



MIL-DTL-26482

Features and Application

Series 2

Features and Application

MIL-DTL-26482 Series 2, bayonet coupling, rear-removable crimp contact connectors were designed as an upgrade to MIL-DTL-26482 Series 1. Series 2 connectors are intermountable and interchangeable with both solder and front-release crimp Series 1. They are also identical to the inactivated MIL-DTL- 83723 Series I connectors.

Series 2 connectors are widely used on commercial, military and aerospace systems requiring general-purpose, miniature cylindrical bayonet coupling connectors.

This family of connectors is offered in 4 receptacle-mounting styles. They include narrow flange wall mounting receptacles, wide flange wall mounting receptacles, cable connecting receptacles and jam nut mounting receptacles which incorporate “O” ring seals, designed for rear panel “D” hole mounting.

Plugs are available in two designs, with and without RFI grounding.

Thirty-three insert arrangements per MIL-STD-1669 are tooled and qualified to MIL-DTL-26482 Series 2, utilizing 3 to 61 M39029 contacts. Contacts come in sizes 20, 16 and 12, terminating wire sizes from 24 to 12 gauge.

These connectors are available in wide range of shell materials and finishes. Aluminum shells are offered in electroless nickel, olive drab cadmium and black anodic. Other finishes such as zinc cobalt are available upon request to commercial callouts only. In addition, we offer passivated stainless steel shells with standard environment-resisting inserts (commercial callouts only), and for highly corrosive environments, nickel-aluminum-bronze shells with standard environment-resisting inserts (commercial callouts only).

Universal I/R Tool – A single, expendable plastic tool is used for both insertion and removal of contacts.

Insert Polarization – Alternate insert clocking positions aid in mating of adjacent connectors having identical insert arrangement.

Closed-Entry Socket Insert – Hard dielectric socket face has lead-in chamfers for positive alignment of pins (even partially bent within pre-established limits) with sockets.

Interfacial Pin Insert Seal – Raised moisture barriers around each pin, which mate into lead-in chamfers of hard face socket insert, provide individual contact sealing. Interfacial seal is never touched by service tools.

Elastomer Wire Sealing Grommet – Sealing over a wide range of wire diameters is assured by a triple wire seal in each cavity at the rear of the connector.

Superior Contact Stability – Rear release crimp contact system features a stamped beryllium-copper retaining clip captivated by molded-in shoulders of each contact cavity in the insulator. A rear-inserted M81969 plastic tool expands the tines beyond the shoulder, releasing the contact.



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MIL-DTL-26482

Performance Specifications

Series 2



Performance Specifications

Operating Temperature Range

Classes A, L and S*: -55°C to +200°C (-67°F to +392°F)
 Classes W and ZC*: -55°C to +175°C (-67°F to +347°F)

Material and Finish Data (Class)

A – aluminum shell, black anodized finish
 L – aluminum shell, electroless nickel finish
 W – aluminum shell, olive drab cadmium over nickel base
 S* – stainless steel shell, passivated
 BN* – aluminum shell, black nickel finish (Aero P/N only)

Corrosion Resistance

Classes A, S*, W and BN* withstand 500-hour salt spray.
 Class L withstands 48-hour salt spray.

Environmental Seal

Wired, mated connectors with specified accessories attached, shall meet the altitude-immersion test specified in MIL-DTL-26482 Series 2.

Fluid Resistance

Connectors resist specified immersions in MIL-PRF-7808 (lubricating oil), MIL-PRF-23699 (lubricating oil), MIL-PRF-5606 (hydraulic fluid), M2-V Chevron oil, Coolanol 25, ASTM D4814 (gasoline), SAE-AMS1424 Type I (defrosting fluid), MIL-DTL-5624 (JP-5), and solvents specified in Method 215 of MIL-STD-202.

* Not on QPL, can be supplied to Aero-Electric P/N only.

Durability

Mated connectors withstand a minimum of 250 mating cycles for RFI plug (MS3475) and 500 cycles for standard plug (MS3476).

Shock and Vibration Requirements

Wired, mated connectors shall not be damaged, coupling ring shall not loosen, and there shall be no interruption of electrical continuity longer than one microsecond when subjected to the following:

Shock

Mated connectors withstand a pulse of approximate half sine wave of 300 G magnitude with duration of three milliseconds applied in each direction of the three major axes.

Vibration

Mated connectors withstand the following vibration levels:

- Random vibration per MIL-STD-202, method 214, test condition II, letter J.

Shielding Effectiveness

RFI attenuation at the specified frequency meets the requirements of MIL-DTL-26482 Series 2.

- RFI shielding effectiveness of mated connectors with RFI backshells is measured in a triaxial radio frequency leakage fixture.

Shell-to-Shell Conductivity

- With RFI spring fingers, the maximum potential drop shall not exceed 5 millivolts.
- Without spring fingers, the maximum potential drop shall not exceed 200 millivolts.

Voltage Rating

| Service Rating | Suggested Operating Voltage** | | Test Voltage | Test Voltage | Test Voltage | Test Voltage |
|----------------|-------------------------------|-------|--------------|--------------|--------------|--------------|
| | (Sea Level) | | Sea Level | 50,000 Ft. | 70,000 Ft. | 110,000 Ft. |
| | AC (RMS) | DC | V RMS | V RMS | V RMS | V RMS |
| I | 600 | 850 | 1,500 | 500 | 375 | 200 |
| II | 1,000 | 1,275 | 2,300 | 750 | 500 | 200 |

** To be used by designer only as a guide.

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Military and Aero-Electric Part Number Development

| | | | | | | | | |
|---|-------------|-----------|----------|-------------|-----------|----------|----------|-------------|
| Mil. Prefix | MS34 | 70 | L | 12 - | 10 | P | W | |
| Aero Prefix | AE7 | 70 | L | 12 - | 10 | P | W | -340 |
| Shell type | | | | | | | | |
| 70 = Narrow flange receptacle | | | | | | | | |
| 71 = Cable connecting receptacle | | | | | | | | |
| 72 = Wide flange receptacle | | | | | | | | |
| 74 = Jam nut receptacle | | | | | | | | |
| 75 = RFI grounding plug | | | | | | | | |
| 76 = Straight plug | | | | | | | | |
| Class (Material and Finish) | | | | | | | | |
| A = Aluminum shell, black anodized finish (not available in RFI plug) | | | | | | | | |
| L = Aluminum shell, electroless nickel finish | | | | | | | | |
| W = Aluminum shell, olive drab cadmium over electroless nickel base | | | | | | | | |
| S* = Stainless steel shell, passivated (Aero part number only) | | | | | | | | |
| BN* = Aluminum shell, Black Nickel finish, (RoHS), (Aero part number only) | | | | | | | | |
| Shell Size | | | | | | | | |
| 8, 10, 12, 14, 16, 18, 20, 22 or 24 | | | | | | | | |
| Insert Arrangement | | | | | | | | |
| See pages 125 thru 126 | | | | | | | | |
| Contact Style | | | | | | | | |
| P = Pin | | | | | | | | |
| S = Socket | | | | | | | | |
| A = Pin connector less pins (with intent to use non-std contact) | | | | | | | | |
| B = Socket connector less sockets (with intent to use non-std contacts) | | | | | | | | |
| Polarization | | | | | | | | |
| N = Normal (not included in part number) | | | | | | | | |
| W, X, Y or Z = Alternate insert polarizations (see pages 123 for position availability) | | | | | | | | |
| Modification (applies to Aero part numbers only) | | | | | | | | |
| 01 = Less contacts (is not marked on the part) | | | | | | | | |
| 340 = Connector kitted with M85049/31-XXX E-nut | | | | | | | | |
| 341 = Connector kitted with M85049/52-1-XXX straight clamp | | | | | | | | |
| 342 = Connector kitted with M85049/51-1-XXX right angle clamp | | | | | | | | |

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* Not on QPL, can be supplied to Aero part number only. Consult factory for availability.

Note 1: Each connector is furnished with contacts unless ordered less contacts (L/C) as follows: One spare contact for inserts requiring 2 to 26 of each contact and two spares for inserts with 27 or more of each size, and a minimum of one sealing plug up to 15% of the number of contacts. In addition, one plastic insetion/removal tool of each size is included.

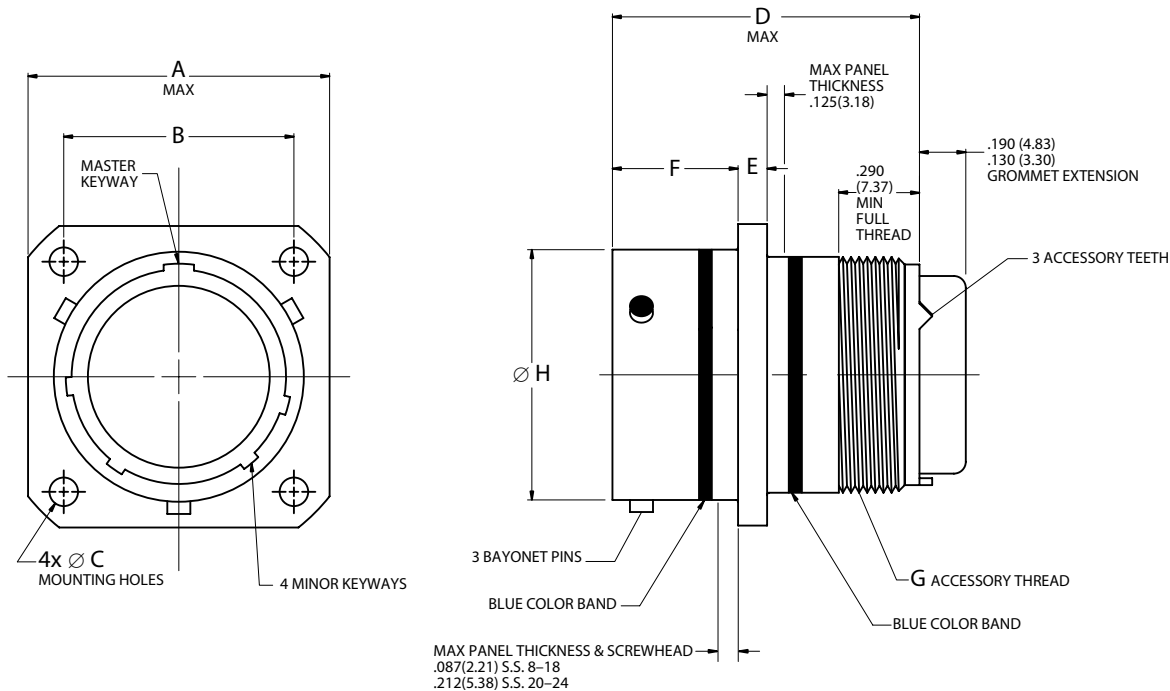
Note 2: Proper part number marking has no "0" in front of single digit shell size (8) and no "0" after the dash between shell size and single digit layout. Example of each: MS3470W8-33P and MS3470W10-6P. In both "N" for normal was omitted.

Note 3: Insert layouts 8-2, 8-3 and 8-4 can only be ordered to Aero-Electric part number. Non standard contacts are required and to avoid confusion are sold "with contacts" only. See page 80 for the correct contact part numbers.

MS3470
Narrow Flange Receptacle
AE770



Bayonet Coupling, Crimp Removable, Rear Release



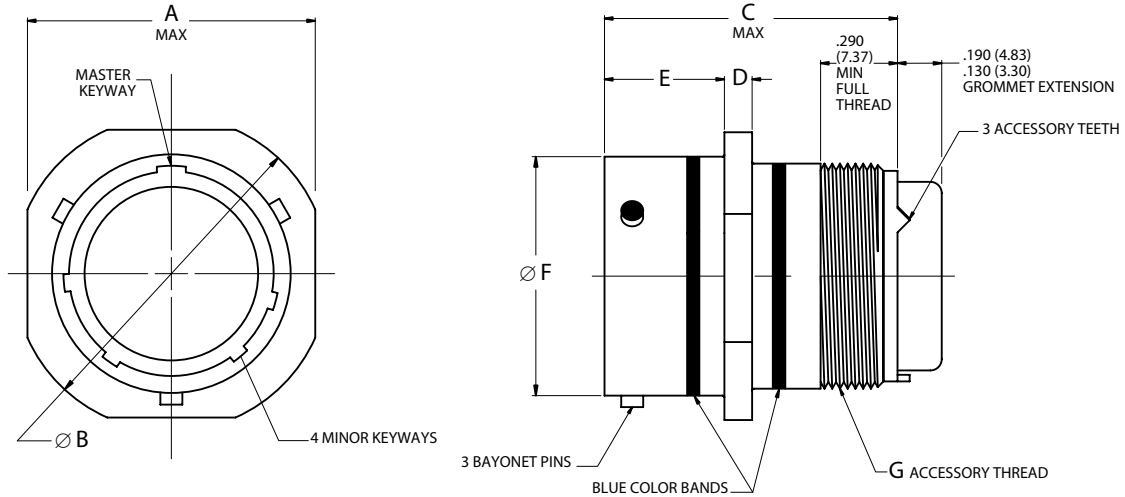
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| Pages 123, 124 | Insert Availability and Contact Information |
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Note: Maximum grommet O.D. is same as Ø C MAX on page 113.

| Shell Size | A | | B | | Ø C | | D | | E | | F | | G | Ø H | |
|------------|---------|-------|-------|-------|-------|------|---------|-------|-------|------|------|-------|---------------------------|-------|-------|
| | Maximum | | (TP) | | ±.005 | ±.13 | Maximum | | ±.016 | ±.41 | +016 | +41 | Accessory Thread Class 2A | ±.003 | ±.08 |
| | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | | inch | mm |
| 8 | .828 | 21.03 | .594 | 15.09 | .120 | 3.05 | 1.215 | 30.86 | .062 | 1.57 | .446 | 11.33 | 1/2-20UNF | .471 | 11.96 |
| 10 | .954 | 24.23 | .719 | 18.26 | .120 | 3.05 | 1.215 | 30.86 | .062 | 1.57 | .446 | 11.33 | 5/8-24UNEF | .588 | 14.94 |
| 12 | 1.047 | 26.59 | .812 | 20.62 | .120 | 3.05 | 1.215 | 30.86 | .062 | 1.57 | .446 | 11.33 | 3/4-20UNEF | .748 | 19.00 |
| 14 | 1.141 | 28.98 | .906 | 23.01 | .120 | 3.05 | 1.215 | 30.86 | .062 | 1.57 | .446 | 11.33 | 7/8-20UNEF | .873 | 22.17 |
| 16 | 1.234 | 31.34 | .969 | 24.61 | .120 | 3.05 | 1.215 | 30.86 | .062 | 1.57 | .446 | 11.33 | 1-20UNEF | .998 | 25.35 |
| 18 | 1.328 | 33.73 | 1.062 | 26.97 | .120 | 3.05 | 1.215 | 30.86 | .062 | 1.57 | .446 | 11.33 | 1-1/16-18UNEF | 1.123 | 28.52 |
| 20 | 1.453 | 36.91 | 1.156 | 29.36 | .120 | 3.05 | 1.275 | 32.39 | .094 | 2.39 | .571 | 14.50 | 1-3/16-18UNEF | 1.248 | 31.70 |
| 22 | 1.578 | 40.08 | 1.250 | 31.75 | .120 | 3.05 | 1.275 | 32.39 | .094 | 2.39 | .571 | 14.50 | 1-5/16-18UNEF | 1.373 | 34.87 |
| 24 | 1.703 | 43.26 | 1.375 | 34.93 | .147 | 3.73 | 1.275 | 32.39 | .094 | 2.39 | .604 | 15.34 | 1-7/16-18UNEF | 1.498 | 38.05 |



Bayonet Coupling, Crimp Removable, Rear Release



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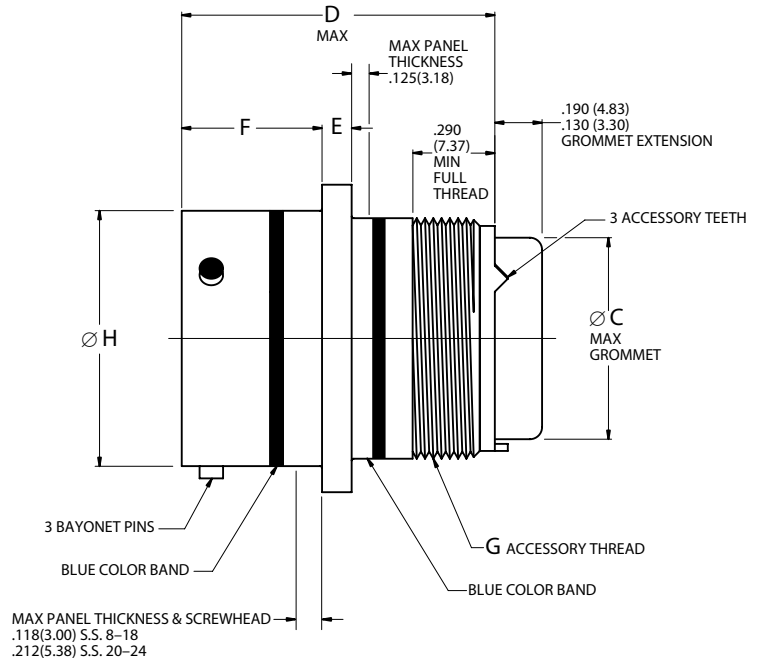
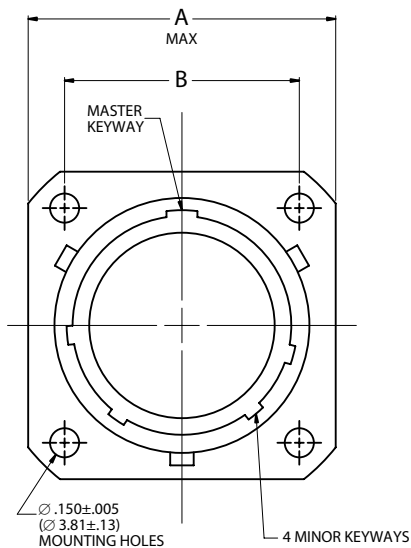
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| Shell Size | A | | Ø B | | C | | D | | E | | Ø F | | G |
|------------|---------|-------|-------|-------|---------|-------|-------|------|--------------|------------|-------|-------|---------------------------|
| | Maximum | | ±.020 | ±.51 | Maximum | | ±.016 | ±.41 | +016 -015 | +41 -38 | ±.003 | ±.08 | Accessory Thread Class 2A |
| | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | |
| 8 | .828 | 21.03 | .938 | 23.83 | 1.215 | 30.86 | .062 | 1.57 | .446 | 11.33 | .471 | 11.96 | 1/2-20UNF |
| 10 | .954 | 24.23 | 1.062 | 26.97 | 1.215 | 30.86 | .062 | 1.57 | .446 | 11.33 | .588 | 14.94 | 5/8-24UNEF |
| 12 | 1.047 | 26.59 | 1.156 | 29.36 | 1.215 | 30.86 | .062 | 1.57 | .446 | 11.33 | .748 | 19.00 | 3/4-20UNEF |
| 14 | 1.141 | 28.98 | 1.250 | 31.75 | 1.215 | 30.86 | .062 | 1.57 | .446 | 11.33 | .873 | 22.17 | 7/8-20UNEF |
| 16 | 1.234 | 31.34 | 1.344 | 34.14 | 1.215 | 30.86 | .062 | 1.57 | .446 | 11.33 | .998 | 25.35 | 1-20UNEF |
| 18 | 1.328 | 33.73 | 1.438 | 36.53 | 1.215 | 30.86 | .062 | 1.57 | .446 | 11.33 | 1.123 | 28.52 | 1-1/16-18UNEF |
| 20 | 1.453 | 36.91 | 1.562 | 39.67 | 1.275 | 32.39 | .094 | 2.39 | .571 | 14.50 | 1.248 | 31.70 | 1-3/16-18UNEF |
| 22 | 1.578 | 40.08 | 1.688 | 42.88 | 1.275 | 32.39 | .094 | 2.39 | .571 | 14.50 | 1.373 | 34.87 | 1-5/16-18UNEF |
| 24 | 1.703 | 43.26 | 1.812 | 46.02 | 1.275 | 32.39 | .094 | 2.39 | .604 | 15.34 | 1.498 | 38.05 | 1-7/16-18UNEF |

MS3472
Wide Flange Receptacle
AE772



Bayonet Coupling, Crimp Removable, Rear Release



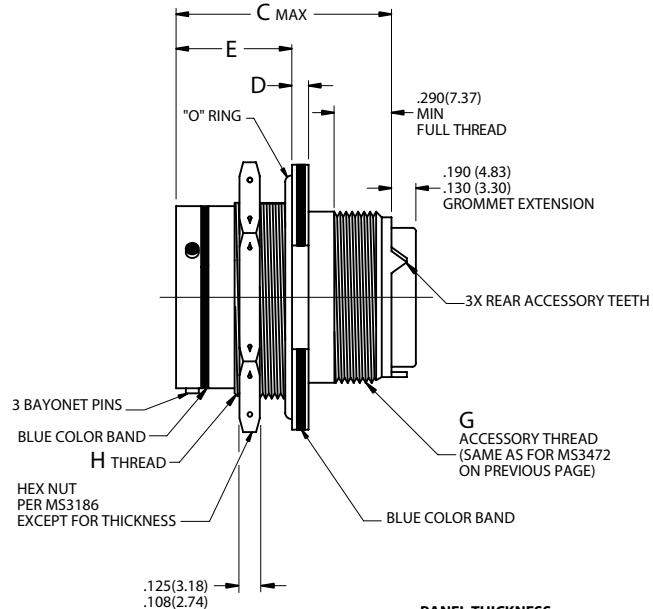
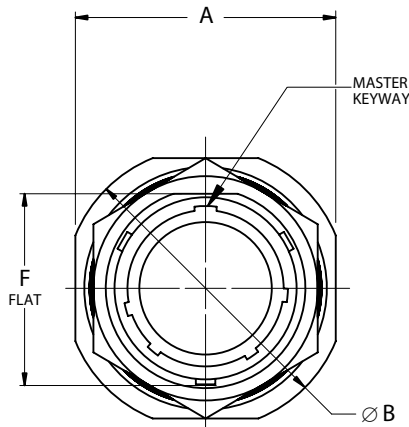
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| Shell Size | A | | B | | $\varnothing C$ | | D | | E | | F | | G | $\varnothing H$ | |
|------------|---------|-------|-------|-------|-----------------|-------|---------|-------|------------|-----------|----------------------|--------------------|------------------------------|-----------------|-----------|
| | Maximum | | (TP) | | Maximum | | Maximum | | $\pm .016$ | $\pm .41$ | $+ .016$ $- .015$ | $+ .41$ $- .38$ | Accessory Thread Class 2A | $\pm .003$ | $\pm .08$ |
| | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | | inch | mm |
| 8 | 1.065 | 27.05 | .734 | 18.64 | .305 | 7.75 | 1.215 | 30.86 | .062 | 1.57 | .477 | 12.12 | 1/2-20UNF | .471 | 11.96 |
| 10 | 1.141 | 28.98 | .812 | 20.62 | .405 | 10.29 | 1.215 | 30.86 | .062 | 1.57 | .477 | 12.12 | 5/8-24UNEF | .588 | 14.94 |
| 12 | 1.266 | 32.16 | .938 | 23.83 | .531 | 13.49 | 1.215 | 30.86 | .062 | 1.57 | .477 | 12.12 | 3/4-20UNEF | .748 | 19.00 |
| 14 | 1.360 | 34.54 | 1.031 | 26.19 | .665 | 16.89 | 1.215 | 30.86 | .062 | 1.57 | .477 | 12.12 | 7/8-20UNEF | .873 | 22.17 |
| 16 | 1.453 | 36.91 | 1.125 | 28.58 | .790 | 20.07 | 1.215 | 30.86 | .062 | 1.57 | .477 | 12.12 | 1-20UNEF | .998 | 25.35 |
| 18 | 1.532 | 38.91 | 1.203 | 30.56 | .869 | 22.07 | 1.215 | 30.86 | .062 | 1.57 | .477 | 12.12 | 1-1/16-18UNEF | 1.123 | 28.52 |
| 20 | 1.688 | 42.88 | 1.297 | 32.94 | .994 | 25.25 | 1.275 | 32.39 | .094 | 2.39 | .571 | 14.50 | 1-3/16-18UNEF | 1.248 | 31.70 |
| 22 | 1.766 | 44.86 | 1.375 | 34.93 | 1.119 | 28.42 | 1.275 | 32.39 | .094 | 2.39 | .571 | 14.50 | 1-5/16-18UNEF | 1.373 | 34.87 |
| 24 | 1.891 | 48.03 | 1.500 | 38.10 | 1.244 | 31.60 | 1.275 | 32.39 | .094 | 2.39 | .604 | 15.34 | 1-7/16-18UNEF | 1.498 | 38.05 |



Bayonet Coupling, Crimp Removable, Rear Release



PANEL THICKNESS

| | |
|------------|------------|
| .187(4.75) | S.S. 8-18 |
| .062(1.57) | |
| .250(6.35) | S.S. 20-24 |
| .062(1.57) | |

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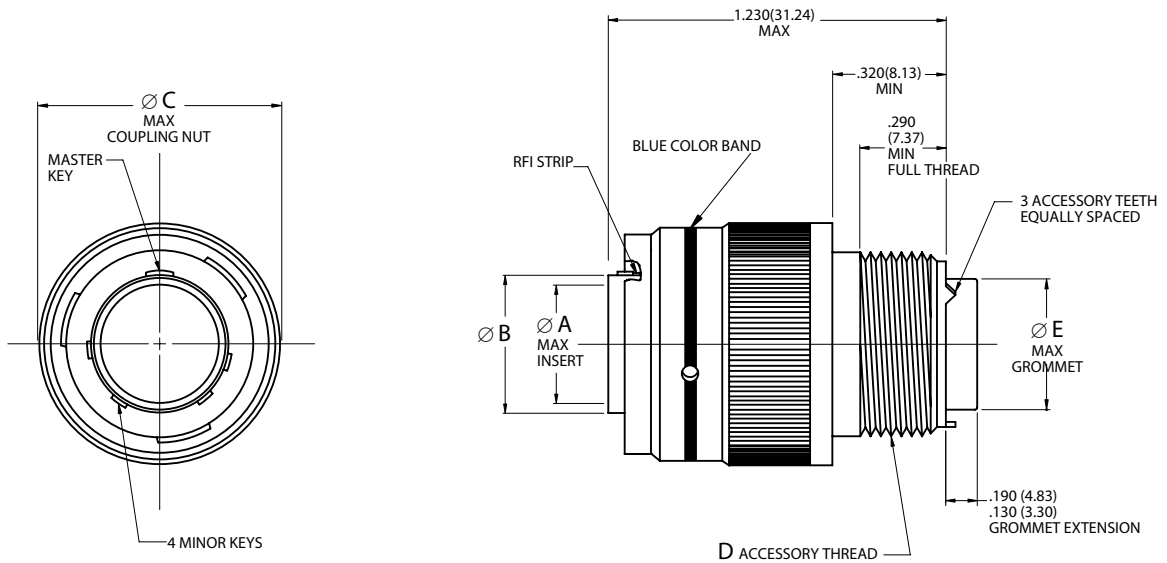
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| Shell Size | A | | \varnothing B | | C | | D | | E | | F | | H |
|------------|-------|--------------|-----------------|--------------|---------|--------------|-----------|------------------|-----------|--------------------|------------|----------------------------|----------------|
| | +0.00 | +0.00 | +0.00 | +0.00 | Maximum | | | | | | Flat | | Jam Nut Thread |
| | -.031 | -.79 | -.031 | -.79 | inch | mm | inch | mm | inch | mm | \pm .005 | \pm.13 | UNEF-2A |
| 8 | .954 | 24.23 | 1.078 | 27.38 | 1.215 | 30.86 | .113/.086 | 2.87/2.18 | .707/.658 | 17.96/16.71 | .525 | 13.34 | 9/16-24 |
| 10 | 1.078 | 27.38 | 1.203 | 30.56 | 1.215 | 30.86 | .113/.086 | 2.87/2.18 | .707/.658 | 17.96/16.71 | .650 | 16.51 | 11/16-24 |
| 12 | 1.266 | 32.16 | 1.391 | 35.33 | 1.215 | 30.86 | .113/.086 | 2.87/2.18 | .707/.658 | 17.96/16.71 | .813 | 20.65 | 7/8-20 |
| 14 | 1.391 | 35.33 | 1.516 | 38.51 | 1.215 | 30.86 | .113/.086 | 2.87/2.18 | .707/.658 | 17.96/16.71 | .937 | 23.80 | 1-20 |
| 16 | 1.516 | 38.51 | 1.641 | 41.68 | 1.215 | 30.86 | .113/.086 | 2.87/2.18 | .707/.658 | 17.96/16.71 | 1.061 | 26.95 | 1-1/8-18 |
| 18 | 1.641 | 41.68 | 1.766 | 44.86 | 1.215 | 30.86 | .113/.086 | 2.87/2.18 | .707/.658 | 17.96/16.71 | 1.186 | 30.12 | 1-1/4-18 |
| 20 | 1.828 | 46.43 | 1.954 | 49.63 | 1.275 | 32.39 | .148/.096 | 3.76/2.44 | .772/.721 | 19.61/18.31 | 1.311 | 33.30 | 1-3/8-18 |
| 22 | 1.954 | 49.63 | 2.078 | 52.78 | 1.275 | 32.39 | .148/.096 | 3.76/2.44 | .772/.721 | 19.61/18.31 | 1.436 | 36.47 | 1-1/2-18 |
| 24 | 2.078 | 52.78 | 2.203 | 55.96 | 1.275 | 32.39 | .148/.096 | 3.76/2.44 | .772/.721 | 19.61/18.31 | 1.561 | 39.65 | 1-5/8-18 |

MS3475
RFI Grounding Plug
AE775



Bayonet Coupling, Crimp Removable, Rear Release



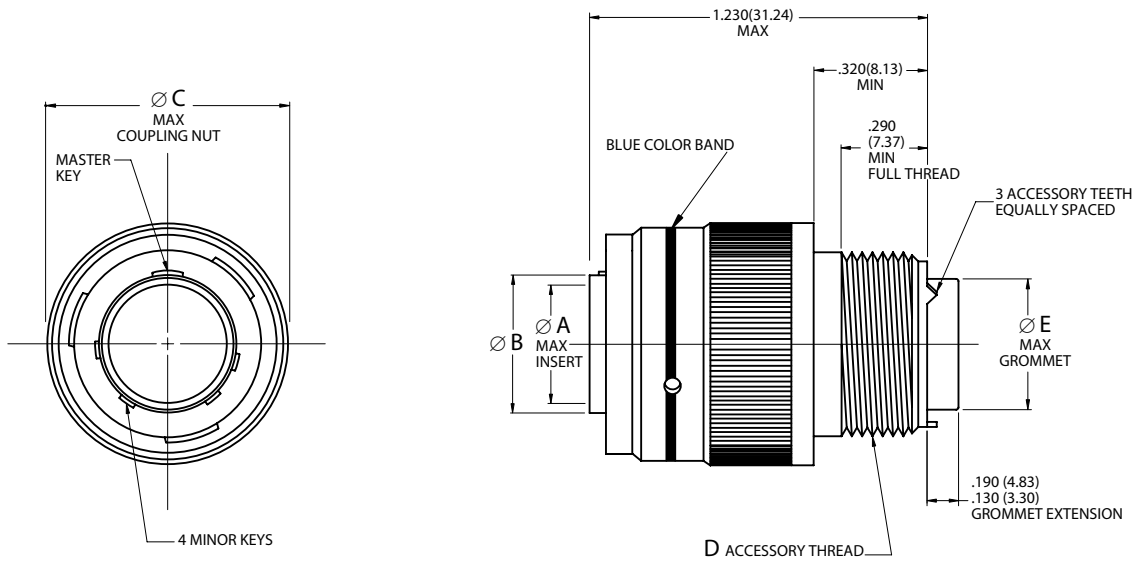
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| Shell Size | $\varnothing A$ Maximum | | $\varnothing B$ | | $\varnothing C$ Maximum | | D Accessory Thread Class 2A | $\varnothing E$ Maximum | |
|------------|-------------------------|-------|-----------------|-----------|-------------------------|-------|-----------------------------|-------------------------|-------|
| | inch | mm | $\pm .003$ | $\pm .08$ | inch | mm | | inch | mm |
| | | | inch | mm | | | | | |
| 8 | .285 | 7.24 | .355 | 9.02 | .782 | 19.86 | 1/2-20UNF | .305 | 7.75 |
| 10 | .402 | 10.21 | .483 | 12.27 | .926 | 23.52 | 5/8-24UNEF | .405 | 10.29 |
| 12 | .516 | 13.11 | .595 | 15.11 | 1.043 | 26.49 | 3/4-20UNEF | .531 | 13.49 |
| 14 | .641 | 16.28 | .720 | 18.29 | 1.183 | 30.05 | 7/8-20UNEF | .665 | 16.89 |
| 16 | .766 | 19.46 | .845 | 21.46 | 1.305 | 33.15 | 1-20UNEF | .790 | 20.07 |
| 18 | .855 | 21.72 | .945 | 24.00 | 1.391 | 35.33 | 1-1/16-18UNEF | .869 | 22.07 |
| 20 | .980 | 24.89 | 1.070 | 27.18 | 1.531 | 38.89 | 1-3/16-18UNEF | .994 | 25.25 |
| 22 | 1.105 | 28.07 | 1.195 | 30.35 | 1.656 | 42.06 | 1-5/16-18UNEF | 1.119 | 28.42 |
| 24 | 1.229 | 31.22 | 1.320 | 33.53 | 1.777 | 45.14 | 1-7/16-18UNEF | 1.244 | 31.60 |



Bayonet Coupling, Crimp Removable, Rear Release



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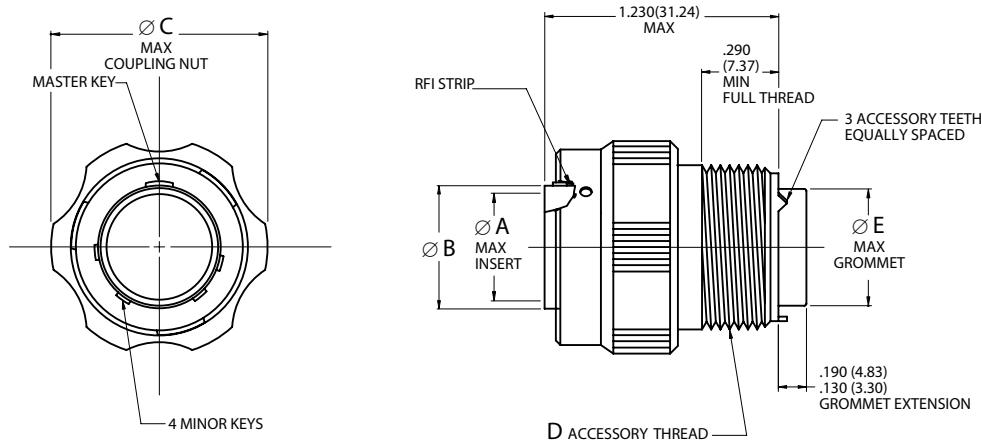
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| Shell Size | Ø A Maximum | | Ø B | | Ø C Maximum | | D Accessory Thread Class 2A | Ø E Maximum | |
|------------|-------------|-------|------------|---------|-------------|-------|-----------------------------|-------------|-------|
| | inch | mm | ±.003 inch | ±.08 mm | inch | mm | | inch | mm |
| 8 | .285 | 7.24 | .355 | 9.02 | .782 | 19.86 | 1/2-20UNF | .305 | 7.75 |
| 10 | .402 | 10.21 | .483 | 12.27 | .926 | 23.52 | 5/8-24UNEF | .405 | 10.29 |
| 12 | .516 | 13.11 | .595 | 15.11 | 1.043 | 26.49 | 3/4-20UNEF | .531 | 13.49 |
| 14 | .641 | 16.28 | .720 | 18.29 | 1.183 | 30.05 | 7/8-20UNEF | .665 | 16.89 |
| 16 | .766 | 19.46 | .845 | 21.46 | 1.305 | 33.15 | 1-20UNEF | .790 | 20.07 |
| 18 | .855 | 21.72 | .945 | 24.00 | 1.391 | 35.33 | 1-1/16-18UNEF | .869 | 22.07 |
| 20 | .980 | 24.89 | 1.070 | 27.18 | 1.531 | 38.89 | 1-3/16-18UNEF | .994 | 25.25 |
| 22 | 1.105 | 28.07 | 1.195 | 30.35 | 1.656 | 42.06 | 1-5/16-18UNEF | 1.119 | 28.42 |
| 24 | 1.229 | 31.22 | 1.320 | 33.53 | 1.777 | 45.14 | 1-7/16-18UNEF | 1.244 | 31.60 |

AC3475 Arctic Coupling Nut, RFI Plug



Bayonet Coupling, Crimp Removable, Rear Release



AC3475 - **10-7-P-N**

Aero Prefix — AC3475

Class (Material and Finish) — -

- = Aluminum shell, cadmium olive drab for the plug shell – aluminum shell, hard anodized, black plating for the coupling nut
 ZC = Aluminum shell, zinc cobalt finish
 L = Aluminum shell, electroless nickel

Shell Size
 8, 10, 12, 14, 16, 18, 20, 22 or 24

Polarization
 N = Normal (N included in part number marking)
 A, B, C, D, E or F (Alternate key positions)
 and W, X, Y or Z (Alternate insert clocking positions)

Contact Style
 P = Pin
 S = Socket

Layout
 See pages 125 and 126

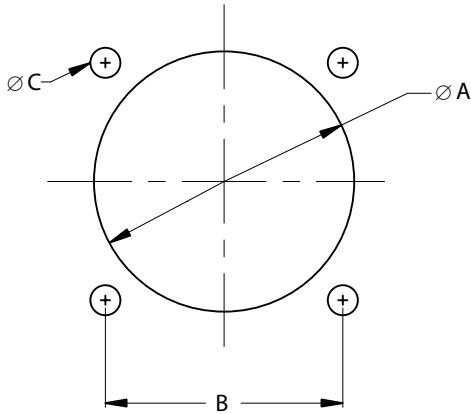
| | |
|----------------|---|
| Page 110 | Completed Part Number |
| Page 121 | Contacts, Sealing Plugs and Tools |
| Pages 125, 126 | Insert Arrangements |
| Page 109 | Performance Specifications |
| Pages 123, 124 | Insert Availability and Contact Information |
| Page 123 | Polarization |

Note: AC3475 Arctic Coupling Nut, RFI Plug is available to Aero-Electric part number only. Mating part is AC3474 which is same as AE774 on page 114. Additional mates are AC3470 (same as AE770 on page 111), AC3471 (same as AE771 on page 112) and AC3472 (same as AE772 on page 113).

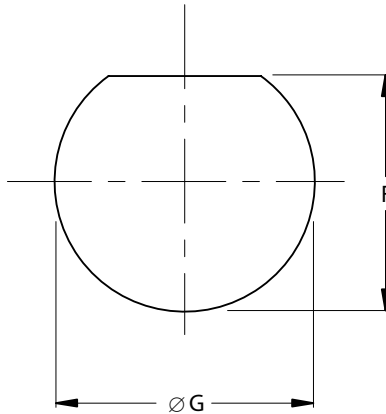
| Shell Size | Ø A | | Ø B | | Ø C | | D Accessory Thread Class 2A | Ø E | |
|------------|---------|-------|-------|-------|---------|-------|-----------------------------------|---------|-------|
| | Maximum | | ±.003 | ±.08 | Maximum | | | Maximum | |
| | inch | mm | inch | mm | inch | mm | | inch | mm |
| 8 | .285 | 7.24 | .355 | 9.02 | .900 | 22.86 | 1/2-20UNF | .305 | 7.75 |
| 10 | .402 | 10.21 | .483 | 12.27 | 1.010 | 25.65 | 5/8-24UNEF | .405 | 10.29 |
| 12 | .516 | 13.11 | .595 | 15.11 | 1.180 | 29.97 | 3/4-20UNEF | .531 | 13.49 |
| 14 | .641 | 16.28 | .720 | 18.29 | 1.310 | 33.27 | 7/8-20UNEF | .665 | 16.89 |
| 16 | .766 | 19.46 | .845 | 21.46 | 1.510 | 38.35 | 1-20UNEF | .790 | 20.07 |
| 18 | .855 | 21.72 | .945 | 24.00 | 1.620 | 41.15 | 1-1/16-18UNEF | .869 | 22.07 |
| 20 | .980 | 24.89 | 1.070 | 27.18 | 1.740 | 44.20 | 1-3/16-18UNEF | .994 | 25.25 |
| 22 | 1.105 | 28.07 | 1.195 | 30.35 | 1.850 | 46.99 | 1-5/16-18UNEF | 1.119 | 28.42 |
| 24 | 1.229 | 31.22 | 1.320 | 33.53 | 1.980 | 50.29 | 1-7/16-18UNEF | 1.244 | 31.60 |



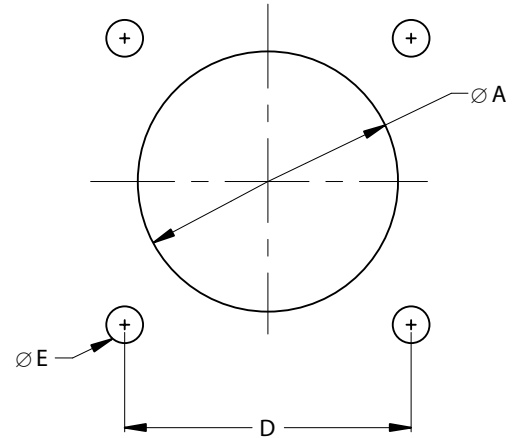
Panel Cutouts



MS3470(AE770)



MS3474(AE774)



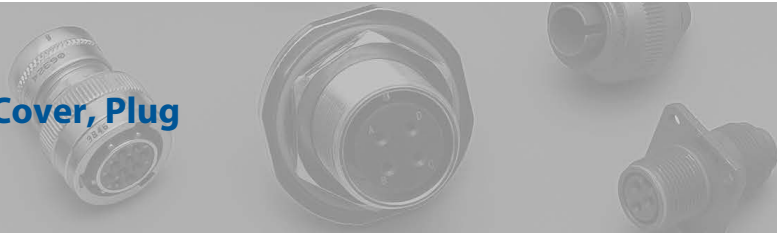
MS3472(AE772)

Flange and Jam Nut Mounting Dimensions

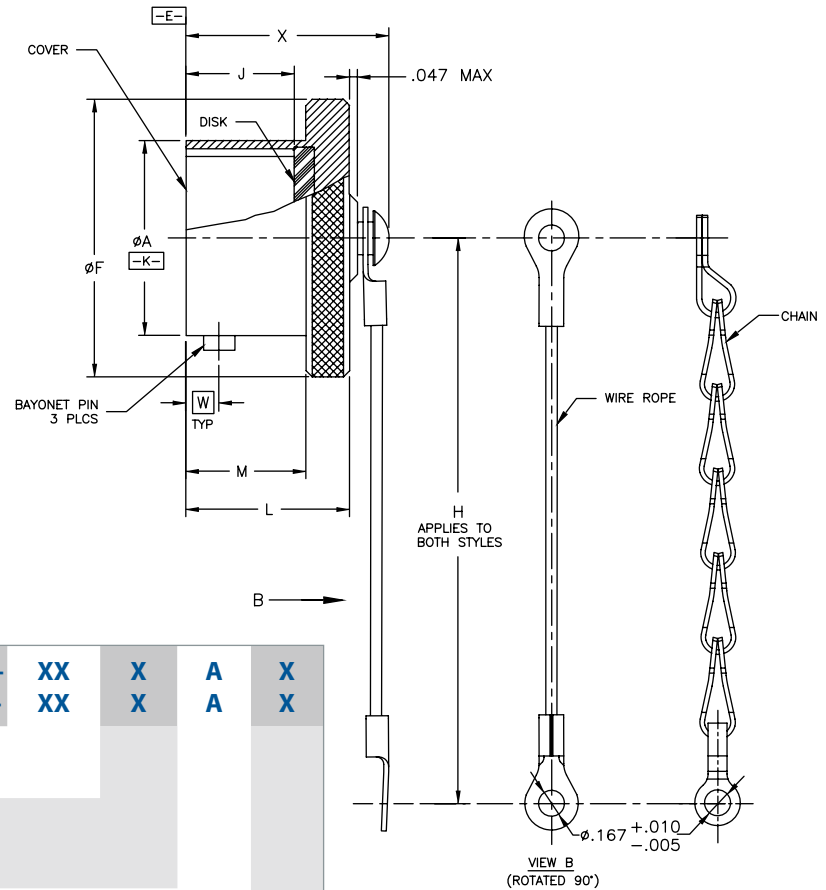
| Shell Size | Ø A | | B | | Ø C | | D | | Ø E | | F | | Ø G | |
|------------|-------|-------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|-------|
| | ±.005 | ±.13 | (TP) | | ±.010 | ±.25 | (TP) | | ±.010 | ±.25 | ±.005 | ±.13 | ±.005 | ±.13 |
| | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm |
| 8 | .568 | 14.43 | .594 | 15.09 | .120 | 3.05 | .734 | 18.64 | .150 | 3.81 | .536 | 13.61 | .572 | 14.53 |
| 10 | .685 | 17.40 | .719 | 18.26 | .120 | 3.05 | .812 | 20.62 | .150 | 3.81 | .661 | 16.79 | .697 | 17.70 |
| 12 | .864 | 21.95 | .812 | 20.62 | .120 | 3.05 | .938 | 23.83 | .150 | 3.81 | .824 | 20.93 | .895 | 22.73 |
| 14 | .989 | 25.12 | .906 | 23.01 | .120 | 3.05 | 1.031 | 26.19 | .150 | 3.81 | .948 | 24.08 | 1.010 | 25.65 |
| 16 | 1.113 | 28.27 | .969 | 24.61 | .120 | 3.05 | 1.125 | 28.58 | .150 | 3.81 | 1.072 | 27.23 | 1.135 | 28.83 |
| 18 | 1.238 | 31.45 | 1.062 | 26.97 | .120 | 3.05 | 1.203 | 30.56 | .150 | 3.81 | 1.197 | 30.40 | 1.260 | 32.00 |
| 20 | 1.363 | 34.62 | 1.156 | 29.36 | .120 | 3.05 | 1.297 | 32.94 | .150 | 3.81 | 1.322 | 33.58 | 1.385 | 35.18 |
| 22 | 1.488 | 37.80 | 1.250 | 31.75 | .120 | 3.05 | 1.375 | 34.93 | .150 | 3.81 | 1.447 | 36.75 | 1.510 | 38.35 |
| 24 | 1.615 | 41.02 | 1.375 | 34.93 | .147 | 3.73 | 1.500 | 38.10 | .150 | 3.81 | 1.572 | 39.93 | 1.635 | 41.53 |

Note: For Ø C and Ø E, MS3470 and MS3472 call out for tolerance of ±.010 (±.25), however we recommend ±.005 (±.13).

MS3180
Protective Cover, Plug
AE1580



Protective Cover, Plug



Part Number Configuration

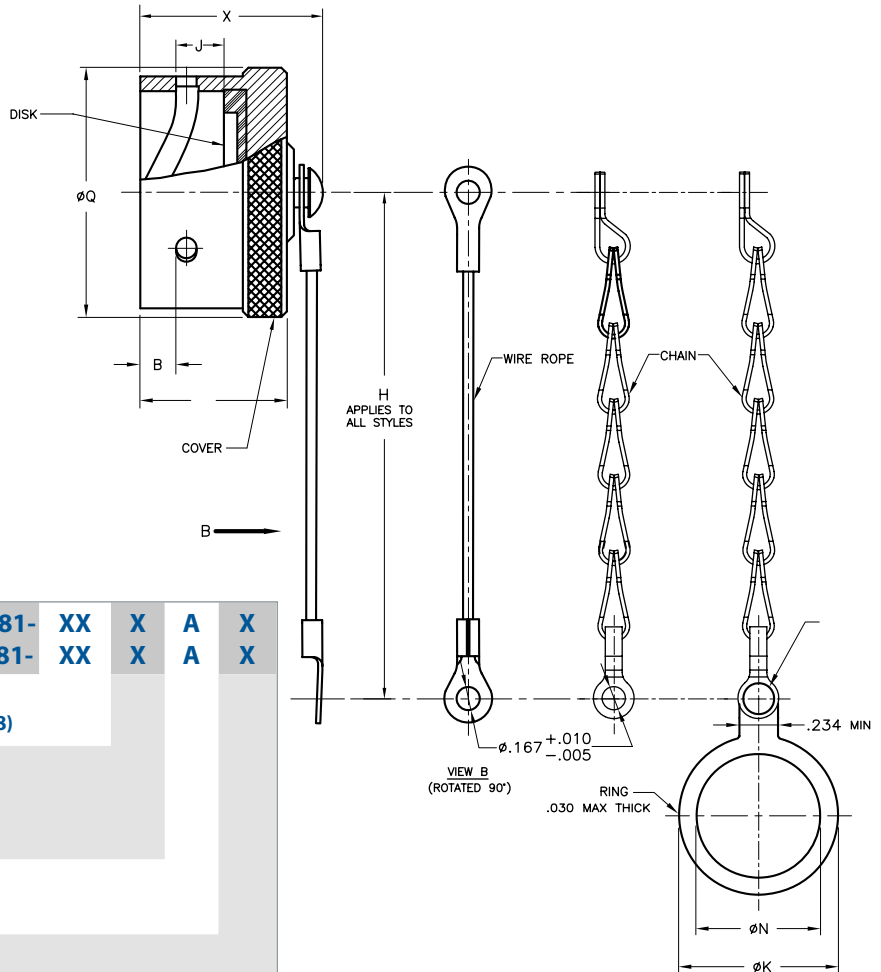
| | | | | | |
|-------------------------------|---|-----------|----------|----------|----------|
| MIL. Prefix | MS3180- | XX | X | A | X |
| Aero Prefix | AE1580- | XX | X | A | X |
| Shell Size | 8 THRU 24 (Note: single digit for shell size 8) | | | | |
| Style | C = Chain R = Wire Rope Assembly | | | | |
| Material Finish | A = Aluminum, Hard Black Anodized | | | | |
| Chain/Wire Rope Length | Blank - for standard length "H" L = 5.000 +500 -250 | | | | |

| SHELL SIZE | ØA +.001 -.005 | ØB +.006 -.002 | ØC +.000 -.016 | ØD +.005 -.001 | ØF MAX. | H +.500 -.250 | J +.010 -.020 | L Max. | M +.031 -.000 | ØQ +.005 -.006 | W | X MAX |
|------------|----------------------|----------------------|----------------------|----------------------|------------|---------------------|---------------------|-----------|---------------------|----------------------|------|----------|
| 8 | .473 | .078 | .563 | .362 | .719 | 3.000 | .328 | .562 | .368 | .412 | .100 | .781 |
| 10 | .590 | .078 | .680 | .490 | .844 | 3.000 | .328 | .562 | .368 | .540 | .100 | .781 |
| 12 | .750 | .078 | .859 | .607 | 1.000 | 3.500 | .328 | .562 | .368 | .689 | .100 | .781 |
| 14 | .875 | .078 | .984 | .732 | 1.125 | 3.500 | .328 | .562 | .368 | .814 | .100 | .781 |
| 16 | 1.000 | .078 | 1.108 | .857 | 1.250 | 3.500 | .328 | .562 | .368 | .939 | .100 | .781 |
| 18 | 1.125 | .078 | 1.233 | .962 | 1.375 | 3.500 | .328 | .562 | .368 | 1.039 | .100 | .781 |
| 20 | 1.250 | .078 | 1.358 | 1.087 | 1.500 | 4.000 | .390 | .625 | .430 | 1.164 | .100 | .844 |
| 22 | 1.375 | .078 | 1.483 | 1.212 | 1.625 | 4.000 | .390 | .625 | .430 | 1.289 | .100 | .844 |
| 24 | 1.500 | .078 | 1.610 | 1.337 | 1.750 | 4.000 | .390 | .625 | .430 | 1.414 | .109 | .875 |

26482 S 2



Protective Cover, Receptacle



Part Number Configuration

| | | | | | |
|------------------------------|---|-----------|----------|----------|----------|
| MIL. Prefix | MS3181- | XX | X | A | X |
| Aero Prefix | AE1581- | XX | X | A | X |
| Shell Size | 8 THRU 24 (Note: single digit for shell size 8) | | | | |
| Style | <ul style="list-style-type: none"> C = Chain R = Wire Rope Assembly N = Chain/Ring Assembly | | | | |
| Material Finish | A = Aluminum, Hard Black Anodized | | | | |
| Chain/Wire Rope Lengh | Blank - for standard length "H" L= 5.000 +500 -250 | | | | |

| SHELL SIZE | ØA +.001 -.005 | B +.006 -.002 | ØG +.005 -.006 | H +.500 -.250 | J +.010 -.020 | L Max. | ØN MIN. | ØQ +.005 -.006 | ØK MAX | X MAX |
|------------|----------------------|---------------------|----------------------|---------------------|---------------------|-----------|------------|----------------------|-----------|----------|
| 8 | .481 | .149 | .576 | 3.000 | .115 | .562 | .578 | .734 | .812 | .844 |
| 10 | .602 | .149 | .697 | 3.000 | .115 | .562 | .703 | .859 | 1.000 | .844 |
| 12 | .761 | .149 | .871 | 3.500 | .115 | .562 | .891 | 1.000 | 1.188 | .844 |
| 14 | .885 | .149 | .995 | 3.500 | .115 | .562 | 1.016 | 1.125 | 1.438 | .844 |
| 16 | 1.010 | .149 | 1.120 | 3.500 | .115 | .562 | 1.141 | 1.250 | 1.562 | .844 |
| 18 | 1.136 | .149 | 1.245 | 3.500 | .115 | .562 | 1.266 | 1.375 | 1.688 | .844 |
| 20 | 1.260 | .149 | 1.370 | 4.000 | .115 | .562 | 1.391 | 1.500 | 1.812 | .844 |
| 22 | 1.385 | .149 | 1.495 | 4.000 | .115 | .562 | 1.516 | 1.625 | 1.938 | .844 |
| 24 | 1.510 | .087 | 1.624 | 4.000 | .147 | .602 | 1.641 | 1.750 | 2.062 | .875 |

26482 S 2

MIL-DTL-26482

**Contacts, Tools and Seal Plugs
Series 2**



Contacts, Plastic Insertion/Removal Tools and Seal Plugs

| Contact Size | Application | Pin Contacts | Socket Contacts | Seal Plugs | Insertion/Removal Tools |
|--------------|--------------|---------------|-----------------|--------------|-------------------------|
| | Type | Military No. | Military No. | Military No. | Military No. |
| 20 | Power/Signal | M39029/4-110 | M39029/5-115 | MS27488-20-1 | M81969/14-11 |
| 16 | Power/Signal | M39029/4-111 | M39029/5-116 | MS27488-16-1 | M81969/14-03 |
| 12 | Power/Signal | M39029/4-113 | M39029/5-118 | MS27488-12-1 | M81969/14-04 |
| 20* | Power/Signal | 5291-022-204H | 5091-022-204H | MS27488-20-1 | M81969/39-01 |

* Size 20 contacts for 8-2, 8-3 and 8-4 layouts are only available to Aero-Electric part numbers. Connectors incorporating these three layouts are only sold to Aero-Electric callouts (AE770, AE771, AE772, AE774, AE775, AE776, AC3470, AC3471, AC3472, AC3474 and AC3475). Standard size 20 contacts M39029/4-110 and M39029/5-115 will not work in these 3 layouts.

Crimping and Metal Insertion/Extraction Tools

| Contact Size | Crimp Tool | Positioner | Positioner | Insertion Tool | Extraction Tool |
|--------------|--------------|----------------------------------|-------------------------------------|-----------------------|-----------------------|
| | Military No. | For Pin Contacts Military No. | For Socket Contacts Military No. | Metal Military No. | Metal Military No. |
| 20 | M22520/1-01 | M22520/1-02 | M22520/1-02 | M81969/8-205 | M81969/8-206 |
| | M22520/2-01 | M22520/2-02 | M22520/2-02 | | |
| 16 | M22520/1-01 | M22520/1-02 | M22520/1-02 | M81969/8-207 | M81969/8-208 |
| 12 | M22520/1-01 | M22520/1-02 | M22520/1-02 | M81969/8-209 | M81969/8-210 |
| 20* | M22520/2-01 | M22520/2-08 | M22520/2-08 | M81969/8-205 | M81969/8-206 |

Contact and Wire Data

| Contact Size | Test Current | Voltage | Crimp Well Data | | | Wire Range | | Finished Wire Ø Range | | | |
|--------------|--------------|------------|-----------------|-------------------|------|------------|-----------------|-----------------------|------|---------|------|
| | DC Test | Max. Drop | Well Dia. | Minimum Well Dept | | AWG | mm ² | Minimum | | Maximum | |
| | Amps | Millivolts | inch | inch | mm | | | inch | mm | inch | mm |
| 20 | 7.5 | 55 | .049 ±.001 | .155 | 3.94 | 24-20 | .20-.52 | .040 | 1.02 | .083 | 2.11 |
| 16 | 13.0 | 49 | .067 ±.001 | .250 | 6.35 | 20-16 | .52-1.31 | .053 | 1.35 | .103 | 2.62 |
| 12 | 23.0 | 42 | .100 ±.002 | .250 | 6.35 | 14-12 | 2.08-3.31 | .097 | 2.46 | .158 | 4.01 |

Note: Test Current and Maximum Voltage Drop when tested with silver-plated wire at 25°C.

26482 S 2



MIL-DTL-26482
Contact Installation Instructions
Series 2

Contact Installation Instructions

Crimping Contacts

1. Select the appropriate crimp tool and ensure that the proper crimp head positioner is used.
2. Cycle the tool to be sure the indentors are open.
3. Determine the correct selector setting for the wire size from the data plate on the positioner (turret head assembly) and set the selector knob on the crimp tool to match.
4. Place the contact, mating end first, into the tool.
5. Insert the stripped wire into the hollow end of the contact. Be sure the wire is inserted as far as it will go.
6. Close the tool completely to crimp. Unless the tool is closed completely, the tool will not release the contact.
7. Remove the crimped contact from the tool. Check the inspection hole to verify that the wire is fully inserted.

Insertion of Contacts

1. Before inserting the contacts, unscrew the accessories (clamps, backshells or adapters) from rear of plug or receptacle. Slide the hardware over the wire bundle in the proper order for reassembly after all the contacts are inserted.
2. To assist insertion of contacts, lubricate insulator (grommet) cavities with isopropyl alcohol. Alcohol will evaporate and will not leave a conductive film. **Caution: Never use any lubricant other than isopropyl alcohol.**

3. Place the correct insertion tool on the contact so that the wire runs along the groove in the tool. (Tool tip will butt against the shoulder.) Hold the plug or receptacle body firmly.
4. Beginning with a center cavity, insert the contact into the insulator with a slow, even pressure until the contact snaps into position. Make sure the contact and tool are held perpendicular to the face of the insert during the contact installation or the grommet could be damaged.
 - 4.1 If contacts are not inserted all the way prior to removing insertion tool, do not try to reinsert the insertion tool. Instead, remove the contact and try again; otherwise reinserting the insertion tool may damage the inside of the contact cavity.
5. Remove tool and check the face of the connector for proper contact installation. Proper installation may also be checked by pulling back lightly on the wire to make sure the contact is properly seated.

Completion

After all the cavities have been filled, slide the hardware back into position on the connector and tighten.

Extraction of Contacts (Rework)

1. Slide the hardware back over the wire bundle.
2. Select the appropriate tool. Place the wire into the extraction tool of the pin or socket.
3. Slowly slide the extraction tool down wire into the contact cavities until the tool tip bottoms against the contact shoulder, expanding the clip retaining tines. Hold the wire firmly in the tool and pull the wired contact and tool straight out of the rear of the insulator.

| Size | Pin Contact | Socket Contact | Basic Crimp Tool | Pin Positioner | Socket Positioner | Insertion/Removal Tool |
|------|---------------|----------------|------------------|--------------------|--------------------|------------------------|
| 20 | M39029/4-110 | M39029/5-115 | M22520/1-01 | M22520/1-02 Red | M22520/1-02 Red | M81969/14-11 |
| | | | M22520/2-01 | M22520/2-02 | M22520/2-02 | |
| 16 | M39029/4-111 | M39029/5-116 | M22520/1-01 | M22520/1-02 Blue | M22520/1-02 Blue | M81969/14-03 |
| 12 | M39029/4-113 | M39029/5-118 | M22520/1-01 | M22520/1-02 Yellow | M22520/1-02 Yellow | M81969/14-04 |
| 20* | 5291-022-204H | 5091-022-204H | M22520/2-01 | M22520/2-08 | M22520/2-08 | M81969/39-01 |

* Aero-Electric proprietary size 20 contacts used in 8-2, 8-3 and 8-4 layouts only.

MIL-DTL-26482 Series 2

Polarization, Insert Availability & Contact Information

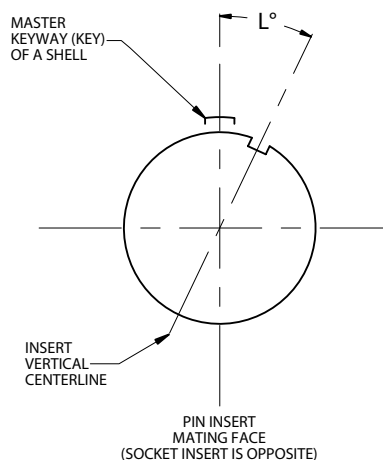
per MIL-STD-1669



Polarization (Insert Clocking)

1. In the normal insert clocking position (position N), the insert centerline coincides with the centerline of the master keyway (key) of the shell: $L = 0^\circ$.
2. In the alternate clocking positions (W, X, Y and Z), the pin insert (viewing from mating side) is rotated clockwise relative to the centerline of the master keyway (key) of the shell.
3. The socket insert is rotated counter-clockwise.
4. Plugs have keys; receptacles have keyways.

Note: Be careful with alternate positions. See table below for position availability on layouts of interest.



Insert Availability, Contact Information and Clocking Positions

| Insert Arrangement | Aero-Electric | | Total | Contact Quantity | | | Service | Insert Positions | | | | |
|--------------------|---------------|--------|----------|------------------|----|----|---------|------------------|----|-----|-----|-----|
| | Status | | No. of | By Size | | | Rating | In Degrees | | | | |
| | QPL'd | Tooled | Contacts | 20 | 16 | 12 | | N | W | X | Y | Z |
| 8-2* | No | Yes | 2 | 2 | | | I | 0 | 58 | 122 | — | — |
| 8-3* | No | Yes | 3 | 3 | | | I | 0 | 60 | 210 | — | — |
| 8-4* | No | Yes | 4 | 4 | | | I | 0 | 45 | — | — | — |
| 8-33 | Yes | Yes | 3 | 3 | | | I | 0 | 90 | — | — | — |
| 8-98 | Yes | Yes | 3 | 3 | | | I | 0 | — | — | — | — |
| 10-6 | Yes | Yes | 6 | 6 | | | I | 0 | 90 | — | — | — |
| 10-7** | N/A | Yes | 7 | 7 | | | I | 0 | 90 | — | — | — |
| 12-3 | Yes | Yes | 3 | | 3 | | II | 0 | — | — | 180 | — |
| 12-8 | Yes | Yes | 8 | 8 | | | I | 0 | 90 | 112 | 203 | 292 |
| 12-10 | Yes | Yes | 10 | 10 | | | I | 0 | 60 | 155 | 270 | 295 |
| 14-2** | N/A | Yes | 2 | | | 2 | I | 0 | — | — | — | — |
| 14-4 | Yes | Yes | 4 | | | 4 | I | 0 | 45 | — | — | — |
| 14-5 | Yes | Yes | 5 | | 5 | | II | 0 | 40 | 92 | 184 | 273 |
| 14-9 | Yes | Yes | 9 | 5 | | 4 | I | 0 | 15 | 90 | 180 | 240 |
| 14-12 | Yes | Yes | 12 | 8 | 4 | | I | 0 | 43 | 90 | — | — |
| 14-15 | Yes | Yes | 15 | 14 | 1 | | I | 0 | 17 | 110 | 155 | 234 |
| 14-18 | Yes | Yes | 18 | 18 | | | I | 0 | 15 | 90 | 180 | 270 |
| 14-19 | Yes | Yes | 19 | 19 | | | I | 0 | 30 | 165 | 315 | — |

* Not qualified to MIL-DTL-26482 Series 2. These layouts were designed to mate with solder Series 1 connectors using proprietary Aero-Electric contacts (not QPL'd to M39029) and to avoid confusion are sold only "with contacts".

** Non MIL-STD-1669 layouts, available to Aero-Electric part numbers only and utilize standard M39029 contacts. These layouts were originally designed for use in AC3475 Arctic Coupling RFI plugs and AC3474 jam nut receptacles.

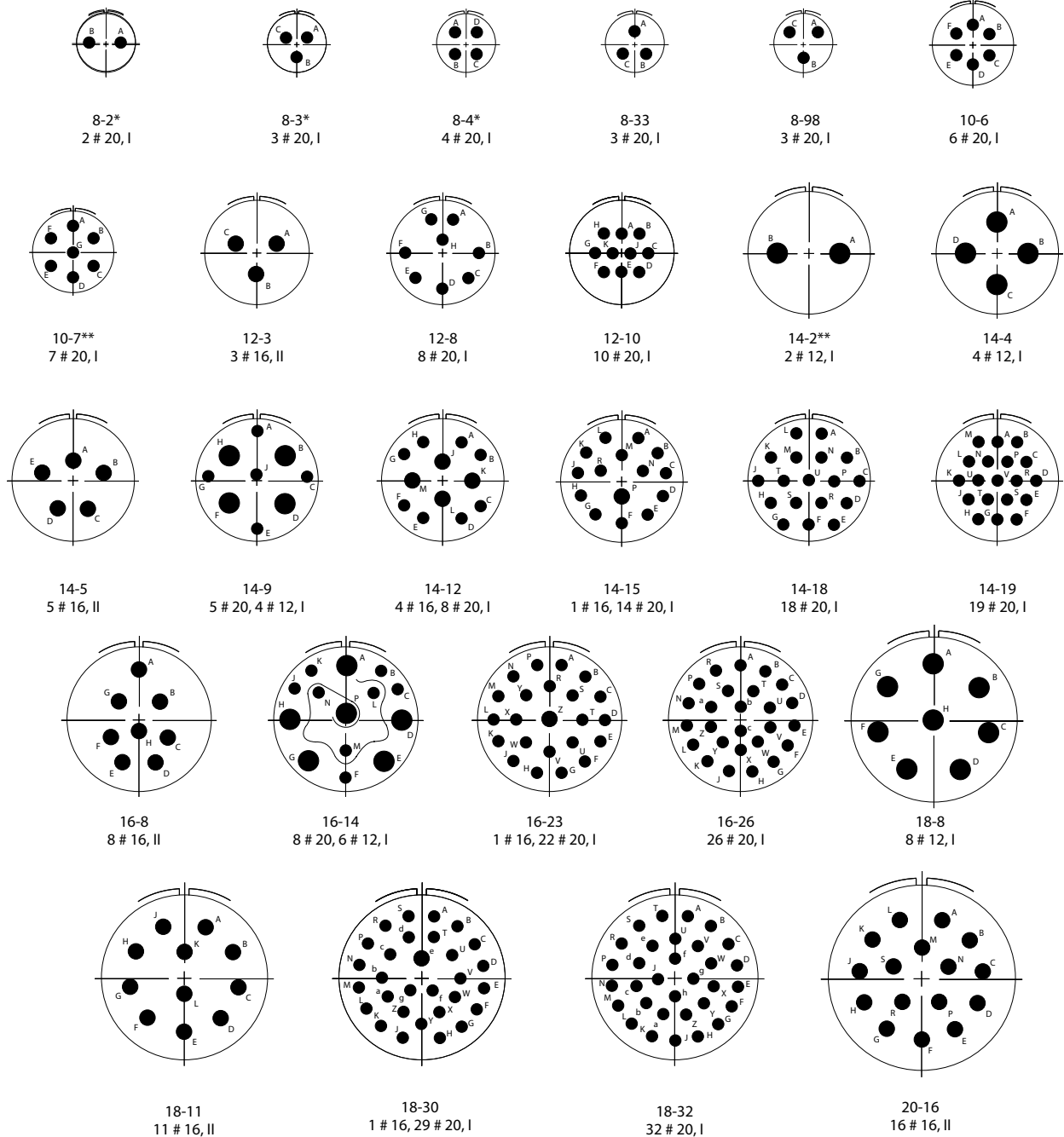


Insert Availability, Contact Information and Clocking Positions

| Insert Arrangement | Aero-Electric | | Total | Contact Quantity | | | Service | Insert Positions | | | | |
|--------------------|---------------|--------|----------|------------------|----|----|---------|------------------|-----|-----|-----|-----|
| | Status | | No. of | By Size | | | | In Degrees | | | | |
| | QPL'd | Tooled | Contacts | 20 | 16 | 12 | Rating | N | W | X | Y | Z |
| 16-8 | Yes | Yes | 8 | | 8 | | II | 0 | 54 | 152 | 180 | 331 |
| 16-14 | Yes | Yes | 14 | 8 | | 6 | I | 0 | 25 | 78 | 180 | 240 |
| 16-23 | Yes | Yes | 23 | 22 | 1 | | I | 0 | 158 | 270 | — | — |
| 16-26 | Yes | Yes | 26 | 26 | | | I | 0 | 60 | — | 275 | 338 |
| 18-8 | Yes | Yes | 8 | | | 8 | I | 0 | 180 | — | — | — |
| 18-11 | Yes | Yes | 11 | | 11 | | II | 0 | 62 | 119 | 241 | 340 |
| 18-30 | Yes | Yes | 30 | 29 | 1 | | I | 0 | 180 | 193 | 285 | 350 |
| 18-32 | Yes | Yes | 32 | 32 | | | I | 0 | 85 | 138 | 222 | 265 |
| 20-16 | Yes | Yes | 16 | | 16 | | II | 0 | 238 | 318 | 333 | 347 |
| 20-24 | Yes | Yes | 24 | 24 | | | I | 0 | 70 | 145 | 215 | 290 |
| 20-39 | Yes | Yes | 39 | 37 | 2 | | I | 0 | 63 | 144 | 252 | 333 |
| 20-41 | Yes | Yes | 41 | 41 | | | I | 0 | 45 | 126 | 225 | — |
| 22-12 | Yes | Yes | 12 | | | 12 | I | 0 | — | — | — | — |
| 22-21 | Yes | Yes | 21 | | 21 | | II | 0 | 16 | 135 | 175 | 349 |
| 22-41 | Yes | Yes | 41 | 27 | 14 | | I | 0 | 39 | 135 | 264 | — |
| 22-55 | Yes | Yes | 55 | 55 | | | I | 0 | 30 | 142 | 226 | 314 |
| 22-95 | Yes | Yes | 32 | 26 | | 6 | I | 0 | 26 | 180 | 266 | — |
| 24-19 | Yes | No | 19 | | | 19 | II | 0 | 30 | 165 | 315 | — |
| 24-31 | Yes | Yes | 31 | | 31 | | I | 0 | 90 | 225 | 255 | — |
| 24-61 | Yes | Yes | 61 | 61 | | | I | 0 | 90 | 180 | 270 | 324 |

26482 S 2

Insert Arrangement Views

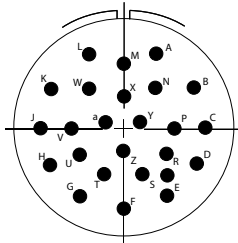


26482 S 2

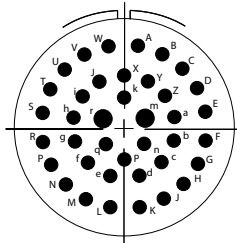
* Not on QPL, available to Aero-Electric part number only.

** Non MIL-STD-1669 layout, available in AC3470 through AC3475 shell styles only.

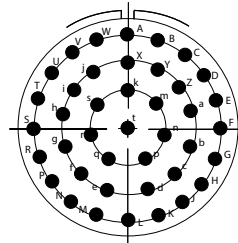
Insert Arrangement Views



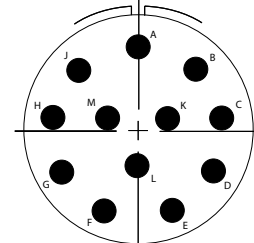
20-24
24 # 20, I



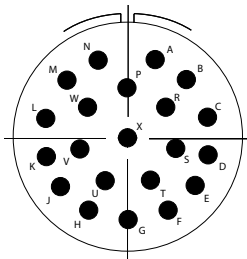
20-39
2 # 16, 37 # 20, I



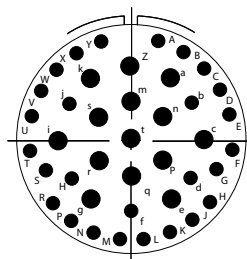
20-41
41 # 20, I



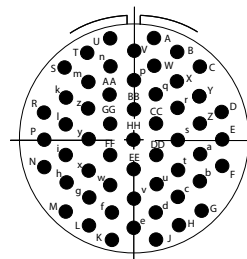
22-12
12 # 12, I



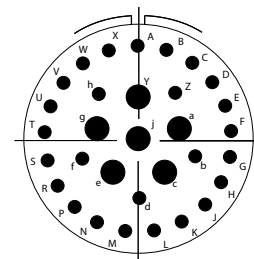
22-21
21 # 16, II



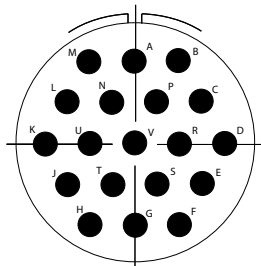
22-41
14 # 16, 27 # 20, I



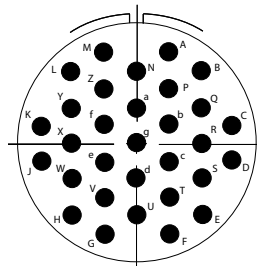
22-55
55 # 20, I



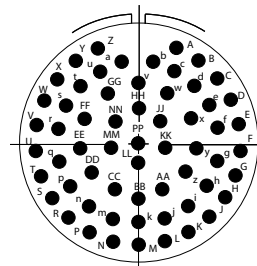
22-95
6 # 12, 26 # 20, I



24-19
19 # 12, II



24-31
31 # 16, I



24-61
61 # 20, I

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