

ITT Cannon MKJ Series Micro-Miniature Circular Connectors



D38999 PERFORMANCE IN A MUCH SMALLER PACKAGE

ITT Cannon MKJ line of micro-miniature circular connectors offer high-density contact arrangements in a light-weight miniature connector. Reduced in weight by 71% and size by 52% as compared to the D38999 22 size layout, these connectors do not sacrifice environmental performance or reliability. The MKJ micro-miniature series is available in three coupling methods: threaded, bayonet, and breakaway. ITT Cannon MKJ micro-miniature circular connectors come with rear accessory threads or integral band platform for direct attachment of cable shield and overmold. Integral band platform allows direct attachment of cable shield to connector. Available in a wide range of materials and finishes, the MKJ series is the rugged connector used in defense, aerospace, medical, and industrial applications. For full details on the ITT Cannon MKJ Series Micro-Miniature Circular Connectors, please see the product specifications below.


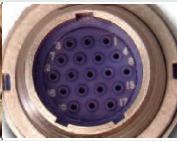
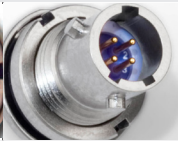

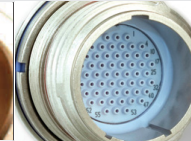
APPLICATIONS

- Sensors
- Satellites
- Instrumentation
- Missile systems
- Avionic systems
- Soldier technology
- Industrial equipment
- Unmanned aviation vehicles
- Navigation and Telemetry equipment
- Medical test and diagnostic equipment
- Ruggedized computers and hand held communication equipment
- Commercial & Military aircraft electronics

FEATURES

- Available in split-tine and PC tail/solder cup contact designs
- Contacts meet MIL-C-39029 specifications
- Internal ratchet mechanism engineered to be comparable to MIL-DTL-38999 shock and vibration requirement
- Multiple keying position
- Well suited to harsh environments
- Wide range of protective accessories and finishes
- High density of contacts

FEATURES (CONT.)

	COUPLING				
					
	MKJ0 UNC THREAD	MKJ1 DOUBLE START	MKJ3 BAYONET	MKJ4 BREAKAWAY	MKJ5 TRIPLE START
MARKETS & SEGMENTS	Defense, Aerospace, Medical, Industrial, Commercial				
HARDWARE	Aluminum	Aluminum/ Stainless steel	Aluminum	Aluminum	Aluminum
EMI SHIELDING EFFECTIVENESS	40 db attenuation, 100Mhz to 1000Mhz				
MATING CYCLES	2000	2000	250 Aluminum, 2000 Stainless Steel	2000	2000
ROHS COMPLIANT	Available				
MATERIALS	Shells – Aluminum alloy or Stainless steel Insulators – Thermoplastic Seals – Fluorosilicone Contacts – Copper alloy with gold over nickel plating				

TECH SPECS

MATERIALS & FINISHES

Shells	Aluminum alloy or stainless steel
Shell Plating	Anodized Black, Electroless Nickel, Passivated, Teflon Nickel, Olive Drab Cadmium, Nickel Black
Insulators	Thermoplastic
Seals	Fluorosilicone
Contacts and Plating	Copper Alloy with gold over nickel plating

ELECTRICAL DATA

Contact Resistance	8 Milliohms
Insulation Resistance	5000 megaohms RMS sea level
Salt Spray Test	48 hrs; Anodized black, Electroless Nickel, 500 hrs; Olive Drab Cadmium, Teflon Nickel, Zinc Nickel Black, 1000 hrs; Stainless steel

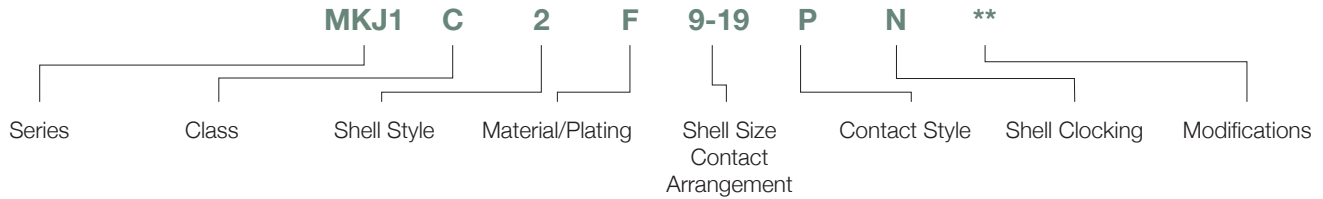
CONTACT SIZE	SPACING	CURRENT RATING	WIRE ACCOMMODATION	SEALING RANGE	OPERATING VOLTAGE RATING*
#23	.076"	5 Amps	#22 - 28 AWG	.030 - .051	500 VAC
#20	.106"	7.5 Amps	#20 - 24 AWG	.040 - .083	750 VAC
#16	.170"	13 Amps	#16 - #20 AWG	.065 - .109	1800 VAC
#12	.230"	23 Amps	#12 - #14 AWG	.097 - .142	1800 VAC

*At sea level

MECHANICAL DATA

Operating Temperature	-55°c to +150°c
Shock/Vibration	300g / 37g
Mating Cycle	250 Aluminium / 2000 Stainless Steel
Clocking Position	Master Key and 2 Secondary Keys. 4 Clocking Positions
Housing Materials	Aluminum and Stainless Steel
Polarization	Keys and keyways
Sealing	1 meter water immersion for 1 hour (MKJ 3 Splash Proof only)

ITT CANNON MKJ CONNECTORS

**EXPLANATION****SERIES**

- MKJ0 - Threaded Coupling, UN Thread
- MKJ1 - Threaded Coupling, Double Start ACME Thread
- MKJ3 - Bayonet Coupling
- MKJ4 - Breakaway/Quick Disconnect
- MKJ5 - Threaded Coupling, Triple Start ACME Thread

CLASS

- A - Environmental Plug & Receptacle with Banding/ Overmolding Attachment
- B - Environmental Plug & Receptacle with Threaded Accessory Attachment
- C - Back-Potted Plug/Receptacle - PC/Flex/Solder
- D - C Filtered Receptacle - Fixed Contacts
- E - L Filtered Receptacle - Fixed Contacts
- F - Pi Filtered Receptacle - Fixed Contacts
- G - Space
- H - Hermetically Sealed Receptacle - Fixed Contacts

SHELL STYLE

- 1 - In-Line Receptacle
- 2 - Box Mount Receptacle (Square Flange)
- 3 - Receptacle, Round, Solder Mount
- 4 - Box Mount Plug (Flange)
- 6 - Straight Plug
- 7 - Jam Nut Receptacle - Rear Panel Mount
- 8 - Jam Nut Receptacle - Front Panel Mount (MKJ4 series only)
- 9 - Jam Nut Plug - Rear Panel Mount (MKJ4 series only)
- 10 - Jam Nut Plug - Front Panel Mount (MKJ4 series only)
- 16 - Straight Plug with Self-Locking Coupling Nut (MKJ0 series only)
- 26 - Straight Plug with Self-Ratchet Coupling Nut (MKJ1 series only)

MATERIAL/PLATING

- C - Aluminum/Anodize, Black
- F - Aluminum/Electroless Nickel
- K - Stainless Steel/Passivated
- T - Aluminum/Teflon Nickel
- W - Aluminum/OD Cad
- Y - Stainless Steel/Electroless Nickel, Black
- Z - Aluminum/Zinc Nickel, Black
- N - Stainless Steel/Electroless Nickel

SHELL SIZE & CONTACT ARRANGEMENT

- 5-3 - Size 3/23 Contacts Series MKJ0, MKJ1, MKJ3, MKJ4
- 6-1 - Size 1/16 Contacts Series MKJ0, MKJ1, MKJ3, MKJ4
- 6-4 - Size 4/23 Contacts Series MKJ0, MKJ1, MKJ3, MKJ4
- 6-7 - Size 7/23 Contacts Series MKJ0, MKJ1, MKJ3, MKJ4
- 7-1 - Size 1/12 Contacts Series MKJ0, MKJ1, MKJ3, MKJ4
- 7-10 - Size 10/23 Contacts Series MKJ0, MKJ1, MKJ3, MKJ4
- 8-1 - Size 1/16 Contacts Series MKJ5
- 8-4 - Size 4/23 Contacts Series MKJ5
- 8-7 - Size 7/23 Contacts Series MKJ5
- 8-13 - Size 13/23 Contacts Series MKJ0, MKJ1, MKJ3, MKJ4
- 9-1 - Size 1/12 Contacts Series MKJ5
- 9-4 - Size 4/16 Contacts Series MKJ0, MKJ1, MKJ3, MKJ4
- 9-10 - Size 10/23 Contacts Series MKJ5
- 9-19 - Size 19/23 Contacts Series MKJ0, MKJ1, MKJ3, MKJ4

SHELL SIZE & CONTACT ARRANGEMENT (CONT.)

- 10-13 - Size 13/23 Contact Series MKJ5
- 10-26 - Size 26/23 Contacts Series MKJ0, MKJ1, MKJ3, MKJ4
- 11-4 - Size 4/16 Contacts Series MKJ5
- 11-19 - Size 19/23 Contacts Series MKJ5
- 12-2 - Size 2/12 Contacts Series MKJ0, MKJ3, MKJ4
- 12-26 - Size 26/23 Contacts Series MKJ5
- 12-37 - Size 37/23 Contacts Series MKJ0, MKJ3, MKJ4
- 13-2 - Size 2/12 Contacts Series MKJ1
- 13-37 - Size 37/23 Contacts Series MKJ1
- 14-55 - Size 55/23 Contacts Series MKJ0, MKJ3, MKJ4
- 15-2 - Size 2/12 Contacts Series MKJ5
- 15-37 - Size 37/23 Contacts Series MKJ5
- 15-55 - Size 55/23 Contacts Series MKJ0, MKJ3, MKJ4
- 16-55 - Size 55/23 Contacts Series MKJ1
- 17-85 - Size 85/23 Contacts Series MKJ1
- 18-55 - Size 55/23 Contacts Series MKJ5
- 19-85 - Size 85/23 Contacts Series MKJ5

CONTACT STYLE

- P - Pin, Crimp, Removable (For Class A & B only)
- S - Socket, Crimp, Removable (For Class A & B only)
- A - Pin, PC Tail, .062 Extension (For Class C through G only)
- B - Pin, PC Tail, .109 Extension (For Class C through G only)
- C - Socket, PC Tail, .062 Extension (For Class C through G only)
- D - Socket, PC Tail, .109 Extension (For Class C through G only)
- E - Pin, Solder Cup (For Class C through G only)
- F - Socket, Solder Cup (For Class C through G only)

SHELL CLOCKING (POSITION)

- | | |
|-------------------------------------|-------------------------------------|
| MKJ0 Series | MKJ4 Series |
| N - Normal | Omit for Single Key/Keyway |
| X - Clocking Position X | A - Normal 150° - 210° |
| Y - Clocking Position Y | B - Clocking Position B 75° - 210° |
| Z - Clocking Position Z | C - Clocking Position C 95° - 230° |
| | D - Clocking Position D 140° - 275° |
| MKJ1 Series | MKJ5 Series |
| A - Normal 150° - 210° | A - Normal 150° - 210° |
| B - Clocking Position B 75° - 210° | B - Clocking Position B 75° - 210° |
| C - Clocking Position C 95° - 230° | C - Clocking Position C 95° - 230° |
| D - Clocking Position D 140° - 275° | D - Clocking Position D 140° - 275° |
| E - Clocking Position E 75° - 275° | |
| F - Clocking Position F 95° - 210° | |
| MKJ3 Series | |
| N - Normal 150° - 210° | |
| X - Clocking Position X 75° - 210° | |
| Y - Clocking Position Y 95° - 230° | |
| Z - Clocking Position Z 140° - 275° | |

MODIFICATION CODE

- F0 - Less Contacts ("F0" not stamped on the connector, but must be included on the P.O.)
 - 518 - Class "C" PC style back potted receptacle connectors with water immersion testing.
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|--|-------------------|
| Capacitance Codes (pF) - A - 19,000 - 28,000 | D - 4,000 - 6,000 |
| B - 16,000 - 22,500 | E - 1,650 - 2,500 |
| C - 9,000 - 16,500 | F - 400 - 650 |
| | G - 200 - 300 |

Contact us for other modification codes