Product Data Sheet

Amphenol® MIL-DTL-38999 Type Coax/Triax/Twinax Ground Plane Connectors

No. 139-1

For high speed Data Bus, LAN and Coax, Triax and Twinax data transmission, MIL-DTL-38999 type connectors are available with metal inserts to maintain a common ground plane with the connector shell for all the shielded contacts contained in the connector. These electrical connectors are available for all MIL-DTL-38999 insert patterns using size 16, 10, 12 or 8 contacts. This data sheet contains some of the popular insert patterns that are commonly used for ground plane connector applications. Options include crimp termination and printed circuit tail contacts in either solder or compliant pin configurations.

Applications for ground plane connectors include MIL-STD-1553B data bus as well as video, signal and multiplex transmission.

Ground Plane Connector with all contacts grounded to a single metallic insert.

Special Hybrid Ground Plane Connector* with a standard MIL-DTL-38999 insert surrounded by a metal ground plane insert. This connector is designed for applications where the twinax contacts are required to be electrically bonded to a common ground while insulated M39029 signal or power contacts are also included for compact packaging.

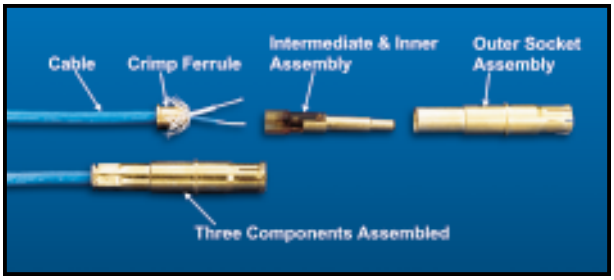
For more information on insert and shell style availability request the following catalogs:

- 12-092, Amphenol® Tri-Start (TV) Subminiature Cylindrical Connectors (MIL-DTL-38999 Series III)
- 12-090, Amphenol® JT/LJT Subminiature Cylindrical Connectors (MIL-DTL-38999 Series I and II)
- 12-091, Amphenol® SJT Subminiature Cylindrical Connectors Proprietary series which is a further expansion of the basic JT Subminiature family, but incorporates the LJT scoop-proof design; complaint with several European specifications

For more information on shielded contacts request catalog:

- 12-130, Amphenol® High Frequency Contacts for Multi-pin Connectors (Coax, Twinax and Triax Shielded Contacts)

Concentric Twinax Contacts qualified to M39029/990 and /91



RCT (Reduced Component Twinax) Contacts Meet MIL-C-39020/90 and /91

Contact your local sales engineer for further details or contact:
Amphenol Aerospace
40-60 Delaware Ave.
Sidney, NY 13838-1395
Phone: 800-678-0141 or 607-563-5011
Fax: 607-563-5157
Website: www.amphenol-aerospace.com

* Patent 6,386,914

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Amphenol

Insert Patterns - Subminiature Cylindricals

Incorporating coax, twinax and triax contacts

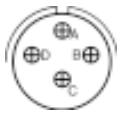
The following pages show the most popular and most readily available insert arrangements for incorporation of shielded contacts within the Subminiature Cylindrical Connector Family. If you require other arrangements than what are shown here, consult Amphenol for further availability. In most cases, unless otherwise stated, size 8 and size 12 cavities can be filled with either coax, twinax, triax or power contacts.

CONTACT LEGEND

8	10	12	16	20	22D
Coax/ Twinax/ Triax or Power	Twinax/ Triax/ or Power	Coax/ Twinax/ Triax or Power	Coax or Power	Power	Power

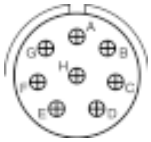
front face of pin inserts illustrated

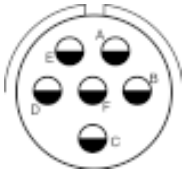


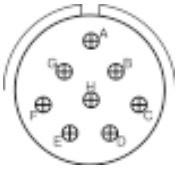
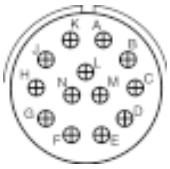

Insert Arrangement	**9-5**	**10-2**	**11-2**	**12-3**	**13-3**	**12-4**	**13-4**	**14-4**	**15-4**
Available in Connector Series	**TV**	**SJT**	**LJT, TV**	**JT**	**LJT**	**JT, SJT**	**LJT, TV**	**JT**	**LJT**
Service Rating	**Grounded**	**I**		**II**		**I**		**I**	
Number of Contacts	**1**	**2**		**3**		**4**		**4**	
Contact Size	**8 Twinax**	**16**		**16**		**16**		**12**	

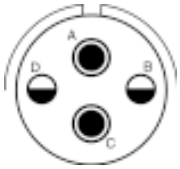




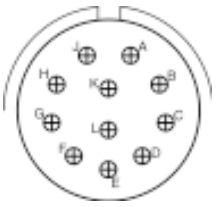
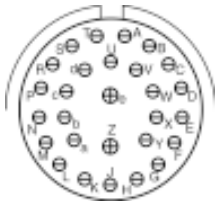
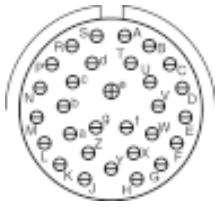
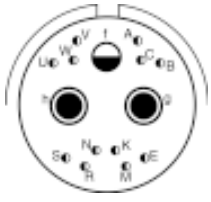


Insert Arrangement	**14-5**	**15-5**	**14-15**	**15-15**	**14-68**	**15-68**	**14-97**	**15-97**	**16-6**	**17-6**
Available in Connector Series	**JT, SJT**	**LJT, TV**	**JT, SJT**	**LJT, TV**	**JT**	**LJT**	**JT, SJT**	**LJT, TV**	**JT, SJT**	**LJT, TV**
Service Rating	**II**		**I**		**I**		**I**		**I**	
Number of Contacts	**5**		**14 1**		**8**		**8 4**		**6**	
Contact Size	**16**		**20 16**		**16**		**20 16**		**12**	

Insert Arrangement	**16-8**	**17-8**	**16-13**	**17-13**	**16-99**	**17-99**	**17-2**		**17-22**	
Available in Connector Series	**JT, SJT**	**LJT, TV**	**JT, SJT**	**LJT**	**JT, SJT**	**LJT, TV**	**LJT**	**TV**	**LJT**	**TV**
Service Rating	**II**		**I**		**I**		**M**		**Coax**	
Number of Contacts	**8**		**13**		**21 2**		**38 1**		**2 2**	
Contact Size	**16**		**16**		**20 16**		**22D 8**		**12 8**	

Insert Arrangement	**17-25**		**18-11**	**19-11**	**18-28**	**19-28**	**18-30**	**19-30**	**19-31**	
Available in Connector Series	**LJT**		**JT, SJT**	**LJT, TV**	**JT**	**LJT**	**JT**	**LJT**	**TV**	
Service Rating	**M**		**II**		**I**		**I**		**M**	
Number of Contacts	**22**	**2**	**11**		**26**	**2**	**29**	**1**	**2**	**1** **12**
Contact Size	**22D**	**8**	**16**		**20**	**16**	**20**	**16**	**8**	**12** **22D**

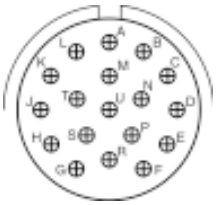
Insert Patterns - Subminiature Cylindricals

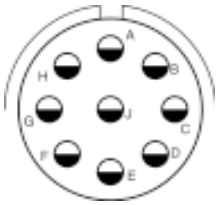
Incorporating coax, twinax and triax contacts

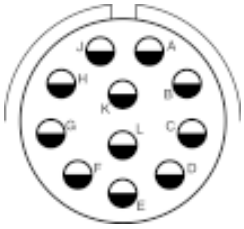
CONTACT LEGEND

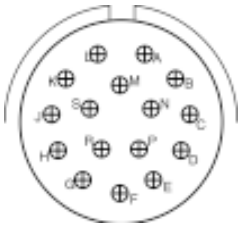
8	10	12	16	20	22D
Coax/ Twinax/ Triax or Power	Twinax/ Triax/ or Power	Coax/ Twinax/ Triax or Power	Coax or Power	Power	Power

front face of pin inserts illustrated

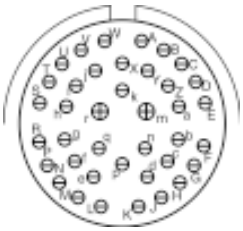


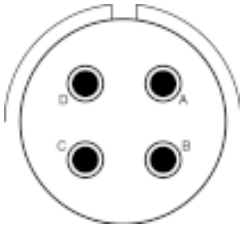


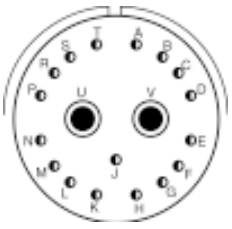


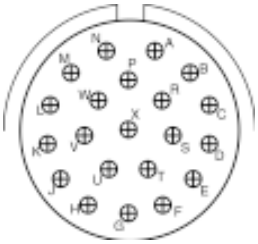


Insert Arrangement	**18-68 19-68**	**18-96**	**20-11 21-11**	**20-16 21-16**
Available in Connector Series	**JT LJT**	**JT**	**JT, SJT LJT, TV**	**JT, SJT LJT, TV**
Service Rating	**I**	**I**	**I**	**II**
Number of Contacts	**18**	**9**	**11**	**16**
Contact Size	**16**	**12**	**12**	**16**

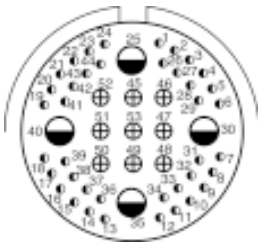


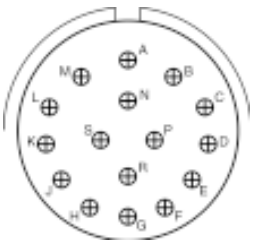


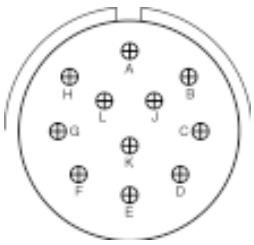


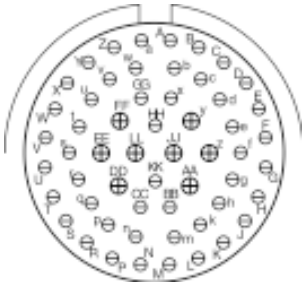


Insert Arrangement	**20-39 21-39**	**20-75 21-75**	**20-79 21-79**	**22-21 23-21**
Available in Connector Series	**JT, SJT LJT, TV**	**SJT LJT, TV**	**SJT LJT**	**JT, SJT LJT, TV**
Service Rating	**I**	**M**	**II**	**II**
Number of Contacts	**37 2**	**4**	**17**	**21**
Contact Size	**20 16**	**8**	**22D**	**16**









Insert Arrangement	**23-54**	**23-97**	**23-99**	**24-4 25-4**
Available in Connector Series	**TV**	**LJT**	**LJT**	**JT, SJT LJT, TV**
Service Rating	**M**	**II**	**II**	**I**
Number of Contacts	**40 9 4**	**16**	**11**	**48 8**
Contact Size	**22D 16 12**	**16**	**16**	**20 16**

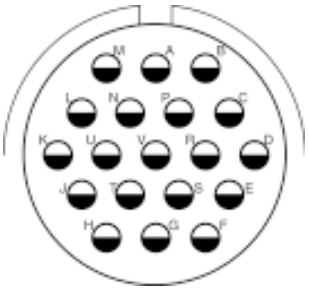
Insert Patterns - Subminiature Cylindricals

Incorporating coax, twinax and triax contacts

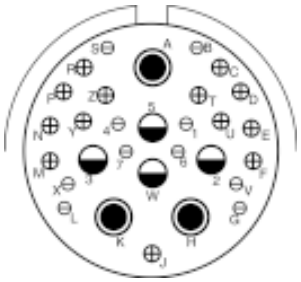
CONTACT LEGEND

8	10	12	16	20	22D
Coax/ Twinax/ Triax or Power	Twinax/ Triax/ or Power	Coax/ Twinax/ Triax or Power	Coax or Power	Power	Power

front face of pin inserts illustrated

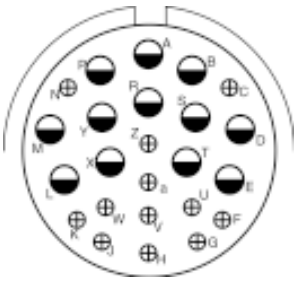


Insert Arrangement	**24-19 25-19**
Available in Connector Series	**JT, SJT LJT, TV**
Service Rating	**I**
Number of Contacts	**19**
Contact Size	**12**

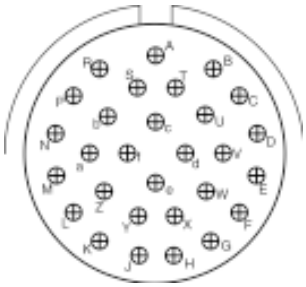


Insert Arrangement	**24-20 25-20***
Available in Connector Series	**SJT LJT, TV**
Service Rating	**N**
Number of Contacts	**10 13 3 4**
Contact Size	**20 16 8 12**

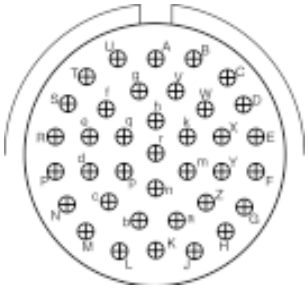
(Locations U and Y - Dedicated to Fiber Optics)



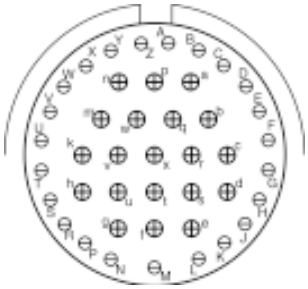
Insert Arrangement	**24-24 25-24**
Available in Connector Series	**JT, SJT LJT, TV**
Service Rating	**I**
Number of Contacts	**12 12**
Contact Size	**16 12**



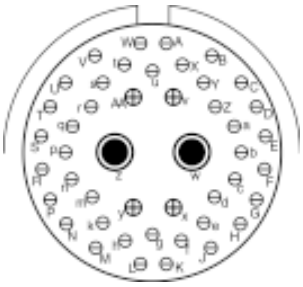
Insert Arrangement	**24-29 25-29**
Available in Connector Series	**JT, SJT LJT, TV**
Service Rating	**I**
Number of Contacts	**29**
Contact Size	**16**



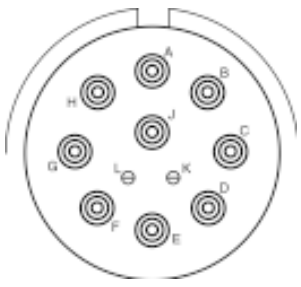
Insert Arrangement	**24-37 25-37**
Available in Connector Series	**JT, SJT LJT, TV**
Service Rating	**I**
Number of Contacts	**37**
Contact Size	**16**



Insert Arrangement	**24-43 25-43**
Available in Connector Series	**JT, SJT LJT,TV**
Service Rating	**I**
Number of Contacts	**23 20**
Contact Size	**20 16**



Insert Arrangement	**24-46 25-46**
Available in Connector Series	**SJT LJT, TV**
Service Rating	**I**
Number of Contacts	**40 4 2**
Contact Size	**20 16 8**



Insert Arrangement	**25-11***
Available in Connector Series	**LJT, TV**
Service Rating	**N**
Number of Contacts	**2 9**
Contact Size	**20 10**

* For use in MIL-STD-1760 applications with MIL-DTL-38999 Series III.