

SAV-CON[®] CONNECTOR SAVERS

MS CIRCULAR • MIGHTY MOUSE • D-SUB • MICRO-D

JANUARY 2015

SERIES 94



SAV-CON®

Connector Savers



The smart solution for preventing contact damage and extending service life



Glenair Sav-Con® connector savers are the smart solution for preventing contact damage and extending the service life of cable assemblies. Sav-Con® connector savers protect connectors that are mated and unmated frequently during manufacturing, test, check-out phases, and environmental test programs. They prevent costly repair or replacement by absorbing connect and disconnect abuse. Glenair Sav-Con® connector savers are available for all MS circular connector types, as well as for Glenair Mighty Mouse connectors, D-Subminiature and Micro-D connectors.



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

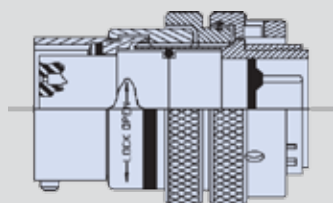


Sav-Con® connector savers



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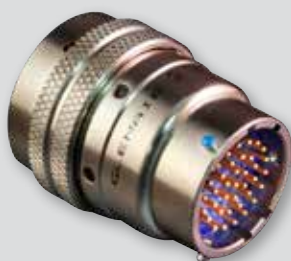
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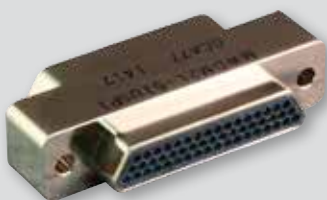
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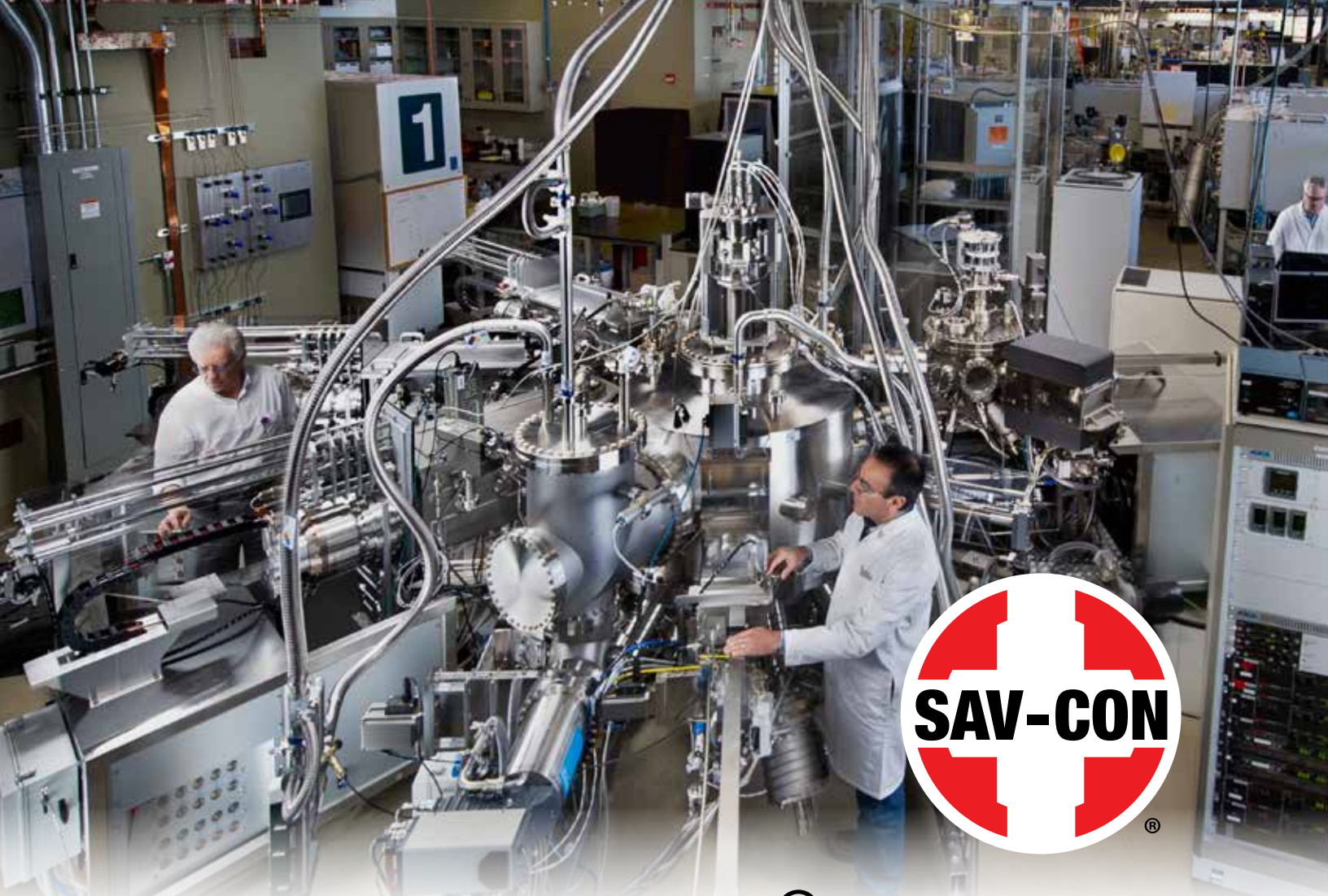
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SAV-CON[®]

Connector Savers

The smart solution for preventing contact damage and extending the service life of cable assemblies and mounted receptacles

Sav-Con[®] connector savers protect connectors that are mated and unmated frequently during manufacturing, test, check-out phases, and environmental test programs. They prevent costly repair or replacement by absorbing connect and disconnect abuse. Glenair Sav-Con[®] connector savers are available for both standard and high-density insert arrangements. Popular Sav-Con[®] part numbers, especially for N (normal) polarization are in-stock and ready for immediate, same-day shipment. Glenair also manufactures and supplies Sav-Con[®] connector savers and bulkhead feed-thrus for a complete range of MS circular and rectangular connectors.

- Traditional plug-receptacle savers, as well as in-line versions and gender changers
- Available EMI/EMP filter savers and adapters
- Pin/pin, pin/socket, and socket/socket versions
- Optional locking mechanism (recommended for bayonet-style connectors)



Series changers and gender changers available in both Sav-Con[®] and bulkhead feed-thru configurations



Sav-Con® connector savers

Circular, rectangular and special application
Military standard and commercial connectors

FULL RANGE OF CIRCULAR MILITARY STANDARD CONFIGURATIONS



MIL-DTL-38999 Series III Type
Plug/Receptacle Go-Between



MIL-DTL-38999 Series II



MIL-DTL-5015 Type



Series 80 Mighty Mouse

SAV-CON® RECTANGULAR D-SUBMINIATURE, MICRO, AND NANO MINIATURE CONNECTOR SERIES



M24308
D-subminiature



Micro-D



Nano-Miniature™



HiPer-D®

SAV-CON® SPECIAL APPLICATION CONNECTOR SERIES



MIL-DTL-38999 Series III Type
In-Line Gender Changer



MIL-DTL-38999 Series III
Type Filtered Adapter



HiPer-D® Gender
Changer



Micro-D Filter

Each Glenair Sav-Con® Connector Saver meets the military specification performance requirements of its mating connector. Glenair manufactures and supplies a Sav-Con® connector saver for most every military standard connector currently in use including:

- MIL-DTL-26482 Series I and II
- MIL-DTL-28840
- MIL-DTL-38999 Series I, II and III
- MIL-DTL-83723 LN 29729 (SJT)
- PATT 105 and PATT 602
- Series 801 and 805 Mighty Mouse
- M24308 D-Subminiature
- MIL-DTL-83513 Micro-D Subminiature
- MIL-DTL-5015
- Series 28 HiPer-D® M24308 intermateable
- Series 89 Nano Miniature™ M32139
- Series 79 Micro-Crimp®

Comprehensive materials, plating, and polarization options available



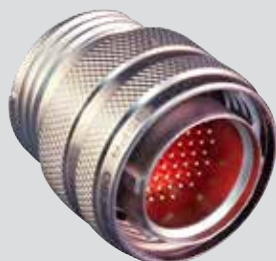
Sav-Con® connector savers

For circular and rectangular connectors

Overview



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- For most every Military Standard connectors
- All standard materials and finish platings
- General duty, environmental, filter, hermetic and high-reliability performance classes
- Pin/pin, pin/socket, socket/socket versions, as well as gender changers
- Optional locking mechanism
- Keyed polarization



Sav-Con® Connector Savers are the smart solution for preventing contact damage and extending the service life of cable assemblies

Glenair Makes a Sav-Con® Connector Saver for Most Every Military Standard Connector Currently in Use

- MIL-DTL-26482 Series I and II
- MIL-DTL-28840
- MIL-DTL-38999 Series I, II and III
- MIL-DTL-83723
- LN 29729 (SJT)
- PATT 105 and PATT 602
- MIL-DTL-5015
- Series 801 and 805 Mighty Mouse
- M24308 Subminiature
- Series 28 HiPer-D®
- Series MWDM Micro-D Subminiature
- Series 89 Nano-Miniature™
- Series 79 Micro-Crimp®
- EMI/EMP Filter Circular and Rectangular





Sav-Con® connector savers

Circular military standard connectors

Circular Mil-Spec Compliance



Mil-Spec Compliance

Each Glenair Sav-Con® Connector Saver series meets the same durability requirements as the Military Specification series with which it mates. The mating portions of the pin-and-socket contacts are in strict compliance with the applicable Military Specification contacts used in each connector series.

Circuit Probing

The closed-entry socket contact design permits probing for individual circuits during equipment test and check-out, preventing possible damage to the equipment connectors.

Standard Material and Finishes

- Shell, Barrel and Coupling Nut – 300-series stainless steel, titanium, aluminum
- Front and Rear Insulators – Glass reinforced thermoset plastic
- PC Receptacle Potting – High-performance potting material
- Finish – See material and finish table
- Contacts – PC tails, socket and pin crimp contacts – Copper alloy, gold plated
- Contact Retention Clip – Beryllium copper, heat-treated, unplated
- Retaining Ring – Ryton
- Wave Spring – CRES

Military Specification Compliance			
Characteristic	Class 0	Class 1	Class 2
Mechanical			
Mating/Unmating Forces	Yes	Yes	Yes
Durability	Yes	Yes	Yes
Insert retention	Yes	Yes	Yes
Contact Retention	Yes	Yes	Yes
Coupling Pin strength	Yes	Yes	Yes
Contact Engagement & Disengagement Forces	Yes	Yes	Yes
Resistance to Probe Damage	Yes	Yes	Yes
EMI Ground Spring Forces	Yes	Yes	Yes
Electrical			
Contact Resistance	Yes	Yes	Yes
Electrical Engagement	Yes	Yes	Yes
Insulation Resistance	Yes	Yes	Yes
Dielectric Withstanding Voltage	Yes	Yes	Yes
Magnetic Permeability	Yes	Yes	Yes
Electrical Conductivity	Yes	Yes	Yes

Shell Finishes			
Plating Code	Material	Finish	Specification
M	Aluminum	Electroless Nickel	AMS-C-26074
B	Aluminum	Cad Plate, Olive Drab	AMS-QQ-P-416, Type II, Class 3
NF	Aluminum	Cadmium Plate Olive Drab over Electroless Nickel	AMS-QQ-P-416, over AMS-C-26074 (1000 Hour Salt Spray)
NC	Aluminum	Zinc-Cobalt	ASTMB840
ZN	Aluminum	Olive Drab Zinc-Nickel	Zinc alloy per ASTM B841-91, Class 1 Type E Grade 3 over Electroless nickel per ASTM B733-90 SC2, Type 1 Class 5
MT	Aluminum	Ni-PTFE 1000 Hour Grey™ (Nickel Fluorocarbon Polymer)	MIL-DTL-38999 (500 Hour Salt Spray)
ZR	Aluminum	Zinc Nickel, Black	
ME	Aluminum	Electroless Nickel (RoHS)	



Sav-Con® connector savers

Circular military standard connectors

Performance selection guide



Sav-Con® Product Applications

Glenair Sav-Con® Connector Savers are designed to protect connectors that are subject to repeated mating and unmating cycles. Sav-Con® Connector Savers prevent costly repair or replacement of expensive connectors and cables while preserving the quality and integrity of connector performance. Sav-Con® Connector Savers take the abuse of repeated connection cycles instead of “black box” or other equipment connectors. Equipment connectors that are mated and unmated frequently during manufacturing, check-out phases and environmental test programs can be protected by Glenair Sav-Con® Connector Savers at considerable savings in time and money.



When a Sav-Con® Connector Saver is installed between a receptacle and a plug, the effective additional length is less than the length of an equivalent mated plug and receptacle. When using bayonet coupled Sav-Con® Connector Savers, Glenair recommends our Lock Ring design feature in applications where large cable bundles may induce unwanted stress to the coupling mechanism and potential unwanted contact displacement.

Choosing the right Sav-Con® Connector Saver for your application

All classes of Glenair Sav-Con® Connector Savers feature one-piece, non-removable pin/socket contacts for maximum reliability and minimum effect on circuit resistance. The mating portions of the pin-and-socket contacts are in strict compliance with the applicable Military Specification contacts used in each connector series. The one-piece design adds resistance to a circuit equal to a mated pin and socket contact, thus it has minimum or no effect on sensitive circuits.

All bayonet coupled Sav-Con® Connector Savers are available with an optional locking feature on the coupling nut. This feature eliminates the wave spring inside the coupling nut, thus providing positive metal-to-metal bottoming out of the plug side of the Sav-Con® Connector Saver to the mating receptacle. Improved durability can be provided by specifying the optional dry lubricant on the inside surfaces of the coupling nut.

Note: Dry lubricant is not recommended for space applications due to outgassing requirements.

Glenair Sav-Con® Connector Savers are available in one or more of the following service classes (see specific series page for details):

Class 0 - General Duty	Class 1 - Environmental	Class 2 - Hi-Rel
Glenair's basic Sav-Con® design is suitable for use in benign environments, such as manufacturing and bench test areas. Not recommended for use in environmental test programs, or in installations which will be exposed to non-ambient conditions.	This category offers peripheral and interfacial sealing to comply with mating connector environmental requirements.	High-performance versions of Class 1 configurations. This design employs materials and processes to provide an extremely broad operating temperature range, as well as non-outgassing properties for space applications.



Sav-Con® connector savers

Circular military standard connectors

Bayonet lock ring features



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Optional Lock Ring prevents accidental disengagement of bayonet coupled connectors

The Coupling Nut:

This feature eliminates the wave spring inside the coupling nut, thus providing positive metal-to-metal bottoming out of the plug side of the Sav-Con® Connector Saver to the mating receptacle. This is a desirable option in the following applications:

Locking a Sav-Con® to a receptacle:

Locking a Sav-Con® Connector Saver to a receptacle can prevent accidental or unauthorized unmating. This can insure that the equipment receptacle remains in its unused condition prior to delivery.

Locking a Sav-Con® to reduce lateral forces:

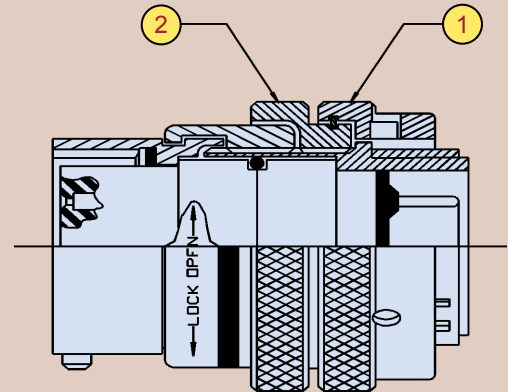
Lateral forces caused by a heavy cable can be reduced when the Sav-Con® Connector Saver is locked to the equipment receptacle. On high-density connectors that have a limited pin-and-socket engagement length, the force applied by a heavy cable can collapse the wave spring and create unwanted discontinuities in the mated contacts.

Locking a Sav-Con® when delivered to end-user:

When equipment is delivered to the end-user, the Sav-Con® Connector Saver may be locked to its mating receptacle to insure that the receptacles mounted on the equipment will remain unused until final installation of the equipment.

Locking a Sav-Con® to a cable mounted plug:

It is often desirable to lock a Sav-Con® Connector Saver on a cable-mounted plug coupler to prevent accidental disconnect of the Sav-Con®.



Locking a Sav-Con® Connector Saver to a receptacle can prevent accidental or unauthorized unmating. This can insure that the equipment receptacle remains in its unused condition prior to delivery.

1. To engage the plug portion of the saver, first ensure that the Lock Ring (2) is in the fully open position by turning the Lock Ring by hand clockwise until it stops.
2. Couple (1) to the Mating receptacle. Note: Pins should be visible in the three holes of the Coupling Ring (1).
3. To lock the Sav-con®, turn the Lock Ring (2) counter-clockwise by hand until it stops. This will seat the bayonet pins.
4. Dis-Engagement is the reverse of steps 3 and 2. Turn Lock Ring (2) to the open position clockwise by hand until it stops. Then rotate the Coupling Ring (1) counter-clockwise until all contacts are separated.

CATALOG NOTES

For all circular Sav-Con® connectors in this catalog:

- All parts will be identified with manufacturer's name and part number, space permitting.
- Glenair 600 series backshell assembly tools are recommended for assembly and installation.
- Dimensions are subject to change without notice. Metric dimensions appear in parentheses in diagrams and tables, based on 1 inch = 25.4 mm, for reference only. Unless otherwise specified, the following other dimensional tolerances apply:
.xx = $\pm .03$ (0.8) Lengths = $\pm .060$ (1.52)
.xxx = $\pm .015$ (0.4) Angles = $\pm 5^\circ$

Customers are advised to consult the factory for the latest specifications, particularly to confirm critical dimensions such as connector lengths, threads, and so on. When errors or mistakes are brought to our attention, corrected content is posted immediately to www.glenair.com.



Sav-Con® connector savers

D-Subminiature Rectangular connectors

Series 28 HiPer-D® Specifications



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Sav-Con® HiPer-D® Shell Plating Codes					
Shell Plating	Glenair Plating Code	Salt Fog (Hours)	RoHS Compliant	Conductivity	Typical Applications
Electroless Nickel	ME	96		Excellent	Space vehicles, missiles, avionics, unmanned vehicles, instrumentation. Corresponds to MIL-DTL-24308 Class K.
Nickel-PTFE	MT	500		Excellent	Harsh environment, soldier systems, communications equipment. Corresponds to MIL-DTL-24308 Code T.
Zinc-Nickel with Black Chromate	ZR	500		Good	Harsh environment, soldier systems. Corresponds to MIL-DTL-24308 Code K.
Cadmium with Olive-Drab Chromate	NF	500	No	Excellent	Harsh environment, military equipment.
Cadmium with Yellow Chromate	JF	500	No	Excellent	General purpose military equipment. Comparable to MIL-DTL-24308 Code F.
Black Anodize	C	336		Non-Conductive	Applications where EMI shielding is not required.
Gold	Z2	48		Excellent	Space. Corresponds to M24308 Class M.
Chem Film	E	48	No	Excellent	Avionics
Stainless Steel, Electroless Nickel	ZM	500		Excellent	Extreme environments where stainless steel is preferred for strength, corrosion resistance, and where high conductivity is desired.
Stainless Steel, Passivated	Z1	500		Good	Extreme environments where stainless steel is preferred for strength, corrosion resistance. Corresponds to MIL-DTL-24308 Class P.

Sav-Con® HiPer-D® Specification		
Description	Material	Finish
Contacts	Copper Alloy	Gold (50 microin.) over nickel
Socket Contact Hood (Size 20, 22)	Stainless steel	Passivated
Shell	Aluminum Alloy or stainless steel	See ordering information
Insulators	Ultem 2300	None
Interfacial Seal	Fluorosilicone	None
Grommet	Fluorosilicone	None
EMI Spring	Copper alloy	Electroless nickel
Contact retention clips	Copper alloy	None
Insert retention clip	Copper alloy	None
Adhesive/Sealant	RTV silicone	None
Hardware	Stainless steel (300 series)	Passivated
O-ring	Fluorosilicone	None



Sav-Con® connector savers

Rectangular connectors

Micro-D Specifications



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Sav-Con® Micro-D Plating Codes: ROHS Compliance			
Micro-D Plating Code	Plating Type	RoHS Compliance	Notes
1, A	Cadmium with yellow chromate conversion coating over electroless nickel	No	Electroless nickel is the preferred alternate.
2, B	Electroless nickel		First choice for RoHS compliance. Good corrosion resistance, excellent conductivity, M83513 approved, always in stock.
3, F	Stainless steel shell, passivated		Higher cost but unsurpassed corrosion resistance, not conductive enough for typical EMI needs. Build-to-order.
4, D	Black anodize over aluminum		Economical, non-reflective, non-conductive. Build-to-order.
5, E	Gold over aluminum		Low volume, higher cost, excellent conductivity. Build-to-order.
6, C	Chem film	No	Electroless nickel is the preferred alternate.
33, T	Nickel-PTFE		Glenair's 500 Hour Grey™ meets the need for a cadmium replacement with excellent conductivity, wear resistance and corrosion protection, M83513 approved.

Sav-Con® Micro-D Material Specification	
Component	Material and finish
Connector Shell	Aluminum Alloy 6061 or Stainless Steel, 300 Series, Passivated. See Ordering Information for Aluminum Plating Options.
Insulator	Liquid Crystal Polymer (LCP)
Seals	Fluorosilicone Rubber, Blue
Pin Contact	Beryllium Copper With 50 Microinches Gold over Nickel Plating
Socket Contact	Copper Alloy With 50 Microinches Gold Over Nickel Plating
Hardware	300 Series Stainless Steel
PCB Terminals	Gold-Plated Copper Alloy, Solder Dipped
Capacitors	Planar Ceramic Array
Inductors	Ferrite
EMI Ground Spring	Beryllium Copper, Gold Plated
Encapsulant	Thermally Conductive Epoxy

Sav-Con® Micro-D Performance Summary	
Current Rating	3 AMP
Dielectric Withstanding Voltage	250 VDC
Working Voltage	100 VDC
Insulation Resistance	5000 Megohms Minimum
Contact Resistance	8 Milliohms Maximum
Low Level Contact Resistance	32 Milliohms Maximum
Magnetic Permeability	2 μ Maximum
Operating Temperature	-55° C. to +125° C.
Shock	50 g.
Vibration	20 g.
Mating Force	(10 Ounces) X (# of Contacts)



Sav-Con® connector savers

Rectangular connectors

Series 89 Nano-Miniature™ Specifications



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Sav-Con® Nano-Miniature™ Plating Codes: ROHS Compliance			
Nano Plating Code	Plating Type	RoHS Compliance	Notes
A1	Cadmium with yellow chromate conversion coating over electroless nickel	No	Electroless nickel is the preferred alternate.
A2	Electroless nickel		First choice for RoHS compliance. Good corrosion resistance, excellent conductivity, M32139 approved, always in stock.
S	Stainless steel shell, passivated		Higher cost but unsurpassed corrosion resistance, not conductive enough for typical EMI needs. Build-to-order.
T	Titanium, unplated		Higher cost but unsurpassed corrosion resistance, not conductive enough for typical EMI needs. Build-to-order.

Sav-Con® Series 89 Nano-Mianiture™ Material Specification	
Connector Shell	Aluminum Alloy, Electroless Nickel Plated Per SAE-AMS-C-26074, Class 3 or 4, Grade B
Socket Insulator	Liquid Crystal Polymer (LCP), per MIL-M-24519 or ASTM D5138
Plug Insulator	Liquid crystal polymer (LCP) per MIL-M-24519 or ASTM D5138
Potting material	Dexterhysol epoxy
Plug contact	Gold alloy per AST B477 and ASTM B541
Socket Contact	Gold alloy, unplated, per ASTM B477 or ASTM B541.
Wire	30 AWG gold plated copper alloy
Hardware	300 Series Stainless Steel
Encapsulant	Epoxy

Sav-Con® Series 89 Nano-Mianiture™ Performance Summary	
Contact Spacing	.025" (0.64) Contact Centers
Wire Accommodation	#30-#32 AWG
Current Rating	1 AMP Maximum
Voltage Rating (DWV)	250 VAC RMS Sea Level, 100 VAC RMS 70,000 Feet
Insulation Resistance	5000 Megohms Minimum
Operating Temperature	-55° C. to +125° C.
Optional High Operating Temperature	Mod Code 428 rated up to 400° C.
Contact Resistance	71 Millivolt Drop Maximum, 1 AMP Current, #30 AWG Wire
Vibration	20 g's, in Accordance with EIA-364-28, Condition IV
Shock	100 g's, in Accordance with EIA-364-27, Condition G
Durability	200 Mating Cycles
Corrosion Resistance	48 Hours Salt Spray In Accordance With EIA-364-26, Condition B
Humidity	96 Hours, In Accordance with EIA-364-31 Condition A
Contact Engaging/Separation Force	5 Ounce Maximum, 0.4 Ounce Minimum
Thermal Vacuum Outgassing	Total Mass Loss (TML) 1.0% Max., Volatile Condensable Material (VCM) 0.1% Max.



Sav-Con® connector savers

Rectangular connectors

Series 79 Micro-Crimp® Specifications



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Sav-Con® Series 79 Micro-Crimp® Shell Plating Codes

Shell Plating	Plating Code	Salt Fog* (Hours)	Cadmium Free	Hexavalent Chromium Free	Conductivity	Compatible with EMI Spring	Typical Applications
Electroless Nickel	M	48	Yes	Yes	Excellent	Yes	Space vehicles, missiles, avionics, unmanned vehicles, instrumentation
Nickel-PTFE	MT	500	Yes	Yes	Excellent	Yes	Harsh environment, soldier systems, communications equipment
Zinc-Nickel with Olive-Drab Chromate	ZN	500	Yes	No	Good	No	Harsh environment, soldier systems, unmanned and manned vehicles
Zinc-Nickel with Black Chromate	ZNU	500	Yes	No	Good	No	Harsh environment, soldier systems, unmanned and manned vehicles
Cadmium with Olive-Drab Chromate	N	500	No	No	Excellent	No	Harsh environment, military equipment
Cadmium with Yellow Chromate	J	500	No	No	Excellent	No	General purpose military equipment
Black Anodize	C	336	Yes	Yes	Non-Conductive	N/A	Applications where EMI shielding is not required
Gold	Z2	48	Yes	Yes	Excellent	Yes	Space
Chem Film	E	48	Yes	No	Excellent	Yes	Avionics

* Salt spray test in accordance with ASTM B117

Sav-Con® Series 79 Micro-Crimp® Material Specification

Size #23 contacts	Beryllium copper alloy, plated gold over nickel
Size #16 and #12 contacts	Copper alloy
Insulators	Liquid crystal polymer, 30% glass-reinforced
Shell	Aluminum alloy. See ordering info for finish options
Interfacial seal and grommet	Fluorosilicone
Contact and insert retention clips	Beryllium copper, heat-treated, unplated
Jackposts and guide pins	Stainless steel, passivated
Spring, EMI (plug)	Stainless steel or beryllium copper alloy, gold plated

Sav-Con® Series 79 Micro-Crimp® Performance Summary

Current rating	Contact size #23 5 Amps, size #16 13 Amps, size #12 23 Amps maximum
Voltage rating (DWV)	Contact size #23 500 VAC rms. Size #16 and #12 1800 VAC rms. Sea level.
Insulation resistance	5000 megohms minimum
Operating temperature	-65° C. to +150° C.
Contact resistance	5 milliohms maximum
Water ingress protection	IP67 (Mated condition)
Shielding effectiveness	>75 dB attenuation from 100 MHz to 1000MHz, >60dB 1GHz to 4GHz, >40dB 4GHz to 10GHz.

CIRCULAR
CONNECTORS



SAV-CON®

Circular Connector Savers

High reliability connector savers for mission-critical applications



Glenair Sav-Con® Connector Savers are designed to protect the quality and integrity of connectors that are mated and unmated frequently during manufacturing, test, check-out phases or environmental test programs. Available in general duty, environmental, and high-reliability performance classes with keyed polarization and optional locking mechanisms for bayonet style connectors, Glenair offers Sav-Con® Connector Savers for most all MS cylindrical connector series—many in-stock and available for immediate, same-day shipment.



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



Sav-Con® connector savers

Circular connectors

Selection Guide



STANDARD OR FILTERED SAV-CON® CONNECTORS FOR MILITARY AND COMMERCIAL CYLINDRICAL CONNECTORS

Glenair standard and filtered Sav-Con® Connector Savers are available in a wide range of military standard configurations including MIL-DTL-26482 Series I and II; MIL-DTL-28840; MIL-DTL-38999 Series I, II and III; MIL-DTL-83723 Series I and III, threaded and bayonet connector savers; LN 29729 (SJT); PATT 105-PATT 602; and MIL-DTL-5015. Each Glenair Sav-Con® connector saver meets the same durability requirements as the military specification series with which it mates.

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942-009 High Reliability Connector	Page B-33

Series 801 Mighty Mouse Reference Page B-34

801-017 Double Start Thread Connector	Page B-35
240-801-AA Filter Connector Adapter	Page B-36

Series 805 Mighty Mouse Reference Page B-37

805-010 Triple Start Thread Connector	Page B-38
240-805-AA Filter Connector Adapter	Page B-39

Series 22 Geo-Marine™ Reference Page B-40

940-014 High-Pressure Environmental Connector	Page B-41
940-025 High-Pressure Scoop-Proof Connector	Page B-42

B



Sav-Con® connector savers

MIL-DTL-38999 Series I

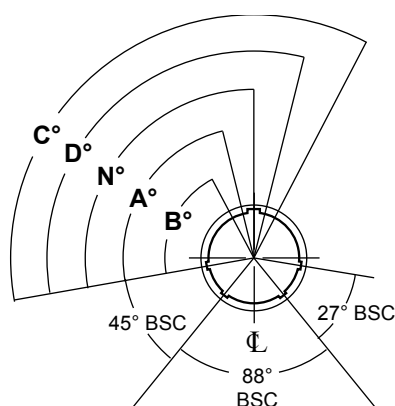
Reference Information



Table I: Material and Finish		
Plating Code	Material	Finish
M	Aluminum	Electroless Nickel
B		Cad Plate, Olive Drab
NF		Cadmium Plate Olive Drab over Electroless Nickel
NC		Zinc-Cobalt
ZN		Olive Drab Zinc-Nickel
MT		Ni-PTFE 1000 Hour Grey™ (Nickel Fluorocarbon Polymer)
ZR		Zinc Nickel, Black
ME		Electroless Nickel (RoHS)
ZL	Stainless Steel	Electro-Deposited Nickel

Table II: Insert Arrangement					
Shell Size Desig.	Insert Arr. Dash No.	Contact Size and Qty			
		22	20	16	12
9	9-3		3		
	9-44	4			
	9-35	6			
	9-98		3		
11	11-2			2	
	11-4		4		
	11-5		5		
	11-6		6		
	11-35	13			
	11-98		6		
	11-99		7		
	13-4			4	
13	13-8		8		
	13-35	22			
	13-98		10		
	15-5			5	
15	15-15		14	1	
	15-18		18		
	15-19		19		
	15-35	37			
	15-97		8	4	
17	17-6				6
	17-8			8	
	17-26		26		
	17-35	55			
	17-99		21	2	
19	19-11			11	
	19-28		26	2	
	19-30		29	1	
	19-32		32		
	19-35	66			
	19-45	67			

Table II: Insert Arrangement					
Shell Size Desig.	Insert Arr. Dash No.	Contact Size and Qty			
		22	20	16	12
21	21-35	79			
	21-11				11
	21-16			16	
	21-24		24		
	21-25		25		
	21-27		27		
	21-39		37	2	
	21-41		41		
23	23-35	100			
	23-2	85			
	23-21			21	
	23-32		32		
	23-34		34		
	23-36		36		
	23-53		53		
	23-55		55		
	23-97			16	
	23-99			11	
25	25-2	100			
	25-4		48	8	
	25-19				19
	25-24			12	12
	25-29			29	
	25-35	128			
	25-43		23	20	
	25-61		61		



**FACE VIEW
RECEPTACLE**

Table III: Main and Alternate Keyway Positions					
Shell Size Desig.	N°	A°	B°	C°	D°
9	95	77	-	-	113
11	95	81	67	123	109
13	95	75	63	127	115
15	95	74	61	129	116
17	95	77	65	125	113
19	95	77	65	125	113
21	95	77	65	125	113
23	95	80	69	121	110
25	95	69	69	121	110

Table IV: Capacitor Array Code Capacitance Range for Filtered Connectors		
Class	Pi - Circuit (pF)	C - Circuit (pF)
X*	160,000 - 240,000	80,000 - 120,000
Y*	80,000 - 120,000	40,000 - 60,000
Z*	60,000 - 90,000	30,000 - 45,000
A	38,000 - 56,000	19,000 - 28,000
B	32,000 - 45,000	16,000 - 22,500
C	18,000 - 33,000	9,000 - 16,500
D	8,000 - 12,000	4,000 - 6,000
E	3,300 - 5,000	1,650 - 2,500
F	800 - 1,300	400 - 650
G	400 - 600	200 - 300
J	70-120	35-60

* Filter Classes X, Y and Z are 250 VDC.
All others are 500 VDC



Sav-Con® connector savers

MIL-DTL-38999 Series I

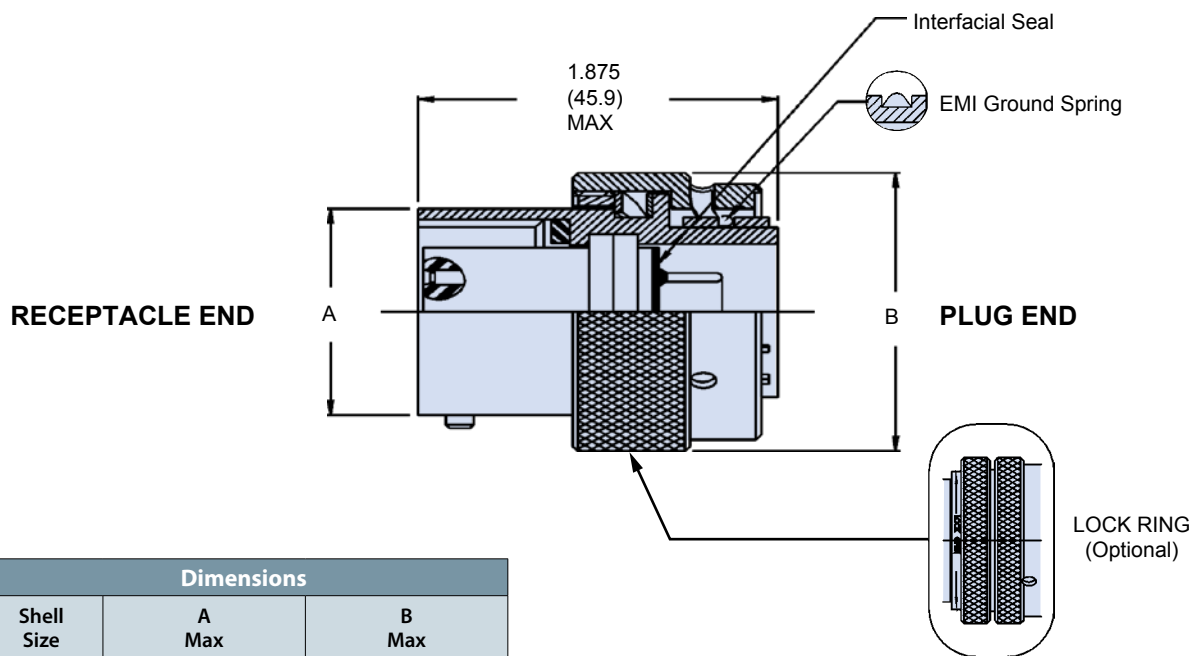
941-003 and 942-003 Bayonet Coupling



941-003 ENVIRONMENTAL AND 942-003 HIGH RELIABILITY WITH BAYONET COUPLING

How To Order									
Sample Part Number	94	1	L	003	M	17-35	P	A	131
Series	94								
Class	1 = Environmental 2 = High Reliability								
Lock Ring (optional)	L = Lock Ring - (dash) = Standard								
Basic Number	003								
Finish	See Table I								
Shell Size - Insert Arrangement	See Table II								
Contact Type	P = Pins, Plug Side S = Sockets, Plug Side								
Alternate Key Position	A, B, C, D, N = Normal; See Table III								
Mod Code	131 = Dry Lube (Omit for None)								

*Add Modification Code 131 for dry lubricant on inside surfaces of the coupling nut. May not be suitable for space applications.



Dimensions		
Shell Size	A Max	B Max
09	.573 (14.6)	.910 (23.1)
11	.701 (17.8)	1.035 (26.3)
13	.851 (21.6)	1.210 (30.7)
15	.976 (24.8)	1.330 (33.8)
17	1.101 (28.0)	1.455 (37.0)
19	1.208 (30.7)	1.570 (39.9)
21	1.333 (33.9)	1.695 (43.1)
23	1.458 (37.0)	1.800 (45.7)
25	1.583 (40.2)	1.925 (48.9)

INTERMATEABLE WITH THE FOLLOWING CONNECTORS:

PATT 616
NFC C93-422 (HE308)



Sav-Con® connector savers

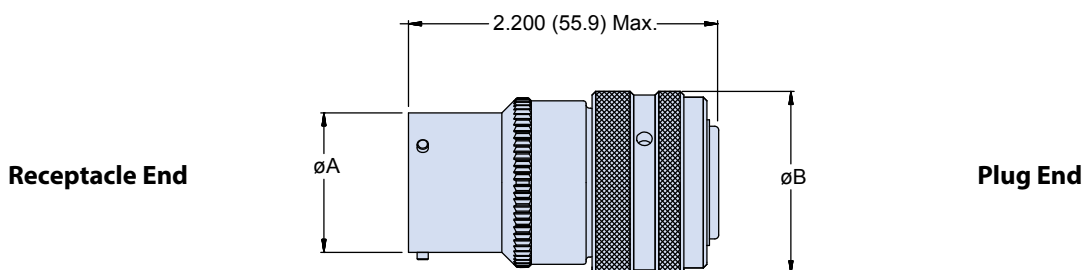
MIL-DTL-38999 Series I Type filter connector

240-381A Bayonet Coupling



240-381A FILTER CONNECTOR ADAPTER WITH BAYONET COUPLING

How To Order									
Sample Part Number	240-381	A	ME	15-35	PS	P	A	N	U
Filter Connector	240-381								
Shell Style	A = Connector Adapter								
Material and Finish	See Table I								
Shell Size - Insert Arrangement	See Table II								
Contact Gender	PS = Pins, Plug Side SP = Sockets, Plug Side; See Note 2								
Filter Type	P = Pi Circuit C = C Circuit; See Note 1								
Capacitance	See Table IV								
Flange Mounting Style	N = Not Applicable								
Alternate Key Position	A, B, C, D, N = Normal, U = Universal; See Note 3								



* Please consult the factory for Pin/Pin and/or Socket/Socket contact arrangements.

NOTES

1. Other filter styles (C-L, L-C, Unbalanced Pi, Multi-Stage, Multi-Value) are available, please consult the factory.
2. Please consult the factory for Pin/Pin and/or Socket/Socket contact arrangements.
3. Do not mate Universal key position with another Universal.

Dimensions		
Shell Size	Ø A Max	Ø B Max
9	.573 (14.6)	.910 (23.1)
11	.701 (17.8)	1.035 (26.3)
13	.851 (21.6)	1.210 (30.7)
15	.976 (24.8)	1.330 (33.8)
17	1.101 (28.0)	1.455 (37.0)
19	1.208 (30.7)	1.570 (39.9)
21	1.333 (33.9)	1.695 (43.1)
23	1.458 (37.0)	1.800 (45.7)
25	1.583 (40.2)	1.925 (48.9)



Sav-Con® connector savers

MIL-DTL-38999 Series II

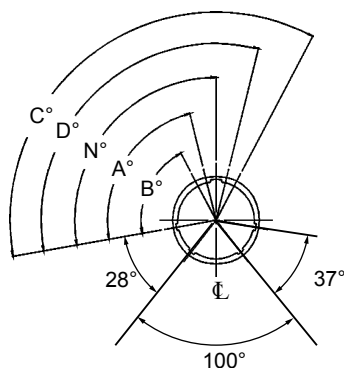
Reference Information



Table I: Material and Finish		
Plating Code	Material	Finish
M	Aluminum	Electroless Nickel
B		Cad Plate, Olive Drab
NF		Cadmium Plate Olive Drab over Electroless Nickel
NC		Zinc-Cobalt
ZN		Olive Drab Zinc-Nickel
MT		Ni-PTFE 1000 Hour Grey™ (Nickel Fluorocarbon Polymer)
ZR		Zinc Nickel, Black
ME		Electroless Nickel (RoHS)
ZL	Stainless Steel	Electro-Deposited Nickel

Table II: Insert Arrangement					
Shell Size Desig.	Insert Arr. Dash No.	Contact Size and Quantity			
		22	20	16	12
8	8-3		3		
	8-35	6			
	8-97	2	2		
	8-98		3		
10	10-5		5		
	10-35	13			
	10-98		6		
	10-99		7		
12	12-3			3	
	12-4			4	
	12-8		8		
	12-35	22			
	12-98		10		
14	14-5			5	
	14-15		14	1	
	14-18		18		
	14-19		19		
	14-35	37			
	14-97		8	4	
16	16-6				6
	16-8			8	
	16-26		26		
	16-42	42			
	16-35	55			
	16-99		21	2	

Table II: Insert Arrangement					
Shell Size Desig.	Insert Arr. Dash No.	Contact Size and Quantity			
		22	20	16	12
18	18-11			11	
	18-28		26	2	
	18-30		29	1	
	18-32		32		
	18-35	66			
	18-45	67			
	18-96				9
20	20-16			16	
	20-24		24		
	20-25		25		
	20-35	79			
	20-39		37	2	
	20-41		41		
22	22-21			21	
	22-32		32		
	22-34		34		
	22-35	100			
	22-36		36		
	22-53		53		
	22-55		55		
	22-97			16	
	22-99			11	
24	24-4		48	8	
	24-19				19
	24-24			12	12
	24-29			29	
	24-35	128			
	25-61		61		



FACE VIEW
RECEPTACLE

NOTE: MASTER KEY AND KEYWAY HAS VARIOUS POSITIONS WHILE MINOR KEYS AND KEYWAYS REMAIN FIXED

Table III: Main and Alternate Keyway Positions					
Shell Size	N°	A°	B°	C°	D°
8	100	82	-	-	118
10	100	86	72	128	114
12	100	80	68	132	120
14	100	79	66	134	121
16	100	82	70	130	118
18	100	82	70	130	118
20	100	82	70	130	118
22	100	85	74	126	115
24	100	85	74	125	115

Table IV: Capacitor Array Code Capacitance Range for Filtered Connectors		
Class	Pi - Circuit (pF)	C - Circuit (pF)
X*	160,000 - 240,000	80,000 - 120,000
Y*	80,000 - 120,000	40,000 - 60,000
Z*	60,000 - 90,000	30,000 - 45,000
A	38,000 - 56,000	19,000 - 28,000
B	32,000 - 45,000	16,000 - 22,500
C	18,000 - 33,000	9,000 - 16,500
D	8,000 - 12,000	4,000 - 6,000
E	3,300 - 5,000	1,650 - 2,500
F	800 - 1,300	400 - 650
G	400 - 600	200 - 300
J	70-120	35-60

* Filter Classes X, Y and Z are 250 VDC. All others are 500 VDC



Sav-Con® connector savers

MIL-DTL-38999 Series II

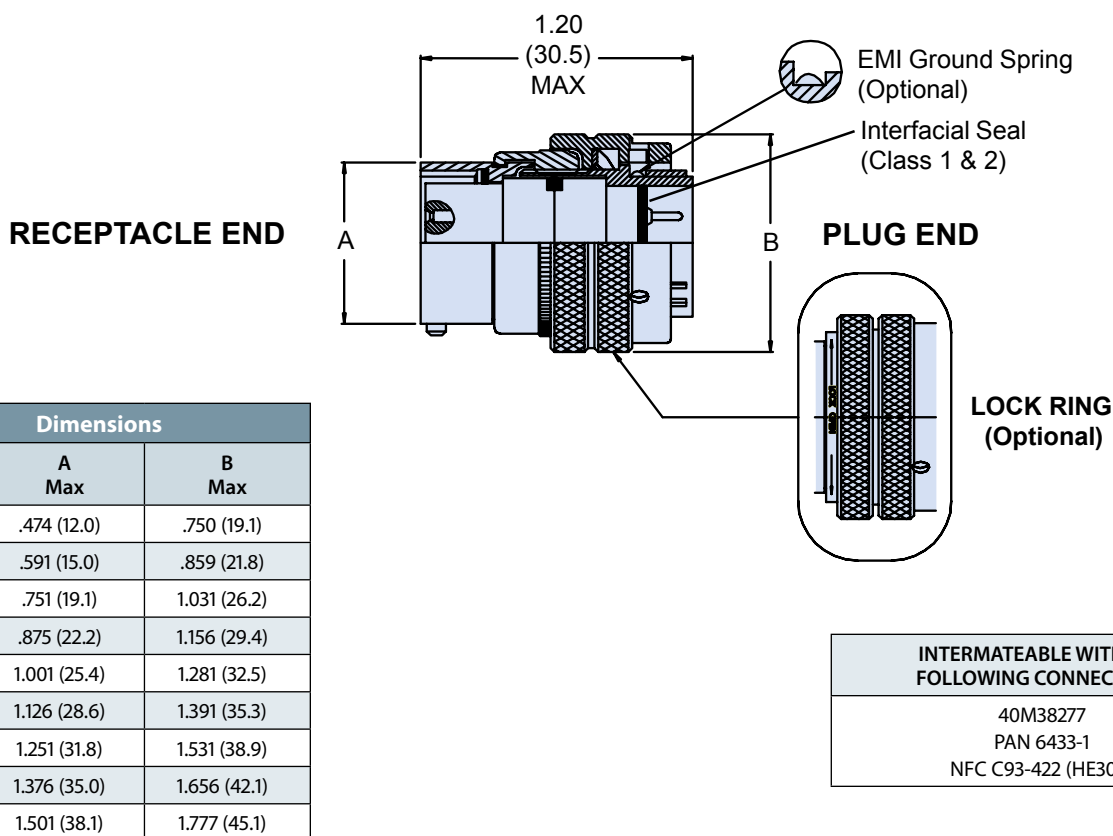
940-004, 941-004 and 942-004 Bayonet Coupling



940-004 GENERAL DUTY, 941-004 ENVIRONMENTAL AND 942-004 HIGH RELIABILITY

How To Order											
Sample Part Number	94	0	L	004	M	16	G	35	P	A	131
Series	94										
Class	0 = General Duty 1 = Environmental 2 = High Reliability										
Lock Ring (optional)	L = Lock Ring – (dash) = Standard										
Basic Number	004										
Finish	See Table I										
Shell Size	8, 10, 12, 14, 16, 18, 20, 22, 24										
EMI Ground	G = EMI Ground Spring (optional) – = Standard										
Insert Arrangement	See Table II										
Contact Type	P = Pins, Plug Side S = Sockets, Plug Side										
Alternate Key Position	A, B, C, D, N = Normal; See Table III										
Mod Code*	131 = Dry Lube, Omit for None										

*Add Modification Code 131 for Dry Lubricant on inside surfaces of the Coupling Nut. May not be suitable for space applications.



INTERMATEABLE WITH THE FOLLOWING CONNECTORS:

40M38277
PAN 6433-1
NFC C93-422 (HE309)



Sav-Con® connector savers

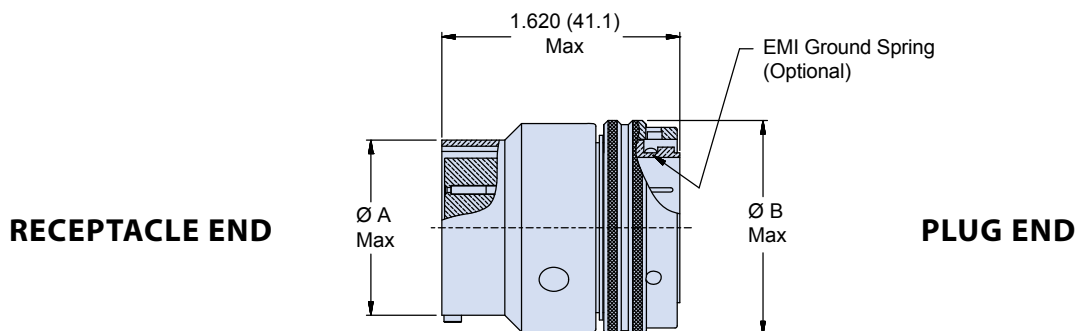
MIL-DTL-38999 Series II

240-382A Filter Adapter



240-382A FILTER CONNECTOR ADAPTER WITH BAYONET COUPLING

How To Order									
Sample Part Number	240-382	A	ME	14-35	PS	P	A	N	U
Filter Connector	240-382								
Shell Style	A = Connector Adapter								
Connector Class	See Table I								
Shell Size - Insert Arrangement	See Table II								
Contact Gender	PS = Pins, Plug Side SP = Sockets, Plug Side (See Note 2)								
Filter Type	P = Pi Circuit C = C Circuit (See Note 1)								
Capacitance	See Table IV								
Flange Mounting Style	N = Not Applicable								
Alternate Key Position	A, B, C, D, N = Normal, U = Universal; See Note 3								



NOTES

1. Other filter styles (C-L, L-C, Unbalanced Pi, Multi-Stage, Multi-Value) are available, please consult the factory.
2. Please consult the factory for Pin/ Pin and/or Socket/Socket contact arrangements.
3. Do not mate Universal key position with another Universal

Dimensions		
Shell Size	Ø A Max	Ø B Max
8	.474 (12.0)	.784 (19.9)
10	.591 (15.0)	.894 (22.7)
12	.751 (19.1)	1.031 (26.2)
14	.876 (22.3)	1.156 (29.4)
16	1.001 (25.4)	1.281 (32.5)
18	1.126 (28.6)	1.406 (35.7)
20	1.251 (31.8)	1.531 (38.9)
22	1.376 (35.0)	1.641 (41.7)
24	1.501 (38.1)	1.766 (44.8)



Sav-Con® connector savers

MIL-DTL-38999 Series III

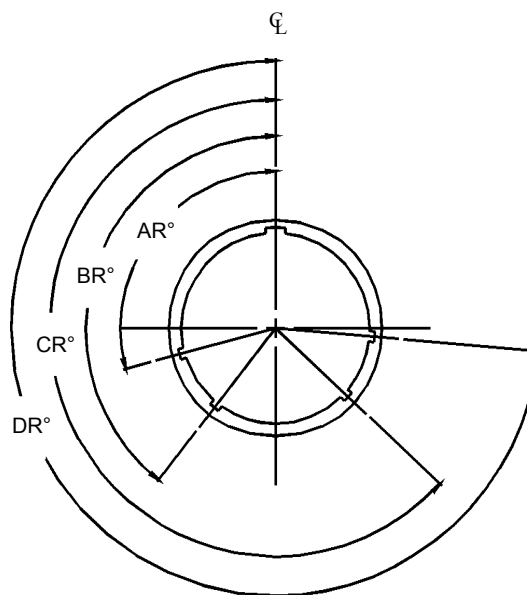
Reference Information



Table I: Material and Finish		
Plating Code	Material	Finish
M	Aluminum	Electroless Nickel
B		Cad Plate, Olive Drab
NF		Cadmium Plate Olive Drab over Electroless Nickel
NC		Zinc-Cobalt
ZN		Olive Drab Zinc-Nickel
MT		Ni-PTFE 1000 Hour Grey™ (Nickel Fluorocarbon Polymer)
ZR		Zinc Nickel, Black
ME		Electroless Nickel (RoHS)
ZL	Stainless Steel	Electro-Deposited Nickel

Table III: Manin and Alternate Keyway Positions

Shell Size Code Ref	Shell Size	Alt. Keyway Code	AR°	BR°	CR°	DR°
A	9	N	105	140	215	265
		A	102	132	248	320
		B	80	118	230	312
		C	35	140	205	275
		D	64	155	234	304
		E	91	131	197	240
B C D	11 13 15	N	95	141	208	236
		A	113	156	182	292
		B	90	145	195	252
		C	53	156	220	255
		D	119	146	176	298
		E	51	141	184	242
E F	17 19	N	80	142	196	293
		A	135	170	200	310
		B	49	169	200	244
		C	66	140	200	257
		D	62	145	180	280
		E	79	153	197	272
G H J	21 23 25	N	80	142	196	293
		A	135	170	200	310
		B	49	169	200	244
		C	66	140	200	257
		D	62	145	180	280
		E	79	153	197	272



FACE VIEW
RECEPTACLE INSERT



Sav-Con® connector savers

MIL-DTL-38999 Series III

Reference Information



Table II: Shell Size - Insert Arrangement						
Shell Size Code	Shell Size Ref.	Insert Arr. Dash No.	Contact Size			
			22	20	16	12
A	9	9-3		3		
		9-35	6			
		9-44	4			
		9-98		3		
B	11	11-2			2	
		11-4		4		
		11-5		5		
		11-6		6		
		11-35	13			
		11-98		6		
		11-99		7		
C	13	13-4			4	
		13-8		8		
		13-35	22			
		13-98		10		
D	15	15-5			5	
		15-15		14	1	
		15-18		18		
		15-19		19		
		15-35	37			
E	17	15-97		8	4	
		17-6				6
		17-8			8	
		17-26		26		
		17-35	55			
F	19	17-99		21	2	
		19-11			11	
		19-28		26	2	
		19-30		29	1	
		19-32		32		
		19-35	66			
		19-45	67			

Table II: Shell Size - Insert Arrangement						
Shell Size Code	Shell Size Ref.	Insert Arr. Dash No.	Contact Size			
			22	20	16	12
G	21	21-35	79			
		21-11				11
		21-16			16	
		21-24		24		
		21-25		25		
		21-27		27		
		21-39		37	2	
		21-41		41		
H	23	23-35	100			
		23-2	85			
		23-21			21	
		23-32		32		
		23-34		34		
		23-36		36		
		23-53		53		
		23-55		55		
		23-97			16	
		23-99			11	
J	25	25-2	100			
		25-4		48	8	
		25-19				19
		25-24			12	12
		25-29			29	
		25-35	128			
		25-43		23	20	
		25-61		61		

Table IV: Capacitor Array Code Capacitance Range for Filtered Connectors		
Class	Pi - Circuit (pF)	C - Circuit (pF)
X*	160,000 - 240,000	80,000 - 120,000
Y*	80,000 - 120,000	40,000 - 60,000
Z*	60,000 - 90,000	30,000 - 45,000
A	38,000 - 56,000	19,000 - 28,000
B	32,000 - 45,000	16,000 - 22,500
C	18,000 - 33,000	9,000 - 16,500
D	8,000 - 12,000	4,000 - 6,000
E	3,300 - 5,000	1,650 - 2,500
F	800 - 1,300	400 - 650
G	400 - 600	200 - 300
J	70-120	35-60

* Filter Classes X, Y and Z are 250 VDC.
All others are 500 VDC



Sav-Con® connector savers

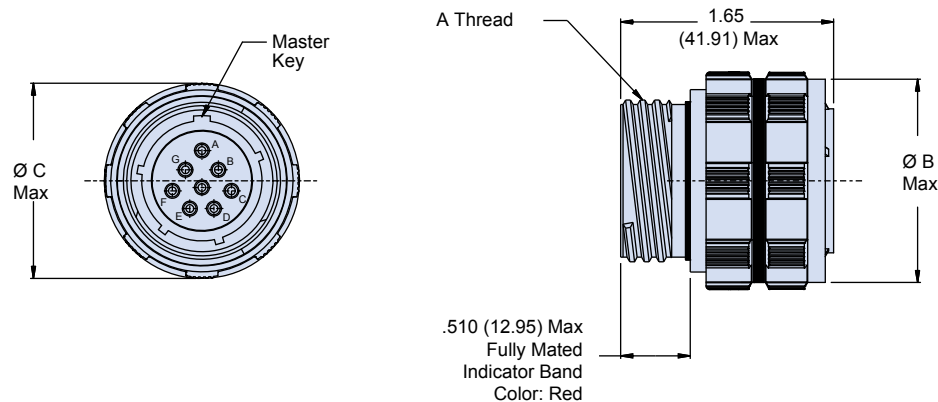
MIL-DTL-38999 Series III

233-213 SuperNine® Threaded Coupling



233-213 HIGH RELIABILITY WITH THREADED COUPLING

How To Order							
Sample Part Number	233-213	-NF	17-8	P	N	S	N
Series / Basic Part No.	233-213						
Finish	NF = Cadmium Olive Drab ME = Electroless Nickel MT = Nickel PTFE ZR = Black Zinc Nickel See Table I for Additional Finishes						
Shell Size - Insert Arrangement	See Table II						
Contact Style (Plug Side)	P = Pin, gold, 500 cycles S = Socket, gold, 500 cycles See Notes 3 and 4						
Alternate Polarization (Plug Side)	A, B, C, D, E, N = Normal, U = Universal; See Table III, See Note 6						
Contact Style (Receptacle Side)	P = Pin, gold, 500 cycles S = Socket, gold, 500 cycles See Notes 3 and 4						
Alternate Polarization (Receptacle Side)	A, B, C, D, E, N = Normal, U = Universal; See Table III, See Note 6						



NOTES

- Glenair's 233-213 connector savers are designed to meet or exceed the mechanical dimensional, electrical, and environmental requirements of MIL-DTL-38999, D38999/20, D38999/26, and MIL-STD-1560 except as shown and/or noted.
- Glenair connector savers mate with any QPL manufacturer's MIL-DTL-38999, series III plugs and receptacles that have the same shell size, insert arrangement, and polarization.
- For pin/pin and socket/socket, symmetrical insert layouts only.
- Power to a given contact on one end will result in power to a contact directly opposite, regardless of identification letter.
- Electrical safety limits must be established by user. Peak voltage, switching surge, transient, etc. should be used to determine the safety application.
- Alternate polarization 'U' (universal) is a non-standard/non-mill-spec option intended for test lab use only which allows for mating to any QPL manufacturer's MIL-DTL-38999, series III connector having the same shell size, insert arrangement, and mating contact size.

Dimensions						
Shell Size Code	Shell Size	A Thread	Ø B Max		Ø C Max	
			In	mm	In	mm
A	9	.6250 - 0.1P - 0.3L - TS-2A	0.811	20.60	0.858	21.79
B	11	.7500 - 0.1P - 0.3L - TS-2A	0.929	23.60	0.984	24.99
C	13	.8750 - 0.1P - 0.3L - TS-2A	1.110	28.19	1.157	29.39
D	15	1.0000 - 0.1P - 0.3L - TS-2A	1.232	31.29	1.280	32.51
E	17	1.1875 - 0.1P - 0.3L - TS-2A	1.358	34.49	1.406	35.71
F	19	1.2500 - 0.1P - 0.3L - TS-2A	1.469	37.31	1.516	38.51
G	21	1.3750 - 0.1P - 0.3L - TS-2A	1.594	40.49	1.642	41.71
H	23	1.5000 - 0.1P - 0.3L - TS-2A	1.720	43.69	1.768	44.91
J	25	1.6250 - 0.1P - 0.3L - TS-2A	1.843	46.81	1.890	48.01



Sav-Con® connector savers

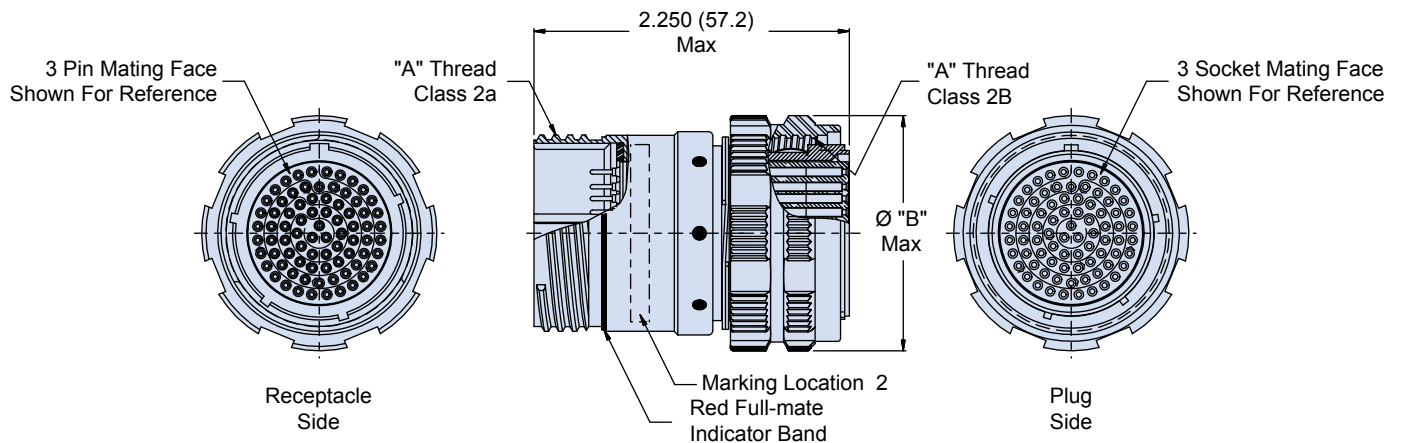
MIL-DTL-38999 Series III

240-383B SuperNine® Threaded Coupling



240-383B HIGH RELIABILITY FILTER CONNECTOR ADAPTER WITH THREADED COUPLING

How To Order									
Sample Part Number	240-383	B	ME	15-35	PS	P	A	N	N
Filter Connector	240-383								
Shell Style	B = Connector Adapter								
Finish	See Table I								
Insert Arrangement	See Table II								
Contact Gender	PS = Pins, Plug Side SP = Sockets, Plug Side								
Filter Type	P = Pi Circuit C = C Circuit (See Note 1)								
Capacitance	See Capacitor Array Code Table								
Flange Mounting Style	N = Not Applicable								
Alternate Key Position	A, B, C, D, E, N = Normal, U = Universal; See Table III, See Note 3								



Consult Factory for Additional Filter Types, TVS Diodes, and other Custom Configurations.

NOTES

1. Other filter styles (C-L, L-C, Unbalanced Pi, Multi-Stage, Multi-Value) are available, please consult the factory.
2. Please consult the factory for Pin/Pin and/or Socket/Socket contact arrangements
3. Do not mate Universal key position with another Universal

Dimensions		
Shell Size	A Thread Class 2	Ø B Max
9	.6250-.1P-.3L-TS	.858 (21.8)
11	.7500-.1P-.3L-TS	.984 (25.0)
13	.8750-.1P-.3L-TS	1.157 (29.4)
15	1.000-.1P-.3L-TS	1.280 (32.5)
17	1.1875-.1P-.3L-TS	1.406 (35.7)
19	1.2500-.1P-.3L-TS	1.516 (38.5)
21	1.3750-.1P-.3L-TS	1.642 (41.7)
23	1.5000-.1P-.3L-TS	1.768 (44.9)
25	1.6250-.1P-.3L-TS	1.890 (48.0)



Sav-Con® Connector Savers

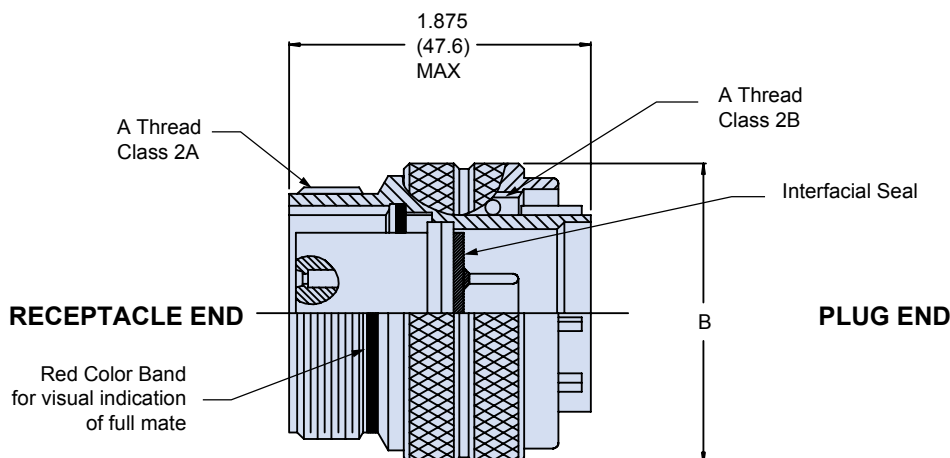
MIL-DTL-38999 Series III

941-005 and 942-005 Threaded Coupling



941-005 ENVIRONMENTAL AND 942-005 HIGH RELIABILITY THREADED COUPLING

How To Order								
Sample Part Number	94	1	-005	NF	B	98	P	A
Series	94							
Class	1 = Environmental 2 = High Reliability							
Basic Number	005							
Finish	See Table I							
Shell Size	A, B, C, D, E, F, G, H, J See Table II or Dimensions Table							
Insert Arrangement	See Table II							
Contact Type	P = Pins, Plug Side S = Sockets, Plug Side							
Alternate Key Position	A, B, C, D, E, N = Normal; See Table III							



Dimensions			
Shell Size Ref	Shell Size	A Thread Class 2	B Max
A	9	.6250 - 0.1P - 0.3L - TS-2	.858 (21.82)
B	11	.7500 - 0.1P - 0.3L - TS-2	.984 (24.61)
C	13	.8750 - 0.1P - 0.3L - TS-2	1.157 (28.98)
D	15	1.0000 - 0.1P - 0.3L - TS-2	1.280 (32.16)
E	17	1.1875 - 0.1P - 0.3L - TS-2	1.406 (35.33)
F	19	1.2500 - 0.1P - 0.3L - TS-2	1.516 (38.10)
G	21	1.3750 - 0.1P - 0.3L - TS-2	1.642 (41.28)
H	23	1.5000 - 0.1P - 0.3L - TS-2	1.768 (44.45)
J	25	1.6250 - 0.1P - 0.3L - TS-2	1.890 (47.63)



Sav-Con® connector savers

MIL-DTL-38999 Series III

240-383A Filter Adapter



240-383A FILTER CONNECTOR ADAPTER WITH THREADED COUPLING

How To Order									
Sample Part Number	240-383	A	ME	15-35	PS	P	A	N	N
Filter Connector	240-383								
Shell Style	A = Connector Adapter								
Connector Class	See Table I								
Shell Size - Insert Arrangement	See Table II								
Contact Gender	PS = Pins, Plug Side SP = Sockets, Plug Side (See Note 2)								
Filter Type	P = Pi Circuit C = C Circuit (See Note 1)								
Capacitance	See Table IV								
Flange Mounting Style	N = Not Applicable								
Alternate Key Position	A, B, C, D, E, N = Normal, U = Universal; See Table III, See Note 3								

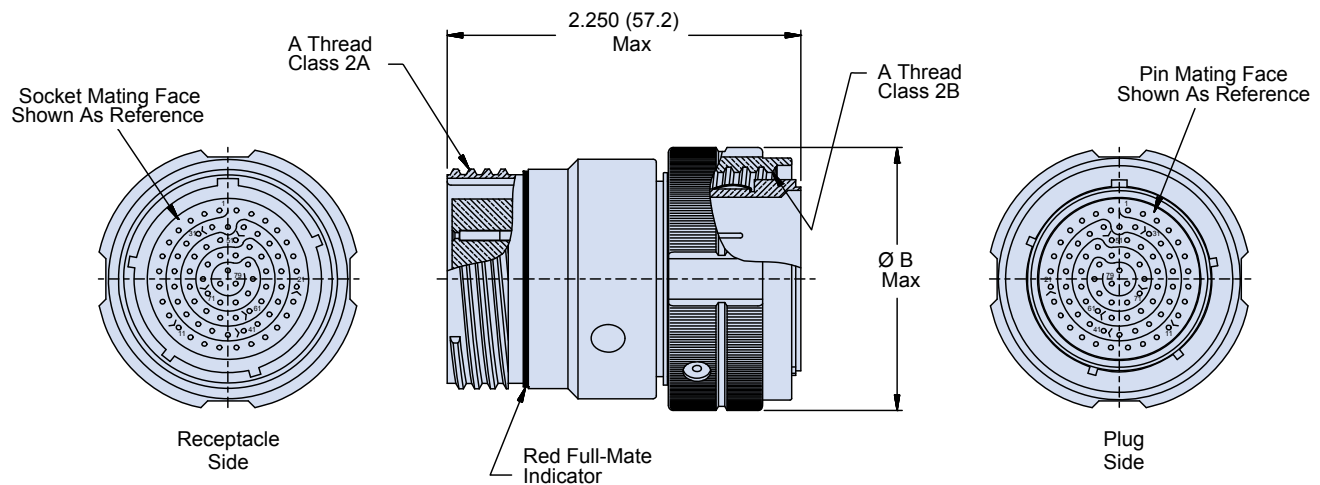


Table III: Dimensions

Shell Size	A Thread Class 2	Ø B Max
9	.6250-.1P-.3L-TS	.858 (21.8)
11	.7500-.1P-.3L-TS	.984 (25.0)
13	.8750-.1P-.3L-TS	1.157 (29.4)
15	1.000-.1P-.3L-TS	1.280 (32.5)
17	1.1875-.1P-.3L-TS	1.406 (35.7)
19	1.2500-.1P-.3L-TS	1.516 (38.5)
21	1.3750-.1P-.3L-TS	1.642 (41.7)
23	1.5000-.1P-.3L-TS	1.768 (44.9)
25	1.6250-.1P-.3L-TS	1.890 (48.0)

NOTES

1. Other filter styles (C-L, L-C, Unbalanced Pi, Multi-Stage, Multi-Value) are available, please consult the factory.
2. Please consult the factory for Pin/Pin and/or Socket/Socket contact arrangements
3. Do not mate Universal key position with another Universal



Sav-Con® Connector Savers

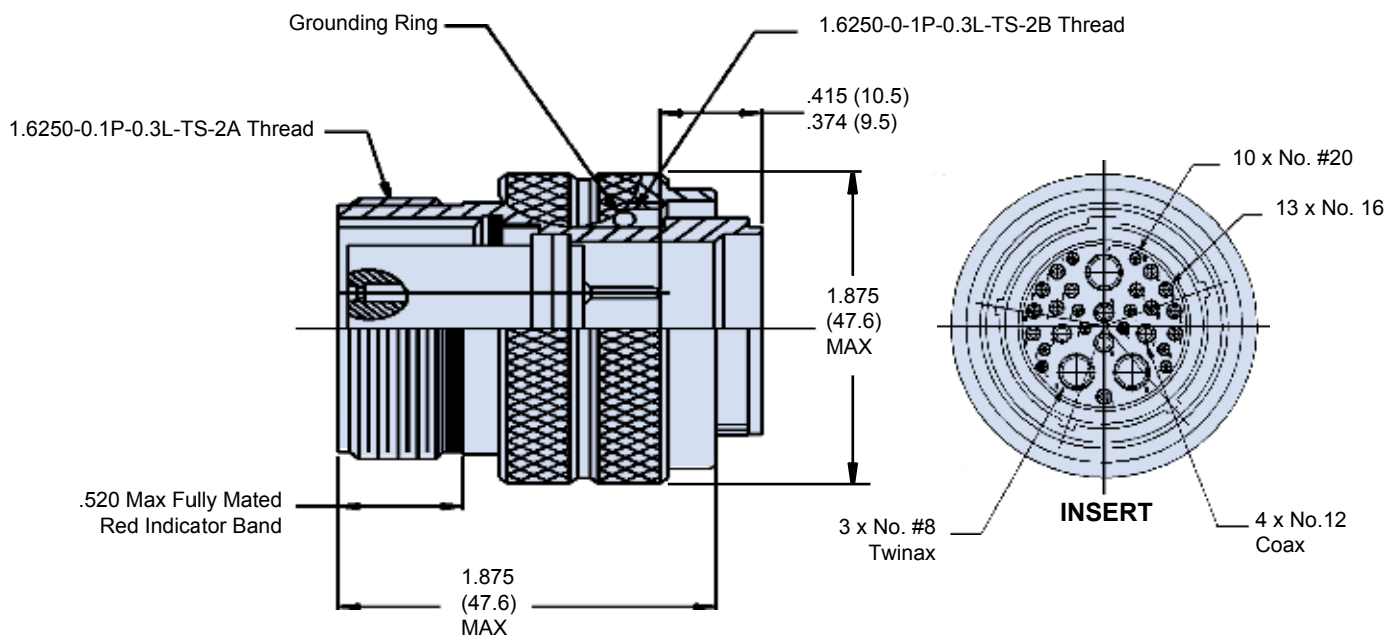
MIL-DTL-38999 Series III, shell size 25

941-021 and 942-021 Threaded Coupling



941-021 ENVIRONMENTAL AND 942-021 HIGH RELIABILITY WITH THREADED COUPLING

How To Order									
Sample Part Number	94	1	-021	NF	25	20	P	A	X
Series	94								
Class	1 = Environmental 2 = High Reliability								
Basic Number	021								
Finish	See Table I								
Shell Size	25								
Insert Arrangement	20; See Table II								
Contact Type	P = Pins, Plug Side S = Sockets, Plug Side								
Alternate Key Position	A, B, C, D, E, N = Normal; See Table III								
Fiber Optic	X = If using Fiber Optics in Channels U and Y (Supplied without electrical contacts in these cavities). Omit for Non-Fiber Use								



Design Features:

- Incorporates all MIL-STD-D38999 Series III Design Features
- Intermateable with D38999/20, /24 and /31 Connectors
- Insert Arrangement 25-20 Compatible with MIL-STD-1553 Aircraft Multiplex Data Bus

25-20 Insert Arrangement							
Shell Size Code	Shell Size	Insert Arrangement Dash No.	Total Number Of Contacts	Contact Size			
J	25	25-20	30	20	16	12 (Coax)	8 (Twinax)
				Quantity			
				10	13	4	3



Sav-Con® connector savers

MIL-DTL-83723 Series III

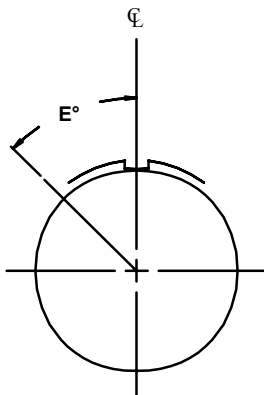
Reference Information



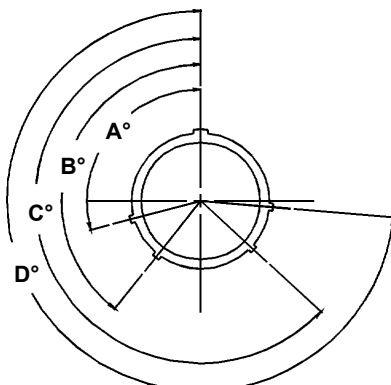
Table I: Material and Finish		
Plating Code	Material	Finish
M	Aluminum	Electroless Nickel
B		Cad Plate, Olive Drab
NF		Cadmium Plate Olive Drab over Electroless Nickel
NC		Zinc-Cobalt
ZN		Olive Drab Zinc-Nickel
MT		Ni-PTFE 1000 Hour Grey™ (Nickel Fluorocarbon Polymer)
ZR		Zinc Nickel, Black
ME		Electroless Nickel (RoHS)
ZL	Stainless Steel	Electro-Deposited Nickel

Table II: Insert Arrangement				
Shell Size Design.	Insert Arrangement Dash No.	Contact Size: Quantity		
		20	16	12
08	8-2	2		
	8-3	3		
	8-98	3		
10	10-2	2		
	10-5	5		
	10-6	6		
	10-20	2		
12	12-3		3	
	12-12	12		
14	14-4			4
	14-7		7	
	14-12	9	3	
	14-15	15		
16	16-10		10	
	16-24	24		

Table II: Insert Arrangement				
Shell Size Design.	Insert Arrangement Dash No.	Contact Size: Quantity		
		20	16	12
18	18-8			8
	18-14		14	
	18-31	31		
20	20-16		16	
	20-25	19		6
	20-28	24		4
	20-39	37	2	
	20-41	41		
22	22-12			12
	22-19		19	
	22-32	26		6
	22-39	27	12	
	22-55	55		
24	24-19			19
	24-43	23	20	
	24-57	55		2
	24-61	61		



ROTATED PIN INSERT
POSITION 1 THRU 5



FACE VIEW RECEPTACLE
POSITION N, 6 THRU 10

Table III: Alternate Keway Positions														
Alternate Key Position	Size 8				Size 10				Sizes 12 - 24				Insert Position	
	A°	B°	C°	D°	A°	B°	C°	D°	A°	B°	C°	D°	E°	
N = Normal	105	140	210	265	105	140	215	265	105	140	215	265	0	
1	-	-	-	-	105	140	215	265	105	140	215	265	10	
2	-	-	-	-	105	140	215	265	105	140	215	265	20	
3	-	-	-	-	105	140	215	265	105	140	215	265	30	
4	-	-	-	-	105	140	215	265	105	140	215	265	40	
5	-	-	-	-	105	140	215	265	105	140	215	265	50	
6	102	132	248	320	102	132	248	320	18	149	192	259	0	
7	80	118	230	312	80	118	230	312	92	152	222	342	0	
8	35	140	205	275	35	140	205	275	84	152	204	334	0	
9	64	155	234	304	64	155	234	304	24	135	199	240	0	
10	-	-	-	-	25	115	220	270	98	152	268	336	0	

In alternate positions, the pin insert rotates clockwise while the socket insert rotates counterclockwise the same number of degrees relative to the center line of the master key or keyway.

Table IV: Capacitor Array Code Capacitance Range		
Class	Pi - Circuit (pF)	C - Circuit (pF)
X*	160,000 - 240,000	80,000 - 120,000
Y*	80,000 - 120,000	40,000 - 60,000
Z*	60,000 - 90,000	30,000 - 45,000
A	38,000 - 56,000	19,000 - 28,000
B	32,000 - 45,000	16,000 - 22,500
C	18,000 - 33,000	9,000 - 16,500

Table IV: Capacitor Array Code Capacitance Range		
Class	Pi - Circuit (pF)	C - Circuit (pF)
D	8,000 - 12,000	4,000 - 6,000
E	3,300 - 5,000	1,650 - 2,500
F	800 - 1,300	400 - 650
G	400 - 600	200 - 300
J	70-120	35-60

* Filter Classes X, Y and Z are 250 VDC.
All others are 500 VDC



Sav-Con® connector savers

MIL-DTL-83723 Series III

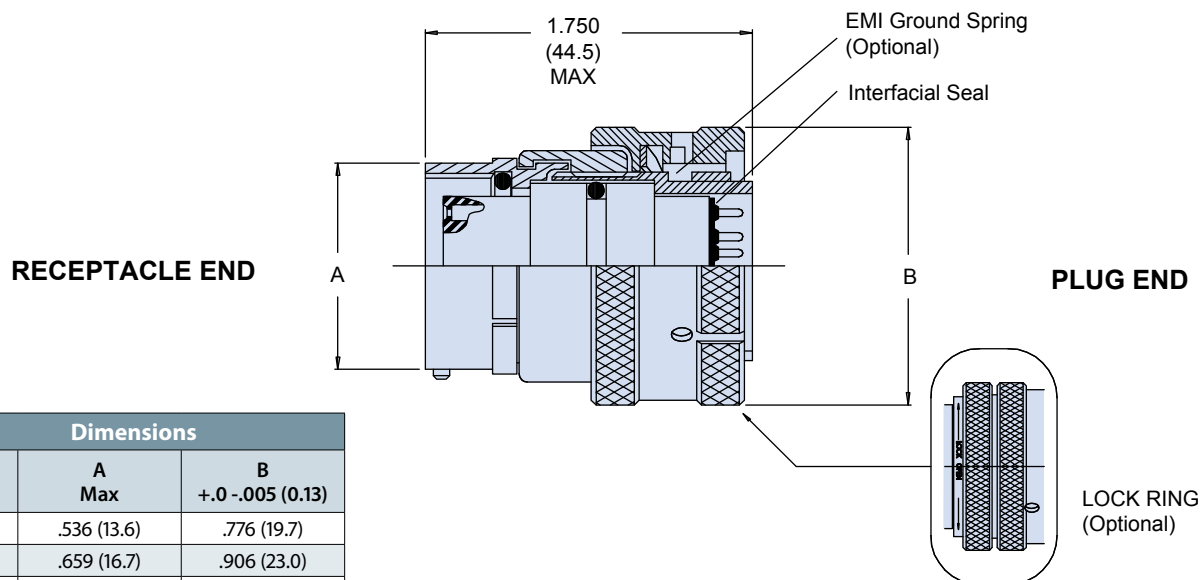
940-006, 941-006, 942-006 Bayonet Coupling



940-006 GENERAL DUTY, 941-006 ENVIRONMENTAL AND 942-006 HIGH RELIABILITY

How To Order											
Sample Part Number	94	0	L	006	M	16	G	24	P	N	131
Series	94										
Class	0 = General Duty 1 = Environmental 2 = High Reliability										
Lock Ring (optional)	L = Lock Ring - (dash) = Standard										
Basic Number	006										
Finish	See Table I										
Shell Size	See Table II										
EMI Ground	G = EMI Ground Spring (optional) - = Standard										
Insert Arrangement	See Table II										
Contact Type	P = Pins, Plug Side S = Sockets, Plug Side										
Alternate Key Position	1 through 10, N = Normal; See Table III										
Mod Code	131 = Dry Lube (Omit for None)										

*Add Modification Code 131 for Dry Lubricant on inside surfaces of the Coupling Nut. May not be suitable for space applications.



Dimensions		
Shell Size	A Max	B +.0 -.005 (0.13)
08	.536 (13.6)	.776 (19.7)
10	.659 (16.7)	.906 (23.0)
12	.829 (21.1)	1.078 (27.4)
14	.898 (22.8)	1.141 (29.0)
16	1.025 (26.0)	1.266 (32.2)
18	1.131 (28.7)	1.375 (34.9)
20	1.256 (31.9)	1.510 (38.4)
22	1.381 (35.1)	1.625 (41.3)
24	1.506 (38.3)	1.760 (44.7)

INTERMATEABLE WITH THE FOLLOWING CONNECTORS:

PAN 6433-2
PATT 615
NFC C93-422 (HE306)
VG 96912



Sav-Con® connector savers

MIL-DTL-83723 Series III

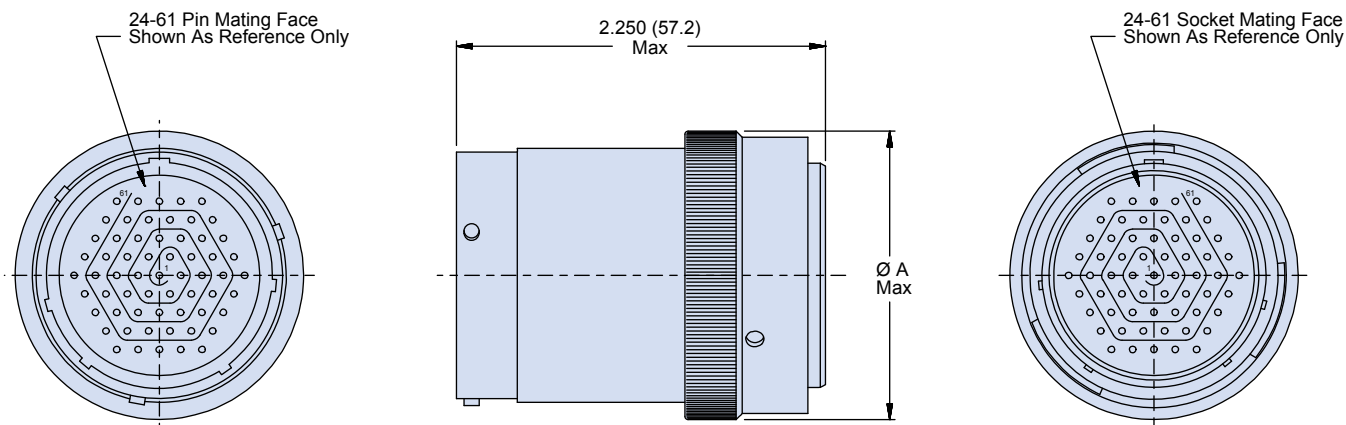
240-838A Bayonet Coupling



240-838A FILTER CONNECTOR ADAPTER WITH BAYONET COUPLING

How To Order									
Sample Part Number	240-838	A	ME	24-61	PS	P	A	N	N
Filter Connector	240-838								
Shell Style	A = Bayonet Coupling								
Finish	See Table I								
Insert Arrangement	See Table II								
Contact Gender	PS = Pins, Plug Side SP = Sockets, Plug Side (See Note 2)								
Filter Type	P = Pi Circuit C = C Circuit (See Note 1)								
Capacitance	See Table IV								
Flange Mounting Style	N = Not Applicable								
Alternate Insert Position	1, 2, 3, 4, 5, 6, 7, 8, 9, Y, N = Normal; See Table III								

B



Dimensions	
Shell Size	Ø A Max
8	.776 (19.7)
10	.906 (23.0)
12	1.708 (43.4)
14	1.141 (29.0)
16	1.266 (32.2)
18	1.375 (34.9)
20	1.510 (38.4)
22	1.625 (41.3)
24	1.760 (44.7)

NOTES

1. Other filter styles (C-L, L-C, Unbalanced Pi, Multi-Stage, Multi-Value) are available, please consult the factory.
2. Please consult the factory for Pin/Pin and/or Socket/Socket contact arrangements.



Sav-Con® connector savers

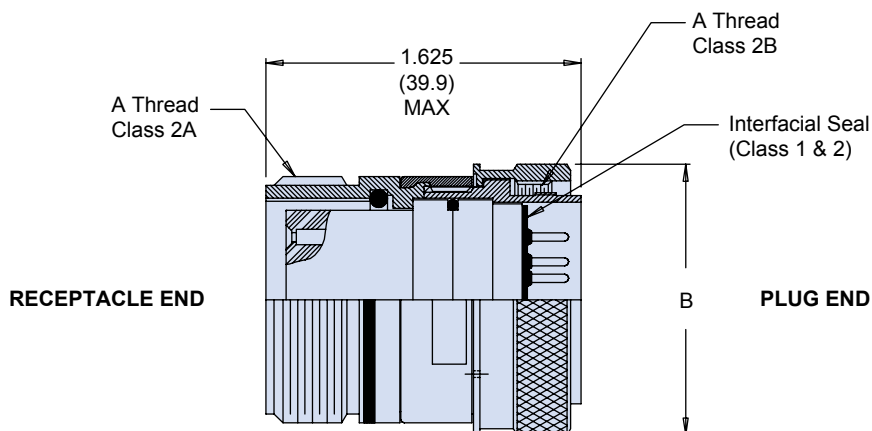
MIL-DTL-83723 Series III

940-007, 941-007, 942-007 Threaded Coupling



940-007 GENERAL DUTY, 941-007 ENVIRONMENTAL AND 942-007 HIGH RELIABILITY

How To Order							
Sample Part Number	94	0	-007	M	16-24	P	N
Series	94						
Class	0 = General Duty 1 = Environmental 2 = High Reliability						
Basic Number	007						
Finish	See Table I						
Shell Size - Insert Arrangement	See Table II						
Contact Type	P = Pins, Plug Side S = Sockets, Plug Side						
Alternate Key Position	1 through 10, N = Normal; See Table III						



Dimensions		
Shell Size	A Thread	B Dia +.0 -.005 (0.13)
08	9/16 - 24 UNEF-2	.776 (19.7)
10	11/16 - 24 UNEF-2	.906 (23.0)
12	7/8 - 24 UNEF-2	1.078 (27.4)
14	15/16 - 24 UNEF-2	1.141 (29.0)
16	1-1/16 - 18 UNEF-2	1.266 (32.2)
18	1-3/16 - 18 UNEF-2	1.375 (34.9)
20	1-5/16 - 18 UNEF-2	1.510 (38.4)
22	1-7/16 - 18 UNEF-2	1.625 (41.3)
24	1-9/16 - 18 UNEF-2	1.760 (44.7)



Sav-Con® connector savers

MIL-DTL-83723 Series III

240-837A Threaded Coupling



240-837A FILTERED CONNECTOR ADAPTER WITH THREADED COUPLING

How To Order										
Sample Part Number	240-837	A	ME	24-61	PS	P	A	N	N	
Filter Connector	240-837									
Shell Style	A = Connector Adapter									
Finish	See Table I									
Shell Size - Insert Arrangement	See Table II									
Contact Gender	PS = Pins, Plug Side SP = Sockets, Plug Side (See Note 2)									
Filter Type	P = Pi Circuit C = C Circuit (See Note 1)									
Capacitance	See Table IV									
Flange Mounting Style	N = Not Applicable									
Alternate Insert Position	1, 2, 3, 4, 5, 6, 7, 8, 9, Y, N = Normal (See Table III)									

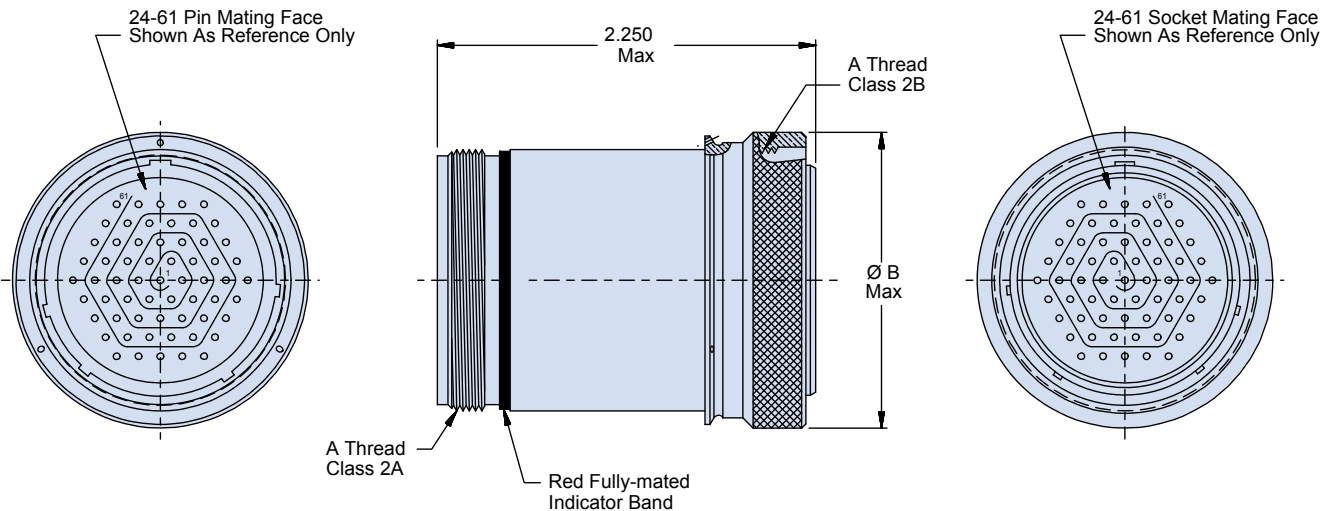


TABLE III: Dimensions

Shell Size	A Thread	Ø B
8	.562-24 UNEF	.776 (19.7)
10	.688-24 UNEF	.906 (23.0)
12	.875-20 UNEF	1.078 (27.4)
14	.938-20 UNEF	1.141 (29.0)
16	1.062-18 UNEF	1.266 (32.2)
18	1.188-18 UNEF	1.375 (34.9)
20	1.312-18 UNEF	1.510 (38.4)
22	1.438-18 UNEF	1.625 (41.3)
24	1.562-18 UNEF	1.760 (44.7)

NOTES

- Other filter styles (C-L, L-C, Unbalanced Pi, Multi-Stage, Multi-Value) are available, please consult the factory.
- Please consult the factory for Pin/Pin and/or Socket/Socket contact arrangements.



Sav-Con® connector savers

MIL-DTL-28840

Reference Information



Table I: Material and Finish		
Plating Code	Material	Finish
M	Aluminum	Electroless Nickel
B		Cad Plate, Olive Drab
NF		Cadmium Plate Olive Drab over Electroless Nickel
NC		Zinc-Cobalt
ZN		Olive Drab Zinc-Nickel
MT		Ni-PTFE 1000 Hour Grey™ (Nickel Fluorocarbon Polymer)
ZR		Zinc Nickel, Black
ME		Electroless Nickel (RoHS)
ZL	Stainless Steel	Electro-Deposited Nickel

Table II: Shell Size and Insert Arrangements			
Shell Size Desig.	Shell Size Ref	Insert Arrangement Dash No.	Contact Size 20: Quantity
A	11	A-1	7
B	13	B-1	12
C	15	C-1	21
D	17	D-1	31
E	19	E-1	42
F	23	F-1	64
G	25	G-1	92
H	29	H-1	121
J	33	J-1	155

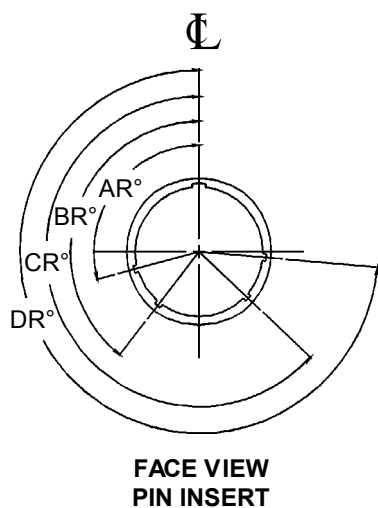


Table III: Alternate Keyway Positions						
Shell Size Desig.	Shell Size Ref	Key and Keyway Arr.	AR°	BR°	CR°	DR°
A B	11 13	1	95	141	208	236
		2	113	156	182	292
		3	90	145	195	252
		4	53	156	220	255
		5	119	146	176	298
		6	51	141	184	242
C D	15 17	1	80	142	196	293
		2	135	170	200	310
		3	49	169	200	244
		4	66	140	200	257
		5	62	145	180	280
		6	79	153	197	272
E F G H J	19 23 25 29 33	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

Table IV: Capacitor Array Code Capacitance Range for Filtered Connectors		
Class	Pi - Circuit (pF)	C - Circuit (pF)
X*	160,000 - 240,000	80,000 - 120,000
Y*	80,000 - 120,000	40,000 - 60,000
Z*	60,000 - 90,000	30,000 - 45,000
A	38,000 - 56,000	19,000 - 28,000
B	32,000 - 45,000	16,000 - 22,500
C	18,000 - 33,000	9,000 - 16,500
D	8,000 - 12,000	4,000 - 6,000
E	3,300 - 5,000	1,650 - 2,500
F	800 - 1,300	400 - 650
G	400 - 600	200 - 300
J	70-120	35-60

* Filter Classes X, Y and Z are 250 VDC.
All others are 500 VDC



Sav-Con® connector savers

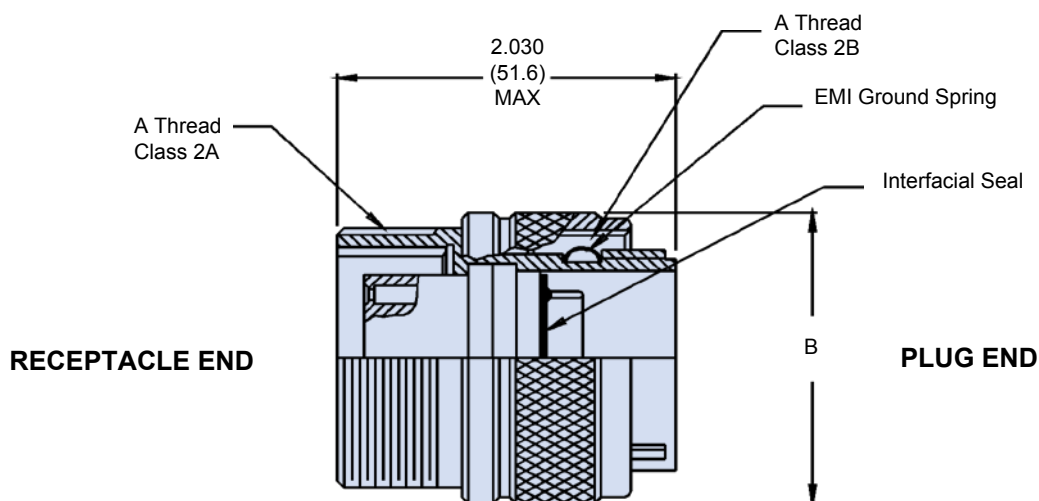
MIL-DTL-28840

941-002 Threaded Coupling



941-002 ENVIRONMENTAL CONNECTOR WITH THREADED COUPLING

How To Order								
Sample Part Number	94	1	-002	NF	-F	1	P	5
Series	94							
Class	1 = Environmental							
Basic Number	002							
Finish	See Table I							
Shell Size	See Table II							
Insert Arrangement	See Table II							
Contact Type	P = Pins, Plug Side S = Sockets, Plug Side							
Alternate Key Position	1, 2, 3, 4, 5, 6, N = Normal; See Table III							



Dimensions				
Shell Size/ Insert Arrangement	Shell Size Ref	A Thread Class 2*	B Max	Contact Size 20: Quantity
A	11	.750 – .1P – 0.2L – DS	1.028 (26.1)	7
B	13	.875 – .1P – 0.2L – DS	1.141 (29.0)	12
C	15	1.062 – .1P – 0.2L – DS	1.263 (32.1)	21
D	17	1.125 – .1P – 0.2L – DS	1.387 (35.2)	31
E	19	1.312 – .1P – 0.2L – DS	1.513 (38.4)	42
F	23	1.500 – .1P – 0.2L – DS	1.703 (43.3)	64
G	25	1.625 – .1P – 0.2L – DS	1.825 (46.4)	92
H	29	1.812 – .1P – 0.2L – DS	2.143 (54.4)	121
J	33	2.000 – .1P – 0.2L – DS	2.329 (59.2)	155



Sav-Con® connector savers

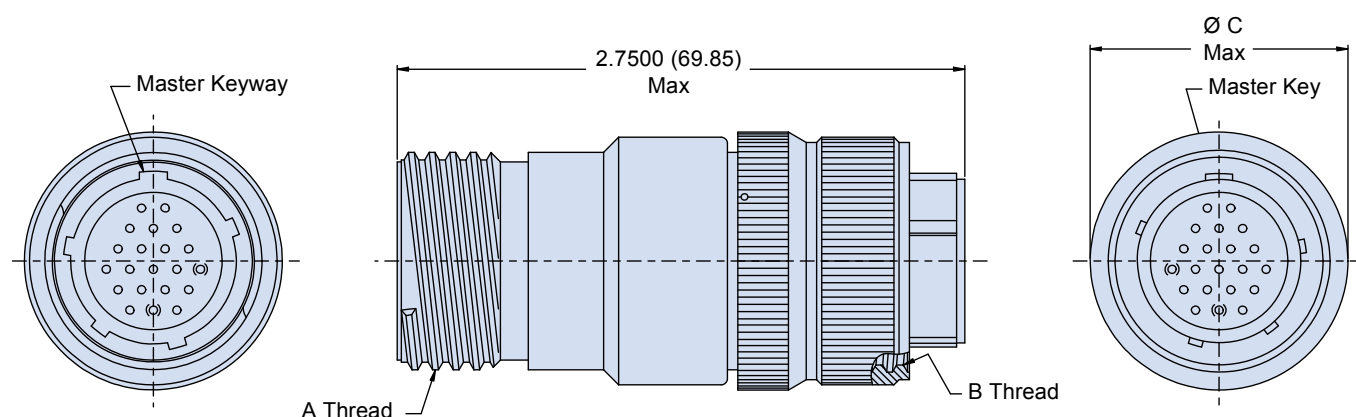
MIL-DTL-28840

240-288A Threaded Coupling



240-288A FILTER CONNECTOR ADAPTER WITH THREADED COUPLING

How To Order									
Sample Part Number	240-288	A	ME	19-1	PS	P	A	N	1
Filter Connector	240-288								
Shell Style	A = Connector Adapter								
Connector Class	See Table I								
Insert Arrangement	See Table II								
Contact Gender	PS = Pins, Plug Side SP = Sockets, Plug Side								
Filter Type	P = Pi Circuit C = C Circuit (See Note 1)								
Capacitance	See Table IV								
Flange Mounting Style	N = Not Applicable								
Alternate Key Position	1, 2, 3, 4, 5, 6								



Dimensions			
Shell Size	A Thread Class 2A	B Thread Class 2B	Ø C Max
11	.750-.1P-.2L-DS	.750-.1P-.2L-DS	1.028 (26.11)
13	.875-.1P-.2L-DS	.875-.1P-.2L-DS	1.141 (28.98)
15	1.062-.1P-.2L-DS	1.062-.1P-.2L-DS	1.263 (32.08)
17	1.125-.1P-.2L-DS	1.125-.1P-.2L-DS	1.387 (35.23)
19	1.312-.1P-.2L-DS	1.312-.1P-.2L-DS	1.513 (38.43)
23	1.500-.1P-.2L-DS	1.500-.1P-.2L-DS	1.703 (43.26)
25	1.625-.1P-.2L-DS	1.625-.1P-.2L-DS	1.825 (46.36)
29	1.812-.1P-.2L-DS	1.812-.1P-.2L-DS	2.143 (54.43)
33	2.000-.1P-.2L-DS	2.000-.1P-.2L-DS	2.329 (59.16)

NOTES

1. Other filter styles (C-L, L-C, Unbalanced Pi, Multi-Stage, Multi-Value) are available, please consult the factory.
2. Please consult the factory for Pin/Pin and/or Socket/Socket contact arrangements.



Sav-Con® connector savers

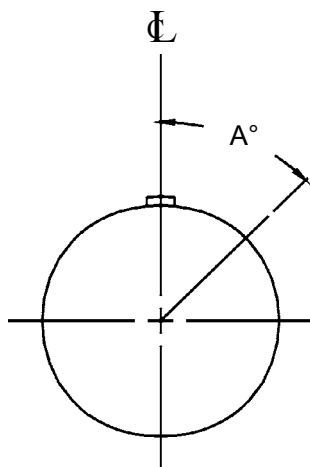
MIL-DTL-26482 Series I and II

Reference Information



Table I: Material and Finish

Plating Code	Material	Finish
M	Aluminum	Electroless Nickel
B		Cad Plate, Olive Drab
NF		Cadmium Plate Olive Drab over Electroless Nickel
NC		Zinc-Cobalt
ZN		Olive Drab Zinc-Nickel
MT		Ni-PTFE 1000 Hour Grey™ (Nickel Fluorocarbon Polymer)
ZR		Zinc Nickel, Black
ME		Electroless Nickel (RoHS)
ZL	Stainless Steel	Electro-Deposited Nickel



**FACE VIEW
RECEPTACLE**

To avoid cross-plugging problems in applications requiring the use of more than one connector of the same size and arrangement, alternate positions are available.

In alternate positions, the pin insert rotates clockwise the same number of degrees relative to the center line of the master key or keyway. The socket insert would be rotated counter-clockwise the same number of degrees in respect to the normal shell key.

Table IV: Capacitor Array Code Capacitance Range for Filtered connectors

Class	Pi - Circuit (pF)	C - Circuit (pF)
X*	160,000 - 240,000	80,000 - 120,000
Y*	80,000 - 120,000	40,000 - 60,000
Z*	60,000 - 90,000	30,000 - 45,000
A	38,000 - 56,000	19,000 - 28,000
B	32,000 - 45,000	16,000 - 22,500
C	18,000 - 33,000	9,000 - 16,500
D	8,000 - 12,000	4,000 - 6,000
E	3,300 - 5,000	1,650 - 2,500
F	800 - 1,300	400 - 650
G	400 - 600	200 - 300
J	70-120	35-60

* Filter Classes X, Y and Z are 250 VDC.
All others are 500 VDC

Table II: Insert Arrangement and Alternate Positioning

Shell Size Desig.	Insert Arrangement Dash No	Contact Size: Quantity			Alternate Insert Positions			
		20	16	12	A Degrees			
8	8-2	2			58	122	-	-
	8-3	3			60	210	-	-
	8-4	4			45	-	-	-
	8-33	3			90	-	-	-
	8-98	3			-	-	-	-
10	10-6	6			90	-	-	-
	10-98	6			90	180	240	270
12	12-3		3		-	-	180	-
	12-4		4		38	-	-	-
	12-8	8			90	112	203	292
	12-10	10			60	155	270	295
	12-14	14			60	155	270	295
14	14-4			4	45	-	-	-
	14-5		5		40	92	184	273
	14-9	5		4	15	90	180	240
	14-12	8	4		43	90	-	-
	14-15	14	1		17	110	155	234
	14-18	18			15	90	180	270
	14-19	19			30	165	315	-
	14-22	1		4	45	-	-	-
16	16-8		8		54	152	180	331
	16-14	8		6	25	78	180	240
	16-23	22	1		158	270	-	-
	16-26	26			60	-	275	338
	16-99	21	2		66	156	223	340
18	18-11		11		62	119	241	340
	18-30	29	1		180	193	285	350
	18-32	32			85	138	222	265
	18-85	5		8	45	90	180	240
20	20-16		16		238	318	333	347
	20-24	24			70	145	215	290
	20-25	25			72	144	216	288
	20-27	27			72	144	216	288
	20-39	37	2		63	144	252	333
	20-41	41			45	126	225	-
	20-90	3		12	18	60	240	270
22	22-12			12	-	-	-	-
	22-19			19	15	90	-	-
	22-21		21		16	135	175	349
	22-32	32			72	145	215	288
	22-34	34			62	142	218	298
	22-36	36			72	144	216	288
	22-37	31	6		90	180	270	-
	22-41	27	14		39	135	264	-
	22-55	55			30	142	226	314
	22-95	26		6	26	180	266	-
	24-19			19	30	165	315	-
24	24-27	11		16	45	110	140	225
	24-31		31		90	225	255	-
	24-61	61			90	180	270	324

B



Sav-Con® connector savers

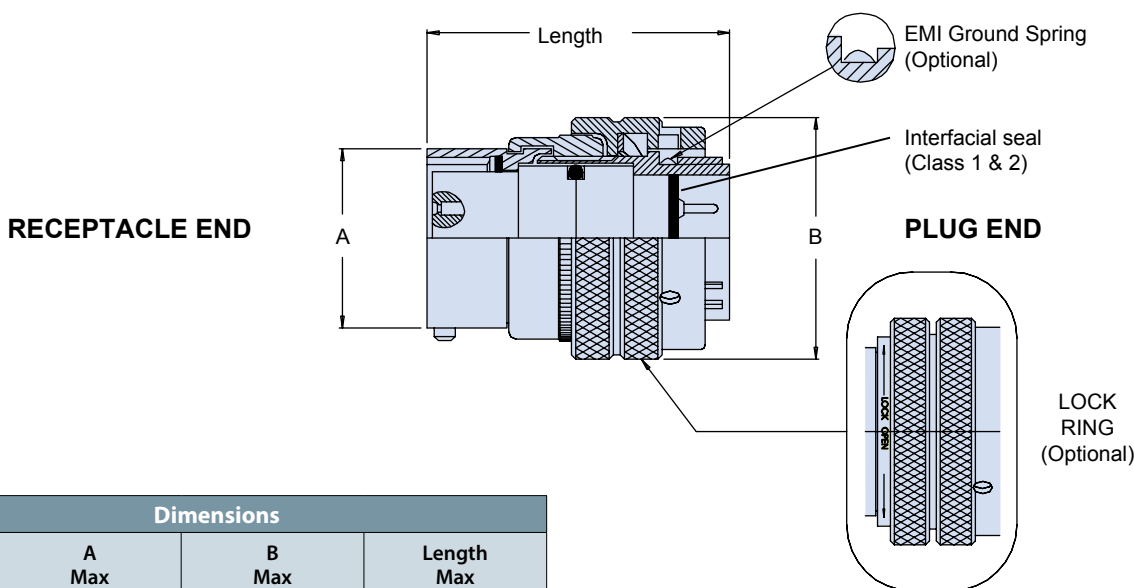


MIL-DTL-26482 Series I and II

940-001, 941-001 and 942-001 Bayonet Coupling

940-001 SERIES I GENERAL DUTY, 941-001 ENVIRONMENTAL AND 942-001 HIGH RELIABILITY

How To Order											
Sample Part Number	94	0	L	001	M	22	G	55	P	X	131
Series	94										
Class	0 = General Duty 1 = Environmental 2 = High Reliability										
Lock Ring (optional)	L = Lock Ring — (dash) = Standard										
Basic Number	001										
Finish	See Table I										
Shell Size	See Table II										
EMI Ground	G = EMI Ground Spring (optional) — (dash) = Standard										
Insert Arrangement	See Table II										
Contact Type	P = Pins, Plug Side S = Sockets, Plug Side										
Alternate Key Position	W, X, Y, Z, N = Normal; See Table II										
Mod Code	131 = Dry Lube, Omit for None										



Dimensions			
Shell Size	A Max	B Max	Length Max
08	.474 (12.0)	.750 (19.1)	1.375 (34.9)
10	.591 (15.0)	.859 (21.8)	1.375 (34.9)
12	.751 (19.1)	1.031 (26.2)	1.375 (34.9)
14	.875 (22.2)	1.156 (29.4)	1.375 (34.9)
16	1.001 (25.4)	1.281 (32.5)	1.375 (34.9)
18	1.126 (28.6)	1.391 (35.3)	1.375 (34.9)
20	1.251 (31.8)	1.531 (38.6)	1.500 (38.1)
22	1.376 (35.0)	1.656 (42.1)	1.500 (38.1)
24	1.501 (38.1)	1.777 (45.1)	1.500 (38.1)

INTERMATEABLE WITH THE FOLLOWING CONNECTORS:

MIL-DTL-83723 Series I
40M39569
PAN 6432-1
NFC C93-422 (HE301B)
NFC C93-422 (HE302)
NFC C93-422 (HE312)
VG 95328

*Add Modification Code 131 for Dry Lubricant on inside surfaces of Coupling Nut.

May not be suitable for space applications.



Sav-Con® connector savers

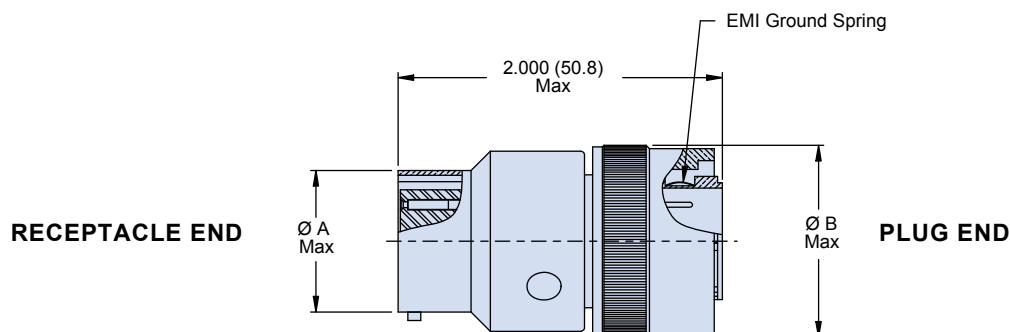
MIL-DTL-26482 Series II

240-264A Bayonet Coupling



240-264A SERIES II FILTER CONNECTOR ADAPTER WITH BAYONET COUPLING

How To Order									
Sample Part Number	240-264	A	ME	16-26	PS	P	A	N	N
Filter Connector	240-264								
Shell Style	A = Connector Adapter								
Finish	See Table I								
Shell Size - Insert Arrangement	See Table II								
Contact Gender	PS = Pins, Plug Side SP = Sockets, Plug Side (See Note 2)								
Filter Type	P = Pi Circuit C = C Circuit (See Note 1)								
Capacitance	See Table IV								
Flange Mounting Style	N = Not Applicable								
Alternate Insert Position	W, X, Y, Z, N = Normal; See Table III								



NOTES

1. Other filter styles (C-L, L-C, Unbalanced Pi, Multi-Stage, Multi-Value) are available, please consult the factory.
2. Please consult the factory for Pin/Pin and/or Socket/Socket contact arrangements.

Dimensions		
Shell Size	ØA Max	ØB Max
8	.474 (12.0)	.784 (19.9)
10	.591 (15.0)	.926 (23.5)
12	.751 (19.1)	1.043 (26.5)
14	.876 (22.3)	1.183 (30.0)
16	1.001 (25.4)	1.305 (33.1)
18	1.126 (28.6)	1.391 (35.3)
20	1.251 (31.8)	1.531 (38.9)
22	1.376 (35.0)	1.656 (42.1)
24	1.501 (38.1)	1.777 (45.1)



Sav-Con® connector savers

MIL-DTL-5015

Reference Information



Table I: Material and Finish

Plating Code	Material	Finish
M	Aluminum	Electroless Nickel
B		Cad Plate, Olive Drab
NF		Cadmium Plate Olive Drab over Electroless Nickel
NC		Zinc-Cobalt
ZN		Olive Drab Zinc-Nickel
MT		Ni-PTFE 1000 Hour Grey™ (Nickel Fluorocarbon Polymer)
ZR		Zinc Nickel, Black
ME		Electroless Nickel (RoHS)
ZL	Stainless Steel	Electro-Deposited Nickel

Table II: Shell Size and Insert Arrangements

Shell Size Desig.	Insert Arrangement Dash No.	Contact Size: Quantity					Service Rating	Alternate Keyway Positions			
		16	12	8	4	0		W°	X°	Y°	Z°
08S	8S-1	1					A	-	-	-	-
10S	10S-2	1					A	-	-	-	-
10SL	10SL-3	3					A	-	-	-	-
	10SL-4	2					A	-	-	-	-
12S	12S-3	2					A	70	145	215	290
14S	14S-2	4					Inst.	-	120	240	-
	14S-5	5					Inst.	-	110	-	-
	14S-6	6					Inst.	-	-	-	-
	14S-7	3					A	90	180	270	-
	14S-9	2					A	70	145	215	290
16	16-7	2		1			A	80	110	250	280
	16-9	2	2				A	35	110	250	325
	16-10		3				A	90	180	270	-
	16-11		2				A	35	110	250	325
16S	16S-1	7					A	80	-	-	280
	16S-4	2					D	35	110	250	325
	16S-8	5					A	-	170	265	-
18	18-1	10					Inst.	70	145	215	290
	18-4	4					D	35	110	250	325
	18-8	7	1				A	70	-	-	290
	18-9	5	2				Inst.	80	110	250	280
	18-10		4				A	-	120	240	-
	18-11		5				A	-	170	265	-
	18-12	6					A	80	-	-	280
	18-22	3					D	70	145	215	290
20	20-4		4				D	45	110	250	-
	20-7	8					A	80	110	250	280
	20-14		3	2			A	80	110	250	280
	20-15		7				A	80	-	-	280
	20-16	7	2				A	80	110	250	280
	20-18	6	3				A	35	110	250	325
	20-2					1	D	-	-	-	-
	20-27	14					A	35	110	250	325
	20-29	17					A	80	-	-	280
22	22-2			3			D	70	145	215	290
	22-22			4			A	-	110	250	-
	22-5	4	2				D	35	110	250	325
	22-13	1	4				A	35	110	250	325
	22-14	19					A	80	-	-	280
	22-18	8					A	80	110	250	280
	22-19	14					A	80	110	250	280



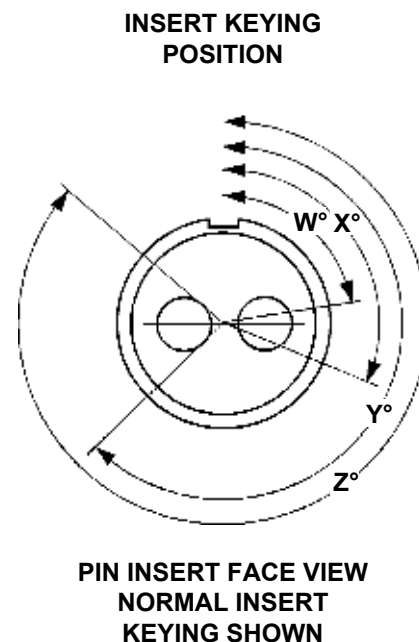
Sav-Con® connector savers

MIL-DTL-5015

Reference Information



Table II: Shell Size and Insert Arrangements											
Shell Size Desig.	Insert Arrangement Dash No.	Contact Size: Quantity					Service Rating	Alternate Keyway Positions			
		16	12	8	4	0		W°	X°	Y°	Z°
24	24-4	3				1	D	80	110	250	280
	24-7	14	2				A	80	110	250	280
	24-10			7			A	80	-	-	280
	24-11		6	3			A	35	110	250	325
	24-20	9	2				D	80	110	250	280
	24-22			4			D	45	110	250	-
	24-28	24					Inst.	80	110	250	280
28	28-2	12	2				D	35	110	250	325
	28-9	6	6				D	80	110	250	280
	28-11	18	4				A	80	110	250	280
	28-12	26					A	90	180	270	-
	28-15	35					A	80	110	250	280
	28-17	15					A	80	110	250	280
	28-21	37					A	80	110	250	280
32	32-1		3			2	D	80	110	250	280
	32-6	16	2	3	2		A	80	110	250	280
	32-7	28					Inst.	80	125	235	280
	32-9	12			2		D	80	110	250	280
	32-15		6			2	D	35	110	250	280
	32-17				4		D	45	110	250	-
36	36-4					3	A	70	145	214	290
	36-5					4	A	-	120	240	-
	36-6				4	2	A	35	110	250	325
	36-7	40	7				A	80	110	250	280
	36-8	46	1				A	80	110	250	280
	36-9	14	14	2	1		A	80	125	235	280
	36-10	48					A	80	125	235	280
	36-14	6	5	5			D	90	180	270	-
	36-15	35					A	60	125	245	305
40	40-10	16		9	4		A	65	125	225	310
	40-56	85					A	72	144	216	288
44	44-1	36	6				D	65	125	225	310
48	48-5	90	9	1			A	65	125	225	310



B

**Table III: Capacitor Array Code
Capacitance Range For filtered
Connectors**

Class	C - Circuit (pF)
X	80,000 - 120,000
Y	40,000 - 60,000
Z	30,000 - 45,000
A	19,000 - 28,000
B	16,000 - 22,500
C	9,000 - 16,500



Sav-Con® connector savers

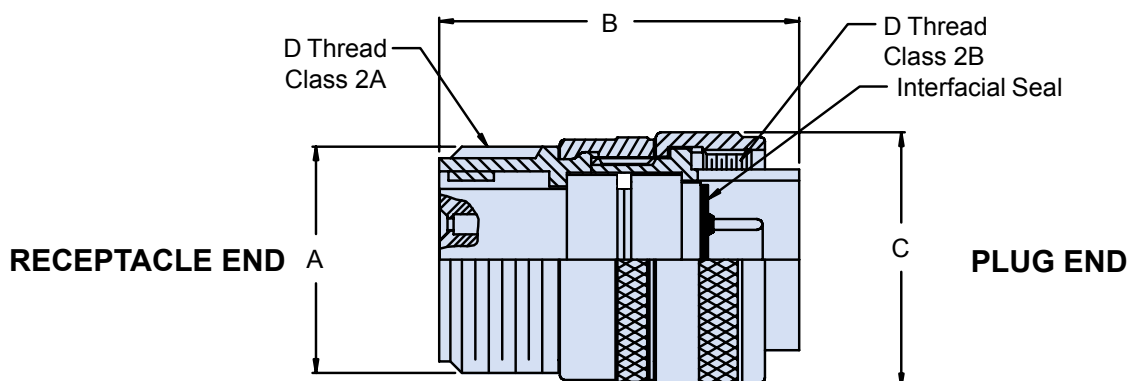
MIL-DTL-5015

941-011 and 942-011 Threaded Coupling



940-011 GENERAL DUTY, 941-011 ENVIRONMENTAL AND 942-011 HIGH RELIABILITY

How To Order							
Sample Part Number	94	2	011	NF	28-2	P	X
Series	94						
Class	1 = Environmental 2 = High Reliability						
Basic Number	011						
Finish	See Table I						
Shell Size - Insert Arrangement	See Table II						
Contact Type	P = Pins, Plug Side S = Sockets, Plug Side						
Alternate Key Position	W, X, Y, Z, N = Normal; See Table II						



Dimensions									
Shell Size	A Ref	B Max	C Max	D Thread Class 2A	Shell Size	A Ref	B Max	C Max	D Thread Class 2A
08S	.500 (12.7)	1.750 (44.5)	.844 (21.4)	1/2-28 UNEF	20	1.250 (31.8)	2.125 (54.0)	1.469 (37.3)	1 1/4-18 UNEF
10SL	.625 (15.9)	1.750 (44.5)	.969 (24.6)	5/8-24 UNEF	22	1.375 (34.9)	2.125 (54.0)	1.594 (40.5)	1 3/8-18 UNEF
12S	.750 (19.1)	1.750 (44.5)	1.062 (27.0)	3/4-20 UNEF	24	1.500 (38.1)	2.125 (54.0)	1.719 (43.7)	1 1/2-18 UNEF
12	.750 (19.1)	2.125 (54.0)	1.062 (27.0)	3/4-20 UNEF	28	1.750 (44.5)	2.125 (54.0)	1.969 (50.0)	1 3/4-18 UNS
14S	.875 (22.2)	1.750 (44.5)	1.156 (29.4)	7/8-20 UNEF	32	2.000 (50.8)	2.125 (54.0)	2.219 (56.4)	2-18 UNEF
14	.875 (22.2)	2.125 (54.0)	1.156 (29.4)	7/8-20 UNEF	36	2.250 (57.2)	2.125 (54.0)	2.469 (62.7)	2 1/4-16 UNS
16S	1.000 (25.4)	1.750 (44.5)	1.250 (31.8)	1-20 UNEF	40	2.500 (63.5)	2.125 (54.0)	2.719 (69.1)	2 1/2-16 UN
16	1.000 (25.4)	2.125 (54.0)	1.250 (31.8)	1-20 UNEF	44	2.750 (69.9)	2.125 (54.0)	2.969 (75.4)	2 3/4-16 UN
18	1.125 (28.6)	2.125 (54.0)	1.344 (34.1)	1 1/8-18 UNEF	48	3.000 (76.2)	2.125 (54.0)	3.219 (81.8)	3-16 UN



Sav-Con® connector savers

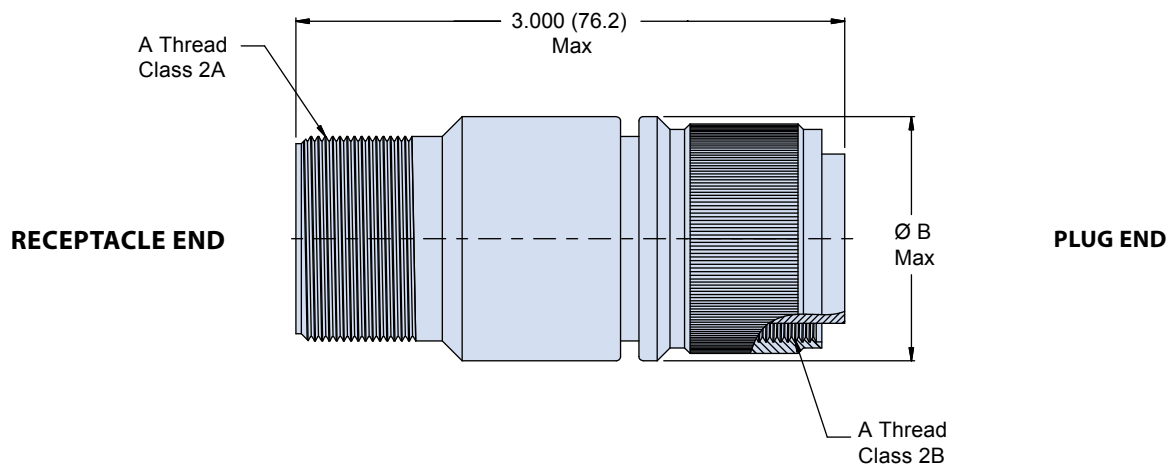
MIL-DTL-5015

240-515A Threaded Coupling



240-515A FILTER CONNECTOR ADAPTER WITH THREADED COUPLING

How To Order									
Sample Part Number	240-515	A	ME	36-5	PS	C	A	N	N
Filter Connector	240-515								
Shell Style	A = Connector Adapter								
Finish	ME, NF, ZL; See Table I								
Insert Arrangement	See Table II								
Contact Gender	PS = Pins, Plug Side SP = Sockets, Plug Side								
Filter Type	C = C Circuit (See Note 1)								
Capacitance	See Table III								
Flange Mounting Style	N = Not Applicable								
Alternate Insert Position	Per MIL-STD-1651. W, X, Y, Z, N = Normal; See Table II								



Dimensions		
Shell Size	A Thread	Ø B Max
8S	.500-28 UNEF	.844 (21.4)
10SL	.625-24 UNEF	.969 (24.6)
10SL	.625-24 UNEF	.969 (24.6)
12S	.750-20 UNEF	1.062 (27.0)
12	.750-20 UNEF	1.062 (27.0)
14S	.875-20 UNEF	1.156 (29.4)
14	.875-20 UNEF	1.156 (29.4)
16S	1.000-20 UNEF	1.250 (31.8)
16	1.000-20 UNEF	1.250 (31.8)

Dimensions		
Shell Size	A Thread	Ø B Max
18	1.125-18 UNEF	1.344 (34.1)
20	1.250-18 UNEF	1.469 (37.3)
22	1.375-18 UNEF	1.594 (40.5)
24	1.500-18 UNEF	1.719 (43.7)
28	1.750-18 UNS	1.969 (50.0)
32	2.000-18 UNS	2.219 (56.4)
36	2.250-16 UN	2.469 (62.7)
40	2.500-16 UN	2.719 (69.1)

NOTES

- Other filter styles (Pi, C-L, L-C, Unbalanced Pi, Multi-Stage, Multi-Value) are available, please consult the factory.
- Please consult the factory for Pin/ Pin and/or Socket/Socket contact arrangements.



Sav-Con® connector savers

LN 29729 (SJT)

Reference Information

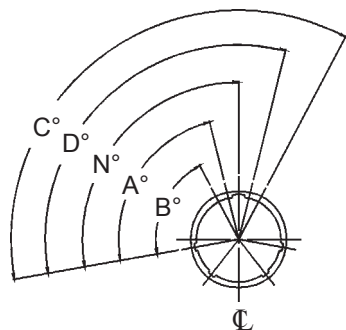


Table I: Material and Finish

Plating Code	Material	Finish
M	Aluminum	Electroless Nickel
B		Cad Plate, Olive Drab
NF		Cadmium Plate Olive Drab over Electroless Nickel
NC		Zinc-Cobalt
ZN		Olive Drab Zinc-Nickel
MT		Ni-PTFE 1000 Hour Grey™ (Nickel Fluorocarbon Polymer)
ZR		Zinc Nickel, Black
ME		Electroless Nickel (RoHS)
ZL	Stainless Steel	Electro-Deposited Nickel

Table II: Insert Arrangements and Keyway Positions

Shell Size Design	Insert Arrangement Dash No.	Contact Size: Quantity				Alternate Keyway Positions				
		22	20	16	12	N°	A°	B°	C°	D°
08	8-35	6				95	-	-	-	-
	8-44	4								
	8-98		3							
10	10-5		5			95	81	67	123	109
	10-35	13								
	10-98		6							
12	12-4			4		95	75	63	127	115
	12-8		8							
	12-35	22								
	12-98		10							
14	14-5			5		95	74	61	129	116
	14-15		14	1						
	14-18		18							
	14-19		19							
	14-35	37								
	14-97		8	4						
16	16-6				6	95	77	65	125	113
	16-8			8						
	16-26		26							
	16-35	55								
	16-99		21	2						
18	18-11			11		95	77	65	125	113
	18-32		32							
	18-35	66								
20	20-35	79				95	77	65	125	113
	20-11				11					
	20-16			16						
	20-39		37	2						
	20-41		41							
22	22-35	100				95	80	69	121	110
	22-2	85								
	22-21			21						
	22-53		53							
24	24-35	128				95	80	69	121	110
	24-2	100								
	24-19				19					
	24-29			29						
	24-61		61							



**FACE VIEW
RECEPTACLE**
In alternate positions, the pin insert rotates clockwise while the socket insert rotates counterclockwise the same number of degrees relative to the center line of the master key or keyway.

Consult Factory for Additional Filter Types, TVS Diodes, and other Custom Configurations.



Sav-Con® connector savers

LN 29729 (SJT)

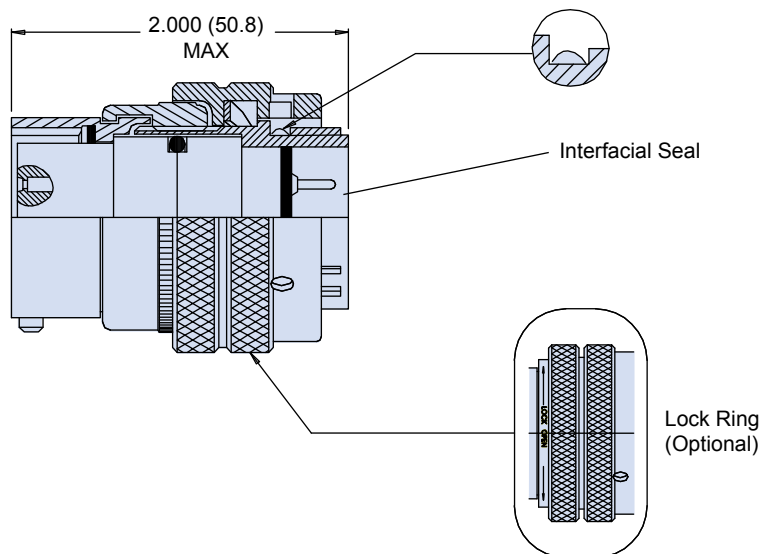
941-008 and 942-008 Bayonet Coupling



941-008 ENVIRONMENTAL AND 942-008 HIGH RELIABILITY WITH BAYONET COUPLING

How To Order										
Sample Part Number	94	1	L	008	NF	28	G	22	P	X
Series	94									
Class	1 = Environmental 2 = High Reliability									
Lock Ring (optional)	L = Lock Ring - (dash) = Standard									
Basic Number	008									
Finish	See Table I									
Shell Size	See Table II									
EMI Ground	G = EMI Ground Spring (optional) - (dash) = Standard									
Insert Arrangement	See Table II									
Contact Type	P = Pins, Plug Side S = Sockets, Plug Side									
Alternate Key Position	W, X, Y, Z, N = Normal; See Table II									

RECEPTACLE END



INTERMATEABLE WITH THE FOLLOWING CONNECTORS:

PAN 6433-2, PATT 615
NFC C93-422 (HE306)
VG 96912



Sav-Con® connector savers

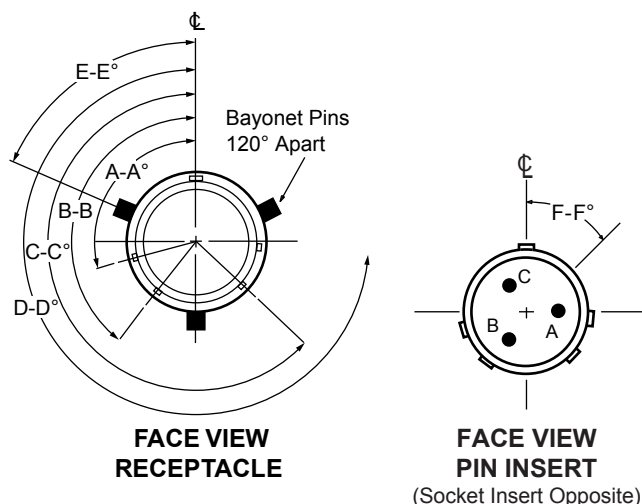
PATT 105 and PATT 602

Reference Information



Table I: Material and Finish		
Plating Code	Material	Finish
M	Aluminum	Electroless Nickel
B		Cad Plate, Olive Drab
NF		Cadmium Plate Olive Drab over Electroless Nickel
NC		Zinc-Cobalt
ZN		Olive Drab Zinc-Nickel
MT		Ni-PTFE 1000 Hour Grey™ (Nickel Fluorocarbon Polymer)
ZR		Zinc Nickel, Black
ME		Electroless Nickel (RoHS)
ZL	Stainless Steel	Electro-Deposited Nickel

Table II: Insert Arrangement								
Shell Size Desig.	Insert Arr. Dash No.	Contact Size: Quantity			Alternate Insert Position (Degrees) FF°			
		20	16	12	W	X	Y	Z
08	-33	3			90	-	-	-
	-98	3			-	-	-	-
10	-6	6			90	-	-	-
	-98	6			90	180	240	270
12	-3		3		-	-	180	-
	-10	10			60	155	270	295
14	-4			4	45	-	-	-
	-5		5		40	92	184	273
	-12	8	4		43	90	-	-
	-19	19			30	165	315	-
	-22	1		4	45	-	-	-
16	-8		8		54	152	180	331
	-26	26			60	-	275	338
18	-11		11		62	119	241	340
	-30	29	1		180	193	285	350
	-32	32			85	138	222	265
20	-16		16		238	318	333	347
	-41	41			45	126	225	-
22	-21		21		16	135	175	349
	-55	55			30	142	226	314
24	-61	61			90	180	270	324



NOTES:

- In Alternate Insert Positions, the Pin Insert rotates clockwise while the Socket Insert rotates counter-clockwise the same number of degrees relative to the centerline of the Master Key or Keyway.
- In Alternate Key/Keyway Positions, the smaller Plug Keys rotate clockwise with respect to the centerline of the Master Keyway as shown.

Table III Alternate Key/Keyway Positions (Degrees)																									
Shell Size	A-A°					B-B°					C-C°					D-D°					E-E°				
	N	B	C	E	F	N	B	C	E	F	N	B	C	E	F	N	B	C	E	F	N	B	C	E	F
8	105	-	-	118	82	140	-	-	148	132	215	-	-	248	207	265	-	-	278	252	60	-	-	73	47
10	105	85	125	115	85	140	120	160	145	135	215	195	235	245	210	265	245	285	275	255	60	40	80	70	50
12	105	89	121	115	85	140	124	156	145	135	215	199	231	245	210	265	249	281	275	255	60	44	76	70	50
14	105	91	119	75	120	140	126	154	105	170	215	201	229	205	245	265	251	279	235	290	60	46	74	30	75
16	105	93	117	75	120	140	128	152	105	170	215	203	227	205	245	265	253	277	235	290	60	48	72	30	75
18	105	95	115	75	120	140	130	150	105	170	215	205	225	205	245	265	255	275	235	290	60	50	70	30	75
20	105	95	115	75	120	140	130	150	105	170	215	205	225	205	245	265	255	275	235	290	60	50	70	30	75
22	105	97	113	75	120	140	132	148	105	170	215	207	223	205	245	265	257	273	235	290	60	52	68	30	75
24	105	97	113	75	120	140	132	148	105	170	215	207	223	205	245	265	257	273	235	290	60	52	68	30	75



Sav-Con® connector savers

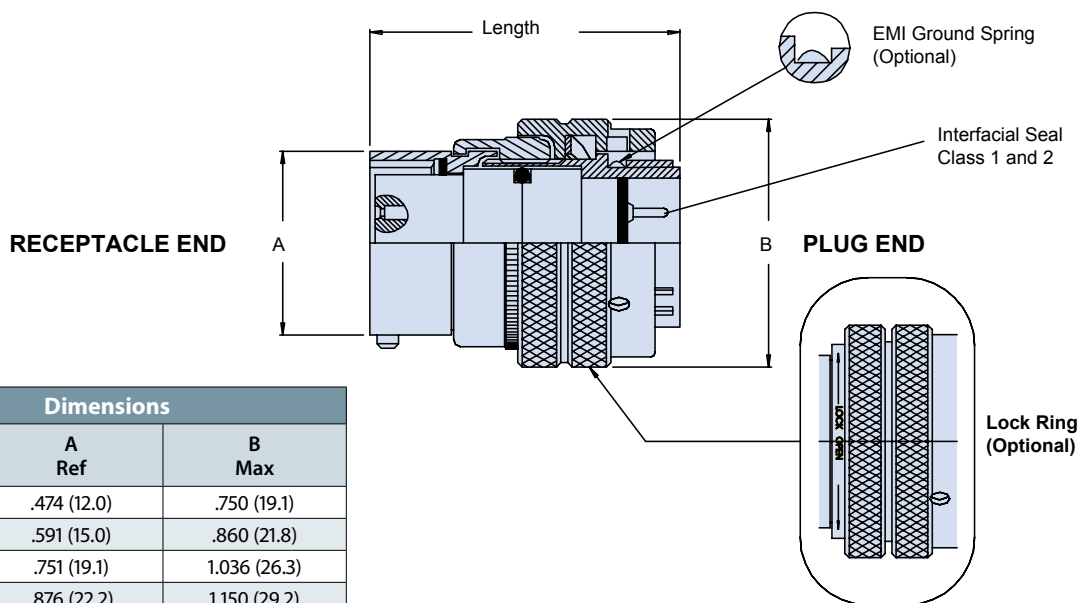
PATT 105 and PATT 602

940-009, 941-009, 942-009 Bayonet Coupling



940-009 GENERAL DUTY, 941-009 ENVIRONMENTAL AND 942-009 HIGH RELIABILITY

How To Order												
Sample Part Number	94	0	L	009	N	24	G	61	P	AA	-B	131
Series	94											
Class	0 = General Duty 1 = Environmental 2 = High Reliability											
Lock Ring (optional)	L = Lock Ring - = Standard											
Basic Number	009											
Finish	See Table I											
Shell Size	See Dimensions Table											
EMI Ground	G = EMI Ground Spring (optional) - = Standard											
Insert Arrangement	See Table II											
Contact Type	P = Pins, Plug Side S = Sockets, Plug Side											
Alternate Key Configuration	AA, BB, CC, DD, N = Normal											
Alternate Key Position	A, B, C, D, E, F, N = Normal; See Table III											
Mod Code	131 = Dry Lube, Omit for None											



Dimensions		
Shell Size	A Ref	B Max
08	.474 (12.0)	.750 (19.1)
10	.591 (15.0)	.860 (21.8)
12	.751 (19.1)	1.036 (26.3)
14	.876 (22.2)	1.150 (29.2)
16	1.101 (27.97)	1.280 (32.5)
18	1.126 (28.6)	1.400 (35.3)
20	1.251 (31.8)	1.530 (38.6)
22	1.376 (35.0)	1.640 (41.1)
24	1.501 (38.1)	1.60 (45.1)



Sav-Con® connector savers

Mighty Mouse Series 801

Reference Information



Table I: Material and Finish

Code	Material	Finish
C	Aluminum	Black Anodize (Non-Conductive) RoHS Compliant
M		Electroless Nickel RoHS Compliant
NF		Cadmium with Olive Drab Chromate
ZN		Zinc-Nickel with Olive Drab Chromate
ZNU		Zinc-Nickel with Black Chromate
MT		Nickel-PTFE RoHS Compliant
Z1	Stainless Steel	Passivated RoHS Compliant

Table II: Insert Arrangements

Insert Arr.	No. of Contacts					
	#23	#20	#20HD	#16	#12	#8
5-3	3					
6-1				1		
6-23			3			
6-4	4					
6-6	6					
6-7	7					
7-1					1	
7-25			5			
7-10	10					
8-1						1
8-2				2		
8-200	4	2				
8-28			8			
8-13	13					
9-4				4		
9-200	4			2		
9-201	8	2				
9-210			10			
9-19	19					
10-2					2	
10-5				5		
10-26	26					
10-200	12				1	
10-201	4				2	
10-202	8			2		
10-200	12				1	
11-31	31					
13-2					2	
13-3					3	
13-7				7		
13-220			20			

Table II: Insert Arrangements

Insert Arr.	No. of Contacts					
	#23	#20	#20HD	#16	#12	#8
13-37	37					
13-200	6				2	
13-201	10				2	
13-202	20			2		
13-203	12			4		
13-204	12				2	
13-205	4				4	
16-2						2
16-5					5	
16-12				12		
16-235			35			
16-55	55					
16-204	40			2		
16-205	32			4		
16-206	34				2	
16-207	20				4	
16-208	32					1
17-3						3
17-7					7	
17-14				14		
17-241			41			
17-85	85					
17-203	40			4		
17-204	28				4	
17-205	40					1
19-4						4
19-19				19		
19-201	44					2
19-202	12					4
19-255			55			
19-100	100					
21-5						5
21-12					12	
21-22				22		
21-200						
21-269			69			
21-130	130					

Plug Key Positions

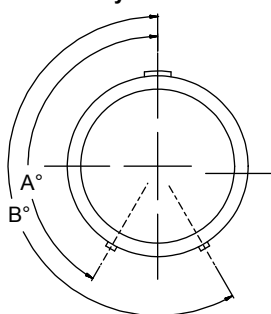


Table III: Key Positions

Key Position	Key Rotation	
	A°	B°
A	150	210
B	75	210
C	95	230
D	140	275
E	75	275
F	95	210

**Table IV: Capacitor Array Code
Capacitance Range for Filtered
Connectors**

Class	Pi - Circuit (pF)	C - Circuit (pF)
A	38,000 - 56,000	19,000 - 28,000
B	32,000 - 45,000	16,000 - 22,500
C	18,000 - 33,000	9,000 - 16,500
D	8,000 - 12,000	4,000 - 6,000
E	3,300 - 5,000	1,650 - 2,500
F	800 - 1,300	400 - 650
G	400 - 600	200 - 300
J	70 - 120	35 - 60



Sav-Con® connector savers



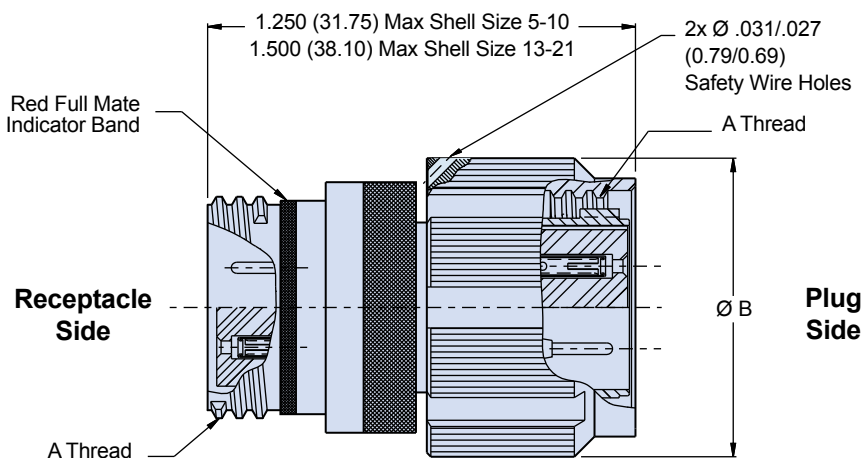
Mighty Mouse Series 801

801-017 Coupling with Double-Start ACME Threads

How To Order						
Sample Part Number	801-017	Z1	13	-37	P	A
Series	801-017					
Finish	C = Aluminum / Black Anodize (Non-Conductive) RoHS Compliant M = Aluminum / Electroless Nickel RoHS Compliant NF = Aluminum / Cadmium with Olive Drab Chromate ZN = Aluminum / Zinc-Nickel with Olive Drab Chromate ZNU = Aluminum / Zinc-Nickel with Black Chromate MT = Aluminum / Nickel-PTFE RoHS Compliant Z1 = Stainless Steel / Passivated RoHS Compliant					
Shell Size	See Table II					
Insert Arrangement	See Table II					
Contact Type	P = Pin Contact on Plug Side, Socket Contact on Receptacle Side S = Socket Contact on Plug Side, Pin Contact on Receptacle Side					
Shell Key Position	A = Normal, B, C, D, E, F ; See Table III					



Dimensions			
Shell Size	A Threads	Ø B	
		In.	mm.
5	.3125-.05P-.1L-2	.540	13.72
6	.375-.05P-.1L-2	.600	15.24
7	.4375-.05P-.1L-2	.680	17.27
8	.5000-.05P-.1L-2	.750	19.05
9	.5625-.05P-.1L-2	.810	20.57
10	.6250-.05P-.1L-2	.880	22.35
11	.6875-.05P-.1L-2A	.920	23.37
13	.8125-.1P-.2L-2	1.050	26.67
16	1.000-.1P-.2L-2	1.240	31.50
17	1.062-.1P-.2L-2	1.300	33.02
19	1.1875-.1P-.2L-2A	1.400	35.56
21	1.3125-.1p-.2L-2	1.550	39.37





Sav-Con® connector savers

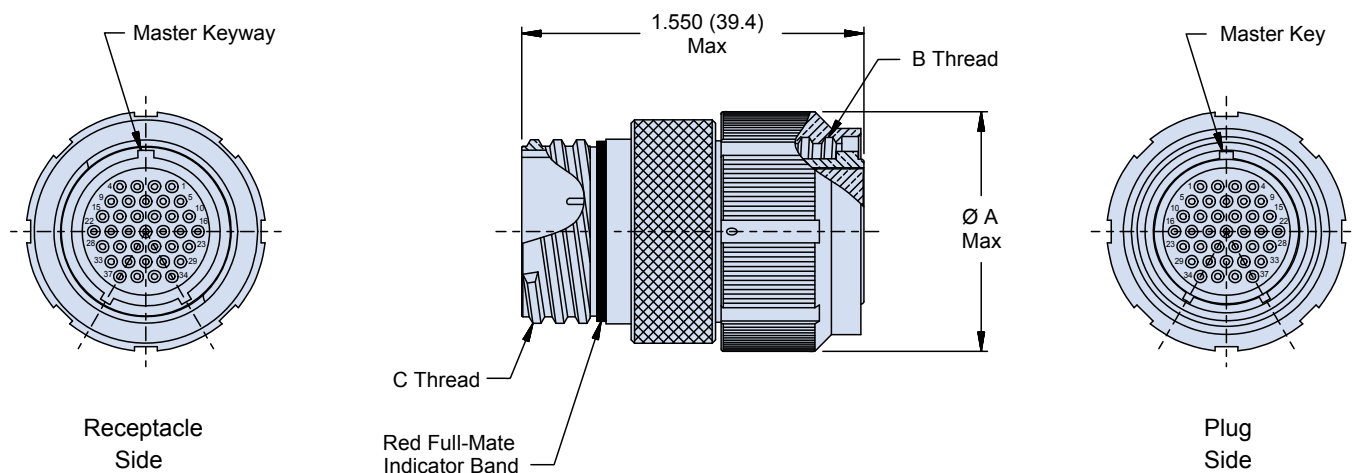
Mighty Mouse Series 801

240-801-AA Filter Connector Adapter



How To Order								
Sample Part Number	240-801-	AA	M	6-7	PS	P	A	A
Filter Connector	240-801							
Shell Style	AA = Adapter							
Finish	See Table I							
Insert Arrangement	See Table II							
Contact Gender	PS = Pins, Plug Side SP = Sockets, Plug Side (See Note 2)							
Filter Type	P = Pi Circuit C = C Circuit; See Table IV, See Note 1							
Capacitance	See Table IV							
Alternate Key Position	A, B, C, D, E, F, U A = Normal, U = Universal; See Table III							

B



NOTES

1. Other filter styles (C-L, L-C, Unbalanced Pi, Multi-Stage, Multi-Value) are available, please consult the factory.
2. Please consult factory for Pin/Pin and/or Socket/Socket contact arrangements.

Dimensions			
Shell Size	Ø A Max	B Thread	C Thread
5	.720 (18.3)	.3125-.05P-.1L-DS-2B	.3125-.05P-.1L-DS-2A
6	.800 (20.3)	.3750-.05P-.1L-DS-2B	.3750-.05P-.1L-DS-2A
7	.870 (22.1)	.4375-.05P-.1L-DS-2B	.4375-.05P-.1L-DS-2A
8	1.000 (25.4)	.5000-.05P-.1L-DS-2B	.5000-.05P-.1L-DS-2A
9	1.060 (26.9)	.5625-.05P-.1L-DS-2B	.5625-.05P-.1L-DS-2A
10	1.060 (26.9)	.6250-.05P-.1L-DS-2B	.6250-.05P-.1L-DS-2A
11	1.100 (27.9)	.6875-.05P-.1L-DS-2B	.6875-.05P-.1L-DS-2A
13	1.250 (31.8)	.8125-.1P-.2L-DS-2B	.8125-.1P-.2L-DS-2A
16	1.380 (35.1)	1.0000-.1P-.2L-DS-2B	1.0000-.1P-.2L-DS-2A
17	1.460 (37.1)	1.0625-.1P-.2L-DS-2B	1.0625-.1P-.2L-DS-2A
19	1.600 (40.6)	1.1875-.1P-.2L-DS-2B	1.1875-.1P-.2L-DS-2A
21	1.850 (47.0)	1.3125-.1P-.2L-DS-2B	1.3125-.1P-.2L-DS-2A



Sav-Con® connector savers

Mighty Mouse Series 805

Reference Information



Table I: Material and Finish		
Code	Material	Finish
C	Aluminum	Black Anodize (Non-Conductive) RoHS Compliant
M		Electroless Nickel RoHS Compliant
NF		Cadmium with Olive Drab Chromate
ZN		Zinc-Nickel with Olive Drab Chromate
ZNU		Zinc-Nickel with Black Chromate
MT		Nickel-PTFE RoHS Compliant
ZI	Stainless Steel	Passivated RoHS Compliant

Table II: Insert Arrangements						
Contact Arr.	No. of Contacts					
	#23	#20	#20HD	#16	#12	#8
8-1				1		
8-23			3			
8-4	4					
8-6	6					
8-7	7					
9-1					1	
9-25			5			
9-10	10					
10-1						1
10-2				2		
10-28			8			
10-13	13					
10-200	4	2				
11-4				4		
11-210			10			
11-19	19					
11-200	4			2		
11-201	8	2				
12-2					2	
12-5				5		
12-26	26					
12-200	12				1	
12-201	4				2	
12-202	8			2		
13-31	31					
15-2					2	
15-3					3	
15-7				7		
15-220			20			
15-37	37					
15-200	6				2	
15-201	10				2	
15-202	20			2		

Table II: Insert Arrangements						
Contact Arr.	No. of Contacts					
	#23	#20	#20HD	#16	#12	#8
15-203	12			4		
15-204	12				2	
15-205	4				4	
18-2						2
18-5					5	
18-12				12		
18-235			35			
18-55	55					
18-204	40			2		
18-205	32			4		
18-206	34			2		
18-207	20			4		
18-208	32					1
19-3						3
19-7					7	
19-14				14		
19-241			41			
19-85	85					
19-203	40			4		
19-204	28				4	
19-205	40					1
21-4						4
21-19				19		
21-255			55			
21-100	100					
21-201	44					2
21-202	12					4
23-5						5
23-12					12	
23-22				22		
23-269			69			
23-130	130					
23-200	28					4

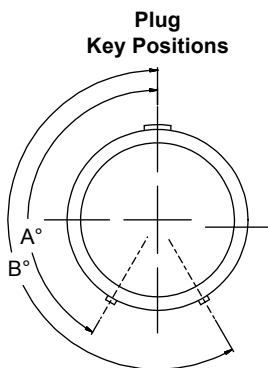


Table III: Plug Keyway		
Key Position	Key Rotation	
	A °	B °
Normal (A)	150	210
B	75	210
C	95	230
D	140	275
E	75	275
F	95	210
Universal (U)*	-	-

Table IV: Capacitor Array Code Capacitance Range for Filtered Connectors		
Class	Pi - Circuit (pF)	C - Circuit (pF)
A	38,000 - 56,000	19,000 - 28,000
B	32,000 - 45,000	16,000 - 22,500
C	18,000 - 33,000	9,000 - 16,500
D	8,000 - 12,000	4,000 - 6,000
E	3,300 - 5,000	1,650 - 2,500
F	800 - 1,300	400 - 650
G	400 - 600	200 - 300
J	70 - 120	35 - 60

* Universal keyway is not intended for field use



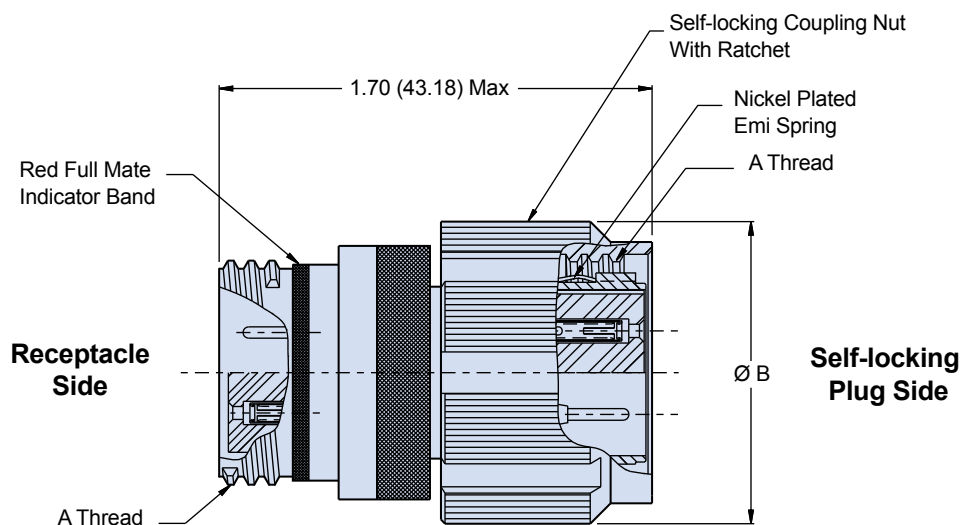
Sav-Con® connector savers



Mighty Mouse Series 805

805-010 Coupling with Triple-Start ACME Threads

How To Order						
Sample Part Number	805-010	Z1	12	-26	P	A
Series	805-010					
Finish	C = Aluminum / Black Anodize (Non-Conductive) RoHS Compliant M = Aluminum / Electroless Nickel RoHS Compliant NF = Aluminum / Cadmium with Olive Drab Chromate ZN = Aluminum / Zinc-Nickel with Olive Drab Chromate ZNU = Aluminum / Zinc-Nickel with Black Chromate MT = Aluminum / Nickel-PTFE RoHS Compliant Z1 = Stainless Steel / Passivated RoHS Compliant					
Shell Size	See Table II					
Insert Arrangement	See Table II					
Contact Type	P = Pin Contact on Plug Side, Socket Contact on Receptacle Side S = Socket Contact on Plug Side, Pin Contact on Receptacle Side					
Shell Key Position	A = Normal, B, C, D, E, F ; See Table III					



Dimensions			
Shell Size	A Threads	Ø B	
		In.	mm.
8	.5000-.1P-.3L-TS-2B	.691	17.55
9	.5625-.1P-.3L-TS-2B	.787	19.99
10	.6250-.1P-.3L-TS-2B	.826	20.98
11	.6875-.1P-.3L-TS-2B	.916	23.27
12	.7500-.1P-.3L-TS-2B	.982	24.94
15	.9375-.1P-.3L-TS-2B	1.097	27.86
18	1.1250-.1P-.3L-TS-2B	1.290	32.77
19	1.1875-.1P-.3L-TS-2B	1.310	33.27
23	1.4375-.1P-.3L-TS-2B	1.562	39.67



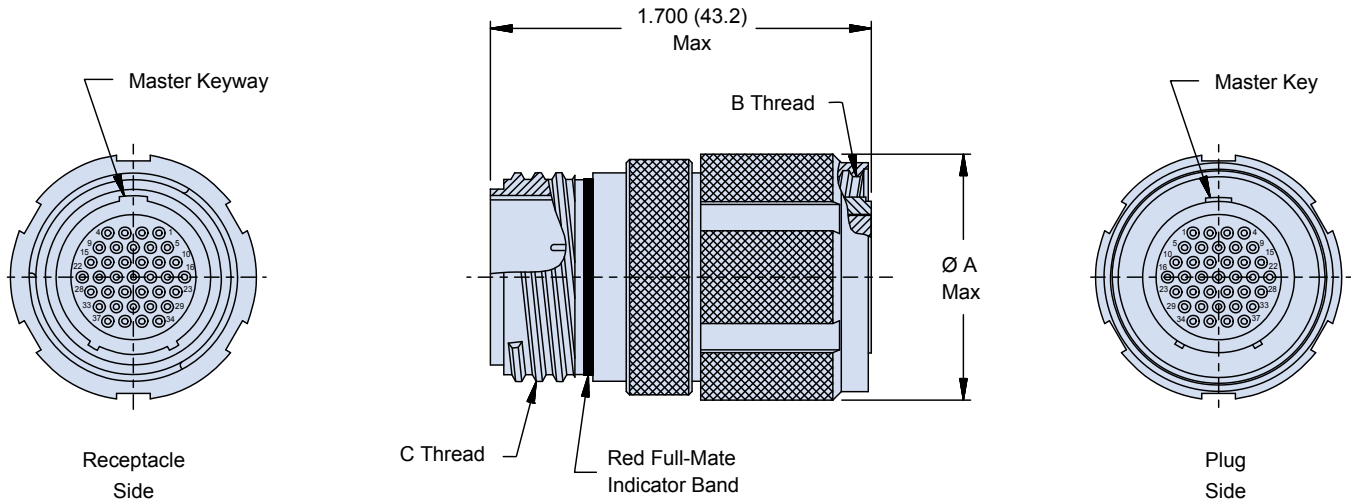
Sav-Con® connector savers

Mighty Mouse Series 805

240-805-AA Filter Connector Adapter



How To Order									
Sample Part Number	240-805-	AA	M	8-7	PS	P	A	A	
Filter Connector	240-805								
Shell Style	AA = Adapter								
Finish	See Table I								
Insert Arrangement	See Table II								
Contact Gender	PS = Pins, Plug Side SP = Sockets, Plug Side (See Note 2)								
Filter Type	P = Pi Circuit C = C Circuit (See Note 1)								
Capacitance	See Table IV								
Alternate Key Position	A, B, C, D, E, F, U A = Normal, U = Universal; See Table III								



NOTES

- Other filter styles (C-L, L-C, Unbalanced Pi, Multi-Stage, Multi-Value) are available, please consult the factory.
- Please consult factory for Pin/Pin and/or Socket/Socket contact arrangements.

Dimensions			
Shell Size	Ø A Max	B Thread	C Thread
8	.870 (22.1)	.5000-.1P-.3L-TS-2B	.5000-.1P-.3L-TS-2A
9	.930 (23.6)	.5625-.1P-.3L-TS-2B	.5625-.1P-.3L-TS-2A
10	1.000 (25.4)	.6250-.1P-.3L-TS-2B	.6250-.1P-.3L-TS-2A
11	1.170 (29.7)	.6875-.1P-.3L-TS-2B	.6875-.1P-.3L-TS-2A
12	1.170 (29.7)	.7500-.1P-.3L-TS-2B	.7500-.1P-.3L-TS-2A
13	1.300 (33.0)	.8125-.1P-.3L-TS-2B	.8125-.1P-.3L-TS-2A
15	1.350 (34.3)	.9375-.1P-.3L-TS-2B	.9375-.1P-.3L-TS-2A
18	1.600 (40.6)	1.1250-.1P-.3L-TS-2B	1.1250-.1P-.3L-TS-2A
19	1.600 (40.6)	1.1875-.1P-.3L-TS-2B	1.1875-.1P-.3L-TS-2A
21	1.750 (44.5)	1.3125-.1P-.3L-TS-2B	1.3125-.1P-.3L-TS-2A
23	1.850 (47.0)	1.4375-.1P-.3L-TS-2B	1.4375-.1P-.3L-TS-2A



Sav-Con® connector savers

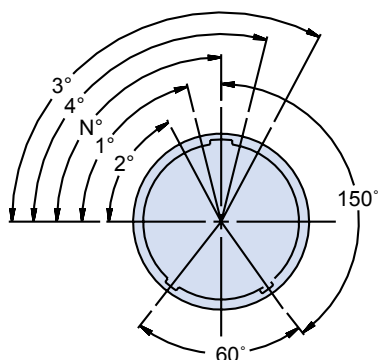
Geo-Marine™ Series 22

Reference Information



Table I: Material/Finish

Sym	Finish Description
B	Aluminum/Cadmium Plate/Olive Drab
J	Aluminum/Gold Iridite Over Cadmium Plate Over Nickel
M	Aluminum/Electroless Nickel
N	Aluminum/Cadmium Plate/Olive Drab Over Nickel
NF	Aluminum/Cad/O. D. Over Electroless Nickel (500 Hour Salt Spray)
T	Aluminum/Cadmium Plate/Bright Dip Over Nickel
Z1	Stainless Steel/Passivate Coupling Nut Nickel - Aluminum - Bronze/Degrease



**FACE VIEW
RECEPTACLE**

Table III: Alternate Keyway Positions

Shell Size Desig.	N°	1°	2°	3°	4°
10	90	76	62	118	104
12	90	70	58	122	110
14	90	69	56	124	111
16	90	72	60	120	108
18	90	72	62	120	108
20	90	72	60	120	108
22	90	75	64	116	105
24	90	75	64	115	105

Table II: Contact Arrangements

Shell Size	Series 22 Pattern	Service Rating	Contact Size/Quantity			
			22	20	16	12
10	10-2	II			2	
	10-4	I			4	
	10-6	I		6		
	10-13	M	13			
12	12-8	II			8	
	12-10	I		10		
	12-22	M	22			
14	14-4	II				4
	14-12	II			12	
	14-19	I		19		
	14-37	M	37			
16	16-6	II				6
	16-19	II			19	
	16-26	I		26		
	16-55	M	55			
18	18-8	I				8
	18-11	II			11	
	18-22	II			22	
	18-32	I		32		
	18-66	M	66			
20	20-11	II				11
	20-30	II			30	
	20-38	I	30		8	
	20-41	I		41		
	20-79	M	79			
	22-19	II				19
22	22-38	II			38	
	22-50	M	48			
	22-55	I		55		
	22-85	M	85			
	24-24	I			16	16
24	24-48	II			48	
	24-61	I		61		
	24-100	M	100			
	24-128	M	128			



Sav-Con® connector savers

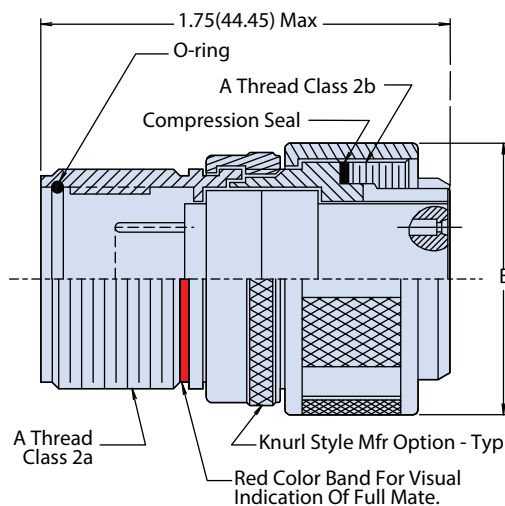
Series 22 Geo-Marine connectors

940-014 High-Pressure Environmental Connector



How To Order							
Sample Part Number	940	-014	M	24	-61	S	N
Series No.	940						
Basic No.	014						
Finish Symbol	B, J, M, N, NF, T, Z1 See Table I						
Shell Size	10, 12, 14, 16, 18, 20, 22, 24 See Table II						
Insert Arrangement	See Table II						
Contact Style	P = Pins, Plug Side S = Sockets, Plug Side						
Alternate Key Position	1, 2, 3, 4, N = Normal; See Table III						

**MATES
WITH
220-006**



Mates to any Geo-Marine® non-scoop proof receptacle

Dimensions		
Shell Size	A Thread	B Dia
10	.750-.1P-.1L	1.000 (25.40)
12	.875-.1P-.1L	1.125 (28.58)
14	1.000-.1P-.1L	1.250 (31.75)
16	1.125-.1P-.1L	1.375 (34.93)
18	1.250-.1P-.1L	1.594 (40.49)
20	1.375-.1P-.1L	1.719 (43.66)
22	1.500-.1P-.1L	1.894 (48.11)
24	1.625-.1P-.1L	1.969 (50.01)

NOTES

1. Assembly identified with manufacturer's name and P/N, space permitting.
2. Glenair 940-014 connector saver is designed to mate with Glenair 220-06 series Geo-Marine® connectors. (Non-scoop-proof)

MATERIAL/FINISH:

- Barrel, shell, coupling nuts - see Table II.
- Contacts - copper alloy/gold plate.
- Insulators - high grade rigid dielectric/N.A.
- O-ring & seals - silicone/N.A.



Sav-Con® connector savers

Series 22 Geo-Marine connectors

940-025 Scoop-Proof High-Pressure Connector



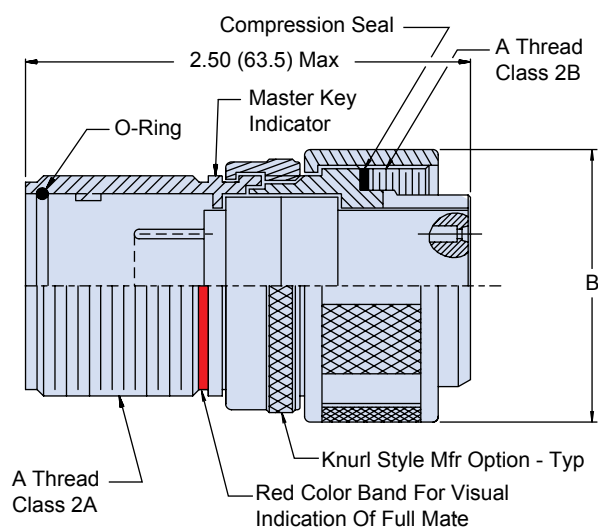
How To Order							
Sample Part Number		940	-025	M	16	-26	S N
Series No.	940						
Basic No.	-025						
Finish Symbol	B, J, M, N, NF, T, Z1 See Table I						
Shell Size	10, 12, 14, 16, 18, 20, 22, 24 See Table II						
Insert Arrangement	See Table II						
Contact Style	P = Pins, Panel Side S = Sockets Panel Side						
Alternate Key Position	1, 2, 3, 4, N = Normal; See Table III						

NOTES:

1. Assembly identified with manufacturer's name and P/N, space permitting.
2. Glenair 940-025 connector saver is designed to mate with Glenair 220-16 series Geo-Marine® connectors. (Scoop-Proof)

MATERIAL/FINISH:

- Barrel, shell, coupling nuts - see Table II.
- Contacts - copper alloy/gold plate.
- Insulators - high grade rigid dielectric/n.a.
- O-ring & seals - silicone/n.a.



MATES WITH
220-16



BETTER THAN QPL

SuperNine®: The advanced-performance MIL-DTL-38999 Series III style connector

Better than QPL? SuperNine® is the interconnect industry's most complete and advanced D38999 Series III type connector family. From IP-68 rated environmental-class connectors with improved durability and ease-of-use, to EMI/EMP filter connectors with innovative flange and PC tail termination configurations, SuperNine® offers military and commercial aerospace customers that have standardized on Series III technology the opportunity to improve interconnect system performance and resolve a wide range of persistent electrical, environmental, and mechanical performance problems—all with catalog (COTS) connector solutions backed by Glenair's high-availability business model.

Better than QPL means significant innovation in every class of connector in the series. SuperNine® hermetics for example, offer many features not available in QPL hermetic solutions, such as crimp-removable socket contacts. Our fiber optic connector series is designed and built to tight-tolerances to ensure precise alignment of fiber optic termini, and superior optical performance.

SuperNine® offers improved durability, sealing, cost-of-ownership, ease of shield termination, a broader range of PC tail configurations, environmental and hermetic bulkhead feed-throughs, connector savers, off-the-shelf EMI/EMP filter connectors and more—all supported with Glenair's well-established reputation for service, support, and fast turnaround.

Glenair SuperNine® connectors in action: in this example, a pair of our advanced fiber optic interconnects cabled-up in a turnkey, environmentally sealed point-to-point jumper

THE SUPERNINE® TECHNOLOGY PROMISE

- **Across-the-board improvements in mating-cycle and contact durability**
- **Advanced ease-of-use features such as integrated band porches and PC-Tail standoffs**
- **Advanced-performance improvements in every connector class—from filters to fiber optics**



RECTANGULAR

SAV-CON®



Rectangular Connector Savers

Connector savers for D-subminiatures, HiPer-D™
Micro-D, Nano-Miniature™ and Micro-Crimp™



Glenair Sav-Con® Connector Savers—the smart way to prevent contact damage and protect connectors for mating and unmating wear. Now available for all of our rectangular connector lines:

- Series 28 HiPer-D® the M24308 compatible D-subminiature for standard and high density applications
- Micro-D and Nano-Miniature™ connectors with high performance TwistPin contacts
- And Series 79 Micro-Crimp™ our high density, low profile aerospace connector.

Glenair®

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



Sav-Con® connector savers

Rectangular connectors

Selection Guide



STANDARD & FILTERED SAV-CON® CONNECTOR SAVERS FOR RECTANGLE CONNECTORS

Sav-Con® Connector Savers for Rectangular connectors, including: D-Subminiature, HiPer-D®, Micro-D, Nano-Miniature™, and Micro-Crimp®. Filtered, high density and standard versions available with standard cadmium or nickel plating or choose optional finishes such as gold or Chem Film.

D-Subminiature and HiPer-D™ Series 28

Page C-2

240-051 D-Sub Filter Adapter Connector Saver	Page C-2
289-012 HiPer-D Standard and High Density Connector Saver	Page C-4

Series MWDM Micro-D

Page C-6

MWDM2L Micro-D Unisaver Connector Saver	Page C-6
240-033 Micro-D In-Line Filter Adapter Connector Saver	Page C-7

Series 89 Nano-Miniature™

Page C-8

890-016 Nano-Miniature™ Single Row Connector Saver	Page C-8
891-016 Nano-Miniature™ Dual Row Connector Saver	Page C-9

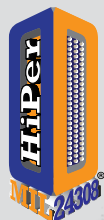
Series 79 Micro-Crimp™

Page C-10

Micro-Crimp™ Crimp Contact Connector Saver	Page C-10
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D-Subminiature



HiPer-D Series 28



Series MWDM Micro-D



Series 89 Nano Miniature



Series 79 Micro-Crimp



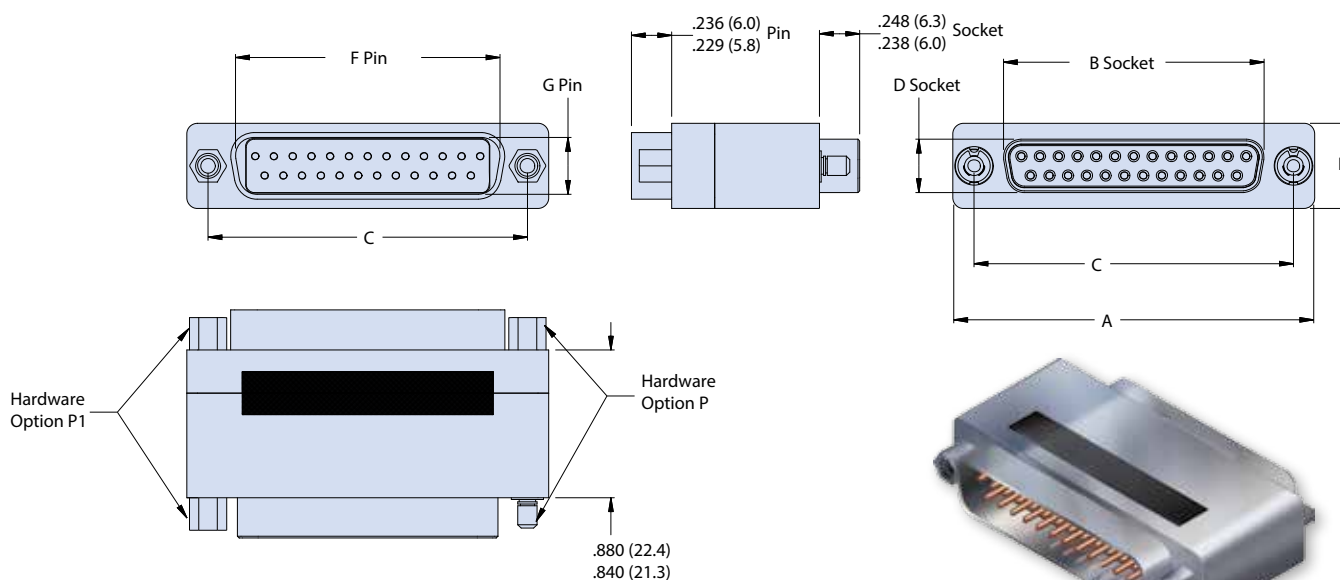
Sav-Con® connector savers

D-Subminiature MIL-DTL-24308 Type

240-051 Filter Adapter



How To Order								
Sample Part Number		240-051	-5H78	GS	P	G	G	B
Series	240-051							
Shell Size/ Insert Arrangement	See Table II							
Shell Material/Finish	Aluminum Shell		Brass Shell					
	ME - Electroless Nickel JF - Yellow Cadmium MT - Nickel-PTFE Z2 - Gold E - Chem Film		GS - Gold					
Filter Type	C - C Filter P - Pi Filter (See Table I)							
Filter Class	A, B, C, D, E, F, G, J (See Table I)							
EMI Spring	G - EMI Spring (Plug/Pin Only) N - No Spring							
Hardware Option	B - No Hardware P - Combination Jackpost/Jackscrew P1 -Fixed Jackposts, both sides							



**Table I: Capacitor Array Code
Capacitance Range**

Class	Pi - Circuit (pF)	C - Circuit (pF)
A	38,000 - 56,000	19,000 - 28,000
B	32,000 - 45,000	16,000 - 22,500
C	18,000 - 33,000	9,000 - 16,500
D	8,000 - 12,000	4,000 - 6,000
E	3,300 - 5,000	1,650 - 2,500
F	800 - 1,300	400 - 650
G	400 - 600	200 - 300
J	70 - 120	35 - 60

NOTES

1. Assembly to be identified with Glenair's name, part number, and date code space permitting
2. Dimensions B and D taken from inside of shell for Pin/Plug and outside for Socket/Receptacle.

ELECTRICAL PERFORMANCE

- Dielectric Withstanding Voltage: 500 VDC
- Insulation Resistance: 5,000 megohms @ 200 VDC
- Current Rating Standard Density: 7.5 Amps max.
- Current Rating High Density: 5 Amps max.

MATERIALS/FINISHES

- Insulators - High Grade Rigid Dielectric/N.A.
- Contacts - Copper Alloy/Gold Plated



Sav-Con[®] connector savers

D-Subminiature MIL-DTL-24308 Type

240-051 Filter Adapter



Table II: Dimensions									
Shell Size Insert Arrangement	Contact Size	Contact Qty	A ±.015	B ±.005	C ±.005	D ±.005	E ±.015	F ±.005	G ±.005
1S9	#20	9	1.243 (31.6)	0.643 (16.3)	0.984 (25.0)	0.311 (7.9)	0.494 (12.5)	0.666 (16.9)	0.329 (8.4)
1H15	#22	15							
2S15	#20	15	1.571 (39.9)	0.971 (24.7)	1.312 (33.3)	0.311 (7.9)	0.494 (12.5)	0.994 (25.2)	0.329 (8.4)
2H26	#22	26							
3S25	#20	25	2.118 (53.8)	1.511 (38.4)	1.852 (47.0)	0.311 (7.9)	0.494 (12.5)	1.534 (39.0)	0.329 (8.4)
3H44	#22	44							
4S37	#20	37	2.759 (70.1)	2.159 (54.8)	2.500 (63.5)	0.311 (7.9)	0.494 (12.5)	2.182 (55.4)	0.329 (8.4)
4H62	#22	62							
5S50	#20	50	2.665 (67.7)	2.064 (52.4)	2.406 (61.1)	0.423 (10.7)	0.605 (15.4)	2.079 (52.8)	0.441 (11.2)
5H78	#22	78							
6H104	#22	104	2.759 (70.1)	2.189 (55.6)	2.500 (63.5)	0.486 (12.3)	0.668 (17.0)	2.212 (56.2)	0.503 (12.8)



Sav-Con® connector savers

HiPer-D® Series 28 D-Subminiature

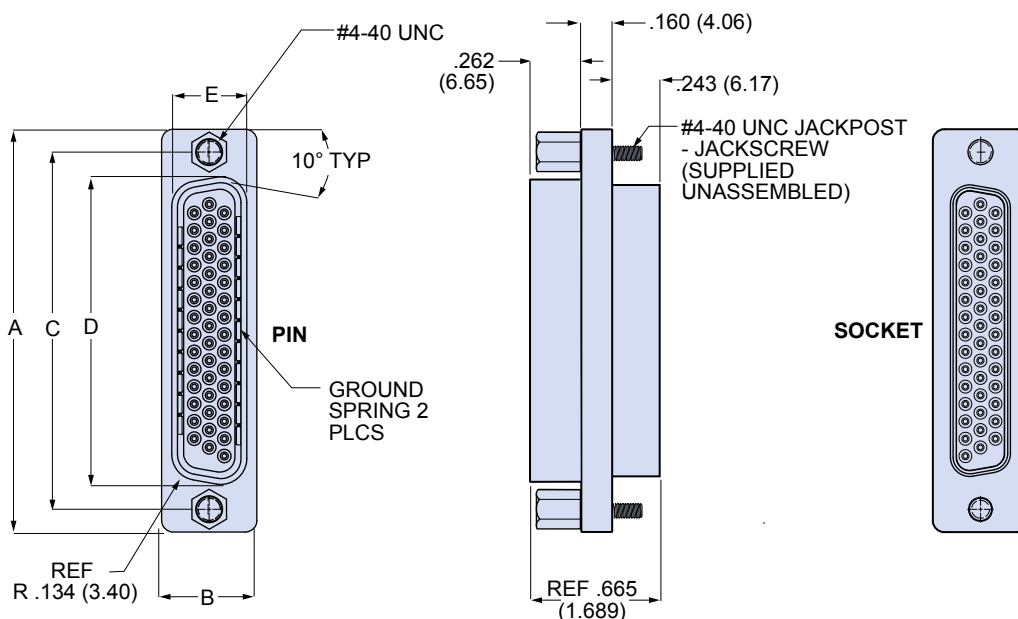
289-012 Standard and High Density



Sav-Con® D-Subminiature Connector Saver



Low profile one-piece machined aluminum housing and ground spring protects circuits from EMI problems. Available in standard density and high density contact arrangements. Pin mating face has fluorosilicone rubber seal. Choose electroless nickel shell finish for avionics and space applications. Choose cadmium for compatibility with cadmium or zinc plated M24308 connectors, or choose nickel-PTFE for maximum corrosion protection. Other materials and finishes available on request.



Dimensions										
Shell Size	A		B		C Basic		D		E	
	in ± .015	mm ± 0.38	in ± .015	mm ± 0.38	in.	mm	in ± .005	mm ± 0.13	in ± .005	mm ± 0.13
1	1.213	30.81	.494	12.55	.984	24.99	.726	18.44	.389	9.88
2	1.541	39.14	.494	12.55	1.312	33.32	1.054	26.77	.389	9.88
3	2.088	53.04	.494	12.55	1.852	47.04	1.594	40.49	.389	9.88
4	2.729	69.32	.494	12.55	2.500	63.50	2.242	56.95	.389	9.88
5	2.635	66.93	.605	15.37	2.406	61.11	2.139	54.33	.501	12.73
6	2.729	69.32	.668	16.97	2.500	63.50	2.272	57.71	.563	14.30

Materials and Finishes	
Shell	Aluminum alloy
Contacts	Copper alloy, 50 microinches gold plated, SST hood
insulator	Thermoset epoxy
interfacial Seal	Fluorosilicone rubber
Hardware	300 series stainless steel

Specifications	
Current Rating	#22D 5 AMPS, #20 7.5 AMPS
Test Voltage	1000 VAC RMS
Insulation Resistance	5000 megohms minimum
Operating Temperature	-65° C. to +200° C.
Ingress Protection	IP 67
Shock	300 g.
Vibration, Random	43.92 g.
Magnetic Permeability	2 μ maximum
Outgassing ⁽¹⁾	Postcure required to meet ASTM E595 NASA requirement

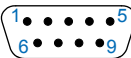
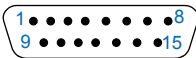
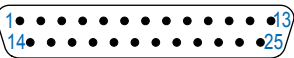
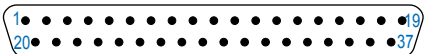


Sav-Con® connector savers

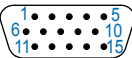
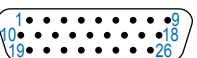
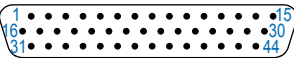
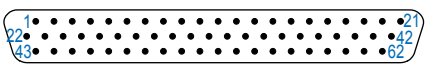
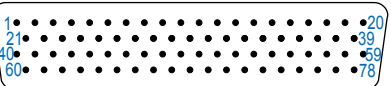
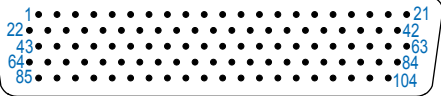
HiPer-D® Series 28 D-Subminiature

289-012 Standard and High Density



Standard Density Contact Arrangements, #20 Contacts		
 1S9 9 #20 Contacts	 2S15 15 #20 Contacts	 3S25 25 #20 Contacts
 4S37 37 #20 Contacts	 5S50 50 #20 Contacts	
Mating face of pin connector. Socket mating face is mirror image.		

Standard Density HiPer-D Sav-Con®				
No. of Contacts	Shell Size	Electroless Nickel Space, Avionics (ME)	Nickel-PTFE Maximum Corrosion Protection (MT)	Cadmium General Purpose (JF)
9	1	289-0121S9MEGR	289-0121S9MTGR	289-0121S9JFGR
15	2	289-0122S15MEGR	289-0122S15MTGR	289-0122S15JFGR
25	3	289-0123S25MEGR	289-0123S25MTGR	289-0123S25JFGR
37	4	289-0124S37MEGR	289-0124S37MTGR	289-0124S37JFGR
50	5	289-0125S50MEGR	289-0125S50MTGR	289-0125S50JFGR

High Density Contact Arrangements, #22D Contacts		
 1H15 15 #22D Contacts	 2H26 26 #22D Contacts	 3H44 44 #22D Contacts
 4H62 62 #22D Contacts	 5H78 78 #22D Contacts	 6H104 104 #22D Contacts
Mating face of pin connector. Socket mating face is mirror image.		

Outgassing Note

Note (1) HiPer-D Sav-Cons will not meet NASA outgassing requirements without special processing. Refer to Series 28 HiPer-D catalog, Section B "HiPer-D Connectors for Space Flight," or www.glenair.com for complete information.

High Density HiPer-D Sav-Con®				
No. of Contacts	Shell Size	Electroless Nickel Space, Avionics (ME)	Nickel-PTFE Maximum Corrosion Protection (MT)	Cadmium General Purpose (JF)
15	1	289-0121H15MEGR	289-0121H15MTGR	289-0121H15JFGR
26	2	289-0122H26MEGR	289-0122H26MTGR	289-0122H26JFGR
44	3	289-0123H44MEGR	289-0123H44MTGR	289-0123H44JFGR
62	4	289-0124H62MEGR	289-0124H62MTGR	289-0124H62JFGR
78	5	289-0125H78MEGR	289-0125H78MTGR	289-0125H78JFGR
104	6	289-0126H104MEGR	289-0125H104MTGR	289-0125H104JFGR



Sav-Con® connector savers

Micro-D connector saver

MWDM2L with TwistPin Contacts



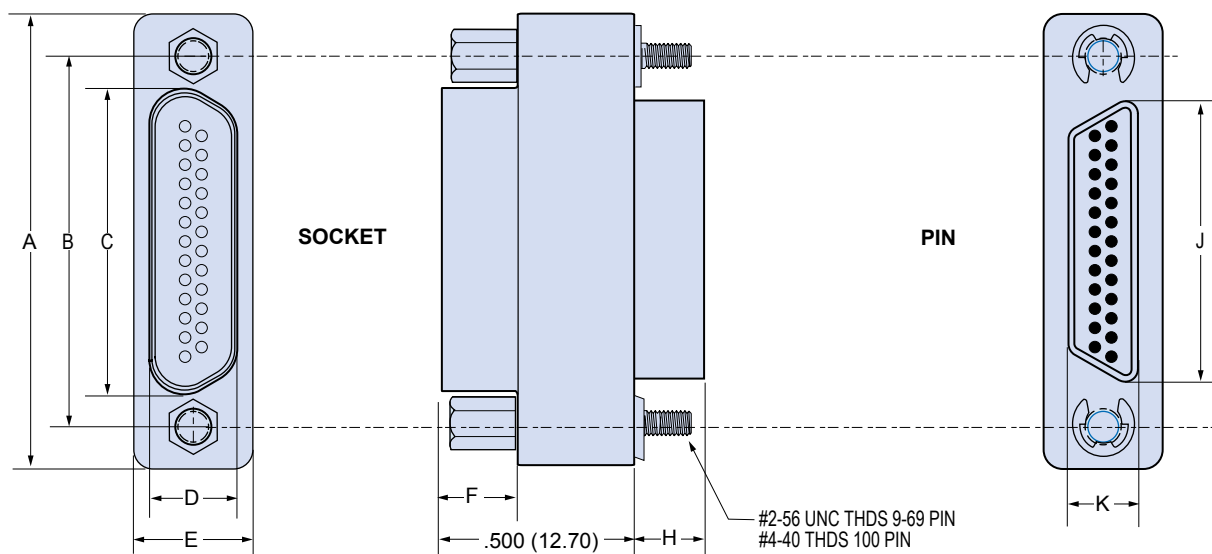
Protect Expensive Equipment with Glenair Micro-D Savers



These connector savers feature a one-piece aluminum housing, TwistPin contacts and locking hardware. Typical applications include test equipment and space-grade instruments. The Micro-D Sav-Con® prevents wear and tear on sensitive gear. Standard versions are electroless nickel plated. Other plating finishes are available on request.

- Compact Size reduces stress on mating connectors.
- In Stock, No Waiting – All standard sizes are in stock (9, 15, 21, 25, 31, 37, 51 and 100 pin).
- EMI Protected one piece shell.

Materials & Finishes	
Shell	Aluminum Alloy 6061-T6 Electroless Nickel Plated
Contacts	Gold-Plated Copper Alloy
Encapsulant	Epoxy
Insulators	Glass-Filled LCP
Hardware	300 Series Stainless Steel, Passivated



Dimensions																			
Size	Part Number	A Max.		B		C Max.		D Max.		E Max.		F		H Max.		J Max.		K Max.	
		In.	mm.	In. ± .003	mm. ± 0.08	In.	mm.	In.	mm.	In.	mm.	In. ± .003	mm. ± 0.08	In.	mm.	In.	mm.	In.	mm.
9	MWDM2L-9USP1	.785	19.94	.565	14.35	.400	10.16	.250	6.35	.308	7.82	.195	4.95	.183	4.65	.333	8.46	.184	4.67
15	MWDM2L-15USP1	.935	23.75	.715	18.16	.551	14.00	.250	6.35	.308	7.82	.195	4.95	.183	4.65	.483	12.27	.184	4.67
21	MWDM2L-21USP1	1.085	27.56	.865	21.97	.701	17.81	.250	6.35	.308	7.82	.195	4.95	.183	4.65	.633	16.08	.184	4.67
25	MWDM2L-25USP1	1.185	30.01	.965	24.51	.801	20.35	.250	6.35	.308	7.82	.195	4.95	.183	4.65	.733	18.62	.184	4.67
31	MWDM2L-31USP1	1.335	33.91	1.115	28.32	.951	24.16	.250	6.35	.308	7.82	.195	4.95	.183	4.65	.883	22.43	.184	4.67
37	MWDM2L-37USP1	1.485	37.72	1.265	32.13	1.101	27.96	.250	6.35	.308	7.82	.195	4.95	.183	4.65	1.033	26.24	.184	4.67
51	MWDM2L-51USP1	1.435	36.45	1.215	30.86	1.051	26.70	.296	7.52	.351	8.92	.195	4.95	.183	4.65	.983	24.97	.228	5.79
51-2	MWDM2L-51-2USP1	1.835	46.61	1.615	41.02	1.450	36.83	.250	6.35	.308	7.82	.195	4.95	.183	4.65	1.384	35.15	.184	4.67
67	MWDM2L-67USP1	2.235	56.77	2.015	51.18	1.850	46.99	.250	6.35	.308	7.82	.195	4.95	.183	4.65	1.784	45.31	.184	4.67
69	MWDM2L-69USP1	1.735	44.07	1.515	38.48	1.350	34.29	.296	7.52	.351	8.92	.195	4.95	.183	4.65	1.284	32.61	.228	5.79
100	MWDM2L-100USP1	2.170	55.12	1.800	45.72	1.451	36.86	.333	8.46	.394	10.01	.195	4.95	.183	4.65	1.383	35.13	.270	6.86



Sav-Con® connector savers

Micro-D filtered connector saver

240-033 In-Line Filter Adapter



EMI/RFI Filter Micro-D Connector Saver

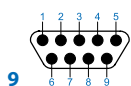
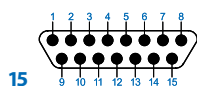
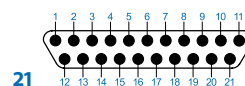
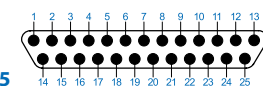
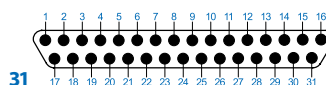
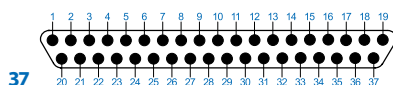


Glenair Sav-Con®, inline filter adapter, provides EMI solutions in a miniaturized M83513 type connector. These connectors feature ceramic capacitor planar arrays and ferrite inductors. Solder cups accept #26 thru #30 AWG wire, or specify oversize contacts for #24 gage wire.

Choose PI or C Filter arrays in eighty filter classes and six layouts. Glenair filtered Micro-D connectors comply with applicable MIL-DTL_83513 requirements and are 100% intermateable with standard connectors.

Choose 9 to 37 contacts, with standard cadmium or nickel plating on the connector housing or choose optional finishes such as gold or Chem Film.

How To Order								
Sample Part Number		240-033	-2	-21	PS	C	D	P
Series	240-033							
Shell Finish	Aluminum Shell		Stainless Steel Shell					
	1 - Cadmium	2 - Nickel	3 - Passivated					
	4 - Black Anodize	5 - Gold						
	6 - Chem Film							
Contact Layout	9, 15, 21, 25, 31, 37 (See Contact Arrangements Table)							
Contact Type	PS - Pin/Socket							
Filter Type	C - C Filter P - Pi Filter							
Filter Class	A, B, C,D, E, F, G, J (See Filter Class and Performance Table)							
Hardware	N - No Hardware P - Combination Jackscrew and Jackpost							

Contact Arrangements			
 9	 15	 21	 25
 31		 37	
Mating Face View of Pin Connector. Socket connectors have reversed cavity numbers.			

Micro-D Filter Classes and Performance															
Filter Class →	A		B		C		D		E		F		G		J
Capacitance, Picofarads (pF)															
C Filter	19000-28000		16000-22500		9000-16500		4000-6000		1650-2500		400-650		200-300		35-60
Pi Filter	38000-56000		32000-45000		18000-33000		8000-12000		3300-5000		800-1300		400-600		70-120
Insertion Loss, dB Minimum, 25° C.															
Filter Type →	C		Pi		C		Pi		C		Pi		C		Pi
1 MHz	6	10	5	8	3	5	—	1	—	—	—	—	—	—	—
10 MHz	24	40	23	35	16	25	8	14	4	8	—	2	—	0.8	—
100 MHz	41	62	39	60	35	57	28	50	21	40	10	15	5	13	1
500-1000 MHz	50	66	49	62	46	60	41	58	34	52	23	32	17	22	8



Sav-Con® connector savers

Series 89 Nano-Miniature™ connector saver

890-016 Single Row



Glenair Connector Savers reduce wear on vital contacts and eliminate downtime due to fowled or damaged connectors.

Choose 5 to 51 contacts, with standard nickel plating on the connector housing.

How To Order

How To Order				
Sample Part Number	890-016	-15	US	P1
Series	890-016			
Number of Contacts	5, 9, 15, 21, 25, 31, 37, 51			
Connector Type	US – Plug to Receptacle One Piece Shell			
Hardware	P1 – Permanently Installed Jackscrew/Jackpost			

Table I: Single Row Nano Connector Saver Dimensions

15 Position Connector Is Shown

Number Of Contacts	A	B Ref	C Ref	D Ref
5	0.400	0.295	0.184	0.185
9	0.500	0.395	0.284	0.285
15	0.650	0.545	0.434	0.435
21	0.800	0.695	0.584	0.585
25	0.900	0.795	0.684	0.685
31	1.050	0.945	0.834	0.835
37	1.200	1.095	0.984	0.985
51	1.550	1.445	1.334	1.335



Sav-Con® connector savers

Series 89 Nano-Miniature™ connector saver

891-016 Dual Row



Glenair Connector Savers extend the life of principle connector interfaces by reducing wear and possible damage to contacts.

Choose 9 to 69 contacts, with standard nickel plating on the connector housing.

How to Order				
Sample Part Number	891-016	-31	US	P1
Series	891-016			
Number of Contacts	9, 15, 21, 25, 31, 37, 51, 65, 69			
Connector Type	US - Plug to Socket One Piece Shell			
Hardware	P1 - Permanently Installed Jackscrew/Jackpost			

Dual Row Nano Connector Saver				
Assembly access window sealed with conductive epoxy, to maintain EMI/RFI shielding #0-80-80UNF-2B Typ Internal Thread #0-80UNF-2A Typ See Note 1 and 2 Pos 1 .125 ±.005 A ±.005 B C .025 (.63) Typ .0125 (.31) Plug Mating Face Per MIL-DTL-32139/03 .040 (1.02) .020 (.51) .0575 (1.46) .105±.003 (2.7±0.1) .580±.005 (14.7±0.1) .025 (0.6) Typ .0125 (0.3) Pos 1 Receptacle mating face per MIL-DTL-32139/04 .040 (1.0) .020 (0.5) .0575 (1.5)				
Number of Contacts	A	B Ref	C Ref	D Ref
9	0.375 (9.5)	0.270 (6.9)	0.160 (4.1)	0.163 (4.1)
15	0.450 (11.4)	0.345 (8.8)	0.235 (6.0)	0.238 (6.0)
21	0.525 (13.3)	0.420 (10.7)	0.310 (7.9)	0.313 (8.0)
25	0.575 (14.6)	0.470 (11.9)	0.360 (9.1)	0.363 (9.2)
31	0.650 (16.5)	0.545 (13.8)	0.435 (11.0)	0.438 (11.1)
37	0.725 (18.4)	0.620 (15.7)	0.510 (13.0)	0.513 (13.0)
51	0.900 (22.9)	0.795 (20.2)	0.685 (17.4)	0.688 (17.5)
65	1.075 (27.3)	0.970 (24.6)	0.860 (21.8)	0.863 (21.9)
69	1.125 (28.6)	1.020 (25.9)	0.910 (23.1)	0.913 (23.2)



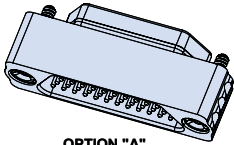
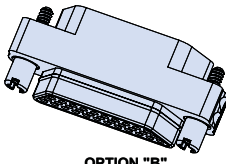
Sav-Con® connector savers

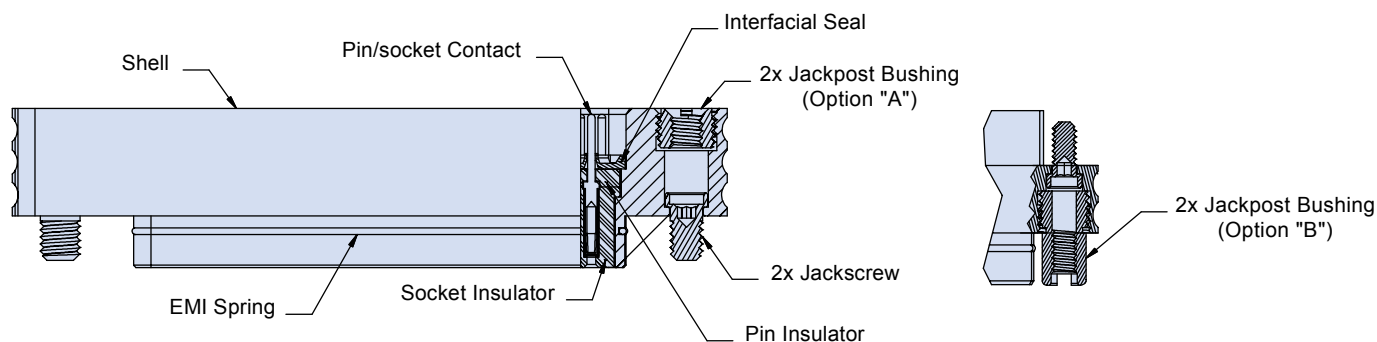
Series 79 Micro-Crimp® connector saver

799-070



Glenair Series 79 Connector Savers provide a low profile one-piece machined aluminum housing. Ground spring protects circuits from EMI problems. Pin mating face has fluorosilicone rubber seal. Choose electroless nickel shell finish for avionics and space applications. Also available with cadmium for compatibility with cadmium or zinc plated connectors, or choose nickel-PTFE for maximum corrosion protection. Other materials and finishes available on request.

How To Order					
Sample Part Number	799-070 H-66 E M A				
Series / Basic Part No.	799-070				
Insert Arrangement	See Micro-Crimp® Insert Arrangement Table				
RFI Spring Option	E - With EMI Spring N - No EMI Spring				
Shell Finish	M - electroless Nickel MT - Teflon Nickel E - Chemfilm Z2 - Gold UC - Zinc Cobalt with Black Chromate J - Cadmium with Yellow Chromate NF - Cadmium with Olive Drab Chromate				
Configuration Option	  OPTION "A" OPTION "B"				

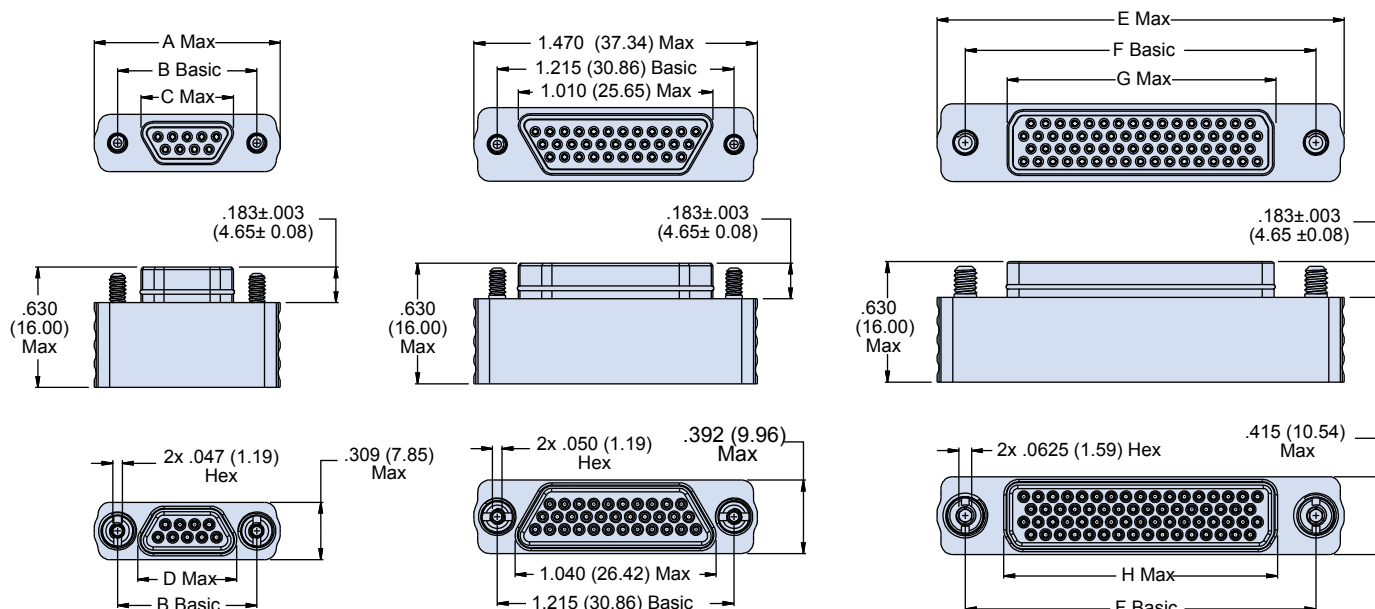




Sav-Con® connector savers

Series 79 Micro-Crimp® connector saver

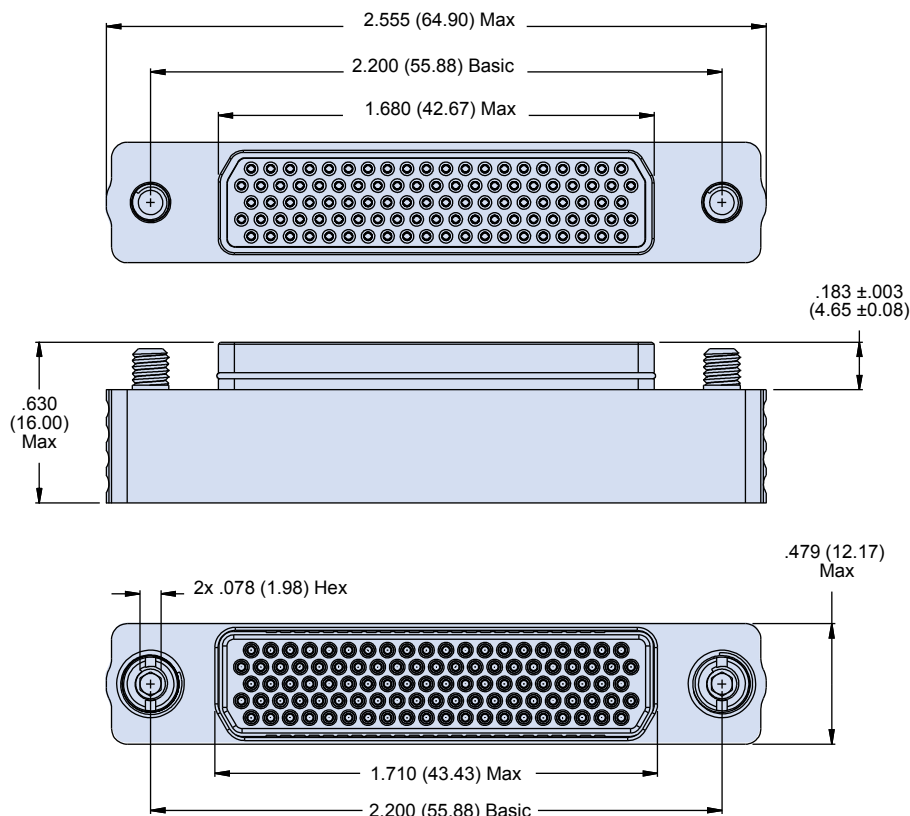
799-070 Configuration A Dimensions



Shell Sizes A,B,C,D,E,F,J,K

Shell Size G

Shell Size H And L



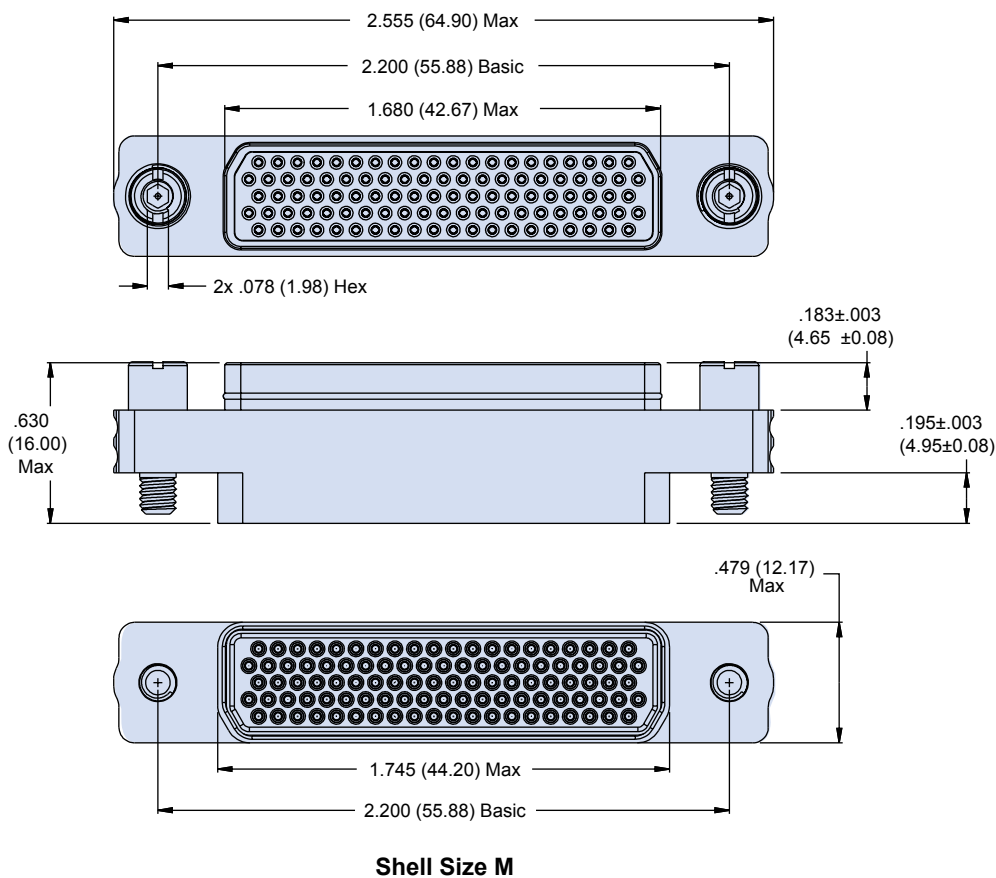
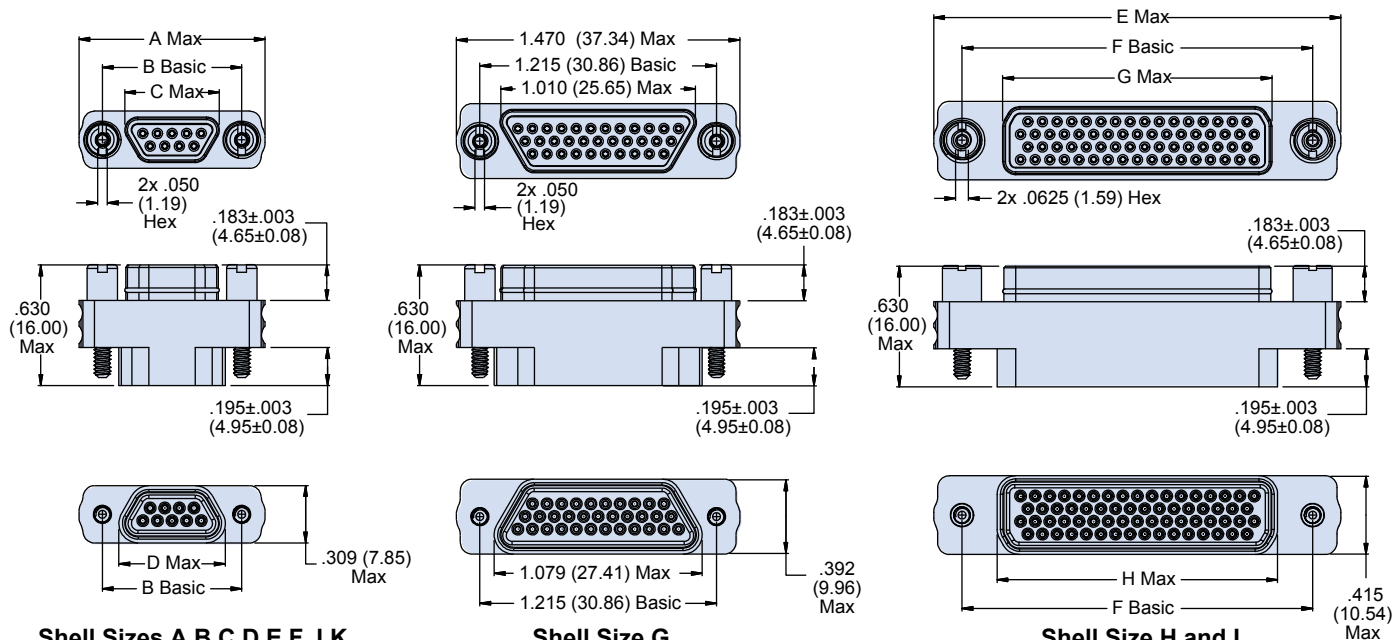
Shell Size M



Sav-Con® connector savers

Series 79 Micro-Crimp® connector saver

799-070 Configuration B Dimensions





Sav-Con® connector savers

Series 79 Micro-Crimp® connector saver

799-070 Configuration A and B Dimensions



Option A Configuration Dimensions																
Shell Size	A Max		B Basic		C Max		D Max		E Max		F Basic		G Max		H Max	
	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.
A	0.820	20.83	0.565	14.35	0.335	8.51	0.365	9.27	-	-	-	-	-	-	-	-
B	0.970	24.64	0.715	18.16	0.485	12.32	0.515	13.08	-	-	-	-	-	-	-	-
C	1.120	28.45	0.865	21.97	0.635	16.13	0.665	16.89	-	-	-	-	-	-	-	-
D	1.220	30.99	0.965	24.51	0.735	18.67	0.765	19.43	-	-	-	-	-	-	-	-
E	1.370	34.80	1.115	28.32	0.885	22.48	0.915	23.23	-	-	-	-	-	-	-	-
F	1.520	38.61	1.265	32.13	1.035	26.39	1.065	27.05	-	-	-	-	-	-	-	-
H	-	-	-	-	-	-	-	-	2.105	53.48	1.800	45.72	1.385	35.18	1.415	35.94
J	1.880	47.75	1.615	41.02	1.390	35.61	1.420	36.07	-	-	-	-	-	-	-	-
K	2.275	57.78	2.015	51.18	1.795	45.59	1.823	46.30	-	-	-	-	-	-	-	-
L	-	-	-	-	-	-	-	-	2.341	59.46	2.036	51.71	1.623	41.22	1.651	41.94

Option B Configuration Dimensions																
Shell Size	A Max		B Basic		C Max		D Max		E Max		F Basic		G Max		H Max	
	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.
A	0.820	20.83	0.565	14.35	0.335	8.51	0.455	11.56	-	-	-	-	-	-	-	-
B	0.970	24.64	0.715	18.16	0.485	12.32	0.555	14.10	-	-	-	-	-	-	-	-
C	1.120	28.45	0.865	21.97	0.635	16.13	0.705	17.91	-	-	-	-	-	-	-	-
D	1.220	30.99	0.965	24.51	0.735	18.67	0.805	20.45	-	-	-	-	-	-	-	-
E	1.370	34.80	1.115	28.32	0.885	22.48	0.955	24.26	-	-	-	-	-	-	-	-
F	1.520	38.61	1.265	32.13	1.035	26.39	1.105	28.07	-	-	-	-	-	-	-	-
H	-	-	-	-	-	-	-	-	2.105	53.48	1.800	45.72	1.385	35.18	1.450	36.83
J	1.880	47.75	1.615	41.02	1.390	35.61	1.460	37.08	-	-	-	-	-	-	-	-
K	2.275	57.78	2.015	51.18	1.795	45.59	1.860	47.24	-	-	-	-	-	-	-	-
L	-	-	-	-	-	-	-	-	2.341	59.46	2.036	51.71	1.623	41.22	1.686	42.82



Sav-Con® connector savers

Series 79 Micro-Crimp® connector saver

799-070 Insert Arrangements



For insert arrangements in **blue** size #12 and #16 contacts are purchased separately

Micro-Crimp Insert Arrangements			
Shell Size	Contact Arrangement	No. of Contacts and Contact Size	Mating Face Pin Connector (Socket Numbers are Reversed)
A	A-5	5 #23 contacts	
B	B-2P2 B-2W2	2 #16 contacts	
B	B-9	9 #23 contacts	
C	C-13	13 #23 contacts	
D	D-15	15 #23 CONTACTS	
D	D-3P3 D-3W3	3 #16 CONTACTS	
D	D-7P2 D-7W2	5 #23 CONTACTS 2 #16 CONTACTS	
E	E-11P2 E-11W2	9 #23 CONTACTS 2 #16 CONTACTS	
E	E-19	19 #23 CONTACTS	
E	E-7P3 E-7W3	4 #23 CONTACTS 3 #16 CONTACTS	
F	F-15P2 F-15W2	13 #23 CONTACTS 2 #16 CONTACTS	
F	F-23	23 #23 CONTACTS	
F	F-5P5 F-5W5	5 #16 CONTACTS	
G	G-33	33 #23 CONTACTS	



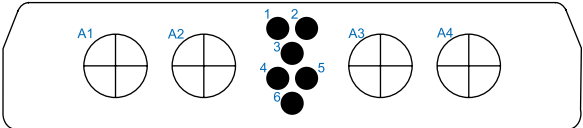
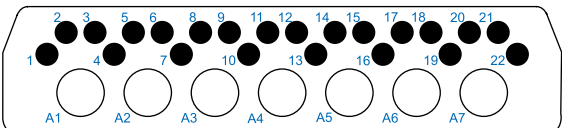
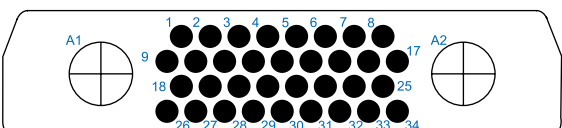
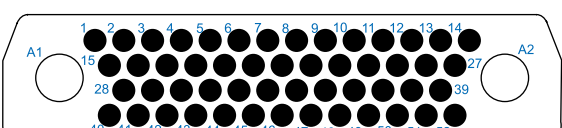
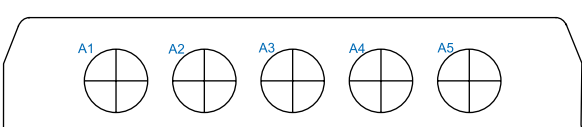
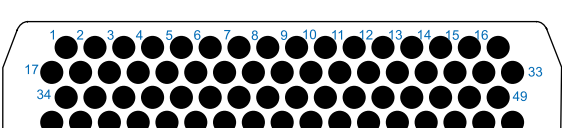
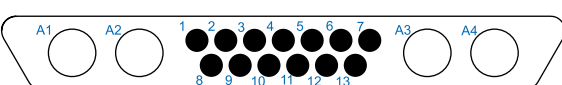
Sav-Con® connector savers

Series 79 Micro-Crimp® connector saver

799-070 Insert Arrangements



For insert arrangements in **blue** size #12 and #16 contacts are purchased separately

Micro-Crimp Insert Arrangements			
Shell Size	Contact Arrangement	No. of Contacts and Contact Size	Mating Face Pin Connector (Socket Numbers are Reversed)
H	H-10P4 H-10W4	6 #23 CONTACTS 4 #12 CONTACTS	
H	H-29P7 H-29W7	22 #23 CONTACTS 7 #16 CONTACTS	
H	H-36P2 H-36W2	34 #23 CONTACTS 2 #12 CONTACTS	
H	H-54P2 H-54W2	52 #23 CONTACTS 2 #16 CONTACTS	
H	H-5P5 H-5W5	5 #12 CONTACTS	
H	H-66	66 #23 CONTACTS	
J	J-17P4 J-17W4	13 #23 contacts 4 #16 contacts	



Sav-Con® connector savers

Series 79 Micro-Crimp® connector saver

799-070 Insert Arrangements



For insert arrangements in **blue** size #12 and #16 contacts are purchased separately

Micro-Crimp Insert Arrangements			
Shell Size	Contact Arrangement	No. of Contacts and Contact Size	Mating Face Pin Connector (Socket Numbers are Reversed)
J	J-25P2 J-25W2	23 #23 contacts 2 #16 contacts	
J	J-33	33 #23 contacts	
J	J-7P7 J-7W7	7 #16 contacts	
K	K-27P4 K-27W4	23 #23 contacts 4 #16 contacts	
K	K-35P2 K-35W2	33 #23 contacts 2 #16 contacts	
K	K-43	43 #23 contacts	
K	K-9P9 K-9W9	9 #16 contacts	
L	L-6P6 L-6W6	6 #12 contacts	
L	L-78	78 #23 CONTACTS	
M	M-102	102 #23 CONTACTS	



Sav-Con® connector savers

Gender Changers

Selection Guide



SAV-CON® GENDER CHANGERS FOR MISMATCHED CABLE ISSUES

Glenair Sav-Con®, connector savers also offer special purpose gender changers to address mis-matched cable issues.

MIL-DTL-38999 Series I	Page D-2
GC443 In-Line Bayonet Coupling Gender Changer	Page D-3
MIL-DTL-38999 Series III	Page D-4
233-214 SuperNine® Threaded In-Line Circular Plug/Plug Gender Changer	Page D-5
947-221 Threaded In-Line Circular Plug/Plug Gender Changer	Page D-6
947-139 Threaded In-Line Circular Receptacle/Receptacle Gender Changer	Page D-7
Series 22 Geo-Marine®	Page D-8
27-152 Series 22 Geo-Marine®, High-Pressure In-Line Receptacle/Receptacle Gender Changer	Page D-9
Series 801 Mighty Mouse	Page D-10
801-091 Micro USB Gender Changer	Page D-10
Series 79 HiPer-D®	Page D-11
289-057P, 289-058S HiPer-D® Gender Changer	Page D-11
Series MWDM Micro-D	Page D-12
MRM17109 Micro-D Mixed Signal and Power Gender Changer	Page D-12



MIL-DTL-38999 Series III Type
In-Line Gender Changer



HiPer-D Gender Changer



Sav-Con® connector savers

MIL-DTL-38999 Series I

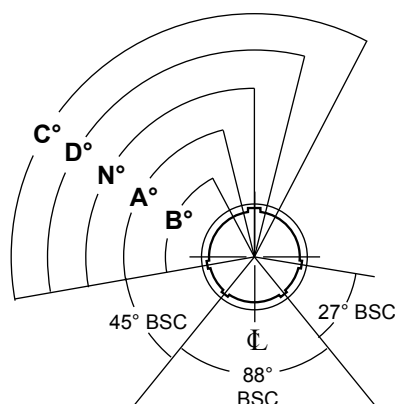
Reference Information



Table I: Material and Finish		
Plating Code	Material	Finish
M	Aluminum	Electroless Nickel
B		Cad Plate, Olive Drab
NF		Cadmium Plate Olive Drab over Electroless Nickel
NC		Zinc-Cobalt
ZN		Olive Drab Zinc-Nickel
MT		Ni-PTFE 1000 Hour Grey™ (Nickel Fluorocarbon Polymer)
ZR		Zinc Nickel, Black
ME		Electroless Nickel (RoHS)

Table II: Shell Size-Insert Arrangement					
Shell Size Desig.	Insert Arr. Dash No.	Contact Size and Qty			
		22	20	16	12
9	9-3		3		
	9-44	4			
	9-35	6			
	9-98		3		
11	11-2			2	
	11-4		4		
	11-5		5		
	11-6		6		
	11-35	13			
	11-98		6		
	11-99		7		
	13-4			4	
13	13-8		8		
	13-35	22			
	13-98		10		
	15-5			5	
15	15-15		14	1	
	15-18		18		
	15-19		19		
	15-35	37			
	15-97		8	4	
	17-6				6
17	17-8			8	
	17-26		26		
	17-35	55			
	17-99		21	2	
	19-11			11	
19	19-28		26	2	
	19-30		29	1	
	19-32		32		
	19-35	66			
	19-45	67			

Table II: Shell Size-Insert Arrangement					
Shell Size Desig.	Insert Arr. Dash No.	Contact Size and Qty			
		22	20	16	12
21	21-35	79			
	21-11				11
	21-16			16	
	21-24		24		
	21-25		25		
	21-27		27		
	21-39		37	2	
	21-41		41		
23	23-35	100			
	23-2	85			
	23-21			21	
	23-32		32		
	23-34		34		
	23-36		36		
	23-53		53		
	23-55		55		
	23-97			16	
	23-99			11	
25	25-2	100			
	25-4		48	8	
	25-19				19
	25-24			12	12
	25-29			29	
	25-35	128			
	25-43		23	20	
	25-61		61		



FACE VIEW
RECEPTACLE

Table III: Alternate Keyway Positions					
Shell Size Desig.	N°	A°	B°	C°	D°
9	95	77	-	-	113
11	95	81	67	123	109
13	95	75	63	127	115
15	95	74	61	129	116
17	95	77	65	125	113
19	95	77	65	125	113
21	95	77	65	125	113
23	95	80	69	121	110
25	95	69	69	121	110



Sav-Con® connector savers

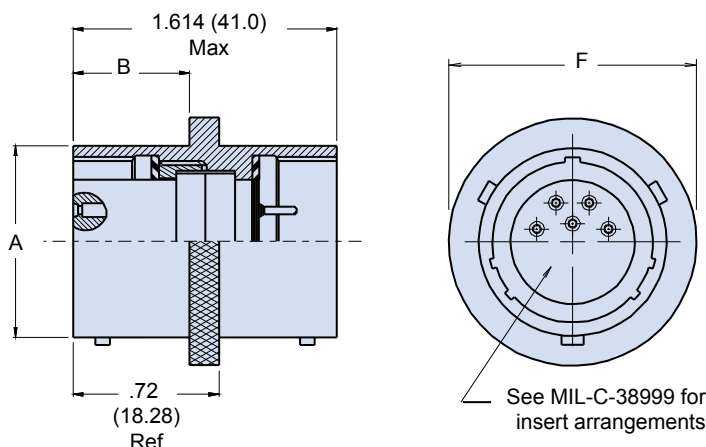


MIL-DTL-38999 Series I

GC443 In-Line Bayonet Coupling Gender Changer

HOW TO ORDER					
Sample Part Number	GC443	-A	NF	21-35	B
Series	GC443				
Style	A - In-line				
Finish	See Table I				
Shell Size	See Table II				
Alternate Key Position	A, B, C, D, Omit for Normal; See Table III				

Style A In-Line



Dimensions						
Shell Size	A Dia Max	B	C +.010-.005 (+0.3-0.1)	D Dim	E Dim ±.020(0.5)	F Dia Max
09	.573(14.6)	.632(16.1)	.128(3.3)	.719(18.3)	.938(23.8)	.859(21.8)
11	.701(17.8)	.632(16.1)	.128(3.3)	.812(20.6)	1.031(26.2)	.984(25.0)
13	.851(21.6)	.632(16.1)	.128(3.3)	.906(23.0)	1.125(28.6)	1.156(29.4)
15	.976(24.8)	.632(16.1)	.128(3.3)	.969(24.6)	1.219(31.0)	1.281(32.5)
17	1.101(28.0)	.632(16.1)	.128(3.3)	1.062(27.0)	1.312(33.3)	1.406(35.7)
19	1.208(30.7)	.632(16.1)	.128(3.3)	1.156(29.4)	1.438(36.5)	1.516(38.5)
21	1.333(33.9)	.602(15.3)	.147(3.7)	1.250(31.8)	1.562(39.7)	1.641(41.7)
23	1.458(37.0)	.602(15.3)	.147(3.7)	1.375(34.9)	1.688(42.9)	1.766(44.9)
25	1.583(40.2)	.602(15.3)	.147(3.7)	1.500(38.1)	1.812(46.0)	1.891(48.0)

MATERIAL/FINISH:

- Shell assembly—Al alloy/see 38999 Reference Information section Table I
- Bayonet pins—CRES/passivate
- Contacts—copper alloy/gold plate
- Insulators—high-grade rigid dielectric/N.A.
- Interfacial & peripheral seals—silicone/ N.A.



Sav-Con® connector savers

MIL-DTL-38999 Series III

Reference Information



Table I: Material and Finish		
Plating Code	Material	Finish
M	Aluminum	Electroless Nickel
B		Cad Plate, Olive Drab
NF		Cadmium Plate Olive Drab over Electroless Nickel
NC		Zinc-Cobalt
ZN		Olive Drab Zinc-Nickel
MT		Ni-PTFE 1000 Hour Grey™ (Nickel Fluorocarbon Polymer)
ZR		Zinc Nickel, Black
ME		Electroless Nickel (RoHS)

Table II: Shell Size - Insert Arr						
Shell Size Code	Shell Size Ref.	Insert Arr. Dash No.	Contact Size			
			22	20	16	12
A	9	9-3		3		
		9-35	6			
		9-44	4			
		9-98		3		
B	11	11-2			2	
		11-4		4		
		11-5		5		
		11-6		6		
		11-35	13			
		11-98		6		
		11-99		7		
C	13	13-4			4	
		13-8		8		
		13-35	22			
		13-98		10		
D	15	15-5			5	
		15-15		14	1	
		15-18		18		
		15-19		19		
		15-35	37			
		15-97		8	4	
E	17	17-6				6
		17-8			8	
		17-26		26		
		17-35	55			
		17-99		21	2	
F	19	19-11			11	
		19-28		26	2	
		19-30		29	1	
		19-32		32		
		19-35	66			
		19-45	67			

Table II: Shell Size - Insert Arr						
Shell Size Code	Shell Size Ref.	Insert Arr. Dash No.	Contact Size			
			22	20	16	12
G	21	21-35	79			
		21-11				11
		21-16			16	
		21-24		24		
		21-25		25		
		21-27		27		
		21-39		37	2	
		21-41		41		
H	23	23-35	100			
		23-2	85			
		23-21			21	
		23-32		32		
		23-34		34		
		23-36		36		
		23-53		53		
		23-55		55		
		23-97			16	
		23-99			11	
J	25	25-2	100			
		25-4		48	8	
		25-19				19
		25-24			12	12
		25-29			29	
		25-35	128			
		25-43		23	20	
		25-61		61		

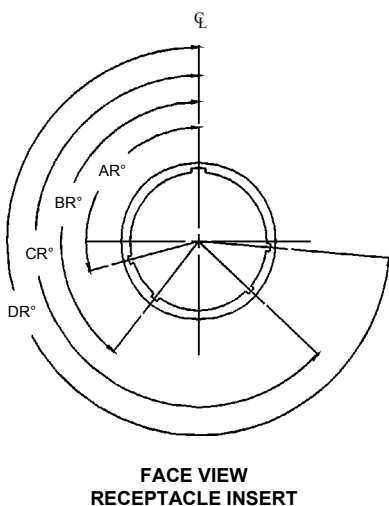


Table III: Alternate Keyway Positions						
Shell Size Code	Shell Size Ref.	Alt. Keyway Code	AR°	BR°	CR°	DR°
A	09	N	105	140	215	265
		A	102	132	248	320
		B	80	118	230	312
		C	35	140	205	275
		D	64	155	234	304
		E	91	131	197	240
B	11	N	95	141	208	236
C	13	A	113	156	182	292
		B	90	145	195	252
D	15	C	53	156	220	255
		D	119	146	176	298
		E	51	141	184	242

Table III: Alternate Keyway Positions						
Shell Size Code	Shell Size Ref.	Alt. Keyway Code	AR°	BR°	CR°	DR°
E	17	N	80	142	196	293
		A	135	170	200	310
		B	49	169	200	244
		C	66	140	200	257
F	19	D	62	145	180	280
		E	79	153	197	272
		N	80	142	196	293
G	21	A	135	170	200	310
		B	49	169	200	244
		C	66	140	200	257
H	23	D	62	145	180	280
		E	79	153	197	272
J	25	N	80	142	196	293
		A	135	170	200	310
		B	49	169	200	244



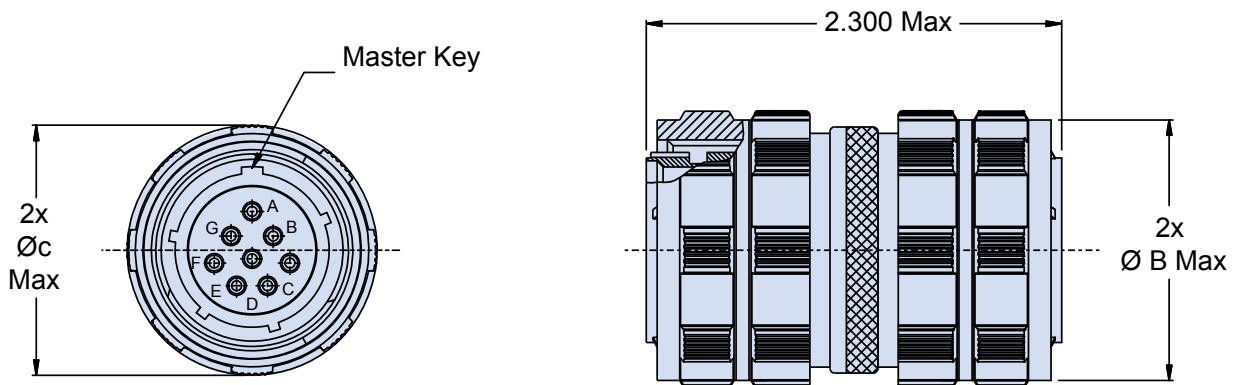
Sav-Con® connector savers

MIL-DTL-38999 Series III

233-214 SuperNine® Plug/Plug In-Line Gender Changer



How To Order							
Sample Part Number	233-214	-NF	17-8	P	N	S	N
Series / Basic Part No.	233-214						
Finish	NF = Cadmium Olive Drab ME = Electroless Nickel MT = Nickel PTFE ZR = Black Zinc Nickel						
Shell Size - Insert Arrangement	See Table II						
Contact Style (Plug Side)	P = Pin, gold, 500 cycles S = Socket, gold, 500 cycles						
Alternate Polarization (Plug Side)	A, B, C, D, E, N = Normal, U = Universal; See Note 5						
Contact Style (Opposite Plug Side)	P = Pin, gold, 500 cycles S = Socket, gold, 500 cycles						
Alternate Polarization (Opposite Plug Side)	A, B, C, D, E, N = Normal, U = Universal; Review Note 5 See Table II						



NOTES

- Glenair 233-214 connector savers are designed to meet or exceed the mechanical dimensional, electrical, and environments, requirements of MIL-DTL-38999, D38999/20 and /24 and MIL-STD-1560 except as shown and /or noted. Glenair connector savers mate with any QPL manufacturer's MIL-DTL-38999, series III plugs and receptacles have the same shell size, insert arrangement, and polarization.
- For pin/pin and socket/socket, symmetrical layout only.
- Power to a given contact on one end will result in power to a contact directly opposite, regardless of identification letter.
- Electrical safety limits must be established by user. Peak voltage, switching surge, transient, etc. should be used to determine the safety application.
- Alternate polarization 'U' (universal) is a non-standard/non-mill-spec option intended for test lab use only which allows for mating to any QPL manufacturer's MIL-DTL-38999, series III connector having the same shell size, insert arrangement, and mating contact size. Universal connectors are intended for use in testing facilities only and should be highly evaluated before consideration in another environment.

Dimensions			
Shell Size Code	Shell Size	ØB Max	ØC Max
A	9	0.811 (20.6)	0.858 (21.8)
B	11	0.929 (23.6)	0.984 (25.0)
C	13	1.110 (28.2)	1.157 (29.4)
D	15	1.232 (31.3)	1.280 (32.5)
E	17	1.358 (34.5)	1.406 (35.7)
F	19	1.469 (37.3)	1.516 (38.5)
G	21	1.594 (40.5)	1.642 (41.7)
H	23	1.720 (43.7)	1.768 (44.9)
J	25	1.843 (46.8)	1.890 (48.0)



Sav-Con® connector savers

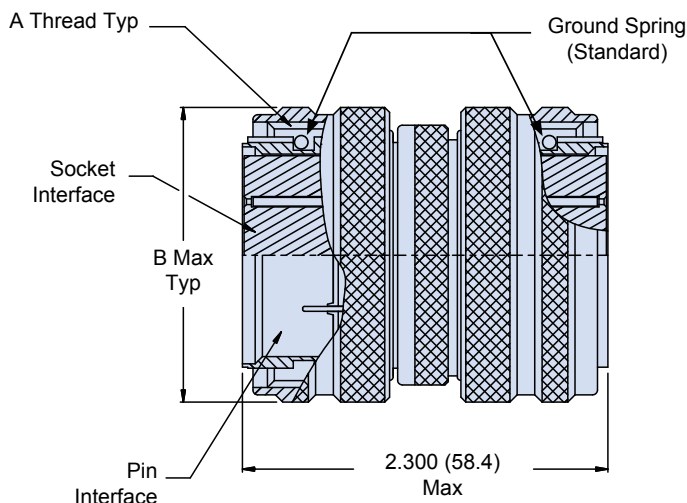
MIL-DTL-38999 Series III

947-221 Plug/Plug In-Line Gender Changer



How To Order					
Sample Part Number	947-221	NF	15-35	PP	A
Series	947-221				
Finish	See Table I				
Shell Size - Insert Arrangement	See Table II				
Contact Type	PP = Pins/Pin Contacts SS = Sockets/Socket Contacts PS = Pin/Socket Contacts				
Alternate Key Position	A, B, C, D, E, N = Normal; See Table III				

Dimensions		
Shell Size	A Thread 0.1 P-0.3L-Ts-2	B Dia Max
09	0.6250	.859(21.8)
11	0.7500	.969(24.6)
13	0.8750	1.141(29.0)
15	1.0000	1.266(32.2)
17	1.1875	1.391(35.3)
19	1.2500	1.500(38.1)
21	1.3750	1.625(41.3)
23	1.5000	1.750(44.5)
25	1.6250	1.875(47.6)



NOTES

1. Assembly features straight-thru double-ended contacts, power to a given contact on one end will result in power to contact directly opposite, regardless of identification.
2. Symmetrical layout only, consult factory for available insert arrangements.

MATERIAL/FINISH:

- Barrel, adapter, junction nuts, coupling nuts—Al alloy/see 38999 Reference Information section Table I
- Insulators—high grade rigid dielectric/N.A.
- Contacts—copper alloy/gold plate



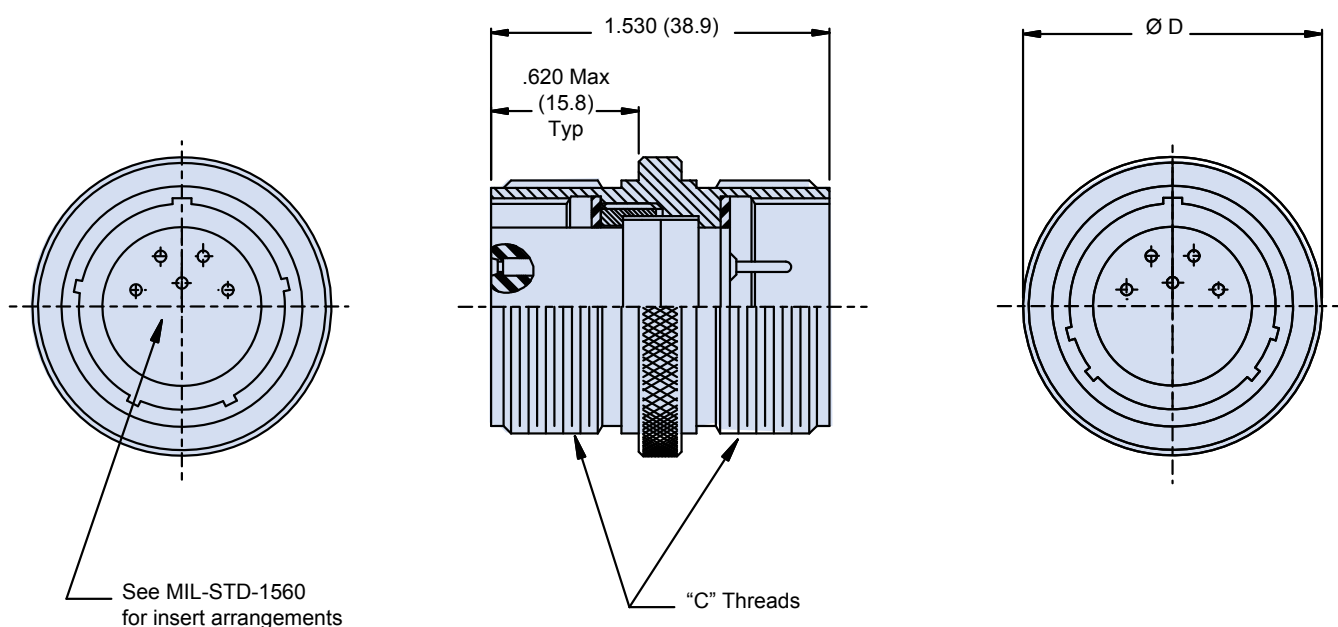
Sav-Con® connector savers

MIL-DTL-38999 Series III

947-139 Receptacle In-Line Gender Changer



HOW TO ORDER							
Sample Part Number	947-139	J	21-35	S	E	P	N
Series	947-139						
Finish	See Table I						
Shell Size - Insert Arrangement	See Table II						
Contact Type (Side "A")	S = Sockets P = Pins						
Alternate Key Position	A, B, C, D, E N = Normal; See Table, Table III						
Contact Type (Side "B")	S = Sockets P = Pins						
Alternate Key Position	A, B, C, D, E N = Normal; See Table III						



Dimensions		
Shell Size	C Thread	Ø D Max
09	.625-1P-.3L-2A	.859
11	.750-1P-.3L-2A	.984
13	.875-1P-.3L-2A	1.156
15	1.000-1P-.3L-2A	1.281
17	1.187-1P-.3L-2A	1.406
19	1.250-1P-.3L-2A	1.516
21	1.375-1P-.3L-2A	1.641
23	1.500-1P-.3L-2A	1.766
25	1.625-1P-.3L-2A	1.891

NOTES

1. For pin/pin and skt/skt symmetrical layouts only. Consult factory for available insert arrangements.
2. Power to a given contact on one end will result in power to the contact directly opposite, regardless of identification marking.

MATERIAL/FINISH:

- Shell assembly—Al alloy/see 38999 Reference Information section Table I
- Contacts—Copper alloy/gold plate
- Insulators—High-grade rigid dielectric/ N.A.
- Seals—Silicone/ N.A



Sav-Con® connector savers

Series 22 Geo-Marine®

Reference Information



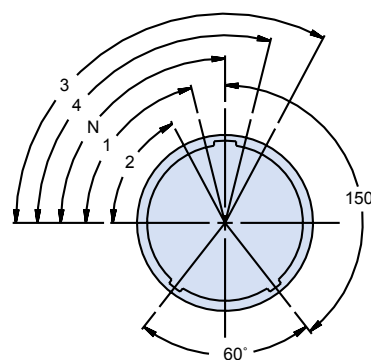
Table I: Material/Finish

Sym	Finish Description
Z1	Stainless Steel/Passivate Coupling Nut Nickel - Aluminum - Bronze/Degrease

Table II: Contact Arrangements

Shell Size	Series 22 Pattern	Service Rating	Contact Size/Quantity			
			22	20	16	12
10	10-2	II			2	
	10-04	I		4		
	10-06	I		6		
	10-13	M	13			
12	12-08	II			8	
	12-10	I		10		
	12-22	M	22			
14	14-04	II				4
	14-12	II			14	
	14-19	I		19		
	14-37	M	37			
16	16-06	II				6
	16-19	II			19	
	16-26	I		26		
	16-55	M	55			
18	18-08	I		8		
	18-22	II			22	
	18-32	I		32		
	18-66	M	66			
20	20-11	II				11
	20-30	II			30	
	20-38	I		30	8	
	20-41	I		41		
	20-79	M	79			
22	22-19	II				19
	22-38	II			38	
	22-55	I		55		
	22-85	M	85			
24	24-48	II			48	
	24-61	I		61		
	24-100	M	100			
	24-128	M	128			

Table III: Alternate Keyway Positions



Shell Size Desig.	N°	1°	2°	3°	4°
10	90	76	62	118	104
12	90	70	58	122	110
14	90	69	56	124	111
16	90	72	60	120	108
18	90	72	62	120	108
20	90	72	60	120	108
22	90	75	64	116	105
24	90	75	64	115	105



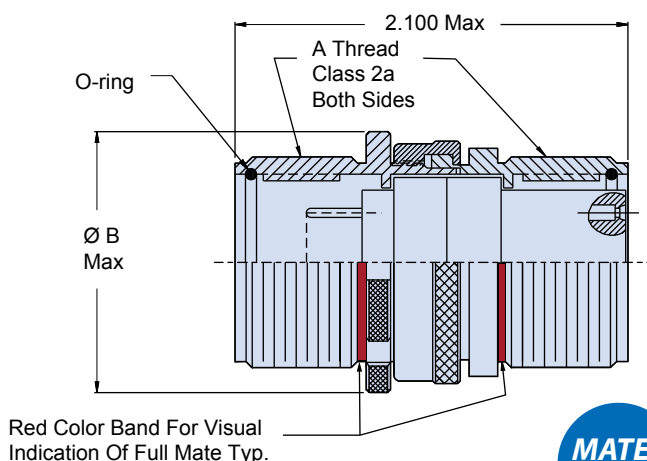
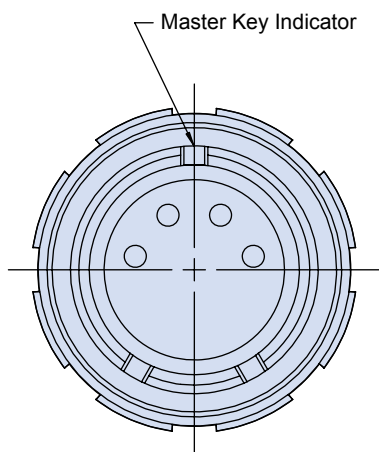
Sav-Con® connector savers

Series 22 Geo-Marine® connectors

227-152 High-Pressure In-Line Gender Changer



How To Order					
Sample Part Number	227-152	Z1	16	-19	N
Series No.	227-152				
Finish Sym	Z1; See Table I				
Shell Size	10, 12, 14, 16, 18, 20, 22, 24				
Insert Arrangement	See Table II				
Alternate Key Position	N, 1, 2, 3 or 4; See Table III				



MATES WITH
220-16

Dimensions		
Shell Size	A Thread	B Dia
10	.750-.1P-.1L	.906
12	.875-.1P-.1L	1.031
14	1.000-.1P-.1L	1.156
16	1.125-.1P-.1L	1.281
18	1.250-.1P-.1L	1.531
20	1.375-.1P-.1L	1.656
22	1.500-.1P-.1L	1.781
24	1.625-.1P-.1L	1.906

NOTES:

1. Assembly identified with manufacturer's name and P/N, space permitting.
2. Glenair 227-152 connector receptacle is designed to mate with Glenair 220-16 series Geo-Marine® connectors. (scoop-proof)

MATERIAL/FINISH:

- Shell, lock nut - CRES/passivate.
- Contacts - copper alloy/gold plate.
- Insulators - high grade rigid dielectric/n.a.
- Interface seal - fluorosilicone/n.a.
- O-rings - nitrile/n.a.



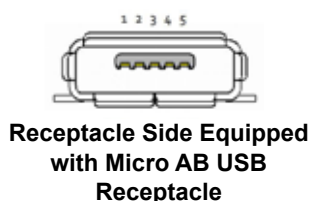
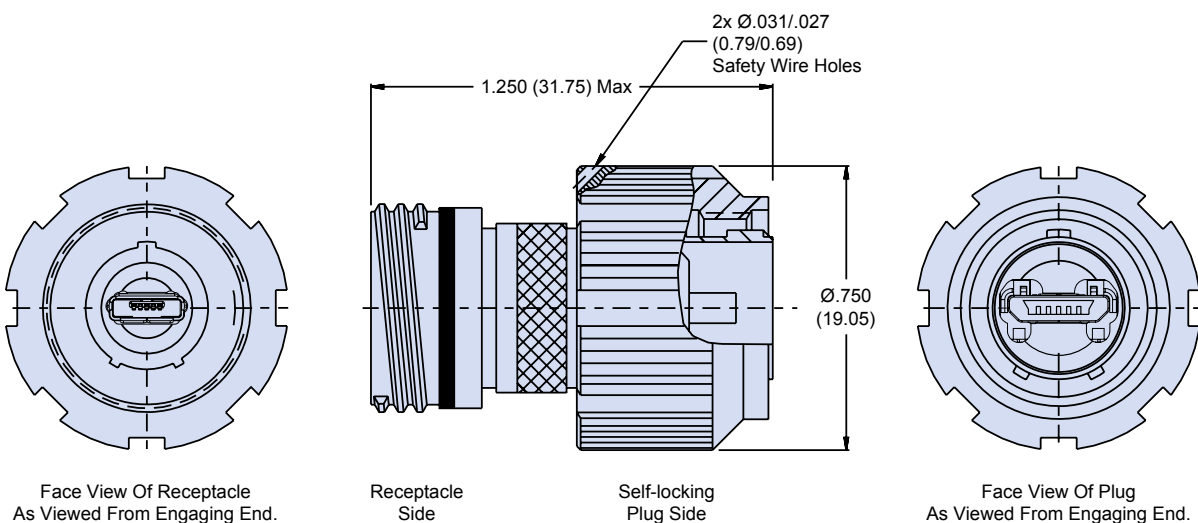
Sav-Con® connector savers

SuperSeal™ Mighty Mouse Series 801

801-091 Micro USB Gender Changer

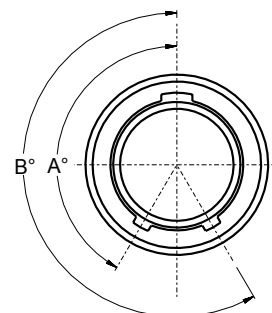


How To Order			
Sample Part Number	801-091 -MUSB	-M	A
Series (See Table I)	801-091 = Plug/Receptacle Sav-Con® Connector Saver		
Shell Material and Finish	NF = Cadmium Olive Drab M = Electroless Nickel MT = Nickel PTFE ZNU = Black Zinc Nickel		
Shell Key Positions	A, B, C, D, E, F		



Rear Grommet Side		Mating Side	
LABEL	Cable Color (Typ)	ID.	Micro USB Pin Description
V	RED	1	V BUS
G	BLACK	2	D-
D-	WHITE	3	D+
D+	GREEN	4	ID
ID	NONE	5	GND
		Shell Ground	

Alternate Key Positions		
Code	A°	B°
A	150°	210°
B	75°	210°
C	95°	230°
D	140°	275°
E	75°	275°
F	95°	210°





Sav-Con® connector savers

HiPer-D® D-subminiature

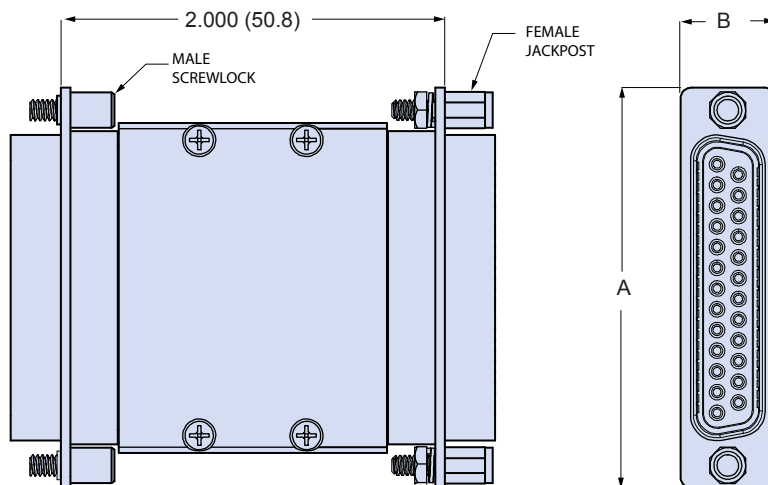
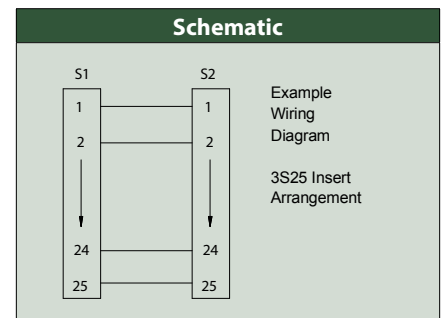
289-057P, 289-058S Gender Changer



HiPer-D® Gender Changers provide a convenient way to change the gender of an interface to allow attachment of a mismatched cable. Two styles are available: male-male and female-female. Machined metal housing protects circuits from EMI problems. Available in standard density and high density contact arrangements. Intermateable with standard M24308-type connectors. Pin mating face has fluorosilicone rubber seal. Choose electroless nickel or gold shell finish for avionics and space applications. Choose cadmium for compatibility with cadmium or zinc plated M24308 connectors, or choose nickel-PTFE for maximum corrosion protection. Other materials and finishes available on request.

How To Order					
Sample Part Number	289-057P	3S25	ME	N	1
Basic Part Number	289-057P Male-Male with Pin Contacts 289-058S Female-Female with Socket Contacts				
Shell Size-Contact Arrangement	Contact Arrangements are shown in the adjacent table				
Finish	ME = Electroless Nickel (RoHS) MT = Nickel-PTFE (RoHS) JF = Cadmium with Yellow Chromate ZZ = Gold (RoHS) Z1 = Passivated Stainless Steel (RoHS)				
Ground Spring	Omit for 289-058S. Applies to 289-057P Male-Male adapter only. G = Supplied with EMI Ground Spring N = No Ground Spring				
Mating Hardware	1 = Captive #4-40 Male Screwlocks on Both Ends 2 = #4-40 Female Jackposts on Both Ends 3 = Captive #4-40 Male Screwlocks on One End, #4-40 Female Jackposts on Other End				

Shell Size - Contact Arrangements		
Shell Size-Contact Arr.	Contact Size and Qty	
	#20	#22
Standard Density		
1S9	9	
2S15	15	
3S25	25	
4S37	37	
5S50	50	
High Density		
1h15		15
2H26		26
3H44		44
4H62		62
5H78		78
6H104		104



Dimensions				
Shell Size	A		B	
	in ± .015	mm ± 0.38	in ± .015	mm ± 0.38
1	1.213	30.81	.494	12.55
2	1.541	39.14	.494	12.55
3	2.088	53.04	.494	12.55
4	2.729	69.32	.494	12.55
5	2.635	66.93	.605	15.37
6	2.729	69.32	.668	16.97



Sav-Con® connector savers

Micro-D D-subminiature

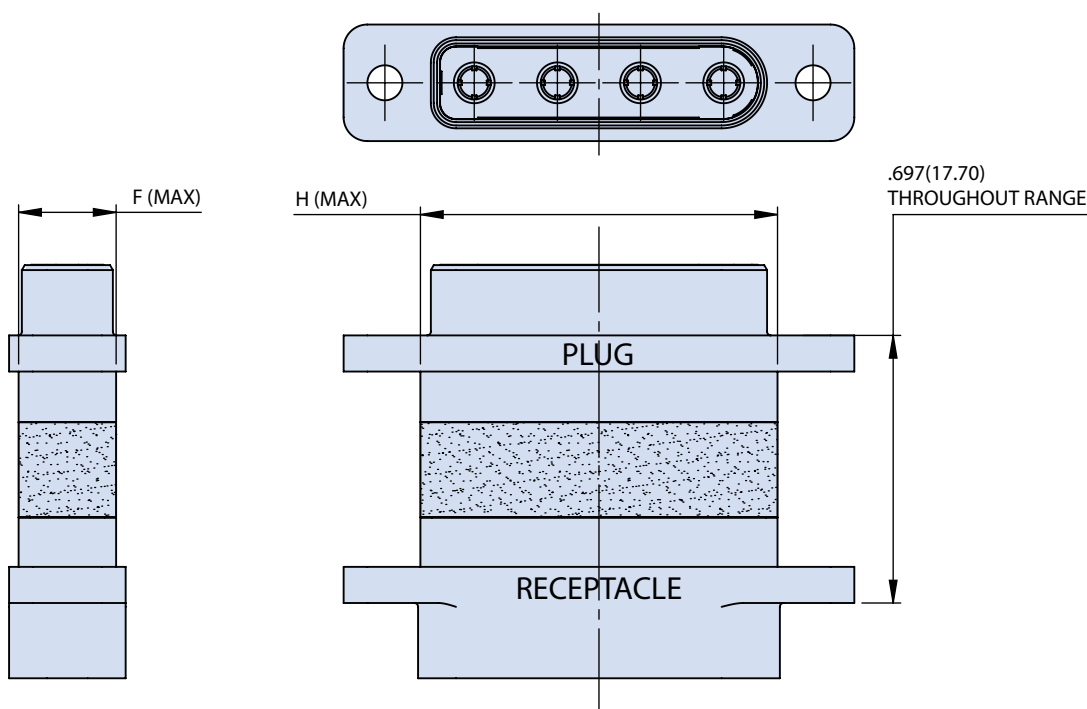
MRM17109 Signal and Power Gender Changer



HOW TO ORDER					
Sample Part Number	MRM17109	-E112	-PR	-2	-B
Generic Part No.	Sav-Con® Micro-D Gender Changer				
Insert Arrangement and Shell Size	See Table I				
Sav-Con Gender	PR - Plug to Receptacle				
Shell Plating/Finish	1 - Cadmium 2 - Electroless Nickel 3 - Stainless Steel Passivated 4 - Black Anodize 5 - Gold 6 - Alchrome				
Hardware	B - Through Hole P - Jackpost JP1 - Extended Jackpost (plug) JP2 - Extended jackpost (receptacle) JPL - Extended jackpost (supplied loose piece)				

Sav-Con Gender Changers are the solution for mis-matched cables. Available for power only or power and signal combinations in 9 insert arrangements.

Table I: Dimensions



Contact Arrangement	Shell Size	Power Contact Quantity	Micro Contact Quantity	F Max		H Max	
				In .	mm.	In.	mm.
MRM17109-B112PR	2	2	0	0.257	6.53	13.97	0.550
MRM17109-D112PR	4	3	0	0.257	6.53	20.32	0.800
MRM17109-D113PR	4	2	6	0.257	6.53	20.32	0.800
MRM17109-E112PR	5	4	0	0.257	6.53	24.13	0.950
MRM17109-E113PR	5	3	8	0.257	6.53	24.13	0.950
MRM17109-G101PR	7	4	22	0.306	7.77	26.67	1.050
MRM17109-G103PR	7	6	6	0.306	7.77	26.67	1.050
MRM17109-G111PR	7	4	20	0.306	7.77	26.67	1.050
MRM17109-J112PR	9	6	0	0.257	6.53	36.83	1.450

For Specific shell layout dimension data please refer to GDS162

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Glenair Power Products Group

860 N. Main Street Extension
Wallingford, CT
06492

Telephone:
203-741-1115
Facsimile:
203-741-0053
sales@glenair.com

Glenair UK Ltd

40 Lower Oakham Way
Oakham Business Park
P.O. Box 37, Mansfield
Notts, NG18 5BY England

Telephone:
+44-1623-638100
Facsimile:
+44-1623-638111
sales@glenair.co.uk

Glenair Microway Systems

7000 North Lawndale Avenue
Lincolnwood, IL
60712

Telephone:
847-679-8833
Facsimile:
847-679-8849

Glenair Nordic AB

Gustav III : S Boulevard 46
SE-169 27 Solna
Sweden

Telephone:
+46-8-50550000
sales@glenair.se

Glenair Electric GmbH

Schaberweg 28
61348 Bad Homburg
Germany

Telephone:
06172 / 68 16 0
Facsimile:
06172 / 68 16 90
germany@glenair.com

Glenair Iberica

C/ La Vega, 16
45612 Velada
Spain

Telephone:
+34-925-89-29-88
Facsimile:
+34-925-89-29-87
sales@glenair.es

Glenair Italia S.p.A.

Via Del Lavoro, 7
40057 Quarto Inferiore –
Granarolo dell'Emilia
Bologna, Italy

Telephone:
+39-051-782811
Facsimile:
+39-051-782259
info@glenair.it

Glenair France SARL

7, Avenue Parmentier
Immeuble Central Parc #2
31200 Toulouse
France

Telephone:
+33-5-34-40-97-40
Facsimile:
+33-5-61-47-86-10
sales@glenair.fr

Glenair Korea

B-1304 Gunpo IT Valley
148 Gosan-Ro, Gunpo-Si
Kyunggi-Do, Korea
435-733

Telephone:
+82-31-8068-1090
Facsimile:
+82-31-8068-1092
sales@glenair.kr