



# Shipboard Connector and Conduit Solutions

*Navy Approved MIL-PRF-24758A "BlueJacket"  
Conduit Systems, MIL-PRF-28840 Connectors,  
EMI/RFI Composite Junction Boxes and More!*

United States ■ United Kingdom ■ Germany ■ France ■ Nordic ■ Italy ■ Spain ■ Japan

2nd Edition • January 2010

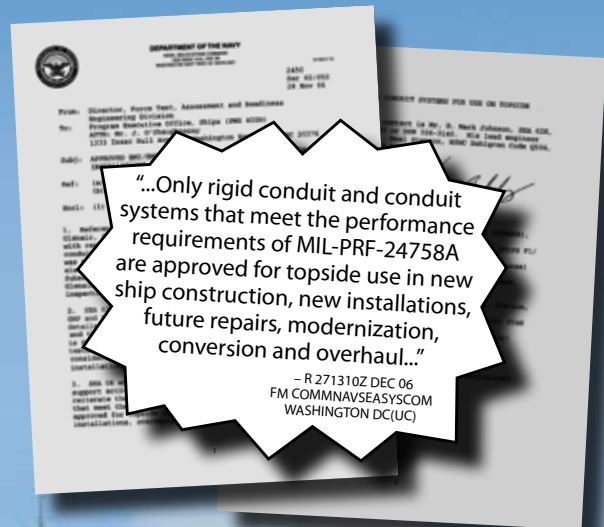
# Glenair MIL-PRF-24758A\*

## "BlueJacket" Topside Conduit

# Do It Once, Do It Right!

### BLUEJACKET

A Seaman in the United States Navy, and the brand name of the Glenair MIL-24758A(SH) Weatherproof EMI Shielded Flexible Conduit System. Although haze gray in color, the product is named "BlueJacket" in honor of the dedicated Navy personnel who work with these products under arduous topside conditions.



\*Glenair Still Manufactures and Stocks Legacy MIL-C-24758 Conduit Systems and Fittings. See [www.glenair.com](http://www.glenair.com).

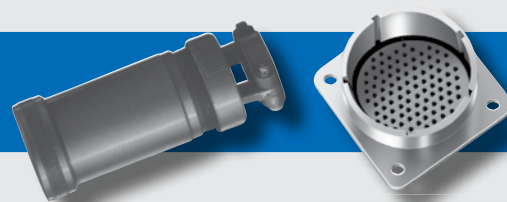
# Shipboard Connector and Conduit Solutions

**A** MIL-PRF-24758A (SH) EMI/EMP Conduit Systems



**A**

**B** MIL-PRF-28840 Shipboard Electrical Connectors



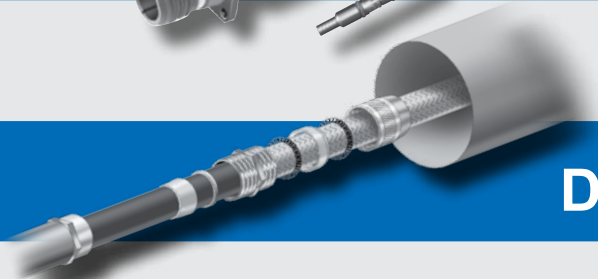
**B**

**C** MIL-PRF-28876 Type Fiber Optic Shipboard Connectors



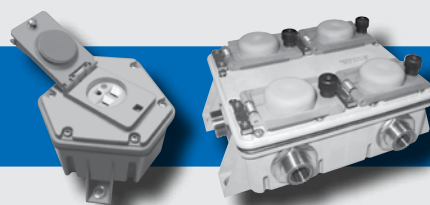
**C**

**D** GA-CSGA Cable Shield Grounding Assemblies



**D**

**E** Composite Thermoplastic EMI/EMP Junction Boxes



**E**

**F** Shipboard Wire and Cable Feed-Throughs



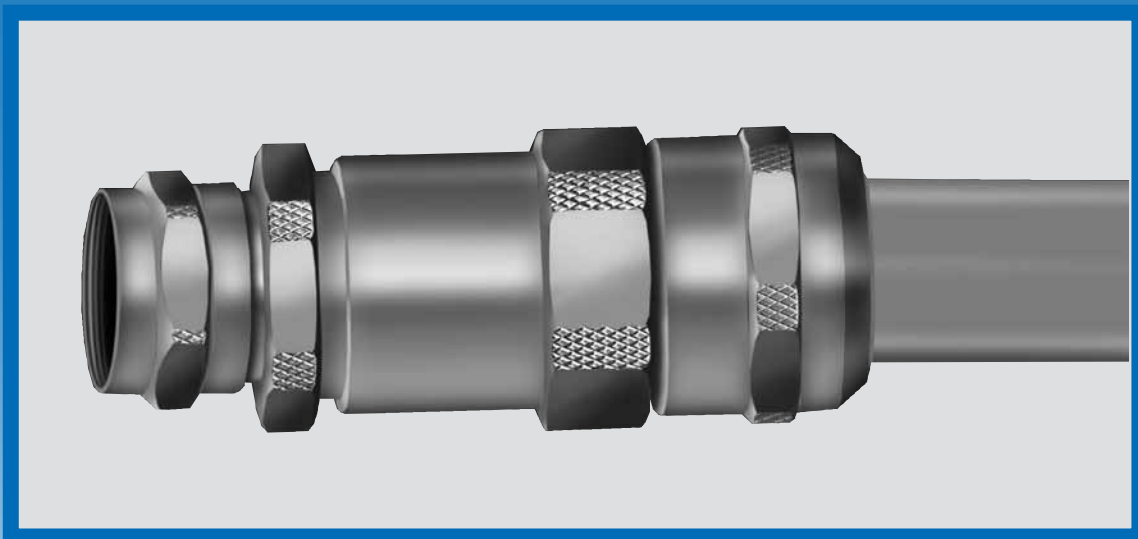
**F**

**G** GR2000 and RP2000 Series Fittings and  
S9407-AB-HBK-010 Naval Sea Systems Command Handbook



**G**

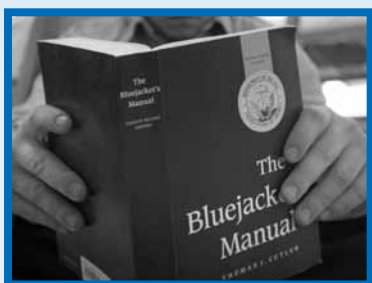
# Haze Gray and Underway!



## Introducing the Glenair MIL-PRF-24758A “BlueJacket” Conduit System

Most topside shipboard conduit users have simple expectations, such as conduit fittings that don't leak or corrode and will last for the full lifetime of a ship. They also want jacket materials that can withstand high heat, extreme UV radiation, demanding weather conditions and caustic chemicals and fluids.

Glenair's U.S. Navy qualified MIL-PRF-24758A conduit system delivers on these expectations—and a whole lot more. Our shielded brass conduit meets all EMI shielding and surface transfer impedance requirements. Our jacket material, which we've named “BlueJacket” in honor of the dedicated Navy personnel



who work with these products in arduous conditions on a daily basis, is a special formula that exceeds all the specifications of MIL-PRF-24758A. These demanding requirements include UV weathering, temperature tolerance, low smoke and toxicity index, flame resistance, and halogen free (IEC754-1) ratings.

And that's not all. Our unique fitting design provides the easiest assembly and the most reliable performance ever in topside conduit systems—no more loosening, no more leaks, no more corrosion, and no more costly replacement of relatively new components that failed to withstand the harsh environmental challenges of shipboard use.

So whether your requirements call for factory terminated M24758A assemblies with lightweight soldered fittings, or field terminated bulk conduit, adapters and fittings, Glenair BlueJacket is “Haze Gray and Underway” and more than ready to exceed all your expectations.



1211 Air Way

Glendale, California 91201-2497

Telephone: 818-247-6000 · Facsimilie: 818-500-9912 · EMail: [sales@glenair.com](mailto:sales@glenair.com)

[www.glenair.com](http://www.glenair.com)

Defense Logistic Agency  
First Article Test Report  
Qualification Approval Letter



MIL-PRF  
24758A

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MAY-16-2006 13:49

DSCR RICHMOND VA

P.01



DEFENSE LOGISTICS AGENCY  
DEFENSE SUPPLY CENTER RICHMOND  
8000 JEFFERSON DAVIS HIGHWAY  
RICHMOND, VIRGINIA 23297-5100

—IN REPLY  
REFER TO

DSCR-FAEBA

April 21, 2006

Glenair, Inc.  
1211 Air Way  
Glendale, Ca. 91201

Gentlemen:

Reference SP0406-06-M-D039, NSN 5975-01-525-3170, First Article Test Report.

The First Article Test Report has been reviewed/evaluated and determined to be acceptable. You are authorized to commence with production of referenced order.

If you need further assistance in this matter, please contact Irene Baskerville/DSCR-FAEBA/ 804-279-6311 or FAX 804-279-3377.

Sincerely,

IRENE P. BASKERVILLE  
Acquisition Specialist  
Electrical Components IST

cc:  
DCMA Los Angeles



## DEPARTMENT OF THE NAVY

NAVAL SEA SYSTEMS COMMAND  
1333 ISAAC HULL AVE SE  
WASHINGTON NAVY YARD DC 20376-0001

IN REPLY TO

2450  
Ser 62/050  
28 Nov 06

From: Director, Force Test, Assessment and Readiness  
Engineering Division

To: Program Executive Office, Ships (PMS 400D)  
ATTN: Mr. J. O'Shaughnessy  
1333 Isaac Hull Ave SE, Washington Navy Yard, DC 20376

Subj: APPROVED EMI/EMP CONDUIT SYSTEMS FOR USE ON TOPSIDE  
INSTALLATIONS

Ref: (a) SEA 62 Memorandum 2450 Ser 06/021 of 29 Jan 04  
(b) SEA 62 Letter 2450 Ser 06/055 of 18 Nov 05

Encl: (1) Consolidated Glenair MIL-PRF-24758A Test Report  
QTR M24758 of 25 Apr 06  
(2) Lothar O. Hoeft, PHD, Report, "Foranne MIL-PRF-24758A  
Conduit Assembly Surface Transfer Impedance Test"  
of 5 Jul 06 and as revised, 27 Aug 06

1. Reference (a) provided SEA 62E technical review of the Glenair, Inc "First System" conduit testing and documentation with regard to its equivalency to the Entraco "Sea-FROST™" conduit and Termination System. SEA 62E's technical assessment was that the Glenair "First System" product was mechanically and electrically equivalent to the Entraco "Sea-FROST™" system. Subsequently, in response to the issuance of MIL-PRF-24758A(SH), Glenair developed a MIL-PRF-24758A product line. Test and inspection results were provided in enclosure (1).

2. Reference (b) provided the SEA 62E technical review of the Foranne Manufacturing, Inc conduit and components test reports as compared to the MIL-PRF-24758A requirements and recommended that additional testing be conducted to meet the performance requirements of MIL-PRF-24758A. The results of this additional testing were provided in enclosure (2).

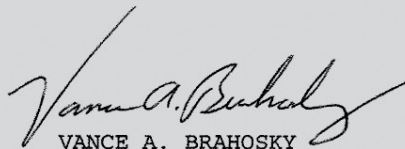
3. SEA 62E, the technical warrant holder for EMI Control, EMC, EMP and RADHAZ for ships and submarines, has completed a detailed technical review of enclosures (1) and (2). Based on this review and the previous review noted in reference (b), it is SEA 62E's assessment that the Foranne Inc "Shield Right" and the Glenair MIL-PRF-24758A products tested meet the performance requirements of MIL-PRF-24758A and are considered acceptable to

Subj: APPROVED EMI/EMP CONDUIT SYSTEMS FOR USE ON TOPSIDE  
INSTALLATIONS

use for EMI/EMP control on topside installations onboard US Navy ships.

3. SEA 06 will provide this information to the Fleet and its support activities via Naval message. This message will also reiterate the policy that only rigid conduit and conduit systems that meet the performance requirements of MIL-PRF-24758A are approved for topside use in new ship construction, new installations, overhauls and modernization.

4. The SEA 06 point of contact is Mr. D. Mark Johnson, SEA 62E, Commercial (202) 781-3140 or DSN 326-3140. His lead engineer for MIL-PRF-24758A is Mr. Neal Stetson, NSWC Dahlgren Code Q504, (540) 653-3470 or DSN 249-3470.



VANCE A. BRAHOSKY

Copy to:  
Commander, Space and Naval Warfare Systems Command (SPAWAR),  
San Diego, CA (w/o Enclosures)  
PEO SHIPS, Washington, DC (PMS 400D/J, Odum, R Popp, SHIPS F1/  
S. Brown, SHIPS FRC/E. Littig) (w/o Enclosures)  
PEO IWS, Washington, DC (IWS1C/LT M. Shine) (w/o Enclosures)  
PEO CARRIERS, Washington, DC (w/o Enclosures)  
PEO LMW, Washington, DC (CHENG/P. Hagan, PMS 495/G. Humes,  
CAPT J. Spitz, K. Haas) (w/o Enclosures)  
PEO C4I and SPACE, San Diego, CA (w/o Enclosures)  
Commander, NSWC Dahlgren, Dahlgren, VA (Code Q504/N. Stetson,  
Code Q54/G. Winters)  
Commander, NSWC Dahlgren, Dahlgren, VA (R. Zanella (for STAN  
Data Base)) (w/o Enclosures)  
Northrop Grumman Ship Systems, Washington DC (N. Buffler)  
(w/o Enclosures)  
Glenair Inc, Glendale CA (D. Holden) (w/o Enclosures)  
Foranne Manufacturing Inc, Ivyland PA (M. Magness)  
(w/o Enclosures)  
GDIT, Washington DC (M. Craig, A. Church) (w/o Enclosures)  
GDIT, Dahlgren VA (B. Ayers) (w/o Enclosures)

# What Ever Happened to the MIL-C-24758 EMI/EMP Conduit System?



**Answer:** This venerable metal-core conduit wire routing and protection system has been *superceded* by the new MIL-PRF-24578A(SH) standard. For all new applications, the U.S. Navy requires engineers to specify only MIL-PRF-24578A(SH) conduit, fittings and adapters. But for repair of existing systems, Glenair still manufactures and stocks the complete line of MIL-C-24758 conduit products. For complete order information on any of the parts listed below, please visit our website: [www.glenair.com](http://www.glenair.com).

- M24758/1 EMI/EMP Shielding Conduit
- M24758/2 Straight Conduit Fitting
- M24758/3 45° Conduit Fitting
- M24758/4 90° Conduit Fitting
- M24758/5 Conduit-to-Panel Fitting
- M24758/6 Conduit-to-Threaded Pipe Fittings
- M24758/7 Conduit-to-Stuffing Tube Fitting
- M24758/8 Conduit-to-Conduit Fitting
- M24758/9 Adapter for MIL-DTL-5015 Series 3100 Connectors
- M24758/10 Adapter for Triaxial Connectors
- M24758/11 Adapter for Coaxial Connectors
- M24758/12 Adapter for MIL-C-26482 Series I Connectors
- M24758/13 Adapter for Connectors with MS3155 Interface
- M24758/14 Adapter for MIL-C-28840 (EC) Backshells
- M24758/15 Adapter for MIL-C-24235 Stuffing Tubes
- M24758/16 Adapter for Miscellaneous Fittings
- M24758/17 Adapter for Tapered Pipe Thread
- M24758/18 Adapter for Straight Pipe Thread
- M24758/19 Adapter for Panel Termination

**Glenair *BlueJacket* Product Line Overview**  
**MIL-PRF-24758A(SH) Qualified**  
**Flexible Waterproof Shielded Shipboard Conduit System**



MIL-PRF  
24758A

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**Product Features**

- Qualified to MIL-PRF-24758A(SH)
- Brass Metal-Core Conduit with EMI Shielding and Durable Glenair *"BlueJacket"* Covering
- Innovative Stainless Steel Fittings with Advanced Environmental Sealing, EMI Shield Termination and Rotatable Coupling Nut
- Available Adapters for all Shipboard Interfaces
- Fully Compatible with Legacy MIL-C-24758 Conduit Systems and Adapters (Still Available from Glenair)
- Corrosion-Resistant 316L Stainless Steel Eliminates Maintenance Cycles and Reduces Assembly Time

*"Only Rigid Conduit and Conduit Systems that Meet the Performance Requirements of MIL-PRF-24758A are Approved for Topside Use..."*

**-U.S. DEPARTMENT OF THE NAVY**

When we set out to design an innovative conduit system to meet the requirements of the new MIL-PRF-24758A specification, we had a simple goal in mind: create a conduit system which was easy to install, easy to maintain and tough enough to perform in even the harshest ocean environments. The results couldn't be better. Our new qualified MIL-PRF-24758A Conduit system with its *"BlueJacket"* weatherproof jacketing exceeds the performance specifications for improved waterproof sealing, improved corrosion protection, and improved electromagnetic shielding. In fact, we believe no other conduit system can match the quality and performance of our new *"BlueJacket"* system. The U.S. Navy has cast its vote: Glenair's MIL-PRF-24758A conduit systems are the first products approved by the Navy under the new specification for topside use in new ship construction, new installations, future repairs, overhauls and modernization. The reference message is COMNAVSEASYS COM 2713107 December 06.

Glenair's *"BlueJacket"* weatherproof conduit is halogen free, flame resistant, and functional to 260°C. *"BlueJacket"* far surpasses the accelerated solar weathering standards under IEC 60068-2-5. Glenair's *"BlueJacket"* tested to 56 accelerated days, equivalent to 53 years of solar exposure. Our new fittings and adapters are equally impressive. The nickel plated 316L stainless steel components are equipped with rotatable couplings to simplify field installation. The design also offers improved environmental sealing and improved metal-to-metal termination of EMI shielding.

**A**

This selection guide is designed to assist you with the selection of components and planning for installation of MIL-PRF-24758A(SH) conduit and fittings. Per current U.S. Navy policy, only MIL-PRF-24758A qualified systems are now approved for topside use. To cross over part numbers from other manufacturers or the original MIL-C-24758 specification, please contact the factory at (818) 247-6000.

Each point-to-point conduit assembly will require a length of bulk conduit, 2 conduit fittings (M24758-2, -3, or -4) and 2 adapters (M24758-9 through M24758-25). You have three basic options for putting all these parts together:

- (1) Specify user installable components (bulk lengths of conduit, fittings and adapters designed for field assembly),
- (2) Select made-to-order conduit assemblies built at the factory according to your exact size, length and routing requirements, or
- (3) Use a combination approach in which one end of the conduit is terminated at the

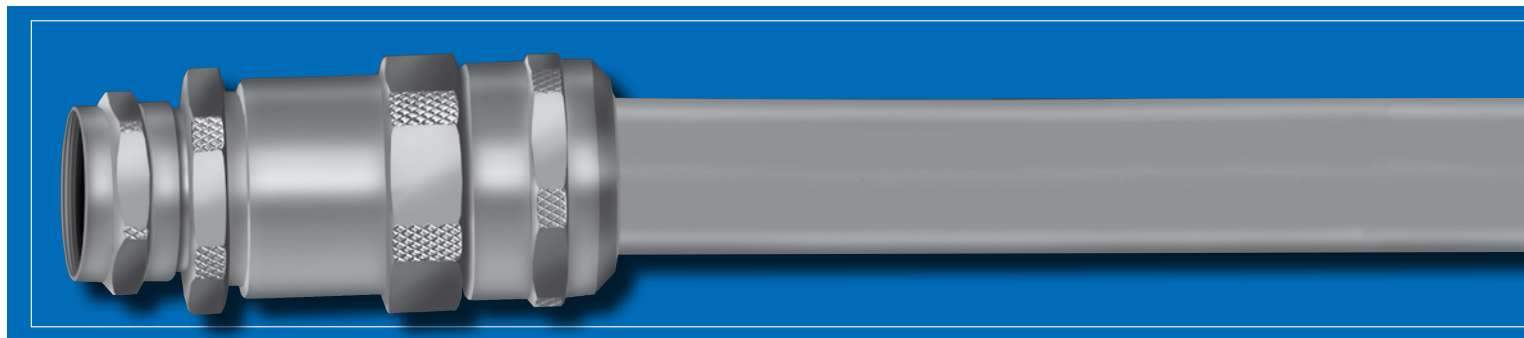
factory with lightweight solder fittings, while the other end is terminated in the field with user installable fittings and adapters.

**Step 1: Select Correct Conduit Size**

Conduit size is identified by its inside diameter (ID). The ID is referenced with a size code. The range of available sizes includes .25 inch (M24758-A) through 3.0 inch (M24758-L).

Conduit is normally filled at up to 90% of its inside diameter. Verify the cable diameter used before selecting the conduit diameter. Low smoke shipboard cable (MIL-C-24643) may have a thicker jacket material than regular (MIL-C-915 and MIL-C-24640) cables and require larger diameter conduit and fittings, so be sure to take this into account.

The shipboard interface, i.e. the diameter of the stuffing tube on the ship the conduit assembly will attach to, is the other key data point for conduit size selection. In a well-designed system, the diameter of the conduit, fitting, adapter and stuffing tube all need to be the same. For example, a size code "D" (1 inch)



***Stainless steel M24758 fittings for field termination and assembly are supplied in straight, 45° and 90° designs. Glenair MIL-PRF-24758A qualified fittings feature unique metal-to-metal shield termination, robust environmental sealing, and a rotatable coupling for easy attachment of M24758 series adapters. Both the environmental sealing and EMI shielding functions incorporate design ideas adapted from military standard backshells, including environmental o-rings, cable-sealing glands and cone-and-ring style shield terminations.***

## Glenair MIL-PRF-24758A Conduit Component Selection Guide



MIL-PRF  
24758A

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conduit would be selected when the stuffing tube on the ship is also 1 inch in diameter.

**NOTE 1:** The color of Mil-PRF-24758A conduit is standard US Navy haze gray in accordance with Fed Std 595B #26270. If other colors are desired, contact the factory at (818) 247-6000.

**NOTE 2:** Conduit internal dimensions 3/8", 5/8", and 3" have been omitted from the MIL-PRF-24758A specification. Products using these dimensions, built to the same standards, are still available from Glenair.

**NOTE 3:** The operating temperature variant of the M24758A jacket material used on the conduit is -70°C to + 200°C. For higher temperature materials, contact the factory.

### Step 2: Select Conduit Fittings

The function of the M24758 conduit fitting is to terminate M24758 flexible shielding conduit and to provide a standard thread for attaching M24758-9 through M24758-24 adapters. Fittings are supplied in straight, 45° and 90° configurations to facilitate the routing of the conduit into and out of kick-pipes and other interfaces to the ship. Selection is a simple

matter of matching the size code in the part number with the size code of the selected conduit. Your selection of a straight, 45° or 90° angled part will depend on the routing requirements of your system.

**NOTE 1:** All conduit fittings and adapters feature a combination of hex wrench flats and knurls to minimize the need for special installation tools.

**NOTE 2:** Glenair recommends the use of torque wrenches to ensure conduit fittings and adapters are mated with the optimal amount of torque. Torque wrenches required for installation are available from Glenair. Please see page 55 for tool order information.

All conduit fittings and adapters are matte finished, nickel plated, 316L stainless steel. If other materials are desired, contact the factory.

### Step 3: Select Appropriate Adapters

As noted, the conduit fittings selected in step 2 provide a standard thread for the attachment of various adapters. The adapters are used to mate the conduit assembly to the many interfaces found on the ship, such as stuffing tubes or kick-pipes with tapered



*Flexible bulk conduit is supplied with a brass metal core, phosphorus bronze metal overbraiding and Glenair "BlueJacket" outer jacketing material which has been optimized for shipboard and other harsh application environments.*

*Factory terminated conduit fittings provide the ultimate flexibility in system specification. The lightweight solder fittings mate to all M24758 adapters and offer a maintenance-free alternative to user installed fittings.*



## Glenair MIL-PRF-24758A Conduit Component Selection Guide

### A

NPT threads. Adapters are also available to facilitate mating of the conduit assembly to various military standard cylindrical connectors. The following are a selection of the standard adapters covered by MIL-PRF-24758A and supplied by Glenair:

**1. Stuffing tube adapter (AKA swage tube or kick pipe adapter):** These adapters are identified by the stuffing tube size and conduit diameter. See the M24758-15 drawing.

**2. Panel adapter (AKA junction box adapter or interconnecting box adapter):** These adapters are identified by the conduit size. The required mounting hole size is shown on M24758-19 and 25 adapters.

**3. NPT adapter (AKA tapered pipe thread adapter):** These adapters are identified by the NPT thread size and conduit size. See the M24758-17.

**4. NPSM adapter (AKA National Pipe Thread Standard adapter):** These adapters are identified by the NPSM thread and conduit size. See the M24758-18 drawing.

**5. Splice (AKA conduit union adapter):** These adapters are used, in conjunction with M24758-2 fittings, to join two sections of conduit together. See the M24758-23 drawing.

**6. MS3100 Series MIL-C-5015 Connector adapter:** These adapters are used with the obsolete MS3100 series solder style connectors. See the M24758-9 drawing.

**NOTE 1:** Do not use the M24758-9 series adapters for MS3400 and MS3450 crimp contact connectors. See item 10 below.

**NOTE 2:** Glenair recommends replacing MS3100 series connectors (and M24758-19 adapters) with the MS3400 series connectors and M24758-13 series adapters.

**7. Triaxial connector adapter:** These adapters connect the conduit fitting to triaxial connectors. Contact the factory for the order information.

**8. Coaxial connector adapter:** These adapters connect the conduit fitting to coaxial RF connectors. See the M24758-11 drawing.

**9. MIL-C-26482 connector adapter:** These adapters connect the conduit fitting to the obsolete MIL-C-26482, series 1 connectors. See the M24758-12 drawing.

**NOTE 1:** Glenair recommends replacing MS312X series connectors (and M24758-12 adapters) with the MIL-C-26482 series 2, MS347X connectors (and M24758-13 series adapters).

**10. MIL-C-5015, MIL-C-26482, MIL-C-81703 and MIL-C-83723 series crimp contact connector adapter:** These adapters connect the conduit fitting to MS3400, MS3450 and other MIL-C-5015 crimp style connectors, and MS347X, MIL-C-26482 series connectors. See the M24758-13 drawing.

**11. MIL-C-28840 connector adapter:** These adapters connect the conduit fitting to MIL-C-28840 series connectors. See the M24758-14 drawing.

**12. MIL-D-38999 series connector adapters:** These adapters connect the conduit fitting to MS 27XXX, series 1 and 2, and D38999 series III and IV connectors. See the M24758-20 drawing.

**13. MIL-C-22992 series connector adapters:** These adapters connect the conduit fitting to M1734X connectors. See the M24758-21 drawing. Contact factory for MIL-C-22992 Class L connector adapters.

**14. Glenair Series 22 adapter:** These adapters connect the conduit fitting to Glenair Series 22 connectors. See the M24758-22 drawing.

**15. Multiple shield termination adapters:** These adapters provide a shield termination mechanism for individual wire shields. See the M24758-24 drawing.

### MIL-PRF-24785-25 Through -37

A massive second wave of dash numbers added to the spec subsequent to the initial release. These adapters handle everything from 90° routing of conduits into and out of stuffing tubes, panels and pipes to the integration of lightweight PEEK conduit. Glenair has qualified on all the new dash numbers, offering our shipboard customers the only comprehensive source for these critical components.

**Glenair *BlueJacket***  
**U.S. Navy Qualified Jacketing Material**  
**Material Specification**



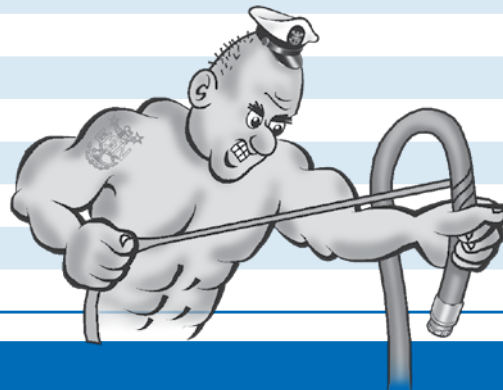
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Glenair has developed and qualified a new formula jacketing material, which we are calling "*BlueJacket*" in honor of the men and women of the U.S. Navy who work with these products in arduous conditions on a daily basis. The material is low smoke, halogen free, high UV tolerant, and meets both U.S. Navy and aerospace fluid requirements. The color of Mil-PRF-24758A "*BlueJacket*" conduit is standard US Navy haze gray in accordance with Fed Std 595B #26270. If other colors are desired, contact the factory at (818) 247-6000. The material has the following performance characteristics:

**GLENAIR "*BLUEJACKET*" MATERIAL SPECIFICATIONS**

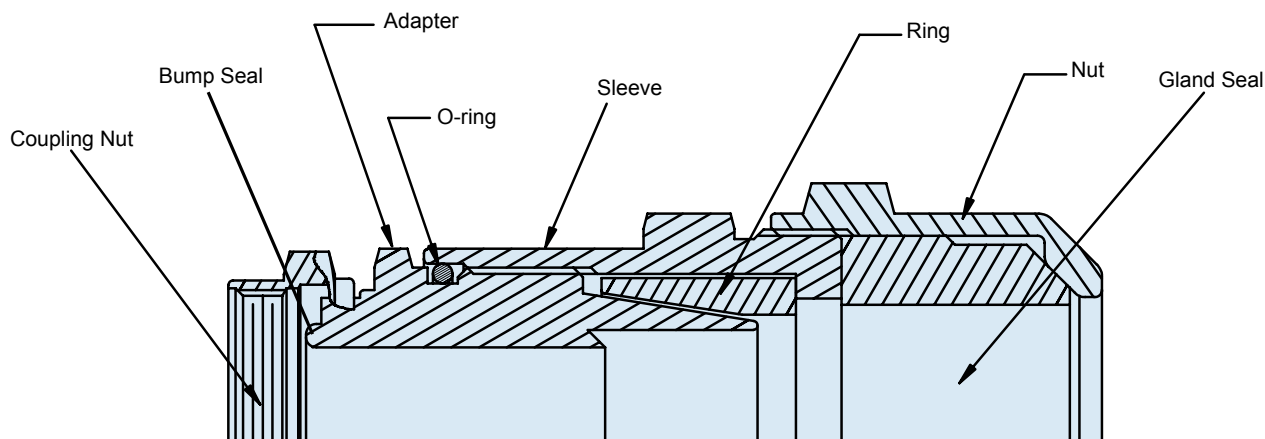
|                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Temperature rating: -70°C to +200°C (with excursions to 260°C)                                                                                                                   |
| Halogen free per IEC 60614-1. Less than 5mg of hcl per 1 gm of product tested.                                                                                                   |
| Accelerated Weathering (Solar) per IEC 60068-2-5; 56 days exposure                                                                                                               |
| Flame Resistant per IEC 60614-1; Material does not sustain combustion when the source of flame is removed.                                                                       |
| Low Smoke Index per NES 711 (11.75); Minimum standard is 25. The Glenair tested level is 11.75. This makes the material acceptable for interior applications as well as topside. |
| Smoke Density Class F1 Per NF F 16-101 IAW DIN EN 60695-2-11:2001                                                                                                                |
| Toxicity Index per NES 713 (1.9); Minimum standard is 5. The Glenair tested level is 1.9. This makes the material acceptable for interior applications as well as topside.       |
| Colorable to Fed Std 595B                                                                                                                                                        |
| Markable IAW MIL-PRF-24758A                                                                                                                                                      |
| Oxygen Limiting Index = 45.1 Per EN ISO 4589-2:1999; Minimum is 28.                                                                                                              |
| 12 Sec Vertical Burn: (Pass) Per 14CFR Part 25.853(a) amdt 25-116 App F Part 1 (a)(1)(ii)                                                                                        |
| Fluids Per MIL STD 810F, Method 504                                                                                                                                              |
| Fuel (MIL-T-83133): JPG                                                                                                                                                          |
| Hydraulic Fluid (MIL H 5606): ROYCO 756                                                                                                                                          |
| Lube Oil (MIL-L-23699): ROYCO-500                                                                                                                                                |
| Cleaner (MIL-C-85570): CALLA-855                                                                                                                                                 |
| Solvent (Isopropyl Alcohol): TT-I-735                                                                                                                                            |
| De Icer (AMS-1432): E36 Runway Deicer                                                                                                                                            |
| Coolant (MIL-C-87252): Coolanol 25R                                                                                                                                              |
| Fire Extinguishant Foam: AMEREX AFFF                                                                                                                                             |



**MASTER  
SEAL** Self-Vulcanizing  
Sealing Tape

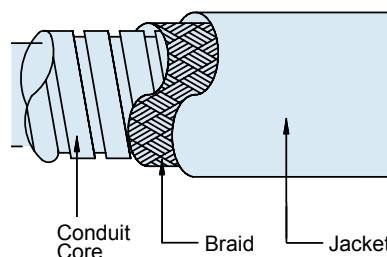
**GLENAIR PART NO.  
687-758**

*"BlueJacket" material sealing tape designed for temporary repair of topside conduit. Glenair Master Seal stops water incursion into conduit until a permanent repair using MIL-PRF-24758A system components can be made.*



## Tools:

Tin snips or scissors capable of trimming conduit and braid  
 Hacksaw, chop saw or tubing cutter  
 Anti Seize Compound such as NSN 8030-01 450 4009 Tef Gel  
 Razorblade  
 Adjustable wrench (Rigid E110 or similar)  
 Silicone O-ring lube  
 Vice or second wrench  
 Needle-nose pliers



**Preassembly instructions:** Disassemble fitting and ensure all thread engagements are smooth and burr free. Lubricate gland and O-ring with silicone lube.

1. Measure conduit to desired length (better long than short) and cut to length.
2. Using snips, trim end of conduit, braid and jacket. Ensure all bent edges are removed or smoothed.
3. Slide sleeve, nut and gland seal up conduit (out of way).
4. Using ring as a guide, cut jacket back 1/4" (6.35mm) wider than ring.
5. Slide ring over braid to edge of jacket.
6. Insert cone portion of adapter under braid and ring over conduit core. Apply anti seize to threads.
7. Slide sleeve down conduit and engage threads on adapter. Tighten sleeve until it bottoms out against adapter. O-ring should not be visible.
8. Slide gland seal and nut down to engage thread on sleeve. Tighten until only a small portion of blue gland 1/32" (.793mm) seal is visible above nut.

**MIL-PRF-24758-\***  
**EMI/EMP Shielding Conduit**  
 with Glenair *BlueJacket*



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A

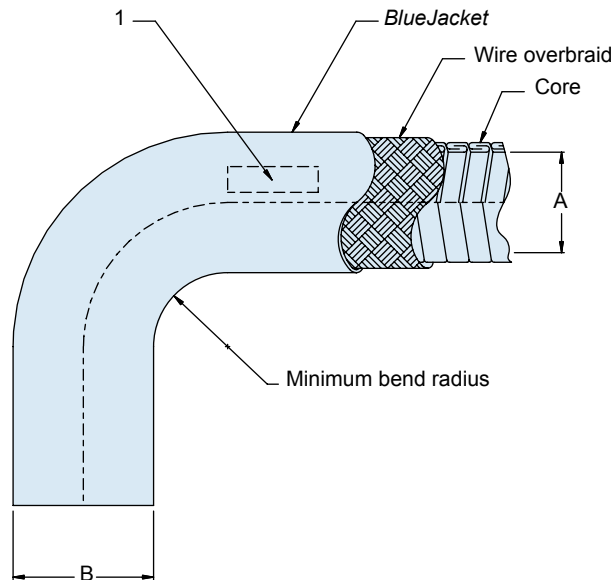
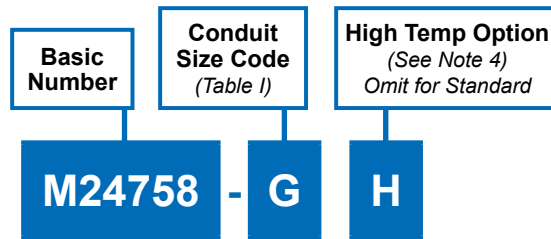
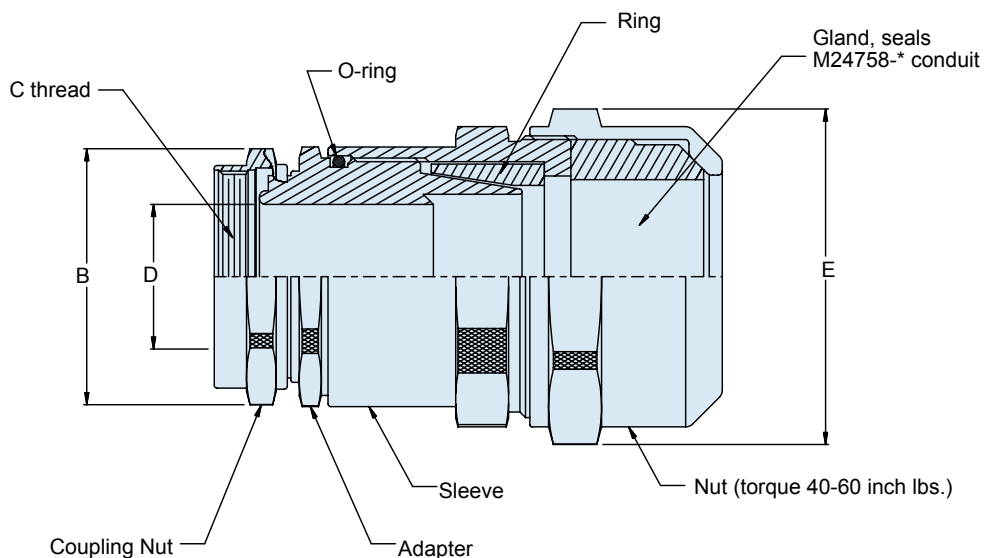
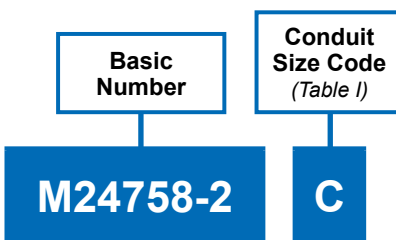


**TABLE I**

| CONDUIT SIZE CODE | A I.D. MIN   | B O.D. MAX    | MINIMUM BEND RADIUS |
|-------------------|--------------|---------------|---------------------|
| A                 | .25 (6.35)   | .62 (15.748)  | 1.25 (31.75)        |
| B                 | .50 (12.7)   | .89 (22.606)  | 2.50 (63.5)         |
| C                 | .75 (19.05)  | 1.14 (33.06)  | 3.75 (95.25)        |
| D                 | 1.00 (25.4)  | 1.45 (36.83)  | 5.00 (127.0)        |
| E                 | 1.25 (31.75) | 1.70 (43.2)   | 6.25 (158.75)       |
| F                 | 1.50 (38.1)  | 1.95 (49.53)  | 7.50 (190.5)        |
| G                 | 2.00 (50.8)  | 2.48 (62.992) | 10.00 (254.0)       |
| H                 | 2.50 (63.5)  | 2.98 (75.692) | 12.50 (317.5)       |
| J                 | .37 (9.398)  | .74 (18.796)  | 2.00 (50.8)         |
| K                 | .62 (15.748) | 1.02 (25.908) | 3.00 (76.2)         |
| L                 | 3.00 (76.2)  | 3.48 (88.392) | 15.00 (381.0)       |

**APPLICATION NOTES**

- Conduit identified with M24758-\* Glenair "BlueJacket" halogen free. Marking shall be applied on the conduit jacket. "H" = Conduit Size code.
- Material:  
 Core - Brass  
 Wire overbraid - Phosphorus bronze  
 Jacket - Glenair *BlueJacket* (U.S. Navy haze grey color).
- Metric dimensions (mm) are indicated in parentheses.
- MIL-PRF-24758A operating temperature range: -40°C to +125°C. (Select Designator "H" for high temperature *BlueJacket* option, -65°C to +260°C.)



### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The function of the M24758-2 fitting is to terminate M24758-\* flexible shielding conduit and to provide a standard thread for attaching all M24758-9 through M24758-21 fittings.
3. Material / Finish:  
Adapter, nuts, sleeve & ring - 316 / electroless nickel, matte finish.  
O-ring and gland - silicone rubber / NA.
4. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-2 Straight Conduit Fitting

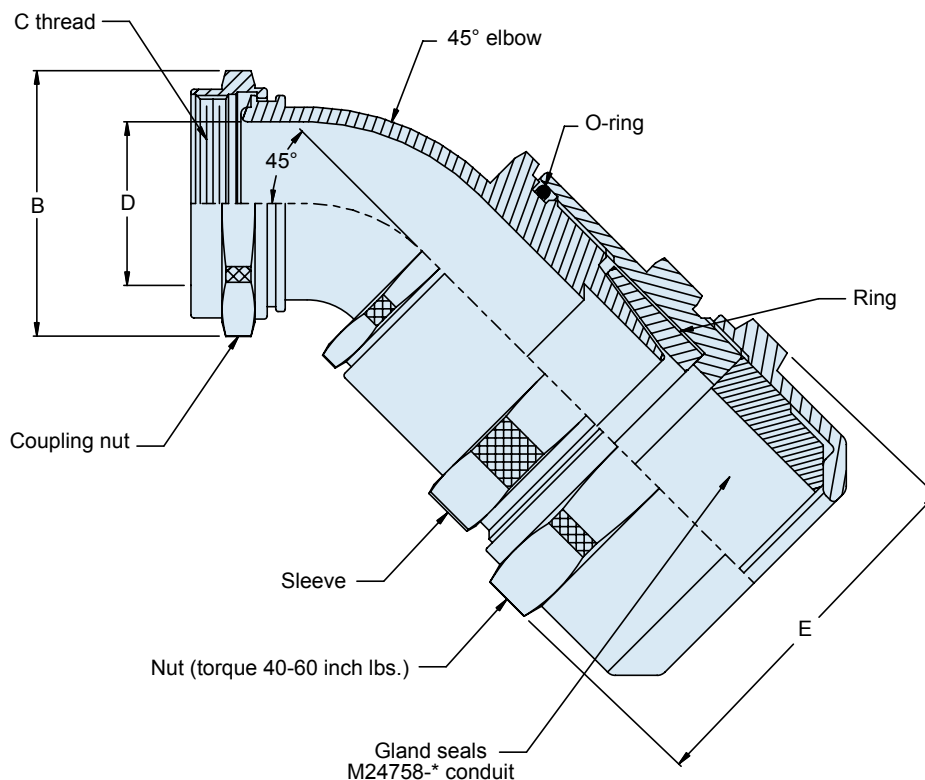


MIL-PRF  
24758A

A

| TABLE I              |                        |                 |                 |                 |
|----------------------|------------------------|-----------------|-----------------|-----------------|
| CONDUIT<br>SIZE CODE | C CLASS - 2B<br>THREAD | B<br>DIA<br>MAX | D<br>DIA<br>MIN | E<br>DIA<br>MAX |
| A                    | .438-28 UNEF           | .88 (22.35)     | .245 (6.22)     | 1.14 (28.96)    |
| B                    | .688-24 UNEF           | 1.13 (28.70)    | .495 (12.57)    | 1.46 (37.08)    |
| C                    | .938-20 UNEF           | 1.38 (35.05)    | .745 (18.92)    | 1.78 (45.21)    |
| D                    | 1.250-18 UNEF          | 1.69 (42.93)    | .995 (25.27)    | 2.03 (51.56)    |
| E                    | 1.563-18 UNEF          | 2.00 (50.80)    | 1.245 (31.62)   | 2.28 (57.91)    |
| F                    | 1.875-16 UN            | 2.31 (58.67)    | 1.495 (37.97)   | 2.53 (64.26)    |
| G                    | 2.375-16 UN            | 2.94 (74.65)    | 1.995 (50.77)   | 3.14 (79.76)    |
| H                    | 2.875-16 UN            | 3.44 (87.38)    | 2.495 (63.37)   | 3.65 (92.71)    |
| J                    | .563-24 UNEF           | .94 (23.88)     | .370 (9.40)     | 1.34 (34.04)    |
| K                    | .813-20 UNEF           | 1.19 (30.23)    | .620 (15.75)    | 1.65 (41.91)    |
| L                    | 3.375-16 UN            | 3.94 (100.08)   | 2.995 (76.07)   | 4.15 (105.41)   |

| TABLE II<br>RECOMMENDED TORQUE |               |        |       |
|--------------------------------|---------------|--------|-------|
| CONDUIT<br>SIZE CODE           | ± 5 Inch lbs. |        |       |
|                                | C<br>THREAD   | SLEEVE | Nut   |
| A                              | 50            | 120    | 40-60 |
| B                              | 75            | 140    | 40-60 |
| C                              | 100           | 150    | 40-60 |
| D                              | 120           | 170    | 40-60 |
| E                              | 140           | 170    | 40-60 |
| F                              | 150           | 170    | 40-60 |
| G                              | 170           | 170    | 40-60 |
| H                              | 170           | 170    | 40-60 |
| J                              | 50            | 120    | 40-60 |
| K                              | 75            | 140    | 40-60 |
| L                              | 170           | 170    | 40-60 |

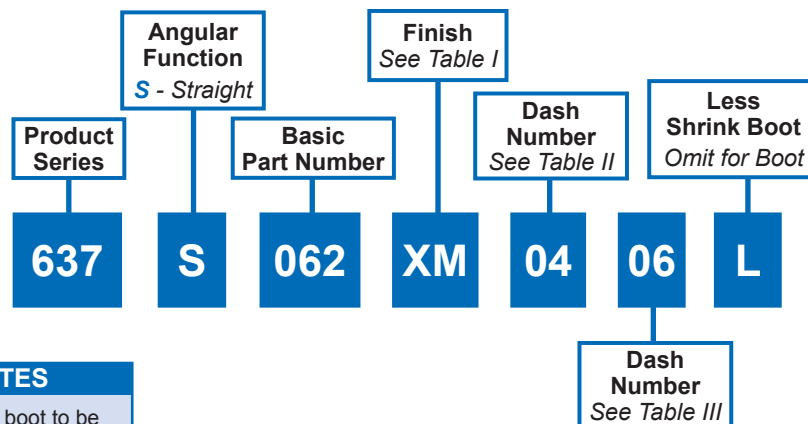
**Basic  
Number****M24758-3****Conduit  
Size Code  
(Table I)****C****APPLICATION NOTES**

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The function of the M24758-3 fitting is to terminate M24758-\* flexible shielding conduit and to provide a standard thread for attaching onto M24758-9 through M24758-25 fittings.
3. Material / Finish:  
Adapter, nuts, sleeve & ring - 316 / electroless nickel, matte finish.  
O-ring and gland - silicone rubber / NA.
4. Metric dimensions (mm) are indicated in parentheses.

# 637-062 Composite Shrink Boot Feed-Through Adapter Jam Nut Mount Environmental



Feed  
Throughs



## APPLICATION NOTES

1. Consult factory for shrink boot to be supplied with product.
2. Metric dimensions (mm) are indicated in parentheses.

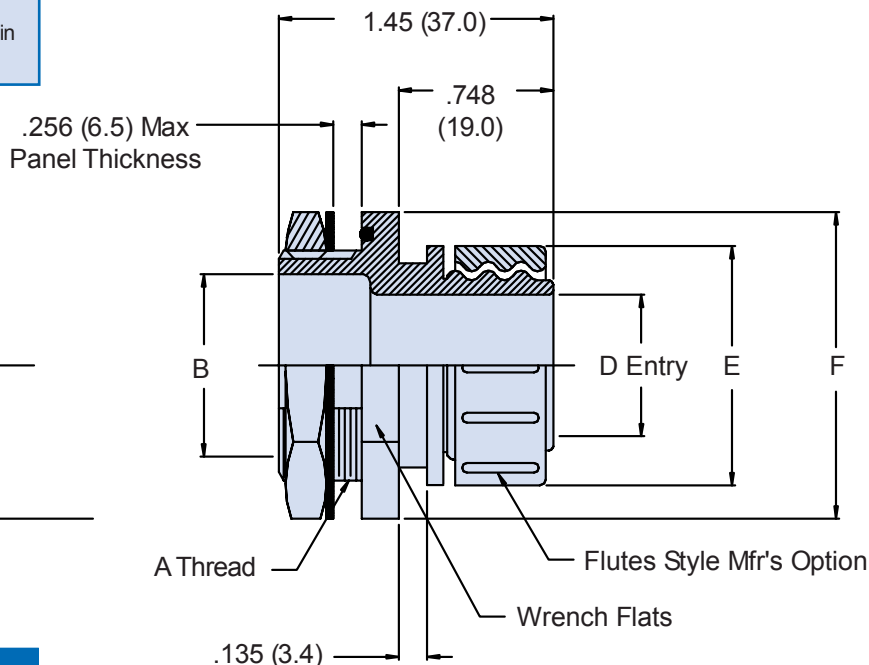
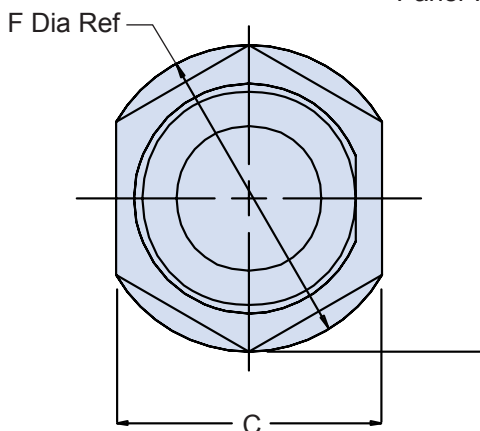


TABLE I: Finish

|    |                                            |
|----|--------------------------------------------|
| XM | Electroless Nickel                         |
| XW | Cadmium Olive Drab Over Electroless Nickel |

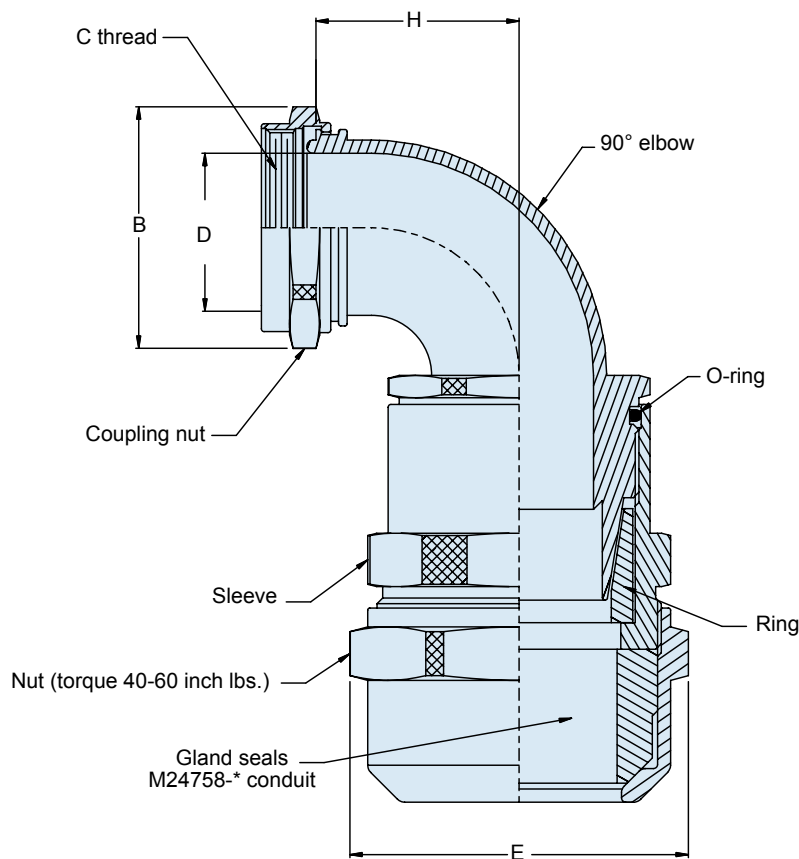
TABLE II: Dash Number, Max Entry

| Dash No. | A Thread ISO Metric | B Dia Min    | C Max       | F Dia       | Max Entry Table III |
|----------|---------------------|--------------|-------------|-------------|---------------------|
| 01       | M 16 x 1.5-6g       | .394 (10.0)  | .98 (24.9)  | 1.10 (27.9) | 03                  |
| 02       | M 20 x 1.5-6g       | .551 (14.0)  | 1.18 (30.0) | 1.31 (33.3) | 04                  |
| 03       | M 27 x 2.0-6g       | .866 (22.0)  | 1.50 (38.1) | 1.63 (41.4) | 07                  |
| 04       | M36 x 2.0-6g        | 1.181 (30.0) | 1.97 (54.1) | 2.13 (54.1) | 08                  |

TABLE III: Dash Number

| Dash No. | D +.03<br>-.00 | D (.8)<br>(.0) | E Max        |
|----------|----------------|----------------|--------------|
| 01       | .125           | (3.2)          | .531 (13.5)  |
| 02       | .250           | (6.4)          | .656 (16.7)  |
| 03       | .375           | (9.5)          | .781 (19.8)  |
| 04       | .500           | (12.7)         | .906 (23.0)  |
| 05       | .625           | (15.9)         | 1.031 (26.2) |
| 06       | .750           | (19.1)         | 1.156 (29.4) |
| 07       | .875           | (22.2)         | 1.281 (32.5) |
| 08       | 1.000          | (25.4)         | 1.406 (35.7) |

F

**Basic  
Number**
**Conduit  
Size Code**  
*(Table I)*
**M24758-4**
**C**


### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The function of the M24758-4 fitting is to terminate M24758-\* flexible shielding conduit and to provide a standard thread for attaching onto M24758-9 through M24758-25 fittings.
3. Material / Finish:  
Adapter, nuts, sleeve & ring - 316 / electroless nickel, matte finish.  
O-ring and gland - silicone rubber / NA.
4. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-4 90° Conduit Fitting



MIL-PRF  
24758A

A

**TABLE I**

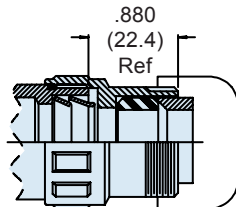
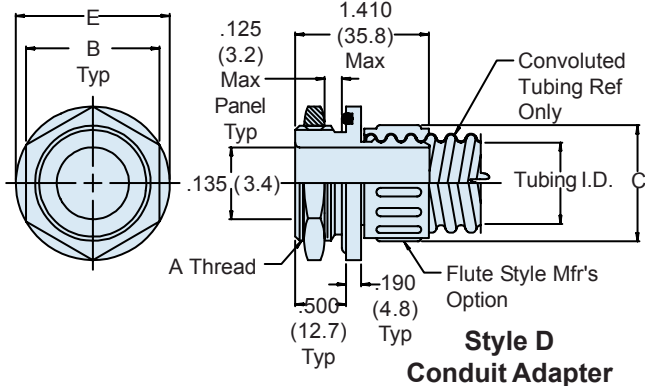
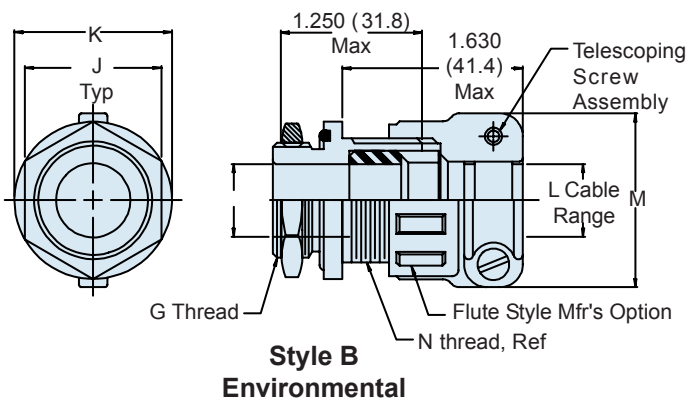
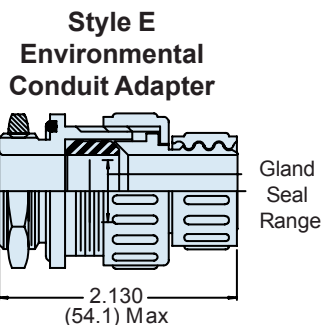
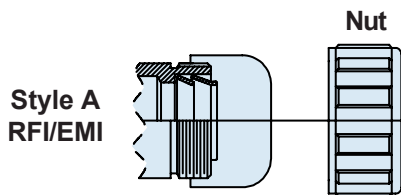
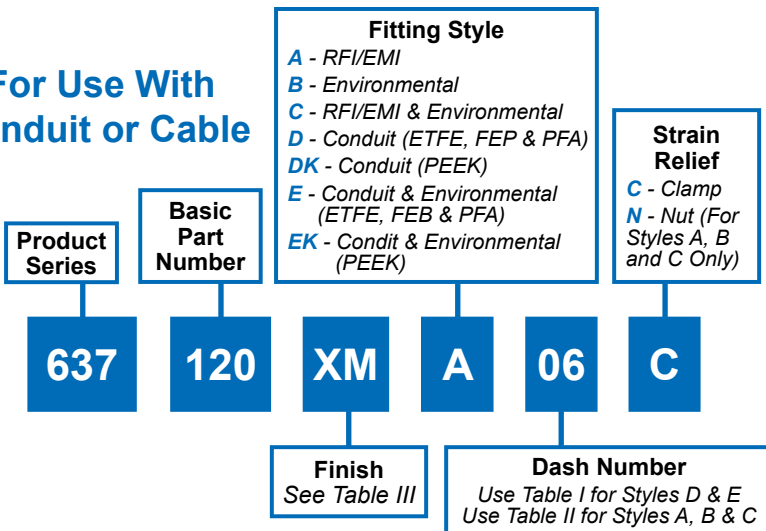
| CONDUIT<br>SIZE CODE | C CLASS - 2B<br>THREAD | B<br>DIA<br>MAX | D<br>DIA<br>MIN | E<br>DIA<br>MAX | H<br>DIM<br>± .06 (1.52) |
|----------------------|------------------------|-----------------|-----------------|-----------------|--------------------------|
| A                    | .438-28 UNEF           | .88 (22.35)     | .245 (6.22)     | 1.14 (28.96)    | .81 (20.57)              |
| B                    | .688-24 UNEF           | 1.13 (28.70)    | .495 (12.57)    | 1.46 (37.08)    | 1.12 (28.45)             |
| C                    | .938-20 UNEF           | 1.38 (35.05)    | .745 (18.92)    | 1.78 (45.21)    | 1.47 (37.34)             |
| D                    | 1.250-18 UNEF          | 1.69 (42.93)    | .995 (25.27)    | 2.03 (51.56)    | 1.81 (45.97)             |
| E                    | 1.563-18 UNEF          | 2.00 (50.80)    | 1.245 (31.62)   | 2.28 (57.91)    | 2.12 (53.85)             |
| F                    | 1.875-16 UN            | 2.31 (58.67)    | 1.495 (37.97)   | 2.53 (64.26)    | 2.50 (63.50)             |
| G                    | 2.375-16 UN            | 2.94 (74.68)    | 1.995 (50.67)   | 3.14 (79.76)    | 3.12 (79.25)             |
| H                    | 2.875-16 UN            | 3.44 (87.38)    | 2.495 (63.37)   | 3.65 (92.71)    | 3.25 (82.55)             |
| J                    | .563-24 UNEF           | .94 (23.88)     | .370 (9.40)     | 1.34 (34.04)    | .93 (23.62)              |
| K                    | .813-20 UNEF           | 1.19 (30.23)    | .620 (15.75)    | 1.65 (41.91)    | 1.25 (31.75)             |
| L                    | 3.375-16 UN            | 3.94 (100.08)   | 2.995 (76.07)   | 4.15 (105.41)   | 4.50 (114.30)            |

**TABLE II  
RECOMMENDED TORQUE**

| CONDUIT<br>SIZE CODE | ± 5 Inch lbs. |        |       |
|----------------------|---------------|--------|-------|
|                      | C<br>THREAD   | SLEEVE | Nut   |
| A                    | 50            | 120    | 40-60 |
| B                    | 75            | 140    | 40-60 |
| C                    | 100           | 150    | 40-60 |
| D                    | 120           | 170    | 40-60 |
| E                    | 140           | 170    | 40-60 |
| F                    | 150           | 170    | 40-60 |
| G                    | 170           | 170    | 40-60 |
| H                    | 170           | 170    | 40-60 |
| J                    | 50            | 120    | 40-60 |
| K                    | 75            | 140    | 40-60 |
| L                    | 170           | 170    | 40-60 |

# 637-120 Composite Feed-Through Fitting Universal Conduit/Cable Accessory Adapter

**For Use With  
Conduit or Cable**



## APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-5 Straight Conduit to Panel Fitting



MIL-PRF  
24758A

A

**TABLE I**

| CONDUIT<br>SIZE CODE | A<br>CLASS - 2A<br>THREAD | B<br>DIA<br>±.06 (1.5) | D<br>DIA<br>MIN | E<br>MAX<br>DIA |
|----------------------|---------------------------|------------------------|-----------------|-----------------|
| A                    | .625-24 UNEF              | 1.000 (25.40)          | .245 (6.2)      | 1.140 (29.0)    |
| B                    | .875-20 UNEF              | 1.250 (31.75)          | .495 (12.6)     | 1.460 (37.1)    |
| C                    | 1.188-18 UNEF             | 1.562 (39.67)          | .745 (18.9)     | 1.780 (45.2)    |
| D                    | 1.438-18 UNEF             | 1.812 (46.02)          | .995 (25.3)     | 1.030 (26.2)    |
| E                    | 1.750-16 UN               | 2.125 (53.98)          | 1.245 (31.6)    | 2.280 (57.9)    |
| F                    | 2.000-16 UN               | 2.375 (60.33)          | 1.495 (38.0)    | 2.530 (64.3)    |
| G                    | 2.500-16 UN               | 2.875 (73.03)          | 1.995 (50.7)    | 3.140 (79.8)    |
| H                    | 3.000-16 UN               | 3.375 (85.73)          | 2.495 (63.4)    | 3.650 (92.7)    |
| J                    | .750-20 UNEF              | 1.125 (28.58)          | .370 (9.4)      | 1.340 (34.0)    |
| K                    | 1.000-20 UNEF             | 1.500 (38.10)          | .620 (15.7)     | 1.650 (41.9)    |
| L                    | 3.500-16 UN               | 3.750 (95.3)           | 2.995 (76.1)    | 4.150 (105.4)   |

**TABLE II  
RECOMMENDED  
TORQUE**  
(See Note 3)

| CONDUIT<br>SIZE CODE | ± 5 Inch lbs. |        |
|----------------------|---------------|--------|
|                      | A<br>THREAD   | SLEEVE |
| A                    | 40            | 120    |
| B                    | 45            | 140    |
| C                    | 50            | 150    |
| D                    | 80            | 170    |
| E                    | 80            | 170    |
| F                    | 80            | 170    |
| G                    | 80            | 170    |
| H                    | 80            | 170    |
| J                    | 45            | 120    |
| K                    | 50            | 140    |
| L                    | 80            | 170    |

# MIL-PRF-24758-9

## Adapter for MS3100 Series MIL-DTL-5015 Connectors

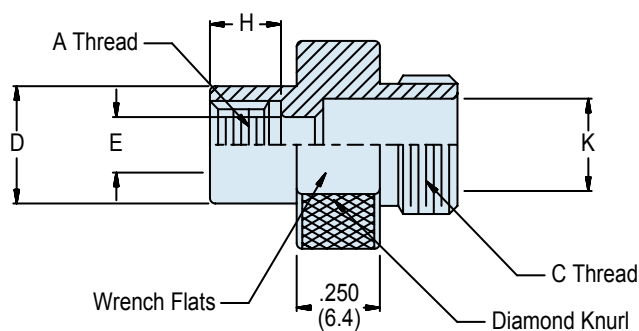
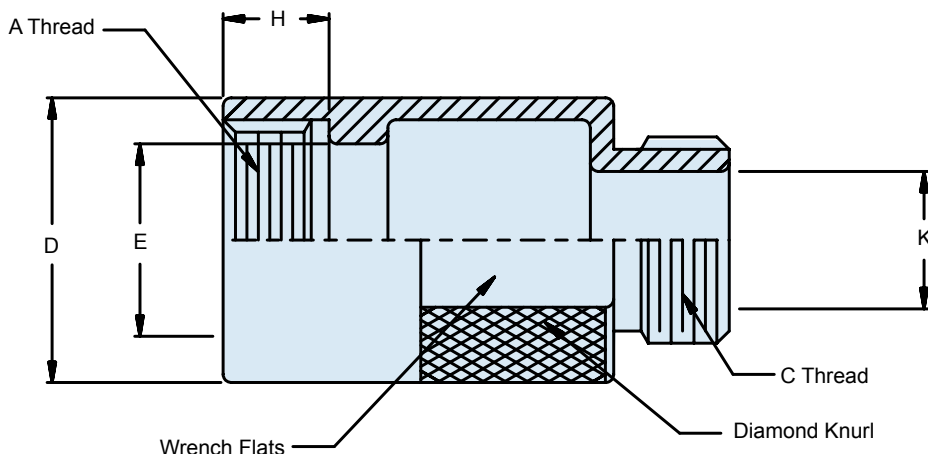
A

Basic  
NumberConduit  
Size Code  
(Table I)A Thread  
Code  
(Table III)

M24758-9

C

11



**Optional Configuration Supplied  
when E Diameter is Equal or Less than K Diameter**

TABLE I

| CONDUIT<br>SIZE CODE | C<br>CLASS - 2A<br>THREAD | K<br>DIA<br>MIN |
|----------------------|---------------------------|-----------------|
| A                    | .438-28 UNEF              | .245 (6.22)     |
| B                    | .688-24 UNEF              | .490 (12.57)    |
| C                    | .938-20 UNEF              | .745 (18.92)    |
| D                    | 1.250-18 UNEF             | .995 (25.27)    |
| E                    | 1.563-18 UNEF             | 1.245 (31.62)   |
| F                    | 1.875-16 UN               | 1.495 (37.97)   |
| G                    | 2.375-16 UN               | 1.995 (50.67)   |
| H                    | 2.875-16 UN               | 2.495 (63.37)   |
| J                    | .563-24 UNEF              | .370 (9.40)     |
| K                    | .813-20 UNEF              | .620 (15.75)    |
| L                    | 3.375-16 UN               | 2.995 (76.07)   |

## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The function of the M24758-9 couples MIL-C-5015 connectors (MS3100, MS3101, MS3106 and MS-series end bells) to M24758-2, MS24758-3 or M24758-4 fittings.
3. For MIL-DTL-5015, MS3400 series, the M24758-13 adapter shall be used.
4. See Table III for A Thread torque values.
5. Material / Finish:  
Adapter - 316 / electroless nickel, matte finish
6. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-9

## Adapter for MS3100 Series MIL-DTL-5015 Connectors



MIL-PRF  
24758A

A

TABLE II: MIL-DTL-5015 CONNECTOR CODE

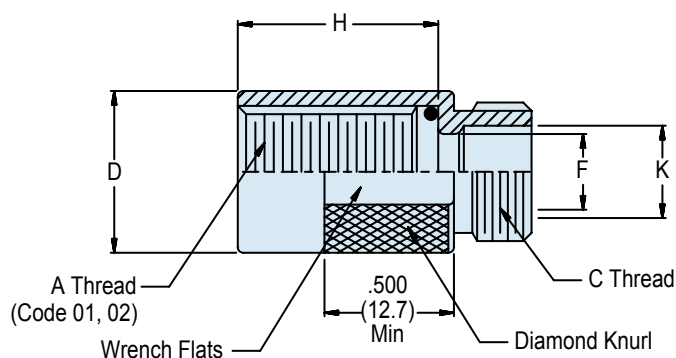
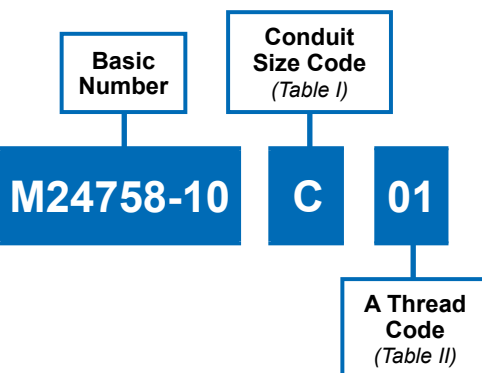
| CONNECTOR CODE | CLASS    | MANUFACTURER      | SERIES                                                 |
|----------------|----------|-------------------|--------------------------------------------------------|
| A              |          | All Manufacturers | MS-Series Endbell                                      |
| B              | A        | Amphenol          | MS3100, MS3101, MS3106, 97-3100, 97-3101, 97-3106      |
| C              | E & R    | Amphenol          | MS3100, MS3101, MS3106, 97-3100, 97-3101, 97-3106      |
| D              | A, E & R | Bendix            | MS3100, MS3101, MS3106, 10-214, 10-720, 10-721, 10-726 |
| E              | A        | Cannon            | MS3100, MS3101, MS3106, CA3101, CA3106                 |
| F              | E & R    | Cannon            | MS3100, MS3101, MS3106                                 |

TABLE III: A-THREAD CODE AND ADAPTER DIMENSIONS

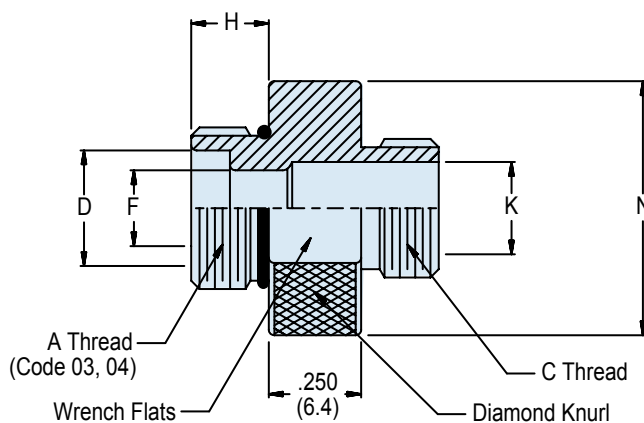
| A<br>THREAD<br>CODE | CONNECTOR<br>SHELL SIZE | CONNECTOR<br>CODE<br>(SEE TABLE II) | A<br>CLASS-2B<br>THREAD | D<br>DIA<br>±.02 (0.5) | E<br>DIA<br>±.02 (0.5) | H<br>±.02 (0.5) | A THREAD<br>TORQUE VALUES |
|---------------------|-------------------------|-------------------------------------|-------------------------|------------------------|------------------------|-----------------|---------------------------|
| 01                  | 8S                      | D                                   | .375-32 UNEF            | .500 (12.70)           | .280 (7.11)            | .180 (4.6)      | 40 inch lbs.              |
| 02                  | 8S                      | B                                   | .438-27 UNS             | .560 (14.22)           | .340 (8.64)            | .210 (5.3)      | 40 inch lbs.              |
| 03                  | 8                       | C, E, F                             | .438-28 UNEF            | .560 (14.22)           | .340 (8.64)            | .210 (5.3)      | 40 inch lbs.              |
| 04                  | 8S                      | A                                   | .500-28 UNEF            | .620 (15.75)           | .370 (9.40)            | .210 (5.3)      | 40 inch lbs.              |
| 04                  | 10S                     | A, B, C, D, E                       | .500-28 UNEF            | .620 (15.75)           | .370 (9.40)            | .210 (5.3)      | 40 inch lbs.              |
| 05                  | 10S                     | E                                   | .563-24 UNEF            | .680 (17.27)           | .450 (11.43)           | .250 (6.4)      | 40 inch lbs.              |
| 05                  | 10SL                    | E, F                                | .563-24 UNEF            | .680 (17.27)           | .450 (11.43)           | .250 (6.4)      | 40 inch lbs.              |
| 06                  | 10SL                    | A, B, C, D                          | .625-24 UNEF            | .750 (19.05)           | .500 (12.70)           | .250 (6.4)      | 40 inch lbs.              |
| 06                  | 12, 12S                 | A, D, F                             | .625-24 UNEF            | .810 (20.57)           | .570 (14.48)           | .250 (6.4)      | 40 inch lbs.              |
| 07                  | 12, 12S                 | B, C, E                             | .688-24 UNEF            | .810 (20.57)           | .570 (14.48)           | .250 (6.4)      | 40 inch lbs.              |
| 08                  | 12SL                    | A                                   | .750-20 UNEF            | .870 (22.10)           | .620 (15.75)           | .280 (7.1)      | 40 inch lbs.              |
| 08                  | 14, 14S                 | A, B, C, D, E, F                    | .750-20 UNEF            | .870 (22.10)           | .620 (15.75)           | .280 (7.1)      | 40 inch lbs.              |
| 09                  | 16, 16S                 | A, B, C, D, E, F                    | .875-20 UNEF            | 1.000 (25.40)          | .750 (19.05)           | .280 (7.1)      | 40 inch lbs.              |
| 10                  | 18                      | A, B, C, D, E, F                    | 1.000-20 UNEF           | 1.120 (28.45)          | 1.000 (25.40)          | .280 (7.1)      | 40 inch lbs.              |
| 11                  | 20                      | B, D, E, F                          | 1.125-18 UNEF           | 1.250 (31.75)          | 1.000 (25.40)          | .280 (7.1)      | 80 inch lbs.              |
| 12                  | 20                      | C                                   | 1.125-24 UNS            | 1.250 (31.75)          | 1.000 (25.40)          | .280 (7.1)      | 80 inch lbs.              |
| 13                  | 20, 22                  | A                                   | 1.188-18 UNEF           | 1.310 (33.27)          | 1.060 (26.92)          | .280 (7.1)      | 80 inch lbs.              |
| 14                  | 22                      | B, C, D, E, F                       | 1.250-18 UNEF           | 1.370 (34.80)          | 1.120 (28.45)          | .280 (7.1)      | 80 inch lbs.              |
| 15                  | 24                      | B, C, D, E, F                       | 1.375-18 UNEF           | 1.500 (38.10)          | 1.250 (31.75)          | .280 (7.1)      | 80 inch lbs.              |
| 16                  | 24, 28                  | A                                   | 1.438-18 UNEF           | 1.560 (39.62)          | 1.310 (33.27)          | .280 (7.1)      | 120 inch lbs.             |
| 17                  | 28                      | B, C, D, E, F                       | 1.625-18 UNEF           | 1.750 (44.45)          | 1.500 (38.10)          | .280 (7.1)      | 120 inch lbs.             |
| 18                  | 32                      | A                                   | 1.750-18 UNS            | 1.870 (47.50)          | 1.620 (41.15)          | .280 (7.1)      | 120 inch lbs.             |
| 19                  | 32                      | D, E, F                             | 1.875-16 UN             | 2.000 (50.80)          | 1.750 (44.45)          | .280 (7.1)      | 120 inch lbs.             |
| 20                  | 32                      | B, C                                | 1.906-18                | 2.030 (51.56)          | 1.780 (45.21)          | .280 (7.1)      | 120 inch lbs.             |
| 21                  | 36                      | A                                   | 2.000-18 UNS            | 2.120 (53.85)          | 1.870 (47.50)          | .310 (7.9)      | 120 inch lbs.             |
| 22                  | 36                      | D                                   | 2.063-16 UNS            | 2.180 (55.37)          | 1.930 (49.02)          | .280 (7.1)      | 120 inch lbs.             |
| 23                  | 36                      | C                                   | 2.063-20                | 2.180 (55.37)          | 1.930 (49.02)          | .310 (7.9)      | 120 inch lbs.             |
| 24                  | 36                      | E, F                                | 2.125-16 UN             | 2.250 (57.15)          | 2.000 (50.80)          | .280 (7.1)      | 120 inch lbs.             |
| 25                  | 36                      | B                                   | 2.125-18                | 2.250 (57.15)          | 2.000 (50.80)          | .310 (7.9)      | 120 inch lbs.             |
| 27                  | 40                      | D                                   | 2.313-16 UNS            | 2.430 (61.72)          | 2.180 (55.37)          | .310 (7.9)      | 160 inch lbs.             |
| 28                  | 40                      | B, E, F                             | 2.375-16 UN             | 2.500 (63.50)          | 2.250 (57.15)          | .310 (7.9)      | 160 inch lbs.             |
| 29                  | 44                      | B, F                                | 2.625-16 UN             | 2.750 (69.85)          | 2.500 (63.50)          | .310 (7.9)      | 160 inch lbs.             |
| 30                  | 48                      | F                                   | 2.813-18                | 2.930 (74.42)          | 2.680 (68.07)          | .280 (7.1)      | 160 inch lbs.             |
| 31                  | 48                      | B                                   | 2.875-16 UN             | 3.000 (76.20)          | 2.750 (69.85)          | .310 (7.9)      | 160 inch lbs.             |

# MIL-PRF-24758-10 Adapter for Triaxial Connectors

A



**Adapter with  
Internal Class 2B Thread  
(Code 01 and 02)**



**Adapter with  
Internal Class 2B Thread  
(Code 03 and 04)**

## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-10 adapter couples triaxial connectors to M24758-2, M24758-3 or M24758-4 fittings.
3. See Table III for recommended torque values.
4. Material / Finish:  
Adapter - 316 SST/electroless nickel, matte finish.  
O-Ring - silicone rubber / NA.
5. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-10 Adapter for Triaxial Connectors



MIL-PRF  
24758A

A

TABLE I

| Conduit<br>Size<br>Code | C<br>Class - 2A<br>Thread | K<br>Dia<br>Min | N<br>Dia<br>±.02 (0.5) |
|-------------------------|---------------------------|-----------------|------------------------|
| A                       | .438-28 UNEF              | .245 (6.2)      | .687 (17.4)            |
| B                       | .688-24 UNEF              | .495 (12.6)     | .937 (23.8)            |
| C                       | .938-20 UNEF              | .745 (18.9)     | 1.187 (30.1)           |
| D                       | 1.250-18 UNEF             | .995 (25.3)     | 1.500 (38.1)           |
| J                       | .563-24 UNEF              | .370 (9.4)      | .812 (20.6)            |
| K                       | .813-20 UNEF              | .620 (15.7)     | 1.062 (27.0)           |

TABLE II: A-THREAD CODE AND ADAPTER DIMENSIONS

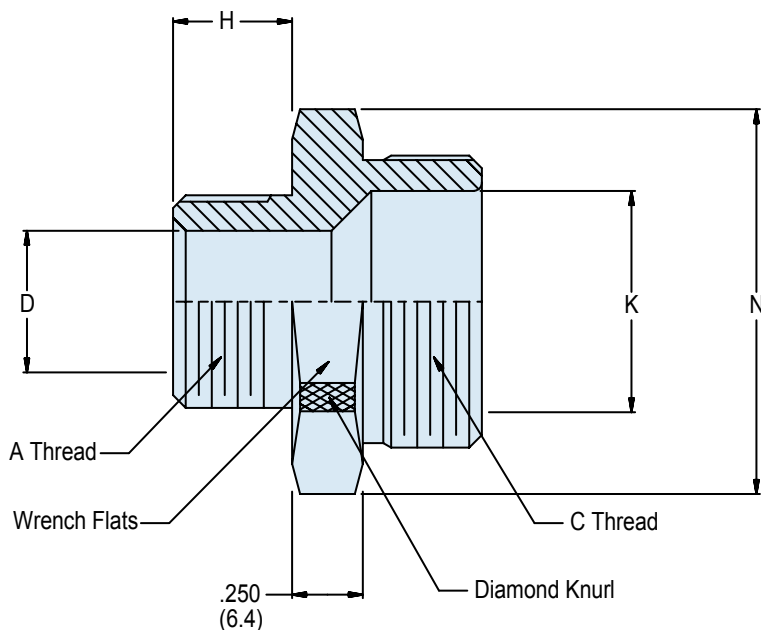
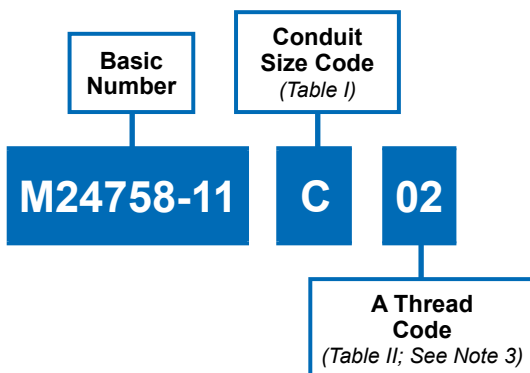
| A<br>Thread<br>Code | Connector Part Number |                    | A<br>Thread      | D<br>Dia<br>Min | F<br>Dia<br>Min | H<br>±.02 (0.5) | Cable (Reference)                           |                                                          |
|---------------------|-----------------------|--------------------|------------------|-----------------|-----------------|-----------------|---------------------------------------------|----------------------------------------------------------|
|                     | ITT/Cannon            | Formerly<br>Gremar |                  |                 |                 |                 | Type                                        | OD                                                       |
| 01                  | 152105-2380           | 5633               | .750-16 UNF-2B   | .875 (22.2)     | .297 (7.5)      | .562 (14.3)     | RG-22/U<br>RG-258C/U                        | .216 (5.5)<br>.195 (5.0)                                 |
| 02                  | 152100-2390           | 7991               | .875-20 UNEF-2B  | 1.000 (25.4)    | .515 (13.1)     | .500 (12.7)     | RG-214/U<br>RG-98/U                         | .425 (10.8)<br>.420 (10.7)                               |
| 03                  | 152190-0000           | 16312              | 1.063-18 UNEF-2A | .922 (23.4)     | .564 (14.3)     | .212 (7.9)      | RG-14A/U<br>RG-293A/U<br>*TRF-8<br>RG-14A/U | .545 (13.8)<br>.545 (13.8)<br>.500 (12.7)<br>.545 (13.8) |
| 04                  |                       | 11865              | 1.063-18 UNEF-2A | .922 (23.4)     | .564 (14.3)     | .335 (8.5)      | RG-293A/U<br>*TRF-8                         | .545 (13.8)<br>.500 (12.7)                               |

TABLE III: RECOMMENDED TORQUE

| Conduit Size Code         | A  | B  | C  | D  | J  | K   |
|---------------------------|----|----|----|----|----|-----|
| C Thread<br>± 5 Inch lbs. | 40 | 40 | 40 | 40 | 80 | 120 |

# MIL-PRF-24758-11 Adapter for Coaxial Connectors

A



## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-11 adapter couples coaxial connectors to M24758-2, M24758-3, M24758-4 series fittings.
3. Select an A-thread from table II which matches that of the back of the nut on the connector being used. If none of the A-threads match, substitute the desired A-thread information in lieu of the A-thread code in the part number. For example: A fitting for a 0.500" conduit with a 0.5-28 A-thread of 0.313' H-length would have the part number: M24758-11B0.5-28-0.313.
5. Material / Finish:  
Adapter - 316 / electroless nickel, matte finish
6. Metric dimensions (mm) are indicated in parentheses.
7. See M24758-2, -3, -4 torque values for C thread.

# MIL-PRF-24758-11 Adapter for Coaxial Connectors



MIL-PRF  
24758A

A

| TABLE I              |                        |                 |                         |
|----------------------|------------------------|-----------------|-------------------------|
| CONDUIT<br>SIZE CODE | C CLASS - 2A<br>THREAD | K<br>DIA<br>MIN | N<br>DIA<br>± .02 (0.5) |
| A                    | .438-28 UNEF           | .245 (6.22)     | .687 (17.4)             |
| B                    | .688-24 UNEF           | .495 (12.57)    | .937 (23.8)             |
| C                    | .938-20 UNEF           | .745 (18.92)    | 1.187 (30.1)            |
| D                    | 1.250-18 UNEF          | .995 (25.27)    | 1.500 (38.1)            |
| E                    | 1.563-18 UNEF          | 1.245 (31.62)   | 1.812 (46.0)            |
| J                    | .563-24 UNEF           | .370 (9.40)     | .812 (20.6)             |
| K                    | .813-20 UNEF           | .620 (15.75)    | 1.062 (27.0)            |

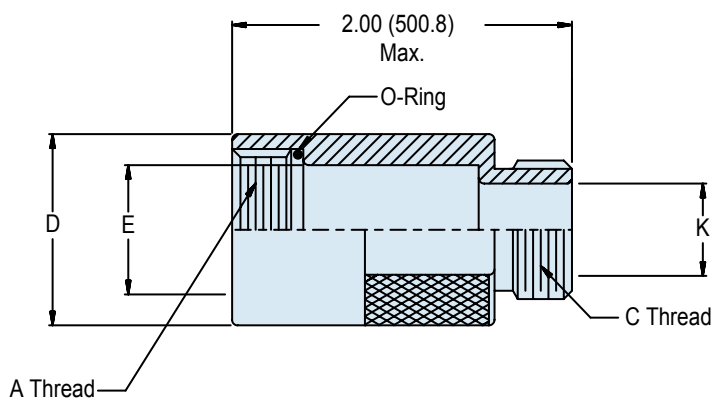
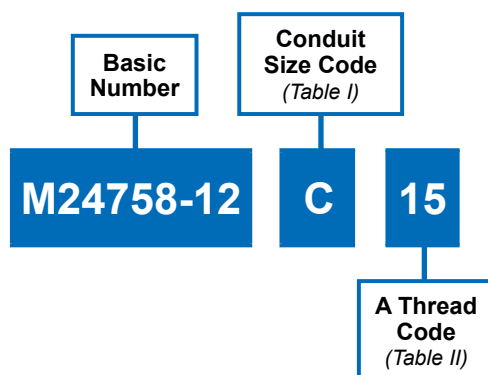
| TABLE II: A-THREAD CODE AND ADAPTER DIMENSIONS |                         |                  |                        |                      |                              |
|------------------------------------------------|-------------------------|------------------|------------------------|----------------------|------------------------------|
| A<br>THREAD<br>CODE                            | A<br>THREAD<br>Class 2A | H<br>± .03 (.76) | D<br>DIA<br>±.02 (.51) | CABLE<br>(REFERENCE) |                              |
|                                                |                         |                  |                        | TYPE                 | OD                           |
| 02                                             | .375-32 UNEF            | .210 (5.33)      | .226 (5.74)            | RG-58, RG-233        | .195 (4.95)<br>.216 (54.86)  |
| 04                                             | .438-28 UNEF            | .250 (6.35)      | .345 (8.76)            | RG-5, RG-21          | .332 (8.43)                  |
| 06                                             | .625-24 UNEF            | .310 (7.87)      | .433 (10.83)           | RG-9, RG-214         | .420 (10.67)<br>.425 (10.80) |
| 08                                             | .688-24 UNEF            | .310 (7.87)      | .568 (14.43)           | RG-14, RG-293        | .545 (13.84)                 |
| 10                                             | .938-20 UNEF            | .310 (7.87)      | .650 (16.51)           | RG-57, RG-294        | .625 (15.88)<br>.630 (16.00) |
| 12                                             | .813-20 UNEF            | .310 (7.87)      | .895 (22.73)           | RG-17                | .870 (22.10)                 |

# MIL-PRF-24758-12

## Adapter for MIL-C-26482

### Solder Type Series I Connectors

A



## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-12 adapter couples MIL-C-26482 series I connectors (series MS3100, MS3111 or MS3116) to M24758-2, M24758-3 or M24758-4 series fittings.
3. For MIL-DTL-26482 series II, the M24758-13 adapter shall be used.
4. See Glenair Circular Connector Accessories catalog for recommended torque values, Group 1.
5. Material / Finish:  
Adapter - 316 / electroless nickel, matte finish.
6. Metric dimensions (mm) are indicated in parentheses.
7. See M24758-2, -3, -4 torque values for C thread.

**MIL-PRF-24758-12**  
**Adapter for MIL-C-26482**  
**Solder Type Series I Connectors**



**MIL-PRF  
24758A**

**A**

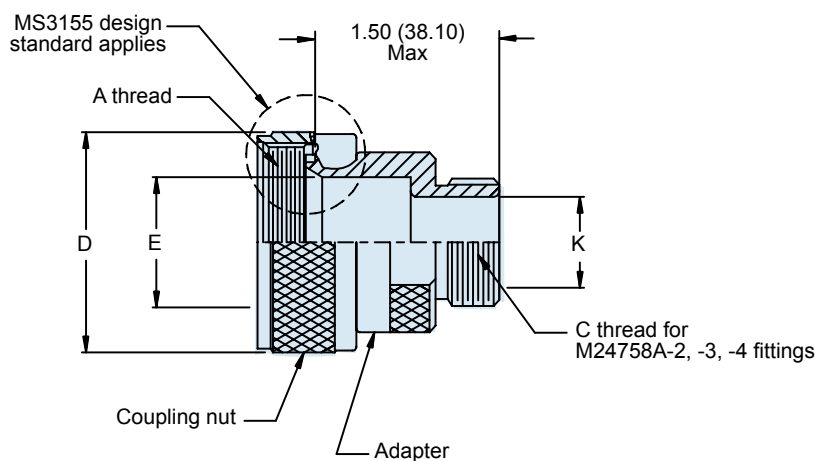
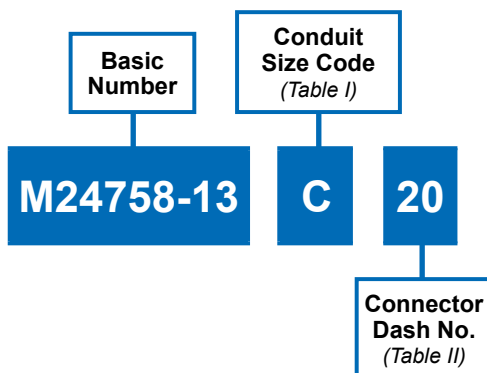
| TABLE I              |                           |                 |
|----------------------|---------------------------|-----------------|
| CONDUIT<br>SIZE CODE | C<br>CLASS - 2A<br>THREAD | K<br>DIA<br>MIN |
| A                    | .438-28 UNEF              | .245 (6.22)     |
| B                    | .688-24 UNEF              | .495 (12.57)    |
| C                    | .938-20 UNEF              | .745 (18.92)    |
| D                    | 1.250-18 UNEF             | .995 (25.27)    |
| E                    | 1.563-18 UNEF             | 1.245 (31.62)   |
| F                    | 1.875-16 UN               | 1.495 (37.97)   |
| G                    | 2.375-16 UN               | 1.995 (50.67)   |
| H                    | 2.875-16 UN               | 2.495 (63.37)   |
| J                    | .563-24 UNEF              | .370 (9.340)    |
| K                    | .813-20 UNEF              | .620 (15.75)    |
| L                    | 3.375-16 UN               | 2.995 (76.07)   |

| TABLE II: A-THREAD CODE AND ADAPTER DIMENSIONS |                       |                           |                         |                         |
|------------------------------------------------|-----------------------|---------------------------|-------------------------|-------------------------|
| A<br>THREAD<br>CODE                            | CONN<br>SHELL<br>SIZE | A<br>CLASS - 2B<br>THREAD | D<br>DIA<br>± .02 (.51) | E<br>DIA<br>± .02 (.51) |
| 07                                             | 8                     | .438-28 UNEF              | .590 (14.99)            | .340 (8.64)             |
| 09                                             | 10                    | .563-24 UNEF              | .710 (18.03)            | .450 (11.43)            |
| 11                                             | 12                    | .688-24 UNEF              | .840 (21.34)            | .580 (14.73)            |
| 13                                             | 14                    | .813-20 UNEF              | .960 (24.38)            | .680 (17.27)            |
| 15                                             | 16                    | .938-20 UNEF              | 1.090 (27.69)           | .810 (20.57)            |
| 17                                             | 18                    | 1.063-18 UNEF             | 1.210 (30.73)           | .930 (23.62)            |
| 19                                             | 20                    | 1.188-18 UNEF             | 1.340 (34.04)           | 1.060 (26.92)           |
| 21                                             | 22                    | 1.313-18 UNEF             | 1.460 (37.08)           | 1.180 (29.97)           |
| 23                                             | 24                    | 1.438-18 UNEF             | 1.590 (40.39)           | 1.310 (33.27)           |

# MIL-PRF-24758-13

## Adapter for MS-3155 Type Connectors

A



| TABLE I                 |                           |                 |
|-------------------------|---------------------------|-----------------|
| CONDUIT<br>SIZE<br>CODE | C<br>CLASS - 2A<br>THREAD | K<br>DIA<br>MIN |
| A                       | .438-28 UNEF              | .245 (6.22)     |
| B                       | .688-24 UNEF              | .495 (12.57)    |
| C                       | .938-20 UNEF              | .745 (18.92)    |
| D                       | 1.250-18 UNEF             | .995 (25.27)    |
| E                       | 1.563-18 UNEF             | 1.245 (31.62)   |
| F                       | 1.875-16 UN               | 1.495 (37.97)   |
| G                       | 2.375-16 UN               | 1.995 (50.67)   |
| H                       | 2.875-16 UN               | 2.495 (63.37)   |
| J                       | .563-24 UNEF              | .370 (9.40)     |
| K                       | .813-20 UNEF              | .620 (15.75)    |
| L                       | 3.375-16 UN               | 2.995 (76.07)   |

### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-13 adapter couples connectors listed in table II to M24758-2, M24758-3 or M24758-4 series conduit fittings.
3. The coupling nut end of this adapter shall conform to military standard MS3155 (Navy), 'Connector, electric, rear accessory design standard.' MS3155 takes precedence over this specification.
4. The E diameter and M thread of this drawing are the same as the E diameter and M thread of MS3155, and are included for reference purposes.
5. See Glenair Circular Connector Accessories catalog for recommended torque values, Group 2.
6. Material/Finish:  
Adapter, coupling nut, 316 / electroless nickel, matte finish.
7. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-13

## Adapter for MS-3155 Type Connectors



MIL-PRF  
24758A

A

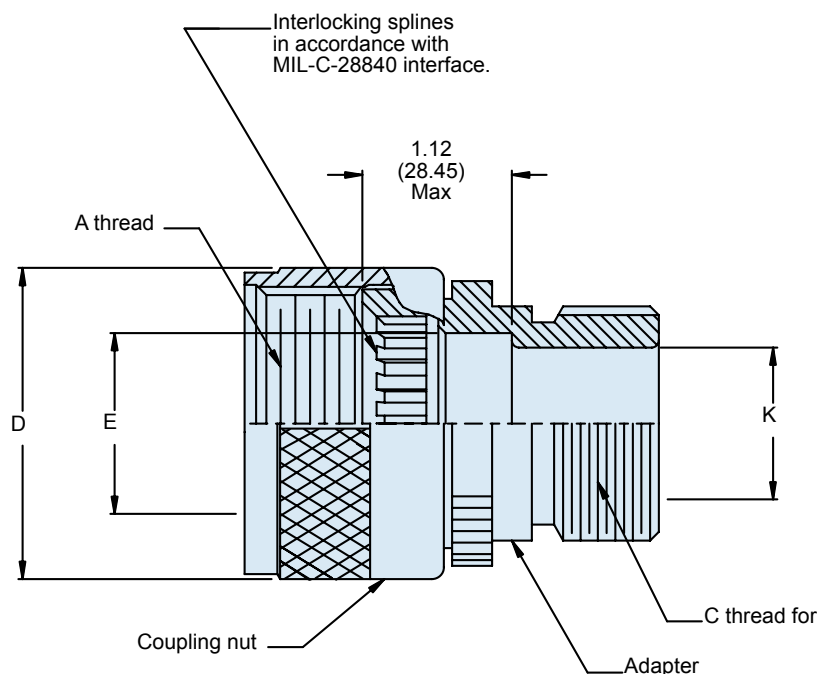
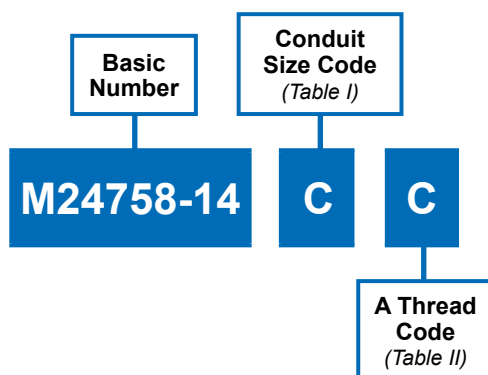
TABLE II: CONNECTOR DASH NUMBERS AND FITTING DIMENSIONS

| CONN<br>DASH<br>NO. | NAS 1599 &<br>MIL-DTL-83723<br>(SERIES 1 & 3) | MIL-DTL-5015<br>(MS3400<br>SERIES) | AS81703<br>(NAVY)<br>(SERIES 3) | MIL-DTL-26482<br>(SERIES 2)<br>(MS347X) | A<br>CLASS<br>- 2B<br>THREAD | D<br>DIA<br>MAX  | E<br>DIA<br>REF  | Y<br>(Style 01)<br>.03 (0.8) |
|---------------------|-----------------------------------------------|------------------------------------|---------------------------------|-----------------------------------------|------------------------------|------------------|------------------|------------------------------|
| 03                  | --                                            | --                                 | 03                              | --                                      | .562-24<br>UNEF              | .669<br>(16.99)  | .270<br>(6.86)   | .620 (15.7)                  |
| 08                  | 08                                            | 8S                                 | --                              | 08                                      | .500-20<br>UNF               | .617<br>(15.67)  | .270<br>(6.86)   | .620 (15.7)                  |
| 10                  | 10                                            | 10S, 10SL                          | --                              | 10                                      | .625-24<br>UNEF              | .734<br>(18.64)  | .375<br>(9.53)   | .690 (17.5)                  |
| 12                  | 12                                            | 12, 12S                            | 07                              | 12                                      | .750-20<br>UNEF              | .858<br>(21.79)  | .511<br>(12.98)  | .690 (17.5)                  |
| 14                  | 14                                            | 14, 14S                            | 12                              | 14                                      | .875-20<br>UNEF              | .984<br>(24.99)  | .585<br>(14.86)  | .750 (19.1)                  |
| 16                  | 16                                            | 16, 16S                            | 19                              | 16                                      | 1.000-20<br>UNEF             | 1.112<br>(28.24) | .710<br>(18.03)  | .750 (19.1)                  |
| 18                  | 18                                            | 18                                 | 27                              | 18                                      | 1.062-18<br>UNEF             | 1.218<br>(30.98) | .789<br>(20.04)  | .750 (19.1)                  |
| 20                  | 20                                            | 20                                 | 37                              | 20                                      | 1.188-18<br>UNEF             | 1.345<br>(34.16) | .914<br>(23.22)  | .810 (20.6)                  |
| 22                  | 22                                            | 22                                 | --                              | 22                                      | 1.312-18<br>UNEF             | 1.468<br>(37.29) | 1.039<br>(26.39) | .810 (20.6)                  |
| 24                  | 24                                            | 24                                 | --                              | 24                                      | 1.438-18<br>UNEF             | 1.593<br>(40.46) | 1.154<br>(29.31) | .810 (20.6)                  |
| 28                  | --                                            | 28                                 | --                              | --                                      | 1.750-18<br>UNS              | 1.969<br>(50.01) | 1.389<br>(35.28) | .880 (22.4)                  |
| 32                  | --                                            | 32                                 | --                              | --                                      | 2.000-18<br>UNS              | 2.219<br>(56.36) | 1.635<br>(41.53) | .880 (22.4)                  |
| 36                  | --                                            | 36                                 | --                              | --                                      | 2.250-16<br>UN               | 2.469<br>(62.71) | 1.850<br>(46.99) | .880 (22.4)                  |
| 40                  | --                                            | 40                                 | --                              | --                                      | 2.500-16<br>UN               | 2.719<br>(69.06) | 2.065<br>(52.45) | .940 (23.9)                  |
| 44                  | --                                            | 44                                 | --                              | --                                      | 2.750-16<br>UN               | 2.969<br>(75.41) | 2.320<br>(58.93) | .940 (23.9)                  |
| 48                  | --                                            | 48                                 | --                              | --                                      | 3.000-16<br>UN               | 3.219<br>(81.76) | 2.570<br>(65.28) | .940 (23.9)                  |
| 61                  | --                                            | --                                 | 61                              | --                                      | 1.500-18<br>UNEF             | 1.653<br>(41.99) | 1.194<br>(30.33) | .810 (20.6)                  |

# MIL-PRF-24758-14

## Adapter for MIL-DTL-28840 Connectors

A



### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-14 adapter provides an environmental coupling between MIL-C-28840 (EC) connectors and M24758-2, M24758-3, or M24758-4 series fittings.
3. See Glenair Circular Connector Accessories catalog for recommended torque values, Group 2.
4. Material / Finish:  
Adapter, coupling nut, 316 / electroless nickel, matte finish.
5. Metric dimensions (mm) are indicated in parentheses.

**MIL-PRF-24758-14**  
**Adapter for MIL-DTL-28840 Connectors**



MIL-PRF  
24758A

A

**TABLE I**

| CONDUIT<br>SIZE CODE | C<br>CLASS - 2A<br>THREAD | K<br>DIA<br>MIN | N<br>DIA<br>± .02 (0.5) |
|----------------------|---------------------------|-----------------|-------------------------|
| A                    | .438-28 UNEF              | .245 (6.22)     | .687 (17.4)             |
| B                    | .688-24 UNEF              | .495 (12.57)    | .937 (23.8)             |
| C                    | .938-20 UNEF              | .745 (18.92)    | 1.187 (30.1)            |
| D                    | 1.250-18 UNEF             | .995 (25.27)    | 1.500 (38.1)            |
| E                    | 1.563-18 UNEF             | 1.245 (31.62)   | 1.812 (46.0)            |
| F                    | 1.875-16 UN               | 1.495 (37.97)   | 2.125 (54.0)            |
| G                    | 2.375-16 UN               | 1.995 (50.67)   | 2.625 (66.7)            |
| H                    | 2.875-16 UN               | 2.495 (63.37)   | 3.125 (79.4)            |
| J                    | .563-24 UNEF              | .370 (9.40)     | .812 (20.6)             |
| K                    | .813-20 UNEF              | .620 (15.75)    | 1.062 (27.0)            |
| L                    | 3.375-16 UN               | 2.995 (76.07)   | 3.625 (92.1)            |

**TABLE II: A-THREAD CODE AND ADAPTER DIMENSIONS**

| A<br>THREAD<br>CODE | SHELL<br>SIZE<br>(REF) | A<br>CLASS - 2B<br>THREAD | D<br>DIA<br>MAX | E<br>DIA<br>+ .01 (.25) - .00 |
|---------------------|------------------------|---------------------------|-----------------|-------------------------------|
| A                   | 11                     | .750-20 UNEF              | 1.028 (26.11)   | .357 (9.07)                   |
| B                   | 13                     | .875-20 UNEF              | 1.141 (28.98)   | .492 (12.50)                  |
| C                   | 15                     | 1.000-20 UNEF             | 1.263 (30.08)   | .637 (16.18)                  |
| D                   | 17                     | 1.125-18 UNEF             | 1.387 (35.23)   | .734 (18.64)                  |
| E                   | 19                     | 1.250-18 UNEF             | 1.513 (38.43)   | .866 (22.00)                  |
| F                   | 23                     | 1.438-18 UNEF             | 1.703 (43.26)   | 1.063 (27.00)                 |
| G                   | 25                     | 1.562-18 UNEF             | 1.825 (46.36)   | 1.195 (30.35)                 |
| H                   | 29                     | 1.875-16 UN               | 2.143 (54.43)   | 1.432 (36.37)                 |
| J                   | 33                     | 2.062-16 UNS              | 2.329 (59.16)   | 1.630 (41.40)                 |

# MIL-PRF-24758-15 Adapter for MIL-S-24235 Stuffing Tubes

A

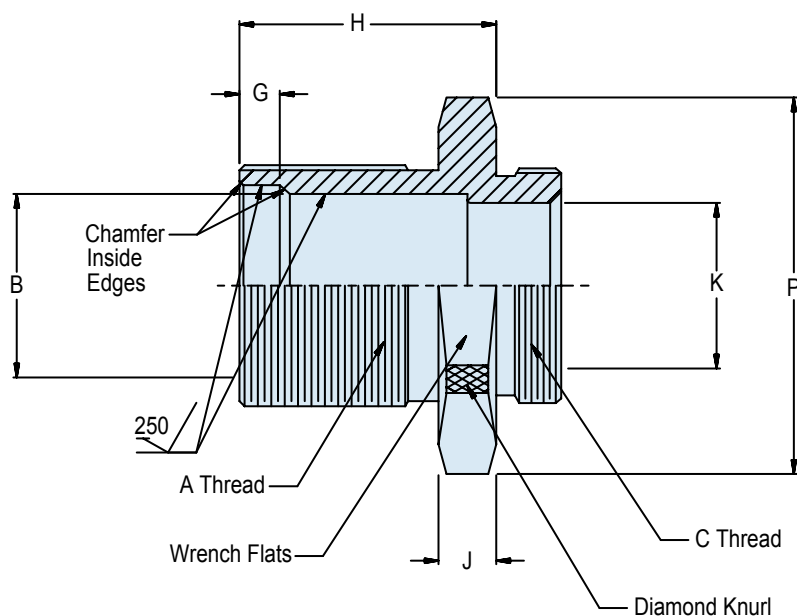
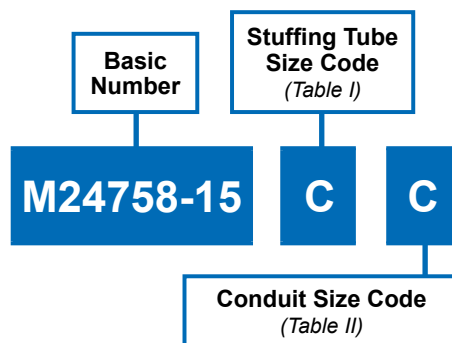


TABLE II

| CONDUIT<br>SIZE CODE | C<br>CLASS - 2A<br>THREAD | K<br>DIA<br>MIN |
|----------------------|---------------------------|-----------------|
| A                    | .438-28 UNEF              | .245 (6.22)     |
| B                    | .688-24 UNEF              | .495 (12.57)    |
| C                    | .938-20 UNEF              | .745 (18.92)    |
| D                    | 1.250-18 UNEF             | .995 (25.27)    |
| E                    | 1.563-18 UNEF             | 1.245 (31.62)   |
| F                    | 1.875-16 UN               | 1.495 (37.97)   |
| G                    | 2.375-16 UN               | 1.995 (50.67)   |
| H                    | 2.875-16 UN               | 2.495 (63.37)   |
| J                    | .563-24 UNEF              | .370 (9.40)     |
| K                    | .813-20 UNEF              | .620 (15.75)    |
| L                    | 3.375-16 UN               | 2.995 (76.07)   |

## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-15 adapter couples MIL-S-24235/9 through MIL-S-24235/17 stuffing tubes to M24758-2, M24758-3 or M24758-4 series fittings.
3. Material / Finish:  
Adapter - 316 / electroless nickel, matte finish
4. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-15

## Adapter for MIL-S-24235 Stuffing Tubes



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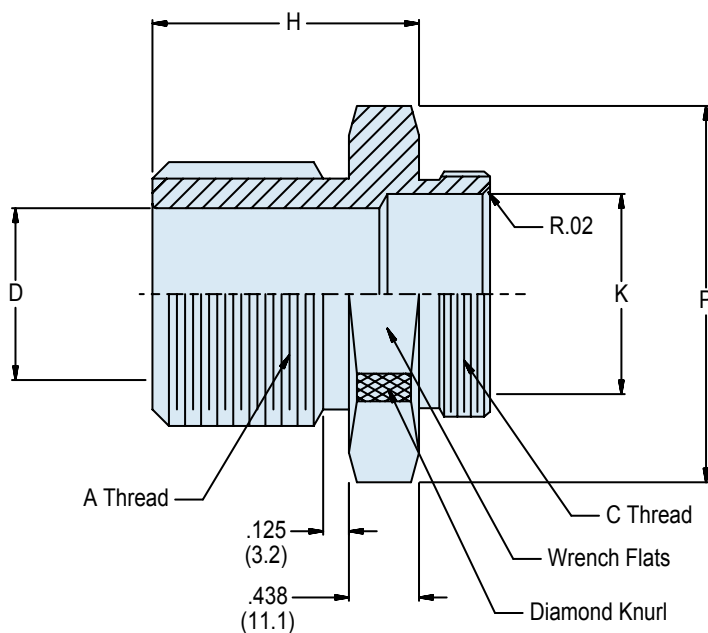
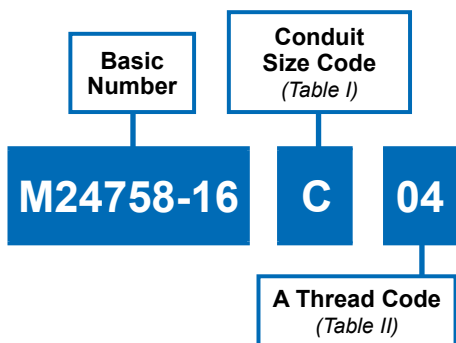
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TABLE I

| MIL-S-24235<br>/9, 17<br>STUFFING<br>TUBE SIZE | CONDUIT<br>SIZE<br>CODE | A<br>CLASS - 2A<br>THREAD | B<br>DIA      | G<br>DIM   | H<br>DIM<br>±.02 (.51) | J<br>DIM<br>±.02 (.51) | P<br>MAX<br>DIA |
|------------------------------------------------|-------------------------|---------------------------|---------------|------------|------------------------|------------------------|-----------------|
| A                                              | A, B, J                 | .875-12 UN                | .406 (10.31)  | .250 (6.4) | 1.063 (27.00)          | .188 (4.78)            | 1.375 (34.93)   |
| B                                              | B                       | 1.000-12 UN               | .515 (13.08)  | .250 (6.4) | 1.063 (27.00)          | .188 (4.78)            | 1.500 (38.10)   |
| C                                              | B, C, K                 | 1.125-12 UN               | .640 (16.26)  | .250 (6.4) | 1.063 (27.00)          | .188 (4.78)            | 1.625 (41.28)   |
| D                                              | C, K                    | 1.250-12 UN               | .750 (19.05)  | .250 (6.4) | 1.063 (27.00)          | .188 (4.78)            | 1.750 (44.45)   |
| E                                              | C, D, K                 | 1.250-12 UN               | .812 (20.62)  | .250 (6.4) | 1.063 (27.00)          | .188 (4.78)            | 1.750 (44.45)   |
| F                                              | D                       | 1.313-12 UN               | .843 (21.41)  | .250 (6.4) | 1.188 (30.18)          | .188 (4.78)            | 1.812 (46.02)   |
| G                                              | D                       | 1.500-12 UN               | .935 (23.75)  | .250 (6.4) | 1.188 (30.18)          | .188 (4.78)            | 2.000 (50.80)   |
| J                                              | E                       | 1.625-12 UN               | 1.062 (26.97) | .250 (6.4) | 1.188 (30.18)          | .188 (4.78)            | 2.125 (53.98)   |
| K                                              | E                       | 1.750-12 UN               | 1.171 (29.74) | .250 (6.4) | 1.500 (38.10)          | .188 (4.78)            | 2.250 (57.15)   |
| L                                              | E                       | 1.813-12 UN               | 1.265 (32.13) | .250 (6.4) | 1.500 (38.10)          | .188 (4.78)            | 2.312 (58.72)   |
| M                                              | E, F                    | 2.000-12 UN               | 1.406 (35.71) | .250 (6.4) | 1.500 (38.10)          | .188 (4.78)            | 2.500 (63.50)   |
| N                                              | F                       | 2.063-12 UN               | 1.515 (38.48) | .250 (6.4) | 1.563 (39.70)          | .250 (6.35)            | 2.625 (66.68)   |
| P                                              | G                       | 2.188-12 UN               | 1.625 (41.28) | .250 (6.4) | 1.563 (39.70)          | .250 (6.35)            | 2.750 (69.85)   |
| R                                              | G                       | 2.313-12 UN               | 1.750 (44.45) | .250 (6.4) | 1.563 (39.70)          | .250 (6.35)            | 2.875 (73.03)   |
| S                                              | G                       | 2.688-12 UN               | 1.875 (47.63) | .375 (9.5) | 2.188 (55.58)          | .313 (7.95)            | 3.250 (82.55)   |
| T                                              | G                       | 2.875-12 UN               | 2.062 (52.37) | .375 (9.5) | 2.188 (55.58)          | .313 (7.95)            | 3.500 (88.90)   |
| V                                              | G                       | 3.000-12 UN               | 2.187 (55.55) | .375 (9.5) | 2.188 (55.58)          | .313 (7.95)            | 3.625 (92.08)   |
| W                                              | G, H                    | 3.125-12 UN               | 2.312 (58.72) | .375 (9.5) | 2.188 (55.58)          | .313 (7.95)            | 3.750 (95.25)   |
| X                                              | H                       | 3.250-12 UN               | 2.500 (63.50) | .375 (9.5) | 2.188 (55.58)          | .313 (7.95)            | 3.875 (98.43)   |
| Y                                              | H                       | 3.375-12 UN               | 2.609 (66.27) | .375 (9.5) | 2.188 (55.58)          | .313 (7.95)            | 4.000 (101.60)  |
| Z                                              | H                       | 3.563-12 UN               | 2.781 (70.64) | .375 (9.5) | 2.188 (55.58)          | .313 (7.95)            | 4.250 (107.95)  |
| AA                                             | H                       | 3.750-12 UN               | 2.875 (73.03) | .375 (9.5) | 3.125 (79.38)          | .438 (11.13)           | 4.500 (114.30)  |
| BB                                             | H, L                    | 4.000-12 UN               | 3.157 (80.19) | .375 (9.5) | 3.125 (79.38)          | .438 (11.13)           | 4.750 (120.65)  |

# MIL-PRF-24758-16 Adapter for Miscellaneous Fittings

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## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-16 adapter couples miscellaneous fittings to M24758-2, MS24758-3 or M24758-4 series fittings.
3. The American national thread series (N) has been superseded by the unified thread series (UN) the series N-thread sizes listed in table II are retained for use with those items which have series N-threads.
4. Material / Finish:  
Adapter, - 316 / electroless nickel, matte finish.
5. Metric dimensions (mm) are indicated in parentheses.

**MIL-PRF-24758-16**  
**Adapter for Miscellaneous Fittings**



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**TABLE I**

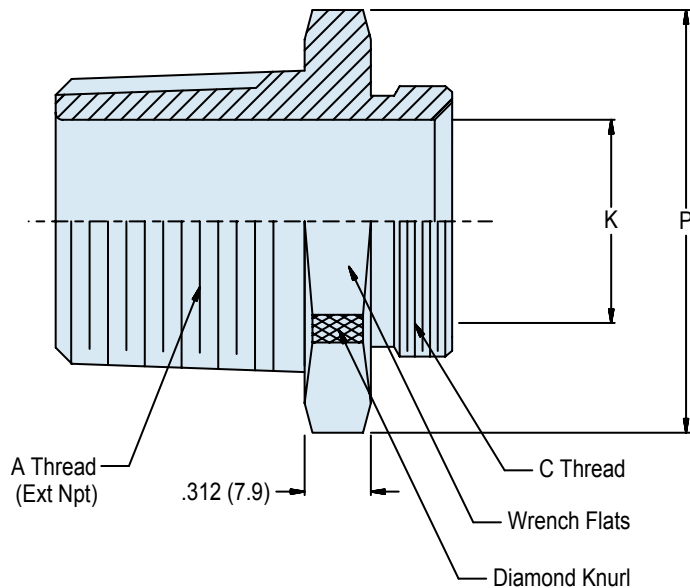
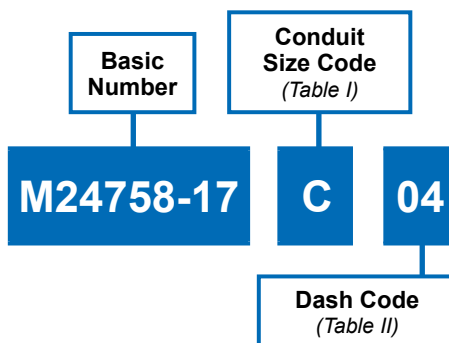
| CONDUIT<br>SIZE CODE | C<br>CLASS - 2A<br>THREAD | K<br>DIA<br>MIN |
|----------------------|---------------------------|-----------------|
| A                    | .438-28 UNEF              | .245 (6.22)     |
| B                    | .688-24 UNEF              | .495 (12.57)    |
| C                    | .938-20 UNEF              | .745 (18.92)    |
| D                    | 1.250-18 UNEF             | .995 (25.27)    |
| E                    | 1.563-18 UNEF             | 1.245 (31.62)   |
| F                    | 1.875-16 UN               | 1.495 (37.97)   |
| G                    | 2.375-16 UN               | 1.995 (50.67)   |
| H                    | 2.875-16 UN               | 2.495 (63.37)   |
| J                    | .563-24 UNEF              | .370 (9.40)     |
| K                    | .813-20 UNEF              | .620 (15.75)    |
| L                    | 3.375-16 UN               | 2.995 (76.07)   |

**TABLE II**

| A<br>THREAD<br>CODE | A<br>CLASS - 2A<br>THREAD | D<br>DIA<br>± .005 (.13) | H<br>DIM<br>± .02 (.51) | P<br>DIM<br>MAX | CONDUIT<br>SIZE |
|---------------------|---------------------------|--------------------------|-------------------------|-----------------|-----------------|
| 01                  | 1.125-14 N                | .500 (12.70)             | 1.250 (31.75)           | 1.625 (41.28)   | A, B            |
| 03                  | 1.280-14 N                | .750 (19.05)             | 1.250 (31.75)           | 1.750 (44.45)   | A-C             |
| 04                  | .750-14 NPSM              | .750 (19.05)             | 1.250 (31.75)           | 1.500 (38.10)   | A-C             |
| 06                  | 1.000-11 1/2 NPSM         | 1.000 (25.40)            | 1.250 (31.75)           | 1.750 (44.45)   | A-D             |
| 07                  | 1.250-11 1/2 NPSM         | 1.000 (25.40)            | 1.250 (31.75)           | 2.000 (50.80)   | A-D             |
| 09                  | 1.250-11 1/2 NPSM         | 1.180 (29.97)            | 1.250 (31.75)           | 2.000 (50.80)   | A-E             |
| 10                  | 2.025-11 1/2 N            | 1.250 (31.75)            | 1.560 (39.62)           | 2.875 (73.03)   | A-E             |
| 13                  | 2.250-11 1/2 N            | 1.500 (38.10)            | 1.690 (42.93)           | 3.250 (82.55)   | A-F             |
| 16                  | 2.500-8 NPSM              | 2.000 (50.80)            | 2.000 (50.80)           | 3.500 (88.90)   | A-G             |
| 19                  | 3.000-8 NPSM              | 2.500 (63.50)            | 2.060 (52.32)           | 4.000 (101.60)  | A-H             |
| 20                  | 1.500-11 1/2 NPSM         | 1.500 (38.10)            | 1.250 (31.75)           | 2.500 (63.50)   | A-D             |
| 21                  | 2.000-11 1/2 NPSM         | 2.000 (50.80)            | 1.250 (31.75)           | 3.000 (76.20)   | A-G             |

# MIL-PRF-24758-17 Adapter for Tapered Pipe Thread

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## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-17 adapter couples any fittings that have a female tapered pipe thread to M24758-2, M24758-3 or M24758-4 fittings.
3. Material / Finish: Adapter, - 316 / electroless nickel, matte finish.
4. Metric dimensions (mm) are indicated in parentheses.

**MIL-PRF-24758-17**  
**Adapter for Tapered Pipe Thread**



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**TABLE I**

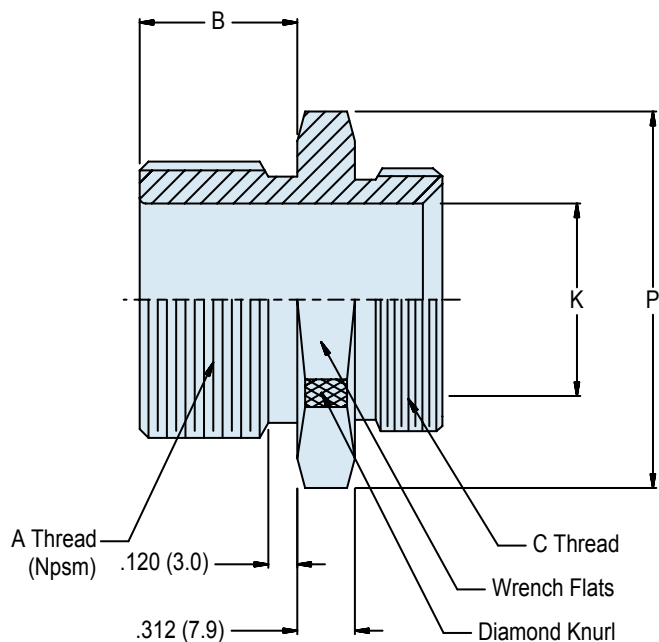
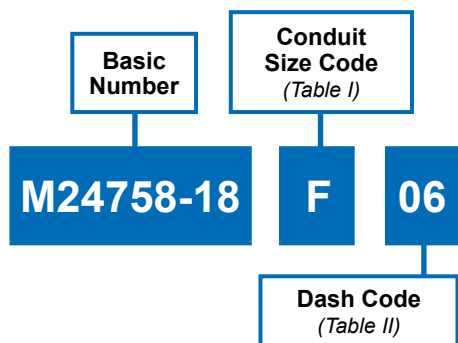
| CONDUIT<br>SIZE CODE | C<br>CLASS - 2A<br>THREAD | K<br>DIA<br>MIN | MAX ENTRY<br>DASH<br>NUMBER |
|----------------------|---------------------------|-----------------|-----------------------------|
| A                    | .438-28 UNEF              | .245 (6.22)     | 01                          |
| B                    | .688-24 UNEF              | .495 (12.57)    | 03                          |
| C                    | .938-20 UNEF              | .745 (18.92)    | 04                          |
| D                    | 1.250-18 UNEF             | .995 (25.27)    | 05                          |
| E                    | 1.563-18 UNEF             | 1.245 (31.62)   | 06                          |
| F                    | 1.875-16 UN               | 1.495 (37.97)   | 07                          |
| G                    | 2.375-16 UN               | 1.995 (50.67)   | 08                          |
| H                    | 2.875-16 UN               | 2.495 (63.37)   | 09                          |
| J                    | .563-24 UNEF              | .370 (9.40)     | 02                          |
| K                    | .813-20 UNEF              | .620 (15.75)    | 04                          |
| L                    | 3.375-16 UN               | 2.995 (76.07)   | 10                          |

**TABLE II**

| DASH<br>NUMBER | A<br>EXTERNAL TAPER<br>PIPE THREAD | D<br>DIA<br>MAX |
|----------------|------------------------------------|-----------------|
| 01             | .250-18 NPT                        | 1.000 (25.40)   |
| 02             | .375-18 NPT                        | 1.130 (28.70)   |
| 03             | .500-14 NPT                        | 1.250 (31.75)   |
| 04             | .750-14 NPT                        | 1.500 (38.10)   |
| 05             | 1.000-11.5 NPT                     | 1.750 (44.45)   |
| 06             | 1.250-11.5 NPT                     | 2.130 (54.10)   |
| 07             | 1.500-11.5 NPT                     | 2.380 (60.45)   |
| 08             | 2.000-11.5 NPT                     | 2.880 (73.15)   |
| 09             | 2.500-8 NPT                        | 3.380 (85.85)   |
| 10             | 3.000-8 NPT                        | 4.130 (104.90)  |

# MIL-PRF-24758-18 Adapter for Straight Pipe Thread

A



## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-18 adapter couples any fittings having a female straight pipe thread to M24758-2, M24758-3 or M24758-4 fittings.
3. Material / Finish:  
Adapter, - 316 / electroless nickel, matte finish.
4. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-18 Adapter for Straight Pipe Thread



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**TABLE I**

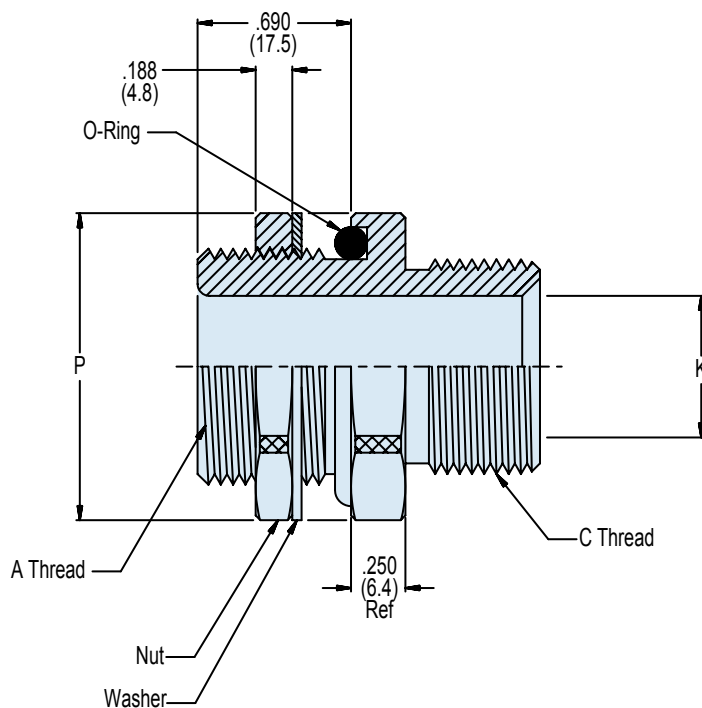
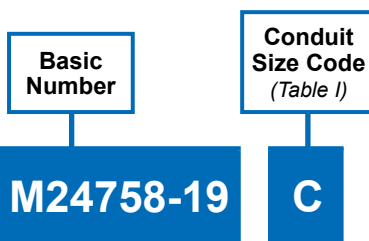
| CONDUIT<br>SIZE CODE | C<br>Class 2A<br>Thread | K<br>DIA<br>MIN | P<br>DIA<br>MAX | MAX ENTRY<br>DASH<br>NUMBER |
|----------------------|-------------------------|-----------------|-----------------|-----------------------------|
| A                    | .438-28 UNEF            | .245 (6.22)     | 1.000 (25.40)   | 01                          |
| B                    | .688-24 UNEF            | .495 (12.57)    | 1.250 (31.75)   | 03                          |
| C                    | .938-20 UNEF            | .745 (18.92)    | 1.500 (38.10)   | 04                          |
| D                    | 1.250-18 UNEF           | .995 (25.27)    | 1.750 (44.45)   | 05                          |
| E                    | 1.563-18 UNEF           | 1.245 (31.62)   | 2.130 (54.10)   | 06                          |
| F                    | 1.875-16 UN             | 1.495 (37.97)   | 2.380 (60.45)   | 07                          |
| G                    | 2.375-16 UN             | 1.995 (50.67)   | 2.880 (73.15)   | 08                          |
| H                    | 2.875-16 UN             | 2.495 (63.37)   | 3.380 (85.85)   | 09                          |
| J                    | .563-24 UNEF            | .370 (9.40)     | 1.130 (28.70)   | 02                          |
| K                    | .813-20 UNEF            | .620 (15.75)    | 1.630 (41.40)   | 04                          |
| L                    | 3.375-16 UN             | 2.995 (76.07)   | 4.130 (104.90)  | 10                          |

**TABLE II**

| DASH<br>NUMBER | A<br>EXTERNAL TAPER<br>PIPE THREAD | B<br>DIM<br>±.02 (0.5) |
|----------------|------------------------------------|------------------------|
| 01             | .250-18 NPSM                       | .750 (19.1)            |
| 02             | .375-18 NPSM                       | .750 (19.1)            |
| 03             | .500-14 NPSM                       | .870 (22.1)            |
| 04             | .750-14 NPSM                       | .870 (22.1)            |
| 05             | 1.000-11.5 NPSM                    | .870 (22.1)            |
| 06             | 1.250-11.5 NPSM                    | .870 (22.1)            |
| 07             | 1.500-11.5 NPSM                    | 1.000 (25.4)           |
| 08             | 2.000-11.5 NPSM                    | 1.190 (30.2)           |
| 09             | 2.500-8 NPSM                       | 1.620 (41.1)           |
| 10             | 3.000-8 NPSM                       | 1.690 (42.9)           |

# MIL-PRF-24758-19 Adapter for Panel Termination

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## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-19 adapter provides the capability of terminating a M24758-2, M24758-3 or M24758-4 series fitting to a panel.
3. Use Glenair 600-175 jam nut wrench.
4. Metric dimensions (mm) are indicated in parentheses.
5. Material / Finish:  
Adapter, jam nut - 316 electroless nickel, matte finish  
O-Ring - silicone rubber/N.A.  
Washer - 316L SST/passivate.

# MIL-PRF-24758-19 Adapter for Panel Termination



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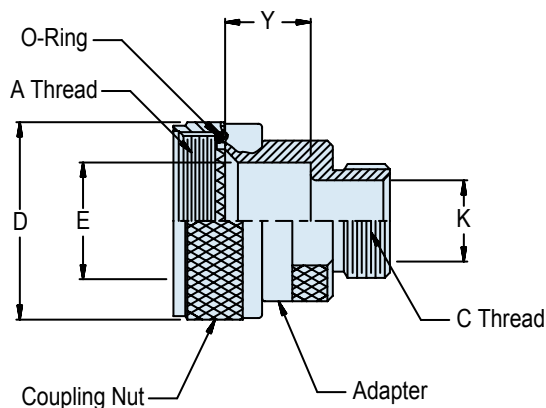
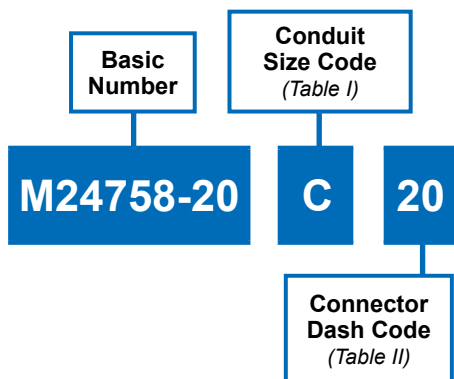
| TABLE I              |                           |               |                           |                                   |                 |                                                          |
|----------------------|---------------------------|---------------|---------------------------|-----------------------------------|-----------------|----------------------------------------------------------|
| CONDUIT<br>SIZE CODE | A<br>CLASS - 2A<br>THREAD | P<br>DIA      | C<br>CLASS - 2A<br>THREAD | L<br>+ .030 - .00<br>+(0.76 -.00) | K<br>DIA<br>MIN | RECOMMENDED<br>TORQUE VALUES<br>INCH LBS<br>(SEE NOTE 3) |
| A                    | .625-24 UNEF              | .970 (24.6)   | .438-28 UNEF              | .210 (5.3)                        | .245 (6.22)     | 40 - 50                                                  |
| B                    | .875-20 UNEF              | 1.240 (31.5)  | .688-24 UNEF              | .250 (6.4)                        | .495 (12.6)     | 50 - 60                                                  |
| BC                   | 1.188-18 UNEF             | 1.580 (40.1)  | .688-24 UNEF              | .250 (6.4)                        | .495 (12.6)     |                                                          |
| C                    | 1.188-18 UNEF             | 1.580 (40.1)  | .938-20 UNEF              | .310 (7.9)                        | .745 (19.0)     |                                                          |
| CK                   | 1.000-20 UNEF             | 1.530 (38.9)  | .938-20 UNEF              | .310 (7.9)                        | .745 (19.0)     |                                                          |
| D                    | 1.438-18 UNEF             | 1.840 (46.7)  | 1.250-18 UNEF             | .370 (9.4)                        | .995 (25.3)     | 80 - 90                                                  |
| E                    | 1.750-16 UN               | 2.180 (55.4)  | 1.563-18 UNEF             | .370 (9.4)                        | 1.245 (31.6)    | 100 - 110                                                |
| F                    | 2.000-16 UN               | 2.410 (61.2)  | 1.875-16 UN               | .430 (10.9)                       | 1.495 (38.0)    |                                                          |
| G                    | 2.500-16 UN               | 2.980 (75.7)  | 2.375-16 UN               | .430 (10.9)                       | 1.995 (50.7)    | 150 - 160                                                |
| H                    | 3.000-16 UN               | 3.410 (86.6)  | 2.875-16 UN               | .430 (10.9)                       | 2.495 (63.4)    |                                                          |
| J                    | .750-20 UNEF              | 1.160 (29.5)  | .563-24 UNEF              | .250 (6.4)                        | .370 (9.4)      | 50 - 60                                                  |
| K                    | 1.000-20 UNEF             | 1.530 (38.9)  | .813-20 UNEF              | .310 (7.9)                        | .620 (15.8)     | 150 - 160                                                |
| L                    | 3.500-16 UN               | 4.060 (103.1) | 3.375-16 UN               | .430 (10.9)                       | 2.995 (76.1)    |                                                          |

**NOTE:** Panel Cut-Out is +.016 (0.41) -.000 over A Thread Size.

# MIL-PRF-24758-20

## Adapter for MIL-DTL-38999 Connectors

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### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-20 adapter couples connectors listed in table II to M24758-2, M24758-3 or M24758-4 series fittings.
3. The coupling nut end of this adapter shall conform to AS85049.
4. The E diameter and M thread of this drawing are the same as AS85049 and are included for reference purposes.
5. See Glenair Circular Connector Accessories catalog for recommended torque values.
6. Material / Finish:  
Adapter, coupling nut, 316 / electroless nickel, matte finish,  
O-ring - silicone rubber N/A.
7. Metric dimensions (mm) are indicated in parentheses.

TABLE I

| CONDUIT<br>SIZE CODE | C<br>CLASS - 2A<br>THREAD | K<br>DIA<br>MIN |
|----------------------|---------------------------|-----------------|
| A                    | .438-28 UNEF              | .245 (6.22)     |
| B                    | .688-24 UNEF              | .495 (12.57)    |
| C                    | .938-20 UNEF              | .745 (18.92)    |
| D                    | 1.250-18 UNEF             | .995 (25.27)    |
| E                    | 1.563-18 UNEF             | 1.245 (31.62)   |
| F                    | 1.875-16 UN               | 1.495 (37.97)   |
| G                    | 2.375-16 UN               | 1.995 (50.67)   |
| H                    | 2.875-16 UN               | 2.495 (63.37)   |
| J                    | .563-24 UNEF              | .370 (9.40)     |
| K                    | .813-20 UNEF              | .620 (15.75)    |
| L                    | 3.375-16 UN               | 2.995 (76.07)   |

# MIL-PRF-24758-20 Adapter for MIL-DTL-38999 Connectors



MIL-PRF  
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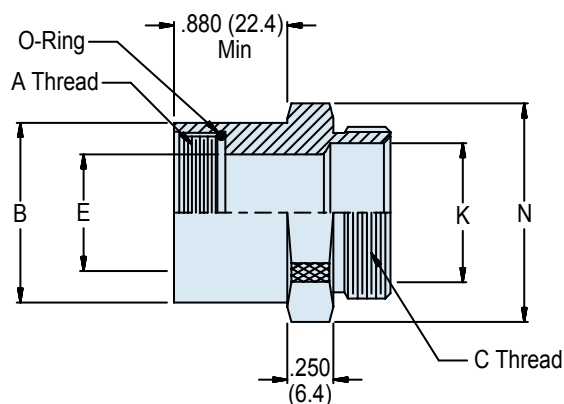
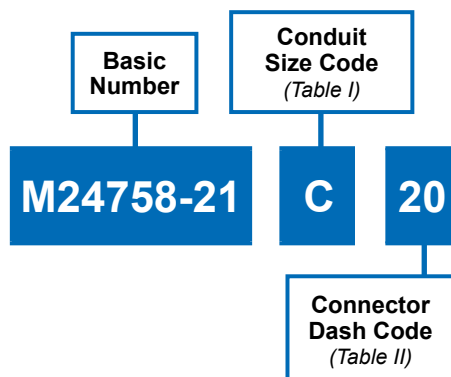
**TABLE II: CONNECTOR DASH NUMBERS AND FITTING DIMENSIONS**

| CONN<br>DASH<br>NO. | MIL-DTL-38999<br>SERIES 1 & 2 | MIL-DTL-38999<br>SERIES 3 & 4 | A<br>Class - 2B<br>THREAD | D<br>DIA<br>MAX | E<br>DIA<br>REF | Y<br>(Style 01)<br>± .03 (0.8) |
|---------------------|-------------------------------|-------------------------------|---------------------------|-----------------|-----------------|--------------------------------|
| 08                  | 08                            | --                            | .438-28 UNEF              | .860 (21.84)    | .269 (6.83)     | .620 (15.7)                    |
| 10                  | 10                            | --                            | .562-24 UNEF              | .980 (24.89)    | .402 (10.21)    | .620 (15.7)                    |
| 12                  | 12                            | --                            | .688-24 UNEF              | 1.160 (29.46)   | .516 (13.11)    | .620 (15.7)                    |
| 14                  | 14                            | --                            | .812-20 UNEF              | 1.280 (32.51)   | .641 (16.28)    | .620 (15.7)                    |
| 16                  | 16                            | --                            | .938-20 UNEF              | 1.410 (35.81)   | .766 (19.46)    | .750 (19.1)                    |
| 18                  | 18                            | --                            | 1.062-18 UNEF             | 1.520 (38.61)   | .863 (21.92)    | .750 (19.1)                    |
| 20                  | 20                            | --                            | 1.188-18 UNEF             | 1.640 (41.66)   | .988 (25.10)    | .750 (19.1)                    |
| 22                  | 22                            | --                            | 1.312-18 UNEF             | 1.770 (44.96)   | 1.113 (28.70)   | .810 (20.6)                    |
| 24                  | 24                            | --                            | 1.438-18 UNEF             | 1.890 (48.01)   | 1.238 (31.45)   | .810 (20.6)                    |
| 09                  | --                            | A / 09                        | M12 X 1.0 - 6H            | .860 (21.84)    | .269 (6.83)     | .620 (15.7)                    |
| 11                  | --                            | B / 11                        | M15 X 1.0 - 6H            | .980 (24.89)    | .402 (10.21)    | .620 (15.7)                    |
| 13                  | --                            | C / 13                        | M18 X 1.0 - 6H            | 1.160 (29.46)   | .516 (13.11)    | .690 (17.5)                    |
| 15                  | --                            | D / 15                        | M22 X 1.0 - 6H            | 1.280 (32.51)   | .641 (16.28)    | .690 (17.5)                    |
| 17                  | --                            | E / 17                        | M25 X 1.0 - 6H            | 1.410 (35.81)   | .766 (19.46)    | .750 (19.1)                    |
| 19                  | --                            | F / 19                        | M28 X 1.0 - 6H            | 1.520 (38.61)   | .863 (21.92)    | .750 (19.1)                    |
| 21                  | --                            | G / 21                        | M31 X 1.0 - 6H            | 1.640 (41.66)   | .988 (25.10)    | .750 (19.1)                    |
| 23                  | --                            | H / 23                        | M34 X 1.0 - 6H            | 1.770 (44.96)   | 1.113 (28.70)   | .810 (20.6)                    |
| 25                  | --                            | J / 25                        | M37 X 1.0 - 6H            | 1.890 (48.01)   | 1.238 (31.45)   | .810 (20.6)                    |

# MIL-PRF-24758-21

## Adapter for MIL-DTL-22992 Connectors

A



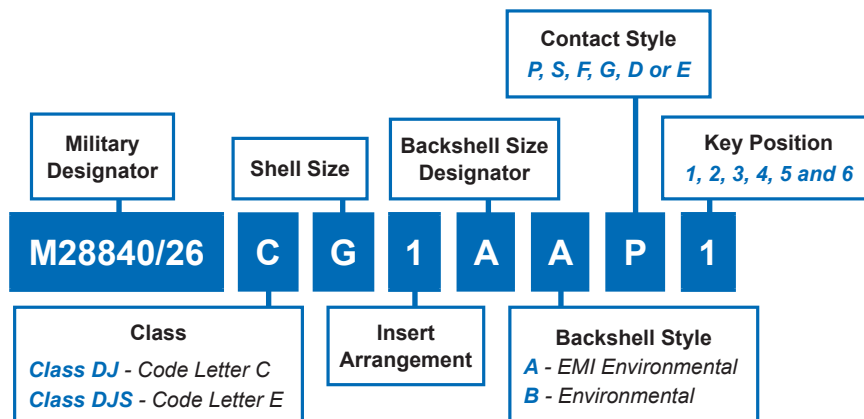
### APPLICATION NOTES

- Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
- The M24758-21 adapter couples connectors listed in table I to M24758-2, M24758-3 or M24758-4 series fittings.
- This adapter shall conform to military standard MIL-DTL-22992 connector.
- The E diameter and M thread of this drawing are included for reference purposes.
- See Glenair Circular Connector Accessories catalog for recommended torque values.
- Material / Finish:  
Adapter, coupling nut - 316 / electroless nickel, matte finish.  
O-ring - silicone rubber.
- Metric dimensions (mm) are indicated in parentheses.

**M28840/26**  
**Plug Connector**  
**with Straight EMI/RFI Backshell**



MIL-DTL-  
28840

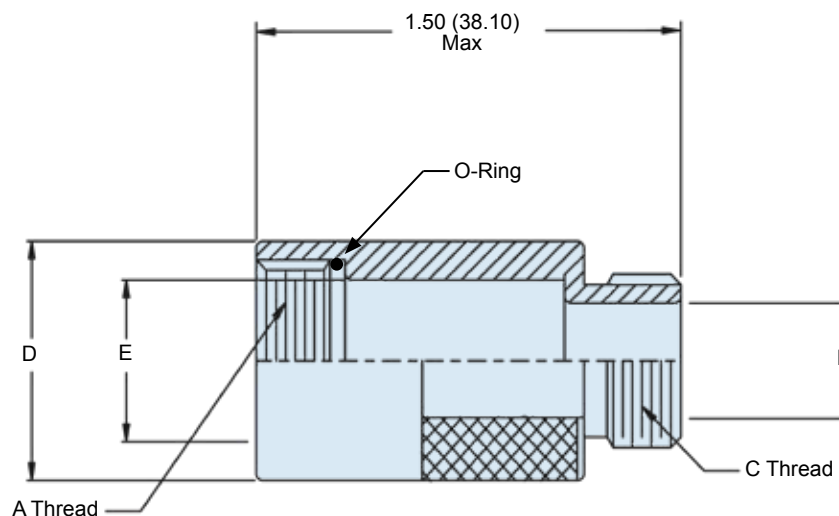
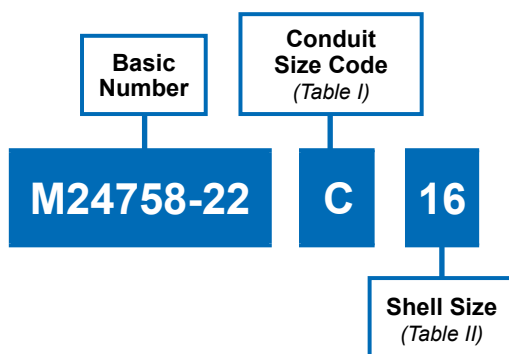


**B**

| Military Shell Size | Shell Size | A Thread Class 2B | Backshell Size Designator | A Cable Entry |        | E Max. | L Max. |
|---------------------|------------|-------------------|---------------------------|---------------|--------|--------|--------|
|                     |            |                   |                           | Open          | Closed |        |        |
| A                   | 11         | .750-1P-.2L-DS    | A                         | .312          | .188   | .938   | 6.500  |
|                     |            |                   | B                         | .438          | .281   | 1.125  |        |
|                     |            |                   | C                         | .562          | .344   | 1.312  |        |
| B                   | 13         | .875-1P-.2L-DS    | A                         | .312          | .188   | .938   | 7.000  |
|                     |            |                   | B                         | .438          | .281   | 1.125  |        |
|                     |            |                   | C                         | .562          | .344   | 1.312  |        |
| C                   | 15         | 1.062-1P-.2L-DS   | D                         | .652          | .375   | 1.312  | 7.000  |
|                     |            |                   | A                         | .438          | .281   | 1.125  |        |
|                     |            |                   | B                         | .562          | .344   | 1.312  |        |
|                     |            |                   | C                         | .625          | .375   | 1.312  |        |
|                     |            |                   | D                         | .750          | .438   | 1.593  |        |
| D                   | 17         | 1.125-1P-.2L-DS   | E                         | .312          | .188   | .938   | 7.500  |
|                     |            |                   | A                         | .625          | .375   | 1.312  |        |
|                     |            |                   | B                         | .750          | .438   | 1.593  |        |
| E                   | 19         | 1.312-1P-.2L-DS   | C                         | .938          | .625   | 1.750  | 7.625  |
|                     |            |                   | A                         | .625          | .375   | 1.312  |        |
|                     |            |                   | B                         | .938          | .625   | 1.750  |        |
| F                   | 23         | 1.500-1P-.2L-DS   | A                         | .750          | .438   | 1.593  | 7.812  |
|                     |            |                   | B                         | .938          | .625   | 1.750  |        |
|                     |            |                   | C                         | 1.188         | .812   | 2.093  |        |
| G                   | 25         | 1.625-1P-.2L-DS   | A                         | .938          | .625   | 1.750  | 8.312  |
|                     |            |                   | B                         | 1.188         | .812   | 2.093  |        |
|                     |            |                   | C                         | 1.250         | .875   | 2.093  |        |
|                     |            |                   | D                         | 1.380         | 1.000  | 2.343  |        |
| H                   | 29         | 1.812-1P-.2L-DS   | A                         | 1.188         | .812   | 2.093  | 8.625  |
|                     |            |                   | B                         | 1.380         | 1.000  | 2.343  |        |
| J                   | 33         | 2.000-1P-.2L-DS   | A                         | 1.380         | 1.000  | 2.343  | 8.625  |
|                     |            |                   | B                         | 1.625         | 1.250  | 2.750  |        |

# MIL-PRF-24758-22 For Glenair 22 Series Adapters

A



## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-22 adapter couples Glenair series 22 connectors to M24758-2, M24758-3 or M24758-4 series fittings.
3. See Glenair Circular Connector Accessories catalog for recommended torque values.
4. **Material / Finish:**  
Adapter, coupling nut - 316 / electroless nickel, matte finish.  
O-ring - silicone rubber.
5. Metric dimensions (mm) are indicated in parentheses.

**MIL-PRF-24758-22**  
For Glenair 22 Series Adapters



MIL-PRF  
24758A

A

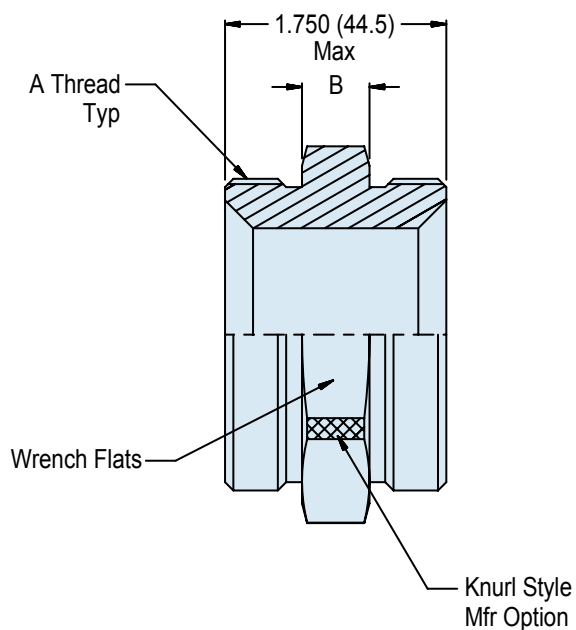
**TABLE I**

| CONDUIT<br>SIZE CODE | C<br>CLASS - 2A<br>THREAD | K<br>DIA<br>MIN |
|----------------------|---------------------------|-----------------|
| A                    | .438-28 UNEF              | .245 (6.22)     |
| B                    | .688-24 UNEF              | .495 (12.57)    |
| C                    | .938-20 UNEF              | .745 (18.92)    |
| D                    | 1.250-18 UNEF             | .995 (25.27)    |
| E                    | 1.563-18 UNEF             | 1.245 (31.62)   |
| F                    | 1.875-16 UN               | 1.495 (37.97)   |
| G                    | 2.375-16 UN               | 1.995 (50.67)   |
| H                    | 2.875-16 UN               | 2.495 (63.37)   |
| J                    | .563-24 UNEF              | .370 (9.40)     |
| K                    | .813-20 UNEF              | .620 (15.75)    |
| L                    | 3.375-16 UN               | 2.995 (76.07)   |

**TABLE II**

| CONN<br>SHELL<br>SIZE | A<br>CLASS - 2B<br>THREAD | D<br>DIA<br>± .02 (0.5) | E<br>DIA<br>REF |
|-----------------------|---------------------------|-------------------------|-----------------|
| 10                    | .625-24 UNEF              | .750 (19.05)            | .430 (10.92)    |
| 12                    | .750-20 UNEF              | .875 (22.23)            | .540 (13.72)    |
| 14                    | .875-20 UNEF              | 1.000 (25.40)           | .660 (16.76)    |
| 16                    | 1.000-20 UNEF             | 1.125 (28.58)           | .790 (20.07)    |
| 18                    | 1.125-16 UN               | 1.250 (31.75)           | .880 (22.35)    |
| 20                    | 1.250-16 UN               | 1.375 (34.93)           | 1.000 (25.40)   |
| 22                    | 1.375-16 UN               | 1.500 (38.10)           | 1.130 (28.70)   |
| 24                    | 1.500-16 UN               | 1.625 (41.28)           | 1.250 (31.75)   |

A

**Basic  
Number**
**M24758-23**
**Conduit  
Size Code**  
*(Table I)*
**C**

**TABLE I**

| CONDUIT<br>SIZE CODE | C<br>CLASS - 2A<br>THREAD | B<br>± .06 (1.52)<br>DIM |
|----------------------|---------------------------|--------------------------|
| A                    | .438-28 UNEF              | .500 (12.70)             |
| B                    | .688-24 UNEF              | .560 (14.22)             |
| C                    | .938-20 UNEF              | .620 (15.75)             |
| D                    | 1.250-18 UNEF             | .620 (15.75)             |
| E                    | 1.563-18 UNEF             | .680 (17.27)             |
| F                    | 1.875-16 UN               | .680 (17.27)             |
| G                    | 2.375-16 UN               | .750 (19.05)             |
| H                    | 2.875-16 UN               | .750 (19.05)             |
| J                    | .563-24 UNEF              | .500 (12.70)             |
| K                    | .813-20 UNEF              | .560 (14.22)             |
| L                    | 3.375-16 UN               | .750 (19.05)             |

**APPLICATION NOTES**

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-23 union fitting couples to Glenair M24758-2, M24758-3 or M24758-4 series fittings.
3. See Glenair Circular Connector Accessories catalog for recommended torque values.
4. Material / Finish:  
Adapter, coupling nut - 316 / electroless nickel, matte finish.
5. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-24 Individual Termination Adapter



MIL-PRF  
24758A

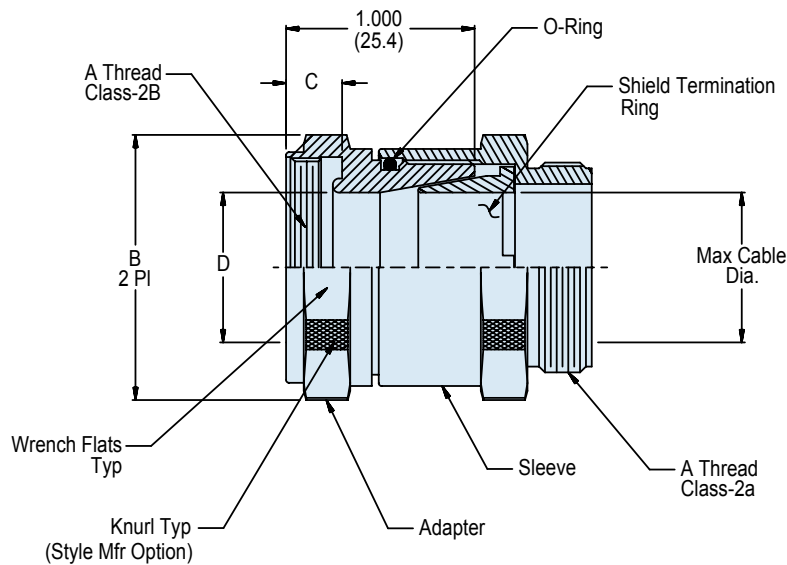
A

Basic  
Number

Conduit  
Size Code  
(Table I)

**M24758-24**

**C**

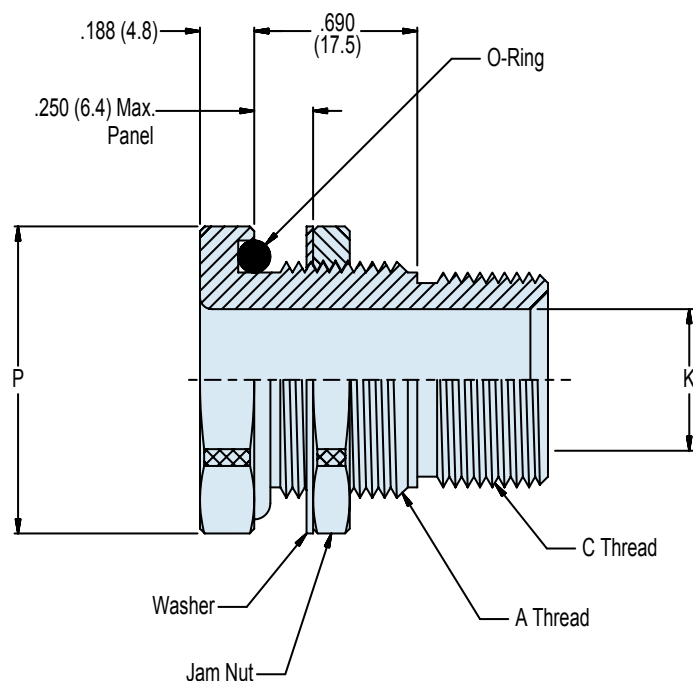


## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The function of the M24758-24 fitting is to couple with M24758-9 through M24758-23 fittings, terminate individual cable shields and to provide a standard thread for attaching all M24758-2, M24758-3 or M24758-4 fittings.
3. See Glenair Circular Connector Accessories catalog for recommended torque values.
4. Material / Finish:  
Adapter, coupling nut - 316 / electroless nickel, matte finish.  
O-Ring - silicone rubber/N.A.
5. Metric dimensions (mm) are indicated in parentheses.

TABLE I

| CONDUIT<br>SIZE CODE | A<br>CLASS - 2*<br>THREAD | D<br>DIA<br>MAX | C<br>+.00<br>-.03 (0.8) | B<br>DIA<br>MIN | MAX<br>CABLE<br>DIA |
|----------------------|---------------------------|-----------------|-------------------------|-----------------|---------------------|
| A                    | .438-28 UNEF              | .880 (22.35)    | .250 (5.21)             | .245 (6.22)     | .220 (5.59)         |
| B                    | .688-24 UNEF              | 1.130 (28.70)   | .245 (6.22)             | .495 (12.57)    | .445 (11.30)        |
| C                    | .938-20 UNEF              | 1.380 (35.05)   | .305 (7.75)             | .745 (18.92)    | .670 (17.02)        |
| D                    | 1.250-18 UNEF             | 1.620 (41.15)   | .350 (8.89)             | 1.015 (25.78)   | .895 (22.73)        |
| E                    | 1.563-18 UNEF             | 2.000 (50.80)   | .365 (9.27)             | 1.245 (31.62)   | 1.120 (28.45)       |
| F                    | 1.875-16 UN               | 2.310 (58.67)   | .425 (10.80)            | 1.495 (37.97)   | 1.345 (34.16)       |
| G                    | 2.375-16 UN               | 2.940 (74.68)   | .425 (10.80)            | 1.995 (50.67)   | 1.795 (45.59)       |
| H                    | 2.875-16 UN               | 3.440 (87.38)   | .425 (10.80)            | 2.495 (63.37)   | 2.245 (57.02)       |
| J                    | .563-24 UNEF              | .940 (23.88)    | .245 (6.22)             | .370 (9.40)     | .333 (8.46)         |
| K                    | .813-20 UNEF              | 1.190 (30.23)   | .305 (7.75)             | .620 (15.75)    | 0.558 (14.17)       |
| L                    | 3.375-16 UN               | 3.940 (100.08)  | .425 (10.80)            | 2.995 (76.07)   | 2.695 (68.45)       |

**Basic  
Number****M24758-25****Conduit  
Size Code**  
(Table I)**C****APPLICATION NOTES**

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The function of the M24758-25 provides the capability of terminating a M24758-2, M24758-3 or M24758-4 series fittings to a panel.
3. Material / Finish:  
Adapter, jam nut, washer - 316 SST / electroless nickel, matte finish.  
O-Ring - silicone rubber / N.A.
4. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-25 Adapter for Panel Termination



MIL-PRF  
24758A

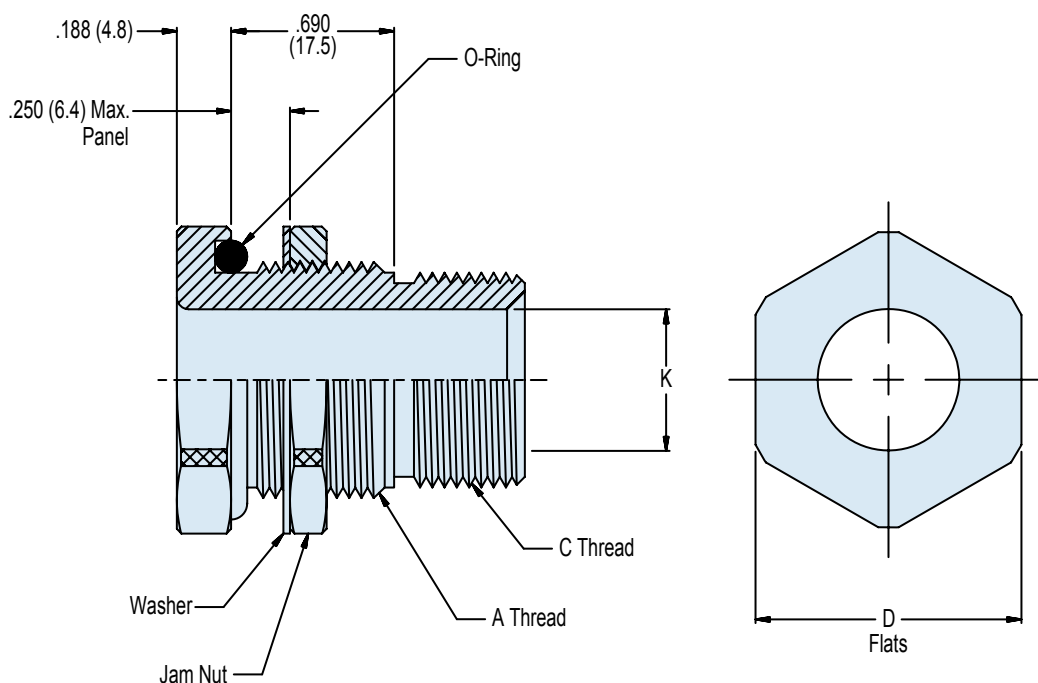
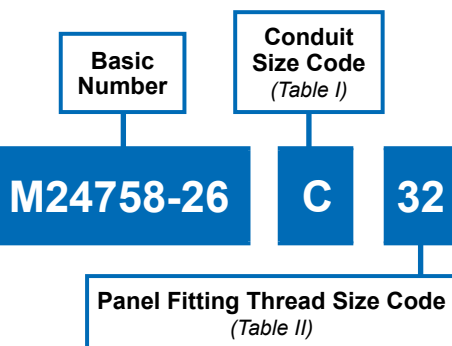
A

| TABLE I              |                           |                |                           |                 |
|----------------------|---------------------------|----------------|---------------------------|-----------------|
| CONDUIT<br>SIZE CODE | A<br>CLASS - 2A<br>THREAD | P<br>DIA       | C<br>CLASS - 2A<br>THREAD | K<br>DIA<br>MIN |
| A                    | .625-24 UNEF              | 1.000 (25.40)  | .438-28 UNEF              | .245 (6.22)     |
| B                    | .875-20 UNEF              | 1.250 (31.75)  | .688-24 UNEF              | .495 (12.57)    |
| C                    | 1.188-18 UNEF             | 1.562 (39.67)  | .938-20 UNEF              | .745 (18.92)    |
| D                    | 1.438-18 UNEF             | 1.812 (46.02)  | 1.250-18 UNEF             | .995 (25.27)    |
| E                    | 1.750-16 UN               | 2.125 (53.98)  | 1.563-18 UNEF             | 1.245 (31.62)   |
| F                    | 2.000-16 UN               | 2.375 (60.33)  | 1.875-16 UN               | 1.495 (37.97)   |
| G                    | 2.500-16 UN               | 2.875 (73.03)  | 2.375-16 UN               | 1.995 (50.67)   |
| H                    | 3.000-16 UN               | 3.375 (85.73)  | 2.875-16 UN               | 2.495 (63.37)   |
| J                    | .750-20 UNEF              | 1.125 (28.58)  | .563-24 UNEF              | .370 (9.40)     |
| K                    | 1.000-20 UNEF             | 1.500 (38.10)  | .813-20 UNEF              | .620 (15.75)    |
| L                    | 3.500-16 UN               | 4.375 (111.13) | 3.375-16 UN               | 2.995 (76.07)   |

**NOTE:** Panel Cut-Out is +.016 (0.41) -.000 over A Thread Size.

# MIL-PRF-24758-26 Adapter for Panel Termination

A



## APPLICATION NOTES

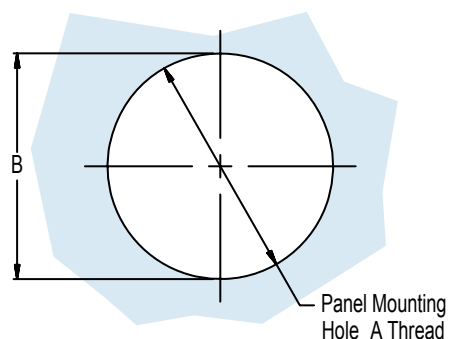
1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-26 adapter provides the capability of terminating a M24758-2, M24758-3 or M24758-4 fitting to a panel.
3. Material / Finish:  
Adapter, coupling nut - 316 / electroless nickel, matte finish
4. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-26 Adapter for Panel Termination



MIL-PRF  
24758A

A



## Panel Cut-Out

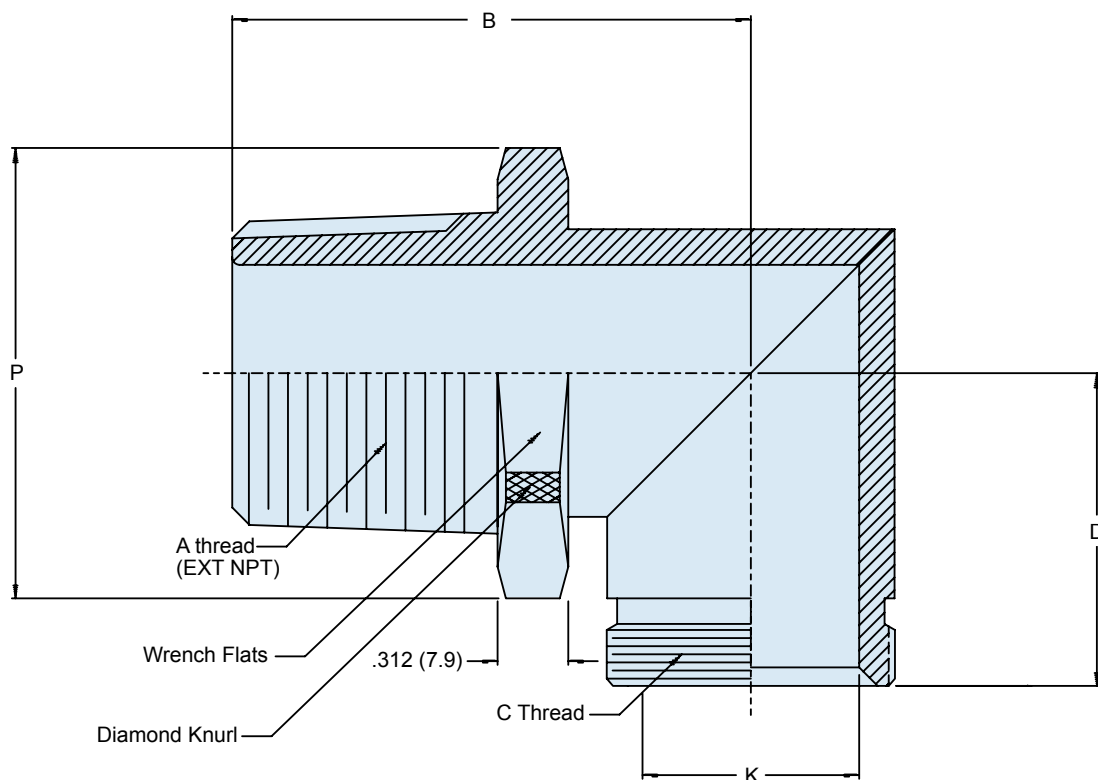
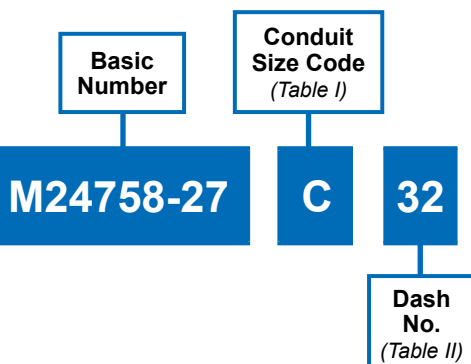
**NOTE:** Panel Cut-Out is  $+0.016$  (0.41)  $-0.000$  over A Thread Size.

TABLE I

| CONDUIT<br>SIZE<br>CODE | C<br>CLASS - 2A<br>THREAD | K<br>DIA<br>MIN |
|-------------------------|---------------------------|-----------------|
| A                       | .438-28 UNEF              | .245 (6.22)     |
| B                       | .688-24 UNEF              | .495 (12.57)    |
| C                       | .938-20 UNEF              | .745 (18.92)    |
| D                       | 1.250-18 UNEF             | .995 (25.27)    |
| E                       | 1.563-18 UNEF             | 1.245 (31.62)   |
| F                       | 1.875-16 UN               | 1.495 (37.97)   |
| G                       | 2.375-16 UN               | 1.995 (50.67)   |
| H                       | 2.875-16 UN               | 2.495 (63.37)   |
| J                       | .563-24 UNEF              | .370 (9.40)     |
| K                       | .813-20 UNEF              | .620 (15.75)    |
| L                       | 3.375-16 UN               | 2.995 (76.07)   |

TABLE II

| DASH<br>NO | A<br>CLASS - 2A<br>THREAD | B<br>$+0.03$ (0.8)<br>$-0.00$ | D<br>FLATS   | MAX<br>SIZE CODE<br>(TABLE I) |
|------------|---------------------------|-------------------------------|--------------|-------------------------------|
| 20         | 5/8-24 UNEF               | .630 (16.0)                   | .875 (22.2)  | A & J                         |
| 24         | 3/4-20 UNEF               | .750 (19.1)                   | 1.000 (25.4) | B                             |
| 28         | 7/8-20 UNEF               | .880 (22.4)                   | 1.125 (28.6) | B & K                         |
| 32         | 1-20 UNEF                 | 1.000 (25.4)                  | 1.250 (31.8) | C                             |
| 36         | 1 1/8-18 UNEF             | 1.130 (28.7)                  | 1.375 (34.9) | C                             |
| 40         | 1 1/4-18 UNEF             | 1.250 (31.8)                  | 1.500 (38.1) | D                             |
| 42         | 1 5/16-18 UNEF            | 1.310 (33.3)                  | 1.625 (41.3) | D                             |
| 48         | 1 1/2-18 UNEF             | 1.500 (38.1)                  | 1.750 (44.5) | D                             |
| 56         | 1 3/4-16 UN               | 1.750 (55.5)                  | 2.000 (50.8) | E                             |
| 64         | 2-16 UN                   | 2.000 (50.8)                  | 2.250 (57.2) | F                             |

**MIL-PRF-24758-27**  
**90° Adapter for Tapered Pipe Thread****A****APPLICATION NOTES**

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-27 adapter couples any fittings having a female tapered pipe thread to M24758-2, M24758-3 or M24758-4 fittings.
3. Material / Finish:  
Elbow - 316 / electroless nickel, matte finish
4. Metric dimensions (mm) are indicated in parentheses.

**MIL-PRF-24758-27**  
**90° Adapter for Tapered Pipe Thread**



**MIL-PRF  
24758A**

**A**

**TABLE I: CONDUIT SIZE CODE**

| CONDUIT<br>SIZE<br>CODE | C<br>CLASS - 2A<br>THREAD | D<br>DIM    | K<br>DIA<br>MIN | MAX<br>ENTRY<br>DASH NO. |
|-------------------------|---------------------------|-------------|-----------------|--------------------------|
| B                       | .688-24 UNEF              | .890 (22.6) | .495 (12.57)    | 03                       |

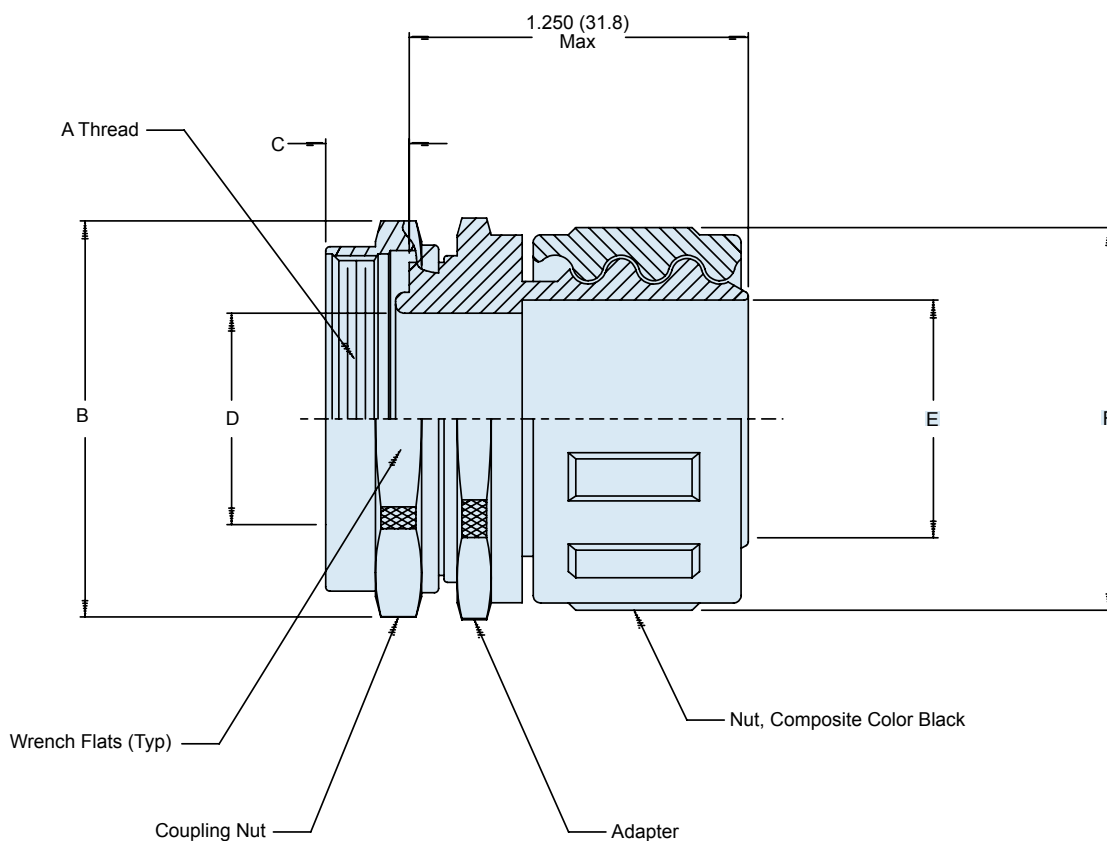
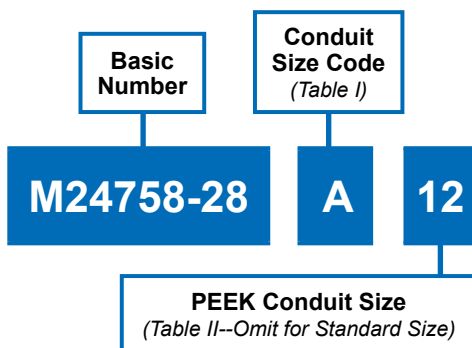
**TABLE II: DASH NUMBER**

| DASH<br>NO | A<br>EXTERNAL<br>TAPER<br>PIPE THREAD | B<br>DIM     | P<br>MAX<br>DIA |
|------------|---------------------------------------|--------------|-----------------|
| 03         | .500-14 NPT                           | 1.570 (39.9) | 1.250 (31.8)    |

# MIL-PRF-24758-28

## Straight Conduit Fitting to PEEK Conduit

A



### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The function of the M24758-28 fitting is to terminate A-A-59827 PEEK conduit and to provide a standard thread for attaching M24758-15 and -25 fittings.
3. Material / Finish:  
Adapter, coupling nut - 316 / electroless nickel, matte finish  
Conduit nut - Ultem 7301, black
4. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-28 Straight Conduit Fitting to PEEK Conduit



MIL-PRF  
24758A

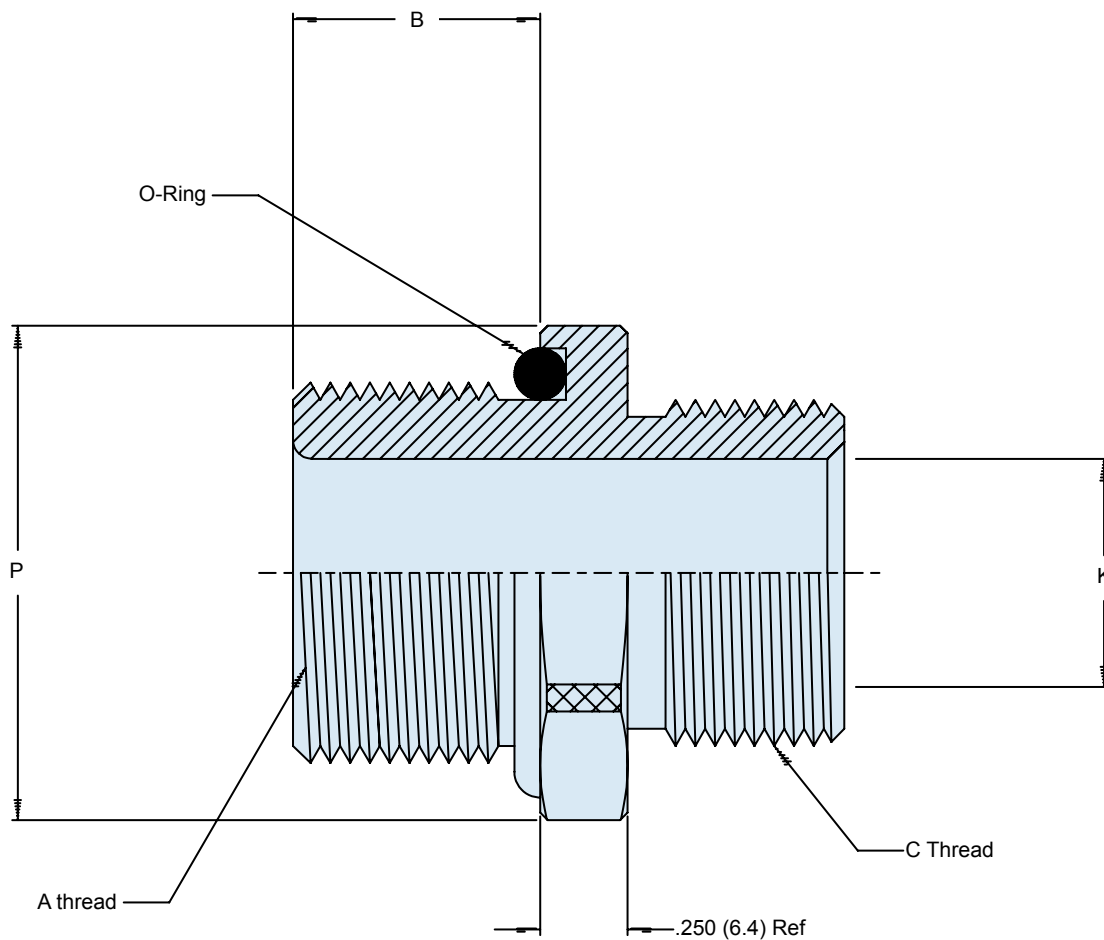
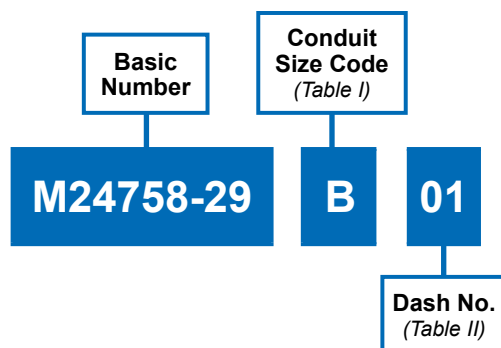
A

**TABLE I: CONDUIT SIZE CODE**

| CONDUIT<br>SIZE<br>CODE | A<br>CLASS - 2B<br>THREAD | B<br>MAX<br>DIA | C<br>+00<br>-.03 (0.8) | D<br>MIN<br>DIA | STANDARD<br>SIZE<br>CONDUIT |
|-------------------------|---------------------------|-----------------|------------------------|-----------------|-----------------------------|
| A                       | .438-28 UNEF              | .880 (22.4)     | .205 (5.2)             | .245 (6.2)      | 09                          |
| B                       | .688-24 UNEF              | 1.130 (28.7)    | .245 (6.2)             | .495 (12.6)     | 12                          |
| C                       | .938-20 UNEF              | 1.380 (35.1)    | .305 (7.7)             | .745 (18.9)     | 24                          |
| D                       | 1.250-18 UNEF             | 1.690 (42.9)    | .365 (9.3)             | .995 (25.3)     | 32                          |
| E                       | 1.563-18 UNEF             | 2.000 (50.8)    | .365 (9.3)             | 1.245 (31.6)    | 40                          |
| F                       | 1.875-16 UN               | 2.310 (58.7)    | .425 (10.8)            | 1.495 (38.0)    | 48                          |
| G                       | 2.375-16 UN               | 2.940 (74.7)    | .425 (10.8)            | 1.995 (50.7)    | 64                          |
| H                       | 2.875-16 UN               | 3.440 (87.4)    | .425 (10.8)            | 2.495 (63.4)    | N/A                         |
| J                       | .563-24 UNEF              | .940 (23.9)     | .245 (6.2)             | .370 (9.4)      | 16                          |
| K                       | .813-20 UNEF              | 1.190 (30.2)    | .305 (7.7)             | .620 (15.7)     | 20                          |
| L                       | 3.375-16 UN               | 3.940 (100.1)   | .425 (10.8)            | 2.995 (76.1)    | N/A                         |

**TABLE II: PEEK CONDUIT SIZE**

| PEEK<br>CONDUIT<br>SIZE<br>CODE | E            | F<br>MAX     |
|---------------------------------|--------------|--------------|
| 09                              | .210 (5.3)   | .640 (16.3)  |
| 12                              | .320 (8.1)   | .760 (19.3)  |
| 14                              | .360 (9.1)   | .830 (21.1)  |
| 16                              | .420 (10.7)  | .890 (22.6)  |
| 20                              | .550 (14.0)  | 1.020 (25.9) |
| 24                              | .680 (17.3)  | 1.200 (30.5) |
| 28                              | .790 (20.1)  | 1.300 (33.0) |
| 32                              | .910 (23.1)  | 1.390 (35.3) |
| 40                              | 1.160 (29.5) | 1.730 (43.9) |
| 48                              | 1.410 (35.8) | 1.970 (50.0) |

**MIL-PRF-24758-29**  
**Adapter for Miscellaneous Termination****A**

**MIL-PRF-24758-29**  
**Adapter for Miscellaneous Termination**



**MIL-PRF  
24758A**

**A**

**TABLE I: CONDUIT  
SIZE CODE**

| CONDUIT<br>SIZE<br>CODE | C<br>CLASS - 2A<br>THREAD | K<br>DIA<br>MIN |
|-------------------------|---------------------------|-----------------|
| B                       | .688-24 UNEF              | .495 (12.57)    |
| C                       | .938-20 UNEF              | .745 (18.9)     |

**TABLE II: DASH NUMBER**

| DASH<br>NO | A<br>CLASS -2A<br>THREAD | B<br>DIM    | P<br>MAX<br>DIA |
|------------|--------------------------|-------------|-----------------|
| 01         | .875-18 UNS              | .250 (6.35) | 1.280 (32.5)    |

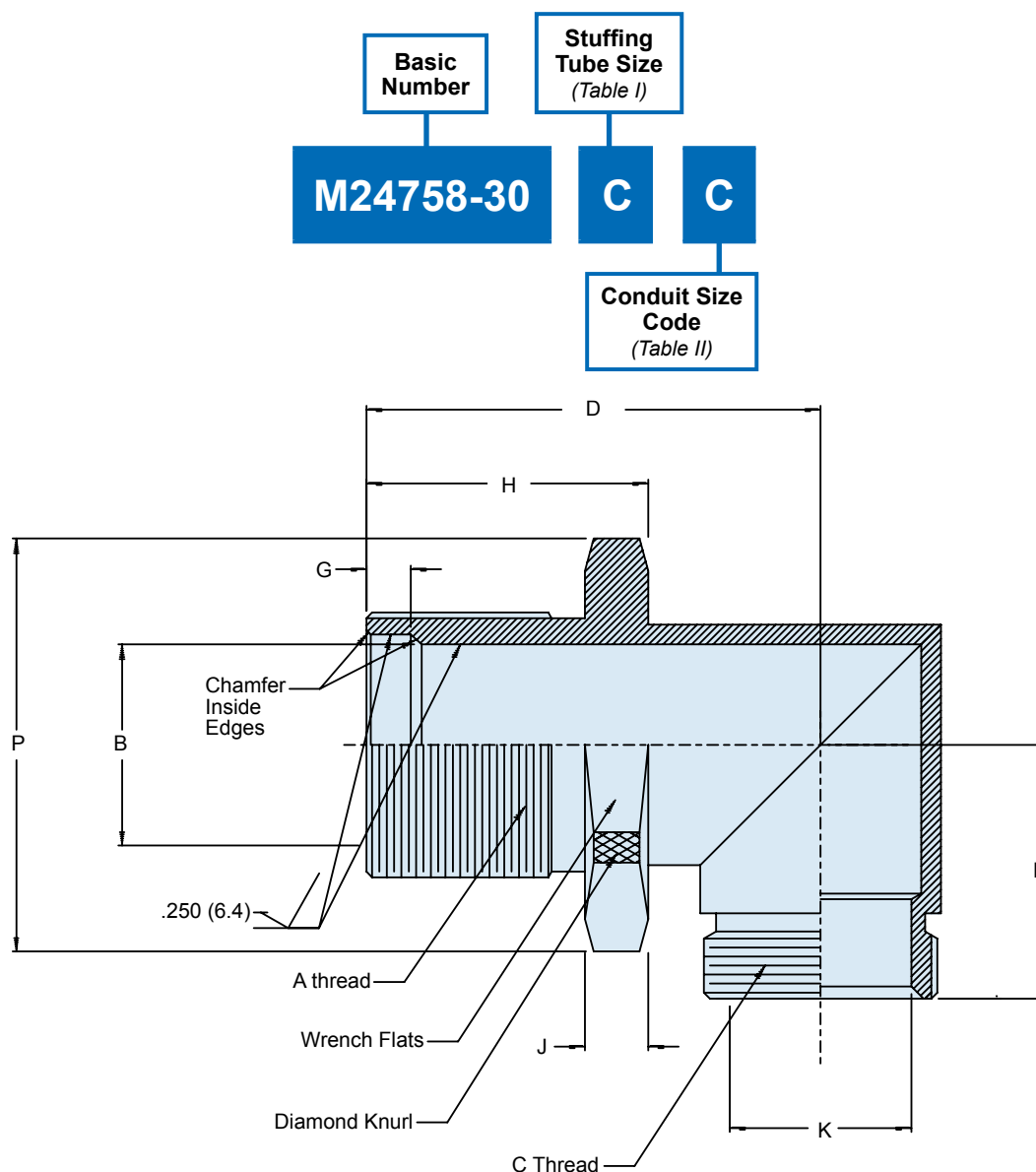
**APPLICATION NOTES**

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-29 mates with the Amphenol RJF (Ethernet) connector (replace rear nut with this fitting).
3. Material / Finish:  
Adapter - 316 / electroless nickel, matte finish  
O-Ring - silicone rubber / N.A.
4. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-30

## 90° Elbow for MIL-S-24235 Stuffing Tubes

A



### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-30 adapter couples MIL-S-24235/9 through MIL-S-24235/17 stuffing tubes to M24758-2, M24758-3 or M24758-4 fittings.
3. Material / Finish:  
Adapter - 316/Electroless nickel, matte finish
4. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-30

## 90° Elbow for MIL-S-24235 Stuffing Tubes



MIL-PRF  
24758A

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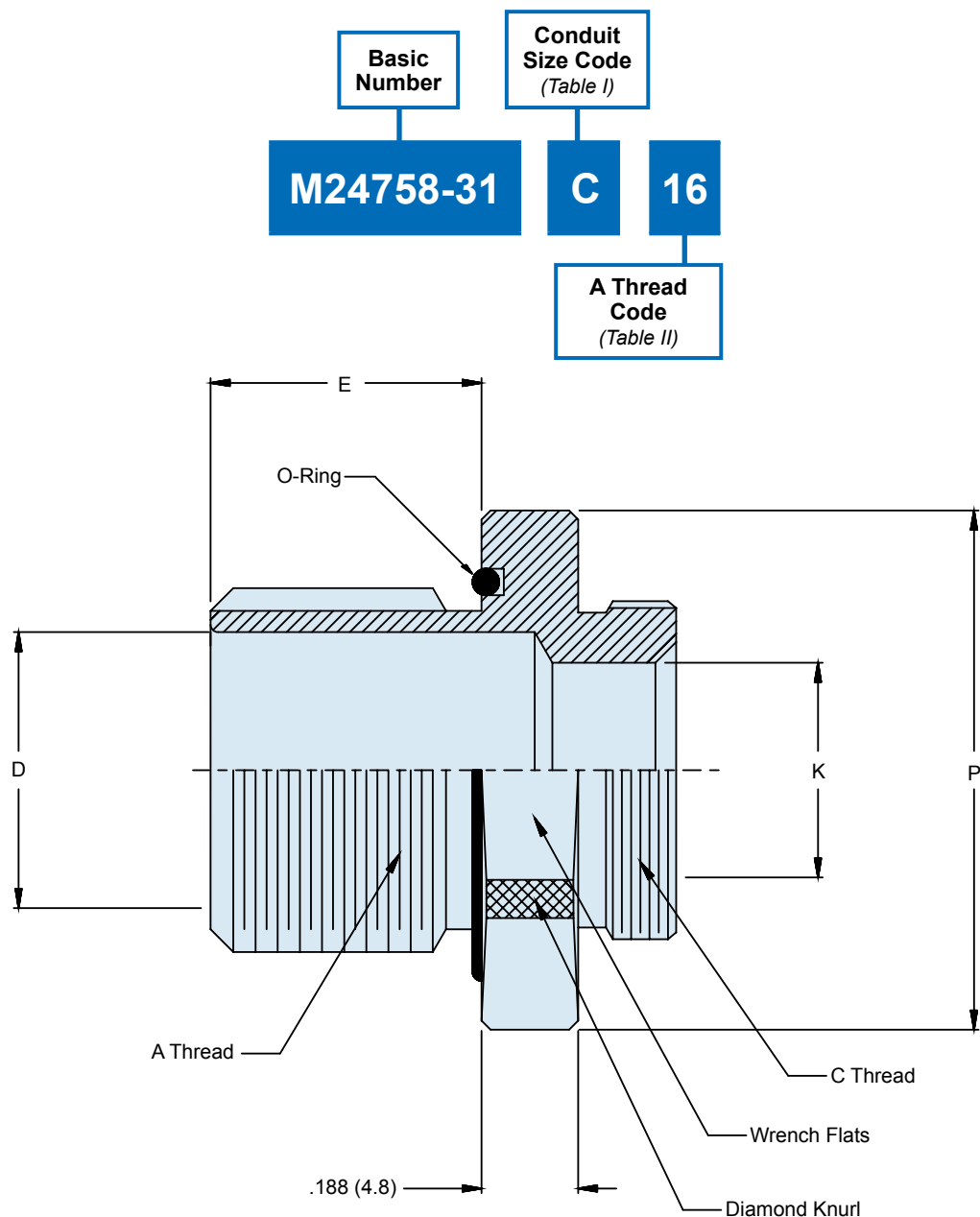
TABLE I: STUFFING TUBE SIZE

| MIL-S-24235/9, /17<br>STUFFING<br>TUBE SIZE | CONDUIT<br>SIZE<br>CODE | A<br>CLASS -2A<br>THREAD | B<br>DIA     | D<br>MAX     | E<br>MAX     | G<br>DIM   | H<br>±.02 (0.5) | J<br>±.02 (0.5) | P<br>DIA<br>MIN |
|---------------------------------------------|-------------------------|--------------------------|--------------|--------------|--------------|------------|-----------------|-----------------|-----------------|
| A                                           | B, J                    | .875-12 UN               | .406 (10.3)  |              |              | .250 (6.4) | 1.063 (27.0)    | .188 (4.8)      | 1.375 (34.9)    |
| B                                           | B, K                    | 1.000-12 UN              | .515 (13.1)  | 1.780 (45.2) | .950 (24.1)  | .250 (6.4) | 1.063 (27.0)    | .188 (4.8)      | 1.500 (38.1)    |
| C                                           | C, K                    | 1.125-12 UN              | .640 (16.3)  |              |              | .250 (6.4) | 1.063 (27.0)    | .188 (4.8)      | 1.625 (41.3)    |
| D                                           | C, D                    | 1.250-12 UN              | .750 (19.1)  | 1.920 (48.8) | 1.200 (30.5) | .250 (6.4) | 1.063 (27.0)    | .188 (4.8)      | 1.750 (44.5)    |
| E                                           | C, D                    | 1.250-12 UN              | .812 (20.6)  |              |              | .250 (6.4) | 1.063 (27.0)    | .188 (4.8)      | 1.750 (44.5)    |
| F                                           | D                       | 1.313-12 UN              | .843 (21.4)  |              |              | .250 (6.4) | 1.188 (30.2)    | .188 (4.8)      | 1.812 (46.0)    |
| G                                           | D                       | 1.500-12 UN              | .935 (23.7)  |              |              | .250 (6.4) | 1.188 (30.2)    | .188 (4.8)      | 2.000 (50.8)    |
| J                                           | D, E                    | 1.625-12 UN              | 1.062 (27.0) |              |              | .250 (6.4) | 1.188 (30.2)    | .188 (4.8)      | 2.125 (54.0)    |
| K                                           | E                       | 1.750-12 UN              | 1.171 (29.7) |              |              | .250 (6.4) | 1.500 (38.1)    | .188 (4.8)      | 2.250 (57.2)    |
| L                                           | E                       | 1.813-12 UN              | 1.265 (32.1) |              |              | .250 (6.4) | 1.500 (38.1)    | .188 (4.8)      | 2.312 (58.7)    |
| M                                           | F                       | 2.000-12 UN              | 1.406 (35.7) |              |              | .250 (6.4) | 1.500 (38.1)    | .188 (4.8)      | 2.500 (63.5)    |
| N                                           | F                       | 2.063-12 UN              | 1.515 (38.5) |              |              | .250 (6.4) | 1.563 (39.7)    | .250 (6.4)      | 2.625 (66.7)    |
| P                                           | G                       | 2.188-12 UN              | 1.625 (41.3) |              |              | .250 (6.4) | 1.563 (39.7)    | .250 (6.4)      | 2.750 (69.9)    |
| R                                           | G                       | 2.313-12 UN              | 1.750 (44.5) |              |              | .250 (6.4) | 1.563 (39.7)    | .250 (6.4)      | 2.875 (73.0)    |
| S                                           | G                       | 2.688-12 UN              | 1.875 (47.6) |              |              | .375 (9.5) | 2.188 (55.6)    | .313 (8.0)      | 3.250 (82.6)    |
| T                                           | G                       | 2.875-12 UN              | 2.062 (52.4) |              |              | .375 (9.5) | 2.188 (55.6)    | .313 (8.0)      | 3.500 (88.9)    |
| V                                           | G, H                    | 3.000-12 UN              | 2.187 (55.5) |              |              | .375 (9.5) | 2.188 (55.6)    | .313 (8.0)      | 3.625 (92.1)    |
| W                                           | H                       | 3.125-12 UN              | 2.312 (58.7) |              |              | .375 (9.5) | 2.188 (55.6)    | .313 (8.0)      | 3.750 (95.3)    |
| X                                           | H                       | 3.250-12 UN              | 2.500 (63.5) |              |              | .375 (9.5) | 2.188 (55.6)    | .313 (8.0)      | 3.875 (98.4)    |
| Y                                           | H                       | 3.375-12 UN              | 2.609 (66.3) |              |              | .375 (9.5) | 2.188 (55.6)    | .313 (8.0)      | 4.000 (101.6)   |
| Z                                           | L                       | 3.563-12 UN              | 2.781 (70.6) |              |              | .375 (9.5) | 2.188 (55.6)    | .313 (8.0)      | 4.250 (108.0)   |
| AA                                          | L                       | 3.750-12 UN              | 2.875 (73.0) |              |              | .375 (9.5) | 3.125 (79.4)    | .438 (12.3)     | 4.500 (114.3)   |
| BB                                          | L                       | 4.000-12 UN              | 3.157 (80.2) |              |              | .375 (9.5) | 3.125 (79.4)    | .438 (12.3)     | 4.750 (120.7)   |

TABLE II: CONDUIT SIZE CODE

| CONDUIT<br>SIZE<br>CODE | C<br>CLASS -2A<br>THREAD | K<br>DIA<br>MIN |
|-------------------------|--------------------------|-----------------|
| A                       | .438-28 UNEF             | .245 (6.2)      |
| B                       | .688-24 UNEF             | .495 (12.6)     |
| C                       | .938-24 UNEF             | .745 (18.9)     |
| D                       | 1.250-18 UNEF            | .995 (25.3)     |
| E                       | 1.563-18 UNEF            | 1.245 (31.6)    |
| F                       | 1.875-16 UN              | 1.495 (38.0)    |
| G                       | 2.375-16 UN              | 1.995 (50.7)    |
| H                       | 2.875-16 UN              | 2.495 (63.4)    |
| J                       | .563-24 UNEF             | .370 (9.4)      |
| K                       | .813-20 UNEF             | .620 (15.7)     |
| L                       | 3.375-16 UN              | 2.995 (76.1)    |

A



### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-31 adapter couples miscellaneous fittings to M24758-2, M24758-3 or M24758-4 fittings.
3. Material / Finish:  
Adapter - 316 SST/Electroless nickel, matte finish.  
O-Ring - Silicone rubber/NA
4. Metric dimensions (mm) are indicated in parentheses.

**MIL-PRF-24758-31**  
**Adapter for PG Thread**



MIL-PRF  
24758A

A

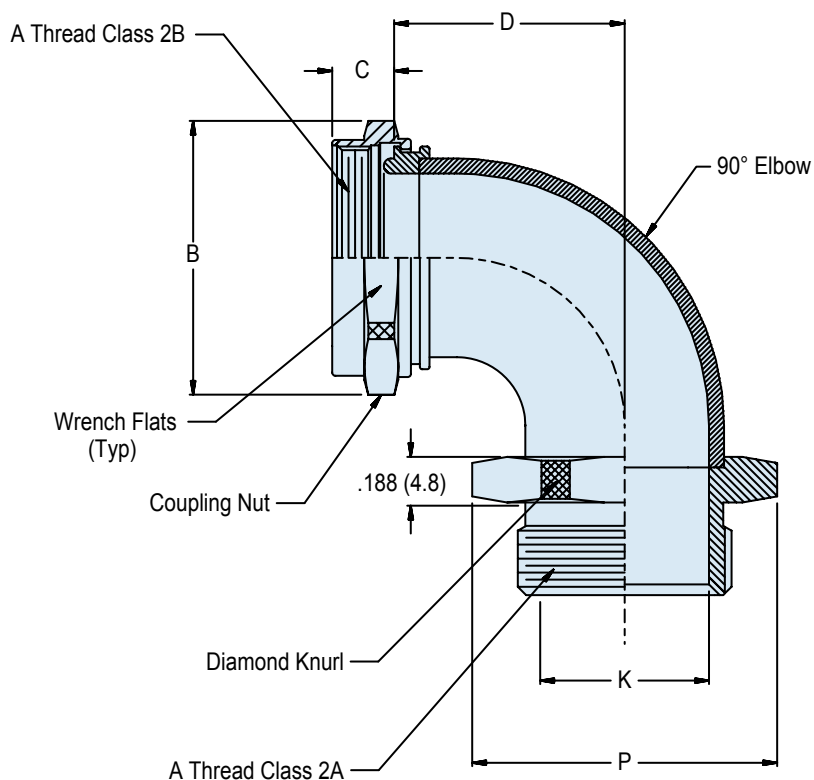
**TABLE I: CONDUIT SIZE CODE**

| CONDUIT<br>SIZE<br>CODE | C<br>CLASS - 2A<br>THREAD | K<br>DIA<br>MIN |
|-------------------------|---------------------------|-----------------|
| A                       | .438-28 UNEF              | .245 (6.22)     |
| B                       | .688-24 UNEF              | .495 (12.57)    |
| C                       | .938-20 UNEF              | .745 (18.92)    |
| D                       | 1.250-18 UNEF             | .995 (25.27)    |
| E                       | 1.563-18 UNEF             | 1.245 (31.62)   |
| F                       | 1.875-16 UN               | 1.495 (37.97)   |
| G                       | 2.375-16 UN               | 1.995 (50.67)   |
| H                       | 2.875-16 UN               | 2.495 (63.37)   |
| J                       | .563-24 UNEF              | .370 (9.40)     |
| K                       | .813-20 UNEF              | .620 (15.75)    |
| L                       | 3.375-16 UN               | 2.995 (76.07)   |

**TABLE II: A THREAD CODE**

| A<br>THREAD<br>CODE | A<br>PG<br>THREAD | D<br>DIA     | H<br>DIM   | P<br>DIM<br>MAX | CONDUIT<br>SIZE |
|---------------------|-------------------|--------------|------------|-----------------|-----------------|
| 07                  | PG 7-20           | .315 (8.0)   | .275 (7.0) | 1.000 (25.4)    | A, J            |
| 09                  | PG 9-18           | .375 (9.5)   | .275 (7.0) | 1.130 (28.7)    | B, J            |
| 11                  | PG 11-18          | .520 (13.2)  | .275 (7.0) | 1.250 (31.8)    | B, K            |
| 13                  | PG 13.5-18        | .600 (15.2)  | .275 (7.0) | 1.250 (31.8)    | B, K            |
| 16                  | PG 16-18          | .670 (17.0)  | .275 (7.0) | 1.380 (35.1)    | C, K            |
| 21                  | PG 21-16          | .890 (22.6)  |            |                 |                 |
| 29                  | PG 29-16          | 1.250 (31.8) |            |                 |                 |
| 36                  | PG 36-16          | 1.640 (41.7) |            |                 |                 |
| 42                  | PG 42-16          | 1.910 (48.5) |            |                 |                 |
| 48                  | PG 48-16          | 2.120 (53.8) |            |                 |                 |

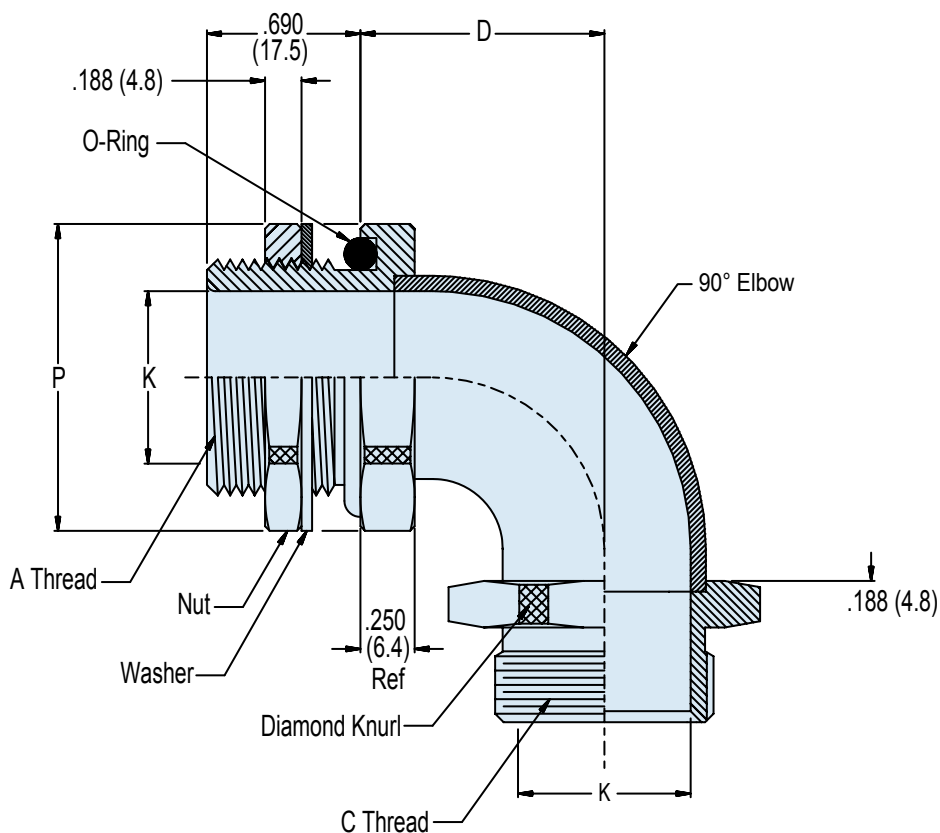
A

**Basic  
Number**
**M24758-32**
**Conduit  
Size Code  
(Table I)**
**C**

**APPLICATION NOTES**

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Material / Finish:  
Elbow, coupling nut - 316 SST/Electroless nickel, matte finish.
3. Metric dimensions (mm) are indicated in parentheses.

TABLE I: CONDUIT SIZE CODE

| CONDUIT<br>SIZE<br>CODE | A<br>THREAD   | B<br>MAX<br>DIA | C<br>+.00<br>-.03 (0.8) | D<br>±.06 (1.5)<br>DIM | K<br>MIN<br>DIA | P<br>MAX      |
|-------------------------|---------------|-----------------|-------------------------|------------------------|-----------------|---------------|
| A                       | .438-28 UNEF  | .880 (22.4)     | .205 (5.2)              | .810 (20.6)            | .245 (6.2)      | .880 (22.4)   |
| B                       | .688-24 UNEF  | 1.130 (28.7)    | .245 (6.2)              | 1.120 (28.4)           | .495 (12.6)     | 1.130 (28.7)  |
| C                       | .938-20 UNEF  | 1.380 (35.1)    | .305 (7.7)              | 1.470 (37.3)           | .745 (18.9)     | 1.380 (35.1)  |
| D                       | 1.250-18 UNEF | 1.690 (42.9)    | .365 (9.3)              | 1.810 (46.0)           | .995 (25.3)     | 1.690 (42.9)  |
| E                       | 1.563-18 UNEF | 2.000 (50.8)    | .365 (9.3)              | 2.120 (53.8)           | 1.245 (31.6)    | 2.000 (50.8)  |
| F                       | 1.875-16 UN   | 2.310 (58.7)    | .425 (10.8)             | 2.500 (63.5)           | 1.495 (38.0)    | 2.310 (58.7)  |
| G                       | 2.375-16 UN   | 2.940 (74.7)    | .425 (10.8)             | 3.120 (79.2)           | 1.995 (50.7)    | 2.940 (74.7)  |
| H                       | 2.875-16 UN   | 3.440 (87.4)    | .425 (10.8)             | 3.250 (82.6)           | 2.495 (63.4)    | 3.440 (87.4)  |
| J                       | .563-24 UNEF  | .940 (23.9)     | .245 (6.2)              | .930 (23.6)            | .370 (9.4)      | .940 (23.9)   |
| K                       | .813-20 UNEF  | 1.190 (30.2)    | .305 (7.7)              | 1.250 (31.8)           | .620 (15.7)     | 1.190 (30.2)  |
| L                       | 3.375-16 UN   | 3.940 (100.1)   | .425 (10.8)             | 4.500 (114.3)          | 2.995 (76.1)    | 3.940 (100.1) |

**Basic  
Number**
**M24758-33**
**Conduit  
Size Code  
(Table I)**
**C**

**APPLICATION NOTES**

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-33 adapter provides the capability of terminating a M24758-2 fitting to a thread panel.
3. Material / Finish:  
Adapter, jam nut, elbow - 316 SST/Electroless nickel, matte finish.  
O-Ring - Silicone rubber/NA  
Washer - 316 SST/Passivate
4. Metric dimensions (mm) are indicated in parentheses.

**MIL-PRF-24758-33**  
**90° Elbow for Panel Termination**

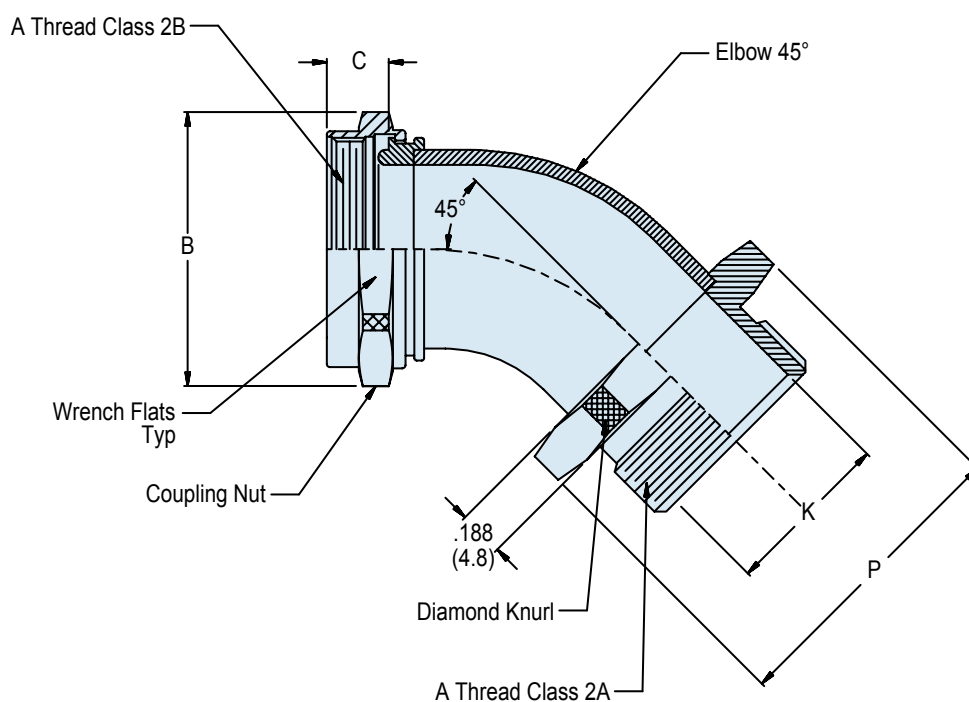


MIL-PRF  
24758A

A

**TABLE I**

| CONDUIT<br>SIZE CODE | A<br>CLASS - 2A<br>THREAD | P<br>DIA     | C<br>CLASS - 2A<br>THREAD | K<br>DIA<br>MIN | D<br>REF      |
|----------------------|---------------------------|--------------|---------------------------|-----------------|---------------|
| A                    | .625-24 UNEF              | 1.000 (25.4) | .438-28 UNEF              | .245 (6.2)      | .810 (20.6)   |
| B                    | .875-20 UNEF              | 1.250 (31.8) | .688-24 UNEF              | .495 (12.6)     | 1.120 (28.5)  |
| C                    | 1.188-18 UNEF             | 1.562 (39.7) | .938-20 UNEF              | .745 (18.9)     | 1.470 (37.3)  |
| D                    | 1.438-18 UNEF             | 1.812 (46.2) | 1.250-18 UNEF             | .995 (25.3)     | 1.810 (46.0)  |
| E                    | 1.750-16 UN               | 2.125 (53.9) | 1.563-18 UNEF             | 1.245 (31.6)    | 2.120 (53.9)  |
| F                    | 2.000-16 UN               | 2.375 (60.3) | 1.875-16 UN               | 1.495 (38.0)    | 2.500 (63.5)  |
| G                    | 2.500-16 UN               | 2.875 (73.3) | 2.375-16 UN               | 1.995 (50.7)    | 3.120 (79.3)  |
| H                    | 3.000-16 UN               | 3.375 (85.7) | 2.875-16 UN               | 2.495 (63.4)    | 3.250 (82.6)  |
| J                    | .750-20 UNEF              | 1.125 (28.6) | .563-24 UNEF              | .370 (9.4)      | .930 (23.6)   |
| K                    | 1.000-20 UNEF             | 1.500 (38.1) | .813-20 UNEF              | 0.620 (15.8)    | 1.250 (31.8)  |
| L                    | 3.500-16 UN               | 3.875 (98.4) | 3.375-16 UN               | 2.995 (76.1)    | 4.500 (114.3) |

**Basic  
Number**
**M24758-34**
**Conduit  
Size Code  
(Table I)**
**C**

**APPLICATION NOTES**

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Material / Finish:  
Elbow, coupling nut - 316 SST/Electroless nickel, matte finish.  
O-Ring - Silicone rubber/NA
3. Metric dimensions (mm) are indicated in parentheses.

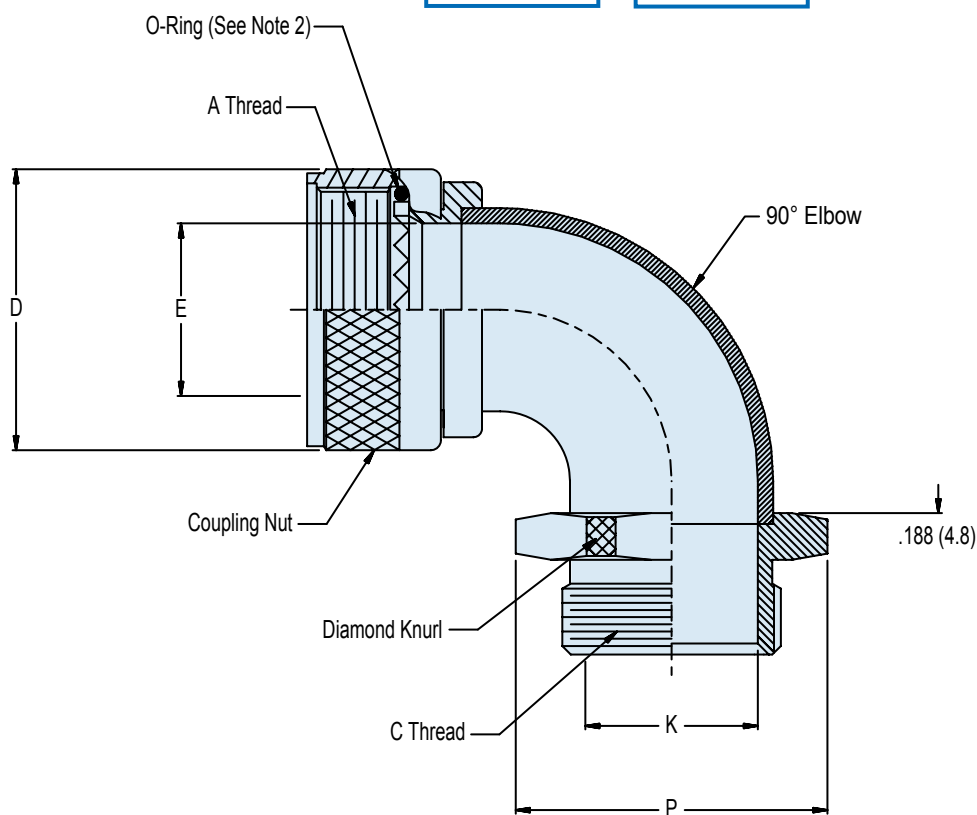
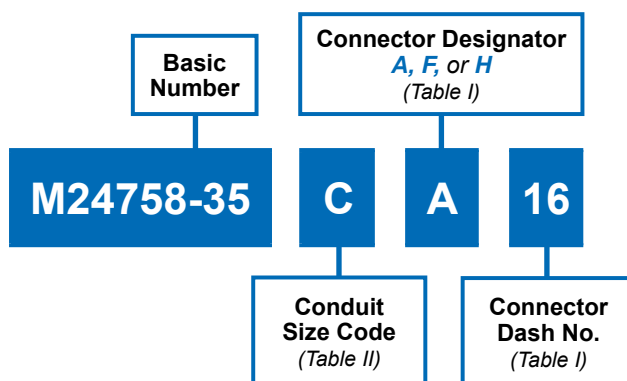
TABLE I: CONDUIT SIZE CODE

| CONDUIT<br>SIZE<br>CODE | A<br>THREAD   | B<br>MAX<br>DIA | C<br>+.00<br>-.03 (0.8) | K<br>MIN<br>DIA | P<br>MAX      |
|-------------------------|---------------|-----------------|-------------------------|-----------------|---------------|
| A                       | .438-28 UNEF  | .880 (22.4)     | .205 (5.2)              | .245 (6.2)      | .880 (22.4)   |
| B                       | .688-24 UNEF  | 1.130 (28.7)    | .245 (6.2)              | .495 (12.6)     | 1.130 (28.7)  |
| C                       | .938-20 UNEF  | 1.380 (35.1)    | .305 (7.7)              | .745 (18.9)     | 1.380 (35.1)  |
| D                       | 1.250-18 UNEF | 1.690 (42.9)    | .365 (9.3)              | .995 (25.3)     | 1.690 (42.9)  |
| E                       | 1.563-18 UNEF | 2.000 (50.8)    | .365 (9.3)              | 1.245 (31.6)    | 2.000 (50.8)  |
| F                       | 1.875-16 UN   | 2.310 (58.7)    | .425 (10.8)             | 1.495 (38.0)    | 2.310 (58.7)  |
| G                       | 2.375-16 UN   | 2.940 (74.7)    | .425 (10.8)             | 1.995 (50.7)    | 2.940 (74.7)  |
| H                       | 2.875-16 UN   | 3.440 (87.4)    | .425 (10.8)             | 2.495 (63.4)    | 3.440 (87.4)  |
| J                       | .563-24 UNEF  | .940 (23.9)     | .245 (6.2)              | .370 (9.4)      | .940 (23.9)   |
| K                       | .813-20 UNEF  | 1.190 (30.2)    | .305 (7.7)              | .620 (15.7)     | 1.190 (30.2)  |
| L                       | 3.375-16 UN   | 3.940 (100.1)   | .425 (10.8)             | 2.995 (76.1)    | 3.940 (100.1) |

# MIL-PRF-24758-35

## 90° Elbow for Connectors Listed in Table I

A



### APPLICATION NOTES

- Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
- O-Ring not supplied with connector designator A.
- See Glenair Circular Connector Accessories catalog for recommended torque values, Group 2.
- Material / Finish:  
Elbow, coupling nut - 316 SST/Electroless nickel, matte finish.  
O-Ring - Silicone rubber/NA
- Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-35

## 90° Elbow for Connectors Listed in Table I



MIL-PRF  
24758A

A

**TABLE I: Dimensions for CONNECTOR DESIGNATOR A (See Note 2)**

| Connector Dash No. | NAS 1599 and MIL-DTL-83723 Series I and III | MIL-DTL-5015 (MS3400 Series) | AS81703 (Navy) Series III | MIL-DTL-26482 Series II | A Thread Class - 2B | D Dia Max    | E Dia Ref    |
|--------------------|---------------------------------------------|------------------------------|---------------------------|-------------------------|---------------------|--------------|--------------|
| 03                 | —                                           | —                            | 03                        | —                       | .562-24 UNEF        | .669 (17.0)  | .270 (6.9)   |
| 08                 | 08                                          | 8S                           | —                         | 08                      | .500-20 UNF         | .617 (15.7)  | .270 (6.9)   |
| 10                 | 10                                          | 10S, 10SL                    | —                         | 10                      | .624-24 UNEF        | .734 (18.6)  | .375 (9.5)   |
| 12                 | 12                                          | 12, 12S                      | 07                        | 12                      | .750-20 UNEF        | .858 (21.8)  | .511 (13.0)  |
| 14                 | 14                                          | 14, 14S                      | 12                        | 14                      | .875-20 UNEF        | .984 (25.0)  | .585 (14.9)  |
| 16                 | 16                                          | 16, 16S                      | 19                        | 16                      | 1.000-20 UNEF       | 1.112 (28.2) | .710 (18.0)  |
| 18                 | 18                                          | 18                           | 27                        | 18                      | 1.062-18 UNEF       | 1.218 (30.9) | .789 (20.0)  |
| 20                 | 20                                          | 20                           | 37                        | 20                      | 1.188-18 UNEF       | 1.345 (34.2) | .914 (23.2)  |
| 22                 | 22                                          | 22                           | —                         | 22                      | 1.312-18 UNEF       | 1.468 (37.3) | 1.039 (26.4) |
| 24                 | 24                                          | 24                           | —                         | 24                      | 1.438-18 UNEF       | 1.593 (40.5) | 1.154 (29.3) |
| 28                 | —                                           | 28                           | —                         | —                       | 1.750-18 UNS        | 1.969 (50.0) | 1.389 (35.3) |
| 32                 | —                                           | 32                           | —                         | —                       | 2.000-18 UNS        | 2.219 (56.4) | 1.635 (41.5) |
| 36                 | —                                           | 36                           | —                         | —                       | 2.250-16 UN         | 2.469 (62.7) | 1.850 (47.0) |
| 40                 | —                                           | 40                           | —                         | —                       | 2.500-16 UN         | 2.719 (69.1) | 2.065 (52.5) |
| 44                 | —                                           | 44                           | —                         | —                       | 3.000-16 UN         | 2.969 (75.4) | 2.320 (58.9) |
| 48                 | —                                           | 48                           | —                         | —                       | 3.000-16 UN         | 3.219 (81.8) | 2.570 (65.3) |
| 61                 | —                                           | —                            | 61                        | —                       | 1.500-18 UNEF       | 1.653 (42.0) | 1.194 (30.3) |

**TABLE I: Dimensions for CONNECTOR DESIGNATOR F**

| Connector Dash No. | NAS 1599 and MIL-DTL-83723 Series I and III | A Thread Class - 2B | D Dia Max    | E Dia Ref    |
|--------------------|---------------------------------------------|---------------------|--------------|--------------|
| 08                 | 08                                          | .438-28 UNEF        | .860 (21.8)  | .269 (6.8)   |
| 10                 | 10                                          | .562-24 UNEF        | .980 (24.9)  | .402 (10.2)  |
| 12                 | 12                                          | .688-24 UNEF        | 1.160 (29.5) | .516 (13.1)  |
| 14                 | 14                                          | .812-20 UNEF        | 1.280 (32.5) | .641 (16.3)  |
| 16                 | 16                                          | .938-20 UNEF        | 1.410 (35.8) | .766 (19.5)  |
| 18                 | 18                                          | 1.062-18 UNEF       | 1.520 (38.6) | .863 (21.9)  |
| 20                 | 20                                          | 1.188-18 UNEF       | 1.640 (41.7) | .988 (25.1)  |
| 22                 | 22                                          | 1.312-18 UNEF       | 1.770 (45.0) | 1.113 (28.3) |
| 24                 | 24                                          | 1.438-18 UNEF       | 1.890 (48.0) | 1.238 (31.4) |

**TABLE I: Dimensions for CONNECTOR DESIGNATOR H**

| Connector Dash No. | MIL-DTL-38999 Series III & IV | A Thread      | D Dia Max    | E Dia Ref    |
|--------------------|-------------------------------|---------------|--------------|--------------|
| 09                 | A / 09                        | M12 X 1.0 -6H | .860 (21.8)  | .269 (6.8)   |
| 11                 | B / 11                        | M15 X 1.0 -6H | .980 (24.9)  | .402 (10.2)  |
| 13                 | C / 13                        | M18 X 1.0 -6H | 1.160 (29.5) | .516 (13.1)  |
| 15                 | D / 15                        | M22 X 1.0 -6H | 1.280 (32.5) | .641 (16.3)  |
| 17                 | E / 17                        | M25 X 1.0 -6H | 1.410 (35.8) | .766 (19.5)  |
| 19                 | F / 19                        | M28 X 1.0 -6H | 1.520 (38.6) | .863 (21.9)  |
| 21                 | G / 21                        | M31 X 1.0 -6H | 1.640 (41.7) | .988 (25.1)  |
| 23                 | H / 23                        | M34 X 1.0 -6H | 1.770 (45.0) | 1.113 (28.3) |
| 25                 | J / 25                        | M37 X 1.0 -6H | 1.890 (48.0) | 1.238 (31.4) |

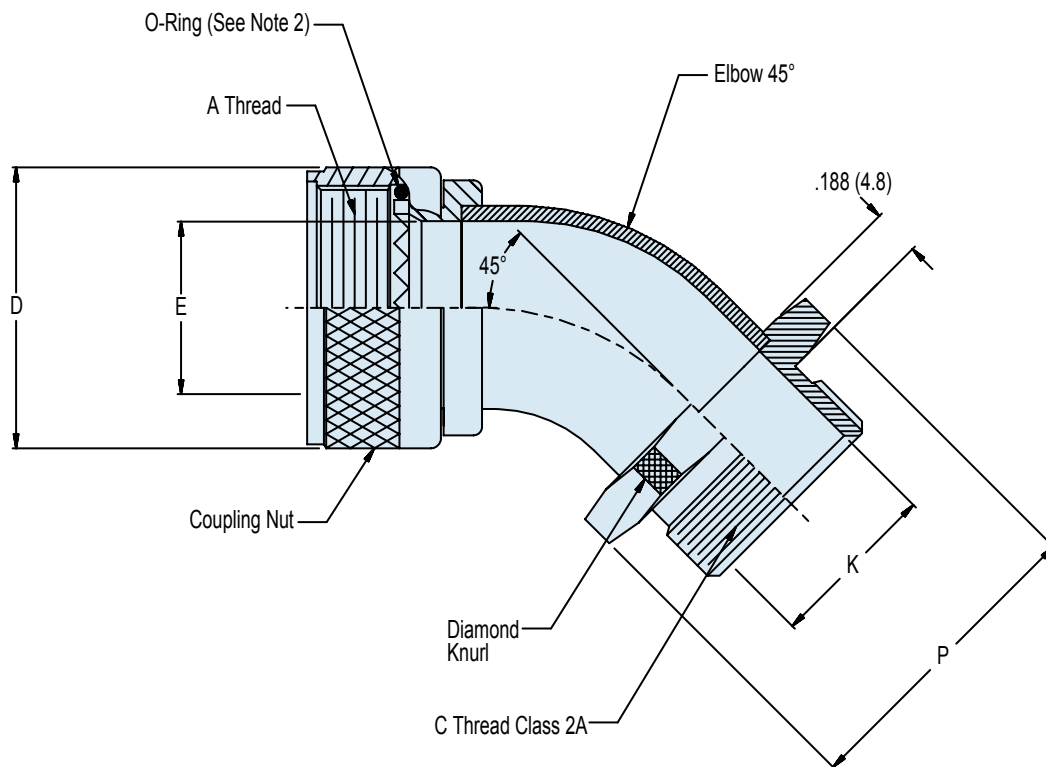
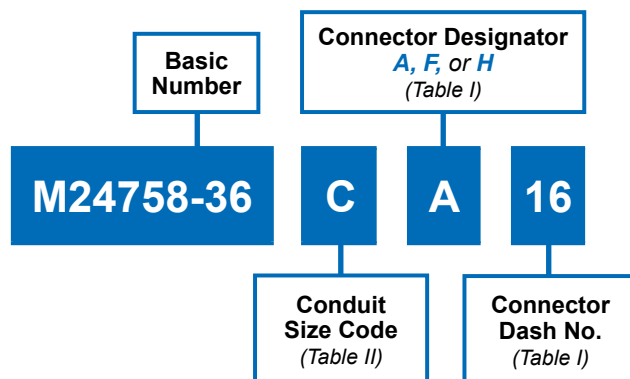
**TABLE II: Conduit Size Code and Fitting Dimensions**

| Conduit Size Code | C Thread Class - 2A | K Dia Min    | P Max         |
|-------------------|---------------------|--------------|---------------|
| A                 | .438-28 UNEF        | .245 (6.2)   | .880 (22.4)   |
| B                 | .562-24 UNEF        | .495 (12.6)  | 1.130 (28.7)  |
| C                 | .688-24 UNEF        | .745 (18.9)  | 1.380 (35.1)  |
| D                 | .812-20 UNEF        | .995 (25.3)  | 1.690 (43.0)  |
| E                 | .938-20 UNEF        | 1.245 (31.6) | 2.000 (50.8)  |
| F                 | 1.062-18 UNEF       | 1.495 (38.0) | 2.310 (58.7)  |
| G                 | 1.188-18 UNEF       | 1.995 (50.7) | 2.940 (74.7)  |
| H                 | 1.312-18 UNEF       | 2.495 (63.4) | 3.440 (87.4)  |
| J                 | 1.438-18 UNEF       | .370 (9.4)   | .940 (23.9)   |
| K                 | 1.438-18 UNEF       | .620 (15.7)  | 1.190 (30.2)  |
| L                 | 1.750-18 UNS        | 2.995 (76.1) | 3.940 (100.1) |

# MIL-PRF-24758-36

## 45° Elbow for Connectors Listed in Table I

A



### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. O-Ring not supplied with connector designator A.
3. See Glenair Circular Connector Accessories catalog for recommended torque values, Group 2.
4. Material / Finish:  
Elbow, coupling nut - 316 SST/Electroless nickel, matte finish.  
O-Ring - Silicone rubber/NA
5. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-36

## 45° Elbow for Connectors Listed in Table I



MIL-PRF  
24758A

A

**TABLE I: Dimensions for CONNECTOR DESIGNATOR A (See Note 2)**

| Connector Dash No. | NAS 1599 and MIL-DTL-83723 Series I and III | MIL-DTL-5015 (MS3400 Series) | AS81703 (Navy) Series III | MIL-DTL-26482 Series II | A Thread Class - 2B | D Dia Max    | E Dia Ref    |
|--------------------|---------------------------------------------|------------------------------|---------------------------|-------------------------|---------------------|--------------|--------------|
| 03                 | —                                           | —                            | 03                        | —                       | .562-24 UNEF        | .669 (17.0)  | .270 (6.9)   |
| 08                 | 08                                          | 8S                           | —                         | 08                      | .500-20 UNF         | .617 (15.7)  | .270 (6.9)   |
| 10                 | 10                                          | 10S, 10SL                    | —                         | 10                      | .624-24 UNEF        | .734 (18.6)  | .375 (9.5)   |
| 12                 | 12                                          | 12, 12S                      | 07                        | 12                      | .750-20 UNEF        | .858 (21.8)  | .511 (13.0)  |
| 14                 | 14                                          | 14, 14S                      | 12                        | 14                      | .875-20 UNEF        | .984 (25.0)  | .585 (14.9)  |
| 16                 | 16                                          | 16, 16S                      | 19                        | 16                      | 1.000-20 UNEF       | 1.112 (28.2) | .710 (18.0)  |
| 18                 | 18                                          | 18                           | 27                        | 18                      | 1.062-18 UNEF       | 1.218 (30.9) | .789 (20.0)  |
| 20                 | 20                                          | 20                           | 37                        | 20                      | 1.188-18 UNEF       | 1.345 (34.2) | .914 (23.2)  |
| 22                 | 22                                          | 22                           | —                         | 22                      | 1.312-18 UNEF       | 1.468 (37.3) | 1.039 (26.4) |
| 24                 | 24                                          | 24                           | —                         | 24                      | 1.438-18 UNEF       | 1.593 (40.5) | 1.154 (29.3) |
| 28                 | —                                           | 28                           | —                         | —                       | 1.750-18 UNS        | 1.969 (50.0) | 1.389 (35.3) |
| 32                 | —                                           | 32                           | —                         | —                       | 2.000-18 UNS        | 2.219 (56.4) | 1.635 (41.5) |
| 36                 | —                                           | 36                           | —                         | —                       | 2.250-16 UN         | 2.469 (62.7) | 1.850 (47.0) |
| 40                 | —                                           | 40                           | —                         | —                       | 2.500-16 UN         | 2.719 (69.1) | 2.065 (52.5) |
| 44                 | —                                           | 44                           | —                         | —                       | 3.000-16 UN         | 2.969 (75.4) | 2.320 (58.9) |
| 48                 | —                                           | 48                           | —                         | —                       | 3.000-16 UN         | 3.219 (81.8) | 2.570 (65.3) |
| 61                 | —                                           | —                            | 61                        | —                       | 1.500-18 UNEF       | 1.653 (42.0) | 1.194 (30.3) |

**TABLE I: Dimensions for CONNECTOR DESIGNATOR F**

| Connector Dash No. | NAS 1599 and MIL-DTL-83723 Series I and III | A Thread Class - 2B | D Dia Max    | E Dia Ref    |
|--------------------|---------------------------------------------|---------------------|--------------|--------------|
| 08                 | 08                                          | .438-28 UNEF        | .860 (21.8)  | .269 (6.8)   |
| 10                 | 10                                          | .562-24 UNEF        | .980 (24.9)  | .402 (10.2)  |
| 12                 | 12                                          | .688-24 UNEF        | 1.160 (29.5) | .516 (13.1)  |
| 14                 | 14                                          | .812-20 UNEF        | 1.280 (32.5) | .641 (16.3)  |
| 16                 | 16                                          | .938-20 UNEF        | 1.410 (35.8) | .766 (19.5)  |
| 18                 | 18                                          | 1.062-18 UNEF       | 1.520 (38.6) | .863 (21.9)  |
| 20                 | 20                                          | 1.188-18 UNEF       | 1.640 (41.7) | .988 (25.1)  |
| 22                 | 22                                          | 1.312-18 UNEF       | 1.770 (45.0) | 1.113 (28.3) |
| 24                 | 24                                          | 1.438-18 UNEF       | 1.890 (48.0) | 1.238 (31.4) |

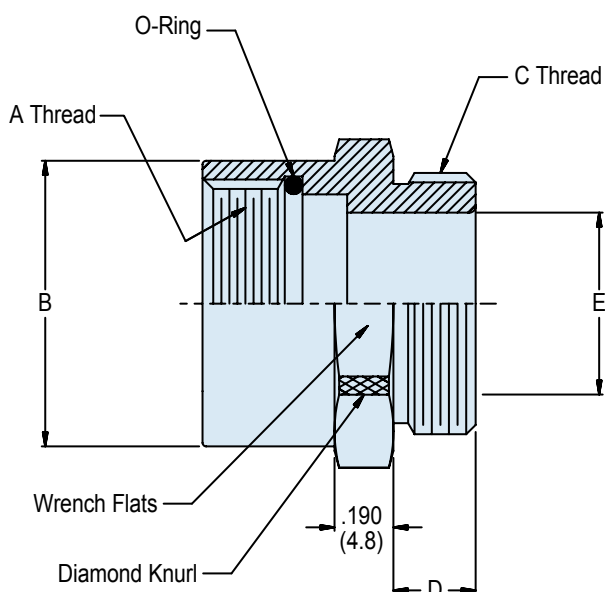
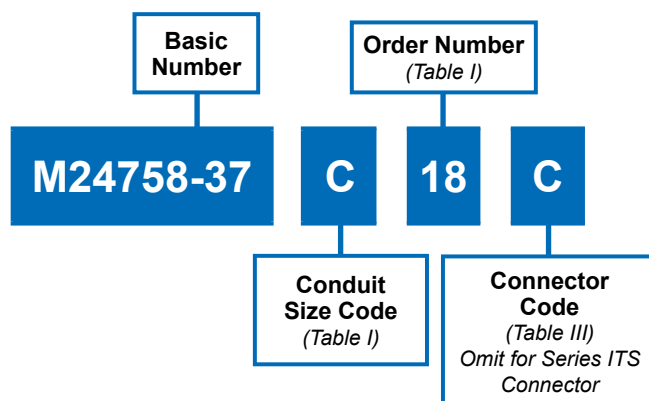
**TABLE I: Dimensions for CONNECTOR DESIGNATOR H**

| Connector Dash No. | MIL-DTL-38999 Series III & IV | A Thread      | D Dia Max    | E Dia Ref    |
|--------------------|-------------------------------|---------------|--------------|--------------|
| 09                 | A / 09                        | M12 X 1.0 -6H | .860 (21.8)  | .269 (6.8)   |
| 11                 | B / 11                        | M15 X 1.0 -6H | .980 (24.9)  | .402 (10.2)  |
| 13                 | C / 13                        | M18 X 1.0 -6H | 1.160 (29.5) | .516 (13.1)  |
| 15                 | D / 15                        | M22 X 1.0 -6H | 1.280 (32.5) | .641 (16.3)  |
| 17                 | E / 17                        | M25 X 1.0 -6H | 1.410 (35.8) | .766 (19.5)  |
| 19                 | F / 19                        | M28 X 1.0 -6H | 1.520 (38.6) | .863 (21.9)  |
| 21                 | G / 21                        | M31 X 1.0 -6H | 1.640 (41.7) | .988 (25.1)  |
| 23                 | H / 23                        | M34 X 1.0 -6H | 1.770 (45.0) | 1.113 (28.3) |
| 25                 | J / 25                        | M37 X 1.0 -6H | 1.890 (48.0) | 1.238 (31.4) |

**TABLE II: Conduit Size Code and Fitting Dimensions**

| Conduit Size Code | C Thread Class - 2A | K Dia Min    | P Max         |
|-------------------|---------------------|--------------|---------------|
| A                 | .438-28 UNEF        | .245 (6.2)   | .880 (22.4)   |
| B                 | .688-24 UNEF        | .495 (12.6)  | 1.130 (28.7)  |
| C                 | .938-20 UNEF        | .745 (18.9)  | 1.380 (35.1)  |
| D                 | 1.250-18 UNEF       | .995 (25.3)  | 1.690 (43.0)  |
| E                 | 1.563-18 UNEF       | 1.245 (31.6) | 2.000 (50.8)  |
| F                 | 1.875-16 UN         | 1.495 (38.0) | 2.310 (58.7)  |
| G                 | 2.375-16 UN         | 1.995 (50.7) | 2.940 (74.7)  |
| H                 | 2.875-16 UN         | 2.495 (63.4) | 3.440 (87.4)  |
| J                 | .563-24 UNEF        | .370 (9.4)   | .940 (23.9)   |
| K                 | .813-20 UNEF        | .620 (15.7)  | 1.190 (30.2)  |
| L                 | 3.375-16 UN         | 2.995 (76.1) | 3.940 (100.1) |

A



#### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. The M24758-37 adapter couples VG95234 connectors to M24758-2, M24758-3 or M24758-4 fittings.
3. See Glenair Circular Connector Accessories catalog for recommended torque values, Group 2.
4. Material / Finish:  
Elbow, coupling nut - 316L SST/Electroless nickel, matte finish.  
O-Ring - Silicone rubber/NA
5. Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-24758-37

## Adapter for VG94234 Reverse Bayonet Connector



MIL-PRF  
24758A

A

**TABLE I: CONDUIT SIZE CODE**

| CONDUIT<br>SIZE<br>CODE | C<br>THREAD   | D<br>+.03 (0.8)<br>-.00 | E<br>MIN<br>DIA |
|-------------------------|---------------|-------------------------|-----------------|
| A                       | .438-28 UNEF  | .210 (5.3)              | .245 (6.2)      |
| B                       | .688-24 UNEF  | .250 (6.4)              | .495 (12.6)     |
| C                       | .938-20 UNEF  | .310 (7.9)              | .745 (18.9)     |
| D                       | 1.250-18 UNEF | .370 (9.4)              | .995 (25.3)     |
| E                       | 1.563-18 UNEF | .370 (9.4)              | 1.245 (31.6)    |
| F                       | 1.875-16 UN   | .430 (10.9)             | 1.495 (38.0)    |
| G                       | 2.375-16 UN   | .430 (10.9)             | 1.995 (50.7)    |
| H                       | 2.875-16 UN   | .430 (10.9)             | 2.495 (63.4)    |
| J                       | .563-24 UNEF  | .250 (6.4)              | .370 (9.4)      |
| K                       | .813-20 UNEF  | .310 (7.9)              | .620 (15.7)     |
| L                       | 3.375-16 UN   | .430 (10.9)             | 2.995 (76.1)    |

**TABLE II: ORDER NUMBER**

| ORDER<br>NO. | SHELL SIZE<br>VG95234 | CONNECTOR<br>DESIGNATOR | A THREAD<br>CLASS 2B | B<br>MAX     |
|--------------|-----------------------|-------------------------|----------------------|--------------|
| 10           | 10SL                  | —,A,C,D,E               | 5/8-24 UNEF          | .795 (20.2)  |
| 11           | 10SL                  | B                       | 9/16-24 UNEF         | .831 (21.1)  |
| 12           | 12S                   | B                       | 5/8-24 UNEF          | .890 (22.6)  |
| 14           | 14S                   | —,A,B,C,D,E             | 3/4-20 UNEF          | 1.012 (25.7) |
| 16           | 16S                   | —,A,B,C,D,E             | 7/8-20 UNEF          | 1.209 (30.7) |
| 17           | 16                    | —,A,B,C,D,E             | 7/8-20 UNEF          | 1.209 (30.7) |
| 18           | 18                    | —,A,B,C,D,E             | 1-20 UNEF            | 1.332 (33.8) |
| 20           | 20                    | —,A,B,C,D,E             | 1 1/8-18 UNEF        | 1.457 (37.0) |
| 22           | 22                    | —,A,B,C,D,E             | 1 1/4-18 UNEF        | 1.583 (40.2) |
| 24           | 24                    | —,A,B,C,D,E             | 1 3/8-18 UNEF        | 1.771 (45.0) |
| 28           | 28                    | —,A,B,C,D,E             | 1 5/8-18 UNEF        | 1.929 (49.0) |
| 32           | 32                    | —,A,B,C,D,E             | 1 7/8-16 UNEF        | 2.217 (56.3) |
| 36           | 36                    | —,A,C,D,E               | 2 1/16-16 UNS        | 2.345 (59.6) |
| 37           | 36                    | B                       | 2 1/8-16 UNS         | 2.449 (62.2) |
| 39           | 40                    | B                       | 2 3/8-16 UNS         | 2.724 (69.2) |
| 40           | 40                    | —,A,C,D,E               | 2 5/16-16 UNS        | 2.590 (65.8) |

**TABLE III: CONNECTOR CODE AND  
FITTING DIMENSIONS**

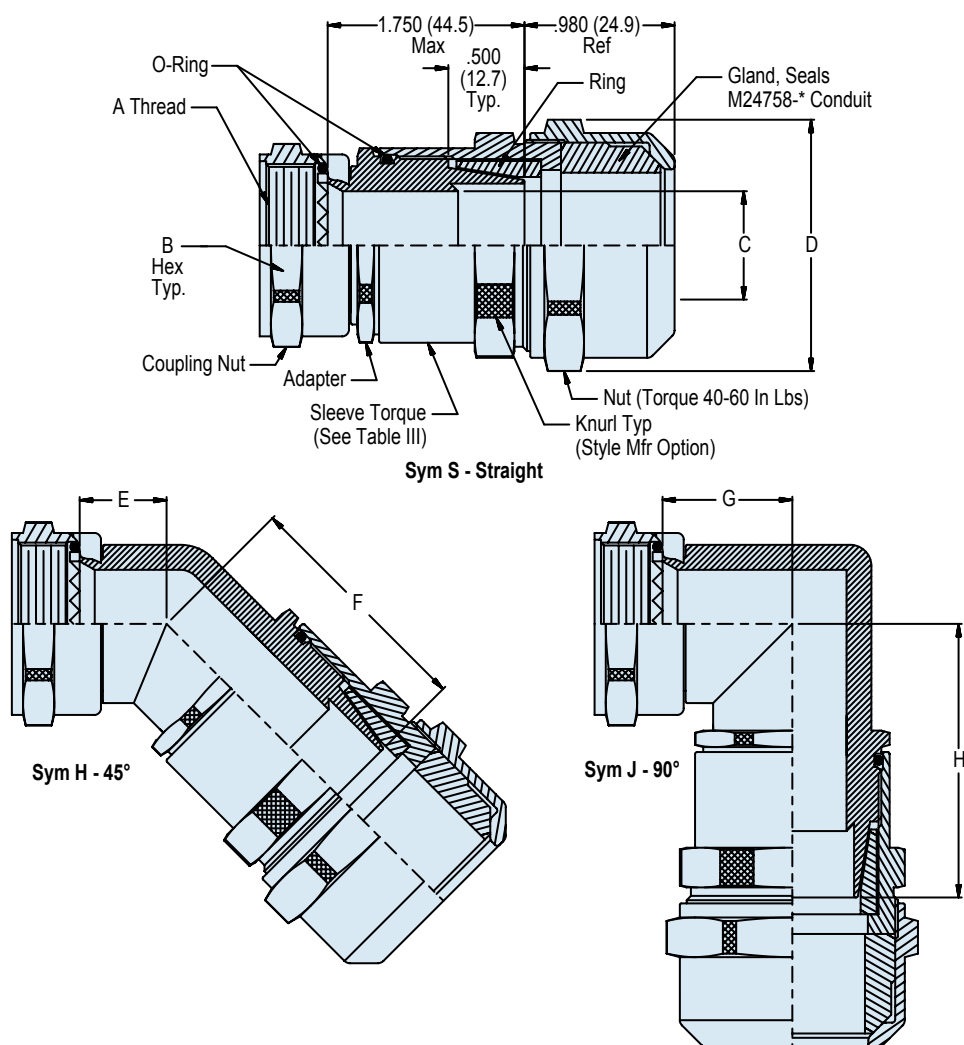
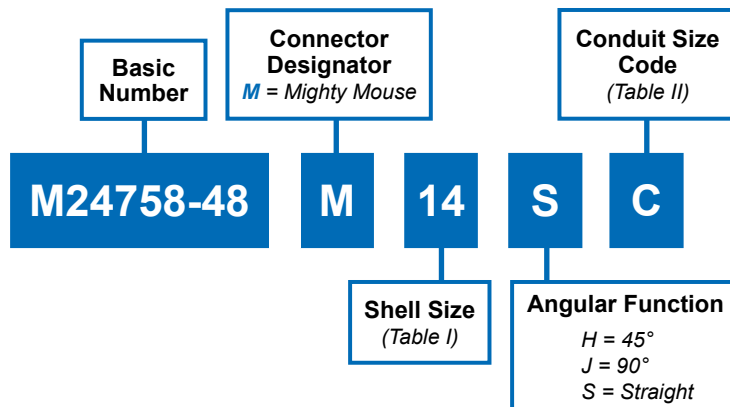
| Connector<br>Code | Manufacturer and Series Description |
|-------------------|-------------------------------------|
| —                 | Glenair ITS Series, VG95234         |
| A                 | Amphenol, GT Series, VG95234        |
| B                 | ITT Cannon, VG95234                 |
| C                 | Litton Veam, CIR Series, VG95234    |
| D                 | Space Craft, VG95234                |
| E                 | JTech, JTCIR, VG95234               |
| F                 | AB Connectors, VG95234              |
| G                 | Van-System, VG95234                 |
| H                 | R3 Connector Systems, VG95234       |

# MIL-PRF-24758-48

## Mighty Mouse Connector Adapter

User Installable for Glenair MIL-PRF-25758 Conduit

A



**MIL-PRF-24758-48**  
**Mighty Mouse Connector Adapter**  
 User Installable for Glenair MIL-PRF-25758 Conduit



MIL-PRF  
24758A

A

**TABLE I: Order No., Shell Size, Thread, Dimensions and Max Conduit Size Code**

| Order No. | Shell Size Ref         |       | A Thread Class - 2B | B Hex         | E Hex        | F Max         | G Max         | H Max         | Max Conduit Size Code See Note 3 |
|-----------|------------------------|-------|---------------------|---------------|--------------|---------------|---------------|---------------|----------------------------------|
|           | 800 / 801<br>803 / 804 | 805   |                     |               |              |               |               |               |                                  |
| 05        | 05                     | N/A   | 1/4-32 UNEF         | .437 (11.09)  | .640 (16.26) | 1.770 (44.96) | 1.030 (26.16) | 1.840 (46.74) | A                                |
| 06        | 06                     | N/A   | 5/16-32 UNEF        | .500 (12.70)  | .640 (16.26) | 1.800 (45.72) | 1.030 (26.16) | 1.880 (47.75) | A                                |
| 11        | N/A                    | 08    | 3/8-32 UNEF         | .562 (14.27)  | .660 (16.76) | 1.800 (45.72) | 1.100 (27.94) | 1.900 (48.26) | J                                |
| 07        | 07                     | 09    | 7/16-28 UNEF        | .625 (15.88)  | .660 (16.76) | 1.850 (46.99) | 1.100 (27.94) | 1.950 (41.91) | J                                |
| 08        | 08                     | 10    | 1/2-28 UNEF         | .687 (17.45)  | .690 (17.53) | 1.860 (47.24) | 1.200 (30.48) | 1.980 (50.29) | B                                |
| 09        | 09                     | 11    | 9/16-24 UNEF        | .750 (19.05)  | .690 (17.53) | 1.890 (48.01) | 1.200 (30.48) | 2.020 (51.31) | B                                |
| 10        | 10                     | 12    | 5/8-24 UNEF         | .812 (20.62)  | .710 (18.03) | 1.900 (48.26) | 1.270 (32.26) | 2.050 (52.07) | K                                |
| 12        | 11/12<br>/13           | N/A   | 11/16-24 UNEF       | .875 (22.23)  | .740 (18.80) | 1.920 (48.77) | 1.340 (34.04) | 2.100 (53.34) | C                                |
| 13        | N/A                    | 15    | 3/4-20 UNEF         | 1.000 (25.40) | .740 (18.80) | 1.880 (47.75) | 1.340 (34.04) | 2.120 (53.85) | C                                |
| 14        | 14/15<br>16/17         | 18/19 | 15/16-20 UNEF       | 1.125 (28.58) | .790 (20.07) | 2.000 (50.80) | 1.500 (38.10) | 2.240 (56.90) | D                                |
| 17        | 21                     | 23    | 1 3/16-18 UNEF      | 1.375 (34.93) | .840 (21.34) | 2.080 (52.83) | 1.640 (41.66) | 2.370 (60.20) | E                                |

**TABLE II: Conduit Size Code**

| Conduit Size Code | C I.D.        | D Max          |
|-------------------|---------------|----------------|
| A                 | .250 (6.35)   | 1.140 (28.96)  |
| J                 | .375 (9.53)   | 1.340 (34.04)  |
| B                 | .500 (12.70)  | 1.460 (37.08)  |
| K                 | .625 (15.88)  | 1.650 (41.91)  |
| C                 | .750 (19.05)  | 1.780 (45.21)  |
| D                 | 1.000 (25.40) | 2.030 (51.56)  |
| E                 | 1.250 (31.75) | 2.280 (57.91)  |
| F                 | 1.500 (38.10) | 2.530 (64.26)  |
| G                 | 2.000 (50.80) | 3.140 (79.76)  |
| H                 | 2.500 (63.50) | 3.650 (92.71)  |
| L                 | 3.000 (76.20) | 4.150 (105.41) |

**TABLE III:  
Recommended  
Sleeve Torque**

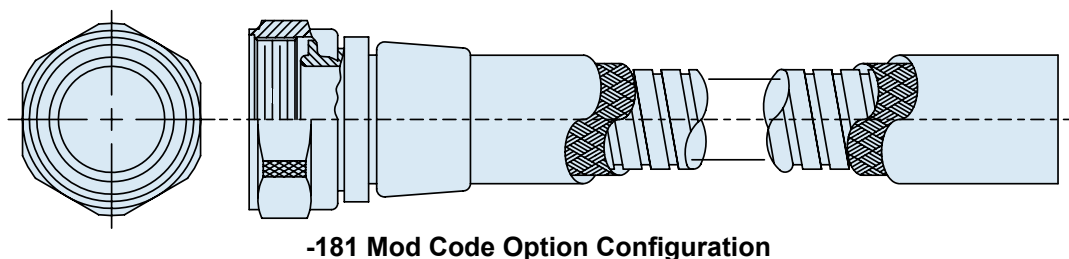
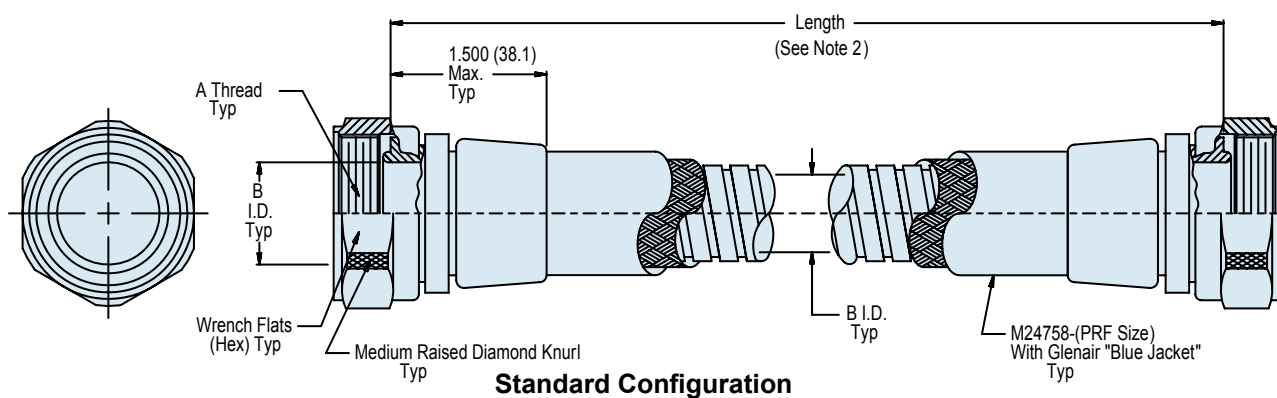
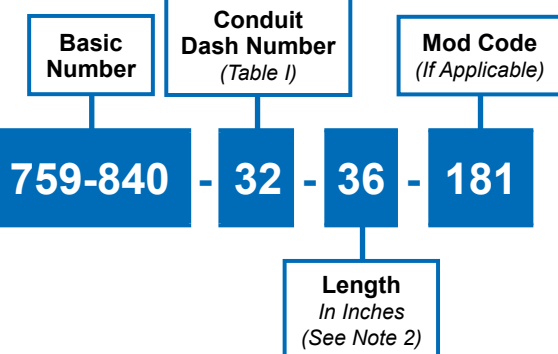
| Conduit Size Code | ± 5 Inch Pounds |
|-------------------|-----------------|
| A                 | 120             |
| J                 | 140             |
| B                 | 150             |
| K                 | 170             |
| C                 | 170             |
| D                 | 170             |
| E                 | 170             |
| F                 | 170             |
| G                 | 120             |
| H                 | 140             |
| L                 | 170             |

**APPLICATION NOTES**

- Assembly identified with manufacturer's name and part number, space permitting.
- Glenair 600 Series Backshell Assembly Tools are recommended for assembly and installation.
- When maximum Conduit Size Code is exceeded, dimensions E, F, G and H may be exceeded. Consult factory for dimensions.
- Material / Finish:  
Coupling nuts, adapters, nuts, sleeves, elbows and rings - 316L SST/ Electroless nickel, matte finish.  
O-Ring and gland - Silicone rubber/NA
- Metric dimensions (mm) are indicated in parentheses.

# 759-840 Conduit Assembly

A



## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number.
2. Length tolerance is 0-24" =  $\pm 1/4$ , for longer lengths is  $\pm 1\%$  of length.
3. Glenair series 600 backshell assembly tools are recommended for assembly and installation.
4. Material / Finish:  
Adapter, ferrule, coupling nut - 316L SST/Electroless nickel, matte finish.  
O-Ring - Silicone rubber/NA
5. Metric dimensions (mm) are indicated in parentheses.

**759-840**  
**Conduit Assembly**



MIL-PRF  
24758A

A

**TABLE I: CONDUIT SIZE CODE**

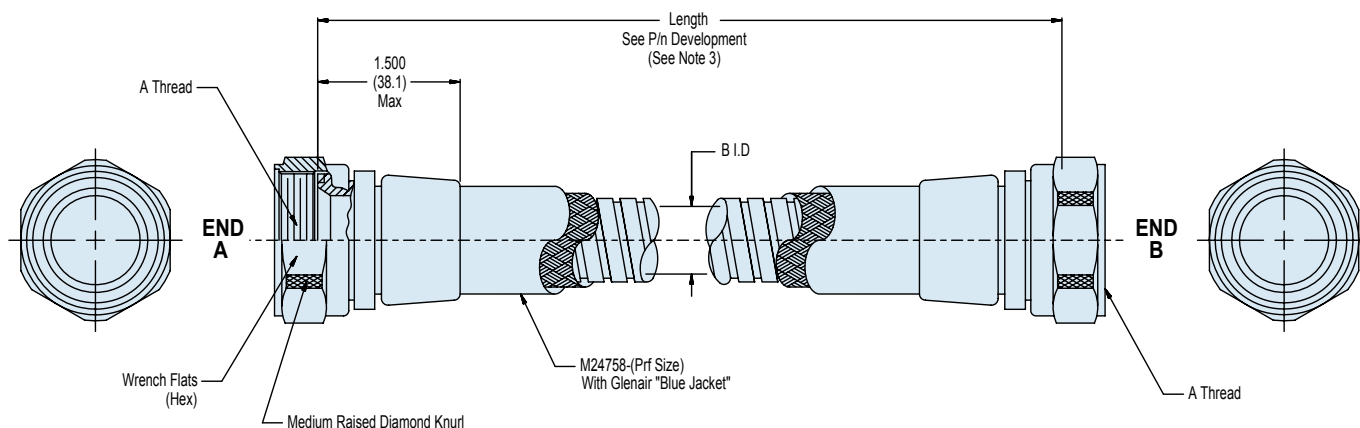
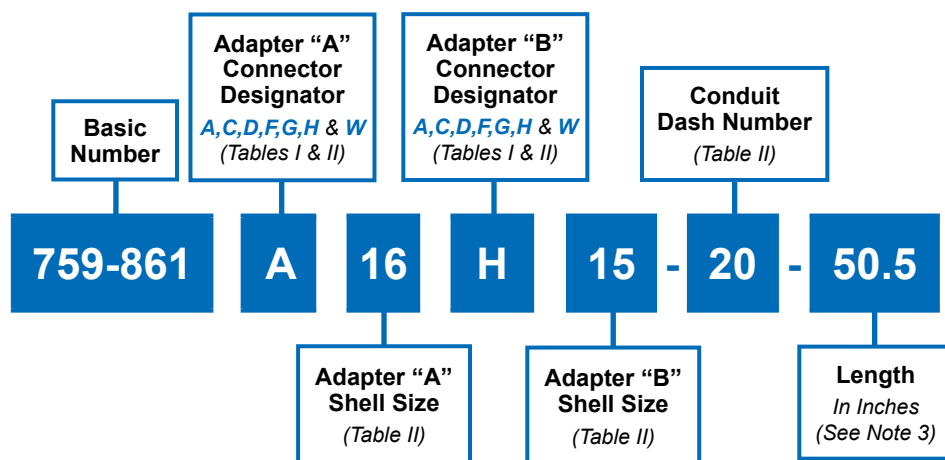
| CONDUIT<br>DASH NO. | MIL PRF<br>SIZE | A THREAD<br>CLASS 2B | B<br>MIN.    |
|---------------------|-----------------|----------------------|--------------|
| 08                  | A               | 7/16-28 UNEF         | .245 (6.2)   |
| 12                  | J               | 9/16-24 UNEF         | .370 (9.4)   |
| 16                  | B               | 11/16-24 UNEF        | .495 (12.6)  |
| 20                  | K               | 13/16-20 UNEF        | .620 (15.7)  |
| 24                  | C               | 15/16-20 UNEF        | .745 (18.9)  |
| 32                  | D               | 1 1/4-18 UNEF        | .995 (25.3)  |
| 40                  | E               | 1 9/16-18 UNEF       | 1.245 (31.6) |
| 48                  | F               | 1 7/8-16 UN          | 1.495 (38.0) |
| 64                  | G               | 2 3/8-16 UN          | 1.995 (50.7) |
| 80                  | H               | 2 7/8-16 UN          | 2.495 (63.4) |
| 96                  | L               | 3 3/8-16 UN          | 2.995 (76.1) |

# 759-861

## Connector to Connector

### Factory Terminated Conduit Assembly

A



#### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification.
2. Glenair 600 series backshell assembly tools are recommended for assembly installation.
3. Length tolerance is 0-24" =  $\pm 1/4"$ , for longer lengths is  $\pm 1\%$  of length.
4. Material / Finish:  
Adapter, ferrule & coupling nut - AISI 316L stainless steel / electroless nickel, matte finish.
5. Metric dimensions (mm) are indicated in parentheses.

**759-861**  
**Connector to Connector**  
**Factory Terminated Conduit Assembly**



MIL-PRF  
24758A

A

**TABLE I: CONNECTOR CODE**

| CONN.<br>CODE | SPECIFICATION                                                                                                                        |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------|
| A             | MIL-DTL-5015 (MS34**) <ul style="list-style-type: none"> <li>MIL-DTL-26482 Series II</li> <li>MIL-DTL-83723 Series I, III</li> </ul> |
| C             | MIL-C-22992 Series R                                                                                                                 |
| D             | MIL-C-26482 Series I                                                                                                                 |
| F             | MIL-DTL-38999, Series I                                                                                                              |
| G             | MIL-C-28840                                                                                                                          |
| H             | MIL-DTL-38999 Series III, IV                                                                                                         |
| W             | Glenair Series 22 (Geo-Marine®)                                                                                                      |

**TABLE II: CONDUIT DASH NO.**

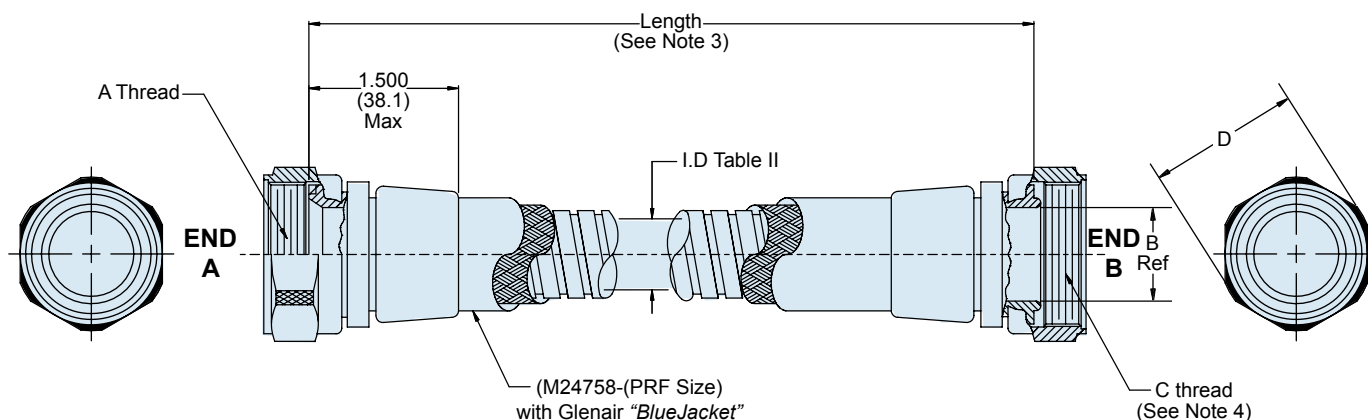
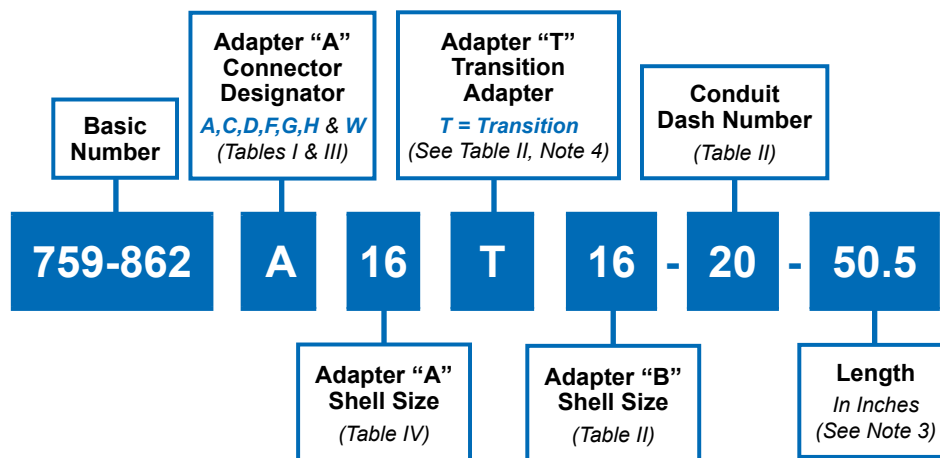
| CONDUIT<br>DASH NO | MIL PRF<br>SIZE | B<br>MIN.     |
|--------------------|-----------------|---------------|
| 08                 | A               | .245 (6.22)   |
| 12                 | J               | .370 (9.40)   |
| 16                 | B               | .495 (12.57)  |
| 20                 | K               | .620 (15.75)  |
| 24                 | C               | .745 (18.92)  |
| 32                 | D               | .995 (25.27)  |
| 40                 | E               | 1.245 (31.62) |
| 48                 | F               | 1.495 (37.97) |
| 64                 | G               | 1.995 (50.67) |
| 80                 | H               | 2.495 (63.37) |
| 96                 | L               | 2.995 (76.07) |

# 759-862

## Connector to Adapter

### Factory Terminated Conduit Assembly

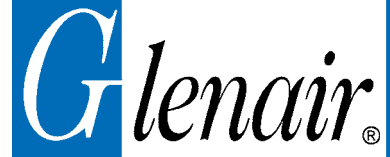
A



#### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification.
2. Glenair 600 series backshell assembly tools are recommended for assembly installation.
3. Length tolerance is 0-24" =  $\pm 1/4$ ", for longer lengths is  $\pm 1\%$  of length.
4. End "B" adapter (C thread) mates with corresponding MIL-PRF-24758-\* adapter (see Table II).
5. Glenair series 600 backshell assembly tools are recommended for assembly and installation.
6. Material / Finish:  
Adapter, ferrule & coupling nut - AISI 316L stainless steel / electroless nickel, matte finish.
7. Metric dimensions (mm) are indicated in parentheses.

**759-862**  
**Connector to Adapter**  
**Factory Terminated Conduit Assembly**



MIL-PRF  
24758A

A

**TABLE I: CONNECTOR CODE**

| CONN. CODE | SPECIFICATION                                                                   |
|------------|---------------------------------------------------------------------------------|
| A          | MIL-DTL-5015 (MS34**)<br>MIL-DTL-26482 Series II<br>MIL-DTL-83723 Series I, III |
| C          | MIL-C-22992 Series R                                                            |
| D          | MIL-C-26482 Series I                                                            |
| F          | MIL-DTL-38999, Series I                                                         |
| G          | MIL-C-28840                                                                     |
| H          | MIL-DTL-38999 Series III, IV                                                    |
| W          | Glenair Series 22 (Geo-Marine®)                                                 |

**TABLE II: CONDUIT DASH NO.**

| CONDUIT DASH NO | MIL PRF SIZE | B MIN         | C THREAD CLASS 2B | D MAX         |
|-----------------|--------------|---------------|-------------------|---------------|
| 08              | A            | .245 (6.22)   | .438-28 UNEF      | .880 (22.4)   |
| 12              | J            | .370 (9.40)   | .563-24 UNEF      | .940 (23.9)   |
| 16              | B            | .495 (12.57)  | .688-24 UNEF      | 1.130 (28.7)  |
| 20              | K            | .620 (15.75)  | .813-20 UNEF      | 1.190 (30.2)  |
| 24              | C            | .745 (18.92)  | .938-20 UNEF      | 1.380 (35.1)  |
| 32              | D            | .995 (25.27)  | 1.250-18 UNEF     | 1.690 (42.9)  |
| 40              | E            | 1.245 (31.62) | 1.563-18 UNEF     | 2.000 (50.8)  |
| 48              | F            | 1.495 (37.97) | 1.875-16 UN       | 2.310 (58.7)  |
| 64              | G            | 1.995 (50.67) | 2.375-16 UN       | 2.940 (74.7)  |
| 80              | H            | 2.495 (63.37) | 2.875-16 UN       | 3.440 (87.4)  |
| 96              | L            | 2.995 (76.07) | 3.375-16 UN       | 3.940 (100.1) |

**TABLE III: REFERENCE ONLY**

| MIL PRF DASH NO. | END "B" MATING ADAPTERS MIL-PRF-24758          |
|------------------|------------------------------------------------|
| 9                | MS3100 Series MIL-DTL-5015                     |
| 11               | Coaxial Connectors                             |
| 12               | MIL-DTL-26482 Series I (Code D Table I)        |
| 13               | MS3155 Series (Code A Table I)                 |
| 14               | MIL-DTL-28840 (Code G Table I)                 |
| 15               | MIL-S-24235 Stuffing Tubes                     |
| 16               | Miscellaneous Fittings                         |
| 17               | Tapered Pipe Thread                            |
| 18               | Straight Pipe Thread                           |
| 19               | Bulkhead Termination                           |
| 20               | MIL-DTL-38999 (Codes F & H Table I)            |
| 22               | Glenair Series 22 Geo-Marine® (Code W Table I) |
| 23               | Union Fitting                                  |
| 24               | Shielded Cable Fitting                         |

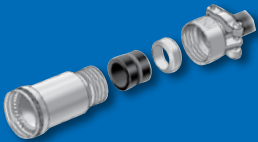
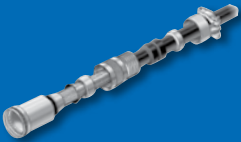
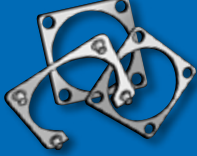
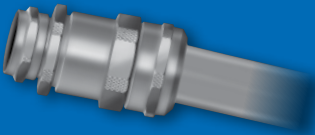
**TABLE IV: Shell Dimensions**

| Shell Size |    | B Hex         |
|------------|----|---------------|
| A, F, L    | H  |               |
| 08         |    | .625 (15.88)  |
|            | 09 | .687 (17.45)  |
| 10/11      |    | .750 (19.05)  |
|            | 11 | .812 (20.62)  |
| 12/13      |    | .875 (22.23)  |
|            | 13 | .937 (23.80)  |
| 14/15      |    | 1.000 (25.4)  |
|            | 15 | 1.062 (26.97) |
| 16/17      |    | 1.125 (28.58) |
|            | 17 | 1.250 (31.75) |
| 18/19      |    | 1.187 (30.15) |
|            | 19 | 1.375 (34.93) |
| 20/21      |    | 1.312 (33.32) |
|            | 21 | 1.500 (38.10) |
| 22/23      |    | 1.437 (36.50) |
|            | 23 | 1.625 (41.28) |
| 24/25      |    | 1.562 (39.67) |
|            | 25 | 1.750 (44.45) |
| 28         |    | 1.875 (47.63) |
| 32         |    | 2.125 (53.98) |
| 36         |    | 2.375 (60.33) |
| 40         |    | 2.625 (66.68) |
| 44         |    | 3.000 (76.20) |
| 48         |    | 3.250 (82.55) |
| 61         |    | 1.625 (41.28) |

MIL-DTL-28840

# CONNECTOR ACCESSORIES

**No Gaps: Every Slash Sheet, Every Size.**

|                                        |                                                                                                                        |                                                                                                                                |                                                                                                                                        |                                                                                                                                |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Military<br>Connector<br>Specification | <br>37<br>Environmental<br>Backshells | <br>39<br>EMI/RFI Environmental<br>Backshells | <br>60<br>Connector Sockets                          | 61<br>"E" Nuts<br>                          |
|                                        |                                                                                                                        |                                                                                                                                |                                                                                                                                        | Non-Self-Locking                                                                                                               |
| MIL-DTL-28840                          | M28840/6 B Straight<br>M28840/9 B 45°<br>M28840/8 B 90°                                                                | M28840/6 A Straight<br>M28840/8 A 90°<br>M28840/9 A 45°                                                                        | 600G005*                                                                                                                               | M28840/23                                                                                                                      |
| Military<br>Connector<br>Specification | 62<br>Strain Reliefs<br>            | <br>65<br>Dummy Storage<br>Receptacles      | <br>66<br>Protective<br>Plug Covers               | <br>66<br>Protective<br>Receptacle Covers |
|                                        | Non-Self-Locking                                                                                                       |                                                                                                                                |                                                                                                                                        |                                                                                                                                |
| MIL-DTL-28840                          | M28840/1 Straight<br>M28840/3 45°<br>M28840/2 90°                                                                      | M28840/7                                                                                                                       | M28840/15                                                                                                                              | M28840/13                                                                                                                      |
| Military<br>Connector<br>Specification | <br>68<br>Jam Nuts                  | <br>68<br>Mounting Flanges<br>and Gaskets   | <br>70 - 74<br>MIL-PRF-24758A<br>Conduit Fittings |                                                                                                                                |
|                                        |                                                                                                                        |                                                                                                                                |                                                                                                                                        |                                                                                                                                |
| MIL-DTL-28840                          | MS3186                                                                                                                 | M28840/24 Gasket                                                                                                               | M24758-14 Straight<br>(M24758/14 Straight.)*<br>M28840/5 Straight<br>M28840/25 90°<br>M28840/27 45°<br>M28840/30 Coupling              |                                                                                                                                |

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E-Mail: [sales@glenair.com](mailto:sales@glenair.com)

# Qualified Military Standard Connectors and Accessories for Shipboard Applications

## *Ideal for All Rugged Environmental Applications*

B

### Product Applications

The standard connector and backshell series for shipboard use, MIL-DTL-28840 offers high-density insert arrangement and high-shock performance. Glenair's qualified product line is fully tooled and highly available.

The MIL-DTL-28840 features RFI/EMI shielding, scoop-proof shells and corrosion resistant materials and finishes. In addition to all the connector types and styles, Glenair makes all the backshell accessory slash numbers as well. The addition of the MIL-DTL-28840 connector product line is part of Glenair's total commitment to meeting all your shipboard interconnect requirements. So, if a rugged, environmental M28840 solution is in your future, think Glenair—from connectors to accessories.

### Product Features

- High Density, Scoop Proof Insert Arrangements
- Flange Mount, Box Mount, Jam-Nut and In-Line Receptacles
- Straight, 45° and 90° Strain Reliefs and Backshell Assemblies
- Sav-Con® Connector Savers
- MIL-DTL-28840 Qualified
- Additional Glenair Commercial Part Numbers with Features Not Available in the Mil-Spec

### ***MIL-DTL-28840 In a Nutshell:***

*MIL-DTL-28840 connectors were developed for the Navy for use in shipboard applications. They are a high density, environmental, circular connector series utilizing a high shock, threaded coupling system with front release crimped contacts.*



**Errata:** Catalog contents—including part numbers, materials and dimensions—are accurate to the best of our ability when we go to print. Even so, 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](http://www.glenair.com).



# MIL-DTL-28840

## Shipboard Electrical Connectors

### Performance Specifications, Class and Finishes

#### PERFORMANCE SPECIFICATIONS

|                                                |                                                                            |
|------------------------------------------------|----------------------------------------------------------------------------|
| Current Rating (Maximum)                       | Size #20 Contact; 20AWG 7.5A, 22AWG 5.0A, 28AWG 1.5A, 30AWG 1.0A           |
| Test Voltage (Dielectric Withstanding Voltage) | 1000 VAC RMS at sea level. Test per EIA-364-20                             |
| Insulation Resistance                          | 5000 megohms minimum (at ambient temperature) per EIA-364-21               |
| Contact Resistance                             | Per SAE-AS39029                                                            |
| Operating Temperature                          | -55° C. to +200° C.                                                        |
| Immersion                                      | per test method EIA-364-09                                                 |
| Shock                                          | in accordance with MIL-S-901 grade A                                       |
| Vibration                                      | per EIA-364-28 test procedure                                              |
| Magnetic Permeability                          | 2.0 $\mu$ (Aluminum), 5.0 $\mu$ (Stainless Steel) maximum; ASTM-A342/A342M |

#### MATERIALS AND FINISHES

|                                                  |                                                                                                                                                                                 |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shells, Coupling Nuts, Jam Nuts                  | Aluminum alloy per ASTM B211, or stainless steel per AMS-QQ-S-763                                                                                                               |
| Contacts                                         | Copper alloy, 50 $\mu$ lnch gold plated per ASTM B488 Type 3, Code C, Class 1,27 over nickel underplate per QQ-N-290 Class 2. Socket contact hood: stainless steel, passivated. |
| Insulators                                       | High Grade Engineering Plastic per ASTM D5948                                                                                                                                   |
| Contact Retention Clip                           | Beryllium copper                                                                                                                                                                |
| Shells, Coupling Nuts,<br>Jam Nut Plating Finish | Stainless Steel, Black Cadmium plated                                                                                                                                           |
| Grommet, Seal                                    | Blended elastomer, 30% silicone per ZZ-R-765, 70% fluorosilicone per MIL-R-25988                                                                                                |

| Contact Code | Type   | Contact Spec.      | Contact Size | Acceptable Wire Size | Outside Diameter of Finished Wire |                |
|--------------|--------|--------------------|--------------|----------------------|-----------------------------------|----------------|
|              |        |                    |              |                      | Minimum                           | Maximum        |
| F            | Pin    | SAE-AS39029/83-508 | 20-20        | 24                   | .040<br>(1.02)                    | .070<br>(1.78) |
| G            | Socket | SAE-AS39029/84-509 |              | 22<br>20             |                                   |                |
| P            | Pin    | SAE-AS39029/83-450 | 20-22        | 26                   |                                   |                |
| S            | Socket | SAE-AS39029/84-452 |              | 24<br>22             |                                   |                |
| D            | Pin    | SAE-AS39029/83-451 | 20-28        | 32                   |                                   |                |
| E            | Socket | SAE-AS39029/84-453 |              | 30<br>28             |                                   |                |

#### APPLICATION NOTES

- Dimensions are in inches.
- Metric equivalents (mm) are for reference only.
- To achieve sealing, wires must be built up to finished wire diameter.
- In accordance with MIL-DTL-24643 and MIL-DTL-16878.

**M22520/34-01, M22520/34-02, M22520/35,  
M81969/33-01, M81969/33-02, and M81969/34-01**  
Contact Crimping, Insertion and Removal Tools  
for MIL-DTL-28840 Connectors

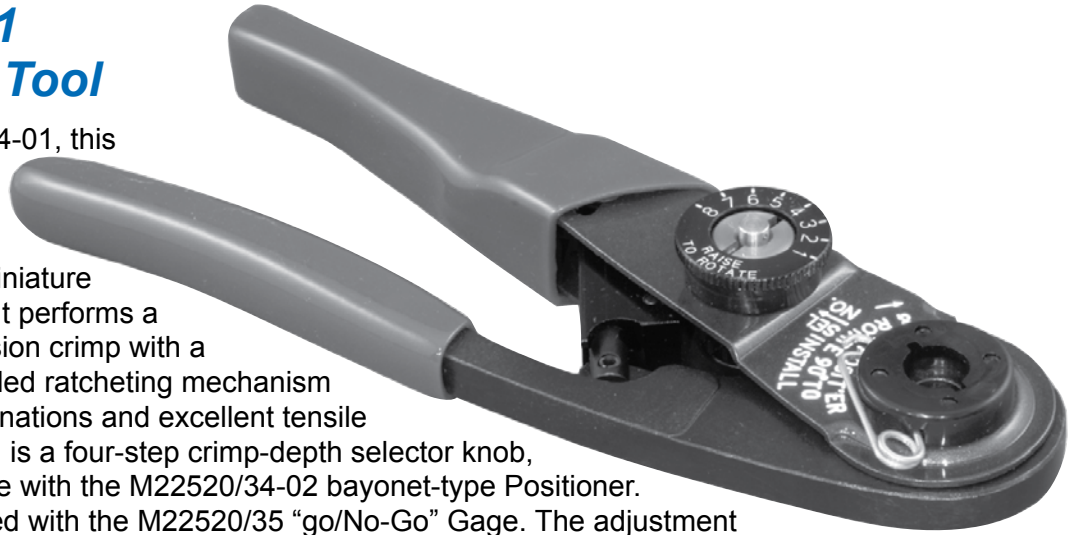


MIL-DTL-  
28840

B

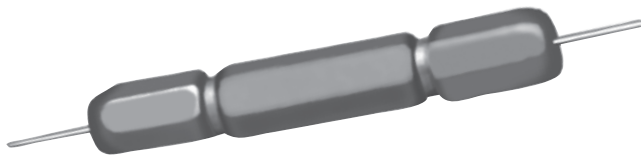
## **M22520/34-01 Basic Crimp Tool**

Qualified to M22520/34-01, this crimp tool prevents improper crimps and overcrimping and is based on the AFM8 miniature adjustable crimp tool. It performs a modified eight impression crimp with a precision cycle controlled ratcheting mechanism for gas-tight wire terminations and excellent tensile strength. Also featured is a four-step crimp-depth selector knob, and is designed for use with the M22520/34-02 bayonet-type Positioner. Gaging is accomplished with the M22520/35 "go/No-Go" Gage. The adjustment wheel has eight settings. Check calibration with the M22520/35 gage. Length is 6.75 inches, weight is approximately 10 oz.



## **M22520/34-02 Positioner**

This bayonet-type positioner locates and holds contacts at the correct position for crimping with the M22520/34-01 Basic Crimp Tool. The face plate shows the correct tool settings.



## **M22520/35 Gage**

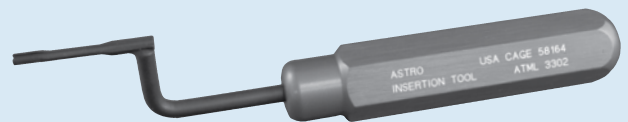
Periodic Gaging is recommended to ensure accurate calibration, and is easily accomplished by setting the tool selector knob to the proper position and checking the indenter closure with the M22520/35 "Go/No-Go" Gage. Color coded anodized aluminum with stainless steel probes.

## **Insertion and Removal Tools**



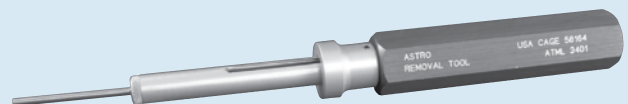
### **M81969/33-01 Straight Insertion Tool**

The M81969/33-01 Straight Insertion Tool is approved for use on MIL-DTL-28840 connectors and features an anodized aluminum handle and stainless steel insertion tip.



### **M81969/33-02 Offset Insertion Tool**

Approved for use on MIL-DTL-28840 connectors, the M81969/33-02 Offset Insertion Tool features an anodized aluminum handle and stainless steel offset insertion tip.



### **M81969/34-01 Removal Tool**

Designed and approved for removal of contacts and in MIL-DTL-28840 connectors, the M81969/34-01 Removal Tool's anodized aluminum handle and stainless steel tip will provide many years of reliable service.

## Contact Insertion

### 1. Tools:

Be sure that all proper assembly tools are on hand and properly calibrated (Figure 1). See previous page for complete descriptions of required tools.

### 2. Stripping:

Strip wire ends to 3/16" for 20-32 AWG, taking care not to nick or cut wire strands (Figure 2). Hold insulation and twist strands to eliminate any splaying.

### 3. Wire Insertion:

Insert wire into crimp well of contact. **Do Not Force**. Wire strands must be visible through inspection hole (Figure 3).

### 4. Crimping:

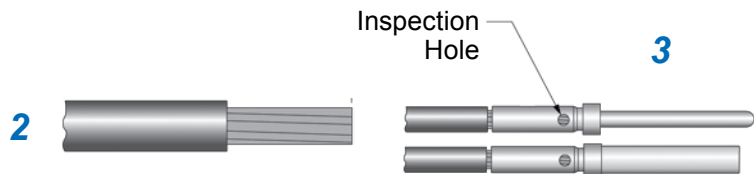
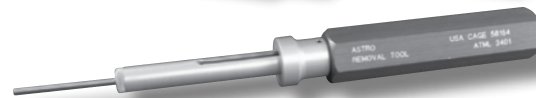
Using crimp tool and positioner noted above, insert wire and contact into locator jaws. Squeeze tool handle completely until ratchet releases. Remove wired contact from tool (Figure 4).

### 5. Backshell Preparation:

Slide backshell/strain relief over jacketed cable or wires in proper order for re-assembly. Consult Glenair backshell catalog or contact factory for proper jacketed cable assembly (Figure 5).

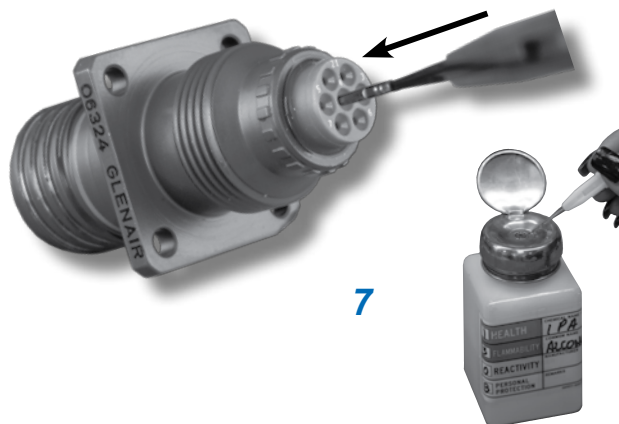
### 6. Contact Preparation:

Slide wired contact into insertion tool of choice so that the tip of the tool butts against the shoulder of the contact (Figure 6).



### 7. Insertion of Contacts:

Insert wired contacts and tool into contact cavity until contact “clicks” into retention clip (Figure 7). A straight pull on the wire will assure the contact is properly seated. Note: Isopropyl alcohol may be used as a lubricant. Use sparingly.



### 8. Assembly:

After all contacts are inserted, assemble backshell or strain relief according to Glenair backshell catalog instructions.

## Contact Extraction

### 1a. Contact Extraction:

Remove backshell or strain relief from connector.

### 2a. Contact Extraction:

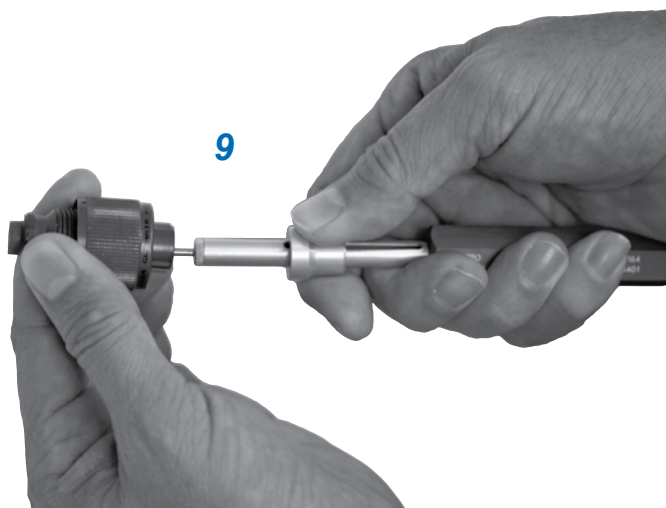
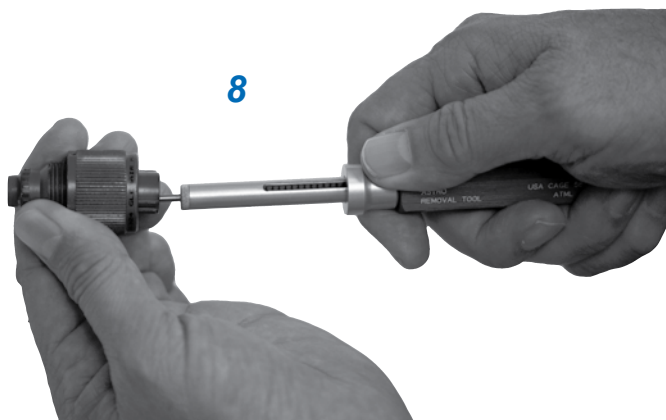
MIL-DTL-28840 connector contacts are extracted from the rear but released from the front of the connector. Using an extraction tool, slide tool tip into front of contact cavity (mating face of connector, figure 8) until tool tip engages against contact retention clip. Push plunger with minimum force to release contact (Figure 9). Note: Isopropyl alcohol may be used as a lubricant. Use sparingly.

### 3a. Contact Extraction:

Pull wired contact from rear grommet of connector.

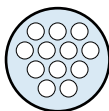
### Contact Replacement:

After replacing contact, re-insert starting with assembly instruction number 7.

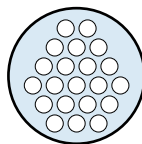




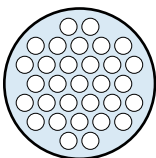
Shell Size 11  
7 Contacts



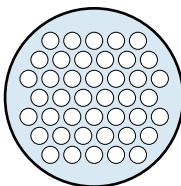
Shell Size 13  
12 Contacts



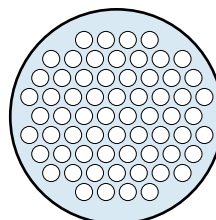
Shell Size 15  
21 Contacts



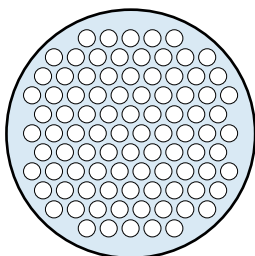
Shell Size 17  
31 Contacts



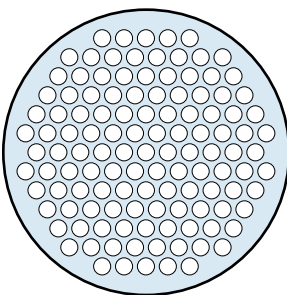
Shell Size 19  
42 Contacts



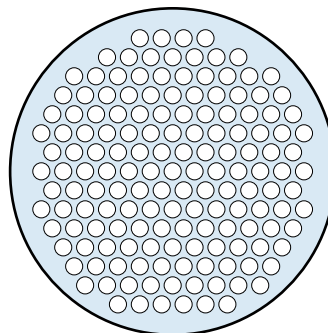
Shell Size 23  
64 Contacts



Shell Size 25  
92 Contacts



Shell Size 29  
121 Contacts



Shell Size 33  
155 Contacts

# MIL-DTL-28840 Polarization Keyways



MIL-DTL-  
28840

B

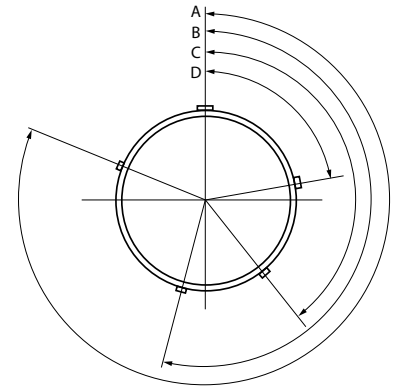
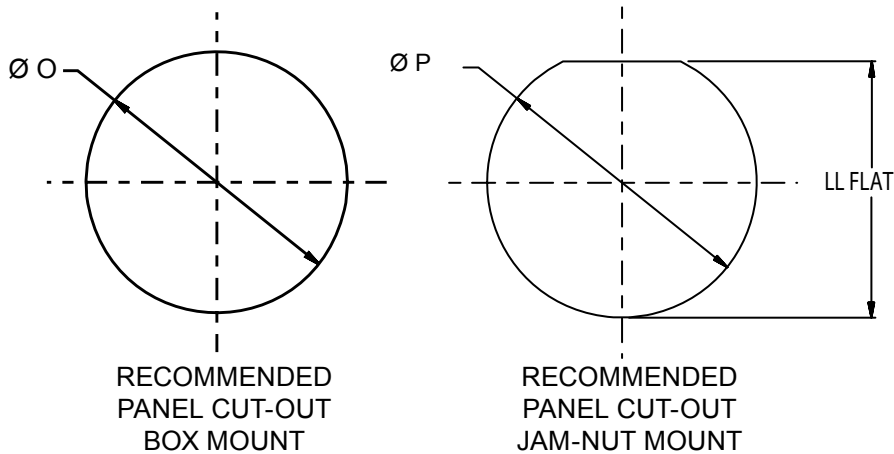


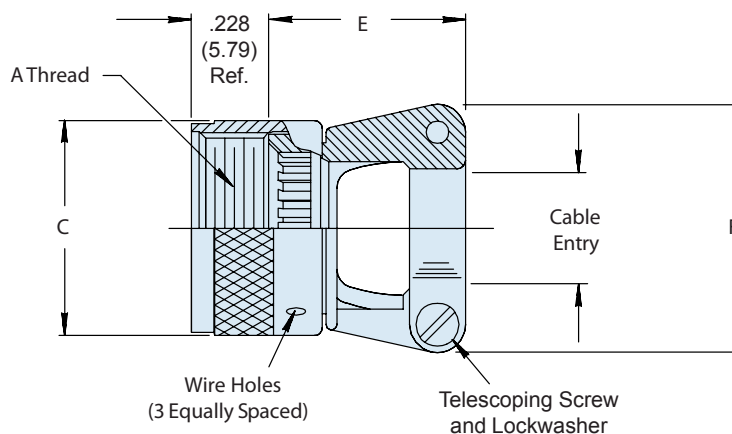
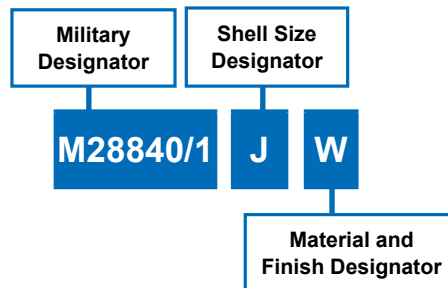
TABLE I: PANEL CUT-OUT

| Designator | P Dia.         | LL Flat        | O Ref. Mtg. Hole |
|------------|----------------|----------------|------------------|
| A (11)     | .890<br>.880   | .853<br>.843   | .812             |
| B (13)     | 1.015<br>1.005 | .978<br>.968   | .937             |
| C (15)     | 1.203<br>1.193 | 1.165<br>1.155 | 1.124            |
| D (17)     | 1.265<br>1.255 | 1.228<br>1.218 | 1.187            |
| E (19)     | 1.453<br>1.443 | 1.415<br>1.405 | 1.374            |
| F (23)     | 1.640<br>1.630 | 1.603<br>1.593 | 1.562            |
| G (25)     | 1.765<br>1.755 | 1.728<br>1.718 | 1.687            |
| H (29)     | 1.953<br>1.943 | 1.915<br>1.905 | 1.874            |
| J (33)     | 2.140<br>2.130 | 1.103<br>2.093 | 2.062            |

TABLE II: ALTERNATE KEYWAYS

| Designator                                     | Key and Keyway Arrangement | AR° or AP° BSC | BR° or BP° BSC | CR° or CP° BSC | DR° or DP° BSC |
|------------------------------------------------|----------------------------|----------------|----------------|----------------|----------------|
| A (11)<br>B (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 (15)<br>D (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 (19)<br>F (23)<br>G (25)<br>H (29)<br>J (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            |

# M28840/1 Straight Strain Relief

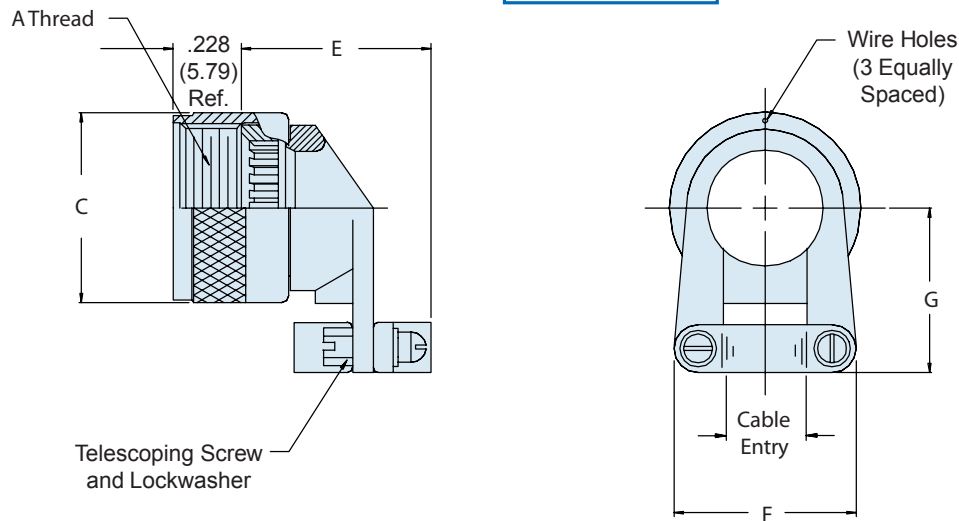
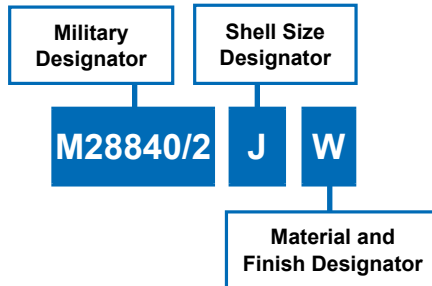


| Designator | A Thread<br>Class 2B | B Max.<br>Diameter | C Max.           | D Max.           | Screw Size<br>Ref. | Cable Entry     |                  |
|------------|----------------------|--------------------|------------------|------------------|--------------------|-----------------|------------------|
|            |                      |                    |                  |                  |                    | Min.            | Max.             |
| A (11)     | .750-20<br>UNEF      | 1.028<br>(26.11)   | 1.091<br>(27.71) | .903<br>(22.94)  | .114-40            | .177<br>(4.50)  | .286<br>(7.26)   |
| B (13)     | .875-20<br>UNEF      | 1.141<br>(28.98)   | 1.091<br>(27.71) | .977<br>(24.82)  | .114-40            | .177<br>(4.50)  | .286<br>(7.26)   |
| C (15)     | 1.000-20<br>UNEF     | 1.263<br>(32.08)   | 1.091<br>(27.71) | 1.151<br>(29.24) | .114-40            | .250<br>(6.35)  | .416<br>(10.57)  |
| D (17)     | 1.125-18<br>UNEF     | 1.387<br>(35.23)   | 1.206<br>(30.63) | 1.281<br>(32.54) | .114-40            | .291<br>(7.39)  | .476<br>(12.09)  |
| E (19)     | 1.250-18<br>UNEF     | 1.513<br>(38.43)   | 1.320<br>(33.53) | 1.406<br>(35.71) | .114-40            | .348<br>(8.84)  | .626<br>(15.90)  |
| F (23)     | 1.438-18<br>UNEF     | 1.703<br>(43.26)   | 1.445<br>(36.70) | 1.576<br>(40.03) | .134-32            | .429<br>(10.90) | .831<br>(21.11)  |
| G (25)     | 1.562-18<br>UNEF     | 1.825<br>(46.36)   | 1.570<br>(39.88) | 1.666<br>(42.32) | .134-32            | .523<br>(13.28) | .956<br>(24.28)  |
| H (29)     | 1.875-16<br>UN       | 2.143<br>(54.43)   | 1.721<br>(43.71) | 2.046<br>(51.97) | .134-32            | .643<br>(16.33) | 1.081<br>(27.46) |
| J (33)     | 2.062-16<br>UNS      | 2.329<br>(59.16)   | 1.908<br>(48.46) | 2.209<br>(56.11) | .162-32            | .704<br>(17.88) | 1.187<br>(30.15) |

# M28840/2 90° Strain Relief



MIL-DTL-  
28840



| Designator | A Thread<br>Class 2B | B Max.<br>Diameter | C Max.           | D Max.           | Screw Size<br>Ref. | Cable Entry     |                  |
|------------|----------------------|--------------------|------------------|------------------|--------------------|-----------------|------------------|
|            |                      |                    |                  |                  |                    | Min.            | Max.             |
| A (11)     | .750-20<br>UNEF      | 1.028<br>(26.11)   | 1.071<br>(27.20) | .929<br>(23.60)  | .114-40            | .177<br>(4.50)  | .286<br>(7.26)   |
| B (13)     | .875-20<br>UNEF      | 1.141<br>(28.98)   | 1.071<br>(27.20) | .929<br>(23.60)  | .114-40            | .177<br>(4.50)  | .286<br>(7.26)   |
| C (15)     | 1.000-20<br>UNEF     | 1.263<br>(32.08)   | 1.280<br>(32.51) | 1.056<br>(26.82) | .114-40            | .250<br>(6.35)  | .416<br>(10.57)  |
| D (17)     | 1.125-18<br>UNEF     | 1.387<br>(35.23)   | 1.392<br>(35.36) | 1.233<br>(31.32) | .114-40            | .291<br>(7.39)  | .476<br>(12.09)  |
| E (19)     | 1.250-18<br>UNEF     | 1.513<br>(38.43)   | 1.517<br>(38.53) | 1.296<br>(32.92) | .114-40            | .348<br>(8.84)  | .626<br>(15.90)  |
| F (23)     | 1.438-18<br>UNEF     | 1.703<br>(43.26)   | 1.642<br>(41.71) | 1.358<br>(34.49) | .134-32            | .429<br>(10.90) | .831<br>(21.11)  |
| G (25)     | 1.562-18<br>UNEF     | 1.825<br>(46.36)   | 1.767<br>(44.88) | 1.420<br>(36.07) | .134-32            | .523<br>(13.28) | .956<br>(24.28)  |
| H (29)     | 1.875-16<br>UN       | 2.143<br>(54.43)   | 1.905<br>(48.39) | 1.634<br>(41.50) | .134-32            | .643<br>(16.33) | 1.081<br>(27.46) |
| J (33)     | 2.062-16<br>UNS      | 2.329<br>(59.16)   | 1.968<br>(49.99) | 1.859<br>(47.22) | .162-32            | .704<br>(17.88) | 1.187<br>(30.15) |

# M28840/3 45° Strain Relief

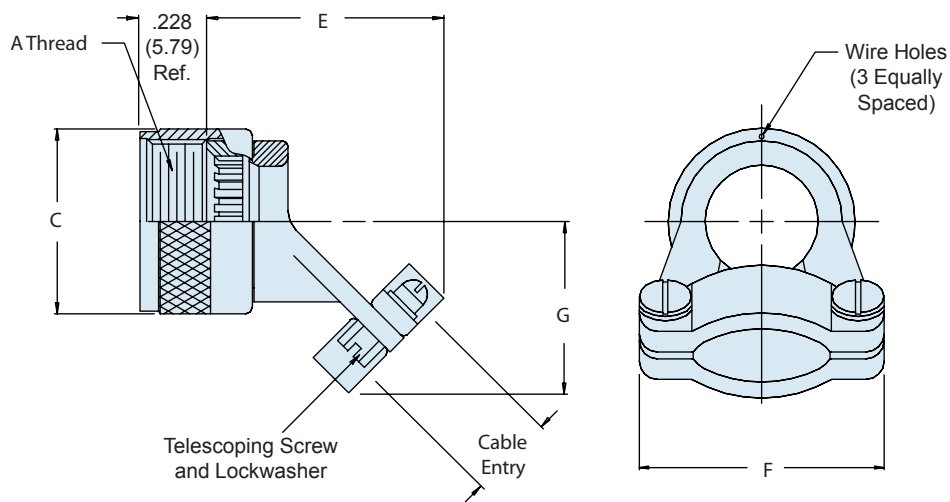
Military  
DesignatorShell Size  
Designator

M28840/3

J

W

## Material Type

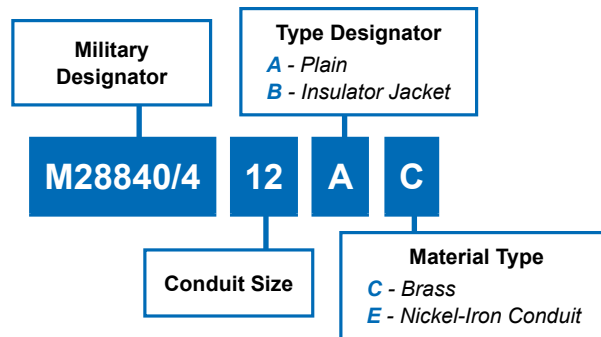
*W* - Aluminum, Cadmium Plate,  
O.D. over Electroless Nickel*D* - Corrosion Resistant Steel,  
Cadmium Plate, Black

| Designator | A Thread<br>Class 2B | B Max.<br>Diameter | C Max.           | D Max.           | E Max.           | Screw Size<br>Ref. | Cable Entry     |                  |
|------------|----------------------|--------------------|------------------|------------------|------------------|--------------------|-----------------|------------------|
|            |                      |                    |                  |                  |                  |                    | Min.            | Max.             |
| A (11)     | .750-20<br>UNEF      | 1.028<br>(26.11)   | 1.091<br>(27.71) | .929<br>(23.60)  | .903<br>(22.94)  | .114-40            | .177<br>(4.50)  | .286<br>(7.26)   |
| B (13)     | .875-20<br>UNEF      | 1.141<br>(28.98)   | 1.091<br>(27.71) | .929<br>(23.60)  | .977<br>(24.82)  | .114-40            | .177<br>(4.50)  | .286<br>(7.26)   |
| C (15)     | 1.000-20<br>UNEF     | 1.263<br>(32.08)   | 1.091<br>(27.71) | 1.056<br>(26.82) | 1.151<br>(29.24) | .114-40            | .250<br>(6.35)  | .416<br>(10.57)  |
| D (17)     | 1.125-18<br>UNEF     | 1.387<br>(35.23)   | 1.206<br>(30.63) | 1.233<br>(31.32) | 1.281<br>(32.54) | .114-40            | .291<br>(7.39)  | .476<br>(12.09)  |
| E (19)     | 1.250-18<br>UNEF     | 1.513<br>(38.43)   | 1.320<br>(33.53) | 1.296<br>(32.92) | 1.406<br>(35.71) | .114-40            | .348<br>(8.84)  | .626<br>(15.90)  |
| F (23)     | 1.438-18<br>UNEF     | 1.703<br>(43.26)   | 1.445<br>(36.70) | 1.358<br>(34.49) | 1.576<br>(40.03) | .134-32            | .429<br>(10.90) | .831<br>(21.11)  |
| G (25)     | 1.562-18<br>UNEF     | 1.825<br>(46.36)   | 1.570<br>(39.88) | 1.420<br>(36.07) | 1.666<br>(42.32) | .134-32            | .523<br>(13.28) | .956<br>(24.28)  |
| H (29)     | 1.875-16<br>UN       | 2.143<br>(54.43)   | 1.721<br>(43.71) | 1.634<br>(41.50) | 2.046<br>(51.97) | .134-32            | .643<br>(16.33) | 1.081<br>(27.46) |
| J (33)     | 2.062-16<br>UNS      | 2.329<br>(59.16)   | 1.908<br>(48.46) | 1.859<br>(47.22) | 2.209<br>(56.11) | .162-32            | .704<br>(17.88) | 1.187<br>(30.15) |

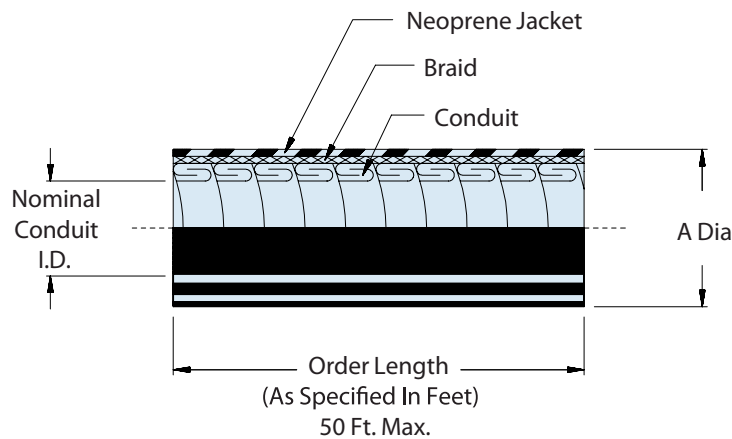
# M28840/4 Metal Core Conduit



MIL-DTL-  
28840

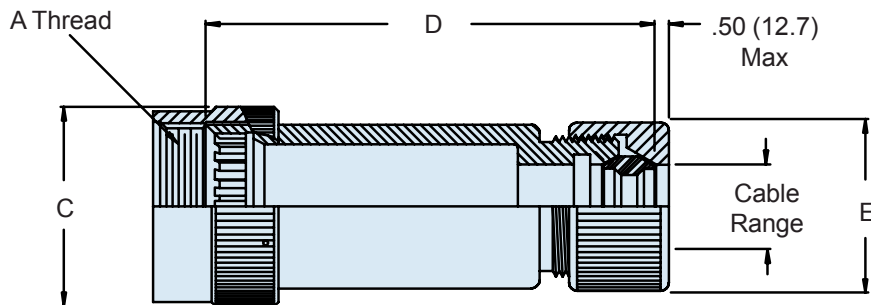


B

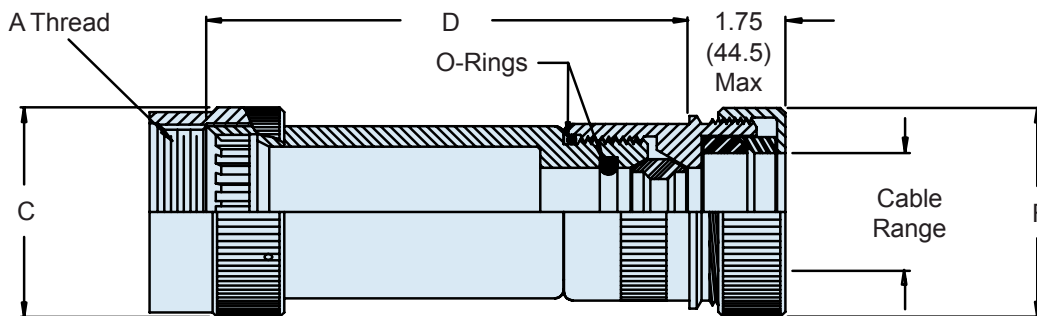


| Size | Nominal Conduit Inside Diameter | A Diameter Over Shield $\pm .010$ (0.25) | L           | B Diameter Max Over Jacket |
|------|---------------------------------|------------------------------------------|-------------|----------------------------|
| 03   | .375 (9.52)                     | .525 (13.34)                             | 50 ft. Max. | .688 (17.47)               |
| 04   | .500 (12.70)                    | .650 (16.51)                             |             | .812 (20.62)               |
| 05   | .625 (15.87)                    | .765 (19.43)                             |             | .937 (23.79)               |
| 06   | .750 (19.05)                    | .925 (23.50)                             |             | 1.078 (27.38)              |
| 08   | 1.00 (25.40)                    | 1.210 (30.73)                            |             | 1.437 (36.49)              |
| 10   | 1.25 (31.75)                    | 1.455 (36.96)                            |             | 1.695 (43.05)              |
| 12   | 1.500 (38.10)                   | 1.725 (43.82)                            |             | 1.956 (49.68)              |
| 16   | 2.000 (50.80)                   | 2.200 (55.88)                            |             | 2.469 (62.71)              |

# M28840/5 Backshell for Metal Core Conduit

**Military  
Designator**
**M28840/5**
**Dash  
Number**
**16**
**Material Type**
*W - Aluminum, Cadmium Plate,  
O.D. over Electroless Nickel*
*D - Corrosion Resistant Steel,  
Cadmium Plate, Black*
**W**
**A**
**Type Designator**
*A - EMI Environmental*
*B - Environmental*


STYLE A - EMI/Non-Environmental  
(Plain Conduit)



STYLE B - EMI/Environmental  
(Jacket Conduit)

# M28840/5 Backshell for Metal Core Conduit



MIL-DTL-  
28840

B

| Dash Number | Designator | Conduit Size | L<br>± .12<br>(± 3.05) | Working Room Ref. | V<br>Thread Class 2* | M<br>Max. Diameter | Y<br>Max. Diameter |             |
|-------------|------------|--------------|------------------------|-------------------|----------------------|--------------------|--------------------|-------------|
| 01          | A (11)     | 03           | 1.75 (44.45)           | 1.00 (25.4)       | 1.00-20 UNEF         | 1.12 (28.45)       | 1.19 (30.23)       |             |
| 02          | B (13)     |              |                        |                   |                      |                    |                    |             |
| 03          |            | 04           |                        |                   | 1.188-18 UNEF        | 1.25 (31.8)        | 1.38 (35.1)        |             |
| 04          | C (15)     | 03           |                        |                   | 1.000-20 UNEF        | 1.12 (28.5)        | 1.19 (30.23)       |             |
| 05          |            | 04           |                        |                   | 1.188-30 UNEF        | 1.25 (31.8)        | 1.38 (35.1)        |             |
| 06          |            | 05           |                        |                   | 1.438-18 UNEF        | 1.43 (36.3)        | 1.63 (41.4)        |             |
| 07          |            | 06           | 3.00 (76.2)            |                   | 1.750-18 UNS         | 1.62 (41.2)        | 1.94 (49.3)        |             |
| 08          | D (17)     | 05           | 2.25 (57.15)           | 1.50 (38.10)      | 1.438-18 UNEF        | 1.43 (36.3)        | 1.63 (41.4)        |             |
| 09          |            | 06           |                        | 1.750-18 UNS      | 1.62 (41.2)          | 1.94 (49.3)        |                    |             |
| 10          |            | 08           |                        | 2.00 (50.80)      | 2.00-18 UNS          | 1.81 (46.0)        | 2.19 (55.6)        |             |
| 11          | E (19)     | 05           |                        | 1.50 (38.10)      | 1.438-18 UNEF        | 1.43 (36.3)        | 1.63 (41.4)        |             |
| 12          |            | 06           |                        |                   | 1.750-18 UNEF        | 1.62 (41.2)        | 1.94 (49.3)        |             |
| 13          |            | 08           |                        |                   | 2.00-18 UNS          | 1.81 (46.2)        | 2.19 (55.6)        |             |
| 14          | F (23)     | 06           | 2.75 (69.85)           | 2.00 (50.80)      | 1.750-18 UNS         | 1.62 (41.2)        | 1.94 (49.3)        |             |
| 15          |            | 08           | 3.50 (88.90)           |                   | 2.00-18 UN           | 1.81 (46.0)        | 2.19 (55.6)        |             |
| 16          |            | 10           |                        |                   | 2.00-16 UN           | 2.18 (55.4)        | 2.44 (62.0)        |             |
| 17          | G (25)     | 06           | 2.75 (60.85)           |                   | 1.750-18 UN          | 1.62 (41.2)        | 1.94 (49.3)        |             |
| 18          |            | 08           |                        |                   | 2.00-18 UN           | 1.81 (46.0)        | 2.19 (55.6)        |             |
| 19          |            | 10           |                        |                   | 2.250-16 UN          | 2.18 (55.4)        | 2.44 (62.0)        |             |
| 20          | H (29)     | 12           | 4.00 (101.6)           | 2.50 (63.50)      | 2.500-16 UN          | 2.56 (65.0)        | 2.69 (68.3)        |             |
| 21          |            | 10           | 3.25 (82.55)           |                   | 2.250-16 UN          | 2.18 (55.4)        | 2.44 (62.0)        |             |
| 22          |            | 12           |                        |                   | 2.500-16 UN          | 2.56 (65.0)        | 2.66 (68.3)        |             |
| 23          | J (33)     | 12           |                        |                   |                      | 2.56 (65.0)        | 2.60 (88.3)        |             |
| 24          |            | 16           |                        |                   | 3.00-16 UN           | 3.06 (77.8)        | 3.18 (81.0)        |             |
| 25          | A (11)     | 04           | 1.75 (44.45)           |                   | 1.00 (25.4)          | 1.188-18 UNEF      | 1.75 (31.75)       | 1.38 (35.0) |



# M28840/5

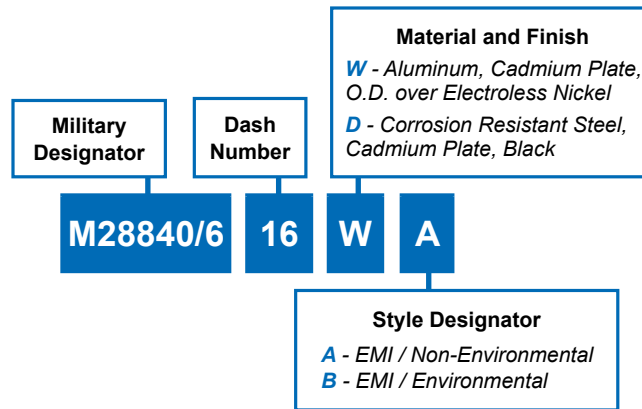
## Backshell for Metal Core Conduit

| Dash Number | Designator | A Thread Class 2B | B Diameter Max. | C Thread Class 2* | Sealing Range |             |
|-------------|------------|-------------------|-----------------|-------------------|---------------|-------------|
|             |            |                   |                 |                   | Max.          | Min.        |
| 01          | A (11)     | .750-20 UNEF      | 1.028 (26.11)   | .875-20 UNEF      | .63 (16.0)    | .50 (12.7)  |
| 02          | B (13)     | .875-20 UNEF      | 1.141 (28.98)   |                   |               |             |
| 03          |            |                   |                 | 1.000-20 UNEF     | .75 (19.1)    | .63 (16.0)  |
| 04          | C (15)     | 1.000-20 UNEF     | 1.263 (32.08)   | .875-20 UNEF      | .63 (16.0)    | .50 (12.7)  |
| 05          |            |                   |                 | 1.000-20 UNEF     | .75 (19.1)    | .63 (16.0)  |
| 06          |            |                   |                 | 1.125-18 UNEF     | .88 (22.4)    | .75 (19.1)  |
| 07          |            |                   |                 | 1.250-18 UNEF     | 1.00 (25.4)   | .88 (22.4)  |
| 08          | D (17)     | 1.125-18 UNEF     | 1.387 (35.23)   | 1.125-18 UNEF     | .88 (22.4)    | .75 (19.1)  |
| 09          |            |                   |                 | 1.250-18 UNEF     | 1.00 (25.4)   | .88 (22.4)  |
| 10          |            |                   |                 | 1.625-18 UNEF     | 1.38 (35.1)   | 1.19 (30.2) |
| 11          | E (19)     | 1.250-18 UNEF     | 1.513 (38.43)   | 1.125-18 UNEF     | .88 (22.4)    | .75 (19.1)  |
| 12          |            |                   |                 | 1.250-18 UNEF     | 1.00 (25.4)   | .88 (22.4)  |
| 13          |            |                   |                 | 1.625-18 UNEF     | 1.38 (35.1)   | 1.19 (30.2) |
| 14          | F (23)     | 1.438-18 UNEF     | 1.703 (45.51)   | 1.250-18 UNEF     | 1.00 (25.4)   | .88 (22.4)  |
| 15          |            |                   |                 | 1.625-18 UNEF     | 1.38 (35.1)   | 1.19 (30.2) |
| 16          |            |                   |                 | 1.875-18 UNS      | 1.63 (41.4)   | 1.44 (36.6) |
| 17          | G (25)     | 1.562-18 UNEF     | 1.825 (46.35)   | 1.250-18 UNEF     | 1.00 (25.4)   | .88 (22.4)  |
| 18          |            |                   |                 | 1.625-18 UNEF     | 1.38 (35.1)   | 1.19 (30.2) |
| 19          |            |                   |                 | 1.875-18 UNS      | 1.63 (41.4)   | 1.44 (36.6) |
| 20          |            |                   |                 | 2.125-16 UN       | 1.88 (47.8)   | 1.63 (41.4) |
| 21          | H (29)     | 1.875-16 UN       | 2.143 (54.43)   | 1.875-18 UNS      | 1.63 (41.4)   | 1.44 (36.6) |
| 22          |            |                   |                 | 2.125-16 UN       | 1.88 (47.8)   | 1.63 (41.4) |
| 23          | J (33)     | 2.062-16 UNS      | 2.329 (59.16)   | 2.1225-16 UN      | 1.88 (47.8)   | 1.63 (41.4) |
| 24          |            |                   |                 | 2.750-16 UN       | 2.38 (60.5)   | 2.13 (54.1) |
| 25          | A (11)     | .750-20 UNEF      | 1.028 (26.11)   | .875-20 UNEF      | .75 (19.05)   | .63 (16.00) |

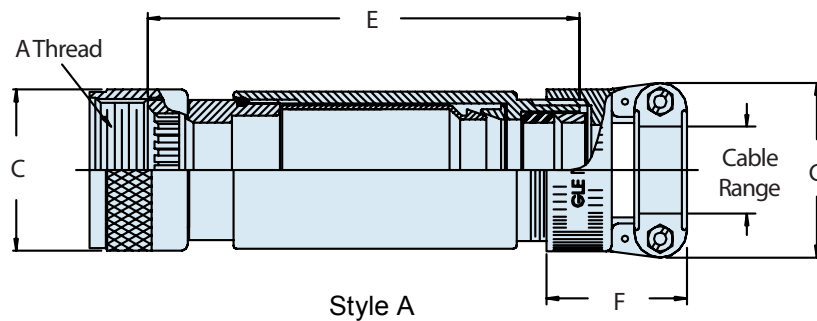
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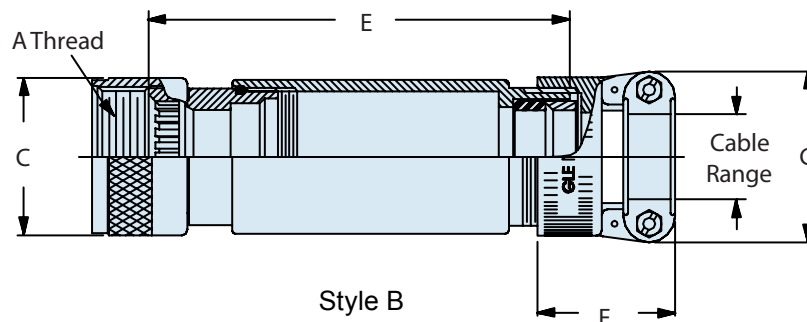
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**B**



Style A



Style B


**M28840/6**  
**EMI/RFI Environmental Backshell**

B

| Dash Number | Designator    | A Thread Class<br>2B | B Diameter<br>Max. | C Diameter<br>Max. | D Diameter<br>Min. | Cable Range   |               |
|-------------|---------------|----------------------|--------------------|--------------------|--------------------|---------------|---------------|
|             |               |                      |                    |                    |                    | Max.          | Min.          |
| 01          | A (11)        | .750-20 UNEF         | 1.028 (26.11)      | 1.156 (29.36)      | .750 (19.05)       | .312 (7.92)   | .188 (4.77)   |
| 02          | B (13)        | .875-20 UNEF         | 1.141 (28.98)      | 1.156 (29.36)      | .750 (19.05)       | .312 (7.92)   | .188 (4.77)   |
| 03          |               |                      |                    |                    |                    | .438 (11.12)  | .281 (7.14)   |
| 04          | C (15)        | 1.000-20 UNEF        | 1.263 (32.08)      | 1.281 (32.54)      | .875 (22.23)       | .312 (7.92)   | .188 (4.77)   |
| 05          |               |                      |                    |                    |                    | .438 (11.12)  | .281 (7.14)   |
| 06          |               |                      |                    |                    |                    | .562 (14.27)  | .344 (8.74)   |
| 07          |               |                      |                    |                    |                    | .750 (19.05)  | .438 (11.12)  |
| 08          | D (17)        | 1.125-18 UNEF        | 1.387 (35.23)      | 1.406 (35.71)      | 1.000 (25.40)      | .625 (15.87)  | .375 (9.52)   |
| 09          |               |                      |                    |                    |                    | .750 (19.05)  | .375 (9.52)   |
| 10          |               |                      |                    |                    |                    | .938 (23.82)  | .438 (11.12)  |
| 11          | E (19)        | 1.250-18 UNEF        | 1.513 (38.43)      | 1.531 (38.89)      | 1.125 (28.58)      | .625 (15.87)  | .438 (11.12)  |
| 12          |               |                      |                    |                    |                    | .938 (23.82)  | .625 (15.87)  |
| 13          |               |                      | F (23)             | 1.438-18 UNEF      | 1.703 (45.51)      | 1.656 (42.06) | 1.250 (31.75) |
| 14          | .938 (23.82)  | .625 (15.87)         |                    |                    |                    |               |               |
| 15          | 1.188 (30.17) | .625 (15.87)         |                    |                    |                    |               |               |
| 16          | .938 (23.82)  | .812 (20.62)         |                    |                    |                    |               |               |
| 17          | G (25)        | 1.562-18 UNEF        | 1.825 (46.35)      | 1.781 (45.24)      | 1.375 (34.93)      | 1.188 (30.17) | .875 (22.23)  |
| 18          |               |                      |                    |                    |                    | 1.250 (31.75) | 1.19 (30.2)   |
| 19          |               |                      |                    |                    |                    | 1.380 (35.05) | 1.000 (25.4)  |
| 20          |               |                      | 2.143 (54.43)      | 2.156 (54.76)      | 1.750 (44.45)      | 1.188 (30.17) | 1.63 (41.4)   |
| 21          | H (29)        | 1.875-16 UN          | 2.329 (59.16)      | 2.281 (57.94)      | 1.875 (47.63)      | 1.380 (38.05) | 1.44 (36.6)   |
| 22          |               |                      |                    |                    |                    | 1.380 (38.05) | 1.63 (41.4)   |
| 23          | J (33)        | 2.062-16 UNS         | 1.028 (26.11)      | 1.156 (29.36)      | .750 (19.05)       | 1.625 (41.28) | 1.53 (41.4)   |
| 24          |               |                      |                    |                    |                    | .438 (11.12)  | 2.13 (54.1)   |
| 25          | A (11)        | .750-20 UNEF         |                    |                    |                    | .562 (14.27)  | .63 (16.00)   |
| 26          | B (13)        | .875-30 UNEF         | 1.141 (28.98)      | 1.281 (32.54)      | .875 (22.22)       | .562 (14.27)  | .344 (8.74)   |
| 27          |               |                      |                    |                    |                    | .625 (15.87)  | .375 (9.52)   |
| 28          | C (15)        | 1.000-20 UNEF        | 1.263 (32.08)      | 1.406 (35.71)      | 1.000 (25.4)       |               |               |

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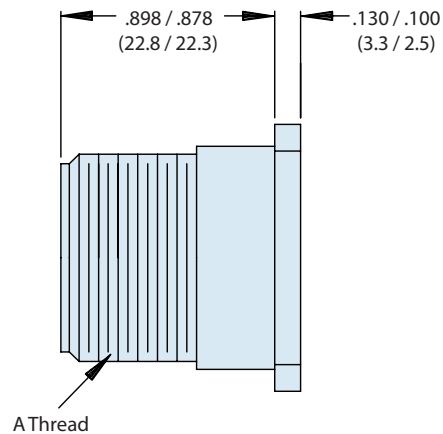
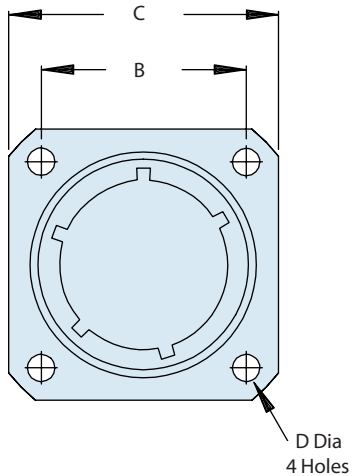
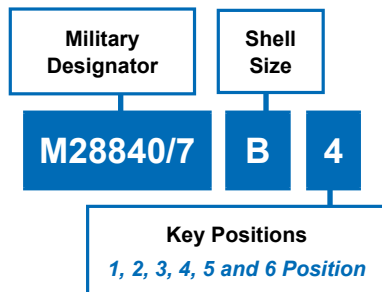


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**B**

| Dash Number | Designator 1/ | L<br>± .12<br>(± 3.05) | Working Room Ref. | V<br>Thread Class 2* | X<br>Max.<br>Diameter | Y<br>Max.<br>Diameter |
|-------------|---------------|------------------------|-------------------|----------------------|-----------------------|-----------------------|
| 01          | A (11)        | 3.62 (91.55)           | 2.00 (50.80)      | .625-24 UNEF         |                       | .038 (23.82)          |
| 02          | B (13)        |                        |                   | .625-24 UNEF         |                       | 1.125 (23.82)         |
| 03          |               |                        |                   | .750-20 UNEF         |                       |                       |
| 04          | C (15)        |                        |                   | .625-24 UNEF         |                       | .938 (23.82)          |
| 05          |               |                        |                   | .750-20 UNEF         |                       | 1.125 (28.57)         |
| 06          |               |                        |                   | .875-20 UNEF         |                       | 1.312 (33.32)         |
| 07          | D (17)        | 4.12 (104.65)          | 2.50 (63.50)      | 1.188-18 UNEF        | 1.312 (33.32)         | 1.593 (40.62)         |
| 08          |               |                        |                   | 1.000-20 UNEF        | 1.281 (32.54)         | 1.312 (33.32)         |
| 09          |               |                        |                   | 1.188-19 UNEF        | 1.312 (33.32)         | 1.593 (40.62)         |
| 10          |               |                        |                   | 1.438-18 UNEF        | 1.406 (35.71)         | 1.750 (44.45)         |
| 11          | E (19)        | 4.62 (117.35)          | 3.00 (76.20)      | 1.000-20 UNEF        | 1.281 (32.54)         | 1.312 (33.32)         |
| 12          |               |                        |                   | 1.438-18 UNEF        | 1.406 (35.71)         | 1.750 (44.45)         |
| 13          |               |                        |                   | 1.188-18 UNEF        | 1.312 (33.32)         | 1.593 (40.62)         |
| 14          | F (23)        |                        |                   | 1.438-18 UNEF        | 1.406 (35.71)         | 1.750 (44.45)         |
| 15          |               |                        |                   | 1.750-18 UNS         | 1.593 (40.46)         | 2.003 (53.16)         |
| 16          |               |                        |                   | 1.438-18 UNEF        | 1.406 (35.71)         | 1.750 (44.45)         |
| 17          | G (25)        | 5.12 (130.05)          | 3.50 (88.90)      | 1.750-18 UNS         | 1.593 (40.46)         | 2.093 (53.16)         |
| 18          |               |                        |                   | 1.750-18 UNS         |                       | 2.093 (53.16)         |
| 19          |               |                        |                   | 2.000-18 UNS         | 1.625 (41.28)         | 2.343 (59.51)         |
| 20          |               |                        |                   | 1.750-18 UNS         | 1.593 (40.46)         | 2.093 (53.16)         |
| 21          | H (29)        |                        |                   | 2.000-18 UNS         | 1.625 (41.28)         | 2.343 (59.51)         |
| 22          |               |                        |                   | 2.000-18 UNS         |                       |                       |
| 23          | J (33)        |                        |                   |                      |                       | 2.250-16 UNS          |
| 24          |               | .750-20 UNEF           | 1.281 (32.54)     |                      |                       | 1.125 (28.57)         |
| 25          | A (11)        | .875-20 UNEF           |                   | 1.312 (33.32)        |                       |                       |
| 26          | B (13)        |                        |                   |                      |                       |                       |

# M28840/7 Dummy Stowage Receptacle

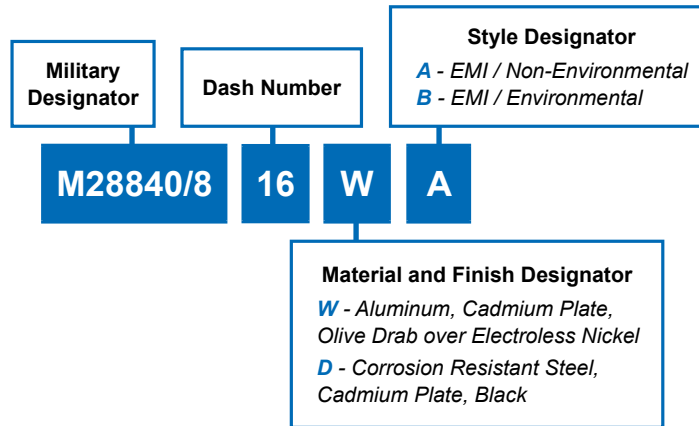


| Designator | N<br>Diameter<br>Max. | O<br>Reference<br>Mating Hole | R<br>T.P.<br>Centerline to<br>Centerline | S                              | T                          |
|------------|-----------------------|-------------------------------|------------------------------------------|--------------------------------|----------------------------|
| A (11)     | .750<br>(19.05)       | .812 (20.62)                  | .750 (19.05)                             | 1.043 (26.49)<br>1.003 (25.48) | .130 (3.30)<br>.115 (2.92) |
| B (13)     | .875<br>(22.22)       | .937 (23.80)                  | .843 (21.41)                             | 1.158 (29.41)<br>1.118 (28.40) |                            |
| C (15)     | 1.062<br>(26.97)      | 1.124 (28.55)                 | .968 (24.59)                             | 1.278 (32.46)<br>1.238 (31.45) |                            |
| D (17)     | 1.125<br>(28.58)      | 1.187 (30.15)                 | 1.015 (25.78)                            | 1.403 (35.64)<br>1.363 (34.62) |                            |
| E (19)     | 1.312<br>(33.32)      | 1.374 (34.90)                 | 1.140 (28.96)                            | 1.528 (38.81)<br>1.488 (37.80) |                            |
| F (23)     | 1.500<br>(38.10)      | 1.562 (39.67)                 | 1.281 (32.54)                            | 1.738 (44.15)<br>1.698 (43.13) |                            |
| G (25)     | 1.625<br>(41.28)      | 1.687 (42.85)                 | 1.392 (35.36)                            | 1.838 (46.69)<br>1.798 (45.67) | .157 (3.99)<br>.142 (3.61) |
| H (29)     | 1.812<br>(46.02)      | 1.874 (47.60)                 | 1.568 (39.83)                            | 2.158 (54.81)<br>2.118 (53.80) |                            |
| J (33)     | 2.000<br>(50.80)      | 2.062 (52.37)                 | 1.734 (44.04)                            | 2.348 (59.64)<br>2.308 (58.62) |                            |

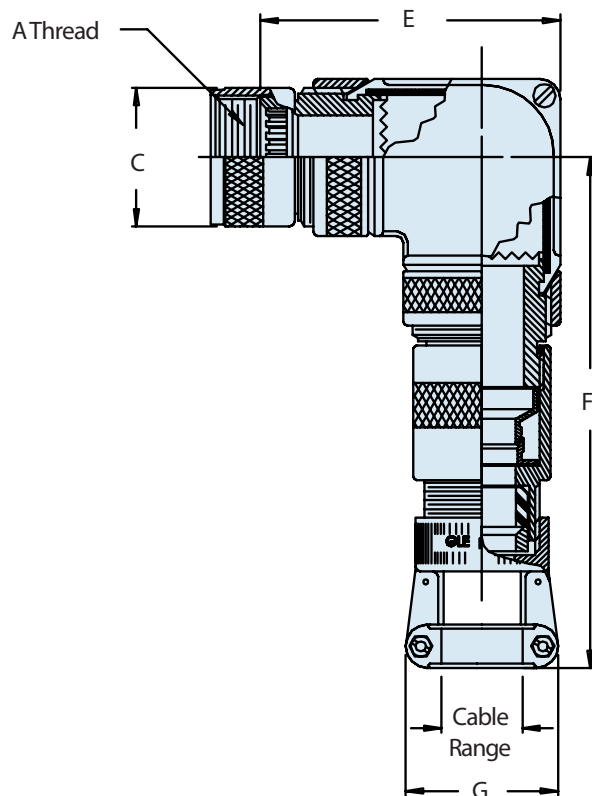
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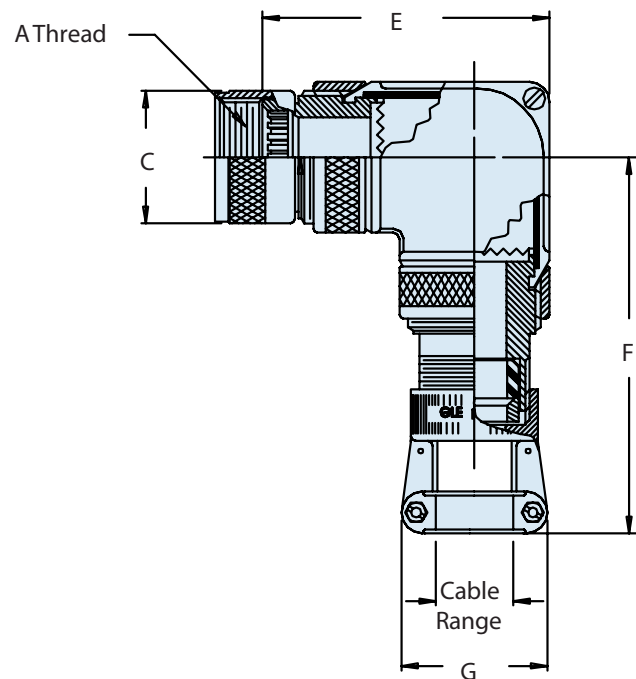
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**B**



**BACKSHELL STYLE A**



**BACKSHELL STYLE B**

B

| Backshell Size | Dash Number | Designator | A Thread Class 2B | B Max. Diameter | C Max. Diameter | D Max. Diameter |
|----------------|-------------|------------|-------------------|-----------------|-----------------|-----------------|
| A              | 01          | A (11)     | .750-20 UNEF      | 1.028 (26.11)   | 1.188 (30.17)   | 1.031 (26.19)   |
| A              | 02          | B (13)     | .875-20 UNEF      | 1.141 (28.98)   |                 |                 |
| B              | 03          | B (13)     |                   |                 |                 |                 |
| A              | 04          | C (15)     | 1.00-20 UNEF      | 1.263 (32.08)   | 1.438 (36.52)   | 1.156 (29.36)   |
| B              | 05          | C (15)     |                   |                 |                 |                 |
| C              | 06          | C (15)     |                   |                 |                 |                 |
| D              | 07          | C (15)     |                   |                 |                 |                 |
| A              | 08          | D (17)     | 1.125-18 UNEF     | 1.387 (35.23)   | 1.688 (42.87)   | 1.281 (32.54)   |
| B              | 09          | D (17)     |                   |                 |                 |                 |
| C              | 10          | D (17)     |                   |                 |                 |                 |
| A              | 11          | E (19)     | 1.250-18 UNEF     | 1.513 (38.43)   | 1.938 (49.22)   | 1.406 (35.71)   |
| B              | 12          | E (19)     |                   |                 |                 |                 |
| A              | 13          | F (23)     | 1.438-18 UNEF     | 1.703 (43.51)   |                 |                 |
| B              | 14          | F (23)     |                   |                 |                 |                 |
| C              | 15          | F (23)     |                   |                 |                 |                 |
| A              | 16          | G (25)     | 1.562-18 UNEF     | 1.825 (46.35)   | 2.188 (54.43)   | 1.531 (38.89)   |
| B              | 17          | G (25)     |                   |                 |                 |                 |
| C              | 18          | G (25)     |                   |                 |                 |                 |
| D              | 19          | G (25)     |                   |                 |                 |                 |
| A              | 20          | H (29)     | 1.875-16 UN       | 2.143 (54.43)   |                 |                 |
| B              | 21          | H (29)     |                   |                 |                 |                 |

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B

| Backshell Size | Dash Number | Designator | Cable Range   |               | E Max. Dim.   | F Max. Dim.   | V Thread Class 2 |
|----------------|-------------|------------|---------------|---------------|---------------|---------------|------------------|
|                |             |            | Max.          | Min.          |               |               |                  |
| A              | 01          | A (11)     | .312 (7.92)   | .188 (4.77)   | 1.156 (29.36) | 2.614 (66.40) | .625-24 UNEF     |
| A              | 02          | B (13)     | .312 (7.92)   | .188 (4.77)   |               |               | .625-24 UNEF     |
| B              | 03          | B (13)     | .438 (11.12)  | .281 (7.14)   |               |               | .750-20 UNEF     |
| A              | 04          | C (15)     | .312 (7.92)   | .188 (4.77)   | 1.281 (32.54) | 2.864 (72.75) | .625-24 UNEF     |
| B              | 05          | C (15)     | .438 (11.12)  | .281 (7.14)   |               |               | .750-20 UNEF     |
| C              | 06          | C (15)     | .562 (14.27)  | .344 (8.74)   |               |               | .875-20 UNEF     |
| D              | 07          | C (15)     | .750 (19.05)  | .438 (11.12)  | 1.406 (35.71) | 3.114 (79.10) | 1.188-18 UNEF    |
| A              | 08          | D (17)     | .625 (15.87)  | .375 (9.82)   |               |               | 1.000-20 UNEF    |
| B              | 09          | D (17)     | .750 (19.05)  | .438 (11.12)  |               |               | 1.188-18 UNEF    |
| C              | 10          | D (17)     | .938 (23.82)  | .625 (15.87)  | 1.531 (38.89) |               | 1.438-18 UNEF    |
| A              | 11          | E (19)     | .625 (15.87)  | .375 (9.52)   | 1.406 (35.71) |               | 1.00-20 UNEF     |
| B              | 12          | E (19)     | .938 (23.82)  | .625 (15.87)  | 1.531 (38.89) | 3.364 (85.45) | 1.438-18 UNEF    |
| A              | 13          | F (23)     | .750 (19.05)  | .438 (11.12)  | 1.406 (25.71) |               | 1.188-18 UNEF    |
| B              | 14          | F (23)     | .938 (23.82)  | .625 (15.87)  | 1.531 (38.89) |               | 1.438-18 UNEF    |
| C              | 15          | F (23)     | 1.188 (30.17) | .812 (20.62)  | 1.781 (45.24) |               | 1.750-18 UNEF    |
| A              | 16          | G (25)     | .938 (23.82)  | .625 (15.87)  | 1.531 (38.89) |               | 1.438-18 UNEF    |
| B              | 17          | G (25)     | 1.188 (30.17) | .812 (20.62)  | 1.781 (45.24) | 3.614 (91.80) | 1.750-18 UNS     |
| C              | 18          | G (25)     | 1.250 (31.75) | .875 (22.23)  |               |               |                  |
| D              | 19          | G (25)     | 1.380 (35.05) | 1.000 (25.40) | 2.156 (54.76) |               | 2.000-16 UNS     |
| A              | 20          | H (29)     | 1.188 (30.17) | .812 (20.62)  | 1.781 (45.24) |               | 1.750-18 UNS     |
| B              | 21          | H (29)     | 1.380 (35.05) | 1.000 (25.40) | 2.156 (54.76) |               | 2.000-18 UNS     |

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**90° EMI/RFI Environmental Backshell**

| Backshell Size | Dash Number | Designator | X Ref. Dimension | Y Ref. Dimension | H Max. Style A | N Max. Style B |
|----------------|-------------|------------|------------------|------------------|----------------|----------------|
| A              | 01          | A (11)     | 1.281 (32.54)    | .938 (23.82)     | 5.332 (134.43) | 2.962 (75.23)  |
| A              | 02          | B (13)     |                  | .938 (23.82)     | 5.332 (134.43) | 2.962 (75.23)  |
| B              | 03          | B (13)     |                  | 1.125 (28.57)    | 5.332 (134.43) | 2.962 (75.23)  |
| A              | 04          | C (15)     |                  | .938 (23.82)     | 5.457 (138.61) | 3.087 (78.41)  |
| B              | 05          | C (15)     |                  | 1.125 (28.57)    | 5.457 (138.61) | 3.087 (78.41)  |
| C              | 06          | C (15)     |                  | 1.312 (33.32)    | 5.457 (138.61) | 3.087 (78.41)  |
| D              | 07          | C (15)     |                  | 1.593 (40.62)    | 5.682 (144.32) | 3.312 (84.12)  |
| A              | 08          | D (17)     |                  | 1.312 (33.32)    | 5.682 (144.32) | 3.312 (84.12)  |
| B              | 09          | D (17)     | 1.312 (33.32)    | 1.593 (40.62)    | 5.713 (145.11) | 3.343 (84.91)  |
| C              | 10          | D (17)     | 1.406 (35.71)    | 1.750 (44.45)    | 5.807 (147.50) | 3.437 (87.30)  |
| A              | 11          | E (19)     | 1.281 (32.54)    | 1.312 (33.32)    | 5.682 (144.32) | 3.312 (84.12)  |
| B              | 12          | E (19)     | 1.406 (35.71)    | 1.750 (44.45)    | 5.832 (148.13) | 3.462 (87.93)  |
| A              | 13          | F (23)     | 1.312 (33.32)    | 1.593 (40.62)    | 5.738 (145.28) | 3.368 (85.55)  |
| B              | 14          | F (23)     | 1.406 (35.71)    | 1.750 (44.45)    | 5.832 (148.13) | 3.462 (87.93)  |
| C              | 15          | F (23)     | 1.593 (40.46)    | 2.093 (53.16)    | 6.019 (152.88) | 3.649 (92.68)  |
| A              | 16          | G (25)     | 1.406 (35.71)    | 1.750 (44.45)    | 5.832 (148.13) | 3.462 (87.93)  |
| B              | 17          | G (25)     | 1.593 (40.46)    | 2.093 (53.16)    | 6.019 (152.88) | 3.649 (92.68)  |
| C              | 18          | G (25)     | 1.593 (40.46)    | 2.093 (53.16)    | 6.144 (156.06) | 3.774 (95.86)  |
| D              | 19          | G (25)     | 1.625 (41.28)    | 2.343 (59.51)    | 6.176 (156.87) | 3.806 (96.62)  |
| A              | 20          | H (29)     | 1.593 (40.46)    | 2.093 (53.16)    | 6.144 (156.06) | 3.774 (95.86)  |
| B              | 21          | H (29)     | 1.625 (41.28)    | 2.343 (59.51)    | 6.176 (156.87) | 3.806 (96.62)  |

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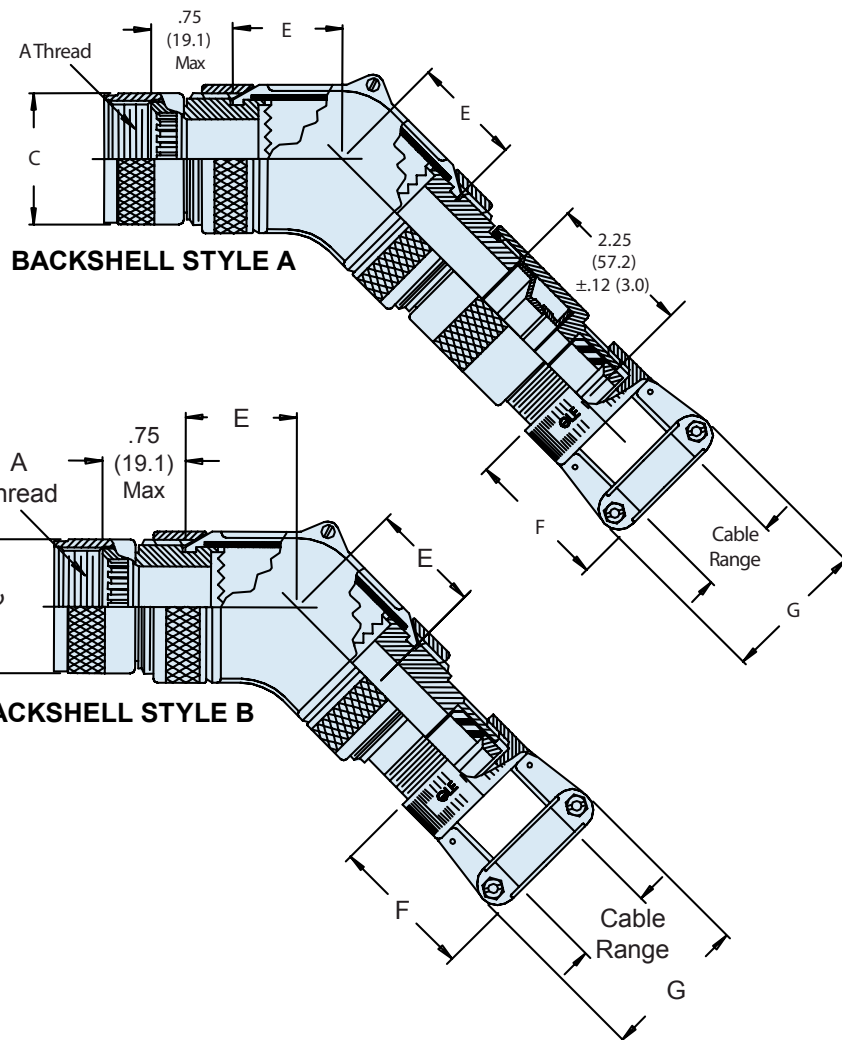
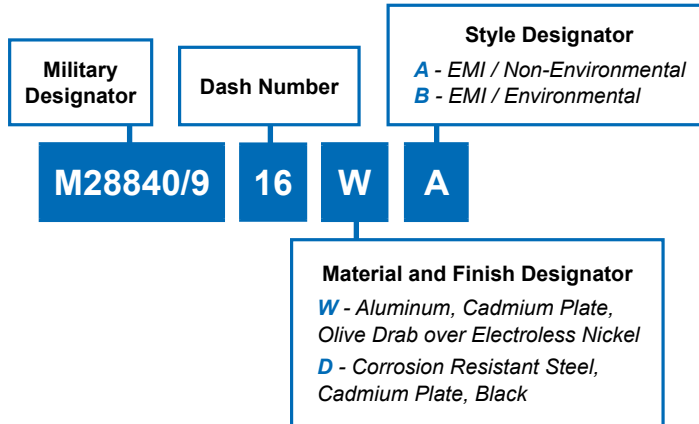
B

| Backshell Size | Dash Number | Designator | A Thread Class 2B | B Max. Diameter | C Max. Diameter | D Max. Diameter |
|----------------|-------------|------------|-------------------|-----------------|-----------------|-----------------|
| A              | 22          | J (33)     | 2.062-16 UNS      | 2.329 (59.16)   | 2.688 (68.26)   | 1.781 (45.24)   |
| A              | 23          | J (33)     |                   |                 |                 |                 |
| B              | 24          | A (11)     | .750-20 UNEF      | 1.028 (26.11)   | 1.188 (30.17)   | 1.031 (26.19)   |
| C              | 25          | A (11)     |                   |                 | 1.438 (36.52)   | 1.156 (29.36)   |
| C              | 26          | B (13)     | .875-20 UNEF      | 1.141 (28.98)   | 1.688 (42.87)   | 1.281 (32.54)   |
| D              | 27          | B (13)     |                   |                 |                 |                 |
| E              | 28          | C (15)     | 1.000-20 UNEF     | 1.263 (32.08)   |                 |                 |

| Backshell Size | Dash Number | Designator | Cable Range   |               | E Max. Dimensions | F Max. Dimensions | V Thread Class 2 |
|----------------|-------------|------------|---------------|---------------|-------------------|-------------------|------------------|
|                |             |            | Max.          | Min.          |                   |                   |                  |
| A              | 22          | J (33)     | 1.380 (35.05) | 1.000 (25.40) | 2.281 (57.94)     | 4.114 (104.50)    | 2.000-18 UNS     |
| A              | 23          | J (33)     | 1.625 (41.26) | 1.250 (31.75) |                   |                   | 2.250-16 UNS     |
| B              | 24          | A (11)     | .438 (11.12)  | .281 (7.14)   | 1.156 (29.36)     | 2.614 (66.40)     | .750-20 UNEF     |
| C              | 25          | A (11)     | .562 (14.27)  | .344 (8.74)   | 1.281 (32.54)     | 2.864 (72.75)     | .875-20 UNEF     |
| C              | 26          | B (13)     | .562 (14.27)  | .344 (8.74)   |                   |                   |                  |
| D              | 27          | B (13)     | .625 (15.87)  | .375 (9.52)   | 1.406 (35.71)     | 3.114 (79.10)     | 1.000-20 UNEF    |
| E              | 28          | C (15)     | .625 (15.87)  | .375 (9.50)   |                   |                   |                  |

| Backshell Size | Dash Number | Designator | X Ref. Dimensions | Y Ref. Dimensions | H Max. Style A | N Max. Style B |
|----------------|-------------|------------|-------------------|-------------------|----------------|----------------|
| A              | 22          | J (33)     | 1.625 (41.28)     | 2.343 (59.51)     | 6.426 (163.22) | 4.056 (103.02) |
| A              | 23          | J (33)     | 1.900 (48.26)     | 2.750 (59.85)     | 6.701 (170.21) | 4.33 (110.01)  |
| B              | 24          | A (11)     | 1.281 (32.54)     | 1.125 (28.57)     | 5.332 (135.43) | 2.962 (75.23)  |
| C              | 25          | A (11)     |                   | 1.312 (33.32)     | 5.457 (138.61) | 3.087 (78.41)  |
| C              | 26          | B (13)     |                   |                   | 5.457 (138.61) | 3.087 (78.41)  |
| C              | 27          | B (13)     |                   |                   | 5.682 (144.32) | 3.312 (84.12)  |
| B              | 28          | C (15)     |                   |                   | 5.682 (144.32) | 3.312 (84.12)  |

# M28840/9 45° EMI/RFI Environmental Backshell



**M28840/9**  
**45° EMI/RFI Environmental Backshell**



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**B**

| Backshell Size | Dash Number | Designator | A Thread      | B Max. Diameter | C Max. Diameter | D Max.        |
|----------------|-------------|------------|---------------|-----------------|-----------------|---------------|
| A              | 01          | A (11)     | .750-20 UNEF  | 1.028 (26.11)   | 1.031 (26.19)   | 1.031 (26.19) |
| A              | 02          | B (13)     | .875-20 UNEF  | 1.141 (28.98)   |                 |               |
| B              | 03          | B (13)     |               |                 |                 |               |
| A              | 04          | C (15)     | 1.00-20 UNEF  | 1.263 (32.08)   | 1.281 (32.54)   | 1.156 (29.36) |
| B              | 05          | C (15)     |               |                 |                 |               |
| C              | 06          | C (15)     |               |                 |                 |               |
| D              | 07          | C (15)     |               |                 |                 |               |
| A              | 08          | D (17)     | 1.125-18 UNEF | 1.387 (35.23)   | 1.513 (38.89)   | 1.281 (32.54) |
| B              | 09          | D (17)     |               |                 |                 |               |
| C              | 10          | D (17)     |               |                 |                 |               |
| A              | 11          | E (19)     | 1.250-18 UNEF | 1.513 (38.43)   | 1.781 (45.24)   | 1.406 (35.71) |
| B              | 12          | E (19)     |               |                 |                 |               |
| A              | 13          | F (23)     | 1.438-18 UNEF | 1.703 (43.51)   |                 |               |
| B              | 14          | F (23)     |               |                 |                 |               |
| C              | 15          | F (23)     |               |                 |                 |               |
| A              | 16          | G (25)     | 1.562-18 UNEF | 1.825 (46.35)   | 2.031 (51.59)   | 1.531 (38.89) |
| B              | 17          | G (25)     |               |                 |                 |               |
| C              | 18          | G (25)     |               |                 |                 |               |
| D              | 19          | G (25)     |               |                 |                 |               |
| A              | 20          | H (29)     | 1.875-16 UN   | 2.143 (54.43)   |                 |               |
| B              | 21          | H (29)     |               |                 |                 |               |



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## 45° EMI/RFI Environmental Backshell

| Backshell Size | Dash Number | Designator | Cable Range   |               | E<br>Max. Dim. | F<br>Max.<br>Style A | H<br>Max.<br>Style B |
|----------------|-------------|------------|---------------|---------------|----------------|----------------------|----------------------|
|                |             |            | Max.          | Min.          |                |                      |                      |
| A              | 01          | A (11)     | .312 (7.92)   | .188 (4.77)   | 1.156 (29.36)  | 5.879 (149.33)       | 4.199 (106.65)       |
| A              | 02          | B (13)     | .312 (7.92)   | .188 (4.77)   |                | 5.879 (149.33)       | 4.199 (106.65)       |
| B              | 03          | B (13)     | .438 (11.12)  | .281 (7.14)   |                | 5.932 (150.67)       | 4.252 (108.00)       |
| A              | 04          | C (15)     | .312 (7.92)   | .188 (4.77)   | 1.281 (32.54)  | 6.092 (154.74)       | 4.412 (112.06)       |
| B              | 05          | C (15)     | .438 (11.12)  | .281 (7.14)   |                | 6.146 (156.11)       | 4.466 (113.44)       |
| C              | 06          | C (15)     | .562 (14.27)  | .344 (8.74)   |                | 6.202 (157.53)       | 4.522 (114.86)       |
| D              | 07          | C (15)     | .750 (19.05)  | .438 (11.12)  | 1.406 (35.71)  | 6.533 (165.94)       | 4.853 (123.27)       |
| A              | 08          | D (17)     | .625 (15.87)  | .375 (9.82)   |                | 6.413 (162.89)       | 4.733 (120.22)       |
| B              | 09          | D (17)     | .750 (19.05)  | .438 (11.12)  |                | 6.533 (165.94)       | 4.853 (123.27)       |
| C              | 10          | D (17)     | .938 (23.82)  | .625 (15.87)  | 1.531 (38.89)  | 6.636 (168.55)       | 4.956 (125.88)       |
| A              | 11          | E (19)     | .625 (15.87)  | .375 (9.52)   | 1.406 (35.71)  | 6.413 (162.89)       | 4.733 (120.22)       |
| B              | 12          | E (19)     | .938 (23.82)  | .625 (15.87)  | 1.531 (38.89)  | 6.846 (173.89)       | 5.166 (131.22)       |
| A              | 13          | F (23)     | .750 (19.05)  | .438 (11.12)  | 1.406 (25.71)  | 6.747 (171.37)       | 5.067 (128.70)       |
| B              | 14          | F (23)     | .938 (23.82)  | .625 (15.87)  | 1.531 (38.89)  | 6.846 (173.89)       | 5.166 (131.22)       |
| C              | 15          | F (23)     | 1.188 (30.17) | .812 (20.62)  | 1.781 (45.24)  | 7.103 (180.42)       | 5.423 (138.23)       |
| A              | 16          | G (25)     | .938 (23.82)  | .625 (15.87)  | 1.531 (38.89)  | 6.846 (173.89)       | 5.156 (130.96)       |
| B              | 17          | G (25)     | 1.188 (30.17) | .812 (20.62)  |                | 7.103 (180.42)       | 5.4239 (138.23)      |
| C              | 18          | G (25)     | 1.250 (31.75) | .875 (22.23)  |                | 7.316 (185.83)       | 5.636 (143.15)       |
| D              | 19          | G (25)     | 1.380 (35.05) | 1.000 (25.40) | 2.156 (54.76)  | 7.425 (188.60)       | 5.745 (145.92)       |
| A              | 20          | H (29)     | 1.188 (30.17) | .812 (20.62)  | 1.781 (45.24)  | 7.316 (185.83)       | 5.636 (143.15)       |
| B              | 21          | H (29)     | 1.380 (35.05) | 1.000 (25.40) | 2.156 (54.76)  | 7.425 (188.60)       | 5.745 (145.92)       |

# M28840/9 45° EMI/RFI Environmental Backshell



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| Backshell Size | Dash Number | Designator | V Thread Class | X Ref. Dimension | Y Ref. Dimension |
|----------------|-------------|------------|----------------|------------------|------------------|
| A              | 01          | A (11)     | .625-24 UNEF   | 1.281 (32.54)    | .938 (23.82)     |
| A              | 02          | B (13)     | .625-24 UNEF   |                  | .938 (23.82)     |
| B              | 03          | B (13)     | .750-20 UNEF   |                  | 1.125 (28.57)    |
| A              | 04          | C (15)     | .625-24 UNEF   |                  | .938 (23.82)     |
| B              | 05          | C (15)     | .750-20 UNEF   |                  | 1.125 (28.57)    |
| C              | 06          | C (15)     | .875-20 UNEF   |                  | 1.312 (33.32)    |
| D              | 07          | C (15)     | 1.188-18 UNEF  | 1.312 (33.32)    | 1.593 (40.62)    |
| A              | 08          | D (17)     | 1.000-20 UNEF  | 1.281 (32.54)    | 1.312 (33.32)    |
| B              | 09          | D (17)     | 1.188-18 UNEF  | 1.312 (33.32)    | 1.593 (40.62)    |
| C              | 10          | D (17)     | 1.438-18 UNEF  | 1.406 (35.71)    | 1.750 (44.45)    |
| A              | 11          | E (19)     | 1.000-20 UNEF  | 1.281 (32.54)    | 1.312 (33.32)    |
| B              | 12          | E (19)     | 1.438-18 UNEF  | 1.406 (35.71)    | 1.750 (44.45)    |
| A              | 13          | F (23)     | 1.188-18 UNEF  | 1.312 (33.32)    | 1.593 (40.62)    |
| B              | 14          | F (23)     | 1.438-18 UNEF  | 1.406 (35.71)    | 1.750 (44.45)    |
| C              | 15          | F (23)     | 1.750-18 UNS   | 1.593 (40.46)    | 2.093 (53.16)    |
| A              | 16          | G (25)     | 1.438-18 UNEF  | 1.406 (35.71)    | 1.750 (44.45)    |
| B              | 17          | G (25)     | 1.750-18 UNS   | 1.593 (40.46)    | 2.093 (53.16)    |
| C              | 18          | G (25)     | 1.750-18 UNS   | 1.593 (40.46)    | 2.093 (53.16)    |
| D              | 19          | G (25)     | 2.000-16 UNS   | 1.625 (41.28)    | 2.343 (59.51)    |
| A              | 20          | H (29)     | 1.750-18 UNS   | 1.593 (40.46)    | 2.093 (53.16)    |
| B              | 21          | H (29)     | 2.000-18 UNS   | 1.625 (41.28)    | 2.343 (59.51)    |

B

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## 45° EMI/RFI Environmental Backshell

| Backshell Size | Dash Number | Designator | A Thread      | B Max. Diameter | C Max. Diameter | D Max.        |
|----------------|-------------|------------|---------------|-----------------|-----------------|---------------|
| A              | 22          | J (33)     | 2.062-16 UNEF | 2.329 (59.16)   | 2.531 (64.29)   | 1.781 (45.24) |
| B              | 23          | J (33)     |               |                 |                 |               |
| B              | 24          | A (11)     | .750-20 UNEF  | 1.028 (26.11)   | 1.031 (26.19)   | 1.031 (26.19) |
| C              | 25          | A (11)     |               |                 | 1.281 (32.54)   | 1.156 (29.36) |
| C              | 26          | B (13)     | .875-20 UNEF  | 1.141 (28.98)   | 1.281 (32.54)   | 1.156 (29.36) |
| D              | 27          | B (13)     |               |                 | 1.531 (38.99)   | 1.281 (32.54) |
| E              | 28          | C (15)     | 1.000-20 UNEF | 1.263 (32.08)   |                 |               |

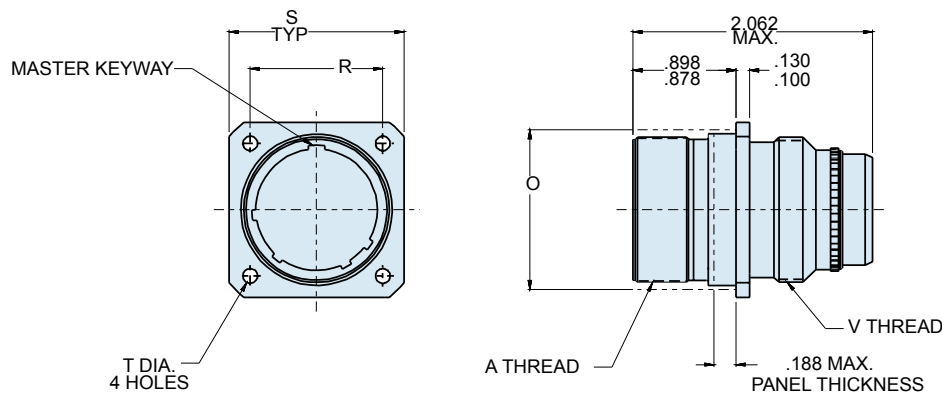
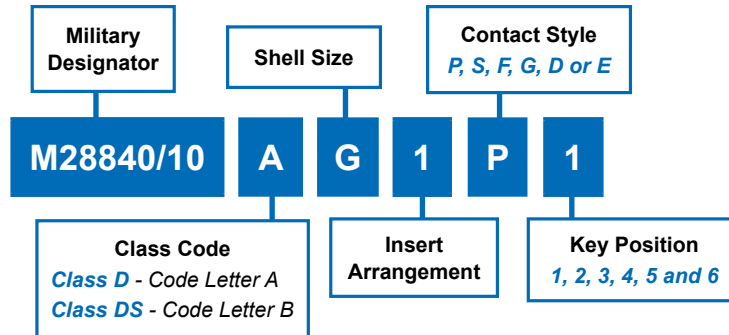
| Backshell Size | Dash Number | Designator | Cable Range   |               | E Max. Dimension | F Max. Style A | H Max. Style B |
|----------------|-------------|------------|---------------|---------------|------------------|----------------|----------------|
|                |             |            | Max.          | Min.          |                  |                |                |
| A              | 22          | J (33)     | 1.380 (35.05) | 1.000 (25.40) | 2.281 (57.94)    | 7.852 (199.44) | 6.127 (156.77) |
| B              | 23          | J (33)     | 1.625 (41.28) | 1.250 (31.75) |                  | 6.454 (163.93) | 6.454 (163.93) |
| B              | 24          | A (11)     | .438 (11.12)  | .281 (7.14)   | 1.156 (29.36)    | 5.932 (150.67) | 4.252 (108.00) |
| C              | 25          | A (11)     | .562 (14.27)  | .344 (8.74)   | 1.281 (32.54)    | 6.202 (157.53) | 4.522 (114.86) |
| C              | 26          | B (13)     | .562 (14.27)  | .344 (8.74)   | 1.281 (32.54)    | 6.202 (157.53) | 4.522 (114.86) |
| D              | 27          | B (13)     | .625 (15.87)  | .375 (9.52)   | 1.406            | 6.413 (162.89) | 4.733 (120.22) |
| E              | 28          | C (15)     | .625 (15.87)  | .375 (9.50)   |                  | 6.413 (162.89) | 4.733 (120.22) |

| Backshell Size | Dash Number | Designator | V Thread Class | X Ref. Dimension | Y Ref. Dimension |
|----------------|-------------|------------|----------------|------------------|------------------|
| A              | 22          | J (33)     | 2.000-18 UNS   | 1.625 (41.28)    | 2.343 (59.51)    |
| B              | 23          | J (33)     | 2.250-16 UNS   | 1.900 (48.26)    | 2.750 (69.85)    |
| B              | 24          | A (11)     | .750-20 UNEF   | 1.281 (32.54)    | 1.125 (28.57)    |
| C              | 25          | A (11)     | .875-20 UNEF   |                  | 1.312 (33.32)    |
| C              | 26          | B (13)     | .875-20 UNEF   |                  |                  |
| D              | 27          | B (13)     | 1.000-20 UNEF  |                  |                  |
| E              | 28          | C (15)     | 1.000-20 UNEF  |                  |                  |

# M28840/10 Wall Mount Receptacle Connector

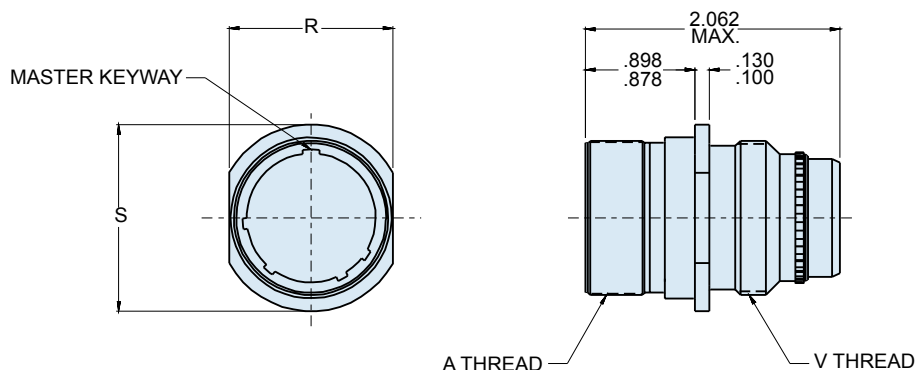
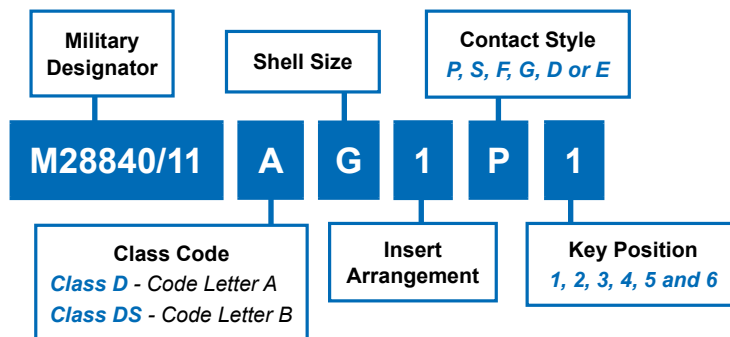


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| Military Shell Size | Shell Size | A Thread Class 2A  | V Thread Class 2A | O Ref. Mtg. Hole | R True Position $\varnothing$ to $\varnothing$ | S                              | T Diameter                 |
|---------------------|------------|--------------------|-------------------|------------------|------------------------------------------------|--------------------------------|----------------------------|
| A                   | 11         | .750-.1P-.2L-D.S.  | .750-20 UNEF      | .812 (20.62)     | .750 (19.05)                                   | 1.043 (26.49)<br>1.003 (25.48) | .130 (3.30)<br>.115 (2.92) |
| B                   | 13         | .875-.1P-.2L-D.S.  | .875-20 UNEF      | .937 (23.80)     | .743 (21.41)                                   | 1.158 (29.41)<br>1.118 (28.40) |                            |
| C                   | 15         | 1.062-.1P-.2L-D.S. | 1.000-20 UNEF     | 1.124 (28.55)    | .968 (24.59)                                   | 1.278 (32.46)<br>1.238 (31.45) |                            |
| D                   | 17         | 1.125-.1P-.2L-D.S. | 1.125-18 UNEF     | 1.187 (30.15)    | 1.015 (25.78)                                  | 1.403 (35.64)<br>1.363 (34.62) |                            |
| E                   | 19         | 1.312-.1P-.2L-D.S. | 1.250-18 UNEF     | 1.374 (34.90)    | 1.140 (28.96)                                  | 1.528 (38.81)<br>1.488 (37.80) |                            |
| F                   | 23         | 1.500-.1P-.2L-D.S. | 1.437-18 UNEF     | 1.562 (39.67)    | 1.281 (32.54)                                  | 1.738 (44.15)<br>1.698 (43.13) |                            |
| G                   | 25         | 1.625-.1P-.2L-D.S. | 1.562-18 UNEF     | 1.687 (42.85)    | 1.392 (35.36)                                  | 1.838 (46.69)<br>1.798 (45.67) | .157 (3.99)<br>.142 (3.61) |
| H                   | 29         | 1.812-.1P-.2L-D.S. | 1.875-16 UN       | 1.874 (47.60)    | 1.568 (39.83)                                  | 2.158 (54.81)<br>2.118 (53.80) |                            |
| J                   | 33         | 2.000-.1P-.2L-D.S. | 2.062-16 UNS      | 2.062 (52.37)    | 1.734 (44.04)                                  | 2.348 (59.64)<br>2.308 (58.62) | .183 (4.65)<br>.168 (4.27) |

# M28840/11 In-Line Receptacle Connector

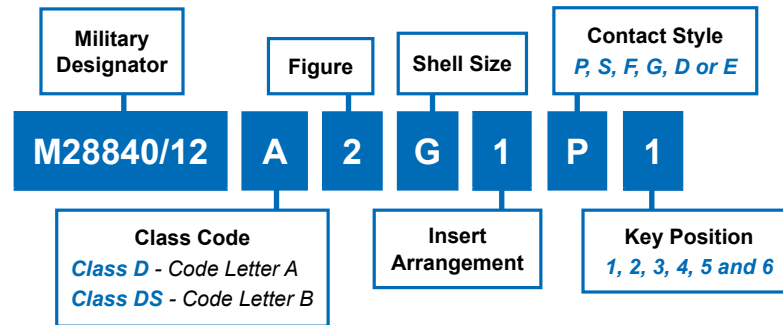


| Military Shell Size | Shell Size | A Thread Class 2A  | V Thread Class 2A | R                              | S Diameter                     |
|---------------------|------------|--------------------|-------------------|--------------------------------|--------------------------------|
| A                   | 11         | .750-.1P-.2L-D.S.  | .750-20 UNEF      | .768 (19.51)<br>.758 (19.25)   | .963 (24.46)<br>.943 (23.95)   |
| B                   | 13         | .875-.1P-.2L-D.S.  | .875-20 UNEF      | .893 (22.68)<br>.883 (22.43)   | 1.088 (27.63)<br>1.063 (27.13) |
| C                   | 15         | 1.062-.1P-.2L-D.S. | 1.000-20 UNEF     | 1.080 (27.43)<br>1.070 (27.18) | 1.275 (32.38)<br>1.255 (31.88) |
| D                   | 17         | 1.125-.1P-.2L-D.S. | 1.125-18 UNEF     | 1.143 (29.03)<br>1.133 (28.78) | 1.338 (33.98)<br>1.318 (33.48) |
| E                   | 19         | 1.312-.1P-.2L-D.S. | 1.250-18 UNEF     | 1.330 (33.78)<br>1.320 (33.53) | 1.525 (38.74)<br>1.505 (38.23) |
| F                   | 23         | 1.500-.1P-.2L-D.S. | 1.437-18 UNEF     | 1.518 (38.56)<br>1.508 (38.30) | 1.713 (43.51)<br>1.693 (43.00) |
| G                   | 25         | 1.625-.1P-.2L-D.S. | 1.562-18 UNEF     | 1.643 (41.73)<br>1.633 (41.48) | 1.838 (46.09)<br>1.818 (46.18) |
| H                   | 29         | 1.812-.1P-.2L-D.S. | 1.875-16 UN       | 1.893 (48.08)<br>1.883 (47.83) | 2.088 (53.04)<br>2.068 (52.53) |
| J                   | 33         | 2.000-.1P-.2L-D.S. | 2.062-16 UNS      | 2.080 (52.83)<br>2.070 (52.58) | 2.275 (57.78)<br>2.255 (57.28) |

# M28840/12 Box Mount Receptacle Connector

**Glenair**

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28840



**B**

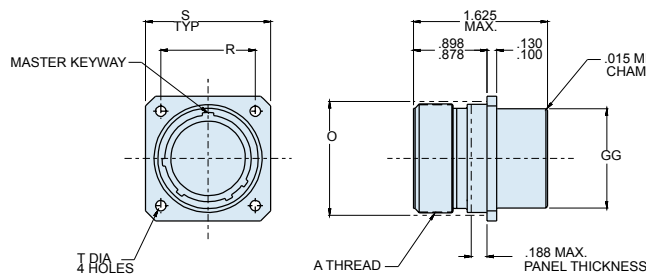


FIGURE 1

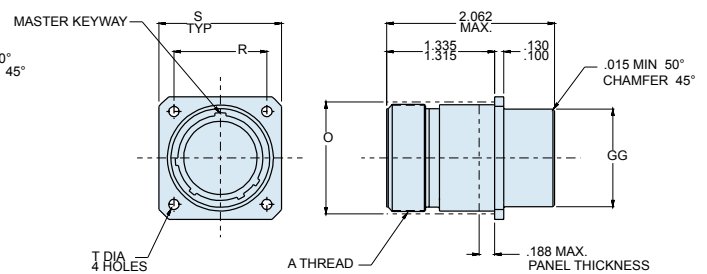
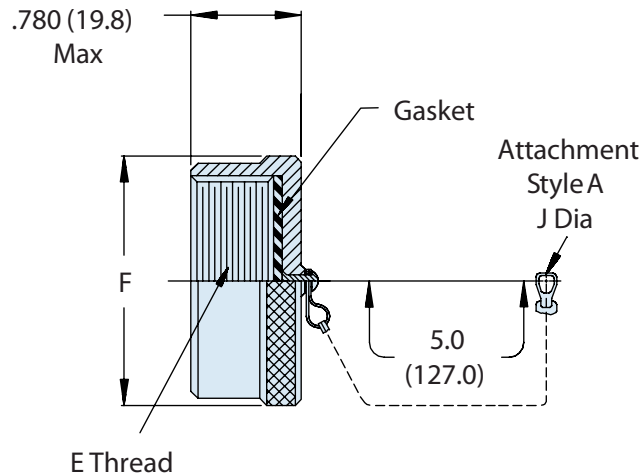
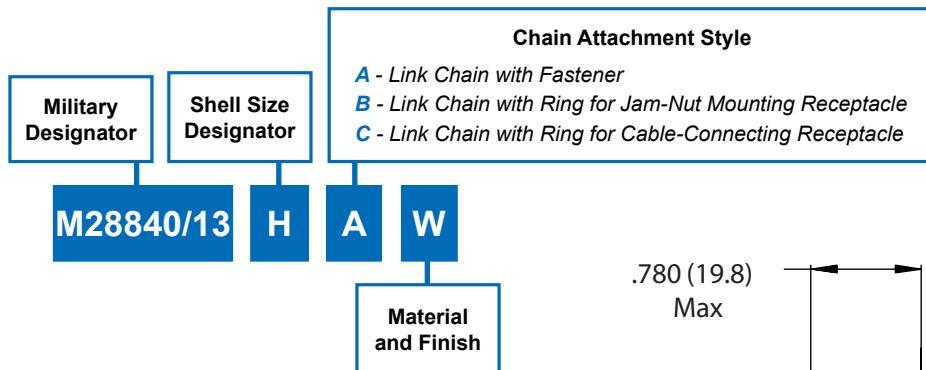


FIGURE 2

| Designator | N<br>Diameter Max | O<br>Reference<br>Mating Hole | R<br>True Position<br>Centerline to<br>Centerline | S                              | T                          | GG Diameter<br>Max. |
|------------|-------------------|-------------------------------|---------------------------------------------------|--------------------------------|----------------------------|---------------------|
| A (11)     | .750 (19.05)      | .812 (20.62)                  | .750 (19.05)                                      | 1.043 (26.49)<br>1.003 (25.48) | .130 (3.30)<br>.115 (2.92) | .758 (19.25)        |
| B (13)     | .875 (22.22)      | .937 (23.80)                  | .843 (21.41)                                      | 1.158 (29.41)<br>1.118 (28.40) |                            | .880 (22.35)        |
| C (15)     | 1.062 (26.97)     | 1.124 (28.55)                 | .968 (24.59)                                      | 1.278 (32.46)<br>1.238 (31.45) |                            | 1.005 (25.53)       |
| D (17)     | 1.125 (28.58)     | 1.187 (30.15)                 | 1.015 (25.78)                                     | 1.403 (35.64)<br>1.363 (34.62) |                            | 1.130 (28.70)       |
| E (19)     | 1.312 (33.32)     | 1.374 (34.90)                 | 1.140 (28.96)                                     | 1.528 (38.81)<br>1.488 (37.80) |                            | 1.255 (31.88)       |
| F (23)     | 1.500 (38.10)     | 1.562 (39.67)                 | 1.281 (32.54)                                     | 1.738 (44.15)<br>1.698 (43.13) |                            | 1.443 (36.65)       |
| G (25)     | 1.625 (41.28)     | 1.687 (42.85)                 | 1.392 (35.36)                                     | 1.838 (46.69)<br>1.798 (45.67) | .157 (3.99)<br>.142 (3.61) | 1.567 (39.80)       |
| H (29)     | 1.812 (46.02)     | 1.874 (47.60)                 | 1.568 (39.83)                                     | 2.158 (54.81)<br>2.118 (53.80) |                            | 1.880 (47.75)       |
| J (33)     | 2.000 (50.80)     | 2.062 (52.37)                 | 1.734 (44.04)                                     | 2.343 (59.64)<br>2.308 (58.62) | .183 (4.65)<br>.168 (4.27) | 2.067 (52.50)       |

# M28840/13 Protective Receptacle Cover



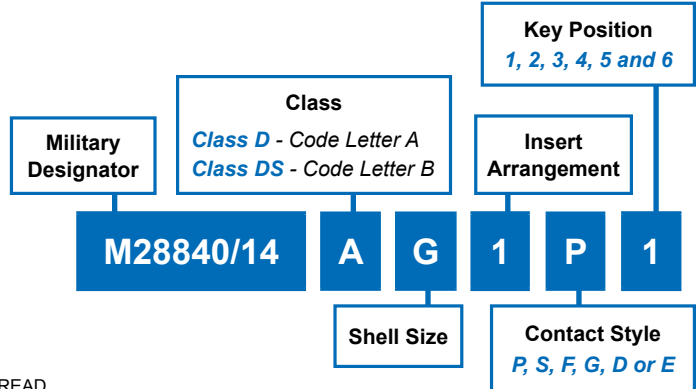
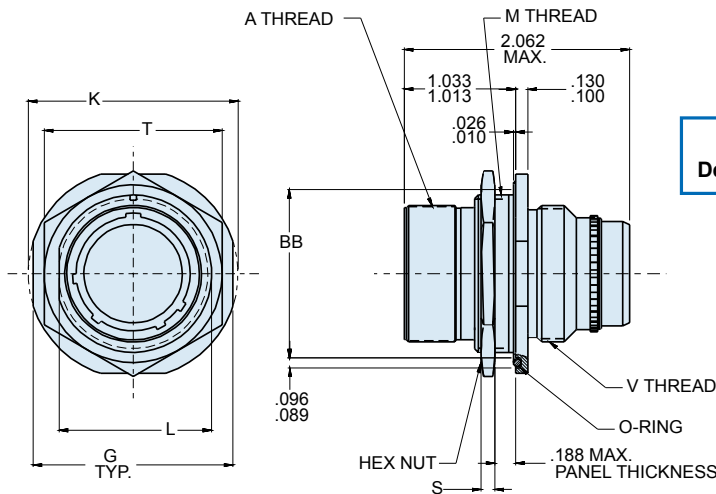
M28840/13 Receptacle Cover

| Designator | E<br>Thread Class 2A | F<br>Max. Diameter | H<br>± .010<br>(± .25) | J Dia<br>± .005<br>(± .13) | G<br>± .005<br>(± .13) |
|------------|----------------------|--------------------|------------------------|----------------------------|------------------------|
| A (11)     | .750-.1P-.2L-D.S.    | 1.028 (26.21)      | .890 (22.61)           | .130 (3.30)                | .765 (19.43)           |
| B (13)     | .875-.1P-.2L-D.S.    | 1.141 (23.98)      | 1.015 (25.78)          |                            | .890 (22.61)           |
| C (15)     | 1.062-.1P-.2L-D.S.   | 1.263 (32.08)      | 1.203 (30.56)          |                            | 1.015 (25.78)          |
| D (17)     | 1.125-.1P-.2L-D.S.   | 1.387 (35.23)      | 1.265 (32.13)          |                            | 1.140 (28.96)          |
| E (19)     | 1.312-.1P-.2L-D.S.   | 1.513 (38.43)      | 1.453 (36.91)          |                            | 1.265 (32.13)          |
| F (23)     | 1.500-.1P-.2L-D.S.   | 1.703 (43.51)      | 1.640 (41.66)          |                            | 1.453 (36.91)          |
| G (25)     | 1.625-.1P-.2L-D.S.   | 1.825 (46.35)      | 1.765 (44.83)          | .156 (3.96)                | 1.577 (40.06)          |
| H (29)     | 1.812-.1P-.2L-D.S.   | 2.143 (54.43)      | 1.953 (49.61)          |                            | 1.890 (48.01)          |
| J (33)     | 2.000-.1P-.2L-D.S.   | 2.329 (59.16)      | 2.140 (54.36)          | .193 (4.90)                | 2.077 (52.76)          |

# M28840/14 Jam Nut Mount Receptacle Connector

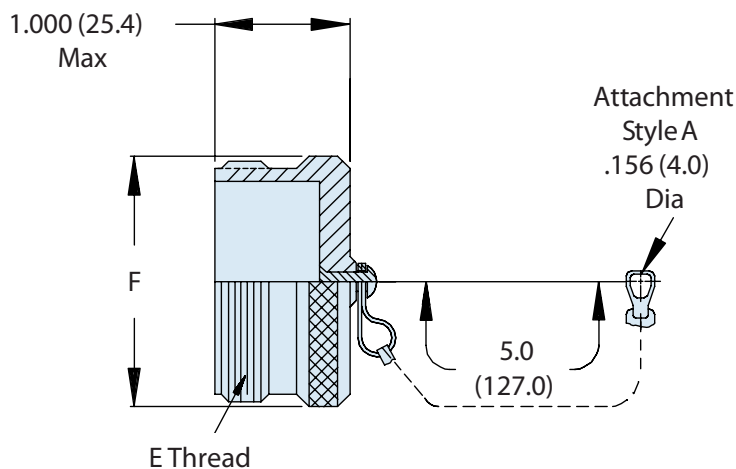
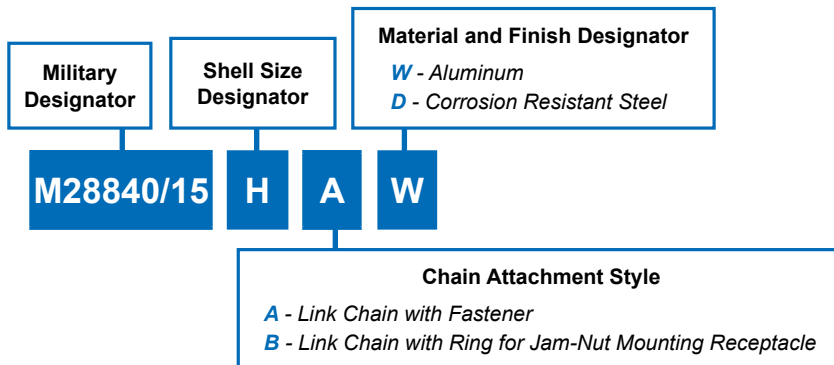
**Glenair**

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| Designator | G                              | K                              | L<br>Across Flat               | M<br>Thread<br>Class 2A | N<br>Max.        | P                              | R<br>Max.        | S<br>Hex Nut<br>Thick-<br>ness |
|------------|--------------------------------|--------------------------------|--------------------------------|-------------------------|------------------|--------------------------------|------------------|--------------------------------|
| A (11)     | 1.274 (32.36)<br>1.254 (31.85) | 1.368 (34.75)<br>1.348 (34.24) | .841 (21.36)<br>.832 (21.13)   | 7/8-20 UNEF             | .750<br>(19.05)  | .890 (22.61)<br>.880 (22.35)   | .875<br>(22.22)  | .125<br>(3.17)                 |
| B (13)     | 1.399 (35.53)<br>1.379 (35.03) | 1.508 (38.30)<br>1.488 (37.80) | .966 (24.54)<br>.957 (24.31)   | 1-20 UNEF               | .875<br>(22.22)  | 1.015 (24.78)<br>1.005 (25.53) | 1.000<br>(25.40) |                                |
| C (15)     | 1.587 (40.31)<br>1.567 (39.80) | 1.681 (42.70)<br>1.661 (42.19) | 1.156 (29.29)<br>1.144 (29.06) | 1 3/16-18 UNEF          | 1.062<br>(26.97) | 1.203 (30.56)<br>1.193 (30.30) | 1.188<br>(30.18) |                                |
| D (17)     | 1.649 (41.88)<br>1.629 (41.38) | 1.743 (44.27)<br>1.723 (43.76) | 1.216 (30.89)<br>1.207 (30.66) | 1 1/4-18 UNEF           | 1.125<br>(28.58) | 1.265 (32.13)<br>1.255 (31.88) | 1.250<br>(31.75) |                                |
| E (19)     | 1.837 (46.66)<br>1.817 (46.15) | 1.931 (49.05)<br>1.911 (48.54) | 1.403 (35.64)<br>1.394 (35.41) | 1 7/16-18 UNEF          | 1.312<br>(33.32) | 1.453 (36.91)<br>1.443 (36.65) | 1.438<br>(36.52) |                                |
| F (23)     | 2.024 (51.41)<br>2.004 (50.90) | 2.118 (53.80)<br>2.098 (53.29) | 1.591 (40.41)<br>1.582 (40.18) | 1 5/8-18 UNEF           | 1.500<br>(38.10) | 1.640 (41.66)<br>1.630 (41.40) | 1.625<br>(41.28) |                                |
| G (25)     | 2.149 (54.58)<br>2.129 (54.08) | 2.243 (56.97)<br>2.223 (56.46) | 1.716 (43.59)<br>1.707 (43.36) | 1 3/4-18 UNS            | 1.625<br>(41.28) | 1.765 (44.83)<br>1.755 (44.58) | 1.750<br>(44.45) | .189<br>(4.8)                  |
| H (29)     | 2.337 (59.36)<br>2.317 (58.85) | 2.435 (61.85)<br>2.415 (61.34) | 1.903 (46.34)<br>1.894 (48.11) | 1 15/16-16 UN           | 1.812<br>(46.02) | 1.953 (49.61)<br>1.943 (49.35) | 1.938<br>(49.22) |                                |
| J (33)     | 2.524 (64.11)<br>2.504 (63.60) | 2.618 (66.50)<br>2.598 (65.99) | 2.091 (53.11)<br>2.082 (52.88) | 2 1/8-16 UN             | 2.000<br>(50.80) | 2.140 (54.36)<br>2.130 (54.10) | 2.125<br>(53.98) |                                |

# M28840/15 Protective Plug Cover



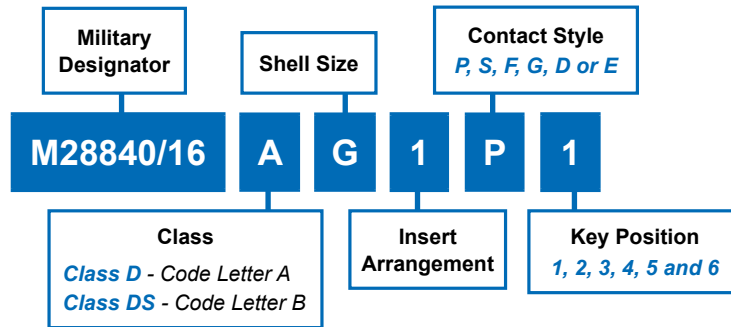
M28840/15 Plug Cover

| Designator | E Thread Class 2B | F Max. Diameter |
|------------|-------------------|-----------------|
| A (11)     | .750-1P-.2L-DS    | 1.028 (26.21)   |
| B (13)     | .875-1P-.2L-DS    | 1.141 (28.98)   |
| C (15)     | 1.062-1P-.2L-DS   | 1.263 (32.08)   |
| D (17)     | 1.125-1P-.2L-DS   | 1.387 (35.23)   |
| E (19)     | 1.312-1P-.2L-DS   | 1.108 (28.14)   |
| F (23)     | 1.500-1P-.2L-DS   | 1.293 (32.84)   |
| G (25)     | 1.625-1P-.2L-DS   | 1.454 (36.93)   |
| H (29)     | 1.812-1P-.2L-DS   | 1.620 (41.15)   |
| J (33)     | 2.000-1P-.2L-DS   | 1.812 (46.02)   |

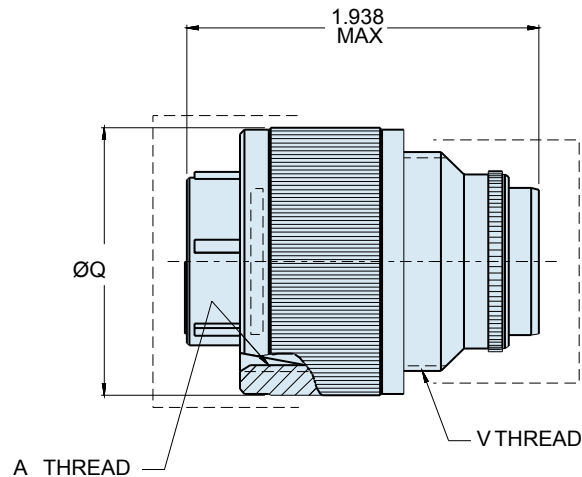
# M28840/16 Plug Connector

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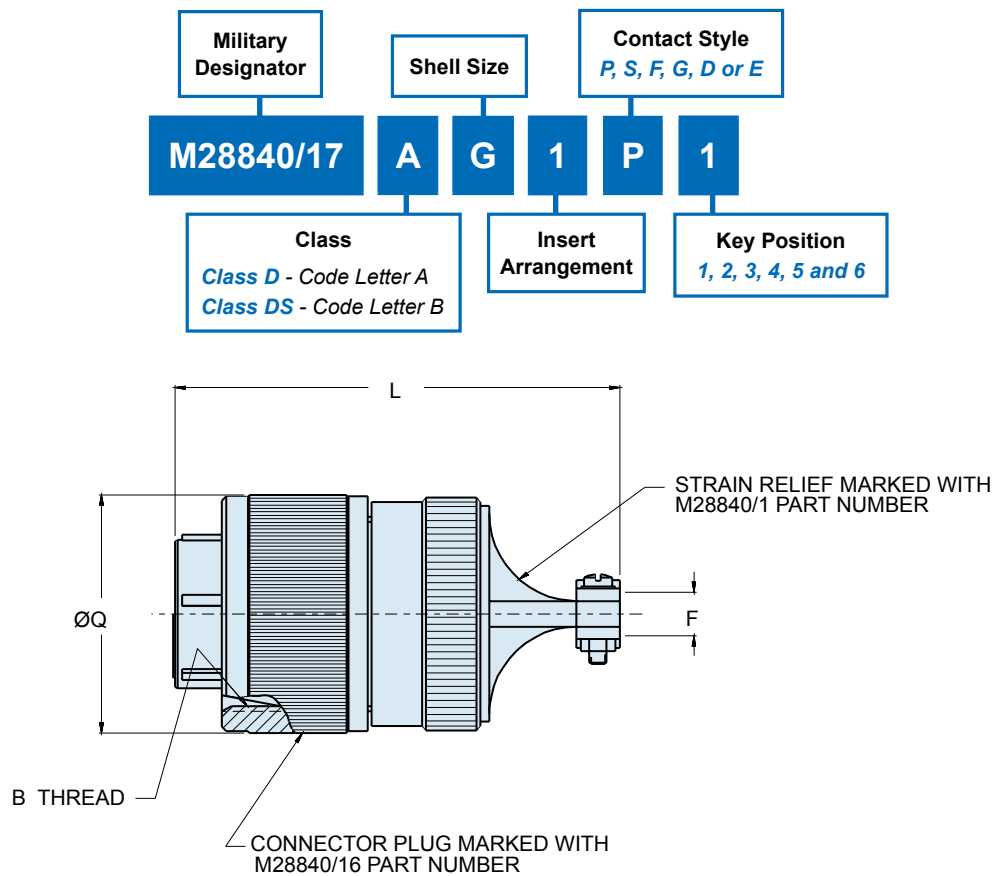
B



| Designator | A Thread Class 2B | V Thread Class 2A | Ø Q Max.      |
|------------|-------------------|-------------------|---------------|
| A (11)     | .750-1P-.2L-DS    | 3/4-20 UNEF       | 1.028 (26.11) |
| B (13)     | .875-1P-.2L-DS    | 7/8-20 UNEF       | 1.141 (28.98) |
| C (15)     | 1.062-1P-.2L-DS   | 1-20 UNEF         | 1.263 (32.08) |
| D (17)     | 1.125-1P-.2L-DS   | 1 1/8-18 UNEF     | 1.387 (35.23) |
| E (19)     | 1.312-1P-.2L-DS   | 1 1/4-18 UNEF     | 1.513 (38.43) |
| F (23)     | 1.500-1P-.2L-DS   | 1 7/16-18 UNEF    | 1.703 (43.26) |
| G (25)     | 1.625-1P-.2L-DS   | 1 9/16-18 UNEF    | 1.825 (46.36) |
| H (29)     | 1.812-1P-.2L-DS   | 1 7/8-16 UN       | 2.143 (54.43) |
| J (33)     | 2.000-1P-.2L-DS   | 2 1/16-16 UNS     | 2.329 (59.16) |

# M28840/17 Plug Connector with Straight Strain Relief

B

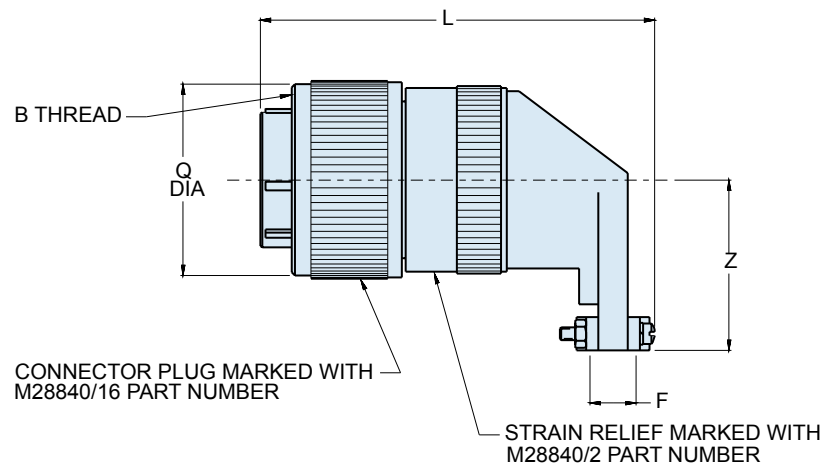
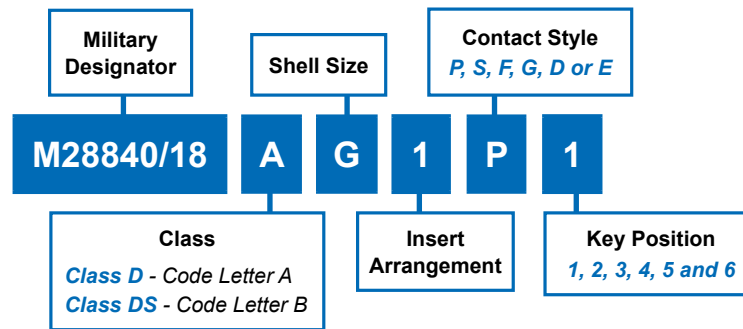


| Designator | A Thread<br>Class 2B | F Cable Entry |        | L<br>Max. | Q<br>Max. | Max. O.D.<br>Over Rear<br>Clamps |
|------------|----------------------|---------------|--------|-----------|-----------|----------------------------------|
|            |                      | Open          | Closed |           |           |                                  |
| A (11)     | .750-1P-.2L-DS       | .286          | .177   | 2.438     | 1.028     | .832                             |
| B (13)     | .875-1P-.2L-DS       | .286          |        |           | 1.141     |                                  |
| C (15)     | 1.062-1P-.2L-DS      | .416          | .250   |           | 1.263     | .989                             |
| D (17)     | 1.125-1P-.2L-DS      | .476          | .291   | 2.688     | 1.387     | 1.094                            |
| E (19)     | 1.312-1P-.2L-DS      | .626          | .348   | 2.812     | 1.513     | 1.319                            |
| F (23)     | 1.500-1P-.2L-DS      | .831          | .429   | 2.938     | 1.703     | 1.557                            |
| G (25)     | 1.625-1P-.2L-DS      | .956          | .523   | 3.062     | 1.825     | 1.653                            |
| H (29)     | 1.812-1P-.2L-DS      | 1.081         | .643   | 3.188     | 2.143     | 1.819                            |
| J (33)     | 2.000-1P-.2L-DS      | 1.187         | .704   | 3.375     | 2.329     | 2.020                            |

# M28840/18 Plug Connector with 90° Strain Relief

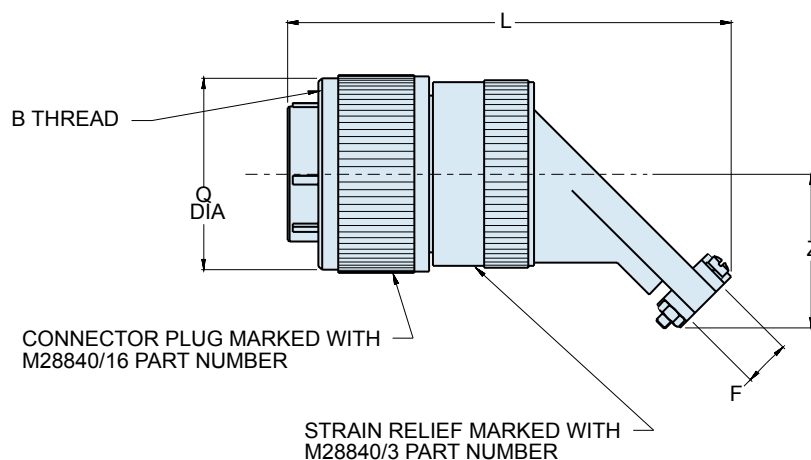
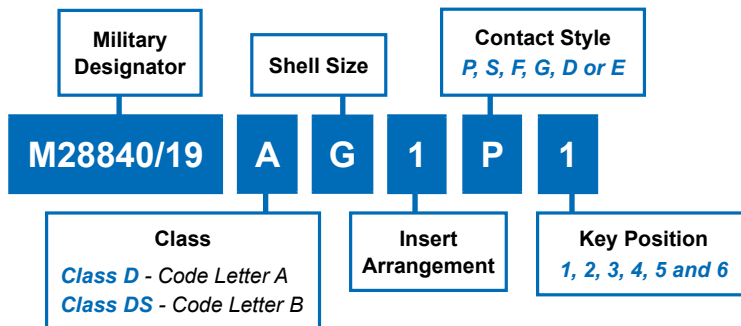


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| Designator | A Thread<br>Class 2B | F Cable Entry |        | L<br>Max. | Q<br>Max. | Z<br>Max. | Max. O.D.<br>Over Rear<br>Clamps |
|------------|----------------------|---------------|--------|-----------|-----------|-----------|----------------------------------|
|            |                      | Open          | Closed |           |           |           |                                  |
| A (11)     | .750-1P-.2L-DS       | .286          | .177   | 2.562     | 1.028     | .929      | .832                             |
| B (13)     | .875-1P-.2L-DS       | .286          |        | 2.562     | 1.141     | .929      |                                  |
| C (15)     | 1.062-1P-.2L-DS      | .416          | .250   | 2.750     | 1.263     | 1.056     | .989                             |
| D (17)     | 1.125-1P-.2L-DS      | .476          | .291   | 2.875     | 1.387     | 1.233     | 1.094                            |
| E (19)     | 1.312-1P-.2L-DS      | .626          | .348   | 3.000     | 1.513     | 1.296     | 1.319                            |
| F (23)     | 1.500-1P-.2L-DS      | .831          | .429   | 3.125     | 1.703     | 1.358     | 1.557                            |
| G (25)     | 1.625-1P-.2L-DS      | .956          | .523   | 3.250     | 1.825     | 1.420     | 1.653                            |
| H (29)     | 1.812-1P-.2L-DS      | 1.081         | .643   | 3.375     | 2.143     | 1.634     | 1.819                            |
| J (33)     | 2.000-1P-.2L-DS      | 1.187         | .704   | 3.438     | 2.329     | 1.859     | 2.020                            |

# M28840/19 Plug Connector with 45° Strain Relief

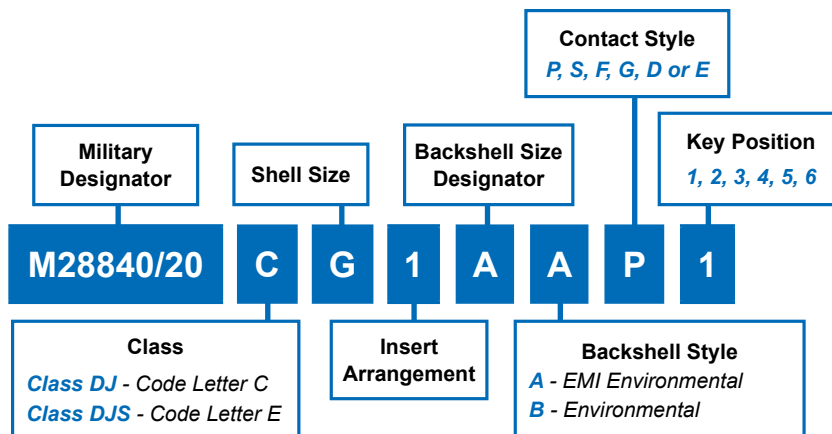


| Designator | A Thread Class 2B | F Cable Entry |        | L Max. | Q Max. | Z Max. | Max. O.D. Over Rear Clamps |
|------------|-------------------|---------------|--------|--------|--------|--------|----------------------------|
|            |                   | Open          | Closed |        |        |        |                            |
| A (11)     | .750-1P-.2L-DS    | .286          | .177   | 3.125  | 1.028  | .928   | .832                       |
| B (13)     | .875-1P-.2L-DS    | .286          |        | 3.125  | 1.141  | .928   |                            |
| C (15)     | 1.062-1P-.2L-DS   | .416          | .250   | 3.250  | 1.263  | .991   | .989                       |
| D (17)     | 1.125-1P-.2L-DS   | .476          | .291   | 3.312  | 1.387  | 1.110  | 1.094                      |
| E (19)     | 1.312-1P-.2L-DS   | .626          | .348   | 3.375  | 1.513  | 1.172  | 1.319                      |
| F (23)     | 1.500-1P-.2L-DS   | .831          | .429   | 3.438  | 1.703  | 1.235  | 1.557                      |
| G (25)     | 1.625-1P-.2L-DS   | .956          | .523   | 3.500  | 1.825  | 1.297  | 1.653                      |
| H (29)     | 1.812-1P-.2L-DS   | 1.081         | .643   | 3.750  | 2.143  | 1.543  | 1.819                      |
| J (33)     | 2.000-1P-.2L-DS   | 1.187         | .704   | 3.875  | 2.329  | 1.668  | 2.020                      |

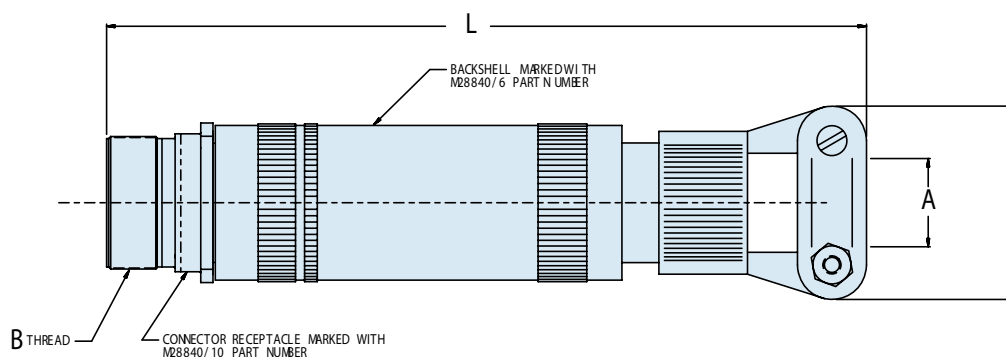
# M28840/20 Receptacle Connector with Straight EMI/RFI Backshell



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**B**



# M28840/20

## Receptacle Connector

### with Straight EMI/RFI Backshell

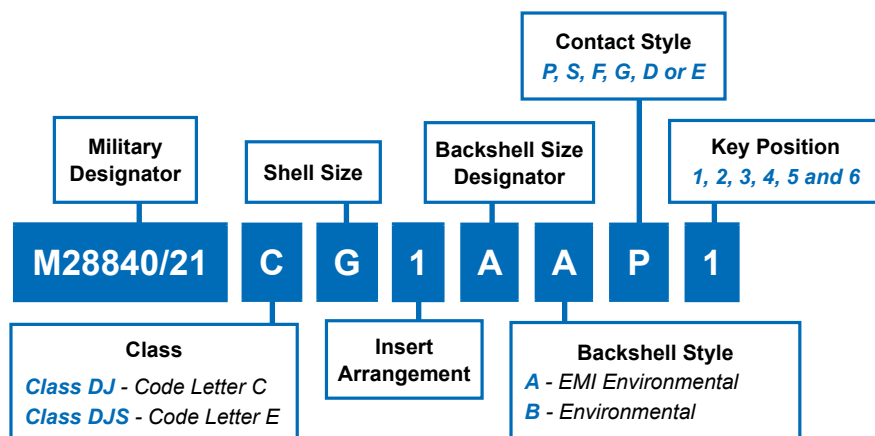
B

| JMilitary<br>Shell Size | Shell<br>Size | Backshell<br>Size<br>Designator | A Cable Entry |        | A<br>Thread<br>Class 2B | E<br>Max. | L<br>Max. |
|-------------------------|---------------|---------------------------------|---------------|--------|-------------------------|-----------|-----------|
|                         |               |                                 | Open          | Closed |                         |           |           |
| A                       | 11            | A                               | .312          | .188   | .750-1P-.2L-DS          | .938      | 6.625     |
| A                       | 11            | B                               | .438          | .281   |                         | 1.125     | 6.625     |
| A                       | 11            | C                               | .562          | .344   |                         | 1.312     | 6.625     |
| B                       | 13            | A                               | .312          | .188   | .875-1P-.2L-DS          | .938      | 6.625     |
| B                       | 13            | B                               | .438          | .281   |                         | 1.125     | 6.625     |
| B                       | 13            | C                               | .562          | .344   |                         | 1.312     | 6.625     |
| B                       | 13            | D                               | .652          | .375   |                         | 1.312     | 7.125     |
| C                       | 15            | A                               | .438          | .281   | 1.062-1P-.2L-DS         | 1.125     | 6.625     |
| C                       | 15            | B                               | .562          | .344   |                         | 1.312     | 6.625     |
| C                       | 15            | C                               | .625          | .375   |                         | 1.312     | 7.125     |
| C                       | 15            | D                               | .750          | .438   |                         | 1.593     | 7.188     |
| C                       | 15            | E                               | .312          | .188   |                         | .938      | 6.625     |
| D                       | 17            | A                               | .625          | .375   | 1.125-1P-.2L-DS         | 1.312     | 7.125     |
| D                       | 17            | B                               | .750          | .438   |                         | 1.593     | 7.188     |
| D                       | 17            | C                               | .938          | .625   |                         | 1.750     | 7.188     |
| E                       | 19            | A                               | .625          | .375   | 1.312-1P-.2L-DS         | 1.312     | 7.125     |
| E                       | 19            | B                               | .938          | .625   |                         | 1.750     | 7.250     |
| F                       | 23            | A                               | .750          | .438   | 1.500-1P-.2L-DS         | 1.593     | 7.688     |
| F                       | 23            | B                               | .938          | .625   |                         | 1.750     | 7.812     |
| F                       | 23            | C                               | 1.188         | .812   |                         | 2.093     | 7.938     |
| G                       | 25            | A                               | .938          | .625   | 1.625-1P-.2L-DS         | 1.750     | 7.750     |
| G                       | 25            | B                               | 1.188         | .812   |                         | 2.093     | 8.438     |
| G                       | 25            | C                               | 1.250         | .875   |                         | 2.093     | 8.438     |
| G                       | 25            | D                               | 1.380         | 1.000  |                         | 2.343     | 8.500     |
| H                       | 29            | A                               | 1.188         | .812   | 1.812-1P-.2L-DS         | 2.093     | 8.438     |
| H                       | 29            | B                               | 1.380         | 1.000  |                         | 2.343     | 8.500     |
| J                       | 33            | A                               | 1.380         | 1.000  | 2.000-1P-.2L-DS         | 2.343     | 8.500     |
| J                       | 33            | B                               | 1.625         | 1.250  |                         | 2.750     | 8.750     |

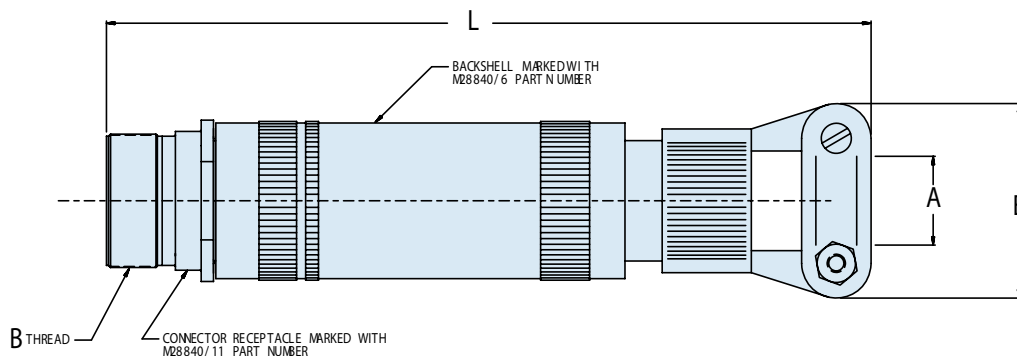
# M28840/21 In-Line Receptacle Connector with Straight EMI/RFI Backshell



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B



# M28840/21

## In-Line Receptacle Connector with Straight EMI/RFI Backshell

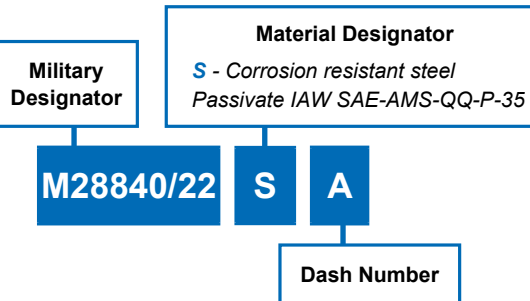
B

| J Military<br>Shell Size | Shell<br>Size | Backshell<br>Size<br>Designator | A Cable Entry |        | A<br>Thread<br>Class 2B | E<br>Max. | L<br>Max. |
|--------------------------|---------------|---------------------------------|---------------|--------|-------------------------|-----------|-----------|
|                          |               |                                 | Open          | Closed |                         |           |           |
| A                        | 11            | A                               | .312          | .188   | .750-1P-.2L-DS          | .938      | 6.625     |
| A                        | 11            | B                               | .438          | .281   |                         | 1.125     | 6.625     |
| A                        | 11            | C                               | .562          | .344   |                         | 1.312     | 6.625     |
| B                        | 13            | A                               | .312          | .188   | .875-1P-.2L-DS          | .938      | 6.625     |
| B                        | 13            | B                               | .438          | .281   |                         | 1.125     | 6.625     |
| B                        | 13            | C                               | .562          | .344   |                         | 1.312     | 6.625     |
| B                        | 13            | D                               | .652          | .375   |                         | 1.312     | 7.125     |
| C                        | 15            | A                               | .438          | .281   | 1.062-1P-.2L-DS         | 1.125     | 6.625     |
| C                        | 15            | B                               | .562          | .344   |                         | 1.312     | 6.625     |
| C                        | 15            | C                               | .625          | .375   |                         | 1.312     | 7.125     |
| C                        | 15            | D                               | .750          | .438   |                         | 1.593     | 7.188     |
| C                        | 15            | E                               | .312          | .188   |                         | .938      | 6.625     |
| D                        | 17            | A                               | .625          | .375   | 1.125-1P-.2L-DS         | 1.312     | 7.125     |
| D                        | 17            | B                               | .750          | .438   |                         | 1.593     | 7.188     |
| D                        | 17            | C                               | .938          | .625   |                         | 1.750     | 7.188     |
| E                        | 19            | A                               | .625          | .375   | 1.312-1P-.2L-DS         | 1.312     | 7.125     |
| E                        | 19            | B                               | .938          | .625   |                         | 1.750     | 7.250     |
| F                        | 23            | A                               | .750          | .438   | 1.500-1P-.2L-DS         | 1.593     | 7.688     |
| F                        | 23            | B                               | .938          | .625   |                         | 1.750     | 7.812     |
| F                        | 23            | C                               | 1.188         | .812   |                         | 2.093     | 7.938     |
| G                        | 25            | A                               | .938          | .625   | 1.625-1P-.2L-DS         | 1.750     | 7.750     |
| G                        | 25            | B                               | 1.188         | .812   |                         | 2.093     | 8.438     |
| G                        | 25            | C                               | 1.250         | .875   |                         | 2.093     | 8.438     |
| G                        | 25            | D                               | 1.380         | 1.000  |                         | 2.343     | 8.500     |
| H                        | 29            | A                               | 1.188         | .812   | 1.812-1P-.2L-DS         | 2.093     | 8.438     |
| H                        | 29            | B                               | 1.380         | 1.000  |                         | 2.343     | 8.500     |
| J                        | 33            | A                               | 1.380         | 1.000  | 2.000-1P-.2L-DS         | 2.343     | 8.500     |
| J                        | 33            | B                               | 1.625         | 1.250  |                         | 2.750     | 8.750     |

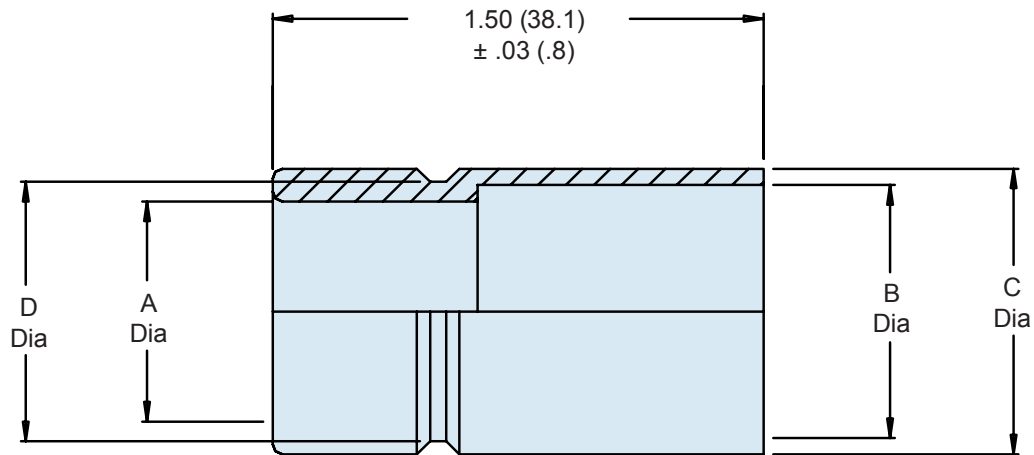
# M28840/22 Metal Conduit Bushing



MIL-DTL-  
28840



B



| Size | MIL-<br>DTL-28840/04<br>Size Ref. | A<br>+.020 (.50)<br>-.000 (.000) | B<br>+.005 (.12)<br>-.000 (.000) | C<br>+.000 (.000)<br>-.005 (.12) | D<br>+.000 (.000)<br>-.005 (.12) |
|------|-----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 03   | 03                                | .375 (9.53)                      | .540 (13.71)                     | .625 (15.87)                     | .525 (13.34)                     |
| 04   | 04                                | .500 (12.70)                     | .665 (16.89)                     | .750 (19.05)                     | .650 (16.51)                     |
| 05   | 05                                | .625 (15.87)                     | .780 (19.81)                     | .875 (22.23)                     | .775 (19.69)                     |
| 06   | 06                                | .750 (19.05)                     | .940 (23.88)                     | 1.000 (25.40)                    | .900 (22.86)                     |
| 08   | 08                                | 1.000 (25.40)                    | 1.225 (31.12)                    | 1.375 (34.93)                    | 1.275 (32.39)                    |
| 10   | 10                                | 1.250 (31.75)                    | 1.470 (37.34)                    | 1.625 (41.28)                    | 1.525 (38.74)                    |
| 12   | 12                                | 1.500 (38.10)                    | 1.740 (44.20)                    | 1.875 (47.65)                    | 1.775 (45.09)                    |
| 16   | 16                                | 2.000 (50.80)                    | 2.215 (56.26)                    | 2.375 (60.33)                    | 2.275 (57.79)                    |

Military  
Designator

Size

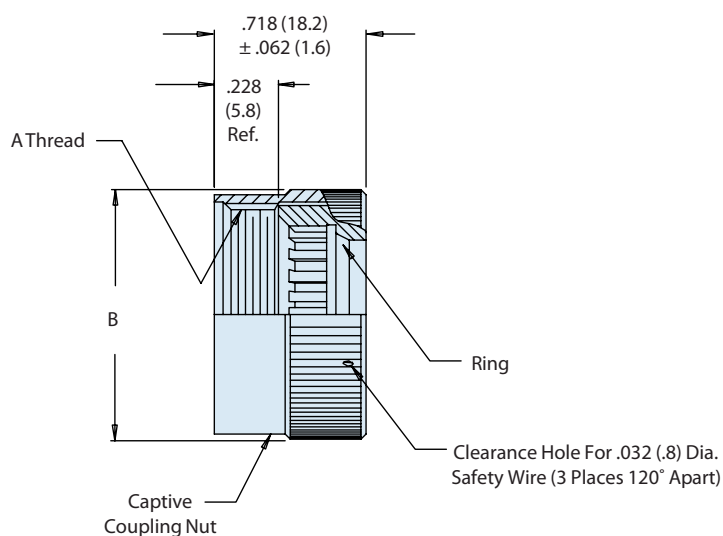
M28840/23

J

W

## Material and Finish Designator

*W* - Aluminum, Cadmium Plate, O.D. over Electroless Nickel  
*D* - Corrosion Resistant Steel, Cadmium Plate, Black

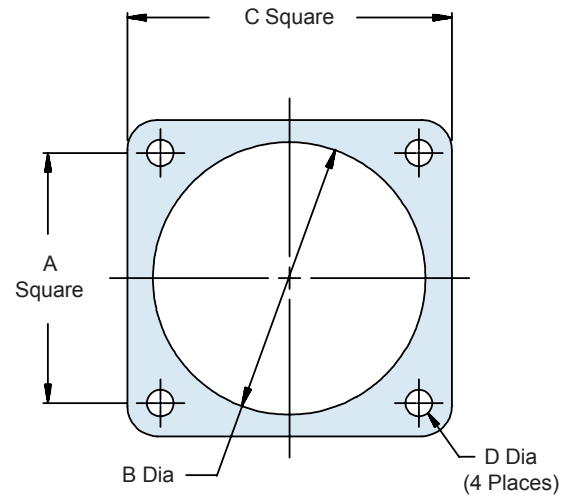
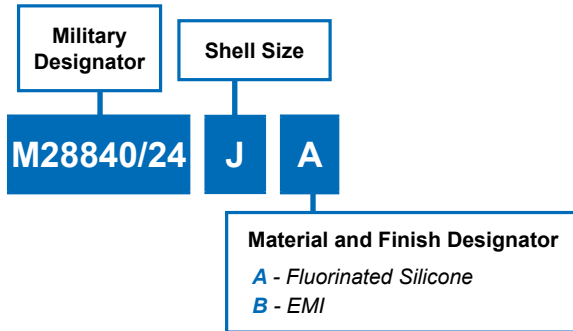


| Designator | A<br>Thread<br>Class 2B | B<br>Max.<br>Diameter |
|------------|-------------------------|-----------------------|
| A (11)     | .750-20 UNEF            | 1.028 (26.11)         |
| B (13)     | .875-20 UNEF            | 1.14 (26.11)          |
| C (15)     | 1.000-20 UNEF           | 2.263 (32.08)         |
| D (17)     | 1.125-18 UNEF           | 1.387 (35.23)         |
| E (19)     | 1.250-18 UNEF           | 1.513 (38.43)         |
| F (23)     | 1.438-18 UNEF           | 1.703 (43.51)         |
| G (25)     | 1.562-18 UNEF           | 1.825 (46.35)         |
| H (29)     | 1.876-16 UN             | 2.143 (54.43)         |
| J (33)     | 2.062-16 UNS            | 2.329 (59.16)         |

# M28840/24 Mounting Gasket



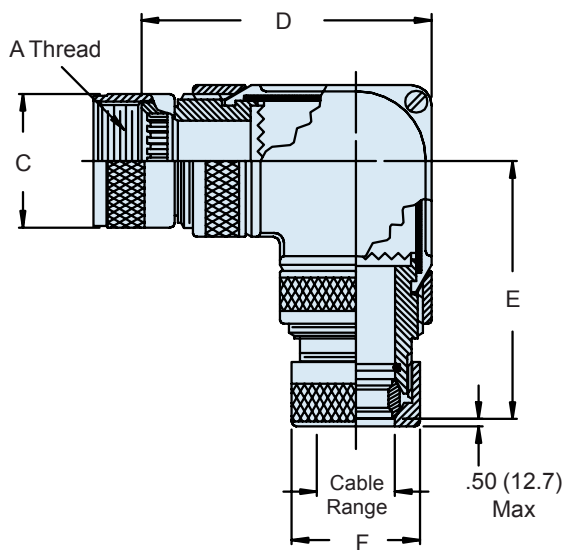
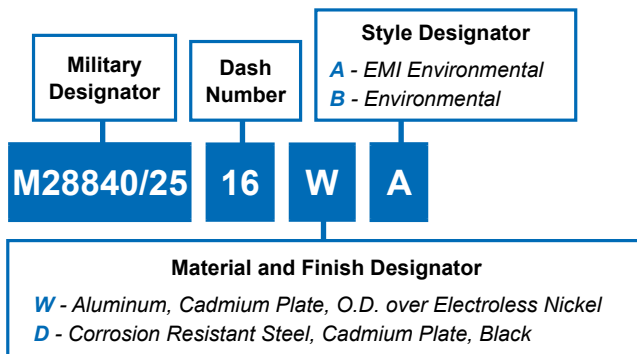
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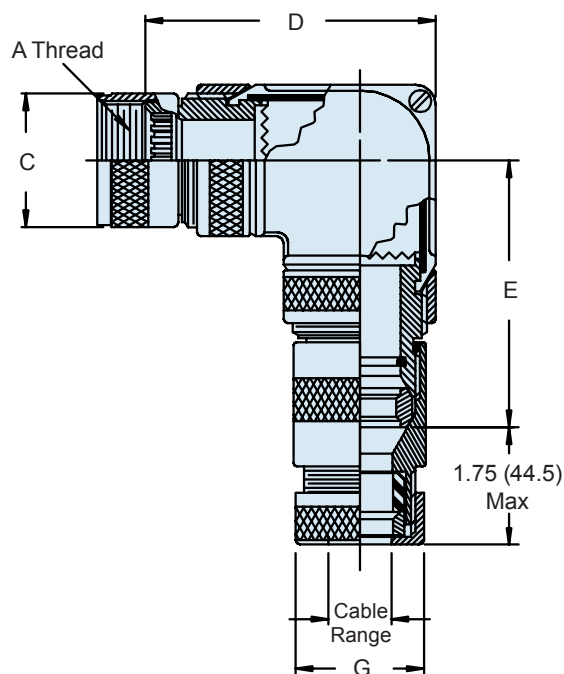
| Designator | A                              | B Dia.                         | C                              | D Dia.                     |
|------------|--------------------------------|--------------------------------|--------------------------------|----------------------------|
| A (11)     | .760 (19.30)<br>.740 (18.80)   | .766 (19.46)<br>.750 (19.05)   | 1.039 (26.39)<br>1.023 (25.98) | .130 (3.30)<br>.110 (2.79) |
| B (13)     | .853 (21.67)<br>.833 (21.16)   | .891 (22.63)<br>.875 (22.22)   | 1.154 (29.31)<br>1.138 (28.90) |                            |
| C (15)     | .978 (24.84)<br>.958 (24.33)   | 1.078 (27.38)<br>1.062 (26.97) | 1.274 (32.36)<br>1.258 (31.95) |                            |
| D (17)     | 1.025 (26.04)<br>1.005 (25.53) | 1.141 (28.98)<br>1.125 (28.58) | 1.399 (26.39)<br>1.383 (35.13) |                            |
| E (19)     | 1.150 (29.21)<br>1.130 (28.70) | 1.338 (33.98)<br>1.312 (33.32) | 1.524 (38.71)<br>1.508 (38.30) |                            |
| F (23)     | 1.291 (32.79)<br>1.271 (32.28) | 1.516 (38.51)<br>1.500 (38.10) | 1.734 (44.04)<br>1.718 (43.64) |                            |
| G (25)     | 1.402 (35.61)<br>1.382 (35.10) | 1.641 (41.68)<br>1.625 (41.28) | 1.834 (46.58)<br>1.818 (46.18) | .157 (3.99)<br>.137 (3.48) |
| H (29)     | 1.578 (40.08)<br>1.558 (39.57) | 1.891 (48.03)<br>1.875 (47.62) | 2.154 (54.71)<br>2.138 (54.30) |                            |
| J (33)     | 1.744 (44.30)<br>1.724 (43.79) | 2.078 (52.78)<br>2.062 (52.37) | 2.344 (59.54)<br>2.328 (59.13) |                            |

# M28840/25 90° EMI Conduit Adapter

B



STYLE A - EMI/Non-Environmental  
(Plain Conduit)



STYLE B - EMI/Environmental  
(Jacket Conduit)

# M28840/25 90° EMI Conduit Adapter



MIL-DTL-  
28840

B

| Dash Number | Designator | A Thread Class 2B | B Diameter Max. | C Thread Class 1 | D Max Diameter | Sealing Range |             |
|-------------|------------|-------------------|-----------------|------------------|----------------|---------------|-------------|
|             |            |                   |                 |                  |                | Max.          | Min.        |
| 01          | A (11)     | .750-20 UNEF      | 1.028 (26.11)   | .875-20 UNEF     | 1.031 (26.19)  | .63 (16.0)    | .50 (12.7)  |
| 02          | B (13)     | .875-20 UNEF      | 1.141 (28.98)   | .875-20 UNEF     |                | .63 (16.0)    | .50 (12.7)  |
| 03          |            |                   |                 | 1.000-20 UNEF    |                | .75 (19.1)    | .63 (16.0)  |
| 04          | C (15)     | 1.000-20 UNEF     | 1.263 (32.08)   | .875-20 UNEF     | 1.281 (32.58)  | .63 (16.0)    | .50 (12.7)  |
| 05          |            |                   |                 | 1.000-20 UNEF    |                | .75 (19.1)    | .63 (16.0)  |
| 06          |            |                   |                 | 1.125-18 UNEF    |                | .88 (22.4)    | .75 (19.1)  |
| 07          |            |                   |                 | 1.250-18 UNEF    | 1.531 (38.89)  | 1.00 (25.4)   | .88 (22.4)  |
| 08          | D (17)     | 1.125-18 UNEF     | 1.387 (35.23)   | 1.125-18 UNEF    |                | .88 (22.4)    | .75 (19.1)  |
| 09          |            |                   |                 | 1.250-18 UNEF    |                | 1.00 (25.4)   | .88 (22.4)  |
| 10          |            |                   |                 | 1.625-18 UNEF    |                | 1.38 (35.1)   | 1.19 (30.2) |
| 11          | E (19)     | 1.250-18 UNEF     | 1.513 (38.43)   | 1.125-18 UNEF    |                | .88 (22.4)    | .75 (19.1)  |
| 12          |            |                   |                 | 1.250-18 UNEF    |                | 1.00 (25.4)   | .88 (22.4)  |
| 13          |            |                   |                 | 1.625-18 UNEF    | 1.781 (45.24)  | 1.38 (35.1)   | 1.19 (30.2) |
| 14          | F (23)     | 1.438-18 UNEF     | 1.703 (45.51)   | 1.250-18 UNEF    |                | 1.00 (25.4)   | .88 (22.4)  |
| 15          |            |                   |                 | 1.625-18 UNEF    |                | 1.38 (35.1)   | 1.18 (30.2) |
| 16          |            |                   |                 | 1.875-18 UNS     |                | 1.63 (41.4)   | 1.44 (36.6) |
| 17          | G (25)     | 1.562-18 UNEF     | 1.825 (46.35)   | 1.250-18 UNEF    |                | 1.00 (25.4)   | .88 (22.4)  |
| 18          |            |                   |                 | 1.625-18 UNEF    |                | 1.38 (35.1)   | 1.19 (30.2) |
| 19          |            |                   |                 | 1.875-18 UNS     |                | 1.63 (41.4)   | 1.44 (36.5) |
| 20          |            |                   |                 | 2.125-16 UN      | 2.031 (51.59)  | 1.88 (47.8)   | 1.63 (41.4) |
| 21          | H (29)     | 1.875-16 UN       | 2.143 (54.43)   | 1.875-18 UNS     |                | 1.63 (41.4)   | 1.44 (36.6) |
| 22          |            |                   |                 | 2.125-16 UN      |                | 1.33 (47.8)   | 1.63 (41.4) |
| 23          | J (33)     | 2.062-16 UNS      | 2.329 (59.16)   | 2.125-16 UN      | 2.531 (64.29)  | 1.88 (47.8)   | 1.63 (41.4) |
| 24          |            |                   |                 | 2.750-16 UN      |                | 2.38 (60.5)   | 2.13 (54.1) |
| 25          | A (11)     | .750-20 UNEF      | 1.028 (26.11)   | .875-20 UNEF     | 1.031 (25.19)  | .75 (19.5)    | .63 (16.0)  |

**M28840/25**  
**90° EMI Conduit Adapter**

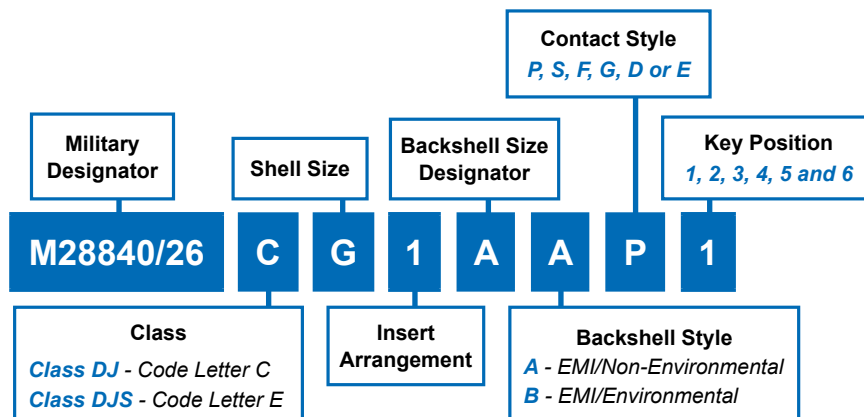
B

| Dash Number | Designator | Conduit Size<br>M 04 | E<br>Max. Dim. | F<br>Max. Dim. | V Thread Class 2 | M Max. Dia. | Y Max. Dia.  |
|-------------|------------|----------------------|----------------|----------------|------------------|-------------|--------------|
| 01          | A (11)     | 03                   | 2.36 (59.9)    | 3.50 (92.8)    | 1.000-20 UNEF    | 1.12 (28.5) | 1.19 (30.23) |
| 02          | B (13)     | 03                   |                |                | 1.000-20 UNEF    | 1.12 (28.5) | 1.19 (30.23) |
| 03          |            | 04                   |                |                | 1.188-18 UNEF    | 1.25 (31.8) | 1.38 (35.1)  |
| 04          | C (15)     | 03                   | 2.56 (65.0)    | 3.69 (9.79)    | 1.000-20 UNEF    | 1.12 (28.5) | 1.39 (35.3)  |
| 05          |            | 04                   |                |                | 1.118-18 UNEF    | 1.25 (31.8) | 1.38 (35.1)  |
| 06          |            | 05                   |                |                | 1.438-18 UNEF    | 1.43 (36.3) | 1.63 (41.4)  |
| 07          | D (17)     | 06                   | 2.67 (67.8)    | 3.81 (101.0)   | 1.750-18 UNS     | 1.62 (41.2) | 1.94 (49.3)  |
| 08          |            | 05                   |                |                | 1.438-18 UNEF    | 1.43 (36.3) | 1.63 (41.4)  |
| 09          |            | 06                   |                |                | 1.750-18 UNS     | 1.62 (42.2) | 1.94 (49.3)  |
| 10          |            | 08                   |                |                | 2.00-18 UNS      | 1.81 (46.0) | 2.19 (55.6)  |
| 11          | E (19)     | 05                   | 3.05 (77.5)    | 4.19 (111.1)   | 1.438-18 UNEF    | 1.43 (36.3) | 1.63 (41.4)  |
| 12          |            | 06                   |                |                | 1.750-18 UNS     | 1.62 (41.2) | 1.94 (49.3)  |
| 13          |            | 08                   |                |                | 2.00-18 UNS      | 1.81 (46.0) | 2.19 (55.6)  |
| 14          | F (23)     | 06                   |                |                | 1.750-18 UNS     | 1.62 (41.2) | 1.94 (49.3)  |
| 15          |            | 08                   |                |                | 2.00-18 UNS      | 1.81 (46.0) | 2.19 (55.6)  |
| 16          |            | 10                   |                |                | 2.250-18 UN      | 2.18 (55.4) | 2.44 (62.0)  |
| 17          | G (25)     | 06                   | 3.33 (84.6)    | 4.50 (119.4)   | 1.750-18 UNS     | 1.62 (41.2) | 1.94 (49.3)  |
| 18          |            | 08                   |                |                | 2.00-18 UN       | 1.81 (46.0) | 2.19 (55.6)  |
| 19          |            | 10                   |                |                | 2.250-18 UN      | 2.18 (55.4) | 2.44 (62.0)  |
| 20          | H (29)     | 12                   |                |                | 2.500-16 UN      | 2.56 (65.0) | 2.69 (68.5)  |
| 21          |            | 10                   | 3.70 (94.0)    | 4.43 (128.1)   | 2.250-16 UN      | 2.18 (55.4) | 2.18 (55.4)  |
| 22          |            | 12                   |                |                | 1.500-16 UN      | 2.56 (65.0) | 2.44 (62.0)  |
| 23          | J (33)     | 12                   | 3.70 (94.0)    | 4.43 (128.1)   | 2.500-16 UN      | 2.56 (65.0) | 2.69 (68.3)  |
| 24          |            | 16                   |                |                | 3.00-16 UN       | 3.06 (77.8) | 3.19 (81.0)  |
| 25          | A (11)     | 04                   | 2.36 (59.9)    | 3.50 (92.8)    | 1.133-18 UNF     | 1.25 (31.8) | 1.38 (35.1)  |

# M28840/26 Plug Connector with Straight EMI/RFI Backshell



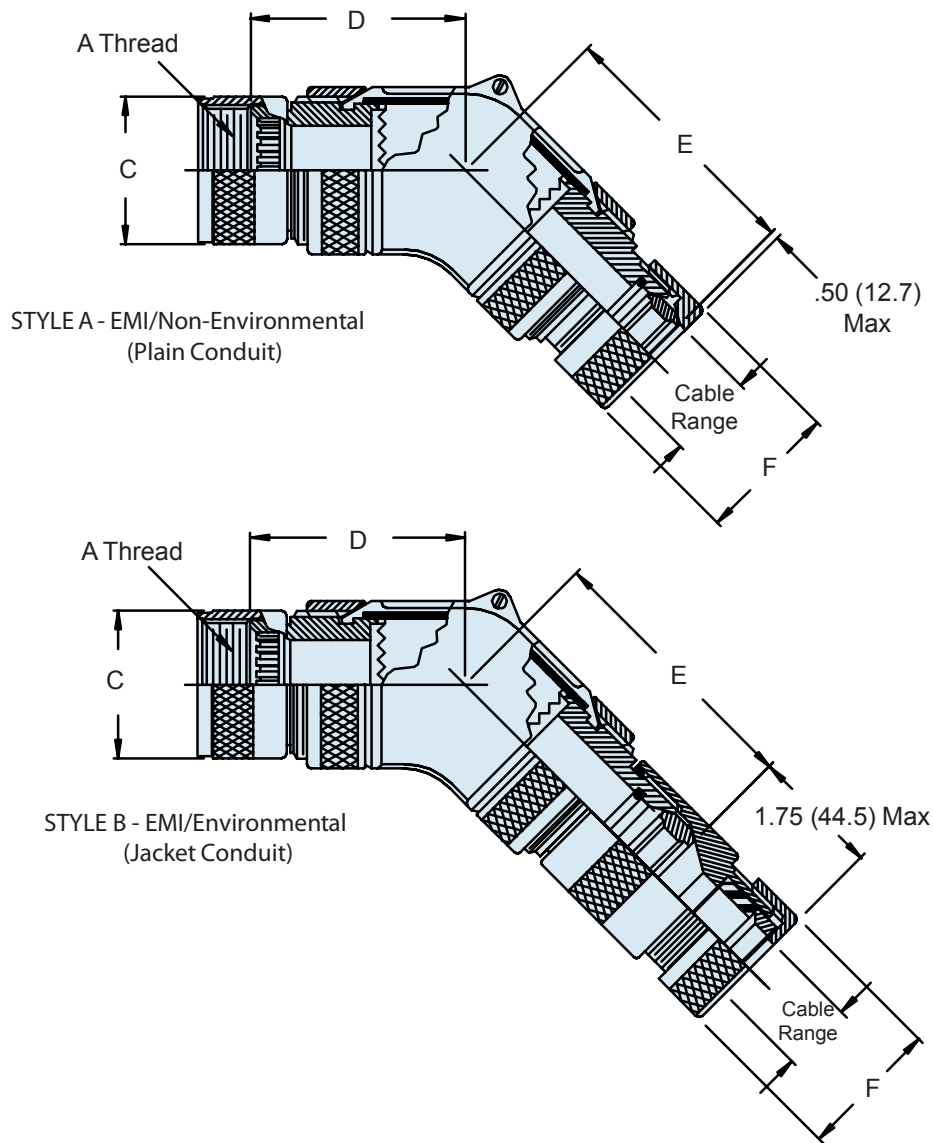
MIL-DTL-  
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B

| Military Shell Size | Shell Size | A Thread Class 2B | Backshell Size Designator | A Cable Entry |        | E Max. | L Max. |
|---------------------|------------|-------------------|---------------------------|---------------|--------|--------|--------|
|                     |            |                   |                           | Open          | Closed |        |        |
| A                   | 11         | .750-1P-.2L-DS    | A                         | .312          | .188   | .938   | 6.500  |
|                     |            |                   | B                         | .438          | .281   | 1.125  |        |
|                     |            |                   | C                         | .562          | .344   | 1.312  |        |
| B                   | 13         | .875-1P-.2L-DS    | A                         | .312          | .188   | .938   | 7.000  |
|                     |            |                   | B                         | .438          | .281   | 1.125  |        |
|                     |            |                   | C                         | .562          | .344   | 1.312  |        |
| C                   | 15         | 1.062-1P-.2L-DS   | D                         | .652          | .375   | 1.312  | 7.000  |
|                     |            |                   | A                         | .438          | .281   | 1.125  |        |
|                     |            |                   | B                         | .562          | .344   | 1.312  |        |
|                     |            |                   | C                         | .625          | .375   | 1.312  |        |
|                     |            |                   | D                         | .750          | .438   | 1.593  |        |
| D                   | 17         | 1.125-1P-.2L-DS   | E                         | .312          | .188   | .938   | 7.500  |
|                     |            |                   | A                         | .625          | .375   | 1.312  |        |
|                     |            |                   | B                         | .750          | .438   | 1.593  |        |
| E                   | 19         | 1.312-1P-.2L-DS   | C                         | .938          | .625   | 1.750  | 7.625  |
|                     |            |                   | A                         | .625          | .375   | 1.312  |        |
|                     |            |                   | B                         | .938          | .625   | 1.750  |        |
| F                   | 23         | 1.500-1P-.2L-DS   | A                         | .750          | .438   | 1.593  | 7.812  |
|                     |            |                   | B                         | .938          | .625   | 1.750  |        |
|                     |            |                   | C                         | 1.188         | .812   | 2.093  |        |
| G                   | 25         | 1.625-1P-.2L-DS   | A                         | .938          | .625   | 1.750  | 8.312  |
|                     |            |                   | B                         | 1.188         | .812   | 2.093  |        |
|                     |            |                   | C                         | 1.250         | .875   | 2.093  |        |
|                     |            |                   | D                         | 1.380         | 1.000  | 2.343  |        |
| H                   | 29         | 1.812-1P-.2L-DS   | A                         | 1.188         | .812   | 2.093  | 8.625  |
|                     |            |                   | B                         | 1.380         | 1.000  | 2.343  |        |
| J                   | 33         | 2.000-1P-.2L-DS   | A                         | 1.380         | 1.000  | 2.343  | 8.625  |
|                     |            |                   | B                         | 1.625         | 1.250  | 2.750  |        |

# M28840/27 45° EMI Conduit Adapter

**Military  
Designator**
**Dash  
Number**
**Style Designator**
*A - EMI Environmental  
B - Environmental*
**M28840/27**
**16**
**W**
**A**
**Material and Finish Designator**
*W - Aluminum, Cadmium Plate, O.D. over Electroless Nickel  
D - Corrosion Resistant Steel, Cadmium Plate, Black*


# M28840/27 45° EMI Conduit Adapter



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**B**

| Dash No. | Designator | A Thread Class 2B | B Max Diameter | C Thread Class 2 | D Max. Diameter | Sealing Range |             | Conduit Size M 04 | E Max. Dim. |
|----------|------------|-------------------|----------------|------------------|-----------------|---------------|-------------|-------------------|-------------|
|          |            |                   |                |                  |                 | Max.          | Min.        |                   |             |
| 01       | A (11)     | .750-20 UNEF      | 1.028 (26.11)  | .875-20 UNEF     | 1.031 (26.19)   | .63 (16.0)    | .50 (12.7)  | 03                | 2.36 (59.9) |
| 02       | B (13)     | .875-20 UNEF      | 1.141 (28.98)  | .875-20 UNEF     |                 | .63 (16.0)    | .50 (12.7)  | 03                |             |
| 03       |            |                   |                | 1.000-20 UNEF    |                 | .75 (19.1)    | .63 (16.0)  | 04                |             |
| 04       | C (15)     | 1.000-20 UNEF     | 1.263 (32.08)  | .875-20 UNEF     | 1.281 (32.50)   | .63 (16.0)    | .50 (12.7)  | 03                | 2.56 (65.0) |
| 05       |            |                   |                | 1.000-20 UNEF    |                 | .75 (19.1)    | .63 (16.0)  | 04                |             |
| 06       |            |                   |                | 1.125-18 UNEF    |                 | .88 (22.4)    | .75 (19.1)  | 05                |             |
| 07       |            |                   |                | 1.250-18 UNEF    | 1.531 (38.80)   | 1.00 (25.4)   | .88 (22.4)  | 06                |             |
| 08       | D (17)     | 1.125-18 UNEF     | 1.387 (38.23)  | 1.125-18 UNEF    |                 | .88 (22.4)    | .75 (19.1)  | 05                | 2.67 (67.8) |
| 09       |            |                   |                | 1.250-18 UNEF    |                 | 1.00 (25.4)   | .88 (22.4)  | 06                |             |
| 10       |            |                   |                | 1.625-18 UNEF    |                 | 1.38 (35.1)   | 1.19 (22)   | 08                |             |
| 11       | E (19)     | 1.250-18 UNEF     | 1.513 (38.43)  | 1.125-18 UNEF    |                 | .88 (22.4)    | .75 (19.1)  | 05                |             |
| 12       |            |                   |                | 1.250-18 UNEF    |                 | 1.00 (25.4)   | .88 (22.4)  | 06                |             |
| 13       |            |                   |                | 1.625-18 UNEF    | 1.781 (45.24)   | 1.38 (35.1)   | 1.19 (30.2) | 08                | 3.05 (77.5) |
| 14       | F (23)     | 1.438-18 UNEF     | 1.703 (45.51)  | 1.250-18 UNEF    |                 | 1.000 (25.4)  | .88 (22.4)  | 06                |             |
| 15       |            |                   |                | 1.625-18 UNEF    |                 | 1.38 (35.1)   | 1.19 (30.2) | 08                |             |
| 16       |            |                   |                | 1.875-18 UNS     |                 | 1.63 (41.4)   | 1.44 (36.6) | 10                |             |
| 17       | G (25)     | 1.562-18 UNEF     | 1.825 (46.35)  | 1.250-18 UNEF    |                 | 1.00 (25.4)   | .88 (22.4)  | 06                |             |
| 18       |            |                   |                | 1.625-18 UNEF    |                 | 1.38 (41.4)   | 1.19 (30.2) | 08                |             |
| 19       |            |                   |                | 1.875-18 UNS     |                 | 1.43 (41.4)   | 1.44 (36.6) | 10                |             |
| 20       |            |                   |                | 2.125-16 UN      | 2.031 (51.59)   | 1.88 (47.8)   | 1.63 (41.4) | 12                | 3.33 (84.6) |
| 21       | H (29)     | 1.875-16 UNS      | 2.143 (54.43)  | 1.875-18 UNS     |                 | 1.63 (41.4)   | 1.44 (36.6) | 10                |             |
| 22       |            |                   |                | 2.125-16 UN      |                 | 1.88 (47.8)   | 1.63 (41.4) | 12                |             |
| 23       | J (33)     | 2.062-16 UNS      | 2.329 (50.16)  | 2.125-16 UN      | 2.531 (64.29)   | 1.88 (47.8)   | 1.63 (41.4) | 12                | 3.70 (94.0) |
| 24       |            |                   |                | 2.750-16 UN      |                 | 2.38 (60.5)   | 2.13 (54.1) | 16                |             |
| 25       | A (11)     | .750-20 UNEF      | 1.028 (16.11)  | .875-20 UNEF     | 1.031 (26.19)   | .75 (19.1)    | .63 (16.0)  | 04                | 2.36 (59.9) |

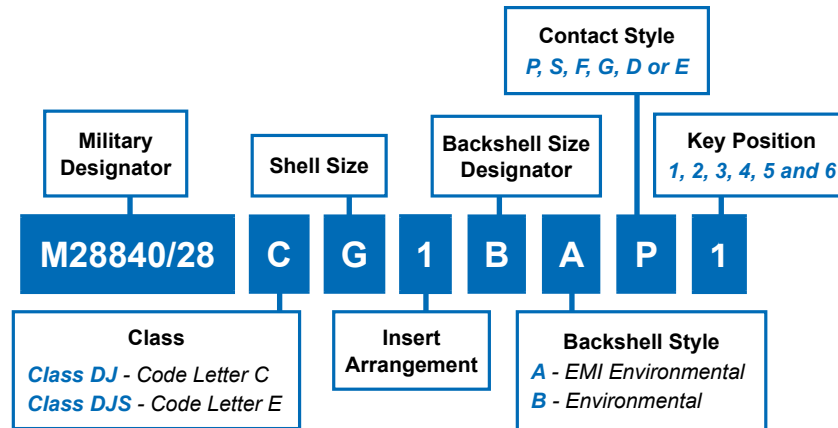
B

| Dash Number | Designator | F<br>Max.<br>Dim. | V<br>Thread<br>Class 2 | M<br>Max.<br>Diameter | Y<br>Max.<br>Diameter |  |
|-------------|------------|-------------------|------------------------|-----------------------|-----------------------|--|
| 1           | A (11)     | 3.50<br>(88.9)    | 1.000-20 UNEF          | 1.12 (28.5)           | 1.19 (30.23)          |  |
| 2           | B (13)     |                   | 1.000-20 UNEF          | 1.12 (28.5)           | 1.19 (30.23)          |  |
| 3           |            |                   | 1.188-18 UNEF          | 1.25 (31.8)           | 1.38 (35.1)           |  |
| 4           | C (15)     | 3.69<br>(93.7)    | 1.000-20 UNEF          | 1.12 (28.5)           | 1.19 (30.23)          |  |
| 5           |            |                   | 1.188-18 UNEF          | 1.25 (31.8)           | 1.38 (35.1)           |  |
| 6           |            |                   | 1.438-18 UNEF          | 1.43 (36.3)           | 1.63 (41.4)           |  |
| 7           | D (17)     | 3.81<br>(96.7)    | 1.750-18 UNS           | 1.62 (41.2)           | 1.94 (49.3)           |  |
| 8           |            |                   | 1.438-18 UNEF          | 1.43 (36.3)           | 1.63 (41.4)           |  |
| 9           |            |                   | 1.750-18 UNS           | 1.62 (41.2)           | 1.94 (49.3)           |  |
| 10          |            |                   | 2.00-18 UNS            | 1.81 (46.0)           | 2.19 (55.6)           |  |
| 11          | E (19)     | 4.19<br>(106.4)   | 1.438-18 UNEF          | 1.43 (36.3)           | 1.63 (41.4)           |  |
| 12          |            |                   | 1.750-18 UNS           | 1.62 (41.2)           | 1.94 (49.3)           |  |
| 13          | F (23)     |                   | 2.00-18 UNS            | 1.81 (46.0)           | 2.19 (55.6)           |  |
| 14          |            |                   | 1.750-18 UNS           | 1.62 (41.2)           | 1.94 (49.3)           |  |
| 15          |            |                   | 2.00-18 UN             | 1.81 (46.0)           | 2.19 (55.6)           |  |
| 16          | G (25)     |                   | 2.250-16 UN            | 2.18 (55.4)           | 2.44 (62.0)           |  |
| 17          |            |                   | 1.750-18 UNS           | 1.62 (41.2)           | 1.94 (49.3)           |  |
| 18          |            |                   | 2.00-18 UN             | 1.81 (46.0)           | 2.19 (55.6)           |  |
| 19          |            |                   | 2.250-16 UN            | 2.18 (55.4)           | 2.44 (62.0)           |  |
| 20          | H (29)     | 4.50<br>(114.3)   | 2.500-16 UN            | 2.56 (65.0)           | 2.69 (68.3)           |  |
| 21          |            |                   | 2.250-16 UN            | 2.18 (55.4)           | 2.44 (62.0)           |  |
| 22          |            |                   | 2.500-16 UN            | 2.56 (65.0)           | 2.69 (68.3)           |  |
| 23          | J (33)     | 4.83<br>(122.6)   | 2.500-16 UN            | 2.56 (65.0)           | 2.69 (68.3)           |  |
| 24          |            |                   | 3.00-16 UN             | 3.06 (77.8)           | 3.19 (81.0)           |  |
| 25          | A (11)     | 3.50<br>(88.9)    | 1.188-18 UNEF          | 1.25 (31.8)           | 1.38 (35.1)           |  |

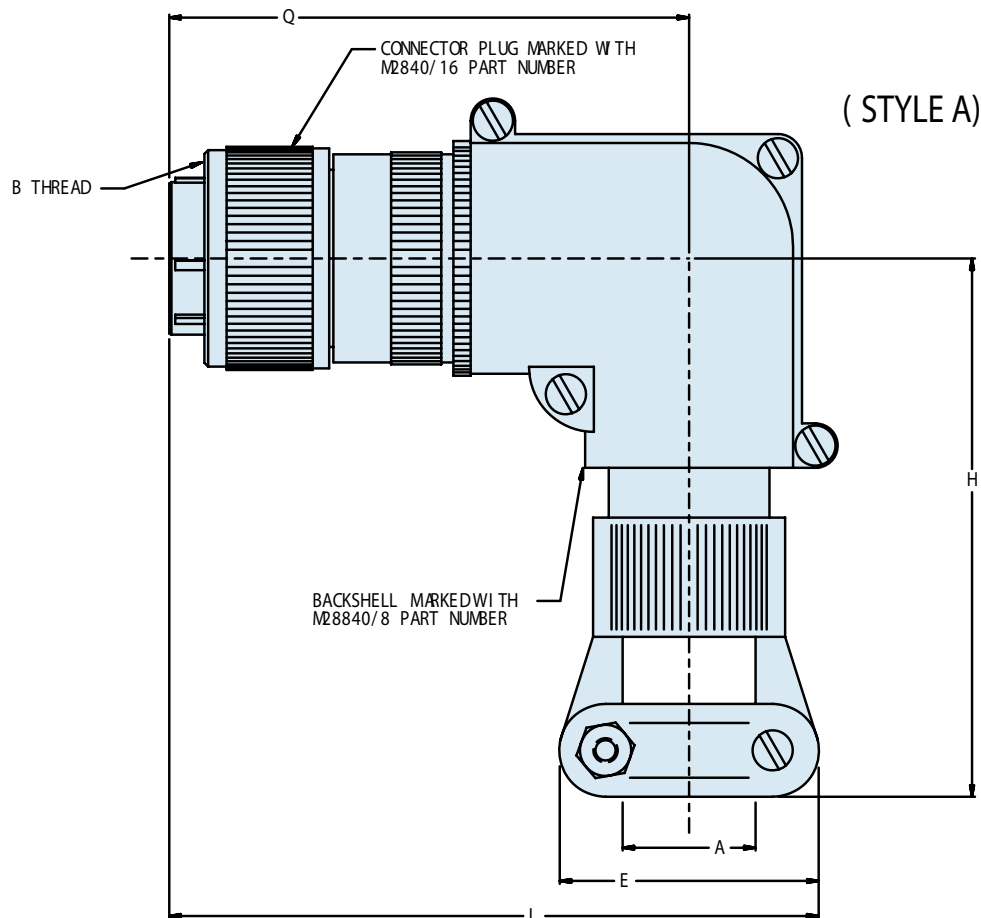
# M28840/28 90° Adapter Assembly Plug

**Glenair**®

MIL-DTL-  
28840



**B**



**M28840/28**  
**90° Adapter Assembly Plug**

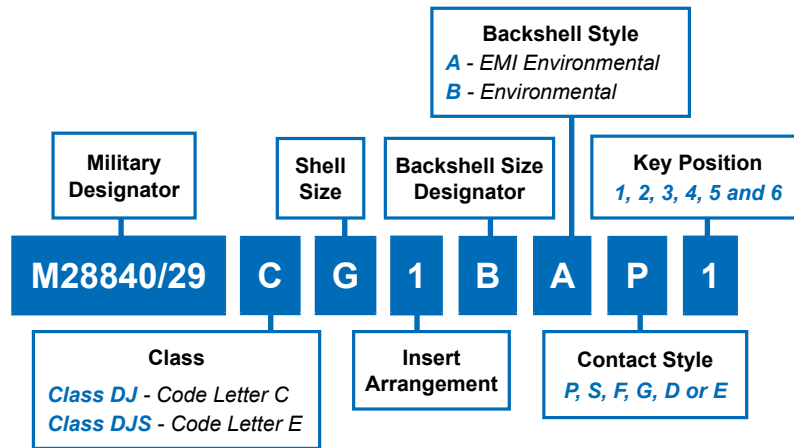
B

| JMilitary<br>Shell Size | Shell<br>Size | Backshell<br>Size<br>Designator | A Cable Entry |        | A<br>Thread<br>Class 2B | E<br>Max. | H<br>Max. | L<br>Max. | Q<br>Max. |
|-------------------------|---------------|---------------------------------|---------------|--------|-------------------------|-----------|-----------|-----------|-----------|
|                         |               |                                 | Open          | Closed |                         |           |           |           |           |
| A                       | 11            | A                               | .312          | .188   | .750-1P-.2L-DS          | .938      | 5.332     | 3.812     | 3.250     |
| A                       | 11            | B                               | .438          | .281   |                         | 1.125     | 5.332     | 3.812     | 3.250     |
| A                       | 11            | C                               | .562          | .344   |                         | 1.312     | 5.457     | 4.000     | 3.375     |
| B                       | 13            | A                               | .438          | .281   | .875-1P-.2L-DS          | 1.125     | 5.332     | 3.812     | 3.250     |
| B                       | 13            | B                               | .562          | .344   |                         | 1.312     | 5.457     | 4.000     | 3.375     |
| B                       | 13            | C                               | .625          | .375   |                         | 1.312     | 5.682     | 4.250     | 3.500     |
| C                       | 15            | A                               | .438          | .281   | 1.062-1P-.2L-DS         | 1.125     | 5.457     | 4.000     | 3.375     |
| C                       | 15            | B                               | .562          | .344   |                         | 1.312     | 5.457     | 4.000     | 3.375     |
| C                       | 15            | C                               | .625          | .375   |                         | 1.312     | 5.682     | 4.250     | 3.500     |
| C                       | 15            | D                               | .750          | .438   |                         | 1.593     | 5.713     | 4.125     | 3.500     |
| D                       | 17            | A                               | .625          | .375   | 1.125-1P-.2L-DS         | 1.312     | 5.682     | 4.250     | 3.500     |
| D                       | 17            | B                               | .750          | .438   |                         | 1.593     | 5.713     | 4.250     | 3.500     |
| E                       | 19            | A                               | .625          | .375   | 1.312-1P-.2L-DS         | 1.312     | 5.682     | 4.250     | 3.500     |
| E                       | 19            | B                               | .938          | .625   |                         | 1.750     | 5.832     | 4.375     | 3.625     |
| F                       | 23            | A                               | .750          | .438   | 1.500-1P-.2L-DS         | 1.593     | 5.738     | 4.500     | 3.625     |
| F                       | 23            | B                               | .938          | .625   |                         | 1.750     | 5.832     | 4.500     | 3.625     |
| F                       | 23            | C                               | 1.188         | .812   |                         | 2.093     | 6.019     | 4.688     | 3.625     |
| G                       | 25            | A                               | .938          | .625   | 1.625-1P-.2L-DS         | 1.750     | 5.832     | 4.500     | 3.625     |
| G                       | 25            | B                               | 1.188         | .812   |                         | 2.093     | 6.019     | 4.688     | 3.625     |
| G                       | 25            | C                               | 1.250         | .875   |                         | 2.093     | 6.144     | 4.688     | 3.750     |
| G                       | 25            | D                               | 1.380         | 1.000  |                         | 2.343     | 6.176     | 4.938     | 3.750     |
| H                       | 29            | A                               | 1.188         | .812   | 1.812-1P-.2L-DS         | 2.093     | 6.144     | 4.812     | 3.750     |
| H                       | 29            | B                               | 1.380         | 1.000  |                         | 2.343     | 6.176     | 4.938     | 3.750     |
| J                       | 33            | A                               | 1.380         | 1.000  | 2.000-1P-.2L-DS         | 2.343     | 6.426     | 5.188     | 4.000     |
| J                       | 33            | B                               | 1.625         | 1.250  |                         | 2.750     | 6.701     | 5.375     | 4.000     |

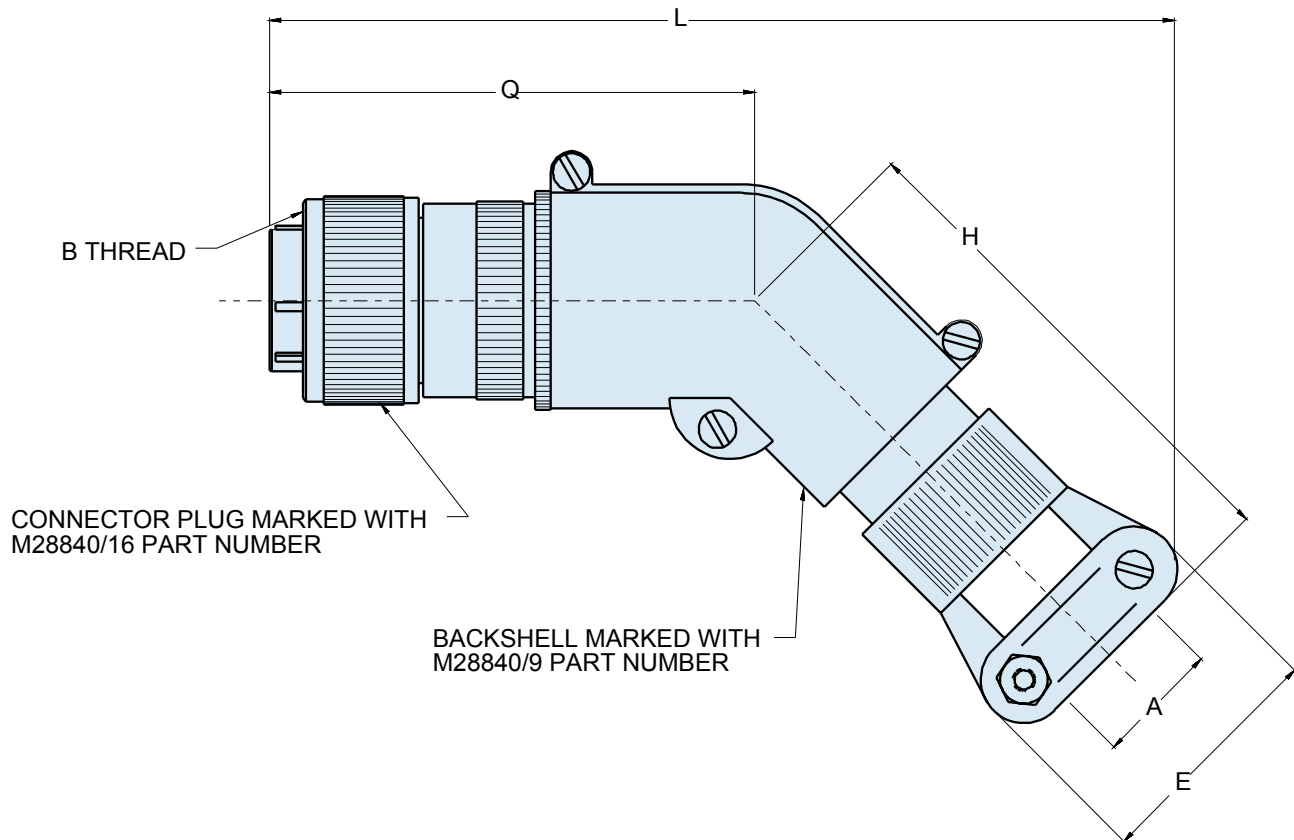
**M28840/29  
Plug Connector  
with 45° EMI/RFI Backshell**



MIL-DTL-  
28840



**B**





# M28840/29

## Plug Connector

### with 45° EMI/RFI Backshell

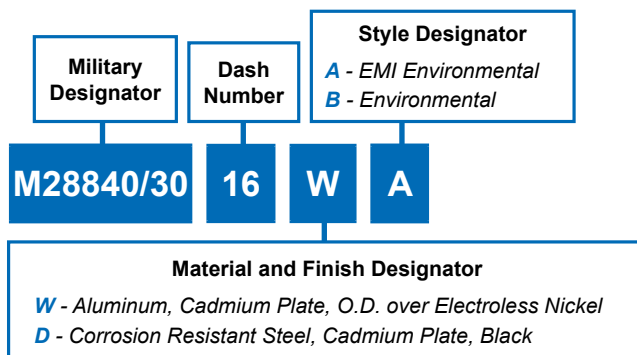
B

| JMilitary<br>Shell Size | Shell<br>Size | Backshell<br>Size<br>Designator | A Cable Entry |        | A<br>Thread<br>Class 2B | E<br>Max. | H<br>Max. | L<br>Max. | Q<br>Max. |
|-------------------------|---------------|---------------------------------|---------------|--------|-------------------------|-----------|-----------|-----------|-----------|
|                         |               |                                 | Open          | Closed |                         |           |           |           |           |
| A                       | 11            | A                               | .312          | .188   | .750-1P-.2L-DS          | .938      | 5.432     | 7.404     | 3.250     |
| A                       | 11            | B                               | .438          | .281   |                         | 1.125     | 5.432     | 7.457     | 3.250     |
| A                       | 11            | C                               | .562          | .344   |                         | 1.312     | 5.557     | 7.727     | 3.375     |
| B                       | 13            | A                               | .438          | .281   | .875-1P-.2L-DS          | 1.125     | 5.432     | 7.457     | 3.250     |
| B                       | 13            | B                               | .562          | .344   |                         | 1.312     | 5.557     | 7.727     | 3.375     |
| B                       | 13            | C                               | .625          | .375   |                         | 1.312     | 5.682     | 7.938     | 3.500     |
| C                       | 15            | A                               | .438          | .281   | 1.062-1P-.2L-DS         | 1.125     | 5.557     | 7.671     | 3.375     |
| C                       | 15            | B                               | .562          | .344   |                         | 1.312     | 5.557     | 7.727     | 3.375     |
| C                       | 15            | C                               | .625          | .375   |                         | 1.312     | 5.682     | 7.938     | 3.500     |
| C                       | 15            | D                               | .750          | .438   |                         | 1.593     | 5.713     | 8.058     | 3.500     |
| D                       | 17            | A                               | .625          | .375   | 1.125-1P-.2L-DS         | 1.312     | 5.682     | 7.938     | 3.500     |
| D                       | 17            | B                               | .750          | .438   |                         | 1.593     | 5.713     | 8.058     | 3.500     |
| E                       | 19            | A                               | .625          | .375   | 1.312-1P-.2L-DS         | 1.312     | 5.682     | 7.938     | 3.500     |
| E                       | 19            | B                               | .938          | .625   |                         | 1.750     | 5.932     | 8.371     | 3.625     |
| F                       | 23            | A                               | .750          | .438   | 1.500-1P-.2L-DS         | 1.593     | 5.838     | 8.272     | 3.625     |
| F                       | 23            | B                               | .938          | .625   |                         | 1.750     | 5.932     | 8.371     | 3.625     |
| F                       | 23            | C                               | 1.188         | .812   |                         | 2.093     | 6.119     | 8.628     | 3.625     |
| G                       | 25            | A                               | .938          | .625   | 1.625-1P-.2L-DS         | 1.750     | 5.932     | 8.371     | 3.625     |
| G                       | 25            | B                               | 1.188         | .812   |                         | 2.093     | 6.119     | 8.628     | 3.625     |
| G                       | 25            | C                               | 1.250         | .875   |                         | 2.093     | 6.244     | 8.841     | 3.750     |
| G                       | 25            | D                               | 1.380         | 1.000  |                         | 2.343     | 6.276     | 8.950     | 3.750     |
| H                       | 29            | A                               | 1.188         | .812   | 1.812-1P-.2L-DS         | 2.093     | 6.244     | 8.841     | 3.750     |
| H                       | 29            | B                               | 1.380         | 1.000  |                         | 2.343     | 6.276     | 8.950     | 3.750     |
| J                       | 33            | A                               | 1.380         | 1.000  | 2.000-1P-.2L-DS         | 2.343     | 6.526     | 9.377     | 4.000     |
| J                       | 33            | B                               | 1.625         | 1.250  |                         | 2.750     | 6.801     | 9.659     | 4.000     |

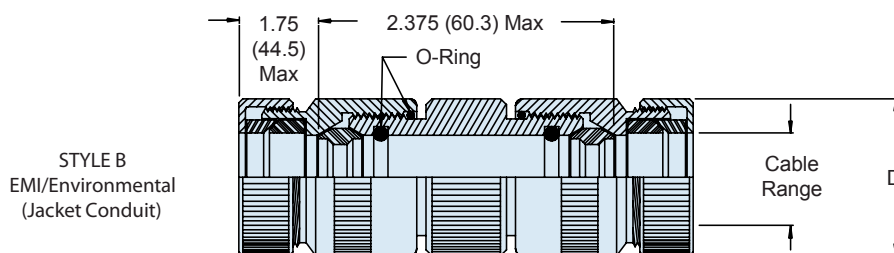
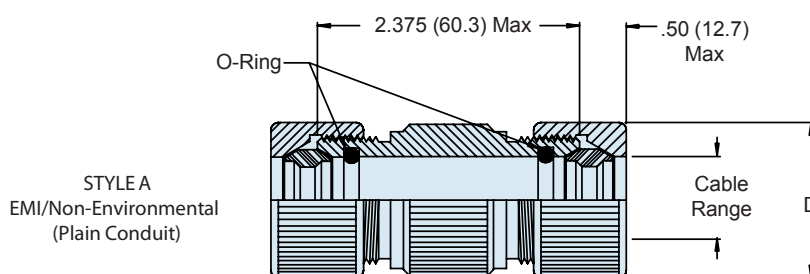
# M28840/30 Metal Conduit Coupler Styles A and B



MIL-DTL-  
28840



B



| Dash Number | Conduit Size | Sealing Range |             | C Thread      | M Max Diameter | V Thread Class 2 | Y Max Diameter |
|-------------|--------------|---------------|-------------|---------------|----------------|------------------|----------------|
|             |              | Max.          | Min.        |               |                |                  |                |
| 03          | 03           | .63 (16.0)    | .50 (12.7)  | .875-20 UNEF  | 1.12 (28.5)    | 1.00-20 UNEF     | 1.19 (30.23)   |
| 04          | 04           | .75 (19.1)    | .63 (16.0)  | 1.000-20 UNEF | 1.25 (31.8)    | 1.188-18 UNEF    | 1.38 (35.1)    |
| 05          | 05           | .88 (22.4)    | .75 (18.1)  | 1.125-18 UNEF | 1.43 (36.3)    | 1.438-18 UNEF    | 1.63 (41.4)    |
| 06          | 06           | 1.00 (25.4)   | .88 (22.4)  | 1.250-18 UNEF | 1.62 (41.2)    | 1.750-18 UNS     | 1.94 (49.3)    |
| 08          | 08           | 1.38 (35.1)   | 1.19 (30.2) | 1.625-18 UNEF | 1.81 (46.0)    | 2.00-18 UNS      | 2.19 (55.6)    |
| 10          | 10           | 1.63 (41.4)   | 1.44 (36.6) | 1.875-18 UNS  | 2.18 (55.4)    | 2.250-16 UN      | 2.44 (62.0)    |
| 12          | 12           | 1.88 (47.8)   | 1.63 (41.4) | 2.125-16 UN   | 2.56 (65.0)    | 2.50-16 UN       | 2.69 (68.3)    |
| 16          | 16           | 2.38 (60.5)   | 2.13 (54.1) | 2.750-16 UN   | 3.06 (77.8)    | 3.00-16 UN       | 3.19 (81.0)    |

# 907-003

## Glenair MIL-DTL-28840 Commercial Equivalent

### Box Mount Receptacle

### with PC Tail Contacts

Basic Part  
Number

907-003

Shell Size  
(See Table)

NF

25

Key  
Position

P

1

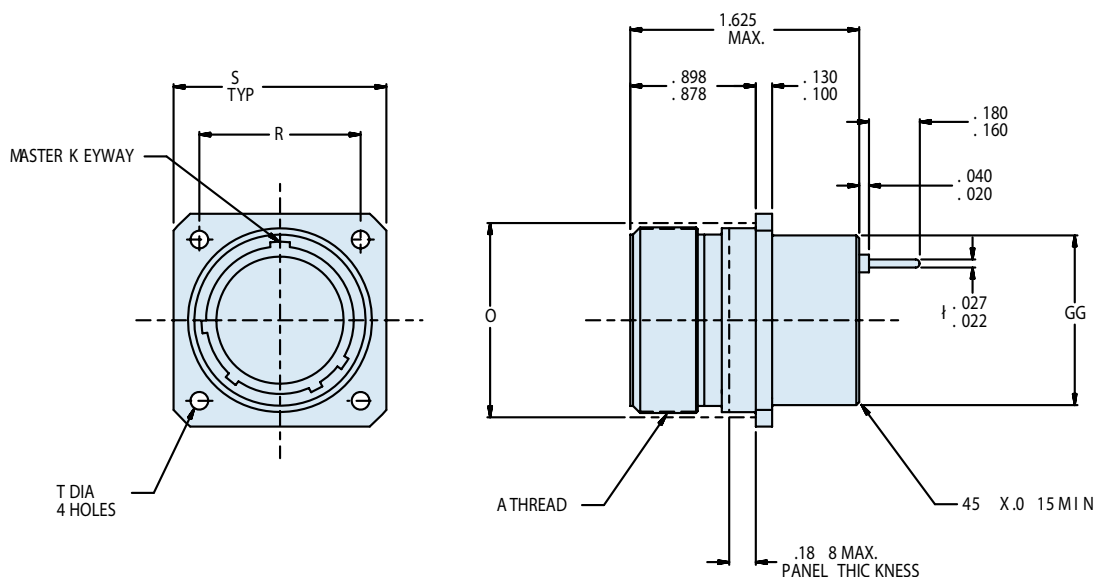
Finish

NF - Olive Drab Cadmium / Nickel

Contact Style

P - Pin Contacts / PC Tail

S - Socket Contacts / PC Tail



**907-003**  
**Glenair MIL-DTL-28840 Commercial Equivalent**  
**Box Mount Receptacle**  
**with PC Tail Contacts**



MIL-DTL-  
28840

**B**

| Symbol | Material                 | Finish Description                   |
|--------|--------------------------|--------------------------------------|
| NF     | Aluminum                 | Cadmium O.D. over Electroless Nickel |
| ZN     |                          | Zinc Nickel                          |
| MT     |                          | Nickel-PTFE, 1000 Hour Grey™         |
| Z1     | 316 Type Stainless Steel | Passivate                            |
| ZU     |                          | Black Cadmium Olive Drab over Nickel |

| Military Shell Size | Shell Size | A Thread Class 2A  | O Ref. Mtg. Max. | R True Position $\varnothing$ to $\varnothing$ | S              | T            | GG Diameter Max. |
|---------------------|------------|--------------------|------------------|------------------------------------------------|----------------|--------------|------------------|
| A                   | 11         | .750-.1P-.2L-D.S.  | .812             | .750                                           | 1.043<br>1.003 | .130<br>.115 | .758             |
| B                   | 13         | .875-.1P-.2L-D.S.  | .937             | .843                                           | 1.158<br>1.118 |              | .880             |
| C                   | 15         | 1.062-.1P-.2L-D.S. | 1.124            | .968                                           | 1.278<br>1.238 |              | 1.005            |
| D                   | 17         | 1.125-.1P-.2L-D.S. | 1.187            | 1.015                                          | 1.403<br>1.363 |              | 1.130            |
| E                   | 19         | 1.312-.1P-.2L-D.S. | 1.374            | 1.140                                          | 1.528<br>1.488 |              | 1.255            |
| F                   | 23         | 1.500-.1P-.2L-D.S. | 1.562            | 1.281                                          | 1.738<br>1.698 |              | 1.443            |
| G                   | 25         | 1.625-.1P-.2L-D.S. | 1.687            | 1.392                                          | 1.838<br>1.798 | .157<br>.142 | 1.567            |
| H                   | 29         | 1.812-.1P-.2L-D.S. | 1.937            | 1.568                                          | 2.158<br>2.118 |              | 1.880            |
| J                   | 33         | 2.000-.1P-.2L-D.S. | 2.124            | 1.734                                          | 2.348<br>2.308 | .183<br>.168 | 2.067            |

# 907-037

## Glenair MIL-DTL-28840 Commercial Equivalent

### Box Mount Receptacle with PC Tail Contacts

Basic Part  
Number

907-037

Shell Size  
(See Table)

NF

Shell Size  
(See Table)

25

Key  
Position

S

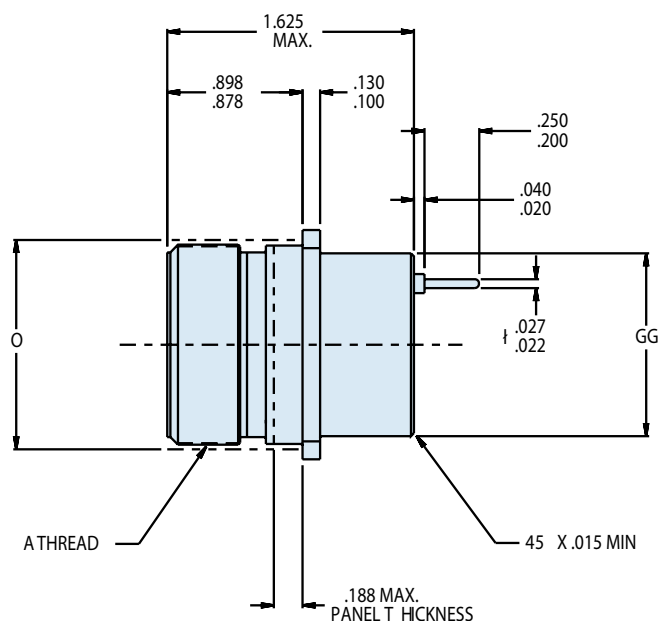
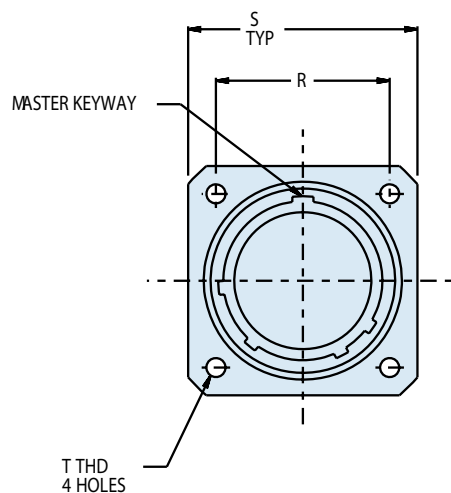
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Finish

NF - Olive Drab Cadmium / Nickel

Contact Style

S - Socket Contacts / PC Tail



**907-037**  
**Glenair MIL-DTL-28840 Commercial Equivalent**  
**Box Mount Receptacle**  
**with PC Tail Contacts**



MIL-DTL-  
28840

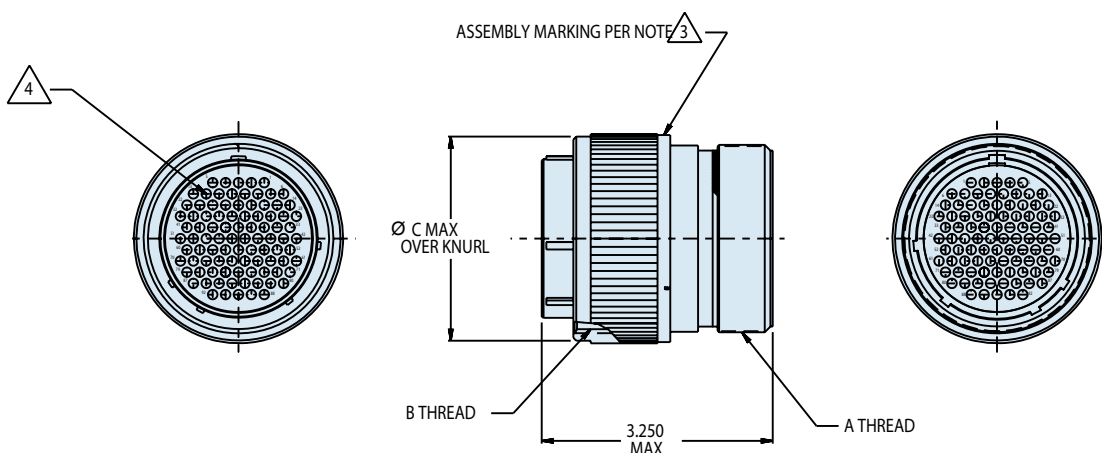
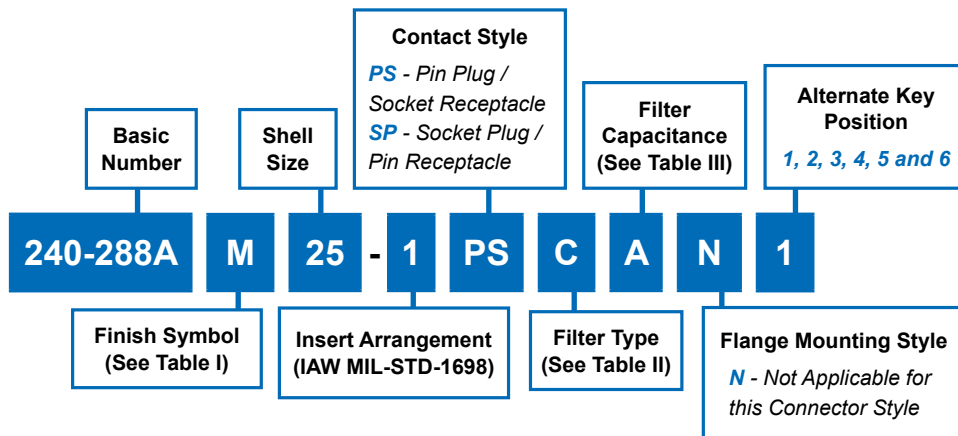
**B**

| Symbol | Material                 | Finish Description                   |
|--------|--------------------------|--------------------------------------|
| NF     | Aluminum                 | Cadmium O.D. over Electroless Nickel |
| ZN     |                          | Zinc Nickel                          |
| MT     |                          | Nickel-PTFE, 1000 Hour Grey™         |
| Z1     | 316 Type Stainless Steel | Passivate                            |
| ZU     |                          | Black Cadmium Olive Drab over Nickel |

| Military Shell Size | Shell Size | A Thread Class 2A   | O Ref. Mtg. Max. | R True Position $\varnothing$ to $\varnothing$ | S              | T     | GG Diameter Max. |
|---------------------|------------|---------------------|------------------|------------------------------------------------|----------------|-------|------------------|
| A                   | 11         | .750-.1P-.2L-D.S.   | .812             | .750                                           | 1.043<br>1.003 | #4-40 | .758             |
| B                   | 13         | .875 -.1P-.2L-D.S.  | .937             | .843                                           | 1.158<br>1.118 | #4-40 | .880             |
| C                   | 15         | 1.062 -.1P-.2L-D.S. | 1.124            | .968                                           | 1.278<br>1.238 | #4-40 | 1.005            |
| D                   | 17         | 1.125 -.1P-.2L-D.S. | 1.187            | 1.015                                          | 1.403<br>1.363 | #4-40 | 1.130            |
| E                   | 19         | 1.312 -.1P-.2L-D.S. | 1.374            | 1.140                                          | 1.528<br>1.488 | #4-40 | 1.255            |
| F                   | 23         | 1.500 -.1P-.2L-D.S. | 1.562            | 1.281                                          | 1.738<br>1.698 | #4-40 | 1.443            |
| G                   | 25         | 1.625 -.1P-.2L-D.S. | 1.687            | 1.392                                          | 1.838<br>1.798 | #6-32 | 1.567            |
| H                   | 29         | 1.812 -.1P-.2L-D.S. | 1.937            | 1.568                                          | 2.158<br>2.118 | #6-32 | 1.880            |
| J                   | 33         | 2.000 -.1P-.2L-D.S. | 2.124            | 1.734                                          | 2.348<br>2.308 | #6-32 | 2.067            |

# 240-288A

## Sav-Con® Filtered Connector Saver for MIL-DTL-28840 Connectors



| Military Shell Size | Shell Size | A Thread Class 2A  | B Thread Class 2B  | Ø C Max |
|---------------------|------------|--------------------|--------------------|---------|
| A                   | 11         | .750-.1P-.2L-D.S.  | .750-.1P-.2L-D.S.  | 1.028   |
| B                   | 13         | .875-.1P-.2L-D.S.  | .875-.1P-.2L-D.S.  | 1.141   |
| C                   | 15         | 1.062-.1P-.2L-D.S. | 1.062-.1P-.2L-D.S. | 1.263   |
| D                   | 17         | 1.125-.1P-.2L-D.S. | 1.125-.1P-.2L-D.S. | 1.387   |
| E                   | 19         | 1.312-.1P-.2L-D.S. | 1.312-.1P-.2L-D.S. | 1.513   |
| F                   | 23         | 1.500-.1P-.2L-D.S. | 1.500-.1P-.2L-D.S. | 1.703   |
| G                   | 25         | 1.625-.1P-.2L-D.S. | 1.625-.1P-.2L-D.S. | 1.825   |
| H                   | 29         | 1.812-.1P-.2L-D.S. | 1.812-.1P-.2L-D.S. | 2.143   |
| J                   | 33         | 2.000-.1P-.2L-D.S. | 2.000-.1P-.2L-D.S. | 2.329   |

**240-288A**  
**Sav-Con® Filtered Connector Saver**  
 for MIL-DTL-28840 Connectors



MIL-DTL-  
28840

**B**

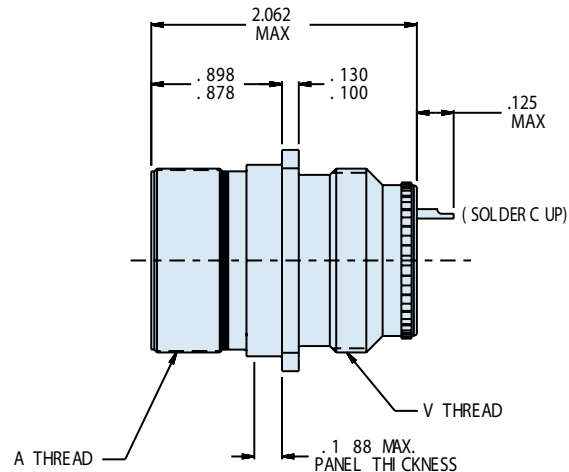
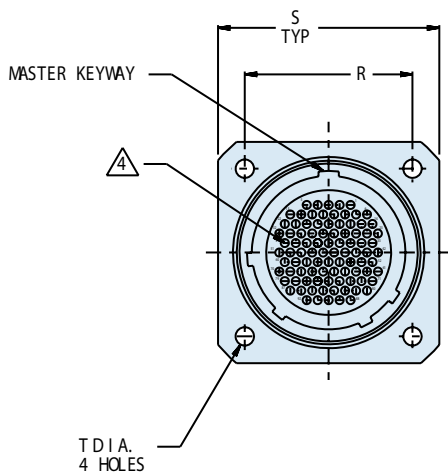
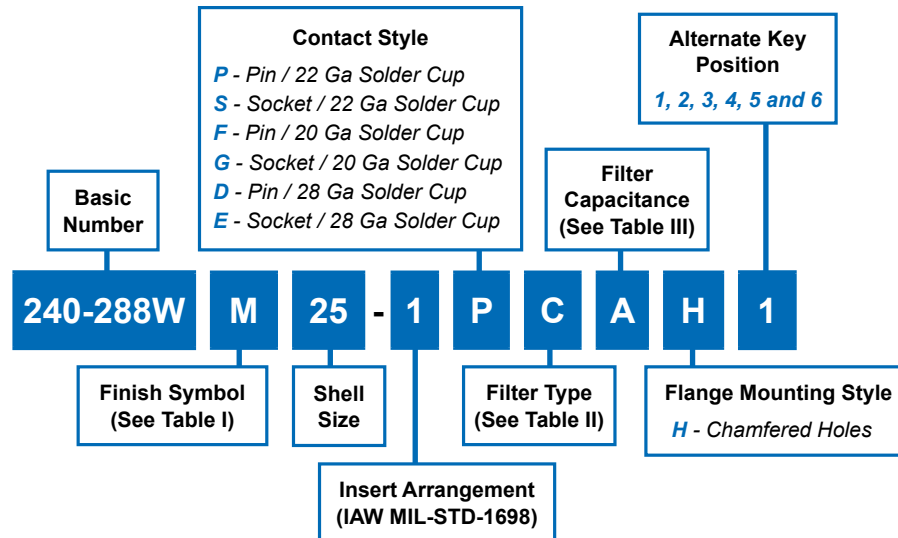
| Symbol | Material        | Finish Description                   |
|--------|-----------------|--------------------------------------|
| M      | Aluminum        | Electroless Nickel                   |
| MT     | Aluminum        | Nickel-PTFE, 1000 Hour Grey™         |
| NF     | Aluminum        | Cadmium O.D. over Electroless Nickel |
| P      | Stainless Steel | Electrodeposited Nickel              |

| Filter Type |            |
|-------------|------------|
| P           | PI-Section |
| C           | C-Section  |

| Class | PI-Section (pF)   | C-Section (pF)   |
|-------|-------------------|------------------|
| X     | 160,000 - 240,000 | 80,000 - 120,000 |
| Y     | 80,000 - 120,000  | 40,000 - 60,000  |
| Z     | 60,00 - 91,000    | 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        |

# 240-288W Filtered Wall Mount Receptacle MIL-DTL-28840 Type

B



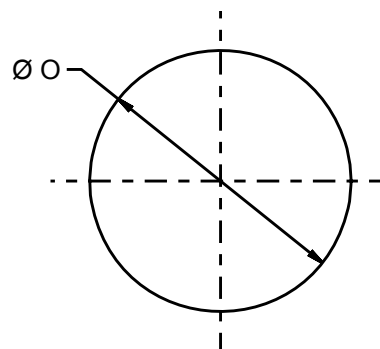
| Symbol | Material        | Finish Description                   |
|--------|-----------------|--------------------------------------|
| M      | Aluminum        | Electroless Nickel                   |
| MT     | Aluminum        | Nickel-PTFE, 1000 Hour Grey™         |
| NF     | Aluminum        | Cadmium O.D. over Electroless Nickel |
| P      | Stainless Steel | Electrodeposited Nickel              |

**240-288W**  
**Filtered Wall Mount Receptacle**  
**MIL-DTL-28840 Type**



MIL-DTL-  
28840

| Class | PI-Section (pF)   | C-Section (pF)   |
|-------|-------------------|------------------|
| X     | 160,000 - 240,000 | 80,000 - 120,000 |
| Y     | 80,000 - 120,000  | 40,000 - 60,000  |
| Z     | 60,00 - 91,000    | 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        |



RECOMMENDED PANEL CUT OUT

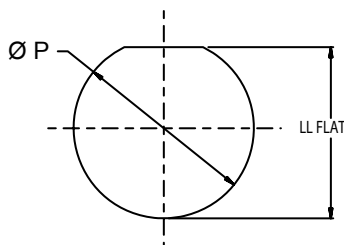
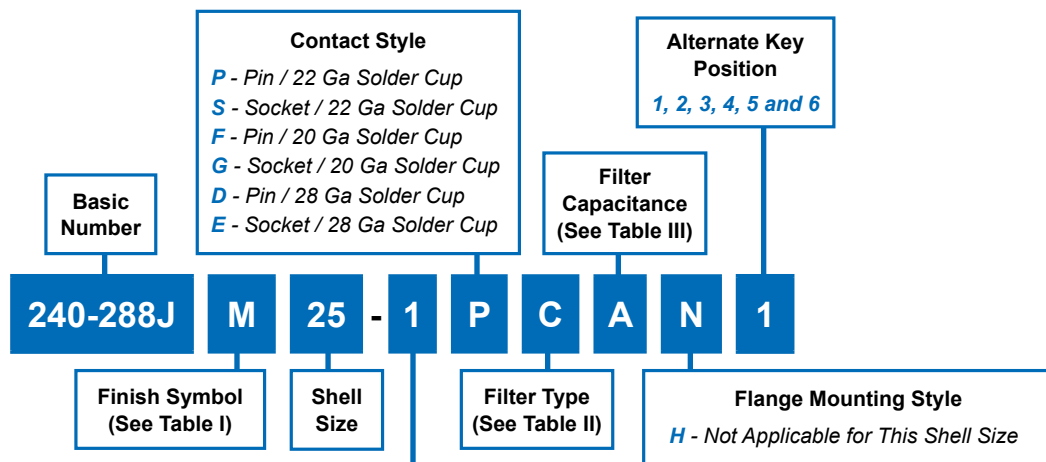
| Filter Type |            |
|-------------|------------|
| P           | PI-Section |
| C           | C-Section  |

**B**

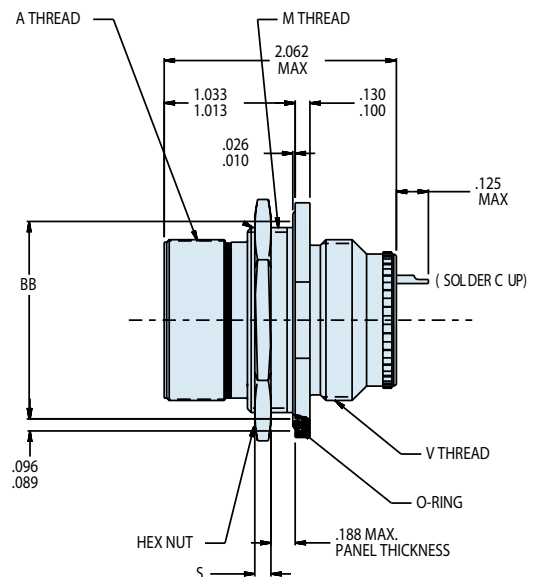
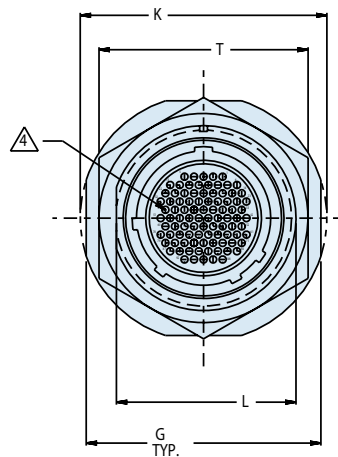
| Military Shell Size | Shell Size | A Thread Class 2A  | V Thread Class 2A | O Ref. Mtg. Hole | R True Position $\varnothing$ to $\varnothing$ | S              | T Diameter   |
|---------------------|------------|--------------------|-------------------|------------------|------------------------------------------------|----------------|--------------|
| A                   | 11         | .750-.1P-.2L-D.S.  | .750-20 UNEF      | .812             | .750                                           | 1.043<br>1.003 | .130<br>.115 |
| B                   | 13         | .875-.1P-.2L-D.S.  | .875-20 UNEF      | .937             | .843                                           | 1.158<br>1.118 |              |
| C                   | 15         | 1.062-.1P-.2L-D.S. | 1.000-20 UNEF     | 1.124            | .968                                           | 1.278<br>1.238 |              |
| D                   | 17         | 1.125-.1P-.2L-D.S. | 1.125-18 UNEF     | 1.187            | 1.015                                          | 1.403<br>1.363 |              |
| E                   | 19         | 1.312-.1P-.2L-D.S. | 1.250-18 UNEF     | 1.374            | 1.140                                          | 1.528<br>1.488 |              |
| F                   | 23         | 1.500-.1P-.2L-D.S. | 1.437-18 UNEF     | 1.562            | 1.281                                          | 1.738<br>1.698 |              |
| G                   | 25         | 1.625-.1P-.2L-D.S. | 1.562-18 UNEF     | 1.687            | 1.392                                          | 1.838<br>1.798 | .157<br>.142 |
| H                   | 29         | 1.812-.1P-.2L-D.S. | 1.875-16 UN       | 1.874            | 1.568                                          | 2.158<br>2.118 |              |
| J                   | 33         | 2.000-.1P-.2L-D.S. | 2.062-16 UNS      | 2.062            | 1.734                                          | 2.348<br>2.308 | .183<br>.168 |

# 240-288J Filtered Jam Nut Mount Receptacle MIL-DTL-28840 Type

B



| Filter Type |            |
|-------------|------------|
| P           | PI-Section |
| C           | C-Section  |



| Class | PI-Section (pF)   | C-Section (pF)   |
|-------|-------------------|------------------|
| X     | 160,000 - 240,000 | 80,000 - 120,000 |
| Y     | 80,000 - 120,000  | 40,000 - 60,000  |
| Z     | 60,000 - 91,000   | 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        |

| Symbol | Material        | Finish Description                   |
|--------|-----------------|--------------------------------------|
| M      | Aluminum        | Electroless Nickel                   |
| MT     | Aluminum        | Nickel-PTFE, 1000 Hour Grey™         |
| NF     | Aluminum        | Cadmium O.D. over Electroless Nickel |
| P      | Stainless Steel | Electrodeposited Nickel              |

**240-288J**  
**Filtered Jam Nut Mount Receptacle**  
**MIL-DTL-28840 Type**



MIL-DTL-  
28840

**B**

| Military Shell Size | Shell Size | A Thread Class 2A  | G              | K Dia.         | L Across Flat  | M Thread Class 2A |
|---------------------|------------|--------------------|----------------|----------------|----------------|-------------------|
| A                   | 11         | .750-.1P-.2L-D.S.  | 1.274<br>1.254 | 1.368<br>1.348 | .841<br>.832   | .875-20 UNEF      |
| B                   | 13         | .875-.1P-.2L-D.S.  | 1.399<br>1.379 | 1.508<br>1.488 | .966<br>.957   | 1.000-20 UNEF     |
| C                   | 15         | 1.062-.1P-.2L-D.S. | 1.587<br>1.567 | 1.681<br>1.661 | 1.153<br>1.144 | 1.187-18 UNEF     |
| D                   | 17         | 1.125-.1P-.2L-D.S. | 1.649<br>1.629 | 1.743<br>1.723 | 1.216<br>1.207 | 1.250-18 UNEF     |
| E                   | 19         | 1.312-.1P-.2L-D.S. | 1.837<br>1.817 | 1.931<br>1.911 | 1.403<br>1.394 | 1.437-18 UNEF     |
| F                   | 23         | 1.500-.1P-.2L-D.S. | 2.024<br>2.004 | 2.118<br>2.098 | 1.591<br>1.582 | 1.625-18 UNEF     |
| G                   | 25         | 1.625-.1P-.2L-D.S. | 2.149<br>2.129 | 2.243<br>2.223 | 1.716<br>1.707 | 1.750-18 UNS      |
| H                   | 29         | 1.812-.1P-.2L-D.S. | 2.337<br>2.317 | 2.435<br>2.415 | 1.903<br>1.894 | 1.937-16 UN       |
| J                   | 33         | 2.000-.1P-.2L-D.S. | 2.524<br>2.504 | 2.618<br>2.598 | 2.091<br>2.082 | 2.125-16 UN       |

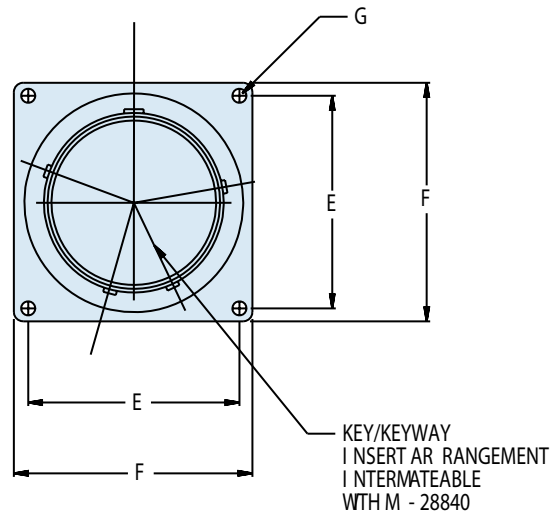
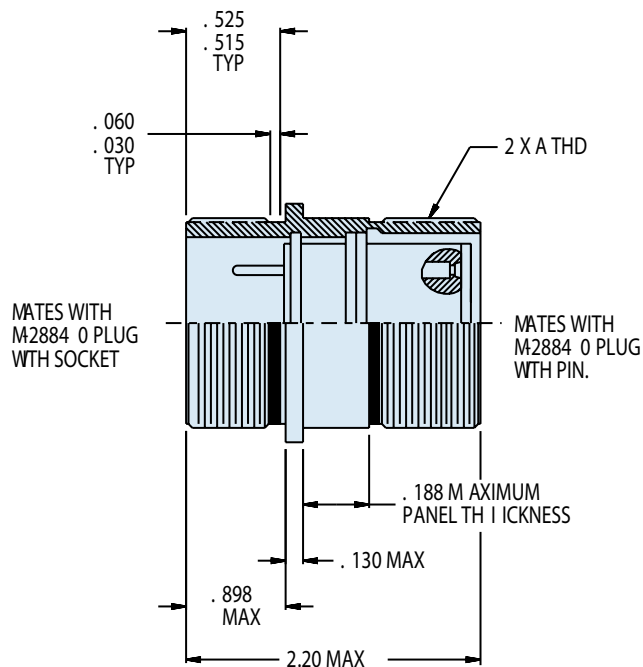
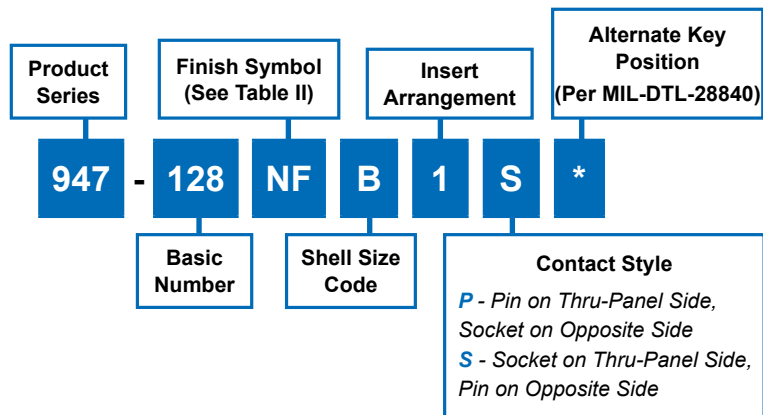
| Military Shell Size | Shell Size | V Thread Class 2A | BB Dia.        | S Nominal | T ± .017 | P Dia.         | LL Flat        |
|---------------------|------------|-------------------|----------------|-----------|----------|----------------|----------------|
| A                   | 11         | .750-20 UNEF      | .979<br>.969   | .125      | 1.062    | .890<br>.880   | .853<br>.843   |
| B                   | 13         | .875-20 UNEF      | 1.104<br>1.094 |           | 1.188    | 1.015<br>1.005 | .978<br>.968   |
| C                   | 15         | 1.000-20 UNEF     | 1.292<br>1.282 |           | 1.375    | 1.203<br>1.193 | 1.165<br>1.155 |
| D                   | 17         | 1.125-18 UNEF     | 1.354<br>1.344 |           | 1.438    | 1.265<br>1.255 | 1.228<br>1.218 |
| E                   | 19         | 1.250-18 UNEF     | 1.542<br>1.532 |           | 1.625    | 1.453<br>1.443 | 1.415<br>1.405 |
| F                   | 23         | 1.437-18 UNEF     | 1.729<br>1.719 |           | 1.812    | 1.640<br>1.630 | 1.603<br>1.593 |
| G                   | 25         | 1.562-18 UNEF     | 1.854<br>1.844 | .189      | 2.000    | 1.765<br>1.755 | 1.728<br>1.718 |
| H                   | 29         | 1.875-16 UN       | 2.042<br>2.032 |           | 2.188    | 1.953<br>1.943 | 1.915<br>1.905 |
| J                   | 33         | 2.062-16 UNS      | 2.229<br>2.219 |           | 2.375    | 2.140<br>2.130 | 1.103<br>2.093 |

# 947-128

## Bulkhead Feedthrough Receptacle

### Wall Mount

### MIL-DTL-28840 Type



**947-128**  
**Bulkhead Feedthrough Receptacle**  
**Wall Mount**  
**MIL-DTL-28840 Type**



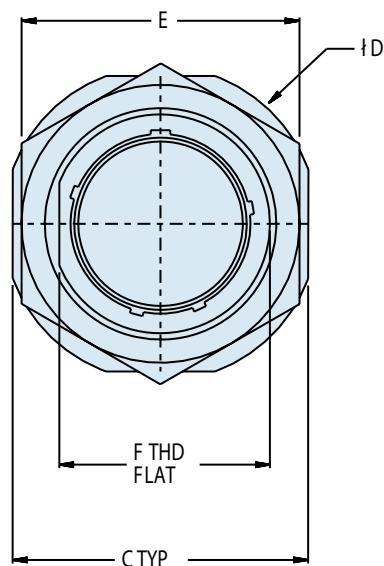
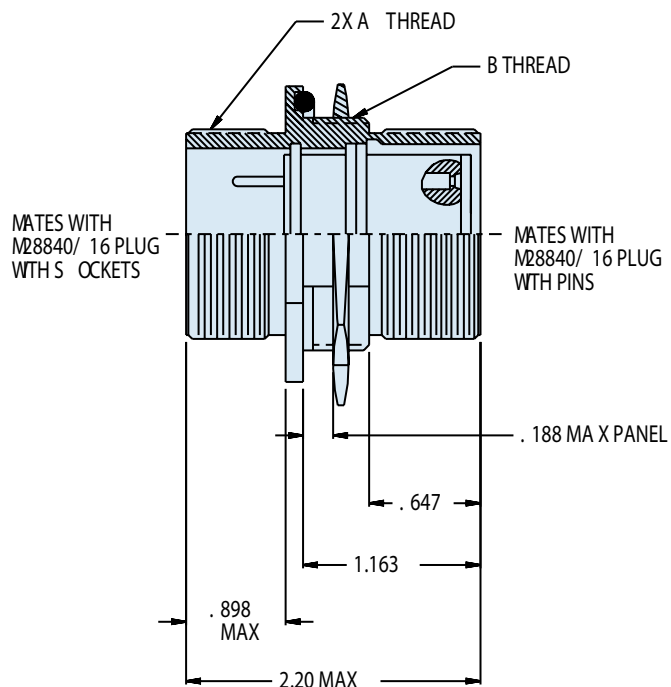
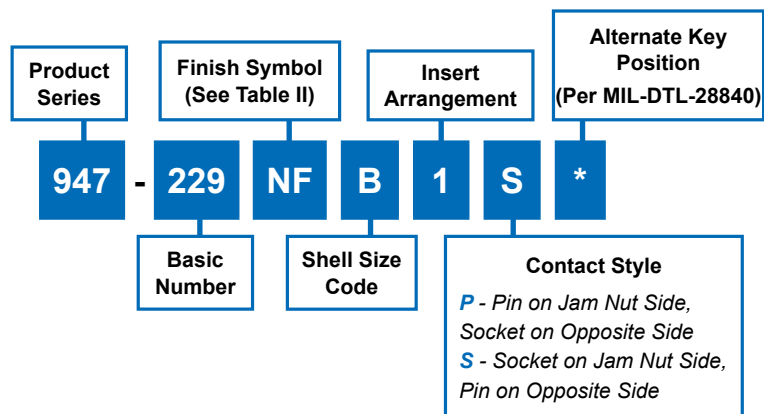
MIL-DTL-  
28840

**B**

| Symbol | Material                 | Finish Description                   |
|--------|--------------------------|--------------------------------------|
| NF     | Aluminum                 | Cadmium O.D. over Electroless Nickel |
| ZN     |                          | Zinc Nickel                          |
| MT     |                          | Nickel-PTFE, 1000 Hour Grey™         |
| Z1     | 316 Type Stainless Steel | Passivate                            |
| ZU     |                          | Black Cadmium Olive Drab over Nickel |

| Military Shell Size | Shell Size | Insert Arrangement Dash Number | A Thread Class 2A  | E BSC | F Max. | G Dia. Max. |
|---------------------|------------|--------------------------------|--------------------|-------|--------|-------------|
| A                   | 11         | A-1                            | .750-.1P-.2L-D.S.  | .750  | 1.039  | .130        |
| B                   | 13         | B-1                            | .875-.1P-.2L-D.S.  | .843  | 1.154  |             |
| C                   | 15         | C-1                            | 1.062-.1P-.2L-D.S. | .968  | 1.274  |             |
| D                   | 17         | D-1                            | 1.125-.1P-.2L-D.S. | 1.015 | 1.399  |             |
| E                   | 19         | E-1                            | 1.312-.1P-.2L-D.S. | 1.140 | 1.524  |             |
| F                   | 23         | F-1                            | 1.500-.1P-.2L-D.S. | 1.281 | 1.734  |             |
| G                   | 25         | G-1                            | 1.625-.1P-.2L-D.S. | 1.392 | 1.834  | .157        |
| H                   | 29         | H-1                            | 1.812-.1P-.2L-D.S. | 1.568 | 2.154  |             |
| J                   | 33         | J-1                            | 2.000-.1P-.2L-D.S. | 1.734 | 2.344  | .183        |

B



**947-229**  
**Bulkhead Feedthrough Receptacle**  
**Jam Nut Mount**  
**MIL-DTL-28840 Type**



MIL-DTL-  
28840

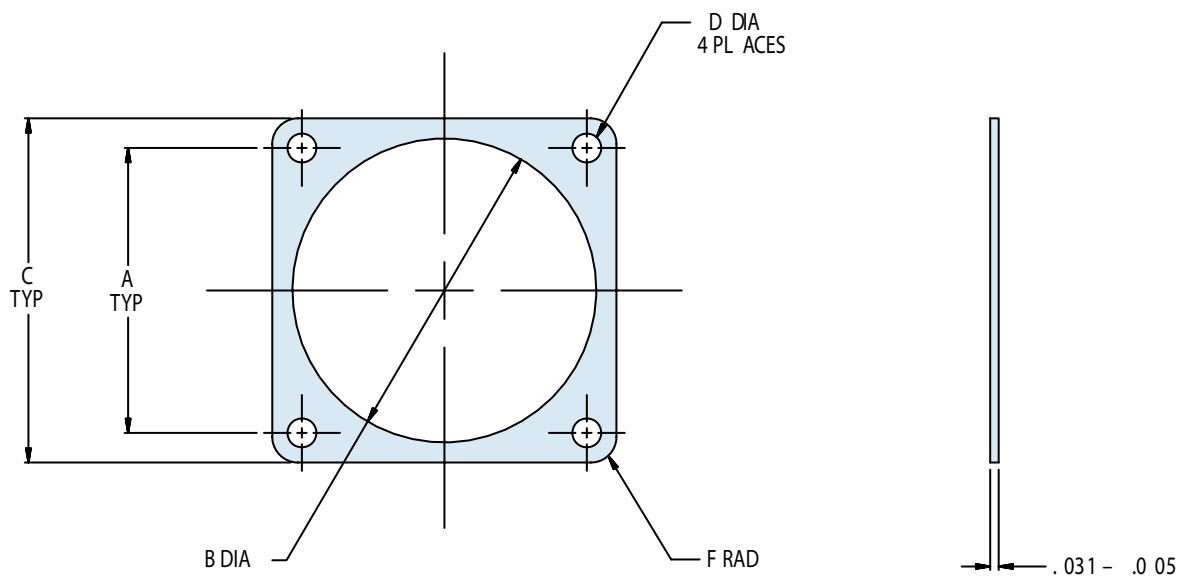
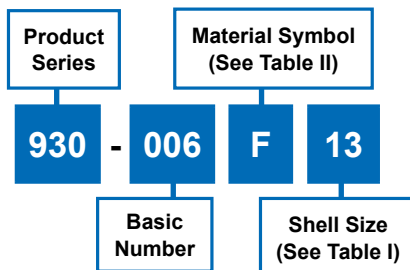
**B**

| Symbol | Material                 | Finish Description                   |
|--------|--------------------------|--------------------------------------|
| NF     | Aluminum                 | Cadmium O.D. over Electroless Nickel |
| ZN     |                          | Zinc Nickel                          |
| MT     |                          | Nickel-PTFE, 1000 Hour Grey™         |
| Z1     | 316 Type Stainless Steel | Passivate                            |
| ZU     |                          | Black Cadmium Olive Drab over Nickel |

| Military Shell Size | Shell Size | Insert Arrangement Dash Number | A Thread Class 2A  | B Thread Class 2A | C Flats | D Dia. | E Hex | F Thread Flat |
|---------------------|------------|--------------------------------|--------------------|-------------------|---------|--------|-------|---------------|
| A                   | 11         | A-1                            | .750-.1P-.2L-D.S.  | .875-20 UNEF      | 1.264   | 1.358  | 1.062 | .836          |
| B                   | 13         | B-1                            | .875-.1P-.2L-D.S.  | 1.000-20 UNEF     | 1.389   | 1.498  | 1.188 | .962          |
| C                   | 15         | C-1                            | 1.062-.1P-.2L-D.S. | 1.187-18 UNEF     | 1.577   | 1.671  | 1.375 | 1.149         |
| D                   | 17         | D-1                            | 1.125-.1P-.2L-D.S. | 1.250-18 UNEF     | 1.639   | 1.733  | 1.438 | 1.212         |
| E                   | 19         | E-1                            | 1.312-.1P-.2L-D.S. | 1.437-18 UNEF     | 1.827   | 1.921  | 1.625 | 1.399         |
| F                   | 23         | F-1                            | 1.500-.1P-.2L-D.S. | 1.625-18 UNF      | 2.014   | 2.108  | 1.812 | 1.587         |
| G                   | 25         | G-1                            | 1.625-.1P-.2L-D.S. | 1.750-18 UNS      | 2.139   | 2.233  | 2.000 | 1.708         |
| H                   | 29         | H-1                            | 1.812-.1P-.2L-D.S. | 1.937-16 UN       | 2.327   | 2.425  | 2.188 | 1.898         |
| J                   | 33         | J-1                            | 2.000-.1P-.2L-D.S. | 2.125-16 UN       | 2.514   | 2.608  | 2.375 | 2.086         |

# 930-006

## Wall Mount Receptacle Mounting Gasket for MIL-DTL-28840 Connectors



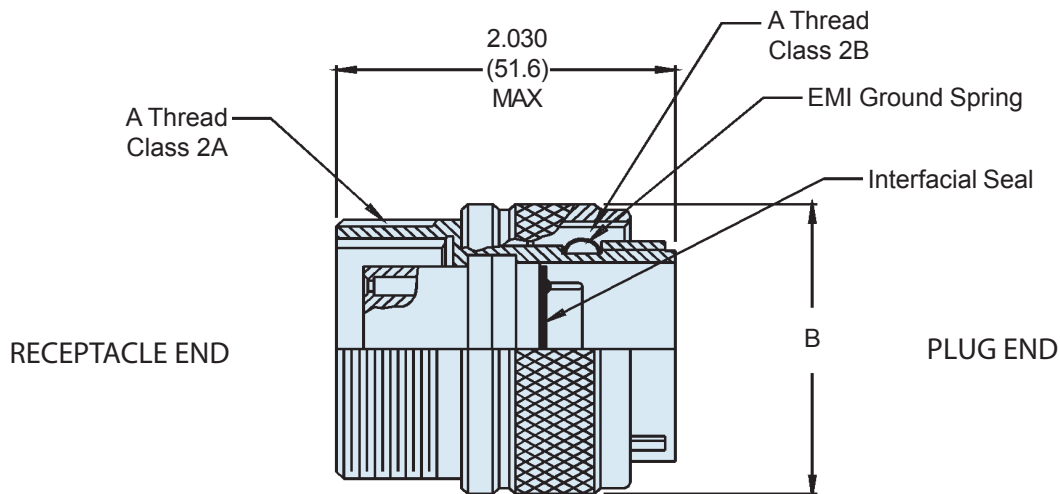
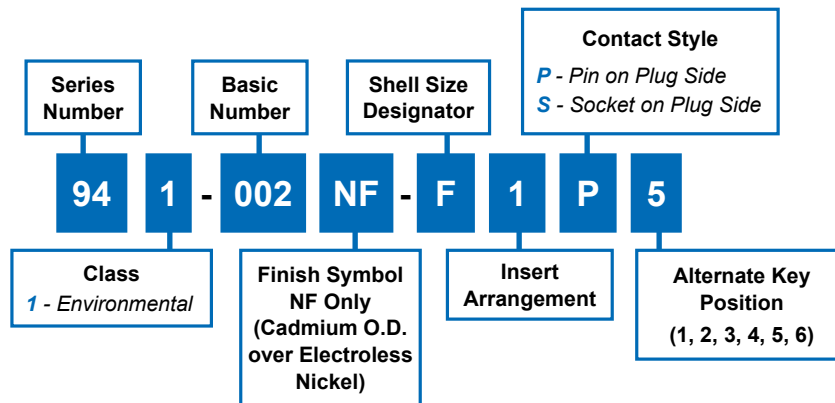
| Symbol | Material Description                |
|--------|-------------------------------------|
| F      | Fluorosilicone                      |
| M      | Silver Plated Glass Filled Silicone |
| N      | Neoprene                            |

| Shell Size | A<br>± .010 | B Dia.<br>+.016<br>-.000 | C<br>.016<br>-.000 | D Dia.<br>± .010 | F Radius<br>± .010 |
|------------|-------------|--------------------------|--------------------|------------------|--------------------|
| 11         | .750        | .750                     | 1.023              | .120             | .141               |
| 13         | .843        | .875                     | 1.138              |                  |                    |
| 15         | .968        | 1.062                    | 1.258              |                  |                    |
| 17         | 1.015       | 1.125                    | 1.383              |                  | .156               |
| 19         | 1.140       | 1.312                    | 1.508              |                  | .172               |
| 23         | 1.281       | 1.500                    | 1.718              | .147             | .188               |
| 25         | 1.392       | 1.625                    | 1.818              |                  | .219               |
| 29         | 1.568       | 1.875                    | 2.138              |                  |                    |
| 33         | 1.734       | 2.062                    | 2.328              |                  |                    |

**941-002**  
**Sav-Con® Environmental Connector Saver**  
 for MIL-DTL-28840 Connectors



MIL-DTL-  
28840

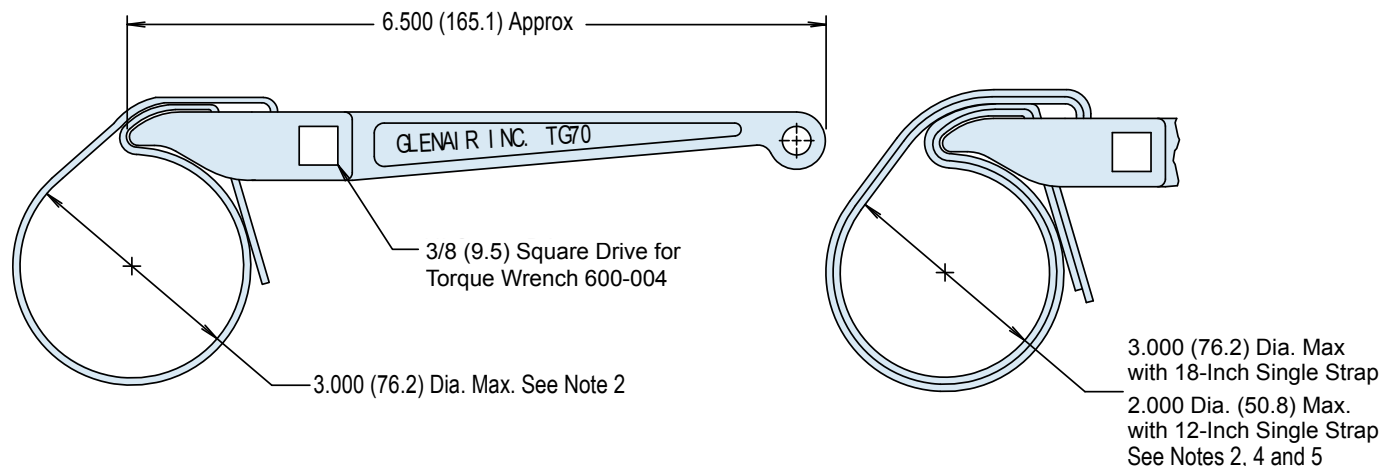


| Insert Arrangement Dash Number | Shell Size | A Thread Class 2*  | B Max        | Contact Size 20 Quantity |
|--------------------------------|------------|--------------------|--------------|--------------------------|
| A-1                            | 11         | .750-.1P-.2L-D.S.  | 1.028 (26.1)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

# TG70

## Strap Wrench Assembly Tool

for Use with MIL-DTL-28840 Connectors



Basic  
Part  
Number

Torque Wrench  
(Omit for None)

**TG70 - 1 - 18**

### Strap Length in Inches (See Notes 2 and 4)

Lengths Available: 12, 18, 24 and 36-Inch Only  
Standard length is 12 Inches,  
Omit Dash Number for Standard

### APPLICATION NOTES

- These wrenches are made of the following materials:  
Wrench Handle - Aluminum Alloy/Nickel Plate.  
Wedge - Stainless Steel/Passivated.  
Strap - Impregnated Fabric. Straps are 1/2 inch (12.7) in width.
- Replacement straps are available. Specify part number G70515-xx for 12, 18, 24 or 36-inch strap. 24 and 36 inch for double wrap.
- Metric dimensions (mm) are indicated in parentheses.
- Double wrap as shown for heavy duty range.
- Not recommended for composite coupling nuts (use 600-091 or 600-157).

### VARIANCE CHART

#### TG-70 Strap Wrench Used with Glenair Torque Wrenches

##### Recommended Installation Torque

| Accessory<br>Shell Size | Light/Medium Duty<br>± 5 Inch Pounds |             | Heavy Duty<br>± 5 Inch Pounds |             |
|-------------------------|--------------------------------------|-------------|-------------------------------|-------------|
|                         | TG70 Torque                          | Part Torque | TG70 Torque                   | Part Torque |
| 08/09                   | 28                                   | 35          | 45                            | 60          |
| 10/11                   | 28                                   | 35          | 70                            | 80          |
| 12/13                   | 30                                   | 40          | 75                            | 110 [80]    |
| 14/15                   | 30                                   | 40          | 75                            | 120 [80]    |
| 16/17                   | 30                                   | 40          | 75                            | 120 [80]    |
| 18/19                   | 30                                   | 40          | 75                            | 120 [80]    |
| 20/21                   | 75                                   | 80          | 95                            | 140 [100]   |
| 22/23                   | 75                                   | 80          | 120*                          | 140         |
| 24/25                   | 75                                   | 80          | 120*                          | 140         |
| 28                      |                                      |             | 135*                          | 150         |
| 32                      |                                      |             | 150*                          | 150         |
| 36                      |                                      |             | 150*                          | 150         |

\* TG70 Not Recommended For Values of 120 Inch Lbs. or Greater.

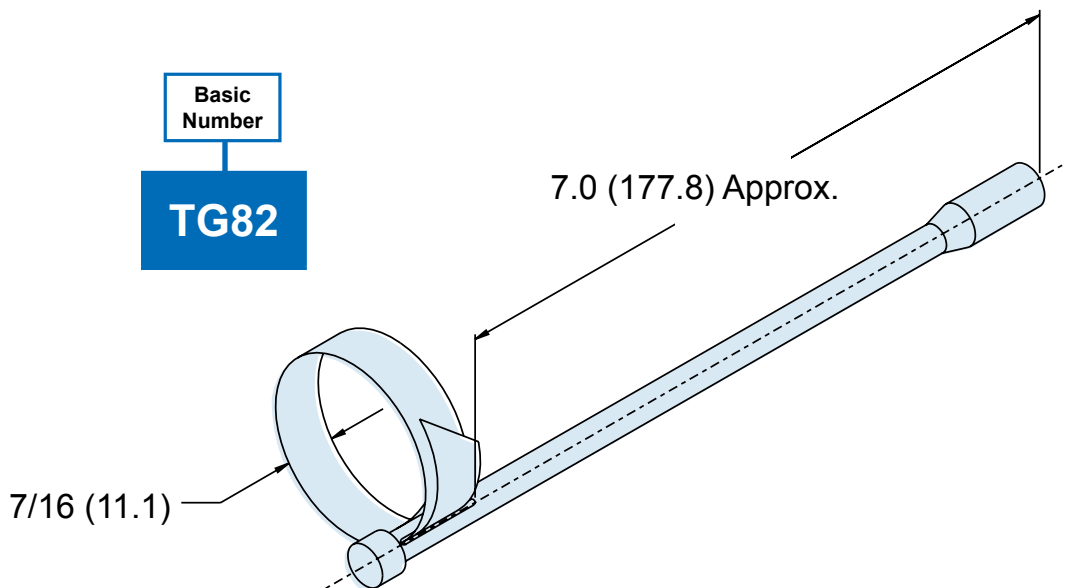
### VARIANCE CHART NOTES

- Recommended installation torque is approximately 80% of MIL-C-85049 accessory thread strength values.
- Heavy duty installation torque values may be difficult to attain with the TG70 Strap Wrench; the values shown in brackets [ ] are the maximum attainable with the TG70 Strap Wrench using a single wrap.
- Glenair recommends using 600 series torque tools whenever possible. When torque loading exceeds 75 inch pounds, or to attain the heavy duty torque values shown, a double wrap strap provides suitable friction to achieve torque values.
- Glenair recommends that heavy duty torque values be directly read through the connector shell body with the use of 600-005 connectors holding tools.

**TG69 and TG82**  
**Soft Jaw Pliers and Strap Wrench Assembly Tool**  
for Use with MIL-DTL-28840 Connectors

**Glenair**®

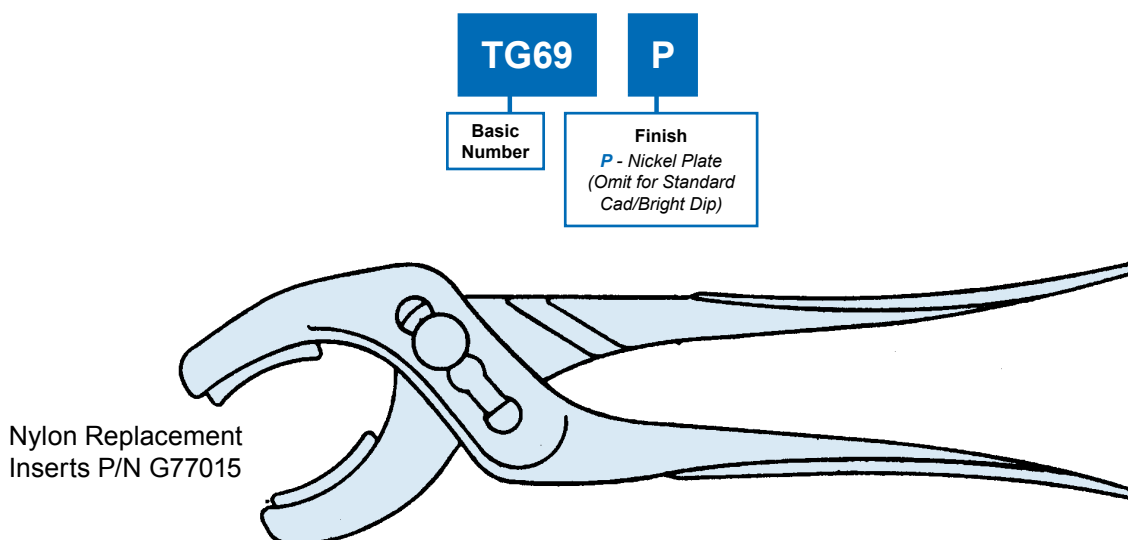
MIL-DTL-  
28840



**B**

**APPLICATION NOTES**

1. Metric dimensions (mm) are in parentheses and are for reference only.
2. 2.50 (63.5) Max Capacity; Not recommended for composite coupling nuts (use 600-091 or 600-157)
3. 1/4 Inch Drive
4. The replacement strap part number is G62748-11. Consult Factory for other lengths.



**SERIES 18**

# FIBER OPTICS

## **Mission-Critical Interconnect Systems for Commercial and Military Applications**



From our MIL-PRF-28876 type fiber optic connectors to our MIL-DTL-38999 type solutions, Glenair produces advanced performance fiber optic interconnection systems for every military and commercial standard. Fiber optic connectors, termini and cabling offer reduced weight, reduced size, huge bandwidth and EMI immunity— and Glenair manufactures a solution for every branch of the military and every mission-critical commercial application. For complete order information please see our fiber optic catalog or visit our website at [www.glenair.com](http://www.glenair.com)



# MIL-PRF-28876 Type Fiber Optic Connection System Introduction



MIL-PRF-  
28876



## PRODUCT FEATURES

- Designed to Meet the General Requirements of MIL-PRF-28876
- Plugs, Wall-Mount Receptacles, and Jam-Nut Mount Receptacles Available
- Multiple Shell Sizes and Insert Arrangements, Including 2, 4, 6, 8, 18 and 31 Channel Configurations
- Various Materials and Finishes Available
- Singlemode and Multimode Capable
- Corrosion-Resistant
- Environmentally Sealed
- Same Day Availability

C

## Glenair MIL-PRF-28876 Type Connectors are the Standard Fiber Optic Interconnect for Shipboard Use—from Sea to Shining Sea

### The Glenair MIL-PRF-28876 Type Fiber Optic Connector

The use of fiber optics in shipboard and ship-to-shore data transmissions is growing rapidly, and the tight-tolerance MIL-PRF-28876 type interconnect has become the universal standard for Navy shipboard applications. Glenair's offering delivers all the necessary performance—from precise optical alignment, to environmental protection, corrosion resistance and weight reduction. The Glenair MIL-PRF-28876 type connector is specifically geared for upgrade and retrofit applications where extending system life-cycles and reducing cost of ownership are principle requirements. This connector uses MIL-PRF-29504/14 and /15 style contacts, also available from Glenair. For more information, or for product samples, please consult the factory or visit us at [www.glenair.com](http://www.glenair.com).

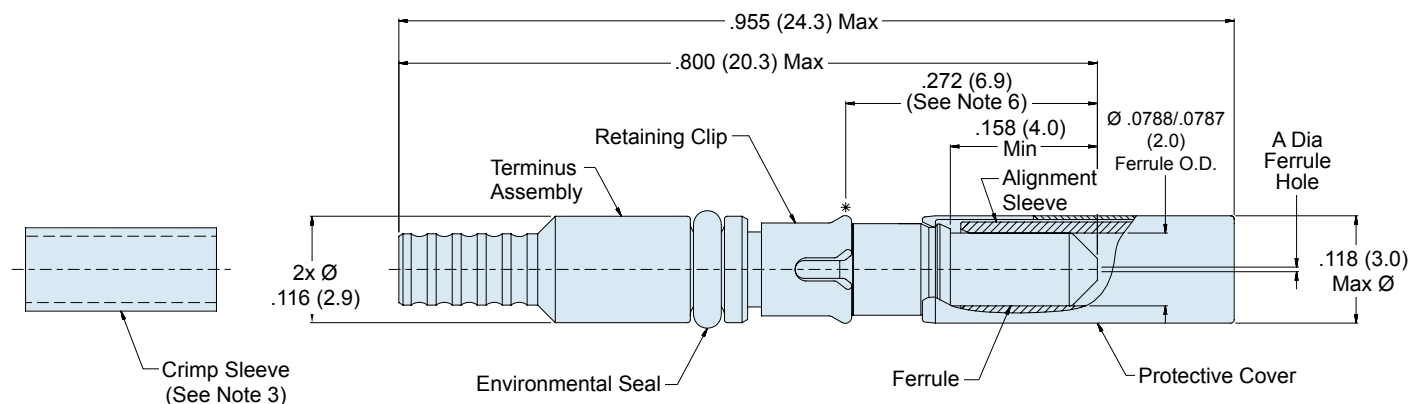
# 181-040

## M29504/15 Type Front Release Socket Terminus

### Size 16

Product Series and  
Basic Number**181-040**Dash  
Number  
(Table I)**- 1260**Crimp Sleeve  
*Omit if None  
(Table II)***C**
**TABLE II:  
CRIMP SLEEVE  
DESIGNATOR**

| Designator | Cable Diameter           | Part Number |
|------------|--------------------------|-------------|
| C          | 2.0-2.4 mm<br>(MIL-Spec) | 265-008     |


**TABLE I: DASH NUMBER**

| Assembly Dash Number | A Dia (Microns) | Typical Fiber Type | MIL-SPEC Type  |
|----------------------|-----------------|--------------------|----------------|
| -1255                | 125.5           | Single Mode        | N/A            |
| -1260                | 126.0           | Single Mode        | N/A            |
|                      |                 | Multi Mode         | M29504/15-4171 |
| -1270                | 127.0           | Multi Mode         | M29504/15-4172 |
| -1420                | 142.0           | Multi Mode         | M29504/15-4175 |

Consult Factory for Additional Sizes

**TABLE III: TERMINUS  
ACCESSORIES**

| Part Number | Accessory                                           |
|-------------|-----------------------------------------------------|
| 265-010     | Alignment Sleeve Assembly                           |
| 182-012     | Crimp Tool                                          |
| 182-013     | Insertion Tool, Straight                            |
| 182-014     | Insertion Tool, 90°                                 |
| 182-015     | Removal Tool                                        |
| 182-016     | Alignment Sleeve Assembly<br>Insertion/Removal Tool |
| 182-035     | Hand Polishing Tool                                 |

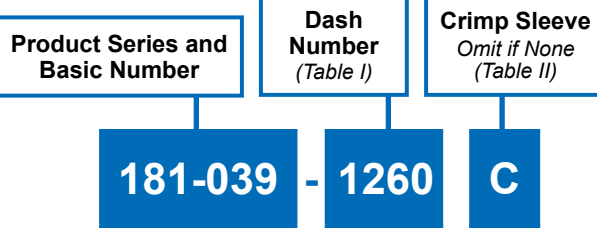
### APPLICATION NOTES

- Assembly packaged in plastic bag and tag identified with manufacturer's name and part number
- Material/ Finish:  
Alignment Sleeve, Ferrule: Zirconia Ceramic/ N.A.  
Protective cover: Spring Alloy / Nickel  
Terminus Assembly: Stainless Steel / Passivate  
Retaining Clip: Spring Alloy / N.A.  
Seal: Fluorosilicone  
Crimp Sleeve: Brass Alloy / Nickel
- Alignment Sleeve Assembly and Crimp Sleeve may be ordered separately (Tables II and III)
- Metric dimensions (mm) are in parentheses.
- Dummy Terminus: Part Number 181-051
- Dimension to be measured when installed into insert equivalent fixture per MIL-PRF-29504/15
- For use with MIL-PRF-28876 type connectors.

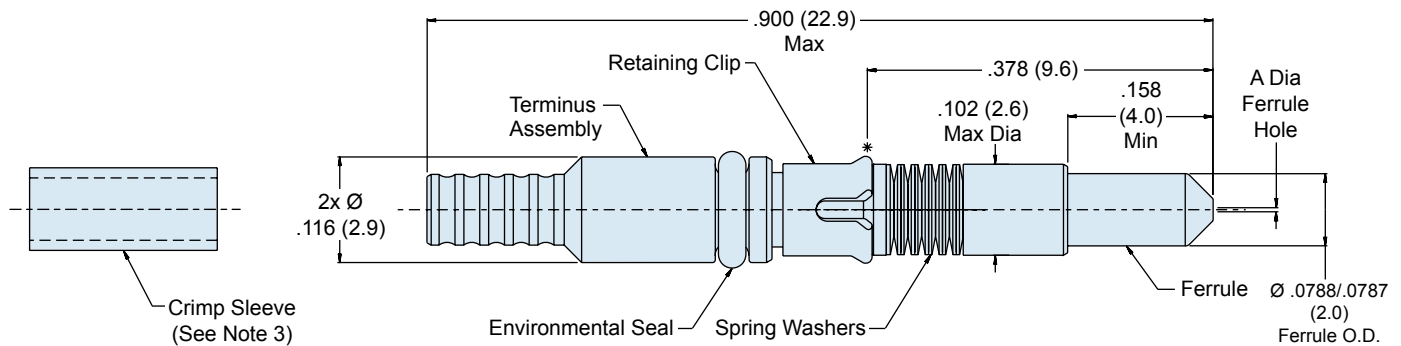
# 181-039 M29504/14 Type Front Release Pin Terminus Size 16



MIL-PRF-  
28876



| TABLE II: CRIMP SLEEVE DESIGNATOR |                       |             |
|-----------------------------------|-----------------------|-------------|
| Designator                        | Cable Diameter        | Part Number |
| C                                 | 2.0-2.4 mm (MIL-Spec) | 265-008     |



C

| TABLE I: DASH NUMBER |                 |                    |                |
|----------------------|-----------------|--------------------|----------------|
| Assembly Dash Number | A Dia (Microns) | Typical Fiber Type | MIL-SPEC Type  |
| -1255                | 125.5           | Single Mode        | N/A            |
| -1260                | 126.0           | Single Mode        | N/A            |
|                      |                 | Multi Mode         | M29504/14-4131 |
| -1270                | 127.0           | Multi Mode         | M29504/14-4132 |
| -1420                | 142.0           | Multi Mode         | M29504/14-4135 |

| TABLE III: TERMINUS ACCESSORIES |                          |
|---------------------------------|--------------------------|
| Part Number                     | Accessory                |
| 182-012                         | Crimp Tool               |
| 182-013                         | Insertion Tool, Straight |
| 182-014                         | Insertion Tool, 90°      |
| 182-015                         | Removal Tool             |
| 182-035                         | Hand Polishing Tool      |

Consult Factory for Additional Sizes

## APPLICATION NOTES

- Assembly packaged in plastic bag and tag identified with manufacturer's name and part number.
- Material/ Finish:  
Ferrule: Zirconia Ceramic/ N.A.  
Terminus Assembly: Stainless Steel/ Passivate  
Retaining Clip, Spring Washers: Spring Alloy / N.A.  
Seal: Fluorosilicone  
Crimp Sleeve: Brass Alloy/Nickel
- Crimp Sleeve may be ordered separately (Table II).
- Metric dimensions (mm) are in parentheses
- Dummy Terminus: Part Number 181-051
- Dimension to be measured when installed into insert equivalent fixture per MIL-PRF-29504/14
- For use with MIL-PRF-28876 type connectors.



MIL-PRF-28876 Type  
Fiber Optic Connection System  
How to Order

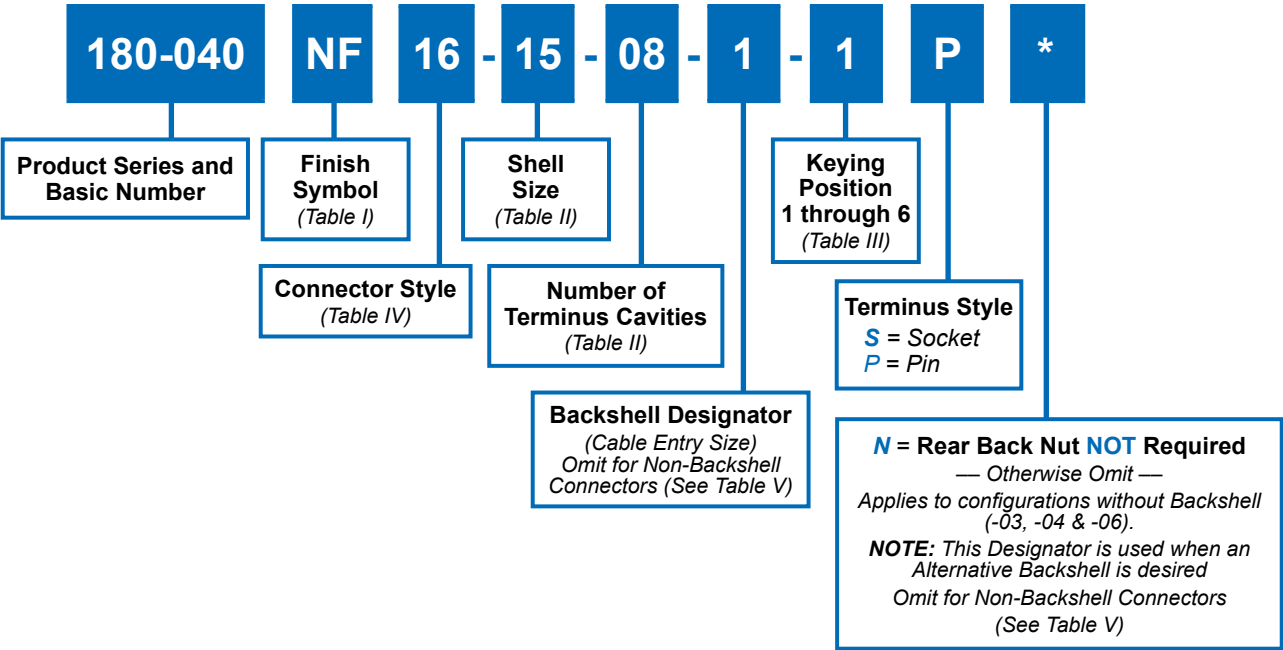


TABLE V: BACKSHELL DESIGNATOR

| Backshell Designator | Max Allowable Cable Diameter by Shell Size |             |             |              |
|----------------------|--------------------------------------------|-------------|-------------|--------------|
|                      | 11                                         | 13          | 15          | 23           |
| 1                    | .250 (6.4)                                 | .285 (7.2)  | .500 (12.7) | .866 (22.0)  |
| 2                    | .346 (8.8)                                 | .346 (8.8)  | .250 (6.4)  | 1.000 (25.4) |
| 3                    |                                            | .453 (11.5) | .375 (9.5)  | .600 (15.2)  |

TABLE I: FINISH

| SYM | MATERIAL | FINISH DESCRIPTION                                                             |
|-----|----------|--------------------------------------------------------------------------------|
| NF  | Aluminum | Olive Drab Chromate over Cadmium, over Electroless Nickel (500 Hrs Salt Spray) |

APPLICATION NOTES

- Assembly packaged in plastic bag and tag identified with manufacturer's name and part number.
- Material/ Finish:
  - External Hardware: See Table I
  - Internal Hardware: Aluminum Alloy/Chem Film, Stainless Steel/Passivate
  - Misc. Hardware: Stainless Steel/Passivate
  - Insert: Aluminum Alloy/Anodize or High-Grade Thermoplastic, Mfr's Option
  - Seals: Fluorosilicone
  - Consult factory for alternate materials and finishes.
- Backnut retained using thread-locking compound.
- Termini (Not Supplied with Connector):
  - M29504/14 - Pin terminus, MIL-Spec
  - M29504/15 - Socket Terminus, MIL-Spec
  - M29504/3 - Dummy Terminus, MIL-Spec
  - 181-039 - Pin Terminus, MIL-Spec Style
  - 181-040 - Socket terminus, MIL-Spec Style
  - 181-051 - Dummy Terminus MIL-Spec Style
- Consult factory for appropriate termination and assembly tools/procedures.
- Operating Temperature Range: -55° to +125°C.
- Metric dimensions (mm) are indicated in parentheses.

# MIL-PRF-28876 Type Fiber Optic Connection System How to Order



MIL-PRF-  
28876

**TABLE III: KEYING POSITION**

| Shell Size | Keying Position | A°  | B°  | C°  | D°  |
|------------|-----------------|-----|-----|-----|-----|
| 11 and 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 |
| 15 and 23  | 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 II: TERMINUS CAVITIES**

| Shell Size | Number of Terminus Cavities |
|------------|-----------------------------|
| 11         | 02                          |
| 13         | 04                          |
| 15         | 06 or 08                    |
| 23         | 18 or 31                    |

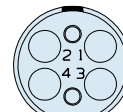
**TABLE IV: CONNECTOR TYPE**

| Connector Type        | Backshell Type | Connector Style | MIL-Spec Style Slash Number |
|-----------------------|----------------|-----------------|-----------------------------|
| Wall Mount Receptacle | None           | 03              | M28876/1                    |
|                       | Straight       | 13              | M28876/2                    |
|                       | 45°            | 23              | M28876/3                    |
|                       | 90°            | 33              | M28876/4                    |
| In-Line Receptacle    | Straight       | 15              | M28876/5                    |
| Plug                  | None           | 06              | M28876/6                    |
|                       | Straight       | 16              | M28876/7                    |
|                       | 45°            | 26              | M28876/8                    |
|                       | 90°            | 36              | M28876/9                    |
| Jam Nut Receptacle    | None           | 04              | M28876/11                   |
|                       | Straight       | 14              | M28876/12                   |
|                       | 45°            | 24              | M28876/13                   |
|                       | 90°            | 34              | M28876/14                   |

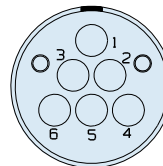
**Pin Insert Face**



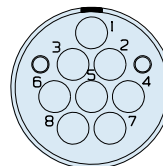
Size 11-02



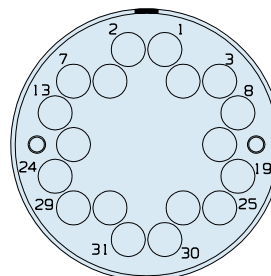
Size 13-04



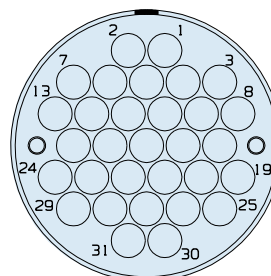
Size 15-06



Size 15-08



Size 23-18

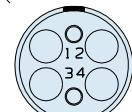


Size 23-31

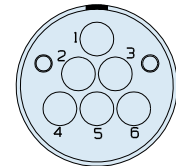
**Socket Insert Face**



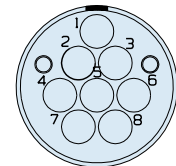
Size 11-02



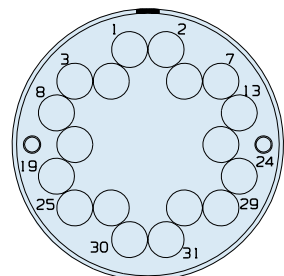
Size 13-04



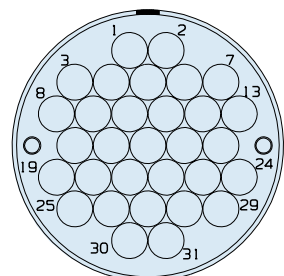
Size 15-06



Size 15-08

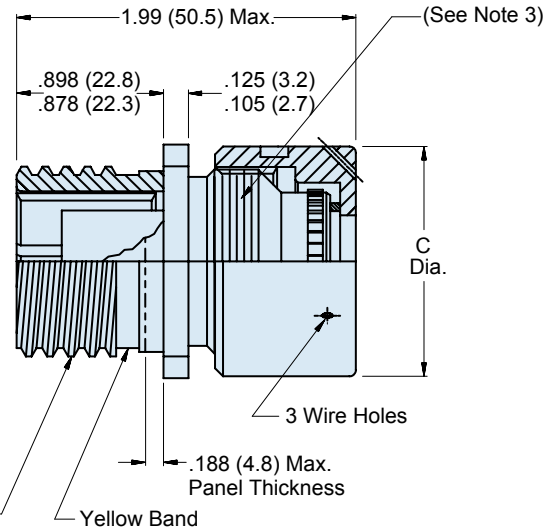
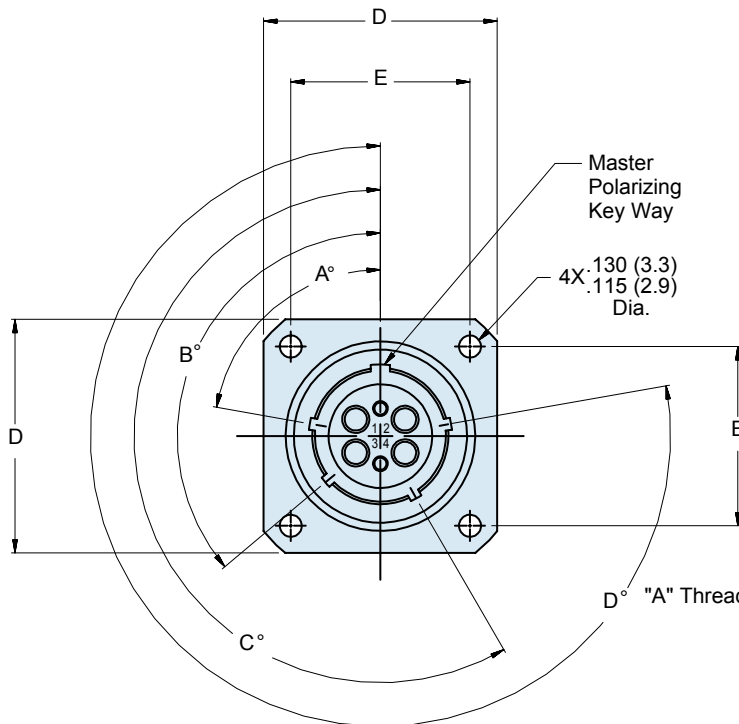


Shell Size 23-18

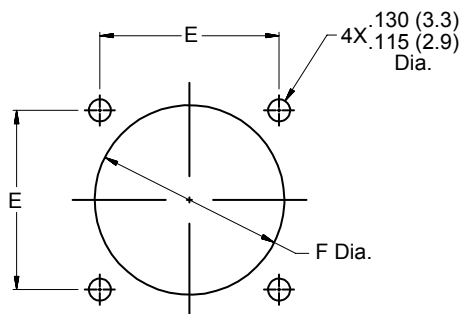


Size 23-31

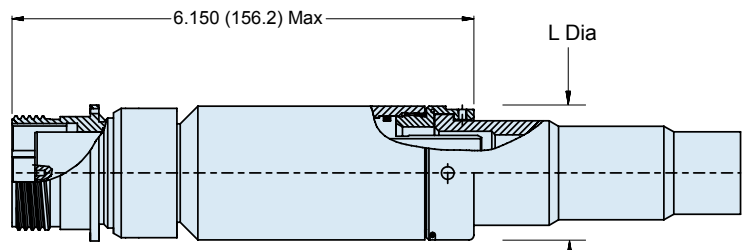
**180-040 (-03, -13, -23, -33)**  
**MIL-PRF-28876 Type Wall Mount Receptacle Connector**  
 for use with MIL-PRF-29504/14 and /15 Termini



**03 - WALL MOUNT RECEPTACLE  
WITHOUT BACKSHELL**



**RECOMMENDED  
PANEL CUT-OUT**



**13 - WALL MOUNT RECEPTACLE  
WITH STRAIGHT BACKSHELL**

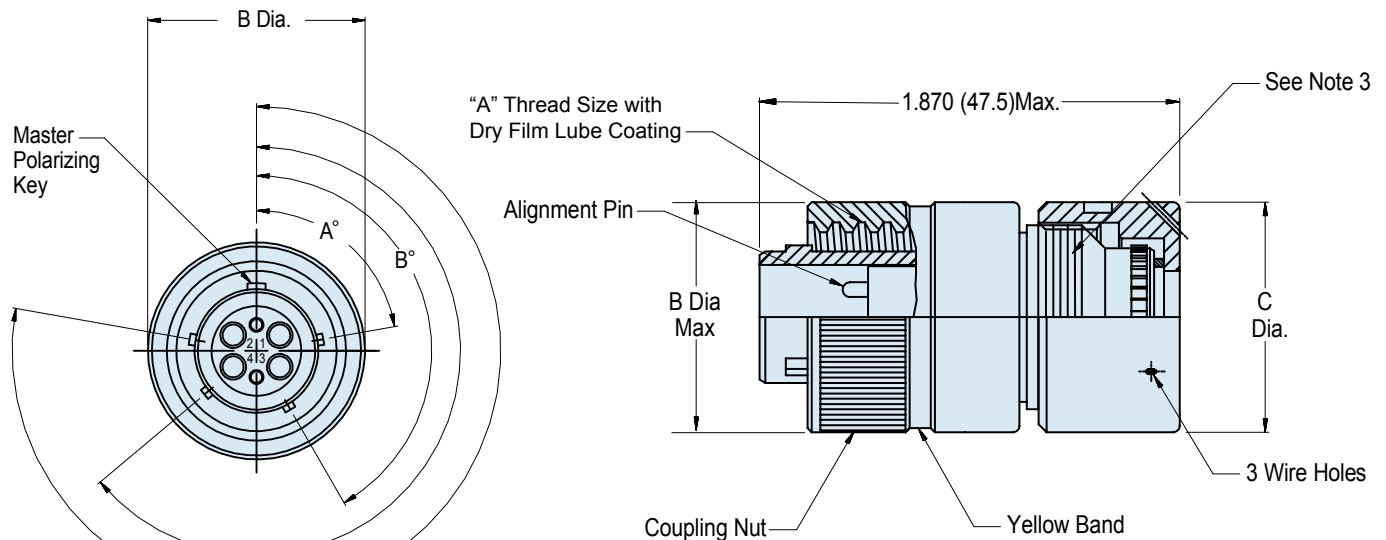
**TABLE VI: SHELL SIZE**

| Shell Size | D<br>± .020 (0.5) | E            | F Dia<br>± .005 (0.1) | C Dia<br>Max | L Dia<br>Max | "A" Thread<br>Size<br>.1P-.2L-DS |
|------------|-------------------|--------------|-----------------------|--------------|--------------|----------------------------------|
| 11         | 1.022 (26.0)      | .750 (19.1)  | .812 (20.6)           | .960 (24.4)  | .960 (24.4)  | .750 (19.05)                     |
| 13         | 1.137 (28.9)      | .843 (21.4)  | .937 (23.8)           | 1.085 (27.6) | 1.085 (27.6) | .875 (22.2)                      |
| 15         | 1.257 (31.9)      | .968 (24.6)  | 1.124 (28.5)          | 1.255 (31.9) | 1.255 (31.9) | 1.062 (26.9)                     |
| 23         | 1.718 (43.6)      | 1.281 (32.5) | 1.562 (39.7)          | 1.695 (43.1) | 1.763 (44.8) | 1.500 (38.1)                     |

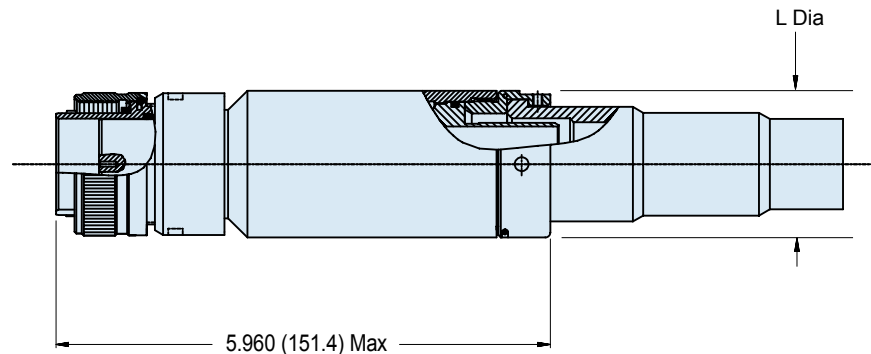
**180-040 (-06, -16, -26, -36)**  
**MIL-PRF-28876 Type Plug Connector**  
 for use with MIL-PRF-29504/14 and /15 Termini



**MIL-PRF-  
28876**



**06 - PLUG WITHOUT STRAIGHT  
BACKSHELL**

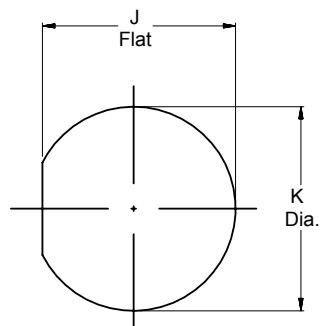
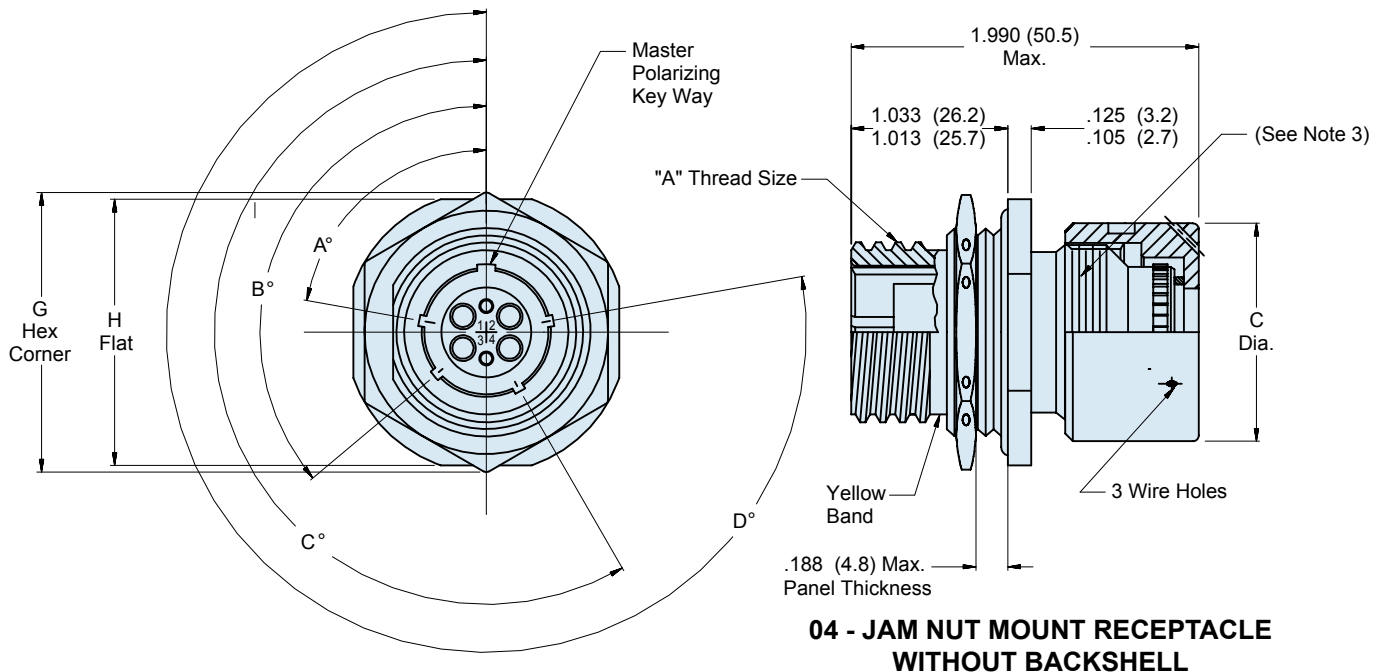


**16 - PLUG WITH STRAIGHT BACKSHELL**  
 (Consult Factory for 45° and 90° Backshell Versions)

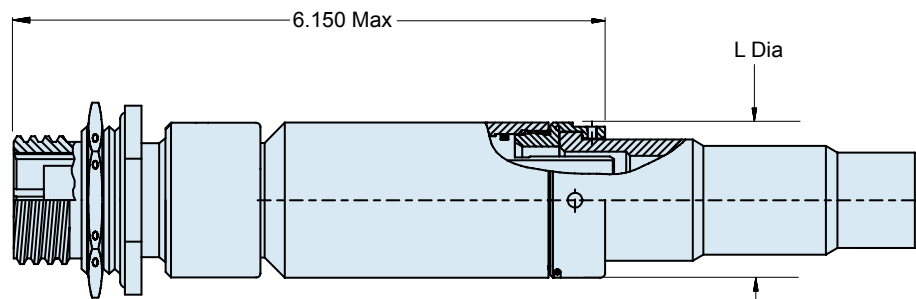
**TABLE VI: SHELL SIZE**

| Shell Size | B Dia Max    | C Dia Max    | L Dia Max    | "A" Thread Size<br>.1P-.2L-DS |
|------------|--------------|--------------|--------------|-------------------------------|
| 11         | 1.028 (26.1) | .960 (24.4)  | .960 (24.4)  | .750 (19.05)                  |
| 13         | 1.141 (29.0) | 1.085 (27.6) | 1.085 (27.6) | .875 (22.2)                   |
| 15         | 1.263 (32.1) | 1.255 (31.9) | 1.255 (31.9) | 1.062 (26.9)                  |
| 23         | 1.705 (43.3) | 1.695 (43.1) | 1.763 (44.8) | 1.500 (38.1)                  |

**180-040 (-04, -14, -24, -34)**  
**MIL-PRF-28876 Type Jam Nut Receptacle Connector**  
 for use with MIL-PRF-29504/14 and /15 Termini



**RECOMMENDED  
PANEL CUTOUT**



**14 - JAM NUT MOUNT RECEPTACLE  
WITH STRAIGHT BACKSHELL**  
 (Consult Factory for 45° and 90° Backshell Versions)

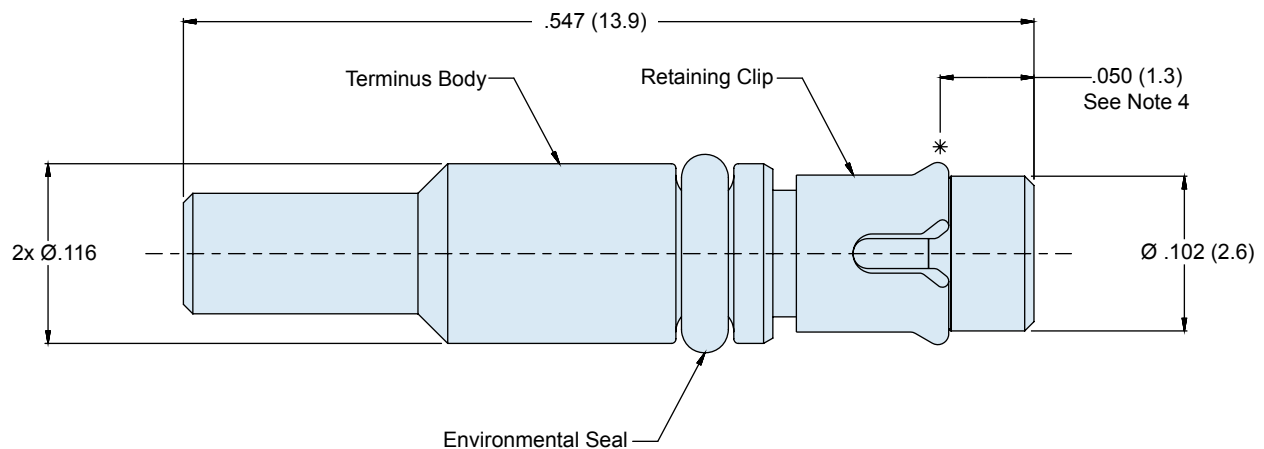
**TABLE VI: SHELL SIZE**

| Shell Size | G Max        | H<br>± .010 (0.3) | J<br>± .005 (0.1) | K Dia<br>± .005 (0.1) | C Dia<br>Max | L Dia<br>Max | "A" Thread Size<br>.1P-.2L-DS |
|------------|--------------|-------------------|-------------------|-----------------------|--------------|--------------|-------------------------------|
| 11         | 1.290 (32.8) | 1.262 (32.1)      | .848 (21.5)       | .885 (22.5)           | .960 (24.4)  | .960 (24.4)  | .750 (19.05)                  |
| 13         | 1.435 (35.9) | 1.387 (35.2)      | .937 (24.7)       | 1.010 (25.7)          | 1.085 (27.6) | 1.085 (27.6) | .875 (22.2)                   |
| 15         | 1.650 (41.9) | 1.575 (40.0)      | 1.160 (29.5)      | 1.198 (30.4)          | 1.255 (31.9) | 1.255 (31.9) | 1.062 (26.9)                  |
| 23         | 2.093 (53.2) | 2.014 (51.2)      | 1.598 (40.6)      | 1.635 (41.5)          | 1.695 (43.1) | 1.763 (44.8) | 1.500 (38.1)                  |

**181-051**  
**M29504/3 Type Dummy Terminus**  
**Size 16**



**MIL-PRF-  
28876**

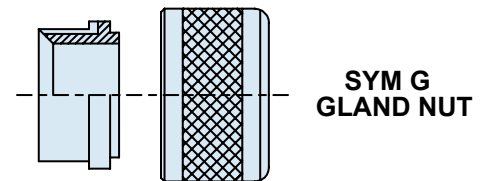
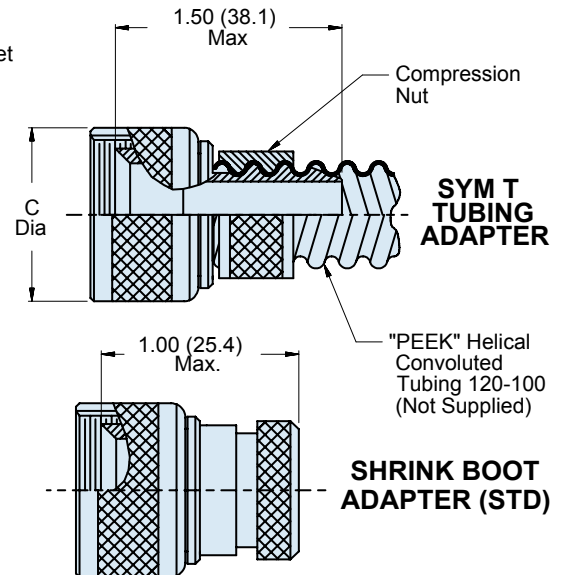
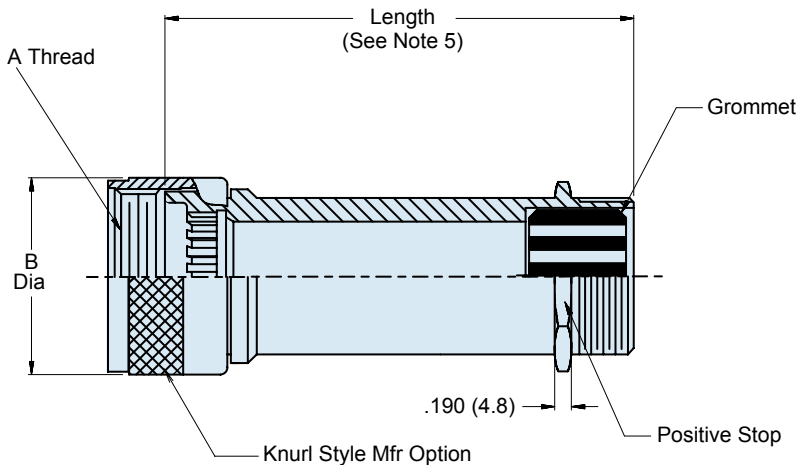
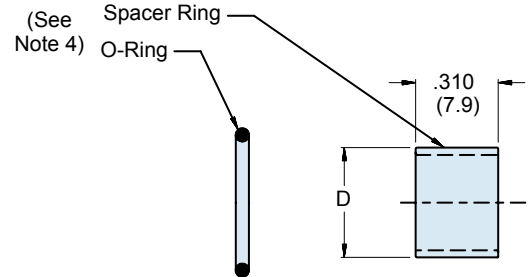
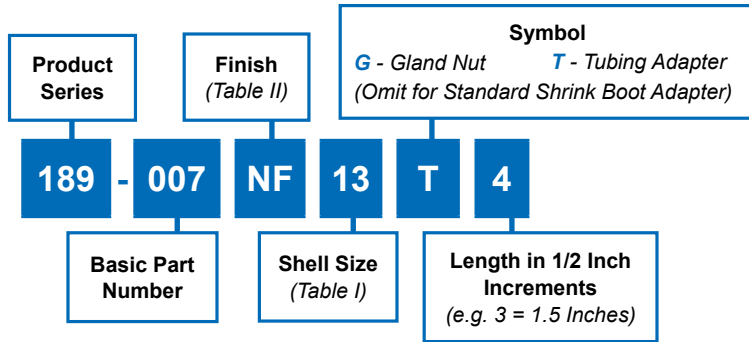


**APPLICATION NOTES**

1. Assembly packaged in plastic bag and tag identified with manufacturer's name and part number and date code.
2. Material/ Finish:  
Terminus Body: Stainless Steel/Passivate  
Retaining Clip: Spring Alloy/Nickel  
Seal: Fluorosilicone
3. Dummy terminus is designed to meet the general requirements of MIL-PRF-29504/3.
4. Dimension to be measured when installed into insert equivalent fixture per MIL-PRF-29504/3
5. For use with MIL-PRF-28876 type connectors.

**TABLE III: TERMINUS  
ACCESSORIES**

| Part Number | Accessory                |
|-------------|--------------------------|
| 182-013     | Insertion Tool, Straight |
| 182-014     | Insertion Tool, 90°      |
| 182-015     | Removal Tool             |



### APPLICATION NOTES

1. Assembly identified with manufacturer's name and P/N, space permitting.
2. Glenair 600 series Backshell assembly tools are recommended for assembly and installation.
3. Material/ Finish:  
Adapters, Coupling Nuts, Ferrule,  
Compression Nut, Spacer Ring- Al Alloy  
Grommet- Fluorosilicone/ N.A.  
O-Ring- Fluorosilicone/ N.A.
4. Spacer Ring and O-Ring are packaged loose and must be installed with connector at the time of assembly. The spacer is utilized to retain the Terminus Insert
5. Standard minimum order is 1.5 inch consult factory for shorter length.
6. Metric dimensions (mm) are indicated in parentheses.

**189-007**  
**Fiber-Con Backshell**  
**for MIL-PRF-28876 Connectors**



**MIL-PRF-  
28876**

**TABLE I: SHELL SIZE**

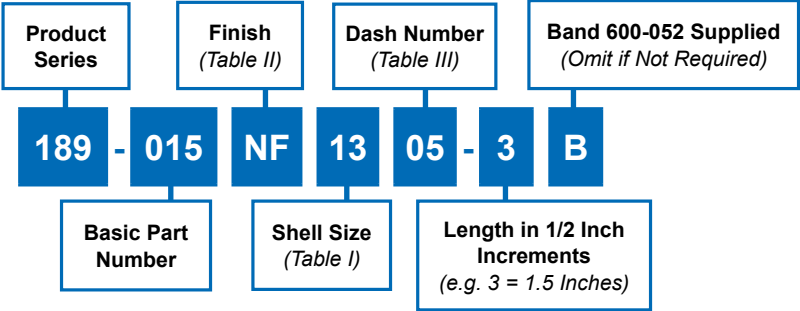
| Shell Size | Designator (Ref) | A Thread Class 2B | B Max        | C Max        | D Max       | Conduit Size | No. of Holes |
|------------|------------------|-------------------|--------------|--------------|-------------|--------------|--------------|
| 11         | A                | 3/4 - 20 UNEF     | 1.028 (26.1) |              | .410 (10.4) | 12           | 2            |
| 13         | B                | 7/8 - 20 UNEF     | 1.141 (29.0) | 1.120 (28.4) | .532 (13.5) | 16           | 4            |
| 15         | C                | 1 - 20 UNEF       | 1.263 (32.1) | 1.340 (34.0) | .710 (18.0) | 24           | 8            |

**TABLE II: FINISH**

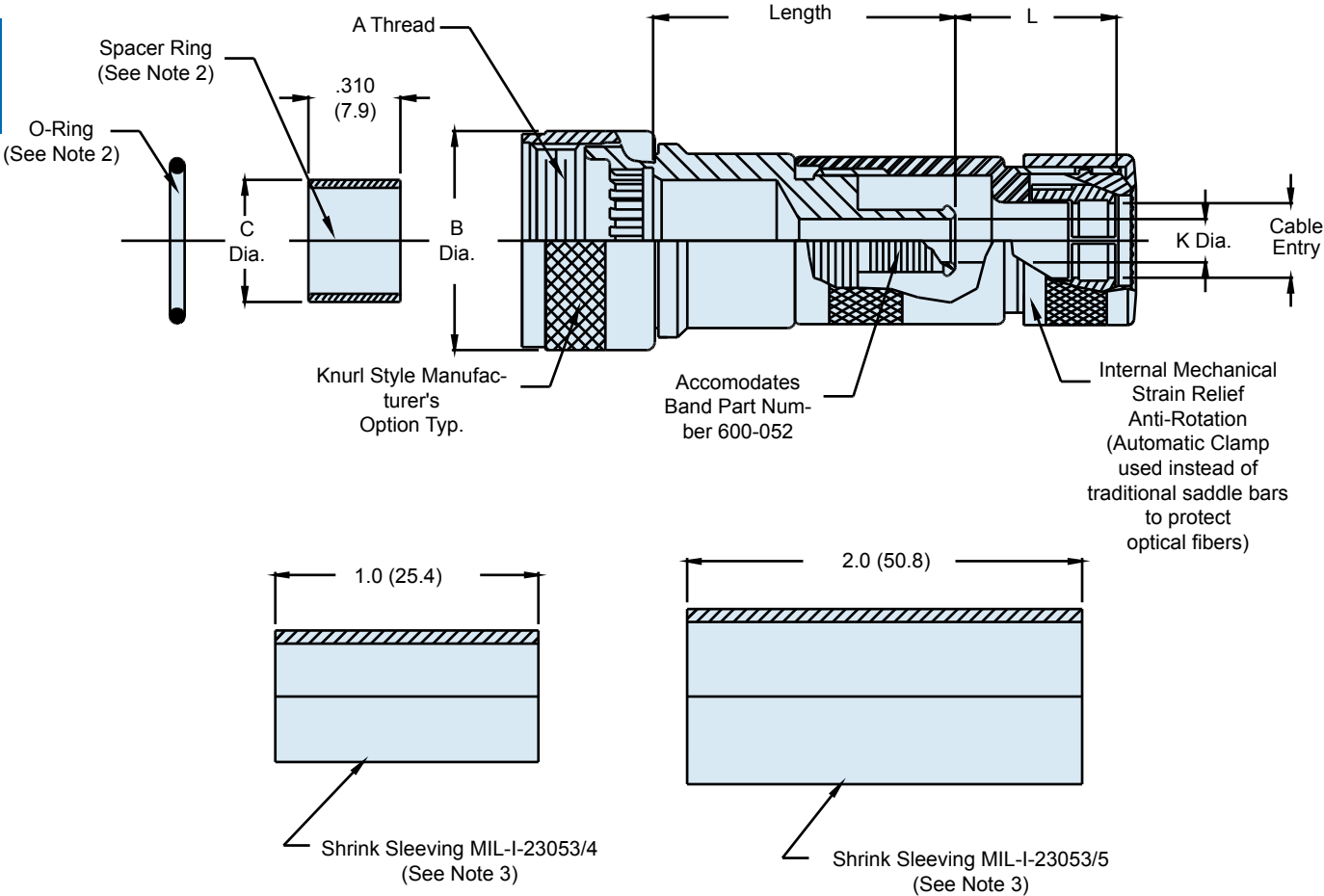
| SYM | MATERIAL | FINISH                                                          |
|-----|----------|-----------------------------------------------------------------|
| NF  | Aluminum | Cadmium/Olive Drab over Electroless Nickel (500 Hr. Salt Spray) |
| B   | Aluminum | Cadmium Plate/Olive Drab                                        |
| J   | Aluminum | Gold Iridite over Cadmium Plate over Nickel                     |
| N   | Aluminum | Cadmium Plate/Olive Drab over Nickel                            |
| M   | Aluminum | Electroless Nickel                                              |
| T   | Aluminum | Cadmium Plate/Bright Dip over Nickel                            |

**C**

**189-015**  
**Environmental Banding Backshell**  
for Multichannel M85045 Shipboard Fiber Optic Cable  
for Use with MIL-PRF-28876 or Glenair 180-040 Connectors



**C**



189-015

**Environmental Banding Backshell**  
for Multichannel M85045 Shipboard Fiber Optic Cable  
for Use with MIL-PRF-28876 or Glenair 180-040 Connectors

MIL-PRF-  
28876

TABLE I: SHELL SIZE

| Shell Size | Designator (Ref) | A Thread Class 2B | B Dia Max    | C Dia Max    | Max Dash Number |
|------------|------------------|-------------------|--------------|--------------|-----------------|
| 11         | A                | 3/4 -20 UNEF      | 1.028 (26.1) | .410 (10.4)  | 05              |
| 13         | B                | 7/8 -20 UNEF      | 1.141 (29.0) | .532 (13.5)  | 05              |
| 15         | C                | 1 -20 UNEF        | 1.263 (32.1) | .710 (18.0)  | 07              |
| 23         | F                | 1-7/16 -18 UNEF   | 1.703 (43.3) | 1.116 (28.3) | 13              |

TABLE I: CABLE ENTRY AND SHRINK SLEEVE DASH NUMBER

| Dash No. | Clamp Size | Cable Size Maximum | K Diameter $\pm .005$ (0.1) | L Max        | Dash No. MIL-I-2305/4 Shrink Sleeve | Dash No. MIL-I-23053/5 Shrink Sleeve | Cable Entry |             |
|----------|------------|--------------------|-----------------------------|--------------|-------------------------------------|--------------------------------------|-------------|-------------|
|          |            |                    |                             |              |                                     |                                      | Minimum     | Maximum     |
| 05       | 12         | .280 (7.1)         | .312 (7.9)                  | 1.110 (28.2) | -203-0                              | -107-0                               | .203 (5.2)  | .375 (9.5)  |
| 07       | 16         | .395 (10.0)        | .438 (11.1)                 | 1.210 (30.7) | -204-0                              | -108-0                               | .328 (8.3)  | .500 (12.7) |
| 09       | 20         | .510 (13.0)        | .562 (14.3)                 | 1.210 (30.7) | -204-0                              | -109-0                               | .452 (11.5) | .625 (15.9) |
| 11       | 24         | .621 (15.8)        | .688 (17.5)                 | 1.210 (30.7) | -205-0                              | -106-0                               | .515 (13.1) | .750 (19.1) |
| 13       | 28         | .736 (18.7)        | .812 (20.6)                 | 1.360 (34.5) | -205-0                              | -110-0                               | .640 (16.3) | .875 (22.2) |

TABLE II: FINISH

| SYM | MATERIAL | FINISH                                                    |
|-----|----------|-----------------------------------------------------------|
| M   | Aluminum | Electroless Nickel                                        |
| NF  | Aluminum | Cadmium O.D. Over Electroless Nickel (500-Hr. Salt Spray) |

## APPLICATION NOTES

## 1. Material/ Finishes:

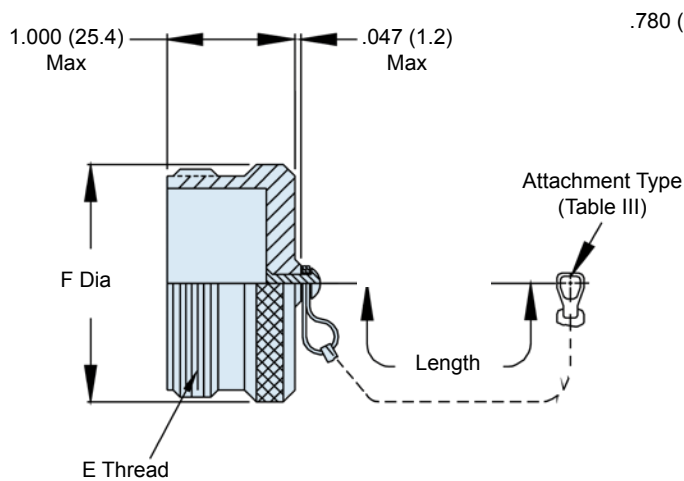
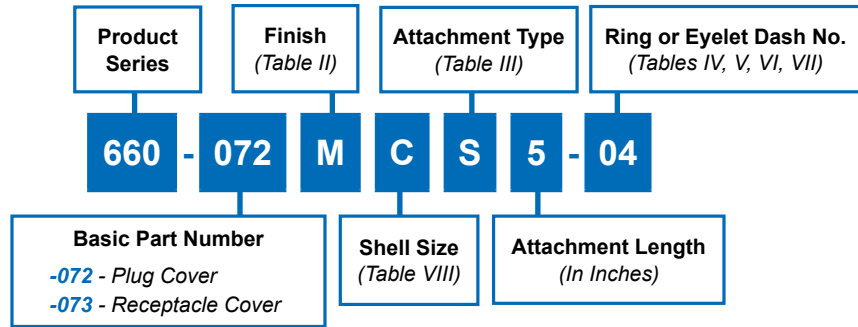
Adapter, Coupling Nut – Aluminum Alloy/See Table II  
Clamp Components – Ryton R4XT-Black; Ultem 1000-Natural  
Anti-Rotation Device – Torlon 4203L-Natural  
O-Ring – Fluorosilicone/ N.A.

## 2. Spacer Ring and O-Ring are packed loose and must be installed with connector at time of assembly. The Spacer is utilized to retain the Terminus Insert.

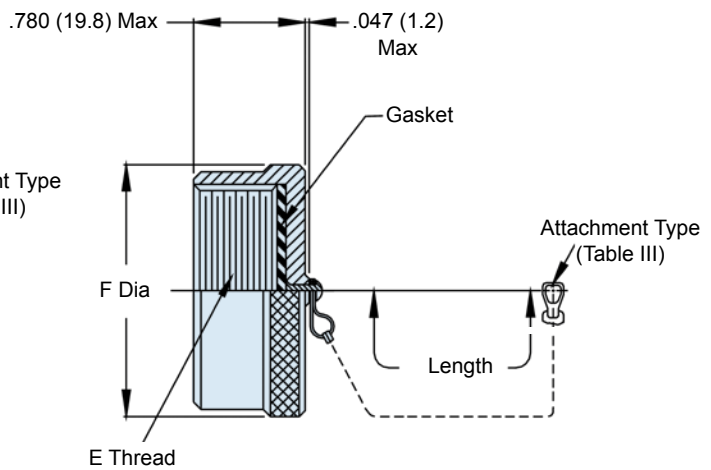
## 3. MIL-I-23053/4 &amp; 5 Shrink Sleeve are packed loose in a plastic bag. MIL-I-2305/4 Shrink Sleeve to be heat shrunk over rear of Adapter before MIL-I-23053/5 Shrink Sleeve.

## 4. Metric Dimensions (mm) are indicated in parentheses.

# 660-072 and 660-073 MIL-PRF-28876 Type Threaded Protective Covers



**660-072 Plug Cover**  
**MIL-PRF-28876/10 Style**



**660-073 Receptacle Cover**  
**MIL-PRF-28876/15 Style**

| TABLE I: CONNECTOR SHELL SIZE |                  |                  |              |
|-------------------------------|------------------|------------------|--------------|
| Designator                    | Shell Size (Ref) | A Thread         | B Dia Max    |
| A                             | 11               | .750-.1P-.2L-DS  | 1.028 (26.1) |
| B                             | 13               | .875-.1P-.2L-DS  | 1.141 (29.0) |
| C                             | 15               | 1.062-.1P-.2L-DS | 1.263 (32.1) |
| D                             | 17               | 1.125-.1P-.2L-DS | 1.387 (35.2) |
| E                             | 19               | 1.312-.1P-.2L-DS | 1.513 (38.4) |
| F                             | 23               | 1.500-.1P-.2L-DS | 1.703 (43.5) |
| G                             | 25               | 1.625-.1P-.2L-DS | 1.825 (46.4) |
| H                             | 29               | 1.812-.1P-.2L-DS | 2.143 (54.4) |
| J                             | 33               | 2.000-.1P-.2L-DS | 2.329 (59.2) |

| TABLE II: FINISH |                 |                                                       |
|------------------|-----------------|-------------------------------------------------------|
| SYM              | MATERIAL        | FINISH                                                |
| C                | Aluminum        | Black Anodize                                         |
| M                | Aluminum        | Electroless Nickel<br>(Coupling Nut Electrodeposited) |
| NF               | Aluminum        | Olive Drab Cadmium<br>over Electroless Nickel         |
| ZN               | Aluminum        | Zinc-Nickel/Olive Drab over<br>Electroless Nickel     |
| Z1               | Stainless Steel | Passivate                                             |

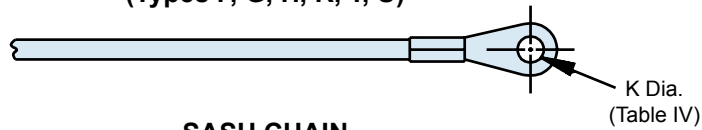
**660-072 and 660-073  
MIL-PRF-28876 Typer  
Threaded Protective Covers**



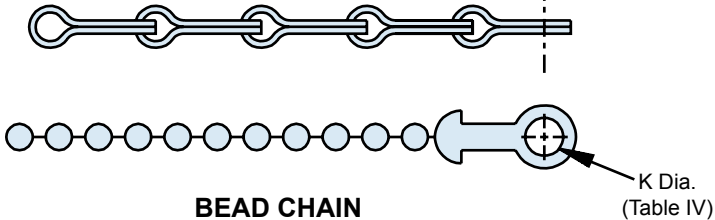
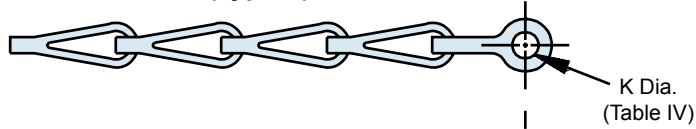
**MIL-PRF-  
28876**

**C**

**ROPE  
(Types F, G, H, R, T, U)**

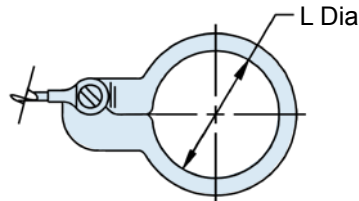


**SASH CHAIN  
(Type S)**

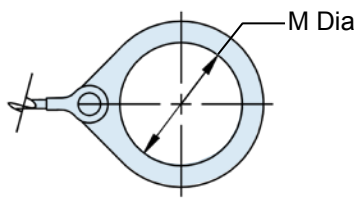


**BEAD CHAIN  
(Type D)**

**SPLIT RING - Style C**



**SOLID RING - Style B**



**SOLID RING - Style A**

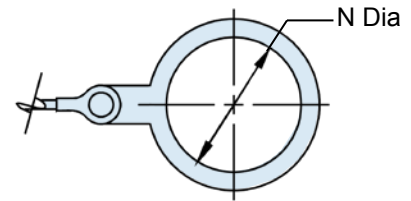


**TABLE V: SPLIT RING**

| Dash No. | L Dia<br>±.015 (4.0) | Dash No. | L Dia<br>±.015 (4.0) |
|----------|----------------------|----------|----------------------|
| 50       | .425 (10.8)          | 74       | 1.625 (41.3)         |
| 52       | .485 (12.3)          | 76       | 1.750 (44.5)         |
| 54       | .640 (16.3)          | 78       | 1.220 (31.0)         |
| 56       | .750 (19.1)          | 80       | 1.980 (50.3)         |
| 58       | .890 (22.6)          | 82       | 2.060 (52.3)         |
| 60       | 1.015 (25.8)         | 84       | 2.235 (56.8)         |
| 62       | 1.095 (27.8)         | 86       | 2.310 (58.7)         |
| 64       | 1.130 (28.7)         | 88       | 2.475 (62.9)         |
| 66       | 1.250 (31.8)         | 90       | 2.655 (67.4)         |
| 68       | 1.350 (34.3)         | 92       | 2.810 (71.4)         |
| 70       | 1.390 (35.3)         | 94       | 3.045 (77.3)         |
| 72       | 1.485 (37.7)         |          |                      |

**TABLE VI: SOLID RING STYLE B**

| Dash No. | M Dia<br>±.015 (4.0) | Dash No. | M Dia<br>±.015 (4.0) |
|----------|----------------------|----------|----------------------|
| 08       | .468 (11.9)          | 24       | 1.484 (37.7)         |
| 10       | .593 (15.1)          | 25       | 1.577 (40.1)         |
| 12       | .718 (18.2)          | 27       | 1.640 (41.7)         |
| 13       | .765 (19.4)          | 28       | 1.687 (42.8)         |
| 14       | .844 (21.4)          | 29       | 1.765 (44.8)         |
| 15       | .890 (22.6)          | 30       | 1.890 (48.0)         |
| 16       | .968 (24.6)          | 31       | 1.953 (49.6)         |
| 17       | 1.015 (25.8)         | 32       | 1.968 (50.0)         |
| 18       | 1.093 (27.8)         | 33       | 2.077 (52.8)         |
| 19       | 1.140 (29.0)         | 35       | 2.140 (54.4)         |
| 20       | 1.203 (30.6)         | 36       | 2.187 (55.5)         |
| 21       | 1.265 (32.1)         | 40       | 2.406 (61.1)         |
| 22       | 1.343 (34.1)         | 44       | 2.656 (67.5)         |
| 23       | 1.453 (36.9)         | 48       | 3.031 (77.0)         |

**TABLE VII: SOLID RING STYLE A**

| Dash No. | N Dia<br>±.015 (4.0) | Dash No. | N Dia<br>±.015 (4.0) |
|----------|----------------------|----------|----------------------|
| 095      | .312 (7.9)           | 109      | 1.266 (32.2)         |
| 100      | .391 (9.9)           | 209      | 1.312 (33.3)         |
| 101      | .516 (13.1)          | 110      | 1.391 (35.3)         |
| 102      | .583 (14.8)          | 210      | 1.391 (35.3)         |
| 103      | .641 (16.3)          | 111      | 1.521 (38.6)         |
| 104      | .708 (18.0)          | 211      | 1.536 (39.0)         |
| 105      | .766 (19.5)          | 112      | 1.641 (41.7)         |
| 205      | .788 (20.0)          | 113      | 1.766 (44.9)         |
| 106      | .896 (22.8)          | 213      | 1.812 (46.0)         |
| 206      | .907 (23.0)          | 114      | 1.891 (48.0)         |
| 107      | 1.016 (25.8)         | 214      | 1.938 (49.2)         |
| 207      | 1.025 (26.0)         | 115      | 2.078 (52.8)         |
| 108      | 1.141 (29.0)         | 116      | 2.406 (61.1)         |
| 308      | 1.188 (30.2)         | 117      | 2.510 (63.8)         |
| 208      | 1.203 (30.6)         |          |                      |

| TABLE III:<br>ATTACHMENT TYPE |                                              |
|-------------------------------|----------------------------------------------|
| Sym                           | Attachment Type                              |
| D                             | Bead Chain, Cres., Passivate                 |
| F                             | Wire Rope, Nylon Jacket                      |
| G                             | Nylon Rope                                   |
| H                             | Wire Rope, Teflon Jacket                     |
| N                             | No Attachment                                |
| R                             | Wire Rope, PVC Jacket                        |
| S                             | #8 Sash Chain, Cres., Passivate              |
| T                             | Wire Rope, No Jacket                         |
| U                             | Wire Rope, Polyurethane Jacket with Terminal |

| TABLE IV: EYELET |                      |
|------------------|----------------------|
| Dash No.         | K Dia<br>±.010 (3.6) |
| 01               | .140 (3.6)           |
| 02               | .182 (4.6)           |
| 03               | .191 (4.9)           |
| 04               | .197 (5.0)           |
| 05               | .167 (4.2)           |
| 06               | .125 (3.2)           |
| 07               | .218 (5.5)           |
| 09               | .156 (4.0)           |
| 00               | No Eyelet            |

Metric dimensions (mm) are indicated in parenthesis.

**SERIES 77**

# FULL NELSON

## Heat Shrink Boots

*Outstanding Environmental and Mechanical Protection*

*"Think he'll ever break that hold?  
Nope. He's got him in a Full Nelson!"*



Nothing conjures up the image of an unbreakable hold like a Standing Full Nelson. Properly applied, this classic Greco-Roman wrestling move is simply unbeatable. We'd like to think the same holds true for our Series 77 *Full Nelson* Environmental Shrink Boots. Properly applied, Series 77 boots provide a dependable, leak-proof seal for interconnect cable assemblies. Optional adhesive coatings on the inside of the boot provide a watertight, high-

strength bond to the cable jacket and the connector or adapter. And the Glenair shape-memory boot material formula works every time. So if you're worried about sealing effectiveness, if you want long-lasting environmental protection, if you want an ingress prevention solution that won't lose its grip after years and years of service, get a Series 77 *Full Nelson*—the environmental shrink boot with the iron grip of a championship wrestler.



# Glenair's CSGA Provide 360° EMI/EMP Grounding the First Time...and Every Time

Our line of **Cable Shield Grounding Assemblies** are available in male, female and split versions and provide completely reliable 360° grounding of shielded cables to above deck stuffing tubes and swage tubes.

Glenair's CSGA are designed to insure both reliable EMI/EMP shielding as well as strict environmental protection. Glenair's CSGA meet MIL-STD 1310 grounding requirements

and NAVSEA 803-5001-27 sealing requirements. Glenair CSGA are available in 18 sizes to accommodate stuffing tube sizes A through V.

Supplied in kit form, each CSGA includes the complete grounding assembly as well as an adhesive-coated heat shrinkable sleeve and Permatex 133A antisieze compound. Products meet NAVSEA requirements.

**Temperature Rating: -55° C to 90° C**  
**Minimum Shrink Temperature: 121° C**  
**CSGA Material: 6061-T6 Aluminum\***  
**Finish: Electroless Nickel\***



\*Available in Passivated 316 Stainless Steel

**Attention: Do Not Disassemble The Unit**

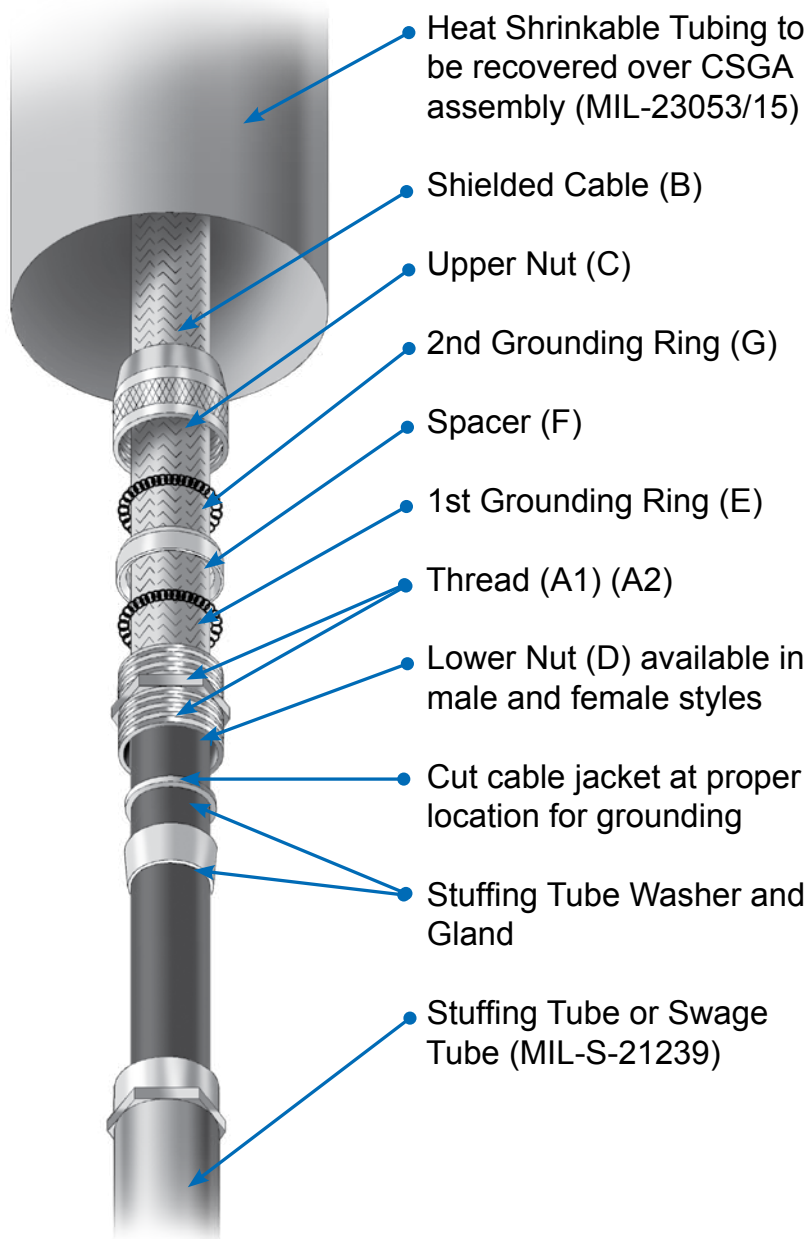
1. Prior to pulling the cable through the stuffing tube, remove and discard the gland nut and replace with the grounding assembly, lightly threading the assembly onto the tube (the assembly must match the tube size, i.e., A, B, C, etc.). Slide the tubing over the grounding assembly.
2. Pull the cable (B) through the grounding assembly and tubing, using care to prevent damage to internal components.
3. Permanently install the cable in place and tighten all hangers.
4. Slide the tubing up the cable, away from the grounding assembly. Unscrew the grounding assembly and move it several inches up the cable. Separate the lower nut (D) from the upper nut (C).
5. Pack the stuffing tube, as required, using the original slip washer and packing gland. Apply anti-seize compound per MIL-T-22361 (FSN 8030-00-22-1102) to threads (A1) and tighten the lower nut (D) as required for packing.
6. Abrade the cable for approximately 6" above the lower nut (D).
7. Drop the 1st grounding ring (E), spacer (F), and the 2nd grounding ring (G) down on top of the lower nut (D). Mark the cable at top of the 2nd grounding ring (G), slide the components up the cable and remove the outer jacket from the mark to the top of the lower nut (D).
8. Apply a coating of anti-seize to the exposed threads (A2). Reassemble the components (E, F, & G) on the exposed shield.
9. Lower the upper nut (C) and hand-tighten firmly.
10. Slide the tubing down the cable and center it over the grounding assembly. Be sure the tubing overlaps the stuffing tube and onto the cable beyond the boot. Apply heat from the center of the tubing towards the ends to ensure even shrinkage. The sealant will flow from the ends of the tubing when recovery is complete.

**NOTE:** *This method of cable grounding applies to new installation and to retrofit cables that can be removed and routed through the grounding assembly.*

# Cable Shield Grounding Assembly Installation Instructions



CSGA

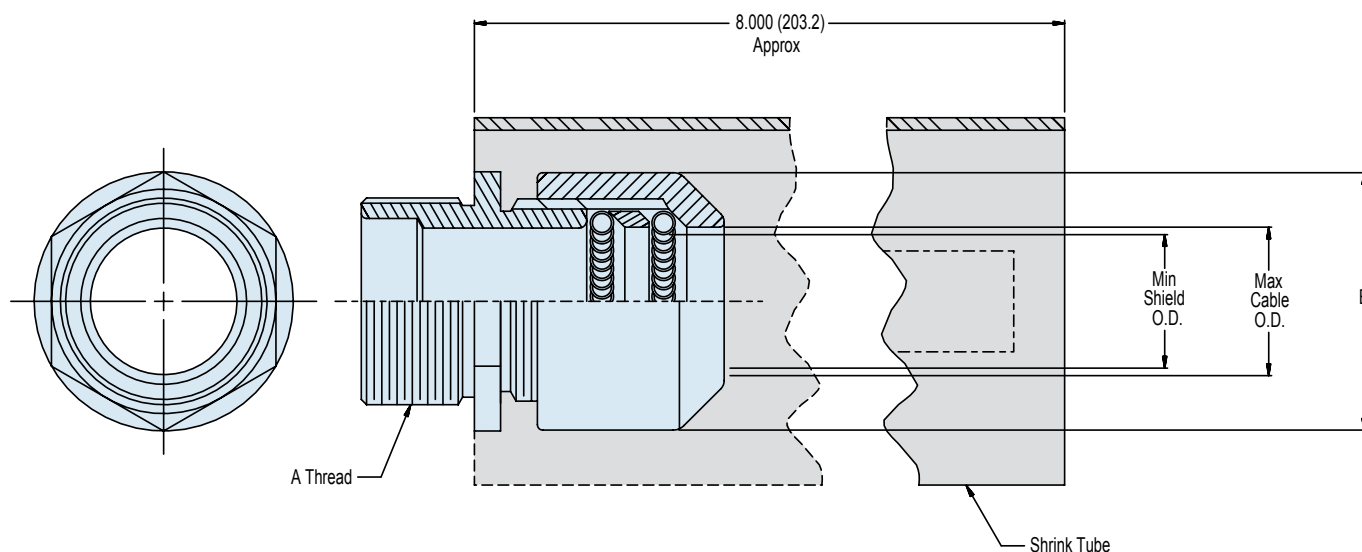


D

# GA/CSGA Male Cable Shield Grounding Assembly

Basic  
NumberStuffing  
Tube Size  
(Table I)

GA/CSGA - A



## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Glenair series 600 backshell assembly tools are recommended for assembly and installation.
3. Material / Finish:  
Adapters - Al alloy/cad/O.D. over electroless nickel (500 hr salt spray).  
Ferrule, grounding spring - CRES/passivate.  
Tubing - Heat shrinkable, flame retardant, with adhesive.
4. Metric dimensions (mm) are indicated in parentheses.

**GA/CSGA**  
**Male**  
**Cable Shield Grounding Assembly**



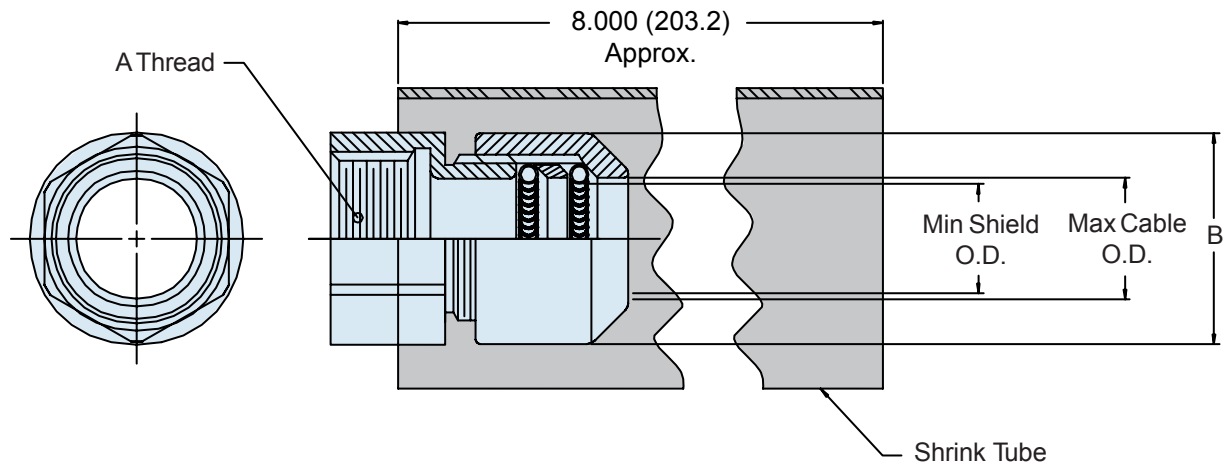
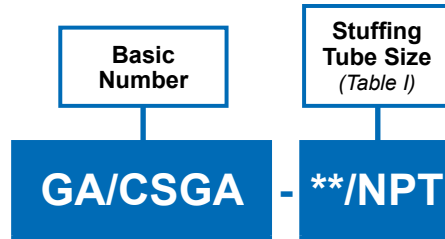
CSGA

**TABLE I: Stuffing Tube Size and Adapter Dimensions**

| Glenair Part No. | A Thread       | Max Cable O.D. | Min Shield O.D. | B Max        | Shrink Tube Number |
|------------------|----------------|----------------|-----------------|--------------|--------------------|
| GA/CSGA-A (sm)   | 7/8 -12 UN     | .250 (6.4)     | .125 (3.2)      | 1.120 (28.4) | HRSR 125           |
| GA/CSGA-A        | 7/8 -12 UN     | .406 (10.3)    | .200 (5.1)      | 1.120 (28.4) |                    |
| GA/CSGA-B        | 1 -12 UN       | .515 (13.1)    | .260 (6.6)      | 1.120 (28.4) |                    |
| GA/CSGA-C        | 1 1/8 -12 UN   | .640 (16.3)    | .400 (10.2)     | 1.320 (33.5) | HRSR 175           |
| GA/CSGA-D        | 1 1/4 -12 UN   | .750 (19.1)    | .400 (10.2)     | 1.630 (41.4) |                    |
| GA/CSGA-E        | 1 1/4 -12 UN   | .812 (20.6)    | .430 (10.9)     | 1.630 (41.4) |                    |
| GA/CSGA-F        | 1 5/16 -12 UN  | .843 (21.4)    | .470 (11.9)     | 1.750 (44.5) | HRSR 200           |
| GA/CSGA-G        | 1 1/2 -12 UN   | .953 (24.2)    | .580 (14.7)     | 1.880 (47.8) |                    |
| GA/CSGA-J        | 1 5/8 -12 UN   | 1.062 (27.0)   | .690 (17.5)     | 1.880 (47.8) |                    |
| GA/CSGA-K        | 1 3/4 -12 UN   | 1.172 (29.8)   | .800 (20.3)     | 2.060 (52.1) | HRSR 250           |
| GA/CSGA-L        | 1 13/16 -12 UN | 1.265 (32.1)   | .890 (22.6)     | 2.180 (55.4) |                    |
| GA/CSGA-M        | 2 -12 UN       | 1.406 (35.7)   | 1.010 (25.7)    | 2.320 (58.9) |                    |
| GA/CSGA-N        | 2 1/16 -12 UN  | 1.515 (38.5)   | 1.130 (28.7)    | 2.380 (60.5) |                    |
| GA/CSGA-P        | 2 3/16 -12 UN  | 1.625 (41.3)   | 1.200 (30.5)    | 2.440 (62.0) |                    |
| GA/CSGA-R        | 2 5/16 -12 UN  | 1.750 (44.5)   | 1.250 (31.8)    | 2.750 (69.9) | HRSR 300           |
| GA/CSGA-S        | 2 11/16 -12 UN | 1.875 (47.6)   | 1.380 (35.1)    | 2.880 (73.2) |                    |
| GA/CSGA-T        | 2 7/8 -12 UN   | 2.062 (52.4)   | 1.560 (39.6)    | 3.130 (79.5) | HRSR 400           |
| GA/CSGA-V        | 3 -12 UN       | 2.187 (55.5)   | 1.690 (42.9)    | 3.250 (82.6) |                    |

D

# GA/CSGA-\*\*/NPT Female Pipe Thread Cable Shield Grounding Assembly



## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Glenair series 600 backshell assembly tools are recommended for assembly and installation.
3. Material / Finish:  
Adapters - Al alloy/cad/O.D. over electroless nickel (500 hr salt spray).  
Ferrule, grounding spring - CRES/passivate.  
Tubing - Heat shrinkable, flame retardant, with adhesive.
4. Metric dimensions (mm) are indicated in parentheses.

\*Available in Passivated 316 Stainless Steel, add 49A to end of part number.

**GA/CSGA-\*/NPT**  
**Female Pipe Thread**  
**Cable Shield Grounding Assembly**



CSGA

**TABLE II**

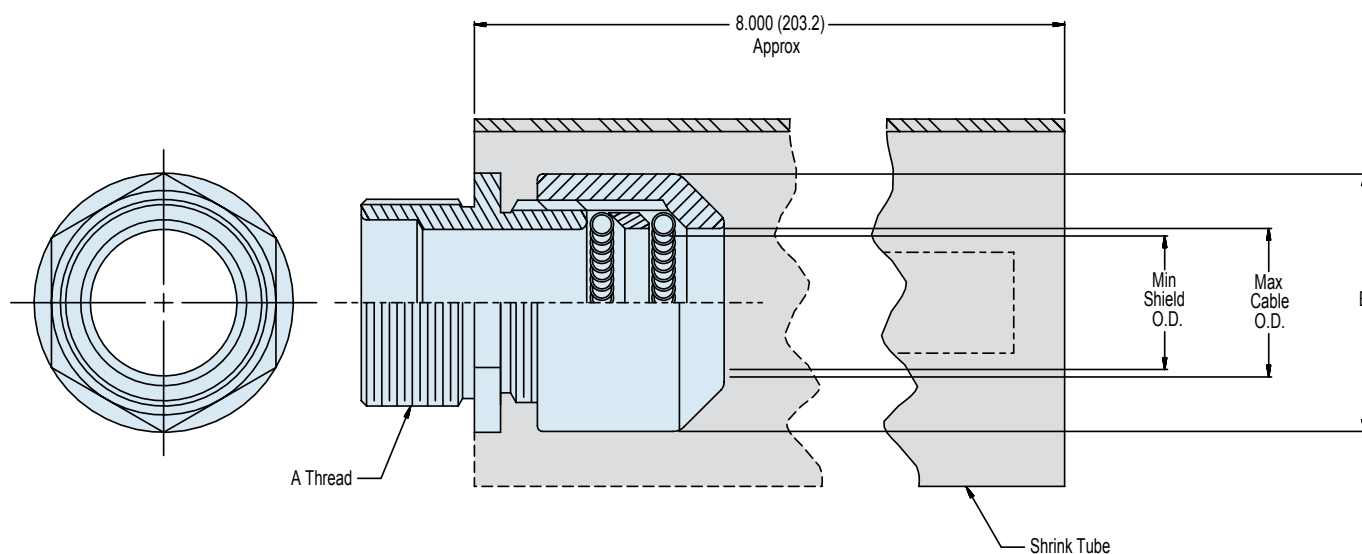
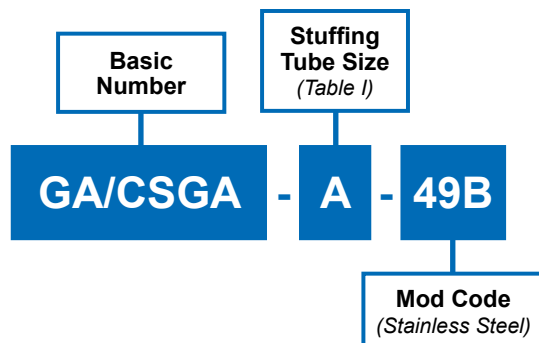
| Part Number    | A Thread        | Max Cable O.D. | Min Shield O.D. | B Max       | Shrink Tube Part Number |
|----------------|-----------------|----------------|-----------------|-------------|-------------------------|
| GA/CSGA-A (SM) | 7/8 - 12 UN     | .250 (6.4)     | .125 (3.2)      | 1.12 (28.4) | HRSR 125                |
| GA/CSGA-A      | 7/8 - 12 UN     | .406 (10.3)    | .200 (5.1)      | 1.12 (28.4) | HRSR 125                |
| GA/CSGA-B      | 1 - 12 UN       | .515 (13.1)    | .260 (6.6)      | 1.12 (28.4) | HRSR 125                |
| GA/CSGA-C      | 1 1/8 - 12 UN   | .640 (16.3)    | .400 (10.2)     | 1.32 (33.5) | HRSR 175                |
| GA/CSGA-D      | 1 1/4 - 12 UN   | .750 (19.1)    | .400 (10.2)     | 1.63 (41.4) | HRSR 175                |
| GA/CSGA-E      | 1 1/4 - 12 UN   | .812 (20.6)    | .430 (10.9)     | 1.63 (41.4) | HRSR 175                |
| GA/CSGA-F      | 1 5/16 - 12 UN  | .843 (21.4)    | .470 (11.9)     | 1.75 (44.5) | HRSR 200                |
| GA/CSGA-G      | 1 1/2 - 12 UN   | .953 (24.2)    | .580 (14.7)     | 1.88 (47.8) | HRSR 200                |
| GA/CSGA-J      | 1 5/8 - 12 UN   | 1.062 (27.0)   | .690 (17.5)     | 1.88 (47.8) | HRSR 200                |
| GA/CSGA-K      | 1 3/4 - 12 UN   | 1.172 (29.8)   | .800 (20.3)     | 2.06 (52.3) | HRSR 250                |
| GA/CSGA-L      | 1 13/16 - 12 UN | 1.265 (32.1)   | .890 (22.6)     | 2.18 (55.4) | HRSR 250                |
| GA/CSGA-M      | 2 - 12 UN       | 1.406 (35.7)   | 1.010 (25.7)    | 2.32 (58.9) | HRSR 250                |
| GA/CSGA-N      | 2 1/16 - 12 UN  | 1.515 (38.5)   | 1.130 (28.7)    | 2.38 (60.5) | HRSR 250                |
| GA/CSGA-P      | 2 3/16 - 12 UN  | 1.625 (41.3)   | 1.200 (30.5)    | 2.44 (62.0) | HRSR 250                |
| GA/CSGA-R      | 2 5/16 - 12 UN  | 1.750 (44.5)   | 1.250 (31.8)    | 2.75 (69.9) | HRSR 300                |
| GA/CSGA-S      | 2 11/16 - 12 UN | 1.875 (47.6)   | 1.380 (35.1)    | 2.88 (73.2) | HRSR 300                |
| GA/CSGA-T      | 2 7/8 - 12 UN   | 2.062 (52.4)   | 1.560 (39.6)    | 3.13 (79.5) | HRSR 400                |
| GA/CSGA-V      | 3 - 12 UN       | 2.187 (55.5)   | 1.690 (42.9)    | 3.25 (82.6) | HRSR 400                |

D

# GA/CSGA-49B

## Male

### Stainless Steel Cable Shield Grounding Assembly



#### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Glenair series 600 backshell assembly tools are recommended for assembly and installation.
3. Material / Finish:  
Adapters - CRES/passivate.  
Ferrule, grounding spring - CRES/passivate.  
Tubing - Heat shrinkable, flame retardant, with adhesive.
4. Metric dimensions (mm) are indicated in parentheses.

**GA/CSGA-49B**  
**Male**  
**Stainless Steel Cable Shield Grounding Assembly**



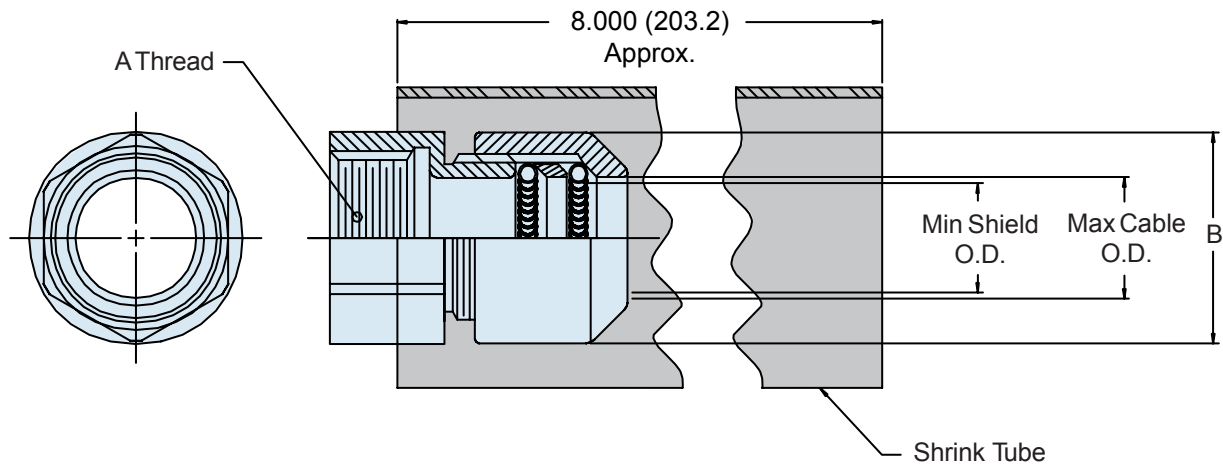
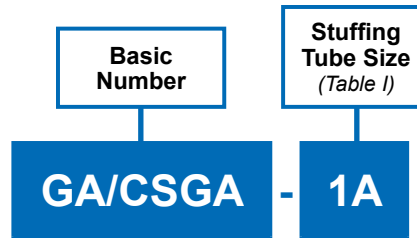
CSGA

**TABLE I: Stuffing Tube Size and Adapter Dimensions**

| Glenair Part No.   | A Thread       | Max Cable O.D. | Min Shield O.D. | B Max        | Shrink Tube Number |
|--------------------|----------------|----------------|-----------------|--------------|--------------------|
| GA/CSGA-A (SM)-49B | 7/8 -12 UN     | .250 (6.4)     | .125 (3.2)      | 1.120 (28.4) | HRSR 125           |
| GA/CSGA-49B        | 7/8 -12 UN     | .406 (10.3)    | .200 (5.1)      | 1.120 (28.4) |                    |
| GA/CSGA-B-49B      | 1 -12 UN       | .515 (13.1)    | .260 (6.6)      | 1.120 (28.4) |                    |
| GA/CSGA-C-49B      | 1 1/8 -12 UN   | .640 (16.3)    | .400 (10.2)     | 1.320 (33.5) | HRSR 175           |
| GA/CSGA-D-49B      | 1 1/4 -12 UN   | .750 (19.1)    | .400 (10.2)     | 1.630 (41.4) |                    |
| GA/CSGA-E-49B      | 1 1/4 -12 UN   | .812 (20.6)    | .430 (10.9)     | 1.630 (41.4) |                    |
| GA/CSGA-F-49B      | 1 5/16 -12 UN  | .843 (21.4)    | .470 (11.9)     | 1.750 (44.5) | HRSR 200           |
| GA/CSGA-G-49B      | 1 1/2 -12 UN   | .953 (24.2)    | .580 (14.7)     | 1.880 (47.8) |                    |
| GA/CSGA-J-49B      | 1 5/8 -12 UN   | 1.062 (27.0)   | .690 (17.5)     | 1.880 (47.8) |                    |
| GA/CSGA-K-49B      | 1 3/4 -12 UN   | 1.172 (29.8)   | .800 (20.3)     | 2.060 (52.2) | HRSR 250           |
| GA/CSGA-L-49B      | 1 13/16 -12 UN | 1.265 (32.1)   | .890 (22.6)     | 2.180 (55.4) |                    |
| GA/CSGA-M-49B      | 2 -12 UN       | 1.406 (35.7)   | 1.010 (25.7)    | 2.320 (58.9) |                    |
| GA/CSGA-N-49B      | 2 1/16 -12 UN  | 1.515 (38.5)   | 1.130 (28.7)    | 2.380 (60.5) |                    |
| GA/CSGA-P-49B      | 2 3/16 -12 UN  | 1.625 (41.3)   | 1.200 (30.5)    | 2.440 (62.0) |                    |
| GA/CSGA-R-49B      | 2 5/16 -12 UN  | 1.750 (44.5)   | 1.250 (31.8)    | 2.750 (69.9) | HRSR 300           |
| GA/CSGA-S-49B      | 2 11/16 -12 UN | 1.875 (47.6)   | 1.380 (35.1)    | 2.880 (73.2) |                    |
| GA/CSGA-T-49B      | 2 7/8 -12 UN   | 2.062 (52.4)   | 1.560 (39.6)    | 3.130 (79.5) | HRSR 400           |
| GA/CSGA-V-49B      | 3 -12 UN       | 2.187 (55.5)   | 1.690 (42.9)    | 3.250 (82.6) |                    |

D

# GA/CSGA-\*\* Female Cable Shield Grounding Assembly



## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Glenair series 600 backshell assembly tools are recommended for assembly and installation.
3. Material / Finish:  
Adapters - Al alloy/cad/O.D. over electroless nickel (500 hr salt spray).  
Ferrule, grounding spring - CRES/passivate.  
Tubing - Heat shrinkable, flame retardant, with adhesive.
4. Metric dimensions (mm) are indicated in parentheses.

**GA/CSGA-\*\***  
**Female**  
**Cable Shield Grounding Assembly**



CSGA

**TABLE I: Stuffing Tube Size and Adapter Dimensions**

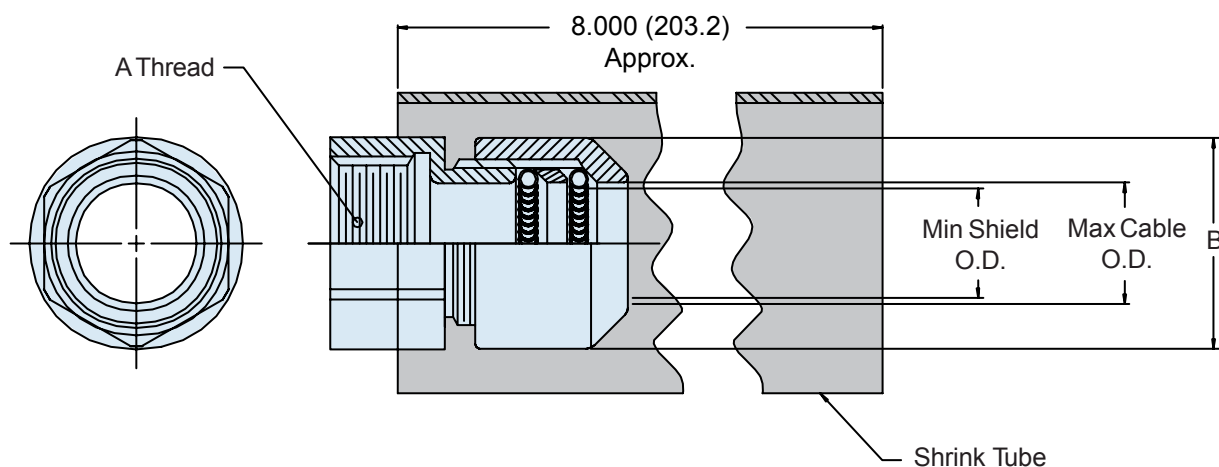
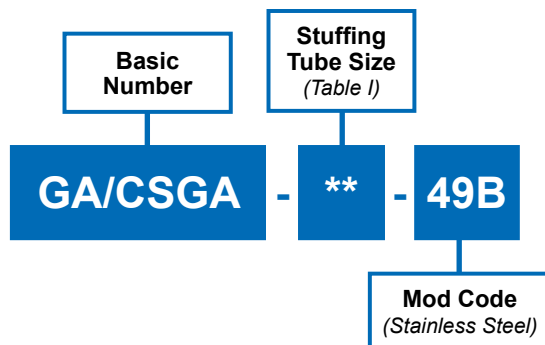
| Glenair Part No. | A Thread     | Max Cable O.D. | Min Shield O.D. | B Max        | Shrink Tube Number |
|------------------|--------------|----------------|-----------------|--------------|--------------------|
| GA/CSGA-1A       | 7/8 -12 UN   | .406 (10.3)    | .200 (5.1)      | 1.120 (28.4) | HRSR 125           |
| GA/CSGA-2A       | 1 -12 UN     | .406 (10.3)    | .200 (5.1)      | 1.120 (28.4) |                    |
| GA/CSGA-2B       | 1 -12 UN     | .515 (13.1)    | .260 (6.6)      | 1.120 (28.4) |                    |
| GA/CSGA-3A       | 1 1/8 -12 UN | .515 (13.1)    | .260 (6.6)      | 1.120 (28.4) |                    |
| GA/CSGA-4A       | 1 1/4 -12 UN | .640 (16.3)    | .400 (10.2)     | 1.320 (33.5) | HRSR 175           |
| GA/CSGA-4B       | 1 1/4 -12 UN | .750 (19.1)    | .400 (10.2)     | 1.630 (41.4) |                    |
| GA/CSGA-5A       | 2 -12 UN     | .843 (21.4)    | .430 (10.9)     | 1.750 (44.5) | HRSR 200           |
| GA/CSGA-5B       | 2 -12 UN     | .953 (24.2)    | .580 (14.7)     | 1.880 (47.8) |                    |
| GA/CSGA-5C       | 2 -12 UN     | 1.062 (27.0)   | .690 (17.5)     | 1.880 (47.8) |                    |
| GA/CSGA-5D       | 2 -12 UN     | 1.172 (29.8)   | .800 (20.3)     | 2.060 (52.2) | HRSR 250           |
| GA/CSGA-6A       | 2 1/2 -12 UN | 1.172 (29.8)   | .800 (20.3)     | 2.060 (52.2) |                    |
| GA/CSGA-6B       | 2 1/2 -12 UN | 1.265 (32.1)   | .890 (22.6)     | 2.180 (55.4) |                    |
| GA/CSGA-6C       | 2 1/2 -12 UN | 1.406 (35.7)   | 1.010 (25.7)    | 2.320 (58.9) |                    |
| GA/CSGA-7A       | 2 3/4 -12 UN | 1.515 (38.5)   | 1.130 (28.7)    | 2.380 (60.5) |                    |
| GA/CSGA-7B       | 2 1/4 -12 UN | 1.625 (41.3)   | 1.130 (28.7)    | 2.440 (62.0) |                    |
| GA/CSGA-8A       | 3 1/4 -12 UN | 1.750 (44.5)   | 1.250 (31.8)    | 2.750 (69.9) | HRSR 300           |
| GA/CSGA-8B       | 3 1/4 -12 UN | 1.875 (47.6)   | 1.380 (35.1)    | 2.880 (73.2) |                    |
| GA/CSGA-8C       | 3 1/4 -12 UN | 2.062 (52.4)   | 1.560 (39.6)    | 3.130 (79.5) | HRSR 400           |
| GA/CSGA-9A       | 4 -12 UN     | 2.185 (55.5)   | 1.690 (42.9)    | 3.250 (82.6) |                    |

D

# GA/CSGA-\*\*-49B

## Female

### Stainless Steel Cable Shield Grounding Assembly



#### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Glenair series 600 backshell assembly tools are recommended for assembly and installation.
3. Material / Finish:
  - Adapters - CRES/passivate.
  - Ferrule, grounding spring - CRES/passivate.
  - Tubing - Heat shrinkable, flame retardant, with adhesive.
4. Metric dimensions (mm) are indicated in parentheses.

**GA/CSGA-\*\*-49B**  
**Female**  
**Stainless Steel Cable Shield Grounding Assembly**



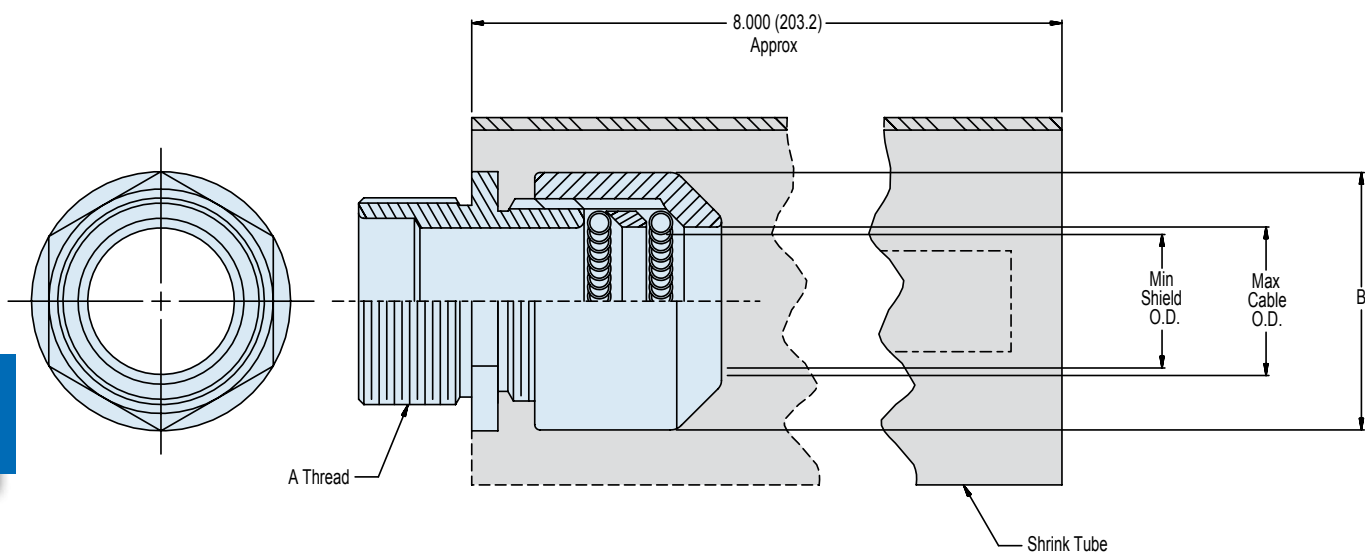
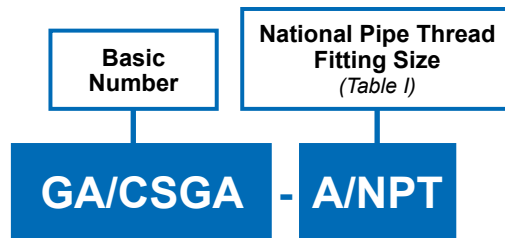
CSGA

**TABLE I: Stuffing Tube Size and Adapter Dimensions**

| Glenair Part No. | A Thread     | Max Cable O.D. | Min Shield O.D. | B Max        | Shrink Tube Number |
|------------------|--------------|----------------|-----------------|--------------|--------------------|
| GA/CSGA-1A-49B   | 7/8 -12 UN   | .406 (10.3)    | .200 (5.1)      | 1.120 (28.4) | HRSR 125           |
| GA/CSGA-2A-49B   | 1 -12 UN     | .406 (10.3)    | .200 (5.1)      | 1.120 (28.4) |                    |
| GA/CSGA-2B-49B   | 1 -12 UN     | .515 (13.1)    | .260 (6.6)      | 1.120 (28.4) |                    |
| GA/CSGA-3A-49B   | 1 1/8 -12 UN | .515 (13.1)    | .260 (6.6)      | 1.120 (28.4) |                    |
| GA/CSGA-4A-49B   | 1 1/4 -12 UN | .640 (16.3)    | .400 (10.2)     | 1.320 (33.5) | HRSR 175           |
| GA/CSGA-4B-49B   | 1 1/4 -12 UN | .750 (19.1)    | .400 (10.2)     | 1.630 (41.4) |                    |
| GA/CSGA-5A-49B   | 2 -12 UN     | .843 (21.4)    | .430 (10.9)     | 1.750 (44.5) | HRSR 200           |
| GA/CSGA-5B-49B   | 2 -12 UN     | .953 (24.2)    | .580 (14.7)     | 1.880 (47.8) |                    |
| GA/CSGA-5C-49B   | 2 -12 UN     | 1.062 (27.0)   | .690 (17.5)     | 1.880 (47.8) |                    |
| GA/CSGA-5D-49B   | 2 -12 UN     | 1.172 (29.8)   | .800 (20.3)     | 2.060 (5.2)  | HRSR 250           |
| GA/CSGA-6A-49B   | 2 1/2 -12 UN | 1.172 (29.8)   | .800 (20.3)     | 2.060 (5.2)  |                    |
| GA/CSGA-6B-49B   | 2 1/2 -12 UN | 1.265 (32.1)   | .890 (22.6)     | 2.180 (55.4) |                    |
| GA/CSGA-6C-49B   | 2 1/2 -12 UN | 1.406 (35.7)   | 1.010 (25.7)    | 2.320 (58.9) |                    |
| GA/CSGA-7A-49B   | 2 3/4 -12 UN | 1.515 (38.5)   | 1.130 (28.7)    | 2.380 (60.5) |                    |
| GA/CSGA-7B-49B   | 2 1/4 -12 UN | 1.625 (41.3)   | 1.130 (28.7)    | 2.440 (62.0) |                    |
| GA/CSGA-8A-49B   | 3 1/4 -12 UN | 1.750 (44.5)   | 1.250 (31.8)    | 2.750 (69.9) | HRSR 300           |
| GA/CSGA-8B-49B   | 3 1/4 -12 UN | 1.875 (47.6)   | 1.380 (35.1)    | 2.880 (73.2) |                    |
| GA/CSGA-8C-49B   | 3 1/4 -12 UN | 2.062 (52.4)   | 1.560 (39.6)    | 3.130 (79.5) | HRSR 400           |
| GA/CSGA-9A-49B   | 4 -12 UN     | 2.185 (55.5)   | 1.690 (42.9)    | 3.250 (82.6) |                    |

D

# GA/CSGA-\*/NPT Male Pipe Thread Cable Shield Grounding Assembly



## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Glenair series 600 backshell assembly tools are recommended for assembly and installation.
3. Material / Finish:  
Adapters - Al alloy/cad/O.D. over electroless nickel (500 hr salt spray).  
Ferrule, grounding spring - CRES/passivate.  
Tubing - Heat shrinkable, flame retardant, with adhesive.
4. Metric dimensions (mm) are indicated in parentheses.

**GA/CSGA-\*/NPT**  
**Male Pipe Thread**  
**Cable Shield Grounding Assembly**



CSGA

**TABLE I: Stuffing Tube Size and Adapter Dimensions**

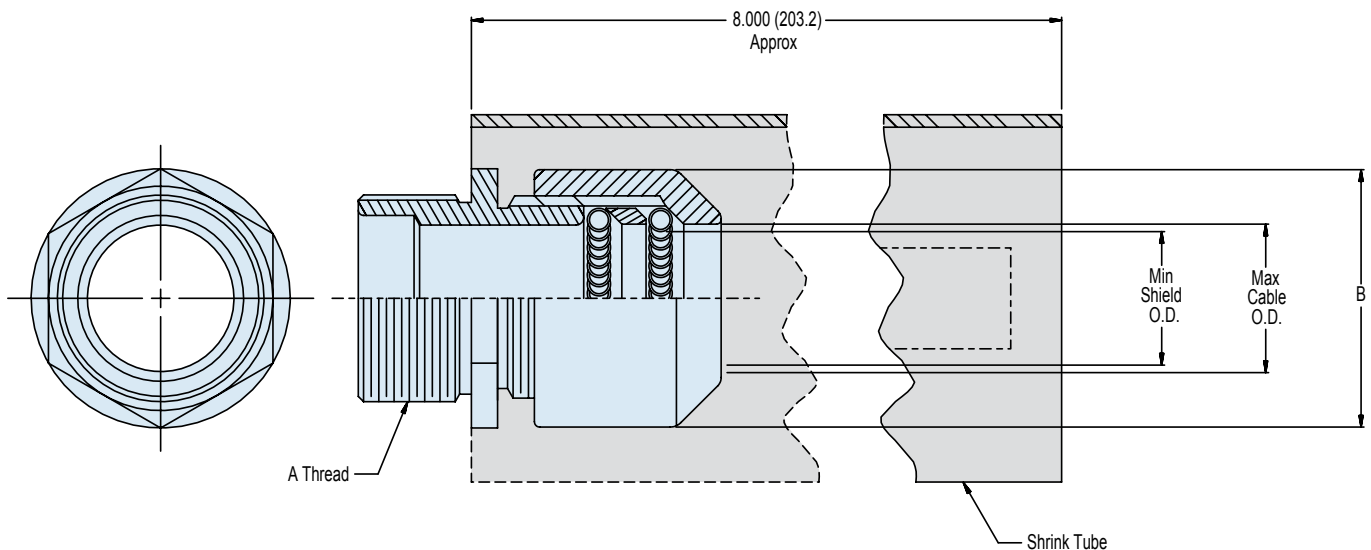
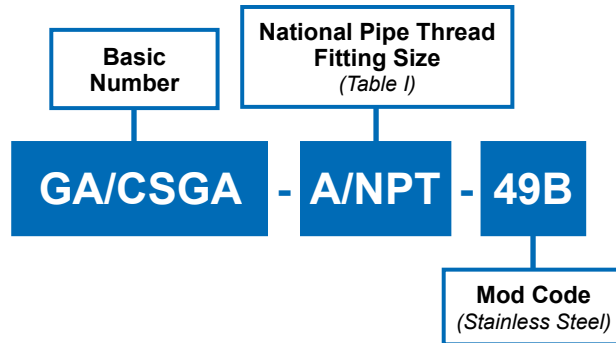
| Glenair Part No. | A Thread       | Max Cable O.D. | Min Shield O.D. | B Max        | Shrink Tube Number |
|------------------|----------------|----------------|-----------------|--------------|--------------------|
| GA/CSGA-A/NPT    | 3/8-18 NPT     | .406 (10.3)    | .200 (5.1)      | 1.120 (28.4) | HRSR 125           |
| GA/CSGA-B/NPT    | 1/2-14 NPT     | .515 (13.1)    | .260 (6.6)      | 1.120 (28.4) |                    |
| GA/CSGA-C/NPT    | 3/4-14NPT      | .640 (16.3)    | .400 (10.2)     | 1.320 (33.5) | HRSR 175           |
| GA/CSGA-D/NPT    | 3/4-14 NPT     | .750 (19.1)    | .400 (10.2)     | 1.630 (41.4) |                    |
| GA/CSGA-E/NPT    | 1-11 1/2 NPT   | .812 (20.6)    | .430 (10.9)     | 1.630 (41.4) |                    |
| GA/CSGA-F/NPT    | 1-11 1/2 NPT   | .843 (21.4)    | .470 (11.9)     | 1.750 (44.5) | HRSR 200           |
| GA/CSGA-G/NPT    | 1-11 1/2 NPT   | .953 (24.2)    | .580 (14.7)     | 1.880 (47.8) |                    |
| GA/CSGA-J/NPT    | 1/4-11 1/2 NPT | 1.062 (27.0)   | .690 (17.5)     | 1.880 (47.8) |                    |
| GA/CSGA-K/NPT    | 1/4-11 1/2 NPT | 1.172 (29.8)   | .800 (20.3)     | 2.060 (52.2) | HRSR 250           |
| GA/CSGA-L/NPT    | 1/4-11 1/2 NPT | 1.265 (32.1)   | .890 (22.6)     | 2.180 (55.4) |                    |
| GA/CSGA-M/NPT    | 1/2-11 1/2 NPT | 1.406 (35.7)   | 1.010 (25.7)    | 2.320 (58.9) |                    |
| GA/CSGA-N/NPT    | 1/2-11 1/2 NPT | 1.515 (38.5)   | 1.130 (28.7)    | 2.380 (60.5) |                    |
| GA/CSGA-P/NPT    | 2-11 NPT       | 1.625 (41.3)   | 1.200 (30.5)    | 2.440 (62.0) |                    |
| GA/CSGA-R/NPT    | 2-11 NPT       | 1.750 (44.5)   | 1.250 (31.8)    | 2.750 (69.9) | HRSR 300           |
| GA/CSGA-S/NPT    | 2-11 NPT       | 1.875 (47.6)   | 1.380 (35.1)    | 2.880 (73.2) |                    |
| GA/CSGA-T/NPT    | 2 1/2-8 NPT    | 2.062 (52.4)   | 1.560 (39.6)    | 3.130 (79.5) | HRSR 400           |
| GA/CSGA-V/NPT    | 2 1/2-8 NPT    | 2.187 (55.5)   | 1.690 (42.9)    | 3.250 (82.6) |                    |

D

# GA/CSGA-\*/NPT-49B

## Male Pipe Thread

### Stainless Steel Cable Shield Grounding Assembly



#### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Glenair series 600 backshell assembly tools are recommended for assembly and installation.
3. Material / Finish:  
Adapters - CRES/passivate.  
Ferrule, grounding spring - CRES/passivate.  
Tubing - Heat shrinkable, flame retardant, with adhesive.
4. Metric dimensions (mm) are indicated in parentheses.

**GA/CSGA-\*/NPT-49B**  
**Male Pipe Thread**  
**Stainless Steel Cable Shield Grounding Assembly**



CSGA

**TABLE I: Stuffing Tube Size and Adapter Dimensions**

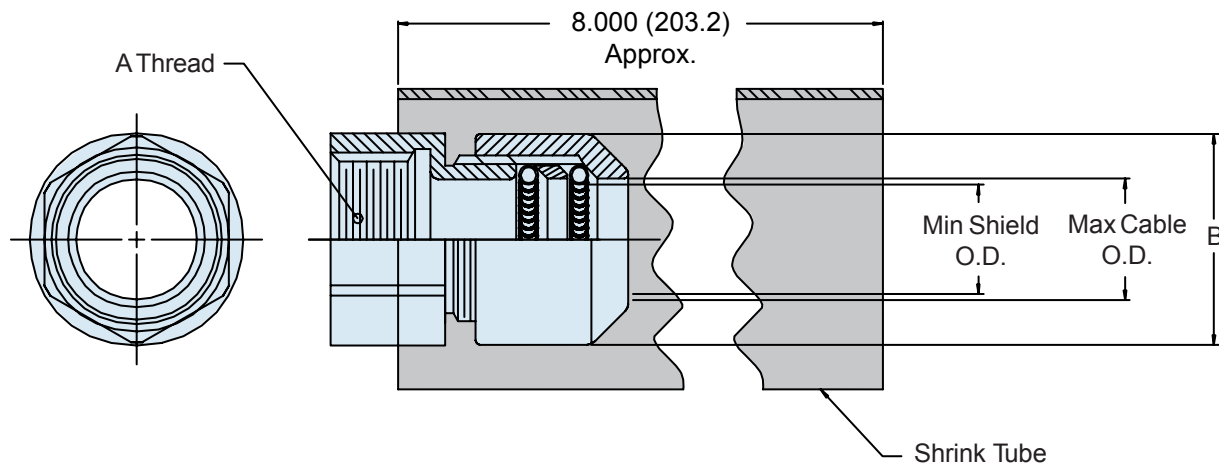
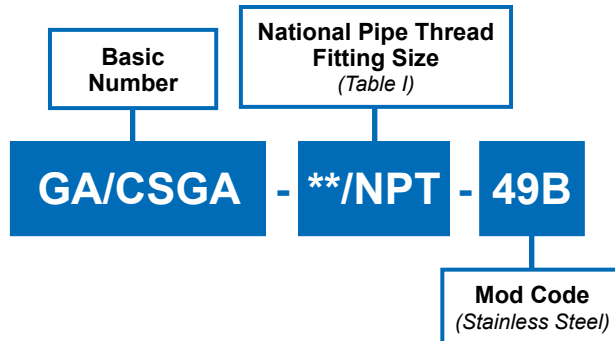
| Glenair Part No.  | A Thread         | Max Cable O.D. | Min Shield O.D. | B Max        | Shrink Tube Number |
|-------------------|------------------|----------------|-----------------|--------------|--------------------|
| GA/CSGA-A/NPT-49B | 3/8-18 NPT       | .406 (10.3)    | .200 (5.1)      | 1.120 (28.4) | HRSR 125           |
| GA/CSGA-B/NPT-49B | 1/2-14 NPT       | .515 (13.1)    | .260 (6.6)      | 1.120 (28.4) |                    |
| GA/CSGA-C/NPT-49B | 3/4-14NPT        | .640 (16.3)    | .400 (10.2)     | 1.320 (33.5) | HRSR 175           |
| GA/CSGA-D/NPT-49B | 3/4-14 NPT       | .750 (19.1)    | .400 (10.2)     | 1.630 (41.4) |                    |
| GA/CSGA-E/NPT-49B | 1-11 1/2 NPT     | .812 (20.6)    | .430 (10.9)     | 1.630 (41.4) |                    |
| GA/CSGA-F/NPT-49B | 1-11 1/2 NPT     | .843 (21.4)    | .470 (11.9)     | 1.750 (44.5) | HRSR 200           |
| GA/CSGA-G/NPT-49B | 1-11 1/2 NPT     | .953 (24.2)    | .580 (14.7)     | 1.880 (47.8) |                    |
| GA/CSGA-J/NPT-49B | 1 1/4-11 1/2 NPT | 1.062 (27.0)   | .690 (17.5)     | 1.880 (47.8) |                    |
| GA/CSGA-K/NPT-49B | 1 1/4-11 1/2 NPT | 1.172 (29.8)   | .800 (20.3)     | 2.060 (5.2)  | HRSR 250           |
| GA/CSGA-L/NPT-49B | 1 1/4-11 1/2 NPT | 1.265 (32.1)   | .890 (22.6)     | 2.180 (55.4) |                    |
| GA/CSGA-M/NPT-49B | 1 1/2-11 1/2 NPT | 1.406 (35.7)   | 1.010 (25.7)    | 2.320 (58.9) |                    |
| GA/CSGA-N/NPT-49B | 1 1/2-11 1/2 NPT | 1.515 (38.5)   | 1.130 (28.7)    | 2.380 (60.5) |                    |
| GA/CSGA-P/NPT-49B | 2-11 NPT         | 1.625 (41.3)   | 1.200 (30.5)    | 2.440 (62.0) |                    |
| GA/CSGA-R/NPT-49B | 2-11 NPT         | 1.750 (44.5)   | 1.250 (31.8)    | 2.750 (69.9) | HRSR 300           |
| GA/CSGA-S/NPT-49B | 2-11 NPT         | 1.875 (47.6)   | 1.380 (35.1)    | 2.880 (73.2) |                    |
| GA/CSGA-T/NPT-49B | 2 1/2-8 NPT      | 2.062 (52.4)   | 1.560 (39.6)    | 3.130 (79.5) | HRSR 400           |
| GA/CSGA-V/NPT-49B | 2 1/2-8 NPT      | 2.187 (55.5)   | 1.690 (42.9)    | 3.250 (82.6) |                    |

D

# GA/CSGA-\*\*/NPT-49B

## Female Pipe Thread

### Stainless Steel Cable Shield Grounding Assembly



#### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Glenair series 600 backshell assembly tools are recommended for assembly and installation.
3. Material / Finish:  
Adapters - CRES/passivate.  
Ferrule, grounding spring - CRES/passivate.  
Tubing - Heat shrinkable, flame retardant, with adhesive.
4. Metric dimensions (mm) are indicated in parentheses.

**GA/CSGA-\*/NPT-49B**  
**Female Pipe Thread**  
**Stainless Steel Cable Shield Grounding Assembly**



CSGA

**TABLE I: Stuffing Tube Size and Adapter Dimensions**

| Glenair Part No.  | A Thread       | Max Cable O.D. | Min Shield O.D. | B Max        | Shrink Tube Number |
|-------------------|----------------|----------------|-----------------|--------------|--------------------|
| GA/CSGA-A/NPT-49B | 3/8-18 NPT     | .406 (10.3)    | .200 (5.1)      | 1.120 (28.4) | HRSR 125           |
| GA/CSGA-B/NPT-49B | 1/2-14 NPT     | .515 (13.1)    | .260 (6.6)      | 1.120 (28.4) |                    |
| GA/CSGA-C/NPT-49B | 3/4-14NPT      | .640 (16.3)    | .400 (10.2)     | 1.320 (33.5) | HRSR 175           |
| GA/CSGA-D/NPT-49B | 3/4-14 NPT     | .750 (19.1)    | .400 (10.2)     | 1.630 (41.4) |                    |
| GA/CSGA-E/NPT-49B | 1-11 1/2 NPT   | .812 (20.6)    | .430 (10.9)     | 1.630 (41.4) |                    |
| GA/CSGA-F/NPT-49B | 1-11 1/2 NPT   | .843 (21.4)    | .470 (11.9)     | 1.750 (44.5) | HRSR 200           |
| GA/CSGA-G/NPT-49B | 1-11 1/2 NPT   | .953 (24.2)    | .580 (14.7)     | 1.880 (47.8) |                    |
| GA/CSGA-J/NPT-49B | 1/4-11 1/2 NPT | 1.062 (27.0)   | .690 (17.5)     | 1.880 (47.8) |                    |
| GA/CSGA-K/NPT-49B | 1/4-11 1/2 NPT | 1.172 (29.8)   | .800 (20.3)     | 2.060 (52.2) | HRSR 250           |
| GA/CSGA-L/NPT-49B | 1/4-11 1/2 NPT | 1.265 (32.1)   | .890 (22.6)     | 2.180 (55.4) |                    |
| GA/CSGA-M/NPT-49B | 1/2-11 1/2 NPT | 1.406 (35.7)   | 1.010 (25.7)    | 2.320 (58.9) |                    |
| GA/CSGA-N/NPT-49B | 1/2-11 1/2 NPT | 1.515 (38.5)   | 1.130 (28.7)    | 2.380 (60.5) |                    |
| GA/CSGA-P/NPT-49B | 2-11 NPT       | 1.625 (41.3)   | 1.200 (30.5)    | 2.440 (62.0) | HRSR 300           |
| GA/CSGA-R/NPT-49B | 2-11 NPT       | 1.750 (44.5)   | 1.250 (31.8)    | 2.750 (69.9) |                    |
| GA/CSGA-S/NPT-49B | 2-11 NPT       | 1.875 (47.6)   | 1.380 (35.1)    | 2.880 (73.2) |                    |
| GA/CSGA-T/NPT-49B | 2 1/2-8 NPT    | 2.062 (52.4)   | 1.560 (39.6)    | 3.130 (79.5) | HRSR 400           |
| GA/CSGA-V/NPT-49B | 2 1/2-8 NPT    | 2.187 (55.5)   | 1.690 (42.9)    | 3.250 (82.6) |                    |

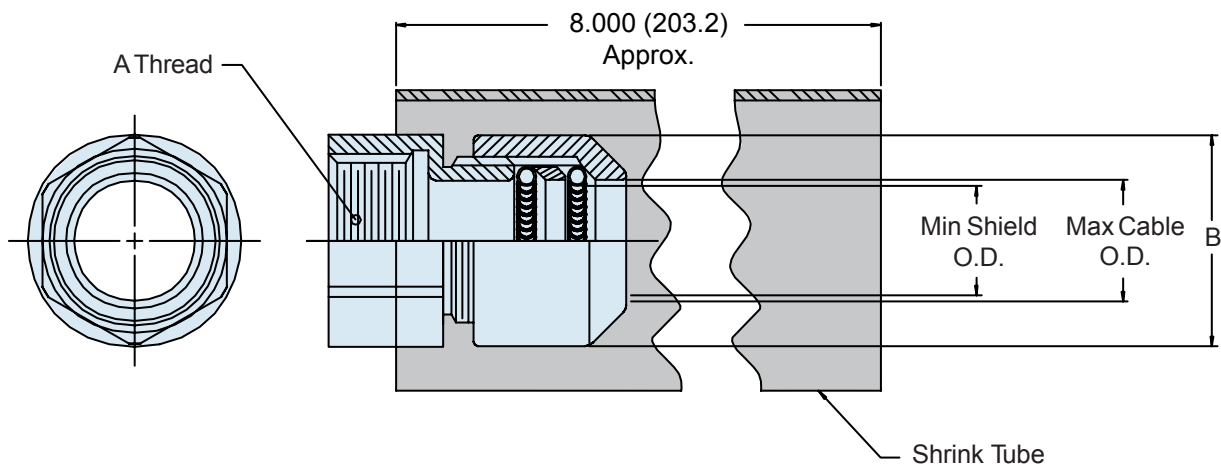
D

# GA/CSGA-\*\*/NPT Female Pipe Thread Cable Shield Grounding Assembly

Basic  
Number

National Pipe Thread  
Fitting Size  
(Table I)

**GA/CSGA - \*\*/NPT**



## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Glenair series 600 backshell assembly tools are recommended for assembly and installation.
3. Material / Finish:  
Adapters - Al alloy/cad/O.D. over electroless nickel (500 hr salt spray).  
Ferrule, grounding spring - CRES/passivate.  
Tubing - Heat shrinkable, flame retardant, with adhesive.
4. Metric dimensions (mm) are indicated in parentheses.

**GA/CSGA-\*\*/NPT**  
**Female Pipe Thread**  
**Cable Shield Grounding Assembly**



CSGA

**TABLE I: Stuffing Tube Size and Adapter Dimensions**

| Glenair Part No. | A Thread         | Max Cable O.D. | Min Shield O.D. | B Max        | Shrink Tube Number |
|------------------|------------------|----------------|-----------------|--------------|--------------------|
| GA/CSGA-1A/NPT   | 3/8-18 NPT       | .406 (10.3)    | .200 (5.1)      | 1.120 (28.4) | HRSR 125           |
| GA/CSGA-2B/NPT   | 1/2-14 NPT       | .515 (13.1)    | .260 (6.6)      | 1.120 (28.4) |                    |
| GA/CSGA-3C/NPT   | 3/4-14NPT        | .640 (16.3)    | .400 (10.2)     | 1.320 (33.5) | HRSR 175           |
| GA/CSGA-3D/NPT   | 3/4-14 NPT       | .750 (19.1)    | .400 (10.2)     | 1.630 (41.4) |                    |
| GA/CSGA-4E/NPT   | 1-11 1/2 NPT     | .812 (20.6)    | .430 (10.9)     | 1.630 (41.4) |                    |
| GA/CSGA-4F/NPT   | 1-11 1/2 NPT     | .843 (21.4)    | .470 (11.9)     | 1.750 (44.5) | HRSR 200           |
| GA/CSGA-4G/NPT   | 1-11 1/2 NPT     | .953 (24.2)    | .580 (14.7)     | 1.880 (47.8) |                    |
| GA/CSGA-5J/NPT   | 1 1/4-11 1/2 NPT | 1.062 (27.0)   | .690 (17.5)     | 1.880 (47.8) |                    |
| GA/CSGA-5K/NPT   | 1 1/4-11 1/2 NPT | 1.172 (29.8)   | .800 (20.3)     | 2.060 (52.2) | HRSR 250           |
| GA/CSGA-5L/NPT   | 1 1/4-11 1/2 NPT | 1.265 (32.1)   | .890 (22.6)     | 2.180 (55.4) |                    |
| GA/CSGA-6M/NPT   | 1 1/2-11 1/2 NPT | 1.406 (35.7)   | 1.010 (25.7)    | 2.320 (58.9) |                    |
| GA/CSGA-6N/NPT   | 1 1/2-11 1/2 NPT | 1.515 (38.5)   | 1.130 (28.7)    | 2.380 (60.5) |                    |
| GA/CSGA-7P/NPT   | 2-11 NPT         | 1.625 (41.3)   | 1.200 (30.5)    | 2.440 (62.0) | HRSR 300           |
| GA/CSGA-7R/NPT   | 2-11 NPT         | 1.750 (44.5)   | 1.250 (31.8)    | 2.750 (69.9) |                    |
| GA/CSGA-7S/NPT   | 2-11 NPT         | 1.875 (47.6)   | 1.380 (35.1)    | 2.880 (73.2) |                    |
| GA/CSGA-8T/NPT   | 2 1/2-8 NPT      | 2.062 (52.4)   | 1.560 (39.6)    | 3.130 (79.5) | HRSR 400           |
| GA/CSGA-8V/NPT   | 2 1/2-8 NPT      | 2.187 (55.5)   | 1.690 (42.9)    | 3.250 (82.6) |                    |

D



## CSGA-\*(S) Split Type Cable Shield Grounding Assembly

- Split configuration installs easily without cutting cable
- Provides 360° grounding of cables at stuffing tubes and swage tubes
- Meets MIL-STD-1310 Grounding requirements for EMI and EMP
- Wraparound Sleeve Provides Positive Weather Sealing

Glenair's Cable Shield Grounding Assembly, Split Type, is a grounding device that provides 360° grounding to an overall shielded cable, such as coaxial cables, at the top side entrance to MIL-S-24235 stuffing tubes. The cable shield grounding adapter provides approximately 80 dB of grounding effectiveness from 1 MHz to 100MHz.

**TABLE I**

| Part Number  | Tube Size | Max Cable O.D. | Min Shield O.D. |
|--------------|-----------|----------------|-----------------|
| GA/CSGA-A(S) | A         | .406 (10.3)    | .200 (5.1)      |
| GA/CSGA-B(S) | B         | .515 (13.1)    | .260 (6.6)      |
| GA/CSGA-C(S) | C         | .640 (16.3)    | .400 (10.2)     |
| GA/CSGA-D(S) | D         | .750 (19.1)    | .400 (10.2)     |
| GA/CSGA-E(S) | E         | .812 (20.6)    | .430 (10.9)     |
| GA/CSGA-F(S) | F         | .843 (21.4)    | .470 (11.9)     |
| GA/CSGA-G(S) | G         | .953 (24.2)    | .580 (14.7)     |
| GA/CSGA-J(S) | J         | 1.062 (27.0)   | .690 (17.5)     |
| GA/CSGA-K(S) | K         | 1.172 (29.8)   | .800 (20.3)     |
| GA/CSGA-L(S) | L         | 1.265 (32.1)   | .890 (22.6)     |
| GA/CSGA-M(S) | M         | 1.406 (35.7)   | 1.010 (25.7)    |
| GA/CSGA-N(S) | N         | 1.515 (38.5)   | 1.130 (28.7)    |
| GA/CSGA-P(S) | P         | 1.625 (41.3)   | 1.130 (28.7)    |
| GA/CSGA-R(S) | R         | 1.750 (44.5)   | 1.250 (31.8)    |
| GA/CSGA-S(S) | S         | 1.875 (47.6)   | 1.380 (35.1)    |
| GA/CSGA-T(S) | T         | 2.062 (52.4)   | 1.560 (39.6)    |
| GA/CSGA-V(S) | V         | 2.187 (55.5)   | 1.690 (42.9)    |
| GA/CSGA-W(S) | W         | 1.312 (33.3)   | 1.810 (46.0)    |
| GA/CSGA-X(S) | X         | 2.500 (63.5)   | 2.000 (50.8)    |

Metric dimensions (mm) are indicated in parentheses.

**CSGA-\*(S)  
Split Type  
Cable Shield Grounding Assembly**

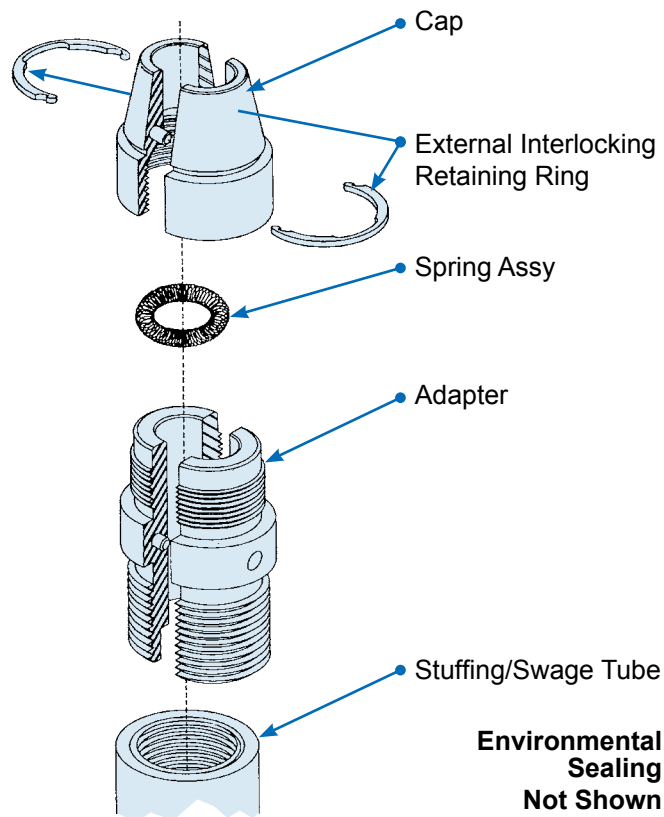


CSGA

The grounding adapters are provided in 19 different sizes to accommodate MIL-S-24235 stuffing tube sizes "A" through "X". The grounding adapters are provided in kit form which includes all the necessary parts and instruc-

tions to install the adapter, except gland nut tightening wrench and heat source for shrinking the weather seal shroud. Contents of the kit are shown in the illustration below:

- Specified Grounding Adapter
- Anti-Seize Compound and Applicator
- Cable Jacket Cleaning Strip
- Wraparound Sleeve
- Installation Instruction Sheet



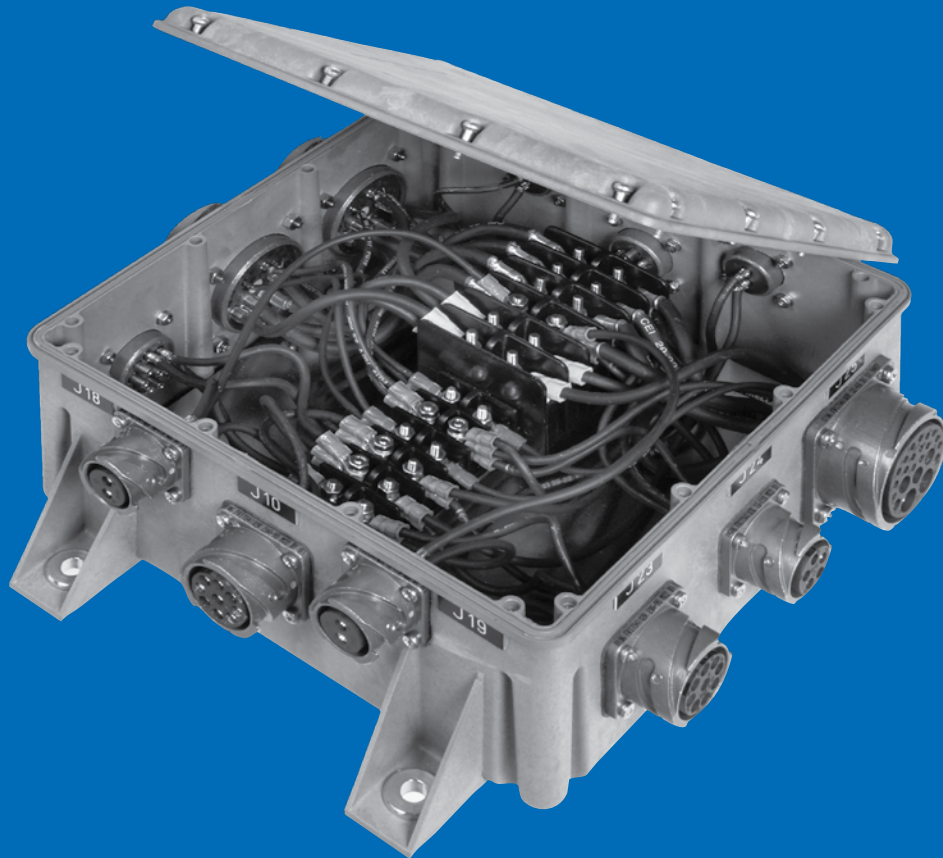
D

**SERIES 14**

# **COST SAVER**

## **EMI/RFI Composite Junction Boxes**

*Lightweight ♦ Corrosion-Free ♦ Shielded ♦ Sealed*



**G**lenair Series 14 CostSaver Composite EMI/RFI Junction Boxes can be specially designed and outfitted for any application requirement. We offer a dozen standard sizes that can be equipped with your selection of feedthrough fittings, connectors, grounding devices, terminal boards—you name it. For complete information please see our composite products catalog or visit our website, [www.glenair.com](http://www.glenair.com)



# Glenair Composite Electrical Boxes Resist Corrosion and Reduce Costly and Time-Consuming Maintenance

Fleet managers are encouraged to replace corroded or leaking electrical metal boxes with their composite counterparts. Glenair composite boxes eliminate the costly repeated need to remove corroded metal boxes, re-preserve the ship's hull, installing a new box, and re-connecting the electrical system. Widespread use of Glenair composite boxes can eliminate the

need for ships to paint, repair and replace topside electrical boxes.

Glenair composite boxes provide corrosion-resistant alternatives to the metal boxes listed in MIL-T-24649 that covers most standard telephone boxes and MIL-E-24b42. Glenair composite boxes were developed to replace metal boxes on a one-for-one form fit and function basis.

Series 316 stainless steel hardware provides long-term durability

IP67 rated seals and gaskets protect equipment from moisture and dust

Glass reinforced composite thermoplastic material is strong and durable and yet extremely lightweight.

Glenair 147-021 and 147-022 Series Sound Powered Telephone Boxes for the US Navy are available in three box sizes with custom single, dual or quad jack receptacles

Low harmonic resonance and inherent attenuating properties reduce loosening and decoupling of feed-through fittings and accessories.

Unlimited corrosion resistance compared to metal junction boxes reduces repair and maintenance costs.



## Glenair Composite Box National Stock Numbers

Glenair composite boxes have passed all shock, fire and EMI testing requirement. SCD-6922 authorizes the use of composite boxes on surface ships. NASEA standard drawing 803-6983506 Rev-A *"Electrical Enclosures,*

*Composite, Installation and Details"* provides box installation details and instructions.

The following national stock numbers have been established for these Navy approved, corrosion-proof composite boxes:

**Glenair Composite Box National Stock Numbers**

| Part Number Ref No. | FLIS Nomenclature         | New Composite NSN | Eq. Brass Box NSW | Part/Symbol Number     | Description |
|---------------------|---------------------------|-------------------|-------------------|------------------------|-------------|
| 147-021XMS-02       | Enclosure, Composite      | 5935-01-572-6657  | 5935-00-552-6790  | SYMBOL 2842            | Dual SPT    |
| 147-021XMS-03       | Enclosure, Composite      | 5935-01-572-5631  | 5935-00-355-4739  | SYMBOL 2843            | Quad SPT    |
| 147-022XMS-01       | Enclosure, Composite      | 5935-01-572-5487  | 5935-00-552-6791  | SYMBOL 2841            | Single SPT  |
| 140-060XMS-01       | Junction Box, Composite   | 5975-01-556-7957  | 5975-00-122-6048  | MIL-E-24142/1          | Small       |
| 140-060XMS-02       | Junction Box, Composite   | 5975-01-557-2672  | 5975-00-357-0974  | MIL-E-24142-/4-001     | Medium      |
| 140-060XMS-03       | Junction Box, Composite   | 5975-01-557-2679  | 5395-01-185-3693  | ENC6X9                 | Large       |
| 140-060XMS-05       | Junction Box, Composite   | 5975-01-556-7948  | None              | No NSN Identified      | Small Round |
| 140-060XMS-01T4     | Junction Box, Composite   | 5940-01-556-9434  | 5940-00-351-2223  | SYMBOL 528             | Small       |
| 140-060XMS-01T6     | Junction Box, Composite   | 5940-01-556-9443  | NICN: LLCA42632   | SYMBOL 444             | Small       |
| 140-060XMS-05T4     | Junction Box, Composite   | 5940-01-557-2712  | 5940-00-024-0128  | SYMBOL 400.1           | Small Round |
| 140-060XMS-05T2     | Junction Box, Composite   | 5940-01-557-2579  | 5940-00-351-0000  | M24558/1-520.1         | Small Round |
| 140-060XMS-03T1     | Junction Box, Composite   | 5940-01-556-9489  | 5940-00-215-5962  | SYMBOL 432.1           | Large       |
| 140-060XMS-03T2     | Junction Box, Composite   | 5940-01-557-2564  | 5940-00-080-3931  | SYMBOL 434             | Large       |
| 140-060XMS-03T5     | Junction Box, Composite   | 5940-01-557-2578  | 5940-00-503-4204  | SYMBOL 529             | Large       |
| 140-060XMS-03T9     | Junction Box, Composite   | 5940-01-557-2582  | 5940-00-215-5963  | SYMBOL 433.1           | Large       |
| 140-060XMS-03T10    | Junction Box, Composite   | 5940-01-556-9494  | 5940-00-2226      | SYMBOL 522.1           | Large       |
| 140-060XMS-03T11    | Junction Box, Composite   | 5940-01-557-2563  | 5940-01-387-4412  | M24558/8-446           | Large       |
| 140-060XMS-03T12    | Junction Box, Composite   | 5940-01-556-9499  | 4940-00-351-2225  | M24558/9-525           | Large       |
| 140-060XMS-01T3     | Junction Box, Composite   | 5975-01-556-7967  | 5940-00-215-5959  | SYMBOL 435.1           | Small       |
| 147-023XMS-02       | Electrical Box, Composite | 5940-01-557-2667  | 5935-00-086-8922  | SYMBOL 1099.1          | Single 115V |
| 147-023XMS-01       | Electrical Box, Composite | 5940-01-557-2645  | 5935-00-720-0527  | SYMBOL 35.1            | Single 115V |
| 147-032XMS-0005G    | Electrical Box, Composite | 5940-01-557-2719  | 5935-01-145-3182  | MILR2726-71 SYMBOL 101 | Single 125V |
| 147-033XMS-0003     | Electrical Box, Composite | 5940-01-557-2725  | 5935-01-415-0883  | SYMBOL 1098-1          | Single 115V |
| 147-020XMS-02       | Junction Box, Composite   | 5975-01-556-9504  | None              | No NSN Identified      | Dual 115V   |
| 147-020XMS-05       | Electrical Box, Composite | 5940-01-557-2634  | None              | No NSN Identified      | Dual 115V   |

# Glenair Composite Box Lid Replacement National Stock Numbers

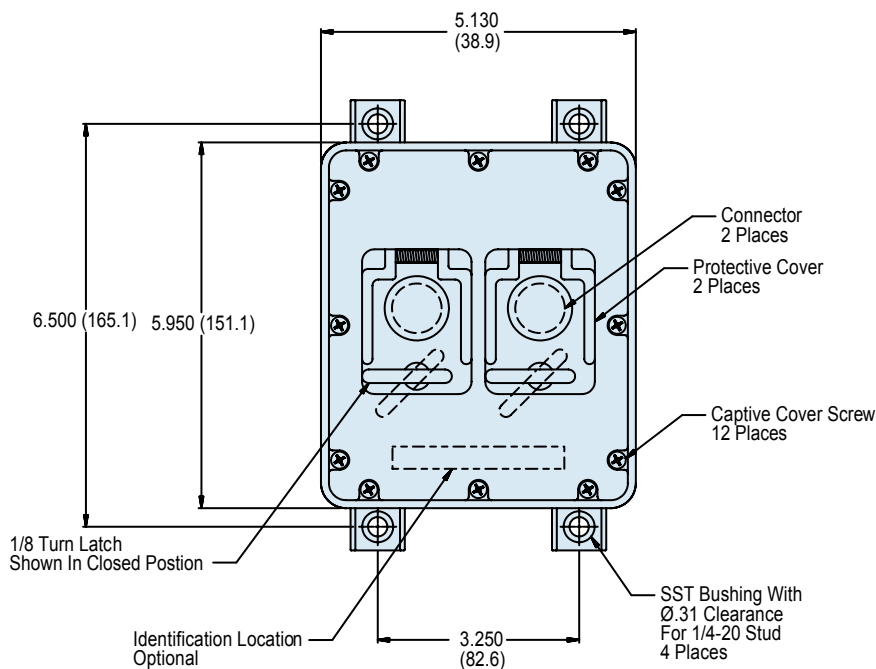
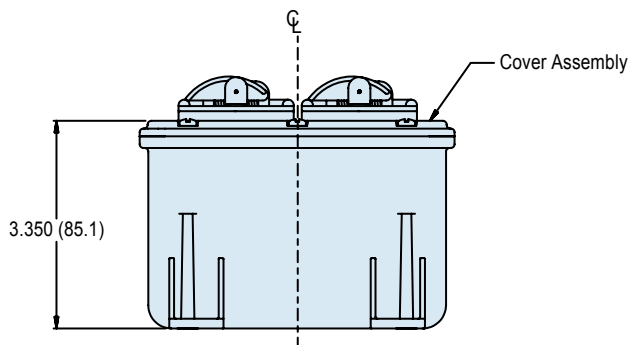


Composite  
Boxes

**Glenair Composite Box Lid National Stock Numbers**

| Part Number<br>Ref No. | FLIS Nomenclature        | New Composite NSN | Eq. Brass<br>Box NSW | Use With<br>Part Number                                    | Description                           |
|------------------------|--------------------------|-------------------|----------------------|------------------------------------------------------------|---------------------------------------|
| 140-XMS-05             | Cover, Terminal Box      | 5935-01-572-5480  | None                 | 147-021XMS-02                                              | Lid, Composite                        |
| 140-065XMS-06          | Cover, Terminal Box      | 5935-01-572-5483  | None                 | 147-021XMS-03                                              | Lid, Composite                        |
| 140-065XMS-14          | Cover, Terminal Box      | 5940-01-557-2622  | None                 | 140-060XMS-05,<br>05T2 and 05T4                            | Lid, Composite                        |
| 140-065XMS-01          | Cover, Terminal Box      | 5940-01-557-2612  | None                 | 140-060XMS-01,<br>01T3, 01T4 and 01T6                      | Lid, Composite                        |
| 140-065XMS-03          | Cover, Junction Box      | 5975-01-556-9522  | None                 | 140-060XMS-02                                              | Lid, Composite                        |
| 140-065XMS-12          | Cover, Terminal Box      | 5935-01-572-5845  | None                 | 147-022X0-01                                               | Lid, Composite                        |
| 630-038X0-02K          | Cover, Junction Box      | 5975-01-556-9582  | None                 | 022X0-01,<br>147-021X0-02 and 147-021X0-03                 | Cover, Composite<br>with Spring Latch |
| 140-065XMS-15          | Cover, Terminal Box      | 5940-01-557-2626  | None                 | 140-060XMS-03, 03T1, 03T5<br>03T9, 03T10, 03T11, AND 03T12 | Lid, Composite                        |
| 140-065XMS-17          | Cover, Terminal Box      | 5940-01-557-2616  | None                 | 147-023XMS-02                                              | Lid, Composite                        |
| 630-038X0-04K          | Cover, Junction Box      | 5975-01-556-9627  | None                 | 147-023XMS-02<br>and 147020XMS-05                          | Cover, Composite<br>with Spring Latch |
| 140-065XMS-13          | Cover, Terminal Box      | 5940-01-557-2585  | None                 | 147-023XMS-01                                              | Lid, Composite                        |
| 140-065XMS-08          | Cover, Terminal Box      | 5940-01-557-2573  | None                 | 147-020XMS-02                                              | Lid, Composite                        |
| 630-038X0-01K          | Cover, Junction Box      | 5975-01-556-9621  | None                 | 147023XMS-01<br>and 147-023XMS-02                          | Cover, Composite<br>with Spring Latch |
| 140-065XMS-16          | Cover, Terminal Box      | 5940-01-557-2587  | None                 | 147-020XMS-05                                              | Lid, Composite                        |
| 227-059X004            | Connector, Sound Powered | 5935-01-558-3700  | None                 | 147-022X0-01<br>and 147-021X0-02                           | SPT Jack,<br>Composite Panel          |

E

**147-021XMS-02**  
**(NSN: 5935-01-572-6657)**  
**Dual Sound Powered Composite Telephone Box****Basic Part  
Number****147-021****Finish  
(See Table I)****XMS - 02****Basic Box  
Number****FIGURE 1 TOP VIEW**

**147-021XMS-02**  
**(NSN: 5935-01-572-6657)**  
**Dual Sound Powered Composite Telephone Box**



Composite  
Boxes

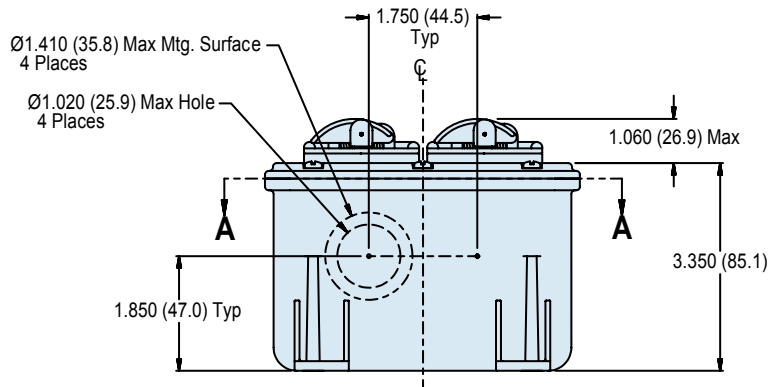
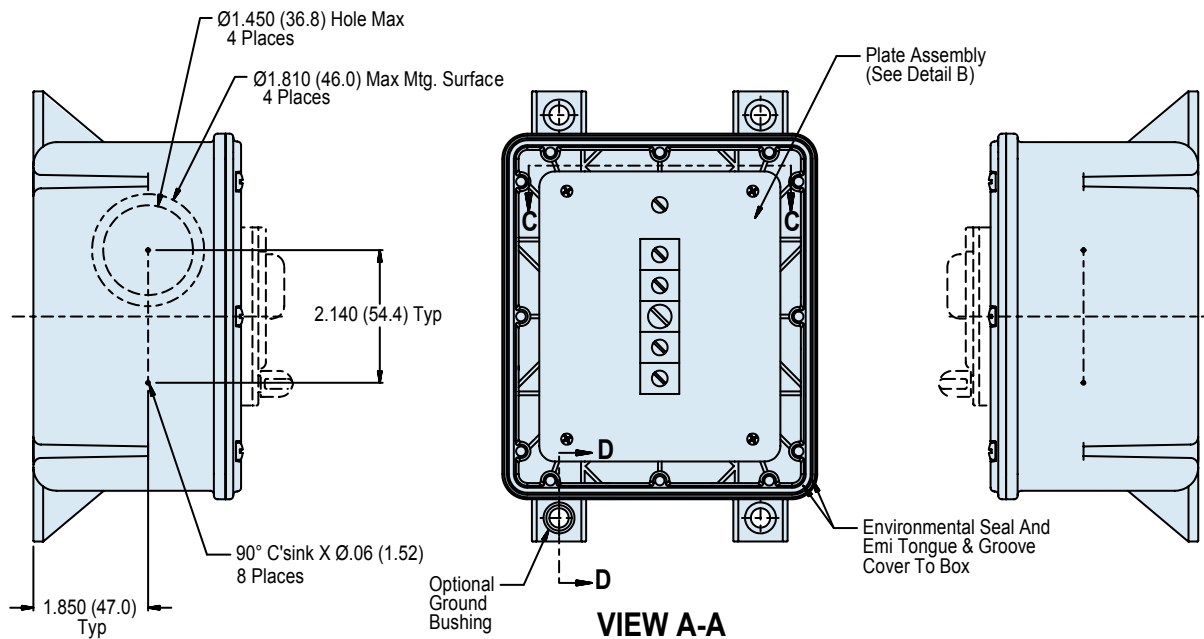
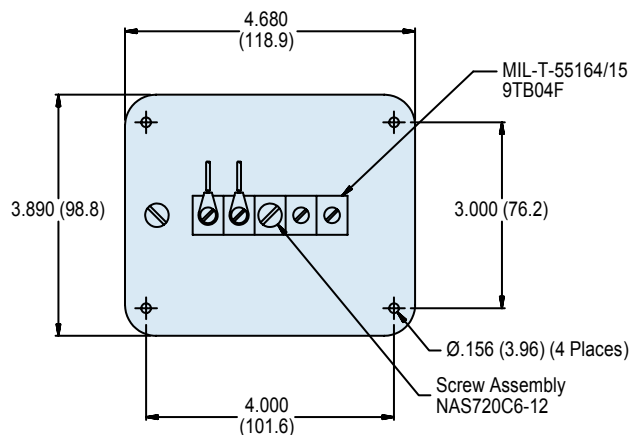


**FIGURE 2**

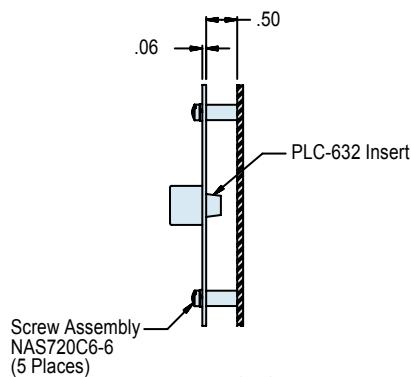


**VIEW A-A**

**147-021XMS-02**  
**(NSN: 5935-01-572-6657)**  
**Dual Sound Powered Composite Telephone Box**



**DETAIL B**



**VIEW C-C**

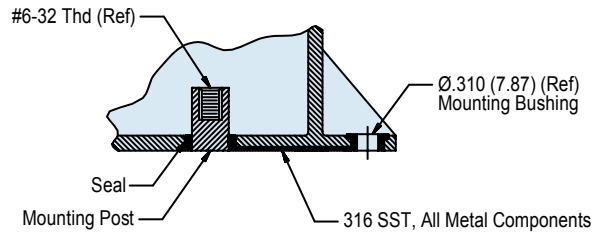
**TABLE I: Finish**

| Symbol     | Description                                                                             |
|------------|-----------------------------------------------------------------------------------------|
| <b>XMS</b> | Internal Surfaces - Electroless Nickel<br>Exterior Surfaces - Unplated Light Grey Color |
| <b>XO</b>  | No Plating                                                                              |

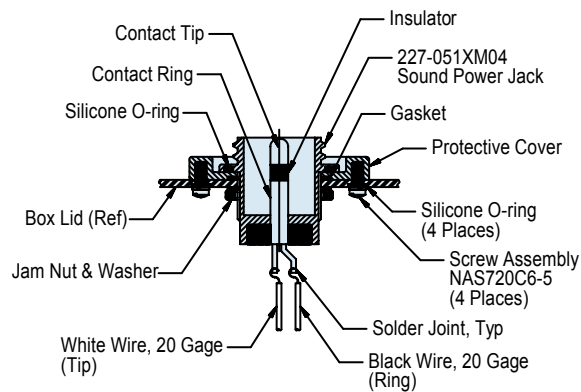
**147-021XMS-02**  
**(NSN: 5935-01-572-6657)**  
**Dual Sound Powered Composite Telephone Box**



Composite  
Boxes



**SECTION D-D**  
**Electrical Ground Through Internal**  
**Mounting Post To External Mounting Bushing**



**SOUND POWER JACK SECTION VIEW**  
**(2 Places)**

**APPLICATION NOTES**

- |                                                                                                                           |                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490). | 4. Material / Finish:<br>Box, cover - Thermoplastic grey color/see Table I.<br>Hardware - 316 SST/passivate.<br>Seals and gaskets - Silicone/N.A.<br>Mounting Plate - 300 series SST/passivate. |
| 2. Color may be subject to fading, however UV exposure will not affect material physical properties.                      | 5. NAVSEA approved; Dwg 803-698-3506.                                                                                                                                                           |
| 3. Assembly is similar to symbol part numbers and require installation in accordance with NAVSEA drawing 803-6983506.     | 6. Metric dimensions (mm) are indicated in parentheses.                                                                                                                                         |

**147-022XMS-01**  
**(NSN: 5935-01-572-5487)**  
**Single Sound Powered Composite Telephone Box**

**Basic Part  
Number**

**147-022**

**Finish  
(See Table I)**

**XMS - 01**

**Basic Box  
Number**

**01**

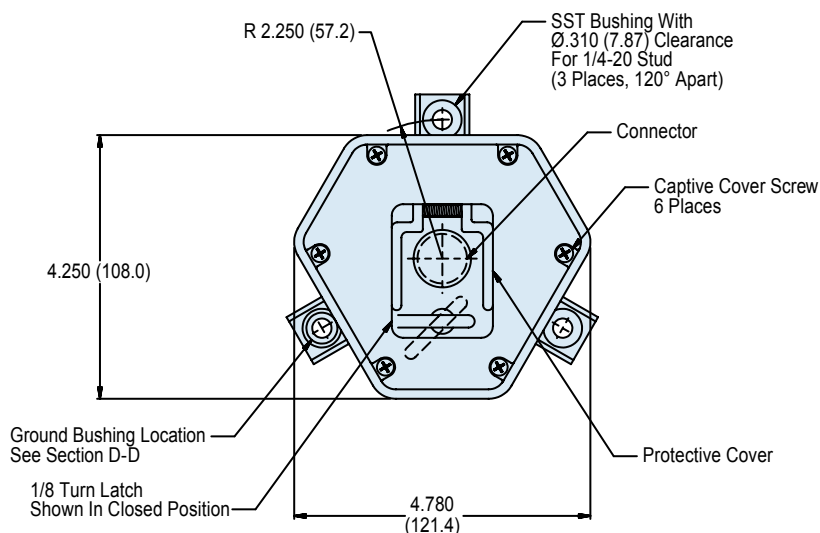
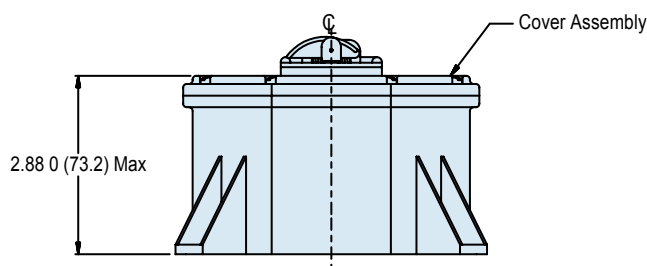


**FIGURE 1 TOP VIEW**



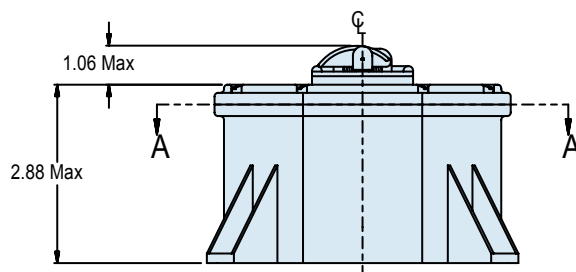
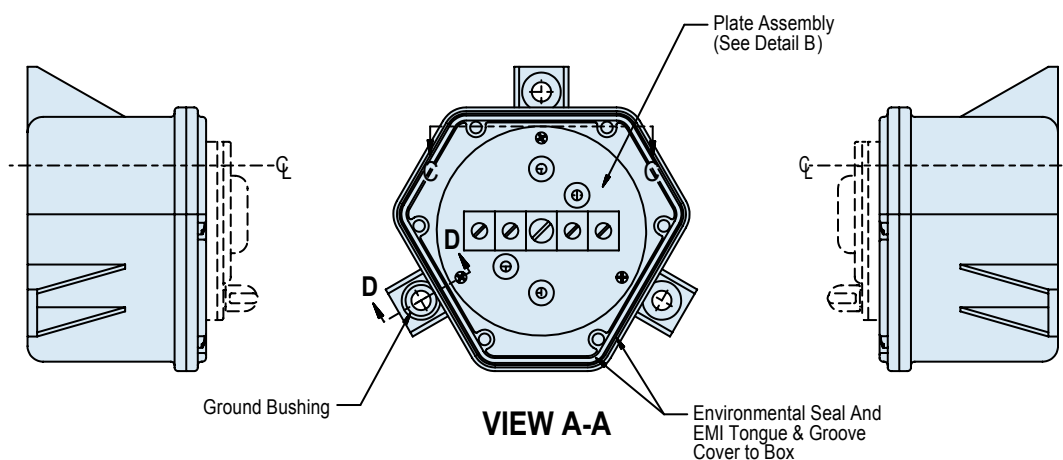
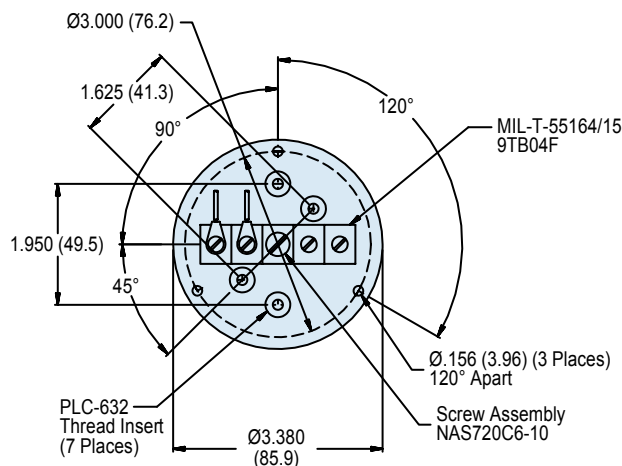


FIGURE 2

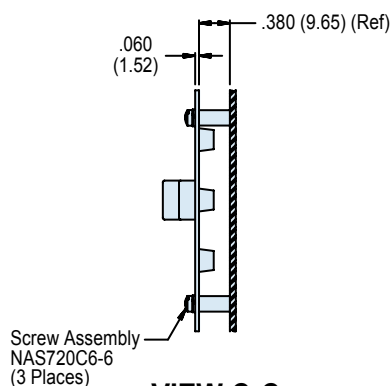


VIEW A-A

**147-022XMS-01**  
**(NSN: 5935-01-572-5487)**  
**Single Sound Powered Composite Telephone Box**



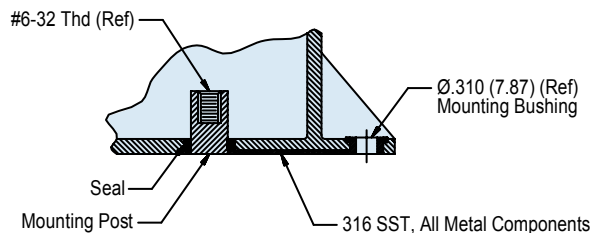
**DETAIL B**



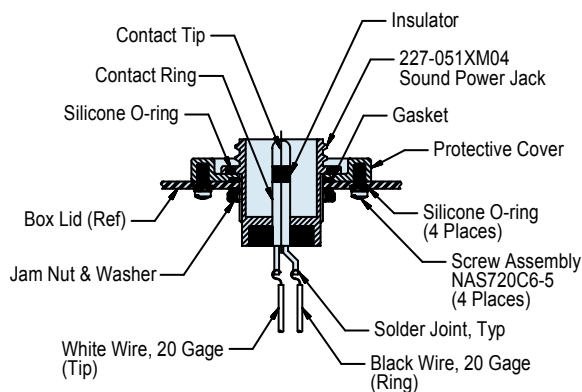
**VIEW C-C**

**APPLICATION NOTES**

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Color may be subject to fading, however UV exposure will not affect material physical properties.
3. Assembly is similar to symbol part numbers and require installation in accordance with NAVSEA drawing 803-6983506.
4. Material / Finish:  
 Box, cover - Thermoplastic grey color/see Table I.  
 Hardware - 316 SST/passivate.  
 Seals and gaskets - Silicone/N.A.  
 Mounting Plate - 300 series SST/passivate.
5. NAVSEA approved; Dwg 803-698-3506.
6. Metric dimensions (mm) are indicated in parentheses.

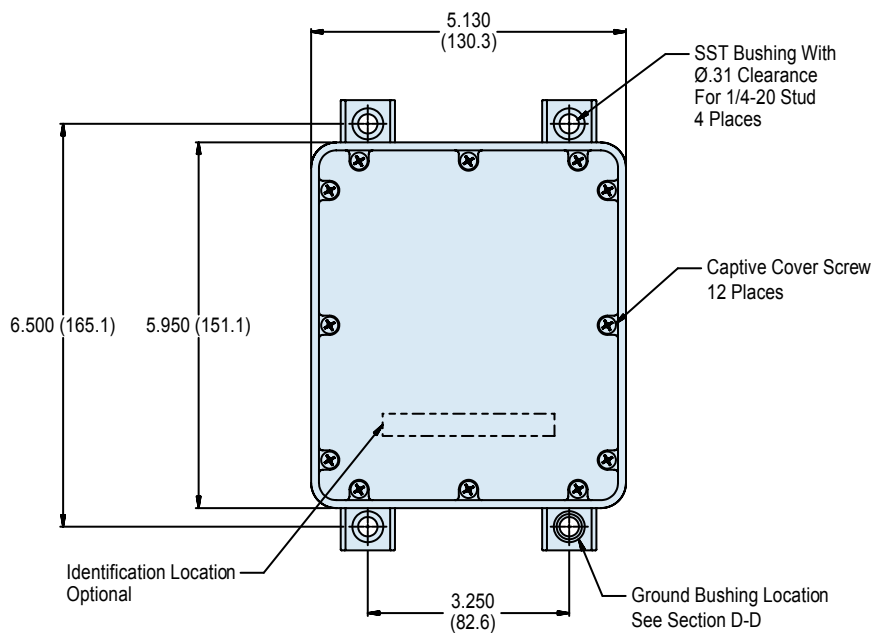
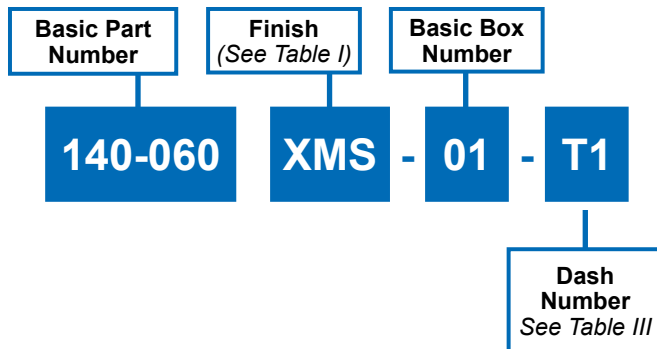
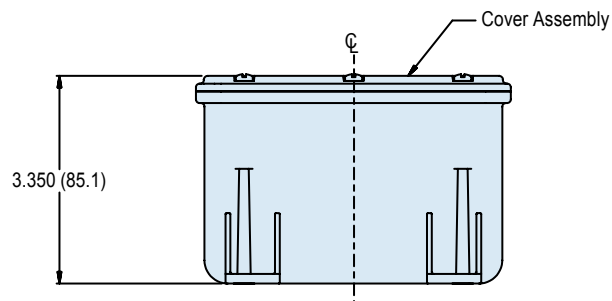


**SECTION D-D**  
**Electrical Ground Through Internal  
 Mounting Post To External Mounting Bushing**



**SOUND POWER JACK SECTION VIEW**  
**(1 Place)**

| TABLE I: Finish |                                                                                         |
|-----------------|-----------------------------------------------------------------------------------------|
| Symbol          | Description                                                                             |
| <b>XMS</b>      | Internal Surfaces - Electroless Nickel<br>Exterior Surfaces - Unplated Light Grey Color |
| <b>XO</b>       | No Plating                                                                              |

**FIGURE 1 TOP VIEW**

**140-060XMS-01**  
**(NSN: 5975-01-556-7957)**  
**10 Terminal Grounded Composite Junction Box**  
**15 Ft. Submersion**



Composite  
Boxes

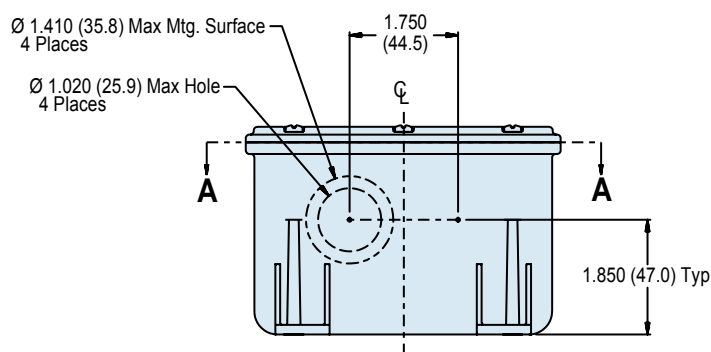
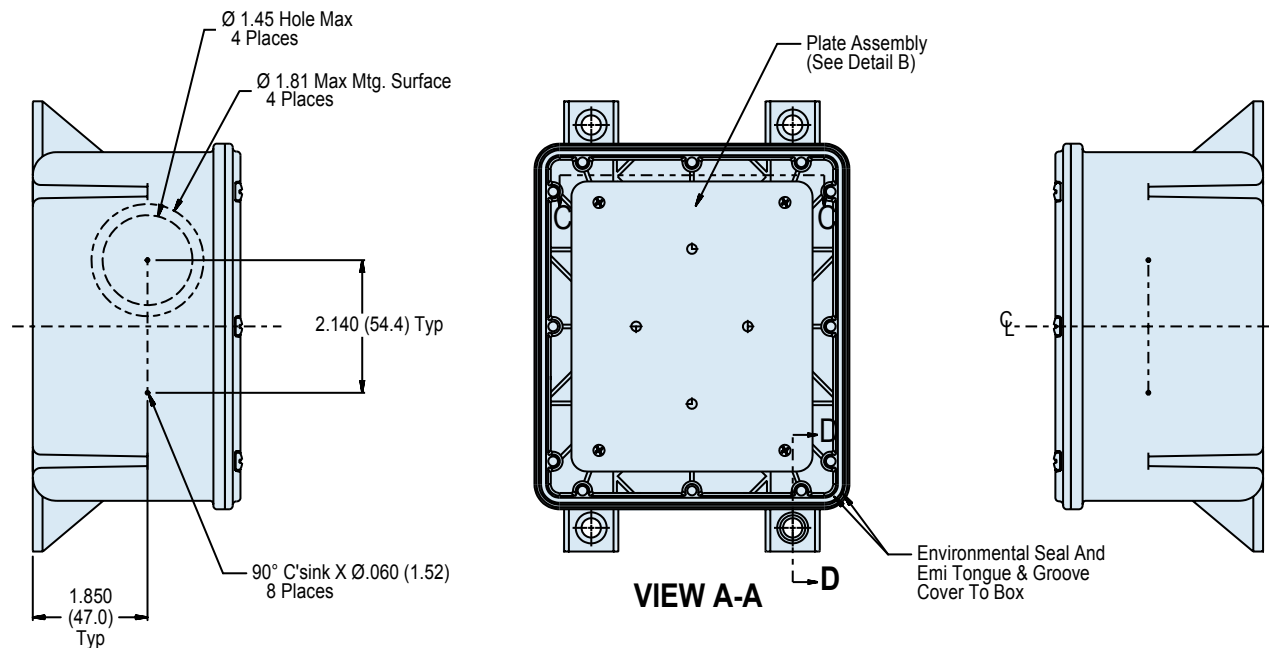
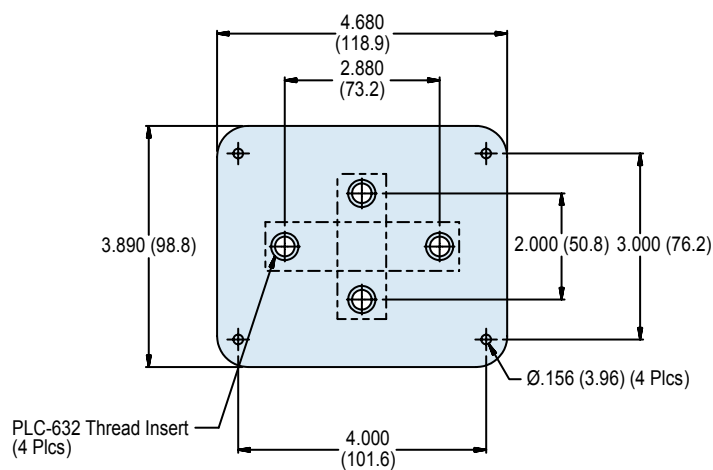
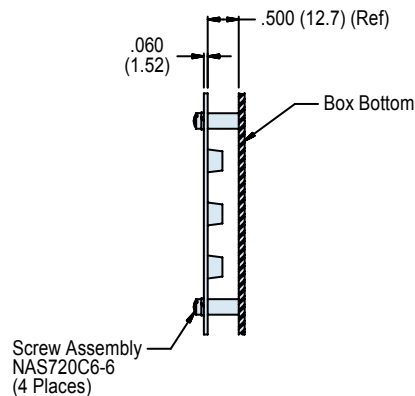


**FIGURE 2**



**DETAIL B**



**VIEW C-C**

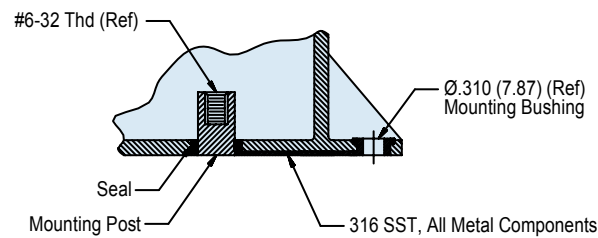
#### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Color may be subject to fading, however UV exposure will not affect material physical properties.
3. Assembly is similar to symbol part numbers and require installation in accordance with NAVSEA drawing 803-6983506.
4. Material / Finish:  
 Box, cover - Thermoplastic grey color/see Table I.  
 Hardware - 316 SST/passivate.  
 Seals and gaskets - Silicone/N.A.  
 Mounting Plate - 300 series SST/passivate.
5. NAVSEA approved; Dwg 803-698-3506.
6. Metric dimensions (mm) are indicated in parentheses.

**140-060XMS-01**  
**(NSN: 5975-01-556-7957)**  
**10 Terminal Grounded Composite Junction Box**  
**15 Ft. Submersion**



Composite  
Boxes



**SECTION D-D**  
**Electrical Ground Through Internal**  
**Mounting Post To External Mounting Bushing**

**TABLE I: Finish**

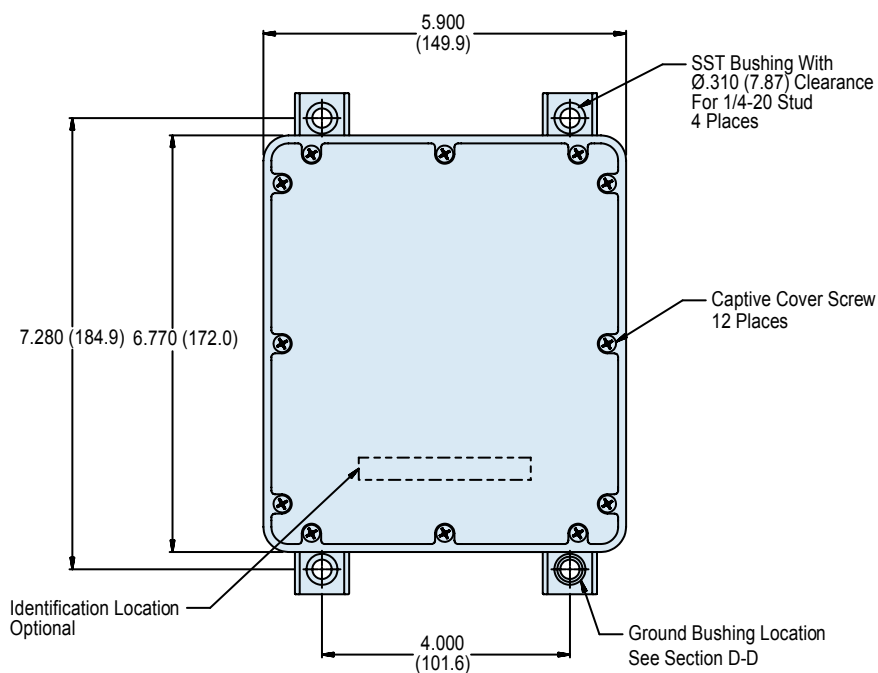
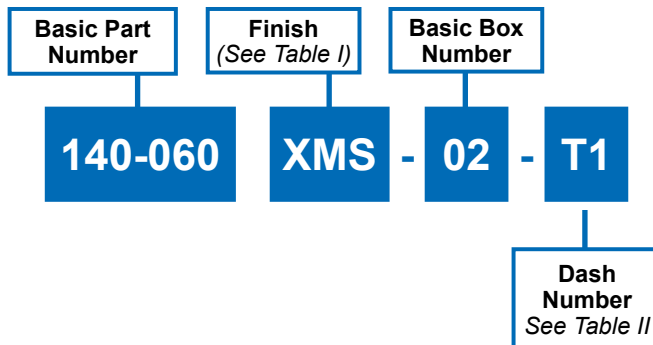
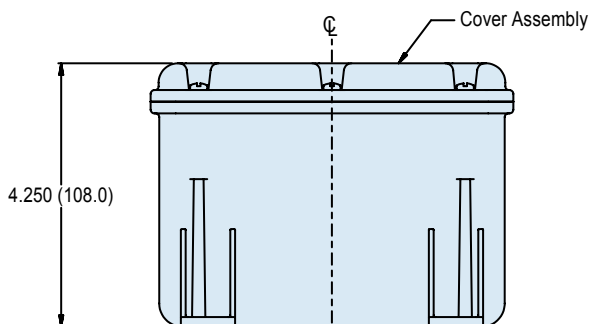
| Symbol     | Description                                                                             |
|------------|-----------------------------------------------------------------------------------------|
| <b>XMS</b> | Internal Surfaces - Electroless Nickel<br>Exterior Surfaces - Unplated Light Grey Color |
| <b>XO</b>  | No Plating                                                                              |

**TABLE II: Replacement Parts**

| Item     | Part Number  | Description             | Material           |
|----------|--------------|-------------------------|--------------------|
| <b>1</b> | 140-065**-01 | Cover Assembly          | Grey Thermoplastic |
| <b>2</b> | 687-499-2    | Cover Screw Assembly    | 316 SST/Passivate  |
| <b>3</b> | 687-305Z129  | Mounting Plate Assembly | 300 SST/Passivate  |

**TABLE III: Mounting Plate Assembly**

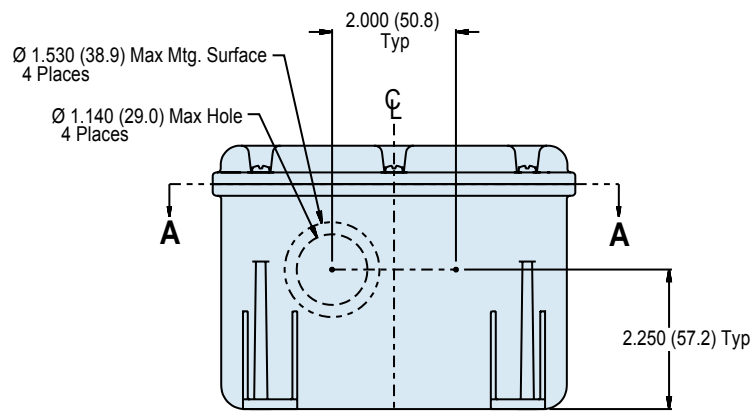
| Dash No.    | 2.000" Mntg Holes | 2.880" Mntg Holes | MIL-T-55164 A-A-59125 | Number of Terminals | Max No of Wires | Recm'd Max Wire Size | Recm'd Lug MS17143 | Qty Blocks per Assembly | Symbol Number | Military Specification |
|-------------|-------------------|-------------------|-----------------------|---------------------|-----------------|----------------------|--------------------|-------------------------|---------------|------------------------|
| <b>01T1</b> | 6TB06F            | -                 | /12                   | 6                   | 24              | #14 AWG              | -5                 | 1                       | -             | -                      |
| <b>01T2</b> | 25TB05F           | -                 | /23                   | 5                   | 10              | #14 AWG              | -17                | 1                       | -             | -                      |
| <b>01T3</b> | -                 | 4TB085            | /10                   | 8                   | 32              | #12 AWG              | -3                 | 1                       | 435.1         | MIL-T-24588/2          |
| <b>01T4</b> | -                 | 6TB10F            | /12                   | 10                  | 30              | #14 AWG              | -5                 | 1                       | 528           | MIL-T-24588/3          |
| <b>01T5</b> | -                 | 15TB10F           | /19                   | 10                  | 40              | #14 AWG              | -8                 | 1                       | -             | -                      |
| <b>01T6</b> | -                 | 16TB04F           | /20                   | 4                   | 08              | #12 AWG              | -3                 | 1                       | 444           | MIL-T-24588/18         |

**FIGURE 1 TOP VIEW**

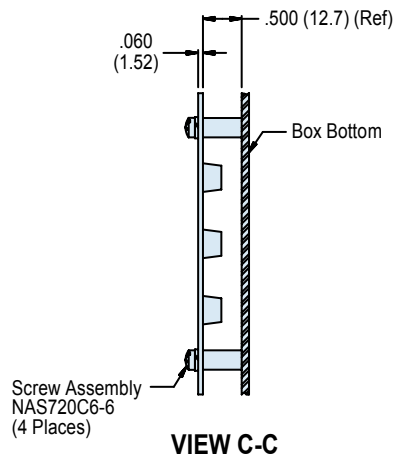
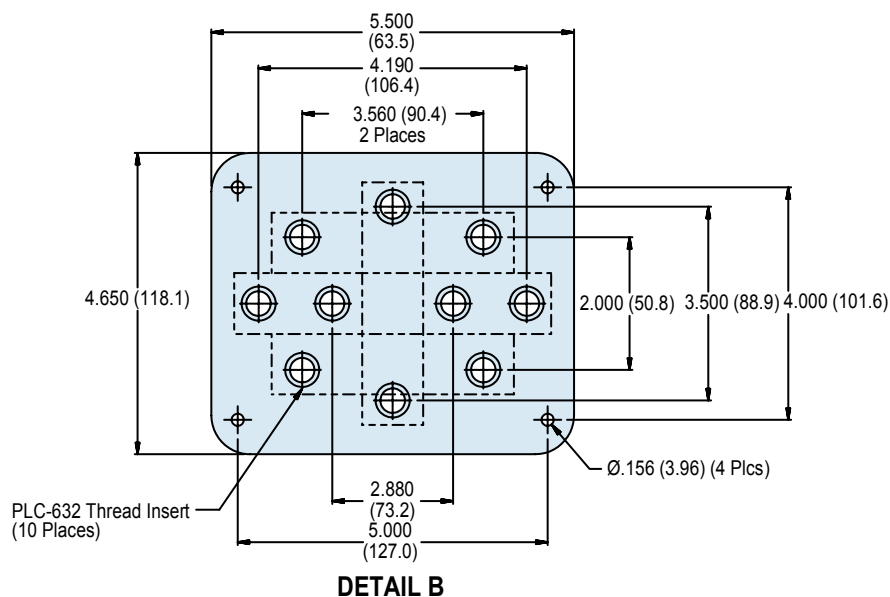


Glencair®

E



**E-Mail: [sales@glenair.com](mailto:sales@glenair.com)**



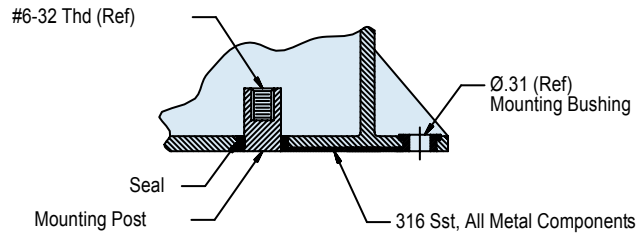
#### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Color may be subject to fading, however UV exposure will not affect material physical properties.
3. Assembly is similar to symbol part numbers and require installation in accordance with NAVSEA drawing 803-6983506.
4. Material / Finish:  
 Box, cover - Thermoplastic grey color/see Table I.  
 Hardware - 316 SST/passivate.  
 Seals and gaskets - Silicone/N.A.  
 Mounting Plate - 300 series SST/passivate.
5. NAVSEA approved; Dwg 803-698-3506.
6. Metric dimensions (mm) are indicated in parentheses.

**140-060XMS-02**  
**(NSN: 5975-01-557-2672)**  
**12 Terminal Grounded Composite Junction Box**  
**15 Ft. Submersion**



Composite  
Boxes



**SECTION D-D**  
**Electrical Ground Through Internal**  
**Mounting Post To External Mounting Bushing**

**TABLE I: Finish**

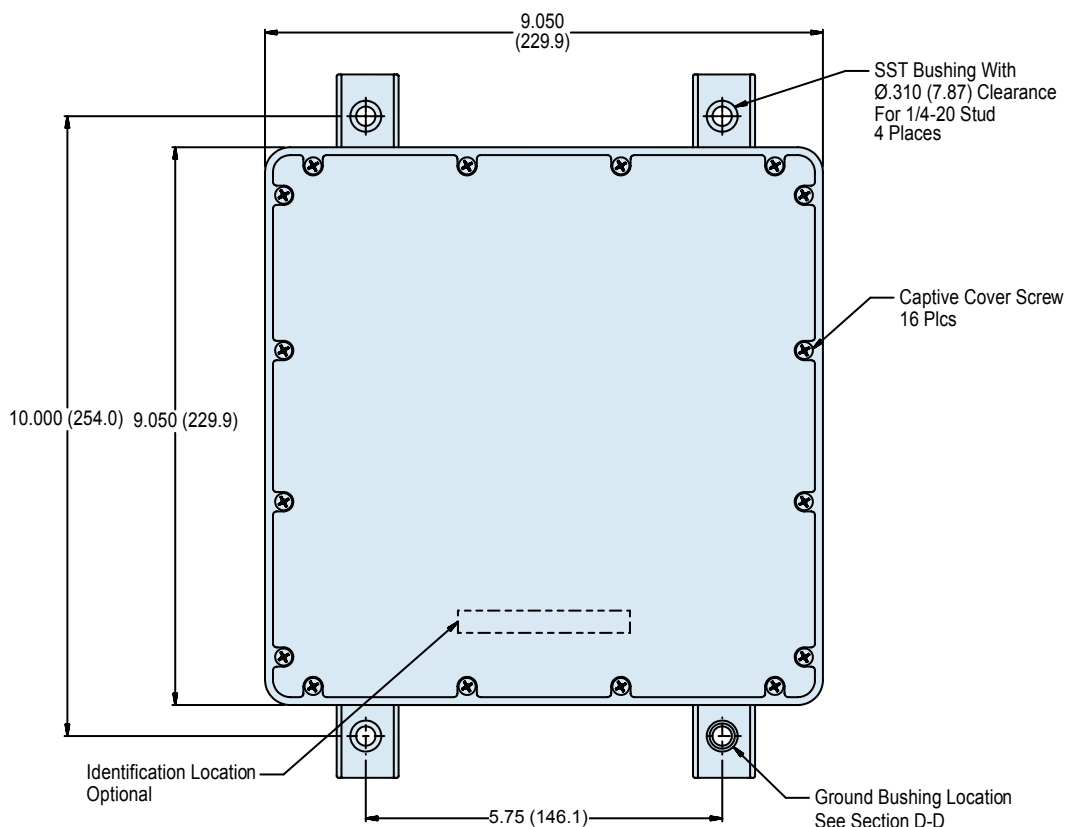
| Symbol     | Description                                                                             |
|------------|-----------------------------------------------------------------------------------------|
| <b>XMS</b> | Internal Surfaces - Electroless Nickel<br>Exterior Surfaces - Unplated Light Grey Color |
| <b>XO</b>  | No Plating                                                                              |

**TABLE II: Replacement Parts**

| Item     | Part Number  | Description             | Material           |
|----------|--------------|-------------------------|--------------------|
| <b>1</b> | 140-065**-17 | Cover Assembly          | Grey Thermoplastic |
| <b>2</b> | 687-499-2    | Cover Screw Assembly    | 316 SST/Passivate  |
| <b>3</b> | 687-305Z130  | Mounting Plate Assembly | 300 SST/Passivate  |

**TABLE II: Mounting Plate Assembly**

| Dash No. | 2.000" Mntg Holes | 2.880" Mntg Holes | 3.500" Mntg Holes | 3.560" Mntg Holes | 4.190" Mntg Holes | MIL-T-55164 A-A-59125 | Number of Terminals  | Max No of Wires | Recm'd Max Wire Size | Recm'd Lug MS17143 | Qty Blocks per Assembly |
|----------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------------|----------------------|-----------------|----------------------|--------------------|-------------------------|
| 02T1     | 6TB60F            | -                 | -                 | -                 | -                 | /12                   | 6                    | 40              | #14 AWG              | -5                 | 2                       |
| 02T2     | 25TB05F           | -                 | -                 | -                 | -                 | /23                   | 5                    | 20              | #14 AWG              | -17                | 2                       |
| 02T3     | -                 | 4TB08F            | -                 | -                 | -                 | /10                   | 8                    | 32              | #12 AWG              | -3                 | 1                       |
| 02T4     | -                 | 5TB0F             | -                 | -                 | -                 | /12                   | 10                   | 30              | #14 AWG              | -5                 | 1                       |
| 02T5     | -                 | 15TB0F            | -                 | -                 | -                 | /19                   | 10                   | 40              | #14 AWG              | -8                 | 1                       |
| 02T6     | -                 | 16TB04F           | -                 | -                 | -                 | /20                   | 8 W/ STUD 16 W/OW/O  | 8               | #12 AWG              | -3                 | 1                       |
| 02T7     | -                 | -                 | 8TB08F            | -                 | -                 | /14                   | 10                   | 32              | #14 AWG              | -11                | 1                       |
| 02T8     | -                 | -                 | -                 | 25TB10F           | -                 | /23                   | 10 W/ STUD 20 W/OW/O | 40              | #14 AWG              | -17                | 2                       |
| 02T9     | -                 | -                 | -                 | 26TB10F           | -                 | /24                   | 12                   | 80              | #16 AWG              | -20                | 2                       |
| 03210    | -                 | -                 | -                 | -                 | 25TB12F           | /23                   | 12W/ STUD 20 W/O     | 24              | #14 AWG              | -17                | 1                       |
| 03T11    | -                 | -                 | -                 | -                 | 26TB12F           | /24                   |                      | 48              | #16 AWG              | -20                | 1                       |

**Basic Part  
Number****140-060****Finish  
(See Table I)****XMS****Basic Box  
Number****- 02****T1****Optional  
Configuration**  
*See Table III  
for Required  
MIL-T-55164  
Terminal Block  
Omit if Not  
Required***FIGURE 1 TOP VIEW**

**140-060XMS-03**  
**(NSN: 5975-01-557-2679)**  
**48 Terminal Grounded Composite Junction Box**  
**15 Ft. Submersion**



Composite  
Boxes

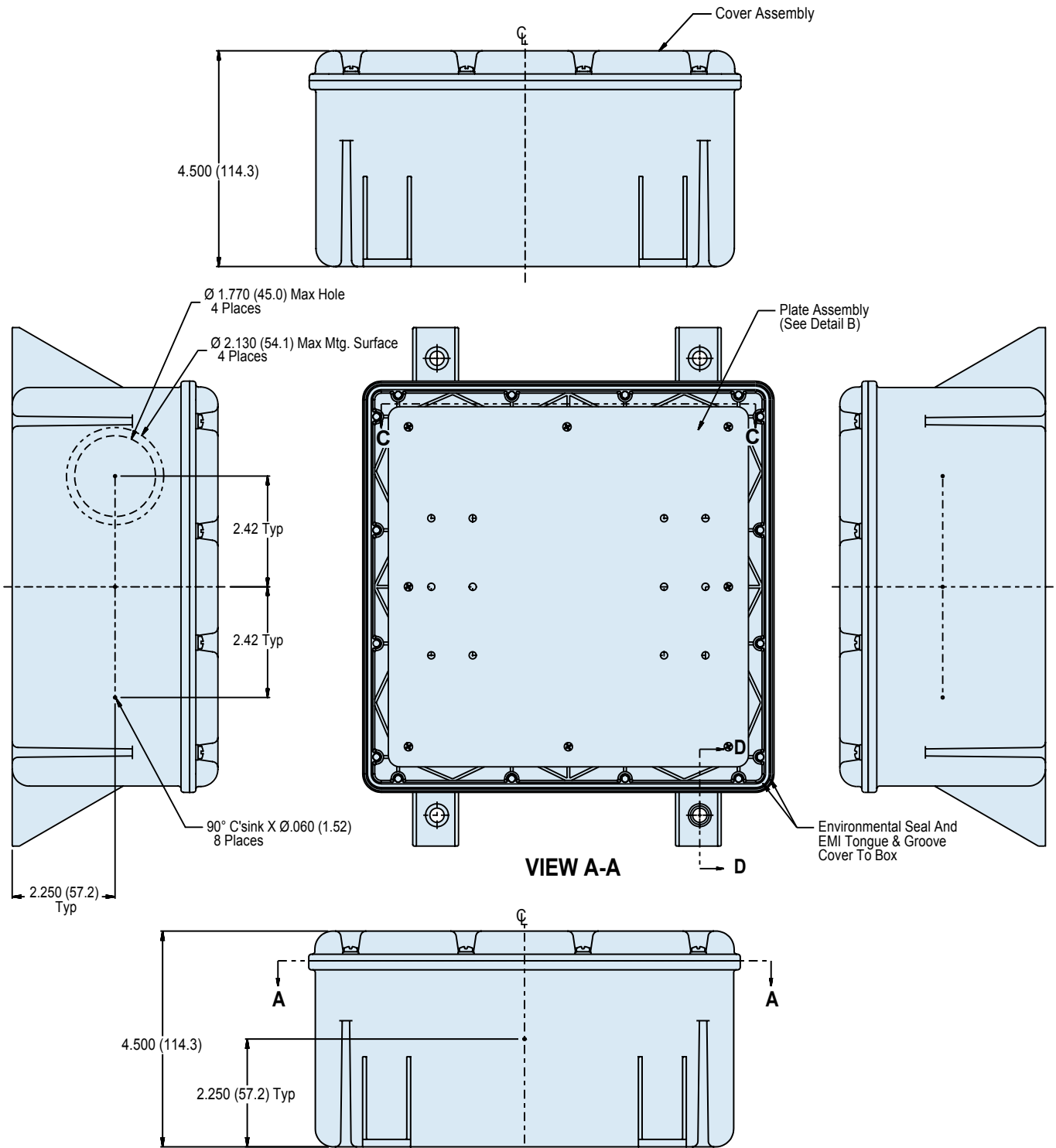
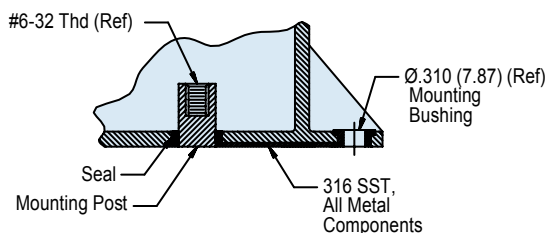
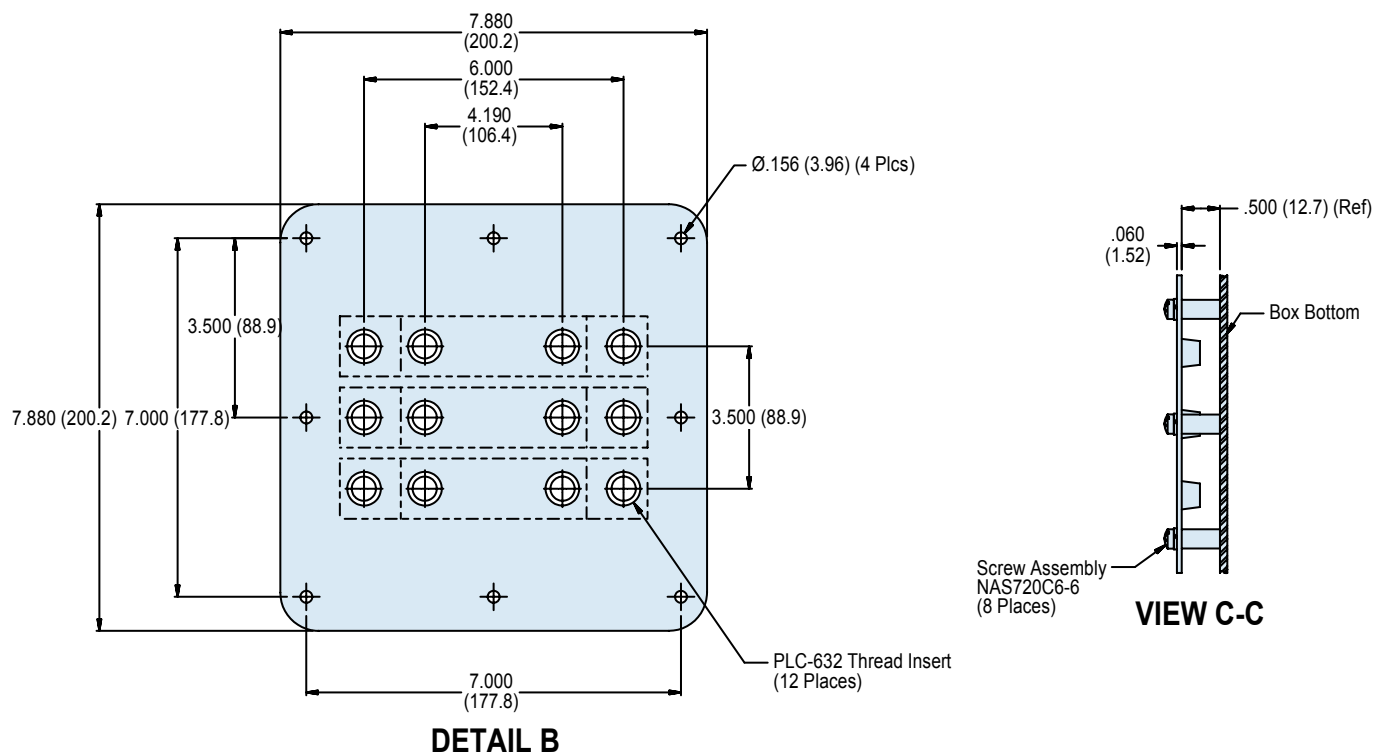


**FIGURE 2**



## SECTION D-D

### Electrical Ground Through Internal Mounting Post To External Mounting Bushing

## APPLICATION NOTES

- |                                                                                                                           |                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490). | 5. Material / Finish:<br>Box, cover - Thermoplastic grey color/see Table I.<br>Hardware - 316 SST/passivate.<br>Seals and gaskets - Silicone/N.A.<br>Mounting Plate - 300 series SST/passivate. |
| 2. Color may be subject to fading, however UV exposure will not affect material physical properties.                      | 6. Metric dimensions (mm) are indicated in parentheses.                                                                                                                                         |
| 3. Assembly is similar to symbol part numbers and require installation in accordance with NAVSEA drawing 803-6983506.     |                                                                                                                                                                                                 |
| 4. NAVSEA approved; Dwg 803-698-3506.                                                                                     |                                                                                                                                                                                                 |

**140-060XMS-03**  
**(NSN: 5975-01-557-2679)**  
**48 Terminal Grounded Composite Junction Box**  
**15 Ft. Submersion**



Composite  
Boxes

**TABLE I: Finish**

| Symbol     | Description                                                                             |
|------------|-----------------------------------------------------------------------------------------|
| <b>XMS</b> | Internal Surfaces - Electroless Nickel<br>Exterior Surfaces - Unplated Light Grey Color |
| <b>XO</b>  | No Plating                                                                              |

**TABLE II: Replacement Parts**

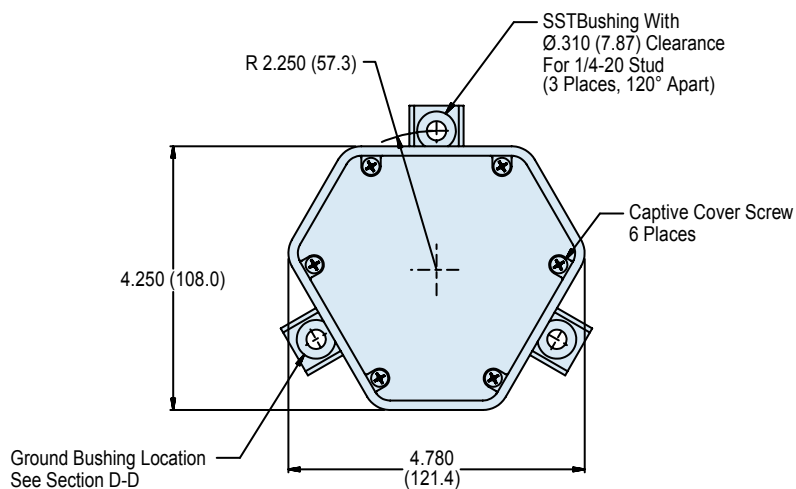
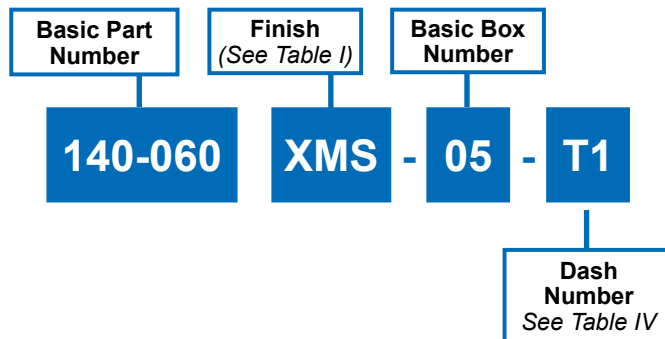
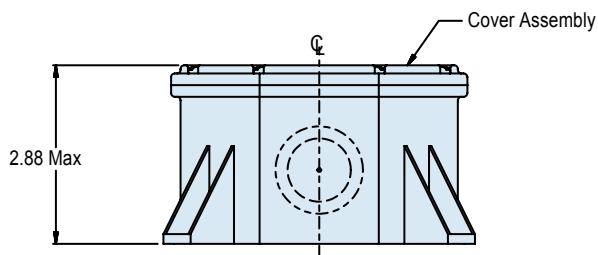
| Item     | Part Number  | Description             | Material           |
|----------|--------------|-------------------------|--------------------|
| <b>1</b> | 140-065**-15 | Cover Assembly          | Grey Thermoplastic |
| <b>2</b> | 687-499-2    | Cover Screw Assembly    | 316 SST/Passivate  |
| <b>3</b> | 687-305Z131  | Mounting Plate Assembly | 300 SST/Passivate  |

**TABLE III: MIL-T-55164 Terminal Block**

| Part Number      | National Stock Number |
|------------------|-----------------------|
| 140-060XMS-03    | 5935-01-557-2679      |
| 140-060XMS-03T1  | 5940-01-556-9489      |
| 140-060XMS-03T2  | 5940-01-557-2564      |
| 140-060XMS-03T5  | 5940-01-5576-2578     |
| 140-060XMS-03T9  | 5940-01-557-2582      |
| 140-060XMS-03T10 | 5940-01-556-9494      |
| 140-060XMS-03T11 | 5940-01-557-2563      |
| 140-060XMS-03T12 | 5940-01-556-9499      |

**TABLE IV: Mounting Plate Assembly**

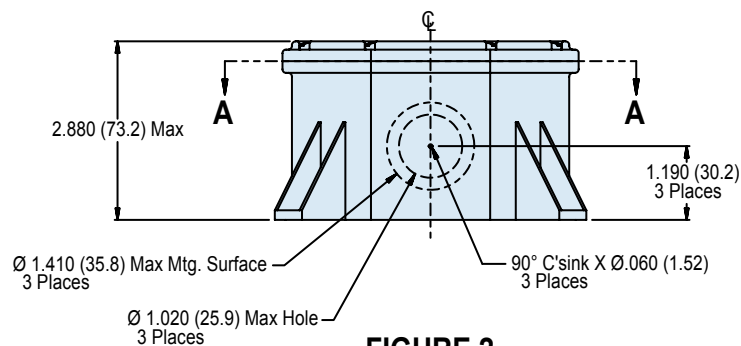
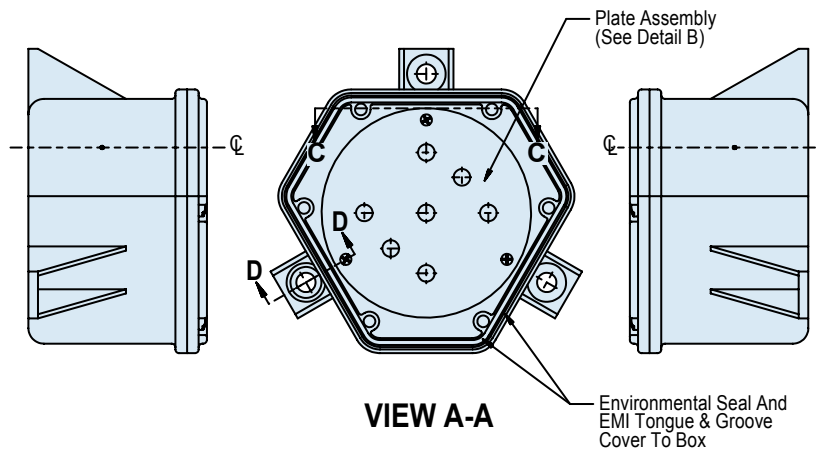
| Dash No.     | 6.000" Mntg Holes | 4.190" Mntg Holes | MIL-T-55164 A-A-59125 | Number of Terminals | Max No of Wires | Recm'd Max Wire Size | Recm'd Lug MS17143 | Qty Blocks per Assembly | Symbol Number | Military Specification |
|--------------|-------------------|-------------------|-----------------------|---------------------|-----------------|----------------------|--------------------|-------------------------|---------------|------------------------|
| <b>03T1</b>  | 4TB20F            | -                 | /10                   | 20                  | 80              | #12 AWG              | -3                 | 1                       | 432.1         | MIL-T-24558/4          |
| <b>03T2</b>  | 6TB06F/24F        | -                 | /12                   | 30                  | 90              | #14 AWG              | -5                 | 2                       | 434           | MIL-T-24558/5          |
| <b>03T3</b>  | 10TB28F           | -                 | /16                   | 56                  | 168             | #14 AWG              | -                  | 2                       | -             | -                      |
| <b>03T4</b>  | 15TB24F           | -                 | /19                   | 48                  | 144             | #14 AWG              | -8                 | 2                       | -             | -                      |
| <b>03T5</b>  | 16TB10F           | -                 | /20                   | 10                  | 20              | #12 AWG              | -3                 | 1                       | 529           | MIL-T-24588/20         |
| <b>03T6</b>  | 17TB10F           | -                 | /21                   | 10W/STUD 20 W/O     | 80              | #12 AWG              | -3                 | 2                       | -             | -                      |
| <b>03T7</b>  | -                 | 25TB12F           | /23                   | 36                  | 72              | #14 AWG              | -17                | 3                       | -             | -                      |
| <b>03T8</b>  | -                 | 26TB12F           | /24                   | 24W/STUD 48 W/O     | 96              | #16 AWG              | -20                | 2                       | -             | -                      |
| <b>03T9</b>  | 4TB20F            | -                 | /10                   | 40                  | 160             | #12 AWG              | -3                 | 2                       | 433.1         | MIL-T-24588/6          |
| <b>03T10</b> | 6TB24F            | -                 | /12                   | 48                  | 144             | #14 AWG              | -5                 | 2                       | 522.1         | MIL-T-24588/7          |
| <b>03T11</b> | 4TB20T            | -                 | /10                   | 60                  | 240             | #12 AWG              | -3                 | 3                       | 446           | MIL-T-24588/8          |
| <b>03T12</b> | 6TB24F            | -                 | /12                   | 72                  | 216             | #14 AWG              | -5                 | 3                       | 525           | MIL-T-24588/9          |

**140-060XMS-05**  
(NSN: 5975-01-556-7948)  
**4 Terminal Grounded Composite Junction Box**  
15 Ft. Submersion • Size 4.3 x 4.8 x 2.9**FIGURE 1 TOP VIEW**

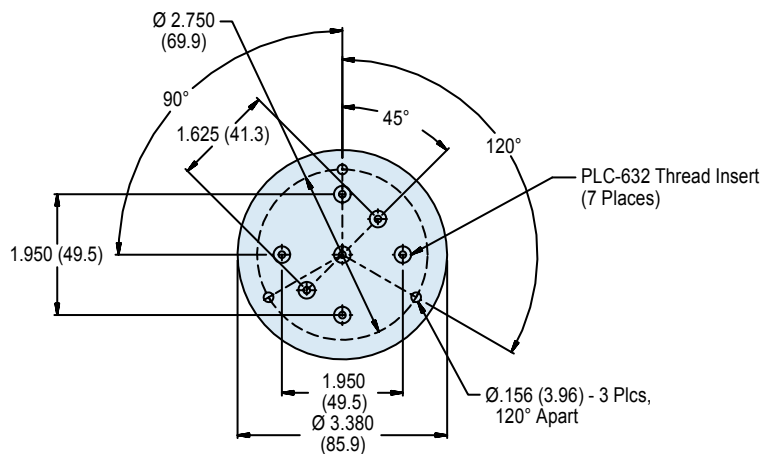
**140-060XMS-05**  
**(NSN: 5975-01-556-7948)**  
**4 Terminal Grounded Composite Junction Box**  
**15 Ft. Submersion • Size 4.3 x 4.8 x 2.9**



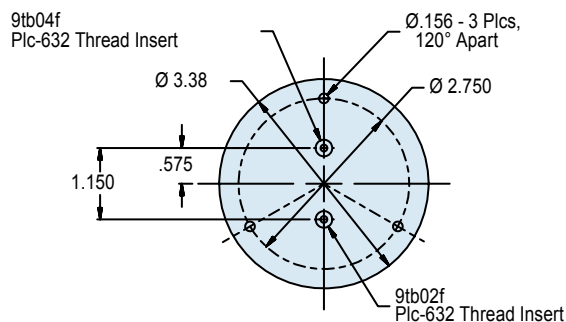
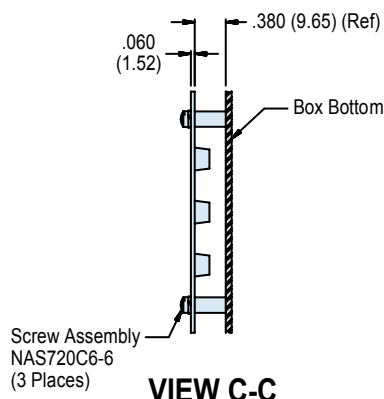
Composite  
Boxes



E



**DETAIL B**  
Dash No.'s T1, T2 & T3



**DETAIL B**  
Dash No. T4 Only

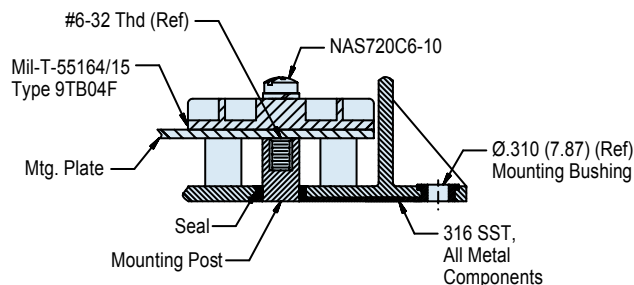
### APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Color may be subject to fading, however UV exposure will not affect material physical properties.
3. Assembly is similar to symbol part numbers and require installation in accordance with NAVSEA drawing 803-6983506.
4. Material / Finish:
  - Box, cover - Thermoplastic grey color/see Table I.
  - Hardware - 316 SST/passivate.
  - Seals and gaskets - Silicone/N.A.
  - Mounting Plate - 300 series SST/passivate.
5. NAVSEA approved; Dwg 803-698-3506.
6. Metric dimensions (mm) are indicated in parentheses.

**140-060XMS-05**  
**(NSN: 5975-01-556-7948)**  
**4 Terminal Grounded Composite Junction Box**  
**15 Ft. Submersion • Size 4.3 x 4.8 x 2.9**



Composite  
Boxes



**SECTION VIEW D-D**  
Terminal Block Mounting Plate, Internal  
Mounting Post And External Mounting Bushing  
(Ground Option Shown)

| TABLE I: Finish |                                                                                         |
|-----------------|-----------------------------------------------------------------------------------------|
| Symbol          | Description                                                                             |
| <b>XMS</b>      | Internal Surfaces - Electroless Nickel<br>Exterior Surfaces - Unplated Light Grey Color |
| <b>XO</b>       | No Plating                                                                              |

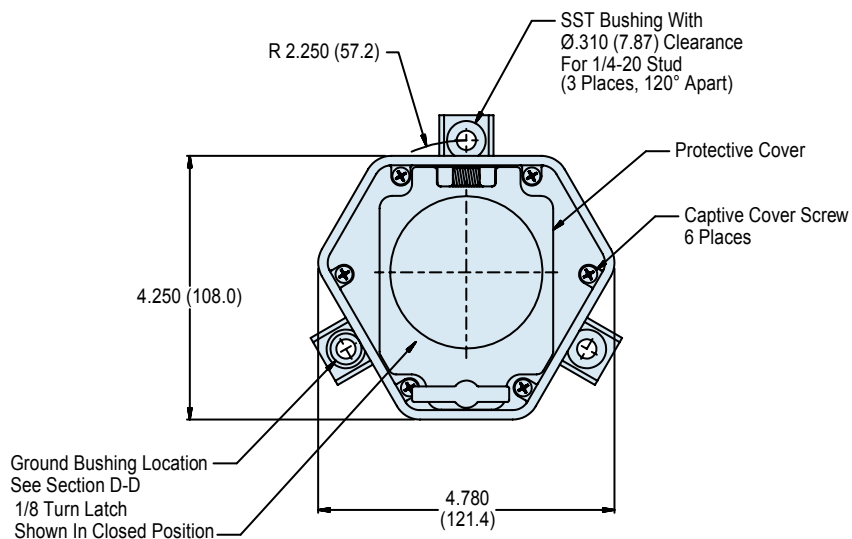
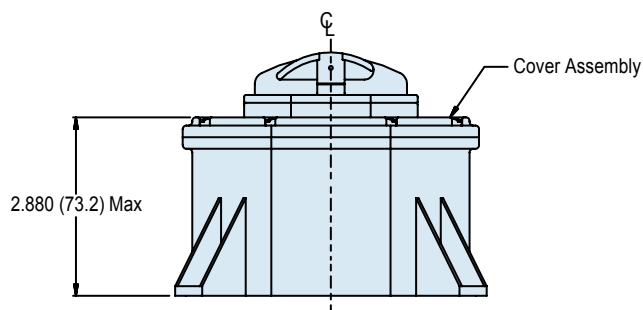
| TABLE II: MIL-T-55164 Terminal Block |                       |
|--------------------------------------|-----------------------|
| Part Number                          | National Stock Number |
| 140-060XMS-05                        | 5975-01-556-7948      |
| 140-060XMS-05T1                      | 5940-01-557-2579      |
| 140-060XMS-05T4                      | 5940-01-557-2712      |

| TABLE III: Replacement Parts |             |                         |                    |
|------------------------------|-------------|-------------------------|--------------------|
| Item                         | Part Number | Description             | Material           |
| 1                            | 140-065*-15 | Cover Assembly          | Grey Thermoplastic |
| 2                            | 687-499-2   | Cover Screw Assembly    | 316 SST/Passivate  |
| 3                            | 687-305Z131 | Mounting Plate Assembly | 300 SST/Passivate  |

| TABLE IV: Mounting Plate Assembly |                   |                   |                       |                     |                 |                      |                    |                         |               |                        |
|-----------------------------------|-------------------|-------------------|-----------------------|---------------------|-----------------|----------------------|--------------------|-------------------------|---------------|------------------------|
| Dash No.                          | 1.950" Mntg Holes | 1.625" Mntg Holes | MIL-T-55164 A-A-59125 | Number of Terminals | Max No of Wires | Recm'd Max Wire Size | Recm'd Lug MS17143 | Qty Blocks per Assembly | Symbol Number | Military Specification |
| 05T1                              | 9TB04F            | -                 | /15                   | 4                   | 8               | #12 AWG              | -                  | 1                       | -             | -                      |
| 05T2                              | 6TB06F            | -                 | /12                   | 6                   | 18              | #14 AWG              | -5                 | 1                       | 520.1         | MIL-T-24588/1          |
| 05T3                              | 25TB05F           | -                 | /23                   | 5                   | 10              | #14 AWG              | -17                | 1                       | -             | -                      |
| 05T4                              | T4 Detail         | -                 | /15                   | 6                   | 12              | -                    | -                  | 2                       | 400           | MIL-T-24588/18         |

**Basic Part  
Number****140-023****Finish  
(See Table I)****XMS - 02****Basic Box  
Number****T****Optional  
Configuration**

Add "T" for  
MIL-T-55164/15  
Terminal Block  
Omit if Not  
Required

**FIGURE 1 TOP VIEW**

**147-023XMS-02**  
**(NSN: 5940-01-557-2667)**  
**15 Amp, 115 V Blade Type Receptacle Composite Box**  
**Grounded • Size 4.3 x 4.8 x 2.9**



Composite  
Boxes

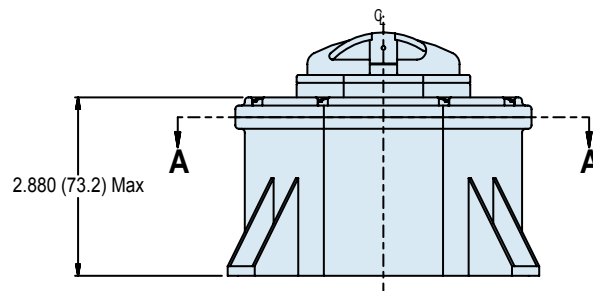
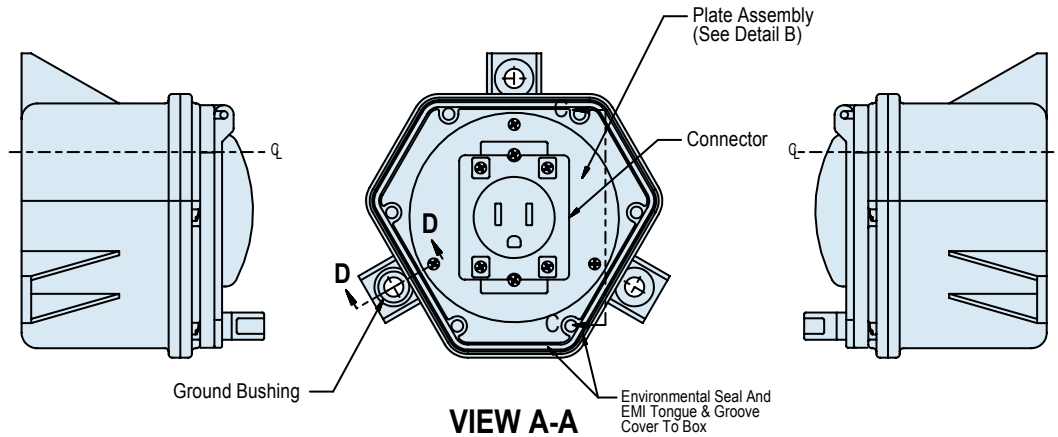


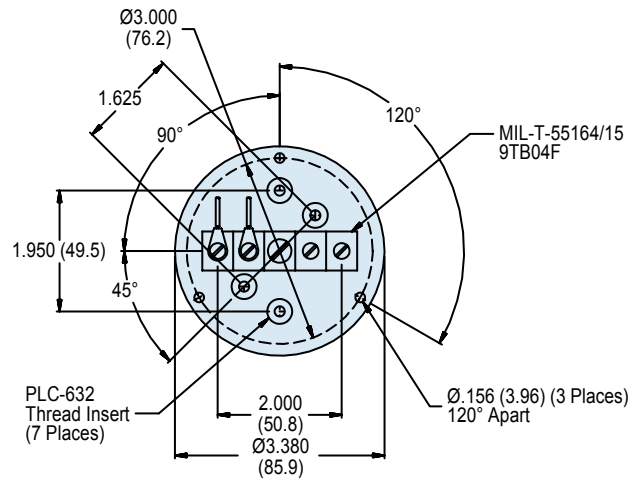
**FIGURE 2**

E

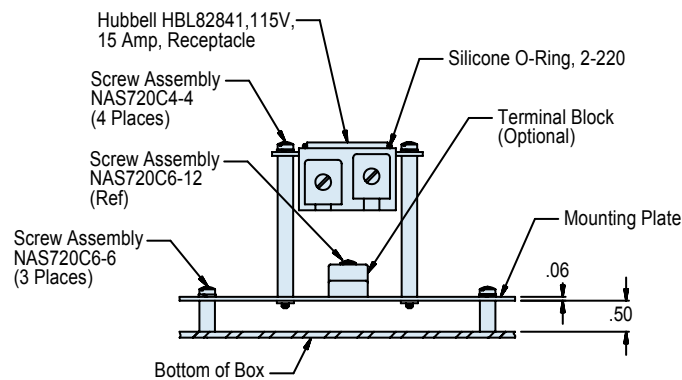
**147-023XMS-02**

**(NSN: 5940-01-557-2667)**

**15 Amp, 115 V Blade Type Receptacle Composite Box  
Grounded • Size 4.3 x 4.8 x 2.9**



### DETAIL B



**VIEW C-C**

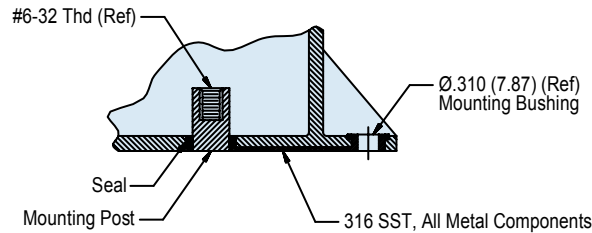
## APPLICATION NOTES

1. Assembly manually identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Color may be subject to fading, however UV exposure will not affect material physical properties.
3. Assembly is similar to symbol part numbers and require installation in accordance with NAVSEA drawing 803-6983506.
4. Material / Finish:
  - Box, cover - Thermoplastic grey color/see Table I.
  - Hardware - 316 SST/passivate.
  - Seals and gaskets - Silicone/N.A.
  - Mounting Plate - 300 series SST/passivate.
5. NAVSEA approved; Dwg 803-698-3506.
6. Metric dimensions (mm) are indicated in parentheses.

**147-023XMS-02**  
**(NSN: 5940-01-557-2667)**  
**15 Amp, 115 V Blade Type Receptacle Composite Box**  
**Grounded • Size 4.3 x 4.8 x 2.9**



Composite  
Boxes



**SECTION D-D**

**Electrical Ground Through Internal  
Mounting Post To External Mounting Bushing**

**TABLE I: Finish**

| Symbol     | Description                                                                             |
|------------|-----------------------------------------------------------------------------------------|
| <b>XMS</b> | Internal Surfaces - Electroless Nickel<br>Exterior Surfaces - Unplated Light Grey Color |
| <b>XO</b>  | No Plating                                                                              |

**TABLE II: Replacement Parts**

| Item     | Part Number   | Description             | Material           |
|----------|---------------|-------------------------|--------------------|
| <b>1</b> | 140-065**-02  | Cover Assembly          | Grey Thermoplastic |
| <b>2</b> | 687-499-2     | Cover Screw Assembly    | 316 SST/Passivate  |
| <b>3</b> | 687-305Z132   | Mounting Plate Assembly | 300 Series SST     |
| <b>4</b> | 630-038XO-04K | 1/8 Turn Flop Lid       | Grey Thermoplastic |
| <b>5</b> | HBL8284I      | Electrical Connector    | N/A                |

**E**

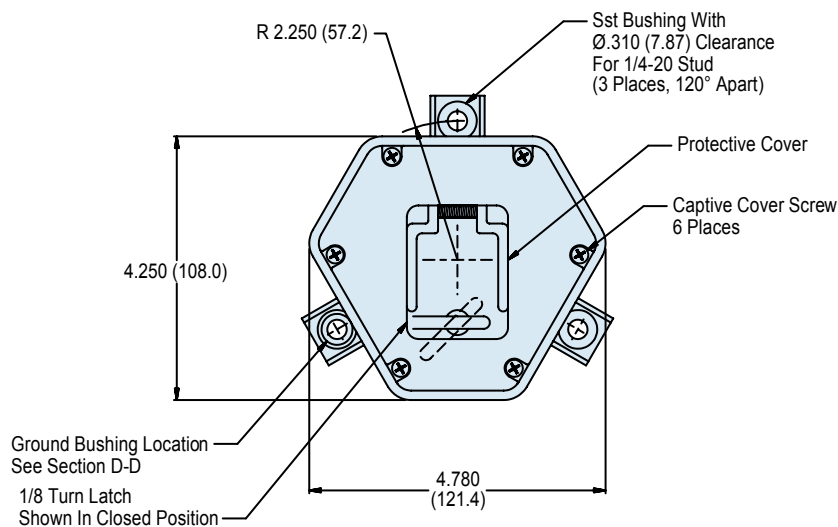
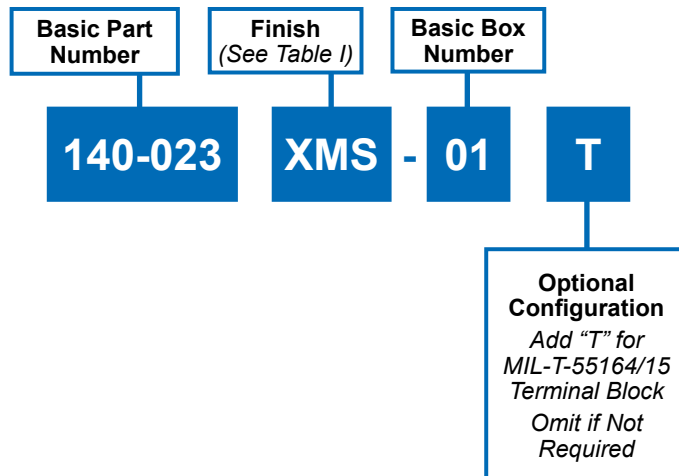
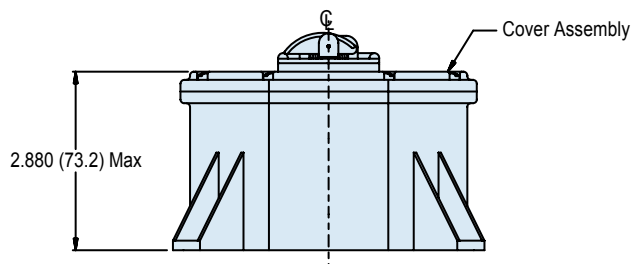


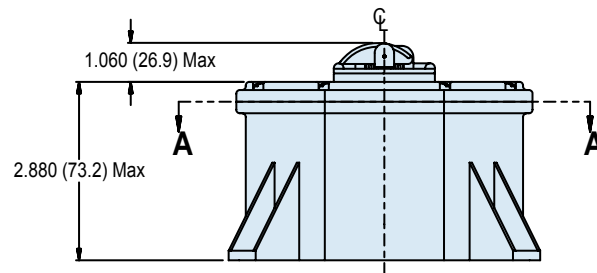
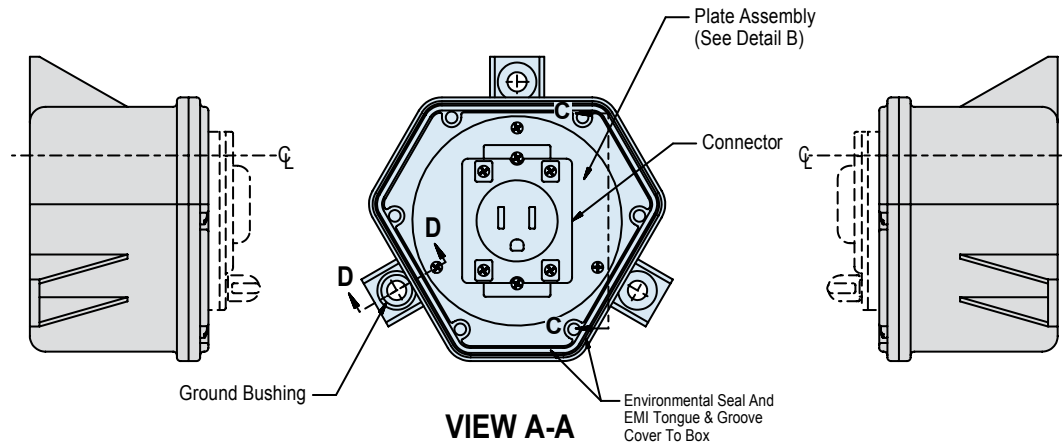
**FIGURE 1 TOP VIEW**



**147-023XMS-01**  
**(NSN: 5940-01-557-2645)**  
**15 Amp, 115 V Blade Type Receptacle Composite Box**  
**Grounded • Size 4.3 x 4.8 x 2.9**



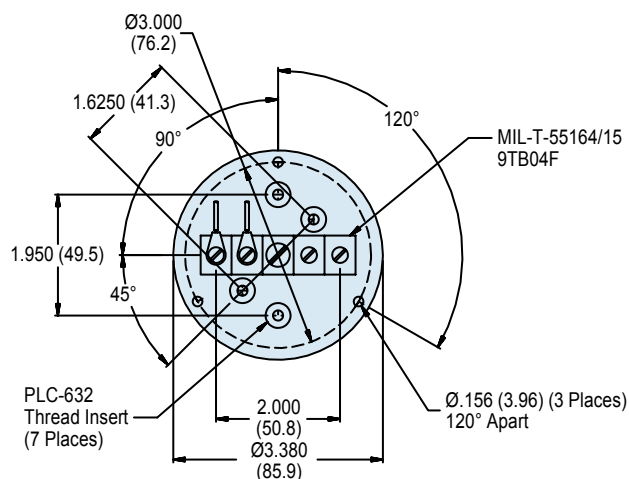
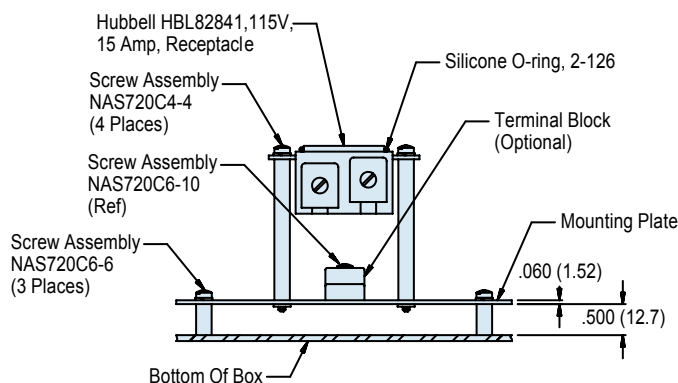
Composite  
Boxes



**E**

147-023XMS-01

(NSN: 5940-01-557-2645)

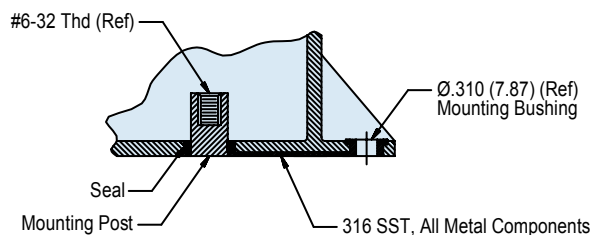
**15 Amp, 115 V Blade Type Receptacle Composite Box**  
**Grounded • Size 4.3 x 4.8 x 2.9**
**DETAIL B****VIEW C-C****APPLICATION NOTES**

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Color may be subject to fading, however UV exposure will not affect material physical properties.
3. Assembly is similar to symbol part numbers and require installation in accordance with NAVSEA drawing 803-6983506.
4. Material / Finish:  
 Box, cover - Thermoplastic grey color/see Table I.  
 Hardware - 316 SST/passivate.  
 Seals and gaskets - Silicone/N.A.  
 Mounting Plate - 300 series SST/passivate.
5. NAVSEA approved; Dwg 803-698-3506.
6. Metric dimensions (mm) are indicated in parentheses.

**147-023XMS-01**  
**(NSN: 5940-01-557-2645)**  
**15 Amp, 115 V Blade Type Receptacle Composite Box**  
**Grounded • Size 4.3 x 4.8 x 2.9**



Composite  
Boxes



**SECTION D-D**

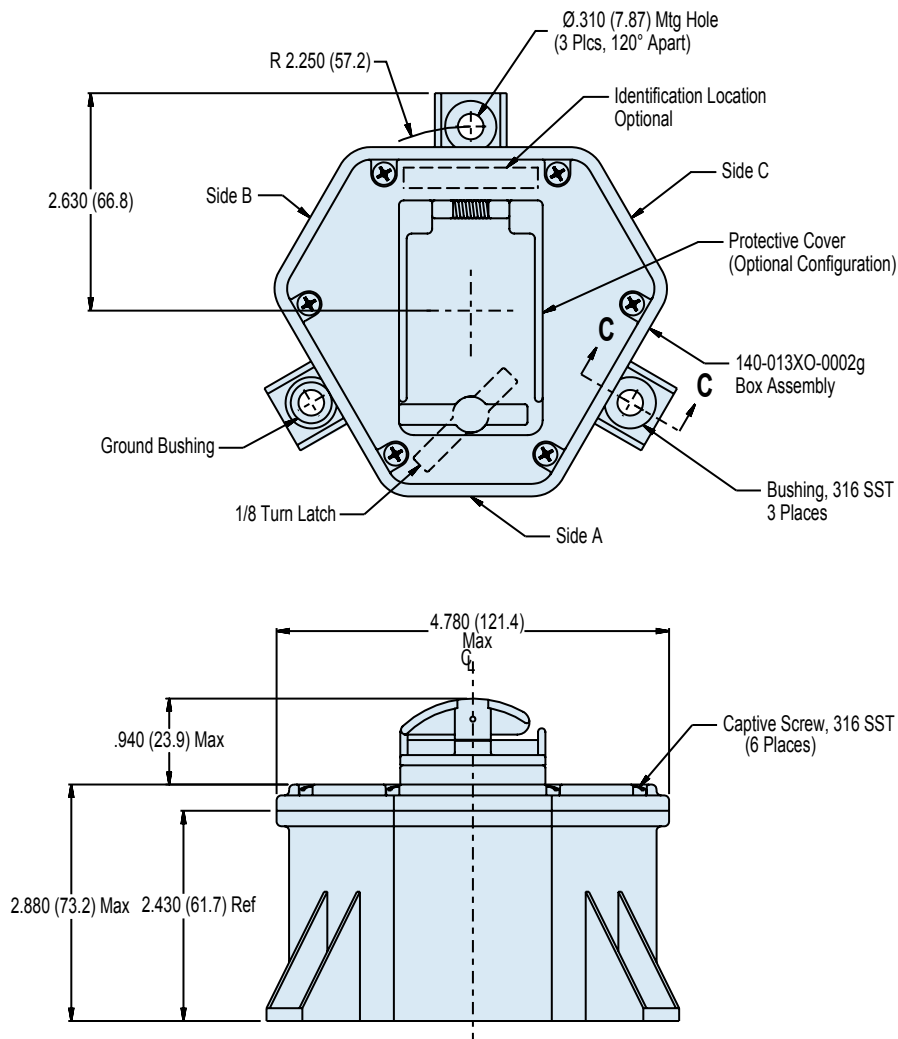
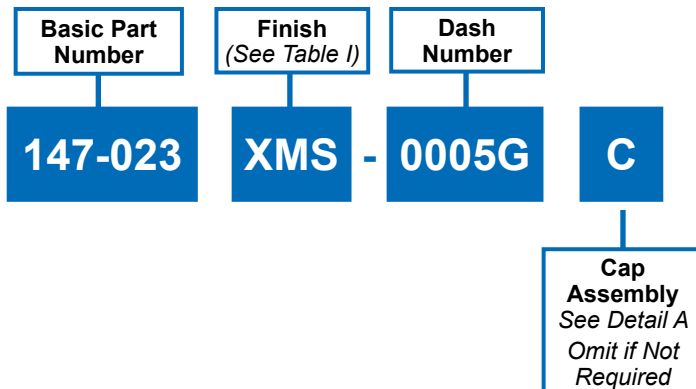
**Electrical Ground Through Internal  
Mounting Post To External Mounting Bushing**

**TABLE I: Finish**

| Symbol     | Description                                                                             |
|------------|-----------------------------------------------------------------------------------------|
| <b>XMS</b> | Internal Surfaces - Electroless Nickel<br>Exterior Surfaces - Unplated Light Grey Color |
| <b>XO</b>  | No Plating                                                                              |

**TABLE II: Replacement Parts**

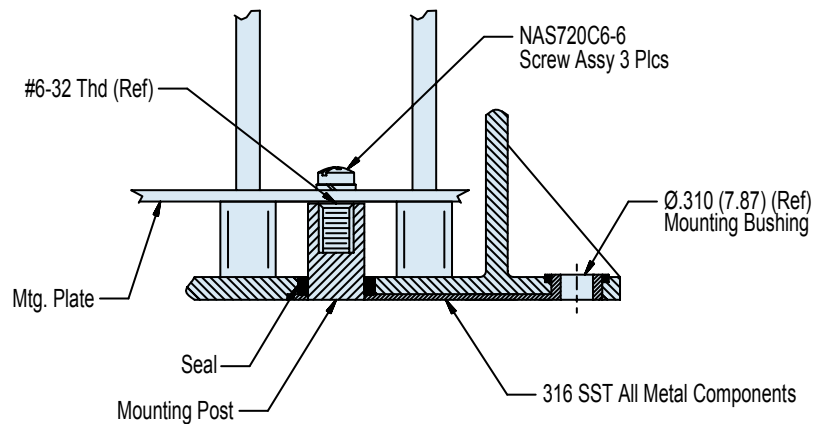
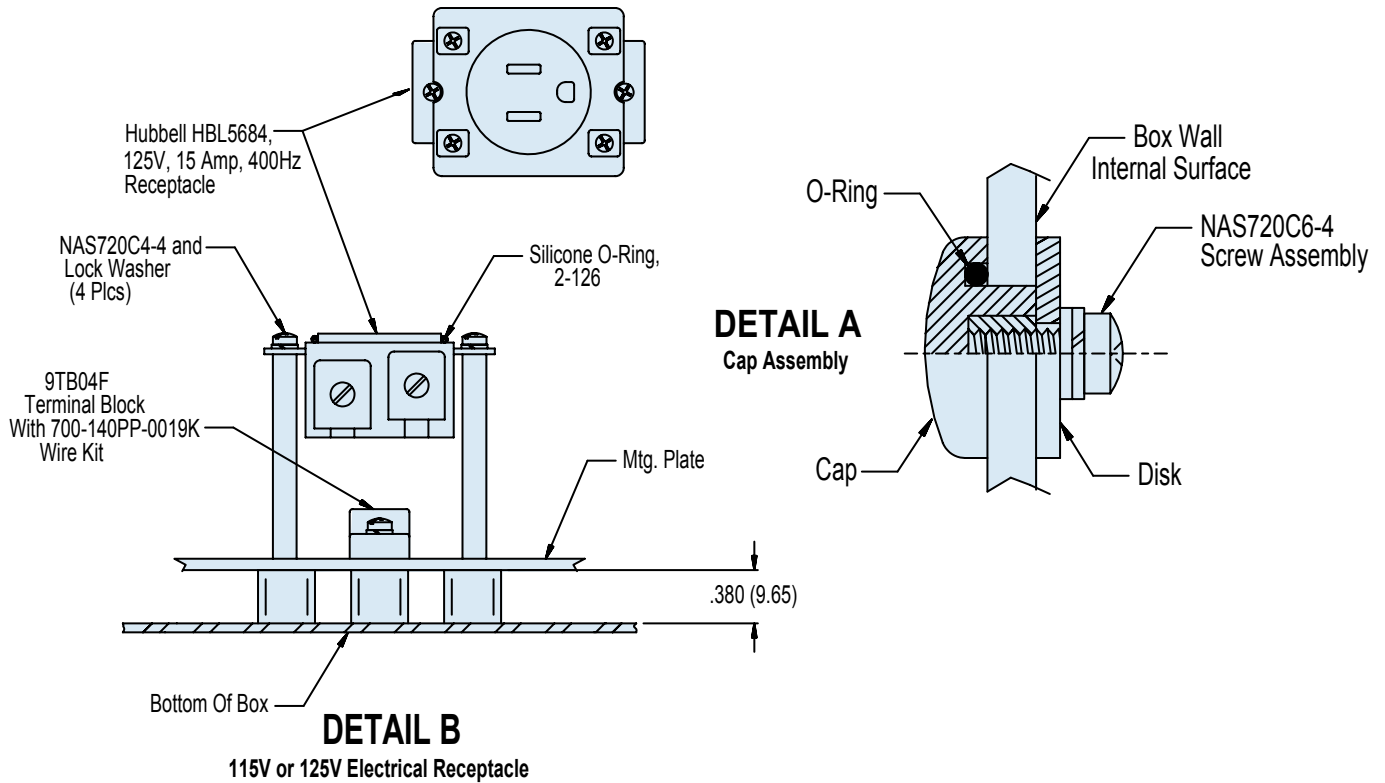
| Item     | Part Number   | Description             | Material           |
|----------|---------------|-------------------------|--------------------|
| <b>1</b> | 140-065**-02  | Cover Assembly          | Grey Thermoplastic |
| <b>2</b> | 687-499-2     | Cover Screw Assembly    | 316 SST/Passivate  |
| <b>3</b> | 687-305Z132   | Mounting Plate Assembly | 300 Series SST     |
| <b>4</b> | 630-038XO-04K | 1/8 Turn Flop Lid       | Grey Thermoplastic |
| <b>5</b> | HBL8284I      | Electrical Connector    | N/A                |



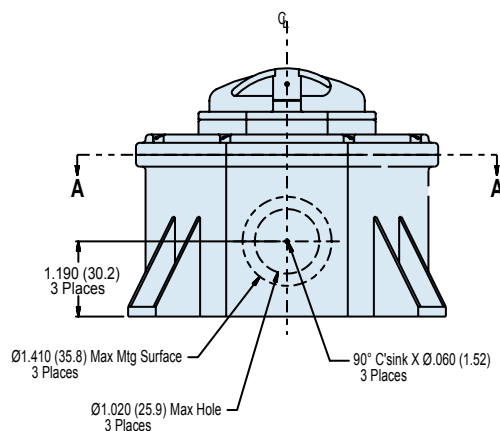
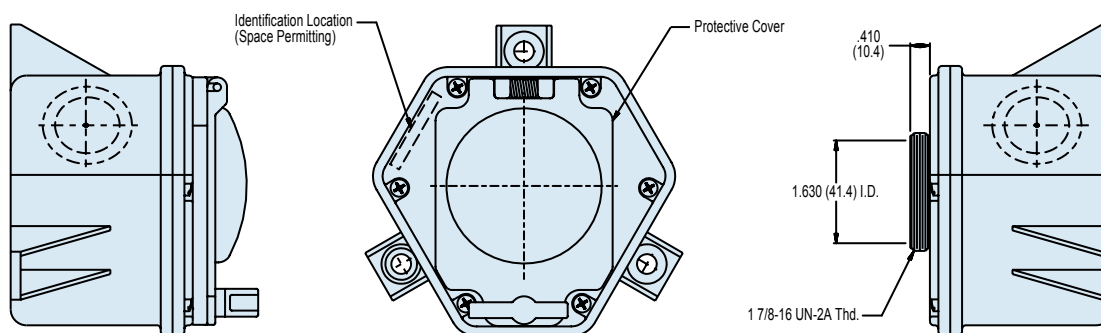
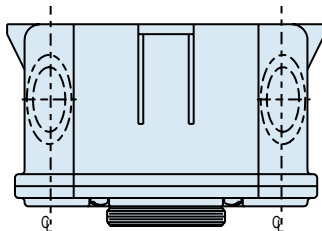
**147-023XMS-0005G**  
**(NSN: 5940-01-557-2719)**  
**EMI/Environmental Composite Electrical Box**  
**Grounded**



Composite  
Boxes



**SECTION VIEW C-C**  
 Mounting Plate, Internal Mounting Post and  
 External Mounting Bushing (Ground Option Shown)



**147-023XMS-0005G**  
**(NSN: 5940-01-557-2719)**  
**EMI/Environmental Composite Electrical Box**  
**Grounded**



**Composite  
Boxes**

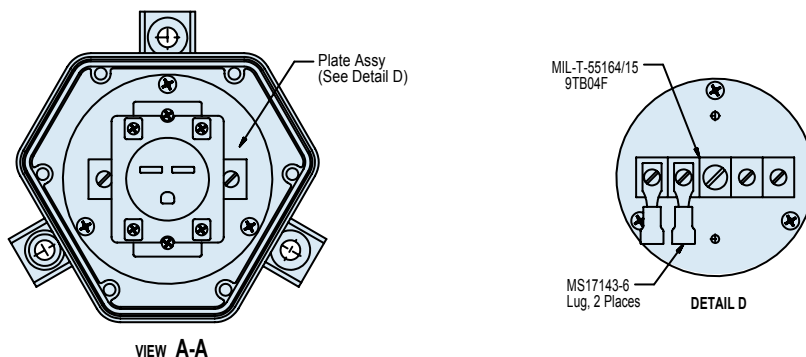


**TABLE I: Finish**

| Symbol     | Description                                                                             |
|------------|-----------------------------------------------------------------------------------------|
| <b>XMS</b> | Internal Surfaces - Electroless Nickel<br>Exterior Surfaces - Unplated Light Grey Color |
| <b>XO</b>  | No Plating                                                                              |

**APPLICATION NOTES**

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Accommodates one each, 115V or 125V, 15 Amp electrical connector receptacle (See Detail B).
3. Material / Finish:  
Box, cover - Thermoplastic grey color/see Table I.  
Hardware - 316 SST/passivate.  
Seals and gaskets - Silicone/N.A.  
Mounting Plate - Al alloy/electroless nickel or 300 series SST/passivate.
4. Dash 0005G NAVSEA approved, see 803-6983506.
5. Metric dimensions (mm) are indicated in parentheses.

**147-033XMS-0003**  
**(NSN: 5940-01-557-2725)**  
**EMI/Environmental Composite Electrical Box**  
**for MS3402 Receptacle Connector • Grounded**

**Basic Part  
Number**

**147-033**

**Finish  
(See Table I)**

**XMS**

**Dash  
Number**

**0003**

**C**

**C Option Supplied with  
Connector Assembly**  
*See Specific Eng. Dwg.  
Omit if Not Required*

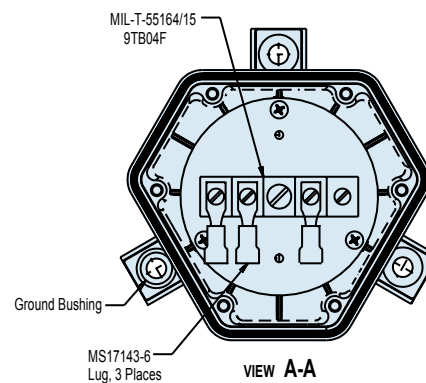
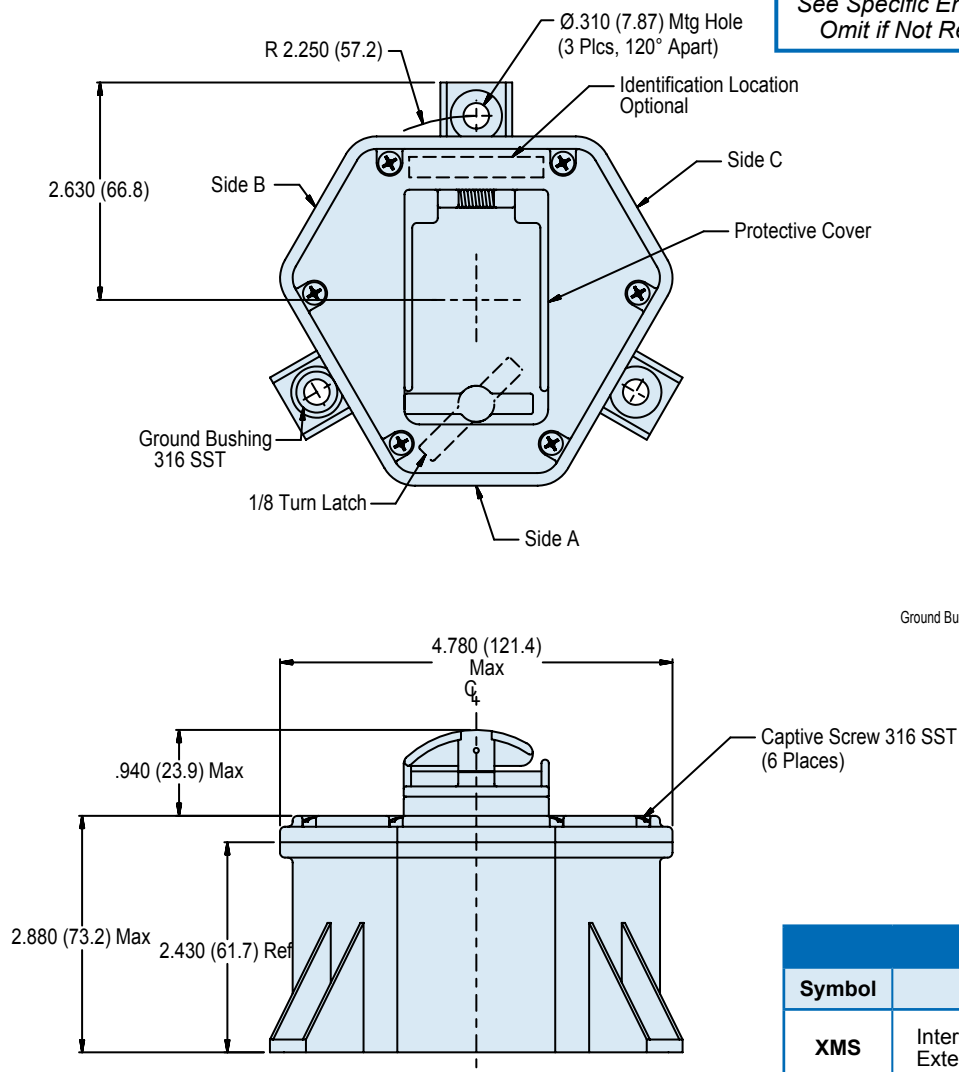


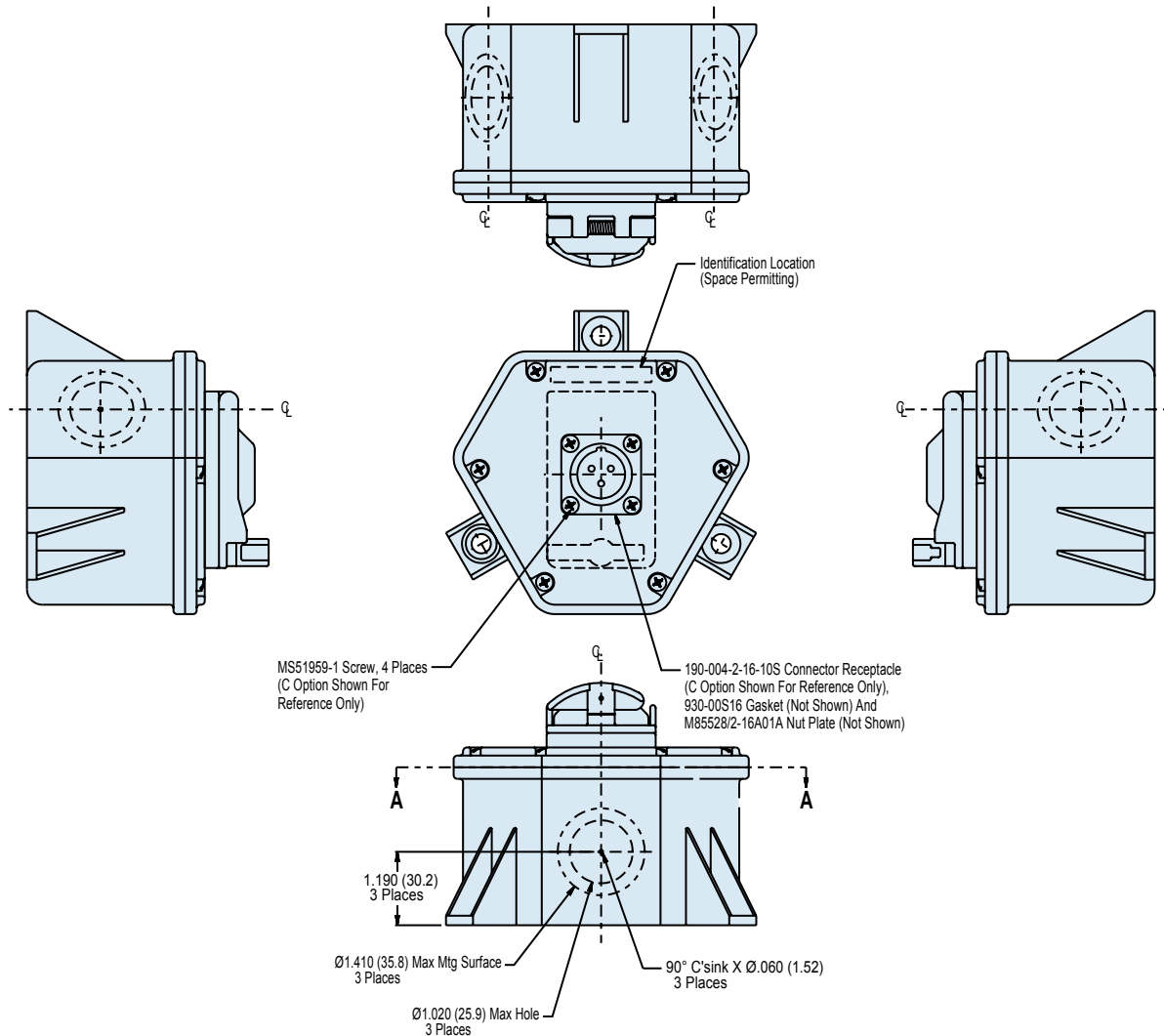
**TABLE I: Finish**

| Symbol     | Description                                                                             |
|------------|-----------------------------------------------------------------------------------------|
| <b>XMS</b> | Internal Surfaces - Electroless Nickel<br>Exterior Surfaces - Unplated Light Grey Color |
| <b>XO</b>  | No Plating                                                                              |

**147-033XMS-0003**  
**(NSN: 5940-01-557-2725)**  
**EMI/Environmental Composite Electrical Box**  
**for MS3402 Receptacle Connector • Grounded**

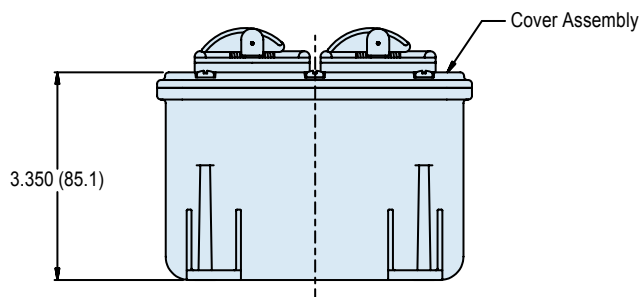
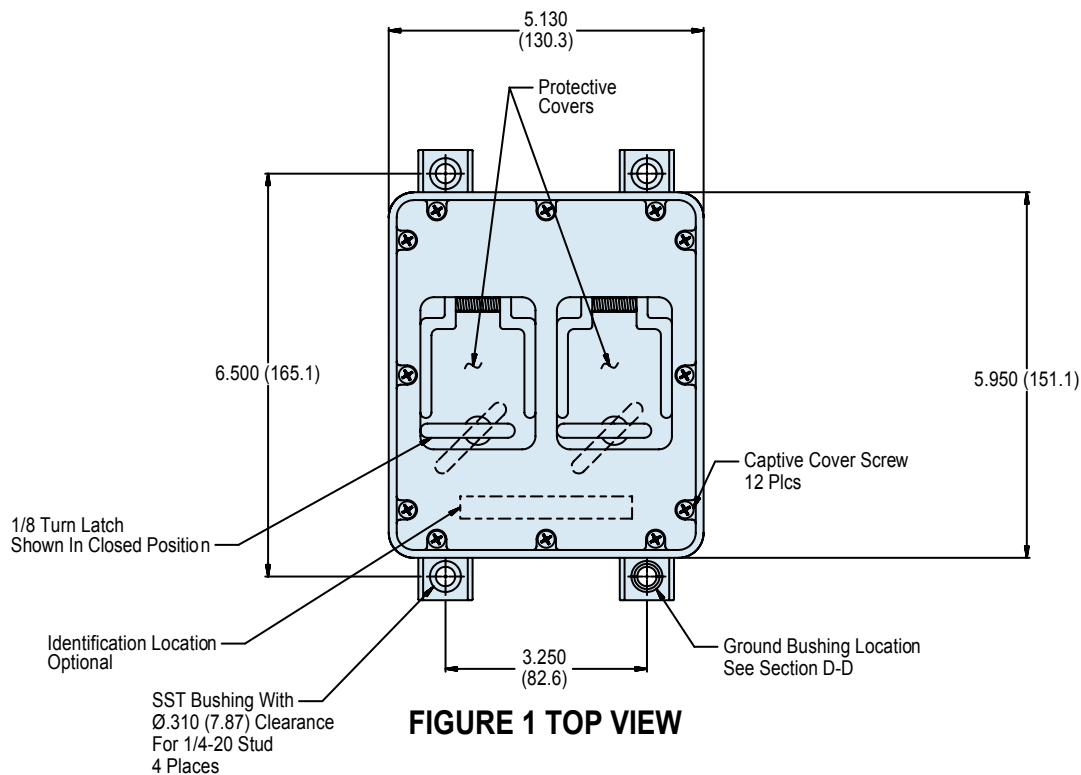
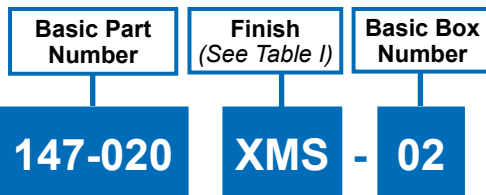


Composite  
Boxes



#### APPLICATION NOTES

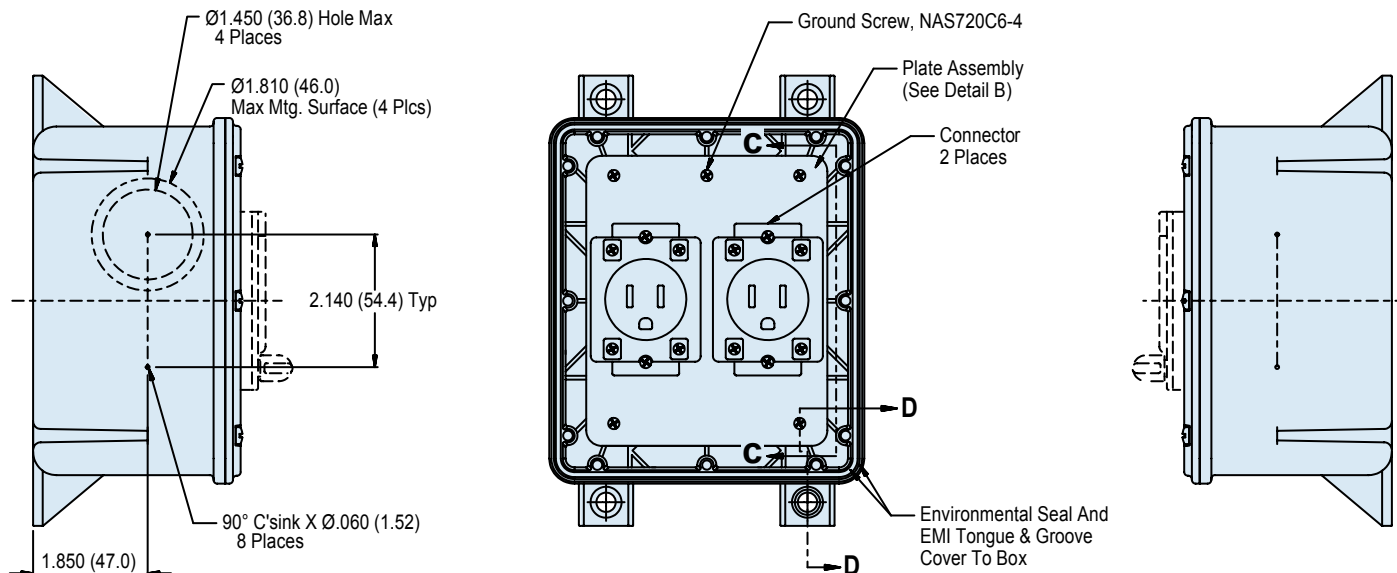
1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Material / Finish:  
Box, cover - Thermoplastic grey color/see Table I.  
Hardware - 316 SST/passivate.  
Seals and gaskets - Silicone/N.A.  
Mounting Plate - 300 series SST/passivate.
3. Dash 0003 NAVSEA approved, see 803-6983506.
4. Glenair recommended mating connector plug and backshell: 190-004-6-16-10P.
5. Metric dimensions (mm) are indicated in parentheses.

**147-020XMS-02****(NSN: 5975-01-556-9504)****Dual Electrical Blade Type Receptacle Composite Box  
15 Amp, 125 Volt 60 Hz, Grounded • Size 6.0 x 5.2 x 3.4**

**147-020XMS-02**  
**(NSN: 5975-01-556-9504)**  
**Dual Electrical Blade Type Receptacle Composite Box**  
**15 Amp, 125 Volt 60 Hz, Grounded • Size 6.0 x 5.2 x 3.4**



Composite  
Boxes



**VIEW A-A**

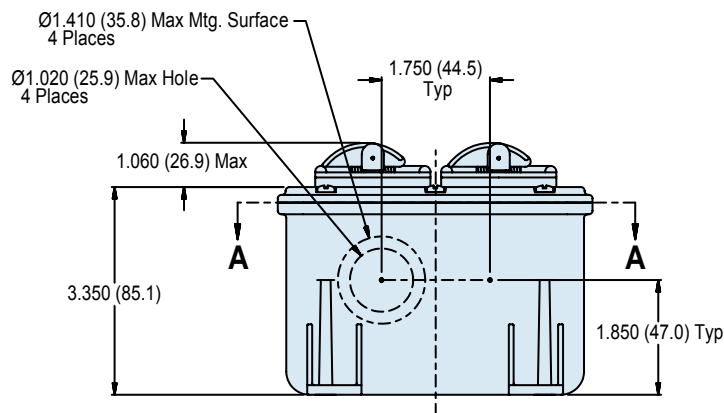
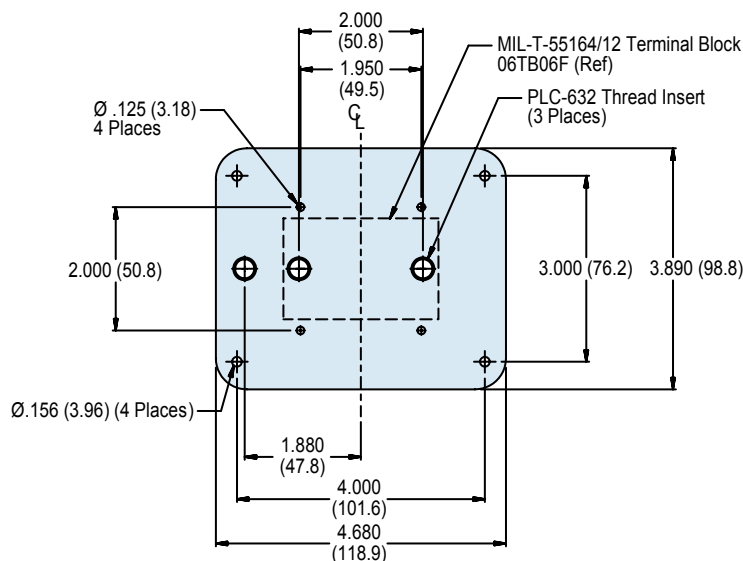


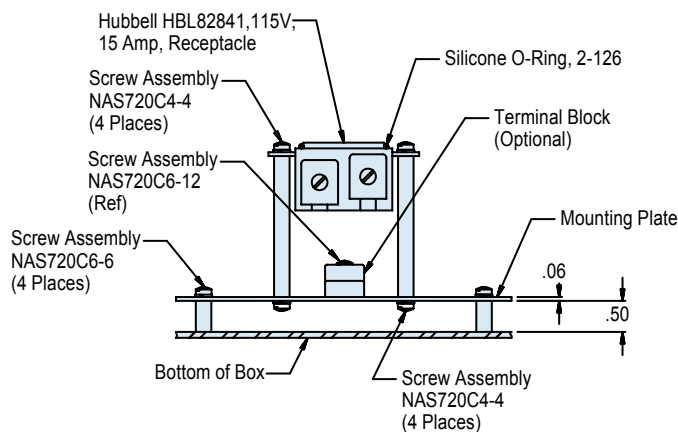
**FIGURE 2**

147-020XMS-02

(NSN: 5975-01-556-9504)

Dual Electrical Blade Type Receptacle Composite Box  
15 Amp, 125 Volt 60 Hz, Grounded • Size 6.0 x 5.2 x 3.4

DETAIL B



VIEW C-C

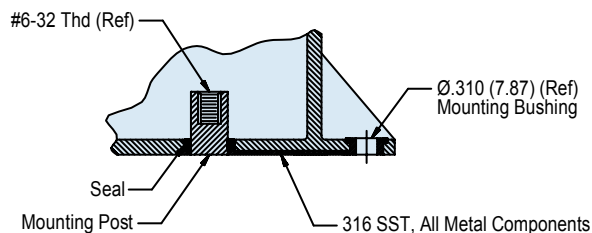
## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Color may be subject to fading, however UV exposure will not affect material physical properties.
3. Assembly is similar to symbol part numbers and require installation in accordance with NAVSEA drawing 803-6983506.
4. Material / Finish:  
Box, cover - Thermoplastic grey color/see Table I.  
Hardware - 316 SST/passivate.  
Seals and gaskets - Silicone/N.A.  
Mounting Plate - 300 series SST/passivate.
5. NAVSEA approved; Dwg 803-698-3506.
6. Metric dimensions (mm) are indicated in parentheses.

**147-020XMS-02**  
**(NSN: 5975-01-556-9504)**  
**Dual Electrical Blade Type Receptacle Composite Box**  
**15 Amp, 125 Volt 60 Hz, Grounded • Size 6.0 x 5.2 x 3.4**



**Composite  
Boxes**



**SECTION D-D**  
**Electrical Ground Through Internal**  
**Mounting Post To External Mounting Bushing**

**TABLE I: Finish**

| Symbol     | Description                                                                             |
|------------|-----------------------------------------------------------------------------------------|
| <b>XMS</b> | Internal Surfaces - Electroless Nickel<br>Exterior Surfaces - Unplated Light Grey Color |
| <b>XO</b>  | No Plating                                                                              |

**TABLE II: Replacement Parts**

| Item     | Part Number   | Description             | Material           |
|----------|---------------|-------------------------|--------------------|
| <b>1</b> | 140-065**-02  | Cover Assembly          | Grey Thermoplastic |
| <b>2</b> | 687-499-2     | Cover Screw Assembly    | 316 SST/Passivate  |
| <b>3</b> | 687-305Z132   | Mounting Plate Assembly | 300 Series SST     |
| <b>4</b> | 630-038XO-04K | 1/8 Turn Flop Lid       | Grey Thermoplastic |
| <b>5</b> | HBL8284I      | Electrical Connector    | N/A                |

**147-020XMS-05**

**(NSN: 5940-01-557-2634)**

**Dual Electrical Blade Type Receptacle Composite Box**  
**15 Amp, 115 Volt 60 Hz, Grounded • Size 6.8 x 5.9 x 4.25**

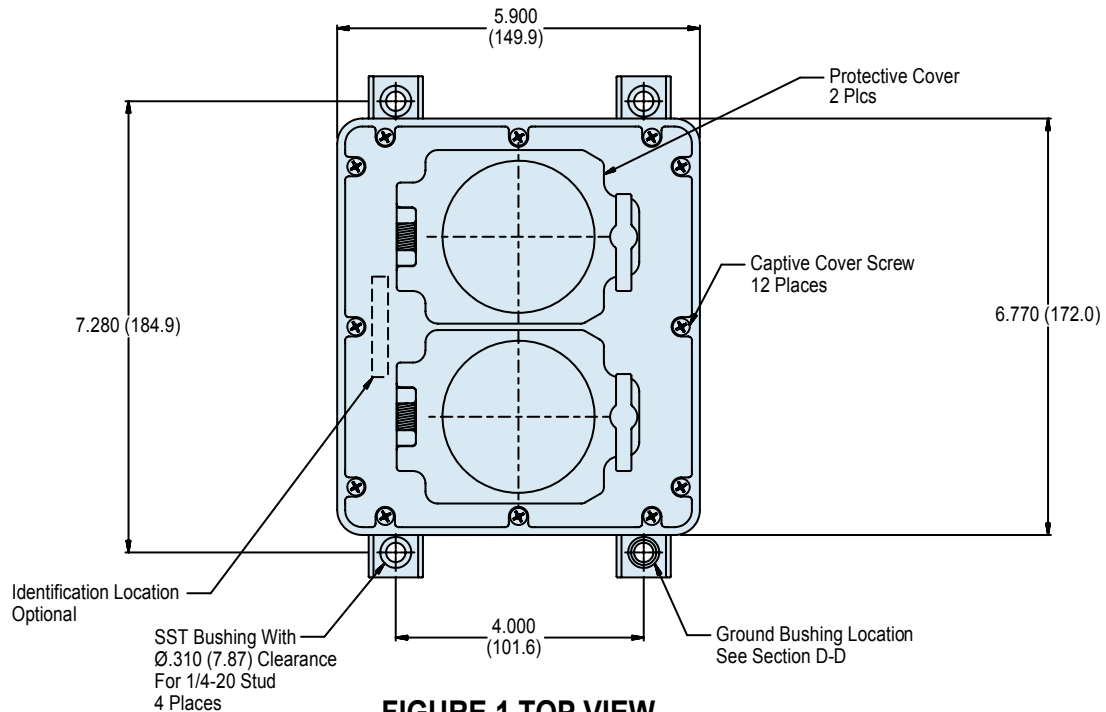
### Basic Part Number

**Finish**  
(See Table I)

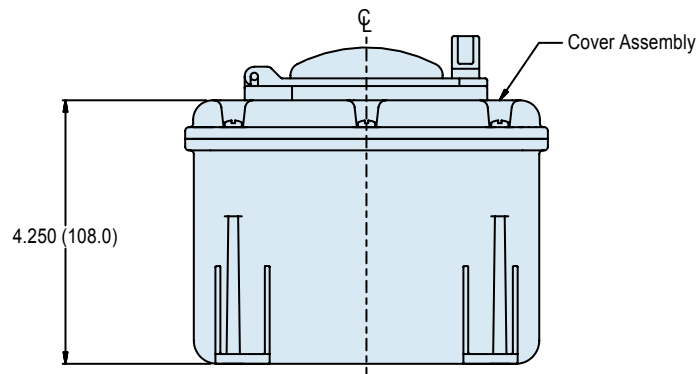
### Basic Box Number

**147-020**

## XMS - 05



### FIGURE 1 TOP VIEW



**147-020XMS-05**  
**(NSN: 5940-01-557-2634)**  
**Dual Electrical Blade Type Receptacle Composite Box**  
**15 Amp, 115 Volt 60 Hz, Grounded • Size 6.8 x 5.9 x 4.25**



Composite  
Boxes

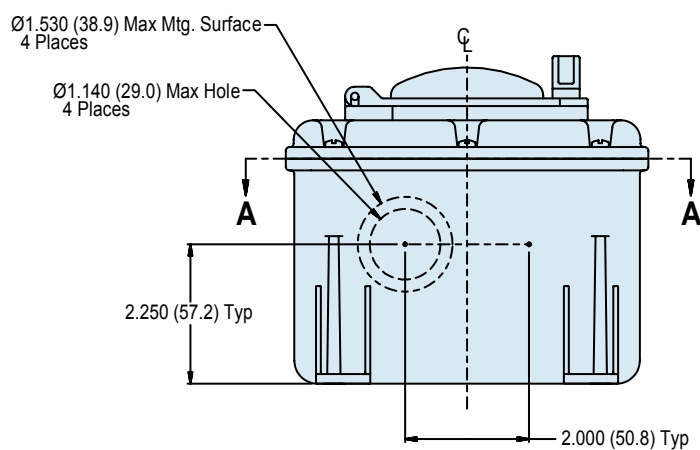
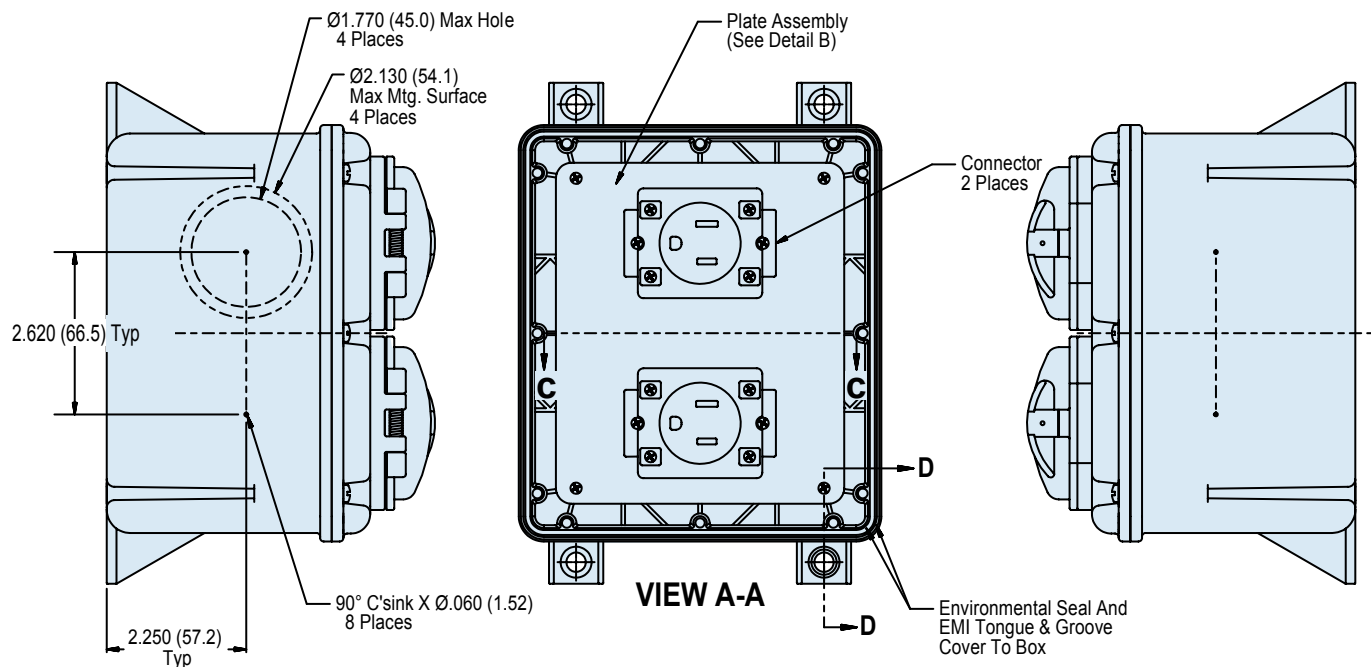
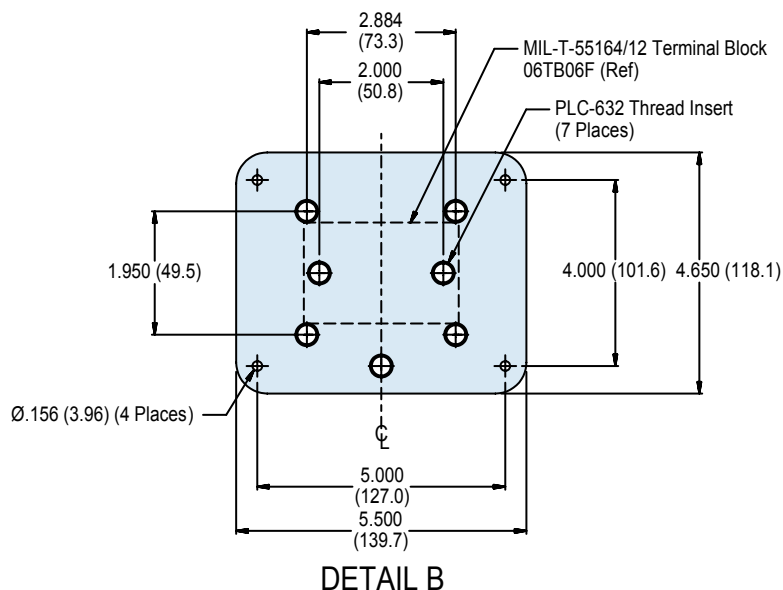


**FIGURE 2**

147-020XMS-05

(NSN: 5940-01-557-2634)

Dual Electrical Blade Type Receptacle Composite Box  
15 Amp, 115 Volt 60 Hz, Grounded • Size 6.8 x 5.9 x 4.25



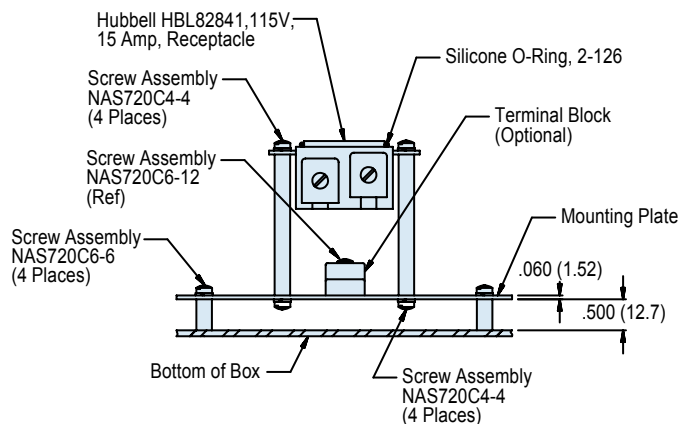
## APPLICATION NOTES

1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Color may be subject to fading, however UV exposure will not affect material physical properties.
3. Assembly is similar to symbol part numbers and require installation in accordance with NAVSEA drawing 803-6983506.
4. Material / Finish:
  - Box, cover - Thermoplastic grey color/see Table I.
  - Hardware - 316 SST/passivate.
  - Seals and gaskets - Silicone/N.A.
  - Mounting Plate - 300 series SST/passivate.
5. NAVSEA approved; Dwg 803-698-3506.
6. Metric dimensions (mm) are indicated in parentheses.

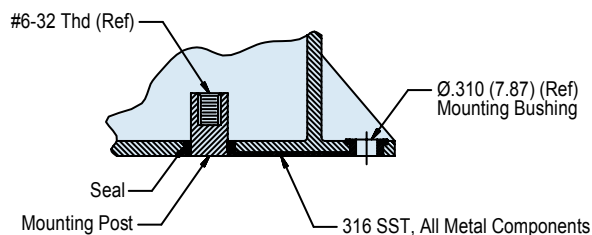
**147-020XMS-05**  
**(NSN: 5940-01-557-2634)**  
**Dual Electrical Blade Type Receptacle Composite Box**  
**15 Amp, 115 Volt 60 Hz, Grounded • Size 6.8 x 5.9 x 4.25**



Composite  
Boxes



**VIEW C-C**



**SECTION D-D**

**Electrical Ground Through Internal  
Mounting Post To External Mounting Bushing**

**TABLE I: Finish**

| Symbol     | Description                                                                             |
|------------|-----------------------------------------------------------------------------------------|
| <b>XMS</b> | Internal Surfaces - Electroless Nickel<br>Exterior Surfaces - Unplated Light Grey Color |
| <b>XO</b>  | No Plating                                                                              |

**TABLE II: Replacement Parts**

| Item     | Part Number   | Description             | Material           |
|----------|---------------|-------------------------|--------------------|
| <b>1</b> | 140-065**-02  | Cover Assembly          | Grey Thermoplastic |
| <b>2</b> | 687-499-2     | Cover Screw Assembly    | 316 SST/Passivate  |
| <b>3</b> | 687-305Z132   | Mounting Plate Assembly | 300 Series SST     |
| <b>4</b> | 630-038XO-04K | 1/8 Turn Flop Lid       | Grey Thermoplastic |
| <b>5</b> | HBL8284I      | Electrical Connector    | N/A                |

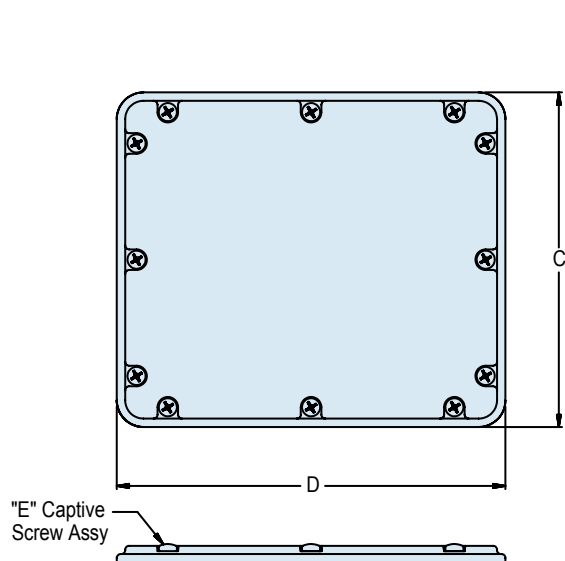
# 147-065XMS-01

(See Table I for NSN Designator)  
Replacement Lid Assembly  
for Glenair Composite Box Enclosures

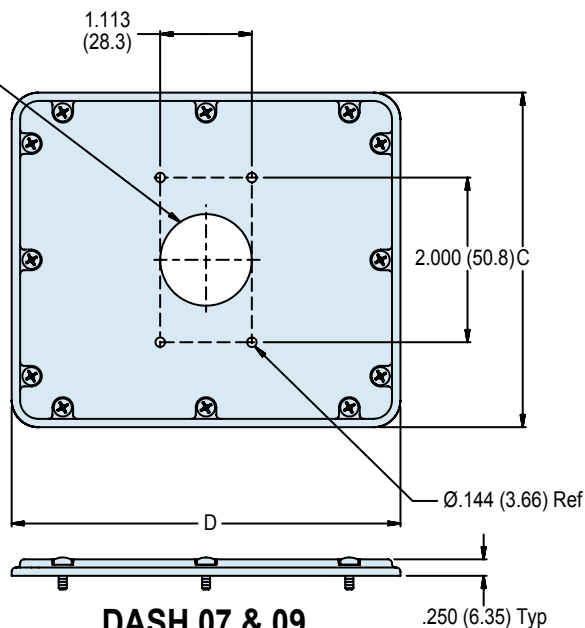
Basic Part  
NumberFinish  
(See Table II)Dash  
Number  
(See Table I)

140-065

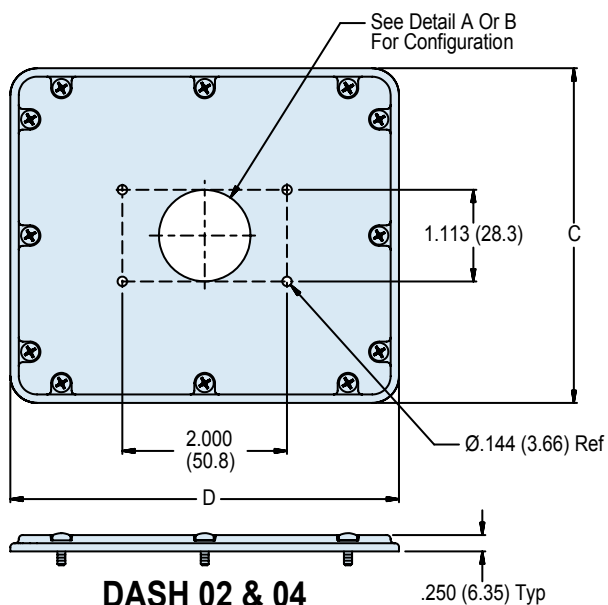
XMS - 01



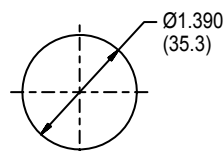
DASH 01, 17, 21 &amp; 24

See Detail A or B  
For Configuration

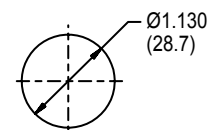
DASH 07 &amp; 09



DASH 02 &amp; 04



**DETAIL A**  
115 VAC Receptacle,  
630-038XO-02 Cover Assembly

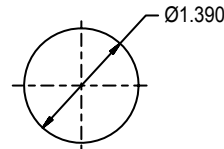
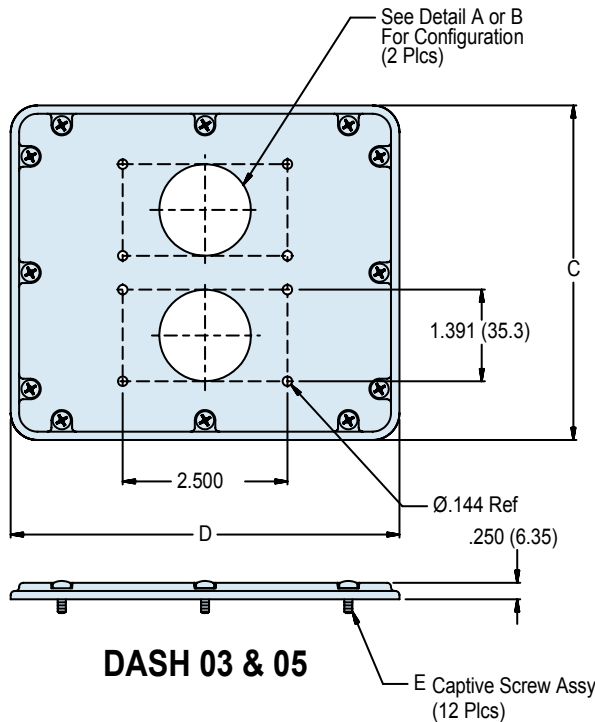
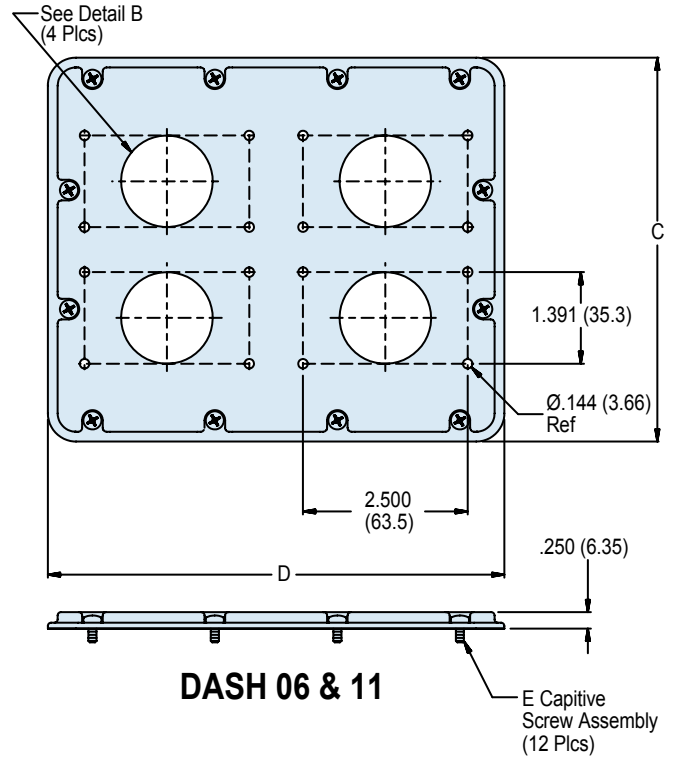
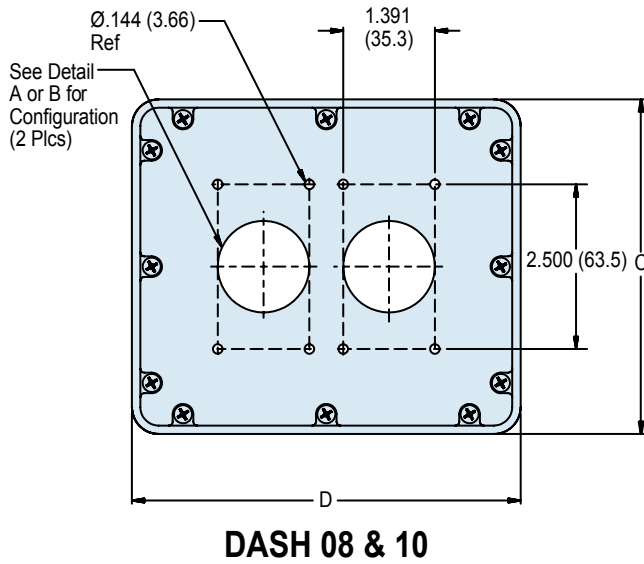


**DETAIL B**  
227-059XO-04 Sound Power Jack,  
630-038XO-02 Cover Assembly

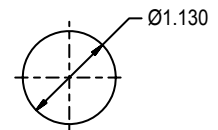
**147-065XMS-01**  
**(See Table I for NSN Designator)**  
**Replacement Lid Assembly**  
**for Glenair Composite Box Enclosures**



Composite  
Boxes



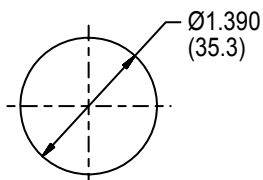
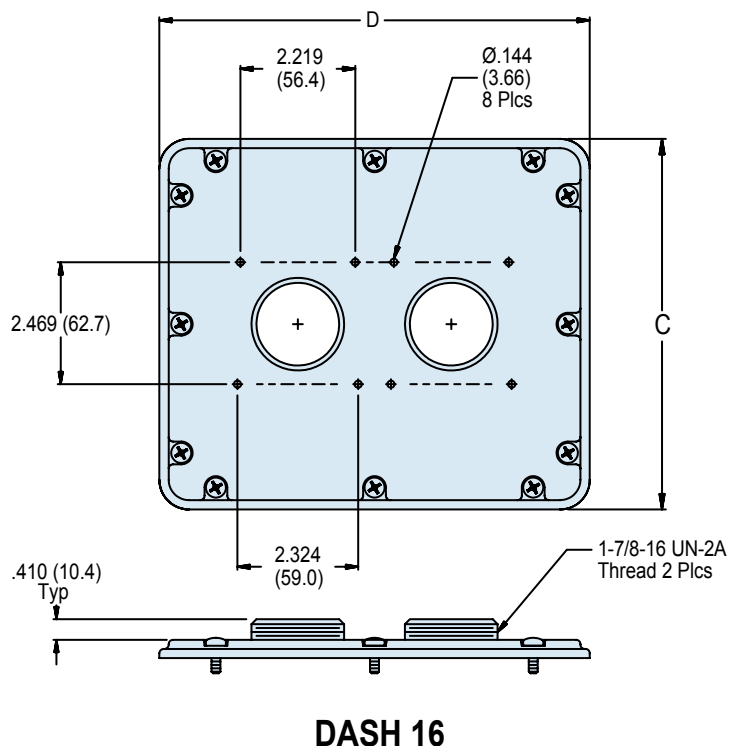
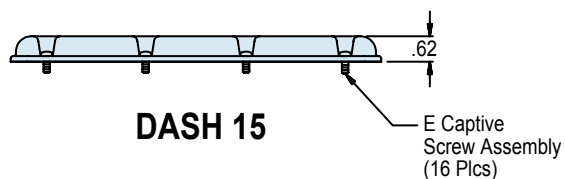
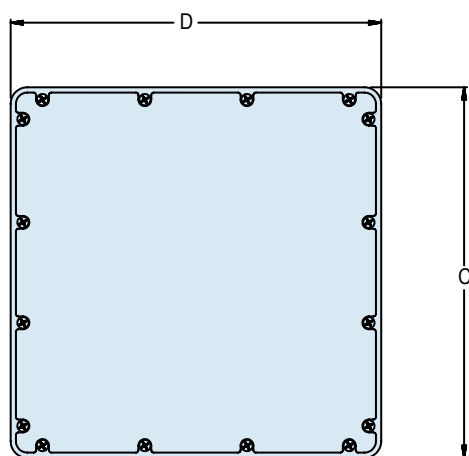
**DETAIL A**  
**115 VAC Receptacle,**  
**630-038XO-02 Cover Assembly**



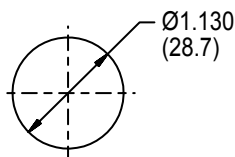
**DETAIL B**  
**227-059XO-04 Sound Power Jack,**  
**630-038XO-02 Cover Assembly**

E

**147-065XMS-01**  
**(See Table I for NSN Designator)**  
**Replacement Lid Assembly**  
**for Glenair Composite Box Enclosures**



**DETAIL A**  
 115 VAC Receptacle,  
 630-038XO-02 Cover Assembly

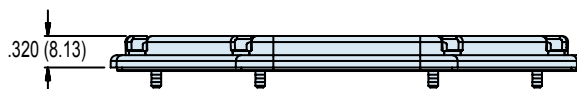
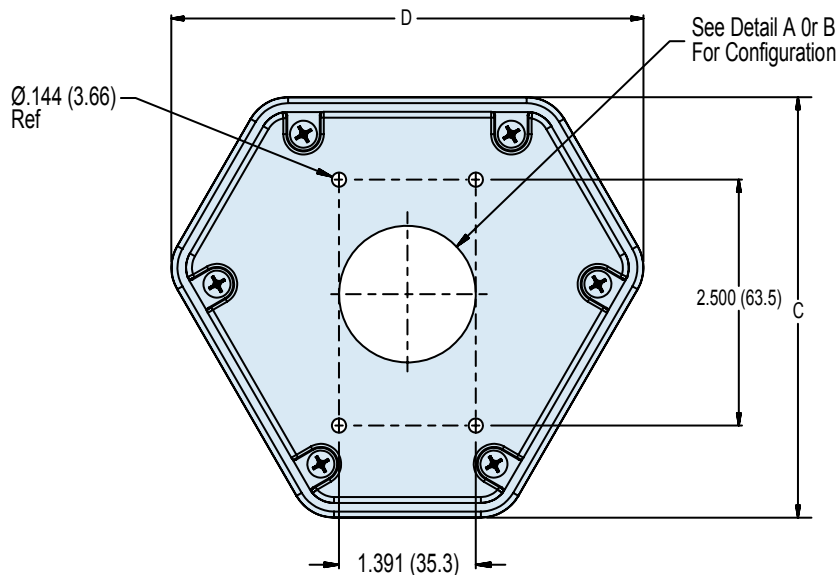


**DETAIL B**  
 227-059XO-04 Sound Power Jack,  
 630-038XO-02 Cover Assembly

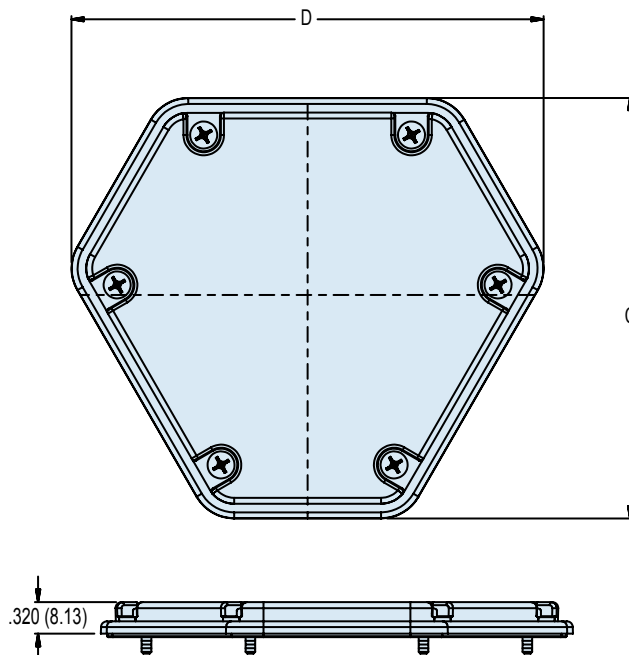
**147-065XMS-01**  
**(See Table I for NSN Designator)**  
**Replacement Lid Assembly**  
**for Glenair Composite Box Enclosures**



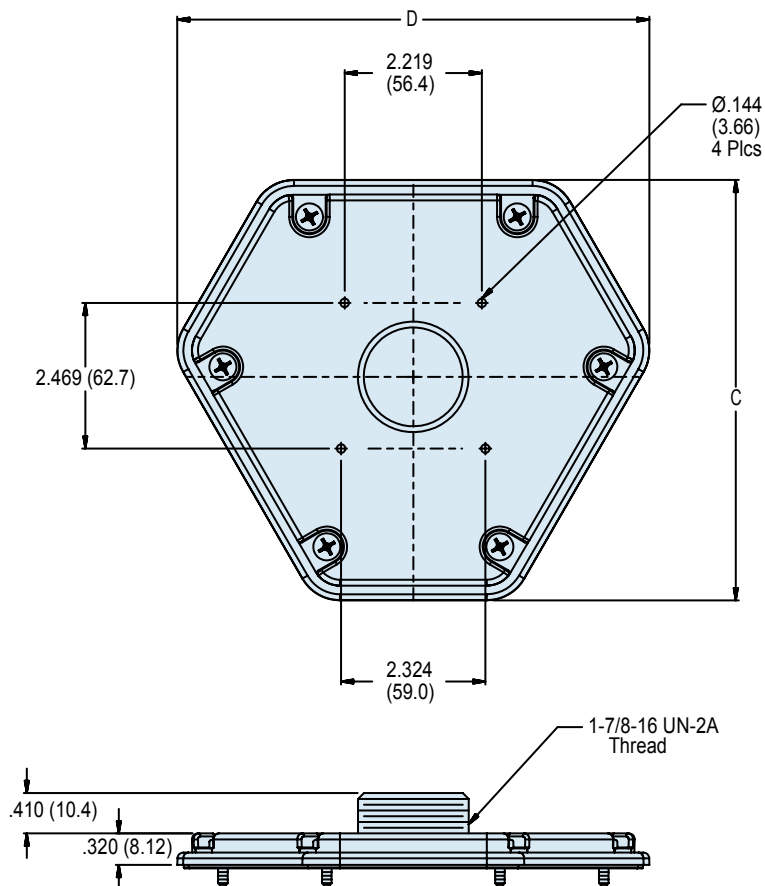
**Composite  
Boxes**



**DASH 12 AND 13**



**DASH 14**

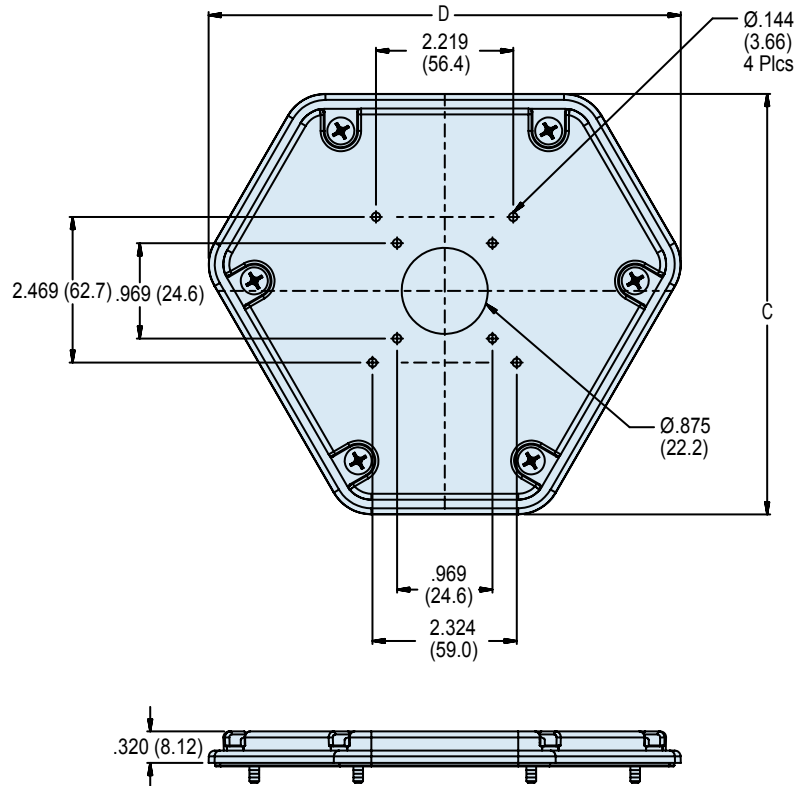
**147-065XMS-01**  
(See Table I for NSN Designator)  
Replacement Lid Assembly  
for Glenair Composite Box Enclosures**DASH 18****TABLE II: Finish**

| Symbol     | Description                                                                             |
|------------|-----------------------------------------------------------------------------------------|
| <b>XMS</b> | Internal Surfaces - Electroless Nickel<br>Exterior Surfaces - Unplated Light Grey Color |
| <b>XO</b>  | No Plating                                                                              |

**147-065XMS-01**  
(See Table I for NSN Designator)  
Replacement Lid Assembly  
for Glenair Composite Box Enclosures



Composite  
Boxes



**DASH 19**

**APPLICATION NOTES**

1. Assembly to be bagged and tagged.
2. Color may be subject to fading, however UV exposure will not affect material physical properties.
3. Assembly is similar to symbol part numbers and require installation in accordance with NAVSEA drawing 803-6983506.
4. Material / Finish:  
Cover - Thermoplastic grey color/see Table II.  
Hardware - 316 SST/passivate.  
Elastomers - Silicone/N.A.  
Retainer - Buna/N.A.
5. NAVSEA approved; Dwg 803-698-3506.
6. Metric dimensions (mm) are indicated in parentheses.

# 630-038XO-01K

(See Table I for NSN Designator)  
Composite Box Cover Assembly  
for 147-020 and 147-021 Composite Boxes

Basic Part  
Number

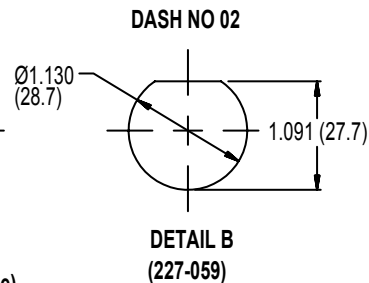
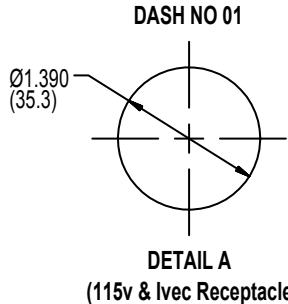
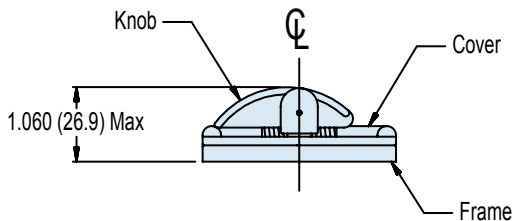
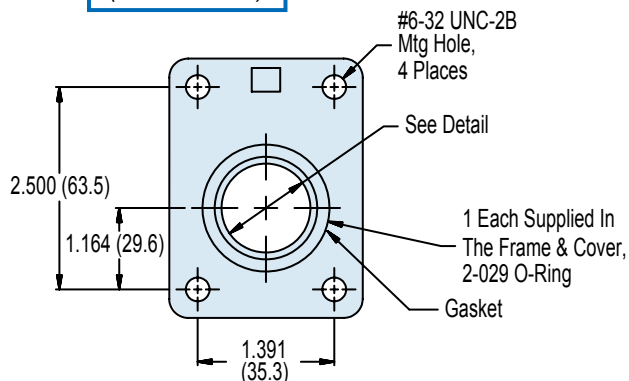
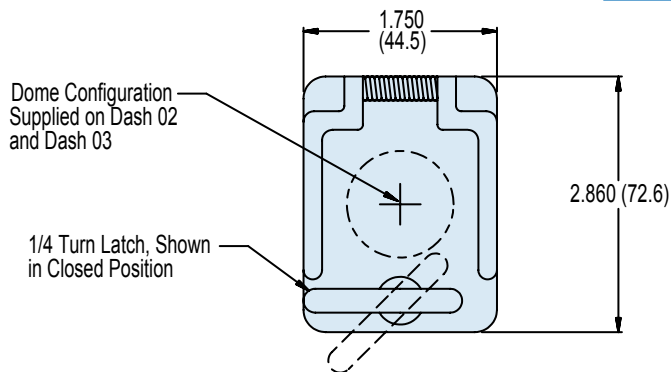
630-038

Dash  
Number  
(See Table I)

XO

- 01

K

Finish  
(None)Four Mounting  
Screws  
(NAS720C6-4)

## APPLICATION NOTES

1. Assembly identified with manufacturer's name and part number, space permitting.
2. Color may be subject to fading, however UV exposure will not affect material physical properties.
3. Material / Finish:  
Cover - Thermoplastic grey color/see Table II.  
Spring and shaft - 316 SST/passivate.  
Gaskets - Silicone rubber ZZ-R-765/N.A.
4. NAVSEA approved; Dwg 803-698-3506.
5. Metric dimensions (mm) are indicated in parentheses.

**630-038XO-01K**  
**(See Table I for NSN Designator)**  
**Composite Box Cover Assembly**  
**for 147-020 and 147-021 Composite Boxes**



Composite  
Boxes

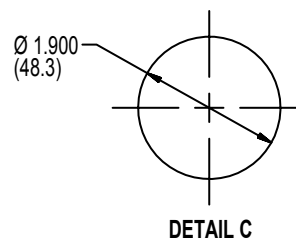
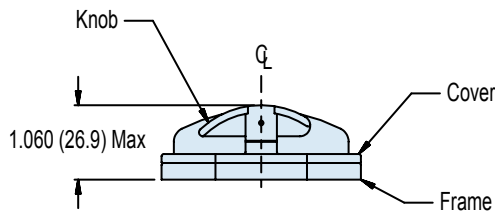
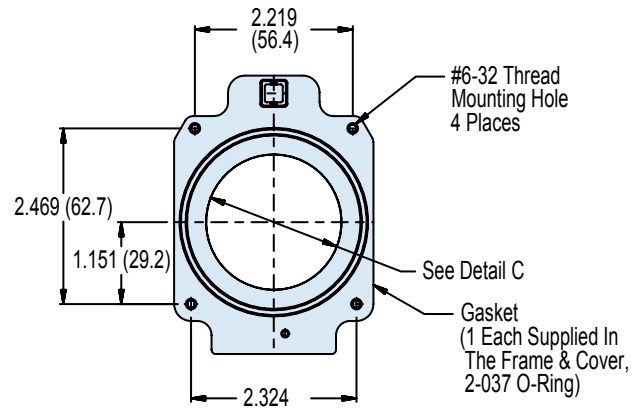
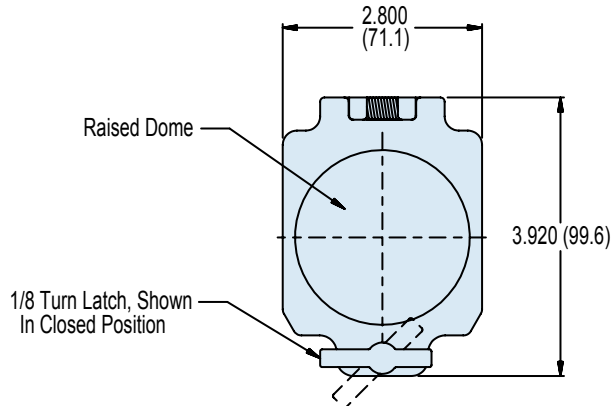


**TABLE I: Dash Number and NSN Designators**

| Dash No. | Cut-Out Detail | Used On        | Sheet Reference | NSN Designator                         |
|----------|----------------|----------------|-----------------|----------------------------------------|
| 01       | A              | 147-020 Series | Sheet 1         | 5975-01-556-9621 (XO Finish, K Option) |
| 02       | B              | 147-021 Series | Sheet 1         | 5975-01-556-9582 (XO Finish, K Option) |
| 03       | A              | 140-043-0006   | Sheet 1         |                                        |
| 24       | C              | 147-023-02     | Sheet 2         | 5975-01-556-9627 (XO Finish, K Option) |

**Basic Part  
Number**

**227-059**

**Connector  
Style**

**04 - Jam Nut  
Mounting**

**XO**

**- 04**

**W**

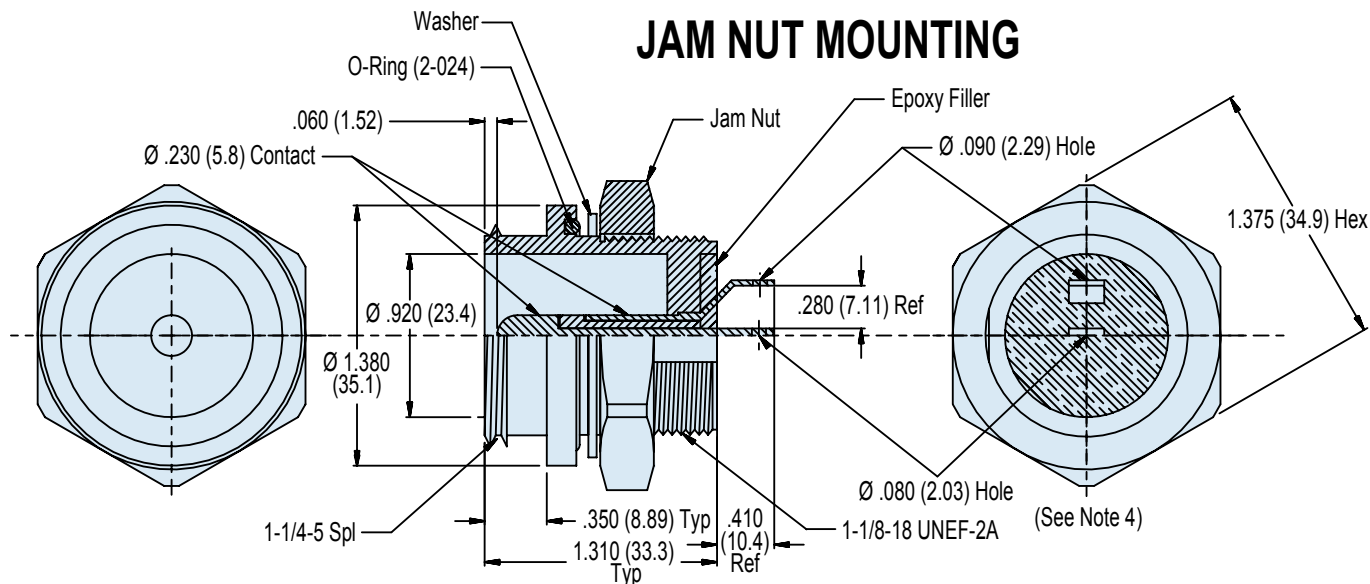
**Finish  
(See Table I)**

**Pre-Wired  
Assembly**  
*Omit for None  
(See Note 5)*

**TABLE I: Finish**

| Symbol    | Description                   |
|-----------|-------------------------------|
| <b>XM</b> | Conductive Electroless Nickel |
| <b>XO</b> | No Plating, Non Conductive    |

## JAM NUT MOUNTING



## APPLICATION NOTES

- Assembly identified with manufacturer's name and part number, space permitting.
- Color may be subject to fading, however UV exposure will not affect material physical properties.
- Material / Finish:  
 Shell, insulator and jam nut - High temperature IAW AIR4567/See Table I.  
 Contacts - Copper alloy/gold plate.  
 O-Ring - Silicone rubber/N.A.  
 Washer - 300 series SST/passivate.  
 Filler - Epoxy (Stycast)/N.A.
- Solder terminal holes for 22 and 20 gage wire.
- Supplied pre-wired with MIL-W-16878/4 Type E stranded wire, 22 gage, center contact white, ring black, 12 inches (304.8) long with MS25036-101 terminal.
- Glenair's 227-059 composite receptacle connector is designed to mate with H39A type jack plug and mount to Glenair part number 140-041 composite box lid.
- Metric dimensions (mm) are indicated in parentheses.

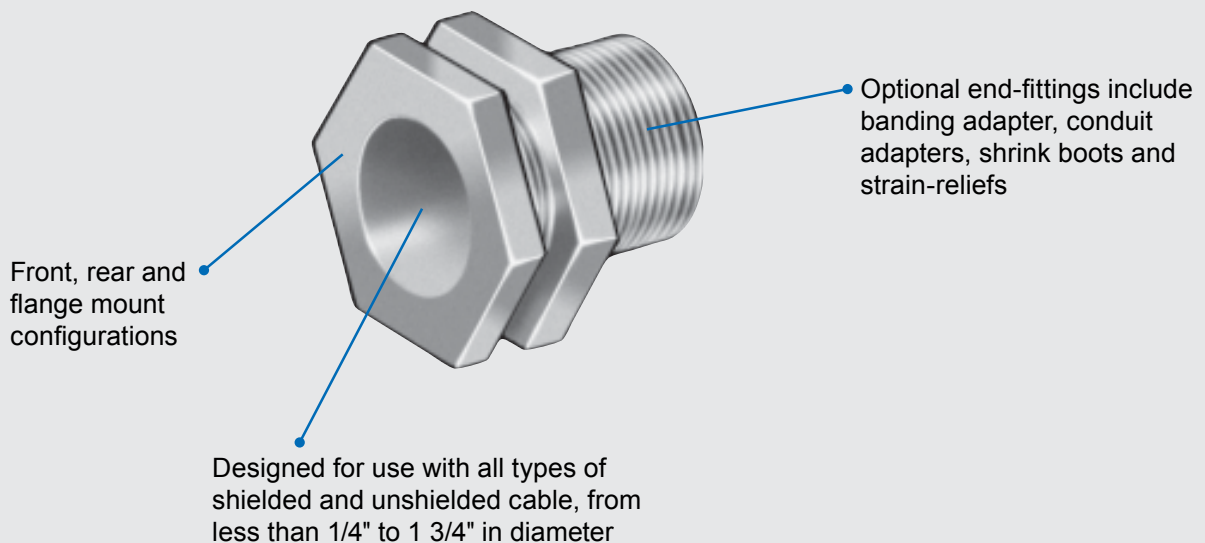
# The Right Feed-Through Fitting for Every Shipboard Application—in Aluminum, Titanium, Composite Thermoplastic or Stainless Steel

Glenair manufactures a full spectrum line of feed-through fittings for routing wire and cable into and out of switchgear and other types of junction boxes. The fittings are also ideal for thru-panel and bulkhead applications.

From environmental sealers and EMI/RFI shield terminators to strain reliefs and shrink boot

adapters—Glenair has the right feed-through for every application requirement. Our composite thermoplastic designs offer significant weight savings and unlimited corrosion protection.

Best of all, many of our most popular part numbers are in stock, in quantity and ready for immediate delivery.



**\*Composite Thermoplastic Parts:** Unless otherwise specified, feed-through fittings will be finished per Table II. Consult factory for additional options for plating of composite components. Composite feed-throughs should be considered for applications where weight savings and extended corrosion protection is desired. Compared to aluminum alloy, composite materials provide equal or improved RFI/EMI protection; however, composite materials have lower thermal conductivity and reduced high-current grounding characteristics. Composite feed-throughs are designed to meet RTCA/DO-160C environmental conditions and physical strength requirements. Please consult the factory for assistance in selecting the best materials and platings for your application.



## Feed-Through Fittings Standard Materials and Notes

The following standard materials are used for the majority of Glenair feed-through fittings and connector accessories. Feed-through components are not limited to those items listed, but are representative of the elements used

in the majority of standard components. Contact Glenair for applicable specifications on items not listed below, or for more information on composite thermoplastic material options.

### STANDARD MATERIALS - FEED-THROUGH FITTINGS

| COMPONENT                                                                                                                                                                                              | MATERIAL                                   | SPECIFICATION                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------|
| Machined components: such as feed-through bodies, strain reliefs, banding platforms, rotatable couplers, mounting plates, lock nuts, G-spring support rings, EMI ground rings, grommet followers, etc. | Aluminum                                   | QQ-A-200, 225<br>ASTMB211, 221 |
| Feed-throughs and strain reliefs: available in optional injection molded and/or machined composite thermoplastic.                                                                                      | Engineering thermo-<br>plastic such as PEI | AIR 4567<br>MIL-C-85049        |
| Feed-throughs and strain reliefs: available in optional corrosion resisting steel; and hardware such as screws, washers, rivets, band straps, etc.                                                     | Corrosion<br>Resisting Steel               | QQ-s-763<br>(300 Series)       |
| Elastomeric seals: such as O-rings, cable jacket seals, grommets, etc.                                                                                                                                 | Silicone                                   | TFE                            |
| Anti-friction and thrust washers                                                                                                                                                                       | Teflon                                     | ZZ-R-765                       |
| Anti-rotation device                                                                                                                                                                                   | Corrosion Resistant<br>Material            |                                |

### NOTES

On all length callouts, tolerance is  $\pm .060$  unless otherwise specified.

Unless otherwise specified, the following other dimensional tolerances will apply:

.xx =  $\pm .03$  (0.8)  
 .xxx =  $\pm .015$  (0.4)  
 Lengths =  $\pm .060$  (1.52)  
 Angles =  $\pm 5^\circ$

Metric dimensions (mm) are indicated in parentheses

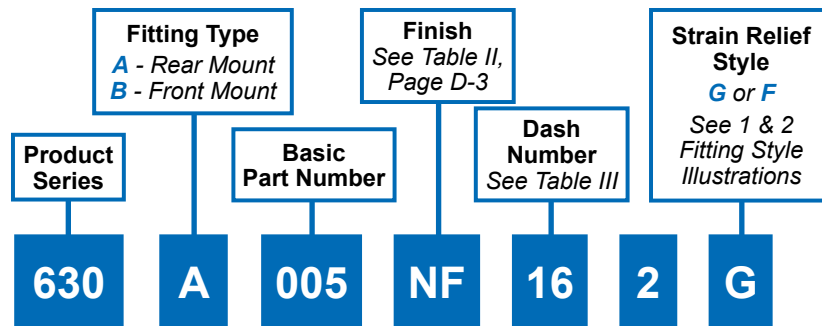
### GENERAL COMPOSITE CHARACTERISTICS

- 24 KPSI - 38 KPSI Tensile Strength
- 33 KPSI - 54 KPSI Flexural Strength
- 1,300 KPSI - 2,100 KPSI Flexural Modulus
- 175 - 200° Celsius Operating Temperature
- CTE, Composite: @ 10° inch/inch °F is 1.10 - 1.40
- Meets ASTM-E-595, NASA SP-R-0022A  
Outgassing Requirements for Space  
*Contact factory for specific data.*

**TABLE II - STANDARD MATERIALS AND FINISHES**

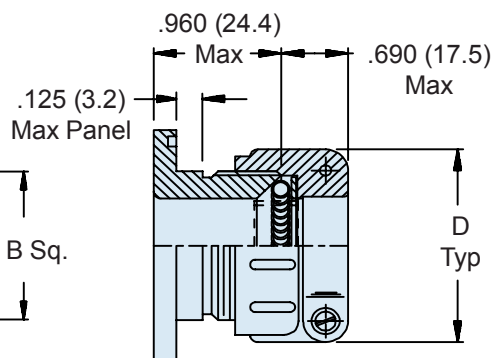
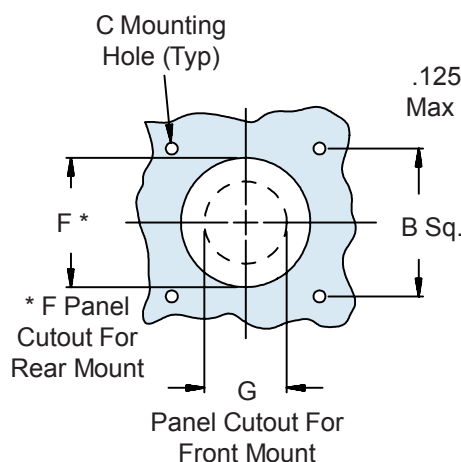
| <b>PART NUMBER<br/>FINISH<br/>SYMBOL</b>                 | <b>ALUMINUM ALLOY (I.A.W. QQ-A-225)*</b>                                                                                                                                    |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NF</b>                                                | Cadmium Plate, Olive Drab per QQ-P-416, Type II, Class 3 over Electroless Nickel Plate per MIL-C-26074 Class 3 or 4, .0005 Min. Thickness. 1,000 hrs. Corrosion Resistance. |
| <b>ZN</b>                                                | Zinc Alloy Plate per ASTM B 841-91, Class 1, Type E, Grade 3, over Electroless Nickel Plate per ASTM B 733-90 SC2, Type 1, Class 5, Olive Drab.                             |
| <b>G</b>                                                 | Hard Coat, Anodic, MIL-A-8625, Type III, Class 1.<br>Not suitable for EMI shielding or grounding.                                                                           |
| <b>STAINLESS STEEL (300 Series Cres I.A.W. QQ-S-763)</b> |                                                                                                                                                                             |
| <b>Z1</b>                                                | Passivate per QQ-P-35. Applicable to corrosion-resisting steel backshells and accessories.                                                                                  |
| <b>ZM</b>                                                | Electroless Nickel Plate per MIL-C-26074, Class 30R4, Grade A.                                                                                                              |
| <b>TITANIUM</b>                                          |                                                                                                                                                                             |
| <b>TP</b>                                                | Nickel Plate, Electroless or Electro-Deposited with suitable under-plate.                                                                                                   |
| <b>HIGH-GRADE ENGINEERING THERMOPLASTIC COMPOSITE</b>    |                                                                                                                                                                             |
| <b>XB</b>                                                | No Plating, Black Thermoplastic Composite Material.                                                                                                                         |
| <b>XO</b>                                                | No Plating, Base Material Non-Conductive Thermoplastic Composite.                                                                                                           |
| <b>XM</b>                                                | Electroless Nickel Plate, 1,000 hrs. Corrosion Resistance.                                                                                                                  |
| <b>XW</b>                                                | Cadmium Plate, Olive Drab over Electroless Nickel.<br>1,000 hrs. Corrosion Resistance.                                                                                      |

\* Aluminum components are not recommended for above-deck (weather-deck) shipboard use. Glenair's CostSaver Composite EMI/RFI Junction Boxes should not be paired with aluminum feed-through fittings when used in exposed, harsh-weather environments. Despite protective platings, aluminum interconnect components corrode too quickly when exposed to salt spray or other corrosive liquids to be useful in these settings.

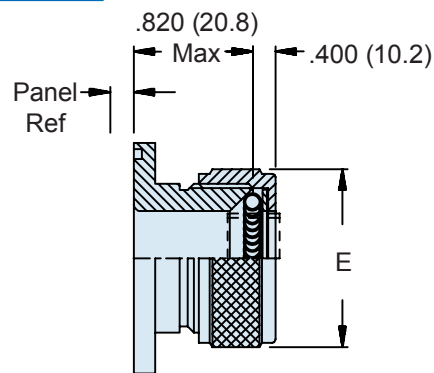


**"G"-Spring Style Shield Termination  
for Strain Relief Styles G and F**

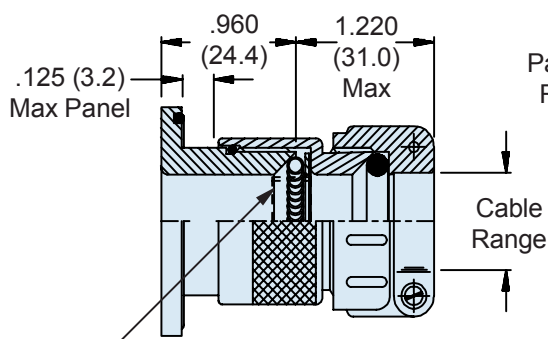
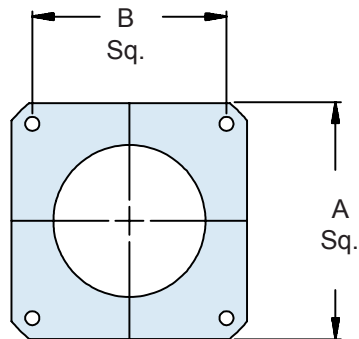
**Fitting Style**  
1 - RFI/EMI Only  
2 - RFI/EMI  
Environmental



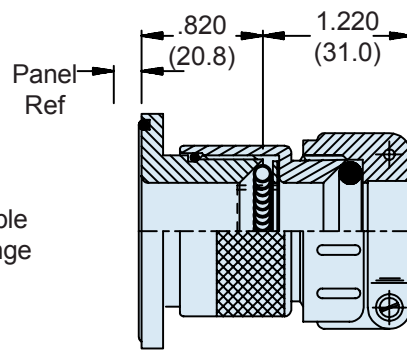
**Style 1**  
**Rear Mount Type A**  
**RFI/EMI**  
(Shown With Style F  
Strain Relief)



**Style 1**  
**Front Mount Type B**  
**RFI/EMI**  
(Shown With Style G  
Gland Nut)



**Style 2**  
**Rear Mount Type A**  
**RFI/EMI Environmental**  
(Shown With Style F  
Strain Relief)



**Style 2**  
**Front Mount Type B**  
**RFI/EMI Environmental**  
(Shown With Style F  
Strain Relief)

**630-005**  
**Square Flange Feed-Through Fittings**  
 "G"=Spring RFI/EMI Environmental



Feed  
Throughs

**TABLE III: Dash Number, Cable Range and Dimensions (Continued Below)**

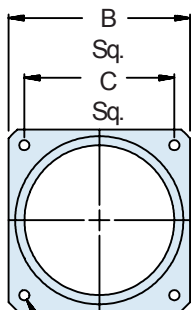
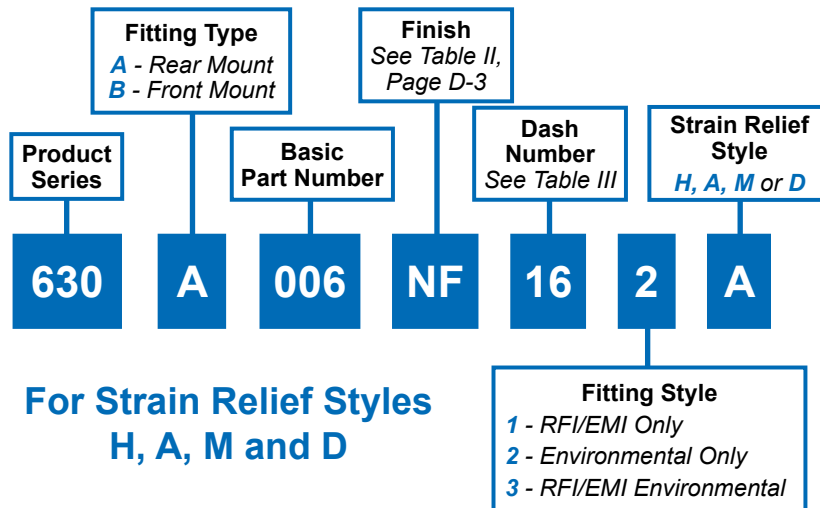
| Dash<br>No. | Cable Range  |              | A<br>Max     | B<br>Dim     |            | C<br>+.015 (+0.4)<br>- 0 (-0.0) |            |
|-------------|--------------|--------------|--------------|--------------|------------|---------------------------------|------------|
|             | Min          | Max          |              |              |            |                                 |            |
| 01          | .156 (4.0)   | .250 (6.4)   | .885 (22.5)  | .593 (15.1)  | .120 (3.0) | .120 (3.0)                      | .120 (3.0) |
| 02          | .188 (4.8)   | .375 (9.5)   | 1.104 (28.0) | .812 (20.6)  | .120 (3.0) | .120 (3.0)                      | .120 (3.0) |
| 03          | .250 (6.4)   | .438 (11.1)  | 1.197 (30.4) | .906 (23.0)  | .120 (3.0) | .120 (3.0)                      | .120 (3.0) |
| 04          | .280 (7.1)   | .500 (12.7)  | 1.291 (32.8) | .968 (24.6)  | .120 (3.0) | .120 (3.0)                      | .120 (3.0) |
| 05          | .375 (9.5)   | .625 (15.9)  | 1.385 (35.2) | 1.062 (27.0) | .120 (3.0) | .120 (3.0)                      | .120 (3.0) |
| 06          | .500 (12.7)  | .750 (19.1)  | 1.635 (41.5) | 1.250 (31.8) | .120 (3.0) | .120 (3.0)                      | .120 (3.0) |
| 07          | .625 (15.9)  | .875 (22.2)  | 1.760 (44.7) | 1.375 (34.9) | .147 (3.7) | .147 (3.7)                      | .147 (3.7) |
| 08          | .750 (19.1)  | 1.000 (25.4) | 2.010 (51.1) | 1.562 (39.7) | .147 (3.7) | .147 (3.7)                      | .147 (3.7) |
| 09          | .875 (22.2)  | 1.125 (28.6) | 2.260 (57.4) | 1.750 (44.5) | .173 (4.4) | .173 (4.4)                      | .173 (4.4) |
| 10          | 1.000 (25.4) | 1.250 (31.8) | 2.510 (63.8) | 1.938 (49.2) | .173 (4.4) | .173 (4.4)                      | .173 (4.4) |
| 11          | 1.125 (28.6) | 1.375 (34.9) | 2.760 (70.1) | 2.125 (54.0) | .173 (4.4) | .173 (4.4)                      | .173 (4.4) |

**TABLE III: (Continued from Above)**

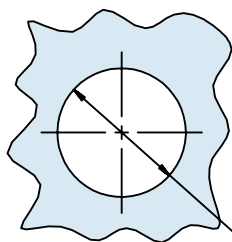
| Dash<br>No. | D<br>Max     | E<br>Max     | F<br>+.015 (+0.4)<br>- 0 (-0.0) |              | G<br>+.031 (+0.8)<br>- 0 (-0.0) |              |
|-------------|--------------|--------------|---------------------------------|--------------|---------------------------------|--------------|
|             |              |              |                                 |              |                                 |              |
| 01          | .843 (21.4)  | .625 (15.9)  | .515 (13.1)                     | .250 (6.4)   | .250 (6.4)                      | .250 (6.4)   |
| 02          | .968 (24.6)  | .750 (19.1)  | .640 (16.3)                     | .375 (9.5)   | .375 (9.5)                      | .375 (9.5)   |
| 03          | 1.046 (26.6) | .875 (22.2)  | .765 (19.4)                     | .438 (11.1)  | .438 (11.1)                     | .438 (11.1)  |
| 04          | 1.156 (29.4) | 1.000 (25.4) | .890 (22.6)                     | .500 (12.7)  | .500 (12.7)                     | .500 (12.7)  |
| 05          | 1.218 (30.9) | 1.125 (28.6) | 1.015 (25.8)                    | .625 (15.9)  | .625 (15.9)                     | .625 (15.9)  |
| 06          | 1.343 (34.1) | 1.250 (31.8) | 1.140 (29.0)                    | .750 (19.1)  | .750 (19.1)                     | .750 (19.1)  |
| 07          | 1.468 (37.3) | 1.375 (34.9) | 1.265 (32.1)                    | .875 (22.2)  | .875 (22.2)                     | .875 (22.2)  |
| 08          | 1.593 (40.5) | 1.500 (38.1) | 1.390 (35.3)                    | 1.000 (25.4) | 1.000 (25.4)                    | 1.000 (25.4) |
| 09          | 1.718 (43.6) | 1.625 (41.3) | 1.515 (38.5)                    | 1.125 (28.6) | 1.125 (28.6)                    | 1.125 (28.6) |
| 10          | 1.843 (46.8) | 1.750 (44.5) | 1.640 (41.7)                    | 1.250 (31.8) | 1.250 (31.8)                    | 1.250 (31.8) |
| 11          | 2.187 (55.5) | 1.875 (47.6) | 1.765 (44.8)                    | 1.375 (34.9) | 1.375 (34.9)                    | 1.375 (34.9) |

**APPLICATION NOTES**

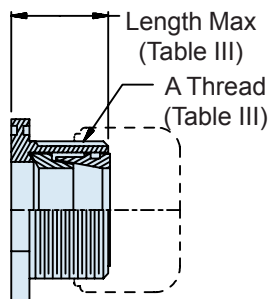
- Assembly identified with manufacturer's name and part number, space permitting.
- Cable range is defined as the accommodations range for the wire bundle or cable. Dimensions shown are not intended for inspection criteria.
- Material / Finish: See Table II.
- For proper termination, it is recommended that Glenair 469-001 shield support ring be used on all assemblies. Place ring over wire and under shield; position under G-spring. Please consult factory for more information.
- "G"-spring fittings are not available in composite thermoplastic.
- Metric dimensions (mm) are indicated in parentheses.



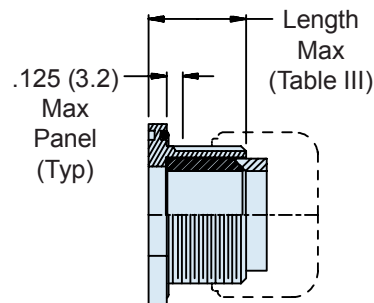
D Mounting Holes  
(4 Places)



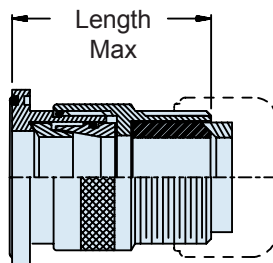
Panel Cut-Out E Dia.



**Style 1**  
**Type B - Front Mount**  
**RFI/EMI**



**Style 2**  
**Type A - Rear Mount**  
**Environmental**

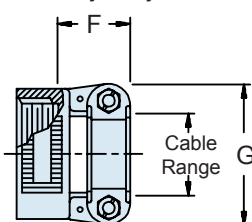


**Style 3 -**  
**Type B - Front Mount**  
**RFI/EMI Environmental**

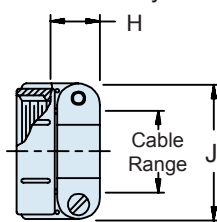
#### APPLICATION NOTES

1. Assembly identified with manufacturer's name and part number, space permitting.
2. Cable range is defined as the accommodations range for the wire bundle or cable. Dimensions shown are not intended for inspection criteria.
3. Material / Finish: See Table II.
4. Metric dimensions (mm) are indicated in parentheses.

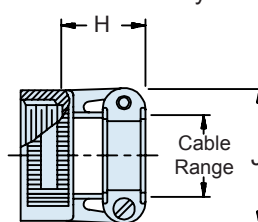
**STYLE H**  
Heavy Duty



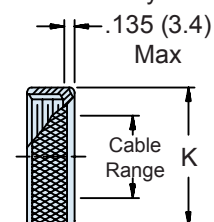
**STYLE A**  
Medium Duty



**STYLE M**  
Medium Duty



**STYLE D**  
Medium Duty



**630-006**  
**Square Flange Feed-Through Fittings**  
**RFI/EMI Environmental**



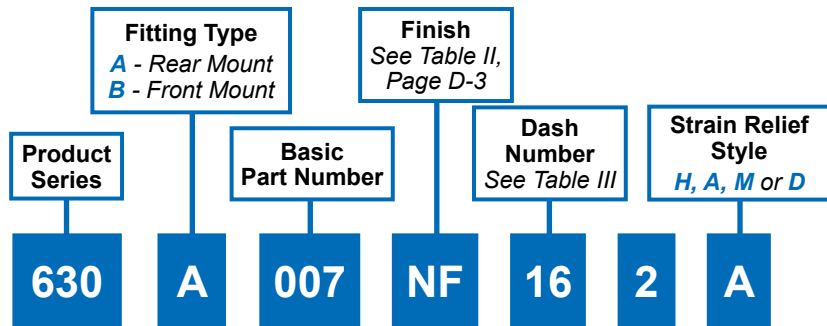
**Feed  
Throughs**

**TABLE III: Dash Number, Cable Range and Dimensions (Continued Below)**

| Dash No. | Style | Clamp Size | Cable Range  |              | A Thread Unified | B Dim        | C Sq.  |        | D Dia -.000 | E Dia -.000  |
|----------|-------|------------|--------------|--------------|------------------|--------------|--------|--------|-------------|--------------|
|          |       |            | Min          | Max          |                  |              | ± .010 | (± .3) |             |              |
| 01       | 1, 2  | 03         | .157 (4.0)   | .250 (6.4)   | 1/2 -28          | .885 (22.5)  | .593   | (15.1) | .120 (3.0)  | .250 (6.4)   |
| 02       | 3     | 03         | .157 (4.0)   | .250 (6.4)   | 1/2 -28          | .885 (22.5)  | .593   | (15.1) | .120 (3.0)  | .250 (6.4)   |
| 03       | 1,2   | 04         | .187 (4.7)   | .312 (7.9)   | 5/8 -24          | 1.104 (28.0) | .812   | (20.6) | .120 (3.0)  | .312 (7.9)   |
| 04       | 3     | 04         | .187 (4.7)   | .312 (7.9)   | 5/8 -24          | 1.104 (28.0) | .812   | (20.6) | .120 (3.0)  | .312 (7.9)   |
| 05       | 1, 2  | 06         | .281 (7.1)   | .437 (11.1)  | 3/4 -20          | 1.197 (30.4) | .906   | (23.0) | .120 (3.0)  | .437 (11.1)  |
| 06       | 3     | 06         | .281 (7.1)   | .437 (11.1)  | 3/4 -20          | 1.197 (30.4) | .906   | (23.0) | .120 (3.0)  | .437 (11.1)  |
| 07       | 1,2   | 08         | .344 (8.7)   | .562 (14.3)  | 7/8 -20          | 1.291 (32.8) | .968   | (24.6) | .120 (3.0)  | .562 (14.3)  |
| 08       | 3     | 08         | .387 (9.8)   | .562 (14.3)  | 7/8 -20          | 1.291 (32.8) | .968   | (24.6) | .120 (3.0)  | .562 (14.3)  |
| 09       | 1, 2  | 10         | .375 (9.5)   | .625 (15.9)  | 1 -20            | 1.385 (35.2) | 1.062  | (27.0) | .120 (3.0)  | .625 (15.9)  |
| 10       | 3     | 10         | .512 (13.0)  | .625 (15.9)  | 1 -20            | 1.385 (35.2) | 1.062  | (27.0) | .120 (3.0)  | .625 (15.9)  |
| 11       | 1,2   | 12         | .438 (11.1)  | .750 (19.1)  | 1 3/16 -18       | 1.635 (41.5) | 1.250  | (31.8) | .120 (3.0)  | .750 (19.1)  |
| 12       | 3     | 12         | .575 (14.6)  | .750 (19.1)  | 1 3/16 -18       | 1.635 (41.5) | 1.250  | (31.8) | .120 (3.0)  | .750 (19.1)  |
| 13       | 1, 2  | 16         | .625 (15.9)  | .937 (23.8)  | 1 7/16 -18       | 1.760 (44.7) | 1.375  | (34.9) | .147 (3.7)  | .937 (23.8)  |
| 14       | 3     | 16         | .625 (15.9)  | .937 (23.8)  | 1 7/16 -18       | 1.760 (44.7) | 1.375  | (34.9) | .147 (3.7)  | .937 (23.8)  |
| 15       | 1,2   | 20         | .875 (22.2)  | 1.250 (31.8) | 1 3/4 -18        | 2.010 (51.1) | 1.562  | (39.7) | .147 (3.7)  | 1.250 (31.8) |
| 16       | 3     | 20         | .875 (22.2)  | 1.250 (31.8) | 1 3/4 -18        | 2.010 (51.1) | 1.562  | (39.7) | .147 (3.7)  | 1.250 (31.8) |
| 17       | 1, 2  | 24         | 1.000 (25.4) | 1.375 (34.9) | 2 -18            | 2.260 (57.4) | 1.750  | (44.5) | .173 (4.4)  | 1.375 (34.9) |
| 18       | 3     | 24         | 1.000 (25.4) | 1.375 (34.9) | 2 -18            | 2.260 (57.4) | 1.750  | (44.5) | .173 (4.4)  | 1.375 (34.9) |
| 19       | 1,2   | 28         | 1.250 (31.8) | 1.625 (41.3) | 2 1/4 -16        | 2.510 (63.8) | 1.938  | (49.2) | .173 (4.4)  | 1.625 (41.3) |
| 20       | 3     | 28         | 1.250 (31.8) | 1.625 (41.3) | 2 1/4 -16        | 2.510 (63.8) | 1.938  | (49.2) | .173 (4.4)  | 1.625 (41.3) |
| 21       | 1, 2  | 32         | 1.437 (36.5) | 1.875 (47.6) | 2 1/2 -16        | 2.781 (70.6) | 2.188  | (55.6) | .173 (4.4)  | 1.875 (47.6) |
| 22       | 3     | 32         | 1.437 (36.5) | 1.875 (47.6) | 2 1/2 -16        | 2.781 (70.6) | 2.188  | (55.6) | .173 (4.4)  | 1.875 (47.6) |
| 23       | 1,2   | 40         | 1.875 (47.6) | 2.375 (60.3) | 3 -16            | 3.281 (83.3) | 2.625  | (66.7) | .173 (4.4)  | 2.375 (60.3) |
| 24       | 3     | 40         | 1.875 (47.6) | 2.375 (60.3) | 3 -16            | 3.281 (83.3) | 2.625  | (66.7) | .173 (4.4)  | 2.375 (60.3) |

**TABLE III: (Continued from Above)**

| Dash No. | Style | F Max        |              | G Max        |              | H Max        |              | J Max        |              | K Max |  | Length Max |
|----------|-------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|--|------------|
| 01       | 1, 2  | ---          | ---          | ---          | ---          | .760 (19.3)  | .843 (21.4)  | .630 (16.0)  | .971 (24.7)  |       |  |            |
| 02       | 3     | ---          | ---          | ---          | ---          | .760 (19.3)  | .843 (21.4)  | .630 (16.0)  | 1.820 (46.2) |       |  |            |
| 03       | 1,2   | .780 (19.8)  | .957 (24.3)  | .760 (19.3)  | .906 (23.0)  | .755 (19.2)  | 1.820 (46.2) | .971 (24.7)  |              |       |  |            |
| 04       | 3     | .780 (19.8)  | .957 (24.3)  | .760 (19.3)  | .906 (23.0)  | .755 (19.2)  | 1.820 (46.2) | .971 (24.7)  |              |       |  |            |
| 05       | 1, 2  | .780 (19.8)  | 1.145 (29.1) | .760 (19.3)  | 1.093 (27.8) | .942 (23.9)  | 1.820 (46.2) | .971 (24.7)  |              |       |  |            |
| 06       | 3     | .780 (19.8)  | 1.145 (29.1) | .760 (19.3)  | 1.093 (27.8) | .942 (23.9)  | 1.820 (46.2) | .971 (24.7)  |              |       |  |            |
| 07       | 1,2   | .780 (19.8)  | 1.332 (33.8) | .760 (19.3)  | 1.187 (30.1) | 1.067 (27.1) | 1.820 (46.2) | .971 (24.7)  |              |       |  |            |
| 08       | 3     | .780 (19.8)  | 1.332 (33.8) | .760 (19.3)  | 1.187 (30.1) | 1.067 (27.1) | 1.820 (46.2) | .971 (24.7)  |              |       |  |            |
| 09       | 1, 2  | .780 (19.8)  | 1.332 (33.8) | .760 (19.3)  | 1.281 (32.5) | 1.192 (30.3) | 1.820 (46.2) | .971 (24.7)  |              |       |  |            |
| 10       | 3     | .780 (19.8)  | 1.332 (33.8) | .760 (19.3)  | 1.281 (32.5) | 1.192 (30.3) | 1.820 (46.2) | .971 (24.7)  |              |       |  |            |
| 11       | 1,2   | .811 (20.6)  | 1.551 (39.4) | .760 (19.3)  | 1.500 (38.1) | 1.380 (35.1) | 1.820 (46.2) | 1.031 (26.2) |              |       |  |            |
| 12       | 3     | .811 (20.6)  | 1.551 (39.4) | .760 (19.3)  | 1.500 (38.1) | 1.380 (35.1) | 1.820 (46.2) | 1.031 (26.2) |              |       |  |            |
| 13       | 1, 2  | .905 (23.0)  | 1.770 (45.0) | 1.073 (27.3) | 1.719 (43.7) | 1.535 (39.0) | 1.820 (46.2) | 1.031 (26.2) |              |       |  |            |
| 14       | 3     | .905 (23.0)  | 1.770 (45.0) | 1.073 (27.3) | 1.719 (43.7) | 1.535 (39.0) | 1.820 (46.2) | 1.031 (26.2) |              |       |  |            |
| 15       | 1,2   | 1.092 (27.7) | 2.113 (53.7) | 1.323 (33.6) | 2.062 (52.4) | 1.848 (46.9) | 1.820 (46.2) | 1.031 (26.2) |              |       |  |            |
| 16       | 3     | 1.092 (27.7) | 2.113 (53.7) | 1.323 (33.6) | 2.062 (52.4) | 1.848 (46.9) | 1.820 (46.2) | 1.031 (26.2) |              |       |  |            |
| 17       | 1, 2  | 1.124 (28.5) | 2.363 (60.0) | 1.323 (33.6) | 2.312 (58.7) | 2.255 (57.3) | 1.820 (46.2) | 1.095 (27.8) |              |       |  |            |
| 18       | 3     | 1.124 (28.5) | 2.363 (60.0) | 1.323 (33.6) | 2.312 (58.7) | 2.255 (57.3) | 1.820 (46.2) | 1.095 (27.8) |              |       |  |            |
| 19       | 1,2   | 1.399 (35.5) | 2.770 (70.4) | 1.572 (39.9) | 2.719 (69.1) | 2.505 (63.6) | 1.820 (46.2) | 1.095 (27.8) |              |       |  |            |
| 20       | 3     | 1.399 (35.5) | 2.770 (70.4) | 1.572 (39.9) | 2.719 (69.1) | 2.505 (63.6) | 1.820 (46.2) | 1.095 (27.8) |              |       |  |            |
| 21       | 1, 2  | 1.399 (35.5) | 3.020 (76.7) | 1.572 (39.9) | 2.969 (75.4) | 2.755 (70.0) | 1.820 (46.2) | 1.095 (27.8) |              |       |  |            |
| 22       | 3     | 1.399 (35.5) | 3.020 (76.7) | 1.572 (39.9) | 2.969 (75.4) | 2.755 (70.0) | 1.820 (46.2) | 1.095 (27.8) |              |       |  |            |
| 23       | 1,2   | ---          | ---          | ---          | ---          | 1.572 (39.9) | 3.531 (89.7) | 3.255 (82.7) | 1.220 (31.0) |       |  |            |
| 24       | 3     | ---          | ---          | ---          | ---          | 1.572 (39.9) | 3.531 (89.7) | 3.255 (82.7) | 2.060 (52.3) |       |  |            |



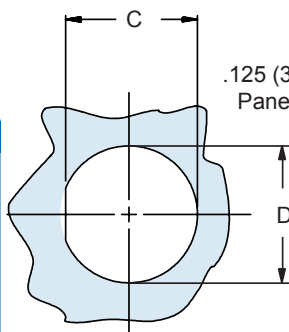
**For Strain Relief Styles  
H, A, M and D**

**Fitting Style**

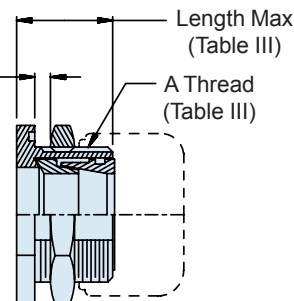
- 1 - RFI/EMI Only      2 - Environmental Only  
3 - RFI/EMI Environmental      4 - Non-RFI/EMI, Non-Environmental

**APPLICATION NOTES**

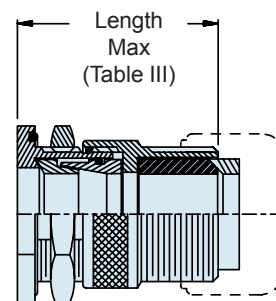
1. Assembly identified with manufacturer's name and part number, space permitting.
2. Cable range is defined as the accommodations range for the wire bundle or cable. Dimensions shown are not intended for inspection criteria.
3. Material / Finish: See Table II.
4. Metric dimensions (mm) are indicated in parentheses.



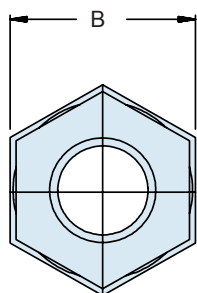
.125 (3.2) Max  
Panel (Typ)



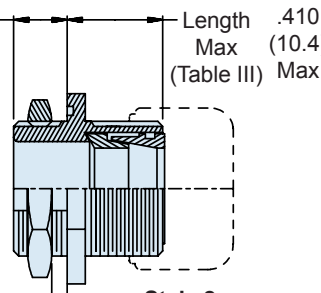
**Style 1 - RFI/EMI  
Type A - Rear Mount**



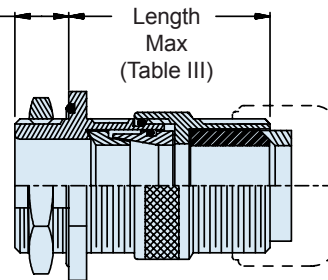
**Style 3 - RFI/EMI Environmental  
Type A - Rear Mount**



.410  
(10.4)  
Max

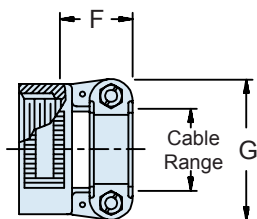


**Style 2 - RFI/EMI  
Type B - Front Mount**

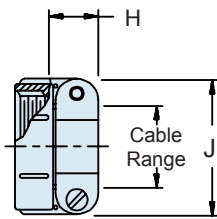


**Style 3 - RFI/EMI Environmental  
Type B - Front Mount**

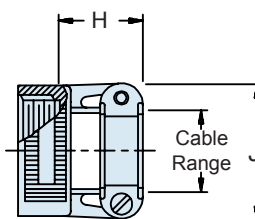
**STYLE H**  
Heavy Duty



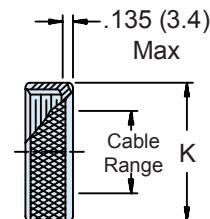
**STYLE A**  
Medium Duty



**STYLE M**  
Medium Duty



**STYLE D**  
Medium Duty



**630-007**  
**Jam Nut Feed-Through Fittings**  
**RFI/EMI Environmental**



Feed  
Throughs

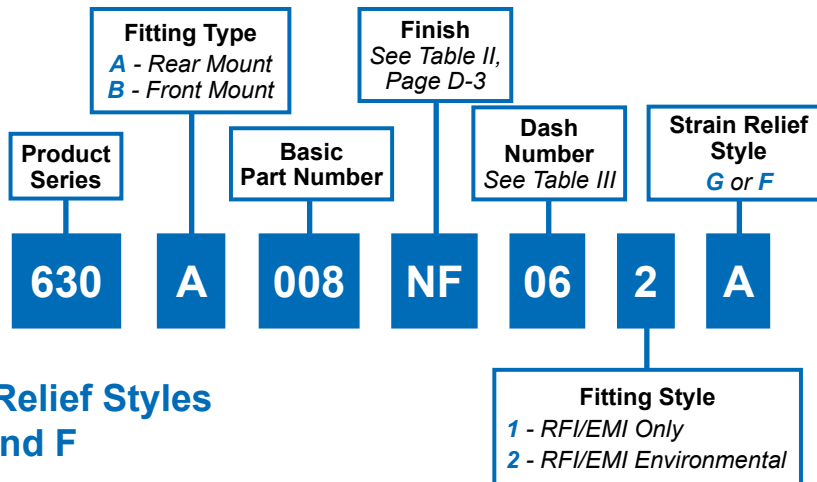
**TABLE III: Dash Number, Cable Range and Dimensions (Continued Below)**

| Dash No. | Style | Clamp Size | Cable Range |        |       |        | A Thread   | B     |        | C Flat |        | D Dia  |        |
|----------|-------|------------|-------------|--------|-------|--------|------------|-------|--------|--------|--------|--------|--------|
|          |       |            | Min         |        | Max   |        | Unified    | Dim   |        | ± .010 | (± .3) | ± .010 | (± .3) |
| 01       | 1, 2  | 03         | .157        | (4.0)  | .250  | (6.4)  | 1/2 -28    | .688  | (17.5) | .479   | (12.2) | .515   | (13.1) |
| 02       | 3     | 03         | .157        | (4.0)  | .250  | (6.4)  | 1/2 -28    | .688  | (17.5) | .479   | (12.2) | .515   | (13.1) |
| 03       | 1,2   | 04         | .187        | (4.7)  | .312  | (7.9)  | 5/8 -24    | .813  | (20.7) | .595   | (15.1) | .640   | (16.3) |
| 04       | 3     | 04         | .187        | (4.7)  | .312  | (7.9)  | 5/8 -24    | .813  | (20.7) | .595   | (15.1) | .640   | (16.3) |
| 05       | 1, 2  | 06         | .281        | (7.1)  | .437  | (11.1) | 3/4 -20    | .938  | (23.8) | .720   | (18.3) | .765   | (19.4) |
| 06       | 3     | 06         | .281        | (7.1)  | .437  | (11.1) | 3/4 -20    | .938  | (23.8) | .720   | (18.3) | .765   | (19.4) |
| 07       | 1,2   | 08         | .344        | (8.7)  | .562  | (14.3) | 7/8 -20    | 1.063 | (27.0) | .845   | (21.5) | .890   | (22.6) |
| 08       | 3     | 08         | .387        | (9.8)  | .562  | (14.3) | 7/8 -20    | 1.063 | (27.0) | .845   | (21.5) | .890   | (22.6) |
| 09       | 1, 2  | 10         | .375        | (9.5)  | .625  | (15.9) | 1 -20      | 1.250 | (31.8) | .970   | (24.6) | 1.015  | (25.8) |
| 10       | 3     | 10         | .512        | (13.0) | .625  | (15.9) | 1 -20      | 1.250 | (31.8) | .970   | (24.6) | 1.015  | (25.8) |
| 11       | 1,2   | 12         | .438        | (11.1) | .750  | (19.1) | 1 3/16 -18 | 1.375 | (34.9) | 1.158  | (29.4) | 1.202  | (30.5) |
| 12       | 3     | 12         | .575        | (14.6) | .750  | (19.1) | 1 3/16 -18 | 1.375 | (34.9) | 1.158  | (29.4) | 1.202  | (30.5) |
| 13       | 1, 2  | 16         | .625        | (15.9) | .937  | (23.8) | 1 7/16 -18 | 1.625 | (41.3) | 1.408  | (35.8) | 1.452  | (36.9) |
| 14       | 3     | 16         | .625        | (15.9) | .937  | (23.8) | 1 7/16 -18 | 1.625 | (41.3) | 1.408  | (35.8) | 1.452  | (36.9) |
| 15       | 1,2   | 20         | .875        | (22.2) | 1.250 | (31.8) | 1 3/4 -18  | 2.000 | (50.8) | 1.720  | (43.7) | 1.765  | (44.8) |
| 16       | 3     | 20         | .875        | (22.2) | 1.250 | (31.8) | 1 3/4 -18  | 2.000 | (50.8) | 1.720  | (43.7) | 1.765  | (44.8) |
| 17       | 1, 2  | 24         | 1.000       | (25.4) | 1.375 | (34.9) | 2 -18      | 2.188 | (55.6) | 1.970  | (50.0) | 2.015  | (51.2) |
| 18       | 3     | 24         | 1.000       | (25.4) | 1.375 | (34.9) | 2 -18      | 2.188 | (55.6) | 1.970  | (50.0) | 2.015  | (51.2) |
| 19       | 1,2   | 28         | 1.250       | (31.8) | 1.625 | (41.3) | 2 1/4 -16  | 2.438 | (61.9) | 2.220  | (56.4) | 2.265  | (57.5) |
| 20       | 3     | 28         | 1.250       | (31.8) | 1.625 | (41.3) | 2 1/4 -16  | 2.438 | (61.9) | 2.220  | (56.4) | 2.265  | (57.5) |
| 21       | 1, 2  | 32         | 1.437       | (36.5) | 1.875 | (47.6) | 2 1/2 -16  | 2.813 | (71.5) | 2.470  | (62.7) | 2.515  | (63.9) |
| 22       | 3     | 32         | 1.437       | (36.5) | 1.875 | (47.6) | 2 1/2 -16  | 2.813 | (71.5) | 2.470  | (62.7) | 2.515  | (63.9) |
| 23       | 1,2   | 40         | 1.875       | (47.6) | 2.375 | (60.3) | 3 -16      | 3.375 | (85.7) | 2.970  | (75.4) | 3.015  | (76.6) |
| 24       | 3     | 40         | 1.875       | (47.6) | 2.375 | (60.3) | 3 -16      | 3.375 | (85.7) | 2.970  | (75.4) | 3.015  | (76.6) |

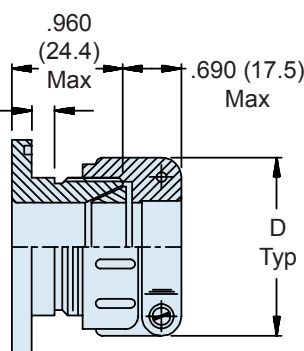
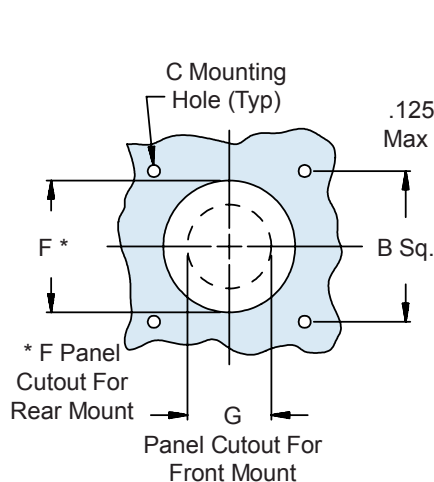
**TABLE III: (Continued from Above)**

| Dash No. | Style | E Max |        | F Max |        | G Max |        | H Max |        | J Max |        | Length Max |        |
|----------|-------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|------------|--------|
| 01       | 1, 2  | ---   | ---    | ---   | ---    | .760  | (19.3) | .843  | (21.4) | .630  | (16.0) | 1.281      | (32.5) |
| 02       | 3     | ---   | ---    | ---   | ---    | .760  | (19.3) | .843  | (21.4) | .630  | (16.0) | 1.969      | (50.0) |
| 03       | 1,2   | .780  | (19.8) | .957  | (24.3) | .760  | (19.3) | .906  | (23.0) | .755  | (19.2) | 1.281      | (32.5) |
| 04       | 3     | .780  | (19.8) | .957  | (24.3) | .760  | (19.3) | .906  | (23.0) | .755  | (19.2) | 1.969      | (50.0) |
| 05       | 1, 2  | .780  | (19.8) | 1.145 | (29.1) | .760  | (19.3) | 1.093 | (27.8) | .942  | (23.9) | 1.281      | (32.5) |
| 06       | 3     | .780  | (19.8) | 1.145 | (29.1) | .760  | (19.3) | 1.093 | (27.8) | .942  | (23.9) | 1.969      | (50.0) |
| 07       | 1,2   | .780  | (19.8) | 1.332 | (33.8) | .760  | (19.3) | 1.187 | (30.1) | 1.067 | (27.1) | 1.281      | (32.5) |
| 08       | 3     | .780  | (19.8) | 1.332 | (33.8) | .760  | (19.3) | 1.187 | (30.1) | 1.067 | (27.1) | 1.969      | (50.0) |
| 09       | 1, 2  | .780  | (19.8) | 1.332 | (33.8) | .760  | (19.3) | 1.281 | (32.5) | 1.192 | (30.3) | 1.281      | (32.5) |
| 10       | 3     | .780  | (19.8) | 1.332 | (33.8) | .760  | (19.3) | 1.281 | (32.5) | 1.192 | (30.3) | 1.969      | (50.0) |
| 11       | 1,2   | .811  | (20.6) | 1.551 | (39.4) | .760  | (19.3) | 1.500 | (38.1) | 1.380 | (35.1) | 1.344      | (34.1) |
| 12       | 3     | .811  | (20.6) | 1.551 | (39.4) | .760  | (19.3) | 1.500 | (38.1) | 1.380 | (35.1) | 1.969      | (50.0) |
| 13       | 1, 2  | .905  | (23.0) | 1.770 | (45.0) | 1.073 | (27.3) | 1.719 | (43.7) | 1.535 | (39.0) | 1.344      | (34.1) |
| 14       | 3     | .905  | (23.0) | 1.770 | (45.0) | 1.073 | (27.3) | 1.719 | (43.7) | 1.535 | (39.0) | 1.969      | (50.0) |
| 15       | 1,2   | 1.062 | (27.0) | 2.113 | (53.7) | 1.323 | (33.6) | 2.062 | (52.4) | 1.848 | (46.9) | 1.344      | (34.1) |
| 16       | 3     | 1.092 | (27.7) | 2.113 | (53.7) | 1.323 | (33.6) | 2.062 | (52.4) | 1.848 | (46.9) | 2.062      | (52.4) |
| 17       | 1, 2  | 1.124 | (28.5) | 2.363 | (60.0) | 1.323 | (33.6) | 2.312 | (58.7) | 2.255 | (57.3) | 1.406      | (35.7) |
| 18       | 3     | 1.124 | (28.5) | 2.363 | (60.0) | 1.323 | (33.6) | 2.312 | (58.7) | 2.255 | (57.3) | 2.062      | (52.4) |
| 19       | 1,2   | 1.399 | (35.5) | 2.770 | (70.4) | 1.572 | (39.9) | 2.719 | (69.1) | 2.505 | (63.6) | 1.406      | (35.7) |
| 20       | 3     | 1.399 | (35.5) | 2.770 | (70.4) | 1.572 | (39.9) | 2.719 | (69.1) | 2.505 | (63.6) | 2.062      | (52.4) |
| 21       | 1, 2  | 1.399 | (35.5) | 3.020 | (76.7) | 1.572 | (39.9) | 2.969 | (75.4) | 2.755 | (70.0) | 1.406      | (35.7) |
| 22       | 3     | 1.399 | (35.5) | 3.020 | (76.7) | 1.572 | (39.9) | 2.969 | (75.4) | 2.755 | (70.0) | 2.375      | (60.3) |
| 23       | 1,2   | ---   | ---    | ---   | ---    | 1.572 | (39.9) | 3.531 | (89.7) | 3.255 | (82.7) | 1.531      | (38.9) |
| 24       | 3     | ---   | ---    | ---   | ---    | 1.572 | (39.9) | 3.531 | (89.7) | 3.255 | (82.7) | 2.375      | (60.3) |

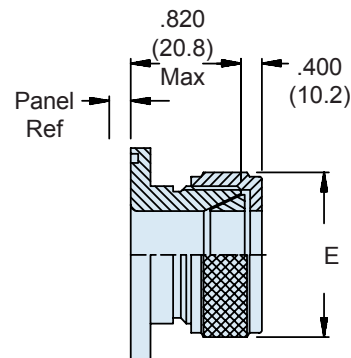
F



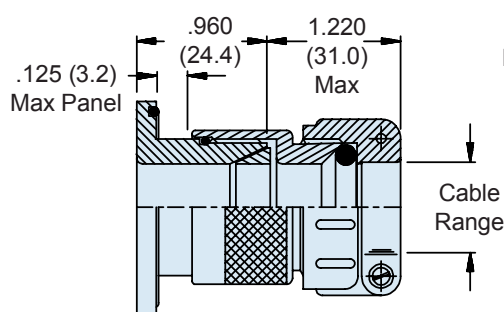
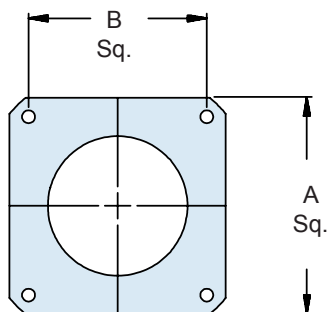
**For Strain Relief Styles  
G and F**



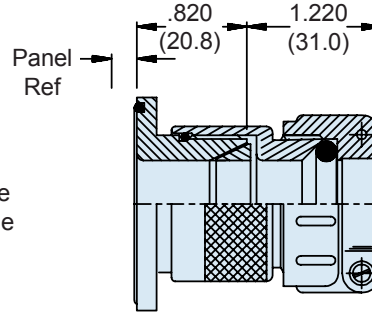
**Style 1**  
**Rear Mount Type A**  
**RFI/EMI**  
(Shown With Style F Strain Relief)



**Style 1**  
**Front Mount Type B**  
**RFI/EMI**  
(Shown With Style G Gland Nut)



**Style 2**  
**Rear Mount Type A**  
**RFI/EMI Environmental**  
(Shown With Style F Strain Relief)



**Style 2**  
**Front Mount Type A**  
**RFI/EMI Environmental**  
(Shown With Style F Strain Relief)

**630-008**  
**Square Flange Feed-Through Fittings**  
**RFI/EMI Environmental**



**Feed  
Throughs**

**TABLE III: Dash Number, Cable Range and Dimensions (Continued Below)**

| Dash<br>No. | Cable Range  |              | A            |  | B            |  | C             |                  |
|-------------|--------------|--------------|--------------|--|--------------|--|---------------|------------------|
|             | Min          | Max          | Max          |  | Dim          |  | +0.015<br>- 0 | (+0.4)<br>(-0.0) |
| 01          | .125 (3.2)   | .250 (6.4)   | .885 (22.5)  |  | .593 (15.1)  |  | .120 (3.0)    |                  |
| 02          | .156 (4.0)   | .375 (9.5)   | 1.104 (28.0) |  | .812 (20.6)  |  | .120 (3.0)    |                  |
| 03          | .250 (6.4)   | .438 (11.1)  | 1.197 (30.4) |  | .906 (23.0)  |  | .120 (3.0)    |                  |
| 04          | .280 (7.1)   | .500 (12.7)  | 1.291 (32.8) |  | .968 (24.6)  |  | .120 (3.0)    |                  |
| 05          | .375 (9.5)   | .625 (15.9)  | 1.385 (35.2) |  | 1.062 (27.0) |  | .120 (3.0)    |                  |
| 06          | .500 (12.7)  | .750 (19.1)  | 1.635 (41.5) |  | 1.250 (31.8) |  | .120 (3.0)    |                  |
| 07          | .625 (15.9)  | .875 (22.2)  | 1.760 (44.7) |  | 1.375 (34.9) |  | .147 (3.7)    |                  |
| 08          | .750 (19.1)  | 1.000 (25.4) | 2.010 (51.1) |  | 1.562 (39.7) |  | .147 (3.7)    |                  |
| 09          | .875 (22.2)  | 1.125 (28.6) | 2.260 (57.4) |  | 1.750 (44.5) |  | .173 (4.4)    |                  |
| 10          | 1.000 (25.4) | 1.250 (31.8) | 2.510 (63.8) |  | 1.938 (49.2) |  | .173 (4.4)    |                  |

**TABLE III: (Continued from Above)**

| Dash<br>No. | D            |  | E            |  | F             |                  | G             |                  |
|-------------|--------------|--|--------------|--|---------------|------------------|---------------|------------------|
|             | Max          |  | Max          |  | +0.015<br>- 0 | (+0.4)<br>(-0.0) | +0.031<br>- 0 | (+0.8)<br>(-0.0) |
| 01          | .843 (21.4)  |  | .625 (15.9)  |  | .515 (13.1)   |                  | .250 (6.4)    |                  |
| 02          | .968 (24.6)  |  | .750 (19.1)  |  | .640 (16.3)   |                  | .375 (9.5)    |                  |
| 03          | 1.046 (26.6) |  | .875 (22.2)  |  | .765 (19.4)   |                  | .438 (11.1)   |                  |
| 04          | 1.156 (29.4) |  | 1.000 (25.4) |  | .890 (22.6)   |                  | .500 (12.7)   |                  |
| 05          | 1.218 (30.9) |  | 1.125 (28.6) |  | 1.015 (25.8)  |                  | .625 (15.9)   |                  |
| 06          | 1.343 (34.1) |  | 1.250 (31.8) |  | 1.140 (29.0)  |                  | .750 (19.1)   |                  |
| 07          | 1.468 (37.3) |  | 1.375 (34.9) |  | 1.265 (32.1)  |                  | .875 (22.2)   |                  |
| 08          | 1.593 (40.5) |  | 1.500 (38.1) |  | 1.390 (35.3)  |                  | 1.000 (25.4)  |                  |
| 09          | 1.718 (43.6) |  | 1.625 (41.3) |  | 1.515 (38.5)  |                  | 1.125 (28.6)  |                  |
| 10          | 1.843 (46.8) |  | 1.750 (44.5) |  | 1.640 (41.7)  |                  | 1.250 (31.8)  |                  |

**APPLICATION NOTES**

1. Assembly identified with manufacturer's name and part number, space permitting.
2. Cable range is defined as the accommodations range for the wire bundle or cable. Dimensions shown are not intended for inspection criteria.
3. Material / Finish: See Table II.
4. Metric dimensions (mm) are indicated in parentheses.

# 630-015 Fiber Optic Bulkhead Feed-Through Adapter Cable with Kevlar

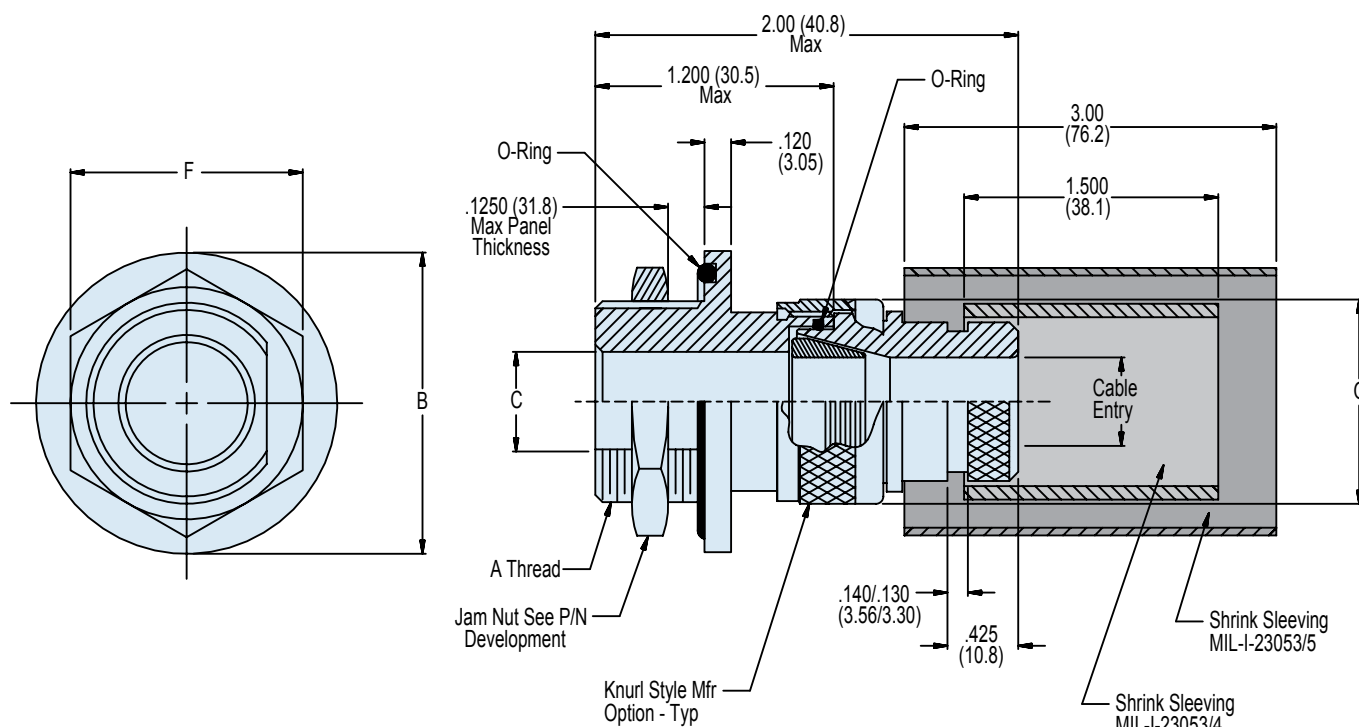
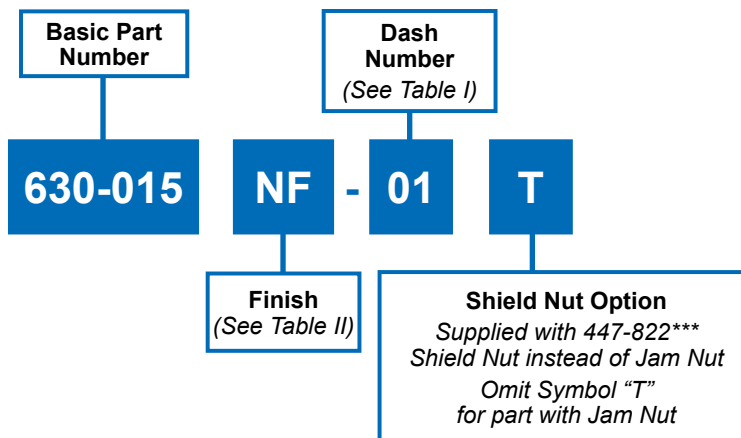
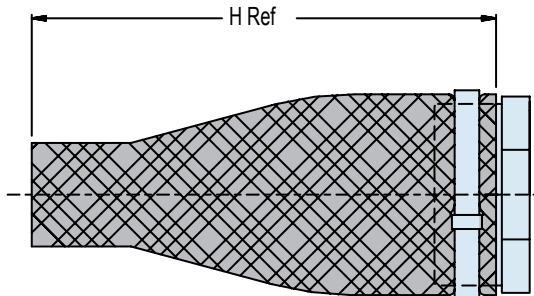


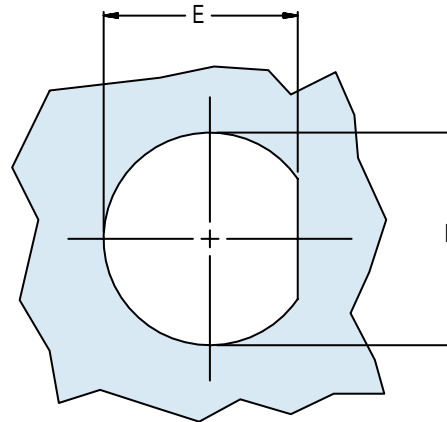
**TABLE I: Dash Number and Dimensions**

| Dash No. | A Thread Class 2A | B Max        | C +.010 (0.25) -0.0 | D +.010 (0.25) -0.0 | E +.010 (0.25) -0.0 | F            | G Max        | H Min | Max Cable Entry | MIL-I-23053 Shrink Sleeve | MIL-I-23053 Shrink Sleeve | Braid Sock 103-005-005 Ref |
|----------|-------------------|--------------|---------------------|---------------------|---------------------|--------------|--------------|-------|-----------------|---------------------------|---------------------------|----------------------------|
| 01       | 3/4-20 UNEF       | 1.140 (29.0) | .340 (8.6)          | .755 (19.2)         | .691 (17.6)         | .938 (23.8)  | 1.004 (25.5) | 6.0   | .335 (8.5)      | /4-204-0                  | /5-109-0                  | A10                        |
| 02       | 3/4-20 UNEF       | 1.140 (29.0) | .460 (11.7)         | .755 (19.2)         | .691 (17.6)         | .938 (23.8)  | 1.132 (28.8) | 6.0   | .455 (11.6)     | /4-204-0                  | /5-109-0                  | A10                        |
| 03       | 7/8-20 UNEF       | 1.280 (32.5) | .630 (16.0)         | .880 (22.4)         | .816 (20.7)         | 1.062 (27.0) | 1.343 (34.1) | 6.0   | .625 (15.9)     | /4-205-0                  | /5-110-0                  | A10                        |
| 04       | 1 1/16-18 UNEF    | 1.490 (37.8) | .755 (19.2)         | 1.067 (27.1)        | 1.004 (25.5)        | 1.250 (31.8) | 1.468 (37.3) | 6.0   | .750 (19.1)     | /4-206-0                  | /5-110-0                  | A14                        |
| 05       | 1 3/16-18 UNEF    | 1.640 (41.7) | .880 (22.4)         | 1.192 (30.3)        | 1.130 (28.7)        | 1.375 (34.9) | 1.593 (40.5) | 6.0   | .875 (22.2)     | /4-506-0                  | /5-111-0                  | A16                        |
| 06       | 1 5/16-18 UNEF    | 1.930 (49.0) | 1.005 (25.5)        | 1.137 (28.9)        | 1.254 (31.9)        | 1.625 (41.3) | 1.656 (42.1) | 6.0   | 1.000 (25.4)    | /4-305-0                  | /5-111-0                  | A18                        |

**630-015**  
**Fiber Optic Bulkhead Feed-Through Adapter**  
**Cable with Kevlar**



**447-822\*\*\* ASSEMBLY**  
**Style T see P/N Development**



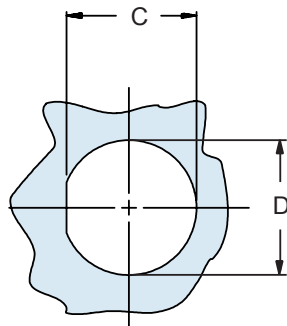
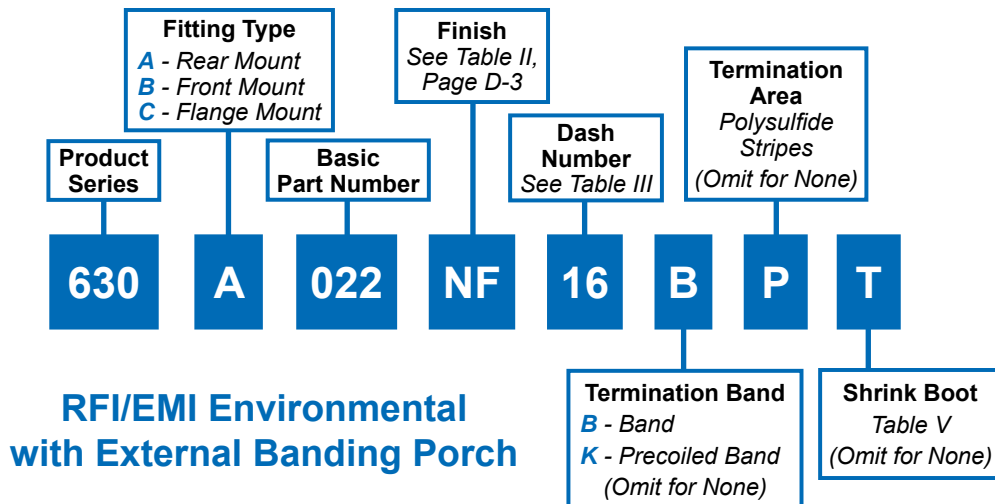
**RECOMMENDED PANEL CUT-OUT**

**TABLE I: Finish**

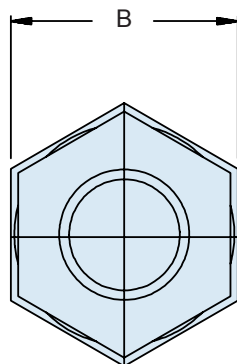
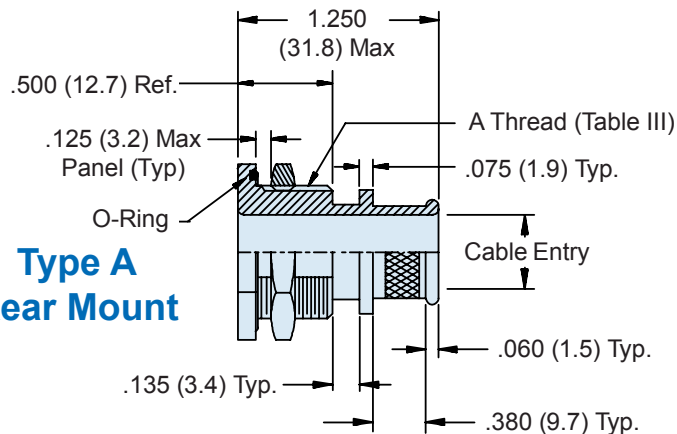
| Symbol    | Description                                                |
|-----------|------------------------------------------------------------|
| <b>B</b>  | Cadmium Plate/Olive Drab                                   |
| <b>M</b>  | Electroless Nickel                                         |
| <b>N</b>  | Cadmium Plate/Olive Drab over Nickel                       |
| <b>NF</b> | Cad/O.D. over Electroless Nickel<br>(1,000 Hr. Salt Spray) |

**APPLICATION NOTES**

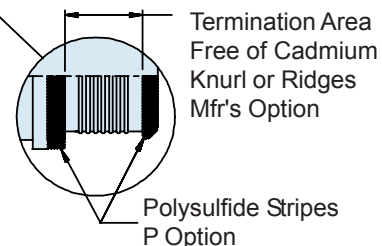
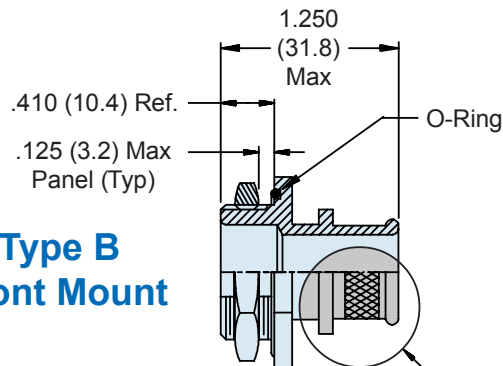
1. Assembly identified with manufacturer's code identification number (Glenair, part number and classification code 490).
2. Glenair series 600 backshell assembly tools are recommended for assembly and installation.
3. Material / Finish:  
Adapters, Jam Nut, Ferrule, Coupling Nut - Al alloy/see Table I.  
Hardware - 316 SST/passivate.  
Seals and gaskets - Silicone/N.A.  
Mounting Plate - 300 series SST/passivate.
4. MIL-T-23053/4 & /5 shrink sleeving to be packaged loose in a plastic bag.
5. Metric dimensions (mm) are indicated in parentheses.



**Type A  
Rear Mount**



**Type B  
Front Mount**



**630-022**  
**Feed-Through Fittings**  
**Banding Adapter RFI/EMI Environmental**



Feed  
Throughs

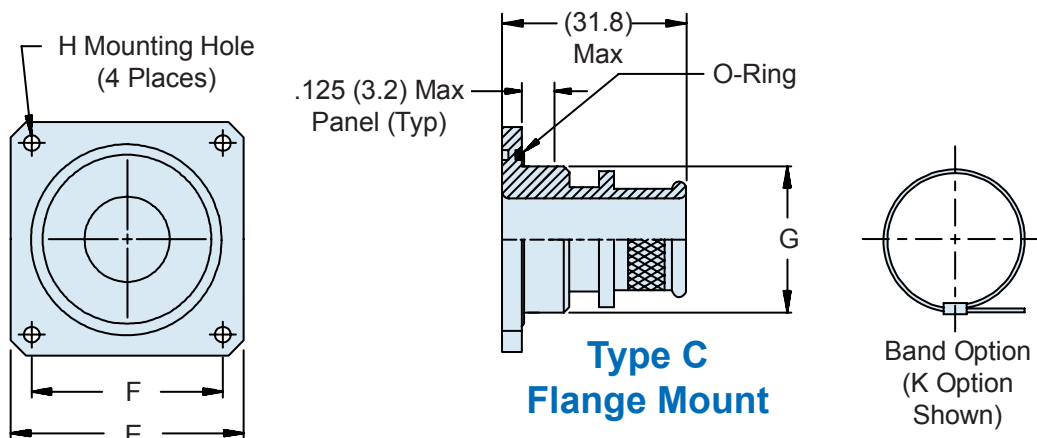


**TABLE III: Dash Number, Cable Range and Dimensions**

| No. | Cable Entry<br>Dia | A Thread<br>Unified | B<br>Dim     | C Flat<br>± .010 (± .3) | D Dia<br>± .010 (± .3) | E Sq<br>± .031 (± .8) | F<br>Dim.    | G Dia<br>+ .005 (+ .1)<br>- .015 (- .4) |
|-----|--------------------|---------------------|--------------|-------------------------|------------------------|-----------------------|--------------|-----------------------------------------|
| 03  | .188 (4.8)         | 1/2 -28             | .688 (17.5)  | .480 (12.2)             | .515 (13.1)            | .875 (22.2)           | .594 (15.1)  | .500 (12.7)                             |
| 04  | .250 (6.4)         | 1/2 -28             | .688 (17.5)  | .480 (12.2)             | .515 (13.1)            | .875 (22.2)           | .594 (15.1)  | .500 (12.7)                             |
| 05  | .313 (8.0)         | 5/8 -24             | .813 (20.7)  | .605 (15.4)             | .640 (16.3)            | 1.000 (25.4)          | .719 (18.3)  | .625 (15.9)                             |
| 06  | .375 (9.5)         | 5/8 -24             | .813 (20.7)  | .605 (15.4)             | .640 (16.3)            | 1.000 (25.4)          | .719 (18.3)  | .625 (15.9)                             |
| 07  | .438 (11.1)        | 3/4 -20             | .938 (23.8)  | .730 (18.5)             | .765 (19.4)            | 1.094 (27.8)          | .812 (20.6)  | .750 (19.1)                             |
| 08  | .500 (12.7)        | 3/4 -20             | .938 (23.8)  | .730 (18.5)             | .765 (19.4)            | 1.094 (27.8)          | .812 (20.6)  | .750 (19.1)                             |
| 09  | .563 (14.3)        | 7/8 -20             | 1.063 (27.0) | .855 (21.7)             | .890 (22.6)            | 1.188 (30.2)          | .906 (23.0)  | .875 (22.2)                             |
| 10  | .625 (15.9)        | 7/8 -20             | 1.063 (27.0) | .855 (21.7)             | .890 (22.6)            | 1.188 (30.2)          | .906 (23.0)  | .875 (22.2)                             |
| 11  | .688 (17.5)        | 1 -20               | 1.188 (30.2) | .980 (24.9)             | 1.015 (25.8)           | 1.281 (32.5)          | .969 (24.6)  | 1.000 (25.4)                            |
| 12  | .750 (19.1)        | 1 -20               | 1.188 (30.2) | .980 (24.9)             | 1.015 (25.8)           | 1.281 (32.5)          | .969 (24.6)  | 1.000 (25.4)                            |
| 13  | .813 (20.7)        | 1 1/8 -18           | 1.313 (33.4) | 1.105 (28.1)            | 1.140 (29.0)           | 1.375 (34.9)          | 1.062 (27.0) | 1.125 (28.6)                            |
| 14  | .875 (22.2)        | 1 1/4 -18           | 1.438 (36.5) | 1.230 (31.2)            | 1.265 (32.1)           | 1.500 (38.1)          | 1.156 (29.4) | 1.250 (31.8)                            |
| 15  | .938 (23.8)        | 1 1/4 -18           | 1.438 (36.5) | 1.230 (31.2)            | 1.265 (32.1)           | 1.500 (38.1)          | 1.156 (29.4) | 1.250 (31.8)                            |
| 16  | 1.000 (25.4)       | 1 3/8 -18           | 1.563 (39.7) | 1.355 (34.4)            | 1.390 (35.3)           | 1.625 (41.3)          | 1.250 (31.8) | 1.375 (34.9)                            |
| 17  | 1.063 (27.0)       | 1 3/8 -18           | 1.563 (39.7) | 1.355 (34.4)            | 1.390 (35.3)           | 1.625 (41.3)          | 1.250 (31.8) | 1.375 (34.9)                            |
| 18  | 1.125 (28.6)       | 1 1/2 -18           | 1.688 (42.9) | 1.480 (37.6)            | 1.515 (38.5)           | 1.750 (44.5)          | 1.375 (34.9) | 1.500 (38.1)                            |
| 19  | 1.188 (30.2)       | 1 1/2 -18           | 1.688 (42.9) | 1.480 (37.6)            | 1.515 (38.5)           | 1.750 (44.5)          | 1.375 (34.9) | 1.500 (38.1)                            |
| 20  | 1.250 (31.8)       | 1 5/8 -18           | 1.813 (46.1) | 1.605 (40.8)            | 1.640 (41.7)           | 1.812 (46.0)          | 1.500 (38.1) | 1.625 (41.3)                            |
| 22  | 1.375 (34.9)       | 1 3/4 -18           | 1.938 (49.2) | 1.730 (43.9)            | 1.765 (44.8)           | 2.000 (50.8)          | 1.562 (39.7) | 1.750 (44.5)                            |
| 24  | 1.500 (38.1)       | 2 -18               | 2.188 (55.6) | 1.980 (50.3)            | 2.015 (51.2)           | 2.250 (57.2)          | 1.750 (44.5) | 2.000 (50.8)                            |
| 26  | 1.625 (41.3)       | 2 -18               | 2.188 (55.6) | 1.980 (50.3)            | 2.015 (51.2)           | 2.250 (57.2)          | 1.750 (44.5) | 2.000 (50.8)                            |
| 28  | 1.750 (44.5)       | 2 1/4 -16           | 2.438 (61.9) | 2.230 (56.6)            | 2.265 (57.5)           | 2.500 (63.5)          | 1.938 (49.2) | 2.250 (57.2)                            |

**TABLE IV**

| Dash Nos. | H Dia<br>+ .015 (+ .4)<br>- .000 (- .0) |
|-----------|-----------------------------------------|
| 03-17     | .125 (3.2)                              |
| 18-20     | .156 (4.0)                              |
| 22-28     | .188 (4.8)                              |

**TABLE V**

| Dash Nos. | Shrink Boot<br>(Note 4) |
|-----------|-------------------------|
| 03-06     | 202K121-25-0            |
| 07-10     | 202K132-25-0            |
| 11-12     | 202K142-25-0            |
| 13-16     | 202K153-25-0            |
| 17-20     | 202K163-25-0            |
| 22-26     | 202K174-25-0            |
| 28        | 202K185-25-0            |

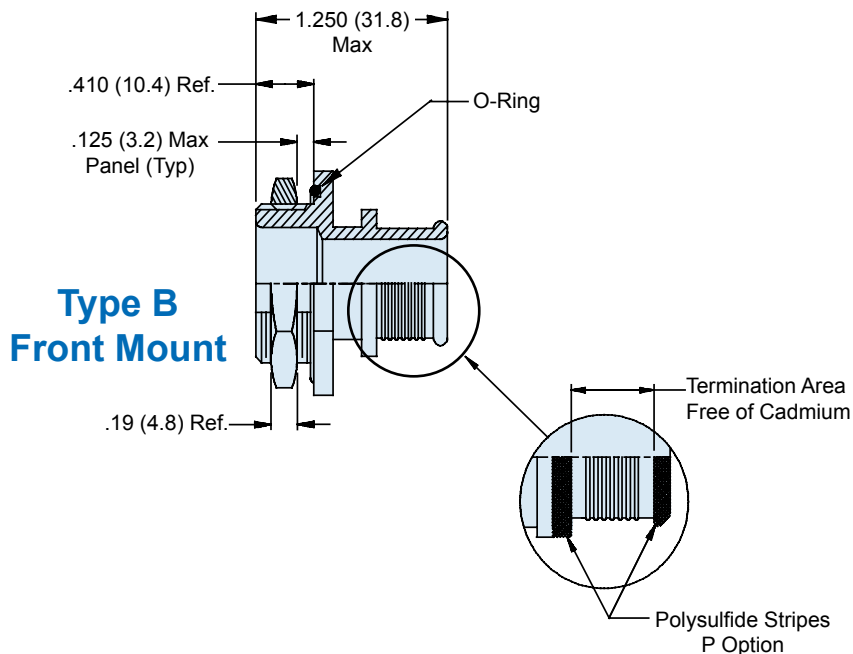
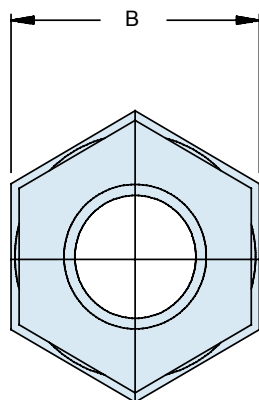
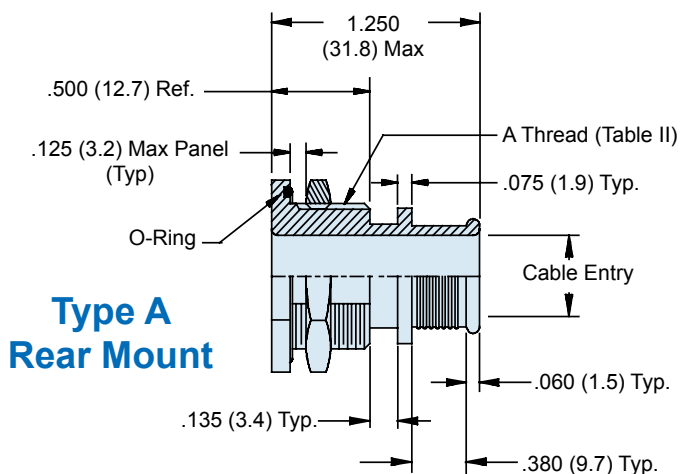
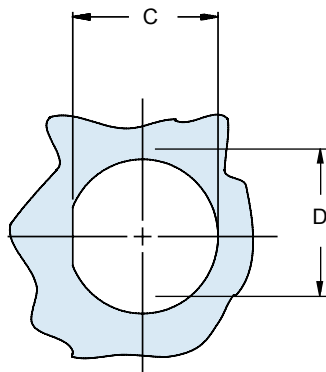
**APPLICATION NOTES**

1. Assembly identified with manufacturer's name and part number, space permitting.
2. Cable range is defined as the accommodations range for the wire bundle or cable. Dimensions shown are not intended for inspection criteria.
3. Material / Finish: See Table II.
4. Raychem shrink boot supplied with "T" option (see part number development).
5. Metric dimensions (mm) are indicated in parentheses.



# 630-030 Composite Thru-Box, Panel and Bulkhead RFI/EMI/Environmental Banding Adapter

| Product Series<br>630 - Bulkhead Feed-Thru                                   | Basic Part Number                      | Entry Code<br>(See Table I)                                              | Polysulfide<br>(Omit for None)                                      |
|------------------------------------------------------------------------------|----------------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------|
| 630                                                                          | A                                      | 030                                                                      | XM                                                                  |
| 16                                                                           | B                                      | P                                                                        | T                                                                   |
| <b>Fitting Type</b><br>A - Rear Mount<br>B - Front Mount<br>C - Flange Mount | <b>Finish Symbol</b><br>(See Table II) | <b>Band Option</b><br>B - Band<br>K - Pre-Coiled Band<br>(Omit for None) | <b>Shrink Boot</b><br>770-001 Shrink Boot<br>Supplied with T Option |



# 630-030 Composite Thru-Box, Panel and Bulkhead RFI/EMI/Environmental Banding Adapter



Feed  
Throughs

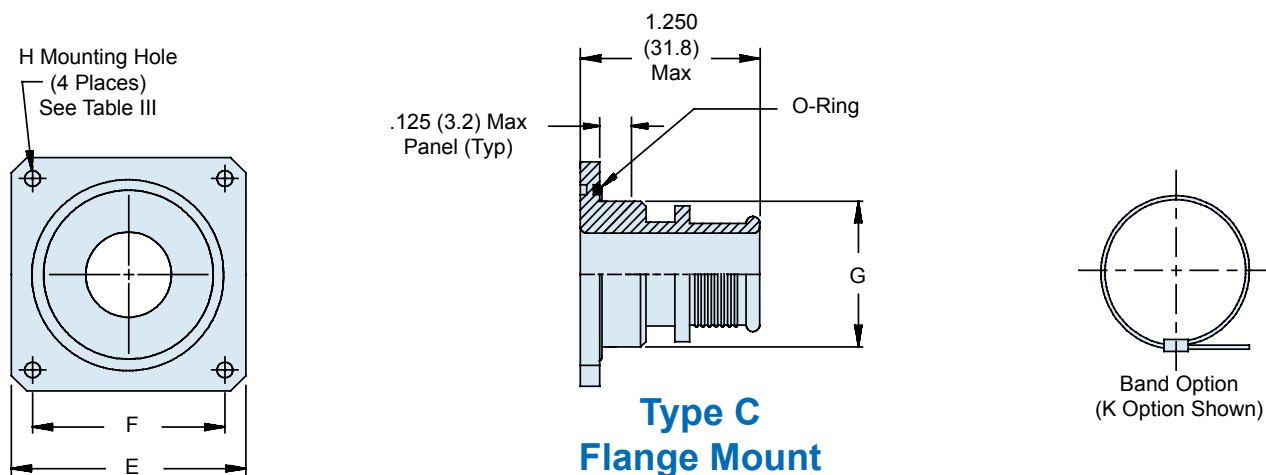


TABLE I: CABLE ENTRY

| Entry Code | Cable Entry Dia | A Thread Unified | B Dim        | C Flat ± .010 (± .3) | D Dia ± .010 (± .3) | E Sq ± .031 (± .8) | F Dim.       | G Dia + .005 (+ .1) - .015 (- .4) |
|------------|-----------------|------------------|--------------|----------------------|---------------------|--------------------|--------------|-----------------------------------|
| 03         | .188 (4.8)      | 1/2 -28          | .688 (17.5)  | .480 (12.2)          | .515 (13.1)         | .875 (22.2)        | .594 (15.1)  | .500 (12.7)                       |
| 04         | .250 (6.4)      | 1/2 -28          | .688 (17.5)  | .480 (12.2)          | .515 (13.1)         | .875 (22.2)        | .594 (15.1)  | .500 (12.7)                       |
| 05         | .313 (8.0)      | 5/8 -24          | .813 (20.7)  | .605 (15.4)          | .640 (16.3)         | 1.000 (25.4)       | .719 (18.3)  | .625 (15.9)                       |
| 06         | .375 (9.5)      | 5/8 -24          | .813 (20.7)  | .605 (15.4)          | .640 (16.3)         | 1.000 (25.4)       | .719 (18.3)  | .625 (15.9)                       |
| 07         | .438 (11.1)     | 3/4 -20          | .938 (23.8)  | .730 (18.5)          | .765 (19.4)         | 1.094 (27.8)       | .812 (20.6)  | .750 (19.1)                       |
| 08         | .500 (12.7)     | 3/4 -20          | .938 (23.8)  | .730 (18.5)          | .765 (19.4)         | 1.094 (27.8)       | .812 (20.6)  | .750 (19.1)                       |
| 09         | .563 (14.3)     | 7/8 -20          | 1.063 (27.0) | .855 (21.7)          | .890 (22.6)         | 1.188 (30.2)       | .906 (23.0)  | .875 (22.2)                       |
| 10         | .625 (15.9)     | 7/8 -20          | 1.063 (27.0) | .855 (21.7)          | .890 (22.6)         | 1.188 (30.2)       | .906 (23.0)  | .875 (22.2)                       |
| 11         | .688 (17.5)     | 1 -20            | 1.188 (30.2) | .980 (24.9)          | 1.015 (25.8)        | 1.281 (32.5)       | .969 (24.6)  | 1.000 (25.4)                      |
| 12         | .750 (19.1)     | 1 -20            | 1.188 (30.2) | .980 (24.9)          | 1.015 (25.8)        | 1.281 (32.5)       | .969 (24.6)  | 1.000 (25.4)                      |
| 13         | .813 (20.7)     | 1 1/8 -18        | 1.313 (33.4) | 1.105 (28.1)         | 1.140 (29.0)        | 1.375 (34.9)       | 1.062 (27.0) | 1.125 (28.6)                      |
| 14         | .875 (22.2)     | 1 1/4 -18        | 1.438 (36.5) | 1.230 (31.2)         | 1.265 (32.1)        | 1.500 (38.1)       | 1.156 (29.4) | 1.250 (31.8)                      |
| 15         | .938 (23.8)     | 1 1/4 -18        | 1.438 (36.5) | 1.230 (31.2)         | 1.265 (32.1)        | 1.500 (38.1)       | 1.156 (29.4) | 1.250 (31.8)                      |
| 16         | 1.000 (25.4)    | 1 3/8 -18        | 1.563 (39.7) | 1.355 (34.4)         | 1.390 (35.3)        | 1.625 (41.3)       | 1.250 (31.8) | 1.375 (34.9)                      |
| 17         | 1.063 (27.0)    | 1 3/8 -18        | 1.563 (39.7) | 1.355 (34.4)         | 1.390 (35.3)        | 1.625 (41.3)       | 1.250 (31.8) | 1.375 (34.9)                      |
| 18         | 1.125 (28.6)    | 1 1/2 -18        | 1.688 (42.9) | 1.480 (37.6)         | 1.515 (38.5)        | 1.750 (44.5)       | 1.375 (34.9) | 1.500 (38.1)                      |
| 19         | 1.188 (30.2)    | 1 1/2 -18        | 1.688 (42.9) | 1.480 (37.6)         | 1.515 (38.5)        | 1.750 (44.5)       | 1.375 (34.9) | 1.500 (38.1)                      |
| 20         | 1.250 (31.8)    | 1 5/8 -18        | 1.813 (46.1) | 1.605 (40.8)         | 1.640 (41.7)        | 1.812 (46.0)       | 1.500 (38.1) | 1.625 (41.3)                      |
| 22         | 1.375 (34.9)    | 1 3/4 -18        | 1.938 (49.2) | 1.730 (43.9)         | 1.765 (44.8)        | 2.000 (50.8)       | 1.562 (39.7) | 1.750 (44.5)                      |
| 24         | 1.500 (38.1)    | 2 -18            | 2.188 (55.6) | 1.980 (50.3)         | 2.015 (51.2)        | 2.250 (57.2)       | 1.750 (44.5) | 2.000 (50.8)                      |
| 26         | 1.625 (41.3)    | 2 -18            | 2.188 (55.6) | 1.980 (50.3)         | 2.015 (51.2)        | 2.250 (57.2)       | 1.750 (44.5) | 2.000 (50.8)                      |
| 28         | 1.750 (44.5)    | 2 1/4 -16        | 2.438 (61.9) | 2.230 (56.6)         | 2.265 (57.5)        | 2.500 (63.5)       | 1.938 (49.2) | 2.250 (57.2)                      |

TABLE II

| Symbol | Finish Description                                                                  |
|--------|-------------------------------------------------------------------------------------|
| XM     | 2000 Hour Corrosion Resistant Electroless Nickel                                    |
| XMT    | 2000 Hour Corrosion Resistant Ni-PTFE, Nickel-Fluorocarbon Polymer. 1000 Hour Grey™ |
| XW     | 2000 Hour Corrosion Resistant Cadmium/Olive Drab over Electroless Nickel            |

TABLE III: MOUNTING

|       | H Dia         |
|-------|---------------|
| Dash  | + .015 (+ .4) |
| Nos.  | - .000 (- .0) |
| 03-17 | .125 (3.2)    |
| 18-20 | .156 (4.0)    |
| 22-28 | .188 (4.8)    |

APPLICATION NOTES

1. Metric dimensions (mm) are in parentheses and are for reference only
2. Consult factory for shrink boot to be supplied with part.



# 630-031 Composite RFI/EMI Environmental Feed-Through Jam-Nut Mount Accessory Adapter

**For Use With  
MIL-DTL-38999  
Series III and  
IV Accessory  
Threads  
(Glenair Code H)**

## APPLICATION NOTES

1. MIL-DTL-38999 Series III and IV accessory interface, Glenair Code H.
2. Metric dimensions (mm) are indicated in parentheses.

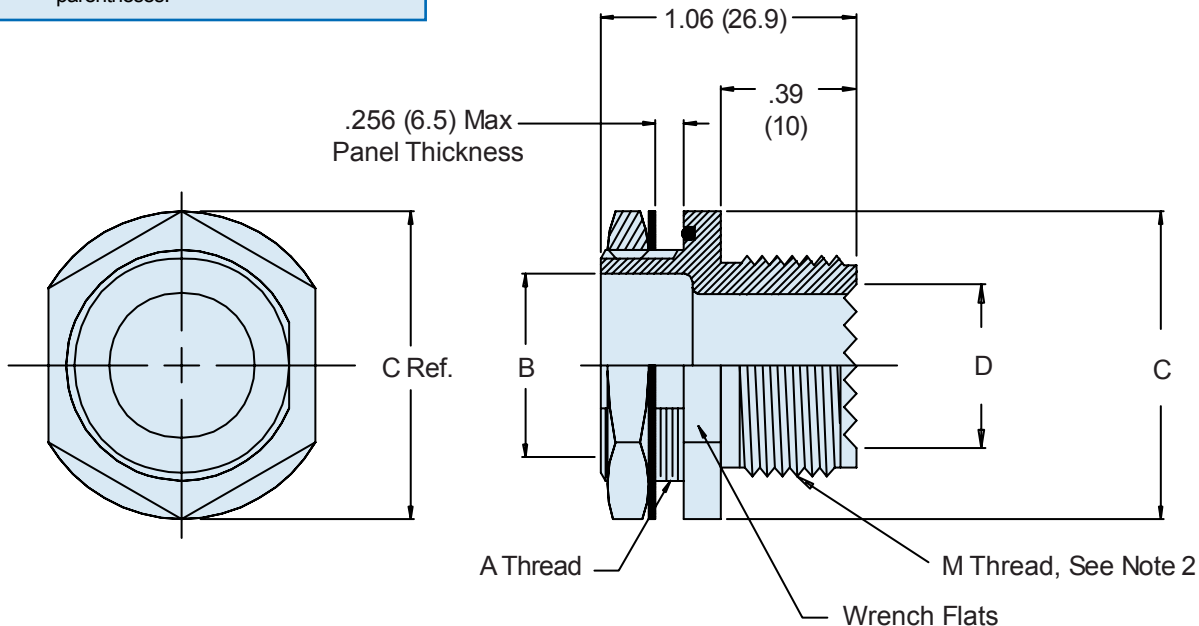
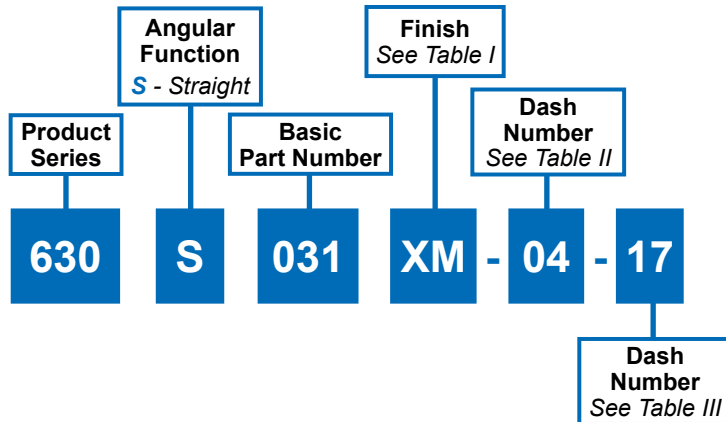


**TABLE I: Finish**

|    |                                            |
|----|--------------------------------------------|
| XM | Electroless Nickel                         |
| XW | Cadmium Olive Drab Over Electroless Nickel |

**TABLE II: Dash Number, Max Entry**

| Dash No. | A Thread ISO Metric | B Dia. Min.  | C Max.       | Max Entry Table III |
|----------|---------------------|--------------|--------------|---------------------|
| 01       | M 16 x 1.5-6g       | .394 (10.0)  | 1.024 (26.0) | 11                  |
| 02       | M 20 x 1.5-6g       | .551 (14.0)  | 1.181 (30.0) | 13                  |
| 03       | M 27 x 2.0-6g       | .866 (22.0)  | 1.496 (38.0) | 21                  |
| 04       | M 36 x 2.0-6g       | 1.181 (30.0) | 1.850 (47.0) | 25                  |

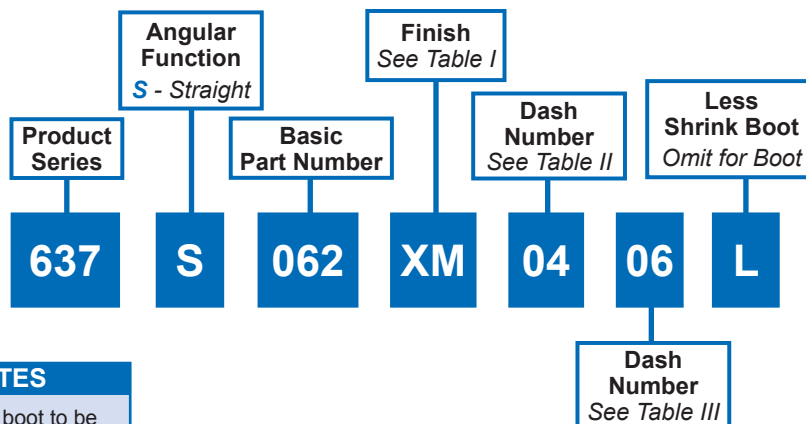
**TABLE III: Dash Number**

| Dash No. | M Thread ISO Metric | D Min        |
|----------|---------------------|--------------|
| 09       | M 12 x 1.0-6g       | .250 (6.4)   |
| 11       | M 15 x 1.0-6g       | .375 (9.5)   |
| 13       | M 18 x 1.0-6g       | .500 (12.7)  |
| 15       | M 22 x 1.0-6g       | .625 (15.9)  |
| 17       | M 25 x 1.0-6g       | .750 (19.1)  |
| 19       | M 28 x 1.0-6g       | .812 (20.6)  |
| 21       | M 31 x 1.0-6g       | .938 (23.8)  |
| 23       | M 34 x 1.0-6g       | 1.062 (27.0) |
| 25       | M 37 x 1.0-6g       | 1.188 (30.2) |

# 637-062 Composite Shrink Boot Feed-Through Adapter Jam Nut Mount Environmental



Feed  
Throughs



## APPLICATION NOTES

1. Consult factory for shrink boot to be supplied with product.
2. Metric dimensions (mm) are indicated in parentheses.

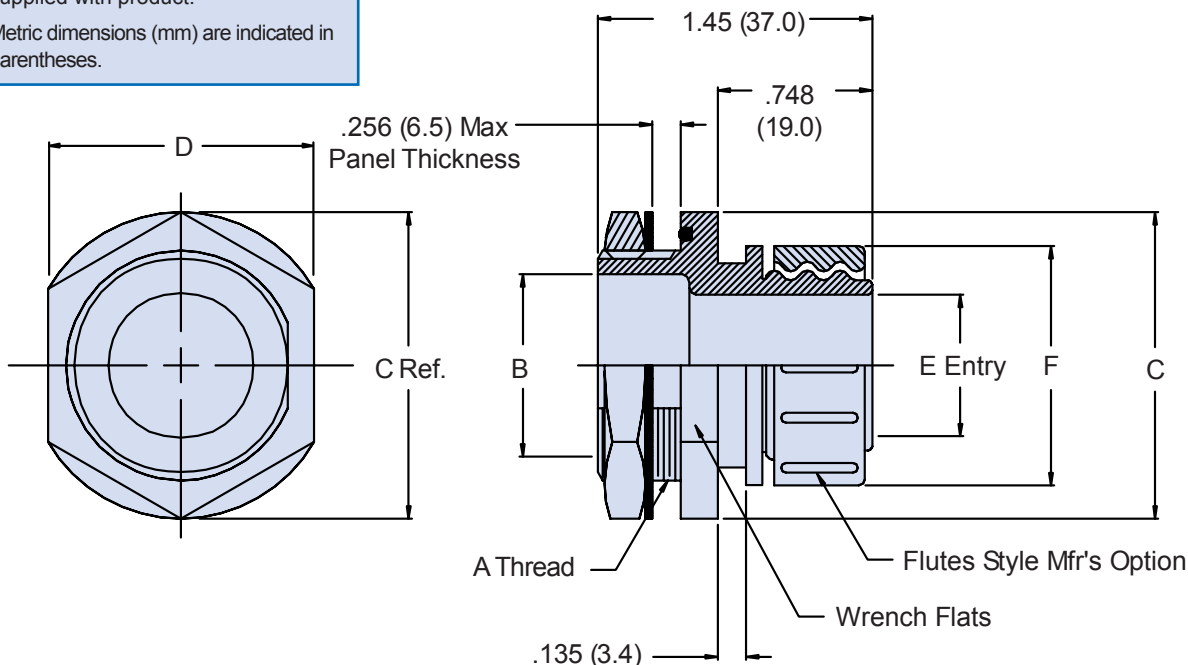


TABLE I: Finish

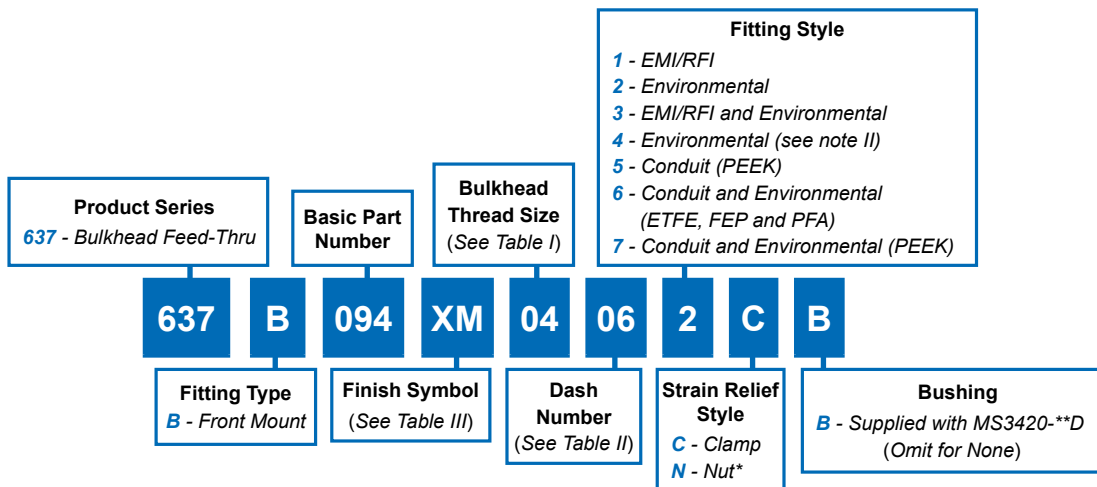
|    |                                            |
|----|--------------------------------------------|
| XM | Electroless Nickel                         |
| XW | Cadmium Olive Drab Over Electroless Nickel |

TABLE II: Dash Number, Max Entry

| Dash No. | A Thread ISO Metric | B Dia. Min.  | C Max.      | Max Entry Table III |
|----------|---------------------|--------------|-------------|---------------------|
| 01       | M 16 x 1.5-6g       | .394 (10.0)  | .98 (24.9)  | 03                  |
| 02       | M 20 x 1.5-6g       | .551 (14.0)  | 1.18 (30.0) | 04                  |
| 03       | M 27 x 2.0-6g       | .866 (22.0)  | 1.50 (38.1) | 07                  |
| 04       | M 36 x 2.0-6g       | 1.181 (30.0) | 1.97 (54.1) | 08                  |

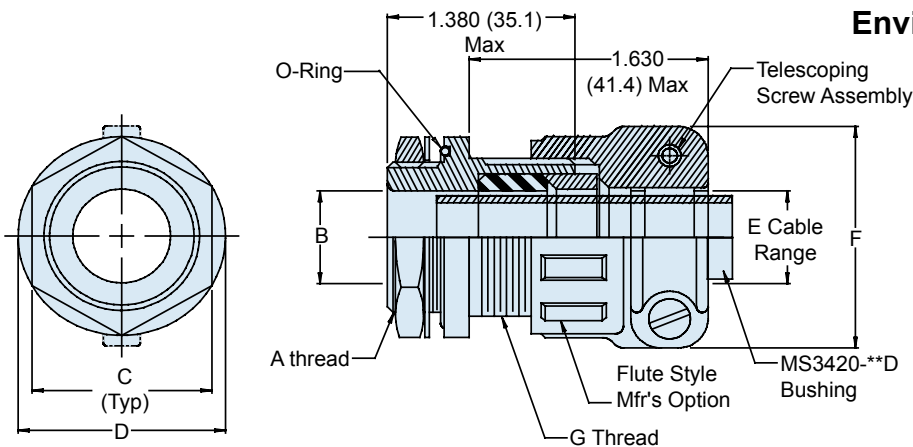
TABLE III: Dash Number

| Dash No. | + .03<br>-.00 | E<br>(.8)<br>(.0) | F Max        |
|----------|---------------|-------------------|--------------|
| 01       | .125          | (3.2)             | .531 (13.5)  |
| 02       | .250          | (6.4)             | .656 (16.7)  |
| 03       | .375          | (9.5)             | .781 (19.8)  |
| 04       | .500          | (12.7)            | .906 (23.0)  |
| 05       | .625          | (15.9)            | 1.031 (26.2) |
| 06       | .750          | (19.1)            | 1.156 (29.4) |
| 07       | .875          | (22.2)            | 1.281 (32.5) |
| 08       | 1.000         | (25.4)            | 1.406 (35.7) |

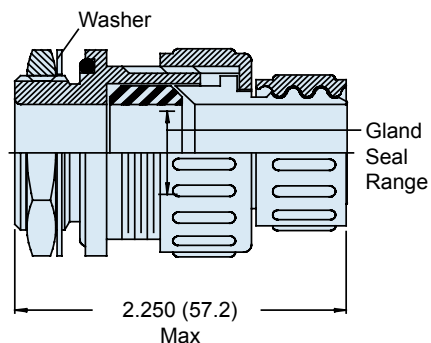


\*(for styles A, B and C only)

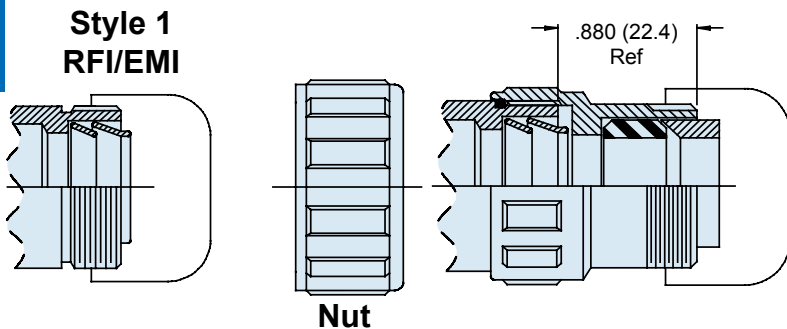
**Type B Environmental**  
**Style 2**



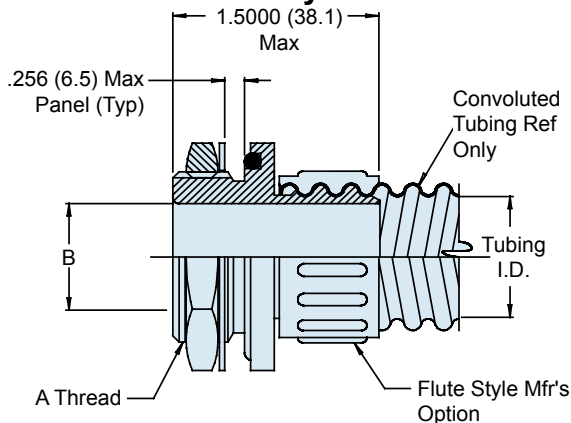
**Type B**  
**Environmental Conduit Adapter**  
**Style 6 or 7**



**Type B**  
**RFI/EMI & Environmental**  
**Style 3**



**Type B Conduit Adapter**  
**Style 5**



**637-094**  
**Composite Box Conduit or Cable**  
**Feed-Through Adapter Series**



Feed  
Throughs

**TABLE I: BULKHEAD THREAD SIZE**

| Dash No. | A Thread ISO Metric | B Ref Diameter | C            | D Max Diameter | Max Entry Table II |
|----------|---------------------|----------------|--------------|----------------|--------------------|
| 01       | M16 x 1.5-6g        | .55 (14.0)     | .875 (22.2)  | 1.06 (27.2)    | 06                 |
| 02       | M20 x 1.5-6g        | .61 (15.5)     | 1.062 (27.0) | 1.19 (30.5)    | 10                 |
| 03       | M27 x 2.0-6g        | .86 (21.8)     | 1.375 (34.9) | 1.50 (38.4)    | 16                 |
| 04       | M36 x 2.0-6g        | 1.21 (30.7)    | 1.750 (44.5) | 2.00 (51.1)    | 20                 |
| 05       | 1 -20 UNEF-2A       | .78 (19.8)     | 1.250 (31.8) | 1.38 (35.3)    | 12                 |

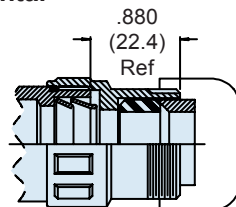
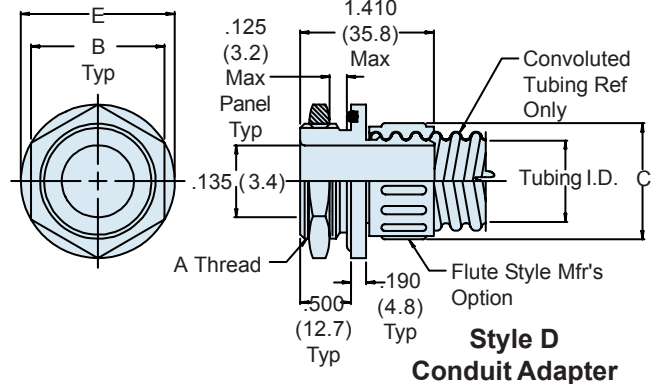
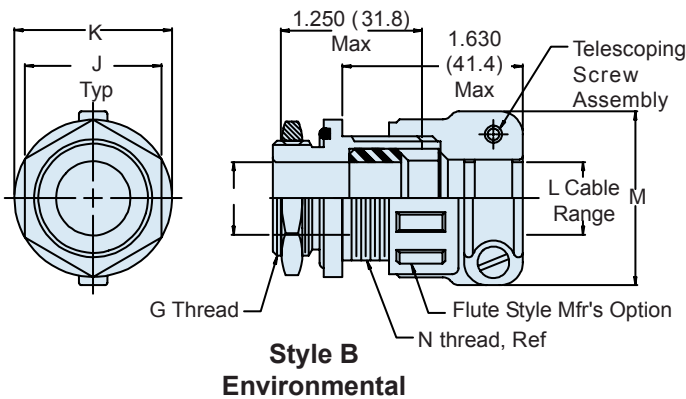
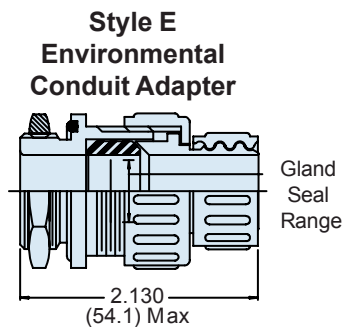
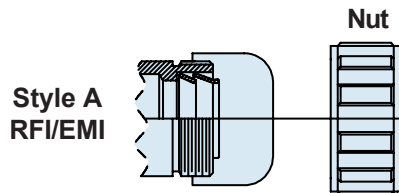
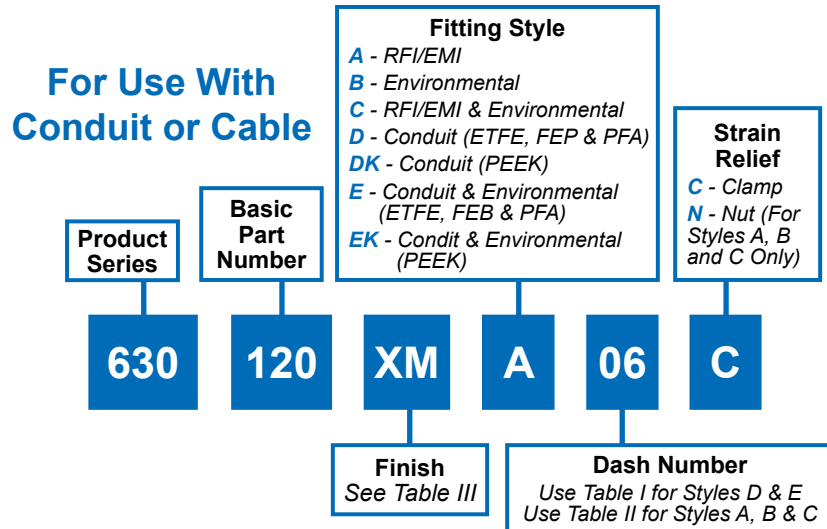
**TABLE II: CONNECTOR SHELL SIZE ORDER NUMBER**

| Dash No. | E           |              | F Max        | G Thread         |            | Ref. Conduit Size Styles 5, 6 & 7 |
|----------|-------------|--------------|--------------|------------------|------------|-----------------------------------|
|          | Min         | Max          |              | Unified Class 2A | MS3420-**D |                                   |
| 04       | .188 (4.8)  | .312 (7.9)   | 1.150 (29.2) | 11/16-24         | -04        | 14                                |
| 06       | .291 (7.1)  | .438 (11.1)  | 1.270 (32.3) | 13/16-20         | -06        | 16                                |
| 10       | .375 (9.5)  | .610 (15.5)  | 1.460 (37.1) | 1 1/16-18        | -06 & -10  | 24                                |
| 12       | .438 (11.1) | .750 (19.1)  | 1.620 (41.1) | 1 1/4-18         | -08 & -12  | 28                                |
| 16       | .625 (15.9) | .860 (21.8)  | 1.770 (44.9) | 1 1/2-18         | -12 & -16  | 32                                |
| 20       | .875 (22.2) | 1.210 (30.7) | 2.060 (52.3) | 1 13/16-16       | -16 & -20  | 40                                |

**TABLE III**

| Symbol | Finish Description                                                                  |
|--------|-------------------------------------------------------------------------------------|
| XB     | No Plating - Black Color (Non-Conductive Finish)                                    |
| XM     | 2000 Hour Corrosion Resistant Electroless Nickel                                    |
| XMT    | 2000 Hour Corrosion Resistant Ni-PTFE, Nickel-Fluorocarbon Polymer. 1000 Hour Grey™ |
| XO     | No Plating - Brown Color (Non-Conductive Finish)                                    |
| XW     | 2000 Hour Corrosion Resistant Cadmium/Olive Drab over Electroless Nickel            |

**637-120**  
**Composite Feed-Through Fitting**  
**Universal Conduit/Cable Accessory Adapter**



## APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.

# 637-120

## Composite Feed-Through Fitting

### Universal Conduit/Cable Accessory Adapter



Feed  
Throughs

**TABLE I: Dash Number, Gland Seal Range and Dimensions (Continued Below)**

| Dash No. | A Thread Class 2A | B Across Flat | C Max        | D Min        | E Max        | Tubing I.D.  |              | Gland Seal Range |              |
|----------|-------------------|---------------|--------------|--------------|--------------|--------------|--------------|------------------|--------------|
|          |                   |               |              |              |              | Min          | Max          | Min              | Max          |
| 06       | 1/2-28 UNEF       | .750 (19.1)   | .500 (12.7)  | .162 (4.1)   | .900 (22.9)  | .181 (4.6)   | .187 (4.7)   | .156 (4.0)       | .250 (6.4)   |
| 09       | 1/2-28 UNEF       | .750 (19.1)   | .600 (15.2)  | .244 (6.2)   | .900 (22.9)  | .273 (6.9)   | .281 (7.1)   | .156 (4.0)       | .250 (6.4)   |
| 10       | 5/8-24 UNEF       | .880 (22.4)   | .630 (16.0)  | .274 (7.0)   | 1.030 (26.2) | .306 (7.8)   | .312 (7.9)   | .156 (4.0)       | .250 (6.4)   |
| 12       | 5/8-24 UNEF       | .880 (22.4)   | .700 (17.8)  | .326 (8.3)   | 1.030 (26.2) | .364 (9.2)   | .375 (9.5)   | .188 (4.8)       | .312 (7.9)   |
| 14       | 3/4-20 UNEF       | 1.000 (25.4)  | .760 (19.3)  | .382 (9.7)   | 1.160 (29.5) | .427 (10.8)  | .437 (11.1)  | .250 (6.4)       | .438 (11.1)  |
| 16       | 3/4-20 UNEF       | 1.000 (25.4)  | .850 (21.6)  | .434 (11.0)  | 1.160 (29.5) | .485 (12.3)  | .500 (12.7)  | .250 (6.4)       | .438 (11.1)  |
| 20       | 7/8-20 UNEF       | 1.130 (28.7)  | .970 (24.6)  | .539 (13.7)  | 1.280 (32.5) | .608 (15.4)  | .625 (15.9)  | .375 (9.5)       | .625 (15.9)  |
| 24       | 1-20 UNEF         | 1.250 (31.8)  | 1.140 (29.0) | .649 (16.5)  | 1.410 (35.8) | .730 (18.5)  | .750 (19.1)  | .375 (9.5)       | .625 (15.9)  |
| 28       | 1 1/8-18 UNEF     | 1.500 (38.1)  | 1.280 (32.5) | .769 (19.5)  | 1.530 (38.9) | .860 (21.8)  | .875 (22.2)  | .438 (11.1)      | .750 (19.1)  |
| 32       | 1 3/8-18 UNEF     | 1.750 (44.5)  | 1.450 (36.8) | .868 (22.0)  | 1.780 (45.2) | .975 (24.8)  | 1.000 (25.4) | .625 (15.9)      | .938 (23.8)  |
| 40       | 1 1/2-18 UNEF     | 1.880 (47.8)  | 1.760 (44.7) | 1.078 (27.4) | 1.890 (48.0) | 1.210 (30.7) | 1.250 (31.8) | .875 (22.2)      | 1.250 (31.8) |
| 48       | 1 3/4-18 UNEF     | 2.130 (54.1)  | 2.060 (52.3) | 1.200 (30.5) | 2.280 (57.9) | 1.437 (36.5) | 1.500 (38.1) | 1.000 (25.4)     | 1.375 (34.9) |
| 56       | 2-18 UNS          | 2.380 (60.5)  | 2.390 (60.7) | 1.400 (35.6) | 2.530 (64.3) | 1.688 (42.9) | 1.750 (44.5) | 1.250 (31.8)     | 1.625 (41.3) |
| 64       | 2 1/4-16 UN       | 2.630 (66.8)  | 2.570 (65.3) | 1.600 (40.6) | 2.780 (70.6) | 1.937 (49.2) | 2.000 (50.8) | 1.250 (31.8)     | 1.625 (41.3) |

**TABLE II: (Continued from Above)**

| Dash No. | G Thread Class 2A | H Min        | J Across Flat | K Max        | L           |              | M Max        | N Thread Unified Class 2 A |
|----------|-------------------|--------------|---------------|--------------|-------------|--------------|--------------|----------------------------|
|          |                   |              |               |              | Min         | Max          |              |                            |
| 04       | 5/8-24 UNEF       | .362 (9.2)   | .880 (22.4)   | 1.030 (26.2) | .188 (4.8)  | .312 (7.9)   | 1.150 (29.2) | 11/16-24                   |
| 06       | 3/4-20 UNEF       | .434 (11.0)  | 1.000 (25.4)  | 1.160 (29.5) | .281 (7.1)  | .438 (12.3)  | 1.270 (32.3) | 13/16-20                   |
| 10       | 1-20 UNEF         | .649 (16.5)  | 1.250 (31.8)  | 1.410 (35.8) | .375 (9.5)  | .610 (15.5)  | 1.460 (37.1) | 1 1/16-18                  |
| 12       | 1 1/8-18 UNEF     | .769 (19.5)  | 1.500 (38.1)  | 1.530 (38.9) | .438 (12.3) | .750 (19.1)  | 1.620 (41.1) | 1 1/4-18                   |
| 16       | 1 3/8-18 UNEF     | .868 (22.0)  | 1.750 (44.5)  | 1.780 (45.2) | .625 (15.9) | .860 (21.8)  | 1.770 (45.0) | 1 1/2-18                   |
| 20       | 1 3/4-10 UNEF     | 1.200 (30.5) | 2.130 (54.1)  | 2.280 (57.9) | .875 (22.2) | 1.210 (30.7) | 2.060 (52.3) | 1 13/16-16                 |

**TABLE III: Finish**

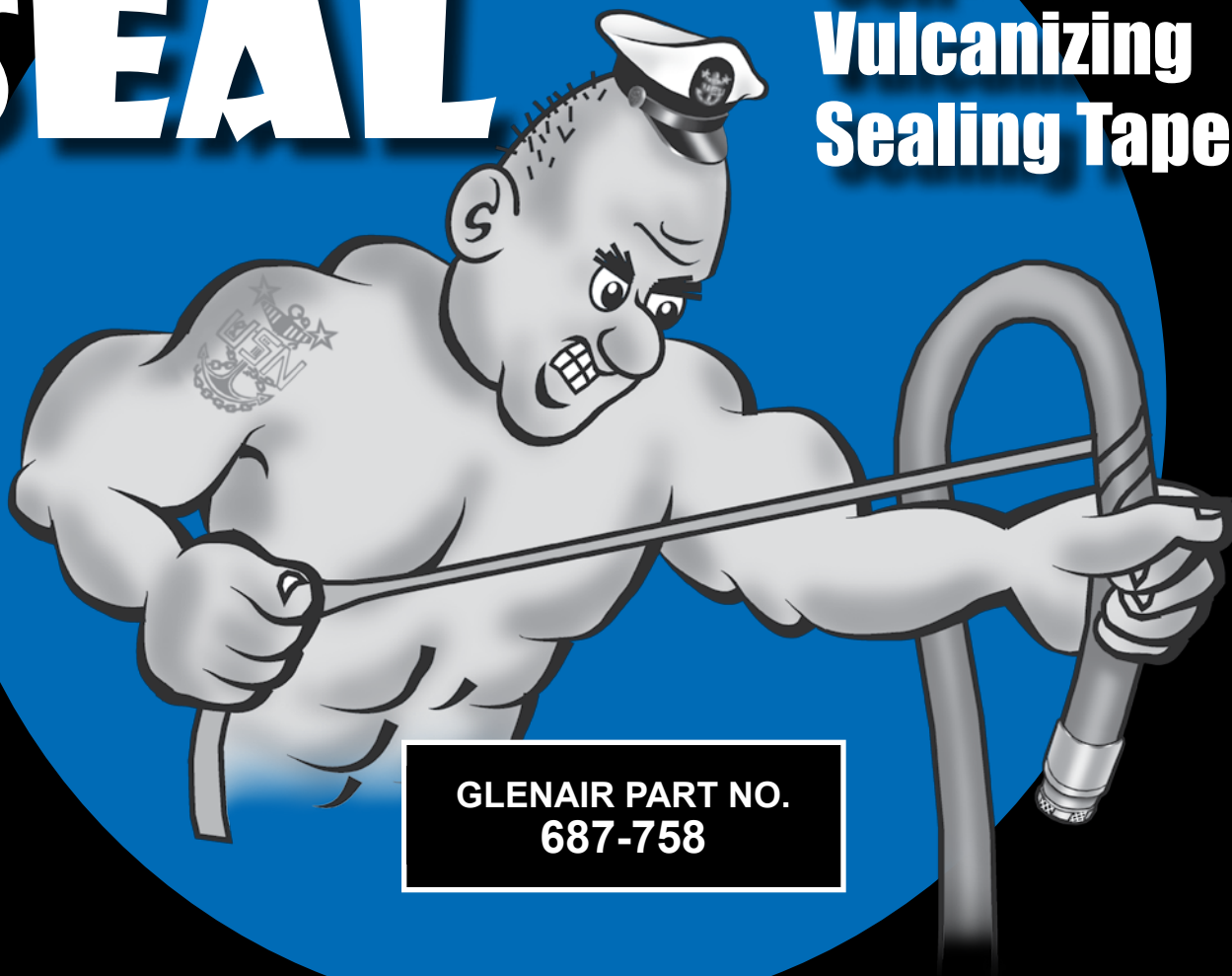
|    |                                            |
|----|--------------------------------------------|
| XM | Electroless Nickel                         |
| XW | Cadmium Olive Drab Over Electroless Nickel |
| XO | No Plating - Base Material Non-Conductive  |

#### APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.

# MASTER SEAL

**Self-  
Vulcanizing  
Sealing Tape**



**GLENAIR PART NO.  
687-758**

## **Halogen Free!**

*"BlueJacket" material sealing tape designed for temporary repairs to topside conduit; Stops water incursion into conduit until a permanent repair using MIL-PRF-24758A components can be made.*



1211 Air Way  
Glendale, California 91201-2497

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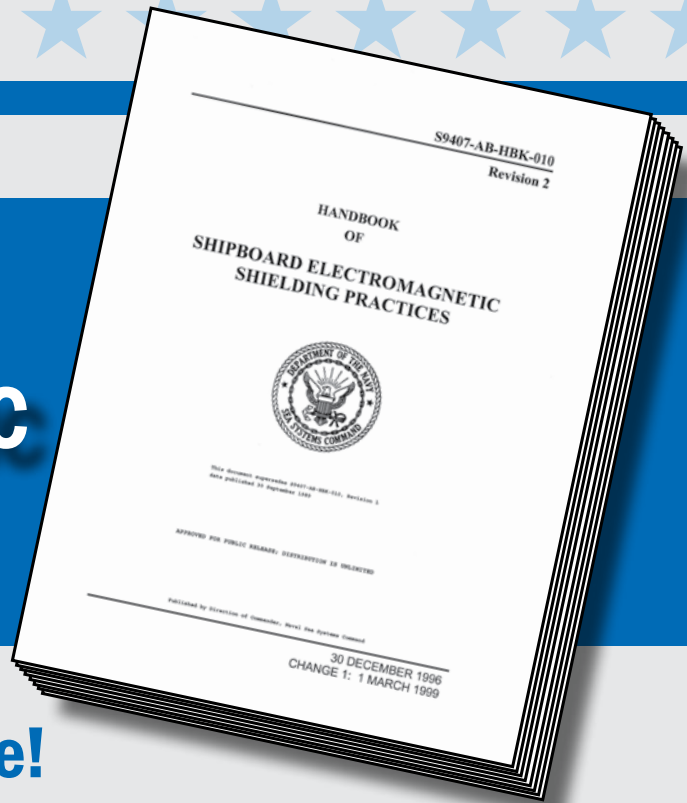
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S9407-AB-HBK-010, Rev. 2

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**Glenair is also qualified for the following GR2000  
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drawings and specifications.**

| <b>NAVSEA HANDBOOK<br/>S9407-AB-HBK-010</b> | <b>NAVSEA HANDBOOK<br/>0967-LP-283-5010</b>        |
|---------------------------------------------|----------------------------------------------------|
| GR2120-X-XX-EMXX-XX                         | GR2120-X-X-X-XXSN                                  |
| GR2121-XXSM                                 | GR2121-XXSN                                        |
| GR2122-XXXSM (Style A)                      | GR2122-XXXSN (Style A)                             |
| GR2122-XXXESM (Style B)                     | GR2122-XXXESN (Style B)                            |
| GR2123-X-XX-EMXX                            | GR2123-X-X-XXSN                                    |
| GR2124-X-EMXX-XX                            | GR2124-X-X-XXSN                                    |
| GR2125-X-EMXX-XX                            | GR2125-X-X-XXSN                                    |
| GR2126-EMXX                                 | GR2126-XX                                          |
| GR2127-EMXX                                 | GR2127-XX                                          |
| GR2128-EMXX                                 | GR2128-XXSM                                        |
| GR2129-EMXX                                 | GR2129-XX                                          |
| RP2100-EMXX-T(S) Telescoping/Short          | RP2100-GXX-T(S)                                    |
| RP2110-EMXX-T(S) Telescoping/Short          | RP2110-GXX-T(S)                                    |
| RP2120-EMXX-T(S) Telescoping/Short          | RP2120-GXX-T(S)                                    |
| RP2130-EMXX                                 | RP2130-GXX                                         |
| RP2140-EMXX                                 | RP2140-GXX                                         |
| RP2141-EMXX                                 | RP2141-GXX                                         |
| RP2200-EMXX                                 | RP2200-GXX                                         |
| RP2210-EMXX                                 | RP2210-GXX                                         |
| RP2311-XX-XX-XXSM                           | RP2311-XX-XX-XXSN                                  |
| RP2321-XX-XXSM                              | RP2321-XX-XXSN                                     |
| RP2330-XX-XX-N (No Letter Steel) SM         | RP2330-XX-XX-N (No Letter Steel) SN                |
| RP2340-XX-XX-XXSM                           | RP2340-XX-XX-XXSN                                  |
| RP2350-XX-XX-XX-XSM                         | RP2350-XX-XX-XX-XSN                                |
| RP2360-XX-XX-XXSM                           | RP2360-XX-XX-XXSN                                  |
| RP2400-XX-XXSM                              | RP2400-XX-XXSN                                     |
| RP2411-XX-XXSM                              | RP2411-XX-XXSN                                     |
| RP2420-XX-XXSM                              | RP2420-XX-XXSN                                     |
| RP2430-XXSM                                 | RP2430-XXSN                                        |
| RP2431-XXSM                                 | RP2431-XXSN                                        |
| RP2440-XXSM                                 | RP2440-XXSN                                        |
| RP2500-XXSM                                 | RP2500-XXSN                                        |
| RP2610-XXSM                                 | RP2610-XXSN                                        |
| RP2620-XXSM                                 | RP2620-XXSN                                        |
| SM = Electroless Nickel Plating/Mild Steel  | SN = Cadmium over Electroless<br>Nickel/Mild Steel |

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