



**SERIES 85**

# **RF, MICROWAVE AND DATALINK CONTACTS**

**for MIL-DTL-38999, Series 23 SuperNine®, Series 80 Mighty Mouse,  
and Series 79 Micro-Crimp® connectors**



# High Speed High Reliability High Availability

No more long lead times —  
Glenair high-performance RF,  
microwave and datalink contacts are  
in stock and ready to ship

Glenair's growing portfolio of high-speed solutions now includes a wide selection of RF, microwave and datalink contacts. Compatible with MIL-DTL-38999 connectors, these contacts also fit Glenair Series 80 Mighty Mouse, Series 79 Micro-Crimp® and Series 23 SuperNine® connectors. Designed in accordance with SAE AS39029 requirements, these contacts are suitable for aerospace and defense equipment subjected to high-vibration and temperature extremes.

Glenair's complete high-speed solution also includes a wide variety of standard and modified connectors, cordsets, fiber optic and opto-electronic technologies. Our rapid-response engineering and manufacturing capabilities allow us to quickly design and build customized interconnects and systems.

- 50 and 75 ohm coax contacts
- Spring-loaded microwave contacts
- Twinax contacts
- Quadrax contacts
- El Ochito® octaxial contacts

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## CUSTOM PACKAGING—OUR SPECIALTY



El Ochito® 10GBase-T Ethernet contacts installed in a custom Micro-Crimp connector

Quadrax contacts installed in a HiPer-D connector



Custom right angle board mount twinax connector

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse, and  
Micro-Crimp Connectors



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# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse, and Micro-Crimp Connectors



## Product Selection Guide

### AS39029 RF Contacts



#### Size #8 AS39029 Coaxial Contacts for RG-180..... 6 *dc – 700 MHz*

Size #8 coaxial contacts accept RG-180 cable. Maximum frequency is 700 MHz. Crimp termination. Snap-in, rear release. Compatible with MIL-DTL-38999 Series I, III, and IV, Series 23 SuperNine, and Series 80 Mighty Mouse connectors with size 8 cavities. AS39029 qualified.



#### Size #12 AS39029 Coaxial Contacts ..... 7 *dc – 3 GHz*

Size #12 coaxial contacts accept RG-174, RG-179, RG-180 and RG-316 cable. Crimp termination. Snap-in, rear release. Compatible with MIL-DTL-38999 Series I, II, III, and IV, Series 23 SuperNine, Series 79 MicroCrimp and Series 80 Mighty Mouse connectors with size 12 cavities. AS39029 qualified.



#### Size #16 AS39029 Coaxial Contacts ..... 8 *dc – 500 MHz*

Size #16 coaxial contacts accept RG-174, RG-178, RG-179 and RG-316 cable. Crimp termination. Snap-in, rear release. Compatible with MIL-DTL-38999 Series I, II, III, and IV, Series 23 SuperNine, Series 79 MicroCrimp and Series 80 Mighty Mouse connectors with size 16 cavities. AS39029 qualified.

### 50 Ohm Low-Loss Matched-Impedance Coaxial Contacts



#### Size #8 50 Ohm Matched-Impedance Contacts..... 10 *dc – 6 GHz*

High-frequency matched-impedance #8 contacts accept RG-316 single and double shielded cable along with M17/220-0001 cable. Compatible with MIL-DTL-38999, Series 23 SuperNine and Series 80 Mighty Mouse connectors. Crimp termination. Snap-in, rear-release. 50 ohm impedance.



#### Size #12 50 Ohm Matched-Impedance Contacts ..... 12 *dc – 3 GHz*

High-frequency matched-impedance contacts accept RG-178, RG-316, and RG-405 flex cable. Compatible with MIL-DTL-38999 Series I, II, III and IV, Series 23 SuperNine, Series 79 MicroCrimp and Series 80 Mighty Mouse connectors. Crimp termination. Snap-in, rear-release. 50 ohm impedance.

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse, and Micro-Crimp Connectors



## Product Selection Guide

### 75 Ohm Low-Loss Matched-Impedance Coaxial Contacts



#### Size #8 75 Ohm Matched-Impedance Contacts ..... 14 *dc – 4 GHz*

High-frequency 75 ohm #8 contacts accept RG-179 cable along with high performance RS170, SMPTE 292M, SMPTE 424M and other video cables. Compatible with MIL-DTL-38999 Series I, III, and IV, Series 23 SuperNine and Series 80 Mighty Mouse connectors. Crimp termination. Snap-in, rear-release.



#### Size #12 75 Ohm Matched-Impedance Contacts ..... 16 *dc – 3 GHz*

75 ohm size #12 matched-impedance contacts accept high performance RS170, SMPTE 292M and other video cables. Compatible with MIL-DTL-38999 Series I, II, III, and IV, Series 23 SuperNine, Series 79 MicroCrimp and Series 80 Mighty Mouse connectors. Crimp termination. Snap-in, rear-release.



#### 75 Ohm High-Performance Video Cable ..... 18

Cable is specially designed and manufactured for reliable performance in aircraft systems and other harsh environments involving high temperature, EMI and corrosive materials.

### 50 Ohm Spring-Loaded Microwave Coaxial Contacts



#### Size #8 Spring-Loaded BMB Coaxial Contacts ..... 22 *dc – 18 GHz*

These size 8 contacts conform to the MIL-STD-348 BMB interface standard. These contacts accept RG-402-FLEX and RG-405-FLEX cables along with other low loss flexible cables. Compatible with MIL-DTL-38999 Series I, III, and IV, Series 23 SuperNine and Series 80 Mighty Mouse connectors. Solder termination.



#### Size 12 Spring-Loaded SMPM Coaxial Contacts ..... 24 *dc – 40 GHz*

These size 12 contacts accept RG-405-FLEX cable and are compatible with MIL-DTL-38999, Series 23 SuperNine, Series 79 MicroCrimp and Series 80 Mighty Mouse connectors. Solder termination. .

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse, and Micro-Crimp Connectors



## Product Selection Guide

### Twinax Contacts



#### Size #8 77 Ohm Concentric Twinax Contacts ..... 26

M39029 concentric twinax contacts accommodate 77 ohm shielded twisted pair cable. These size 8 contacts meet the requirements of M39029/113 and /114. Compatible with MIL-DTL-38999, Series 23 SuperNine and Series 80 Mighty Mouse connectors. Use with M17/176-00002 databus cable, 10 MHz maximum operating frequency.



#### Size #8 100 Ohm Concentric Twinax Contacts ..... 28

These concentric twinax contacts accommodate 24 AWG 100 ohm shielded twisted pair data cable. Compatible with MIL-DTL-38999 Series I, III, and IV, Series 23 SuperNine and Series 80 Mighty Mouse connectors. Accepts TE/Raychem 0024A0024 and Gore GSC-03-81416-00 cables.



#### Size #12 77 Ohm Concentric Twinax Contacts ..... 30

M39029 concentric twinax contacts accommodate 77 ohm shielded twisted pair data cable. Typically used for MIL-STD-1553 databus applications, these size 12 contacts meet the requirements of JN1104, DSCC 02003 and DSCC 02004. Compatible with MIL-DTL-38999 Series I, III, and IV connectors. Snap-in, rear release, crimp termination.



#### Size #8 Differential Twinax Contacts ..... 32

Rated for dc – 3 GHz frequency, these contacts accept 68, 75, 77 and 100 ohm shielded twisted pair cable including with M17/176-00002 databus cable. Compatible with Series 80 Mighty Mouse connectors and Glenair 233-217 MIL-DTL-38999-type Series III connectors with keyed #8 cavities. **Not for use in standard MIL-DTL-38999 connectors with unkeyed inserts.**



#### Size #12 Differential Ultra-Twinax Contacts ..... 35

These 100 Ohm differential twinax contacts are suited for multi-gigabit data rate applications such as CML, LVDS and other advanced digital communications protocols. Use with high-speed #30 AWG twisted pair cable. These contacts are compatible with Glenair Series 80 Mighty Mouse connectors with size #12 cavities. Size #12 100 ohm contacts feature DC – 10 GHz frequency range. Solder termination.

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse, and Micro-Crimp Connectors



## Product Selection Guide

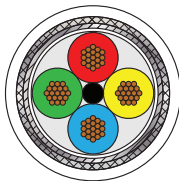
### Quadrax Contacts



#### Quadrax Contacts ..... 37

100 ohm Ethernet and 150 ohm Fibre Channel differential quadrax contacts are compatible with standard Series 80 Mighty Mouse connectors and Glenair 233-217 MIL-DTL-38999-type Series III connectors with keyed #8 inserts. These contacts accept aerospace grade quad cable.

*Not for use with standard MIL-DTL-38999 connectors with unkeyed inserts.*



#### Quad Cable..... 39

Aerospace-grade four-conductor 100 ohm quad cable is available in wire sizes 22, 24 and 26. These high-performance cables feature inner and outer shields for excellent EMI protection. High-temperature fluoropolymer insulation provides up to 150°C or 200°C temperature rating.

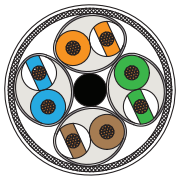
### El Ochito® Octaxial Contacts



#### El Ochito® Octaxial Contacts ..... 40

El Ochito, “the Little 8”, brings 1000BASE-T and 10GBASE-T capability to a size #8 snap-in contact with eight inner contacts. Data pair isolation technology reduces crosstalk between pairs. This contact accepts flight-grade Cat6a cable with #26AWG conductors.

*Not for use with standard MIL-DTL-38999 connectors with unkeyed inserts.*



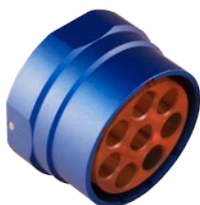
#### Aerospace Cat6a Cable..... 46

Lightweight, shielded flight-grade Ethernet cable is available in two styles: S/UTP (unshielded pairs) and S/FTP (foil-wrapped pairs). These 26 AWG cables are 200°C rated and meet ANSI/TIA 568-C.2 Category 6a requirements.



#### Pre-Wired El Ochito® Contacts ..... 47

Pre-wired El Ochito® assemblies are 100% tested and ready for use. These assemblies are available with three termination options: single-ended, El Ochito® contacts on both ends, or with an RJ45 plug on one end.



#### El Ochito® Test Adapters and Jumpers ..... 49

Prevent damage to expensive cables with El Ochito® test adapters and jumper cables. These test adapters properly align mating test contacts without the added expense and time-consuming labor of mating connectors. Jumper cables have shielded Cat6a RJ45 plugs.

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine<sup>®</sup>, Mighty Mouse and Micro-Crimp<sup>®</sup> Connectors



## AS39029 Coaxial Contacts

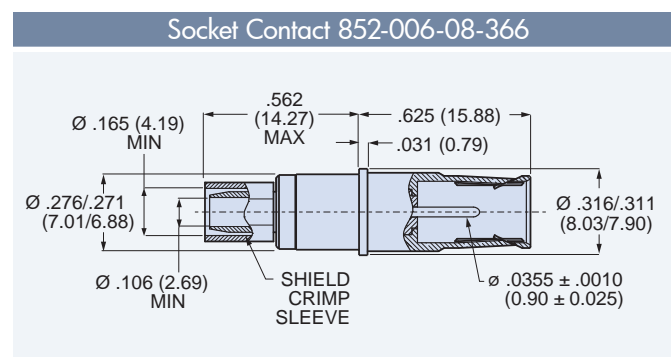
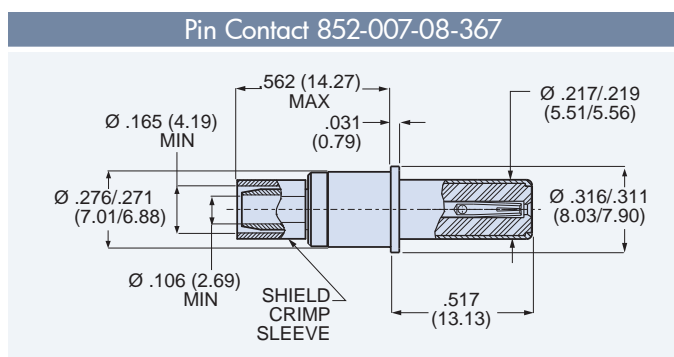
### Size #8 AS39029 Coaxial Contacts



These snap-in, rear-release contacts fit Glenair Series 80 Mighty Mouse, Series 23 SuperNine<sup>®</sup>, and MIL-DTL-38999 Series I, III and IV connectors with size #8 cavities. Crimp termination. SAE AS39029 qualified. Shipped unassembled with assembly instruction sheet, expander tool and push-rod tool.

Technical Data	
Specifications	Construction
Operating temperature: -65°C to +200°C Dielectric withstanding voltage: 1300 Vac rms at sea level, 250 Vac at 50,000 feet Current rating: 1 ampere Durability: 500 mating cycles Shock: EIA-364-27 condition D Vibration: MIL-DTL-38999 Max operating frequency: 700 MHz	<b>Inner contact, body, outer sleeve:</b> copper alloy, gold over nickel underplate per AS39029 Type D <b>Insulator:</b> fluoroplastic

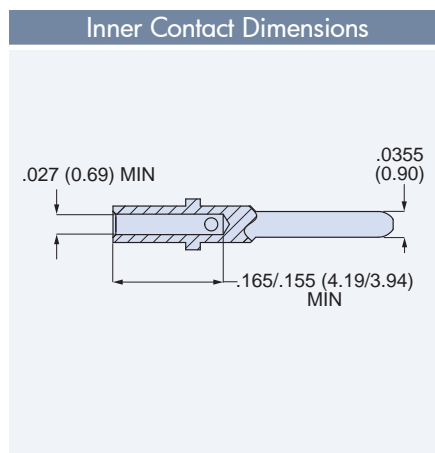
Size #8 AS39029 Coaxial Contacts								
RG Cable	Size	Pin Contact M38999 Series I, III, IV Series 80	Socket Contact M38999 Series I, III, IV Series 80	Crimp Tools				Removal Tool
				Inner Contact		Shield Crimp Sleeve		
				Crimper	Positioner	Crimper	Die Set	
RG180	8	<b>852-007-08-367</b> (M39029/60-367)	<b>852-006-08-366</b> (M39029/59-366)	<b>809-015</b> (M22520/2-01)	<b>859-050</b> (M22520/2-31)	<b>809-129</b> (M22520/5-01)	<b>859-051</b> (M22520/5-05)	<b>859-022</b> (M81969/14-06)



#### #8 Sealing Boot

Optional sealing boot fits RG180 cable. Slide boot onto cable before terminating contact. Fluorosilicone grommet, Ultem follower.

Cable Range (In.)	Part Number
.130-.170	<b>859-042-02</b>



#### AS39029 Color Stripes

Part Number	AS39029 Part No.	Color Bands		
		1st	2nd	3rd
852-006-08-366	M39029/59-366	ORANGE	BLUE	BLUE
852-007-08-367	M39029/60-367	ORANGE	BLUE	VIOLET



# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## AS39029 Coaxial Contacts

### Size #12 AS39029 Coaxial Contacts



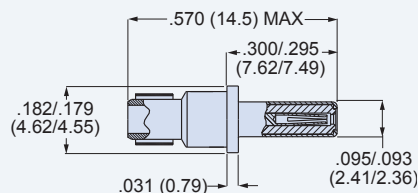
These snap-in, rear-release contacts fit Glenair Series 80 Mighty Mouse, Series 23 SuperNine®, Series 79 Micro-Crimp® and MIL-DTL-38999 connectors with size #12 cavities. Crimp termination. SAE AS39029 qualified.

Technical Data	
Specifications	Construction
<ul style="list-style-type: none"> <li>Operating temperature: -65°C. to +200°C.</li> <li>Dielectric withstanding voltage: 1000 Vac rms at sea level, 250 Vac at 50,000 feet</li> <li>Current rating: 1 ampere</li> <li>Durability: 500 mating cycles</li> <li>50 ohm nominal impedance*</li> <li>VSWR: 1.32 max., 500 MHz to 3 GHz*</li> <li>Insertion loss: 0.20 dB max. @ 3 GHz*</li> </ul>	<ul style="list-style-type: none"> <li><b>Inner contact, body, outer sleeve:</b> copper alloy, gold over nickel underplate per AS39029 Type D</li> <li><b>Socket contact hood:</b> stainless steel</li> <li><b>Insulator:</b> fluoroplastic</li> </ul>
* Applies to 852-004 and 852-005 only	

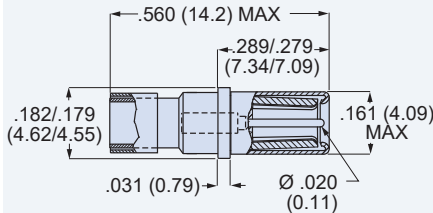
### Size #12 AS39029 Coaxial Contacts

RG Cable	Size	Freq.	Pin Contact M38999 I-IV Ser. 79, 80	Socket Contact		Crimp Tools				Insertion/ Removal Tool
				M38999 Series I, III, IV	M38999 Ser. II Series 79, 80	Inner Contact Crimper	Positioner	Shield Crimp Sleeve Crimper	Die Set	
RG174	12	700 MHz	<b>852-002-12-211</b> (M39029/28-211)	<b>852-003-12-416</b> (M39029/75-416)	<b>852-001-12-210</b> (M39029/27-210)	<b>809-015</b> (M22520/2-01)	<b>809-135</b> (M22520/2-34)	<b>809-133</b> (M22520/31-01)	<b>809-134</b> (M22520/31-02)	<b>809-132</b> (M81969/14-04)
RG179	12	200 MHz	<b>852-002-12-211</b> (M39029/28-211)	<b>852-003-12-416</b> (M39029/75-416)	<b>852-001-12-210</b> (M39029/27-210)	<b>809-015</b> (M22520/2-01)	<b>809-135</b> (M22520/2-34)	<b>809-133</b> (M22520/31-01)	<b>809-134</b> (M22520/31-02)	<b>809-132</b> (M81969/14-04)
RG180	12	700 MHz	<b>852-002-12-409</b> (M39029/28-409)	<b>852-003-12-417</b> (M39029/75-417)	<b>852-001-12-402</b> (M39029/27-402)	<b>809-015</b> (M22520/2-01)	<b>809-135</b> (M22520/2-34)	<b>809-133</b> (M22520/31-01)	<b>809-134</b> (M22520/31-02)	<b>809-132</b> (M81969/14-04)
RG316	12	700 MHz	<b>852-002-12-211</b> (M39029/28-211)	<b>852-003-12-416</b> (M39029/75-416)	<b>852-001-12-210</b> (M39029/27-210)	<b>809-015</b> (M22520/2-01)	<b>809-135</b> (M22520/2-34)	<b>809-133</b> (M22520/31-01)	<b>809-134</b> (M22520/31-02)	<b>809-132</b> (M81969/14-04)
		3 GHz	<b>852-004-12-558</b> (M39029/102-558)	<b>852-005-12-559</b> (M39029/103-559)	(N/A)	<b>809-128</b> (MH992)	<b>859-006</b> (K1721)	<b>809-129</b> (M22520/5-01)	<b>809-130</b> (M22520/5-03)	<b>809-132</b> (M81969/14-04)

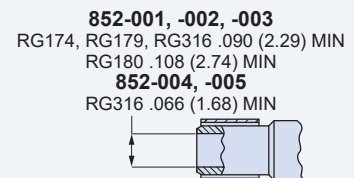
#### Pin Contact 852-002, 852-004



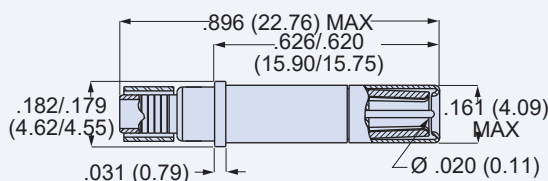
#### Socket Contact 852-001



#### Cable Entry



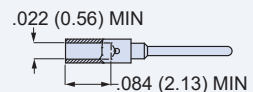
#### Socket Contact 852-003, 852-005



#### AS39029 Color Stripes

AS39029 Part No.	Color Bands		
	1st	2nd	3rd
M39029/27-210	RED	BROWN	BLACK
M39029/27-402	YELLOW	BLACK	RED
M39029/28-211	RED	BROWN	BROWN
M39029/28-409	YELLOW	BLACK	WHITE
M39029/75-416	YELLOW	BROWN	BLUE
M39029/75-417	YELLOW	BROWN	VIOLET
M39029/102-558	GREEN	GREEN	GRAY
M39029/103-559	GREEN	GREEN	WHITE

#### Inner Contact Crimp Barrel



# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine<sup>®</sup>, Mighty Mouse and Micro-Crimp<sup>®</sup> Connectors



## AS39029 Coaxial Contacts

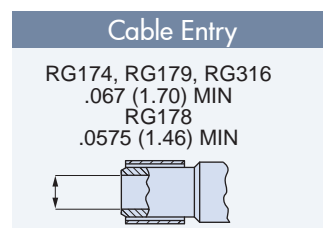
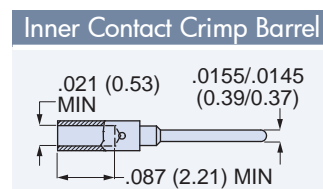
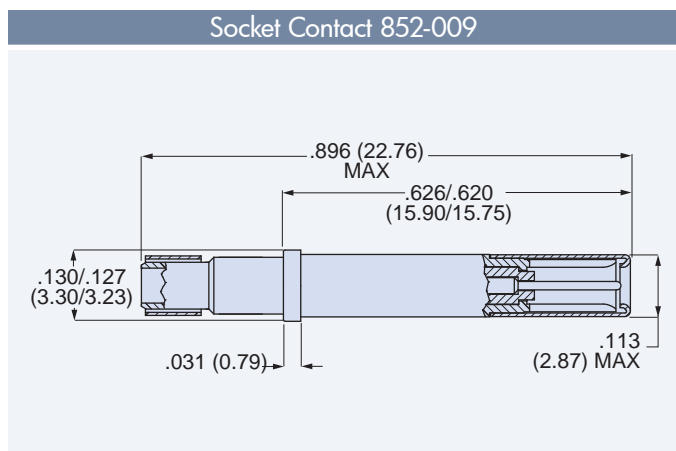
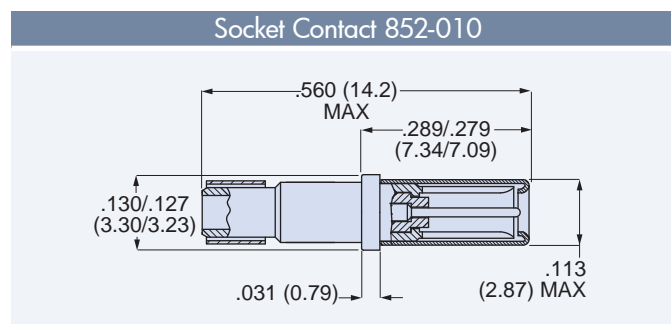
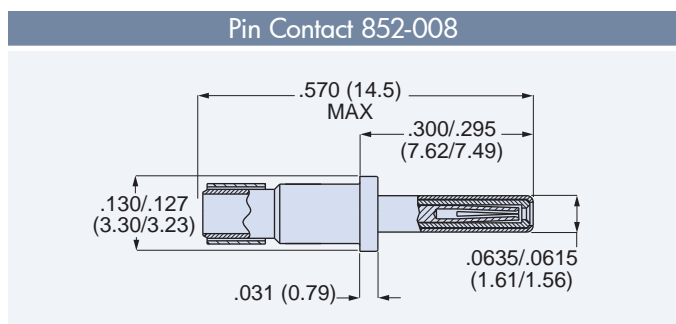
### Size #16 AS39029 Coaxial Contacts



These snap-in, rear-release contacts fit Glenair Series 80 Mighty Mouse, Series 23 SuperNine<sup>®</sup>, Series 79 Micro-Crimp<sup>®</sup> and MIL-DTL-38999 connectors with size #16 cavities. Crimp termination. SAE AS39029 qualified.

Technical Data	
Specifications	Construction
Operating temperature: -65°C. to +200°C. Dielectric withstanding voltage: 800 Vac rms at sea level, 250 Vac at 50,000 feet Current rating: 1 ampere Durability: 500 mating cycles VSWR: 1.50 max. @ 500 MHz	<b>Inner contact, body, outer sleeve:</b> copper alloy, gold over nickel underplate per AS39029 Type D <b>Socket contact hood:</b> stainless steel <b>Insulator:</b> fluoroplastic

Size #16 AS39029 Coaxial Contacts										
RG Cable	Size	Max. Freq.	Pin Contact M38999 I-IV Ser. 79, 80	Socket Contact		Crimp Tools				Insertion/Removal Tool
				M38999 Series I, III, IV	M38999 Ser. II Series 79, 80	Inner Contact Crimper	Positioner	Shield Crimp Sleeve Crimper	Die Set	
RG174 RG179 RG316	16	500 MHz	<b>852-008-16-424</b> (M39029/76-424)	<b>852-009-16-428</b> (M39029/77-428)	<b>852-010-16-432</b> (M39029/78-432)	<b>809-015</b> (M22520/2-01)	<b>809-125</b> (M22520/2-35)	<b>809-127</b> (M22520/4-01)	<b>809-126</b> (M22520/4-02)	<b>809-131</b> (M81969/14-03)
RG178	16	500 MHz	<b>852-008-16-425</b> (M39029/76-425)	<b>852-009-16-429</b> (M39029/77-429)	<b>852-010-16-433</b> (M39029/78-433)					



AS39029 Part No.	Color Bands		
	1st	2nd	3rd
M39029/76-424	YELLOW	RED	YELLOW
M39029/76-425	YELLOW	RED	GREEN
M39029/77-428	YELLOW	RED	GRAY
M39029/77-429	YELLOW	RED	WHITE
M39029/78-432	YELLOW	ORANGE	RED
M39029/78-433	YELLOW	ORANGE	ORANGE

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Low-Loss Matched-Impedance Coaxial Contacts

### Selection Guide

## 50 Ohm Matched-Impedance Contacts

These 50 ohm high frequency contacts provide low insertion loss and improved VSWR compared to AS39029 coaxial contacts. These snap-in, rear-release contacts are compatible with MIL-DTL-38999 connectors and Glenair Series 79 Micro-Crimp®, Series 80 Mighty Mouse and Series 23 SuperNine® connectors.



50 Ohm Matched-Impedance Coaxial Contacts						
Cable	Size	Max. Freq.	Pin Contact M38999 I-IV Ser. 79, 80	Socket Contact		Page
				M38999 Series I, III, IV Series 80	M38999 Series II Series 79, 80	
RG178	12	3 GHz	<a href="#">852-016-03</a>	<a href="#">852-019-03</a>	<a href="#">852-015-03</a>	12
RG316	8	3 GHz	<a href="#">852-031-02F</a>	<a href="#">852-030-02F</a>	(N/A)	10
RG316	12	3 GHz	<a href="#">852-016-01</a>	<a href="#">852-019-01</a>	<a href="#">852-015-01</a>	12
RG316DS	8	6 GHz	<a href="#">852-031-01F</a>	<a href="#">852-030-01F</a>	(N/A)	10
RG316DS	12	3 GHz	<a href="#">852-016-02</a>	<a href="#">852-019-02</a>	<a href="#">852-015-02</a>	12
RG405-FLEX	12	3 GHz	<a href="#">852-018</a>	<a href="#">852-037</a>	<a href="#">852-017</a>	12
M17/220-0001	8	2.5 GHz	<a href="#">852-043F</a>	<a href="#">852-042F</a>	(N/A)	10

## 75 Ohm Matched-Impedance Contacts

These 75 ohm high frequency contacts for up to 4 GHz frequency range accept aerospace grade digital video cable. These snap-in, rear-release contacts are compatible with MIL-DTL-38999 connectors, Glenair Series 79 Micro-Crimp®, Series 80 Mighty Mouse and Series 23 SuperNine® connectors.



75 Ohm Matched-Impedance Coaxial Contacts						
Cable	Size	Max. Freq.	Pin Contact M38999 I-IV Ser. 79, 80	Socket Contact		Page
				M38999 Series I, III, IV Series 80	M38999 Series II Series 79, 80	
RG179	8	4 GHz	<a href="#">852-056-02F</a>	<a href="#">852-057-02F</a>	(N/A)	14
RG179	12	3 GHz	<a href="#">852-103-02</a>	<a href="#">852-106-02</a>	<a href="#">852-104-02</a>	16
PIC V73263, V75268, V76261	8	4 GHz	<a href="#">852-056-01F</a>	<a href="#">852-057-01F</a>	(N/A)	14
PIC V73263, V75268, V76261	12	4 GHz	<a href="#">852-103-01</a>	<a href="#">852-106-01</a>	<a href="#">852-104-01</a>	16
PIC V78209	8	4 GHz	<a href="#">852-082-01F</a>	<a href="#">852-083-01F</a>	(N/A)	14
LMR-240-75	8	4 GHz	<a href="#">852-082-02F</a>	<a href="#">852-083-02F</a>	(N/A)	14

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Low-Loss Matched-Impedance Coaxial Contacts

### Size #8 50 Ohm Matched-Impedance Coaxial Contacts

Coax contacts fit Glenair Series 80 Mighty Mouse connectors and MIL-DTL-38999 Series I, III and IV connectors with size 8 contact cavities. 50 ohm nominal impedance. DC – 6 GHz frequency range. Inner contact is solder type, shield termination is crimp type. Supplied as unassembled kit with contact body, center contact, front and rear dielectric, retainer, clamp nut, crimp sleeve, sealing boot and instruction sheet. Contacts are snap-in, rear-release.



Pin Contact

DC – 6 GHz frequency range  
50 ohm nominal impedance  
50 microinches gold over nickel plating

Crimp termination  
VSWR 1.25:1 max. @ 6 GHz  
AS39029 design, construction and performance

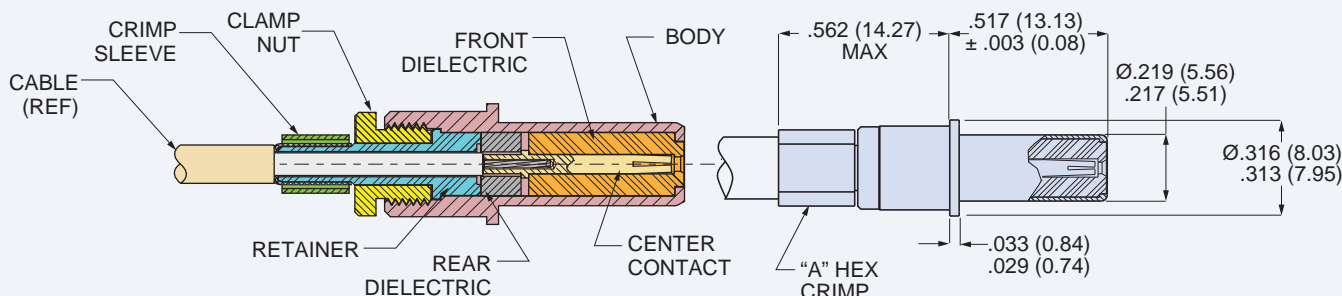


Socket Contact

Size #8 50 Ohm Matched-Impedance Coaxial Contacts						
RG Cable	Size	Max. Freq.	Pin Contact	Socket Contact	"A" Hex In.	mm.
<b>RG316</b> (M17/113-RG316)	8	3 GHz	<a href="#">852-031-02F</a>	<a href="#">852-030-02F</a>	.128	3.25
<b>RG316DS</b> (M17/152-00001)	8	6 GHz	<a href="#">852-031-01F</a>	<a href="#">852-030-01F</a>	.128	3.25
<b>LLSB-200</b> (M17/220-0001)	8	2.5 GHz	<a href="#">852-043F</a>	<a href="#">852-042F</a>	.213	5.41

Technical Data		
Specifications	Construction	Connector Compatibility
Operating temperature: -65°C. to +200°C. VSWR: 1.25:1 max. @ 6 GHz 50 ohm nominal impedance Dielectric withstanding voltage: 1300 Vac rms at sea level, 250 Vac at 50,000 feet Current rating: 1 ampere Durability: 500 mating cycles Shock: EIA-364-27 condition D Vibration: EIA-364-28 condition VI, letter J	<b>Center contact, body, retainer, clamp nut:</b> copper alloy, 50 microinches gold over nickel plating <b>Front and rear dielectric:</b> fluoroplastic <b>Sealing Boot:</b> fluorosilicone rubber, glass-filled PEI	MIL-DTL-38999 Series I, III and IV Glenair Series 23 SuperNine® Glenair Series 80 Mighty Mouse

### Pin Contact 852-031, 852-043



# RF, Microwave and Datalink Contacts

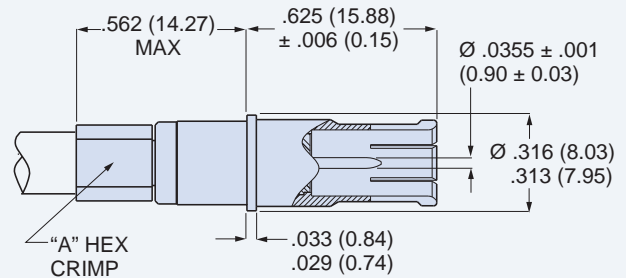
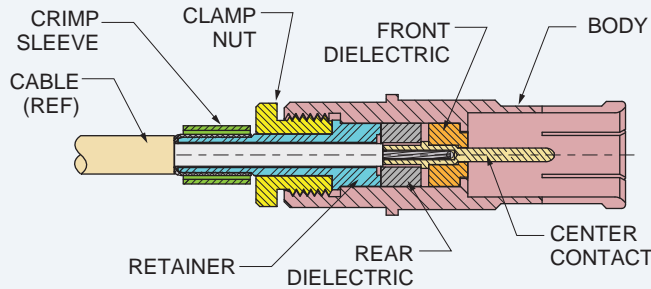
for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Low-Loss Matched-Impedance Coaxial Contacts

### Size #8 50 Ohm Matched-Impedance Coaxial Contacts

Socket Contact 852-030, 852-042



#### Crimp Tools, Removal Tool, Assembly Instruction Sheet

Contact Part Number	Crimp Tools				Removal Tool	Assembly Instruction Sheet
	Inner Contact Crimper	Positioner	Shield Crimper	Hex Die		
852-030	(Solder termination)	(Solder termination)	<b>809-129</b> (M22520/5-01)	<b>809-130</b> (M22520/5-03)	<b>859-049</b> (M81969/14-12)	AI85011
852-031	(Solder termination)	(Solder termination)	<b>809-129</b> (M22520/5-01)	<b>809-130</b> (M22520/5-03)	<b>859-049</b> (M81969/14-12)	AI85012
852-042	(Solder termination)	(Solder termination)	<b>809-129</b> (M22520/5-01)	<b>859-051</b> (M22520/5-05)	<b>859-049</b> (M81969/14-12)	AI85040
852-043	(Solder termination)	(Solder termination)	<b>809-129</b> (M22520/5-01)	<b>859-051</b> (M22520/5-05)	<b>859-049</b> (M81969/14-12)	AI85040

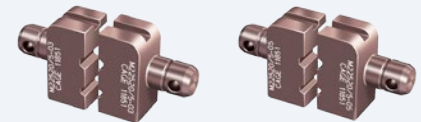
#### Crimp Tools

Tool terminates cable shield to contact ferrule. Use with M22520/5 die sets.



#### Hex Dies

Hex die for crimping ferrule to cable braid. Hardened steel, black oxide finish.



#### Removal Tool



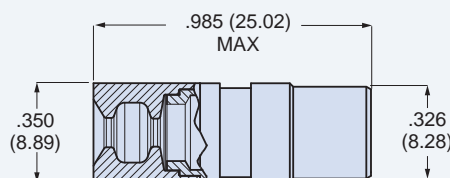
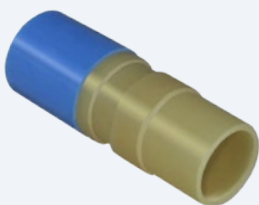
#### Reference Coax Cable Data

	LLSB-200	RG316	RG316DS
Manufacturer	Times Microwave	(mil spec)	(mil spec)
Military Part Number	M17/220-0001	M17-113-RG316	M17/152-00001
Impedance	50 ± 2	50 ± 2	50 ± 2
Operating Frequency (Max)	2.5 GHz	3 GHz	12.4 GHz
Temperature Range	-30° to +85°C	-55° to +200°C	-55° to +200°C
Continuous Working Voltage	750 V rms, max.	900 V rms, max.	900 V rms, max.
Jacket Material	LSZH*	FEP	FEP
Jacket Diameter	.195 (4.95)	.098 (2.49)	.114 (2.90)

\*Low Smoke Zero Halogen cross-linked polyolefin

#### Sealing Boot

Sealing boots are supplied with contacts. To order contacts less the sealing boot, remove the "F" suffix from the part number.



Wire Dia. (in.)	Wire Dia. (mm.)	Part Number
.090 - .130	2.3 - 3.3	<b>859-042-01</b>
.130 - .170	3.3 - 4.3	<b>859-042-02</b>
.170 - .205	4.3 - 5.2	<b>859-042-03</b>

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Low-Loss Matched-Impedance Coaxial Contacts

### Size #12 50 Ohm Matched-Impedance Coaxial Contacts



**Pin Contact**



**Socket Contact**

(MIL-DTL-38999 Series II, Glenair Series 79 and Series 80)



**Socket Contact**

(MIL-DTL-38999 Series I, III, and IV)

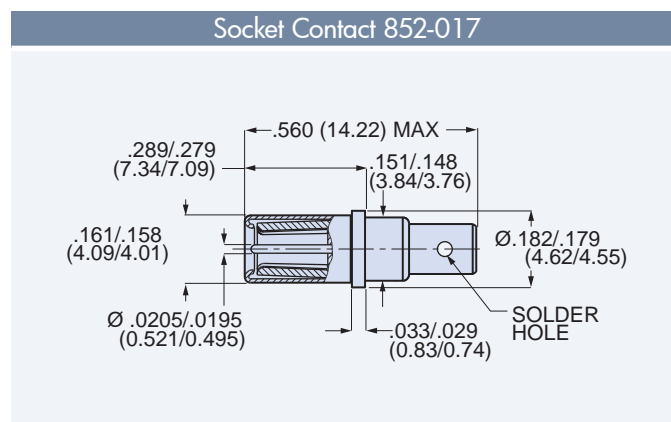
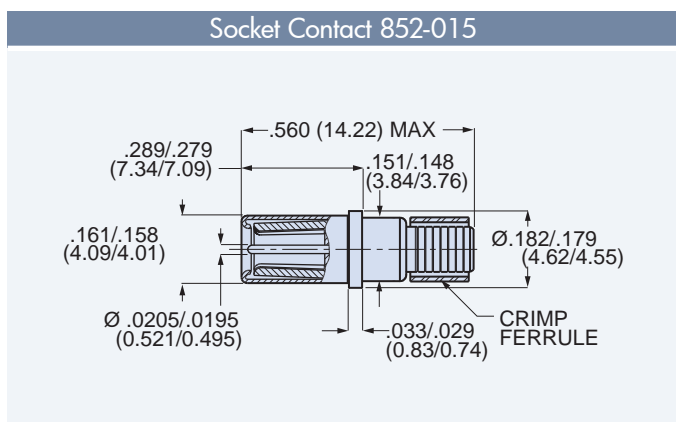
Coax contacts fit Glenair Series 79 Micro-Crimp, Series 80 Mighty Mouse, and MIL-DTL-38999 Series I, II, III and IV connectors with size 12 contact cavities. 50 ohm nominal impedance. DC – 3 GHz frequency range. Contacts are snap-in, rear-release. Gold plated copper alloy, fluoroplastic insulator.

DC – 3 GHz frequency range  
50 ohm nominal impedance  
50 microinches gold over nickel plating

Crimp termination  
AS39029 performance  
Accepts RG-405-Flex low-loss microwave cable

Size 12 50 Ohm Matched-Impedance Coaxial Contacts				
RG Cable	Max. Freq.	Pin Contact	Socket Contact	
			M38999 Series I, III, IV	M38999 Series II Series 79, 80
RG178 (M17/93-RG178)	3 GHz	852-016-03	852-019-03	852-015-03
RG316 (M17/113-RG316)	3 GHz	852-016-01	852-019-01	852-015-01
RG316DS (M17/152-00001)	3 GHz	852-016-02	852-019-02	852-015-02
RG405-FLEX	3 GHz	852-018	852-037	852-017

Technical Data		
Specifications	Construction	Connector Compatibility
Operating temperature: -65°C. to +200°C. VSWR: 1.32:1 max. @ 3 GHz Nominal impedance: 50 ohms Insertion loss: 0.20 dB maximum at 3 GHz Dielectric withstanding voltage: 1000 Vac rms at sea level Current rating: 1 ampere Durability: 500 mating cycles Shock: EIA-364-27 condition D Vibration: EIA-364-28 condition VI, letter J	<b>Center contact, body, crimp sleeve:</b> copper alloy, 50 microinches gold over nickel plating <b>Insulator:</b> fluoroplastic	MIL-DTL-38999 Series I, II, III and IV Glenair Series 23 SuperNine® Glenair Series 79 Micro-Crimp® Glenair Series 80 Mighty Mouse



# RF, Microwave and Datalink Contacts

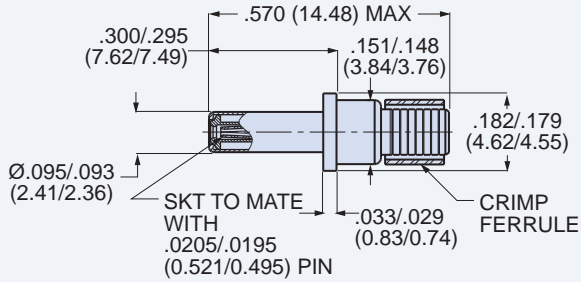
for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



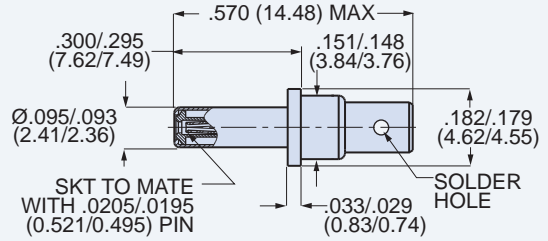
## Low-Loss Matched-Impedance Coaxial Contacts

### Size #12 50 Ohm Matched-Impedance Coaxial Contacts

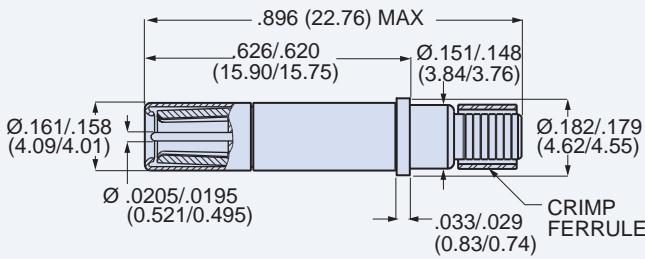
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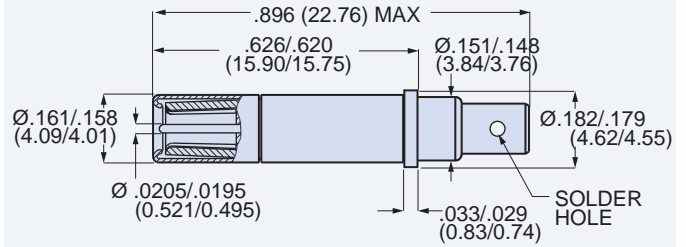
Pin Contact 852-018



Socket Contact 852-019



Socket Contact 852-037



#### Crimp Tools, Installation/Removal Tool, Assembly Instruction Sheet

Contact Part Number	Crimp Tools				Installation/Removal Tool	Assembly Instruction Sheet
	Inner Contact		Shield Crimp Sleeve			
	Crimper	Positioner	Crimper	Hex Die		
852-015	<b>809-128</b> (MH992)	<b>859-006</b> (K1721)	<b>809-129</b> (M22520/5-01)	<b>809-130</b> (M22520/5-03)	<b>809-132</b> (M81969/14-04)	AI85001
852-016	<b>809-128</b> (MH992)	<b>859-006</b> (K1721)	<b>809-129</b> (M22520/5-01)	<b>809-130</b> (M22520/5-03)	<b>809-132</b> (M81969/14-04)	AI85001
852-017	(Solder termination)	(Solder termination)	(Solder termination)	(Solder termination)	<b>809-132</b> (M81969/14-04)	AI85002
852-018	(Solder termination)	(Solder termination)	(Solder termination)	(Solder termination)	<b>809-132</b> (M81969/14-04)	AI85002
852-019	<b>809-015</b> (M22520/2-01)	<b>859-123</b> (K1457)	<b>809-129</b> (M22520/5-01)	<b>809-130</b> (M22520/5-03)	<b>809-132</b> (M81969/14-04)	AI85047
852-037	(Solder termination)	(Solder termination)	(Solder termination)	(Solder termination)	<b>809-132</b> (M81969/14-04)	AI85081

#### Inner Contact Crimp Tools



#### Shield Crimp Tool



#### Installation/Removal Tool



# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Low-Loss Matched-Impedance Coaxial Contacts

### Size #8 75 Ohm Matched-Impedance Coaxial Contacts



Pin Contact



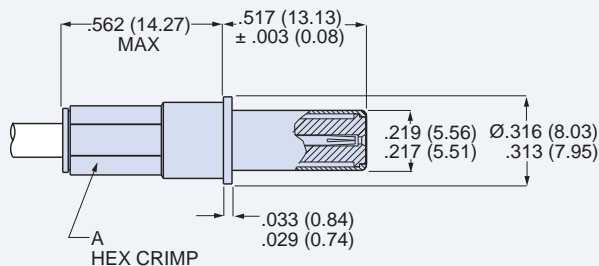
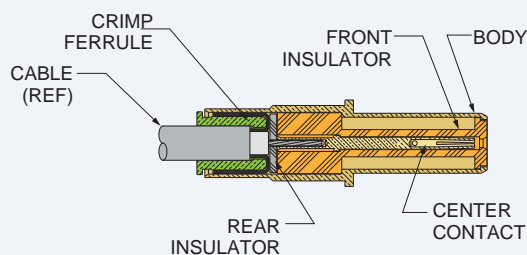
Socket Contact

Size 8 coax contacts fit aerospace-grade digital video cable. 75 ohm nominal impedance. 0-4 GHz frequency range. Crimp termination. Supplied as unassembled kit with contact body, center contact, outer ferrule and sealing boot. These snap-in, rear-release contacts fit Glenair Series 80 Mighty Mouse connectors and MIL-DTL-38999 Series I, III and IV connectors with size 8 contact cavities. Gold-plated copper alloy, fluoroplastic insulators.

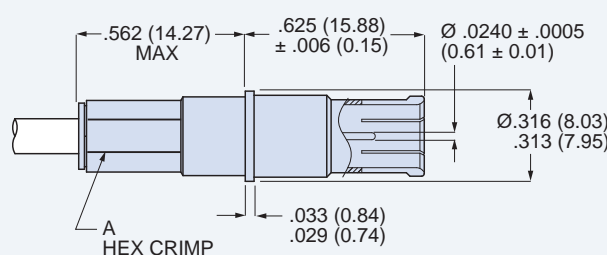
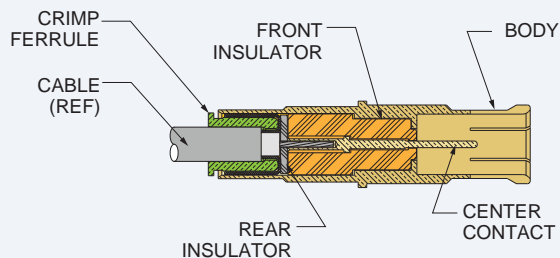
Size 8 75 Ohm Matched-Impedance Coaxial Contacts				
Cable	Pin Contact	Socket Contact	A Hex Crimp In.	mm.
V75268, V76261, V73263 (PIC™ Wire and Cable)	<a href="#">852-056-01F</a>	<a href="#">852-057-01F</a>	.218	5.54
RG179 (M17/94-RG179)	<a href="#">852-056-02F</a>	<a href="#">852-057-02F</a>	.128	3.25
V78209 (PIC™ Wire and Cable)	<a href="#">852-082-01F</a>	<a href="#">852-083-01F</a>	.231	5.87
LMR-240-75 (Times Microwave)	<a href="#">852-082-02F</a>	<a href="#">852-083-02F</a>	.231	5.87

Technical Data		
Specifications	Construction	Connector Compatibility
Operating temperature: -65°C. to +200°C. Dielectric withstanding voltage: 500 Vac rms at sea level Current rating: 1 ampere VSWR: 1.25:1 max. @ 4 GHz 75 ohm nominal impedance Durability: 500 mating cycles Shock: EIA-364-27 condition D Vibration: EIA-364-28 condition VI, letter J	<b>Center contact, body, retainer, clamp nut, ferrule:</b> copper alloy, 50 microinches gold over nickel plating <b>Front and rear insulator:</b> fluoropolymer <b>Sealing boot:</b> fluorosilicone rubber, glass-filled PEI	MIL-DTL-38999 Series I, III and IV Glenair Series 23 SuperNine® Glenair Series 80 Mighty Mouse

#### Pin Contact 852-056



#### Socket Contact 852-057





# RF, Microwave and Datalink Contacts

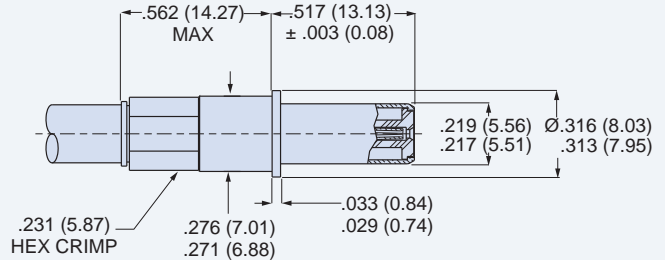
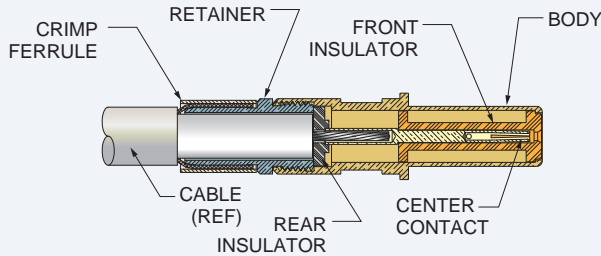
for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



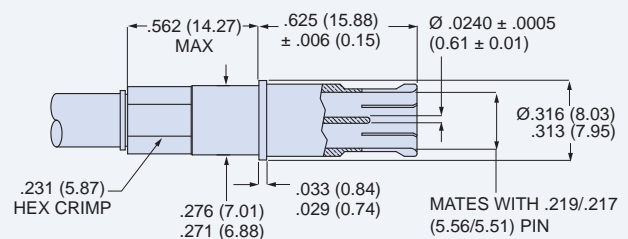
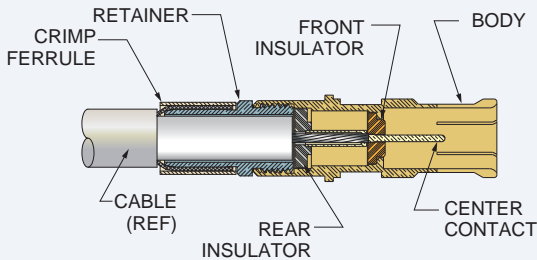
## Low-Loss Matched-Impedance Coaxial Contacts

### Size #8 75 Ohm Matched-Impedance Coaxial Contacts

#### Pin Contact 852-082



#### Socket Contact 852-083



#### Crimp Tools, Removal Tool, Assembly Instruction Sheet

Contact Part Number	Crimp Tools				Removal Tool	Assembly Instruction Sheet
	Inner Crimper	Contact Positioner	Shield Crimp Crimper	Hex Die		
852-056-01F	809-015 (M22520/2-01)	809-240 (M22520/2-37)	809-129 (M22520/5-01)	859-047 (M22520/5-45)	859-049 (M81969/14-12)	AI85028
852-056-02F	809-015 (M22520/2-01)	809-240 (M22520/2-37)	809-129 (M22520/5-01)	809-130 (M22520/5-03)	859-049 (M81969/14-12)	AI85059
852-057-01F	809-015 (M22520/2-01)	809-240 (M22520/2-37)	809-129 (M22520/5-01)	859-047 (M22520/5-45)	859-049 (M81969/14-12)	AI85028
852-057-02F	809-015 (M22520/2-01)	809-240 (M22520/2-37)	809-129 (M22520/5-01)	809-130 (M22520/5-03)	859-049 (M81969/14-12)	AI85059
852-082	809-015 (M22520/2-01)	809-240 (M22520/2-37)	809-129 (M22520/5-01)	859-047 (M22520/5-45)	859-049 (M81969/14-12)	AI85060
852-083	809-015 (M22520/2-01)	809-240 (M22520/2-37)	809-129 (M22520/5-01)	859-047 (M22520/5-45)	859-049 (M81969/14-12)	AI85036

#### Inner Contact Crimp Tools



#### Shield Crimp Tool



#### Hex Die

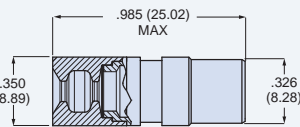
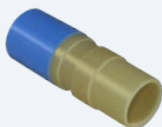


#### Removal Tool



#### Sealing Boot

Sealing boots are supplied with contacts. To order contacts less the sealing boot, remove the "F" suffix from the part number.



Wire Dia. (in.)	Wire Dia. (mm.)	Part Number
.090 – .130	2.3 – 3.3	859-042-01
.130 – .170	3.3 – 4.3	859-042-02
.170 – .205	4.3 – 5.2	859-042-03

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Low-Loss Matched-Impedance Coaxial Contacts

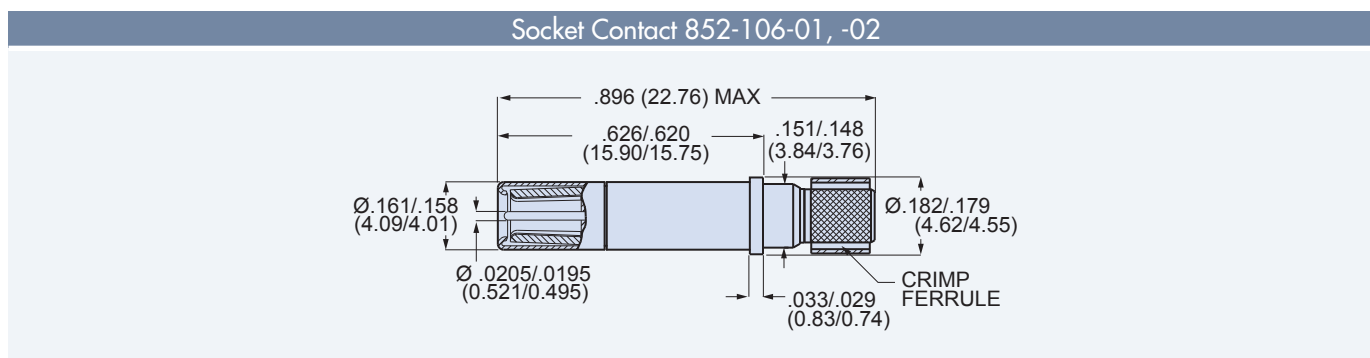
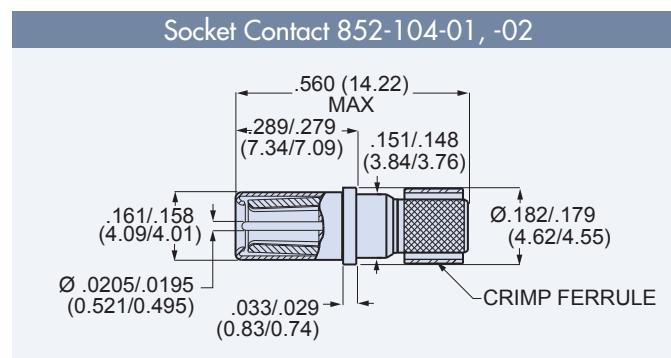
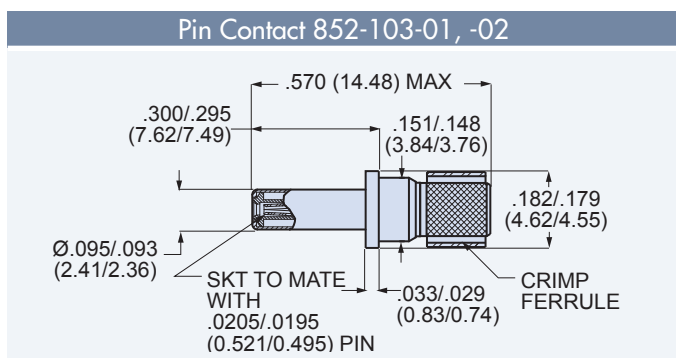
### Size #12 75 Ohm Matched-Impedance Coaxial Contacts



75 ohm coax contacts provide DC – 3 GHz frequency range. Crimp termination. Supplied as unassembled kit with contact body, center contact and outer ferrule. These snap-in, rear-release contacts fit Glenair Series 80 Mighty Mouse, Series 79 Micro-Crimp® and MIL-DTL-38999 connectors with size 12 contact cavities. Gold-plated copper alloy, fluoroplastic insulator.

Size 12 75 Ohm Matched-Impedance Coaxial Contacts			
RG Cable	Pin Contact	Socket Contact	
		M38999 Series I, III, IV	M38999 Series II Series 79, 80
<b>RG179</b> (M17/94-RG179)	<b>852-103-02</b>	<b>852-106-02</b>	<b>852-104-02</b>
<b>V75268, V76261, V73263</b> (PIC™ Wire and Cable)	<b>852-103-01</b>	<b>852-106-01</b>	<b>852-104-01</b>

Technical Data		
Specifications	Construction	Connector Compatibility
<ul style="list-style-type: none"> <li>Operating temperature: -65°C. to +200°C.</li> <li>Dielectric withstanding voltage: 500 Vac</li> <li>Current rating: 1 ampere</li> <li>VSWR: 1.25:1 max. @ 3 GHz</li> <li>75 ohm nominal impedance</li> <li>Durability: 500 mating cycles</li> <li>Shock: EIA-364-27 condition D</li> <li>Vibration: EIA-364-28 condition VI, letter J</li> </ul>	<ul style="list-style-type: none"> <li><b>Center contact, body, crimp sleeve:</b> copper alloy, 50 microinches gold over nickel plating</li> <li><b>Insulator:</b> fluoroplastic</li> <li><b>Hood:</b> stainless steel, passivated</li> </ul>	<ul style="list-style-type: none"> <li>MIL-DTL-38999 Series I, II, III and IV</li> <li>Glenair Series 23 SuperNine®</li> <li>Glenair Series 80 Mighty Mouse</li> <li>Glenair Series 79 Micro-Crimp®</li> </ul>



# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Low-Loss Matched-Impedance Coaxial Contacts

### Size #12 75 Ohm Matched-Impedance Coaxial Contacts

Crimp Tools, Installation/Removal Tool, Assembly Instruction Sheet						
Contact Part Number	Crimp Tools				Insertion/Removal Tool	Assembly Instruction Sheet
	Inner Contact		Shield Crimp Sleeve			
	Crimper	Positioner	Crimper	Positioner		
852-103-01	<b>809-128</b> (MH992)	<b>859-006</b> (K1721)	<b>809-133</b> (M22520/31-01)	<b>859-128</b> (GP959)	<b>809-132</b> (M81969/14-04)	AI85075
852-103-02	<b>809-128</b> (MH992)	<b>859-006</b> (K1721)	<b>809-129</b> (M22520/5-01)	<b>809-130</b> (M22520/5-03)	<b>809-132</b> (M81969/14-04)	AI85024
852-104-01	<b>809-128</b> (MH992)	<b>859-006</b> (K1721)	<b>809-133</b> (M22520/31-01)	<b>859-128</b> (GP959)	<b>809-132</b> (M81969/14-04)	AI85075
852-104-02	<b>809-128</b> (MH992)	<b>859-006</b> (K1721)	<b>809-129</b> (M22520/5-01)	<b>809-130</b> (M22520/5-03)	<b>809-132</b> (M81969/14-04)	AI85001
852-106-01	<b>809-015</b> (M22520/2-01)	<b>859-050</b> (M22520/2-31)	<b>809-133</b> (M22520/31-01)	<b>859-128</b> (GP959)	<b>809-132</b> (M81969/14-04)	AI85088
852-106-02	<b>809-015</b> (M22520/2-01)	<b>859-050</b> (M22520/2-31)	<b>809-129</b> (M22520/5-01)	<b>809-130</b> (M22520/5-03)	<b>809-132</b> (M81969/14-04)	AI85031

Inner Contact Crimp Tools



**809-128**  
(MH992)



**859-006**  
(K1721)



**809-015**  
(M22520/2-01)



**859-050**  
(M22520/2-31)

Shield Crimp Tool



**809-133**  
(M22520/31-01)



**859-128**  
(GP959)



**809-129**  
(M22520/5-01)



**809-130**  
(M22520/5-03)

Installation/Removal Tool



**809-132**  
(M81969/14-04)

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine<sup>®</sup>, Mighty Mouse and Micro-Crimp<sup>®</sup> Connectors



## Low-Loss Matched-Impedance Coaxial Contacts

### High Performance 75 Ohm Coaxial Cable

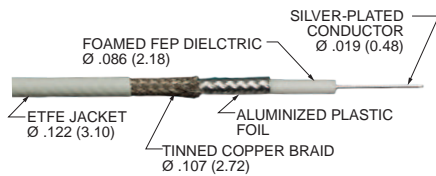
#### PIC<sup>™</sup> Aerospace-Grade Video Cable

PIC<sup>™</sup> video cable is specially designed and manufactured for reliable performance in aircraft systems and other harsh environments involving high temperature, EMI and corrosive materials. Improved strength, lower attenuation and better shielding compared with M17/94-RG179. Silver-plated conductor, foamed FEP dielectric, tinned copper braid, FEP or ETFE jacket. Syddrol resistant, RoHS compliant, meets FAA FAR Parts 23 and 25, Appendix F flammability, complies with MIL-DTL-17.

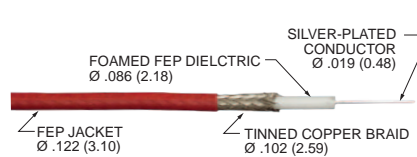
#### Times Microwave LMR<sup>®</sup>-240-75 Cable

Times Microwave LMR<sup>®</sup>-240-75 flexible low-loss coaxial cable is designed for 20 year outdoor service life. Featuring excellent flexibility and bendability, LMR-240-75 cable has a UV resistant polyethylene jacket.

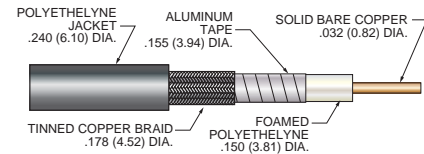
#### PIC<sup>™</sup> V76261



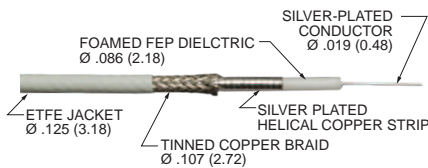
#### PIC<sup>™</sup> V75268



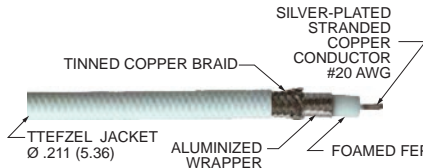
#### LMR<sup>®</sup>-240-75



#### PIC<sup>™</sup> V73263



#### PIC<sup>™</sup> V78209



Glenair Part No.	960-130	960-131	960-132							
Manufacturer Part No.	V75268	V76261	V73263	V78209	LMR-240-75					
Manufacturer	PIC <sup>™</sup>	PIC <sup>™</sup>	PIC <sup>™</sup>	PIC <sup>™</sup>	Times Microwave					
Impedance (ohms)	75	75	75	75	75					
Shielding Effectiveness (dB)	50	90	110	90	>90					
Video Application	RS170	RS170	SMPTE 292M	SMPTE 424M	Various					
First Shield	TC Braid	TC Braid	TC Braid	TC Braid	TC Braid					
Second Shield	None	Aluminized film, 100% coverage	Silver plated helical copper strip, 100%	Aluminized film, 100% coverage	Aluminized film, 100% coverage					
Temperature Rating	-65° to +165° C	-65° to +165° C	-65° to +165° C	-55° to +150° C	-40° to +85° C					
Minimum Bend Radius	0.6 in. (15mm.)	0.6 in. (15mm.)	0.65 in. (16.5mm.)	1.1 in. (27.9mm.)	.75 in. (19.1mm.)					
Weight (lbs/100 ft.)	1.2	1.1	1.5	3.0	3.4					
Capacitance (pF/ft)	16.0	16.0	16.0	16.5	16.1					
Velocity of Propagation %	80	80	80	80	84					
Time Delay nS/ft	1.28	1.28	1.28	1.28	1.21					
Max. Attenuation	Freq.	dB/100 ft	Freq.	dB/100 ft	Freq.	dB/100 ft	Freq.	dB/100 ft	Freq.	dB/100 ft
	1 MHz	0.55	1 MHz	0.52	1 MHz	0.58	1 MHz	0.4	50 MHz	1.6
	10 MHz	1.77	10 MHz	1.71	10 MHz	1.6	10 MHz	0.9	450 MHz	5.0
	100 MHz	5.7	100 MHz	5.5	100 MHz	5.0	100 MHz	3.0	900 MHz	7.2
	400 MHz	11.8	400 MHz	11.3	400 MHz	10.6	400 MHz	6.1	1.5 GHz	9.4
	1.45 GHz	24.6	1.45 GHz	23.4	1.45 GHz	22.0	1.45 GHz	13.6	2.0 GHz	10.9
3 GHz	37.4	3 GHz	36.1	3 GHz	34.0	3 GHz	25.0	2.5 GHz	12.3	

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors

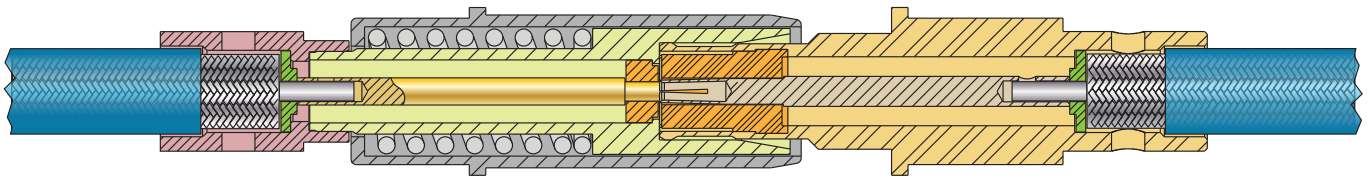


## Spring-Loaded Microwave Frequency Coaxial Contacts

### Product Overview and Selection Guide

## Spring-Loaded Coaxial Contacts for up to 40 GHz Performance

Spring-loaded coaxial contacts maintain consistent mating geometry for optimum performance at extremely high frequencies in challenging environmental conditions. These interfaces are adapted from the field-proven and widely-deployed blind-mate contact interfaces of MIL-STD-348. Suitable for satellite communications and radar equipment, these contacts are made to the highest standards for mission-critical applications.



Spring-Loaded BMB Contact

### Size 8 BMB Spring-Loaded Microwave Contacts ..... Page 22



50 ohm high frequency BMB coaxial contacts snap into standard MIL-DTL-38999 connectors with size #8 contact cavities. Maximum operating frequency 18 GHz. Spring-loaded BMB pin contact assures full mating under a variety of tolerance conditions. Interface conforms to MIL-STD-348 figure 322.

### Size 12 SMPM Spring-Loaded Microwave Contacts ..... Page 24



50 ohm high frequency size #12 coaxial contacts fit Glenair Series 80 Mighty Mouse connectors, Glenair Series 79 Micro-Crimp® connectors and MIL-DTL-38999 connectors. Maximum operating frequency 40 GHz.

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Spring-Loaded Microwave Frequency Coaxial Contacts

### Size #8 BMB Contacts for DC – 18 GHz



**Pin Contact**  
(for use in socket connectors)



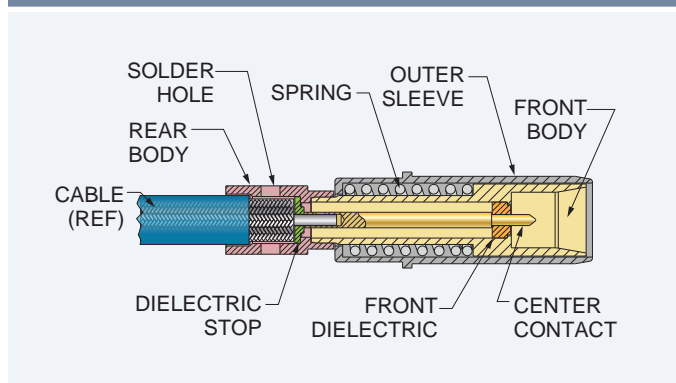
**Socket Contact**  
(for use in pin connectors)

50 ohm high frequency BMB coaxial contacts snap into standard MIL-DTL-38999 Series I, III and IV connectors with size #8 contact cavities. Also compatible with Glenair Series 80 Mighty Mouse and Series 23 SuperNine® connectors. Maximum operating frequency 18 GHz. Spring-loaded BMB pin contact assures full mating under a variety of tolerance conditions. Interface conforms to MIL-STD-348 figure 322. Aerospace-grade construction. Solder termination.

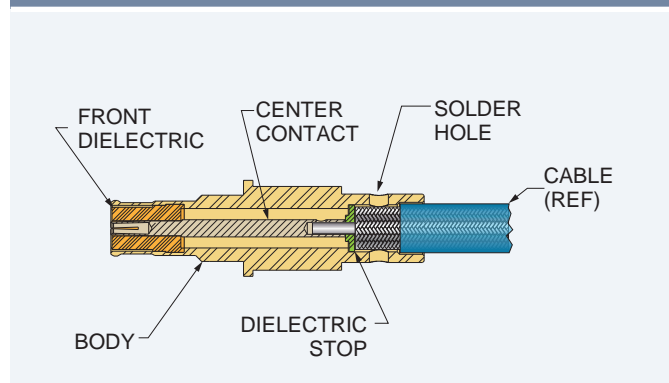
Size 8 50 Ohm BMB Coaxial Contacts for DC – 18 GHz		
Cable	Pin Contact <i>Use in Socket Connector</i>	Socket Contact <i>Use in Pin Connector</i>
RG-402 Flex	852-070-01	852-071-01
RG-142	852-070-02	852-071-02
LL142 (Harbour Industries)	852-070-03	852-071-03
LMR-240 (Times Microwave)	852-070-04	852-071-04
RG-405 Flex	852-070-05	852-071-05

Technical Data		
Specifications	Construction	Connector Compatibility
Operating temperature: -55°C. to +125°C. Dielectric withstanding voltage: 1000 Vac rms Frequency range: DC – 18 GHz VSWR: 1.10:1 DC – 1 GHz. Above 1 GHz 1.20 + .025(freq GHz). 50 ohm nominal impedance Insertion loss: .05 dB @ 400 MHz, above 1 GHz: 0.06 x √(Freq in GHz) Durability: 500 mating cycles Shock: EIA-364-27 condition D Vibration: EIA-364-28 condition VI, letter J	<b>Center contact:</b> beryllium copper alloy, 50 microinches gold over nickel plating <b>Dielectric:</b> PTFE per ASTM D-1710 <b>Body:</b> beryllium copper alloy, 50 microinches gold over nickel plating <b>Pin contact outer sleeve:</b> 303 SST per ASTM A-582, passivated <b>Pin contact spring:</b> 302 or 17-7 stainless steel, passivated <b>Sealing Boot:</b> fluorosilicone rubber grommet, glass-filled PEI follower	BMB contacts are compatible with the following connectors with size #8 contact cavities:  MIL-DTL-38999 Series I, III and IV Glenair Series 23 SuperNine Glenair Series 80 Mighty Mouse  <i>Note: Pin contact 852-070 is installed in socket connectors. Socket contact 852-071 is installed in pin connectors.</i>

Construction Details: Pin Contact 852-070



Construction Details: Socket Contact 852-071



# RF, Microwave and Datalink Contacts

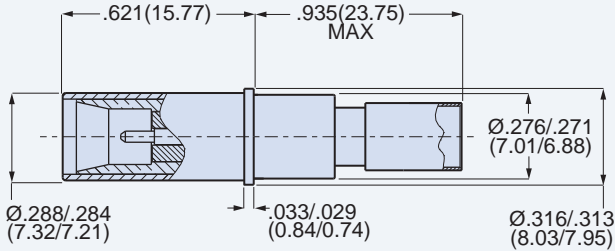
for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



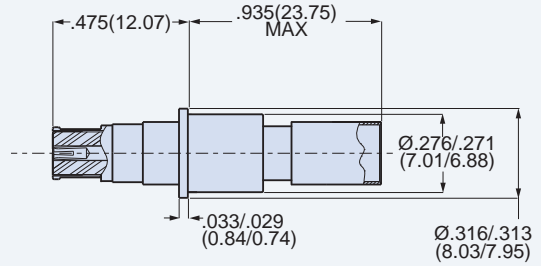
## Spring-Loaded Microwave Frequency Coaxial Contacts

Size #8 BMB Contacts for DC – 18 GHz

Pin Contact 852-070

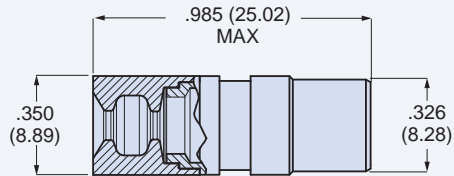
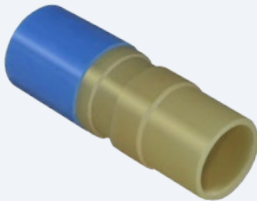


Socket Contact 852-071



### Sealing Boot

Sealing boots are supplied with contacts.



Wire Dia. (in.)	Wire Dia. (mm.)	Part Number
.090 – .130	2.3 – 3.3	<a href="#">859-042-01</a>
.130 – .170	3.3 – 4.3	<a href="#">859-042-02</a>
.170 – .205	4.3 – 5.2	<a href="#">859-042-03</a>

### Removal Tool

No tool is required for installing contact into connector.



**859-049**  
(M81969/14-12)

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Spring-Loaded Microwave Frequency Coaxial Contacts

### Size #12 SMPM-Type Contacts for DC – 40 GHz



**Male Contact**  
(for use in socket connectors)



**Female Contact**  
(for use in pin connectors)

50 ohm high frequency size #12 coaxial contacts fit Glenair Series 80 Mighty Mouse connectors, Glenair Series 79 Micro-Crimp®, Glenair Series 23 SuperNine® and MIL-DTL-38999 connectors. Maximum operating frequency 40 GHz. Spring-loaded male contact assures consistent mating dimensions and superior microwave performance. Supplied fully assembled with cable termination instruction sheet.

- DC – 40 GHz frequency range
- 50 ohm impedance
- Aerospace-grade construction
- SMPM-type Interface per MIL-DTL-348
- Spring-loaded interface
- Low insertion loss
- Solderless center contact
- VSWR 1.3 at 40 GHz

#### Size 12 50 Ohm SMPM-Type Coaxial Contacts for DC – 40 GHz

Cable	Female Contact (Use in Pin Connectors)	Male Contact (Use in Socket Connectors)	
		M38999 Series I, III, IV	M38999 Series II Series 79, 80
RG-405 Flex (Times Microwave TFlex-405) Tensolite LLF-1087)	<b>852-025-01</b>	<b>852-024-01</b>	<b>852-032-01</b>

#### Technical Data

##### Specifications

- Operating temperature: -55°C. to +125°C.
- Dielectric withstanding voltage: 500 Vac
- Ins. resistance: 5000 megohms min.
- Frequency range: DC – 40 GHz
- VSWR: 1.10 + (.005 x Freq GHz)
- 50 ohm nominal impedance
- Insertion loss: .04 x √(Freq in GHz)
- RF leakage: -(90 – Freq GHz)
- Durability: 500 mating cycles
- Shock: EIA-364-27 condition D
- Vibration: EIA-364-28 condition VI, letter J

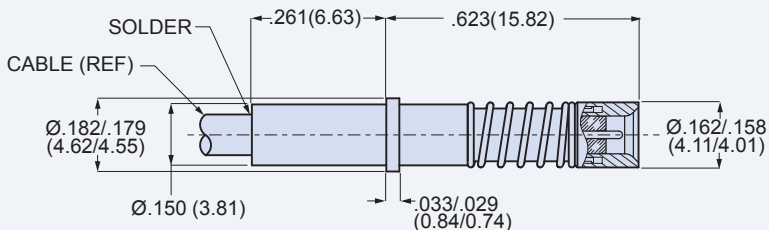
##### Construction

- **Center contact:** copper alloy, 50 microinches gold over nickel plating
- **Dielectric:** PTFE per ASTM D-1710
- **Female body:** copper alloy, 50 microinches gold over nickel plating
- **Male body:** stainless steel, passivated
- **Male contact spring:** high carbon steel (music wire), nickel plated

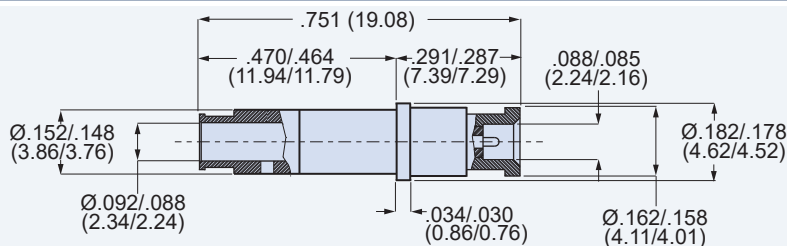
##### Connector Compatibility

- MIL-DTL-38999 Series I, II, III and IV
- Glenair Series 23 SuperNine®
- Glenair Series 79 Micro-Crimp®
- Glenair Series 80 Mighty Mouse

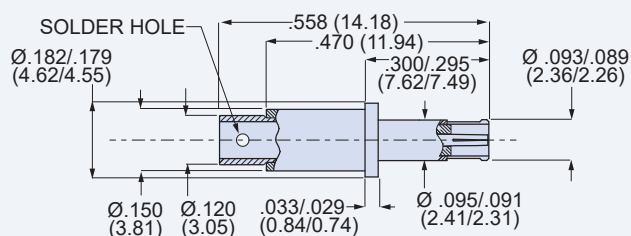
#### Male Contact 852-024-01



#### Male Contact 852-032-01



#### Female Contact 852-025-01





# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors

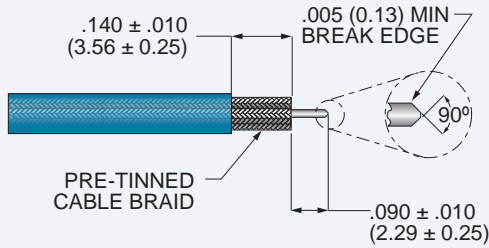


## Spring-Loaded Microwave Frequency Coaxial Contacts

### Size #12 SMPM-Type Contacts for DC – 40 GHz

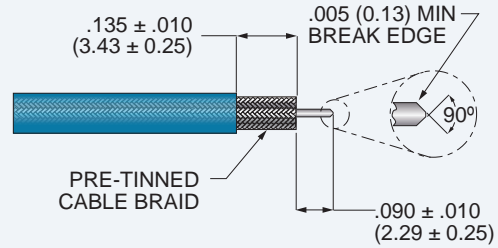
#### Cable Prep Dimensions for 852-024 and 852-025

Slide prepped cable into contact, then solder cable braid to contact body. See Assembly Instruction Sheet AI85009 for complete termination instructions.

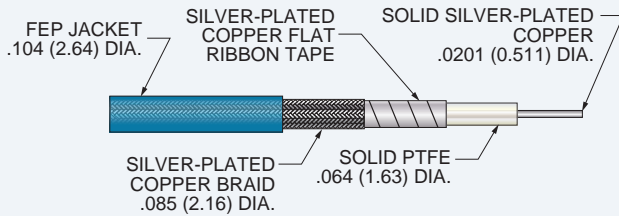


#### Cable Prep Dimensions for 852-032

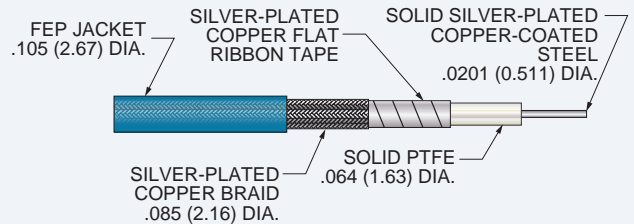
Slide prepped cable into contact, then solder cable braid to contact body. See Assembly Instruction Sheet AI85010 for complete termination instructions.



#### Tflex®-405 Microwave Cable



#### LLF-1087 Microwave Cable



Glenair Part No.	<b>962-001-405</b>	
Mfgr Part No.	TFlex®-405	
Manufacturer	Times Microwave	
Impedance (ohms)	50	
Shielding Effectiveness (dB)	>100dB	
Temperature Rating	-65 °C to +125 °C	
Minimum Bend Radius	0.25 in. (6.4 mm.)	
Weight (lbs/ft.)	.015	
Capacitance (pF/ft)	29.3	
Velocity of Propagation %	69.5	
Cutoff Frequency	60 GHz	
<b>Attenuation and Power</b>	<b>dB/100 ft</b>	<b>Watts</b>
100 MHz	6.4	401
400 MHz	13.1	195
1 GHz	21.1	119
2 GHz	31.0	81
3 GHz	38.0	65
10 GHz	75.0	31
12 GHz	83.0	28
13.5 GHz	89.0	26
16 GHz	99.0	23
18 GHz	106.0	21

Manufacturer Part No.	LLF-1087
Manufacturer	Tensolite
Impedance (ohms)	50
Shielding Effectiveness (dB)	90
Minimum Bend Radius	0.5 in. (12.7mm)
Weight (lbs/ft.)	.013
Capacitance (pF/ft)	29
Velocity of Propagation %	70
<b>Attenuation</b>	<b>dB/100 ft</b>
400 MHz	13.7
1 GHz	22.2
3 GHz	38.9
10 GHz	74.9
18 GHz	104.3

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Twinax Contacts

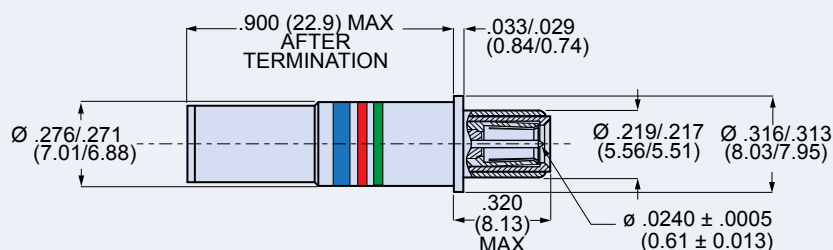
### Size #8 Concentric Twinax Contacts for M17/176-00002 Shielded Twisted Pair Cable



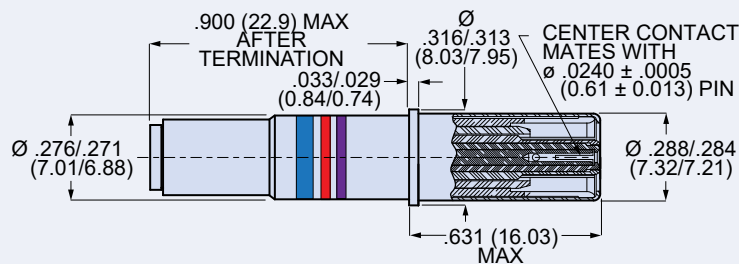
Concentric twinax contacts accept M17/176-00002 shielded twisted pair databus cable. These snap-in, rear-release contacts fit Glenair Series 80 Mighty Mouse connectors and MIL-DTL-38999 Series I, III and IV connectors with size #8 cavities. Crimp termination. Gold-plated copper alloy, fluoroplastic dielectric. Supplied unassembled with heatshrink boot. SAE AS39029 qualified.

Size #8 Concentric Twinax Contacts		
Cable	Pin Contact	Socket Contact
M17/176-00002	<b>853-003-08-625</b> (M39029/113-625)	<b>853-004-08-628</b> (M39029/114-628)

#### Pin Contact 853-003-08-625 (M39029/113-625)



#### Socket Contact 853-004-08-628 (M39029/114-628)



#### Technical Data

##### Specifications

- Operating temperature: -65°C. to +175°C.
- Dielectric withstanding voltage, center contact to intermediate contact: 1000 Vrms sea level, 250 Vrms at 70,000 feet
- Dielectric withstanding voltage, intermediate contact to outer contact: 500 Vrms sea level, 250 Vrms at 70,000 feet
- Contact resistance, center and intermediate contacts: 55 millivolt max. voltage drop @ 1 ampere
- Contact resistance, outer contact: 75 millivolt max. voltage drop @ 12 A.
- Durability: 500 mating cycles
- Shock: MIL-DTL-38999 Series III
- Vibration: MIL-DTL-38999 Series III

##### Construction

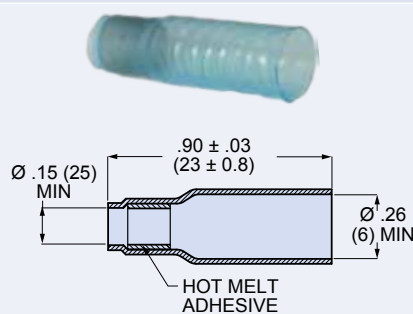
- **Center contact, intermediate contact and outer contact:** copper alloy, 50 microinches gold over nickel plating
- **Dielectric:** PEEK and PTFE
- **Socket contact hood:** stainless steel, passivated
- **Heatshrink boot:** cross-linked polyvinylidene fluoride, translucent blue, with thermoplastic hot melt adhesive

##### Connector Compatibility

- MIL-DTL-38999 Series I, III and IV
- Glenair Series 23 SuperNine®
- Glenair Series 80 Mighty Mouse

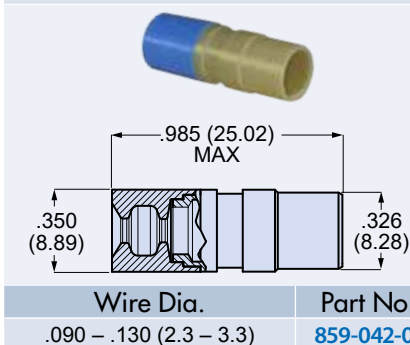
#### Heatshrink Boot

Supplied with contact. Slide onto cable before terminating contact. Slide onto contact after the cable is terminated. Apply heat to shrink the boot and melt the adhesive. Install contact into connector.



#### Optional Sealing Boot

Sealing boots, purchased separately, provide improved environmental seal compared to heatshrink boot supplied with contacts.



# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Twinax Contacts

Size #8 Concentric Twinax Contacts for M17/176-00002 Shielded Twisted Pair Cable

Crimp Tools						
Contact Part Number	Center Contact		Intermediate Contact		Outer Crimp Sleeve	
	Crimper	Positioner	Crimper	Hex Die	Crimper	Hex Die
853-003-08-625 853-004-08-628	<b>809-015</b> (M22520/2-01)	<b>809-240</b> (M22520/2-37)	<b>809-129</b> (M22520/5-01)	<b>859-048</b> (M22520/5-105)	<b>809-129</b> (M22520/5-01)	<b>859-048</b> (M22520/5-105)

### Center Contact Crimp Tools



**809-015**  
(M22520/2-01)

**809-240**  
(M22520/2-37)

### Intermediate Contact and Outer Sleeve Crimp Tools



**809-129**  
(M22520/5-01)

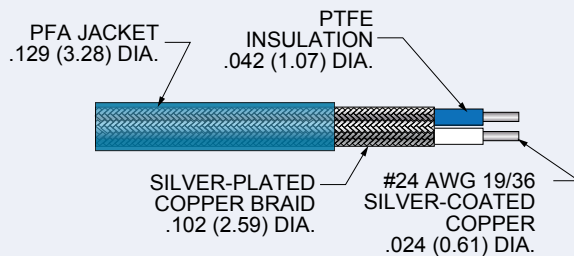
**859-048**  
(M22520/5-105)

### Removal Tool



**859-049**  
(M81969/14-12)

### M17/176-00002 Shielded Twisted Pair Databus Wire (Ref)



Military Specification	MIL-DTL-17/176
Military Part Number	M17/176-00002
Continuous working voltage	750 Vrms, maximum
Operating frequency	10 MHz, maximum
Characteristic Impedance (ohms)	77 ± 7 at 1 MHz
Temperature Rating	-65° to +200° C
Minimum Bend Radius	0.6 in. (15mm.)
Weight (lbs/ 1,000 ft.)	18
Capacitance (pF/ft)	24
Attenuation	1.4 dB per 100 feet, maximum at 1MHz
Velocity of Propagation	68%

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Twinax Contacts

### Size #8 Concentric Twinax Contacts for 100 Ohm Twisted Pair Cable

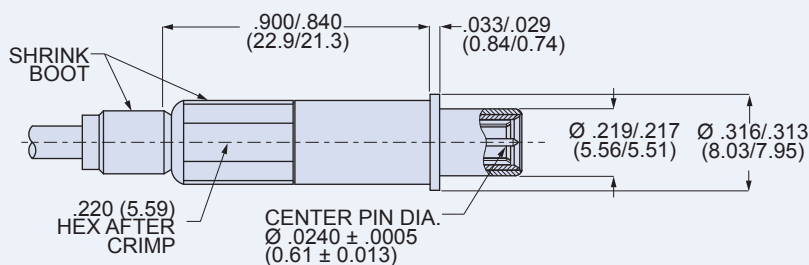


Size #8 concentric twinax contacts accept 100 ohm #24 AWG controlled impedance shielded twisted pair databus cable. These snap-in, rear-release contacts fit Glenair Series 80 Mighty Mouse connectors and MIL-DTL-38999 Series I, III and IV connectors with size #8 cavities. Crimp termination. Gold-plated copper alloy. Supplied unassembled with heatshrink boot and assembly instruction sheet.

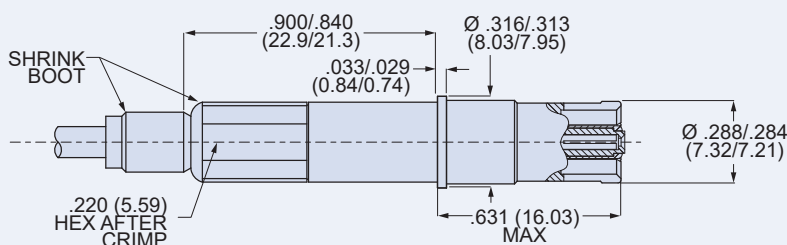
Size #8 Concentric Twinax Contacts		
Cable	Pin Contact	Socket Contact
TE Raychem 0024A0024 Gore GSC-03-81416-00	<b>853-011</b>	<b>853-012</b>

Socket Contact

#### Pin Contact 853-011



#### Socket Contact 853-012



#### Technical Data

##### Specifications

- Operating temperature: -65°C. to +175°C.
- Dielectric withstanding voltage, center contact to intermediate contact: 1000 Vrms sea level, 250 Vrms at 70,000 feet
- Dielectric withstanding voltage, intermediate contact to outer contact: 500 Vrms sea level, 250 Vrms at 70,000 feet
- Contact resistance, center and intermediate contacts: 55 millivolt max. voltage drop @ 1 ampere
- Contact resistance, outer contact: 75 millivolt max. voltage drop @ 12 A.
- Durability: 500 mating cycles
- Shock: MIL-DTL-38999 Series III
- Vibration: MIL-DTL-38999 Series III

##### Construction

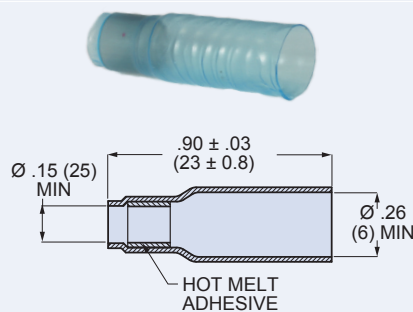
- **Center contact, intermediate contact and outer contact:** copper alloy, 50 microinches gold over nickel plating
- **Dielectric:** PEEK and PTFE
- **Socket contact hood:** stainless steel, passivated
- **Heatshrink boot:** cross-linked polyvinylidene fluoride, translucent blue, with thermoplastic hot melt adhesive

##### Connector Compatibility

- MIL-DTL-38999 Series I, III and IV
- Glenair Series 23 SuperNine®
- Glenair Series 80 Mighty Mouse

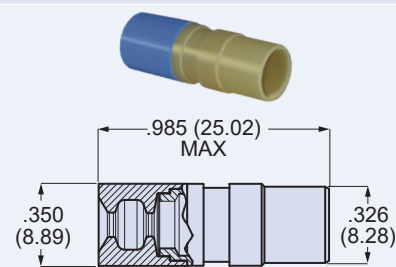
#### Heatshrink Boot

Supplied with contact. Slide onto cable before terminating contact. Slide onto contact after the cable is terminated. Apply heat to shrink the boot and melt the adhesive. Install contact into connector.



#### Optional Sealing Boot

Sealing boots, purchased separately, provide improved environmental seal compared to heatshrink boot supplied with contacts.



Wire Dia.	Part No.
.090 – .130 (2.3 – 3.3)	<b>859-042-01</b>

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Twinax Contacts

Size #8 Concentric Twinax Contacts for 100 Ohm #24 AWG Twisted Pair Cable

### Crimp Tools

Contact Part Number	Center Contact		Intermediate Contact		Outer Crimp Sleeve		Instruction Sheet
	Crimper	Positioner	Crimper	Hex Die	Crimper	Hex Die	
853-011 853-012	<b>809-015</b> (M22520/2-01)	<b>809-240</b> (M22520/2-37)	<b>809-129</b> (M22520/5-01)	<b>859-048</b> (M22520/5-105)	<b>809-129</b> (M22520/5-01)	<b>859-048</b> (M22520/5-105)	AI853-011

### Center Contact Crimp Tools



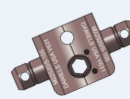
**809-015**  
(M22520/2-01)



**809-240**  
(M22520/2-37)

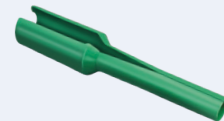


**809-129**  
(M22520/5-01)



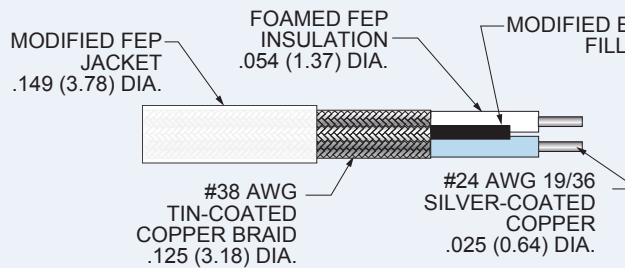
**859-048**  
(M22520/5-105)

### Removal Tool



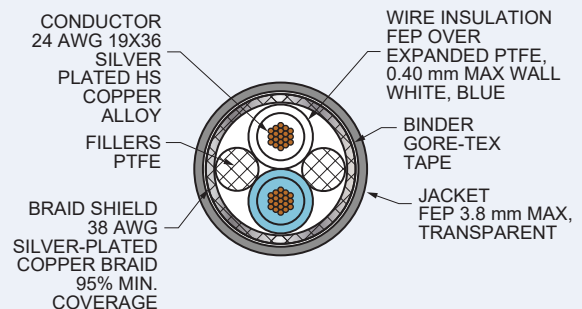
**859-049**  
(M81969/14-12)

### Raychem 0024A0024 100 Ohm #24 AWG Twisted Pair Cable



Characteristic Impedance	100 ± 7 ohms @ 1 MHz
capacitance, mutual	15 pF/ft. (nominal)
Velocity of Propagation	76% (nominal)
Conductor resistance	26.5 ohms/1000 ft (nominal)
Dielectric Withstanding Voltage	1000 Vrms
Temperature Rating	-55 °C to +200 °C

### Gore GSC-03-81416-00 #24 AWG Twisted Pair Cable



Characteristic Impedance	100 ± 7 ohms @ 1 MHz
capacitance, mutual	77 pF/m. (nominal)
Velocity of Propagation	78% (nominal)
Conductor resistance	85 ohms/km (nominal)
Dielectric Withstanding Voltage	1000 Vrms
Temperature Rating	-65 °C to +200 °C

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Twinax Contacts

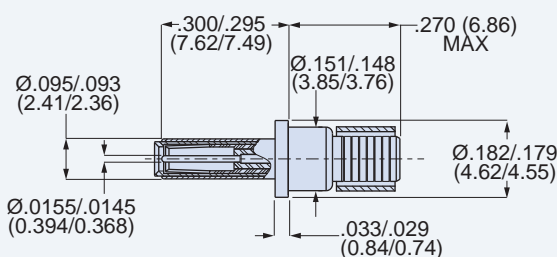
### Size #12 Concentric Twinax Contacts for M17/176-00002 Shielded Twisted Pair Cable



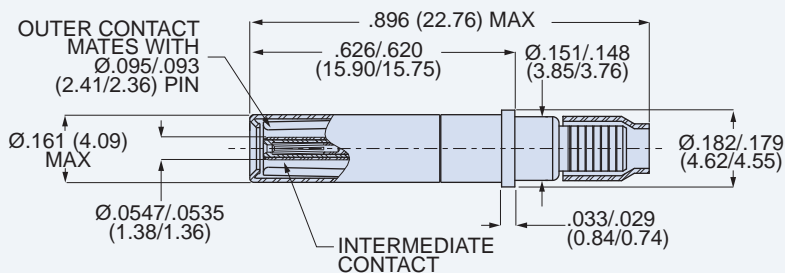
Size #12 concentric twinax contacts accept M17/176-00002 shielded twisted pair databus cable. These snap-in, rear-release contacts fit MIL-DTL-38999 Series I, III and IV connectors with size #12 cavities, and Glenair Series 23 SuperNine® connectors. Crimp termination. Gold-plated copper alloy. Interface is in accordance with JN1104, DSCC 02003 and DSCC 02004 specifications.

Size #12 Concentric Twinax Contacts		
Cable	Pin Contact	Socket Contact
M17/176-00002	853-008-1	853-009-1

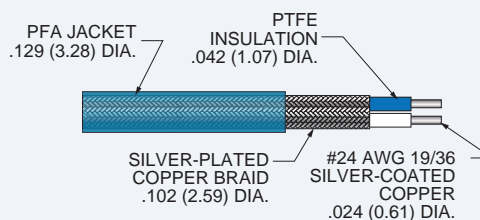
#### Pin Contact 853-008-1



#### Socket Contact 853-009-1



#### M17/176-00002 Shielded Twisted Pair Databus Wire (Ref)



#### Technical Data Specifications

Operating temperature: -65°C. to +175°C.  
 Operating frequency: 0 – 20 MHz  
 Dielectric withstanding voltage, center contact to intermediate contact: 800 Vrms  
 Dielectric withstanding voltage, intermediate contact to outer contact: 500 Vrms  
 Contact resistance, center and intermediate contacts: 55 millivolt max. voltage drop @ 1 ampere  
 Contact resistance, outer contact: 75 millivolt max. voltage drop @ 12 amperes  
 Durability: 500 mating cycles  
 Shock: EIA-364-27 condition D  
 Vibration: EIA-364-28

#### Construction

**Center contact, intermediate contact, outer contact, rear bushing:** copper alloy, 50 microinches gold over nickel plating  
**Inner and outer crimp sleeves:** copper alloy, 50 microinches gold over nickel plating  
**Rear bushing:** copper alloy, 50 microinches gold over nickel plating  
**Insulators:** PEEK, PTFE  
**Socket contact hood:** stainless steel, passivated

#### Connector Compatibility

MIL-DTL-38999 Series I, III and IV  
 Glenair Series 23 SuperNine®

Military Specification	MIL-DTL-17/176
Military Part Number	M17/176-00002
Continuous working voltage	750 Vrms, maximum
Operating frequency	10 MHz, maximum
Characteristic Impedance	77 ± 7 at 1 MHz
Temperature Rating	-65° to +200° C
Minimum Bend Radius	0.6 in. (15mm.)
Weight (lbs/ 1,000 ft.)	18
Capacitance (pF/ft)	24
Attenuation	1.4 dB per 100 feet, max. at 1MHz
Velocity of Propagation	68%

# RF, Microwave and Datalink Contacts

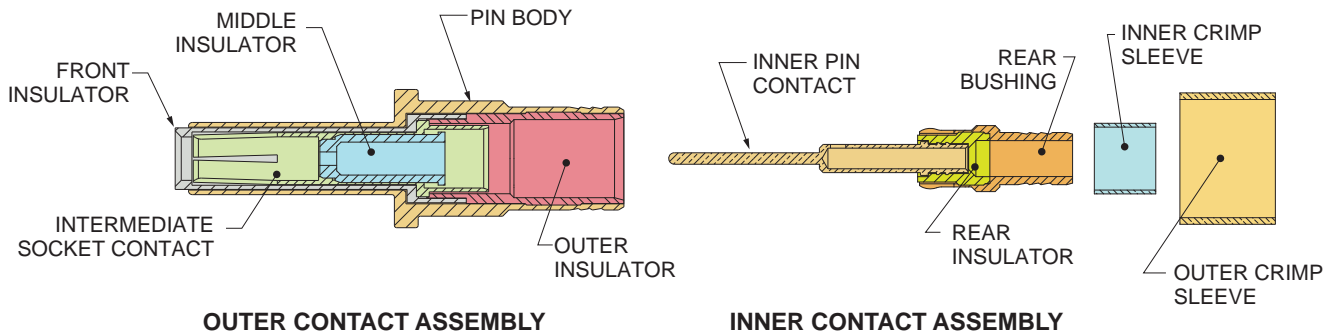
for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Twinax Contacts

Size #12 Concentric Twinax Contacts for M17/176-00002 Shielded Twisted Pair Cable

### Pin Contact Details



### Crimp Tools, Installation/Removal Tool, Assembly Instruction Sheet

Contact Part Number	Crimp Tools						Insertion/Removal Tool	Assembly Instruction Sheet
	Inner Contact Crimper	Inner Contact Positioner	Intermediate Contact Crimper	Intermediate Contact Positioner	Outer Contact Crimper	Outer Contact Hex Die		
853-008-1 853-009-1	<b>809-128</b> (MH992)	<b>859-125</b> (K1365)	<b>859-126</b> (GS212)	<b>859-127</b> (GP1437)	<b>809-133</b> (M22520/31-01)	<b>859-128</b> (GP959)	<b>809-132</b> (M81969/14-04)	AI85021

Center Contact Crimp Tools	Intermediate Contact Crimp Tools		Outer Contact Crimp Tools		Installation/Removal Tool	
 <b>809-128</b> (MH992)	 <b>859-125</b> (K1365)	 <b>859-126</b> (GS212)	 <b>859-127</b> (GP1437)	 <b>809-133</b> (M22520/31-01)	 <b>859-128</b> (GP959)	 <b>808-132</b> (M81969/14-04)

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Twinax Contacts

### Size #8 Differential Twinax Contacts

Differential twinax contacts accept shielded twisted pair cable. These snap-in, rear-release contacts fit Glenair Series 80 Mighty Mouse connectors and Glenair 233-217 MIL-DTL-38999 type connectors with keyed inserts. Crimp termination. 24 and 26 AWG versions. 68 ohm, 75 ohm, 77 ohm and 100 ohm impedance. Gold-plated copper alloy. Supplied unassembled with sealing boot and instruction sheet.



Size #8 Differential Twinax Contacts				
Shielded Twisted Pair Cable	Wire Size (AWG)	Impedance (ohms)	Pin Contact	Socket Contact
GSC-03-83971-00 (Gore)	24	100	853-014-02F	853-013-02F
0024A0024 (TE Raychem)	24	100	853-014-04F	853-013-04F
M17/176-00002 (MIL-DTL-17)	24	77	853-014-05F	853-013-05F
24443/52088X2 (Tensolite ref: 5M2022-003)	24	75	853-014-05F	853-013-05F
ST5M1212-002 (McDonnell Douglas)	24	68	853-025-01F	853-024-01F
DXN2603 (Gore)	26	100	853-014-09F	853-013-09F
7726D0664 (TE Raychem)	26	77	853-025-02F	853-024-02F

Technical Data		
Specifications	Construction	Connector Compatibility
<ul style="list-style-type: none"> <li>Operating temperature: -65°C. to +175°C.</li> <li>Operating frequency: consult factory</li> <li>Dielectric withstanding voltage, inner contact to inner contact: 1000 Vrms</li> <li>Dielectric withstanding voltage, inner contact to outer body: 500 Vrms</li> <li>Insulation resistance: 5000 megohms min.</li> <li>Contact resistance, inner contacts: 55 millivolt max. voltage drop @ 1 ampere</li> <li>Contact resistance, outer body: 75 millivolt max. voltage drop @ 12 amperes</li> <li>Durability: 500 mating cycles</li> <li>Shock: EIA-364-27 condition D</li> <li>Vibration: EIA-364-28 condition VI, letter J</li> </ul>	<ul style="list-style-type: none"> <li><b>Inner contacts, outer body:</b> copper alloy, 50 microinches gold over nickel plating</li> <li><b>Crimp ferrule:</b> copper alloy, 50 microinches gold over nickel plating</li> <li><b>Insulators:</b> PPS</li> <li><b>Sealing boot:</b> fluorosilicone rubber grommet, glass-filled PEI follower</li> </ul>	<ul style="list-style-type: none"> <li><b>Differential twinax contacts have an alignment key and are not for use in standard MIL-DTL-38999 connectors</b></li> <li>Glenair 233-217 MIL-DTL-38999 Series III connectors with keyed inserts for contact alignment.</li> <li>Glenair Series 80 Mighty Mouse. <i>All standard Mighty Mouse connectors with size #8 contacts have keyed contact cavities for proper alignment of differential twinax, quadax, and octaxial contacts.</i></li> </ul>

### Sealing Boot

Sealing boots are supplied with contacts. To order contacts without sealing boots, delete the "F" suffix from the part number

The diagram shows a cross-section of the sealing boot with the following dimensions:

- Overall length: .985 (25.02) MAX
- Inner diameter: .350 (8.89)
- Outer diameter: .326 (8.28)



# RF, Microwave and Datalink Contacts

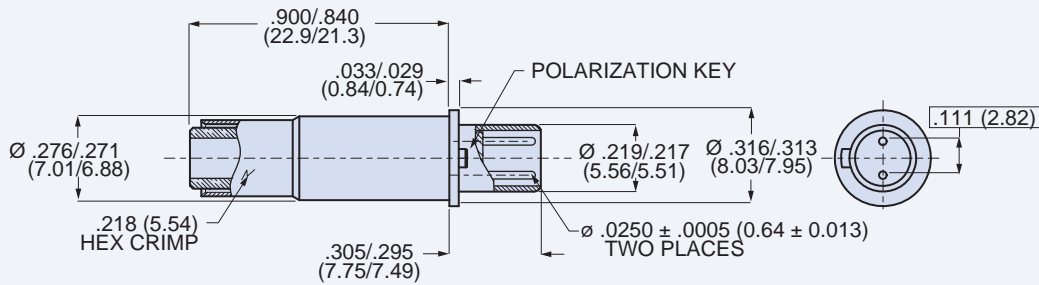
for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



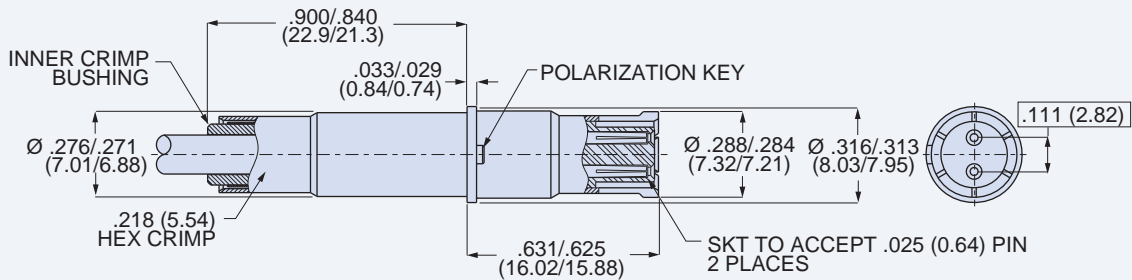
## Twinax Contacts

### Size #8 Differential Twinax Contacts

Pin Contact 853-014 and 853-025



Socket Contact 853-013 and 853-024



### Crimp Tools, Removal Tool, Assembly Instruction Sheet

Contact Part Number	Inner Contacts		Outer Body		Removal Tool	Assembly Instruction Sheet
	Crimper	Positioner	Crimper	Hex Die		
853-013 853-014 853-024 853-025	<b>809-015</b> (M22520/2-01)	<b>809-240</b> (M22520/2-37)	<b>809-129</b> (M22520/5-01)	<b>859-007</b> (M22520/5-45)	<b>859-049</b> (M81969/14-12)	AI85007

#### Inner Contact Crimp Tools



**809-015**  
(M22520/2-01)



**809-240**  
(M22520/2-37)

#### Outer Body Crimp Tools



**809-129**  
(M22520/5-01)



**859-007**  
(M22520/5-45)

#### Removal Tool



**859-049**  
(M81969/14-12)

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors

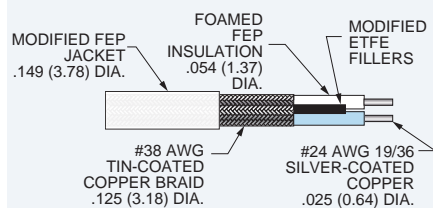


## Twinax Contacts

### Size #8 Differential Twinax Contacts

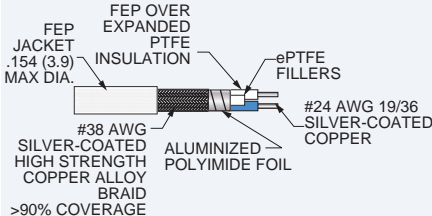
## Shielded Twisted Pair Cables for Differential Twinax Contacts

Raychem 0024A0024 100 Ohm 24 AWG Twisted Pair Cable



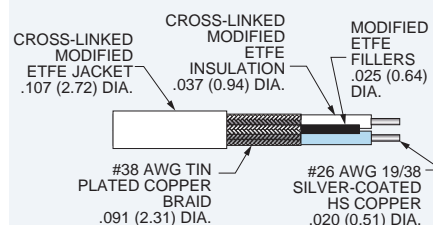
Impedance	100 ± 7 ohms @ 1 MHz
DWV rating	1000 Vrms
Temperature Rating	-55° to +200° C

Gore GSC-03-83971-00 100 Ohm 24 AWG Twisted Pair Cable



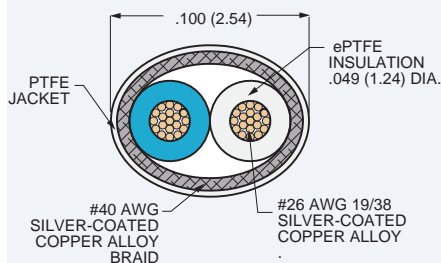
Impedance	100 ± 7 ohms
DWV Rating	1000 Vrms
Temperature Rating	-65° to +200° C

Raychem 7726D0664-9 77 Ohm 26 AWG Twisted Pair Cable



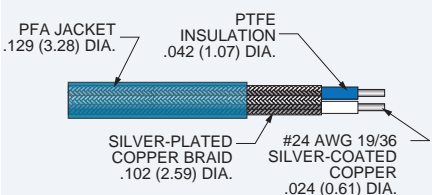
Impedance	77 ± 5 ohms @ 1 MHz
DWV rating	1000 Vrms
Temperature Rating	-65° to +150° C

Gore DXN2603 100 Ohm 26 AWG Twisted Pair Cable



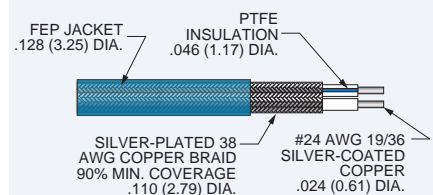
Impedance	100 ± 10 ohms
Attenuation	31.2 dB / 100 ft. @ 1 GHz
Temperature Rating	+200° C

M17/176-00002 Shielded Twisted Pair Databus Cable



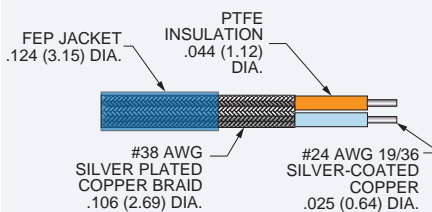
Impedance (ohms)	77 ± 7 at 1 MHz
DWV Rating	1000 Vrms
Temperature Rating	-65° to +200° C

Tensolite 24443/52088X2 75 Ohm 24 AWG Twisted Pair Cable



Impedance (ohms)	75 ± 5
DWV Rating	1500 Vrms
Temperature Rating	-65° to +200° C

ST5M1212-002 68 Ohm 24 AWG Twisted Pair Cable



Impedance	68 ± 4 ohms
DWV rating	1500 Vrms
Temperature Rating	-65° to +200° C

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## Quadrax Contacts

### Size #8 100 Ohm and 150 Ohm Quadrax Contacts



Socket Contact

Quadrax contacts are size 8 multi-pin contacts with four signal pins and an outer contact body. These contacts are used for harsh environment military and aerospace data networks using star quad cable. Crimp termination. Two types are available: 100 ohm for 100BASE-T Ethernet and 150 ohm for fibre channel. Compatible with Glenair Series 80 Mighty Mouse and Glenair 233-217 SuperNine® connectors. Supplied as unassembled kit with outer body, (4) inner contacts, shield crimp ferrule, insulators, sealing boot and instruction sheet.

DC – 3 GHz frequency range  
100 ohm and 150 ohm versions  
Arinc 664 compatible

Snap-in, rear release  
Sealing boot included  
Gold plated copper alloy

#### Size #8 100 Ohm Quadrax Contacts

Wire Size (AWG)	Imped. (ohms)	Ref Cable Diameter		A Hex Crimp		Cable Accomodation		Pin Contact	Socket Contact
		In.	mm.	In.	mm.	Mfgr.	Part Number		
22	100	.190	4.83	.231	5.86	Tensolite	NF22Q100-01	854-001-05F	854-002-05F
24	100	.160	4.06	.218	5.54	PIC	E51424	854-001-02F	854-002-02F
						(various)	AS6070-1		
						Gore	GSC-03-84608-00		
						Tensolite	NF24Q100-01		
24	100	.175	4.45	.218	5.54	TE	CEC-RWC-18664	854-001-04F	854-002-04F
						Draka	F 4704-4		
						(various)	ABS1503KD24		
26	100	.137	3.48	.218	5.54	Tensolite	NF26Q100-01	854-001-01F	854-002-01F
						PIC	E51426		

#### Size #8 150 Ohm Quadrax Contacts for Fibre Channel (not intermateable with 100 ohm quadrax contacts)

26	150	Fibre Channel	.195	4.95	.231	5.86	Tensolite	26473/02006X-4(LD)	854-015-02F	854-014-02F
							Gore	RCN8328		

#### Technical Data

Specifications	Construction	Connector Compatibility
<p>Operating temperature: -65°C. to +175°C.</p> <p>Operating frequency: DC – 3 GHz</p> <p>Characteristic Impedance: 100 ±10 ohms or 150 ± 10 ohms</p> <p>Dielectric withstanding voltage, inner to inner contact: 1000 Vrms sea level, 250 Vrms 70,000 feet.</p> <p>Dielectric withstanding voltage, inner to outer contact: 500 Vrms sea level, 250 Vrms 70,000 feet.</p> <p>Insulation resistance: 5000 megohms min.</p> <p>Durability: 500 mating cycles</p> <p>Vibration: MIL-DTL-38999 Series III</p> <p>Shock: MIL-DTL-38999 Series III</p>	<p><b>Inner contacts, outer contact, shield crimp ferrule:</b> copper alloy, 50 microinches gold over nickel plating</p> <p><b>Insulator:</b> PPS</p> <p><b>Sealing boot grommet:</b> fluorosilicone</p> <p><b>Sealing boot body:</b> rigid thermoplastic, PEI or equivalent</p>	<p><b>Quadrax contacts have an alignment key and are not for use in standard MIL-DTL-38999 connectors</b></p> <p>Glenair Series 80 Mighty Mouse</p> <p>Glenair 233-217 SuperNine®</p>

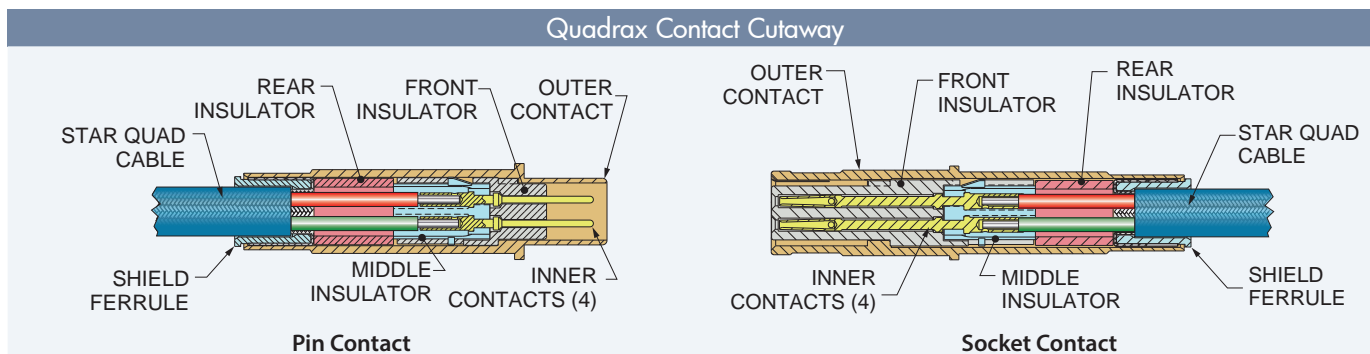
# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors

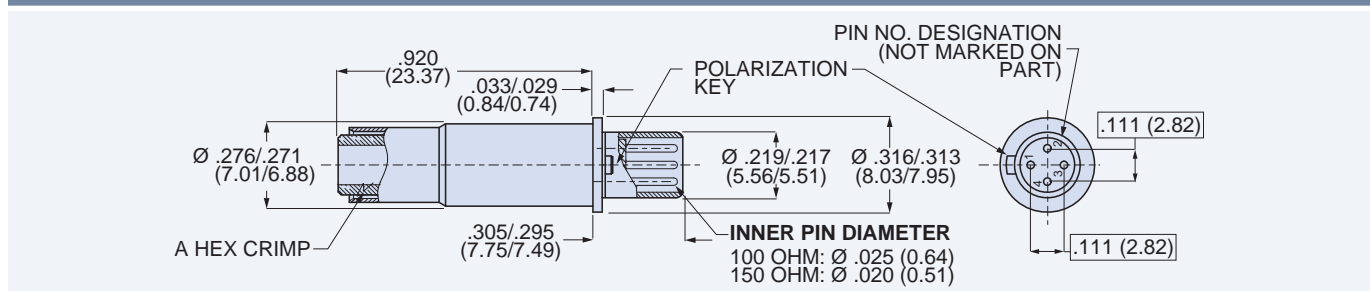


## Quadrax Contacts

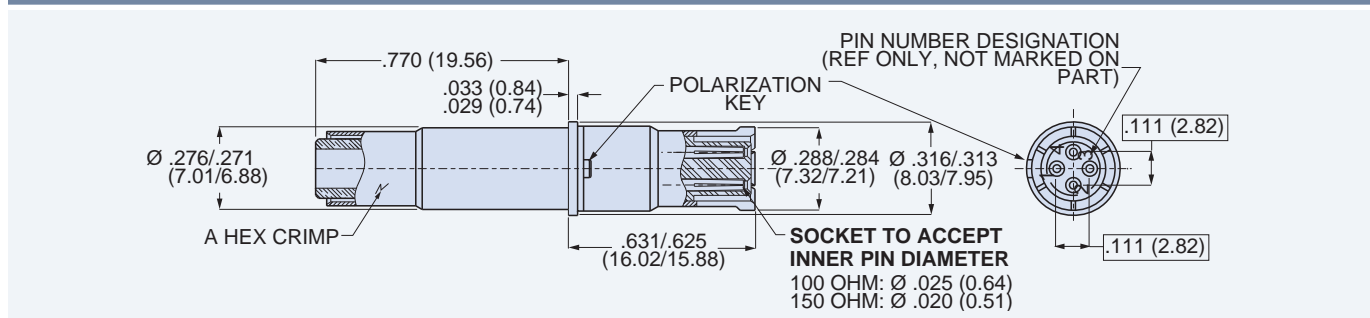
Size #8 100 Ohm and 150 Ohm Quadrax Contacts



### Pin Contact 854-001 and 854-015



### Socket Contact 854-002 and 854-014



### Crimp Tools, Removal Tool, Assembly Instruction Sheet

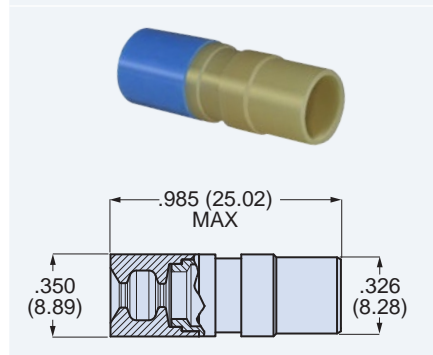
Contact PN	Inner Contacts		Outer Body		Removal Tool	Assembly Instructions
	Crimper	Positioner	Crimper	Hex Die		
854-001 854-002	<b>809-015</b> (M22520/2-01)	<b>809-240</b> (M22520/2-37)	<b>809-129</b> (M22520/5-01)	<b>859-007</b> (M22520/5-45)	<b>859-049</b> (M81969/14-12)	AI854-001
854-014 854-015	<b>809-015</b> (M22520/2-01)	<b>809-240</b> (M22520/2-37)	<b>809-129</b> (M22520/5-01)	<b>859-007</b> (M22520/5-45)	<b>859-049</b> (M81969/14-12)	AI85038

### Inner Contact Crimp Tools      Outer Body Crimp Tools      Removal Tool



### Sealing Boot

Sealing boots are supplied with contacts. To order contacts without sealing boots, remove the "F" suffix from the part number.



# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors

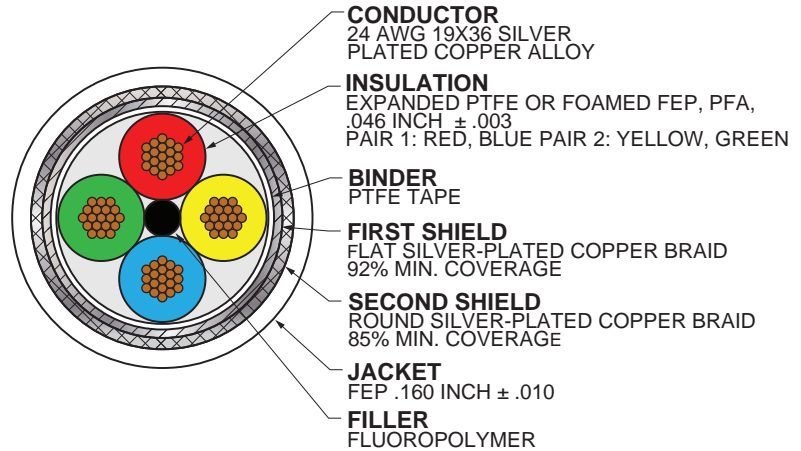


## Quadrax Contacts

### Aerospace-Grade Star Quad Cable

#### About Star Quad Cable

Star quad cables are widely used for 100 ohm ARINC 664 10/100BASE-T Ethernet and 150 ohm fibre channel. Quad cable, when paired with quadrax contacts, offers improved EMI protection and better data integrity compared to shielded twisted data pair cable terminated to individual connector pins. This illustration depicts SAE AS6070/1 high speed data quad cable. This construction, with two shields and fluoropolymer insulation, is typical of aerospace star quad cables available from Gore, Carlisle (Tensolite), PIC, TE, Draka and other cable manufacturers. The table below lists standard star quad cables available from Glenair.



#### Star Quad Cables Available From Glenair

Glenair Part No.	963-019	963-020	963-021	963-022	963-023	963-024
Manufacturer Part No.	NF22Q100-01	NF24Q100-01	NF26Q100-01	E50424	E51424	E51426
Manufacturer	Tensolite	Tensolite	Tensolite	PIC	PIC	PIC
Construction Details						
Conductor Size (AWG)	22	24	26	24	24	26
Conductor Material	SCC	SCCA	SCCA	SCC	SCC	SCC
Insulation	Extruded PTFE over fused PTFE tape	Extruded PTFE over fused PTFE tape	Extruded PTFE over fused PTFE tape	PTFE	Foamed FEP	Foamed FEP
Insulation Color	Pair 1: Red, Blue Pair 2: Green, Yellow	Pair 1: Red, Blue Pair 2: Green, Yellow	Pair 1: Red, Blue Pair 2: Green, Yellow	Pair 1: Red, Blue Pair 2: Green, Yellow	Pair 1: Red, Blue Pair 2: Green, Yellow	Pair 1: Red, Blue Pair 2: Green, Yellow
Binder	PTFE	PTFE	PTFE		PTFE	PTFE
Shield	Inner TCC flat braid, outer TCC round braid	Inner TCC flat braid, outer TCC round braid	Inner TCC flat braid, outer TCC round braid	Inner foil, outer SCC round braid	Inner TCC flat braid, outer TCC round braid	Inner TCC flat braid, outer TCC round braid
Jacket	FEP	FEP	FEP	FEP	ETFE	ETFE
Jacket Color	Translucent Blue	Translucent Blue	Translucent Blue	Translucent Blue	White	White
Nominal Cable Diameter	.190	.163	.137 (3.48)	.170 (4.32)	.161 (4.09)	.161 (4.09)
Specifications						
Impedance (ohms)	100	100	100	100	100	100
Temperature Rating	+150 °C	+150 °C	+150 °C	+200 °C	+150 °C	+150 °C
Weight (lbs/100 ft.)	3.4	2.45	1.8	2.6	2.2	1.8
Capacitance (pF/ft)	13	13	13	13	13	14.5
Velocity of Propagation %	80	80	80	69.5	80	70
Time Delay pS/ft	137	137	137			
Max. Attenuation dB/100 ft., 100 MHz	7.3	9.2	11.0	11.5	9.2	11.0
Min. NEXT (dB), 100 MHz	35	35	35	35.3	35.3	35.3
Min. SRL (dB), 100 MHz	16	16	16	20.1	16.0	16.0
Notes						
SCC silver-coated copper SCCA silver-coated copper alloy TCC tin-coated copper Cables are Skydrol resistant, RoHS compliant and meet the FAA flammability requirements of FAR Part 23 and 25, Appendix F						

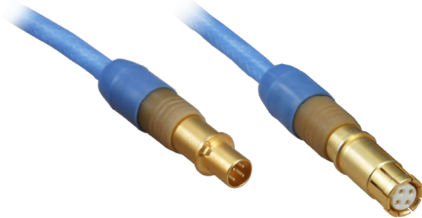
# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®



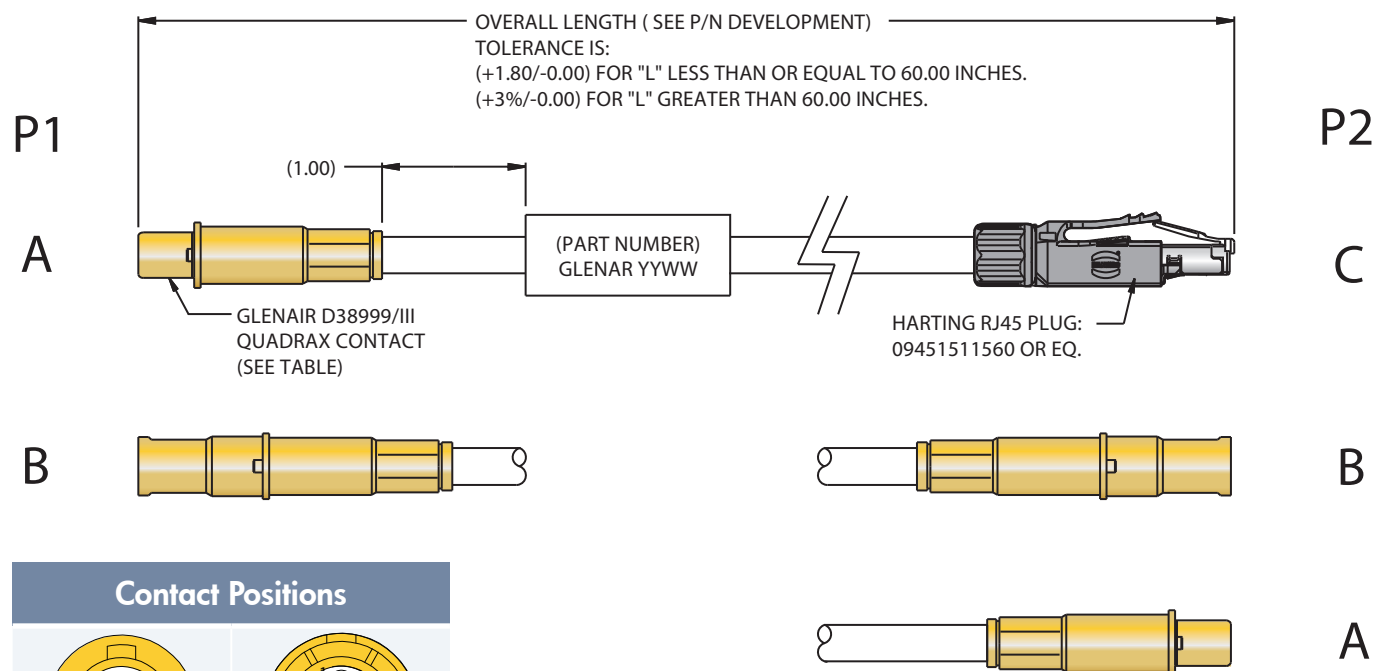
## 854-035 Quadrax Cable Assemblies

### Size #8 100 Ohm Quadrax Cable Assemblies, How-to-Order

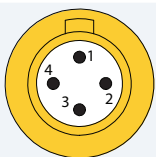


Quadrax contact, Pin and Socket

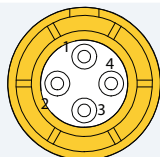
**Aerospace-grade or commercial-grade cable. 100% tested.** Save assembly time and cost with quadrax cordset assemblies. These assemblies are available with pin/pin, pin/socket, socket/socket, pin/RJ45 or socket/RJ45 configurations. Star quad aerospace-grade high temperature cable has fluoropolymer construction. Compatible with Glenair Series 23 and Series 80 connectors. Optional sealing boot available. **Quadrax contacts must be installed in keyed connectors before mating to prevent misalignment and contact damage.**



#### Contact Positions



Mating face of Pin



Mating face of Socket

#### Technical Data

- ❑ For use with 100 BASE-T Ethernet applications. For 1000 BASE-T Ethernet applications, please consult factory.
- ❑ Refer to individual contact and cable data sheets for construction details
- ❑ 100% tested for shorts, continuity and IR
- ❑ **Operating temp.:** -65° to +125°C, aerospace-grade
- ❑ **Impedance:** 100 ohms
- ❑ **DWV:** 500 Vrms
- ❑ **IR:** 5000 megohms min @ 200VDC.

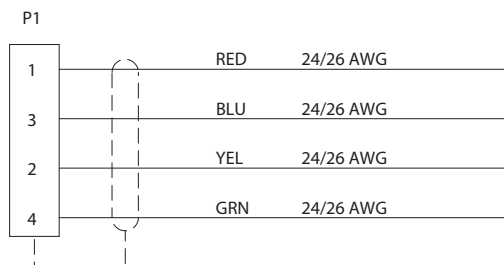
#### D38999 Series III and Mighty Mouse Quadrax Cables

Sample Part Number	854-035	F	-A	C	-01	-12
Product	854-035 = Pre-wired quadrax contact					
Sealing Boot	F = Add grommet follower Omit for none					
P1 Connector	A = Quadrax, Pin (P/N 854-001) B = Quadrax, Socket (P/N 854-002)					
P2 Connector	A = Quadrax, Pin B = Quadrax, Socket	C = RJ45 Plug N = No Connector				
Cable Option	01 = Tensolite NF26Q100-01, 26 AWG 02 = Tensolite NF24Q100-01, 24 AWG 03 = Draka Fileca F 4704-6, 26 AWG 04 = Draka Fileca F 4704-4, 24 AWG 05 = Tensolite NF22Q100-01, 22 AWG					
Length	Overall length in inches					

## 854-035 Quadrax Cable Assemblies

### Size #8 100 Ohm Quadrax Cable Assemblies, Wiring Dia

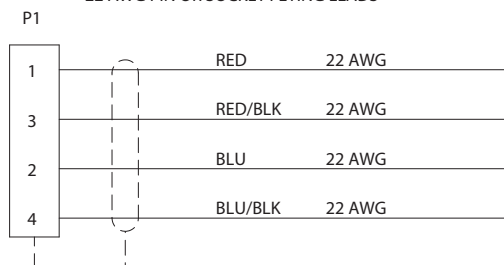
WIRING DIAGRAM  
24/26 AWG PIN OR SOCKET FLYING LEADS



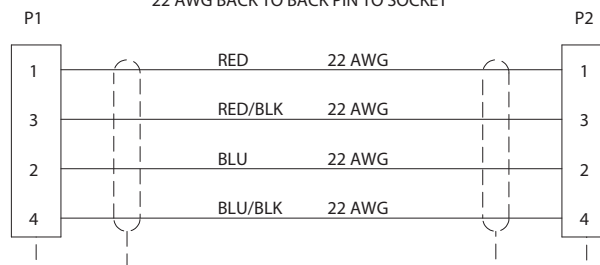
WIRING DIAGRAM  
24/26 AWG BACK TO BACK PIN TO SOCKET



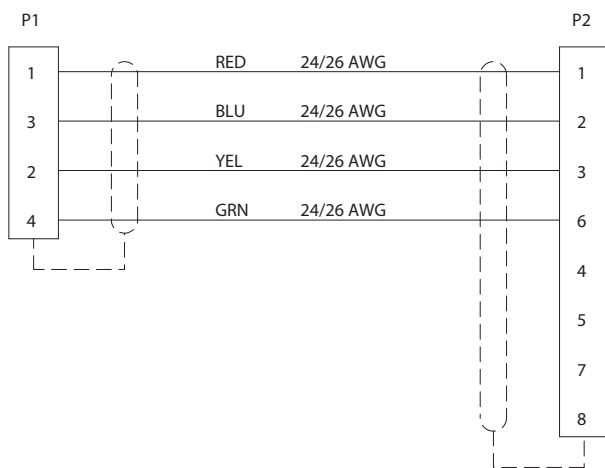
WIRING DIAGRAM  
22 AWG PIN OR SOCKET FLYING LEADS



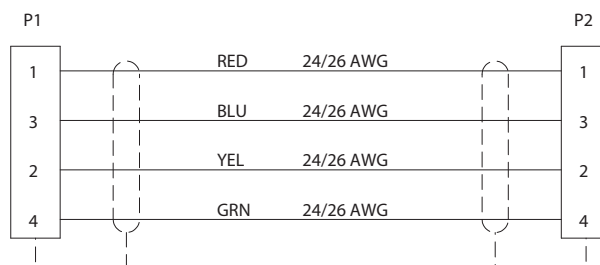
WIRING DIAGRAM  
22 AWG BACK TO BACK PIN TO SOCKET



WIRING DIAGRAM  
24/26 AWG PIN OR SOCKET TO RJ45



WIRING DIAGRAM  
24/26 AWG PIN TO PIN OR SKT TO SKT



# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## El Ochito® Octaxial Contacts for 10G Ethernet

Size #8 100 Ohm El Ochito® Contacts

### El Ochito® The 10G Ethernet Contact with Patented Data Pair Isolator Technology

United States Patent Number  
9,257,796



Pin Contact



Socket Contact

El Ochito® contacts are intended for harsh environment military and aerospace data networks utilizing 1000BASE-T or 10GBASE-T protocols. El Ochito® contacts provide up to 50% total weight savings compared to quadrax-based solutions. These contacts have eight signal pins housed in a machined, gold plated outer contact. Crimp termination. Metal spline isolates data pairs for improved signal integrity. For use with aerospace-grade 26 AWG Category 6a cables with unshielded or shielded data pairs. El Ochito® contacts snap into ARINC 600 connectors with quadrax inserts, along with Series 80 Mighty Mouse and Series 23 SuperNine® connectors. Supplied as unassembled kit with outer body, (8) inner contacts, shield crimp ferrule, insulators, and instruction sheet.

DC – 4 GHz frequency range  
100 ohms  
Data pair isolation technology  
50% size and weight savings compared to quadrax contacts

Snap-in, rear release  
Sealing boot included  
Gold plated copper alloy  
10GBase-T compatible

Technical Data	
Specifications	Construction
Operating temperature: -65°C. to +175°C. Operating frequency: DC – 4 GHz Characteristic Impedance: 100 ±10 ohms Dielectric withstanding voltage, inner to inner contact: 1000 Vrms sea level, 250 Vrms 70,000 feet. Dielectric withstanding voltage, inner to outer contact: 500 Vrms sea level, 250 Vrms 70,000 feet. Insulation resistance: 5000 megohms min. Durability: 500 mating cycles Vibration: MIL-DTL-38999 Series III Shock: MIL-DTL-38999 Series III	<b>Inner contacts, outer contact, shield crimp ferrule:</b> copper alloy, 50 microinches gold over nickel plating <b>Front, middle and rear insulator:</b> PPS <b>Sealing boot grommet:</b> fluorosilicone <b>Sealing boot body:</b> rigid thermoplastic, PEI or equivalent
	Connector Compatibility
	<b>El Ochito® contacts have an alignment key and are not for use in standard MIL-DTL-38999 connectors</b> Glenair Series 80 Mighty Mouse Glenair 233-217 SuperNine® ARINC 600 quadraxial inserts

Size #8 El Ochito® Contacts for Aerospace High Speed Ethernet Cable						
Connector Type	Cable Type	Cable Description	Cable		Pin Contact	Socket Contact
			Mfgr. Part Number	Glenair Part No.		
ARINC 600	S/UTP	Unshielded twisted pairs, 26 AWG	PIC E6A3826	963-003-26	<b>858-009-01</b>	<b>858-010-01</b>
	S/FTP	Foil shields on individual twisted pairs, 26 AWG	Gore RCN9047-26	963-033-26	<b>858-009-02</b>	<b>858-010-02</b>
Series 23 SuperNine® Series 80 Mighty Mouse	S/UTP	Unshielded twisted pairs, 26 AWG	PIC E6A3826	963-003-26	<b>858-003-01F</b>	<b>858-004-01F</b>
	S/FTP	Foil shields on individual twisted pairs, 26 AWG	Gore RCN9047-26	963-033-26	<b>858-016-01F</b>	<b>858-017-01F</b>



# RF, Microwave and Datalink Contacts

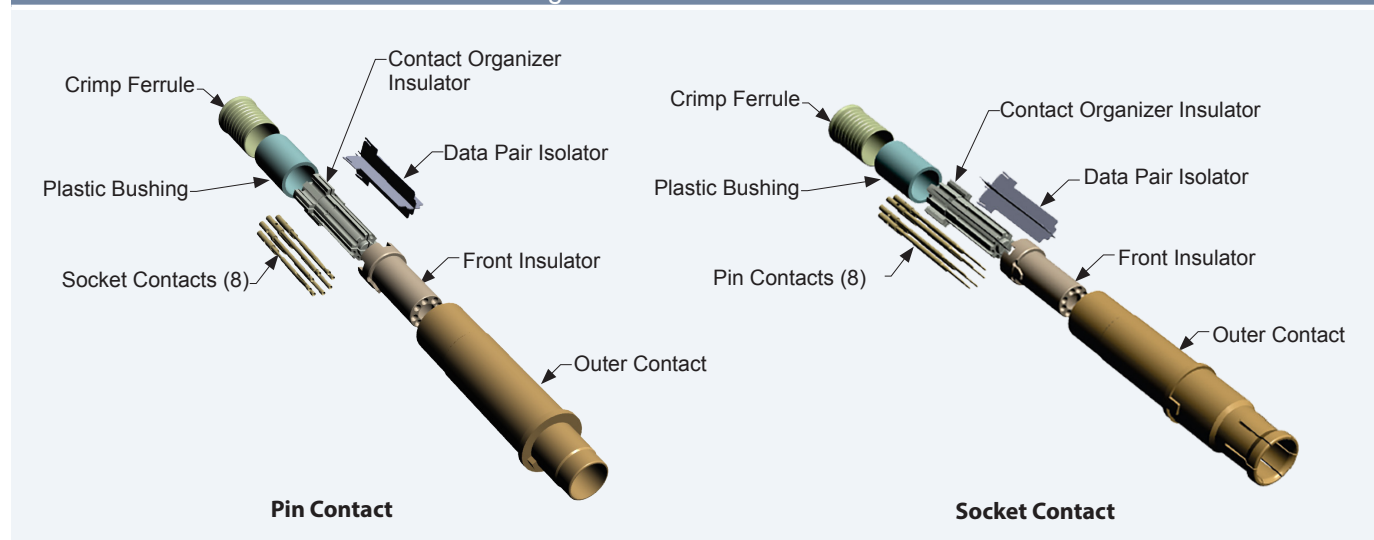
for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## El Ochito® Octaxial Contacts for 10G Ethernet

Size #8 100 Ohm El Ochito® Contacts

### El Ochito® 10GbE Octaxial Contact Construction Details



Contact PN	Inner Contacts		Outer Body		Removal Tool	Assembly Instructions
	Crimper	Positioner	Crimper	Hex Die		
858-003-01F 858-004-01F	<b>809-015</b> (M22520/2-01)	<b>859-101</b> (K1906)	<b>809-129</b> (M22520/5-01)	<b>859-007</b> (M22520/5-45)	<b>859-049</b> (M81969/14-12)	AI85048
858-009-01 858-010-01	<b>809-015</b> (M22520/2-01)	<b>859-101</b> (K1906)	<b>809-129</b> (M22520/5-01)	<b>859-007</b> (M22520/5-45)	<b>859-049</b> (M81969/14-12)	AI85074
858-009-02 858-010-02	<b>809-015</b> (M22520/2-01)	<b>859-101</b> (K1906)	<b>859-145</b>	(not required)	<b>859-049</b> (M81969/14-12)	
858-016-01F 858-017-01F	<b>809-015</b> (M22520/2-01)	<b>859-101</b> (K1906)	<b>859-134</b> (GS206)	(not required)	<b>859-049</b> (M81969/14-12)	

### Sealing Boot

Sealing boots are supplied with 858-003, 858-004, 858-016 and 858-017 contacts. To order these contacts without sealing boots, delete the "F" suffix from the part number. Sealing boots are not supplied with 858-009 and 858-010 contacts.

SEALING BOOT FOR OCHITO CONTACTS USING .220 (5.59) DIAMETER CABLE  
**687-754-8-8**

# RF, Microwave and Datalink Contacts

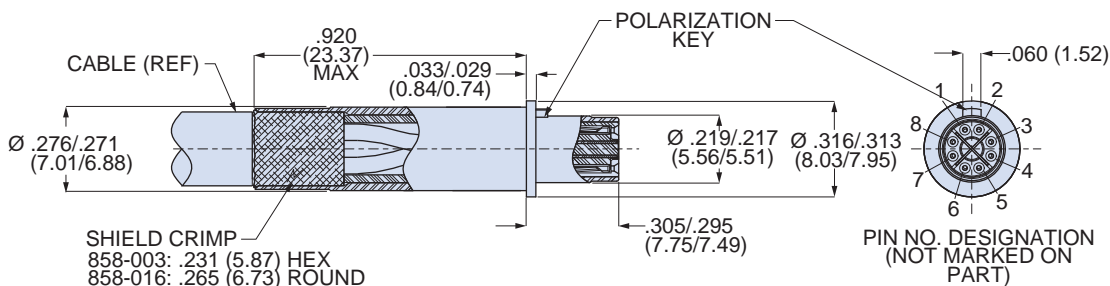
for MIL-DTL-38999, SuperNine<sup>®</sup>, Mighty Mouse and Micro-Crimp<sup>®</sup> Connectors



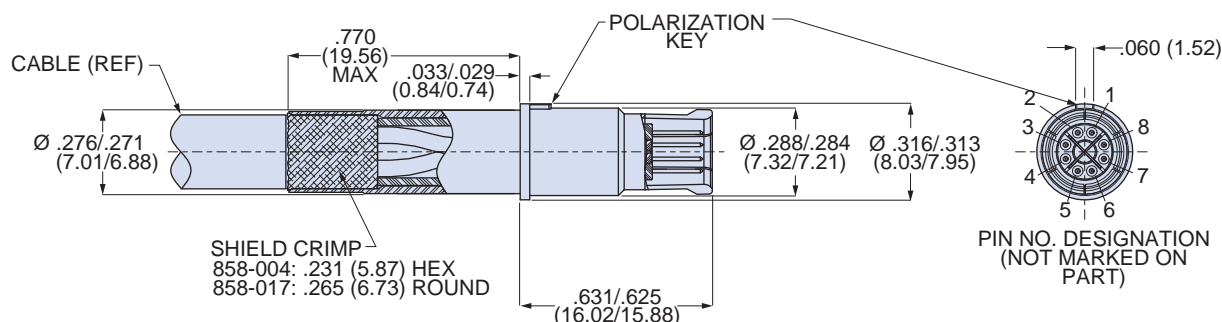
## El Ocho<sup>®</sup> Octaxial Contacts for 10G Ethernet

### Size #8 100 Ohm El Ocho<sup>®</sup> Contacts

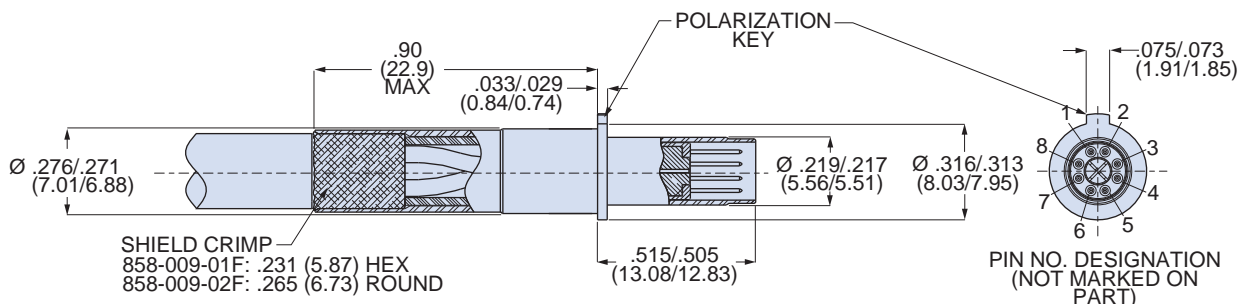
858-003 and 858-016 El Ocho<sup>®</sup> Pin Contact for 233-217 SuperNine<sup>®</sup> and Series 80 Mighty Mouse



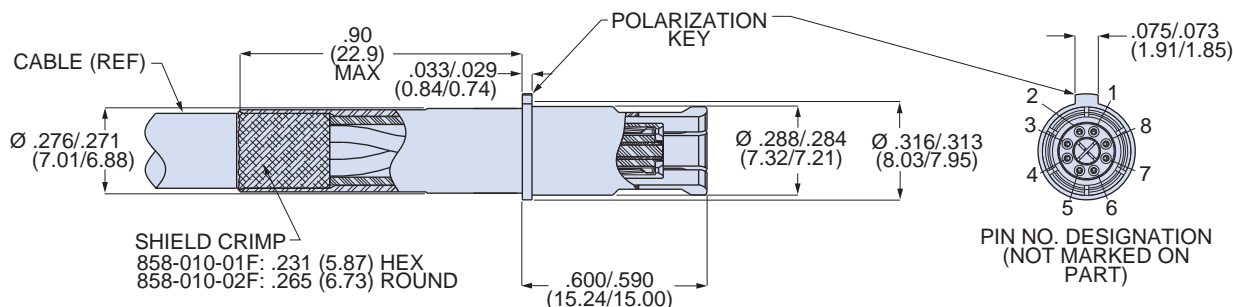
858-004 and 858-017 El Ocho<sup>®</sup> Socket Contact for 233-217 SuperNine<sup>®</sup> and Series 80 Mighty Mouse



858-009 El Ocho<sup>®</sup> Pin Contact for ARINC 600 Connectors with Quadaxial Inserts



858-010 El Ocho<sup>®</sup> Socket Contact for ARINC 600 Connectors with Quadaxial Inserts



# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## El Ochito® Octaxial Contacts for 10G Ethernet

### Wiring Guidelines

#### Implementation Guidelines for Terminating El Ochito® Contacts to 4-Pair Wire

ARINC Specification 664 Part 2- Appendix N provides guidelines for implementing 1000BASE-T and 10GBASE-T Ethernet links utilizing El Ochito® contacts. These guidelines provide instructions on maintaining the geometric relationship between the El Ochito® contact and the wire. The wire has an "A" end and a "B" end as shown in Figure 1. A contact installed on end "A" has a different wiring schematic than a contact installed on end "B". This is done to prevent the four wire pairs to be crossed contrary to their natural twist or lay. System designers and integrators should refer to ARINC 664 Part 2 for full guidance on specifying the connectors used throughout the data link.

The ARINC specification allows only four possible contact number-to-wire color combinations. Figure 2 shows these four combinations. The wire designer must specify which wire end (A or B) to terminate to each connector. Following the pin number- wire colors in Figure 2 will ensure cable assemblies are assembled with the correct wire rotation.

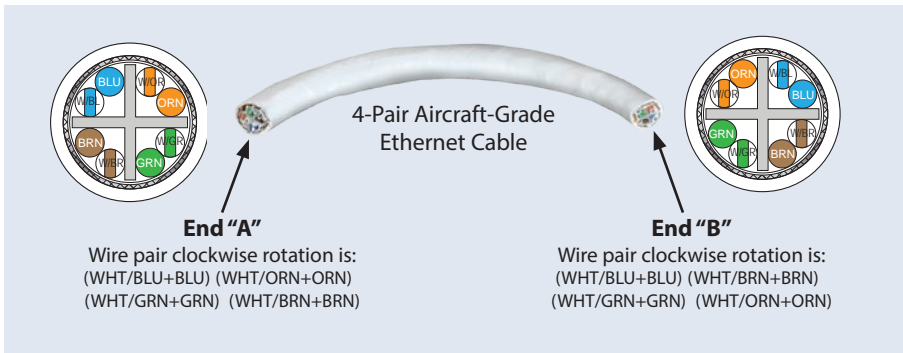


Figure 1 — Wire Rotation

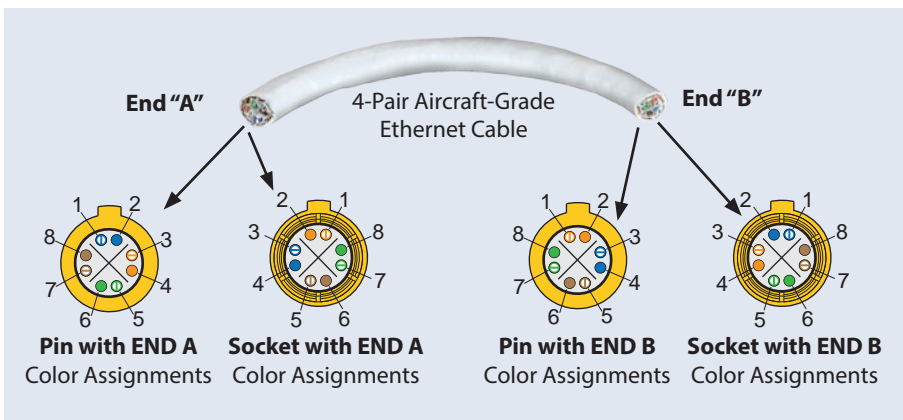


Figure 2 — Contact Color Assignment

#### ARINC 664 Wiring Configurations

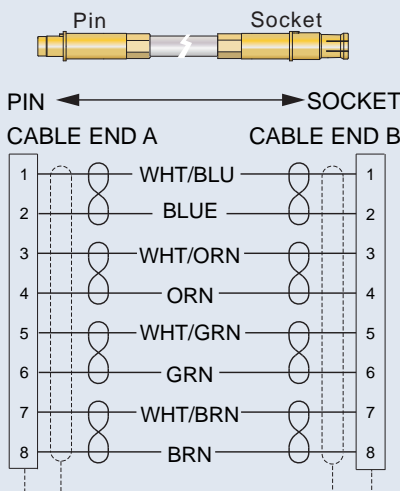


Figure 3

Schematic for Pin – Socket Wiring

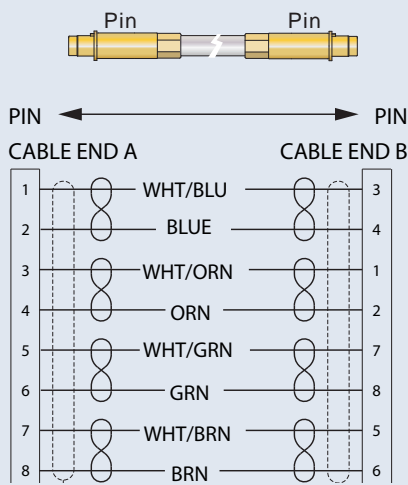


Figure 4

Schematic for Pin – Pin Wiring

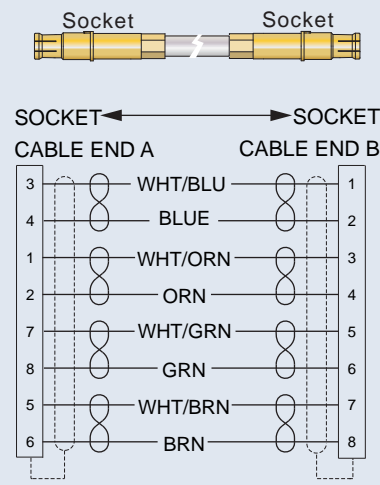


Figure 5

Schematic for Socket – Socket Wiring

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors

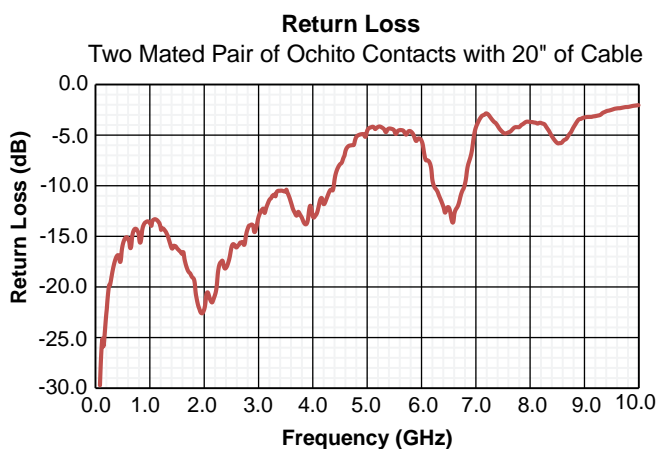
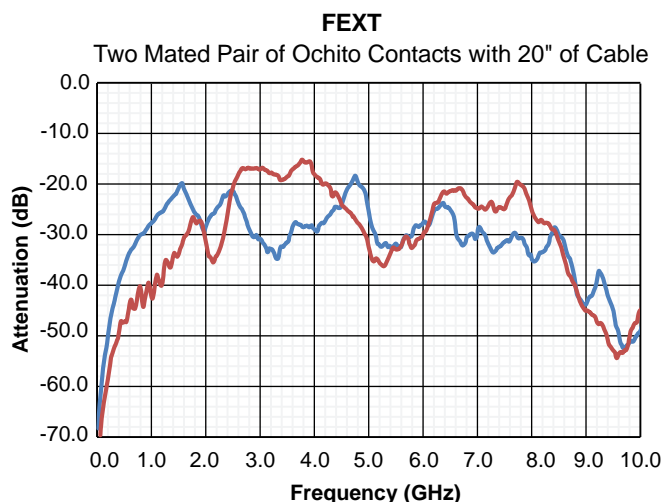
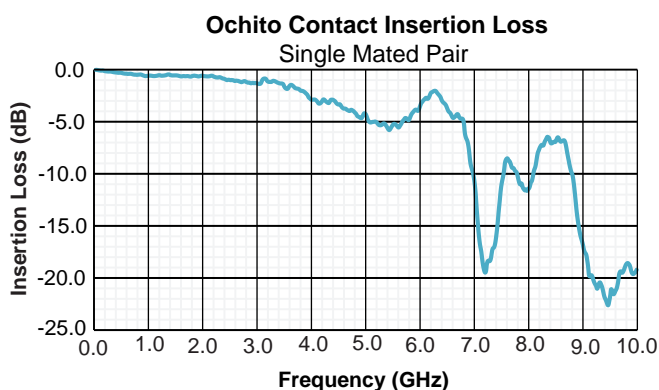


## El Ochito® Octaxial Contacts for 10G Ethernet

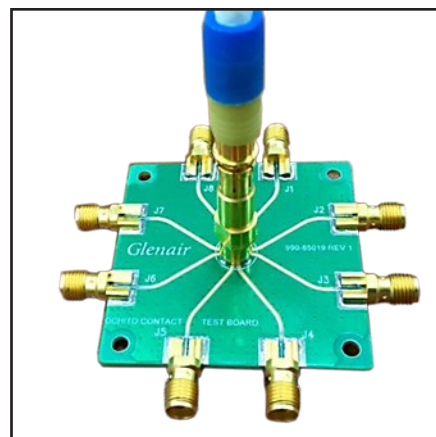
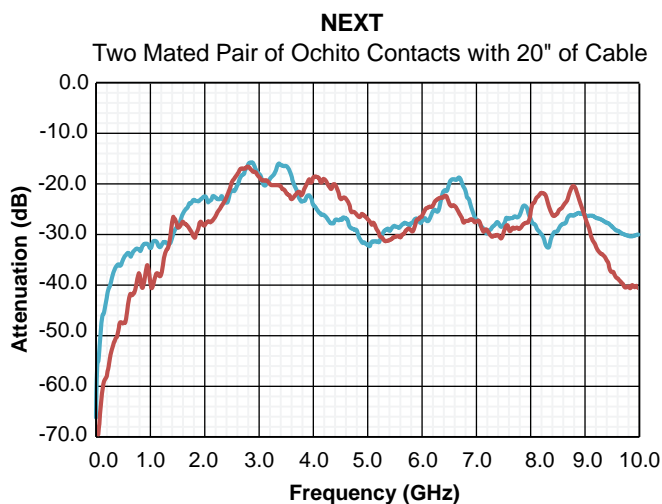
### Signal Integrity Data

### Excellent signal integrity at Gigabit speeds with S/UTP Cable

El Ochito® contacts with internal metal spline reduce crosstalk and attenuation for superior electrical bandwidth up to 9 Gbps. At -3dB insertion loss for a single mated pair at 4.1 GHz, the El Ochito® contact offers performance exceeding the requirements for 10 GbE interconnects.



These graphs illustrate data shown in Glenair Test Report GT-15-40 "High Speed Characterization Report: El Ochito® Size 8 Multi-Pair Contact for Differential Applications". All measurements were taken using an Agilent E5071C network analyzer with TDR option connected to a SMA launch board designed specifically for this testing. Test cables were fabricated using 100 ohm Glenair twisted pair S/UTP Ethernet cable 963-003-26 terminated to El Ochito® pin contact 858-003. The mating PC tail socket 858-008 was assembled onto the PCB launch fixture shown below.



# RF, Microwave and Datalink Contacts

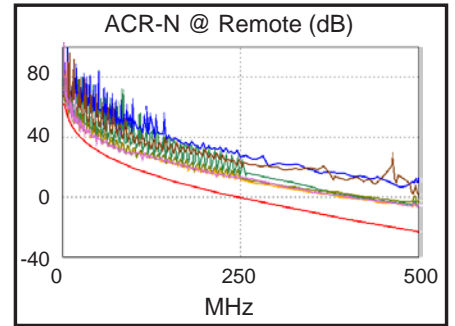
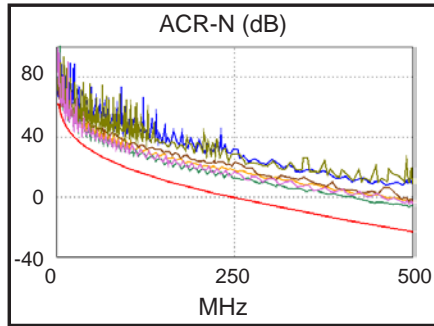
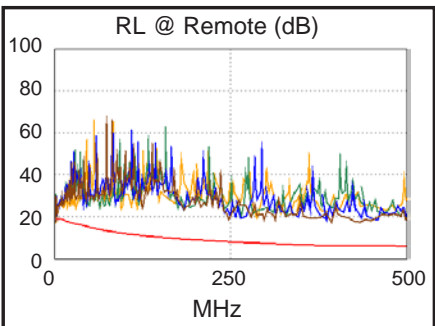
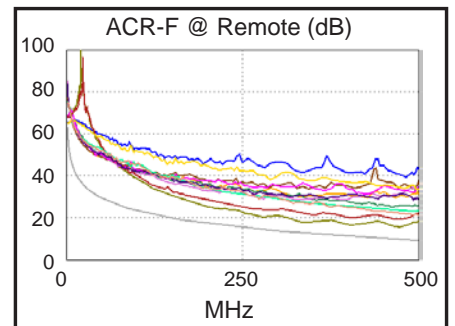
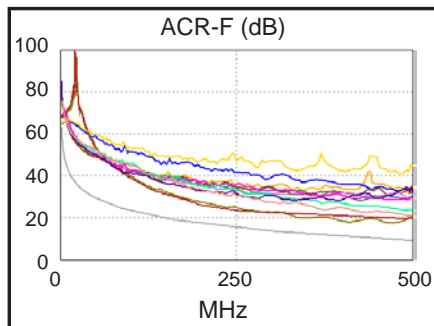
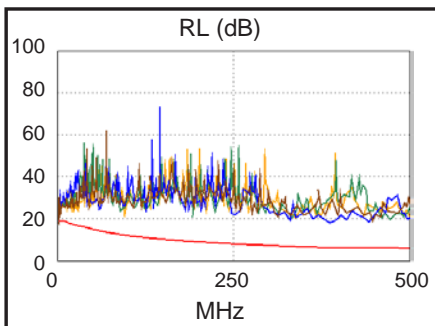
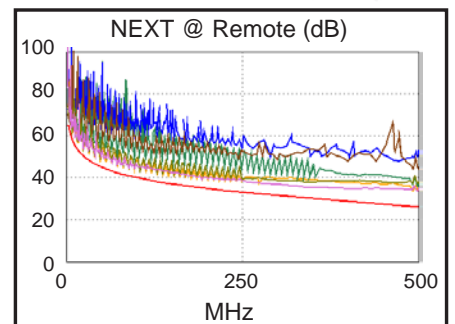
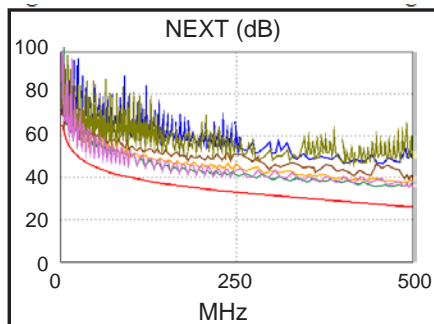
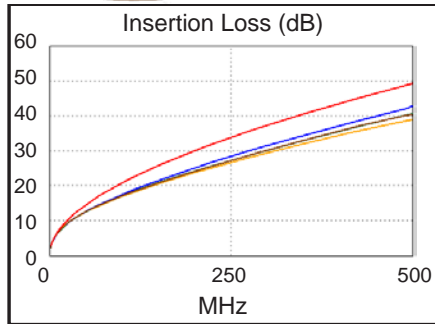
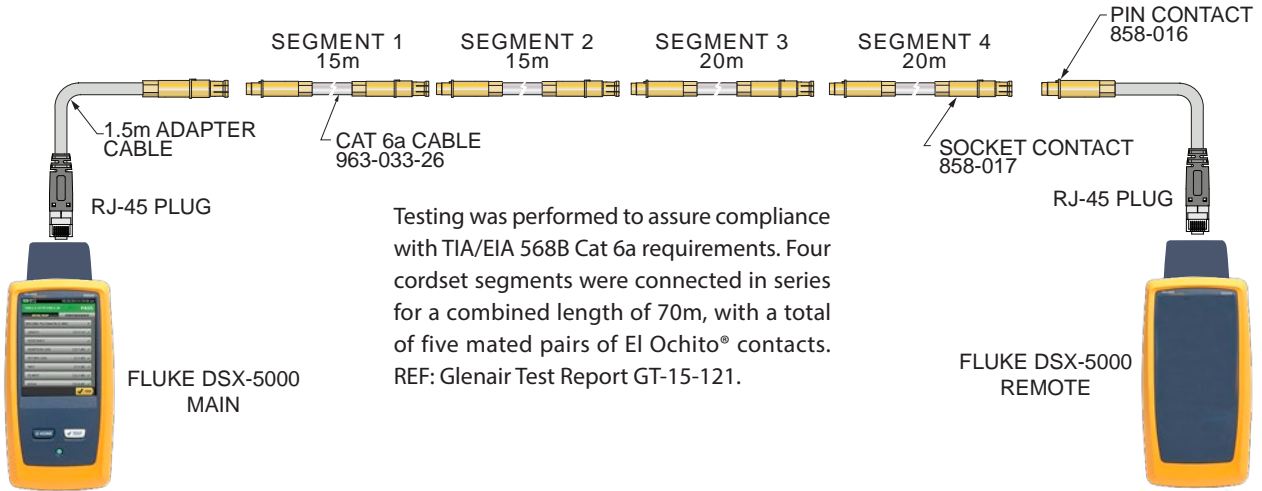
for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## El Ochito® Octaxial Contacts for 10G Ethernet

### Signal Integrity Data

### 10GBase-T Cat 6a Compliance Testing



# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



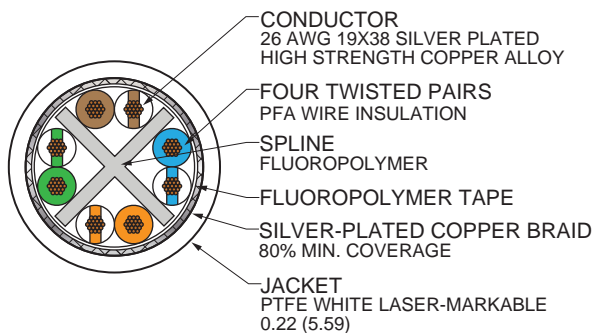
## El Ochito® Octaxial Contacts for 10G Ethernet

### Aerospace Grade Category 6a Ethernet Cable

#### 963-003-26 S/UTP Cable

S/UTP 26 AWG cable is small, lightweight and flexible. Twisted pairs are separated by a fluoropolymer spline for reduced crosstalk and attenuation. This 200°C rated cable is Skydrol resistant, RoHS compliant and meets FAA FAR Parts 23 and 25 Appendix F flammability requirements. Rugged, laser-markable PTFE jacket withstands abrasion and chemicals. Meets ANSI/TIA-568B Category 6a performance up to 193 feet.

S/UTP Cable	
Glenair Part No.	963-003-26
Manufacturer Part No.	E6A3826
Manufacturer	PIC
Construction Details	



#### Color Code

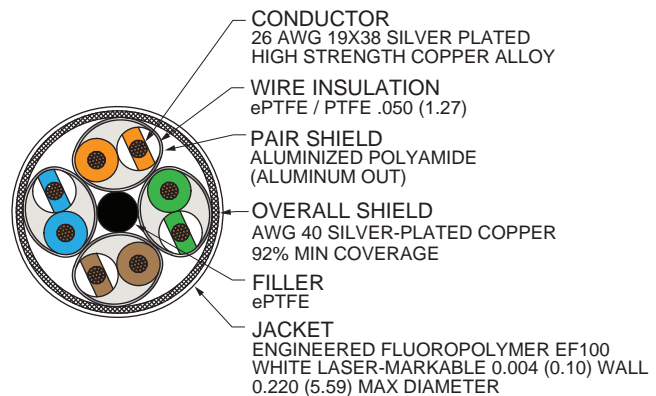
Pair #1 Blue, White/Blue Pair #2 Orange, White/Orange Pair #3 Green, White/Green Pair #4 Brown, White/Brown

Specifications		
Impedance (ohms)	100	
Temperature Rating	-55 to +200 °C	
Weight (lbs/100 ft.)	3.5	
Capacitance (pF/ft)	14.5	
Minimum Bend Radius (inches)	0.66	
Velocity of Propagation %	70	
Dielectric Voltage Rating (kV rms)	1.5	
DC Resistance, Max (ohms/1000 ft.)	44.8	
Max Distance in Feet (m)	193 (59)	
Attenuation Nom / Max	Frequency	dB/100 ft.
	10 MHz	2.7 / 3.1
	100 MHz	8.7 / 10.5
	250 MHz	14.4 / 17.2
	500 MHz	20.7 / 24.9

#### 963-033-26 S/FTP Cable

S/FTP 26 AWG cable has an individual foil shield around each data pair for reduced crosstalk and attenuation. This high data rate Ethernet cable features a unique cable jacket material and high-density construction that significantly reduces weight and diameter. Meets ANSI/TIA 568-C.2 Category 6a requirements up to 65 meters (213 feet).

S/FTP Cable	
Glenair Part No.	963-033-26
Manufacturer Part No.	RCN9047-26
Manufacturer	Gore
Construction Details	



#### Color Code

Pair #1 Blue, White/Blue Pair #2 Orange, White/Orange Pair #3 Green, White/Green Pair #4 Brown, White/Brown

Specifications		
Impedance (ohms)	100 (+10 -5)	
Temperature Rating	-65 to +200 °C	
Weight (lbs/100 ft.)	3.2	
Capacitance (pF/ft)	12.5	
Time Delay	1.24 ns/ft	
Maximum Attenuation at 65m Length	Frequency	dB
	10 MHz	5.9
	100 MHz	19.1
	250 MHz	31.1
	500 MHz	45.3
NEXT (maximum)	Frequency	dB
	1 MHz	74.3
	10 MHz	59.2
	100 MHz	52.3
	250 MHz	47.9
500 MHz	42.2	

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## El Ochito® Octaxial Contacts for 10G Ethernet

### Pre-Wired El Ochito® Contacts



Pre-wired El Ochito® assemblies are 100% tested and ready for use. Compatible with Glenair 233-217 SuperNine or Series 80 Mighty Mouse connectors with keyed size #8 cavities, these assemblies are available with three termination options: single-ended, El Ochito® contacts on both ends, or with an RJ45 plug on one end. Two flight-grade cables are available: S/UTP (PIC) or S/FTP (Gore). Contacts are wired per the guidelines of ARINC 664 Part 2 Appendix N.

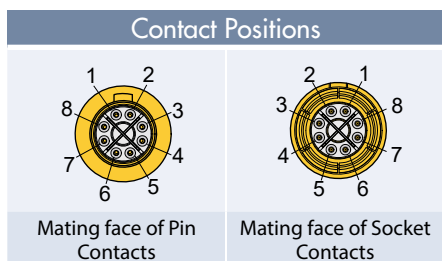
Technical Data Specifications
<ul style="list-style-type: none"> <li>Operating temperature: -65°C. to +175°C. (El Ochito) or -40°C. to +85°C (RJ45)</li> <li>Meets EIA/TIA 568B.2-10 and IEC 60603-7-51 CAT6a 500 MHz</li> <li>Characteristic Impedance: 100 ohms</li> <li>Insulation resistance: 200 megohms min.</li> <li>Durability: 500 mating cycles</li> </ul>

El Ochito® Construction
<ul style="list-style-type: none"> <li>Inner contacts, outer contact, shield crimp ferrule: copper alloy, 50 microinches gold over nickel plating</li> <li>Front, middle and rear insulator: PPS</li> <li>Spline: copper alloy, nickel plated</li> <li>Sealing boot grommet: fluorosilicone</li> <li>Sealing boot body: rigid thermoplastic, PEI or equivalent</li> </ul>

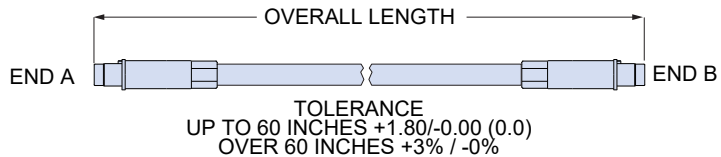
RJ45 Construction
<ul style="list-style-type: none"> <li>Body: UL 94-V0 polycarbonate</li> <li>Grommet: UL 94-V0 polycarbonate</li> <li>Contacts: copper alloy, 50 microinches selective gold plating</li> <li>Shield: nickel-plated copper alloy</li> </ul>

Connector Compatibility
<ul style="list-style-type: none"> <li>Glenair Series 80 Mighty Mouse</li> <li>Glenair 233-217 SuperNine™</li> </ul>

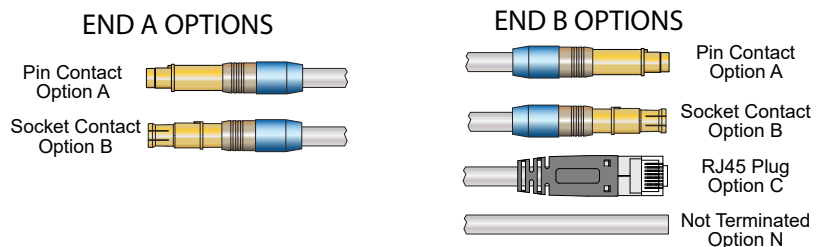
Notes
<ol style="list-style-type: none"> <li>100% tested for continuity, DWV and IR.</li> <li>Wired per the guidelines of ARINC 664 Part 2 Appendix N.</li> </ol>



How To Order Pre-Wired El Ochito® Contacts						
	858-022	B	-A	C	-01	-36
Product	858-022 = Pre-wired El Ochito® contact					
Connector Type	A = ARINC 600 B = M38999 type (233-217 or Series 80 Mighty Mouse)					
End A Contact Type	A = El Ochito® pin contact B = El Ochito® socket contact					
End B Contact/Connector	A = El Ochito® pin contact B = El Ochito® socket contact C = RJ45 Cat6a shielded plug N = End B not terminated					
Cable Type	01 = S/UTP cable, #26 AWG, P/N 963-003-26 (PIC) 02 = S/FTP cable, #26 AWG, P/N 963-033-26 (Gore)					
Length	Overall length in inches					



Ref. El Ochito® Contact Part Numbers				
Connector Type	Connector Description	Cable Type	Pin Contact	Socket Contact
A	ARINC 600	01	858-009-01	858-010-01
		02	858-009-02	858-010-02
B	Series 23 SuperNine®	01	858-003-01	858-004-01
	Series 80 Mighty Mouse	02	858-016-01	858-017-01



# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



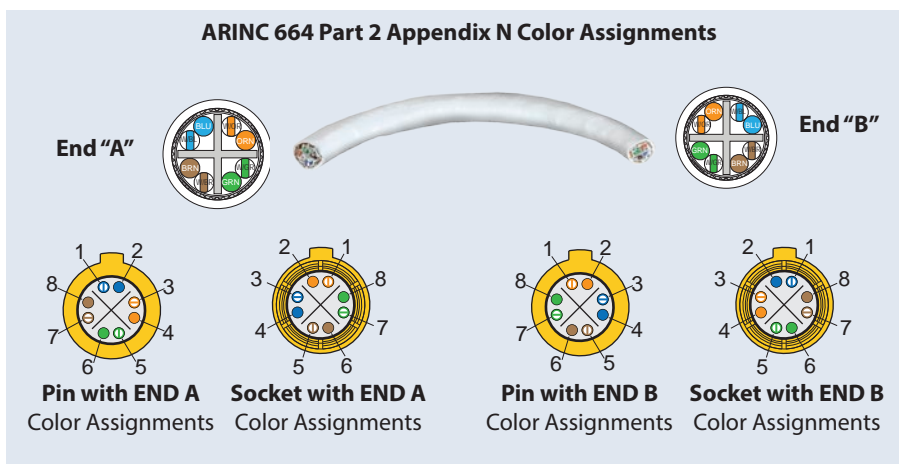
## El Ochito® Octaxial Contacts for 10G Ethernet

### Pre-Wired El Ochito® Contacts

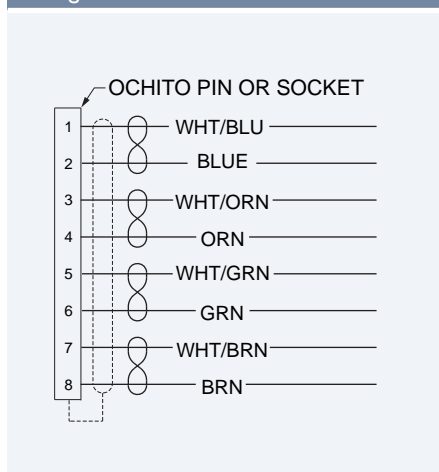
### 858-022 Pre-Wired El Ochito® Contact Schematics

Contacts are wired per the guidelines of ARINC 664 Part 2 Appendix N. These guidelines control the wire color assignments. The wire terminations depend on the contact gender and whether the contact is terminated to end "A" or end "B" of the wire.

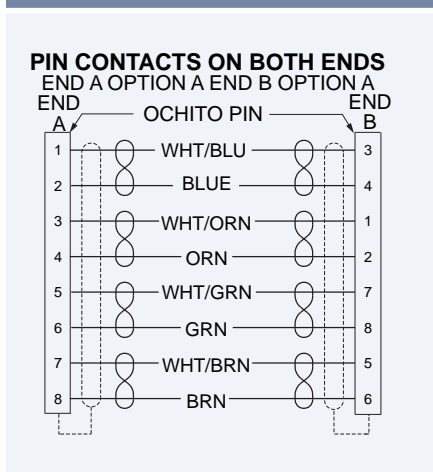
The diagram at right shows the ARINC 664 Part 2 color assignments for each end of the wire. Following these guidelines ensure the wire geometry is maintained throughout the data link.



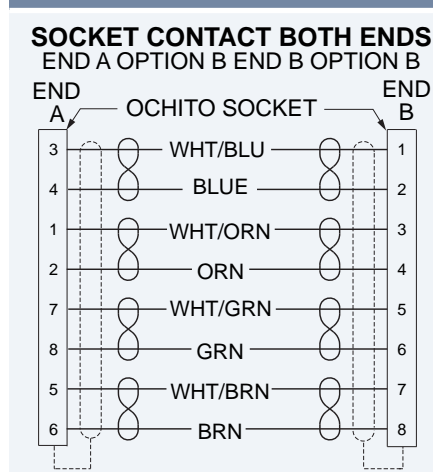
#### Single-Ended El Ochito® Pin or Socket



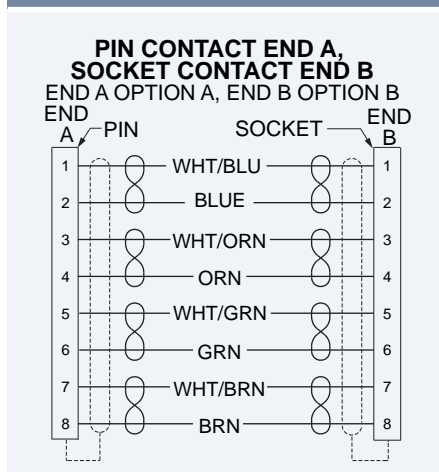
#### El Ochito® Pin to El Ochito® Pin



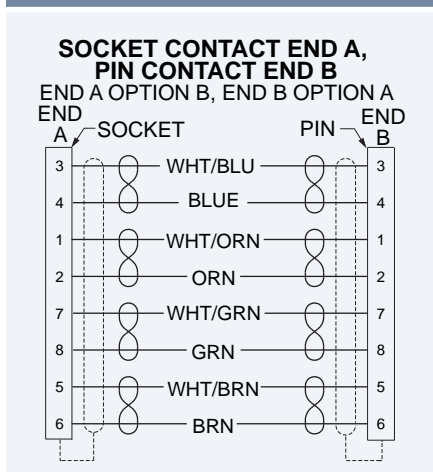
#### El Ochito® Socket to El Ochito® Socket



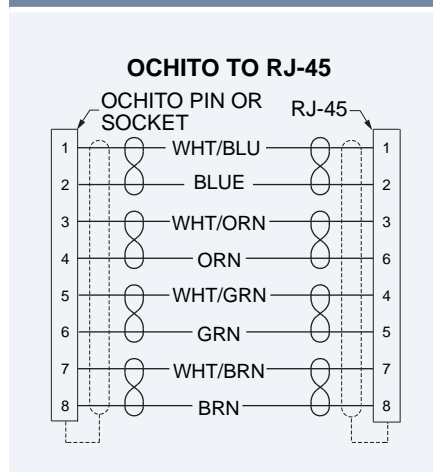
#### El Ochito® Pin End A to El Ochito® Socket



#### El Ochito® Socket End A to El Ochito® Pin



#### El Ochito® Pin or Socket to RJ-45





# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors

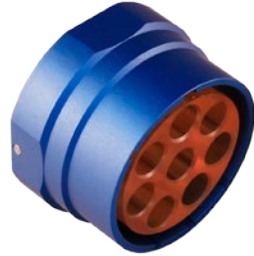


## El Ochito® Octaxial Contacts for 10G Ethernet

### El Ochito® Test Adapters and Cables for SuperNine® Connectors



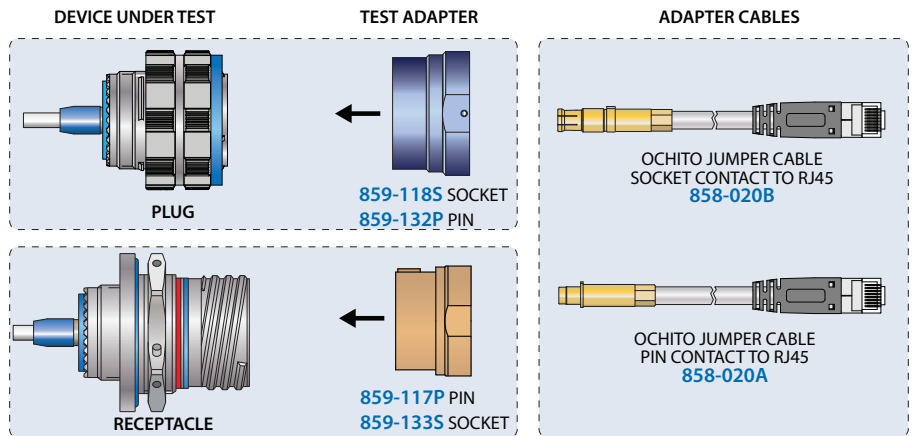
**Plug Adapter**



**Receptacle Adapter**

Prevent damage to expensive cables with El Ochito® test adapters and jumper cables. These test adapters properly align mating contacts without the added expense and time-consuming labor of mating connectors. Jumper cables are ordered separately. Push test adapter into Device Under Test (DUT), then insert adapter cable into adapter. No tool is required to insert and remove adapter cable. Jumper cables have high performance shielded EIA/TIA 568B.2-10 Cat6a RJ45 plug for interface with test instruments.

Construction
<p><b>Receptacle adapter (859-117P and 857-133S):</b> polyetherimide resin, natural color</p> <p><b>Plug adapter (859-118S and 859-132P):</b> polyetherimide insert, blue anodized aluminum alloy housing</p>
Connector Compatibility
<p>Glenair 233-217 SuperNine™ connectors with size 8 El Ochito® contacts</p>



### Ordering Information for El Ochito® Test Adapters (Jumper Cables not Included)

**RECEPTACLE ADAPTER**  
MATES WITH PLUG CONNECTOR

859-118S  
MATES WITH PLUG WITH PIN CONTACTS  
859-132P  
MATES WITH PLUG WITH SOCKET CONTACTS

**PLUG ADAPTER**  
MATES WITH RECEPTACLE CONNECTOR

859-117P  
MATES WITH RECEPTACLE WITH SOCKET CONTACTS  
859-133S  
MATES WITH RECEPTACLE WITH PIN CONTACTS

Arr.	Device Under Test			
	Plug with Pin Contacts <sup>(1)</sup>	Plug with Socket Contacts <sup>(1)</sup>	Receptacle with Pin Contacts	Receptacle with Socket Contacts
09G05	859-118S09G05N	859-132P09G05N	859-133S09G05	859-117P09G05
11-01	859-118S11-01N	859-132P11-01N	859-133S11-01	859-117P11-01
17-02	859-118S17-02N	859-132P17-02N	859-133S17-02	859-117P17-02
17-22	859-118S17-22N	859-132P17-22N	859-133S17-22	859-117P17-22
17-60	859-118S17-60N	859-132P17-60N	859-133S17-60	859-117P17-60
17-75	859-118S17-75N	859-132P17-75N	859-133S17-75	859-117P17-75
19-04	859-118S19-04N	859-132P19-04N	859-133S19-04	859-117P19-04
19-12	859-118S19-12N	859-132P19-12N	859-133S19-12	859-117P19-12
19-17	859-118S19-17N	859-132P19-17N	859-133S19-17	859-117P19-17
19-18	859-118S19-18N	859-132P19-18N	859-133S19-18	859-117P19-18
21-75	859-118S21-75N	859-132P21-75N	859-133S21-75	859-117P21-75
23-05	859-118S23-05N	859-132P23-05N	859-133S23-05	859-117P23-05
23-06	859-118S23-06N	859-132P23-06N	859-133S23-06	859-117P23-06
25-07	859-118S25-07N	859-132P25-07N	859-133S25-07	859-117P25-07
25-08	859-118S25-08N	859-132P25-08N	859-133S25-08	859-117P25-08
25-17	859-118S25-17N	859-132P25-17N	859-133S25-17	859-117P25-17
25-20	859-118S25-20N	859-132P25-20N	859-133S25-20	859-117P25-20
25-26	859-118S25-26N	859-132P25-26N	859-133S25-26	859-117P25-26
25-41	859-118S25-41N	859-132P25-41N	859-133S25-41	859-117P25-41
25-46	859-118S25-46N	859-132P25-46N	859-133S25-46	859-117P25-46

(1) For alternate polarizations, change suffix code from N to A, B, C, D or E.

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse and Micro-Crimp® Connectors



## El Ochito® Octaxial Contacts for 10G Ethernet

### El Ochito® Test Adapters and Cables for SuperNine® Connectors

#### 859-117P Pin Adapter

Shell Size	A Diameter	
	In.	mm.
09 (A)	.650	16.5
11 (B)	.780	19.8
17 (E)	1.203	30.6
19 (F)	1.265	32.1
21 (G)	1.390	35.3
23 (H)	1.520	38.6
25 (J)	1.635	41.5

#### 859-118S Socket Adapter

Shell Size	A Diameter	
	In.	mm.
09 (A)	.710	18.0
11 (B)	.850	21.6
17 (E)	1.271	32.3
19 (F)	1.333	33.9
21 (G)	1.460	37.1
23 (H)	1.585	40.3
25 (J)	1.711	43.5

#### 859-132P Pin Adapter

Shell Size	A Diameter	
	In.	mm.
09 (A)	.710	18.0
11 (B)	.850	21.6
17 (E)	1.271	32.3
19 (F)	1.333	33.9
21 (G)	1.460	37.1
23 (H)	1.585	40.3
25 (J)	1.711	43.5

#### 859-133S Socket Adapter

Shell Size	A Diameter	
	In.	mm.
09 (A)	.650	16.5
11 (B)	.780	19.8
17 (E)	1.203	30.6
19 (F)	1.265	32.1
21 (G)	1.390	35.3
23 (H)	1.520	38.6
25 (J)	1.635	41.5

#### El Ochito® Test Jumpers with Pin Contacts

RJ45 MODULAR PLUG SHIELDED HIGH PERFORMANCE EIA/TIA 568B.2-10 AND IEC 60603-7-51 CAT6a 10 GIGABIT SPEED

OCHITO PIN CONTACT (858-018)

ETHERNET CABLE S/FTP CAT6A, 26 AWG (963-033-26)

#### El Ochito® Test Jumpers with Socket Contacts

RJ45 MODULAR PLUG SHIELDED HIGH PERFORMANCE EIA/TIA 568B.2-10 AND IEC 60603-7-51 CAT6a 10 GIGABIT SPEED

OCHITO SOCKET CONTACT (858-019)

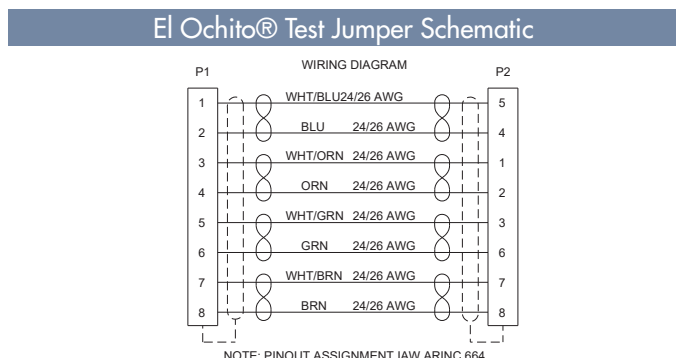
ETHERNET CABLE S/FTP CAT6A, 26 AWG (963-033-26)

#### Pin Jumper Ordering Information

Overall Length		Part Number
Inches	meters	
18	0.45	<a href="#">858-020-A-02-18</a>
36	0.91	<a href="#">858-020-A-02-36</a>
72	1.82	<a href="#">858-020-A-02-72</a>
120	3.05	<a href="#">858-020-A-02-120</a>

#### Socket Jumper Ordering Information

Overall Length		Part Number
Inches	meters	
18	0.45	<a href="#">858-020-B-02-18</a>
36	0.91	<a href="#">858-020-B-02-36</a>
72	1.82	<a href="#">858-020-B-02-72</a>
120	3.05	<a href="#">858-020-B-02-120</a>



- #### Notes
- 858-020 jumper cables are intended only for use in Glenair El Ochito® test adapters. Do not attempt to install in MIL-DTL-38999 type connectors.
  - Other cable lengths are readily available. Change the suffix number to the desired length in inches.
  - 858-020 jumper cables are fully assembled and 100% electrically tested.
  - Length is minimum overall length including contact and plug.
  - No tool is required to install or remove contacts.
  - Jumper cables are wired per the guidelines of ARINC 664 Part 2 Appendix N.

# RF, Microwave and Datalink Contacts

for MIL-DTL-38999, SuperNine®, Mighty Mouse, and  
Micro-Crimp Connectors



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## TECHNOLOGY OVERVIEW

# Glenair High-Speed Interconnect Solutions



OctobYTE™ 4/8 pole modular contact system for industrial applications



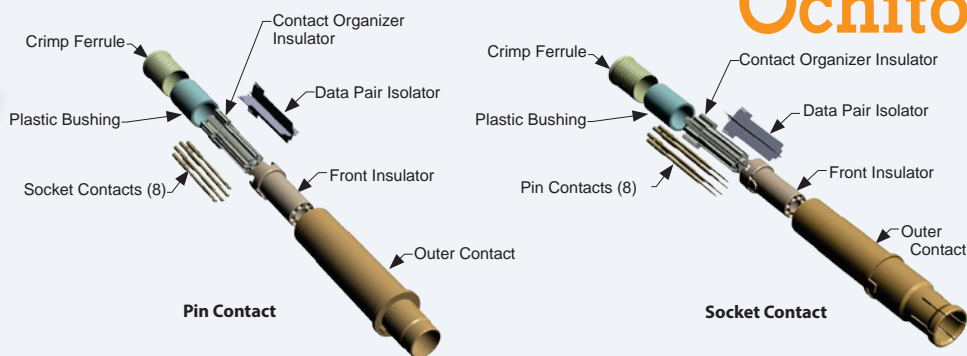
Series 80 Mighty Mouse High-Speed with matched-impedance Teflon® inserts

A complete range of electrical, fiber optic, and opto-electronic interconnect solutions for harsh environment Ethernet, RF, microwave, and other high-speed matched-impedance military and aerospace applications

### EL OCHITO® OCTAXIAL MATCHED-IMPEDANCE 10G ETHERNET CONTACT



El Ochito®: The 10G Ethernet contact with patented data pair isolation technology



# TECHNOLOGY OVERVIEW

## Glenair High-Speed Interconnect Solutions



### RF, MICROWAVE, AND DATALINK CONTACTS



AS39029 Coaxial



Spring-loaded Microwave Coax



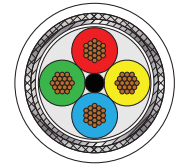
Concentric Twinax



Differential Ultra-Twinax



Quadrax



High-Performance Cable

### SUPERSEAL FIELD RJ45 AND USB SOLUTIONS



Series 80 Mighty Mouse Micro-USB



SuperNine® RJ45



SuperNine® USB



### HARSH-ENVIRONMENT OPTO-ELECTRONIC TECHNOLOGIES



Small form-factor transceiver



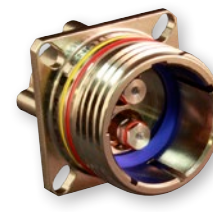
Signal aggregation media converter



7-port Ethernet switch



DVI video media converter



Photonic connectors and modules



Size #8 Photonic contacts

### HARSH-ENVIRONMENT FIBER OPTIC INTERCONNECT SYSTEMS



MIL-DTL-38999 Type Fiber Optic



Glenair High Density (GHD)



Series 80 Mighty Mouse Fiber Optic



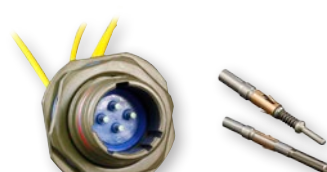
MIL-PRF-28876 QPL



MT Ferrule Fiber Optic



ARINC 801



Eye-Beam® GLT Expanded-Beam Grin-Lens Termini



Eye-Beam® GMA HMA-type Ball Lens



*Out of This World*  
**INTERCONNECT  
SOLUTIONS**

**Glenair, Inc.**

1211 Air Way • Glendale, California • 91201-2497

Telephone: 818-247-6000 • Fax: 818-500-9912 • sales@glenair.com

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860 N. Main Street Extension Facsimile:  
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