



**SERIES 970**

# **POWERTRIP™ CONNECTORS**



**THE POWER CONNECTOR FOR EXTREME ENVIRONMENTS**

FIRST EDITION • MARCH 2013

SERIES 970  
HIGH CURRENT,  
HARSH ENVIRONMENT

# POWERTRIP™

*The power connector  
for extreme environments*



## Protect circuits with Series 970 PowerTrip™ connectors

The George HW Bush, pictured above, is the first US Navy surface ship to use the Series 970 PowerTrip™ connector. Series 970 connectors fill the need for a military-grade harsh environment power connector with improved mechanical, environmental and electrical performance. PowerTrip™ also delivers reduced size and weight compared to lower-density 5015 type power connectors. Featuring triple-start mating threads, crimp rear-release contacts, upgraded finish choices and improved EMI protection, the PowerTrip™ connector is ideal for power distribution units, hybrid electric drives, motors, and other high current, high-reliability applications.



**POWER  
TRIP™**

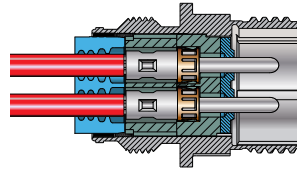
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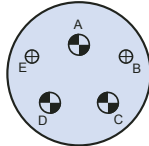
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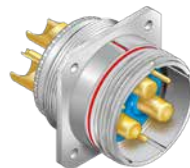
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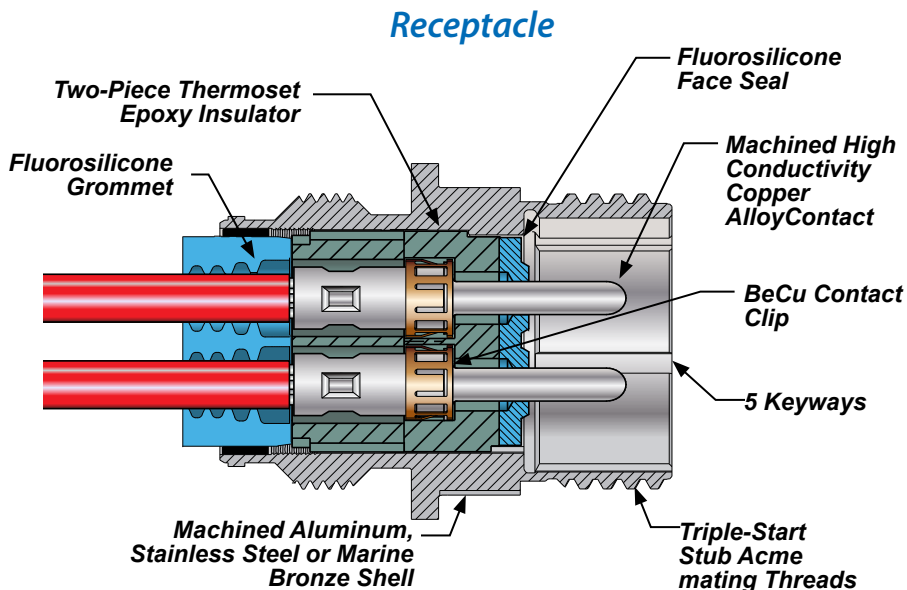
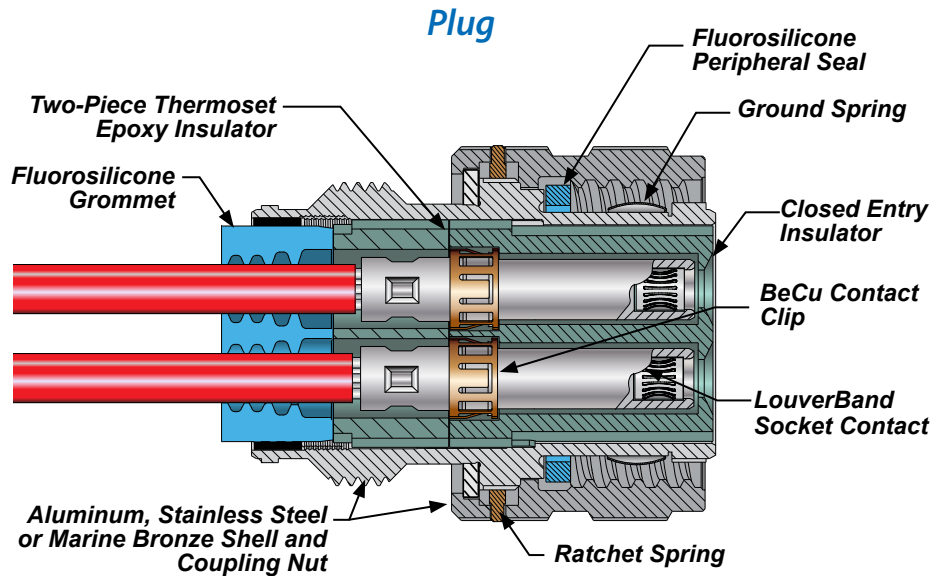
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### Series 970 PowerTrip™ Connectors

The Series 970 connector is a high current, harsh environment connector capable of meeting the demanding requirements of modern defense and aerospace systems. The connector is significantly smaller and lighter than lower-density 5015 type connectors.

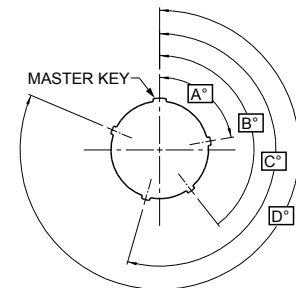
#### Features

- **Fast, easy connector mating with triple-start ACME thread. 360° turn for full mating**
- **5 polarizing keys, 6 keying positions**
- **LouverBand sockets for improved conductivity and longer life**
- **High conductivity copper alloy contacts**
- **Crimp, rear release contact system**
- **Splined backshell interface for improved EMI protection**
- **Ratcheting coupling for secure mating**
- **-65° C to +200° C**
- **Size 8, 4 and 1/0 contact sizes**
- **Last-mate, first-break size 12 and 16 contacts**



Plug Key Positions				
Pos	A°	B°	C°	D°
1	80	142	196	293
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272

Receptacle keyways are mirrored



## Cable Mount Plugs and Receptacles

Cable Plug with  
Accessory Threads  
970-001



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Cable Plug with  
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## Feed-Thru Bulkhead Receptacles

Jam Nut Feed-Thru  
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Hermetic Jam  
Nut Feed-Thru  
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970-007



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## Series 970 Connectors and Accessories Introduction

### LouverBand Contact System, Current Rating

#### About the PowerTrip Contact System

Series 970 contacts are precision-machined using high conductivity copper alloy. A stamped and formed spring ("louverband") is installed into the socket contact. The spring is made from 6 mil beryllium copper (BeCu). Testing has demonstrated that this contact system outperforms conventional aerospace-grade contact systems. The louverband spring provides many points of electrical contact with the mating pin, as opposed to a few "high spots" on a conventional four-finger contact as shown in *Fig. 2*. The size #8 Powertrip socket contact has a total of 18 louvers. The #4 has 27 louvers, and the #1/0 has 42 louvers. The louverband design offers lower voltage drop for reduced temperature rise and higher current carrying capacity. In addition to its electrical advantages, the louverband also is mechanically superior to four-finger contacts. The louverband spring has consistent, stable normal force, even when subjected to thousands of mating cycles and temperature extremes.

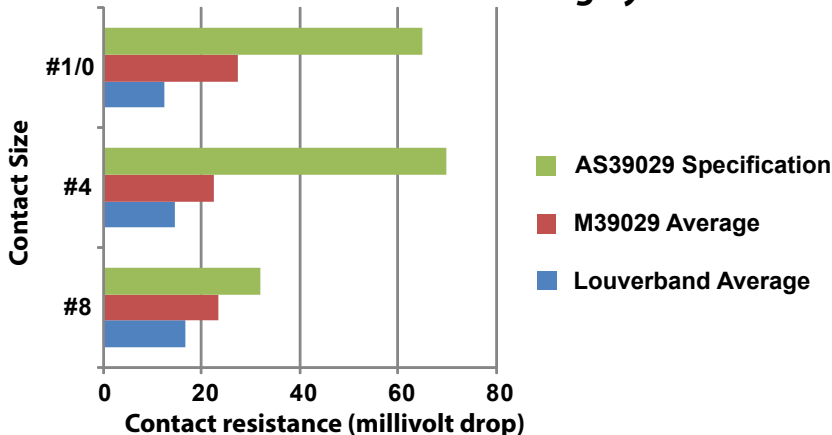
#### About "Last-Mate, First-Break" Capability

PowerTrip connectors should be mated and demated only after the circuit has been de-energized. The Powertrip contact arrangements include layouts with size #12 and #16 contacts. These contacts are designed to mate only after the larger power contacts are mated. When uncoupled, the size #12 and #16 contacts separate before the power contacts are disengaged. These smaller contacts are typically used for safety interlock circuits.

#### About Current Rating

PowerTrip connector current carrying capacity and maximum contact resistance are in accordance with AS39029 specifications for conventional contacts. Testing of Powertrip contacts has shown the contact resistance (voltage drop) to be up to 60% lower than the allowable voltage drops of AS39029. Temperature -Rise tests have also demonstrated the Powertrip contact to generate less heat under load than conventional contacts. However, the maximum safe current load is dependent on a number of application-specific variables. The maximum safe current load is the combination of the electrical load and ambient conditions that do not exceed a maximum connector internal hot-spot temperature of +200° C, which is the maximum recommended operating temperature.

#### Contact Resistance after 1000 Mating Cycles



**Figure 1**  
LouverBand Socket Contact



**Figure 2**  
Conventional Contact on the Left, LouverBand Contact on the Right

CURRENT RATING	
Contact Size	Copper Alloy
16	13
12	23
8	60
4	100
1/0	175

# Series 970 Connectors and Accessories Technical Reference Contact Arrangements

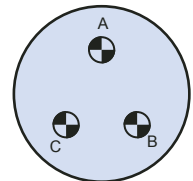
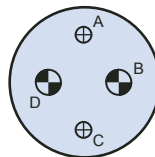
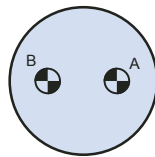
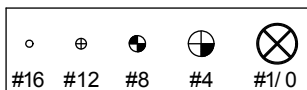


## SERIES 970 CONTACT ARRANGEMENTS

Contact Size	Contact Arrangement	Contact Size and Quantity				
		#16	#12	#8	#4	#1/0
Size #16	28-15	15				
Size #12	32-20	1	19			
Size #8	18-2			2		
	18-4		2	2		
	20-3			3		
	20-5		2	3		
	20-7	4		3		
	20-4			4		
	24-5			5		
	28-8		1	7		
	36-16	3		13		
40-21			21			
Size #4	24-2				2	
	24-6		4		2	
	24-3				3	
	24-A6		3		3	
	28-4				4	
	28-9	5			4	
	32-5				5	
	32-2					2
	32-4				2	2
	32-3					3
	32-6		3			3
	36-4					4
	40-5					5

## CONTACT ARRANGEMENTS

### CONTACT SYMBOLS



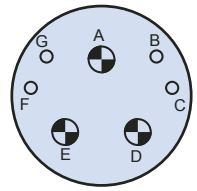
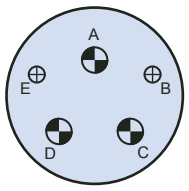
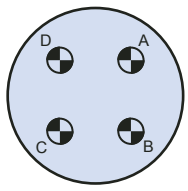
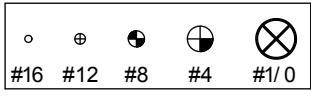
Shell Size-Contact Quantity	18-2	18-4		20-3
Contact Size	2 #8	2 #8	2 #12	3 #8
Amps	120	120	46	180
Total Amps	120	166		180



Series 970 Connectors and Accessories  
 Technical Reference  
 Contact Arrangements

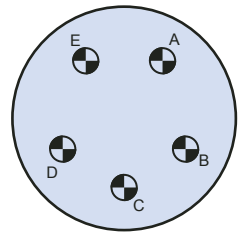
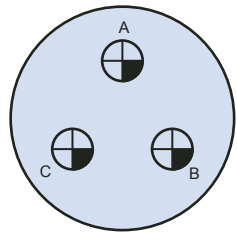
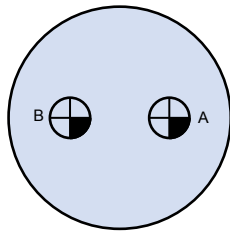
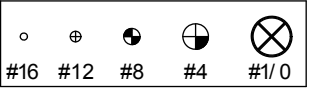
Contact Arrangements shown are mating face views of pin connectors.  
 Socket arrangements are reversed.

CONTACT SYMBOLS



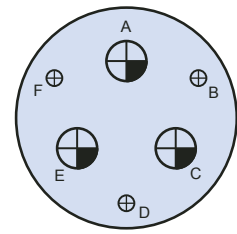
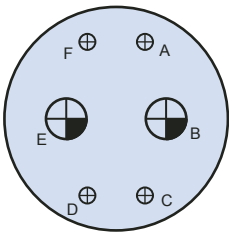
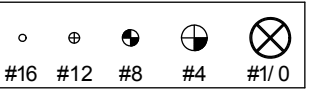
Shell Size-Contact Quantity	20-4		20-5		20-7	
Contact Size	4 #8		3 #8	2 #12	3 #8	4 #16
Amps	240		180	46	180	52
Total Amps	240		226		232	

CONTACT SYMBOLS



Shell Size-Contact Quantity	24-2	24-3	24-5
Contact Size	2 #4	3 #4	5 #8
Amps	200	300	300
Total Amps	200	300	300

CONTACT SYMBOLS



Shell Size-Contact Quantity	24-6		24-A6	
Contact Size	2 #4,	4 #12	3 #4	3 #12
Amps	200	92	300	69
Total Amps	292		369	

B

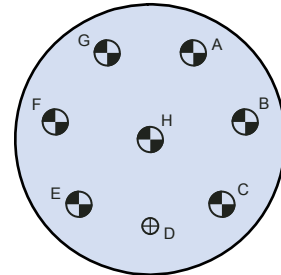
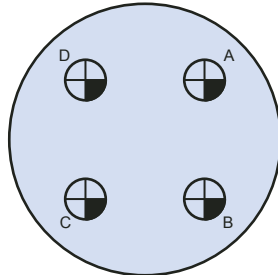
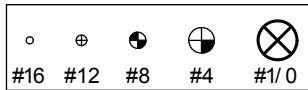


Series 970 Connectors and Accessories  
 Technical Reference  
 Contact Arrangements



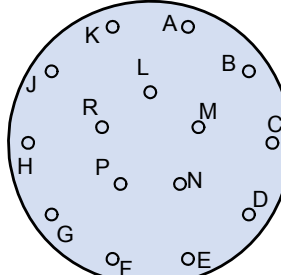
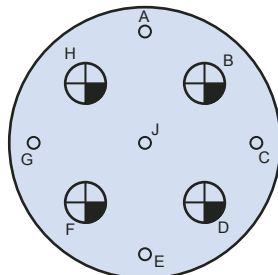
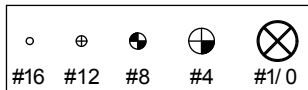
Contact Arrangements shown are mating face views of pin connectors.  
 Socket arrangements are reversed.

CONTACT SYMBOLS



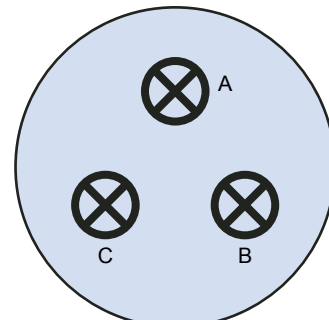
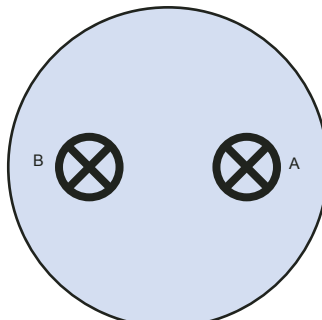
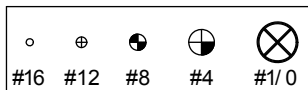
Shell Size-Contact Quantity	28-4		28-8	
Contact Size	4 #4		1 #12	7 #8
Amps	400		23	420
Total Amps	400		443	

CONTACT SYMBOLS



Shell Size-Contact Quantity	28-9		28-15	
Contact Size	4 #4	5 #16	15 #16	
Amps	400	65	195	
Total Amps	465		195	

CONTACT SYMBOLS



Shell Size-Contact Quantity	32-2		32-3	
Contact Size	2 #1/0		3 1/0	
Amps	350		525	
Total Amps	350		525	

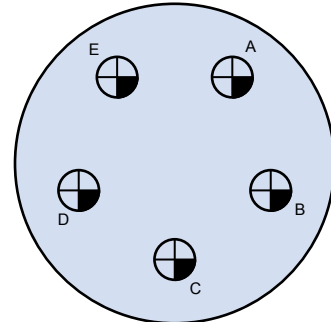
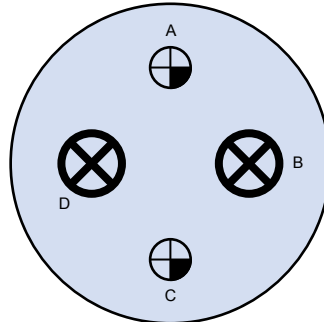
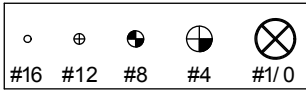


Series 970 Connectors and Accessories  
 Technical Reference  
 Contact Arrangements

B

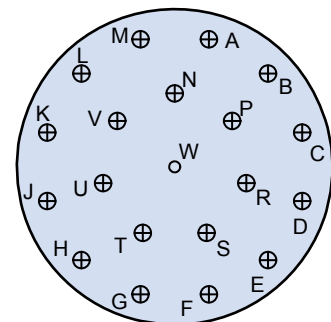
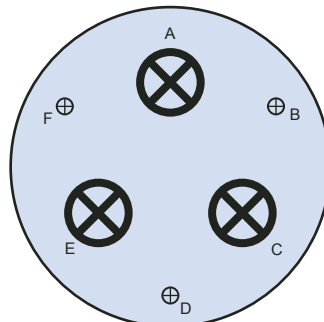
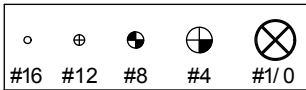
Contact Arrangements shown are mating face views of pin connectors.  
 Socket arrangements are reversed.

CONTACT SYMBOLS



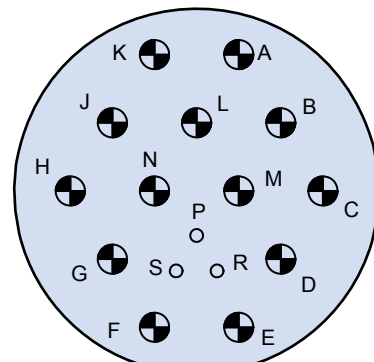
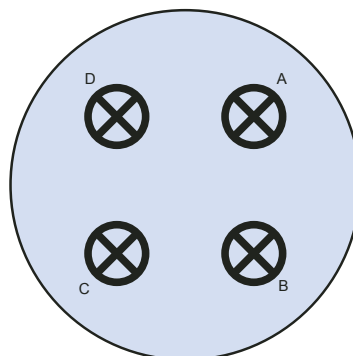
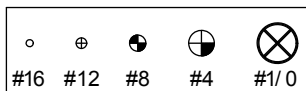
Shell Size-Contact Quantity	32-4		32-5	
Contact Size	2 #1/0	2 #4	5 #4	
Amps	350	200	500	
Total Amps	550		500	

CONTACT SYMBOLS



Shell Size-Contact Quantity	32-6		32-20	
Contact Size	3 #1/0	3 #12	1 #16	19 #12
Amps	525	69	13	437
Total Amps	594		450	

CONTACT SYMBOLS



Shell Size-Contact Quantity	36-4		36-16	
Contact Size	4 #1/0		3 #16	13 #8
Amps	700		39	780
Total Amps	700		819	

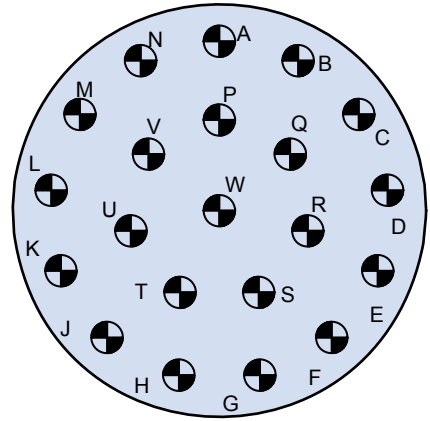
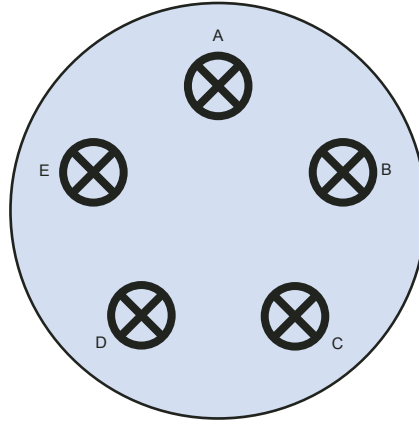
Series 970 Connectors and Accessories  
 Technical Reference  
 Contact Arrangements and Wire Diameter



Contact Arrangements shown are mating face views of pin connectors.  
 Socket arrangements are reversed.

CONTACT SYMBOLS

○	⊕	⊗	⊙	⊗
#16	#12	#8	#4	#1/0



Shell Size-Contact Quantity	40-5	40-21
Contact Size	5 #1/0	21 #8
Amps	875	1260
Total Amps	875	1260

Wire Insulation Diameters

This table shows the minimum and maximum wire diameters compatible with Series 970 connectors. Wires smaller than specified will not seal properly. Wires larger than specified will be difficult to install and extract.

Contact Size	Wire Size (AWG)	Finished Wire Outside Dimensions			
		Minimum Diameter		Maximum Diameter	
		Inches	mm	Inches	mm
16	16	.053	1.35	.103	2.62
12	12	.085	2.16	.158	4.01
8	8	.187	4.75	.203	5.16
4	4	.280	7.11	.320	8.13
1/0	0	.465	11.81	.500	12.7



Series 970 Connectors and Accessories  
Technical Reference  
Contact Rating, Materials and Finishes

B

MATERIALS AND FINISHES

COMPONENT	MATERIAL	FINISH
Contacts, Size #1/0, #4 and #8	Pin contact and socket contact body: high-conductivity copper alloy per ASTM B301 Hermetic contact: ferrous alloy per ASTM B 829 Socket contact spring: beryllium copper	<b>Code 1:</b> Silver per ASTM-B700, 0.0002 – 0.0003 thick over nickel plate per QQ-N-290 class 2 .000050-.000100 thick <b>Code 2:</b> Gold per ASTM B488, Type II, Code C, Class 1.25, .000050-.000100 thick over nickel plate per QQ-N-290, Class 2, .000050-.000100 thick
Contacts, Size #12 and #16	Pin contact: copper alloy Socket contact: copper alloy, stainless steel hood	Gold per ASTM B488, Type II, Code C, 0.000015-0.000025 thick over palladium per ASTM B679, 0.000060-0.000100 thick, over nickel per SAE AMS-QQ-N-290 Class 2, 0.000050-0.000100 thick
Contacts, Hermetic, Size #12 and #16	Pin contact: ferrous alloy per ASTM B 829 Socket Contact: ferrous alloy pin, copper alloy socket, stainless steel hood	<b>Code 1:</b> Silver per ASTM-B700, 0.0002 – 0.0003 thick over nickel plate per QQ-N-290 class 2 .000050-.000100 thick <b>Code 2:</b> Gold per ASTM B488, Type II, Code C, Class 1.25, .000050-.000100 thick over nickel plate per QQ-N-290, Class 2, .000050-.000100 thick
Aluminum Shells, Coupling Nuts	Aluminum alloy 6061 or 7075	See Ordering Information
Stainless Steel Shells, Coupling Nuts, Hermetic Receptacle Shells	Stainless steel, AISI 316	See Ordering Information
Insulators	Fiberglass-reinforced thermosetting epoxy resin per ASTM-D-5948, Type GEI-5, black	None
Insulator, Hermetic	Vitreous glass	None
Interfacial Seals, Grommets	Fluorosilicone/silicone blend, blue	None
EMI Spring	Beryllium copper	Nickel-plated
Contact Retention Clip	Beryllium copper	None
Clinch Nut	Stainless Steel	Passivated
Anti-Decoupling Ratchet Spring	Stainless Steel	None
Filter Element	Multilayer ceramic planar array	

Series 970 Connectors and Accessories  
 Technical Reference  
 Product Specification



DESCRIPTION	REQUIREMENT	PROCEDURE																					
Altitude Immersion	No evidence of moisture on connector interface or contacts. At the end of the third cycle, while still submersed, connectors shall meet 2000 Vac dielectric withstanding voltage and 1,000 megohms insulation resistance.	EIA-364-03 Simulated 75,000 feet altitude																					
Altitude- Low Temperature	Insulation resistance greater than 5,000 megohms while mated and exposed to simulated 110,000 feet altitude and -65°C.	EIA-364-105 Mated pair																					
Blowing Sand and Dust	Connectors shall meet electrical and mechanical requirements following exposure to sand and dust.	MIL-STD-810G Method 510.5 Mated connectors																					
Contact Insertion and Removal Force (Maintenance Aging)	<table border="1"> <thead> <tr> <th>Contact Size</th> <th>Max. Pounds</th> </tr> </thead> <tbody> <tr> <td>16</td> <td>20</td> </tr> <tr> <td>12</td> <td>30</td> </tr> <tr> <td>8</td> <td>35</td> </tr> <tr> <td>4</td> <td>40</td> </tr> <tr> <td>1/0</td> <td>40</td> </tr> </tbody> </table>	Contact Size	Max. Pounds	16	20	12	30	8	35	4	40	1/0	40	EIA-364-24									
Contact Size	Max. Pounds																						
16	20																						
12	30																						
8	35																						
4	40																						
1/0	40																						
Contact resistance (copper alloy)	<table border="1"> <thead> <tr> <th>Wire Size</th> <th>Test Current</th> <th>Voltage Drop</th> </tr> </thead> <tbody> <tr> <td>16</td> <td>13</td> <td>49</td> </tr> <tr> <td>14</td> <td>17</td> <td>40</td> </tr> <tr> <td>12</td> <td>23</td> <td>42</td> </tr> <tr> <td>8</td> <td>46</td> <td>26</td> </tr> <tr> <td>4</td> <td>80</td> <td>23</td> </tr> <tr> <td>1/0</td> <td>150</td> <td>21</td> </tr> </tbody> </table>	Wire Size	Test Current	Voltage Drop	16	13	49	14	17	40	12	23	42	8	46	26	4	80	23	1/0	150	21	EIA-364-06 Test current in amperes. Maximum voltage drop in millivolts. Silver-coated copper wire, +25°C.
Wire Size	Test Current	Voltage Drop																					
16	13	49																					
14	17	40																					
12	23	42																					
8	46	26																					
4	80	23																					
1/0	150	21																					
Contact resistance (ferrous alloy hermetic)	<table border="1"> <thead> <tr> <th>Wire Size</th> <th>Test Current</th> <th>Voltage Drop</th> </tr> </thead> <tbody> <tr> <td>16</td> <td>10</td> <td>539</td> </tr> <tr> <td>14</td> <td>13</td> <td>440</td> </tr> <tr> <td>12</td> <td>17</td> <td>462</td> </tr> <tr> <td>8</td> <td>33</td> <td>286</td> </tr> <tr> <td>4</td> <td>60</td> <td>253</td> </tr> <tr> <td>1/0</td> <td>100</td> <td>231</td> </tr> </tbody> </table>	Wire Size	Test Current	Voltage Drop	16	10	539	14	13	440	12	17	462	8	33	286	4	60	253	1/0	100	231	EIA-364-06 Test current in amperes. Maximum voltage drop in millivolts. Silver-coated copper wire, +25°C.
Wire Size	Test Current	Voltage Drop																					
16	10	539																					
14	13	440																					
12	17	462																					
8	33	286																					
4	60	253																					
1/0	100	231																					
Contact Retention	<table border="1"> <thead> <tr> <th>Contact Size</th> <th>Min. Pounds</th> </tr> </thead> <tbody> <tr> <td>16</td> <td>25</td> </tr> <tr> <td>12</td> <td>30</td> </tr> <tr> <td>8</td> <td>50</td> </tr> <tr> <td>4</td> <td>60</td> </tr> <tr> <td>1/0</td> <td>75</td> </tr> </tbody> </table>	Contact Size	Min. Pounds	16	25	12	30	8	50	4	60	1/0	75	EIA-364-29 Method B									
Contact Size	Min. Pounds																						
16	25																						
12	30																						
8	50																						
4	60																						
1/0	75																						
Salt Spray material/finish code ME	No exposure of base metal. Connectors shall meet DWV, contact resistance, shell-to-shell resistance and coupling torque	EIA-364-26 96 hours																					
Dynamic Salt Spray material/finish codes NF, ZR, MT, Z1	No exposure of base metal. Connectors shall meet DWV, contact resistance, shell-to-shell resistance and coupling torque	MIL-DTL-38999 Para. 4.5.13.2 50 cycles of mating and unmating prior to test 452 hours mated 48 hours unmated 450 cycles of mating and unmating following salt spray exposure																					
Coupling Torque	<table border="1"> <thead> <tr> <th>Shell Size</th> <th>Maximum (in-lb.)</th> </tr> </thead> <tbody> <tr> <td>18</td> <td>28</td> </tr> <tr> <td>20</td> <td>32</td> </tr> <tr> <td>24</td> <td>36</td> </tr> <tr> <td>28</td> <td>47</td> </tr> <tr> <td>32</td> <td>53</td> </tr> <tr> <td>36</td> <td>65</td> </tr> <tr> <td>40</td> <td>75</td> </tr> </tbody> </table>	Shell Size	Maximum (in-lb.)	18	28	20	32	24	36	28	47	32	53	36	65	40	75						
Shell Size	Maximum (in-lb.)																						
18	28																						
20	32																						
24	36																						
28	47																						
32	53																						
36	65																						
40	75																						
Current Rating	<table border="1"> <thead> <tr> <th>Contact Size</th> <th>Copper Alloy</th> <th>Ferrous Alloy</th> </tr> </thead> <tbody> <tr> <td>16</td> <td>13</td> <td>10</td> </tr> <tr> <td>12</td> <td>23</td> <td>17</td> </tr> <tr> <td>8</td> <td>60</td> <td>33</td> </tr> <tr> <td>4</td> <td>100</td> <td>60</td> </tr> <tr> <td>1/0</td> <td>175</td> <td>125</td> </tr> </tbody> </table>	Contact Size	Copper Alloy	Ferrous Alloy	16	13	10	12	23	17	8	60	33	4	100	60	1/0	175	125	EIA-364-70			
Contact Size	Copper Alloy	Ferrous Alloy																					
16	13	10																					
12	23	17																					
8	60	33																					
4	100	60																					
1/0	175	125																					
Dielectric Withstanding Voltage at Sea Level (not applicable to filter connectors)	No breakdown or flashover at 2000 volts	EIA-364-20 AC rms 50-60 Hz 2mA max. leakage current																					



Series 970 Connectors and Accessories  
 Technical Reference  
 Product Specification

B

DESCRIPTION	REQUIREMENT	PROCEDURE																										
Dielectric Withstanding Voltage at Sea Level, filter connectors	No breakdown or flashover at 1250 volts	EIA-364-20 Volts DC 2mA max. leakage current																										
EMI Shielding Effectiveness	<table border="1"> <thead> <tr> <th>Frequency MHz</th> <th>Min. Atten. dB</th> </tr> </thead> <tbody> <tr><td>100</td><td>90</td></tr> <tr><td>200</td><td>88</td></tr> <tr><td>300</td><td>88</td></tr> <tr><td>400</td><td>87</td></tr> <tr><td>800</td><td>85</td></tr> <tr><td>1000</td><td>85</td></tr> <tr><td>1500</td><td>76</td></tr> <tr><td>2000</td><td>70</td></tr> <tr><td>3000</td><td>69</td></tr> <tr><td>4000</td><td>68</td></tr> <tr><td>6000</td><td>66</td></tr> <tr><td>10000</td><td>65</td></tr> </tbody> </table>	Frequency MHz	Min. Atten. dB	100	90	200	88	300	88	400	87	800	85	1000	85	1500	76	2000	70	3000	69	4000	68	6000	66	10000	65	EIA-364-66 1,000 MHz to 10,000 MHz. MIL-DTL-38999L Para. 4.5.28.1 100 MHz to 1,000 MHz Prior to EMI test, connectors shall be mated a minimum of 500 cycles.
Frequency MHz	Min. Atten. dB																											
100	90																											
200	88																											
300	88																											
400	87																											
800	85																											
1000	85																											
1500	76																											
2000	70																											
3000	69																											
4000	68																											
6000	66																											
10000	65																											
External Bend Moment	<p>No evidence of damage.</p> <table border="1"> <thead> <tr> <th>SHELL SIZE</th> <th>Bend Moment (in-lb.)</th> </tr> </thead> <tbody> <tr><td>18</td><td>420</td></tr> <tr><td>20</td><td>450</td></tr> <tr><td>24</td><td>570</td></tr> <tr><td>28</td><td>630</td></tr> <tr><td>32</td><td>750</td></tr> <tr><td>36</td><td>810</td></tr> <tr><td>40</td><td>870</td></tr> </tbody> </table>	SHELL SIZE	Bend Moment (in-lb.)	18	420	20	450	24	570	28	630	32	750	36	810	40	870	SAE AS50151 Para. 4.6.20										
SHELL SIZE	Bend Moment (in-lb.)																											
18	420																											
20	450																											
24	570																											
28	630																											
32	750																											
36	810																											
40	870																											
Fluid Immersion	No visual evidence of degradation from immersion in various fuels and oils. Following immersion connectors shall meet coupling torque and dielectric withstanding voltage at sea level.	EIA-364-10																										
Fungus Resistance	Connector materials shall be fungus inert	MIL-STD-810G Method 508.6																										
High-Impact Shock	No discontinuity, no cracking, breaking or loosening of parts. Connectors shall meet electrical requirements after shock test.	MIL-DTL-38999L Para. 4.5.23.2 MIL-S-901, grade A																										
Humidity, 21 Day (Damp heat, Long Term)	No deterioration which will adversely affect the connector. Following the drying period, connectors shall meet 100 megohms minimum, contact resistance, shell-to-shell resistance, DWV, mating and unmating requirements.	EIA-364-31 Condition C Method II 90-95% RH 40° C Apply 100 volts DC during test. 4 hours drying time at ambient temperature prior to final measurements.																										
Humidity, Cyclic (Damp Heat, Cyclic) (Moisture Resistance)	No deterioration which will adversely affect the connector. 100 megohms minimum insulation resistance during the final cycle. Following the recovery period, connectors shall meet contact resistance, shell-to-shell resistance and DWV requirements.	EIA-364-31 Condition B Method III 80-98% RH 10 cycles (10 days) +25° C to +65° C Step 7b vibration deleted. 24 hour recovery period.																										
Impact, Cable Connectors	No impairment of function. Connector shall meet contact resistance, insulation resistance and waterproof sealing.	EIA-364-42 1 meter 8 drops																										
Ingress Protection	IP67 rating	IEC-60529																										
Insert Retention	<table border="1"> <thead> <tr> <th>SHELL SIZE</th> <th>FORCE (lbs.)</th> </tr> </thead> <tbody> <tr><td>18</td><td>50</td></tr> <tr><td>20</td><td>75</td></tr> <tr><td>24</td><td>85</td></tr> <tr><td>28</td><td>105</td></tr> <tr><td>32</td><td>115</td></tr> <tr><td>36</td><td>135</td></tr> <tr><td>40</td><td>165</td></tr> </tbody> </table>	SHELL SIZE	FORCE (lbs.)	18	50	20	75	24	85	28	105	32	115	36	135	40	165	EIA-364-35 Unmated connectors 100 ± 5 pounds per square inch										
SHELL SIZE	FORCE (lbs.)																											
18	50																											
20	75																											
24	85																											
28	105																											
32	115																											
36	135																											
40	165																											
Insulation Resistance at Ambient Temperature	5,000 megohms minimum	EIA-364-21 500 volts DC ± 50 volts.																										
Insulation Resistance at Elevated Temperature	1,000 megohms minimum following 30 minutes at +200°C	EIA-364-21 500 volts DC ± 50 volts.																										

**Series 970 Connectors and Accessories  
Technical Reference  
Product Specification**



DESCRIPTION	REQUIREMENT	PROCEDURE						
Low Level Contact Resistance	<table border="0"> <tr> <td><u>Wire Size</u></td> <td><u>Max. Milliohms</u></td> </tr> <tr> <td>16</td> <td>5</td> </tr> <tr> <td>20</td> <td>9</td> </tr> </table>	<u>Wire Size</u>	<u>Max. Milliohms</u>	16	5	20	9	EIA-364-23 100 milliamperes maximum and 20 millivolts maximum open circuit voltage
<u>Wire Size</u>	<u>Max. Milliohms</u>							
16	5							
20	9							
Magnetic Permeability	2 μ maximum.	EIA-364-54						
Mechanical Durability, at Ambient Temperature	No deterioration which will adversely affect the connector after 500 cycles of mating and unmating. Connectors shall meet contact resistance, insulation resistance, shell-to-shell resistance, DWV, and coupling torque.	EIA-364-09						
Mechanical Shock	No discontinuity of greater than 1 microsecond, no cracking, breaking or loosening of parts, plug shall not become disengaged from receptacle. Connectors shall meet electrical requirements after shock test.	EIA-364-27 Condition D 3 shocks X 3 axes X 2 directions = 18 shocks 2941 m/s <sup>2</sup> (300 g's), 3 ms, half-sine						
Operating Temperature	-65°C to +200°C Filter Connectors -55°C to +125°C							
Outgassing	Connectors, when specially processed for outgassing control, shall not exceed 1.0% Total Mass Loss (TML) and 0.1% Collected Volatile Condensable Material (CVCM)	ASTM E 595						
Ozone Exposure	No evidence of degradation due to ozone exposure that will adversely affect performance	EIA-364-14 Wired, mated connectors						
Resistance to Indirect Lightning Strike	No damage or degradation to material or finish that would affect subsequent use, no damage or hardening of elastomeric materials that adversely affects sealing effectiveness. Connector must meet coupling torque, DWV and IR and shell-to-shell conductivity. Applicable to connectors with conductive plating finishes.	EIA/ECA-364-75 Table XII, group 14 10,000 Amps peak current Test details per MIL-DTL-38999 Para. 4.5.47						
Shell-To-Shell Conductivity	Finish Code ME 1 millivolt drop maximum Finish Code NF, MT 2.5 millivolt drop maximum Finish Code ZR 10 millivolt drop maximum Finish Code Z1 50 millivolt drop maximum	EIA-364-83 Unwired connectors						
Socket Contact Engagement and Separation Force	Contact engagement and separation forces shall meet the requirements of SAE AS39029 Table 9	SAE AS39029						
Thermal Shock	No mechanical damage or loosening of parts. Following thermal shock, connector shall meet contact resistance, DWV, insulation resistance and shell-to-shell resistance requirements.	EIA-364-32 Test Condition VI 5 cycles consisting of -65° C 30 minutes, +25° C 5 minutes max., +200° C 30 minutes, +25° C 5 minutes max.						
Vibration, Random, at Ambient Temperature	No discontinuity of greater than 1 microseconds, no cracking, breaking or loosening of parts, plug shall not become disengaged from receptacle. Connectors shall meet electrical requirements after vibration test.	MIL-DTL-38999 Para. 4.5.23.2.4						
Vibration, Random, at Elevated Temperature	No discontinuity of greater than 1 microseconds, no cracking, breaking or loosening of parts, plug shall not become disengaged from receptacle. Connectors shall meet electrical requirements after vibration test.	EIA-364-28 Test Condition VI Letter "J" 50- 2,000 Hz 43.92 g rms 200° C						
Vibration, Sine	No discontinuity of greater than 1 microseconds, no cracking, breaking or loosening of parts, plug shall not become disengaged from receptacle. Connectors shall meet electrical requirements after vibration test.	MIL-DTL-38999L Para. 4.5.23.2.1						
Water Immersion	No evidence of water penetration into mated connectors.	MIL-STD-810F Method 512.4, 1 meter immersion for 1 hour						
Water Pressure	No evidence of water penetration into mated connectors or backshell interface. ≥ 100 MΩ insulation resistance.	MIL-DTL- 28840 Paragraph 4.1.15. 6 feet immersion in tap water, 48 hours						
Outgassing	Special Bakeout Required 1.0% Total Mass Loss (TML) 0.1% Collected Volatile Condensable Material (CVCM)	ASTM E595						



## Series 970 Connectors and Accessories Technical Reference Material and Finish Options

B

### MATERIAL AND FINISH OPTIONS FOR POWERTRIP CONNECTORS AND ACCESSORIES

Powertrip connector shells are made of aluminum alloy or stainless steel. These shells are plated to improve corrosion resistance and conductivity. Electroless nickel plating is used for instrumentation, avionics and space applications where corrosion protection is not critical. Cadmium plating provides superior corrosion protection, but the United States Department of Defence (DOD) mandated the elimination of cadmium from DOD weapons systems because of toxicity concerns. The European Union has also restricted the use of cadmium on electronics equipment (RoHS). The top choices for cadmium replacement are Nickel-PTFE (MT) and Zinc-Nickel (ZR). In this catalog you will find four standard platings for aluminum shells: *Electroless Nickel*, *Nickel-PTFE*, *Black Zinc-Nickel*, and *Olive-Drab Cadmium*. A fifth option is *Passivated Stainless Steel* for extremely hostile environments. Glenair also offers dozens of optional material and finish options, typically with no minimum orders or lengthy lead times. A selection of these optional finishes is shown in the table below.

#### STANDARD MATERIAL & FINISH SELECTION GUIDE

Property	Alum/ Nickel	Alum/ Nickel-PTFE	Alum/ Olive Drab Cadmium	Alum/ Black Zinc-Nickel	SST/ Passivate
Glenair Code	<b>ME</b>	<b>MT</b>	<b>NF</b>	<b>ZR</b>	<b>Z1</b>
Corrosion Resistance	Fair	Excellent	Excellent	Excellent	Excellent
Temperature Range	-65°C to +200°C	-65°C to +200°C	-65°C to +175°C	-65°C to +175°C	-65°C to +200°C
Salt Spray Hours	96	1000 <sup>(1)</sup>	1000 <sup>(1)</sup>	1000 <sup>(1)</sup>	2000
Conductivity	Excellent	Excellent	Good	Good	Fair
Relative Cost	\$\$	\$\$\$	\$\$	\$\$\$	\$\$\$\$
RoHS Compliant <sup>(2)</sup>	Yes	Yes	No	Yes	Yes

(1) Dynamic salt spray testing reduces 1000 hours to 500 hours. Dynamic testing includes 500 connector mating cycles.

(2) Does not contain cadmium or hexavalent chromium. Meets EU requirements.

The following table contains optional plating codes not shown in the ordering information. If one of these optional finishes is preferred over the above standard finishes, substitute the appropriate code in the part number.

#### OPTIONAL MATERIAL AND FINISH CODES

Code	Material	Finish	Finish Specification	Hrs. Salt Spray	Electrical Conductivity	Operating Temp. Range	RoHS Compliance <sup>(2)</sup>
<b>AB</b>	Marine Bronze	Unplated		1000	Conductive	-65 to +200°C	✓
<b>AL</b>	Aluminum	AlumiPlate	MIL-DTL-83488	1000 <sup>(1)</sup>	Conductive	-65 to +175°C	✓
<b>C</b>	Aluminum	Anodize, Black	AMS-A-8625	48	Non-Conductive	-65 to +175°C	✓
<b>E</b>	Aluminum	Chem Film	MIL-DTL-5541	168	Conductive	-65 to +175°C	
<b>G2</b>	Aluminum	Anodize, Hardcoat	AMS-A-8625	336	Non-Conductive	-65 to +200°C	✓
<b>JF</b>	Aluminum	Cadmium, Gold	SAE-AMS-QQ-P-416	1000 <sup>(1)</sup>	Conductive	-65 to +175°C	
<b>M</b>	Aluminum	Electroless Nickel	AMS-C-26074	48	Conductive	-65 to +200°C	✓
<b>NC</b>	Aluminum	Zinc-Cobalt, Olive Drab	ASTM B 840	350	Conductive	-65 to +175°C	
<b>P</b>	Stainless Steel	Electrodeposited Nickel	SAE-AMS-QQ-N-290	500	Conductive	-65 to +200°C	✓
<b>Z1</b>	Stainless Steel	Passivate	SAE-AMS-QQ-P-35	1000	Conductive	-65 to +200°C	✓
<b>Z2</b>	Aluminum	Gold	MIL-DTL-45204	48	Conductive	-65 to +200°C	✓
<b>ZL</b>	Stainless Steel	Electrodeposited Nickel	SAE-AMS-QQ-N-290	1000 <sup>(1)</sup>	Conductive	-65 to +200°C	✓
<b>ZM</b>	Stainless Steel	Electroless Nickel	AMS-C-26074	1000	Conductive	-65 to +200°C	✓
<b>ZMT</b>	Stainless Steel	Nickel-PTFE	SAE AMS 2454	1000 <sup>(1)</sup>	Conductive	-65 to +200°C	✓
<b>ZN</b>	Aluminum	Zinc-Nickel, Olive Drab	ASTM B841	500	Conductive	-65 to +175°C	
<b>ZNU</b>	Aluminum	Zinc-Nickel, Black	ASTM B841	500	Conductive	-65 to +175°C	
<b>ZU</b>	Stainless Steel	Cadmium, Black	SAE-AMS-QQ-P-416	1000	Conductive	-65 to +175°C	
<b>ZW</b>	Stainless Steel	Cadmium, Olive Drab	SAE-AMS-QQ-P-416	2000	Conductive	-65 to +175°C	

(1) Dynamic salt spray testing reduces 1000 hours to 500 hours. Dynamic testing includes 500 connector mating cycles.

(2) Does not contain cadmium or hexavalent chromium. Meets EU requirements.





**POWERTRIP™ CONNECTORS FOR SPACE FLIGHT**

**OUTGASSING**

- **Standard connectors must be baked out to meet outgassing requirements.**
- **Modification codes are a convenient way to specify special outgassing bakeout.**

Space flight equipment requires low-outgassing components in order to prevent degradation to optics and other sensitive instruments. The space industry has adopted a standardized test procedure, ASTM E595, to evaluate outgassing properties. In the ASTM test, material samples are heated to 125° C at a vacuum of 5 X 10<sup>-5</sup> torr for 24 hours. The test sample is then weighed to calculate the Total Mass Loss (TML), which may not exceed 1.0% of the total initial mass. A collector plate is used to determine the Collected Volatile Condensable Material (CVCM), which may not exceed 0.1% of the total original specimen mass. Powertrip™ connectors contain nonmetallic materials such as rubber, plastic, adhesives and potting compounds which can give off gasses when subjected to a vacuum or high heat. Unless the connector is specially processed, the TML and CVCM can exceed allowable limits. Glenair is able to offer two bakeout processes which assure all materials comply with ASTM E595: an 8 hour oven bakeout at 400° F or a 24 hour thermal vacuum outgassing at 125° C. The table below shows suffix codes which specify outgassing processing.

**CONNECTOR MATERIAL AND FINISH OPTIONS**

- **Cadmium and silver plating are prohibited in space.**
- **Specify electroless nickel plating on connector shells and gold plating on contacts.**

Some types of metals are prohibited for space flight. "Cadmium, zinc, chemically coated cadmium or zinc, or silver shall not be used as a connector or contact finish" (NASA EEE-INST-002 Instructions for EEE Parts Selection, Screening, Qualification, and Derating). NASA recommends electroless nickel or gold plating on connector shells and gold plating for contacts.

**NASA SCREENING**

- **"Mission critical" connectors for space flight should undergo rigorous 100% final inspection.**
- **Modification codes are available to invoke special screening.**

NASA recommends that connectors for space flight be specially screened. NASA EEE-INST-002 Instructions for EEE Parts Selection, Screening, Qualification, and Derating contains three levels of screening: level 1 for highest reliability, level 2 for high reliability and level 3 for standard reliability. Glenair suffix codes are available to invoke NASA screening. The table below shows these "Mod" codes which can also include outgassing processing.

NASA SCREENING LEVELS AND MODIFICATION CODES			
NASA Screening Level	Special Screening Only	Special Screening Plus Outgassing Processing	
		48 Hour Oven Bake 175° C.	Thermal Vacuum Outgassing 24 hrs. 125° C.
Level 1 Highest Reliability	Mod 429B	Mod 429J	Mod 429C
Level 2 High Reliability	Mod 429	Mod 429K	Mod 429A
Level 3 Standard Reliability	(Use standard part number)	Mod 186	Mod 186M



## Series 970 PowerTrip™ Connectors and Accessories Cable Connectors 970-001 Plug with Accessory Thread

### PLUG CONNECTORS



Series 970 PowerTrip™ plug connectors feature high current LouverBand contacts and rugged water resistant construction for the most demanding environments. Coupling threads are triple-start ACME type. EMI protected with ground spring and splined backshell interface. Anti-decoupling ratchet prevents de-mating under vibration. Standard contacts are silver plated high conductivity copper alloy, or choose gold-plated contacts for improved corrosion protection. Fluorosilicone rubber gaskets and grommets provide watertight sealing. Contacts are packaged with connector.

- EMI Protected
- High Current Contacts
- Splined Backshell Interface
- Ratchet Self-Locking

#### PRODUCT FACTS

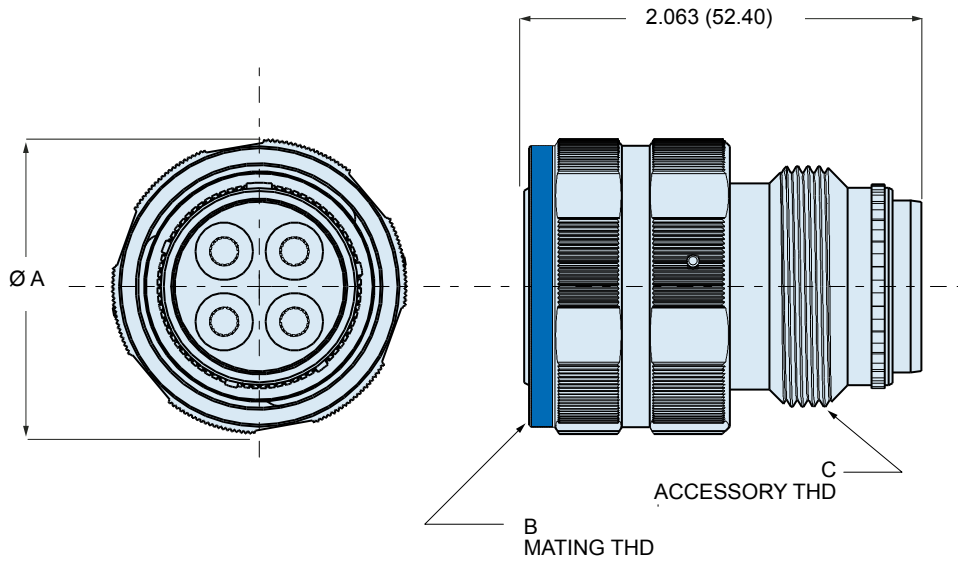
2000 VAC Sea Level DWV Rating  
-65°C to +200°C Operating Temperature  
6 Feet Water Immersion, 48 Hours  
65 dB min. Attenuation, up to 10GHz  
500 Cycles Mating Durability  
MIL-S 901 Grade A High-Impact Shock  
43 g Random Vibration

### HOW TO ORDER

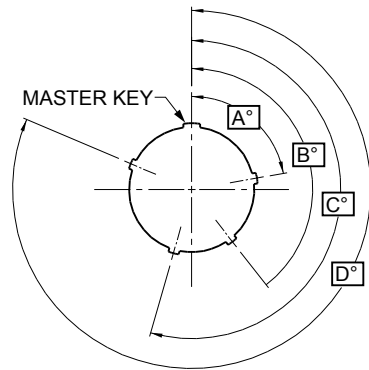
SERIES	SHELL MATERIAL AND FINISH	SHELL SIZE - INSERT ARRANGEMENT						CONTACT TYPE AND PLATING	KEY POSITION
<b>970-001</b> Plug Connector	<b>ME</b> Aluminum, Electroless Nickel Finish	Contact Arr.	Contact Size and Qty					<b>P1</b> Pin Contacts, Silver Plating*	<b>-1</b> Position 1
		#16	#12	#8	#4	#1/0			
	<b>MT</b> Aluminum, Nickel-PTFE Finish	<b>18-2</b>			2			<b>P2</b> Pin Contacts, Gold Plating	<b>-2</b> Position 2
		<b>18-4</b>		2	2				
		<b>20-3</b>			3				
		<b>20-4</b>			4				
	<b>NF</b> Aluminum, Olive Drab Cadmium	<b>20-5</b>		2	3			<b>S1</b> Socket Contacts, Silver Plating*	<b>-3</b> Position 3
		<b>20-7</b>	4		3				
		<b>24-2</b>				2			
		<b>24-3</b>				3			
	<b>ZR</b> Aluminum, Black Zinc-Nickel Finish	<b>24-5</b>			5			<b>S2</b> Socket Contacts, Gold Plating	<b>-4</b> Position 4
		<b>24-6</b>		4		2			
		<b>24-A6</b>		3		3			
		<b>28-4</b>				4			
	<b>Z1</b> Passivated Stainless Steel	<b>28-8</b>		1	7			<b>A</b> Pin Connector, without Contacts	<b>-5</b> Position 5
		<b>28-9</b>	5			4			
		<b>28-15</b>	15						
		<b>32-2</b>					2		
		<b>32-3</b>					3		
		<b>32-4</b>				2	2		
<b>32-5</b>					5				
<b>32-6</b>			3			3			
<b>32-20</b>	1	19							
<b>36-4</b>					4	<b>B</b> Socket Connector, without Contacts	<b>-6</b> Position 6		
<b>36-16</b>	3		13						
<b>40-5</b>					5				
<b>40-21</b>			21						
<b>Sample Part Number</b>									
<b>970-001</b>	<b>MT</b>	<b>18-2</b>						<b>P2</b>	<b>-1</b>

\* Size 12 and 16 contacts are gold-plated. Size 8, 4 and 1/0 are silver plated.

**970-001 PLUG CONNECTOR**



DIMENSIONS				
Shell Size	Ø A		B Mating Thread	C Accessory Thread
	In.	mm.		
18	1.485	37.72	1.125-0.1P-.3L-TS-2B	1.125-18 UNEF-2A
20	1.583	40.21	1.250-0.1P-.3L-TS-2B	1.250-18 UNEF-2A
24	1.875	47.63	1.500-0.1P-.3L-TS-2B	1.4375-18 UNEF-2A
28	2.186	55.52	1.750-0.1P-.3L-TS-2B	1.8125-16 UN-2A
32	2.420	61.47	2.000-0.1P-.3L-TS-2B	2.0625-16 UNS-2A
36	2.709	68.81	2.250-0.1P-.3L-TS-2B	2.250-16 UN-2A
40	2.980	75.69	2.500-0.1P-.3L-TS-2B	2.500-16 UN-2A



KEY POSITIONS				
Position	A°	B°	C°	D°
1	80	142	196	293
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272



## Series 970 PowerTrip™ Connectors and Accessories Cable Connectors

### 970-011 Cable Plug with Integral Banding Porch

#### 970-011 CABLE PLUG



These connectors, often called “in-line”, “line” or “free-hanging” plugs, are installed on cables for cord-to-cord applications. These connectors feature high current LouverBand contacts. Coupling threads are triple-start ACME type. EMI protected with ground spring and integral shield banding porch. Standard contacts are silver plated high conductivity copper alloy, or choose gold-plated contacts for improved corrosion protection. Fluorosilicone rubber gaskets and grommets provide watertight sealing. Unassembled contacts are packaged with connector.

- EMI Protected
- High Current Contacts
- Integral Banding Porch
- Ratchet Self-Locking

#### PRODUCT FACTS

2000 VAC Sea Level DWV Rating
-65°C to +200°C Operating Temperature
6 Feet Water Immersion, 48 Hours
65 dB min. Attenuation, up to 10GHz
500 Cycles Mating Durability
MIL-S 901 Grade A High-Impact Shock
43 g Random Vibration

#### HOW TO ORDER

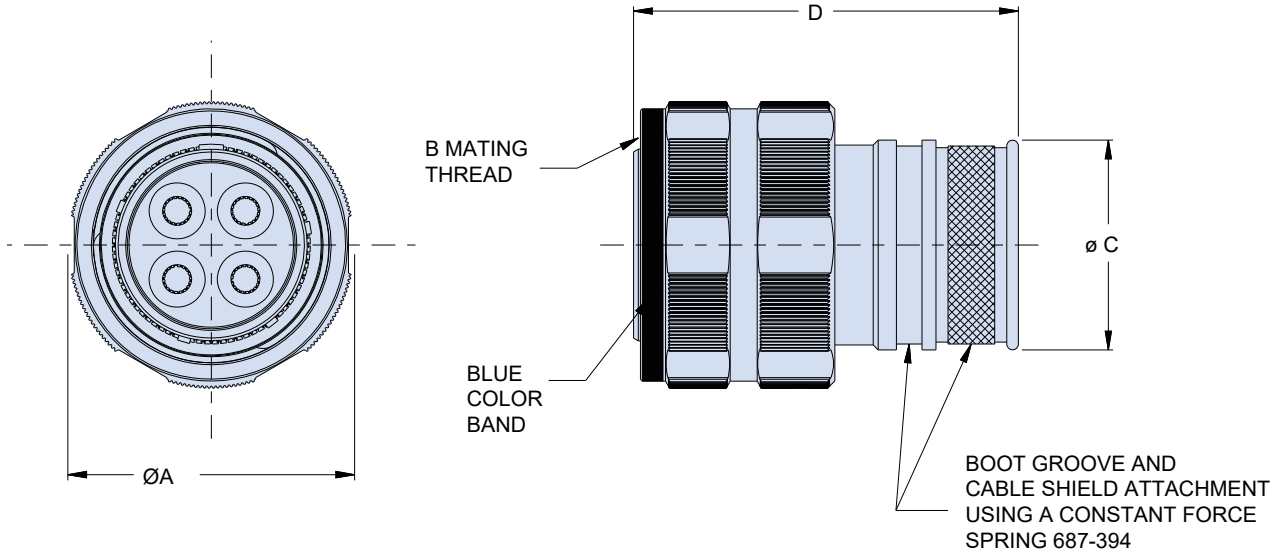
SERIES	SHELL MATL AND FINISH	SHELL SIZE - INSERT ARRANGEMENT					CONTACT TYPE AND PLATING	KEY POSITION
970-011 Cable Plug	ME Aluminum, Electroless Nickel Finish	Contact Arr.					P1 Pin Contacts, Silver Plating*	-1 Position 1
		Contact Size and Qty						
	MT Aluminum, Nickel- PTFE Finish	#16	#12	#8	#4	#1/0	P2 Pin Contacts, Gold Plating	-2 Position 2
	NF Aluminum, Olive Drab Cadmium <td></td> <td></td> <td>2</td> <td></td> <td></td> <td>S1 Socket Contacts, Silver Plating*</td> <td>-3 Position 3</td>			2			S1 Socket Contacts, Silver Plating*	-3 Position 3
	ZR Aluminum, Black Zinc-Nickel Finish <td></td> <td></td> <td>3</td> <td></td> <td></td> <td>S2 Socket Contacts, Gold Plating</td> <td>-4 Position 4</td>			3			S2 Socket Contacts, Gold Plating	-4 Position 4
	Z1 Passivated Stainless Steel <td></td> <td></td> <td>4</td> <td></td> <td></td> <td>A Pin Connector, without Contacts</td> <td>-5 Position 5</td>			4			A Pin Connector, without Contacts	-5 Position 5
				5			B Socket Connector, without Contacts	-6 Position 6
				7				
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				2				
				3				
				4				
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# Series 970 PowerTrip™ Connectors and Accessories Cable Connectors

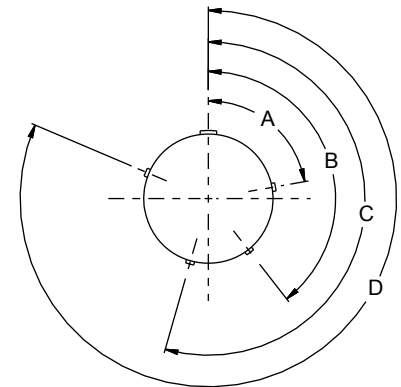
## 970-011 Cable Plug with Integral Banding Porch



### 970-011 CABLE PLUG



DIMENSIONS							
Shell Size	$\varnothing A$		B Mating Thread	$\varnothing C$		D	
	In.	mm		In.	mm.	In.	mm.
18	1.485	37.72	1.125-0.1P-0.3L-TS-2B	1.037	26.34	2.063	52.4
20	1.583	40.21	1.250-0.1P-0.3L-TS-2B	1.163	29.54	2.063	52.4
24	1.857	47.17	1.500-0.1P-0.3L-TS-2B	1.350	34.29	2.063	52.4
28	2.186	55.52	1.750-0.1P-0.3L-TS-2B	1.670	42.42	2.063	52.4
32	2.420	61.47	2.000-0.1P-0.3L-TS-2B	1.945	49.40	2.063	52.4
36	2.709	68.81	2.250-0.1P-0.3L-TS-2B	2.176	55.27	2.063	52.4



KEY POSITIONS				
Position	A°	B°	C°	D°
1	80	142	196	293
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272



## Series 970 PowerTrip™ Connectors and Accessories

### Cable Connectors

#### 970-005 Cable Receptacle

### 970-005 CABLE RECEPTACLES



These connectors, often called “in-line,” “line” or “free-hanging” receptacles, are installed on cables for cord-to-cord applications. These connectors feature high current LouverBand contacts. Coupling threads are triple-start ACME type. EMI protected with ground spring and splined backshell interface. Standard contacts are silver plated high conductivity copper alloy, or choose gold-plated contacts for improved corrosion protection. Fluorosilicone rubber gaskets and grommets provide watertight sealing. Unassembled contacts are packaged with connector.

- EMI Protected
- High Current Contacts
- Splined Backshell Interface

#### PRODUCT FACTS

2000 VAC Sea Level DWV Rating
-65°C to +200°C Operating Temperature
6 Feet Water Immersion, 48 Hours
65 dB min. Attenuation, up to 10GHz
500 Cycles Mating Durability
MIL-S 901 Grade A High-Impact Shock
43 g Random Vibration

### HOW TO ORDER

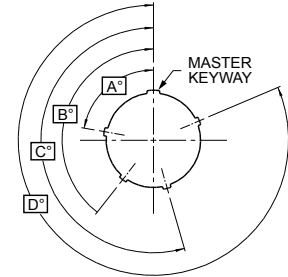
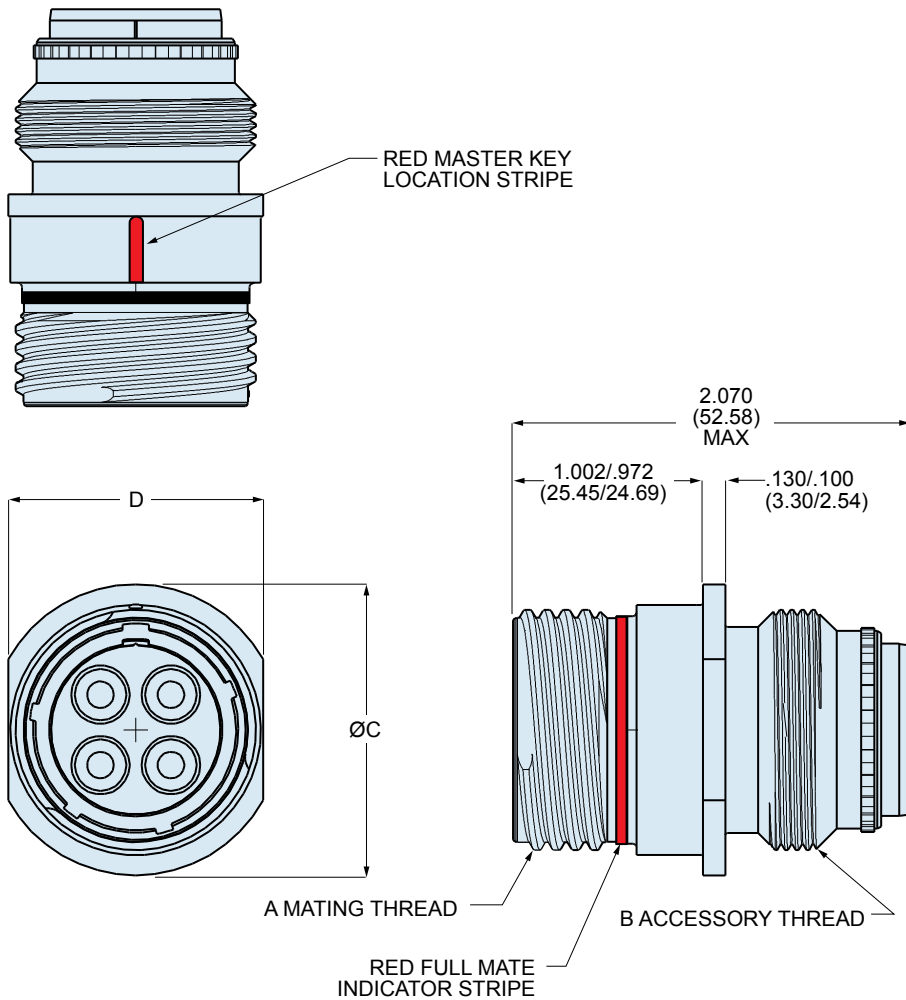
SERIES	SHELL MATL AND FINISH	SHELL SIZE - INSERT ARRANGEMENT					CONTACT TYPE AND PLATING	KEY POSITION	
		Contact Arr.	Contact Size and Qty						
		#16	#12	#8	#4	#1/0			
<b>970-005</b> Cable Receptacle	<b>ME</b> Aluminum, Electroless Nickel Finish			2			<b>P1</b> Pin Contacts, Silver Plating*	<b>-1</b> Position 1	
		<b>18-2</b>		2					
		<b>18-4</b>	2	2					
	<b>MT</b> Aluminum, Nickel-PTFE Finish				3		<b>P2</b> Pin Contacts, Gold Plating	<b>-2</b> Position 2	
		<b>20-3</b>			3				
		<b>20-4</b>			4				
	<b>NF</b> Aluminum, Olive Drab Cadmium			2	3		<b>S1</b> Socket Contacts, Silver Plating*	<b>-3</b> Position 3	
		<b>20-5</b>		2	3				
		<b>20-7</b>	4		3				
	<b>ZR</b> Aluminum, Black Zinc-Nickel Finish					2	<b>S2</b> Socket Contacts, Gold Plating	<b>-4</b> Position 4	
		<b>24-2</b>				2			
		<b>24-3</b>				3			
	<b>Z1</b> Passivated Stainless Steel				5		<b>A</b> Pin Connector, without Contacts	<b>-5</b> Position 5	
		<b>24-5</b>			5				
		<b>24-A6</b>		4		2			
	<b>970-005</b> Cable Receptacle	<b>MT</b> Aluminum, Olive Drab Cadmium				4		<b>B</b> Socket Connector, without Contacts	<b>-6</b> Position 6
			<b>28-4</b>				4		
			<b>28-8</b>		1	7			
			<b>28-9</b>	5			4		
			<b>32-2</b>	15					
			<b>32-3</b>						
<b>32-4</b>						2	2		
<b>32-5</b>						5			
<b>32-6</b>				3			3		
<b>32-20</b>			1	19					
<b>36-4</b>					4				
<b>36-16</b>	3		13						
<b>40-5</b>					5				
<b>40-21</b>			21						
<b>Sample Part Number</b>									
<b>970-005</b>	<b>MT</b>		<b>24-5</b>				<b>P1</b>	<b>-1</b>	

\* Size 12 and 16 contacts are gold-plated. Size 8, 4 and 1/0 are silver plated.

Series 970 PowerTrip™ Connectors and Accessories  
Cable Connectors  
970-005 Cable Receptacle



970-005 CABLE RECEPTACLE CONNECTOR



KEY POSITIONS				
Position	A°	B°	C°	D°
1	80	142	196	293
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272

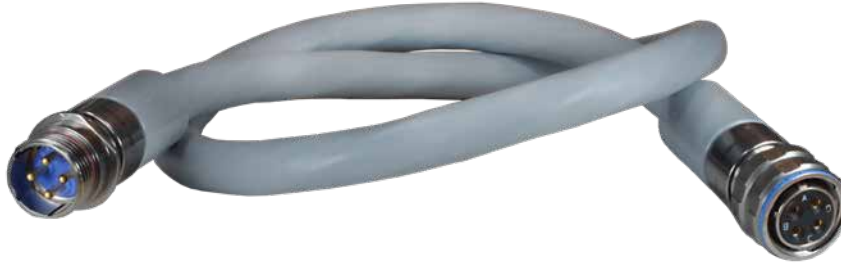


DIMENSIONS						
Shell Size	A Mating Thread	B Accessory Thd	C		D	
			In. ±.010	mm. ±0.25	In. ±.005	mm. ±0.13
18	1.125-.1P-.3L-TS-2A	1.125-18 UNEF-2A	1.328	33.73	1.138	28.91
20	1.250-.1P-.3L-TS-2A	1.250-18 UNEF-2A	1.515	38.48	1.325	33.66
24	1.500-.1P-.3L-TS-2A	1.4375-18 UNEF-2A	1.703	43.26	1.513	38.43
28	1.750-.1P-.3L-TS-2A	1.8125-16 UN-2A	2.078	52.02	1.888	47.96
32	2.000-.1P-.3L-TS-2A	2.0625-16 UNS-2A	2.265	57.53	2.075	52.71
36	2.250-.1P-.3L-TS-2A	2.250-16 UN-2A	2.515	63.89	2.325	55.06
40	2.500-.1P-.3L-TS-2A	2.500-16 UN-2A	2.765	70.23	2.575	65.41



## Series 970 PowerTrip™ Connectors and Accessories Cable Connectors TurboFlex Cordsets

### TURBOFLEX CORDSETS



#### PRODUCT FACTS

##### Conductors:

- Annealed stranded copper, nickel or silver coated
- High strandcount construction for excellent flexibility
- 16 through 1/0 AWG

##### Insulation:

- Duraelectric™ rubber
- 2000 volt rating

##### Cable jacket:

- Duraelectric™ rubber
- 2000 volt rating
- -65° to +260°C

##### Overmold Compound:

- Duraelectric™ rubber
- 2000 volt rating

##### Features:

- Excellent cold temperature flexibility
- 2000 volt rating
- Good abrasion resistance
- Excellent resistance to fuels and solvents
- Halogen free
- Flame retardant
- Water resistant
- Fugus resistant
- Excellent resistance to sunlight (UV) and ozone
- Fully shielded for EMI/RFI protection

Save cost and reduce leadtimes with Glenair-made Powertrip cordsets. Ultra-flexible overmolded power cords feature Glenair's high performance **Duraelectric™** rubber. Originally developed for US Navy conduit applications, flame retardant **Duraelectric™** elastomer has excellent cold temperature flexibility and outstanding resistance to solar radiation, solvents and fuels. Low smoke, zero halogen (LSZH) material. Glenair TurboFlex wires feature high strandcount copper and extruded **Duraelectric™** insulation. Outer jacket and overmold are **Duraelectric™** material.

#### **Duraelectric™ Test Data and Specifications**

Temperature Rating: -60°C to 260°C (with excursions to 290°C) Per MIL-PRF-24758A.

Halogen free per IEC 60614-1. Less than 5mg of HCl per 1 gram of product used.

Accelerated weathering (solar) per IEC 60068-2-5; 56 days exposure (equivalent to 50 years in the sun.)

Flame resistant per IEC 60614-1; material does not sustain combustion when the source of flame is removed.

Low smoke index per NES 711 (11.75); minimum standard is 25. Tested level is 11.75.

Smoke density class F1 per NF F 16-101 in accordance with DIN EN 60695-2-11:2001.

Toxicity index per NES 713 (1.9); minimum standard is 5. Tested level is 1.9.

Oxygen limiting index: 45.1 per EN ISO 4589-2:1999; minimum is 28.

12 second vertical burn: (pass) per 14CFR part 25.853 (a) AMDT25-116 APP F part 1 (a) (1) (ii)

Fluids per MIL-STD-810F, method 504

Fuel	MIL-T-83133: JPG
Hydraulic fluid	MIL-H-5606: Royco 756
Lubricating oil	MOL-L-23699: Royco -500
Cleaner	MIL-C-85570: calla -855
Solvent	Isopropyl Alcohol: TT-I-735
De-icer	AMS-1432: E36 runway de-icer
Coolant	MIL-C-87252: Coolanol 25R
Fire extinguishing foam:	Amerex AFFF

ASTME E 595 vacuum outgassing—post bake results: TML .06%, CVCM .006%, WVR .02%

Fungus resistance testing (rating of 0) per MIL-STD-810F, method 508.5

ASTM D624 DIE B tear test: 150 KN/M

#### HOW TO ORDER

Please consult the Glenair factory or your local Glenair sales office





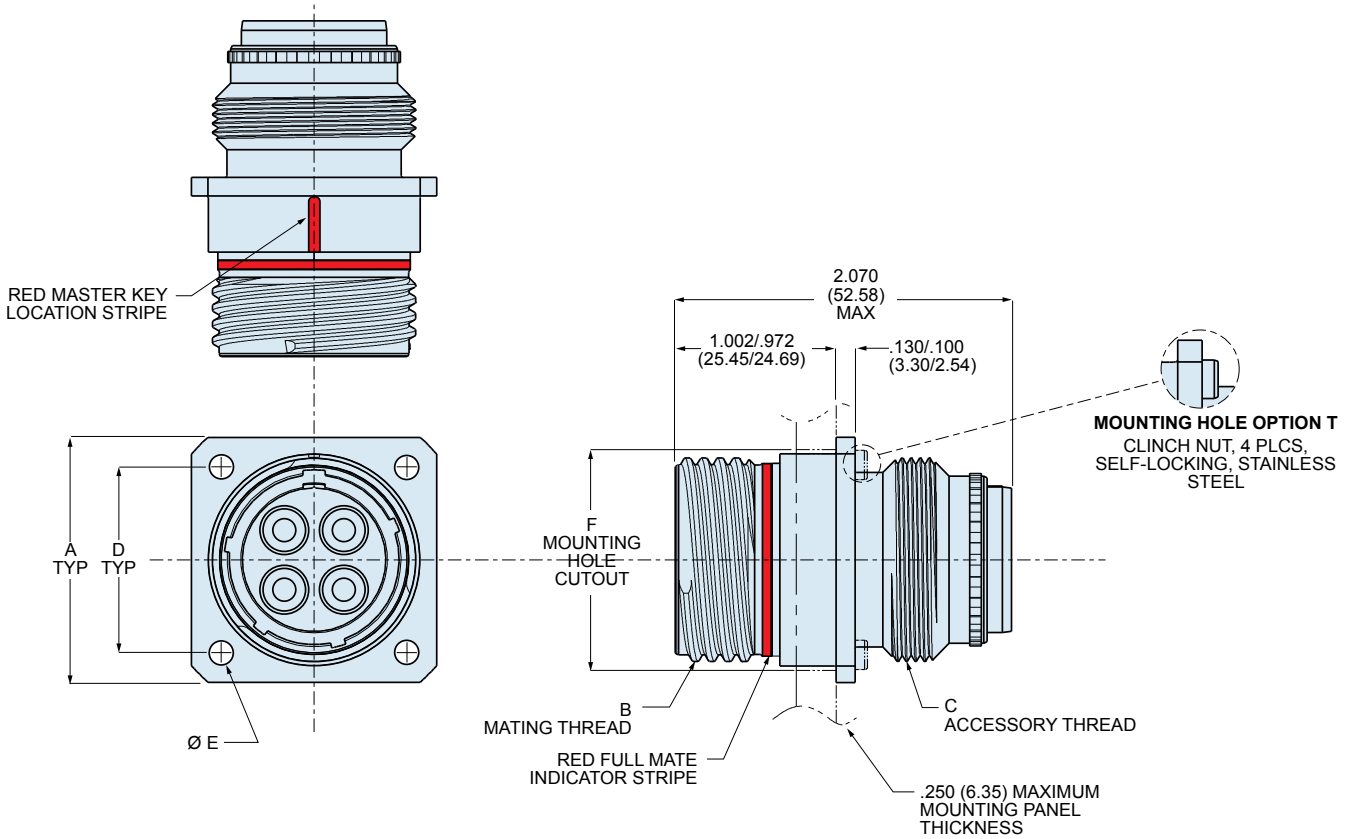


# Series 970 PowerTrip™ Connectors and Accessories

## Receptacle Connectors

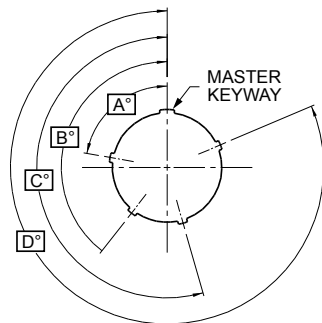
### 970-003 Square Flange Receptacle

#### 970-003 SQUARE FLANGE RECEPTACLE



#### DIMENSIONS

Shell Size	A		B	C	D		Ø E		E	Ø F	
	In.	mm.	Mating Thread	Accessory Thd	In.	mm.	In.	mm.	Clinch Nut Thd	In.	mm.
18	1.383	35.13	1.125-.1P-.3L-TS-2A	1.125-18 UNEF-2A	1.015	25.78	.146	3.71	6-32 UNC-2B	1.187	30.15
20	1.508	38.30	1.250-.1P-.3L-TS-2A	1.250-18 UNEF-2A	1.140	28.96	.146	3.71	6-32 UNC-2B	1.374	34.90
24	1.718	43.64	1.500-.1P-.3L-TS-2A	1.4375-18 UNEF-2A	1.281	32.54	.146	3.71	6-32 UNC-2B	1.562	39.67
28	2.138	54.31	1.750-.1P-.3L-TS-2A	1.8125-16 UN-2A	1.568	39.83	.170	4.32	8-32 UNC-2B	1.835	46.61
32	2.328	59.13	2.000-.1P-.3L-TS-2A	2.0625-16 UNS-2A	1.734	44.04	.170	4.32	8-32 UNC-2B	2.093	53.16
36	2.578	65.48	2.250-.1P-.3L-TS-2A	2.250-16 UN-2A	1.984	50.39	.170	4.32	8-32 UNC-2B	2.302	58.47
40	2.828	71.83	2.500-.1P-.3L-TS-2A	2.500-16 UN-2A	2.234	56.74	.170	4.32	8-32 UNC-2B	2.562	65.07



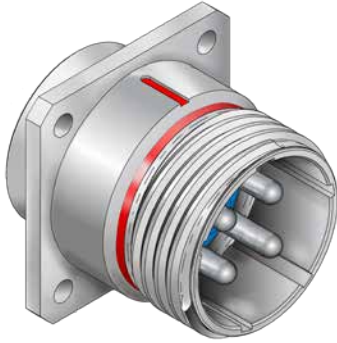
#### KEY POSITIONS

Position	A°	B°	C°	D°
1	80	142	196	293
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272

**Series 970 PowerTrip™ Connectors and Accessories**  
**Receptacle Connectors**  
**970-009 Low Profile Square Flange Receptacle**



**970-009 LOW PROFILE SQUARE FLANGE RECEPTACLES**



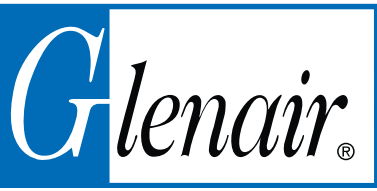
970-009 receptacles have a shorter profile than standard square flange receptacles. This reduced protrusion behind the mounting panel results from removing the accessory threads, moving the mounting flange and replacing the grommet wire seal with a thinner wire separator. Series 970 PowerTrip™ extreme environment receptacle connectors are intended for high current applications where size 8 AWG to size 1/0 AWG wires are used. These connectors feature high current LouverBand contacts. Coupling threads are triple-start ACME type. EMI protected with ground spring and splined backshell interface. Standard contacts are silver plated high conductivity copper alloy, or choose gold-plated contacts for improved corrosion protection. Contacts are packaged with connector. Red stripe indicates full mating condition when the plug connector coupling ring fully covers the stripe.

*970-009 connectors have a low profile wire separator instead of a thick watertight rear grommet. These connectors are splashproof but are not rated for water immersion or altitude immersion.*

**HOW TO ORDER**

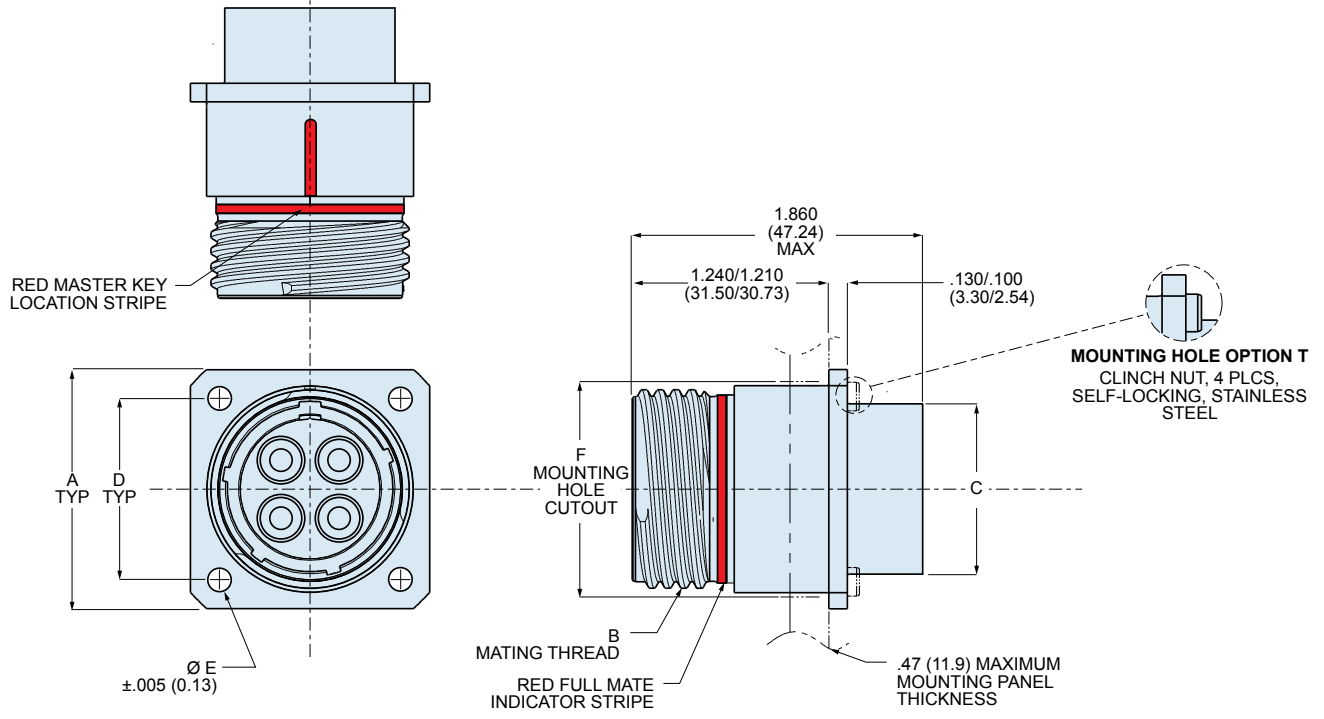
SERIES	SHELL MATL AND FINISH	SHELL SIZE - INSERT ARRANGEMENT						CONTACT TYPE AND PLATING	MOUNTING HOLE OPTION	KEY POSITION
<b>970-009</b> Low Profile Square Flange Panel Mount Receptacle with Crimp Contacts	<b>ME</b> Aluminum, Electroless Nickel Finish	Contact Arr.						<b>P1</b> Pin Contacts, Silver Plating*	<b>N</b> Thru-Hole	<b>-1</b> Position 1
		Contact Size and Qty								
	<b>MT</b> Aluminum, Nickel-PTFE Finish	#16	#12	#8	#4	#1/0		<b>P2</b> Pin Contacts, Gold Plating	<b>T</b> Clinch Nuts Installed in Mounting Holes for Back Panel Mounting.	<b>-2</b> Position 2
		18-2		2						
		18-4	2	2						
		20-3		3						
		20-4		4						
		20-5		2	3					
		20-7	4	3						
		24-2				2				
		24-3				3				
		24-5			5					
	<b>NF</b> Aluminum, Olive Drab Cadmium	24-6	4		2			<b>S1</b> Socket Contacts, Silver Plating*	<b>-3</b> Position 3	
		24-A6	3		3					
		28-4			4					
		28-8		1	7					
	<b>ZR</b> Aluminum, Black Zinc-Nickel Finish	28-9	5		4			<b>S2</b> Socket Contacts, Gold Plating	<b>-4</b> Position 4	
		28-15	15							
	<b>Z1</b> Passivated Stainless Steel	32-2				2		<b>A</b> Pin Connector, without Contacts	<b>-5</b> Position 5	
		32-3				3				
32-4					2	2				
32-5					5					
32-6			3		3					
32-20		1	19							
36-4					4					
36-16		3		13						
40-5					5					
40-21				21						
<b>Sample Part Number</b>										
<b>970-009</b>	<b>MT</b>	<b>24-5</b>						<b>P1</b>	<b>N</b>	<b>-1</b>





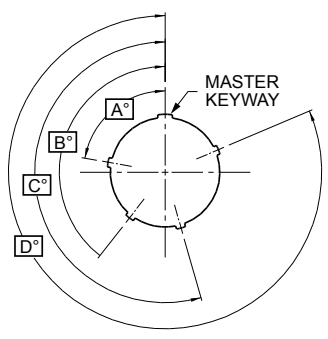
**Series 970 PowerTrip™ Connectors and Accessories**  
**Receptacle Connectors**  
**970-009 Low Profile Square Flange Receptacle**

**970-009 LOW PROFILE RECEPTACLE**



D

DIMENSIONS												
Shell Size	A		B Mating Thread	C		D		$\varnothing$ E		E Clinch Nut Thd	$\varnothing$ F	
	In.	mm.		In.	mm.	In.	mm.	In.	mm.		In.	mm.
18	1.383	35.13	1.125-.1P-.3L-TS-2A	.972	24.69	1.015	25.78	.146	3.71	6-32 UNC-2B	1.187	30.15
20	1.508	38.30	1.250-.1P-.3L-TS-2A	1.116	28.35	1.140	28.96	.146	3.71	6-32 UNC-2B	1.374	34.90
24	1.718	43.64	1.500-.1P-.3L-TS-2A	1.300	33.02	1.281	32.54	.146	3.71	6-32 UNC-2B	1.562	39.67
28	2.138	54.31	1.750-.1P-.3L-TS-2A	1.604	40.74	1.568	39.83	.170	4.32	8-32 UNC-2B	1.835	46.61
32	2.328	59.13	2.000-.1P-.3L-TS-2A	1.875	47.63	1.734	44.04	.170	4.32	8-32 UNC-2B	2.093	53.16
36	2.578	65.48	2.250-.1P-.3L-TS-2A	2.093	53.16	1.984	50.39	.170	4.32	8-32 UNC-2B	2.302	58.47
40	2.828	71.83	2.500-.1P-.3L-TS-2A	2.310	58.67	2.234	56.74	.170	4.32	8-32 UNC-2B	2.562	65.07

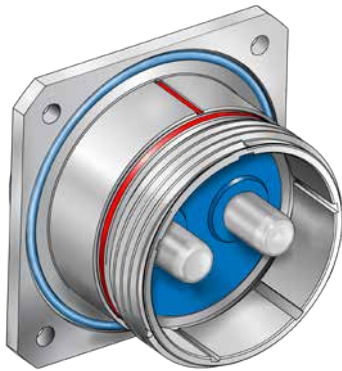


KEY POSITIONS				
Position	A°	B°	C°	D°
1	80	142	196	293
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272

**Series 970 PowerTrip™ Connectors and Accessories**  
**Receptacle Connectors**  
**970-013 Low Profile Square Flange Receptacle**



**970-013 LOW PROFILE RECEPTACLE WITH O-RING**



970-013 receptacles feature an O-ring for panel sealing. Low profile for reduced clearance inside equipment. Connector mounting flange is enlarged to include the O-ring. Series 970 PowerTrip™ extreme environment receptacle connectors are intended for high current applications where size 8 AWG to size 1/0 AWG wires are used. Contacts snap into connector and can be removed with a plastic tool. These connectors feature high current LouverBand contacts. Coupling threads are triple-start ACME type. EMI protected with ground spring and splined backshell interface. Standard contacts are silver plated high conductivity copper alloy, or choose gold-plated contacts for improved corrosion protection. Contacts are packaged with connector. Red stripe indicates full mating condition when the plug connector coupling ring fully covers the stripe.

*970-013 connectors have a low profile wire separator instead of a thicker watertight rear grommet. These connectors are splashproof but are not rated for water immersion or altitude immersion.*

**HOW TO ORDER**

SERIES	SHELL MATL AND FINISH	SHELL SIZE - INSERT ARRANGEMENT						CONTACT TYPE AND PLATING	MOUNTING HOLE OPTION	KEY POS.		
<b>970-013</b> Low Profile Square Flange Panel Mount Receptacle with O-ring Panel Seal	<b>ME</b> Aluminum, Electroless Nickel Finish	Contact Arr.		Contact Size and Qty				<b>P1</b> Pin Contacts, Silver Plating*	<b>N</b> Thru-Hole	<b>-1</b> Position 1		
		#16	#12	#8	#4	#1/0						
		<b>18-2</b>		2								
		<b>18-4</b>	2	2								
		<b>20-3</b>		3								
		<b>20-4</b>		4								
		<b>20-5</b>	2	3								
		<b>20-7</b>	4	3								
		<b>24-2</b>			2							
		<b>24-3</b>			3							
	<b>NF</b> Aluminum, Olive Drab Cadmium	<b>24-5</b>		5								
		<b>24-6</b>	4	2								
		<b>24-A6</b>	3	3								
		<b>28-4</b>		4								
		<b>28-8</b>	1	7								
		<b>28-9</b>	5	4								
	<b>ZR</b> Aluminum, Black Zinc-Nickel Finish	<b>28-15</b>	15									
		<b>32-2</b>				2						
		<b>32-3</b>				3						
		<b>32-4</b>			2	2						
<b>32-5</b>				5								
<b>32-6</b>			3		3							
<b>32-20</b>		1	19									
<b>36-4</b>					4							
<b>36-16</b>		3		13								
<b>40-5</b>					5							
<b>Z1</b> Passivated Stainless Steel	<b>40-21</b>		21									
						<b>P2</b> Pin Contacts, Gold Plating	<b>T</b> Clinch Nuts Installed in Mounting Holes for Back Panel Mounting.	<b>-2</b> Position 2				
						<b>S1</b> Socket Contacts, Silver Plating*			<b>-3</b> Position 3			
						<b>S2</b> Socket Contacts, Gold Plating				<b>-4</b> Position 4		
						<b>A</b> Pin Connector, without Contacts					<b>-5</b> Position 5	
						<b>B</b> Socket Connector, without Contacts						<b>-6</b> Position 6
<b>Sample Part Number</b>												
<b>970-013</b>	<b>MT</b>	<b>24-5</b>						<b>P1</b>	<b>N</b>	<b>-1</b>		

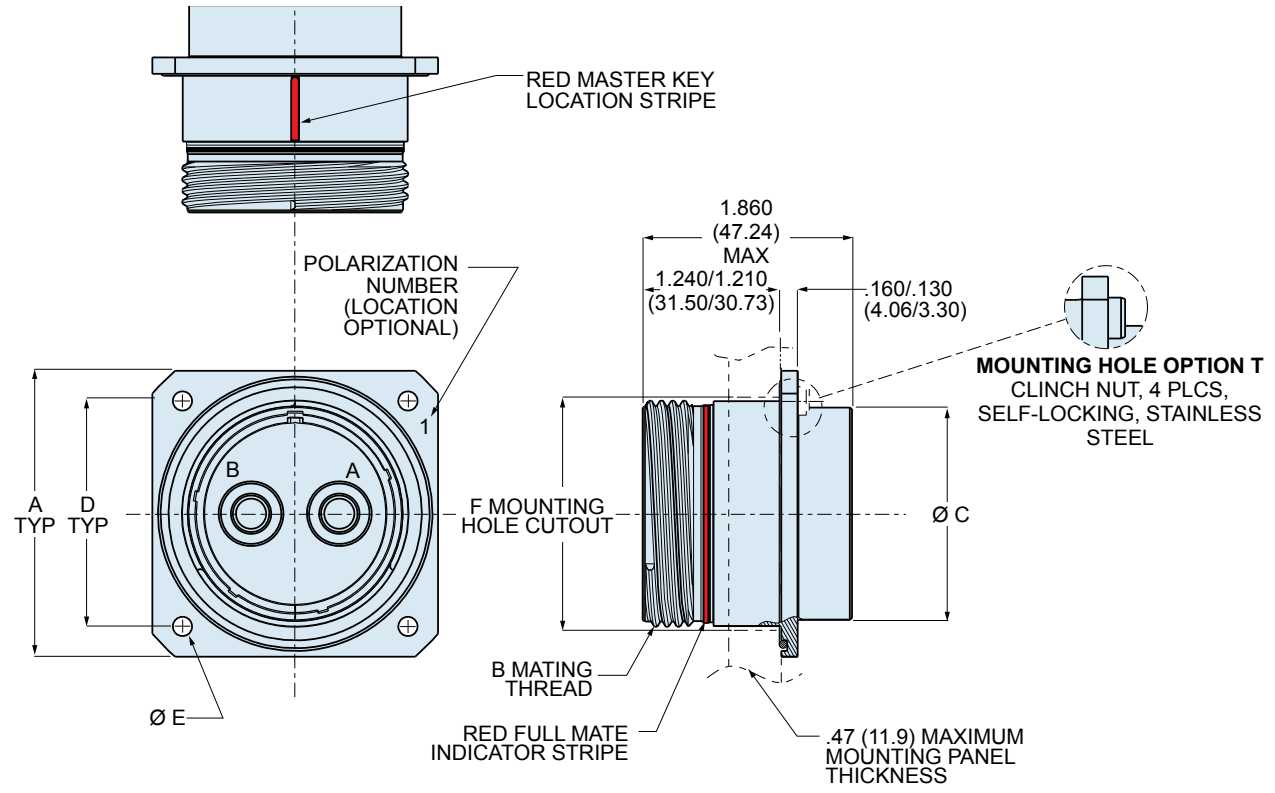
\* Size 12 and 16 contacts are gold-plated. Size 8, 4 and 1/0 are silver plated.





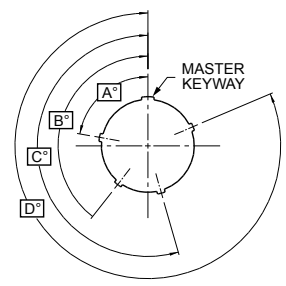
Series 970 PowerTrip™ Connectors and Accessories  
Receptacle Connectors  
970-013 Low Profile Square Flange Receptacle

970-013 LOW PROFILE RECEPTACLE



DIMENSIONS

Shell Size	A		B Mating Thread	C		D		Ø E		E Clinch Nut Thd	Ø F	
	In.	mm.		In.	mm.	In.	mm.	In.	mm.		In.	mm.
18	1.591	40.41	1.125-.1P-.3L-TS-2A	.972	24.69	1.275	32.39	.146	3.71	6-32 UNC-2B	1.187	30.15
20	1.779	45.19	1.250-.1P-.3L-TS-2A	1.116	28.35	1.408	35.76	.146	3.71	6-32 UNC-2B	1.374	34.90
24	2.029	51.54	1.500-.1P-.3L-TS-2A	1.300	33.02	1.585	40.26	.146	3.71	6-32 UNC-2B	1.562	39.67
28	2.404	61.06	1.750-.1P-.3L-TS-2A	1.604	40.74	1.905	48.39	.170	4.32	8-32 UNC-2B	1.835	46.61
32	2.529	64.24	2.000-.1P-.3L-TS-2A	1.875	47.63	1.993	50.62	.170	4.32	8-32 UNC-2B	2.093	53.16
36	2.654	67.41	2.250-.1P-.3L-TS-2A	2.093	53.16	2.081	52.86	.170	4.32	8-32 UNC-2B	2.302	58.47
40	3.029	76.94	2.500-.1P-.3L-TS-2A	2.310	58.67	2.347	59.61	.170	4.32	8-32 UNC-2B	2.562	65.07



KEY POSITIONS

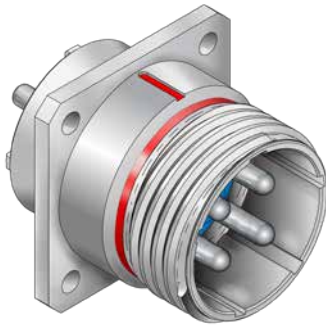
Position	A°	B°	C°	C°
1	80	142	196	293
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272

**Series 970 PowerTrip™ Connectors and Accessories**  
**Receptacle Connectors**  
**970-008 PC Tail Receptacles**



**970-008 RECEPTACLES WITH SIZE #8 PC TAILS**

Series 970 PowerTrip™ receptacles with size #8 PC tail contacts for direct termination to circuit boards. Contacts are factory-installed and are non-removable. These connectors feature high current LouverBand contacts. Coupling threads are triple-start ACME type. EMI protected with ground spring and splined backshell interface. Standard contacts are silver plated high conductivity copper alloy, or choose gold-plated contacts for improved corrosion protection. Fluorosilicone rubber gaskets and epoxy potting provide watertight sealing. Connector shell has integral standoffs.

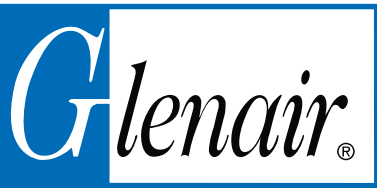


- EMI Protected
- High Current Contacts
- PC Board terminals
- Harsh Environment

PRODUCT FACTS
2000 VAC Sea Level DWV Rating
-65°C to +200°C Operating Temperature
6 Feet Water Immersion, 48 Hours
65 dB min. Attenuation, up to 10GHz
500 Cycles Mating Durability
MIL-S 901 Grade A High-Impact Shock
43 g Random Vibration

**HOW TO ORDER**

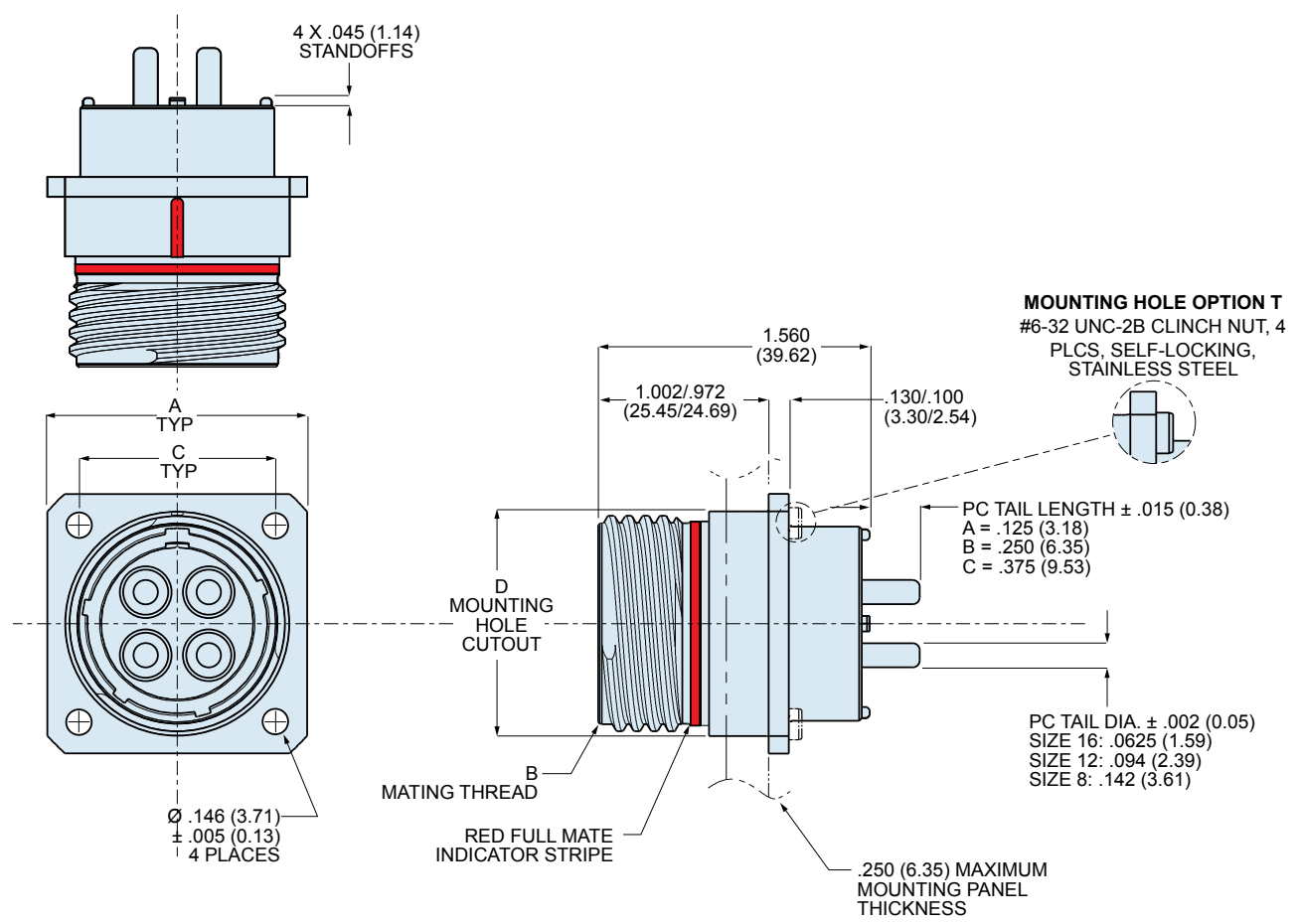
SERIES	SHELL MATL AND FINISH	SHELL SIZE - INSERT ARRANGEMENT	CONTACT TYPE AND PLATING	PC TAIL LENGTH	MOUNTING HOLE OPTION	KEY POS.
<b>970-008</b> Low Profile Square Flange Panel Mount Receptacle with Printed Circuit Terminals	<b>ME</b> Aluminum, Electroless Nickel Finish	<b>18-2</b> 2 #8	<b>P1</b> Pin Contacts, Silver Plating*	<b>A</b> .125 (3.18)	<b>N</b> Thru-Hole	<b>-1</b> Position 1
	<b>MT</b> Aluminum, Nickel-PTFE Finish	<b>18-4</b> 2 #8, 2 #12	<b>P2</b> Pin Contacts, Gold Plating	<b>B</b> .250 (6.35)	<b>T</b> Clinch Nuts Installed in Mounting Holes for Back Panel Mounting.	<b>-2</b> Position 2
	<b>NF</b> Aluminum, Olive Drab Cadmium	<b>20-3</b> 3 #8	<b>S1</b> Socket Contacts, Silver Plating*	<b>C</b> .375 (9.53)		<b>-3</b> Position 3
	<b>ZR</b> Aluminum, Black Zinc-Nickel Finish	<b>20-4</b> 4 #8	<b>S2</b> Socket Contacts, Gold Plating			<b>-4</b> Position 4
	<b>Z1</b> Passivated Stainless Steel	<b>20-5</b> 3 #8, 2 #12	* Size 12 and 16 contacts are gold-plated. Size 8, 4 and 1/0 are silver plated.			<b>-5</b> Position 5
		<b>20-7</b> 3 #8, 4 #16				<b>-6</b> Position 6
		<b>24-5</b> 5 #8				
<b>Sample Part Number</b>						
<b>970-008</b>	<b>MT</b>	<b>24-5</b>	<b>P2</b>	<b>A</b>	<b>N</b>	<b>-1</b>



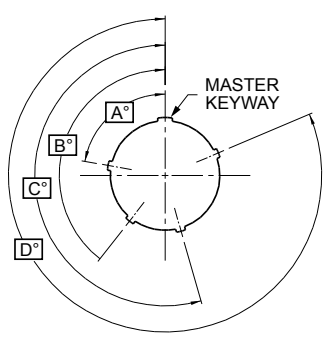
**Series 970 PowerTrip™ Connectors and Accessories**  
**Receptacle Connectors**  
**970-008 PC Tail Receptacles**

**970-008 PC TAIL RECEPTACLE**

D



DIMENSIONS							
Shell Size	A		B Mating Thread	C		ø D	
	In.	mm.		In.	mm.	In.	mm.
18	1.383	35.13	1.125-.1P-.3L-TS-2A	1.015	25.78	1.187	30.15
20	1.508	38.30	1.250-.1P-.3L-TS-2A	1.140	28.96	1.374	34.90
24	1.718	43.64	1.500-.1P-.3L-TS-2A	1.281	32.54	1.562	39.67



KEY POSITIONS				
Position	A°	B°	C°	D°
1	80	142	196	293
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272

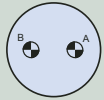
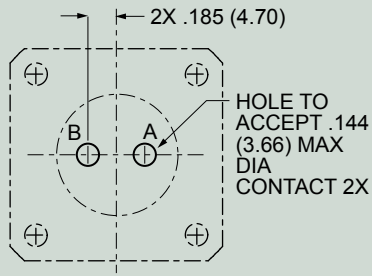
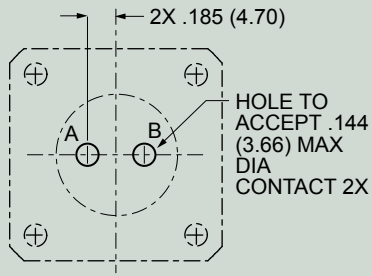
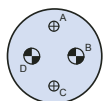
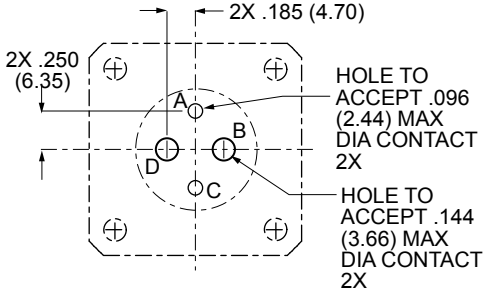
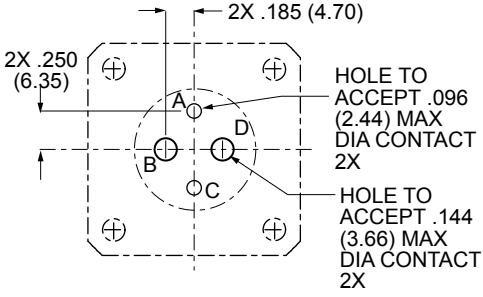
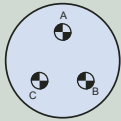
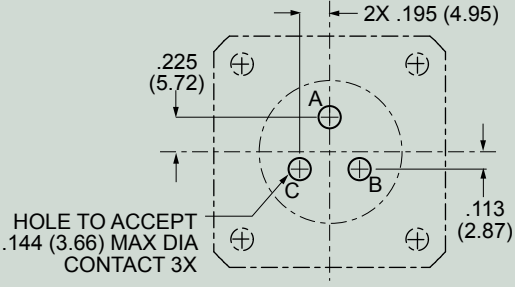
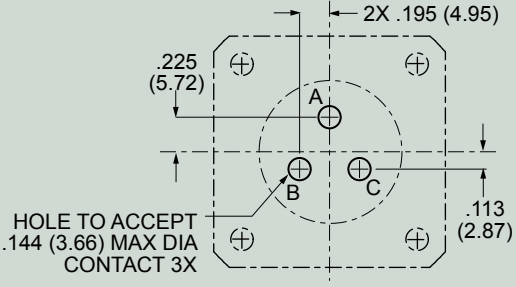
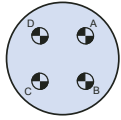
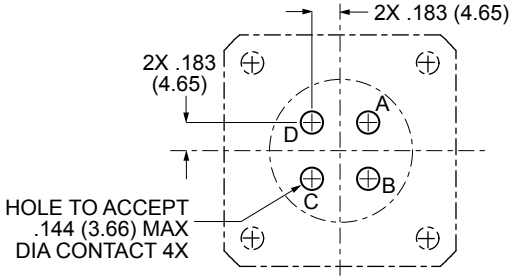
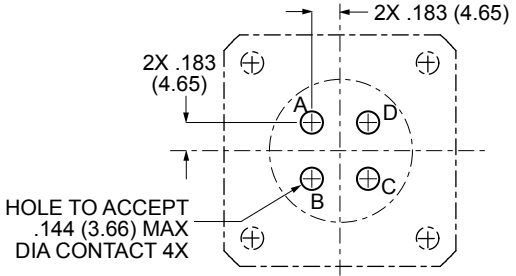


Series 970 PowerTrip™ Connectors and Accessories  
 Receptacle Connectors  
 970-008 PC Tail Receptacles



Receptacle  
Connectors

970-008 PRINTED CIRCUIT BOARD PATTERNS

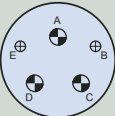
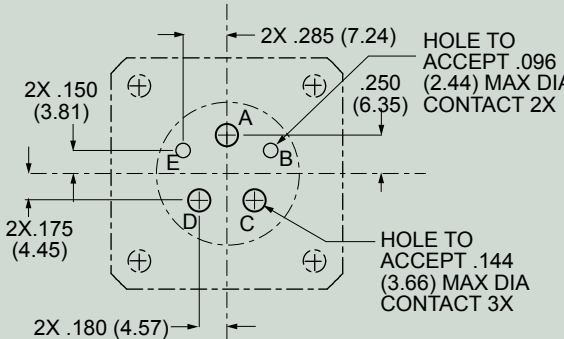
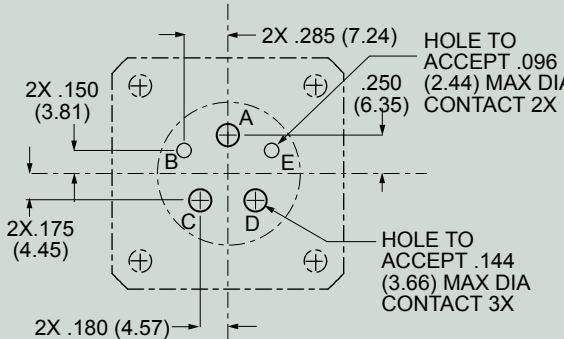
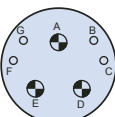
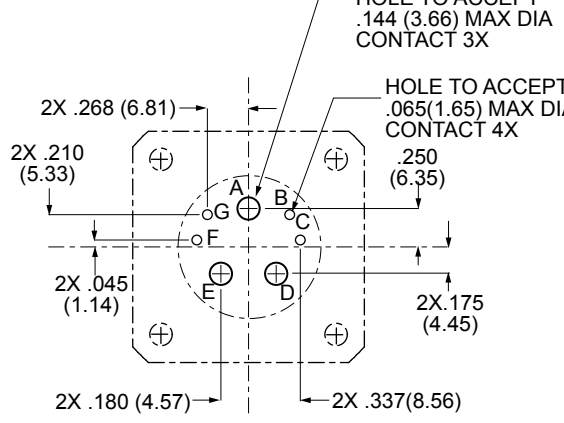
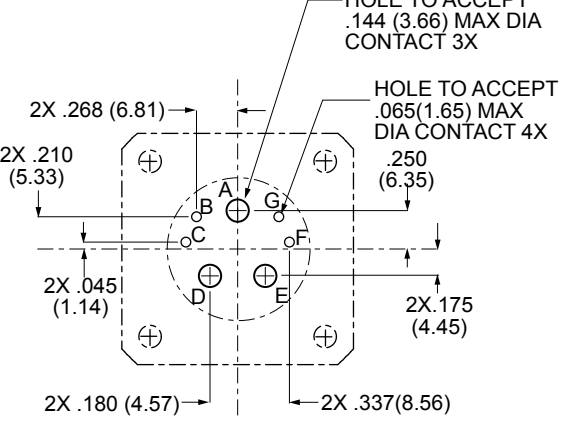
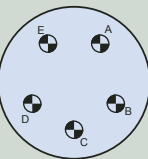
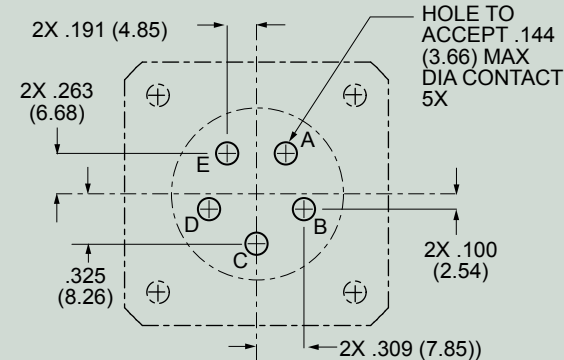
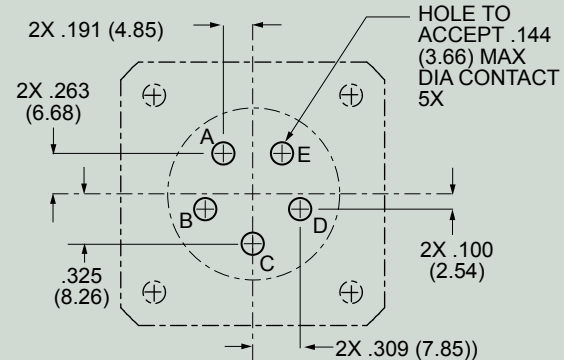
Contact Arrangement	Component Mounting Side of PCB	
 <p><b>18-2</b> 2#8 Contacts</p>	 <p>18-2P Pin Connector</p>	 <p>18-2S Socket Connector</p>
 <p><b>18-4</b> 2#8 Contacts, 2 #12 Contacts</p>	 <p>18-4P Pin Connector</p>	 <p>18-4S Socket Connector</p>
 <p><b>20-3</b> 3#8 Contacts</p>	 <p>20-3P Pin Connector</p>	 <p>20-3S Socket Connector</p>
 <p><b>20-4</b> 4#8 Contacts</p>	 <p>20-4P Pin Connector</p>	 <p>20-4S Socket Connector</p>

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Series 970 PowerTrip™ Connectors and Accessories  
Receptacle Connectors  
970-008 PC Tail Receptacles

970-008 PRINTED CIRCUIT BOARD PATTERNS

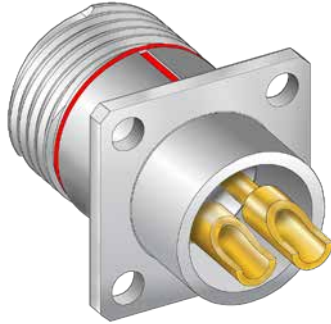
Contact Arrangement	Component Mounting Side of PCB	
 <p><b>20-5</b> 3#8 Contacts, 2 #12 Contacts</p>	 <p>2X .150 (3.81) 2X .175 (4.45) 2X .180 (4.57) 2X .285 (7.24) HOLE TO ACCEPT .096 (2.44) MAX DIA CONTACT 2X .250 (6.35) HOLE TO ACCEPT .144 (3.66) MAX DIA CONTACT 3X</p> <p>20-5P Pin Connector</p>	 <p>2X .150 (3.81) 2X .175 (4.45) 2X .180 (4.57) 2X .285 (7.24) HOLE TO ACCEPT .096 (2.44) MAX DIA CONTACT 2X .250 (6.35) HOLE TO ACCEPT .144 (3.66) MAX DIA CONTACT 3X</p> <p>20-5S Socket Connector</p>
 <p><b>20-7</b> 3#8 Contacts, 4 #16 Contacts</p>	 <p>2X .268 (6.81) 2X .210 (5.33) 2X .045 (1.14) 2X .175 (4.45) 2X .180 (4.57) HOLE TO ACCEPT .144 (3.66) MAX DIA CONTACT 3X HOLE TO ACCEPT .065 (1.65) MAX DIA CONTACT 4X .250 (6.35)</p> <p>20-7P Pin Connector</p>	 <p>2X .268 (6.81) 2X .210 (5.33) 2X .045 (1.14) 2X .175 (4.45) 2X .180 (4.57) HOLE TO ACCEPT .144 (3.66) MAX DIA CONTACT 3X HOLE TO ACCEPT .065 (1.65) MAX DIA CONTACT 4X .250 (6.35)</p> <p>20-7S Socket Connector</p>
 <p><b>24-5</b> 5#8 Contacts</p>	 <p>2X .191 (4.85) 2X .263 (6.68) .325 (8.26) 2X .100 (2.54) 2X .309 (7.85) HOLE TO ACCEPT .144 (3.66) MAX DIA CONTACT 5X</p> <p>24-5P Pin Connector</p>	 <p>2X .191 (4.85) 2X .263 (6.68) .325 (8.26) 2X .100 (2.54) 2X .309 (7.85) HOLE TO ACCEPT .144 (3.66) MAX DIA CONTACT 5X</p> <p>24-5S Socket Connector</p>

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**Series 970 PowerTrip™ Connectors and Accessories**  
**Receptacle Connectors**  
**970-012 Hermetic**



**970-012 HERMETIC RECEPTACLES**



Series 970 PowerTrip™ hermetic receptacles feature 316L stainless steel shells and compression glass insulators. Solder cup contacts are nickel-iron alloy and are non-removable. Coupling threads are triple-start ACME type. Contacts are silver plated high conductivity copper alloy, or choose gold-plated contacts. Fluorosilicone rubber face seal on pin connector. Stainless steel shells are passivated, or choose nickel plating for improved shell-to-shell conductivity and EMI protection. Hermeticity is  $1 \times 10^{-7}$  cc/sec maximum helium leak rate with one atmosphere pressure differential.

- **Compression Glass Seal**
- **$1 \times 10^{-7}$  cc/sec He leak rate**
- **Both Pin and Socket Versions**
- **Stainless Steel Shell**

PRODUCT FACTS	
2000 VAC Sea Level DWV Rating	
-65°C to +200°C Operating Temperature	
6 Feet Water Immersion, 48 Hours	
65 dB min. Attenuation, up to 10GHz	
500 Cycles Mating Durability	
MIL-S 901 Grade A High-Impact Shock	
43 g Random Vibration	

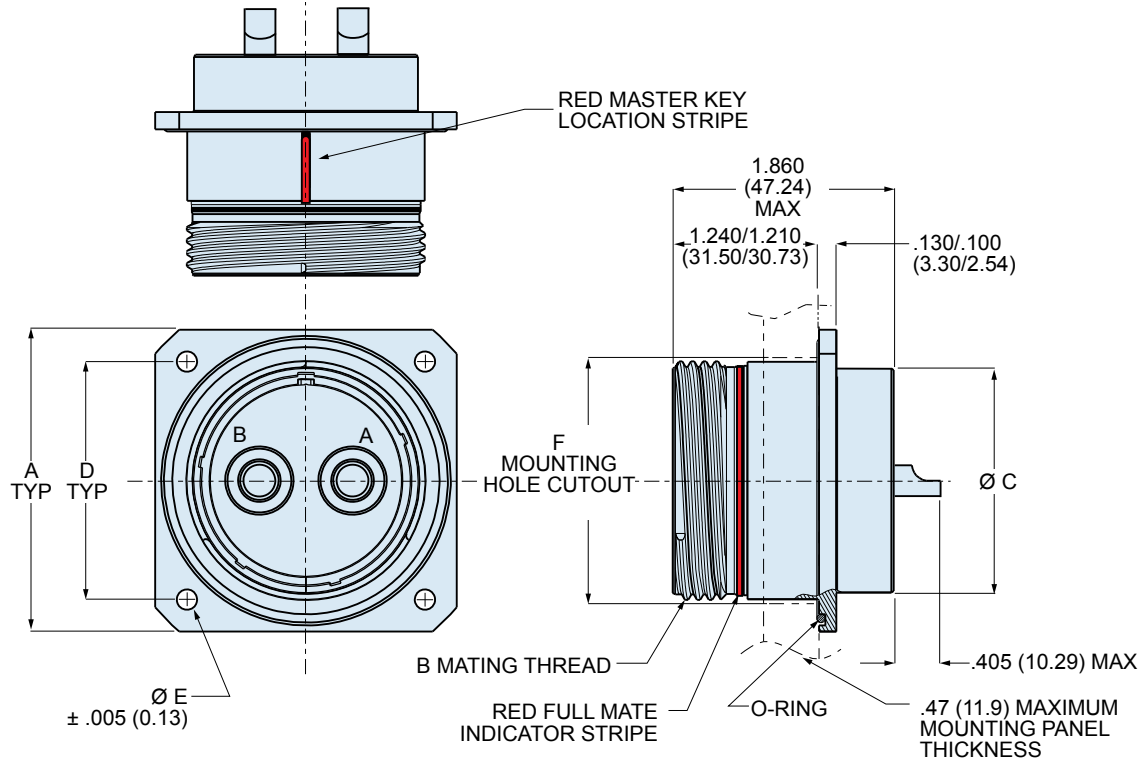
**HOW TO ORDER**

SERIES	SHELL MATL AND FINISH	SHELL SIZE - INSERT ARRANGEMENT					CONTACT TYPE AND PLATING	MOUNTING HOLE OPTION	KEY POSITION			
<b>970-012</b> Hermetic Square Flange Panel Mount Receptacle	<b>Z1</b> Passivated Stainless Steel	Contact Arr.					<b>P1</b> Pin Contacts, Silver Plating	<b>N</b> Thru-Hole	<b>-1</b> Position 1			
		Contact Size and Qty										
			#16	#12	#8	#4				#1/0		
		<b>18-2</b>			2							
		<b>18-4</b>		2	2							
		<b>20-3</b>			3							
		<b>20-4</b>			4							
		<b>20-5</b>		2	3							
		<b>20-7</b>	4		3							
		<b>24-2</b>				2						
	<b>24-3</b>				3							
	<b>24-5</b>			5								
	<b>24-6</b>		4		2							
	<b>24-A6</b>		3		3							
	<b>28-4</b>				4							
	<b>28-8</b>		1	7								
	<b>28-9</b>	5			4							
	<b>28-15</b>	15										
	<b>32-2</b>					2						
	<b>32-3</b>					3						
	<b>32-4</b>				2	2						
<b>32-5</b>				5								
<b>32-6</b>		3			3							
<b>32-20</b>	1	19										
<b>36-4</b>					4							
<b>36-16</b>	3		13									
<b>40-5</b>					5							
<b>40-21</b>			21									
<b>Sample Part Number</b>												
<b>970-012</b>	<b>Z1</b>	<b>20-4</b>					<b>P1</b>	<b>N</b>	<b>-1</b>			



**Series 970 PowerTrip™ Connectors and Accessories**  
**Receptacle Connectors**  
**970-012 Hermetic**

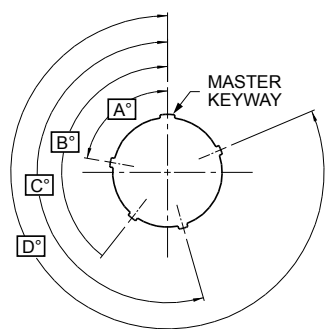
**970-012 HERMETIC RECEPTACLE**



D

**DIMENSIONS**

Shell Size	A		B Mating Thread	C		D		ø E		ø F	
	In.	mm.		In.	mm.	In.	mm.	In.	mm.	In.	mm.
18	1.383	35.13	1.125-.1P-.3L-TS-2A	.972	24.69	1.015	25.78	.146	3.71	1.187	30.15
20	1.508	38.30	1.250-.1P-.3L-TS-2A	1.116	28.35	1.140	28.96	.146	3.71	1.374	34.90
24	1.718	43.64	1.500-.1P-.3L-TS-2A	1.300	33.02	1.281	32.54	.146	3.71	1.562	39.67
28	2.138	54.31	1.750-.1P-.3L-TS-2A	1.604	40.74	1.568	39.83	.170	4.32	1.874	47.60
32	2.328	59.13	2.000-.1P-.3L-TS-2A	1.875	47.63	1.734	44.04	.170	4.32	2.062	52.37
36	2.578	65.48	2.250-.1P-.3L-TS-2A	2.093	53.16	1.984	50.39	.170	4.32	2.302	58.47
40	2.828	71.83	2.500-.1P-.3L-TS-2A	2.310	58.67	2.234	56.74	.170	4.32	2.562	65.07



**KEY POSITIONS**

Position	A°	B°	C°	D°
1	80	142	196	293
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272

**Series 970 PowerTrip™ Connectors and Accessories**  
**Receptacle Connectors**  
**970-004 Jam Nut Receptacle**



**970-004 JAM NUT RECEPTACLES**



Series 970 PowerTrip™ extreme environment receptacle connectors are intended for high current applications where size 8 AWG to size 1/0 AWG wires are used. These connectors feature high current LouverBand contacts. Coupling threads are triple-start ACME type. EMI protected with ground spring and splined backshell interface. Standard contacts are silver plated high conductivity copper alloy, or choose gold-plated contacts for improved corrosion protection. Fluorosilicone rubber gaskets and grommets provide watertight sealing. Contacts are packaged with connector.

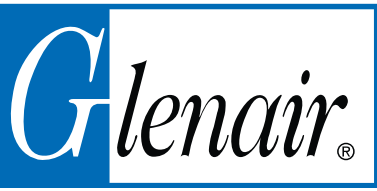
- EMI Protected
- High Current Contacts
- Splined Backshell Interface
- Ratchet Self-Locking

PRODUCT FACTS	
2000 VAC Sea Level DWV Rating	
-65°C to +200°C Operating Temperature	
6 Feet Water Immersion, 48 Hours	
65 dB min. Attenuation, up to 10GHz	
500 Cycles Mating Durability	
MIL-S 901 Grade A High-Impact Shock	
43 g Random Vibration	

**HOW TO ORDER**

SERIES	SHELL MATL AND FINISH	SHELL SIZE - INSERT ARRANGEMENT					CONTACT TYPE AND PLATING	KEY POSITION	
		Contact Arr.	Contact Size and Qty						
		#16	#12	#8	#4	#1/0			
<b>970-004</b> Jam Nut Receptacle, for Rear Panel Mounting	<b>ME</b> Aluminum, Electroless Nickel Finish			2			<b>P1</b> Pin Contacts, Silver Plating*	<b>-1</b> Position 1	
	<b>MT</b> Aluminum, Nickel-PTFE Finish	<b>18-2</b>		2				<b>P2</b> Pin Contacts, Gold Plating	<b>-2</b> Position 2
		<b>18-4</b>		2	2			<b>S1</b> Socket Contacts, Silver Plating*	<b>-3</b> Position 3
		<b>20-3</b>			3				
		<b>20-4</b>			4			<b>S2</b> Socket Contacts, Gold Plating	<b>-4</b> Position 4
		<b>20-5</b>		2	3				
		<b>20-7</b>	4		3			<b>A</b> Pin Connector, Supplied without Contacts	<b>-5</b> Position 5
		<b>24-2</b>				2			
		<b>24-3</b>				3		<b>B</b> Socket Connector, Supplied without Contacts	<b>-6</b> Position 6
		<b>24-5</b>			5				
		<b>24-6</b>		4		2		* Size 12 and 16 contacts are gold-plated. Size 8, 4 and 1/0 are silver plated.	
	<b>24-A6</b>		3		3				
	<b>28-4</b>				4				
	<b>28-8</b>		1	7					
	<b>28-9</b>	5			4				
	<b>28-15</b>	15							
	<b>32-2</b>					2			
	<b>32-3</b>					3			
	<b>32-4</b>				2	2			
	<b>32-5</b>				5				
<b>32-6</b>		3			3				
<b>32-20</b>	1	19							
<b>36-4</b>				4					
<b>36-16</b>	3		13						
<b>40-5</b>					5				
<b>40-21</b>			21						
<b>Sample Part Number</b>									
<b>970-004</b>	<b>MT</b>	<b>24-5</b>					<b>P1</b>	<b>-1</b>	

D

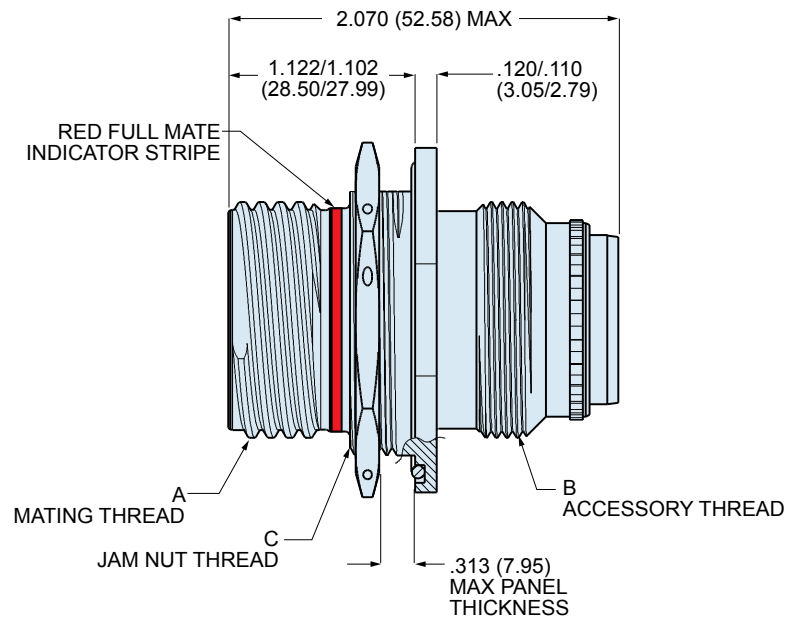
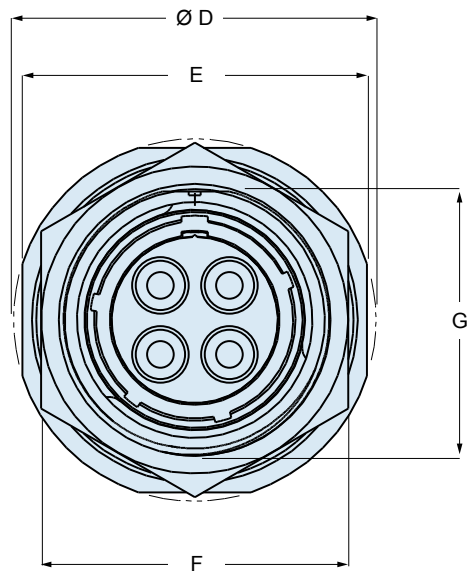


# Series 970 PowerTrip™ Connectors and Accessories

## Receptacle Connectors

### 970-004 Jam Nut Receptacle

#### 970-004 JAM NUT RECEPTACLE



D

#### DIMENSIONS

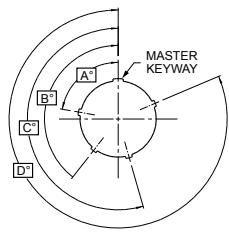
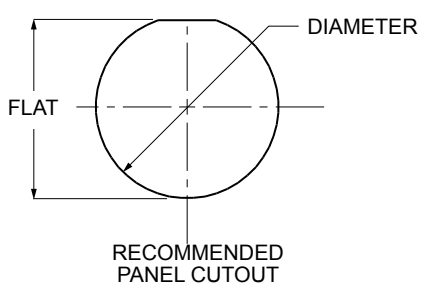
Shell Size	A Mating Thd.	B Accessory Thd.	C Jam Nut Thd.	Ø D		E		F		G	
				In.	mm.	In.	mm.	In.	mm.	In.	mm.
18	1.125-.1P-.3L-TS-2A	1.125-18 UNEF-2A	1.250-18 UNEF-2A	1.733	44.02	1.639	41.63	1.438	36.53	1.212	30.78
20	1.250-.1P-.3L-TS-2A	1.250-18 UNEF-2A	1.4375-18 UNEF-2A	1.921	48.79	1.827	46.41	1.625	41.28	1.399	35.53
24	1.500-.1P-.3L-TS-2A	1.4375-18 UNEF-2A	1.625-18 UNEF-2A	2.108	53.54	2.014	51.16	1.822	46.28	1.587	40.31
28	1.750-.1P-.3L-TS-2A	1.8125-16 UN-2A	1.9375-16 UN-2A	2.425	61.60	2.327	59.11	2.188	55.58	1.899	48.23
32	2.000-.1P-.3L-TS-2A	2.0625-16 UNS-2A	2.125-16 UN-2A	2.607	66.24	2.513	63.83	2.375	60.33	2.084	52.93
36	2.250-.1P-.3L-TS-2A	2.250-16 UN-2A	2.375-16 UN-2A	2.857	72.57	2.763	70.18	2.625	66.68	2.323	59.00
40	2.500-.1P-.3L-TS-2A	2.500-16 UN-2A	2.625-16 UN-2A	3.107	78.92	3.013	76.53	2.875	73.03	2.548	64.72

#### KEY POSITIONS

Position	A°	B°	C°	D°
1	80	142	196	293
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272

#### PANEL CUTOUT

Shell Size	Diameter		Flat	
	In.	mm.	In.	mm.
		-.000 +.010	-.00 +0.25	-.000 +.010
18	1.265	32.13	1.217	30.91
20	1.452	36.88	1.409	35.79
24	1.640	41.66	1.596	40.54
28	1.952	49.58	1.910	48.51
32	2.140	54.36	2.092	53.14
36	2.390	60.71	2.342	59.49
40	2.640	67.06	2.557	64.95



**Series 970 PowerTrip™ Connectors and Accessories**  
**Receptacle Connectors**  
**970-010 Low Profile Jam Nut Receptacle**



**970-010 LOW PROFILE JAM NUT RECEPTACLES**



970-010 receptacles have a shorter profile than standard jam nut receptacles. This reduced protrusion behind the mounting panel results from removing the accessory threads, moving the mounting flange and replacing the grommet wire seal with a thinner wire separator. Series 970 PowerTrip™ extreme environment receptacle connectors are intended for high current applications where size 8 AWG to size 1/0 AWG wires are used. Contacts snap into connector through rear wire separator and can be removed with a plastic tool. These connectors feature high current LouverBand contacts. Coupling threads are triple-start ACME type. EMI protected with ground spring and splined backshell interface. Standard contacts are silver plated high conductivity copper alloy, or choose gold-plated contacts for improved corrosion protection. Contacts are packaged with connector. Red stripe indicates full mating condition

*970-010 connectors have a low profile wire separator instead of a thick watertight rear grommet. These connectors are splashproof but are not rated for water immersion or altitude immersion.*

**HOW TO ORDER**

SERIES	SHELL MATL AND FINISH	SHELL SIZE - INSERT ARRANGEMENT					CONTACT TYPE AND PLATING	KEY POSITION
		Contact Arr.	Contact Size and Qty					
<b>970-010</b> Jam Nut Receptacle, for Rear Panel Mounting, Low Profile	<b>ME</b> Aluminum, Electroless Nickel Finish	#16	#12	#8	#4	#1/0	<b>P1</b> Pin Contacts, Silver Plating*	<b>-1</b> Position 1
		18-2		2				
		18-4	2	2				
		20-3		3				
		20-4		4				
	<b>MT</b> Aluminum, Nickel-PTFE Finish	20-5		2	3		<b>P2</b> Pin Contacts, Gold Plating	<b>-2</b> Position 2
		20-7	4		3			
		24-2				2		
		24-3				3		
		24-5			5			
	<b>NF</b> Aluminum, Olive Drab Cadmium	24-6		4		2	<b>S1</b> Socket Contacts, Silver Plating*	<b>-3</b> Position 3
		24-A6		3		3		
		28-4				4		
		28-8		1	7			
		28-9	5			4		
	<b>Z1</b> Passivated Stainless Steel	28-15	15				<b>S2</b> Socket Contacts, Gold Plating	<b>-4</b> Position 4
		32-2				2		
		32-3				3		
		32-4				2		
		32-5				5		
32-6			3		3			
32-20		1	19					
36-4					4			
36-16	3		13					
40-5				5	<b>A</b> Pin Connector, without Contacts	<b>-5</b> Position 5		
40-21			21					
<b>B</b> Socket Connector, without Contacts								<b>-6</b> Position 6
* Size 12 and 16 contacts are gold-plated. Size 8, 4 and 1/0 are silver plated.								
<b>Sample Part Number</b>								
<b>970-010</b>	<b>MT</b>	<b>24-5</b>					<b>P1</b>	<b>-1</b>

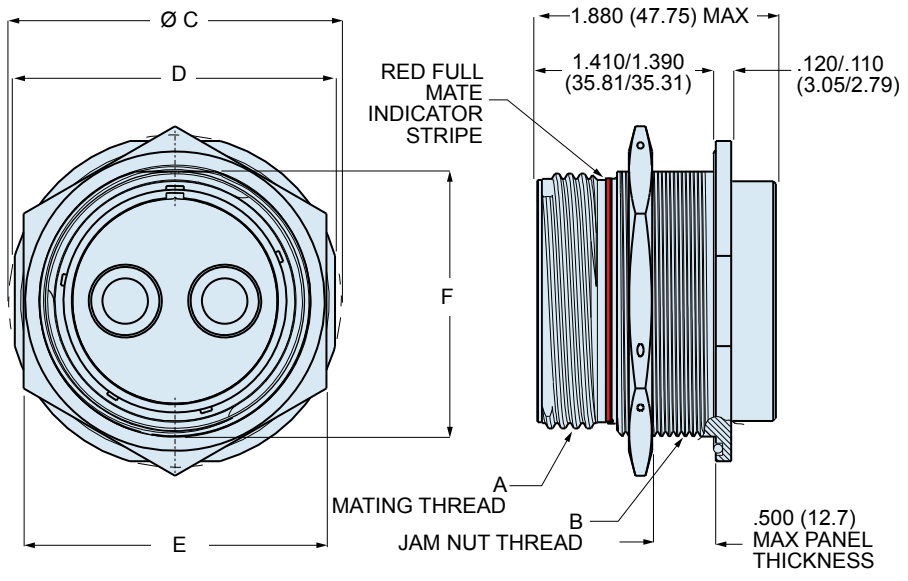


# Series 970 PowerTrip™ Connectors and Accessories

## Receptacle Connectors

### 970-010 Low Profile Jam Nut Receptacle

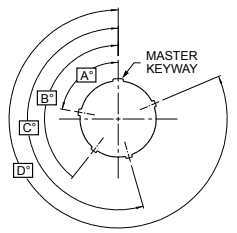
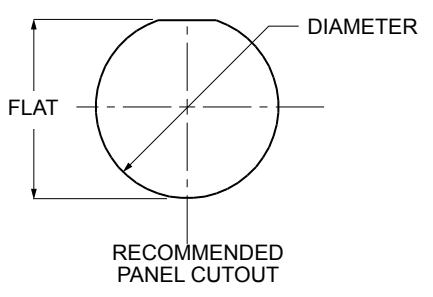
#### 970-010 LOW PROFILE JAM NUT RECEPTACLE



DIMENSIONS										
Shell Size	A Mating Thd.	B Jam Nut Thd.	ø C		D		E		F	
			In.	mm.	In.	mm.	In.	mm.	In.	mm.
18	1.125-.1P-.3L-TS-2A	1.250-18 UNEF-2A	1.733	44.02	1.639	41.63	1.438	36.53	1.212	30.78
20	1.250-.1P-.3L-TS-2A	1.4375-18 UNEF-2A	1.921	48.79	1.827	46.41	1.625	41.28	1.399	35.53
24	1.500-.1P-.3L-TS-2A	1.625-18 UNEF-2A	2.108	53.54	2.014	51.16	1.822	46.28	1.587	40.31
28	1.750-.1P-.3L-TS-2A	1.9375-16 UN-2A	2.425	61.60	2.327	59.11	2.188	55.58	1.899	48.23
32	2.000-.1P-.3L-TS-2A	2.125-16 UN-2A	2.607	66.24	2.513	63.83	2.375	60.33	2.084	52.93
36	2.250-.1P-.3L-TS-2A	2.375-16 UN-2A	2.857	72.57	2.763	70.18	2.625	66.68	2.323	59.00
40	2.500-.1P-.3L-TS-2A	2.625-16 UN-2A	3.107	78.92	3.013	76.53	2.875	73.03	2.548	64.72

KEY POSITIONS				
Position	A°	B°	C°	D°
1	80	142	196	293
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272

PANEL CUTOUT				
Shell Size	Diameter		Flat	
	In.	mm.	In.	mm.
		-.000 +.010	-.00 +0.25	-.000 +.010
18	1.265	32.13	1.217	30.91
20	1.452	36.88	1.409	35.79
24	1.640	41.66	1.596	40.54
28	1.952	49.58	1.910	48.51
32	2.140	54.36	2.092	53.14
36	2.390	60.71	2.342	59.49
40	2.640	67.06	2.557	64.95





# Series 970 PowerTrip™ Connectors and Accessories

## Hermetic Bulkhead Feed-thru Connector

970-006



### 970-006 HERMETIC BULKHEAD FEED-THRU CONNECTOR

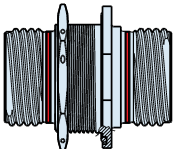


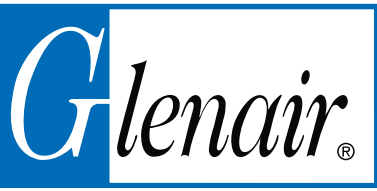
Series 970 PowerTrip™ jam-nut mount hermetic bulkhead feed-thru connectors have pin contacts on one side and socket contacts on the other side. Mount to bulkhead and attach mating plug connectors to both sides. Coupling threads are triple-start ACME type. Contacts are factory-installed and are non-removable. Standard contacts are silver plated high conductivity copper alloy for excellent conductivity, or choose gold-plated contacts for improved corrosion protection. Jam nut mount available for panel thicknesses from 1/16 inch (1.58mm) up to 1.4 inches (35.56mm).

- EMI Protected
- High Current Contacts
- Submersible
- Harsh Environment

PRODUCT FACTS
2000 VAC Sea Level DWV Rating
-65°C to +200°C Operating Temperature
6 Feet Water Immersion, 48 Hours
65 dB min. Attenuation, up to 10GHz
500 Cycles Mating Durability
MIL-S 901 Grade A High-Impact Shock
43 g Random Vibration

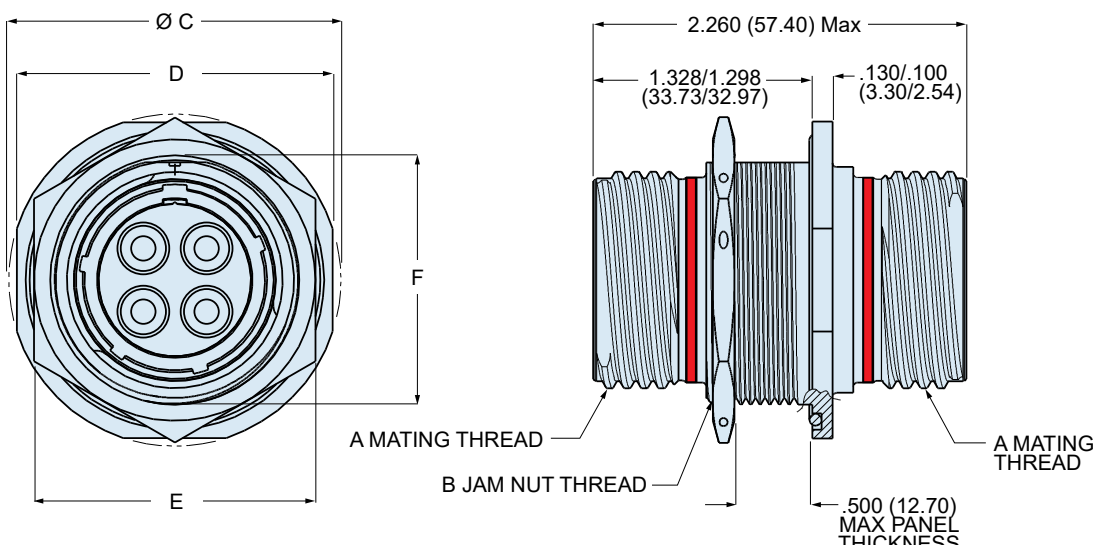
#### HOW TO ORDER

SERIES	SHELL MATL AND FINISH	SHELL SIZE - INSERT ARRANGEMENT					CONTACT TYPE	CONTACT PLATING	PANEL THICKNESS	KEY POSITION			
		Cont. Arr.	Contact Size and Qty										
			#16	#12	#8	#4	#1/0						
<b>970-006</b> Series 970 Hermetic Bulkhead Feed-Thru Connector, with Jam Nut Mounting	<b>ME</b> Aluminum, Electroless Nickel Finish	18-2			2			<b>P</b> Pin Contacts on Jam Nut Side	<b>1</b> Silver Plated Power Contacts (size 1/0, 4 and 8) and Gold Plated Signal Contacts	<b>BLANK</b> (Standard) .500 in max panel thickness	<b>-1</b> Position 1		
		18-4		2	2						<b>-2</b> Position 2		
		20-3			3								
	<b>MT</b> Aluminum, Nickel-PTFE Finish	20-4			4			<b>S</b> Socket Contacts on Jam Nut Side			<b>2</b> Gold Plated Contacts	<b>B</b> .950 max panel thickness	<b>-3</b> Position 3
		20-5		2	3								<b>-4</b> Position 4
		20-7	4		3								<b>-5</b> Position 5
	<b>NF</b> Aluminum, Olive Drab Cadmium	24-2				2		<b>JAM NUT SIDE</b> 	<b>C</b> 1.400 max panel thickness (See Table III)	<b>-6</b> Position 6			
		24-3				3							
		24-5			5								
	<b>ZR</b> Aluminum, Black Zinc-Nickel Finish	24-6		4		2							
		24-A6		3		3							
		28-4				4							
	<b>Z1</b> Passivated Stainless Steel	28-8		1	7								
		28-9	5			4							
		28-15	15										
			32-2				2						
			32-3				3						
			32-4			2	2						
			32-5			5							
			32-6		3		3						
			32-20	1	19								
		36-4				4							
		36-16	3		13								
		40-5				5							
		40-21			21								
<b>Sample Part Number</b>													
<b>970-006</b>	<b>MT</b>		<b>24-5</b>				<b>P</b>	<b>1</b>		<b>-1</b>			



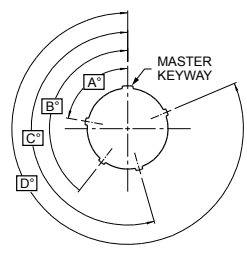
**Series 970 PowerTrip™ Connectors and Accessories**  
**Hermetic Bulkhead Feed-thru Connector**  
**970-006**

**970-006 HERMETIC BULKHEAD FEED-THRU CONNECTOR**



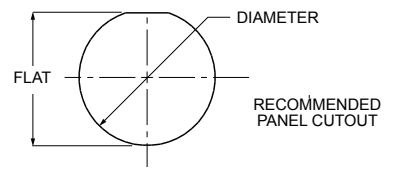
DIMENSIONS										
Shell Size	A Mating Thd.	B Jam Nut Thd.	ø C		D		E		F	
			In.	mm.	In.	mm.	In.	mm.	In.	mm.
18	1.125-.1P-.3L-TS-2A	1.250-18 UNEF-2A	1.733	44.02	1.639	41.63	1.438	36.53	1.212	30.78
20	1.250-.1P-.3L-TS-2A	1.4375-18 UNEF-2A	1.921	48.79	1.827	46.41	1.625	41.28	1.399	35.53
24	1.500-.1P-.3L-TS-2A	1.625-18 UNEF-2A	2.108	53.54	2.014	51.16	1.822	46.28	1.587	40.31
28	1.750-.1P-.3L-TS-2A	1.9375-16 UN-2A	2.425	61.60	2.327	59.11	2.188	55.58	1.899	48.23
32	2.000-.1P-.3L-TS-2A	2.125-16 UN-2A	2.607	66.24	2.513	63.86	2.375	60.33	2.084	53.01
36	2.250-.1P-.3L-TS-2A	2.375-16 UN-2A	2.857	72.57	2.763	70.18	2.625	66.68	2.323	59.00
40	2.500-.1P-.3L-TS-2A	2.625-16 UN-2A	3.107	78.92	3.013	76.53	2.875	73.03	2.548	64.72

KEY POSITIONS				
Position	A°	B°	C°	D°
1	80	142	196	293
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272



PANEL CUTOUT				
Shell Size	Diameter		Flat	
	In.	mm.	In.	mm.
		-.000 +.010	-.00 +0.25	-.000 +.010
18	1.265	32.13	1.217	30.91
20	1.452	36.88	1.409	35.79
24	1.640	41.66	1.596	40.54
28	1.952	49.58	1.910	48.51
32	2.140	54.36	2.092	53.14
36	2.390	60.71	2.342	59.49
40	2.640	67.06	2.557	64.95

TABLE III: PANEL THICKNESS						
Panel Option	J Max		K		L Max	
	In.	mm.	In.	mm.	In.	mm.
Blank (std.)	.500	12.70	1.328/1.298	33.73/32.97	2.260	57.40
B	.950	24.13	1.801/1.771	45.75/44.98	2.733	69.42
C	1.400	35.56	2.274/2.244	57.76/57.00	3.206	81.43



Series 970 PowerTrip™ Connectors and Accessories  
 Hermetic Bulkhead Feed-thru Connector  
 970-007 Hermetic



**SERIES 970 HERMETIC FEED-THRU BULKHEAD CONNECTOR**



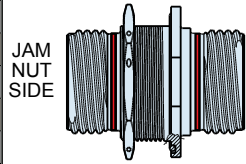
Series 970 PowerTrip™ hermetic feed-thru bulkhead receptacles have pin contacts on one side and socket contacts on the other side. Attach mating plug connectors to both sides. Compression glass hermetic seal. 100% tested to meet helium leak rate of  $1 \times 10^{-7}$  cc/second at 15 psi pressure differential. Contacts are factory-installed and are non-removable. Standard contacts are silver plated, or choose gold-plated contacts for improved corrosion protection. Jam nut rear panel mounting, for panel thicknesses from 1/16 inch (1.58mm) to 1/2 inch (12.7mm).

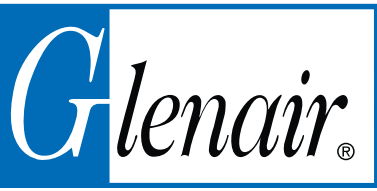
- **EMI Protected**
- **Submersible**
- **Harsh Environment**

PRODUCT FACTS
2000 VAC Sea Level DWV Rating
-65°C to +200°C Operating Temperature
6 Feet Water Immersion, 48 Hours
65 dB min. Attenuation, up to 10GHz
500 Cycles Mating Durability
MIL-S 901 Grade A High-Impact Shock
43 g Random Vibration

**HOW TO ORDER**

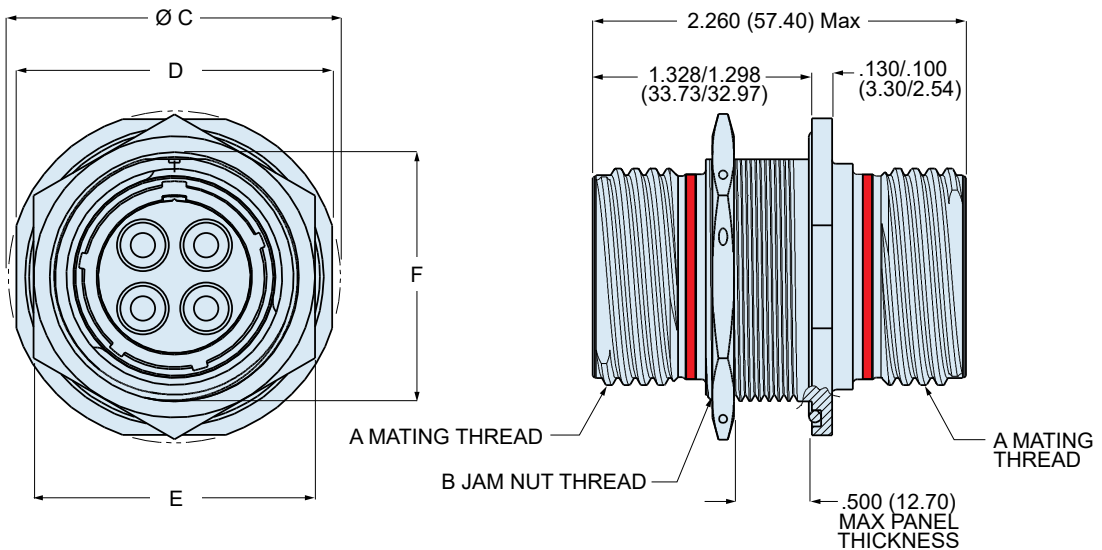
SERIES	SHELL MATL AND FINISH	SHELL SIZE - INSERT ARRANGEMENT					CONTACT TYPE	CONTACT PLATING	KEY POSITION
		Cont. Arr.	Contact Size and Qty						
		#16	#12	#8	#4	#1/0			
<b>970-007</b> Series 970 Hermetic Bulkhead Feed-Thru Connector, with Jam Nut Mounting	<b>Stainless Steel Shell</b>  <b>Z1</b> Passivated  <b>ZL</b> Electrodeposited Nickel			2			<b>P</b> Pin Contacts on Jam Nut Side	<b>1</b> Silver Plated Contacts	<b>-1</b> Position 1
		<b>18-2</b>							<b>-2</b> Position 2
		<b>18-4</b>	2	2					<b>-3</b> Position 3
		<b>20-3</b>			3				<b>-4</b> Position 4
		<b>20-4</b>			4				<b>-5</b> Position 5
		<b>20-5</b>	2	3					<b>-6</b> Position 6
		<b>20-7</b>	4		3				
		<b>24-2</b>				2			
		<b>24-3</b>				3			
		<b>24-5</b>			5				
		<b>24-6</b>		4		2			
		<b>24-A6</b>		3		3			
		<b>28-4</b>				4			
		<b>28-8</b>		1	7				
		<b>28-9</b>	5			4			
		<b>28-15</b>	15						
		<b>32-2</b>					2		
		<b>32-3</b>					3		
		<b>32-4</b>				2	2		
		<b>32-5</b>				5			
<b>32-6</b>		3			3				
<b>32-20</b>	1	19							
<b>36-4</b>					4				
<b>36-16</b>	3		13						
<b>40-5</b>					5				
<b>40-21</b>				21					
<b>Sample Part Number</b>									
<b>970-007</b>	<b>Z1</b>	<b>32-4</b>					<b>S</b>	<b>2</b>	<b>-1</b>





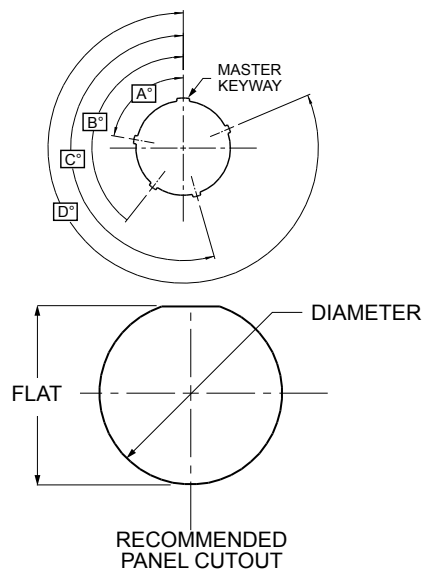
**Series 970 PowerTrip™ Connectors and Accessories**  
**Hermetic Bulkhead Feed-thru Connector**  
**970-007 Hermetic**

**970-007 FEED-THRU RECEPTACLE**



DIMENSIONS										
Shell Size	A Mating Thd.	B Jam Nut Thd.	ø C		D		E		F	
			In.	mm.	In.	mm.	In.	mm.	In.	mm.
18	1.125-.1P-.3L-TS-2A	1.250-18 UNEF-2A	1.733	44.02	1.639	41.63	1.438	36.53	1.212	30.78
20	1.250-.1P-.3L-TS-2A	1.4375-18 UNEF-2A	1.921	48.79	1.827	46.41	1.625	41.28	1.399	35.53
24	1.500-.1P-.3L-TS-2A	1.625-18 UNEF-2A	2.108	53.54	2.014	51.16	1.822	46.42	1.587	40.31
28	1.750-.1P-.3L-TS-2A	1.9375-16 UN-2A	2.425	61.60	2.327	59.11	2.188	55.58	1.899	48.23
32	2.000-.1P-.3L-TS-2A	2.125-16 UN-2A	2.607	66.24	2.513	63.86	2.375	60.33	2.087	53.01
36	2.250-.1P-.3L-TS-2A	2.375-16 UN-2A	2.857	72.57	2.763	70.18	2.625	66.68	2.323	59.00
40	2.500-.1P-.3L-TS-2A	2.625-16 UN-2A	3.107	78.92	3.013	76.53	2.875	73.03	2.548	64.72

KEY POSITIONS				
Position	A°	B°	C°	D°
1	80	142	196	293
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272



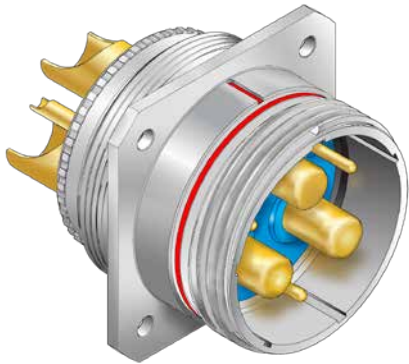
Shell Size	Diameter		Flat	
	In.	mm.	In.	mm.
	-000 +010	-00 +0.25	-000 +010	-00 +0.25
18	1.265	32.13	1.217	30.91
20	1.452	36.88	1.409	35.79
24	1.640	41.66	1.596	40.54
28	1.952	49.58	1.910	48.51
32	2.140	54.36	2.092	53.14
36	2.390	60.71	2.342	59.49
40	2.640	67.06	2.557	64.95

Series 970 PowerTrip™ Connectors and Accessories  
 Filter Receptacles  
 240-970W Square Flange Receptacle



**240-970W FILTER RECEPTACLE, SQUARE FLANGE**

Series 970 PowerTrip™ filter receptacles feature planar array ceramic capacitors. Solder cup contacts are factory-installed, epoxy sealed and are non-removable. Socket contacts have copper alloy louverband spring for multiple points of electrical contact. Coupling threads are triple-start ACME type. Contacts are gold plated. Fluorosilicone rubber face seal on pin connector. Aluminum or stainless steel shell.



- Planar Array C Filter
- -55° C to +125° C
- 1,250 VDC DWV Rating
- Solder Cup Contacts

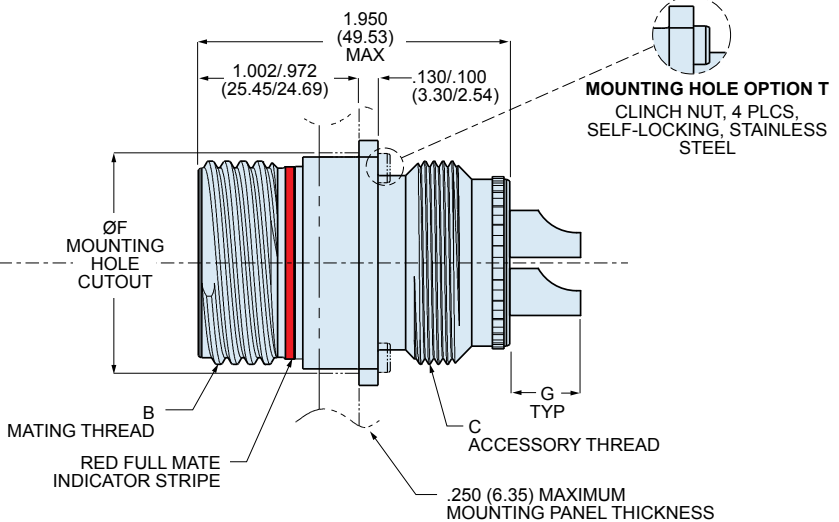
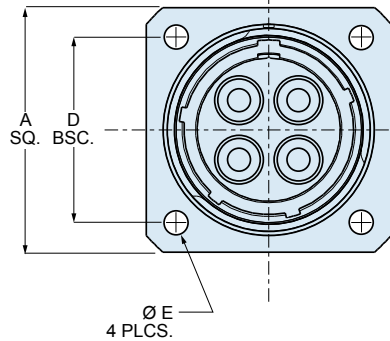
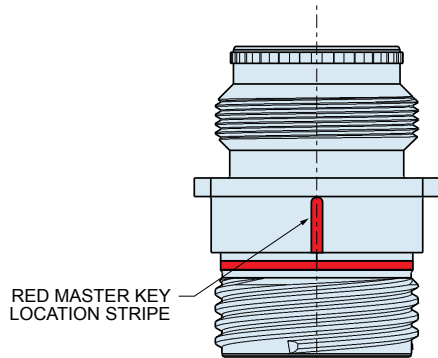
INSERTION LOSS			
Insertion Loss, dB minimum, 25°C			
Frequency	CX	CY	CZ
	80K-120K pF	40K-60K pF	30K-45K pF
1 MHz	22	16	13
10 MHz	41	36	33
100 MHz	56	53	52
500 -1000 MHz	60	57	57

**HOW TO ORDER**

SERIES	SHELL MATL AND FINISH	SHELL SIZE - INSERT ARRANGEMENT					CONTACT TYPE	FILTER TYPE & CAPACITANCE	MOUNTING HOLE	KEY POS.													
		Contact Arr.	Contact Size and Qty																				
240-970W Filter Receptacle, Square Flange	<b>ME</b> Aluminum, Electroless Nickel Finish	18-2	#16	#12	#8	#4	#1/0	<b>PS</b> Pin Contact, Solder Cup	<b>CX</b> C Filter 80,000-120,000 pF	<b>N</b> Thru-Hole	<b>1</b> Pos. 1												
											18-4	2	2				<b>2</b> Pos. 2						
	20-3			3			<b>SS</b> Socket Contact, Solder Cup				<b>CY</b> C Filter 40,000-60,000 pF	<b>T</b> Cinch Nuts Installed in Mounting Holes for Back Panel Mounting.	<b>3</b> Pos. 3										
	20-4			4									<b>4</b> Pos. 4										
	20-5	4		3									<b>5</b> Pos. 5										
	20-7			3									<b>6</b> Pos. 6										
	<b>NF</b> Aluminum, Olive Drab Cadmium	24-2	#16	#12	#8	#4	#1/0	<b>SS</b> Socket Contact, Solder Cup	<b>CZ</b> C Filter 30,000-45,500 pF	<b>T</b> Cinch Nuts Installed in Mounting Holes for Back Panel Mounting.	<b>1</b> Pos. 1												
											24-3			3			<b>2</b> Pos. 2						
											24-5			5			<b>3</b> Pos. 3						
											24-6	4		2			<b>4</b> Pos. 4						
	<b>ZR</b> Aluminum, Black Zinc-Nickel Finish	24-A6	#16	#12	#8	#4	#1/0				<b>SS</b> Socket Contact, Solder Cup	<b>CZ</b> C Filter 30,000-45,500 pF	<b>T</b> Cinch Nuts Installed in Mounting Holes for Back Panel Mounting.	<b>5</b> Pos. 5									
														28-4			4			<b>6</b> Pos. 6			
	<b>ZR</b> Aluminum, Black Zinc-Nickel Finish	28-9	#16	#12	#8	#4	#1/0							<b>SS</b> Socket Contact, Solder Cup	<b>CZ</b> C Filter 30,000-45,500 pF	<b>T</b> Cinch Nuts Installed in Mounting Holes for Back Panel Mounting.	<b>1</b> Pos. 1						
																	32-2						<b>2</b> Pos. 2
																	32-3						<b>3</b> Pos. 3
	<b>ZMT</b> Stainless Steel, Nickel-PTFE Finish	32-4	#16	#12	#8	#4	#1/0										<b>SS</b> Socket Contact, Solder Cup	<b>CZ</b> C Filter 30,000-45,500 pF	<b>T</b> Cinch Nuts Installed in Mounting Holes for Back Panel Mounting.	<b>4</b> Pos. 4			
								32-5												5			<b>5</b> Pos. 5
								32-6	3													3	<b>6</b> Pos. 6
	<b>Z1</b> Stainless Steel, Passivated	36-4	#16	#12	#8	#4	#1/0	<b>SS</b> Socket Contact, Solder Cup	<b>CZ</b> C Filter 30,000-45,500 pF	<b>T</b> Cinch Nuts Installed in Mounting Holes for Back Panel Mounting.										<b>1</b> Pos. 1			
																				40-5			
																						<b>3</b> Pos. 3	
<b>Sample Part Number</b>																							
<b>240-970W</b>	<b>ME</b>			<b>40-5</b>			<b>PS</b>				<b>CY</b>	<b>N</b>	<b>1</b>										



### 240-970W FILTER RECEPTACLE, SQUARE FLANGE



### SOLDER CUP DIMENSIONS

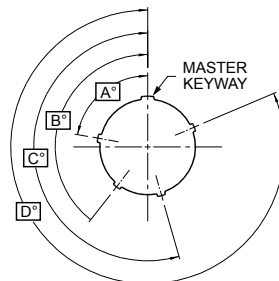
Contact Size	G Typ	
	In. ±.025	mm. ±0.64
16	.500	12.70
12	.500	12.70
8	.600	15.24
4	.800	20.32
1/0	.800	20.32

### DIMENSIONS

Shell Size	A Sq.		B Mating Thread	C Accessory Thd	D Bsc		Ø E		E Clinch Nut Thd	Ø F	
	In.	mm.			In.	mm.	In.	mm.		In.	mm.
18	1.383	35.13	1.125-.1P-.3L-TS-2A	1.125-18 UNEF-2A	1.015	25.78	.146	3.71	6-32 UNC-2B	1.187	30.15
20	1.508	38.30	1.250-.1P-.3L-TS-2A	1.250-18 UNEF-2A	1.140	28.96	.146	3.71	6-32 UNC-2B	1.374	34.90
24	1.718	43.64	1.500-.1P-.3L-TS-2A	1.4375-18 UNEF-2A	1.281	32.54	.146	3.71	6-32 UNC-2B	1.562	39.67
28	2.138	54.31	1.750-.1P-.3L-TS-2A	1.8125-16 UN-2A	1.568	39.83	.170	4.32	8-32 UNC-2B	1.874	47.60
32	2.328	59.13	2.000-.1P-.3L-TS-2A	2.0625-16 UNS-2A	1.734	44.04	.170	4.32	8-32 UNC-2B	2.062	52.37
36	2.578	65.48	2.250-.1P-.3L-TS-2A	2.250-16 UN-2A	1.984	50.39	.170	4.32	8-32 UNC-2B	2.302	58.47
40	2.828	71.83	2.500-.1P-.3L-TS-2A	2.500-16 UN-2A	2.234	56.74	.170	4.32	8-32 UNC-2B	2.562	65.07

### MATERIALS AND FINISHES

Shells, Jam Nuts	Aluminum alloy or stainless steel
Contacts	High conductivity copper alloy, gold over nickel plating
Insulators	Thermoset epoxy
Interfacial Seal	Fluorosilicone
Clinch Nut	Stainless steel



### KEY POSITIONS

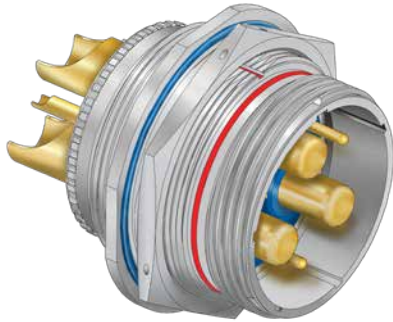
Position	A°	B°	C°	D°
1	80	142	196	293
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272

Series 970 PowerTrip™ Connectors and Accessories  
Filter Receptacles  
240-970J Jam Nut Receptacle



**240-970J FILTER RECEPTACLE, JAM NUT**

Series 970 PowerTrip™ filter receptacles feature planar array ceramic capacitors. Solder cup contacts are factory-installed, epoxy sealed and are non-removable. Socket contacts have copper alloy louverband spring for multiple points of electrical contact. Coupling threads are triple-start ACME type. Contacts are gold plated. Fluorosilicone rubber face seal on pin connector. Aluminum or stainless steel shell.



- Planar Array C Filter
- -55° C to +125° C
- 1,250 VDC DWV Rating
- Solder Cup Contacts

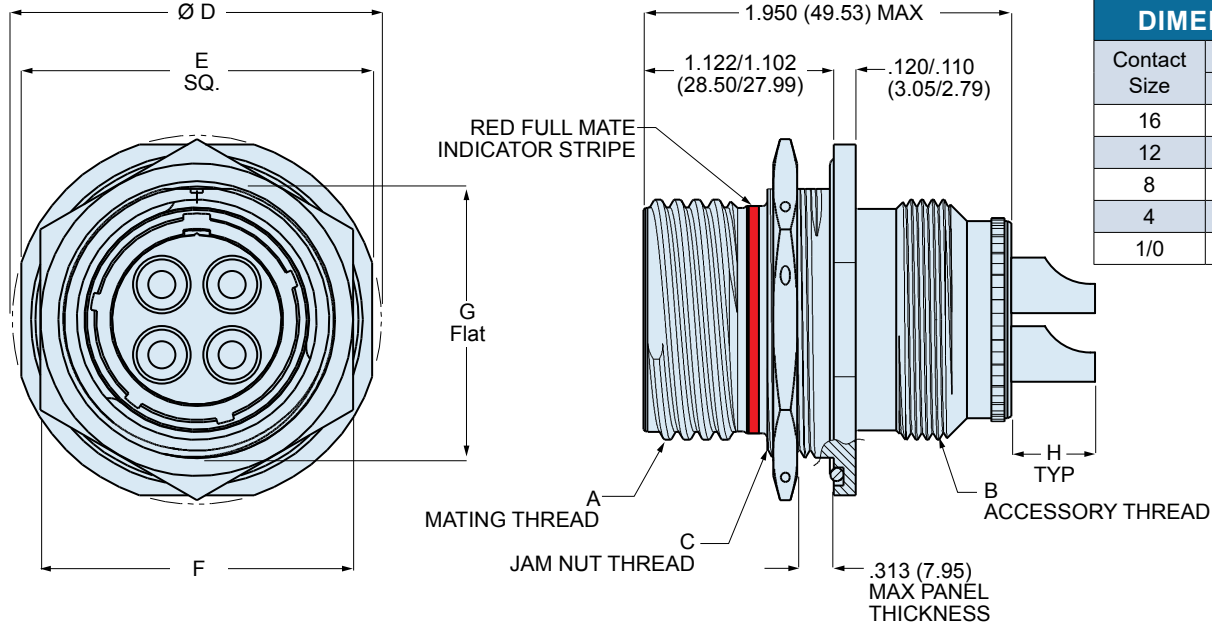
INSERTION LOSS			
Insertion Loss, dB minimum, 25°C			
Frequency	CX	CY	CZ
	80K-120K pF	40K-60K pF	30K-45K pF
1 MHz	22	16	13
10 MHz	41	36	33
100 MHz	56	53	52
500 -1000 MHz	60	57	57

**HOW TO ORDER**

SERIES	SHELL MATL AND FINISH	SHELL SIZE - INSERT ARRANGEMENT					CONTACT TYPE	FILTER TYPE & CAPACITANCE	MOUNTING STYLE	KEY POS.						
		Contact Arr.	Contact Size and Qty													
240-970J Filter Receptacle, Jam Nut	<b>ME</b> Aluminum, Electroless Nickel Finish	18-2	#16	#12	#8	#4	#1/0	<b>PS</b> Pin Contact, Solder Cup	<b>CX</b> C Filter 80,000-120,000 pF	<b>N</b> Standard Mounting	<b>1</b> Pos. 1					
			18-4		2	2										
		20-3			3							<b>SS</b> Socket Contact, Solder Cup	<b>CY</b> C Filter 40,000-60,000 pF	<b>2</b> Pos. 2		
			20-4			4										
		20-5		2	3										<b>CZ</b> C Filter 30,000-45,500 pF	<b>3</b> Pos. 3
			20-7	4		3										
	24-2	Aluminum, Olive Drab Cadmium				2		<b>4</b> Pos. 4								
			24-3			3										
			24-5			5										
	24-6	Aluminum, Black Zinc-Nickel Finish		4		2			<b>5</b> Pos. 5							
			24-A6		3	3										
	28-4	Aluminum, Black Zinc-Nickel Finish				4				<b>6</b> Pos. 6						
			28-9	5		4										
	32-2	Stainless Steel, Nickel-PTFE Finish					2									
			32-3				3									
			32-4			2	2									
	32-5	Stainless Steel, Passivated				5										
			32-6		3		3									
	36-4					4										
	40-5					5										
<b>Sample Part Number</b>																
240-970J	ME	40-5					PS	CY	N	1						



### 240-970J DIMENSIONS



### SOLDER CUP DIMENSIONS

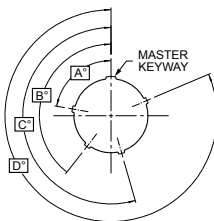
Contact Size	H Typ	
	In.	mm.
16	.500	12.70
12	.500	12.70
8	.600	15.24
4	.800	20.32
1/0	.800	20.32

### DIMENSIONS

Shell Size	A Mating Thd.	B Accessory Thd.	C Jam Nut Thd.	$\varnothing D$		E Sq.		F		G Flat	
				In.	mm.	In.	mm.	In.	mm.	In.	mm.
18	1.125-.1P-.3L-TS-2A	1.125-18 UNEF-2A	1.250-18 UNEF-2A	1.733	44.02	1.639	41.63	1.438	36.53	1.212	31.06
20	1.250-.1P-.3L-TS-2A	1.250-18 UNEF-2A	1.4375-18 UNEF-2A	1.921	48.79	1.827	46.41	1.625	41.28	1.399	35.81
24	1.500-.1P-.3L-TS-2A	1.4375-18 UNEF-2A	1.625-18 UNEF-2A	2.108	53.54	2.014	51.16	2.000	50.80	1.587	40.36
28	1.750-.1P-.3L-TS-2A	1.8125-16 UN-2A	1.9375-16 UN-2A	2.425	61.60	2.327	59.11	2.188	55.58	1.899	48.51
32	2.000-.1P-.3L-TS-2A	2.0625-16 UNS-2A	2.125-16 UN-2A	2.607	66.24	2.514	63.86	2.375	60.33	2.084	52.93
36	2.250-.1P-.3L-TS-2A	2.250-16 UN-2A	2.375-16 UN-2A	2.857	72.57	2.763	70.18	2.625	66.68	2.323	59.00
40	2.500-.1P-.3L-TS-2A	2.500-16 UN-2A	2.625-16 UN-2A	3.107	78.92	3.013	76.53	2.875	73.03	2.548	64.72

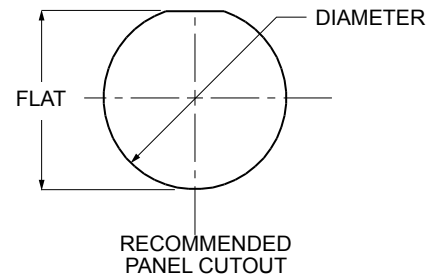
### KEY POSITIONS

Position	A°	B°	C°	D°
1	80	142	196	293
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272



### PANEL CUTOUT

Shell Size	Diameter		Flat	
	In.	mm.	In.	mm.
	-.000 +.010	-.00 +0.25	-.000 +.010	-.00 +0.25
18	1.254	31.85	1.217	30.91
20	1.441	36.60	1.404	35.66
24	1.629	41.38	1.592	40.64
28	1.941	49.30	1.904	48.36
32	2.129	54.08	2.092	53.14
36	2.379	60.43	2.328	59.13
40	2.629	66.78	2.553	64.85





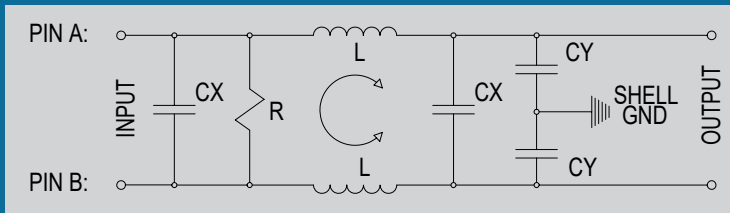
POWERTRIP™  
POWERLINE  
FILTERS

# POWERLINE FILTERS WITH COMMON MODE CHOKES AND LINE-TO-LINE FILTERING

*Contact factory for high-performance, low heat  
dissipation powerline filtering*



Powerline filters suited for filtering DC and AC mains services are typically designed to incorporate both common-mode and differential-mode filters (line-to-line). Common mode chokes capable of screening both incoming and outgoing noise and transients (see example schematic) are ideally suited for incorporation in Series 970 PowerTrip™ filter connectors. All multiple-line filters employ modern filter elements incorporating compensating inductors or coupled chokes. PowerTrip powerline filters are typically supplied as made-to-order (bespoke) solutions. Please contact the factory for application engineering assistance.



**G**lenair®

Glenair, Inc.  
1211 Air Way  
Glendale, CA  
91201-2497  
818-247-6000  
sales@glenair.com  
www.glenair.com



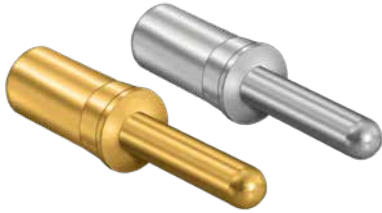
# Series 970 PowerTrip™ Connectors and Accessories

## Contacts and Tools

### Crimp Contacts

#### CRIMP CONTACTS

Series 970 PowerTrip™ contacts for size #16 through Size #1/0 wire. Size #8, #4 and #1/0 contacts are high conductivity copper alloy (IACS >90%) with silver or gold plating. Size #12 and #16 contacts are copper alloy with gold over palladium finish. Size #1/0, 4 and 8 socket contacts feature low resistance, high durability louverband springs. Terminate to wire with standard crimp tools. Contacts are snap-in, rear-release and meet the performance requirements of SAE AS39029.



Pin Contact

- LouverBand Springs
- High Conductivity Alloy
- Crimp Termination
- Gold or Silver Plating



Socket Contact

#### Crimp Contacts

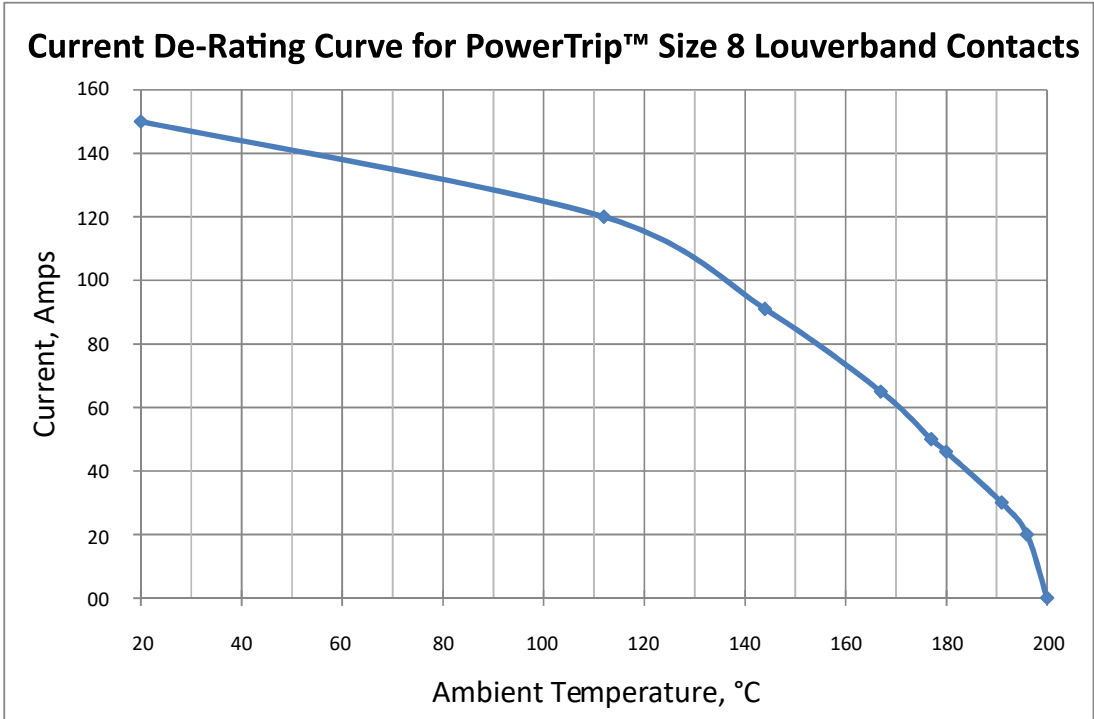
Size	Wire Size	Finish	Pin Contact Part Number	Socket Contact Part Number	Socket Contact Type
16	#16-#20	Gold/Palladium	<a href="#">850-037-16</a>	<a href="#">850-038-16</a>	Split-Tine
12	#12-#14	Gold/Palladium	<a href="#">850-037-12</a>	<a href="#">850-038-12</a>	Split-Tine
8	#8	Silver	<a href="#">850-026-8-8-1</a>	<a href="#">850-027-8-8-1</a>	LouverBand
		Gold	<a href="#">850-026-8-8-2</a>	<a href="#">850-027-8-8-2</a>	LouverBand
	#10	Silver	<a href="#">850-026-8-10-1</a>	<a href="#">850-027-8-10-1</a>	LouverBand
		Gold	<a href="#">850-026-8-10-2</a>	<a href="#">850-027-8-10-2</a>	LouverBand
4	#4	Silver	<a href="#">850-026-4-4-1</a>	<a href="#">850-027-4-4-1</a>	LouverBand
		Gold	<a href="#">850-026-4-4-2</a>	<a href="#">850-027-4-4-2</a>	LouverBand
	#6	Silver	<a href="#">850-026-4-6-1</a>	<a href="#">850-027-4-6-1</a>	LouverBand
		Gold	<a href="#">850-026-4-6-2</a>	<a href="#">850-027-4-6-2</a>	LouverBand
1/0	#1/0	Silver	<a href="#">850-026-0-0-1</a>	<a href="#">850-027-0-0-1</a>	LouverBand
		Gold	<a href="#">850-026-0-0-2</a>	<a href="#">850-027-0-0-2</a>	LouverBand
	#2	Silver	<a href="#">850-026-0-2-1</a>	<a href="#">850-027-0-2-1</a>	LouverBand
		Gold	<a href="#">850-026-0-2-2</a>	<a href="#">850-027-0-2-2</a>	LouverBand

#### Material and Finish Specifications

Pin, Size #16 and #12	Copper alloy, gold flash over palladium finish
Pin, Size #8, #4 and #1/0	High conductivity copper alloy, gold or silver finish over nickel
Socket, Size #16 and #12	Copper alloy, stainless steel hood, gold flash over palladium finish
Socket, Size #8, #4 and #1/0	High conductivity copper alloy, beryllium copper louverband spring, gold or silver finish over nickel

#### Tools for Contact Crimping and Installation

Contact Size	Wire Size	Insertion/Extraction Tool	Extraction Tool	Crimp Tool	Positioner	Die Set	Locator
#16	#16 - #20	<a href="#">809-131</a>	—	<a href="#">809-136</a>	<a href="#">859-032</a>	—	—
#12	#12 - #14	<a href="#">809-132</a>	—	<a href="#">809-136</a>	<a href="#">859-032</a>	—	—
#8	#8	—	<a href="#">859-022</a>	<a href="#">859-025</a>	—	<a href="#">859-026</a>	<a href="#">859-029</a>
#8	#10	—	<a href="#">859-022</a>	<a href="#">859-025</a>	—	<a href="#">859-026</a>	<a href="#">859-173</a>
#4	#4 - #6	—	<a href="#">859-023</a>	<a href="#">859-025</a>	—	<a href="#">859-027</a>	<a href="#">859-030</a>
#1/0	#1/0 - #2	—	<a href="#">859-024</a>	<a href="#">859-025</a>	—	<a href="#">859-028</a>	<a href="#">859-031</a>



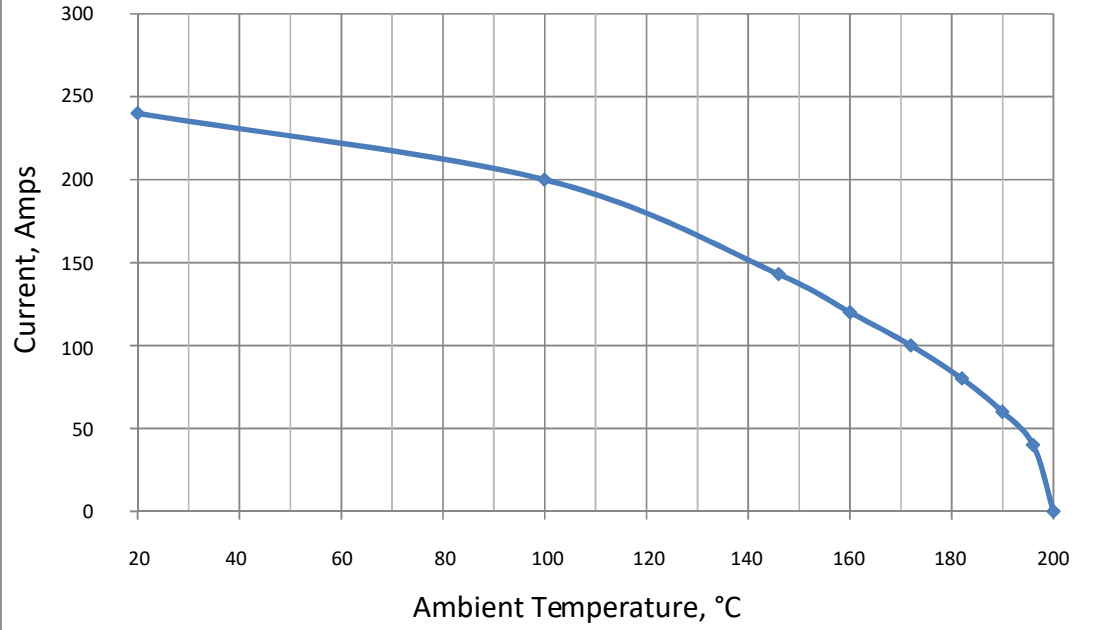
SIZE 8 CONTACTS	
Current, A	Temperature Rise, °C
0	0
20	4
30	9
46	20
50	23
60	33
80	56
120	88
150	179



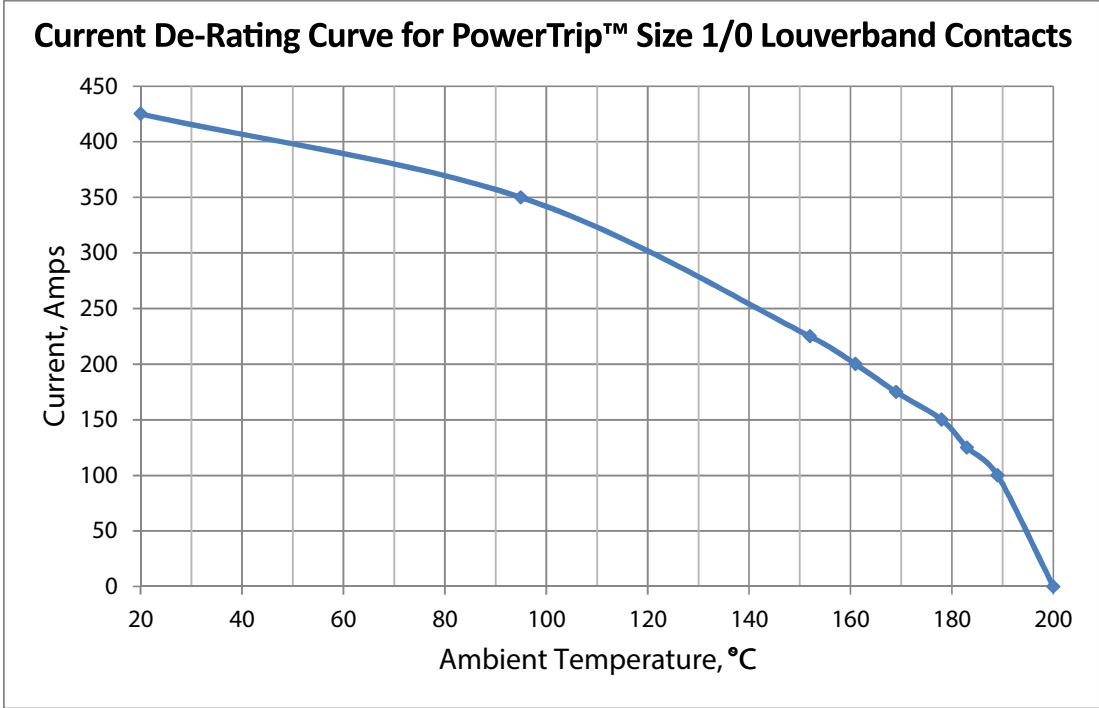


**Series 970 PowerTrip™ Connectors and Accessories**  
**Size 4 Contact Current Performance**

**Current De-Rating Curve for PowerTrip™ Size 4 Louverband Contacts**



SIZE 4 CONTACTS	
Current, A	Temperature Rise, °C
0	0
40	4
60	10
80	18
100	28
120	40
140	54
200	100
240	176



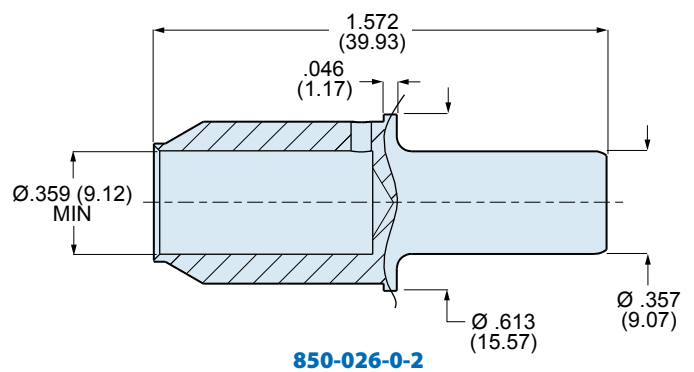
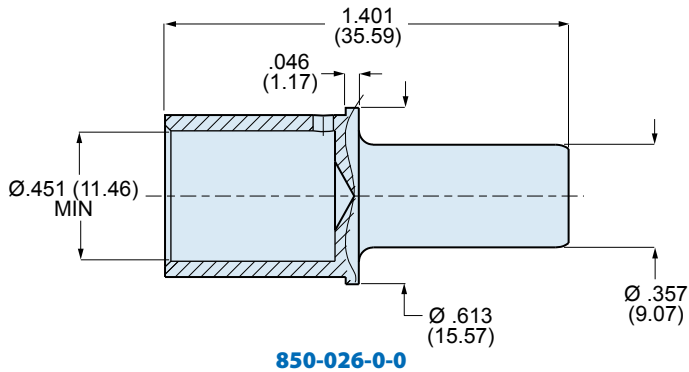
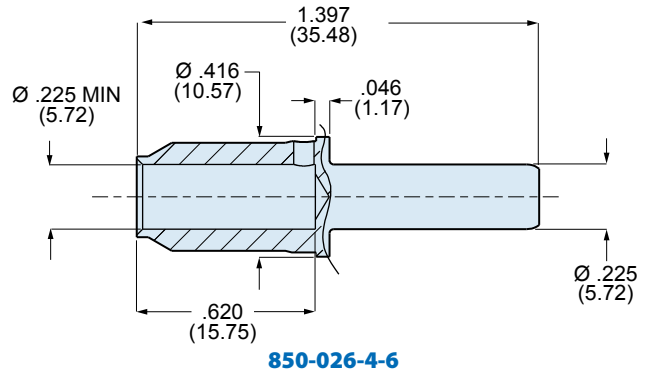
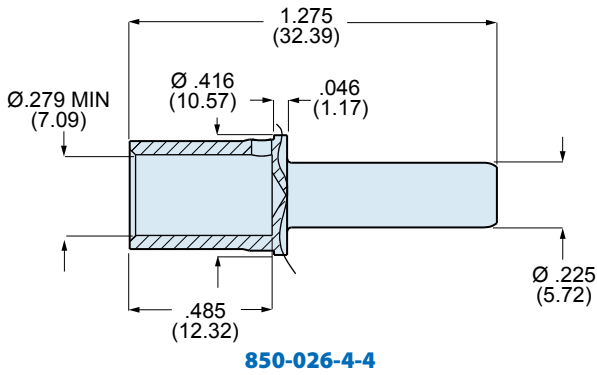
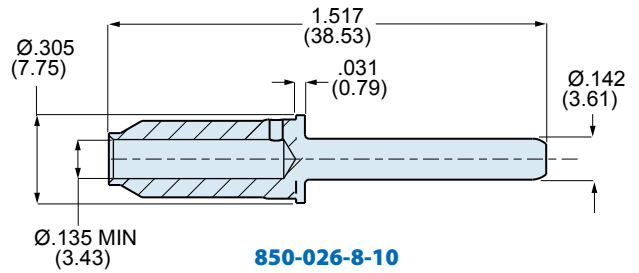
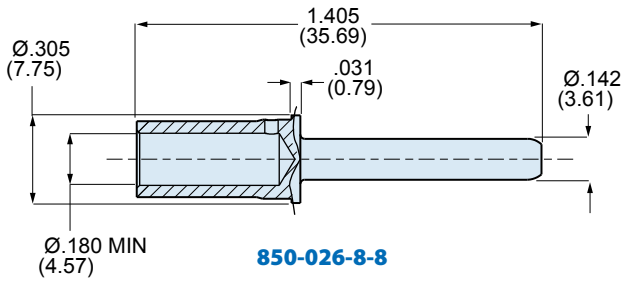
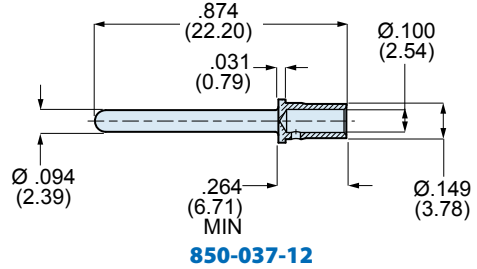
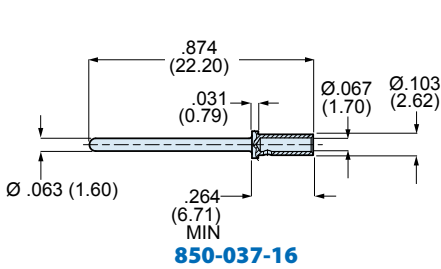
SIZE 1/0 CONTACTS	
Current A	Temperature Rise, °C
0	0
100	11
125	17
150	22
175	31
200	39
225	48
350	104
425	177





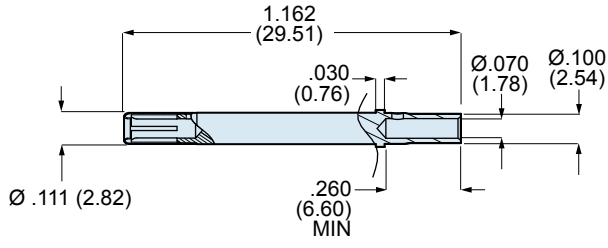
Series 970 PowerTrip™ Connectors and Accessories  
 Contacts and Tools  
 Crimp Contacts

**PIN CONTACTS**

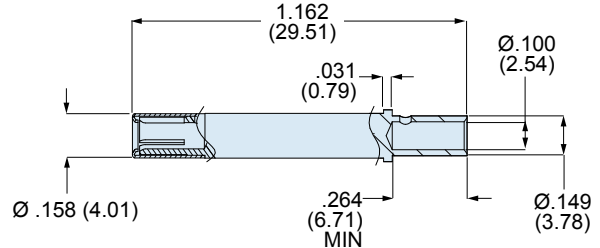


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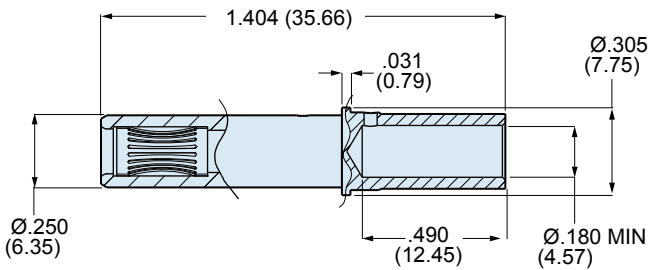
**SOCKET CONTACTS**



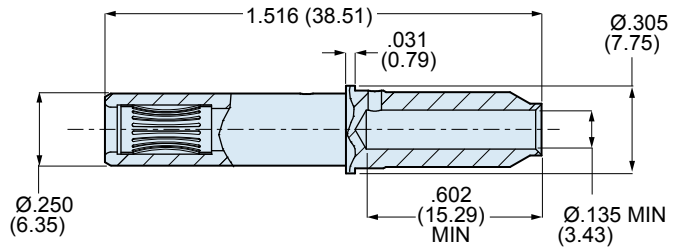
**850-038-16**



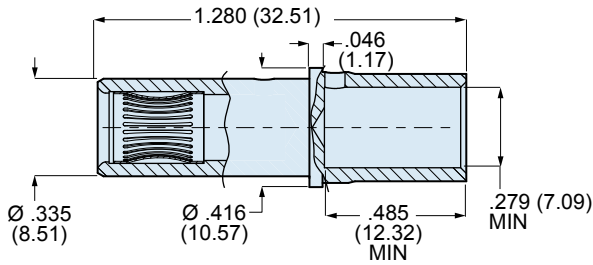
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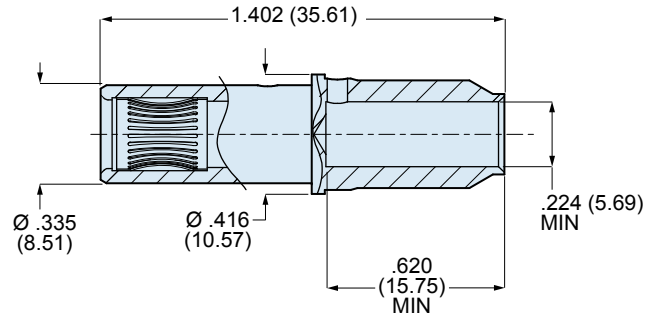
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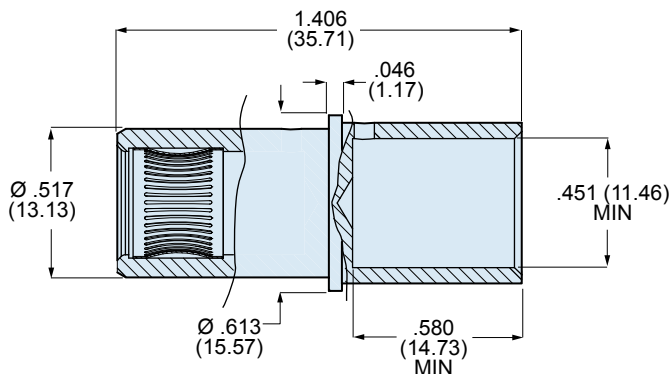
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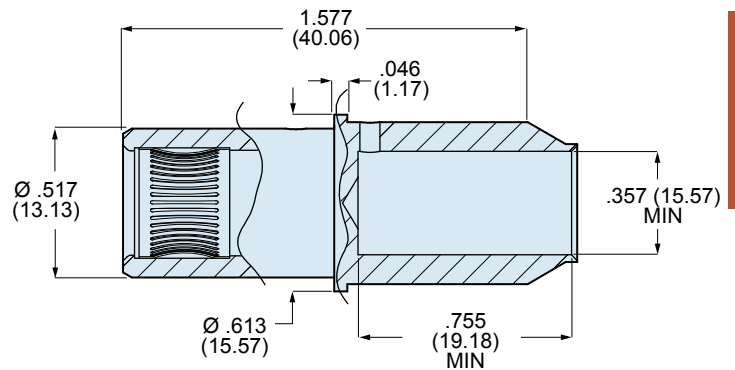
**850-027-4-4**



**850-027-4-6**



**850-027-0-0**



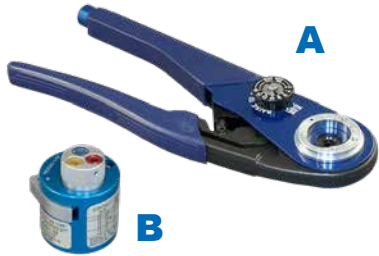
**850-027-0-2**





**Series 970 PowerTrip™ Connectors and Accessories**  
**Contacts and Tools**  
**Crimp Tools**

**HAND CRIMP TOOL AND POSITIONER FOR #12 AND #16 CONTACTS**



**A** Crimp tool for use with size #16 and #12 Series 970 pin and socket contacts. Use with turret-type positioner 859-032. 9.75 inches OAL, 1.25 pounds.

**B** Positioner for use with size #12 and #16 contacts. Rotate turret head to blue position for #16 contact termination, yellow position for #12 contacts.

Figure	Wire Size	Part Number	Military Part Number
A	N/A	<b>809-136</b>	M22520/1-01
B	#16 - #20	<b>859-032</b>	M22520/1-02
B	#12 - #14	<b>859-032</b>	M22520/1-02

**PNEUMATIC CRIMP TOOL FOR #8, #4 AND #1/0 CONTACTS**



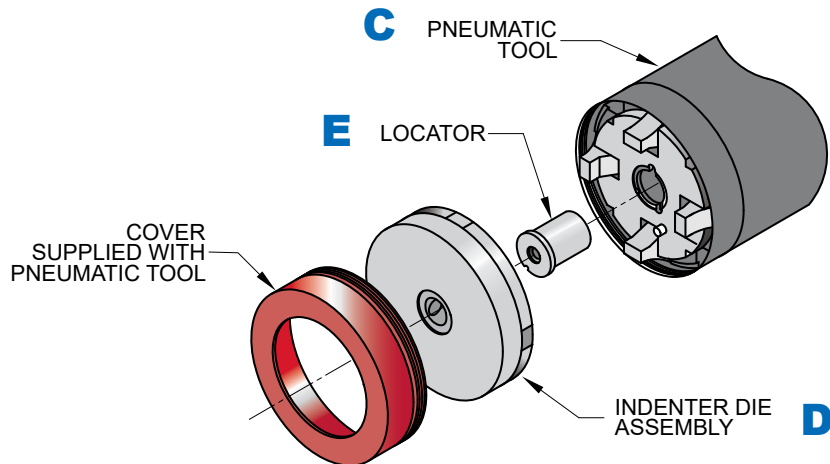
**C** Bench mount pneumatic crimp tool. Heavy duty, four-indent crimp termination. Attach to air supply with quick-disconnect fitting or install 1/4 NPT fitting into tapped port. 90-120 psi air supply. Requires die assemblies and locators, sold separately. Hand actuate with push-button valve trigger on handle. Steel with black wrinkle enamel coating. 13 inches overall length, 9.2 inches tall, 17 pounds (7.7 Kg).

**D** Indenter Die Assembly. Precision four-indent die with hardened tool steel indenters, stainless steel housing. Separate die assembly required for each contact size.

**E** Locator. Aluminum locator positions contact at correct depth for crimping. Separate locator required for each contact size.



Contact Size	Wire Size	Crimper (Fig. C)	Die Assembly (Fig. D)	Locator (Fig. E)
8	#10	<b>859-025</b> M22520/23-01	<b>859-026</b> M22520/23-02	<b>859-173</b> N/A
8	#8		<b>859-026</b> M22520/23-02	<b>859-029</b> M22520/23-09
4	#4 - #6		<b>859-027</b> M22520/23-04	<b>859-030</b> M22520/23-11
1/0	#1/0 - #2		<b>859-028</b> M22520/23-05	<b>859-031</b> M22520/23-13





# Series 970 PowerTrip™ Connectors and Accessories

## Contacts and Tools

Insertion/Removal Tools, Band Tools and Sealing Plugs



### CONTACT INSERTION AND REMOVAL TOOLS



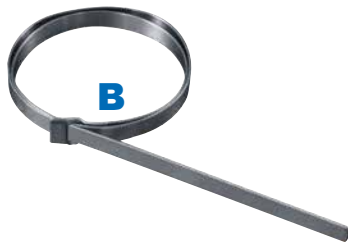
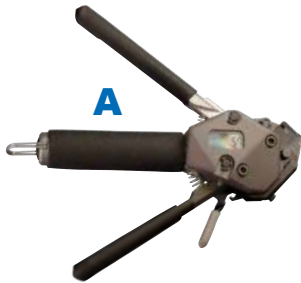
Install and remove PowerTrip™ contacts with plastic or Mil-spec metal tools.

Plastic Contact Removal Tools		
Size	Part Number	Color
#1/0	N/A	-
#4	<b>859-136-04</b>	Blue
#8	<b>859-136-08</b>	Red
#12	<b>859-136-12</b>	Yellow
#16	<b>859-136-16</b>	Blue

Metal Contact Removal Tools		
Size	Military Part Number	Part Number
#1/0	M81969/15-03	<b>859-137</b>
#4	M81969/15-02	<b>859-138</b>
#8	M81969/15-01	<b>859-139</b>
#12	M81969/8-210	<b>859-140</b>
#16	M81969/8-208	<b>859-141</b>

Metal Contact Removal Tools		
Size	Military Part Number	Part Number
#1/0		
#4	N/A	N/A
#8		
#12	M81969/8-209	<b>859-142</b>
#16	M81969/8-207	<b>859-143</b>

### BAND-MASTER™ ATS SHIELD TERMINATION TOOL AND BANDS



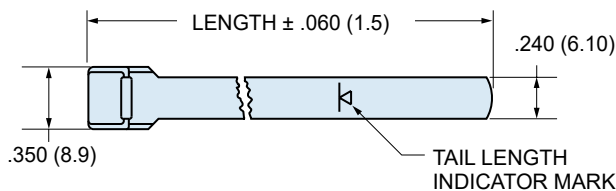
Fast, cost-effective shield termination. Attach cable shield to 440-069 EMI/RFI backshells with stainless steel bands. The **Band-Master™** system offers fast termination and the flexibility to handle a wide range of parts with just one band size. Contact factory about QPL approved bands for aerospace and defense applications.

**A** Banding tool for use with .250" (6.4mm) width bands. Digital counter improves calibration interval accuracy. Supplied with hardshell case and instruction booklet. 1.18 lbs., 5.75" length.

**B** .250" (6.4mm) width band. Supplied flat or pre-coiled in two lengths. Stainless steel.

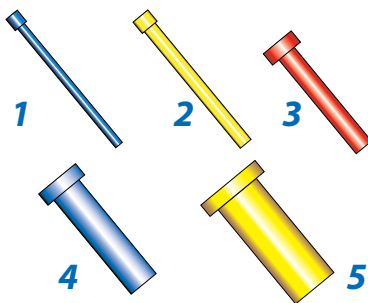
Figure	Description	Part Number
A	Standard Band Installation Tool	<b>601-100</b>

Figure	Length		Part Number		Accommodates Diameter	
	in.	mm.	Flat	Pre-Coiled	in.	mm.
B	14.0	355.6	<b>601-040</b>	<b>601-041</b>	1.88	47.8
B	18.0	457.2	<b>601-049</b>	<b>601-050</b>	2.5	63.5



Contact Glenair or visit our website ([www.glenair.com](http://www.glenair.com)) to view our complete line of **Band-Master™** products, including pneumatic tools for high volume production and calibration kits.

### GROMMET SEALING PLUGS



Grommet sealing plugs prevent moisture and contamination from entering unwired connector positions. Molded thermoplastic. Size 12 and size 16 plugs can be inserted with contact insertion tools. Size 8 and larger can be inserted by hand with no tool. Bulk packaged.

Figure	Size	Color	Part Number	Military Part Number
1	#16	Blue	<b>859-036</b>	MS27488-16-3
2	#12	Yellow	<b>859-037</b>	MS27488-12-3
3	#8	Red	<b>859-038</b>	MS27488-8-3
4	#4	Blue	<b>859-039</b>	MS27488-4-3
5	#1/0	Yellow	<b>859-040</b>	MS27488-0-3



**Series 970 PowerTrip™ Connectors and Accessories**  
**Contacts and Tools**  
**Connector Holding Tools, Backshell Assembly Tools**

**CONNECTOR HOLDING TOOL**

Simplify backshell installation with connector holding tools. Tool prevents connector damage by securely holding the connector mating face in position while tightening a backshell onto connector. Install holding tool onto torque wrench. 3/8" square drive. Heat-treated steel with nickel plating.



**A** Plug tool for use with 970-001 plug connectors.



**B** Receptacle tool for use with 970 Series receptacle connectors.

**HOW TO ORDER**

Shell Size	Fig.	Type	Shell Polarizing Position					
			1	2	3	4	5	6
18	A	Plug	600P005-18P1	600P005-18P2	600P005-18P3	600P005-18P4	600P005-18P5	600P005-18P6
	B	Recep	600P005-18R1	600P005-18R2	600P005-18R3	600P005-18R4	600P005-18R5	600P005-18R6
20	A	Plug	600P005-20P1	600P005-20P2	600P005-20P3	600P005-20P4	600P005-20P5	600P005-20P6
	B	Recep	600P005-20R1	600P005-20R2	600P005-20R3	600P005-20R4	600P005-20R5	600P005-20R6
24	A	Plug	600P005-24P1	600P005-24P2	600P005-24P3	600P005-24P4	600P005-24P5	600P005-24P6
	B	Recep	600P005-24R1	600P005-24R2	600P005-24R3	600P005-24R4	600P005-24R5	600P005-24R6
28	A	Plug	600P005-28P1	600P005-28P2	600P005-28P3	600P005-28P4	600P005-28P5	600P005-28P6
	B	Recep	600P005-28R1	600P005-28R2	600P005-28R3	600P005-28R4	600P005-28R5	600P005-28R6
32	A	Plug	600P005-32P1	600P005-32P2	600P005-32P3	600P005-32P4	600P005-32P5	600P005-32P6
	B	Recep	600P005-32R1	600P005-32R2	600P005-32R3	600P005-32R4	600P005-32R5	600P005-32R6
36	A	Plug	600P005-36P1	600P005-36P2	600P005-36P3	600P005-36P4	600P005-36P5	600P005-36P6
	B	Recep	600P005-36R1	600P005-36R2	600P005-36R3	600P005-36R4	600P005-36R5	600P005-36R6
40	A	Plug	600P005-40P1	600P005-40P2	600P005-40P3	600P005-40P4	600P005-40P5	600P005-40P6
	B	Recep	600P005-40R1	600P005-40R2	600P005-40R3	600P005-40R4	600P005-40R5	600P005-40R6

**BACKSHELL ASSEMBLY TOOLS**

Glenair assembly tools accomplish proper tightening of adapters and backshells. Torque wrenches, soft jaw pliers, strap wrenches, and circular wrenches speed up assembly and prevent damage to connectors and backshells.



Interconnect Cable Assembly Tools Catalog has assembly tools, shield termination tools, fiber optic termination tools. Contact Glenair or go to [www.glenair.com](http://www.glenair.com).



**BACKSHELLS AND ACCESSORIES FOR SERIES 970 CONNECTORS**



**Shrink Boot Adapters**

These spin-coupling adapters are available in straight, 45° and 90° versions. Use with unshielded cable.

**310-001** Page 52



**EMI Band-Master™ Adapters**

These spin-coupling banding adapters have a knurled platform for EMI shield attachment and boot groove.

**440-069** Page 58



**Heatshrink Boots**

Rugged boots provide strain relief and environmental protection. Available in low-toxicity material.

**770-003** Page 54



**Strain Relief Clamp**

Open frame cable clamp is designed for use with large, heavy power cable. Optional wire support bushing.

**620PS076** Page 56



**Submersible Backshell**

Heavy duty environmental backshell features saddle clamp or wire mesh cordgrip for strain relief.

**370-024** Page 60



**EMI/RFI Backshell**

Non-environmental backshell with ground rings for cable shield termination, heavy duty saddle bar clamp.

**380-105** Page 64



**Submersible EMI Backshell**

Heavy duty environmental backshell features ground rings, silicone O-rings and cable gland.

**390-055** Page 67



**Submersible EMI Backshell**

MIL-DTL-28840 type heavy duty backshell, straight exit, with saddle bar strain relief.

**390PS036** Page 72



**Submersible EMI Backshell**

MIL-DTL-28840 type heavy duty backshell, straight exit, with wire mesh cord grip.

**390PS086** Page 70



**Protective Covers**

Thread-on metal covers with a variety of attachments.

**660PS097/098**

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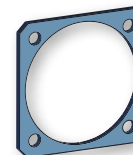


**Bean Rubber Covers**

Black rubber covers with multiple attachment styles.

**780-001/002**

Page 79



**Mounting Gaskets**

Elastomeric gaskets for square flange receptacles.

**930-014**

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# Series 970 PowerTrip™ Connectors and Accessories

## 310-001 Heatshrink Boot Adapters

### 310-001 BOOT ADAPTERS

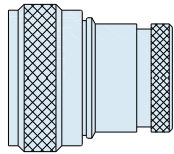


Attach Series 77 heatshrink boots to PowerTrip connectors with spin-coupling 310-001 boot adapters. These adapters feature self-locking ratchet to prevent loosening under vibration. Boot groove accepts standard lipped heatshrink boots.

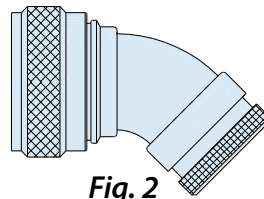
#### How To Order Adapters with Boots

Add "T" to the adapter part numbers in the table below. The adapter and boot will be supplied as a kit.

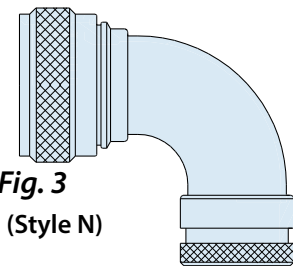
Example: [310PS001ME18T](#)



**Fig. 1**  
Straight (Style S)



**Fig. 2**  
45° (Style M)



**Fig. 3**  
90° (Style N)

### HOW TO ORDER

FIG.	TYPE	SHELL SIZE	ALUMINUM WITH NICKEL PLATING (ME)	ALUMINUM WITH NICKEL-PTFE PLATING (MT)	ALUMINUM WITH OLIVE DRAB CADMIUM PLATING (NF)	ALUMINUM WITH BLACK ZINC-NICKEL PLATING (ZR)	PASSIVATED STAINLESS STEEL (Z1)
Fig. 1	Straight	18	<a href="#">310PS001ME18</a>	<a href="#">310PS001MT18</a>	<a href="#">310PS001NF18</a>	<a href="#">310PS001ZR18</a>	<a href="#">310PS001Z118</a>
		20	<a href="#">310PS001ME20</a>	<a href="#">310PS001MT20</a>	<a href="#">310PS001NF20</a>	<a href="#">310PS001ZR20</a>	<a href="#">310PS001Z120</a>
		24	<a href="#">310PS001ME24</a>	<a href="#">310PS001MT24</a>	<a href="#">310PS001NF24</a>	<a href="#">310PS001ZR24</a>	<a href="#">310PS001Z124</a>
		28	<a href="#">310PS001ME28</a>	<a href="#">310PS001MT28</a>	<a href="#">310PS001NF28</a>	<a href="#">310PS001ZR28</a>	<a href="#">310PS001Z128</a>
		32	<a href="#">310PS001ME32</a>	<a href="#">310PS001MT32</a>	<a href="#">310PS001NF32</a>	<a href="#">310PS001ZR32</a>	<a href="#">310PS001Z132</a>
		36	<a href="#">310PS001ME36</a>	<a href="#">310PS001MT36</a>	<a href="#">310PS001NF36</a>	<a href="#">310PS001ZR36</a>	<a href="#">310PS001Z136</a>
		40	<a href="#">310PS001ME40</a>	<a href="#">310PS001MT40</a>	<a href="#">310PS001NF40</a>	<a href="#">310PS001ZR40</a>	<a href="#">310PS001Z140</a>
Fig. 2	45°	18	<a href="#">310PM001ME18</a>	<a href="#">310PM001MT18</a>	<a href="#">310PM001NF18</a>	<a href="#">310PM001ZR18</a>	<a href="#">310PM001Z118</a>
		20	<a href="#">310PM001ME20</a>	<a href="#">310PM001MT20</a>	<a href="#">310PM001NF20</a>	<a href="#">310PM001ZR20</a>	<a href="#">310PM001Z120</a>
		24	<a href="#">310PM001ME24</a>	<a href="#">310PM001MT24</a>	<a href="#">310PM001NF24</a>	<a href="#">310PM001ZR24</a>	<a href="#">310PM001Z124</a>
		28	<a href="#">310PM001ME28</a>	<a href="#">310PM001MT28</a>	<a href="#">310PM001NF28</a>	<a href="#">310PM001ZR28</a>	<a href="#">310PM001Z128</a>
		32	<a href="#">310PM001ME32</a>	<a href="#">310PM001MT32</a>	<a href="#">310PM001NF32</a>	<a href="#">310PM001ZR32</a>	<a href="#">310PM001Z132</a>
		36	<a href="#">310PM001ME36</a>	<a href="#">310PM001MT36</a>	<a href="#">310PM001NF36</a>	<a href="#">310PM001ZR36</a>	<a href="#">310PM001Z136</a>
		40	<a href="#">310PM001ME40</a>	<a href="#">310PM001MT40</a>	<a href="#">310PM001NF40</a>	<a href="#">310PM001ZR40</a>	<a href="#">310PM001Z140</a>
Fig. 3	90°	18	<a href="#">310PN001ME18</a>	<a href="#">310PN001MT18</a>	<a href="#">310PN001NF18</a>	<a href="#">310PN001ZR18</a>	<a href="#">310PN001Z118</a>
		20	<a href="#">310PN001ME20</a>	<a href="#">310PN001MT20</a>	<a href="#">310PN001NF20</a>	<a href="#">310PN001ZR20</a>	<a href="#">310PN001Z120</a>
		24	<a href="#">310PN001ME24</a>	<a href="#">310PN001MT24</a>	<a href="#">310PN001NF24</a>	<a href="#">310PN001ZR24</a>	<a href="#">310PN001Z124</a>
		28	<a href="#">310PN001ME28</a>	<a href="#">310PN001MT28</a>	<a href="#">310PN001NF28</a>	<a href="#">310PN001ZR28</a>	<a href="#">310PN001Z128</a>
		32	<a href="#">310PN001ME32</a>	<a href="#">310PN001MT32</a>	<a href="#">310PN001NF32</a>	<a href="#">310PN001ZR32</a>	<a href="#">310PN001Z132</a>
		36	<a href="#">310PN001ME36</a>	<a href="#">310PN001MT36</a>	<a href="#">310PN001NF36</a>	<a href="#">310PN001ZR36</a>	<a href="#">310PN001Z136</a>
		40	<a href="#">310PN001ME40</a>	<a href="#">310PN001MT40</a>	<a href="#">310PN001NF40</a>	<a href="#">310PN001ZR40</a>	<a href="#">310PN001Z140</a>

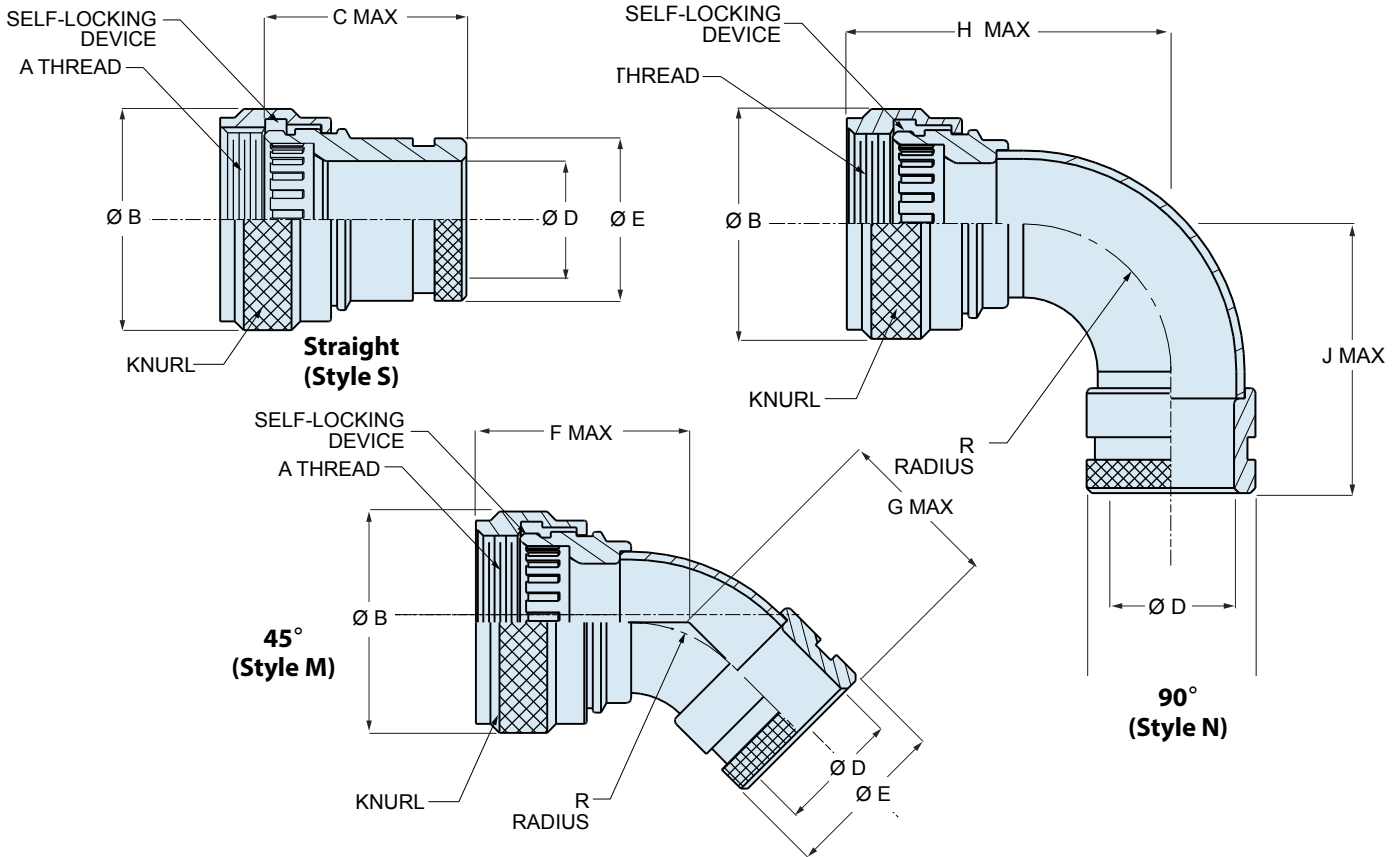
# Series 970 PowerTrip™ Connectors and Accessories

## Accessories

### 310-001 Heatshrink Boot Adapters



### 310-001 BOOT ADAPTERS



DIMENSIONS																			
Shell Size	A Thread	ø B Max.		C Max.		ø D Min.		ø E Max.		F Max.		G Max.		H Max.		J Max.		R Max.	
		In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.
18	1.125-18 UNEF-2B	1.39	35.3	1.250	31.8	.724	18.4	1.005	25.5	.750	19.1	1.00	25.4	1.38	35.1	1.63	41.4	.88	22.4
20	1.250-18 UNEF-2B	1.53	38.9	1.250	31.8	.858	21.8	1.139	28.9	.812	20.6	1.06	26.9	1.50	38.1	1.75	44.5	1.00	25.4
24	1.4375-18 UNEF-2B	1.72	43.7	1.250	31.8	1.043	26.5	1.324	33.6	.937	23.8	1.19	30.2	1.75	44.5	2.00	50.8	1.25	31.8
28	1.8125-16 UN-2B	2.13	54.1	1.250	31.8	1.353	34.4	1.625	41.2	1.000	25.4	1.25	31.8	2.19	55.7	2.44	62.0	1.50	38.1
32	2.0625-16 UNS-2B	2.35	59.7	1.315	33.4	1.620	41.4	1.901	48.3	1.130	28.7	1.38	35.1	2.50	63.5	2.75	69.9	1.75	44.5
36	2.250-16 UN-2B	2.59	65.8	1.315	33.4	1.823	46.3	2.104	53.4	1.500	38.1	1.75	44.5	2.63	66.8	2.88	73.2	2.25	57.2
40	2.500-16 UN-2B	2.87	70.6	1.315	33.4	2.050	52.1	2.331	59.2	1.500	38.1	1.75	44.5	2.63	66.8	2.88	73.2	2.25	57.2

MATERIALS AND FINISHES
Coupling nut, backshell: aluminum or stainless steel. See <b>How To Order</b> for material & finish options.
Anti-decoupling spring, bushing: high-temperature thermoplastic

INSTALLATION TORQUE	
Shell Size	Recommended Installation Torque Inch-Pounds ± 5
18	116
20, 24	136
28, 32, 36	148
40	164





## Series 970 PowerTrip™ Connectors and Accessories

### 770-003S Heatshrink Boots

#### HEATSHRINK BOOTS



#### About User-Installed Adhesive

Heat-shrink boots are not watertight unless equipped with pre-coated or user-installed adhesives. When heat is applied to the boot, the adhesive melts and fixes the boot to the adapter and cable jacket to provide the necessary sealing as well as mechanical strain-relief. For maximum performance Glenair recommends Type U user-installed two-part epoxy adhesive which offers reduced boot installation time and easier installation. Pre-coated boots require additional care to install because the boot must be heated sufficiently to activate the epoxy, at the risk of overheating the overall assembly. A single 50 ml duo syringe can coat many boots. The duo syringe can be re-capped for re-use. Inexpensive mixing nozzles must be discarded after each use.

**NOTE: Glenair high-performance two part epoxy meets VG95343 part 15.**

See next page for ordering information on user-installed two part epoxy adhesive.



Series 77 "Full Nelson" Shrink Boot Catalog has additional boot styles, technical information, installation instructions and other heatshrink products. Contact Glenair or go to [www.glenair.com](http://www.glenair.com).

Heatshrink boots provide strain relief and environmental protection. Shape-memory polymer returns to as-molded shape when heat is applied. Use with 310-001 unshielded boot adapters or 440-069 **Band-Master™** EMI adapters. Boot lip fits adapter groove for precise fit. Semi-rigid high performance elastomer resists high temperature and withstands exposure to petroleum-based fluids and fuels. Also available with non-halogenated flame-retardant polyolefin for use where limited fire hazard is required.

#### MATERIAL SELECTION GUIDE

- 1 High Performance Elastomer** -75°C to +150°C. Semi-rigid high performance elastomer combines excellent resistance to fuels, oils and solvents with superior performance at extreme temperatures. Material meets the requirements of VG95343 Type 6, BSG 198-5-DE, EN62329-102 and SAE AS5258 Type H. These boots are recommended for demanding applications such as military vehicles and petrochemical exploration.
- 2 Zero Halogen Polyolefin** -30°C to +135°C. Low Smoke Zero Halogen (LSZH) polyolefin boots meet low smoke and toxicity requirements of shipboard, transit and aircraft systems. Oxygen index greater than 30%, smoke index less than 20, and toxicity index under 3 per 100 grams. Material meets requirements of NAVSEA 5617649, VG95343 Part 29, BSG 198-5-DF, EN62329-101 and SAE AS5258 Type G. Good resistance to oils, fuels and solvents.

#### PRE-COATED ADHESIVE SELECTION GUIDE

- W1 Low Smoke Zero halogen (LSZH) polyamide hot melt adhesive Coating.** Bonds well to a variety of substrates. Good creep resistance at elevated temperatures. Excellent bond strength at low temperature. Good resistance to fuels and oils. -55°C to +125°C. Compatible with Type 1 and Type 2 boot materials.
- R High Temperature Epoxy Adhesive Coating.** Glenair's highest performance pre-coated adhesive. The material requires careful installation using trained operators. -75°C to 150°C. Withstands prolonged high temperature immersion in fuels and oils. Excellent peel adhesion on a wide range of materials. *Compatible with Type 1 boot material only.*

#### HOW TO ORDER

SERIES	MATERIAL	BOOT SIZE	ADHESIVE LINING																																																						
770-003S Heatshrink Boot, Lipped, Straight	1 High Performance Elastomer, Semi-Rigid, -75°C to +150°C		<p><b>Omit</b> for no adhesive lining.</p> <p><b>W1</b> Hot Melt Adhesive Low Smoke, Zero Halogen -55°C to +125°C</p> <p><b>R</b> High Temperature Epoxy Adhesive -75°C to +150°C. <i>Use with Type 1 High Performance Elastomer only. Not for use with Type 2 material.</i></p>																																																						
				<p style="text-align: center;"><b>Adapter Diameter</b></p> <table border="1"> <thead> <tr> <th rowspan="2">Boot Size</th> <th colspan="2">Inches</th> <th colspan="2">mm.</th> </tr> <tr> <th>Min.</th> <th>Max.</th> <th>Min.</th> <th>Max.</th> </tr> </thead> <tbody> <tr> <td>02</td> <td>.350</td> <td>.600</td> <td>8.9</td> <td>15.2</td> </tr> <tr> <td>03</td> <td>.450</td> <td>.850</td> <td>11.4</td> <td>21.6</td> </tr> <tr> <td>04</td> <td>.600</td> <td>1.000</td> <td>15.2</td> <td>25.4</td> </tr> <tr> <td>05</td> <td>.750</td> <td>1.200</td> <td>19.1</td> <td>30.5</td> </tr> <tr> <td>06</td> <td>.900</td> <td>1.350</td> <td>22.9</td> <td>34.3</td> </tr> <tr> <td>07</td> <td>1.250</td> <td>1.650</td> <td>31.8</td> <td>41.9</td> </tr> <tr> <td>08</td> <td>1.400</td> <td>2.250</td> <td>35.6</td> <td>57.2</td> </tr> <tr> <td>09</td> <td>1.870</td> <td>2.470</td> <td>47.5</td> <td>62.7</td> </tr> <tr> <td>10</td> <td>2.400</td> <td>3.250</td> <td>61.0</td> <td>82.6</td> </tr> </tbody> </table>		Boot Size	Inches		mm.		Min.	Max.	Min.	Max.	02	.350	.600	8.9	15.2	03	.450	.850	11.4	21.6	04	.600	1.000	15.2	25.4	05	.750	1.200	19.1	30.5	06	.900	1.350	22.9	34.3	07	1.250	1.650	31.8	41.9	08	1.400	2.250	35.6	57.2	09	1.870	2.470	47.5	62.7	10	2.400	3.250
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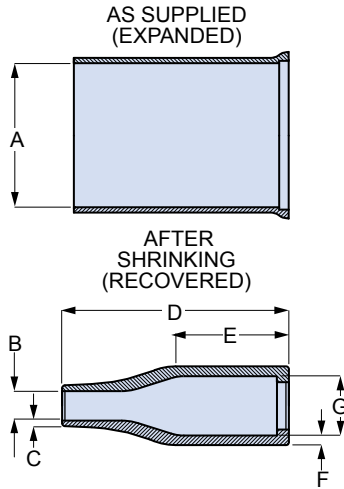
# Series 970 PowerTrip™ Connectors and Accessories

## Accessories

### 770-003S Heatshrink Boots



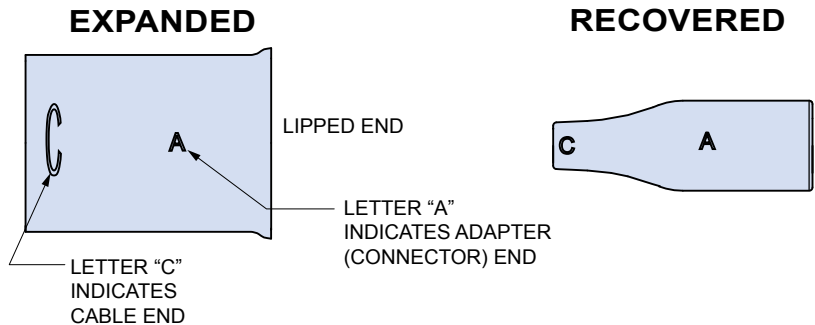
### HEATSHRINK BOOT DIMENSIONS



Boot Size	A Min.		B Max.		C ± 20%		D ± 10%		E Ref.		F ± 30%		G Max.	
	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.
00	.354	9.0	.079	2.0	.028	0.7	.984	25.0	.551	14.0	.039	1.0	.217	5.5
01	.472	12.0	.118	3.0	.028	0.7	.984	25.0	.551	14.0	.043	1.1	.276	7.0
02	.669	17.0	.138	3.5	.028	0.7	1.181	30.0	.728	18.5	.051	1.3	.276	7.0
03	.945	24.0	.197	5.0	.035	0.9	1.496	38.0	.748	19.0	.063	1.6	.413	10.5
04	1.181	30.0	.236	6.0	.039	1.0	2.165	55.0	1.181	30.0	.071	1.8	.551	14.0
05	1.260	32.0	.276	7.0	.047	1.2	2.638	67.0	1.299	33.0	.071	1.8	.709	18.0
06	1.417	36.0	.335	8.5	.047	1.2	3.150	80.0	1.575	40.0	.079	2.0	.866	22.0
07	1.693	43.0	.394	10.0	.051	1.3	3.898	99.0	2.165	55.0	.087	2.2	1.102	28.0
08	2.362	60.0	.591	15.0	.063	1.6	5.118	130.0	1.969	50.0	.130	3.3	1.378	35.0
09	2.599	66.0	.661	16.8	.079	2.0	6.693	170.0	3.543	90.0	.150	3.8	1.752	44.5
10	3.400	86.4	1.060	26.9	.130	3.3	7.700	195.6	4.005	102.0	.160	4.1	2.250	57.2

### BOOT IDENTIFICATION MARKING

Heatshrink boots are identified with molded-in lettering. This lettering shows the boot type, boot size and orientation. Position the boot so that the lipped "A" end is toward the adapter and the "C" end is toward the cable. Assembly instructions are in the **Series 77 "Full Nelson" Environmental Shrink Boots** catalog, available at [www.glenair.com](http://www.glenair.com).



### USER-INSTALLED BOOT ADHESIVE, DISPENSING GUN AND MIXING NOZZLE



Part Number
<b>779-001</b>



Part Number
<b>779-002</b>



Part Number	Count Per Pack
<b>779-003</b>	12

High performance flexible two part thermoset epoxy provides high strength flexible bond from -55° to 150°C. 50 ml duo syringe fits standard dispensing guns. Use with square green mixing nozzle sold separately. 12 hour cure time at 20°C, 1 hour at 85°C, 30 minutes at 150°C. Apply to inside of boot with wooden spatula. 18 month shelf life.

Twin push-rod 1:1 ratio epoxy dispensing gun for use with duo syringe epoxy and mixing nozzle sold separately. Durable heavy-duty plastic. Gun type hand grip with ratcheting trigger to advance push-rods.

1:1 ratio mixing nozzle attaches to duo syringe with 1/2 turn and locks into place. Nozzle provides consistent mixing of resin and hardener. Kit consists of (12) nozzles.



## Series 970 PowerTrip™ Connectors and Accessories Accessories 620PS076 Strain Relief Clamp

### 620PS076 STRAIN RELIEF CLAMP



Spin coupling strain relief clamp with anti-decoupling ratchet prevents loosening under vibration. Fits standard Series 970 connectors. Heavy duty saddle clamp with telescoping screws. Available rigid dielectric bushing provides additional wire support. Aluminum alloy or stainless steel coupling nut, cable clamp and saddle bars. Stainless steel screws, high temperature thermoplastic anti-decoupling device and wire support bushing.

Optional **Wire Support Bushing** holds wires in place to prevent contact splay or grommet distortion. **Not available for layouts with size #12 or #16 contacts.**



### HOW TO ORDER

SHELL SIZE	WIRE SUPPORT BUSHING	LAYOUT	MATERIAL/FINISH OPTION				
			ALUM/ NICKEL (ME)	ALUM/ NICKEL-PTFE (MT)	ALUM/ OD CADMIUM (NF)	ALUM/ BLACK ZINC- NICKEL (ZR)	SST/ PASSIVATE (Z1)
18	No Bushing	All	620PS076ME18	620PS076MT18	620PS076NF18	620PS076ZR18	620PS076Z118
	Bushing Included	18-2	620PS076ME18B2	620PS076MT18B2	620PS076NF18B2	620PS076ZR18B2	620PS076Z118B2
20	No Bushing	All	620PS076ME20	620PS076MT20	620PS076NF20	620PS076ZR20	620PS076Z120
	Bushing Included	20-3	620PS076ME20B3	620PS076MT20B3	620PS076NF20B3	620PS076ZR20B3	620PS076Z120B3
		20-4	620PS076ME20B4	620PS076MT20B4	620PS076NF20B4	620PS076ZR20B4	620PS076Z120B4
24	No Bushing	All	620PS076ME24	620PS076MT24	620PS076NF24	620PS076ZR24	620PS076Z124
	Bushing Included	24-2	620PS076ME24B2	620PS076MT24B2	620PS076NF24B2	620PS076ZR24B2	620PS076Z124B2
		24-3	620PS076ME24B3	620PS076MT24B3	620PS076NF24B3	620PS076ZR24B3	620PS076Z124B3
		24-5	620PS076ME24B5	620PS076MT24B5	620PS076NF24B5	620PS076ZR24B5	620PS076Z124B5
28	No Bushing	All	620PS076ME28	620PS076MT28	620PS076NF28	620PS076ZR28	620PS076Z128
	Bushing Included	28-4	620PS076ME28B4	620PS076MT28B4	620PS076NF28B4	620PS076ZR28B4	620PS076Z128B4
32	No Bushing	All	620PS076ME32	620PS076MT32	620PS076NF32	620PS076ZR32	620PS076Z132
	Bushing Included	32-2	620PS076ME32B2	620PS076MT32B2	620PS076NF32B2	620PS076ZR32B2	620PS076Z132B2
		32-3	620PS076ME32B3	620PS076MT32B3	620PS076NF32B3	620PS076ZR32B3	620PS076Z132B3
		32-5	620PS076ME32B5	620PS076MT32B5	620PS076NF32B5	620PS076ZR32B5	620PS076Z132B5
36	No Bushing	All	620PS076ME36	620PS076MT36	620PS076NF36	620PS076ZR36	620PS076Z136
	Bushing Included	36-4	620PS076ME36B4	620PS076MT36B4	620PS076NF36B4	620PS076ZR36B4	620PS076Z136B4
40	No Bushing	All	620PS076ME40	620PS076MT40	620PS076NF40	620PS076ZR40	620PS076Z140
	Bushing Included	40-5	620PS076ME40B5	620PS076MT40B5	620PS076NF40B5	620PS076ZR40B5	620PS076Z140B5

### MATERIAL & FINISH SELECTION GUIDE

Property	Alum/ Nickel (ME)	Alum/ Nickel-PTFE (MT)	Alum/ Olive Drab Cadmium (NF)	Alum/ Black Zinc-Nickel (ZR)	SST/ Passivate
Corrosion Resistance	Fair	Excellent	Excellent	Excellent	Excellent
Temperature Range	-65°C to +200°C	-65°C to +200°C	-65°C to +175°C	-65°C to +175°C	-65°C to +200°C
Salt Spray Hours	96	1000	1000	1000	2000
Conductivity	Excellent	Excellent	Good	Good	Fair
Relative Cost	\$\$	\$\$\$	\$\$	\$\$\$	\$\$\$\$
RoHS Compliant*	Yes	Yes	No	Yes	Yes

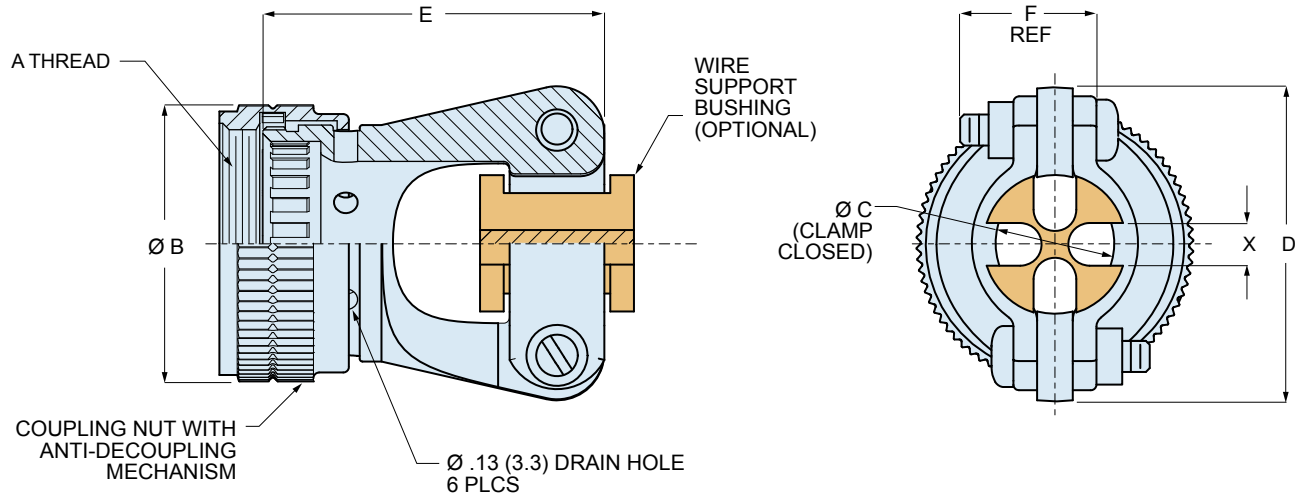
\* Does not contain cadmium or hexavalent chromium. Meets EU requirements.



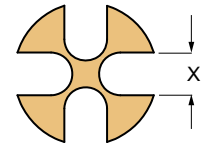
Series 970 PowerTrip™ Connectors and Accessories  
Accessories  
620PS076 Strain Relief Clamp



620PS076 STRAIN RELIEF CLAMP



DIMENSIONS											
Shell Size	A Thread	Ø B Max.		C ± .031 (0.79)		D Max.		E Max.		F Ref.	
		In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.
18	1.125-18 UNEF-2B	1.39	35.3	.438	11.13	1.500	38.10	1.83	46.48	.63	16.0
20	1.250-18 UNEF-2B	1.53	38.9	.625	15.88	1.687	42.85	1.83	46.48	.63	16.0
24	1.4375-18 UNEF-2B	1.72	43.7	.688	17.48	1.921	48.79	2.03	51.56	.63	16.0
28	1.8125-16 UN-2B	2.13	54.1	.938	23.83	2.355	59.82	2.13	54.10	.63	16.0
32	2.0625-16 UNS-2B	2.35	59.7	1.062	26.97	2.716	68.99	2.53	64.26	.75	19.1
36	2.250-16 UN-2B	2.59	65.8	1.438	36.53	2.869	72.87	2.53	64.26	.75	19.1
40	2.500-16 UN-2B	2.87	70.6	1.438	36.53	3.066	77.88	2.53	64.26	.75	19.1



BUSHING DIMENSIONS		
Wire Size	X Ref.	
	In.	mm.
#8 AWG	.217	5.51
#4 AWG	.331	8.41
#1/0 AWG	.500	12.70

MATERIALS AND FINISHES
Coupling nut, clamp, saddle bars: aluminum or stainless steel. See <i>How To Order</i> for material & finish options.
Anti-decoupling spring: high-temperature thermoplastic
Wire support bushing: high-temperature thermoplastic

INSTALLATION TORQUE	
Shell Size	Recommended Installation Torque Inch-Pounds ± 5
18	116
20, 24	136
28, 32, 36	148
40	164



# Series 970 PowerTrip™ Connectors and Accessories Accessories

440-069 EMI/RFI Adapter

## 440-069 EMI/RFI ADAPTER, BAND-MASTER™ SHIELD TERMINATION

Spin coupling EMI/RFI adapter with anti-decoupling ratchet prevents loosening under vibration. Fits standard Series 970 connectors. Terminate cable shield to backshell with **Band-Master™ ATS** (Advanced Termination System) stainless steel band. Optional heatshrink boot provides strain relief and environmental seal. Backshell features splined connector interface for improved mechanical and electrical performance.




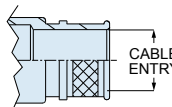
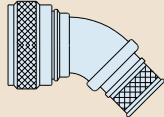
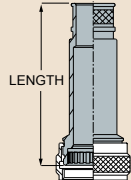


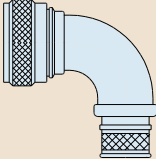
### MATERIALS AND FINISHES

Adapter: aluminum or stainless steel. See **How To Order** for material & finish options.  
Anti-decoupling spring: high-grade engineering thermoplastic

### INSTALLATION TORQUE

Shell Size	Recommended Installation Torque Inch-Pounds ± 5
18	116
20, 24	136
28, 32, 36	148
40	164

### HOW TO ORDER

SERIES	SHELL MATERIAL / FINISH	SHELL SIZE	CABLE ENTRY CODE	LENGTH CODE	OPTIONAL BAND STRAP	OPTIONAL SHRINK BOOT
<b>440PS069</b> Straight Exit 	<b>ME</b> Aluminum / Electroless Nickel RoHS Compliant  <b>NF</b> Aluminum / Cadmium with Olive Drab Chromate	<b>18</b> <b>20</b> <b>24</b> <b>28</b> <b>32</b> <b>36</b> <b>40</b>		<b>Omit</b> for 45° and 90° styles.  The <b>Length Code</b> is the length of the adapter in ½ inch increments. Minimum length is 2 inches.	<b>K</b> Adapter supplied with pre-coiled stainless steel shield termination band  <b>Omit</b> if bands will be purchased separately. Refer to Band-Master strap and tool ordering information in this catalog.	<b>T</b> Adapter supplied with standard heatshrink boot.  <b>S</b> Adapter supplied with low-smoke, zero halogen heatshrink boot.  <b>Omit</b> if boots will be purchased separately. Refer to heatshrink boot ordering information in this catalog.
<b>440PM069</b> 45° Exit 	<b>NFP</b> Aluminum / Cadmium with Olive Drab Chromate, Nickel-plated Shield Termination Area, Polysulfide Barrier (See Application Note)	<b>11</b> <b>12</b> <b>13</b> <b>14</b> <b>15</b> <b>16</b> <b>17</b> <b>18</b> <b>19</b> <b>20</b>		<b>Code</b> <b>Length</b> In.    mm.		
<b>440PN069</b> 90° Exit 	<b>ZR</b> Aluminum / Zinc-Nickel with Non-Reflective Black Chromate RoHS Compliant  <b>MT</b> Aluminum / Nickel-PTFE RoHS Compliant  <b>Z1</b> Stainless Steel / Passivated RoHS Compliant	<b>-4</b> <b>-5</b> <b>-6</b> <b>-7</b> <b>-8</b> <b>-9</b> <b>-10</b> <b>-11</b> <b>-12</b> <b>-13</b> <b>-14</b> <b>-15</b> <b>-16</b>	<b>Code</b> <b>Length</b> In.    mm.	<b>Code</b> <b>Length</b> In.    mm.	<b>Code</b> <b>Length</b> In.    mm.	<b>Code</b> <b>Length</b> In.    mm.
<b>Sample Part Number</b>						
<b>440PH069</b>	<b>NF</b>	<b>24</b>	<b>07</b>			

# Series 970 PowerTrip™ Connectors and Accessories

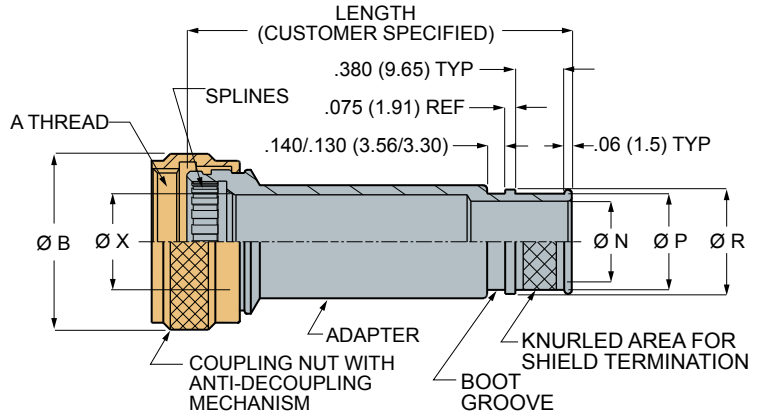
## Accessories

### 440-069 EMI/RFI Adapter

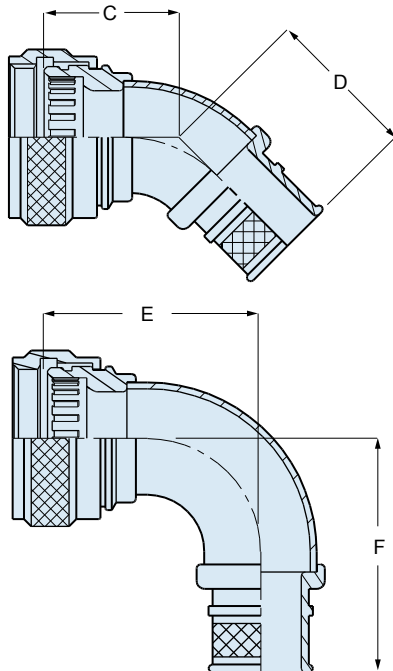


### 440-069 EMI/RFI ADAPTER, BAND-MASTER™ SHIELD TERMINATION

Shell Size	A Thread	ø B Max.		ø X Min.	
		In.	mm.	In.	mm.
18	1.125-18 UNEF-2B	1.39	35.3	.724	18.4
20	1.250-18 UNEF-2B	1.53	38.9	.858	21.8
24	1.4375-18 UNEF-2B	1.72	43.7	1.043	26.5
28	1.8125-16 UN-2B	2.13	54.1	1.353	34.4
32	2.0625-16 UNS-2B	2.35	59.7	1.620	41.2
36	2.250-16 UN-2B	2.59	65.8	1.823	46.3
40	2.500-16 UN-2B	2.87	70.6	2.050	52.1

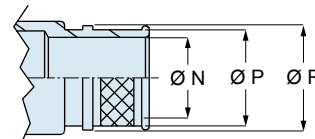


### 45° AND 90° DIMENSIONS



Shell Size	C Max.		D Max.		E Max.		F Max.	
	In.	mm.	In.	mm.	In.	mm.	In.	mm.
18	1.250	31.8	2.468	62.7	1.906	48.4	1.812	46.0
20	1.312	33.3	2.657	67.5	2.031	51.6	1.938	49.2
24	1.406	35.7	3.063	77.8	2.281	57.9	2.188	55.6
28	1.500	38.1	3.656	92.9	2.531	64.3	2.625	66.7
32	1.675	42.5	3.845	97.7	2.625	66.7	2.895	73.5
36	1.799	45.7	4.230	107.4	2.875	73.0	3.145	79.9
40	1.861	47.3	4.459	113.3	3.025	76.8	3.295	83.7

### CABLE ENTRY DIMENSIONS



Cable Entry Code	ø N		ø P		ø R		Heatshrink Boot Ref.*
	In.	mm.	In.	mm.	In.	mm.	
02	.250	6.4	.375	9.53	.437	11.10	770-003S112
03	.375	9.5	.500	12.70	.562	14.27	770-001S103
04	.500	12.7	.625	15.88	.687	17.45	770-001S104
05	.625	15.9	.750	19.05	.812	20.62	770-001S104
06	.750	19.1	.875	22.23	.937	23.80	770-001S105
07	.875	22.2	1.000	25.40	1.062	26.97	770-001S105
08	1.000	25.4	1.125	28.58	1.187	30.15	770-001S106
09	1.125	28.6	1.250	31.75	1.312	33.32	770-001S107
10	1.250	31.8	1.375	34.93	1.437	36.50	770-001S107
11	1.375	34.9	1.500	38.10	1.562	39.67	770-001S107
12	1.500	38.1	1.625	41.28	1.687	42.85	770-001S108
13	1.625	41.3	1.750	44.45	1.812	46.02	770-001S108
14	1.750	44.5	1.875	47.63	1.937	49.20	770-001S108
15	1.875	47.6	2.000	50.80	2.062	52.37	770-001S109
16	2.000	50.8	2.125	53.98	2.187	55.55	770-001S109
17	2.125	54.0	2.250	57.15	2.313	58.75	770-003S110
18	2.250	57.2	2.375	60.37	2.438	61.93	770-003S110
19	2.375	60.3	2.500	63.50	2.563	65.10	770-003S110
20	2.500	63.5	2.625	66.68	2.688	68.28	770-003S110

\* Heatshrink boot part number specifies standard material. For low-smoke, zero halogen change "S1" to "S2".



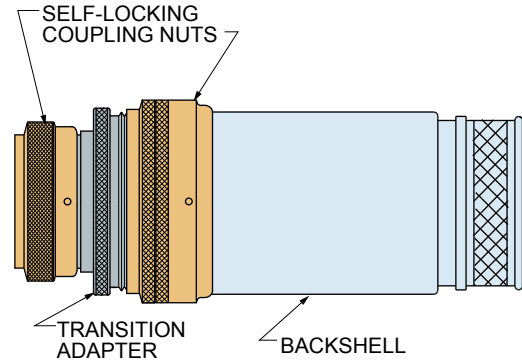
## Series 970 PowerTrip™ Connectors and Accessories Accessories

440-069 EMI/RFI Adapter

### ALTERNATE CONFIGURATION FOR LARGE CABLES

If the cable entry diameter exceeds the diameter of the backshell shown in the table at right, the backshell will be supplied with a **transition adapter**. The clamp and adapters are first installed over the cable jacket, and then are threaded onto the transition adapter. On straight exit backshells, the transition adapter does not affect the length. On 45° and 90° versions the transition adapter adds 1.00 inch (25.4mm) maximum to the backshell length.

Shell Size	Backshell Inside Diameter	
	In.	mm.
18	.72	18.3
20	.85	21.7
24	1.04	26.4
28	1.35	34.3
32	1.62	41.1
36	1.82	46.3
40	2.05	52.0

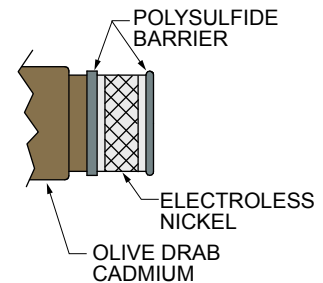


### APPLICATION NOTE: POLYSULFIDE BARRIER FOR GALVANIC CORROSION PROTECTION

Olive drab (OD) cadmium (Cd) over electroless nickel (EN) is available in two versions. The standard version, designated as Glenair code **NF**, is a uniform Cd/EN finish over the entire part. A second version, designated as Glenair code **NFP**, is selectively plated with electroless nickel in the knurled shield attachment area. A polysulfide barrier separates the electroless nickel area from the cadmium plated area. This selectively plated version prevents galvanic corrosion that could potentially occur if nickel-coated shield braid is attached to a cadmium plated surface.

#### The Polysulfide Process

First, the part is plated with electroless nickel. Next, a tape mask is applied to the shield termination area. Following cadmium plating and chromate conversion coating, the tape is removed, exposing the electroless nickel. Polysulfide is applied with a brush to completely seal the transition area between the nickel and cadmium. The final step is to oven cure the polysulfide.



# Series 970 PowerTrip™ Connectors and Accessories

## 370-024 Submersible Backshell



### SUBMERSIBLE BACKSHELL


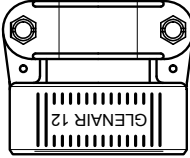
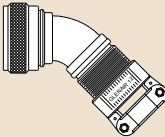
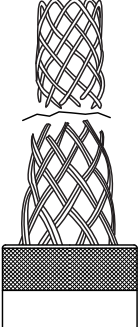
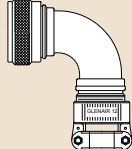
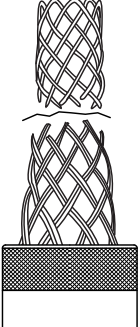


Heavy duty backshell features positive detent self-locking spin coupling for high vibration environments. For use with unshielded, jacketed power cable. Splined connector interface. Heavy duty cable clamps fit most cable sizes, or choose wire mesh stainless steel cordgrip. Withstands six feet water immersion for 48 hours. Aluminum or stainless steel with silicone gland. Stainless steel telescoping clamp screws. Meets environmental, electrical and mechanical requirements of AS85049 Category 1A Heavy Duty.

MATERIALS AND FINISHES
Adapters, elbows, follower, coupling nut: aluminum or stainless steel. See <b>How To Order</b> for material & finish options.
Hardware: stainless steel
Wire Mesh Cordgrip: stainless steel
Screws: stainless steel
Grommet, O-rings: fluorosilicone

INSTALLATION TORQUE	
Shell Size	Recommended Installation Torque Inch-Pounds ± 5
18	116
20, 24	136
28, 32, 36	148
40	164

### HOW TO ORDER

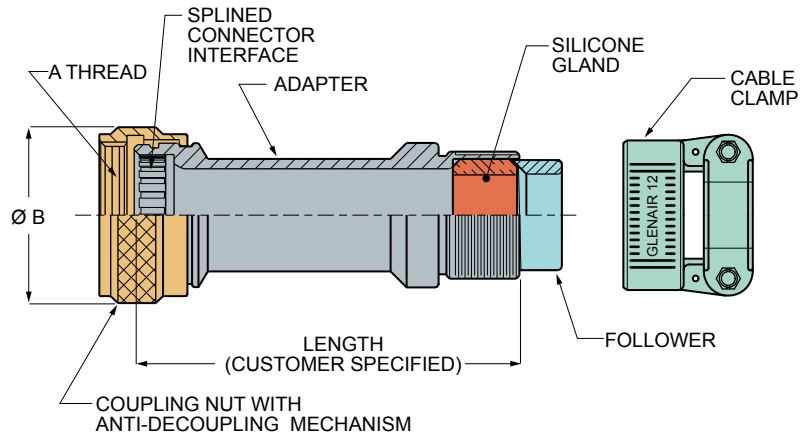
SERIES	SHELL MATERIAL / FINISH	SHELL SIZE	CABLE ENTRY CODE	LENGTH CODE																																																																
<b>370PS024</b> Straight Exit 	<b>ME</b> Aluminum / Electroless Nickel RoHS Compliant  <b>NF</b> Aluminum / Cadmium with Olive Drab Chromate  <b>ZR</b> Aluminum / Zinc-Nickel with Non-Reflective Black Chromate RoHS Compliant	<b>18</b> <b>20</b> <b>24</b> <b>28</b> <b>32</b> <b>36</b> <b>40</b>	 <b>Saddle Clamp</b>	(Omit for 45° and 90° styles. Applies to 370PS024 straight exit only)  The <b>Length Code</b> is the length of the adapter in 1/2 inch increments  <table border="1"> <thead> <tr> <th rowspan="2">Code</th> <th colspan="2">Length</th> </tr> <tr> <th>In.</th> <th>mm.</th> </tr> </thead> <tbody> <tr><td>6</td><td>3.0</td><td>76</td></tr> <tr><td>7</td><td>3.5</td><td>89</td></tr> <tr><td>8</td><td>4.0</td><td>102</td></tr> <tr><td>9</td><td>4.5</td><td>114</td></tr> <tr><td>10</td><td>5.0</td><td>127</td></tr> <tr><td>11</td><td>5.5</td><td>140</td></tr> <tr><td>12</td><td>6.0</td><td>152</td></tr> <tr><td>13</td><td>6.5</td><td>165</td></tr> <tr><td>14</td><td>7.0</td><td>178</td></tr> <tr><td>15</td><td>7.5</td><td>191</td></tr> <tr><td>16</td><td>8.0</td><td>203</td></tr> </tbody> </table>	Code	Length		In.	mm.	6	3.0	76	7	3.5	89	8	4.0	102	9	4.5	114	10	5.0	127	11	5.5	140	12	6.0	152	13	6.5	165	14	7.0	178	15	7.5	191	16	8.0	203																										
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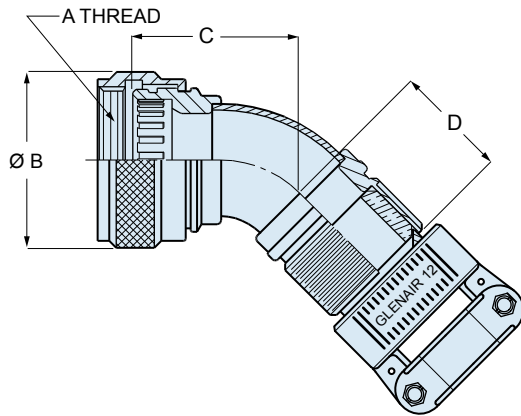
# Series 970 PowerTrip™ Connectors and Accessories Accessories 370-024 Submersible Backshell

## SUBMERSIBLE BACKSHELL: 370PS024 STRAIGHT EXIT

Shell Size	A Thread	ø B Max.	
		In.	mm.
18	1.125-18 UNEF-2B	1.39	35.3
20	1.250-18 UNEF-2B	1.53	38.9
24	1.4375-18 UNEF-2B	1.72	43.7
28	1.8125-16 UN-2B	2.13	54.1
32	2.0625-16 UNS-2B	2.35	59.7
36	2.250-16 UN-2B	2.59	65.8
40	2.500-16 UN-2B	2.87	70.6

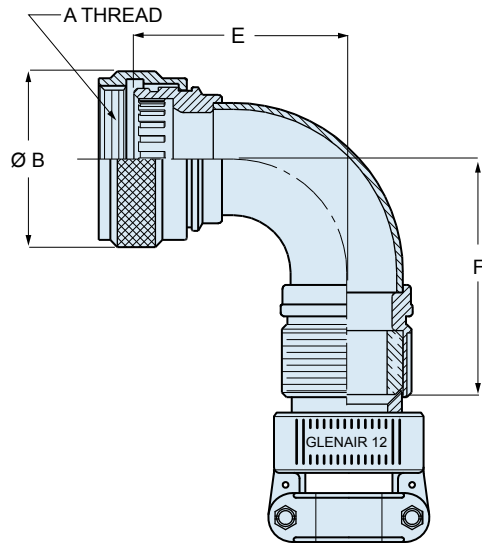


## 370PM024 45° EXIT DIMENSIONS



Shell Size	A Thread Class 2B	ø B Max.		C Max.		D Max.	
		In.	mm.	In.	mm.	In.	mm.
18	1.125-18 UNEF	1.39	35.3	1.250	31.8	2.468	62.7
20	1.250-18 UNEF	1.53	38.9	1.312	33.3	2.657	67.5
24	1.4375-18 UNEF	1.72	43.7	1.406	35.7	3.063	77.8
28	1.8125-16 UN	2.13	54.1	1.500	38.1	3.656	92.9
32	2.0625-16 UNS	2.35	59.7	1.675	42.5	3.845	97.7
36	2.250-16 UN	2.59	65.8	1.799	45.7	4.230	107.4
40	2.500-16 UN	2.87	70.6	1.861	47.3	4.459	113.3

## 370PN024 90° EXIT



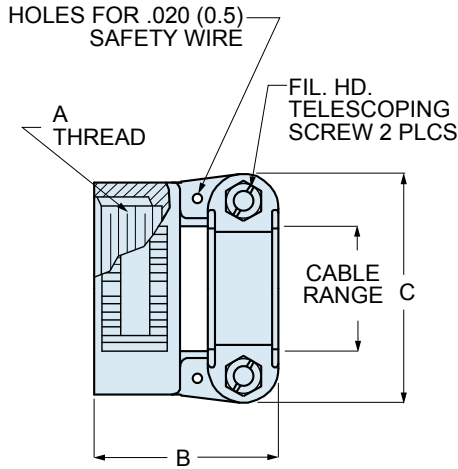
Shell Size	A Thread Class 2B	ø B Max.		E Max.		F Max.	
		In.	mm.	In.	mm.	In.	mm.
18	1.125-18 UNEF	1.39	35.3	1.906	48.4	1.812	46.0
20	1.250-18 UNEF	1.53	38.9	2.031	51.6	1.938	49.2
24	1.4375-18 UNEF	1.72	43.7	2.281	57.9	2.188	55.6
28	1.8125-16 UN	2.13	54.1	2.531	64.3	2.625	66.7
32	2.0625-16 UNS	2.35	59.7	2.625	66.7	2.895	73.5
36	2.250-16 UN	2.59	65.8	2.875	73.0	3.145	79.9
40	2.500-16 UN	2.87	70.6	3.025	76.8	3.295	83.7

# Series 970 PowerTrip™ Connectors and Accessories

## 370-024 Submersible Backshell

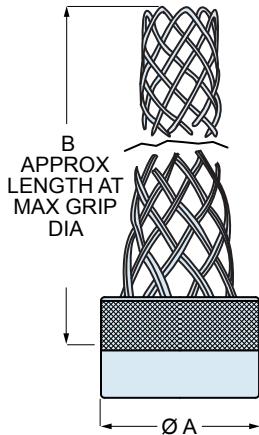


### SADDLE CLAMP DIMENSIONS



Clamp Size	Cable Range				A Thread Class 2B	B Max.		C Max.	
	Min.		Max.			In.	mm.	In.	mm.
	In.	mm.	In.	mm.					
06H	.250	6.4	.437	11.1	.750-20UNEF	1.301	33.04	1.145	29.1
08H	.387	9.8	.562	14.3	.875-20UNEF	1.301	33.04	1.332	33.8
10H	.350	8.9	.625	15.9	1.000-20UNEF	1.301	33.04	1.332	33.8
12H	.500	12.7	.750	19.1	1.1875-18UNEF	1.332	33.83	1.551	39.4
16H	.625	15.9	.937	23.8	1.4375-18UNEF	1.426	36.22	1.770	45.0
20H	.875	22.2	1.250	31.8	1.750-18UNS	1.613	40.97	2.113	53.7
24H	1.000	25.4	1.375	34.9	2.000-18UNS	1.645	41.78	2.363	60.0
28H	1.250	31.8	1.625	41.3	2.250-16UN	1.920	48.77	2.770	70.4
32H	1.437	36.5	1.875	47.6	2.500-16UN	1.920	48.77	3.020	76.7
36H	1.625	41.3	2.125	54.0	2.750-16UN	2.060	53.32	3.250	82.6
40H	1.875	47.6	2.375	60.3	3.000-16UN	2.060	53.32	3.500	88.9

### WIRE MESH GRIP DIMENSIONS

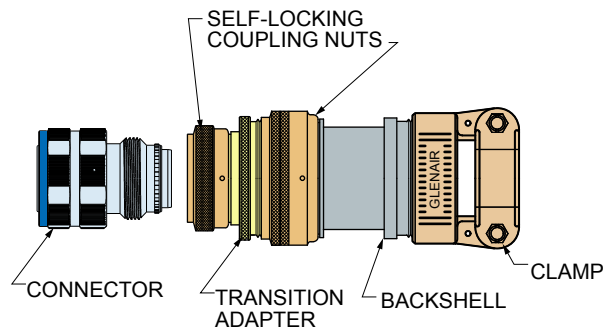


Grip Size	Cable Range				Ø A Max.		B Approx.	
	Min.		Max.		In.	mm.	In.	mm.
	In.	mm.	In.	mm.				
06K	.310	7.8	.438	11.1	.942	23.9	4.000	101
08K	.438	11.1	.500	12.7	1.067	27.1	4.120	105
10K	.500	12.7	.625	15.8	1.192	30.3	4.370	111
12K	.625	15.9	.750	19.1	1.380	35.1	5.000	127
14K	.750	19.1	.875	22.2	1.563	39.7	6.000	152
16K	.875	22.2	1.000	25.4	1.563	39.7	6.250	158
20K	1.000	25.4	1.250	31.8	1.875	47.6	7.250	184
24K	1.125	28.6	1.375	34.9	2.225	57.3	8.000	203
28K	1.375	34.9	1.625	41.2	2.505	63.6	8.500	216
32K	1.625	41.3	1.875	47.6	2.755	70.0	9.000	229
40K	2.125	53.9	2.375	60.3	3.225	82.7	9.500	241

### ALTERNATE CONFIGURATION FOR LARGE CABLES

If the cable range exceeds the inside diameter of the backshell shown in the table at right, the backshell will be supplied with a **transition adapter** and a second coupling nut. This style of backshell is called a **Style 2**. The transition adapter attaches to the connector. The backshell and clamp fit over the cable jacket. On straight exit backshells, the transition adapter does not affect the length. On 45° and 90° versions the transition adapter adds 1.00 inch (25.4mm) maximum to the backshell length.

Shell Size	Backshell Inside Diameter	
	In.	mm.
18	.72	18.3
20	.85	21.7
24	1.04	26.4
28	1.35	34.3
32	1.62	41.1
36	1.82	46.3
40	2.05	52.0





# Series 970 PowerTrip™ Connectors and Accessories

## 380-105 EMI/RFI Backshell (Non-Environmental)

### 380P\*105 EMI/RFI BACKSHELL



EMI/RFI backshell features ground rings for cable braid shield termination. Spin coupling with anti-decoupling ratchet. Splined connector interface. Heavy duty saddle clamp. Aluminum or stainless steel. Stainless steel telescoping clamp screws. Meets environmental, electrical and mechanical requirements of AS85049 Category 3A Heavy Duty. Assembly procedure conforms to Glenair Type F shield terminations.

#### MATERIALS AND FINISHES

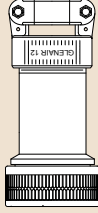
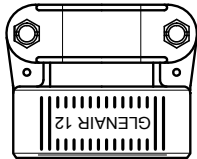
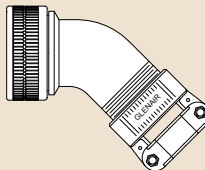
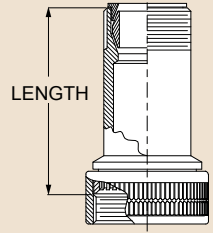
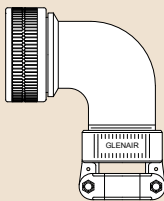
Adapters, crimp rings, follower, coupling nut: aluminum or stainless steel. See **How To Order** for finish options.

Hardware: stainless steel

#### INSTALLATION TORQUE

Shell Size	Recommended Installation Torque Inch-Pounds ± 5
18	116
20, 24	136
28, 32, 36	148
40	164

#### HOW TO ORDER

SERIES	SHELL MATERIAL / FINISH	SHELL SIZE	STRAIN RELIEF CODE	LENGTH CODE																																																																												
<b>380PS105</b> Straight Exit 	<b>ME</b> Aluminum / Electroless Nickel RoHS Compliant  <b>NF</b> Aluminum / Cadmium with Olive Drab Chromate  <b>ZR</b> Aluminum / Zinc-Nickel with Non-Reflective Black Chromate RoHS Compliant	<b>18</b> <b>20</b> <b>24</b> <b>28</b> <b>32</b> <b>36</b> <b>40</b>	 <b>Saddle Clamp</b>	(Omit for 45° and 90° styles. Applies to 380PS105 straight exit only)  The <b>Length Code</b> is the length of the adapter in 1/2 inch increments																																																																												
					<table border="1"> <thead> <tr> <th rowspan="2">Code</th> <th colspan="2">Cable Diameter</th> <th rowspan="2">Code</th> <th colspan="2">Length</th> </tr> <tr> <th>Min.</th> <th>Max.</th> <th>In.</th> <th>mm.</th> </tr> </thead> <tbody> <tr> <td><b>06H</b></td> <td>.250</td> <td>6.4</td> <td><b>8</b></td> <td>3.0</td> <td>76</td> </tr> <tr> <td><b>08H</b></td> <td>.312</td> <td>7.9</td> <td><b>9</b></td> <td>3.5</td> <td>89</td> </tr> <tr> <td><b>10H</b></td> <td>.350</td> <td>8.9</td> <td><b>10</b></td> <td>4.0</td> <td>102</td> </tr> <tr> <td><b>12H</b></td> <td>.375</td> <td>9.5</td> <td><b>11</b></td> <td>4.5</td> <td>114</td> </tr> <tr> <td><b>14H</b></td> <td>.400</td> <td>10.2</td> <td><b>12</b></td> <td>5.0</td> <td>127</td> </tr> <tr> <td><b>16H</b></td> <td>.425</td> <td>10.8</td> <td><b>13</b></td> <td>5.5</td> <td>140</td> </tr> <tr> <td><b>18H</b></td> <td>.450</td> <td>11.4</td> <td><b>14</b></td> <td>6.0</td> <td>152</td> </tr> <tr> <td><b>20H</b></td> <td>.475</td> <td>12.0</td> <td><b>15</b></td> <td>6.5</td> <td>165</td> </tr> <tr> <td><b>22H</b></td> <td>.500</td> <td>12.7</td> <td><b>16</b></td> <td>7.0</td> <td>178</td> </tr> <tr> <td><b>24H</b></td> <td>.525</td> <td>13.3</td> <td></td> <td>7.5</td> <td>191</td> </tr> <tr> <td><b>26H</b></td> <td>.550</td> <td>13.9</td> <td></td> <td>8.0</td> <td>203</td> </tr> </tbody> </table>	Code	Cable Diameter		Code	Length		Min.	Max.	In.	mm.	<b>06H</b>	.250	6.4	<b>8</b>	3.0	76	<b>08H</b>	.312	7.9	<b>9</b>	3.5	89	<b>10H</b>	.350	8.9	<b>10</b>	4.0	102	<b>12H</b>	.375	9.5	<b>11</b>	4.5	114	<b>14H</b>	.400	10.2	<b>12</b>	5.0	127	<b>16H</b>	.425	10.8	<b>13</b>	5.5	140	<b>18H</b>	.450	11.4	<b>14</b>	6.0	152	<b>20H</b>	.475	12.0	<b>15</b>	6.5	165	<b>22H</b>	.500	12.7	<b>16</b>	7.0	178	<b>24H</b>	.525	13.3		7.5	191	<b>26H</b>	.550	13.9		8.0
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<b>380PM105</b> 45° Exit 	<b>MT</b> Aluminum / Nickel-PTFE RoHS Compliant  <b>Z1</b> Stainless Steel / Passivated RoHS Compliant																																																																															
<b>380PN105</b> 90° Exit 																																																																																
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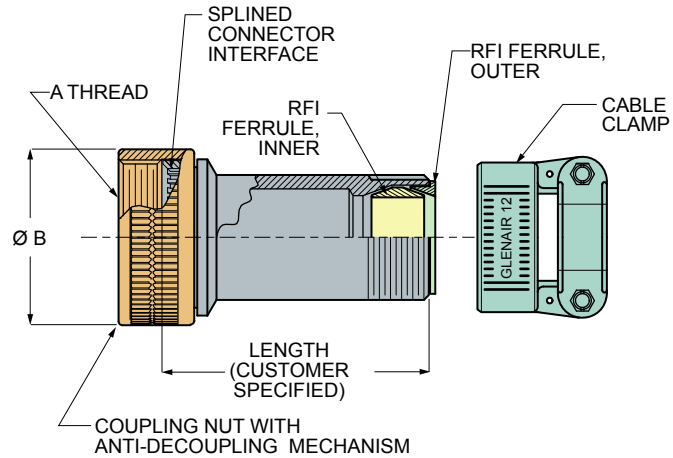
# Series 970 PowerTrip™ Connectors and Accessories Accessories

## 380-105 EMI/RFI Backshell (Non-Environmental)

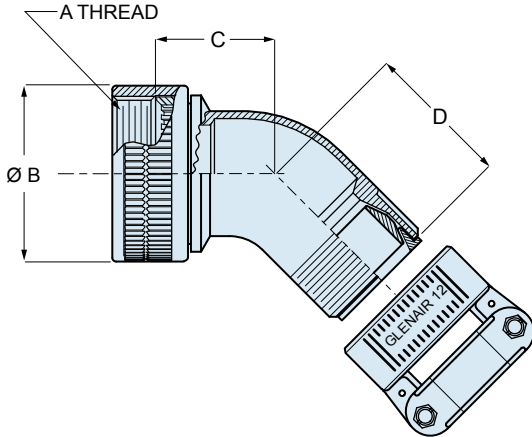


### 380PS105 STRAIGHT EXIT EMI/RFI BACKSHELL

Shell Size	A Thread	ø B Max.	
		In.	mm.
18	1.125-18 UNEF-2B	1.39	35.3
20	1.250-18 UNEF-2B	1.53	38.9
24	1.4375-18 UNEF-2B	1.72	43.7
28	1.8125-16 UN-2B	2.13	54.1
32	2.0625-16 UNS-2B	2.35	59.7
36	2.250-16 UN-2B	2.59	65.8
40	2.500-16 UN-2B	2.87	70.6

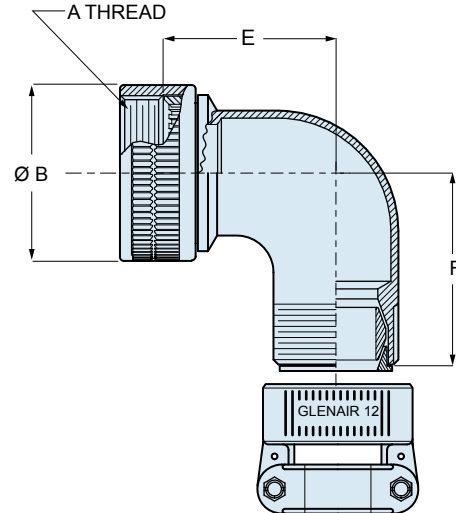


### 380PM105 45° EXIT DIMENSIONS



Shell Size	A Thread Class 2B	ø B Max.		C Max.		D Max.	
		In.	mm.	In.	mm.	In.	mm.
18	1.125-18 UNEF	1.39	35.3	1.250	31.8	1.156	29.4
20	1.250-18 UNEF	1.53	38.9	1.312	33.3	1.219	31.0
24	1.4375-18 UNEF	1.72	43.7	1.406	35.7	1.312	33.3
28	1.8125-16 UN	2.13	54.1	1.500	38.1	1.625	41.3
32	2.0625-16 UNS	2.35	59.7	1.675	42.5	1.945	49.4
36	2.250-16 UN	2.59	65.8	1.799	45.7	2.069	52.6
40	2.500-16 UN	2.87	70.6	1.861	47.3	2.131	54.1

### 380PN105 90° EXIT



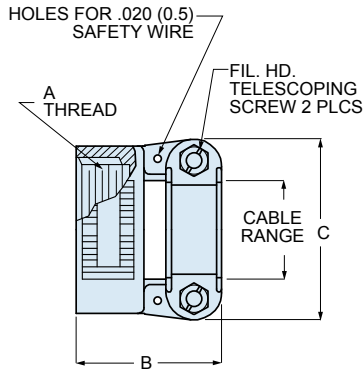
Shell Size	A Thread Class 2B	ø B Max.		E Max.		F Max.	
		In.	mm.	In.	mm.	In.	mm.
18	1.125-18 UNEF	1.39	35.3	1.906	48.4	1.812	46.0
20	1.250-18 UNEF	1.53	38.9	2.031	51.6	1.938	49.2
24	1.4375-18 UNEF	1.72	43.7	2.281	57.9	2.188	55.6
28	1.8125-16 UN	2.13	54.1	2.531	64.3	2.625	66.7
32	2.0625-16 UNS	2.35	59.7	2.625	66.7	2.895	73.5
36	2.250-16 UN	2.59	65.8	2.875	73.0	3.145	79.9
40	2.500-16 UN	2.87	70.6	3.025	76.8	3.295	83.7



## Accessories

### 380P\*105 EMI/RFI Backshell (Non-Environmental)

#### SADDLE CLAMP DIMENSIONS

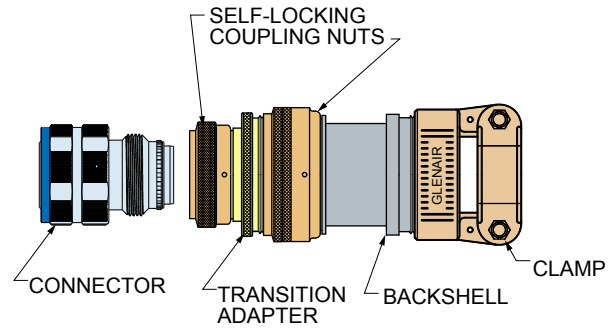


Clamp Size	Cable Range				A Thread Class 2B	B Max.		C Max.	
	Min.		Max.			In.	mm.	In.	mm.
	In.	mm.	In.	mm.					
06H	.250	6.4	.437	11.1	.750-20UNEF	1.301	33.04	1.145	29.1
08H	.312	7.9	.562	14.3	.875-20UNEF	1.301	33.04	1.332	33.8
10H	.350	8.9	.625	15.9	1.000-20UNEF	1.301	33.04	1.332	33.8
12H	.500	12.7	.750	19.1	1.1875-18UNEF	1.332	33.83	1.551	39.4
16H	.625	15.9	.937	23.8	1.4375-18UNEF	1.426	36.22	1.770	45.0
20H	.875	22.2	1.250	31.8	1.750-18UNS	1.613	40.97	2.113	53.7
24H	1.000	25.4	1.375	34.9	2.000-18UNS	1.645	41.78	2.363	60.0
28H	1.250	31.8	1.625	41.3	2.250-16UN	1.920	48.77	2.770	70.4
32H	1.437	36.5	1.875	47.6	2.500-16UN	1.920	48.77	3.020	76.7

#### ALTERNATE CONFIGURATION FOR LARGE CABLES

If the cable range exceeds the inside diameter of the backshell shown in the table at right, the backshell will be supplied with a **transition adapter** and a second coupling nut. This style of backshell is called a **Style 2**. The transition adapter attaches to the connector. The backshell and clamp fit over the cable jacket. On straight exit backshells, the transition adapter does not affect the length. On 45° and 90° versions the transition adapter adds 1.00 inch (25.4mm) maximum to the backshell length.

Shell Size	Backshell Inside Diameter	
	In.	mm.
18	.72	18.3
20	.85	21.7
24	1.04	26.4
28	1.35	34.3
32	1.62	41.1
36	1.82	46.3
40	2.05	52.0



# Series 970 PowerTrip™ Connectors and Accessories

## 390-055 EMI/RFI Submersible Backshell



### SUBMERSIBLE EMI BACKSHELL



Heavy duty backshell features positive detent self-locking spin coupling for high vibration environments. For use with shielded, jacketed power cable. Splined connector interface. Terminate cable shield to inner and outer ground rings. Heavy duty cable clamps fit most cable sizes, or choose wire mesh stainless steel cordgrip. Withstands six feet water immersion for 48 hours. Aluminum or stainless steel with silicone O-rings and gland. Stainless steel telescoping clamp screws. Meets environmental, electrical and mechanical requirements of AS85049 Category 1A Heavy Duty.

#### MATERIALS AND FINISHES


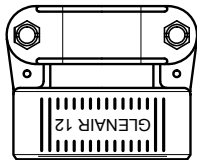
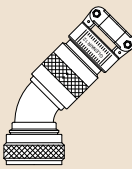
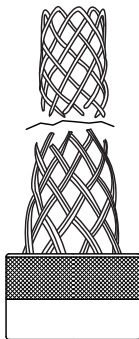
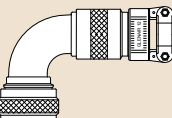
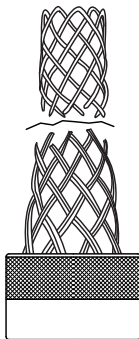
Adapters, elbows, follower, coupling nut: aluminum or stainless steel. See **How To Order** for material & finish options.

Hardware: stainless steel
Wire Mesh Cordgrip: stainless steel
Screws: stainless steel
Grommet, O-rings: fluorosilicone

#### INSTALLATION TORQUE

Shell Size	Recommended Installation Torque Inch-Pounds ± 5
18	116
20, 24	136
28, 32, 36	148
40	164

### HOW TO ORDER

SERIES	SHELL MATERIAL / FINISH	SHELL SIZE	STRAIN RELIEF TYPE AND SIZE	LENGTH CODE																																																															
<b>390PS055</b> Straight Exit 	<b>ME</b> Aluminum / Electroless Nickel RoHS Compliant  <b>NF</b> Aluminum / Cadmium with Olive Drab Chromate  <b>ZR</b> Aluminum / Zinc-Nickel with Non-Reflective Black Chromate RoHS Compliant	<b>18</b> <b>20</b> <b>24</b> <b>28</b> <b>32</b> <b>36</b> <b>40</b>	<b>Heavy Duty Saddle Clamp</b> 	<i>Omit for 45° and 90° styles. The Length Code is the length of the front adapter in 1/2 inch increments</i> <table border="1"> <thead> <tr> <th>Code</th> <th>Length</th> </tr> <tr> <th></th> <th>In.</th> <th>mm.</th> </tr> </thead> <tbody> <tr><td>6</td><td>3.0</td><td>76</td></tr> <tr><td>7</td><td>3.5</td><td>89</td></tr> <tr><td>8</td><td>4.0</td><td>102</td></tr> <tr><td>9</td><td>4.5</td><td>114</td></tr> <tr><td>10</td><td>5.0</td><td>127</td></tr> <tr><td>11</td><td>5.5</td><td>140</td></tr> <tr><td>12</td><td>6.0</td><td>152</td></tr> <tr><td>13</td><td>6.5</td><td>165</td></tr> <tr><td>14</td><td>7.0</td><td>178</td></tr> <tr><td>15</td><td>7.5</td><td>191</td></tr> <tr><td>16</td><td>8.0</td><td>203</td></tr> </tbody> </table>	Code	Length		In.	mm.	6	3.0	76	7	3.5	89	8	4.0	102	9	4.5	114	10	5.0	127	11	5.5	140	12	6.0	152	13	6.5	165	14	7.0	178	15	7.5	191	16	8.0	203																									
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<b>390PM055</b> 45° Exit 	<b>MT</b> Aluminum / Nickel-PTFE RoHS Compliant  <b>Z1</b> Stainless Steel / Passivated RoHS Compliant	<b>18</b> <b>20</b> <b>24</b> <b>28</b> <b>32</b> <b>36</b> <b>40</b>	<b>Wire Mesh Cordgrip</b> 	<table border="1"> <thead> <tr> <th rowspan="2">Code</th> <th colspan="2">Cable Diameter</th> </tr> <tr> <th>Min.</th> <th>Max.</th> </tr> <tr> <th></th> <th>In.</th> <th>mm.</th> </tr> </thead> <tbody> <tr><td>06H</td><td>.250</td><td>6.4</td><td>.437</td><td>11.1</td></tr> <tr><td>08H</td><td>.387</td><td>9.8</td><td>.562</td><td>14.3</td></tr> <tr><td>10H</td><td>.350</td><td>8.9</td><td>.625</td><td>15.9</td></tr> <tr><td>12H</td><td>.500</td><td>12.7</td><td>.750</td><td>19.1</td></tr> <tr><td>16H</td><td>.625</td><td>15.9</td><td>.937</td><td>23.8</td></tr> <tr><td>20H</td><td>.875</td><td>22.2</td><td>1.250</td><td>31.8</td></tr> <tr><td>24H</td><td>1.000</td><td>25.4</td><td>1.375</td><td>34.9</td></tr> <tr><td>28H</td><td>1.250</td><td>31.8</td><td>1.625</td><td>41.3</td></tr> <tr><td>32H</td><td>1.437</td><td>36.5</td><td>1.875</td><td>47.6</td></tr> <tr><td>36H</td><td>1.625</td><td>41.3</td><td>2.125</td><td>54.0</td></tr> <tr><td>40H</td><td>1.875</td><td>47.6</td><td>2.375</td><td>60.3</td></tr> </tbody> </table>	Code	Cable Diameter		Min.	Max.		In.	mm.	06H	.250	6.4	.437	11.1	08H	.387	9.8	.562	14.3	10H	.350	8.9	.625	15.9	12H	.500	12.7	.750	19.1	16H	.625	15.9	.937	23.8	20H	.875	22.2	1.250	31.8	24H	1.000	25.4	1.375	34.9	28H	1.250	31.8	1.625	41.3	32H	1.437	36.5	1.875	47.6	36H	1.625	41.3	2.125	54.0	40H	1.875	47.6	2.375	60.3
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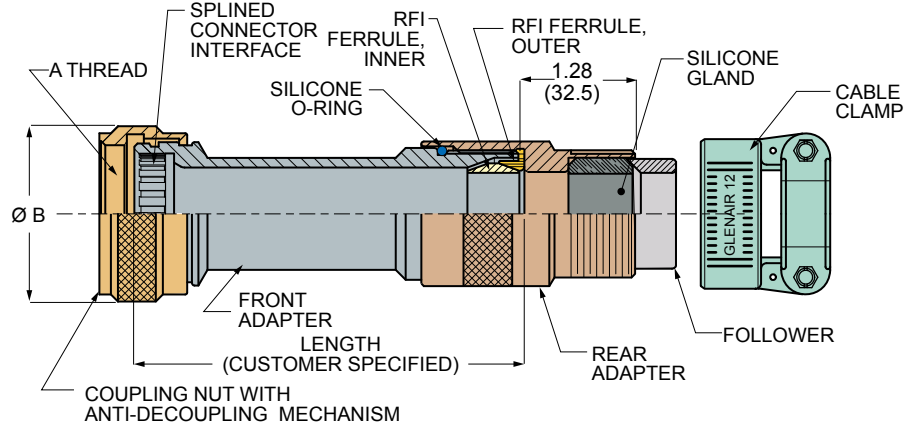


# Series 970 PowerTrip™ Connectors and Accessories

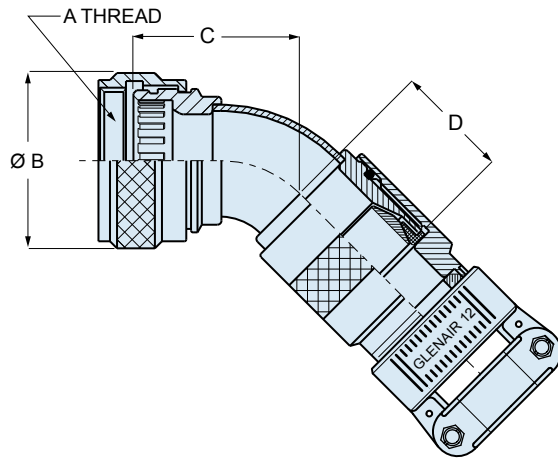
## 390-055 EMI/RFI Submersible Backshell

### 390PS055 STRAIGHT EXIT

Shell Size	A Thread	ø B Max.	
		In.	mm.
18	1.125-18 UNEF-2B	1.39	35.3
20	1.250-18 UNEF-2B	1.53	38.9
24	1.4375-18 UNEF-2B	1.72	43.7
28	1.8125-16 UN-2B	2.13	54.1
32	2.0625-16 UNS-2B	2.35	59.7
36	2.250-16 UN-2B	2.59	65.8
40	2.500-16 UN-2B	2.87	70.6

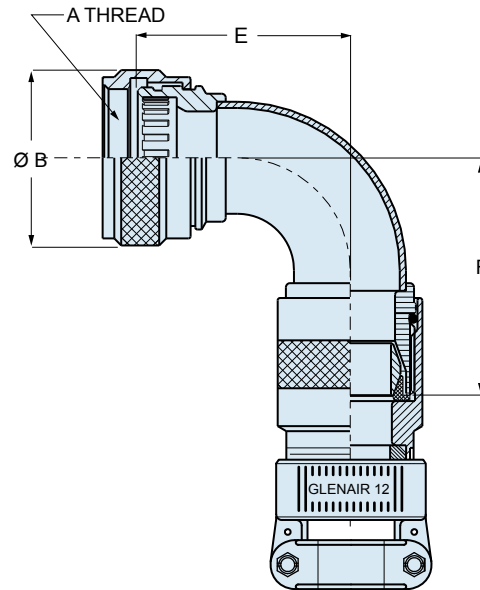


### 390PM055 45° EXIT



Shell Size	A Thread Class 2B	ø B Max.		C Max.		D Max.	
		In.	mm.	In.	mm.	In.	mm.
18	1.125-18 UNEF	1.39	35.3	1.250	31.8	2.468	62.7
20	1.250-18 UNEF	1.53	38.9	1.312	33.3	2.657	67.5
24	1.4375-18 UNEF	1.72	43.7	1.406	35.7	3.063	77.8
28	1.8125-16 UN	2.13	54.1	1.500	38.1	3.656	92.9
32	2.0625-16 UNS	2.35	59.7	1.675	42.5	3.845	97.7
36	2.250-16 UN	2.59	65.8	1.799	45.7	4.230	107.4
40	2.500-16 UN	2.87	70.6	1.861	47.3	4.459	113.3

### 390PN055 90° EXIT



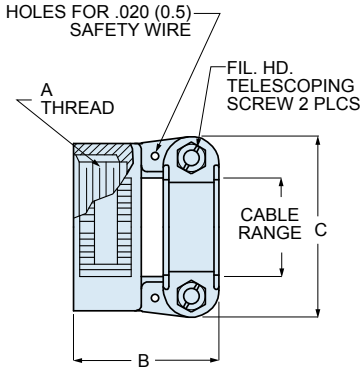
Shell Size	A Thread Class 2B	ø B Max.		E Max.		F Max.	
		In.	mm.	In.	mm.	In.	mm.
18	1.125-18 UNEF	1.39	35.3	1.906	48.4	1.812	46.0
20	1.250-18 UNEF	1.53	38.9	2.031	51.6	1.938	49.2
24	1.4375-18 UNEF	1.72	43.7	2.281	57.9	2.188	55.6
28	1.8125-16 UN	2.13	54.1	2.531	64.3	2.625	66.7
32	2.0625-16 UNS	2.35	59.7	2.625	66.7	2.895	73.5
36	2.250-16 UN	2.59	65.8	2.875	73.0	3.145	79.9
40	2.500-16 UN	2.87	70.6	3.025	76.8	3.295	83.7

# Series 970 PowerTrip™ Connectors and Accessories Accessories

390-055 EMI/RFI Submersible Backshell

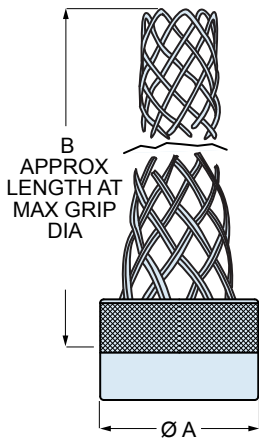


## SADDLE CLAMP DIMENSIONS



Clamp Size	Cable Range				A Thread Class 2B	B Max.		C Max.	
	Min.		Max.			In.	mm.	In.	mm.
	In.	mm.	In.	mm.					
06H	.250	6.4	.437	11.1	.750-20UNEF	1.301	33.04	1.145	29.1
08H	.387	9.8	.562	14.3	.875-20UNEF	1.301	33.04	1.332	33.8
10H	.350	8.9	.625	15.9	1.000-20UNEF	1.301	33.04	1.332	33.8
12H	.500	12.7	.750	19.1	1.1875-18UNEF	1.332	33.83	1.551	39.4
16H	.625	15.9	.937	23.8	1.4375-18UNEF	1.426	36.22	1.770	45.0
20H	.875	22.2	1.250	31.8	1.750-18UNS	1.613	40.97	2.113	53.7
24H	1.000	25.4	1.375	34.9	2.000-18UNS	1.645	41.78	2.363	60.0
28H	1.250	31.8	1.625	41.3	2.250-16UN	1.920	48.77	2.770	70.4
32H	1.437	36.5	1.875	47.6	2.500-16UN	1.920	48.77	3.020	76.7
36H	1.625	41.3	2.125	54.0	2.750-16UN	2.060	53.32	3.250	82.6
40H	1.875	47.6	2.375	60.3	3.000-16UN	2.060	53.32	3.500	88.9

## WIRE MESH GRIP DIMENSIONS



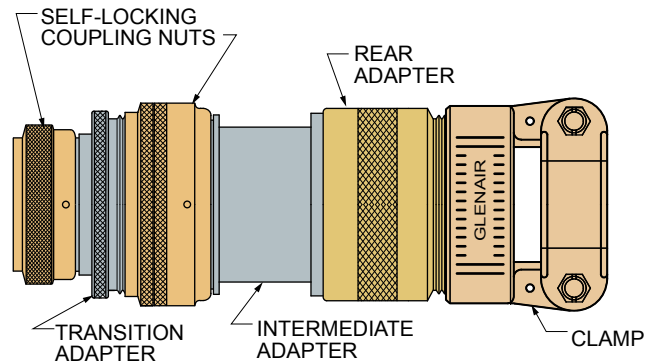
Grip Size	Cable Range				Ø A Max.		B Approx.	
	Min.		Max.		In.	mm.	In.	mm.
	In.	mm.	In.	mm.				
06K	.310	7.8	.438	11.1	.942	23.9	4.000	101
08K	.438	11.1	.500	12.7	1.067	27.1	4.120	105
10K	.500	12.7	.625	15.8	1.192	30.3	4.370	111
12K	.625	15.9	.750	19.1	1.380	35.1	5.000	127
14K	.750	19.1	.875	22.2	1.563	39.7	6.000	152
16K	.875	22.2	1.000	25.4	1.563	39.7	6.250	158
20K	1.000	25.4	1.250	31.8	1.875	47.6	7.250	184
24K	1.125	28.6	1.375	34.9	2.225	57.3	8.000	203
28K	1.375	34.9	1.625	41.2	2.505	63.6	8.500	216
32K	1.625	41.3	1.875	47.6	2.755	70.0	9.000	229
40K	2.125	53.9	2.375	60.3	3.225	82.7	9.500	241

## ALTERNATE CONFIGURATION FOR LARGE CABLES

If the cable diameter exceeds the diameter of the backshell shown in the table at right, the backshell will be supplied with a **transition adapter**. The clamp and adapters are first installed over the cable jacket, and then are threaded onto the transition adapter.

On straight exit backshells, the transition adapter does not affect the length. On 45° and 90° versions the transition adapter adds 1.00 inch (25.4mm) maximum to the backshell length.

Shell Size	Backshell Inside Diameter	
	In.	mm.
18	.72	18.3
20	.85	21.7
24	1.04	26.4
28	1.35	34.3
32	1.62	41.1
36	1.82	46.3
40	2.05	52.0





## Series 970 PowerTrip™ Connectors and Accessories Accessories

### 390PS086 EMI/RFI Submersible Backshell

#### 390PS086 SUBMERSIBLE HEAVY DUTY BACKSHELL WITH WIRE MESH CORDGRIP

Heavy duty backshell fits Series 970 connectors and withstands MIL-S-901 grade A high impact shock. Splined connector interface. Terminate cable shield to inner and outer ground rings. Stainless steel wire mesh cordgrip provides strain relief to heavy duty power cables. Withstands six feet water immersion for 48 hours. Aluminum or stainless steel with silicone O-rings and cable gland. Meets environmental, electrical and mechanical requirements of MIL-DTL-28840.



#### MATERIALS AND FINISHES

Adapters, crimp rings, follower, coupling nut:  
aluminum or stainless steel. See table for  
finish options.

Hardware: stainless steel

Cable sealing gland, O-rings: silicone

Wire mesh cordgrip: stainless steel

#### INSTALLATION TORQUE

Shell Size	Recommended Installation Torque Inch-Pounds ± 5
18	116
20, 24	136
28, 32, 36	148
40	164

#### HOW TO ORDER

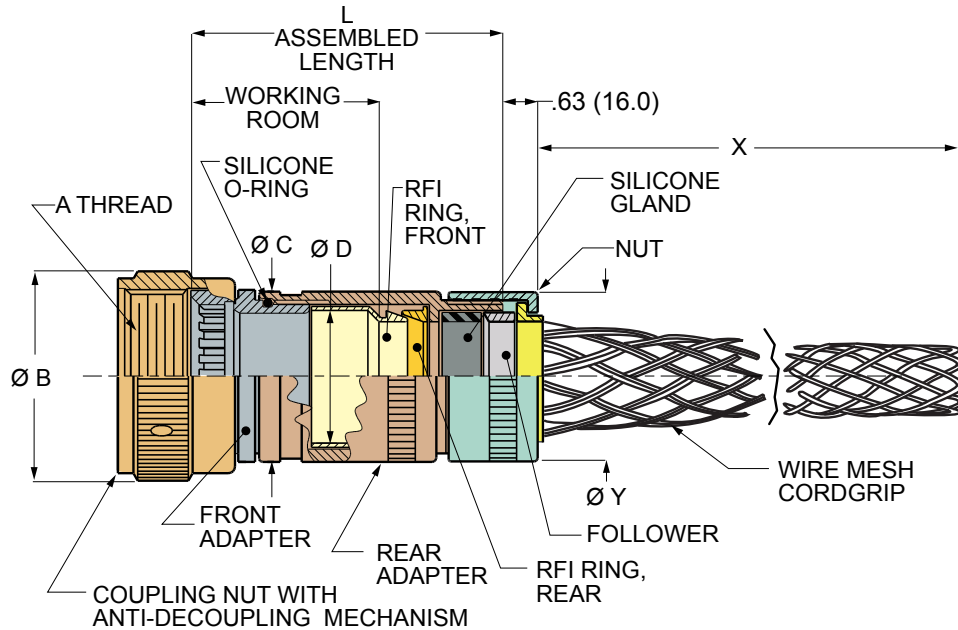
SHELL SIZE	CABLE RANGE				ALUMINUM/ NICKEL	ALUMINUM/ NICKEL-PTFE	ALUMINUM/ OD CADMIUM	ALUMINUM/ BLACK ZINC- NICKEL	STAINLESS STEEL/ PASSIVATED
	Min.		Max.						
	In.	mm.	In.	mm.					
18	.500	12.70	.625	15.88	<a href="#">390PS086ME1810</a>	<a href="#">390PS086MT1810</a>	<a href="#">390PS086NF1810</a>	<a href="#">390PS086ZR1810</a>	<a href="#">390PS086Z11810</a>
	.625	15.88	.750	19.05	<a href="#">390PS086ME1812</a>	<a href="#">390PS086MT1812</a>	<a href="#">390PS086NF1812</a>	<a href="#">390PS086ZR1812</a>	<a href="#">390PS086Z11812</a>
	.750	19.05	.875	22.23	<a href="#">390PS086ME1814</a>	<a href="#">390PS086MT1814</a>	<a href="#">390PS086NF1814</a>	<a href="#">390PS086ZR1814</a>	<a href="#">390PS086Z11814</a>
20	.500	12.70	.625	15.88	<a href="#">390PS086ME2010</a>	<a href="#">390PS086MT2010</a>	<a href="#">390PS086NF2010</a>	<a href="#">390PS086ZR2010</a>	<a href="#">390PS086Z12010</a>
	.625	15.88	.750	19.05	<a href="#">390PS086ME2012</a>	<a href="#">390PS086MT2012</a>	<a href="#">390PS086NF2012</a>	<a href="#">390PS086ZR2012</a>	<a href="#">390PS086Z12012</a>
	.750	19.05	.875	22.23	<a href="#">390PS086ME2014</a>	<a href="#">390PS086MT2014</a>	<a href="#">390PS086NF2014</a>	<a href="#">390PS086ZR2014</a>	<a href="#">390PS086Z12014</a>
24	.625	15.88	.750	19.05	<a href="#">390PS086ME2412</a>	<a href="#">390PS086MT2412</a>	<a href="#">390PS086NF2412</a>	<a href="#">390PS086ZR2412</a>	<a href="#">390PS086Z12412</a>
	.750	19.05	.875	22.23	<a href="#">390PS086ME2414</a>	<a href="#">390PS086MT2414</a>	<a href="#">390PS086NF2414</a>	<a href="#">390PS086ZR2414</a>	<a href="#">390PS086Z12414</a>
	1.000	25.40	1.250	31.75	<a href="#">390PS086ME2420</a>	<a href="#">390PS086MT2420</a>	<a href="#">390PS086NF2420</a>	<a href="#">390PS086ZR2420</a>	<a href="#">390PS086Z12420</a>
28	.750	19.05	.875	22.23	<a href="#">390PS086ME2814</a>	<a href="#">390PS086MT2814</a>	<a href="#">390PS086NF2814</a>	<a href="#">390PS086ZR2814</a>	<a href="#">390PS086Z12814</a>
	1.000	25.40	1.250	31.75	<a href="#">390PS086ME2820</a>	<a href="#">390PS086MT2820</a>	<a href="#">390PS086NF2820</a>	<a href="#">390PS086ZR2820</a>	<a href="#">390PS086Z12820</a>
	1.125	28.58	1.375	34.93	<a href="#">390PS086ME2824</a>	<a href="#">390PS086MT2824</a>	<a href="#">390PS086NF2824</a>	<a href="#">390PS086ZR2824</a>	<a href="#">390PS086Z12824</a>
32	1.125	28.58	1.375	34.93	<a href="#">390PS086ME3224</a>	<a href="#">390PS086MT3224</a>	<a href="#">390PS086NF3224</a>	<a href="#">390PS086ZR3224</a>	<a href="#">390PS086Z13224</a>
	1.375	34.93	1.625	41.28	<a href="#">390PS086ME3228</a>	<a href="#">390PS086MT3228</a>	<a href="#">390PS086NF3228</a>	<a href="#">390PS086ZR3228</a>	<a href="#">390PS086Z13228</a>
	1.625	41.28	1.875	47.63	<a href="#">390PS086ME3232</a>	<a href="#">390PS086MT3232</a>	<a href="#">390PS086NF3232</a>	<a href="#">390PS086ZR3232</a>	<a href="#">390PS086Z13232</a>
36	1.125	28.58	1.375	34.93	<a href="#">390PS086ME3624</a>	<a href="#">390PS086MT3624</a>	<a href="#">390PS086NF3624</a>	<a href="#">390PS086ZR3624</a>	<a href="#">390PS086Z13624</a>
	1.375	34.93	1.625	41.28	<a href="#">390PS086ME3628</a>	<a href="#">390PS086MT3628</a>	<a href="#">390PS086NF3628</a>	<a href="#">390PS086ZR3628</a>	<a href="#">390PS086Z13628</a>
	1.625	41.28	1.875	47.63	<a href="#">390PS086ME3632</a>	<a href="#">390PS086MT3632</a>	<a href="#">390PS086NF3632</a>	<a href="#">390PS086ZR3632</a>	<a href="#">390PS086Z13632</a>
	2.125	53.98	2.375	60.33	<a href="#">390PS086ME3640</a>	<a href="#">390PS086MT3640</a>	<a href="#">390PS086NF3640</a>	<a href="#">390PS086ZR3640</a>	<a href="#">390PS086Z13640</a>
40	1.125	28.58	1.375	34.93	<a href="#">390PS086ME4024</a>	<a href="#">390PS086MT4024</a>	<a href="#">390PS086NF4024</a>	<a href="#">390PS086ZR4024</a>	<a href="#">390PS086Z14024</a>
	1.375	34.93	1.625	41.28	<a href="#">390PS086ME4028</a>	<a href="#">390PS086MT4028</a>	<a href="#">390PS086NF4028</a>	<a href="#">390PS086ZR4028</a>	<a href="#">390PS086Z14028</a>
	1.625	41.28	1.875	47.63	<a href="#">390PS086ME4032</a>	<a href="#">390PS086MT4032</a>	<a href="#">390PS086NF4032</a>	<a href="#">390PS086ZR4032</a>	<a href="#">390PS086Z14032</a>
	2.125	53.98	2.375	60.33	<a href="#">390PS086ME4040</a>	<a href="#">390PS086MT4040</a>	<a href="#">390PS086NF4040</a>	<a href="#">390PS086ZR4040</a>	<a href="#">390PS086Z14040</a>

# Series 970 PowerTrip™ Connectors and Accessories Accessories

## 390PS086 EMI/RFI Submersible Backshell



### 390PS086 BACKSHELL WITH WIRE MESH CORD GRIP



Shell Size	Cable Range				L Length ±.12 (3.0)		Working Room		A Thread Class 2B	ØB Max.		ØC Max.		ØD Min.		X Ref.		Y Max.	
	Min.		Max.		In.	mm.	In.	mm.		In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.
	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.
18	.500	12.70	.625	15.88	4.62	117.4	3.00	76.2	1.125-18 UNEF	1.44	36.6	1.406	35.71	1.000	25.40	4.37	111.0	1.16	29.5
	.625	15.88	.750	19.05	4.62	117.4	3.00	76.2	1.125-18 UNEF	1.44	36.6	1.406	35.71	1.000	25.40	5.00	127.0	1.34	34.0
	.750	19.05	.875	22.23	4.62	117.4	3.00	76.2	1.125-18 UNEF	1.44	36.6	1.531	38.89	1.125	28.58	5.00	127.0	1.59	40.4
20	.500	12.70	.625	15.88	4.62	117.4	3.00	76.2	1.250-18 UNEF	1.54	39.1	1.531	38.89	1.125	28.58	4.37	111.0	1.16	29.5
	.625	15.88	.750	19.05	4.62	117.4	3.00	76.2	1.250-18 UNEF	1.54	39.1	1.531	38.89	1.125	28.58	6.00	152.4	1.34	34.0
	.750	19.05	.875	22.23	4.62	117.4	3.00	76.2	1.250-18 UNEF	1.54	39.1	1.656	42.06	1.250	31.75	5.00	127.0	1.59	40.4
24	.625	15.88	.750	19.05	5.12	130.1	3.50	88.9	1.438-18 UNEF	1.73	43.9	1.656	42.06	1.250	31.75	6.00	152.4	1.34	34.0
	.750	19.05	.875	22.23	5.12	130.1	3.50	88.9	1.438-18 UNEF	1.73	43.9	1.781	45.24	1.375	34.93	5.00	127.0	1.59	40.4
	1.000	25.40	1.250	31.75	5.12	130.1	3.50	88.9	1.438-18 UNEF	1.73	43.9	1.781	45.24	1.375	34.93	6.25	158.8	1.94	49.3
28	.750	19.05	.875	22.23	5.12	130.1	3.50	88.9	1.812-16 UN	2.14	54.4	2.156	54.76	1.750	44.45	5.00	127.0	1.59	40.4
	1.000	25.40	1.250	31.75	5.12	130.1	3.50	88.9	1.812-16 UN	2.14	54.4	2.156	54.76	1.750	44.45	6.25	158.8	1.94	49.3
	1.125	28.58	1.375	34.93	5.12	130.1	3.50	88.9	1.812-16 UN	2.14	54.4	2.156	54.76	1.750	44.45	7.25	184.2	2.19	55.6
32	1.125	28.58	1.375	34.93	5.12	130.1	3.50	88.9	2.062-16 UNS	2.37	60.2	2.281	57.94	1.875	47.63	7.25	184.2	2.19	55.6
	1.375	34.93	1.625	41.28	6.12	155.5	4.50	114.3	2.062-16 UNS	2.37	60.2	2.281	57.94	1.875	47.63	8.00	203.2	2.43	61.7
	1.625	41.28	1.875	47.63	6.12	155.5	4.50	114.3	2.062-16 UNS	2.37	60.2	2.281	57.94	1.875	47.63	10.00	254.0	2.69	68.3
36	1.125	28.58	1.375	34.93	6.12	155.5	4.50	114.3	2.250-16 UN	2.63	66.8	2.531	64.29	2.125	53.98	7.25	184.2	2.19	55.6
	1.375	34.93	1.625	41.28	6.12	155.5	4.50	114.3	2.250-16 UN	2.63	66.8	2.531	64.29	2.125	53.98	8.00	203.2	2.43	61.7
	1.625	41.28	1.875	47.63	6.12	155.5	4.50	114.3	2.250-16 UN	2.63	66.8	2.531	64.29	2.125	53.98	10.00	254.0	2.69	68.3
	2.125	53.98	2.375	60.33	6.62	168.2	5.00	127.0	2.250-16 UN	2.63	66.8	3.031	76.99	2.625	66.68	12.60	320.0	3.19	81.0
40	1.125	28.58	1.375	34.93	6.12	155.5	4.50	114.3	2.500-16 UN	2.93	74.4	2.781	70.64	2.375	60.33	7.25	184.2	2.19	55.6
	1.375	34.93	1.625	41.28	6.12	155.5	4.50	114.3	2.500-16 UN	2.93	74.4	2.781	70.64	2.375	60.33	8.00	203.2	2.43	61.7
	1.625	41.28	1.875	47.63	6.12	155.5	4.50	114.3	2.500-16 UN	2.93	74.4	2.781	70.64	2.375	60.33	10.00	254.0	2.69	68.3
	2.125	53.98	2.375	60.33	6.62	168.2	5.00	127.0	2.500-16 UN	2.93	74.4	3.031	76.99	2.625	66.68	12.60	320.0	3.19	81.0



## Series 970 PowerTrip™ Connectors and Accessories Accessories

### 390PS036 EMI/RFI Submersible Backshell

#### 390PS036 SUBMERSIBLE EMI/RFI BACKSHELL WITH SADDLE BAR CABLE CLAMP

Heavy duty backshell fits Series 970 connectors and withstands MIL-S-901 grade A high impact shock. Splined connector interface. Terminate cable shield to inner and outer ground rings. Heavy duty saddle bar cable clamp with telescoping stainless steel screws, lockwashers and lockwire holes. Meets AS85049/42 Class 1A requirements. Withstands six feet water immersion for 48 hours. Aluminum or stainless steel with silicone O-rings and cable gland. Meets environmental, electrical and mechanical requirements of MIL-DTL-28840.



#### MATERIALS AND FINISHES

Adapters, crimp rings, follower, coupling nut, cable clamp: aluminum or stainless steel. See Ordering Information for finish options.

Hardware: stainless steel

Cable sealing gland, O-rings: silicone

Wire mesh cordgrip: stainless steel

#### INSTALLATION TORQUE

Shell Size	Recommended Installation Torque Inch-Pounds ± 5
18	116
20, 24	136
28, 32, 36	148
40	164

#### HOW TO ORDER

SHELL SIZE	CABLE RANGE				ALUMINUM/ NICKEL	ALUMINUM/ NICKEL-PTFE	ALUMINUM/ OD CADMIUM	ALUMINUM/ BLACK ZINC- NICKEL	STAINLESS STEEL/ PASSIVATED
	Min.		Max.						
	In.	mm.	In.	mm.					
18	.375	9.53	.625	15.88	<a href="#">390PS036ME1810</a>	<a href="#">390PS036MT1810</a>	<a href="#">390PS036NF1810</a>	<a href="#">390PS036ZR1810</a>	<a href="#">390PS036Z11810</a>
	.438	11.13	.750	19.05	<a href="#">390PS036ME1812</a>	<a href="#">390PS036MT1812</a>	<a href="#">390PS036NF1812</a>	<a href="#">390PS036ZR1812</a>	<a href="#">390PS036Z11812</a>
	.625	15.88	.938	23.83	<a href="#">390PS036ME1816</a>	<a href="#">390PS036MT1816</a>	<a href="#">390PS036NF1816</a>	<a href="#">390PS036ZR1816</a>	<a href="#">390PS036Z11816</a>
20	.375	9.53	.625	15.88	<a href="#">390PS036ME2010</a>	<a href="#">390PS036MT2010</a>	<a href="#">390PS036NF2010</a>	<a href="#">390PS036ZR2010</a>	<a href="#">390PS036Z12010</a>
	.438	11.13	.750	19.05	<a href="#">390PS036ME2012</a>	<a href="#">390PS036MT2012</a>	<a href="#">390PS036NF2012</a>	<a href="#">390PS036ZR2012</a>	<a href="#">390PS036Z12012</a>
	.625	15.88	.938	23.83	<a href="#">390PS036ME2016</a>	<a href="#">390PS036MT2016</a>	<a href="#">390PS036NF2016</a>	<a href="#">390PS036ZR2016</a>	<a href="#">390PS036Z12016</a>
24	.438	11.13	.750	19.05	<a href="#">390PS036ME2412</a>	<a href="#">390PS036MT2412</a>	<a href="#">390PS036NF2412</a>	<a href="#">390PS036ZR2412</a>	<a href="#">390PS036Z12412</a>
	.625	15.88	.938	23.83	<a href="#">390PS036ME2416</a>	<a href="#">390PS036MT2416</a>	<a href="#">390PS036NF2416</a>	<a href="#">390PS036ZR2416</a>	<a href="#">390PS036Z12416</a>
	.875	22.23	1.250	31.75	<a href="#">390PS036ME2420</a>	<a href="#">390PS036MT2420</a>	<a href="#">390PS036NF2420</a>	<a href="#">390PS036ZR2420</a>	<a href="#">390PS036Z12420</a>
28	.625	15.88	.938	23.83	<a href="#">390PS036ME2816</a>	<a href="#">390PS036MT2816</a>	<a href="#">390PS036NF2816</a>	<a href="#">390PS036ZR2816</a>	<a href="#">390PS036Z12816</a>
	.875	22.23	1.250	31.75	<a href="#">390PS036ME2820</a>	<a href="#">390PS036MT2820</a>	<a href="#">390PS036NF2820</a>	<a href="#">390PS036ZR2820</a>	<a href="#">390PS036Z12820</a>
	1.000	25.40	1.380	35.05	<a href="#">390PS036ME2824</a>	<a href="#">390PS036MT2824</a>	<a href="#">390PS036NF2824</a>	<a href="#">390PS036ZR2824</a>	<a href="#">390PS036Z12824</a>
32	1.000	25.40	1.380	35.05	<a href="#">390PS036ME3224</a>	<a href="#">390PS036MT3224</a>	<a href="#">390PS036NF3224</a>	<a href="#">390PS036ZR3224</a>	<a href="#">390PS036Z13224</a>
	1.250	31.75	1.625	41.28	<a href="#">390PS036ME3228</a>	<a href="#">390PS036MT3228</a>	<a href="#">390PS036NF3228</a>	<a href="#">390PS036ZR3228</a>	<a href="#">390PS036Z13228</a>
	1.437	36.50	1.875	47.63	<a href="#">390PS036ME3232</a>	<a href="#">390PS036MT3232</a>	<a href="#">390PS036NF3232</a>	<a href="#">390PS036ZR3232</a>	<a href="#">390PS036Z13232</a>
36	1.000	25.40	1.375	34.93	<a href="#">390PS036ME3624</a>	<a href="#">390PS036MT3624</a>	<a href="#">390PS036NF3624</a>	<a href="#">390PS036ZR3624</a>	<a href="#">390PS036Z13624</a>
	1.250	31.75	1.625	41.28	<a href="#">390PS036ME3628</a>	<a href="#">390PS036MT3628</a>	<a href="#">390PS036NF3628</a>	<a href="#">390PS036ZR3628</a>	<a href="#">390PS036Z13628</a>
	1.437	36.50	1.875	47.63	<a href="#">390PS036ME3632</a>	<a href="#">390PS036MT3632</a>	<a href="#">390PS036NF3632</a>	<a href="#">390PS036ZR3632</a>	<a href="#">390PS036Z13632</a>
	1.875	25.40	2.375	60.33	<a href="#">390PS036ME3640</a>	<a href="#">390PS036MT3640</a>	<a href="#">390PS036NF3640</a>	<a href="#">390PS036ZR3640</a>	<a href="#">390PS036Z13640</a>
40	1.000	47.63	1.375	34.93	<a href="#">390PS036ME4024</a>	<a href="#">390PS036MT4024</a>	<a href="#">390PS036NF4024</a>	<a href="#">390PS036ZR4024</a>	<a href="#">390PS036Z14024</a>
	1.250	31.75	1.625	41.28	<a href="#">390PS036ME4028</a>	<a href="#">390PS036MT4028</a>	<a href="#">390PS036NF4028</a>	<a href="#">390PS036ZR4028</a>	<a href="#">390PS036Z14028</a>
	1.437	36.50	1.875	47.63	<a href="#">390PS036ME4032</a>	<a href="#">390PS036MT4032</a>	<a href="#">390PS036NF4032</a>	<a href="#">390PS036ZR4032</a>	<a href="#">390PS036Z14032</a>
	2.125	47.63	2.375	60.33	<a href="#">390PS036ME4040</a>	<a href="#">390PS036MT4040</a>	<a href="#">390PS036NF4040</a>	<a href="#">390PS036ZR4040</a>	<a href="#">390PS036Z14040</a>

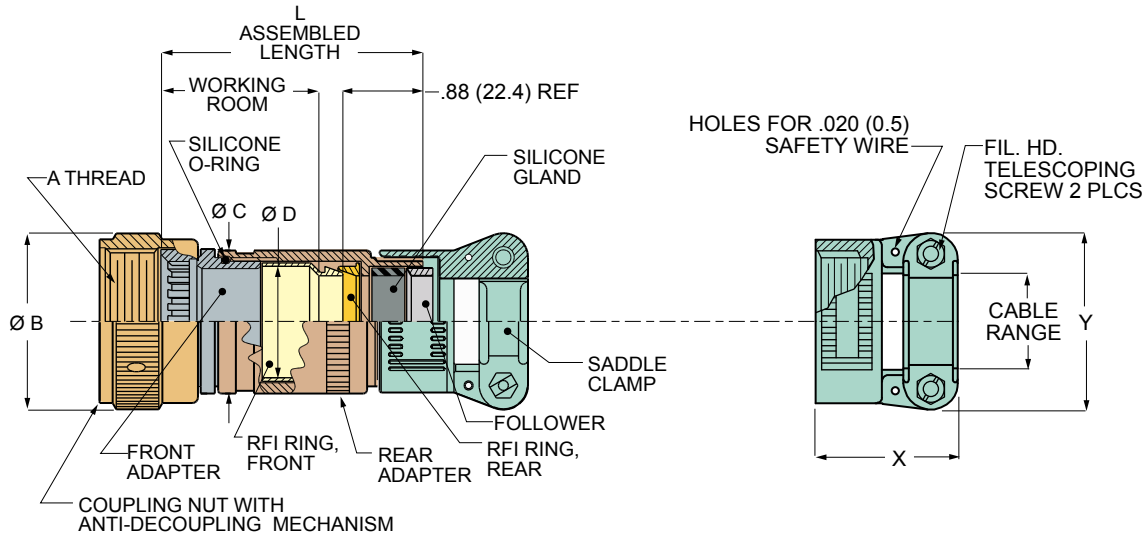


# Series 970 PowerTrip™ Connectors and Accessories Accessories

## 390PS036 EMI/RFI Submersible Backshell



### 390PS036 BACKSHELL WITH SADDLE BAR CLAMP



Shell Size	Cable Range				L Length ±.12 (3.0)		Working Room		A Thread Class 2B	ØB Max.		ØC Max.		ØD Min.		ØX Max.		Y Ref.	
	Min.		Max.		In.	mm.	In.	mm.		In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.
	In.	mm.	In.	mm.	In.	mm.	In.	mm.		In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.
18	.375	9.53	.625	15.88	4.62	117.4	3.00	76.2	1.125-18 UNEF	1.44	36.6	1.406	35.71	1.000	25.40	1.281	32.54	1.312	33.32
	.438	11.13	.750	19.05	4.62	117.4	3.00	76.2	1.125-18 UNEF	1.44	36.6	1.406	35.71	1.000	25.40	1.312	33.32	1.593	40.46
	.625	15.88	.938	23.83	4.62	117.4	3.00	76.2	1.125-18 UNEF	1.44	36.6	1.531	38.89	1.125	28.58	1.406	35.71	1.750	44.45
20	.375	9.53	.625	15.88	4.62	117.4	3.00	76.2	1.250-18 UNEF	1.54	39.1	1.531	38.89	1.125	28.58	1.281	32.54	1.312	33.32
	.438	11.13	.750	19.05	4.62	117.4	3.00	76.2	1.250-18 UNEF	1.54	39.1	1.531	38.89	1.125	28.58	1.312	33.32	1.593	40.46
	.625	15.88	.938	23.83	4.62	117.4	3.00	76.2	1.250-18 UNEF	1.54	39.1	1.656	42.06	1.250	31.75	1.406	35.71	1.750	44.45
24	.438	11.13	.750	19.05	5.12	130.1	3.50	88.9	1.438-18 UNEF	1.73	43.9	1.656	42.06	1.250	31.75	1.312	33.32	1.593	40.46
	.625	15.88	.938	23.83	5.12	130.1	3.50	88.9	1.438-18 UNEF	1.73	43.9	1.781	45.24	1.375	34.93	1.593	40.46	1.750	44.45
	.875	22.23	1.250	31.75	5.12	130.1	3.50	88.9	1.438-18 UNEF	1.73	43.9	1.781	45.24	1.375	34.93	1.625	41.28	2.093	53.16
28	.625	15.88	.938	23.83	5.12	130.1	3.50	88.9	1.812-16 UN	2.14	54.4	2.156	54.76	1.750	44.45	1.406	35.71	1.750	44.45
	.875	22.23	1.250	31.75	5.12	130.1	3.50	88.9	1.812-16 UN	2.14	54.4	2.156	54.76	1.750	44.45	1.593	40.46	2.093	53.16
	1.000	25.40	1.380	35.05	5.12	130.1	3.50	88.9	1.812-16 UN	2.14	54.4	2.156	54.76	1.750	44.45	1.625	41.28	2.343	59.51
32	1.000	25.40	1.380	35.05	5.12	130.1	3.50	88.9	2.062-16 UNS	2.37	60.2	2.281	57.94	1.875	47.63	1.625	41.28	2.343	59.51
	1.250	31.75	1.625	41.28	6.12	155.5	4.50	114.3	2.062-16 UNS	2.37	60.2	2.281	57.94	1.875	47.63	1.900	48.26	2.750	69.85
	1.437	36.50	1.875	47.63	6.12	155.5	4.50	114.3	2.062-16 UNS	2.37	60.2	2.281	57.94	1.875	47.63	1.900	48.26	3.000	76.20
36	1.000	25.40	1.375	34.93	6.12	155.5	4.50	114.3	2.250-16 UN	2.63	66.8	2.531	64.29	2.125	53.98	1.625	41.28	2.343	59.51
	1.250	31.75	1.625	41.28	6.12	155.5	4.50	114.3	2.250-16 UN	2.63	66.8	2.531	64.29	2.125	53.98	1.900	48.26	2.750	69.85
	1.437	36.50	1.875	47.63	6.12	155.5	4.50	114.3	2.250-16 UN	2.63	66.8	2.531	64.29	2.125	53.98	1.900	48.26	3.000	76.20
	1.875	47.63	2.375	60.33	6.62	168.2	5.00	127.0	2.250-16 UN	2.63	66.8	3.031	76.99	2.625	66.68	2.060	52.32	3.500	88.90
40	1.000	25.40	1.375	34.93	6.12	155.5	4.50	114.3	2.500-16 UN	2.93	74.4	2.781	70.64	2.375	60.33	1.625	41.28	2.343	59.51
	1.250	31.75	1.625	41.28	6.12	155.5	4.50	114.3	2.500-16 UN	2.93	74.4	2.781	70.64	2.375	60.33	1.900	48.26	2.750	69.85
	1.437	36.50	1.875	47.63	6.12	155.5	4.50	114.3	2.500-16 UN	2.93	74.4	2.781	70.64	2.375	60.33	1.900	48.26	3.000	76.20
	1.875	47.63	2.375	60.33	6.62	168.2	5.00	127.0	2.500-16 UN	2.93	74.4	3.031	76.99	2.625	66.68	2.060	52.32	3.500	88.90

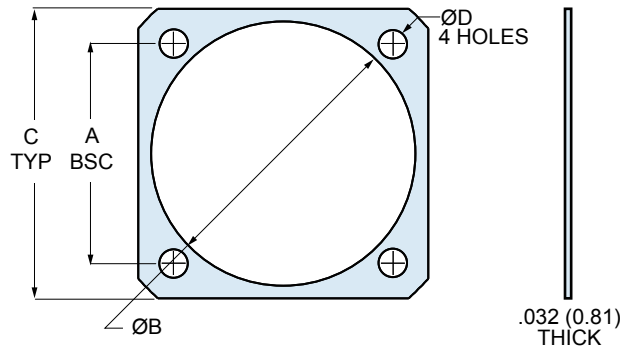
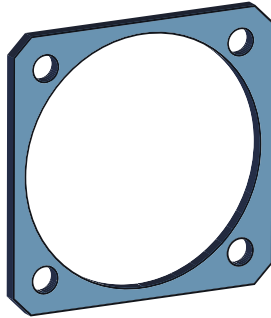


# Series 970 PowerTrip™ Connectors and Accessories Accessories

## 930-014 Flange Mount Gaskets

### 930-014 FLANGE MOUNT GASKETS

Flange mount gaskets protect equipment from moisture ingress and contamination. Conductive gaskets reduce EMI problems. These die-cut elastomeric gaskets fit Series 970 square flange connectors.



#### About Fluorosilicone

Fluorosilicone (FVMQ) offers excellent resistance to hydrocarbons, oils, petroleum fuels and greases. Suitable for use with mineral-based hydraulic fluids. Continuous operating temperature -60°C to +175°C, +200°C intermittent. Meets MIL-DTL-25988.

#### FLUOROSILICONE GASKETS

Shell Size	Part Number	A Bsc.		B Dia.		C Typ.		D Dia.	
		In.	mm.	In.	mm.	In.	mm.	In.	mm.
18	930-014F18	1.015	25.78	1.187	30.15	1.383	35.13	.146	3.71
20	930-014F20	1.140	28.96	1.374	34.90	1.508	38.30	.146	3.71
24	930-014F24	1.281	32.54	1.562	39.67	1.718	43.64	.146	3.71
28	930-014F28	1.568	39.83	1.874	47.60	2.138	54.31	.170	4.32
32	930-014F32	1.734	44.04	2.062	52.37	2.328	59.13	.170	4.32
36	930-014F36	1.984	50.39	2.302	58.47	2.578	65.48	.170	4.32
40	930-014F40	2.234	56.74	2.562	65.07	2.828	71.83	.170	4.32

#### About Viton®

Viton® fluoroelastomer (FKM) offers excellent resistance to high temperatures, ozone and solvents. Continuous operating temperature -20°C to +200°C.

#### VITON® GASKETS

Shell Size	Part Number	A Bsc.		B Dia.		C Typ.		D Dia.	
		In.	mm.	In.	mm.	In.	mm.	In.	mm.
18	930-014V18	1.015	25.78	1.187	30.15	1.383	35.13	.146	3.71
20	930-014V20	1.140	28.96	1.374	34.90	1.508	38.30	.146	3.71
24	930-014V24	1.281	32.54	1.562	39.67	1.718	43.64	.146	3.71
28	930-014V28	1.568	39.83	1.874	47.60	2.138	54.31	.170	4.32
32	930-014V32	1.734	44.04	2.062	52.37	2.328	59.13	.170	4.32
36	930-014V36	1.984	50.39	2.302	58.47	2.578	65.48	.170	4.32
40	930-014V40	2.234	56.74	2.562	65.07	2.828	71.83	.170	4.32

#### About Conductive Fluorosilicone

High performance silver-filled fluorosilicone has excellent corrosion resistance in harsh environments. 90 dB plane wave shielding effectiveness at 10GHz, continuous operating temperature -55°C to +160°C, resistant to solvents and fuels. Material meets MIL-DTL-83528 Type D.

#### CONDUCTIVE FLUOROSILICONE GASKETS

Shell Size	Part Number	A Bsc.		B Dia.		C Typ.		D Dia.	
		In.	mm.	In.	mm.	In.	mm.	In.	mm.
18	930-014X18	1.015	25.78	1.187	30.15	1.383	35.13	.146	3.71
20	930-014X20	1.140	28.96	1.374	34.90	1.508	38.30	.146	3.71
24	930-014X24	1.281	32.54	1.562	39.67	1.718	43.64	.146	3.71
28	930-014X28	1.568	39.83	1.874	47.60	2.138	54.31	.170	4.32
32	930-014X32	1.734	44.04	2.062	52.37	2.328	59.13	.170	4.32
36	930-014X36	1.984	50.39	2.302	58.47	2.578	65.48	.170	4.32
40	930-014X40	2.234	56.74	2.562	65.07	2.828	71.83	.170	4.32

**METAL PROTECTIVE COVERS**




Metal covers protect unmated Series 970 connectors. Available with no attachment (see table below for part numbers), or choose sash chain, wire rope or nylon cord attachments from the ordering table on the following page.



*Plug Cover*



*Receptacle Cover*

ATTACHMENT OPTIONS	
 <b>Sash Chain</b>	#8 sash chain, 300 series stainless steel, passivated. Glenair's most popular attachment option for circular connector covers.
 <b>Fluoropolymer Coated SST Wire Rope</b>	Tough, flexible translucent FEP fluoropolymer® jacket over stainless steel, +200°C., resists weather, chemicals and abrasion. Glenair's best selling wire rope. 1/16 inch diameter uncoated, .09 inch (2.3 mm) finished diameter.
 <b>Black Nylon Cord</b>	Black braided nylon cord. Very flexible, very good abrasion resistance, good chemical resistance. .120" (3mm) diameter. +125°C.

MATERIALS AND FINISHES	
<b>Cover</b>	Aluminum or Stainless Steel. See ordering information for finish options.
<b>Gasket (Receptacle Cover)</b>	Silicone
<b>Rivet, Ring, Clevis</b>	Stainless Steel

**PROTECTIVE COVERS WITH NO ATTACHMENT (SEE NEXT PAGE FOR ATTACHMENT OPTIONS)**

SHELL SIZE	THREAD SIZE	TYPE	ALUMINUM/ NICKEL	ALUMINUM/ NICKEL- PTFE	ALUMINUM/ OD CADMIUM	ALUMINUM/ BLACK ZINC-NICKEL	STAINLESS STEEL/ PASSIVATED
18	1.125-.1P-.3L-TS	Plug Cover	660PS097ME18N	660PS097MT18N	660PS097NF18N	660PS097ZR18N	660PS097Z118N
		Receptacle Cover	660PS098ME18N	660PS098MT18N	660PS098NF18N	660PS098ZR18N	660PS098Z118N
20	1.250-.1P-.3L-TS	Plug Cover	660PS097ME20N	660PS097MT20N	660PS097NF20N	660PS097ZR20N	660PS097Z120N
		Receptacle Cover	660PS098ME20N	660PS098MT20N	660PS098NF20N	660PS098ZR20N	660PS098Z120N
24	1.500-.1P-.3L-TS	Plug Cover	660PS097ME24N	660PS097MT24N	660PS097NF24N	660PS097ZR24N	660PS097Z124N
		Receptacle Cover	660PS098ME24N	660PS098MT24N	660PS098NF24N	660PS098ZR24N	660PS098Z124N
28	1.750-.1P-.3L-TS	Plug Cover	660PS097ME28N	660PS097MT28N	660PS097NF28N	660PS097ZR28N	660PS097Z128N
		Receptacle Cover	660PS098ME28N	660PS098MT28N	660PS098NF28N	660PS098ZR28N	660PS098Z128N
32	2.000-.1P-.3L-TS	Plug Cover	660PS097ME32N	660PS097MT32N	660PS097NF32N	660PS097ZR32N	660PS097Z132N
		Receptacle Cover	660PS098ME32N	660PS098MT32N	660PS098NF32N	660PS098ZR32N	660PS098Z132N
36	2.250-.1P-.3L-TS	Plug Cover	660PS097ME36N	660PS097MT36N	660PS097NF36N	660PS097ZR36N	660PS097Z136N
		Receptacle Cover	660PS098ME36N	660PS098MT36N	660PS098NF36N	660PS098ZR36N	660PS098Z136N
40	2.500-.1P-.3L-TS	Plug Cover	660PS097ME40N	660PS097MT40N	660PS097NF40N	660PS097ZR40N	660PS097Z140N
		Receptacle Cover	660PS098ME40N	660PS098MT40N	660PS098NF40N	660PS098ZR40N	660PS098Z140N



# Series 970 PowerTrip™ Connectors and Accessories Accessories 660PS097 & 098 Protective Covers

## PROTECTIVE COVERS

Attach covers to panel or cable connector with sash chain or rope. Large ring fits under jam nut of panel mount receptacle or over accessory thread of cable connector (captivate with backshell or adapter). Ring terminal fits #4, #6 or #8 screws on backshell or square flange panel receptacle mounting screws. Split rings also available-see next page.

### HOW TO ORDER

SERIES	SHELL MATERIAL / FINISH	SHELL SIZE	ATTACHMENT TYPE	ATTACHMENT LENGTH	FITTING TYPE AND DIAMETER (SEE NEXT PAGE FOR ADDITIONAL SIZES)																																
<b>660PS097</b> Plug Cover    <b>660PS098</b> Receptacle Cover  	<b>ME</b> Aluminum / Electroless Nickel / RoHS Compliant  <b>NF</b> Aluminum / Cadmium with Olive Drab Chromate	<b>18</b> <b>20</b> <b>24</b> <b>28</b> <b>32</b> <b>36</b> <b>40</b>	<b>N</b> No attachment	Length in Inches	Ring Terminal or Clevis for Attaching With #4, #6 or #8 Screw  <div style="display: flex; justify-content: space-around;"> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th>Code</th> <th>Screw Size</th> <th>Ring I.D.</th> </tr> </thead> <tbody> <tr><td>-06</td><td>#4</td><td>.125</td></tr> <tr><td>-09</td><td>#6</td><td>.156</td></tr> <tr><td>-03</td><td>#8</td><td>.191</td></tr> </tbody> </table>	Code	Screw Size	Ring I.D.	-06	#4	.125	-09	#6	.156	-03	#8	.191																				
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			-06	#4		.125																															
			-09	#6		.156																															
			-03	#8		.191																															
	<b>S</b> Sash Chain	3 inches																																			
			<b>4</b> 4 inches																																		
	<b>H</b> Fluoro-polymer Coated SST Wire Rope	<b>5</b> 5 inches  <b>6</b> 6 inches																																			
			<b>G</b> Black Nylon Rope	Other lengths are available, including fractional sizes. EXAMPLE: for a 7 1/2 inch length, use 7.5																																	
	Ring for Attaching Under Jam Nut Receptacle or Over Accessory Thread  																																				
<b>ZR</b> Aluminum / Zinc-Nickel with Non-Reflective Black Chromate / RoHS Compliant  <b>MT</b> Aluminum / Nickel-PTFE / RoHS Compliant  <b>Z1</b> Stainless Steel / Passivated / RoHS Compliant					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Code</th> <th>Shell Size</th> <th>Jam Nut Thd.</th> <th>Ring I.D.</th> </tr> </thead> <tbody> <tr><td>-21</td><td>18</td><td>1.250</td><td>1.265</td></tr> <tr><td>-23</td><td>20</td><td>1.4375</td><td>1.453</td></tr> <tr><td>-27</td><td>24</td><td>1.625</td><td>1.640</td></tr> <tr><td>-31</td><td>28</td><td>1.9375</td><td>1.953</td></tr> <tr><td>-35</td><td>32</td><td>2.125</td><td>2.140</td></tr> <tr><td>-40</td><td>36</td><td>2.375</td><td>2.406</td></tr> <tr><td>-44</td><td>40</td><td>2.625</td><td>2.656</td></tr> </tbody> </table>	Code	Shell Size	Jam Nut Thd.	Ring I.D.	-21	18	1.250	1.265	-23	20	1.4375	1.453	-27	24	1.625	1.640	-31	28	1.9375	1.953	-35	32	2.125	2.140	-40	36	2.375	2.406	-44	40	2.625	2.656
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<b>Sample Part Number</b>																																					
<b>660PS097</b>	<b>MT</b>	<b>24</b>	<b>S</b>	<b>4</b>	<b>-06</b>																																

# Series 970 PowerTrip™ Connectors and Accessories

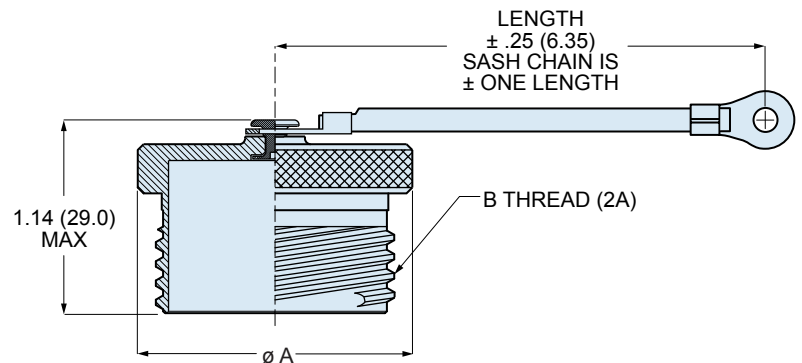
## Accessories

### 660PS097 & 098 Protective Covers

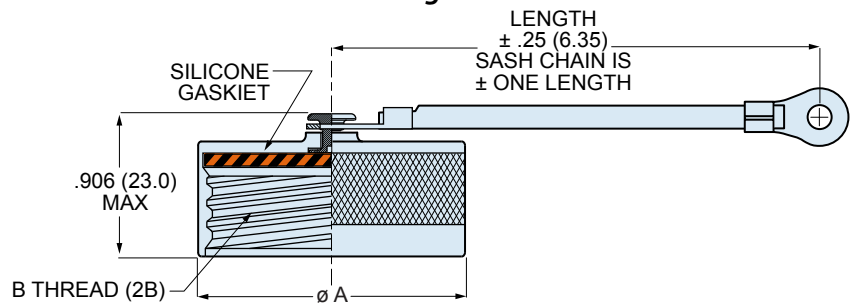


### 660PS097 AND -098 PROTECTIVE COVERS

Shell Size	A Max.		B Thread
	In.	mm.	
18	1.417	36.0	1.125-.1P-.3L-TS
20	1.535	39.0	1.250-.1P-.3L-TS
24	1.772	45.0	1.500-.1P-.3L-TS
28	2.007	51.0	1.750-.1P-.3L-TS
32	2.244	57.0	2.000-.1P-.3L-TS
36	2.480	63.0	2.250-.1P-.3L-TS
40	2.716	69.0	2.500-.1P-.3L-TS



660PS097 Plug Cover



660PS098 Receptacle Cover

### RING STYLES



Style A Solid Ring



Style B Solid Ring



Ring Terminal



Clevis (Sash Chain)



Split Ring

### RING REFERENCE TABLE (IN ASCENDING DIAMETER ORDER)

Code	Ring Type	I.D.	Code	Ring Type	I.D.	Code	Ring Type	I.D.	Code	Ring Type	I.D.
		In. mm.			In. mm.			In. mm.			In. mm.
00	No Fitting	- -	13	Solid Ring Style B	.765 19.43	21	Solid Ring Style B	1.265 32.13	78	Split Ring	1.875 47.63
06	Ring terminal/Clevis	.125 3.18	105	Solid Ring Style A	.766 19.46	109	Solid Ring Style A	1.266 32.16	30	Solid Ring Style B	1.890 48.01
01	Ring terminal/Clevis	.145 3.68	205	Solid Ring Style A	.788 20.02	209	Solid Ring Style A	1.312 33.32	114	Solid Ring Style A	1.891 48.03
09	Ring terminal/Clevis	.156 3.96	14	Solid Ring Style B	.844 21.44	22	Solid Ring Style B	1.343 34.11	214	Solid Ring Style A	1.938 49.23
05	Ring terminal/Clevis	.167 4.24	15	Solid Ring Style B	.890 22.61	68	Split Ring	1.350 34.29	31	Solid Ring Style B	1.953 49.61
02	Ring terminal/Clevis	.182 4.62	58	Split Ring	.890 22.61	70	Split Ring	1.375 34.93	32	Solid Ring Style B	1.968 49.99
03	Ring terminal/Clevis	.191 4.85	106	Solid Ring Style A	.896 22.76	110	Solid Ring Style A	1.391 35.33	80	Split Ring	1.980 50.29
04	Ring terminal/Clevis	.197 5.00	206	Solid Ring Style A	.907 23.04	210	Solid Ring Style A	1.438 36.53	82	Split Ring	2.060 52.32
07	Ring terminal/Clevis	.218 5.54	16	Solid Ring Style B	.968 24.59	23	Solid Ring Style B	1.453 36.91	33	Solid Ring Style B	2.077 52.76
095	Solid Ring Style A	.312 7.92	17	Solid Ring Style B	1.015 25.78	24	Solid Ring Style B	1.484 37.69	115	Solid Ring Style A	2.078 52.78
100	Solid Ring Style A	.391 9.93	60	Split Ring	1.015 25.78	72	SPLIT RING	1.485 37.72	35	Solid Ring Style B	2.140 54.36
50	Split Ring	.425 10.80	107	Solid Ring Style A	1.016 25.81	111	Solid Ring Style A	1.521 38.63	36	Solid Ring Style B	2.187 55.55
08	Solid Ring Style B	.468 11.89	207	Solid Ring Style A	1.025 26.04	211	Solid Ring Style A	1.536 39.01	84	Split Ring	2.235 56.77
52	Split Ring	.485 12.32	18	Solid Ring Style B	1.093 27.76	25	Solid Ring Style B	1.577 40.06	86	Split Ring	2.310 58.67
101	Solid Ring Style A	.516 13.11	62	Split Ring	1.095 27.81	74	Split Ring	1.625 41.28	116	Solid Ring Style A	2.406 61.11
102	Solid Ring Style A	.583 14.81	64	Split Ring	1.130 28.70	27	Solid Ring Style B	1.640 41.66	40	Solid Ring Style B	2.406 61.11
10	Solid Ring Style B	.593 15.06	19	Solid Ring Style B	1.140 28.96	112	Solid Ring Style A	1.641 41.68	88	Split Ring	2.475 62.87
54	Split Ring	.640 16.26	108	Solid Ring Style A	1.141 28.98	28	Solid Ring Style B	1.687 42.85	117	Solid Ring Style A	2.510 63.75
103	Solid Ring Style A	.641 16.28	308	Solid Ring Style A	1.188 30.18	76	Split Ring	1.750 44.45	90	Split Ring	2.655 67.44
104	Solid Ring Style A	.708 17.98	208	Solid Ring Style A	1.203 30.56	29	Solid Ring Style B	1.765 44.83	44	Solid Ring Style B	2.656 67.46
12	Solid Ring Style B	.718 18.24	20	Solid Ring Style B	1.203 30.56	113	Solid Ring Style A	1.766 44.86	92	Split Ring	2.810 71.37
56	Split Ring	.750 19.05	66	Split Ring	1.250 31.75	213	Solid Ring Style A	1.812 46.02	48	Solid Ring Style B	3.031 76.99
									94	Split Ring	3.045 77.34



# Series 970 PowerTrip™ Connectors and Accessories

## 780-001 Bean Rubber Covers


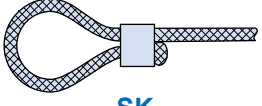

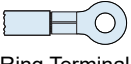
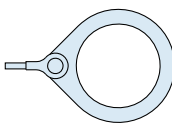
### RUBBER COVERS FOR SERIES 970 CONNECTORS



These *splashproof molded rubber covers* fit Series 970 plugs and receptacles. Braided black nylon lanyard is available with metal rings, cable tie or slipknot for attachment to panel or to cable. -40° to +120° C operating temperature.

MATERIALS	
Cover	SBR rubber blend, black
Lanyard	.094 (2.4) nylon cord, black
Cable Tie	Nylon, black, SST locking tab
Attachment Ring	Stainless steel
Friction Sleeve	Kynar
Crimp Ring	Copper alloy, tin plated

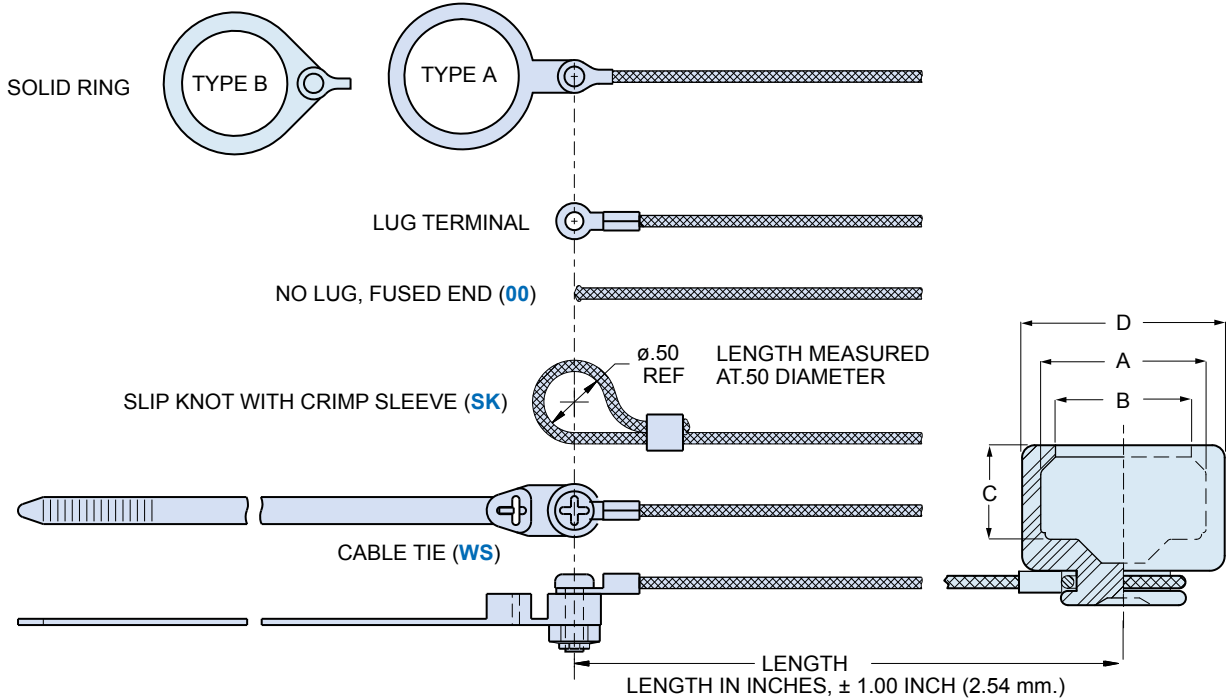
### HOW TO ORDER

SERIES	SIZE	LANYARD TYPE	LANYARD LENGTH	ATTACHMENT CODE	MATERIAL				
780-001 Plug Cover	780-001 Plug Covers		Length in Inches  ± 1 (25.4) Inch	 <b>-WS</b> Nylon Cable Tie, 1.77 Inch (45mm) Maximum Wire Bundle Diameter	Omit for Standard SBR Rubber  <b>C</b> Optional Conductive Rubber				
	Size Code	Shell Size							
	-19	18							
	-22	20							
	-25	24							
	-32	28							
	-36	32							
	-38	36							
780-002 Receptacle Cover	780-002 Receptacle Covers			 <b>-SK</b> Adjustable Slip Knot with Friction Sleeve. The sleeve can be crimped with pliers for a permanent attachment.					
	-14	18							
	-16	20							
	-22	24							
	-24	28							
	-27	32							
	-32	36							
	-36	40							
						 <b>-00</b> Lanyard With No Attachment (Fused End)			
						<b>Ring Terminals and Solid Rings</b>			
				 Ring Terminal	<b>-06</b> – .125 (3.2) I.D. <b>-09</b> – .156 (3.9) I.D. <b>-03</b> – .191 (4.9) I.D.				
				 Solid Ring	<b>-19</b> – 1.140 (29.0) I.D. <b>-21</b> – 1.265 (32.1) I.D. <b>-23</b> – 1.453 (36.9) I.D. <b>-27</b> – 1.640 (41.7) I.D. <b>-30</b> – 1.875 (47.6) I.D. <b>-31</b> – 1.953 (49.6) I.D. <b>-33</b> – 2.077 (52.8) I.D. <b>-35</b> – 2.140 (54.4) I.D. <b>-40</b> – 2.406 (61.1) I.D. <b>-44</b> – 2.656 (67.5) I.D.				
<b>Sample Part Number</b>									
780-001	-19	G	5	-SK					

Series 970 PowerTrip™ Connectors and Accessories  
**Accessories**  
 780-001 Bean Rubber Covers



**RUBBER COVERS**



780-001 AND 780-002 DIMENSIONS										
Shell Size	Type	Part Number	A Dia.		B Dia.		C Typ.		D Dia.	
			In.	mm.	In.	mm.	In.	mm.	In.	mm.
18	Plug	780-001-19	1.58	40.13	1.36	34.54	1.25	31.75	2.18	55.37
	Receptacle	780-002-13	1.22	30.99	1.00	25.40	.63	16.00	1.68	42.67
20	Plug	780-001-22	1.68	42.67	1.44	36.58	1.25	31.75	2.31	58.67
	Receptacle	780-002-16	1.31	33.27	1.09	27.69	.63	16.00	1.81	45.97
24	Plug	780-001-25	1.96	49.78	1.74	44.20	1.25	31.75	2.68	68.07
	Receptacle	780-002-22	1.68	42.67	1.46	37.08	.63	16.00	2.31	58.67
28	Plug	780-001-32	2.31	58.67	2.13	54.10	1.25	31.75	2.98	75.69
	Receptacle	780-002-24	1.80	45.72	1.59	40.39	.69	17.53	2.43	61.72
32	Plug	780-001-36	2.56	65.02	2.32	58.93	1.25	31.75	3.21	81.53
	Receptacle	780-002-27	2.16	54.86	1.75	44.45	.69	17.53	2.58	65.53
36	Plug	780-001-38	2.76	70.10	2.50	63.50	1.25	31.75	3.21	81.53
	Receptacle	780-002-32	2.31	58.67	2.13	54.10	.69	17.53	2.98	75.69
40	Plug	780-001-44	3.06	77.72	2.84	72.14	1.56	39.62	3.58	90.93
	Receptacle	780-002-36	2.56	65.02	2.32	58.93	.69	17.53	3.21	81.53



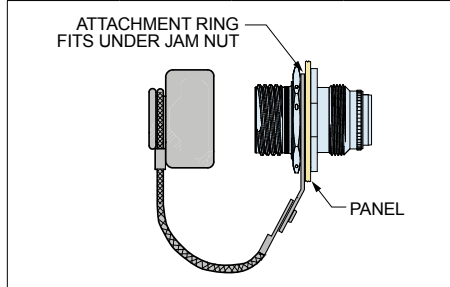
# Series 970 PowerTrip™ Connectors and Accessories

## Accessories

### 780-001 Bean Rubber Covers

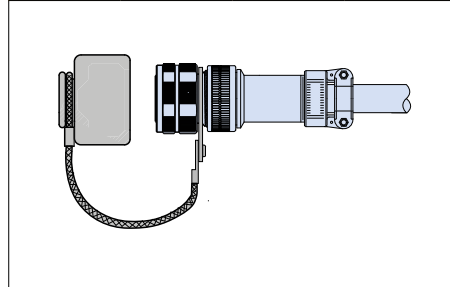
#### RUBBER COVERS FOR SERIES 970 CONNECTORS

##### RING FOR ATTACHING UNDER JAM NUT RECEPTACLE



Ring Code	Shell Size	Jam Nut Thd.	Ring I.D.
-21	18	1.250	1.265
-23	20	1.4375	1.453
-27	24	1.625	1.640
-31	28	1.9375	1.953
-35	32	2.125	2.140
-40	36	2.375	2.406
-44	40	2.625	2.656

##### RING FOR ATTACHING OVER ACCESSORY THREAD



Ring Code	Shell Size	Access. Thd.	Ring I.D.
-19	18	1.125	1.140
-21	20	1.250	1.265
-23	24	1.500	1.453
-30	28	1.750	1.875
-33	32	2.000	2.077
-40	36	2.250	2.406
-44	40	2.500	2.656

#### RING STYLES



Style A Solid Ring



Style B Solid Ring



Ring Terminal



Split Ring

#### RING REFERENCE TABLE (IN ASCENDING DIAMETER ORDER)

Code	Ring Type	I.D.	Code	Ring Type	I.D.	Code	Ring Type	I.D.	Code	Ring Type	I.D.
		In. mm.			In. mm.			In. mm.			In. mm.
00	No Fitting	- -	13	Solid Ring Style B	.765 19.43	21	Solid Ring Style B	1.265 32.13	78	Split Ring	1.875 47.63
06	Ring terminal	.125 3.18	105	Solid Ring Style A	.766 19.46	109	Solid Ring Style A	1.266 32.16	30	Solid Ring Style B	1.890 48.01
01	Ring terminal	.145 3.68	205	Solid Ring Style A	.788 20.02	209	Solid Ring Style A	1.312 33.32	114	Solid Ring Style A	1.891 48.03
09	Ring terminal	.156 3.96	14	Solid Ring Style B	.844 21.44	22	Solid Ring Style B	1.343 34.11	214	Solid Ring Style A	1.938 49.23
05	Ring terminal	.167 4.24	15	Solid Ring Style B	.890 22.61	68	Split Ring	1.350 34.29	31	Solid Ring Style B	1.953 49.61
02	Ring terminal	.182 4.62	58	Split Ring	.890 22.61	70	Split Ring	1.375 34.93	32	Solid Ring Style B	1.968 49.99
03	Ring terminal	.191 4.85	106	Solid Ring Style A	.896 22.76	110	Solid Ring Style A	1.391 35.33	80	Split Ring	1.980 50.29
04	Ring terminal	.197 5.00	206	Solid Ring Style A	.907 23.04	210	Solid Ring Style A	1.438 36.53	82	Split Ring	2.060 52.32
07	Ring terminal	.218 5.54	16	Solid Ring Style B	.968 24.59	23	Solid Ring Style B	1.453 36.91	33	Solid Ring Style B	2.077 52.76
095	Solid Ring Style A	.312 7.92	17	Solid Ring Style B	1.015 25.78	24	Solid Ring Style B	1.484 37.69	115	Solid Ring Style A	2.078 52.78
100	Solid Ring Style A	.391 9.93	60	Split Ring	1.015 25.78	72	Split Ring	1.485 37.72	35	Solid Ring Style B	2.140 54.36
50	Split Ring	.425 10.80	107	Solid Ring Style A	1.016 25.81	111	Solid Ring Style A	1.521 38.63	36	Solid Ring Style B	2.187 55.55
08	Solid Ring Style B	.468 11.89	207	Solid Ring Style A	1.025 26.04	211	Solid Ring Style A	1.536 39.01	84	Split Ring	2.235 56.77
52	Split Ring	.485 12.32	18	Solid Ring Style B	1.093 27.76	25	Solid Ring Style B	1.577 40.06	86	Split Ring	2.310 58.67
101	Solid Ring Style A	.516 13.11	62	Split Ring	1.095 27.81	74	Split Ring	1.625 41.28	116	Solid Ring Style A	2.406 61.11
102	Solid Ring Style A	.583 14.81	64	Split Ring	1.130 28.70	27	Solid Ring Style B	1.640 41.66	40	Solid Ring Style B	2.406 61.11
10	Solid Ring Style B	.593 15.06	19	Solid Ring Style B	1.140 28.96	112	Solid Ring Style A	1.641 41.68	88	Split Ring	2.475 62.87
54	Split Ring	.640 16.26	108	Solid Ring Style A	1.141 28.98	28	Solid Ring Style B	1.687 42.85	117	Solid Ring Style A	2.510 63.75
103	Solid Ring Style A	.641 16.28	308	Solid Ring Style A	1.188 30.18	76	Split Ring	1.750 44.45	90	Split Ring	2.655 67.44
104	Solid Ring Style A	.708 17.98	208	Solid Ring Style A	1.203 30.56	29	Solid Ring Style B	1.765 44.83	44	Solid Ring Style B	2.656 67.46
12	Solid Ring Style B	.718 18.24	20	Solid Ring Style B	1.203 30.56	113	Solid Ring Style A	1.766 44.86	92	Split Ring	2.810 71.37
56	Split Ring	.750 19.05	66	Split Ring	1.250 31.75	213	Solid Ring Style A	1.812 46.02	48	Solid Ring Style B	3.031 76.99
									94	Split Ring	3.045 77.34



# Quick Picks: A Guide to Glenair's Most Popular Materials and Finishes



## Electroless Nickel

Cost	\$	\$	\$	\$	\$
Conductivity	+	+	+	+	+
Corrosion Resistance	⌚	⌚	⌚	⌚	⌚

-65 to +200°C

Glenair Code **M, ME**



Aluminum plated with electroless nickel offers excellent conductivity, wear resistance, and adequate corrosion resistance. Typically specified on electrical connectors and accessories used in avionics boxes, exoatmospheric equipment, and missiles, electroless nickel is a good choice when exposure to marine or corrosive atmospheres is not a primary concern. The plating process is purely chemical, and once started, is autocatalytic (it runs by itself).



## Marine Bronze

Cost	\$	\$	\$	\$	\$
Conductivity	+	+	+	+	+
Corrosion Resistance	⌚	⌚	⌚	⌚	⌚

-65 to +200°C

Glenair Code **AB**



Marine bronze, an alloy of bronze, aluminum and nickel, is more resistant to the corrosive effects of seawater than ferrous alloys. Used on Glenair's GeoMarine connector coupling nuts, marine bronze is unplated and develops an aluminum oxide protective layer when exposed to air. Marine bronze connectors and accessories are found in shipboard and offshore drilling applications.



## Black Zinc Nickel

Cost	\$	\$	\$	\$	\$
Conductivity	+	+	+	+	+
Corrosion Resistance	⌚	⌚	⌚	⌚	⌚

-65 to +175°C

Glenair Code **ZR**



RoHS-compliant black zinc-nickel is approved for MIL-DTL-38999, AS85049 and other major military specifications as a replacement for cadmium and hexavalent chromium platings. The non-reflective finish and good conductivity make the Glenair ZR finish a leading choice for cadmium-free tactical systems. Corrosion resistance is comparable to cadmium, and the ZR finish is backward-compatible with Cd-plated connectors and accessories.



## Zinc-Nickel

Cost	\$	\$	\$	\$	\$
Conductivity	+	+	+	+	+
Corrosion Resistance	⌚	⌚	⌚	⌚	⌚

-65 to +175°C

Glenair Code **ZN, ZNU**



Recently added to MIL-DTL-38999 and MIL-DTL-83513, zinc-nickel plated aluminum has become a cost-effective alternative to cadmium. Available with olive drab or black chromate conversion coatings, zinc-nickel plated aluminum is commonly found on soldier systems and military airframe applications.



## Cadmium

Cost	\$	\$	\$	\$	\$
Conductivity	+	+	+	+	+
Corrosion Resistance	⌚	⌚	⌚	⌚	⌚

-65 to +175°C

Glenair Code **NE, JF**



Cadmium plated aluminum has been the unchallenged workhorse of the defense/aerospace industry. Offering up to 1000 hours of salt spray protection when deposited over electroless nickel, cadmium is highly conductive, and provides good lubricity and resistance to galling. As plated, cadmium has a silvery appearance. A subsequent chromic acid passivation bath creates a chromate topcoat over the cadmium, enhancing corrosion protection. Olive drab chromate is widely used, followed by gold chromate and clear chromate.



## Stainless Steel

Cost	\$	\$	\$	\$	\$
Conductivity	+	+	+	+	+
Corrosion Resistance	⌚	⌚	⌚	⌚	⌚

-65 to +200°C

Glenair Code **Z1, ZL, ZW**



Stainless steel offers unbeatable strength and protection from environmental stress if durability and corrosion resistance are more important than cost and weight. Typically found on aircraft engines, landing gear, geophysical equipment, armored vehicles and marine applications, passivated stainless steel is widely specified in throughout the interconnect industry. Also offered with nickel and cadmium plating for improved conductivity, stainless steel is an obvious alternative to cadmium if cost and weight are not an issue.



## Quick Picks: A Guide to Glenair's Most Popular Materials and Finishes

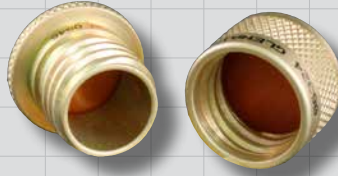


### Black Anodize

Cost	\$	\$	\$	\$	\$
Conductivity	+	+	+	+	+
Corrosion Resistance	⌚	⌚	⌚	⌚	⌚

-65 to +175°C  
Glenair Code **C**

Black anodized aluminum is a popular finish for electrical connectors and accessories. Typically employed when conductivity is not required, black anodized aluminum offers a modicum of corrosion protection and is relatively inexpensive. Anodizing is an electrolytic process that creates aluminum oxide films by oxidizing the base metal. The resulting coating is much harder and denser than natural oxidation. The parts are immersed in a sulfuric acid solution at room temperature. After anodizing, the parts are dyed black.



### Chem Film

Cost	\$	\$	\$	\$	\$
Conductivity	+	+	+	+	+
Corrosion Resistance	⌚	⌚	⌚	⌚	⌚

-65 to +175°C  
Glenair Code **E**

Chem Film is Glenair's standard chem film finish. Plated IAW MIL-DTL-5541, Class 3, Chem Film is a relatively inexpensive, moderately durable barrier plating. This chemical conversion coating is intended for use as a corrosion preventative film for electrical and electronic applications where lower resistant contacts, relative to Class 1A coatings, and anodic coatings in accordance with Mil-A-8625, are required.



### Zinc-Cobalt

Cost	\$	\$	\$	\$	\$
Conductivity	+	+	+	+	+
Corrosion Resistance	⌚	⌚	⌚	⌚	⌚

-65 to +175°C  
Glenair Code **UC, UCR, ZC, ZCR**

Zinc-cobalt with olive drab chromate topcoat fills the need for a RoHS compliant conductive NF olive drab finish for military vehicles, robots and other land system equipment.



### AlumiPlate<sup>SM</sup>

Cost	\$	\$	\$	\$	\$
Conductivity	+	+	+	+	+
Corrosion Resistance	⌚	⌚	⌚	⌚	⌚

-65 to +175°C  
Glenair Code **AL, XAL**

AlumiPlate provides excellent conductivity and corrosion resistance. 99.99% pure aluminum is electrolytically deposited onto aluminum or composite in a specialized water-free process, followed by a trivalent chromate conversion coating. AlumiPlate has been approved by Boeing and Lockheed as a replacement for cadmium. AlumiPlate has been added to MIL-DTL-38999 and MIL-DTL-83513. Threaded parts require dry lube to prevent galling. AlumiPlate is a service mark of AlumiPlate Incorporated, Minneapolis, Minnesota.



### Nickel-PTFE

Cost	\$	\$	\$	\$	\$
Conductivity	+	+	+	+	+
Corrosion Resistance	⌚	⌚	⌚	⌚	⌚

-65 to +175°C  
Glenair Code **MT, ZMT**

Now approved for MIL-DTL-38999 and MIL-DTL-83513, Glenair's 1000 Hour Grey™ meets the need for a cadmium replacement with excellent conductivity, wear resistance and corrosion protection. This extremely durable finish is gun-metal gray. A proprietary preliminary undercoat is followed with a composite coating of electroless nickel phosphorus and polytetra-fluoroethylene (PTFE). An organic topcoat provides sealing and added resistance to SO2 salt fog. Ni-PTFE is approved for the Joint Strike Fighter and offers extremely good lubricity.



### Hardcoat Anodize

Cost	\$	\$	\$	\$	\$
Conductivity	+	+	+	+	+
Corrosion Resistance	⌚	⌚	⌚	⌚	⌚

-65 to +200°C  
Glenair Code **G2**

Hardcoat anodized aluminum offers greater wear resistance and better corrosion resistance compared to conventional anodizing. Typically employed when conductivity is not required, hardcoat aluminum offers good corrosion protection for marine and tactical applications. The resulting finish is a matte greenish-gray color. Hardcoat anodizing is an electrolytic process that creates aluminum oxide films by oxidizing the base metal in a sulfuric acid solution. The parts are immersed in a sulfuric acid solution at cold temperature. After anodizing, the parts can be dyed black (code GB).

**PLACE HOLDER  
PAGE**

# Why Choose **GLENAIR?**



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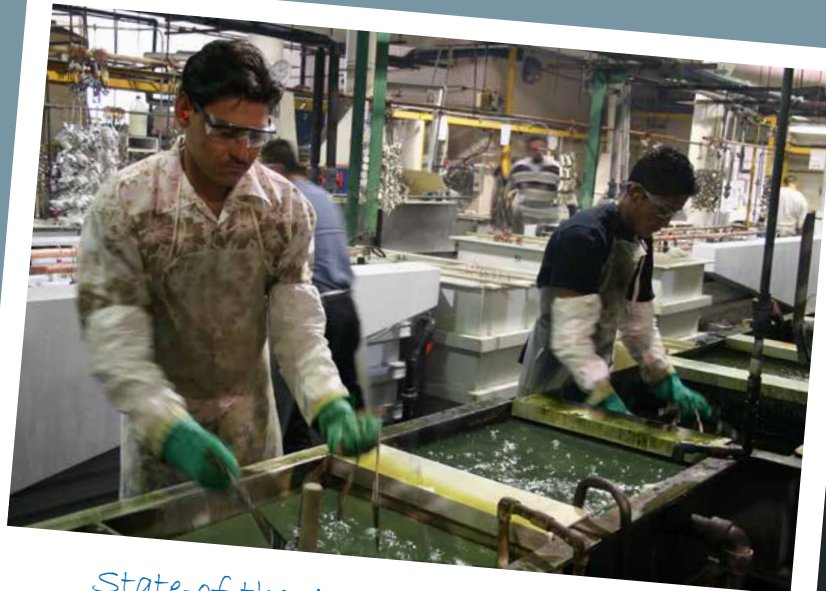
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