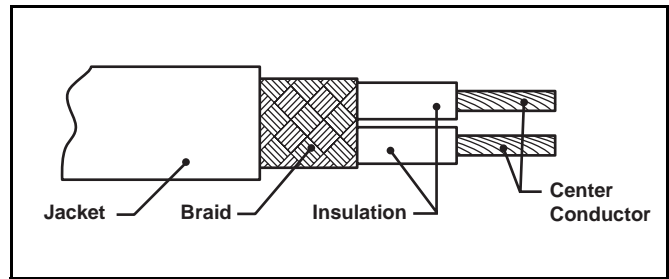


Twinax Contacts for Subminiature Cylindricals

general description, application data - size 12

Amphenol® Twinax Contacts were designed for use with twinax cable in Data Bus systems. Twinax contacts provide the following benefits:

- Protection from magnetic interference
- Protection from electrostatic interference including nuclear electromagnetic pulse
- Meets parameters defined by MIL-STD-1553B
- Maintains shield integrity through a multi-pin cylindrical connector and does not require contact polarization within the insert



Cable Illustration - Twinax Contact

SIZE 12 CONCENTRIC TWINAX CONTACTS

The size 12 concentric twinax contact interface was developed for JN1104 EuroFighter contacts, and can be used in any size 12 cavity M38999 I, II or III or SJT connector.

Features:

- Operating temperature -55°C to 175°C
- Pins are scoop-proof
- Meets performance levels of M38999 connector
- 4 components, gold plated crimp termination
- For use with a variety of cables (See chart below)

TYPICAL ELECTRICAL PERFORMANCE

Size 12 Concentric Twinax Contacts

Voltage Rating:

500 Vrms max. @ sea level

Contact Resistance:

Center @ 1 Amp, 55 millivolts max. voltage drop @ 25°C

Intermediate @ 1 Amp, 55 millivolts max. voltage drop @ 25°C

Outer @ 12 Amps, 85 millivolts max. voltage drop @ 25°C

Operating Frequency: 0-30 MHz

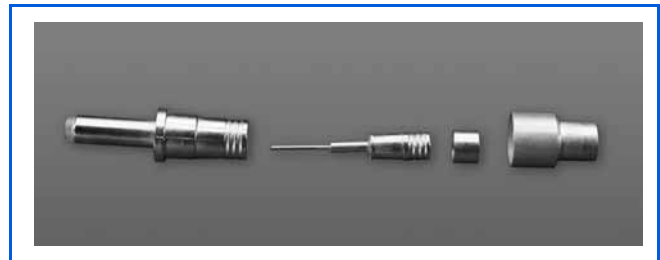
Dielectric Withstanding Voltage:

Center to Intermediate 800 VAC Rms @ Sea Level

Intermediate to Outer 500 VAC Rms @ Sea Level



Concentric Twinax Contacts Size 12



Unassembled Components of Size 12 Concentric Twinax Contact

SIZE 12 CONCENTRIC TWINAX CONTACTS FOR USE IN D38999 CONNECTORS				
For use with Cable	Size 12 Concentric Twinaxial Contact Part Number		Comments	Connector Series
	Pin	Socket		
EPD32263A, GSC-12-2548-00	21-33909-22	21-33908-22	JN1104 Interface	D38999 Series I, III
M17/176-00002	21-33909-25	21-33908-25		
GSC-12-81095-00	21-33909-26	21-33908-26		
GSC-12-81095-00		21-33640-26		D38999 Series II
0024A0024	21-33909-28	21-33908-28		
EPD32263A, 10612, GSC-12-2548-00	21-33909-29	21-33908-29		D38999 Series I, III

NOTE: Contacts can be ordered by part numbers given in chart

Twinax Contacts for Subminiature Cylindricals

general description, application data - size 8

High performance connectors within the D38999 families are the most commonly used connectors for incorporation of twinax contacts. These connectors offer wide versatility in insert arrangements for not only concentric twinax contacts, but also coax, triax, PCB, wire wrap, thermo-couples and EMI filter contacts.

Other connectors available with concentric twinax contacts:

- Wire Integrated Connectors (WICS) for Data Bus Systems. Consult Amphenol Aerospace, Sidney, NY.
- ARINC 404 and ARINC 600 rectangular connectors. Supplied by Amphenol Canada.

SIZE 8 CONCENTRIC TWINAX CONTACTS

The size 8 concentric twinax contact was developed for use in MIL-STD-1553 Airborne multiplex data bus applications which require high performance interconnect characteristics in multi-pin connectors. Ideal for this application need is the high performance Tri-Start connector with its fully scoop-proof feature of recessed pins. The concentric twinax contact is crimp terminable to twisted shielded cable. Features include:

- Provides protection from magnetic and electrostatic interference including nuclear electromagnetic pulse
- Maintains shield integrity through a multi-pin cylindrical connector and does not require contact polarization within the insert
- 175°C rated and meets performance levels of MIL-DTL-38999 Series III connectors
- MIL-C-17/176-00002 cable termination
- Gold plated full crimp termination contacts qualified to M39029/90 & /91
- Integral part of the MIL-STD-1760 interconnection system
- Also available in modified but intermateable versions for termination to a host of cables (See chart on next page)

TYPICAL ELECTRICAL PERFORMANCE

Size 8 Concentric Twinax Contacts

Voltage Rating: 500 Vrms max. @ sea level

Contact Resistance:

Center @ 1 Amp, 55 millivolts max. voltage drop @ 25°C

Intermediate @ 1 Amp, 55 millivolts max. voltage drop @ 25°C

Outer @ 12 Amps, 75 millivolts max. voltage drop @ 25°C

Operating Frequency: 0–20 MHz

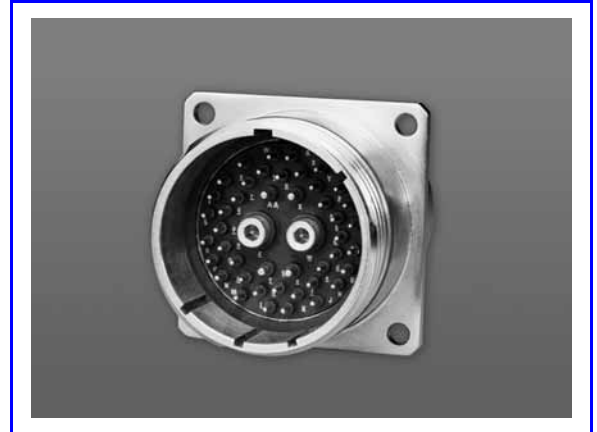
Dielectric Withstanding Voltage:

Center to Intermediate: 1000 VAC Rms @ Sea Level

Intermediate to Outer: 500 VAC Rms @ Sea Level

TWINAX CONTACTS OPTIONAL DESIGNS

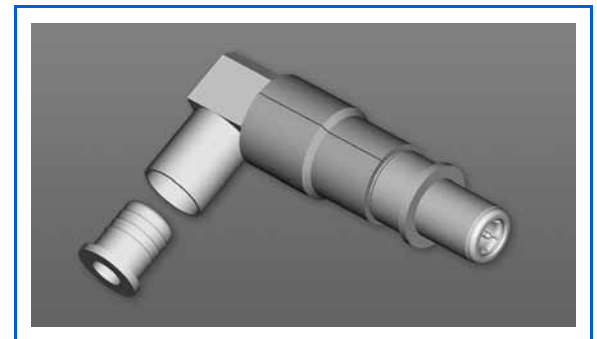
A 90 Degree size 8 Twinax and a Short Profile size 8 Twinax are available designs that both offer increased packaging efficiency. Consult Amphenol, Sidney, NY for further information on these contact options.



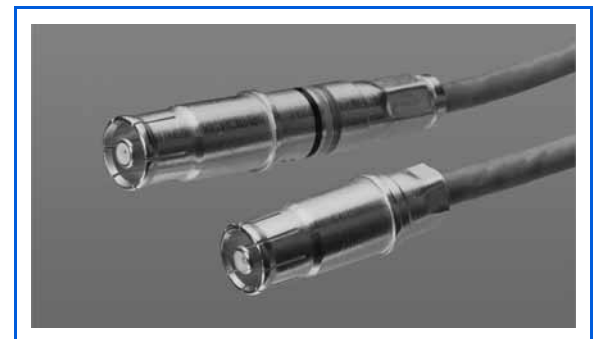
Subminiature MIL-DTL-38999 Series III Connector with Twinax Contacts and Standard Contacts



Concentric Twinax Contacts Size 8



Size 8, 90 Degree Twinax Pin Contact for use in Series I, II and III D38999 Connectors



Short Profile Twinax vs Standard Length Twinax Contact

Twinax Contacts for Subminiature Cylindricals

general description, application data - size 8, cont.

SIZE 8 CONCENTRIC TWINAX CONTACTS FOR USE IN D38999 CONNECTORS				
For use with Cable	Size 8 Concentric Twinaxial Contact Part Number		Comments	Connector Series
	Pin	Socket		
M17/176-00002	21-33190-529	21-33191-530	M39029/90/91 (Amphenol) Supplied with heat shrink seal	D38999 Series I, III
M17/176-00002	T3-46T08-LD	T3-47T08-LD	M39029/90/91 (Pyle) Supplied with heat shrink seal	
M17/176-00002	21-33190-000	21-33191-000	Supplied without seal	
M17/176-00002	21-33190-001	21-33191-001	Supplied with piggyback grommet seal	
Raychem 10612	21-33190-26	21-33191-26		
Raychem 10614, EPD22189B, 7724C8664, 05A0771, GC875TM24H, T10971	21-33190-22	21-33191-22		
Raychem 10613, PAN711-6421, 23089/RC	21-33190-27	21-33191-27	Heat Shrink Seal	
Raychem 10613, PAN711-6421, 23089/RC	21-33190-30	21-33191-30		
GSC-12-2548-00, 7726D0664	21-33190-40	21-33191-40	Supplied with piggyback grommet seal	
Raychem 10614, 7724C8664	T3-46TB08-LD	T3-47TB08-LD		
5M2022-003, HS5930, 0024G0024, Raychem 10602	P-209527	P-209528		
782OD0111 (20 AWG)	T3-467C08-LD	T3-477C08-LD		
M17/176-00002	21-33625-1		90 Degree	
S280W502-1	21-33190-71	21-33191-71	Supplied with piggyback grommet seal	
CXN2268	T3-46TE08-LD	T3-47TE08-LD	Short Profile	
M17/176-00002	T3-46TD08-LD	T3-47TD08-LD		
M17/176-00002	21-33910-15	21-33922-15		
M17/176-00002	21-33617-1		Short Profile with piggyback grommet seal	
CNX2702	T3-46TF08-LD	T3-47TF08-LD	Short Profile	
M17/176-00002		P-209546-27		

NOTE: Contacts can be ordered by part numbers given in chart.

Twinax Contacts for Subminiature Cylindricals

general description, application data - RCT Contacts

Amphenol® RCT (Reduced Component Twinax)

Contacts - contact assembly and termination for MIL-STD-1760 and MIL-STD-1553 Data Bus requirements.

- 3 user-assembled components
- Available in size 8 or size 10 contact sizes
- MIL-C-17/176-00002 and other various cable termination
- Termination completed in only two crimping operations
- Inner conductors stripped to common length

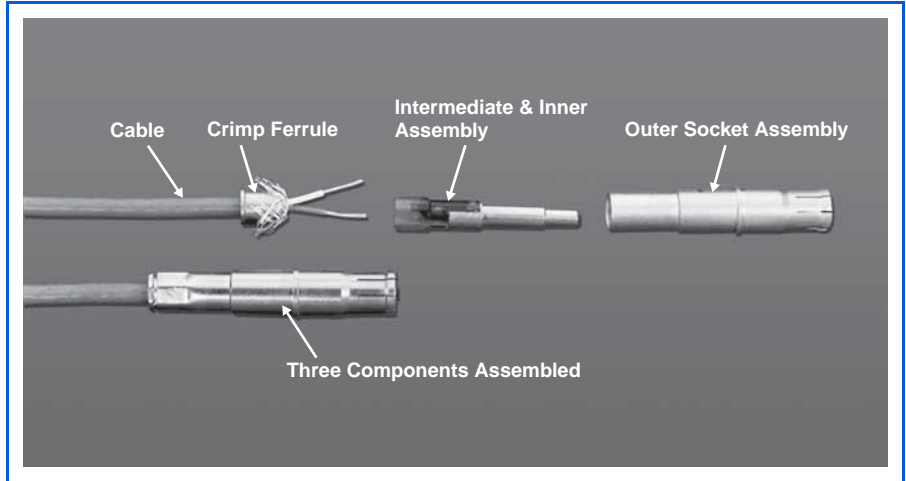
The size 8 reduced component twinax contact meets MIL-C-39029/90 and /91 requirements for intermateability and performance, while reducing the number of user-assembled components from seven to three.

The reduced component twinax can be installed in MIL-DTL-38999* Series I or III connectors, and can be terminated to MIL-C-17/176-00002 cable, with other cable versions available with minor modifications. (see chart below)

The inner conductors and outer barrel are each terminated to the cable by a crimp joint, so no costly assembly soldering operation is required.

As the inner conductors are stripped to a common length, multiple measurements are eliminated. Assembly instructions are included in the packaging of the contacts.

* MIL-DTL-38999 supersedes MIL-C-38999



RCT (Reduced Component Twinax Size 8 Contact)

TYPICAL ELECTRICAL PERFORMANCE Size 8 & 10 Reduced Component Contacts

Voltage Rating: 500 Vrms max. @ sea level

Contact Resistance:

Center @ 1 Amp, 55 millivolts max. voltage drop @ 25°C

Intermediate @ 1 Amp, 55 millivolts max. voltage drop @ 25°C

Outer @ 12 Amps, 75 millivolts max. voltage drop @ 25°C

Operating Frequency: 0–20 MHz

Dielectric Withstanding Voltage:

Center to Intermediate 1000 VAC Rms @ Sea Level

Intermediate to Outer 500 VAC Rms @ Sea Level

SIZE 8 & 10 REDUCED COMPONENT CONTACTS FOR USE IN D38999 CONNECTORS					
For use with Cable	Size	Size 8 & 10 Reduced Component Contact Part Number		Comments	Connector Series
		Pin	Socket		
M17-176-00002	8	21-33876-3	21-33875-3	Supplied with Heat Shrink Seals	D38999 Series I, III
M17-176-00002	8	21-33876-1	21-33875-1	Without Seals	
M17-176-00002	8	21-33876-2	21-33875-2	With Piggyback Seal	
Raychem 10612	8	21-33190-25	21-33191-25		
CXN2268	8	21-33876-65	21-33875-65		
5M2022-003 HS5930 0024G0024 Raychem 10602	8	21-33190-6	21-33191-6		
5M2022-003	10	21-33844-1	21-33843-1		
Raychem 10606	8	21-33190-34	21-33191-34		
0024A0311	8	21-33876-5	21-33875-5		

NOTE: Contacts can be ordered by part numbers given in chart.