Connector cable assembly kits in 48 hours

Version 2a

PEI-Genesis



Cable Assembly Kit COOKBOOK

Just add wire!

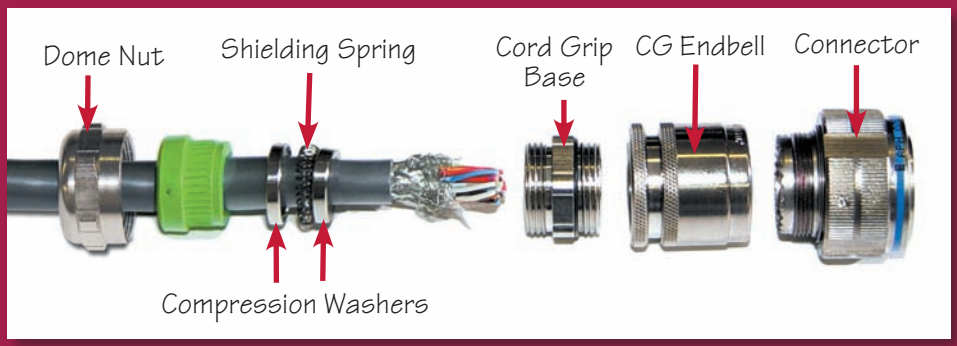
www.peigenesis.com

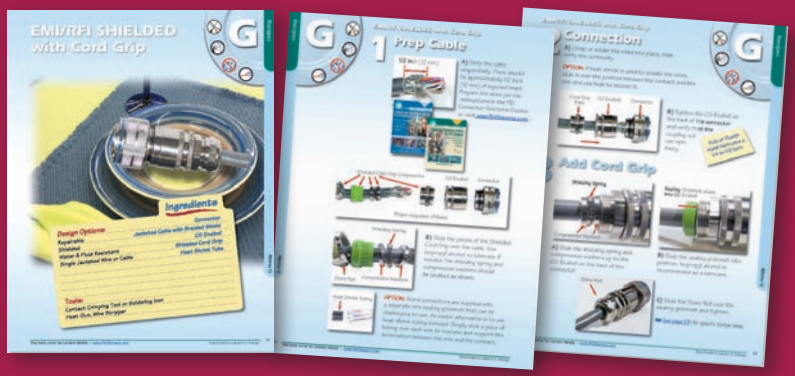
What is a Cable Assembly Kit?

We provide component kit:

(Menu G shown)

And assembly instructions





You provide wire:



Kits make it easy for you to build cable assemblies

After more than 60 years of experience, our application engineers have answered thousands of technical inquiries. The most common questions involved ways to design or build cable assemblies. When we considered how long it took our customers to investigate potential parts, get samples, build prototypes, test designs, calculate costs, create drawings, and transfer to production it was amazing how big a simple cable assembly project could become.

Simplify the design

After evaluating hundreds of designs, we set out to create a mass-customized approach for building typical cable assemblies. This led to the eight basic Cook Book design approaches we call Menus A through H. These eight approaches address the vast majority of the design challenges you will face.

Simplify materials sourcing

Our engineers evaluated the traditional materials, searched for new products, and created some components of their own. We then tested these components in every possible combination to insure that they would function reliably together. We then packaged these as a kit for your convenience.

Simplified selection and instructions

Using our new family of pre-tested and pre-matched components, we reduced the confusion of connector and component selection to a few simple selection charts. We also created detailed assembly instructions to allow our customers to quickly create cable assemblies. The Cook Book then takes you from design to finished assembly fast and flawlessly - as simple as baking a cake!

Bon Appetit!

Steven Fisher

Chairman, CEO & Head Chef, PEI-Genesis



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STEP 1
Pick your cable criteria

A Unshielded with heat shrink boot or tubing



B EMI/RFI shielded with heat shrink boot or tubing

C Grounded with heat shrink boot or tubing

D



Conduit with heat shrink boot or tubing

E



Expando braided sleeve protections

F



Unshielded cord grip

G



EMI/RFI shielded with cord grip

H



Sealed flexible conduit

STEP 2
Select your connector



STEP 3
Get your kit in 48 hours



Typical MENU B Overmolded Assembly

Our design team can help!



PEI-Genesis



Cable Design Recipes

How to Fix

See pages 39-41

For Shielded & Unshielded Cables

Menu Type	Cable Design Recipes	Repairability: Tamper Resistant	Repairability: Field Serviceable	Grounding & Shielding: EMI/RFI Shielded (Screened)	Grounding & Shielding: Earth Ground to Shell	Fluid Protection: Environmentally Sealed	Fluid Protection: Self Draining	Cable Types: Single Jacketed Cable or Single Jacketed Wire	Cable Types: Multiple Wires or Cables	Cable Types: Non-Standard Mix of Wire Sizes
A	Unshielded with Heat Shrink Boot or Tubing	●				● [2]		●		
B	EMI/RFI Shielded with Heat Shrink Boot or Tubing	●		●	● [1]	● [2]		●		
C	Grounded with Heat Shrink Boot or Tubing	●			●	● [2]		●		
D	Conduit with Heat Shrink Boot or Tubing	●			● [1]	● [2]		●	●	●
E	Expando Braided Sleeve Protection	●				● [2]	●	●	●	●
F	Unshielded with Cord Grip		●			● [2]		●	●	●
G	EMI/RFI Shielded with Cord Grip		●	●		● [2]		●		
H	Sealed Flexible Conduit		●			● [2]		●	●	●

[1]Optional: see “Grounding Option” in recipe [2]Can be non-environmental, non-potted

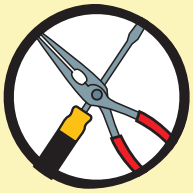
Definitions

Repairability



Tamper Resistant:
The assemblies cannot be taken apart and reworked. If the cable assembly is damaged in the field it needs to be replaced.

Field Service:
The connector and endbell can be disassembled allowing users to remove contacts and re-wire the assembly.



PEI Advice:
There are three questions we usually ask.

1. Could a mis-wired field repair result in damage to the electronic system or lead to other safety or system problems?

2. Does your warranty depend on the integrity of the cable assembly?

3. Is there potential for you to sell spare or replacement cables as an accessory?

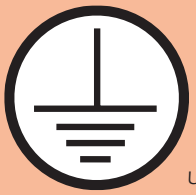
If the answer to any of these is yes, then we recommend using a tamper resistant design.

Grounding & Shielding

EMI/RFI Shielded (Screened):
High frequency electronic noise can either be radiated out or absorbed into a cable assembly. Shielding is a conductive layer that prevents noise from either getting in or escaping. A key issue for cable assemblies is the coverage between the cable and the connector. In our Shielded designs we use 360 degree coverage going from the shield in the cable to the connector shell and endbell. This is suitable for low, medium or high frequency applications.



Earth Ground to Shell:
Cable assemblies that carry power often need to have all conductive surfaces grounded to the cable shield as a safety feature. In these designs metal shell connectors and endbells need to be connected to the shield of the cable. This shield also has to be able to exceed the fuse rating for the power circuit. Grounded cables should use braided shielding and bayonet style plug connectors should use grounding fingered barrels. Foil shielding usually cannot handle the current load.



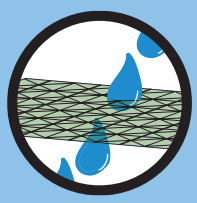
PEI Advice:
It is possible for a cable assembly to be both grounded and shielded. Our **grounded assembly designs (Menus C and D)** provide shielding suitable for low to medium frequency applications (<50 MHz). At these frequencies the gap between the endbell and the cable is small enough that electro-magnetic noise isn't likely to pass.

At higher frequencies we recommend adding the 360 degree protection in our **shielded designs (Menus B and G)**. Remember – shielding protects both outgoing and incoming noise. When selecting the upper shielding protection range it is important to consider both.

Fluid Protection

Environmentally Sealed:
In these designs the connector, endbell and wire protection (or cable jacket) work together to prevent water or other fluids from penetrating inside of the assembly.



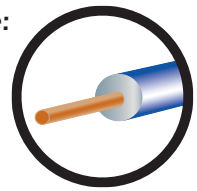


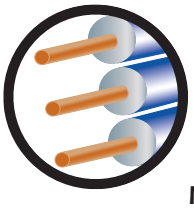
Self Draining: These assemblies seal the rear of the connector where the wire or cable enters the endbell. If water gets inside of the wire protection it cannot easily penetrate into the connector. The self draining feature allows the water to get back out so it does not build up inside of the wire protection.

PEI Advice:
Environmentally sealed designs using jacketed cables or plastic conduit are more commonly used for harsh environment applications. Self draining designs can offer advantages in cost, weight or flexibility if some durability can be conceded.

Cable Types

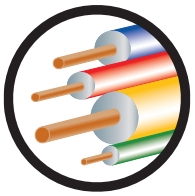
Single Jacketed Cable:
These are cables with multiple conductors on the inside and an outside jacketing (usually PVC or Polyurethane) to protect the wires.





Multiple Wires or Cables:
These are designs where several individual wires or cables are bundled together.

Non-Standard Mix of Wire Sizes:
These are assemblies that use a wide mix of wires, cables, hoses, etc. They pose a challenge because of the different sizes and protection needs.

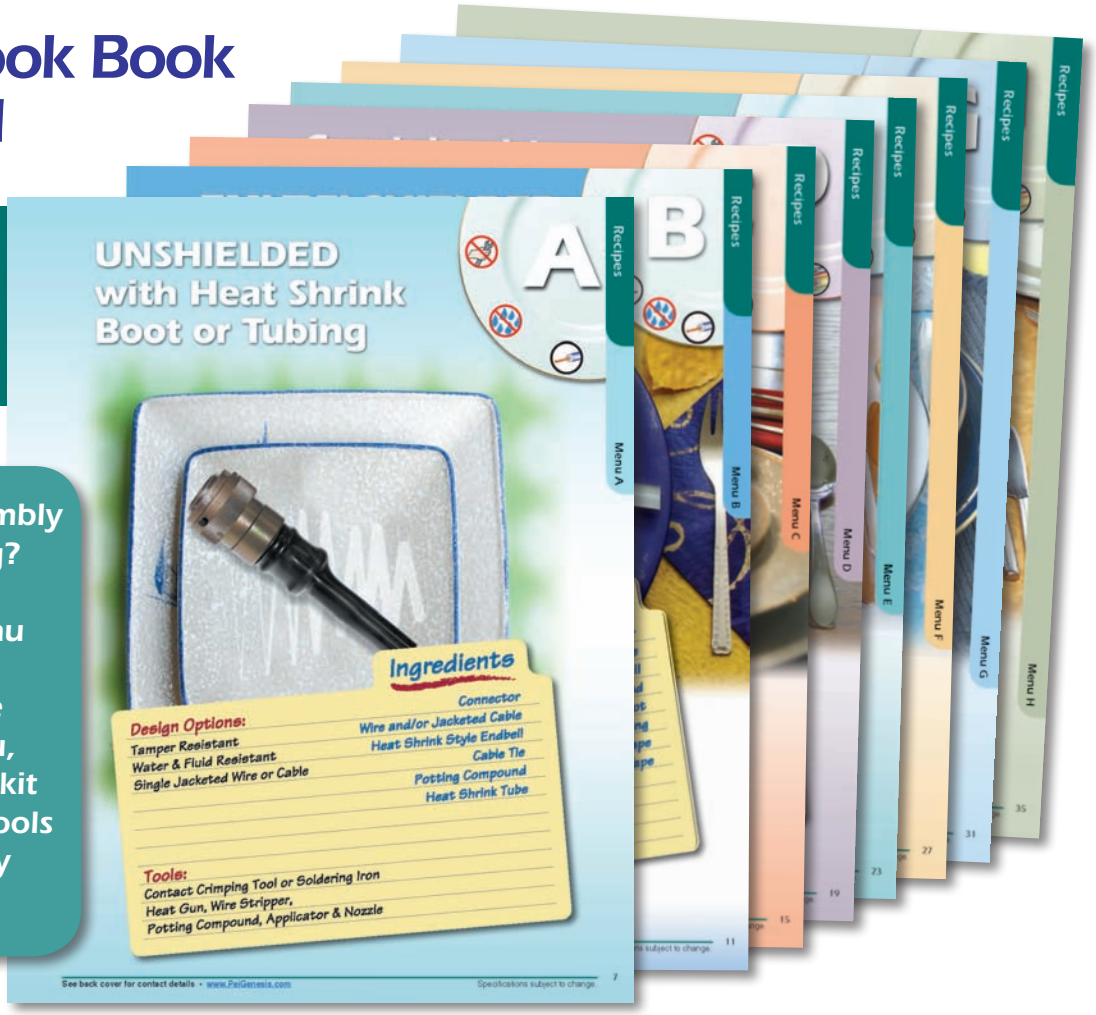


PEI Advice:
Single Jacketed Cables will work with any of our design platforms. Menus A, B, C, F and G work very well with these. Conduit and Expando are great options for **Multiple Wires** or for a **Non-Standard Mix**. Flexible conduit (Menus D and H) is recommended for harsh environment and heavy duty applications. It is a great alternative to custom jacketed cables since it can be assembled from off the shelf materials. Expando (Menu E) is recommended for less demanding applications where bundling is needed.

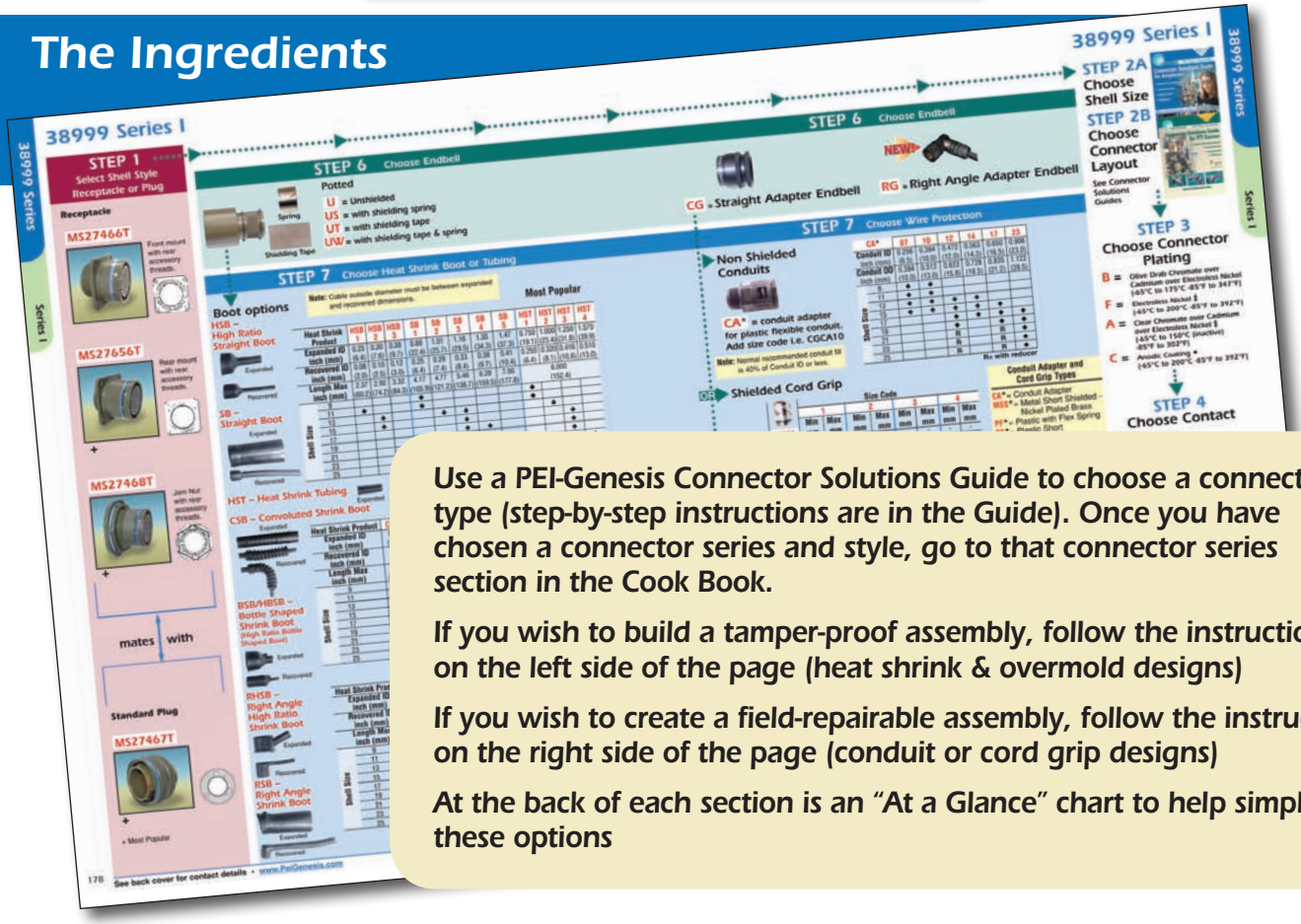
How the Cook Book is organized

8 Cable Design Menus

What type of assembly are you creating? Start with the appropriate Menu (A though H). Once you have selected a menu, you will create a kit of materials and tools that will reliably work together.



The Ingredients



Use a PEI-Genesis Connector Solutions Guide to choose a connector type (step-by-step instructions are in the Guide). Once you have chosen a connector series and style, go to that connector series section in the Cook Book.

If you wish to build a tamper-proof assembly, follow the instructions on the left side of the page (heat shrink & overmold designs)

If you wish to create a field-repairable assembly, follow the instructions on the right side of the page (conduit or cord grip designs)

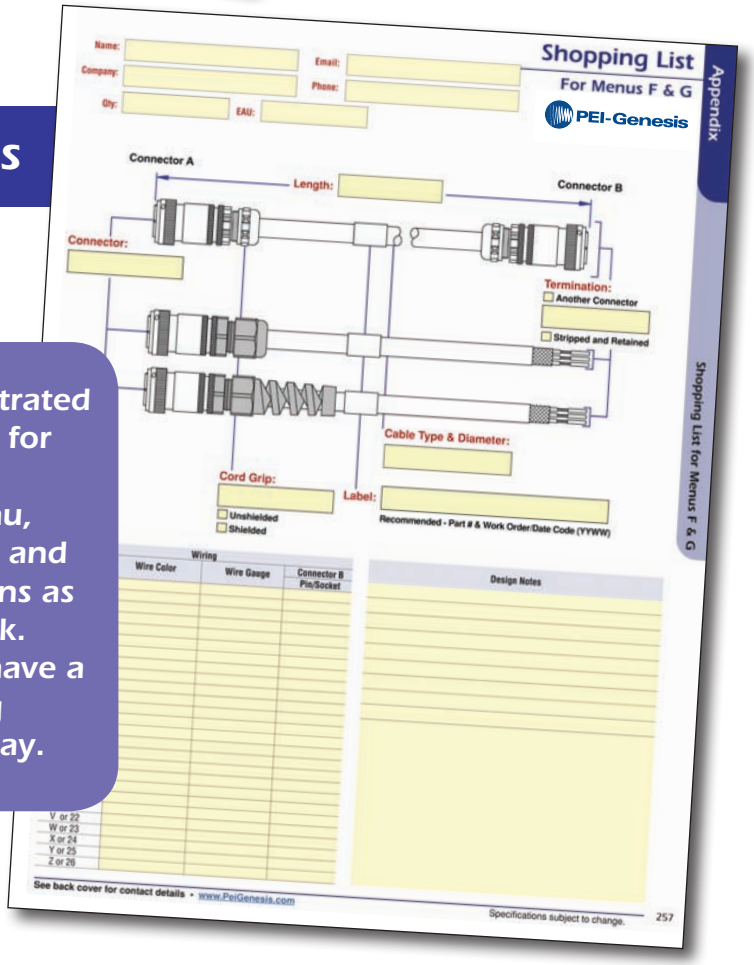
At the back of each section is an "At a Glance" chart to help simplify these options

Accessories & Side Dishes



This section has wire protection products, terminals and tools to help you complete your design. You'll find even more at: www.peigenesis.com/pei-cookbook Simply click on the "Recommended Products" link for the most updated list.

Shopping Lists & Tips



In the appendix you'll find an illustrated shopping list and reference tips for each menu platform. Once you have selected a menu, make a copy of the shopping list and use it to take notes and list options as you go through the Cook Book. When you are finished, you will have a complete kit with everything (but the wire) just 48 hours away.

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26482 Series
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KPSE: ITT Cannon Miniature Bayonet Style w/Front Release Contacts 113-122
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62GB: Amphenol UK Miniature Bayonet Style w/Solder & Crimp Contacts 135-146
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Trident: ITT Cannon Commercial/Industrial Miniature Bayonet Style 159-176

38999 Series
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UNSHIELDED with Heat Shrink Boot or Tubing



Ingredients

- Connector
- Wire and/or Jacketed Cable
- Heat Shrink Style Endbell
- Cable Tie
- Potting Compound
- Heat Shrink Tube

Design Options:

- Tamper Resistant
- Water & Fluid Resistant
- Single Jacketed Wire or Cable

Tools:

Contact Crimping Tool or Soldering Iron
Heat Gun, Wire Stripper,
Potting Compound Applicator & Nozzle

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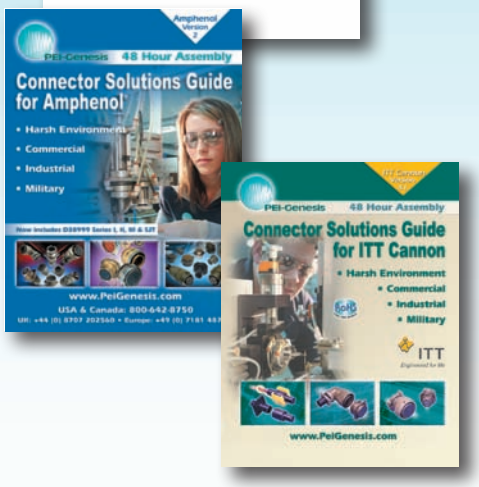


UNSHIELDED with Heat Shrink Boot or Tubing

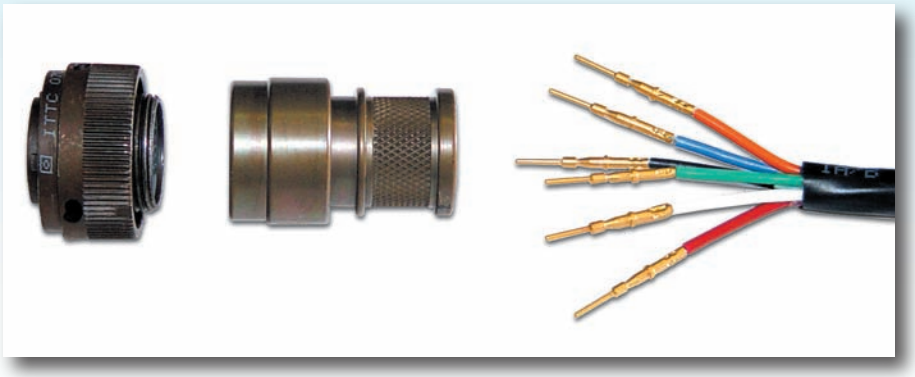
1 Prep Cable

A) Strip the cable jacket to expose the wires. See the PEI Connector Solutions Guides for strip lengths and crimp tool settings or visit www.peigenesis.com.



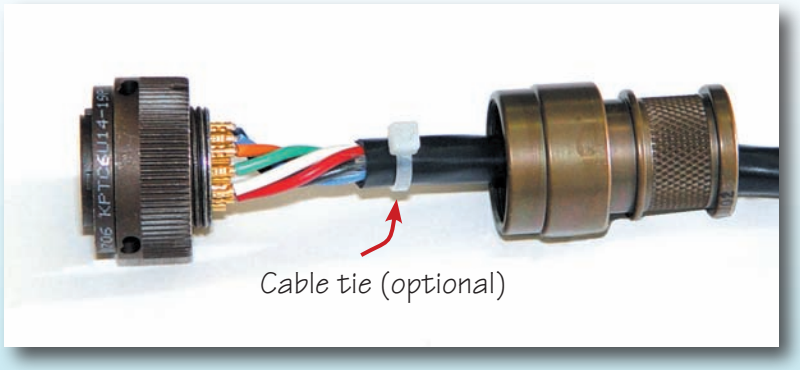


B) Terminate contacts

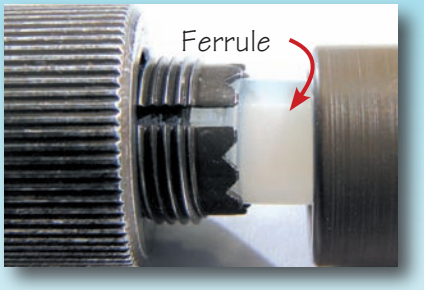


2 Connection

A) Crimp or solder the wires into place, then verify the continuity.



OPTION: For extra strain relief, add a cable tie to the cable jacket. In step 3 we will fill the endbell with potting compound. It will encapsulate the cable tie and increase both the strain relief and the water sealing.



OPTION:
Some connectors have an alignment slot cut into the rear threads. For these connectors, a plastic ferrule should be used to prevent potting compound from wicking through during Step 3.



3 Potting

A) Tighten the endbell on the rear of the connector. Make sure the coupling nut still spins freely.

Rule of Thumb: Hand tight plus a 1/4 to 1/2 turn.

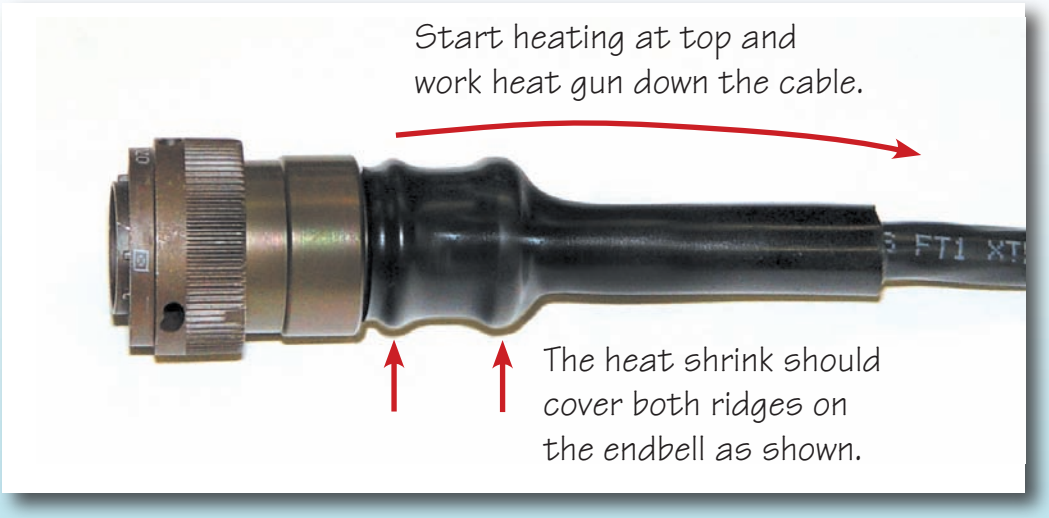
B) Pot the rear of the endbell with potting compound. The cable jacket and cable tie should extend into the potting.

➥ See page 243 for potting compound.



4 Encapsulation

A) Cover with either heat shrink or overmold material to encapsulate the assembly.





UNSHIELDED with Heat Shrink Boot or Tubing

4 Encapsulation



From left to right: Heat Shrink Tube, Molded Heat Shrink Boot, and two samples of Overmolding: Low Profile and Heavy Duty.

EMI/RFI SHIELDED
with Heat Shrink Boot or Tubing

B



Ingredients

Design Options:

Tamper Resistant
Shielded
Grounded
Water & Fluid Resistant
Single Jacketed Cable
with Braided Shield
and Drain Wire

Connector
Shielded Jacketed Cable
Heat Shrink Style Endbell
Potting Compound
Heat Shrink Tube or Boot
Constant Force Spring
Conductive Fabric Tape
Silicone and/or Electrical Tape

Tools:

Contact Crimping Tool or Soldering Iron
Heat Gun, Wire Stripper,
Potting Compound, Applicator & Nozzle

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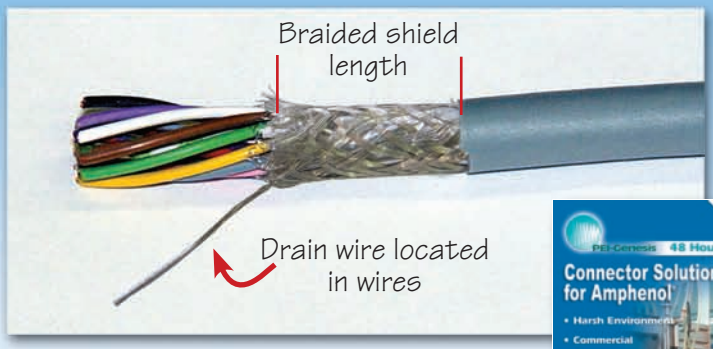


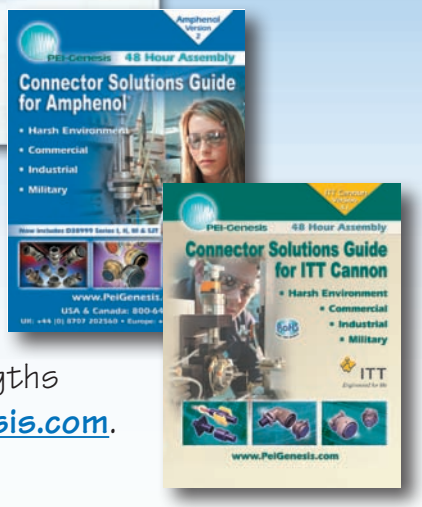
B

EMI/RFI SHIELDED with Heat Shrink Boot or Tubing

1 Prep Cable

A) Strip the cable jacket as shown. The braided shield should extend approximately halfway between the end of the wires and the jacket strip.





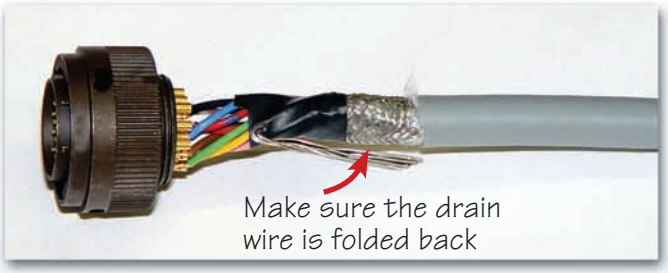
B) Locate and separate the drain wire. It should be the same length as the individual wires.

C) Strip wire to proper length. See the PEI Connector Solutions Guides for strip lengths and crimp tool settings or visit **www.peigenesis.com**.

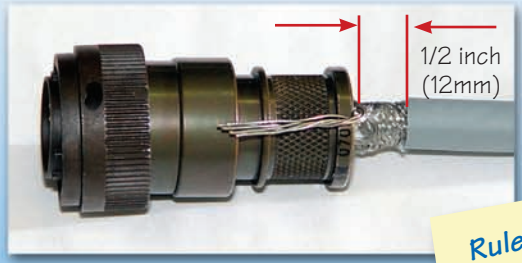
2 Connection

A) Crimp or solder the wires into place, then verify the continuity.

B) Add silicone tape or electrical tape to secure the ends of the braided shield.



3 Add Endbell



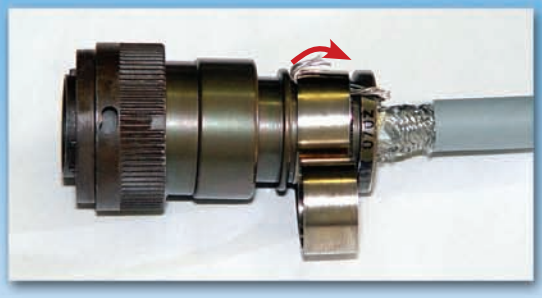
A) Tighten the endbell. Make sure that the coupling nut on the connector can spin freely.

NOTE: There should be approximately 1/2 inch (12 mm) of braided shield exposed at the rear of the endbell.

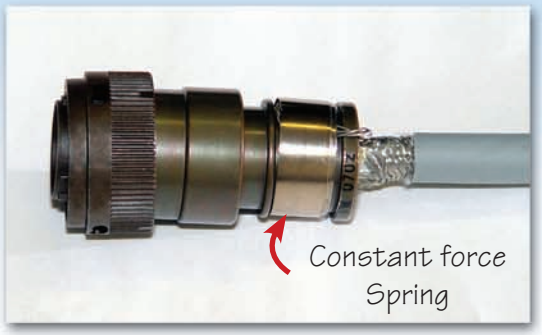
Rule of Thumb: Hand tight plus a 1/4 to 1/2 turn.

B) Fold the drain wire over the outside of the endbell.

4 Drain Termination



A) Wrap one layer of the constant force spring **over** the drain wire.



B) After first wrap, fold the drain wire **over** the constant force spring, and then wrap the rest of the spring around the endbell.

5 Potting

A) Pot the rear of the endbell with potting compound. The braided shield should extend into the potting.





See page 243 for potting compound.

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B

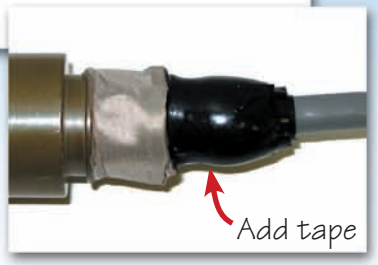
EMI/RFI SHIELDED with Heat Shrink Boot or Tubing

6 Conductive Tape

A) Wrap the conductive tape around the back of the endbell, and then fold down over the exposed braided shield. This will provide 360 degree shielding coverage.

Shielding Attenuation:
85dB (10MHz - 10GHz)
E-Field Typical

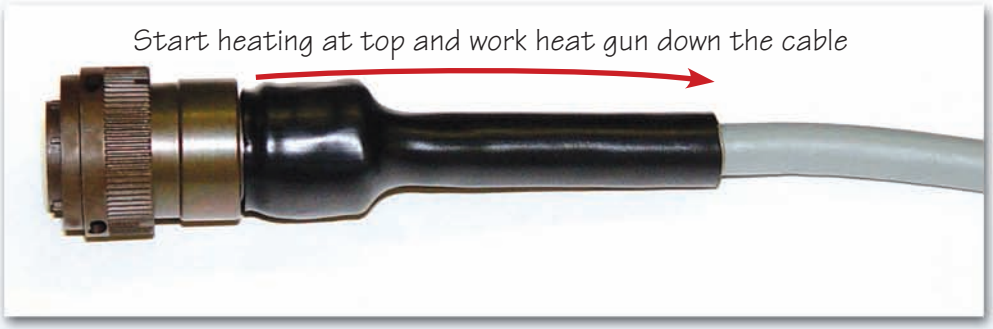




OPTION: For cables less than half the diameter of the endbell, add silicone tape to build up the cable diameter for added flex relief and smoother cable transition.

7 Encapsulation

A) Cover with either heat shrink or overmold to encapsulate the assembly.



From left to right:
Heat Shrink Tube, Molded Heat Shrink Boot, and two samples of Overmolding:
Low Profile and Heavy Duty



Grounded with Heat Shrink Boot or Tubing





Ingredients

Design Options:

- Tamper Resistant
- Grounded
- Water & Fluid Resistant
- Single Jacketed Cable with Braided Shield and Drain Wire

Tools:

- Contact Crimping Tool or Soldering Iron
- Heat Gun, Epoxy Applicator & Nozzle
- Wire Stripper

- Connector
- Jacketed Cable
- Heat Shrink Style Endbell
- Cable Tie
- Epoxy
- Heat Shrink Tube or Boot
- Constant Force Spring

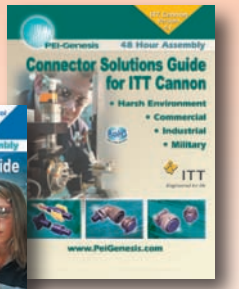
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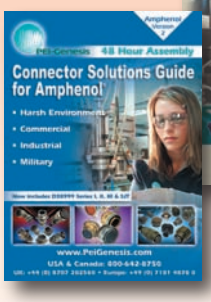


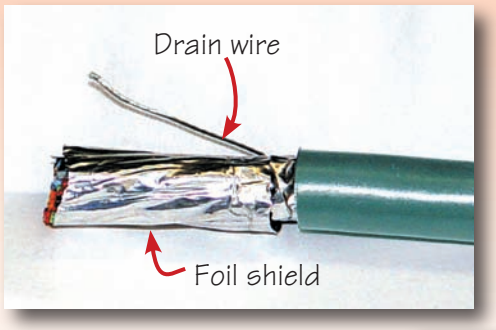
Grounded with Heat Shrink Boot or Tubing

1 Prep Cable

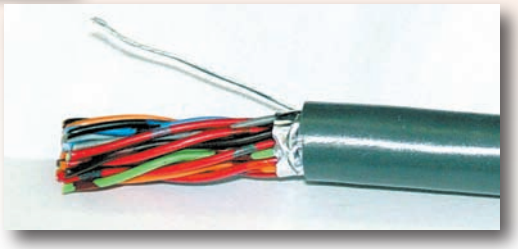
A) Strip the cable jacket to expose the wires. See the PEI Connector Solutions Guides for strip lengths and crimp tool settings or visit www.peigenesis.com.







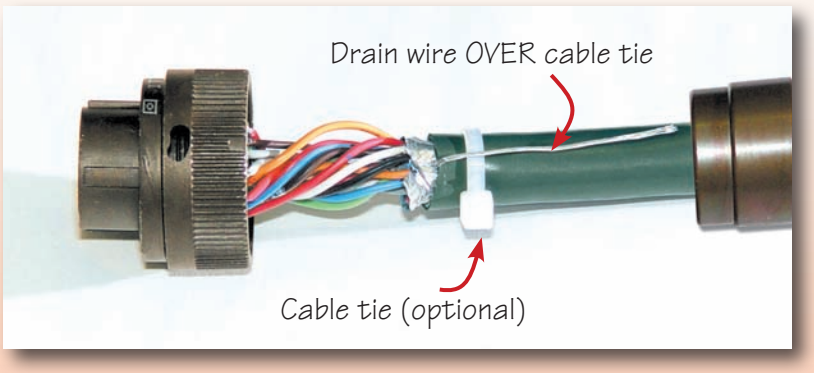
B) Locate and fold back the drain wire.



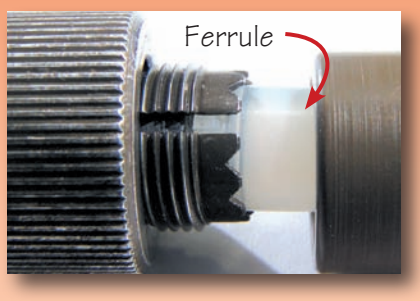
C) Strip the shield back to flush with the cable jacket.

2 Connection

A) Crimp or solder the wires into place, then verify the continuity.



OPTION: For extra strain relief, add a cable tie to the cable jacket. In Step 3 we will fill the endbell with potting compound. It will encapsulate the cable tie and increase both the strength of the strain relief and the water sealing. The drain wire should pass over the cable tie.



OPTION:
Some connectors have an alignment slot cut into the rear threads. For these connectors, a plastic ferrule should be used to prevent potting compound from wicking through during Step 4.

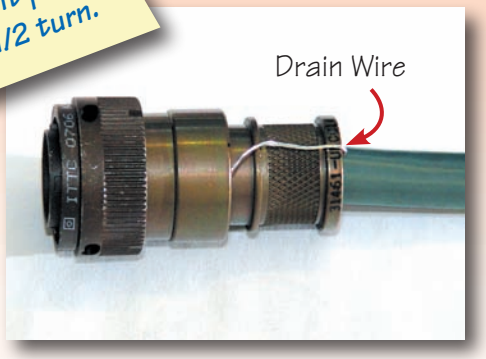


Grounded with Heat Shrink Boot or Tubing

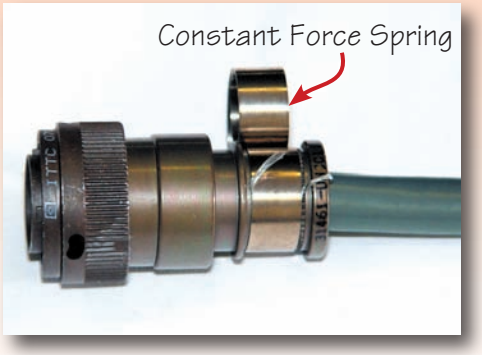
3 Drain Termination

A) Tighten the endbell on the back of the connector. Make sure that the coupling nut on the connector can spin freely. The cable jacket should extend into the endbell.

Rule of Thumb: Hand tight plus a 1/4 to 1/2 turn.



B) Fold the drain wire over the back of the endbell.



C) Wrap one layer of the constant force spring ***over*** the drain wire. After first wrap, fold the drain wire ***over*** the constant force spring.



D) Wrap the remaining layers of the constant force spring over the endbell.

4 Potting

A) Pot the rear of the endbell with potting compound. The cable jacket and cable tie should extend into the potting.

➥ See page 243 for potting compound.





Grounded with Heat Shrink Boot or Tubing

5 Encapsulation

A) Cover with either heat shrink or overmold to encapsulate the assembly.

Start heating at top and work heat gun down the cable.



The heat shrink should cover both ridges on the endbell as shown.

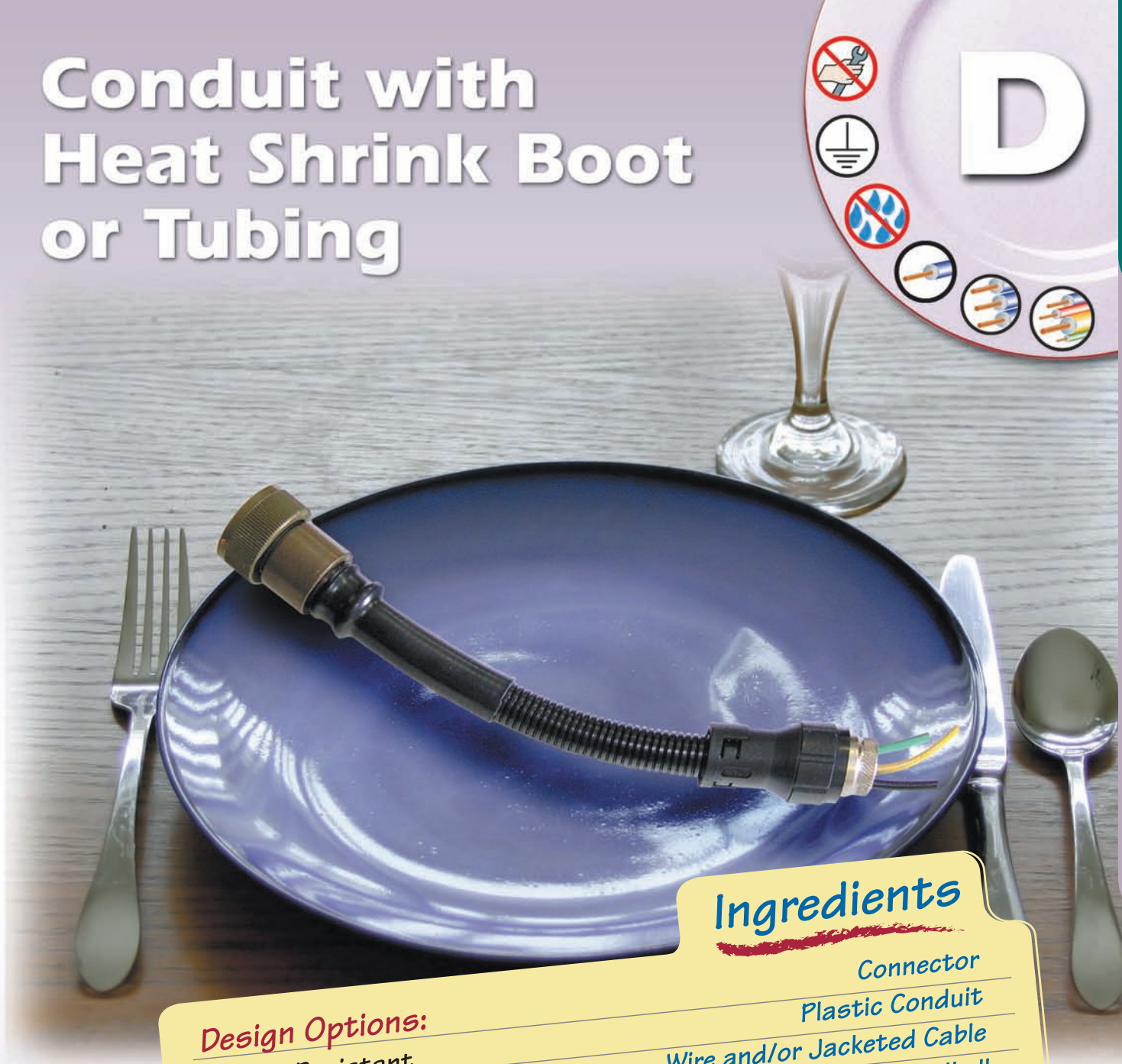


From left to right: Heat Shrink Tube, Molded Heat Shrink Boot, and two samples of Overmolding: Low Profile and Heavy Duty.

In North America: Pricing Delivery: 800-642-8750 • Tech Support: 800-523-0727 • www.peigenesis.com • Specifications subject to change.

Conduit with Heat Shrink Boot or Tubing

D



Ingredients

Design Options:

- Tamper Resistant
- Grounded
- Water & Fluid Resistant
- Single Jacketed Wire or Cable
- Multiple Wires or Cables
- Non-Standard Mix of Wire Sizes

- Connector
- Plastic Conduit
- Wire and/or Jacketed Cable
- Heat Shrink Style Endbell
- Potting Compound
- Heat Shrink Tube or Boot
- Optional: Constant Force Spring if drain wire needs to be grounded

Tools:

Contact Crimping Tool or Soldering Iron
Heat Gun, Wire Stripper,
Potting Compound, Applicator & Nozzle

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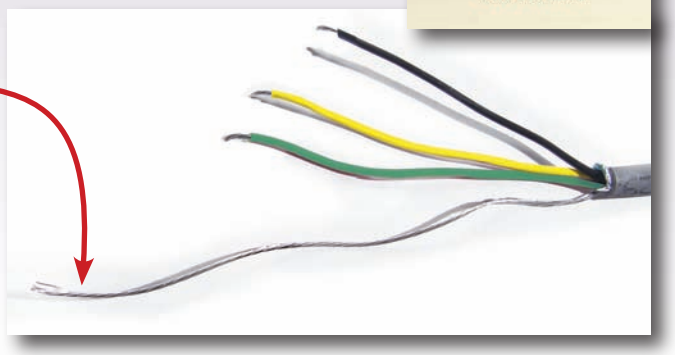
Conduit with Heat Shrink Boot or Tubing

1 Prep Cable or Wires

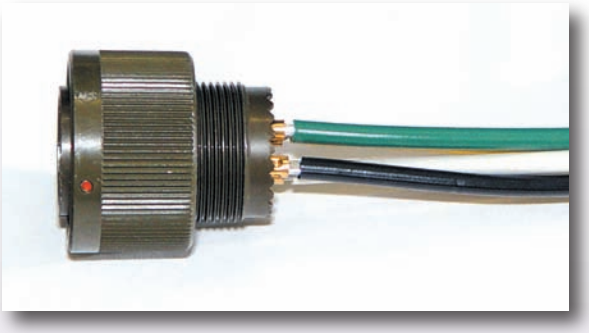
A) Strip the cable jacket to expose the wires. See the PEI Connector Solutions Guides for individual wire strip lengths and crimp tool settings or visit www.peigenesis.com.



GROUNDED OPTION: If using a cable with a drain wire, the drain wire should be at least 2-3 inches longer than the conductor to allow for conduit. (see 2a on page 21)



2 Connection

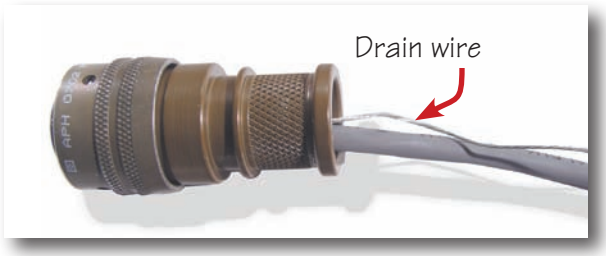


A) Crimp or solder the wires into place, then verify the continuity.



Rule of Thumb: Hand tight plus a 1/4 to 1/2 turn.

B) Secure the endbell on the back of the connector. Make sure that the coupling nut on the connector can spin freely.

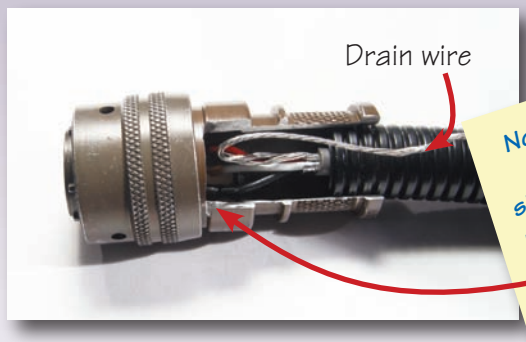


GROUNDED OPTION: Note how the drain wire extends at least 2-3 inches past the endbell, allowing room for the conduit. (see 2a on page 21)

Conduit with Heat Shrink Boot or Tubing

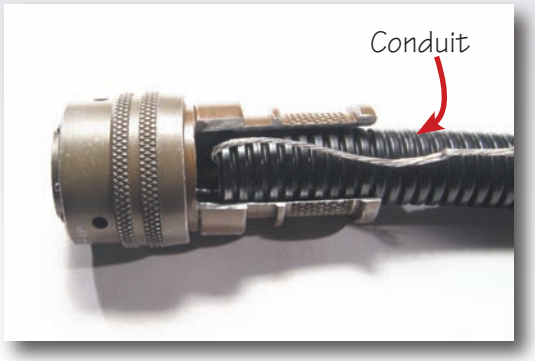
2a Grounded Option

The endbell has been cut away to show drain wire



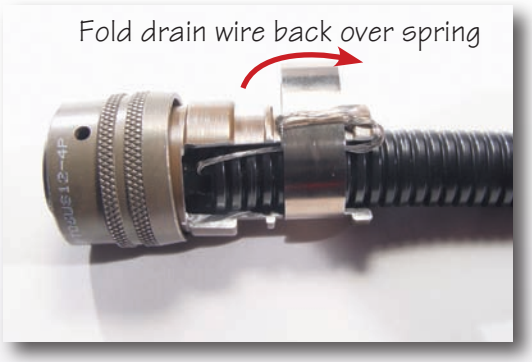
Note: To prevent the drain wire from shorting the contacts, use electrical tape over the contacts and wires as a protective insulating barrier.

A) Slide conduit up the cable, keeping the drain wire on the outside of the conduit.

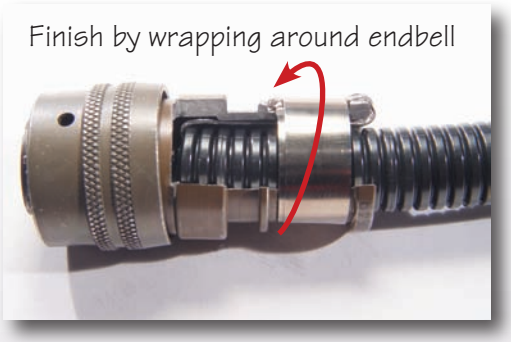




B) Wrap one layer of the constant force spring over the drain wire.



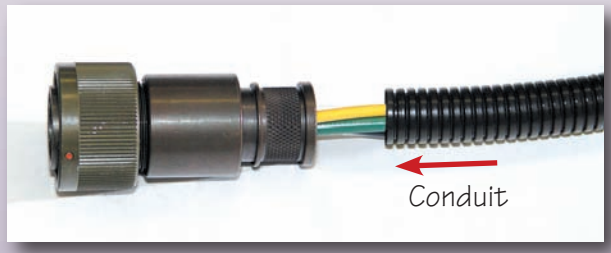
C) Fold the drain wire back over the constant force spring.



D) Wrap the remaining layers of the constant force spring over the endbell, covering the drain wire.

3 Add Conduit

A) Slide conduit over the wires to test fit.





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D

Conduit with Heat Shrink Boot or Tubing

4 Potting

A) Slide the conduit back from the endbell.

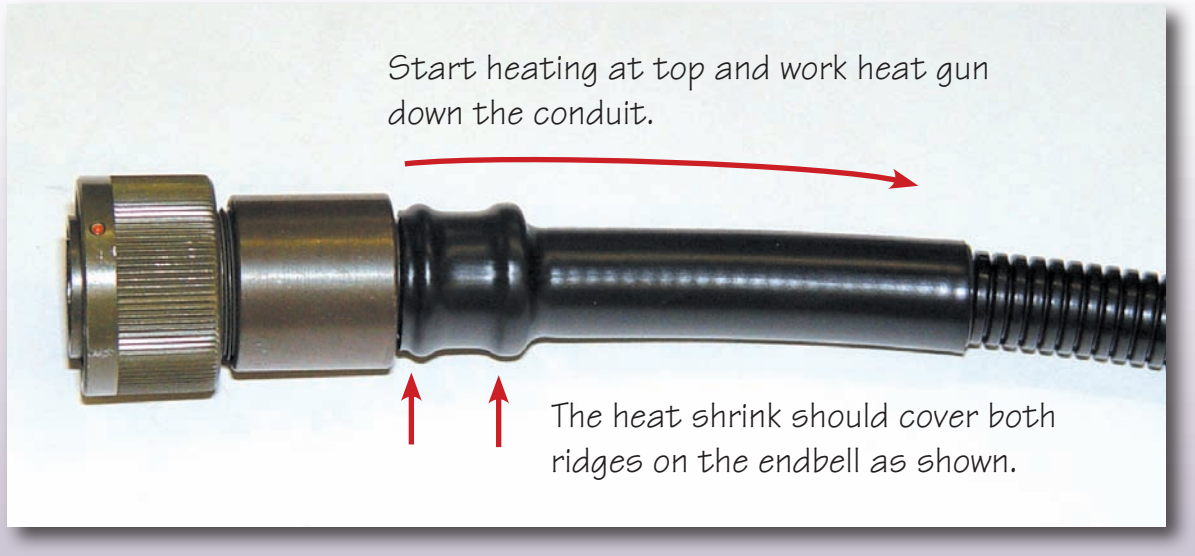
B) Pot the rear of the endbell with potting compound. Fill the endbell approximately half way, and then slide the conduit into the endbell. The potting compound will secure the conduit into the endbell.

See page 243 for potting compound.



5 Encapsulation

A) Cover the rear of the endbell and the conduit with heat shrink tubing or a boot. For tubing we recommend adhesive lined heat shrink.



Expando Braided Sleeve Protection





Ingredients

- Connector
- Wire and/or Jacketed Cable
- Heat Shrink Style Endbell
- Expando Sleeving
- Constant Force Spring
- Potting Compound
- Heat Shrink Tube
- Silicone Tape and/or Electrical Tape

Design Options:

- Tamper Resistant
- Water & Fluid Resistant
- Self Draining
- Single Jacketed Wire or Cable
- Multiple Wires or Cables
- Non-Standard Mix of Wire Sizes

Tools:

- Contact Crimping Tool or Soldering Iron
- Heat Gun, Wire Stripper, Expando Cutting Hot Knife or Shears,
- Potting Compound, Applicator & Nozzle

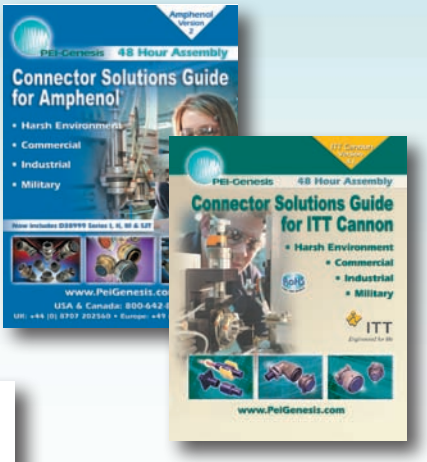


Expando Braided Sleeve Protection

1 Prep Cable & Connection

A) Strip the cable jacket to expose the wires. See the PEI Connector Solutions Guides for strip lengths and crimp tool settings or visit www.peigenesis.com.







B) Pass the wires and/or cables through the endbell, crimp or solder the wires into place, and then verify the continuity.

2 Potting

A) Tighten the endbell on to the rear of the connector. Make sure the coupling nut still spins freely.

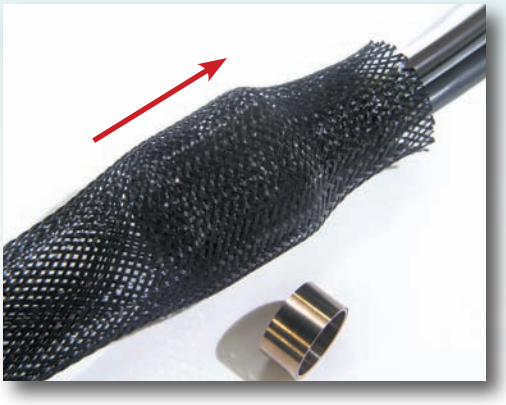
B) Pot the rear of the endbell with potting compound. The cable jacket should extend into the potting compound.



See page 243 for potting compound.

3 Expando Sleeving





A) Slide the Expando sleeving over the front of the connector and the endbell. Make sure you extend past the endbell by 1/4 inch (6mm).



B) Secure Expando Sleeving with a constant force spring.



C) Fold the Expando Sleeving back over the endbell and the constant force spring.

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Expando Braided Sleeve Protection

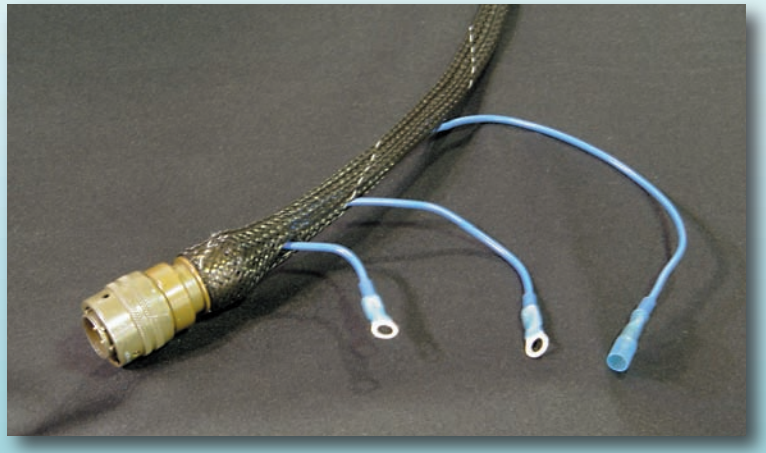
4 Encapsulation

A) Secure the opposite end of the Expando Sleeving with either heat shrink tubing, silicone tape or electrical tape.





Wires can be pulled through Expando Sleeving where needed by carefully spreading the braid and pushing the wire through.



UNSHIELDED with Cord Grip

F



Ingredients

Design Options:

- Repairable
- Water & Fluid Resistant
- Self Draining
- Single Jacketed Wire or Cable
- Multiple Wires or Cables
- Non-Standard Mix of Wire Sizes

Tools:

- Contact Crimping Tool or Soldering Iron
- Heat Gun, Wire Stripper,
- Potting Compound, Applicator & Nozzle

- Connector
- Wire and/or Jacketed Cable
- Heat Shrink Style Endbell
- Expando Sleeving
- Constant Force Spring
- Potting Compound
- Heat Shrink Tube
- Silicone or Electrical Tape

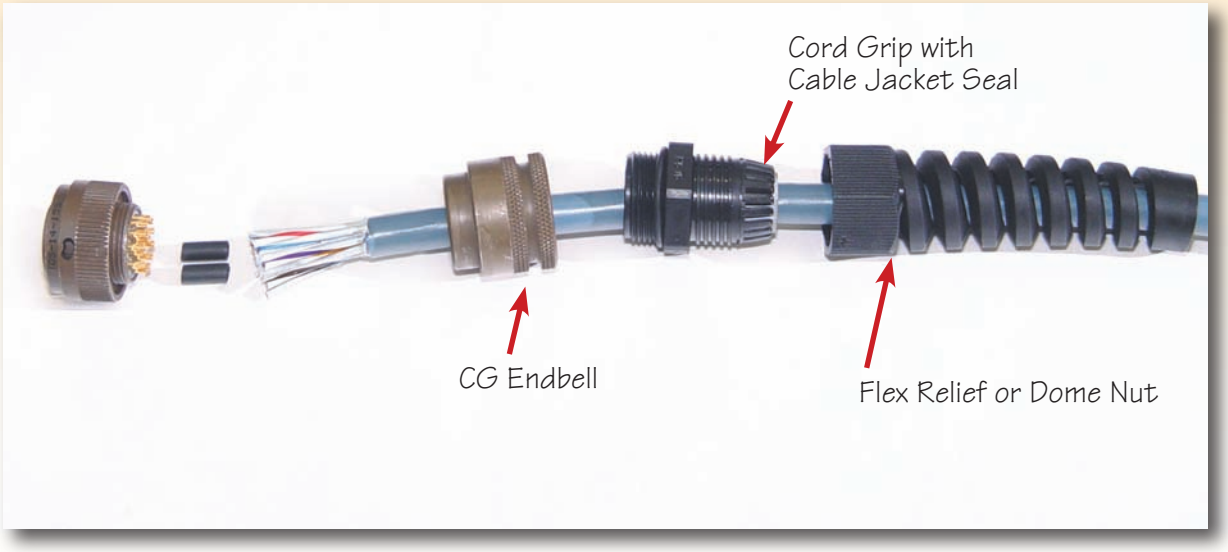
For Assistance in Europe – Please See the Back Cover For a Complete Listing of Our Branch Offices and Contact Numbers. • Specifications subject to change.

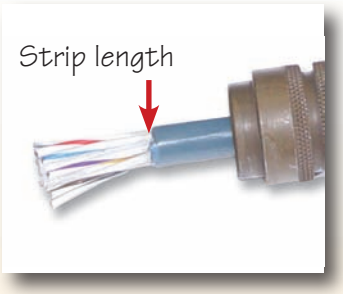


UNSHIELDED with Cord Grip

1 Prep Cable

A) Slide the pieces of the Cord Grip and CG Endbell over the cable. Use isopropyl alcohol to lubricate the cable jacket seal (if needed).





B) Strip the cable jacket and prepare the wires per the instructions in the PEI Connector Solutions Guides or visit www.peigenesis.com.



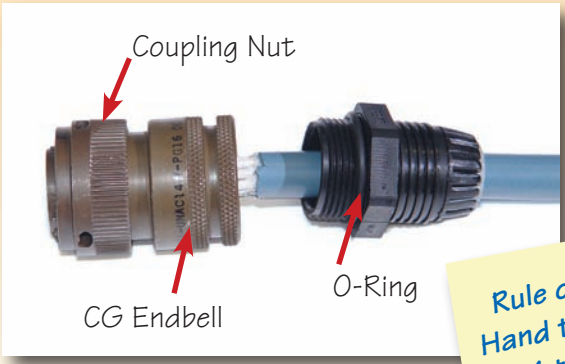


OPTION: Some connectors are supplied with a separate wire sealing grommet that can be challenging to use. An easier alternative is to use heat shrink tubing instead. Simply slide a piece of tubing over each wire to insulate and support the termination between the wire and the contact.



UNSHIELDED with Cord Grip

2 Connection



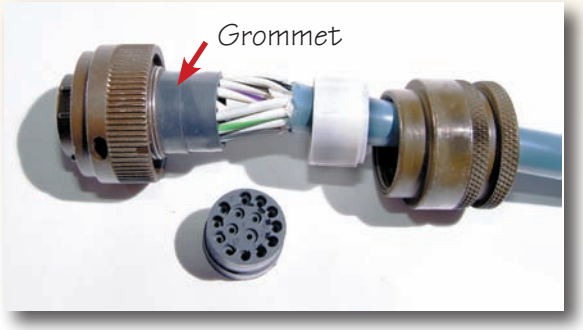
A) Crimp or solder the wires into place, then verify the continuity.

Rule of Thumb: Hand tight plus a 1/4 to 1/2 turn.

B) Tighten the CG Endbell on the back of the connector and verify that the coupling nut can spin freely.

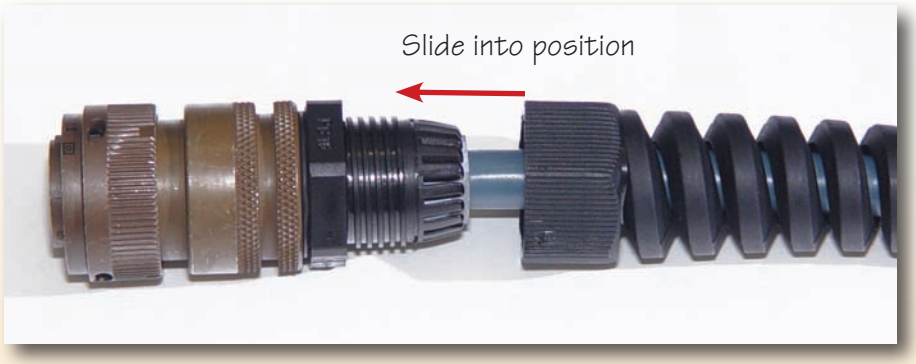


OPTION: If heat shrink is used to isolate the wires, slide it over the junction between the contact and the wire, and use heat to recover it.

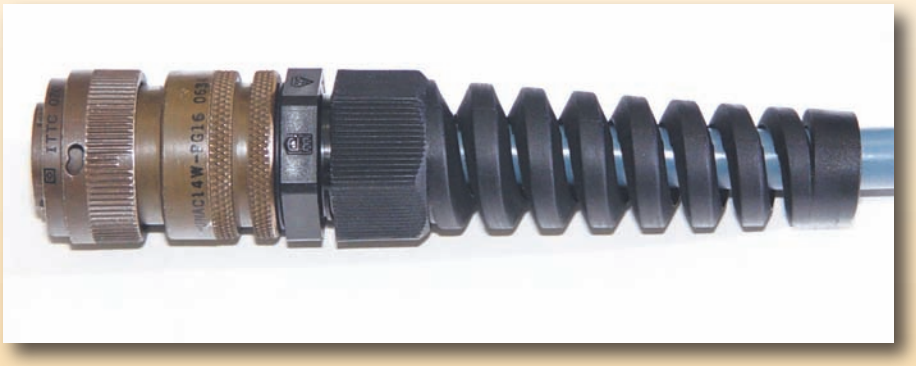


OPTION: If a Grommet is used, slide it into place.

3 Add Cord Grip



A) Slide the sealing grommet and flex relief and/or dome nut into position. Isopropyl alcohol is recommended as a lubricant.



B) Tighten dome nut and/or flex relief.

See page 231 for specific torque value.

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F

UNSHIELDED with Cord Grip

4 Options

A) Multihole Cord Grip.





Close up of dome nut with multihole wire seal in the cord grip.



Cord Grips left to right: **MS**= Metal Short, **ML**=Metal Long, **PS**=Plastic Short, **PL**=Plastic Long, **PF**=Plastic Flex

EMI/RFI SHIELDED with Cord Grip

G



Ingredients

Design Options:

- Repairable
- Shielded
- Water & Fluid Resistant
- Single Jacketed Wire or Cable

- Connector
- Jacketed Cable with Braided Shield
- CG Endbell
- Shielded Cord Grip
- Heat Shrink Tube

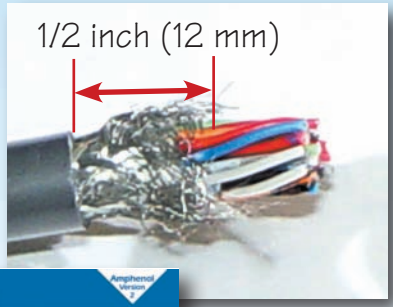
Tools:

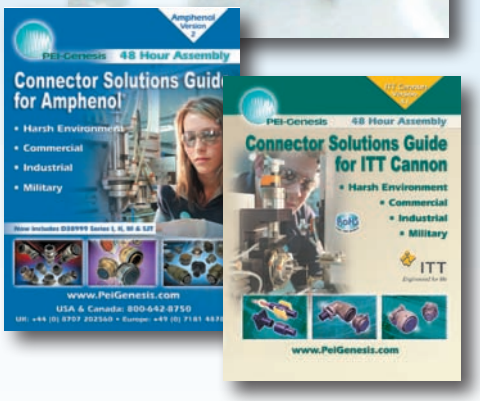
- Contact Crimping Tool or Soldering Iron
- Heat Gun, Wire Stripper



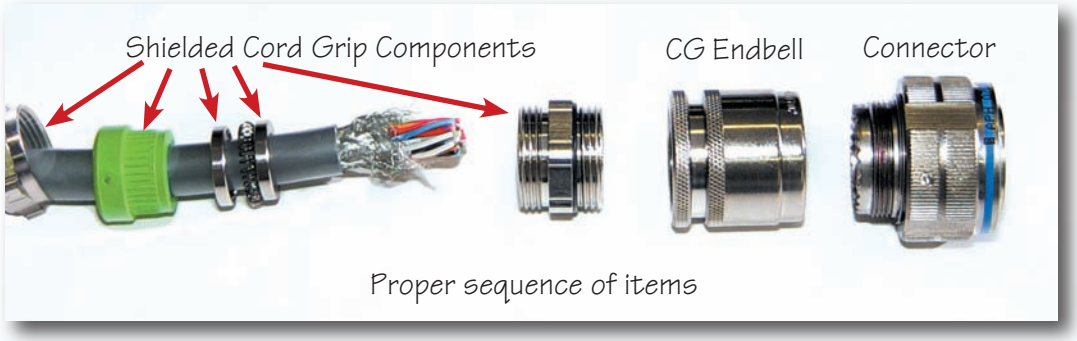
EMI/RFI SHIELDED with Cord Grip

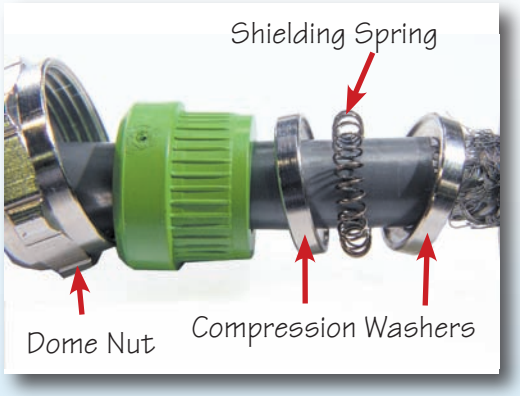
1 Prep Cable





A) Strip the cable sequentially. There should be approximately 1/2 inch (12 mm) of exposed braid. Prepare the wires per the instructions in the PEI Connector Solutions Guides or visit www.peigenesis.com.





B) Slide the pieces of the Shielded Cord Grip over the cable. Use isopropyl alcohol to lubricate if needed. The shielding spring and compression washers should be located as shown.

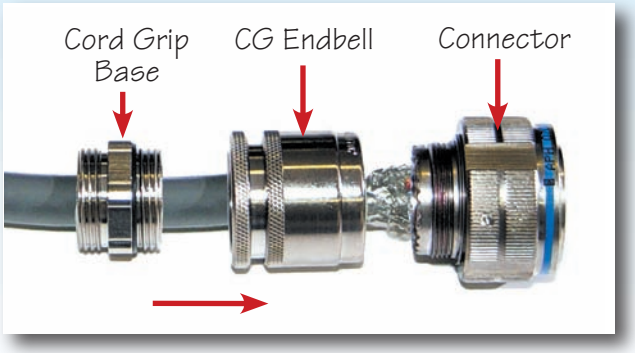


OPTION: Some connectors are supplied with a separate wire sealing grommet that can be challenging to use. An easier alternative is to use heat shrink tubing instead. Simply slide a piece of tubing over each wire to insulate and support the termination between the wire and the contact.

2 Connection

A) Crimp or solder the wires into place, then verify the continuity.

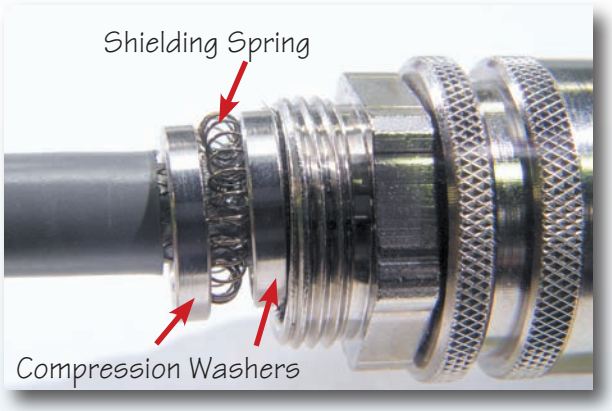
OPTION: If heat shrink is used to isolate the wires, slide it over the junction between the contact and the wire and use heat to recover it.



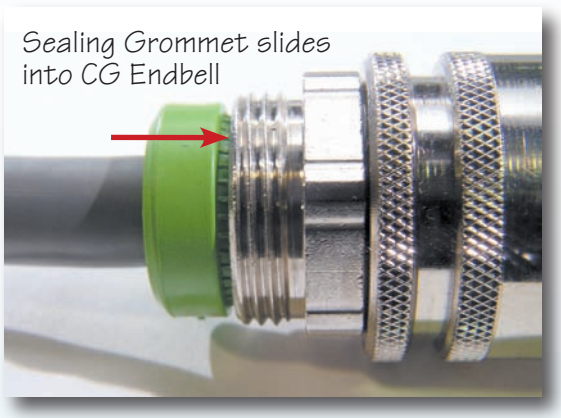
B) Tighten the CG Endbell on the back of the connector and verify that the coupling nut can spin freely.

Rule of Thumb: Hand tight plus a 1/4 to 1/2 turn.

3 Add Cord Grip



A) Slide the shielding spring and compression washers up to the CG Endbell on the back of the connector.



B) Slide the sealing grommet into position. Isopropyl alcohol is recommended as a lubricant.



C) Slide the Dome Nut over the sealing grommet and tighten.

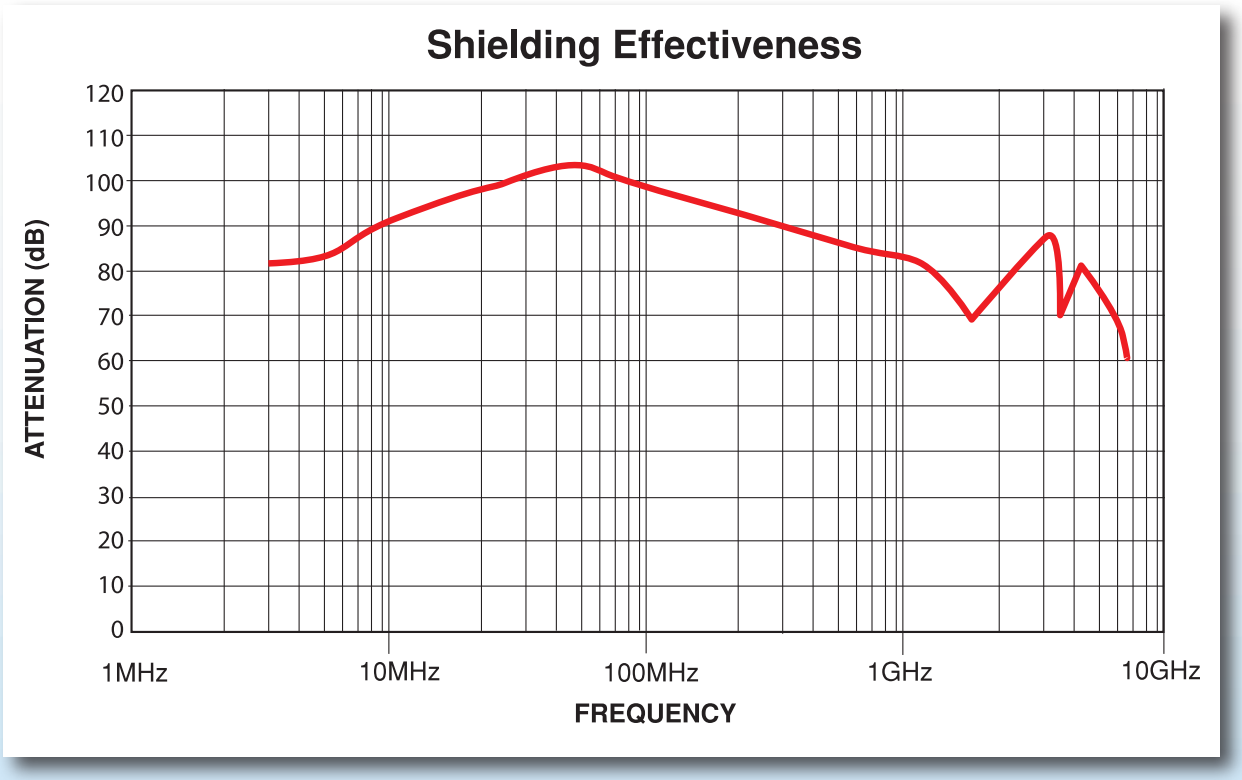
See page 231 for specific torque value.



EMI/RFI SHIELDED with Cord Grip

4 Finished Product





Sealed Flexible Conduit

H



Ingredients

Design Options:

- Repairable
- Water & Fluid Resistant
- Single Jacketed Wire or Cable
- Multiple Wires or Cables
- Non-Standard Mix of Wire Sizes

- Connector with Threaded Endbell
- Wire and/or Jacketed Cable
- Plastic Conduit
- Conduit Adapter
- Optional: Conductive Expando or metal braid for shielded or grounded applications

Tools:

- Contact Crimping Tool or Soldering Iron
- Conduit Cutter, Wire Stripper,
- Optional: Conduit Compression Fixture

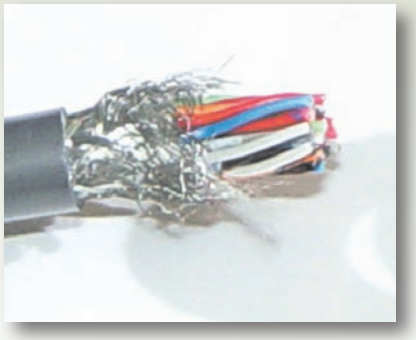
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Sealed Flexible Conduit

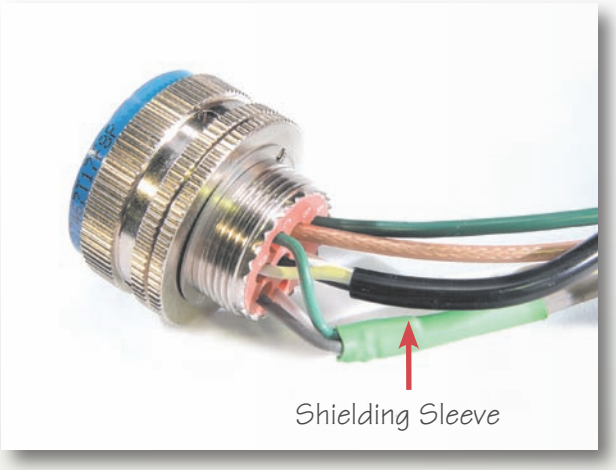
1 Prep Cable/Wires

A) Strip the cable jacket to expose the wires. Refer to the PEI Connector Solutions Guides for strip lengths and crimp tool settings or visit www.peigenesis.com.





2 Connection



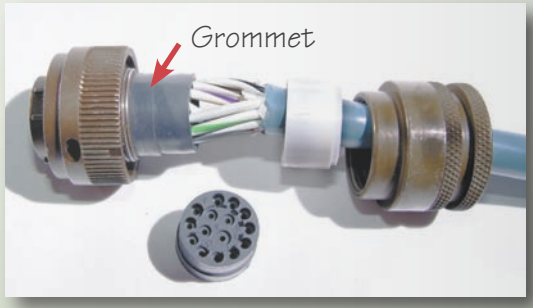
A) Solder or crimp the contacts, insert them into the connector, then verify the continuity.

OPTION: Add internal shielded sleeving.



OPTION:
If heat shrink is used to isolate the wires, slide it over the junction between the contact and the wire, and use heat to recover it.

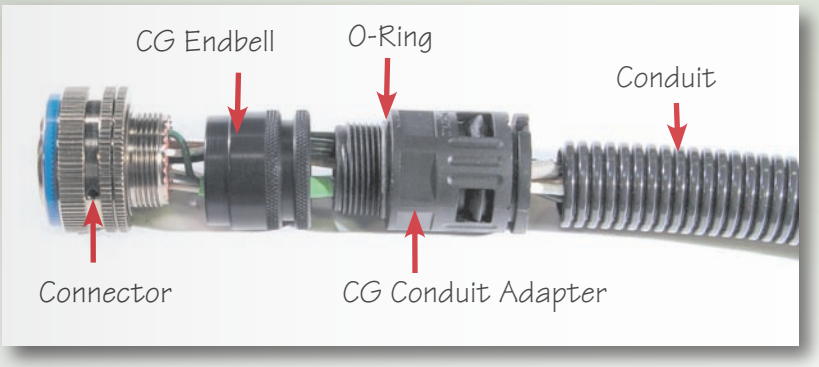
B) Tighten the CG Endbell on the back of the connector and verify that the coupling nut can spin freely.



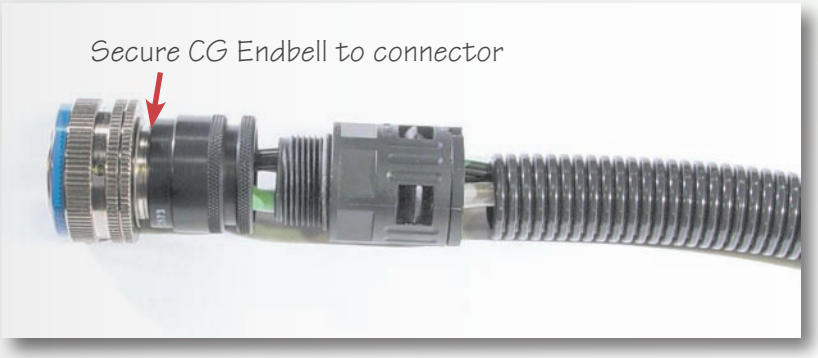
OPTION: If a Grommet is used, slide it into place.

3 Add Endbell & Adapter



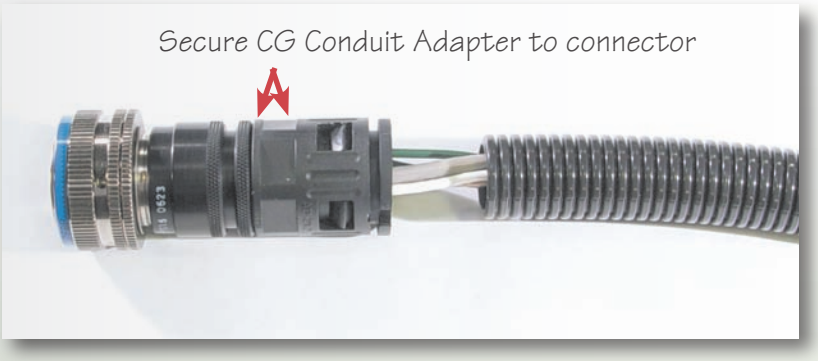


A) Make sure components are in the sequence shown at the left.



B) Secure the CG Endbell to the connector.

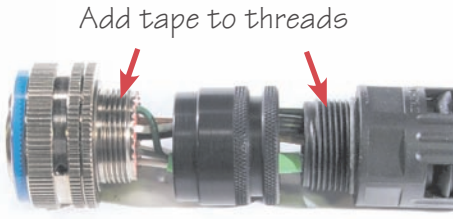
Rule of Thumb: Hand tight plus a 1/4 to 1/2 turn.



C) Secure the CG Conduit Adapter on the back of the connector.

NOTE: To make assembly tamper resistant, pot the endbell

Design Suggestion:
For unshielded applications, Teflon tape can be added to the threads to improve the sealing of the CG Endbell and CG Conduit Adapter.



For Assistance in Europe – Please See the Back Cover For a Complete Listing of Our Branch Offices and Contact Numbers. • Specifications subject to change.

H

Sealed Flexible Conduit

4 Add Conduit





A) Slide the conduit over the wires and into the adapter. The conduit seal and clip are contained in the adapter.

B) Simply push the conduit into the adapter until it clicks into place, then spin the conduit 1/4 to 1/2 turn to verify full insertion.

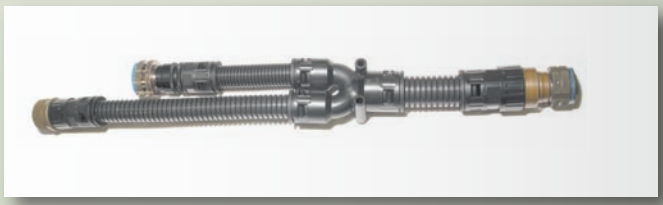
5 Finished Products



Design Suggestion:
For cables with a connector on each end, follow the instructions listed above for one end, then add the second connector, endbell, and adapter. Use 2 to 4 inches (5 to 10 cm) of extra wire as a service loop or use a fixture to compress the conduit. This will provide the working room needed for the second connector.







How to Fix

UNSHIELDED Cable

PGALCP Installation

Background

This kit is intended to repair cables where the wire or cable insulation has been damaged **but not the primary conductors**.

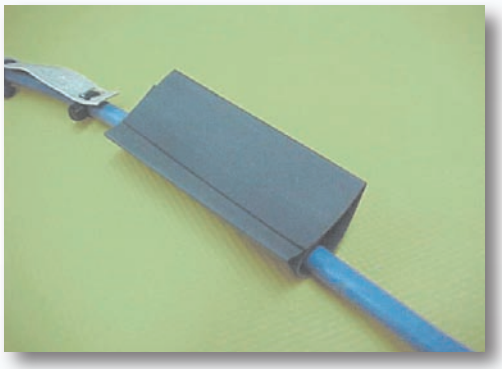


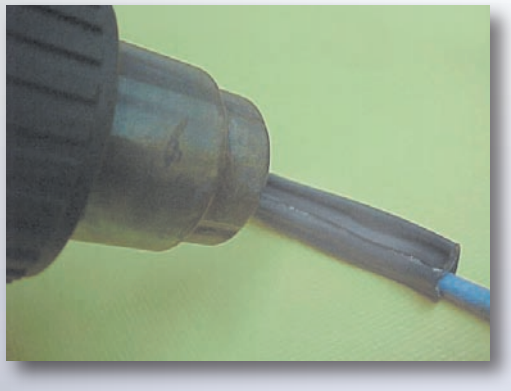
Repair Kit Part Numbers

Kit P/N:	Cable O.D.
PGALCP-1	0.040" – 0.075" (1.0mm - 1.8mm)
PGALCP-2	0.076" - 0.125" (1.9mm - 3.1mm)
PGALCP-3	0.126" – 0.174" (3.2mm - 4.3mm)
PGALCP-4	0.175" – 0.250" (4.4mm - 6.3mm)

Step #1

Cut a piece of the PGALCP heat shrink tubing long enough to extend a minimum of 1 inch (25 mm) beyond either end of the damaged area. Then wrap the tubing around the cable so the amber colored hot melt adhesive material is on the inside of the closed tubing and faces the cable. Peel back the paper release liner covering the adhesive on the outside of the tubing about halfway. Overlap the tubing so the edge without the adhesive covers the exposed adhesive, but does not extend beyond it!





Step #2

Rotate tubing so that the tubing's adhesive overlap area is positioned directly over the damaged cable area. Use a heat gun to recover the heat shrink **STARTING WITH THE OVERLAP AREA.** This part of the heat shrink is double thick and will require more heat to recover properly. Focus the heat on just the overlap area until it is recovered. Once the overlap is recovered heat the rest of the heat shrink and recover it. Do not use a heat reflector since it will recover the non-overlap area before the overlap is finished.



Step #3

Continue to apply heat slowly and evenly until adhesive starts to ooze out of each end. This assures that the heat shrink is sealed to the cable. Do **NOT** use solvents to remove excess adhesive. The final assembly should be smooth, and the seam should not have any gaps.

For Assistance in Europe – Please See the Back Cover For a Complete Listing of Our Branch Offices and Contact Numbers. • Specifications subject to change.

How to Fix

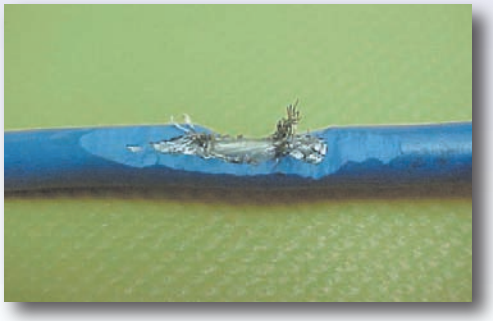
Adhesive Lined SHIELDED Cable Patch

Background

This kit is intended to repair cables where the shielding has been damaged **but not the primary conductors.**

Repair Kit Part Numbers

Kit P/N:	Cable O.D.	Contents
PG Shield Patch Kit-1	0.076" – 0.125" (1.9mm - 3.1mm)	6" of EMI Flexible Shielding Tape and PGALCP Heat Shrink Wrap Around Tubing
PG Shield Patch Kit-2	0.126" - 0.174" (3.2mm - 4.3mm)	
PG Shield Patch Kit-3	0.175" – 0.250" (4.4mm - 6.3mm)	





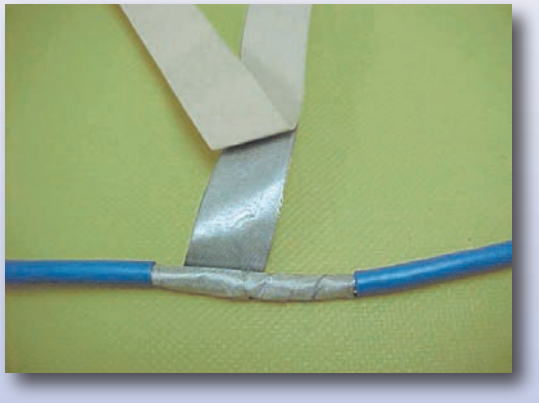
Step #1

Carefully remove the cable jacket. There should be approximately 1 inch (25 mm) of jacketing removed on each side.



Step #2

Broken strands can have sharp edges that can puncture the wire insulation. Fold back all of the broken wires over the undamaged part of the shield.



Step #3

Use the conductive fabric tape supplied in the kit to cover the gap in the shield. Start at one end of the exposed area and apply the adhesive side of the tape to the cable. Use a spiral wrap with 50% overlap.

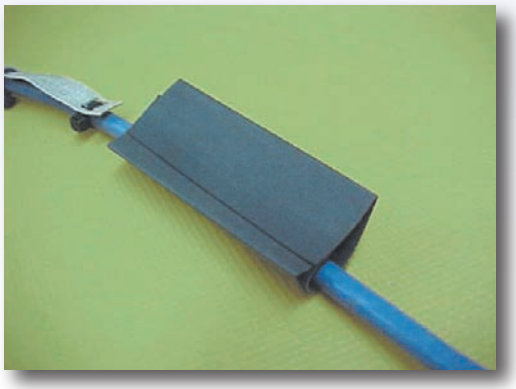
Adhesive Lined SHIELDED Cable Patch

How to Fix



Step #4

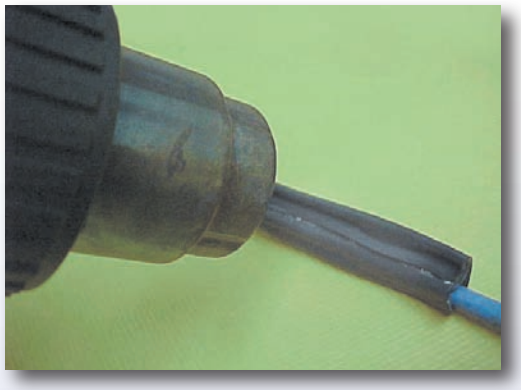
Cut a piece of the PGALCP heat shrink tubing long enough to extend a minimum of 1/2 inch (13 mm) beyond either end of the damaged area. Then wrap the tubing around the cable so the amber colored hot melt adhesive material is on the inside of the closed tubing and faces the cable.

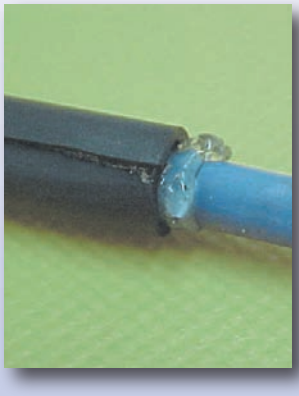


Peel back the paper release liner covering the adhesive on the outside of the tubing about halfway. Overlap the tubing so the edge without the adhesive covers the exposed adhesive, but does not extend beyond it!

Step #5

Rotate tubing so that the tubing's adhesive overlap area is positioned directly over the damaged cable area. Use a heat gun to recover the heat shrink **STARTING WITH THE OVERLAP AREA.** This part of the heat shrink is double thick and will require more heat to recover properly. Focus the heat on just the overlap area until it is recovered. Once the overlap is recovered heat the rest of the heat shrink and recover it. Do not use a heat reflector since it will recover the non-overlap area before the overlap is finished.





Step #6

Continue to apply heat slowly and evenly until adhesive starts to ooze out of each end. This assures that the heat shrink is sealed to the cable. **Do not use solvents to remove excess adhesive.** The final assembly should be smooth and the seam should not have any gaps.



Ingredients for Connector & Endbell Solutions



5015 Series
➥ Pages 43-96



26482 Series
➥ Pages 97-176



38999 Series
➥ Pages 177-212

Amphenol Industrial Threaded – AIT



AIT Series is a low cost, MIL-DTL-5015 threaded type connector for use in harsh environmental conditions. This popular, cylindrical connector is particularly well suited to commercial applications where a low cost, yet rugged connector is required. Over 286 contact layouts are available from 1 to 85 circuits and up to 150 amps per contact. The standard MIL-DTL-5015 layouts allow the mixing of power and signal contacts, power only, or signal only. Contacts are available in solder, crimp, or PC terminations covering wire gauges from size 24 to size 0 AWG. Thermocouple (J, Y, K, T) and coax contacts are also available. These connectors are completely sealed to withstand moisture, condensation, vibration, and flash-over across a broad range of wire diameters. When the two connector halves are mated, the rear-sealing grommet along with a dynamic interfacial seal at the front, create an environmentally sealed assembly.

Applications

Military, Industrial and Commercial environments requiring extreme reliability, high power handling and low cost.

- Power Generators
- Engines
- Sensors
- Motion Control
- Off-road Vehicles
- Earth Moving Equipment
- Ships
- Mobile Equipment
- Industrial Machinery
- Telecommunications

Features

Agency Approvals

MIL-DTL-5015 (MIL-C-5015)

Broad Temperature Range

These connectors will operate in temperatures ranging from -67°F to +257°F (-55°C to +125°C) under extremely harsh conditions.

Environmental

These connectors will perform in the full range of operating conditions as defined in MIL-DTL-5015 and are recommended for conditions where vibration, moisture, pressure and/or temperature are extreme.

Resilient Insulator

A resilient neoprene insulator provides a liquid-tight assembly.

Rugged Shell

The rugged aluminum alloy shell and hardware are light in weight yet highly resistant to damage and corrosion. Shells are available in 5 different styles and in 19 sizes.

Wide Range of Wire Gauges and Current Carrying Capacity

Up to 150 amps for standard military contacts and up to 255 amps using Radsok contacts. Wire gauges from 24 to size 0 AWG.

Wide Variety of Contacts

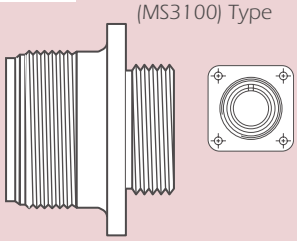
Machined contacts with silver or gold plating are available in sizes from 16 through 0. Solder, Crimp, PC, and Thermocouple contacts are available.

AIT – Amphenol Industrial Threaded

STEP 1
Choose Shell Style: Receptacle or Plug
(See Connector Solutions Guide)

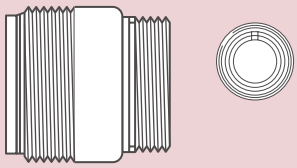
Wall Mount Receptacle
with Accessory Threads (MS3100) Type

AIT0



Cable Mount Receptacle
with Accessory Threads (MS3101) Type

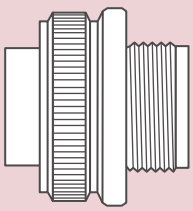
AIT1



mates with

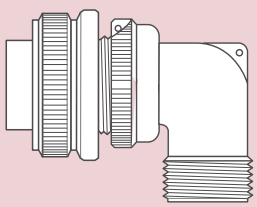
Straight Plug (MS3106) Type

AIT6



Right Angle Plug
not available in shell sizes 8, 32, or 36
not used with RU endbell option

AIT8



STEP 2 Choose Endbell



Potted

- **U** = Unshielded
- **US** = with shielding spring
- **UT** = with shielding tape
- **UW** = with shielding tape & spring

For use with grommets (wire seals)

- **D** = Unshielded
- **DS** = with shielding spring
- **DT** = with shielding tape
- **DW** = with shielding tape & spring

RU Right Angle

NEW!



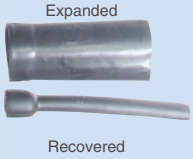
Call for more info

STEP 3 Choose Heat Shrink Boot or Tubing

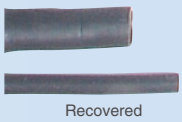
Note: Cable outside diameter must be between expanded and recovered dimensions.

Boot options

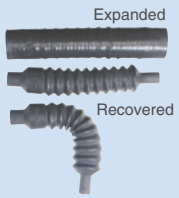
SB – Straight Boot



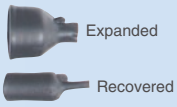
HST – Heat Shrink Tubing



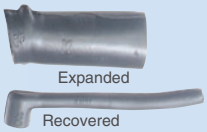
CSB – Convoluted Shrink Boot



BSB/HBSB – Bottle Shaped Shrink Boot
(High Ratio Bottle Shaped Boot)



RSB – Right Angle Shrink Boot



Most Popular

Heat Shrink Product	SB 1	SB 2	SB 3	SB 4	SB 5	SB 6	SB 7	SB 8	HST 1	HST 2	HST 3	HST 4
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	1.72 (43.7)	1.97 (50.3)	2.47 (62.7)	0.750 (19.1)	1.000 (25.4)	1.250 (31.8)	1.570 (39.9)
Recovered ID inch (mm)	0.25 (6.4)	0.29 (7.4)	0.33 (8.4)	0.38 (9.7)	0.41 (10.4)	0.44 (11.2)	0.51 (13.0)	0.67 (17.0)	0.250 (6.4)	0.320 (8.1)	0.416 (10.6)	0.510 (13.0)
Length Max inch (mm)	4.17 (105.9)	4.77 (121.2)	5.46 (138.7)	6.28 (159.5)	7.00 (177.8)	8.00 (203.2)	8.00 (203.2)	8.00 (203.2)	6.00 (152.4)			
Shell Size 8S	◆											
10SL	◆								◆			
12/12S	◆								◆			
14/14S		◆	◆							◆		
16/16S			◆	◆							◆	
18			◆	◆								◆
20				◆								◆
22				◆								◆
24					◆	◆						◆
28					◆	◆						◆
32					◆	◆	◆					◆
36							◆					
40								◆				

adhesive lined heat shrink tubing

Heat Shrink Product	CSB2	CSB3	CSB4	CSB5	BSB1	HBSB2	BSB2	BSB3	BSB4	BSB5	BSB6	BSB7
Expanded ID inch (mm)	0.70 (17.8)	1.06 (26.9)	1.44 (36.6)	1.80 (45.7)	0.94 (23.9)	0.35 (8.9)	1.18 (30.0)	1.22 (31.0)	1.42 (36.1)	1.69 (42.9)	2.36 (59.9)	2.00 (50.8)
Recovered ID inch (mm)	0.32 (8.1)	0.50 (12.7)	0.69 (17.5)	0.88 (22.4)	0.24 (6.1)	0.14 (3.6)	0.24 (6.1)	0.28 (7.1)	0.33 (8.4)	0.39 (9.9)	0.63 (16.0)	0.67 (17.0)
Length Max inch (mm)	5.25 (133.4)	5.75 (146.1)	6.25 (158.8)	6.75 (171.5)	1.50 (38.1)	2.17 (55.1)	2.17 (55.1)	2.64 (67.1)	3.15 (80.0)	3.90 (99.1)	5.12 (130.0)	6.73 (170.9)
Shell Size 8S	◆											
10SL	◆				◆	◆	◆					
12/12S	◆				◆	◆	◆					
14/14S		◆			◆	◆	◆	◆	◆			
16/16S		◆	◆				◆	◆	◆			
18		◆	◆				◆	◆	◆			
20		◆	◆					◆	◆			
22		◆	◆						◆			
24			◆	◆						◆		
28			◆	◆						◆		
32			◆	◆						◆	◆	
36											◆	
40											◆	◆

Heat Shrink Product	RSB1	RSB2	RSB3	RSB4	RSB5	RSB6	RSB7	RSB8
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	1.72 (43.7)	1.97 (50.0)	2.47 (62.7)
Recovered ID Inch (mm)	0.23 (5.8)	0.26 (6.6)	0.30 (7.6)	0.35 (8.9)	0.37 (9.4)	0.44 (11.2)	0.51 (13.0)	0.69 (17.5)
Length Max inch (mm)	4.14 (105.2)	4.88 (124.0)	5.76 (146.3)	6.78 (172.2)	7.29 (185.2)	8.41 (213.6)	8.84 (224.5)	8.95 (227.3)
Shell Size 8S	◆							
10SL	◆	◆						
12/12S	◆	◆						
14/14S		◆	◆	◆				
16/16S			◆	◆				
18				◆				
20				◆				
22					◆	◆		
24					◆	◆		
28					◆	◆		
32					◆	◆	◆	
36							◆	
40								◆

Amphenol Industrial Threaded – AIT

STEP 2 Choose Endbell



NEW!



CG = Straight Adapter Endbell

RG = Right Angle Adapter Endbell

Please call for more information

STEP 3 Choose Conduit Adapter or Cord Grip

Unshielded Conduits



CA* = conduit adapter for plastic flexible conduit. Add size code i.e. CGCA10

Note: Normal recommended conduit fill is 40% of Conduit ID or less.

Size Code		07	10	12	14	17	23	29	36
Conduit ID Inch (mm)		0.256 (6.5)	0.394 (10.0)	0.472 (12.0)	0.563 (14.3)	0.650 (16.5)	0.906 (23.0)	1.142 (29.0)	1.417 (36.0)
Conduit OD Inch (mm)		0.394 (10.0)	0.512 (13.0)	0.622 (15.8)	0.728 (18.5)	0.835 (21.2)	1.122 (28.5)	1.358 (34.5)	1.673 (42.5)
Shell Size	8S	◆	◆						
	10SL	◆	◆						
	12/12S	◆	◆	◆					
	14/14S	◆	◆	◆	◆	◆			
	16/16S			◆	◆	◆	◆		
	18			◆	◆	◆	◆		
	20			R		R	◆		
	22			R		R	◆		
	24			R		R	◆		
	28			R		R	R	◆	
	32			R		R	R	◆	
	36							R	◆
	40							R	◆

OR Shielded Cord Grip



R = with reducer

Shell Size	Size Code	MSS*	1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm	4 Min mm	4 Max mm
	8S	◆	4.0	6.0	6.0	9.5	-	-	-	-
	10SL	◆	4.0	6.5	6.5	9.5	8.0	10.5	-	-
	12/12S	◆	6.5	9.5	8.0	10.5	9.0	13.0	-	-
	14/14S	◆	6.5	9.5	7.0	10.5	9.0	13.0	-	-
	16/16S	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	18	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	20	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	22	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	24	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	28	◆	20.0	25.0	24.0	28.0	17.0	32.0	29.0	34.0
	32	◆	20.0	25.0	24.0	28.0	17.0	32.0	29.0	34.0
	36	◆	24.0	28.0	29.0	34.0	-	-	-	-
	40	◆	24.0	28.0	29.0	34.0	-	-	-	-

Conduit Adapter and Cord Grip Types

CA*= Conduit Adapter
MSS*= Metal Short Shielded - Nickel Plated Brass
PF*= Plastic with Flex Spring
PS*= Plastic Short
MS*= Metal Short - Nickel Plated Brass
PL*= Plastic Long
ML*= Metal Long - Nickel Plated Brass
*= add size code per chart i.e. CGPFA or CGMSS4

Min/Max refers to cable diameter.

Note: Cable jacket and shield diameters must be between Min/Max of cord grip.

For detailed info on shield diameters, see MSS table on page 232.

OR Unshielded Cord Grip



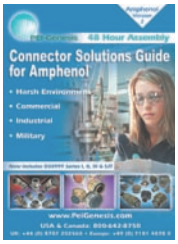




Shell Size	PF*	PS*	MS*	Size Code A Min mm	A Max mm	R Min mm	R Max mm	PL*	ML*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm
8S	◆	◆	◆	3.0	6.5	2.0	5.0			-	-	-	-	-	-
10SL	◆	◆	◆	4.0	8.0	2.0	6.0	◆	◆	4.0	6.5	7.5	9.5	-	-
12/12S	◆	◆	◆	5.0	10.0	3.0	7.0	◆	◆	6.5	9.5	7.0	10.5	-	-
14/14S	◆	◆	◆	6.0	12.0	5.0	9.0	◆	◆	6.5	9.5	8.5	10.5	-	-
16/16S	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
18	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
20	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
22	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
24	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
28		◆	◆	18.0	25.0	12.0	20.0	◆	◆	17.0	21.0	21.0	25.0	-	-
32		◆	◆	18.0	25.0	12.0	20.0	◆	◆	17.0	21.0	21.0	25.0	-	-
36		◆	◆	22.0	32.0	20.0	26.0			-	-	-	-	-	-
40		◆	◆	22.0	32.0	20.0	26.0			-	-	-	-	-	-

STEP 4 Choose Connector Layout

See Connector Solutions Guide



STEP 5 Choose Contact

P = Pin
S = Socket

STEP 6 Choose Rotation

(omit for normal)

W X Y Z

STEP 7 Choose Contact Type

S = Solder
C = Crimp
0 = Less contacts

STEP 8 Choose Platings/ Modifications

CONTACTS

Omit = Silver plated contacts
B30 = Gold 50µ Gold over Nickel

SHELLS

Standard Plating = Conductive olive drab chromate over cadmium

023 = Conductive Nickel (RoHS✣ with crimp contacts)
025 = Non-Conductive Black Zinc (RoHS✣ with crimp contacts)
027 = Conductive Black Zinc (RoHS✣ with crimp or 116 contacts)
116 = Solder Style Contacts less Pretinned Solder Cups
472 = 116 + 025 (RoHS✣)
548 = 116 + 023 (RoHS✣)
G96 = Non-Conductive Anodized✦

MATERIALS

Omit = Standard Neoprene

For Low Smoke, Zero Halogen, High Temperature Viton®, and other materials call.

Note: ✦ Endbells U & CG will be Black Anodized.
✣ As reported by Amphenol, please call for more info.

Example of part description:

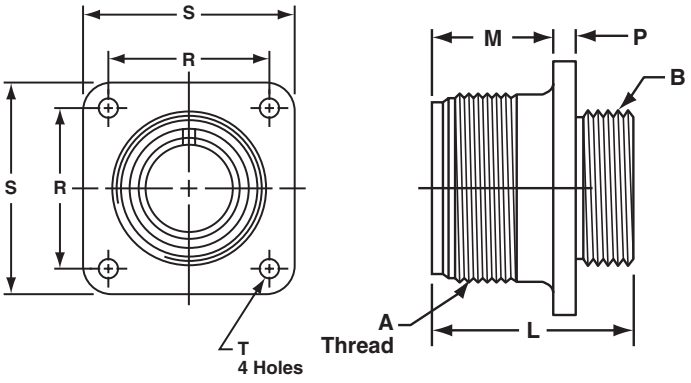
AIT1	CG	PFR-	10SL-3	P		S	-B30-023
1 Shell Style	2 Endbells/ Shielding	3 Wire Protection	4 Connector Layout	5 Contact	6 Rotation	7 Contact Type	8 Platings/ Modifications

(See Connector Solutions Guide)

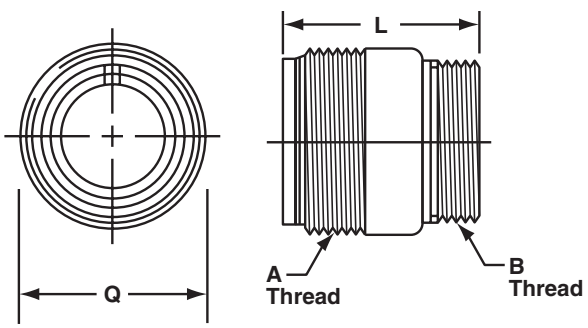
AIT – Dimensions

Receptacle Styles

AIT0

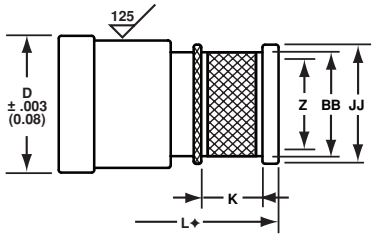


AIT1

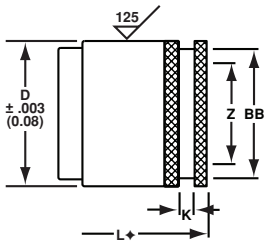


	AIT0						AIT1	AIT1	AIT0/AIT1
Shell Size	A Thread Class 2A	M +.010 -.000	P REF.	R ±.005	S ±0.31	T Diameter Ø +.004 -.002	L	Q Diameter	B Thread Class 2A
8S	.5000-28UNEF	0.562 (14.3)	0.110 (2.8)	0.594 (15.1)	0.875 (22.2)	0.120 (3.0)	1.087 (27.6)	0.532 (13.5)	.5000-28UNEF
10S	.6250-24UNEF	0.562 (0.6)	0.110 (2.8)	0.719 (18.3)	1.000 (25.4)	0.120 (3.0)	1.087 (27.6)	0.628 (16.0)	.5000-28UNEF
10SL	.6250-24UNEF	0.562 (0.6)	0.110 (2.8)	0.719 (18.3)	1.000 (25.4)	0.120 (3.0)	1.087 (27.6)	0.755 (19.2)	.6250-24UNEF
12S	.7500-20UNEF	0.562 (14.3)	0.110 (2.8)	0.812 (20.6)	1.094 (27.8)	0.120 (3.0)	1.087 (27.6)	0.755 (19.2)	.6250-24UNEF
12	.7500-20UNEF	0.750 (19.1)	0.110 (2.8)	0.812 (20.6)	1.094 (27.8)	0.120 (3.0)	1.334 (33.9)	0.755 (19.2)	.6250-24UNEF
14S	.8750-20UNEF	0.562 (14.3)	0.110 (2.8)	0.906 (23.0)	1.188 (30.2)	0.120 (3.0)	1.087 (27.6)	0.882 (22.4)	.7500-20UNEF
14	.8750-20UNEF	0.750 (19.1)	0.110 (2.8)	0.906 (23.0)	1.188 (30.2)	0.120 (3.0)	1.334 (33.9)	0.882 (22.4)	.7500-20UNEF
16S	1.0000-20UNEF	0.562 (14.3)	0.110 (2.8)	0.969 (24.6)	1.281 (32.5)	0.120 (3.0)	1.087 (27.6)	1.010 (25.7)	.8750-20UNEF
16	1.0000-20UNEF	0.750 (19.1)	0.110 (2.8)	0.969 (24.6)	1.281 (32.5)	0.120 (3.0)	1.334 (33.9)	1.010 (25.7)	.8750-20UNEF
18	1.1250-18NEF	0.750 (19.1)	0.141 (3.6)	1.062 (27.0)	1.375 (34.9)	0.120 (3.0)	1.334 (33.9)	1.137 (28.9)	1.0000-20UNEF
20	1.1250-18NEF	0.750 (19.1)	0.141 (3.6)	1.156 (29.4)	1.500 (38.1)	0.120 (3.0)	1.334 (33.9)	1.264 (32.1)	1.1875-18NEF
22	1.3750-18NEF	0.750 (19.1)	0.141 (3.6)	1.25 (31.8)	1.625 (41.3)	0.120 (3.0)	1.334 (33.9)	1.392 (35.4)	1.1875-18NEF
24	1.5000-18NEF	0.812 (20.6)	0.141 (3.6)	1.375 (34.9)	1.750 (44.5)	0.147 (3.7)	1.406 (35.7)	1.519 (38.6)	1.4375-18NEF
28	1.7500-18NS	0.812 (20.6)	0.141 (3.6)	1.562 (39.7)	2.000 (50.8)	0.147 (3.7)	1.406 (35.7)	1.774 (45.1)	1.4375-18NEF
32	2.0000-18NS	0.875 (22.2)	0.156 (4.0)	1.75 (44.5)	2.250 (57.2)	0.173 (4.4)	1.469 (37.3)	1.996 (50.7)	1.7500-18NS
36	2.2500-16UN	0.875 (22.2)	0.156 (4.0)	1.938 (49.2)	2.500 (63.5)	0.173 (4.4)	1.469 (37.3)	2.251 (57.2)	2.0000-18NS
40	2.7500-16UN	0.875 (22.2)	0.156 (4.0)	2.188 (55.6)	2.750 (69.9)	0.173 (4.4)	1.469 (37.3)	2.506 (63.7)	2.2500-16UN

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	**L✦ Max**	**DØ**	**K Max**	**ZØ Cable Max***	**BBØ Max**	**JJØ Max**	**C Code**
8S	2.419 (61.4)	0.740 (18.8)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10S	Call	-	-	-	-	-	-
10SL	2.427 (61.6)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12S	2.581 (64.0)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.588 (14.9)	B
12	Call	-	-	-	-	-	-
14S	2.424 (61.6)	0.865 (22.0)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	Call	-	-	-	-	-	-
16S	2.514 (63.9)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
16	2.761 (70.1)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
18	2.874 (73.0)	1.146 (29.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
20	2.984 (75.8)	1.271 (32.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
22	2.933 (74.5)	1.428 (36.3)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
24	3.108 (78.9)	1.552 (39.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
28	3.187 (80.9)	1.740 (44.2)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
32	3.745 (95.1)	2.118 (53.8)	0.476 (12.1)	1.125 (28.6)	1.417 (36.0)	1.536 (39.0)	-
36	3.628 (92.2)	2.291 (58.2)	0.476 (12.1)	1.238 (31.5)	1.542 (39.2)	1.661 (42.2)	-
40	3.846 (97.7)	2.520 (64.0)	0.476 (12.1)	1.463 (37.1)	1.792 (45.5)	1.911 (48.5)	-



Cord Grip						
Shell Size	**L✦ Max**	**DØ**	**K Max**	**ZØ Cable Max***	**BBØ Max**	**C Code**
8S	2.085 (52.1)	0.740 (18.8)	0.118 (3.0)	0.330 (8.4)	0.583 (14.8)	B
10S	Call -	- -	- -	- -	- -	- -
10SL	2.085 (53.0)	0.865 (22.0)	0.118 (3.0)	0.376 (9.5)	0.707 (18.0)	C
12S	2.097 (53.3)	0.990 (25.2)	0.118 (3.0)	0.376 (9.5)	0.833 (21.2)	D
14S	2.097 (53.3)	0.990 (25.2)	0.118 (3.0)	0.475 (12.1)	0.887 (22.6)	D
16S	2.246 (57.0)	1.146 (29.1)	0.118 (3.0)	0.581 (14.8)	0.989 (25.1)	E
16	2.493 (63.3)	1.146 (29.1)	0.118 (3.0)	0.581 (14.8)	0.989 (25.1)	E
18	2.513 (63.8)	1.271 (32.3)	0.118 (3.0)	0.687 (17.5)	1.114 (28.3)	F
20	2.623 (66.6)	1.428 (36.3)	0.118 (3.0)	0.787 (20.0)	1.270 (32.3)	G
22	2.623 (66.6)	1.428 (36.3)	0.118 (3.0)	0.875 (22.2)	1.270 (32.3)	G
24	2.636 (67.0)	1.552 (39.4)	0.118 (3.0)	0.958 (24.3)	1.395 (35.4)	H
28	2.695 (69.8)	1.820 (46.2)	0.118 (3.0)	1.113 (28.3)	1.661 (42.2)	-
32	2.801 (71.1)	2.055 (52.2)	0.118 (3.0)	1.226 (32.2)	1.898 (48.2)	-
36	2.852 (72.4)	2.291 (58.2)	0.118 (3.0)	1.605 (40.8)	2.130 (54.2)	-
40	2.974 (75.5)	2.520 (64.0)	0.118 (3.0)	1.620 (41.2)	2.362 (60.0)	-

✦ L is the maximum reference length from the mating face of the connector

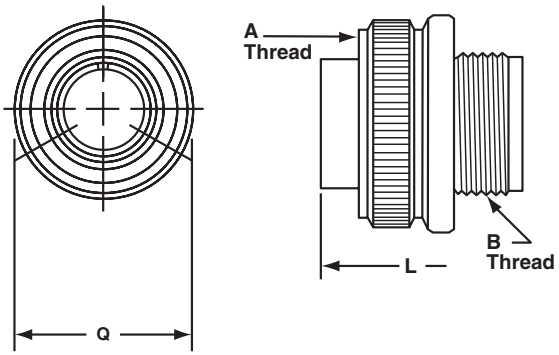
* Recommended cable maximum is 90% of actual endbell I.D.

All dimensions in inches (millimeters in parenthesis)

AIT – Dimensions

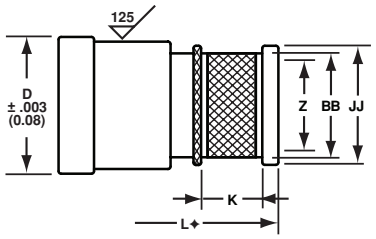
Style 6 Plugs (Barrel Assembly)

AIT6



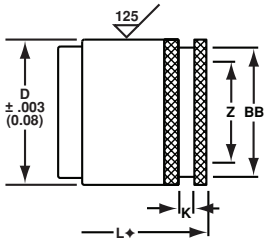
Shell Size	A Thread Class 2B	Q Diameter Max	Barrel B Thread Class 2A
8S	.5000-28UNEF	0.741 (18.8)	.5000-28UNEF
10S	.6250-24NEF	0.869 (22.1)	.5000-28UNEF
10SL	.6250-24NEF	0.946 (24.0)	.6250-24UNEF
12S	.7500-20UNEF	0.995 (25.3)	.6250-24UNEF
12	.7500-20UNEF	0.955 (24.3)	.6250-24UNEF
14S	.8750-20UNEF	1.123 (28.5)	.7500-20UNEF
14	.8750-20UNEF	1.123 (28.5)	.7500-20UNEF
16S	1.0000-20UNEF	1.250 (31.8)	.8750-20UNEF
16	1.0000-20UNEF	1.250 (31.8)	.8750-20UNEF
18	1.1250-18NEF	1.333 (33.9)	1.0000-20UNEF
20	1.1250-18NEF	1.461 (37.1)	1.1250-18UNEF
22	1.3750-18NEF	1.588 (40.3)	1.2500-18UNEF
24	1.5000-18NEF	1.715 (43.6)	1.3750-18UNEF
28	1.7500-18NS	1.968 (50.0)	1.6250-18UNEF
32	2.0000-18NS	2.209 (56.1)	1.8750-16UN
36	2.2500-16UN	2.463 (62.6)	2.0625-16UN
40	2.7500-16UN	2.719 (69.1)	2.3125-16UN

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink

Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	JJØ Max	C Code
8S	2.380 (60.5)	0.553 (14.0)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10S	Call	-	-	-	-	-	-
10SL	2.422 (61.5)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12S	2.521 (64.0)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.588 (14.9)	B
12	Call	-	-	-	-	-	-
14S	2.407 (61.1)	0.865 (22.0)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	Call	-	-	-	-	-	-
16S	2.407 (61.1)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
16	2.761 (70.1)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
18	3.012 (76.5)	1.146 (29.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
20	3.012 (76.5)	1.271 (32.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
22	3.012 (76.5)	1.428 (36.3)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
24	3.198 (81.2)	1.552 (39.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
28	3.257 (82.7)	1.740 (44.2)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
32	3.791 (96.3)	1.990 (50.6)	0.476 (12.1)	1.125 (28.6)	1.417 (36.0)	1.536 (39.0)	-
36	3.674 (93.3)	2.291 (58.2)	0.476 (12.1)	1.238 (31.5)	1.542 (39.2)	1.661 (42.2)	-
40	3.882 (98.6)	2.520 (64.0)	0.476 (12.1)	1.463 (37.1)	1.792 (45.5)	1.911 (48.5)	-



Cord Grip

Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	C Code
8S	2.050 (52.1)	0.740 (18.8)	0.118 (3.0)	0.330 (8.4)	0.583 (14.8)	B
10S	Call	-	-	-	--	
10SL	2.018 (51.3)	0.865 (22.0)	0.118 (3.0)	0.376 (9.5)	0.707 (18.0)	C
12S	2.030 (51.6)	0.990 (25.2)	0.118 (3.0)	0.376 (9.5)	0.833 (21.2)	D
14S	2.030 (51.6)	0.990 (25.2)	0.118 (3.0)	0.475 (12.1)	0.887 (22.6)	D
16S	2.179 (55.3)	1.146 (29.1)	0.118 (3.0)	0.581 (14.8)	0.989 (25.1)	E
16	2.555 (64.9)	1.146 (29.1)	0.118 (3.0)	0.581 (14.8)	0.989 (25.1)	E
18	2.575 (65.4)	1.271 (32.3)	0.118 (3.0)	0.687 (17.5)	1.114 (28.3)	F
20	2.685 (68.2)	1.428 (36.3)	0.118 (3.0)	0.787 (20.0)	1.270 (32.3)	G
22	2.685 (68.2)	1.428 (36.3)	0.118 (3.0)	0.875 (22.2)	1.270 (32.3)	G
24	2.685 (68.2)	1.552 (39.4)	0.118 (3.0)	0.958 (24.3)	1.395 (35.4)	H
28	2.748 (69.8)	1.820 (46.2)	0.118 (3.0)	1.113 (28.3)	1.661 (42.2)	-
32	2.847 (72.3)	2.055 (52.2)	0.118 (3.0)	1.226 (32.2)	1.898 (48.2)	-
36	2.898 (73.6)	2.291 (58.2)	0.118 (3.0)	1.605 (40.8)	2.130 (54.2)	-
40	3.010 (76.5)	2.520 (64.0)	0.118 (3.0)	1.620 (41.2)	2.362 (60.0)	-

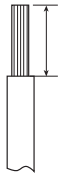
✦ L is the maximum reference length from the mating face of the connector

* Recommended cable maximum is 90% of actual endbell I.D.

All dimensions in inches (millimeters in parenthesis)

AIT – Contacts

Pin & Socket Crimp Contacts

Pin Contact	Socket Contact	Wire Strip Lengths	Wire Range
			

Contact Size	Wire Size	Part Number					Wire Strip Lengths Inches (mm)	Wire Sealing Lengths Inches (mm)
		Pin Contact		Socket Contact				
		Silver	Gold	Silver	Gold			
16S†	16-18-20	**AIC16S-16P**	**AIC16S-16PG**	**AIC16S-16S**	**AIC16S-16SG**		.312 (7.9)	.090-.118 (2.3-3.0)
	12-14	AIC16S-12P	AIC16S-12PG	AIC16S-12S	AIC16S-12SG	C4		
	14-16	AIC16S-14P	AIC16S-14PG	AIC16S-14S	AIC16S-14SG	C3		
	18-20	AIC16S-20P	AIC16S-20PG	AIC16S-20S	AIC16S-20SG	C13		
	20-22	AIC16S-22P	AIC16S-22PG	AIC16S-22S	AIC16S-22SG	C14		
	22-24	AIC16S-24P	AIC16S-24PG	AIC16S-24S	AIC16S-24SG	C2		
16	16-18-20	**AIC16-16P**	**AIC16-16PG**	**AIC16-16S**	**AIC16-16SG**			
	12-14	AIC16-12P	AIC16-12PG	AIC16-12S	AIC16-12SG	C4		
	14-16	AIC16-14P	AIC16-14PG	AIC16-14S	AIC16-14SG	C3		
	18-20	AIC16-18P	AIC16-18PG	AIC16-18S	AIC16-18SG	C13		
	20-22	AIC16-20P	AIC16-20PG	AIC16-20S	AIC16-20SG	C14		
	20-24	AIC16-2024P	AIC16-2024PG	AIC16-2024S	AIC16-2024SG	C36		
	22-24	AIC16-22P	AIC16-22PG	AIC16-22S	AIC16-22SG	C2		
12	12-14	**AIC12-12P**	**AIC12-12PG**	**AIC12-12S**	**AIC12-12SG**		.312 (7.9)	.126-.177 (3.2-4.5)
	12 High Power	-	-	AIC12-12SRAD	-			
	8-10	AIC12-8P	AIC12-8PG	AIC12-8S	AIC12-8SG	C5		
	10-12	AIC12-10P	AIC12-10PG	AIC12-10S	AIC12-10SG	C8		
	14-16	AIC12-14P	AIC12-14PG	AIC12-14S	AIC12-14SG	C9		
	16-18	AIC12-16P	AIC12-16PG	AIC12-16S	AIC12-16SG	C7		
	18-20	AIC12-18P	AIC12-18PG	AIC12-18S	AIC12-18SG	C6		
	20-22	AIC12-20P	AIC12-20PG	AIC12-20S	AIC12-20SG	C40		
8	8	**AIC8-8P**	**AIC8-8PG**	**AIC8-8S**	**AIC8-8SG**		.563 (14.3)	.150-.256 (3.8-6.5)
	8 High Power	-	-	AIC8-8SRAD	-			
	10-12	AIC8-10P	AIC8-10PG	AIC8-10S	AIC8-10SG	C10		
	12-14	AIC8-12P	AIC8-12PG	AIC8-12S	AIC8-12SG	C38		
4	4	**AIC4-4P**	**AIC4-4PG**	**AIC4-4S**	**AIC4-4SG**		.500 (12.7)	.279-.366 (7.1-9.3)
	4 High Power	-	-	AIC4-4SRAD	-			
	8	AIC4-8P	AIC4-8PG	AIC4-8S	AIC4-8SG	C15		
0	0	**AIC0-0P**	**AIC0-0PG**	**AIC0-0S**	**AIC0-0SG**		.750 (19.0)	.394-.539 (10.0-13.7)
	0 High Power	-	-	AIC0-0SRAD	-			
	0-2	AIC0-2P	AIC0-2PG	AIC0-2S	AIC0-2SG	C11		
	4	AIC0-4P	AIC0-4PG	AIC0-4S	AIC0-4SG	C12		

Bolded items are standard crimp contacts

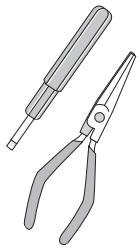
Solder Thermocouple Contacts			
	Type	Pins	Sockets
16S†	Alumel	10-040799-02P*	10-040799-02S*
	Chromel	10-040799-01P*	10-040799-01S*
	Iron	10-040799-03P*	10-040799-03S*
	Constantan	10-040799-04P*	10-040799-04S*
16	Alumel	10-040799-12P*	10-040799-12S*
	Chromel	10-040799-11P*	10-040799-11S*
	Iron	10-040799-13P*	10-040799-13S*
	Constantan	10-040799-14P*	10-040799-14S*

Solder Thermocouple Contacts			
	Type	Pins	Sockets
12	Alumel	10-040799-42P*	10-040799-42S*
	Chromel	10-040799-41P*	10-040799-41S*
	Iron	10-040799-43P*	10-040799-43S*
	Constantan	10-040799-44P*	10-040799-44S*

Thermocouple Types: J = Iron-Constantan K = Alumel-Chromel
T = Copper-Constantan E = Chromel-Constantan

*Call for availability

† 16S contacts are used in 8S, 10S, 10SL, 12S, 14S and 16S connector sizes only.

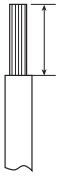
Accessories	Tools						
 Head goes in first, trim excess.						
Wire Hole Filler (Color)	**Crimp Tools**	**Crimp Locator & Die Sets**	**Locator Color**	**Pilot Pin/Insertion Guide for Sockets**	**Insertion Tool**	**Extraction Tool**
MS27488-16-3 (Blue)	AF8 (hand) WA27F (pneumatic) ††	TH29-1	Red	10-242758-016	DAK168-16	DRK59 Kit with Multiple Tips
			Pin-Blue Socket-Green			
MS27488-12-3 (Yellow)			Green	10-242758-012	DAK168-12	
MS27488-8-3 (White)	400BHD	**Die Set** 414DA-8N **Locator** 4025-Pin 4026-Socket	-	10-242758-008	DAK282	
MS27488-4-3 (Blue)		**Die Set** 414DA-4N **Locator** 4043	-	-	AIC4INS	AIC4EXT
MS27488-0-3 (Yellow)		**Die Set** 414DA-0N **Locator** 4042	-	-	AIC0INS	AIC0EXT

†† Call for additional tool accessories.

All dimensions in inches (millimeters in parenthesis)

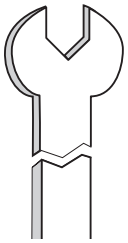
AIT – Contacts

Pin & Socket Coax Contacts

	Coax Pin	Coax Socket	Wire Strip Length	Wire Range	Accessories
					 Head goes in first, trim excess.

Coax Contact Size	Coax Wire Size	Part Number				Wire Strip Lengths Inches (mm)	Wire Sealing Range Inches (mm)		Wire Hole Filler
		Pin Contact		Socket Contact					
		Silver	Gold	Silver	Gold		Min.	Max.	
12	RG161/U RG174A/U RG179B/U RG187A/U RG188A/U RG316/U	21-33034-1	21-33014-21 21-33048-1() 21-33130-1()	21-33033-1	21-33013-21 21-33047-1() 21-33129-1()	Call for details	0.126 (3.2 mm)	0.177 (4.5 mm)	Yellow 10-405996-12
	RG178B/U RG196A/U		21-33014-22		21-33013-22				
8	RG58C/U RG141A/U RG303/U	21-33034-2(1)	21-33014-1(5) 21-33016-5(3) 21-33130-2()	21-33033-2(1) 21-33048-2()	21-33013-1(5) 21-33047-2() 21-33015-5(3) 21-33129-2()	Call for details	0.150 (3.8 mm)	0.256 (6.5 mm)	White 10-405996-8
	RG59B/U RG62A/U RG62B/U RG210/U	31-33034-5(1)	21-33014-5(5) 21-33016-2(3) 21-33130-5() 21-33064-21()	21-33033-3(1)	21-33013-5(5) 21-33015-2(3) 21-33129-3() 21-33063-21()				
	RG161/U RG174A/U RG179B/U RG187A/U RG188A/U RG316/U	21-33034-3(1)	21-33014-3(5) 21-33016-1(3) 21-33130-3 () 21-33064-20()	21-33033-3(1)	21-33013-3(5) 21-33015-1(3) 21-33129-3() 21-33063-20()				
	RG180B/U RG195A/U	21-33034-6	21-33014-6(5) 21-33048-3() 21-33130-6()	21-33033-6	21-33013-(6) 21-33047-3() 21-33129-6()				
	RG140/U RG302/U	21-33034-8	21-33014-8(5) 21-33033-8 21-33130-8()		21-33013-8(5) 21-33129-8()				
	RG55B/U RG142A/U RG142B/U RG223/U	21-33034-4	21-33014-5(5) 21-33130-4()	21-33033-4	21-33013-5(5) 21-33129-4()				
4	RG59B/U RG62A/U RG62B/U RG210/U		21-33060-10()		21-33059-10()	Call for details	0.279 (7.1 mm)	0.366 (9.3 mm)	Blue 10-405996-4
	RG212/U		21-33060-11()		21-33059-11()				
	RG55B/U RG142A/U RG142B/U RG223/U		31-33060-12()		21-33059-12()				

( ) Various platings available. Availability of coax contacts varies widely. Call for details.
All dimensions in inches (millimeters in parenthesis)

	Tools				
	 M22520/10-01	 M22520/5-01	 Crimp Dies		
Coax Contact Size	**Coax Wire Size**	**Hand Crimp Tool**	**Crimp Die/Locator**	**Use Locator**	**Coax Clamp Nut Wrench**
12	RG161/U RG174A/U RG179B/U RG187A/U RG188A/U RG316/U	M22520/10-01	M22520/10-05	A	11-8676-1
	RG178B/U RG196A/U			B	
8	RG58C/U RG141A/U RG303/U	M22520/10-01	M22520/10-07	B	11-8676-2
	RG59B/U RG62A/U RG62B/U RG210/U	M22520/5-01	M22520/5-45	B	11-8676-3
	RG161/U RG174A/U RG179B/U RG187A/U RG188A/U RG316/U	M22520/10-01	M22520/10-05	A	11-8676-2
	RG180B/U RG195A/U		M22520/10-07	B	
	RG140/U RG302/U			A	
	RG55B/U RG142A/U RG142B/U RG223/U				
4	RG59B/U RG62A/U RG62B/U RG210/U	M22520/5-01	M22520/5-45	B	11-8676-4
	RG212/U	M22520/5-01	M22520/5-39	A	
	RG55B/U RG142A/U RG142B/U RG223/U	M22520/10-01	M22520/10-07	A	

AIT – At-A-Glance

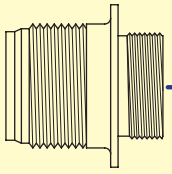
Name:
Company:
Email:
Phone:
Qty: EAU:

Additional Connector Information

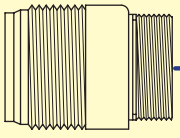
CONNECTOR Part #:_____
OR
# of Contacts:_____ Sizes & Type:_____

CABLE Manufacturer: _____
(If Known)
CABLE Part #: _____ OR Cable OD:_____

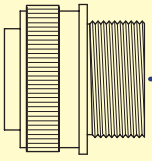
Choose One Connector



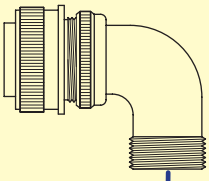
☐ AIT0
MS3100 Type
Wall Mount
Receptacle



☐ AIT1
MS3101 Type
Cable Mount
Receptacle



☐ AIT6
MS3106 Type
Standard Plug

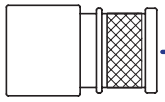


☐ AIT8
MS3108 Type
Right Angle
Plug

Not available in shell sizes 32 & 36

Choose One Endbell

Use endbell "U" for Menus A, B, C, D & E

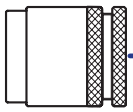


☐ U

- ☐ Omit for Unshielded
- ☐ S — Shielding Spring
- ☐ T — Shielding Tape
- ☐ W — Shielding Tape & Spring

Contact Termination
☐ Crimp ☐ Solder

Use endbell "CG" for Menus F, G & H



☐ CG

Comments/Notes:

_____
_____
_____
_____
_____
_____

Choose One Wire Protection

- ☐ HST — Heat Shrink Tubing
- ☐ SB — Straight Boot
- ☐ BSB — Bottle Shaped Shrink Boot
- ☐ HBSB — High Ratio Bottle Shaped Shrink Boot
- ☐ CSB — Convoluted Shrink Boot
- ☐ RSB — Right Angle Shrink Boot

- ☐ CA — Conduit Adapter & Conduit
- ☐ MSS — Metal Short Shielded
- ☐ PF — Plastic with flex Relief
- ☐ PS — Plastic Short
- ☐ MS — Metal Short
- ☐ PL — Plastic with Long Boot
- ☐ ML — Metal with Long Boot

ITT Cannon Threaded – CT



ITT Cannon Threaded connectors are designed and manufactured to MIL-DTL-5015 to operate in extreme environmental conditions. They were originally designed for aircraft, but have since found their way into a wide variety of commercial and military applications. These popular connector styles are well suited to commercial applications where a low cost, yet extremely rugged connector is required. Over 180 contact layouts are available from 1 to 65 positions and up to 150 Amps per contact. The standard MIL-DTL-5015 layouts allow the mixing of power and signal contacts, power only, or signal only. Contacts are available in solder, crimp, or PC termination covering wire gauges from size 20 to size 0 AWG. Thermocouple contacts (J, Y, K, T) are also available. These connectors are completely sealed to withstand moisture, condensation, vibration, and flash-over. When the two connector halves are mated, the rear sealing grommet plus the interfacial seal at the front create a completely sealed assembly.

Applications

Industrial environments requiring extreme environmental reliability and ease of mating and unmating, such as:

- Power Generators
- Battery Systems
- Engines
- Sensors
- Motion Control
- Off-road Vehicles
- Earth Moving Equipment
- Ships
- Railroad Equipment
- Any Mobile Equipment
- Industrial Machinery
- Telecommunications

Features

Full Military Temperature Range

CT connectors will operate in temperatures from -55° to +125°C (-67° to +257°F) under the harshest possible conditions.

Wide Range of Wire Gauges and Current Carrying Capability

Up to 245 amps with wire gauges from size 20 up to size 0 AWG wire.

Wide Variety of Contacts

High reliability screw machine contacts with silver or gold plating are available in sizes from 20 through 0 to accommodate wire gauges from 24 to 0 AWG. Solder, crimp, PC, and Thermocouple contacts are available.

Rugged Shell

Aluminum alloy shell and hardware create a rugged connector with minimal weight. These connectors have been used extensively in the military and have proven their reliability. The primary applications are now in industry where these connectors are widely used when reliability coupled with low cost is critical.

Standard Shielding Interface

CT connectors meet and/or exceed the requirements for MIL-DTL-5015 E/F/R styles of connectors. The threaded coupling provides superior EMI/RFI shielding without the need for special grounding spring components. The threaded coupling nuts are used extensively in robotic applications where connector/cables rock continually. The standard CT coupling nut has holes for lock wires for high vibration or security applications.

Sealed Receptacles

All CT solder receptacles have inserts and contacts bonded in place in accordance to the MIL-DTL-5015 specifications. These receptacles are sealed and their air leakage rate is not greater than one atmospheric cubic inch per hour (4.55 x 10-3 cubic centimeters per second) through the interface. Gaskets and seal screws are used to seal the panel and protect from leaks around the connectors.

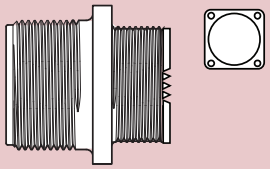
ITT
Engineered for life

For Assistance in Europe – Please See the Back Cover For a Complete Listing of Our Branch Offices and Contact Numbers. • Specifications subject to change.

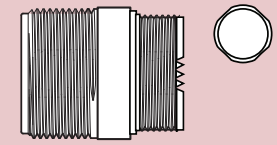
CT – ITT Cannon Threaded

STEP 1
Choose Shell Style: Receptacle or Plug
(See Connector Solutions Guide)

Wall Mount Receptacle
CT0

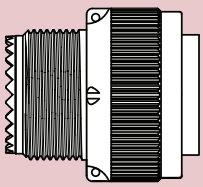


Cable Mount Receptacle
CT1



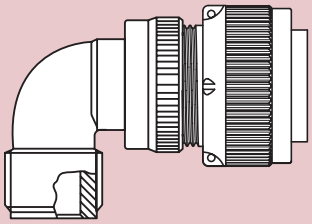
mates with

Standard Plug
CT6



Right Angle Plug
not available in shell sizes 8, 32, or 36

CT8



STEP 2 Choose Endbell



- **U** = Unshielded
- **US** = with shielding spring
- **UT** = with shielding tape
- **UW** = with shielding tape & spring

For use with grommets (wire seals)

- **D** = Unshielded
- **DS** = with shielding spring
- **DT** = with shielding tape
- **DW** = with shielding tape & spring

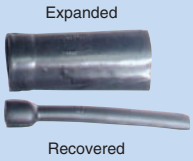
RU Right Angle
NEW!
Call for more info

STEP 3 Choose Heat Shrink Boot or Tubing

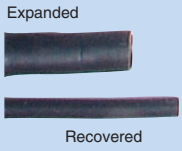
Boot options

Note: Cable outside diameter must be between expanded and recovered dimensions.

SB – Straight Boot



HST – Heat Shrink Tubing



Most Popular

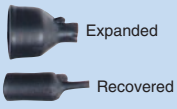
Heat Shrink Product	SB 1	SB 2	SB 3	SB 4	SB 5	SB 6	SB 7	HST 1	HST 2	HST 3	HST 4
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	1.72 (43.7)	1.97 (50.5)	0.750 (19.1)	1.000 (25.4)	1.250 (31.8)	1.570 (39.9)
Recovered ID inch (mm)	0.25 (6.4)	0.29 (7.4)	0.33 (8.4)	0.38 (9.7)	0.41 (10.4)	0.44 (11.2)	0.51 (13.0)	0.250 (6.4)	0.320 (8.1)	0.416 (10.6)	0.510 (13.0)
Length Max inch (mm)	4.17 (105.9)	4.77 (121.2)	5.46 (138.7)	6.28 (159.5)	7.00 (177.8)	8.00 (203.2)	8.00 (203.2)	6.00 (152.4)			
Shell Size 8S	◆							◆			
10SL	◆							◆			
12S/12*	◆							◆			
14S/14*		◆	◆						◆		
16S/16*			◆	◆						◆	
18			◆	◆							◆
20				◆							◆
22				◆							◆
24					◆	◆					◆
28					◆	◆					◆
32					◆	◆	◆				◆
36							◆				

adhesive lined heat shrink tubing

CSB – Convoluted Shrink Boot

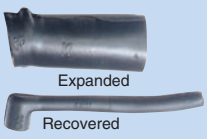


BSB/HBSB – Bottle Shaped Shrink Boot
(High Ratio Bottle Shaped Boot)



Heat Shrink Product	CSB2	CSB3	CSB4	CSB5	BSB1	HBSB2	BSB2	BSB3	BSB4	BSB5	BSB6
Expanded ID inch (mm)	0.70 (17.8)	1.06 (26.9)	1.44 (36.6)	1.80 (45.7)	0.94 (23.9)	0.35 (8.9)	1.18 (30.0)	1.22 (31.0)	1.42 (36.1)	1.69 (42.9)	2.36 (59.9)
Recovered ID inch (mm)	0.32 (8.1)	0.50 (12.7)	0.69 (17.5)	0.88 (22.4)	0.24 (6.1)	0.14 (3.6)	0.24 (6.1)	0.28 (7.1)	0.33 (8.4)	0.39 (9.9)	0.63 (16.0)
Length Max inch (mm)	5.25 (133.4)	5.75 (146.1)	6.25 (158.8)	6.75 (171.5)	1.50 (38.1)	2.17 (55.1)	2.17 (55.1)	2.64 (67.1)	3.15 (80.0)	3.90 (99.1)	5.12 (130.0)
Shell Size 8S	◆										
10SL	◆				◆	◆	◆				
12S/12*		◆			◆	◆	◆	◆	◆		
14S/14*		◆	◆				◆	◆	◆		
16S/16*		◆	◆				◆	◆	◆		
18		◆	◆					◆	◆		
20		◆	◆						◆		
22			◆	◆						◆	
24			◆	◆						◆	
28			◆	◆						◆	
32											◆
36											◆

RSB – Right Angle Shrink Boot



Heat Shrink Product	RSB1	RSB2	RSB3	RSB4	RSB5	RSB6	RSB7
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	1.72 (43.7)	1.97 (50.0)
Recovered ID inch (mm)	0.23 (5.8)	0.26 (6.6)	0.30 (7.6)	0.35 (8.9)	0.37 (9.4)	0.44 (11.2)	0.51 (13.0)
Length Max inch (mm)	4.14 (105.2)	4.88 (124.0)	5.76 (146.3)	6.78 (172.2)	7.29 (185.2)	8.41 (213.6)	8.84 (224.5)
Shell Size 8S	◆						
10SL	◆	◆					
12S/12*	◆	◆	◆				
14S/14*		◆	◆	◆			
16S/16*			◆	◆			
18				◆			
20				◆			
22					◆	◆	
24					◆	◆	
28					◆	◆	
32					◆	◆	
36							◆

Note: * 12, 14, 16
Please call for D style endbell

ITT Cannon Threaded – CT

STEP 2 Choose Endbell



CG = Straight Adapter Endbell

NEW!



RG = Right Angle Adapter Endbell

Please call for more information

STEP 3 Choose Conduit Adapter or Cord Grip

Unshielded Conduits



CA* = conduit adapter for plastic flexible conduit. Add size code i.e. CGCA10

Note: Normal recommended conduit fill is 40% of Conduit ID or less.

Size Code		07	10	12	14	17	23	29	36
Conduit ID	Inch (mm)	0.256 (6.5)	0.394 (10.0)	0.472 (12.0)	0.563 (14.3)	0.650 (16.5)	0.906 (23.0)	1.142 (29.0)	1.417 (36.0)
Conduit OD	Inch (mm)	0.394 (10.0)	0.512 (13.0)	0.622 (15.8)	0.728 (18.5)	0.835 (21.2)	1.122 (28.5)	1.358 (34.5)	1.673 (42.5)
Shell Size	8S	◆	◆						
	10SL	◆	◆						
	12/12S	◆	◆	◆					
	14/14S	◆	◆	◆	◆	◆			
	16/16S			◆	◆	◆	◆		
	18			◆	◆	◆	◆		
	20			R		R	◆		
	22			R		R	◆		
	24			R		R	◆		
	28			R		R	R	◆	
	32			R		R	R	◆	
	36							R	◆

R = with reducer

OR Shielded Cord Grip



Shell Size	Size Code	MSS*	1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm	4 Min mm	4 Max mm
	8S	◆	4.0	6.0	6.0	9.5	-	-	-	-
	10SL	◆	4.0	6.5	6.5	9.5	8.0	10.5	-	-
	12/12S	◆	6.5	9.5	8.0	10.5	9.0	13.0	-	-
	14/14S	◆	6.5	9.5	7.0	10.5	9.0	13.0	-	-
	16/16S	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	18	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	20	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	22	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	24	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	28	◆	20.0	25.0	24.0	28.0	17.0	32.0	29.0	34.0
	32	◆	20.0	25.0	24.0	28.0	17.0	32.0	29.0	34.0
	36	◆	24.0	28.0	29.0	34.0	-	-	-	-

Conduit Adapter and Cord Grip Types

CA*= Conduit Adapter
MSS*= Metal Short Shielded - Nickel Plated Brass
PF*= Plastic with Flex Spring
PS*= Plastic Short
MS*= Metal Short - Nickel Plated Brass
PL*= Plastic Long
ML*= Metal Long - Nickel Plated Brass
*= add size code per chart i.e. CGPFA or CGMSS4
Min/Max refers to cable diameter.

OR Unshielded Cord Grip







Shell Size	PF*	PS*	MS*	Size Code A Min mm	A Max mm	R Min mm	R Max mm	PL*	ML*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm
8S	◆	◆	◆	3.0	6.5	2.0	5.0			-	-	-	-	-	-
10SL	◆	◆	◆	4.0	8.0	2.0	6.0	◆	◆	4.0	6.5	7.5	9.5	-	-
12/12S	◆	◆	◆	5.0	10.0	3.0	7.0	◆	◆	6.5	9.5	7.0	10.5	-	-
14/14S	◆	◆	◆	6.0	12.0	5.0	9.0	◆	◆	6.5	9.5	8.5	10.5	-	-
16/16S	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
18	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
20	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
22	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	17.0	21.0	21.0	25.0	-	-
24	◆	◆	◆	13.0	18.0	9.0	16.0			-	-	-	-	-	-
28				-	-	-	-			-	-	-	-	-	-
32				-	-	-	-			-	-	-	-	-	-
36				-	-	-	-			-	-	-	-	-	-

Note: Cable jacket and shield diameters must be between Min/Max of cord grip.

For detailed info on shield diameters, see MSS table on page 232.

STEP 4 Choose Connector Layout

See Connector Solutions Guide



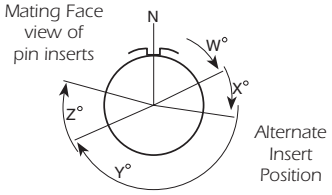
STEP 5 Choose Contact

P = Pin
S = Socket

STEP 6 Choose Rotation

(omit for normal)

W X Y Z



STEP 7 Choose Contact Type

S = Solder
C = Crimp
0 = Less contacts

STEP 8 Choose Platings

CONTACTS:

AU = Gold
Omit for silver plated contacts

SHELLS:

Standard Plating = Conductive olive drab chromate over cadmium

A34 = Bright Nickel (EU)

A206 = Non-Conductive Black Zinc Cobalt (US) (RoHS✣ with crimp or F127 contacts)

A232 = Non-Conductive Black Zinc Cobalt (EU) (RoHS✣ with crimp or F127 contacts)

F127 = Less prefilled solder contacts

Note: ✣As reported by ITT Cannon, please call for more info.

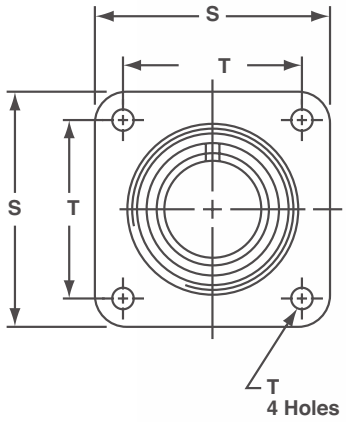
Example of part description:

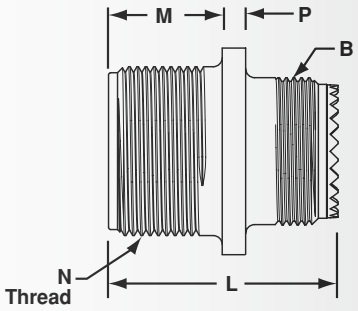
1 Shell Style	2 Endbells/ Shielding	3 Wire Protection	4 Connector Layout	5 Contact	6 Rotation	7 Contact Type	8 Platings
CT1	US	CSB2-	10SL-3	P		S	AUA34

(See Connector Solutions Guide)

CT – Dimensions

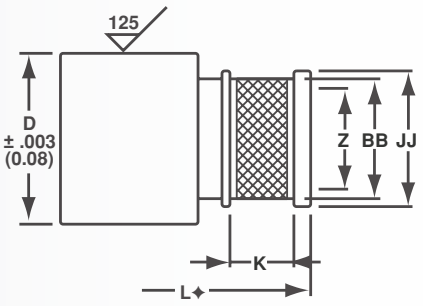
CT 0 Styles



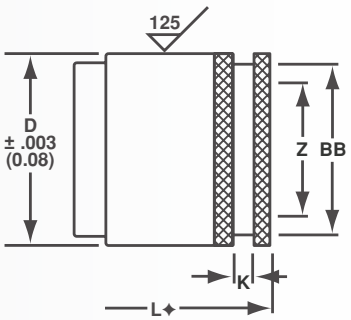


Shell Size	M	N Thread 2A	P	R	S	T	L MAX	B Thread 2A
8S	0.562 (14.3)	1/2-28UNEF	0.125 (3.2)	0.594 (15.1)	0.875 (22.2)	0.120 (3.0)	1.145 (29.1)	7/16-28UNEF
10S	0.562 (14.3)	5/8-24UNEF	0.125 (3.2)	0.719 (18.3)	1.000 (25.4)	0.120 (3.0)	1.145 (29.1)	1/2-28UNEF
10SL	0.562 (14.3)	5/8-24UNEF	0.125 (3.2)	0.719 (18.3)	1.000 (25.4)	0.120 (3.0)	1.145 (29.1)	9/16-24UNEF
12S	0.562 (14.3)	3/4-20UNEF	0.140 (3.6)	0.812 (20.6)	1.094 (27.8)	0.120 (3.0)	1.145 (29.1)	5/8-24UNEF
12	0.750 (19.1)	3/4-20UNEF	0.146 (3.7)	0.812 (20.6)	1.094 (27.8)	0.120 (3.0)	1.499 (38.1)	5/8-24UNEF
14S	0.562 (14.3)	7/8-20UNEF	0.140 (3.6)	0.906 (23.0)	1.188 (30.2)	0.120 (3.0)	1.145 (29.1)	3/4-20UNEF
14	0.750 (19.1)	7/8-20UNEF	0.146 (3.7)	0.906 (23.0)	1.188 (30.2)	0.120 (3.0)	1.499 (38.1)	3/4-20UNEF
16S	0.562 (14.3)	1-20UNEF	0.140 (3.6)	0.969 (24.6)	1.281 (32.5)	0.120 (3.0)	1.145 (29.1)	7/8-20UNEF
16	0.750 (19.1)	1-20UNEF	0.146 (3.7)	0.969 (24.6)	1.281 (32.5)	0.120 (3.0)	1.499 (38.1)	7/8-20UNEF
18	0.750 (19.1)	1-1/8-18UNEF	0.180 (4.6)	1.062 (27.0)	1.375 (34.9)	0.120 (3.0)	1.499 (38.1)	1-20UNEF
20	0.750 (19.1)	1-1/4-18UNEF	0.180 (4.6)	1.156 (29.4)	1.500 (38.1)	0.120 (3.0)	1.499 (38.1)	1-1/18UNEF
22	0.750 (19.1)	1/3/8-18UNEF	0.180 (4.6)	1.250 (31.8)	1.625 (41.3)	0.120 (3.0)	1.499 (38.1)	1-1/4-18UNEF
24	0.812 (20.6)	1-1/2-18UNEF	0.203 (5.2)	1.375 (34.9)	1.750 (44.5)	0.147 (3.7)	1.562 (39.7)	1-3/8-18UNEF
28	0.812 (20.6)	1-3/4-18UNEF	0.203 (5.2)	1.562 (39.7)	2.000 (50.8)	0.147 (3.7)	1.562 (39.7)	1-5/8-18UNEF
32	0.875 (22.2)	2-18UNS	0.203 (5.2)	1.750 (44.5)	2.250 (57.2)	0.173 (4.4)	1.624 (41.2)	1-7/8-16UN
36	0.875 (22.2)	2-1/4-16UNS	0.203 (5.2)	1.938 (49.2)	2.500 (63.5)	0.173 (4.4)	1.624 (41.2)	2-1/8-16UN

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	JJØ Max	C Code
8S	2.274 (57.8)	0.740 (18.8)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10S	Call						-
10SL	2.392 (60.8)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12S	2.491 (63.3)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.588 (14.9)	B
12	Call						-
14S	2.377 (60.4)	0.865 (22.0)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	Call						-
16S	2.377 (60.4)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
16	2.731 (69.4)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
18	2.928 (74.4)	1.146 (29.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
20	2.928 (74.4)	1.271 (32.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
22	2.987 (75.9)	1.428 (36.3)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
24	3.168 (80.5)	1.552 (39.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
28	3.227 (82.0)	1.740 (44.2)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
32	3.761 (95.5)	1.990 (50.6)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
36	3.679 (93.4)	2.291 (58.2)	0.476 (12.1)	1.238 (31.4)	1.532 (38.9)	1.650 (41.9)	-

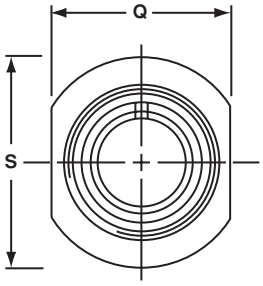


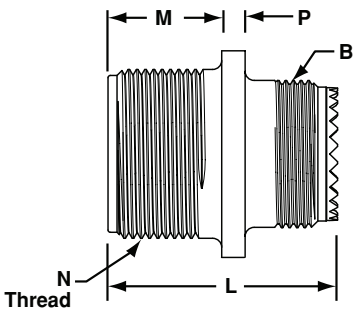
Cord Grip						
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	C Code
8S	2.050 (52.1)	0.740 (18.8)	0.118 (3.0)	0.374 (9.5)	0.583 (14.8)	B
10S	Call					
10SL	2.050 (52.1)	0.865 (22.0)	0.118 (3.0)	0.351 (8.9)	0.707 (18.0)	C
12S	2.070 (52.6)	0.990 (25.2)	0.118 (3.0)	0.376 (9.5)	0.833 (21.2)	D
14S	2.050 (52.1)	0.990 (25.2)	0.118 (3.0)	0.457 (11.6)	0.887 (22.6)	D
16S	2.109 (53.6)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
16	2.463 (62.6)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
18	2.621 (66.6)	1.146 (29.1)	0.118 (3.0)	0.670 (17.0)	0.989 (25.1)	E
20	2.621 (66.6)	1.428 (36.3)	0.118 (3.0)	0.794 (20.2)	1.270 (32.3)	G
22	2.672 (67.9)	1.428 (36.3)	0.118 (3.0)	0.886 (22.5)	1.270 (32.3)	G
24	2.696 (68.5)	1.552 (39.4)	0.118 (3.0)	0.958 (24.3)	1.395 (35.4)	H
28	2.735 (69.5)	1.772 (45.0)	0.118 (3.0)	1.134 (28.8)	1.614 (41.0)	-
32	2.817 (71.6)	2.043 (51.9)	0.118 (3.0)	1.266 (32.2)	1.886 (47.9)	-
36	2.824 (71.7)	2.290 (58.2)	0.118 (3.0)	1.580 (40.1)	2.130 (54.2)	-

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

CT – Dimensions

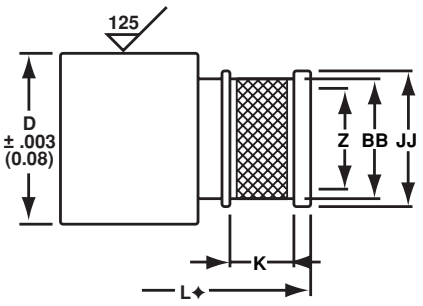
CT 1 Styles



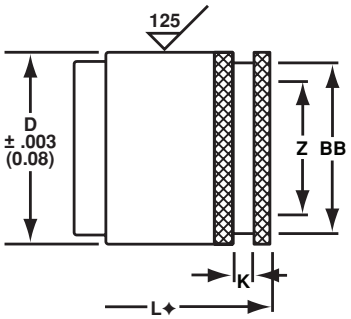


Shell Size	M	N Thread 2A	P	Q	S	L Max	B Thread 2A
8S	0.562 (14.3)	1/2-28UNEF	0.125 (3.2)	0.515 (13.1)	0.844 (21.4)	1.145 (29.1)	7/16-28UNEF
10S	0.562 (14.3)	5/8-24UNEF	0.125 (3.2)	0.640 (16.3)	0.969 (24.6)	1.145 (29.1)	1/2-28UNEF
10SL	0.562 (14.3)	5/8-24UNEF	0.125 (3.2)	0.640 (16.3)	1.062 (27.0)	1.145 (29.1)	9/16-24UNEF
12S	0.562 (14.3)	3/4-20UNEF	0.140 (3.6)	0.765 (19.4)	1.062 (27.0)	1.145 (29.1)	5/8-24UNEF
12	0.750 (19.1)	3/4-20UNEF	0.146 (3.7)	0.765 (19.4)	1.062 (27.0)	1.499 (38.1)	5/8-24UNEF
14S	0.562 (14.3)	7/8-20UNEF	0.140 (3.6)	0.890 (22.6)	1.156 (29.4)	1.145 (29.1)	3/4-20UNEF
14	0.750 (19.1)	7/8-20UNEF	0.146 (3.7)	0.890 (22.6)	1.156 (29.4)	1.499 (38.1)	3/4-20UNEF
16S	0.562 (14.3)	1-20UNEF	0.140 (3.6)	1.015 (25.8)	1.281 (32.5)	1.145 (29.1)	7/8-20UNEF
16	0.750 (19.1)	1-20UNEF	0.146 (3.7)	1.015 (25.8)	1.281 (32.5)	1.499 (38.1)	7/8-20UNEF
18	0.750 (19.1)	1-1/8-18UNEF	0.180 (4.6)	1.140 (29.0)	1.344 (34.1)	1.499 (38.1)	1-20UNEF
20	0.750 (19.1)	1-1/4-18UNEF	0.180 (4.6)	1.265 (32.1)	1.500 (38.1)	1.499 (38.1)	1-1/18UNEF
22	0.750 (19.1)	1/3/8-18UNEF	0.180 (4.6)	1.390 (35.3)	1.625 (41.3)	1.499 (38.1)	1-1/4-18UNEF
24	0.812 (20.6)	1-1/2-18UNEF	0.203 (5.2)	1.515 (38.5)	1.750 (44.5)	1.562 (39.7)	1-3/8-18UNEF
28	0.812 (20.6)	1-3/4-18UNEF	0.203 (5.2)	1.765 (44.8)	2.000 (50.8)	1.562 (39.7)	1-5/8-18UNEF
32	0.875 (22.2)	2-18UNS	0.203 (5.2)	2.015 (51.2)	2.250 (57.2)	1.624 (41.3)	1-7/8-16UN
36	0.875 (22.2)	2-1/4-16UNS	0.203 (5.2)	2.270 (57.7)	2.500 (63.5)	1.624 (41.3)	2-1/8-16UN

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	JJØ Max	C Code
8S	2.274 (57.8)	0.740 (18.8)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10S	Call						-
10SL	2.392 (60.8)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12S	2.491 (63.3)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.588 (14.9)	B
12	Call						-
14S	2.377 (60.4)	0.865 (22.0)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	Call						-
16S	2.377 (60.4)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
16	2.731 (69.4)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
18	2.928 (74.4)	1.146 (29.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
20	2.928 (74.4)	1.271 (32.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
22	2.987 (75.9)	1.428 (36.3)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
24	3.168 (80.5)	1.552 (39.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
28	3.227 (82.0)	1.740 (44.2)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
32	3.761 (95.5)	1.990 (50.6)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
36	3.679 (93.4)	2.291 (58.2)	0.476 (12.1)	1.238 (31.4)	1.532 (38.9)	1.650 (41.9)	-

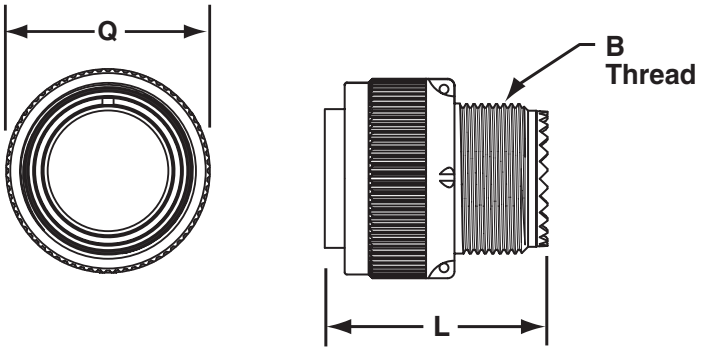


Cord Grip						
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	C Code
8S	2.050 (52.1)	0.740 (18.8)	0.118 (3.0)	0.374 (9.5)	0.583 (14.8)	B
10S	Call					
10SL	2.050 (52.1)	0.865 (22.0)	0.118 (3.0)	0.351 (8.9)	0.707 (18.0)	C
12S	2.070 (52.6)	0.990 (25.2)	0.118 (3.0)	0.376 (9.5)	0.833 (21.2)	D
14S	2.050 (52.1)	0.990 (25.2)	0.118 (3.0)	0.457 (11.6)	0.887 (22.6)	D
16S	2.109 (53.6)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
16	2.463 (62.6)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
18	2.621 (66.6)	1.146 (29.1)	0.118 (3.0)	0.670 (17.0)	0.989 (25.1)	E
20	2.621 (66.6)	1.428 (36.3)	0.118 (3.0)	0.794 (20.2)	1.270 (32.3)	G
22	2.672 (67.9)	1.428 (36.3)	0.118 (3.0)	0.886 (22.5)	1.270 (32.3)	G
24	2.696 (68.5)	1.552 (39.4)	0.118 (3.0)	0.958 (24.3)	1.395 (35.4)	H
28	2.735 (69.5)	1.772 (45.0)	0.118 (3.0)	1.134 (28.8)	1.614 (41.0)	-
32	2.817 (71.6)	2.043 (51.9)	0.118 (3.0)	1.266 (32.2)	1.886 (47.9)	-
36	2.824 (71.7)	2.290 (58.2)	0.118 (3.0)	1.580 (40.1)	2.130 (54.2)	-

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

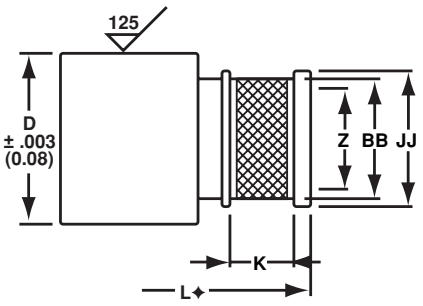
CT – Dimensions

CT 6 Styles

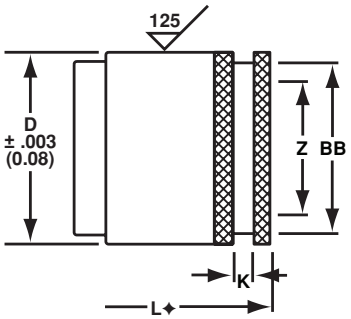


Shell Size	Q Max	L Max	B Thread 2A
8S	0.844 (21.4)	1.145 (29.1)	7/16-28UNEF
10S	0.969 (24.6)	1.145 (29.1)	1/2-28UNEF
10SL	0.696 (17.7)	1.145 (29.1)	9/16-24UNEF
12S	1.062 (27.0)	1.145 (29.1)	5/8-24UNEF
12	1.062 (27.0)	1.499 (38.1)	5/8-24UNEF
14S	1.156 (29.4)	1.145 (29.1)	3/4-20UNEF
14	1.156 (29.4)	1.499 (38.1)	3/4-20UNEF
16S	1.250 (31.8)	1.145 (29.1)	7/8-20UNEF
16	1.250 (31.8)	1.499 (38.1)	7/8-20UNEF
18	1.344 (34.1)	1.499 (38.1)	1-20UNEF
20	1.469 (37.3)	1.499 (38.1)	1-1/18UNEF
22	1.594 (40.5)	1.499 (38.1)	1-1/4-18UNEF
24	1.719 (43.7)	1.562 (39.7)	1-3/8-18UNEF
28	1.969 (50.0)	1.562 (39.7)	1-5/8-18UNEF
32	2.219 (56.4)	1.624 (41.3)	1-7/8-16UN
36	2.469 (62.7)	1.624 (41.3)	2-1/8-16UN

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	JJØ Max	C Code
8S	2.274 (57.8)	0.740 (18.8)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10S	Call						-
10SL	2.392 (60.8)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12S	2.491 (63.3)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.588 (14.9)	B
12	Call						-
14S	2.377 (60.4)	0.865 (22.0)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	Call						-
16S	2.377 (60.4)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
16	2.731 (69.4)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
18	2.928 (74.4)	1.146 (29.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
20	2.928 (74.4)	1.271 (32.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
22	2.987 (75.9)	1.428 (36.3)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
24	3.168 (80.5)	1.552 (39.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
28	3.227 (82.0)	1.740 (44.2)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
32	3.761 (95.5)	1.990 (50.6)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
36	3.679 (93.4)	2.291 (58.2)	0.476 (12.1)	1.238 (31.4)	1.532 (38.9)	1.650 (41.9)	-

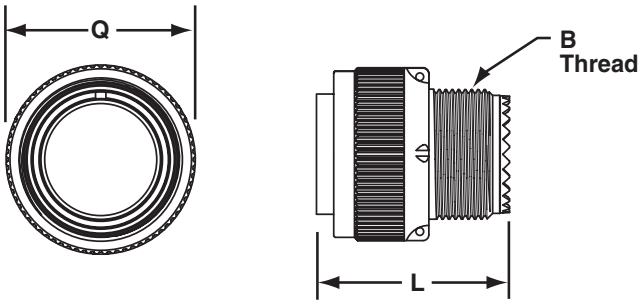


Cord Grip						
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	C Code
8S	2.050 (52.1)	0.740 (18.8)	0.118 (3.0)	0.374 (9.5)	0.583 (14.8)	B
10S	Call					
10SL	2.050 (52.1)	0.865 (22.0)	0.118 (3.0)	0.351 (8.9)	0.707 (18.0)	C
12S	2.070 (52.6)	0.990 (25.2)	0.118 (3.0)	0.376 (9.5)	0.833 (21.2)	D
14S	2.050 (52.1)	0.990 (25.2)	0.118 (3.0)	0.457 (11.6)	0.887 (22.6)	D
16S	2.109 (53.6)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
16	2.463 (62.6)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
18	2.621 (66.6)	1.146 (29.1)	0.118 (3.0)	0.670 (17.0)	0.989 (25.1)	E
20	2.621 (66.6)	1.428 (36.3)	0.118 (3.0)	0.794 (20.2)	1.270 (32.3)	G
22	2.672 (67.9)	1.428 (36.3)	0.118 (3.0)	0.886 (22.5)	1.270 (32.3)	G
24	2.696 (68.5)	1.552 (39.4)	0.118 (3.0)	0.958 (24.3)	1.395 (35.4)	H
28	2.735 (69.5)	1.772 (45.0)	0.118 (3.0)	1.134 (28.8)	1.614 (41.0)	-
32	2.817 (71.6)	2.043 (51.9)	0.118 (3.0)	1.266 (32.2)	1.886 (47.9)	-
36	2.824 (71.7)	2.290 (58.2)	0.118 (3.0)	1.580 (40.1)	2.130 (54.2)	-

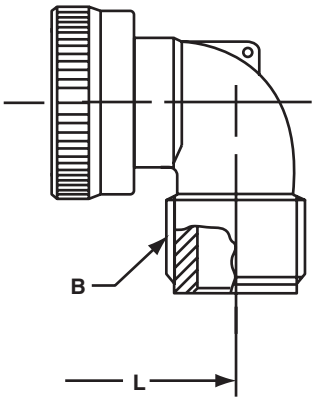
L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

CT – Dimensions

CT 8 Styles



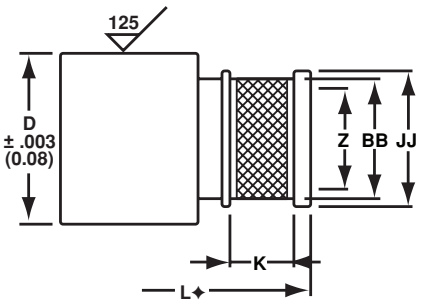
CT8 Endbell



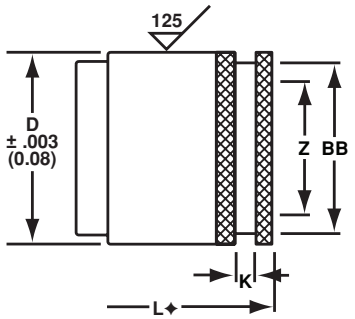
Shell Size	Q Max	L Max	Barrel Thread Class 2A B
8S	0.844 (21.4)	1.145 (29.1)	7/16-28UNEF
10S	0.969 (24.6)	1.145 (29.1)	1/2-28UNEF
10SL	0.696 (17.7)	1.145 (29.1)	9/16-24UNEF
12S	1.062 (27.0)	1.145 (29.1)	5/8-24UNEF
12	1.062 (27.0)	1.499 (38.1)	5/8-24UNEF
14S	1.156 (29.4)	1.145 (29.1)	3/4-20UNEF
14	1.156 (29.4)	1.499 (38.1)	3/4-20UNEF
16S	1.250 (31.8)	1.145 (29.1)	7/8-20UNEF
16	1.250 (31.8)	1.499 (38.1)	7/8-20UNEF
18	1.344 (34.1)	1.499 (38.1)	1-20UNEF
20	1.469 (37.3)	1.499 (38.1)	1-1/18UNEF
22	1.594 (40.5)	1.499 (38.1)	1-1/4-18UNEF
24	1.719 (43.7)	1.562 (39.7)	1-3/8-18UNEF
28	1.969 (50.0)	1.562 (39.7)	1-5/8-18UNEF
32	2.219 (56.4)	1.624 (41.3)	1-7/8-16UN
36	2.469 (62.7)	1.624 (41.3)	2-1/8-16UN

	Endbell
L Max	B Thread A
2.156 (54.8)	1/2-28UNEF
2.156 (54.8)	1/2-28UNEF
2.188 (55.6)	5/8-24UNEF
2.188 (55.6)	5/8-24UNEF
2.531 (64.3)	5/8-24UNEF
2.312 (58.7)	3/4-20UNEF
2.688 (68.3)	3/4-20UNEF
2.406 (61.1)	7/8-20UNEF
2.781 (70.6)	7/8-20UNEF
2.844 (72.2)	1-20UNEF
3.250 (82.6)	1-3/16-18UNEF
3.250 (82.6)	1-3/16-18UNEF
3.719 (94.5)	1-7/16-18UNEF
3.719 (94.5)	1-7/16-18UNEF
4.188 (106.4)	1-3/4-18NS
4.297 (109.1)	2-18NS

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	JJØ Max	C Code
8S	2.274 (57.8)	0.740 (18.8)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10S	Call						-
10SL	2.392 (60.8)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12S	2.491 (63.3)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.588 (14.9)	B
12	Call						-
14S	2.377 (60.4)	0.865 (22.0)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	Call						-
16S	2.377 (60.4)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
16	2.731 (69.4)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
18	2.928 (74.4)	1.146 (29.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
20	2.928 (74.4)	1.271 (32.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
22	2.987 (75.9)	1.428 (36.3)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
24	3.168 (80.5)	1.552 (39.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
28	3.227 (82.0)	1.740 (44.2)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
32	3.761 (95.5)	1.990 (50.6)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
36	3.679 (93.4)	2.291 (58.2)	0.476 (12.1)	1.238 (31.4)	1.532 (38.9)	1.650 (41.9)	-



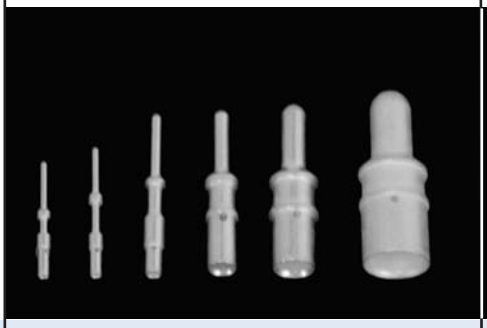
Cord Grip						
Shell Size	L✦ Max	DØ	K	ZØ Cable Max*	BBØ Max	C Code
8S	2.050 (52.1)	0.740 (18.8)	0.118 (3.0)	0.374 (9.5)	0.583 (14.8)	B
10S	Call					
10SL	2.050 (52.1)	0.865 (22.0)	0.118 (3.0)	0.351 (8.9)	0.707 (18.0)	C
12S	2.070 (52.6)	0.990 (25.2)	0.118 (3.0)	0.376 (9.5)	0.833 (21.2)	D
14S	2.050 (52.1)	0.990 (25.2)	0.118 (3.0)	0.457 (11.6)	0.887 (22.6)	D
16S	2.109 (53.6)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
16	2.463 (62.6)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
18	2.621 (66.6)	1.146 (29.1)	0.118 (3.0)	0.670 (17.0)	0.989 (25.1)	E
20	2.621 (66.6)	1.428 (36.3)	0.118 (3.0)	0.794 (20.2)	1.270 (32.3)	G
22	2.672 (67.9)	1.428 (36.3)	0.118 (3.0)	0.886 (22.5)	1.270 (32.3)	G
24	2.696 (68.5)	1.552 (39.4)	0.118 (3.0)	0.958 (24.3)	1.395 (35.4)	H
28	2.735 (69.5)	1.772 (45.0)	0.118 (3.0)	1.134 (28.8)	1.614 (41.0)	-
32	2.817 (71.6)	2.043 (51.9)	0.118 (3.0)	1.266 (32.2)	1.886 (47.9)	-
36	2.824 (71.7)	2.290 (58.2)	0.118 (3.0)	1.580 (40.1)	2.130 (54.2)	-

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

CT – Contacts

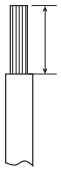
CT Series

CT Crimp Pins



CT Crimp Sockets





CONTACT SIZE	WIRE GAUGE (AWG)	PART NUMBER		PART NUMBER		WIRE STRIP LENGTHS
		SILVER	GOLD	SILVER	GOLD	
16S†	16-18	CT16S-16P	CT16S-16PG	CT16S-16S	CT16S-16SG	.250 (6.4)
16	16-20	CT16-16P	CT16-16PG	CT16-16S	CT16-16SG	.250 (6.4)
12	12-14	CT12-12P	CT12-12PG	CT12-12S	CT12-12SG	.250 (6.4)
8	8-10	CT8-8P	-	CT8-8S	CT8-8SG	.438 (11.1)
4	4	CT4-4P	-	CT4-4S	-	.625 (15.9)
0	0	CT0-0P	-	CT0-0S	-	.688 (17.5)

† 16S contacts are used in 8S, 10S, 10SL, 12S, 14S and 16S connector sizes only

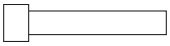
All dimensions in inches (millimeters in parenthesis)

CT Series

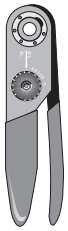
Wire Range

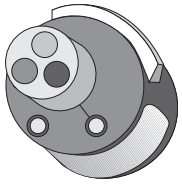


Accessories



Tools



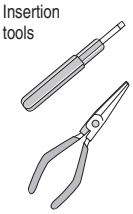




400BHD Shown



Insertion tools



Extraction tool





INSULATION O.D. MIN	INSULATION O.D. MAX	WIRE HOLE FILLERS	HOLE FILLER COLOR	HAND CRIMP TOOL	HAND TOOL TURRET	USE LOCATOR COLOR	POWER CRIMP TOOL	POWER CRIMP LOCATOR	INSERTION/ EXTRACTION TOOL	INSERTION GUIDE PINS
.064 (1.6)	.130 (3.3)	225-0017-000	BLUE	AF8	TH70-1	BLUE△/RED♦	WA27F	Use hand tool turret with power tool.	CIT-F80-16*	226-1017-000
.064 (1.6)	.130 (3.3)	225-0017-000	BLUE	AF8	TH70-1	RED△/GREEN♦	WA27F		CET-F80-16†	226-1017-000
.114 (2.9)	.170 (4.3)	225-0018-000	YELLOW	AF8	TP567	-	WA27F		CIT-F80-12*/CET-F80-12†	226-1018-000
.164 (4.2)	.255 (6.5)	MS27488-8-3	RED	N/A	N/A	N/A	400BHD	CCH8-KIT	CIT-8*/CET-8†	N/A
.272 (6.9)	.370 (9.4)	MS27488-4-3	BLUE	N/A	N/A	N/A	400BHD	CCH4-KIT	CIT-4*/CET-4†	N/A
.415 (10.5)	.550 (14.0)	MS27488-0-3	YELLOW	N/A	N/A	N/A	400BHD	CCH0-KIT	CIT-0*/CET-0†	N/A

*Insertion Tool †Extraction Tool △ Pin ♦ Socket



Crimp kits are available for 16S & 16 size contacts - CT16KIT.

Kit includes:
- Crimp Tool
- Locator
- Insertion Tool
- Insertion Guide Pins
- Contact Insertion Lubricant
- Assembly Instructions
- Rugged Case

All dimensions in inches (millimeters in parenthesis)

CT – At-A-Glance

Name:
Company:
Email:
Phone:
Qty: EAU:

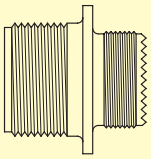
Additional Connector Information

CONNECTOR Part #:_____
OR
# of Contacts:_____ Sizes & Type:_____

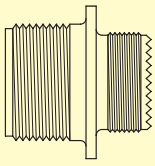
CABLE Manufacturer: _____
(If Known)
CABLE Part #: _____ OR Cable OD:_____

PEI-Genesis

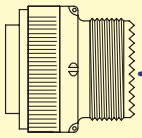
Choose One Connector



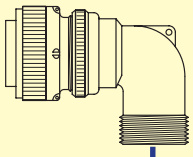
☐ CT0
MS3100 Type
Wall Mount
Receptacle



☐ CT1
MS3101 Type
Cable Mount
Receptacle



☐ CT6
MS3106 Type
Standard Plug



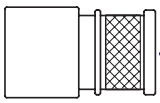
☐ CT8
MS3108 Type
Right Angle
Plug*

*Option NOT available
for shell sizes 32 & 36

Choose One Endbell

Use endbell "U" for Menus A, B, C, D & E

☐ U
☐ D

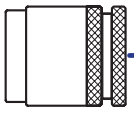


☐ Omit for Unshielded
☐ S Shielding Spring
☐ T Shielding Tape
☐ W Shielding Tape & Spring

Contact Termination
☐ Crimp ☐ Solder

Use endbell "CG" for Menus F, G & H

☐ CG



Comments/Notes:

_____
_____
_____
_____
_____
_____

Choose One Wire Protection

☐ HST — Heat Shrink Tubing
☐ SB — Straight Boot
☐ BSB — Bottle Shaped Shrink Boot
☐ HBSB — High Ratio Bottle Shaped Shrink Boot
☐ CSB — Convoluted Shrink Boot
☐ RSB — Right Angle Shrink Boot

☐ CA — Conduit Adapter & Conduit
☐ MSS — Metal Short Shielded
☐ PF — Plastic with flex Relief
☐ PS — Plastic Short
☐ MS — Metal Short
☐ PL — Plastic with Long Boot
☐ ML — Metal with Long Boot

Amphenol Industrial Reverse Bayonet – AIB



AIB Series is basically a MIL-DTL-5015 (MIL-C-5015) connector, but with an improved coupling system. AIB Series replaces the threaded coupling used in MIL-DTL-5015 with a positive, quick-mating, 3-point reverse bayonet lock. AIB Series shares the same shell dimensions, contact layouts, contacts, and performance characteristics as the MIL-DTL-5015 threaded connectors; however, the two series do not intermate. Over 180 contact layouts are available from 1 to 85 circuits and up to 150 amps per contact. The standard MIL-DTL-5015 layouts allow the mixing of power and signal contacts, power only, or signal only. Contacts are available in solder, crimp, or PC termination covering wire gauges from size 26 to size 0 AWG. Thermocouple (J, Y, K, T) and coax contacts are also available. These connectors are completely sealed to withstand moisture, condensation, vibration, and flash-over across a broad range of wire diameters. When the two connector halves are mated, the dynamic interfacial seal at the front creates an environmentally sealed assembly.

Commercial and Military

AIB Series connectors are made in accordance with German military specification VG 95 234 and MIL-DTL-5015. Originally designed for NATO combat vehicles, aircraft, and airborne equipment, these rugged connectors are now widely used in a broad range of demanding commercial applications from trucks to industrial robots.

Applications

Industrial environments requiring extreme environmental reliability and ease of mating and unmating, such as:

- Power Generators
- Battery Systems
- Engines
- Sensors
- Motion Control
- Off-road Vehicles
- Earth Moving Equipment
- Ships
- Railroad Equipment
- Mobile Equipment
- Industrial Machinery
- Telecommunications
- Mass Transit

Features

Audible, Visual, and Tactile Confirmation of Mating

AIB Series connectors provide the user with three independent checks that the connector halves are mated. When the coupling nut is fully rotated, the three studs snap into the end of the ramps with a loud "click" (audible confirmation). At that same moment, the user can actually feel the bolts click into the grooves (tactile confirmation). Blue dots on the receptacle and on the coupling nut are aligned when the connector is properly mated (visual confirmation).

Environmental

The sealing of this connector is not compromised by any of the operating conditions defined in MIL-DTL-5015. The connector is completely watertight when mated.

Broad Temperature Range

These connectors will operate in temperatures from -67˚ to +257˚F (-55˚ to +125˚C). High temperature and zero halogen insulators are also available. Call for ordering information.

Wide Range of Wire Gauges and Current Carrying Capability

Up to 150 amps with accommodations for wire gauges from size 26 up to size 0 AWG wire.

Wide Variety of Contacts

High reliability screw machine contacts with silver or gold plating are available in sizes from 20 through 0 to accommodate wire gauges from 26 to 0 AWG. Solder, Crimp, PC, Coax, and Thermocouple contacts are available.

AIB Series connectors use rail industry standard crimp contacts which are completely interchangeable with other rail connectors such as Veam CIR series.

Intermateable and Intermountable with all VG 95 234 Connectors

The standard MIL-DTL-5015 layouts and dimensions ensure intermateability and intermountability with all connectors made in accordance with VG 95 234.

All AIB Series connectors are intermountable with standard threaded MIL-DTL-5015 connectors, making it possible to upgrade without the need to change panel cutouts or clearances in most cases.

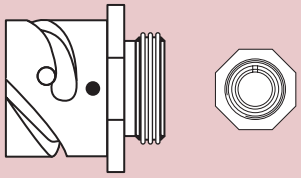
Amphenol®

For Assistance in Europe – Please See the Back Cover For a Complete Listing of Our Branch Offices and Contact Numbers. • Specifications subject to change.

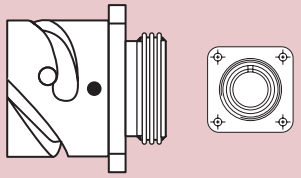
AIB – Amphenol Industrial Reverse Bayonet

STEP 1
Choose Shell Style: Receptacle or Plug
(See Connector Solutions Guide)

Cable Mount Receptacle
AIB1 with Accessory Threads

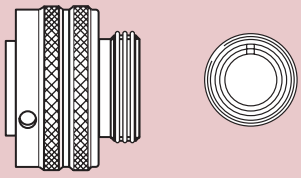


Rear Wall Mount
AIB30 with Accessory Threads (Most Popular)



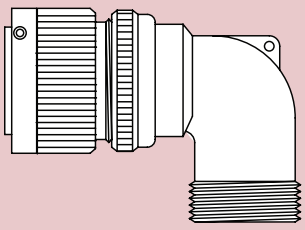
mates with

Straight Plug
AIB6



Right Angle Plug
not available in shell sizes 8, 32, or 36
not used with RU endbell option

AIB8



Note: Call for more information

STEP 2 Choose Endbell



Potted
- **U** = Unshielded
- **US** = with shielding spring
- **UT** = with shielding tape
- **UW** = with shielding tape & spring

For use with grommets (wire seals)
- **D** = Unshielded
- **DS** = with shielding spring
- **DT** = with shielding tape
- **DW** = with shielding tape & spring

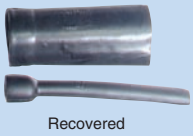
RU Right Angle
NEW!

Call for more info

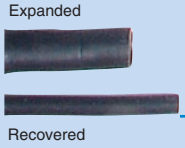
Boot options

Note: Cable outside diameter must be between expanded and recovered dimensions.

SB – Straight Boot



HST – Heat Shrink Tubing



Most Popular

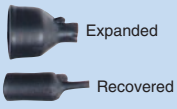
Heat Shrink Product	SB 1	SB 2	SB 3	SB 4	SB 5	SB 6	SB 7	SB 8	HST 1	HST 2	HST 3	HST 4
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	1.72 (43.7)	1.97 (50.5)	2.47 (62.7)	0.750 (19.1)	1.000 (25.4)	1.250 (31.8)	1.570 (39.9)
Recovered ID inch (mm)	0.25 (6.4)	0.29 (7.4)	0.33 (8.4)	0.38 (9.7)	0.41 (10.4)	0.44 (11.2)	0.51 (13.0)	0.67 (17.0)	0.250 (6.4)	0.320 (8.1)	0.416 (10.6)	0.510 (13.0)
Length Max inch (mm)	4.17 (105.9)	4.77 (121.2)	5.46 (138.7)	6.28 (159.5)	7.00 (177.8)	8.00 (203.2)	8.00 (203.2)	8.00 (203.2)	6.00 (152.4)			
Shell Size 10SL	◆								◆			
14S		◆	◆							◆		
16/16S			◆	◆							◆	
18			◆	◆								◆
20				◆								◆
22				◆								◆
24					◆	◆						◆
28					◆	◆						◆
32					◆	◆	◆					◆
36							◆					
40								◆				

adhesive lined heat shrink tubing

CSB – Convoluted Shrink Boot

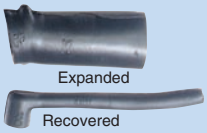


BSB/HBSB – Bottle Shaped Shrink Boot
(High Ratio Bottle Shaped Boot)



Heat Shrink Product	CSB2	CSB3	CSB4	CSB5	BSB1	HBSB2	BSB2	BSB3	BSB4	BSB5	BSB6	BSB7
Expanded ID inch (mm)	0.70 (17.8)	1.06 (26.9)	1.44 (36.6)	1.80 (45.7)	0.94 (23.9)	0.35 (8.9)	1.18 (30.0)	1.22 (31.0)	1.42 (36.1)	1.69 (42.9)	2.36 (59.9)	2.00 (50.8)
Recovered ID inch (mm)	0.32 (8.1)	0.50 (12.7)	0.69 (17.5)	0.88 (22.4)	0.24 (6.1)	0.14 (3.6)	0.24 (6.1)	0.28 (7.1)	0.33 (8.4)	0.39 (9.9)	0.63 (16.0)	0.67 (17.0)
Length Max inch (mm)	5.25 (133.4)	5.75 (146.1)	6.25 (158.8)	6.75 (171.5)	1.50 (38.1)	2.17 (55.1)	2.17 (55.1)	2.64 (67.1)	3.15 (80.0)	3.90 (99.1)	5.12 (130.0)	6.73 (170.9)
Shell Size 10SL	◆				◆	◆	◆					
14S		◆			◆	◆	◆	◆	◆			
16/16S		◆	◆				◆	◆	◆			
18		◆	◆				◆	◆	◆			
20		◆	◆					◆	◆			
22		◆	◆						◆			
24			◆	◆						◆		
28			◆	◆						◆		
32			◆	◆						◆	◆	
36											◆	
40											◆	◆

RSB – Right Angle Shrink Boot



Heat Shrink Product	RSB1	RSB2	RSB3	RSB4	RSB5	RSB6	RSB7	RSB8
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	1.72 (43.7)	1.97 (50.0)	2.47 (62.7)
Recovered ID Inch (mm)	0.23 (5.8)	0.26 (6.6)	0.30 (7.6)	0.35 (8.9)	0.37 (9.4)	0.44 (11.2)	0.51 (13.0)	0.69 (17.5)
Length Max inch (mm)	4.14 (105.2)	4.88 (124.0)	5.76 (146.3)	6.78 (172.2)	7.29 (185.2)	8.41 (213.6)	8.84 (224.5)	8.95 (227.3)
Shell Size 10SL	◆	◆						
14S		◆	◆	◆				
16/16S			◆	◆				
18				◆				
20				◆				
22					◆	◆		
24					◆	◆		
28					◆	◆		
32					◆	◆	◆	
36							◆	
40								◆

Amphenol Industrial Reverse Bayonet – AIB

STEP 2 Choose Endbell



CG = Straight Adapter Endbell

NEW!



RG = Right Angle Adapter Endbell

Please call for more information

STEP 3 Choose Conduit Adapter or Cord Grip

Unshielded Conduits



CA* = conduit adapter for plastic flexible conduit. Add size code i.e. CGCA10

Note: Normal recommended conduit fill is 40% of Conduit ID or less.

Size Code	07	10	12	14	17	23	29	36
Conduit ID Inch (mm)	0.256 (6.5)	0.394 (10.0)	0.472 (12.0)	0.563 (14.3)	0.650 (16.5)	0.906 (23.0)	1.142 (29.0)	1.417 (36.0)
Conduit OD Inch (mm)	0.394 (10.0)	0.512 (13.0)	0.622 (15.8)	0.728 (18.5)	0.835 (21.2)	1.122 (28.5)	1.358 (34.5)	1.673 (42.5)
Shell Size 10SL	♦	♦						
14S	♦	♦	♦	♦	♦			
16/16S			♦	♦	♦	♦		
18			♦	♦	♦	♦		
20			R		R	♦		
22			R		R	♦		
24			R		R	♦		
28			R		R	R	♦	
32			R		R	R	♦	
36							R	♦
40							R	♦

R = with reducer

OR

Shielded Cord Grip



Size Code		1		2		3		4	
	MSS*	Min mm	Max mm	Min mm	Max mm	Min mm	Max mm	Min mm	Max mm
Shell Size 10SL	♦	4.0	6.5	6.5	9.5	8.0	10.5	-	-
14S	♦	6.5	9.5	7.0	10.5	9.0	13.0	-	-
16/16S	♦	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
18	♦	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
20	♦	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
22	♦	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
24	♦	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
28	♦	20.0	25.0	24.0	28.0	17.0	32.0	29.0	34.0
32	♦	20.0	25.0	24.0	28.0	17.0	32.0	29.0	34.0
36	♦	24.0	28.0	29.0	34.0	-	-	-	-
40	♦	24.0	28.0	29.0	34.0	-	-	-	-

Conduit Adapter and Cord Grip Types

CA*= Conduit Adapter
MSS*= Metal Short Shielded - Nickel Plated Brass
PF*= Plastic with Flex Spring
PS*= Plastic Short
MS*= Metal Short - Nickel Plated Brass
PL*= Plastic Long
ML*= Metal Long - Nickel Plated Brass
*= add size code per chart i.e. CGPFA or CGMSS4
Min/Max refers to cable diameter.

Note: Cable jacket and shield diameters must be between Min/Max of cord grip.

For detailed info on shield diameters, see MSS table on page 232.

OR

Unshielded Cord Grip







		PF*	PS*	MS*	Size Code A Min mm	A Max mm	R Min mm	R Max mm	PL*	ML*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm
Shell Size	10SL	♦	♦	♦	4.0	8.0	2.0	6.0	♦	♦	4.0	6.5	7.5	9.5	-	-
	14S	♦	♦	♦	6.0	12.0	5.0	9.0	♦	♦	6.5	9.5	8.5	10.5	-	-
	16/16S	♦	♦	♦	10.0	14.0	7.0	12.0	♦	♦	6.5	9.5	7.0	10.5	9.5	13.0
	18	♦	♦	♦	10.0	14.0	7.0	12.0	♦	♦	6.5	9.5	7.0	10.5	9.5	13.0
	20	♦	♦	♦	13.0	18.0	9.0	16.0	♦	♦	9.0	13.0	13.0	15.5	14.0	18.0
	22	♦	♦	♦	13.0	18.0	9.0	16.0	♦	♦	9.0	13.0	13.0	15.5	14.0	18.0
	24	♦	♦	♦	13.0	18.0	9.0	16.0	♦	♦	9.0	13.0	13.0	15.5	14.0	18.0
	28		♦	♦	18.0	25.0	12.0	20.0	♦	♦	17.0	21.0	21.0	25.0	-	-
	32		♦	♦	18.0	25.0	12.0	20.0	♦	♦	17.0	21.0	21.0	25.0	-	-
	36		♦	♦	22.0	32.0	20.0	26.0			-	-	-	-	-	-
	40		♦	♦	22.0	32.0	20.0	26.0			-	-	-	-	-	-

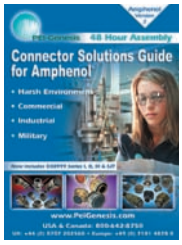
Example of part description:

AIB6	US	CSB2-	18-1	S	Y	C	-B30-023
1 Shell Style	2 Endbells/ Shielding	3 Wire Protection	4 Connector Layout	5 Contact	6 Rotation	7 Contact Type	8 Platings

See Connector Solutions Guide

STEP 4 Choose Connector Layout

See Connector Solutions Guide



STEP 5 Choose Contact

P = Pin
S = Socket

STEP 6 Choose Rotation

(omit for normal)

W X Y Z

STEP 7 Choose Contact Type

S = Solder
C = Crimp
0 = Less contacts

STEP 8 Choose Platings/ Modifications

CONTACTS

Omit = silver plated contacts
B30 = Gold 50µ Gold over Nickel

SHELLS

Standard Plating = Conductive olive drab chromate over cadmium

023 = Conductive Nickel (RoHS❖ with crimp contacts)
025 = Non-Conductive Black Zinc (RoHS❖ with crimp contacts)
027 = Conductive Black Zinc (RoHS❖ with crimp or 116 contacts)
116 = Solder Style Contacts less Pretinned Solder Cups
472 = 116 + 025 (RoHS❖)
548 = 116 + 023 (RoHS❖)
G96 = Non-Conductive Anodized✦

MATERIALS

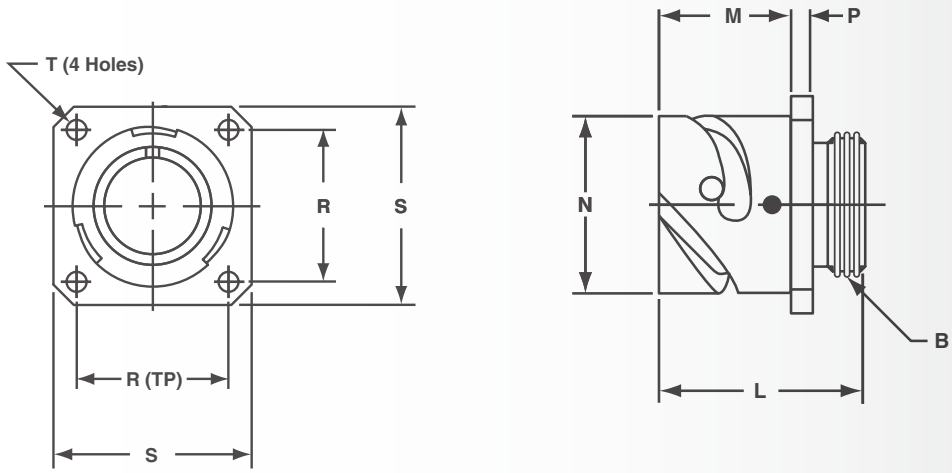
Omit = Standard Neoprene

For Low Smoke, Zero Halogen, High Temperature Viton® and other materials call.

Note: ✦ Endbells U & CG will be Black Anodized.
❖ As reported by Amphenol, please call for more info.

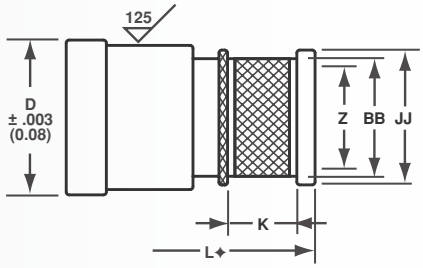
AIB – Dimensions

Style 30 Receptacle

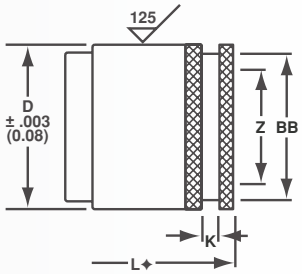


Shell Size	M +.016-.000 (+0.4-0.0)	N +.000-.006 (+0.00-0.15)	P ± .008 (±0.2)	R ± .004 (±0.1)	S ± .012 (±0.3)	TØ +.004-.000 (+0.1-0.0)	B Thread Class 2A	L + .012 (+ 0.3)
10SL	.717 (18.20)	.717 (18.2)	.110 (2.8)	.717 (18.2)	1.000 (25.4)	.126 (3.2)	.6250-24 UNEF	1.087 (27.6)
14S	.717 (18.20)	.969 (24.6)	.126 (3.2)	.906 (23.0)	1.181 (30.0)	.126 (3.2)	.7500-20 UNEF	1.087 (27.6)
16S	.717 (18.20)	1.079 (27.4)	.126 (3.2)	.969 (24.6)	1.280 (32.5)	.126 (3.2)	.8750-20 UNEF	1.087 (27.6)
16	.846 (21.50)	1.079 (27.4)	.126 (3.2)	.969 (24.6)	1.280 (32.5)	.126 (3.2)	.8750-20 UNEF	1.331 (33.8)
18	.907 (23.05)	1.213 (30.8)	.157 (4.0)	1.063 (27.0)	1.378 (35.0)	.126 (3.2)	1.0000-20 UNEF	1.331 (33.8)
20	.907 (23.05)	1.346 (34.2)	.157 (4.0)	1.157 (29.4)	1.496 (38.0)	.126 (3.2)	1.1250-18 UNEF	1.331 (33.8)
22	.907 (23.05)	1.472 (37.4)	.157 (4.0)	1.252 (31.8)	1.614 (41.0)	.126 (3.2)	1.2500-18 UNEF	1.331 (33.8)
24	.907 (23.05)	1.610 (40.9)	.157 (4.0)	1.374 (34.9)	1.752 (44.5)	.146 (3.7)	1.3750-18 UNEF	1.331 (33.8)
28	.947 (24.05)	1.839 (46.7)	.157 (4.0)	1.563 (39.7)	2.000 (50.8)	.146 (3.7)	1.6250-18 UNEF	1.406 (35.7)
32	.947 (24.05)	2.102 (53.4)	.157 (4.0)	1.752 (44.5)	2.244 (57.0)	.169 (4.3)	1.8750-16 UN	1.469 (37.3)
36	.947 (24.05)	2.346 (59.6)	.157 (4.0)	1.937 (49.2)	2.500 (63.5)	.169 (4.3)	2.0625-16 UN	1.469 (37.3)
40	.947 (24.05)	2.579 (65.5)	.157 (4.0)	2.185 (55.5)	2.752 (69.9)	.169 (4.3)	2.3125-16 UN	1.469 (37.3)

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	JJØ Max	C Code
10SL	2.422 (61.5)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.587 (14.9)	B
14S	2.424 (61.6)	0.865 (22.0)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
16S	2.514 (63.9)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
16	2.758 (70.1)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
18	2.817 (71.6)	1.146 (29.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
20	2.927 (74.3)	1.271 (32.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
22	3.033 (77.0)	1.428 (36.3)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
24	3.187 (80.9)	1.552 (39.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
28	3.050 (77.5)	1.740 (44.2)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
32	3.745 (95.1)	1.990 (50.6)	0.476 (12.1)	1.125 (28.6)	1.417 (36.0)	1.536 (39.0)	-
36	3.628 (92.2)	2.291 (58.2)	0.476 (12.1)	1.238 (31.5)	1.542 (39.2)	1.661 (42.2)	-
40	3.846 (97.7)	2.520 (64.0)	0.476 (12.1)	1.463 (37.1)	1.792 (45.5)	1.911 (48.5)	-



Cord Grip						
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	C Code
10SL	2.085 (53.0)	0.865 (22.0)	0.118 (3.0)	0.376 (9.5)	0.707 (18.0)	C
14S	2.097 (55.3)	0.990 (25.2)	0.118 (3.0)	0.475 (12.1)	0.887 (22.6)	D
16S	2.246 (57.0)	1.146 (29.1)	0.118 (3.0)	0.581 (14.8)	0.989 (25.1)	E
16	2.490 (63.2)	1.146 (29.1)	0.118 (3.0)	0.581 (14.8)	0.989 (25.1)	E
18	2.510 (63.8)	1.217 (32.3)	0.118 (3.0)	0.687 (17.5)	1.114 (28.3)	F
20	2.620 (66.5)	1.428 (36.3)	0.118 (3.0)	0.787 (20.0)	1.270 (32.3)	G
22	2.620 (66.5)	1.428 (36.3)	0.118 (3.0)	0.875 (22.2)	1.270 (32.3)	G
24	2.561 (65.0)	1.552 (39.4)	0.118 (3.0)	0.958 (24.3)	1.395 (35.4)	H
28	2.695 (68.5)	1.820 (46.2)	0.118 (3.0)	1.113 (28.3)	1.661 (42.2)	-
32	2.801 (71.1)	2.055 (52.2)	0.118 (3.0)	1.266 (32.2)	1.898 (48.2)	-
36	2.852 (72.4)	2.291 (58.2)	0.118 (3.0)	1.605 (40.8)	2.130 (54.2)	-
40	2.974 (75.5)	2.520 (64.0)	0.118 (3.0)	1.620 (41.2)	2.362 (60.0)	-

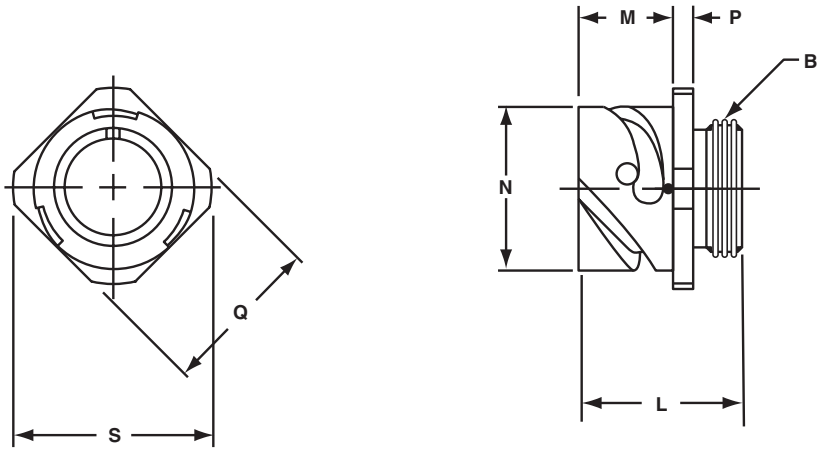
✦ L is the maximum reference length from the mating face of the connector

* Recommended cable maximum is 90% of actual endbell I.D.*

All dimensions in inches (millimeters in parenthesis)

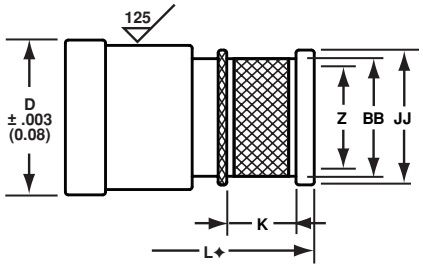
AIB – Dimensions

Style 1 Cable Receptacle

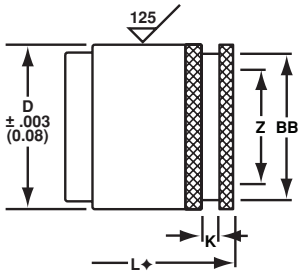


Shell Size	M +.016-.000 (+0.4-0.0)	N +.000-.006 (+0.00-0.15)	P ± .008 (+0.2)	Q ± .008 (±0.2)	S Max	B Thread Class 2A	L + .012 (+ 0.3)
10SL	.717 (18.20)	.717 (18.2)	.110 (2.8)	.811 (20.6)	.992 (25.2)	.6250-24 UNEF	1.087 (27.6)
14S	.717 (18.20)	.969 (24.6)	.126 (3.2)	1.000 (25.4)	1.173 (29.8)	.7500-20 UNEF	1.087 (27.6)
16S	.717 (18.20)	1.079 (27.4)	.126 (3.2)	1.126 (28.6)	1.272 (32.3)	.8750-20 UNEF	1.087 (27.6)
16	.8461 (21.50)	1.079 (27.4)	.126 (3.2)	1.126 (28.6)	1.272 (32.3)	.8750-20 UNEF	1.331 (33.8)
18	.907 (23.05)	1.213 (30.8)	.157 (4.0)	1.248 (31.7)	1.370 (34.8)	1.0000-20 UNEF	1.331 (33.8)
20	.907 (23.05)	1.346 (34.2)	.157 (4.0)	1.374 (34.9)	1.488 (37.8)	1.1250-18 UNEF	1.331 (33.8)
22	.907 (23.05)	1.472 (37.4)	.157 (4.0)	1.500 (38.1)	1.618 (41.1)	1.2500-18 UNEF	1.331 (33.8)
24	.907 (23.05)	1.610 (40.9)	.157 (4.0)	1.626 (41.3)	1.756 (44.6)	1.3750-18 UNEF	1.331 (33.8)
28	.947 (24.05)	1.839 (46.7)	.157 (4.0)	1.874 (47.6)	2.004 (50.9)	1.6250-18 UNEF	1.406 (35.7)
32	.947 (24.05)	2.102 (53.4)	.157 (4.0)	2.126 (54.0)	2.248 (57.1)	1.8750-16 UN	1.469 (37.3)
36	.947 (24.05)	2.346 (59.6)	.157 (4.0)	2.386 (60.6)	2.504 (63.6)	2.0625-16 UN	1.469 (37.3)
40	.947 (24.05)	2.579 (65.5)	.157 (4.0)	2.618 (66.5)	2.756 (70.0)	2.3125-16 UN	1.469 (37.3)

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	**L✦ Max**	**DØ**	**K Max**	**ZØ Cable Max***	**BBØ Max**	**JJØ Max**	**C Code**
10SL	2.422 (61.5)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.587 (14.9)	B
14S	2.424 (61.6)	0.865 (22.0)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
16S	2.514 (63.9)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
16	2.758 (70.1)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
18	2.817 (71.6)	1.146 (29.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
20	2.927 (74.3)	1.271 (32.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
22	3.033 (77.0)	1.428 (36.3)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
24	3.187 (80.9)	1.552 (39.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
28	3.050 (77.5)	1.740 (44.2)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
32	3.745 (95.1)	1.990 (50.6)	0.476 (12.1)	1.125 (28.6)	1.417 (36.0)	1.536 (39.0)	-
36	3.628 (92.2)	2.291 (58.2)	0.476 (12.1)	1.238 (31.5)	1.542 (39.2)	1.661 (42.2)	-
40	3.846 (97.7)	2.520 (64.0)	0.476 (12.1)	1.463 (37.1)	1.792 (45.5)	1.911 (48.5)	-



Cord Grip						
Shell Size	**L✦ Max**	**DØ**	**K Max**	**ZØ Cable Max***	**BBØ Max**	**C Code**
10SL	2.085 (53.0)	0.865 (22.0)	0.118 (3.0)	0.376 (9.5)	0.707 (18.0)	C
14S	2.097 (55.3)	0.990 (25.2)	0.118 (3.0)	0.475 (12.1)	0.887 (22.6)	D
16S	2.246 (57.0)	1.146 (29.1)	0.118 (3.0)	0.581 (14.8)	0.989 (25.1)	E
16	2.490 (63.2)	1.146 (29.1)	0.118 (3.0)	0.581 (14.8)	0.989 (25.1)	E
18	2.510 (63.8)	1.217 (32.3)	0.118 (3.0)	0.687 (17.5)	1.114 (28.3)	F
20	2.620 (66.5)	1.428 (36.3)	0.118 (3.0)	0.787 (20.0)	1.270 (32.3)	G
22	2.620 (66.5)	1.428 (36.3)	0.118 (3.0)	0.875 (22.2)	1.270 (32.3)	G
24	2.561 (65.0)	1.552 (39.4)	0.118 (3.0)	0.958 (24.3)	1.395 (35.4)	H
28	2.695 (68.5)	1.820 (46.2)	0.118 (3.0)	1.113 (28.3)	1.661 (42.2)	-
32	2.801 (71.1)	2.055 (52.2)	0.118 (3.0)	1.266 (32.2)	1.898 (48.2)	-
36	2.852 (72.4)	2.291 (58.2)	0.118 (3.0)	1.605 (40.8)	2.130 (54.2)	-
40	2.974 (75.5)	2.520 (64.0)	0.118 (3.0)	1.620 (41.2)	2.362 (60.0)	-

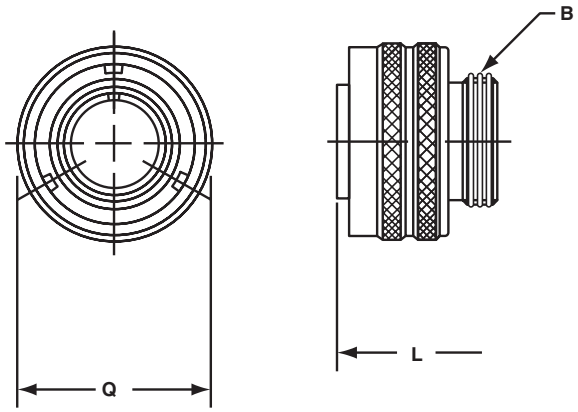
✦ L is the maximum reference length from the mating face of the connector

* Recommended cable maximum is 90% of actual endbell I.D.*

All dimensions in inches (millimeters in parenthesis)

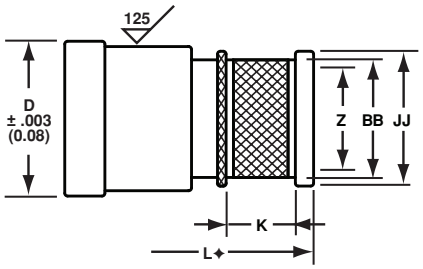
AIB – Dimensions

Style 6 Plugs

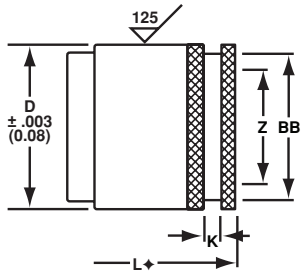


Shell Size	Q Max	B Thread Class 2A	L + .012 (+.03)
10SL	.898 (22.8)	.6250-24 UNEF	1.087 (27.6)
14S	1.150 (29.2)	.7500-20 UNEF	1.087 (27.6)
16S	1.260 (32.0)	.8750-20 UNEF	1.087 (27.6)
16	1.260 (32.0)	.8750-20 UNEF	1.331 (33.8)
18	1.437 (36.5)	1.0000-20 UNEF	1.331 (33.8)
20	1.571 (39,9)	1.1250-18 UNEF	1.331 (33.8)
22	1.697 (43.1)	1.2500-18 UNEF	1.331 (33.8)
24	1.835 (46.6)	1.3750-18 UNEF	1.331 (33.8)
28	2.102 (53.4)	1.6250-18 UNEF	1.406 (35.7)
32	2.366 (60.1)	1.8750-16 UN	1.469 (37.3)
36	2.610 (66.3)	2.0625-16 UN	1.469 (37.3)
40	2.850 (72.4)	2.3125-16 UN	1.469 (37.3)

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	**L✦ Max**	**DØ**	**K Max**	**ZØ Cable Max***	**BBØ Max**	**JJØ Max**	**C Code**
10SL	2.325 (59.1)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.587 (14.9)	B
14S	2.337 (59.4)	0.865 (22.0)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
16S	2.486 (63.7)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
16	2.787 (70.8)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
18	2.866 (72.8)	1.146 (29.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
20	2.977 (75.6)	1.271 (32.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
22	3.977 (75.6)	1.428 (36.3)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
24	2.901 (73.7)	1.552 (39.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
28	3.036 (77.1)	1.740 (44.2)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
32	3.073 (78.1)	1.990 (50.6)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
36	3.674 (93.3)	2.291 (58.2)	0.476 (12.1)	1.238 (31.5)	1.542 (39.2)	1.661 (42.2)	-
40	3.882 (98.6)	2.520 (64.0)	0.476 (12.1)	1.463 (37.1)	1.792 (45.5)	1.911 (48.5)	-



Cord Grip						
Shell Size	**L✦ Max**	**DØ**	**K Max**	**ZØ Cable Max***	**BBØ Max**	**C Code**
10SL	2.018 (51.3)	0.865 (22.0)	0.118 (3.0)	0.376 (9.5)	0.707 (18.0)	C
14S	2.030 (51.6)	0.990 (25.2)	0.118 (3.0)	0.475 (12.1)	0.887 (22.6)	D
16S	2.179 (55.3)	1.146 (29.1)	0.118 (3.0)	0.581 (14.8)	0.989 (25.1)	E
16	2.555 (64.9)	1.146 (29.1)	0.118 (3.0)	0.581 (14.8)	0.989 (25.1)	E
18	2.575 (65.4)	1.217 (32.3)	0.118 (3.0)	0.687 (17.5)	1.114 (28.3)	F
20	2.685 (68.2)	1.428 (36.3)	0.118 (3.0)	0.787 (20.0)	1.270 (32.3)	G
22	2.685 (68.2)	1.428 (36.3)	0.118 (3.0)	0.875 (22.2)	1.270 (32.3)	G
24	2.685 (68.2)	1.552 (39.4)	0.118 (3.0)	0.958 (24.3)	1.395 (35.4)	H
28	2.748 (69.8)	1.820 (46.2)	0.118 (3.0)	1.113 (28.3)	1.661 (42.2)	-
32	2.847 (72.3)	2.055 (52.2)	0.118 (3.0)	1.266 (32.2)	1.898 (48.2)	-
36	2.898 (73.6)	2.291 (58.2)	0.118 (3.0)	1.605 (40.8)	2.130 (54.2)	-
40	3.010 (76.5)	2.520 (64.0)	0.118 (3.0)	1.620 (41.2)	2.362 (60.0)	-

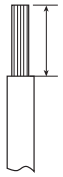
✦ L is the maximum reference length from the mating face of the connector

* Recommended cable maximum is 90% of actual endbell I.D.*

All dimensions in inches (millimeters in parenthesis)

AIB – Contacts

Pin & Socket Crimp Contacts

Pin Contact	Socket Contact	Wire Strip Lengths	Wire Range
			

Contact Size	Wire Size	Part Number					Wire Strip Lengths Inches (mm)	Wire Sealing Lengths Inches (mm)
		Pin Contact		Socket Contact				
		Silver	Gold	Silver	Gold			
16S†	16-18-20	**AIC16S-16P**	**AIC16S-16PG**	**AIC16S-16S**	**AIC16S-16SG**		.312 (7.9)	.090-.118 (2.3-3.0)
	12-14	AIC16S-12P	AIC16S-12PG	AIC16S-12S	AIC16S-12SG	C4		
	14-16	AIC16S-14P	AIC16S-14PG	AIC16S-14S	AIC16S-14SG	C3		
	18-20	AIC16S-20P	AIC16S-20PG	AIC16S-20S	AIC16S-20SG	C13		
	20-22	AIC16S-22P	AIC16S-22PG	AIC16S-22S	AIC16S-22SG	C14		
	22-24	AIC16S-24P	AIC16S-24PG	AIC16S-24S	AIC16S-24SG	C2		
16	16-18-20	**AIC16-16P**	**AIC16-16PG**	**AIC16-16S**	**AIC16-16SG**			
	12-14	AIC16-12P	AIC16-12PG	AIC16-12S	AIC16-12SG	C4		
	14-16	AIC16-14P	AIC16-14PG	AIC16-14S	AIC16-14SG	C3		
	18-20	AIC16-18P	AIC16-18PG	AIC16-18S	AIC16-18SG	C13		
	20-22	AIC16-20P	AIC16-20PG	AIC16-20S	AIC16-20SG	C14		
	20-24	AIC16-2024P	AIC16-2024PG	AIC16-2024S	AIC16-2024SG	C36		
	22-24	AIC16-22P	AIC16-22PG	AIC16-22S	AIC16-22SG	C2		
12	12-14	**AIC12-12P**	**AIC12-12PG**	**AIC12-12S**	**AIC12-12SG**		.312 (7.9)	.126-.177 (3.2-4.5)
	12 High Power	-	-	AIC12-12SRAD	-			
	8-10	AIC12-8P	AIC12-8PG	AIC12-8S	AIC12-8SG	C5		
	10-12	AIC12-10P	AIC12-10PG	AIC12-10S	AIC12-10SG	C8		
	14-16	AIC12-14P	AIC12-14PG	AIC12-14S	AIC12-14SG	C9		
	16-18	AIC12-16P	AIC12-16PG	AIC12-16S	AIC12-16SG	C7		
	18-20	AIC12-18P	AIC12-18PG	AIC12-18S	AIC12-18SG	C6		
	20-22	AIC12-20P	AIC12-20PG	AIC12-20S	AIC12-20SG	C40		
8	8	**AIC8-8P**	**AIC8-8PG**	**AIC8-8S**	**AIC8-8SG**		.563 (14.3)	.150-.256 (3.8-6.5)
	8 High Power	-	-	AIC8-8SRAD	-			
	10-12	AIC8-10P	AIC8-10PG	AIC8-10S	AIC8-10SG	C10		
	12-14	AIC8-12P	AIC8-12PG	AIC8-12S	AIC8-12SG	C38		
4	4	**AIC4-4P**	**AIC4-4PG**	**AIC4-4S**	**AIC4-4SG**		.500 (12.7)	.279-.366 (7.1-9.3)
	4 High Power	-	-	AIC4-4SRAD	-			
	8	AIC4-8P	AIC4-8PG	AIC4-8S	AIC4-8SG	C15		
0	0	**AIC0-0P**	**AIC0-0PG**	**AIC0-0S**	**AIC0-0SG**		.750 (19.0)	.394-.539 (10.0-13.7)
	0 High Power	-	-	AIC0-0SRAD	-			
	0-2	AIC0-2P	AIC0-2PG	AIC0-2S	AIC0-2SG	C11		
	4	AIC0-4P	AIC0-4PG	AIC0-4S	AIC0-4SG	C12		

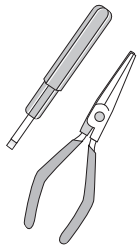
Bolded items are standard crimp contacts

Solder Thermocouple Contacts			
	Type	Pins	Sockets
16S†	Alumel	10-040799-02P*	10-040799-02S*
	Chromel	10-040799-01P*	10-040799-01S*
	Iron	10-040799-03P*	10-040799-03S*
	Constantan	10-040799-04P*	10-040799-04S*
16	Alumel	10-040799-12P*	10-040799-12S*
	Chromel	10-040799-11P*	10-040799-11S*
	Iron	10-040799-13P*	10-040799-13S*
	Constantan	10-040799-14P*	10-040799-14S*

Solder Thermocouple Contacts			
	Type	Pins	Sockets
12	Alumel	10-040799-42P*	10-040799-42S*
	Chromel	10-040799-41P*	10-040799-41S*
	Iron	10-040799-43P*	10-040799-43S*
	Constantan	10-040799-44P*	10-040799-44S*

Thermocouple Types: J = Iron-Constantan K = Alumel-Chromel
T = Copper-Constantan E = Chromel-Constantan

*Call for availability
† 16S contacts are used in 8S, 10S, 10SL, 12S, 14S and 16S connector sizes only.

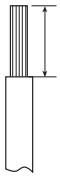
Accessories	Tools						
 Head goes in first, trim excess.						
Wire Hole Filler (Color)	**Crimp Tools**	**Crimp Locator & Die Sets**	**Locator Color**	**Pilot Pin/Insertion Guide for Sockets**	**Insertion Tool**	**Extraction Tool**
MS27488-16-3 (Blue)	AF8 (hand) WA27F (pneumatic) ††	TH29-1	Red	10-242758-016	DAK168-16	DRK59 Kit with Multiple Tips
			Pin-Blue Socket-Green			
MS27488-12-3 (Yellow)			Green	10-242758-012	DAK168-12	
MS27488-8-3 (White)	400BHD	**Die Set** 414DA-8N **Locator** 4025-Pin 4026-Socket	-	10-242758-008	DAK282	
MS27488-4-3 (Blue)		**Die Set** 414DA-4N **Locator** 4043	-	-	AIC4INS	AIC4EXT
MS27488-0-3 (Yellow)		**Die Set** 414DA-0N **Locator** 4042	-	-	AIC0INS	AIC0EXT

†† Call for additional tool accessories.

All dimensions in inches (millimeters in parenthesis)

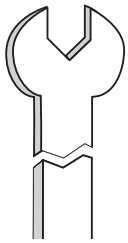
AIB – Contacts

Pin & Socket Coax Contacts

	Coax Pin	Coax Socket	Wire Strip Length	Wire Range	Accessories
					 Head goes in first, trim excess.

Coax Contact Size	Coax Wire Size	Part Number				Wire Strip Lengths Inches (mm)	Wire Sealing Range Inches (mm)		Wire Hole Filler
		Pin Contact		Socket Contact					
		Silver	Gold	Silver	Gold		Min.	Max.	
12	RG161/U RG174A/U RG179B/U RG187A/U RG188A/U RG316/U	21-33034-1	21-33014-21 21-33048-1() 21-33130-1()	21-33033-1	21-33013-21 21-33047-1() 21-33129-1()	Call for details	0.126 (3.2 mm)	0.177 (4.5 mm)	Yellow 10-405996-12
	RG178B/U RG196A/U		21-33014-22		21-33013-22				
8	RG58C/U RG141A/U RG303/U	21-33034-2(1)	21-33014-1(5) 21-33016-5(3) 21-33130-2()	21-33033-2(1) 21-33048-2()	21-33013-1(5) 21-33047-2() 21-33015-5(3) 21-33129-2()	Call for details	0.150 (3.8 mm)	0.256 (6.5 mm)	White 10-405996-8
	RG59B/U RG62A/U RG62B/U RG210/U	31-33034-5(1)	21-33014-5(5) 21-33016-2(3) 21-33130-5() 21-33064-21()	21-33033-3(1)	21-33013-5(5) 21-33015-2(3) 21-33129-3() 21-33063-21()				
	RG161/U RG174A/U RG179B/U RG187A/U RG188A/U RG316/U	21-33034-3(1)	21-33014-3(5) 21-33016-1(3) 21-33130-3 () 21-33064-20()	21-33033-3(1)	21-33013-3(5) 21-33015-1(3) 21-33129-3() 21-33063-20()				
	RG180B/U RG195A/U	21-33034-6	21-33014-6(5) 21-33048-3() 21-33130-6()	21-33033-6	21-33013-(6) 21-33047-3() 21-33129-6()				
	RG140/U RG302/U	21-33034-8	21-33014-8(5) 21-33033-8 21-33130-8()		21-33013-8(5) 21-33129-8()				
	RG55B/U RG142A/U RG142B/U RG223/U	21-33034-4	21-33014-5(5) 21-33130-4()	21-33033-4	21-33013-5(5) 21-33129-4()				
4	RG59B/U RG62A/U RG62B/U RG210/U		21-33060-10()		21-33059-10()	Call for details	0.279 (7.1 mm)	0.366 (9.3 mm)	Blue 10-405996-4
	RG212/U		21-33060-11()		21-33059-11()				
	RG55B/U RG142A/U RG142B/U RG223/U		31-33060-12()		21-33059-12()				

( ) Various platings available. Availability of coax contacts varies widely. Call for details.

	Tools				
	 M22520/10-01	 M22520/5-01	 Crimp Dies		

Coax Contact Size	Coax Wire Size	Hand Crimp Tool	Crimp Die/Locator	Use Locator	Coax Clamp Nut Wrench
12	RG161/U RG174A/U RG179B/U RG187A/U RG188A/U RG316/U	M22520/10-01	M22520/10-05	A	11-8676-1
	RG178B/U RG196A/U			B	
8	RG58C/U RG141A/U RG303/U	M22520/10-01	M22520/10-07	B	11-8676-2
	RG59B/U RG62A/U RG62B/U RG210/U	M22520/5-01	M22520/5-45	B	11-8676-3
	RG161/U RG174A/U RG179B/U RG187A/U RG188A/U RG316/U	M22520/10-01	M22520/10-05	A	11-8676-2
	RG180B/U RG195A/U		M22520/10-07	B	
	RG140/U RG302/U			A	
	RG55B/U RG142A/U RG142B/U RG223/U				
4	RG59B/U RG62A/U RG62B/U RG210/U	M22520/5-01	M22520/5-45	B	11-8676-4
	RG212/U	M22520/5-01	M22520/5-39	A	
	RG55B/U RG142A/U RG142B/U RG223/U	M22520/10-01	M22520/10-07	A	

AIB – At-A-Glance

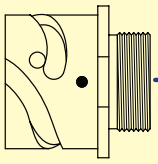
Name:
Company:
Email:
Phone:
Qty: EAU:

Additional Connector Information

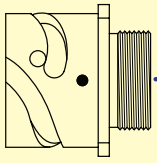
CONNECTOR Part #:_____
OR
# of Contacts:_____ Sizes & Type:_____

CABLE Manufacturer: _____
(If Known)
CABLE Part #: _____ OR Cable OD:_____

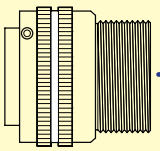
Choose One Connector



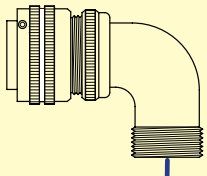
☐ AIB1
GT*01 Type
Cable Mount
Receptacle



☐ AIB30
GT*030 Type
Rear Wall Mount
Receptacle



☐ AIB6
GT*06 Type
Standard Plug



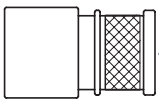
☐ AIB8
GT*08 Type
Right Angle
Plug†

†Option NOT available for shell sizes 32 & 36

Choose One Endbell

Use endbell "U" for Menus A, B, C, D & E

☐ U

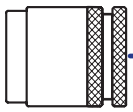


- ☐ Omit for Unshielded
- ☐ S — Shielding Spring
- ☐ T — Shielding Tape
- ☐ W — Shielding Tape & Spring

Contact Termination
☐ Crimp ☐ Solder

Use endbell "CG" for Menus F, G & H

☐ CG



Comments/Notes:
_____
_____
_____
_____
_____
_____

Choose One Wire Protection

- ☐ HST — Heat Shrink Tubing
- ☐ SB — Straight Boot
- ☐ BSB — Bottle Shaped Shrink Boot
- ☐ HBSB — High Ratio Bottle Shaped Shrink Boot
- ☐ CSB — Convoluted Shrink Boot
- ☐ RSB — Right Angle Shrink Boot

- ☐ CA — Conduit Adapter & Conduit
- ☐ MSS — Metal Short Shielded
- ☐ PF — Plastic with flex Relief
- ☐ PS — Plastic Short
- ☐ MS — Metal Short
- ☐ PL — Plastic with Long Boot
- ☐ ML — Metal with Long Boot

ITT Cannon Reverse Bayonet - CB



CA-Bayonet is basically a MIL-DTL-5015 connector, but with an improved coupling system. CA-Bayonet replaces the threaded coupling used in MIL-DTL-5015 with a positive, quick mating 3-point reverse Bayonet lock. CA-Bayonet shares the same shell dimensions, contact layouts, contacts, and performance characteristics as the MIL-DTL-5015 threaded connectors; however the two series do not intermate. Over 180 contact layouts are available from 1 to 85 circuits and up to 245 Amps per contact. The standard MIL-DTL-5015 layouts allow the mixing of power and signal contacts, power only, or signal only. Contacts are available in solder, crimp, or PC termination covering wire gauges from size 26 to size 0 AWG. Thermocouple contacts (J, Y, K, T) are also available. These connectors are completely sealed to withstand moisture, condensation, vibration, and flash-over across a broad range of wire diameters. When the two connector halves are mated, the rear sealing grommet plus the dynamic interfacial seal at the front create an environmentally sealed assembly.

Applications

Industrial environments requiring extreme environmental reliability and ease of mating and unmating, such as:

- Power Generators
- Battery Systems
- Engines
- Sensors
- Motion Control
- Off-road Vehicles
- Earth Moving Equipment
- Ships
- Railroad Equipment
- Any Mobile Equipment
- Industrial Machinery
- Telecommunications

Features

Full Military Temperature Range
CB connectors will operate in temperatures from -55° to +125°C (-67° to +257°F) under the harshest possible conditions.

Wide Range of Wire Gauges and Current Carrying Capability
Up to 245 amps with wire gauges from size 20 up to size 0 AWG wire.

Resilient Insulator & Grommet
A resilient polychloroprene insulator guarantees a liquid tight assembly. Crimp contacts can be inserted and removed a minimum of five cycles for field service.

Wide Variety of Contacts
High reliability screw machine contacts with silver or gold plating are available in sizes from 20 through 0 to accommodate wire gauges from 24 to 0 AWG. Solder, crimp, PC, and Thermocouple contacts are available.

Rugged Shell
Aluminum alloy shell and hardware create a rugged connector with minimal weight. These connectors have been used extensively in the military over for many years and have proven their reliability in a wide range of combat and industrial applications. The primary applications are now in industry where these connectors have found broad application when reliability coupled with low cost is critical.

Simple and Fast Mating and Un-mating
CB bayonet style connectors use a unique "reverse bayonet" coupling system for ease of use. This system allows mating and un-mating of the connector halves with a simple 120° rotation - without compromising shock, vibration, or moisture resistance. The coupling nut employs the exclusive Cannon "roller bolt" which is actually three small stainless steel wheels that roll down the mating ramps. The roller bolt lowers mating forces by half over competitive bayonet connectors while providing the same level of shock, vibration, and moisture resistance. The large open ramps are easily cleaned of mud or other contaminants. The roller bolt and ramp coupling system eliminates the possibility of cross threading and thread damage possible with standard MIL-DTL-5015 threaded connectors. This quick mating design is easier to mate in cold weather, tight spaces, or on equipment which must be disassembled frequently.

Audible, Visual, & Tactile Confirmation of Mating
CB connectors, provide the user with 3 independent checks that the connector halves are mated. When the coupling nut is fully rotated, the three roller bolts snap into the end of the ramps with a loud "click" (audible confirmation). At that same moment, the user can actually feel the bolts click into the grooves (tactile confirmation). A red arrow on the receptacle, and a red dot on the coupling nut are aligned when the connector is properly mated (visual confirmation).

Environmental Sealing
The sealing of this connector is not compromised by any of the operating conditions defined in MIL-DTL-5015 or VG95 234. Mated connectors are completely watertight when tested to 1 bar (35 feet) per the requirements of the VG 95 234 specification. Unlike CT connectors the receptacle contacts are not bonded into the inserts unless requested by the end user.

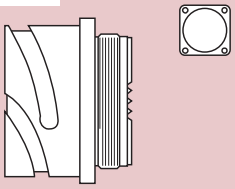
Intermateable and Intermountable with all VG 95 234 Connectors
The standard MIL-DTL-5015 layouts and dimensions insure intermateability and intermountability with all connectors made in accordance with VG 95 234. When front mounted all CB connectors are intermountable with standard threaded MIL-DTL-5015 connectors, making it possible to upgrade without the need to change panel cutouts or clearances in most cases.

ITT
Engineered for life

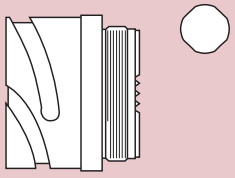
CB – ITT Cannon Reverse Bayonet

STEP 1
Choose Shell Style: Receptacle or Plug
(See Connector Solutions Guide)

Wall Mount Receptacle
CB0



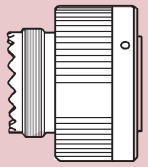
Cable Mount Receptacle
CB1



mates with

Standard Plug
CB6•

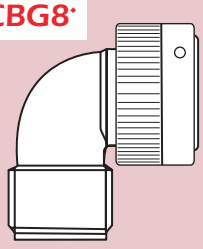
EMI Grounding Plug
CBG6•



• Add **W** for wave spring and washer style coupling nut

Right Angle Plug
not available in shell sizes 8, 32, or 36
CB8•

Right Angle with EMI Grounding
not available in shell sizes 8, 32, or 36
CBG8•



STEP 2 Choose Endbell



Potted
- **U** = Unshielded
- **US** = with shielding spring
- **UT** = with shielding tape
- **UW** = with shielding tape & spring

For use with grommets (wire seals)
- **D** = Unshielded
- **DS** = with shielding spring
- **DT** = with shielding tape
- **DW** = with shielding tape & spring

RU Right Angle
NEW!

Call for more info

STEP 3 Choose Heat Shrink Boot or Tubing

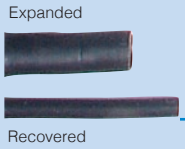
Boot options

Note: Cable outside diameter must be between expanded and recovered dimensions.

SB – Straight Boot



HST – Heat Shrink Tubing



Most Popular

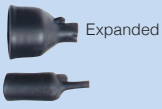
Heat Shrink Product	SB 1	SB 2	SB 3	SB 4	SB 5	SB 6	SB 7	HST 1	HST 2	HST 3	HST 4
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	1.72 (43.7)	1.97 (50.5)	0.750 (19.1)	1.000 (25.4)	1.250 (31.8)	1.570 (39.9)
Recovered ID inch (mm)	0.25 (6.4)	0.29 (7.4)	0.33 (8.4)	0.38 (9.7)	0.41 (10.4)	0.44 (11.2)	0.51 (13.0)	0.250 (6.4)	0.320 (8.1)	0.416 (10.6)	0.510 (13.0)
Length Max inch (mm)	4.17 (105.9)	4.77 (121.2)	5.46 (138.7)	6.28 (159.5)	7.00 (177.8)	8.00 (203.2)	8.00 (203.2)	6.00 (152.4)			
Shell Size 10SL	◆							◆			
12S	◆							◆			
14S		◆	◆						◆		
16S/16*			◆	◆						◆	
18			◆	◆							◆
20				◆							◆
22				◆							◆
24					◆	◆					◆
28					◆	◆					◆
32					◆	◆	◆				◆
36							◆				

adhesive lined heat shrink tubing

CSB – Convoluted Shrink Boot

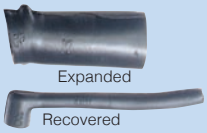


BSB/HBSB – Bottle Shaped Shrink Boot
(High Ratio Bottle Shaped Boot)



Heat Shrink Product	CSB2	CSB3	CSB4	CSB5	BSB1	HBSB2	BSB2	BSB3	BSB4	BSB5	BSB6
Expanded ID inch (mm)	0.70 (17.8)	1.06 (26.9)	1.44 (36.6)	1.80 (45.7)	0.94 (23.9)	0.35 (8.9)	1.18 (30.0)	1.22 (31.0)	1.42 (36.1)	1.69 (42.9)	2.36 (59.9)
Recovered ID inch (mm)	0.32 (8.1)	0.50 (12.7)	0.69 (17.5)	0.88 (22.4)	0.24 (6.1)	0.14 (3.6)	0.24 (6.1)	0.28 (7.1)	0.33 (8.4)	0.39 (9.9)	0.63 (16.0)
Length Max inch (mm)	5.25 (133.4)	5.75 (146.1)	6.25 (158.8)	6.75 (171.5)	1.50 (38.1)	2.17 (55.1)	2.17 (55.1)	2.64 (67.1)	3.15 (80.0)	3.90 (99.1)	5.12 (130.0)
Shell Size 10SL	◆				◆	◆	◆				
12S		◆			◆	◆	◆	◆	◆		
14S		◆	◆				◆	◆	◆		
16S/16*		◆	◆				◆	◆	◆		
18		◆	◆					◆	◆		
20		◆	◆						◆		
22			◆	◆						◆	
24			◆	◆						◆	
28			◆	◆						◆	
32											◆
36											◆

RSB – Right Angle Shrink Boot



Heat Shrink Product	RSB1	RSB2	RSB3	RSB4	RSB5	RSB6	RSB7
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	1.72 (43.7)	1.97 (50.0)
Recovered ID Inch (mm)	0.23 (5.8)	0.26 (6.6)	0.30 (7.6)	0.35 (8.9)	0.37 (9.4)	0.44 (11.2)	0.51 (13.0)
Length Max inch (mm)	4.14 (105.2)	4.88 (124.0)	5.76 (146.3)	6.78 (172.2)	7.29 (185.2)	8.41 (213.6)	8.84 (224.5)
Shell Size 10SL	◆	◆					
12S	◆	◆	◆				
14S		◆	◆	◆			
16S/16*			◆	◆			
18				◆			
20				◆			
22					◆	◆	
24					◆	◆	
28					◆	◆	
32					◆	◆	
36							◆

Note: * Please call for D style endbell

ITT Cannon Reverse Bayonet – CB

STEP 2 Choose Endbell



CG = Straight Adapter Endbell

NEW!



RG = Right Angle Adapter Endbell

Please call for more information

STEP 3 Choose Conduit Adapter or Cord Grip

Unshielded Conduits



CA* = conduit adapter for plastic flexible conduit. Add size code i.e. CGCA10

Note:

Size Code		07	10	12	14	17	23	29	36
Conduit ID Inch (mm)		0.256 (6.5)	0.394 (10.0)	0.472 (12.0)	0.563 (14.3)	0.650 (16.5)	0.906 (23.0)	1.142 (29.0)	1.417 (36.0)
Conduit OD Inch (mm)		0.394 (10.0)	0.512 (13.0)	0.622 (15.8)	0.728 (18.5)	0.835 (21.2)	1.122 (28.5)	1.358 (34.5)	1.673 (42.5)
Shell Size	10SL	♦	♦						
	12S	♦	♦	♦					
	14S	♦	♦	♦	♦	♦			
	16/16S			♦	♦	♦	♦		
	18			♦	♦	♦	♦		
	20			R		R	♦		
	22			R		R	♦		
	24			R		R	♦		
	28			R		R	R	♦	
	32			R		R	R	♦	
	36							R	♦

R = with reducer

OR Shielded Cord Grip



Size Code		MSS*	1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm	4 Min mm	4 Max mm
Shell Size	10SL	♦	4.0	6.5	6.5	9.5	8.0	10.5	-	-
	12S	♦	6.5	9.5	8.0	10.5	9.0	13.0	-	-
	14S	♦	6.5	9.5	7.0	10.5	9.0	13.0	-	-
	16/16S	♦	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	18	♦	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	20	♦	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	22	♦	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	24	♦	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	28	♦	20.0	25.0	24.0	28.0	17.0	32.0	29.0	34.0
	32	♦	20.0	25.0	24.0	28.0	17.0	32.0	29.0	34.0
	36	♦	24.0	28.0	29.0	34.0	-	-	-	-

Conduit Adapter and Cord Grip Types

CA* = Conduit Adapter
MSS* = Metal Short Shielded - Nickel Plated Brass
PF* = Plastic with Flex Spring
PS* = Plastic Short
MS* = Metal Short - Nickel Plated Brass
PL* = Plastic Long
ML* = Metal Long - Nickel Plated Brass
* = add size code per chart i.e. CGPFA or CGMSS4
Min/Max refers to cable diameter.

OR Unshielded Cord Grip

Note: Cable jacket and shield diameters must be between Min/Max of cord grip.

For detailed info on shield diameters, see MSS table on page 232.







Shell Size		PF*	PS*	MS*	A Min mm	A Max mm	R Min mm	R Max mm	PL*	ML*	1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm
	10SL	♦	♦	♦	4.0	8.0	2.0	6.0	♦	♦	4.0	6.5	7.5	9.5	-	-
	12S	♦	♦	♦	5.0	10.0	3.0	7.0	♦	♦	6.5	9.5	7.0	10.5	-	-
	14S	♦	♦	♦	6.0	12.0	5.0	9.0	♦	♦	6.5	9.5	8.5	10.5	-	-
	16/16S	♦	♦	♦	10.0	14.0	7.0	12.0	♦	♦	6.5	9.5	7.0	10.5	9.5	13.0
	18	♦	♦	♦	10.0	14.0	7.0	12.0	♦	♦	6.5	9.5	7.0	10.5	9.5	13.0
	20	♦	♦	♦	13.0	18.0	9.0	16.0	♦	♦	9.0	13.0	13.0	15.5	14.0	18.0
	22	♦	♦	♦	13.0	18.0	9.0	16.0	♦	♦	17.0	21.0	21.0	25.0		
	24	♦	♦	♦	13.0	18.0	9.0	16.0			-	-	-	-	-	-
	28				-	-	-	-			-	-	-	-	-	-
	32				-	-	-	-			-	-	-	-	-	-
	36				-	-	-	-			-	-	-	-	-	-

STEP 4 Choose Connector Layout



See Connector Solutions Guide

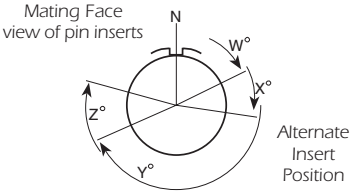
STEP 5 Choose Contact

P = Pin
S = Socket

STEP 6 Choose Rotation

(omit for normal)

W X Y Z



STEP 7 Choose Contact Type

S = Solder
C = Crimp
0 = Less contacts

STEP 8 Choose Platings

CONTACTS:

AU = Gold
Omit for silver plated contacts

SHELLS:

Standard Plating = Conductive olive drab chromate over cadmium

A34 = Bright Nickel (EU)

A232 = Non-Conductive Black Zinc Cobalt (EU) (RoHS✣ with crimp or F127 contacts)

F127 = Less prefilled solder contacts

Example of part description:

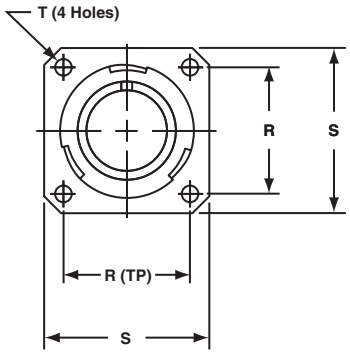
CB6	US	CSB2-	10SL-3	P		S	AUA34
1 Shell Style	2 Endbells/ Shielding	3 Wire Protection	4 Connector Layout	5 Contact	6 Rotation	7 Contact Type	8 Platings

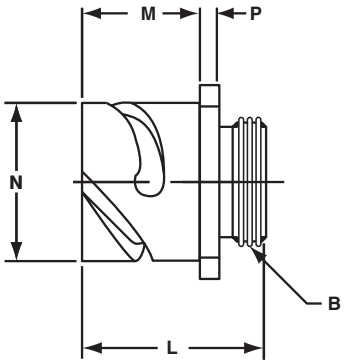
(See Connector Solutions Guide)

Note: ✣As reported by ITT Cannon, please call for more info.

CB – Dimensions

CB 0 Styles

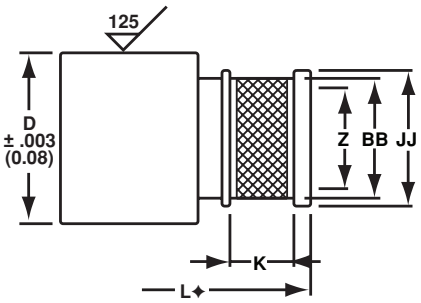




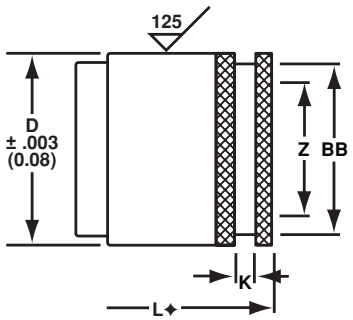
Shell Size	M	N	P	R	S	T
10SL	0.717 (18.2)	0.717 (18.2)	0.110 (2.8)	0.717 (18.2)	1.000 (25.4)	0.126 (3.2)
12S	0.717 (18.2)	0.843 (21.4)	0.126 (3.2)	0.811 (20.6)	1.102 (28.0)	0.126 (3.2)
14S	0.717 (18.2)	0.969 (24.6)	0.126 (3.2)	0.906 (23.0)	1.181 (30.0)	0.126 (3.2)
16S	0.717 (18.2)	1.079 (27.4)	0.126 (3.2)	0.969 (24.6)	1.280 (32.5)	0.126 (3.2)
16	0.846 (21.5)	1.079 (27.4)	0.126 (3.2)	0.969 (24.6)	1.280 (32.5)	0.126 (3.2)
18	0.907 (23.1)	1.213 (30.8)	0.157 (4.0)	1.063 (27.0)	1.378 (35.0)	0.126 (3.2)
20	0.907 (23.1)	1.346 (34.2)	0.157 (4.0)	1.157 (29.4)	1.496 (38.0)	0.126 (3.2)
22	0.907 (23.1)	1.472 (37.4)	0.157 (4.0)	1.252 (31.8)	1.614 (41.0)	0.126 (3.2)
24	0.907 (23.1)	1.610 (40.9)	0.157 (4.0)	1.374 (34.9)	1.752 (44.5)	0.146 (3.7)
28	0.947 (24.1)	1.839 (46.7)	0.157 (4.0)	1.563 (39.7)	2.000 (50.8)	0.146 (3.7)
32	0.947 (24.1)	2.102 (53.4)	0.157 (4.0)	1.752 (44.5)	2.244 (50.8)	0.169 (4.3)
36	0.947 (24.1)	2.346 (59.6)	0.157 (4.0)	1.937 (49.2)	2.500 (50.8)	0.169 (4.3)

L Max	B Thread 2A
1.276 (32.4)	9/16-24UNEF
1.276 (32.4)	5/8-24UNEF
1.276 (32.4)	3/4-20UNEF
1.276 (32.4)	7/8-20UNEF
1.575 (40.0)	7/8-20UNEF
1.634 (41.5)	1-20UNEF
1.634 (41.5)	1-1/18UNEF
1.634 (41.5)	1-1/4-18UNEF
1.634 (41.5)	1-3/8-18UNEF
1.673 (42.5)	1-5/8-18UNEF
1.673 (42.5)	1-7/8-16UN
1.673 (42.5)	2-1/8-16UN

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	JJØ Max	C Code
10SL	2.523 (64.1)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12S	2.622 (66.6)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.588 (14.9)	B
14S	2.508 (63.7)	0.865 (22.0)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
16S	2.508 (63.7)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
16	2.807 (71.3)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
18	3.063 (77.8)	1.146 (29.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
20	3.063 (77.8)	1.271 (32.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
22	3.122 (79.3)	1.428 (36.3)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
24	3.211 (82.3)	1.552 (39.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
28	3.338 (84.8)	1.740 (44.2)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
32	3.810 (96.8)	1.990 (50.6)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
36	3.728 (94.7)	2.291 (58.2)	0.476 (12.1)	1.238 (31.4)	1.532 (38.9)	1.650 (41.9)	-

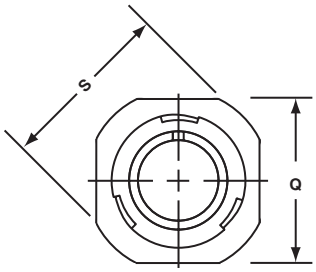


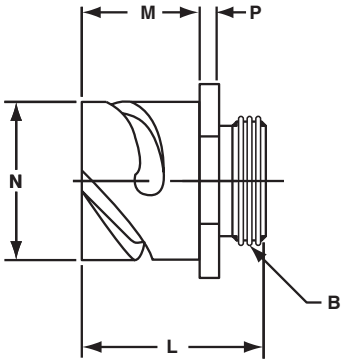
Cord Grip						
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	C Code
10SL	2.181 (55.4)	0.865 (22.0)	0.118 (3.0)	0.351 (8.9)	0.707 (18.0)	C
12S	2.201 (55.9)	0.990 (25.2)	0.118 (3.0)	0.376 (9.5)	0.833 (21.2)	D
14S	2.181 (55.4)	0.990 (25.2)	0.118 (3.0)	0.457 (11.6)	0.887 (22.6)	D
16S	2.240 (56.9)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
16	2.539 (64.5)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
18	2.756 (70.0)	1.146 (29.1)	0.118 (3.0)	0.670 (17.0)	0.989 (25.1)	E
20	2.756 (70.0)	1.428 (36.3)	0.118 (3.0)	0.794 (20.2)	1.270 (32.3)	G
22	2.807 (71.3)	1.428 (36.3)	0.118 (3.0)	0.886 (22.5)	1.270 (32.3)	G
24	2.768 (70.3)	1.552 (39.4)	0.118 (3.0)	0.958 (24.3)	1.395 (35.4)	H
28	2.846 (72.3)	1.772 (45.0)	0.118 (3.0)	1.134 (28.8)	1.614 (41.0)	-
32	2.866 (72.8)	2.043 (51.9)	0.118 (3.0)	1.266 (32.2)	1.886 (47.9)	-
36	2.873 (73.0)	2.290 (58.2)	0.118 (3.0)	1.580 (40.1)	2.130 (54.2)	-

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

CB – Dimensions

CB 1 Styles

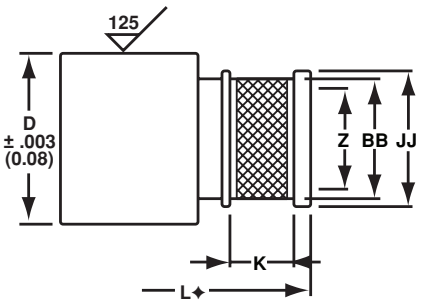




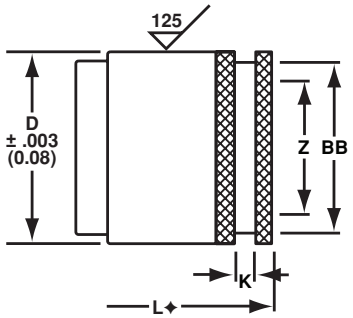
Shell Size	M	N	P	Q	S
10SL	0.717 (18.2)	0.717 (18.2)	0.110 (2.8)	0.811 (20.6)	0.992 (25.2)
12S	0.717 (18.2)	0.843 (21.4)	0.126 (3.2)	0.929 (23.6)	1.094 (27.8)
14S	0.717 (18.2)	0.969 (24.6)	0.126 (3.2)	1.000 (25.4)	1.173 (29.8)
16S	0.717 (18.2)	1.079 (27.4)	0.126 (3.2)	1.126 (28.6)	1.268 (32.2)
16	0.846 (21.5)	1.079 (27.4)	0.126 (3.2)	1.126 (28.6)	1.268 (32.2)
18	0.907 (23.1)	1.213 (30.8)	0.157 (4.0)	1.248 (31.7)	1.370 (34.8)
20	0.907 (23.1)	1.346 (34.2)	0.157 (4.0)	1.374 (34.9)	1.488 (37.8)
22	0.907 (23.1)	1.472 (37.4)	0.157 (4.0)	1.500 (38.1)	1.618 (41.1)
24	0.907 (23.1)	1.610 (40.9)	0.157 (4.0)	1.626 (41.3)	1.756 (44.6)
28	0.947 (24.1)	1.839 (46.7)	0.157 (4.0)	1.862 (47.3)	2.004 (50.9)
32	0.947 (24.1)	2.102 (53.4)	0.157 (4.0)	2.126 (54.0)	2.248 (57.1)
36	0.947 (24.1)	2.346 (59.6)	0.157 (4.0)	2.386 (60.6)	2.504 (63.6)

L Max	B Thread 2A
1.276 (32.4)	9/16-24UNEF
1.276 (32.4)	5/8-24UNEF
1.276 (32.4)	3/4-20UNEF
1.276 (32.4)	7/8-20UNEF
1.575 (40.0)	7/8-20UNEF
1.634 (41.5)	1-20UNEF
1.634 (41.5)	1-1/18UNEF
1.634 (41.5)	1-1/4-18UNEF
1.634 (41.5)	1-3/8-18UNEF
1.673 (42.5)	1-5/8-18UNEF
1.673 (42.5)	1-7/8-16UN
1.673 (42.5)	2-1/8-16UN

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	JJØ Max	C Code
10SL	2.523 (64.1)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12S	2.622 (66.6)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.588 (14.9)	B
14S	2.508 (63.7)	0.865 (22.0)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
16S	2.508 (63.7)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
16	2.807 (71.3)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
18	3.063 (77.8)	1.146 (29.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
20	3.063 (77.8)	1.271 (32.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
22	3.122 (79.3)	1.428 (36.3)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
24	3.211 (82.3)	1.552 (39.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
28	3.338 (84.8)	1.740 (44.2)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
32	3.810 (96.8)	1.990 (50.6)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
36	3.728 (94.7)	2.291 (58.2)	0.476 (12.1)	1.238 (31.4)	1.532 (38.9)	1.650 (41.9)	-

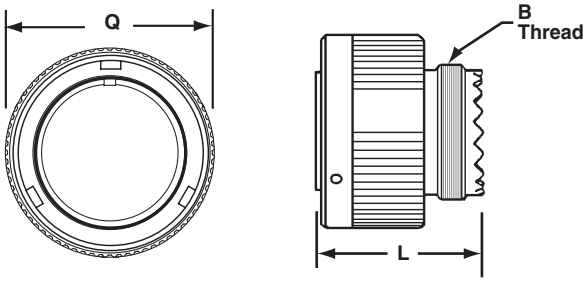


Cord Grip						
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	C Code
10SL	2.181 (55.4)	0.865 (22.0)	0.118 (3.0)	0.351 (8.9)	0.707 (18.0)	C
12S	2.201 (55.9)	0.990 (25.2)	0.118 (3.0)	0.376 (9.5)	0.833 (21.2)	D
14S	2.181 (55.4)	0.990 (25.2)	0.118 (3.0)	0.457 (11.6)	0.887 (22.6)	D
16S	2.240 (56.9)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
16	2.539 (64.5)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
18	2.756 (70.0)	1.146 (29.1)	0.118 (3.0)	0.670 (17.0)	0.989 (25.1)	E
20	2.756 (70.0)	1.428 (36.3)	0.118 (3.0)	0.794 (20.2)	1.270 (32.3)	G
22	2.807 (71.3)	1.428 (36.3)	0.118 (3.0)	0.886 (22.5)	1.270 (32.3)	G
24	2.768 (70.3)	1.552 (39.4)	0.118 (3.0)	0.958 (24.3)	1.395 (35.4)	H
28	2.846 (72.3)	1.772 (45.0)	0.118 (3.0)	1.134 (28.8)	1.614 (41.0)	-
32	2.866 (72.8)	2.043 (51.9)	0.118 (3.0)	1.266 (32.2)	1.886 (47.9)	-
36	2.873 (73.0)	2.290 (58.2)	0.118 (3.0)	1.580 (40.1)	2.130 (54.2)	-

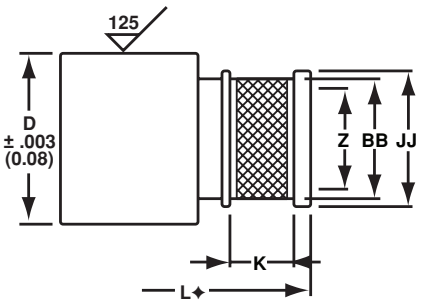
L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

CB – Dimensions

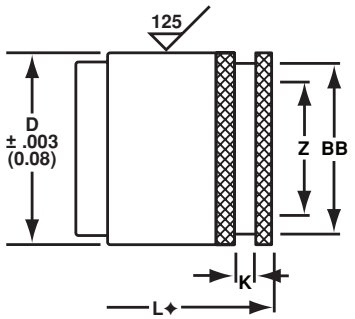
CB 6 Style



Shell Size	Q Max	L Max	B Thread 2A
10SL	0.898 (22.8)	0.969 (24.6)	9/16-24UNEF
12S	1.024 (26.0)	0.969 (24.6)	5/8-24UNEF
14S	1.150 (29.2)	0.969 (24.6)	3/4-20UNEF
16S	1.260 (32.0)	0.969 (24.6)	7/8-20UNEF
16	1.260 (32.0)	1.343 (34.1)	7/8-20UNEF
18	1.437 (36.5)	1.343 (34.1)	1-20UNEF
20	1.571 (39.9)	1.343 (34.1)	1-1/18UNEF
22	1.657 (42.1)	1.343 (34.1)	1-1/4-18UNEF
24	1.835 (46.6)	1.406 (35.7)	1-3/8-18UNEF
28	2.102 (53.4)	1.406 (35.7)	1-5/8-18UNEF
32	2.366 (60.1)	1.469 (37.3)	1-7/8-16UN
36	2.610 (66.3)	1.469 (37.3)	2-1/8-16UN



Universal Heat Shrink							
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	JJØ Max	C Code
10SL	2.216 (56.3)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12S	2.313 (58.8)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.588 (14.9)	B
14S	2.201 (55.9)	0.865 (22.0)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
16S	2.201 (55.9)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
16	2.575 (65.4)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
18	2.772 (70.4)	1.146 (29.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
20	2.772 (70.4)	1.271 (32.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
22	2.831 (71.9)	1.428 (36.3)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
24	3.024 (76.8)	1.552 (39.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
28	3.050 (77.4)	1.740 (44.2)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
32	3.584 (91.0)	1.990 (50.6)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
36	3.524 (89.5)	2.291 (58.2)	0.476 (12.1)	1.238 (31.4)	1.532 (38.9)	1.650 (41.9)	-

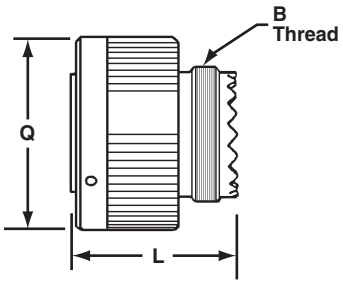


Cord Grip						
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	C Code
10SL	1.874 (47.6)	0.865 (22.0)	0.118 (3.0)	0.351 (8.9)	0.707 (18.0)	C
12S	1.894 (48.1)	0.990 (25.2)	0.118 (3.0)	0.376 (9.5)	0.833 (21.2)	D
14S	1.874 (47.6)	0.990 (25.2)	0.118 (3.0)	0.457 (11.6)	0.887 (22.6)	D
16S	1.933 (48.1)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
16	2.307 (58.6)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
18	2.465 (62.6)	1.146 (29.1)	0.118 (3.0)	0.670 (17.0)	0.989 (25.1)	E
20	2.465 (62.6)	1.428 (36.3)	0.118 (3.0)	0.794 (20.2)	1.270 (32.3)	G
22	2.516 (63.9)	1.428 (36.3)	0.118 (3.0)	0.886 (22.5)	1.270 (32.3)	G
24	2.540 (64.5)	1.552 (39.4)	0.118 (3.0)	0.958 (24.3)	1.395 (35.4)	H
28	2.585 (65.7)	1.772 (45.0)	0.118 (3.0)	1.134 (28.8)	1.614 (41.0)	-
32	2.662 (67.6)	2.043 (51.9)	0.118 (3.0)	1.266 (32.2)	1.886 (47.9)	-
36	2.669 (67.8)	2.290 (58.2)	0.118 (3.0)	1.580 (40.1)	2.130 (54.2)	-

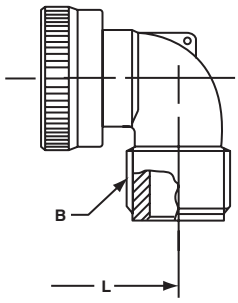
L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

CB – Dimensions

CB 8 Styles



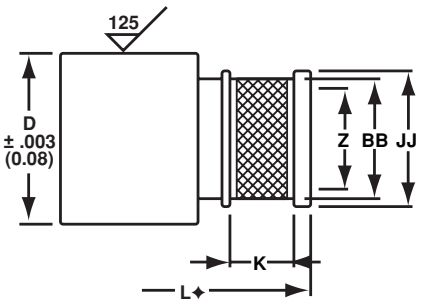
CB8 Endbell



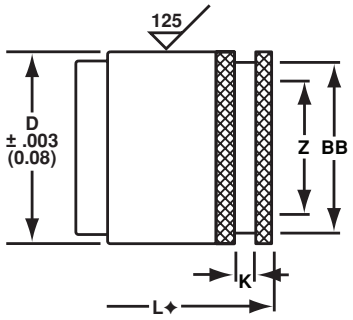
Shell Size	Q Max	L Max	B Thread 2A
10SL	0.898 (22.8)	0.969 (24.6)	9/16-24UNEF
12S	1.024 (26.0)	0.969 (24.6)	5/8-24UNEF
14S	1.150 (29.2)	0.969 (24.6)	3/4-20UNEF
16S	1.260 (32.0)	0.969 (24.6)	7/8-20UNEF
16	1.260 (32.0)	1.343 (34.1)	7/8-20UNEF
18	1.437 (36.5)	1.343 (34.1)	1-20UNEF
20	1.571 (39.9)	1.343 (34.1)	1-1/18UNEF
22	1.657 (42.1)	1.343 (34.1)	1-1/4-18UNEF
24	1.835 (46.6)	1.406 (35.7)	1-3/8-18UNEF
28	2.102 (53.4)	1.406 (35.7)	1-5/8-18UNEF
32	2.366 (60.1)	1.469 (37.3)	1-7/8-16UN
36	2.610 (66.3)	1.469 (37.3)	2-1/8-16UN

L Max	B Thread 2A
2.188 (55.6)	5/8-24UNEF
2.188 (55.6)	5/8-24UNEF
2.312 (58.7)	3/4-20UNEF
2.406 (61.1)	7/8-20UNEF
2.781 (70.6)	7/8-20UNEF
2.844 (72.2)	1-20UNEF
3.250 (82.6)	1-3/16-18UNEF
3.250 (82.6)	1-3/16-18UNEF
3.719 (94.5)	1-7/16-18UNEF
3.719 (94.5)	1-7/16-18UNEF
4.188 (106.4)	1-3/4-18NS
4.297 (109.1)	2-18NS

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	JJØ Max	C Code
10SL	2.216 (56.3)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12S	2.313 (58.8)	0.740 (18.8)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.588 (14.9)	B
14S	2.201 (55.9)	0.865 (22.0)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
16S	2.201 (55.9)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
16	2.575 (65.4)	0.990 (25.2)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
18	2.772 (70.4)	1.146 (29.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
20	2.772 (70.4)	1.271 (32.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
22	2.831 (71.9)	1.428 (36.3)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
24	3.024 (76.8)	1.552 (39.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
28	3.050 (77.5)	1.740 (44.2)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
32	3.584 (91.0)	1.990 (50.6)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
36	3.524 (89.5)	2.291 (58.2)	0.476 (12.1)	1.238 (31.4)	1.532 (38.9)	1.650 (41.9)	-



Cord Grip						
Shell Size	L✦ Max	DØ	K Max	ZØ Cable Max*	BBØ Max	C Code
10SL	1.879 (47.6)	0.865 (22.0)	0.118 (3.0)	0.351 (8.9)	0.707 (18.0)	C
12S	1.894 (48.1)	0.990 (25.2)	0.118 (3.0)	0.376 (9.5)	0.833 (21.2)	D
14S	1.874 (47.6	0.990 (25.2)	0.118 (3.0)	0.457 (11.6)	0.887 (22.6)	D
16S	1.933 (49.1)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
16	2.307 (58.6)	1.146 (29.1)	0.118 (3.0)	0.560 (14.2)	0.989 (25.1)	E
18	2.465 (62.6)	1.146 (29.1)	0.118 (3.0)	0.670 (17.0)	0.989 (25.1)	E
20	2.465 (62.6)	1.428 (36.3)	0.118 (3.0)	0.794 (20.2)	1.270 (32.3)	G
22	2.516 (63.9)	1.428 (36.3)	0.118 (3.0)	0.886 (22.5)	1.270 (32.3)	G
24	2.540 (64.5)	1.552 (39.4)	0.118 (3.0)	0.958 (24.3)	1.395 (35.4)	H
28	2.585 (65.7)	1.772 (45.0)	0.118 (3.0)	1.134 (28.8)	1.614 (41.0)	-
32	2.662 (67.6)	2.043 (51.9)	0.118 (3.0)	1.266 (32.2)	1.886 (47.9)	-
36	2.669 (67.8)	2.290 (58.2)	0.118 (3.0)	1.580 (40.1)	2.130 (54.2)	-

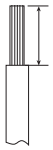
L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

CB – Contacts

CB Series







Contact Size

CONTACT SIZE	WIRE GAUGE (AWG)	PART NUMBER SILVER	PART NUMBER GOLD		PART NUMBER SILVER	PART NUMBER GOLD		WIRE STRIP LENGTHS
16S†	16-18❖	CB16S-16P❖	CB16S-16PG❖		CB16S-16S❖	CB16S-16SG❖		
	20-22	CB16S-20P	CB16S-20PG	G5	CB16S-20S	CB16S-20SG	G5	
	22-26	CB16S-22P	CB16S-22PG	G6	CB16S-22S	CB16S-22SG	G6	
16	12-14	CB16-12P	CB16-12PG	G13	CB16-12S	CB16-12SG	G13	
	14-16	CB16-14P	CB16-14PG	G12	CB16-14S	CB16-14SG	G12	.245 (6.2)
	16-18❖	CB16-16P❖	CB16-16PG❖		CB16-16S❖	CB16-16SG❖		
	20-22	CB16-20P	CB16-20PG	G9	CB16-20S	CB16-20SG	G9	
	22-26	CB16-22P	CB16-22PG	G10	CB16-22S	CB16-22SG	G10	
12	12-14❖	CB12-12P❖	CB12-12PG❖		CB12-12S❖	CB12-12SG❖		
	16-18	CB12-16P	CB12-16PG	G16	CB12-16S	CB12-16SG	G16	
8	8-10❖	CB8-8P❖	-		CB8-8S❖	-		
	10	CB8-10P	-	G42	CB8-10S	-	G42	
	12-14	CB8-12P	-	G40	CB8-12S	-	G40	.465 (11.8)
4	4❖	CB4-4P❖	-		CB4-4S❖	-		
	6	CB4-6P	-	G44	CB4-6S	-	G44	
0	0❖	CB0-0P❖	-		CB0-0S❖	-		
	2	CB0-2P	-	G48	CB0-2S	-	G48	.540 (13.7)
	4	CB0-4P	-	G47	CB0-4S	-	G47	

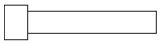
Part Numbers marked with ❖ are the standard for that contact size
† 16S contacts are used in 10SL, 12S, 14S, 16S

CB Series

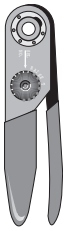
Wire Range

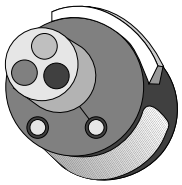


Accessories



Tools







400BHD Shown



Insertion tools



Extraction tool





INSULATION O.D. MIN	INSULATION O.D. MAX	WIRE HOLE FILLERS	HOLE FILLER COLOR	HAND CRIMP TOOL	HAND TOOL TURRET	USE LOCATOR COLOR	POWER CRIMP TOOL	POWER CRIMP LOCATOR	INSERTION/ EXTRACTION TOOL	INSERTION GUIDE PINS
.089 (2.2)	.110 (2.8)	225-0017-000	BLUE	AF8	TH452	BLUE△/GREEN◆	WA27F	Use hand tool turret with power tool.	CIT-F80-16* CET-F80-16††	226-1017-000
.089 (2.2)	.110 (2.8)	225-0017-000	BLUE	AF8	TH452	BLUE△/GREEN◆	WA27F			226-1017-000
.089 (2.2)	.110 (2.8)	225-0017-000	BLUE	AF8	TH452	BLUE△/GREEN◆	WA27F			226-1017-000
.089 (2.2)	.110 (2.8)	225-0017-000	BLUE	AF8	TH452	GREEN△/RED◆	WA27F			226-1017-000
.089 (2.2)	.110 (2.8)	225-0017-000	BLUE	AF8	TH452	GREEN△/RED◆	WA27F			226-1017-000
.089 (2.2)	.110 (2.8)	225-0017-000	BLUE	AF8	TH452	GREEN△/RED◆	WA27F			226-1017-000
.089 (2.2)	.110 (2.8)	225-0017-000	BLUE	AF8	TH452	GREEN△/RED◆	WA27F			226-1017-000
.089 (2.2)	.110 (2.8)	225-0017-000	BLUE	AF8	TH452	GREEN△/RED◆	WA27F			226-1017-000
.122 (3.1)	.138 (3.5)	225-0018-000	YELLOW	AF8	TH452	RED	WA27F		CIT-F80-12*	226-1018-000
.122 (3.1)	.138 (3.5)	225-0018-000	YELLOW	AF8	TH452	RED	WA27F		CET-F80-12††	226-1018-000
.220 (5.6)	.256 (6.5)	MS27488-8-3	RED	N/A	N/A	N/A	400BHD	CCH8-KIT	CIT-8* CET-8††	N/A
.220 (5.6)	.256 (6.5)	MS27488-8-3	RED	N/A	N/A	N/A	400BHD	CCH8-KIT		N/A
.220 (5.6)	.256 (6.5)	MS27488-8-3	RED	N/A	N/A	N/A	400BHD	CCH8-KIT		N/A
.335 (8.5)	.370 (9.4)	MS27488-4-3	BLUE	N/A	N/A	N/A	400BHD	CCH4-KIT	CIT-4*	N/A
.335 (8.5)	.370 (9.4)	MS27488-4-3	BLUE	N/A	N/A	N/A	400BHD	CCH4-KIT	CET-4††	N/A
.452 (11.5)	.512 (13.0)	MS27488-0-3	YELLOW	N/A	N/A	N/A	400BHD	CCH0-KIT	CIT-0* CET-0††	N/A
.452 (11.5)	.512 (13.0)	MS27488-0-3	YELLOW	N/A	N/A	N/A	400BHD	CCH0-KIT		N/A
.452 (11.5)	.512 (13.0)	MS27488-0-3	YELLOW	N/A	N/A	N/A	400BHD	CCH0-KIT		N/A

*Insertion Tool †† Extraction Tool △ Pin ◆ Socket



Crimp kits are available for 16S & 16 size contacts - CAB16KIT.

Kit includes:

- Crimp Tool
- Locator
- Insertion Tool
- Insertion Guide Pins
- Contact Insertion Lubricant
- Assembly Instructions
- Rugged Case

CAB16-12KIT for 16S, 16 and 12 size contacts
(Not Shown)

All dimensions in inches (millimeters in parenthesis)

CB – At-A-Glance

Name:
Company:
Email:
Phone:
Qty: EAU:

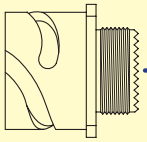
Additional Connector Information

CONNECTOR Part #:_____
OR
# of Contacts:_____ Sizes & Type:_____

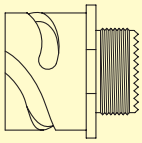
CABLE Manufacturer: _____
(If Known)
CABLE Part #: _____ OR Cable OD:_____

PEI-Genesis

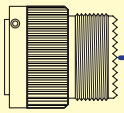
Choose One Connector



☐ **CB0**
CA3100...B Type
Wall Mount Receptacle

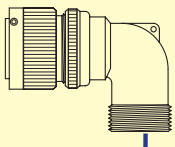


☐ **CB1**
CA3101...B Type
Cable Mount Receptacle



☐ **CB6**
CA3106...B Type
Standard Plug

☐ **CBG6**
CA3106...B Type
Standard Plug with EMI Grounding



☐ **CB8**
CA3108...B Type
Right Angle Plug*

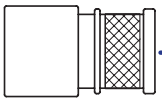
☐ **CBG8**
CA3108...B Type
Right Angle Plug with EMI Grounding*

*Option NOT available for shell sizes 32 & 36

Choose One Endbell

Use endbell "U" for Menus A, B, C, D & E

☐ **U**
☐ **D**

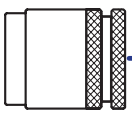


☐ Omit for Unshielded
☐ **S** Shielding Spring
☐ **T** Shielding Tape
☐ **W** Shielding Tape & Spring

Contact Termination
☐ Crimp ☐ Solder

Use endbell "CG" for Menus F, G & H

☐ **CG**



Comments/Notes:

_____
_____
_____
_____
_____
_____

Choose One Wire Protection

☐ **HST** Heat Shrink Tubing



☐ **SB** Straight Boot

☐ **BSB** Bottle Shaped Shrink Boot



☐ **HBSB** High Ratio Bottle Shaped Shrink Boot

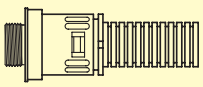
☐ **CSB** Convoluted Shrink Boot



☐ **RSB** Right Angle Shrink Boot



☐ **CA** Conduit Adapter & Conduit



☐ **MSS** Metal Short Shielded



☐ **PF** Plastic with flex Relief



☐ **PS** Plastic Short



☐ **MS** Metal Short



☐ **PL** Plastic with Long Boot



☐ **ML** Metal with Long Boot



MIL-DTL-26482 Series 1 Solder Type – KPT



KPT connectors offer high density contact arrangements in a miniature circular metal shell. The connector is environmentally sealed, conforms to MIL-DTL-26482 and is intermateable, intermountable, and interchangeable with all MIL-DTL-26482 connectors, whether solder or crimp style is used. KPT Series use a quick disconnect bayonet coupling for rapid positive mating and unmating of the connector.

Applications

Military and Industrial environments requiring a miniature, high density, environmental connector.

- Power generators
- Engines
- Sensors
- Motion Control
- Off-road vehicles
- Earth moving equipment
- Ships
- Mobile equipment
- Industrial machinery
- Telecommunications

Features

Rugged Shell
Aluminum alloy shell and hardware create a rugged connector with minimal weight. This connector has been used extensively in commercial, military, and aerospace environments.

Environmentally Sealed
Complete moisture sealing is achieved by combining four seals: shell, peripheral, interfacial, and wire. Wire Seal is accomplished by multiple ripple design, exceeding the wire sealing requirements of MIL-DTL-26482.

Resistant to Military Environments
This connector will operate in temperatures from -67˚ to +257˚F (-55˚ to +125˚C) under the harshest possible conditions.

Wide Range of Wire Gauges and Current Carrying Capability
Up to 22 amps with wire gauges from size 24 up to size 16 AWG wire.

Resilient Insulator & Grommet
A resilient polychloroprene insulator and integrated rear wire sealing grommet guarantees a liquid tight assembly. Solder contact is permanently bonded into the insulator.

Solder Gold Plated Contacts
KPT solder contacts are gold plated per MIL-G-45204 Type II. Socket contacts are closed to eliminate damage from test probes and to help correct misaligned pins during engagement.

ITT
Engineered for life

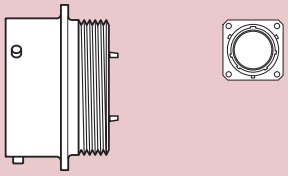
For Assistance in Europe – Please See the Back Cover For a Complete Listing of Our Branch Offices and Contact Numbers. • Specifications subject to change.

ITT Cannon KPT

STEP 1
Choose Shell Style: Receptacle or Plug
(See Connector Solutions Guide)

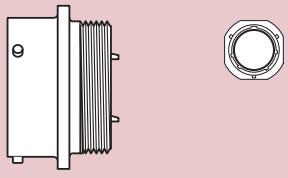
Solder Wall Mount Receptacle

KPT0



Solder Cable Mount Receptacle

KPT1



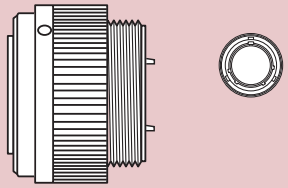
mates with

Solder Cable Plug

KPT6

EMI Grounding Finger Barrel Plug*

KPT6G



Right Angle Plug*

KPT8 not available in shell size 8

EMI Grounding Finger Barrel Right Angle Plug*

KPT8G not available in shell size 8

*Call for more information

STEP 2 Choose Endbell



Potted (Preferred)

- **U** = Unshielded
- **US** = with shielding spring
- **UT** = with shielding tape
- **UW** = with shielding tape & spring

RU Right Angle



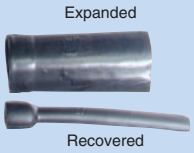
Call for more info

STEP 3 Choose Heat Shrink Boot or Tubing

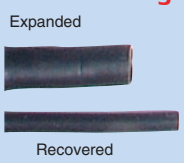
Note: Cable outside diameter must be between expanded and recovered dimensions.

Boot options

SB – Straight Boot



HST – Heat Shrink Tubing



Most Popular

Heat Shrink Product	SB 1	SB 2	SB 3	SB 4	SB 5	HST 1	HST 2	HST 3	HST 4
Expanded ID inch (mm)	0.88 ((22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	0.750 (19.1)	1.000 (25.4)	1.250 (31.8)	1.570 (39.9)
Recovered ID inch (mm)	0.25 (6.4)	0.29 (7.4)	0.33 (8.4)	0.38 (9.7)	0.41 (10.4)	0.250 (6.4)	0.320 (8.1)	0.416 (10.6)	0.510 (13.0)
Length Max inch (mm)	4.17 (105.9)	4.77 (121.2)	5.46 (138.7)	6.28 (159.5)	7.00 (177.8)	6.00 (152.4)			
Shell Size 8	◆					◆			
10	◆					◆			
12		◆	◆				◆		
14			◆					◆	
16			◆	◆				◆	
18				◆				◆	
20				◆					◆
22					◆				◆
24									◆

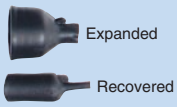
adhesive lined heat shrink tubing

CSB – Convoluted Shrink Boot

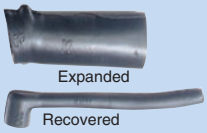


Heat Shrink Product	CSB2	CSB3	CSB4	CSB5	BSB1	HBSB2	BSB2	BSB3	BSB4	BSB5
Expanded ID inch (mm)	0.70 (17.8)	1.06 (26.9)	1.44 (36.6)	1.80 (45.7)	0.94 (23.9)	0.35 (8.9)	1.18 (30.0)	1.22 (31.0)	1.42 (36.1)	1.69 (42.9)
Recovered ID inch (mm)	0.32 (8.1)	0.50 (12.7)	0.69 (17.5)	0.88 (22.4)	0.24 (6.1)	0.14 (3.6)	0.24 (6.1)	0.28 (7.1)	0.33 (8.4)	0.39 (9.9)
Length Max inch (mm)	5.25 (133.4)	5.75 (146.1)	6.25 (158.8)	6.75 (171.5)	1.50 (38.1)	2.17 (55.1)	2.17 (55.1)	2.64 (67.1)	3.15 (80.0)	3.90 (99.1)
Shell Size 8	◆									
10	◆				◆	◆	◆			
12	◆				◆	◆	◆	◆		
14		◆			◆	◆	◆	◆	◆	
16		◆	◆				◆	◆	◆	
18		◆	◆				◆	◆	◆	
20		◆	◆					◆	◆	
22		◆	◆						◆	
24			◆	◆						◆

BSB/HBSB – Bottle Shaped Shrink Boot
(High Ratio Bottle Shaped Boot)



RSB – Right Angle Shrink Boot



Heat Shrink Product	RSB1	RSB2	RSB3	RSB4	RSB5
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)
Recovered ID inch (mm)	0.23 (5.8)	0.26 (6.6)	0.30 (7.6)	0.35 (8.9)	0.37 (9.4)
Length Max inch (mm)	4.14 (105.2)	4.88 (124.0)	5.76 (146.3)	6.78 (172.2)	7.29 (185.2)
Shell Size 8	◆				
10	◆	◆			
12		◆	◆		
14			◆	◆	
16			◆	◆	
18				◆	
20				◆	◆
22					◆
24					

STEP 2 Choose Endbell



NEW!



CG = Straight Adapter Endbell

RG = Right Angle Adapter Endbell

Please call for more information

STEP 3 Choose Conduit Adapter or Cord Grip

Unshielded Conduits



CA* = conduit adapter for plastic flexible conduit. Add size code i.e. CGCA10

Note: Normal recommended conduit fill is 40% of Conduit ID or less.

Size Code		07	10	12	14	17	23
Conduit ID Inch (mm)		0.256 (6.5)	0.394 (10.0)	0.472 (12.0)	0.563 (14.3)	0.650 (16.5)	0.906 (23.0)
Conduit OD Inch (mm)		0.394 (10.0)	0.512 (13.0)	0.622 (15.8)	0.728 (18.5)	0.835 (21.2)	1.122 (28.5)
Shell Size	8	◆	◆				
	10	◆	◆				
	12	◆	◆	◆			
	14	◆	◆	◆	◆	◆	
	16			◆	◆	◆	◆
	18			◆	◆	◆	◆
	20			R		R	◆
	22			R		R	◆
	24			R		R	◆

R = with reducer

OR Shielded Cord Grip



Shell Size		MSS*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm	4 Min mm	4 Max mm
	8	◆	4.0	6.0	6.0	9.5	-	-	-	-
	10	◆	4.0	6.5	6.5	9.5	8.0	10.5	-	-
	12	◆	6.5	9.5	8.0	10.5	9.0	13.0	-	-
	14	◆	6.5	9.5	7.0	10.5	9.0	13.0	-	-
	16	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	18	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	20	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	22	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	24	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0

Conduit Adapter and Cord Grip Types

CA*= Conduit Adapter
MSS*= Metal Short Shielded - Nickel Plated Brass
PF*= Plastic with Flex Spring
PS*= Plastic Short
MS*= Metal Short - Nickel Plated Brass
PL*= Plastic Long
ML*= Metal Long - Nickel Plated Brass
*= add size code per chart i.e. CGPFA or CGMSS4
Min/Max refers to cable diameter.

OR Unshielded Cord Grip

Note: Cable jacket and shield diameters must be between Min/Max of cord grip.

For detailed info on shield diameters, see MSS table on page 232.





Shell Size		PF*	PS*	MS*	Size Code A Min mm	A Max mm	R Min mm	R Max mm	PL*	ML*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm
	8	◆	◆	◆	3.0	6.5	2.0	5.0			-	-	-	-	-	-
	10	◆	◆	◆	4.0	8.0	2.0	6.0	◆	◆	4.0	6.5	7.5	9.5	-	-
	12	◆	◆	◆	5.0	10.0	3.0	7.0	◆	◆	6.5	9.5	7.0	10.5	-	-
	14	◆	◆	◆	6.0	12.0	5.0	9.0	◆	◆	6.5	9.5	8.5	10.5	-	-
	16	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
	18	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
	20	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
	22	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
	24	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0

STEP 4 Choose Connector Layout



See Connector Solutions Guide

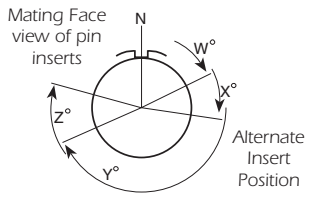
STEP 5 Choose Contact

P = Pin
S = Socket

STEP 6

(omit for normal)

W, X, Y, Z



STEP 7 Choose Shell Modifier

Standard Plating = Conductive olive drab chromate over cadmium

A34 = Bright Nickel (EU)

A71 = Electroless Nickel (US) (RoHS✤)

A206 = Non-Conductive Black Zinc Cobalt (US) (RoHS✤)

A232 = Non-Conductive Black Zinc Cobalt (EU) (RoHS✤)

KPT6	UT	CSB3-	14-19	P	W	-A71
1 Shell Style	2 Endbells Shielding Options	3 Wire Protection	4 Connector Layout	5 Contact	6 Rotation	7 Modifier

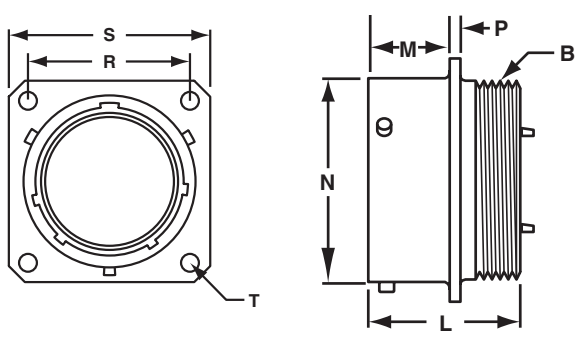
(See Connector Solutions Guide)

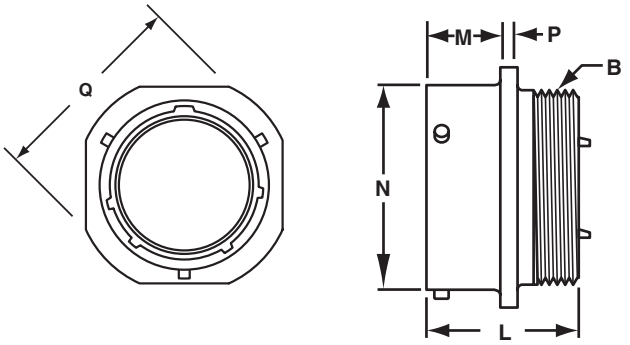
Note: ✤As reported by ITT Cannon, please call for more info.

KPT – Dimensions

Receptacle Styles

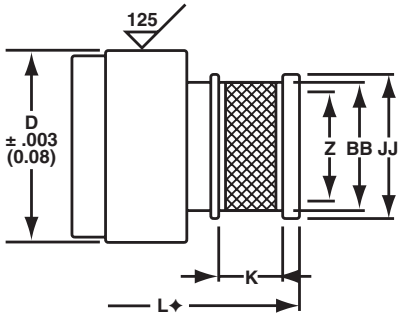
KPT0



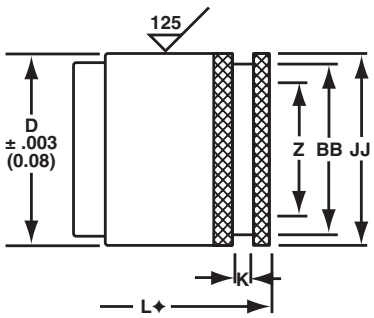


	KPT0			KPT1	KPT0			KPT1	KPT0/1	
Shell Size	M +.003 -.08	N +.001 -.055	P	P	R (TP)	S Max	T ∅	Q Max	L	B Thread 2A
8	0.431 (10.9)	0.471 (12.0)	0.062 (1.6)	0.093 (2.4)	0.594 (15.1)	0.828 (21.0)	0.120 (3.0)	0.958 (24.3)	0.850 (21.6)	.4375-28 UNEF
10	0.431 (10.9)	0.588 (14.9)	0.062 (1.6)	0.093 (2.4)	0.719 (18.3)	0.954 (24.2)	0.120 (3.0)	1.082 (27.5)	0.850 (21.6))	.5625-24 UNEF
12	0.431 (10.9)	0.748 (19.0)	0.062 (1.6)	0.093 (2.4)	0.812 (20.6)	1.047 (26.6)	0.120 (3.0)	1.176 (29.9)	0.850 (21.6))	.6875-24 UNEF
14	0.431 (10.9)	0.873 (22.2)	0.062 (1.6)	0.093 (2.4)	0.906 (23.0)	1.141 (29.0)	0.120 (3.0)	1.270 (32.3)	0.850 (21.6))	.8125-20 UNEF
16	0.431 (10.9)	.998 (25.3)	0.062 (1.6)	0.093 (2.4)	0.969 (24.6)	1.234 (31.3)	0.120 (3.0)	1.364 (34.6)	0.850 (21.6))	.9375-20 UNEF
18	0.431 (10.9)	1.123 (28.5)	0.062 (1.6)	0.093 (2.4)	1.062 (27.0)	1.328 (33.7)	0.120 (3.0)	1.458 (37.0)	0.850 (21.6))	1.0625-18 UNEF
20	0.556 (14.1)	1.248 (31.7)	0.094 (2.4)	0.115 (2.9)	1.156 (29.4)	1.453 (36.9)	0.120 (3.0)	1.582 (40.2)	1.057 (26.8)	1.1875-18 UNEF
22	0.556 (14.1)	1.373 (34.9)	0.094 (2.4)	0.115 (2.9)	1.250 (31.8)	1.578 (40.1)	0.120 (3.0)	1.708 (43.4)	1.057 (26.8)	1.3125-18 UNEF
24	0.589 (15.0)	1.498 (38.0)	0.094 (2.4)	0.115 (2.9)	1.375 (34.9)	1.703 (43.3)	0.147 (3.7)	1.832 (46.5)	1.057 (26.8)	1.4375-18 UNEF

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	1.980 (50.3)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10	0.740 (18.8)	2.055 (52.2)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12	0.865 (22.0)	2.063 (52.4)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	2.181 (55.4)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
16	1.146 (29.1)	2.248 (57.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	2.327 (59.1)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.512 (63.8)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.610 (66.3)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	1.552 (39.4)	2.661 (67.8)	0.476 (12.1)	0.900 (22.8)	1.157 (29.4)	1.276 (32.4)	H



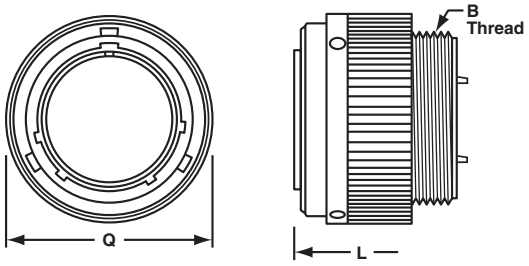
Cord Grip							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	1.756 (44.6)	0.118 (3.0)	0.330 (8.3)	0.580 (14.8)	0.740 (18.8)	B
10	0.865 (22.0)	1.756 (44.6)	0.118 (3.0)	0.439 (11.2)	0.707 (18.0)	0.865 (22.0)	C
12	0.990 (25.1)	1.756 (44.6)	0.118 (3.0)	0.549 (13.9)	0.833 (21.2)	0.990 (25.2)	D
14	0.990 (25.1)	1.776 (45.1)	0.118 (3.0)	0.651 (16.5)	0.887 (22.6)	0.990 (25.2)	D
16	1.146 (29.1)	1.776 (45.1)	0.118 (3.0)	0.751 (19.1)	0.989 (25.1)	1.146 (29.1)	E
18	1.271 (32.3)	1.894 (48.1)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	1.271 (32.3)	F
20	1.428 (36.3)	2.138 (54.3)	0.118 (3.0)	0.974 (24.7)	1.270 (32.3)	1.428 (36.3)	G
22	1.552 (39.4)	2.256 (57.3)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H
24	1.552 (39.4)	2.335 (59.3)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H

L✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

KPT – Dimensions

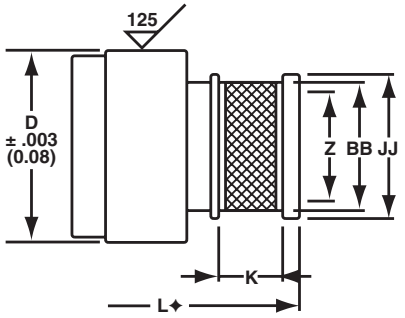
Straight Plugs

KPT6

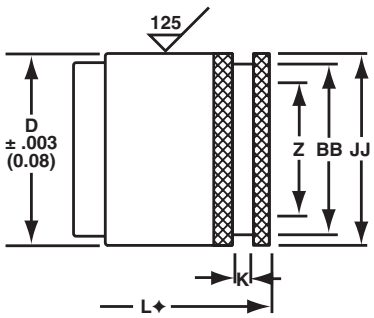


Shell Size	KPT6 Barrel Q Max	KPT6 Barrel L Max	KPT6 Barrel B Thread 2A
8	0.765 (19.4)	0.841 (21.4)	.4375-28 UNEF
10	0.840 (21.3)	0.841 (21.4)	.5625-24 NEF
12	0.999 (25.4)	0.841 (21.4)	.6875-24 NEF
14	1.139 (28.9)	0.841 (21.4)	.8125-20 UNEF
16	1.261 (32.0)	0.841 (21.4)	.9375-20 UNEF
18	1.337 (34.0)	0.841 (21.4)	1.0625-18 NEF
20	1.477 (37.5)	0.986 (25.0)	1.1875-18 NEF
22	1.602 (40.7)	0.986 (25.0)	1.3125-18 NEF
24	1.723 (43.8)	0.986 (25.0)	1.4375-18 NEF

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	1.970 (50.2)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10	0.740 (18.8)	2.055 (52.2)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12	0.865 (22.0)	2.063 (52.4)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	2.181 (55.4)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
16	1.146 (29.1)	2.248 (57.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	2.327 (59.1)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.512 (63.8)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.610 (66.3)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	1.552 (39.4)	2.661 (67.8)	0.476 (12.1)	0.900 (22.8)	1.157 (29.4)	1.276 (32.4)	H



Cord Grip							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	1.756 (44.6)	0.118 (3.0)	0.330 (8.3)	0.580 (14.8)	0.740 (18.8)	B
10	0.865 (22.0)	1.756 (44.6)	0.118 (3.0)	0.439 (11.2)	0.707 (18.0)	0.865 (22.0)	C
12	0.990 (25.1)	1.756 (44.6)	0.118 (3.0)	0.549 (13.9)	0.833 (21.2)	0.990 (25.2)	D
14	0.990 (25.1)	1.776 (45.1)	0.118 (3.0)	0.651 (16.5)	0.887 (22.6)	0.990 (25.2)	D
16	1.146 (29.1)	1.776 (45.1)	0.118 (3.0)	0.751 (19.1)	0.989 (25.1)	1.146 (29.1)	E
18	1.271 (32.3)	1.894 (48.1)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	1.271 (32.3)	F
20	1.428 (36.3)	2.138 (54.3)	0.118 (3.0)	0.974 (24.7)	1.270 (32.3)	1.428 (36.3)	G
22	1.552 (39.4)	2.256 (57.3)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H
24	1.552 (39.4)	2.335 (59.3)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H

L✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

KPT – At-A-Glance

Name:
Company:
Email:
Phone:
Qty: EAU:

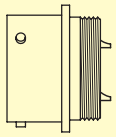
Additional Connector Information

CONNECTOR Part #:_____
OR
# of Contacts:_____ Sizes & Type:_____

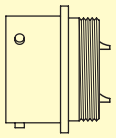
CABLE Manufacturer: _____
(If Known)
CABLE Part #: _____ OR Cable OD:_____

PEI-Genesis

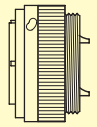
Choose One Connector



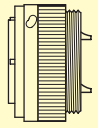
☐ **KPT0**
MS3110 Type
Solder Wall Mount Receptacle



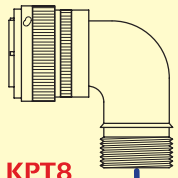
☐ **KPT1**
MS3111 Type
Solder Cable Mount Receptacle



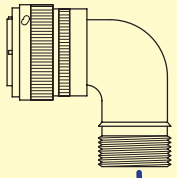
☐ **KPT6**
MS3116 Type
Solder Cable Plug



☐ **KPT6G**
EMI Grounding Finger Barrel Plug



☐ **KPT8**
Right Angle Plug*



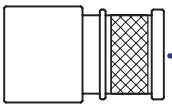
☐ **KPT8G**
EMI Grounding Finger Barrel Right Angle Plug*

* Option NOT available for shell size 8

Choose One Endbell

Use endbell "U" for Menus A, B, C, D & E

☐ **U**

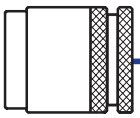


- ☐ Omit for Unshielded
- ☐ **S** Shielding Spring
- ☐ **T** Shielding Tape
- ☐ **W** Shielding Tape & Spring

Solder Termination Only
Use KPSE for Crimp Type

Use endbell "CG" for Menus F, G & H

☐ **CG**



Comments/Notes:

_____
_____
_____
_____
_____
_____

Choose One Wire Protection

- ☐ **HST** Heat Shrink Tubing
- ☐ **SB** Straight Boot
- ☐ **BSB** Bottle Shaped Shrink Boot
- ☐ **HBSB** High Ratio Bottle Shaped Shrink Boot
- ☐ **CSB** Convoluted Shrink Boot
- ☐ **RSB** Right Angle Shrink Boot

- ☐ **CA** Conduit Adapter & Conduit
- ☐ **MSS** Metal Short Shielded
- ☐ **PF** Plastic with Flex Relief
- ☐ **PS** Plastic Short
- ☐ **MS** Metal Short
- ☐ **PL** Plastic with Long Boot
- ☐ **ML** Metal with Long Boot

MIL-DTL-26482 Series 1 Solder Type – PT



The Amphenol Miniature Cylindrical Connector Series offers high density contact arrangements in a miniature, circular metal shell. This connector is environmentally sealed and comes in a solder contact version. PTs are intermateable, intermountable, and interchangeable with all MIL-DTL-26482 connectors, whether solder or crimp style is used. PTs use a quick disconnect bayonet coupling for rapid positive mating and unmating of the connector. The PT types meet all requirements of MIL-DTL-26482.

Applications

- Power generators
- Engines
- Sensors
- Motion Control
- Off-road vehicles
- Earth moving equipment
- Ships
- Mobile equipment
- Industrial machinery
- Telecommunications
- Traffic control

Features

Rugged Shell
Aluminum alloy shell and hardware create a rugged connector with minimal weight. These connectors have been used extensively in commercial, military, and aerospace environments.

Environmentally Sealed
Complete moisture sealing is achieved by combining four seals: shell, peripheral, interfacial, and wire.

Resistant to Military Environments
These connectors will operate in temperatures from -67˚F to +257˚F (-55˚C to +125˚C) under the harshest possible conditions.

Wide Range of Wire Gauges and Current Carrying Capacity
Up to 23 amps with wire gauges from size 24 up to size 12 AWG wire.

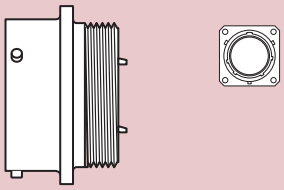
Resilient Insulator & Grommet
A resilient Neoprene insulator and integrated rear wire sealing grommet guarantees a liquid tight assembly. Solder contacts are permanently bonded into the insulator.

Solder Gold Plated Contacts
PT connector contacts are gold plated per MIL-G-45204 Type II. Socket contacts are closed to eliminate damage from test probes and to help prevent misaligned pins during engagement.

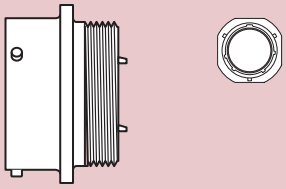
Amphenol PT

STEP 1
Choose Shell Style: Receptacle or Plug
(See Connector Solutions Guide)

Wall Mount Receptacle
PT00

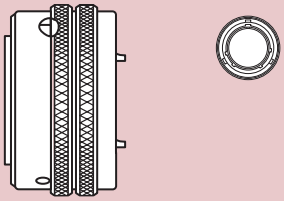


Cable Mount Receptacle
PT01



mates with

Cable Plug
PT06



STEP 2 Choose Endbell



Potted (Preferred)
- **U** = Unshielded
- **US** = with shielding spring
- **UT** = with shielding tape
- **UW** = with shielding tape & spring

RU Right Angle



Call for more info

STEP 3 Choose Heat Shrink Boot or Tubing

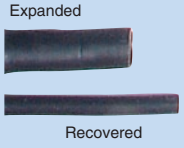
Note: Cable outside diameter must be between expanded and recovered dimensions.

Boot options

SB – Straight Boot



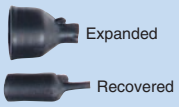
HST – Heat Shrink Tubing



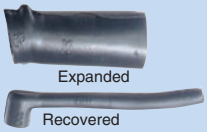
CSB – Convoluted Shrink Boot



BSB/HBSB – Bottle Shaped Shrink Boot
(High Ratio Bottle Shaped Boot)



RSB – Right Angle Shrink Boot



Heat Shrink Product	SB 1	SB 2	SB 3	SB 4	SB 5	HST 1	HST 2	HST 3	HST 4
Expanded ID inch (mm)	0.88 ((22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	0.750 (19.1)	1.000 (25.4)	1.250 (31.8)	1.570 (39.9)
Recovered ID inch (mm)	0.25 (6.4)	0.29 (7.4)	0.33 (8.4)	0.38 (9.7)	0.41 (10.4)	0.250 (6.4)	0.320 (8.1)	0.416 (10.6)	0.510 (13.0)
Length Max inch (mm)	4.17 (105.9)	4.77 (121.2)	5.46 (138.7)	6.28 (159.5)	7.00 (177.8)	6.00 (152.4)			
Shell Size 8	◆					◆			
10	◆					◆			
12		◆	◆				◆		
14			◆					◆	
16			◆	◆				◆	
18				◆				◆	
20				◆					◆
22					◆				◆
24									◆

Most Popular

adhesive lined heat shrink tubing

Heat Shrink Product	CSB2	CSB3	CSB4	CSB5	BSB1	HBSB2	BSB2	BSB3	BSB4	BSB5
Expanded ID inch (mm)	0.70 (17.8)	1.06 (26.9)	1.44 (36.6)	1.80 (45.7)	0.94 (23.9)	0.35 (8.9)	1.18 (30.0)	1.22 (31.0)	1.42 (36.1)	1.69 (42.9)
Recovered ID inch (mm)	0.32 (8.1)	0.50 (12.7)	0.69 (17.5)	0.88 (22.4)	0.24 (6.1)	0.14 (3.6)	0.24 (6.1)	0.28 (7.1)	0.33 (8.4)	0.39 (9.9)
Length Max inch (mm)	5.25 (133.4)	5.75 (146.1)	6.25 (158.8)	6.75 (171.5)	1.50 (38.1)	2.17 (55.1)	2.17 (55.1)	2.64 (67.1)	3.15 (80.0)	3.90 (99.1)
Shell Size 8	◆									
10	◆				◆	◆	◆			
12	◆				◆	◆	◆	◆		
14		◆			◆	◆	◆	◆	◆	
16		◆	◆				◆	◆	◆	
18		◆	◆				◆	◆	◆	
20		◆	◆					◆	◆	
22		◆	◆						◆	
24			◆	◆						◆

Heat Shrink Product	RSB1	RSB2	RSB3	RSB4	RSB5
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)
Recovered ID inch (mm)	0.23 (5.8)	0.26 (6.6)	0.30 (7.6)	0.35 (8.9)	0.37 (9.4)
Length Max inch (mm)	4.14 (105.2)	4.88 (124.0)	5.76 (146.3)	6.78 (172.2)	7.29 (185.2)
Shell Size 8	◆				
10	◆	◆			
12		◆	◆		
14			◆	◆	
16			◆	◆	
18				◆	
20				◆	◆
22					◆
24					

STEP 2 Choose Endbell



NEW!



CG = Straight Adapter Endbell

RG = Right Angle Adapter Endbell

Please call for more information

STEP 3 Choose Conduit Adapter or Cord Grip

Unshielded Conduits



CA* = conduit adapter for plastic flexible conduit. Add size code i.e. CGCA10

Note: Normal recommended conduit fill is 40% of Conduit ID or less.

Size Code		07	10	12	14	17	23
Conduit ID Inch (mm)		0.256 (6.5)	0.394 (10.0)	0.472 (12.0)	0.563 (14.3)	0.650 (16.5)	0.906 (23.0)
Conduit OD Inch (mm)		0.394 (10.0)	0.512 (13.0)	0.622 (15.8)	0.728 (18.5)	0.835 (21.2)	1.122 (28.5)
Shell Size	8	◆	◆				
	10	◆	◆				
	12	◆	◆	◆			
	14	◆	◆	◆	◆	◆	
	16			◆	◆	◆	◆
	18			◆	◆	◆	◆
	20			R		R	◆
	22			R		R	◆
	24			R		R	◆

R = with reducer

OR Shielded Cord Grip



Shell Size	MSS*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm	4 Min mm	4 Max mm
8	◆	4.0	6.0	6.0	9.5	-	-	-	-
10	◆	4.0	6.5	6.5	9.5	8.0	10.5	-	-
12	◆	6.5	9.5	8.0	10.5	9.0	13.0	-	-
14	◆	6.5	9.5	7.0	10.5	9.0	13.0	-	-
16	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
18	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
20	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
22	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
24	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0

Conduit Adapter and Cord Grip Types

CA*= Conduit Adapter
MSS*= Metal Short Shielded - Nickel Plated Brass
PF*= Plastic with Flex Spring
PS*= Plastic Short
MS*= Metal Short - Nickel Plated Brass
PL*= Plastic Long
ML*= Metal Long - Nickel Plated Brass
*= add size code per chart i.e. CGPFA or CGMSS4
Min/Max refers to cable diameter.

OR Unshielded Cord Grip









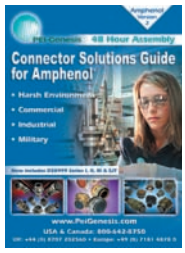


Shell Size	PF*	PS*	MS*	Size Code A Min mm	A Max mm	R Min mm	R Max mm	PL*	ML*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm
8	◆	◆	◆	3.0	6.5	2.0	5.0			-	-	-	-	-	-
10	◆	◆	◆	4.0	8.0	2.0	6.0	◆	◆	4.0	6.5	7.5	9.5	-	-
12	◆	◆	◆	5.0	10.0	3.0	7.0	◆	◆	6.5	9.5	7.0	10.5	-	-
14	◆	◆	◆	6.0	12.0	5.0	9.0	◆	◆	6.5	9.5	8.5	10.5	-	-
16	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
18	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
20	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
22	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
24	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0

Note: Cable jacket and shield diameters must be between Min/Max of cord grip.

For detailed info on shield diameters, see MSS table on page 232.

STEP 4 Choose Connector Layout



See Connector Solutions Guide

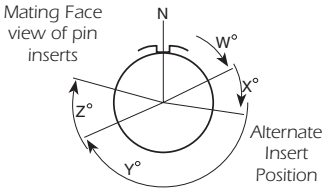
STEP 5 Choose Contact

P = Pin
S = Socket

STEP 6 Choose Rotation

(omit for normal)

W, X, Y, Z



STEP 7 Choose Shell Modifier

Standard Plating = Conductive olive drab chromate over cadmium

005 = Anodic Coating (Alumilite)

014 = Olive Drab Chromate over Cadmium over Nickel (500-hour salt spray)

023 = Electroless Nickel

024 = Olive Drab Zinc Cobalt✦

025 = Non-Conductive Black Zinc✦ (RoHS✣)

027 = Conductive Black Zinc (RoHS✣)

Example of part description:

1	2	3	4	5	6	7
PT01	CG	CA12-	14-19	P		-023
Shell Style	Endbells Shielding Options	Wire Protection	Connector Layout	Contact	Rotation	Modifier

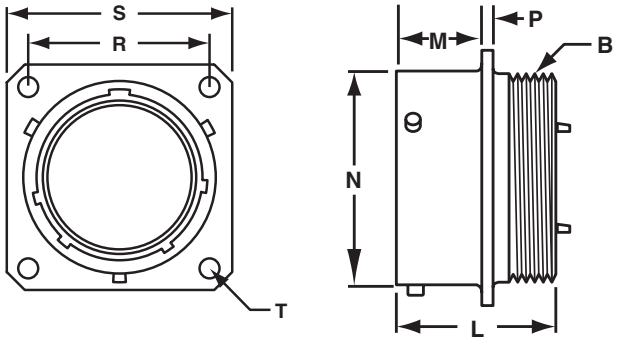
(See Connector Solutions Guide)

Note: ✦ Endbells U & CG will be Black Anodized.
✣ As reported by Amphenol, please call for more info.

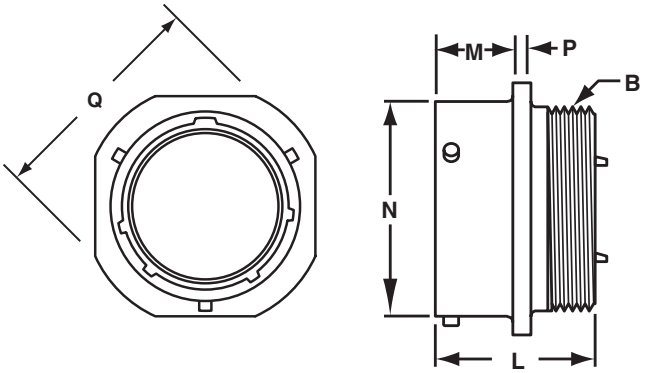
PT – Dimensions

Receptacle Styles

PT00

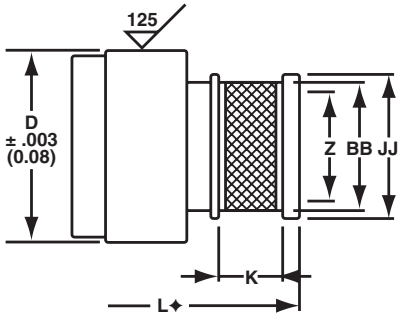


PT01

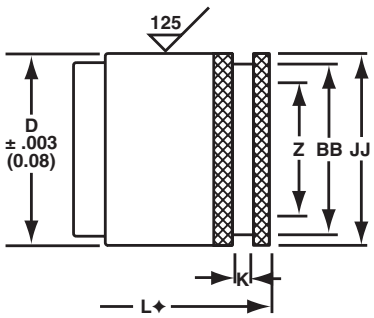


	PT00			PT01	PT00			PT01	PT00/PT01	
Shell Size	M	N +.001 -.055	P	P	R (TP)	S	T ∅	Q	L	B Thread 2A
8	0.431	0.473	0.062	0.093	0.594	0.812	0.120	0.938	0.906	.4375-28
	(10.9)	(12.0)	(1.6)	(2.4)	(15.1)	(20.6)	(3.0)	(23.8)	(23.0)	UNEF
10	0.431	0.590	0.062	0.093	0.719	0.938	0.120	1.062	0.906	.5625-24
	(10.9)	(15.0)	(1.6)	(2.4)	(18.3)	(23.8)	(3.0)	(27.0)	(23.0)	UNEF
12	0.431	0.750	0.062	0.093	0.812	1.031	0.120	1.156	0.906	.6875-24
	(10.9)	(19.1)	(1.6)	(2.4)	(20.6)	(26.2)	(3.0)	(29.4)	(23.0)	UNEF
14	0.431	0.875	0.062	0.093	0.906	1.125	0.120	1.250	0.906	.8125-20
	(10.9)	(22.2)	(1.6)	(2.4)	(23.0)	(28.6)	(3.0)	(31.8)	(23.0)	UNEF
16	0.431	1.000	0.062	0.093	0.969	1.219	0.120	1.344	0.906	.9375-20
	(10.9)	(25.4)	(1.6)	(2.4)	(24.6)	(31.0)	(3.0)	(34.1)	(23.0)	UNEF
18	0.431	1.125	0.062	0.093	1.062	1.312	0.120	1.438	0.906	1.0625-18
	(10.9)	(28.6)	(1.6)	(2.4)	(27.0)	(33.3)	(3.0)	(36.5)	(23.0)	UNEF
20	0.556	1.250	0.094	0.115	1.156	1.438	0.120	1.562	1.125	1.1875-18
	(14.1)	(31.8)	(2.4)	(2.9)	(29.4)	(36.5)	(3.0)	(39.7)	(28.6)	UNEF
22	0.556	1.375	0.094	0.115	1.250	1.561	0.120	1.688	1.125	1.3125-18
	(14.1)	(34.9)	(2.4)	(2.9)	(31.8)	(39.6)	(3.0)	(42.9)	(28.6)	UNEF
24	0.556	1.500	0.127	0.115	1.375	1.688	0.147	1.812	1.188	1.4375-18
	(14.1)	(38.1)	(3.2)	(2.9)	(34.9)	(42.9)	(3.7)	(46.0)	(30.2)	UNEF

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	2.035 (51.7)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10	0.740 (18.8)	2.111 (53.6)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12	0.865 (22.0)	2.118 (53.8)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	2.236 (56.8)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
16	1.146 (29.1)	2.304 (58.5)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	2.383 (60.5)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.582 (65.6)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.683 (68.1)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	1.552 (39.4)	2.794 (71.0)	0.476 (12.1)	0.900 (22.8)	1.157 (29.4)	1.276 (32.4)	H



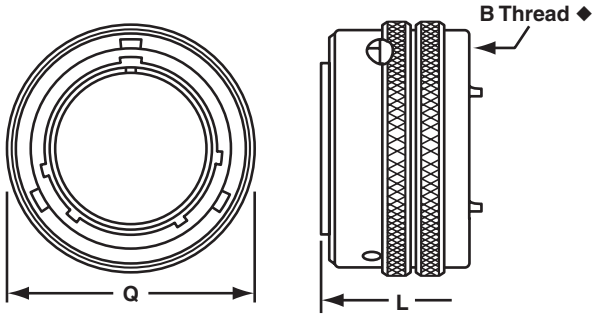
Cord Grip							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	1.811 (46.0)	0.118 (3.0)	0.330 (8.37)	0.580 (14.8)	0.740 (18.8)	B
10	0.865 (22.0)	1.811 (46.0)	0.118 (3.0)	0.439 (11.2)	0.707 (18.0)	0.865 (22.0)	C
12	0.990 (25.1)	1.811 (46.0)	0.118 (3.0)	0.549 (13.9)	0.833 (21.2)	0.990 (25.2)	D
14	0.990 (25.1)	1.831 (46.5)	0.118 (3.0)	0.651 (16.5)	0.887 (22.6)	0.990 (25.2)	D
16	1.146 (29.1)	1.831 (46.5)	0.118 (3.0)	0.751 (19.1)	0.989 (25.1)	1.146 (29.1)	E
18	1.271 (32.3)	1.949 (49.5)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	1.271 (32.3)	F
20	1.428 (36.3)	2.209 (56.1)	0.118 (3.0)	0.974 (24.7)	1.270 (32.3)	1.428 (36.3)	G
22	1.552 (39.4)	2.327 (59.1)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H
24	1.552 (39.4)	2.467 (62.7)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H

L✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

PT – Dimensions

Straight Plugs

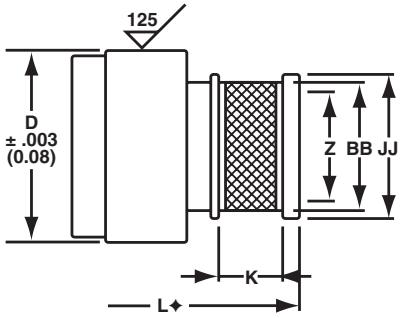
PT06



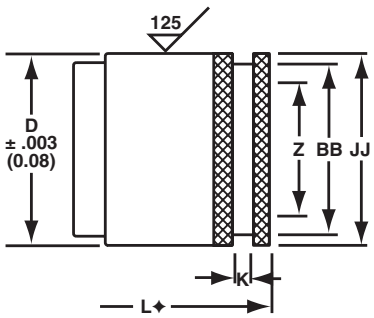
Shell Size	PT06 Barrel Q	L	B Thread 2A
8	0.750 (19.1)	0.906 (23.0)	.4375-28 UNEF
10	0.859 (21.8)	0.906 (23.0)	.5625-24 UNEF
12	1.013 (25.7)	0.906 (23.0)	.6875-24 UNEF
14	1.156 (29.4)	0.906 (23.0)	.8125-20 UNEF
16	1.281 (32.5)	0.906 (23.0)	.9375-20 UNEF
18	1.319 (33.5)	0.906 (23.0)	1.0625-18 UNEF
20	1.531 (38.9)	1.062 (27.0)	1.1875-18 UNEF
22	1.656 (42.1)	1.062 (27.0)	1.3125-18 UNEF
24⋆	1.776 (45.1)	1.125 (28.6)	1.4375-18 UNEF

⋆ Commercial
◆Coupling nut covers barrel threads in illustration

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	2.035 (51.7)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10	0.740 (18.8)	2.111 (53.6)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12	0.865 (22.0)	2.118 (53.8)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	2.236 (56.8)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
16	1.146 (29.1)	2.304 (58.5)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	2.383 (60.5)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.582 (65.6)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.683 (68.1)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	1.552 (39.4)	2.794 (71.0)	0.476 (12.1)	0.900 (22.8)	1.157 (29.4)	1.276 (32.4)	H



Cord Grip							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	1.811 (46.0)	0.118 (3.0)	0.330 (8.37)	0.580 (14.8)	0.740 (18.8)	B
10	0.865 (22.0)	1.811 (46.0)	0.118 (3.0)	0.439 (11.2)	0.707 (18.0)	0.865 (22.0)	C
12	0.990 (25.1)	1.811 (46.0)	0.118 (3.0)	0.549 (13.9)	0.833 (21.2)	0.990 (25.2)	D
14	0.990 (25.1)	1.831 (46.5)	0.118 (3.0)	0.651 (16.5)	0.887 (22.6)	0.990 (25.2)	D
16	1.146 (29.1)	1.831 (46.5)	0.118 (3.0)	0.751 (19.1)	0.989 (25.1)	1.146 (29.1)	E
18	1.271 (32.3)	1.949 (49.5)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	1.271 (32.3)	F
20	1.428 (36.3)	2.209 (56.1)	0.118 (3.0)	0.974 (24.7)	1.270 (32.3)	1.428 (36.3)	G
22	1.552 (39.4)	2.327 (59.1)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H
24	1.552 (39.4)	2.467 (62.7)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H

L✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

PT - 26482 Series – At-A-Glance

Name:
Company:
Email:
Phone:
Qty: EAU:

Additional Connector Information

CONNECTOR Part #:_____
OR
# of Contacts:_____ Sizes & Type:_____

CABLE Manufacturer: _____
(If Known)
CABLE Part #: _____ OR Cable OD:_____

PEI-Genesis

Choose One Connector

- ☐ PT00 MS3110 Type — Wall Mount Receptacle
- ☐ PT01 MS3111 Type — Cable Mount Receptacle
- ☐ PT06 MS3116 Type — Cable Plug

Choose One Endbell

Use endbell "U" for Menus A, B, C, D & E

☐ U
- Omit for Unshielded
- S — Shielding Spring
- T — Shielding Tape
- W — Shielding Tape & Spring

Solder Termination Only
Use PTS for Crimp Type

Use endbell "CG" for Menus F, G & H

☐ CG

Comments/Notes:
_____
_____
_____
_____
_____
_____

Choose One Wire Protection

- ☐ HST — Heat Shrink Tubing
- ☐ SB — Straight Boot
- ☐ BSB — Bottle Shaped Shrink Boot
- ☐ HBSB — High Ratio Bottle Shaped Shrink Boot
- ☐ CSB — Convoluted Shrink Boot
- ☐ RSB — Right Angle Shrink Boot
- ☐ CA — Conduit Adapter & Conduit
- ☐ MSS — Metal Short Shielded
- ☐ PF — Plastic with flex Relief
- ☐ PS — Plastic Short
- ☐ MS — Metal Short
- ☐ PL — Plastic with Long Boot
- ☐ ML — Metal with Long Boot

MIL-DTL-26482 Series 1 Crimp Type – KPSE



KPSE MIL-DTL-26482 Series I connectors offer high density contact arrangements in a miniature circular metal shell. The connector is environmentally sealed, conforms to MIL-DTL-26482 and is intermateable, intermountable, and interchangeable with all MIL-DTL-26482 connectors, whether solder or crimp style is used. KPSE Series connectors use a quick disconnect bayonet coupling for rapid positive mating and unmating of the connector.

Applications

Military and Industrial environments requiring a miniature, high density, environmental connector.

- Power generators
- Engines
- Sensors
- Motion Control
- Off-road vehicles
- Earth moving equipment
- Ships
- Mobile equipment
- Industrial machinery
- Telecommunications

Features

Rugged Shell
Aluminum alloy shell and hardware create a rugged connector with minimal weight. This connector has been used extensively in commercial, military, and aerospace environments.

Environmentally Sealed
Complete moisture sealing is achieved by combining four seals: shell, peripheral, interfacial, and wire. Wire Seal is accomplished by multiple ripple design, exceeding the wire sealing requirements of MIL-DTL-26482.

Resistant to Military Environments
This connector will operate in temperatures from -67˚ to +257˚F (-55˚ to +125˚C) under the harshest possible conditions.

Wide Range of Wire Gauges and Current Carrying Capability
Up to 22 amps with wire gauges from size 24 up to size 16 AWG wire.

Resilient Insulator & Grommet
A resilient polychloroprene insulator and integrated rear wire sealing grommet guarantees a liquid tight assembly. Crimp contacts are available that can be inserted from the rear of the connector.

Crimp Gold Plated Contacts
KPSE crimp contacts are gold plated per MIL-G-45204 Type II. KPSE crimp contacts are designed to MIL-C-39029 and can be crimped with the standard M22520/1 crimp tool. Contact insertion is from the rear of the connector. When the contact is fully inserted, it snaps securely into metal retention tines embedded in the insulator. Contact extraction is accomplished from the front with the proper extraction tool. Pressing the tool plunger pushes the contact out through the rear of the connector.

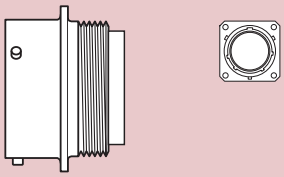
ITT
Engineered for life

ITT Cannon KPSE

STEP 1
Choose Shell Style: Receptacle or Plug
(See Connector Solutions Guide)

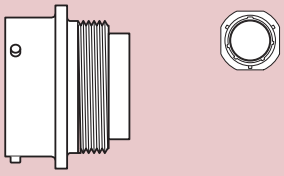
Crimp Wall Mount Receptacle

KPSE0



Crimp Cable Mount Receptacle

KPSE1



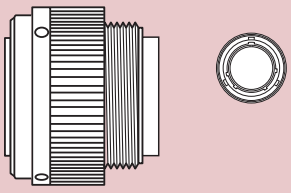
mates with

Crimp Cable Plug

KPSE6

EMI Grounding Finger Barrel Plug

KPSE6G



Crimp Style Right Angle Plug*

KPSE8 not available in shell size 8

EMI Grounding Finger Barrel Right Angle Plug*

KPSE8G not available in shell size 8

*Call for more information

STEP 2 Choose Endbell



Potted (Preferred)

- **U** = Unshielded
- **US** = with shielding spring
- **UT** = with shielding tape
- **UW** = with shielding tape & spring

RU Right Angle



Call for more info

STEP 3 Choose Heat Shrink Boot or Tubing

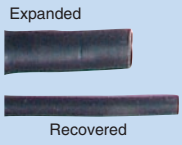
Note: Cable outside diameter must be between expanded and recovered dimensions.

Boot options

SB – Straight Boot



HST – Heat Shrink Tubing



Most Popular

Heat Shrink Product	SB 1	SB 2	SB 3	SB 4	SB 5	HST 1	HST 2	HST 3	HST 4
Expanded ID inch (mm)	0.88 ((22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	0.750 (19.1)	1.000 (25.4)	1.250 (31.8)	1.570 (39.9)
Recovered ID inch (mm)	0.25 (6.4)	0.29 (7.4)	0.33 (8.4)	0.38 (9.7)	0.41 (10.4)	0.250 (6.4)	0.320 (8.1)	0.416 (10.6)	0.510 (13.0)
Length Max inch (mm)	4.17 (105.9)	4.77 (121.2)	5.46 (138.7)	6.28 (159.5)	7.00 (177.8)	6.00 (152.4)			
Shell Size 8	◆					◆			
Shell Size 10	◆					◆			
Shell Size 12		◆	◆				◆		
Shell Size 14			◆					◆	
Shell Size 16			◆	◆				◆	
Shell Size 18				◆				◆	
Shell Size 20				◆					◆
Shell Size 22					◆				◆
Shell Size 24									◆

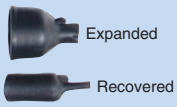
adhesive lined heat shrink tubing

CSB – Convoluted Shrink Boot

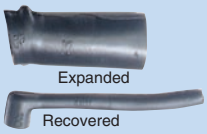


Heat Shrink Product	CSB2	CSB3	CSB4	CSB5	BSB1	HBSB2	BSB2	BSB3	BSB4	BSB5
Expanded ID inch (mm)	0.70 (17.8)	1.06 (26.9)	1.44 (36.6)	1.80 (45.7)	0.94 (23.9)	0.35 (8.9)	1.18 (30.0)	1.22 (31.0)	1.42 (36.1)	1.69 (42.9)
Recovered ID inch (mm)	0.32 (8.1)	0.50 (12.7)	0.69 (17.5)	0.88 (22.4)	0.24 (6.1)	0.14 (3.6)	0.24 (6.1)	0.28 (7.1)	0.33 (8.4)	0.39 (9.9)
Length Max inch (mm)	5.25 (133.4)	5.75 (146.1)	6.25 (158.8)	6.75 (171.5)	1.50 (38.1)	2.17 (55.1)	2.17 (55.1)	2.64 (67.1)	3.15 (80.0)	3.90 (99.1)
Shell Size 8	◆									
Shell Size 10	◆				◆	◆	◆			
Shell Size 12	◆				◆	◆	◆	◆		
Shell Size 14		◆			◆	◆	◆	◆	◆	
Shell Size 16		◆	◆				◆	◆	◆	
Shell Size 18		◆	◆				◆	◆	◆	
Shell Size 20		◆	◆					◆	◆	
Shell Size 22		◆	◆						◆	
Shell Size 24			◆	◆						◆

BSB/HBSB – Bottle Shaped Shrink Boot
(High Ratio Bottle Shaped Boot)



RSB – Right Angle Shrink Boot



Heat Shrink Product	RSB1	RSB2	RSB3	RSB4	RSB5
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)
Recovered ID inch (mm)	0.23 (5.8)	0.26 (6.6)	0.30 (7.6)	0.35 (8.9)	0.37 (9.4)
Length Max inch (mm)	4.14 (105.2)	4.88 (124.0)	5.76 (146.3)	6.78 (172.2)	7.29 (185.2)
Shell Size 8	◆				
Shell Size 10	◆	◆			
Shell Size 12		◆	◆		
Shell Size 14			◆	◆	
Shell Size 16			◆	◆	
Shell Size 18				◆	
Shell Size 20				◆	◆
Shell Size 22					◆
Shell Size 24					

STEP 2 Choose Endbell



CG = Straight Adapter Endbell

NEW!



RG = Right Angle Adapter Endbell

Please call for more information

STEP 3 Choose Conduit Adapter or Cord Grip

Unshielded Conduits



CA* = conduit adapter for plastic flexible conduit. Add size code i.e. CGCA10

Note: Normal recommended conduit fill is 40% of Conduit ID or less.

Size Code		07	10	12	14	17	23
Conduit ID Inch (mm)		0.256 (6.5)	0.394 (10.0)	0.472 (12.0)	0.563 (14.3)	0.650 (16.5)	0.906 (23.0)
Conduit OD Inch (mm)		0.394 (10.0)	0.512 (13.0)	0.622 (15.8)	0.728 (18.5)	0.835 (21.2)	1.122 (28.5)
Shell Size	8	◆	◆				
	10	◆	◆				
	12	◆	◆	◆			
	14	◆	◆	◆	◆	◆	
	16			◆	◆	◆	◆
	18			◆	◆	◆	◆
	20			R		R	◆
	22			R		R	◆
	24			R		R	◆

R = with reducer

OR Shielded Cord Grip

		MSS*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm	4 Min mm	4 Max mm
Shell Size	8	◆	4.0	6.0	6.0	9.5	-	-	-	-
	10	◆	4.0	6.5	6.5	9.5	8.0	10.5	-	-
	12	◆	6.5	9.5	8.0	10.5	9.0	13.0	-	-
	14	◆	6.5	9.5	7.0	10.5	9.0	13.0	-	-
	16	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	18	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	20	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	22	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	24	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0

Conduit Adapter and Cord Grip Types

- CA*= Conduit Adapter
- MSS*= Metal Short Shielded - Nickel Plated Brass
- PF*= Plastic with Flex Spring
- PS*= Plastic Short
- MS*= Metal Short - Nickel Plated Brass
- PL*= Plastic Long
- ML*= Metal Long - Nickel Plated Brass

*= add size code per chart i.e. CGPFA or CGMSS4

Min/Max refers to cable diameter.

OR Unshielded Cord Grip

Note: Cable jacket and shield diameters must be between Min/Max of cord grip.

For detailed info on shield diameters, see MSS table on page 232.

		PF*	PS*	MS*	Size Code A Min mm	A Max mm	R Min mm	R Max mm	PL*	ML*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm
Shell Size	8	◆	◆	◆	3.0	6.5	2.0	5.0			-	-	-	-	-	-
	10	◆	◆	◆	4.0	8.0	2.0	6.0	◆	◆	4.0	6.5	7.5	9.5	-	-
	12	◆	◆	◆	5.0	10.0	3.0	7.0	◆	◆	6.5	9.5	7.0	10.5	-	-
	14	◆	◆	◆	6.0	12.0	5.0	9.0	◆	◆	6.5	9.5	8.5	10.5	-	-
	16	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
	18	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
	20	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
	22	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
	24	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0

STEP 4 Choose Connector Layout



See Connector Solutions Guide

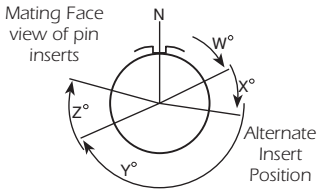
STEP 5 Choose Contact

P = Pin

S = Socket

STEP 6 Choose Rotation (omit for normal)

W, X, Y, Z



STEP 7 Choose Shell Modifier

Standard Plating = Conductive olive drab chromate over cadmium

- A34 = Bright Nickel (EU) (RoHS✣)
- A71 = Electroless Nickel (US) (RoHS✣)
- A206 = Non-Conductive Black Zinc Cobalt (US) (RoHS✣)
- A232 = Non-Conductive Black Zinc Cobalt (EU) (RoHS✣)

Note: ✣As reported by ITT Cannon, please call for more info.

Example of part description:

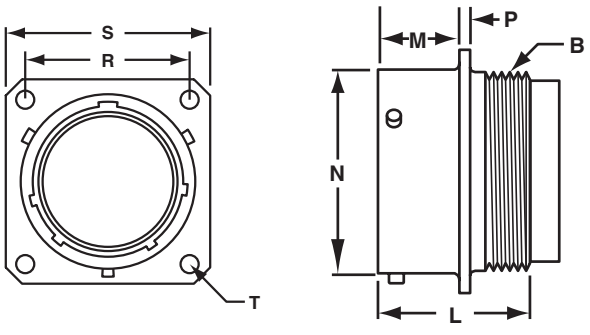
KPSE6G	UT	CSB3-	14-19	P	W	A71
1 Shell Style	2 Endbells Shielding Options	3 Wire Protection	4 Connector Layout	5 Contact	6 Rotation	7 Modifier

(See Connector Solutions Guide)

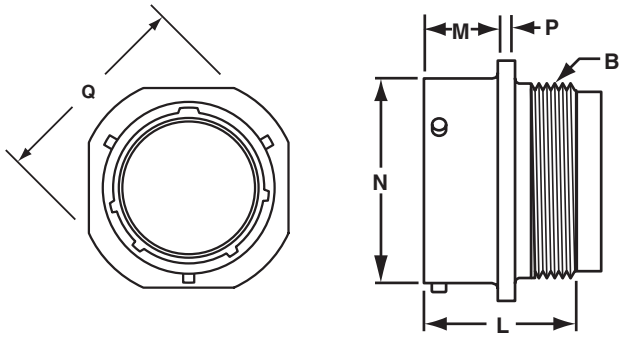
KPSE – Dimensions

Receptacle Styles

KPSE0

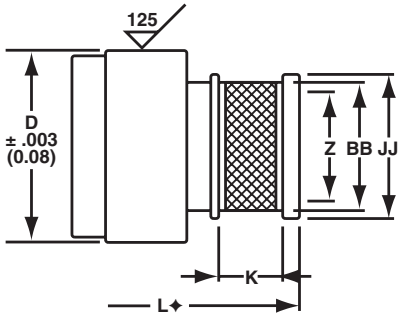


KPSE1

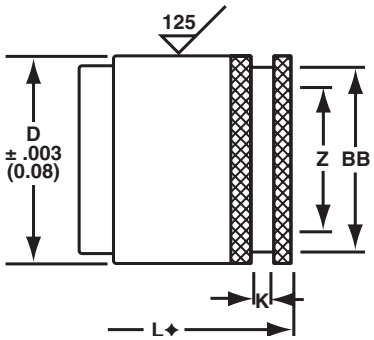


	KPSE0			KPSE1	KPSE0			KPSE1	KPSE0/1	
Shell Size	M +.003 -.08	N +.001 -.055	P	P	R (TP)	S Max	T ∅	KPT01 Q Max	L	B Thread 2A
8	0.431 (10.9)	0.471 (12.0)	0.062 (1.6)	0.093 (2.4)	0.594 (15.1)	0.828 (21.0)	0.120 (3.0)	0.958 (24.3)	0.850 (21.6)	.4375-28 UNEF
10	0.431 (10.9)	0.588 (14.9)	0.062 (1.6)	0.093 (2.4)	0.719 (18.3)	0.954 (24.2)	0.120 (3.0)	1.082 (27.5)	0.850 (21.6)	.5625-24 UNEF
12	0.431 (10.9)	0.748 (19.0)	0.062 (1.6)	0.093 (2.4)	0.812 (20.6)	1.047 (26.6)	0.120 (3.0)	1.176 (29.9)	0.850 (21.6)	.6875-24 UNEF
14	0.431 (10.9)	0.873 (22.2)	0.062 (1.6)	0.093 (2.4)	0.906 (23.0)	1.141 (29.0)	0.120 (3.0)	1.270 (32.3)	0.850 (21.6)	.8125-20 UNEF
16	0.431 (10.9)	.998 (25.3)	0.062 (1.6)	0.093 (2.4)	0.969 (24.6)	1.234 (31.3)	0.120 (3.0)	1.364 (34.6)	0.850 (21.6)	.9375-20 UNEF
18	0.431 (10.9)	1.123 (28.5)	0.062 (1.6)	0.093 (2.4)	1.062 (27.0)	1.328 (33.7)	0.120 (3.0)	1.458 (37.0)	0.850 (21.6)	1.0625-18 UNEF
20	0.556 (14.1)	1.248 (31.7)	0.094 (2.4)	0.115 (2.9)	1.156 (29.4)	1.453 (36.9)	0.120 (3.0)	1.582 (40.2)	1.057 (26.8)	1.1875-18 UNEF
22	0.556 (14.1)	1.373 (34.9)	0.094 (2.4)	0.115 (2.9)	1.250 (31.8)	1.578 (40.1)	0.120 (3.0)	1.708 (43.4)	1.057 (26.8)	1.3125-18 UNEF
24	0.589 (15.0)	1.498 (38.0)	0.094 (2.4)	0.115 (2.9)	1.375 (34.9)	1.703 (43.3)	0.147 (3.7)	1.832 (46.5)	1.057 (26.8)	1.4375-18 UNEF

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	1.980 (50.3)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10	0.740 (18.8)	2.055 (52.2)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12	0.865 (22.0)	2.063 (52.4)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	2.181 (55.4)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
16	1.146 (29.1)	2.248 (57.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	2.327 (59.1)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.512 (63.8)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.610 (66.3)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	1.552 (39.4)	2.661 (67.8)	0.476 (12.1)	0.900 (22.8)	1.157 (29.4)	1.276 (32.4)	H



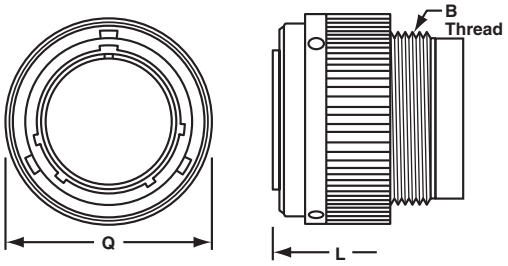
Cord Grip							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	1.756 (44.6)	0.118 (3.0)	0.330 (8.3)	0.580 (14.8)	0.740 (18.8)	B
10	0.865 (22.0)	1.756 (44.6)	0.118 (3.0)	0.439 (11.2)	0.707 (18.0)	0.865 (22.0)	C
12	0.990 (25.1)	1.756 (44.6)	0.118 (3.0)	0.549 (13.9)	0.833 (21.2)	0.990 (25.2)	D
14	0.990 (25.1)	1.776 (45.1)	0.118 (3.0)	0.651 (16.5)	0.887 (22.6)	0.990 (25.2)	D
16	1.146 (29.1)	1.776 (45.1)	0.118 (3.0)	0.751 (19.1)	0.989 (25.1)	1.146 (29.1)	E
18	1.271 (32.3)	1.894 (48.1)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	1.271 (32.3)	F
20	1.428 (36.3)	2.138 (54.3)	0.118 (3.0)	0.974 (24.7)	1.270 (32.3)	1.428 (36.3)	G
22	1.552 (39.4)	2.256 (57.3)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H
24	1.552 (39.4)	2.335 (59.3)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H

L✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

KPSE – Dimensions

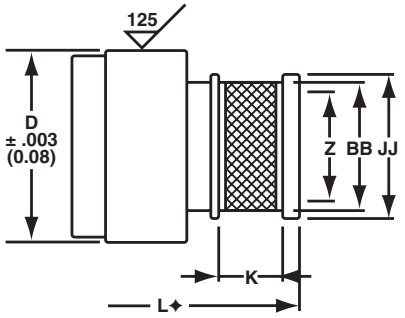
Straight Plugs

KPSE6

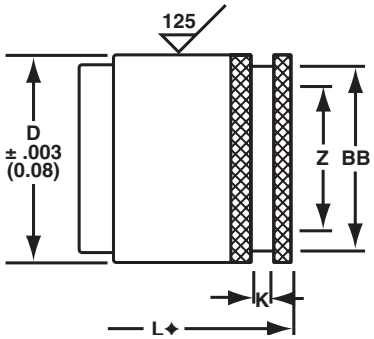


Shell Size	KPSE6 Barrel Q Max	KPSE6 Barrel L Max	KPSE6 Barrel B Thread 2A
8	0.765 (19.4)	0.841 (21.4)	.4375-28 UNEF
10	0.840 (21.3)	0.841 (21.4)	.5625-24 UNEF
12	0.999 (25.4)	0.841 (21.4)	.6875-24 UNEF
14	1.139 (28.9)	0.841 (21.4)	.8125-20 UNEF
16	1.261 (32.0)	0.841 (21.4)	.9375-20 UNEF
18	1.337 (34.0)	0.841 (21.4)	1.0625-18 UNEF
20	1.477 (37.5)	0.986 (25.0)	1.1875-18 UNEF
22	1.602 (40.7)	0.986 (25.0)	1.3125-18 UNEF
24	1.723 (43.8)	0.986 (25.0)	1.4375-18 UNEF

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	1.970 (50.2)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10	0.740 (18.8)	2.055 (52.2)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12	0.865 (22.0)	2.063 (52.4)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	2.181 (55.4)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
16	1.146 (29.1)	2.248 (57.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	2.327 (59.1)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.512 (63.8)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.610 (66.3)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	1.552 (39.4)	2.661 (67.8)	0.476 (12.1)	0.900 (22.8)	1.157 (29.4)	1.276 (32.4)	H

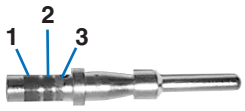


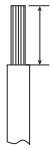
Cord Grip							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	1.756 (44.6)	0.118 (3.0)	0.330 (8.3)	0.580 (14.8)	0.740 (18.8)	B
10	0.865 (22.0)	1.756 (44.6)	0.118 (3.0)	0.439 (11.2)	0.707 (18.0)	0.865 (22.0)	C
12	0.990 (25.1)	1.756 (44.6)	0.118 (3.0)	0.549 (13.9)	0.833 (21.2)	0.990 (25.2)	D
14	0.990 (25.1)	1.776 (45.1)	0.118 (3.0)	0.651 (16.5)	0.887 (22.6)	0.990 (25.2)	D
16	1.146 (29.1)	1.776 (45.1)	0.118 (3.0)	0.751 (19.1)	0.989 (25.1)	1.146 (29.1)	E
18	1.271 (32.3)	1.894 (48.1)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	1.271 (32.3)	F
20	1.428 (36.3)	2.138 (54.3)	0.118 (3.0)	0.974 (24.7)	1.270 (32.3)	1.428 (36.3)	G
22	1.552 (39.4)	2.256 (57.3)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H
24	1.552 (39.4)	2.335 (59.3)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H

L✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

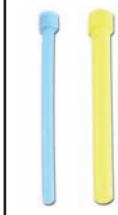
KPSE – Contacts

Pin Crimp Contacts









Head goes in first, trim excess



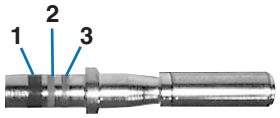


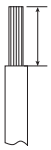
Extraction tool

Insertion tool

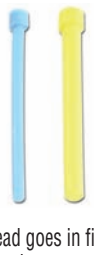
Size	Wire Size AWG	Pin	Color Bands 1	Color Bands 2	Color Bands 3	Wire Strip Lengths	Wire Sealing Range Min	Wire Sealing Range Max	Wire Hole Filler	Crimp Tools	Use Turret Head Locator Color	Insertion/ Extraction Tool M81969
20	20-24	M39029/31-240	Red	Yellow	Black	.250 (6.4)	.047 (1.2)	.083 (2.1)	MS27488-20-2	AF8 Hand Tool WA27F Air Powered TH1A Turret Head	Red	/17-03 (INS) /19-06 (EXT)
16	16-20	M39029/31-228	Red	Red	Grey	.250 (6.4)	.066 (1.7)	.109 (2.7)	MS27488-16-2		Blue	/17-04 (INS) /19-01 (EXT)

Socket Crimp Contacts









Head goes in first, trim excess





Extraction tool

Insertion tool

Size	Wire Size AWG	Pin	Color Bands 1	Color Bands 2	Color Bands 3	Wire Strip Lengths	Wire Sealing Range Min	Wire Sealing Range Max	Wire Hole Filler	Crimp Tools	Use Turret Head Locator Color	Insertion/ Extraction Tool M81969
20	20-24	M39029/32-259	Red	Green	White	.250 (6.4)	.047 (1.2)	.083 (2.1)	MS27488-20-2	AF8 Hand Tool WA27F Air Powered TH1A Turret Head	Red	/17-03 (INS) /19-06 (EXT)
16	16-20	M39029/32-247	Red	Yellow	Violet	.250 (6.4)	.066 (1.7)	.109 (2.7)	MS27488-16-2		Blue	/17-04 (INS) /19-01 (EXT)



KPSE Crimp Kit

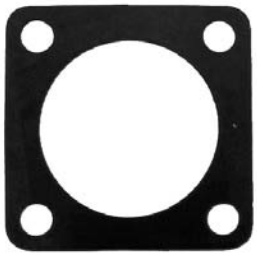
Kit includes:

- Crimp Tool
- Locator
- Insertion Tools 16 + 20
- Extraction Tools 16 + 20
- Contact Insertion Lubricant
- Assembly Instructions
- Rugged Case

All dimensions in inches (millimeters in parenthesis)

Flange Mount Receptacle Accessories

Gasket



Nut Plate



Sealing Screws



Dummy Receptacle



Dust Caps

Plug Dust Cap



Receptacle Flange Dust Cap



Receptacle Jam Nut Dust Cap



Standard plating is anodized

	Flange Mount Receptacle Accessories				Dust Caps		
					Receptacles		
Shell Size	Gasket	Nut Plate	Sealing Screws	Dummy Receptacle	Plugs	Flanged	Jam Nut
8	CMD02-8*	M85528/2-8A	S440-1/2	MS3115-8**	MS3180-8CA	MS3181-8CA	MS3181-8NA
10	CMD02-10*	M85528/2-10A	S440-1/2	MS3115-10**	MS3180-10CA	MS3181-10CA	MS3181-10NA
12	CMD02-12*	M85528/2-12A	S440-1/2	MS3115-12**	MS3180-12CA	MS3181-12CA	MS3181-12NA
14	CMD02-14*	M85528/2-14A	S440-1/2	MS3115-14**	MS3180-14CA	MS3181-14CA	MS3181-14NA
16	CMD02-16*	M85528/2-16A	S440-1/2	MS3115-16**	MS3180-16CA	MS3181-16CA	MS3181-16NA
18	CMD02-18*	M85528/2-18A	S440-1/2	MS3115-18**	MS3180-18CA	MS3181-18CA	MS3181-18NA
20	CMD02-20*	M85528/2-20A	S440-1/2	MS3115-20**	MS3180-20CA	MS3181-20CA	MS3181-20NA
22	CMD02-22*	M85528/2-22A	S440-1/2	MS3115-22**	MS3180-22CA	MS3181-22CA	MS3181-22NA
24	CMD02-24*	M85528/2-24B	S632-1/2	MS3115-24**	MS3180-24CA	MS3181-24CA	MS3181-24NA

* Add C for conductive type

** Select Plating
W = Olive drab over cadmium
A = Anodized
L = Electroless nickel

KPSE – At-A-Glance

Name:
Company:
Email:
Phone:
Qty: EAU:

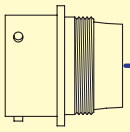
Additional Connector Information

CONNECTOR Part #:_____
OR
# of Contacts:_____ Sizes & Type:_____

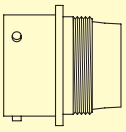
CABLE Manufacturer: _____
(If Known)
CABLE Part #: _____ OR Cable OD:_____

PEI-Genesis

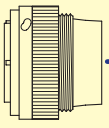
Choose One Connector



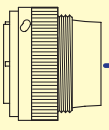
☐ **KPSE0**
MS3120 Type
Crimp Wall
Mount Receptacle



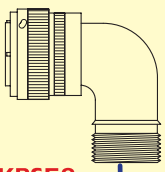
☐ **KPSE1**
MS3121 Type
Crimp Cable
Mount Receptacle



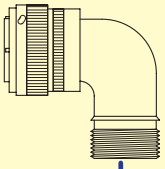
☐ **KPSE6**
MS3126 Type
Crimp Cable Plug



☐ **KPSE6G**
EMI Grounding
Finger Barrel Plug



☐ **KPSE8**
Crimp
Right Angle Plug*



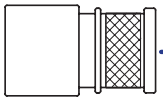
☐ **KPSE8G**
EMI Grounding
Finger Barrel
Right Angle Plug*

* Option NOT available for shell size 8

Choose One Endbell

Use endbell "U" for Menus A, B, C, D & E

☐ **U**

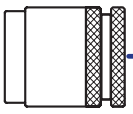


- Omit for Unshielded
- **S** Shielding Spring
- **T** Shielding Tape
- **W** Shielding Tape & Spring

Crimp Termination Only
Use KPT for Solder Type

Use endbell "CG" for Menus F, G & H

☐ **CG**



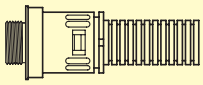
Comments/Notes:

_____
_____
_____
_____
_____
_____

Choose One Wire Protection

- ☐ **HST** Heat Shrink Tubing
- ☐ **SB** Straight Boot
- ☐ **BSB** Bottle Shaped Shrink Boot
- ☐ **HBSB** High Ratio Bottle Shaped Shrink Boot
- ☐ **CSB** Convoluted Shrink Boot
- ☐ **RSB** Right Angle Shrink Boot

- ☐ **CA** Conduit Adapter & Conduit



- ☐ **MSS** Metal Short Shielded



- ☐ **PF** Plastic with flex Relief



- ☐ **PS** Plastic Short



- ☐ **MS** Metal Short



- ☐ **PL** Plastic with Long Boot



- ☐ **ML** Metal with Long Boot



MIL-DTL-26482 Series 1 Crimp Type – PTS



The Amphenol Miniature Cylindrical Connector Series offers high density contact arrangements in a miniature, circular metal shell. The connector is environmentally sealed and comes in a high performance crimp contact version (PTS). The style is intermateable, intermountable, and interchangeable with all MIL-DTL-26482 connectors, whether solder or crimp style is used. PTS uses a quick disconnect bayonet coupling for rapid positive mating and unmating of the connector. PTS types meet all requirements of MIL-DTL-26482.

Applications

- Power generators
- Engines
- Sensors
- Motion Control
- Off-road vehicles
- Earth moving equipment
- Ships
- Mobile equipment
- Industrial machinery
- Telecommunications
- Traffic control

Features

Rugged Shell
Aluminum alloy shell and hardware create a rugged connector with minimal weight. These connectors have been used extensively in commercial, military, and aerospace environments.

Environmentally Sealed
Complete moisture sealing is achieved by combining four seals: shell, peripheral, interfacial, and wire. Wire seal is accomplished by multiple ripple design, exceeding the wire sealing requirements of MIL-DTL-26482.

Resistant to Military Environments
These connectors will operate in temperatures from -67˚F to +257˚F (-55˚C to +125˚C) under the harshest possible conditions.

Wide Range of Wire Gauges and Current Carrying Capacity
Up to 23 amps with wire gauges from size 24 up to size 12 AWG wire.

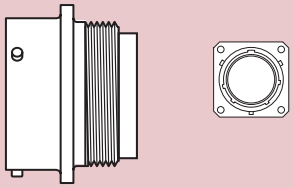
Resilient Insulator & Grommet
A resilient Neoprene insulator and integrated rear wire sealing grommet guarantees a liquid tight assembly. Crimp contacts that can be inserted from the rear of the connector are available.

Crimp Gold Plated Contacts
PTS connector contacts are gold plated per MIL-G-45204 Type II. The PTS crimp contacts are built in accordance to MIL-C-39029. The contacts are crimped with the standard M22520/1 crimp tool. Socket contacts are closed to eliminate damage from test probes and to help prevent misaligned pins during engagement. Contact insertion is from the rear of the connector. When the contact is fully inserted, it snaps securely into retention tines embedded in the insulator. Contact extraction is accomplished from the front with the proper extraction tool. Pressing the tool plunger pushes the contact out through the rear of the connector.

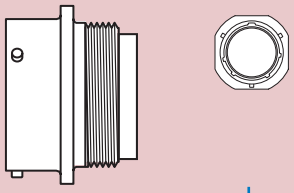
Amphenol PTS

STEP 1
Choose Shell Style: Receptacle or Plug
(See Connector Solutions Guide)

Wall Mount Receptacle
PTS00

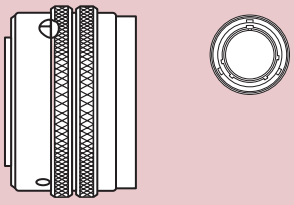


Cable Mount Receptacle
PTS01



mates with

Cable Plug
PTS06



STEP 2 Choose Endbell



- **U** = Unshielded
- **US** = with shielding spring
- **UT** = with shielding tape
- **UW** = with shielding tape & spring

RU Right Angle
NEW!
Call for more info

STEP 3 Choose Heat Shrink Boot or Tubing

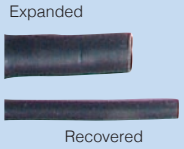
Note: Cable outside diameter must be between expanded and recovered dimensions.

Boot options

SB – Straight Boot



HST – Heat Shrink Tubing



Most Popular

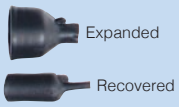
Heat Shrink Product	SB 1	SB 2	SB 3	SB 4	SB 5	HST 1	HST 2	HST 3	HST 4
Expanded ID inch (mm)	0.88 ((22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	0.750 (19.1)	1.000 (25.4)	1.250 (31.8)	1.570 (39.9)
Recovered ID inch (mm)	0.25 (6.4)	0.29 (7.4)	0.33 (8.4)	0.38 (9.7)	0.41 (10.4)	0.250 (6.4)	0.320 (8.1)	0.416 (10.6)	0.510 (13.0)
Length Max inch (mm)	4.17 (105.9)	4.77 (121.2)	5.46 (138.7)	6.28 (159.5)	7.00 (177.8)	6.00 (152.4)			
Shell Size 8	◆					◆			
10	◆					◆			
12		◆	◆				◆		
14			◆					◆	
16			◆	◆				◆	
18				◆				◆	
20				◆					◆
22					◆				◆
24									◆

adhesive lined heat shrink tubing



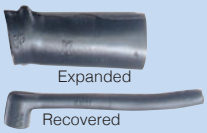
Heat Shrink Product	CSB2	CSB3	CSB4	CSB5	BSB1	HBSB2	BSB2	BSB3	BSB4	BSB5
Expanded ID inch (mm)	0.70 (17.8)	1.06 (26.9)	1.44 (36.6)	1.80 (45.7)	0.94 (23.9)	0.35 (8.9)	1.18 (30.0)	1.22 (31.0)	1.42 (36.1)	1.69 (42.9)
Recovered ID inch (mm)	0.32 (8.1)	0.50 (12.7)	0.69 (17.5)	0.88 (22.4)	0.24 (6.1)	0.14 (3.6)	0.24 (6.1)	0.28 (7.1)	0.33 (8.4)	0.39 (9.9)
Length Max inch (mm)	5.25 (133.4)	5.75 (146.1)	6.25 (158.8)	6.75 (171.5)	1.50 (38.1)	2.17 (55.1)	2.17 (55.1)	2.64 (67.1)	3.15 (80.0)	3.90 (99.1)
Shell Size 8	◆									
10	◆				◆	◆	◆			
12	◆				◆	◆	◆	◆		
14		◆			◆	◆	◆	◆	◆	
16		◆	◆				◆	◆	◆	
18		◆	◆				◆	◆	◆	
20		◆	◆					◆	◆	
22		◆	◆						◆	
24			◆	◆						◆

BSB/HBSB – Bottle Shaped Shrink Boot
(High Ratio Bottle Shaped Boot)



Heat Shrink Product	RSB1	RSB2	RSB3	RSB4	RSB5
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)
Recovered ID inch (mm)	0.23 (5.8)	0.26 (6.6)	0.30 (7.6)	0.35 (8.9)	0.37 (9.4)
Length Max inch (mm)	4.14 (105.2)	4.88 (124.0)	5.76 (146.3)	6.78 (172.2)	7.29 (185.2)
Shell Size 8	◆				
10	◆	◆			
12		◆	◆		
14			◆	◆	
16			◆	◆	
18				◆	
20				◆	◆
22					◆
24					

RSB – Right Angle Shrink Boot



STEP 2 Choose Endbell



CG = Straight Adapter Endbell

NEW!



RG = Right Angle Adapter Endbell

Please call for more information

STEP 3 Choose Conduit Adapter or Cord Grip

Unshielded Conduits



CA* = conduit adapter for plastic flexible conduit. Add size code i.e. CGCA10

Note: Normal recommended conduit fill is 40% of Conduit ID or less.

Size Code		07	10	12	14	17	23
Conduit ID Inch (mm)		0.256 (6.5)	0.394 (10.0)	0.472 (12.0)	0.563 (14.3)	0.650 (16.5)	0.906 (23.0)
Conduit OD Inch (mm)		0.394 (10.0)	0.512 (13.0)	0.622 (15.8)	0.728 (18.5)	0.835 (21.2)	1.122 (28.5)
Shell Size	8	◆	◆				
	10	◆	◆				
	12	◆	◆	◆			
	14	◆	◆	◆	◆	◆	
	16			◆	◆	◆	◆
	18			◆	◆	◆	◆
	20			R		R	◆
	22			R		R	◆
	24			R		R	◆

OR Shielded Cord Grip

			Size Code 1		2		3		4	
		MSS*	Min mm	Max mm	Min mm	Max mm	Min mm	Max mm	Min mm	Max mm
Shell Size	8	♦	4.0	6.0	6.0	9.5	-	-	-	-
	10	♦	4.0	6.5	6.5	9.5	8.0	10.5	-	-
	12	♦	6.5	9.5	8.0	10.5	9.0	13.0	-	-
	14	♦	6.5	9.5	7.0	10.5	9.0	13.0	-	-
	16	♦	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	18	♦	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	20	♦	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	22	♦	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	24	♦	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0

Conduit Adapter and Cord Grip Types

- **CA***= Conduit Adapter
- **MSS***= Metal Short Shielded - Nickel Plated Brass
- **PF***= Plastic with Flex Spring
- **PS***= Plastic Short
- **MS***= Metal Short - Nickel Plated Brass
- **PL***= Plastic Long
- **ML***= Metal Long - Nickel Plated Brass
- *= add size code per chart i.e. CGPFA or CGMSS4

Min/Max refers to cable diameter.

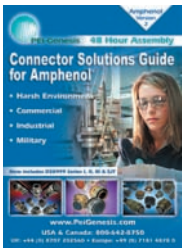
Note: Cable jacket and shield diameters must be between Min/Max of cord grip.

For detailed info on shield diameters, see MSS table on page 232.

OR Unshielded Cord Grip

					Size Code A		R				Size Code 1		2		3	
		PF*	PS*	MS*	Min mm	Max mm	Min mm	Max mm	PL*	ML*	Min mm	Max mm	Min mm	Max mm	Min mm	Max mm
Shell Size	8	♦	♦	♦	3.0	6.5	2.0	5.0			-	-	-	-	-	-
	10	♦	♦	♦	4.0	8.0	2.0	6.0	♦	♦	4.0	6.5	7.5	9.5	-	-
	12	♦	♦	♦	5.0	10.0	3.0	7.0	♦	♦	6.5	9.5	7.0	10.5	-	-
	14	♦	♦	♦	6.0	12.0	5.0	9.0	♦	♦	6.5	9.5	8.5	10.5	-	-
	16	♦	♦	♦	10.0	14.0	7.0	12.0	♦	♦	6.5	9.5	7.0	10.5	9.5	13.0
	18	♦	♦	♦	10.0	14.0	7.0	12.0	♦	♦	6.5	9.5	7.0	10.5	9.5	13.0
	20	♦	♦	♦	13.0	18.0	9.0	16.0	♦	♦	9.0	13.0	13.0	15.5	14.0	18.0
	22	♦	♦	♦	13.0	18.0	9.0	16.0	♦	♦	9.0	13.0	13.0	15.5	14.0	18.0
	24	♦	♦	♦	13.0	18.0	9.0	16.0	♦	♦	9.0	13.0	13.0	15.5	14.0	18.0

STEP 4 Choose Connector Layout



See Connector Solutions Guide

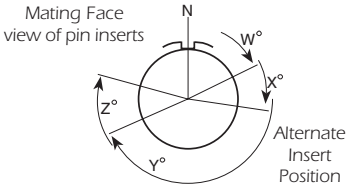
STEP 5 Choose Contact

P = Pin
S = Socket

STEP 6 Choose Rotation

(omit for normal)

W, X, Y, Z



STEP 7 Choose Platings/ Modifications

CONTACTS

LC = Less Contacts (not marked on part)

SHELLS

Standard Plating = Conductive olive drab chromate over cadmium

005 = Anodic Coating (Alumilite)

014 = Olive Drab Chromate over Cadmium over Nickel (500-hour salt spray)

023 = Electroless Nickel

024 = Olive Drab Zinc Cobalt✦

025 = Non-Conductive Black Zinc✦(RoHS❖)

027 = Conductive Black Zinc (RoHS❖)

Note: ✦ Endbells U & CG will be Black Anodized.
❖ As reported by Amphenol, please call for more info.

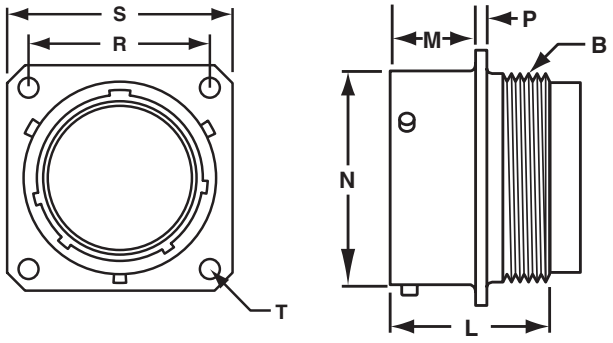
PTS06	CG	MSS2-	14-19	S	Y	-023-LC
1 Shell Style	2 Endbells Shielding Options	3 Wire Protection	4 Connector Layout	5 Contact	6 Rotation	7 Modifier

(See Connector Solutions Guide)

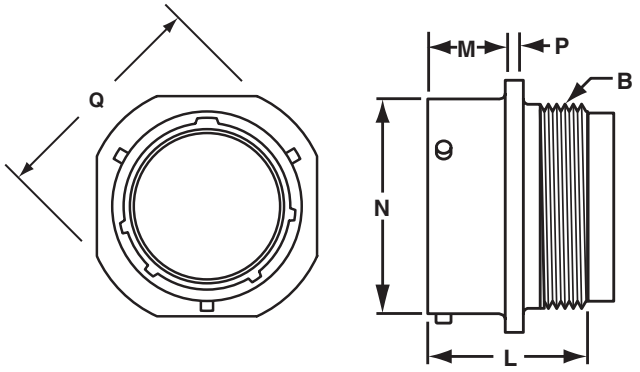
PTS – Dimensions

Receptacle Styles

PTS00

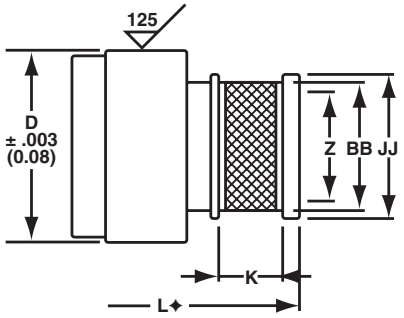


PTS01

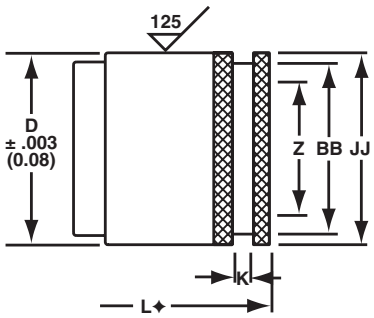


	PTS00			PTS01	PTS00			PTS01	PTS00/PTS01	
Shell Size	M	N +.001 -.055	P	P	R (TP)	S	T ∅	Q	L	B Thread 2A
8	0.431	0.473	0.062	0.093	0.594	0.812	0.120	0.938	0.906	.4375-28
	(10.9)	(12.0)	(1.6)	(2.4)	(15.1)	(20.6)	(3.0)	(23.8)	(23.0)	UNEF
10	0.431	0.590	0.062	0.093	0.719	0.938	0.120	1.062	0.906	.5625-24
	(10.9)	(15.0)	(1.6)	(2.4)	(18.3)	(23.8)	(3.0)	(27.0)	(23.0)	UNEF
12	0.431	0.750	0.062	0.093	0.812	1.031	0.120	1.156	0.906	.6875-24
	(10.9)	(19.1)	(1.6)	(2.4)	(20.6)	(26.2)	(3.0)	(29.4)	(23.0)	UNEF
14	0.431	0.875	0.062	0.093	0.906	1.125	0.120	1.250	0.906	.8125-20
	(10.9)	(22.2)	(1.6)	(2.4)	(23.0)	(28.6)	(3.0)	(31.8)	(23.0)	UNEF
16	0.431	1.000	0.062	0.093	0.969	1.219	0.120	1.344	0.906	.9375-20
	(10.9)	(25.4)	(1.6)	(2.4)	(24.6)	(31.0)	(3.0)	(34.1)	(23.0)	UNEF
18	0.431	1.125	0.062	0.093	1.062	1.312	0.120	1.438	0.906	1.0625-18
	(10.9)	(28.6)	(1.6)	(2.4)	(27.0)	(33.3)	(3.0)	(36.5)	(23.0)	UNEF
20	0.556	1.250	0.094	0.115	1.156	1.438	0.120	1.562	1.125	1.1875-18
	(14.1)	(31.8)	(2.4)	(2.9)	(29.4)	(36.5)	(3.0)	(39.7)	(28.6)	UNEF
22	0.556	1.375	0.094	0.115	1.250	1.561	0.120	1.688	1.125	1.3125-18
	(14.1)	(34.9)	(2.4)	(2.9)	(31.8)	(39.6)	(3.0)	(42.9)	(28.6)	UNEF
24	0.556	1.500	0.127	0.115	1.375	1.688	0.147	1.812	1.188	1.4375-18
	(14.1)	(38.1)	(3.2)	(2.9)	(34.9)	(42.9)	(3.7)	(46.0)	(30.2)	UNEF

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	**D ∅**	**L✦ Max**	**K Max**	**Z∅ Cable Max***	**BB∅ Max**	**JJ∅ Max**	**C Code**
8	0.740 (18.8)	2.035 (51.7)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10	0.740 (18.8)	2.111 (53.6)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12	0.865 (22.0)	2.118 (53.8)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	2.236 (56.8)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
16	1.146 (29.1)	2.304 (58.5)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	2.383 (60.5)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.582 (65.6)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.683 (68.1)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	1.552 (39.4)	2.794 (71.0)	0.476 (12.1)	0.900 (22.8)	1.157 (29.4)	1.276 (32.4)	H



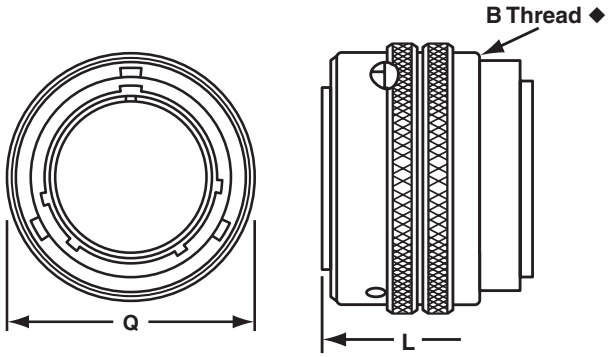
Cord Grip							
Shell Size	**D ∅**	**L✦ Max**	**K Max**	**Z∅ Cable Max***	**BB∅ Max**	**JJ∅ Max**	**C Code**
8	0.740 (18.8)	1.811 (46.0)	0.118 (3.0)	0.330 (8.37)	0.580 (14.8)	0.740 (18.8)	B
10	0.865 (22.0)	1.811 (46.0)	0.118 (3.0)	0.439 (11.2)	0.707 (18.0)	0.865 (22.0)	C
12	0.990 (25.1)	1.811 (46.0)	0.118 (3.0)	0.549 (13.9)	0.833 (21.2)	0.990 (25.2)	D
14	0.990 (25.1)	1.831 (46.5)	0.118 (3.0)	0.651 (16.5)	0.887 (22.6)	0.990 (25.2)	D
16	1.146 (29.1)	1.831 (46.5)	0.118 (3.0)	0.751 (19.1)	0.989 (25.1)	1.146 (29.1)	E
18	1.271 (32.3)	1.949 (49.5)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	1.271 (32.3)	F
20	1.428 (36.3)	2.209 (56.1)	0.118 (3.0)	0.974 (24.7)	1.270 (32.3)	1.428 (36.3)	G
22	1.552 (39.4)	2.327 (59.1)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H
24	1.552 (39.4)	2.467 (62.7)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

PTS – Dimensions

Straight Plugs

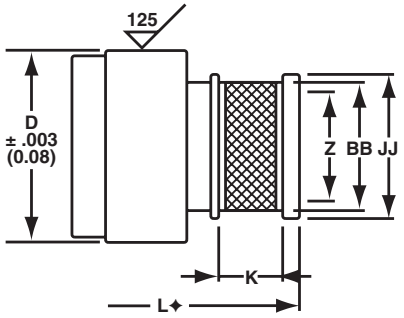
PTS06



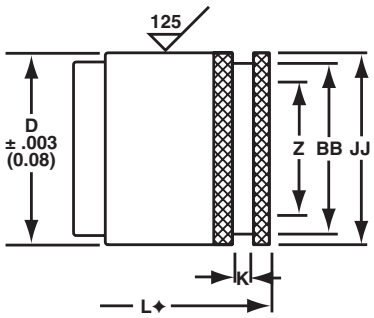
Shell Size	PTS06 Barrel Q	L	B Thread 2A
8	0.750 (19.1)	0.906 (23.0)	.4375-28 UNEF
10	0.859 (21.8)	0.906 (23.0)	.5625-24 UNEF
12	1.013 (25.7)	0.906 (23.0)	.6875-24 UNEF
14	1.156 (29.4)	0.906 (23.0)	.8125-20 UNEF
16	1.281 (32.5)	0.906 (23.0)	.9375-20 UNEF
18	1.391 (35.3)	0.906 (23.0)	1.0625-18 UNEF
20	1.531 (38.9)	1.062 (27.0)	1.1875-18 UNEF
22	1.656 (42.1)	1.062 (27.0)	1.3125-18 UNEF
24	1.776 (45.1)	1.125 (28.6)	1.4375-18 UNEF

◆Coupling nut covers barrel threads in illustration

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	**D ∅**	**L✦ Max**	**K Max**	**Z∅ Cable Max***	**BB∅ Max**	**JJ∅ Max**	**C Code**
8	0.740 (18.8)	2.035 (51.7)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10	0.740 (18.8)	2.111 (53.6)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12	0.865 (22.0)	2.118 (53.8)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	2.236 (56.8)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
16	1.146 (29.1)	2.304 (58.5)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	2.383 (60.5)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.582 (65.6)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.683 (68.1)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	1.552 (39.4)	2.794 (71.0)	0.476 (12.1)	0.900 (22.8)	1.157 (29.4)	1.276 (32.4)	H

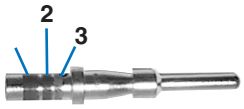


Cord Grip							
Shell Size	**D ∅**	**L✦ Max**	**K Max**	**Z∅ Cable Max***	**BB∅ Max**	**JJ∅ Max**	**C Code**
8	0.740 (18.8)	1.811 (46.0)	0.118 (3.0)	0.330 (8.37)	0.580 (14.8)	0.740 (18.8)	B
10	0.865 (22.0)	1.811 (46.0)	0.118 (3.0)	0.439 (11.2)	0.707 (18.0)	0.865 (22.0)	C
12	0.990 (25.1)	1.811 (46.0)	0.118 (3.0)	0.549 (13.9)	0.833 (21.2)	0.990 (25.2)	D
14	0.990 (25.1)	1.831 (46.5)	0.118 (3.0)	0.651 (16.5)	0.887 (22.6)	0.990 (25.2)	D
16	1.146 (29.1)	1.831 (46.5)	0.118 (3.0)	0.751 (19.1)	0.989 (25.1)	1.146 (29.1)	E
18	1.271 (32.3)	1.949 (49.5)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	1.271 (32.3)	F
20	1.428 (36.3)	2.209 (56.1)	0.118 (3.0)	0.974 (24.7)	1.270 (32.3)	1.428 (36.3)	G
22	1.552 (39.4)	2.327 (59.1)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H
24	1.552 (39.4)	2.467 (62.7)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	1.552 (39.4)	H

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

PTS – Contacts

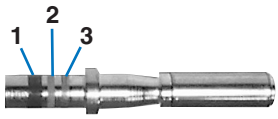
Pin Crimp Contacts

CONTACT & WIRE SIZE	PIN CONTACT & COLOR BANDS	WIRE STRIP LENGTH
		

CONTACT SIZE	WIRE SIZE AWG	PIN CONTACT PART NUMBER	COLOR BANDS			WIRE STRIP LENGTH	WIRE SEALING RANGE	
			1	2	3		MIN.	MAX.
SE CRIMP CONTACTS								
20	20-24	M39029/31-240	Red	Yellow	Black	.250 (6.4)	.047 (1.2)	.083 (2.1)
16	16-20	M39029/31-228	Red	Red	Grey	.250 (6.4)	.066 (1.7)	.109 (2.7)
12	12-14	M39029/31-235	Red	Orange	Green	.232 (5.9)	.097 (2.5)	.149 (3.7)
20 Chromel	20-24	10-330940-01P	-	-	-	.250 (6.4)	.047 (1.2)	.083 (2.1)
20 Alumel	20-24	10-330940-02P	-	-	-			
20 Iron	20-24	10-330940-03P	-	-	-			
20 Constantan	20-24	10-330940-04P	-	-	-			

All dimensions in inches (millimeters in parenthesis)

Socket Crimp Contacts

CONTACT & WIRE SIZE	SOCKET CONTACT & COLOR BANDS	WIRE STRIP LENGTH
		

CONTACT SIZE	WIRE SIZE AWG	SOCKET CONTACT PART NUMBER	COLOR BANDS			WIRE STRIP LENGTH	WIRE SEALING RANGE	
			1	2	3		MIN.	MAX.
SE CRIMP CONTACTS								
20	20-24	M39029/32-259	Red	Green	White	.250 (6.4)	.047 (1.2)	.083 (2.1)
16	16-20	M39029/32-247	Red	Yellow	Violet	.250 (6.4)	.066 (1.7)	.109 (2.7)
12	12-14	M39029/32-254	Red	Green	Yellow	.232 (5.9)	.097 (2.5)	.149 (3.7)
20 Chromel	20-24	10-330940-01S	-	-	-	.250 (6.4)		.083 (2.1)
20 Alumel	20-24	10-330940-02S	-	-	-			
20 Iron	20-24	10-330940-03S	-	-	-			
20 Constantan	20-24	10-330940-04S	-	-	-			

All dimensions in inches (millimeters in parenthesis)

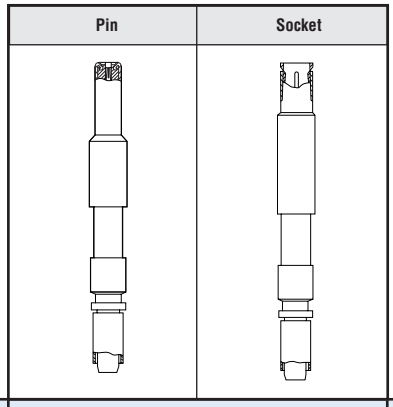
WIRE HOLE FILLER		CRIMP TOOLS				INSERTION TOOL	EXTRACTION TOOL
 Head goes in first, trim excess		WA27F 		AF8  M22520/1-01	TH1A  M22520/1-02		
PART NUMBER	**COLOR**	**HAND CRIMP TOOL**	**POWER CRIMP TOOL**	**TURRET HEAD**	**COLOR USE LOCATOR**	**INSERTION TOOL**	**EXTRACTION TOOL**
SE CRIMP CONTACTS							
MS27488-20-2	Red	AF8 or M22520/1-01	*	TH1A or M22520/1-02	Red	M81969/17-03	M81969/19-06
MS27488-16-2	Blue				Blue	M81969/17-04	M81969/19-01
MS27488-12-2	Yellow				Yellow	M81969/17-05	M81969/19-02
MS27488-20-2	Red				Red	M81969/17-03	M81969/19-06

WIRE HOLE FILLER		CRIMP TOOLS				INSERTION TOOL	EXTRACTION TOOL
 Head goes in first, trim excess		WA27F 		AF8  M22520/1-01	TH1A  M22520/1-02		
PART NUMBER	**COLOR**	**HAND CRIMP TOOL**	**POWER CRIMP TOOL**	**TURRET HEAD**	**COLOR USE LOCATOR**	**INSERTION TOOL**	**EXTRACTION TOOL**
SE CRIMP CONTACTS							
MS27488-20-2	Red	AF8 or M22520/1-01	*	TH1A or M22520/1-02	Red	M81969/17-03	M81969/19-06
MS27488-16-2	Blue				Blue	M81969/17-04	M81969/19-01
MS27488-12-2	Yellow				Yellow	M81969/17-05	M81969/19-02
MS27488-20-2	Red				Red	M81969/17-03	M81969/19-06

PTS – Contacts

Pin & Socket Solder Coax Contacts

Solder (PT)



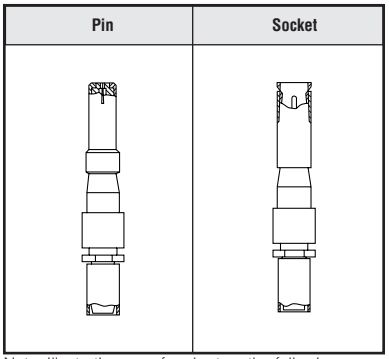
Coax Wire Size	Fits in Shell Sizes	Inner Solder Contact		Outer Shield Crimp Ferrule		Locator Cavity	Clamp Nut Wrench
		Pins	Sockets	Hand Tool	Locator		
Contact Size 12							
RG161/U RG174A/U RG179B/U RG187A/U RG188A/U RG316/U	10 to 18	21-033020-032*		M22520/10-01		B	11-8676-1
RG196A/U		21-033020-031+	21-033061-031+		M22520/10-05		
Thermatics 2929-29		21-033020-033	21-033061-033	M22520/5-01	M22520/5-37		
Contact Size 8							
RG58C/U RG141A/U RG303/U	10 to 18	21-033020-002		M22520/10-01		B	11-8672-2
RG59B/U RG62A/U			21-033019-003	M22520/5-01	M22520/5-45		
RG62B/U RG210/U	20 to 24	21-033020-001	21-033019-001				
RG142B/U Times MI51115	10 to 18	21-033020-007*			M22520/5-43		11-8672-2
RG178B/U		21-033020-004	21-033019-004	M22520/10-01	M22520/10-05		
RG180B/U RG195A/U Tyco 5022D1312-9		21-033020-005*		M22520/10-01	M22520/10-07		
Tyco 5021D1331-9		21-033020-006*	21-033019-006*				

Note: Solder contacts are supplied with outer contact body bonded into the insert (insulator). Call for wire strip lengths and assembly instructions.

* Please check availability

\+ Only mate with each other

Crimp (PT-SE)



Note: Illustrations are for chart on the following page.

Pin & Socket Crimp Coax Contacts

Coax Wire Size	Inner Solder Contact				Hand Crimp Tool (▲) Crimp Die (△)	Clamp Nut Wrench	Insertion	Extraction
	Pins		Sockets					
	.00005 Gold Over Silver	.00010 Gold Over Copper	.00005 Gold Over Silver	.00010 Gold over Copper				
Contact Size 12								
RG161/U RG174A/U RG179B/U RG187A/U RG188A/U RG316/U	21-033012-001 21-033012-004	21-033037-001* 21-033038-004	21-033011-001 21-033011-004	21-033037-001* 21-033037-004*	M22520/10-01▲ M22520/10-05△ A	11-8676-1	11-8369-2 11-8660-2	11-7880-12 11-8154-2
RG178B/U RG196A/U	21-033012-003* 21-033012-005	21-033038-003 21-033038-005	21-033011-003* 21-033011-005	21-033037-003* 21-033037-005*			11-8369-1 11-8660-1	
Double Braid RG188/U RG316/U	21-033012-006* 21-033012-007*	21-033038-006* 21-033038-007*	21-033011-006* 21-033011-007*	21-033037-006* 21-033037-007*	M22520/5-01▲ M22520/5-37△ B		11-8369-2 11-8660-2	
Westrex 199-49-1 Tensolite 30850/87T1	N/A 21-033012-043	N/A 21-033038-043	N/A 21-033011-043	N/A 21-033037-043	M22520/10-01▲ M22520/10-05△ B			
Contact Size 8								
RG55B/U RG142A/U RG142B/U RG223/U	21-033012-021 21-033012-025	21-033038-021 21-033038-025*	21-033011-021 21-033011-025	21-033037-021 21-033037-025	M22520/10-01▲ M22520/10-07△ A	11-8676-2	11-8369-5 11-8660-5	11-7880-8 11-8154-1
RG58C/U RG141A/U RG303/U	21-033012-022 21-033012-026	21-033038-022* 21-033038-026*	21-033011-022 21-033011-026	21-033037-022 21-033037-026*	M22520/10-01▲ M22520/10-07△ B		11-8369-4 11-8660-4	
RG59B/U RG62A/U RG62B/U RG210/U	N/A 21-033012-036	N/A 21-033038-036*	N/A 21-033011-036	N/A 21-033037-036	M22520/5-01▲ M22520/5-01△ B	11-8676-3	11-8369-5 11-8660-5	
RG140/U RG302/U	N/A 21-033012-037*	N/A 21-033038-037*	N/A 21-033011-037*	N/A 21-033037-037*	M22520/10-01▲ M22520/10-07△ A	11-8676-2	11-8369-5 11-8660-5	
RG161/U RG174A/U RG179B/U RG187A/U RG188A/U RG316/U	21-033012-034 21-033012-030	21-033038-034 21-033038-030	21-033011-034 21-033011-030	21-033037-034 21-033037-030	M22520/10-01▲ M22520/10-07△ A		11-8369-2 11-8660-2	
RG178B/U RG196A/	21-033012-035 N/A	21-033038-035 N/A	21-033011-035 N/A	21-033037-035 N/A				
RG180/BU RG195A/U	21-033012-024 21-033012-046*	21-033038-024 21-033037-046*	21-033011-024 21-033011-049*	21-033037-024 21-033037-046*	M22520/10-01▲ M22520/10-07△ B		11-8369-4 11-8660-4	
Thermax 50C25ADS1	N/A 21-033012-044	N/A 21-033038-044*	N/A 21-033011-044	N/A 21-033037-044*	M22520/5-01▲ M22520/5-37△ B		11-8369-2 11-8660-2	
Double Braid RG195/U	21-033012-028 N/A	21-033038-028* N/A	21-033011-028 N/A	21-033037-028* N/A	M22520/5-01▲ M22520/5-43△ B			
RG122/U Tyco 5022E5111	21-033012-023 21-033012-027	21-033038-023* 21-033038-027	21-033011-023 21-033011-027	21-033037-023* 21-033037-027	M22520/10-01▲ M22520/10-07△ B			
Tyco 9530D5314	21-033012-031 N/A	21-033038-031 N/A	21-033011-031 N/A	21-033037-031 N/A				
Tyco 9527A1317	N/A 21-033012-039	N/A 21-033038-039*	N/A 21-033011-039	N/A 21-033037-039*				
Tyco 7527A1318	N/A 21-033012-040*	N/A 21-033038-040*	N/A 21-033011-040	N/A 21-033037-040*	M22520/10-01▲ M22520/10-05△ A			

Italicized = Matched impedance contacts ▲ = Hand crimp tool △ = Crimp Die
Availability of coax contacts varies widely. *Call for availability Call for strip lengths and assembly instructions.

PTS – Contacts – At-A-Glance

Name:

Company:

Email:

Phone:

Qty: EAU:

Additional Connector Information

CONNECTOR Part #:_____

OR

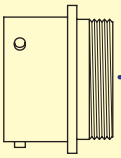
# of Contacts:_____ Sizes & Type:_____

CABLE Manufacturer: _____
(If Known)

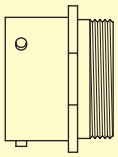
CABLE Part #: _____ OR Cable OD:_____

PEI-Genesis

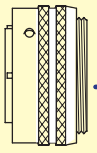
Choose One Connector



☐ PTS00
PT00SE Type/
MS3120 Type
Wall Mount
Receptacle



☐ PTS01
PT01SE Type/
MS3121 Type
Cable Mount
Receptacle

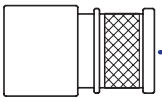


☐ PTS06
PT06SE Type/
MS3126 Type
Cable Plug

Choose One Endbell

Use endbell "U" for Menus A, B, C, D & E

☐ U

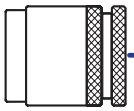


- Omit for Unshielded
- S — Shielding Spring
- T — Shielding Tape
- W — Shielding Tape & Spring

Crimp Termination Only
Use PT for Solder Type

Use endbell "CG" for Menus F, G & H

☐ CG



Comments/Notes:

_____

_____

_____

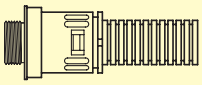
_____

_____

_____

Choose One Wire Protection

- ☐ HST — Heat Shrink Tubing
- ☐ SB — Straight Boot
- ☐ BSB — Bottle Shaped Shrink Boot
- ☐ HBSB — High Ratio Bottle Shaped Shrink Boot
- ☐ CSB — Convoluted Shrink Boot
- ☐ RSB — Right Angle Shrink Boot



- ☐ CA — Conduit Adapter & Conduit
- ☐ MSS — Metal Short Shielded
- ☐ PF — Plastic with flex Relief



- ☐ PS — Plastic Short
- ☐ MS — Metal Short
- ☐ PL — Plastic with Long Boot
- ☐ ML — Metal with Long Boot



Amphenol 62GB Series connectors are built to British Standard Specification BS 9522 F00 17 which is similar to US military specification MIL-DTL-26482. They are machined from solid aluminum bar stock for superior strength and adaptability and may be specially ordered in brass or stainless steel. 62GB Series connectors feature a wide variety of both insert rotation and positive shell-to-shell keying that provides superior protection against mismating. The standard shell finish is corrosion resistant zinc olive drab; however, other finishes such as cadmium plate are also available. Inserts are made of polychloroprene rubber and are available in layouts from 2 to 61 conductor arrangements. Contacts are gold plated to eliminate contact corrosion and provide an indefinite shelf life.

Applications

Industrial, commercial and medical applications where mismating or cross plugging are a concern.

- Aircraft
- Communications systems
- Factory automation
- Industrial machinery
- Medical instrumentation
- Mobile equipment
- Sensors
- Ships

Features

- Medium size, highly adaptable
- Operating voltage to 1,500 Vac
- Positive shell-to-shell keying, insert rotations and alternate key/keyway locations
- Machined connector shell
- Wide variety of endbell styles

Rugged Shell
Machined aluminum alloy shell and hardware create an exceptionally strong connector. These connectors have been used extensively in commercial, military, and aerospace environments.

Environmentally Sealed
Complete moisture sealing is achieved by combining four seals: shell, peripheral, interfacial, and wire. Wire seal is accomplished by multiple ripple design, exceeding the wire sealing requirements of MIL-DTL-26482.

Resistant to Harshest Environments
These connectors will operate in temperatures from -67˚F to +257˚F (-55˚C to +125˚C) under the harshest possible conditions.

Wide Range of Wire Gauges and Current Carrying Capability
Up to 22 amps with wire gauges from size 24 up to size 8 AWG wire.

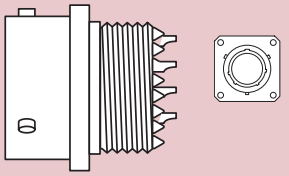
Resilient Insulator & Grommet
A resilient Neoprene insulator and integrated rear wire sealing grommet guarantees a liquid-tight assembly. Solder contacts are permanently bonded into the insulator.

Solder Gold Plated Contacts
62GB connector contacts are gold plated. Socket contacts are closed to eliminate damage from test probes and to help prevent misaligned pins during engagement.

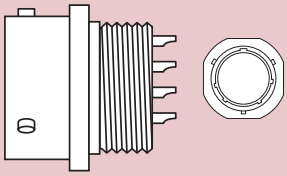
Amphenol 62GB

STEP 1
Choose Shell Style: Receptacle or Plug
(See Connector Solutions Guide)

Flange Receptacle
62GB-50T



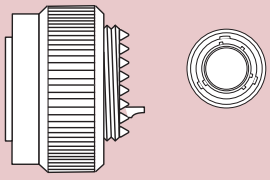
Inline Receptacle
62GB-51T



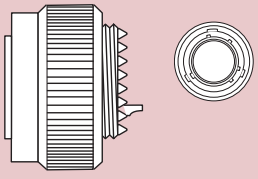
Jam Nut Receptacle*
62GB-57T

mates with

Standard Plug
62GB-56T



EMI Grounding Finger Barrel Plug
62GB-56TG



Right Angle Plug*
62GB-58T

EMI Grounding Finger Barrel Right Angle Plug*
62GB-58TG

*Call for more information

STEP 2 Choose Endbell



Potted (Preferred)

- **U** = Unshielded
- **US** = with shielding spring
- **UT** = with shielding tape
- **UW** = with shielding tape & spring

RU Right Angle



Call for more info

STEP 3 Choose Heat Shrink Boot or Tubing

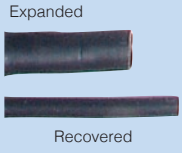
Boot options

Note: Cable outside diameter must be between expanded and recovered dimensions.

SB – Straight Boot



HST – Heat Shrink Tubing



Most Popular

Heat Shrink Product	SB 1	SB 2	SB 3	SB 4	SB 5	HST 1	HST 2	HST 3	HST 4
Expanded ID inch (mm)	0.88 ((22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	0.750 (19.1)	1.000 (25.4)	1.250 (31.8)	1.570 (39.9)
Recovered ID inch (mm)	0.25 (6.4)	0.29 (7.4)	0.33 (8.4)	0.38 (9.7)	0.41 (10.4)	0.250 (6.4)	0.320 (8.1)	0.416 (10.6)	0.510 (13.0)
Length Max inch (mm)	4.17 (105.9)	4.77 (121.2)	5.46 (138.7)	6.28 (159.5)	7.00 (177.8)	6.00 (152.4)			
Shell Size 8	◆					◆			
10	◆					◆			
12		◆	◆				◆		
14			◆					◆	
16			◆	◆				◆	
18				◆				◆	
20				◆					◆
22					◆				◆
24									◆

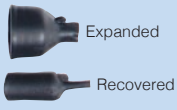
adhesive lined heat shrink tubing

CSB -Convoluted Shrink Boot

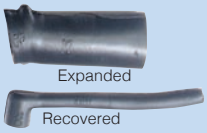


Heat Shrink Product	CSB2	CSB3	CSB4	CSB5	BSB1	HBSB2	BSB2	BSB3	BSB4	BSB5
Expanded ID inch (mm)	0.70 (17.8)	1.06 (26.9)	1.44 (36.6)	1.80 (45.7)	0.94 (23.9)	0.35 (8.9)	1.18 (30.0)	1.22 (31.0)	1.42 (36.1)	1.69 (42.9)
Recovered ID inch (mm)	0.32 (8.1)	0.50 (12.7)	0.69 (17.5)	0.88 (22.4)	0.24 (6.1)	0.14 (3.6)	0.24 (6.1)	0.28 (7.1)	0.33 (8.4)	0.39 (9.9)
Length Max inch (mm)	5.25 (133.4)	5.75 (146.1)	6.25 (158.8)	6.75 (171.5)	1.50 (38.1)	2.17 (55.1)	2.17 (55.1)	2.64 (67.1)	3.15 (80.0)	3.90 (99.1)
Shell Size 8	◆									
10	◆				◆	◆	◆			
12	◆				◆	◆	◆	◆		
14		◆			◆	◆	◆	◆	◆	
16		◆	◆				◆	◆	◆	
18		◆	◆				◆	◆	◆	
20		◆	◆					◆	◆	
22		◆	◆						◆	
24			◆	◆						◆

BSB/HBSB – Bottle Shaped Shrink Boot
(High Ratio Bottle Shaped Boot)



RSB – Right Angle Shrink Boot



Heat Shrink Product	RSB1	RSB2	RSB3	RSB4	RSB5
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)
Recovered ID inch (mm)	0.23 (5.8)	0.26 (6.6)	0.30 (7.6)	0.35 (8.9)	0.37 (9.4)
Length Max inch (mm)	4.14 (105.2)	4.88 (124.0)	5.76 (146.3)	6.78 (172.2)	7.29 (185.2)
Shell Size 8	◆				
10	◆	◆			
12		◆	◆		
14			◆	◆	
16			◆	◆	
18				◆	
20				◆	◆
22					◆
24					

STEP 2 Choose Endbell



NEW!



CG = Straight Adapter Endbell

RG = Right Angle Adapter Endbell

Please call for more information

STEP 3 Choose Conduit Adapter or Cord Grip

Unshielded Conduits



CA* = conduit adapter for plastic flexible conduit. Add size code i.e. CGCA10

Note: Normal recommended conduit fill is 40% of Conduit ID or less.

Size Code		07	10	12	14	17	23
Conduit ID Inch (mm)		0.256 (6.5)	0.394 (10.0)	0.472 (12.0)	0.563 (14.3)	0.650 (16.5)	0.906 (23.0)
Conduit OD Inch (mm)		0.394 (10.0)	0.512 (13.0)	0.622 (15.8)	0.728 (18.5)	0.835 (21.2)	1.122 (28.5)
Shell Size	8	◆	◆				
	10	◆	◆				
	12	◆	◆	◆			
	14	◆	◆	◆	◆	◆	
	16			◆	◆	◆	◆
	18			◆	◆	◆	◆
	20			R		R	◆
	22			R		R	◆
	24			R		R	◆

R = with reducer

OR Shielded Cord Grip

		MSS*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm	4 Min mm	4 Max mm
Shell Size	8	◆	4.0	6.0	6.0	9.5	-	-	-	-
	10	◆	4.0	6.5	6.5	9.5	8.0	10.5	-	-
	12	◆	6.5	9.5	8.0	10.5	9.0	13.0	-	-
	14	◆	6.5	9.5	7.0	10.5	9.0	13.0	-	-
	16	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	18	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	20	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	22	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	24	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0

Conduit Adapter and Cord Grip Types

CA* = Conduit Adapter
MSS* = Metal Short Shielded - Nickel Plated Brass
PF* = Plastic with Flex Spring
PS* = Plastic Short
MS* = Metal Short - Nickel Plated Brass
PL* = Plastic Long
ML* = Metal Long - Nickel Plated Brass
* = add size code per chart i.e. CGPFA or CGMSS4
Min/Max refers to cable diameter.

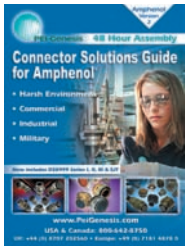
OR Unshielded Cord Grip

Note: Cable jacket and shield diameters must be between Min/Max of cord grip.

For detailed info on shield diameters, see MSS table on page 232.

		PF*	PS*	MS*	Size Code A Min mm	A Max mm	R Min mm	R Max mm	PL*	ML*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm
Shell Size	8	◆	◆	◆	3.0	6.5	2.0	5.0			-	-	-	-	-	-
	10	◆	◆	◆	4.0	8.0	2.0	6.0	◆	◆	4.0	6.5	7.5	9.5	-	-
	12	◆	◆	◆	5.0	10.0	3.0	7.0	◆	◆	6.5	9.5	7.0	10.5	-	-
	14	◆	◆	◆	6.0	12.0	5.0	9.0	◆	◆	6.5	9.5	8.5	10.5	-	-
	16	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
	18	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
	20	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
	22	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
	24	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0

STEP 4 Choose Connector Layout



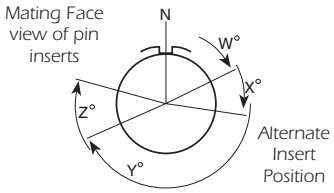
See Connector Solutions Guide

STEP 5 Choose Contact

P = Pin
S = Socket

STEP 6 Choose Rotation (N for normal)

W, X, Y, Z

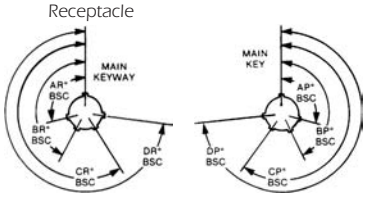


STEP 7 (OPTIONAL) Choose Keyway

A, B, C, D, E, F

See Solutions Guide.

Receptacle



STEP 8 Choose Modifiers (omit for normal)

044 = Rough Grip Heavy Duty Coupling Nut (plugs only)

CONTACTS

760 = Crimp and Insert (poke) contacts

SHELL PLATING

Standard Plating = Green Zinc‡
714 = Olive Drab Chromate over Cadmium
416 = Electroless Nickel‡ (RoHS✜)
608 = Non-Conductive Black Anodized✦ (RoHS✜)

Note: ✦ Endbells U & CG will be Black Anodized.
‡ Endbells U & CG will be Electroless Nickel Plated
✜ As reported by Amphenol, please call for more info.

Example of part description:

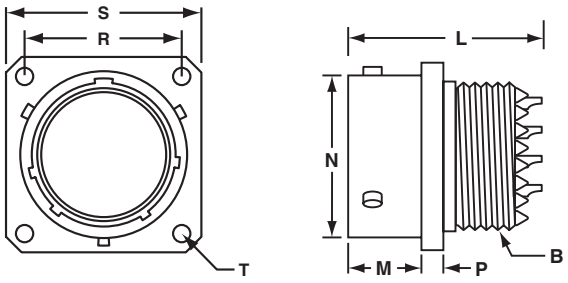
62GB-56TG	US	BSB4-	14-19	P	N	E	-608
1 Shell Style	2 Endbells Shielding Options	3 Wire Protection	4 Connector Layout	5 Contact	6 Rotation	7 Keyway	8 Modifier

(See Connector Solutions Guide)

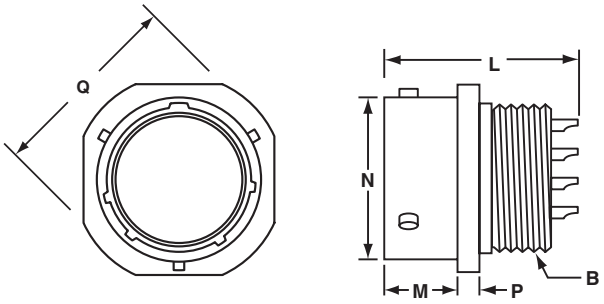
62GB – Dimensions

Receptacle Styles

62GB50T



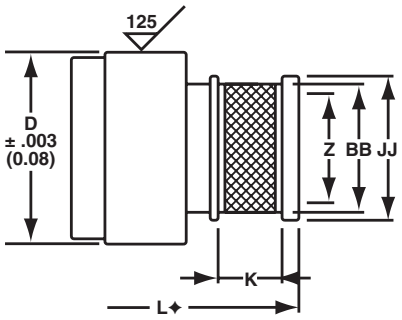
62GB51T



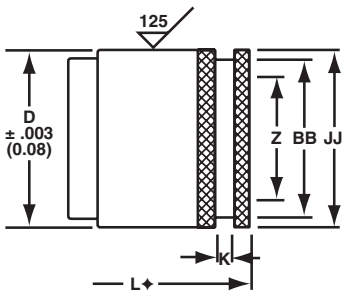
Shell Size	62GB50T M	N	P	R (TP)	S	T
8	0.445	0.473	0.062	0.594	0.817	0.120
	(11.3)	(12.0)	(1.6)	(15.1)	(20.8)	(3.0)
10	0.445	0.590	0.062	0.719	0.842	0.120
	(11.3)	(15.0)	(1.6)	(18.3)	(21.4)	(3.0)
12	0.445	0.750	0.062	0.812	1.036	0.120
	(11.3)	(19.1)	(1.6)	(20.6)	(26.3)	(3.0)
14	0.445	0.875	0.062	0.906	1.130	0.120
	(11.3)	(22.2)	(1.6)	(23.0)	(28.7)	(3.0)
16	0.445	1.000	0.062	0.969	1.223	0.120
	(11.3)	(25.4)	(1.6)	(24.6)	(31.1)	(3.0)
18	0.445	1.125	0.062	1.062	1.317	0.120
	(11.3)	(28.6)	(1.6)	(27.0)	(33.5)	(3.0)
20	0.555	1.250	0.080	1.156	1.442	0.120
	(14.1)	(31.8)	(2.0)	(29.4)	(36.6)	(3.0)
22	0.555	1.375	0.080	1.250	1.567	0.120
	(14.1)	(34.9)	(2.0)	(31.8)	(39.8)	(3.0)
24	0.590	1.500	0.080	1.375	1.692	0.147
	(15.0)	(38.1)	(2.0)	(34.9)	(43.0)	(3.7)

62GB50T/62GB51T Q REF.	L	B Thread 2A
0.938	0.978	.4375-28
(23.8)	(24.8)	UNEF
1.026	0.978	.5625-24
(27.0)	(24.8)	UNEF
1.156	0.978	.6875-24
(29.4)	(24.8)	UNEF
1.250	0.978	.8125-20
(31.8)	(24.8)	UNEF
1.344	0.978	.9375-20
(34.1)	(24.8)	UNEF
1.438	0.978	1.0625-18
(36.5)	(24.8)	UNEF
1.562	1.048	1.1875-18
(39.7)	(26.6)	UNEF
1.688	1.048	1.3125-18
(42.9)	(26.6)	UNEF
1.812	1.048	1.4375-18
(46.0)	(26.6)	UNEF

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	2.105 (53.5)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10	0.740 (18.8)	2.181 (55.4)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12	0.865 (22.0)	2.188 (55.6)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	2.306 (58.2)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
16	1.146 (29.1)	2.374 (60.3)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	2.453 (62.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.504 (63.6)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.605 (66.2)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	1.552 (39.4)	2.653 (67.4)	0.476 (12.1)	0.900 (22.9)	1.157 (29.4)	1.276 (32.4)	H



UNAC-PG

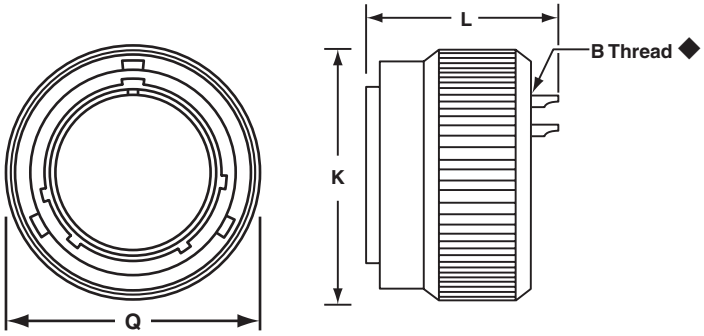
Cord Grip						
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	C Code
8	0.740 (18.8)	1.881 (47.8)	0.118 (3.0)	0.330 (8.37)	0.580 (14.8)	B
10	0.865 (22.0)	1.881 (47.8)	0.118 (3.0)	0.413 (10.5)	0.707 (18.0)	C
12	0.990 (25.1)	1.881 (47.8)	0.118 (3.0)	0.512 (13.0)	0.833 (21.2)	D
14	0.990 (25.1)	1.901 (48.3)	0.118 (3.0)	0.551 (14.0)	0.887 (22.6)	D
16	1.146 (29.1)	1.901 (48.3)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
18	1.271 (32.3)	2.019 (51.3)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	F
20	1.428 (36.3)	2.091 (51.3)	0.118 (3.0)	0.984 (25.0)	1.270 (32.3)	G
22	1.552 (39.4)	2.248 (57.1)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	H
24	1.552 (39.4)	2.327 (59.1)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	H

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

62GB – Dimensions

Straight Plug

62GB56T/62GB56TG

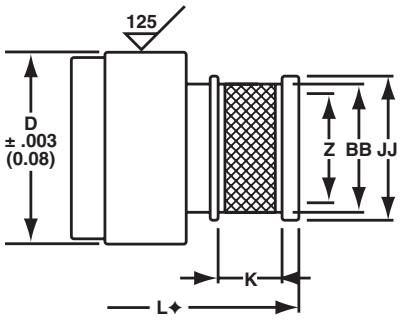


Shell Size	62GB56T/62GB56TG Barrel Q Max	L Max	B Thread 2A
8	0.750 (19.1)	0.976 (24.8)	.4375-28 UNEF
10	0.859 (21.8)	0.976 (24.8)	.5625-24 UNEF
12	1.013 (25.7)	0.976 (24.8)	.6875-24 UNEF
14	1.156 (29.4)	0.976 (24.8)	.8125-20 UNEF
16	1.281 (32.5)	0.976 (24.8)	.9375-20 UNEF
18	1.391 (33.5)	0.976 (24.8)	1.0625-18 UNEF
20	1.531 (38.9)	0.976 (24.8)	1.1875-18 UNEF
22	1.656 (42.1)	0.976 (24.8)	1.3125-18 UNEF
24	1.777 (45.1)	0.976 (24.8)	1.4375-18 UNEF

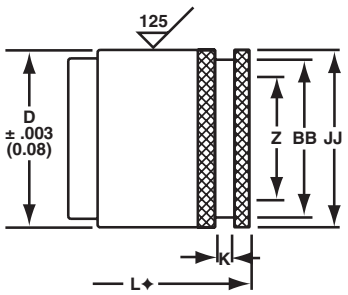
◆Coupling nut covers barrel threads in illustration

All dimensions in inches (millimeters in parenthesis)

In North America: Pricing Delivery: 800-642-8750 • Tech Support: 800-523-0727 • www.peigenesis.com • Specifications subject to change.



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	2.105 (53.5)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10	0.740 (18.8)	2.181 (55.4)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12	0.865 (22.0)	2.188 (55.6)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	2.306 (58.2)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
16	1.146 (29.1)	2.374 (60.3)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	2.453 (62.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.433 (61.8)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.534 (64.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	1.552 (39.4)	2.582 (65.6)	0.476 (12.1)	0.900 (22.9)	1.157 (29.4)	1.276 (32.4)	H



UNAC-PG

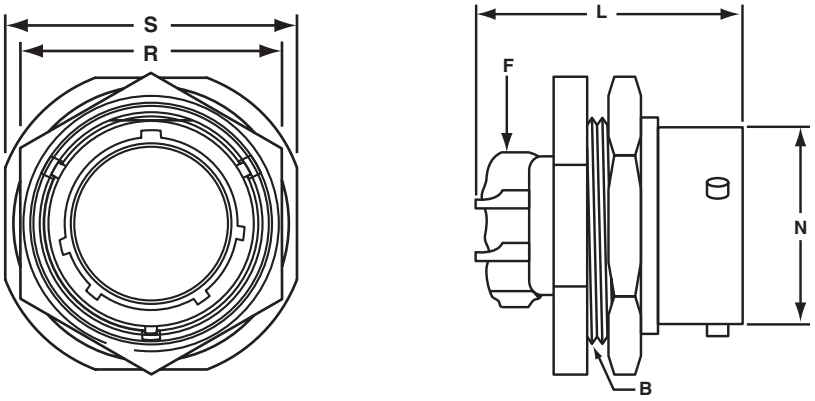
Cord Grip						
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	C Code
8	0.740 (18.8)	1.881 (47.8)	0.18 (3.0)	0.330 (8.37)	0.580 (14.8)	B
10	0.865 (22.0)	1.881 (47.8)	0.118 (3.0)	0.413 (10.5)	0.707 (18.0)	C
12	0.990 (25.1)	1.881 (47.8)	0.118 (3.0)	0.512 (13.0)	0.833 (21.2)	D
14	0.990 (25.1)	1.901 (48.3)	0.118 (3.0)	0.551 (14.0)	0.887 (22.6)	D
16	1.146 (29.1)	1.901 (48.3)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
18	1.271 (32.3)	2.019 (51.3)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	F
20	1.428 (36.3)	2.091 (51.3)	0.118 (3.0)	0.984 (25.0)	1.270 (32.3)	G
22	1.552 (39.4)	2.177 (55.3)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	H
24	1.552 (39.4)	2.256 (57.3)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	H

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

62GB – Dimensions

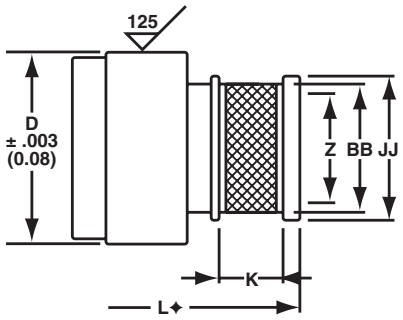
Jam Nut Receptacles

62GB57

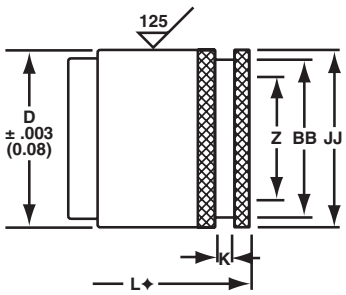


Shell Size	B Thread 2A	M = /-.005 (+/- 0.13)	N	P	R	Q	Panel Thickness J Min	Panel Thickness J Max	L	F Thread 2A
8	.5625-24 UNEF	0.706 (17.9)	0.473 (12.0)	0.117 (3.0)	0.750 (19.1)	0.942 (23.9)	0.062 (1.6)	0.125 (3.2)	0.978 (24.8)	.4375-28 UNEF
10	.6875-24 UNEF	0.706 (17.9)	0.590 (15.0)	0.117 (3.0)	0.875 (22.2)	1.067 (27.1)	0.062 (1.6)	0.125 (3.2)	0.978 (24.8)	.5625-24 UNEF
12	.8750-20 UNEF	0.706 (17.9)	0.750 (19.1)	0.117 (3.0)	1.062 (27.0)	1.255 (31.9)	0.062 (1.6)	0.125 (3.2)	0.978 (24.8)	.6875-24 UNEF
14	1.0000-20 UNEF	0.706 (17.9)	0.875 (22.2)	0.117 (3.0)	1.187 (30.1)	1.380 (35.1)	0.062 (1.6)	0.125 (3.2)	0.978 (24.8)	.8125-20 UNEF
16	1.1250-18 UNEF	0.706 (17.9)	1.000 (25.4)	0.117 (3.0)	1.312 (33.3)	1.505 (38.2)	0.062 (1.6)	0.125 (3.2)	0.978 (24.8)	.9375-20 UNEF
18	1.2500-18 UNEF	0.706 (17.9)	1.125 (28.6)	0.117 (3.0)	1.437 (36.5)	1.630 (41.4)	0.062 (1.6)	0.125 (3.2)	0.978 (24.8)	1.0625-18 UNEF
20	1.3750-18 UNEF	0.894 (22.7)	1.250 (31.8)	0.148 (3.8)	1.562 (39.7)	1.817 (46.2)	0.062 (1.6)	0.250 (6.4)	1.048 (26.6)	1.1875-18 UNEF
22	1.5000-18 UNEF	0.894 (22.7)	1.375 (34.9)	0.148 (3.8)	1.687 (42.8)	1.942 (49.3)	0.062 (1.6)	0.250 (6.4)	1.048 (26.6)	1.3125-18 UNEF
24	1.6250-18 UNEF	0.927 (23.5)	1.500 (38.1)	0.148 (3.8)	1.812 (46.0)	2.067 (52.5)	0.062 (1.6)	0.250 (6.4)	1.048 (26.6)	1.4375-18 UNEF

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	2.105 (53.5)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10	0.740 (18.8)	2.181 (55.4)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12	0.865 (22.0)	2.188 (55.6)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	2.306 (58.2)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
16	1.146 (29.1)	2.374 (60.3)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	2.453 (62.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.504 (63.6)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.605 (66.2)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	1.552 (39.4)	2.653 (67.4)	0.476 (12.1)	0.900 (22.9)	1.157 (29.4)	1.276 (32.4)	H



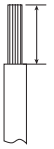
UNAC-PG

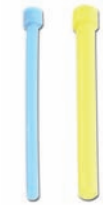
Cord Grip						
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	C Code
8	0.740 (18.8)	1.881 (47.8)	0.118 (3.0)	0.330 (8.37)	0.580 (14.8)	B
10	0.865 (22.0)	1.881 (47.8)	0.118 (3.0)	0.413 (10.5)	0.707 (18.0)	C
12	0.990 (25.1)	1.881 (47.8)	0.118 (3.0)	0.512 (13.0)	0.833 (21.2)	D
14	0.990 (25.1)	1.901 (48.3)	0.118 (3.0)	0.551 (14.0)	0.887 (22.6)	D
16	1.146 (29.1)	1.901 (48.3)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
18	1.271 (32.3)	2.019 (51.3)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	F
20	1.428 (36.3)	2.091 (51.3)	0.118 (3.0)	0.984 (25.0)	1.270 (32.3)	G
22	1.552 (39.4)	2.248 (57.1)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	H
24	1.552 (39.4)	2.327 (59.1)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	H

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

62GB – Dimensions

Pin Crimp Contacts

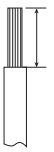

Head goes in first, trim excess

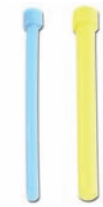

Insertion tool
Extraction tool


Size	Wire Size AWG	Pin	Wire Strip Lengths Inches (mm)	Wire Sealing Range Inches (mm)		Wire Hole Filler	Hand Crimp Tool	Power Crimp Tool ††	Turret Head	Use Turret Head Locator Color	Insertion Tool Metal	Extraction Tool Metal
				Max	Min							
20	20-24	62-1525	.314 (8.00)	.047 (1.19)	.085 (2.16)	MS27488-20-2	M22520/1-04	WA27F	M22520/1-04	RED	DAK83S-20	121086-0082
16	16-20	62-1708	.314 (8.00)	.066 (1.68)	.109 (2.77)	MS27488-16-2	M22520/1-01	WA27F	M22520/1-02	BLUE	121086-0097	121086-0081
12	12-14	62-1621	.314 (8.00)	.097 (2.46)	.142 (3.78)	MS27488-12-2	M22520/1-01	WA27F	M22520/1-02	YELLOW	121086-0096	121086-0080

†† Call for more tool accessories.

Socket Crimp Contacts


Head goes in first, trim excess

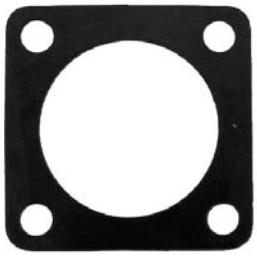

Insertion tool
Extraction tool


Size	Wire Size AWG	Socket	Wire Strip Lengths Inches (mm)	Wire Sealing Range Inches (mm)		Wire Hole Filler	Hand Crimp Tool	Power Crimp Tool ††	Turret Head	Use Turret Head Locator Color	Insertion Tool Metal	Extraction Tool Metal
				Max	Min							
20	20-24	62-1563	.314 (8.00)	.047 (1.19)	.085 (2.16)	MS27488-20-2	M22520/1-04	WA27F	M22520/1-04	RED	DAK83S-20	121086-0082
16	16-20	62-1770	.314 (8.00)	.066 (1.68)	.109 (2.77)	MS27488-16-2	M22520/1-01	WA27F	M22520/1-02	BLUE	121086-0097	121086-0081
12	12-14	62-1698	.314 (8.00)	.097 (2.46)	.142 (3.78)	MS27488-12-2	M22520/1-01	WA27F	M22520/1-02	YELLOW	121086-0096	121086-0080

†† Call for more tool accessories.

Flange Mount Receptacle Accessories

Gasket



Nut Plate



Sealing Screws



Dummy Receptacle



Dust Caps

Plug Dust Cap



Receptacle Flange Dust Cap



Receptacle Jam Nut Dust Cap



Standard plating is anodized

	Flange Mount Receptacle Accessories				Dust Caps		
					Receptacles		
Shell Size	Gasket	Nut Plate	Sealing Screws	Dummy Receptacle	Plugs	Flanged	Jam Nut
8	CMD02-8*	M85528/2-8A	S440-1/2	MS3115-8**	MS3180-8CA	MS3181-8CA	MS3181-8NA
10	CMD02-10*	M85528/2-10A	S440-1/2	MS3115-10**	MS3180-10CA	MS3181-10CA	MS3181-10NA
12	CMD02-12*	M85528/2-12A	S440-1/2	MS3115-12**	MS3180-12CA	MS3181-12CA	MS3181-12NA
14	CMD02-14*	M85528/2-14A	S440-1/2	MS3115-14**	MS3180-14CA	MS3181-14CA	MS3181-14NA
16	CMD02-16*	M85528/2-16A	S440-1/2	MS3115-16**	MS3180-16CA	MS3181-16CA	MS3181-16NA
18	CMD02-18*	M85528/2-18A	S440-1/2	MS3115-18**	MS3180-18CA	MS3181-18CA	MS3181-18NA
20	CMD02-20*	M85528/2-20A	S440-1/2	MS3115-20**	MS3180-20CA	MS3181-20CA	MS3181-20NA
22	CMD02-22*	M85528/2-22A	S440-1/2	MS3115-22**	MS3180-22CA	MS3181-22CA	MS3181-22NA
24	CMD02-24*	M85528/2-24B	S632-1/2	MS3115-24**	MS3180-24CA	MS3181-24CA	MS3181-24NA

* Add C for conductive type

** Select Plating
W = Olive drab over cadmium
A = Anodized
L = Electroless nickel

62GB – At-A-Glance

Name:

Company:

Email:

Phone:

Qty: EAU:

Additional Connector Information

CONNECTOR Part #:_____

OR

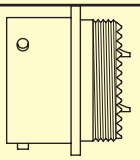
# of Contacts:_____ Sizes & Type:_____

CABLE Manufacturer: _____
(If Known)

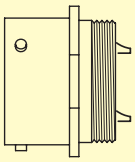
CABLE Part #: _____ OR Cable OD:_____

PEI-Genesis

Choose One Connector

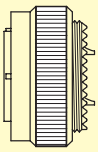


☐ 62GB-50T
Flange Receptacle

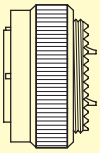


☐ 62GB-51T
Inline Receptacle

☐ 62GB-57T
Jam Nut Receptacle*



☐ 62GB-56T
Standard Plug



☐ 62GB-58T
EMI Grounding Finger Barrel Plug

☐ 62GB-58T
Right Angle Plug*

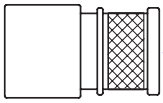
☐ 62GB-58T
EMI Grounding Finger Barrel Right Angle Plug*

*Call for more information

Choose One Endbell

Use endbell "U" for Menus A, B, C, D & E

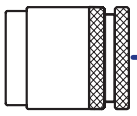
☐ U



- ☐ Omit for Unshielded
- ☐ S — Shielding Spring
- ☐ T — Shielding Tape
- ☐ W — Shielding Tape & Spring

Use endbell "CG" for Menus F, G & H

☐ CG



Contact Termination
☐ Crimp ☐ Solder

Comments/Notes:

_____

_____

_____

_____

_____

_____

Choose One Wire Protection

- ☐ HST — Heat Shrink Tubing
- ☐ SB — Straight Boot
- ☐ BSB — Bottle Shaped Shrink Boot
- ☐ HBSB — High Ratio Bottle Shaped Shrink Boot
- ☐ CSB — Convoluted Shrink Boot
- ☐ RSB — Right Angle Shrink Boot

- ☐ CA — Conduit Adapter & Conduit
- ☐ MSS — Metal Short Shielded
- ☐ PF — Plastic with flex Relief
- ☐ PS — Plastic Short
- ☐ MS — Metal Short
- ☐ PL — Plastic with Long Boot
- ☐ ML — Metal with Long Boot

MS3470 Style – MIL-DTL-26482 Series II Crimp



MIL-DTL-26482 Series II connectors are used extensively in the demanding high reliability world of today's aerospace industry. Utilizing a quick-mating, three point bayonet coupling system, MS3470 Style Connectors use a rugged contact retention system and high-quality silicone seals. These connectors work in the harshest of conditions. MS3470 Series Connectors are intermateable with all MIL-DTL-26482 Series I connectors.

Applications

- Commercial and military aircraft
- High-temperature industrial equipment
- Instrumentation
- Avionics

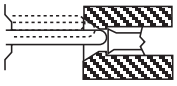
Features

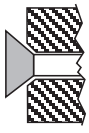
High-Quality Contact System
This line of connectors use industry standard M39029 crimp-style contacts and the field proven contact retention clip that locks the contact into place while allowing easy insertion and removal with simple and low-cost plastic tools.

Broad Operating Temperatures
MS3470s are constructed using high-quality silicone for the peripheral, interfacial and wire seals. This, along with the stable hard dielectric insert material that houses the contact retention clip provide operating temperature from -55°C up to +200°C.

Rear Contact Insertion and Release System
Used properly, the insertion and extraction tools never touch or come in contact with or damage the interfacial seals, a common problem with front release contact systems.

Cork in a Bottle Interfacial Seal System
Socket inserts are constructed with a hard dielectric and funnel-shaped contact lead-ins which not only assist aligning the contacts when mating, but also provide for compression of the raised individual contact seals on the high-quality silicone interfacial seals of the pin insert.





MS3470 Series

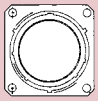
STEP 1
Choose Shell Style: Receptacle or Plug
(See Connector Solutions Guide)

Receptacles

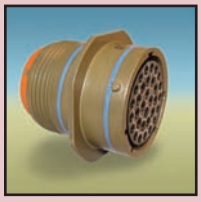
MS3470



Front mount with rear accessory threads.

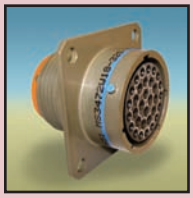


MS3471 +

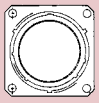




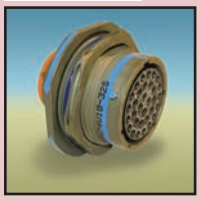
MS3472 +



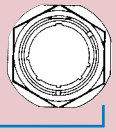
Front mount with rear accessory threads.



MS3474



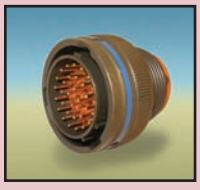
Jam Nut with rear accessory threads.



mates with

Standard Plug

MS3476





EMI Grounding Finger Plug

MS3475 +





+ Most Popular

STEP 6 Choose Endbell





Spring



Shielding Tape

Potted (Preferred)

U = Unshielded

US = with shielding spring

UT = with shielding tape

UW = with shielding tape & spring

RU Right Angle

NEW!



Call for more info

STEP 7 Choose Heat Shrink Boot or Tubing

Note: Cable outside diameter must be between expanded and recovered dimensions.

Boot options

SB – Straight Boot



Recovered

HST – Heat Shrink Tubing

Expanded



Recovered

Heat Shrink Product	SB 1	SB 2	SB 3	SB 4	SB 5	HST 1	HST 2	HST 3	HST 4
Expanded ID inch (mm)	0.88 ((22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	0.750 (19.1)	1.000 (25.4)	1.250 (31.8)	1.570 (39.9)
Recovered ID inch (mm)	0.25 (6.4)	0.29 (7.4)	0.33 (8.4)	0.38 (9.7)	0.41 (10.4)	0.250 (6.4)	0.320 (8.1)	0.416 (10.6)	0.510 (13.0)
Length Max inch (mm)	4.17 (105.9)	4.77 (121.2)	5.46 (138.7)	6.28 (159.5)	7.00 (177.8)	6.00 (152.4)			
Shell Size 8-CALL									
10	◆					◆			
12		◆	◆				◆		
14			◆					◆	
16			◆	◆				◆	
18				◆				◆	
20				◆					◆
22					◆				◆
24									◆

Most Popular

adhesive lined heat shrink tubing

CSB – Convoluted Shrink Boot

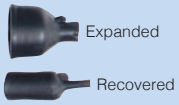
Expanded



Recovered

Heat Shrink Product	CSB2	CSB3	CSB4	CSB5	BSB1	HBSB2	BSB2	BSB3	BSB4	BSB5
Expanded ID inch (mm)	0.70 (17.8)	1.06 (26.9)	1.44 (36.6)	1.80 (45.7)	0.94 (23.9)	0.35 (8.9)	1.18 (30.0)	1.22 (31.0)	1.42 (36.1)	1.69 (42.9)
Recovered ID inch (mm)	0.32 (8.1)	0.50 (12.7)	0.69 (17.5)	0.88 (22.4)	0.24 (6.1)	0.14 (3.6)	0.24 (6.1)	0.28 (7.1)	0.33 (8.4)	0.39 (9.9)
Length Max inch (mm)	5.25 (133.4)	5.75 (146.1)	6.25 (158.8)	6.75 (171.5)	1.50 (38.1)	2.17 (55.1)	2.17 (55.1)	2.64 (67.1)	3.15 (80.0)	3.90 (99.1)
Shell Size 8-CALL										
10	◆				◆	◆	◆			
12	◆				◆	◆	◆	◆		
14		◆			◆	◆	◆	◆	◆	
16		◆	◆				◆	◆	◆	
18		◆	◆				◆	◆	◆	
20		◆	◆					◆	◆	
22		◆	◆						◆	
24			◆	◆						◆

BSB/HBSB – Bottle Shaped Shrink Boot
(High Ratio Bottle Shaped Boot)

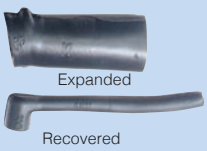


Expanded

Recovered

Heat Shrink Product	RSB1	RSB2	RSB3	RSB4	RSB5
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)
Recovered ID inch (mm)	0.23 (5.8)	0.26 (6.6)	0.30 (7.6)	0.35 (8.9)	0.37 (9.4)
Length Max inch (mm)	4.14 (105.2)	4.88 (124.0)	5.76 (146.3)	6.78 (172.2)	7.29 (185.2)
Shell Size 8-CALL					
10	◆	◆			
12		◆	◆		
14			◆	◆	
16			◆	◆	
18				◆	
20				◆	◆
22					◆
24					

RSB – Right Angle Shrink Boot



Expanded

Recovered

STEP 6 Choose Endbell



CG = Straight Adapter Endbell

NEW!



RG = Right Angle Adapter Endbell

Please call for more information

STEP 7 Choose Conduit Adapter or Cord Grip

Unshielded Conduits



CA* = conduit adapter for plastic flexible conduit. Add size code i.e. CGCA10

Note: Normal recommended conduit fill is 40% of Conduit ID or less.

CA*		07	10	12	14	17	23
Conduit ID Inch (mm)		0.256 (6.5)	0.394 (10.0)	0.472 (12.0)	0.563 (14.3)	0.650 (16.5)	0.906 (23.0)
Conduit OD Inch (mm)		0.394 (10.0)	0.512 (13.0)	0.622 (15.8)	0.728 (18.5)	0.835 (21.2)	1.122 (28.5)
Shell Size	8						
	10	◆	◆	◆			
	12	◆	◆	◆	◆	◆	
	14			◆	◆	◆	◆
	16			◆	◆	◆	◆
	18			◆	◆	◆	◆
	20			R		R	◆
	22			R		R	◆
	24			R		R	◆

R= with reducer

OR Shielded Cord Grip

		MSS*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm	4 Min mm	4 Max mm
Shell Size	8	Call	4.0	6.5	6.5	9.5	8.0	10.5	-	-
	10	◆	6.5	9.5	8.0	10.5	9.0	13.0	-	-
	12	◆	6.5	9.5	7.0	10.5	9.0	13.0	-	-
	14	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	16	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	18	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	20	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	22	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	24	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0

Conduit Adapter and Cord Grip Types

- **CA***= Conduit Adapter
- **MSS***= Metal Short Shielded - Nickel Plated Brass
- **PF***= Plastic with Flex Spring
- **PS***= Plastic Short
- **MS***= Metal Short - Nickel Plated Brass
- **PL***= Plastic Long
- **ML***= Metal Long - Nickel Plated Brass
- *= add size code per chart i.e. CGPFA or CGMSS4

Min/Max refers to cable diameter.

OR Unshielded Cord Grip

Note: Cable jacket and shield diameters must be between Min/Max of cord grip.

For detailed info on shield diameters, see MSS table on page 232.

		PF*	PS*	MS*	Size Code A Min mm	A Max mm	R Min mm	R Max mm	PL*	ML*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm
Shell Size	8				-	-	-	-			-	-	-	-	-	-
	10	◆	◆	◆	5.0	10.0	3.0	7.0	◆	◆	6.5	9.5	7.0	10.5	-	-
	12	◆	◆	◆	6.0	12.0	5.0	9.0	◆	◆	6.5	9.5	8.5	10.5	-	-
	14	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
	16	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
	18	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
	20	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
	22	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
	24	◆	◆	◆	13.0	18.0	9.0	16.0			9.0	13.0	13.0	15.5	14.0	18.0

STEP 2 Choose Connector Plating

- **L** = Electroless Nickel
- **W** = Olive Drab Chromate over Cadmium over Nickel

STEP 3 Choose Connector Layout



See Connector Solutions Guides

STEP 4 Choose Contact

- **P** = Pin
- **S** = Socket
- **A** = Less Pin Contacts
- **B** = Less Socket Contacts

A or B is used only for special contact types (PC Pin, Thermocouple, Fiberoptic).

STEP 5 Choose Alternate Shell Position

(omit for normal)

- **W**
- **X**
- **Y**
- **Z**

See Connector Solutions Guide

Go to STEP 6 to choose Endbell

Example of part description:

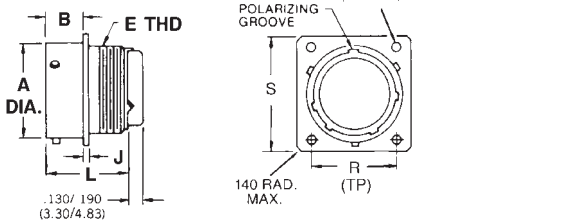
1 Shell Style	2 Plating	3 Connector Layout	4 Contact	5 Rotation (omit for normal)	6 Endbell	7 Wire Protection
MS3475	L	24-61	P		-UT	BSB5

(See Connector Solutions Guide)

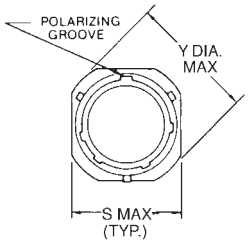
MIL-DTL-26482 Series II – Dimensions

Receptacles

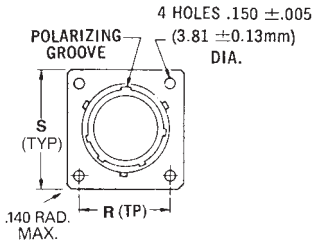
MS3470 - Flanged



MS3471 - Flanged

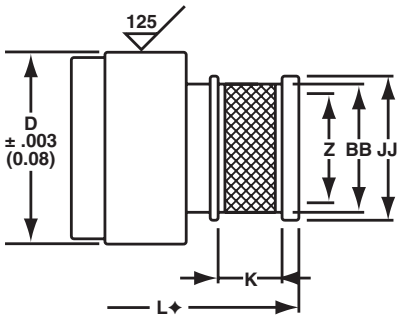


MS3472 - Cable Connecting

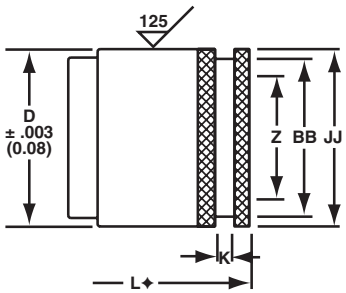


Shell Size	A Diameter Max	Overall Length L Max	B Max		J Max	R (TP)		S Max		Y Max	E Rear Thread
			MS3470/71	MS3472	MS3470/71/72	MS3470	MS3472	MS3470/71	MS3472	MS3471	UNEF-2A
8	.474	1.215	.462	.493	.078	.594	.734	.828	1.065	.958	1/2-20
	(12.04)	(30.86)	(11.73)	(12.52)	(1.98)	(15.09)	(18.64)	(21.03)	(27.05)	(24.33)	
10	.591	1.215	.462	.493	.078	.719	.812	.954	1.141	1.082	5/8-24
	(15.01)	(30.86)	(11.73)	(12.52)	(1.98)	(18.26)	(20.62)	(24.23)	(28.98)	(27.48)	
12	.751	1.215	.462	.493	.078	.812	.938	1.047	1.266	1.176	3/4-20
	(19.08)	(30.86)	(11.73)	(12.52)	(1.98)	(20.62)	(23.93)	(26.59)	(32.16)	(29.87)	
14	.876	1.215	.462	.493	.078	.906	1.031	1.141	1.360	1.270	7/8-20
	(22.25)	(30.86)	(11.73)	.493 (12.52)	.078 (1.98)	(23.01)	(26.19)	(28.98)	(34.54)	(32.26)	
16	1.001	1.215	.46	.493	.078	.969	1.125	1.234	1.453	1.364	1-20
	(25.43)	30.86)	(11.73)	(12.52)	(1.98)	(24.61)	(28.58)	(31.34)	(36.91)	(34.64)	
18	1.126	1.215	.462	.493	.078	1.062	1.203	1.328	1.532	1.458	1-1/16-18
	(28.60)	(30.86)	(11.73)	(12.52)	(1.98)	(26.97)	(30.56)	(33.73)	(38.91)	(37.03)	
20	1.251	1.275	.587	.587	.110	1.156	1.297	1.453	1.688	1.708	1-3/16-18
	(31.78)	(32.40)	(14.91)	(14.91)	(2.79)	(29.36)	(32.94)	(36.91)	(42.88)	(43.38)	
22	1.376	1.275	.587	.587	.110	1.250	1.375	1.578	1.766	1.708	1-5/16-18
	(34.95)	(32.40)	(14.91)	(14.91)	(2.79)	(31.75)	(34.93)	(40.08)	(44.86)	(43.38)	
24	1.501	1.275	.620	.620	.110	1.375	1.500	1.703	1.891	1.832	1-7/16-18
	(38.130)	(32.40)	(15.75)	(15.75)	(2.79)	(34.93)	(38.10)	(43.26)	(48.03)	(46.53)	

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
10	0.740 (18.8)	2.614 (66.4)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.588 (14.9)	B
12	0.865 (22.0)	2.496 (63.4)	0.476 (12.1)	0.506 (12.9)	0.655 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	2.496 (63.4)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
16	1.146 (29.1)	2.697 (68.5)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	2.744 (69.7)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.783 (70.7)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.886 (73.3)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	2.552 (39.4)	2.933 (74.5)	0.476 (12.1)	0.900 (22.8)	1.157 (29.4)	1.276 (32.4)	H



UNAC-PG

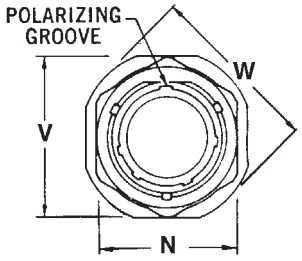
Cord Grip						
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	C Code
10	0.740 (18.8)	2.193 (55.7)	0.118 (3.0)	0.512 (13.0)	0.833 (21.2)	D
12	0.865 (22.0)	2.173 (55.2)	0.118 (3.0)	0.551 (14.0)	0.887 (22.6)	D
14	0.990 (25.2)	2.232 (56.7)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
16	1.146 (29.1)	2.390 (60.7)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
18	1.271 (32.3)	2.311 (58.7)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	F
20	1.428 (36.3)	2.409 (61.2)	0.118 (3.0)	0.974 (24.7)	1.270 (32.3)	G
22	1.552 (39.4)	2.528 (64.2)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	H
24	1.552 (39.4)	2.606 (66.2)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	H

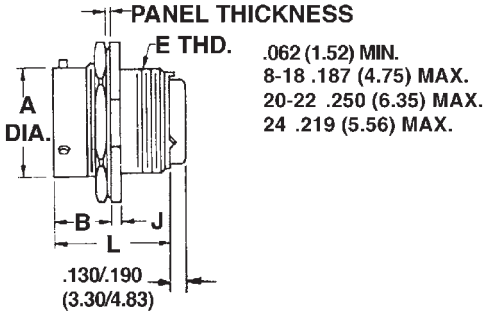
L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

MIL-DTL-26482 Series II – Dimensions

Jam Nut

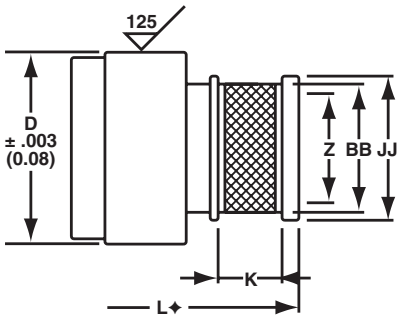
MS3474



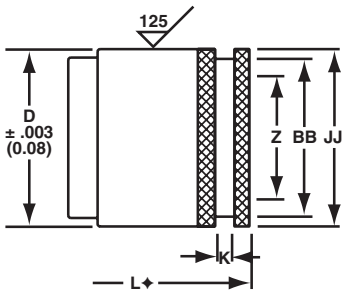


Shell Size	A Diameter Max	L Max	B Max	J Max	N Max	V Max	W Max	E Thread UNEF 2A
8	.474 (12.04)	1.215 (30.86)	.707 (17.96)	.113 (2.87)	.767 (19.48)	.954 (24.23)	1.078 (27.38)	1/2-20
10	.591 (15.01)	1.215 (30.86)	.707 (17.96)	.113 (2.87)	.892 (22.66)	1.078 (27.38)	1.203 (30.56)	5/8-24
12	.751 (19.08)	1.215 (30.86)	.707 (17.96)	.113 (2.87)	1.079 (27.41)	1.266 (32.16)	1.391 (35.33)	3/4-20
14	.876 (22.25)	1.215 (30.86)	.707 (17.96)	.113 (2.87)	1.205 (30.61)	1.391 (35.33)	1.516 (38.51)	7/8-20
16	1.001 (25.43)	1.215 (30.86)	.707 (17.96)	.113 (2.87)	1.329 (33.76)	1.516 (38.51)	1.641 (41.68)	1-20
18	1.126 (28.60)	1.215 (30.86)	.707 (17.96)	.113 (2.87)	1.455 (36.96)	1.641 (41.68)	1.766 (44.86)	1-1/16-18
20	1.251 (31.78)	1.275 (32.40)	.772 (19.61)	.148 (3.76)	1.579 (40.11)	1.828 (46.63)	1.954 (49.63)	1-3/16-18
22	1.376 (34.95)	1.275 (32.40)	.772 (19.61)	.148 (3.76)	1.705 (43.31)	1.954 (49.63)	2.078 (52.78)	1-5/16-18
24	1.50 (38.13)	1.275 (32.40)	.772 (19.61)	.148 (3.76)	1.829 (46.46)	2.078 (52.78)	2.203 (55.96)	1-7/16-18

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
10	0.740 (18.8)	2.614 (66.4)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.588 (14.9)	B
12	0.865 (22.0)	2.496 (63.4)	0.476 (12.1)	0.506 (12.9)	0.655 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	2.496 (63.4)	0.476 (12.1)	0.619 (15.7)	0.807 (20.5)	0.926 (23.5)	D
16	1.146 (29.1)	2.697 (68.5)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	2.744 (69.7)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.783 (70.7)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.886 (73.3)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	2.552 (39.4)	2.933 (74.5)	0.476 (12.1)	0.900 (22.8)	1.157 (29.4)	1.276 (32.4)	H



UNAC-PG

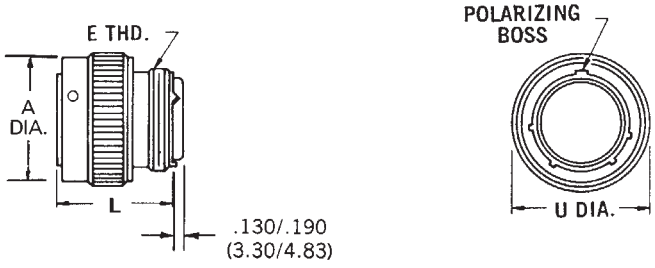
Cord Grip						
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	C Code
10	0.740 (18.8)	2.193 (55.7)	0.118 (3.0)	0.512 (13.0)	0.833 (21.2)	D
12	0.865 (22.0)	2.173 (55.2)	0.118 (3.0)	0.551 (14.0)	0.887 (22.6)	D
14	0.990 (25.2)	2.232 (56.7)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
16	1.146 (29.1)	2.390 (60.7)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
18	1.271 (32.3)	2.311 (58.7)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	F
20	1.428 (36.3)	2.409 (61.2)	0.118 (3.0)	0.974 (24.7)	1.270 (32.3)	G
22	1.552 (39.4)	2.528 (64.2)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	H
24	1.552 (39.4)	2.606 (66.2)	0.118 (3.0)	0.956 (24.3)	1.395 (35.4)	H

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

MIL-DTL-26482 Series II – Dimensions

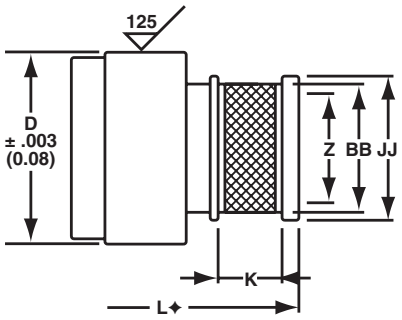
Plugs

MS3476/MS3475

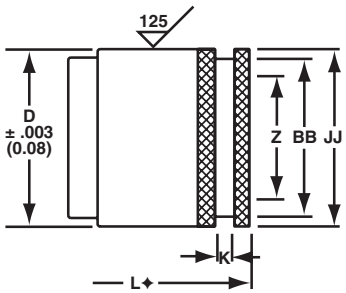


Shell Size	A Diameter Max	U Diameter Max	L Max	E Rear Thread UNEF-2A
8	.765 (19.43)	.782 (19.86)	1.230 (31.24)	1/2-20
10	.840 (21.34)	.926 (23.52)	1.230 (31.24)	5/8-24
12	.999 (25.37)	1.043 (26.49)	1.230 (31.24)	3/4-20
14	1.139 (28.93)	1.183 (30.05)	1.230 (31.24)	7/8-20
16	1.261 (32.03)	1.305 (33.15)	1.230 (31.24)	1-20
18	1.337 (33.96)	1.391 (35.33)	1.230 (31.24)	1-1/16-18
20	1.477 (37.52)	1.531 (38.89)	1.230 (31.24)	1-3/16-18
22	1.602 (40.69)	1.656 (42.06)	1.230 31.24)	1-5/16-18
24	1.723 (43.76)	1.777 (45.14)	1.230 (31.24)	1-7/16-18

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
10	0.740 (18.8)	2.209 (56.1)	0.433 (11.0)	0.337 (8.6)	0.493 (12.5)	0.588 (14.9)	B
12	0.865 (22.0)	2.189 (55.6)	0.476 (12.1)	0.506 (12.9)	0.655 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	2.248 (57.1)	0.476 (12.1)	0.562 (14.3)	0.807 (20.5)	0.926 (23.5)	D
16	1.146 (29.1)	2.429 (61.7)	0.476 (12.1)	0.620 (15.7)	0.820 (20.9)	0.939 (23.9)	E
18	2.318 (58.9)	2.327 (59.1)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	2.443 (62.1)	2.457 (62.4)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	2.544 (64.6)	2.575 (65.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	2.592 (65.8)	2.654 (67.4)	0.476 (12.1)	0.843 (21.4)	1.157 (29.4)	1.276 (32.4)	H



UNAC-PG

Cord Grip						
Shell Size	D∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	C Code
10	0.740 (18.8)	2.630 (66.8)	0.118 (3.0)	0.512 (13.0)	0.833 (21.2)	D
12	0.865 (22.0)	2.512 (63.8)	0.118 (3.0)	0.551 (14.0)	0.887 (22.6)	D
14	0.990 (25.2)	2.512 (63.8)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
16	1.146 (29.1)	2.713 (68.9)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
18	2.318 (58.9)	2.760 (70.1)	0.118 (3.0)	0.709 (18.0)	1.114 (28.3)	F
20	2.443 (62.1)	2.831 (71.9)	0.118 (3.0)	0.984 (25.0)	1.270 (32.3)	G
22	2.544 (64.6)	2.933 (74.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
24	2.592 (65.8)	2.980 (75.7)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H

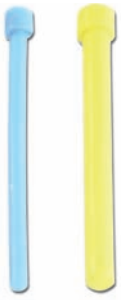
L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

MIL-DTL-26482 Series II – Contacts

Pins





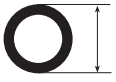


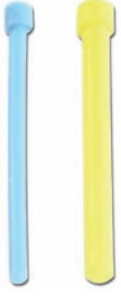
Head goes in first, trim excess

Contact Size	Wire Size Awg	Pin Contact Part Number	Color Bands			Wire Strip Lengths	Wire Insulation Range		Wire Hole Filler	Color
			1	2	3		Min	Max		
20	20 - 24	M39029/4-110	Brown	Brown	Black	3/16 (4.77)	.040 (1.02)	.083 (2.11)	MS27488-20-2	Red
16	16 - 20	M39029/4-111	Brown	Brown	Brown	9/32 (7.14)	.053 (1.35)	.103 (2.62)	MS27488-16-2	Blue
12	12 - 14	M39029/4-113	Brown	Brown	Orange	9/32 (7.14)	.097 (2.46)	.158 (4.01)	MS27488-12-2	Yellow

Sockets







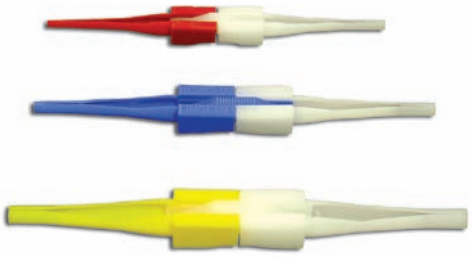
Head goes in first, trim excess

Contact Size	Wire Size Awg	Socket Contact Part Number	Color Bands			Wire Strip Lengths	Wire Insulation Range		Wire Hole Filler	Color
			1	2	3		Min	Max		
20	20 - 24	M39029/5-115	Brown	Brown	Green	3/16 (4.77)	.040 (1.02)	.083 (2.11)	MS27488-20-2	Red
16	16 - 20	M39029/5-116	Brown	Brown	Blue	9/32 (7.14)	.053 (1.35)	.103 (2.62)	MS27488-16-2	Blue
12	12 - 14	M39029/5-118	Brown	Brown	Grey	9/32 (7.14)	.097 (2.46)	.158 (4.01)	MS27488-12-2	Yellow

Pins







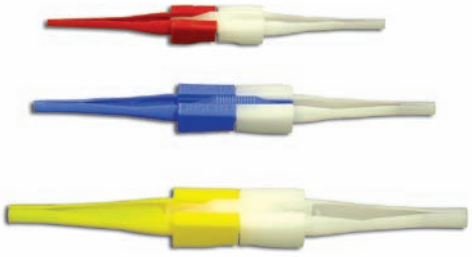
Hand Crimp Tool	Power Crimp Tool	Turret Heads	Use Locator Color	Metal		Plastic		
				Insertion Tool	Extraction Tool	Insertion/Extraction Tool	Insertion Tip Color	Extraction Tip Color
M22520/1-01	WA27F††	M22520/1-02	Red	DAK83-20B	DRK83-20B	M81969/14-11	Red	White
M22520/1-01	WA27F††	M22520/1-02	Blue	DAK83-16B	DRK83-16B	M81969/14-03	Blue	White
M22520/1-01	WA27F††	M22520/1-02	Yellow	DAK83-12B	DRK83-12B	M81969/14-04	Yellow	White

†† Call for more tool accessories.

Sockets







Hand Crimp Tool	Power Crimp Tool	Turret Heads	Use Locator Color	Metal		Plastic		
				Insertion Tool	Extraction Tool	Insertion/Extraction Tool	Insertion Tip Color	Extraction Tip Color
M22520/1-01	WA27F††	M22520/1-02	Red	DAK83-20B	DRK83-20B	M81969/14-11	Red	White
M22520/1-01	WA27F††	M22520/1-02	Blue	DAK83-16B	DRK83-16B	M81969/14-03	Blue	White
M22520/1-01	WA27F††	M22520/1-02	Yellow	DAK83-12B	DRK83-12B	M81969/14-04	Yellow	White

†† Call for more tool accessories.

MIL-DTL-26482 Series II – At-A-Glance

Name:

Company:

Email:

Phone:

Qty: EAU:

Additional Connector Information

CONNECTOR Part #:_____

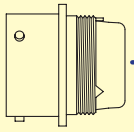
OR

# of Contacts:_____ Sizes & Type:_____

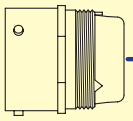
CABLE Manufacturer: _____
(If Known)

CABLE Part #: _____ OR Cable OD:_____

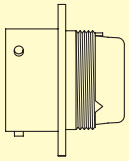
Choose One Connector



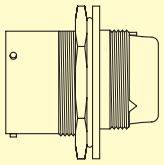
☐ **MS3470** Narrow Flange Receptacle



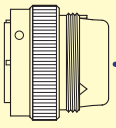
☐ **MS3471** Cable Receptacle



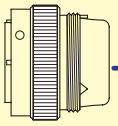
☐ **MS3472** Wide Flange Receptacle



☐ **MS3474** Jam Nut Receptacle



☐ **MS3476** Standard Cable Plug

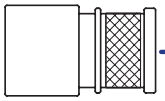


☐ **MS3475** Shielded Cable Plug

Choose One Endbell

Use endbell "U" for Menus A, B, C, D & E

☐ **U**

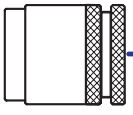


- **Omit** for Unshielded
- **S** Shielding Spring
- **T** Shielding Tape
- **W** Shielding Tape & Spring

Crimp Termination Only

Use endbell "CG" for Menus F, G & H

☐ **CG**



Comments/Notes:

_____

_____

_____

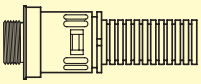
_____

_____

_____

Choose One Wire Protection

- ☐ **HST** Heat Shrink Tubing
- ☐ **SB** Straight Boot
- ☐ **BSB** Bottle Shaped Shrink Boot
- ☐ **HBSB** High Ratio Bottle Shaped Shrink Boot
- ☐ **CSB** Convoluted Shrink Boot
- ☐ **RSB** Right Angle Shrink Boot



- ☐ **CA** Conduit Adapter & Conduit



- ☐ **MSS** Metal Short Shielded



- ☐ **PF** Plastic with flex Relief



- ☐ **PS** Plastic Short



- ☐ **MS** Metal Short



- ☐ **PL** Plastic with Long Boot



- ☐ **ML** Metal with Long Boot

Trident Ringlock, Trident Neptune & TNM



Trident circular connectors are a cost effective, reliable, and aesthetically pleasing method of making connections to and from an electronic package. There are three types of Trident circular connectors: Trident Ringlock, Trident Neptune, and TNM. Trident Ringlock connectors are designed to carry power or control signals and are waterproof to IP67. Trident Neptune, which is a variation of the Ringlock line, allows mixing of high power and signal contacts within the same connector with amperage up to 30 amps per contact. Neptune is completely sealed and submersible to IP67 for the most demanding applications. Both Trident Ringlock and Trident Neptune are UL94V0 circular plastic connectors, but with the critical addition of a metal coupling nut and metal bayonet retention mechanism. This unique construction combines the low cost and weight of a plastic connector with the durability of an all metal connector. Trident Ringlock connectors are completely interchangeable with Trim-Trio (UTG) series and use interchangeable contacts. Trident Neptune uses the same contacts as Ringlock, but is a unique product for transportation and harsh environments where full sealing and mixing of power and signal contacts is required.

Applications

Industrial and vehicular connections to & from electronic cabinets and boxes.
Any power and signal application requiring total moisture sealing.

- Trucks & Buses
- Off-road Vehicles
- Rail and Mass Transit
- Marine
- Process Control
- Industrial Machinery
- Control Cables
- Probes
- Hand Controllers
- Remote Sensors
- Inter-system Connections

Features

Strong, Light Weight, Low Cost

Superior to plastic circular connectors and less costly than metal connectors. Trident's metal bayonet coupling nut and locking mechanism provide strength and life comparable to an all metal connector. Bodies are of durable UL94V0 thermoplastic with high strength nickel plated metal coupling nuts and bayonet ring. Molded rubber and silicone seals guarantee water-tightness.

Attractive Appearance

Nice enough for front panel mounting

Submersible or Waterjet-proof Versions

Neptune and TNM Connectors use a rear individual wire sealing grommet and is fully submersible to IP67. Ringlock is protected against submersion to IP67 using either a Universal Heat Shrink or a Cord Grip endbell.

Wide Temperature Range

Trident will operate in temperatures from -55°C to +120°C (-67° to +248°F) under conditions of high humidity, severe vibration, ice and mud.

Wide Range of Wire Gauges and Current Carrying Capability

Up to 30 amps per contact with wire sizes from 28 AWG up to 12 AWG wire. New TNM 700 volt 40 amp power for up to 8 AWG.

Standard and Reverse Connector Housings

In the Trident STANDARD configuration, the receptacles use socket contacts and the plugs use pin contacts. A REVERSED version is also available for safety and/or polarization. Standard and reversed connectors will not intermate. 'Keying Pins' are also available to polarize connectors with the same orientation and layout used on the same panel to prevent mis-mating.

Wide Range of Contact Styles

Contacts are available in crimp, PC, coax, wire wrap or first make/last break for ground connections.

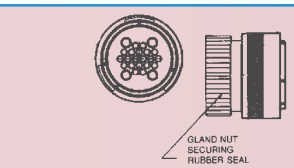
Field Serviceable

The use of removable crimp contacts allows connections to be changed or modified in the field if necessary. Contacts are copper alloy with a range of gold or tin platings.

ITT
Engineered for life

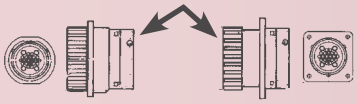
Trident

STEP 1
Select Shell Style
Receptacle or Plug



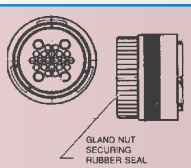
Plug (Pins)
(Neptune version pictured)

Mates with



Jam Nut Receptacle (Sockets)

Flanged Receptacle (Sockets)



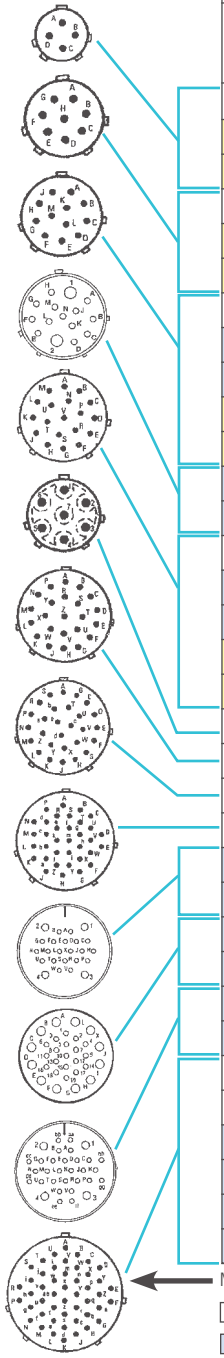
Plug (Sockets)
(Neptune version pictured)

Mates with



Flanged Receptacle (Pins)

STEP 1A
Choose Layout



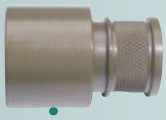
				STANDARD SEX		REVERSE SEX	
Total Number of Circuits	Number of Power Contacts	Number of Signal Contacts	Shell Size	Plug (Pins)	Flanged & Jam Nut † Receptacle (Sockets)	Plug (Sockets)	Flanged & Jam Nut † Receptacle (Pins)
4	0	4	10	192922-1250	192990-1660	192926-0500	192990-1760
4	0	4	10	192993-0011	192993-0031	192993-0051	192993-0071
4	0	4	10	192993-0001#	192993-0021#	192993-0041#	192993-0061#
8	0	8	12	192922-1260	192990-1670	192926-0510	192990-1770
8	0	8	12	192993-0012	192993-0032	192993-0052	192993-0072
8	0	8	12	192993-0002#	192993-0022#	192993-0042#	192993-0062#
12	0	12	14	192922-1270	192990-1680	192926-0520	192990-1780
12	0	12	14	192900-0303	192900-0308	192900-0236	192900-0256
12	0	12	14	-	192900-0313†	-	192900-0266†
12	0	12	14	192993-0013	192993-0033	192993-0053	192993-0073
12	0	12	14	192993-0003#	192993-0023#	192993-0043#	192993-0063#
15	2	13	16	192900-0507	192900-0509	192900-0581	192900-0582
15	2	13	16	192900-0561*	192990-0508†	192900-0562*	192900-0583†
19	0	19	16	192922-1280	192990-1690#	192926-0530#	192990-1790#
19	0	19	16	192900-0017	192900-0039	192900-0057	192900-0078
19	0	19	16	192900-0557*	192900-0490†	192900-0558*	192900-0353†
19	0	19	16	192993-0014	192993-0034	192993-0054	192993-0074
19	0	19	16	192993-0004#	192993-0024#	192993-0044#	192993-0064#
7	0	7	18	192990-1330	192990-1700	192990-1390	192990-1800
23	0	23	18	192990-1320	192990-1710	192990-1380	192990-1810
28	0	28	20	192922-1290	192990-1720	192926-0540	192990-1820
35	0	35	22	192922-1300	192990-1730	192926-0550	192990-1830
24	4	20	24	192900-0014	192900-0030	192900-0054	192900-0069
24	4	20	24	192990-0537*	192900-0032†	192900-0540*	192900-0071†
31	12	19	24	192900-0016	192900-0036	192900-0056	192900-0075
31	12	19	24	192900-0538*	192900-0038†	192900-0541*	192900-0077†
32	4	28	24	192900-0015	192900-0033	192900-0055	192900-0072
32	4	28	24	192900-0549*	192900-0035†	192900-0550*	192900-0074†
48	0	48	24	192990-1340	192990-1740	192990-1400	192990-1840
48	0	48	24	192990-0553*	-	192900-0554*	-
48	0	48	24	192900-0469	192900-0475	192900-0425	192900-0431
48	0	48	24	192991-0628	192991-0640(L)	192991-0648(L)	192991-0652(L)
48	0	48	24	192900-0539*	192900-0481†	192900-0542*	192900-0437†
48	0	48	24	192991-0660(L)*	192991-0644(L)†	192991-0664(L)*	192991-0656(L)†

Mating face of plug for Standard Sex is shown. Reverse Sex have mirror image cavity identification.

Trident Ringlock
Trident Neptune
TNM Trident Neptune Metal

* Plastic Coupling Nut
† Jam Nut Receptacle
(L) Wire seal for large OD wires .090"-.126" (2.3mm-3.2mm)
TNM without rear wire seal

STEP 2 Choose Endbell





Spring



Shielding Tape

Potted (Preferred)

- **U** = Unshielded
- **US** = with shielding spring
- **UT** = with shielding tape
- **UW** = with shielding tape & spring

RU Right Angle

NEW!



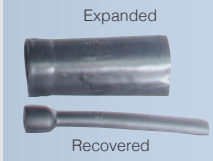
Call for more info

STEP 3 Choose Heat Shrink Boot or Tubing

Note: Cable outside diameter must be between expanded and recovered dimensions.

Boot options

SB – Straight Boot



HST – Heat Shrink Tubing



Heat Shrink Product	SB 1	SB 2	SB 3	SB 4	SB 5	HST 1	HST 2	HST 3	HST 4
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	0.750 (19.1)	1.000 (25.4)	1.250 (31.8)	1.570 (39.9)
Recovered ID inch (mm)	0.25 (6.4)	0.29 (7.4)	0.33 (8.4)	0.38 (9.7)	0.41 (10.4)	0.250 (6.4)	0.320 (8.1)	0.416 (10.6)	0.510 (13.0)
Length Max inch (mm)	4.17 (105.9)	4.77 (121.2)	5.46 (138.7)	6.28 (159.5)	7.00 (177.8)	6.00 (152.4)			
Shell Size 10	◆					◆	◆		
12		◆	◆				◆		
14			◆					◆	
16			◆	◆				◆	
18				◆				◆	
20				◆					◆
22					◆				◆
24									◆

Most Popular

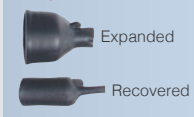
adhesive lined heat shrink tubing

CSB – Convoluted Shrink Boot



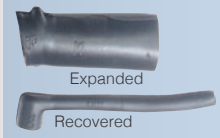
Heat Shrink Product	CSB2	CSB3	CSB4	CSB5	BSB1	BSB2	BSB3	BSB4	BSB5
Expanded ID inch (mm)	0.70 (17.8)	1.06 (26.9)	1.44 (36.6)	1.80 (45.7)	0.94 (23.9)	1.18 (30.0)	1.22 (31.0)	1.42 (36.1)	1.69 (42.9)
Recovered ID inch (mm)	0.32 (8.1)	0.50 (12.7)	0.69 (17.5)	0.88 (22.4)	0.24 (6.1)	0.24 (6.1)	0.28 (7.1)	0.33 (8.4)	0.39 (9.9)
Length Max inch (mm)	5.25 (133.4)	5.75 (146.1)	6.25 (158.8)	6.75 (171.5)	1.50 (38.1)	2.17 (55.1)	2.64 (67.1)	3.15 (80.0)	3.90 (99.1)
Shell Size 10	◆				◆	◆			
12	◆				◆	◆	◆		
14		◆			◆	◆	◆	◆	
16		◆	◆			◆	◆	◆	
18		◆	◆			◆	◆	◆	
20		◆	◆				◆	◆	
22		◆	◆					◆	
24			◆	◆					◆

BSB/HBSB – Bottle Shaped Shrink Boot (High Ratio Bottle Shaped Boot)



Heat Shrink Product	RSB1	RSB2	RSB3	RSB4	RSB5
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)
Recovered ID inch (mm)	0.23 (5.8)	0.26 (6.6)	0.30 (7.6)	0.35 (8.9)	0.37 (9.4)
Length Max inch (mm)	4.14 (105.2)	4.88 (124.0)	5.76 (146.3)	6.78 (172.2)	7.29 (185.2)
Shell Size 10	◆	◆			
12		◆	◆		
14			◆	◆	
16			◆	◆	
18				◆	
20				◆	◆
22					◆
24					

RSB – Right Angle Shrink Boot



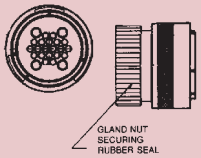
Example of part description:

192993-0011	-UW	HST1
1 Shell Style	2 Endbells Shielding Options	3 Wire Protection

Note: Endbells U Type will be Electroless Nickel Plated

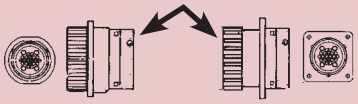
Trident

STEP 1
Select Shell Style
Receptacle or Plug

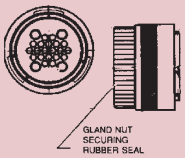


Plug (Pins)
(Neptune version pictured)

Mates with

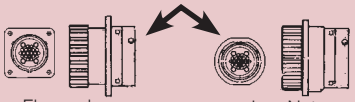


Flanged Receptacle (Sockets)



Plug (Sockets)
(Neptune version pictured)

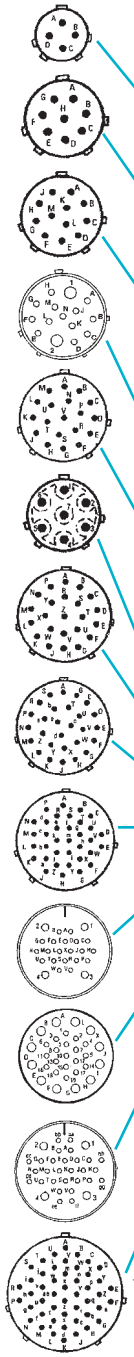
Mates with



Flanged Receptacle (Pins)

Jam Nut Receptacle (Pins)

STEP 1A
Choose Layout



				STANDARD SEX		REVERSE SEX	
Total Number of Circuits	Number of Power Contacts	Number of Signal Contacts	Shell Size	Plug (Pins)	Flanged & Jam Nut † Receptacle (Sockets)	Plug (Sockets)	Flanged & Jam Nut † Receptacle (Pins)
4	0	4	10	192922-1250	192990-1660	192926-0500	192990-1760
4	0	4	10	192993-0011	192993-0031	192993-0051	192993-0071
4	0	4	10	192993-0001#	192993-0021#	192993-0041#	192993-0061#
8	0	8	12	192922-1260	192990-1670	192926-0510	192990-1770
8	0	8	12	192993-0012	192993-0032	192993-0052	192993-0072
8	0	8	12	192993-0002#	192993-0022#	192993-0042#	192993-0062#
12	0	12	14	192922-1270	192990-1680	192926-0520	192990-1780
12	0	12	14	192900-0303	192900-0308	192900-0236	192900-0256
12	0	12	14	-	192900-0313†	-	192900-0266†
12	0	12	14	192993-0013	192993-0033	192993-0053	192993-0073
12	0	12	14	192993-0003#	192993-0023#	192993-0043#	192993-0063#
15	2	13	16	192900-0507	192900-0509	192900-0581	192900-0582
15	2	13	16	192900-0561*	192990-0508†	192900-0562*	192900-0583†
19	0	19	16	192922-1280	192990-1690#	192926-0530#	192990-1790#
19	0	19	16	192900-0017	192900-0039	192900-0057	192900-0078
19	0	19	16	192900-0557*	192900-0490†	192900-0558*	192900-0353†
19	0	19	16	192993-0014	192993-0034	192993-0054	192993-0074
19	0	19	16	192993-0004#	192993-0024#	192993-0044#	192993-0064#
7	0	7	18	192990-1330	192990-1700	192990-1390	192990-1800
23	0	23	18	192990-1320	192990-1710	192990-1380	192990-1810
28	0	28	20	192922-1290	192990-1720	192926-0540	192990-1820
35	0	35	22	192922-1300	192990-1730	192926-0550	192990-1830
24	4	20	24	192900-0014	192900-0030	192900-0054	192900-0069
24	4	20	24	192990-0537*	192900-0032†	192900-0540*	192900-0071†
31	12	19	24	192900-0016	192900-0036	192900-0056	192900-0075
31	12	19	24	192900-0538*	192900-0038†	192900-0541*	192900-0077†
32	4	28	24	192900-0015	192900-0033	192900-0055	192900-0072
32	4	28	24	192900-0549*	192900-0035†	192900-0550*	192900-0074†
48	0	48	24	192990-1340	192990-1740	192990-1400	192990-1840
48	0	48	24	192990-0553*	-	192900-0554*	-
48	0	48	24	192900-0469	192900-0475	192900-0425	192900-0431
48	0	48	24	192991-0628	192991-0640(L)	192991-0648(L)	192991-0652(L)
48	0	48	24	192900-0539*	192900-0481†	192900-0542*	192900-0437†
48	0	48	24	192991-0660(L)*	192991-0644(L)†	192991-0664(L)*	192991-0656(L)†

Mating face of plug for Standard Sex is shown. Reverse Sex have mirror image cavity identification.

Trident Ringlock
Trident Neptune
TNM Trident Neptune Metal

* Plastic Coupling Nut
† Jam Nut Receptacle
(L) Wire seal for large OD wires .090"-.126" (2.3mm-3.2mm)
TNM without rear wire seal

STEP 2 Choose Endbell



NEW!



CG = Straight Adapter Endbell

RG = Right Angle Adapter Endbell

Please call for more information

Unshielded Conduits



CA* = conduit adapter for plastic flexible conduit. Add size code i.e. CGCA10

Note: Normal recommended conduit fill is 40% of Conduit ID or less.

Size Code		07	10	12	14	17	23
Conduit ID Inch (mm)		0.256 (6.5)	0.394 (10.0)	0.472 (12.0)	0.563 (14.3)	0.650 (16.5)	0.906 (23.0)
Conduit OD Inch (mm)		0.394 (10.0)	0.512 (13.0)	0.622 (15.8)	0.728 (18.5)	0.835 (21.2)	1.122 (28.5)
Shell Size	10	◆	◆				
	12	◆	◆	◆			
	14	◆	◆	◆	◆	◆	
	16			◆	◆	◆	◆
	18			◆	◆	◆	◆
	20			R		R	◆
	22			R		R	◆
	24			R		R	◆

R = with reducer

OR Shielded Cord Grip

			Size Code 1		2		3		4	
		MSS*	Min mm	Max mm	Min mm	Max mm	Min mm	Max mm	Min mm	Max mm
Shell Size	10	◆	4.0	6.5	6.5	9.5	8.0	10.5	-	-
	12	◆	6.5	9.5	8.0	10.5	9.0	13.0	-	-
	14	◆	6.5	9.5	7.0	10.5	9.0	13.0	-	-
	16	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	18	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	20	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	22	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	24	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0

Conduit Adapter and Cord Grip Types CA* MSS* PF* PS* MS* PL* ML**

OR Unshielded Cord Grip

Note: Cable jacket and shield diameters must be between Min/Max of cord grip.

For detailed info on shield diameters, see MSS table on page 232.

					Size Code A		R				Size Code 1		2		3	
		PF*	PS*	MS*	Min mm	Max mm	Min mm	Max mm	PL*	ML*	Min mm	Max mm	Min mm	Max mm	Min mm	Max mm
Shell Size	10	◆	◆	◆	4.0	8.0	2.0	6.0			4.0	6.5	7.5	9.5	-	-
	12	◆	◆	◆	5.0	10.0	3.0	7.0	◆	◆	6.5	9.5	7.0	10.5	-	-
	14	◆	◆	◆	6.0	12.0	5.0	9.0	◆	◆	6.5	9.5	8.5	10.5	-	-
	16	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
	18	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
	20	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
	22	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
	24	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0

Example of part description:

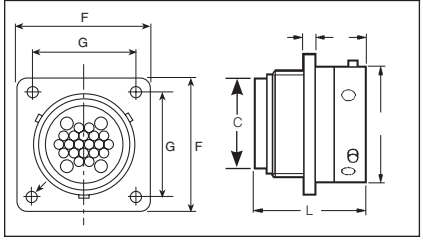
192922-1250	-CG	PFA
1 Shell Style	2 Endbells Shielding Options	3 Wire Protection

Note: Endbells CGMSS Type will be Electroless Nickel Plated, other options will be Black Anodized

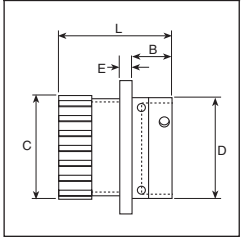
Trident

Standard Flanged Receptacle

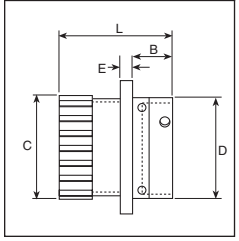
Ringlock

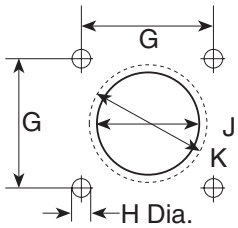


Neptune



TNM

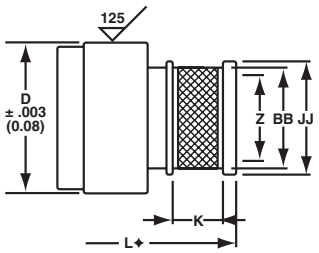


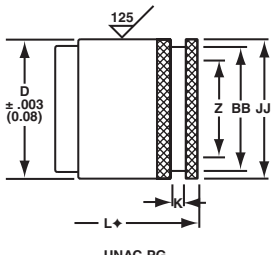


Dim. J-flange in front of panel
Dim. K-flange at rear of panel

Number of Contacts	Shell Size	Part Number	L Max	B Max	C∅ Max	D∅ Max	E Max	F Max	G TP	H∅ ±.005 (0.13)	J∅ +.010 (0.25) -.000 (0.00)	K∅ +.010 (0.25) -.000 (0.00)
4	10	192990-1660	1.016 (25.8)	0.439 (11.2)	0.433 (11.0)	0.591 (15.0)	0.091 (2.3)	0.925 (23.5)	0.709 (18.0)	0.128 (3.3)	0.594 (15.1)	0.681 (17.3)
4	10	192993-0021 †	1.193 (30.3)	0.460 (11.6)	0.560 (14.3)	0.590 (14.9)	0.070 (1.9)	0.940 (23.8)	0.720 (18.3)	0.130 (3.2)	0.590 (15.1)	0.680 (17.3)
4	10	192993-0031	1.366 (34.7)	0.460 (11.6)	0.690 (17.5)	0.590 (14.9)	0.070 (1.9)	0.940 (23.8)	0.720 (18.3)	0.130 (3.2)	0.590 (15.1)	0.680 (17.3)
8	12	192990-1670	1.016 (25.8)	0.447 (11.4)	0.547 (13.9)	0.748 (19.0)	0.091 (2.3)	1.031 (26.2)	0.807 (20.5)	0.128 (3.3)	0.717 (18.2)	0.858 (21.8)
8	12	192993-0022 †	1.193 (30.3)	0.460 (11.6)	0.690 (17.4)	0.750 (19.0)	0.070 (1.9)	1.030 (26.2)	0.810 (20.6)	0.130 (3.2)	0.720 (18.2)	0.860 (21.8)
8	12	192993-0032	1.366 (34.7)	0.460 (11.6)	0.810 (20.6)	0.750 (19.0)	0.070 (1.9)	1.030 (26.2)	0.810 (20.6)	0.130 (3.2)	0.720 (18.2)	0.860 (21.8)
12	14	192990-1680	1.016 (25.8)	0.447 (11.4)	0.673 (17.1)	0.874 (22.2)	0.091 (2.3)	1.108 (28.1)	0.890 (22.6)	0.128 (3.3)	0.842 (21.4)	0.984 (25.0)
12	14	192900-0308	1.563 (39.7)	0.448 (11.4)	0.956 (24.3)	0.874 (22.2)	0.091 (2.3)	1.122 (28.5)	0.901 (22.9)	0.126 (3.2)	0.968 (24.6)	0.968 (24.6)
12	14	192993-0023 †	1.193 (30.3)	0.460 (11.6)	0.810 (20.6)	0.870 (22.1)	0.070 (1.9)	1.120 (28.5)	0.900 (22.8)	0.140 (3.5)	0.840 (21.4)	0.980 (25.0)
12	14	192993-0033	1.366 (34.7)	0.460 (11.6)	0.960 (24.3)	0.870 (22.1)	0.070 (1.9)	1.120 (28.5)	0.900 (22.8)	0.140 (3.5)	0.840 (21.4)	0.900 (25.0)
19	16	192990-1690	1.016 (25.8)	0.447 (11.4)	0.787 (20.0)	1.000 (25.4)	0.091 (2.3)	1.200 (30.5)	0.953 (24.2)	0.128 (3.3)	0.968 (24.6)	1.100 (28.1)
19	16	192900-0039	1.566 (39.8)	0.448 (11.4)	1.0630 (27.0)	1.000 (25.4)	0.091 (2.3)	1.220 (31.0)	0.964 (24.5)	0.126 (3.2)	1.106 (28.1)	1.100 (28.1)
19	16	192993-0024 †	1.193 (30.3)	0.460 (11.6)	0.940 (23.8)	1.000 (25.3)	0.070 (1.9)	1.220 (30.9)	0.970 (24.6)	0.140 (3.5)	0.970 (24.6)	1.100 (28.1)
19	16	192993-0034	1.366 (34.7)	0.460 (11.6)	1.060 (27.0)	1.000 (25.3)	0.070 (1.9)	1.220 (30.9)	0.970 (24.6)	0.140 (3.5)	0.970 (24.6)	1.100 (28.1)
7	18	192990-1700	1.280 (32.5)	0.716 (18.2)	0.886 (22.5)	1.122 (28.5)	0.098 (2.5)	1.311 (33.3)	1.063 (27.0)	0.128 (3.3)	1.094 (27.8)	1.230 (31.3)
23	18	192990-1710	1.016 (25.8)	0.447 (11.4)	0.886 (22.5)	1.122 (28.5)	0.098 (2.5)	1.311 (33.3)	1.059 (26.9)	0.128 (3.3)	1.094 (27.8)	1.230 (31.3)
28	20	192990-1720	1.311 (33.3)	0.571 (14.5)	1.012 (25.7)	1.248 (31.7)	0.098 (2.5)	1.437 (36.5)	1.150 (29.2)	0.128 (3.3)	1.216 (30.9)	1.350 (34.5)
35	22	192990-1730	1.311 (33.3)	0.571 (14.5)	1.126 (28.6)	1.374 (34.9)	0.138 (3.5)	1.563 (39.7)	1.244 (31.6)	0.128 (3.3)	1.342 (34.1)	1.480 (37.7)
48	24	192990-1740	1.311 (33.3)	0.602 (15.3)	1.252 (31.8)	1.496 (38.0)	0.138 (3.5)	1.689 (42.9)	1.356 (34.4)	0.154 (3.9)	1.468 (37.3)	1.610 (40.9)
24	24	192900-0030	1.645 (41.8)	0.606 (15.4)	1.578 (40.1)	1.500 (38.1)	0.138 (3.5)	2.000 (50.8)	1.563 (39.7)	0.165 (4.2)	1.614 (41.0)	1.610 (41.0)
31	24	192900-0036	1.645 (41.8)	0.606 (15.4)	1.578 (40.1)	1.500 (38.1)	0.138 (3.5)	2.000 (50.8)	1.563 (39.7)	0.165 (4.2)	1.614 (41.0)	1.610 (41.0)
32	24	192900-0033	1.645 (41.8)	0.606 (15.4)	1.578 (40.1)	1.500 (38.1)	0.138 (3.5)	2.000 (50.8)	1.563 (39.7)	0.165 (4.2)	1.614 (41.0)	1.610 (41.0)
48	24	192900-0475	1.645 (41.8)	0.606 (15.4)	1.578 (40.1)	1.500 (38.1)	0.138 (3.5)	2.000 (50.8)	1.563 (39.7)	0.165 (4.2)	1.614 (41.0)	1.610 (41.0)
48	24	192991-0640	2.075 (52.7)	0.606 (15.4)	1.578 (40.1)	1.500 (38.1)	0.138 (3.5)	2.000 (50.8)	1.563 (39.7)	0.165 (4.2)	1.614 (41.0)	1.610 (41.0)

† No wire seal or nut





Universal Heat Shrink							Cord Grip					
D∅ Max	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code	D∅ Max	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	C Code
0.740 (18.8)	2.057 (52.2)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B	0.740 (18.8)	1.764 (44.8)	0.118 (3.0)	0.413 (10.5)	0.707 (18.0)	C
0.740 (18.8)	2.173 (55.2)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B	0.740 (18.8)	1.843 (46.8)	0.118 (3.0)	0.322 (8.2)	0.707 (18.0)	C
0.740 (18.8)	2.173 (55.2)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B	0.740 (18.8)	1.843 (46.8)	0.118 (3.0)	0.322 (8.2)	0.707 (18.0)	C
0.865 (22.0)	2.218 (56.3)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C	0.865 (22.0)	1.754 (44.6)	0.118 (3.0)	0.512 (13.0)	0.833 (21.2)	D
0.865 (22.0)	2.284 (58.0)	0.476 (12.1)	0.425 (10.8)	0.665 (16.9)	0.783 (19.9)	C	0.865 (22.0)	1.843 (46.8)	0.118 (3.0)	0.425 (10.8)	0.833 (21.2)	D
0.865 (22.0)	2.284 (58.0)	0.476 (12.1)	0.425 (10.8)	0.665 (16.9)	0.783 (19.9)	C	0.865 (22.0)	1.843 (46.8)	0.118 (3.0)	0.425 (10.8)	0.833 (21.2)	D
0.990 (25.1)	2.107 (53.5)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D	0.990 (25.1)	1.703 (43.3)	0.118 (3.0)	0.631 (16.0)	0.887 (22.5)	D
0.990 (25.1)	2.654 (67.4)	0.476 (12.1)	0.528 (13.4)	0.744 (18.9)	0.862 (21.9)	D	0.990 (25.1)	2.012 (51.1)	0.118 (3.0)	0.551 (14.0)	0.887 (22.5)	D
0.990 (25.1)	2.284 (58.0)	0.476 (12.1)	0.528 (13.4)	0.744 (18.9)	0.862 (21.9)	D	0.990 (25.1)	2.052 (52.1)	0.118 (3.0)	0.551 (14.0)	0.887 (22.5)	D
0.990 (25.1)	2.299 (58.4)	0.476 (12.1)	0.528 (13.4)	0.744 (18.9)	0.862 (21.9)	D	0.990 (25.1)	1.723 (43.8)	0.118 (3.0)	0.551 (14.0)	0.887 (22.5)	D
1.146 (29.1)	2.167 (55.0)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E	1.146 (29.1)	2.055 (52.2)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
1.146 (29.1)	2.477 (62.9)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E	1.146 (29.1)	1.723 (43.8)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
1.146 (29.1)	2.276 (57.8)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E	1.146 (29.1)	1.855 (47.1)	0.118 (3.0)	0.638 (16.2)	0.989 (25.1)	E
1.146 (29.1)	2.276 (57.8)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E	1.146 (29.1)	1.855 (47.1)	0.118 (3.0)	0.638 (16.2)	0.989 (25.1)	E
1.271 (32.3)	2.495 (63.4)	0.476 (12.1)	0.675 (17.1)	0.931 (23.6)	1.049 (26.6)	F	1.271 (32.3)	2.031 (51.6)	0.118 (3.0)	0.638 (16.2)	1.114 (28.3)	F
1.271 (32.3)	2.231 (56.7)	0.476 (12.1)	0.675 (17.1)	0.931 (23.6)	1.049 (26.6)	F	1.271 (32.3)	1.767 (44.9)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	F
1.428 (36.3)	2.430 (61.7)	0.476 (12.1)	0.815 (20.7)	0.931 (23.6)	1.049 (26.6)	G	1.428 (36.3)	2.002 (50.9)	0.118 (3.0)	0.755 (19.2)	1.270 (32.3)	G
1.552 (39.4)	2.509 (63.7)	0.476 (12.1)	0.932 (23.7)	1.173 (29.8)	1.291 (32.8)	H	1.552 (39.4)	2.065 (52.5)	0.118 (3.0)	0.939 (23.9)	1.395 (35.4)	H
1.552 (39.4)	2.695 (68.5)	0.476 (12.1)	0.932 (23.7)	1.173 (29.8)	1.291 (32.8)	H	1.552 (39.4)	2.305 (58.5)	0.118 (3.0)	1.049 (26.6)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.540 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.539 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.539 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.539 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	3.138 (79.7)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H

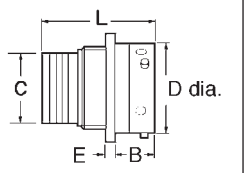
✦ L is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.

All dimensions in inches (millimeters in parenthesis)

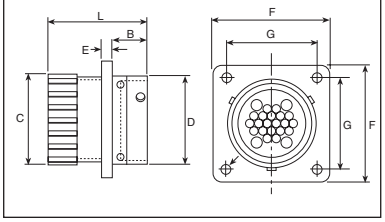
Dimensions – Trident

Reverse Flanged Receptacle

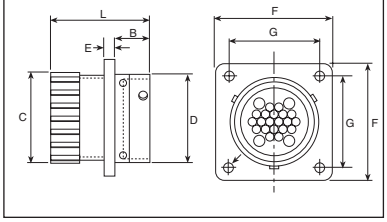
Ringlock

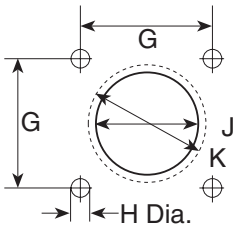


Neptune



TNM





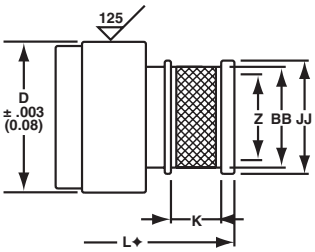
Dim. J-flange in front of panel
Dim. K-flange at rear of panel

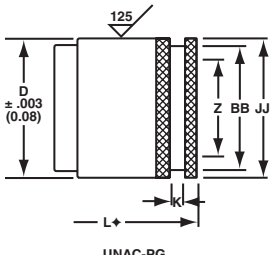
Number of Contacts	Shell Size	Part Number	L Max	B Max	C∅ Max	D∅ Max	E Max	F Max	G TP	H∅ ±.005 (0.13)	J∅ +.010 (0.25) -.000 (0.00)	K∅ +.010 (0.25) -.000 (0.00)
4	10	192990-1760	1.240 (31.5)	0.447 (11.4)	0.433 (11.0)	0.591 (15.0)	0.091 (2.3)	0.925 (23.5)	0.709 (18.0)	0.128 (3.3)	0.594 (15.1)	0.681 (17.3)
4	10	192993-0061 †	1.520 (38.6)	0.460 (11.6)	0.560 (14.3)	0.590 (14.9)	0.070 (1.9)	0.940 (23.8)	0.720 (18.3)	0.130 (3.2)	0.590 (15.1)	0.680 (17.3)
4	10	192993-0071	1.693 (43.0)	0.460 (11.6)	0.690 (17.5)	0.590 (14.9)	0.070 (1.9)	0.940 (23.8)	0.720 (18.3)	0.130 (3.2)	0.590 (15.1)	0.680 (17.3)
8	12	192990-1770	1.240 (31.5)	0.447 (11.4)	0.547 (13.9)	0.748 (19.0)	0.091 (2.3)	1.031 (26.2)	0.807 (20.5)	0.128 (3.3)	0.717 (18.2)	0.858 (21.8)
8	12	192993-0062 †	1.520 (38.6)	0.460 (11.6)	0.690 (17.4)	0.750 (19.0)	0.070 (1.9)	1.030 (26.2)	0.810 (20.6)	0.130 (3.2)	0.720 (18.2)	0.860 (21.8)
8	12	192993-0072	1.693 (43.0)	0.460 (11.6)	0.810 (20.6)	0.750 (19.0)	0.070 (1.9)	1.030 (26.2)	0.810 (20.6)	0.130 (3.2)	0.720 (18.2)	0.860 (21.8)
12	14	192990-1780	1.240 (31.5)	0.447 (11.4)	0.673 (17.1)	0.874 (22.2)	0.091 (2.3)	1.108 (28.1)	0.890 (22.6)	0.128 (3.3)	0.843 (21.4)	0.984 (25.0)
12	14	192900-0256	1.563 (39.7)	0.448 (11.4)	0.956 (24.3)	0.874 (22.2)	0.090 (2.3)	1.122 (28.5)	0.901 (22.9)	0.126 (3.2)	0.968 (24.6)	0.968 (24.6)
12	14	192993-0063 †	1.520 (38.6)	0.460 (11.6)	0.810 (20.6)	0.870 (22.1)	0.070 (1.9)	1.120 (28.5)	0.900 (22.8)	0.140 (3.5)	0.840 (21.4)	0.980 (25.0)
12	14	192993-0073	1.693 (43.0)	0.460 (11.6)	0.960 (24.3)	0.870 (22.1)	0.070 (1.9)	1.120 (28.5)	0.900 (22.8)	0.140 (3.5)	0.840 (21.4)	0.980 (25.0)
19	16	192990-1790	1.240 (31.5)	0.447 (11.4)	0.787 (20.0)	1.000 (25.4)	0.091 (2.3)	1.200 (30.5)	0.953 (24.2)	0.128 (3.3)	0.969 (24.6)	1.106 (28.1)
19	16	192900-0078	1.566 (39.8)	0.448 (11.4)	1.063 (27.0)	1.000 (25.4)	0.090 (2.3)	1.220 (31.0)	0.964 (24.5)	0.126 (3.2)	1.106 (28.1)	1.106 (28.1)
19	16	192993-0064 †	1.520 (38.6)	0.460 (11.6)	0.940 (23.8)	1.000 (25.3)	0.070 (1.9)	1.220 (30.9)	0.970 (24.6)	0.140 (3.5)	0.970 (24.6)	1.110 (28.1)
19	16	192993-0074	1.693 (43.0)	0.460 (11.6)	1.060 (27.0)	1.000 (25.3)	0.070 (1.9)	1.220 (30.9)	0.970 (24.6)	0.140 (3.5)	0.970 (24.6)	1.110 (28.1)
7	18	192990-1800	1.346 (34.2)	0.700 (17.8)	0.886 (22.5)	1.122 (28.5)	0.091 (2.3)	1.311 (33.3)	1.063 (27.0)	0.128 (3.3)	1.098 (27.9)	1.232 (31.3)
23	18	192990-1810	1.240 (31.5)	0.447 (11.4)	0.886 (22.5)	1.122 (28.5)	0.098 (2.5)	1.311 (33.3)	1.059 (26.9)	0.128 (3.3)	1.098 (27.9)	1.232 (31.3)
28	20	192990-1820	1.299 (33.0)	0.573 (14.6)	1.012 (25.7)	1.248 (31.7)	0.098 (2.5)	1.437 (36.5)	1.150 (29.2)	0.128 (3.3)	1.217 (30.9)	1.358 (34.5)
35	22	192990-1830	1.299 (33.0)	0.573 (14.6)	1.126 (28.6)	1.374 (34.9)	0.138 (3.5)	1.563 (39.7)	1.244 (31.6)	0.128 (3.3)	1.343 (34.1)	1.484 (37.7)
48	24	192990-1840	1.370 (34.8)	0.604 (15.3)	1.252 (31.8)	1.498 (38.0)	0.138 (3.5)	1.689 (42.9)	1.356 (34.4)	0.154 (3.9)	1.469 (37.3)	1.610 (40.9)
24	24	192900-0069	1.646 (41.8)	0.606 (15.4)	1.578 (40.1)	1.500 (38.1)	0.137 (3.5)	2.000 (50.8)	1.563 (39.7)	0.165 (4.2)	1.614 (41.0)	1.614 (41.0)
31	24	192900-0075	1.646 (41.8)	0.606 (15.4)	1.578 (40.1)	1.500 (38.1)	0.137 (3.5)	2.000 (50.8)	1.563 (39.7)	0.165 (4.2)	1.614 (41.0)	1.614 (41.0)
32	24	192900-0072	1.646 (41.8)	0.606 (15.4)	1.578 (40.1)	1.500 (38.1)	0.137 (3.5)	2.000 (50.8)	1.563 (39.7)	0.165 (4.2)	1.614 (41.0)	1.614 (41.0)
48	24	192900-0431	1.646 (41.8)	0.606 (15.4)	1.578 (40.1)	1.500 (38.1)	0.137 (3.5)	2.000 (50.8)	1.563 (39.7)	0.165 (4.2)	1.614 (41.0)	1.614 (41.0)
48	24	192991-0652	2.075 (52.7)	0.606 (15.4)	1.578 (40.1)	1.500 (38.1)	0.137 (3.5)	2.000 (50.8)	1.563 (39.7)	0.165 (4.2)	1.614 (41.0)	1.61 (41.0)

† No wire seal or nut

All dimensions in inches (millimeters in parenthesis)

Dimensions – Trident





Universal Heat Shrink							Cord Grip					
D∅ Max	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code	D∅ Max	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	C Code
0.740 (18.8)	2.066 (52.5)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B	0.740 (18.8)	1.736 (44.1)	0.118 (3.0)	0.413 (10.5)	0.707 (18.0)	C
0.740 (18.8)	2.500 (63.5)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B	0.740 (18.8)	2.170 (55.1)	0.118 (3.0)	0.322 (8.2)	0.707 (18.0)	C
0.740 (18.8)	2.500 (63.5)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B	0.740 (18.8)	2.170 (55.1)	0.118 (3.0)	0.322 (8.2)	0.707 (18.0)	C
0.865 (22.0)	2.228 (56.6)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C	0.865 (22.0)	1.745 (44.3)	0.118 (3.0)	0.512 (13.0)	0.833 (21.2)	D
0.865 (22.0)	2.611 (66.3)	0.476 (12.1)	0.425 (10.8)	0.665 (16.9)	0.783 (19.9)	C	0.865 (22.0)	2.170 (55.1)	0.118 (3.0)	0.425 (10.8)	0.833 (21.2)	D
0.865 (22.0)	2.611 (66.3)	0.476 (12.1)	0.425 (10.8)	0.665 (16.9)	0.783 (19.9)	C	0.865 (22.0)	2.170 (55.1)	0.118 (3.0)	0.425 (10.8)	0.833 (21.2)	D
0.990 (25.1)	2.178 (55.3)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D	0.990 (25.1)	1.713 (43.5)	0.118 (3.0)	0.631 (16.0)	0.887 (22.5)	D
0.990 (25.1)	2.481 (63.0)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D	0.990 (25.1)	2.052 (52.1)	0.118 (3.0)	0.551 (14.0)	0.887 (22.5)	D
0.990 (25.1)	2.626 (66.7)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D	0.990 (25.1)	2.182 (55.4)	0.118 (3.0)	0.551 (14.0)	0.887 (22.5)	D
0.990 (25.1)	2.626 (66.7)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D	0.990 (25.1)	2.182 (55.4)	0.118 (3.0)	0.551 (14.0)	0.887 (22.5)	D
1.146 (29.1)	2.150 (54.6)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E	1.146 (29.1)	1.761 (44.7)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
1.146 (29.1)	2.477 (62.9)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E	1.146 (29.1)	2.052 (52.1)	0.118 (3.0)	0.638 (16.2)	0.989 (25.1)	E
1.146 (29.1)	2.603 (66.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E	1.146 (29.1)	2.182 (55.4)	0.118 (3.0)	0.638 (16.2)	0.989 (25.1)	E
1.146 (29.1)	2.603 (66.1)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E	1.146 (29.1)	2.182 (55.4)	0.118 (3.0)	0.638 (16.2)	0.989 (25.1)	E
1.271 (32.3)	2.347 (59.6)	0.476 (12.1)	0.675 (17.1)	0.931 (23.6)	1.049 (26.6)	F	1.271 (32.3)	1.883 (47.8)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	F
1.271 (32.3)	2.241 (56.9)	0.476 (12.1)	0.675 (17.1)	0.931 (23.6)	1.049 (26.6)	F	1.271 (32.3)	1.777 (45.1)	0.118 (3.0)	0.755 (19.2)	1.114 (28.3)	F
1.428 (36.3)	2.204 (56.0)	0.476 (12.1)	0.815 (20.7)	0.931 (23.6)	1.049 (26.6)	G	1.428 (36.3)	1.776 (45.1)	0.118 (3.0)	0.939 (23.9)	1.270 (32.3)	G
1.552 (39.4)	2.309 (58.6)	0.476 (12.1)	0.932 (23.7)	1.173 (29.8)	1.291 (32.8)	H	1.552 (39.4)	1.876 (47.7)	0.118 (3.0)	1.049 (26.6)	1.395 (35.4)	H
1.552 (39.4)	2.577 (65.5)	0.476 (12.1)	0.932 (23.7)	1.173 (29.8)	1.291 (32.8)	H	1.552 (39.4)	2.150 (54.6)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.539 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.539 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.539 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.539 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	3.138 (79.7)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H

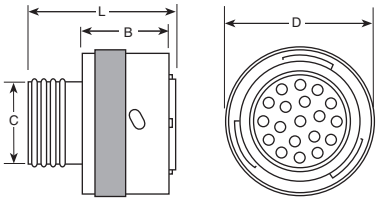
✦ L is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.

All dimensions in inches (millimeters in parenthesis)

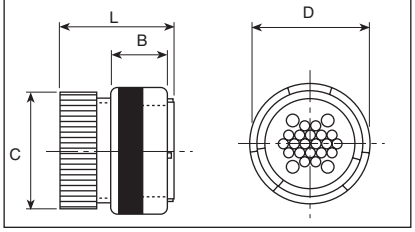
Trident – Dimensions

Standard Plug

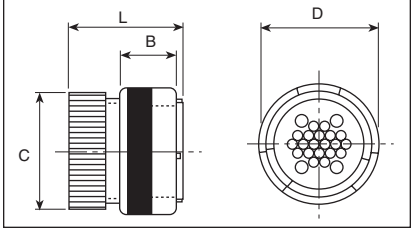
Ringlock



Neptune



TNM

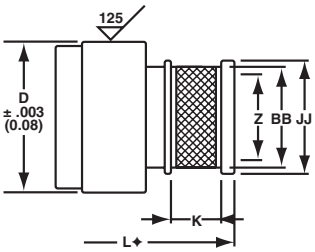


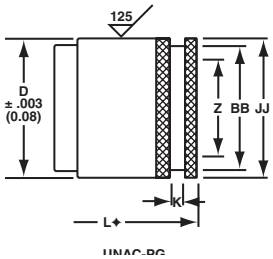
Number of Contacts	Shell Size	Part Number	L Max	B Max	C∅ Max	D∅ Max
4	10	192922-1250	1.252 (31.8)	0.756 (19.2)	0.429 (10.9)	0.850 (21.6)
4	10	192993-0001 †	1.500 (38.1)	0.750 (19.1)	0.540 (13.8)	0.850 (21.6)
4	10	192993-0011	1.673 (42.5)	0.750 (19.1)	0.690 (17.5)	0.850 (21.6)
8	12	192922-1260	1.252 (31.8)	0.756 (19.2)	0.543 (13.8)	0.976 (24.8)
8	12	192993-0002 †	1.500 (38.1)	0.750 (19.1)	0.670 (16.9)	0.976 (24.8)
8	12	192993-0012	1.673 (42.5)	0.750 (19.1)	0.810 (20.6)	0.976 (24.8)
12	14	192922-1270	1.252 (31.8)	0.756 (19.2)	0.669 (17.0)	1.102 (28.0)
12	14	192900-0303	1.527 (38.8)	0.756 (19.2)	0.956 (24.3)	1.102 (28.0)
12	14	192993-0003 †	1.500 (38.1)	0.750 (19.1)	0.790 (20.1)	1.102 (28.0)
12	14	192993-0013	1.673 (42.5)	0.750 (19.1)	0.960 (24.3)	1.102 (28.0)
19	16	192922-1280	1.252 (31.8)	0.756 (19.2)	0.783 (19.9)	1.228 (31.2)
19	16	192900-0017	1.566 (39.8)	0.756 (19.2)	1.063 (27.0)	1.189 (30.2)
19	16	192993-0004 †	1.500 (38.1)	0.750 (19.1)	0.920 (23.3)	1.230 (31.2)
19	16	192993-0014	1.673 (42.5)	0.750 (19.1)	1.060 (27.0)	1.230 (31.2)
7	18	192990-1330	1.299 (33.0)	0.756 (19.2)	0.885 (22.5)	1.350 (34.3)
23	18	192990-1320	1.252 (31.8)	0.756 (19.2)	0.881 (22.4)	1.350 (34.3)
28	20	192922-1290	1.252 (31.8)	0.756 (19.2)	1.007 (25.6)	1.476 (37.5)
35	22	192922-1300	1.252 (31.8)	0.756 (19.2)	1.122 (28.5)	1.602 (40.7)
48	24	192990-1340	1.252 (31.8)	0.756 (19.2)	1.248 (31.7)	1.728 (43.9)
24	24	192900-0014	1.566 (39.8)	0.756 (19.2)	1.594 (40.5)	1.732 (44.0)
31	24	192900-0016	1.566 (39.8)	0.756 (19.2)	1.594 (40.5)	1.732 (44.0)
32	24	192900-0015	1.566 (39.8)	0.756 (19.2)	1.594 (40.5)	1.732 (44.0)
48	24	192900-0469	1.566 (39.8)	0.756 (19.2)	1.594 (40.5)	1.732 (44.0)
48	24	192991-0628	2.000 (50.8)	0.756 (19.2)	1.594 (40.5)	1.732 (44.0)

† No wire seal or nut

All dimensions in inches (millimeters in parenthesis)

Dimensions – Trident





Universal Heat Shrink

DØ	L✦ Max	K Max	ZØ Cable Max*	BBØ Max	JJØ Max	C Code
0.740 (18.8)	2.098 (53.3)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
0.740 (18.8)	2.480 (63.0)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
0.740 (18.8)	2.480 (63.0)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
0.865 (22.0)	2.190 (55.6)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
0.865 (22.0)	2.591 (65.8)	0.476 (12.1)	0.425 (10.8)	0.665 (16.9)	0.783 (19.9)	C
0.865 (22.0)	2.591 (65.8)	0.476 (12.1)	0.425 (10.8)	0.665 (16.9)	0.783 (19.9)	C
0.990 (25.1)	2.191 (55.7)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
0.990 (25.1)	2.437 (61.9)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
0.990 (25.1)	2.583 (65.6)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
0.990 (25.1)	2.583 (65.6)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
1.146 (29.1)	2.213 (56.2)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
1.146 (29.1)	2.477 (62.9)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
1.146 (29.1)	2.583 (65.6)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
1.146 (29.1)	2.583 (65.6)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
1.271 (32.3)	2.469 (62.7)	0.476 (12.1)	0.675 (17.1)	0.931 (23.6)	1.049 (26.6)	F
1.271 (32.3)	2.286 (58.1)	0.476 (12.1)	0.675 (17.1)	0.931 (23.6)	1.049 (26.6)	F
1.428 (36.3)	2.354 (59.8)	0.476 (12.1)	0.815 (20.7)	0.931 (23.6)	1.049 (26.6)	G
1.552 (39.4)	2.433 (61.8)	0.476 (12.1)	0.932 (23.7)	1.173 (29.8)	1.291 (32.8)	H
1.552 (39.4)	2.629 (66.8)	0.476 (12.1)	0.932 (23.7)	1.173 (29.8)	1.291 (32.8)	H
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

✦ L is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.

Cord Grip

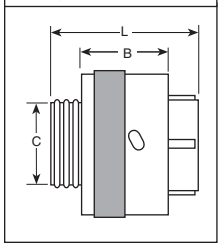
DØ	L✦ Max	K Max	ZØ Cable Max*	BBØ Max	C Code
0.740 (18.8)	1.781 (45.2)	0.118 (3.0)	0.413 (10.5)	0.707 (18.0)	C
0.740 (18.8)	2.150 (54.6)	0.118 (3.0)	0.322 (8.2)	0.707 (18.0)	C
0.740 (18.8)	2.150 (54.6)	0.118 (3.0)	0.322 (8.2)	0.707 (18.0)	C
0.865 (22.0)	1.721 (43.7)	0.118 (3.0)	0.512 (13.0)	0.833 (21.2)	D
0.865 (22.0)	2.150 (54.6)	0.118 (3.0)	0.425 (10.8)	0.833 (21.2)	D
0.865 (22.0)	2.150 (54.6)	0.118 (3.0)	0.425 (10.8)	0.833 (21.2)	D
0.990 (25.1)	1.747 (44.4)	0.118 (3.0)	0.631 (16.0)	0.887 (22.5)	D
0.990 (25.1)	2.048 (52.0)	0.118 (3.0)	0.551 (14.0)	0.887 (22.5)	D
0.990 (25.1)	2.162 (54.9)	0.118 (3.0)	0.551 (14.0)	0.887 (22.5)	D
0.990 (25.1)	2.162 (54.9)	0.118 (3.0)	0.551 (14.0)	0.887 (22.5)	D
1.146 (29.1)	1.806 (45.9)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
1.146 (29.1)	2.045 (51.9)	0.118 (3.0)	0.638 (16.2)	0.989 (25.1)	E
1.146 (29.1)	2.162 (54.9)	0.118 (3.0)	0.638 (16.2)	0.989 (25.1)	E
1.146 (29.1)	2.162 (54.9)	0.118 (3.0)	0.638 (16.2)	0.989 (25.1)	E
1.271 (32.3)	2.029 (51.5)	0.118 (3.0)	0.709 (18.0)	1.114 (28.3)	F
1.271 (32.3)	1.850 (47.0)	0.118 (3.0)	0.709 (18.0)	1.114 (28.3)	F
1.428 (36.3)	1.943 (49.4)	0.118 (3.0)	0.939 (23.9)	1.270 (32.3)	G
1.552 (39.4)	1.959 (49.8)	0.118 (3.0)	1.049 (26.6)	1.395 (35.4)	H
1.552 (39.4)	2.207 (56.1)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
1.552 (39.4)	2.450 (62.0)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
1.552 (39.4)	2.450 (62.0)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
1.552 (39.4)	2.450 (62.0)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
1.552 (39.4)	2.450 (62.0)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
1.552 (39.4)	2.894 (73.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H

All dimensions in inches (millimeters in parenthesis)

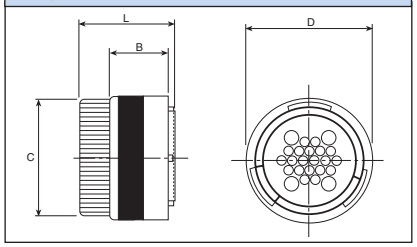
Dimensions – Trident

Reverse Plug

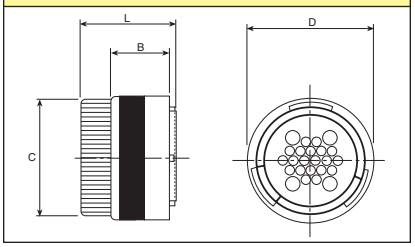
Ringlock



Neptune



TNM

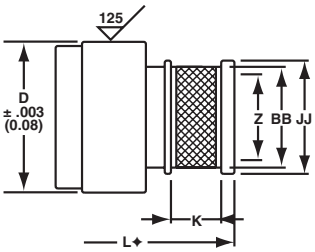


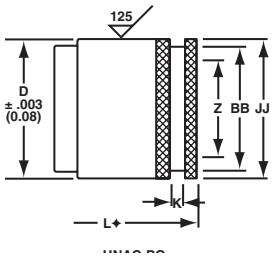
Number of Contacts	Shell Size	Part Number	L Max	B Max	C∅ Max	D∅ Max
4	10	192926-0500	1.027 (26.1)	0.756 (19.2)	0.433 (11.0)	0.850 (21.6)
4	10	192993-0041 †	1.173 (29.8)	0.750 (19.1)	0.540 (13.8)	0.850 (21.6)
4	10	192993-0051	1.346 (34.2)	0.750 (19.1)	0.690 (17.5)	0.850 (21.6)
8	12	192926-0510	1.008 (25.6)	0.756 (19.2)	0.547 (13.9)	0.976 (24.8)
8	12	192993-0042 †	1.173 (29.8)	0.750 (19.1)	0.670 (16.9)	0.976 (24.8)
8	12	192993-0052	1.346 (34.2)	0.750 (19.1)	0.810 (20.6)	0.976 (24.8)
12	14	192926-0520	1.055 (26.8)	0.756 (19.2)	0.673 (17.1)	1.102 (28.0)
12	14	192900-0236	1.244 (31.6)	0.756 (19.2)	0.956 (24.3)	1.102 (28.0)
12	14	192993-0043 †	1.173 (29.8)	0.750 (19.1)	0.790 (20.1)	1.102 (28.0)
12	14	192993-0053	1.346 (34.2)	0.750 (19.1)	0.960 (24.3)	1.102 (28.0)
19	16	192926-0530	1.087 (27.6)	0.756 (19.2)	0.787 (20.0)	1.228 (31.2)
19	16	192900-0057	1.248 (31.7)	0.756 (19.2)	1.063 (27.0)	1.189 (30.2)
19	16	192993-0044 †	1.173 (29.8)	0.750 (19.1)	0.920 (23.3)	1.230 (31.2)
19	16	192993-0054	1.346 (34.2)	0.750 (19.1)	1.063 (27.0)	1.230 (31.2)
7	18	192990-1390	1.240 (31.5)	0.756 (19.2)	0.886 (22.5)	1.350 (34.3)
23	18	192990-1380	1.008 (25.6)	0.756 (19.2)	0.886 (22.5)	1.350 (34.3)
28	20	192926-0540	1.232 (31.3)	0.756 (19.2)	1.012 (25.7)	1.476 (37.5)
35	22	192926-0550	1.232 (31.3)	0.756 (19.2)	1.126 (28.6)	1.602 (40.7)
48	24	192990-1400	1.232 (31.3)	0.756 (19.2)	1.252 (31.8)	1.732 (44.0)
24	24	192900-0054	1.276 (32.4)	0.752 (19.1)	1.594 (40.5)	1.732 (44.0)
31	24	192900-0056	1.276 (32.4)	0.752 (19.1)	1.594 (40.5)	1.732 (44.0)
32	24	192900-0055	1.276 (32.4)	0.752 (19.1)	1.594 (40.5)	1.732 (44.0)
48	24	192900-0425	1.693 (43.0)	0.752 (19.1)	1.594 (40.5)	1.732 (44.0)
48	24	192991-0648	1.693 (43.0)	0.752 (19.1)	1.594 (40.5)	1.732 (44.0)

† No wire seal or nut

All dimensions in inches (millimeters in parenthesis)

Dimensions – Trident





Universal Heat Shrink							Cord Grip					
D∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code	D∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	C Code
0.740 (18.8)	2.070 (52.6)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B	0.740 (18.8)	1.736 (44.1)	0.118 (3.0)	0.413 (10.5)	0.707 (18.0)	C
0.740 (18.8)	2.153 (54.7)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B	0.740 (18.8)	1.819 (46.2)	0.118 (3.0)	0.322 (8.2)	0.707 (18.0)	C
0.740 (18.8)	2.153 (54.7)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B	0.740 (18.8)	1.823 (46.3)	0.118 (3.0)	0.322 (8.2)	0.707 (18.0)	C
0.865 (22.0)	2.199 (55.9)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C	0.865 (22.0)	1.733 (44.0)	0.118 (3.0)	0.512 (13.0)	0.833 (21.2)	D
0.865 (22.0)	2.264 (57.5)	0.476 (12.1)	0.425 (10.8)	0.665 (16.9)	0.783 (19.9)	C	0.865 (22.0)	1.823 (46.3)	0.118 (3.0)	0.425 (10.8)	0.833 (21.2)	D
0.865 (22.0)	2.264 (57.5)	0.476 (12.1)	0.425 (10.8)	0.665 (16.9)	0.783 (19.9)	C	0.865 (22.0)	1.823 (46.3)	0.118 (3.0)	0.425 (10.8)	0.833 (21.2)	D
0.990 (25.1)	2.172 (55.2)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D	0.990 (25.1)	1.708 (43.4)	0.118 (3.0)	0.631 (16.0)	0.887 (22.5)	D
0.990 (25.1)	2.154 (54.7)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D	0.990 (25.1)	1.737 (44.1)	0.118 (3.0)	0.551 (14.0)	0.887 (22.5)	D
0.990 (25.1)	2.256 (57.3)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D	0.990 (25.1)	1.835 (46.6)	0.118 (3.0)	0.551 (14.0)	0.887 (22.5)	D
0.990 (25.1)	2.256 (57.3)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D	0.990 (25.1)	1.835 (46.6)	0.118 (3.0)	0.551 (14.0)	0.887 (22.5)	D
1.146 (29.1)	2.227 (56.6)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E	1.146 (29.1)	1.788 (45.4)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
1.146 (29.1)	2.158 (54.8)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E	1.146 (29.1)	1.737 (44.1)	0.118 (3.0)	0.638 (16.2)	0.989 (25.1)	E
1.146 (29.1)	2.256 (57.3)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E	1.146 (29.1)	1.835 (46.6)	0.118 (3.0)	0.638 (16.2)	0.989 (25.1)	E
1.146 (29.1)	2.256 (57.3)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E	1.146 (29.1)	1.835 (46.6)	0.118 (3.0)	0.638 (16.2)	0.989 (25.1)	E
1.271 (32.3)	2.493 (63.3)	0.476 (12.1)	0.675 (17.1)	0.931 (23.6)	1.049 (26.6)	F	1.271 (32.3)	2.025 (51.4)	0.118 (3.0)	0.709 (18.0)	1.114 (28.3)	F
1.271 (32.3)	2.261 (57.4)	0.476 (12.1)	0.675 (17.1)	0.931 (23.6)	1.049 (26.6)	F	1.271 (32.3)	1.805 (45.8)	0.118 (3.0)	0.709 (18.0)	1.114 (28.3)	F
1.428 (36.3)	2.334 (59.3)	0.476 (12.1)	0.815 (20.7)	0.931 (23.6)	1.049 (26.6)	G	1.428 (36.3)	1.896 (48.2)	0.118 (3.0)	0.939 (23.9)	1.270 (32.3)	G
1.552 (39.4)	2.413 (61.3)	0.476 (12.1)	0.932 (23.7)	1.173 (29.8)	1.291 (32.8)	H	1.552 (39.4)	1.947 (49.5)	0.118 (3.0)	1.049 (26.6)	1.395 (35.4)	H
1.552 (39.4)	2.609 (66.3)	0.476 (12.1)	0.932 (23.7)	1.173 (29.8)	1.291 (32.8)	H	1.552 (39.4)	2.187 (55.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.169 (55.1)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.169 (55.1)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.169 (55.1)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.169 (55.1)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.587 (65.7)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H

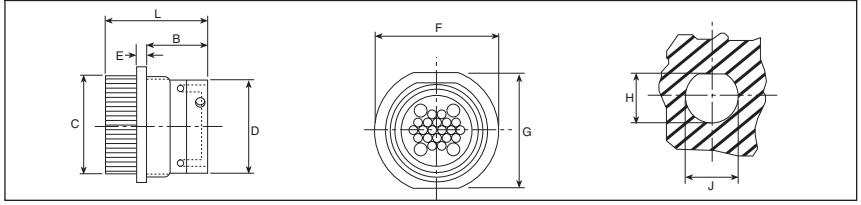
✦ L is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.

All dimensions in inches (millimeters in parenthesis)

Dimensions – Trident

Standard Jam Nut Receptacle

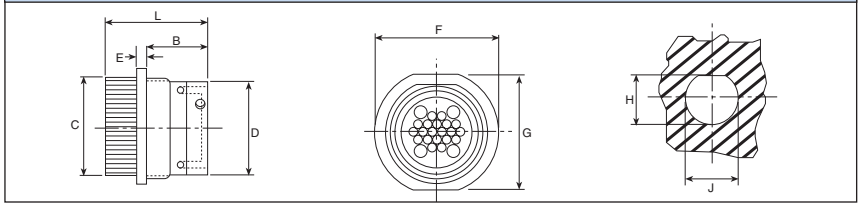
Neptune



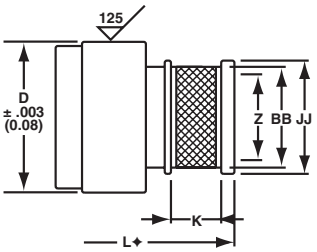
Number of Contacts	Shell Size	Part Number	L Max	B Max	C∅ Max	D∅ Max	E Max	F∅ Max	G Max	H∅ +.010 (0.25) -.000 (0.00)	J∅ +.010 (0.25) -.000 (0.00)
12	14	192900-0313	1.563 (39.7)	0.870 (22.1)	0.956 (24.3)	0.874 (22.2)	0.138 (3.5)	1.410 (35.8)	1.267 (32.2)	0.779 (19.8)	1.122 (28.5)
19	16	192900-0490	1.565 (39.8)	0.905 (23.0)	1.063 (27.0)	1.000 (25.4)	0.090 (2.3)	1.566 (39.8)	1.511 (38.4)	1.102 (28.0)	1.200 (30.5)
24	24	192900-0032	1.646 (41.8)	0.606 (15.4)	1.579 (40.1)	1.500 (38.1)	0.138 (3.5)	2.008 (51.0)	1.870 (47.5)	1.634 (41.5)	1.701 (43.2)
31	24	192900-0038	1.646 (41.8)	0.606 (15.4)	1.579 (40.1)	1.500 (38.1)	0.138 (3.5)	2.008 (51.0)	1.870 (47.5)	1.634 (41.5)	1.701 (43.2)
32	24	192900-0035	1.646 (41.8)	0.606 (15.4)	1.579 (40.1)	1.500 (38.1)	0.138 (3.5)	2.008 (51.0)	1.870 (47.5)	1.634 (41.5)	1.701 (43.2)
48	24	192900-0481	1.646 (41.8)	0.606 (15.4)	1.579 (40.1)	1.500 (38.1)	0.138 (3.5)	2.008 (51.0)	1.870 (47.5)	1.634 (41.5)	1.701 (43.2)
48	24	192991-0644	2.075 (52.7)	0.606 (15.4)	1.579 (40.1)	1.500 (38.1)	0.138 (3.5)	2.008 (51.0)	1.870 (47.5)	1.634 (41.5)	1.701 (43.2)

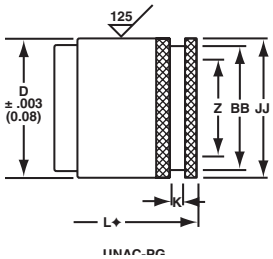
Reverse Jam Nut Receptacle

Neptune

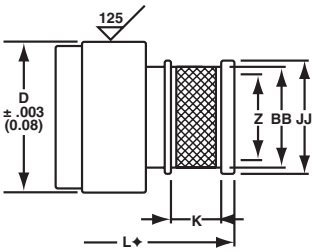


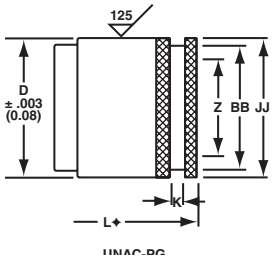
Number of Contacts	Shell Size	Part Number	L Max	B Max	C∅ Max	D∅ Max	E Max	F∅ Max	G Max	H∅ +.010 (0.25) -.000 (0.00)	J∅ +.010 (0.25) -.000 (0.00)
12	14	192900-0266	1.563 (39.7)	0.870 (22.1)	0.956 (24.3)	0.874 (22.2)	0.137 (3.5)	1.409 (35.8)	1.267 (32.2)	0.988 (25.1)	1.075 (27.3)
19	16	192900-0353	1.566 (39.8)	0.905 (23.0)	1.063 (27.0)	1.000 (25.4)	0.090 (2.3)	1.566 (39.8)	1.511 (38.4)	1.102 (28.0)	1.200 (30.5)
24	24	192900-0071	1.645 (41.8)	0.921 (23.4)	1.578 (40.1)	1.500 (38.1)	0.137 (3.5)	2.007 (51.0)	1.870 (47.5)	1.633 (41.5)	1.700 (43.2)
31	24	192900-0077	1.645 (41.8)	0.921 (23.4)	1.578 (40.1)	1.500 (38.1)	0.137 (3.5)	2.007 (51.0)	1.870 (47.5)	1.633 (41.5)	1.700 (43.2)
32	24	192900-0074	1.645 (41.8)	0.921 (23.4)	1.578 (40.1)	1.500 (38.1)	0.137 (3.5)	2.007 (51.0)	1.870 (47.5)	1.633 (41.5)	1.700 (43.2)
48	24	192900-0437	1.646 (41.8)	0.921 (23.4)	1.578 (40.1)	1.500 (38.1)	0.137 (3.5)	2.007 (51.0)	1.870 (47.5)	1.633 (41.5)	1.700 (43.2)
48	24	192991-0656	2.075 (52.7)	0.921 (23.4)	1.578 (40.1)	1.500 (38.1)	0.137 (3.5)	2.007 (51.0)	1.870 (47.5)	1.633 (41.5)	1.700 (43.2)





Universal Heat Shrink							Cord Grip					
D Max	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code	D Max	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	C Code
0.990 (25.1)	2.501 (63.5)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D	0.990 (25.1)	2.048 (52.0)	0.118 (3.0)	0.551 (14.0)	0.887 (22.5)	D
1.146 (29.1)	2.477 (62.9)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E	1.146 (29.1)	2.051 (52.1)	0.118 (3.0)	0.638 (16.2)	0.989 (25.1)	E
-	-	-	-	-	-	-	1.552 (39.4)	2.539 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.539 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.539 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.539 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	3.138 (79.7)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H





Universal Heat Shrink							Cord Grip					
D Max	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code	D Max	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	C Code
0.990 (25.1)	2.481 (63.0)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D	0.990 (25.1)	2.048 (52.0)	0.118 (3.0)	0.551 (14.0)	0.887 (22.5)	D
1.146 (29.1)	2.477 (62.9)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E	1.146 (29.1)	2.051 (52.1)	0.118 (3.0)	0.638 (16.2)	0.989 (25.1)	E
-	-	-	-	-	-	-	1.552 (39.4)	2.539 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.539 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.539 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	2.539 (64.5)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
-	-	-	-	-	-	-	1.552 (39.4)	3.138 (79.7)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H

✦ L is the maximum reference length from the mating face of the connector

* Recommended cable maximum is 90% of actual endbell I.D.

All dimensions in inches (millimeters in parenthesis)

Trident – Contacts

COLUMN 1	Contacts (1) COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5	COLUMN 6	COLUMN 7
Trident Contacts	**A.W.G. Wire Size**	**Plating**	**Loose Pins**	**3K Reel**	**Loose Pin**	**3K Reel Sockets**	**Sockets**
STAMPED CRIMP							
13 Amp-200 insertions	24-26	Tin	192990-0020	192990-2510	192990-0030	192990-2550
	24-26	Gold flash	192990-0080	192990-2650	192990-0090	192990-2690
		Gold	192900-0448	192900-0406	192900-0452	192900-0410
	20-22	Tin	192990-0040	192990-2500	192990-0050	192990-2540
		Gold flash	192922-1460	192990-2640	192922-1470	192990-2680
		Gold	192900-0447	192900-0405	192900-0451	192900-0409
[Call for High Conductivity Contacts (16A)]	16-20	Tin	192990-0060	192990-2490	192990-0070	192990-2530
		Gold flash	192990-0100	192990-2630	192990-0110	192990-2670
		Gold	192900-0446	192900-0404	192900-0450	192900-0408
Non-insulation support	14	Tin	192990-1240	192990-2480	192990-1250	192990-2520
	14	Gold flash	192990-1220	192990-2620	192990-1230	192990-2660
	14	Gold	192900-0445	192900-0403	192900-0449	192900-0407
MACHINED CRIMP						
13 Amp-500 insertions	24-28	Gold flash	192991-0099		192991-0036	
	24-28	Gold	192991-0100		192991-0042	
	24-28	Heavy Gold	192991-0101		192991-0054	
	24	Gold flash	192991-0091		192991-0037	
	24	Gold	192991-0092		192991-0043	
	24	Heavy Gold	192991-0093		192991-0055	
	22	Gold flash	192991-0095		192991-0038	
	22	Gold	192991-0096		192991-0044	
	22	Heavy Gold	192991-0097		192990-0056	
	20	Gold flash	192991-0127		192991-0039	
	20	Gold	192991-0128		192991-0045	
	20	Heavy Gold	192991-0129		192991-0057	
	20 Thick Wire	Gold flash	192991-0087		192991-0040	
	20 Thick Wire	Gold	192991-0088		192991-0046	
	20 Thick Wire	Heavy Gold	192991-0089		192991-0058	
	16-18	Gold flash	192991-0083		192991-0041	
	16-18	Gold	192991-0084		192991-0047	
	16-18	Heavy Gold	192991-0085		192991-0059	
FIRST MAKE/LAST BREAK MACHINED CRIMP						
13 Amp-500 insertions	20	Tin	192991-0166		192991-0211	
	20	Gold flash	192991-0163		192991-0078	
	20	Gold	192991-0164		192991-0207	
	16	Tin	192991-0162		192991-0212	
	16	Gold flash	192991-0159		192991-0079	
	16	Gold	192991-0160		192991-0208	
PRINTED CIRCUIT BOARD CONTACTS						
13 Amp-500 insertions	PC post dia. inches (mm)					
	.043 (1.10)	Tin	192991-0198		192991-0204	
	.043 (1.10)	Gold	192991-0195		192991-0067	
	.03 (.76)	Tin	192991-0122		192991-0203	
.03 (.76)	Gold	192991-0119		192991-0066		
Stamped PC pin contacts available, please call.	.028 (.71)	Tin Signal	192900-0465			
	.028 (.71)	Gold Signal	192900-0356			
	.059 (1.50)	Tin Power	192991-0617			
POWER STAMPED 30 Amp-200 insertions						
	16-18	Tin	031-8717-020	121668-0000	031-8717-120	121668-0100
	14-16	Tin	031-8717-021	121668-0001	031-8717-121	121668-0101
	12-14	Tin	031-8717-022	121668-0002	031-8717-122	121668-0102
COAX/TWISTED PAIR Used only in signal contact cavities						
	Twisted Pair (B)	Gold	192945-4530		192945-4930	
Outer Male Contact Assembly	Coaxial (A)		192945-4390		192945-4380	

MACHINED SOLDER FOR PROTOTYPING

28-14 AWG wire

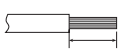
	Pin	Socket
Tin	192900-0632	192900-0634
Gold	192900-0633	192900-0635

(1) Loose or 3K Reel
Stamped contacts are available loose piece or on continuous reels of 3,000 for use with semi-automated crimping systems. Call for information.

(2) Wire Hole Fillers (Neptune only)
The rear Neptune wire seal has individual wire seals that are punched out when inserting the contact. If a seal is accidentally pierced, the seal can be repaired by inserting a wire hole filler.

(3) Keying Pins
A plastic pin which can be snapped into an unused signal or power contact hole. This will only allow another connector to mate if there is an empty hole opposite the keying pin. Used to polarize similar connectors to avoid mis-mating.

All dimensions in inches (millimeters in parenthesis)

Wire Range		Accessories		Tools			
							
COLUMN 8	COLUMN 9	COLUMN 10	COLUMN 11	COLUMN 12	COLUMN 13	COLUMN 14	COLUMN 15
Wire Strip Lengths Inches (MM) +.02 +.01	Wire Insulation Diameter Inches (MM)	Wire Hole Fillers Neptune Only [2]	Keying Pins [3]	Automatic Crimp Tooling		Economy Non-Ratcheting Hand Crimp Tool[5]	Extraction Tool[6]
Hand Crimp Tool[4]							
	.035 - .0627 (.89 - 1.58)	192991-0018 192991-0018 192991-0018	192990-0000 192990-0000 192990-0000	121586-5236 (20-26 AWG)		192922-1440 192922-1440 192922-1440	192922-1450 192922-1450 192922-1450
	.046 - .081 (1.17 - 2.08)	192991-0018 192991-0018 192991-0018	192990-0000 192990-0000 192990-0000			192922-1440 192922-1440 192922-1440	192922-1450 192922-1450 192922-1450
	.078 - .118 (2.00 - 3.00)	192991-0018 192991-0018 192991-0018	192990-0000 192990-0000 192990-0000	121586-5237 (16-18 AWG)		192922-1440 192922-1440 192922-1440	192922-1450 192922-1450 192922-1450
	N/A No insulation grip	192991-0018 192991-0018 192991-0018	192990-0000 192990-0000 192990-0000	121586-5238 (14-16 AWG)		- - -	192922-1450 192922-1450 192922-1450
Locator[4]							
.20 (5.0)	.035 - .055 (.90 - 1.40)	192991-0018 192991-0018 192991-0018	192990-0000 192990-0000 192990-0000	AF8 AF8 AF8	TH206 TH206 TH206	- - -	192922-1450 192922-1450 192922-1450
.20 (5.0)	.041 - .062 (1.05 - 1.60)	192991-0018 192991-0018 192991-0018	192990-0000 192990-0000 192990-0000	AF8 AF8 AF8	TH206 TH206 TH206	- - -	192922-1450 192922-1450 192922-1450
.20 (5.0)	.062 - .084 (1.60 - 2.15)	192991-0018 192991-0018 192991-0018	192990-0000 192990-0000 192990-0000	AF8 AF8 AF8	TH206 TH206 TH206	- - -	192922-1450 192922-1450 192922-1450
.20 (5.0)	.051 - .070 (1.30 - 1.80)	192991-0018 192991-0018 192991-0018	192990-0000 192990-0000 192990-0000	AF8 AF8 AF8	TH206 TH206 TH206	- - -	192922-1450 192922-1450 192922-1450
.20 (5.0)	.062 - .082 (1.60 - 2.10)	192991-0018 192991-0018 192991-0018	192990-0000 192990-0000 192990-0000	AF8 AF8 AF8	TH206 TH206 TH206	- - -	192922-1450 192922-1450 192922-1450
.28 (7.1)	N/A No insulation grip	192991-0018 192991-0018 192991-0018	192990-0000 192990-0000 192990-0000	AF8 AF8 AF8	TH206 TH206 TH206	- - -	192922-1450 192922-1450 192922-1450
.20 (5.0)		192991-0018 192991-0018 192991-0018	192990-0000 192990-0000 192990-0000	AF8 AF8 AF8	TH206 TH206 TH206	- - -	192922-1450 192922-1450 192922-1450
.28 (7.1)	N/A No insulation grip	192991-0018 192991-0018 192991-0018	192990-0000 192990-0000 192990-0000	AF8 AF8 AF8	TH206 TH206 TH206	- - -	192922-1450 192922-1450 192922-1450
N/A	N/A		192990-0010 pin 192990-7650 skt	- - - -	- - - -	- - - -	192922-1450 192922-1450 192922-1450 192922-1450
							- - -
Hand Crimp Tool[4]							
.20 (5.0)	.055-.079 (1.4 - 2.0) .079-.114 (2.0 - 2.9) .114-.142 (2.9 - 3.6)	192991-0019 192991-0019 192990-0019	192900-0189 192900-0189 192900-0189	112108-0012 112108-0012 112108-0011		192922-1440 192922-1440 192922-1440	192900-0176 192900-0176 192900-0176
Hand Crimp Tool[4]			**Locator[4]**				
Call for data sheet containing wire preparation information, tooling, and cable types.			Inner Conductor AFM8 Outer Conductor GS100-1	K151 GP295			192922-1450

(4) Hand Crimp Tool & Locator
Hand crimp tools produce consistent, high quality crimps by using a ratchet mechanism which will only release the contact when the crimp is completed. Stamped contacts use a tool with integrated dies. Machined contacts use a military style tool(MIL-C-22520/1) which also requires the appropriate locator to form a complete crimping system.

(5) Economy Crimp Tool (stamp contacts only)
This is a pliers style tool for prototype or service use. It has no ratchet and the completed crimp requires two separate operations, one to crimp the conductor, and a second crimp to secure the insulation support.The economy tool covers wire gauges 16, 20, and 24 AWG and is for use with stamped contacts only.

(6) Extraction Tool
Contacts can be easily removed by placing the extraction tool over the contact in the front of the connector and pushing. The contact is ejected from the rear of the connector. No insertion tool is needed for any Trident contacts.

Trident – At-A-Glance

Name:

Company:

Email:

Phone:

Qty: EAU:

Additional Connector Information

CONNECTOR Part #:_____

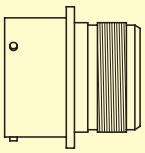
OR

# of Contacts:_____ Sizes & Type:_____

CABLE Manufacturer: _____
(If Known)

CABLE Part #: _____ OR Cable OD:_____

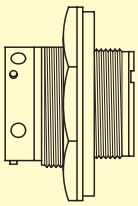
Choose One Connector



Flange Receptacle

☐ Standard Sex

☐ Reversed Sex

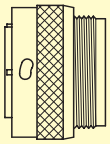


Jam Nut Receptacle

(Neptune & TNM)

☐ Standard Sex

☐ Reversed Sex



Plug

☐ Standard Sex

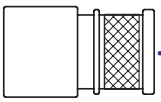
☐ Reversed Sex

Choose One Endbell

Use endbell "U" for Menus A, B, C, D & E

☐ U

☐ D



☐ Omit for Unshielded

☐ S — Shielding Spring

☐ T — Shielding Tape

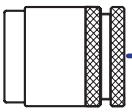
☐ W — Shielding Tape & Spring

Contact Termination

☐ Crimp ☐ Solder

Use endbell "CG" for Menus F, G & H

☐ CG



Comments/Notes:

_____

_____

_____

_____

_____

_____

Choose One Wire Protection

☐ HST — Heat Shrink Tubing

☐ SB — Straight Boot

☐ BSB — Bottle Shaped Shrink Boot

☐ HBSB — High Ratio Bottle Shaped Shrink Boot

☐ CSB — Convoluted Shrink Boot

☐ RSB — Right Angle Shrink Boot

☐ CA — Conduit Adapter & Conduit

☐ MSS — Metal Short Shielded

☐ PF — Plastic with flex Relief

☐ PS — Plastic Short

☐ MS — Metal Short

☐ PL — Plastic with Long Boot

☐ ML — Metal with Long Boot



MIL-DTL-38999 Series I connectors offer high density contact arrangements in a miniature circular shell. Originally designed for the especially demanding requirements of today's high performance military and commercial aircraft, these connectors are finding their way into applications needing extremely reliable interconnections. Series I features include total environmental sealing, wide operating temperature range (-65°C to 200°C), quick mating three-point bayonet coupling, 100% scoop proof shell design, EMI-RFI shielding, and they are available in a rugged 500-hour salt spray plating.

Applications

- High Performance Military Aircraft
- Commercial Airlines
- Communications Equipment
- Armored Personnel Carriers & Tanks
- Missiles
- Shipboard
- Medical Instrumentation
- High Reliability Test Equipment

Features

Quick Mating
A three-point bayonet coupling system is quick mating and also provides an audible and tactile "click," along with visual verification of mated connectors via a sighting hole and high-visibility, bright blue painted bayonet pins.

Shielded Interconnect
The plugs feature high quality grounding springs that provide 360 degrees of EMI/RFI shielding protection. These springs ground the barrel of the plug to the inside wall of the receptacle with a wiping action that offers effective protection from reception or transmission of electronic noise.

Many Contact Layouts and Styles
Series I connectors come in a wide variety of contact sizes and layouts up to 128 contacts. Printed circuit board, fiber optic, thermocouple, and coax style contacts are available for special applications.

Utilizes High-Quality Military Contacts
For standard applications, these connectors come with crimp style military contacts designed to resist bending, and provide reliable performance under the most rigorous conditions.

Corrosion Resistant
Available with cadmium-over-nickel plating, Series I connectors have met and passed the 500-hour military salt spray corrosion tests.

38999 Series 1

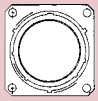
STEP 1
Select Shell Style Receptacle or Plug

Receptacle

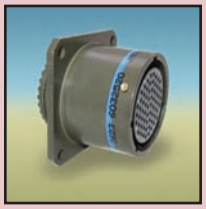
MS27466T



Front mount with rear accessory threads.



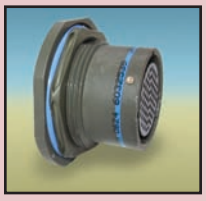
MS27656T +



Rear mount with rear accessory threads.



MS27468T



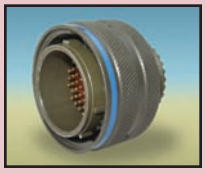
Jam Nut with rear accessory threads.

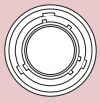


mates with

Standard Plug

MS27467T +





+ Most Popular

STEP 6 Choose Endbell





Spring



Shielding Tape

Potted (Preferred)

- **U** = Unshielded
- **US** = with shielding spring
- **UT** = with shielding tape
- **UW** = with shielding tape & spring

RU Right Angle

NEW!



Call for more info

STEP 7 Choose Heat Shrink Boot or Tubing

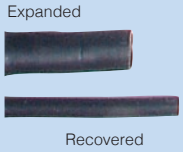
Note: Cable outside diameter must be between expanded and recovered dimensions.

Boot Options

SB – Straight Boot



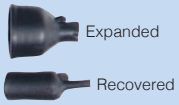
HST – Heat Shrink Tubing



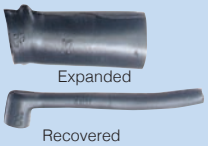
CSB – Convoluted Shrink Boot



BSB/HSBB – Bottle Shaped Shrink Boot (High Ratio Bottle Shaped Boot)



RSB – Right Angle Shrink Boot



Heat Shrink Product	SB 1	SB 2	SB 3	SB 4	SB 5	HST 1	HST 2	HST 3	HST 4
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	0.750 (19.1)	1.000 (25.4)	1.250 (31.8)	1.570 (39.9)
Recovered ID inch (mm)	0.25 (6.4)	0.29 (7.4)	0.33 (8.4)	0.38 (9.7)	0.41 (10.4)	0.250 (6.4)	0.320 (8.1)	0.416 (10.6)	0.510 (13.0)
Length Max inch (mm)	4.17 (105.9)	4.77 (121.2)	5.46 (138.7)	6.28 (159.5)	7.00 (177.8)	6.00 (152.4)			
Shell Size 9	◆					◆			
11	◆					◆	◆		
13		◆	◆				◆		
15			◆					◆	
17			◆	◆				◆	
19				◆				◆	
21				◆					◆
23					◆				◆
25									◆

Most Popular

adhesive lined heat shrink tubing

Heat Shrink Product	CSB2	CSB3	CSB4	CSB5	BSB1	HBSB2	BSB2	BSB3	BSB4	BSB5
Expanded ID inch (mm)	0.70 (17.8)	1.06 (26.9)	1.44 (36.6)	1.80 (45.7)	0.94 (23.9)	0.35 (8.9)	1.18 (30.0)	1.22 (31.0)	1.42 (36.1)	1.69 (42.9)
Recovered ID inch (mm)	0.32 (8.1)	0.50 (12.7)	0.69 (17.5)	0.88 (22.4)	0.24 (6.1)	0.14 (3.6)	0.24 (6.1)	0.28 (7.1)	0.33 (8.4)	0.39 (9.9)
Length Max inch (mm)	5.25 (133.4)	5.75 (146.1)	6.25 (158.8)	6.75 (171.5)	1.50 (38.1)	2.17 (55.1)	2.17 (55.1)	2.64 (67.1)	3.15 (80.0)	3.90 (99.1)
Shell Size 9	◆									
11	◆				◆	◆	◆			
13	◆				◆	◆	◆	◆		
15		◆			◆	◆	◆	◆	◆	
17		◆	◆				◆	◆	◆	
19		◆	◆				◆	◆	◆	
21		◆	◆					◆	◆	
23		◆	◆						◆	
25			◆	◆						◆

Heat Shrink Product	RSB1	RSB2	RSB3	RSB4	RSB5
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)
Recovered ID inch (mm)	0.23 (5.8)	0.26 (6.6)	0.30 (7.6)	0.35 (8.9)	0.37 (9.4)
Length Max inch (mm)	4.14 (105.2)	4.88 (124.0)	5.76 (146.3)	6.78 (172.2)	7.29 (185.2)
Shell Size 9	◆				
11	◆	◆			
13		◆	◆		
15			◆		
17			◆	◆	
19				◆	
21				◆	
23				◆	◆
25					◆

STEP 6 Choose Endbell



CG = Straight Adapter Endbell



RG = Right Angle Adapter Endbell

Please call for more information

STEP 7 Choose Wire Protection

Unshielded Conduits



CA* = conduit adapter for plastic flexible conduit. Add size code i.e. CGCA10

Note: Normal recommended conduit fill is 40% of Conduit ID or less.

CA*		07	10	12	14	17	23
Conduit ID Inch (mm)		0.256 (6.5)	0.394 (10.0)	0.472 (12.0)	0.563 (14.3)	0.650 (16.5)	0.906 (23.0)
Conduit OD Inch (mm)		0.394 (10.0)	0.512 (13.0)	0.622 (15.8)	0.728 (18.5)	0.835 (21.2)	1.122 (28.5)
Shell Size	9	◆	◆				
	11	◆	◆				
	13	◆	◆	◆			
	15	◆	◆	◆	◆	◆	
	17			◆	◆	◆	◆
	19			◆	◆	◆	◆
	21						◆
	23						◆
	25			◆			

R= with reducer

OR Shielded Cord Grip

			Size Code 1		2		3		4	
		MSS*	Min mm	Max mm	Min mm	Max mm	Min mm	Max mm	Min mm	Max mm
Shell Size	9	◆	4.0	6.0	6.0	9.5	-	-	-	-
	11	◆	4.0	6.5	6.5	9.5	8.0	10.5	-	-
	13	◆	6.5	9.5	8.0	10.5	9.0	13.0	-	-
	15	◆	6.5	9.5	7.0	10.5	9.0	13.0	-	-
	17	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	19	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	21	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	23	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	25	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0

Conduit Adapter and Cord Grip Types

- **CA***= Conduit Adapter
- **MSS***= Metal Short Shielded - Nickel Plated Brass
- **PF***= Plastic with Flex Spring
- **PS***= Plastic Short
- **MS***= Metal Short - Nickel Plated Brass
- **PL***= Plastic Long
- **ML***= Metal Long - Nickel Plated Brass
- *= add size code per chart i.e. CGPFA or CGMSS4

Min/Max refers to cable diameter.

OR Unshielded Cord Grip

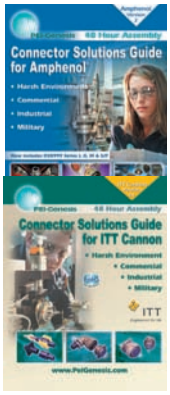
		 PF*	 PS*	 MS*	Size Code A Min mm	A Max mm	R Min mm	R Max mm	 PL*	 ML*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm
Shell Size	9	◆	◆	◆	3.0	6.5	2.0	5.0			-	-	-	-	-	-
	11	◆	◆	◆	4.0	8.0	2.0	6.0	◆	◆	4.0	6.5	7.5	9.5	-	-
	13	◆	◆	◆	5.0	10.0	3.0	7.0	◆	◆	6.5	9.5	7.0	10.5	-	-
	15	◆	◆	◆	6.0	12.0	5.0	9.0	◆	◆	6.5	9.5	8.5	10.5	-	-
	17	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
	19	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
	21	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
	23	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	17.0	21.0	21.0	25.0	-	-
	25	◆	◆	◆	13.0	18.0	9.0	16.0			-	-	-	-	-	-

Note: Cable jacket and shield diameters must be between Min/Max of cord grip.

For detailed info on shield diameters, see MSS table on page 232.

STEP 2A Choose Shell Size

STEP 2B Choose Connector Layout



See Connector Solutions Guides

STEP 3 Choose Connector Plating

- **B =** Olive Drab Chromate over Cadmium over Electroless Nickel (-65°C to 175°C -85°F to 347°F)
- **F =** Electroless Nickel ‡ (-65°C to 200°C -85°F to 392°F)
- **A =** Clear Chromate over Cadmium over Electroless Nickel ‡ (-65°C to 150°C (inactive) -85°F to 302°F)
- **C =** Anodic Coating ✦ (-65°C to 200°C -85°F to 392°F)

STEP 4 Choose Contact

- **P** = Pin
- **S** = Socket
- **A** = Less Pin Contacts
- **B** = Less Socket Contacts

A or B is used only for special contact types (PC Pin, Thermocouple, Fiberoptic).

STEP 5 Choose Alternate Shell Position

(omit for normal)

- **A** = Next Most Popular
- **B** = Limited Availability
- **C** = Check for Availability
- **D** = Check for Availability

See Connector Solutions Guides

Go to STEP 6

Example of part description:

MS27468T	25	F	35	P		-UT	BSB5
1 Shell Style	2A Shell Size*	3 Plating	2B Connector Layout*	4 Contact	5 Rotation (omit for normal)	6 Endbell	7 Wire Protection

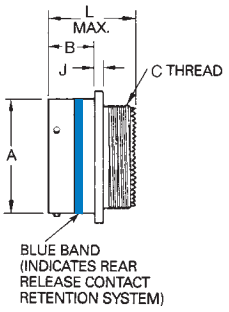
*See Connector Solutions Guide

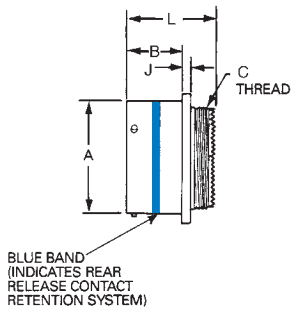
Note: ✦ Endbells U & CG will be Black Anodized.
‡ Endbells U & CG will be Electroless Nickel Plated

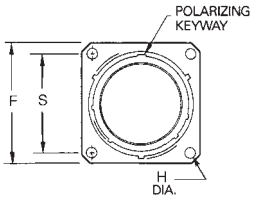
38999 Series I – Dimensions

Receptacles

MS27656

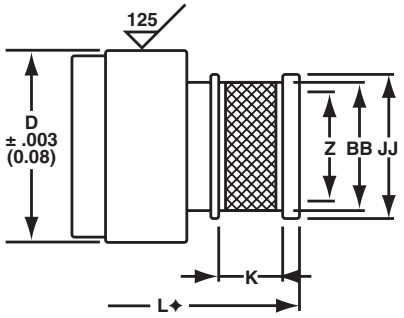




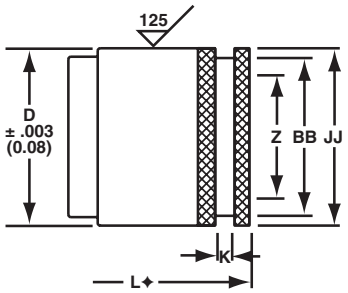


Shell Size	A Diameter Max	L Max Overall Length		B Max		C Rear Thread UNEF-2A	J Max	F Max	S (TP)	H Max
		MS27466	MS27656	MS27466	MS27656					
9	.573	1.240	1.247	.632	.820	7/16-28	.100	.958	.719	.138
	(14.55)	(31.50)	(31.67)	(16.05)	(20.83)		(2.54)	(24.33)	(18.26)	(3.51)
11	.701	1.240	1.247	.632	.820	9/16-24	.100	1.051	.812	.138
	(17.81)	(31.50)	(31.67)	(16.05)	.820(20.83)		(2.54)	(26.70)	(20.62)	(3.51)
13	.851	1.240	1.247	.632	.820	11/16/24	.100	1.145	.906	.138
	(21.62)	(31.50)	(31.67)	(16.05)	.820(20.83)		(2.54)	(29.08)	(23.01)	(3.51)
15	.976	1.240	1.247	.632	.820	13/16-20	.100	1.239	.969	.138
	(24.79)	(31.50)	(31.67)	(16.05)	.820(20.83)		(2.54)	(31.47)	(24.61)	(3.51)
17	1.101	1.240	1.247	.632	.820	15/16-20	.100	1.332	1.062	.138
	(27.97)	(31.50)	(31.67)	(16.05)	.820(20.83)		(2.54)	(33.83)	(26.97)	(3.51)
19	1.208	1.240	1.247	.632	.820	1-1/16-18	.100	1.458	1.156	.138
	(30.68)	(31.50)	(31.67)	(16.05)	.820(20.83)		(2.54)	(37.03)	(29.36)	(3.51)
21	1.333	1.240	1.247	.602	.820	1-3/16-18	.130	1.582	1.250	.138
	(33.86)	(31.50)	(31.67)	(15.29)	.790(20.07)		(3.30)	(40.18)	(31.75)	(3.51)
23	1.458	1.240	1.247	.602	.820	1-5/16-18	.130	1.708	1.375	.157
	(37.03)	(31.50)	(31.67)	(15.29)	.790(20.07)		(3.30)	(43.38)	(34.93)	(3.99)
25	1.583	1.240	1.247	.602	.820	1-7/16-18	.130	1.832	1.500	.157
	(40.21)	(31.50)	(31.67)	(15.29)	.790(20.07)		(3.30)	(46.53)	(38.10)	(3.99)

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Min*	BB∅ Max	JJ∅ Max	C Code
9	0.740 (18.8)	2.189 (55.5)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
11	0.740 (18.8)	2.270 (57.7)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
13	0.865 (22.0)	2.270 (57.7)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
15	0.990 (25.1)	2.390 (60.7)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
17	1.146 (29.1)	2.460 (62.5)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
19	1.271 (32.3)	2.540 (64.5)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
21	1.428 (36.3)	2.480 (63.0)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
23	1.552 (39.4)	2.580 (65.5)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
25	1.552 (39.4)	2.630 (66.6)	0.476 (12.1)	0.900 (22.86)	1.157 (29.4)	1.276 (32.4)	H



UNAC-PG

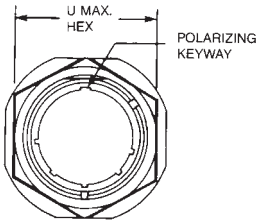
Cord Grip						
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	C Code
9	0.740 (18.8)	1.930 (49.0)	0.118 (3.0)	0.330 (8.38)	0.580 (14.8)	B
11	0.865 (22.0)	1.930 (49.0)	0.118 (3.0)	0.440 (11.18)	0.707 (18.0)	C
13	0.990 (25.1)	1.930 (49.0)	0.118 (3.0)	0.550 (13.97)	0.833 (21.2)	D
15	0.990 (25.1)	1.950 (49.5)	0.118 (3.0)	0.652 (16.56)	0.887 (22.6)	D
17	1.146 (29.1)	2.000 (50.8)	0.118 (3.0)	0.752 (19.10)	0.989 (25.1)	E
19	1.271 (32.3)	1.887 (47.9)	0.118 (3.0)	0.752 (19.10)	1.114 (28.3)	F
21	1.428 (36.3)	2.104 (53.4)	0.118 (3.0)	0.950 (24.10)	1.270 (32.3)	G
23	1.552 (39.4)	2.220 (56.4)	0.118 (3.0)	0.950 (24.10)	1.395 (35.4)	H
25	1.552 (39.4)	2.300 (58.4)	0.118 (3.0)	0.950 (24.10)	1.395 (35.4)	H

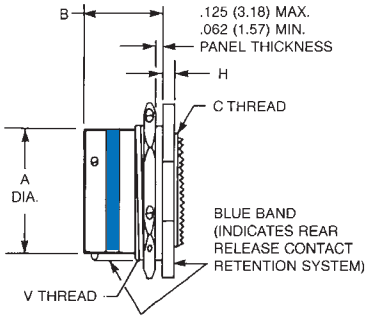
L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

38999 Series I – Dimensions

Receptacles

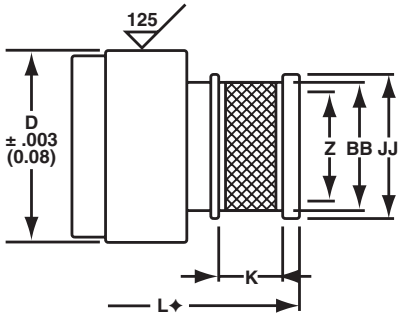
MS27468



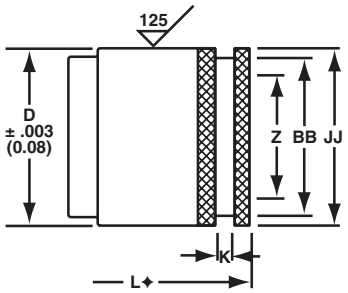


Shell Size	A Diameter Max	B Max	H Max	Overall Length Class T	U Max Jam Nut Flats	W Max	V Jam Nut	C Rear Thread UNEF-2A
9	.573 (14.55)	.920 (23.37)	.120 (3.05)	1.358 (34.50)	.892 (22.66)	1.204 (30.58)	11/16-24UNEF	7/16-28
11	.701 (17.81)	.920 (23.37)	.120 (3.05)	1.358 (34.50)	1.017 (25.83)	1.391 (35.33)	13/16-24UNEF	9/16-24
13	.851 (21.62)	.920 (23.37)	.120 (3.05)	1.358 (34.50)	1.205 (30.61)	1.516 (38.51)	1-20UNEF	11/16/24
15	.976 (24.79)	.920 (23.37)	.120 (3.84)	1.358 (34.50)	1.329 (33.76)	1.641 (41.68)	1-1/8-18UNEF	13/16-20
17	1.101 (27.97)	.920 (23.37)	.120 (3.84)	1.358 (34.50)	1.455 (39.96)	1.766 (44.86)	1-1/4-18UNEF	15/16-20
19	1.208 (30.68)	.920 (23.37)	.120 (3.84)	1.358 (34.50)	1.579 (40.11)	1.954 (49.63)	1-3/8-18UNEF	1-1/16-18
21	1.333 (33.86)	.920 (23.37)	.120 (3.84)	1.358 (34.50)	1.705 (43.31)	2.078 (52.78)	1-1/2-18UNEF	1-3/16-18
23	1.458 (37.03)	.920 (23.37)	.120 (3.84)	1.358 (34.50)	1.829 (46.46)	2.204 (55.98)	1-5/8-18UNEF	1-5/16-18
25	1.583 (40.21)	.920 (23.37)	.120 (3.84)	1.358 (34.50)	2.017 (51.23)	2.328 (59.13)	1-3/4-18UNS	1-7/16-18

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Min*	BB∅ Max	JJ∅ Max	C Code
9	0.740 (18.8)	2.349 (59.7)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
11	0.740 (18.8)	2.420 (61.5)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
13	0.865 (22.0)	2.430 (61.7)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
15	0.990 (25.1)	2.550 (64.8)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
17	1.146 (29.1)	2.620 (66.5)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
19	1.271 (32.3)	2.700 (68.6)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
21	1.428 (36.3)	2.700 (68.6)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
23	1.552 (39.4)	2.850 (72.4)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
25	1.552 (39.4)	2.850 (72.4)	0.476 (12.1)	0.900 (22.86)	1.157 (29.4)	1.276 (32.4)	H



UNAC-PG

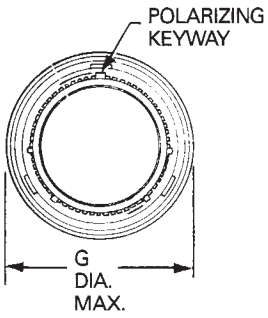
Cord Grip						
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	C Code
9	0.740 (18.8)	2.140 (54.4)	0.118 (3.0)	0.330 (8.38)	0.580 (14.8)	B
11	0.865 (22.0)	2.140 (54.4)	0.118 (3.0)	0.440 (11.18)	0.707 (18.0)	C
13	0.990 (25.1)	2.160 (54.9)	0.118 (3.0)	0.550 (13.97)	0.833 (21.2)	D
15	0.990 (25.1)	2.180 (54.5)	0.118 (3.0)	0.652 (16.56)	0.887 (22.6)	D
17	1.146 (29.1)	2.180 (55.4)	0.118 (3.0)	0.752 (19.10)	0.989 (25.1)	E
19	1.271 (32.3)	2.300 (58.4)	0.118 (3.0)	0.752 (19.10)	1.114 (28.3)	F
21	1.428 (36.3)	2.360 (59.9)	0.118 (3.0)	0.950 (24.10)	1.270 (32.3)	G
23	1.552 (39.4)	2.530 (64.3)	0.118 (3.0)	0.950 (24.10)	1.395 (35.4)	H
25	1.552 (39.4)	2.560 (65.0)	0.118 (3.0)	0.950 (24.10)	1.395 (35.4)	H

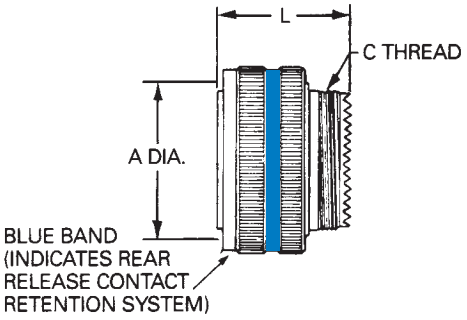
L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

38999 Series I – Dimensions

Plugs

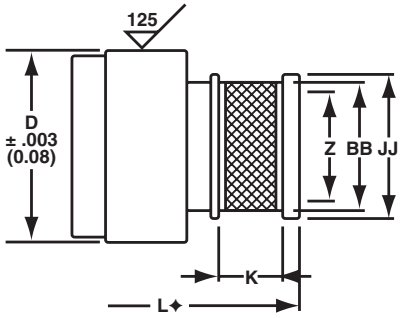
MS27467



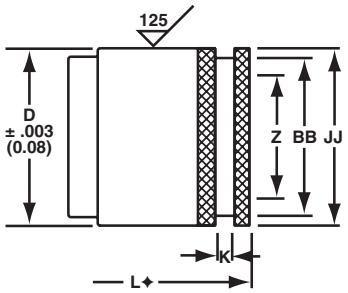


Shell Size	A Diameter Max	G Diameter Max	L Max Overall Length T Class	C Rear Thread UNEF-2A
9	.585 (14.86)	.859 (21.82)	1.234 (31.34)	7/16 - 28
11	.717 (18.21)	.984 (24.99)	1.234 (31.34)	9/16 - 24
13	.866 (22.00)	1.156 (29.36)	1.234 (31.34)	11/16 - 24
15	.990 (25.15)	1.281 (32.54)	1.234 (31.34)	13/16 - 20
17	1.115 (28.32)	1.406 (35.71)	1.234 (31.34)	15/16 - 20
19	1.222 (31.04)	1.516 (38.51)	1.234 (31.34)	1 1/16 - 18
21	1.347 (34.21)	1.641 (41.68)	1.234 (31.34)	1 3/16 - 18
23	1.472 (37.39)	1.766 (44.86)	1.234 (31.34)	1 5/16 - 18
25	1.597 (40.56)	1.891 (48.03)	1.234 (31.34)	1 7/16 - 18

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Min*	BB∅ Max	JJ∅ Max	C Code
9	0.740 (18.8)	2.189 (55.6)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
11	0.740 (18.8)	2.260 (57.4)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
13	0.865 (22.0)	2.270 (57.7)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
15	0.990 (25.1)	2.390 (60.7)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
17	1.146 (29.1)	2.460 (62.5)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
19	1.271 (32.3)	2.530 (64.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
21	1.428 (36.3)	2.470 (62.7)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
23	1.552 (39.4)	2.570 (65.3)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
25	1.552 (39.4)	2.620 (66.5)	0.476 (12.1)	0.900 (22.86)	1.157 (29.4)	1.276 (32.4)	H



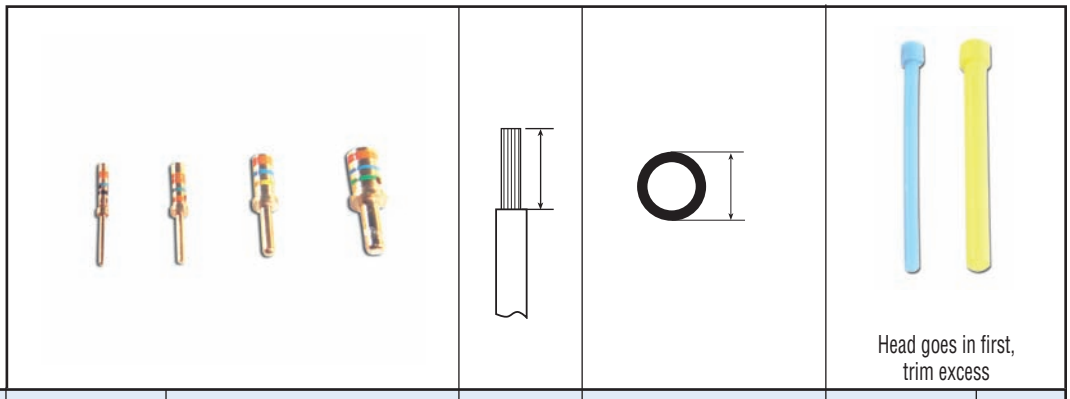
UNAC-PG

Cord Grip						
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	C Code
9	0.740 (18.8)	1.930 (49.0)	0.118 (3.0)	0.330 (8.38)	0.580 (14.8)	B
11	0.865 (22.0)	1.930 (49.0)	0.118 (3.0)	0.440 (11.18)	0.707 (18.0)	C
13	0.990 (25.1)	1.930 (49.0)	0.118 (3.0)	0.550 (13.97)	0.833 (21.2)	D
15	0.990 (25.1)	1.950 (49.5)	0.118 (3.0)	0.652 (16.56)	0.887 (22.6)	D
17	1.146 (29.1)	1.950 (49.5)	0.118 (3.0)	0.752 (19.10)	0.989 (25.1)	E
19	1.271 (32.3)	2.060 (52.3)	0.118 (3.0)	0.752 (19.10)	1.114 (28.3)	F
21	1.428 (36.3)	2.090 (53.1)	0.118 (3.0)	0.950 (24.10)	1.270 (32.3)	G
23	1.552 (39.4)	2.220 (56.4)	0.118 (3.0)	0.950 (24.10)	1.395 (35.4)	H
25	1.552 (39.4)	2.300 (58.4)	0.118 (3.0)	0.950 (24.10)	1.395 (35.4)	H

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

38999 Series I – Contacts

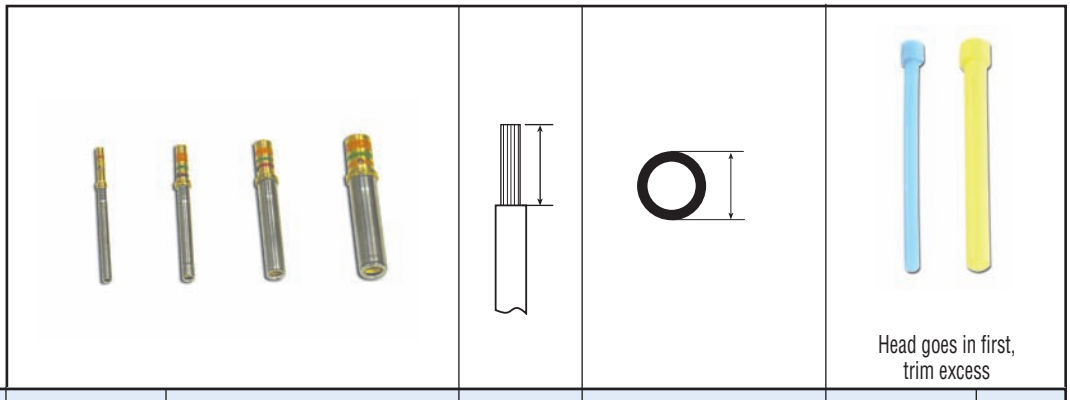
Pins



Contact Size	Wire Size AWG	Pin Contact Part Number	Color Bands 1	2	3	Wire Strip Lengths	Wire Range Filler Min	Max	Wire Hole Color	
22D	22-28	M39029/58-360	Orange	Blue	Black	.125 (3.18)	.030 (0.76)	.054 (1.37)	MS27488-22-2	Black
*22M	24-28	M39029/58-361	Orange	Blue	Brown	.125 (3.18)	.030 (0.76)	.050 (1.27)	MS27488-22-2	Black
*22	22-26	M39029/58-362	Orange	Blue	Red	.125 (3.18)	.034 (0.86)	.060 (1.52)	MS27488-22-2	Black
20	20-24	M39029/58-363	Orange	Blue	Orange	.188 (4.77)	.040 (1.02)	.083 (2.11)	MS27488-20-2	Red
16	16-20	M39029/58-364	Orange	Blue	Yellow	.188 (4.77)	.065 (1.65)	.109 (2.77)	MS27488-16-2	Blue
12	12-14	M39029/58-365	Orange	Blue	Green	.188 (4.77)	.097 (2.46)	.142 (3.61)	MS27488-12-2	Yellow
8	Coax+	-	-	-	-	-	.135 (3.43)	.155 (3.94)	MS27488-8-3	-

+ For Coax and Fiber Optic (MIL-T-29504/4) contacts, call.
* Inactive for new designs

Sockets

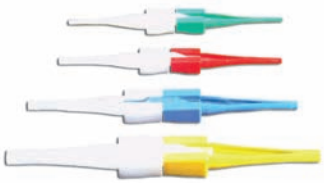


Contact Size	Wire Size AWG	Socket Contact Part Number	Color Bands 1	2	3	Wire Strip Lengths	Wire Range Filler Min	Max	Wire Hole Color	
22D	22-28	M39029/56-348	Orange	Yellow	Grey	.125 (3.18)	.030 (0.76)	.054 (1.37)	MS27488-22-2	Black
20	20-24	M39029/56-351	Orange	Green	Brown	.188 (4.77)	.040 (1.02)	.083 (2.11)	MS27488-20-2	Red
16	16-20	M39029/56-352	Orange	Green	Red	.188 (4.77)	.065 (1.65)	.109 (2.77)	MS27488-16-2	Blue
12	12-14	M39029/56-353	Orange	Green	Orange	.188 (4.77)	.097 (2.46)	.142 (3.61)	MS27488-12-2	Yellow
8	Coax+	-	-	-	-	-	.135 (3.43)	.155 (3.94)	MS27488-8-3	-

+ For Coax and Fiber Optic (MIL-T-29504/4) contacts, call.

All dimensions in inches (millimeters in parenthesis)

Pins

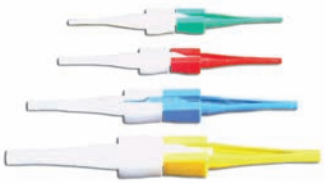





Hand Crimp Tool	Power Crimp Tool	Turret Heads	Use Locator Color	Plastic Insertion/ Extraction Tool	Insertion Tip Color	Extraction Tip Color	Metal Insertion Tool	Color Band	Metal Extraction Tool	Color Band	
										1	2
M22520/2-01	WA22††	M22520/2-09	-	M81969/14-01	Green	White	MS27495A22M	Black	MS27495R22M	Black	White
M22520/2-01	WA22††	M22520/2-09	-	M81969/14-01	Green	White	MS27495A22M	Black	MS27495R22M	Black	White
M22520/2-01	WA22††	M22520/2-09	-	M81969/14-01	Green	White	MS27495A22M	Black	MS27495R22M	Black	White
M22520/1-01	WA27F††	M22520/1-04	Red	M81969/14-10	Red	Orange	MS27495A20	Red	MS27495R20	Red	White
M22520/1-01	WA27F††	M22520/1-04	Blue	M81969/14-03	Blue	White	MS27495A16	Blue	MS27495R16	Blue	White
M22520/1-01	WA27F††	M22520/1-04	Yellow	M81969/14-04	Yellow	White	DAK95-12B	-	DRK95-12B	-	-
-	-	-	-	M81969/14-06	-	Red	-	-	-	-	-

†† Call for more tool accessories.

Sockets



Hand Crimp Tool	Power Crimp Tool	Turret Heads	Use Locator Color	Plastic Insertion/ Extraction Tool	Insertion Tip Color	Extraction Tip Color	Metal Insertion Tool	Color Band	Metal Extraction Tool	Color Band	
										1	2
M22520/2-01	WA22††	M22520/2-07	-	M81969/14-01	Green	White	MS27495A22M	Black	MS27495R22M	Black	White
M22520/1-01	WA27F††	M22520/1-04	Red	M81969/14-10	Red	Orange	MS27495A20	Red	MS27495R20	Red	White
M22520/1-01	WA27F††	M22520/1-04	Blue	M81969/14-03	Blue	White	MS27495A16	Blue	MS27495R16	Blue	White
M22520/1-01	WA27F††	M22520/1-04	Yellow	M81969/14-04	Yellow	White	DAK95-12B	-	DRK95-12B	-	-
-	-	-	-	M81969/14-06	-	Red	-	-	-	-	-

†† Call for more tool accessories.

38999 Series I – At-A-Glance

Name:
Company:
Email:
Phone:
Qty: EAU:

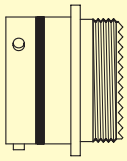
Additional Connector Information

CONNECTOR Part #:_____
OR
# of Contacts:_____ Sizes & Type:_____

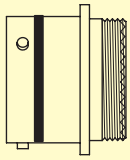
CABLE Manufacturer: _____
(If Known)
CABLE Part #: _____ OR Cable OD:_____

PEI-Genesis

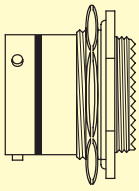
Choose One Connector



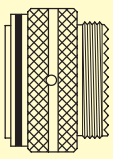
☐ **MS27466T**
Front Mount Receptacle



☐ **MS27656T**
Rear Mount Receptacle



☐ **MS27468T**
Jam Nut Receptacle

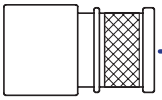


☐ **MS27467T**
Standard Plug

Choose One Endbell

Use endbell "U" for Menus A, B, C, D & E

☐ **U**

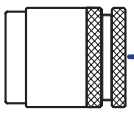


- ☐ Omit for Unshielded
- ☐ **S** Shielding Spring
- ☐ **T** Shielding Tape
- ☐ **W** Shielding Tape & Spring

Crimp Termination Only

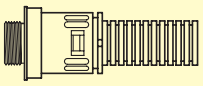
Use endbell "CG" for Menus F, G & H

☐ **CG**



Choose One Wire Protection

- ☐ **HST** Heat Shrink Tubing
- ☐ **SB** Straight Boot
- ☐ **BSB** Bottle Shaped Shrink Boot
- ☐ **HBSB** High Ratio Bottle Shaped Shrink Boot
- ☐ **CSB** Convoluted Shrink Boot
- ☐ **RSB** Right Angle Shrink Boot



- ☐ **CA** Conduit Adapter & Conduit
- ☐ **MSS** Metal Short Shielded
- ☐ **PF** Plastic with flex Relief



- ☐ **PS** Plastic Short
- ☐ **MS** Metal Short
- ☐ **PL** Plastic with Long Boot



- ☐ **ML** Metal with Long Boot



MIL-DTL-38999 Series II connectors offer high density contact arrangements in a low profile miniature circular shell. Series II connectors were designed for use in avionics and military vehicles where more and more electronics systems are being packed in to the same physical space leaving less available for interconnect devices. Series II features include a very small area for mating the connectors, total environmental sealing, wide operating temperature range (-65°C to 200°C), extremely light weight connector design, quick mating three-point bayonet coupling, a wide range of receptacle styles, and available in a ruggedized 500-hour salt spray plating.

Applications

- High Performance Military Aircraft
- Commercial Airlines
- Communications Equipment
- Missiles
- Sophisticated Test Equipment
- Shipboard

Features

High Reliability
MIL-DTL-38999 Series II - style connectors are used in performance aircraft that demand reliable connections in some of the most rigorous environments. The connectors must perform flawlessly under wide temperature ranges, high vibrations, and be resistant to a vast array of contaminants.

Low Profile Connector Design
Series II require a fraction of the space needed to mate most of the other high performance connectors. This allows interconnects to be located in areas that would be impossible for other mating systems.

Light Weight
Today's aircraft designs require connectors that are very light weight. Saving weight on the connector systems allows the aircraft to carry more fuel, maximizing its range or payload carrying capacity.

High Density Connectors
Series II connectors offer up to 128 contacts per connector. Ideally suited for the demands of today's digital electronics that are used on fly-by-wire aircraft, advanced robotics, and critical industrial equipment.

Operates at Extreme Temperatures
These connectors will operate in temperatures from -65°C up to 200°C (-85°F up to 392°F)

Quick Mating Coupling Systems
Three point bayonet coupling nuts provide fast, one-third of a turn connector mating. Mating is easily verified with an audible and tactile "click" and a bayonet pin sighting hole located in the coupling nut.

For Assistance in Europe – Please See the Back Cover For a Complete Listing of Our Branch Offices and Contact Numbers. • Specifications subject to change.

38999 Series II

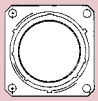
STEP 1
Select Shell Style
Receptacle or Plug

Receptacle

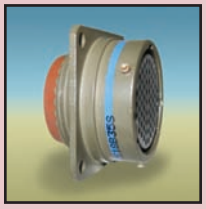
MS27472T



Front mount with rear accessory threads.



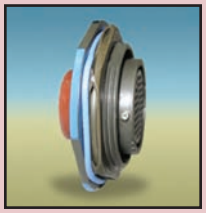
MS27497T +



Rear mount with rear accessory threads.



MS27474T +



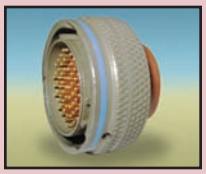
Jam Nut with rear accessory threads.

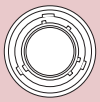


mates with

Standard Plug

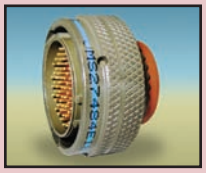
MS27473T +

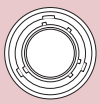




EMI Plug

MS27484T





+ Most Popular

STEP 6 Choose Endbell





Spring



Shielding Tape

Potted (Preferred)

- **U** = Unshielded
- **US** = with shielding spring
- **UT** = with shielding tape
- **UW** = with shielding tape & spring

RU
Right Angle



Call for more info

STEP 7 Choose Heat Shrink Boot or Tubing

Note: Cable outside diameter must be between expanded and recovered dimensions.

Boot options

SB – Straight Boot



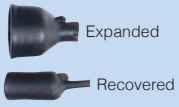
HST – Heat Shrink Tubing



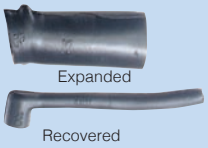
CSB – Convoluted Shrink Boot



BSB/HSBB – Bottle Shaped Shrink Boot
(High Ratio Bottle Shaped Boot)



RSB – Right Angle Shrink Boot



Most Popular

Heat Shrink Product	SB 1	SB 2	SB 3	SB 4	SB 5	HST 1	HST 2	HST 3	HST 4
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	0.750 (19.1)	1.000 (25.4)	1.250 (31.8)	1.570 (39.9)
Recovered ID inch (mm)	0.25 (6.4)	0.29 (7.4)	0.33 (8.4)	0.38 (9.7)	0.41 (10.4)	0.250 (6.4)	0.320 (8.1)	0.416 (10.6)	0.510 (13.0)
Length Max inch (mm)	4.17 (105.9)	4.77 (121.2)	5.46 (138.7)	6.28 (159.5)	7.00 (177.8)	6.00 (152.4)			
Shell Size 8	◆					◆			
10	◆					◆	◆		
12		◆	◆				◆		
14			◆					◆	
16			◆	◆				◆	
18				◆				◆	
20				◆					◆
22					◆				◆
24									◆

adhesive lined heat shrink tubing

Heat Shrink Product	CSB2	CSB3	CSB4	CSB5	BSB1	HBSB2	BSB2	BSB3	BSB4	BSB5
Expanded ID inch (mm)	0.70 (17.8)	1.06 (26.9)	1.44 (36.6)	1.80 (45.7)	0.94 (23.9)	0.35 (8.9)	1.18 (30.0)	1.22 (31.0)	1.42 (36.1)	1.69 (42.9)
Recovered ID inch (mm)	0.32 (8.1)	0.50 (12.7)	0.69 (17.5)	0.88 (22.4)	0.24 (6.1)	0.14 (3.6)	0.24 (6.1)	0.28 (7.1)	0.33 (8.4)	0.39 (9.9)
Length Max inch (mm)	5.25 (133.4)	5.75 (146.1)	6.25 (158.8)	6.75 (171.5)	1.50 (38.1)	2.17 (55.1)	2.17 (55.1)	2.64 (67.1)	3.15 (80.0)	3.90 (99.1)
Shell Size 8	◆									
10	◆				◆	◆	◆			
12	◆				◆	◆	◆	◆		
14		◆			◆	◆	◆	◆	◆	
16		◆	◆				◆	◆	◆	
18		◆	◆				◆	◆	◆	
20		◆	◆					◆	◆	
22		◆	◆						◆	
24			◆	◆						◆

Heat Shrink Product	RSB1	RSB2	RSB3	RSB4	RSB5
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)
Recovered ID inch (mm)	0.23 (5.8)	0.26 (6.6)	0.30 (7.6)	0.35 (8.9)	0.37 (9.4)
Length Max inch (mm)	4.14 (105.2)	4.88 (124.0)	5.76 (146.3)	6.78 (172.2)	7.29 (185.2)
Shell Size 8	◆				
10	◆	◆			
12		◆	◆		
14			◆		
16			◆	◆	
18				◆	
20				◆	
22				◆	◆
24					◆

STEP 6 Choose Endbell



CG = Straight Adapter Endbell

NEW!



RG = Right Angle Adapter Endbell

Please call for more information

STEP 7 Choose Wire Protection

Unshielded Conduits



CA* = conduit adapter for plastic flexible conduit. Add size code i.e. CGCA10

Note: Normal recommended conduit fill is 40% of Conduit ID or less.

CA*		07	10	12	14	17	23
Conduit ID Inch (mm)		0.256 (6.5)	0.394 (10.0)	0.472 (12.0)	0.563 (14.3)	0.650 (16.5)	0.906 (23.0)
Conduit OD Inch (mm)		0.394 (10.0)	0.512 (13.0)	0.622 (15.8)	0.728 (18.5)	0.835 (21.2)	1.122 (28.5)
Shell Size	8	◆	◆				
	10	◆	◆				
	12	◆	◆	◆			
	14	◆	◆	◆	◆	◆	
	16			◆	◆	◆	◆
	18			◆	◆	◆	◆
	20			R		R	◆
	22			R		R	◆
	24			R		R	◆

R= with reducer

OR

Shielded Cord Grip



		MSS*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm	4 Min mm	4 Max mm
Shell Size	8	◆	4.0	6.0	6.0	9.5	-	-	-	-
	10	◆	4.0	6.5	6.5	9.5	8.0	10.5	-	-
	12	◆	6.5	9.5	8.0	10.5	9.0	13.0	-	-
	14	◆	6.5	9.5	7.0	10.5	9.0	13.0	-	-
	16	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	18	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
	20	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	22	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
	24	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0

Conduit Adapter and Cord Grip Types

CA*= Conduit Adapter
MSS*= Metal Short Shielded - Nickel Plated Brass
PF*= Plastic with Flex Spring
PS*= Plastic Short
MS*= Metal Short - Nickel Plated Brass
PL*= Plastic Long
ML*= Metal Long - Nickel Plated Brass
*= add size code per chart i.e. CGPFA or CGMSS4
Min/Max refers to cable diameter.

OR

Unshielded Cord Grip











		PF*	PS*	MS*	Size Code A Min mm	A Max mm	R Min mm	R Max mm	PL*	ML*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm
Shell Size	8	◆	◆	◆	3.0	6.5	2.0	5.0			-	-	-	-	-	-
	10	◆	◆	◆	4.0	8.0	2.0	6.0	◆	◆	4.0	6.5	7.5	9.5	-	-
	12	◆	◆	◆	5.0	10.0	3.0	7.0	◆	◆	6.5	9.5	7.0	10.5	-	-
	14	◆	◆	◆	6.0	12.0	5.0	9.0	◆	◆	6.5	9.5	8.5	10.5	-	-
	16	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
	18	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
	20	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
	22	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	17.0	21.0	21.0	25.0	-	-
	24	◆	◆	◆	13.0	18.0	9.0	16.0			-	-	-	-	-	-

Note: Cable jacket and shield diameters must be between Min/Max of cord grip.

For detailed info on shield diameters, see MSS table on page 232.

STEP 2A Choose Shell Size



STEP 2B Choose Connector Layout

See Connector Solutions Guides

STEP 3 Choose Connector Plating

B = Olive Drab Chromate over Cadmium over Electroless Nickel (-65°C to 175°C) -85°F to 347°F

F = Electroless Nickel ‡ (-65°C to 200°C) -85°F to 392°F

A = Clear Chromate over Cadmium over Electroless Nickel ‡ (-65°C to 150°C) (inactive) -85°F to 302°F

C = Anodic Coating ✦ (-65°C to 200°C) -85°F to 392°F

STEP 4 Choose Contact

P = Pin
S = Socket
A = Less Pin Contacts
B = Less Socket Contacts

A or B is used only for special contact types (PC Pin, Thermocouple, Fiberoptic).

STEP 5 Choose Alternate Shell Position

(omit for normal)

A = Next Most Popular
B = Limited Availability
C = Check for Availability
D = Check for Availability

See Connector Solutions Guide

Go to STEP 6

Example of part description:

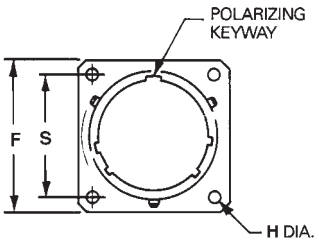
MS27473T	24	F	35	P		-UT	BSB5
1 Shell Style	2A Shell Size*	3 Plating	2B Connector Layout*	4 Contact	5 Rotation (omit for normal)	6 Endbell	7 Wire Protection

*See Connector Solutions Guide

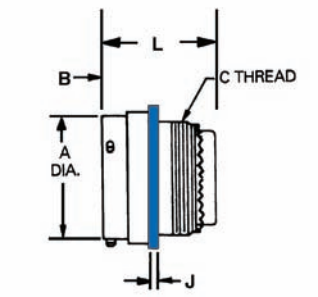
Note: ✦ Endbells U & CG will be Black Anodized.
‡ Endbells U & CG will be Electroless Nickel Plated

38999 Series II – Dimensions

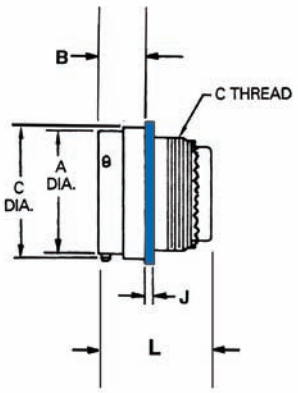
Flange Receptacle



MS27472



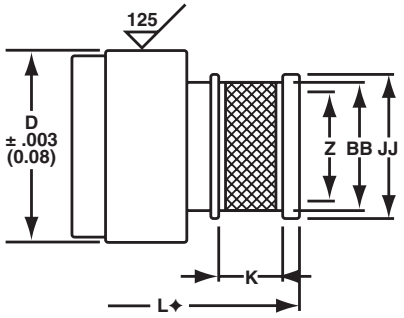
MS27497



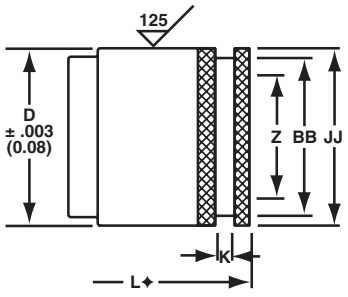
Blue Band indicates Rear Release Contact Retention System.

Shell Size	A Diameter Max	Overall Length L Max		B +.000 (.00) -.005 (-.13)		C Rear Thread UNEF-2A	+.011-.000 (.28-.00) J	F Max	S (TP) Max	H +.010 (.26) - .005 (-.13)
		MS27472	MS27497	MS27472	MS27497	MS27472 MS27497				
8	.474 (12.04)	.782 (19.86)	.838 (21.29)	.322 (8.18)	.447 (11.35)	7/16-28	.058 (1.47)	.828 (21.03)	.594 (15.09)	.120 (3.05)
10	.591 (15.01)	.782 (19.86)	.838 (21.29)	.322 (8.18)	.447 (11.35)	9/16-24	.058 (1.47)	.954 (24.23)	.719 (18.26)	.120 (3.05)
12	.751 (19.08)	.782 (19.86)	.838 (21.29)	.322 (8.18)	.447 (11.35)	11/16-24	.058 (1.47)	1.047 (26.59)	.812 (20.62)	.120 (3.05)
14	.876 (22.25)	.782 (19.86)	.838 (21.29)	.322 (8.18)	.447 (11.35)	13/16-20	.058 (1.47)	1.141 (28.98)	.906 (23.01)	.120 (3.05)
16	1.001 (25.42)	.782 (19.86)	.838 (21.29)	.322 (8.18)	.447 (11.35)	15/16-20	.058 (1.47)	1.234 (31.34)	.969 (24.61)	.120 (3.05)
18	1.126 (28.60)	.782 (19.86)	.838 (21.29)	.322 (8.18)	.447 (11.35)	1-1/16-18	.058 (1.47)	1.328 (33.73)	1.062 (26.97)	.120 (3.05)
20	1.251 (31.77)	.782 (19.86)	.838 (21.29)	.322 (8.18)	.447 (11.35)	1-3/16-18	.058 (1.47)	1.453 (36.91)	1.156 (29.36)	.120 (3.05)
22	1.376 (34.95)	.782 (19.86)	.838 (21.29)	.322 (8.18)	.447 (11.35)	1-5/16-18	.058 (1.47)	1.578 (40.08)	1.250 (31.75)	.120 (3.05)
24	1.501 (38.13)	.860 (21.85)	.916 (23.27)	.322 (8.18)	.447 (11.35)	1-7/16-18	.058 (1.47)	1.703 (43.26)	1.375 (34.93)	.147 (3.73)

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Min*	BB∅ Max	JJ∅ Max	C Code
8	0.740 (18.8)	1.739 (44.2)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10	0.740 (18.8)	1.810 (46.0)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12	0.865 (22.0)	1.820 (46.2)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	1.940 (49.3)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
16	1.146 (29.1)	2.000 (50.8)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	2.100 (53.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.020 (51.3)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.120 (53.8)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	1.552 (39.4)	2.250 (57.2)	0.476 (12.1)	0.900 (22.86)	1.157 (29.4)	1.276 (32.4)	H



UNAC-PG

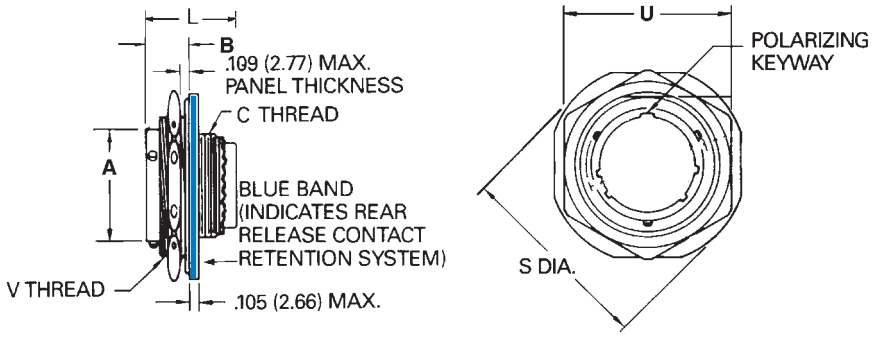
Cord Grip						
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Min*	BB∅ Max	C Code
8	0.740 (18.8)	1.490 (37.8)	0.118 (3.0)	0.330 (8.38)	0.580 (14.8)	B
10	0.865 (22.0)	1.490 (37.8)	0.118 (3.0)	0.440 (11.18)	0.707 (18.0)	C
12	0.990 (25.1)	1.470 (37.3)	0.118 (3.0)	0.550 (13.97)	0.833 (21.2)	D
14	0.990 (25.1)	1.490 (37.8)	0.118 (3.0)	0.652 (16.56)	0.887 (22.6)	D
16	1.146 (29.1)	1.490 (37.8)	0.118 (3.0)	0.752 (19.10)	0.989 (25.1)	E
18	1.271 (32.3)	1.610 (40.9)	0.118 (3.0)	0.752 (19.10)	1.114 (28.3)	F
20	1.428 (36.3)	1.650 (41.9)	0.118 (3.0)	0.950 (24.10)	1.270 (32.3)	G
22	1.552 (39.4)	1.760 (44.7)	0.118 (3.0)	0.950 (24.10)	1.395 (35.4)	H
24	1.552 (39.4)	1.920 (48.8)	0.118 (3.0)	0.950 (24.10)	1.395 (35.4)	H

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

38999 Series II – Dimensions

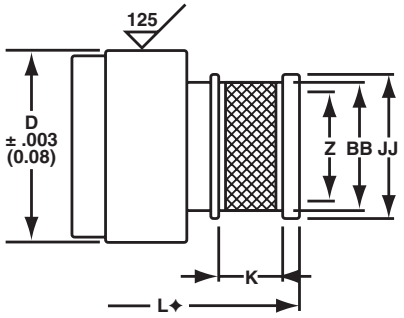
Jam Nut Panel

MS27474

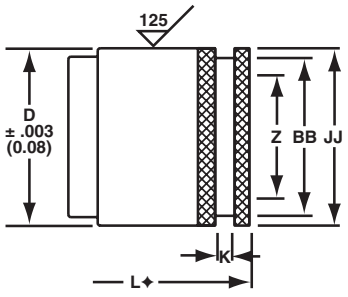


Shell Size	A Diameter Max	B +/-.005 (.13)	Overall Length L Max. Class T	U Jam Nut Flats Max.	S Dia Max	V Jam Nut Thread 2A	C Rear Thread UNEF-2A
8	0.474 (12.0)	.438 (11.13)	.782 (19.86)	1.709 (43.4)	1.381 (35.1)	7/8-20UNEF	7/16-28
10	0.591 (15.0)	.438 (11.13)	.782 (19.86)	1.205 (30.6)	1.506 (38.3)	1-20UNEF	9/16-24
12	0.751 (19.1)	.438 (11.13)	.782 (19.86)	1.329 (33.8)	1.631 (41.4)	11/8-18UNEF	11/16-24
14	0.876 (22.3)	.438 (11.13)	.782 (19.86)	1.455 (37.0)	1.756 (44.6)	11/4-18UNEF	13/16-20
16	1.001 (25.4)	.438 (11.13)	.782 (19.86)	1.579 (40.1)	1.944 (49.4)	13/8-18UNEF	15/16-20
18	1.126 (28.6)	.438 (11.13)	.782 (19.86)	1.705 (43.3)	2.022 (51.4)	11/2-18UNEF	1-1/16-18
20	1.251 (31.8)	.464 (11.79)	.776 (19.71)	1.829 (46.5)	2.147 (54.5)	15/8-18UNEF	1-3/16-18
22	1.376 (35.0)	.464 (11.79)	.776 (19.71)	2.017 (51.2)	2.271 (57.7)	13/4-18UNS	1-5/16-18
24	1.501 (38.1)	.464 (11.79)	.839 (21.31)	2.142 (54.4)	2.396 (60.9)	17/8-16UN	1-7/16-18

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Min*	BB∅ Max	JJ∅ Max	Code C
8	0.740 (18.8)	1.739 (44.2)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10	0.740 (18.8)	1.810 (46.0)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12	0.865 (22.0)	1.820 (46.2)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	1.940 (49.3)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
16	1.146 (29.1)	2.000 (50.8)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	2.000 (50.8)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.010 (51.1)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.120 (53.8)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	1.552 (39.4)	2.230 (56.6)	0.476 (12.1)	0.900 (22.86)	1.157 (29.4)	1.276 (32.4)	H



UNAC-PG

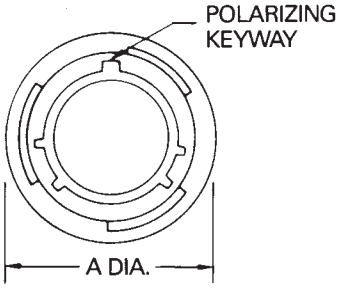
Cord Grip						
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	Code C
8	0.740 (18.8)	1.490 (37.8)	0.118 (3.0)	0.370 (9.5)	0.580 (14.8)	B
10	0.865 (22.0)	1.490 (37.8)	0.118 (3.0)	0.413 (10.5)	0.707 (18.0)	C
12	0.990 (25.1)	1.470 (37.3)	0.118 (3.0)	0.512 (13.0)	0.833 (21.2)	D
14	0.990 (25.1)	1.490 (37.8)	0.118 (3.0)	0.551 (14.0)	0.887 (22.6)	D
16	1.146 (29.1)	1.490 (37.8)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
18	1.271 (32.3)	1.610 (40.9)	0.118 (3.0)	0.709 (18.0)	1.114 (28.3)	F
20	1.428 (36.3)	1.650 (41.9)	0.118 (3.0)	0.984 (25.0)	1.270 (32.3)	G
22	1.552 (39.4)	1.760 (44.7)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
24	1.552 (39.4)	1.900 (48.3)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

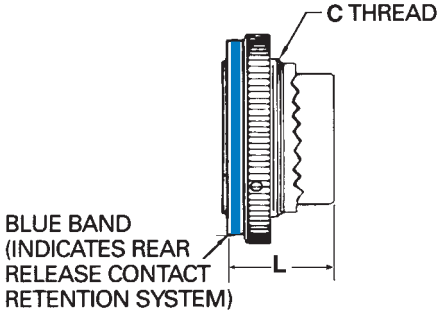
38999 Series II - Dimensions

Plugs

MS27473

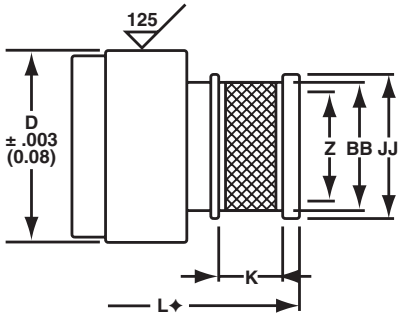


MS27484

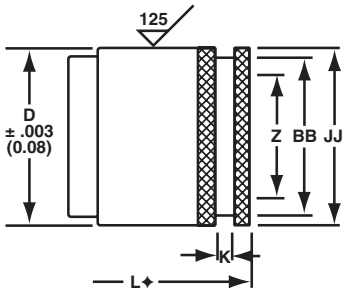


Shell Size	A Diameter Max	Overall Length L Max T Class	C Rear Thread UNEF-2A
8	.750 (19.05)	.766 (19.46)	7/16-28
10	.859 (21.82)	.766 (19.46)	9/16-24
12	1.031 (26.19)	.766 (19.46)	11/16/24
14	1.156 (29.36)	.766 (19.46)	13/16-20
16	1.281 (32.54)	.766 (19.46))	15/16-20
18	1.406 (35.71)	.766 (19.46)	1-1/16-18
20	1.531 (38.89)	.766 (19.46)	1-3/16-18
22	1.641 (41.68)	.766 (19.46)	1-5/16-18
24	1.766 (44.86)	.844 (19.46)	1-7/16-18

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Min*	BB∅ Max	JJ∅ Max	Code C
8	0.740 (18.8)	1.719 (43.7)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	B
10	0.740 (18.8)	1.790 (45.5)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
12	0.865 (22.0)	1.800 (45.7)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
14	0.990 (25.1)	1.920 (48.8)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
16	1.146 (29.1)	1.980 (50.3)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
18	1.271 (32.3)	1.980 (50.3)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
20	1.428 (36.3)	2.000 (50.8)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
22	1.552 (39.4)	2.100 (53.3)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
24	1.552 (39.4)	2.220 (56.4)	0.476 (12.1)	0.900 (22.86)	1.157 (29.4)	1.276 (32.4)	H



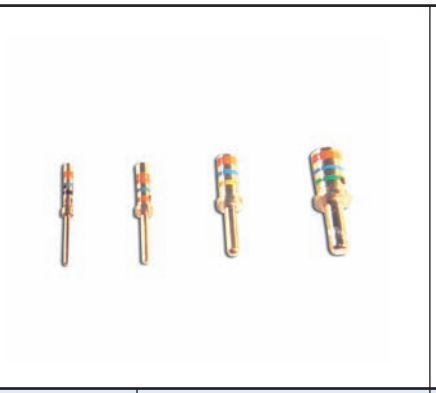
UNAC-PG

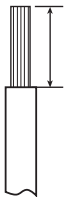
Cord Grip						
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	Code C
8	0.740 (18.8)	1.490 (37.8)	0.118 (3.0)	0.370 (9.5)	0.580 (14.8)	B
10	0.865 (22.0)	1.490 (37.8)	0.118 (3.0)	0.413 (10.5)	0.707 (18.0)	C
12	0.990 (25.1)	1.470 (37.3)	0.118 (3.0)	0.512 (13.0)	0.833 (21.2)	D
14	0.990 (25.1)	1.490 (37.8)	0.118 (3.0)	0.551 (14.0)	0.887 (22.6)	D
16	1.146 (29.1)	1.490 (37.8)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
18	1.271 (32.3)	1.610 (40.9)	0.118 (3.0)	0.709 (18.0)	1.114 (28.3)	F
20	1.428 (36.3)	1.650 (41.9)	0.118 (3.0)	0.984 (25.0)	1.270 (32.3)	G
22	1.552 (39.4)	1.760 (44.7)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
24	1.552 (39.4)	1.900 (48.3)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

38999 Series II – Contacts

Pins









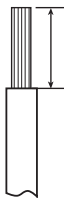
Head goes in first, trim excess

Contact Size	Wire Size AWG	Pin Contact Part Number	Color Bands 1	2	3	Wire Strip Lengths	Wire Range Filler Min	Max	Wire Hole Color	
22D	22-28	M39029/58-360	Orange	Blue	Black	.125 (3.18)	.030 (0.76)	.054 (1.37)	MS27488-22-2	Black
*22M	24-28	M39029/58-361	Orange	Blue	Brown	.125 (3.18)	.030 (0.76)	.050 (1.27)	MS27488-22-2	Black
*22	22-26	M39029/58-362	Orange	Blue	Red	.125 (3.18)	.034 (0.86)	.060 (1.52)	MS27488-22-2	Black
20	20-24	M39029/58-363	Orange	Blue	Orange	.188 (4.77)	.040 (1.02)	.083 (2.11)	MS27488-20-2	Red
16	16-20	M39029/58-364	Orange	Blue	Yellow	.188 (4.77)	.065 (1.65)	.109 (2.77)	MS27488-16-2	Blue
12	12-14	M39029/58-365	Orange	Blue	Green	.188 (4.77)	.097 (2.46)	.142 (3.61)	MS27488-12-2	Yellow
8	Coax+	-	-	-	-	-	.135 (3.43)	.155 (3.94)	MS27488-8-3	-

+ For Coax and Fiber Optic (MIL-T-29504/4) contacts, call.
* Inactive for new designs

Sockets









Head goes in first, trim excess

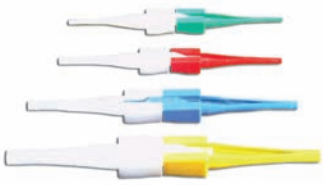
Contact Size	Wire Size AWG	Socket Contact Part Number	Color Bands 1	2	3	Wire Strip Lengths	Wire Range Filler Min	Max	Wire Hole Color	
22D	22-28	M39029/57-354	Orange	Green	Yellow	.125 (3.18)	.030 (0.76)	.054 (1.37)	MS27488-22-2	Black
*22M	24-28	M39029/57-355	Orange	Green	Green	.125 (3.18)	.030 (0.76)	.050 (1.27)	MS27488-22-2	Black
*22	22-26	M39029/57-356	Orange	Green	Blue	.125 (3.18)	.034 (0.86)	.060 (1.52)	MS27488-22-2	Black
20	20-24	M39029/57-357	Orange	Green	Violet	.188 (4.77)	.040 (1.02)	.083 (2.11)	MS27488-20-2	Red
16	16-20	M39029/57-358	Orange	Green	Gray	.188 (4.77)	.065 (1.65)	.109 (2.77)	MS27488-16-2	Blue
12	12-14	M39029/57-359	Orange	Green	White	.188 (4.77)	.097 (2.46)	.142 (3.61)	MS27488-12-2	Yellow
8	Coax+	-	-	-	-	-	.135 (3.43)	.155 (3.94)	MS27488-8-3	-

+ For Coax and Fiber Optic (MIL-T-29504/4) contacts, call.
* Inactive for new designs

Contact Color Codes			
0	Black	5	Green
1	Brown	6	Blue
2	Red	7	Violet
3	Orange	8	Gray
4	Yellow	9	White

All dimensions in inches (millimeters in parenthesis)

Pins

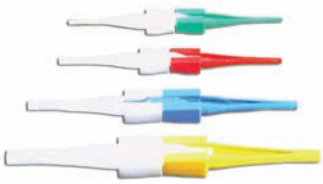





Hand Crimp Tool	Power Crimp Tool	Turret Heads	Use Locator Color	Plastic Insertion/ Extraction Tool	Insertion Tip Color	Extraction Tip Color	Metal Insertion Tool	Color Band	Metal Extraction Tool	Color Band	
										1	2
M22520/2-01	WA22††	M22520/2-09	-	M81969/14-01	Green	White	MS27495A22M	Black	MS27495R22M	Black	White
M22520/2-01	WA22††	M22520/2-09	-	M81969/14-01	Green	White	MS27495A22M	Black	MS27495R22M	Black	White
M22520/2-01	WA22††	M22520/2-09	-	M81969/14-01	Green	White	MS27495A22	Black	MS27495R22	Brown	White
M22520/1-01	WA27F††	M22520/1-04	Red	M81969/14-10	Red	Orange	MS27495A20	Red	MS27495R20	Red	White
M22520/1-01	WA27F††	M22520/1-04	Blue	M81969/14-03	Blue	White	MS27495A16	Blue	MS27495R16	Blue	White
M22520/1-01	WA27F††	M22520/1-04	Yellow	M81969/14-04	Yellow	White	DAK95-12B	-	DRK95-12B	-	-
-	-	-	-	-	-	-	-	-	-	-	-

†† Call for more tool accessories.

Sockets



Hand Crimp Tool	Power Crimp Tool	Turret Heads	Use Locator Color	Plastic Insertion/ Extraction Tool	Insertion Tip Color	Extraction Tip Color	Metal Insertion Tool	Color Band	Metal Extraction Tool	Color Band	
										1	2
M22520/2-01	WA22††	M22520/2-06	-	M81969/14-01	Green	White	MS27495A22M	Black	MS27495R22M	Black	White
M22520/2-01	WA22††	M22520/2-06	-	M81969/14-01	Green	White	MS27495A22M	Black	MS27495R22M	Black	White
M22520/2-01	WA22††	M22520/2-06	-	M81969/14-01	Green	White	MS27495A22	Black	MS27495R22	Brown	White
M22520/1-01	WA27F††	M22520/1-04	Red	M81969/14-10	Red	Orange	MS27495A20	Red	MS27495R20	Red	White
M22520/1-01	WA27F††	M22520/1-04	Blue	M81969/14-03	Blue	White	MS27495A16	Blue	MS27495R16	Blue	White
M22520/1-01	WA27F††	M22520/1-04	Yellow	M81969/14-04	Yellow	White	DAK95-12B	-	DRK95-12B	-	-
-	-	-	-	-	-	-	-	-	-	-	-

†† Call for more tool accessories.

38999 Series II – At-A-Glance

Name:

Company:

Email:

Phone:

Qty: EAU:

Additional Connector Information

CONNECTOR Part #:_____

OR

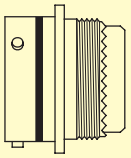
# of Contacts:_____ Sizes & Type:_____

CABLE Manufacturer: _____
(If Known)

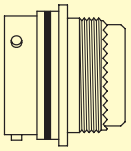
CABLE Part #: _____ OR Cable OD:_____

PEI-Genesis

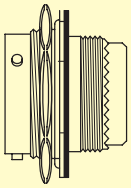
Choose One Connector



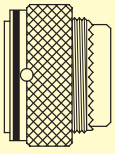
☐ **MS27472T**
Front Mount Receptacle



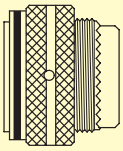
☐ **MS27497T**
Rear Mount Receptacle



☐ **MS27474T**
Jam Nut Receptacle



☐ **MS27473T**
Standard Plug

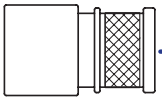


☐ **MS27484T**
Standard Plug with Grounding Spring

Choose One Endbell

Use endbell "U" for Menus A, B, C, D & E

☐ **U**

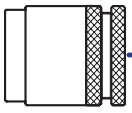


- **Omit** for Unshielded
- **S** Shielding Spring
- **T** Shielding Tape
- **W** Shielding Tape & Spring

Crimp Termination Only

Use endbell "CG" for Menus F, G & H

☐ **CG**



Comments/Notes:

_____

_____

_____

_____

_____

_____

Choose One Wire Protection

- **HST** Heat Shrink Tubing
- **SB** Straight Boot
- **BSB** Bottle Shaped Shrink Boot
- **HBSB** High Ratio Bottle Shaped Shrink Boot
- **CSB** Convoluted Shrink Boot
- **RSB** Right Angle Shrink Boot

Crimp Termination Only

- **CA** Conduit Adapter & Conduit
- **MSS** Metal Short Shielded
- **PF** Plastic with flex Relief
- **PS** Plastic Short
- **MS** Metal Short
- **PL** Plastic with Long Boot
- **ML** Metal with Long Boot



MIL-DTL-38999 Series III connectors offer high density contact arrangements in a miniature circular shell. Originally designed for the especially demanding requirements of today's high performance military and commercial aircraft, these connectors are finding their way into applications needing extremely reliable interconnections. Series III features include, total environmental sealing, wide operating temperature range (-65°C up to 200°C), quick-mating, triple lead threaded, self-locking coupling, 100% scoop proof shell design, EMI - RFI shielding, and are available in a ruggedized 500-hour salt spray plating or 1000-hour salt spray material.

Applications

- High Performance Military Aircraft
- Commercial Airlines
- Communications Equipment
- Armored Personnel Carriers & Tanks
- Missiles
- Shipboard

Features

High Reliability

D38999 - Series III style connectors are used in performance aircraft that demand reliable connections in some of the most rigorous environments. The connectors must perform flawlessly under wide temperature ranges, high vibrations and be resistant to a vast array of contaminants. Visual confirmation of complete mating is accomplished by the plug coupling nut covering over a red band on the mating shell.

Outstanding EMI Shielding Protection

These connectors provide excellent signal integrity due to the shielded mating system that utilizes 360 degree shell grounding fingers providing protection of up to 65 dB at 10 GHz.

Operates at Extreme Temperatures

These connectors will operate in temperatures from -65°C up to 200°C (-85°F up to 392°F).

High Density Connectors

If space and weight are at a premium, Series III connectors offer up to 128 contacts per
connector. Ideally suited for the demands of today's digital electronics used on fly-by-wire aircraft, advanced robotics, and critical industrial equipment.

Self-Locking Connector Systems

Self-locking coupling nuts and self-locking endbell accessory hardware provide the best performance for threaded connectors in high vibration applications.

Contacts Protection

Series III connectors are designed to be scoop proof. Pin contacts are recessed to prevent contact damage and contact shorting when connector halves are put together while mating.

For Assistance in Europe – Please See the Back Cover For a Complete Listing of Our Branch Offices and Contact Numbers. • Specifications subject to change.

38999 Series III

STEP 1
Select Shell Style
Receptacle or Plug

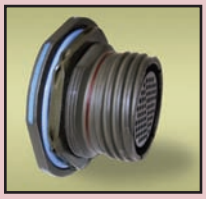
Receptacle

D38999/20



Wall Mount

D38999/24 +



Jam Nut

mates with

Standard Plug

D38999/26 +



Straight Cable

+ Most Popular

STEP 6 Choose Endbell



Spring



Shielding Tape

Potted (Preferred)

- **U** = Unshielded
- **US** = with shielding spring
- **UT** = with shielding tape
- **UW** = with shielding tape & spring

RU Right Angle

NEW!



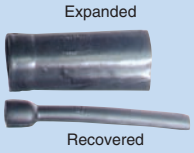
Call for more info

STEP 7 Choose Heat Shrink Boot or Tubing

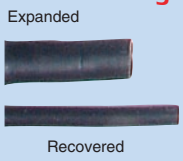
Note: Cable outside diameter must be between expanded and recovered dimensions.

Boot options

SB – Straight Boot



HST – Heat Shrink Tubing



adhesive lined heat shrink tubing

Most Popular

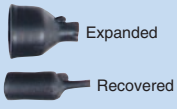
Heat Shrink Product	SB 1	SB 2	SB 3	SB 4	SB 5	HST 1	HST 2	HST 3	HST 4
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)	0.750 (19.1)	1.000 (25.4)	1.250 (31.8)	1.570 (39.9)
Recovered ID inch (mm)	0.25 (6.4)	0.29 (7.4)	0.33 (8.4)	0.38 (9.7)	0.41 (10.4)	0.250 (6.4)	0.320 (8.1)	0.416 (10.6)	0.510 (13.0)
Length Max inch (mm)	4.17 (105.9)	4.77 (121.2)	5.46 (138.7)	6.28 (159.5)	7.00 (177.8)	6.00 (152.4)			
Shell Size A/9	◆					◆			
Shell Size B/11	◆					◆	◆		
Shell Size C/13		◆	◆				◆		
Shell Size D/15			◆					◆	
Shell Size E/17			◆	◆				◆	
Shell Size F/19				◆				◆	
Shell Size G/21				◆					◆
Shell Size H/23					◆				◆
Shell Size J/25									◆

CSB – Convoluted Shrink Boot



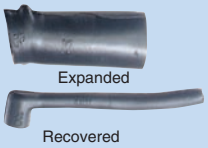
Heat Shrink Product	CSB2	CSB3	CSB4	CSB5	BSB1	HBSB2	BSB2	BSB3	BSB4	BSB5
Expanded ID inch (mm)	0.70 (17.8)	1.06 (26.9)	1.44 (36.6)	1.80 (45.7)	0.94 (23.9)	0.35 (8.9)	1.18 (30.0)	1.22 (31.0)	1.42 (36.1)	1.69 (42.9)
Recovered ID inch (mm)	0.32 (8.1)	0.50 (12.7)	0.69 (17.5)	0.88 (22.4)	0.24 (6.1)	0.14 (3.6)	0.24 (6.1)	0.28 (7.1)	0.33 (8.4)	0.39 (9.9)
Length Max inch (mm)	5.25 (133.4)	5.75 (146.1)	6.25 (158.8)	6.75 (171.5)	1.50 (38.1)	2.17 (55.1)	2.17 (55.1)	2.64 (67.1)	3.15 (80.0)	3.90 (99.1)
Shell Size A/9	◆									
Shell Size B/11	◆				◆	◆	◆			
Shell Size C/13	◆				◆	◆	◆	◆		
Shell Size D/15		◆			◆	◆	◆	◆	◆	
Shell Size E/17		◆	◆				◆	◆	◆	
Shell Size F/19		◆	◆				◆	◆	◆	
Shell Size G/21		◆	◆					◆	◆	
Shell Size H/23		◆	◆						◆	
Shell Size J/25			◆	◆						◆

BSB/HBSB – Bottle Shaped Shrink Boot
(High Ratio Bottle Shaped Boot)



Heat Shrink Product	RSB1	RSB2	RSB3	RSB4	RSB5
Expanded ID inch (mm)	0.88 (22.4)	1.01 (25.7)	1.16 (29.5)	1.35 (34.3)	1.47 (37.3)
Recovered ID inch (mm)	0.23 (5.8)	0.26 (6.6)	0.30 (7.6)	0.35 (8.9)	0.37 (9.4)
Length Max inch (mm)	4.14 (105.2)	4.88 (124.0)	5.76 (146.3)	6.78 (172.2)	7.29 (185.2)
Shell Size A/9	◆				
Shell Size B/11	◆	◆			
Shell Size C/13		◆	◆		
Shell Size D/15			◆	◆	
Shell Size E/17			◆	◆	
Shell Size F/19				◆	
Shell Size G/21				◆	◆
Shell Size H/23					◆
Shell Size J/25					

RSB – Right Angle Shrink Boot



STEP 6 Choose Endbell



CG = Straight Adapter Endbell

NEW!



RG = Right Angle Adapter Endbell

Please call for more information

Q = Quick Thread Converter

For use with Standard Accessoried Thread MS3057



STEP 7 Choose Wire Protection

Unshielded Conduits



CA* = conduit adapter for plastic flexible conduit. Add size code i.e. CGCA10

Note: Normal recommended conduit fill is 40% of Conduit ID or less.

CA*	Size Code 07	10	12	14	17	23	29
Conduit ID Inch (mm)	0.256 (6.5)	0.394 (10.0)	0.472 (12.0)	0.563 (14.3)	0.650 (16.5)	0.906 (23.0)	1.142 (29.0)
Conduit OD Inch (mm)	0.394 (10.0)	0.512 (13.0)	0.622 (15.8)	0.728 (18.5)	0.835 (21.2)	1.122 (28.5)	1.358 (34.5)
Shell Size A/9	◆	◆					
B/11	◆	◆					
C/13	◆	◆	◆	◆	◆		
D/15			◆	◆	◆	◆	
E/17			◆	◆	◆	◆	
F/19			R		R	◆	
G/21			R		R	◆	
H/23			R		R	◆	
J/25			R		R	R	◆

R= with reducer

Shell Size	UNEF-2A Thread
A/9	5/8-24
B/11	5/8-24
C/13	3/4-20
D/15	7/8-20
E/17	1-20
F/19	1 3/16-18
G/21	1 3/16-18
H/23	1 7/16-18
J/25	1 7/16-18

OR

Shielded Cord Grip



Shell Size	MSS*	Size Code 1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm	4 Min mm	4 Max mm
A/9	◆	4.0	6.0	6.0	9.5	-	-	-	-
B/11	◆	4.0	6.5	6.5	9.5	8.0	10.5	-	-
C/13	◆	6.5	9.5	7.0	10.5	9.0	13.0	-	-
D/15	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
E/17	◆	6.5	9.5	7.0	10.5	9.0	13.0	11.5	15.5
F/19	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
G/21	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
H/23	◆	9.0	13.0	11.5	15.5	17.0	20.0	20.0	25.0
J/25	◆	20.0	25.0	24.0	28.0	17.0	32.0	29.0	34.0

Conduit Adapter and Cord Grip Types

CA*= Conduit Adapter
MSS*= Metal Short Shielded - Nickel Plated Brass
PF*= Plastic with Flex Spring
PS*= Plastic Short
MS*= Metal Short - Nickel Plated Brass
PL*= Plastic Long
ML*= Metal Long - Nickel Plated Brass
*= add size code per chart i.e. CGPFA or CGMSS4
Min/Max refers to cable diameter.

OR

Unshielded Cord Grip











Shell Size	PF*	PS*	MS*	Size Code A Min mm	A Max mm	R Min mm	R Max mm	PL*	ML*	1 Min mm	1 Max mm	2 Min mm	2 Max mm	3 Min mm	3 Max mm
A/9	◆	◆	◆	3.0	6.5	2.0	5.0			-	-	-	-	-	-
B/11	◆	◆	◆	4.0	8.0	2.0	6.0	◆	◆	4.0	6.5	7.5	9.5	-	-
C/13	◆	◆	◆	6.0	12.0	5.0	9.0	◆	◆	6.5	9.5	8.5	10.5	-	-
D/15	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
E/17	◆	◆	◆	10.0	14.0	7.0	12.0	◆	◆	6.5	9.5	7.0	10.5	9.5	13.0
F/19	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
G/21	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
H/23	◆	◆	◆	13.0	18.0	9.0	16.0	◆	◆	9.0	13.0	13.0	15.5	14.0	18.0
J/25				-	-	-	-	◆	◆	17.0	21.0	21.0	25.0	-	-

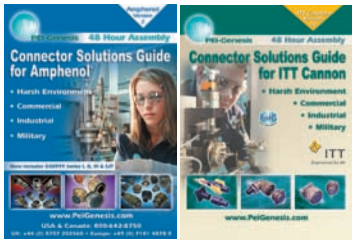
Note: Cable jacket and shield diameters must be between Min/Max of cord grip.

For detailed info on shield diameters, see MSS table on page 232.

STEP 2 Choose Connector Plating

F = Electroless Nickel
W = Olive Drab Chromate over Cadmium over Nickel

STEP 3 Choose Connector Layout



See Connector Solutions Guides

STEP 4 Choose Contact

P = Pin
S = Socket
A = Less Pin Contacts
B = Less Socket Contacts

A or B is used only for special contact types (PC Pin, Thermocouple, Fiberoptic).

STEP 5 Choose Alternate Shell Position

N = Normal
A = Next Most Popular
B = Limited Availability
C = Check for Availability
D = Check for Availability

See Connector Solutions Guide

Go to STEP 6 (Choose Endbell)

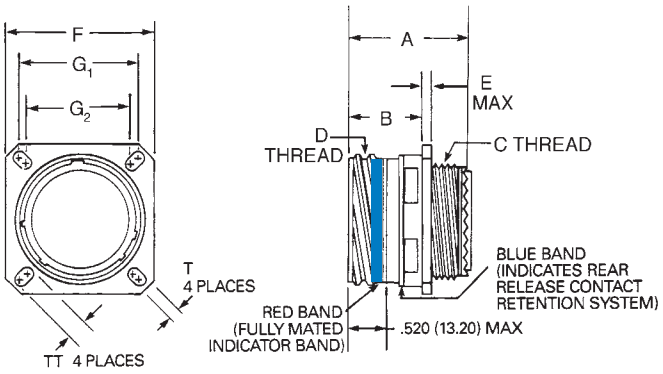
Example of part description:

D38999/26	F	J35	P	N	-UT	BSB5
1 Shell Style	2 Plating	3 Connector Layout (See Connector Solutions Guide)	4 Contact	5 Rotation (omit for normal)	6 Endbell	7 Wire Protection

38999 Series III – Dimensions

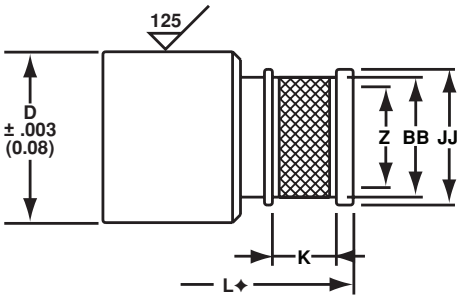
Wall Mount Receptacle

D38999/20

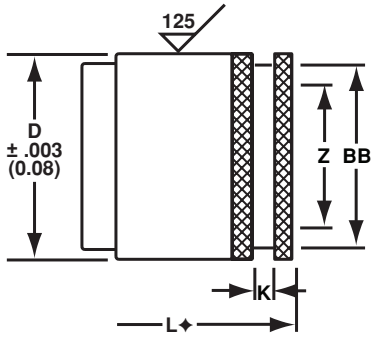


Shell Size	Overall Length A Max	Front Flange to Mating Face +0.056/0.000 +(1.4/0.0)	Rear Metric Thread (Plated) C	Mating Thread Class 2A (Plated) D	Flange Thickness E Max	Flange Thickness ±0.062 (±0.3) F	Outer Hole G1	Inner Hole G2	T	TT
A 9	1.2402	0.768			0.098	0.937	0.719	0.594	0.128	0.216
	(31.5)	(19.5)	M12x1.0-6g	5/8 - .1P - .3L - TS	(2.5)	(23.8)	(18.26)	(15.09)	(3.25)	(5.49)
B 11	1.240	0.768			0.098	1.031	0.812	0.719	0.128	0.194
	(31.5)	(19.5)	M15x1.0-6g	3/4 - .1P - .3L - TS	(2.5)	(26.2)	(20.62)	(18.26)	(3.25)	(4.93)
C 13	1.240	0.768			0.098	1.126	0.906	0.812	0.128	0.194
	(31.5)	(19.5)	M18x1.0-6g	7/8 - .1P - .3L - TS	(2.5)	(28.6)	(23.01)	(20.62)	(3.25)	(4.93)
D 15	1.240	0.768			0.098	1.220	0.969	0.906	0.128	0.194
	(31.5)	(19.5)	M22x1.0-6g	1 - .1P - .3L - TS	(2.5)	(31.0)	(24.61)	(23.01)	(3.25)	(4.93)
E 17	1.240	0.768			0.098	1.311	1.062	0.969	0.128	0.194
	(31.5)	(19.5)	M25x1.0-6g	1 3/16 - .1P - .3L - TS	(2.5)	(33.3)	(26.97)	(24.61)	(3.25)	(4.93)
F 19	1.240	0.768			0.098	1.437	1.157	1.062	0.128	0.194
	(31.5)	(19.5)	M28x1.0-6g	1 1/4 - .1P - .3L - TS	(2.5)	(36.5)	(29.39)	(26.97)	(3.25)	(4.93)
G 21	1.240	0.736			0.126	1.563	1.250	1.157	0.128	0.194
	(31.5)	(18.7)	M31x1.0-6g	1 3/8 - .1P - .3L - TS	(3.2)	(39.7)	(31.75)	(29.39)	(3.25)	(4.93)
H 23	1.240	0.736			0.126	1.689	1.375	1.250	0.154	0.243
	(31.5)	(18.7)	M34x1.0-6g	1 1/2 - .1P - .3L - TS	(3.2)	(42.9)	(34.93)	(31.75)	(3.91)	(6.16)
J 25	1.240	0.736			0.126	1.811	1.500	1.375	0.154	0.243
	(31.5)	(18.7)	M37x1.0-6g	1 5/8 - .1P - .3L - TS	(3.2)	(46.0)	(38.10)	(34.93)	(3.91)	(6.16)

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	**D ∅**	**L✦ Max**	**K Max**	**Z∅ Cable Max***	**BB∅ Max**	**JJ∅ Max**	**C Code**
A 9	0.553 (14.0)	1.970 (50.0)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	A
B 11	0.740 (18.8)	2.090 (53.1)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
C 13	0.865 (22.0)	2.100 (53.3)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
D 15	0.990 (25.1)	2.210 (56.1)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
E 17	1.146 (29.1)	2.280 (57.9)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
F 19	1.271 (32.3)	2.360 (59.9)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
G 21	1.428 (36.3)	2.400 (61.0)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
H 23	1.552 (39.4)	2.520 (64.0)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
J 25	1.552 (39.4)	2.520 (64.0)	0.476 (12.1)	0.900 (22.86)	1.160 (29.4)	1.276 (32.4)	H



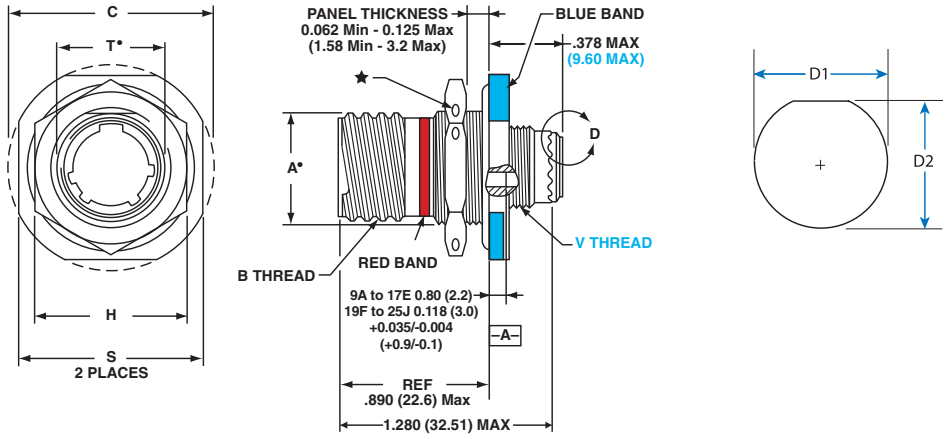
Cord Grip						
Shell Size	**D ∅**	**L✦ Max**	**K Max**	**Z∅ Cable Max***	**BB∅ Max**	**C Code**
A 9	0.740 (18.8)	1.610 (40.9)	0.118 (3.0)	0.374 (9.5)	0.583 (14.8)	B
B 11	0.865 (22.0)	1.730 (43.9)	0.118 (3.0)	0.413 (10.5)	0.707 (18.0)	C
C 13	0.990 (25.1)	1.700 (43.2)	0.118 (3.0)	0.551 (14.0)	0.887 (22.6)	D
D 15	1.146 (29.1)	1.750 (44.5)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
E 17	1.146 (29.1)	1.800 (45.7)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
F 19	1.148 (36.3)	1.920 (48.8)	0.118 (3.0)	0.984 (25.0)	1.270 (32.3)	G
G 21	1.148 (36.3)	1.960 (49.8)	0.118 (3.0)	0.984 (25.0)	1.270 (32.3)	G
H 23	1.552 (39.4)	2.080 (52.8)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
J 25	1.687 (42.8)	2.110 (53.6)	0.118 (3.0)	1.339 (34.0)	1.530 (38.9)	-

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

38999 Series III – Dimensions

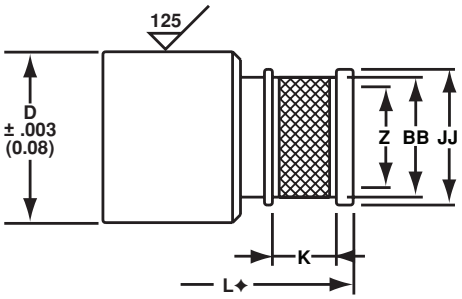
Jam Nut Receptacle

D38999/24

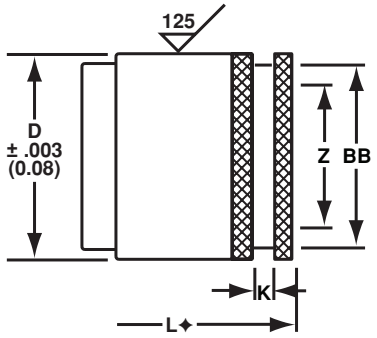


Shell Size	+.000/-.010 (+.00/-.25) A+	Class 2A 0.1P-0.3L-TS (Plated) B Thread	+/- 0.012 (0.3) C	+.010/-.000 (+.25/-.00) D1	+.000/-.100 (+.00/-.25) D2	+.017/-.016 (+.43/-.41) H Hex	+/- 0.016 (0.4) S	+.010/-.000 (+.25/-.00) T•	Thread Metric V
9 A	0.651 (16.53)	0.625	1.189 (30.2)	0.700 (17.78)	0.670 (17.02)	0.875 (22.23)	1.063 (27.0)	0.697 (17.70)	M12X1-6g
11B	0.751 (19.07)	0.750	1.374 (34.9)	0.825 (20.96)	0.770 (19.59)	1.000 (25.40)	1.252 (31.8)	0.822 (20.88)	M15X1-6g
13C	0.938 (23.82)	0.875	1.500 (38.1)	1.010 (25.65)	0.955 (24.26)	1.188 (30.18)	1.374 (34.9)	1.007 (25.58)	M18X1-6g
15D	1.062 (26.97)	1.000	1.626 (41.3)	1.135 (28.83)	1.085 (27.56)	1.312 (33.32)	1.500 (38.1)	1.134 (28.80)	M22X1-6g
17E	1.187 (30.15)	1.188	1.752 (44.5)	1.260 (32.01)	1.210 (30.73)	1.438 (36.53)	1.626 (41.3)	1.259 (31.98)	M25X1-6g
19F	1.312 (33.32)	1.250	1.937 (49.2)	1.385 (35.18)	1.335 (33.91)	1.562 (39.67)	1.811 (46.0)	1.384 (35.15)	M28X1-6g
21G	1.437 (36.50)	1.375	2.063 (52.4)	1.510 (38.35)	1.460 (37.08)	1.688 (42.80)	1.937 (49.2)	1.507 (38.28)	M31X1-6g
23H	1.562 (39.67)	1.500	2.189 (55.6)	1.635 (41.53)	1.585 (40.26)	1.812 (46.02)	2.063 (52.4)	1.634 (41.50)	M34X1-6g
25J	1.687 (42.84)	1.625	2.311 (58.7)	1.760 (44.70)	1.710 (43.43)	2.000 (50.80)	2.189 (55.6)	1.759 (44.68)	M37X1-6g

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	D ∅ Max	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	JJ∅ Max	C Code
A 9	0.553 (14.0)	2.020 (51.3)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	A
B 11	0.740 (18.8)	2.130 (54.1)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
C 13	0.865 (22.0)	2.140 (54.4)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
D 15	0.990 (25.1)	2.260 (57.4)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
E 17	1.146 (29.1)	2.330 (59.2)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
F 19	1.271 (32.3)	2.400 (61.0)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
G 21	1.428 (36.3)	2.440 (62.0)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
H 23	1.552 (39.4)	2.560 (65.0)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
J 25	1.552 (39.4)	2.560 (65.0)	0.476 (12.1)	0.900 (22.86)	1.160 (29.4)	1.276 (32.4)	H



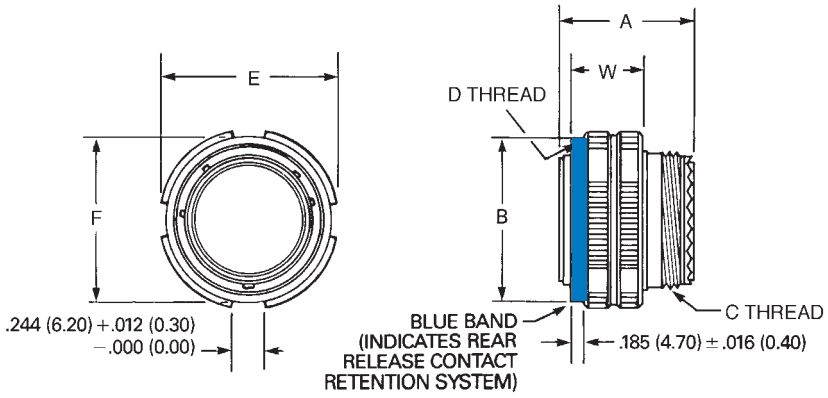
Cord Grip						
Shell Size	D ∅	L✦ Max	K Max	Z∅ Cable Max*	BB∅ Max	C Code
A 9	0.740 (18.8)	1.650 (41.9)	0.118 (3.0)	0.374 (9.5)	0.583 (14.8)	B
B 11	0.865 (22.0)	1.770 (45.0)	0.118 (3.0)	0.413 (10.5)	0.707 (18.0)	C
C 13	0.990 (25.1)	1.740 (44.2)	0.118 (3.0)	0.551 (14.0)	0.887 (22.6)	D
D 15	1.146 (29.1)	1.800 (45.7)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
E 17	1.146 (29.1)	1.840 (46.7)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
F 19	1.148 (36.3)	1.970 (50.0)	0.118 (3.0)	0.984 (25.0)	1.270 (32.3)	G
G 21	1.148 (36.3)	2.010 (51.1)	0.118 (3.0)	0.984 (25.0)	1.270 (32.3)	G
H 23	1.552 (39.4)	2.130 (54.1)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
J 25	1.687 (42.8)	2.170 (55.1)	0.118 (3.0)	1.339 (34.0)	1.530 (38.9)	-

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

38999 Series III – Dimensions

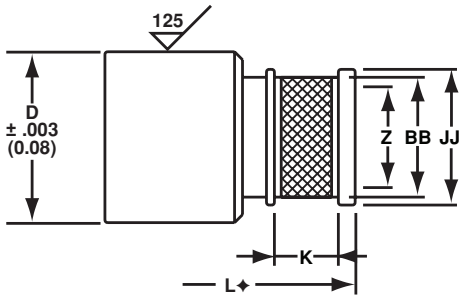
Straight Plug Grounded

D38999/26

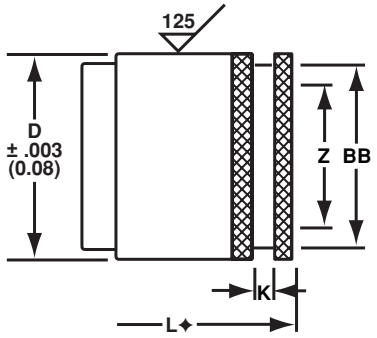


Shell Size	Overall Length A Max	+0.008/0.000 (+.2/-0) B	Rear Metric Thread (Plated) C	Mating Thread Class 2B (Plated) D	Overall Diameter E Max	F Max	+0.008/-0.004 (+.2/-.1) W
A 9	1.234 (31.34)	0.724 (18.4)	M12x1.0-6g	5/8-.1P-.3L-TS	0.858 (21.8)	0.748 (19.0)	0.760 (19.3)
B 11	1.234 (31.34)	0.831 (21.1)	M15x1.0-6g	3/4-.1P-.3L-TS	0.984 (25.0)	0.862 (21.9)	0.760 (19.3)
C 13	1.234 (31.34)	1.000 (25.4)	M18x1.0-6g	7/8-.1P-.3L-TS	1.157 (29.4)	1.028 (26.1)	0.760 (19.3)
D 15	1.234 (31.34)	1.130 (28.7)	M22x1.0-6g	1-.1P-.3L-TS	1.280 (32.5)	1.154 (29.3)	0.760 (19.3)
E 17	1.234 (31.34)	1.268 (32.2)	M25x1.0-6g	1 3/16-.1P-.3L-TS	1.406 (35.7)	1.291 (32.8)	0.760 (19.3)
F 19	1.234 (31.34)	1.374 (34.9)	M28x1.0-6g	1 1/4-.1P-.3L-TS	1.516 (38.5)	1.398 (35.5)	0.760 (19.3)
G 21	1.234 (31.34)	1.500 (38.1)	M31x1.0-6g	1 3/8-.1P-.3L-TS	1.642 (41.7)	1.524 (38.7)	0.760 (19.3)
H 23	1.234 (31.34)	1.618 (41.1)	M34x1.0-6g	1 1/2-.1P-.3L-TS	1.768 (44.9)	1.642 (41.7)	0.760 (19.3)
J 25	1.234 (31.34)	1.744 (44.3)	M37x1.0-6g	1 5/8-.1P-.3L-TS	1.890 (48.0)	1.768 (44.9)	0.760 (19.3)

All dimensions in inches (millimeters in parenthesis)



Universal Heat Shrink							
Shell Size	**D ∅ Max**	**L✦ Max**	**K Max**	**Z∅ Cable Max***	**BB∅ Max**	**JJ∅ Max**	**C Code**
A 9	0.553 (14.0)	1.970 (50.0)	0.433 (11.0)	0.281 (7.2)	0.391 (9.9)	0.486 (12.3)	A
B 11	0.740 (18.8)	2.000 (50.8)	0.433 (11.0)	0.338 (8.6)	0.493 (12.5)	0.587 (14.9)	B
C 13	0.865 (22.0)	2.100 (53.3)	0.476 (12.1)	0.506 (12.9)	0.665 (16.9)	0.783 (19.9)	C
D 15	0.990 (25.1)	2.210 (56.1)	0.476 (12.1)	0.562 (14.3)	0.744 (18.9)	0.862 (21.9)	D
E 17	1.146 (29.1)	2.280 (57.9)	0.476 (12.1)	0.619 (15.7)	0.821 (20.9)	0.939 (23.9)	E
F 19	1.271 (32.3)	2.360 (59.9)	0.476 (12.1)	0.675 (17.1)	0.891 (22.6)	1.010 (25.6)	F
G 21	1.428 (36.3)	2.400 (61.0)	0.476 (12.1)	0.731 (18.6)	0.954 (24.2)	1.072 (27.2)	G
H 23	1.552 (39.4)	2.520 (64.0)	0.476 (12.1)	0.843 (21.4)	1.095 (27.8)	1.213 (30.8)	H
J 25	1.552 (39.4)	2.520 (64.0)	0.476 (12.1)	0.900 (22.86)	1.160 (29.4)	1.276 (32.4)	H



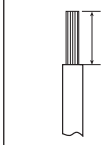
Cord Grip						
Shell Size	**D ∅**	**L✦ Max**	**K Max**	**Z∅ Cable Max***	**BB∅ Max**	**C Code**
A 9	0.740 (18.8)	1.630 (41.4)	0.118 (3.0)	0.374 (9.5)	0.583 (14.8)	B
B 11	0.865 (22.0)	1.730 (43.9)	0.118 (3.0)	0.413 (10.5)	0.707 (18.0)	C
C 13	0.990 (25.1)	1.700 (43.2)	0.118 (3.0)	0.551 (14.0)	0.887 (22.6)	D
D 15	1.146 (29.1)	1.750 (44.5)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
E 17	1.146 (29.1)	1.800 (45.7)	0.118 (3.0)	0.709 (18.0)	0.989 (25.1)	E
F 19	1.148 (36.3)	1.920 (48.8)	0.118 (3.0)	0.984 (25.0)	1.270 (32.3)	G
G 21	1.148 (36.3)	1.960 (49.8)	0.118 (3.0)	0.984 (25.0)	1.270 (32.3)	G
H 23	1.552 (39.4)	2.080 (52.8)	0.118 (3.0)	0.984 (25.0)	1.395 (35.4)	H
J 25	1.687 (42.8)	2.120 (53.8)	0.118 (3.0)	1.339 (34.0)	1.530 (38.9)	-

L ✦ is the maximum reference length from the mating face of the connector
* Recommended cable maximum is 90% of actual endbell I.D.
All dimensions in inches (millimeters in parenthesis)

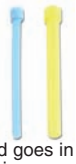
38999 Series III – Contacts

Pins









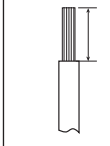
Head goes in first, trim excess

Contact Size	Wire Size AWG	Pin Contact Part Number	Color Bands 1	2	3	Wire Strip Lengths	Wire Range Min	Max	Wire Hole Filler	Color
22D	22-28	M39029/58-360	Orange	Blue	Black	.125 (3.18)	.030 (0.76)	.054 (1.37)	MS27488-22-2	Black
		M39029/107-620#	Blue	Red	Black					
20	20-24	M39029/58-363	Orange	Blue	Orange	.188 (4.77)	.040 (1.02)	.083 (2.11)	MS27488-20-2	Red
		M39029/107-621#	Blue	Red	Brown					
16	16-20	M39029/58-364	Orange	Blue	Yellow	.188 (4.77)	.065 (1.65)	.109 (2.77)	MS27488-16-2	Blue
		M39029/107-622#	Blue	Red	Red					
12	12-14	M39029/58-365	Orange	Blue	Green	.188 (4.77)	.097 (2.46)	.142 (3.61)	MS27488-12-2	Yellow
		M39029/107-623#	Blue	Red	Orange					
10	10-12	M39029/58-528	Green	Red	Gray	-	.135 (3.42)	.162 (4.12)	M85049/81-10	Green
8	Coax* RG180B/U RG195A/U	M39029/60-367	Orange	Blue	Violet	Detailed Instructions included with contacts	-	-	MS27488-8-3	Red
8	Twinax** M17/M176-0002	M39029/90-529	Green	Red	White		-	-	MS27488-8-3	Red
8	Power 8	10-497448-075	-	-	-	.470 (11.94)	-	-	MS27488-8-3	-
8	Power 10	10-497448-095	-	-	-	.470 (11.94)	-	-	MS27488-8-3	-

#1500 Mating Cycle Contacts *Coax **Twinax call for details. For Fiber Optic (MIL-T-29504/4 for size 16 contacts) or Thermocouple Contacts, call.

Sockets









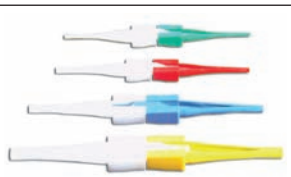
Head goes in first, trim excess

Contact Size	Wire Size AWG	Pin Contact Part Number	Color Bands 1	2	3	Wire Strip Lengths	Wire Range Min	Max	Wire Hole Filler	Color
22D	22-28	M39029/56-348	Orange	Yellow	Gray	.125 (3.18)	.030 (0.76)	.054 (1.37)	MS27488-22-2	Black
		M39029/106-614#	Blue	Brown	Yellow					
20	20-24	M39029/56-351	Orange	Green	Brown	.188 (4.77)	.040 (1.02)	.083 (2.11)	MS27488-20-2	Red
		M39029/106-615#	Blue	Brown	Green					
16	16-20	M39029/56-352	Orange	Green	Red	.188 (4.77)	.065 (1.65)	.109 (2.77)	MS27488-16-2	Blue
		M39029/106-616#	Blue	Brown	Blue					
12	12-14	M39029/56-353	Orange	Green	Orange	.188 (4.77)	.097 (2.46)	.142 (3.61)	MS27488-12-2	Yellow
		M39029/106-617#	Blue	Brown	Violet					
10	10-12	M39029/56-527	Green	Red	Violet	-	.135 (3.42)	.162 (4.12)	M85049/81-10	Green
8	Coax* RG180B/U RG195A/U	M39029/59-366	Orange	Blue	Blue	Detailed Instructions included with contacts	-	-	MS27488-8-3	Red
8	Twinax** M17/M176-0002	M39029/91-530	Green	Orange	Black		-	-	MS27488-8-3	Red
8	Power 8	10-497448-075	-	-	-	.470 (11.94)	-	-	MS27488-8-3	-
8	Power 10	10-497448-095	-	-	-	.470 (11.94)	-	-	MS27488-8-3	-

#1500 Mating Cycle Contacts *Coax **Twinax call for details. For Fiber Optic (MIL-T-29504/4 for size 16 contacts) or Thermocouple Contacts, call.

Contact Color Codes									
0	Black	1	Brown	2	Red	3	Orange	4	Yellow

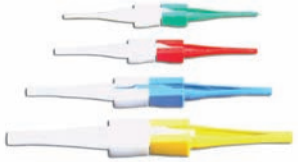
All dimensions in inches (millimeters in parenthesis)



Hand Crimp Tool	Power Crimp Tool	Turret Heads	Use Locator Color	Plastic Insertion/ Extraction Tool	Insertion Tip Color	Extraction Tip Color	Metal Insertion Tool	Color Band	Metal Extraction Tool	Color† Band 1	Color† Band 2
M22520/2-01	WA22††	M22520/2-09	-	M81969/14-01	Green	White	MS27495A22M	Black	MS27495R22M	Black	White
M22520/1-01	WA27F††	M22520/1-04	Red	M81969/14-10	Red	Orange	MS27495A20	Red	MS27495R20	Red	White
M22520/1-01	WA27F††	M22520/1-04	Blue	M81969/14-03	Blue	White	MS27495A16	Blue	MS27495R16	Blue	White
M22520/1-01	WA27F††	M22520/1-04	Yellow	M81969/14-04	Yellow	White	DAK95-12B	-	DRK95-12B	-	-
TP-201423 or 1716P-1	-	-	-	M81969/14-05	Gray	White	M81969/8-11	Green	M81969/8-12	Green	White
M22520/2-01 M22520/5-01	WA22†† HX23	M22520/2-31 M22520/5-05	(inner) (outer)	M81969/14-12	Green		-	-	DRK264-8	-	-
M22520/2-01 M22520/5-01	WA22†† HX23	K709 Y631	(inner) (outer)	M81969/14-12	Green		M81969/46-06	Red	M81969/46-12	-	-
-	400B-1	414DA-8N (Die) 4691 (positioner)	-	M81969/14-12 (extraction only)	-	Green	-	-	DRK264-8	-	-
M3SP-6	400B-1	414DA-8N (Die) 4691 (positioner)	-	M81969/14-12 (extraction only)	-	Green	-	-	DRK264-8	-	-

†† Call for more tool accessories.



Hand Crimp Tool	Power Crimp Tool	Turret Heads	Use Locator Color	Plastic Insertion/ Extraction Tool	Insertion Tip Color	Extraction Tip Color	Metal Insertion Tool	Color Band	Metal Extraction Tool	Color† Band 1	Color† Band 2
M22520/2-01	WA22††	M22520/2-07	-	M81969/14-01	Green	White	MS27495A22M	Black	MS27495R22M	Black	White
M22520/1-01	WA27F††	M22520/1-04	Red	M81969/14-10	Red	Orange	MS27495A20	Red	MS27495R20	Red	White
M22520/1-01	WA27F††	M22520/1-04	Blue	M81969/14-03	Blue	White	MS27495A16	Blue	MS27495R16	Blue	White
M22520/1-01	WA27F††	M22520/1-04	Yellow	M81969/14-04	Yellow	White	DAK95-12B	-	DRK95-12B	-	-
TP-201423 or 1716P-1	-	-	-	M81969/14-05	Gray	White	M81969/8-11	Green	M81969/8-12	Green	White
M22520/2-01 M22520/5-01	WA22†† HX23	M22520/2-31 M22520/5-05	(inner) (outer)	M81969/14-12	Green		-	-	DRK264-8	-	-
M22520/2-01 M22520/5-01	WA22†† HX23	K709 Y631	(inner) (outer)	M81969/14-12	Green		M81969/46-06	Red	M81969/46-12	-	-
-	400B-1	414DA-8N (Die) 4691 (positioner)	-	M81969/14-12 (extraction only)	-	Green	-	-	DRK264-8	-	-
M3SP-6	400B-1	414DA-8N (Die) 4691 (positioner)	-	M81969/14-12 (extraction only)	-	Green	-	-	DRK264-8	-	-

† Band #1 indicates Tool Size - Band #2 indicates Removal Tool †† Call for more tool accessories.

Contact Color Codes									
5	Green	6	Blue	7	Violet	8	Gray	9	White

All dimensions in inches (millimeters in parenthesis)

38999 Series III – At-A-Glance

Name:

Company:

Email:

Phone:

Qty: EAU:

Additional Connector Information

CONNECTOR Part #:_____

OR

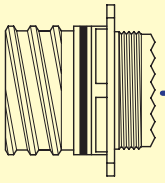
# of Contacts:_____ Sizes & Type:_____

CABLE Manufacturer: _____
(If Known)

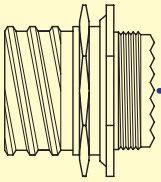
CABLE Part #: _____ OR Cable OD:_____

PEI-Genesis

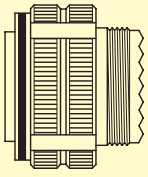
Choose One Connector



☐ D38999/20
Flange Receptacle



☐ D38999/24
Jam Nut Receptacle

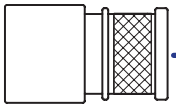


☐ D38999/26
Cable Plug

Choose One Endbell

☐ Q
Quick Thread Converter

☐ U



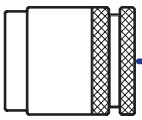
- Omit for Unshielded
- S — Shielding Spring
- T — Shielding Tape
- W — Shielding Tape & Spring

Use endbell "U" for Menus A, B, C, D & E

Crimp Termination Only

Use endbell "CG" for Menus F, G & H

☐ CG



Choose One Wire Protection

- C — MS-3057-C
- A — MS-3057-A
- Other Standard 5015 Series Endbells, call PEI for info.
- HST — Heat Shrink Tubing
- SB — Straight Boot
- BSB — Bottle Shaped Shrink Boot
- HBSB — High Ratio Bottle Shaped Shrink Boot
- CSB — Convoluted Shrink Boot
- RSB — Right Angle Shrink Boot
- CA — Conduit Adapter & Conduit
- MSS — Metal Short Shielded
- PF — Plastic with Flex Relief
- PS — Plastic Short
- MS — Metal Short
- PL — Plastic with Long Boot
- ML — Metal with Long Boot

Comments/Notes:

Accessories



Accessories & Side Dishes

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Flexible Braided Sleeving

Technical Specifications

Physical Properties	PTN	FRN	CCF	HWN	NHN
Monofilament Diameter ASTM D-204	.010	.010	.008	.015	NA
Flammability Rating	FAR 25, FMVSS 302	VW-1, FAR 25	VW-1	-	-
Recommended Cutting	Hot Knife	Hot Knife	Scissor	Hot Knife	Hot Knife
Stock Colors	19	2	2	3	1
Wall Thickness	.025	.025	.024	.038	-
Tensile Strength PSI ASTM D-2256	85,000	55,000	55,000	85,000	55,000
Abrasion Resistance ASTM D-4157	High	High	High	Very High	Very High
Tenacity (Gm/Denier) ASTM D-638	4.5	4.6	4.6	4.5	-
Specific Gravity ASTM D-792	1.38	1.38	1.38	1.38	1.12
Moisture Absorption % ASTM D-570	.08	.08	.08	.08	1.1
Smoke D-Max ASTM E-662	56	275	275	56	-
Toxicity Index USN 713	4.2	6.2	6.2	4.2	-
Typical Elongation ASTM D-2256-8					
Break	15	15	14	20	-
3g/Denier	5	5	5	7	-
Hard Vacuum Data ASTM E-595 at 10-5 torr TML	.51	.19	.19	.51	-
CVCM	0	.01	.01	0	-
WVR	.10	.11	.11	.10	-
Operating Temperatures					
Minimum Continuous	-75°C/-103°F	-75°C/-103°F	-75°C/-103°F	-75°C/-103°F	-45°C/-49°F
Maximum Continuous Mil-I-23053	125°C/257°F	125°C/257°F	125°C/257°F	125°C/257°F	150°C/302°F
Melt ASTM D-2117	230°C/446°F	250°C/482°F	250°C/482°F	230°C/446°F	265°C/509°F
Chemical Resistance 1=No Effect 2-Little Effect 3=Affected 4=More Affected 5=Severely Affected					
Aromatic Solvents	2	2	2	2	1
Aliphatic Solvents	1	1	1	1	1
Chlorinated Solvents	3	3	3	3	1
Weak Bases	1	1	1	1	1
Salts	1	1	1	1	1
Strong Bases	2	2	2	2	2
Salt Water O-S 1926	1	1	1	1	1
Hydraulic Fluid MIL-A-8243	1	1	1	1	1
Lube Oil MIL-L-7808	1	1	1	1	1
De-Icing Fluid MIL-A-8243	1	1	1	1	1
Strong Acids	3	3	3	3	5
Strong Oxidants	2	2	2	2	5
Esters/Keytones	1	2	2	1	-
UV Light	1	1	1	1	-
Petroleum	1	1	1	1	2
Fungus ASTM G-21	1	1	1	1	2
Outgassing	med	med	med	med	high
Oxygen Index ASTM D-2863	21	31	31	21	22
Halogen Free	yes	yes	yes	yes	-

FLEXO Wrap	RYTON	KFLEX KEVLAR	nomex	TEFLON	PEEK	FLEXO HT	FLEX-SHIELD HP	METAL BRAID
FWF	**RYN**	**KVN**	**NXN**	**TFN**	**PEEK**	**HTN**	**PG01-19-001**	**MBN**
.10	.008	NA	N/A	.016	.010	.011	0.01	-
VW-1	FAR 25	-	-	FAR 25	V-0 UL94	VW-1, UL94	VW-1, UL94	-
Hot Knife	Hot Knife	Kevlar Shears	Scissor	Hot Knife	Hot Knife	Hot Knife	Kevlar Shears	Scissor
1	2	1	1	1	1	2	1	1
.025	.02	.020	-	.04	.025	.02	-	-
55,000	-	439,000	90,000	20,000	-	45,000	-	-
High	Med	Very High	High	Med	High	Med	Very High	Very High
4.6	-	23.8	4.9	1	-	2	-	-
1.38	1.37	1.44	1.38	2.10	1.32	1.68	-	-
.08	.02	-	-	<.01	-	.01	-	-
275	-	-	-	-	-	-	-	-
6.2	-	-	-	-	-	-	-	-
15	30	2.5	27	-	-	-	-	-
5	-	-	-	-	-	-	-	-
.19	-	-	-	-	-	-	-	-
.01	-	-	-	-	-	-	-	-
.11	-	-	-	-	-	-	-	-
-75°C/-103°F	-70°C/-94°F	-170°C/-340°F	-196°C/-320°F	-70°C/-94°F	-70°C/-94°F	-75°C/-103°F	-40°C/-40°F	-
125°C/257°F	200°C/392°F	160°C/320°F	350°C/662°F	280°C/550°F	260°C/500°F	150°C/302°F	150°C/302°F	-
250°C/482°F	285°C/545°F	NA	NA	310°C/590°F	340°C/644°F	240°C/464°F	n/a	-
2	-	2	-	1	1	1	2	-
1	1	2	-	1	1	1	2	-
3	-	2	-	1	1	1	2	-
1	1	1	-	1	1	1	1	-
1	1	1	-	1	1	1	1	-
2	-	2	1	1	1	1	2	-
1	1	1	-	1	1	1	1	-
1	1	1	-	1	1	1	1	-
1	1	1	-	1	1	1	1	-
1	1	1	-	1	1	1	1	-
3	-	2	2	1	2	1	2	-
2	-	2	2	1	-	1	2	-
2	1	1	-	2	-	2	1	1
1	1	4	3	1	-	1	4	2
1	1	1	1	1	1	1	1	-
1	1	2	-	1	-	1	2	-
med	low	-	-	very low	low	low	-	-
31	40	29	28	95	35	64	-	-
yes	yes	yes	yes	no	yes	no	yes	yes

Flexible Braided Sleeving



PTN

A Versatile Bundling & Protection Solution

- Economical & easy to install
- Cut & abrasion resistant
- Expands up to 150%
- Halogen free
- Resists gasoline, engine chemicals & cleaning solvents
- FAR 25 approval
- AFVSS 302 approval



FRN

Flame Retardant, Economical Sleeving Solution

- MIL-202, FAR 25, FMVSS 302, VW-1, FR-1 approved
- Economical & easy to install
- Cut & abrasion resistant
- Expands up to 150%
- Halogen free
- Resists gasoline and engine chemicals
- Temp. range -75°C to 125°C
- Melt temp. 250°C



CCF

Scissor Cut for Field Installation, Will Not Support Combustion

- Scissor cut for easy installation
- MIL-202, FAR 25, VW-1, FR-1 approved
- Cut & abrasion resistant
- Expands for ease of installation
- Halogen free
- Temp. range -75°C to 125°C
- Melt temp. 250°C



HWN

50% Thicker For The Really Abrasive Jobs

- Braided from .15 mil PET monofilament
- Extreme abrasion & cut resistance
- UV resistant
- Resists gasoline, solvents, salt water and chemicals
- Temp. range -75°C to 125°C
- Melt temp. 230°C



NHN

Innovative Flat Filament Braided for High Abrasion Resistance

- Flat filament technology
- Heavy plastic protection
- Smooth feel & reduced drag



FWF

Easy On, Easy Off Access, Will Not Support Combustion

- MIL-202, VW-1, FR-1 approved
- Economical & easy to install
- Cut & abrasion resistant
- Hook & loop closure for easy and repeatable access
- Temp. range -75°C to 125°C
- Melt temp. 250°C



RYN

Ultra Lightweight, High-Temp Tolerant and Virtually Impervious to Chemical Degradation

- FAR 25 approved
- Ultra light weight
- Highly wear resistant
- Expands up to 150%
- Resists acids, bases, solvents, fuels
- Temp. range -70°C to 200°C
- Melt temp. 285°C



FLEX-SHIELD-HP

PG01-19-001*

Tin-Plated, Copper-Wrapped Aramid Sleeve

- Lightweight alternative to metal braid for EMI/RFI protection
- -40°C to 150°C

Frequency (MHz)	Attenuation (dB)
1	50
10	63
50	64
100	65
500	73
1000	60

Call for low cost version: -15°C/+85°C

*Size	Diameter	
	Min(inches)	Max(inches)
1/8	1/16	1/4
3/8	1/4	1/2
1/2	3/8	3/4
3/4	1/2	1



MBN

Metal Braid, Tinned-Copper Sleeve

- EMI/RFI/ESD protection
- Grounding/grounding straps
- High current capacity
- ASTM-B 33 standard
- Low cost

Special Versions

Call for availability



KVN

Stronger Than Steel, Soft & Pliable

- Up to 20 times stronger than steel
- Will not melt, burn or support combustion
- Stays soft, flexible and pliable through-out -170°C operating temperature range



NXN

Soft, Pliable Flame Protection to 700°F/395°C

- Halogen free
- Asbestos free
- Resistant to gasoline and engine chemicals



FLEXA HG-CU

High Temp Stable, Abrasion Resistant, Low Outgassing

- EMI/RFI/ESD protection
- Supplied on tube former for easy installation



PEEK

500°F Protection & Bundling Solution

- High chemical resistance
- Low outgassing
- Halogen free
- Very light weight
- V-O flammability rating
- Wear resistant
- High strength alternative to fluropolymers



HTN

Very Low Outgassing, Self-Extinguishing UL-2024 Plenum Rated Sleeving

- UL 2024 rated
- FAR 25 approved
- Cut & abrasion resistant
- Expands up to 150%
- Resists gasoline and engine chemicals
- Temp. range -75°C to 150°C
- Melt temp. 250°C



TFN

High Temp Stable, Abrasion Resistant, Low Outgassing

- Plenum suitable
- FAR 25 approved
- Easy to install
- Cut & abrasion resistant
- Expands up to 150%
- Resists gasoline and other chemicals
- Temp. range -70°C to 280°C
- Melt temp. 310°C

Flexible Braided Sleeving for Cable Diameters .094-1.625

Cable Range and Colors

Colors Available
**** Add code to part number**

Part Number	Cable Range Inch min	Cable Range Inch max	WHITE WITH BLACK TRACER TW	BLACK WITH WHITE TRACER TB	NEON RED NR	NEON PINK NP	NEON YELLOW NY	NEON GREEN NG	NEON BLUE NB	BEIGE BE	CARBON CB	NITROX NX	PATRIOT PT
PTN0.13**	0.094	0.250			NR	NP	NY	NG	NB	BE	CB	NX	PT
FRN0.13**	0.094	0.250	TW	TB									
HTN0.13**	0.094	0.250	TW	TB									
RYN0.13**	0.094	0.250											
TFN0.13**	0.094	0.250											
CCF0.13**	0.125	0.250	TW	TB									
KVN0.25**	0.125	0.313											
RYN0.25**	0.125	0.375											
PTN0.25**	0.125	0.438			NR	NP	NY	NG	NB	BE	CB	NX	PT
FRN0.25**	0.125	0.438	TW	TB									
CCN0.25**	0.125	0.438											
HTN0.25**	0.125	0.438	TW	TB									
CCF0.25**	0.156	0.438	TW	TB									
TFN0.25**	0.188	0.375											
PTN0.38**	0.188	0.625			NR	NP	NY	NG	NB	BE	CB	NX	PT
FRN0.38**	0.188	0.625	TW	TB									
CCF0.38**	0.188	0.625	TW	TB									
CCN0.38**	0.188	0.625											
HTN0.38**	0.188	0.625	TW	TB									
HWN0.38**	0.188	0.750									CB		
KVN0.50**	0.250	0.625											
PTN0.50**	0.250	0.750			NR	NP	NY	NG	NB	BE	CB	NX	PT
FRN0.50**	0.250	0.750	TW	TB									
CCF0.50**	0.250	0.750	TW	TB									
CCN0.50**	0.250	0.750											
HTN0.50**	0.250	0.750	TW	TB									
RYN0.50**	0.250	0.750											
TFN0.38**	0.250	0.750											
HWN0.63**	0.313	1.000									CB		
NHN0.50**	0.375	0.625											
TFN0.50**	0.375	0.875											
PTN0.63**	0.375	1.000			NR	NP	NY	NG	NB	BE	CB	NX	PT
FRN0.75**	0.375	1.000	TW	TB									
KVN0.75**	0.500	0.875											
PTN0.75**	0.500	1.250			NR	NP	NY	NG	NB	BE	CB	NX	PT
CCN0.75**	0.500	1.250											
HTN0.75**	0.500	1.250	TW	TB									
RYN0.75**	0.500	1.250											
HWN1.00**	0.500	1.500									CB		
CCF0.75**	0.625	1.000	TW	TB									
NHN0.75**	0.625	1.000											
TFN0.75**	0.625	1.250											
PTN1.00**	0.625	1.625			NR	NP	NY	NG	NB	BE	CB	NX	PT
FRN1.50**	0.625	1.625	TW	TB									
CCN1.00**	0.625	1.625											

BOLD = Most Popular

Colors Available

**** Add code to part number**



RD	OR	YL	GN	BL	PP	CL	**BK**	WH	GY	
							BK			NT
										NT
		YL								
							BK			NT
RD	OR	YL	GN	BL	PP	CL	**BK**	WH	GY	
							BK			
										NT
RD	OR	YL	GN	BL	PP	CL	**BK**	WH	GY	
							BK			
						CL	**BK**			
		YL								
RD	OR	YL	GN	BL	PP	CL	**BK**	WH	GY	
							BK			
							BK			NT
										NT
						CL	**BK**			
							BK			
										NT
RD	OR	YL	GN	BL	PP	CL	**BK**	WH	GY	
		YL								
RD	OR	YL	GN	BL	PP	CL	**BK**	WH	GY	
							BK			
							BK			NT
						CL	**BK**			
							BK			
										NT
RD	OR	YL	GN	BL	PP	CL	**BK**	WH	GY	
							BK			

Flexible Braided Sleeving for Cable Diameters .750-5.500

Colors Available
**** Add code to part number**

Part Number	Cable Range Inch Min.	Max.	WHITE WITH BLACK TRACER TW	BLACK WITH WHITE TRACER TB	NEON RED NR	NEON PINK NP	NEON YELLOW NY	NEON GREEN NG	NEON BLUE NB	BEIGE BE	CARBON CB	NITROX NX	PATRIOT PT
CCF1.00**	0.750	1.188	TB	TW									
KVN1.00**	0.750	1.250											
PTN1.25**	0.750	1.750			NR	NP	NY	NG	NB	BE	CB	NX	PT
FRN1.75**	0.750	1.750	TW	TB									
HTN1.25**	0.750	1.750	TW	TB									
RYN1.25**	0.750	1.750											
HWN1.50**	0.750	2.000									CB		
CCF1.25**	1.000	1.500	TW	TB									
NHN1.25**	1.000	1.500											
KVN1.25**	1.000	1.625											
PTN1.50**	1.000	2.500			NR	NP	NY	NG	NB	BE	CB	NX	PT
FRN1.50**	1.000	2.500	TW	TB									
TFN1.25**	1.125	1.500											
CCF1.50**	1.250	2.000	TW	TB									
KVN1.50**	1.250	2.000											
PTN1.75**	1.250	2.750			NR	NP	NY	NG	NB	BE	CB	NX	PT
FRN1.75**	1.250	2.750	TW	TB									
HTN1.75**	1.250	2.750	TW	TB									
RYN1.75**	1.250	5.500											
NHN1.75**	1.500	2.000											
HWN2.00**	1.500	3.000									CB		
PTN2.00**	1.500	3.500			NR	NP	NY	NG	NB	BE	CB	NX	PT
FRN2.00**	1.500	3.500	TW	TB									
HTN2.00**	1.500	3.500	TW	TB									
PTN2.50**	1.750	4.500			NR	NP	NY	NG	NB	BE	CB	NX	PT
FRN2.50**	1.750	4.500	TW	TB									
HWN3.00**	2.000	4.000									CB		
PTN3.00**	2.500	4.750			NR	NP	NY	NG	NB	BE	CB	NX	PT
FRN3.00**	2.500	4.750	TW	TB									
HWN4.00**	2.500	5.500									CB		

BOLD = Most Popular

Handheld Hot Knife

Perfect for individual projects or small volume production. The large knife blade heats quickly and easily cuts and seals most grades of braided sleeving. Handle can also be used as a soldering gun with the appropriate tips.
110 volt operation.



Hand Held Hot Knife - Part # HKH0.00BK
Replacement Knife Blade - Part # RBH0.00BK

Bench Mount Hot Knife

Heavy duty components and heavy gauge 2 1/2" blade make this tool ideal for use in production environments. Lighted power switch. Heats to 600° C in 30 seconds.
110 volt operation.



Bench Mount Hot Knife - HKB0.00WH
Replacement Knife Blade - RBB0.00BK

Colors Available

**** Add code to part number**



		YL								
RD	OR	YL	GN	BL	PP	CL	**BK**	WH	GY	
							BK			NT
						CL	**BK**			
							BK			
		YL								
RD	OR	YL	GN	BL	PP	CL	**BK**	WH	GY	
										NT
		YL								
RD	OR	YL	GN	BL	PP	CL	**BK**	WH	GY	
							BK			NT
							BK			
						CL	**BK**			
RD	OR	YL	GN	BL	PP	CL	**BK**	WH	GY	
RD	OR	YL	GN	BL	PP	CL	**BK**	WH	GY	
						CL	**BK**			
RD	OR	YL	GN	BL	PP	CL	**BK**	WH	GY	
						CL	**BK**			

#94907K – Handheld Soldering Iron/Hot Knife Kit

- *Automatic ignition systems*
- *Butane powered*
- *Ergonomic design*

Specifications:
Approx. temperatures:
Soldering tip: 210-400°C (410-750°F)
Torch: 1300°C (2400°F)
Gas container capacity: 20ml
Operating time for one gas filling:
120 min. at mid-setting.



25W-80W Power Range

- *Multi-function heat tool*



Wrap Around Sleeving

Wrap Around Zip Closure Re-enterable Wire & Cable Protection

Recommended For:

Complex Assemblies: Wrap around sleeving is a great option for complicated cable assemblies. It will fit around a wide range of wires, cables, hoses and bundles. With wrap around materials users do not need to pre-cut and slide tubing over wire bundles before adding connectors or break outs. Instead, the wire harness can be assembled and tested first, and the wrap around sleeve can be added later.

Re-Entry: The Quick-Zip and Shield-Zip versions can be opened and closed over and over again. They make it easy to add or remove wires, repair damaged wires, or adjust cable assembly lengths.

Field Repair and Adjustments: Wrap around protection is an easy and effective way to repair damaged cables or add extra protection to existing cables.

UNSHIELDED
Quick-Zip – PVC Coated Polyester Fabric with Zip-Track

Flame retardant PVC is laminated to both sides of a Polyester fabric to make this rugged jacket extremely flexible and lightweight. This reinforced construction provides good wear resistance combined with high tear strength. It's ideal for discrete wires, wire harnesses, hoses, and other applications where its flexibility, strength and abrasion protection are needed. The jacket conforms to MIL-C-43006E, Type II, Class 1.

Application Notes

Quick-Zip is easy to open and close. Once closed it is very rugged and reliable. It is a great choice for applications where re-entry is needed to access wires.

Properties

	UNSHIELDED Quick-Zip
Operating Temperature:	-20°C to 100°C
Standard Color:	Black
Standard Put-up:	Spools
Materials:	PVC laminated to Polyester fabric
Shielding:	–
Flame Rating:	UL 224 VW-1
Fastener:	Zip-Track
RoHS:	Compliant

Part Numbers

Maximum Bundle Diameter	UNSHIELDED Quick-Zip Part #:100 Foot Spool
1/2 Inch (12.7 mm)	PG99-16-064-0.5
3/4 Inch (19.0 mm)	PG99-16-064-0.75
1.0 Inch (25.4 mm)	PG99-16-064-1.0
1 1/2 Inch (38.1 mm)	PG99-16-064-1.5
2.0 Inch (50.8 mm)	PG99-16-064-2.0

SHIELDED
Shield-Zip – Shielded PVC Coated Polyester Fabric with Zip-Track

Designed to meet the demand for a quality jacket with lifetime flexibility in most installations, the 63-10 jacket is manufactured of .010" thick high-temperature PVC materials. Inside overlap construction for military applications meets Mil-I-631D, Type F, Form S, Grade C, Class 1. Recognized under the components programs of Underwriters Laboratories, Inc., and Canadian Standards Laboratories. This lightweight shielding is combined with a jacket for economy and flexibility, yet provides protective shielding. Grounding is accomplished with a tinned-copper braid.

Application Notes

Shield-Zip is easy to open and close. It provides excellent shielding at high frequencies. This is a great option for wire assemblies and bundles that need additional shielding, or for complex assemblies with multiple break-outs. The braid can be separated from the jacket for easy connection with a lug or ring terminal.

Properties

	SHIELDED Shield-Zip
Operating Temperature:	-20°C to 100°C
Standard Color:	Black
Standard Put-up:	Spools
Materials:	PVC laminated to Polyester fabric
Shielding:	Aluminum Foil Shield with Tinned Copper Braid
Flame Rating:	UL 224 VW-1
Fastener:	Zip-Track
RoHS:	–
Shield Attenuation:	>85 dB from 10 MHz thru 20 GHz
Enclosure Tool:	ZTZ-SP

Part Numbers

Maximum Bundle Diameter	SHIELDED Shield-Zip Part #:100 Foot Spool
1/2 Inch (12.7 mm)	PG97-17-004-0.5
3/4 Inch (19.0 mm)	PG97-17-004-0.75
1.0 Inch (25.4 mm)	PG97-17-004-1.0
1 1/2 Inch (38.1 mm)	PG97-17-004-1.5
2.0 Inch (50.8 mm)	PG97-17-004-2.0

SHIELDED & UNSHIELDED Assembly Instructions



1. Lay wires and cables in wrap around sleeving. (Shielded version shown)



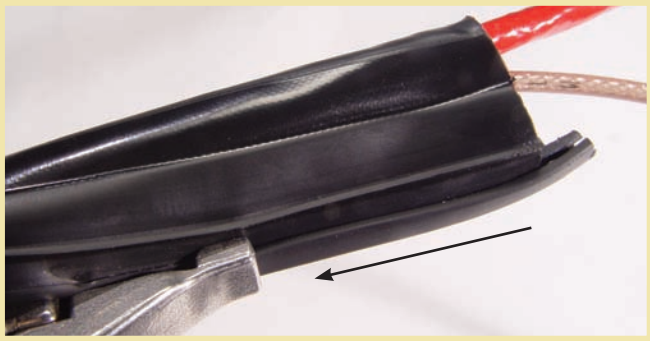
2. Slightly open ZTZ-SP hand tool.



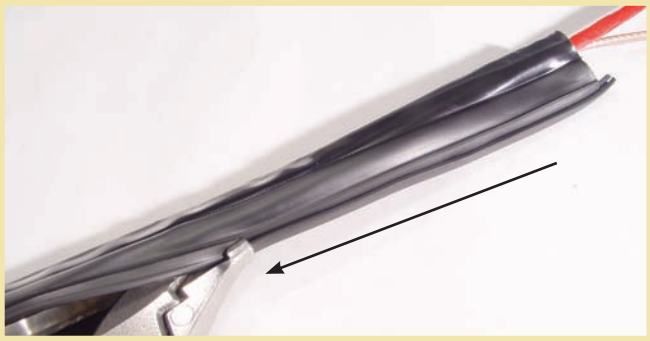
3. Slide into Zip tool.



4. Insert opposite side of track into tip of tool. Make sure the tracks mate into each other.



5. Carefully pull tool along sleeving until closed.



6. Slide completely down length of sleeve.

To Re-enter for Repair or Rework



Use ZTZ-SP to disengage zip-track. Separate and slide tool up entire length to open.

Wrap Around Sleeving

Wrap Around Adhesive Closure Wire & Cable Protection

Recommended For:

Complex Assemblies: *Wrap around sleeving is a great option for complicated cable assemblies. It will fit around a wide range of wires, cables, hoses and bundles. With wrap around materials users do not need to pre-cut and slide tubing over wire bundles before adding connectors or break outs. Instead, the wire harness can be assembled and tested first, and the wrap around sleeve can be added later.*

Field Repair and Adjustments: *Wrap around protection is an easy and effective way to repair damaged cables or add extra protection to existing cables.*

UNSHIELDED
Quick-Wrap – PVC Coated Polyester Fabric with Adhesive

Flame retardant PVC is laminated to both sides of a Polyester fabric to make this rugged jacket extremely flexible and lightweight. A strip of high strength fast curing (24hrs) acrylic adhesive is bonded to one edge to provide a secure and flexible closure. This reinforced construction provides good wear resistance combined with high tear strength. It's ideal for discrete wires, wire harnesses, hoses, and other applications where its flexibility, strength and abrasion protection are needed. The jacket conforms to MIL-C-43006E, Type II, Class 1.

Application Notes

Quick-Wrap is quick and easy to install. It is a great alternative to long runs of heat shrink, especially for complex cables with lots of break-outs or for assemblies with an unusual mix of wires, cables and/or hoses. It can be added after the wire assembly has been built and tested or to add extra protection on an existing assembly.

Properties

	UNSHIELDED Quick-Wrap
Operating Temperature:	-20°C to 100°C
Standard Color:	Black
Standard Put-up:	Spools
Materials:	PVC laminated to Polyester fabric
Shielding:	–
Flame Rating:	UL 224 VW-1
Fastener:	Adhesive
RoHS:	Compliant

Part Numbers

Maximum Bundle Diameter	UNSHIELDED Quick-Wrap Part #:100 Foot Spool
1/2 Inch (12.7 mm)	PG93-04-009-0.5
3/4 Inch (19.0 mm)	PG93-04-009-0.75
1.0 Inch (25.4 mm)	PG93-04-009-1.0
1 1/2 Inch (38.1 mm)	PG93-04-009-1.5
2.0 Inch (50.8 mm)	PG93-04-009-2.0

SHIELDED
Shield-Wrap – Shielded PVC Coated Polyester Fabric with Adhesive

Z-Shield-AL is a combination of a polyurethane film bonded to our SH1 lightweight aluminum foil/polyester shield for maximum shielding effectiveness. Extremely useful in electrical applications where shielding is needed and reentry is not required. Ideal for flat cable shielding requirements. Will cross reference to Chomerics CJ-021 Jacket.

Application Notes

Shield-Wrap is easy to add to wire harnesses and bundles – especially complex assemblies with multiple break-outs. It has excellent shielding properties across a wide range of high frequencies. This makes it a great option to solve unexpected EMI noise problems or to add extra noise protection.

Properties

	SHIELDED Shield-Wrap
Operating Temperature:	-20°C to 100°C
Standard Color:	Black
Standard Put-up:	Spools
Materials:	PVC laminated to Polyester fabric
Shielding:	Aluminum Foil Shield with Tinned Copper Braid
Flame Rating:	UL 224 VW-1
Fastener:	Adhesive
RoHS:	–
Shield Attenuation:	>85 dB from 10 MHz thru 20 GHz
Enclosure Tool:	Z Track Enclosure

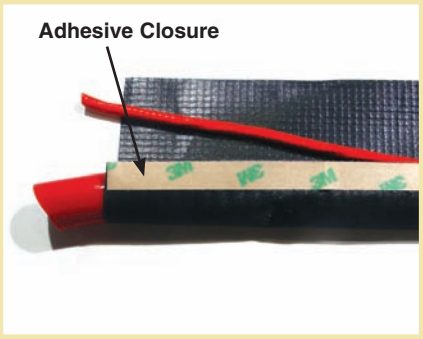
Part Numbers

Maximum Bundle Diameter	SHIELDED Shield-Wrap Part #:100 Foot Spool
1/2 Inch (12.7 mm)	PG94-04-003-0.5
3/4 Inch (19.0 mm)	PG94-04-003-0.75
1.0 Inch (25.4 mm)	PG94-04-003-1.0
1 1/2 Inch (38.1 mm)	PG94-04-003-1.5
2.0 Inch (50.8 mm)	PG94-04-003-2.0

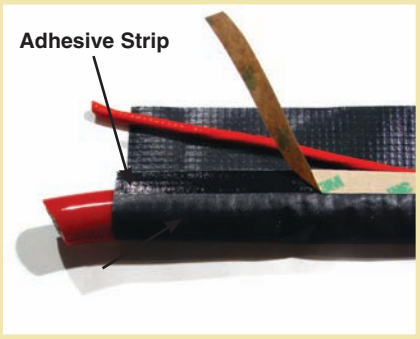
UNSHIELDED Quick-Wrap Assembly Instructions



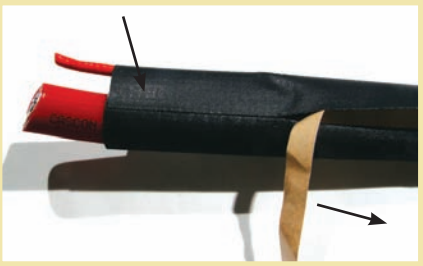
1. Lay wire and/or cables on Quick-Wrap.



2. Fold over adhesive closure side of sleeving.



3. Start to remove non-stick liner.



5. Fold over other side of sleeving onto adhesive strip. Pull liner out a few inches at a time while pressing the sleeving closed. Work up the assembly until complete.



Complete protection in place.

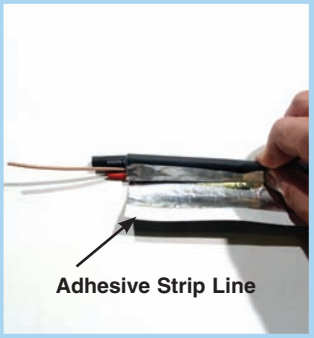
SHIELDED Quick-Wrap Assembly Instructions



1. Identify SHIELDED (inside) and environmentally protected (outside). Note position of adhesive strip.



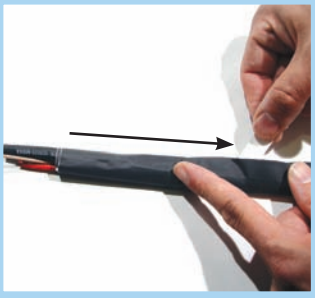
2. Lay wire and cables on shielded side.



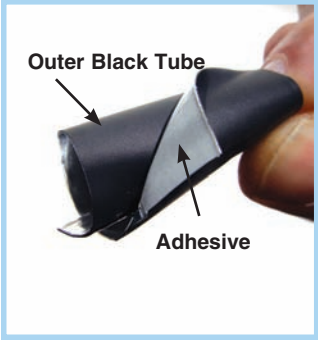
3. Fold over the side without the adhesive strip line.



4. Remove the non-stick liner and stick adhesive to outside of black tube.



5. Continue to remove non-stick lining until complete.



Correct Adhesive Termination



Incorrect Adhesive Termination

Flexible Braided Shielded Sleeving

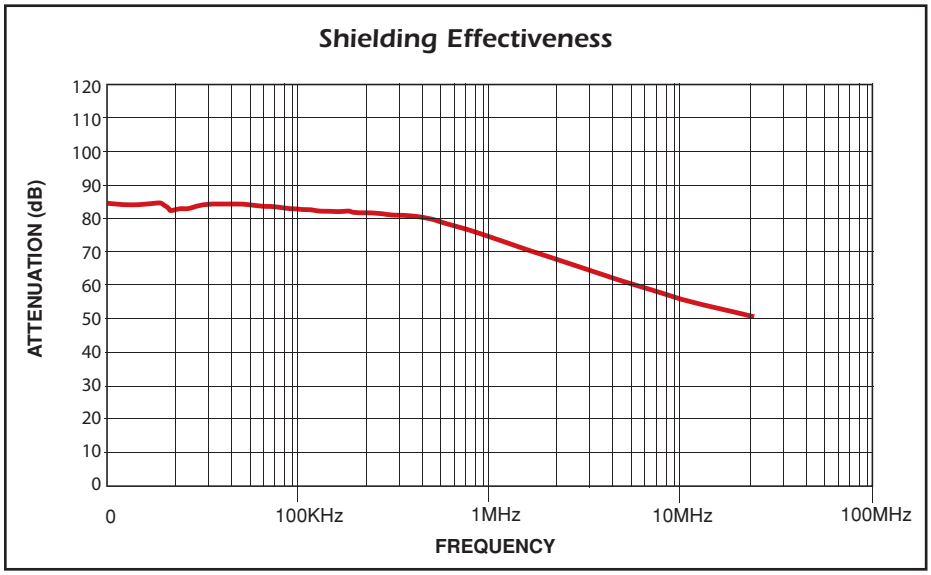
EMI/RFI - EMC Braid



Flexa HG-CU Flexible Tinned Copper Braid

This braided shield (Screen) is woven over a flexible PVC tube. The tube maintains the shielding shape for excellent shielding performance and simplifies installation. Just attach your wires/cables to the end and pull the tube out from the braid.

Part Number	Trade Size	Cable Range inch (mm) min	Cable Range inch (mm) max	Stranding	Cross Section mm2	Weight (kg/m) +/-10% Pounds Per Foot
4051.701.008	07	(2.5) 0.098	(10.0) 0.394	24x5x0.20mm2	3.0	(0.070) 0.047
4051.701.013	10	(5.0) 0.197	(16.0) 0.630	24x6x0.20mm2	4.5	(0.930) 0.625
4051.701.017	15	(12.0) 0.472	(22.0) 0.866	24x8x0.20mm2	6.0	(0.109) 0.073
4051.701.025	20	(16.0) 0.630	(27.0) 1.063	36x6x0.24mm2	8.7	(0.196) 0.132
4051.701.040	25	(20.0) 0.787	(35.0) 1.378	48x7x0.24mm2	11.6	(0.336) 0.226
4051.701.055	35	(25.0) 0.984	(45.0) 1.772	48x8x0.24mm2	14.5	(0.370) 0.249



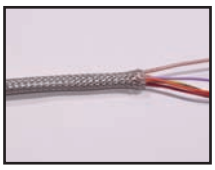
How to Pull Through



Tape wires/cables to be pulled and insert into end of PVC tube.



Use electrical or silicone tape to secure wires/cables to PVC tube.



Push the braided shield while pulling PVC tube and wires/cables through.



After PVC tube comes free of the braided shield, un-tape the wires/cables.



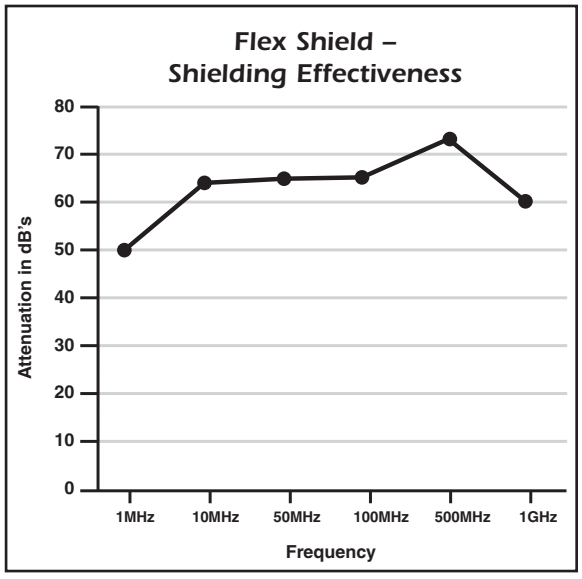
Wires/cables are now ready to be un-taped and terminated.



High Performance Flex Shield

High temperature, ultra light-weight, tinned copper foil-wrapped Aramid Monofilaments braided shield (Screen). This shield works in temperatures from -40°C to 150°C (-40°F to 302°F) and is extremely strong and flexible.

Part Number	Cable Range inch (mm) min	Cable Range inch (mm) max	Weight (kg/m) +/-10% Pounds Per Foot
PG01-19-001-1/8	(1.6) 0.063	(6.4) 0.250	(0.012) 0.008
PG01-19-001-3/8	(6.4) 0.250	(12.7) 0.500	(0.021) 0.014
PG01-19-001-1/2	(9.5) 0.375	(19.1) 0.750	(0.031) 0.021
PG01-19-001-3/4	(12.7) 0.500	(25.4) 1.000	(0.042) 0.028



Performance

Frequency	Attenuation dB
1MHZ	50
10MHz	63
50MHz	64
100MHz	65
500MHz	73
1GHz	60



DSG-Canusa's Heat Shrink Tubing is supplied in various shrink ratios, materials and thickness. Available in several colors with a wide range of operating temperatures; most are flame retardant. Adhesive lined version forms a bond to the underlying surface, filling small voids. When cool this creates a barrier against water, moisture, dirt and other contaminants. Custom lengths are available. Call for ordering information.

CPX100 Heat Shrink (2:1 Ratio)

Thin Wall Flexible Polyolefin – Heat Shrink

Flame Retardant:	Yes except Clear
Continuous Operating Temperature:	-55° to 135°C (-67° to 275°F)
Shrink Temperature:	120°C (248°F)
Other Colors Available:	Red, White, Blue, Yellow, Green, Clear
Packing:	Spools and 48" sticks

Meets UL224, CSA C22.2 No. 198.1, MIL-DTL-23053/5 Class 1 & 2
AMS3636 & 3637, DEF STAN 59-97Issue 3, Type 2a

CPX100 Heat Shrink (2:1 Ratio)	Trade Size	Cable OD Inches Max.	Cable OD Inches Min.
CPX100-0047-BLK	3/64"	0.047	0.023
CPX100-0063-BLK	1/16"	0.063	0.031
CPX100-0094-BLK	3/32"	0.094	0.047
CPX100-0125-BLK	1/8"	0.125	0.063
CPX100-0187-BLK	3/16"	0.188	0.094
CPX100-0250-BLK	1/4"	0.250	0.125
CPX100-0312-BLK	5/16"	0.313	0.188
CPX100-0375-BLK	3/8"	0.375	0.250
CPX100-0500-BLK	1/2"	0.500	0.313
CPX100-0750-BLK	3/4"	0.750	0.375
CPX100-1000-BLK	1"	1.000	0.500
CPX100-1250-BLK	1 1/4"	1.250	0.625
CPX100-1500-BLK	1 1/2"	1.500	0.750
CPX100-2000-BLK	2"	2.00	1.000
CPX100-3000-BLK	3"	3.00	1.500
CPX100-4000-BLK	4"	4.00	2.000

CPA100 Heat Shrink (3:1 Ratio)

Thin Dual Wall Flexible Polyolefin – Adhesive Lined

Flame Retardant:	Yes except Clear
Continuous Operating Temperature:	-55° to 110°C (-67° to 230°F)
Shrink Temperature:	120°C (248°F)
Other Colors Available:	Red, Blue, Clear
Packing:	Spools and 48" sticks

Meets MIL-DTL-23053/4 Class 3

CPA100 Heat Shrink (3:1 Ratio)		Max.	Min.
CPA100-0125-BLK	1/8"	0.125	0.040
CPA100-0187-BLK	3/16"	0.188	0.060
CPA100-0250-BLK	1/4"	0.250	0.080
CPA100-0312-BLK	5/16"	0.313	0.100
CPA100-0375-BLK	3/8"	0.375	0.125
CPA100-0500-BLK	1/2"	0.500	0.160
CPA100-0750-BLK	3/4"	0.750	0.250
CPA100-1000-BLK	1"	1.000	0.320
CPA100-1250-BLK	1 1/4"	1.250	0.416
CPA100-1500-BLK	1.57"	1.570	0.510

DERAY IHKT Features (4:1 Ratio)

Thin Dual Wall Flexible Polyolefin – Adhesive Lined

Flame Retardant:	Yes
Continuous Operating Temperature:	-55° to 135°C (-67° to 275°F)
Shrink Temperature:	100°C (212°F)
Other Colors Available:	Red, Blue, Clear
Packing:	48" sticks

Meets VG95343, Part 12, type D

Deray IHKT Heat Shrink (4:1 Ratio)	Max.	Min.
DERAYIHKT-0157-BLK-4FTSTK	0.157	0.039
DERAYIHKT-0315-BLK-4FTSTK	0.315	0.080
DERAYIHKT-0472-BLK-4FTSTK	0.472	0.118
DERAYIHKT-0630-BLK-4FTSTK	0.630	0.160
DERAYIHKT-0945-BLK-4FTSTK	0.945	0.240
DERAYIHKT-1260-BLK-4FTSTK	1.260	0.315
DERAYIHKT-2047-BLK-4FTSTK	2.047	0.512

CFHR Features (6:1 Ratio)

Heavy Wall Cross linked Polyolefin – Adhesive Lined

Continuous Operating Temperature:	-55° to 135°C (-67° to 275°F)
Shrink Temperature:	120°C (248°F)
Packing:	6"or 48" sticks

CFHR Heat Shrink (6:1 Ratio)	Max.	Min.
CFHR-0750-BLK-LINED-4FTSTK	0.75	0.125
CFHR-1300-BLK-LINED-4FTSTK	1.30	0.220
CFHR-1750-BLK-LINED-4FTSTK	1.75	0.290
CFHR-2000-BLK-LINED-4FTSTK	2.00	0.330
CFHR-2750-BLK-LINED-4FTSTK	2.75	0.460
CFHR-3500-BLK-LINED-4FTSTK	3.50	0.673
CFHR-4700-BLK-LINED-4FTSTK	4.70	0.900

Specialty Heat Shrink Tubing

Polyolefin Repair Tubing
UnShielded, Shielded or Environmentally Sealed

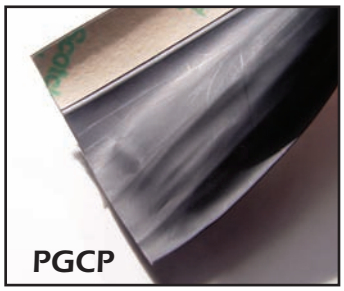
It wraps around cables, making it ideal for repairs and complex assemblies. Connectors and break outs can remain in place!
Simply select the correct size from the chart, wrap the tubing around the cable (note: the shield and meltable liner should be on the inside), remove the 3m adhesive liner cover and stick the tubing to it. Carefully heat the adhered sides to secure the bond, then recover the other side of tubing.

Select:
PGCP for standard repairs or where you need additional flexibility.
PGSCP for Shielded applications
also see page 252 for repair kit.
PGALCP for applications where a hot melt liner is needed to environmentally seal and encapsulate the repair.
Please note this is ideal for doing cable breakouts. Simply punch a hole the tubing at the appropriate place and pass the wire though the hole before recovering. Unlike traditional heat shrink materials, will not split apart when scored or punched.

See our Repair Instructions on pages 39-41 for complete details.

Polyolefin Repair Tubing

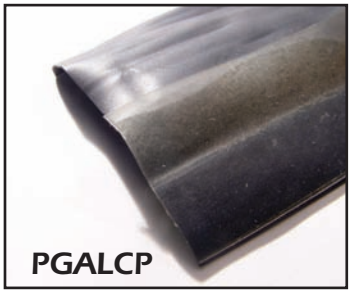
		Cable Range - inch (mm)	
UnShielded	Shielded	Recovered	Expanded
PGCP1	PGSCP1	0.125 (3.2)	0.187 (4.7)
PGCP2	PGSCP2	0.188 (4.8)	0.249 (6.3)
PGCP3	PGSCP3	0.250 (6.4)	0.370 (9.4)
PGCP4	PGSCP4	0.380 (9.7)	0.490 (12.4)
PGCP5	PGSCP5	0.500 (12.7)	0.620 (15.7)
PGCP6	PGSCP6	0.600 (15.2)	0.740 (18.8)
PGCP7	PGSCP7	0.750 (19.1)	0.870 (22.1)
PGCP8	PGSCP8	0.880 (22.4)	0.990 (25.1)
PGCP9	PGSCP9	1.000 (25.4)	1.120 (28.4)
PGCP10	PGSCP10	1.130 (28.7)	1.240 (31.5)
PGCP11	PGSCP11	1.250 (31.8)	1.370 (34.8)
PGCP12	PGSCP12	1.380 (35.1)	1.490 (37.8)
PGCP13	PGSCP13	1.500 (38.1)	1.620 (41.1)
PGCP14	PGSCP14	1.630 (41.4)	1.750 (44.5)





Polyolefin Repair Tubing
Environmentally Sealed

	Cable Range inch (mm)	
	Recovered	Expanded
PGALCP-1	0.040 (1.0)	0.075 (1.9)
PGALCP-2	0.076 (1.9)	0.125 (3.2)
PGALCP-3	0.126 (3.2)	0.174 (4.4)
PGALCP-4	0.178 (4.5)	0.250 (6.4)



Shrink-N-Shield EMI Tubing

Single Step Shielding and Jacketing Installation

Shrink-N-Shield combines two proven technologies in a single, easy-to-install product. It is ideal for small cables and wire bundles (1/2" and less in diameter). This product combines MIL-I-23053/5 heat shrink tubing and conductive cloth. It provides excellent wire protection and shielding.

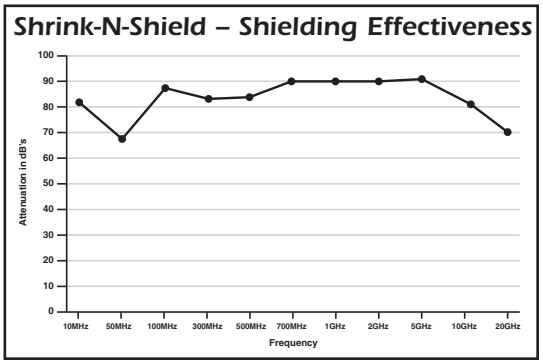
There are various ways to use Shrink-N-Shield, from simply exposing the shielding cloth and clamping under the saddles of a cable clamp to tying off to a drain wire. Go to www.PeiGenesis.com for the full details.

	Cable Range inch (mm)	
	Recovered	Expanded
PGSNS4	0.093 (2.4)	0.187 (4.7)
PGSNS7	0.125 (3.2)	0.250 (6.4)
PGSNS10	0.188 (4.8)	0.375 (9.5)
PGSNS12	0.250 (6.4)	0.500 (12.7)
PGSNS20	0.375 (9.5)	0.750 (19.1)
PGSNS25	0.500 (12.7)	1.000 (25.4)



Performance

Frequency	Attenuation dB
10MHz	82
50MHz	68
100MHz	88
300MHz	83
500MHz	84
700MHz	90
1GHz	90
2GHz	90
5GHz	91
10GHz	81
20GHz	70



Heat Shrink Transitions

Hellermann Heatshrink Transitions are used to break out or consolidate wires or cables in environmentally sealed harnesses. The boots are supplied with a pre-applied adhesive lining that bonds to and/or encapsulates most cable jacket materials. The standard material for these boots is a chemically cross-linked polyolefin. They can also be supplied in Halogen free, silicone, or High temp Viton* materials. Please call for more information.

*Viton is a registered trademark of the Dow Dupont Company.

CALL FOR MORE INFORMATION



Single Exit

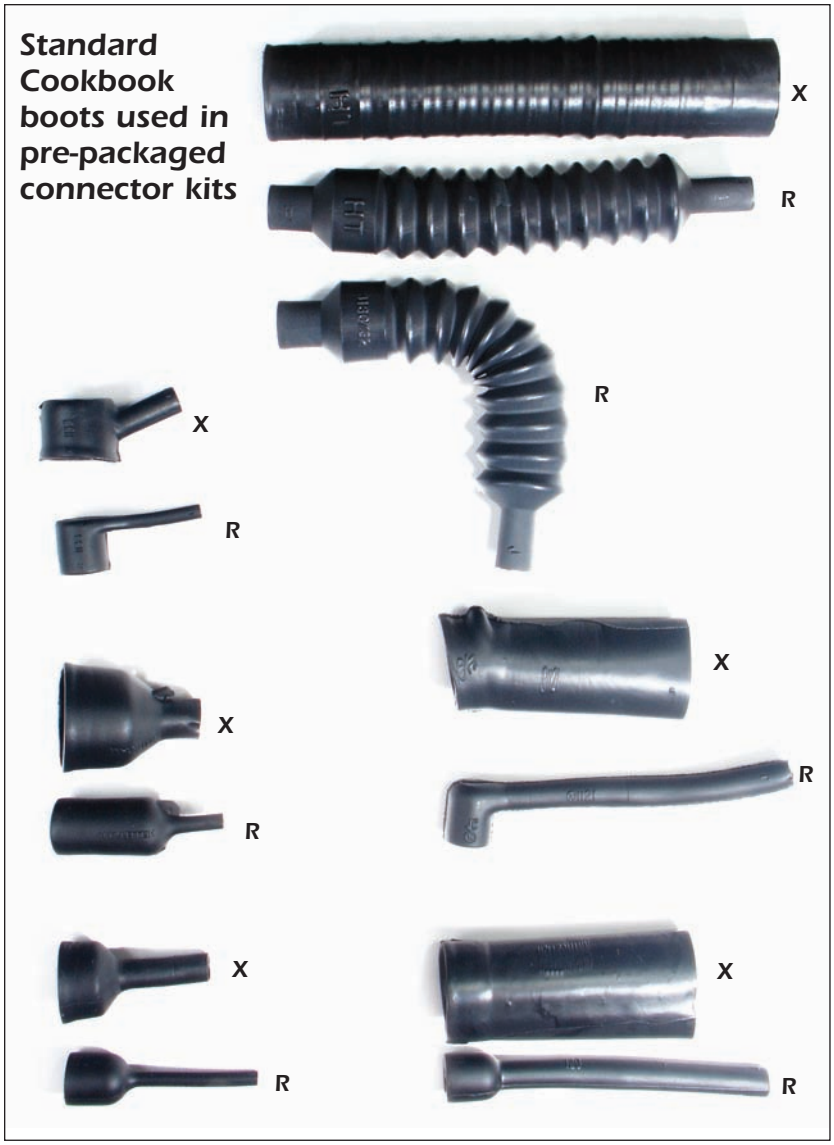


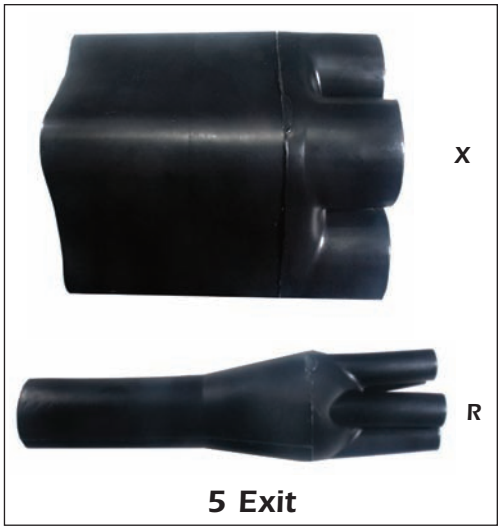
2 Exit
Available in Straight, Y's, 45 Degree



3 & 4 Exit

Standard Cookbook boots used in pre-packaged connector kits





5 Exit



6 Exit



Single Exit D'sub

X = Expanded R = Recovered

CG Cord Grips

Part # Description	Cable Range Min (mm)	Max (mm)	Min inch	Max inch	Connector Size & Style 5015	26482 S1	26482 S2	38999 I	38999 II	38999 III
ML – Metal Long with Flex Relief Nickel Plated Brass										
PG7ML1	-	-	-	-	8S	8	-	9	8	A/9
PG7ML2	-	-	-	-	8S	8	-	9	8	A/9
PG9ML1	4.0	6.5	0.157	0.256	10SL	10	-	11	10	B/11
PG9ML2	7.5	9.5	0.295	0.374	10SL	10	-	11	10	B/11
PG11ML1	6.5	9.5	0.256	0.374	12/12S	12	10	13	12	-
PG11ML2	7.0	10.5	0.276	0.413	12/12S	12	10	13	12	-
PG13.5ML1	6.5	9.5	0.256	0.374	14/14S	14	12	15	14	C/13
PG13.5ML2	8.5	10.5	0.335	0.413	14/14S	14	12	15	14	C/13
PG16ML1	6.5	9.5	0.256	0.374	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG16ML2	7.0	10.5	0.276	0.413	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG16ML3	9.5	13.0	0.374	0.512	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG21ML1	9.0	13.0	0.354	0.512	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H23
PG21ML2	13.0	15.5	0.512	0.610	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H23
PG21ML3	14.0	18.0	0.551	0.709	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H23
PG29ML1	17.0	21.0	0.669	0.827	28/32	-	-	-	-	J/25
PG29ML2	21.0	25.0	0.827	0.984	28/32	-	-	-	-	J/25
MS – Metal Short with Nickel Plated Brass										
PG7MSR	2.0	5.0	0.079	0.197	8S	8	-	9	8	A/9
PG7MSA	3.0	6.5	0.118	0.256	8S	8	-	9	8	A/9
PG9MSR	2.0	6.0	0.079	0.236	10SL	10	-	11	10	B/11
PG9MSA	4.0	8.0	0.157	0.315	10SL	10	-	11	10	B/11
PG11MSR	3.0	7.0	0.118	0.276	12/12S	12	10	13	12	-
PG11MSA	5.0	10.0	0.197	0.394	12/12S	12	10	13	12	-
PG13.5MSR	5.0	9.0	0.197	0.354	14/14S	14	12	15	14	C/13
PG13.5MSA	6.0	12.0	0.236	0.472	14/14S	14	12	15	14	C/13
PG16MSR	7.0	12.0	0.276	0.472	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG16MSA	10.0	14.0	0.394	0.551	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG21MSR	9.0	16.0	0.354	0.630	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H23
PG21MSA	13.0	18.0	0.512	0.709	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H23
PG29MSR	12.0	20.0	0.472	0.787	28/32	-	-	-	-	J/25
PG29MSA	18.0	25.0	0.709	0.984	28/32	-	-	-	-	J/25
PG36MSR	20.0	26.0	0.787	1.024	36/40	-	-	-	-	-
PG36MSA	22.0	32.0	0.866	1.260	36/40	-	-	-	-	-
PF – Plastic with Spring Flex Relief										
PG7PFR	2.0	5.0	0.079	0.197	8S	8	-	9	8	A/9
PG7PFA	3.0	6.5	0.118	0.256	8S	8	-	9	8	A/9
PG9PFR	2.0	6.0	0.079	0.236	10SL	10	-	11	10	B/11
PG9PFA	4.0	8.0	0.157	0.315	10SL	10	-	11	10	B/11
PG11PFR	3.0	7.0	0.118	0.276	12/12S	12	10	13	12	-
PG11PFA	5.0	10.0	0.197	0.394	12/12S	12	10	13	12	-
PG13.5PFR	5.0	9.0	0.197	0.354	14/14S	14	12	15	14	C/13
PG13.5PFA	6.0	12.0	0.236	0.472	14/14S	14	12	15	14	C/13
PG16PFR	7.0	12.0	0.276	0.472	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG16PFA	10.0	14.0	0.394	0.551	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG21PFR	9.0	16.0	0.354	0.630	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H23
PG21PFA	13.0	18.0	0.512	0.709	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H23











Part # Description	Cable Range Min (mm)	Max (mm)	Min inch	Max inch	Connector Size & Style 5015	26482 S1	26482 S2	38999 I	38999 II	38999 III
PL – Plastic Long with Flex Relief										
PG9PL1	4.0	6.5	0.157	0.256	10SL	10	-	11	10	B/11
PG9PL2	7.5	9.5	0.295	0.374	10SL	10	-	11	10	B/11
PG11PL1	6.5	9.5	0.256	0.374	12/12S	12	10	13	12	-
PG11PL2	7.0	10.5	0.276	0.413	12/12S	12	10	13	12	-
PG13.5PL1	6.5	9.5	0.256	0.374	14/14S	14	12	15	14	C/13
PG13.5PL2	8.5	10.5	0.335	0.413	14/14S	14	12	15	14	C/13
PG16PL1	6.5	9.5	0.256	0.374	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG16PL2	7.0	10.5	0.276	0.413	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG16PL3	9.5	13.0	0.374	0.512	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG21PL1	9.0	13.0	0.354	0.512	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H/23
PG21PL2	13.0	15.5	0.512	0.610	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H/23
PG21PL3	14.0	18.0	0.551	0.709	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H/23
PG29PL1	17.0	21.0	0.669	0.827	28/32	-	-	-	-	J/25
PG29PL2	21.0	25.0	0.827	0.984	28/32	-	-	-	-	J/25
PS – Plastic Short										
PG7PSR	2.0	5.0	0.079	0.197	8S	8	-	9	8	A/9
PG7PSA	3.0	6.5	0.118	0.256	8S	8	-	9	8	A/9
PG9PSR	2.0	6.0	0.079	0.236	10SL	10	-	11	10	B/11
PG9PSA	4.0	8.0	0.157	0.315	10SL	10	-	11	10	B/11
PG11PSR	3.0	7.0	0.118	0.276	12/12S	12	10	13	12	-
PG11PSA	5.0	10.0	0.197	0.394	12/12S	12	10	13	12	-
PG13.5PSR	5.0	9.0	0.197	0.354	14/14S	14	12	15	14	C/13
PG13.5PSA	6.0	12.0	0.236	0.472	14/14S	14	12	15	14	C/13
PG16PSR	7.0	12.0	0.276	0.472	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG16PSA	10.0	14.0	0.394	0.551	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG21PSR	9.0	16.0	0.354	0.630	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H/23
PG21PSA	13.0	18.0	0.512	0.709	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H/23
PG29PSR	12.0	20.0	0.472	0.787	28/32	-	-	-	-	J/25
PG29PSA	18.0	25.0	0.709	0.984	28/32	-	-	-	-	J/25
PG36PSR	20.0	26.0	0.787	1.024	36/40	-	-	-	-	-
PG36PSA	22.0	32.0	0.866	1.260	36/40	-	-	-	-	-

Torque Table

External Thread Sizes	Non-Metallic Cord Grips: Dome Nuts 1bf-in.	Dome Nuts NM	External Thread Lock Nuts 1bf-in.	External Thread Lock Nuts NM	Metal Cord Grips: Dome Nuts 1bf-in.	Dome Nuts NM	External Thread Lock Nuts 1bf-in.	External Thread Lock Nuts NM
PG7	14.00	1.90	22.00	2.50	37.00	4.00	55.00	6.20
PG9	22.00	2.50	33.00	4.00	36.00	4.00	55.00	6.20
PG11	22.00	2.50	33.00	4.00	36.00	4.00	55.00	6.20
PG13.5	22.00	2.50	33.00	4.00	36.00	4.00	55.00	6.20
PG16	29.00	3.30	44.00	5.00	44.00	4.00	66.00	7.50
PG21	44.00	5.00	66.00	7.50	59.00	5.00	88.50	10.00
PG29	44.00	5.00	66.00	7.50	59.00	6.50	88.50	10.00
PG36	44.00	5.00	66.00	7.50	59.00	6.50	88.50	10.00

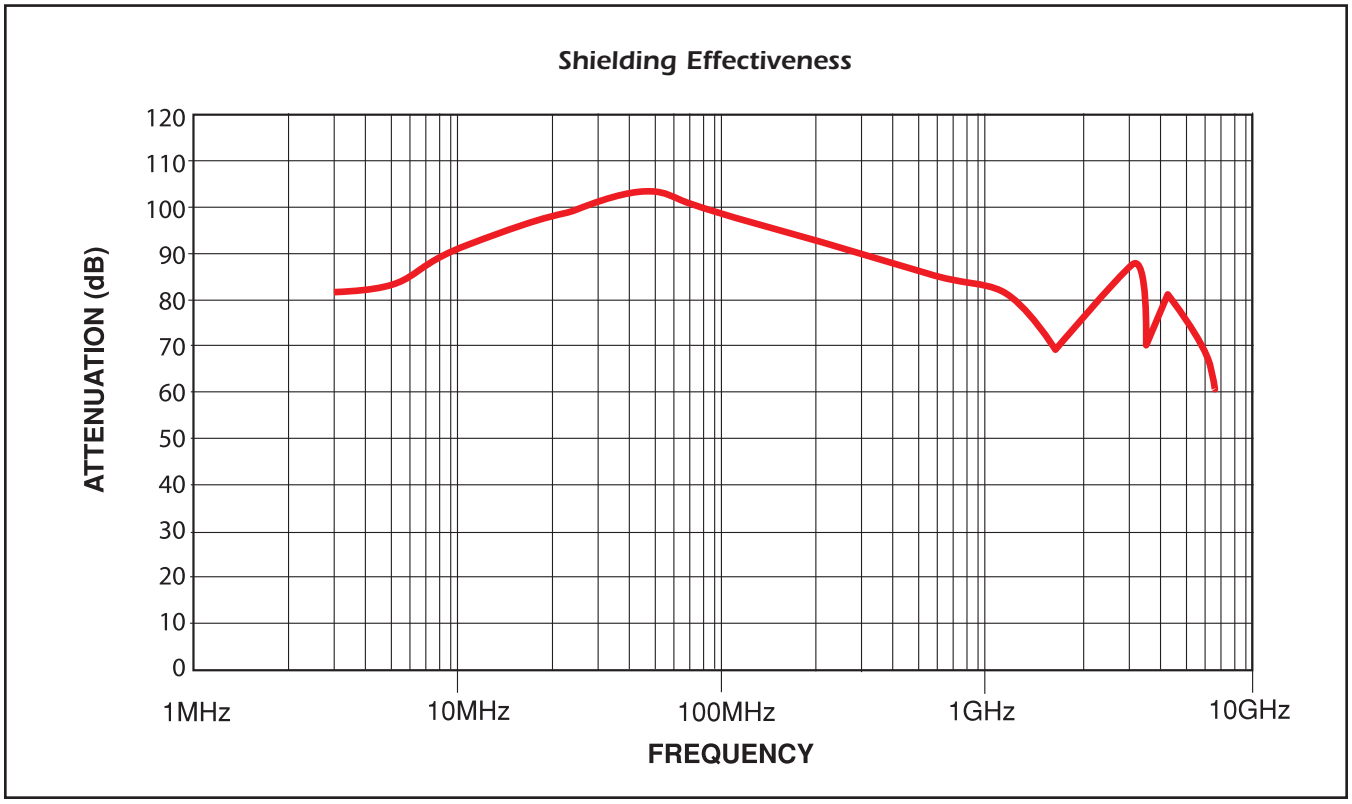
CG Cord Grips – Metal Short Shielded



Note: Cable shield diameters may be calculated by subtracting the cable jacket thickness multiplied by two from the cable outside diameters.

Cable OD – (Jacket Thickness X 2) = Shield Diameter

Part # Description	Style	Cable Diameter				Shield Diameter				Connector Series Shell Size					
		Min mm	Max mm	Min inch	Max inch	Min mm	Max mm	Min inch	Max inch	5015	26482 S1	26482 S2	38999 I	38999 II	38999 III
PG7MSS1	A	4.0	6.0	0.157	0.236	1.5	4.0	0.059	0.157	8S	8	-	9	8	A/9
PG7MSS2	A	6.0	9.5	0.236	0.374	1.5	6.5	0.059	0.256	8S	8	-	9	8	A/9
PG9MSS1	A	4.0	6.5	0.157	0.256	1.5	4.0	0.059	0.157	10SL	10	-	11	10	B/11
PG9MSS2	A	6.5	9.5	0.256	0.374	2.5	6.5	0.098	0.256	10SL	10	-	11	10	B/11
PG9MSS3	B	8.0	10.5	0.315	0.413	3.5	8.5	0.138	0.335	10SL	10	-	11	10	B/11
PG11MSS1	A	6.5	9.5	0.256	0.374	3.5	8.5	0.138	0.335	12/12S	12	10	13	12	-
PG11MSS2	A	8.0	10.5	0.315	0.413	3.5	8.5	0.138	0.335	12/12S	12	10	13	12	-
PG11MSS3	B	9.0	13.0	0.354	0.512	6.5	10.5	0.256	0.413	12/12S	12	10	13	12	-
PG13.5MSS1	A	6.5	9.5	0.256	0.374	2.5	6.5	0.098	0.256	14/14S	14	12	15	14	C/13
PG13.5MSS2	A	7.0	10.5	0.276	0.413	3.0	8.0	0.118	0.315	14/14S	14	12	15	14	C/13
PG13.5MSS3	A	9.0	13.0	0.354	0.512	6.5	10.5	0.256	0.413	14/14S	14	12	15	14	C/13
PG16MSS1	A	6.5	9.5	0.256	0.374	3.5	8.0	0.138	0.315	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG16MSS2	A	7.0	10.5	0.276	0.413	4.5	8.0	0.177	0.315	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG16MSS3	A	9.0	13.0	0.354	0.512	4.5	8.0	0.177	0.315	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG16MSS4	B	11.5	15.5	0.453	0.610	9.5	13.5	0.374	0.531	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG16MSS5	B	14.0	18.0	0.551	0.709	10.5	14.5	0.413	0.571	16/16S/18	16/18	14/16/18	17/19	16/18	D/15/E/17
PG21MSS1	A	9.0	13.0	0.354	0.512	5.5	9.5	0.217	0.374	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H/23
PG21MSS2	A	11.5	15.5	0.453	0.610	9.5	13.5	0.374	0.531	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H/23
PG21MSS3	B	17.0	20.0	0.669	0.787	13.0	18.0	0.512	0.709	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H/23
PG21MSS4	B	20.0	25.0	0.787	0.984	15.0	21.0	0.591	0.827	20/22/24	20/22/24	20/22/24	21/23/25	20/22/24	F/19/G/21/H/23
PG29MSS1	A	20.0	25.0	0.787	0.984	15.0	20.0	0.591	0.787	28/32	-	-	-	-	J/25
PG29MSS2	B	24.0	28.0	0.945	1.102	18.0	25.5	0.709	1.004	28/32	-	-	-	-	J/25
PG29MSS3	B	17.0	32.0	0.669	1.260	24.0	31.0	0.945	1.220	28/32	-	-	-	-	J/25
PG29MSS4	B	29.0	34.0	1.142	1.339	24.0	31.0	0.945	1.220	28/32	-	-	-	-	J/25
PG36MSS1	A	24.0	28.0	0.945	1.102	18.0	25.5	0.709	1.004	36/40	-	-	-	-	-
PG36MSS2	A	29.0	34.0	1.142	1.339	24.0	31.0	0.945	1.220	36/40	-	-	-	-	-



Cord Grip and Conduit Thread Adapters



Enlargers



Reducers

External Thread \ Internal Thread	PG7	PG9	PG11	PG13.5	PG16	PG21	PG29	PG36	PG42	PG48
PG7		22866.9	-	-	-	-	-	-	-	-
PG9	22800.9		22867.9	22868.9	-	-	-	-	-	-
PG11	22801.9	22802.9		22869.9	22870.9	22871.9	-	-	-	-
PG13.5	22803.9	22804.9	22805.9		22872.9	22873.9	-	-	-	-
PG16	22806.9	22807.9	22808.9	22809.9		22874.9	22875.9	-	-	-
PG21	-	-	22810.9	22811.9	22812.9		22876.9	-	-	-
PG29	-	-	-	22813.9	22814.9	22815.9		22877.9	-	-
PG36	-	-	-	-	-	22816.9	22817.9		22878.9	-
PG42	-	-	-	-	-	-	22818.9	22819.9		22879.9
PG48	-	-	-	-	-	-	22820.9	22821.9	-	





	O-Ring/Seal Rings		Lock Nuts	
	Perbunan -20° to +120°C	Silicone -60° to +200°C	Black Polyamide	Nickel Plated Brass
PG7	23150.9	23230.9	23060.9	23000.9
PG9	23151.9	23231.9	23061.9	23001.9
PG11	23152.9	23232.9	23062.9	23002.9
PG13.5	23153.9	23233.9	23063.9	23003.9
PG16	23154.9	23234.9	23064.9	23004.9
PG21	23155.9	23235.9	23065.9	23005.9
PG29	23156.9	23236.9	23066.9	23006.9
PG36	23157.9	23237.9		
PG42	23158.9			
PG48	23159.9			



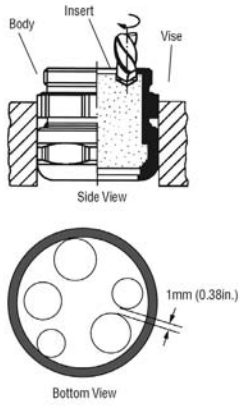


	Solid Insert (Drill Your Own)		
	Black Plastic	Metal (NPB)	Drillable Area
PG7		20920.6	call
PG9	20921.1	20921.6	(10) 0.39"
PG11	20922.1	20922.6	(11) 0.43"
PG13.5	20923.1	20923.6	(13) 0.51"
PG16	20924.1	20924.6	(16) 0.63"
PG21	20925.1	20925.6	(21) 0.83"
PG29	20926.1	20926.6	(28) 1.10"

Add O-Ring to Plastic

Drilling Instructions

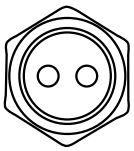
1. Cool insert to 45°F (7°C)
2. Place cord grip & insert in a vise or holding fixture with the threaded side facing drill
3. Cool insert with air or water during drilling
4. Maximum drill speed of 800 rpm
5. Minimum spacing between holes and or shell (1mm) 0.38"



1-3 Hole Cord Grips









Number of Wire Cavities	Part Numbers: Black Plastic PA	Part Numbers: Metal NBP	PG Thread size thread	Hole Size (mm)	Hole Size Inch	# of A Holes	Hole Size (mm)	Hole Size Inch	# of B Holes	Hole Size (mm)	Hole Size Inch
1	21305.1	21305.6	9	(3.0)	0.118						
	21318.1	21318.6	11	(3.0)	0.118						
	21306.1	21306.6	9	(4.0)	0.157						
	21319.1	21319.6	11	(4.0)	0.157						
	21357.1	21357.6	16	(4.0)	0.157						
	21307.1	21307.6	9	(5.0)	0.197						
	21320.1	21320.6	11	(5.0)	0.197						
	21358.1	21358.6	16	(5.0)	0.197						
	21339.1	21339.6	13.5	(8.0)	0.315						
	21359.1	21359.6	16	(8.0)	0.315						
	21396.1	21396.6	21	(16.0)	0.630						
	21446.1	21446.6	29	(16.0)	0.630						
	21308.1	21308.6	9	(1.2)	0.047						
2	21321.1	21321.6	11	(2.3)	0.091						
	21309.1	21309.6	9	(3.0)	0.118						
	21322.1	21322.6	11	(3.0)	0.118						
	21340.1	21340.6	13.5	(3.0)	0.118						
	21310.1	21310.6	9	(4.0)	0.157						
	21323.1	21323.6	11	(4.0)	0.157						
	21360.1	21360.6	16	(4.0)	0.157						
	21398.1	21398.6	21	(4.5)	0.177						
	21324.1	21324.6	11	(5.0)	0.197						
	21341.1	21341.6	13.5	(5.0)	0.197						
	21325.1	21325.6	11	(6.0)	0.236						
	21342.1	21342.6	13.5	(6.0)	0.236						
	21361.1	21361.6	16	(6.0)	0.236						
	21362.1	21362.6	16	(8.0)	0.315						
	21399.1	21399.6	21	(8.0)	0.315						
	21400.1	21400.6	21	(9.0)	0.354						
	21447.1	21447.6	29	(11.0)	0.433						
	21448.1	21448.6	29	(13.0)	0.512						
	21481.1	21481.6	36	(15.0)	0.591						
	21376.1	21376.6	16	Combinations *		1	(3.0)	0.118	1	(8.0)	0.315
	21377.1	21377.6	16	Combinations *		1	(3.0)	0.118	1	(9.0)	0.354
	21381.1	21381.6	16	Combinations *		1	(6.0)	0.236	1	(8.0)	0.315
	21415.1	21415.6	21	Combinations *		1	(7.0)	0.276	1	(10.5)	0.413
	21416.1	21416.6	21	Combinations *		1	(8.5)	0.335	1	(12.0)	0.472
	21465.1	21465.6	29	Combinations *		1	(12.0)	0.472	1	(13.0)	0.512
	21467.1	21467.6	29	Combinations *		1	(6.5)	0.256	1	(17.0)	0.669
	21471.1	21471.6	29	Combinations *		1	(9.0)	0.354	1	(15.0)	0.591
	21493.1	21493.6	36	Combinations *		1	(11.0)	0.433	1	(21.0)	0.827
	21494.1	21494.6	36	Combinations *		1	(12.5)	0.492	1	(16.5)	0.650
	21495.1	21495.6	36	Combinations *		1	(13.0)	0.512	1	(16.5)	0.650
	21496.1	21496.6	36	Combinations *		1	(14.0)	0.551	1	(17.0)	0.669
3	21343.1	21343.6	13.5	(2.0)	0.079						
	21311.1	21311.6	9	(3.0)	0.118						
	21326.1	21326.6	11	(3.0)	0.118						
	21344.1	21344.6	13.5	(3.0)	0.118						
	21364.1	21364.6	16	(3.0)	0.118						
	21327.1	21327.6	11	(4.0)	0.157						
	21345.1	21345.6	13.5	(4.0)	0.157						
	21346.1	21346.6	13.5	(5.3)	0.209						
	21365.1	21365.6	16	(7.0)	0.276						
	21401.1	21401.6	21	(7.0)	0.276						
	21402.1	21402.6	21	(9.0)	0.354						
	21482.1	21482.6	36	(10.0)	0.394						
	21449.1	21449.6	29	(11.0)	0.433						
	21351.1	21351.6	13.5	Combinations *		1	(3.0)	0.118	2	(6.0)	0.236
	21353.1	21353.6	13.5	Combinations *		2	(5.0)	0.197	1	(5.5)	0.217
	21378.1	21378.6	16	Combinations *		1	(3.0)	0.118	2	(8.0)	0.315
	21379.1	21379.6	16	Combinations *		1	(5.0)	0.197	2	(6.0)	0.236
	21382.1	21382.6	16	Combinations *		2	(5.0)	0.197	1	(6.0)	0.236
	21383.1	21383.6	16	Combinations *		2	(6.0)	0.236	1	(7.0)	0.276
	21384.1	21384.6	16	Combinations *		2	(6.0)	0.236	1	(8.0)	0.315
	21414.1	21414.6	21	Combinations *		1	(6.0)	0.236	2	(9.0)	0.354
	21473.1	21473.6	29	Combinations *		2	(6.5)	0.256	1	(10.0)	0.394

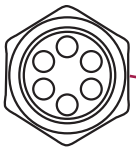
* Combination = more than one diameter size hole

4-15 Hole Cord Grips













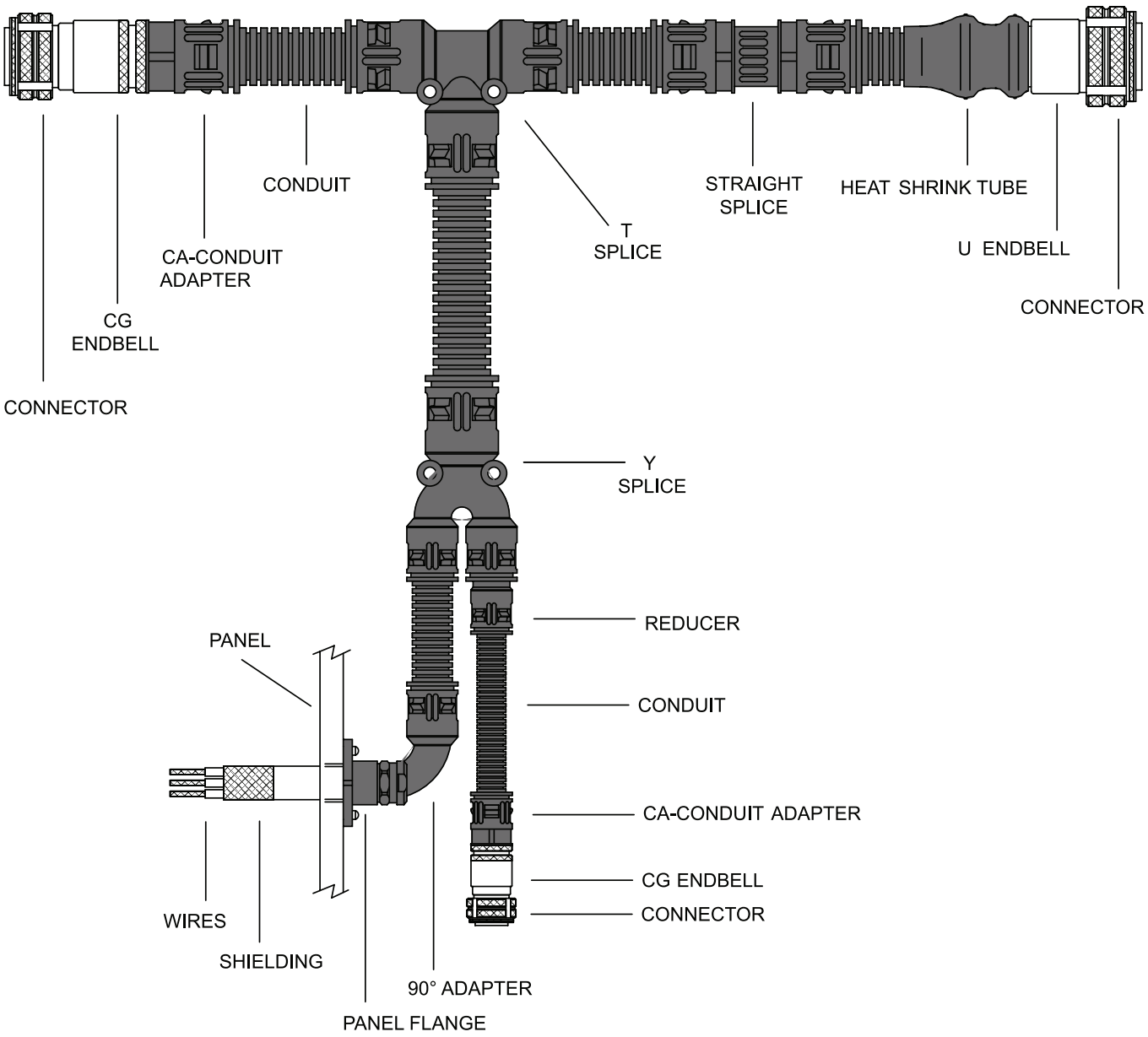


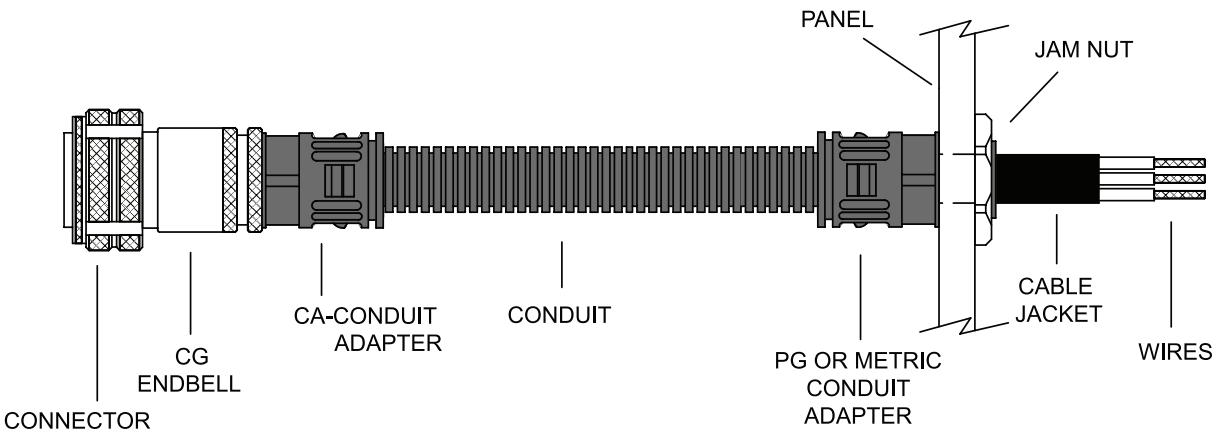
Number of Wire Cavities	Part Numbers: Black Plastic PA	Part Numbers: Metal NBP	PG Thread size thread	Hole Size: (mm)	Hole Size: Inch	# of A Holes	Hole Size: (mm)	Hole Size: Inch	# of B Holes	Hole Size: mm	Hole Size: Inch
4	21312.1	21312.6	9	(1.4)	0.055						
	21328.1	21328.6	11	(1.5)	0.059						
	21313.1	21313.6	9	(3.0)	0.118						
	21347.1	21347.6	13.5	(3.0)	0.118						
	21366.1	21366.6	16	(4.0)	0.157						
	21403.1	21403.6	21	(5.0)	0.197						
	21451.1	21451.6	29	(5.5)	0.217						
	21367.1	21367.6	16	(6.0)	0.236						
	21404.1	21404.6	21	(6.0)	0.236						
	21405.1	21405.6	21	(6.5)	0.256						
	21406.1	21406.6	21	(8.0)	0.315						
	21452.1	21452.6	29	(8.0)	0.315						
	21453.1	21453.6	29	(9.0)	0.354						
	21450.1	21450.6	29	(10.0)	0.394						
	21483.1	21483.6	36	(10.2)	0.402						
	21484.1	21484.6	36	(11.5)	0.453						
	21485.1	21485.6	36	(13.0)	0.512						
	21354.1	21354.6	13.5	Combinations *		2	(3.0)	0.118	1	(6.5)	0.256
	21385.1	21385.6	16	Combinations *		3	(4.0)	0.157	1	(9.0)	0.354
	21419.1	21419.6	21	Combinations *		2	(6.0)	0.236	2	(8.0)	0.315
	21329.1	21329.6	11	(3.5)	0.138						
5	21455.1	21455.6	29	(8.0)	0.315						
	21456.1	21456.6	29	(9.0)	0.354						
	21454.1	21454.6	29	(10.0)	0.394						
	21486.1	21486.6	36	(11.5)	0.453						
	21420.1	21420.6	21	Combinations*		2	(7.0)	0.276	3	(7.0)	0.276
	21477.1	21477.6	29	Combinations*		4	(5.5)	0.217	1	(8.0)	0.315
6	21330.1	21330.6	11	(2.0)	0.079						
	21331.1	21331.6	11	(2.5)	0.098						
	21348.1	21348.6	13.5	(3.5)	0.138						
	21368.1	21368.6	16	(4.0)	0.157						
	21407.1	21407.6	21	(4.0)	0.157						
	21408.1	21408.6	21	(5.0)	0.197						
	21409.1	21409.6	21	(5.5)	0.217						
	21457.1	21457.6	29	(6.0)	0.236						
	21410.1	21410.6	21	(6.5)	0.256						
	21458.1	21458.6	29	(8.0)	0.315						
	21475.1	21475.6	29	Combinations *		3	(7.0)	0.276	3	(8.0)	0.315
7	21332.1	21332.6	11	(1.5)	0.059						
	21369.1	21369.6	16	(2.0)	0.079						
	21459.1	21459.6	29	(7.0)	0.276						
	21487.1	21487.6	36	(9.0)	0.354						
	21424.1	21424.6	21	Combinations *		6	(4.0)	0.157	1	(7.0)	0.276
	21479.1	21479.6	29	Combinations *		4	(6.0)	0.236	3	(8.5)	0.335
8	21349.1	21349.6	13.5	(1.5)	0.059						
	21411.1	21411.6	21	(3.0)	0.118						
	21412.1	21412.6	21	(4.0)	0.157						
	21412.1	21412.6	21	(5.0)	0.197						
	21460.1	21460.6	29	(5.5)	0.217						
	21488.1	21488.6	36	(8.0)	0.315						
	21489.1	21489.6	36	(9.0)	0.354						
9	21333.1	21333.6	11	(1.5)	0.059						
	21370.1	21370.6	16	(3.0)	0.118						
10	21350.1	21350.6	13.5	(2.0)	0.079						
	21461.1	21461.6	29	(6.0)	0.236						
11	21490.1	21490.6	36	(8.0)	0.315						
12	21462.1	21462.6	29	(5.3)	0.209						
13	21491.1	21491.6	36	(7.0)	0.276						
15	21492.1	21492.6	36	(5.0)	0.197						

* Combination = more than one diameter size hole

Conduit Assemblies

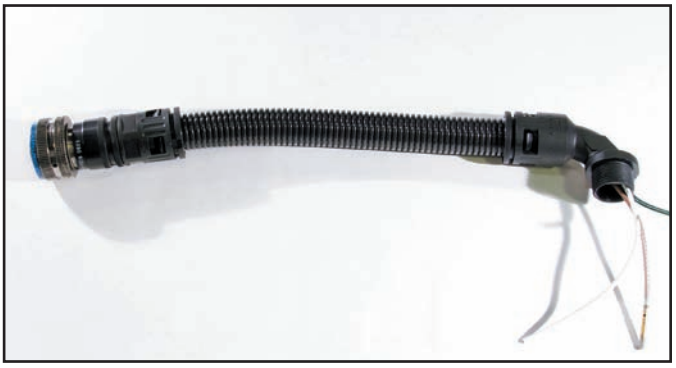
Complex Assembly - FLEXAquick System



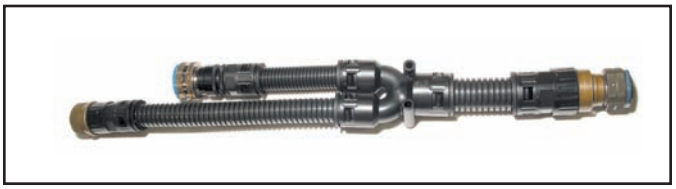


Finished Products



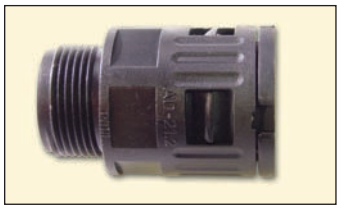






Conduits

Straight PG Adapters

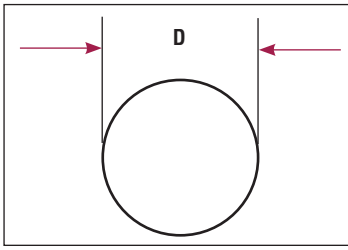


Externally threaded PG Adapters are used to attach conduit directly to a box or panel for installations that will not need to be disconnected frequently. Panel Seals prevent dust and fluids from getting inside. Jam nuts simplify the attachment to the panel without having to tap pre-threaded panel holes.

		Conduit Code								
		07	10	12	14	17	23	29	36	48
		Trade Size								
		AD10.0	AD13.0	AD15.8	AD18.5	AD21.2	AD28.5	AD34.5	AD42.5	AD54.5
PG Thread	7	5020.026.207	5020.027.201							
	9	5020.027.202	5020.026.209							
	11	5020.027.203	5020.027.204	5020.026.211						
	13.5	5020.027.205	5020.027.206	5020.027.207	5020.026.213	5020.027.209				
	16			5020.027.210	5020.026.214	5020.026.216	5020.027.208			
	21						5020.026.221			
	29							5020.026.229		
	36								5020.026.236	
	48									5020.026.248

Right Angle PG Adapters

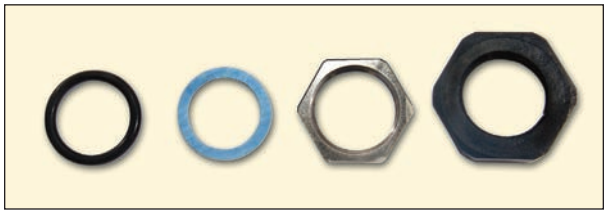




	Panel Cutouts D +/-(0.2) .008	
	(mm)	Inch
PG7	(13.0)	0.512
PG9	(15.7)	0.618
PG11	(19.0)	0.748
PG13.5	(21.0)	0.827
PG16	(23.0)	0.906
PG21	(28.8)	1.134
PG29	(37.5)	1.476
PG36	(47.5)	1.870
PG48	(59.8)	2.354

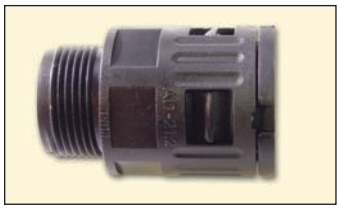
		Conduit Code								
		07	10	12	14	17	23	29	36	48
		Trade Size								
		AD10.0	AD13.0	AD15.8	AD18.5	AD21.2	AD28.5	AD34.5	AD42.5	AD54.5
PG Thread	7	5020.028.207								
	9		5020.028.209							
	11		5020.029.211	5020.028.211						
	13.5		5020.029.213		5020.028.213					
	16					5020.028.216				
	21						5020.028.221			
	29							5020.028.229		
	36								5020.028.236	
	48									5020.028.248

Seal and Jam Nuts PG



		Seals		Nuts	
		O-Rings	Flat Gaskets	Metal	Plastic
PG Thread	7	0330.000.007	0331.000.007	0530.000.007	0310.000.007
	9	0330.000.009	0331.000.009	0530.000.009	0310.000.009
	11	0330.000.011	0331.000.011	0530.000.011	0310.000.011
	13	0330.000.013	0331.000.013	0530.000.013	0310.000.013
	16	0330.000.016	0331.000.016	0530.000.016	0310.000.016
	21	0330.000.021	0331.000.021	0530.000.021	0310.000.021
	29	0330.000.029	0331.000.029	0530.000.029	0310.000.029
	36	0330.000.036	0331.000.036	0530.000.036	0310.000.036
	48	0330.000.048	0331.000.048	0530.000.048	0310.000.048

Straight Metric Adapters

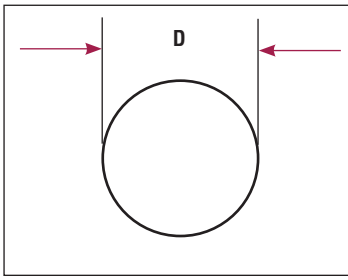


Now a European Standard. These externally threaded Metric Adapters are used to attach conduit directly to a box or panel for installations that will not need to be disconnected frequently. Panel Seals prevent dust and fluids from getting inside. Jam nuts simplify the attachment to the panel without having to tap pre-threaded panel holes.

		Conduit Code							
		07	10	12	17	23	29	36	48
		Trade Size							
		AD10.0	AD13.0	AD15.8	AD21.2	AD28.5	AD34.5	AD42.5	AD54.5
Metric Thread	M10x1.5	5020.037.210							
	M12x1.5	5020.065.203	5020.037.212						
	M16X1.5		5020.065.205	5020.037.216					
	M20X1.5			5020.065.207	5020.037.220				
	M25X1.5				5020.065.209	5020.037.225			
	M32X1.5					5020.065.211	5020.037.232		
	M40X1.5						5020.037.238	5020.037.240	
	M50X1.5							5020.037.245	5020.037.250
	M63X1.5								5020.037.236

Right Angle Metric Adapters

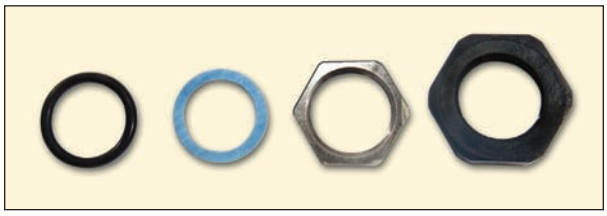




	Panel Cutouts D +/-(0.2) .008	
	(mm)	Inch
M10x1.5	(10.3)	0.406
M12x1.5	(12.3)	0.484
M16x1.5	(16.3)	0.642
M20x1.5	(20.3)	0.799
M25x1.5	(25.3)	0.996
M32x1.5	(32.3)	1.272
M40x1.5	(40.4)	1.591
M50x1.5	(50.4)	1.984
M63x1.5	(63.4)	2.496

		Conduit Code							
		07	10	12	17	23	29	36	48
		Trade Size							
		AD10.0	AD13.0	AD15.8	AD21.2	AD28.5	AD34.5	AD42.5	AD54.5
Metric Thread	M10x1.5	5020.064.210							
	M12x1.5		5020.064.212						
	M16X1.5		5020.036.216	5020.064.216					
	M20X1.5			5020.036.220	5020.064.220				
	M25X1.5				5020.036.225	5020.064.225			
	M32X1.5					5020.036-232	5020.064.232		
	M40X1.5						5020.036.240	5020.064.240	
	M50X1.5							5020.036.250	5020.064.250
	M63X1.5								5020.036.263

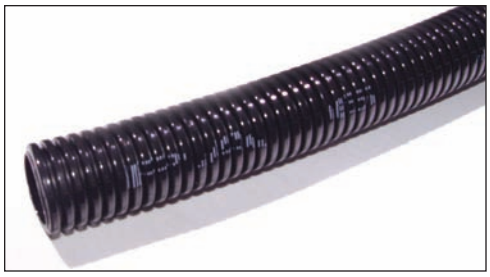
Seal and Jam Nuts Metric

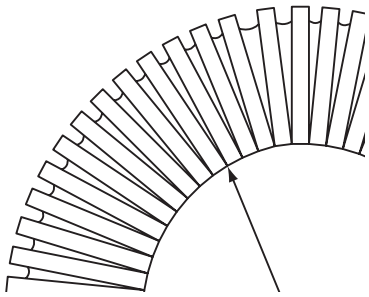


		Seals		Nuts	
		O-Rings	Flat Gaskets	Metal	Plastic
Metric Thread	M10x1.0	0330.001.010	0333.000.010	0531.000.010	0309.000.210
	M12x1.5	0330.001.012	0333.000.012	0531.000.012	0309.000.212
	M16X1.5	0330.001.016	0333.000.016	0531.000.016	0309.000.216
	M20X1.5	0330.001.020	0333.000.020	0531.000.020	0309.000.220
	M25X1.5	0330.001.025	0333.000.025	0531.000.025	0309.000.225
	M32X1.5	0330.001.032	0333.000.032	0531.000.032	0309.000.232
	M40X1.5	0330.001.040	0333.000.040	0531.000.040	0309.000.240
	M50X1.5	0330.001.050	0333.000.050	0531.000.050	0309.000.250
	M63X1.5	0330.001.063	0333.000.063	0531.000.063	0309.000.263

Conduits – PA6

High Impact Resistance in Cold, Flexible

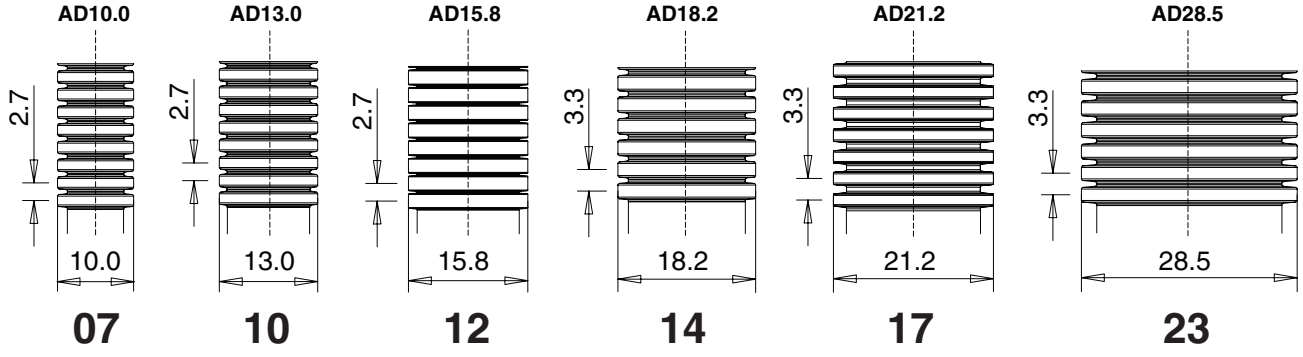




Heavy-duty cable conduits are manufactured using modified polyamides that are free of halogen and cadmium. These impact resistant conduits are rugged, easy to install and provide excellent resistance to UV rays and environmental corrosion. They are UL recognized: file # E86359. Flammability rating: UL94V0
Temperature range:
-58°F to +221°F; short term +302°F
(-50°C to +105°C; short term +150°C)

Part Number	Code	Trade Size	Inches (mm) d1	Inches (mm) d2	Bend Radius R PA6 Static	Bend Radius R PA6 Dynamic
0233.202.006	07	AD10.0	(6.5) 0.256	(10.0) 0.394	(13.0) 0.512	(35.0) 1.378
0233.202.010	10	AD13.0	(10.0) 0.394	(13.0) 0.512	(20.0) 0.787	(45.0) 1.772
0233.202.012	12	AD15.8	(12.0) 0.472	(15.8) 0.622	(35.0) 1.378	(55.0) 2.165
0233.202.014	14	AD18.5	(14.3) 0.563	(18.2) 0.717	(40.0) 1.575	(65.0) 2.559
0233.202.016	17	AD21.2	(16.5) 0.650	(21.2) 0.835	(45.0) 1.772	(75.0) 2.953
0233.202.023	23	AD28.5	(23.0) 0.906	(28.5) 1.122	(55.0) 2.165	(100.0) 3.937
0233.202.029	29	AD34.5	(29.0) 1.142	(34.5) 1.358	(65.0) 2.559	(120.0) 4.724
0233.202.036	36	AD42.5	(36.0) 1.417	(42.5) 1.673	(90.0) 3.543	(150.0) 5.906
0233.202.048	48	AD54.5	(48.0) 1.890	(54.5) 2.146	(100.0) 3.937	(190.0) 7.480

PA6 & PA12 Conduit Dimension AD10.0 to AD28.5



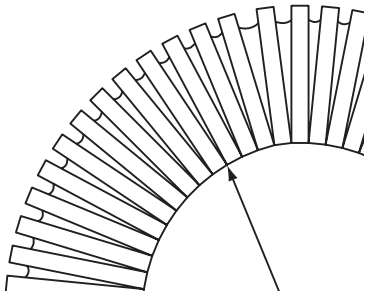
Tubing Cutter up to AD34.5 (07 to 29)

0433.000.010



High Alternate Bending Strength, Highly Flexible

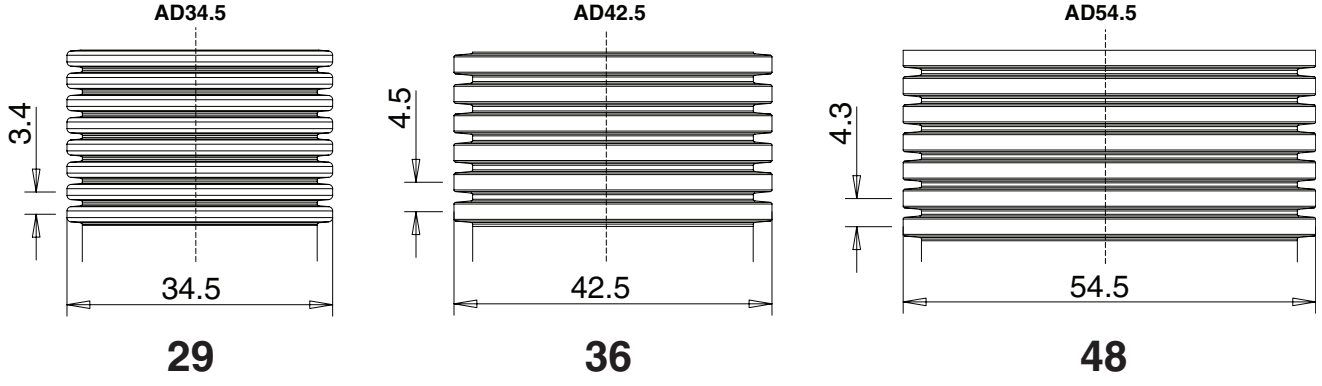




Heavy-duty cable conduits are manufactured using modified polyamides that are free of halogen and cadmium. These impact resistant conduits are rugged, easy to install and provide excellent resistance to UV rays and environmental corrosion.
Flammability rating: UL94V2
Temperature range:
-40°F to +239°F; short term +302°F
(-40°C to +115°C; short term +150°C)

Part Number	Code	Trade Size	Inches (mm)		Bend Radius R PA12	
			d1	d2	Static	Dynamic
0236.202.006	07	AD10.0	(6.5) 0.256	(10.0) 0.394	(13.0) 0.512	(35.0) 1.378
0236.202.010	10	AD13.0	(10.0) 0.394	(13.0) 0.512	(15.0) 0.591	(45.0) 1.772
0236.202.012	12	AD15.8	(12.0) 0.472	(15.8) 0.622	(22.0) 0.866	(55.0) 2.165
0236.202.014	14	AD18.5	(14.3) 0.563	(18.2) 0.717	(27.0) 1.063	(65.0) 2.559
0236.202.016	17	AD21.2	(16.5) 0.650	(21.2) 0.835	(35.0) 1.378	(75.0) 2.953
0236.202.023	23	AD28.5	(23.0) 0.906	(28.5) 1.122	(45.0) 1.772	(100.0) 3.937
0236.202.029	29	AD34.5	(29.0) 1.142	(34.5) 1.358	(50.0) 1.969	(120.0) 4.724
0236.202.036	36	AD42.5	(36.0) 1.417	(42.5) 1.673	(80.0) 3.150	(150.0) 5.906
0236.202.048	48	AD54.5	(48.0) 1.890	(54.5) 2.146	(100.0) 3.937	(190.0) 7.480

PA6 & PA12 Conduit Dimension AD34.5 to AD54.5



Tubing Cutter for AD21.2 to AD54.5 (17 to 48)

0433.000.011



Conduits

Flexa Transitions

Splices are used to join two lengths of conduit. They can be used to make conduit harnesses longer. Reducers are used to go from a larger adapter to smaller conduit.

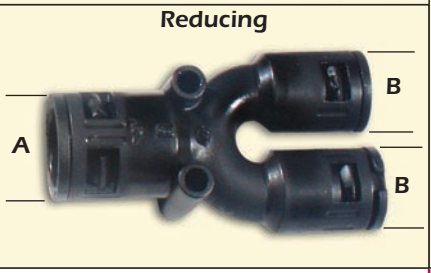




A Conduit Code	Trade Size	Straight Splice	Reducer		
		Part #	Part #	B Outlet	Trade Size
10	AD13.0	-	-		
		-	-		
12	AD15.8	-	-		
		-	-		
17	AD21.2	**5602.021.221**	**5601.015.221**	12	AD15.8
		-	-		
23	AD28.5	**5602.028.228**	**5601.015.228**	12	AD15.8
		-	**5601.021.228**	17	AD21.2
29	AD34.5	**5602.034.234**	**5601.015.234**	12	AD15.8
		-	**5601.021.234**	17	AD21.2
		-	**5601.028.234**	23	AD28.5
36	AD42.5	**5602.042.242**	**5601.034.242**	29	AD34.5
48	AD54.5	**5602.054.254**	**5601.042.254**	36	AD42.5
		-	**5601.021.254**	17	AD21.2

Y and T Adapters are used to branch off or consolidate conduits.
The inlet side "A" can be larger (more popular) or the same size as the outlet side "B".







A Conduit Code	Trade Size	Y Splice			T Splice		
		Part #	B Outlet	Trade Size	Part #	B Outlet	Trade Size
10	AD13.0	**5020.032.201**	07	AD10.0		-	
		5020.032.202	10	AD13.0		-	
12	AD15.8	**5020.032.203**	10	AD13.0	**5020.041.208**	12	AD15.8
		5020.032.204	12	AD15.8		-	
17	AD21.2	**5020.032.206**	12	AD15.8	**5020.041.201**	17	AD21.2
		-				-	
23	AD28.5	**5020.032.208**	17	AD21.2	**5020.041.202**	23	AD28.5
		-				-	
29	AD34.5	**5020.032.209**	23	AD28.5	**5020.041.210**	23	AD28.5
		-			**5020.041.211**	29	AD34.5
		-			-		
36	AD42.5	**5020.032.210**	29	AD34.5	**5020.041.212**	36	AD42.5
48	AD54.5	**5020.032.211**	36	AD42.5	**5020.041.213**	48	AD54.5
		-			-		

Potting Guidelines for Cable Assemblies:

1. There is a wide range of potting compounds available in the market. We set out to select a concise group of potting compounds for general purpose use with electrical connectors. Each of the recommended materials has been tested by PEI-Genesis. If a more optimized potting compound is needed please contact us. One of our application engineers will gladly help you find the right potting compound for your design.
2. We recommend getting all of the cables ready and positioned before potting – especially if a quick cure speed potting compound is used. Fixtures, clamps or racks will help position the connector and cable while the potting compound hardens.
3. Adhesion can be improved by either cleaning surfaces with rubbing alcohol or roughening surfaces with sand paper.
4. When using a mixing nozzle insert it as far as possible into the endbell and fill upward. This will prevent air bubbles from forming beneath the potting compound.
5. Heat can be used to accelerate the hardening time of potting compounds. Be careful not to overheat them, especially if you are using a hot air gun or torch. Gentle heat (2 times room temperature) will significantly accelerate the hardening time.
6. For assemblies with heat shrink boots we recommend waiting until the potting compound working time has passed before recovering the heat shrink boot. Otherwise, the compound may overheat.
7. Clean up uncured potting compounds with rubbing alcohol.

		Potting Compound Types			
					
		DP100FR-XXML	720UR-XXML	3015C-XXML	3125-XXML
Connector Series	Sure Seal	X	X		
	Trident				
	97 Series	X		X	
	MIL-DTL-5015 & P-lok	X	X	X	X
	VG 95 234 & Bayonet	X	X	X	X
	MIL-DTL-26482 & 62GB	X	X	X	X
	MIL-DTL-38999	X	X	X	X
	D-Sub	X		X	
Material Information	Work Life	4-8 Min	5-6 Min	6-10 Min	15 -20 Min
	Fixture Time	15-20 Min	1-2 Hours	15-20 Min	45-60 Min
	Viscosity	120,000 cps	4,000 cps	12,000 cps	14,000 cps
	Flows Like	Ketchup	Light Syrup	Honey	Honey
	Temperature Range	-67° to +180°F (-55° to +82°C)	-65° to + 200°F (-53° to + 93°C)	-67° to +250°F (-55° to +121°C)	-40° to +225°F (-40° to +107°C)
	Color	Beige	Straw	Clear	Amber
	Shore D Hardness	87	78	82	75
	Flame Resistant per UL94	E61941	-	-	-
	DOT UN/NA #	-	-	2735*	2735*
Package Sizes	30ml Trial Size			X	X
	50ml	X	X	X	X
	250ml/200ml**	X**		X	X
	400ml	X		X	X

* Special Shipping Requirements may apply, call for more information.

** 200ml only

Potting Compounds & Tools

DP100 FR – Flame Resistant

Working Time: 5 to 8 minutes
Fixture Time: 15 to 20 minutes
Color: Beige
Mix Ratio: 1 to 1
UL Rating: UL 94-V0 (File Number E61941)



Part Numbers:

Package Type	Part Number	Mixing Nozzle	Applicator Tool
50 ml	DP100FR-50ML	300-028 or 300-026	DK-104 or Caulk Adapter
200 ml	DP100FR-200ML	300-006	EXT-250/MNLGUN
400 ml	DP100FR-400ML	300-006	VBM-400X

PEI Comments: *This epoxy is recommended for applications where the UL 94-V0 flame test is required. It is not as thick as the S310 and has a moderate ability to flow between wires and into gaps. It is thicker than the 3015C and 3030 epoxies. We recommend that users pay extra attention when using it, especially in tight wire bundles. It is important to make sure that potting nozzles are fully inserted to limit air bubbles beneath the epoxy. Users may also want to move the nozzle around while potting to make sure the entire wire bundle is encapsulated.*

720UR – Low Viscosity Polyurethane

Working Time: 5 to 6 minutes
Fixture Time: 1 - 2 hours
Color: Straw
Mix Ratio: 1 to 1
Operating Temperature: -65° to +200°F (-53° to +93°C)



Part Numbers:

Package Type	Part Number	Mixing Nozzle	Applicator Tool
50 ml	720UR-50ML	300-026	DK-104 or Caulk Adapter

PEI Comments: *720UR has a very low viscosity for a potting compound. That makes it a great choice for prototypes and low volume production since it is easier to pour into endbells than most epoxies. It flows well and easily fills gaps between wires. 720UR bonds well to PVC and Polyurethane wires and cables as well as a wide variety of thermoplastics, metals, and connector insulators.*

3015C – Fast Cure Epoxy

Working Time: 6 to 10 minutes
Fixture Time: 15 to 20 minutes
Color: Clear
Mix Ratio: 1 to 1
Temperature Range: -67° to +250°F (-55° to +121°C)
DOT UN/NA #: 2735*



Part Numbers:

Package Type	Part Number	Mixing Nozzle	Applicator Tool
Trial Size: 30 ml - Dual Syringe	3015C-30ML	Not required	Not required
50 ml	3015C-50ML	300-028 or 300-026	DK-104 or Caulk Adapter
250 ml	3015C-250ML	300-006	EXT-250/MNLGUN
400 ml	3015C-400ML	300-006	VBM-400X

PEI Comments: *This is a great epoxy for small jobs since it flows well and hardens quickly. It may harden a little too fast if working time is needed between applications or if there is a dense wire bundle. Our advice for first time users is to get some extra mixing nozzles and to set up groups of cables in fixtures prior to potting.*

***** Special Shipping Requirements may apply, call for more information.

3125 – Medium Cure Speed Epoxy

Working Time: 15 to 25 minutes
Fixture Time: 45 to 60 minutes
Color: Amber
Mix Ratio: 1 to 1
Temperature Range: -40° to +225°F (-40° to +107°C)
DOT UN/NA #: 2735*



Part Numbers:

Package Type	Part Number	Mixing Nozzle	Applicator Tool
Trial Size: 30 ml - Dual Syringe	3125-30ML	Not required	Not required
50 ml	3125-50ML	300-028 or 300-026	DK-104 or Caulk Adapter
250 ml	3125-250ML	300-006	EXT-250/MNLGUN
400 ml	3125-400ML	300-006	VBM-400X

PEI Comments: 3125 is recommended for general purpose potting. It bonds well to plastics, metal and ceramics. It has a long enough working life to make it convenient for production or for applications where users need a little more working time. It flows well and does a good job of encapsulating small spaces and between wires. The longer working time also gives more time for air bubbles to work their way out before the epoxy hardens.

* Special Shipping Requirements may apply, call for more information.

50 ml Handgun Applicator Tools

50 ml Manual Handgun	DK-104
50 ml Caulking Gun Conversion Kit	DK-117
50 ml Pneumatic Handgun (not shown)	CBA-25/94

250 ml Handgun Applicator Tools

250 ml Manual Handgun	EXT-250/MNLGUN
250 ml Pneumatic Handgun (not shown)	TBA-250X

400 ml Handgun Applicator Tools

400 ml Manual Handgun	VBM-400X
400 ml Pneumatic Handgun (not shown)	VBA-400X

Static Mixers for 50 ml Cartridges

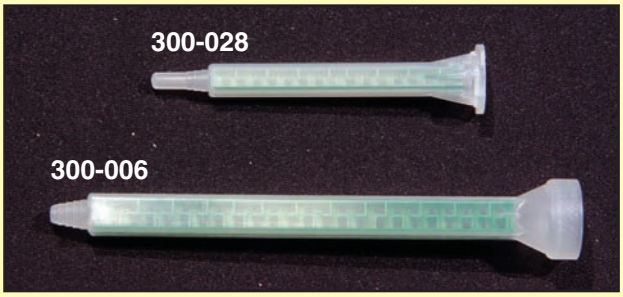
5.5mm x 16 Elements - Square Nozzle	300-028
5.3mm x 24 Elements - Square Nozzle	300-026

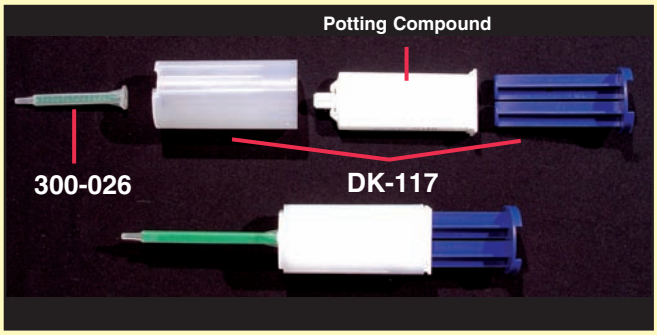
(not shown)

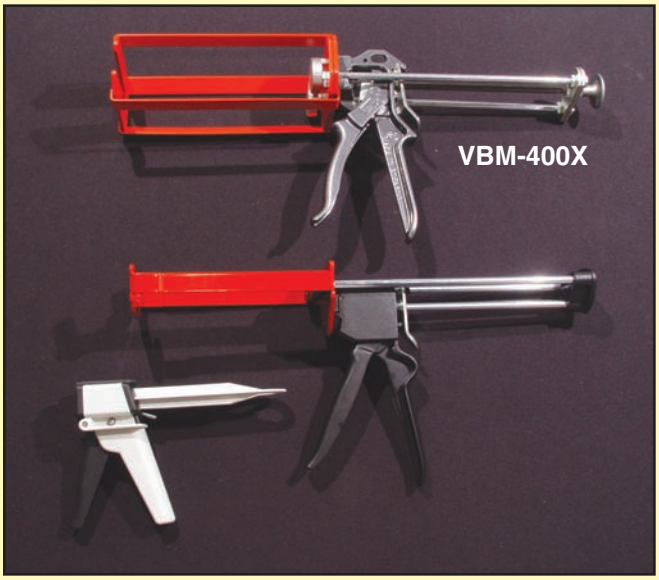
Static Mixers for 250 ml & 400 ml

w/Bell Opening

7.5mm x 24 Elements - Square Nozzle	300-006

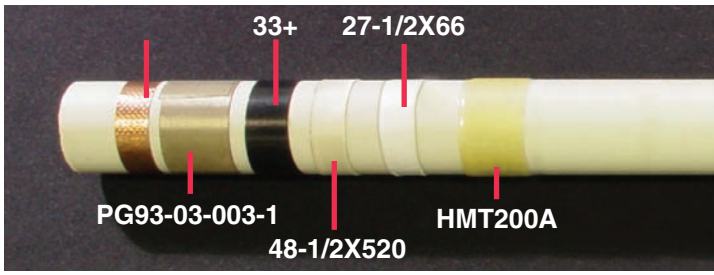






Tapes

There are a vast array of tapes available for many specialized applications. These are some of the most popular tape options for cable harnessing.



1245CU Tape*
Embossed Copper Foil Shielding and Grounding Tape

Color: Copper
Sealing: No
UL E17385

The 1245 tape is a flexible, soft copper tape that has been embossed to allow continuity through the acrylic adhesive. The tape is recommended for static applications with limited bending or flexing. Shielding effectiveness is 75dB to 85dB (30MHz to 1GHz). Drain wires can be soldered to this tape for ground connections between cables and connector shells.

PG93-03-003-1*
Flexible Polyester Tape Plated with Nickel over Copper

Color: Silver
Sealing: No

This is our preferred choice for EMI Shielding. It works well in both static and flexing applications. Shielding effectiveness is 85dB (10MHz to 10GHz). This tape can be used for grounding by carefully soldering drain wires or with the use of conductive adhesives.

33+ PVC Tape
PVC Electric Tape

Color: Black
Sealing: Yes
Temperature: 0°F (-18°C) to 220°F (105°C)
UL-E129200 CSA-LR48769

Scotch brand 33+ Super is an industry standard for all purpose insulating and splicing. It is rated to 600 volts and 220°F (105°C). Electrical Tape is often uses to bundle and seal cables. It conforms to irregular shapes, is tough and easy to apply. Install with at least two half lap layers for proper protection. 33+ is also used as a protective layer over self fusing tapes, split conduit and expandable sleeving.

48-1/2X520
PTFE Thread Sealing & Lubricating Tape

Color: White
Sealing: Yes
Temperature: -450°F (-268°C) to 400°F (204°C)

Series 48 tape is used to seal threaded endbells where O-Rings or other seals are not present. The PTFE tape not only fills the small voids in between the internal and external threads, but also provides a protective barrier against corrosion and the seizing up of threaded components. This tape has no adhesive but easily conforms to almost any thread. Simply wrap the externally threaded part multiple times (more for very large deep threads and less for fine shallow threads) to provide enough tape material to uniformly cover the threads and then thread the parts together.

27-1/2X66
High Strength Glass Cloth Tape

Color: White (printable)
Sealing: No
Temperature: up to 266°F (130°C)
UL-E17385 CSA-LR93411

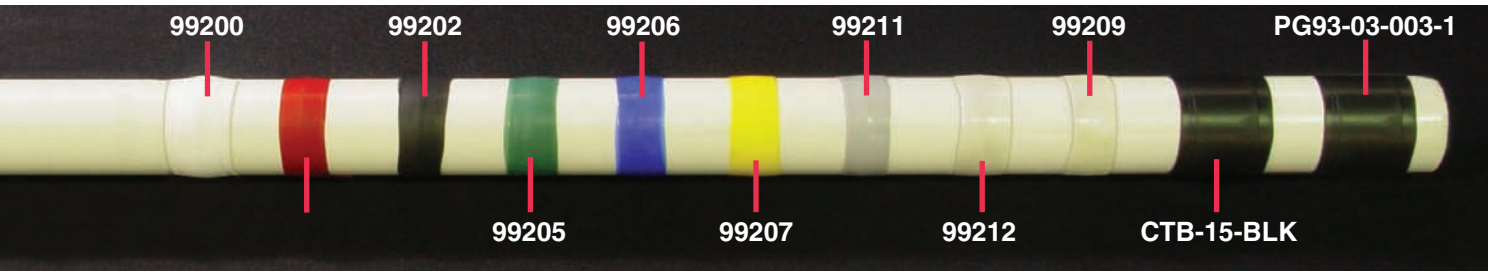
This is a high tensile strength tape (150lb/in (262N/10mm)) with a thermosetting rubber adhesive. It is typically used to wrap individual wires into cable-like bundles. This tape is often used under heat shrink tubing. The heat shrink provides protection against fluids and dirt, while the tape provides much more tensile strength than heat shrink alone. One half lap layer is sufficient for low voltage applications. For voltages up to 600V, we recommend a minimum of two half lap layers.

HMT200A
Hot Melt Tape

Color: Amber
Sealing: Yes
Temperature: -67°F (-55°C) to 221°F (105°C)

This is a heat activated adhesive used as a liner beneath heat shrink tubing or boots. It will improve both adhesion and fluid resistance. Cable surfaces should be free of dust or grease before application. For optimum performance we recommend that surfaces be cleaned and or roughened and then warmed slightly. Wrap a single layer of the tape tightly and with limited overlap. A soldering iron at a low temperature can be used to tack the tape in place. Then slide the heat shrink or boot in place. Use a heater to recover the heat shrink or boot and melt the tape. You should see some of the melted tape ooze out of the end of the heat shrink or boot. Allow the assembly to cool completely before bending or flexing.

* Most Popular



99200 Series
Silicone Self Fusing Tape

Color: Various (see below)
Sealing: Yes
Temperature: -65°F (-54°C) to 500°F (260°C)

Meets MIL-I-46852C Type II Standard

Self fusing tapes do not have an adhesive liner. Instead, they fuse to themselves. Silicone tape will stick to itself quickly and will completely fuse over 24 hours, so the tape is supplied on a clear plastic carrier strip. This tape can be stretched and half lap layered to form a water resistant compression seal around cables and endbells. It can also be used to build up cable diameters for additional flex relief or to make more gradual endbell-to-cable transitions. Silicone tape should be covered with either heat shrink tubing, a boot, or 2 layers of half lap Electrical Tape. It is easy to remove for repairs. Simply cut the tape off, repair the cable and rewrap.

99200	White	99207	Yellow
99201	Red	99211	Gray
99202	Black	99212	Clear
99205	Green	99209	Glow in the Dark
99206	Blue		

PG93-03-003-1*
Flexible Nickel over Copper Plated Polyester Shielding Fabric bonded to a Polyurethane Environmental Sealing Tape.

Color: Black
Sealing: Yes

This tape combines EMI shielding with environmental protection. The inner layer has a shielding effectiveness of 85dB (10MHz to 10GHz). The outer layer is made from black polyurethane and will resist fluids, dust and cuts. Simply wrap the cable and endbell with a half lap coverage pattern.

CTB-15-BLK
Heavy Duty Self Fusing Tape

Color: Black
Sealing: Yes
Temperature: Up to Temperature range:0°C)

Heavy duty self fusing tape is made from ethylene propylene rubber. It will fuse to itself in as little as 30 minutes and is supplied on a reinforced paper carrier that should be removed prior to application. The tape can be stretched up to 750% of its original length and will confirm to a wide variety of shapes. The CTB tape has a tough outer surface and can be left uncovered (unlike the Silicone Self Fusing Tape). It is recommended as an alternative for heat shrink tubing and boots for applications where the heat needed to recover heat shrink could cause damage or for applications with unusual shapes. The CTB tape can be easily removed by cutting it off and will not leave a residue. It is also resistant to ozone and ultra-violet light.

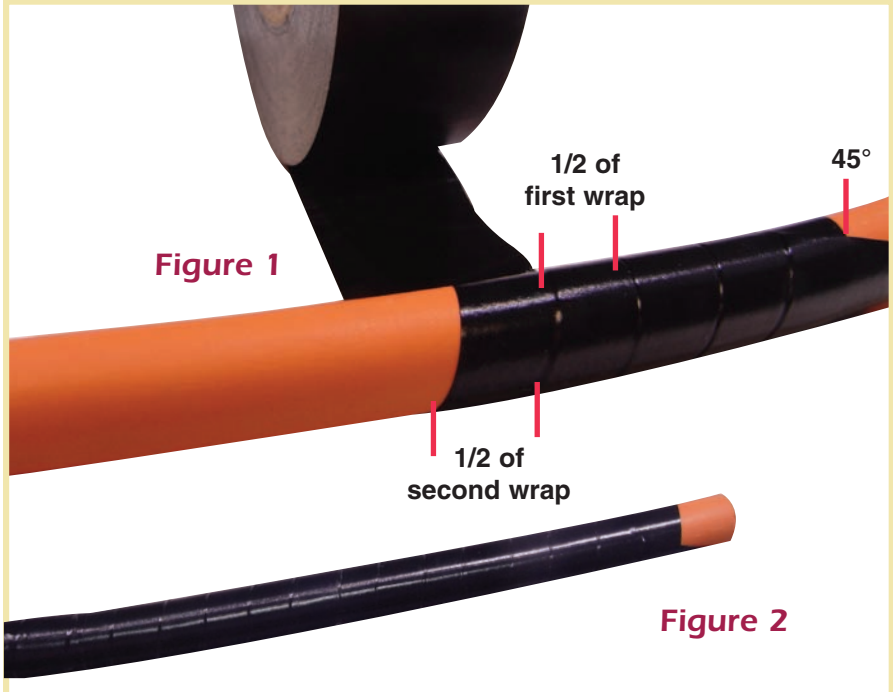


Figure 1

Figure 2

1. **Start tape on wire or cable at 45° angle.** (See Figure 1)
2. **Tightly overlap 1/2 of first wrap with 1/2 of second wrap, maintaining a smooth finish.** (See Figure 1)
3. **Continue over cable as needed** (See Figure 2)

* Most Popular

Terminals – Crimp and Seal Extreme

Adhesive Lined - Heat Shrink Tube





Wire Gauge	Ring Tongue Stud Sizes						
	6	8	10	1/4	5/16	3/8	1/2
22-18	30112	30113	30114	30115	30116	30117	-
16-14	30312	30313	30314	30315	30316	30317	-
12-10	30412	30413	30414	30415	30416	30417	30419



Wire Gauge	Ring Tongue Multi-Stud Sizes		Butt Splice	Bullets			
	2, 4, 6	6, 8, 10		.156 Male	.156 Female	.180 Male	.180 Female
22-18	3011MS	3011M	30130	30169	30179	30168	30178
16-14	3031MS	3031M	30330	30369	30379	30368	30378
12-10	-	3041M	30430	-	-	-	-



Wire Gauge	Forks and Spades Stud Sizes			Quick Connects			
	6	8	10	.187 Male	.187 Female	.250 Male	.250 Female
22-18	30122	30123	30124	30185	30195	30187	30197
16-14	30322	30323	30324	30385	30395	30387	30397
12-10	30422	30423	30424	-	-	30487	30497

COOL SEAL®
BY FTZ INDUSTRIES

New Environmentally Sealed Butt Splice

Seals without the use of Heat Guns or Torches! Patented Anaerobic Sealing Technology



Wire Gauge	Ring Tongue Sizes
22-18	33130
16-14	33330
12-10	33430



#94130 Racheted Crimp Tool

For Terminals shown above.

#99305 Crimp & Seal Standard Nylon Crimp Kit

Low cost option for non-extreme versions.

(Standard)



Lugs and Battery Connections

Standard Duty Lugs

Wire Gauge	Stud Sizes				
	10	1/4	5/16	3/8	1/2
8	91004	91005	91006	91007	91009
6	91014	91015	91016	91017	91019
4	91024	91025	91026	91027	91029
2		91035	91036	91037	91039
1		91045	91046	91047	91049
1/0		91055	91056	91057	91059
2/0		91065	91066	91067	91069
3/0		91075	91076	91077	91079
4/0		91085	91086	91087	91089





Seamless design for ultimate corrosion protection

Heavy Duty Power Lugs

Wire Gauge	Stud Sizes			
	1/4	5/16	3/8	1/2
8	91705	91706	91707	91709
6	91715	91716	91717	91719
4	91725	91726	91727	91729
1-2	91745	91746	91747	91749
1/0		91756	91757	91759
2/0		91766	91767	91769
3/0		91776	91777	91779
4/0		91786	91787	91789





Seamless design for ultimate corrosion protection

Correct Connect Battery Terminals

Wire Gauge	Straight		Elbows: Right		Elbows: Left	
	Negative	Positive	Negative	Positive	Negative	Positive
4	14128					
1-2	15143	15144				
1/0	15163	15164	15263	15264	15363	15364
2/0	15173	15174	15273	15274	15373	15374
3/0	15183	15184	15283	15284	15383	15384
4/0	15193	15194				



Cast lead clamp for corrosion resistance with copper crimp tube for reliability

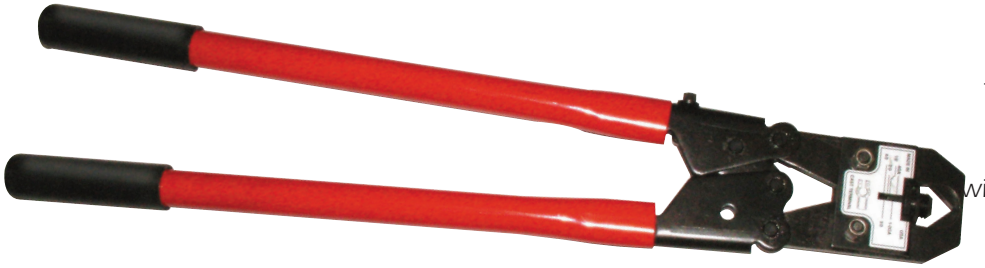




Right



Left



#94297 Lug Tool

Tri-Form is a die-less tool that has over 50 settings and allows the user to crimp lugs and terminals with wire sizes from 8 AWG to 250 MCM cable. The crimp applies equal force to all three sides of the crimp.

Note: Background color in tables refers to crimp dies used in powered crimpers. Please call for more information.

Cable Ties

Standard Nylon Cable Ties

Standard Nylon Cable Ties are used extensively in electrical and electronic applications. They can be used inside potted endbells to provide excellent strain relief and to improve the environmental sealing capabilities by interrupting the leak path. Cable Ties are also good for bundling wires and cables, and securing cables in place.

Part Number	Type	Color	UV Resistant	Max Bundle Diameter inch(mm)	Width inch(mm)	Length inch(mm)	Loop Tensile Strength lbs (N)
93110	Standard	Natural	no	0.75 (19.1)	0.10 (2.5)	4.0 (101.6)	18 (80)
93210	Standard	Black	yes	0.75 (19.1)	0.10 (2.5)	4.0 (101.6)	18 (80)
93120	Standard	Natural	no	1.25 (31.8)	0.14 (3.6)	5.7 (144.8)	40 (178)
93220	Standard	Black	yes	1.25 (31.8)	0.14 (3.6)	5.7 (144.8)	40 (178)
93280	Heavy Duty	Black	yes	7.00 (177.8)	0.35 (8.9)	25.0 (635.0)	175 (778)
93320	Mounting #8 Hole	Natural	no	1.25 (31.8)	0.14 (3.6)	5.9 (149.9)	40 (178)
93440	Mounting #10 Hole	Black	yes	2.00 (50.8)	0.19 (4.8)	8.0 (203.2)	50 (222)

Nylon Locking Cable Tie Tools

94400 Tightening Tool Low Cost



GS2B High Quality Tightening



Metal Locking Ties

There are many uses for the Metal Locking Ties. They are typically used to attach connector dustcaps to cable assemblies. The stainless steel resists corrosion and stays secure in rugged environments. Just like the nylon cable ties listed above, they can also be used to affix or secure the cable harnesses to various mounting rails, brackets, or other support members in vehicles or industrial machines.

Part Number	Type	Color	UV Resistant	Max Bundle Diameter inch(mm)	Min Bundle Diameter inch(mm)	Width inch(mm)	Length inch(mm)	Loop Tensile Strength lbs (N)
93804	Standard	Silver	yes	2.00 (50.8)	0.50 (12.7)	0.18 (4.6)	8.00 (203.2)	200 (890)
93805	Heavy Duty	Silver	yes	2.00 (50.8)	0.50 (12.7)	0.30 (7.6)	8.00 (203.2)	450 (2000)

Metal Locking Tie Tools

HTMT Prototyping Tightening Tool



ST3MT Production Tightening Tool with cut off



TG70 Strap Wrench

The strap wrench is used to connect or disconnect coupling nuts in a confined space, or to tighten or loosen endbells without damaging the connector plating.



A strap wrench also increases torque, allowing you to more easily mate or unmate a connector pair. Substitute tools, such as a pipe wrench or pliers, should never be used because of the high probability of severe damage to the connector plating or the coupling mechanism.

TG69P Non-Marring Adjustable Endbell Pliers For Field Service



The TG69P pliers have resilient jaws and are used to tighten or remove endbells without damaging the connector plating. The pliers are adjustable and will accommodate all of the connector sizes in this catalog. Substitute tools, such as a pipe wrench or metal jaw pliers, should never be used due to the high probability of severe damage to the connector plating. Replacement jaws, Part No. G77015, are available.

600 Series Production System

The 600 Series is a complete system for the proper assembly and torquing of connector endbells. The system includes a bench mounted or hand-held torque wrench, plug and receptacle holders, and a range of endbell tightening tools. When used together, these tools provide the user with consistent endbell installations. Each item is shipped with detailed assembly instructions.





Endbell Tightening Kit

600-007



Bench Mounted Torque Wrench

Plug and Receptacle Holders



600B005-R



600B005-P



600D005-R



600D005-P

Size	MIL-DTL-5015 for MS310_, AIT, AIB, CB, CT		MIL-DTL-26482 for PT, PTS, MB, 62GB, MS311_, MS312_, MS347_ Trident, KPT, KPSE	
	Receptacles	Plugs	Receptacles	Plugs
8/8S	600B005-8R	600B005-8P	600D005-8R	600D005-8P
10S/SL	600B005-10R	600B005-10P	600D005-10R	600D005-10P
12/12S	600B005-12R	600B005-12P	600D005-12R	600D005-12P
14/14S	600B005-14R	600B005-14P	600D005-14R	600D005-14P
16/16S	600B005-16R	600B005-16P	600D005-16R	600D005-16P
18	600B005-18R	600B005-18P	600D005-18R	600D005-18P
20	600B005-20R	600B005-20P	600D005-20R	600D005-20P
22	600B005-22R	600B005-22P	600D005-22R	600D005-22P
24	600B005-24R	600B005-24P	600D005-24R	600D005-24P
28	600B005-28R	600B005-28P	-	-
32	600B005-32R	600B005-32P	-	-
36	600B005-36R	600B005-36P	-	-

Size	MIL-DTL-38999 Series I		MIL-DTL-38999 Series II		MIL-DTL-38999 Series III			
	Receptacles	Plugs	Receptacles	Plugs	Shell Size		Receptacles	Plugs
9	600F005-9R	600F005-9P	600FF005-8R	600FF005-8P	A	9	600H005-9R#	600H005-9P#
11	600F005-11R	600F005-11P	600FF005-10R	600FF005-10P	B	11	600H005-11R#	600H005-11P#
13	600F005-13R	600F005-13P	600FF005-12R	600FF005-12P	C	13	600H005-13R#	600H005-13P#
15	600F005-15R	600F005-15P	600FF005-14R	600FF005-14P	D	15	600H005-15R#	600H005-15P#
17	600F005-17R	600F005-17P	600FF005-16R	600FF005-16P	E	17	600H005-17R#	600H005-17P#
19	600F005-19R	600F005-19P	600FF005-18R	600FF005-18P	F	19	600H005-19R#	600H005-19P#
21	600F005-21R	600F005-21P	600FF005-20R	600FF005-20P	G	21	600H005-21R#	600H005-21P#
23	600F005-23R	600F005-23P	600FF005-22R	600FF005-22P	H	23	600H005-23R#	600H005-23P#
25	600F005-25R	600F005-25P	600FF005-24R	600FF005-24P	J	25	600H005-25R#	600H005-25P#

Add polarizations: N, A, B, C, D, E

Heat Tools and Heat Kits

Electric Power Heat Tools

North America:

Part #94502
2 Temperature
115VAC 750°F and 1100°F (400°C – 600°C)
Good for Light Tubing, Small To Medium Boots

Part #HSG115V650
Variable Temperature
115VAC 650°F – 900°F (344°C – 482°C)
High Air Flow Good for Large Boots

Europe:

Part #HL2010E
Variable Temperature
230-240VAC LCD Read Out 122°F – 1200°F (50°C – 650°C)
Good for Small Tubing to Large Boots



Butane Powered Heat Tools

Part #94900
Low Cost Torch up to 2400°F (1315°C)
Good for Small Heat Shrink Tubing and Crimp and Seal Terminals

Part #94700
Low Cost Flameless Heat Gun 1400°F (760°C)
Good for Small to Medium Heat Shrink Tubing
Part #94701 – Replacement Fuel Cell

Part #94940
High Output Flameless Heat Gun 1300°F (700°C)
Good for Medium to Large Heat Shrink Boots



Heat Tool Kits



Part #94907K Contains:
- Heat Hand Tool
- Solder Tip
- Hot Knife
- Heat Gun and Deflector
- Solder Blow Torch



Part #94901K Contains:
- Heat Hand Tool
- Heat Gun and Deflector
- 2 Solder Tips
- Solder
- Tip Cleaning Sponge



Part #94908K Contains:
- Pistol Grip Heat Hand Tool
- Heat Gun and Deflector
- Solder Tip
- Wire Brush
- Solder
- Flux
- Solder Sucker
- Extra Fuel Cell
- Wire Cutters

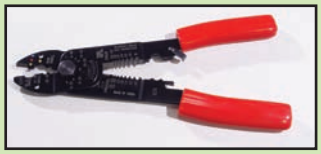
Cable Strippers and Jacket



Part #94040
Jacket Stripper
8 Awg-4/0 Awg



Part #94143
Small Low Cost Strips
10-18 Awg



Part #94145
Multi Function Tool



Part #94015
Heavy Duty Wire Cutter
up to 500 MCM



Part #99166
CNS Crimp Kit

Contact Tooling



Part #UH2-5
AF8 Universal
Contact Locator

Crimp Kits





Call for more information.



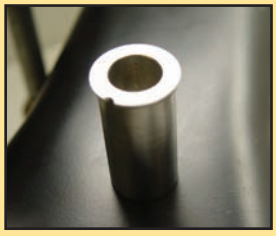
Part #400BHD
Pneumatic Crimper
12 Awg-0 Awg



Power Crimp Die*

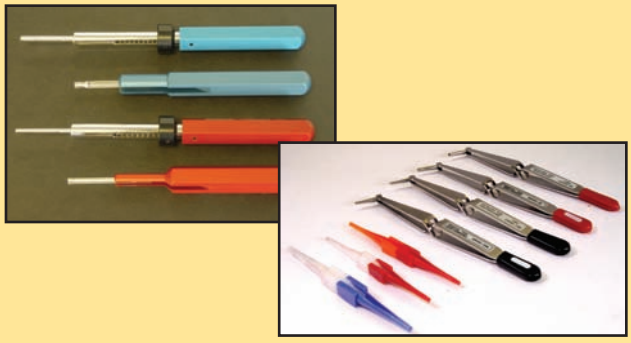


Go/No-Go Gauge*



Power Crimp Tool Contact Locator*

Contact Insertion/Extraction Tools*



Contact Insertion Lubricant

Part #1610N



*Call for More Information

Shopping List

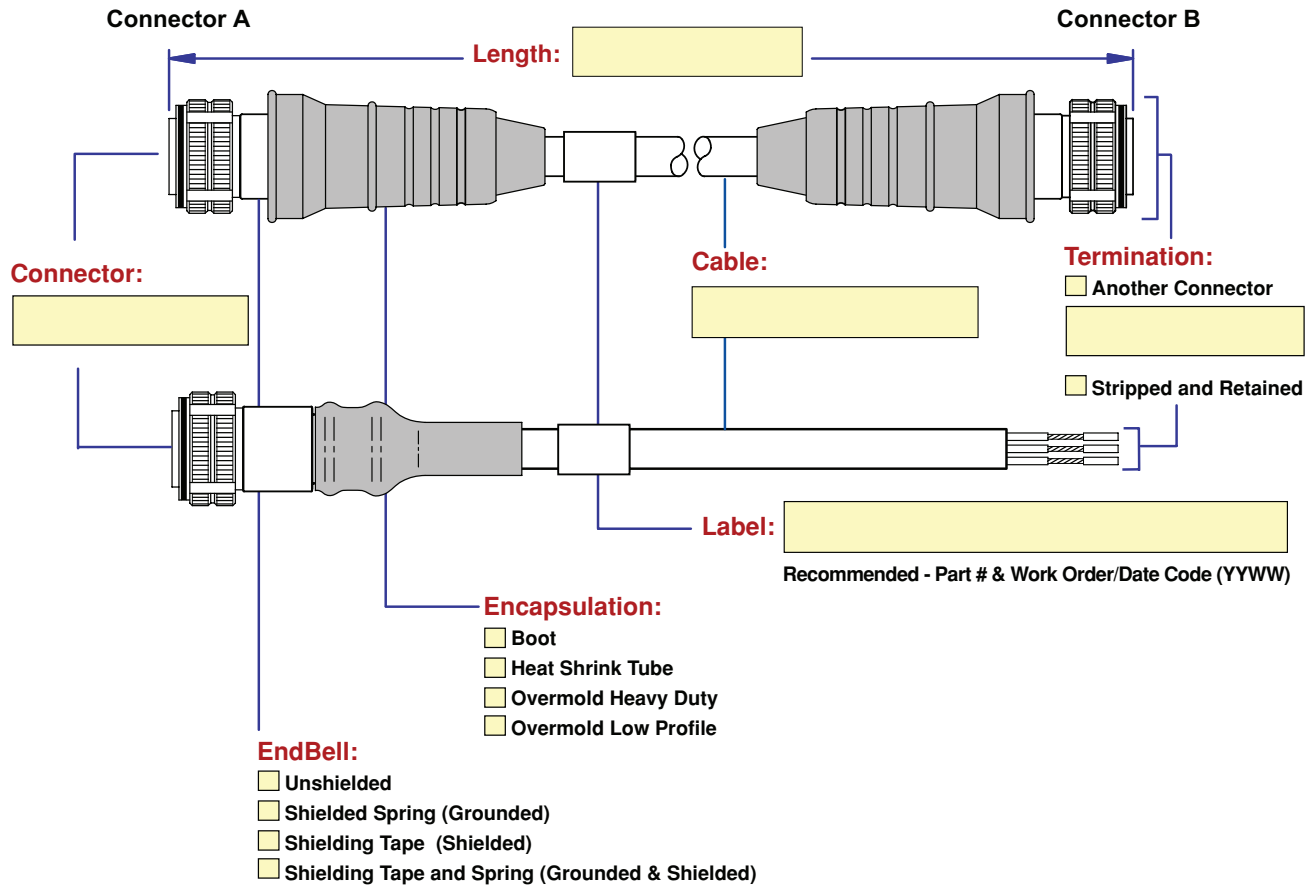
For Menus A, B & C

PEI-Genesis

Name: Email:

Company: Phone:

Qty: EAU:



Wiring			
Connector A Pin/Socket	Wire Color	Wire Gauge	Connector B Pin/Socket
A or 1			
B or 2			
C or 3			
D or 4			
E or 5			
F or 6			
G or 7			
H or 8			
I or 9			
J or 10			
K or 11			
L or 12			
M or 13			
N or 14			
O or 15			
P or 16			
Q or 17			
R or 18			
S or 19			
T or 20			
U or 21			
V or 22			
W or 23			
X or 24			
Y or 25			
Z or 26			

Design Notes

Shopping List

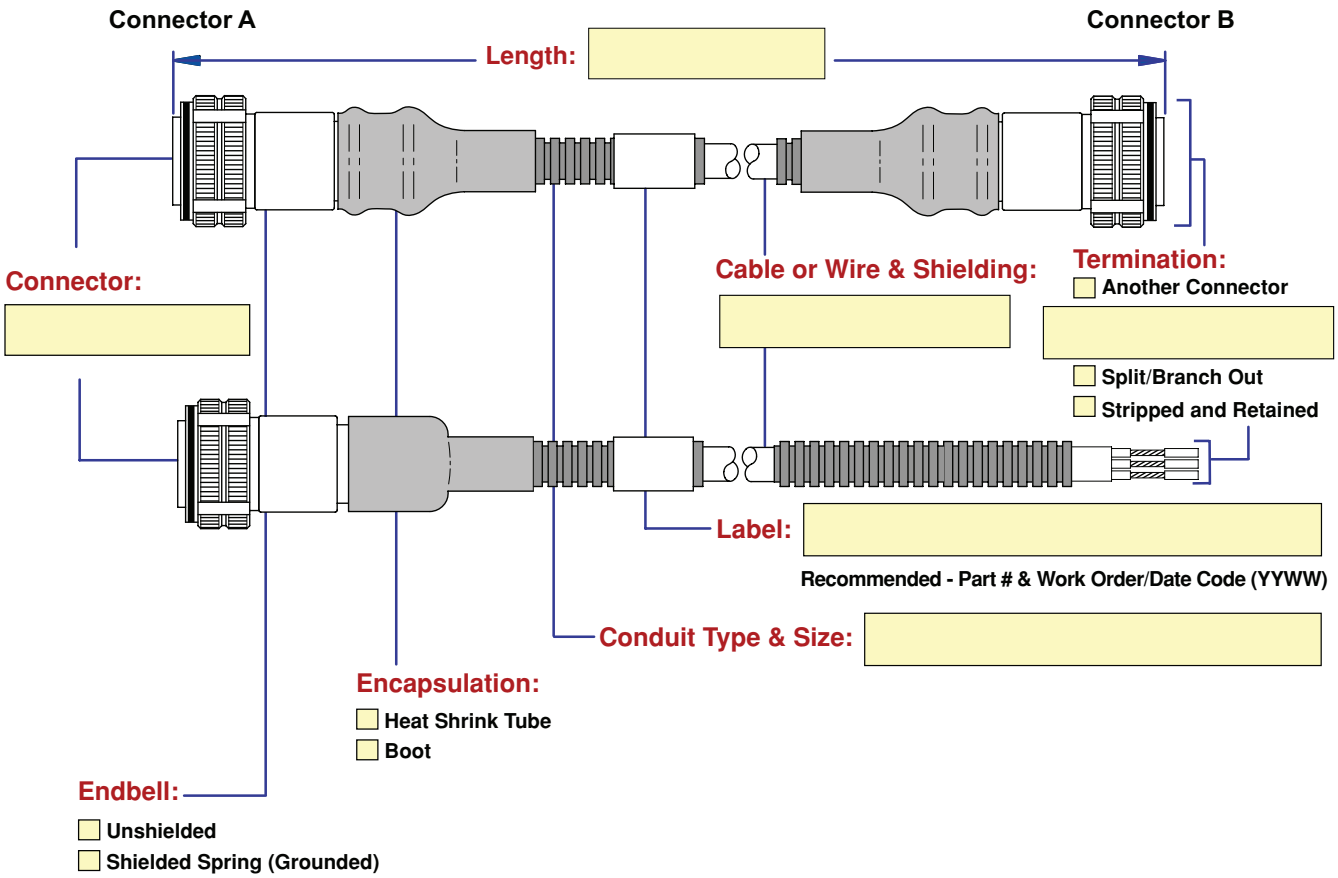
For Menu D

PEI-Genesis

Name: Email:

Company: Phone:

Qty: EAU:



Wiring			
Connector A Pin/Socket	Wire Color	Wire Gauge	Connector B Pin/Socket
A or 1			
B or 2			
C or 3			
D or 4			
E or 5			
F or 6			
G or 7			
H or 8			
I or 9			
J or 10			
K or 11			
L or 12			
M or 13			
N or 14			
O or 15			
P or 16			
Q or 17			
R or 18			
S or 19			
T or 20			
U or 21			
V or 22			
W or 23			
X or 24			
Y or 25			
Z or 26			

Design Notes

Shopping List

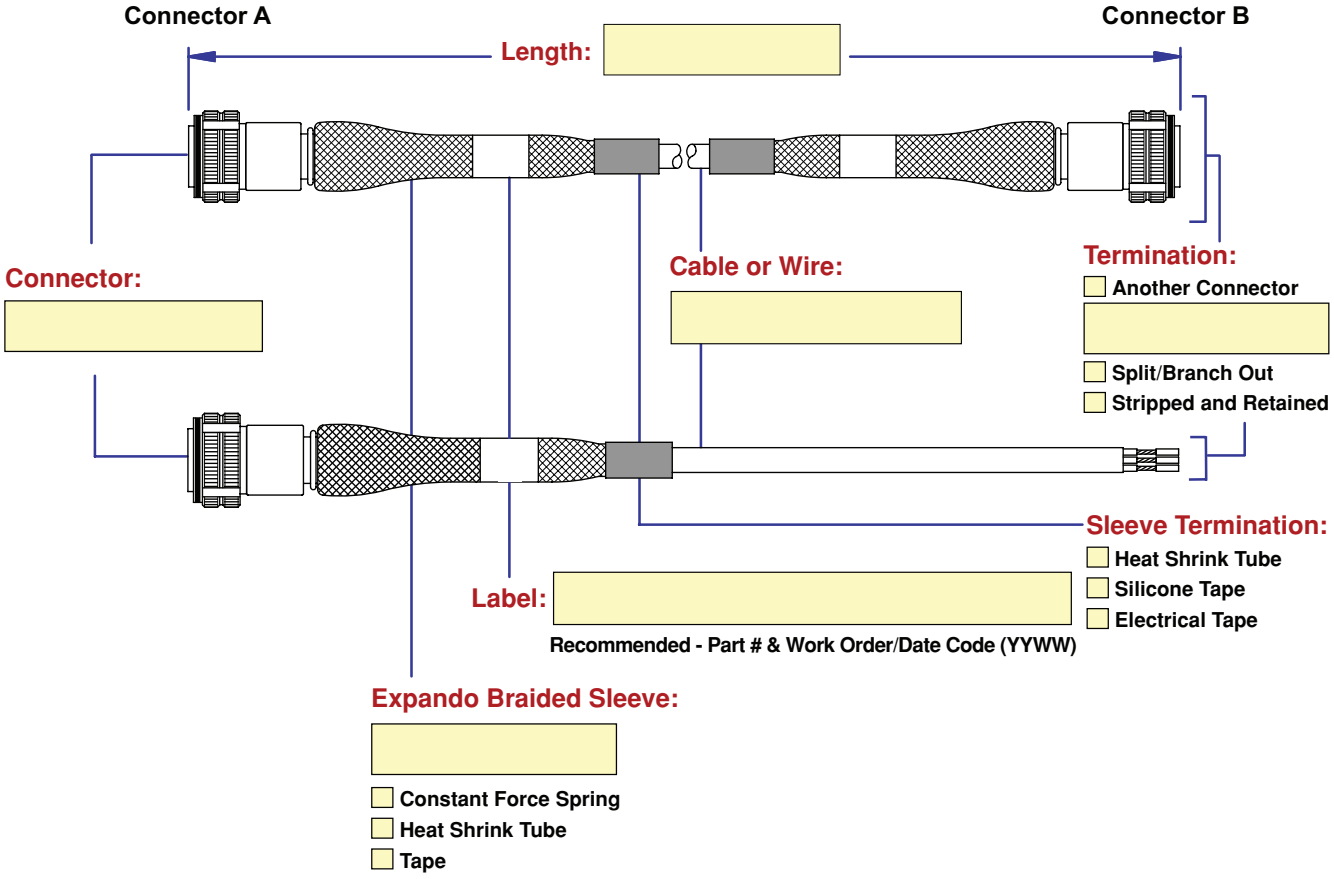
For Menu E

PEI-Genesis

Name: Email:

Company: Phone:

Qty: EAU:



Wiring			
Connector A Pin/Socket	Wire Color	Wire Gauge	Connector B Pin/Socket
A or 1			
B or 2			
C or 3			
D or 4			
E or 5			
F or 6			
G or 7			
H or 8			
I or 9			
J or 10			
K or 11			
L or 12			
M or 13			
N or 14			
O or 15			
P or 16			
Q or 17			
R or 18			
S or 19			
T or 20			
U or 21			
V or 22			
W or 23			
X or 24			
Y or 25			
Z or 26			

Design Notes

Shopping List

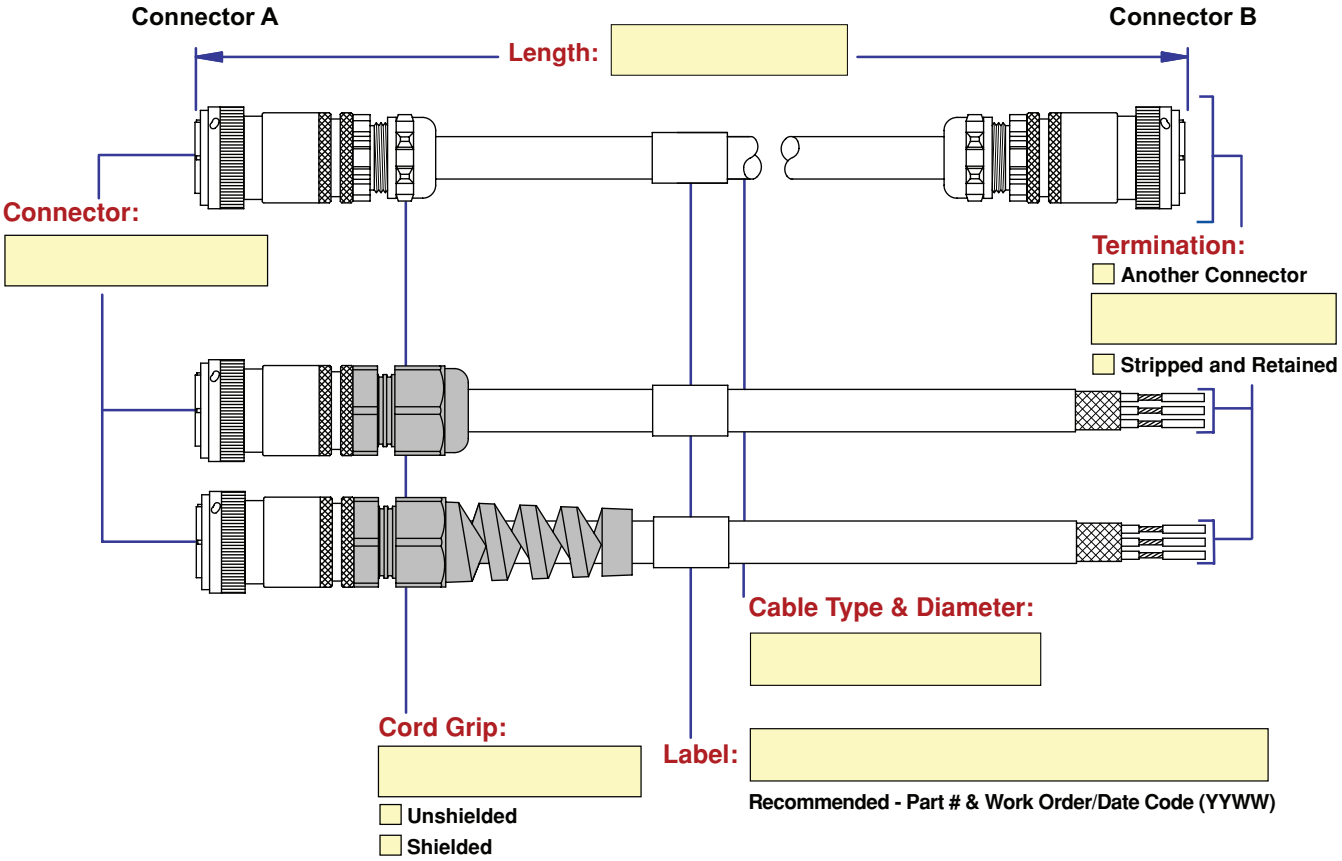
For Menus F & G

PEI-Genesis

Name: Email:

Company: Phone:

Qty: EAU:



Wiring			
Connector A Pin/Socket	Wire Color	Wire Gauge	Connector B Pin/Socket
A or 1			
B or 2			
C or 3			
D or 4			
E or 5			
F or 6			
G or 7			
H or 8			
I or 9			
J or 10			
K or 11			
L or 12			
M or 13			
N or 14			
O or 15			
P or 16			
Q or 17			
R or 18			
S or 19			
T or 20			
U or 21			
V or 22			
W or 23			
X or 24			
Y or 25			
Z or 26			

Design Notes

Shopping List

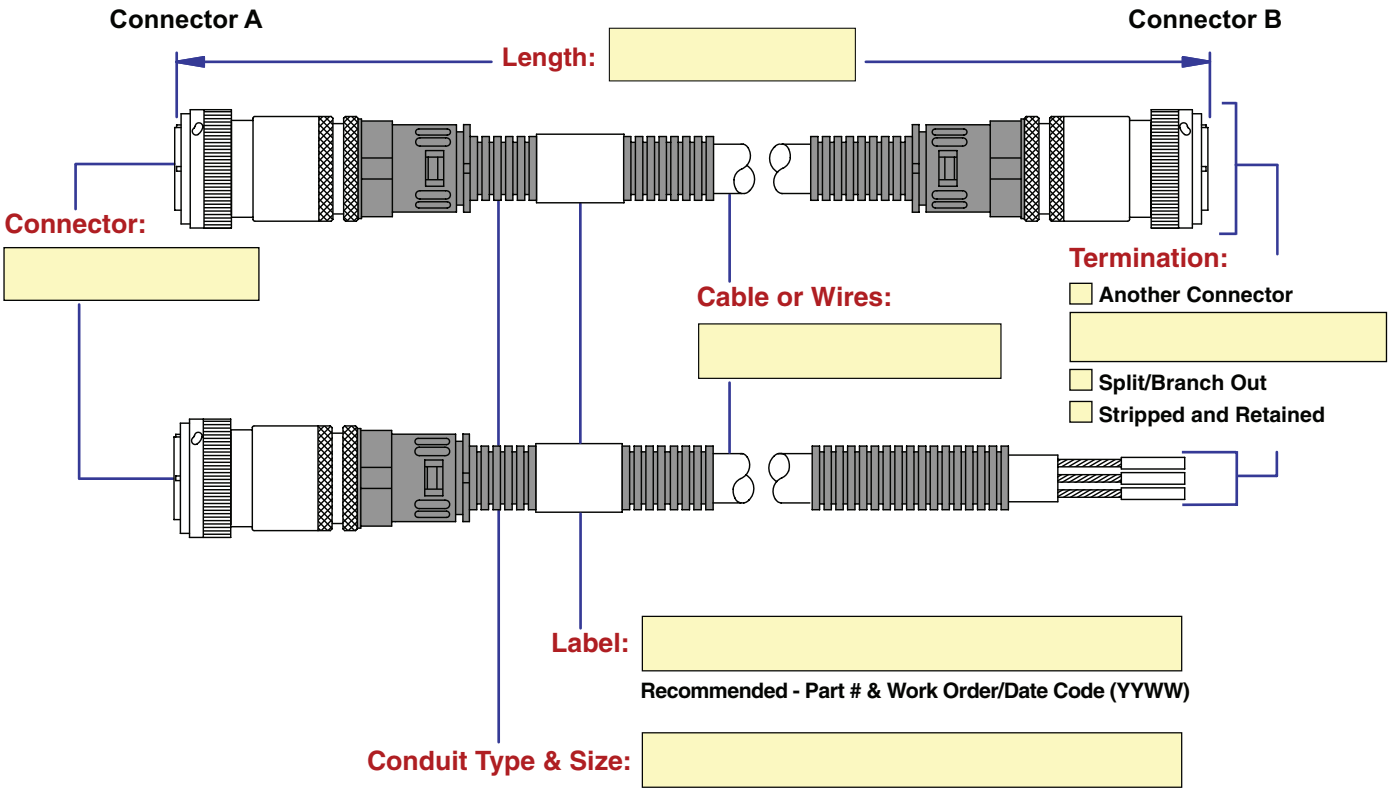
For Menu H

PEI-Genesis

Name: Email:

Company: Phone:

Qty: EAU:



Wiring			
Connector A Pin/Socket	Wire Color	Wire Gauge	Connector B Pin/Socket
A or 1			
B or 2			
C or 3			
D or 4			
E or 5			
F or 6			
G or 7			
H or 8			
I or 9			
J or 10			
K or 11			
L or 12			
M or 13			
N or 14			
O or 15			
P or 16			
Q or 17			
R or 18			
S or 19			
T or 20			
U or 21			
V or 22			
W or 23			
X or 24			
Y or 25			
Z or 26			

Design Notes

Shopping List

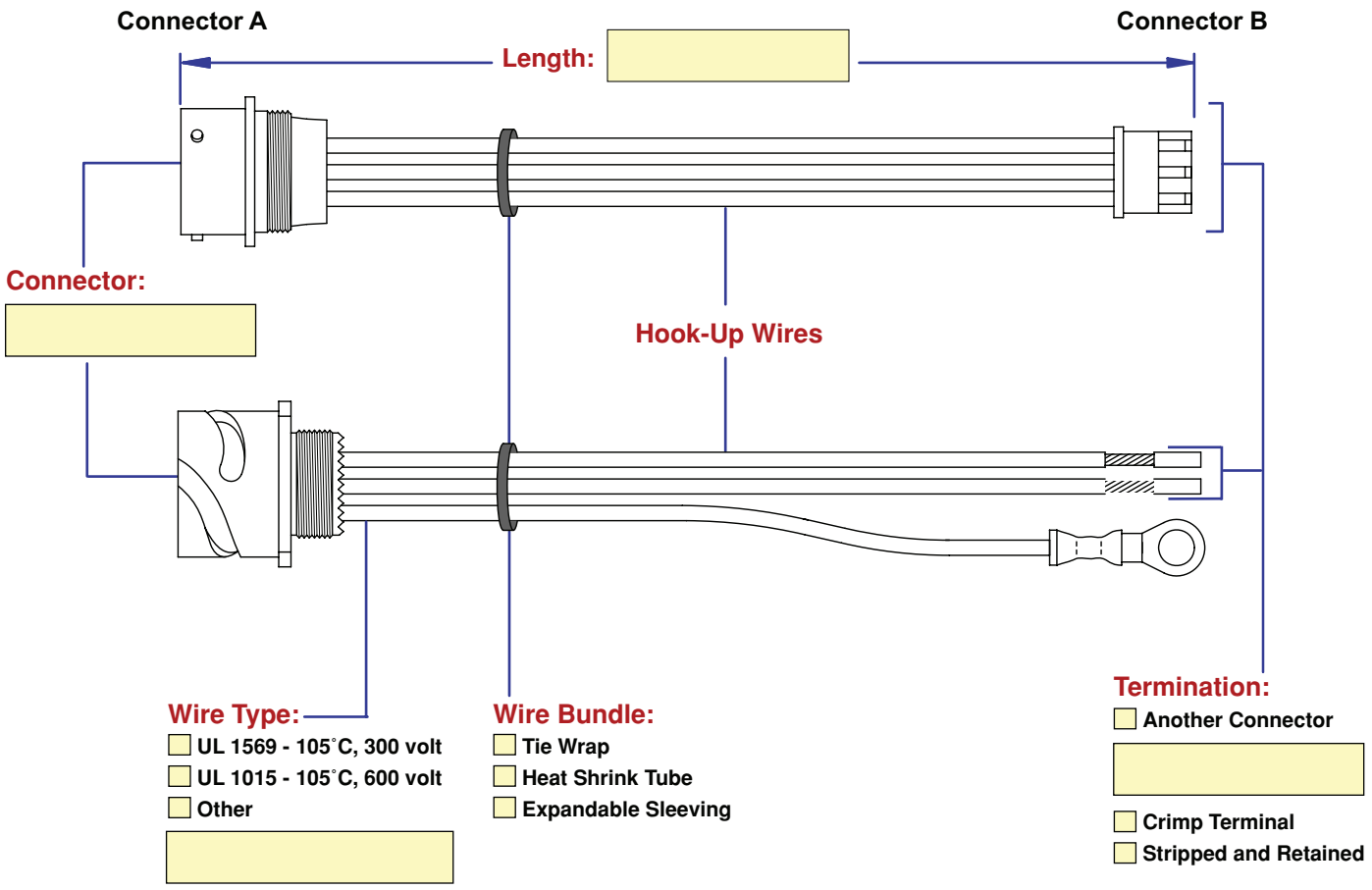
Receptacle Assembly

PEI-Genesis

Name: Email:

Company: Phone:

Qty: EAU:



Wiring			
Connector A Pin/Socket	Wire Color	Wire Gauge	Connector B Pin/Socket
A or 1			
B or 2			
C or 3			
D or 4			
E or 5			
F or 6			
G or 7			
H or 8			
I or 9			
J or 10			
K or 11			
L or 12			
M or 13			
N or 14			
O or 15			
P or 16			
Q or 17			
R or 18			
S or 19			
T or 20			
U or 21			
V or 22			
W or 23			
X or 24			
Y or 25			
Z or 26			

Design Notes

For Assistance in Europe – Please See the Back Cover For a Complete Listing of Our Branch Offices and Contact Numbers. • Specifications subject to change.

Shopping List

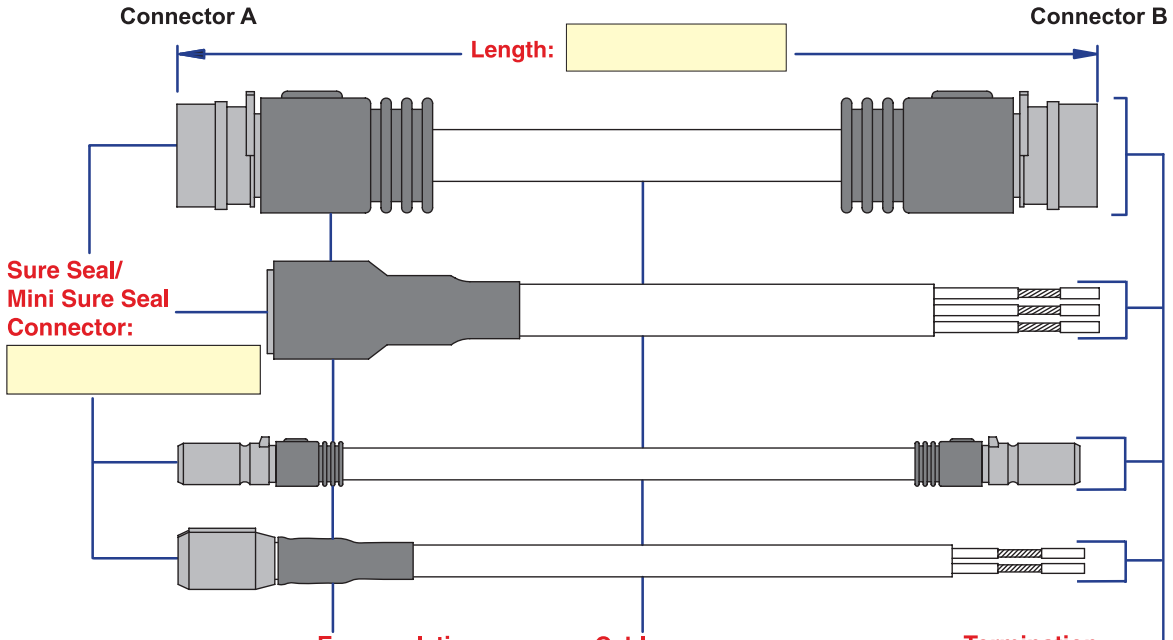
Sure Seal, Jacketed Cable

PEI-Genesis

Name: Email:

Company: Phone:

Qty: EAU:



Encapsulation:
- ☐ Overmold
- ☐ Boot
- ☐ Heat Shrink Tube

Cable:
- ☐ SJTOW Power Cord
  UL & CSA rated to 105°C and 300 V
  Resists oil, solvents, moisture and outdoor exposure
  - ☐ 14 AWG
  - ☐ 16 AWG (Recommended for Sure Seal)
  - ☐ 18 AWG (Recommended for Mini Sure Seal)
- ☐ Other Type - Please Specify

Termination:
- ☐ Another Connector
- ☐ Stripped and Retained

Wiring

Connector A	*Wire Color	**Wire Gauge	Connector B
1	Black		
2	White		
3	Green		
4	Red		
5	Orange		
6	Blue		
7	Brown		
8	Yellow		
9	Violet		
10	Gray		

* Colors shown are PEI's recommendations. Simply overwrite them if you require a different color code.
**Recommended wire gauge for:
Sure Seal: AWG 14-18
Mini Sure Seal: AWG 18-20

Design Notes

Shopping List

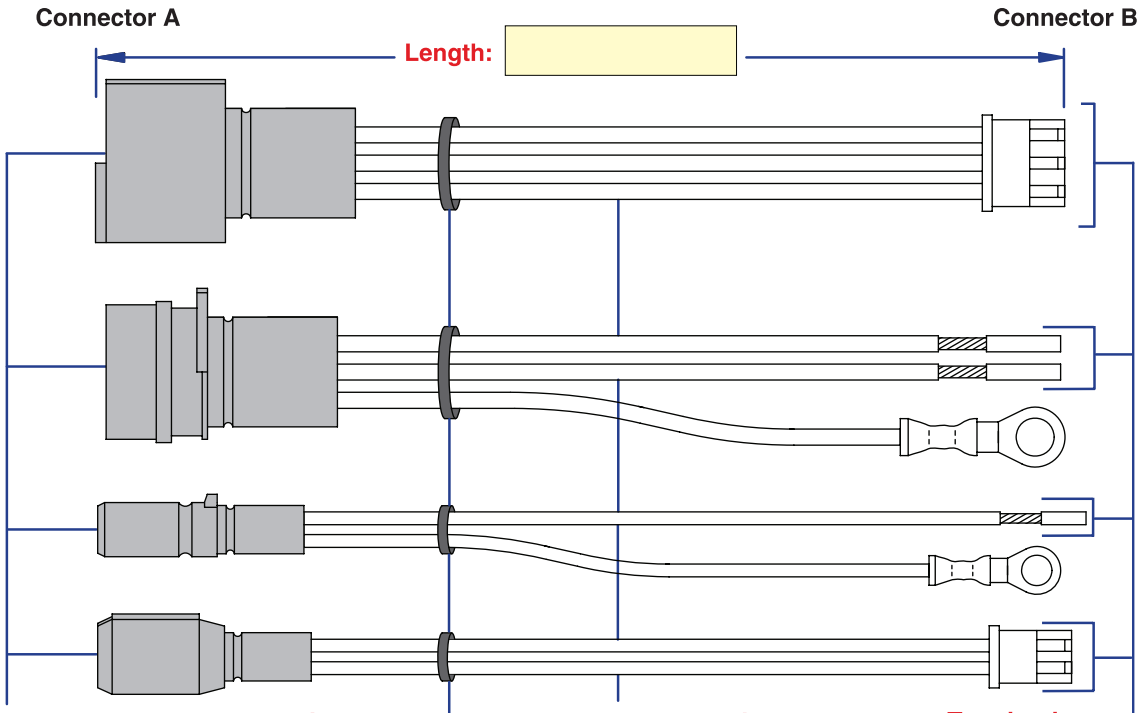
Sure Seal, Hook-Up Wire

PEI-Genesis

Name: Email:

Company: Phone:

Qty: EAU:



Sure Seal/ Mini Sure Seal Connector:

Wire Bundle:
- ☐ Tie Wrap
- ☐ Heat Shrink Tube
- ☐ Expandable Sleeving

Hook-Up Wire Type:
- ☐ UL 1569 - 105˚C, 300 volt
- ☐ UL 1015 - 105˚C, 600 volt
- ☐ Other

Termination:
- ☐ Another Connector
- ☐ Stripped and Retained
- ☐ Crimp Terminal

Wiring			
Connector A	*Wire Color	**Wire Gauge	Connector B
1	Black		
2	White		
3	Green		
4	Red		
5	Orange		
6	Yellow		
7	Blue		
8	Violet		
9	Gray		
10	Brown		

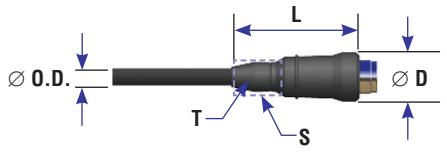
* Recommended colors shown. If one color is used for all wires, we recommend black.
**Recommended wire gauge for:
Sure Seal: AWG 14-18
Mini Sure: Seal AWG 18-20

Design Notes

Overmold Guidelines

Standard Duty

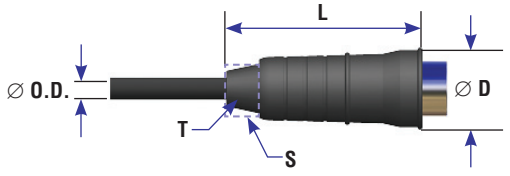
A



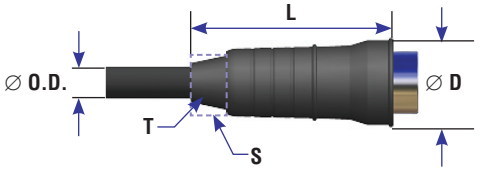
C Code	L Length inch (mm)	D Diameter inch (mm)	Cable Range inch (mm) Min	Tail Style T Tapered Max	Tail Style S Straight Max
A	2.046 (52.0)	0.789 (20.0)	0.141 (3.6)	0.281 (7.2)	0.351 (8.9)

Heavy Duty

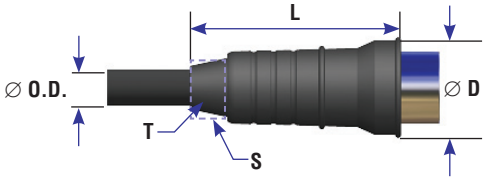
C



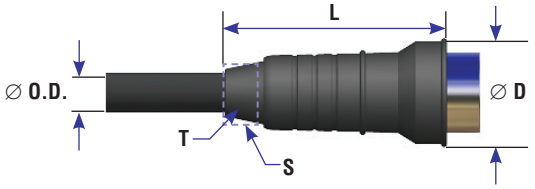
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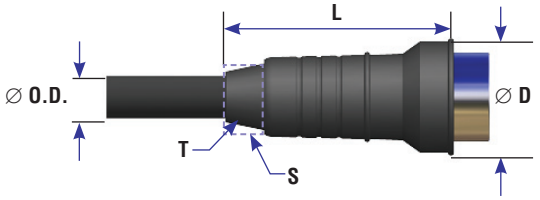
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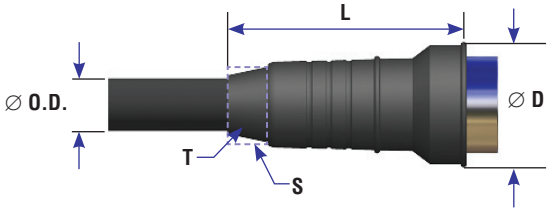
F



G



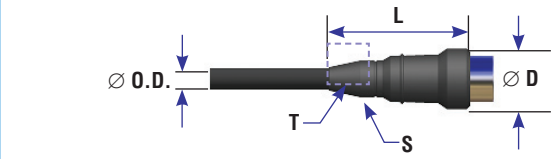
H



C Code	L Length inch (mm)	D Diameter inch (mm)	Cable Range inch (mm) Min	Tail Style T Tapered Max	Tail Style S Straight Max
C	3.116 (79.1)	1.298 (33.0)	0.253 (6.4)	0.506 (12.9)	0.633 (16.1)
D	3.216 (81.7)	1.423 (36.1)	0.281 (7.1)	0.562 (14.3)	0.702 (17.8)
E	3.353 (85.2)	1.599 (40.6)	0.309 (7.9)	0.619 (15.7)	0.774 (19.6)
F	3.525 (89.5)	1.724 (43.8)	0.338 (8.6)	0.675 (17.1)	0.844 (21.4)
G	3.623 (92.0)	1.880 (47.8)	0.336 (9.3)	0.731 (18.6)	0.914 (23.2)
H	3.803 (96.6)	2.005 (50.9)	0.422 (10.7)	0.844 (21.4)	1.055 (26.8)

Standard Duty

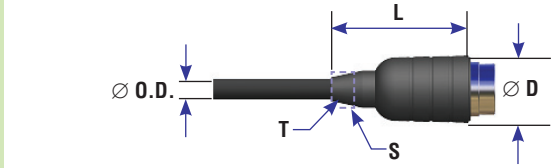
(mm) C Code	L Length inch (mm)	D Diameter inch (mm)	Cable Range inch Min	Tail Style T Tapered Max	Tail Style S Straight Max
B	2.250 (57.1)	0.976 (24.8)	0.169 (4.3)	0.337 (8.5)	0.421 (10.7)



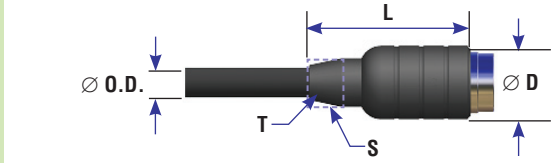
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Low Profile

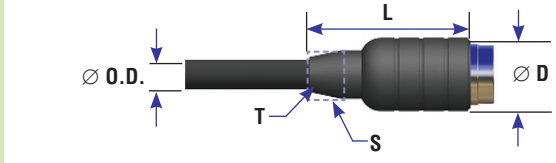
(mm) C Code	L Length inch (mm)	D Diameter inch (mm)	Cable Range inch Min	Tail Style T Tapered Max	Tail Style S Straight Max
C	2.208 (56.1)	1.065 (27.0)	0.169 (4.3)	0.337 (8.6)	0.421 (10.7)
D	2.573 (65.4)	1.185 (30.1)	0.253 (6.4)	0.506 (12.9)	0.633 (16.1)
E	2.613 (66.4)	1.372 (34.8)	0.281 (7.1)	0.562 (14.3)	0.702 (17.8)
F	2.845 (72.3)	1.466 (37.2)	0.309 (7.9)	0.619 (15.7)	0.774 (19.6)
G	3.060 (77.7)	1.624 (41.3)	0.338 (8.6)	0.675 (17.1)	0.844 (21.4)
H	3.211 (81.6)	1.749 (44.4)	0.366 (9.3)	0.731 (18.6)	0.914 (23.2)



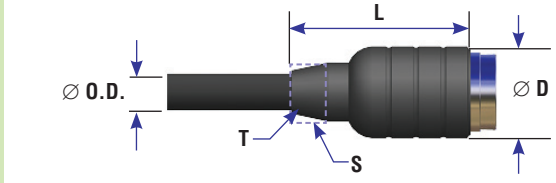
C



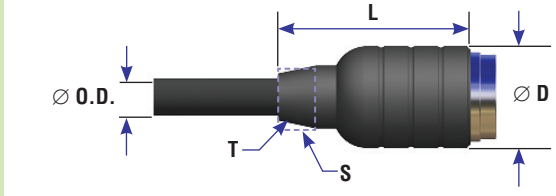
D



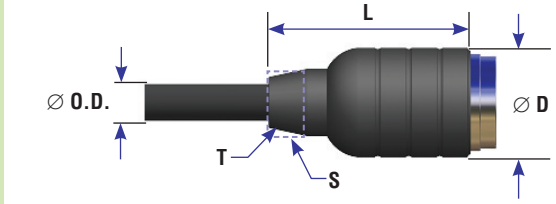
E



F



G

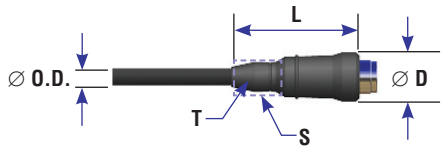


H

Overmold Guidelines

Standard Duty

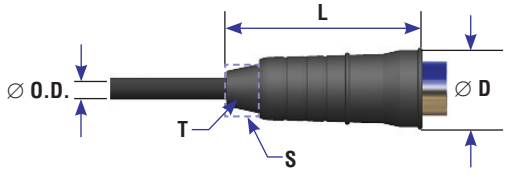
A



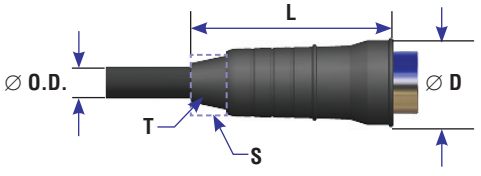
C Code	L Length inch (mm)	D Diameter inch (mm)	Cable Range inch (mm) Min	Tail Style T Tapered Max	Tail Style S Straight Max
A	2.046 (52.0)	0.789 (20.0)	0.141 (3.6)	0.281 (7.2)	0.351 (8.9)

Heavy Duty

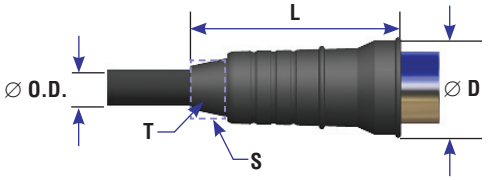
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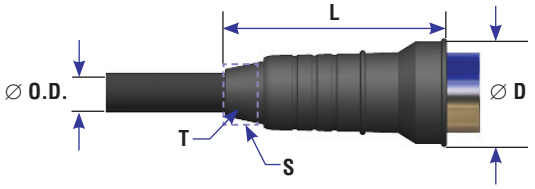
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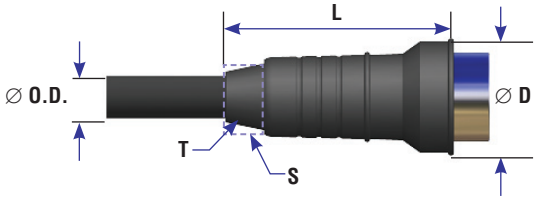
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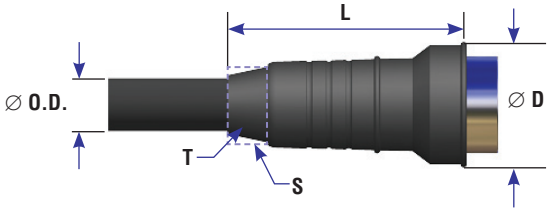
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G



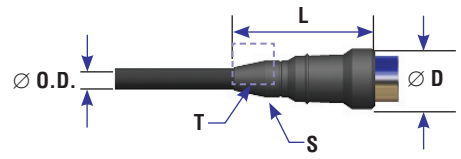
H



C Code	L Length inch (mm)	D Diameter inch (mm)	Cable Range inch (mm) Min	Tail Style T Tapered Max	Tail Style S Straight Max
C	3.116 (79.1)	1.298 (33.0)	0.253 (6.4)	0.506 (12.9)	0.633 (16.1)
D	3.216 (81.7)	1.423 (36.1)	0.281 (7.1)	0.562 (14.3)	0.702 (17.8)
E	3.353 (85.2)	1.599 (40.6)	0.309 (7.9)	0.619 (15.7)	0.774 (19.6)
F	3.525 (89.5)	1.724 (43.8)	0.338 (8.6)	0.675 (17.1)	0.844 (21.4)
G	3.623 (92.0)	1.880 (47.8)	0.336 (9.3)	0.731 (18.6)	0.914 (23.2)
H	3.803 (96.6)	2.005 (50.9)	0.422 (10.7)	0.844 (21.4)	1.055 (26.8)

Standard Duty

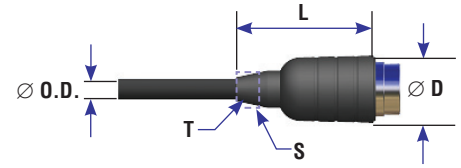
(mm) C Code	L Length inch (mm)	D Diameter inch (mm)	Cable Range inch Min	Tail Style T Tapered Max	Tail Style S Straight Max
B	2.250 (57.1)	0.976 (24.8)	0.169 (4.3)	0.337 (8.5)	0.421 (10.7)



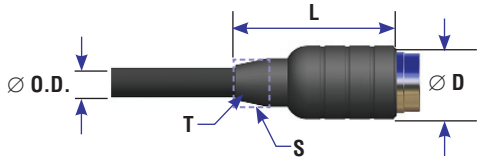
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Low Profile

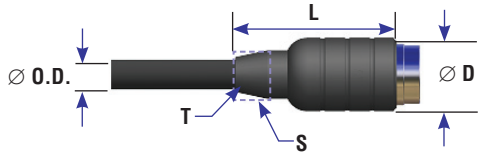
(mm) C Code	L Length inch (mm)	D Diameter inch (mm)	Cable Range inch Min	Tail Style T Tapered Max	Tail Style S Straight Max
C	2.208 (56.1)	1.065 (27.0)	0.169 (4.3)	0.337 (8.6)	0.421 (10.7)
D	2.573 (65.4)	1.185 (30.1)	0.253 (6.4)	0.506 (12.9)	0.633 (16.1)
E	2.613 (66.4)	1.372 (34.8)	0.281 (7.1)	0.562 (14.3)	0.702 (17.8)
F	2.845 (72.3)	1.466 (37.2)	0.309 (7.9)	0.619 (15.7)	0.774 (19.6)
G	3.060 (77.7)	1.624 (41.3)	0.338 (8.6)	0.675 (17.1)	0.844 (21.4)
H	3.211 (81.6)	1.749 (44.4)	0.366 (9.3)	0.731 (18.6)	0.914 (23.2)



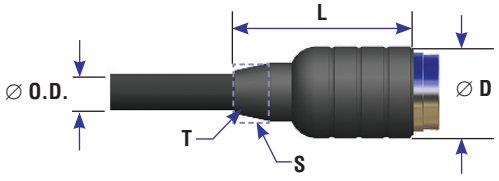
C



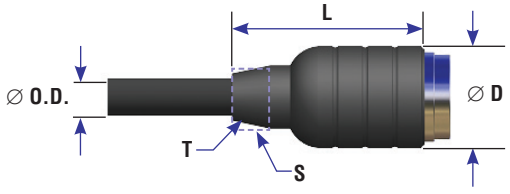
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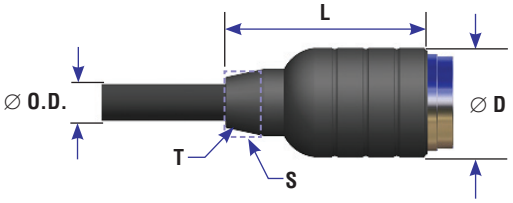
E



F



G



H

Glossary

ACCELERATED AGING - A connector test in which temperature, voltage, current, or other parameters are increased beyond the normal operating values to observe deterioration in a relatively short period of time.

ACCESSORIES - Auxiliary devices such as cable clamps, endbells, gaskets, or any number of mechanical hardware devices that can be added to a connector.

ADAPTER - A device which enables the interconnection of two dissimilar connectors and/or mechanically allows the connection of unique accessories. Some adapters are actually connectors in themselves and allow the user to mate the adapter with one half of a connector and then mate a different type of connector to the adapter effecting a transition. These types of adapters are common in RF and audio connectors. Other adapters are purely mechanical and allow the use of unique accessories or allow for special mounting configurations.

AEM - A connector insulating material which will not emit halogen (toxic) gases when exposed to flame. Referred to as a ZERO HALOGEN insulator. See HALOGEN.

ALLOY - A composition of two or more elements, of which at least one is a metal. In connector applications it is usually a combination of metals which is used to create an alloy superior in performance to any of its individual components.

ALTERNATE INSERT POSITION - See ROTATION.

ALTERNATING CURRENT - A flow of electricity which reaches a maximum in one direction, decreases to zero, then reverses itself and reaches maximum in the opposite direction. This cycle is repeated continuously. The number of such cycles per second is the frequency. The average value of the voltage during any cycle is zero. Abbreviated ac.

AMBIENT TEMPERATURE - The temperature of the environment surrounding the connector. Usually the air. Normally used as the reference when specifying the OPERATING TEMPERATURE range of the connector.

AMP - Abbreviation for ampere.

AMPERE - A unit of electrical current or rate of flow of electrons. One volt across one ohm of resistance causes a current of 1 ampere.

ANODIZE - A protective, insulating oxide layer formed on a metal by electrolytic action. Occasionally used as the outer most layer in connector plating, anodize is a very tough, non-conductive plating.

APIN CONTACT - (See Pizza Bone)

ARC - A luminous discharge of electricity through a gas. In connector usage, this is an extremely undesirable discharge through the air across two or more contacts or the contacts and the shell. This is usually the result of operating the connector beyond it's capabilities. Arc discharge is characterized by a relatively low voltage drop, a high current density, and the high probability that the connector and related circuitry will be damaged as a result.

ATMOSPHERE - The unit of pressure defined as the pressure of 760 mm mercury at 0o C. Approximately 14.7 pounds per square inch.

AWG - American Wire Gauge. A standard for wire diameters based on the approximate circular mil area of the wire. As numbers get larger, wire diameters decrease in size (a size 16 AWG wire has a larger diameter than a size 22 AWG).

BACK MOUNTING - See REAR MOUNTING.

BACK-END TERMINATION - See ENDBELL.

BACKSHELL MOLD - See POTTING CUP

BAR - A centimeter-gram-second unit of pressure (force exerted on a unit of area) equal to 1,000,00 dynes per square centimeter. Formerly known as microbar. Its symbol is b.

BASE METAL - The metal which the connector or connector component is made and over which various platings will be deposited.

BAYONET COUPLING - A quick coupling mechanism for mechanically mating and unmating connector halves. The plug half has a coupling nut with internal ramps and the receptacle has three "bayonet" pins. The two halves are mated and unmated by rotating the coupling nut. A REVERSE BAYONET COUPLING reverses this arrangement, with the ramps on the receptacle and the bayonet pins or roller bolts under the coupling nut.

BERYLLIUM COPPER - An alloy of copper used to make contacts. It is relatively expensive, but has superior spring quantities, is resistant to fatigue, and can operate at higher temperatures than other materials such as phosphor bronze. It is used when numerous insertion and extraction cycles are required.

BEZEL - A holder or flange designed to receive and position a lens or window in an electronic component such as an indicator assembly.

BIFURCATED CONTACT - A contact design in which the metal of the mating tube is slotted lengthwise to create two independent spring elements.

BODY - The main portion of the connector made of the shell, insulator, and contacts.

BOOT - A rear accessory, usually made of a resilient material, which is used around a multiconductor cable to add additional insulation, strength, abrasion resistance, or sealing. Also see SHRINK BOOT.

BRAID - A woven metal tube used as shielding around a wire or a group of wires. In a flattened form, it is used as a grounding strap.

BRASS - metal alloy of copper and zinc used for contacts. It is low cost, an excellent conductor, and resists fatigue.

BREAKDOWN - An electrical discharge through a connector insulator or insulation on a wire. A catastrophic failure mode.

BREAKDOWN VOLTAGE - The voltage at which an insulator ruptures.

BREAKOUT - The point at which wires are separated from a multi-conductor cable or wire bundle for routing to other points.

BS - Prefix for a performance specification of the British Standards Institution. See BSI.

BSI - Abbreviation for British Standards Institution which deals with general, electrical, and telecommunication standards in Britain. BSI has a deliberate policy of republishing European standards in the English language as British standards. These usually bear the prefix BS EN. Specifications are based upon those of the CEN, CENELEC, ETSI, or international specifications of ISO, IEC, and ITU.

BUNDLE - See WIRE BUNDLE.

C - Abbreviation for centigrade, or more properly Celsius, since the term centigrade was officially abandoned by international agreement in 1948. See CELSIUS.

CABLE ASSEMBLY - A cable (or bundle of cables) with plugs and/or receptacles on each end.

CABLE CLAMP - A rear connector clamping accessory which tightens over a cable or wire bundle to provide strain relief to the cable. The cable clamp may be part of a more elaborate endbell or it may be used alone. Some cable clamps also provide cable jacket sealing using a resilient gland; for example the MS3057-C, others provide only strain relief.

CABLE CONNECTING RECEPTACLE - Unlike most receptacles which are designed for panel mounting, a cable connecting receptacle is for in-line use. It does not have a flange or jam nut for panel mounting, but does have rear threads to accept an endbell.

CABLE RECEPTACLE - See CABLE CONNECTING RECEPTACLE.

CABLE SEAL - An endbell or cable clamp that is used to seal a round jacketed cable as it enters the rear of the connector. Examples would be a Gland Seal Endbell or an MS3057-C cable clamp.

CABLE SEALING RANGE - See SEALING RANGE.

CADMIUM - A metallic element chemically related to zinc and mercury, widely used for plating. It has an extraordinary ability to resist outdoor corrosion. It is especially resistant to alkali. Cadmium is electrically conductive and it is easy to solder. Its symbol is Cd.

CANADIAN STANDARDS ASSOCIATION - In Canada, a body that issues standards and specifications prepared by various voluntary committees of government and industry. Abbreviated CSA.

CECC - Abbreviation for Electronic Components Committee of CENELEC, the European committee for Electrotechnical Standardization. CECC uses the IEC test methods, and thus is based upon worldwide standards.

CELSIUS - A temperature scale in which the freezing point of water is 0 degrees and the boiling point is 100 degrees at normal atmospheric pressure. Formerly known as Centigrade, but officially changed to Celsius by international agreement in 1948. See the conversion table for converting Celsius to Fahrenheit

CEN - Abbreviation for European Committee for Standardization. A European standards group corresponding to the ISO at the European level.

CENELEC - Abbreviation for European Committee for Electrical Standardization. A European standards group corresponding to the IEC at the European level.

CHAMFER - A bevel cut on the inside edge of an insulator contact cavity or a mounting hole. In a contact cavity the chamfer is intended to guide the mating pin into the cavity. In a mounting hole it is a countersink to accept a cone shaped bolt.

CIRCUIT - An electronic path between two or more points capable of carrying an electrical current.

CIRCULAR MIL - The international term used to define the cross-sectional area of a wire, equal to the area of a circle one mil (.001 inch) in diameter.

CIRCULAR MIL AREA - The square of the diameter of a round conductor measured in thousandths of an inch (.001).

CLEARANCE HOLE - A mounting hole without threads. Also known as a through hole.

CLOCKING - See INSULATOR ROTATION.

CLOSED ENTRY - An insulator design which limits the diameter of the mating contacts.

CLOSED SOCKET CONTACT - A socket contact in which the mating cavity limits the entry of a contact or probe having a diameter larger than the mating pin.

COEFFICIENT OF EXPANSION - The average expansion per degree of temperature over a specified range expressed as a fraction of the original dimension. The coefficient may be linear or volumetric.

COMPONENT - An essential functional part of the connector.

CONTACT - The conductive element in a connector which makes the actual connection between the wire and the mating connector for the purpose of transferring electrical energy. Ideally the contact should add nothing to the circuit. In the real world, however, contacts typically have a small CONTACT RESISTANCE and associated POTENTIAL DROP. Contacts come in many styles such as solder, crimp, printed circuit (PC), wire-wrap, first-make last-break, and thermocouple, to name just those found in this catalog. Also see SOLDER CONTACT, CRIMP CONTACT, PC CONTACT, THERMO-COUPLE CONTACT, FIRST-MAKE LAST-BREAK CONTACT, WIRE WRAP CONTACT, STAMPED AND FORMED CONTACT, SCREW MACHINE CONTACT, PIN CONTACT, and SOCKET CONTACT.

CONTACT ALIGNMENT - The overall play that a contact has in the insulator cavity to allow the mating contacts to self align. Also called contact float.

CONTACT ARRANGEMENT - See LAYOUT.

CONTACT CAVITY - A defined hole in the connector insulator into which the contacts fit. The cavities are generally marked with a unique designation or number for ease of identification.

CONTACT INSPECTION HOLE - See INSPECTION HOLE.

CONTACT RESISTANCE - The maximum amount of resistance which a contact introduces into the connection when carrying a specified current (usually stated in milliohms). When not stated, values are typically given for "Initial" or new contacts. Most specifications also limit the maximum resistance during or after each of a series of extreme tests, such as "Contact Resistance After Corrosion Test". These figures are typically slightly higher than "Initial". Also see POTENTIAL DROP.

CONTACT RETENTION - The maximum allowable axial load which can be applied to a contact from either direction without it being dislodged from the insulator. Usually stated in Newtons or pounds of force.

CONTACT SEPARATION FORCE - The force required to separate a pair of mated contacts. Usually stated in Newtons or pounds of force.

CONTACT SIZE - This usually relates to the maximum size wire this contact can nominally accommodate. It is based on that AWG size most closely corresponding to the circular mil area of the engaging end of a pin contact. For example, a size 16 contact can accommodate a size 16 AWG wire maximum and the pin corresponds to the CMA of a size 16 AWG. Note, however, that oversized crimp pots are available for some crimp contacts which will allow, for example, a size 16 contact to accommodate a size 14 AWG wire.

CONTACT SPACING - The distance between two centers of adjacent contacts.

CONTINUITY - An unbroken conductive path for electrical energy.

COUPLING - There are three common methods of mechanically coupling circular connectors, all three are represented in this catalog. Coupling can be made with threads (as in the CT series), three pin bayonet (as in TRIDENT and KPT/ KPSE) or ramps (as in the CB and CR series).

COUPLING NUT - The rotating ring on plug style connectors which mechanically locks the two connector halves together. Coupling nuts may function by means of internal threads, roller wheels, pins, or internal bayonet ramps. Also known as a coupling ring.

COUPLING RING - See COUPLING NUT.

COUPLING TORQUE - Torque is rotational force, usually stated in Newton-meters or Foot-pounds. In the coupling of connectors it is normally used to give the maximum or minimum force which should be applied to the coupling nut when mating and unmating the two connector halves.

CPS - Cycles per second.

CREEPAGE - The conduction of electricity across the surface of an insulator.

CREEPAGE DISTANCE - The shortest distance between contacts of opposite polarities, or between a live contact and ground, measured over the surface of the insulator.

CREEPAGE PATH - A path across the surface of the insulator between two conductors. Lengthening the path reduces the possibility of arc damage.

CRIMP - A method of attaching a contact to a wire through the application of pressure.

CRIMP CONTACT - A contact which is terminated to a wire by means of crimping with an appropriate die and tool. After termination, an insertion tool is normally used to insert the crimped contact into the connector. Removable crimp contacts can be FRONT RELEASE or REAR RELEASE. A removal tool is usually required to remove the contact.

CSA - Abbreviation for Canadian Standards Association.

CURRENT - The movement of electrons through a conductor. Current is measured in amperes. Its symbol is I.

CURRENT RATING - The maximum current that a particular wire, contact, or connector can accommodate. NOTE: When several wires are used in a single connector or elevated temperature or altitude is involved, derating curves must be applied to these ratings. A typical derating system is MIL-W-5088 which allows the user to calculate the derating effects of current, ambient temperature, number of wires in the bundle, and altitude.

DB - Abbreviation for DECIBEL.

DEAD FACE - See DEAD FRONT.

DEAD FRONT - The mating surface of a connector which is designed so that the conductive elements, such as the contacts, are physically recessed in the insulator to avoid shorting or shock hazard.

DECIBEL - A standard unit of measure for transmission gain or loss. It expresses the ratio of power input to power output. Abbreviated DB. The term DBm is used when 1 milliwatt is the reference level.

DERATING - To reduce the voltage, current, or power rating of a connector to improve its reliability or to permit operation at high ambient temperatures or altitudes.

DERATING CURVE - A graph of the change in power handling capability of a connector as a function of ambient temperature or altitude. Typically the graphed function is curved, hence the name.

DIALLYL PHTHALATE - A thermosetting plastic used for insulators and some types of connector housings. It has outstanding resistance to chemicals, excellent dimensional stability, and superior electrical insulating properties.

DIELECTRIC - An insulator used to isolate two conductors.

DIN - Abbreviation for Deutsche Industrie Norm, A German standards organization.

DIRECT CURRENT - An essentially constant value of current that flows in only one direction. Abbreviated dc.

DRAIN WIRE - In a foil shielded cable, the drain wire is an uninsulated wire which runs the length of the cable making intimate electrical contact with the inside of the foil. Since it would be difficult to directly terminate the fragile foil shield, the drain wire is used to terminate the shield by either soldering or crimping the drain wire to a ground termination.

DUMMY RECEPTACLE - A receptacle shell which takes the place of a working receptacle and is used to fill an empty connector mounting hole or to provide a location to mate an unused connector. A dummy receptacle has no contacts and no insulator and thus provides no electrical function.

DUST CAP - A cover used in place of a mating connector to seal it against dirt and moisture. Usually secured to the connector by a captive chain, wire, or rope.

DYNE - The standard centimeter-gram-second unit of force, equal to the force that produces an acceleration of one centimeter per second per second on a mass of one gram. Its abbreviation is dyn.

ELECTROPLATNG - To deposit a metal on the surface of a conductor using electrolysis.

EMI/RFI - Electro-Magnetic Interference and Radio Frequency Interference. This is unwanted stray electronic radiation which may enter, and/or be emitted by a electronic system. The most common method of shielding interconnections against this radiation is to use wires with a metallic braided shield and a connector system which will extend the shield through the interconnection. This type of design will keep radiation from entering, or being emitted by the system. Endbells for shielded cable and connectors with threads or grounding fingers are typically used for this purpose. Call for the specific EMI/RFI accommodations of the connectors in this catalog.

EN - Abbreviation for Euro Norm. A European market-wide product standard.

ENDBELL (also know as BACKSHELL) - The outer rear end of the connector which is attached by means of internal threads or screws. It adapts the connector to its wire connections in a variety of ways. Typical endbells might have cable clamps to secure a wire bundle, ridges for heat shrink tubing, pipe threads, or shield termination mechanisms. Endbells may be straight, right angle, or 45 degree.

ENVIRONMENTALLY SEALED - A connector which uses seals, gaskets, O-rings, potting, or other devices to prevent moisture, dirt, air, or other contaminants from entering and degrading its performance.

ETSI - Abbreviation for European Telecommunications Standards Institute. A group which deals with telecommunications standards at the European level, corresponding to the ITU at the international level.

EU - Abbreviation for European Union. A group of European community nations. In practice, they typically adopt standards set by the ISO, IEC, and ITU.

EXTRACTION TOOL - A device used to remove a (removable) contact from a connector insulator. The extraction tool may be inserted into the mating face of the insulator (FRONT RELEASE) or the wire side (REAR RELEASE). In either case, the contact comes out the rear, or wire side, of the connector.

F - Abbreviation for Fahrenheit.

FAHRENHEIT - A temperature scale in which the freezing point of water is defined as 32 degrees and the boiling point is 212 degrees at normal atmospheric pressure. See the conversion tables for converting Fahrenheit to Celsius.

FAILURE MODE - The manner in which a failure occurs, including the operating conditions of the connector at the time of failure.

FEMALE CONTACT - See SOCKET CONTACT.

FERRULE: A bell shaped ring which is placed over a WIRE SEALING GROMMET to provide uniform axial compression of the grommet and to minimize the transmission of torque to the grommet when the endbell is screwed on to the rear of the connector. Ferrules are a part of the sealing mechanism at the rear of a connector. Ferrules are normally a separate component part of the connector although some endbells have integrated ferrules. Ferrules are usually made from a thermoplastic material, but occasionally ferrules are made of metal.

FINISH - See PLATING.

FIRST-MAKE LAST-BREAK CONTACT - A contact which is longer than a standard contact or which sits in the insulator in such a way that it mates with the opposing connector half before any of the other contacts. Used to insure that a ground connection between the connector halves mates before, and breaks after, any of the other contacts.

FLANGE - A square mounting flange with four mounting holes for bolting the connector to a panel. The mounting holes may be clearance holes or threaded.

FLANGED RECEPTACLE - The shell of this connector has a square flange with mounting holes at each corner. Mounting holes are usually clearance holes, but may be threaded. Flanged receptacles can usually be front or rear panel mounted depending upon panel thickness. Some connectors have two different versions, one for front mounting, and one for rear panel mounting. Also known as a Box Mount or Wall Mount.

FLASH - 1. As commonly used in connector terminology, flash refers to extremely thin platings of metal, for example: gold flash is a very thin plating of gold. So thin, that the thickness is generally not specified. 2. A defect in the molding process or omission of a secondary operation such that undesirable rough edges remain on the connector from the mold gate or seam.

FLASH PLATING - See FLASH (1).

FOLLOWER - See FERRULE.

FOOT-POUND - A unit of measurement equivalent to the work of raising one pound vertically a distance of one foot.

FRONT MOUNTING - A receptacle that can only be mounted to the front of a panel with it's mounting FLANGE outside the equipment.

FRONT RELEASE - For crimp type removable contacts, front release means that the appropriate extraction tool is inserted from the front, or mating face, of the connector. The contact is then pushed out the rear (wire side) of the connector.

g - The international unit for the acceleration of a falling body in the earth's gravitational field, inversely proportional to the square of the distance from the body to the center of the earth. 1g = 32.17 feet per second per second. Connectors are frequently tested by subjecting them to very short duration shocks which are several times the force of gravity while simultaneously confirming electrical continuity.

GAS TIGHT - The mating of two contact surfaces which are so tight that corrosive gasses can not enter the joint.

GEESC - General Electrotechnical Engineering Standards Committee. A European organization which sets standards for electrical devices.

GLAND SEAL - Usually part of an endbell, a gland seal is a resilient element which is compressed around a cable jacket by means of a compression ring. When the proper diameter wire is used and the compression ring is tightened to specifications, the gland creates an air and moisture tight seal around the cable jacket.

GOLD - A precious metal which is more conductive than silver or copper. Because it does not corrode and is highly conductive, it is used as a plating for contacts. Its chemical symbol is Au.

GROMMET - See WIRE SEALING GROMMET.

GROMMET CAVITY - A defined hole in the WIRE SEALING GROMMET through which the wires are passed. The cavities are generally marked with a unique designation or number for ease of use.

GROMMET SEAL - See WIRE SEALING GROMMET.

GUIDE PIN - A special pin which is inserted into a socket contact before the contact can be inserted into the connector insulator. Guide pins provide a rounded surface at the front of the socket and greatly aid in pushing the contact into the insulator thus avoiding damage to both the insulator and the contact. Typically, small size socket contacts require the use of guide pins while larger sizes can be inserted without them.

HALOGEN - A general name applied to four chemical elements, fluorine, chlorine, bromine, and iodine, that have similar chemical properties. As it applies to connector insulating materials, these elements are all high toxic to humans when burned.

HARNESS - A group of wires or cables bundled together with attached connectors and/or components in a preshaped assembly.

HEAT SHRINK ENDBELL - An endbell specifically designed to allow heat shrink boots or heat shrink tubing to be applied over it and insure a good bond.

HERTZ - International unit of frequency equal to one cycle per second. That is, 20,000 Hz is 20,000 cycles per second.

Hz - Symbol for Hertz, an International unit of frequency equal to one cycle per second. That is, 20,000 Hz is 20,000 cycles per second.

I.D. - Abbreviation for inside diameter

Glossary

IEC - Abbreviation for the International Electrotechnical Commission. An international organization that develops standards exclusively for electrical engineering. CENELEC is the equivalent organization at the European level.

INITIAL - A test result taken prior to any other environmental testing. For example, contact resistance is frequently specified "Initial" , that is, with "new" contacts. Most specifications also limit the maximum resistance during or after each of a series of extreme tests, such as "Contact Resistance After Corrosion Test". These figures are typically slightly higher than "Initial."

IN-LINE RECEPTACLE - See CABLE CONNECTING RECEPTACLE.

INDENTOR - The part of a crimping die which indents the contact barrel to form the actual crimp. Indentors normally make six or eight multiple indention's for each crimp.

INDIVIDUAL WIRE SEALING GROMMET - See WIRE SEALING GROMMET.

INSERT - See INSULATOR.

INSERT ARRANGEMENT - See LAYOUT.

INSERT RETENTION FORCE - The maximum allowable force which should be applied to the face of the insulator without dislodging it from the shell or causing any change in connector performance specifications. Usually stated in Newtons or pounds of force.

INSERTION FORCE - The effort, usually stated ounces or Newtons, required to engage two contacts or connector halves.

INSERTION TOOL - A device used to insert a contact into a connector insulator.

INSPECTION HOLE - A small hole in a crimp contact barrel. A properly crimped contact will allow the user to see the bare wire through the inspection hole. This is verification that the wire is fully seated in the crimp barrel.

INSULATION - A material which has high electrical resistance and is suitable for covering or encasing electrical components to prevent a short circuit.

INSULATION DISPLACEMENT CONNECTOR (IDC) - A connector contact with sharp tines which pierce and displace the wire insulation and make direct electrical connection with the conductor. Normally used with multi-pin connectors which must be terminated to flat cable. This is a fast, low cost method to terminate many conductors simultaneously.

INSULATION GRIP - See INSULATION SUPPORT.

INSULATION RESISTANCE - The minimum resistance (usually stated in Megohms) between adjacent contacts and between the contacts and the shell at a specific voltage. When not stated, values are typically given for new insulators. Most specifications also specify minimum resistance figures during or after each of a series of extreme tests, such as "Insulation Resistance During Dry Heat."

INSULATION SUPPORT - An extended portion at the rear of a crimp contact that is crimped around the wire insulation to provide extra strain relief. This crimp is in addition to the crimp over the conductor which provides the actual electrical termination.

INSULATOR - The insulating element into which the contacts are mounted in a connector. This can be a resilient material, thermoplastic, or a thermoset compound, among other materials.

INSULATOR POLARIZATION - See INSULATOR ROTATION.

INSULATOR ROTATION - A method of differentiating a circular connector if more than one connector with the same sex and layout is to be used in a system. The insulator is permanently positioned in the shell so that only a connector with the same degree of rotation can be mated with it. Possible rotations are specific to each layout with some layouts having many possible rotations and others having none. A chart of valid rotations is listed by layout for connectors capable of being rotated. Most connector series use the military convention of assigning letter designations for specific degrees of rotation (for example: W, X, Y, Z). Also see KEYING.

INTERCHANGEABLE - The characteristic of connectors in which a connector half of one manufacturer or series will directly replace that of another manufacturer and provide the same electrical and mechanical function.

INTERFACIAL SEAL - The sealing of mated connectors over the entire face of the mating insulators when the two connector halves are mated. Usually done by employing resilient insulators.

INTERMATEABLE - The characteristic of connectors in which a connector half of one manufacturer or series will mate directly with the connector half of another manufacturer.

INTERMITTENT - Occurring at intervals. A connection which passes electrical current only in random or undesirable intervals.

INTERMOUNTABLE - The characteristic of connectors in which one manufacturer's connector or series will mount in exactly the same panel space and mounting holes as another manufacturer's.

IP65 - One classification from a rating system used in Europe covering the environmental sealing capability of a connector or enclosure. The system uses two digits, the first digit relates to the degrees of protection the connector has from dirt and dust under the conditions defined in the specification. The second digit relates to the degrees of protection it has against moisture. The degree of protection against dirt ranges from 1 (no protection), to 6 (dust tight). Moisture sealing in the specification ranges from 1 (no protection), to 8 (protected against continuous submersion). The classification IP65 states that the connector is "dust-tight" (6), allowing no ingress of dust what-so-ever, and "protected against water jets" (5), water projected by a nozzle against the connector from any direction shall have no harmful effect.

IP67 - One classification from a rating system used in Europe covering the environmental sealing capability of a connector or enclosure. The system uses two digits, the first digit relates to the degrees of protection the connector has from dirt and dust under the conditions defined in the specification. The second digit relates to the degrees of protection it has against moisture. The degree of protection against dirt ranges from 1 (no protection), to 6 (dust tight). Moisture sealing in the specification ranges from 1 (no protection), to 8 (protected against continuous submersion). The classification IP67 states that the connector is "dust-tight" (6), allowing no ingress of dust what-so-ever, and "protected against the effects of immersion" (7), the ingress of water in harmful quantity shall not be possible when the connector is immersed in water under defined conditions of pressure and time.

IP69 - One classification from a rating system used in Europe covering the environmental sealing capability of a connector or enclosure. The system uses two digits, the first digit relates to the degrees of protection the connector has from dirt and dust under the conditions defined in the specification. The second digit relates to the degree of protection it has against moisture. The degree of protection against dirt ranges from 1 (no protection), to 6 (dust tight). Moisture sealing in the specification ranges from 1 (no protection), to 8 (protected against continuous submersion). The classification IP69 states that the connector is "dust-tight" (6), allowing no ingress of dust whatsoever, and "protected against the effects of high pressure steam washing" (9), the ingress of water in harmful quantity shall not be possible when the connector is subjected to high pressure steam washing under defined conditions of pressure and time.

ISO - Abbreviation for the International Organization for Standards. A group that operates at the international level and sets most standards for industry, with the exception of electrical engineering and telecommunications which are set by the IEC and ITU respectively. CEN is the equivalent organization at the European level.

ITU - Abbreviation for International Telecommunications Union. A group which sets international standards for telecommunications. ETSI is the equivalent organization at the European level.

JACKET - The outermost layer of insulation in a cable composed of several wires.

JACKSCREW - A screw attached to one half of a connector pair used to mechanically align, draw them together, and lock them in place.

JAM NUT - See JAM NUT RECEPTACLE.

JAM NUT RECEPTACLE - A top-hat shaped connector (the top of the hat being the mating surface). It is mounted into a round panel hole from the rear. The "brim of the hat" prevents the connector from falling through the hole. A large hex nut (jam nut) is screwed on to the front of the connector to secure it to the panel. Typically, the upper "brim" of the hat contains an O-ring which seals the connector to the panel.

KEY - A mechanism used to polarize connectors by the user. See KEYING.

KEYING - A method of differentiating a connector if more than one connector with the same sex and layout is to be used in a system. The key is usually a pin or other projection which can be located in a contact cavity or slot. The key will prevent a connector without a matching orifice from mating. Keying and POLARIZATION serve the same function, but keying can be done by the user, while polarization is manufactured into the connector and normally can not be altered by the user.

LACING CORD - Several types of cord or ribbon which can be used to tie a group of wires into a bundle or harness.

LAMBDA - Greek letter used to designate wavelength measured in meters.

LANYARD RELEASE - A plug connector with a wire or cable handle (lanyard). The plug can be separated from the receptacle by an axial pull on the lanyard.

LAYOUT: The number, size, and geometric arrangement of the contacts in a connector. When a connector is said to have a certain "layout" it refers to a specific contact configuration. For example, the KPT/KPSE series has a page of drawings showing the arrangement of the contacts in the insulator. Each of these arrangements can be referred to as a layout.

L.E.D. - Abbreviation for light emitting diode. A solid state light source which may emit visible light or light of a higher or lower frequency. One application is for very long life, shock resistant lighted indicators.

LEVELS OF INTERCONNECTION - A system of classifying interconnection devices into one of six categories. Level 1 is chip to lead. It covers interconnections used inside of integrated circuits and passive devices to connect the internal elements to the leads on the device package. Level 2 is device to board. It covers the interconnection of PC mounted parts to the printed circuit board. Level 3 is Board to Backplane. It covers the direct interconnection of PC boards. Level 4 is Board to board. It covers interconnections between circuit boards within the same enclosure. Level 5 is board to box. It covers interconnection of circuit board to the I/O of the equipment. It forms the system interconnection to the outside world. Level 6 is System to System. It covers external connections of one system to another, for example an interconnection of a computer to its CRT terminal would be a Level 6 interconnect.

LOCATOR - A part of a crimping tool TURRET. Rotation of the locator sets the tool for a particular size or sex contact. Also see TURRET.

LOCK WIRE - A mechanical means of securing a mated pair of threaded connectors. A wire is passed through a hole in the coupling nut and then secured to the shell, endbell, or other surface. Using this technique, the coupling nut can not be removed without cutting the lock wire. Lock wires are used to provide additional vibration resistance or to minimize the possibility of tampering with the connector. Lock wires are unnecessary with bayonet style connectors.

MALE CONTACT - See PIN CONTACT.

MATING LIFE - The minimum number of times a connector can be mated and unmated and still meet all of its design specifications. The maximum life may be much higher than this figure.

MEAN TIME BETWEEN FAILURES - The limit of the ratio of operating time of a connector to the number of observed failures as the failures approach infinity. Abbreviated MTBF.

MICRON - A unit of length equal to 10-6 meters (.001 millimeters).

MIL - One thousandth of an inch (.001). Used in the United States as unit of length in wire diameters and linear dimensions.

MIL-SPEC - Abbreviation for Military Specification.

MILLI - Prefix meaning one-thousandth (1/1000, .001, or 10-3) Abbreviated m.

MILLIAMP - Abbreviation for milliampere.

MILLIAMPERE - One one-thousandth (.001) of an ampere. Abbreviated mA.

MILLIMETER - Metric unit of linear measure. 1 millimeter = .03937 inches.

MILLIOHM - One one-thousandth (.001) of an ohm.

MILLISECOND - One thousandth of a second (.001). Abbreviated ms.

MILLIVOLT - One thousandth of a volt (.001). Abbrev. mV.

mm - millimeter. See MILLIMETER.

mm2 - Millimeters squared. A standard for wire diameters used in Europe instead of AWG. As numbers get larger, wire diameters increase in size. The relationship between mm2 and AWG is reverse logarithmic. 1 mm2 = 1973 circular mils. A conversion graph is needed to make accurate comparisons between AWG and mm2. Call for assistance.

MOUNTING CLIP: Any of a variety of mounting accessories used to secure a connector or connector pair to a rigid surface.

MOUNTING FLANGE - See FLANGE and FLANGED RECEPTACLE.

MS - 1. Abbreviation for Millisecond. 2. Abbreviation for Military Specification.

MTBF - Abbreviation for mean time between failures.

MULTI-CONDUCTOR CABLE - Two or more individual wires surrounded by a jacketing material.

N - See NEWTON.

NANO - One billionth (10-9). Abbreviated n.

NAPKIN RING- One of several designs used for screw machine socket contacts. A band of plated conductive metal is formed around a circumferential cut or opening in the mating portion of contact. This creates a zone of mechanical and electrical continuity between the mated contacts.

NEC - National Electrical Code which contains regulations governing construction and installation of electrical wiring apparatus in the United States.

NEMA - Abbreviation for National Electrical Manufacturer's Association. An organization of manufacturers of electrical products that sets various standards for electrical devices. NEMA ratings for degrees of protection against environmental contamination for electrical devices is roughly equivalent to the IP rating system in Europe.

NEST - The portion of a crimping die that supports the contact barrel during crimping.

NEWTON - A unit of acceleration. One Newton is the force capable of accelerating 1 kilogram to one meter per second per second. 1 pound force = 4.448221 Newtons.

NEWTON-METERS - A unit of measure for rotational acceleration. 1 Nm = .7376 Foot Pounds.

Nm - See NEWTON-METERS.

NPT - National Pipe Thread. A standard system of threads used for pipe.

O.D. - Abbreviation for outside diameter.

OHM - The unit of electrical resistance. One ohm is the value of resistance through which a potential difference of one volt will maintain a current of one ampere. Its symbol is the Greek letter omega.

O-RING - A donut shaped ring of rubber used as a seal around the periphery of connectors and connector accessories to form an air, dirt, and moisture tight seal.

OPERATING TEMPERATURE - The range of AMBIENT TEMPERATUREs over which the connector can operate and still meet all of it's design specifications.

OPERATING VOLTAGE - The range of voltages over which the connector can be operated. Safety precautions must be taken anytime a voltage in excess of 50V is to be used in a circuit. Check your local and national codes for guidelines.

OUTGASSING - The circumstance in which an insulator releases gases trapped within it under a vacuum or conditions of decreased pressure, high heat, or both.

PANEL - The outside surface of a piece of equipment on to which connectors are mounted. The panel is usually made of metal.

PANEL MOUNT - A connector designed to be mounted on a panel by means of screws or jam nut.

PAIRED CABLE - A cable in which all of the conductors are arranged in the form of twisted pairs.

PC CONNECTOR - A connector with PC contacts.

PC CONTACT - A pin or socket contact that has a post opposite the mating end which is intended to be soldered directly to a printed circuit (PC) board instead of being terminated to a wire. The solder post may come in a variety of diameters and lengths.

PC PIN - See PC CONTACT.

PERIPHERAL SEAL - A resilient seal used to keep moisture from entering the connector at the point where the plug and receptacle shells meet. A common method is to use flat gaskets on receptacles and O-rings on plugs.

PHOSPHOR BRONZE - An alloy of copper, tin, and phosphorus used to make spring contacts. It typically used in lower cost contacts where frequent insertions and withdrawals and high temperatures are not a factor.

PIN - A male contact. See PIN CONTACT.

PIN CONTACT - The contact which has a long shaft at the engagement end which enters the socket contact.

PIZZA BONE - The uneaten, discarded pieces of crust from the outside edge of a slice of pizza.

PLATING - The metallic coatings used on contacts and metal connectors. These are thin layers of metal designed to improve conductivity, solderability, or to resist corrosion. Typical contact finishes are gold or silver. Typical shell finishes are olive drab over cadmium, electroless nickel, or black anodize.

PLUG - The male portion of the connector pair usually employing a coupling nut to secure it to the receptacle half. A Plug may have either pin or socket contacts.

POLARIZATION - A mechanical mechanism that allows connector halves to intermate in only one specific orientation. This can be accomplished by asymmetrical shapes of the two halves as in a D-Subminiature connector, insulator rotation, keys, keyways, ramps, or other means. Polarization prevents connectors of the same size and/or same layout from intermating when this is undesirable, such as when two otherwise identical connectors are used on the same panel. Polarization is typically done by the assembler and can not be changed by the user, while keying is typically done by the user with an auxiliary keying device.

POLARIZING PIN - See KEY.

POLARIZED BACKSHELL - An ENDBELL with "TEETH" for positioning the endbell.

POSITION - See INSULATOR ROTATION

POTENTIAL - The difference in voltage between two points in a circuit. Frequently one point is assumed to be ground, which has zero potential.

POTENTIAL DROP - The difference in potential between two ends of a resistance with a current flowing through it. In connector specifications it is the maximum amount of voltage drop in millivolts (or resistance in milliohms) which a contact introduces into the connection. When not stated, values are typically given for "Initial" or new contacts. Most specifications also limit maximum voltage drop (or resistance) during or after each of a series of extreme tests. These figures are typically slightly higher than "Initial".

POT LIFE - The period after the addition of a catalyst during which the compound can be used.

POTTING - The permanent sealing of a cable to a connector using an insulating material such as potting compound to exclude moisture or provide stain relief. See POTTING CUP.

POTTING COMPOUND - A sealing material used in potting to fill a potting cup.

POTTING CUP - A bell-shaped (plastic) endbell with an enlarged opening for the wires. After the connector is loaded with wired contacts, the potting cup is attached to the rear of the connector. The inside of the cup is then filled with a potting compound. When the compound hardens, it forms a solid, permanent, watertight mass around the wires.

POTTING RING - A portion of the POTTING CUP which secures the bell shaped cup to the rear of the connector, usually by means of internal threads.

PRE-TIN- To apply tin-lead solder to contact solder cup and/or conductor prior to soldering the two together.

RACK & PANEL CONNECTOR - A connector made to mount inside a cabinet (rack) which contains electronic modules. These modules have a mating connector half mounted on their rear panels. The modules slide into and out of the rack like a drawer. When fully pushed into the rack, the connector halves self align and mate, connecting the module to the rack system. This arrangement of rack mounted modules makes it easy to quickly interchange modules.

RAMP - A sloped channel that accepts the bayonet pins or roller wheels in a bayonet or reverse bayonet connector. The ramp is part of the mechanism which mechanically locks the two connector halves together.

RANGE - See SEALING RANGE and WIRE RANGE.

RATCHET CRIMP TOOL - A crimping tool with a ratchet mechanism in the handle which will not allow the jaws to open until the crimp dies have closed completely insuring a complete crimp.

REAR MOUNTING - A receptacle that mounts through the panel from the rear, with its mounting flange inside the equipment. Typically, rear mount receptacles are slightly longer than front mount types to allow for the thickness of the panel. Flange mount receptacles usually come in front and rear mount versions. All Jam Nut Receptacles are rear mount.

REAR RELEASE - For crimp type removable contacts, rear release means that the appropriate extraction tool is inserted from the rear, or wire side, of the connector. The contact is then pulled out the rear of the connector.

RECEPTACLE - The connector half that mates with the plug. The receptacle has threads, pins or ramps which engage the coupling nut on the plug, locking the two halves together. A receptacle may have either pin or socket contacts.

REDUCTION SLEEVE - A method of crimping a wire on to a crimp contact when the wire diameter is smaller than that accommodated by contact. The sleeve is inserted into the contact crimp barrel and then the wire is inserted into the sleeve. The contact is then crimped. The sleeve increases the diameter of the wire such that standard crimping tools and contacts can be used.

REMOVABLE CONTACT - A contact which can be inserted and removed from the insulator by the user. Insertion tool and extraction tool are normally required to insert and remove the contact.

REMOVAL TOOL - See EXTRACTION TOOL.

RESISTANCE - That property of a substance which impedes current and results in the dissipation of power in the form of heat. The unit of resistance is the ohm.

REVERSE BAYONET COUPLING - A quick coupling mechanism for mechanically mating and unmating connector halves. The plug half has internal roller bolts or pins and the receptacle has ramps. The two halves are mated and unmated by rotating the coupling nut.

RFI - See EMI/RFI.

RING - See COUPLING NUT.

RMS - Abbreviation for root-mean-squared.

ROOT MEAN SQUARE - The square root, of the average of the squares, of the values of a periodic quantity (like alternating current), taken through one complete period. It is the effective quantity of a periodic quantity. Abbreviated rms.

ROTATION - See INSULATOR ROTATION.

SAFETY WIRE - See LOCK WIRE.

SALT SPRAY TEST - A test, or series of tests, in which mated and/or unmated connectors are subjected to salt water under specified conditions. Used to test the connector's resistance to corrosion and any associated degradation in electrical function.

SASH CHAIN - A style of metal chain used to secure a DUST CAP to a connector or panel.

SCOOP PROOF - A connector design which includes an elongated shell to prevent the pin contacts from contacting the mating connector face before they are properly aligned for mating. This eliminates the possibility of damaged pins during mating.

SCREW MACHINE CONTACT - A contact made from a solid bar or rod using screw machine operations. Some screw machine contacts include secondary elements which are welded, crimped, or formed around the basic screw machined part to complete the contact.

SEAL - There are generally four types of seals associated with connectors. See PERIPHERAL SEAL, INTERFACIAL SEAL, WIRE SEALING GROMMET, and CABLE SEAL.

SEAL PLUG - See WIRE HOLE FILLER.

SEALING RANGE - The sizes of wire insulation diameter accommodated by a connector's individual wire sealing grommet. Also the diameter of a cable jacket accommodated by a gland seal endbell.

SELECTIVE PLATING - The application of metal PLATING to selective areas of the contact, particularly those areas subject to wear. Precious metal platings may be applied selectively to those contact surfaces responsible for the electrical connection, reducing the contact cost without sacrificing electrical performance.

SERRATIONS - See TEETH.

Glossary

SERVICE RATING - The service rating is determined by the amount of insulation or creepage distance between contacts. Each layout has a service rating associated with it based upon the operating voltages which can be safely handled by that specific arrangement of contacts.

SHELL - The outside case of a connector into which the insulator and contacts are situated.

SHELL SIZE - A standard system developed for military circular connectors for indicating the diameter of the shell. The system is based upon 1/16" increments, that is, a size 16 shell is one inch in diameter.

SHIELDED CABLE - A cable or group of wires enclosed within a conductive shield. The shield is normally terminated to ground and minimizes the effects of unwanted electrical energy entering or leaving the cable. Shields are made of braided copper, copper foil, or other conductive overlays. The shield is usually enclosed in an insulating jacket. Also See EMI/RFI. Some connector and connector endbells allow the termination and continuation of the shielding effect through the connector. See SHIELDED CABLE ENDBELL.

SHIELDED CABLE ENDBELL - Endbell with a threaded rear ring designed to captivate the braid of a shielded cable and continue the shielding through the connector.

SHOCK - An abrupt impact applied to a stationary object. It is usually expressed in gravities (g).

SHRINK BOOT - A rear accessory made from various types of insulating materials which shrink when specific temperatures are applied to them. Shrink boots are used to add additional insulation, strength, abrasion resistance, or sealing properties to the connector. Boots are supplied to the user in an expanded form, but return to a predefined shape and size when the appropriate amount of heat is applied to them. Various materials and options are available to meet specific user requirements, such as boots with meltable inner adhesive liners which form a moisture tight mass inside the boot after it has been shrunk.

SILICONE - A group of polymers which are rubbery and extremely stable in high temperatures. Silicone is an insulator and is water repellent by nature.

SILVER - A precious metal which is more conductive than copper. Because it does not readily corrode, it is used for contact plating. Its chemical symbol is Ag.

SKID WASHER - A smooth flat washer used to protect the WAVE SPRING from damage.

SLEEVE - A bell-shaped ring that is placed over a WIRE SEALING GROMMET to provide uniform axial compression of the grommet and to minimize the transmission of torque to the grommet when the endbell is screwed onto the rear of the connector. Sleeves are a part of the sealing mechanism at the rear of a connector. Sleeves are normally a separate part of the connector although some endbells have integrated ferrules. Sleeves are usually made from a thermoplastic material but are occasionally made of metal.

SOCKET - A female contact. See SOCKET CONTACT.

SOCKET CONTACT - The contact which has a opening at the engagement end to accept the pin contact.

SOLDER CONTACT - A contact which is terminated to the wire with solder. Solder contacts are normally bonded into the insulator and can not be removed by the user. The alternative is crimp contacts to which a wire is attached by crimping. Crimp contacts can usually be inserted and removed by the user.

SOLDER CUP - The end of a SOLDER CONTACT designed to accept a wire which will be then soldered to the contact.

STAMPED AND FORMED CONTACT - Contacts made by stamping and forming a sheet of metal rather than by machining metal stock. Also see SCREW MACHINE CONTACTS.

STAR CLIP - One of several designs used for screw machine socket contacts. A tiny plated star shaped clip is captivated inside a solid barrel into which the pin contact fits. The clip creates a multi-point area of mechanical and electrical continuity between the mated contacts.

STEPPED PLANE - A polarization technique where one half of the insulator face is set back below the level of the other half. This creates a stair step front face which fits into the mating connector only when the two stepped planes match. Typically a pin contact is used in the recessed plane while a socket contact is used is the forward plane. The Sure Seal connector makes use of this type of polarization.

STRANDED CONDUCTOR - A conductor composed of several smaller independent strands.

STRIP - To remove insulation from a conductor.

STRIP FORM CONTACTS - Stamped and formed crimp contacts supplied on a continuous metal strip for use in automated or semi-automated crimping machines.

STRIP LENGTH - The length of conductor which should be exposed from the insulation at the end of the wire prior to terminating to a contact. Using the appropriate strip length guarantees a connection with maximum mechanical strength and a minimum of exposed conductor. NOTE: Correct strip lengths are typically quite short. Care should be taken to use the strip length data in this catalog to prepare wires for termination.

STRIPPER - A tool to remove insulation from a wire.

TEETH- A serrated edge on the rear of a connector shell and/or front of an endbell which allows the endbell to be positioned at a specific angle before tightening on to the connector. Used particularly with right angle endbells to position them at a specific angle.

TEST PROD - A sharp metal point with an insulated handle used with various types of test equipment for making an electrical connection between the circuit and the test gear.

TEST VOLTAGE - The range of voltages over which the connector has been tested per the parameters in the applicable specification.

THERMOCOUPLE CONTACT - A contact made of a special material for use with thermocouple probes. Typical contact materials are Alumel, chromel, constantan, or iron.

THERMOPLASTIC - A plastic material that can be softened by heat and rehardened into a solid state by cooling. This process can be accomplished using a variety of techniques.

THERMOSET - A plastic material which hardens when heat and pressure are applied. Unlike thermoplastic, it cannot be remelted or remolded.

THREADED COUPLING - A method of mechanically coupling connector halves which makes use of a threaded coupling nut on the plug which threads into a mating thread on the receptacle.

THRU-BULKHEAD RECEPTACLE - Flange mounted on a panel, the TBR connector has a mating end on each side of the panel, one with pin contacts, and the other with socket contacts. This provides a transition through a panel (or bulkhead). Standard plug style connectors can be mated with the TBR from each side of the panel. TBRs are used when a disconnect is needed from each side of the panel. They are particularly useful when air leakage through the panel must be eliminated.

THROUGH HOLE - See CLEARANCE HOLE.

TORQUE - A force which produces rotation. See ROTATIONAL TORQUE.

TORQUE WRENCH - A device which makes use of an integrated gauge which allows you to tighten coupling nuts, endbells, and bolts to a specific force.

TURRET - An interchangeable device which is attached to a CRIMP TOOL that allows the tool to crimp a range of contacts. Each turret is made to crimp a specific style contact or a range of contacts and/or wire gauges. Also see LOCATOR.

TWISTED PAIR - A cable in which the two insulated conductors are twisted together beneath the jacket. A group of wires in a jacket may also be twisted together in pairs.

UBE (or UBI) - A Filipino purple yam (Dioscorea alata). It is cooked with sugar and eaten as a sweetened dessert or as ice cream.

UL - Abbreviation for Underwriter's Laboratories, a corporation supported by a group of underwriters for the purpose of establishing safety standards covering certain types of equipment and components in the United States.

V - Symbol for volt.

UL94V0 - A flammability performance rating set by Underwriter's Laboratories for plastics.

Vac - Volts, alternating current.

Vdc - Volts, direct current.

VDE - A German rating covering performance specifications of a device.

VIBRATION - A continuously reversing change in the magnitude of a given force.

VG 95 234 - A military specification used by the German government and NATO covering reverse bayonet connectors. VG is the equivalent of an MS specification in the United States, in translation from the German, literally meaning Defense (V), Equipment (G).

VOLT - The unit of measurement of electromotive force. It is equivalent to the force required to produce a current of 1 ampere through a resistance of one ohm.

VOLTAGE - The force which causes current to flow through an electrical conductor. Its symbol is E. The greatest effective difference in potential between and two conductors of a circuit.

VOLTAGE DROP - The difference in voltage between two points in a circuit due to the loss of electrical pressure as a current flows through an impedance.

VOLTAGE RATING - The maximum voltage which a connector can sustain without breaking down or varying from design specifications.

W - 1. In circular connectors, a degree of INSULATOR ROTATION. 2. Symbol for watt, work, or energy.

WASH OUT - A defect in the mold used to make molded connector components that manifests itself as a blurred or deformed surface around the area on the component where the mold is gated. It is the result of mold age and wear. It is typically a cosmetic issue that rarely results in any decreased connector performance.

WAVE SPRING - A wavy metal washer mounted inside a coupling nut. When the connector halves are mated, the wavespring applies a reverse pressure on the two mated halves. This is intended to improve vibration performance or peripheral sealing.

WAVE WASHER - See WAVE SPRING.

WIRE BUNDLE - A group of individual wires held together by a wire accessory such as cable ties, lacing cord, tubing, or clamps.

WIRE INSULATION DIAMETER - The outside diameter of the insulation on an insulated wire.

WIRE RANGE - The sizes of wire conductors accommodated by a particular contact.

WIRE HOLE FILLER (also know as a seal plug): A plug which is inserted into an unused GROMMET CAVITY in a connector to retain the sealing capability of the connector. They can be inserted into unused cavities in the grommet, insulator, or both, however, contacts are always recommended for filling unused insulator cavities. Fillers are usually made of plastic and are commonly found in two shapes, one which resembles a blunt nail and the other shaped like a barbell.

WIRE SEALING GROMMET: A resilient disc with holes in it to accommodate the individual wires entering the rear of the connector. Each cavity forms a tight seal against the wire insulation (as long as wires within the specified diameter are used). The grommet seals the back of the connector against moisture, dirt, and air. The grommet is normally held in place and compressed by an endbell and/or ferrule. It is usually a separate component, but may be part of the insulator itself. Also see GROMMET CAVITY.

WIRE SIZE - A numerical designation for conductor diameter. This catalog uses American Wire Gauge (AWG) which is based on the approximate circular mil area of the wire. Also see AWG and mm2.

WIRE STRIP LENGTH - See STRIP LENGTH.

WIRE WRAP CONTACT - A type of contact which is terminated by wrapping wire around a post in a manner that deforms the wire and creates a gas tight connection between the wire and the post. This method is slow and labor intensive. If used at all, it is employed in prototype work.

WORK - The magnitude of a force times the distance through which that force is applied.

X - 1. In circular connectors, a degree of INSULATOR ROTATION. 2. Symbol for reactance.

Y - 1. In circular connectors, a degree of INSULATOR ROTATION. 2. Symbol for admittance.

Z - 1. In circular connectors, a degree of INSULATOR ROTATION. 2. Symbol for impedance.

ZERO HALOGEN - In connector terminology, an insulating material that will not emit halogen gasses when burned. See HALOGEN and AEM..

ZERO INSERTION FORCE CONNECTOR (ZIF) - A connector designed in such a way that the contacts do not mechanically touch until the two connector halves have been jointed and a compression mechanism has forced the contacts together. A ZIF connector has extremely low insertion and removal forces making it possible to easily mate very large numbers of contacts with virtually no wear.

Temperature Conversion Table

If center column value is °F, the °C equivalent is to the left. If center column value is °C, the °F equivalent is to the right.

°C		°F	°C		°F	°C		°F	°C		°F	°C		°F
-40.00	-40	-40.0	-2.22	28	82.4	35.56	96	204.8	73.33	164	327.2	111.11	232	449.6
-39.44	-39	-38.2	-1.67	29	84.2	36.11	97	206.6	73.89	165	329.0	111.67	233	451.4
-38.89	-38	-36.4	-1.11	30	86.0	36.67	98	208.4	74.44	166	330.8	112.22	234	453.2
-38.33	-37	-34.6	-0.56	31	87.8	37.22	99	210.2	75.00	167	332.6	112.78	235	455.0
-37.78	-36	-32.8	0.00	32	89.6	37.78	100	212.0	75.56	168	334.4	113.33	236	456.8
-37.22	-35	-31.0	0.56	33	91.4	38.33	101	213.8	76.11	169	336.2	113.89	237	458.6
-36.67	-34	-29.2	1.11	34	93.2	38.89	102	215.6	76.67	170	338.0	114.44	238	460.4
-36.11	-33	-27.4	1.67	35	95.0	39.44	103	217.4	77.22	171	339.8	115.00	239	462.2
-35.56	-32	-25.6	2.22	36	96.8	40.00	104	219.2	77.78	172	341.6	115.56	240	464.0
-35.00	-31	-23.8	2.78	37	98.6	40.56	105	221.0	78.33	173	343.4	116.11	241	465.8
-34.44	-30	-22.0	3.33	38	100.4	41.11	106	222.8	78.89	174	345.2	116.67	242	467.6
-33.89	-29	-20.2	3.89	39	102.2	41.67	107	224.6	79.44	175	347.0	117.22	243	469.4
-33.33	-28	-18.4	4.44	40	104.0	42.22	108	226.4	80.00	176	348.8	117.78	244	471.2
-32.78	-27	-16.6	5.00	41	105.8	42.78	109	228.2	80.56	177	350.6	118.33	245	473.0
-32.22	-26	-14.8	5.56	42	107.6	43.33	110	230.0	81.11	178	352.4	118.89	246	474.8
-31.67	-25	-13.0	6.11	43	109.4	43.89	111	231.8	81.67	179	354.2	119.44	247	476.6
-31.11	-24	-11.2	6.67	44	111.2	44.44	112	233.6	82.22	180	356.0	120.00	248	478.4
-30.56	-23	-9.4	7.22	45	113.0	45.00	113	235.4	82.78	181	357.8	120.56	249	480.2
-30.00	-22	-7.6	7.78	46	114.8	45.56	114	237.2	83.33	182	359.6	121.11	250	482.0
-29.44	-21	-5.8	8.33	47	116.6	46.11	115	239.0	83.89	183	361.4	121.67	251	483.8
-28.89	-20	-4.0	8.89	48	118.4	46.67	116	240.8	84.44	184	363.2	122.22	252	485.6
-28.33	-19	-2.2	9.44	49	120.2	47.22	117	242.6	85.00	185	365.0	122.78	253	487.4
-27.78	-18	-0.4	10.00	50	122.0	47.78	118	244.4	85.56	186	366.8	123.33	254	489.2
-27.22	-17	1.4	10.56	51	123.8	48.33	119	246.2	86.11	187	368.6	123.89	255	491.0
-26.67	-16	3.2	11.11	52	125.6	48.89	120	248.0	86.67	188	370.4	124.44	256	492.8
-26.11	-15	5.0	11.67	53	127.4	49.44	121	249.8	87.22	189	372.2	125.00	257	494.6
-25.56	-14	6.8	12.22	54	129.2	50.00	122	251.6	87.78	190	374.0	125.56	258	496.4
-25.00	-13	8.6	12.78	55	131.0	50.56	123	253.4	88.33	191	375.8	126.11	259	498.2
-24.44	-12	10.4	13.33	56	132.8	51.11	124	255.2	88.89	192	377.6	126.67	260	500.0
-23.89	-11	12.2	13.89	57	134.6	51.67	125	257.0	89.44	193	379.4	127.22	261	501.8
-23.33	-10	14.0	14.44	58	136.4	52.22	126	258.8	90.00	194	381.2	127.78	262	503.6
-22.78	-9	15.8	15.00	59	138.2	52.78	127	260.6	90.56	195	383.0	128.33	263	505.4
-22.22	-8	17.6	15.56	60	140.0	53.33	128	262.4	91.11	196	384.8	128.89	264	507.2
-21.67	-7	19.4	16.11	61	141.8	53.89	129	264.2	91.67	197	386.6	129.44	265	509.0
-21.11	-6	21.2	16.67	62	143.6	54.44	130	266.0	92.22	198	388.4	130.00	266	510.8
-20.56	-5	23.0	17.22	63	145.4	55.00	131	267.8	92.78	199	390.2	130.56	267	512.6
-20.00	-4	24.8	17.78	64	147.2	55.56	132	269.6	93.33	200	392.0	131.11	268	514.4
-19.44	-3	26.6	18.33	65	149.0	56.11	133	271.4	93.89	201	393.8	131.67	269	516.2
-18.89	-2	28.4	18.89	66	150.8	56.67	134	273.2	94.44	202	395.6	132.22	270	518.0
-18.33	-1	30.2	19.44	67	152.6	57.22	135	275.0	95.00	203	397.4	132.78	271	519.8
-17.78	0	32.0	20.00	68	154.4	57.78	136	276.8	95.56	204	399.2	133.33	272	521.6
-17.22	1	33.8	20.56	69	156.2	58.33	137	278.6	96.11	205	401.0	133.89	273	523.4
-16.67	2	35.6	21.11	70	158.0	58.89	138	280.4	96.67	206	402.8	134.44	274	525.2
-16.11	3	37.4	21.67	71	159.8	59.44	139	282.2	97.22	207	404.6	135.00	275	527.0
-15.56	4	39.2	22.22	72	161.6	60.00	140	284.0	97.78	208	406.4	135.56	276	528.8
-15.00	5	41.0	22.78	73	163.4	60.56	141	285.8	98.33	209	408.2	136.11	277	530.6
-14.44	6	42.8	23.33	74	165.2	61.11	142	287.6	98.89	210	410.0	136.67	278	532.4
-13.89	7	44.6	23.89	75	167.0	61.67	143	289.4	99.44	211	411.8	137.22	279	534.2
-13.33	8	46.4	24.44	76	168.8	62.22	144	291.2	100.00	212	413.6	137.78	280	536.0
-12.78	9	48.2	25.00	77	170.6	62.78	145	293.0	100.56	213	415.4	138.33	281	537.8
-12.22	10	50.0	25.56	78	172.4	63.33	146	294.8	101.11	214	417.2	138.89	282	539.6
-11.67	11	51.8	26.11	79	174.2	63.89	147	296.6	101.67	215	419.0	139.44	283	541.4
-11.11	12	53.6	26.67	80	176.0	64.44	148	298.4	102.22	216	420.8	140.00	284	543.2
-10.56	13	55.4	27.22	81	177.8	65.00	149	300.2	102.78	217	422.6	140.56	285	545.0
-10.00	14	57.2	27.78	82	179.6	65.56	150	302.0	103.33	218	424.4	141.11	286	546.8
-9.44	15	59.0	28.33	83	181.4	66.11	151	303.8	103.89	219	426.2	141.67	287	548.6
-8.89	16	60.8	28.89	84	183.2	66.67	152	305.6	104.44	220	428.0	142.22	288	550.4
-8.33	17	62.6	29.44	85	185.0	67.22	153	307.4	105.00	221	429.8	142.78	289	552.2
-7.78	18	64.4	30.00	86	186.8	67.78	154	309.2	105.56	222	431.6	143.33	290	554.0
-7.22	19	66.2	30.56	87	188.6	68.33	155	311.0	106.11	223	433.4	143.89	291	555.8
-6.67	20	68.0	31.11	88	190.4	68.89	156	312.8	106.67	224	435.2	144.44	292	557.6
-6.11	21	69.8	31.67	89	192.2	69.44	157	314.6	107.22	225	437.0	145.00	293	559.4
-5.56	22	71.6	32.22	90	194.0	70.00	158	316.4	107.78	226	438.8	145.56	294	561.2
-5.00	23	73.4	32.78	91	195.8	70.56	159	318.2	108.33	227	440.6	146.11	295	563.0
-4.44	24	75.2	33.33	92	197.6	71.11	160	320.0	108.89	228	442.4	146.67	296	564.8
-3.89	25	77.0	33.89	93	199.4	71.67	161	321.8	109.44	229	444.2	147.22	297	566.6
-3.33	26	78.8	34.44	94	201.2	72.22	162	323.6	110.00	230	446.0	147.78	298	568.4
-2.78	27	80.6	35.00	95	203.0	72.78	163	325.4	110.56	231	447.8	148.33	299	570.2
												148.89	300	572.0
												149.44	301	573.8
												150.00	302	575.6

For Assistance in Europe – Please See the Back Cover For a Complete Listing of Our Branch Offices and Contact Numbers. • Specifications subject to change.

Conversion Charts

Conduit Capacity*

Conduit Trade Size		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Internal Dia. Inches		0.622	0.824	1.047	1.388	1.610	2.067	2.469	3.068	3.548	4.026
Permissible Area		0.12	0.21	0.34	0.60	0.82	1.34	1.92	2.95	3.96	5.09
Cable O.D.	Cable Area Sq. In.										
0.125	0.0123	9	17	27	48	66	108	156	239	321	413
0.150	0.0177	6	11	19	33	46	75	108	166	223	287
0.175	0.0241	4	8	14	24	34	55	79	122	164	211
0.200	0.0315	3	6	10	19	26	42	61	93	126	162
0.225	0.0398	3	5	8	15	20	33	48	74	99	127
0.250	0.0491	2	4	6	12	16	27	39	60	89	103
0.275	0.0594	2	3	5	10	13	22	32	49	66	85
0.300	0.0707	1	2	4	8	11	18	27	41	56	71
0.325	0.0830	1	2	4	7	9	16	23	35	47	61
0.350	0.0963	1	2	3	6	8	13	19	30	41	52
0.375	0.1105	1	1	3	5	7	12	17	26	35	46
0.400	0.1257	-	1	2	4	6	10	15	23	31	40
0.425	0.1419	-	1	2	4	5	9	13	20	27	35
0.450	0.1591	-	1	2	3	5	8	12	18	24	32
0.475	0.1773	-	1	1	3	4	7	10	16	22	28
0.500	0.1964	-	1	1	3	4	6	9	15	20	25
0.525	0.2165	-	-	1	2	3	6	8	13	18	23
0.550	0.2376	-	-	1	2	3	5	8	12	16	21
0.575	0.2597	-	-	1	2	3	5	7	11	15	19
0.600	0.2828	-	-	1	2	2	4	6	10	14	18
0.625	0.3068	-	-	1	1	2	4	6	9	12	16
0.650	0.3319	-	-	-	1	2	4	5	8	11	15
0.675	0.3579	-	-	-	1	2	3	5	8	11	14
0.700	0.3849	-	-	-	1	2	3	4	7	10	13
0.725	0.4129	-	-	-	1	1	3	4	7	9	12
0.750	0.4418	-	-	-	1	1	3	4	6	8	11
0.775	0.4718	-	-	-	1	1	2	4	6	8	10
0.800	0.5027	-	-	-	1	1	2	3	5	7	10
0.825	0.5346	-	-	-	1	1	2	3	5	7	9
0.850	0.5675	-	-	-	1	1	2	3	5	6	8
0.875	0.6014	-	-	-	-	1	2	3	4	6	8
0.900	0.6362	-	-	-	-	1	2	3	4	6	8
0.925	0.6721	-	-	-	-	1	1	3	4	6	8
0.950	0.7089	-	-	-	-	1	1	2	4	5	7
0.975	0.7467	-	-	-	-	1	1	2	3	5	6
1.000	0.7854	-	-	-	-	1	1	2	3	5	6
1.025	0.8252	-	-	-	-	-	1	2	3	4	6
1.050	0.8660	-	-	-	-	-	1	2	3	4	5
1.075	0.9077	-	-	-	-	-	1	2	3	4	5
1.100	0.9504	-	-	-	-	-	1	2	3	4	5
1.125	0.9941	-	-	-	-	-	1	1	2	3	5
1.150	1.0387	-	-	-	-	-	1	1	2	3	4
1.175	1.0844	-	-	-	-	-	1	1	2	3	4
1.200	1.1310	-	-	-	-	-	1	1	2	3	4
1.225	1.1786	-	-	-	-	-	1	1	2	3	4
1.250	1.2272	-	-	-	-	-	1	1	2	3	4
1.275	1.2768	-	-	-	-	-	1	1	2	3	3
1.300	1.3274	-	-	-	-	-	1	1	2	2	3
1.325	1.3789	-	-	-	-	-	-	1	2	2	3
1.350	1.4314	-	-	-	-	-	-	1	2	2	3
1.375	1.4849	-	-	-	-	-	-	1	1	2	3
1.400	1.5394	-	-	-	-	-	-	1	1	2	3
1.425	1.5949	-	-	-	-	-	-	1	1	2	3
1.450	1.6513	-	-	-	-	-	-	1	1	2	2
1.475	1.7088	-	-	-	-	-	-	1	1	2	2
1.500	1.7672	-	-	-	-	-	-	1	1	2	2
1.525	1.8266	-	-	-	-	-	-	1	1	2	2
1.550	1.8870	-	-	-	-	-	-	1	1	2	2
1.575	1.9483	-	-	-	-	-	-	-	1	2	2
1.600	2.0107	-	-	-	-	-	-	-	1	1	2
1.625	2.0740	-	-	-	-	-	-	-	1	1	2
1.650	2.1383	-	-	-	-	-	-	-	1	1	2
1.675	2.2036	-	-	-	-	-	-	-	1	1	2
1.700	2.2699	-	-	-	-	-	-	-	1	1	2
1.725	2.3371	-	-	-	-	-	-	-	1	1	2
1.750	2.4053	-	-	-	-	-	-	-	1	1	2
1.775	2.4745	-	-	-	-	-	-	-	1	1	2
1.800	2.5447	-	-	-	-	-	-	-	1	1	2

Figures shown indicate number of cables of a given size O.D. that can be pulled through conduit size listed.

*Based on National Electrical Code for non-lead sheathed cables when 3 or more wires occupy the same conduit (40% fill).

Wire Gauge

AWG	Diameter Inches	Diameter MM	CMA
4/0	0.460	(11.68)	212000
3/0	0.410	(10.41)	168000
2/0	0.365	(9.27)	133000
1/0	0.325	(8.26)	106000
1	0.289	(7.34)	83700
2	0.258	(6.55)	66400
3	0.229	(5.82)	52600
4	0.204	(5.18)	41700
5	0.182	(4.62)	33100
6	0.162	(4.11)	26300
7	0.144	(3.66)	20800
8	0.128	(3.25)	16500
9	0.114	(2.90)	13100
10	0.102	(2.59)	10400
11	0.091	(2.31)	8230
12	0.081	(2.06)	6530
13	0.072	(1.83)	5180
14	0.062	(1.57)	4110
15	0.057	(1.45)	3260
16	0.051	(1.30)	2580
17	0.045	(1.14)	2050
18	0.040	(1.02)	1620
19	0.036	(0.91)	1290
20	0.032	(0.81)	1020
21	0.0285	(0.72)	810
22	0.0253	(0.643)	642
23	0.0226	(0.574)	509
24	0.0201	(0.511)	404
25	0.0179	(0.45)	320
26	0.0159	(0.404)	254
27	0.0142	(0.361)	202
28	0.0126	(0.320)	106
29	0.0113	(0.29)	127
30	0.0100	(0.254)	101
31	0.0089	(0.23)	79.7
32	0.0080	(0.20)	63.2
33	0.0071	(0.18)	50.1
34	0.0063	(0.16)	39.8
35	0.0056	(0.14)	31.5
36	0.0050	(0.13)	25.0
37	0.0045	(0.114)	19.8
38	0.0040	(0.10)	15.7
39	0.0035	(0.09)	12.5
40	0.0031	(0.079)	9.9

Use to Convert American Wire Gage to Diameter and Circular Mil Area.

AWG TO mm²			
AWG	mm²	AWG	mm²
1	42.4000	2	33.6000
3	26.7000	4	21.2000
5	16.8000	6	13.3000
7	10.6000	8	8.3500
9	6.6200	10	5.2700
11	4.1500	12	3.3100
13	2.6300	14	2.0800
15	1.6500	16	1.3100
17	1.0400	18	0.8230
19	0.6530	20	0.5190
21	0.4120	22	0.3250
23	0.2590	24	0.2050
25	0.1630	26	0.1280
27	0.1020	28	0.0804

MULTIPLY	BY	OBTAIN
acres	0.4047	hectares
atmospheres	1.10133	bars
atmospheres	0.0001033	kg per square meter
atmospheres	760	mm of mercury at 0°C
atmospheres	0.000010133	newtons per square meter
atmospheres	14.7	pounds per square inch
bars	0.9869	atmospheres
bars	100000	newtons per square meter
Btu	778.3	foot-pounds
Btu	0.000293	kilowatt-hours
Btu per hour	12.96	foot-pounds per minute
Btu per minute	17.58	watts
centimeters	0.03281	feet
centimeters	0.3937	inches
centimeters per second	1.969	feet per minute
centimeters per second	0.6	meters per minute
circular mils	0.000005067	square centimeters
circular mils	7.854E-07	square inches
circular mils	0.0005067	square millimeters
circular mils	0.7854	square mils
cubic centimeters	0.06102	cubic inches
cubic centimeters	0.001	liters
cubic feet	1728	cubic inches
cubic feet	0.02832	cubic meters
cubic feet	7.481	gallons (US liquid)
cubic feet	28.32	liters
cubic inches	16.393	cubic centimeters
cubic inches	0.0005787	cubic feet
cubic inches	0.00001639	cubic meters
cubic inches	0.01639	liters
cubic meters	35.31	cubic feet
cubic meters	1000	liters
dynes	0.00102	grams
dynes	0.00001	newtons
dynes	0.000002248	pounds
feet	30.48	centimeters
feet	12	inches
feet	0.0003048	kilometers
feet	0.06061	rods
feet of water (4°C)	0.8826	inches of mercury (0°C)
feet of water (4°C)	304.8	kg per square meter
feet of water (4°C)	62.43	pounds per square foot
feet per minute	0.508	centimeters per second
feet per minute	0.3048	meters per minute

MULTIPLY	BY	OBTAIN
feet per minute	0.01136	miles per hour
foot-pounds	0.001285	Btu
foot-pounds	1.356	joules
foot -pounds	0.1383	kilogram-meters
foot -pounds	3.766E-07	kilowatt-hours
foot-pounds	1.3557	newton-meters
foot-pounds per minute	0.07716	Btu per hour
foot-pounds per minute	0.0226	watts
gallons (US liquid)	0.1337	cubic feet
gallons (US liquid)	0.003785	cubic meters
gallons (US liquid)	4	quarts
grams	980.7	dynes
grams	0.03527	ounce
grams per cm	0.0056	pounds per inch
grams per cubic cm	0.03613	pounds per cubic inch
grams per sq cm	2.0481	pounds per square foot
hectares	2.471	acres
hectares	10000	square meters
horsepower	1.014	horsepower (metric)
horsepower (metric)	0.9863	horsepower
inches	2.54	centimeters
inches	0.08333	feet
inches	0.0254	meters
inches	25.4	millimeters
inches	1000	mils
inches	0.02778	yards
inches of mercury (0°C)	1.133	feet of water (4°C)
inches of mercury (0°C)	0.4912	pounds per square inch
inches of mercury (32°F)	33.86	millibars
inches of water (4°C)	0.07355	inches of mercury
inches of water (4°C)	25.4	kg per square meter
inches of water (4°C)	0.5782	ounces per square inch
inches of water (4°C)	5.202	pounds per square foot
joules	0.7376	foot-pounds
joules	9.81	kilogram-meters
kilograms	9.807	newtons
kilograms	2.2046	pounds
kilogram-calories per min.	69.77	watts
kilogram-force	9.81	newtons
kilogram-meters	7.233	foot -pounds
kilogram-meters	0.102	joules
kilograms per meter	0.672	pounds per foot
kilograms per meter	0.056	pounds per inch
kilograms per sq. meter	0.00009678	atmospheres

Conversion Factors

MULTIPLY	BY	OBTAIN
kilograms per sq. meter	0.003281	feet of water (4°C)
kilograms per sq. meter	0.2048	pounds per square foot
kilograms per sq. meter	0.001422	pounds per square inch
kilometers	3281	feet
kilometers	0.62137	miles
kilometers per hour	0.9113	feet per second
kilometers per hour	16.67	meters per minute
kilometers per minute	37.28	miles per hour
kilowatt-hours	3413	Btu
kilowatt-hours	0.000002655	foot-pounds
liters	1000	cubic centimeters
liters	0.03531	cubic feet
liters	61.02	cubic inches
liters	0.001	cubic meters
liters	0.908	quarts (dry)
liters	1.0567	quarts (US liquid)
meters	39.37	inches
meters	0.000394	mils
meters	1.0936	yards
meters per minute	1.667	centimeters per second
meters per minute	3.281	feet per minute
meters per minute	0.06	kilometers per hour
metric tons	0.9842	English long ton (2240 lbs)
metric tons	1.102	tons, short (2000 lbs)
miles (statute)	1.6094	kilometers
miles per hour	88	feet per minute
miles per hour	0.02682	kilometers per minute
millibars	0.02953	inches of mercury (32°F)
millibars	2.089	pounds per square foot
millimeters	0.03937	inches
millimeters	0.3937	mils
mm of mercury at 0°C	0.001316	atmospheres
mils	0.001	inches
mils	0.0000254	meters
mils	0.0254	millimeters
newtons	100000	dynes
newtons	0.102	kilograms
newtons	0.22481	pounds force
newton-meters	0.7376	foot-pounds
newton-meters	8.8512	inch-pounds
newtons per sq meter	0.00009678	atmospheres
newtons per sq meter	0.00001	bars
ounce	28.35	grams
ounces per square inch	1.729	inches of water (4°C)

MULTIPLY	BY	OBTAIN
pints	0.5	quarts
pounds	0.00004448	dynes
pounds	0.4536	kilogram
pounds force	4.44822	newtons
pounds per cubic foot	0.0005787	pounds per cubic inch
pounds per cubic inch	27.68	gram per cubic cm
pounds per cubic inch	1728	pounds per cubic foot
pounds per foot	1.488	kg per meter
pounds per inch	178.6	grams per cm
pounds per inch	17.86	kg per meter
pounds per square foot	0.01602	feet of water (4°C)
pounds per square foot	0.4883	grams per sq cm
pounds per square foot	0.1922	inches of water (4°C)
pounds per square foot	4.882	kg per square meter
pounds per square foot	4.882	kg per square meter
pounds per square foot	0.4788	millibars
pounds per square foot	0.006944	pounds per sq inch
pounds per square inch	0.06804	atmospheres
pounds per square inch	2.036	inches mercury (0°C)
pounds per square inch	703.1	kg per square meter
pounds per square inch	144	pounds per sq foot
quarts	0.25	gallons (US liquid)
quarts (dry)	1.1	liters
quarts (US liquid)	0.9463	liters
quarts	2	pints
rods	16.5	feet
square centimeters	0.00001973	circular mils
square centimeters	0.155	square inches
square feet	0.0929	square meters
square inches	0.000001273	circular mils
square inches	6.452	square centimeters
square kilometers	0.386	square miles
square meters	0.0001	hectares
square meters	10.76	square feet
square miles	2.59	square kilometers
square millimeters	1973	circular mils
square mils	1.273	circular mils
tons, English long (2240 lbs)	1.016	metric tons
tons, short (2000 lbs)	0.9072	metric tons
watts	0.05689	Btu per minute
watts	44.26	foot-pound per minute
watts	0.01433	kg-calories per minute
yards	0.02778	inches
yards	1.0936	meters

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Limited Warranty & Product Information

Limited Warranty

PEI-Genesis produces some of the highest quality products available; however, these products are intended for use in strict accordance with the specifications in this catalog.

a. If any of the products in this catalog are electrical connectors, electrical components, electrical connector accessories, or assemblies using electrical connectors, electrical components, and/or electrical connector accessories, then the warranty terms set forth in this subparagraph (a) apply to them. PEI-Genesis warrants each new product sold by PEI-Genesis to be free from defects in materials and workmanship under normal use and service. The obligation and liability of PEI-Genesis under this warranty is limited to the repair or replacement at its facility, at the option of PEI-Genesis, of any such product which proves defective within ninety (90) days after delivery to the first end user, and is found to be defective in materials and workmanship by inspection by PEI-Genesis. PEI-Genesis shall not be obligated or liable under this warranty for apparent defects which examination discloses are due to tampering, misuse, abuse, neglect, improper storage, normal wear and tear or any case where the product is disassembled by other than authorized PEI-Genesis representatives. In addition, PEI-Genesis shall not be obligated or liable under this warranty unless the date of delivery to the first end user is within six (6) months of the date of delivery to the original purchaser, if different from the first end user, and further provided that written notice of any defect must be given to PEI-Genesis within thirty (30) days from the date such defect is first discovered.

Products covered by this warranty must be returned to PEI-Genesis (with all transportation charges prepaid) in shipping containers that are adequate to prevent loss or damage in shipment. Products repaired or replaced under this warranty are warranted for the unexpired portion of the original warranty or for thirty (30) days, whichever is greater.

b. The purchaser's SOLE AND EXCLUSIVE REMEDY, and the SOLE OBLIGATION of PEI-Genesis, under the foregoing warranty shall be to repair or replace any defective or nonconforming products, provided that PEI-Genesis may, in its sole discretion, elect instead to refund the purchase price of the affected products. All replaced products shall become the property of PEI-Genesis.

c. PEI-GENESIS EXPRESSLY DISCLAIMS ANY LIABILITY, WHETHER UNDER THIS WARRANTY OR OTHERWISE, FOR ANY FAILURE OF ANY PRODUCT WHICH IS CAUSED, IN WHOLE OR IN PART, BY THE USE OF THAT PRODUCT WITH OR IN ANY COMPONENT PARTS THAT WERE NOT FURNISHED BY PEI-GENESIS.

d. THE ABOVE WARRANTY IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, USE OR APPLICATION, AND ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF PEI-GENESIS.

e. THE AGGREGATE LIABILITY OF PEI-GENESIS TO ANY PURCHASER IN DAMAGES OR OTHERWISE SHALL NOT EXCEED THE AGGREGATE PURCHASE PRICE OF THE PRODUCTS THAT ARE THE SUBJECT OF THE CLAIM OR DISPUTE. IN NO EVENT SHALL PEI-GENESIS BE LIABLE FOR ANY INCIDENTAL, INDIRECT, CONSEQUENTIAL, PUNITIVE OR SPECIAL LOSSES OR DAMAGES OF ANY KIND, HOWSOEVER CAUSED. All such damages are expressly excluded and disclaimed, it being understood that the products sold to the purchaser are not consumer products. No action, regardless of form, arising out of, or in any way connected with any products furnished by PEI-Genesis may be brought by a purchaser more than one (1) year after the cause of action accrued.

Product Safety Information

This information sheet should be read in conjunction with the Product Data Sheet/Catalog distributed by PEI-Genesis. Failure to observe the advice in this information sheet and the operating conditions specified in the Product Data Sheet/Catalog could result in hazardous situations. None of the connectors in this catalog are meant to be mated or unmated under load.

1. MATERIAL CONTENT AND PHYSICAL FORM

Electrical connectors do not usually contain hazardous materials. They contain conducting and nonconducting materials and can be divided into two groups:

a) Printed circuit types and low cost audio types which employ all plastic insulators and casings; and

b) Rugged, Fire Barrier and High Reliability types with metal casings and either natural rubber, synthetic rubber, plastic or glass insulating materials.

Contact materials vary with type of connector and application and are usually manufactured from copper alloys, nickel, alumel, chromel or steel. In special applications, other alloys may be specified.

2. FIRE CHARACTERISTICS AND ELECTRIC SHOCK HAZARD

There is no fire hazard when the connector is correctly wired and used within the specified parameters.

Incorrect wiring or assembly of the connector or careless use of metal tools or conductive fluids, or transit damage to any of the component parts may cause electric shock or burns. Live circuits must not be broken by separating mated connectors as this may cause arcing, ionization and burning.

Heat dissipation is greater at maximum resistance in a circuit. Hot spots may occur when resistance is raised locally by damage, e.g., cracked or deformed contacts, or broken strands of wire. Local overheating may also result from the use of incorrect application tools or from poor quality soldering or slack screw terminals. Overheating may occur if the ratings in the Product Data Sheet/Catalog are exceeded and can cause breakdown of insulation and, hence, electric shock.

If heating is allowed to continue, it intensifies by further increasing the local resistance through loss of temper of spring contacts, formation of oxide film on contacts and wires, and leakage currents through carbonization of insulation and tracking paths. Fire can then result in the presence of combustible materials and this may release noxious fumes. Overheating may not be visually apparent. Burns may result from touching overheated components.

3. HANDLING

Care must be taken to avoid damage to any component parts of electrical connectors during installation and use. Although there are normally no sharp edges, care must be taken when handling certain components to avoid injury to fingers.

Electrical connectors may be damaged in transit to customers and such damage may result in creation of hazards. Products should therefore be examined prior to installation or use and rejected if found to be damaged in any respect.

4. DISPOSAL

Dispose of all products properly. The incineration of some products may release noxious or even toxic fumes.

5. APPLICATION

Connectors with exposed contacts should not be selected for use on the current supply side of an electrical circuit, because an electric shock could result from touching exposed contacts on an unmated connector. Voltages in excess of 30 Vac or 42.5 Vdc are potentially hazardous and care should be taken to ensure that such voltages can not be transmitted in any way to exposed metal parts of the connector body. The connector and wiring should be inspected, before making live, to ensure there is no damage to metal parts or insulators, no solder blobs, loose strands, conducting lubricants, swarf, or any other undesired conducting particles. Circuit resistance and continuity checks should be made to make certain that there are no low resistance joints or spurious conducting paths. Always use the correct application tools as specified in the Data Sheet/Catalog.

Do not permit untrained personnel to wire, assemble or tamper with connectors. For operation voltage, please see appropriate national regulations.

IMPORTANT GENERAL INFORMATION

1. Air and Creepage Paths/Operating Voltage

The admissible operating voltages depend on the individual applications, and the valid national and other applicable safety regulations. For this reason, the air and creepage path data are only reference values. Observe reduction of air and creepage paths due to PC board and/or harnessing.

2. Temperature

All information given are temperature limits. The operating temperature depends on the individual application.

3. Other important information

PEI-Genesis continuously endeavors to improve products. Therefore, products may deviate from the description, technical data or specifications and/or shape as shown in this catalog. PEI-Genesis reserves the right to change the description, technical data or specifications and/or shape of any products at any time.

4. Harnessing and Assembly Instructions

If applicable, our special harnessing and/or assembly instruction must be adhered to. This information can be provided on request.

Got Questions?

Our Engineering Support Group has answers!



Internal Application Engineers

We have experts available for phone or e-mail support. They are there to help you get quick answers to quick questions. Our internal application engineers have at least 10 years of hands on experience with connectors and cable assemblies. They can help you find the right part, get technical specifications, or come up with design ideas.

Field Application Engineers

Our Field Application Engineers are available to consult on design challenges. Together with our Outside Sales Representatives, we bring a team approach to helping our customers. They will help put new products, technologies, and design options to work for you.

Design Services

At PEI we specialize in solving problems. We can help improve or cost-reduce an existing design, or we can come up with a complete design based on your application. Our standard platforms make it easy to come up with proven designs that are cost effective and reliable.



Project Management

Each engineering project is led by a project engineer who is responsible for meeting the schedule and performance goals. Our proven four-step product development process ensures a smooth transition from concept to production.



1. Specification: Our field application engineers and sales staff will work as a team to define the project requirements and specifications.

2. Engineering: Our design engineering staff has over 100 years of combined experience in the design and development of electro-mechanical products. They are experts at converting specifications into designs.

3. Design Verification: Our manufacturing engineers make sure that the proper procedures, fixtures, training, and test equipment are in place to build your product.

4. Ramp-Up: Every project is reviewed by our quality control group before it is released to production.

Supply Chain Management

From components to kits to assemblies, we can come up with a supply chain solution to meet your needs. We maintain a multi-million dollar inventory of components and have industry-leading cycle times. Our account management team will work with you to ensure that the products are there when you need them.



Need help now? Contact Tech Support at www.peigenesis.com/tech
US/Canada call 1-800-523-0727

Corporate Headquarters, Philadelphia, PA



Production Headquarters, South Bend, IN



Power Headquarters, Bensalem, PA



European Headquarters, Southampton, UK



PEI-Genesis™
Engineered Solutions for connectors and power

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