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ABOUT AMPHENOL AEROSPACE:

Amphenol Aerospace, a Division of Amphenol Corporation, is one of the largest manufacturers of interconnect products in the world for the Military, Commercial Aerospace and Industrial markets. Amphenol designs, manufactures and markets circular and rectangular, electronic, fiber optic, EMI/EMP filter, and a variety of special applications connectors and interconnect systems.

Our 675,000 square foot facility is nestled at the foothills of the Catskill Mountains in Sidney NY. The Amphenol complex houses state-of-the-art manufacturing technologies including CNC machining, die-casting, molding, impact and extruding, plating, screw machining and process controls. Our fully equipped material evaluation lab and engineering organization utilize the latest in computer aided design software and analysis tools, allowing us to design, test, and qualify advanced interconnect systems.

Amphenol's interconnect products are supplied to thousands of OEMs worldwide and are supported by our worldwide sales and engineering force, including the largest global network of electronic distributors.



Amphenol Aerospace, Amphenol Commercial Air and Amphenol Industrial Operations Main Facility in Sidney, N.Y. USA



Amphenol Canada Corp. (ACC) facility in Toronto, ON

Offers a comprehensive range of filtered and rectangular connector products for commercial, military and aerospace applications.



Amphenol Backplane Systems (ABS) facility in Nashua, NH

Houses the manufacturing, design and engineering of backplane systems.



Amphenol Printed Circuits, (APC) facility in Nashua, NH

Manufactures, designs and engineers flex circuit products and printed circuit boards.



Amphenol facility in Nogales, Mexico

Houses the manufacture of several industrial and aerospace product lines.



Amphenol Nexus Technologies in Stamford, CT

Designs and manufactures audio connectors for military, aviation, medical, telecommunications, auto racing, power boats & farm equipment.



Amphenol Borisch in Grand Rapids, MI

A full service electronics manufacturer specializing in defense contractors with wiring harnesses, circuit boards and other electrical hardware.

AMPHENOL AEROSPACE'S PHILOSOPHY

As a basic business philosophy, Amphenol Aerospace is dedicated to concentrating on those advanced and challenging market segments that demand an extraordinary level of supplier support and reaction. Our approach to implement this strategy is based on the following key principles:

FOCUS: Concentrate all resources on serving a limited number of tightly defined markets, and understanding the needs of those markets.

INNOVATION: Provide these markets new, creative solutions in both products and services.

RESPONSIVENESS: Identify and respond to the market and product needs more rapidly than any other supplier.

QUALITY ASSURANCE:

Amphenol Aerospace has been awarded both AS9100 - Revision B and ISO9001:2000 Quality Assurance Certifications.

Performance is the sum of these principles. It is the measure of how well we continually and consistently implement our basic strategy and key principles.

2M Micro-Miniature Connectors

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- 71% in weight savings compared to MIL-DTL-38999
- 52% smaller than MIL-DTL-38999
- Broad family with many styles and options
- Designed for high-reliability aerospace/defense/C4I applications
- For use in harshest environments



HD38999 High Density Connectors

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| HD38999 Ordering Guide | 127 |
| General Information | 128 |
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- 30% to 50% more contact density than the highest density Mil-Spec 38999 connector of its size.
- Designed to utilize Mil-Spec 38999 components with the exception of contacts and insert arrangements
- Available in Metal, composite, sealed & filtered versions, hermetic and custom versions



Micro-D Micro Miniature Rectangular

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- Small rectangular interconnect with reduced space requirement and reduced weight compared to other rectangulars
- Exceed the requirements of the US military standard M83513



Terrapin Connectors

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| Part #, Keyway, Perform, Insert | 206-208 |
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- Miniature Circular interconnects with push-pull termination
- Designed for harsh environments; used extensively in soldier communication applications



Nexus Connectors

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| TAC Connectors | 229 |
| Watertight Breakaway | 230 |
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- Designed and manufactured to the exacting specifications of MIL-DTL-55116
- Half the size of standard 38999 connectors



HD SIM Rectangular Connectors

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| EN4165/SIM High Density | 232 |

- Modular interconnects that are lightweight, compact, with easy push-pull termination
- Available in shielded or non-shielded versions
- 7 keying positions
- Filtered with EN4165/SIM Modules





Micro-Miniature Comparison Chart

Circular Interconnects

| Shell Size | ZM801 Page 32-49 | | | ZM803 Page 50-62 | | | ZM804 Page 63-85 | | | ZM805 Page 86-102 | | | Terrapin Page 201-225 | | | TAC Page 226-229 | | | HD38999 Page 123-132 | | |
|------------|---------------------|----------------|----------------|---------------------|------------|------------------|---------------------|---------------------|------------|----------------------|-------------------|---------------------|--------------------------|------------------|-------------------|---------------------|------------|------------------|-------------------------|---------------------|-----------------|
| | Jam Nut Max O.D. | Nut O.D. (-16) | Nut O.D. (-26) | Max No. of Contacts | Shell Size | Jam Nut Max O.D. | Coupling Nut O.D. | Max No. of Contacts | Shell Size | Jam Nut Max O.D. | Coupling Nut O.D. | Max No. of Contacts | Shell Size | Jam Nut Max O.D. | Coupling Nut O.D. | Max No. of Contacts | Shell Size | Jam Nut Max O.D. | Coupling Nut O.D. | Max No. of Contacts | |
| 5 | 0.575 | 0.540 | 0.640 | 3 | 5 | 0.575 | 0.500 | 3 | | | | | | | | | | | | | |
| 6 | 0.635 | 0.600 | 0.700 | 7 | 6 | 0.635 | 0.565 | 7 | | | | | | | | | | | | | |
| 7 | 0.755 | 0.680 | 0.780 | 10 | 7 | 0.755 | 0.650 | 10 | | | | | | | | | | | | | |
| 8 | 0.755 | 0.750 | 0.850 | 13 | 8 | 0.755 | 0.750 | 13 | 5 | 0.775 | 0.427 | 3 | 6 | 0.750 | 0.550 | 7 | 6 | 0.750 | 0.534 | 10 | (Spring-loaded) |
| 9 | 0.830 | 0.810 | 0.910 | 19 | 9 | 0.830 | 0.790 | 19 | 6 | 0.830 | 0.495 | 7 | 8 | 0.760 | 0.691 | 7 | | | | | |
| 10 | 0.890 | 0.880 | 0.980 | 26 | 10 | 0.890 | 0.875 | 26 | 9 | 0.880 | 0.787 | 10 | 9 | 0.880 | 0.826 | 13 | 7 | 0.895 | 0.630 | 14 | |
| 11 | | | | | | | | | 7 | 0.910 | 0.575 | 10 | 10 | 0.880 | 0.826 | 13 | 8 | 0.930 | 0.705 | 19 | |
| 12 | | | | | | | | | 8 | 0.955 | 0.614 | 13 | 11 | 0.965 | 0.916 | 19 | 9 | 1.005 | 0.780 | 26 | |
| 13 | 1.078 | 1.050 | 1.150 | 37 | 12 | 1.078 | 0.944 | 37 | 9 | 1.000 | 0.670 | 19 | 12 | 1.060 | 0.982 | 26 | 10 | 1.080 | 0.855 | 37 | |
| 14 | | | | | | | | | 10 | 1.085 | 0.745 | 26 | 15 | 1.203 | 1.097 | 37 | 11 | | | | |
| 15 | | | | | | | | | 12 | 1.180 | 0.865 | 37 | 18 | 1.389 | 1.290 | 55 | 12 | | | | |
| 16 | 1.264 | 1.240 | 1.340 | 55 | 14 | 1.264 | 1.095 | 55 | 14 | 1.370 | 0.985 | 55 | 19 | 1.450 | 1.310 | 85 | 15 | 1.080 | 0.855 | 37 | |
| 17 | 1.325 | 1.300 | 1.400 | 85 | | | | | 15 | 1.450 | 1.105 | 85 | 23 | 1.705 | 1.562 | 130 | 16 | | | | |
| 18 | | | | | | | | | 15 | 1.450 | 1.105 | 85 | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | |
| 21 | 1.625 | 1.550 | 1.650 | 130 | | | | | 23 | 1.705 | 1.562 | 130 | | | | | 17 | 1.630 | 1.391 | 73 | |
| 22 | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | | | | | | | | |

Smallest

Smallest to largest by Jam Nut Size

Largest

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

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**2M801 PC Board
2M801 Hermetic Recept**



**2M803 PC Board Recept
2M803 Hermetic Recept**

2M803 Protection



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Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

Micro-D

Terrapin

Nexus





| SERIES | 2M801 | 2M803 | 2M804 | 2M805 |
|-------------------------------|--|---|--|---|
| PAGES | Page 34-51 | Pages 52-64 | Pages 65-87 | Pages 88-104 |
| TYPE | Dual-Start ACME Thread | Bayonet | Push-Pull | Tri-Start ACME Thread |
| DESCRIPTION | More rugged keys and threads. Faster mating. | Quick-mating, light duty, general purpose. Not rated for immersion, 50 milliohms shell-to-shell resistance. | Breakaway connector for headsets and tactical equipment. Gold-plated spring for long mating life and superior EMI shielding. | "Anti-Decoupling" ratchet mechanism and ground spring for military airframes and avionics boxes. Fast mating. |
| CONTACTS | 1 to 130 | 1 to 55 | 1 to 85 | 1 to 130 |
| COUPLING | Threaded Coupling with 1 1/2 Turns to Full Mate | 1/4 turn lock Bayonet | Push, Pull Quick-Disconnect | Tri-Start Thread |
| WATER IMMERSION, MATED | MIL-STD-810 Method 512 1 Meter for 1 Hour | Splashproof | MIL-STD-810 Method 512 1 Meter for 1 Hour | MIL-STD-810 Method 512 1 Meter for 1 Hour |
| EMI SHIELDING Ref. page 25 | Good | Fair | Very Good | Excellent |
| VIBRATION AND SHOCK | 37 g's Random Vibration; 300 g's Shock | 37 g's Random Vibration; 300 g's Shock | 37 g's Random Vibration; 300 g's Shock | 37 g's Random Vibration; 300 g's Shock |
| MATING CYCLES | 2000 Cycles | 250 Cycles Aluminum 2000 Cycles Stainless Steel | 2000 Cycles | 500 Cycles |
| ELECTRICAL PERFORMANCE | #12: 23 AMP, 1800 VAC #16: 13 AMP, 1800 VAC #20: 7.5 AMP, 750 VAC #23: 5 AMP, 500 VAC | #12: 23 AMP, 1800 VAC #16: 13 AMP, 1800 VAC #20: 7.5 AMP, 750 VAC #23: 5 AMP, 500 VAC | #12: 23 AMP, 1800 VAC #16: 13 AMP, 1800 VAC #20: 7.5 AMP, 750 VAC #23: 5 AMP, 500 VAC | #12: 23 AMP, 1800 VAC #16: 13 AMP, 1800 VAC #20: 7.5 AMP, 750 VAC #23: 5 AMP, 500 VAC |
| FILTERED | See page 105 and 106 | See page 105 and 106 | See page 105 and 106 | See page 105 and 106 |

- Contacts & Tools
- 2M Specs
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- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

Crimp Contacts

| Contact Size | Type | AMPS | Wire Size AWG | Part Number | Color Band | | |
|--------------|--------|------|---------------|---------------|------------|-------|--------|
| | | | | | 1st | 2nd | 3rd |
| #23 | Pin | 5 | #22-#28 | 2M809-001 | N/A | N/A | N/A |
| | Pin | | #26-#30 | 2M809-042* | Blue | N/A | N/A |
| | Socket | | #22-#28 | 2M809-002 | N/A | N/A | N/A |
| | Socket | | #26-#30 | 2M809-043* | Blue | N/A | N/A |
| #20HD | Pin | 7.5 | #20-#24 | 2M809-204 | N/A | N/A | N/A |
| | Socket | | #20-#24 | 2M809-205 | N/A | N/A | N/A |
| #20 | Pin | 7.5 | #20-#24 | M39029/58-363 | Orange | Blue | Orange |
| | Socket | | #20-#24 | M39029/57-357 | Orange | Green | Violet |
| #16 | Pin | 13 | #16-#20 | M39029/58-364 | Orange | Blue | Orange |
| | Socket | | #16-#20 | M39029/57-358 | Orange | Green | Gray |
| #12 | Pin | 23 | #12-#14 | M39029/58-365 | Orange | Blue | Green |
| | Socket | | #12-#14 | M39029/57-359 | Orange | Green | White |



*Special order please consult Amphenol-Aerospace for information.

Contact Tools

| Contact Size | Tooling Part Numbers | | |
|--------------|----------------------|-------------|------------------------------------|
| | Crimper | Positioner | Insertion/ Removal Number |
| #23 | M22520/2-01 | 2M809-005 | DAK225-22 (Daniels Insertion Only) |
| | | | 2M809-23R (Removal only) |
| #20HD | M22520/2-01 | 2M809-206 | 2M809-20HDR (Removal only) |
| #20 | M22520/1-01 | M22520/1-04 | M81969/14-10 |
| #16 | M22520/1-01 | M22520/1-04 | M81969/14-03 |
| #12 | M22520/1-01 | M22520/1-04 | M81969/14-04 |

Crimp Tensile Strength

| Contact Size | Wire Gage | Silver or Tin Coated Copper Wire | Nickel Coated Copper Wire |
|--------------|-----------|----------------------------------|---------------------------|
| #23, #20HD | #22 | 12 | 8 |
| #23, #20HD | #24 | 8 | 6 |
| #23 | #26 | 5 | 3 |
| #23 | #28 | 3 | 2 |
| #23 | #30 | 1.5 | 1.5 |

Tensile Strength for size #23 and #20HD only

Values represent minimums and are in pounds

Series 2M Torque Values

SERIES 2M801, 2M803, 2M805 RECOMMENDED TORQUE VALUES

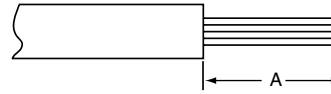
| Shell Size Series 2M801, 2M803 | Shell Size Series 2M805 | Coupling Torque | | | | Jam Nut Tightening | | | | Backshell Tightening | | | |
|--------------------------------|-------------------------|-----------------|------|------|------|--------------------|------|------|------|----------------------|------|------|------|
| | | In-LBs. | | N-m | | In-LBs. | | N-m | | In-LBs. | | N-m | |
| | | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. |
| 5 | - | 25 | 35 | 2.8 | 4.0 | 20 | 25 | 2.2 | 2.8 | 13 | 17 | 1.5 | 1.9 |
| 6 | 8 | 35 | 40 | 4.0 | 4.5 | 20 | 25 | 2.2 | 2.8 | 18 | 22 | 2.0 | 2.5 |
| 7 | 9 | 35 | 40 | 4.0 | 4.5 | 20 | 25 | 2.2 | 2.8 | 30 | 40 | 3.4 | 4.5 |
| 8 | 10 | 40 | 50 | 4.5 | 5.7 | 20 | 25 | 2.2 | 2.8 | 30 | 40 | 3.4 | 4.5 |
| 9 | 11 | 40 | 50 | 4.5 | 5.7 | 20 | 25 | 2.2 | 2.8 | 35 | 45 | 4.0 | 5.1 |
| 10 | 12 | 50 | 60 | 5.7 | 6.8 | 25 | 30 | 2.8 | 3.3 | 35 | 45 | 4.0 | 5.1 |
| 12, 13 | 15 | 50 | 60 | 5.7 | 6.8 | 25 | 30 | 2.8 | 3.3 | 35 | 45 | 4.0 | 5.1 |
| 14, 16 | 18 | 55 | 65 | 6.2 | 7.3 | 25 | 30 | 2.8 | 3.3 | 35 | 45 | 4.0 | 5.1 |
| 15, 17 | 19 | 55 | 65 | 6.2 | 7.3 | 25 | 30 | 2.8 | 3.3 | 35 | 45 | 4.0 | 5.1 |
| 21 | 23 | 55 | 65 | 6.2 | 7.3 | 25 | 30 | 2.8 | 3.3 | 35 | 45 | 4.0 | 5.1 |

Wire Stripping

- Strip wire to required length. (See Figure at right). When using hot wire stripping, do not wipe melted insulation material on wire strands; with mechanical strippers do not cut or nick strands.
- See Table 1 for proper finished outside wire dimensions.
- Twist strands together to form a firm bundle.
- Insert stripped wire into contact applying slight pressure until wire insulation butts against wire well. Check inspection hole to see that wire strands are visible. If there are strayed wire strands, entire wire end should be re-twisted.

When wire is stripped and properly installed into contact, the next step is to crimp the wire inside the contact by using the proper crimping tool.

Stripping Dimensions



| Wire Size | A |
|-----------|-------------|
| 23 | .115 (2.92) |
| 20/20HD | .188 (4.77) |
| 16 | .188 (4.77) |
| 12 | .188 (4.77) |

Table 1

| Contact Size | Wire Dimension (inches)** | |
|--------------|---------------------------|------|
| | Min. | Max. |
| 10 | .135 | .162 |
| 12 | .097 | .142 |
| 16 | .065 | .109 |
| 20/20HD | .040 | .077 |
| 23 | .025 | .048 |

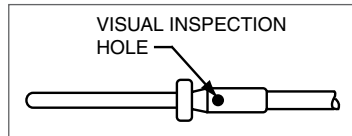
** Min. diameters to insure moisture proof assembly; max. diameters to permit use of metal removal tools.

Crimping

See table on preceding page for more information on crimp contacts, contact tools, and crimp tensile strength



- Insert stripped wire into contact crimp pot. Wire must be visible through inspection hole.
- Using correct crimp tool and locator, cycle the tool once to be sure the indentors are open, insert contact and wire into locator. Squeeze tool handles firmly and completely to insure a proper crimp. The tool will not release unless the crimp indentors in the tool head have been fully actuated.
- Release crimped contact and wire from tool. Be certain the wire is visible through inspection hole in contact.



Examples of M22520 Series Crimping Tools:
Shown top: tool used for small size 23 contacts.
Shown bottom: tool used for size 20, 16 or 12 contacts and has a positioner that can be dialed for each contact size.

Contact Insertion

- First remove hardware from the plug and receptacle and slide the hardware over wires in proper sequence.
- Use proper plastic or metal insertion tool for corresponding contact. (Consult Insertion Tool table on preceding page). Slide correct tool (with plastic tool use colored end) over wire insulation and slide forward until tool bottoms against rear contact shoulder.



Plastic tool with contact in proper position.

- Next align the tool and contact up to the properly identified cavity at rear of connector plug. Use firm, even pressure; do not use excessive pressure. It is recommended to start at the center cavity. Contact must be aligned with grommet hole and not inserted at an angle. Push forward until contact is felt to snap into position within insert.



Metal tool with contact.



Continued on next page.

Note: All plastic tools are double-ended. The colored side is the insertion tool and the white side is the removal tool.

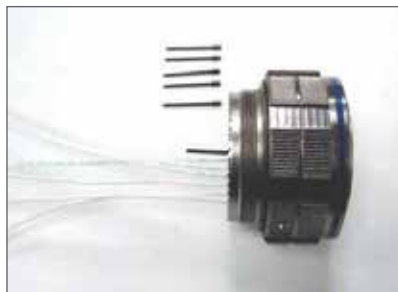
Assembly Instructions

Contact Insertion, cont.

4. Remove tool and pull back lightly on wire, making sure contact stays properly seated and isn't dragged back with the tool. Repeat operation with remainder of contacts to be inserted, beginning with the center cavity and working outward in alternating rows.



5. After all contacts are inserted, fill any empty cavities with wire sealing plugs. (Refer to sealing plug chart on page 10)



6. Reassemble plug or receptacle hardware - slide forward and tighten using connector pliers. Connector holding tools are recommended while tightening back accessories. When using strain relief, center wires at bar clamp. Slide clamp grommet into position and tighten clamp bar screws. When tightening screws, pressure should be applied in the same direction that clamp is threaded to rear threads of connector. When not using clamp grommet, build up wire bundle with vinyl tape so clamp bar will maintain pressure on wires.



CAUTION, when inserting or removing contacts, do not spread or rotate tool tips.

Contact Removal

1. Remove hardware from plug or receptacle and slide hardware back along wire bundle.



2. Use proper plastic or metal removal tool for corresponding contact. (Consult Removal Tool table on page 135). Slide correct size tool over wire insulation.



Use white end of plastic tool for removal of contacts.

3. Insert plastic or metal removal tool into contact cavity until tool tips enter rear grommet and come to a positive stop. Hold tool tip firmly against positive stop on contact shoulder. Grip wire and simultaneously remove tool and contact. (On occasion, it may be necessary to remove tool, rotate 90° and reinsert.)



Removal of contacts with metal tool.

Grommet Sealing Plugs

| Size | Color | Part Number | Military Part Number |
|------|--------|-------------|----------------------|
| #23 | Black | 2M809-155 | (None) |
| #20 | Red | 2M859-012 | MS27488-20-2 |
| #16 | Green | 2M859-013 | MS27488-16-2 |
| #12 | Orange | 2M859-014 | MS27488-12-2 |

Spanner Tool for Tightening Series 2M Jam Nuts

| Shell Size | Holding Tool Part Number (Add P or R) | | | | |
|------------|---------------------------------------|--------------|-----------------------|-----------------------|--------------|
| | Series 2M801 | Series 2M803 | Series 2M804 Style 07 | Series 2M804 Style 00 | Series 2M805 |
| 5 | 2M600-146-02 | 2M600-137-05 | 2M600-146-03 | 2M600-147-05 | |
| 6 | 2M600-146-03 | 2M600-137-06 | 2M600-146-04 | 2M600-147-06 | |
| 7 | 2M600-146-05 | 2M600-137-07 | 2M600-146-06 | 2M600-147-07 | |
| 8 | 2M600-146-05 | 2M600-137-08 | 2M600-146-06 | 2M600-147-07 | 2M600-154-08 |
| 9 | 2M600-146-06 | 2M600-137-09 | 2M600-146-07 | 2M600-147-09 | 2M600-154-09 |
| 10 | 2M600-146-07 | 2M600-137-10 | 2M600-146-08 | 2M600-147-10 | 2M600-154-09 |
| 11 | | | | | 2M600-154-11 |
| 12 | | 2M600-137-12 | 2M600-141-10 | 2M600-147-12 | 2M600-154-12 |
| 13 | 2M600-146-10 | | | | |
| 14 | | 2M600-137-14 | 2M600-141-12 | 2M600-147-14 | |
| 15 | | 2M600-137-15 | 2M600-141-13 | 2M600-147-15 | 2M600-154-15 |
| 16 | 2M600-146-13 | | | | |
| 17 | 2M600-146-14 | | | | |
| 18 | | | | | 2M600-154-18 |
| 19 | | | | | 2M600-154-19 |
| 21 | 2M600-146-17 | | | | |
| 23 | | | | | 2M600-154-23 |

Connector Holding Tool for Tightening Backshells Accessories

| Shell Size | Holding Tool Part Number (Add P or R) | | | | |
|------------|---------------------------------------|---|--------------|--------------|--------------|
| | Series 2M801 | | Series 2M803 | Series 2M804 | Series 2M805 |
| 5 | 2M600MM005-05 | • | 2M600-140-5 | 2M600-141-5 | x |
| 6 | 2M600MM005-06 | • | 2M600-140-6 | 2M600-141-6 | x |
| 7 | 2M600MM005-07 | • | 2M600-140-7 | 2M600-141-7 | x |
| 8 | 2M600MM005-08 | • | 2M600-140-8 | 2M600-141-8 | x |
| 9 | 2M600MM005-06 | • | 2M600-140-9 | 2M600-141-9 | x |
| 10 | 2M600MM005-10 | | 2M600-140-10 | 2M600-141-10 | x |
| 11 | | | | | 2M600-155-11 |
| 12 | | | 2M600-140-12 | 2M600-141-12 | x |
| 13 | 2M600MM005-13 | • | | | |
| 14 | | | 2M600-140-14 | 2M600-141-14 | x |
| 15 | | | 2M600-140-15 | 2M600-141-15 | x |
| 16 | 2M600MM005-16 | • | | | |
| 17 | 2M600MM005-17 | • | | | |
| 18 | | | | | 2M600-155-18 |
| 19 | | | | | 2M600-155-19 |
| 21 | 2M600MM005-21 | • | | | |
| 23 | | | | | 2M600-155-23 |

• Add P for plug holder or R for receptacle holder, followed by polarizing position (N, X, Y, Z)

Add P for Plug holder or R for Receptacle holder, followed by polarizing position (A, B, C, D).

x Add P for Plug holder or R for Receptacle holder.

Micro Band Shield Termination Tool

Micro Band Shield Termination System:

Micro Band Termination: For assembling cables to overmolded style 2M connectors or backshells The Band-It® system offers quick termination of cable shields and flexibility to be utilized on a wide range of parts with just one band size. These rugged straps have passed numerous hazardous environmental testing, including shock and vibration. Approved for use in military and aerospace applications.

MATERIALS:

Micro Band Installation Tool. Use with .120" (3.05 mm) wide bands. 6.75 inches (172 mm.) length, 1.2 pounds (0.6 Kg.)

Micro Band, .120" (3.05 mm) wide. Available in two lengths, flat or pre-coiled. Stainless steel.

| Description | Part Number |
|------------------------------|-------------|
| Micro Band Installation Tool | 2M600-061 |

| Length | | Part Number | Accommodates Diameter | |
|--------|--------|-------------|-----------------------|-------|
| inch | mm | | inch | mm |
| 8.125 | 206.38 | 2M600-057 | .88 | 22.35 |
| 14.250 | 361.95 | 2M600-083 | 1.88 | 47.75 |



Micro Band Shield Termination Instructions:

1. Prepare cable braid for termination process (Figure 1).
2. Push braid forward over adapter retention lip to the adapter incline point (or .4" [10.2mm] minimum braid length). Milk braid as required to remove slack and winsure a snug fit around the shield termination area (Figure 2).
3. Prepare the band in the following manner: **IMPORTANT:** Due to connector/adaptor circumference, it may be necessary to prepare the band around the cable or retention area.
 - A. Roll band through the buckle slot twice. (Band must be double-coiled!)
 - B. Pull on band until mark (▷) is within approximately .250 inch (6.4mm) of buckle slot (Figure 3). The band may be tightened further if desired.

NOTE: Prepared band should have this (▷) mark visible approximately where shown in Figure 3.

Shield Termination Clamping Process (Figures 4 thru 8)

NOTE: To free tool handles, squeeze handles together and move holding clips to center of tool.

4. Squeeze gray gripper release lever and insert band into the front end opening of the tool. (Circular portion of looped band must always face downward.)

5. Aligning the band and tool with the shield termination area, squeeze blue pull-up handle repeatedly in full strokes until it locks against tool body. (This indicates the band is compressed to the tool precalibrated tension.)
NOTE: To loosen or remove band before locking and cut-off, squeeze gray gripper release lever on tool and pull band out. To loosen or remove band after blue pull-up handle locks against tool body, squeeze pull-up handle and push tension release lever on top of tool forward. Let tension handle return to original position and use the gripper release lever to remove band.
6. Complete the clamping process by squeezing the black cut-off handle to form lock and trim excess band.
7. To remove excess band from tool, squeeze gray gripper release handle, pull out and dispose.
8. Inspect shield termination.

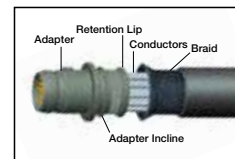


Fig. 1

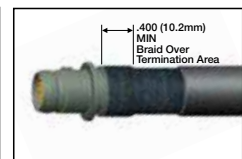


Fig. 2

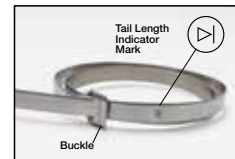


Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7

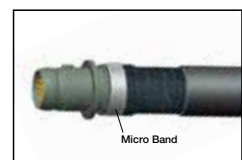


Fig. 8

Band-It® is a registered trademark of Band-It - IDEX Inc.

SERIES 2M INSERT ARRANGEMENTS

| Contact Size | Contact Quantity | | | | | Insert Arrangement | | | |
|--|------------------|-----|-------|-----|--------|--------------------|--------|--------|--------|
| | #23 | #20 | #20HD | #16 | #12 | 2M801 | 2M803 | 2M804 | 2M805 |
| Size #23 Contacts 5 Amp Max. Current 500 VAC #23-#28 AWG | 3 | | | | | 5-3 | 5-3 | 5-3 | NA |
| | 4 | | | | | 6-4 | 6-4 | 6-4 | 8-4 |
| | 6 | | | | | 6-6 | 6-6 | 6-6 | 8-6 |
| | 7 | | | | | 6-7 | 6-7 | 6-7 | 8-7 |
| | 10 | | | | | 7-10 | 7-10 | 7-10 | 9-10 |
| | 13 | | | | | 8-13 | 8-13 | 8-13 | 10-13 |
| | 19 | | | | | 9-19 | 9-19 | 9-19 | 11-19 |
| | 26 | | | | | 10-26 | 10-26 | 10-26 | 12-26 |
| | 37 | | | | | 13-37 | 12-37 | 12-37 | 15-37 |
| | 55 | | | | | 16-55 | 14-55 | 14-55 | 18-55 |
| | 85 | | | | | 17-85 | NA | 15-85 | 19-85 |
| 130 | | | | | 21-130 | NA | NA | 23-130 | |
| Size #20HD Contacts 7.5 Amp Max. Current 750 VAC #20-#24 AWG. | | | 3 | | | 6-23 | 6-23 | 6-23 | 8-23 |
| | | | 5 | | | 7-25 | 7-25 | 7-25 | 9-25 |
| | | | 8 | | | 8-28 | 8-28 | 8-28 | 10-28 |
| | | | 10 | | | 9-210 | 9-210 | 9-210 | 11-210 |
| | | | 20 | | | 13-220 | 12-220 | 12-220 | 15-220 |
| | | | 35 | | | 16-235 | 14-235 | 14-235 | 18-235 |
| | | | 41 | | | 17-241 | NA | NA | 19-241 |
| | | 69 | | | 21-269 | NA | NA | 23-269 | |
| Size #16 Contacts 13 Amp Max. Current 1800 VAC #16-#20 AWG | | | | 1 | | 6-1 | 6-1 | 6-1 | 8-1 |
| | | | | 2 | | 8-2 | 8-2 | 8-2 | 10-2 |
| | | | | 4 | | 9-4 | 9-4 | 9-4 | 11-4 |
| | | | | 5 | | 10-5 | 10-5 | 10-5 | 12-5 |
| | | | | 7 | | 13-7 | 12-7 | 12-7 | 15-7 |
| | | | | 12 | | 16-12 | 14-12 | 14-12 | 18-12 |
| | | | | 14 | | 17-14 | NA | NA | 19-14 |
| | | | | 22 | | 21-22 | NA | NA | 23-22 |
| Size #12 Contacts 23 Amp Max. Current 1800 VAC #12-14 AWG | | | | | 1 | 7-1 | 7-1 | 7-1 | 9-1 |
| | | | | | 2 | 10-2 | 10-2 | 10-2 | 12-2 |
| | | | | | 2 | 13-2 | 12-2 | 12-2 | 15-2 |
| | | | | | 3 | 13-3 | 12-3 | 12-3 | 15-3 |
| | | | | | 5 | 16-5 | 14-5 | 14-5 | 18-5 |
| | | | | | 7 | 17-7 | NA | NA | 19-7 |
| | | | | | 12 | 21-12 | NA | NA | 23-12 |
| Insert Arrangements with Mixed Size (Combo) Layouts | 4 | 2 | | | | 8-200 | 8-200 | 8-200 | 10-200 |
| | 8 | 2 | | | | 9-201 | 9-201 | 9-201 | 11-201 |
| | 4 | | | 2 | | 9-200 | 9-200 | 9-200 | 11-200 |
| | 8 | | | 2 | | 10-202 | 10-202 | 10-202 | 12-202 |
| | 4 | | | | 2 | 10-201 | 10-201 | 10-201 | 12-201 |
| | 6 | | | | 2 | 13-200 | 12-200 | 12-200 | 15-200 |
| | 10 | | | | 2 | 13-201 | 12-201 | 12-201 | 15-201 |
| 12 | | | | 1 | 10-200 | 10-200 | 10-200 | 12-200 | |

Insert Arrangements

Front face of pin inserts illustrated (Socket Reversed)

CONTACT LEGEND 12 16 20 20HD 20 23

| | | | | | | | | |
|-----------------------|-----|------|-----|-----|-----|-------|------|------|
| | | | | | | | | |
| 2M801, 2M803, 2M804 | 5-3 | 6-1 | 6-4 | 6-6 | 6-7 | 6-23 | 7-1 | 7-10 |
| 2M805 | NA | 8-1 | 8-4 | 8-6 | 8-7 | 8-23 | 9-1 | 9-10 |
| No. of Contacts | 3 | 1 | 4 | 6 | 7 | 3 | 1 | 10 |
| Contact Size | #23 | #16 | #23 | #23 | #23 | #20HD | #12 | #23 |
| DWV Voltage (VAC) | 500 | 1800 | 500 | 500 | 500 | 750 | 1800 | 500 |
| Current Rating (Amps) | 5 | 13 | 5 | 5 | 5 | 7.5 | 23 | 5 |

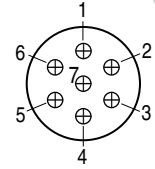
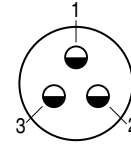
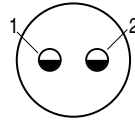
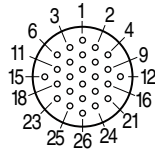
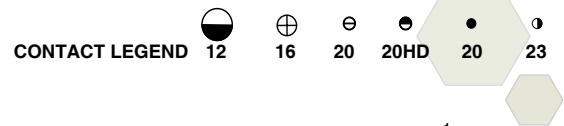
| | | | | | | |
|-----------------------|-------|------|-------|-------|----------|------|
| | | | | | | |
| 2M801, 2M803, 2M804 | 7-25 | 8-2 | 8-13 | 8-28 | 8-200 | 9-4 |
| 2M805 | 9-25 | 10-2 | 10-13 | 10-28 | 10-200 | 11-4 |
| No. of Contacts | 5 | 2 | 13 | 8 | 2 4 | 4 |
| Contact Size | #20HD | #16 | #23 | #20HD | #20 #23 | #16 |
| DWV Voltage (VAC) | 750 | 1800 | 500 | 750 | 1000 500 | 1800 |
| Current Rating (Amps) | 7.5 | 13 | 5 | 7.5 | 7 5 | 13 |

| | | | | | |
|-----------------------|-------|----------|----------|--------|------|
| | | | | | |
| 2M801, 2M803, 2M804 | 9-19 | 9-200 | 9-201 | 9-210 | 10-2 |
| 2M805 | 11-19 | 11-200 | 11-201 | 11-210 | 12-2 |
| No. of Contacts | 19 | 2 4 | 2 8 | 10 | 2 |
| Contact Size | #23 | #16 #23 | #20 #23 | #20HD | #12 |
| DWV Voltage (VAC) | 500 | 1800 500 | 1000 500 | 750 | 1800 |
| Current Rating (Amps) | 5 | 13 5 | 7.5 5 | 7.5 | 23 |

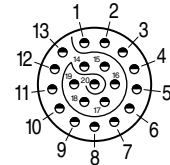
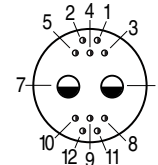
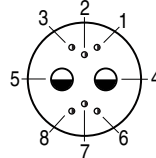
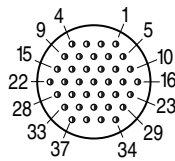
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|-----------------------|------|----------|----------|----------|
| | | | | |
| 2M801, 2M803, 2M804 | 10-5 | 10-201 | 10-202 | 10-200 |
| 2M805 | 12-5 | 12-201 | 12-202 | 12-200 |
| No. of Contacts | 5 | 2 4 | 2 8 | 1 12 |
| Contact Size | #16 | #12 #23 | #16 #23 | #12 #23 |
| DWV Voltage (VAC) | 1800 | 1800 500 | 1800 500 | 1800 500 |
| Current Rating (Amps) | 13 | 23 5 | 13 5 | 23 5 |

Insert Arrangements

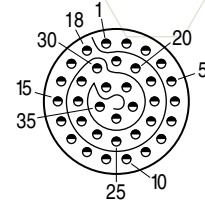
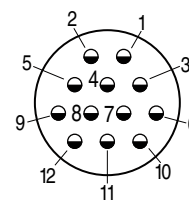
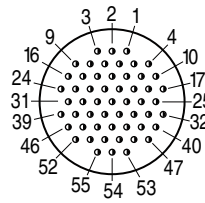
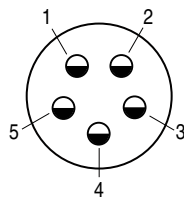
Front face of pin inserts illustrated (Socket Reversed)



| | | | | |
|-----------------------|-------|------|------|------|
| 2M801 | 10-26 | 13-2 | 13-3 | 13-7 |
| 2M803, 2M804 | 10-26 | 12-2 | 12-3 | 12-7 |
| 2M805 | 12-26 | 15-2 | 15-3 | 15-7 |
| No. of Contacts | 26 | 2 | 3 | 7 |
| Contact Size | #23 | #12 | #12 | #16 |
| DWV Voltage (VAC) | 500 | 1800 | 1800 | 1800 |
| Current Rating (Amps) | 5 | 23 | 23 | 13 |



| | | | | |
|-----------------------|-------|-------------|-------------|--------|
| 2M801 | 13-37 | 13-200 | 13-201 | 13-220 |
| 2M803, 2M804 | 12-37 | 12-200 | 12-201 | 12-220 |
| 2M805 | 15-37 | 15-200 | 15-201 | 15-220 |
| No. of Contacts | 37 | 2 6 | 2 10 | 20 |
| Contact Size | #23 | #12 #23 | #12 #23 | #20HD |
| DWV Voltage (VAC) | 500 | 1800 500 | 1800 500 | 750 |
| Current Rating (Amps) | 5 | 23 5 | 23 5 | 7.5 |

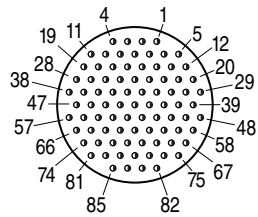
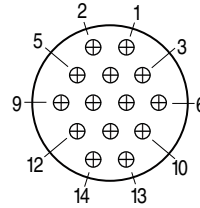
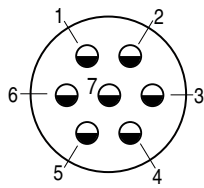


| | | | | |
|-----------------------|------|-------|-------|--------|
| 2M801 | 16-5 | 16-55 | 16-12 | 16-235 |
| 2M803, 2M804 | 14-5 | 14-55 | 14-12 | 14-235 |
| 2M805 | 18-5 | 18-55 | 18-12 | 18-235 |
| No. of Contacts | 5 | 55 | 12 | 35 |
| Contact Size | #12 | #23 | #16 | #20HD |
| DWV Voltage (VAC) | 1800 | 500 | 1800 | 750 |
| Current Rating (Amps) | 23 | 5 | 13 | 7.5 |

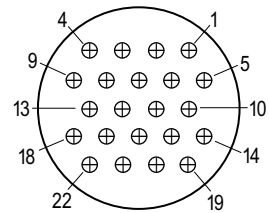
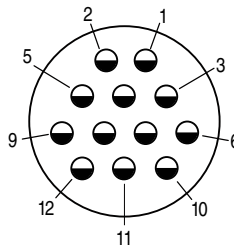
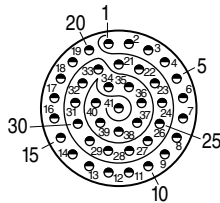
Insert Arrangements

Front face of pin inserts illustrated (Socket Reversed)

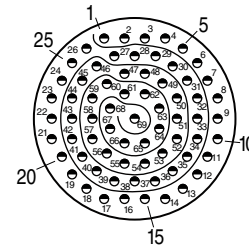
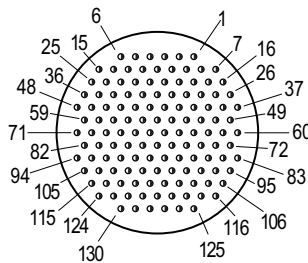
CONTACT LEGEND 12 16 20 20HD 20 23



| | 17-7 | 17-14 | 17-85 |
|-----------------------|------|-------|-------|
| 2M801 | | | |
| 2M804 | | | |
| 2M805 | | | |
| No. of Contacts | 7 | 14 | 85 |
| Contact Size | #12 | #16 | #23 |
| DWV Voltage (VAC) | 1800 | 1800 | 500 |
| Current Rating (Amps) | 23 | 13 | 5 |



| | 17-241 | 21-12 | 21-22 |
|-----------------------|--------|-------|-------|
| 2M801 | | | |
| 2M805 | | | |
| No. of Contacts | 41 | 12 | 22 |
| Contact Size | #20HD | #12 | #16 |
| DWV Voltage (VAC) | 750 | 1800 | 1800 |
| Current Rating (Amps) | 7.5 | 23 | 13 |



| | 21-130 | 21-269 |
|-----------------------|--------|--------|
| 2M801 | | |
| 2M805 | | |
| No. of Contacts | 130 | 69 |
| Contact Size | #23 | #20HD |
| DWV Voltage (VAC) | 500 | 750 |
| Current Rating (Amps) | 5 | 7.5 |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

Accessories

2M


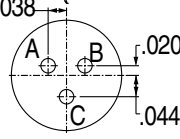
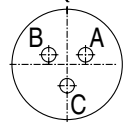

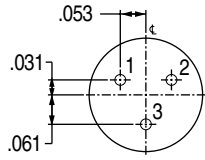
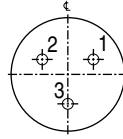

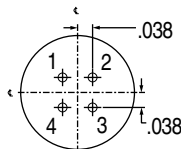
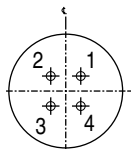

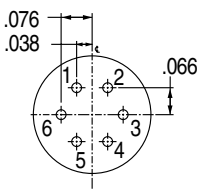
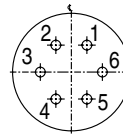

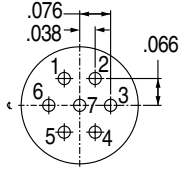
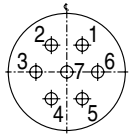
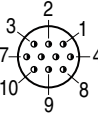
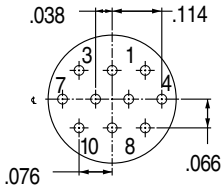
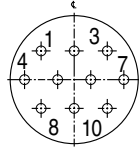
HD38999

Micro-ID

Terrapin

Nexus

Socket inserts are a mirror image of pin side. Socket side shown for cavity locations only, reference pin side for dimensions.

| Insert Arrangement | Pin Connector | Socket Connector |
|---|---|---|
|  <p>5-3 (3) #23 Contacts .022 Max. Dia Tail</p> |  |  |
|  <p>6-23, 8-23 (3) #20HD Contacts .023 Max. Dia. Tail</p> |  |  |
|  <p>6-4, 8-4 (4) #23 Contacts .022 Max. Dia Tail</p> |  |  |
|  <p>6-6, 8-6 (6) #23 Contacts .022 Max. Dia. Tail</p> |  |  |
|  <p>6-7, 8-7 (7) #23 Contacts .022 Max. Dia. Tail</p> |  |  |
|  <p>7-10, 9-10 10 #23 Contacts .022 Max. Dia. Tail</p> |  |  |

Straight PCB Footprints

| Insert Arrangement | Pin Connector | Socket Connector |
|--|---------------|------------------|
| <p>7-25, 9-25 (5) #20HD Contacts .028 Max. Dia Tail</p> | | |
| <p>8-2, 10-2 (2) #16 Contacts</p> | | |
| <p>8-28, 10-28 (8) #20HD Contacts</p> | | |
| <p>8-200, 10-200 (2) #20 Contacts (4) #23 Contacts</p> | | |
| <p>8-13, 10-13 (13) #23 Contacts .022 Max. Dia. Tail</p> | | |
| <p>9-4, 11-4 (4) #16 Contacts</p> | | |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

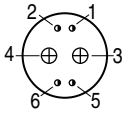
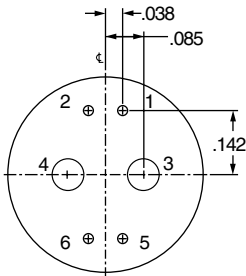
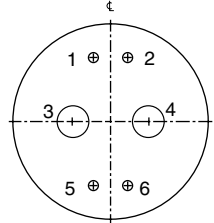
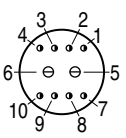
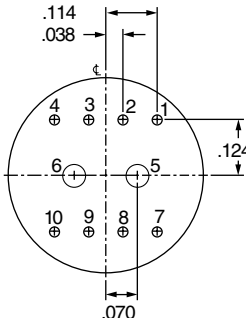
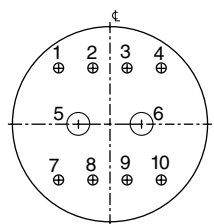
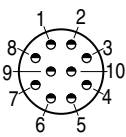
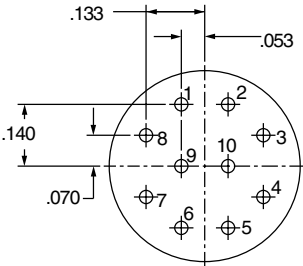
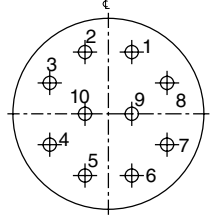
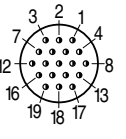
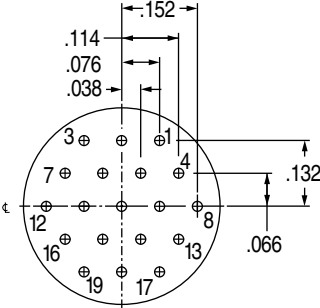
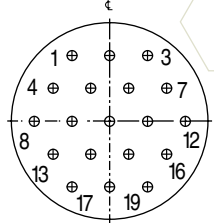
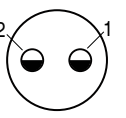
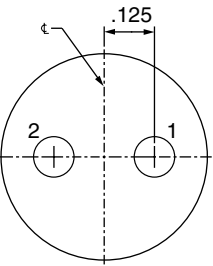
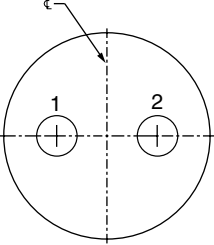
2M Accessories

HD38999

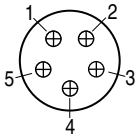
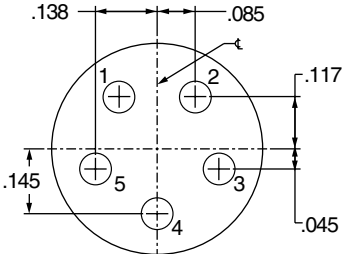
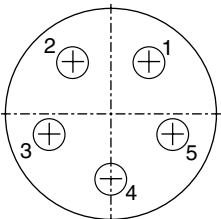
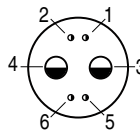
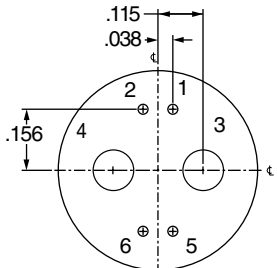
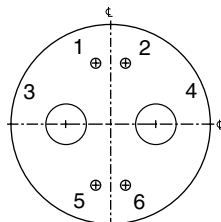

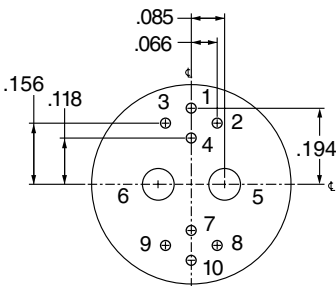
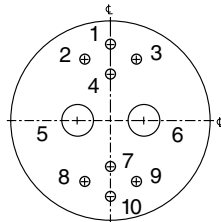
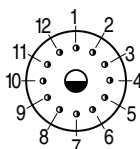
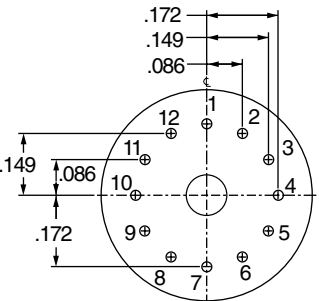
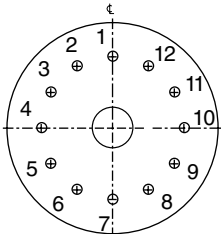
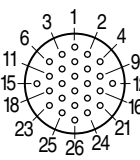
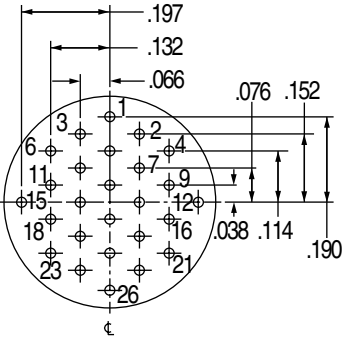
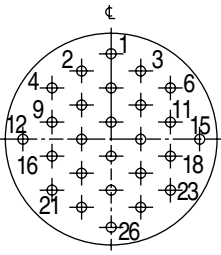
Micro-D

Terrapin

Nexus

| Insert Arrangement | Pin Connector | Socket Connector |
|--|---|---|
|  <p>9-200, 11-200 (4) #23 Contacts (2) #16 Contacts</p> |  |  |
|  <p>9-201, 11-201 (2) #20 Contacts (8) #23 Contacts</p> |  |  |
|  <p>9-210, 11-210 (10) #20HD Contacts</p> |  |  |
|  <p>9-19, 11-19 (19) #20 Contacts .022 Max. Dia Tail</p> |  |  |
|  <p>10-2, 12-2 (2) #12 Contacts</p> |  |  |

Straight PCB Footprints

| Insert Arrangement | Pin Connector | Socket Connector |
|--|---|---|
|  <p>10-5, 12-5 (5) #16 Contacts</p> |  |  |
|  <p>10-201, 12-201 (2) #12 Contacts (4) #23 Contacts</p> |  |  |
|  <p>10-202, 12-202 (2) #16 Contacts (8) #23 Contacts</p> |  |  |
|  <p>10-200, 10-200 (1) #12 Contact (12) #23 Contacts</p> |  |  |
|  <p>10-26, 12-26 (26) #23 Contacts .022 Max. Dia. Tail</p> |  |  |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M

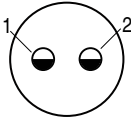
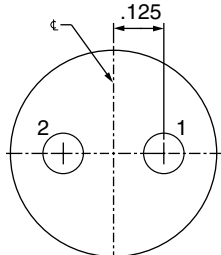
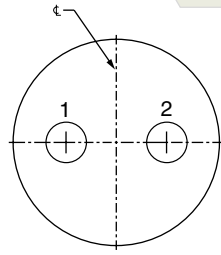
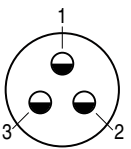
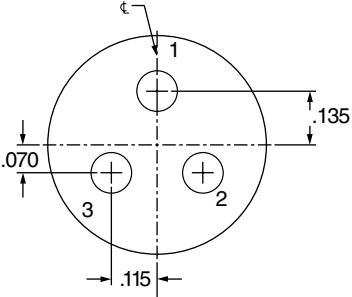
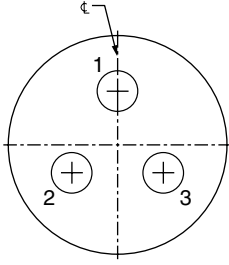
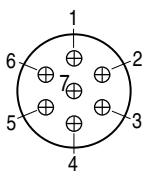
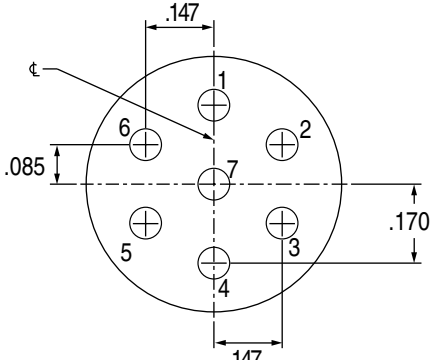
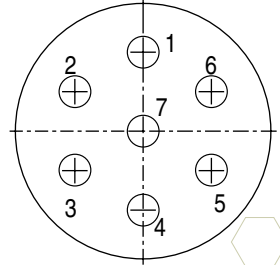
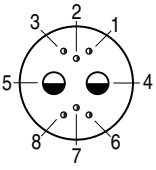
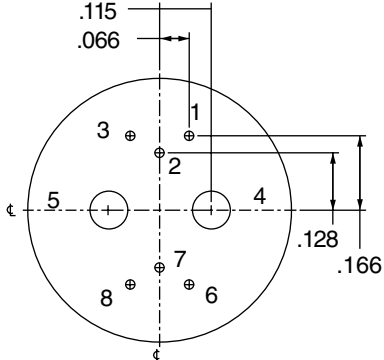
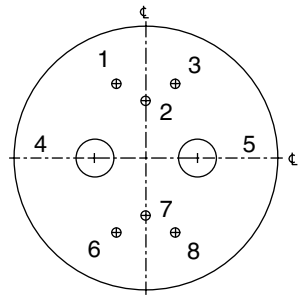
Accessories

HD38999

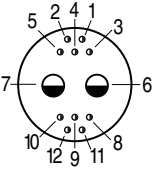
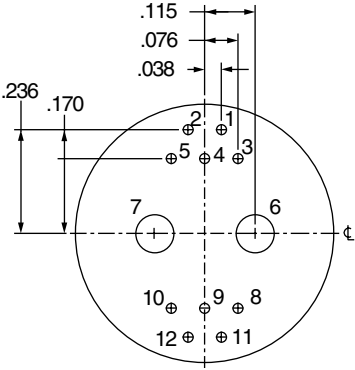
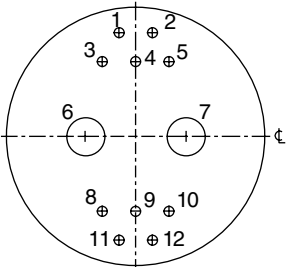
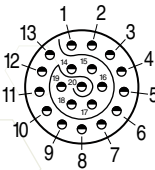
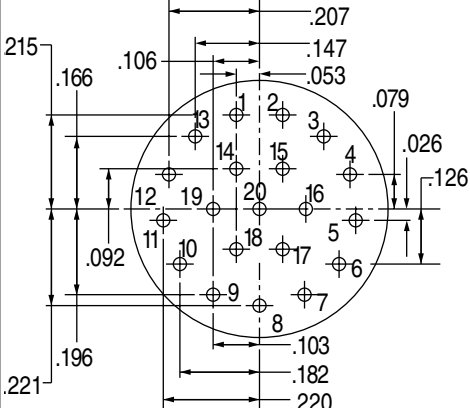
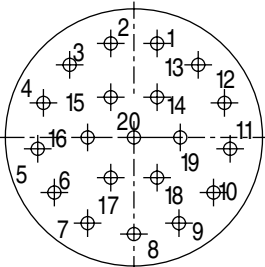
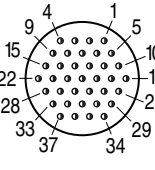
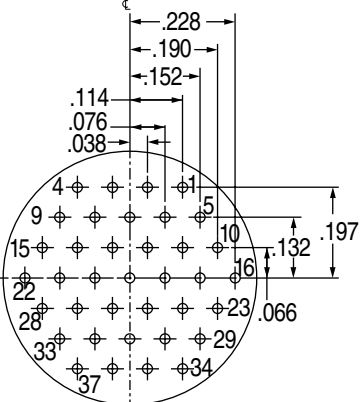
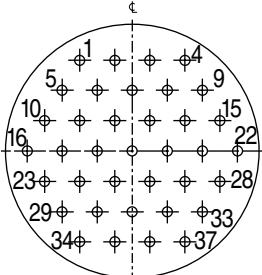
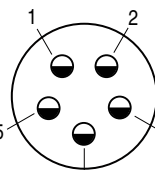
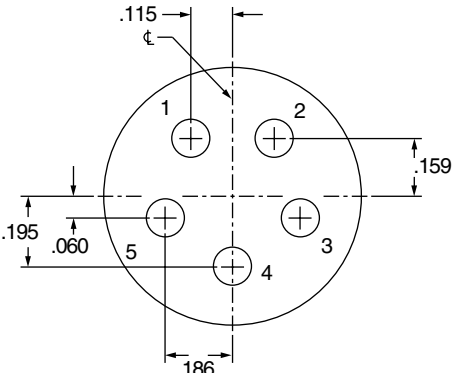
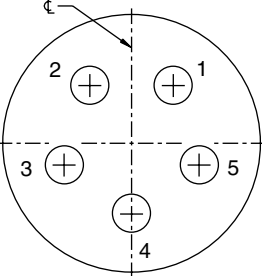
Micro-D

Terrapin

Nexus

| Insert Arrangement | Pin Connector | Socket Connector |
|--|---|---|
|  <p>12-2, 13-2, 15-2 (2) #12 Contacts</p> |  |  |
|  <p>12-3, 13-3, 15-3 (3) #12 Contacts</p> |  |  |
|  <p>12-7, 13-7, 15-7 (7) #16 Contacts</p> |  |  |
|  <p>12-200, 13-200, 15-200 (2) #12 Contacts (6) #23 Contacts</p> |  |  |

Straight PCB Footprints

| Insert Arrangement | Pin Connector | Socket Connector |
|---|---|---|
|  <p>12-201, 13-201, 15-201 (2) #12 Contacts (10) #23 Contacts</p> |  |  |
|  <p>12-220, 13-220, 15-220 (20) #20HD Contacts</p> |  |  |
|  <p>12-37, 13-37, 15-37 (37) #23 Contacts .022 Max. Dia. Tail</p> |  |  |
|  <p>14-5, 16-5, 18-5 (5) #12 Contacts</p> |  |  |

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- Accessories
- 2M
- HD38999
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- Terrapin
- Nexus

Straight PCB Footprints

- Contacts & Tools
- 2M Specs
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- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

| Insert Arrangement | Pin Connector | Socket Connector |
|--|---------------|------------------|
| <p>14-12, 16-12, 18-12 (12) #16 Contacts</p> | | |
| <p>14-55, 16-55, 18-55 (55) #23 Contacts .022 Max. Dia. Tail</p> | | |
| <p>14-235, 16-235, 18-235 (35) #20HD Contacts .023 Max. Dia. Tail</p> | | |

| Pin. No. | X | | Y | | Pin. No. | X | | Y | | Pin. No. | X | | Y | |
|----------|-------|-------|-------|-------|----------|-------|-------|-------|-------|----------|-------|-------|-------|-------|
| | in. | mm. | in. | mm. | | in. | mm. | in. | mm. | | in. | mm. | in. | mm. |
| 1 | -.053 | -1.35 | .301 | 7.65 | 13 | -.234 | -5.94 | -.196 | -4.98 | 25 | .000 | 0.00 | -.209 | -5.31 |
| 2 | .053 | 1.35 | .301 | 7.65 | 14 | -.287 | -7.29 | -.104 | -2.64 | 26 | -.100 | -2.54 | -.172 | -4.37 |
| 3 | .153 | 3.89 | .264 | 6.71 | 15 | -.305 | -7.75 | .000 | 0.00 | 27 | -.181 | -4.60 | -.104 | -2.64 |
| 4 | .234 | 5.94 | .196 | 4.98 | 16 | -.287 | 7.29 | .104 | 2.64 | 28 | -.199 | -5.05 | .000 | 0.00 |
| 5 | .287 | 7.29 | .104 | 2.64 | 17 | -.234 | -5.94 | .196 | 4.98 | 29 | -.181 | -4.60 | .104 | 2.64 |
| 6 | .305 | 7.75 | .000 | 0.00 | 18 | -.153 | -3.89 | .264 | 6.71 | 30 | -.100 | -2.54 | .172 | 4.37 |
| 7 | .287 | 7.29 | -.104 | -2.64 | 19 | .000 | 0.00 | .209 | 5.31 | 31 | -.053 | -1.35 | .073 | 1.85 |
| 8 | .234 | 5.94 | -.196 | -4.98 | 20 | .100 | 2.54 | .172 | 4.37 | 32 | .053 | 1.35 | .073 | 1.85 |
| 9 | .153 | 3.89 | -.264 | -6.71 | 21 | .181 | 4.60 | .104 | 2.64 | 33 | .086 | 2.18 | -.028 | -0.71 |
| 10 | .053 | 1.35 | -.301 | -7.65 | 22 | .199 | 5.05 | .000 | 0.00 | 34 | .000 | 0.00 | -.090 | -2.29 |
| 11 | -.053 | -1.35 | -.301 | -7.65 | 23 | .181 | 4.60 | -.104 | -2.64 | 35 | -.086 | -2.18 | -.028 | -0.71 |
| 12 | -.153 | -3.89 | -.264 | -6.71 | 24 | .100 | 2.54 | -.172 | -4.37 | | | | | |

Straight PCB Footprints

| Insert Arrangement | Pin Connector | Socket Connector |
|--|---------------|------------------|
| <p>15-7, 17-7, 19-7 (7) #12 Contacts</p> | | |
| <p>15-14, 17-14, 19-14 (14) #16 Contacts</p> | | |
| <p>15-241, 16-241, 18-241 (41) #20HD Contacts .028 Max. Dia. Tail</p> | | |

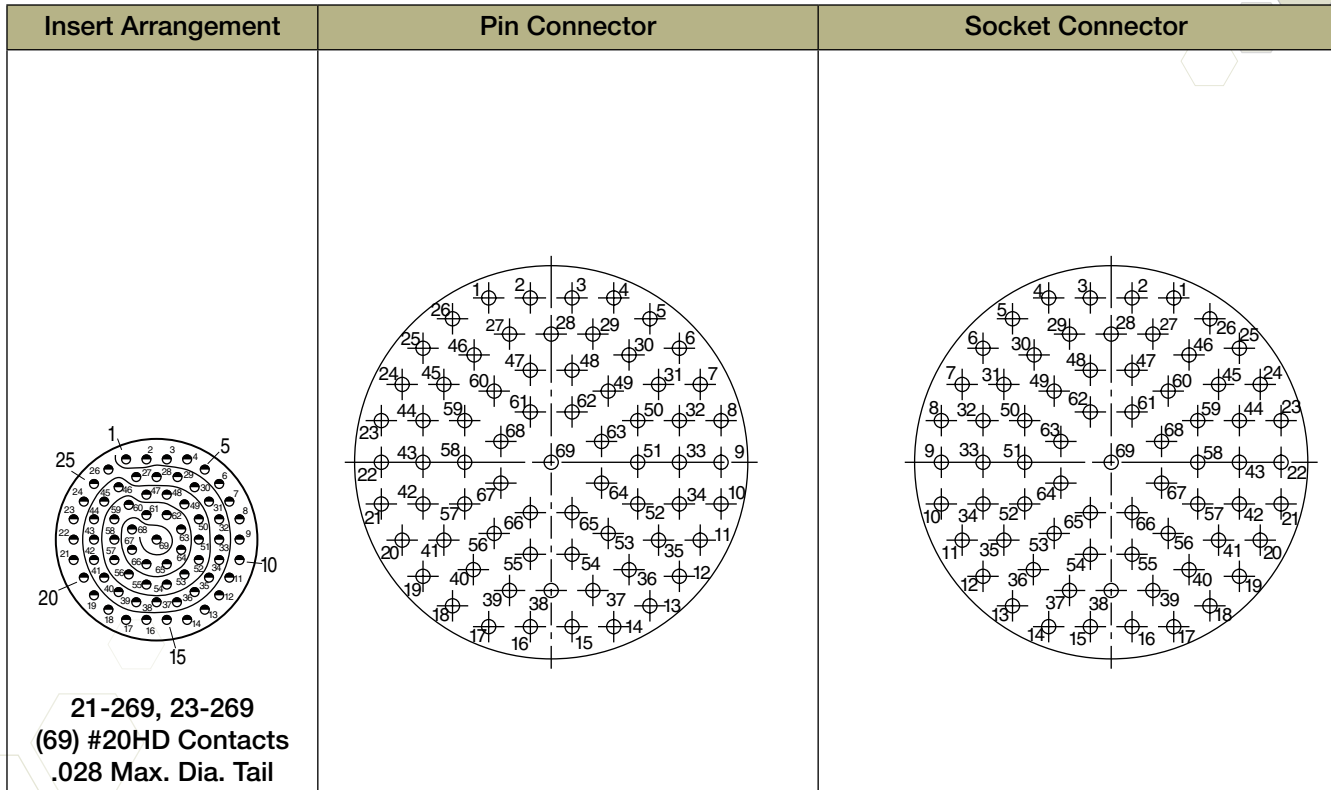
| Pin. No. | X | | Y | | Pin. No. | X | | Y | | Pin. No. | X | | Y | |
|----------|-------|-------|-------|-------|----------|-------|-------|-------|-------|----------|-------|-------|-------|-------|
| | in. | mm. | in. | mm. | | in. | mm. | in. | mm. | | in. | mm. | in. | mm. |
| 1 | -.053 | -1.35 | .335 | 8.51 | 15 | -.302 | -7.67 | -.154 | -3.91 | 29 | -.151 | -3.84 | -.171 | -4.34 |
| 2 | .053 | 1.35 | .335 | 8.51 | 16 | -.335 | -8.51 | -.053 | -1.35 | 30 | -.213 | -5.41 | -.081 | -2.06 |
| 3 | .154 | 3.91 | .302 | 7.67 | 17 | -.335 | -8.51 | .053 | 1.35 | 31 | -.226 | -5.74 | .028 | 0.71 |
| 4 | .240 | 6.10 | .240 | 6.10 | 18 | -.302 | -7.67 | .154 | 3.91 | 32 | -.188 | -4.78 | .130 | 3.30 |
| 5 | .302 | 7.67 | .154 | 3.91 | 19 | -.240 | -6.10 | .240 | 6.10 | 33 | -.106 | -2.69 | .202 | 5.13 |
| 6 | .335 | 8.51 | .053 | 1.35 | 20 | -.154 | -3.91 | .302 | 7.67 | 34 | -.053 | -1.35 | .110 | 2.79 |
| 7 | .335 | 8.51 | -.053 | -1.35 | 21 | .000 | 0.00 | .228 | 5.79 | 35 | .053 | 1.35 | .110 | 2.79 |
| 8 | .302 | 7.67 | -.154 | -3.91 | 22 | .106 | 2.69 | .202 | 5.13 | 36 | .119 | 3.02 | .027 | 0.69 |
| 9 | .240 | 6.10 | -.240 | -6.10 | 23 | .188 | 4.78 | .130 | 3.30 | 37 | .096 | 2.44 | -.076 | -1.93 |
| 10 | .154 | 3.91 | -.302 | -7.67 | 24 | .226 | 5.74 | .028 | 0.71 | 38 | .000 | 0.00 | -.122 | -3.10 |
| 11 | -.053 | 1.35 | -.335 | -8.51 | 25 | .213 | 5.41 | -.081 | -2.06 | 39 | -.096 | -2.44 | -.076 | -1.93 |
| 12 | -.053 | -1.35 | -.335 | -8.51 | 26 | .151 | 3.84 | -.171 | -4.34 | 40 | -.119 | -3.02 | .027 | 0.69 |
| 13 | -.154 | -3.91 | -.302 | -7.67 | 27 | .055 | 1.40 | -.222 | -5.64 | 41 | .000 | 0.00 | .000 | 0.00 |
| 14 | -.240 | -6.10 | -.240 | -6.10 | 28 | -.055 | -1.40 | -.222 | -5.64 | | | | | |

Straight PCB Footprints

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| Insert Arrangement | Pin Connector | Socket Connector |
|--|---------------|------------------|
| <p>17-85, 19-85 (85) #23 Contacts .022 Max. Dia. Tail</p> | | |
| <p>21-12, 23-12 (12) #12 Contacts</p> | | |
| <p>21-22, 23-22 (22) #16 Contacts</p> | | |

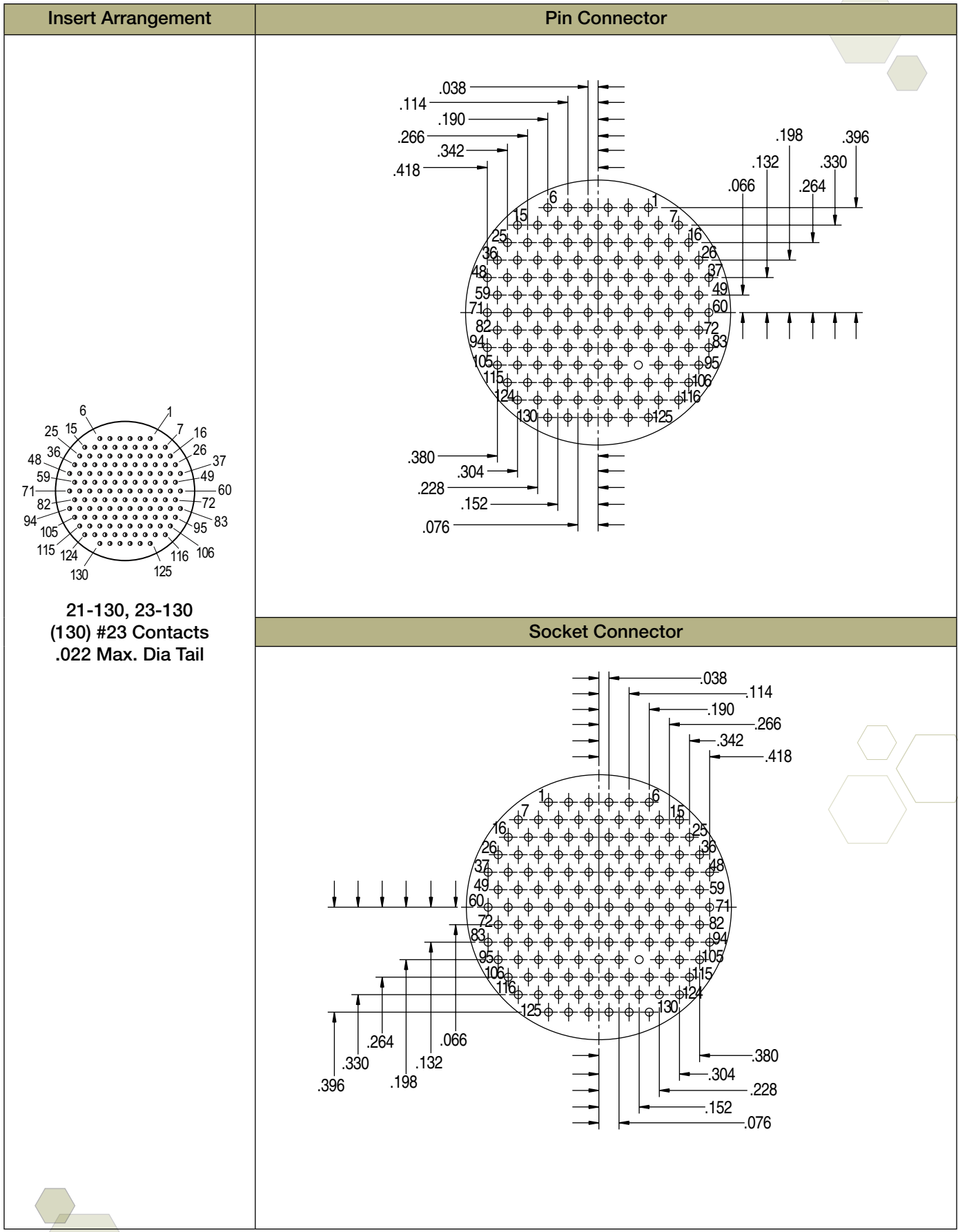
Straight PCB Footprints



| Pin. No. | X | | Y | | Pin. No. | X | | Y | | Pin. No. | X | | Y | |
|----------|-------|--------|-------|--------|----------|-------|-------|-------|-------|----------|-------|-------|-------|-------|
| | in. | mm. | in. | mm. | | in. | mm. | in. | mm. | | in. | mm. | in. | mm. |
| 1 | -.159 | -4.04 | .418 | 10.62 | 24 | -.379 | -9.63 | .198 | 5.03 | 47 | -.053 | -1.35 | .234 | 5.94 |
| 2 | -.053 | -1.35 | .418 | 10.62 | 25 | -.326 | -8.28 | .290 | 7.37 | 48 | .053 | 1.35 | .234 | 5.94 |
| 3 | .053 | 1.35 | .418 | 10.62 | 26 | -.251 | -6.38 | .365 | 9.27 | 49 | .145 | 3.68 | .181 | 4.60 |
| 4 | .159 | 4.04 | .418 | 10.62 | 27 | -.106 | -2.69 | .326 | 8.28 | 50 | .220 | 5.59 | .106 | 2.69 |
| 5 | .251 | 6.38 | .365 | 9.27 | 28 | .000 | 0.00 | .326 | 8.28 | 51 | .220 | 5.59 | .000 | 0.00 |
| 6 | .326 | 8.28 | .290 | 7.37 | 29 | .106 | -2.69 | .326 | 8.28 | 52 | .220 | 5.59 | -.106 | -2.69 |
| 7 | .379 | 9.63 | .198 | 5.03 | 30 | .198 | 5.03 | .273 | 6.93 | 53 | .145 | 3.68 | -.181 | -4.60 |
| 8 | .432 | 10.97 | .106 | 2.69 | 31 | .273 | 6.93 | .198 | 5.03 | 54 | .053 | 1.35 | -.234 | -5.94 |
| 9 | .432 | 10.97 | .000 | 0.00 | 32 | .326 | 8.28 | .106 | 2.69 | 55 | -.053 | -1.35 | -.234 | -5.94 |
| 10 | .432 | 10.97 | -.106 | -2.69 | 33 | .326 | 8.28 | .000 | 0.00 | 56 | -.145 | -3.68 | -.181 | -4.60 |
| 11 | .379 | 9.63 | -.198 | -5.03 | 34 | .326 | 8.28 | -.106 | -2.69 | 57 | -.220 | -5.59 | -.106 | -2.69 |
| 12 | .326 | 8.28 | -.290 | -7.37 | 35 | .273 | 6.93 | -.198 | -5.03 | 58 | .220 | -5.59 | .000 | 0.00 |
| 13 | .251 | 6.38 | -.365 | -9.27 | 36 | .198 | 5.03 | -.273 | -6.93 | 59 | -.220 | -5.59 | .106 | 2.69 |
| 14 | .159 | 4.04 | -.418 | -10.62 | 37 | .106 | 2.69 | -.326 | -8.28 | 60 | -.145 | -3.68 | .181 | 4.60 |
| 15 | .053 | 1.35 | -.418 | -10.62 | 38 | .000 | 0.00 | -.326 | -8.28 | 61 | -.053 | -1.35 | .128 | 3.25 |
| 16 | -.053 | -1.35 | -.418 | -10.62 | 39 | -.106 | -2.69 | -.326 | -8.28 | 62 | .053 | 1.35 | .128 | 3.25 |
| 17 | -.159 | -4.04 | -.418 | -10.62 | 40 | -.198 | -5.03 | -.273 | -6.93 | 63 | .128 | 3.25 | .053 | 1.35 |
| 18 | -.251 | -6.38 | -.365 | -9.27 | 41 | -.273 | -6.93 | -.198 | -5.03 | 64 | .128 | 3.25 | -.053 | -1.35 |
| 19 | -.326 | -8.28 | -.290 | -7.37 | 42 | -.326 | -8.28 | -.106 | -2.69 | 65 | .053 | 1.35 | -.128 | -3.25 |
| 20 | -.379 | -9.63 | -.198 | -5.03 | 43 | -.326 | -8.28 | .000 | 0.00 | 66 | -.053 | -1.35 | -.128 | -3.25 |
| 21 | -.432 | -10.97 | -.106 | -2.69 | 44 | -.326 | -8.28 | .106 | 2.69 | 67 | -.128 | -3.25 | -.053 | -1.35 |
| 22 | .432 | -10.97 | .000 | 0.00 | 45 | -.273 | -6.93 | .198 | 5.03 | 68 | -.128 | -3.25 | .053 | 1.35 |
| 23 | -.432 | -10.97 | .106 | 2.69 | 46 | -.198 | -5.03 | .273 | 6.93 | 69 | .000 | 0.00 | .000 | 0.00 |

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PERFORMANCE SPECIFICATIONS

| | |
|--|--|
| Current Rating (Maximum) | Size #23 Contact: 5 AMPS. Size #20 contact: 7.5 AMPS. Size #16 contact: 13 AMPS. Size #12 contact: 23 AMPS. |
| Test Voltage (Dielectric Withstanding Voltage) Mated Connectors | Size #23 contacts: 500 VAC RMS sea level, 100 VAC RMS 40,000 feet Size #20 contacts: 1800 VAC RMS sea level, 325 VAC RMS 40,000 feet Size #20HD contacts: 750 VAC RMS sea level, 150 VAC RMS 40,000 feet Size #16 contacts: 1800 VAC RMS sea level, 1000 VAC RMS 40,000 feet Size #12 contacts: 1800 VAC RMS sea level, 1000 VAC RMS 40,000 feet |
| Insulation Resistance | 5000 megohms minimum |
| Contact Resistance | Size #23 Contact: 73 millivolt drop at 5 AMPS. test current Size #20 contact: 55 millivolt drop at 7.5 AMPS. test current Size #16 contact: 49 millivolt drop at 13 AMPS. test current Size #12 contact: 42 millivolt drop at 23 AMPS. test current |
| Operating Temperature | -65° C. to +150° C. |
| Immersion, Mated | 1 meter water immersion for 1 hour (2M803 Series splash proof only) |
| Shock | 300 g |
| Vibration | 37 g |
| Magnetic Permeability | 2.0 μ maximum |
| Please refer to the comprehensive 2M Series Product Specification for additional parameters and test methods. Filter and Hermetic designs have different specifications. (Please refer to individual sections) | |

MATERIALS AND FINISHES

| | |
|---|------------------------------------|
| Aluminum Shell, Barrel, and Coupling Nut | Aluminum alloy 6061 T6 |
| Stainless Steel Shell, Barrel Coupling Nut | Passivated Stainless Steel, 200° C |
| Front and Rear Inserts | Polyphenylene Sulfide (PPS) |
| Contact Retention Clip | Beryllium copper, heat-treated |
| Grommet, Peripheral Seal and Interfacial Seal | Fluorosilicone Rubber |
| Contacts | Gold Plated Copper alloy |
| Socket Contact Hood | Passivated Stainless steel |
| Adhesives | Various Epoxies & RTV's |
| Potting Compound, PCB and Solder Cup Versions | High Strength Epoxy |

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| DESCRIPTION | REQUIREMENT | PROCEDURE |
|---|--|---|
| ELECTRICAL | | |
| Contact resistance | SAE AS39029 Table V | |
| | <u>Wire Size</u> | <u>Test Current</u> <u>Max Voltage Drop</u> |
| | 12 | 23 42 |
| | 14 | 17 40 |
| | 16 | 13 49 |
| | 20 | 7.5 55 |
| | 22 | 5 73 |
| | 24 | 3 45 |
| Low level contact resistance | <u>Wire Size</u> | <u>Max. Milliohms</u> |
| | 16 | 5 |
| | 20 | 9 |
| | 22 | 15 |
| | 24 | 20 |
| | 26 | 31 |
| Insulation resistance | 5000 megohms minimum | |
| | EIA-364-21 500 volts DC ± 50 volts. Test between adjacent contacts and contacts to shell. | |
| Dielectric withstanding voltage, sea level | No breakdown or flashover | |
| | #23 contacts | 500 volts |
| | #20HD contacts | 750 volts |
| | #16 contacts | 1800 volts |
| Dielectric withstanding voltage, 40,000 feet altitude | #12 contacts | 1800 volts |
| | No breakdown or flashover | |
| | #23 contacts | 100 volts |
| | #20HD contacts | 150 volts |
| Current carrying capacity | #16 contacts | 1000 volts |
| | #12 contacts | 1000 volts |
| | <u>Contact Size</u> | <u>Max Current</u> |
| | 12 | 23 |
| | 16 | 13 |
| | 20 | 7.5 |
| | 23 | 5 |
| | EIA-364-70 Method 1 | |

| DESCRIPTION | REQUIREMENT | PROCEDURE | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--------------|---------------------|-------|----------------------------|--------------|---------|-------|----|---------|----|---|---------|----|----|---------|----|----|--|----|----|----------|----|----|--|
| Shell-to-shell conductivity, Initial | <p>The maximum voltage drop across a mated pair shall not exceed the values shown.</p> <table border="1"> <thead> <tr> <th>Series</th> <th>Voltage Drop</th> </tr> </thead> <tbody> <tr> <td>2M801</td> <td>2.5</td> </tr> <tr> <td>2M803</td> <td>100</td> </tr> <tr> <td>2M804</td> <td>2</td> </tr> <tr> <td>2M805</td> <td>2</td> </tr> </tbody> </table> | Series | Voltage Drop | 2M801 | 2.5 | 2M803 | 100 | 2M804 | 2 | 2M805 | 2 | EIA-364-83 Electroless nickel plated connectors. | | | | | | | | | | | | | |
| Series | Voltage Drop | | | | | | | | | | | | | | | | | | | | | | | | |
| 2M801 | 2.5 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2M803 | 100 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2M804 | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2M805 | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Shell-to-shell conductivity, after conditioning (48 hours salt spray) | <p>The maximum voltage drop across a mated pair shall not exceed the values shown.</p> <table border="1"> <thead> <tr> <th>Series</th> <th>Voltage Drop</th> </tr> </thead> <tbody> <tr> <td>2M801</td> <td>2.5</td> </tr> <tr> <td>2M803</td> <td>200</td> </tr> <tr> <td>2M804</td> <td>4</td> </tr> <tr> <td>2M805</td> <td>2</td> </tr> </tbody> </table> | Series | Voltage Drop | 2M801 | 2.5 | 2M803 | 200 | 2M804 | 4 | 2M805 | 2 | EIA-364-83 Electroless nickel plated connectors. | | | | | | | | | | | | | |
| Series | Voltage Drop | | | | | | | | | | | | | | | | | | | | | | | | |
| 2M801 | 2.5 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2M803 | 200 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2M804 | 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2M805 | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Shielding effectiveness, low frequency (100MHz-1000 MHz) | <table border="1"> <thead> <tr> <th rowspan="2">Frequency</th> <th colspan="2">dB Min. Attenuation</th> </tr> <tr> <th>Series 2M801, 2M804, 2M805</th> <th>Series 2M803</th> </tr> </thead> <tbody> <tr> <td>100 MHz</td> <td>75</td> <td>60</td> </tr> <tr> <td>200 MHz</td> <td>70</td> <td>55</td> </tr> <tr> <td>300 MHz</td> <td>65</td> <td>55</td> </tr> <tr> <td>400 MHz</td> <td>63</td> <td>50</td> </tr> <tr> <td>800 MHz</td> <td>58</td> <td>45</td> </tr> <tr> <td>1000 MHz</td> <td>55</td> <td>40</td> </tr> </tbody> </table> | Frequency | dB Min. Attenuation | | Series 2M801, 2M804, 2M805 | Series 2M803 | 100 MHz | 75 | 60 | 200 MHz | 70 | 55 | 300 MHz | 65 | 55 | 400 MHz | 63 | 50 | 800 MHz | 58 | 45 | 1000 MHz | 55 | 40 | EIA-364-21 Electroless Nickel Plated Connectors |
| Frequency | dB Min. Attenuation | | | | | | | | | | | | | | | | | | | | | | | | |
| | Series 2M801, 2M804, 2M805 | Series 2M803 | | | | | | | | | | | | | | | | | | | | | | | |
| 100 MHz | 75 | 60 | | | | | | | | | | | | | | | | | | | | | | | |
| 200 MHz | 70 | 55 | | | | | | | | | | | | | | | | | | | | | | | |
| 300 MHz | 65 | 55 | | | | | | | | | | | | | | | | | | | | | | | |
| 400 MHz | 63 | 50 | | | | | | | | | | | | | | | | | | | | | | | |
| 800 MHz | 58 | 45 | | | | | | | | | | | | | | | | | | | | | | | |
| 1000 MHz | 55 | 40 | | | | | | | | | | | | | | | | | | | | | | | |
| Shielding effectiveness, high frequency (1Ghz-10GHz) | <table border="1"> <thead> <tr> <th rowspan="2">Frequency</th> <th colspan="2">dB Min. Attenuation</th> </tr> <tr> <th>Series 2M801, 2M804</th> <th>Series 2M805</th> </tr> </thead> <tbody> <tr> <td>1 GHz</td> <td>55</td> <td>85</td> </tr> <tr> <td>3 GHz</td> <td>50</td> <td>69</td> </tr> <tr> <td>5 GHz</td> <td>45</td> <td>66</td> </tr> <tr> <td>19 GHz</td> <td>40</td> <td>65</td> </tr> </tbody> </table> | Frequency | dB Min. Attenuation | | Series 2M801, 2M804 | Series 2M805 | 1 GHz | 55 | 85 | 3 GHz | 50 | 69 | 5 GHz | 45 | 66 | 19 GHz | 40 | 65 | EIA-364-66 Electroless nickel plated connectors | | | | | | |
| Frequency | dB Min. Attenuation | | | | | | | | | | | | | | | | | | | | | | | | |
| | Series 2M801, 2M804 | Series 2M805 | | | | | | | | | | | | | | | | | | | | | | | |
| 1 GHz | 55 | 85 | | | | | | | | | | | | | | | | | | | | | | | |
| 3 GHz | 50 | 69 | | | | | | | | | | | | | | | | | | | | | | | |
| 5 GHz | 45 | 66 | | | | | | | | | | | | | | | | | | | | | | | |
| 19 GHz | 40 | 65 | | | | | | | | | | | | | | | | | | | | | | | |

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2M804

2M805

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- Micro-D
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- Nexus

| DESCRIPTION | REQUIREMENT | PROCEDURE |
|---|---|---|
| MECHANICAL | | |
| Vibration, Sine | No discontinuity of greater than 1 microsecond, no cracking, breaking or loosening of parts, plug shall not become disengaged from receptacle. Connectors shall meet electrical requirements after vibration test. | MIL-STD-202 Method 204, test Condition G 12 sweep cycles per axes, 20 min. per 10-2000-10Hz |
| Vibration, Random | No discontinuity of greater than 1 microsecond, no cracking, breaking or loosening of parts, plug shall not become disengaged from receptacle. Connectors shall meet electrical requirements after vibration test. | EIA-364-28 Test Condition V Letter I 100 milliamp test current 50- 2,000 Hz 37.80 g rms |
| Gunfire Vibration | No discontinuity of greater than 1 microsecond, no cracking, breaking or loosening of parts, plug shall not become disengaged from receptacle. Connectors shall meet electrical requirements after vibration test. | MIL-STD-810F Method 519.5 |
| Mechanical Shock | No discontinuity of greater than 1 microsecond, no cracking, breaking or loosening of parts, plug shall not become disengaged from receptacle. Connectors shall meet electrical requirements after shock test. | EIA-364-27 Condition D 300 G, halvesine, 3ms, 3 axes |
| Mechanical durability, at ambient temperature | No deterioration which will adversely affect the connector after 2000 cycles (where applicable) of mating and unmating. Connectors shall meet contact resistance, insulation resistance, shell-to-shell resistance, DWV, and mating and unmating force. | EIA-364-09 |
| Solderability, PC tail contacts | 95% solder coverage. Smooth, bright and even finish. | EIA-364-52 Category 3 8 hours steam aging prior to test 245° C, 4-5 sec. dwell 10X magnification |
| Resistance To Soldering Heat | No damage to connector. Connectors shall meet insulation resistance and waterproof sealing requirements. | EIA-364-56 260° C, 10 seconds (PC tail) |

| DESCRIPTION | REQUIREMENT | PROCEDURE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|--|----------------------------------|-------------|--------------|--------------|--------------|-------------|---------|------|------|------|--------|------|------|------|-------|-------------|-------|------|------------|------|----|--------|----|----|----|--|----|--|----|----|--|
| Impact | No impairment of function. Connector shall meet contact resistance, insulation resistance and waterproof sealing. | EIA-364-42 1 meter 8 drops | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contact retention | <table border="1"> <thead> <tr> <th>Contact Size</th> <th>Min. Pounds</th> <th>Min. Newtons</th> </tr> </thead> <tbody> <tr> <td>23</td> <td>6</td> <td>27</td> </tr> <tr> <td>20</td> <td>15</td> <td>67</td> </tr> <tr> <td>20HD</td> <td>9</td> <td>40</td> </tr> <tr> <td>16</td> <td>25</td> <td>111</td> </tr> <tr> <td>12</td> <td>25</td> <td>111</td> </tr> </tbody> </table> | Contact Size | Min. Pounds | Min. Newtons | 23 | 6 | 27 | 20 | 15 | 67 | 20HD | 9 | 40 | 16 | 25 | 111 | 12 | 25 | 111 | EIA-364-29 | | | | | | | | | | | | |
| Contact Size | Min. Pounds | Min. Newtons | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | 6 | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 15 | 67 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20HD | 9 | 40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | 25 | 111 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | 25 | 111 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contact separation force | <table border="1"> <thead> <tr> <th>Contact Size</th> <th>Min. Ounces</th> <th>Min. Newtons</th> </tr> </thead> <tbody> <tr> <td>23</td> <td>0.5</td> <td>0.14</td> </tr> <tr> <td>20</td> <td>0.7</td> <td>0.19</td> </tr> <tr> <td>16</td> <td>2.0</td> <td>0.56</td> </tr> <tr> <td>12</td> <td>3.0</td> <td>0.83</td> </tr> </tbody> </table> | Contact Size | Min. Ounces | Min. Newtons | 23 | 0.5 | 0.14 | 20 | 0.7 | 0.19 | 16 | 2.0 | 0.56 | 12 | 3.0 | 0.83 | SAE AS39029 | | | | | | | | | | | | | | | |
| Contact Size | Min. Ounces | Min. Newtons | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | 0.5 | 0.14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 0.7 | 0.19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | 2.0 | 0.56 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | 3.0 | 0.83 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Coupling torque | <p>Threaded coupling connector coupling torque shall not exceed the following requirements.</p> <table border="1"> <thead> <tr> <th colspan="3">Shell Size</th> </tr> <tr> <th>Series 2M801</th> <th>Series 2M805</th> <th>Inch Pounds</th> </tr> </thead> <tbody> <tr> <td>5, 6, 7</td> <td>8, 9</td> <td>8</td> </tr> <tr> <td>8,9</td> <td>10, 11</td> <td>9</td> </tr> <tr> <td>10</td> <td>12</td> <td>12</td> </tr> <tr> <td>12, 13</td> <td>15</td> <td>16</td> </tr> <tr> <td>14, 15</td> <td>18</td> <td>28</td> </tr> <tr> <td>16, 17</td> <td>19</td> <td>24</td> </tr> <tr> <td>21</td> <td></td> <td>32</td> </tr> <tr> <td></td> <td>23</td> <td>36</td> </tr> </tbody> </table> | Shell Size | | | Series 2M801 | Series 2M805 | Inch Pounds | 5, 6, 7 | 8, 9 | 8 | 8,9 | 10, 11 | 9 | 10 | 12 | 12 | 12, 13 | 15 | 16 | 14, 15 | 18 | 28 | 16, 17 | 19 | 24 | 21 | | 32 | | 23 | 36 | |
| Shell Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Series 2M801 | Series 2M805 | Inch Pounds | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5, 6, 7 | 8, 9 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8,9 | 10, 11 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 12 | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12, 13 | 15 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14, 15 | 18 | 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16, 17 | 19 | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | | 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 23 | 36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unmating force (Series 2M804) | <p>Series 2M804 push/pull connectors</p> <table border="1"> <thead> <tr> <th>Contact Arrangement</th> <th>Pounds</th> </tr> </thead> <tbody> <tr> <td>5-3</td> <td>10.6</td> </tr> <tr> <td>6-4</td> <td>10.8</td> </tr> <tr> <td>6-7</td> <td>11.4</td> </tr> <tr> <td>7-10</td> <td>12.0</td> </tr> <tr> <td>8-13</td> <td>12.6</td> </tr> <tr> <td>9-19</td> <td>13.8</td> </tr> <tr> <td>10-26</td> <td>15.2</td> </tr> <tr> <td>12-37</td> <td>17.4</td> </tr> <tr> <td>14-55</td> <td>21.0</td> </tr> </tbody> </table> | Contact Arrangement | Pounds | 5-3 | 10.6 | 6-4 | 10.8 | 6-7 | 11.4 | 7-10 | 12.0 | 8-13 | 12.6 | 9-19 | 13.8 | 10-26 | 15.2 | 12-37 | 17.4 | 14-55 | 21.0 | | | | | | | | | | | |
| Contact Arrangement | Pounds | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5-3 | 10.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6-4 | 10.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6-7 | 11.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7-10 | 12.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8-13 | 12.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9-19 | 13.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10-26 | 15.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12-37 | 17.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14-55 | 21.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| DESCRIPTION | REQUIREMENT | PROCEDURE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|--|------------|--------------|--------------|----------------------|--|---------------------|--------------|--------------|----------------------|---|---|--|-----|---|---|---|-----|---|---|---|-----|---|---|----|-----|---|---|----|-----|----|----|----|-----|----|----|----|-----|----|----|----|-----|----|----|----|-----|--|----|----|-----|--|
| Insert retention | No impairment of function. Connector shall meet contact resistance, insulation resistance and waterproof sealing. | EIA-365-35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th colspan="4">Shell Size</th> </tr> <tr> <th>Series 2M803, 2M804</th> <th>Series 2M801</th> <th>Series 2M805</th> <th>Min. Force in Pounds</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>5</td> <td></td> <td>100</td> </tr> <tr> <td>6</td> <td>6</td> <td>8</td> <td>100</td> </tr> <tr> <td>7</td> <td>7</td> <td>9</td> <td>100</td> </tr> <tr> <td>8</td> <td>8</td> <td>10</td> <td>100</td> </tr> <tr> <td>9</td> <td>9</td> <td>11</td> <td>100</td> </tr> <tr> <td>10</td> <td>10</td> <td>12</td> <td>100</td> </tr> <tr> <td>12</td> <td>13</td> <td>15</td> <td>100</td> </tr> <tr> <td>14</td> <td>16</td> <td>18</td> <td>100</td> </tr> <tr> <td>15</td> <td>17</td> <td>19</td> <td>100</td> </tr> <tr> <td></td> <td>21</td> <td>23</td> <td>100</td> </tr> </tbody> </table> | | Shell Size | | | | Series 2M803, 2M804 | Series 2M801 | Series 2M805 | Min. Force in Pounds | 5 | 5 | | 100 | 6 | 6 | 8 | 100 | 7 | 7 | 9 | 100 | 8 | 8 | 10 | 100 | 9 | 9 | 11 | 100 | 10 | 10 | 12 | 100 | 12 | 13 | 15 | 100 | 14 | 16 | 18 | 100 | 15 | 17 | 19 | 100 | | 21 | 23 | 100 | |
| | Shell Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Series 2M803, 2M804 | | Series 2M801 | Series 2M805 | Min. Force in Pounds | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 | | 5 | | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | | 6 | 8 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 | | 7 | 9 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 | | 8 | 10 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 9 | | 9 | 11 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 | | 10 | 12 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | 13 | 15 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | 16 | 18 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | 17 | 19 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 21 | 23 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnetic Permeability | 2 μ maximum. | EIA-364-54 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

ENVIRONMENTAL

| | | |
|--|--|---|
| Operating temperature | -65° to +150°C | |
| Water immersion, mated | No evidence of water penetration into mated connectors. $\geq 100\Omega$ insulation resistance. | MIL-STD-810F Method 512.4 1 meter immersion 1 hour |
| Water immersion, open face panel mount receptacles with non-removable printed circuit board or solder cup contacts | Connectors with waterblock potting process. 1 X 10 ⁻⁴ cc/second maximum helium leak rate at 1 atmosphere pressure differential following thermal shock conditioning. | EIA-365-02 3 cycles thermal shock -57°C to +71°C 75 min. dwell 5 minute transfer rate |
| Humidity, cyclic (damp heat, cyclic) (moisture resistance) | No deterioration which will adversely affect the connector. 100 megohms minimum insulation resistance during the final cycle. Following the recovery period, connectors shall meet contact resistance, shell-to-shell resistance and DWV requirements. | EIA-364-31 Condition B Method III 80-98% RH 10 cycles (10 days) +25° C to +65° C Step 7b vibration deleted. 24 hour recovery period. |

| DESCRIPTION | REQUIREMENT | PROCEDURE |
|--|---|---|
| 21 day humidity (damp heat, long term) | No deterioration which will adversely affect the connector. Following the drying period, connectors shall meet 100 megohms minimum, contact resistance, shell-to-shell resistance, DWV, mating and unmating requirements. | EIA-364-31 Condition C Method II 90-95% RH 40° C Apply 100 volts DC during test. 4 hours drying time at ambient temperature prior to final measurements. |
| Thermal shock | No mechanical damage or loosening of parts. Following thermal shock, connector shall meet contact resistance, DWV, insulation resistance and shell-to-shell resistance requirements. | EIA-364-32 Test Condition IV 5 cycles consisting of -65° C 30 minutes, +25° C 5 minutes max., +150° C 30 minutes, +25° C 5 minutes max. |
| Corrosion (salt mist) | No exposure of base metal. Connectors shall meet DWV and contact resistance requirements following the test. | EIA-364-26 5% salt solution 35° C Unmated connectors Code C: 48 hours Code M: 48 hours Code MT: 500 hours Code NF: 500 hours Code ZN: 500 hours Code ZNU: 500 hours Code UCR: 500 hours |
| Sand and dust | Mated connectors shall withstand the effects of blowing sand and dust | MIL-STD-810F, Method 510.4 |
| Fungus | Connector materials shall be fungus inert. | MIL-STD-810F, Method 508.5 |
| Fluid immersion | No visible damage from immersion in various fuels and oils. Connector shall meet coupling torque and dielectric withstanding voltage requirements. | EIA-364-10 Unmated connectors |
| Altitude immersion | No evidence of moisture on connector interface or contacts. Connector shall meet dielectric withstanding voltage. | EIA-364-03 |

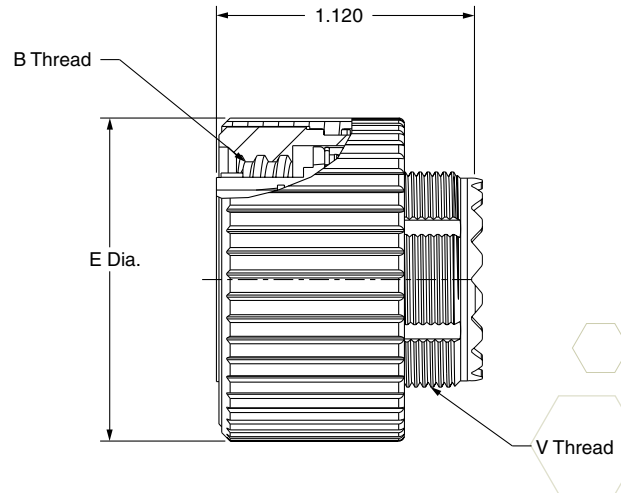
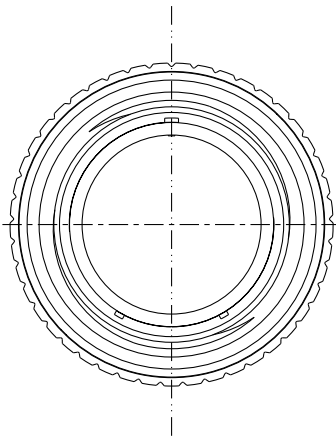
Dualok

Amphenol now offers a *Dualok* Plug for High Vibration Applications!

Meets or Exceeds MIL-DTL-38999 Series III Vibration Levels

Amphenol's 2M801 DUALOK line is now available for extreme vibration applications. The NEW 2M DUALOK plug features a newly developed locking mechanism which ensures solid coupling and metal-to-metal bottoming in the most severe vibration environments. Patent pending. Consult Amphenol Aerospace for ordering information.

NEW!



| Shell Size | E DIA. | | B Thread | V Thread |
|------------|--------|-------|-------------------|-------------------|
| | In. | mm. | | |
| 5 | .653 | 16.59 | .3125-.05P-1L-2B | .2500-32 UNEF-2A |
| 6 | .715 | 18.16 | .3750-.05P-1L-2B | .3125-32 UNEF-2A |
| 7 | .868 | 22.05 | .4375-.05P-1L-2B | .4375-28 UNEF-2A |
| 8 | .930 | 23.62 | .5000-.05P-.1L-2B | .5000-28 UNEF-2A |
| 9 | .993 | 25.22 | .5625-.05P-.1L-2B | .5625-24 UNEF-2A |
| 10 | 1.060 | 26.92 | .6250-.05P-1L-2B | .6250-24 UNEF-2A |
| 13 | 1.153 | 29.29 | .8125-.1P-.2L-2B | .6875-24 UNEF-2A |
| 16 | 1.340 | 34.04 | 1.0000-.1P-.2L-2B | .9375-20 UNEF-2A |
| 17 | 1.402 | 35.61 | 1.0625-.1P-.2L-2B | .9375-20 UNEF-2A |
| 21 | 1.653 | 41.99 | 1.3125-.1p-.2L-2B | 1.1875-18 UNEF-2A |

2M801 Series Micro-Miniature Connector:

Amphenol's 2M801 Series of connectors is ideal for applications where space is limited or a high density interconnect is needed. The series features Plugs with or without anti-decoupling mechanisms and a Dual Start ACME thread that provides full mating in 1 ½ turns. Plugs and Receptacles are provided in two different styles to accommodate the attachment of backshell with rear accessory threads or with integral backshell. The integral backshell allows for use of EMI shielding attachments and/or overmolding. Contact termination styles include Crimp, PC Tail, and Solder Cup with others available upon request. Custom and Filter configurations are available, please consult Amphenol Aerospace for ordering information.

2M801 FEATURES INCLUDE:

- Anti-Vibration Self locking Plugs (-26)
- Dual-Start ACME Thread for 1 ½ Turn Full mating
- Sealed Receptacles:
 - Hermetic (1x10⁻⁸ cc/second)
 - Epoxy Backfilled (1x10⁻⁴ cc/second)
- ROHS Compliant Platings available
- Insert Arrangements up to 130 contacts



2M801 SPECIFICATIONS

| | |
|-------------------------|---|
| Current Rating | See Insert Arrangements (pg. 13-15) |
| DWV | See Insert Arrangements (pg. 13-15) |
| Insulation Resistance | 5000 megohms min. |
| Operating Temperature | -65°C to +150°C |
| Shock | 300 g's |
| Random Vibration | 37 g's |
| Shielding Effectiveness | 55 dB min. from 100MHz to 1000MHz |
| Durability | 2000 mating cycles (-16) plug 500 mating cycles (-26) plug |

2M801 MATERIALS AND FINISHES

| | |
|-----------------------------------|-----------------------------------|
| Shells | Aluminum Alloy or Stainless Steel |
| Contacts | Copper Alloy, gold plated |
| Insulators | Polyphenylene Sulfide (PPS) |
| Contact Retention | Beryllium Copper Alloy |
| Grommet, Interfacial Seal, O-Ring | Fluorosilicone Rubber |



2M Series 801 Dual-Start Acme Threads

Connector Weights

SERIES 2M801 MAXIMUM CONNECTOR WEIGHT IN GRAMS

| Insert Arrg. | Plug | Jam Nut Recept. Crimp | Jam Nut Recept. PCB | Sq. Flange Recept. Crimp | Sq. Flange Recept. PCB | Insert Arrg. | Plug | Jam Nut Recept. Crimp | Jam Nut Recept. PCB | Sq. Flange Recept. Crimp | Sq. Flange Recept. PCB |
|--------------|------|-----------------------|---------------------|--------------------------|------------------------|--------------|------|-----------------------|---------------------|--------------------------|------------------------|
| 5-3P | 4.4 | 3.4 | 3.6 | 2.0 | 2.2 | 10-201S | 16.7 | 13.5 | 14.4 | 15.0 | 11.7 |
| 5-3S | 4.5 | 3.5 | 3.7 | 2.0 | 2.4 | 10-202P | 14.9 | 11.7 | 12.6 | 13.2 | 9.9 |
| 6-1P | 5.6 | 4.3 | 4.6 | 2.7 | 2.9 | 10-202S | 16.3 | 13.1 | 14.0 | 14.6 | 11.3 |
| 6-1S | 5.9 | 4.6 | 4.9 | 3.0 | 3.2 | 13-2P | 18.9 | 17.2 | 17.2 | 17.2 | 15.1 |
| 6-4P | 5.6 | 4.3 | 4.6 | 2.7 | 2.9 | 13-2S | 20.4 | 18.7 | 18.7 | 18.7 | 16.6 |
| 6-4S | 5.8 | 4.5 | 4.7 | 2.8 | 3.0 | 13-3P | 19.8 | 18.1 | 18.1 | 18.1 | 16.0 |
| 6-7P | 5.4 | 4.1 | 4.6 | 2.9 | 3.4 | 13-3S | 21.4 | 19.7 | 19.7 | 19.7 | 17.6 |
| 6-7S | 5.6 | 4.4 | 4.7 | 3.2 | 3.5 | 13-7P | 20.0 | 18.3 | 18.3 | 18.3 | 16.2 |
| 7-1P | 7.8 | 6.5 | 7.2 | 4.5 | 5.2 | 13-7S | 22.4 | 20.7 | 20.7 | 20.7 | 18.6 |
| 7-1S | 8.3 | 7.0 | 7.7 | 5.0 | 5.7 | 13-37P | 18.4 | 16.7 | 16.7 | 16.7 | 14.6 |
| 7-10P | 7.6 | 6.3 | 7.7 | 4.3 | 5.0 | 13-37S | 19.9 | 17.6 | 17.6 | 17.6 | 15.5 |
| 7-10S | 8.0 | 6.7 | 7.0 | 4.7 | 5.2 | 13-200P | 19.0 | 17.3 | 17.3 | 17.3 | 15.2 |
| 8-2P | 8.9 | 7.7 | 7.2 | 5.6 | 6.8 | 13-200S | 21.1 | 19.4 | 19.4 | 19.4 | 17.3 |
| 8-2S | 9.6 | 8.4 | 8.7 | 6.3 | 7.5 | 13-201P | 19.1 | 17.4 | 17.4 | 17.4 | 15.3 |
| 8-13P | 8.3 | 7.1 | 9.4 | 5.0 | 6.2 | 13-201S | 21.3 | 19.6 | 19.6 | 19.6 | 17.5 |
| 8-13S | 8.9 | 7.6 | 8.1 | 5.6 | 6.5 | 16-5P | 28.5 | 22.6 | 24.4 | 25.4 | 23.0 |
| 8-200P | 9.2 | 8.0 | 8.5 | 5.9 | 7.1 | 16-5S | 31.2 | 25.3 | 28.1 | 28.1 | 25.7 |
| 8-200S | 9.8 | 8.6 | 9.0 | 6.5 | 7.7 | 16-12P | 29.2 | 23.3 | 26.1 | 26.1 | 23.7 |
| 9-4P | 10.9 | 8.7 | 10.7 | 7.6 | 8.6 | 16-12S | 32.5 | 26.6 | 29.4 | 29.4 | 27.0 |
| 9-4S | 11.8 | 10.6 | 11.6 | 8.5 | 9.5 | 16-55P | 26.5 | 20.6 | 24.3 | 24.3 | 21.9 |
| 9-19P | 10.1 | 7.9 | 9.2 | 5.8 | 7.1 | 16-55S | 29.2 | 23.3 | 26.1 | 26.1 | 23.7 |
| 9-19S | 10.9 | 8.7 | 9.7 | 6.6 | 7.6 | 17-7P | 29.8 | 27.0 | 29.4 | 29.4 | 25.2 |
| 9-200P | 10.4 | 9.2 | 10.2 | 7.1 | 8.1 | 17-7S | 33.0 | 30.2 | 32.6 | 32.6 | 28.4 |
| 9-200S | 11.4 | 10.2 | 11.2 | 8.1 | 9.1 | 17-14P | 32.6 | 29.8 | 32.2 | 32.2 | 28.0 |
| 9-201P | 9.6 | 8.4 | 9.4 | 6.6 | 7.6 | 17-14S | 32.3 | 29.5 | 31.9 | 31.9 | 27.7 |
| 9-201S | 11.5 | 10.3 | 11.3 | 8.2 | 9.2 | 17-85P | 28.1 | 23.2 | 29.0 | 29.0 | 25.3 |
| 10-5P | 15.8 | 12.6 | 13.5 | 14.1 | 12.8 | 17-85S | 31.0 | 26.2 | 30.6 | 30.6 | 26.4 |
| 10-5S | 17.1 | 13.9 | 14.8 | 15.4 | 14.1 | 21-12P | 35.0 | 31.4 | 34.4 | 26.4 | 31.4 |
| 10-26P | 14.2 | 11.0 | 11.9 | 12.5 | 8.7 | 21-12S | 39.6 | 36.0 | 39.0 | 31.0 | 36.0 |
| 10-26S | 15.3 | 12.1 | 12.5 | 16.7 | 9.2 | 21-22P | 37.3 | 33.7 | 36.7 | 28.7 | 33.7 |
| 10-200P | 15.0 | 11.8 | 12.7 | 13.3 | 10.0 | 21-22S | 43.6 | 40.0 | 43.0 | 35.0 | 40.0 |
| 10-200S | 16.3 | 13.1 | 14.0 | 14.6 | 11.3 | 21-130P | 32.9 | 29.3 | 32.3 | 24.3 | 29.3 |
| 10-201P | 15.3 | 12.1 | 13.3 | 13.6 | 10.3 | 21-130S | 39.4 | 35.8 | 38.8 | 30.8 | 35.8 |

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

Ordering Guide for 2M801

| Series | Shell Style | Service Class | Shell Size-Insert Arrg. | Contact Type | Alternate Position |
|-----------|-------------|---------------|-------------------------|--------------|--------------------|
| 2M801-0XX | -16 | NF | 6-7 | P | A |

| SERIES | |
|-----------|------------------------------------|
| 2M801-007 | Plugs with Integral Backshell |
| 2M801-008 | Plugs with Rear Accessory Thread |
| 2M801-009 | Receptacle with Integral Backshell |
| 2M801-010 | Receptacle with Accessory Thread |

| SHELL STYLE | |
|--------------------------------|--|
| 2M801-007 2M801-008 | |
| -16 | Plug with Anti-Decoupling Spring |
| -26 | Self-Locking Plug with Ratchet Mechanism |
| SHELL STYLE | |
| 2M801-009 2M801-010 | |
| -01 | In-Line |
| -02 | Square Flange |
| -07 | Jam Nut |

| SERVICE CLASS | | |
|---------------|--|--|
| | | Finish |
| C | | Aluminum/Black Anodize (Non-Conductive) |
| M | | Aluminum/Electroless Nickel |
| NF | | Aluminum/Cadmium with Olive Drab Chromate |
| MT | | Aluminum/Nickel-PTFE (Durmalon) |
| Z1 | | Stainless Steel/Passivated |
| ZN | | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| ZNU | | Aluminum/Zinc-Nickel with Black Chromate |

SHELL SIZE - INSERT ARRANGEMENTS
See Insert Arrangements on Pages 13-15

| CONTACTS | |
|----------|--------|
| P | Pin |
| S | Socket |



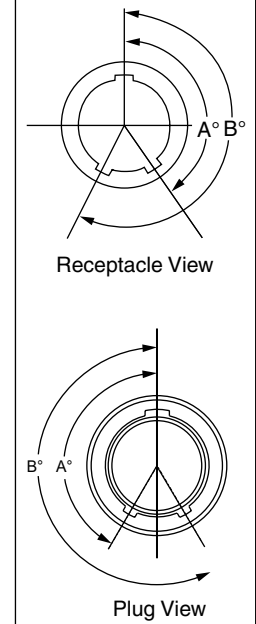
| KEYING | | |
|--------|------|------|
| | A° | B° |
| A | 150° | 210° |
| B | 75° | 210° |
| C | 95° | 230° |
| D | 140° | 275° |
| E | 75° | 275° |
| F | 95° | 210° |

INSERT ARRANGEMENTS

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

INSERT ARRANGEMENTS

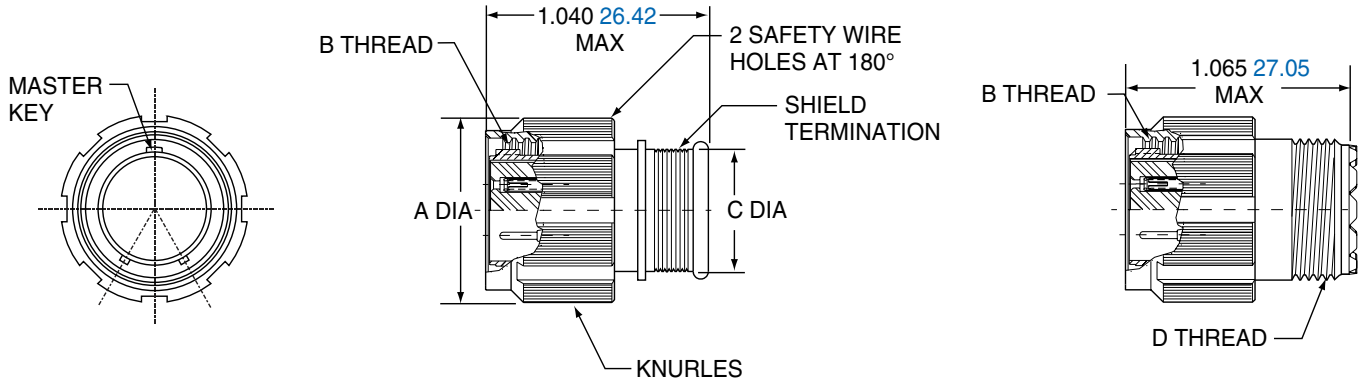
| Insert Arrg. | No. of Contacts | | | | |
|--------------|-----------------|-----|-------|-----|-----|
| | #23 | #20 | #20HD | #16 | #12 |
| 10-200 | 12 | | | | 1 |
| 10-201 | 4 | | | | 2 |
| 10-202 | 8 | | | 2 | |
| 13-2 | | | | | 2 |
| 13-3 | | | | | 3 |
| 13-7 | | | | 7 | |
| 13-37 | 37 | | | | |
| 13-200 | 6 | | | | 2 |
| 13-201 | 10 | | | | 2 |
| 13-220 | | | 20 | | |
| 16-5 | | | | | 5 |
| 16-12 | | | | 12 | |
| 16-55 | 55 | | | | |
| 16-235 | | | 35 | | |
| 17-7 | | | | | 7 |
| 17-14 | | | | 14 | |
| 17-85 | 85 | | | | |
| 17-241 | | | 41 | | |
| 21-12 | | | | | 12 |
| 21-22 | | | | 22 | |
| 21-130 | 130 | | | | |
| 21-269 | | | 69 | | |



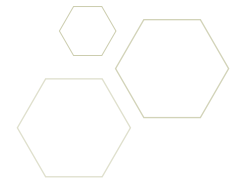


2M801-007

2M801-008



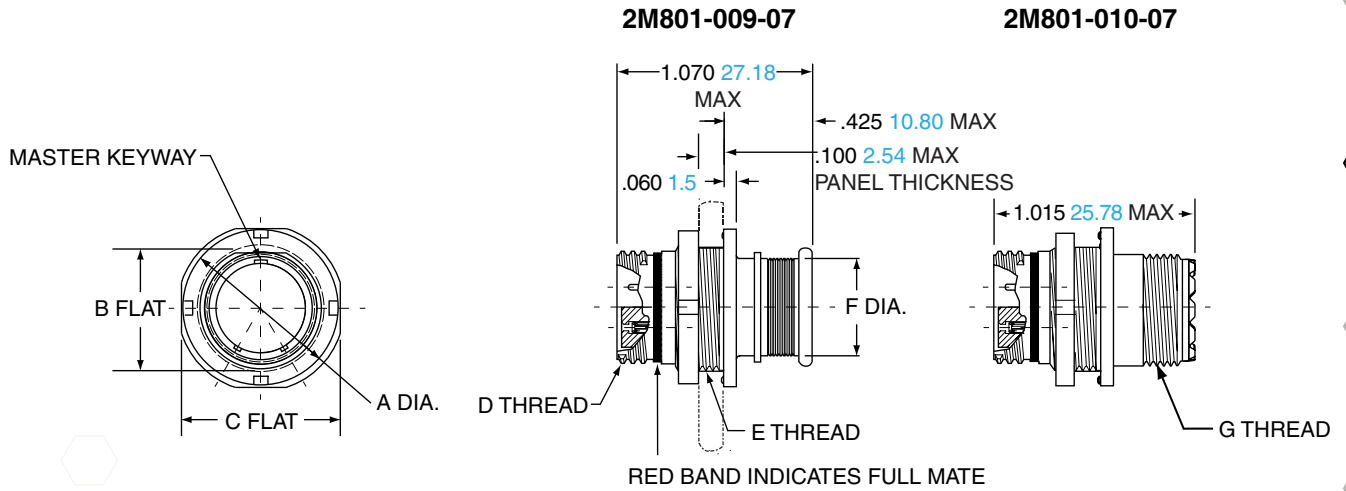
| Shell Size | Style 16 | | Style 26 | | B Thread | C Dia. | | D Thread UNEF-2A |
|------------|----------|-------|----------|-------|-------------------|--------|-------|------------------|
| | A Dia. | | A Dia. | | | in. | mm. | |
| | in. | mm. | in. | mm. | | | | |
| 5 | .537 | 13.64 | .655 | 16.64 | .3125-.05P-.1L-2B | .245 | 6.22 | .2500-32 |
| 6 | .600 | 15.24 | .700 | 17.78 | .3750-.05P-.1L-2B | .290 | 7.37 | .3125-32 |
| 7 | .690 | 17.53 | .785 | 19.94 | .4375-.05P-.1L-2B | .390 | 9.91 | .4375-28 |
| 8 | .750 | 19.05 | .850 | 21.59 | .5000-.05P-.1L-2B | .445 | 11.30 | .5000-28 |
| 9 | .810 | 20.57 | .910 | 23.11 | .5625-.05P-.1L-2B | .500 | 12.70 | .5625-24 |
| 10 | .880 | 22.35 | .980 | 24.89 | .6250-.05P-.1L-2B | .560 | 14.22 | .6250-24 |
| 13 | 1.050 | 26.67 | 1.150 | 29.21 | .8125-.1P-.2L-2B | .650 | 16.51 | .6875-24 |
| 16 | 1.240 | 31.50 | 1.340 | 34.04 | 1.0000-.1P-.2L-2B | .805 | 20.45 | .9375-20 |
| 17 | 1.300 | 33.02 | 1.400 | 35.56 | 1.0625-.1P-.2L-2B | .850 | 21.59 | .9375-20 |
| 21 | 1.550 | 39.37 | 1.650 | 41.91 | 1.3125-.1P-.2L-2B | 1.135 | 28.83 | 1.1875-18 |



2M801 Dual-Start ACME Threads Jam Nut



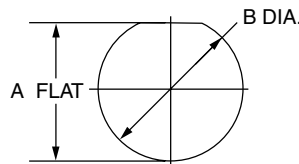
2M801-009-07 and 2M801-010-07

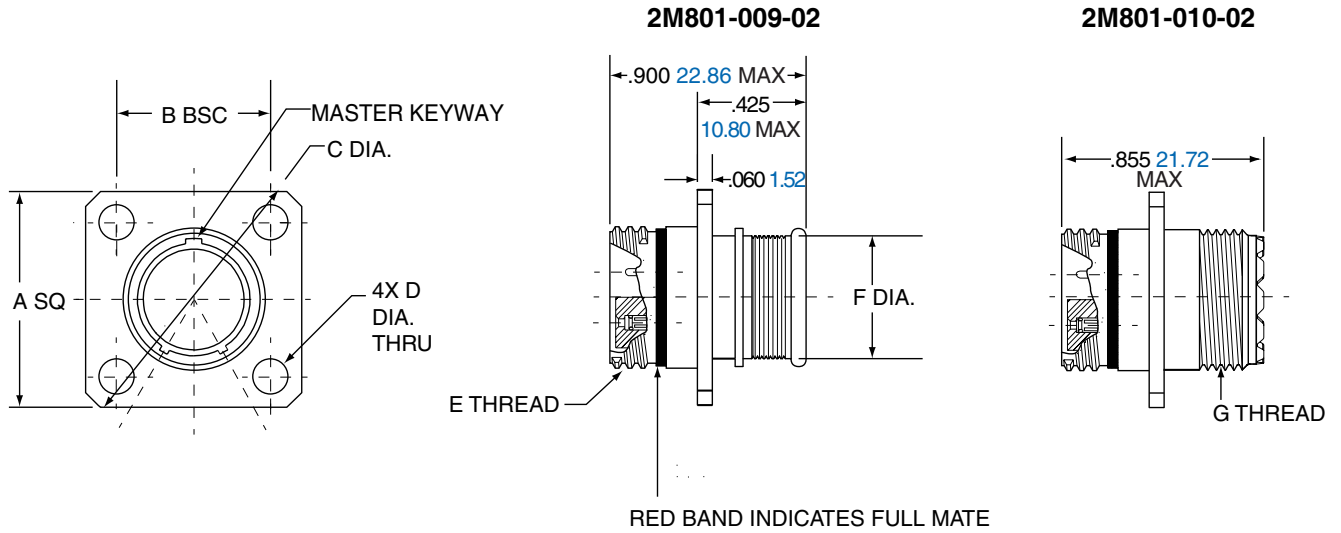


| Shell Size | A Dia. | | B Flat | | C Flat | | D Thread | E Thread | F Dia. | | G Thread |
|------------|--------|-------|--------|-------|--------|-------|-------------------|-----------------|--------|-------|-------------------|
| | in. | mm. | in. | mm. | in. | mm. | | | in. | mm. | |
| 5 | .575 | 14.61 | .350 | 8.89 | .545 | 13.84 | .3125-.05P-.1L-2A | .3750-28 UN-2A | .245 | 6.22 | .2500-32 UNEF-2A |
| 6 | .635 | 16.13 | .410 | 10.41 | .595 | 15.11 | .3750-.05P-.1L-2A | .4375-28 UN-2A | .290 | 7.37 | .3125-32 UNEF-2A |
| 7 | .755 | 19.18 | .536 | 13.61 | .723 | 18.36 | .4375-.05P-.1L-2A | .5625-32 UN-2A | .390 | 9.91 | .4375-28 UNEF-2A |
| 8 | .755 | 19.18 | .536 | 13.61 | .723 | 18.36 | .5000-.05P-.1L-2A | .5625-32 UN-2A | .445 | 11.30 | .5000-28 UNEF-2A |
| 9 | .830 | 21.08 | .596 | 15.14 | .790 | 20.07 | .5625-.05P-.1L-2A | .6250-28 UN-2A | .500 | 12.70 | .5625-24 UNEF-2A |
| 10 | .890 | 22.61 | .658 | 16.71 | .855 | 21.72 | .6250-.05P-.1L-2A | .6875-28 UN-2A | .560 | 14.22 | .6250-24 UNEF-2A |
| 13 | 1.078 | 27.38 | .845 | 21.46 | 1.044 | 26.52 | .8125-.1P-.2L-2A | .8750-28 UN-2A | .650 | 16.51 | .6875-24 UNEF-2A |
| 16 | 1.264 | 32.11 | 1.022 | 25.96 | 1.230 | 31.24 | 1.0000-.1P-.2L-2A | 1.0625-20 UN-2A | .805 | 20.45 | .9375-20 UNEF-2A |
| 17 | 1.325 | 33.66 | 1.096 | 27.84 | 1.290 | 32.77 | 1.0625-.1P-.2L-2A | 1.125-28 UN-2A | .850 | 21.59 | .9375-20 UNEF-2A |
| 21 | 1.625 | 41.28 | 1.345 | 34.16 | 1.577 | 40.06 | 1.3125-.1P-.2L-2A | 1.375-28 UN-2A | 1.135 | 28.83 | 1.1875-18 UNEF-2A |

JAM NUT PANEL CUTOUT

| Shell Size | A Flat | | B Dia. | |
|------------|------------|------------|------------|------------|
| | in. ± .002 | mm. ± 0.05 | in. ± .002 | mm. ± 0.05 |
| 5 | .356 | 9.04 | .385 | 9.78 |
| 6 | .416 | 10.57 | .447 | 11.35 |
| 7 | .542 | 13.77 | .572 | 14.53 |
| 8 | .542 | 13.77 | .572 | 14.53 |
| 9 | .602 | 15.29 | .635 | 16.13 |
| 10 | .666 | 16.62 | .697 | 17.70 |
| 13 | .851 | 21.62 | .885 | 22.48 |
| 16 | 1.028 | 26.11 | 1.075 | 27.31 |
| 17 | 1.102 | 27.99 | 1.135 | 28.83 |
| 21 | 1.354 | 34.39 | 1.385 | 35.18 |





| Shell Size | A | | B BSC | | C Dia. | | D Dia. | | E Thread | F Dia. | | G Thread UNEF-2A |
|------------|-------|-------|-------|-------|--------|-------|------------|-----------|-------------------|--------|-------|------------------|
| | in. | mm. | in. | mm. | in. | mm. | in. ± .003 | mm. ± .08 | | in. | mm. | |
| 5 | .530 | 13.46 | .363 | 9.22 | .680 | 17.27 | .093 | 2.36 | .3125-.05P-.1L-2A | .245 | 6.22 | .2500-32 |
| 6 | .590 | 14.99 | .423 | 10.74 | .750 | 19.05 | .093 | 2.36 | .3750-.05P-.1L-2A | .290 | 7.37 | .3125-32 |
| 7 | .650 | 16.51 | .483 | 12.27 | .850 | 21.59 | .093 | 2.36 | .4375-.05P-.1L-2A | .390 | 9.91 | .4375-28 |
| 8 | .712 | 18.08 | .545 | 13.84 | .940 | 23.88 | .093 | 2.36 | .5000-.05P-.1L-2A | .445 | 11.30 | .5000-28 |
| 9 | .850 | 21.59 | .607 | 15.42 | 1.125 | 28.58 | .128 | 3.25 | .5625-.05P-.1L-2A | .500 | 12.70 | .5625-24 |
| 10 | .890 | 22.61 | .670 | 17.02 | 1.190 | 30.23 | .128 | 3.25 | .6250-.05P-.1L-2A | .560 | 14.22 | .6250-24 |
| 13 | 1.030 | 26.16 | .812 | 20.62 | 1.375 | 34.93 | .128 | 3.25 | .8125-.1P-.2L-2A | .650 | 16.51 | .6875-24 |
| 16 | 1.219 | 30.96 | .981 | 24.92 | 1.625 | 41.28 | .128 | 3.25 | 1.0000-.1P-.2L-2A | .805 | 20.45 | .9375-20 |
| 17 | 1.280 | 32.51 | 1.060 | 26.92 | 1.700 | 43.18 | .128 | 3.25 | 1.0625-.1P-.2L-2A | .850 | 21.59 | .9375-20 |
| 21 | 1.430 | 36.32 | 1.205 | 30.61 | 1.940 | 49.28 | .128 | 3.25 | 1.3125-.1P-.2L-2A | 1.135 | 28.19 | 1.1875-18 |

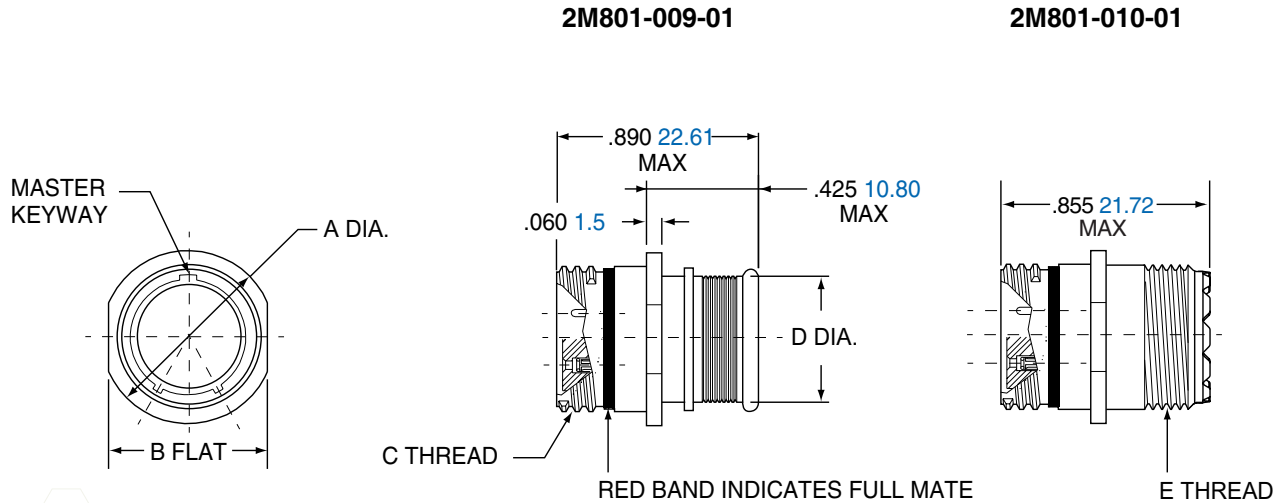
PANEL CUTOUT

| Shell Size | A Dia. | | B Dia. | | C Dia. | |
|------------|--------|-------|--------|-------|--------|------|
| | in. | mm. | in. | mm. | in. | mm. |
| 5 | .330 | 8.38 | .363 | 9.22 | .093 | 2.36 |
| 6 | .390 | 9.91 | .423 | 10.74 | .093 | 2.36 |
| 7 | .450 | 11.43 | .483 | 12.27 | .093 | 2.36 |
| 8 | .510 | 12.95 | .545 | 13.84 | .093 | 2.36 |
| 9 | .575 | 14.61 | .607 | 15.42 | .128 | 3.25 |
| 10 | .640 | 16.26 | .670 | 17.02 | .128 | 3.25 |
| 13 | .825 | 20.96 | .812 | 20.65 | .128 | 3.25 |
| 16 | 1.015 | 25.78 | .981 | 24.92 | .128 | 3.25 |
| 17 | 1.075 | 27.31 | 1.060 | 26.92 | .128 | 3.25 |
| 21 | 1.325 | 33.66 | 1.205 | 30.61 | .128 | 3.25 |

2M801 Dual-Start ACME Threads In-Line



2M801-009-01 and 2M801-010-01



| Shell Size | A Dia. | | B Flat | | C Thread | D Dia. | | E Thread UNEF-2A |
|------------|--------|-------|--------|-------|-------------------|--------|-------|---------------------|
| | in. | mm. | in. | mm. | | in. | mm. | |
| 5 | .355 | 9.02 | .325 | 8.13 | .3125-.05P-.1L-2A | .245 | 6.22 | .2500-32 |
| 6 | .415 | 10.54 | .385 | 9.78 | .3750-.05P-.1L-2A | .290 | 7.37 | .3125-32 |
| 7 | .480 | 12.19 | .445 | 11.30 | .4375-.05P-.1L-2A | .390 | 9.91 | .4375-28 |
| 8 | .540 | 13.72 | .510 | 12.95 | .5000-.05P-.1L-2A | .445 | 11.30 | .5000-28 |
| 9 | .605 | 15.37 | .575 | 14.61 | .5625-.05P-.1L-2A | .500 | 12.70 | .5625-24 |
| 10 | .665 | 16.89 | .635 | 16.13 | .6250-.05P-.1L-2A | .560 | 14.22 | .6250-24 |
| 13 | .855 | 21.72 | .825 | 20.96 | .8125-.1P-.2L-2A | .650 | 16.51 | .6875-24 |
| 16 | 1.040 | 26.42 | 1.010 | 25.65 | 1.0000-.1P-.2L-2A | .805 | 20.44 | .9375-20 |
| 17 | 1.110 | 28.19 | 1.070 | 27.18 | 1.0625-.1P-.2L-2A | .850 | 21.59 | .9375-20 |
| 21 | 1.405 | 35.69 | 1.385 | 35.18 | 1.3125-.1P-.2L-2A | 1.135 | 28.83 | 1.1875-18 |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

Accessories

2M

HD38999

Micro-D

Terrapin

Nexus

2M801 Series of PC Board Receptacles:

2M801 Series of PC Board Receptacles are intended for use of terminating the connector directly to a Circuit Board or Flex assembly. These connectors can also be supplied with Solder cup termination for direct wire attachment.

2M801 FEATURES INCLUDE:

- Low profile shells for minimum box protrusion
- Shell Standoffs for PC Board washout
- Non-removable PC and/or Solder cup contacts
- Environmental Sealing



| Series | Shell Style | Service Class | Shell Size-Insert Arrg. | Contact Type | Alternate Position |
|-----------|-------------|---------------|-------------------------|--------------|--------------------|
| 2M801-0XX | -02 | NF | 6-7 | P | A |

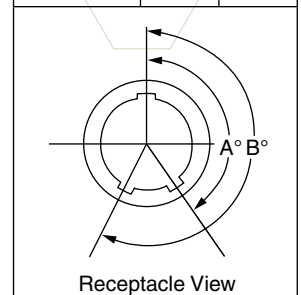
| SERIES | |
|-----------|---|
| 2M801-011 | Receptacle for Solder Cup or PCB Termination with Epoxy Potting |
| 2M801-033 | Receptacle with Solder Cup or PCB Termination with Special Sealing for Open Face (unmated) Water Immersion Requirements. 100% Leak Tested. To maintain a helium leak rate of 1-10 ⁻⁴ cc/sec. pressure differential from -55°C to 150° C. |

| SHELL STYLE | |
|-------------|---------------|
| -02 | Square Flange |
| -07 | Jam Nut |

SHELL SIZE - INSERT ARRANGEMENTS
See Insert Arrangements on Pages 13-15

| SERVICE CLASS | |
|---------------|--|
| | Finish |
| C | Aluminum/Black Anodize (Non-Conductive) |
| M | Aluminum/Electroless Nickel |
| NF | Aluminum/Cadmium with Olive Drab Chromate |
| MT | Aluminum/Nickel-PTFE (Duralon) |
| Z1 | Stainless Steel/Passivated |
| ZN | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| ZNU | Aluminum/Zinc-Nickel with Black Chromate |

| KEYING | | |
|------------|------|------|
| | A° | B° |
| (Normal) A | 150° | 210° |
| B | 75° | 210° |
| C | 95° | 230° |
| D | 140° | 275° |
| E | 75° | 275° |
| F | 95° | 210° |



| CONTACTS | |
|----------|---------------------|
| P | Pin - PCB |
| S | Socket - PCB |
| E | Pin - Solder Cup |
| F | Socket - Solder Cup |



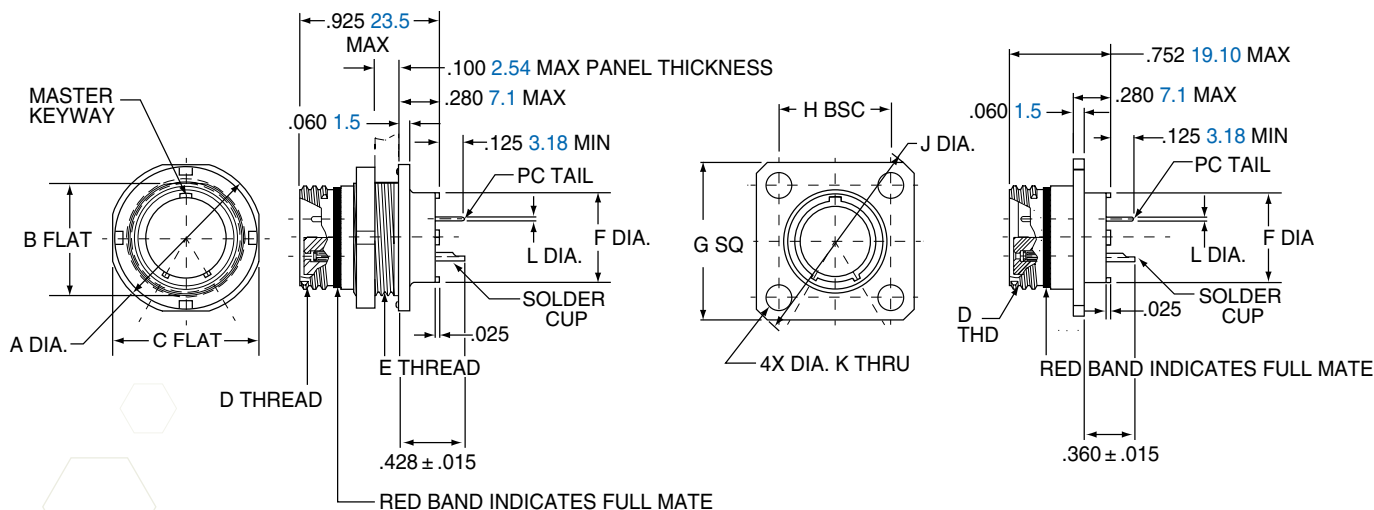
2M801 Dual-Start ACME Threads



Jam Nut and Square Flange 2M801-011 and 2M801-033

2M801-011-07
2M801-033-07

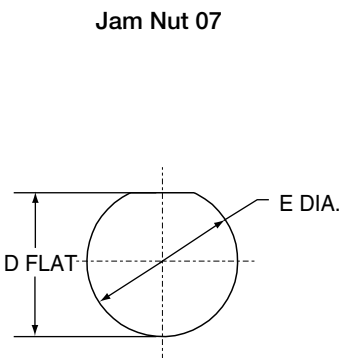
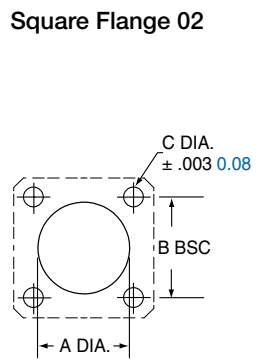
2M801-011-02
2M801-033-02



| Shell Size | A Dia. | | B Flat | | C Flat | | D Thread | E Thread UN-2A | F Dia. | | G Sq. | | H BSC | | J Dia. | | K Dia. | | L Dia. Tail Dia. | |
|------------|--------|-------|--------|-------|--------|-------|-------------------|----------------|--------|-------|-------|-------|-------|-------|--------|-------|--------|------|------------------|-----------|
| | in. | mm. | in. | mm. | in. | mm. | | | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. | | |
| 5 | .575 | 14.61 | .350 | 8.89 | .545 | 13.84 | .3125-.05P-.1L-2A | .3750-28 | .244 | 6.20 | .530 | 13.46 | .363 | 9.22 | .680 | 17.27 | .093 | 2.36 | #23 | |
| 6 | .635 | 16.13 | .410 | 10.41 | .595 | 15.11 | .3750-.05P-.1L-2A | .4375-28 | .330 | 8.38 | .590 | 14.99 | .423 | 10.74 | .750 | 19.05 | .093 | 2.36 | .018/.022 | |
| 7 | .755 | 19.18 | .536 | 13.61 | .723 | 18.36 | .4375-.05P-.1L-2A | .5625-32 | .432 | 10.97 | .650 | 16.51 | .483 | 12.27 | .850 | 21.59 | .093 | 2.36 | 0.46/0.56 | |
| 8 | .755 | 19.18 | .536 | 13.61 | .723 | 18.36 | .5000-.05P-.1L-2A | .5625-32 | .493 | 12.52 | .712 | 18.08 | .545 | 13.84 | .938 | 23.83 | .093 | 3.25 | #20/20HD | |
| 9 | .830 | 21.08 | .596 | 15.14 | .790 | 20.07 | .5625-.05P-.1L-2A | .6250-28 | .551 | 14.00 | .850 | 21.56 | .607 | 15.42 | 1.125 | 28.58 | .128 | 3.25 | .025/.027 | |
| 10 | .890 | 22.61 | .658 | 16.71 | .855 | 21.72 | .6250-.05P-.1L-2A | .6875-28 | .620 | 15.75 | .890 | 22.61 | .670 | 17.02 | 1.188 | 30.18 | .128 | 3.25 | 0.64/0.69 | |
| 13 | 1.078 | 27.38 | .845 | 21.46 | 1.044 | 26.52 | .8125-.1P-.2L-2A | .8750-28 | .703 | 17.86 | 1.030 | 26.16 | .812 | 20.62 | 1.375 | 34.93 | .128 | 3.25 | #16 | |
| 16 | 1.264 | 32.11 | 1.022 | 25.96 | 1.230 | 31.24 | 1.0000-.1P-.2L-2A | 1.0625-20 | .863 | 21.92 | 1.219 | 30.96 | .981 | 24.92 | 1.625 | 41.28 | .128 | 3.25 | .060/.064 | |
| 17 | 1.325 | 33.66 | 1.096 | 27.84 | 1.290 | 32.77 | 1.0625-.1P-.2L-2A | 1.1250-28 | .912 | 23.16 | 1.280 | 32.51 | 1.060 | 26.92 | 1.700 | 43.18 | .128 | 3.25 | 1.52/1.63 | |
| 21 | 1.625 | 41.28 | 1.345 | 34.16 | 1.577 | 40.06 | 1.3125-.1P-.2L-2A | 1.3750-28 | 1.170 | 29.72 | 1.430 | 36.32 | 1.205 | 30.61 | 1.940 | 49.28 | .128 | 3.25 | #12 | |
| | | | | | | | | | | | | | | | | | | | .092/.096 | |
| | | | | | | | | | | | | | | | | | | | | 2.34/2.44 |

PANEL CUTOUT

| Shell Size | A Dia. | | B Dia. | | C Dia. | | D Flat | | E Dia. | |
|------------|--------|-------|--------|-------|--------|------|--------|-------|--------|-------|
| | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. |
| | ±.002 | | ± 0.05 | | ±.002 | | ± 0.05 | | ±.002 | |
| 5 | .330 | 8.38 | .363 | 9.22 | .093 | 2.36 | .356 | 9.04 | .385 | 9.78 |
| 6 | .390 | 9.91 | .423 | 10.74 | .093 | 2.36 | .416 | 10.57 | .447 | 11.35 |
| 7 | .450 | 11.43 | .483 | 12.27 | .093 | 2.36 | .542 | 13.77 | .572 | 14.53 |
| 8 | .510 | 12.95 | .545 | 13.84 | .093 | 2.36 | .542 | 13.77 | .572 | 14.53 |
| 9 | .575 | 14.61 | .607 | 15.42 | .128 | 3.25 | .602 | 15.29 | .635 | 16.13 |
| 10 | .640 | 16.26 | .670 | 17.02 | .128 | 3.25 | .666 | 16.92 | .697 | 17.70 |
| 13 | .825 | 20.96 | .812 | 20.65 | .128 | 3.25 | .851 | 21.62 | .885 | 22.48 |
| 16 | 1.015 | 25.78 | .981 | 24.92 | .128 | 3.25 | 1.028 | 26.11 | 1.075 | 27.31 |
| 17 | 1.075 | 27.31 | 1.060 | 26.92 | .128 | 3.25 | 1.102 | 27.99 | 1.135 | 28.83 |
| 21 | 1.330 | 33.78 | 1.322 | 33.58 | .128 | 3.25 | 1.354 | 34.39 | 1.385 | 35.18 |



2M801 Series of Hermetic Receptacles:

2M801 Series of Hermetic Receptacles provide superior sealing of 1×10^{-8} cc/second helium leak rate and are 100% tested prior to shipping. This superior sealing is accomplished through the use of glass insulator fused to stainless steel shells and iron alloy contacts.

2M801 FEATURES INCLUDE:

- Low profile shells for minimum box protrusion
- Shell Standoffs for PC Board washout
- Non-removable PC and/or Solder cup contacts
- Hermetic Sealing

| Series | Shell Style | Service Class | Shell Size-Insert Arrg. | Contact Type | Alternate Position |
|-----------|-------------|---------------|-------------------------|--------------|--------------------|
| 2M801-012 | -02 | Z1 | 6-7 | P | A |

| SERIES | |
|-----------|---|
| 2M801-012 | Hermetic Receptacles with Printed Circuit Board Contacts or Solder cup contacts |

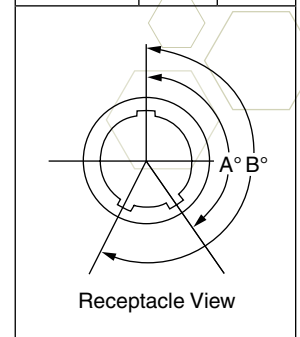
| SHELL STYLE | |
|-------------|--|
| -02 | Square Flange |
| -03 | Weld Mount (only available is Z1 finish) |
| -07 | Jam Nut |

SHELL SIZE - INSERT ARRANGEMENTS
See Insert Arrangements on Pages 13-15

| CONTACTS | |
|----------|------------------|
| P | Pin - Solder Cup |
| C | Pin - PCB Tail |

| SERVICE CLASS | | |
|---------------|--|--|
| | | Finish |
| Z1 | | Stainless Steel/Passivated |
| ZB | | Stainless Steel with Olive Drab Cadmium Finish |
| ZL | | Stainless Steel/ Nickel Plated |

| KEYING | | |
|------------|------|------|
| | A° | B° |
| (Normal) A | 150° | 210° |
| B | 75° | 210° |
| C | 95° | 230° |
| D | 140° | 275° |
| E | 75° | 275° |
| F | 95° | 210° |

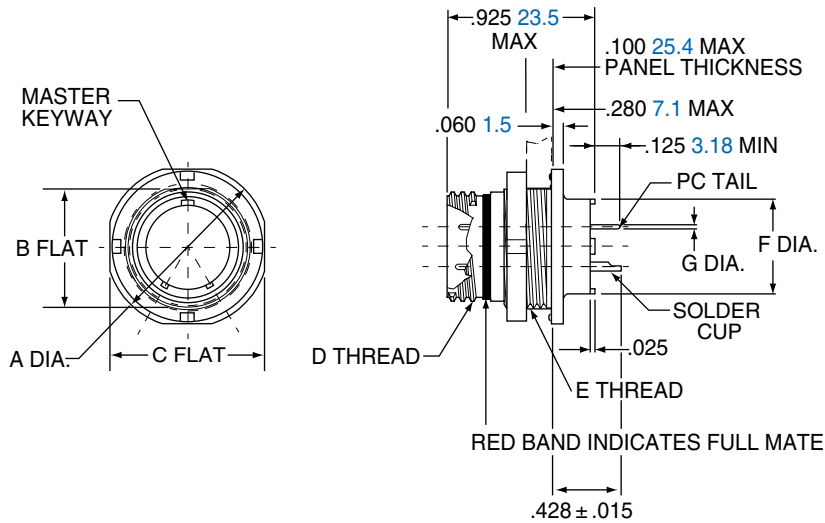


2M801 Dual-Start ACME Threads



Hermetic Jam Nut Connector 2M801-012-07

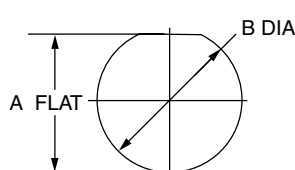
2M801-012-07



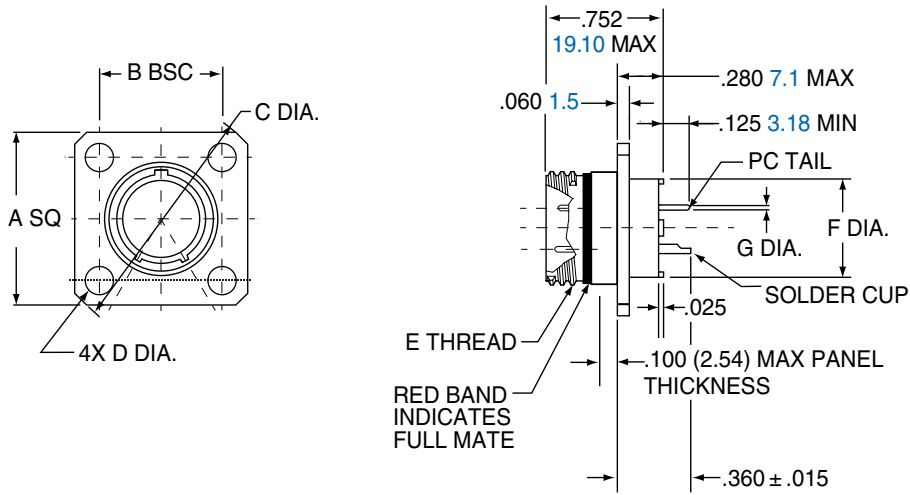
| Shell Size | A Dia. | | B Flat | | C Flat | | D Thread | E Thread UN-2A | F Dia. | | G Dia. Tail Dia. |
|------------|--------|-------|--------|-------|--------|-------|-------------------|----------------|--------|-------|------------------------|
| | in. | mm. | in. | mm. | in. | mm. | | | in. | mm. | |
| 5 | .575 | 14.61 | .350 | 8.89 | .545 | 13.84 | .3125-.05P-.1L-2A | .3750-28 | .244 | 6.20 | #23 |
| 6 | .635 | 16.13 | .410 | 10.41 | .595 | 15.11 | .3750-.05P-.1L-2A | .4375-28 | .330 | 8.38 | .018/.022 0.46/0.56 |
| 7 | .755 | 19.18 | .536 | 13.61 | .723 | 18.36 | .4375-.05P-.1L-2A | .5625-32 | .432 | 10.97 | #20/20HD .025/.027 |
| 8 | .755 | 19.18 | .536 | 13.61 | .723 | 18.36 | .5000-.05P-.1L-2A | .5625-32 | .493 | 12.52 | 0.64/0.69 |
| 9 | .830 | 21.08 | .596 | 15.14 | .790 | 20.07 | .5625-.05P-.1L-2A | .6250-28 | .551 | 14.00 | #16 |
| 10 | .890 | 22.61 | .658 | 16.71 | .855 | 21.72 | .6250-.05P-.1L-2A | .6875-28 | .620 | 15.75 | .060/.064 |
| 13 | 1.078 | 27.38 | .845 | 21.46 | 1.044 | 26.52 | .8125-.1P-.2L-2A | .8750-28 | .703 | 17.86 | 1.52/1.63 |
| 16 | 1.264 | 32.11 | 1.022 | 25.96 | 1.230 | 31.24 | 1.0000-.1P-.2L-2A | 1.0625-20 | .863 | 21.92 | #12 |
| 17 | 1.325 | 33.66 | 1.096 | 27.84 | 1.290 | 32.77 | 1.0625-.1P-.2L-2A | 1.125-28 | .912 | 23.16 | .092/.096 |
| 21 | 1.625 | 41.28 | 1.345 | 34.16 | 1.577 | 40.06 | 1.3125-.1P-.2L-2A | 1.375-28 | 1.170 | 29.72 | 2.34/2.44 |

PANEL CUTOUT

| Shell Size | A Flat | | B Dia. | |
|------------|-----------|------------|-----------|------------|
| | in. ±.002 | mm. ± 0.05 | in. ±.002 | mm. ± 0.05 |
| 5 | .356 | 9.04 | .385 | 9.78 |
| 6 | .416 | 10.57 | .447 | 11.35 |
| 7 | .542 | 13.77 | .572 | 14.53 |
| 8 | .542 | 13.77 | .572 | 14.53 |
| 9 | .602 | 15.29 | .635 | 16.13 |
| 10 | .666 | 16.92 | .697 | 17.70 |
| 13 | .851 | 21.62 | .885 | 22.48 |
| 16 | 1.028 | 26.11 | 1.075 | 27.31 |
| 17 | 1.102 | 27.99 | 1.135 | 28.83 |
| 21 | 1.354 | 34.39 | 1.385 | 35.18 |



2M801-012-02



| Shell Size | A SQ. | | B BSC | | C Dia. | | D Dia. | | E Thread | F Dia. | | G Dia. Tail Dia. |
|------------|-------|-------|-------|-------|--------|-------|-----------|------------|-------------------|--------|-------|------------------------|
| | in. | mm. | in. | mm. | in. | mm. | in. ±.003 | mm. ± 0.08 | | in. | mm. | |
| 5 | .530 | 13.46 | .363 | 9.22 | .680 | 17.27 | .093 | 2.36 | .3125-.05P-.1L-2A | .244 | 6.20 | #23 |
| 6 | .590 | 14.99 | .423 | 10.74 | .750 | 19.05 | .093 | 2.36 | .3750-.05P-.1L-2A | .330 | 8.38 | .018/.022 0.46/0.56 |
| 7 | .650 | 16.51 | .483 | 12.27 | .850 | 21.59 | .093 | 2.36 | .4375-.05P-.1L-2A | .432 | 10.97 | #20/20HD .025/.027 |
| 8 | .712 | 18.08 | .545 | 13.84 | .938 | 23.83 | .093 | 2.36 | .5000-.05P-.1L-2A | .493 | 12.52 | 0.64/0.69 |
| 9 | .850 | 21.56 | .607 | 15.42 | 1.125 | 28.58 | .128 | 3.25 | .5625-.05P-.1L-2A | .551 | 14.00 | #16 |
| 10 | .890 | 22.61 | .670 | 17.02 | 1.188 | 30.18 | .128 | 3.25 | .6250-.05P-.1L-2A | .620 | 15.75 | .060/.064 |
| 13 | 1.030 | 26.16 | .812 | 20.62 | 1.375 | 34.93 | .128 | 3.25 | .8125-.1P-.2L-2A | .703 | 17.86 | 1.52/1.63 |
| 16 | 1.219 | 31.96 | .981 | 24.92 | 1.625 | 41.28 | .128 | 3.25 | 1.0000-.1P-.2L-2A | .863 | 21.92 | #12 |
| 17 | 1.280 | 32.51 | 1.060 | 26.92 | 1.700 | 43.18 | .128 | 3.25 | 1.0625-.1P-.2L-2A | .912 | 23.16 | .092/.096 2.34/2.44 |
| 21 | 1.430 | 36.32 | 1.205 | 30.61 | 1.940 | 49.28 | .128 | 3.25 | 1.3125-.1P-.2L-2A | 1.170 | 29.72 | |

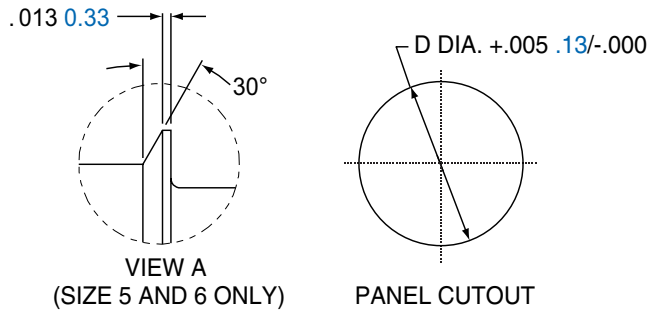
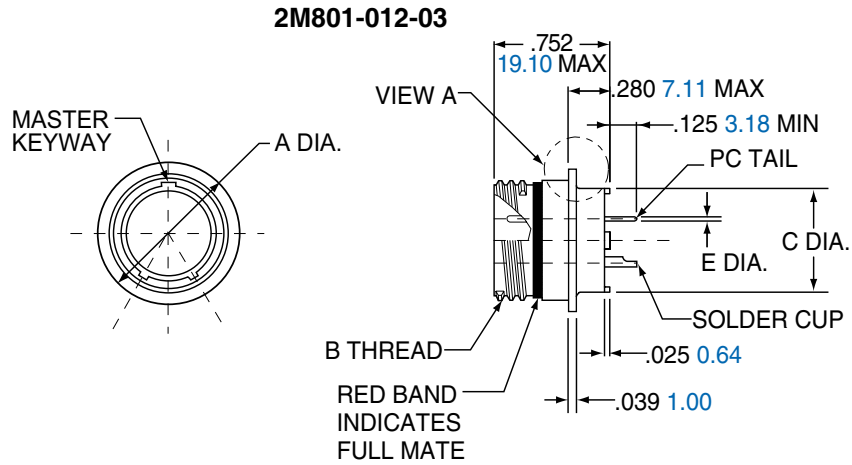
PANEL CUTOUT

| Shell Size | A Dia. | | B BSC | | C Dia. | |
|------------|--------|-------|-------|-------|--------|------|
| | in. | mm. | in. | mm. | in. | mm. |
| 5 | .330 | 8.38 | .363 | 9.22 | .093 | 2.36 |
| 6 | .390 | 9.91 | .423 | 10.74 | .093 | 2.36 |
| 7 | .450 | 11.43 | .483 | 12.27 | .093 | 2.36 |
| 8 | .510 | 12.95 | .545 | 13.84 | .093 | 2.36 |
| 9 | .575 | 14.61 | .607 | 15.42 | .128 | 3.25 |
| 10 | .640 | 16.26 | .670 | 17.02 | .128 | 3.25 |
| 13 | .825 | 20.96 | .812 | 20.65 | .128 | 3.25 |
| 16 | 1.015 | 25.78 | .981 | 24.92 | .128 | 3.25 |
| 17 | 1.075 | 27.31 | 1.060 | 26.92 | .128 | 3.25 |
| 21 | 1.325 | 33.66 | 1.205 | 30.61 | .128 | 3.25 |

2M801 Dual-Start ACME Threads



Hermetic Weld Mount Connector 2M801-012-03



| Shell Size | A Dia | | B Thread | C Dia. | | D Dia. Panel Cutout | | G. PC Tail Dia. |
|------------|-------|-------|-------------------|--------|-------|---------------------|-------|------------------------|
| | in. | mm. | | in. | mm. | in. | mm. | |
| 5 | .395 | 10.03 | .3125-.05P-.1L-2A | .244 | 6.20 | .319 | 8.10 | #23 |
| 6 | .455 | 11.56 | .3750-.05P-.1L-2A | .330 | 8.38 | .379 | 9.55 | .018/.022 0.46/0.56 |
| 7 | .520 | 13.21 | .4375-.05P-.1L-2A | .432 | 11.97 | .438 | 11.13 | #20/20HD |
| 8 | .580 | 14.73 | .5000-.05P-.1L-2A | .493 | 12.52 | .502 | 11.13 | .025/.027 |
| 9 | .645 | 16.38 | .5625-.05P-.1L-2A | .551 | 14.00 | .563 | 14.30 | 0.64/0.69 |
| 10 | .705 | 18.01 | .6250-.05P-.1L-2A | .620 | 15.75 | .627 | 11.13 | #16 |
| 13 | .895 | 22.73 | .8125-.1P-.2L-2A | .703 | 17.86 | .814 | 20.68 | .060/.064 |
| 16 | 1.080 | 27.43 | 1.0000-.1P-.2L-2A | .863 | 21.92 | 1.007 | 25.58 | 1.52/1.63 |
| 17 | 1.145 | 29.08 | 1.0625-.1P-.2L-2A | .912 | 23.16 | 1.067 | 27.10 | #12 |
| 21 | 1.395 | 35.43 | 1.3125-.1P-.2L-2A | 1.170 | 29.72 | 1.320 | 33.53 | .092/.096 2.34/2.44 |

2M801 Series Right Angle PCB Receptacle:

2M801 Right Angle PCB Receptacles are ideal for applications where space and weight are at a premium. This receptacle design can withstand high temperature environments while maintaining an environmental seal.

2M801 FEATURES INCLUDE:

- Dual-Start ACME Thread
- Right Angle Contacts
- High Temperature Housing
- Threaded Inserts
- Environmentally Sealed



| Series | Shell Style | Service Class | Shell Size-Insert Arrg. | Contact Type | Alternate Position |
|-----------|-------------|---------------|-------------------------|--------------|--------------------|
| 2M801-023 | -07 | Z1 | 6-7 | P | A |

| SERIES | |
|-----------|---|
| 2M801-023 | PCB Receptacle for Right Angle PC Board |

| SHELL STYLE | |
|-------------|---------|
| -07 | Jam Nut |

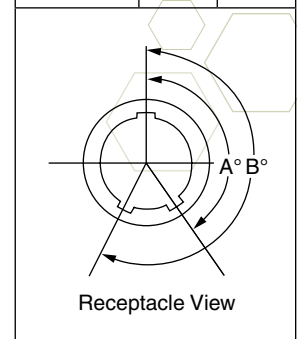
| SERVICE CLASS | | |
|---------------|--|--|
| | | Finish |
| C | | Aluminum/Black Anodize (Non-Conductive) |
| M | | Aluminum/Electroless Nickel |
| NF | | Aluminum/Cadmium with Olive Drab Chromate |
| MT | | Aluminum/Nickel-PTFE (Durmalon) |
| Z1 | | Stainless Steel/Passivated |
| ZN | | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| ZNU | | Aluminum/Zinc-Nickel with Black Chromate |

| SHELL SIZE - INSERT ARRANGEMENTS | |
|----------------------------------|-----------------|
| Arrangement | No. of Contacts |
| 5-3 | 3 |
| 6-4 | 4 |
| 6-7 | 7 |
| 7-10 | 10 |
| 8-2 | 2 |
| 8-13 | 13 |
| 9-19 | 19 |

Note: Consult factory for available arrangements.

| CONTACTS | |
|----------|--------|
| P | Pin |
| S | Socket |

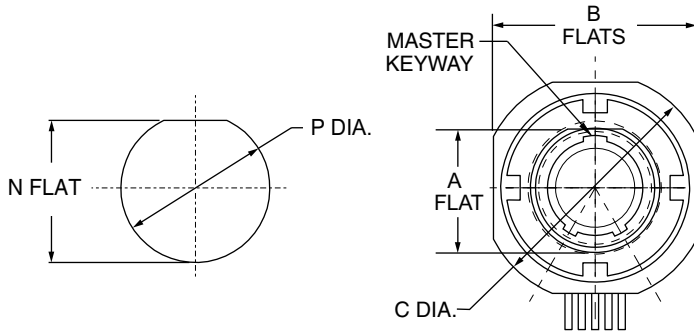
| KEYING | | |
|------------|------|------|
| | A° | B° |
| (Normal) A | 150° | 210° |
| B | 75° | 210° |
| C | 95° | 230° |
| D | 140° | 275° |
| E | 75° | 275° |
| F | 95° | 210° |



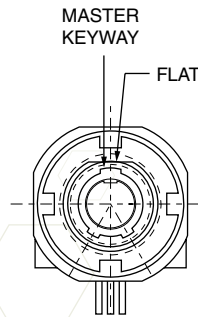
2M801 Dual-Start ACME Threads



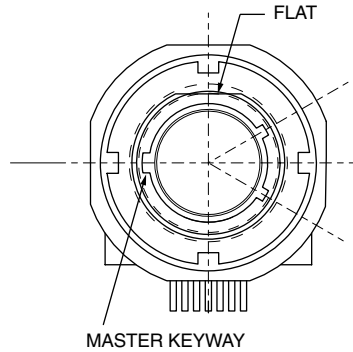
Jam Nut Connector 2M801-023-07



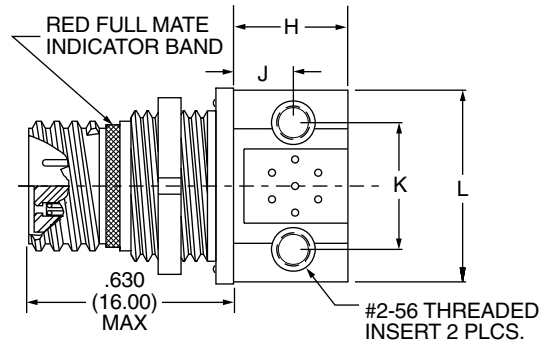
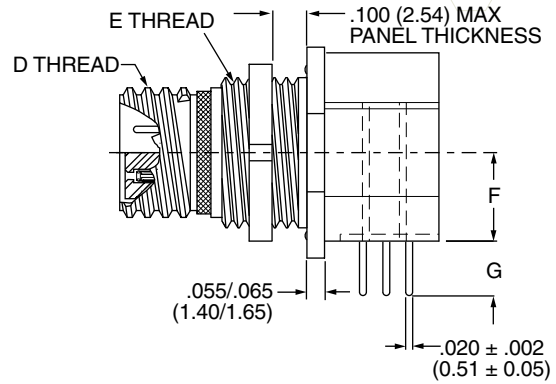
MASTER KEYWAY IS LOCATED AT TOP DEAD CENTER FOR ALL ARRANGEMENTS EXCEPT FOR THE 8-13.



5-3, 6-4, 6-7, 7-10, AND 9-19
MASTER KEYWAY LOCATION



8-13
MASTER KEYWAY LOCATION



| Shell Size | A | | B | | C Dia. | | D Thread | E Thread | F Dia. | | G | | H | | J | | K | |
|------------|-----------|-----------|------|-------|--------|-------|----------------------|----------------|--------|------|------|------|------|-------|------|------|------|-------|
| | in. ±.005 | mm. ±0.13 | in. | mm. | in. | mm. | | | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. |
| 5-3 | .350 | 8.89 | .545 | 13.84 | .575 | 14.61 | .3125-.05P-.1L-DS-2A | .3750-28 UN-2A | .225 | 5.72 | .275 | 6.99 | .260 | 6.60 | .165 | 4.19 | .310 | 7.87 |
| 6-4 | .410 | 10.41 | .595 | 15.11 | .635 | 16.13 | .3750-.05P-.1L-DS-2A | .4375-28 UN-2A | .225 | 5.72 | .292 | 7.42 | .345 | 8.76 | .224 | 5.69 | .385 | 9.78 |
| 6-7 | .410 | 10.41 | .595 | 15.11 | .635 | 16.13 | .3750-.05P-.1L-DS-2A | .4375-28 UN-2A | .225 | 5.72 | .265 | 6.73 | .345 | 8.76 | .187 | 4.75 | .408 | 10.36 |
| 7-10 | .536 | 13.61 | .723 | 18.36 | .755 | 19.18 | .4375-.05P-.1L-DS-2A | .5625-32 UN-2A | .296 | 7.52 | .273 | 6.93 | .345 | 8.76 | .170 | 4.32 | .452 | 11.48 |
| 8-2 | .536 | 13.61 | .723 | 18.36 | .755 | 19.18 | .5000-.05P-.1L-DS-2A | .5625-32 UN-2A | .319 | 8.10 | .316 | .803 | .490 | 12.45 | .230 | 5.84 | .490 | 4.31 |
| 8-13 | .536 | 13.61 | .723 | 18.36 | .755 | 19.18 | .5000-.05P-.1L-DS-2A | .5625-32 UN-2A | .319 | 8.10 | .316 | 8.03 | .490 | 12.45 | .230 | 5.84 | .490 | 12.45 |
| 9-19 | .595 | 15.11 | .790 | 20.01 | .830 | 21.08 | .5625-.05P-.1L-DS-2A | .6250-28 UN-2A | .360 | 9.14 | .275 | 6.99 | .490 | 12.45 | .342 | 8.69 | .600 | 15.24 |

| Shell Size | L | | N | | P | |
|------------|------|-------|-----------|-----------|-----------|-----------|
| | in. | mm. | in. ±.002 | mm. ±0.05 | in. ±.005 | mm. ±0.13 |
| 5-3 | .490 | 14.45 | .357 | 9.07 | .385 | 9.78 |
| 6-4 | .589 | 15.19 | .418 | 10.62 | .448 | 11.37 |
| 6-7 | .589 | 15.19 | .418 | 10.62 | .448 | 11.37 |
| 7-10 | .710 | 18.03 | .544 | 13.82 | .573 | 14.55 |
| 8-2 | .710 | 18.03 | .544 | 13.82 | .573 | 14.55 |
| 8-13 | .710 | 18.03 | .544 | 13.82 | .573 | 14.55 |
| 9-19 | .800 | 20.32 | .603 | 15.32 | .635 | 16.13 |

Contacts & Tools
2M Specs
2M801
2M803
2M804
2M805
2M Accessories
HD38999
Micro-D
Terrapin
Nexus

Protection Caps:

2M801 Double Start Protective Caps are available in plug and receptacle versions. Protective caps keep the connector interface dry and clean while not in use. Caps come in a variety of materials, lanyard styles and lengths to accommodate specific design requirements.

2M801 FEATURES INCLUDE:

- Aluminum or Stainless Steel Bodies
- Rubber Gaskets for Environmental Sealing
- Stainless Steel Fittings
- Variety of attachments



| Series | Service Class | Attachment Type | Shell Size | Attachment Code | Attachment Length in Inches |
|-----------|---------------|-----------------|------------|-----------------|-----------------------------|
| 2M667-21X | -NF | -S | 5 | 04 | -5 |

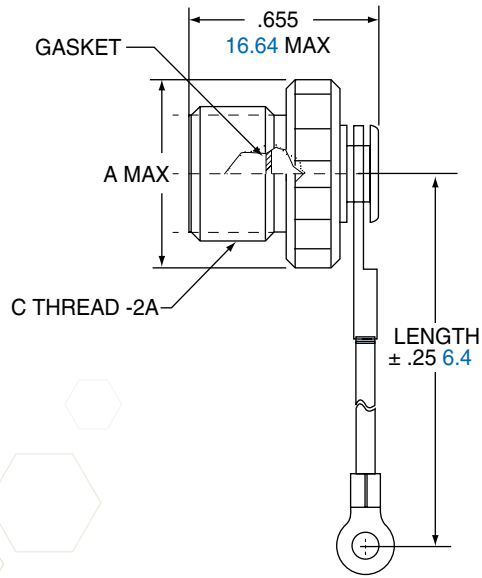
Omit for attachment Type N (No Attachment)
Example "-5" equals 5 inch length

| SERIES | | ATTACHMENT TYPE | | SHELL SIZE | ATTACHMENT CODE | |
|-----------|--------------------------------------|-----------------|--|------------------------|---|------------------------|
| 2M667-217 | Protection Cap for 2M801 Plugs | -G | Nylon Rope | 5 | Omit for attachment Types N (No Attachment) and Slip Knot | |
| 2M667-218 | Protection Cap for 2M801 Receptacles | -H | Stainless Steel Wire Rope, Teflon® Jacket | 6 | Small Ring | 01 -.126 (3.20) I.D. |
| | | -N | No Attachment | 7 | | 02 -.145 (3.68) I.D. |
| | | -S | Stainless Steel Sash Chain | 8 | | 04 -.188 (4.78) I.D. |
| | | -SK | Nylon Rope With Slip Knot | 9 | | 06 -.197 (5.00) I.D. |
| | | -T | Stainless Steel Wire Rope, No Jacket | 10 | Large Ring | 14 -.385 (9.78) I.D. |
| | | -U | Stainless Steel Wire Rope, Polyurethane Jacket | 13 | | 15 -.445 (11.30) I.D. |
| | | | | 16 | | 16 -.570 (14.48) I.D. |
| | | | | 17 | | 17 -.635 (16.13) I.D. |
| | | | | 18 -.695 (17.65) I.D. | | |
| | | | | 19 -.885 (22.48) I.D. | | |
| | | | | 20 -1.070 (27.17) I.D. | | |
| | | | | 21 -1.135 (28.83) I.D. | | |
| | | | | 22 -1.210 (30.73) I.D. | | |
| | | | | 23 -1.275 (32.39) I.D. | | |
| | | | | 24 -1.375 (34.94) I.D. | | |
| | | | | | Split Ring | 50 -.420 (10.67) I.D. |
| | | | | | | 52 -.480 (12.19) I.D. |
| | | | | | | 54 -.635 (16.13) I.D. |
| | | | | | | 56 -.745 (18.92) I.D. |
| | | | | | | 58 -.885 (22.48) I.D. |
| | | | | | | 60 -1.010 (25.65) I.D. |
| | | | | | | 64 -1.125 (28.58) I.D. |
| | | | | | | 68 -1.345 (34.16) I.D. |

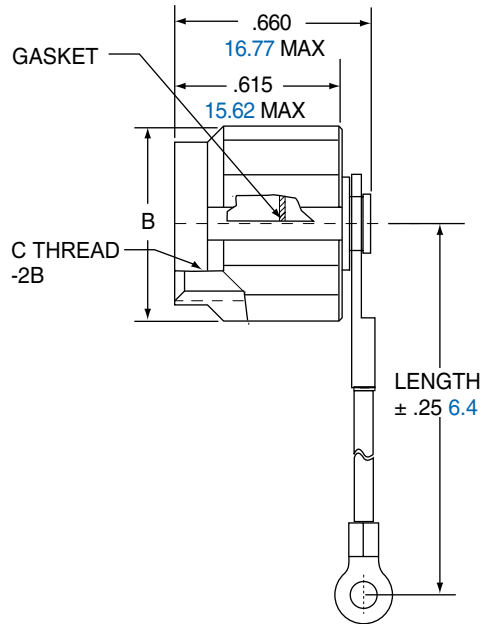
| SERVICE CLASS | | |
|---------------|--|--|
| Finish | | |
| -C | | Aluminum/Black Anodize (Non-Conductive) |
| -M | | Aluminum/Electroless Nickel |
| -NF | | Aluminum/Cadmium with Olive Drab Chromate |
| -MT | | Aluminum/Nickel-PTFE (Durmalon) |
| -Z1 | | Stainless Steel/Passivated |
| -ZN | | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| -ZNU | | Aluminum/Zinc-Nickel with Black Chromate |



2M667-217 (Plug)



2M667-218 (Receptacle)



| Shell Size | A Max. | | B Max. | | C |
|------------|--------|-------|--------|-------|----------------|
| | in. | mm. | in. | mm. | |
| 5 | .463 | 11.76 | .549 | 12.40 | .3125-.05P-1L |
| 6 | .523 | 13.28 | .612 | 14.10 | .3750-.05P-1L |
| 7 | .588 | 14.94 | .699 | 15.62 | .4375-.05P-1L |
| 8 | .648 | 16.46 | .757 | 17.15 | .5000-.05-.1L |
| 9 | .713 | 18.11 | .812 | 21.34 | .5625-.05P-.1L |
| 10 | .773 | 19.63 | .892 | 22.95 | .6250-.05P-1L |
| 13 | .963 | 24.46 | 1.062 | 25.27 | .8125-.1P-.2L |
| 16 | 1.148 | 29.16 | 1.256 | 32.03 | 1.0000-.1P-.2L |
| 17 | 1.213 | 30.81 | N/A | N/A | 1.0625-.1P-.2L |
| 21 | 1.473 | 37.41 | N/A | N/A | 1.3125-.1P-.2L |

MATERIALS

| | |
|----------------|-----------------------------------|
| Cover | Aluminum alloy or stainless steel |
| Gasket | Silicone rubber |
| Wire, Hardware | Stainless steel, passivated |

LANYARD OPTIONS

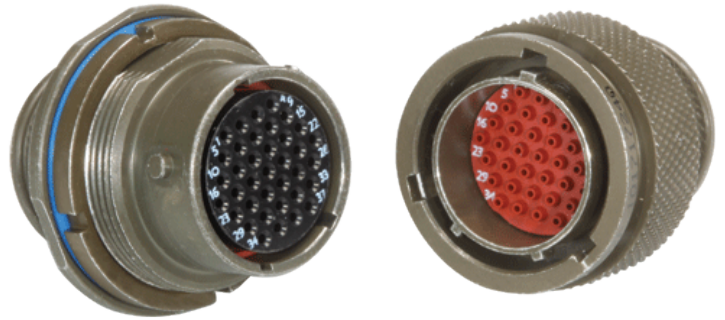
| | |
|---|--|
| Nylon Rope | -55° to +100°C., black, flexible, good abrasion resistance, good resistance to fuels, .120" 3mm diameter |
| Polyurethane Coated Wire Rope | Black polyurethane over stainless steel rope, very flexible, excellent abrasion resistance, excellent resistance to fuels, .080" 2mm diameter |
| Teflon® Jacketed Wire Rope | Translucent FEP jacket over stainless steel, -55° to +200°C., fair flexibility, good abrasion resistance, .100" diameter |
| Sash Chain | Stainless steel, #8 Chain |
| Slip Knot (SK) for attaching Covers to Cables | 55° to +100°C., black, flexible, good abrasion resistance, good resistance to fuels, .120" 3mm diameter. Length includes .5" 13mm diameter loop. |

2M803 Series Micro-Miniature Connectors:

Amphenol's 2M803 Series of connectors are ideal for applications where space is limited or a high density interconnect is needed. The series features bayonet connectors with 1/4 turn full mate coupling. Plugs and Receptacles are provided in two different styles to accommodate the attachment of backshell with rear accessory threads or with integral backshell. The integral backshell allows for use of EMI shielding attachments and/or overmolding. Contact termination styles include Crimp, PC Tail, and Solder cup with others available upon request. Custom and Filter configurations are available, please consult factory for ordering information.

2M803 FEATURES INCLUDES:

- Bayonet Coupling for 1/4 Full mating
- Sealed Receptacles:
 - Hermetic (1×10^{-8} cc/second)
 - Epoxy Backfilled (1×10^{-4} cc/second)
- ROHS Compliant Platings available
- Insert Arrangements up to 55 contacts



2M803 SPECIFICATIONS

| | |
|-------------------------|--|
| Current Rating | See Insert Arrangements (pg. 13-15) |
| DWV | See Insert Arrangements (pg. 13-15) |
| Insulation Resistance | 5000 megohms min. |
| Operating Temperature | -65°C to +150°C |
| Shock | 300 g's |
| Random Vibration | 37 g's |
| Shielding Effectiveness | 40 dB min. from 100MHz to 1000MHz |
| Durability | Aluminum: 250 mating cycles Stainless Steel: 2000 mating cycles |

2M803 MATERIALS AND FINISHES

| | |
|-----------------------------------|-----------------------------------|
| Shells | Aluminum Alloy or Stainless Steel |
| Contacts | Copper Alloy, gold plated |
| Insulators | Polyphenylene Sulfide (PPS) |
| Contact Retention | Beryllium Copper Alloy |
| Grommet, Interfacial Seal, O'Ring | Fluorosilicone Rubber |

Weights

SERIES 2M803 MAXIMUM CONNECTOR WEIGHT IN GRAMS

| Insert Arrangements | Cable Plug | Jam Nut Receptacle Crimp | Jam Nut Receptacle PCB | Flange Receptacle Crimp | Flange Receptacle PCB |
|---------------------|------------|--------------------------|------------------------|-------------------------|-----------------------|
| 5-3P | 3.6 | 3.6 | 3.9 | 2.9 | 3.3 |
| 5-3S | 3.7 | 3.7 | 4.0 | 3.1 | 3.4 |
| 6-1P | 4.4 | 4.4 | 4.6 | 3.1 | 3.5 |
| 6-1S | 4.5 | 4.5 | 4.7 | 3.2 | 3.6 |
| 6-4P | 4.7 | 3.7 | 4.1 | 3.1 | 3.6 |
| 6-4S | 4.7 | 4.0 | 4.2 | 3.2 | 3.7 |
| 6-7P | 5.1 | 4.8 | 5.3 | 3.3 | 4.4 |
| 6-7S | 5.1 | 5.1 | 5.5 | 3.6 | 4.4 |
| 7-1P | 5.7 | 5.9 | 5.8 | 4.4 | 4.7 |
| 7-1S | 5.9 | 6.2 | 5.9 | 4.7 | 5.1 |
| 7-10P | 6.9 | 7.4 | 8.1 | 5.0 | 6.5 |
| 7-10S | 7.4 | 7.8 | 8.4 | 5.4 | 6.6 |
| 8-2P | 8.6 | 8.9 | 9.9 | 6.6 | 8.6 |
| 8-2S | 9.4 | 9.7 | 10.7 | 7.4 | 9.4 |
| 8-13P | 7.9 | 8.3 | 9.2 | 5.9 | 7.9 |
| 8-13S | 8.7 | 8.9 | 9.7 | 6.6 | 8.1 |
| 8-200P | 8.9 | 9.2 | 10.2 | 6.9 | 8.9 |
| 8-200S | 9.6 | 9.9 | 10.9 | 6.9 | 9.6 |
| 9-4P | 9.2 | 9.6 | 10.6 | 6.6 | 9.2 |
| 9-4S | 9.6 | 9.9 | 10.9 | 6.9 | 9.6 |
| 9-19P | 9.2 | 9.1 | 10.6 | 7.0 | 9.9 |
| 9-19S | 10.2 | 10.1 | 11.2 | 8.1 | 10.2 |
| 9-200P | 9.1 | 9.5 | 10.5 | 7.2 | 9.1 |
| 9-200S | 10.2 | 10.6 | 11.6 | 8.3 | 10.2 |
| 9-201P | 9.2 | 9.6 | 10.6 | 7.3 | 10.3 |
| 9-201S | 9.8 | 10.1 | 11.7 | 8.4 | 10.3 |
| 10-5P | 13.4 | 14.1 | 15.0 | 10.6 | 13.9 |
| 10-5S | 14.9 | 15.5 | 17.5 | 12.0 | 15.3 |
| 10-26P | 11.7 | 12.3 | 14.3 | 8.8 | 12.8 |
| 10-26S | 13.4 | 13.6 | 15.1 | 10.1 | 13.1 |
| 10-200P | 12.5 | 13.2 | 15.2 | 9.7 | 13.0 |
| 10-200S | 14.0 | 14.6 | 16.6 | 11.1 | 14.4 |
| 10-201P | 12.9 | 13.5 | 15.5 | 10.0 | 13.3 |
| 10-201S | 14.4 | 15.1 | 17.1 | 11.6 | 14.9 |
| 10-202P | 12.4 | 13.1 | 15.1 | 9.6 | 11.8 |
| 10-202S | 14.0 | 14.6 | 16.6 | 11.1 | 14.4 |
| 12-2P | 15.5 | 16.4 | 19.1 | 11.4 | 16.9 |
| 12-2S | 17.2 | 18.0 | 20.8 | 13.1 | 18.6 |
| 12-3P | 16.5 | 17.4 | 20.1 | 12.4 | 17.9 |
| 12-3S | 18.3 | 19.1 | 21.9 | 14.2 | 19.7 |
| 12-7P | 16.7 | 17.6 | 20.4 | 12.7 | 18.2 |
| 12-7S | 19.4 | 20.2 | 23.0 | 15.3 | 20.8 |
| 12-37P | 15.0 | 15.8 | 18.6 | 10.9 | 16.4 |
| 12-37S | 16.6 | 17.5 | 19.6 | 12.4 | 16.7 |
| 12-200P | 15.6 | 16.5 | 19.3 | 11.6 | 17.1 |
| 12-200S | 17.9 | 18.8 | 21.6 | 13.9 | 19.4 |
| 12-201P | 15.7 | 16.6 | 19.4 | 11.7 | 17.2 |
| 12-201S | 18.2 | 19.0 | 21.8 | 14.1 | 19.6 |
| 14-5P | 22.2 | 23.5 | 27.7 | 17.3 | 25.5 |
| 14-5S | 24.8 | 26.1 | 29.3 | 19.8 | 25.1 |
| 14-55P | 19.6 | 20.9 | 25.1 | 14.6 | 22.9 |
| 14-55S | 22.6 | 23.9 | 27.1 | 14.6 | 23.9 |

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803**
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus



- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

| Series | Shell Style | Service Class | Shell Size-Insert Arrg. | Contact Type | Alternate Position |
|-----------|-------------|---------------|-------------------------|--------------|--------------------|
| 2M803-00X | -06 | NF | 6-7 | P | N |

| SERIES | |
|-----------|--|
| 2M803-001 | Plug with Crimp Contact, Integral Backshell for Direct Attachment of Cable Shield and Overmold |
| 2M803-002 | Plug with Crimp Contact, Rear Accessory Thread |
| 2M803-003 | Receptacle with Integral Backshell for Direct Attachment of Cable Shield and Overmold |
| 2M803-004 | Receptacle with Rear Accessory Thread |

| SHELL STYLE | |
|----------------------|--------------|
| 2M803-001, 2M803-002 | |
| -06 | Plug |
| SHELL STYLE | |
| 2M803-003, 2M803-004 | |
| -07 | Jam Nut |
| -02 | Flange Mount |
| -01 | In-Line |

SHELL SIZE - INSERT ARRANGEMENTS
See Insert Arrangements on Pages 13-15

| CONTACTS | |
|----------|--------|
| P | Pin |
| S | Socket |



| SERVICE CLASS | | |
|---------------|--------|--|
| | Finish | |
| C | | Aluminum/Black Anodize (Non-Conductive) |
| M | | Aluminum/Electroless Nickel |
| NF | | Aluminum/Cadmium with Olive Drab Chromate |
| MT | | Aluminum/Nickel-PTFE (Durmolon) |
| Z1 | | Stainless Steel/Passivated |
| ZN | | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| ZNU | | Aluminum/Zinc-Nickel with Black Chromate |

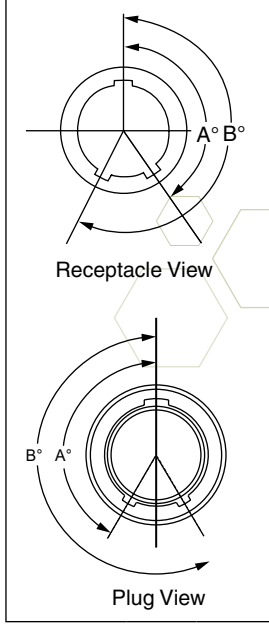
| KEYING | | |
|--------------|--------------|------|
| Key Position | Key Rotation | |
| | A | B |
| N | 150° | 210° |
| X | 75° | 210° |
| Y | 95° | 230° |
| Z | 140° | 275° |

INSERT ARRANGEMENTS

| Insert Arrg. | No. of Contacts | | | | |
|--------------|-----------------|-----|-------|-----|-----|
| | #23 | #20 | #20HD | #16 | #12 |
| 5-3 | 3 | | | | |
| 6-1 | | | | 1 | |
| 6-4 | 4 | | | | |
| 6-6 | 6 | | | | |
| 6-7 | 7 | | | | |
| 6-23 | | | 3 | | |
| 7-1 | | | | | 1 |
| 7-10 | 10 | | | | |
| 7-25 | | | 5 | | |
| 8-2 | | | | 2 | |
| 8-28 | | | 8 | | |
| 8-13 | 13 | | | 4 | |
| 8-200 | 4 | 2 | | | |
| 9-4 | | | | 4 | |
| 9-19 | 19 | | | | |
| 9-200 | 4 | | | 2 | |
| 9-201 | 8 | 2 | | | |
| 9-210 | | | 10 | | |
| 10-2 | | | | | 2 |

INSERT ARRANGEMENTS

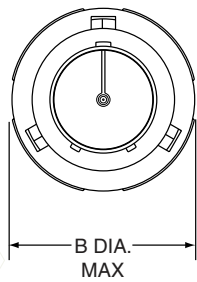
| Insert Arrg. | No. of Contacts | | | | |
|--------------|-----------------|-----|-------|-----|-----|
| | #23 | #20 | #20HD | #16 | #12 |
| 10-5 | | | | 5 | |
| 10-26 | 26 | | | | |
| 10-200 | 12 | | | | 1 |
| 10-201 | 4 | | | | 2 |
| 10-202 | 8 | | | 2 | |
| 12-2 | | | | | 2 |
| 12-3 | | | | | 3 |
| 12-7 | | | | 7 | |
| 12-37 | 37 | | | | |
| 12-200 | 6 | | | | 2 |
| 12-201 | 10 | | | | 2 |
| 12-220 | | | 20 | | |
| 14-5 | | | | | 5 |
| 14-12 | | | | 12 | |
| 14-55 | 55 | | | | |
| 14-235 | | | 35 | | |



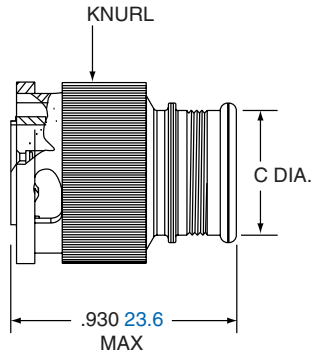
2M803 1/4 Turn Bayonet Coupling Plug



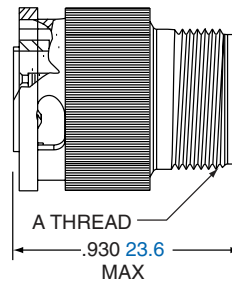
2M803-001-06 and 2M803-002-06



2M803-001-06



2M803-002-06



| Shell Size | A Thread | B Dia. Max | | C Dia. | |
|------------|------------------|------------|-------|--------|-------|
| | | in. | mm. | in. | mm. |
| 5 | .2500-32 UNEF-2A | .475 | 12.07 | .245 | 6.22 |
| 6 | .3125-32 UNEF-2A | .540 | 13.72 | .290 | 7.37 |
| 7 | .4375-28 UNEF-2A | .620 | 15.75 | .390 | 9.91 |
| 8 | .5000-28 UNEF-2A | .675 | 17.15 | .450 | 11.43 |
| 9 | .5625-24 UNEF-2A | .745 | 18.92 | .500 | 12.70 |
| 10 | .6250-24 UNEF-2A | .812 | 20.63 | .562 | 14.28 |
| 12 | .6875-24 UNEF-2A | .894 | 22.71 | .650 | 16.51 |
| 14 | .9375-20 UNEF-2A | 1.060 | 26.92 | .800 | 20.32 |
| 15 | .9375-20 UNEF-2A | 1.120 | 28.45 | 1.035 | 26.29 |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

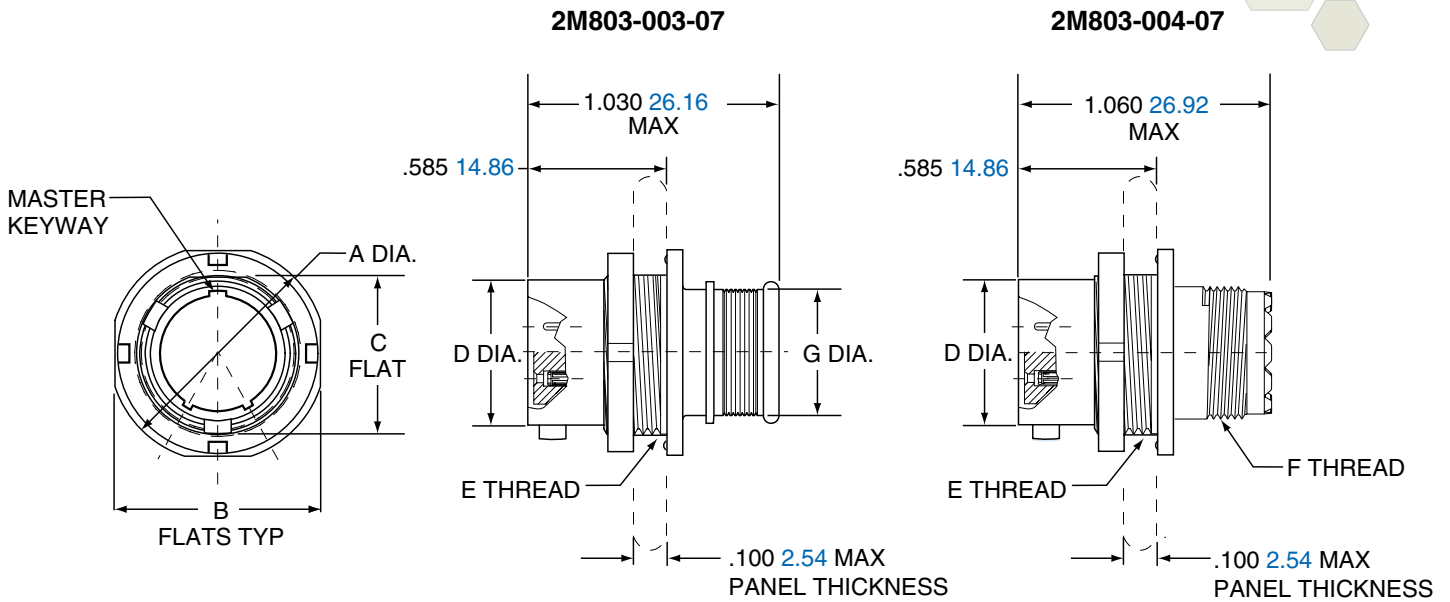
2M Accessories

HD38999

Micro-D

Terrapin

Nexus



| Shell Size | A Dia. | | B Flat | | C Flat | | D Dia. | | E Thread | F Thread | G Dia. | |
|------------|--------|-------|--------|-------|--------|-------|--------|-------|-----------------|------------------|--------|-------|
| | in. | mm. | in. | mm. | in. | mm. | in. | mm. | | | in. | mm. |
| 5 | .575 | 14.61 | .545 | 13.84 | .350 | 8.89 | .300 | 7.62 | .3750-32 UN-2A | .2500-32 UNEF-2A | .245 | 6.22 |
| 6 | .635 | 16.13 | .595 | 15.11 | .410 | 10.41 | .362 | 9.19 | .4375-28 UN-2A | .3125-32 UNEF-2A | .290 | 7.37 |
| 7 | .755 | 19.18 | .723 | 18.36 | .536 | 13.61 | .436 | 11.07 | .5625-32 UN-2A | .4375-28 UNEF-2A | .390 | 9.91 |
| 8 | .830 | 21.08 | .790 | 20.11 | .593 | 15.10 | .500 | 12.70 | .6250-28 UN-2A | .5000-28 UNEF-2A | .450 | 11.43 |
| 9 | .830 | 21.08 | .790 | 20.07 | .596 | 15.14 | .561 | 14.25 | .6250-28 UN-2A | .5625-24 UNEF-2A | .500 | 12.70 |
| 10 | .955 | 24.26 | .925 | 23.51 | .721 | 18.31 | .635 | 16.13 | .7500-28 UN-2A | .6250-24 UNEF-2A | .562 | 14.27 |
| 12 | 1.078 | 27.38 | 1.044 | 26.52 | .845 | 21.46 | .714 | 18.14 | .8750-28 UN-2A | .6875-24 UNEF-2A | .650 | 16.51 |
| 14 | 1.264 | 32.11 | 1.230 | 31.24 | 1.022 | 25.96 | .865 | 21.97 | 1.0625-20 UN-2A | .9375-20 UNEF-2A | .805 | 20.45 |
| 15 | 1.322 | 33.58 | 1.287 | 32.69 | 1.093 | 27.76 | .924 | 23.47 | 1.1250-28 UN-2A | .9375-20 UNEF-2A | .850 | 21.59 |

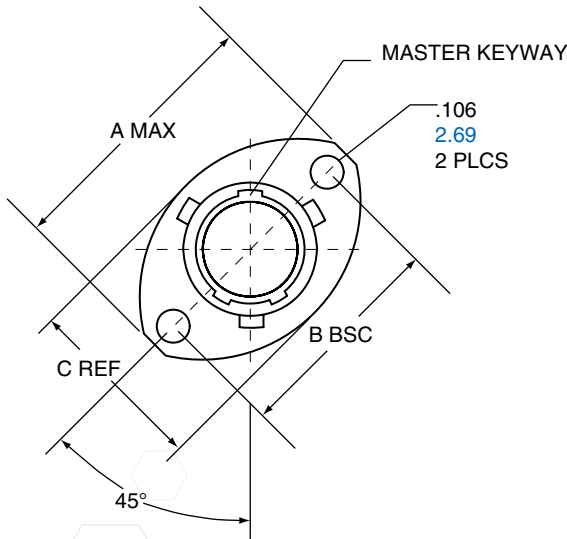
PANEL CUTOUT FOR JAM NUT RECEPTACLE

| Shell Size | A Flat | | B Dia. | |
|------------|--------------|---------------|--------|-------|
| | in. ±.002 | mm. ± 0.05 | in. | mm. |
| 5 | .355 | 9.02 | .382 | 9.70 |
| 6 | .415 | 10.54 | .445 | 11.30 |
| 7 | .541 | 13.74 | .572 | 14.53 |
| 8 | .601 | 15.27 | .635 | 16.13 |
| 9 | .601 | 15.27 | .643 | 16.33 |
| 10 | .729 | 18.52 | .760 | 18.29 |
| 12 | .850 | 21.59 | .885 | 22.48 |
| 14 | 1.031 | 23.19 | 1.072 | 27.23 |

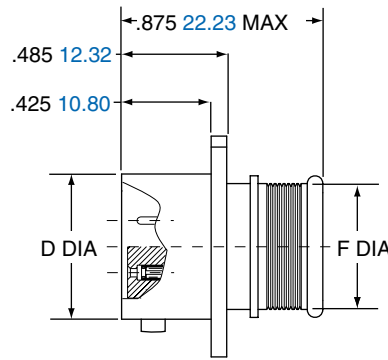
2M803 Bayonet Coupling Flange Mount



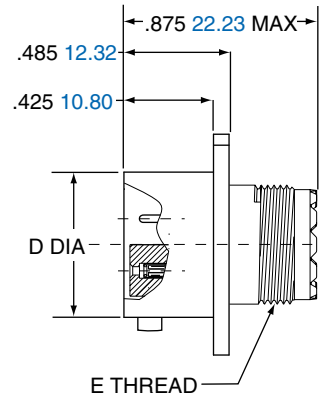
2M803-003-02 and 2M803-004-02



2M803-003-02

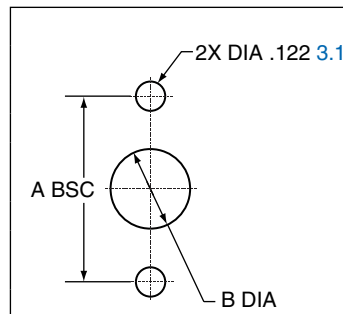


2M803-004-02



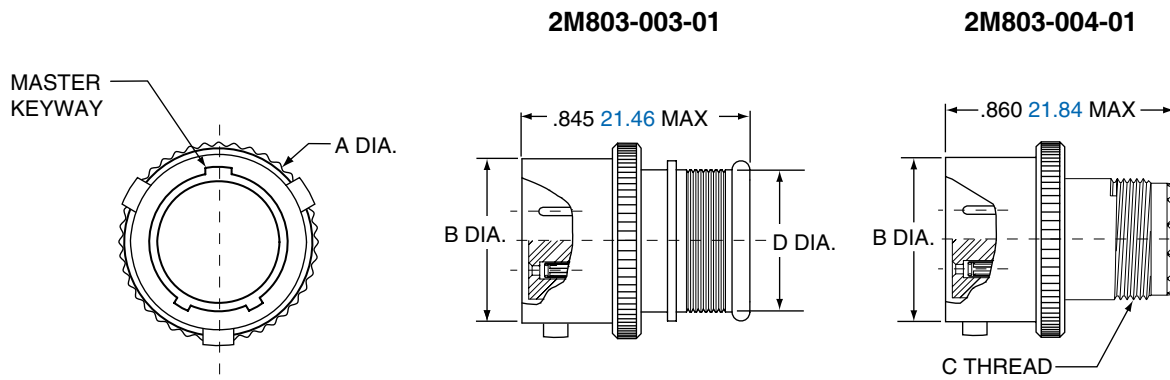
| Shell Size | A Max. | | B BSC. | | C Ref. | | D Dia. | | E Thread | F Dia. | |
|------------|--------|-------|--------|-------|--------|-------|--------|-------|------------------|--------|-------|
| | in. | mm. | in. | mm. | in. | mm. | in. | mm. | | in. | mm. |
| 5 | .710 | 18.03 | .513 | 13.03 | .460 | 11.68 | .300 | 7.62 | .2500-32 UNEF-2A | .245 | 6.22 |
| 6 | .788 | 20.02 | .598 | 15.19 | .522 | 13.26 | .362 | 9.19 | .3125-32 UNEF-2A | .290 | 7.37 |
| 7 | .895 | 22.73 | .708 | 17.98 | .590 | 14.99 | .436 | 11.07 | .4375-28 UNEF-2A | .390 | 9.91 |
| 8 | 1.154 | 29.31 | .964 | 24.49 | .668 | 16.97 | .500 | 12.70 | .5000-28 UNEF-2A | .450 | 11.43 |
| 9 | 1.210 | 30.73 | 1.017 | 25.83 | .721 | 18.31 | .561 | 14.25 | .5625-24 UNEF-2A | .500 | 12.70 |
| 10 | 1.291 | 32.79 | 1.101 | 27.97 | .795 | 20.19 | .635 | 16.13 | .6250-24 UNEF-2A | .562 | 14.27 |
| 12 | 1.395 | 35.43 | 1.204 | 30.58 | .874 | 22.20 | .714 | 18.14 | .6875-24 UNEF-2A | .650 | 16.51 |
| 14 | 1.550 | 39.37 | 1.280 | 32.51 | 1.050 | 26.67 | .865 | 21.97 | .9375-20 UNEF-2A | .805 | 20.45 |

FLANGE MOUNT PANEL CUTOUTS



| Shell Size | A BSC | | B Dia | |
|------------|-------|-------|-------|-------|
| | in. | mm. | in. | mm. |
| 5 | .513 | 13.03 | .365 | 9.25 |
| 6 | .598 | 15.19 | .430 | 10.92 |
| 7 | .708 | 17.98 | .520 | 13.21 |
| 8 | .964 | 17.98 | .592 | 15.04 |
| 9 | 1.017 | 25.83 | .645 | 16.38 |
| 10 | 1.101 | 27.97 | .726 | 18.44 |
| 12 | 1.204 | 30.58 | .832 | 21.13 |
| 14 | 1.280 | 32.51 | .945 | 24.00 |

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- Accessories
- 2M
- HD38999
- Micro-D
- Terrapin
- Nexus



| Shell Size | A Max. | | B Dia. | | C Thread | D Dia. | |
|------------|--------|-------|--------|-------|------------------|--------|-------|
| | in. | mm. | in. | mm. | | in. | mm. |
| 5 | .380 | 9.65 | .300 | 7.62 | .2500-32 UNEF-2A | .245 | 6.22 |
| 6 | .465 | 11.81 | .362 | 9.19 | .3125-32 UNEF-2A | .290 | 7.37 |
| 7 | .485 | 12.32 | .438 | 11.13 | .4375-28 UNEF-2A | .390 | 9.91 |
| 8 | .566 | 14.38 | .498 | 12.65 | .5000-28 UNEF-2A | .450 | 11.43 |
| 9 | .658 | 16.71 | .564 | 14.33 | .5625-24 UNEF-2A | .500 | 12.70 |
| 10 | .720 | 18.29 | .635 | 16.13 | .6250-24 UNEF-2A | .562 | 14.27 |
| 12 | .810 | 20.57 | .636 | 16.15 | .6875-24 UNEF-2A | .650 | 16.51 |
| 14 | 1.027 | 26.09 | .713 | 18.11 | .9375-20 UNEF-2A | .805 | 20.45 |
| 15 | 1.027 | 26.09 | .924 | 23.47 | .9375-20 UNEF-2A | .850 | 21.59 |

2M803 Series of PC Board Receptacles

2M803 Series of PC Board Receptacles are intended for use of terminating the connector directly to a Circuit Board or Flex assembly. These connectors can also be supplied with Solder cup termination for direct wire attachment.

2M803 FEATURES INCLUDE:

- Low profile shells for minimum box protrusion
- Shell Standoffs for PC Board washout
- Non-removable PC and/or Solder cup contacts
- Environmental Sealing



| Series | Shell Style | Service Class | Shell Size-Insert Arrg. | Contact Type | Alternate Position |
|-----------|-------------|---------------|-------------------------|--------------|--------------------|
| 2M803-0XX | -07 | ZNU | 9-19 | P | N |

| SERIES | |
|-----------|--|
| 2M803-005 | Receptacle for Solder Cup or PCB Termination, with Standard Epoxy Potting |
| 2M803-015 | Receptacle with Solder Cup or PCB Termination with Special Sealing for Open Face (unmated) Water Immersion Requirements. 100% Leak Tested. To maintain a helium leak rate of 1×10^{-4} cc/sec. pressure differential from -65°C to 150°C. |

| SHELL STYLE | |
|-------------|--------------|
| -02 | Flange Mount |
| -07 | Jam Nut |

SHELL SIZE - INSERT ARRANGEMENTS

See Insert Arrangements on Pages 13-15

CONTACTS

| | |
|---|---------------------|
| P | Pin - PC Tail |
| S | Socket - PC Tail |
| E | Pin - Solder Cup |
| F | Socket - Solder Cup |

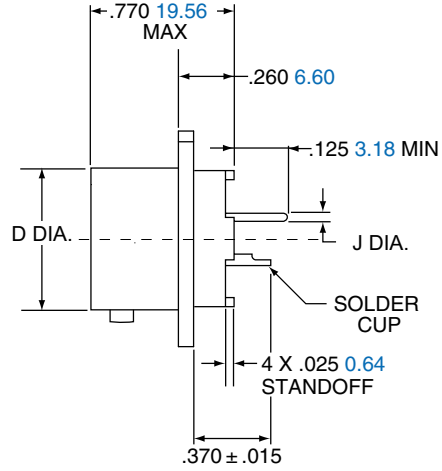
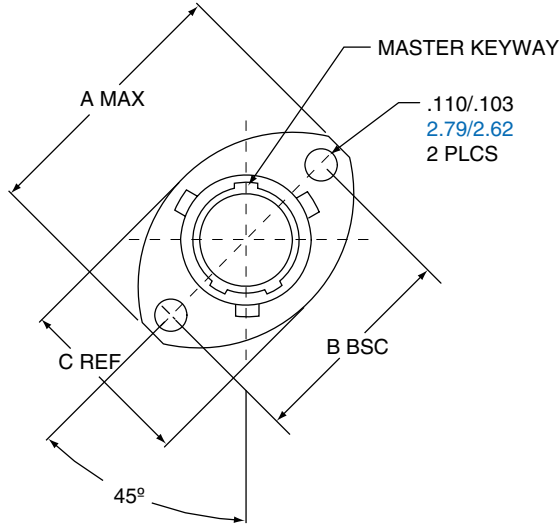


| SERVICE CLASS | |
|---------------|--|
| | Finish |
| C | Aluminum/Black Anodize (Non-Conductive) |
| M | Aluminum/Electroless Nickel |
| NF | Aluminum/Cadmium with Olive Drab Chromate |
| MT | Aluminum/Nickel-PTFE (Duralon) |
| Z1 | Stainless Steel/Passivated |
| ZN | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| ZNU | Aluminum/Zinc-Nickel with Black Chromate |

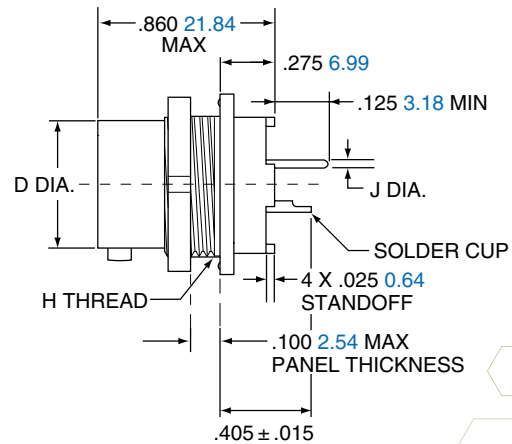
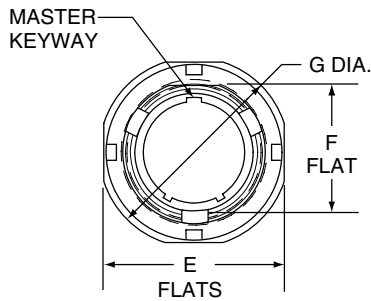
| KEYING | | |
|--------------|--------------|------|
| Key Position | Key Rotation | |
| | A | B |
| N (Normal) | 150° | 210° |
| X | 75° | 210° |
| Y | 95° | 230° |
| Z | 140° | 275° |

Receptacle View

2M803-005-02



2M803-005-07



| Shell Size | A Max. | | B BSC. | | C Ref. | | D Dia. | | E Flats | | F Flats | | G Dia. | | H Thread | J Dia. Tail Dia. |
|------------|--------|-------|--------|-------|--------|-------|--------|-------|---------|-------|---------|-------|--------|-------|-----------------|-------------------------------|
| | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. | | |
| 5 | .710 | 18.03 | .513 | 13.03 | .460 | 11.68 | .300 | 7.62 | .545 | 13.84 | .350 | 8.89 | .575 | 14.61 | .3750-32 UN-2A | #23 |
| 6 | .788 | 20.02 | .598 | 15.19 | .522 | 13.26 | .362 | 9.19 | .595 | 15.11 | .410 | 10.42 | .635 | 16.13 | .4375-28 UN-2A | .018/.022 0.46/0.56 |
| 7 | .895 | 22.73 | .708 | 17.98 | .590 | 14.99 | .436 | 11.07 | .723 | 18.36 | .536 | 13.61 | .755 | 19.18 | .5625-32 UN-2A | #20/20HD |
| 8 | 1.154 | 29.31 | .964 | 24.49 | .665 | 16.89 | .498 | 12.65 | .790 | 20.07 | .593 | 15.10 | .830 | 21.08 | .6250-32 UN-2A | .025/.027 0.64/0.69 |
| 9 | 1.210 | 30.73 | 1.017 | 25.83 | .721 | 18.31 | .561 | 14.25 | .790 | 20.07 | .596 | 15.14 | .830 | 21.08 | .6250-28 UN-2A | #16 |
| 10 | 1.291 | 32.79 | 1.101 | 27.97 | .795 | 20.19 | .635 | 16.13 | .925 | 23.51 | .721 | 23.49 | .955 | 24.26 | .7500-28 UN-2A | .060/.064 |
| 12 | 1.395 | 35.43 | 1.204 | 30.58 | .874 | 22.20 | .714 | 18.14 | 1.044 | 26.52 | .845 | 21.46 | 1.078 | 27.38 | .8750-28 UN-2A | 1.52/1.63 |
| 14 | 1.550 | 39.37 | 1.280 | 32.51 | 1.050 | 26.67 | .865 | 21.97 | 1.230 | 31.24 | 1.022 | 25.96 | 1.264 | 32.11 | 1.0625-20 UN-2A | #12 .092/.096 2.34/2.44 |

2M803 Series of Hermetic Receptacles:

2M803 Series of Hermetic Receptacles provide superior sealing of 1×10^{-8} cc/second helium leak rate and are 100% tested prior to shipping. This superior sealing is accomplished through the use of glass insulator fused to stainless steel shells and iron alloy contacts.

2M803 FEATURES INCLUDE:

- Low profile shells for minimum box protrusion
- Shell Standoffs for PC Board washout
- Non-removable PC and/or Solder cup contacts
- Hermetic Sealing

| Series | Shell Style | Service Class | Shell Size-Insert Arrg. | Contact Type | Alternate Position |
|-----------|-------------|---------------|-------------------------|--------------|--------------------|
| 2M803-006 | -07 | Z1 | 6-7 | P | N |

| SERIES | |
|-----------|---|
| 2M803-006 | Hermetic Receptacles with PCB Contacts or Solder Cup Contacts |

SHELL SIZE - INSERT ARRANGEMENTS
See Insert Arrangements on Pages 13-15

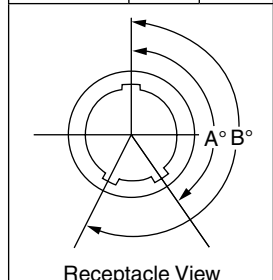
| CONTACTS | |
|----------|------------------|
| P | Pin - Solder Cup |
| C | Pin - PC Tail |

| SHELL STYLE | |
|-------------|--------------|
| -02 | Flange Mount |
| -07 | Jam Nut |

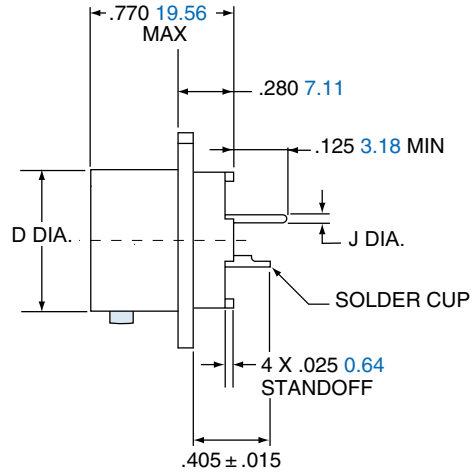
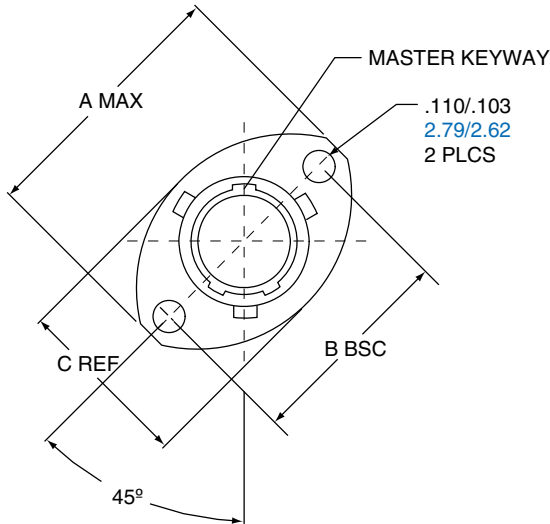
| SERVICE CLASS | | |
|---------------|--|-------------------------------|
| | | Finish |
| Z1 | | Stainless Steel/Passivated |
| ZL | | Stainless Steel/Nickel Plated |



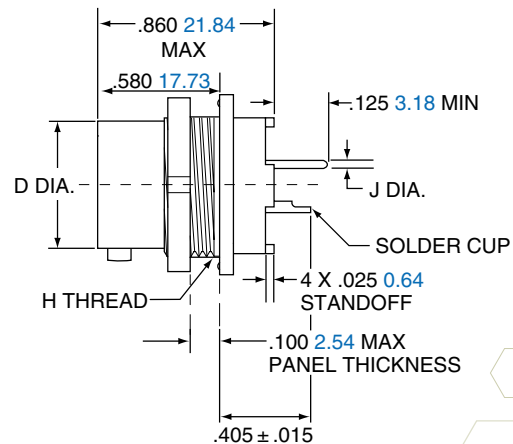
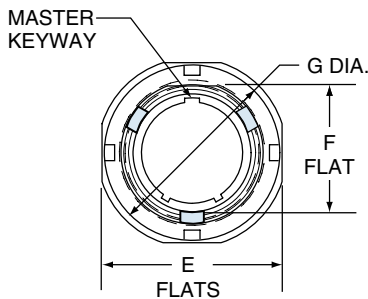
| KEYING | | |
|--------------|--------------|------|
| Key Position | Key Rotation | |
| | A | B |
| N (Normal) | 150° | 210° |
| X | 75° | 210° |
| Y | 95° | 230° |
| Z | 140° | 275° |



2M803-006-02



2M803-006-07



| Shell Size | A Max. | | B BSC. | | C Ref. | | D Dia. | | E Flats | | F Flat | | G Dia. | | H Thread | J PC Tail Dia. |
|------------|--------|-------|--------|-------|--------|-------|--------|-------|---------|-------|--------|-------|--------|-------|-----------------|------------------------|
| | in. | mm | in. | mm | in. | mm | in. | mm | in. | mm | in. | mm | in. | mm | | |
| 5 | .710 | 18.03 | .513 | 13.03 | .460 | 11.68 | .300 | 7.62 | .545 | 13.84 | .350 | 8.89 | .575 | 14.61 | .3750-32 UN-2A | #23 |
| 6 | .788 | 20.02 | .598 | 15.19 | .522 | 13.26 | .362 | 9.19 | .595 | 15.11 | .410 | 10.42 | .635 | 16.13 | .4375-28 UN-2A | .018/.022 0.46/0.56 |
| 7 | .895 | 22.73 | .708 | 17.98 | .590 | 14.99 | .436 | 11.07 | .723 | 18.36 | .536 | 13.61 | .755 | 19.18 | .5625-32 UN-2A | #20/20HD 0.64/0.69 |
| 8 | 1.154 | 29.31 | .964 | 24.49 | .665 | 16.89 | .498 | 12.65 | .790 | 20.07 | .593 | 15.10 | .830 | 21.08 | .6250-32 UN-2A | .025/.027 0.64/0.69 |
| 9 | 1.210 | 30.73 | 1.017 | 25.83 | .721 | 18.31 | .561 | 14.25 | .790 | 20.07 | .596 | 15.14 | .830 | 21.08 | .6250-28 UN-2A | #16 |
| 10 | 1.291 | 32.79 | 1.101 | 27.97 | .795 | 20.19 | .635 | 16.13 | .925 | 23.51 | .721 | .721 | .955 | 24.26 | .7500-28 UN-2A | .060/.064 1.52/1.63 |
| 12 | 1.395 | 35.43 | 1.204 | 30.58 | .874 | 22.20 | .714 | 18.14 | 1.044 | 26.52 | .845 | 21.46 | 1.078 | 27.38 | .8750-28 UN-2A | #12 |
| 14 | 1.550 | 39.37 | 1.280 | 32.51 | 1.050 | 26.67 | .865 | 21.97 | 1.230 | 31.24 | 1.022 | 25.96 | 1.264 | 32.11 | 1.0625-20 UN-2A | .092/.096 2.34/2.44 |
| 15 | N/A | N/A | N/A | N/A | N/A | N/A | .924 | 23.47 | 1.287 | 32.69 | 1.093 | 27.76 | 1.322 | 33.58 | 1.1250-28 UN-2A | |

2M803 1/4 Turn Bayonet Coupling



Ordering Guide for Protection Caps 2M660-082 & 2M660-083

2M803 1/4 Turn Bayonet Protective Caps are available in plug and receptacle versions. Protective caps keep the connector interface dry and clean while not in use. Caps come in a variety of materials, lanyard styles and lengths to accommodate specific design requirements.



| Series | Service Class | Attachment Type | Shell Size | Attachment Code | Attachment Length in Inches |
|-----------|---------------|-----------------|------------|-----------------|-----------------------------|
| 2M660-082 | -M | -G | 6 | 04 | -5 |

| SERIES | |
|-----------|--|
| 2M660-082 | Protection Cap for Bayonet Plug Connectors |
| 2M660-083 | Protection Cap for Bayonet Receptacle Connectors |

| ATTACHMENT TYPE | | SHELL SIZE |
|-----------------|--|------------|
| -G | Nylon Rope | 5 |
| -H | Stainless Steel Wire Rope, Teflon® Jacket | 6 |
| -N | No Attachment | 7 |
| -S | Stainless Steel Sash Chain | 8 |
| -SK | Nylon Rope With Slip Knot | 9 |
| -T | Stainless Steel Wire Rope, No Jacket | 10 |
| -U | Stainless Steel Wire Rope, Polyurethane Jacket | 12 |
| | | 14 |
| | | 15 |

Omit for attachment Type N (No Attachment)
Example "-5" equals five inch length

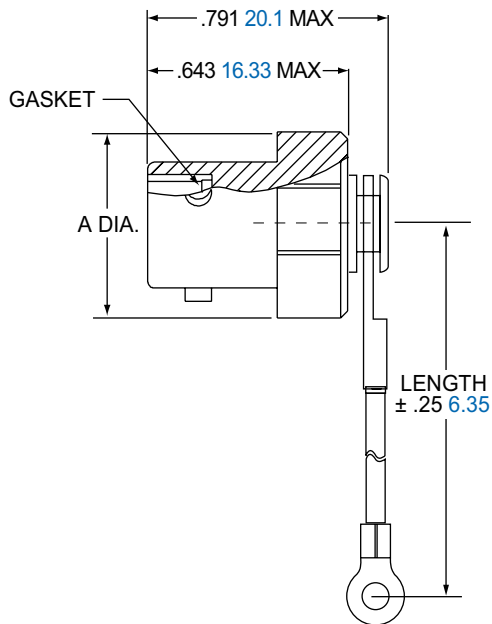
| ATTACHMENT CODE | |
|--|------------------------|
| Omit for attachment Types N (No Attachment) and SK (Slip Knot) | |
| Small Ring | 01 -.126 (3.20) I.D. |
| | 02 -.145 (3.68) I.D. |
| | 04 -.188 (4.78) I.D. |
| | 06 -.197 (5.00) I.D. |
| | 14 -.385 (9.78) I.D. |
| Large Ring | 15 -.445 (11.30) I.D. |
| | 16 -.570 (14.48) I.D. |
| | 17 -.635 (16.13) I.D. |
| | 18 -.695 (17.65) I.D. |
| | 19 -.885 (22.48) I.D. |
| | 20 -1.070 (27.17) I.D. |
| Split Ring | 50 -.420 (10.67) I.D. |
| | 52 -.480 (12.19) I.D. |
| | 54 -.635 (16.13) I.D. |
| | 56 -.745 (18.92) I.D. |
| | 58 -.885 (22.48) I.D. |
| | 60 -1.010 (25.65) I.D. |
| | 64 -1.125 (28.58) I.D. |
| | 68 -1.345 (34.16) I.D. |

| SERVICE CLASS | | |
|---------------|--|--|
| | | Finish |
| -C | | Aluminum/Black Anodize (Non-Conductive) |
| -M | | Aluminum/Electroless Nickel |
| -NF | | Aluminum/Cadmium with Olive Drab Chromate |
| -MT | | Aluminum/Nickel-PTFE (Duralon) |
| -Z1 | | Stainless Steel/Passivated |
| -ZN | | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| -ZNU | | Aluminum/Zinc-Nickel with Black Chromate |

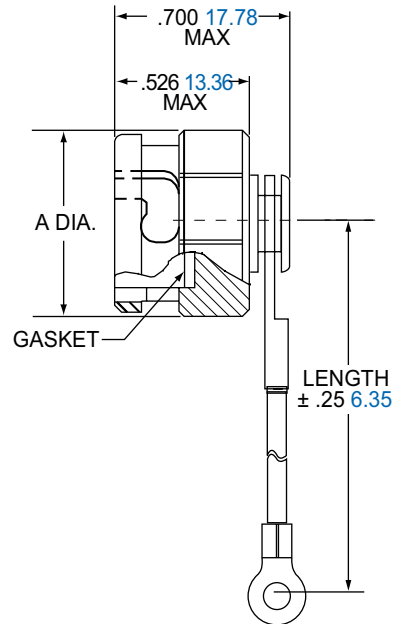


Contacts & Tools
2M Specs
2M801
2M803
2M804
2M805
2M Accessories
HD38999
Micro-D
Terrapin
Nexus

2M660-082



2M660-083



| Shell Size | A Max. | |
|------------|--------|-------|
| | in. | mm. |
| 5 | .620 | 15.75 |
| 6 | .620 | 15.75 |
| 7 | .620 | 15.75 |
| 8 | .690 | 17.53 |
| 9 | .760 | 19.30 |
| 10 | .850 | 21.59 |
| 12 | .940 | 23.88 |
| 14 | 1.170 | 29.72 |
| 15 | 1.230 | 31.24 |

MATERIALS

| | |
|----------------|-----------------------------------|
| Cover | Aluminum alloy or stainless steel |
| Gasket | Fluorosilicone rubber |
| Wire, Hardware | Stainless steel, passivated |

LANYARD OPTIONS

| | | |
|--|---|--|
| | Nylon Rope | -55° to +100°C., black, flexible, good abrasion resistance, good resistance to fuels, .120" 3mm diameter |
| | Polyurethane Coated Wire Rope | Black polyurethane over stainless steel rope, very flexible, excellent abrasion resistance, excellent resistance to fuels, .080" 2mm diameter |
| | Teflon® Jacketed Wire Rope | Translucent FEP jacket over stainless steel, -55° to +200°C., fair flexibility, good abrasion resistance, .100" diameter |
| | Sash Chain | Stainless steel |
| | Slip Knot (SK) for attaching Covers to Cables | 55° to +100°C., black, flexible, good abrasion resistance, good resistance to fuels, .120" 3mm diameter. Length includes .5" 13mm diameter loop. |

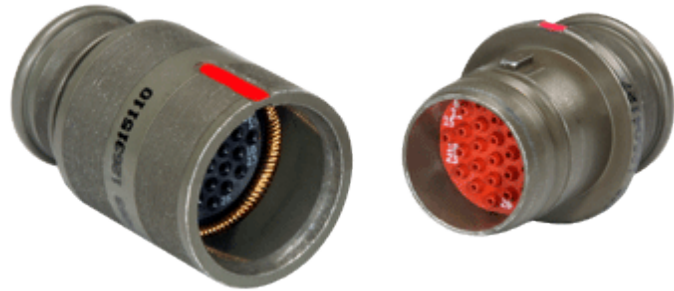
General Information

2M804 Series Micro Miniature Connectors:

Amphenol's 2M804 Series of connectors are ideal for applications where space is limited and a quick disconnect connector is needed. The series features a push to mate, pull to unmate connector with EMI spring installed in the receptacle for improved EMI performance. Plugs and receptacles are provided in two different styles to accommodate the attachment of backshell with rear accessory threads or with integral backshell. The integral backshell allows for use of EMI shielding attachments and/or overmolding. Contact termination styles include: Crimp, PC Tail, and Solder cup with others available upon request. Custom and Filter configurations are available, please consult factory for ordering information.

2M804 FEATURES INCLUDE:

- Push to mate, Pull to unmate coupling
- Flush mounting Receptacle on outside of panel
- Sealed Receptacles:
 - Hermetic (1×10^{-8} cc/second)
 - Epoxy Backfilled (1×10^{-4} cc/second)
- ROHS Compliant Platings available
- Insert Arrangements up to 85 contacts



2M804 SPECIFICATIONS

| | |
|-------------------------|-------------------------------------|
| Current Rating | See Insert Arrangements (pg. 13-15) |
| DWV | See Insert Arrangements (pg. 13-15) |
| Insulation Resistance | 5000 megohms min. |
| Operating Temperature | -65° C to +150° C |
| Shock | 300 g's |
| Random Vibration | 37 g's |
| Shielding Effectiveness | 60 dB min. from 100MHz to 1000MHz |
| Durability | 2000 mating cycles |

2M804 MATERIALS AND FINISHES

| | |
|-----------------------------------|-----------------------------------|
| Shells | Aluminum Alloy or Stainless Steel |
| Contacts | Copper Alloy, gold plated |
| Insulators | Polyphenylene Sulfide (PPS) |
| Contact Retention | Beryllium Copper Alloy |
| Grommet, Interfacial Seal, O'Ring | Fluorosilicone Rubber |
| Canted Coil Spring | Stainless Steel, Gold plated |

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- Accessories
- 2M
- HD38999
- Micro-D
- Terrapin
- Nexus

Connector Weights

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

Micro-D

Terrapin

Nexus

SERIES 2M804 WEIGHTS IN GRAMS

| Insert Arrg. | Plug | Jam Nut Receptacle | | In-Line Receptacle |
|--------------|------|--------------------|-------------|--------------------|
| | | Rear Mount | Front Mount | |
| 5-3P | 2.2 | 8.0 | 9.7 | 4.0 |
| 5-3S | 2.4 | 8.3 | 9.8 | 4.1 |
| 6-1P | 3.1 | 7.2 | 11.8 | 5.2 |
| 6-1S | 3.4 | 7.5 | 12.1 | 5.5 |
| 6-4P | 2.8 | 8.8 | 11.4 | 4.8 |
| 6-4S | 3.0 | 9.0 | 11.6 | 5.1 |
| 6-7P | 3.0 | 9.1 | 11.7 | 5.3 |
| 6-7S | 3.2 | 9.5 | 12.0 | 5.5 |
| 7-1P | 3.7 | 11.1 | 16.4 | 10.1 |
| 7-1S | 4.3 | 11.7 | 16.9 | 10.7 |
| 7-10P | 3.7 | 10.9 | 16.2 | 10.0 |
| 7-10S | 4.2 | 11.3 | 16.5 | 10.3 |
| 8-2P | 5.0 | 10.9 | 13.5 | 8.0 |
| 8-2S | 5.7 | 5.7 | 11.7 | 9.0 |
| 8-13P | 4.3 | 10.6 | 12.4 | 7.4 |
| 8-13S | 4.8 | 11.0 | 13.0 | 8.1 |
| 8-200P | 5.3 | 11.2 | 13.9 | 8.4 |
| 8-200S | 6.1 | 12.0 | 14.6 | 9.1 |
| 9-4P | 5.7 | 15.2 | 21.1 | 11.0 |
| 9-4S | 6.7 | 16.2 | 22.1 | 12.0 |
| 9-19P | 4.6 | 14.1 | 20.0 | 9.9 |
| 9-19S | 4.8 | 14.9 | 21.1 | 9.8 |
| 9-200P | 5.2 | 14.6 | 20.6 | 10.5 |
| 9-200S | 6.3 | 15.7 | 21.7 | 11.6 |
| 9-201P | 5.8 | 15.3 | 21.2 | 11.1 |
| 9-201S | 6.9 | 16.4 | 22.3 | 12.2 |
| 10-5P | 7.3 | 15.5 | 23.3 | 11.9 |
| 10-5S | 8.7 | 16.9 | 24.8 | 13.3 |
| 10-26P | 5.4 | 13.6 | 20.5 | 10.1 |
| 10-26S | 6.2 | 13.9 | 21.1 | 10.5 |
| 10-200P | 6.2 | 14.4 | 22.2 | 10.8 |
| 10-200S | 7.6 | 15.8 | 23.7 | 12.2 |
| 10-201P | 6.3 | 14.5 | 22.3 | 10.9 |
| 10-201S | 7.7 | 16.0 | 23.8 | 12.3 |
| 10-202P | 6.3 | 14.5 | 22.3 | 10.9 |
| 10-202S | 7.8 | 16.1 | 23.9 | 12.4 |
| 12-2P | 10.7 | 21.5 | 26.1 | 20.8 |
| 12-2S | 12.3 | 23.1 | 27.7 | 22.4 |
| 12-3P | 11.7 | 22.4 | 27.1 | 21.8 |
| 12-3S | 13.4 | 24.2 | 28.8 | 23.4 |
| 12-7P | 11.9 | 22.7 | 27.3 | 22.0 |

SERIES 2M804 WEIGHTS IN GRAMS

| Insert Arrg. | Plug | Jam Nut Receptacle | | In-Line Receptacle |
|--------------|------|--------------------|-------------|--------------------|
| | | Rear Mount | Front Mount | |
| 12-7S | 14.5 | 25.3 | 29.9 | 24.6 |
| 12-37P | 10.1 | 21.5 | 25.5 | 22.4 |
| 12-37S | 11.8 | 23.1 | 27.2 | 22.1 |
| 12-200P | 10.3 | 21.1 | 25.7 | 20.5 |
| 12-200S | 12.5 | 23.3 | 27.9 | 22.7 |
| 12-201P | 10.7 | 21.5 | 26.1 | 22.8 |
| 12-201S | 13.0 | 23.8 | 28.4 | 23.1 |
| 14-5P | 15.4 | 28.3 | 33.6 | 26.3 |
| 14-5S | 18.4 | 31.2 | 36.5 | 29.3 |
| 14-12P | 16.2 | 29.0 | 34.3 | 27.1 |
| 14-12S | 19.8 | 32.7 | 38.0 | 30.7 |
| 14-55P | 12.8 | 25.6 | 30.9 | 23.7 |
| 14-55S | 15.6 | 28.3 | 33.8 | 26.5 |

SERIES 2M804 UNMATE FORCE

| Layout | Average Force | |
|--------|---------------|---------|
| | Pounds | Newtons |
| 5-3 | 10.6 | 47.1 |
| 6-4 | 10.8 | 48.0 |
| 6-7 | 11.4 | 50.7 |
| 7-10 | 12.0 | 53.4 |
| 8-13 | 12.6 | 56.0 |
| 9-19 | 13.8 | 61.4 |
| 10-26 | 15.2 | 67.6 |
| 12-37 | 17.4 | 77.4 |
| 14-55 | 21.0 | 93.4 |

Note: Contact Amphenol if modified force values are needed.

2M804 Push-Pull Crimp Receptacles



Ordering Guide for 2M804-001, 002, 003, 004



| 1. Series | 2. Shell Style | 3. Service Class | 4. Shell Size-Insert Arrg. | 5. Contact Type | 6. Alternate Position |
|-----------|----------------|------------------|----------------------------|-----------------|-----------------------|
| 2M804-00X | -06 | ZNU | 6-7 | P | |

For single master key omit (leave blank)

| SERIES | |
|-----------|------------------------------------|
| 2M804-001 | Plug with Integral Backshell |
| 2M804-002 | Plug with Accessory Thread |
| 2M804-003 | Receptacle with Integral Backshell |
| 2M804-004 | Receptacle with Accessory Thread |

SHELL SIZE - INSERT ARRANGEMENTS

See Insert Arrangements on Pages 13-15



| CONTACTS | |
|----------|--------|
| P | Pin |
| S | Socket |

| SHELL STYLE | |
|-------------|----------------------------------|
| 2M804-001 | 2M804-002 |
| -06 | Plug |
| SHELL STYLE | |
| 2M804-003 | 2M804-004 |
| -00 | Jam Nut for Front Panel Mounting |
| -01 | In-Line for Free-Hanging Cable |
| -07 | Jam Nut for Rear Panel Mounting |

| SERVICE CLASS | |
|---------------|--|
| | Finish |
| C | Aluminum/Black Anodize (Non-Conductive) |
| M | Aluminum/Electroless Nickel |
| NF | Aluminum/Cadmium with Olive Drab Chromate |
| MT | Aluminum/Nickel-PTFE (Durmalon) |
| Z1 | Stainless Steel/Passivated |
| ZN | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| ZNU | Aluminum/Zinc-Nickel with Black Chromate |

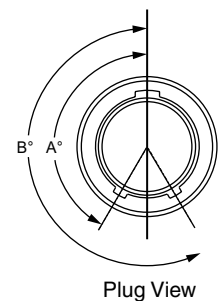
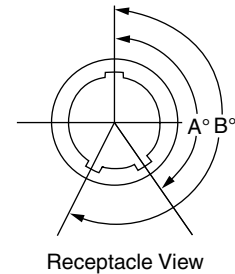
| KEYING | | |
|--------------|-------------------|------|
| Key Position | Key Rotation | |
| | A | B |
| Omit | Single Master Key | |
| A | 150° | 210° |
| B | 75° | 210° |
| C | 95° | 230° |
| D | 140° | 275° |

INSERT ARRANGEMENTS

| Insert Arrg. | No. of Contacts | | | | |
|--------------|-----------------|-----|-------|-----|-----|
| | #23 | #20 | #20HD | #16 | #12 |
| 5-3 | 3 | | | | |
| 6-1 | | | | 1 | |
| 6-4 | 4 | | | | |
| 6-6 | 6 | | | | |
| 6-7 | 7 | | | | |
| 6-23 | | | 3 | | |
| 7-1 | | | | | 1 |
| 7-10 | 10 | | | | |
| 7-25 | | | 5 | | |
| 8-2 | | | | 2 | |
| 8-28 | | | 8 | | |
| 8-13 | 13 | | | | |
| 8-200 | 4 | 2 | | | |
| 9-4 | | | | 4 | |
| 9-19 | 19 | | | | |
| 9-200 | 4 | | | 2 | |
| 9-201 | 8 | 2 | | | |
| 9-210 | | | 10 | | |
| 10-2 | | | | | 2 |

INSERT ARRANGEMENTS

| Insert Arrg. | No. of Contacts | | | | |
|--------------|-----------------|-----|-------|-----|-----|
| | #23 | #20 | #20HD | #16 | #12 |
| 10-5 | | | | 5 | |
| 10-26 | 26 | | | | |
| 10-200 | 12 | | | | 1 |
| 10-201 | 4 | | | | 2 |
| 10-202 | 8 | | | 2 | |
| 12-2 | | | | | 2 |
| 12-3 | | | | | 3 |
| 12-7 | | | | 7 | |
| 12-37 | 37 | | | | |
| 12-200 | 6 | | | | 2 |
| 12-201 | 10 | | | | 2 |
| 12-220 | | | 20 | | |
| 14-5 | | | | | 5 |
| 14-12 | | | | 12 | |
| 14-55 | 55 | | | | |
| 14-235 | | | 35 | | |
| 15-85 | 85 | | | | |



Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

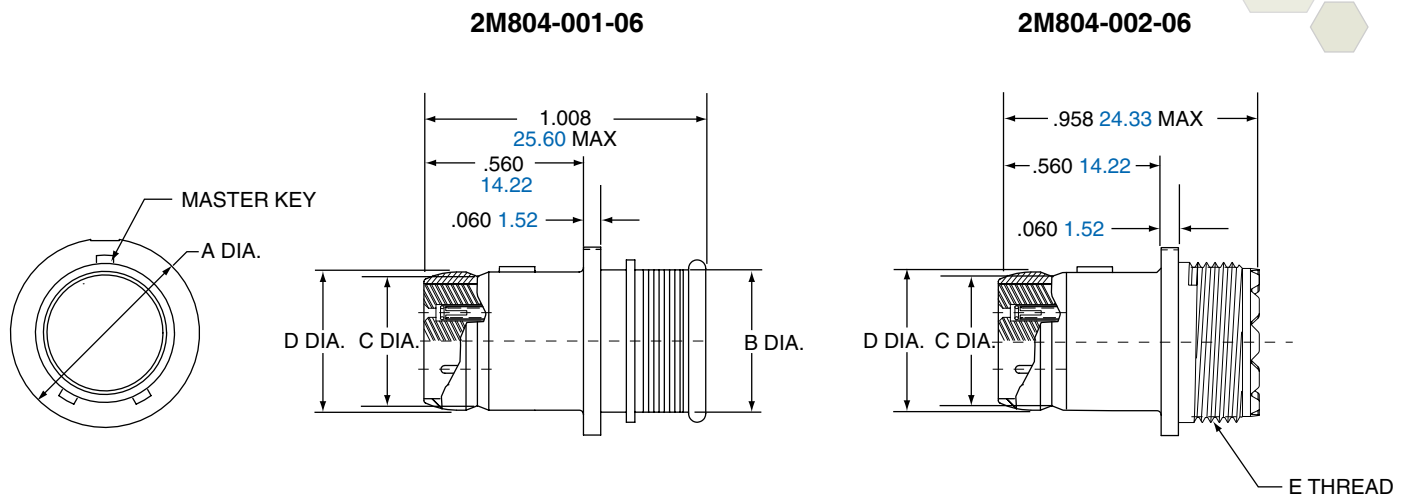
2M Accessories

HD38999

Micro-D

Terrapin

Nexus

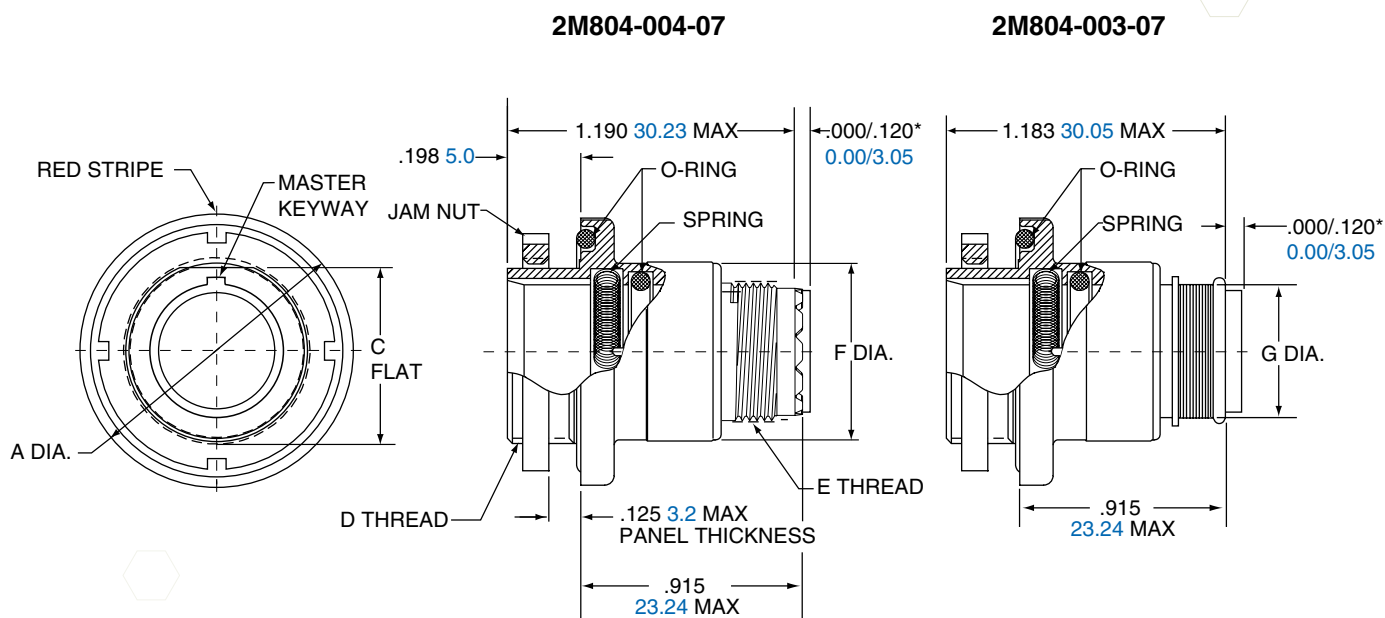


| Shell Size | A Dia. | | B Dia. | | C Dia. | | D Dia. | | E Thread |
|------------|--------|-------|--------|-------|--------|-------|--------|-------|------------------|
| | in. | mm. | in. | mm. | in. | mm. | in. | mm. | |
| 5 | .418 | 10.62 | .248 | 6.30 | .218 | 5.54 | .245 | 6.22 | .2500-32 UNEF-2A |
| 6 | .488 | 12.40 | .293 | 7.44 | .275 | 6.99 | .310 | 7.87 | .3125-32 UNEF-2A |
| 7 | .561 | 14.25 | .388 | 9.86 | .350 | 8.89 | .378 | 9.60 | .4375-28 UNEF-2A |
| 8 | .603 | 15.32 | .448 | 11.38 | .395 | 10.03 | .426 | 10.82 | .5000-28 UNEF-2A |
| 9 | .663 | 16.84 | .503 | 12.78 | .450 | 11.43 | .482 | 12.24 | .5625-24 UNEF-2A |
| 10 | .743 | 18.87 | .563 | 14.30 | .525 | 13.34 | .555 | 14.10 | .6250-24 UNEF-2A |
| 12 | .851 | 21.62 | .653 | 16.59 | .642 | 16.31 | .672 | 17.07 | .6875-24 UNEF-2A |
| 14 | .978 | 24.84 | .803 | 20.40 | .761 | 19.33 | .795 | 20.19 | .9375-20 UNEF-2A |
| 15 | 1.038 | 26.37 | .853 | 21.67 | .837 | 21.26 | .863 | 21.92 | .9375-20 UNEF-2A |

2M804 Push-Pull Jam Nut Rear Panel



2M804-004-07 and 2M804-003-07

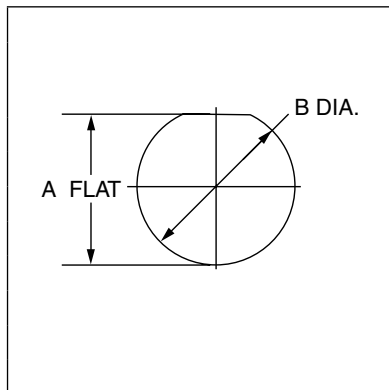


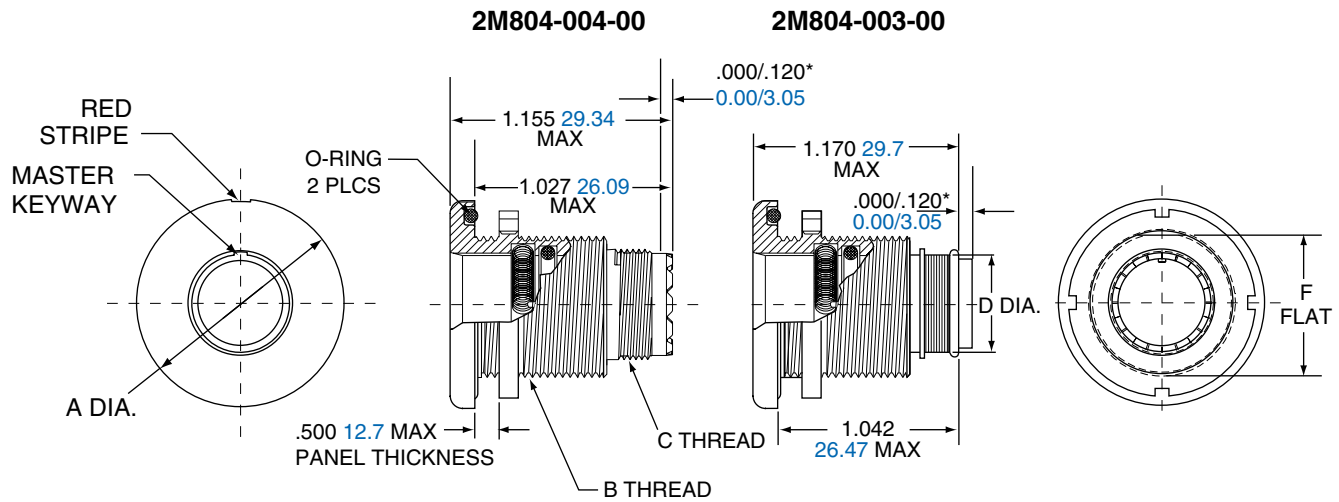
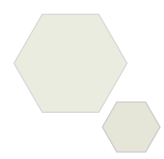
*Grommet protrudes for power/combo arrangements

| Shell Size | A Dia. | | C Flat | | D Thread | E Thread | F Dia. | | G Dia. | |
|------------|--------|-------|--------|-------|-----------------|------------------|--------|-------|--------|-------|
| | in. | mm | in. | mm | | | in. | mm. | in. | mm. |
| 5 | .773 | 19.63 | .414 | 10.52 | .4375-32 UN-2A | .2500-32 UNEF-2A | .448 | 11.38 | .245 | 6.22 |
| 6 | .833 | 21.16 | .468 | 11.89 | .5000-32 UN-2A | .3125-32 UNEF-2A | .513 | 13.03 | .290 | 7.37 |
| 7 | .903 | 22.94 | .593 | 15.06 | .6250-28 UN-2A | .4375-28 UNEF-2A | .573 | 14.55 | .390 | 9.91 |
| 8 | .958 | 24.33 | .593 | 15.06 | .6250-28 UN-2A | .5000-28 UNEF-2A | .596 | 15.14 | .442 | 11.23 |
| 9 | .998 | 25.35 | .653 | 16.59 | .6875-28 UN-2A | .5625-24 UNEF-2A | .691 | 17.55 | .500 | 12.70 |
| 10 | 1.083 | 27.51 | .721 | 18.31 | .7500-28 UN-2A | .6250-24 UNEF-2A | .728 | 18.49 | .564 | 14.33 |
| 12 | 1.183 | 30.05 | .843 | 21.41 | .8750-28 UN-2A | .6875-24 UNEF-2A | .883 | 22.43 | .650 | 16.51 |
| 14 | 1.323 | 33.60 | .968 | 24.59 | 1.0000-28 UN-2A | .9375-20 UNEF-2A | 1.003 | 25.48 | .805 | 20.45 |
| 15 | 1.373 | 34.87 | 1.036 | 26.31 | 1.0625-20 UN-2A | | 1.063 | 27.00 | | |

JAM NUT PANEL CUTOUT

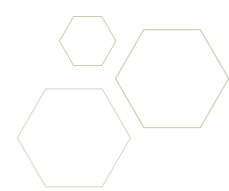
| Shell Size | A Flat | | B Dia. | |
|------------|-----------|------------|-----------|------------|
| | in. ±.002 | mm. ± 0.05 | in. ±.005 | mm. ± 0.13 |
| 5 | .423 | 10.74 | .448 | 11.38 |
| 6 | .475 | 12.07 | .510 | 12.95 |
| 7 | .602 | 15.29 | .635 | 16.13 |
| 8 | .602 | 15.29 | .635 | 16.13 |
| 9 | .663 | 16.84 | .698 | 17.73 |
| 10 | .729 | 18.82 | .760 | 19.30 |
| 12 | .851 | 21.62 | .885 | 22.48 |
| 14 | .976 | 24.79 | 1.010 | 25.65 |





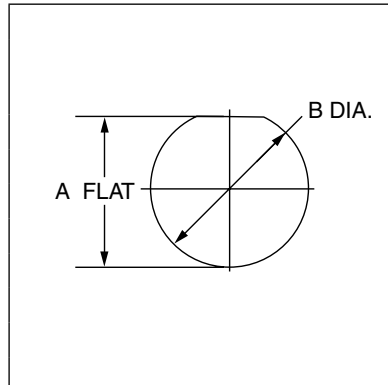
*Grommet protrudes for power/combo arrangements

| Shell Size | A Dia. | | B Thread | C Thread | D Dia. | | F Flat. | |
|------------|--------|-------|-----------------|------------------|--------|-------|---------|-------|
| | in. | mm | | | in. | mm. | in. | mm. |
| 5 | .830 | 21.08 | .5000-32 UN-2A | .2500-32 UNEF-2A | .245 | 6.22 | .470 | 11.94 |
| 6 | .885 | 22.48 | .5625-32 UN-2A | .3125-32 UNEF-2A | .290 | 7.37 | .530 | 13.46 |
| 7 | .955 | 25.27 | .6875-28 UN-2A | .4375-28 UNEF-2A | .390 | 9.91 | .663 | 16.84 |
| 8 | .955 | 25.27 | .6875-28 UN-2A | .5000-28 UNEF-2A | .442 | 11.23 | .663 | 16.84 |
| 9 | 1.075 | 27.31 | .7500-28 UN-2A | .5625-24 UNEF-2A | .500 | 12.70 | .720 | 18.29 |
| 10 | 1.140 | 28.95 | .8125-28 UN-2A | .6250-24 UNEF-2A | .564 | 14.33 | .780 | 19.81 |
| 12 | 1.340 | 34.04 | 1.0000-28 UN-2A | .6875-24 UNEF-2A | .650 | 16.51 | .970 | 24.64 |
| 14 | 1.390 | 35.31 | 1.0625-20 UN-2A | .9375-20 UNEF-2A | .805 | 20.45 | 1.020 | 25.91 |
| 15 | 1.453 | 36.91 | 1.1250-28 UN-2A | .9375-20 UNEF-2A | .850 | 21.59 | 1.113 | 28.27 |



PANEL CUTOUT

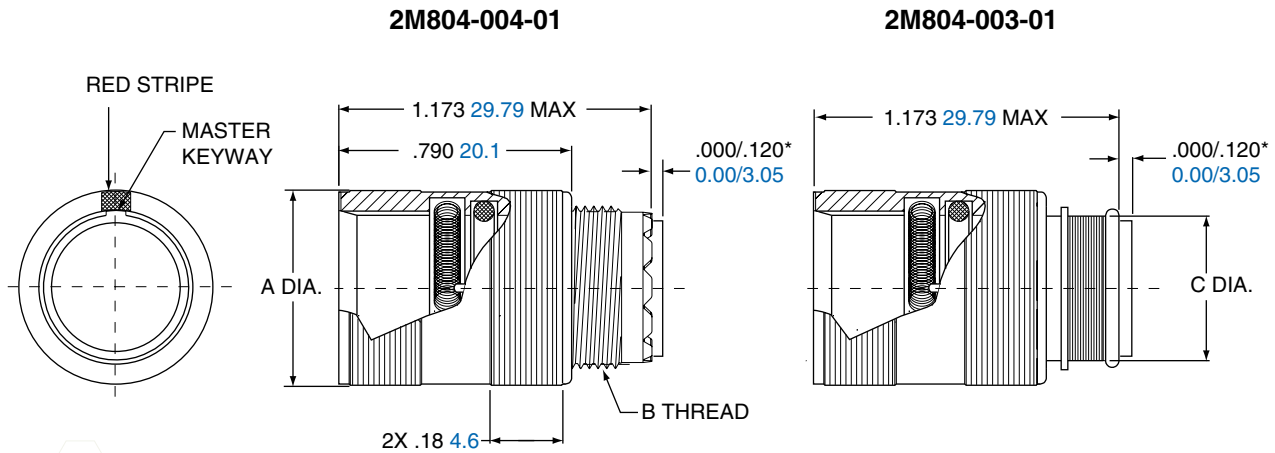
| Shell Size | A Flat | | B Dia. | |
|------------|--------------|---------------|--------------|---------------|
| | in. ±.002 | mm. ± 0.05 | in. ±.005 | mm. ± 0.13 |
| 5 | .477 | 12.12 | .510 | 12.95 |
| 6 | .537 | 13.64 | .573 | 14.55 |
| 7 | .670 | 17.02 | .698 | 17.73 |
| 8 | .670 | 17.02 | .698 | 17.73 |
| 9 | .727 | 18.47 | .760 | 19.30 |
| 10 | .787 | 20.19 | .823 | 20.90 |
| 12 | .977 | 24.82 | 1.010 | 25.65 |
| 14 | 1.027 | 26.09 | 1.073 | 27.25 |



2M804 Push-Pull In-Line Receptacle



2M804-004-01 and 2M804-003-01



*Grommet protrudes for power/combo arrangements

| Shell Size | A Dia. | | B Thread | C Dia. | |
|------------|--------|-------|------------------|--------|-------|
| | in. | mm | | in. | mm. |
| 5 | .450 | 11.43 | .2500-32 UNEF-2A | .245 | 6.22 |
| 6 | .520 | 13.21 | .3125-32 UNEF-2A | .290 | 7.37 |
| 7 | .580 | 14.73 | .4375-28 UNEF-2A | .390 | 9.91 |
| 8 | .603 | 15.32 | .5000-28 UNEF-2A | .442 | 11.23 |
| 9 | .695 | 17.65 | .5625-24 UNEF-2A | .500 | 12.70 |
| 10 | .735 | 18.67 | .6250-24 UNEF-2A | .564 | 14.33 |
| 12 | .880 | 22.35 | .6875-24 UNEF-2A | .650 | 16.51 |
| 14 | 1.010 | 25.65 | .9375-20 UNEF-2A | .805 | 20.45 |
| 15 | 1.061 | 26.95 | .9375-20 UNEF-2A | .853 | 21.67 |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

Micro-D

Terrapin

Nexus

2M804 Series of PC Board Receptacles:

2M804 Series of PC Board Receptacles are intended for use of terminating the connector directly to a Circuit Board or Flex assembly. These connectors can also be supplied with Solder cup termination for direct wire attachment.

2M804 FEATURES INCLUDE:

- Flush mounting Receptacle on outside of panel
- Shell Standoffs for PC Board washout
- Non-removable PC and/or Solder cup contacts
- Environmental Sealing



| Series | Shell Style | Service Class | Shell Size-Insert Arrg. | Contact Type | Alternate Position |
|-----------|-------------|---------------|-------------------------|--------------|--------------------|
| 2M804-0XX | -07 | ZNU | 9-19 | P | |

For single master key omit (leave blank)

| SERIES | |
|-----------|--|
| 2M804-005 | Receptacle with Solder cup or PCB Termination with Standard Epoxy Potting |
| 2M804-020 | Receptacle with Solder Cup or PCB Termination with Special Sealing for Open Face (unmated) Water Immersion Requirements. 100% Leak Tested. To maintain a helium leak rate of 1×10^{-4} cc/sec. pressure differential from -65°C to 150°C. |

SHELL SIZE - INSERT ARRANGEMENTS

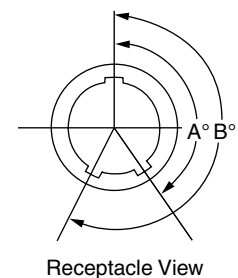
See Insert Arrangements on Pages 13-15

| CONTACTS | |
|----------|---------------------|
| P | Pin - PC Tail |
| S | Socket - PC Tail |
| E | Pin - Solder Cup |
| F | Socket - Solder Cup |

| SHELL STYLE | |
|-------------|----------------------------------|
| -00 | Jam Nut for Front Panel Mounting |
| -07 | Jam Nut for Rear Panel Mounting |

| SERVICE CLASS | | |
|---------------|--|--|
| | | Finish |
| C | | Aluminum/Black Anodize (Non-Conductive) |
| M | | Aluminum/Electroless Nickel |
| NF | | Aluminum/Cadmium with Olive Drab Chromate |
| MT | | Aluminum/Nickel-PTFE (Durmalon) |
| Z1 | | Stainless Steel/Passivated |
| ZN | | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| ZNU | | Aluminum/Zinc-Nickel with Black Chromate |

| KEYING | | |
|--------------|-----------------------|------|
| Key Position | Key Rotation | |
| | A | B |
| Omit | Single Master Key-way | |
| A | 150° | 210° |
| B | 75° | 210° |
| C | 95° | 230° |
| D | 140° | 275° |

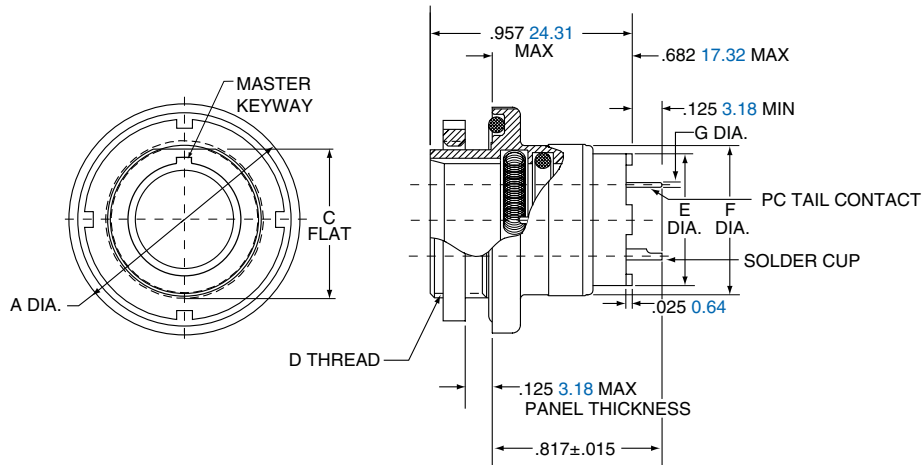


2M804 Push-Pull Rear Panel Jam Nut Recept.



2M804-005-07, 2M804-020-07

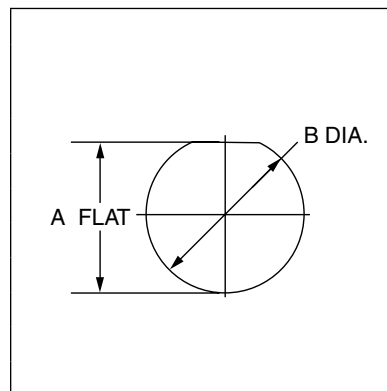
2M804-005-07
2M804-020-07



| Shell Size | A Dia. | | C Flat | | D Thread | E Dia. | | F Dia. | | G PC Tail Dia. |
|------------|--------|-------|--------|-------|-----------------|--------|-------|--------|-------|---------------------------------|
| | in. | mm. | in. | mm. | | in. | mm. | in. | mm. | |
| 5 | .775 | 19.69 | .415 | 10.54 | .4375-32 UN-2A | .275 | 6.98 | .450 | 11.43 | #23 .018/.022 0.46/0.56 |
| 6 | .830 | 21.08 | .467 | 14.40 | .5000-32 UN-2A | .330 | 8.38 | .510 | 12.95 | #20/20HD .025/.027 0.64/0.69 |
| 7 | .910 | 23.11 | .594 | 15.09 | .6250-28 UN-2A | .432 | 10.97 | .570 | 14.48 | |
| 8 | .955 | 24.26 | .594 | 15.09 | .6250-28 UN-2A | .493 | 12.52 | .593 | 15.06 | #16 .060/.064 1.52/1.63 |
| 9 | 1.000 | 25.40 | .655 | 16.64 | .6875-28 UN-2A | .551 | 14.00 | .685 | 17.40 | |
| 10 | 1.085 | 27.48 | .721 | 18.31 | .7500-28 UN-2A | .620 | 15.75 | .725 | 18.42 | #12 .092/.096 2.34/2.44 |
| 12 | 1.190 | 30.23 | .843 | 21.41 | .8750-28 UN-2A | .703 | 17.86 | .880 | 22.35 | |
| 14 | 1.325 | 33.66 | .968 | 24.59 | 1.0000-28 UN-2A | .863 | 21.92 | 1.000 | 25.40 | |
| 15 | 1.373 | 34.87 | 1.036 | 26.31 | 1.0625-20 UN-2A | .913 | 23.19 | 1.063 | 27.00 | |

JAM NUT PANEL CUTOUT

| Shell Size | A Flat | | B Dia. | |
|------------|--------------|---------------|--------------|---------------|
| | in. ±.002 | mm. ± 0.05 | in. ±.005 | mm. ± 0.13 |
| 5 | .423 | 10.74 | .448 | 11.38 |
| 6 | .475 | 12.07 | .510 | 12.95 |
| 7 | .602 | 15.29 | .635 | 16.13 |
| 8 | .602 | 15.29 | .635 | 16.13 |
| 9 | .663 | 16.84 | .698 | 17.73 |
| 10 | .729 | 18.82 | .760 | 19.30 |
| 12 | .851 | 21.62 | .885 | 22.48 |
| 14 | .976 | 24.79 | 1.010 | 25.65 |



Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

Accessories

2M

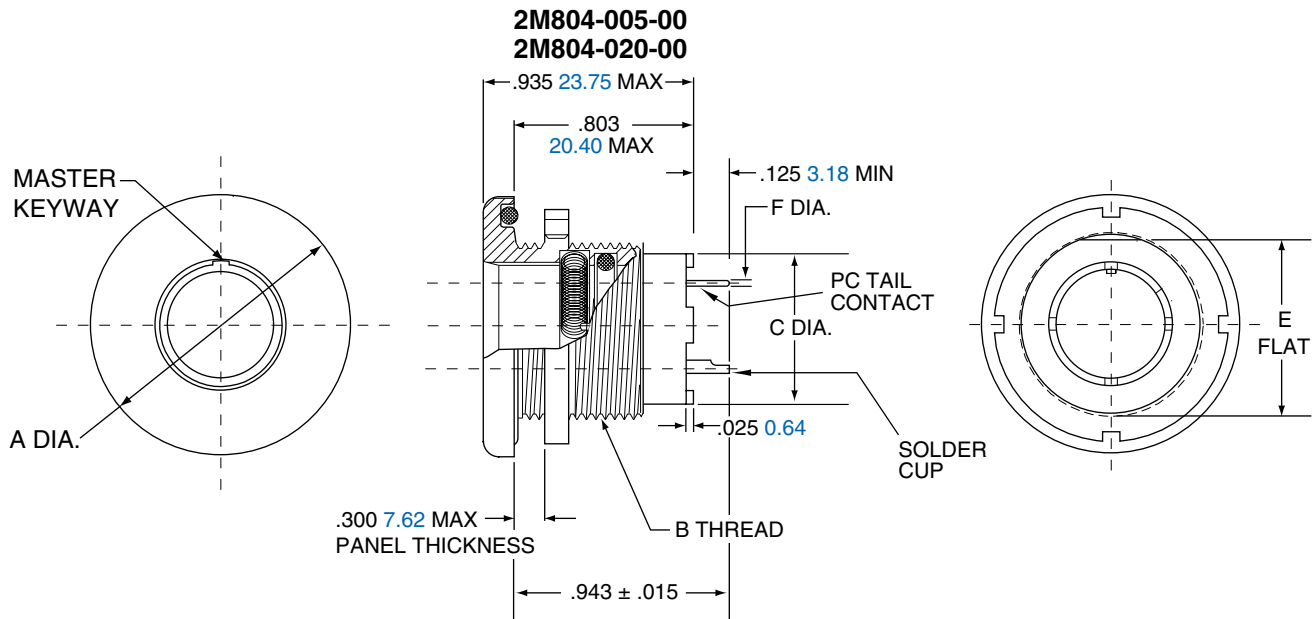
HD38999

Micro-D

Terrapin

Nexus

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804**
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus



| Shell Size | A Dia. | | B Thread | C Dia. | | E Flat. | | F Dia. Tail Dia. |
|------------|--------|-------|-----------------|--------|-------|---------|-------|---------------------------------|
| | in. | mm. | | in. | mm. | in. | mm. | |
| 5 | .830 | 21.08 | .5000-32 UN-2A | .275 | 6.98 | .470 | 11.94 | #23 .018/.022 0.46/0.56 |
| 6 | .885 | 22.48 | .5625-28 UN-2A | .330 | 8.38 | .530 | 13.46 | #20/20HD .025/.027 0.64/0.69 |
| 7 | .995 | 25.27 | .6875-28 UN-2A | .432 | 10.97 | .663 | 16.84 | |
| 8 | .995 | 25.27 | .6875-28 UN-2A | .493 | 12.52 | .663 | 16.84 | #16 .060/.064 1.52/1.63 |
| 9 | 1.075 | 27.31 | .7500-28 UN-2A | .551 | 14.00 | .720 | 18.29 | |
| 10 | 1.140 | 28.95 | .8125-28 UN-2A | .620 | 15.75 | .780 | 19.81 | #12 .092/.096 2.34/2.44 |
| 12 | 1.340 | 34.04 | 1.0000-28 UN-2A | .703 | 17.86 | .970 | 24.64 | |
| 14 | 1.390 | 35.31 | 1.0625-20 UN-2A | .863 | 21.92 | 1.020 | 25.91 | |
| 15 | 1.453 | 36.91 | 1.1250-28 UN-2A | .913 | 23.19 | 1.113 | 28.27 | |

JAM NUT PANEL CUTOUT

| Shell Size | A Flat | | B Dia. | |
|------------|-----------|------------|-----------|------------|
| | in. ±.002 | mm. ± 0.05 | in. ±.005 | mm. ± 0.13 |
| 5 | .477 | 12.12 | .510 | 12.95 |
| 6 | .537 | 13.64 | .573 | 14.55 |
| 7 | .670 | 17.02 | .698 | 17.73 |
| 8 | .670 | 17.02 | .698 | 17.73 |
| 9 | .727 | 18.47 | .760 | 19.30 |
| 10 | .787 | 20.00 | .823 | 20.90 |
| 12 | .977 | 24.82 | 1.010 | 25.65 |
| 14 | 1.027 | 26.10 | 1.073 | 27.75 |

2M804 Panel Mount Plugs:

2M804 Series of Panel Mount Plugs are intended for use of terminating the connector directly to a Circuit Board or Flex assembly. These connectors can also be supplied with solder cup termination for direct wire attachment.

2M804 FEATURES INCLUDE:

- Low profile shells for minimum box protrusion
- Shell Standoffs for PC Board washout
- Non-removable PC and/or Solder cup contacts
- Environmental Sealing



| Series | Shell Style | Service Class | Shell Size-Insert Arrg. | Contact Type | Alternate Position |
|-----------|-------------|---------------|-------------------------|--------------|--------------------|
| 2M804-0XX | -06 | ZNU | 9-19 | P | |

For single master key omit (leave blank)

| SERIES | |
|-----------|---|
| 2M804-009 | Plugs with Solder Cup or PCB Termination with Standard Epoxy Potting |
| 2M804-021 | Plugs with Solder Cup or PCB Termination with Special Sealing for Open Face (unmated) Water Immersion Requirements. 100% Leak Tested. To maintain a helium leak rate of 1×10^{-4} cc/sec. pressure differential from -65°C to 150°C. |

| SHELL STYLE | |
|-------------|----------------------------------|
| -00 | Jam Nut for Front Panel Mounting |
| -07 | Jam Nut for Rear Panel Mounting |
| -02 | Flange Mount, Rear Panel |

SHELL SIZE - INSERT ARRANGEMENTS

See Insert Arrangements on Pages 13-15

CONTACTS

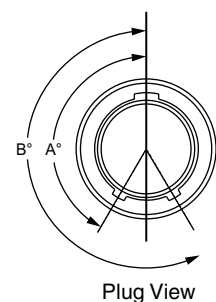
| | |
|---|---------------------|
| P | Pin - PC Tail |
| S | Socket - PC Tail |
| E | Pin - Solder Cup |
| F | Socket - Solder Cup |

SERVICE CLASS

| | Finish |
|-----|--|
| C | Aluminum/Black Anodize (Non-Conductive) |
| M | Aluminum/Electroless Nickel |
| NF | Aluminum/Cadmium with Olive Drab Chromate |
| MT | Aluminum/Nickel-PTFE (Durmalon) |
| Z1 | Stainless Steel/Passivated |
| ZN | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| ZNU | Aluminum/Zinc-Nickel with Black Chromate |

KEYING

| Key Position | Key Rotation | |
|--------------|-------------------|------|
| | A | B |
| Omit | Single Master Key | |
| A | 150° | 210° |
| B | 75° | 210° |
| C | 95° | 230° |
| D | 140° | 275° |

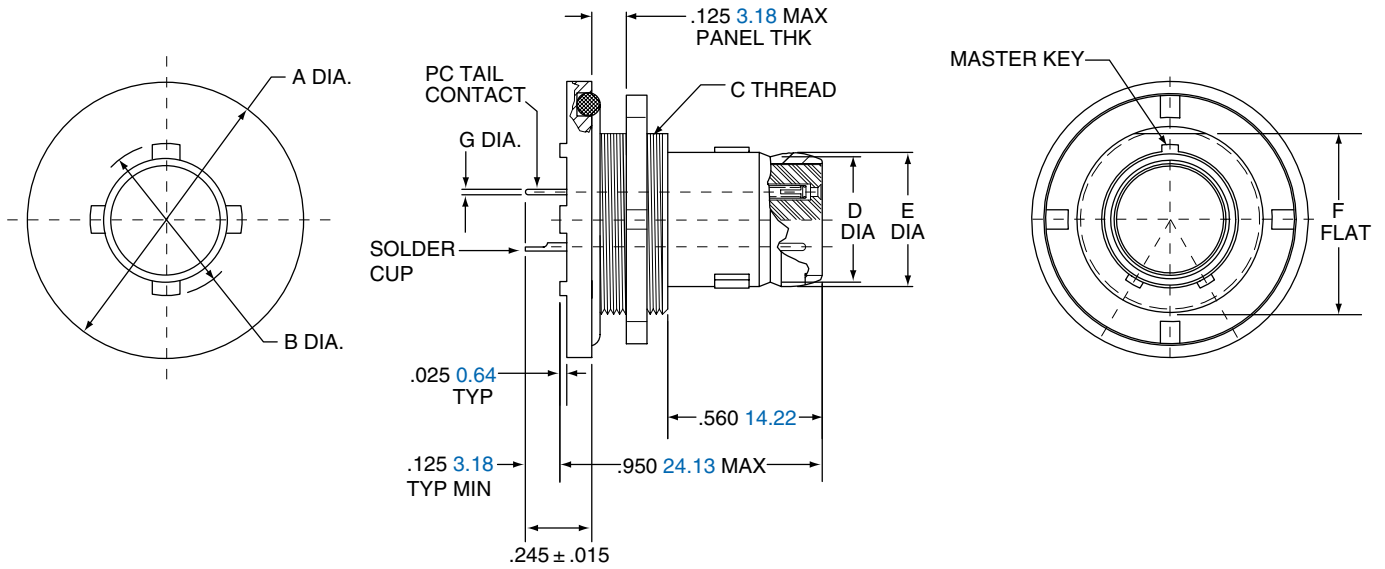


2M804 Push-Pull Jam Nut Panel Mount Plug

2M804-009-07 and 2M804-021-07

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804**
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

2M804-009-07
2M804-021-07



| Shell Size | A Dia. | | B Dia. | | C Thread | D Dia. | | E Dia. | | F Flat. | | G PC Tail Dia. |
|------------|--------|-------|--------|-------|-----------------|--------|-------|--------|-------|---------|-------|---------------------------------|
| | in. | mm. | in. | mm. | | in. | mm. | in. | mm. | in. | mm. | |
| 5 | .775 | 19.69 | .244 | 6.20 | .4375-32 UN-2A | .219 | 5.56 | .245 | 6.22 | .415 | 10.54 | #23 .018/.022 0.46/0.56 |
| 6 | .830 | 21.08 | .330 | 8.38 | .5000-32 UN-2A | .275 | 6.99 | .310 | 7.87 | .467 | 11.86 | #20/20HD .025/.027 0.64/0.69 |
| 7 | .910 | 23.11 | .432 | 10.97 | .6250-28 UN-2A | .351 | 8.92 | .378 | 9.60 | .594 | 15.09 | #16 .060/.064 1.52/1.63 |
| 8 | .955 | 24.26 | .493 | 12.52 | .6250-28 UN-2A | .398 | 10.11 | .426 | 10.82 | .594 | 15.09 | #12 .092/.096 2.34/2.44 |
| 9 | 1.000 | 25.40 | .551 | 14.00 | .6875-28 UN-2A | .450 | 11.43 | .482 | 12.24 | .655 | 16.64 | |
| 10 | 1.085 | 27.56 | .620 | 15.75 | .7500-28 UN-2A | .529 | 13.44 | .555 | 14.10 | .721 | 18.31 | |
| 12 | 1.180 | 29.97 | .703 | 17.86 | .8750-28 UN-2A | .646 | 16.41 | .672 | 17.07 | .843 | 21.41 | |
| 14 | 1.325 | 33.66 | .863 | 21.92 | 1.0000-28 UN-2A | .761 | 19.33 | .795 | 20.19 | .968 | 24.59 | |

JAM NUT PANEL CUTOUT

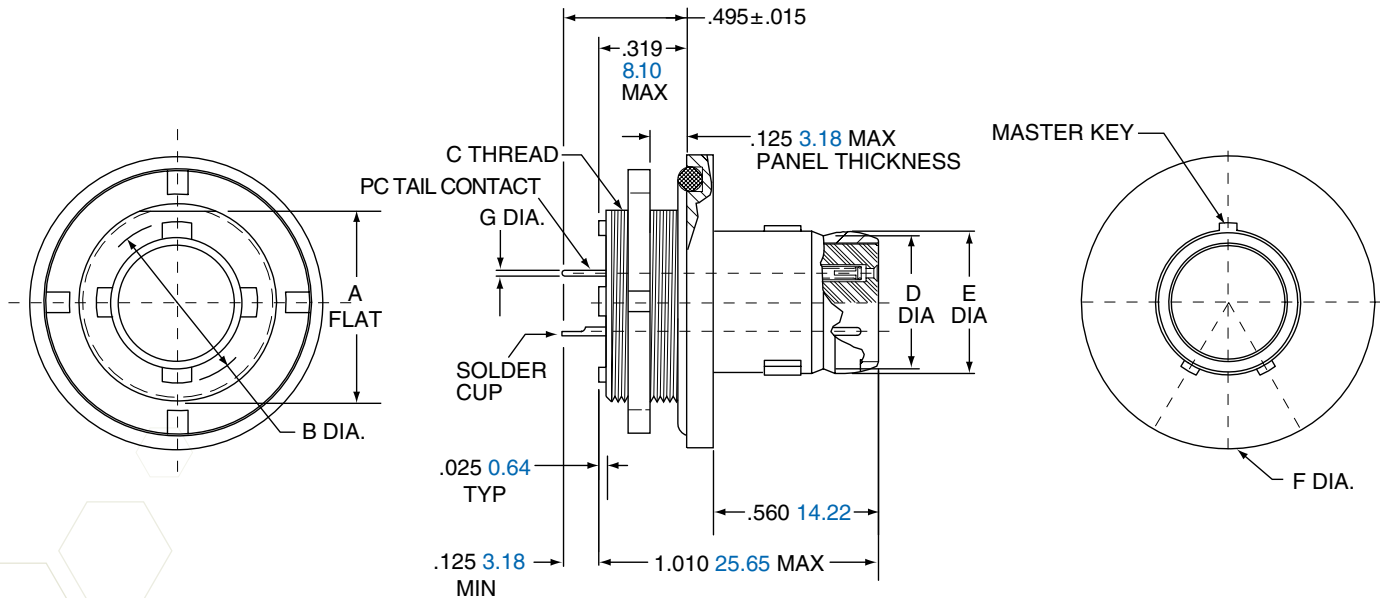
| Shell Size | A Flat | | B Dia. | |
|------------|--------------|---------------|--------------|---------------|
| | in. ±.002 | mm. ± 0.05 | in. ±.005 | mm. ± 0.13 |
| 5 | .423 | 10.74 | .448 | 11.38 |
| 6 | .475 | 12.07 | .510 | 12.95 |
| 7 | .588 | 14.94 | .635 | 16.13 |
| 8 | .602 | 15.29 | .635 | 16.13 |
| 9 | .663 | 16.84 | .698 | 17.73 |
| 10 | .729 | 18.82 | .760 | 19.30 |
| 12 | .851 | 21.62 | .885 | 22.48 |
| 14 | .976 | 24.79 | 1.010 | 25.65 |

2M804 Push-Pull Front Panel Jam Nut Plug



2M804-009-00, 2M804-021-00

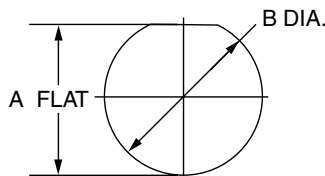
2M804-009-00
2M804-021-00



| Shell Size | A Flat. | | B Dia. | | C Thread | D Dia. | | E Dia. | | F Dia. | | G PC Tail Dia. |
|------------|---------|-------|--------|-------|-----------------|--------|-------|--------|-------|--------|-------|---------------------------------|
| | in. | mm. | in. | mm. | | in. | mm. | in. | mm. | in. | mm. | |
| 5 | .415 | 10.54 | .244 | 6.20 | .4375-32 UN-2A | .219 | 5.56 | .245 | 6.22 | .775 | 19.69 | #23 .018/.022 0.46/0.56 |
| 6 | .467 | 11.86 | .330 | 8.38 | .5000-32 UN-2A | .275 | 6.99 | .310 | 7.87 | .830 | 21.08 | #20/20HD .025/.027 0.64/0.69 |
| 7 | .594 | 15.09 | .432 | 10.97 | .6250-28 UN-2A | .351 | 8.92 | .378 | 9.60 | .910 | 23.11 | #16 .060/.064 1.52/1.63 |
| 8 | .594 | 15.09 | .493 | 12.52 | .6250-28 UN-2A | .398 | 10.11 | .426 | 10.82 | .955 | 24.26 | #12 .092/.096 2.34/2.44 |
| 9 | .655 | 16.64 | .551 | 14.00 | .6875-28 UN-2A | .450 | 11.43 | .482 | 12.24 | 1.000 | 25.40 | |
| 10 | .721 | 18.31 | .620 | 15.75 | .7500-28 UN-2A | .529 | 13.44 | .555 | 14.10 | 1.085 | 27.56 | |
| 12 | .843 | 21.41 | .703 | 17.86 | .8750-28 UN-2A | .646 | 16.41 | .672 | 17.07 | 1.180 | 29.97 | |
| 14 | .968 | 24.59 | .863 | 21.92 | 1.0000-28 UN-2A | .761 | 19.33 | .795 | 20.19 | 1.325 | 33.66 | |

JAM NUT PANEL CUTOUT

| Shell Size | A Flat | | B Dia. | |
|------------|--------------|---------------|--------------|---------------|
| | in. ±.002 | mm. ± 0.05 | in. ±.005 | mm. ± 0.13 |
| 5 | .423 | 10.74 | .448 | 11.38 |
| 6 | .475 | 12.07 | .510 | 12.95 |
| 7 | .588 | 14.94 | .635 | 16.13 |
| 8 | .602 | 15.29 | .635 | 16.13 |
| 9 | .663 | 16.84 | .698 | 17.73 |
| 10 | .729 | 18.82 | .760 | 19.30 |
| 12 | .851 | 21.62 | .885 | 22.48 |
| 14 | .976 | 24.79 | 1.010 | 25.65 |



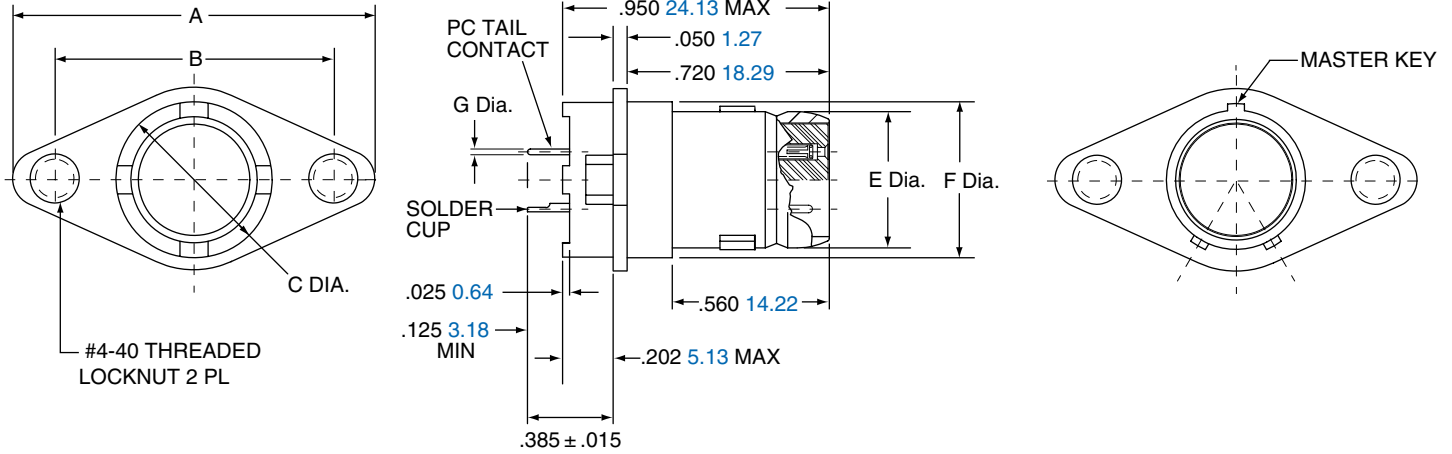


2M804 Push-Pull Plug Flange Panel Mount

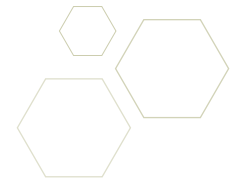
2M804-009-02 and 2M804-021-02

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804**
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

2M804-009-02
2M804-021-02



| Shell Size | A | | B | | C Dia. | | E Dia. | | F Dia. | | G PC Tail Dia. |
|------------|-------|-------|------------|------------|--------|-------|--------|-------|--------|-------|---------------------------------|
| | in. | mm. | in. ± .005 | mm. ± 0.13 | in. | mm. | in. | mm. | in. | mm. | |
| 5 | 1.055 | 26.80 | .755 | 19.18 | .323 | 8.20 | .245 | 6.22 | .320 | 8.13 | #23 .018/.022 0.46/0.56 |
| 6 | 1.120 | 28.45 | .820 | 20.83 | .388 | 9.86 | .310 | 7.87 | .385 | 9.78 | #20/20HD .025/.027 0.64/0.69 |
| 7 | 1.185 | 30.10 | .885 | 22.48 | .453 | 11.51 | .378 | 9.60 | .450 | 11.43 | #16 .060/.064 1.52/1.63 |
| 8 | 1.230 | 31.24 | .930 | 23.62 | .498 | 12.65 | .426 | 10.82 | .495 | 12.57 | #12 .092/.096 2.34/2.44 |
| 9 | 1.290 | 32.77 | .990 | 25.15 | .558 | 14.17 | .482 | 12.24 | .555 | 14.10 | |
| 10 | 1.360 | 34.54 | 1.060 | 26.92 | .628 | 15.95 | .555 | 14.10 | .625 | 15.88 | |
| 12 | 1.485 | 37.72 | 1.185 | 30.10 | .753 | 19.13 | .672 | 17.07 | .750 | 19.05 | |
| 14 | 1.600 | 40.64 | 1.300 | 33.02 | .868 | 22.05 | .795 | 20.19 | .865 | 21.97 | |



2M804 Series of Hermetic Receptacles:

2M804 Series of Hermetic Receptacles provide superior sealing of 1×10^{-8} cc/second helium leak rate and are 100% tested prior to shipping. This superior sealing is accomplished through the use of glass insulator fused to stainless steel shells and iron alloy contacts.

2M804 FEATURES INCLUDE:

- Low profile shells for minimum box protrusion
- Shell Standoffs for PC Board washout
- Non-removable PC and/or Solder cup contacts
- Hermetic Sealing

| Series | Shell Style | Service Class | Shell Size-Insert Arrg. | Contact Type | Alternate Position | For single master key omit (leave blank) |
|-----------|-------------|---------------|-------------------------|--------------|--------------------|--|
| 2M804-006 | -07 | Z1 | 9-19 | P | A | |

| SERIES | |
|-----------|---|
| 2M804-006 | Hermetic Receptacle with Printed Circuit Board Contacts or Solder Cup Contacts. |

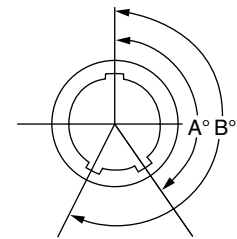
SHELL SIZE - INSERT ARRANGEMENTS
See Insert Arrangements on Pages 13-15

| CONTACTS | |
|----------|------------------|
| P | Pin - Solder Cup |
| C | Pin - PC Tail |

| SHELL STYLE | |
|-------------|----------------------------------|
| -00 | Jam Nut for Front Panel Mounting |
| -07 | Jam Nut for Rear Panel Mounting |

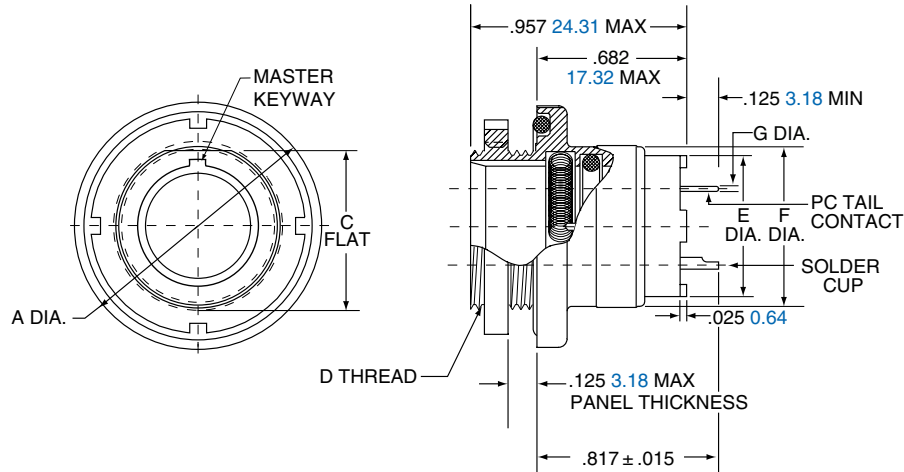
| SERVICE CLASS | | |
|---------------|--|--------------------------------|
| | | Finish |
| ZL | | Stainless Steel/ Nickel Plated |
| Z1 | | Stainless Steel/Passivated |

| KEYING | | |
|--------------|-----------------------|------|
| Key Position | Key Rotation | |
| | A | B |
| Omit | Single Master Key-way | |
| A | 150° | 210° |
| B | 75° | 210° |
| C | 95° | 230° |
| D | 140° | 275° |



- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

2M804-006-07



| Shell Size | A Dia. | | C Flat | | D Threads | E Dia. | | F Dia. | | G PC Tail Dia. |
|------------|--------|-------|--------|-------|-----------------|--------|-------|--------|-------|---------------------------------|
| | in. | mm. | in. | mm. | | in. | mm. | in. | mm. | |
| 5 | .775 | 19.69 | .415 | 10.54 | .4375-32 UN-2A | .275 | 6.99 | .450 | 11.43 | #23 .018/.022 0.46/0.56 |
| 6 | .830 | 21.08 | .467 | 14.40 | .5000-32 UN-2A | .330 | 8.38 | .510 | 12.95 | #20/20HD .025/.027 0.64/0.69 |
| 7 | .910 | 23.11 | .594 | 15.09 | .6250-28 UN-2A | .432 | 10.97 | .570 | 14.48 | #16 .060/.064 1.52/1.63 |
| 8 | .955 | 24.26 | .594 | 15.09 | .6250-28 UN-2A | .493 | 12.52 | .593 | 15.06 | #12 .092/.096 2.34/2.44 |
| 9 | 1.000 | 25.40 | .655 | 16.64 | .6875-28 UN-2A | .551 | 14.00 | .685 | 17.40 | |
| 10 | 1.085 | 27.48 | .721 | 18.31 | .7500-28 UN-2A | .620 | 15.75 | .725 | 18.42 | |
| 12 | 1.190 | 30.23 | .843 | 21.41 | .8750-28 UN-2A | .703 | 17.86 | .880 | 22.35 | |
| 14 | 1.325 | 33.66 | .968 | 24.59 | 1.0000-28 UN-2A | .863 | 21.92 | 1.000 | 25.40 | |

JAM NUT PANEL CUTOUT

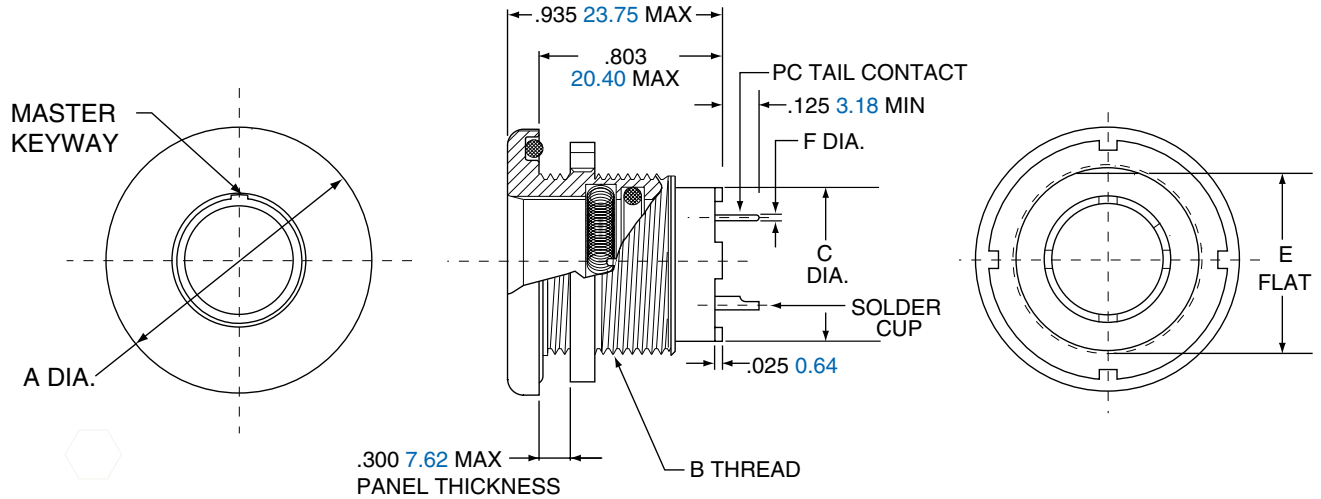
| Shell Size | A Flat | | B Dia. | |
|------------|--------------|---------------|--------------|---------------|
| | in. ±.002 | mm. ± 0.05 | in. ±.005 | mm. ± 0.13 |
| 5 | .423 | 10.74 | .448 | 11.38 |
| 6 | .475 | 12.07 | .510 | 12.95 |
| 7 | .602 | 15.29 | .635 | 16.13 |
| 8 | .602 | 15.29 | .635 | 16.13 |
| 9 | .663 | 16.84 | .698 | 17.73 |
| 10 | .729 | 18.82 | .760 | 19.30 |
| 12 | .851 | 21.62 | .885 | 22.48 |
| 14 | .976 | 24.79 | 1.010 | 25.65 |

2M804 Front Panel Jam Nut Hermetic



2M804-006-00

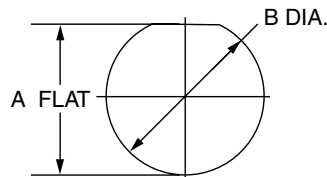
2M804-006-00



| Shell Size | A Dia. | | B Thread | C Dia. | | E Flat. | | F PC Tail Dia. |
|------------|--------|-------|-----------------|--------|-------|---------|-------|---------------------------------|
| | in. | mm | | in. | mm. | in. | mm. | |
| 5 | .830 | 21.08 | .5000-32 UN-2A | .275 | 6.99 | .470 | 11.94 | #23 .018/.022 0.46/0.56 |
| 6 | .885 | 22.48 | .6250-28 UN-2A | .330 | 8.38 | .530 | 13.46 | #20/20HD .025/.027 0.64/0.69 |
| 7 | .995 | 25.27 | .6250-28 UN-2A | .432 | 10.97 | .663 | 16.84 | |
| 8 | .995 | 25.27 | .6875-28 UN-2A | .493 | 12.52 | .663 | 16.84 | #16 .060/.064 1.52/1.63 |
| 9 | 1.075 | 27.31 | .7500-28 UN-2A | .551 | 14.00 | .720 | 18.29 | |
| 10 | 1.140 | 28.95 | .8750-28 UN-2A | .620 | 15.75 | .780 | 19.81 | #12 .092/.096 2.34/2.44 |
| 12 | 1.340 | 34.04 | 1.0000-28 UN-2A | .703 | 17.86 | .970 | 24.64 | |
| 14 | 1.390 | 35.31 | 1.0625-20 UN-2A | .863 | 21.92 | 1.020 | 25.91 | |

JAM NUT PANEL CUTOUT

| Shell Size | A Flat | | B Dia. | |
|------------|--------------|---------------|--------------|---------------|
| | in. ±.002 | mm. ± 0.05 | in. ±.005 | mm. ± 0.13 |
| 5 | .477 | 12.12 | .510 | 12.95 |
| 6 | .537 | 13.64 | .635 | 16.13 |
| 7 | .670 | 17.02 | .635 | 16.13 |
| 8 | .670 | 17.02 | .698 | 17.73 |
| 9 | .727 | 18.47 | .760 | 19.30 |
| 10 | .787 | 19.81 | .885 | 22.48 |
| 12 | .977 | 24.82 | 1.010 | 25.65 |
| 14 | 1.027 | 26.09 | 1.073 | 27.25 |



2M804 Push-Pull Protective Caps are available in plug and receptacle versions. Protective caps keep the connector interface dry and clean while not in use. Caps come in a variety of materials, lanyard styles and lengths to accommodate specific design requirements.



| Series | Service Class | Shell Size | Attachment Type | Attachment Code | Attachment Length in Inches | Pull Ring Option |
|-----------|---------------|------------|-----------------|-----------------|-----------------------------|------------------|
| 2M667-202 | -M | 9 | -G | 04 | -5 | R |

| SERIES | |
|-----------|-----------------------------------|
| 2M667-202 | Protection Caps 2M804 Receptacles |

| SHELL SIZE | ATTACHMENT TYPE |
|------------|---|
| 5 | -G Nylon Rope |
| 6 | Stainless Steel |
| 7 | -H Wire Rope, Teflon® Jacket |
| 8 | -N No Attachment |
| 9 | -S Stainless Steel Sash Chain |
| 10 | -SK Nylon Rope With Slip Knot |
| 12 | -T Stainless Steel Wire Rope, No Jacket |
| 14 | -U Stainless Steel Wire Rope, Polyurethane Jacket |

Omit for attachment Type N (No Attachment)
Example "-5" equals five inch length

| PULL RING OPTIONS | |
|-------------------|-------------------------|
| R | Supplied with Pull Ring |
| | Omit for None |

| ATTACHMENT CODE | |
|--|--|
| Omit for attachment Types N (No Attachment) and SK (Slip Knot) | |
| Small Ring | 01 -.126 (3.20) I.D. 02 -.145 (3.68) I.D. 04 -.188 (4.78) I.D. 06 -.197 (5.00) I.D. |
| Large Ring | 14 -.385 (9.78) I.D. 15 -.445 (11.30) I.D. 16 -.570 (14.48) I.D. 17 -.635 (16.13) I.D. 18 -.695 (17.65) I.D. 19 -.885 (22.48) I.D. 20 -1.070 (27.17) I.D. 21 -1.135 (28.83) I.D. 25 -0.820 (20.8) I.D. |
| Split Ring | 50 -.420 (10.67) I.D. 52 -.480 (12.19) I.D. 54 -.635 (16.13) I.D. 56 -.745 (18.92) I.D. 58 -.885 (22.48) I.D. 60 -1.010 (25.65) I.D. 64 -1.125 (28.58) I.D. 68 -1.345 (34.16) I.D. |

| SERVICE CLASS | | |
|---------------|--|--|
| | | Finish |
| -C | | Aluminum/Black Anodize (Non-Conductive) |
| -M | | Aluminum/Electroless Nickel |
| -NF | | Aluminum/Cadmium with Olive Drab Chromate |
| -MT | | Aluminum/Nickel-PTFE (Durmalon) |
| -Z1 | | Stainless Steel/Passivated |
| -ZN | | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| -ZNU | | Aluminum/Zinc-Nickel with Black Chromate |



2M804 Push-Pull Plug Protection Caps



Ordering Guide for 2M809-198

| Series | Service Class | Shell Size | Attachment Type | Attachment Code | Attachment Length in Inches |
|-----------|---------------|------------|-----------------|-----------------|-----------------------------|
| 2M809-198 | -M | 6 | -G | 04 | -5 |

| SERIES | |
|-----------|-------------------------------|
| 2M809-198 | Protection Cap for 2M804 Plug |

| SHELL SIZE | ATTACHMENT TYPE |
|------------|---|
| 5 | -G Nylon Rope |
| 6 | Stainless Steel |
| 7 | -H Wire Rope, Teflon® Jacket |
| 8 | -N No Attachment |
| 9 | -S Stainless Steel Sash Chain |
| 10 | Nylon Rope With Slip Knot |
| 12 | -SK |
| 14 | -T Stainless Steel Wire Rope, No Jacket |
| | -U Stainless Steel Wire Rope, Polyurethane Jacket |

Omit for attachment Type N (No Attachment)
Example "-5" equals five inch length

| ATTACHMENT CODE | |
|--|--|
| Omit for attachment Types N (No Attachment) and SK (Slip Knot) | |
| Small Ring | 01 -.126 (3.20) I.D. 02 -.145 (3.68) I.D. 04 -.188 (4.78) I.D. 06 -.197 (5.00) I.D. |
| Large Ring | 14 -.385 (9.78) I.D. 15 -.445 (11.30) I.D. 16 -.570 (14.48) I.D. 17 -.635 (16.13) I.D. 18 -.695 (17.65) I.D. 19 -.885 (22.48) I.D. 20 -1.070 (27.17) I.D. 21 -1.135 (28.83) I.D. 22 -1.210 (30.73) I.D. 23 -1.275 (32.39) I.D. 24 -1.375 (34.94) I.D. 24 -0.820 (20.8) I.D. |
| Split Ring | 50 -.420 (10.67) I.D. 52 -.480 (12.19) I.D. 54 -.635 (16.13) I.D. 56 -.745 (18.92) I.D. 58 -.885 (22.48) I.D. 60 -1.010 (25.65) I.D. 64 -1.125 (28.58) I.D. 68 -1.345 (34.16) I.D. |

| SERVICE CLASS | | |
|---------------|--|--|
| | | Finish |
| -C | | Aluminum/Black Anodize (Non-Conductive) |
| -M | | Aluminum/Electroless Nickel |
| -NF | | Aluminum/Cadmium with Olive Drab Chromate |
| -MT | | Aluminum/Nickel-PTFE (Duralon) |
| -Z1 | | Stainless Steel/Passivated |
| -ZN | | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| -ZNU | | Aluminum/Zinc-Nickel with Black Chromate |



Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

Accessories

2M

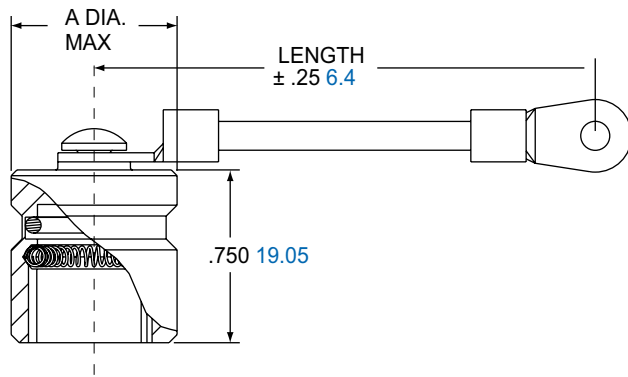
HD38999

Micro-D

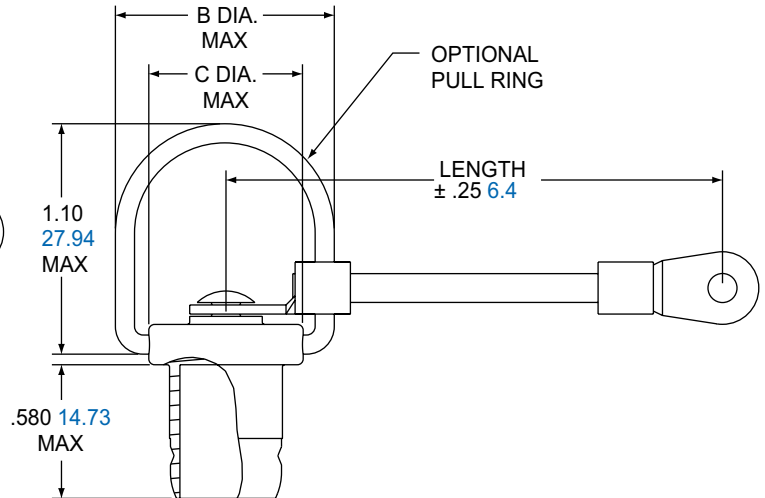
Terrapin

Nexus

2M809-198



2M667-202



| Shell Size | A Max. | | B Max. | | C Max. | |
|------------|--------|-------|--------|-------|--------|-------|
| | in. | mm. | in. | mm. | in. | mm. |
| 5 | .496 | 12.60 | .740 | 18.80 | .490 | 12.45 |
| 6 | .540 | 13.72 | .740 | 18.80 | .490 | 12.45 |
| 7 | .645 | 16.38 | .820 | 20.83 | .570 | 14.48 |
| 8 | .665 | 16.89 | .870 | 22.10 | .619 | 15.72 |
| 9 | .720 | 18.29 | .920 | 23.37 | .670 | 17.02 |
| 10 | .790 | 20.07 | 1.030 | 26.16 | .783 | 19.89 |
| 12 | .915 | 23.24 | 1.110 | 28.19 | .860 | 21.84 |
| 14 | 1.040 | 26.42 | 1.230 | 31.24 | .980 | 24.89 |

MATERIALS AND FINISHES

| | |
|----------------|-----------------------------------|
| Cover | Aluminum alloy or stainless steel |
| O-Ring | Fluorosilicone rubber |
| Wire, Hardware | Stainless steel, passivated |

LANYARD OPTIONS

| | | |
|--|---|--|
| | Nylon Rope | -55° to +100°C., black, flexible, good abrasion resistance, good resistance to fuels, .120" 3mm diameter |
| | Polyurethane Coated Wire Rope | Black polyurethane over stainless steel rope, very flexible, excellent abrasion resistance, excellent resistance to fuels, .080" 2mm diameter |
| | Teflon® Jacketed Wire Rope | Translucent FEP jacket over stainless steel, -55° to +200°C., fair flexibility, good abrasion resistance, .100" diameter |
| | Sash Chain | Stainless steel |
| | Slip Knot (SK) for attaching Covers to Cables | 55° to +100°C., black, flexible, good abrasion resistance, good resistance to fuels, .120" 3mm diameter. Length includes .5" 13mm diameter loop. |

2M804 Push-Pull Plug Rubber Caps



Ordering Guide for 2M809-083 and 2M809-087

Push-Pull Rubber Protective Caps can be used on the 2M804 push-pull plugs and receptacles. These molded rubber covers are ideal for a protective splash-proof option.



| Series | Shell Size | Attachment Type | Lanyard Length | Attachment Code | Conductive Rubber |
|-----------|------------|-----------------|----------------|-----------------|-------------------|
| 2M809-083 | -6 | G | 5 | -04 | C |

| SERIES | |
|-----------|--------------------------------------|
| 2M809-083 | Protection Cap for 2M804 Plugs |
| 2M809-087 | Protection Cap for 2M804 Receptacles |

| ATTACHMENT TYPE | |
|-----------------|---------------|
| G | Nylon Rope |
| N | No Attachment |

| SHELL SIZE |
|------------|
| -5 |
| -6 |
| -7 |
| -8 |
| -9 |
| -10 |
| -12 |
| -14 |

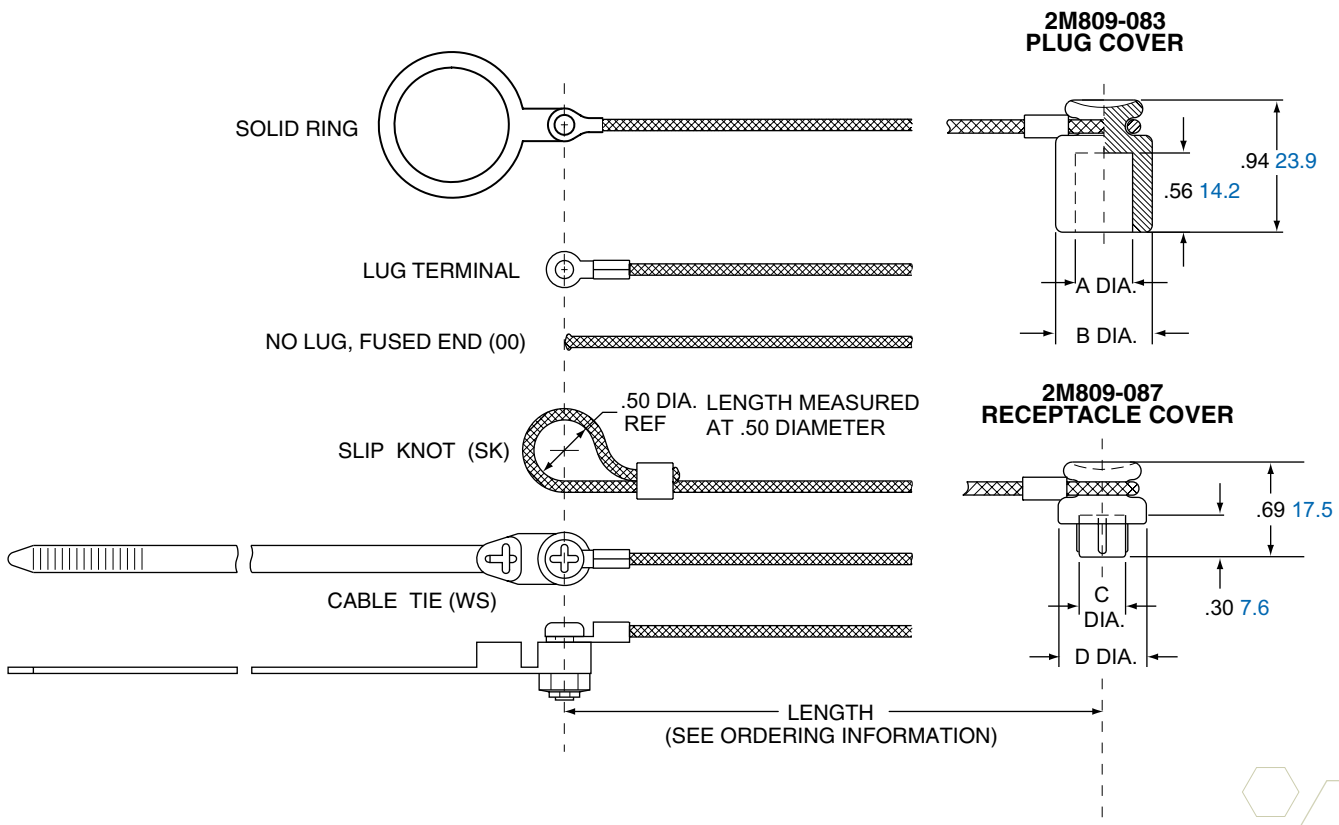
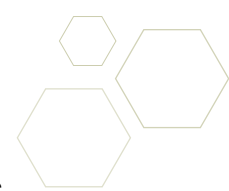
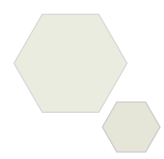
| ATTACHMENT CODE | | |
|-----------------|--|------------|
| -WS | Nylon Cable tie, 1.77 Inch (45mm) Maximum Wire Bundle Diameter | |
| -SK | Slip Knot | |
| -00 | Lanyard with no attachment (fused End) | |
| -01 | -.126 (3.20) I.D. | Small Ring |
| -02 | -.145 (3.68) I.D. | |
| -04 | -.188 (4.78) I.D. | |
| -06 | -.197 (5.00) I.D. | |
| -07 | -.385 (9.78) I.D. | Large Ring |
| -08 | -.510 (13.11) I.D. | |
| -09 | -.583 (14.81) I.D. | |
| -10 | -.766 (19.4) I.D. | |
| -11 | -.896 (25.76) I.D. | |
| -12 | -1.015 (25.78) I.D. | |
| -15 | -.445 (11.30) I.D. | |
| -16 | -.570 (14.48) I.D. | |
| -17 | -.635 (16.13) I.D. | |
| -18 | -.695 (17.65) I.D. | |
| -19 | -.885 (22.48) I.D. | |
| -20 | -1.070 (27.18) I.D. | |
| -21 | -1.135 (28.83) I.D. | |
| -25 | - 0.820 (20.8) I.D. | |

| CONDUCTIVE RUBBER | |
|----------------------------|-------------------|
| Omit for Standard Neoprene | |
| C | Conductive Rubber |

Example "-5" equals five inch length

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- Accessories
- 2M
- HD38999
- Micro-D
- Terrapin
- Nexus





| Shell Size | A Dia. | | B Dia. | | C Dia. | | D Dia. | |
|------------|--------|------|------------|------------|--------|------|--------|------|
| | in. | mm. | in. ± .005 | mm. ± 0.13 | in. | mm. | in. | mm. |
| 5 | .23 | 5.8 | .56 | 14.2 | .27 | 6.9 | .59 | 15.0 |
| 6 | .29 | 7.4 | .56 | 14.2 | .33 | 8.4 | .65 | 16.5 |
| 7 | .36 | 9.1 | .56 | 14.2 | .40 | 10.2 | .78 | 19.8 |
| 8 | .41 | 10.4 | .68 | 17.3 | .44 | 11.2 | .78 | 19.8 |
| 9 | .46 | 11.7 | .68 | 17.3 | .50 | 12.7 | .84 | 21.3 |
| 10 | .54 | 13.7 | .79 | 20.1 | .57 | 14.5 | .90 | 22.9 |
| 12 | .55 | 14.0 | .79 | 20.1 | .69 | 17.5 | 1.03 | 26.2 |
| 14 | .78 | 19.8 | 1.11 | 28.2 | .82 | 20.8 | 1.15 | 29.2 |

MATERIALS

| | |
|-----------|---|
| Cover | Neoprene rubber blend, black |
| Lanyard | .062" (1.57) diameter nylon cord, black |
| Cable Tie | 6/6 nylon, black SST locking tab |
| Ring | Stainless steel |

Protection Covers:

Protection Covers are used on 2M804 Jam Nut Receptacles. Spring loaded cover stays closed when cable is disconnected. A silicone gasket is used to provide a seal when closed. Cover is available in Aluminum alloy or stainless steel.

| Shell Size | Part Number | | | | |
|------------|--------------|---------------|---------------|-------------------|-----------------|
| | Aluminum | | | | Stainless Steel |
| | Nickel | Olive Drab | Nickel-PTFE | Black Zinc-Nickel | Passivated |
| 5 | 2M667-282M05 | 2M667-282NF05 | 2M667-282MT05 | 2M667-282ZNU05 | 2M667-282Z105 |
| 6 | 2M667-282M06 | 2M667-282NF06 | 2M667-282MT06 | 2M667-282ZNU06 | 2M667-282Z106 |
| 7 | 2M667-282M07 | 2M667-282NF07 | 2M667-282MT07 | 2M667-282ZNU07 | 2M667-282Z107 |
| 8 | 2M667-282M08 | 2M667-282NF08 | 2M667-282MT08 | 2M667-282ZNU08 | 2M667-282Z108 |
| 9 | 2M667-282M08 | 2M667-282NF09 | 2M667-282MT09 | 2M667-282ZNU09 | 2M667-282Z109 |
| 10 | 2M667-282M10 | 2M667-282NF10 | 2M667-282MT10 | 2M667-282ZNU10 | 2M667-282Z110 |
| 12 | 2M667-282M12 | 2M667-282NF12 | 2M667-282MT12 | 2M667-282ZNU12 | 2M667-282Z112 |
| 14 | 2M667-282M14 | 2M667-282NF14 | 2M667-282MT14 | 2M667-282ZNU14 | 2M667-282Z114 |

| Shell Size | Dimensions | | | |
|------------|------------|------|------|------|
| | A | | B | |
| | in. | mm. | in. | mm. |
| 5 | .63 | 16.0 | .93 | 23.6 |
| 6 | .69 | 17.5 | .99 | 25.1 |
| 7 | .82 | 20.8 | 1.11 | 28.2 |
| 8 | .82 | 20.8 | 1.11 | 28.2 |
| 9 | .88 | 22.4 | 1.18 | 30.0 |
| 10 | .94 | 23.9 | 1.24 | 31.5 |
| 12 | 1.07 | 27.2 | 1.36 | 34.5 |
| 14 | 1.19 | 30.2 | 1.49 | 37.8 |

| Materials | |
|----------------|-----------------------------------|
| Cover, Housing | Aluminum Alloy or Stainless Steel |
| Gasket | Silicone Rubber |
| Sleeve | Delrin |
| Spring, Shaft | Stainless Steel |



2M805 Series Micro Miniature Connectors:

Amphenol's 2M805 Series of connectors offers the best EMI and Vibration performance among all the 2M connector series. The series features a Tri-Start thread with 1 turn full mate coupling. An EMI ground strap and shell-to-shell bottoming provide superior EMI shielding. Plugs and Receptacles are provided in two different styles to accommodate the attachment of backshell with rear accessory threads or with integral backshell. The integral backshell allows for use of EMI shielding attachments and/or overmolding. Contact termination styles include Crimp, PC Tail, and Solder Cup with others available upon request. Custom and Filter configurations are available, please consult factory for ordering information.

2M805 FEATURES INCLUDE:

- Anti-Vibration Self locking Plugs
- Tri-Start thread for 1 turn full mating
- Superior EMI shielding
- Sealed Receptacles:
 - Hermetic (1×10^{-6} cc/second)
 - Epoxy Backfilled (1×10^{-4} cc/second)
- ROHS Compliant Plating
- Insert Arrangements up to 130 contacts



2M805 SPECIFICATIONS

| | |
|-------------------------|-------------------------------------|
| Current Rating | See Insert Arrangements (pg. 13-15) |
| DWV | See Insert Arrangements (pg. 13-15) |
| Insulation Resistance | 5000 megohms min. |
| Operating Temperature | -65° C to +150° C |
| Shock | 300 g's |
| Random Vibration | 37 g's |
| Shielding Effectiveness | 65 dB min. from 100MHz to 1000MHz |
| Durability | 500 mating cycles |

2M805 MATERIALS AND FINISHES

| | |
|-----------------------------------|-----------------------------------|
| Shells | Aluminum Alloy or Stainless Steel |
| Contacts | Copper Alloy, gold plated |
| Insulators | Polyphenylene Sulfide (PPS) |
| Contact Retention | Beryllium Copper Alloy |
| Grommet, Interfacial Seal, O'Ring | Fluorosilicone Rubber |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

Micro-D

Terrapin

Nexus

Connector Weight in Grams

SERIES 2M805 CONNECTOR WEIGHT IN GRAMS

| Insert Arrange | Cable Plug | J/N Recept. Crimp | J/N Recept. PCB | Sq. Flange Recept. Crimp | Sq. Flange Recept. PCB |
|----------------|------------|-------------------|-----------------|--------------------------|------------------------|
| 8-1P | 7.5 | 5.8 | 5.7 | 5.8 | 4.6 |
| 8-1S | 7.9 | 6.3 | 6.2 | 6.3 | 5.1 |
| 8-4P | 8.3 | 6.6 | 6.5 | 6.6 | 5.4 |
| 8-4S | 8.8 | 7.2 | 7.0 | 7.2 | 5.9 |
| 8-7P | 7.3 | 5.6 | 5.5 | 5.6 | 4.4 |
| 8-7S | 7.7 | 6.1 | 5.9 | 6.1 | 4.8 |
| 9-1P | 10.9 | 9.0 | 9.0 | 6.8 | 7.7 |
| 9-1S | 11.4 | 9.6 | 9.6 | 7.4 | 8.3 |
| 9-10P | 10.7 | 8.8 | 8.8 | 6.6 | 7.5 |
| 9-10S | 11.6 | 9.7 | 9.7 | 7.5 | 8.4 |
| 10-2P | 13.3 | 10.2 | 10.3 | 8.9 | 9.4 |
| 10-2S | 14.1 | 11.0 | 11.1 | 9.7 | 10.1 |
| 10-13P | 12.7 | 9.6 | 9.7 | 8.3 | 8.7 |
| 10-13S | 13.4 | 10.3 | 10.5 | 9.0 | 9.5 |
| 10-200P | 13.9 | 10.8 | 10.9 | 9.5 | 9.9 |
| 10-200S | 14.7 | 11.7 | 11.8 | 10.3 | 10.8 |
| 11-4P | 15.4 | 12.1 | 13.1 | 10.3 | 11.3 |
| 11-4S | 16.4 | 13.1 | 14.1 | 11.3 | 12.3 |
| 11-19P | 14.3 | 11.0 | 12.0 | 9.2 | 10.2 |
| 11-19S | 15.4 | 12.1 | 13.1 | 10.3 | 11.3 |
| 11-200P | 14.9 | 11.6 | 12.5 | 9.8 | 10.8 |
| 11-200S | 16.0 | 12.7 | 13.6 | 10.9 | 11.9 |
| 11-201P | 15.4 | 12.1 | 13.1 | 10.3 | 11.3 |
| 11-201S | 16.6 | 13.3 | 14.3 | 11.6 | 12.5 |
| 12-5P | 17.6 | 13.9 | 16.3 | 12.2 | 13.1 |
| 12-5S | 19.0 | 15.3 | 17.7 | 13.6 | 14.5 |
| 12-26P | 15.8 | 12.1 | 14.5 | 10.5 | 11.3 |
| 12-26S | 17.4 | 13.6 | 16.1 | 12.0 | 12.9 |
| 12-200P | 16.5 | 12.8 | 15.2 | 11.1 | 12.0 |
| 12-200S | 17.9 | 14.2 | 16.6 | 12.5 | 13.4 |
| 12-201P | 16.6 | 12.9 | 15.3 | 11.2 | 12.1 |
| 12-201S | 18.0 | 14.3 | 16.7 | 12.7 | 13.5 |

SERIES 2M805 CONNECTOR WEIGHT IN GRAMS

| Insert Arrange | Cable Plug | J/N Recept. Crimp | J/N Recept. PCB | Sq. Flange Recept. Crimp | Sq. Flange Recept. PCB |
|----------------|------------|-------------------|-----------------|--------------------------|------------------------|
| 12-202P | 16.6 | 12.9 | 15.3 | 11.2 | 12.1 |
| 12-202S | 18.2 | 14.4 | 16.8 | 12.8 | 13.6 |
| 15-2P | 20.7 | 20.2 | 21.8 | 17.1 | 19.5 |
| 15-2S | 22.3 | 21.9 | 23.4 | 18.7 | 21.1 |
| 15-3P | 21.7 | 21.2 | 22.8 | 18.0 | 20.5 |
| 15-3S | 23.4 | 23.0 | 24.5 | 19.8 | 22.2 |
| 15-7P | 21.9 | 21.5 | 23.0 | 18.3 | 20.7 |
| 15-7S | 24.5 | 24.1 | 25.6 | 20.9 | 23.3 |
| 15-37P | 20.1 | 19.7 | 21.2 | 16.5 | 18.9 |
| 15-37S | 23.0 | 22.6 | 24.1 | 19.4 | 21.8 |
| 15-200P | 20.4 | 19.9 | 21.5 | 16.7 | 19.1 |
| 15-200S | 22.6 | 22.1 | 23.7 | 18.9 | 21.3 |
| 15-201P | 20.7 | 20.2 | 21.8 | 17.1 | 19.5 |
| 15-201S | 23.0 | 22.6 | 24.1 | 19.4 | 21.8 |
| 18-5P | 29.9 | 31.6 | 30.1 | 26.1 | 29.0 |
| 18-5S | 32.9 | 34.5 | 33.1 | 29.0 | 32.0 |
| 18-12P | 30.7 | 32.3 | 30.9 | 26.8 | 29.8 |
| 18-12S | 34.3 | 36.0 | 34.5 | 30.5 | 33.4 |
| 18-55P | 27.3 | 28.9 | 27.5 | 23.4 | 26.4 |
| 18-55S | 30.7 | 32.3 | 30.9 | 26.8 | 29.8 |
| 19-7P | 27.9 | 30.0 | 33.1 | 25.1 | 33.0 |
| 19-7S | 31.0 | 33.1 | 36.2 | 28.2 | 36.1 |
| 19-14P | 32.9 | 35.0 | 38.1 | 30.0 | 38.0 |
| 19-14S | 32.6 | 34.7 | 37.7 | 29.7 | 37.6 |
| 19-85P | 26.6 | 28.7 | 31.8 | 23.8 | 31.7 |
| 19-85S | 31.1 | 33.2 | 36.3 | 28.3 | 36.2 |
| 23-17P | 40.2 | 42.9 | 44.4 | 36.7 | 43.9 |
| 23-12S | 45.2 | 48.0 | 49.5 | 41.8 | 49.0 |
| 23-22P | 42.7 | 45.4 | 47.0 | 39.3 | 46.4 |
| 23-22S | 49.6 | 52.4 | 53.9 | 46.2 | 53.4 |
| 23-130P | 37.8 | 40.6 | 42.1 | 34.4 | 41.6 |
| 23-130S | 44.9 | 47.7 | 49.3 | 41.6 | 48.7 |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

Micro-D

Terrapin

Nexus

Series 2M805 Connector



| Series | Shell Style | Service Class | Shell Size-Insert Arrg. | Contact Type | Alternate Position |
|-----------|-------------|---------------|-------------------------|--------------|--------------------|
| 2M805-00X | -16 | C | 15-37 | S | A |

| SERIES | |
|-----------|------------------------------------|
| 2M805-001 | Plug with Integral Backshell |
| 2M805-002 | Plug with Accessory Thread |
| 2M805-003 | Receptacle with Integral Backshell |
| 2M805-004 | Receptacle with Accessory Thread |

SHELL SIZE - INSERT ARRANGEMENTS

See Insert Arrangements on Pages 13-15



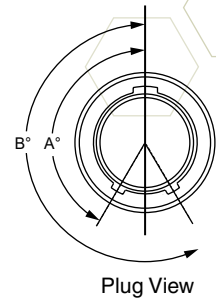
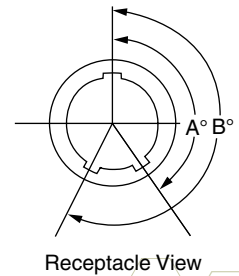
| CONTACTS | |
|----------|--------|
| P | Pin |
| S | Socket |

| SHELL STYLE 2M805-001, 2M805-002 | |
|-------------------------------------|--|
| -16 | Plug Connector with Ratcheting Anti-Decoupling Mechanism |

| SHELL STYLE 2M805-003, 2M805-004 | |
|-------------------------------------|--|
| -01 | In-Line Receptacle |
| -02 | Square Flange Receptacle |
| -07 | Jam Nut for Rear Panel Mounting Receptacle |

| SERVICE CLASS | |
|---------------|--|
| | Finish |
| C | Aluminum/Black Anodize (Non-Conductive) |
| M | Aluminum/Electroless Nickel |
| NF | Aluminum/Cadmium with Olive Drab Chromate |
| MT | Aluminum/Nickel-PTFE (Durmalon) |
| Z1 | Stainless Steel/Passivated |
| ZN | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| ZNU | Aluminum/Zinc-Nickel with Black Chromate |

| KEYING | | |
|--------------|--------------|------|
| Key Position | Key Rotation | |
| | A | B |
| Normal A | 150° | 210° |
| B | 75° | 210° |
| C | 95° | 230° |
| D | 140° | 275° |



INSERT ARRANGEMENTS

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

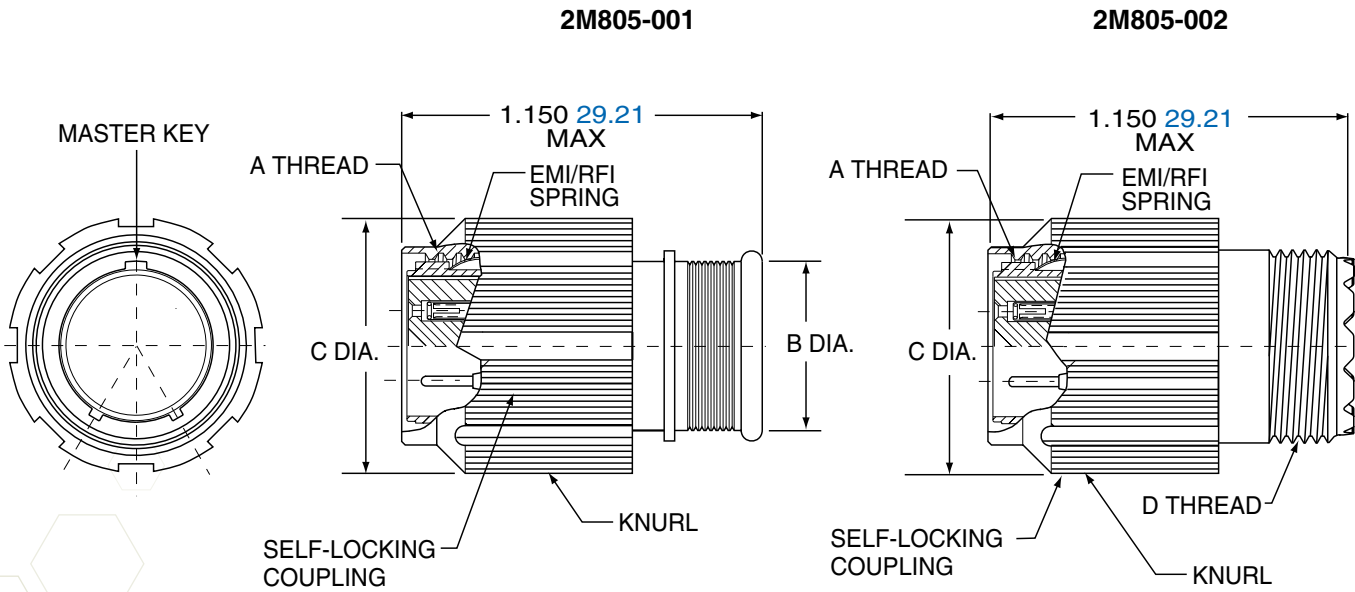
INSERT ARRANGEMENTS

| Insert Arrg. | No. of Contacts | | | | |
|--------------|-----------------|-----|-------|-----|-----|
| | #23 | #20 | #20HD | #16 | #12 |
| 12-201 | 4 | | | | 2 |
| 12-202 | 8 | | | 2 | |
| 15-2 | | | | | 2 |
| 15-3 | | | | | 3 |
| 15-7 | | | | 7 | |
| 15-37 | 37 | | | | |
| 15-200 | 6 | | | | 2 |
| 15-201 | 10 | | | | 2 |
| 15-220 | | | 20 | | |
| 18-5 | | | | | 5 |
| 18-12 | | | | 12 | |
| 18-55 | 55 | | | | |
| 18-235 | | | 35 | | |
| 19-7 | | | | | 7 |
| 19-14 | | | | 14 | |
| 19-85 | 85 | | | | |
| 19-241 | | | 41 | | |
| 23-12 | | | | | 12 |
| 23-22 | | | | 22 | |
| 23-130 | 130 | | | | |
| 23-269 | | | 69 | | |

2M805 Tri-Start Plug

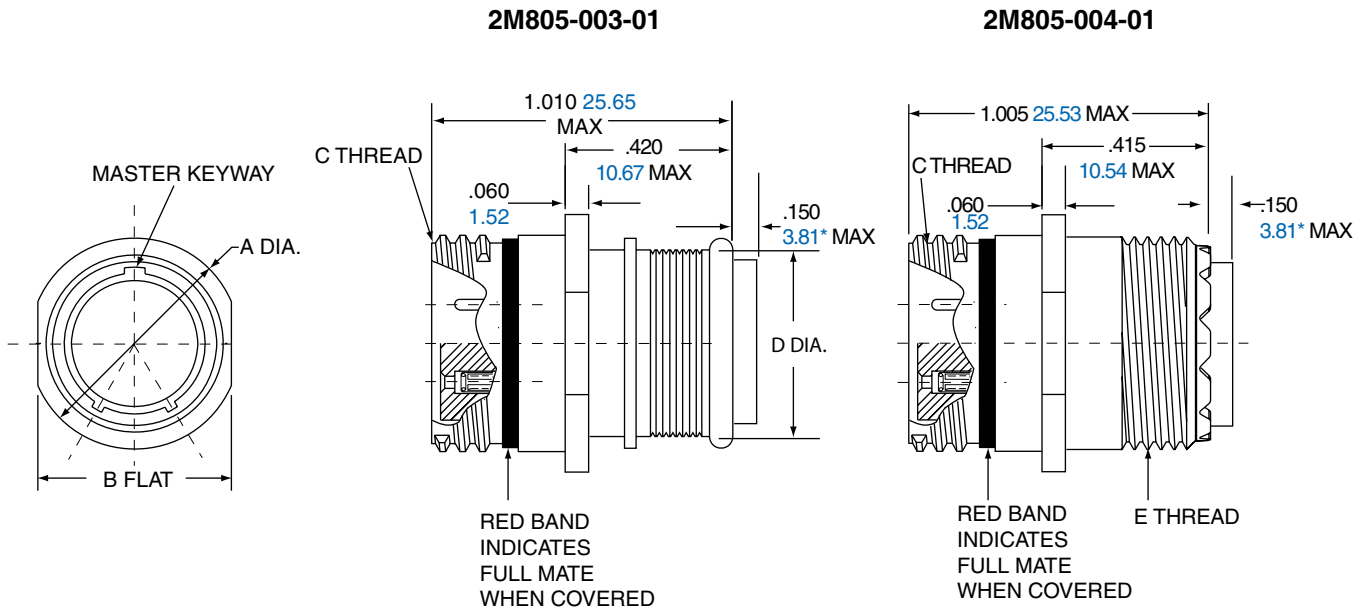


2M805-001 and 2M805-002



| Shell Size | A Threads | B Dia. | | C Dia. | | D Threads Accessory |
|------------|---------------------|--------|-------|--------|-------|---------------------|
| | | in. | mm. | in. | mm. | |
| 8 | .5000.1P-.3L-TS-2B | .317 | 8.05 | .691 | 17.55 | .3750-32 UNEF-2A |
| 9 | .5625.1P-.3L-TS-2B | .397 | 10.08 | .787 | 19.99 | .4375-28 UNEF-2A |
| 10 | .6250.1P-.3L-TS-2B | .473 | 12.01 | .826 | 20.98 | .5000-28 UNEF-2A |
| 11 | .6875.1P-.3L-TS-2B | .519 | 13.18 | .925 | 23.50 | .5625-24 UNEF-2A |
| 12 | .7500.1P-.3L-TS-2B | .585 | 14.86 | .982 | 24.94 | .6250-24 UNEF-2A |
| 15 | .9375.1P-.3L-TS-2B | .687 | 17.45 | 1.105 | 28.07 | .7500-20 UNEF-2A |
| 18 | 1.1250.1P-.3L-TS-2B | .884 | 22.45 | 1.275 | 32.39 | .9375-20 UNEF-2A |
| 19 | 1.1875.1P-.3L-TS-2B | .884 | 22.45 | 1.310 | 33.27 | .9375-20 UNEF-2A |
| 23 | 1.4375.1P-.3L-TS-2B | 1.135 | 28.83 | 1.562 | 39.67 | 1.1875-18 UNEF-2A |

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- Accessories
- 2M
- HD38999
- Micro-D
- Terrapin
- Nexus



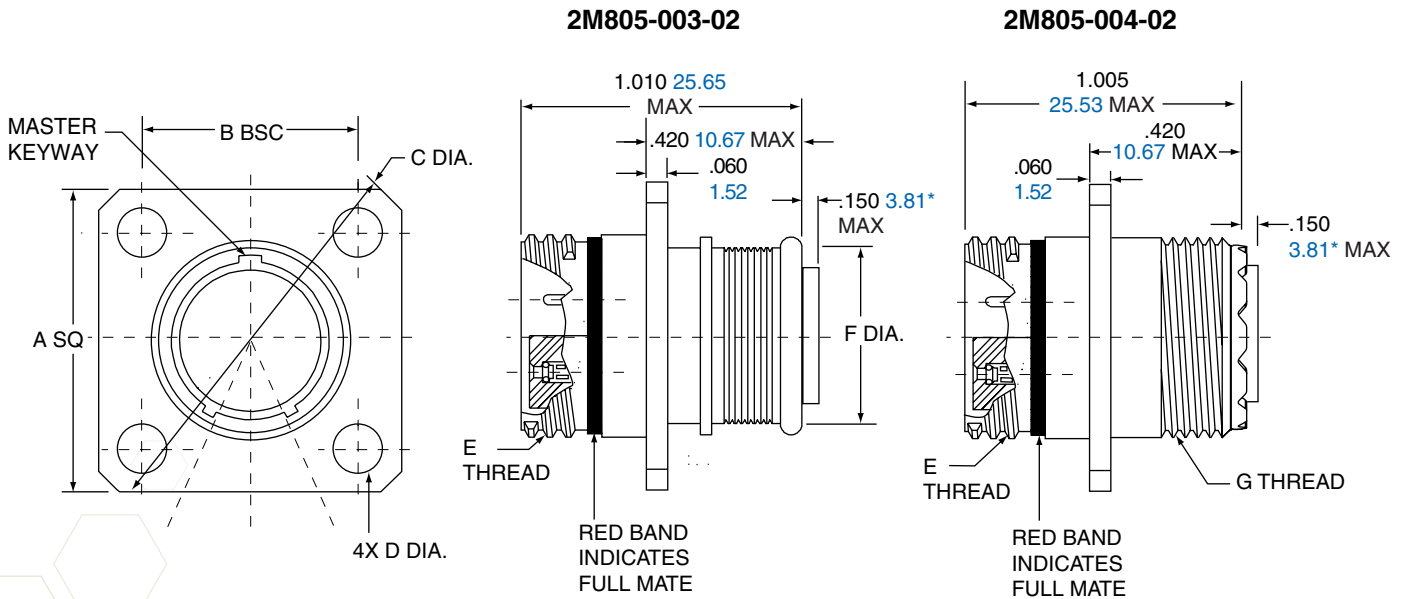
* Grommet protrudes for power/combo arrangement

| Shell Size | A Dia. | | B Flat | | C Threads | D Dia. | | E Threads Accessory |
|------------|--------|-------|--------|-------|---------------------|--------|-------|---------------------|
| | in. | mm. | in. | mm. | | in. | mm. | |
| 8 | .540 | 13.72 | .510 | 12.95 | .5000.1P-.3L-TS-2A | .316 | 8.05 | .3750-32 UNEF-2A |
| 9 | .605 | 15.37 | .575 | 14.61 | .5625.1P-.3L-TS-2A | .397 | 10.08 | .4375-28 UNEF-2A |
| 10 | .668 | 16.96 | .638 | 16.21 | .6250.1P-.3L-TS-2A | .472 | 12.01 | .5000-28 UNEF-2A |
| 11 | .730 | 18.54 | .700 | 17.78 | .6875.1P-.3L-TS-2A | .519 | 13.18 | .5625-24 UNEF-2A |
| 12 | .793 | 20.14 | .763 | 19.38 | .7500.1P-.3L-TS-2A | .585 | 14.86 | .6250-24 UNEF-2A |
| 15 | .980 | 24.89 | .950 | 24.13 | .9375.1P-.3L-TS-2A | .687 | 17.45 | .7500-20 UNEF-2A |
| 18 | 1.165 | 29.59 | 1.135 | 28.83 | 1.1250.1P-.3L-TS-2A | .884 | 22.45 | .9375-20 UNEF-2A |
| 19 | 1.235 | 31.37 | 1.205 | 30.61 | 1.1875.1P-.3L-TS-2A | .884 | 22.45 | .9375-20 UNEF-2A |
| 23 | 1.485 | 37.72 | 1.455 | 39.96 | 1.4375.1P-.3L-TS-2A | 1.134 | 28.80 | 1.1875-18 UNEF-2A |

2M805 Tri-Start Square Flange Receptacle

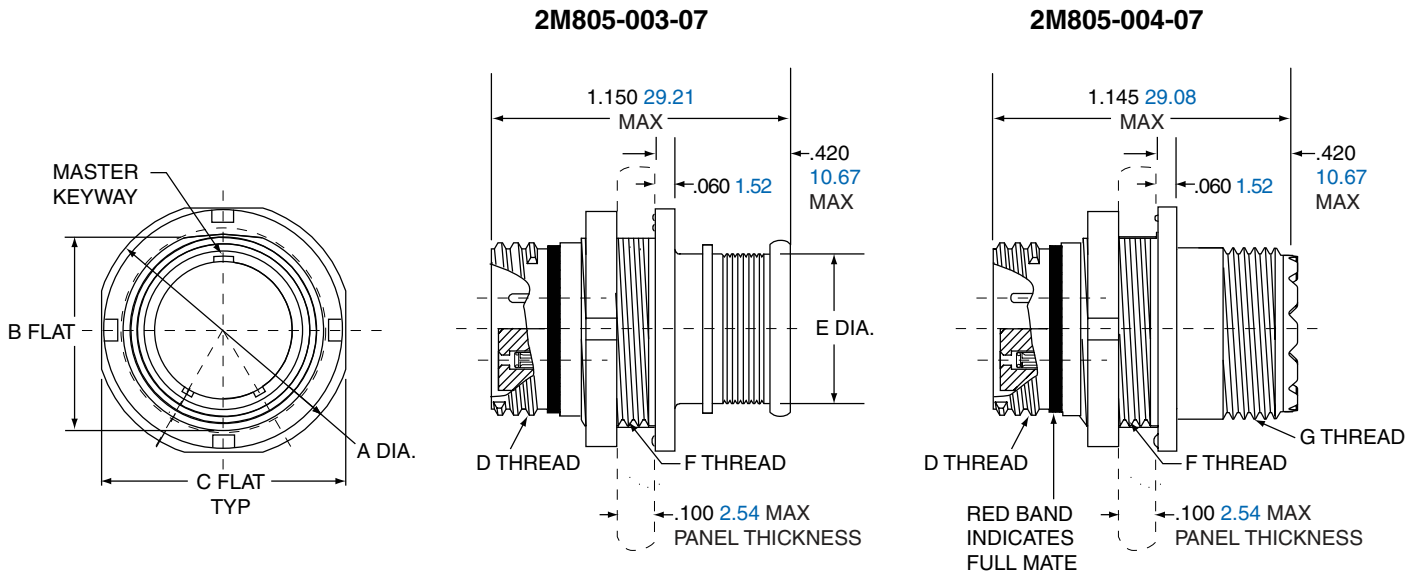


2M805-003-02 and 2M805-004-02



* Grommet protrudes for power/combo arrangement

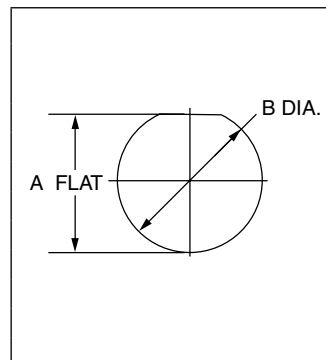
| Shell Size | A Sq. | | B BSC. | | C Dia. | | D Dia. | | E Threads | F Dia. | | G Threads Accessory |
|------------|-------|-------|--------|-------|--------|-------|-----------|----------|---------------------|--------|-------|---------------------|
| | in. | mm. | in. | mm. | in. | mm. | in. ±.003 | mm. ±.08 | | in. | mm. | |
| 8 | .850 | 21.59 | .660 | 16.76 | 1.150 | 29.21 | .094 | 2.39 | .5000 .1P-.3L-TS-2A | .316 | 8.05 | .3750-32 UNEF-2A |
| 9 | .913 | 23.19 | .723 | 18.36 | 1.230 | 31.24 | .094 | 2.39 | .5625.1P-.3L-TS-2A | .397 | 10.08 | .4375-28 UNEF-2A |
| 10 | .975 | 24.77 | .785 | 19.94 | 1.330 | 33.78 | .094 | 2.39 | .6250.1P-.3L-TS-2A | .472 | 12.01 | .5000-28 UNEF-2A |
| 11 | 1.039 | 26.39 | .848 | 21.54 | 1.410 | 35.81 | .094 | 2.39 | .6875.1P-.3L-TS-2A | .519 | 13.18 | .5625-24 UNEF-2A |
| 12 | 1.099 | 27.91 | .909 | 23.09 | 1.500 | 38.10 | .094 | 2.39 | .7500.1P-.3L-TS-2A | .585 | 14.86 | .6250-24 UNEF-2A |
| 15 | 1.288 | 32.74 | 1.058 | 26.87 | 1.750 | 44.45 | .128 | 3.25 | .9375.1P-.3L-TS-2A | .687 | 17.45 | .7500-20 UNEF-2A |
| 18 | 1.475 | 37.47 | 1.255 | 31.88 | 2.000 | 50.80 | .128 | 3.25 | 1.1250.1P-.3L-TS-2A | .884 | 22.45 | .9375-20 UNEF-2A |
| 19 | 1.537 | 71.06 | 1.327 | 33.71 | 2.094 | 53.19 | .128 | 3.25 | 1.1875.1P-.3L-TS-2A | .884 | 22.45 | .9375-20 UNEF-2A |
| 23 | 1.787 | 45.39 | 1.570 | 39.88 | 2.440 | 61.98 | .128 | 3.25 | 1.4375.1P-.3L-TS-2A | 1.134 | 28.80 | 1.1875-18 UNEF-2A |



| Shell Size | A Dia. | | B Flat | | C Flat | | D Threads | E Dia. | | F Threads | G Threads Accessory |
|------------|--------|-------|--------|-------|--------|-------|---------------------|--------|-------|-----------------|---------------------|
| | in. | mm. | in. | mm. | in. | mm. | | in. | mm. | | |
| 8 | .760 | 19.30 | .535 | 13.59 | .730 | 18.54 | .5000.1P-.3L-TS-2A | .317 | 8.05 | .5625-28 UN-2A | .3750-32 UNEF-2A |
| 9 | .880 | 22.35 | .661 | 16.79 | .850 | 21.59 | .5625.1P-.3L-TS-2A | .397 | 10.08 | .6875-28 UN-2A | .4375-28 UNEF-2A |
| 10 | .880 | 22.35 | .661 | 16.79 | .850 | 21.59 | .6250.1P-.3L-TS-2A | .473 | 12.01 | .6875-28 UN-2A | .5000-28 UNEF-2A |
| 11 | .955 | 24.26 | .721 | 18.31 | .925 | 23.50 | .6875.1P-.3L-TS-2A | .519 | 13.18 | .7500-28 UN-2A | .5625-24 UNEF-2A |
| 12 | 1.060 | 26.92 | .784 | 19.91 | 1.035 | 26.29 | .7500.1P-.3L-TS-2A | .585 | 14.86 | .8125-28 UN-2A | .6250-24 UNEF-2A |
| 15 | 1.203 | 30.56 | .970 | 24.64 | 1.173 | 29.79 | .9375.1P-.3L-TS-2A | .687 | 17.45 | 1.0000-28 UN-2A | .7500-20 UNEF-2A |
| 18 | 1.389 | 35.28 | 1.147 | 29.13 | 1.359 | 34.52 | 1.1250.1P-.3L-TS-2A | .884 | 22.45 | 1.1875-28 UN-2A | .9375-20 UNEF-2A |
| 19 | 1.450 | 36.83 | 1.221 | 31.01 | 1.420 | 36.07 | 1.1875.1P-.3L-TS-2A | .884 | 22.45 | 1.2500-28 UN-2A | .9375-20 UNEF-2A |
| 23 | 1.705 | 43.31 | 1.470 | 37.34 | 1.675 | 42.55 | 1.4375.1P-.3L-TS-2A | 1.134 | 28.80 | 1.5000-28 UN-2A | 1.1875-18 UNEF-2A |

PANEL CUTOUT FOR JAM NUT

| Shell Size | A Flat | | B Dia | |
|------------|-----------|------------|-----------|------------|
| | in. ±.002 | mm. ± 0.05 | in. ±.005 | mm. ± 0.13 |
| 8 | .543 | 13.79 | .572 | 14.53 |
| 9 | .669 | 16.99 | .698 | 17.73 |
| 10 | .669 | 16.99 | .698 | 17.73 |
| 11 | .729 | 18.51 | .760 | 19.30 |
| 12 | .792 | 20.17 | .822 | 20.88 |
| 15 | .978 | 24.84 | 1.010 | 25.65 |
| 18 | 1.155 | 29.34 | 1.198 | 30.43 |
| 19 | 1.231 | 31.27 | 1.260 | 32.00 |
| 23 | 1.480 | 37.59 | 1.510 | 38.35 |



PC Board Receptacles:

2M805 Series of PC Board Receptacles are intended for use of terminating the connector directly to a Circuit Board or Flex assembly. These connectors can also be supplied with solder cup termination for direct wire attachment.

2M805 FEATURES INCLUDE:

- Low profile shells for minimum box protrusion
- Shell Standoffs for PC Board washout
- Non-removable PC and/or Solder cup contacts
- Environmental Sealing



| Series | Shell Style | Service Class | Shell Size-Insert Arrg. | Contact Type | Alternate Position |
|-----------|-------------|---------------|-------------------------|--------------|--------------------|
| 2M805-0XX | -02 | C | 15-37 | S | A |

| SERIES | |
|-----------|---|
| 2M805-005 | Receptacle for Solder Cup or PCB Termination, with Standard Epoxy Potting |
| 2M805-017 | Receptacle for Solder Cup or PCB Termination with Special Sealing for open face (unmated) Water Immersion Requirements. 100% leak tested to maintain a helium leak rate of 1×10^{-4} cc/sec. at 1 atmosphere pressure differential from -65°C to 150°C |

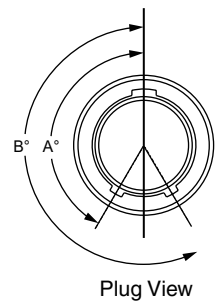
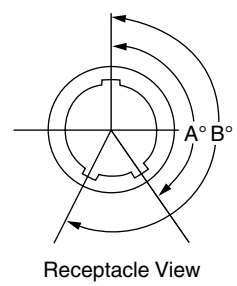
| SHELL STYLE | |
|-------------|--|
| -02 | Square Flange Receptacle |
| -07 | Jam Nut for Rear Panel Mounting Receptacle |

SHELL SIZE - INSERT ARRANGEMENTS
See Insert Arrangements on Pages 13-15

| CONTACTS | |
|----------|---------------------|
| P | Pin - PC Tail |
| S | Socket - PC Tail |
| E | Pin - Solder Cup |
| F | Socket - Solder Cup |

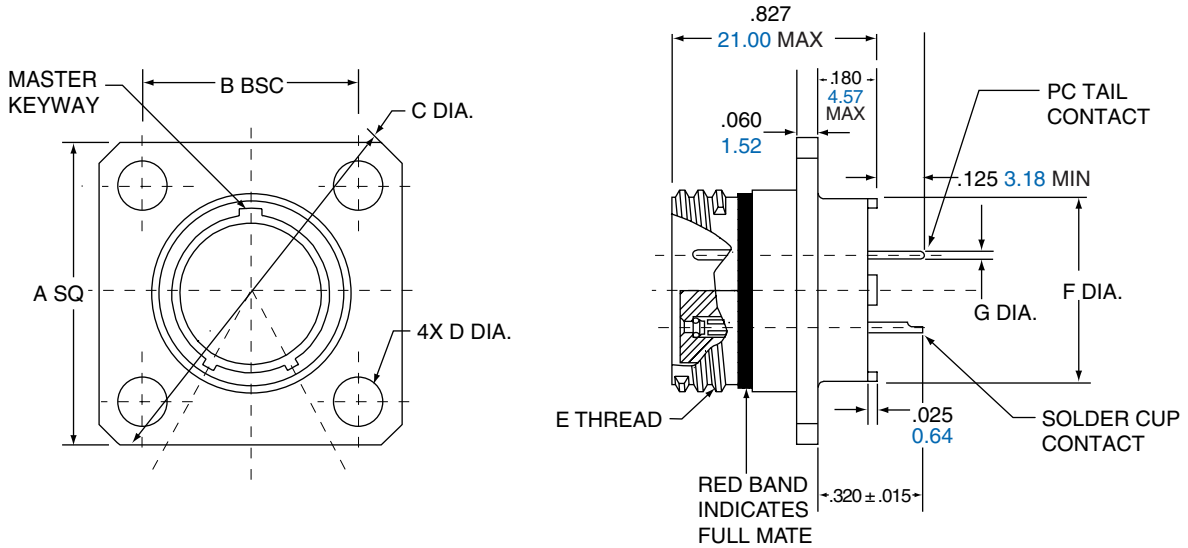
| SERVICE CLASS | | |
|---------------|--|--|
| | | Finish |
| C | | Aluminum/Black Anodize (Non-Conductive) |
| M | | Aluminum/Electroless Nickel |
| NF | | Aluminum/Cadmium with Olive Drab Chromate |
| MT | | Aluminum/Nickel-PTFE (Durmalon) |
| Z1 | | Stainless Steel/Passivated |
| ZN | | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| ZNU | | Aluminum/Zinc-Nickel with Black Chromate |

| KEYING | | |
|--------------|--------------|------|
| Key Position | Key Rotation | |
| | A | B |
| (Normal) A | 150° | 210° |
| B | 75° | 210° |
| C | 95° | 230° |
| D | 140° | 275° |



- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

**2M805-005-02
2M805-017-02**

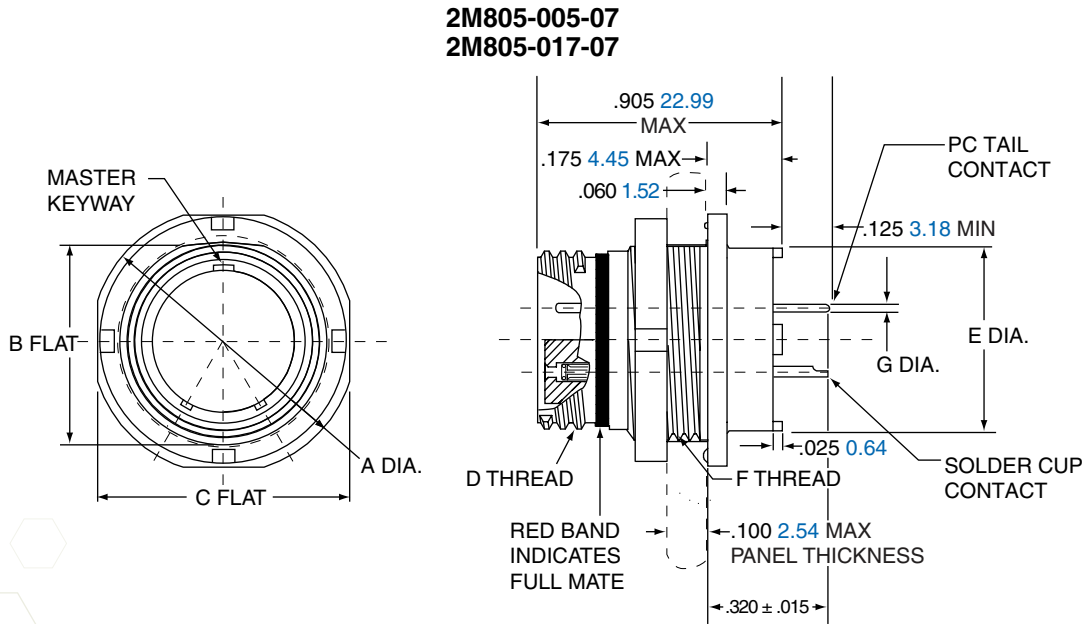


| Shell Size | A Sq. | | B BSC. | | C Dia. | | D Dia. | | E Threads | F Dia. | | G PC Tail Dia. |
|------------|-------|-------|--------|-------|--------|-------|-----------|----------|---------------------|--------|-------|---------------------------------|
| | in. | mm. | in. | mm. | in. | mm. | in. ±.003 | mm. ±.08 | | in. | mm. | |
| 8 | .850 | 21.59 | .660 | 16.76 | 1.150 | 29.21 | .094 | 2.39 | .5000.1P-.3L-TS-2A | .330 | 8.38 | #23 .018/.022 0.46/0.56 |
| 9 | .913 | 23.19 | .723 | 18.36 | 1.230 | 31.24 | .094 | 2.39 | .5625.1P-.3L-TS-2A | .432 | 10.97 | |
| 10 | .975 | 24.77 | .785 | 19.94 | 1.330 | 33.78 | .094 | 2.39 | .6250.1P-.3L-TS-2A | .493 | 12.52 | #20/20HD .025/.027 0.64/0.69 |
| 11 | 1.039 | 26.39 | .848 | 21.54 | 1.410 | 35.81 | .094 | 2.39 | .6875.1P-.3L-TS-2A | .551 | 14.00 | |
| 12 | 1.099 | 27.91 | .909 | 23.09 | 1.500 | 38.10 | .094 | 2.39 | .7500.1P-.3L-TS-2A | .620 | 15.78 | #16 .060/.064 1.521/1.63 |
| 15 | 1.288 | 32.74 | 1.058 | 26.87 | 1.750 | 44.45 | .128 | 3.25 | .9375.1P-.3L-TS-2A | .703 | 17.86 | |
| 18 | 1.475 | 37.47 | 1.255 | 31.88 | 2.000 | 50.80 | .128 | 3.25 | 1.1250.1P-.3L-TS-2A | .863 | 21.92 | #12 .092/.096 2.34/2.44 |
| 19 | 1.537 | 71.06 | 1.327 | 33.71 | 2.094 | 53.19 | .128 | 3.25 | 1.1875.1P-.3L-TS-2A | .912 | 23.16 | |
| 23 | 1.787 | 45.39 | 1.570 | 39.88 | 2.440 | 61.98 | .128 | 3.25 | 1.4375.1P-.3L-TS-2A | 1.162 | 29.51 | |

2M805 Tri-Start PC Tail/Solder Cup Jam Nut



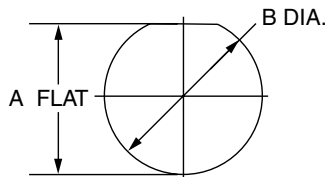
2M805-005-07 and 2M805-017-07



| Shell Size | A Dia. | | B Flat | | C Flat | | D Threads | E Dia. | | F Threads | G PC Tail Dia. |
|------------|--------|-------|--------|-------|--------|-------|---------------------|--------|-------|-----------------|---------------------------------|
| | in. | mm. | in. | mm. | in. | mm. | | in. | mm. | | |
| 8 | .760 | 19.30 | .535 | 13.59 | .730 | 18.54 | .5000.1P-.3L-TS-2A | .330 | 8.38 | .5625-28 UN-2A | #23 |
| 9 | .880 | 22.35 | .661 | 16.79 | .850 | 21.59 | .5625.1P-.3L-TS-2A | .432 | 10.97 | .6875-28 UN-2A | .018/.022 0.46/0.56 |
| 10 | .880 | 22.35 | .661 | 16.79 | .850 | 21.59 | .6250.1P-.3L-TS-2A | .493 | 12.52 | .6875-28 UN-2A | #20/20HD .025/.027 0.64/0.69 |
| 11 | .955 | 24.26 | .721 | 18.31 | .925 | 23.50 | .6875.1P-.3L-TS-2A | .551 | 14.00 | .7500-28 UN-2A | #16 .060/.064 1.521/1.63 |
| 12 | 1.060 | 26.92 | .784 | 19.91 | 1.035 | 26.29 | .7500.1P-.3L-TS-2A | .620 | 15.78 | .8125-28 UN-2A | #12 .092/.096 2.34/2.44 |
| 15 | 1.203 | 30.56 | .970 | 24.64 | 1.173 | 29.79 | .9375.1P-.3L-TS-2A | .703 | 17.86 | 1.0000-28 UN-2A | |
| 18 | 1.389 | 35.28 | 1.147 | 29.13 | 1.359 | 34.52 | 1.1250.1P-.3L-TS-2A | .863 | 21.92 | 1.1875-28 UN-2A | |
| 19 | 1.450 | 36.83 | 1.221 | 31.01 | 1.420 | 36.07 | 1.1875.1P-.3L-TS-2A | .912 | 23.16 | 1.2500-28 UN-2A | |
| 23 | 1.705 | 43.31 | 1.470 | 37.34 | 1.675 | 42.55 | 1.4375.1P-.3L-TS-2A | 1.162 | 29.51 | 1.5000-28 UN-2A | |

PANEL CUTOUT FOR JAM NUT

| Shell Size | A Flat | | B Dia | |
|------------|--------------|---------------|--------------|---------------|
| | in. ±.002 | mm. ± 0.05 | in. ±.005 | mm. ± 0.13 |
| 8 | .543 | 13.79 | .572 | 14.53 |
| 9 | .669 | 16.99 | .698 | 17.73 |
| 10 | .669 | 16.99 | .698 | 17.73 |
| 11 | .729 | 18.51 | .760 | 19.30 |
| 12 | .792 | 20.17 | .822 | 20.88 |
| 15 | .978 | 24.84 | 1.010 | 25.65 |
| 18 | 1.155 | 29.34 | 1.198 | 30.43 |
| 19 | 1.231 | 31.27 | 1.260 | 32.00 |
| 23 | 1.480 | 37.59 | 1.510 | 38.35 |



2M805 Series of Hermetic Receptacles:

2M805 Series of Hermetic Receptacles provide superior sealing of 1×10^{-8} cc/second helium leak rate and are 100% tested prior to shipping. This superior sealing is accomplished through the use of glass insulator fused to stainless steel shells and iron alloy contacts.

2M805 FEATURES INCLUDE:

- Low profile shells for minimum box protrusion
- Shell Standoffs for PC Board washout
- Non-removable PC and/or Solder cup contacts
- Hermetic Sealing

| Series | Shell Style | Service Class | Shell Size-Insert Arrg. | Contact Type | Alternate Position |
|-----------|-------------|---------------|-------------------------|--------------|--------------------|
| 2M805-006 | -07 | Z1 | 12-26 | C | A |

| SERIES | |
|-----------|---------------------|
| 2M805-006 | Hermetic Receptacle |

| SHELL STYLE | |
|-------------|--|
| -02 | Square Flange Receptacle |
| -03 | Weld Mount (only available in Z1 Finish) |
| -07 | Jam Nut for Rear Panel Mounting Receptacle |

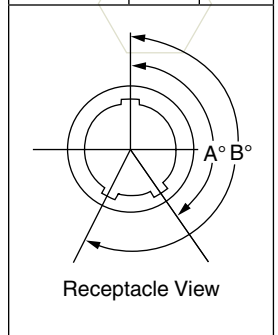
SHELL SIZE - INSERT ARRANGEMENTS
See Insert Arrangements on Pages 13-15

| CONTACTS | |
|----------|------------------|
| P | Pin - Solder Cup |
| C | Pin - PC Tail |

| SERVICE CLASS | |
|---------------|--------------------------------|
| Finish | |
| ZL | Stainless Steel/ Nickel Plated |
| Z1 | Stainless Steel/Passivated |



| KEYING | | |
|--------------|--------------|------|
| Key Position | Key Rotation | |
| | A | B |
| (Normal) A | 150° | 210° |
| B | 75° | 210° |
| C | 95° | 230° |
| D | 140° | 275° |

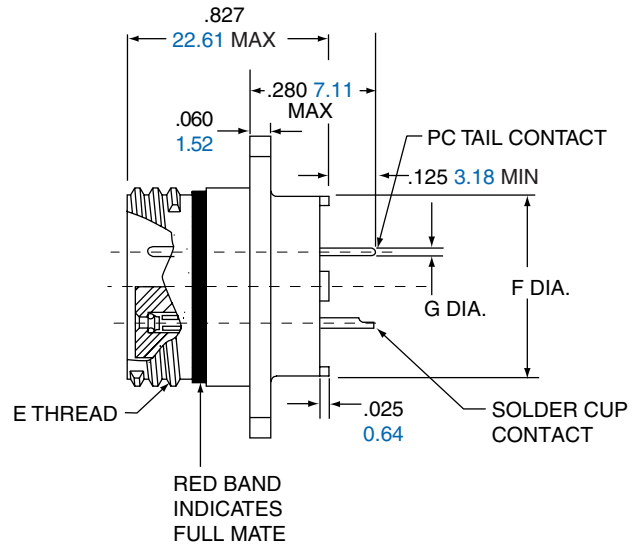
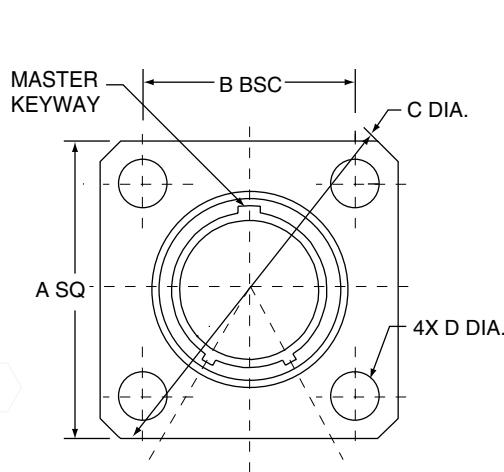


2M805 Tri-Start Flange Mount Hermetic



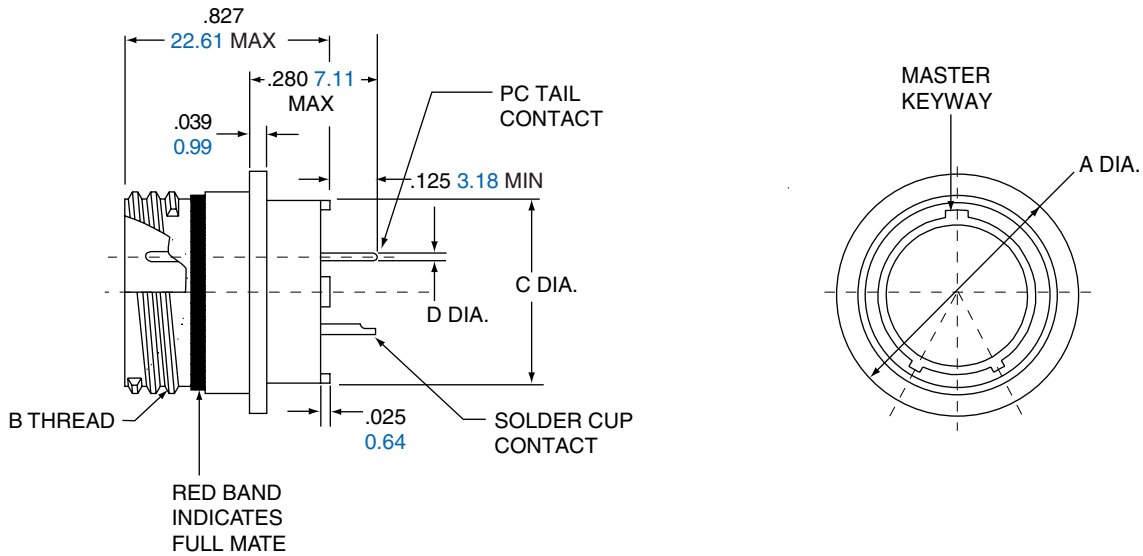
2M805-006-02

2M805-006-02



| Shell Size | A Sq. | | B BSC. | | C Dia. | | D Dia. | | E Threads | F Dia. | | G PC Tail Dia. |
|------------|-------|-------|--------|-------|--------|-------|-----------|----------|---------------------|--------|-------|---------------------------------|
| | in. | mm. | in. | mm. | in. | mm. | in. ±.003 | mm. ±.08 | | in. | mm. | |
| 8 | .850 | 21.59 | .660 | 16.76 | 1.150 | 29.21 | .094 | 2.39 | .5000.1P-.3L-TS-2A | .330 | 8.38 | #23 |
| 9 | .913 | 23.19 | .723 | 18.36 | 1.230 | 31.24 | .094 | 2.39 | .5625.1P-.3L-TS-2A | .432 | 10.97 | .018/.022 0.46/0.56 |
| 10 | .975 | 24.77 | .785 | 19.94 | 1.330 | 33.78 | .094 | 2.39 | .6250.1P-.3L-TS-2A | .493 | 12.52 | #20/20HD .025/.027 0.64/0.69 |
| 11 | 1.039 | 26.39 | .848 | 21.54 | 1.410 | 35.81 | .094 | 2.39 | .6875.1P-.3L-TS-2A | .551 | 14.00 | |
| 12 | 1.099 | 27.91 | .909 | 23.09 | 1.500 | 38.10 | .094 | 2.39 | .7500.1P-.3L-TS-2A | .620 | 15.78 | #16 |
| 15 | 1.288 | 32.74 | 1.058 | 26.87 | 1.750 | 44.45 | .128 | 3.25 | .9375.1P-.3L-TS-2A | .703 | 17.86 | .060/.064 1.521/1.63 |
| 18 | 1.475 | 37.47 | 1.255 | 31.88 | 2.000 | 50.80 | .128 | 3.25 | 1.1250.1P-.3L-TS-2A | .863 | 21.92 | #12 |
| 19 | 1.537 | 71.06 | 1.327 | 33.71 | 2.094 | 53.19 | .128 | 3.25 | 1.1875.1P-.3L-TS-2A | .912 | 23.16 | .092/.096 2.34/2.44 |
| 23 | 1.787 | 45.39 | 1.570 | 39.88 | 2.440 | 61.98 | .128 | 3.25 | 1.4375.1P-.3L-TS-2A | 1.162 | 29.51 | |

2M805-006-03



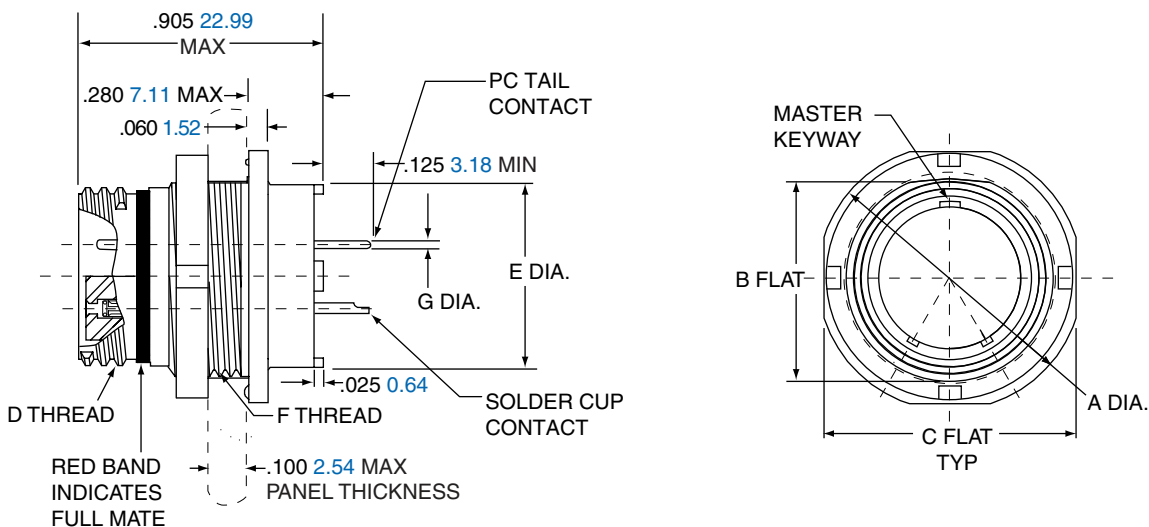
| Shell Size | A Dia. | | B Threads | C Dia. | | D PC Tail Dia. |
|------------|--------|-------|---------------------|--------|-------|---------------------------------|
| | in. | mm. | | in. | mm. | |
| 8 | .625 | 15.88 | .5000.1P-.3L-TS-2A | .330 | 8.38 | #23 .018/.022 0.46/0.56 |
| 9 | .688 | 17.48 | .5625.1P-.3L-TS-2A | .432 | 10.97 | #20/20HD .025/.027 0.64/0.69 |
| 10 | .750 | 19.75 | .6250.1P-.3L-TS-2A | .493 | 12.52 | #16 .060/.064 1.521/1.63 |
| 11 | .812 | 20.62 | .6875.1P-.3L-TS-2A | .551 | 14.00 | #12 .092/.096 2.34/2.44 |
| 12 | .875 | 22.23 | .7500.1P-.3L-TS-2A | .620 | 15.78 | |
| 15 | 1.062 | 26.97 | .9375.1P-.3L-TS-2A | .703 | 17.86 | |
| 18 | 1.250 | 31.75 | 1.1250.1P-.3L-TS-2A | .863 | 21.92 | |
| 19 | 1.312 | 33.32 | 1.1875.1P-.3L-TS-2A | .912 | 23.16 | |
| 23 | 1.563 | 39.70 | 1.4375.1P-.3L-TS-2A | 1.162 | 29.51 | |

2M805 Tri-Start Jam Nut Hermetic



2M805-006-07

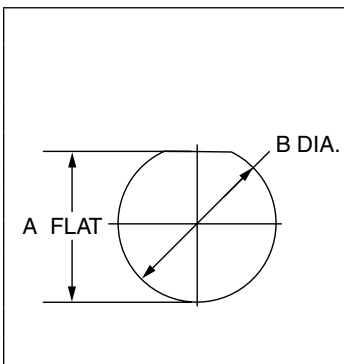
2M805-006-07



| Shell Size | A Dia. | | B Flat | | C Flat | | D Threads | E Dia. | | F Threads | G PC Tail Dia. |
|------------|--------|-------|--------|-------|--------|-------|---------------------|--------|-------|-----------------|----------------------|
| | in. | mm. | in. | mm. | in. | mm. | | in. | mm. | | |
| 8 | .760 | 19.30 | .535 | 13.59 | .730 | 18.54 | .5000.1P-.3L-TS-2A | .330 | 8.38 | .5625-28 UN-2A | #23 |
| 9 | .880 | 22.35 | .661 | 16.79 | .850 | 21.59 | .5625.1P-.3L-TS-2A | .432 | 10.97 | .6875-28 UN-2A | .018/.022 0.46/0.56 |
| 10 | .880 | 22.35 | .661 | 16.79 | .850 | 21.59 | .6250.1P-.3L-TS-2A | .493 | 12.52 | .6875-28 UN-2A | #20/20HD |
| 11 | .955 | 24.26 | .721 | 18.31 | .925 | 23.50 | .6875.1P-.3L-TS-2A | .551 | 14.00 | .7500-28 UN-2A | .025/.027 0.64/0.69 |
| 12 | 1.060 | 26.92 | .784 | 19.91 | 1.035 | 26.29 | .7500.1P-.3L-TS-2A | .620 | 15.78 | .8125-28 UN-2A | #16 |
| 15 | 1.203 | 30.56 | .970 | 24.64 | 1.173 | 29.79 | .9375.1P-.3L-TS-2A | .703 | 17.86 | 1.0000-28 UN-2A | .060/.064 1.521/1.63 |
| 18 | 1.389 | 35.28 | 1.147 | 29.13 | 1.359 | 34.52 | 1.1250.1P-.3L-TS-2A | .863 | 21.92 | 1.1875-28 UN-2A | #12 |
| 19 | 1.450 | 36.83 | 1.221 | 31.01 | 1.420 | 36.07 | 1.1875.1P-.3L-TS-2A | .912 | 23.16 | 1.2500-28 UN-2A | .092/.096 2.34/2.44 |
| 23 | 1.705 | 43.31 | 1.470 | 37.34 | 1.675 | 42.55 | 1.4375.1P-.3L-TS-2A | 1.162 | 29.51 | 1.5000-28 UN-2A | |

PANEL CUTOUT FOR JAM NUT

| Shell Size | A Flat | | B Dia | |
|------------|-----------|------------|-----------|------------|
| | in. ±.002 | mm. ± 0.05 | in. ±.005 | mm. ± 0.13 |
| 8 | .543 | 13.79 | .572 | 14.53 |
| 9 | .669 | 16.99 | .698 | 17.73 |
| 10 | .669 | 16.99 | .698 | 17.73 |
| 11 | .729 | 18.51 | .760 | 19.30 |
| 12 | .792 | 20.17 | .822 | 20.88 |
| 15 | .978 | 24.84 | 1.010 | 25.65 |
| 18 | 1.155 | 29.34 | 1.198 | 30.43 |
| 19 | 1.231 | 31.27 | 1.260 | 32.00 |
| 23 | 1.480 | 37.59 | 1.510 | 38.35 |



Protection Caps:

2M805 Tri-Start Protection Caps are available in plug and receptacle versions. Protective caps keep the connector interface dry and clean while not in use. Caps come in a variety of materials, lanyard styles and lengths to accommodate specific design requirements.



| Series | Service Class | Attachment Type | Shell Size | Attachment Code | Attachment Length in Inches |
|-----------|---------------|-----------------|------------|-----------------|-----------------------------|
| 2M667-26X | -NF | -H | 9 | 04 | -5 |

| SERIES | |
|-----------|---------------------------------------|
| 2M667-261 | Protection Caps for 2M805 Plugs |
| 2M667-262 | Protection Caps for 2M805 Receptacles |

| ATTACHMENT TYPE | | SHELL SIZE |
|-----------------|--|------------|
| -G | Nylon Rope | 8 |
| -H | Stainless Steel Wire Rope, Teflon® Jacket | 9 |
| -N | No Attachment | 10 |
| -S | Stainless Steel Sash Chain | 11 |
| -SK | Nylon Rope With Slip Knot | 12 |
| -T | Stainless Steel Wire Rope, No Jacket | 15 |
| -U | Stainless Steel Wire Rope, Polyurethane Jacket | 18 |
| | | 19 |
| | | 23 |

Omit for attachment Type N (No Attachment)
Example "-5" equals five inch length

| ATTACHMENT CODE | |
|---|--|
| Omit for attachment Types N (No Attachment) and Slip Knot | |
| Small Ring | 01 -.126 (3.20) I.D. 02 -.145 (3.68) I.D. 04 -.188 (4.78) I.D. 06 -.197 (5.00) I.D. |
| Large Ring | 14 -.385 (9.78) I.D. 16 -.570 (14.48) I.D. 17 -.635 (16.13) I.D. 18 -.695 (17.65) I.D. 19 -.885 (22.48) I.D. 20 -1.070 (27.17) I.D. 22 -1.210 (30.73) I.D. 23 -1.275 (32.39) I.D. 25 -1.530 (38.86) I.D. |
| Split Ring | 50 -.420 (10.67) I.D. 52 -.480 (12.19) I.D. 54 -.635 (16.13) I.D. 56 -.745 (18.92) I.D. 58 -.885 (22.48) I.D. 60 -1.010 (25.65) I.D. 64 -1.125 (28.58) I.D. 68 -1.345 (34.16) I.D. |

| SERVICE CLASS | |
|---------------|--|
| Finish | |
| -C | Aluminum/Black Anodize (Non-Conductive) |
| -M | Aluminum/Electroless Nickel |
| -NF | Aluminum/Cadmium with Olive Drab Chromate |
| -MT | Aluminum/Nickel-PTFE (Durmalon) |
| -Z1 | Stainless Steel/Passivated |
| -ZN | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| -ZNU | Aluminum/Zinc-Nickel with Black Chromate |



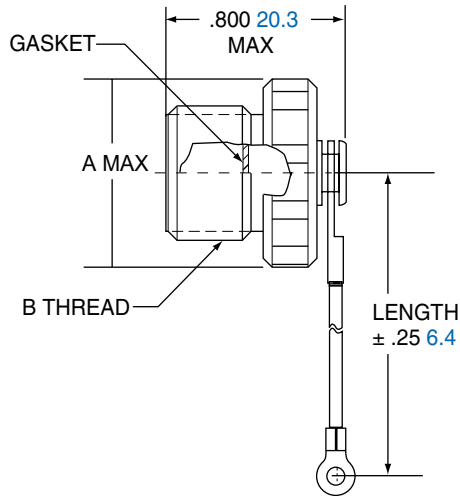
Contacts & Tools
2M Specs
2M801
2M803
2M804
2M805
2M Accessories
HD38999
Micro-D
Terrapin
Nexus

2M805 Tri-Start Flange Mount Hermetic

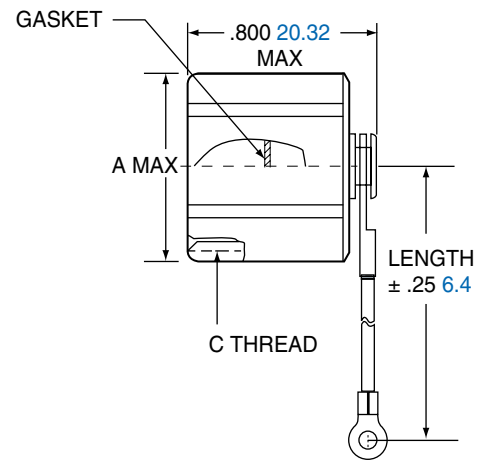


Metal Protective Caps 2M667-261 and 2M667-262

2M667-261



2M667-262

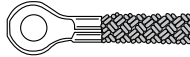
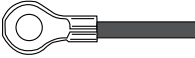


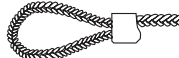


| Shell Size | A Max. | | B Thread | C Thread |
|------------|--------|-------|---------------------|---------------------|
| | in. | mm. | | |
| 8 | .653 | 16.59 | .5000.1P-.3L-TS-2A | .5000.1P-.3L-TS-2B |
| 9 | .715 | 18.16 | .5625.1P-.3L-TS-2A | .5625.1P-.3L-TS-2B |
| 10 | .778 | 19.76 | .6250.1P-.3L-TS-2A | .6250.1P-.3L-TS-2B |
| 11 | .841 | 21.36 | .6875.1P-.3L-TS-2A | .6875.1P-.3L-TS-2B |
| 12 | .903 | 22.94 | .7500.1P-.3L-TS-2A | .7500.1P-.3L-TS-2B |
| 15 | 1.091 | 27.71 | .9375.1P-.3L-TS-2A | .9375.1P-.3L-TS-2B |
| 18 | 1.278 | 32.46 | 1.1250.1P-.3L-TS-2A | 1.1250.1P-.3L-TS-2B |
| 19 | 1.340 | 34.04 | 1.1875.1P-.3L-TS-2A | 1.1875.1P-.3L-TS-2B |
| 23 | 1.600 | 40.64 | 1.4375.1P-.3L-TS-2A | 1.4375.1P-.3L-TS-2B |

MATERIALS AND FINISHES

| | |
|----------------|-----------------------------------|
| Cover | Aluminum alloy or stainless steel |
| Gasket | Fluorosilicone rubber |
| Wire, Hardware | Stainless steel, passivated |

LANYARD OPTIONS

| | | |
|--|---|--|
|  | Nylon Rope | -55° to +100°C., black, flexible, good abrasion resistance, good resistance to fuels, .120" 3mm diameter |
|  | Polyurethane Coated Wire Rope | Black polyurethane over stainless steel rope, very flexible, excellent abrasion resistance, excellent resistance to fuels, .080" 2mm diameter |
|  | Teflon® Jacketed Wire Rope | Translucent FEP jacket over stainless steel, -55° to +200°C., fair flexibility, good abrasion resistance, .100" diameter |
|  | Sash Chain | Stainless steel |
|  | Slip Knot (SK) for attaching Covers to Cables | 55° to +100°C., black, flexible, good abrasion resistance, good resistance to fuels, .120" 3mm diameter. Length includes .5" 13mm diameter loop. |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

Accessories

2M

HD38999

Micro-ID

Terrapin

Nexus

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus



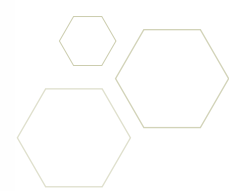
2M Micro-Miniature Double Flange Standoff

Double Flange: Amphenol offers customized 2M receptacles with double flange standoffs. This enhancement allows the user to mount to PC board applications. Shells are available in aluminum and stainless steel. Consult Amphenol Aerospace for ordering information.



2M Micro-Miniature PCB Header Assemblies

2M PCB Header Assemblies: Header assemblies can be utilized in all 2M series. They can be attached to connectors with standard flange placement or directly to the circuit board. Utilizing a header assembly in your application allows for easy separation of the connector from the board. Pin or Socket arrangements are available. Consult Amphenol Aerospace for ordering information.



2M Micro-Miniature High Speed

Amphenol's 2M line is available in high speed variations when your application requires superior electrical performance and shielding. A variety of contacts can provide high speed transmission and operate in high frequency conditions. For a complete list of size 12 and 16 coax/twinax contacts refer to the high speed section of catalog 12-C Combined Circular Catalog.

For 2M Filtered High Density Connectors, Look to the leader...

Amphenol® EMI Protection Connectors have been designed and manufactured for over 45 years. Our EMI protection connectors offer the versatility of our standard 2M connectors with EMI protection to suit the demands of your application.

ADVANTAGES OF FILTER CONNECTORS

- Reduction in overall weight and space with the elimination of external filtering.
- Reduction in solder joints
- Fewer components equals a cost effective solution with increased reliability
- Eliminates radiated and conducted EMI from entering the box
- Perfect for retrofits or late design-in
- Can utilize standard connector packaging

QUALITY

All filter connectors undergo extensive mechanical and electrical testing to ensure consistent, quality hardware.

STANDARD ELECTRICAL TESTS

- 100% Insulation Resistance testing
- 100% Dielectric Withstanding Voltage testing
- 100% Capacitance testing at 1KHz

SPECIAL TESTS/PROCESSES AVAILABLE

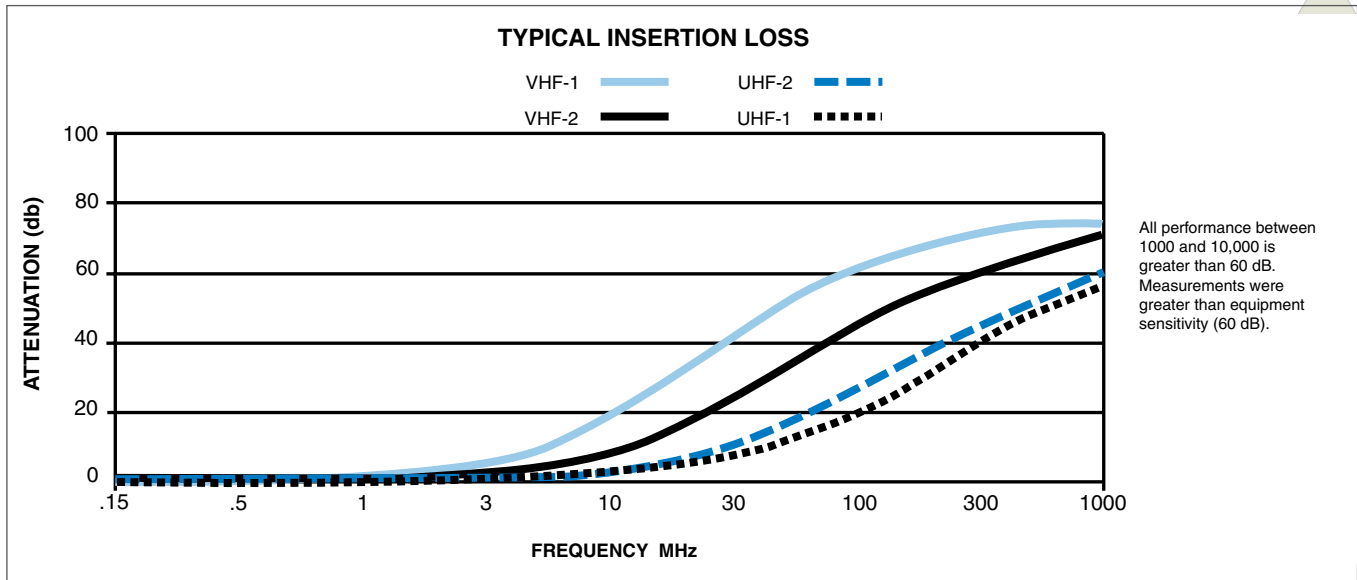
- Attenuation testing (through 100 MHz)
- Leakage inspection
- Thermal cycling/shock
- Burn-in
- De-gassing

Amphenol will work to provide the best solution in standard 2M packaging for the most cost effective solutions available.

RESOURCES

Amphenol Aerospace Factory Direct: 607.563.5011
Filter Technical Support: FilterApps@Amphenol-aa.com
Website: www.amphenol-aerospace.com/filters.asp

Note: Below are typical capacitance values. Other capacitance values are available. Please consult Amphenol Aerospace for availability.



**TYPICAL INSERTION LOSS (dB)
PER MIL-STD-220, 5 ADC, 25°C**

| Capacitance | 1MHz | 3MHz | 10MHz | 30MHz | 100MHz | 300MHz | 1000MHz |
|--------------------------|------|------|-------|-------|--------|--------|---------|
| 375 pf UHF ₁ | 0 | 0 | 1 | 8 | 16 | - | - |
| 750 pf UHF ₂ | 0 | 0 | 3 | 10 | 19 | - | - |
| 2500 pf VHF ₂ | 0 | 2 | 8 | 20 | 28 | - | - |
| 7000 pf VHF ₁ | 5 | 9 | 17 | 23 | 40 | - | - |

Most filter attenuation curves and capacitance values are expressed at 25°C. However, temperature can affect the capacitance of a barium titanate filter element, affecting the insertion loss that the element will cause. In order to assist the user in anticipating the effect of various temperatures, the following charts applicable to Amphenol filter connectors utilizing VHF-1, VHF-2, UHF-1 and UHF-2 filters are provided. Please note that all insertion loss (attenuation) values given were measured with no load applied. The band designations refer to MIL-STD-2120.

VHF-1

Typical Capacitance = 7,000 pf Min. 4,900 pf Max. 12,000 pf
Band G, Type Pi

| Temp. | F _{co} | 1MHz | 3MHz | 10MHz | 30MHz | 100MHz | 300MHz | 1000MHz |
|--------|-----------------|------|------|-------|-------|--------|--------|---------|
| -55°C | - | 1 | 2 | 8 | 21 | 44 | 61 | 65 |
| Room | 1.27M | 1 | 6 | 18 | 42 | 62 | 72 | 75 |
| +125°C | - | 0 | 2 | 9 | 24 | 45 | 62 | 64 |

Note: F_{co} = Cut-off Frequency

VHF-2

Typical Capacitance = 2,500 pf Min. 1,900 pf Max. 4,000 pf
Band E, Type Pi

| Temp. | F _{co} | 1MHz | 3MHz | 10MHz | 30MHz | 100MHz | 300MHz | 1000MHz |
|--------|-----------------|------|------|-------|-------|--------|--------|---------|
| -55°C | - | 0 | 2 | 7 | 17 | 40 | 58 | 71 |
| Room | 3.3M | 0 | 2 | 8 | 24 | 46 | 61 | 71 |
| +125°C | - | 0 | 3 | 10 | 26 | 46 | 63 | 69 |

UHF-1

Typical Capacitance = 375 pf Min. 290 pf Max. 450 pf
Band B, Type Pi

| Temp. | F _{co} | 1MHz | 3MHz | 10MHz | 30MHz | 100MHz | 300MHz | 1000MHz |
|--------|-----------------|------|------|-------|-------|--------|--------|---------|
| -55°C | - | 0 | 0 | 1 | 6 | 21 | 43 | 58 |
| Room | 21.9M | 0 | 0 | 1 | 8 | 18 | 42 | 56 |
| +125°C | - | 0 | 0 | 1 | 8 | 17 | 38 | 50 |

UHF-2

Typical Capacitance = 750 pf Min. 500 pf Max. 1,100 pf
Band C, Type Pi

| Temp. | F _{co} | 1MHz | 3MHz | 10MHz | 30MHz | 100MHz | 300MHz | 1000MHz |
|--------|-----------------|------|------|-------|-------|--------|--------|---------|
| -55°C | - | 0 | 0 | 3 | 9 | 25 | 46 | 61 |
| Room | 12.7M | 0 | 0 | 3 | 10 | 28 | 46 | 61 |
| +125°C | - | 0 | 0 | 3 | 10 | 24 | 42 | 60 |

Please consult the Amphenol Circular Interconnects catalog 12-C4 for full Amphenol EMI/EMP Filter Protection information

2M809S060, 2M809A060, Shrink Boots

The 2M Series of Shrink Boots is intended for use with the 2M series of connectors supplied with Integral Backshells. All shrink boots are supplied pre-coated with Hi-Temperature, Hot-Melt adhesive that will seal the boot to both the cable and connector. The boots also contains a lip that will lock on to a groove on the connector for improved strain relief.

High Performance Elastomer - Lipped Shrink Boot

- Pre-coated with Adhesive
- Operating Temperature: -70°C to +150°C
- Rated for 3000 hrs. continuous operation at +150°C
- Excellent resistance to fuels, oils, and solvents

| Material | Spec |
|-------------------------|-----------------|
| Fluid Resistant Polymer | VG 95343 Part 6 |

| Boot Size | Shell Size | | Straight Shrink Boots Part Number | Right Angle Boots Part Number |
|-----------|----------------------------|--------------|---|---|
| | Series 2M801, 2M803, 2M804 | Series 2M805 | Pre-Coated with Hi-Temp Hot-Melt Adhesive | Pre-Coated with Hi-Temp Hot-Melt Adhesive |
| 1 | 5 | N/A | 2M809S060-1 | 2M809A060-1 |
| 2 | 6, 7 | 8,9 | 2M809S060-2 | 2M809A060-2 |
| 3 | 8, 9 | 10,11 | 2M809S060-3 | 2M809A060-3 |
| 4 | 10, 12, 13 | 12, 15 | 2M809S060-4 | 2M809A060-4 |
| 5 | 14, 15, 16, 17 | 18, 19 | 2M809S060-5 | 2M809A060-5 |
| 6 | 21 | 23 | 2M809S060-6 | 2M809A060-6 |

Zero Halogen - Lipped Shrink Boots

- Low Smoke, Zero Halogen
- Toxicity Requirements: Meets U.S. and EU standards
- Pre-coated with Adhesive
- Operating Temperature: -30°C to +125°C
- Good resistance to fuels, oils, and solvents

| Material | Spec |
|------------------------|----------------|
| Low Smoke Halogen Free | NAVSEA 5617649 |

| Boot Size | Shell Size | | Straight Shrink Boot Part Number | Right Angle Shrink Boots Part Number |
|-----------|----------------------------|--------------|---|---|
| | Series 2M801, 2M803, 2M804 | Series 2M805 | Pre-Coated with Hi-Temp Hot-Melt Adhesive | Pre-Coated with Hi-Temp Hot-Melt Adhesive |
| 1 | 5 | N/A | 2M809S060-1H | 2M809A060-1H |
| 2 | 6, 7 | 8,9 | 2M809S060-2H | 2M809A060-2H |
| 3 | 8, 9 | 10,11 | 2M809S060-3H | 2M809A060-3H |
| 4 | 10, 12, 13 | 12, 15 | 2M809S060-4H | 2M809A060-4H |
| 5 | 14, 15, 16, 17 | 18, 19 | 2M809S060-5H | 2M809A060-5H |
| 6 | 21 | 23 | 2M809S060-6H | 2M809A060-6H |

Size 1 right angle supplied less lip see page 108

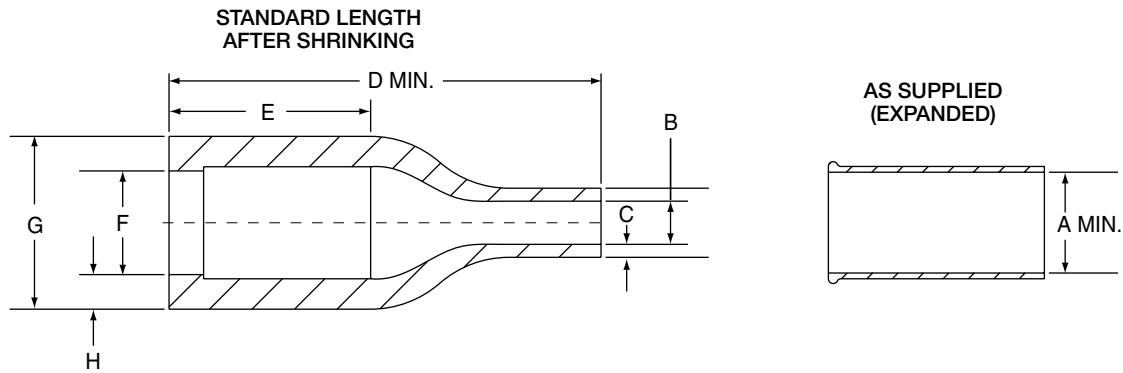
Series 2M Torque Values

SERIES 2M801, 2M803, 2M804, 2M805
RECOMMENDED TORQUE VALUES

| Shell Size Series 2M801, 2M803, 2M804 | Shell Size Series 2M805 | Backshell Tightening | | | |
|---------------------------------------|-------------------------|----------------------|------|------|------|
| | | In-LBs. | | N-m | |
| | | Min. | Max. | Min. | Max. |
| 5 | - | 13 | 17 | 1.5 | 1.9 |
| 6 | 8 | 18 | 22 | 2.0 | 2.5 |
| 7 | 9 | 30 | 40 | 3.4 | 4.5 |
| 8 | 10 | 30 | 40 | 3.4 | 4.5 |
| 9 | 11 | 35 | 45 | 4.0 | 5.1 |
| 10 | 12 | 35 | 45 | 4.0 | 5.1 |
| 12, 13 | 15 | 35 | 45 | 4.0 | 5.1 |
| 14, 16 | 18 | 35 | 45 | 4.0 | 5.1 |
| 15, 17 | 19 | 35 | 45 | 4.0 | 5.1 |
| 21 | 23 | 35 | 45 | 4.0 | 5.1 |

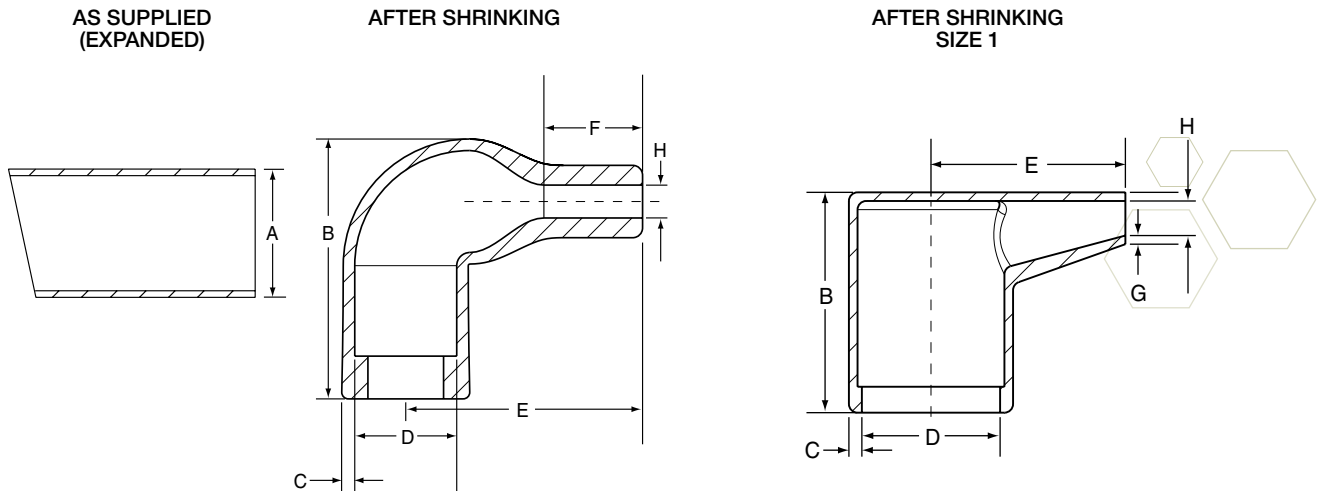


Lipped Straight Shrink Boots



| Boot Size | A Min. | | B Max. | | C±20% | | D±10% | | E Ref. | | F Max. | | G Ref. | | H±30% | |
|-----------|--------|------|--------|-----|-------|-----|-------|-------|--------|------|--------|------|--------|------|-------|-----|
| | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. |
| 1 | .350 | 9.0 | .080 | 2.0 | .020 | 0.6 | .750 | 19.0 | .350 | 9.0 | .220 | 5.6 | .300 | 7.6 | .040 | 1.0 |
| 2 | .650 | 16.5 | .150 | 3.8 | .050 | 1.3 | 1.000 | 25.4 | .560 | 14.2 | .310 | 7.9 | .410 | 10.5 | .050 | 1.3 |
| 3 | .920 | 23.4 | .220 | 5.6 | .070 | 1.8 | 1.500 | 38.1 | 0.830 | 21.1 | .410 | 10.4 | .560 | 14.0 | .070 | 1.8 |
| 4 | 1.120 | 28.4 | .260 | 6.6 | .070 | 1.8 | 2.160 | 54.9 | 1.090 | 27.7 | .560 | 14.2 | .700 | 17.8 | .070 | 1.8 |
| 5 | 1.220 | 31.0 | .280 | 7.1 | .080 | 2.0 | 2.640 | 67.0 | 1.380 | 35.0 | .700 | 17.8 | .860 | 21.8 | .080 | 2.0 |
| 6 | 1.680 | 42.7 | .390 | 9.9 | .080 | 2.0 | 4.080 | 103.6 | 2.220 | 56.4 | 1.110 | 28.2 | 1.270 | 32.2 | .080 | 2.0 |

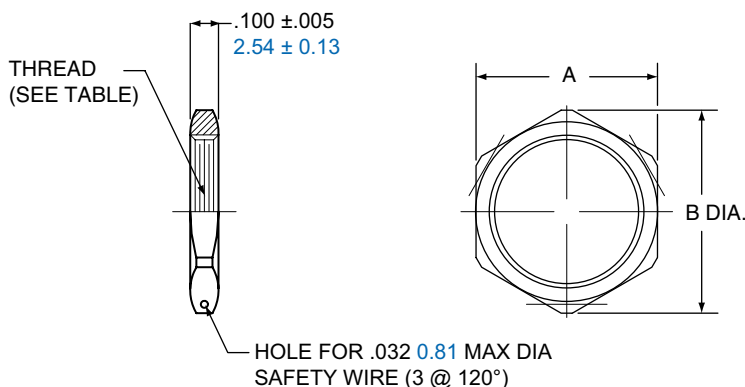
Lipped Right Angle Shrink Boots



| Boot Size | A Min. | | B Ref. | | C±30% | | D Max. | | E±20% | | F Ref. | | G±20% | | H Max | |
|-----------|--------|------|--------|------|-------|-----|--------|------|-------|------|--------|------|-------|-----|-------|-----|
| | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. |
| 1 | .240 | 6.0 | .510 | 13.0 | .040 | 1.0 | .300 | 7.6 | .410 | 10.5 | N/A | N/A | .020 | 0.5 | .080 | 2.0 |
| 2 | .650 | 16.5 | .790 | 20.1 | .040 | 1.0 | .310 | 7.9 | .720 | 18.3 | .200 | 5.1 | .060 | 1.6 | .100 | 2.5 |
| 3 | .920 | 23.3 | .900 | 22.9 | .050 | 1.3 | .410 | 10.4 | .800 | 20.3 | .230 | 5.8 | .050 | 1.3 | .220 | 5.6 |
| 4 | 1.120 | 28.5 | 1.120 | 28.5 | .060 | 1.5 | .560 | 14.2 | 1.170 | 29.8 | .280 | 7.1 | .060 | 1.5 | .250 | 6.3 |
| 5 | 1.220 | 30.9 | 1.200 | 30.5 | .070 | 1.8 | .700 | 17.8 | 1.400 | 35.6 | .340 | 8.6 | .070 | 1.8 | .280 | 7.1 |
| 6 | 1.680 | 42.6 | 1.700 | 43.2 | .080 | 2.0 | 1.100 | 27.9 | 2.100 | 53.3 | .620 | 15.7 | .080 | 2.0 | .380 | 9.7 |

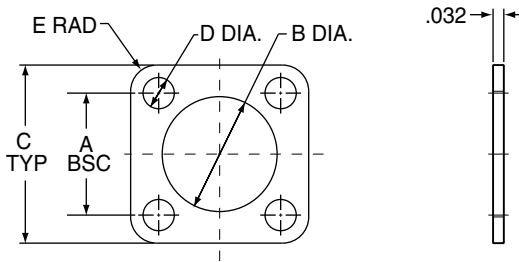
Hex Nuts 2M809-035

Hex Jam Nuts for 2M Receptacles



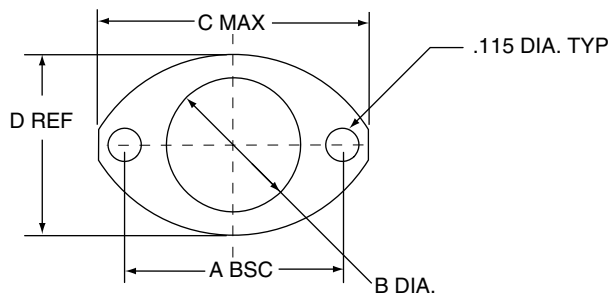
| Thread Size Class 2B | Part Number | | | | | | Dimensions | | | |
|-------------------------|-----------------------|-----------------------|----------------------|----------------|-----------------|-----------------------|------------|-------|--------|-------|
| | Aluminum | | | | Stainless Steel | | A Hex. | | B Dia. | |
| | Electroless Nickel | Olive Drab Cadmium | Black Zinc Nickel | Nickel-PTFE | Passivated | Black Zinc- Cobalt | In. | mm. | In. | mm. |
| .2500-32 UNEF | 2M809-035M01W | 2M809-035NF01W | 2M809-035ZNU01W | 2M809-035MT01W | 2M809-035Z101W | 2M809-035ZC01W | .375 | 9.53 | .403 | 10.24 |
| .3125-28 UN | 2M809-035M02W | 2M809-035NF02W | 2M809-035ZNU02W | 2M809-035MT02W | 2M809-035Z102W | 2M809-035ZC02W | .4375 | 11.11 | .475 | 12.07 |
| .3125-32 UNEF | 2M809-035M03W | 2M809-035NF03W | 2M809-035ZNU03W | 2M809-035MT03W | 2M809-035Z103W | 2M809-035ZC03W | .4375 | 11.11 | .475 | 12.07 |
| .3750-28 UN | 2M809-035M04W | 2M809-035NF04W | 2M809-035ZNU04W | 2M809-035MT04W | 2M809-035Z104W | 2M809-035ZC04W | .500 | 12.70 | .547 | 13.89 |
| .4375-28 UNEF | 2M809-035M05W | 2M809-035NF05W | 2M809-035ZNU05W | 2M809-035MT05W | 2M809-035Z105W | 2M809-035ZC05W | .5625 | 14.29 | .620 | 15.75 |
| .5625-24 UNEF | 2M809-035M06W | 2M809-035NF06W | 2M809-035ZNU06W | 2M809-035MT06W | 2M809-035Z106W | 2M809-035ZC06W | .6875 | 17.46 | .755 | 19.18 |
| .5625-28 UNEF | 2M809-035M16W | 2M809-035NF16W | 2M809-035ZNU16W | 2M809-035MT16W | 2M809-035Z116W | 2M809-035ZC16W | .6875 | 17.46 | .755 | 19.18 |
| .5625-32 UN | 2M809-035M07W | 2M809-035NF07W | 2M809-035ZNU07W | 2M809-035MT07W | 2M809-035Z107W | 2M809-035ZC07W | .6875 | 17.46 | .755 | 19.18 |
| .6250-28 UN | 2M809-035M08W | 2M809-035NF08W | 2M809-035ZNU08W | 2M809-035MT08W | 2M809-035Z108W | 2M809-035ZC08W | .750 | 19.05 | .830 | 21.08 |
| .6875-28 UN | 2M809-035M09W | 2M809-035NF09W | 2M809-035ZNU09W | 2M809-035MT09W | 2M809-035Z109W | 2M809-035ZC09W | .8125 | 20.64 | .898 | 22.81 |
| .7500-28 UN | 2M809-035M10W | 2M809-035NF10W | 2M809-035ZNU10W | 2M809-035MT10W | 2M809-035Z110W | 2M809-035ZC10W | .875 | 22.23 | .970 | 24.64 |
| .8125-28 UN | 2M809-035M17W | 2M809-035NF17W | 2M809-035ZNU17W | 2M809-035MT17W | 2M809-035Z117W | 2M809-035ZC17W | .9375 | 23.81 | 1.030 | 26.16 |
| .8750-28 UN | 2M809-035M11W | 2M809-035NF11W | 2M809-035ZNU11W | 2M809-035MT11W | 2M809-035Z111W | 2M809-035ZC11W | 1.000 | 25.40 | 1.078 | 27.38 |
| .9375-20 UNEF | 2M809-035M12W | 2M809-035NF12W | 2M809-035ZNU12W | 2M809-035MT12W | 2M809-035Z112W | 2M809-035ZC12W | 1.0625 | 26.99 | 1.187 | 30.15 |
| .9375-28 UN | 2M809-035M13W | 2M809-035NF13W | 2M809-035ZNU13W | 2M809-035MT13W | 2M809-035Z113W | 2M809-035ZC13W | 1.0625 | 26.99 | 1.187 | 30.15 |
| 1.0000-28 UN | 2M809-035M18W | 2M809-035NF18W | 2M809-035ZNU18W | 2M809-035MT18W | 2M809-035Z118W | 2M809-035ZC18W | 1.125 | 28.58 | 1.200 | 30.48 |
| 1.0625-20 UN | 2M809-035M14W | 2M809-035NF14W | 2M809-035ZNU14W | 2M809-035MT14W | 2M809-035Z114W | 2M809-035ZC14W | 1.1875 | 30.16 | 1.264 | 32.11 |
| 1.1250-28 UN | 2M809-035M15W | 2M809-035NF15W | 2M809-035ZNU15W | 2M809-035MT15W | 2M809-035Z115W | 2M809-035ZC15W | 1.250 | 31.75 | 1.325 | 33.66 |
| 1.1875-28 UN | 2M809-035M19W | 2M809-035NF19W | 2M809-035ZNU19W | 2M809-035MT19W | 2M809-035Z119W | 2M809-035ZC19W | 1.3125 | 33.34 | 1.415 | 35.94 |
| 1.2500-28 UN | 2M809-035M20W | 2M809-035NF20W | 2M809-035ZNU20W | 2M809-035MT20W | 2M809-035Z120W | 2M809-035ZC20W | 1.375 | 34.93 | 1.490 | 37.85 |
| 1.5000-28 UN | 2M809-035M21W | 2M809-035NF21W | 2M809-035ZNU21W | 2M809-035MT21W | 2M809-035Z121W | 2M809-035ZC21W | 1.625 | 41.28 | 1.750 | 44.45 |

Flange Gaskets for Series 2M801 Receptacles



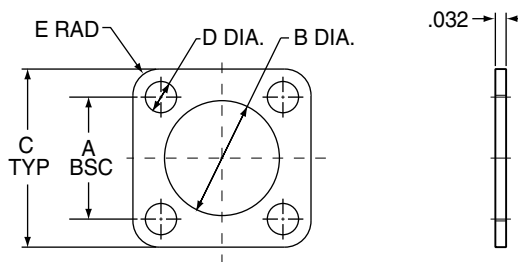
| Shell Size | Part Number | | | A Bsc. | | B Dia. | | C Typ. | | D Dia. | | E Rad. | |
|------------|----------------|--------------|---------------------------|--------|-------|--------|-------|--------|-------|--------|------|--------|------|
| | Fluorosilicone | Viton® | Conductive Fluorosilicone | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. |
| 5 | 2M809-108F11 | 2M809-108V11 | 2M809-108X11 | .363 | 9.22 | .342 | 8.69 | .530 | 13.46 | .093 | 2.36 | .078 | 1.98 |
| 6 | 2M809-108F12 | 2M809-108V12 | 2M809-108X12 | .423 | 10.74 | .405 | 10.29 | .590 | 14.99 | .093 | 2.36 | .078 | 1.98 |
| 7 | 2M809-108F13 | 2M809-108V13 | 2M809-108X13 | .483 | 12.27 | .467 | 11.86 | .650 | 16.51 | .093 | 2.36 | .078 | 1.98 |
| 8 | 2M809-108F14 | 2M809-108V14 | 2M809-108X14 | .542 | 13.84 | .530 | 13.46 | .712 | 18.08 | .093 | 2.36 | .078 | 1.98 |
| 9 | 2M809-108F16 | 2M809-108V16 | 2M809-108X16 | .719 | 15.42 | .560 | 14.22 | .850 | 21.59 | .125 | 3.18 | .105 | 2.67 |
| 10 | 2M809-108F15 | 2M809-108V15 | 2M809-108X15 | .719 | 17.02 | .655 | 16.64 | .890 | 22.61 | .125 | 3.18 | .105 | 2.67 |
| 13 | 2M809-108F17 | 2M809-108V17 | 2M809-108X17 | .812 | 20.62 | .842 | 21.39 | 1.030 | 26.16 | .125 | 3.18 | .105 | 2.67 |
| 16 | 2M809-108F18 | 2M809-108V18 | 2M809-108X18 | .981 | 24.92 | 1.030 | 26.16 | 1.219 | 30.96 | .125 | 3.18 | .105 | 2.67 |
| 17 | 2M809-108F19 | 2M809-108V19 | 2M809-108X19 | 1.060 | 26.92 | 1.092 | 27.74 | 1.280 | 32.51 | .125 | 3.18 | .105 | 2.67 |
| 21 | 2M809-108F43 | 2M809-108V43 | 2M809-108X43 | 1.322 | 33.58 | 1.332 | 33.83 | 1.570 | 39.88 | .125 | 3.18 | .105 | 2.67 |

Flange Gaskets for Series 2M803 Receptacles



| Shell Size | Part Number | | | A Bsc. | | B Dia. | | C Max. | | D Ref. | |
|------------|----------------|--------------|---------------------------|--------|-------|--------|-------|--------|-------|--------|-------|
| | Fluorosilicone | Viton® | Conductive Fluorosilicone | in. | mm. | in. | mm. | in. | mm. | in. | mm. |
| 5 | 2M809-108F31 | 2M809-108V31 | 2M809-108X31 | .513 | 13.03 | .345 | 8.00 | .710 | 18.03 | .460 | 11.68 |
| 6 | 2M809-108F32 | 2M809-108V32 | 2M809-108X32 | .598 | 15.19 | .405 | 10.29 | .795 | 20.19 | .522 | 13.26 |
| 7 | 2M809-108F33 | 2M809-108V33 | 2M809-108X33 | .708 | 17.98 | .475 | 12.07 | .900 | 22.86 | .590 | 14.99 |
| 8 | 2M809-108F34 | 2M809-108V34 | 2M809-108X34 | .964 | 24.51 | .545 | 13.84 | 1.160 | 29.46 | .670 | 17.02 |
| 9 | 2M809-108F35 | 2M809-108V35 | 2M809-108X35 | 1.017 | 25.83 | .605 | 15.37 | 1.215 | 30.86 | .721 | 18.31 |
| 10 | 2M809-108F36 | 2M809-108V36 | 2M809-108X36 | 1.101 | 37.97 | .682 | 17.32 | 1.295 | 32.89 | .795 | 20.19 |
| 12 | 2M809-108F37 | 2M809-108V37 | 2M809-108X37 | 1.204 | 30.58 | .757 | 19.23 | 1.400 | 35.56 | .874 | 22.20 |
| 14 | 2M809-108F38 | 2M809-108V38 | 2M809-108X38 | 1.280 | 32.51 | .910 | 23.11 | 1.555 | 39.50 | 1.050 | 26.67 |
| 15 | 2M809-108F39 | 2M809-108V39 | 2M809-108X39 | 1.370 | 34.80 | .970 | 24.64 | 1.640 | 41.66 | 1.150 | 29.21 |

Flange Gaskets for Series 2M805 Receptacles



| Shell Size | Part Number | | | A Bsc. | | B Dia. | | C Typ. | | D Dia. | | E Rad. | |
|------------|----------------|--------------|---------------------------|--------|-------|--------|-------|--------|-------|--------|------|--------|------|
| | Fluorosilicone | Viton® | Conductive Fluorosilicone | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. |
| 8 | 2M809-108F20 | 2M809-108V20 | 2M809-108X20 | .660 | 16.76 | .530 | 13.46 | .850 | 21.46 | .093 | 2.36 | .078 | 1.98 |
| 9 | 2M809-108F21 | 2M809-108V21 | 2M809-108X21 | .723 | 18.36 | .590 | 14.99 | .913 | 23.19 | .093 | 2.36 | .078 | 1.98 |
| 10 | 2M809-108F22 | 2M809-108V22 | 2M809-108X22 | .785 | 19.94 | .660 | 16.76 | .975 | 24.77 | .093 | 2.36 | .078 | 1.98 |
| 11 | 2M809-108F23 | 2M809-108V23 | 2M809-108X23 | .848 | 21.54 | .720 | 18.29 | 1.039 | 26.39 | .093 | 2.36 | .078 | 1.98 |
| 12 | 2M809-108F24 | 2M809-108V24 | 2M809-108X24 | .909 | 23.09 | .780 | 19.81 | 1.099 | 27.91 | .093 | 2.36 | .078 | 1.98 |
| 15 | 2M809-108F25 | 2M809-108V25 | 2M809-108X25 | 1.058 | 26.87 | .970 | 24.64 | 1.288 | 32.72 | .125 | 3.18 | .105 | 2.67 |
| 18 | 2M809-108F26 | 2M809-108V26 | 2M809-108X26 | 1.255 | 31.88 | 1.160 | 29.46 | 1.475 | 37.47 | .125 | 3.18 | .105 | 2.67 |
| 19 | 2M809-108F27 | 2M809-108V27 | 2M809-108X27 | 1.327 | 33.71 | 1.220 | 30.99 | 1.537 | 39.04 | .125 | 3.18 | .105 | 2.67 |
| 23 | 2M809-108F28 | 2M809-108V28 | 2M809-108X28 | 1.570 | 39.88 | 1.458 | 37.03 | 1.797 | 45.64 | .125 | 3.18 | .105 | 2.67 |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

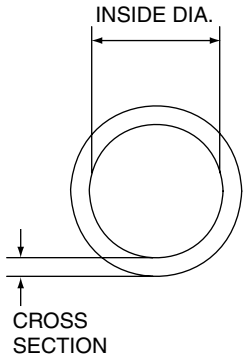
2M Accessories

HD38999

Micro-D

Terrapin

Nexus



O-Rings for Series 2M801 Jam Nut Receptacles

| Shell Size | Part Number | | | | Inside Dia. | | Cross-Section | |
|------------|----------------|---------------|-----------------------------------|--|-------------|-------|---------------|------|
| | Fluorosilicone | EPDM | Conductive Silicone Cho-Seal 1285 | Conductive Fluoro-Silicone Cho-Seal 1298 | in. | mm. | in. | mm. |
| 5 | 2M809-054-05F | 2M809-054-05E | 249-003-2M801-05B | 249-003-801-05C | .394 | 10.01 | .047 | 1.19 |
| 6 | 2M809-054-06F | 2M809-054-06E | 249-003-2M801-06B | 249-003-801-06C | .459 | 11.66 | .049 | 1.24 |
| 7 | 2M809-054-07F | 2M809-054-07E | 249-003-2M801-07B | 249-003-801-07C | .578 | 14.68 | .040 | 1.02 |
| 8 | 2M809-054-08F | 2M809-054-08E | 249-003-2M801-08B | 249-003-801-08C | .578 | 14.68 | .040 | 1.02 |
| 9 | 2M809-054-09F | 2M809-054-09E | 249-003-2M801-09B | 249-003-801-09C | .650 | 16.51 | .045 | 1.14 |
| 10 | 2M809-054-10F | 2M809-054-10E | 249-003-2M801-10B | 249-003-801-10C | .709 | 18.01 | .043 | 1.09 |
| 13 | 2M809-054-13F | 2M809-054-13E | 249-003-2M801-13B | 249-003-801-13C | .894 | 22.71 | .047 | 1.19 |
| 16 | 2M809-054-16F | 2M809-054-16E | 249-003-2M801-16B | 249-003-801-16C | 1.086 | 27.58 | .040 | 1.02 |
| 17 | 2M809-054-17F | 2M809-054-17E | 249-003-2M801-17B | 249-003-801-17C | 1.142 | 29.01 | .043 | 1.09 |
| 21 | 2M809-054-21F | 2M809-054-21E | 249-003-2M801-21B | 249-003-801-21C | 1.535 | 38.99 | .045 | 1.14 |

O-Rings for Series 2M804 Rear Mount Jam Nut Receptacles

| Shell Size | Part Number | | | | Inside Diameter | | Cross Section | |
|------------|----------------|---------------|-----------------------------------|---|-----------------|-------|---------------|------|
| | Fluorosilicone | EPDM | Conductive Silicone Cho-Seal 1285 | Conductive Fluorosilicone Cho-Seal 1298 | in. | mm. | in. | mm. |
| 5 | 2M809-055-05F | 2M809-055-05E | 249-003-2M804-05B | 249-003-804-05C | .505 | 12.83 | .070 | 1.78 |
| 6 | 2M809-055-06F | 2M809-055-06E | 249-003-2M804-06B | 249-003-804-06C | .525 | 13.34 | .071 | 1.80 |
| 7 | 2M809-055-07F | 2M809-055-07E | 249-003-2M804-07B | 249-003-804-07C | .638 | 16.21 | .073 | 1.85 |
| 8 | 2M809-055-08F | 2M809-055-08E | 249-003-2M804-08B | 249-003-804-08C | .688 | 17.48 | .070 | 1.78 |
| 9 | 2M809-055-09F | 2M809-055-09E | 249-003-2M804-09B | 249-003-804-09C | .750 | 19.05 | .070 | 1.78 |
| 10 | 2M809-055-10F | 2M809-055-10E | 249-003-2M804-10B | 249-003-804-10C | .813 | 20.65 | .063 | 1.60 |
| 12 | 2M809-055-12F | 2M809-055-12E | 249-003-2M804-12B | 249-003-804-12C | .943 | 23.95 | .070 | 1.78 |
| 14 | 2M809-055-14F | 2M809-055-14E | 249-003-2M804-14B | 249-003-804-14C | 1.061 | 26.95 | .073 | 1.85 |
| 15 | 2M809-055-15F | 2M809-055-15E | 249-003-2M804-15B | 249-003-804-15C | 1.114 | 28.30 | .070 | 1.78 |

O-Rings for Series 2M805 Jam Nut Receptacles

| Shell Size | Part Number | | | | Inside Diameter | | Cross Section | |
|------------|----------------|---------------|-----------------------------------|---|-----------------|-------|---------------|------|
| | Fluorosilicone | EPDM | Conductive Silicone Cho-Seal 1285 | Conductive Fluorosilicone Cho-Seal 1298 | in. | mm. | in. | mm. |
| 8 | 2M809-150-08F | 2M809-150-08E | 249-003-2M805-08B | 249-003-805-08C | .578 | 14.68 | .040 | 1.02 |
| 9 | 2M809-150-09F | 2M809-150-09E | 249-003-2M805-09B | 249-003-805-09C | .709 | 18.01 | .045 | 1.14 |
| 10 | 2M809-150-10F | 2M809-150-10E | 249-003-2M805-10B | 249-003-805-10C | .709 | 18.01 | .045 | 1.14 |
| 11 | 2M809-150-11F | 2M809-150-11E | 249-003-2M805-11B | 249-003-805-11C | .780 | 19.81 | .047 | 1.19 |
| 12 | 2M809-150-12F | 2M809-150-12E | 249-003-2M805-12B | 249-003-805-12C | .894 | 22.71 | .047 | 1.19 |
| 15 | 2M809-150-15F | 2M809-150-15E | 249-003-2M805-15B | 249-003-805-15C | 1.024 | 26.01 | .047 | 1.19 |
| 18 | 2M809-150-18F | 2M809-150-18E | 249-003-2M805-18B | 249-003-805-18C | 1.201 | 30.51 | .047 | 1.19 |
| 19 | 2M809-150-19F | 2M809-150-19E | 249-003-2M805-19B | 249-003-805-19C | 1.257 | 31.93 | .047 | 1.19 |
| 23 | 2M809-150-23F | 2M809-150-23E | 249-003-2M805-23B | 249-003-805-23C | 1.530 | 38.86 | .047 | 1.19 |

2M Strain Relief Clamp Ordering Information



2M620MS064 and 2M920MS065



| Part Number | Service Class | Size Code |
|-------------|---------------|-----------|
| 2M620MS064 | -M | 07 |

| PART NUMBER | |
|-------------|--------------------|
| 2M620MS065 | Rotatable Coupling |
| 2M620MS064 | Direct Coupling |

| SIZE CODE | | | | |
|-----------|----------------|----------------------|----------------------------|--------------|
| Size Code | Thread Size | Cable Entry Diameter | Shell Size | |
| | | | Series 2M801, 2M803, 2M804 | Series 2M805 |
| 05 | .2500-32 UNEF | .11 | 5 | |
| 06 | .3125-32 UNEF | .17 | 6 | |
| 11 | .3750-32 UNEF | .17 | | 8 |
| 07 | .4375-28 UNEF | .23 | 7 | 9 |
| 08 | .5000-28 UNEF | .30 | 8 | 10 |
| 09 | .5625-24 UNEF | .30 | 9 | 11 |
| 10 | .6250-24 UNEF | .36 | 10 | 12 |
| 12 | .6875-24 UNEF | .42 | 12, 13 | |
| 13 | .7500-20 UNEF | .42 | | 15 |
| 14 | .9375-20 UNEF | .48 | 14, 15, 16, 17 | 18, 19 |
| 15 | .9375-20 UNEF | .61 | 14, 15, 16, 17 | 18, 19 |
| 17 | 1.1875-18 UNEF | .86 | 21 | 23 |



| SERVICE CLASS | |
|---------------|--|
| | Finish |
| -C | Aluminum/Black Anodize (Non-Conductive) |
| -M | Aluminum/Electroless Nickel |
| -NF | Aluminum/Cadmium with Olive Drab Chromate |
| -MT | Aluminum/Nickel-PTFE (Durmalon) |
| -Z1 | Stainless Steel/Passivated |
| -ZN | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| -ZNU | Aluminum/Zinc-Nickel with Black Chromate |

MATERIALS

| | |
|-------------------------|--|
| Nut, Clamp, and Saddles | Aluminum Alloy 6061-T6 or 300 Series SST |
| Hardware | 300 Series Stainless Steel |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

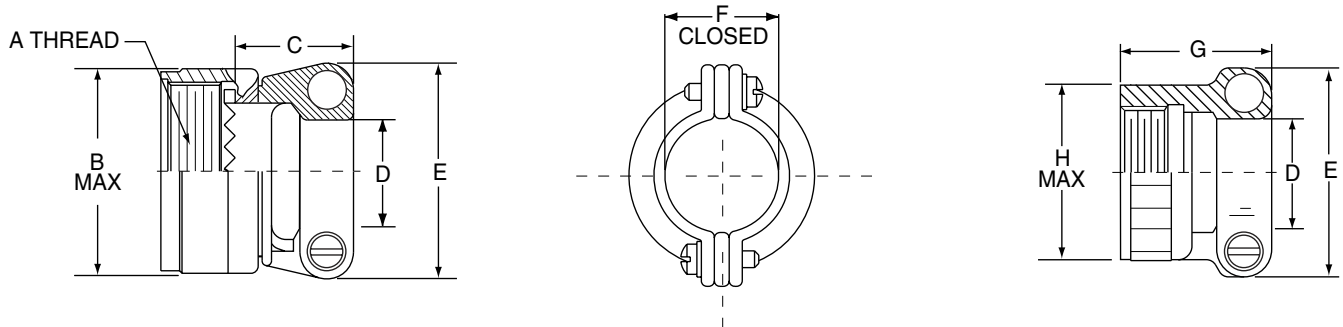
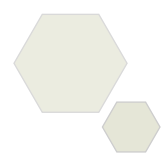
2M Accessories

HD38999

Micro-D

Terrapin

Nexus



| Size Code | A Threads UNEF-2B | B Max. | | C Max. | | D DIA. | | E | | F | | G Max | | H Max. | |
|-----------|-------------------|--------|-------|--------|-------|---------------|---------------|---------------|---------------|---------------|---------------|-------|-------|--------|-------|
| | | in. | mm. | in. | mm. | in. ± .015 | mm. ± 0.38 | in. ± .015 | mm. ± 0.38 | in. ± .030 | mm. ± 0.76 | in. | mm. | in. | mm. |
| 05 | .2500-32 | .470 | 11.94 | .688 | 17.48 | .119 | 3.02 | .496 | 12.60 | .110 | 2.79 | .625 | 15.88 | .350 | 8.89 |
| 06 | .3125-32 | .530 | 13.46 | .688 | 17.48 | .182 | 4.62 | .582 | 14.78 | .170 | 4.32 | .625 | 15.88 | .415 | 10.54 |
| 11 | .3750-32 | .570 | 14.48 | .688 | 17.48 | .182 | 4.62 | .582 | 14.78 | .170 | 4.32 | .625 | 15.88 | .465 | 11.81 |
| 07 | .4375-28 | .637 | 16.18 | .688 | 17.48 | .244 | 6.20 | .656 | 16.66 | .230 | 5.08 | .688 | 17.48 | .530 | 13.46 |
| 08 | .5000-28 | .700 | 17.78 | .688 | 17.48 | .307 | 7.80 | .726 | 18.44 | .300 | 7.62 | .688 | 17.48 | .595 | 15.11 |
| 09 | .5000-28 | .758 | 19.25 | .750 | 19.05 | .307 | 7.80 | .726 | 18.44 | .300 | 7.62 | .750 | 19.05 | .650 | 16.51 |
| 10 | .6250-24 | .819 | 20.80 | .750 | 19.05 | .369 | 9.37 | .885 | 22.48 | .360 | 9.14 | .875 | 22.23 | .715 | 18.16 |
| 12 | .6875-24 | .896 | 22.76 | .750 | 19.05 | .423 | 10.97 | .952 | 24.18 | .420 | 10.67 | .875 | 22.23 | .785 | 19.94 |
| 13 | .7500-20 | .930 | 23.62 | .750 | 19.05 | .432 | 10.97 | .952 | 24.18 | .420 | 10.67 | .875 | 22.23 | .830 | 21.08 |
| 14 | .9375-20 | 1.137 | 28.88 | .750 | 19.05 | .494 | 12.55 | 1.018 | 25.86 | .480 | 12.19 | 1.000 | 25.40 | 1.020 | 25.91 |
| 15 | .9375-20 | 1.137 | 28.88 | .750 | 19.05 | .619 | 15.72 | 1.148 | 29.16 | .610 | 15.49 | 1.000 | 25.40 | 1.020 | 25.91 |
| 17 | 1.1875-18 | 1.397 | 35.48 | .750 | 19.05 | .869 | 22.07 | 1.400 | 35.56 | .860 | 21.84 | 1.125 | 28.58 | 1.280 | 32.51 |

2M Thread-On BAND-IT® Adapter



Ordering Information 2M440MS135, /MK135 and /ML135

| Part Number | Service Class | Size Code | Cable Entry Size | Length | Band Option |
|-------------|---------------|-----------|------------------|--------|-------------|
| 2M440M 135 | M | 07 | 05 | -6 | K |

Omit for no band supplied
K adapter is supplied with
BAND-IT® shield termination
band, pre-coiled

| PART NUMBER | |
|-------------|----------------|
| 2M440MS135 | Straight Entry |
| 2M440MK135 | 45° Entry |
| 2M440ML135 | 90° Entry |

| SIZE CODE | |
|-----------|-----------|
| 05 | .2500-32 |
| 06 | .3125-32 |
| 11 | .3750-32 |
| 07 | .4375-28 |
| 08 | .5000-28 |
| 09 | .5625-24 |
| 10 | .6250-24 |
| 12 | .6875-24 |
| 13 | .7500-20 |
| 14 | .9375-20 |
| 17 | 1.1875-18 |

| CABLE ENTRY SIZE | | |
|------------------|------|-------|
| 02 | .125 | 05-17 |
| 03 | .188 | 05-17 |
| 04 | .250 | 06-17 |
| 05 | .312 | 07-17 |
| 06 | .375 | 07-17 |
| 07 | .438 | 08-17 |
| 08 | .500 | 09-17 |
| 09 | .562 | 10-17 |
| 10 | .625 | 12-17 |
| 11 | .688 | 14-17 |
| 12 | .750 | 14-17 |
| 13 | .812 | 14-17 |
| 14 | .875 | 14-17 |

| LENGTH | |
|--|-----------------|
| Straight Entry 2M440MS135 Only | |
| Length Code | Length (inches) |
| -6 | .750 |
| -7 | .875 |
| -8 | 1.000 |
| -9 | 1.125 |
| -10 | 1.250 |
| -11 | 1.375 |
| -12 | 1.500 |
| -13 | 1.625 |
| -14 | 1.750 |
| -15 | 1.875 |
| -16 | 2.000 |
| -17 | 2.125 |
| -18 | 2.250 |
| -19 | 2.375 |
| -20 | 2.500 |
| Specify Length in increments of .125 inches (3.18 mm.) | |



| SERVICE CLASS | |
|---------------|--|
| | Finish |
| C | Aluminum/Black Anodize (Non-Conductive) |
| M | Aluminum/Electroless Nickel |
| NF | Aluminum/Cadmium with Olive Drab Chromate |
| MT | Aluminum/Nickel-PTFE (Duralon) |
| Z1 | Stainless Steel/Passivated |
| ZN | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| ZNU | Aluminum/Zinc-Nickel with Black Chromate |

MATERIALS

| | |
|--------------|----------------------------------|
| Nut, Adapter | Aluminum Alloy or 300 Series SST |
| Band | 300 Series SST |
| O-Ring | Silicone Elastomer |

Shell Size

| Accessory Thread | Size Code | Series 2M801 | Series 2M803 | Series 2M804 | Series 2M805 |
|------------------|-----------|--------------|--------------|--------------|--------------|
| .2500-32 UNEF | 05 | 5 | 5 | 5 | |
| .3125-32 UNEF | 06 | 6 | 6 | 6 | |
| .3750-32 UNEF | 11 | | | | 8 |
| .4375-28 UNEF | 07 | 7 | 7 | 7 | 9 |
| .5000-28 UNEF | 08 | 8 | 8 | 8 | 10 |
| .5625-24 UNEF | 09 | 9 | 9 | 9 | 11 |
| .6250-24 UNEF | 10 | 10 | 10 | 10 | 12 |
| .6875-24 UNEF | 12 | 13 | 12 | 12 | |
| .7500-20 UNEF | 13 | | | | 15 |
| .9375-20 UNEF | 14 | 16,17 | 14, 15 | 14, 15 | 18, 19 |
| 1.1875-18 UNEF | 17 | 21 | | | 23 |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

Micro-D

Terrapin

Nexus

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

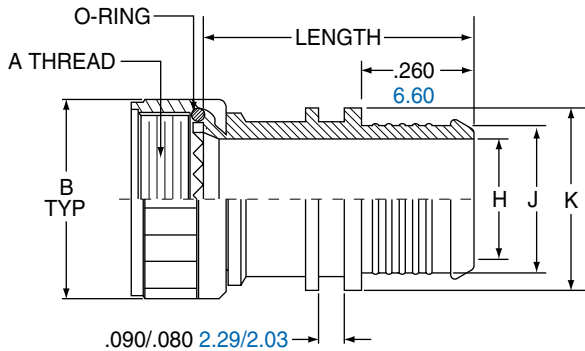
HD38999

Micro-D

Terrapin

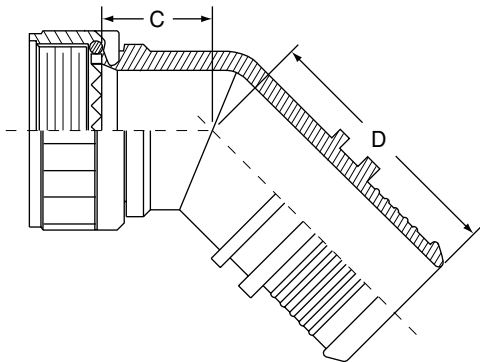
Nexus

STRAIGHT ENTRY ROTATABLE COUPLING 2M440MS135

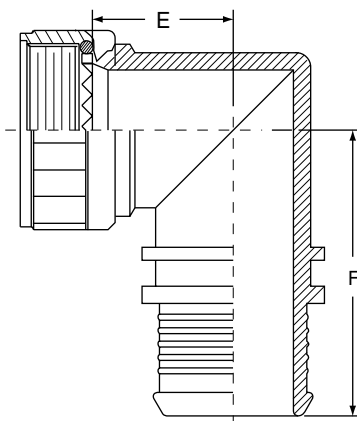


| Size Code | A Threads | B Max | | C Max. | | D Max. | | E Max. | | F Max. | |
|-----------|-----------|-------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| | | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. | mm. |
| 05 | .2500-32 | .470 | 11.94 | .530 | 13.46 | .660 | 16.76 | .630 | 16.00 | .780 | 19.81 |
| 06 | .3125-32 | .530 | 13.46 | .550 | 13.97 | .670 | 17.02 | .660 | 16.76 | .790 | 20.27 |
| 11 | .3750-32 | .570 | 14.48 | .580 | 14.22 | .680 | 17.27 | .680 | 17.27 | .810 | 20.57 |
| 07 | .4375-28 | .637 | 16.18 | .570 | 14.48 | .690 | 17.53 | .700 | 17.48 | .830 | 21.08 |
| 08 | .5000-28 | .700 | 17.78 | .580 | 14.73 | .700 | 17.78 | .740 | 18.80 | .860 | 21.84 |
| 09 | .5625-24 | .758 | 19.25 | .590 | 14.99 | .710 | 18.03 | .770 | 19.56 | .890 | 22.61 |
| 10 | .6250-24 | .819 | 20.80 | .610 | 15.49 | .730 | 18.54 | .800 | 20.32 | .920 | 23.37 |
| 12 | .6875-24 | .896 | 22.76 | .640 | 16.26 | .750 | 19.05 | .840 | 21.34 | .970 | 24.64 |
| 13 | .7500-20 | .936 | 23.62 | .660 | 16.76 | .750 | 19.56 | .880 | 22.35 | 1.020 | 25.91 |
| 14 | .9375-20 | 1.137 | 28.88 | .690 | 17.53 | .800 | 20.32 | .950 | 24.13 | 1.090 | 27.69 |
| 17 | 1.1875-18 | 1.387 | 35.23 | .720 | 18.29 | .830 | 21.08 | 1.010 | 25.65 | 1.160 | 29.46 |

45° ENTRY ROTATABLE COUPLING 2M440MK135



90° ENTRY ROTATABLE COUPLING 2M440ML135



| Cable Entry Code | CABLE ENTRY | | | | | | Use With Size Codes |
|------------------|-------------|------------|------------|------------|------------|------------|---------------------|
| | H Dia. | | J Dia. | | K Dia. | | |
| | in. ± .015 | mm. ± 0.38 | in. ± .015 | mm. ± 0.38 | in. ± .015 | mm. ± 0.38 | |
| 02 | .125 | 3.18 | .164 | 4.17 | .266 | 6.76 | 05-14 |
| 03 | .188 | 4.78 | .227 | 5.77 | .329 | 8.36 | 05-14 |
| 04 | .250 | 6.35 | .289 | 7.34 | .391 | 9.93 | 06-14 |
| 05 | .312 | 7.92 | .351 | 8.92 | .453 | 11.51 | 07-14 |
| 06 | .375 | 9.53 | .414 | 10.52 | .516 | 13.11 | 07-14 |
| 07 | .438 | 11.13 | .477 | 12.12 | .579 | 14.71 | 08-14 |
| 08 | .500 | 12.70 | .539 | 13.69 | .641 | 16.28 | 09-14 |
| 09 | .562 | 14.27 | .601 | 15.27 | .703 | 17.86 | 10-14 |
| 10 | .625 | 15.88 | .664 | 16.87 | .766 | 19.46 | 12-14 |
| 11 | .688 | 17.48 | .727 | 18.47 | .829 | 21.06 | 14 |
| 12 | .750 | 19.05 | .789 | 20.04 | .891 | 22.63 | 14 |
| 13 | .812 | 20.62 | .851 | 21.62 | .953 | 24.21 | 14 |
| 14 | .875 | 22.23 | .914 | 23.22 | 1.016 | 25.81 | 14 |

| Size Code | A Threads | CONNECTOR SHELL SIZE | |
|-----------|-------------------|----------------------------|--------------|
| | | Shell Size | |
| | | Series 2M801, 2M803, 2M804 | Series 2M805 |
| 05 | .2500-32 UNEF-2B | 5 | |
| 06 | .3125-32 UNEF-2B | 6 | |
| 11 | .3705-32 UNEF-2B | | 8 |
| 07 | .4375-28 UNEF-2B | 7 | 9 |
| 08 | .5000-28 UNEF-2B | 8 | 10 |
| 09 | .5625-24 UNEF-2B | 9 | 11 |
| 10 | .6250-24 UNEF-2B | 10 | 12 |
| 12 | .6875-24 UNEF-2B | 12, 13 | |
| 13 | .7500-20 UNEF-2B | | 15 |
| 14 | .9375-20 UNEF-2B | 14, 15, 16, 17 | 18, 19 |
| 17 | 1.1875-18 UNEF-2B | 21 | 23 |

2M Low-Profile BAND-IT® Adapter Order Info



2M440MS134

| Part Number | Service Class | Size Code | Cable Entry Size | Length | Band Option |
|-------------|---------------|-----------|------------------|--------|-------------|
| 2M440MS135 | M | 07 | 05 | -6 | K |

Omit for no band supplied
K adapter is supplied with **BAND-IT®** shield termination band, pre-coiled

| PART NUMBER | |
|-------------|----------------|
| 2M440MS134 | Straight Entry |

| SIZE CODE | |
|-----------|-----------|
| 05 | .2500-32 |
| 06 | .3125-32 |
| 11 | .3750-32 |
| 07 | .4375-28 |
| 08 | .5000-28 |
| 09 | .5625-24 |
| 10 | .6250-24 |
| 12 | .6875-24 |
| 13 | .7500-20 |
| 14 | .9375-20 |
| 17 | 1.1875-18 |

| CABLE ENTRY SIZE | | |
|------------------|------|-----------|
| 01 | .094 | 05-06, 11 |
| 02 | .125 | 05-07, 11 |
| 03 | .175 | 05-08, 11 |
| 04 | .234 | 06-08 |
| 05 | .272 | 07-09 |
| 06 | .312 | 07-10 |
| 07 | .375 | 08-13 |
| 08 | .438 | 09-13 |
| 09 | .500 | 10-13 |
| 10 | .562 | 12-14, 17 |
| 11 | .625 | 14, 17 |
| 12 | .688 | 14, 17 |
| 13 | .750 | 14, 17 |
| 14 | .812 | 14, 17 |

| LENGTH | |
|--|-----------------|
| Straight Entry 2M440MS135 Only | |
| Length Code | Length (inches) |
| -6 | .750 |
| -7 | .875 |
| -8 | 1.000 |
| -9 | 1.125 |
| -10 | 1.250 |
| -11 | 1.375 |
| -12 | 1.500 |
| -13 | 1.625 |
| -14 | 1.750 |
| -15 | 1.875 |
| -16 | 2.000 |
| -17 | 2.125 |
| -18 | 2.250 |
| -19 | 2.375 |
| -20 | 2.500 |
| Specify Length in increments of .125 inches (3.18 mm.) | |



| SERVICE CLASS | | |
|---------------|--|--|
| | | Finish |
| C | | Aluminum/Black Anodize (Non-Conductive) |
| M | | Aluminum/Electroless Nickel |
| NF | | Aluminum/Cadmium with Olive Drab Chromate |
| MT | | Aluminum/Nickel-PTFE (Duralon) |
| Z1 | | Stainless Steel/Passivated |
| ZN | | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| ZNU | | Aluminum/Zinc-Nickel with Black Chromate |

| MATERIALS | |
|--------------|----------------------------------|
| Nut, Adapter | Aluminum Alloy or 300 Series SST |
| Band | 300 Series SST |
| O-Ring | Silicone Elastomer |

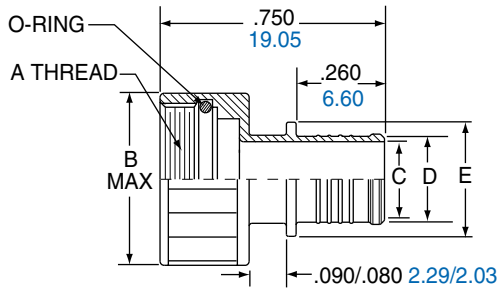
Shell Size

| Accessory Thread | Size Code | Series 2M801 | Series 2M803 | Series 2M804 | Series 2M805 |
|------------------|-----------|--------------|--------------|--------------|--------------|
| .2500-32 UNEF | 05 | 5 | 5 | 5 | |
| .3125-32 UNEF | 06 | 6 | 6 | 6 | |
| .3750-32 UNEF | 11 | | | | 8 |
| .4375-28 UNEF | 07 | 7 | 7 | 7 | 9 |
| .5000-28 UNEF | 08 | 8 | 8 | 8 | 10 |
| .5625-24 UNEF | 09 | 9 | 9 | 9 | 11 |
| .6250-24 UNEF | 10 | 10 | 10 | 10 | 12 |
| .6875-24 UNEF | 12 | 13 | 12 | 12 | |
| .7500-20 UNEF | 13 | | | | 15 |
| .9375-20 UNEF | 14 | 16,17 | 14, 15 | 14, 15 | 18, 19 |
| 1.1875-18 UNEF | 17 | 21 | | | 23 |

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

2M440MS134

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus



| CONNECTOR SHELL SIZE | | | |
|----------------------|-------------------|--------|-------|
| Size Code | A Threads | B Max. | |
| | | in. | mm. |
| 05 | .2500-32 UNEF-2B | .350 | 8.89 |
| 06 | .3125-32 UNEF-2B | .415 | 10.54 |
| 11 | .3750-32 UNEF-2B | .465 | 11.81 |
| 07 | .4375-28 UNEF-2B | .530 | 13.46 |
| 08 | .5000-28 UNEF-2B | .595 | 15.11 |
| 09 | .5625-24 UNEF-2B | .650 | 16.51 |
| 10 | .6250-24 UNEF-2B | .715 | 18.16 |
| 12 | .6875-24 UNEF-2B | .785 | 19.94 |
| 13 | .7500-20 UNEF-2B | .830 | 21.08 |
| 14 | .9375-20 UNEF-2B | 1.020 | 25.91 |
| 17 | 1.1875-18 UNEF-2B | 1.280 | 32.51 |

| Cable Entry Code | CABLE ENTRY | | | | | | Use With Size Codes |
|------------------|-------------|------------|------------|------------|------------|------------|---------------------|
| | C Dia. | | D Dia. | | E Dia. | | |
| | in. ± .015 | mm. ± 0.38 | in. ± .015 | mm. ± 0.38 | in. ± .015 | mm. ± 0.38 | |
| 01 | .094 | 2.39 | .133 | 3.38 | .235 | 5.97 | 05-06 |
| 02 | .125 | 3.18 | .164 | 4.17 | .266 | 6.76 | 05-07 |
| 03 | .172 | 4.37 | .211 | 5.36 | .313 | 7.95 | 05-08 |
| 04 | .234 | 5.94 | .273 | 6.93 | .375 | 9.53 | 06-08 |
| 05 | .272 | 6.91 | .311 | 7.90 | .413 | 10.49 | 07-09 |
| 06 | .312 | 7.92 | .351 | 8.92 | .453 | 11.51 | 07-10 |
| 07 | .375 | 9.53 | .414 | 10.52 | .516 | 13.11 | 08-12 |
| 08 | .438 | 11.13 | .477 | 12.12 | .579 | 14.71 | 09-12 |
| 09 | .500 | 12.70 | .539 | 13.69 | .641 | 16.28 | 10-12 |
| 10 | .562 | 14.27 | .601 | 15.27 | .703 | 17.88 | 12-14 |
| 11 | .625 | 15.88 | .664 | 16.87 | .766 | 19.46 | 14 |
| 12 | .688 | 17.48 | .727 | 18.47 | .829 | 21.06 | 14 |
| 13 | .750 | 19.05 | .789 | 20.04 | .891 | 22.63 | 14 |
| 14 | .812 | 20.62 | .851 | 21.62 | .953 | 24.21 | 14 |

| Size Code | A Threads | CONNECTOR SHELL SIZE | |
|-----------|-------------------|----------------------------|--------------|
| | | Shell Size | |
| | | Series 2M801, 2M803, 2M804 | Series 2M805 |
| 05 | .2500-32 UNEF-2B | 5 | |
| 06 | .3125-32 UNEF-2B | 6 | |
| 11 | .375-32 UNEF-2B | | 8 |
| 07 | .4375-28 UNEF-2B | 7 | 9 |
| 08 | .5000-28 UNEF-2B | 8 | 10 |
| 09 | .5625-24 UNEF-2B | 9 | 11 |
| 10 | .6250-24 UNEF-2B | 10 | 12 |
| 12 | .6875-24 UNEF-2B | 12, 13 | |
| 13 | .7500-20 UNEF-2B | | 15 |
| 14 | .9375-20 UNEF-2B | 14, 15, 16, 17 | 18, 19 |
| 17 | 1.1875-18 UNEF-2B | 21 | 23 |

2M Environmental Backshell Ordering Info



2M370MS37, MS038, 2M370MB038, 2M370MA038



| Part Number | Service Class | Size Code | Cable Entry Size | Length | Band Option |
|-------------|---------------|-----------|------------------|--------|-------------|
| 2M370M 03X | M | 07 | 05 | -6 | N |

Omit for no band supplied
N Compression Nut, Low Profile

| PART NUMBER | |
|-------------|-----------------------------------|
| 2M370MS038 | Straight Entry Rotatable Coupling |
| 2M370MS037 | Straight Entry, Direct Coupling |
| 2M370MB038* | 45° Entry |
| 2M370MA038* | 90° Entry |

*Contact Factory for Stainless Steel Options

| SIZE CODE | |
|-----------|-----------|
| 05 | .2500-32 |
| 06 | .3125-32 |
| 11 | .3750-32 |
| 07 | .4375-28 |
| 08 | .5000-28 |
| 09 | .5625-24 |
| 10 | .6250-24 |
| 12 | .6875-24 |
| 13 | .7500-20 |
| 14 | .9375-20 |
| 17 | 1.1875-18 |

| CABLE ENTRY SIZE | | |
|------------------|------|------|
| Code | Max. | Min. |
| 01 | .109 | .031 |
| 02 | .172 | .078 |
| 03 | .234 | .140 |
| 04 | .297 | .203 |
| 05 | .359 | .265 |
| 06 | .422 | .328 |
| 07 | .484 | .390 |
| 08 | .547 | .463 |
| 09 | .609 | .515 |

| LENGTH | | |
|------------------------------|-----------------|--|
| Straight Entry 2M440MS. Only | | |
| Length Code | Length (inches) | |
| -5 | .625 | |
| -6 | .750 | |
| -7 | .875 | |
| -8 | 1.000 | |
| -9 | 1.125 | |
| -10 | 1.250 | |
| -11 | 1.375 | |
| -12 | 1.500 | |
| -13 | 1.625 | |
| -14 | 1.750 | |
| -15 | 1.875 | |
| -16 | 2.000 | |
| -17 | 2.125 | |
| -18 | 2.250 | |
| -19 | 2.375 | |
| -20 | 2.500 | |

Specify Length in increments of .125 inches (3.18 mm.)

| SERVICE CLASS | | |
|---------------|--|--|
| | | Finish |
| C | | Aluminum/Black Anodize (Non-Conductive) |
| M | | Aluminum/Electroless Nickel |
| NF | | Aluminum/Cadmium with Olive Drab Chromate |
| MT | | Aluminum/Nickel-PTFE (Durmalon) |
| Z1 | | Stainless Steel/Passivated |
| ZN | | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| ZNU | | Aluminum/Zinc-Nickel with Black Chromate |



MATERIALS

| | |
|---------------------------------|--|
| Adapter, Clamp, Nut and Saddles | Aluminum Alloy 6061-T6 or 300 Series Stainless Steel |
| O-Rings | Silicone Rubber |
| Hardware | 300 Series Stainless Steel |

Shell Size

| Accessory Thread | Size Code | Series 2M801 | Series 2M803 | Series 2M804 | Series 2M805 |
|------------------|-----------|--------------|--------------|--------------|--------------|
| .2500-32 UNEF | 05 | 5 | 5 | 5 | |
| .3125-32 UNEF | 06 | 6 | 6 | 6 | |
| .3750-32 UNEF | 11 | | | | 8 |
| .4375-28 UNEF | 07 | 7 | 7 | 7 | 9 |
| .5000-28 UNEF | 08 | 8 | 8 | 8 | 10 |
| .5625-24 UNEF | 09 | 9 | 9 | 9 | 11 |
| .6250-24 UNEF | 10 | 10 | 10 | 10 | 12 |
| .6875-24 UNEF | 12 | 13 | 12 | 12 | |
| .7500-20 UNEF | 13 | | | | 15 |
| .9375-20 UNEF | 14 | 16,17 | 14, 15 | 14, 15 | 18, 19 |
| 1.1875-18 UNEF | 17 | 21 | | | 23 |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

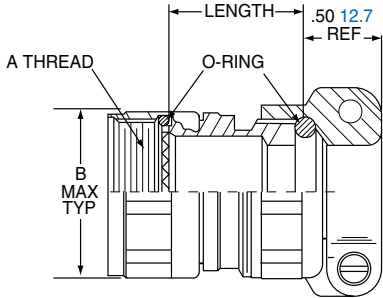
HD38999

Micro-D

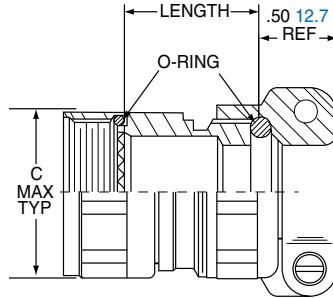
Terrapin

Nexus

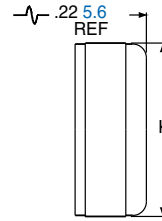
STRAIGHT ENTRY
ROTATABLE COUPLING
2M370MS038



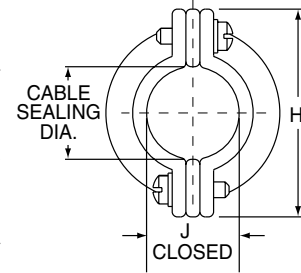
STRAIGHT ENTRY
DIRECT COUPLING
2M370MS037



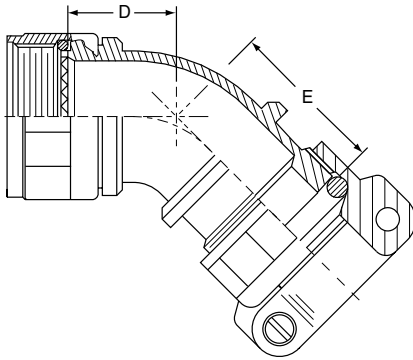
CLAMP STYLE N
COMPRESSION NUT



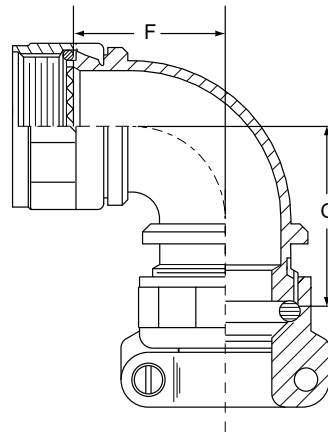
SADDLE CLAMP



45° ENTRY
ROTATABLE COUPLING
2M370MB038



90° ENTRY
ROTATABLE COUPLING
2M370MA038



| Size Code | A Threads UNEF-2B | B Max. | | C Max. | | Standard Length* | |
|-----------|----------------------|--------|-------|--------|-------|------------------|-------|
| | | in. | mm. | in. | mm. | in. | mm. |
| 05 | .2500-32 | .470 | 11.94 | .350 | 8.89 | .750 | 19.05 |
| 06 | .3125-32 | .530 | 13.46 | .415 | 10.54 | .750 | 19.05 |
| 11 | .3750-32 | .570 | 14.48 | .465 | 11.68 | .750 | 19.05 |
| 07 | .4375-28 | .637 | 16.18 | .530 | 13.46 | .750 | 19.05 |
| 08 | .5000-28 | .700 | 17.78 | .595 | 15.11 | .750 | 19.05 |
| 09 | .5000-28 | .758 | 19.25 | .650 | 16.51 | .750 | 19.05 |
| 10 | .6250-24 | .819 | 20.80 | .715 | 18.16 | .750 | 19.05 |
| 12 | .6875-24 | .896 | 22.76 | .785 | 19.94 | .880 | 22.35 |
| 13 | .7500-20 | .930 | 23.62 | .830 | 21.08 | .880 | 22.35 |
| 14 | .9375-20 | 1.137 | 28.88 | 1.020 | 25.91 | 1.000 | 25.40 |
| 17 | 1.1875-18 | 1.280 | 32.51 | 1.387 | 35.23 | 1.130 | 28.70 |

*Choose standard length for best availability

| Cable Entry Code | Cable Sealing Dia. | | D Max. | | E Max. | | F Max. | | G Max. | | H Dia. | | J Dia. | | K Dia. | |
|------------------|--------------------|------|--------|-------|--------|-------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|
| | Max. | Min. | In. | mm. | in. | mm. | in. | mm. | in. | mm. | ± .015 | ± 0.38 | ± .030 | ± 0.76 | ± .015 | ± 0.38 |
| | | | | | | | | | | | in. | mm. | in. | mm. | in. | mm. |
| 01 | .109 | .031 | .603 | 15.32 | .581 | 14.67 | .724 | 18.39 | .702 | 17.83 | .496 | 12.60 | .110 | 2.79 | .398 | 10.11 |
| 02 | .172 | .078 | .603 | 15.32 | .581 | 14.67 | .724 | 18.39 | .702 | 17.83 | .582 | 14.78 | .170 | 4.32 | .460 | 11.68 |
| 03 | .234 | .140 | .603 | 15.32 | .581 | 14.67 | .724 | 18.39 | .702 | 17.83 | .656 | 16.66 | .230 | 5.84 | .523 | 13.28 |
| 04 | .297 | .203 | .629 | 15.98 | .607 | 15.42 | .786 | 19.96 | .764 | 19.41 | .726 | 18.44 | .300 | 7.62 | .585 | 14.86 |
| 05 | .359 | .265 | .629 | 15.98 | .607 | 15.42 | .786 | 19.96 | .764 | 19.41 | .885 | 22.48 | .360 | 9.14 | .647 | 16.43 |
| 06 | .422 | .328 | .655 | 16.64 | .633 | 16.00 | .848 | 21.54 | .826 | 20.98 | .952 | 24.18 | .420 | 10.67 | .710 | 18.03 |
| 07 | .484 | .390 | .655 | 16.64 | .633 | 16.00 | .848 | 21.54 | .826 | 20.98 | 1.018 | 25.86 | .480 | 12.19 | .773 | 19.63 |
| 08 | .547 | .453 | .707 | 17.96 | .685 | 17.40 | .911 | 23.14 | .889 | 22.68 | 1.084 | 27.53 | .550 | 13.97 | .835 | 21.21 |
| 09 | .609 | .515 | .707 | 17.96 | .685 | 17.40 | .911 | 23.14 | .889 | 22.58 | 1.148 | 29.16 | .610 | 15.49 | .897 | 22.76 |

2M EMI Backshell Ordering Information



2M380MS137, MS135, 2M380MB137, 2M380MA137



| Part Number | Service Class | Size Code | Cable Entry Size | Length | Band Option |
|-------------|---------------|-----------|------------------|--------|-------------|
| 2M380M 03X | M | 07 | 05 | -6 | N |

Omit for screw clamp with saddle bars
N Optional Compression Nut, Low Profile

| PART NUMBER | |
|-------------|-----------------------------------|
| 2M380MS137 | Straight Entry Rotatable Coupling |
| 2M380MS135 | Straight Entry, Direct Coupling |
| 2M380MB137 | 45° Entry |
| 2M380MA137 | 90° Entry |

| SIZE CODE | |
|-----------|-----------|
| 05 | .2500-32 |
| 06 | .3125-32 |
| 11 | .3750-32 |
| 07 | .4375-28 |
| 08 | .5000-28 |
| 09 | .5625-24 |
| 10 | .6250-24 |
| 12 | .6875-24 |
| 13 | .7500-20 |
| 14 | .9375-20 |
| 17 | 1.1875-18 |

| CABLE ENTRY SIZE | |
|------------------|--------------------------------|
| Code | Saddle Clamp Dia. Fully Closed |
| 01 | .109 |
| 02 | .172 |
| 03 | .234 |
| 04 | .297 |
| 05 | .359 |
| 06 | .422 |
| 07 | .484 |
| 08 | .547 |
| 09 | .609 |

| LENGTH | |
|-----------------------------|-----------------|
| Straight Entry 2M380MS Only | |
| Length Code | Length (inches) |
| -5 | .625 |
| -6 | .750 |
| -7 | .875 |
| -8 | 1.000 |
| -9 | 1.125 |
| -10 | 1.250 |
| -11 | 1.375 |
| -12 | 1.500 |
| -13 | 1.625 |
| -14 | 1.750 |
| -15 | 1.875 |
| -16 | 2.000 |
| -17 | 2.125 |
| -18 | 2.250 |
| -19 | 2.375 |
| -20 | 2.500 |

Specify Length in increments of .125 inches (3.18 mm.)

| SERVICE CLASS | |
|---------------|--|
| | Finish |
| C | Aluminum/Black Anodize (Non-Conductive) |
| M | Aluminum/Electroless Nickel |
| NF | Aluminum/Cadmium with Olive Drab Chromate |
| MT | Aluminum/Nickel-PTFE (Durmalon) |
| Z1 | Stainless Steel/Passivated |
| ZN | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| ZNU | Aluminum/Zinc-Nickel with Black Chromate |



Shell Size

| Accessory Thread | Size Code | Series 2M801 | Series 2M803 | Series 2M804 | Series 2M805 |
|------------------|-----------|--------------|--------------|--------------|--------------|
| .2500-32 UNEF | 05 | 5 | 5 | 5 | |
| .3125-32 UNEF | 06 | 6 | 6 | 6 | |
| .3750-32 UNEF | 11 | | | | 8 |
| .4375-28 UNEF | 07 | 7 | 7 | 7 | 9 |
| .5000-28 UNEF | 08 | 8 | 8 | 8 | 10 |
| .5625-24 UNEF | 09 | 9 | 9 | 9 | 11 |
| .6250-24 UNEF | 10 | 10 | 10 | 10 | 12 |
| .6875-24 UNEF | 12 | 13 | 12 | 12 | |
| .7500-20 UNEF | 13 | | | | 15 |
| .9375-20 UNEF | 14 | 16,17 | 14, 15 | 14, 15 | 18, 19 |
| 1.1875-18 UNEF | 17 | 21 | | | 23 |

MATERIALS

| | |
|---------------------------------|--|
| Adapter, Clamp, Nut and Saddles | Aluminum Alloy 6061-T6 or 300 Series Stainless Steel |
| O-Rings | Silicone Rubber |
| Hardware | 300 Series Stainless Steel |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

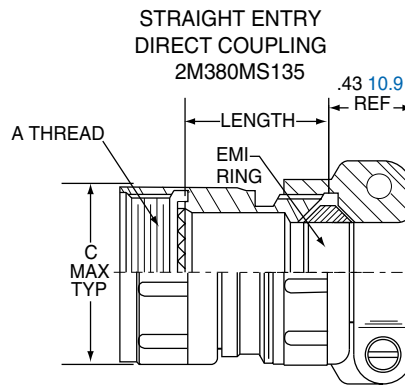
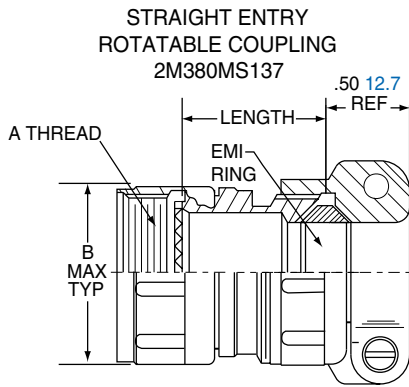
2M Accessories

HD38999

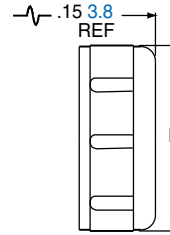
Micro-D

Terrapin

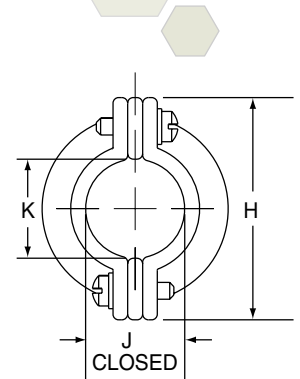
Nexus



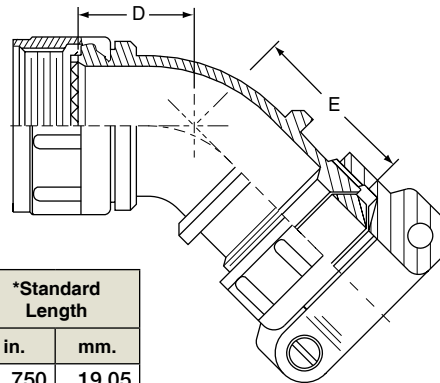
CLAMP STYLE N
COMPRESSION NUT



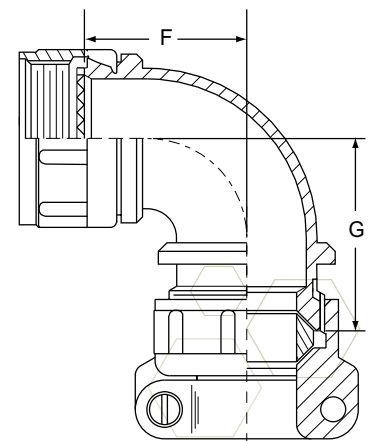
SADDLE CLAMP



45° ENTRY
ROTATABLE COUPLING
2M380MB137



90° ENTRY
ROTATABLE COUPLING
2M380MA137



| Size Code | A Threads | B Max. | | C Max. | | *Standard Length | |
|-----------|-------------------|--------|-------|--------|-------|------------------|-------|
| | | in. | mm. | in. | mm. | in. | mm. |
| 05 | .2500-32 UNEF-2B | .470 | 11.94 | .350 | 8.89 | .750 | 19.05 |
| 06 | .3125-32 UNEF-2B | .530 | 13.46 | .415 | 10.54 | .750 | 19.05 |
| 11 | .3750-32 UNEF-2B | .570 | 14.48 | .465 | 11.68 | .750 | 19.05 |
| 07 | .4375-28 UNEF-2B | .637 | 16.18 | .530 | 13.46 | .750 | 19.05 |
| 08 | .5000-28 UNEF-2B | .700 | 17.78 | .595 | 15.11 | .750 | 19.05 |
| 09 | .5000-28 UNEF-2B | .758 | 19.25 | .650 | 16.51 | .750 | 19.05 |
| 10 | .6250-24 UNEF-2B | .819 | 20.80 | .715 | 18.16 | .750 | 19.05 |
| 12 | .6875-24 UNEF-2B | .896 | 22.76 | .785 | 19.94 | .880 | 22.35 |
| 13 | .7500-20 UNEF-2B | .930 | 23.62 | .830 | 21.08 | .880 | 22.35 |
| 14 | .9375-20 UNEF-2B | 1.137 | 28.88 | 1.020 | 25.91 | 1.000 | 25.40 |
| 17 | 1.1875-18 UNEF-2B | 1.387 | 35.23 | 1.280 | 32.51 | 1.130 | 28.70 |

*Choose standard length for best availability

| Cable Entry Code | CABLE ENTRY | | | | | | | | | | | | | | | |
|------------------|-------------|-------|--------|-------|--------|-------|--------|-------|------------|------------|---------------|------------|------------|------------|------------|------------|
| | D Max. | | E Max. | | F Max. | | G Max. | | H | | J Dia. Closed | | K Dia. | | L Dia. | |
| | in. | mm. | in. | mm. | in. | mm. | in. | mm. | in. ± .015 | mm. ± 0.38 | in. ± .030 | mm. ± 0.76 | in. ± .015 | mm. ± 0.38 | in. ± .015 | mm. ± 0.38 |
| 01 | .603 | 15.32 | .581 | 14.67 | .724 | 18.39 | .702 | 17.83 | .496 | 12.60 | .110 | 2.79 | .119 | 3.02 | .398 | 10.11 |
| 02 | .603 | 15.32 | .581 | 14.67 | .724 | 18.39 | .702 | 17.83 | .582 | 14.78 | .170 | 4.32 | .182 | 4.62 | .460 | 11.68 |
| 03 | .603 | 15.32 | .581 | 14.67 | .724 | 18.39 | .702 | 17.83 | .656 | 16.66 | .230 | 5.84 | .244 | 6.20 | .523 | 13.28 |
| 04 | .629 | 15.98 | .607 | 15.42 | .786 | 19.96 | .764 | 19.41 | .726 | 18.44 | .300 | 7.62 | .307 | 7.80 | .585 | 14.86 |
| 05 | .629 | 15.98 | .607 | 15.42 | .786 | 19.96 | .764 | 19.41 | .885 | 22.48 | .360 | 9.14 | .369 | 9.37 | .647 | 16.43 |
| 06 | .655 | 16.64 | .633 | 16.00 | .848 | 21.54 | .826 | 20.98 | .952 | 24.18 | .420 | 10.67 | .432 | 10.97 | .710 | 18.03 |
| 07 | .655 | 16.64 | .633 | 16.00 | .848 | 21.54 | .826 | 20.98 | 1.018 | 25.86 | .480 | 12.19 | .494 | 12.55 | .773 | 19.63 |
| 08 | .707 | 17.96 | .685 | 17.40 | .911 | 23.14 | .889 | 22.68 | 1.084 | 27.53 | .550 | 13.97 | .557 | 14.15 | .835 | 21.21 |
| 09 | .707 | 17.96 | .685 | 17.40 | .911 | 23.14 | .889 | 22.58 | 1.148 | 29.16 | .610 | 15.49 | .619 | 15.72 | .897 | 22.76 |

2M Environmental EMI Backshell Ordering Info



2M390MS077, MS076, 2M380MB077, 2M380MA077



| Part Number | Service Class | Size Code | Cable Entry Size | Length | Band Option |
|-------------|---------------|-----------|------------------|--------|-------------|
| 2M390M 07X | M | 07 | 05 | -6 | N |

Omit for screw clamp with saddle bars
N Optional Compression Nut, Low Profile

| PART NUMBER | |
|-------------|-----------------------------------|
| 2M390MS077 | Straight Entry Rotatable Coupling |
| 2M390MS076 | Straight Entry, Direct Coupling |
| 2M390MB077 | 45° Entry Rotatable Coupling |
| 2M390MA077 | 90° Entry Rotatable Coupling |

| SIZE CODE | |
|-----------|-----------|
| 05 | .2500-32 |
| 06 | .3125-32 |
| 11 | .3750-32 |
| 07 | .4375-28 |
| 08 | .5000-28 |
| 09 | .5625-24 |
| 10 | .6250-24 |
| 12 | .6875-24 |
| 13 | .7500-20 |
| 14 | .9375-20 |
| 17 | 1.1875-18 |

| CABLE ENTRY SIZE | | |
|------------------|------|------|
| Code | Max. | Min. |
| 01 | .109 | .031 |
| 02 | .172 | .078 |
| 03 | .234 | .140 |
| 04 | .297 | .203 |
| 05 | .359 | .265 |
| 06 | .422 | .328 |
| 07 | .484 | .390 |
| 08 | .547 | .463 |
| 09 | .609 | .515 |
| 10 | .672 | .578 |
| 11 | .734 | .640 |

| LENGTH | |
|--|-----------------|
| Straight Entry 2M390MS Only | |
| Length Code | Length (inches) |
| -5 | .625 |
| -6 | .750 |
| -7 | .875 |
| -8 | 1.000 |
| -9 | 1.125 |
| -10 | 1.250 |
| -11 | 1.375 |
| -12 | 1.500 |
| -13 | 1.625 |
| -14 | 1.750 |
| -15 | 1.875 |
| -16 | 2.000 |
| -17 | 2.125 |
| -18 | 2.250 |
| -19 | 2.375 |
| -20 | 2.500 |
| Specify Length in increments of .125 inches (3.18 mm.) | |

| SERVICE CLASS | |
|---------------|--|
| | Finish |
| C | Aluminum/Black Anodize (Non-Conductive) |
| M | Aluminum/Electroless Nickel |
| NF | Aluminum/Cadmium with Olive Drab Chromate |
| MT | Aluminum/Nickel-PTFE (Duralon) |
| Z1 | Stainless Steel/Passivated |
| ZN | Aluminum/Zinc-Nickel w/Olive Drab Chromate |
| ZNU | Aluminum/Zinc-Nickel with Black Chromate |

Shell Size

| Accessory Thread | Size Code | Series 2M801 | Series 2M803 | Series 2M804 | Series 2M805 |
|------------------|-----------|--------------|--------------|--------------|--------------|
| .2500-32 UNEF | 05 | 5 | 5 | 5 | |
| .3125-32 UNEF | 06 | 6 | 6 | 6 | |
| .3750-32 UNEF | 11 | | | | 8 |
| .4375-28 UNEF | 07 | 7 | 7 | 7 | 9 |
| .5000-28 UNEF | 08 | 8 | 8 | 8 | 10 |
| .5625-24 UNEF | 09 | 9 | 9 | 9 | 11 |
| .6250-24 UNEF | 10 | 10 | 10 | 10 | 12 |
| .6875-24 UNEF | 12 | 13 | 12 | 12 | |
| .7500-20 UNEF | 13 | | | | 15 |
| .9375-20 UNEF | 14 | 16,17 | 14, 15 | 14, 15 | 18, 19 |
| 1.1875-18 UNEF | 17 | 21 | | | 23 |



SERIES

| | |
|---------------------------------|--|
| Adapter, Clamp, Nut and Saddles | Aluminum Alloy 6061-T6 or 300 Series Stainless Steel |
| O-Rings | Silicone Rubber |
| Hardware | 300 Series Stainless Steel |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

2M

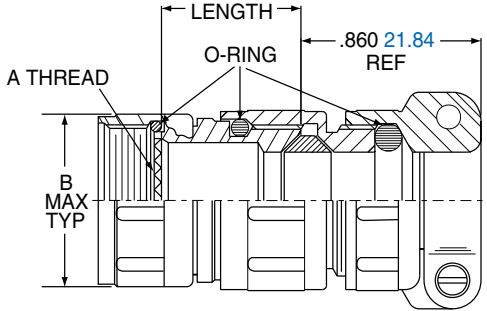
HD38999

Micro-D

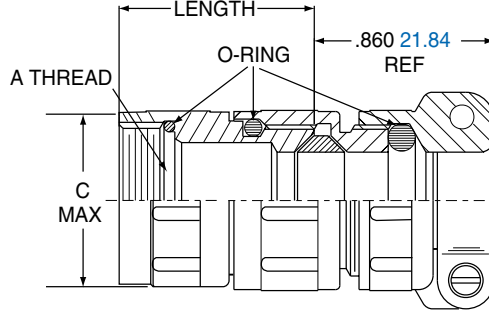
Terrapin

Nexus

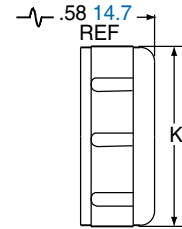
STRAIGHT ENTRY
ROTATABLE COUPLING
2M390MS077



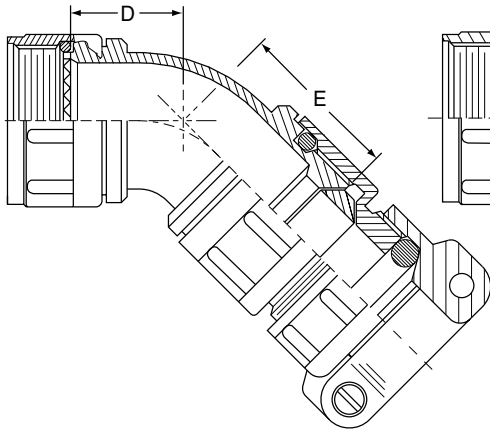
STRAIGHT ENTRY
DIRECT COUPLING
2M390MS076



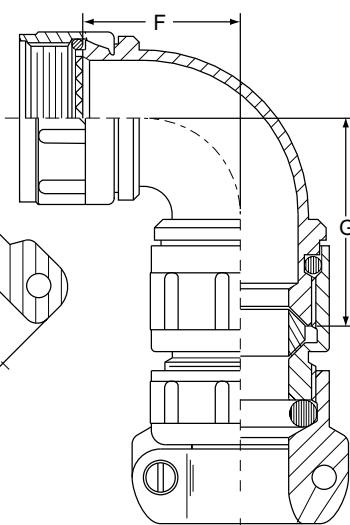
CLAMP STYLE N
COMPRESSION NUT



45° ENTRY
ROTATABLE COUPLING
2M390MB077



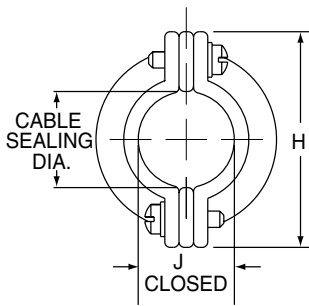
90° ENTRY
ROTATABLE COUPLING
2M390MA077



| Size Code | A Threads UNEF-2B | B Max. | | C Max. | | *Standard Length | |
|-----------|-------------------|--------|-------|--------|-------|------------------|-------|
| | | in. | mm. | in. | mm. | in. | mm. |
| 05 | .2500-32 | .470 | 11.94 | .350 | 8.89 | .750 | 19.05 |
| 06 | .3125-32 | .530 | 13.46 | .415 | 10.54 | .750 | 19.05 |
| 11 | .3750-32 | .570 | 14.48 | .465 | 11.68 | .750 | 19.05 |
| 07 | .4375-28 | .637 | 16.18 | .530 | 13.46 | .750 | 19.05 |
| 08 | .5000-28 | .700 | 17.78 | .595 | 15.11 | .750 | 19.05 |
| 09 | .5625-24 | .758 | 19.25 | .650 | 16.51 | .750 | 19.05 |
| 10 | .6250-24 | .819 | 20.80 | .715 | 18.16 | .750 | 19.05 |
| 12 | .6875-24 | .896 | 22.76 | .785 | 19.94 | .880 | 22.35 |
| 13 | .7500-20 | .930 | 23.62 | .830 | 21.08 | .880 | 22.35 |
| 14 | .9375-20 | 1.137 | 28.88 | 1.020 | 25.91 | 1.000 | 25.40 |
| 17 | 1.1875-18 | 1.387 | 35.23 | 1.280 | 32.51 | 1.130 | 28.70 |

*Choose standard length for best availability

SADDLE CLAMP



| Cable Entry Code | Cable Sealing Dia. | | D Max. | | E Max. | | F Max. | | G Max. | | H | | J Dia. Closed | | K Dia. | |
|------------------|--------------------|------|--------|-------|--------|-------|--------|-------|--------|-------|--------|--------|---------------|-------|--------|--------|
| | Max. | Min. | In. | mm. | in. | mm. | in. | mm. | in. | mm. | ± .010 | ± 0.25 | in. | mm. | ± .010 | ± 0.25 |
| | 01 | .109 | .031 | .603 | 15.32 | .681 | 14.67 | .724 | 18.39 | .802 | 20.37 | .496 | 12.60 | .110 | 2.79 | .398 |
| 02 | .172 | .078 | .603 | 15.32 | .681 | 14.67 | .724 | 18.39 | .802 | 20.37 | .582 | 14.78 | .170 | 4.32 | .460 | 11.68 |
| 03 | .234 | .140 | .603 | 15.32 | .681 | 14.67 | .724 | 18.39 | .802 | 20.37 | .656 | 16.66 | .230 | 5.84 | .523 | 13.28 |
| 04 | .297 | .203 | .629 | 15.98 | .707 | 15.42 | .786 | 19.96 | .864 | 21.95 | .726 | 18.44 | .300 | 7.62 | .585 | 14.86 |
| 05 | .359 | .265 | .629 | 15.98 | .707 | 15.42 | .786 | 19.96 | .864 | 21.95 | .885 | 22.48 | .360 | 9.14 | .647 | 16.43 |
| 06 | .422 | .328 | .655 | 16.64 | .733 | 16.00 | .848 | 21.54 | .926 | 23.52 | .952 | 24.18 | .420 | 10.67 | .710 | 18.03 |
| 07 | .484 | .390 | .655 | 16.64 | .733 | 16.00 | .848 | 21.54 | .926 | 23.52 | 1.018 | 25.86 | .480 | 12.19 | .773 | 19.63 |
| 08 | .547 | .453 | .707 | 17.96 | .785 | 17.40 | .911 | 23.14 | .989 | 25.12 | 1.084 | 27.53 | .550 | 13.97 | .835 | 21.21 |
| 09 | .609 | .515 | .707 | 17.96 | .785 | 17.40 | .911 | 23.14 | .989 | 25.12 | 1.148 | 29.16 | .610 | 15.49 | .897 | 22.78 |

Contents

| Section | Description | Pages |
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| | Wall Mount Double Flange Receptacle | 129 |
| | Line Receptacle | 130 |
| | Box Mount Receptacle | 130 |
| | Jam Nut Receptacle | 131 |
| | Reduced Flange Jam Nut Receptacle | 131 |
| | Double Flange Receptacle | 132 |
| | Plugs | Straight Plug with Integral Backshell |
| Straight Plug | | 133 |
| CLUTCH-LOK Plug | | 133 |
| Custom Designs | Styles Available | 134 |

High Density Interconnects

The HD38999 family of connectors has 30% to 50% more contact density than the highest density Mil Spec 38999 connectors of its size. This series of connectors was designed to utilize mil-specified 38999 components with the exception of the contacts and insert arrangements. Utilizing existing mil-qualified 39029 size 23 contacts and 38999 insert materials, these connectors are essentially a drop-in replacement for the standard 38999 connector. This connector design benefits users in a couple of different ways. For those users who need to increase the amount of contacts in their application, the HD38999 series allows them to do so without increasing the size of their connector. For users who are looking to decrease the overall size of their system, they can do so by using smaller shell sizes without decreasing the number of contacts. Amphenol has qualified this series of connectors to the requirements of MIL-DTL-38999. Amphenol also manufactures this high density series in Filter, Hermetic and customized versions to fit our customer's needs. Please contact us if additional information is required.



HD38999 Connectors available styles:

- Aluminum
- Composite
- Stainless Steel
- Sealed (IP67)
- Filtered

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

A connector that has the
connections...

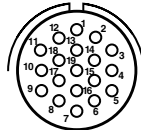
Goes from 9 to 187 contacts!

High Density Shell Sizes (Front of Pin Insert Shown)
(all contacts are size 23)

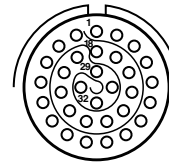
Increased number of contacts in HD38999 insert pattern
compared to Standard 38999* contact density of same shell size.



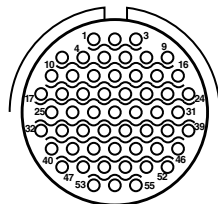
9-9
3



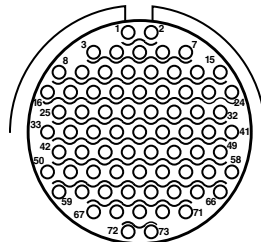
11-19
6



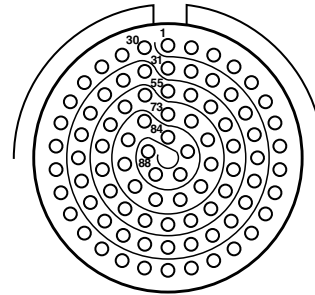
13-32
19



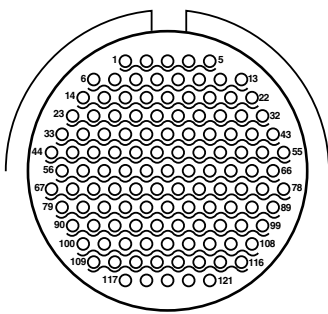
15-55
18



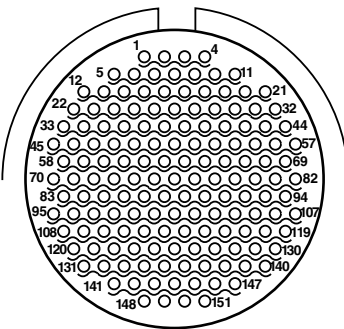
17-73
18



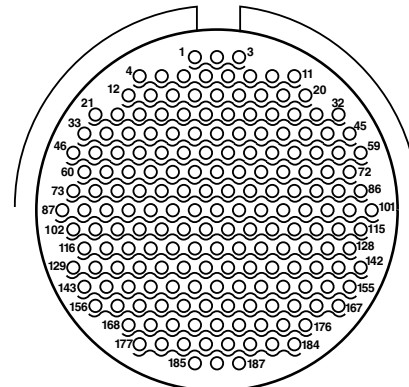
19-88
22



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59

* Standard inserts for 38999 series are shown in Amphenol's Combined Circular Catalog, 12-C3

Ordering Guide for HD38999

Easy Steps to build a part number... HD38999

| 1. | 2. | 3. | 4. | 5. | 6. | 7. |
|----------------------------|--------------|---------------|---------------------------------|--------------|---------------------|-------------|
| Connector Type | Shell Styles | Service Class | Shell Size – Insert Arrangement | Contact Type | Alternate Positions | PCB Options |
| TV or PTV (Potted version) | 06 | RW | 23-151 | P | B | (P25) |



Step 1. Select a Connector Type

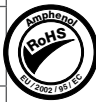
| | Designates | |
|--------------------------|------------|--|
| P (prefix for Potted) | TV | Tri-Start Series Connector |
| | TVP | Back panel mounted receptacle |
| | MTV | CLUTCH-LOK high vibration plug connector (Note: remove dashes in how to order part number when ordering CLUTCH-LOK) |
| | CTV | Tri-Start Composite Series connector |
| | CTVP | Panel mounted composite receptacle |

Step 2. Select a Shell Style

| | Designates |
|----|---|
| 00 | Wall mount receptacle |
| 40 | Wall mount double flange receptacle |
| 01 | Line receptacle |
| 02 | Box mount receptacle- contact Amphenol for availability. |
| 06 | Straight plug |
| 07 | Jam nut receptacle |
| 47 | Jam nut double flange receptacle |
| 26 | Proprietary CLUTCH-LOK high vibration straight plug (service Class RK only) |
| 97 | Reduced flange jam nut receptacle (not available in composite) |
| 96 | Straight plug with integral backshell (not available in composite) |

Step 3. Select a Service Class

| | Designates |
|----|---|
| RF | Electroless nickel plated aluminum, optimum EMI shielding effectiveness -65dB @ 10GHz specification min., 48 hour salt spray, 175°C |
| RW | Corrosion resistant olive drab cadmium plate aluminum, 500 hour extended salt spray, EMI -50dB @ 10GHz specification min., 175°C |
| RL | Corrosion resistant stainless steel, electro-deposited nickel, 48 hours salt spray, 175°C, non-firewall |
| RK | Corrosion resistant stainless steel, firewall capability, plus 500 hour salt spray resistance, EMI -45 dB @ 10 GHz specification min., 175°C |
| DT | Durmalon plated, alternative to cadmium. Corrosion resistant, 500 hour extended salt spray EMI -50dB @ 10GHz specification min. without CR ⁶ |
| DZ | Zinc-Nickel alternative to cadmium. Corrosion resistant, 500 hour salt spray, conductive, -65°C to +175°C |



Step 4. Select a Shell Size – Insert Arrangement

Shell Sizes are MIL-DTL-38999, Series III, with the newer High Density insert arrangements shown on page 1.

| Shell Size | Insert Arrangement Number |
|------------|---------------------------|
| 9- | 9 |
| 11- | 19 |
| 13- | 32 |
| 15- | 55 |
| 17- | 73 |
| 19- | 88 |
| 21- | 121 |
| 23- | 151 |
| 25- | 187 |

Step 5. Select a Contact Type

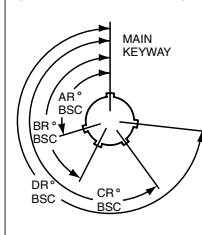
| | Designates |
|---|-----------------|
| P | Pin contacts |
| S | Socket contacts |

Step 6. Select an Alternate Position

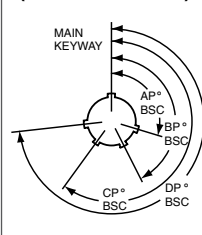
A, B, C, D, E or blank for normal.

| Shell Size | Key & keyway arrangement identification letter | AR ^o or AP ^o BSC | BR ^o or BP ^o BSC | CR ^o or CP ^o BSC | DR ^o or DP ^o BSC |
|----------------|--|--|--|--|--|
| 9 | N | 105 | 140 | 215 | 265 |
| | A | 102 | 132 | 248 | 320 |
| | B | 80 | 118 | 230 | 312 |
| | C | 35 | 140 | 205 | 275 |
| | D | 64 | 155 | 234 | 304 |
| 11, 13, and 15 | E | 91 | 131 | 197 | 240 |
| | N | 95 | 141 | 208 | 236 |
| | A | 113 | 156 | 182 | 292 |
| | B | 90 | 145 | 195 | 252 |
| | C | 53 | 156 | 220 | 255 |
| 17 and 19 | D | 119 | 146 | 176 | 298 |
| | E | 51 | 141 | 184 | 242 |
| | N | 80 | 142 | 196 | 293 |
| | A | 135 | 170 | 200 | 310 |
| | B | 49 | 169 | 200 | 244 |
| 21, 23, and 25 | C | 66 | 140 | 200 | 257 |
| | D | 62 | 145 | 180 | 280 |
| | E | 79 | 153 | 197 | 272 |
| | N | 80 | 142 | 196 | 293 |
| | A | 135 | 170 | 200 | 310 |
| | B | 49 | 169 | 200 | 244 |
| | C | 66 | 140 | 200 | 257 |
| | D | 62 | 145 | 180 | 280 |
| | E | 79 | 153 | 197 | 272 |

RECEPTACLE (front face shown)



PLUG (front face shown)



A plug with a given rotation letter will mate with a receptacle with the same rotation letter. The angles for a given connector are the same whether it contains pins or sockets. Inserts are not rotated in conjunction with the master key/keyway.

Step 7. Select a PCB Contact Option

| Pin Contacts | Pin Contacts with Alignment Disc* | Socket Contacts | Socket Contacts with Alignment Disc** | PCB tail stickout +/- .040 inch |
|--------------|-----------------------------------|-----------------|---------------------------------------|---------------------------------|
| P1* | P1AD | S1 | S1AD | .100" nominal |
| P15* | P15AD | S15 | S15AD | .150" nominal |
| P2 | P2AD | S2 | S2AD | .200" nominal |
| P25* | P25AD | S25 | S25AD | .250" nominal |
| P3* | P3AD | S3 | S3AD | .300" nominal |
| P35 | P35AD | S35 | S35AD | .350" nominal |

* Not available in TV40 wall mount double flange receptacle or TV47 jam nut double flange receptacle styles.

** See page 8 for more information on alignment discs for HD38999 connectors.

Note: Standard tail diameter is 0.019 ±.001

Stick out is measured from the end of the connector shell to end of the contact

Contacts & Tools
2M Specs
2M801
2M803
2M804
2M805
2M Accessories
HD38999
Micro-D
Terrapin
Nexus

Contacts & Tools

Contact Part Numbers:

Size 23 Sockets 10-597330-735 (M39029/17-172)
 Size 23 Pins 10-597331-735 (M39029/18-177)
 Sealing Plugs 10-405996-222 (MS27488-22-2)

Crimp Barrel Dia.:
 (Inches) .034-.036

Crimp Barrel Depth:
 (Inches) .151-.155

Tools:

Crimp Tool: Daniels M22520/2-01
 Positioner: Daniels M22520/2-16 Socket
 Daniels M22520/2-13 Pin
 Insertion Tool: Daniels DAK225-22
 Removal Tool: Daniels DRK225-22
 Insertion/Removal Tool: M81969/16-04 (Plastic)

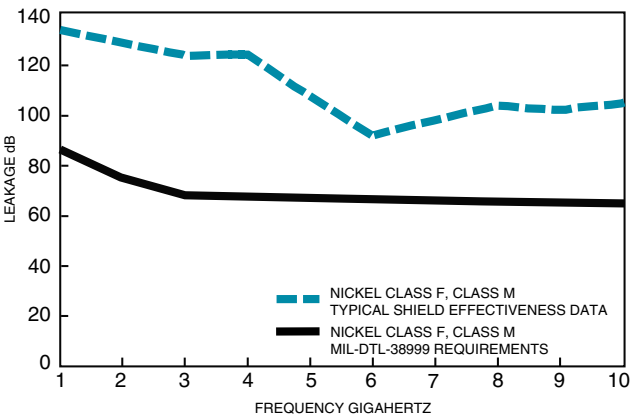
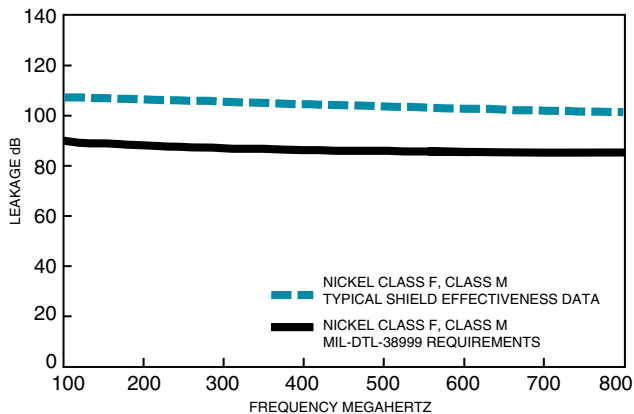
Note: Wire insulation diameter greater than 0.045 is too large for the extraction tool to work properly. Connector damage is possible.

Technical Data

HD38999 series was designed to meet and/or exceed the specifications of MIL-DTL-38999. The connector series has been tested to all the requirements of 38999 with the use of AS39029 size 23 contacts. Test reports are available upon request. The following is a summary of some of the performance requirements.

EMI Shielding Effectiveness:

Solid metal to metal coupling, EMI grounding fingers and conductive finishes have proven to be the ultimate in EMI/EMP shielding effectiveness. The following chart illustrated shielding effectiveness data which is typical in HD38999 connectors.



Electrical:

22 AWG: 5.0 AMPS
 24 AWG: 3.0 AMPS
 26 AWG: 2.0 AMPS
 28 AWG: 1.5 AMPS

Insulation Resistance: 5000 megohms min. @500 VDC 25C

Dielectric Withstanding Voltage: 1000 VRMS@sea level

Mechanical:

Metallic Shells: Material: Aluminum alloy, Stainless Steel
 Protection: Electroless Nickel, O.D. Cadmium, Durmalon (Nickel PTFE), Zinc Nickel

Composite Shells: Material: Thermoplastic
 Protection: Electroless Nickel, O.D. Cadmium, Durmalon (Nickel PTFE), Zinc Nickel

Contacts: Material: Copper Alloy
 Protection: Gold over Nickel

Insert Retention to Shell: 100 psi in axial load

Durability: 500 full mating and unmating cycles

Vibration: 60G sine per MIL-DTL-38999L Para 4.5.23.2.1
 5G2 Random per EIA-364-28E, Test condition A
 1G2 Random per EIA-364-28E, Test condition I

Shock: Per EIA-364-27B, 300g

Environmental:

Operating Temperature: -65°C to +175°C

Salt Spray:
Metallized: Electroless Nickel: 48 hours
 Anodic Coating, O. D. Cadmium, Durmalon, Zinc Nickel: 500 hours

Salt Spray Composite: Electroless Nickel: 1000 hours
 O. D. Cadmium, Durmalon, Zinc Nickel: 500 hours

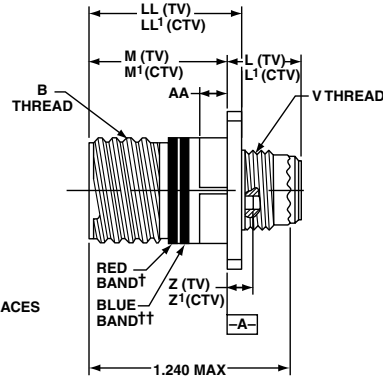
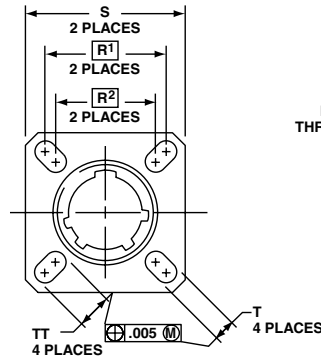
Wall Mount & Double Flange Receptacle

Shell Styles

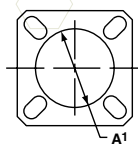
Wall Mounting Receptacle

TVPOD() - Crimp, Metal

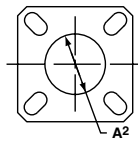
CTVPOD() - Crimp, Composite



PANEL HOLE DIMENSIONS



BACK PANEL MOUNTING



FRONT PANEL MOUNTING

See how to build a part number on pages 2 & 3

† Red band indicates fully mated

†† Blue band indicates rear release contact retention system.

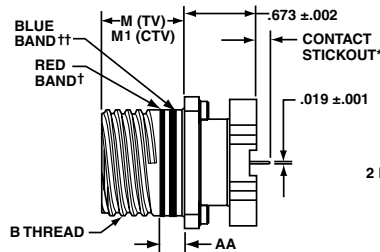
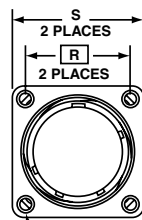
| Shell Size | MS Shell Size Code | B Thread Class 2A 0.1P-0.3L-TS (Plated) | L Max. (TV) | L' Max. (CTV) | M +.000 - .005 (TV) | M' +.000 - .005 (CTV) | R ¹ | R ² | S Max. | T ±.008 | Z Max. (TV) | Z' Max. (CTV) | A ¹ Back Panel Mount | A ² Front Panel Mount | AA Max. Panel Thickness | LL +.006 - .000 (TV) | LL1 ±.005 (CTV) | TT ±.008 |
|------------|--------------------|---|-------------|---------------|---------------------|-----------------------|----------------|----------------|--------|---------|-------------|---------------|---------------------------------|----------------------------------|-------------------------|----------------------|-----------------|----------|
| 9 | A | .6250 | .469 | .514 | .820 | .773 | .719 | .594 | .948 | .128 | .153 | .198 | .650 | .510 | .234 | .905 | .908 | .216 |
| 11 | B | .7500 | .469 | .514 | .820 | .773 | .812 | .719 | 1.043 | .128 | .153 | .198 | .800 | .620 | .234 | .905 | .908 | .194 |
| 13 | C | .8750 | .469 | .514 | .820 | .773 | .906 | .812 | 1.137 | .128 | .153 | .198 | .910 | .740 | .234 | .905 | .908 | .194 |
| 15 | D | 1.0000 | .469 | .514 | .820 | .773 | .969 | .906 | 1.232 | .128 | .153 | .198 | 1.040 | .900 | .234 | .905 | .908 | .173 |
| 17 | E | 1.1875 | .469 | .514 | .820 | .773 | 1.062 | .969 | 1.323 | .128 | .153 | .198 | 1.210 | 1.010 | .234 | .905 | .908 | .194 |
| 19 | F | 1.2500 | .469 | .514 | .820 | .773 | 1.156 | 1.062 | 1.449 | .128 | .153 | .198 | 1.280 | 1.130 | .234 | .905 | .908 | .194 |
| 21 | G | 1.3750 | .500 | .545 | .790 | .741 | 1.250 | 1.156 | 1.575 | .128 | .183 | .228 | 1.410 | 1.250 | .204 | .905 | .904 | .194 |
| 23 | H | 1.5000 | .500 | .545 | .790 | .741 | 1.375 | 1.250 | 1.701 | .154 | .183 | .228 | 1.530 | 1.360 | .204 | .905 | .904 | .242 |
| 25 | J | 1.6250 | .500 | .545 | .790 | .741 | 1.500 | 1.375 | 1.823 | .154 | .183 | .228 | 1.660 | 1.470 | .204 | .905 | .904 | .242 |

All dimensions for reference only

Wall Mounting Double Flange Receptacle (Printed Circuit Board Mount)

TVP4D() - Crimp, Metal

CTVP4D() - Crimp, Composite



(4) CORROSION RESISTANT STEEL
 .112-40 UNC-3B SELF-LOCKING CLINCH NUTS PER MIL-N-45938/6-4C,
 M45938/6-6C EXCEPT SHELL SIZES 23 & 25
 TV40 .138-32 UNC-3B PER MIL-N-45938/7-2P,
 M45938/7-4P EXCEPT FOR SHELL SIZES 23 & 25

See how to build a part number on pages 2 & 3

* Contact stickout dimension: see Step 7 of how to order on page 2.

† Red band indicates fully mated

†† Blue band indicates rear release contact retention system.

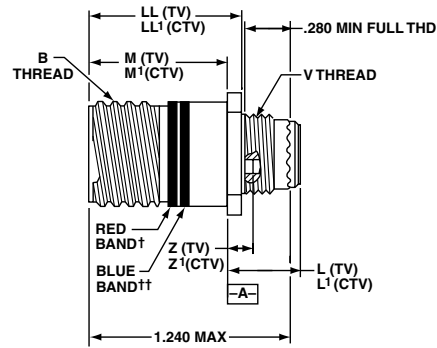
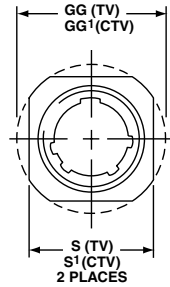
| Shell Size | MS Shell Size Code | A Dia. ±.005 (TV) | A Dia. ±.005 (CTV) | B Thread Class 2A 0.1P-0.3L-TS (Plated) | M +.000 - .005 (TV) | M' ±.003 (CTV) | R (Panel Mount) (CTV) | R (Panel Mount) (TV) | S Max. (TV) | S Max. (CTV) | AA Max. Panel Thickness | PCB Mounting Dimensions | |
|------------|--------------------|-------------------|--------------------|---|---------------------|----------------|-----------------------|----------------------|-------------|--------------|-------------------------|-------------------------|------------|
| | | | | | | | | | | | | T Dia. (TV) TP | W (CTV) TP |
| 9 | A | 1.016 | 1.016 | .6250 | .820 | .770 | .719 | NA | 1.094 | .949 | .234 | .752 | .532 |
| 11 | B | 1.062 | 1.148 | .7500 | .820 | .770 | .812 | .766 | 1.187 | 1.042 | .234 | .850 | .601 |
| 13 | C | 1.250 | 1.250 | .8750 | .820 | .770 | .906 | .859 | 1.281 | 1.136 | .234 | .994 | .703 |
| 15 | D | 1.375 | 1.375 | 1.0000 | .820 | .770 | .969 | .938 | 1.344 | 1.230 | .234 | 1.119 | .791 |
| 17 | E | 1.500 | 1.500 | 1.1875 | .820 | .770 | 1.062 | 1.016 | 1.437 | 1.323 | .234 | 1.237 | .875 |
| 19 | F | 1.625 | 1.625 | 1.2500 | .820 | .770 | 1.156 | 1.110 | 1.531 | 1.449 | .234 | 1.379 | .975 |
| 21 | G | 1.750 | 1.750 | 1.3750 | .820 | .738 | 1.250 | 1.206 | 1.625 | 1.573 | .204 | 1.489 | 1.053 |
| 23 | H | 1.875 | 1.875 | 1.5000 | .820 | .738 | 1.375 | 1.312 | 1.750 | 1.699 | .204 | 1.619 | 1.195 |
| 25 | J | 2.000 | 2.000 | 1.6250 | .820 | .738 | 1.500 | 1.438 | 1.875 | 1.823 | .204 | 1.744 | 1.233 |

All dimensions for reference only

Shell Styles

Line Receptacle

TV0I() - Crimp, Metal
CTV0I() - Crimp, Composite



See how to build a part number on pages 2 & 3

† Red band indicates fully mated

†† Blue band indicates rear release contact retention system.

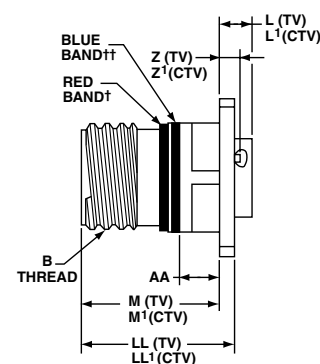
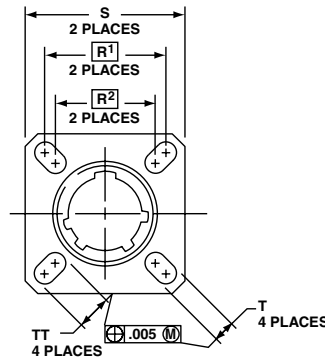
Inches

| Shell Size | MS Shell Size Code | B Thread 0.1P-0.3L-TS-2A (Plated) | M +.000 - .005 (TV) | M' +.000 - .005 (CTV) | L Max. (TV) | L' Max. (CTV) | S ±.010 (TV) | S' ±.010 (CTV) | Z Max (TV) | Z' Max (CTV) | GG ±.010 (TV) | GG' ±.010 (CTV) | LL +.006 - .000 (TV) | LL' ±.005 (CTV) |
|------------|--------------------|-----------------------------------|---------------------|-----------------------|-------------|---------------|--------------|----------------|------------|--------------|---------------|-----------------|----------------------|-----------------|
| 9 | A | .6250 | .820 | .773 | .469 | .514 | .675 | .635 | .153 | .198 | .812 | .699 | .905 | .908 |
| 11 | B | .7500 | .820 | .773 | .469 | .514 | .800 | .765 | .153 | .198 | .905 | .875 | .905 | .908 |
| 13 | C | .8750 | .820 | .773 | .469 | .514 | .925 | .885 | .153 | .198 | 1.093 | 1.007 | .905 | .908 |
| 15 | D | 1.0000 | .820 | .773 | .469 | .514 | 1.050 | 1.100 | .153 | .198 | 1.219 | 1.140 | .905 | .908 |
| 17 | E | 1.1875 | .820 | .773 | .469 | .514 | 1.238 | 1.197 | .153 | .198 | 1.375 | 1.229 | .905 | .908 |
| 19 | F | 1.2500 | .820 | .773 | .469 | .514 | 1.300 | 1.260 | .153 | .198 | 1.469 | 1.380 | .905 | .908 |
| 21 | G | 1.3750 | .790 | .741 | .500 | .545 | 1.425 | 1.385 | .183 | .228 | 1.625 | 1.493 | .905 | .904 |
| 23 | H | 1.5000 | .790 | .741 | .500 | .545 | 1.550 | 1.510 | .183 | .228 | 1.750 | 1.626 | .905 | .904 |
| 25 | J | 1.6250 | .790 | .741 | .500 | .545 | 1.675 | 1.635 | .183 | .228 | 1.875 | 1.777 | .905 | .904 |

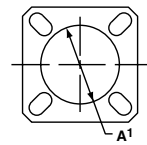
All dimensions for reference only

Box Mount Receptacle

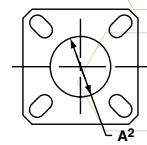
TVP02() - Crimp, Metal
CTVP02() - Crimp, Composite



PANEL HOLE DIMENSIONS



BACK PANEL MOUNTING



FRONT PANEL MOUNTING

Inches

See how to build a part number on pages 2 & 3

† Red band indicates fully mated

†† Blue band indicates rear release contact retention system.

Consult Amphenol Aerospace for availability for composite box mount receptacles.

| Shell Size | MS Shell Size Code | B Thread Class 2A 0.1P-0.3L-TS (Plated) | L Max. (TV) | L' Max. (CTV) | M +.000 - .005 (TV) | M' +.000 - .005 (CTV) | R ¹ | R ² | S Max. | T ±.008 | Z Max. (TV) | Z' Max. (CTV) | A ¹ Back Panel Mount | A ² Front Panel Mount | AA Max. Panel Thickness | LL +.006 - .000 (TV) | LL1 ±.005 (CTV) | TT ±.008 |
|------------|--------------------|---|-------------|---------------|---------------------|-----------------------|----------------|----------------|--------|---------|-------------|---------------|---------------------------------|----------------------------------|-------------------------|----------------------|-----------------|----------|
| 9 | A | .6250 | .205 | .250 | .820 | .773 | .719 | .594 | .948 | .128 | .153 | .198 | .650 | .510 | .234 | .905 | .908 | .216 |
| 11 | B | .7500 | .205 | .250 | .820 | .773 | .812 | .719 | 1.043 | .128 | .153 | .198 | .800 | .620 | .234 | .905 | .908 | .194 |
| 13 | C | .8750 | .205 | .250 | .820 | .773 | .906 | .812 | 1.137 | .128 | .153 | .198 | .910 | .740 | .234 | .905 | .908 | .194 |
| 15 | D | 1.0000 | .205 | .250 | .820 | .773 | .969 | .906 | 1.232 | .128 | .153 | .198 | 1.040 | .900 | .234 | .905 | .908 | .173 |
| 17 | E | 1.1875 | .205 | .250 | .820 | .773 | 1.062 | .969 | 1.323 | .128 | .153 | .198 | 1.210 | 1.010 | .234 | .905 | .908 | .194 |
| 19 | F | 1.2500 | .205 | .250 | .820 | .773 | 1.156 | 1.062 | 1.449 | .128 | .153 | .198 | 1.280 | 1.130 | .234 | .905 | .908 | .194 |
| 21 | G | 1.3750 | .235 | .280 | .790 | .741 | 1.250 | 1.156 | 1.575 | .128 | .183 | .228 | 1.410 | 1.250 | .204 | .905 | .904 | .194 |
| 23 | H | 1.5000 | .235 | .280 | .790 | .741 | 1.375 | 1.250 | 1.701 | .154 | .183 | .228 | 1.530 | 1.360 | .204 | .905 | .904 | .242 |
| 25 | J | 1.6250 | .235 | .280 | .790 | .741 | 1.500 | 1.375 | 1.823 | .154 | .183 | .228 | 1.660 | 1.470 | .204 | .905 | .904 | .242 |

All dimensions for reference only

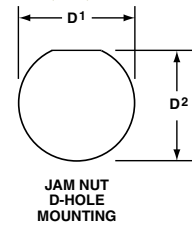
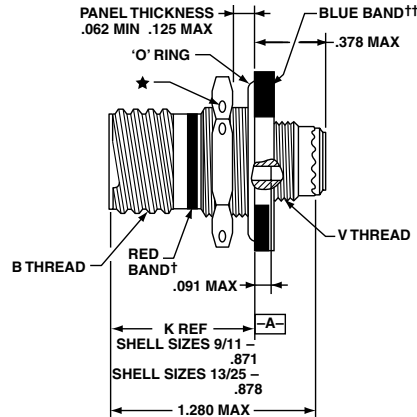
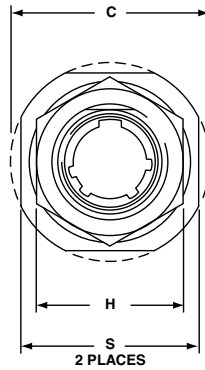
Jam Nut & Reduced Flange Jam Nut Receptacle

Shell Styles

Jam Nut Receptacle

TV07() - Crimp, Metal

CTV07() - Crimp, Composite



See how to build a part number on pages 2 & 3

† Red band indicates fully mated

†† Blue band indicates rear release contact retention system.

*.059 dia. min., 3 lockwire holes. Formed lockwire hole design (6 holes) is optional

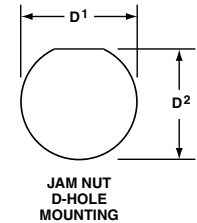
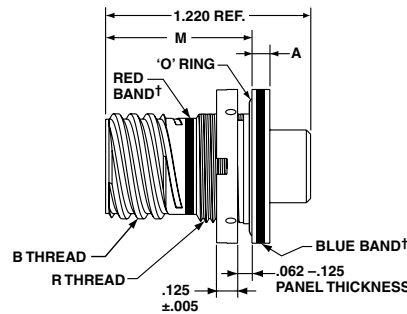
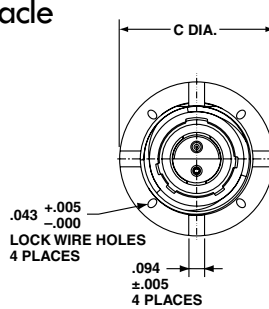
Inches

| Shell Size | MS Shell Size Code | B Thread Class 2A 0.1P-0.3L-TS (Plated) | C Max. | D' +.010 -.000 | D ² +.000 -.010 | H Hex +.017 -.016 | S ±.010 | V Thread Metric | R Thread (Plated) 9-7543 |
|------------|--------------------|---|--------|-------------------|-------------------------------|----------------------|---------|-----------------|-----------------------------|
| 9 | A | .6250 | 1.199 | .693 | .657 | .875 | 1.062 | M12X1-6g | M17X1-6g |
| 11 | B | .7500 | 1.386 | .825 | .770 | 1.000 | 1.250 | M15X1-6g | M20X1-6g |
| 13 | C | .8750 | 1.511 | 1.010 | .955 | 1.188 | 1.375 | M18X1-6g | M25X1-6g |
| 15 | D | 1.0000 | 1.636 | 1.135 | 1.085 | 1.312 | 1.500 | M22X1-6g | M28X1-6g |
| 17 | E | 1.1875 | 1.761 | 1.260 | 1.210 | 1.438 | 1.625 | M25X1-6g | M32X1-6g |
| 19 | F | 1.2500 | 1.949 | 1.385 | 1.335 | 1.562 | 1.812 | M28X1-6g | M35X1-6g |
| 21 | G | 1.3750 | 2.073 | 1.510 | 1.460 | 1.688 | 1.938 | M31X1-6g | M38X1-6g |
| 23 | H | 1.5000 | 2.199 | 1.635 | 1.585 | 1.812 | 2.062 | M34X1-6g | M41X1-6g |
| 25 | J | 1.6250 | 2.323 | 1.760 | 1.710 | 2.000 | 2.188 | M37X1-6g | M44X1-6g |

All dimensions for reference only

Reduced Flange Jam Nut Receptacle

TV97() - Crimp, Metal



See how to build a part number on pages 2 & 3

† Red band indicates fully mated

†† Blue band indicates rear release contact retention system.

Inches

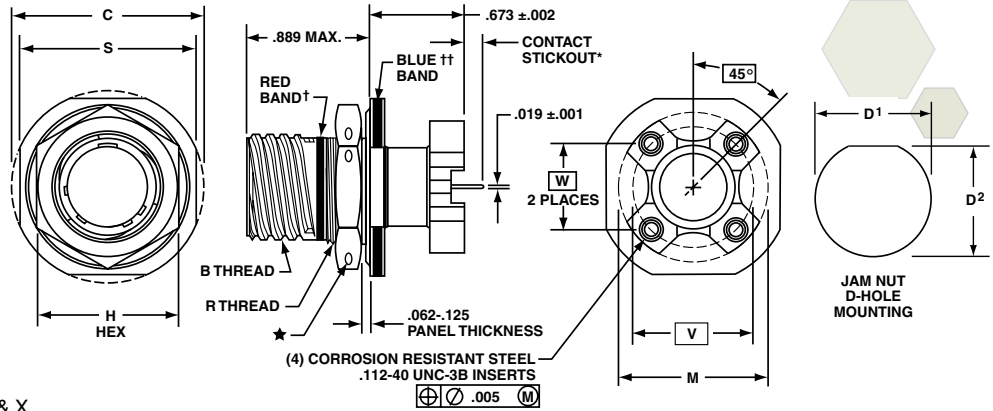
| Shell Size | MS Shell Size Code | B Thread Class 2A 0.1P-0.3L-TS (Plated) | A +.010 -.005 | C Dia. Max. | D' +.010 -.000 | D ² +.000 -.010 | M | R Thread (Plated) 9-7543 |
|------------|--------------------|---|------------------|-------------|-------------------|-------------------------------|------|-----------------------------|
| 9 | A | .6250 | .104 | .915 | .693 | .657 | .871 | M17X1-6g |
| 11 | B | .7500 | .104 | 1.042 | .825 | .770 | .871 | M20X1-6g |
| 13 | C | .8750 | .104 | 1.240 | 1.010 | .955 | .878 | M25X1-6g |
| 15 | D | 1.0000 | .104 | 1.357 | 1.135 | 1.085 | .878 | M28X1-6g |
| 17 | E | 1.1875 | .104 | 1.630 | 1.260 | 1.210 | .878 | M32X1-6g |
| 19 | F | 1.2500 | .135 | 1.816 | 1.385 | 1.335 | .878 | M35X1-6g |
| 21 | G | 1.3750 | .135 | 1.942 | 1.510 | 1.460 | .878 | M38X1-6g |
| 23 | H | 1.5000 | .135 | 2.067 | 1.635 | 1.585 | .878 | M41X1-6g |
| 25 | J | 1.6250 | .135 | 2.190 | 1.760 | 1.710 | .878 | M44X1-6g |

All dimensions for reference only

Jam Nut Double Flange & Straight Plug/Integral Backshell

Shell Styles

Jam Nut
Double Flange Receptacle
 (Printed Circuit Board Mount)
TV47() - Crimp, Metal
CTV47() - Crimp, Composite



See how to build a part number on pages X & X
 * Contact stickout dimension: see Step 7 of how to order on page X.
 † Red band indicates fully mated
 †† Blue band indicates rear release contact retention system.
 ★.059 dia. min., 3 lockwire holes. Formed lockwire hole design (6 holes) is optional

Inches

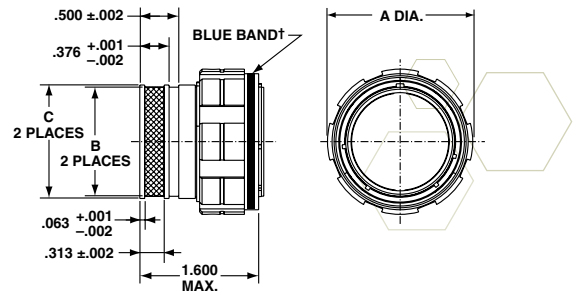
| Shell Size | MS Shell Size Code | B Thread Class 2A 0.1P-0.3L-TS (Plated) | C ±.005 (Jam Nut Flange Dia.) | D1 +.010 -.000 | D2 +.000 -.010 | H Hex +.017 -.016 | M Dia. ±.005 | R Thread Metric (Plated) | S +.011 -.010 | PCB Mounting Dimensions | |
|------------|--------------------|---|--|----------------------|----------------------|----------------------------|--------------------|-----------------------------------|---------------------|----------------------------|---------------|
| | | | | | | | | | | V Dia. (TV) TP | W (CTV) TP |
| 9 | A | .6250 | 1.188 | .700 | .670 | .875 | 1.016 | M17X1-6g0.100R | 1.062 | .753 | .532 |
| 11 | B | .7500 | 1.375 | .825 | .770 | 1.000 | 1.148 | M20X1-6g0.100R | 1.250 | .850 | .601 |
| 13 | C | .8750 | 1.500 | 1.010 | .955 | 1.188 | 1.250 | M25X1-6g0.100R | 1.375 | .994 | .703 |
| 15 | D | 1.0000 | 1.625 | 1.135 | 1.085 | 1.312 | 1.375 | M28X1-6g0.100R | 1.500 | 1.119 | .791 |
| 17 | E | 1.1875 | 1.750 | 1.260 | 1.210 | 1.438 | 1.500 | M32X1-6g0.100R | 1.625 | 1.237 | .875 |
| 19 | F | 1.2500 | 1.937 | 1.385 | 1.335 | 1.562 | 1.625 | M35X1-6g0.100R | 1.812 | 1.379 | .975 |
| 21 | G | 1.3750 | 2.062 | 1.510 | 1.460 | 1.688 | 1.750 | M38X1-6g0.100R | 1.937 | 1.489 | 1.053 |
| 23 | H | 1.5000 | 2.188 | 1.635 | 1.585 | 1.812 | 1.875 | M41X1-6g0.100R | 2.062 | 1.644 | 1.145 |
| 25 | J | 1.6250 | 2.312 | 1.760 | 1.710 | 2.000 | 2.000 | M44X1-6g0.100R | 2.188 | 1.744 | 1.233 |

All dimensions for reference only

Straight Plug with Integral Backshell

TV96() (TV Type) - Crimp, Metal

This MIL-DTL-38999 Series III style connector features an integral backshell design that eliminates the need for costly backshell accessories. The backshell feature is incorporated into the rear of the connector shell, allowing the user to attach the shield of their cable directly to the connector. This provides superior EMI shielding and ease for overmold applications. The straight plug with integral backshell is available in aluminum shells with OD Cad or Electroless Nickel plating.



See how to build a part number on pages 2 & 3
 † Blue band indicates rear release contact retention system.

Inches

| Shell Size | MS Shell Size Code | A Max. | B +.005 -.000 | C +.003 -.002 |
|------------|--------------------|-----------|---------------------|---------------------|
| 9 | A | .859 | .416 | .472 |
| 11 | B | .969 | .524 | .580 |
| 13 | C | 1.141 | .652 | .708 |
| 15 | D | 1.266 | .810 | .866 |
| 17 | E | 1.391 | .928 | .984 |
| 19 | F | 1.500 | 1.046 | 1.102 |
| 21 | G | 1.625 | 1.164 | 1.220 |
| 23 | H | 1.750 | 1.282 | 1.338 |
| 25 | J | 1.875 | 1.400 | 1.456 |

All dimensions for reference only



Contacts & Tools
 2M Specs
 2M801
 2M803
 2M804
 2M805
 2M Accessories
 HD38999
 Micro-D
 Terrapin
 Nexus

Straight Plug & CLUTCH-LOK Plug

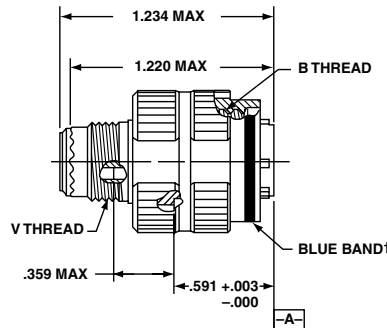
Shell Styles

Straight Plug

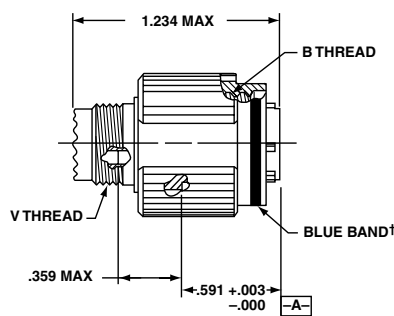
TV06() - Crimp, Metal

CTV06() - Crimp, Composite

METAL



COMPOSITE



CLUTCH-LOK™ Plug

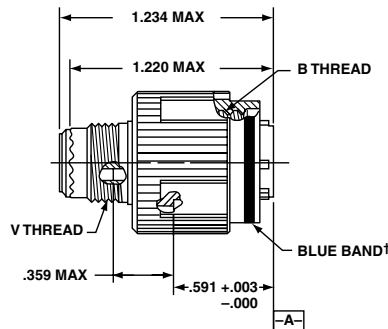
TV26() - Crimp, Metal, Proprietary

Designed for high vibration and harsh environments such as aircraft gas turbine engines, the CLUTCH-LOK is also an ideal choice for demanding applications such as aircraft, space and military ground vehicles. The unique clutch design of the Amphenol CLUTCH-LOK means that you don't have to compromise the need for quick, smooth mating of plugs and receptacles in order to get increased uncoupling torque.

The CLUTCH-LOK has proven to not only remain mated and pass all the Series III specification requirements, it also has proven to actually tighten itself under vibration. This is a powerful advantage over the traditionally high vibration application connectors. The CLUTCH-LOK is also a tremendous advantage in inaccessible, hard to reach areas where mating torque is difficult to apply and complete coupling is not verifiable by inspection.

CLUTCH-LOK features and benefits:

- High degree of differential torque
- Infinite free coupling and positive metal-to-metal bottoming with each mating
- Only available with stainless steel shells
- All the advantages of MIL-DTL-38999 Series III including EMI/RFI shielding, electrolytic erosion resistance and contact protection with recessed pins
- Enhanced connector performance at affordable prices
- Completely intermateable with all existing MIL-DTL-38999 Series III connectors



See how to build a part number on pages 125
 † Blue band indicates rear release contact retention system

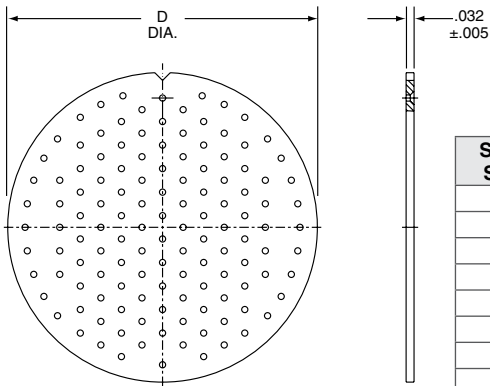
| Shell Size | B Thread 0.1P-0.3L-TS-2B (Plated) | Q Dia. Max. |
|------------|---|----------------|
| 9 | .6250 | .858 |
| 11 | .7500 | .984 |
| 13 | .8750 | 1.157 |
| 15 | 1.0000 | 1.280 |
| 17 | 1.1875 | 1.406 |
| 19 | 1.2500 | 1.516 |
| 21 | 1.3750 | 1.642 |
| 23 | 1.5000 | 1.768 |
| 25 | 1.6250 | 1.890 |

All dimensions for reference only

Provide More Interconnect Solutions:

Alignment Disks

Alignment disks keep contacts aligned for easier insertion into circuit boards. These are typically ordered with the connector - see step 7 of How to Order on page 125.



| Shell Size | D Dia. ±.010 |
|------------|--------------|
| 9 | .234 |
| 11 | .350 |
| 13 | .500 |
| 15 | .725 |
| 17 | .750 |
| 19 | .850 |
| 21 | .953 |
| 23 | 1.147 |
| 25 | 1.250 |

HD38999 Double Flange Receptacles for PC Board Applications

Amphenol also offers PC tail connectors in high density. A custom designed HD38999 with double flanges is available in box mount and jam nut panel mounting which allows the user to mount to PC boards. Shells are available in composite, aluminum and stainless steel.

Consult Amphenol Aerospace for ordering information.



Filtered HD38999 Connectors - for EMI/EMP Protection

High density patterns are available in filter 38999 connectors - consult Amphenol Aerospace for ordering.



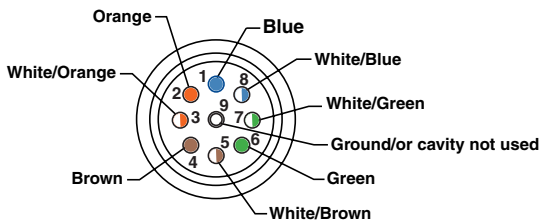
HD38999 for Gigabit Ethernet Applications

The HD38999 is available for high speed (Gigabit Ethernet) data transmission in the size 9-9 insert pattern.

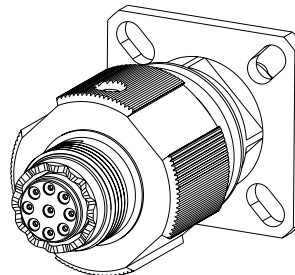
Data transmission performance of this connector insert:

- 10 Base T, 100 Base TX, and 1000 Base T networks using Cat 5e per TIA/EIA568B and Class D per ISO/IEC 11801.
(Test report available - consult Amphenol Aerospace for more information)

Signal-Ground Pin Configuration Wiring Recommendations



View Rear of Connector



HD38999 Connector with 9-9 Insert Pattern (Rear View)

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

Micro-D

Terrapin

Nexus

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ENGINEERED SOLUTIONS. DESIGNED TO FIT.

Amphenol Micro-D provide small interconnect solutions, which will exceed the requirements of the US military standard M83513. What differentiates Amphenol from the competition is our overall connector design. Custom solutions can easily be engineered to ensure exact performance in any application.

Amphenol is not limited to the traditional M83513 rectangular connectors but has also developed and produced circular connectors, strip line connectors, PC board connectors, and hybrid connectors utilizing power, signal, coaxial and fiber optics contacts.

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

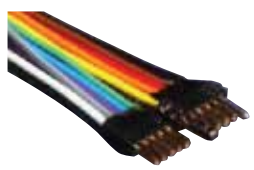
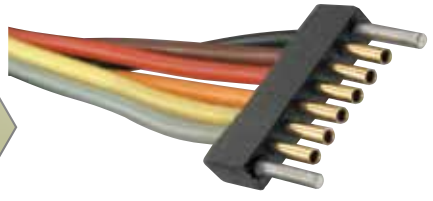
Micro-D

Terrapin

Nexus

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Keyed and Composite Plated Micro-D

Amphenol micro connectors provide small interconnect solutions which will exceed the requirements of the US military standard M83513. What differentiates Amphenol from our competition is our ability to evolve and innovate. Shown here and on the next page are new Micro-D solutions.

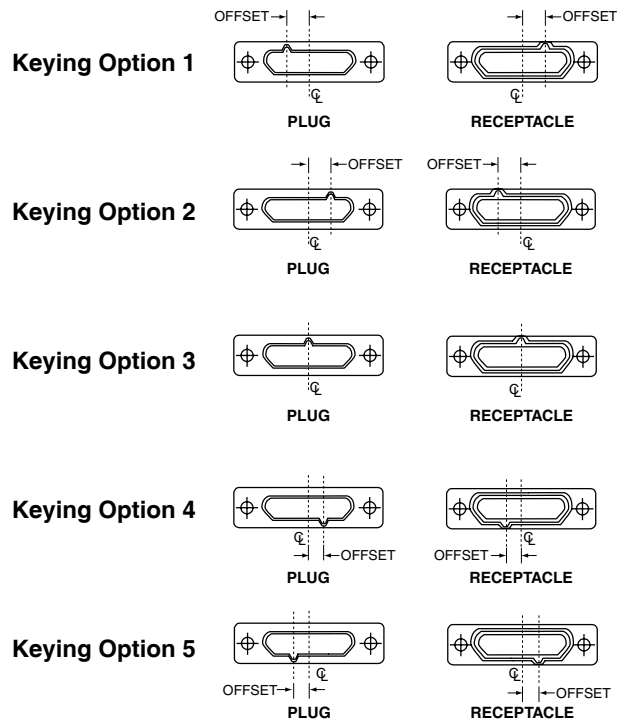
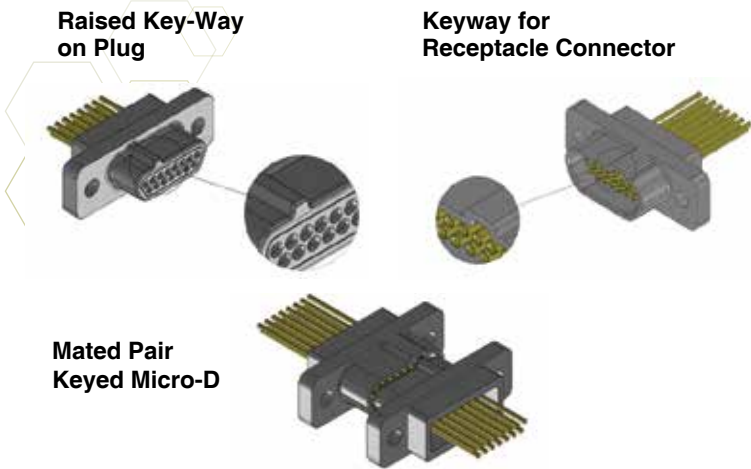
Amphenol is not limited to the traditional M83513 rectangular connectors and continues to offer new variations to support key programs and markets such as C4I, Medical, Space and Military Aerospace Defense.



Keyed Micro-D

The Keyed Micro-D was designed to allow multiple connectors of the same or similar wire counts to be mounted side by side without the fear of cross-mating. Amphenol's Keyed Micro-D connectors also provide a fear-free environment when dealing with blind mate applications.

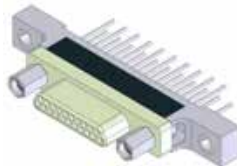
- Five Keying Options for connector sizes 15, 21, 25, 31, 37, 51, 69, 100
- One Keying Option for connector size 9 (Option 3 only)



Composite Plated Micro-D

Amphenol's new composite plated Micro-D provides both shell-to-shell conductivity and weight savings that are required by many of today's applications. Still meeting the Mil-Standard requirements of the M83513, this series will out-perform your expectations and be available in all Mil-Standard arrangements.

Straight Micro-D, Composite



Right Angle 90 Degree PCB Micro-D, Composite

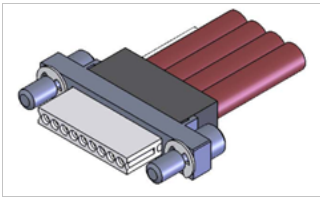




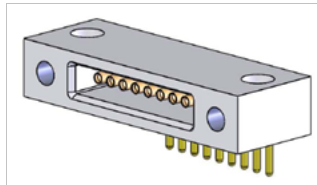
Single Row Metal Micro-D

The Single Row Micro-D series will give those who need the extra support of an aluminum shell while still offering a low profile single row solution; similar to Amphenol Strip Connector series, yet ruggedized to meet today's evolving demands. The Single Row Micro-D design can be optimized for size and ruggedness, and additional features can be added which minimize potential "scooping" damage during the engagement of the connectors. This series will be available in pin counts of 1 to 30 contacts.

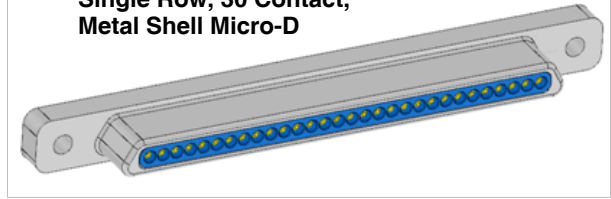
Single Row, Metal Micro-D



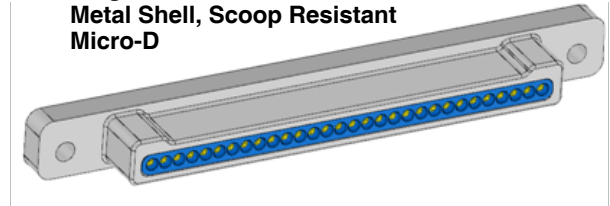
Single Row, Metal Micro-D with Right Angle PCB Mount



Single Row, 30 Contact, Metal Shell Micro-D

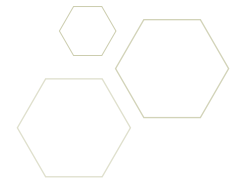


Single Row, 30 Contact, Metal Shell, Scoop Resistant Micro-D



Durmalon® Plated Micro-D

A RoHs compliant alternative to cadmium, Amphenol's Durmalon plating is a Mil-Qualified Nickel-PTFE that is proven to meet today's rugged environmental demand. Qualified to meet MIL-DTL-38999 requirements, Amphenol's Durmalon plating offers salt spray protection of up to 1,500 hours. Durmalon plating is a natural fit for the Micro-D product line as more applications expose our products to the elements.



Pre-Salt Spray Sample of Durmalon Plated Micro-D Shell



After 1560 Hours Salt Spray of Durmalon Plated Micro-D Shell



Mated Pair Micro-D with Durmalon Plating

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

Micro-D

Terrapin

Nexus

Experience

With over 40 years experience and multiple locations in North America and Asia, Amphenol Aerospace has diverse capabilities to design and manufacture harsh environment cable assemblies. Our engineers can design cables and harnesses to fit a wide variety of requirements.

From simple point-point assemblies to ruggedized overmolded harnesses, Amphenol has the capabilities to meet a diverse range of cable needs.

Production

Production Capabilities Include:

- Automated Twisters, strippers, cutters, crimpers, braider
- Primary wire extrusion/jacketing
- Custom overmold presses with in-house production tooling
- High Speed twisted shielded pair RF capabilities
- Full testing capabilities for DWV, IR, Continuity, etc.



Braider



Amphenol's Cable Production



Nano-Circular & Nano-Rectangular

Amphenol's Nano-Circular and Nano-Rectangular Series of connectors offer a contact spacing of 0.025 in pitch. This means you get even a greater density of connections in a smaller package. It will allow you to fit up to 4 times the connectors when in comparison to the standard Micro-D (0.050 in pitch) with the same amount of contacts. Amphenol's Nano Series also offers up to 70% weight savings over the standard Micro-D, making a clear choice for those tight-fitting applications.

- 1A per contact
- .025 in spacing
- Rugged and Lightweight



Circular Micro-D

Amphenol's New Circular Micro-D Series allows the same contact pitch of .050 in spacing while utilizing a push /pull coupling mechanism that has less than a 2 lb. mate and unmate force. Designed for tight-fitting rugged environments, the Circular Micro-D features an aluminum shell and insert sizes down to a size 5.

- 3A per contact
- .050 in spacing
- Shell Size's 5 and up!



Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

Accessories

2M

HD38999

Micro-D

Terrapin

Nexus

Why use Amphenol precision stamped & formed contacts

- AMPHENOL DESIGN not like other stamped and formed designs
- FULLY QUALIFIED per MIL-DTL-83513 requirements
- ONE PIECE CONTACT with EQUALLY SPACED compliant tines
- GOLD OVER NICKEL versus gold over copper flash barrier
- TIGHTER CONTROL over plating process
- UNIFORM PLATING thickness
- AUTOMATED STAMPING versus twist process variations
- Integrated closed engaging end ENSURES UNIFORM INSERTION FORCES
- LOW MATING/UNMATING FORCE
- PREFERRED CONTACT for SPACE and SATELLITE applications
- CONTINUOUS CONNECTION along the length of the contact beam (line contact) versus multi-point connection (point contact)



Amphenol

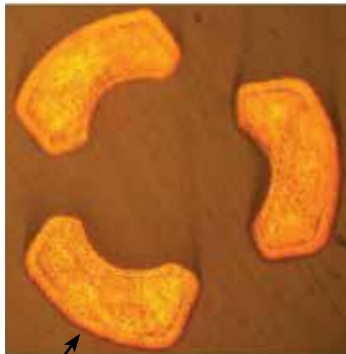


3-Tyne compression

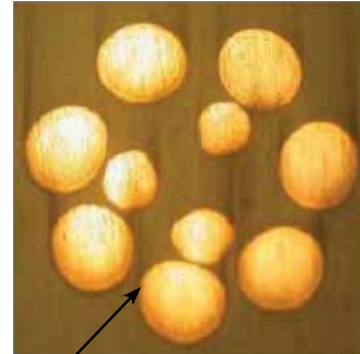
Competitor



2 bundles of wires twisted, tip welded, squashed, crimped then plated



Au/Ni Barrier
(Uniform plating thickness)



Au/Cu Flash Barrier
(Inconsistent plating thickness)

Micro-miniature contact system employs a precision stamped and formed pin contact recessed within the plug insulator. The contact system has proven reliability, exceeding the performance specifications of MIL-DTL-83513.

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

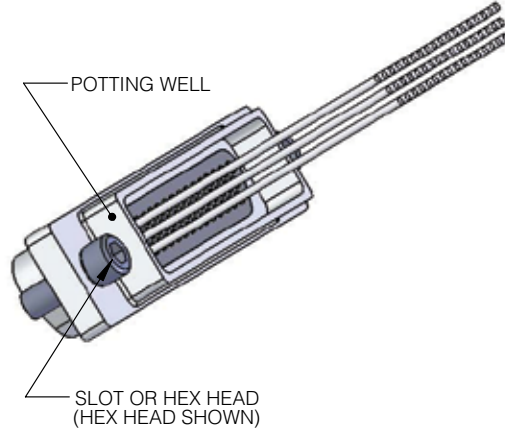
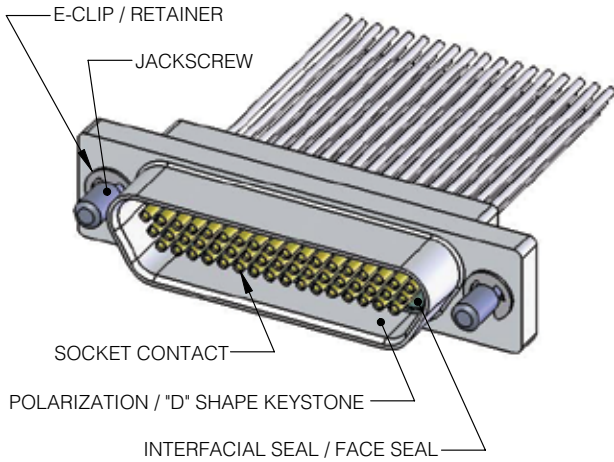
Micro-D

Terrapin

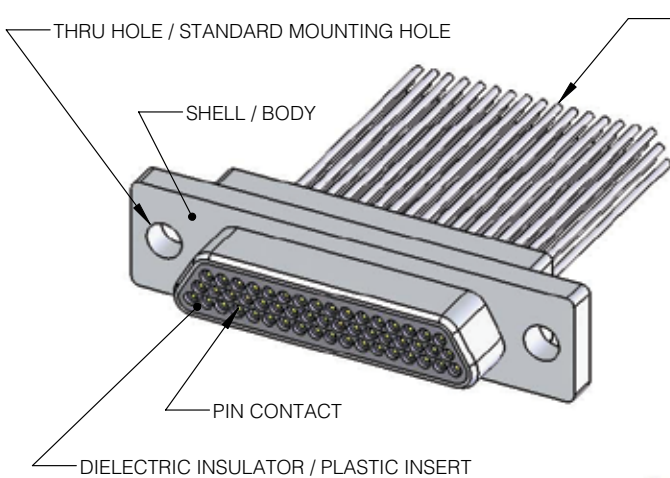
Nexus

How to describe what you really need?

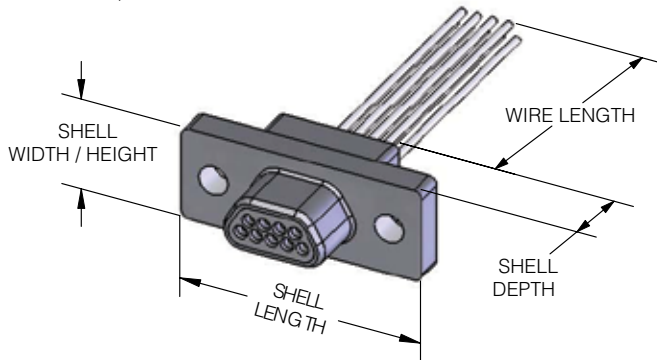
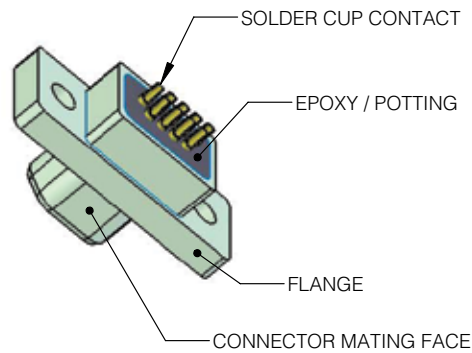
RECEPTACLE / FEMALE / SOCKET CONNECTOR



PLUG / MALE / PIN CONNECTOR



INSULATED WIRE (STRANDED) / PIGTAILS / FLYING LEADS
 OR
 UNINSULATED SOLID WIRE / STRAIGHT PCB TERMINATION



Contacts
& Tools

2M Specs

2M801

2M803

2M804

2M805

2M
Accessories

HD38999

Micro-D

Terrapin

Nexus

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

Micro-D

Terrapin

Nexus

The Amphenol Micro-D microminiature connector series offers proven military spec performance and reliability in rectangular and strip line micro connectors.

Microminiature connectors are available in the following styles:

- Rectangular D Style
- Strip line Style
- Filtered Connectors
- High Density Card
- Strip and custom card edge configurations
- New single row metal style (see pg 136)
- New keyed Micro-D Style (see pg 135)

Micro-D Contacts:

- Contacts on .050 (1.27) center.
- Inserts in Micro-D miniature connectors are available with signal and coax/power contacts.

The Amphenol microminiature contact system employs a precision stamped and formed pin contact recessed within the plug insulator. The socket contact is a precision fabricated tube.

Microminiature Connector

The following data applies to standard Amphenol Micro-D connectors with wires or PCB termination. Variations from standard products may cause performance to vary from that mentioned below. Consult Amphenol Aerospace for special applications and requirements.

Pin and socket contacts are epoxy retained in high grade thermoplastic insulators. The contact system has proven reliability, exceeding the performance specifications of MIL-DTL-83513.

Terminations are available in a broad range including:

- Solder cup
- Terminated to wire harness
- Vertical and right angle PCB

Micro-D Shell materials:

- Plastic
- Metal
- New Composite (see pg 135)
- New Durmalon® (see pg 136) and a variety of finishes

A broad range of mounting hardware is available (jackscrews, posts, guide pins) as well as straight and angled backshells.



Specifications

| | | |
|----------------|--|--|
| Shell Material | Std. Metal (100, 106, 110 & M13 Series): 104 Series: Std. Plastic (101, 102 & 105 Series): High Temp Plastic: | Aluminum alloy 6061-T6 per QQ-A-200/8 Stainless steel Polyphenylene sulfide (Ryton) High performance thermoplastic (PEEK or equivalent) |
|----------------|--|--|

| | |
|------------------------------------|---|
| Shell Finish (Metal Shell Only) | Anodize ** Cadmium Gold Irridite/Alodine ** Electroless Nickel Tin |
|------------------------------------|---|

| | |
|---------------------------|---|
| Insulator / PCB Backshell | Polyphenylene sulfide (Ryton) per MIL-M-24519, type GST-40F; color: black |
|---------------------------|---|

| | |
|----------|--|
| Contacts | Copper alloy, 50 micro-inches gold plate over nickel |
|----------|--|

| | |
|----------|-----------------------------|
| Hardware | Stainless steel, passivated |
|----------|-----------------------------|

| | | |
|------------------|---------------------------------|--|
| Potting Material | Std. Epoxy: High Temp Epoxy: | EP1730-1 or equivalent; color: black EP173859 or equivalent |
|------------------|---------------------------------|--|

| | | |
|------|--|---|
| Wire | Insulated Wire: Solid Uninsulated Wire: | MIL-W-16878/4 or /6 (available 7 or 19 strands) MIL-W-22759/11 or /33 Copper per A-A-59551 (QQ-W-343) |
|------|--|---|

| | |
|----------|--|
| Coupling | Friction or Jackscrews into jackposts/threaded Inserts |
|----------|--|

| | |
|-----------------|---------------------|
| Contact Spacing | .050 (1.27) centers |
|-----------------|---------------------|

| | |
|-----------------------|--|
| Shell Styles (Gender) | Plug (pin contacts) and receptacle (socket contacts) |
|-----------------------|--|

| | | |
|--------------------|---|---|
| Number of Contacts | Standard Micro-D: Combo (Hybrid) Micro-D: High Density Connector (106 Series): Strip Connector (105 Series): | 9, 15, 21, 25, 31, 37, 51, 69, 100 7W2 or 7C2 (5 signal, 2 power/coax) 24W4 or 24C4 (20 signal, 4 power/coax) 50, 54, 58, 62, 66, 70, 74, 104, 112, 120, 128, 136, 144, 152 1 thru 30 (no guide pins) 1 thru 29 (guide pin on one end) 1 thru 28 (guide pin on both ends) |
|--------------------|---|---|

| | |
|---------------|----------|
| Coaxial Cable | RG-178/U |
|---------------|----------|

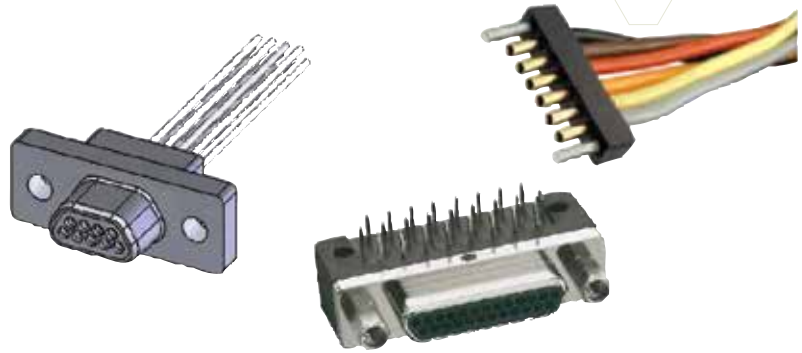
| | |
|-----------|---|
| Wire Size | #24 thru #32 AWG (largest to smallest diameter) |
|-----------|---|

| | |
|---------------------|-----------------------|
| Contact Termination | Multiple indent crimp |
|---------------------|-----------------------|

** Does not apply for die-cast parts (consult Amphenol Aerospace before ordering)

Microminiature Connector Performance Data

The following data applies to standard Amphenol Micro-D connectors that are in accordance with M83513 spec. Variations from standard products may cause performance to vary from that mentioned below. Consult Amphenol Aerospace for special applications and requirements.



| Test Description | Specification/ Method * | Limits |
|--|--|--|
| Contact Rating | --- | 3 amps max. |
| Magnetic Permeability | ASTM-A342/A342M | 2.0 μ max. |
| D.W.V. (Test voltage rms 60 Hz ac volts) | EIA-364-20 | at sea level: 600 vac for solder pot and standard wire at 70,000 ft altitude (reduced barometric pressure): 150 vac for solder pot and standard wire |
| Insulation Resistance | EIA-364-21 | 5000 megohms min. |
| Contact Resistance | EIA-364-23 | 8 milliohms at 3 amps |
| Contact Engagement Force | MIL-DTL-83513 | 6.0 oz. max. |
| Contact Separation Force | MIL-DTL-83513 | 0.5 oz. min. |
| Connector Mating Force | MIL-DTL-83513 | (10 oz. times no. of contacts) max. |
| Connector Unmating Force | MIL-DTL-83513 | (0.5 oz. times no. of contacts) min. |
| Thermal Shock (Temperature Cycling) | EIA-364-32, condition I, 5 cycles | No physical damage -55°C to +125°C (-67°F to +257°F) |
| Mechanical Shock (Specified Pulse) | EIA-364-27, condition E | No physical damage and no loosening of parts No loss of continuity > 1 microsec. |
| Vibration | EIA-364-28, condition IV | No physical damage and no loosening of parts No loss of continuity > 1 microsec. |
| Durability MIL-DTL-83513 | 500 mating cycles at a rate of 200 ± 100 CPH | |
| Salt Spray (Corrosion) | EIA-364-26, condition B | Meets mateability and contact resistance requirements |
| Fluid Immersion | MIL-DTL-83513 | Meets mateability requirements |
| Humidity | EIA-364-31 | Meets D.W.V. and insulation resistance requirements 1 megohm min. after step 6, 1000 megohms min. after 24 hrs of conditioning |
| Insert Retention (class M) | MIL-DTL-83513 | 50 lbs psi (axial load) |
| Solderability | MIL-STD-202, method 208 | Withstand test condition |
| Contact Retention EIA-364-29 | 5 lbs min. (axial load) | |
| Thermal Vacuum Outgassing (Space Classes) | SP-R-0022 or ASTM E595 | Exceeds MIL-DTL-83513 requirements; standard is 1.0% max TML and 0.1% max VCM of original mass |

* Standards References
 MIL = Department of Defense
 ASTM = ASTM International
 EIA = Electronic Industries Association
 SP = NASA

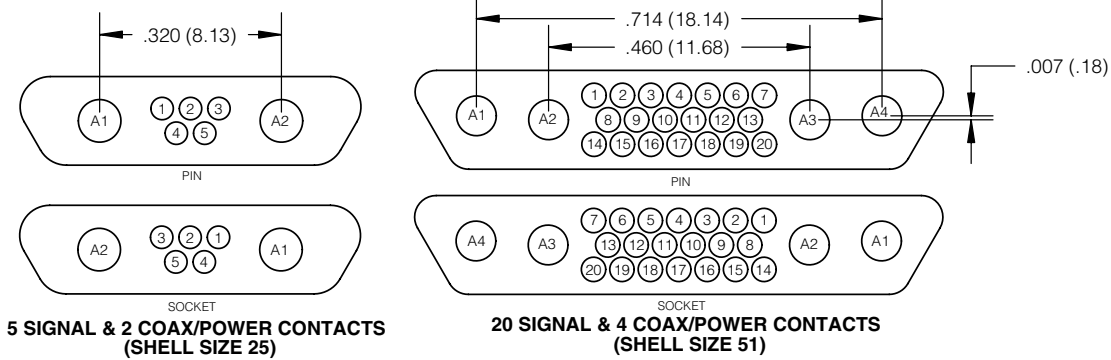
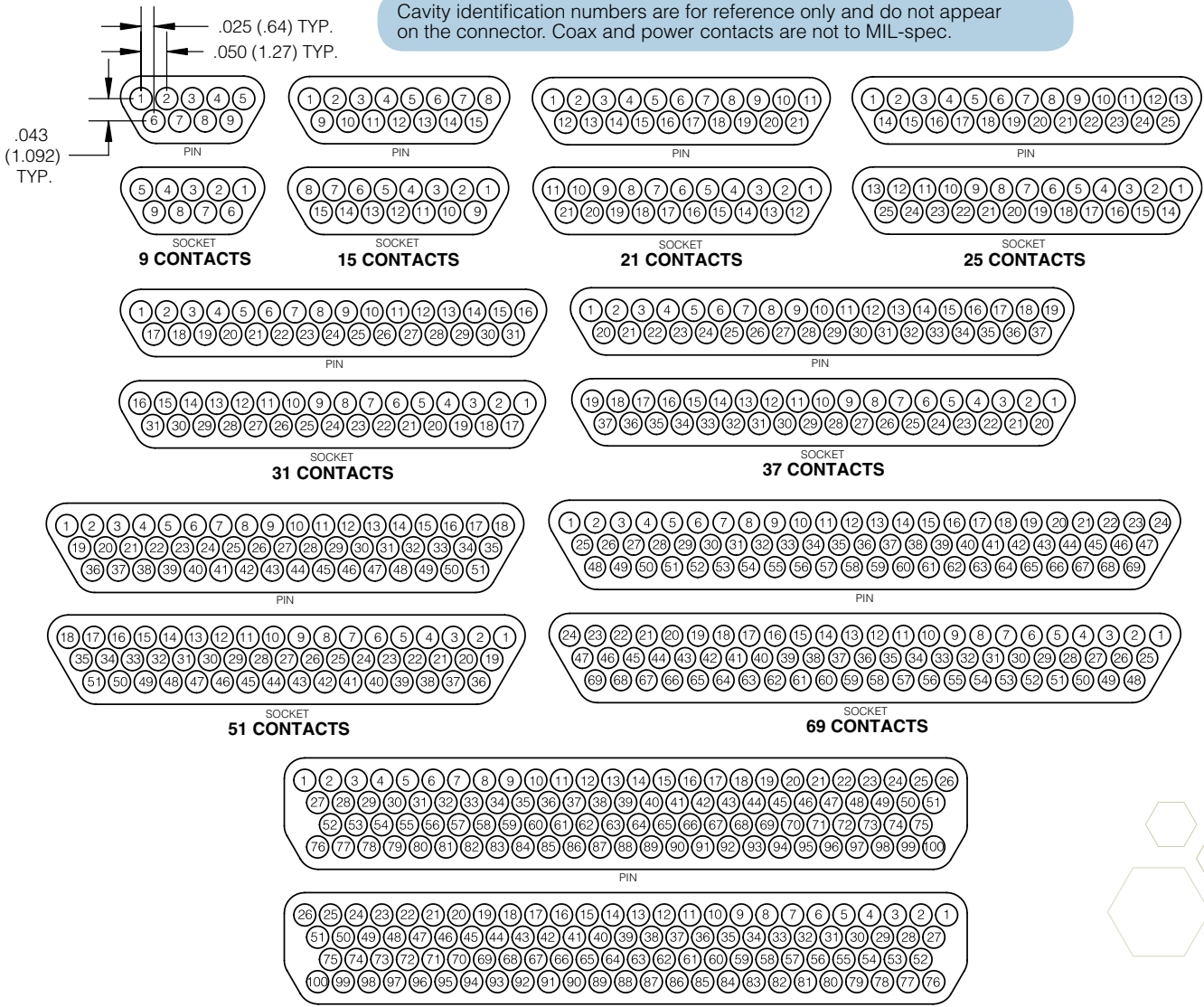
** Does not apply for die-cast parts (consult Amphenol Aerospace before ordering)

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- Accessories
- 2M
- HD38999
- Micro-D
- Terrapin
- Nexus

Series 100 to 104 & Combo Micro-D

Shell sizes 9 thru 100

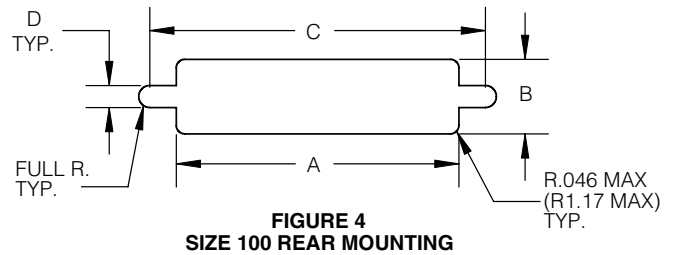
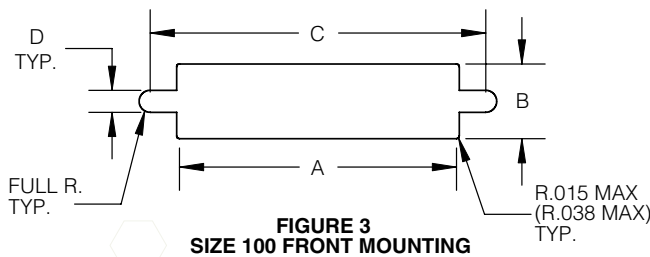
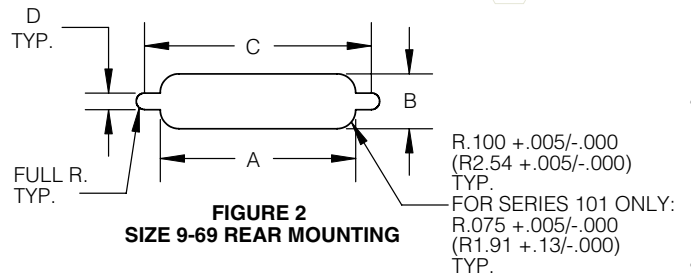
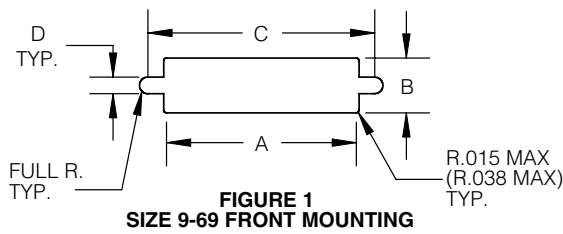
Cavity identification numbers are for reference only and do not appear on the connector. Coax and power contacts are not to MIL-spec.



Inches (mm)
All dimensions for reference only

Contacts & Tools
2M Specs
2M801
2M803
2M804
2M805
2M Accessories
HD38999
Micro-D
Terrapin
Nexus

Series 100 to 104 & Combo Micro-D



Series 100, 102, 104 & Combo Micro-D

| SIZE | FIGURE | A +.004 (0.10) -.000 (0.00) | B +.004 (0.10) -.000 (0.00) | C +.005 (0.13) -.000 (0.00) | D +.005 (0.13) -.000 (0.00) |
|------|--------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| 9 | 1 | .408 (10.36) | .271 (6.88) | .570 (14.48) | .089 (2.26) |
| | 2 | .401 (10.19) | .252 (6.40) | .570 (14.48) | .089 (2.26) |
| 15 | 1 | .558 (14.17) | .271 (6.88) | .720 (18.29) | .089 (2.26) |
| | 2 | .551 (14.00) | .252 (6.40) | .720 (18.29) | .089 (2.26) |
| 21 | 1 | .708 (17.98) | .271 (6.88) | .870 (22.10) | .089 (2.26) |
| | 2 | .701 (17.81) | .252 (6.40) | .870 (22.10) | .089 (2.26) |
| 25 | 1 | .808 (20.52) | .271 (6.88) | .970 (26.64) | .089 (2.26) |
| | 2 | .801 (20.34) | .252 (6.40) | .970 (26.64) | .089 (2.26) |
| 31 | 1 | .958 (24.33) | .271 (6.88) | 1.120 (28.45) | .089 (2.26) |
| | 2 | .951 (24.13) | .252 (6.40) | 1.120 (28.45) | .089 (2.26) |
| 37 | 1 | 1.108 (28.14) | .271 (6.88) | 1.270 (32.26) | .089 (2.26) |
| | 2 | 1.101 (27.97) | .252 (6.40) | 1.270 (32.26) | .089 (2.26) |
| 51 | 1 | 1.058 (26.87) | .315 (8.00) | 1.220 (30.99) | .089 (2.26) |
| | 2 | 1.051 (26.70) | .295 (7.49) | 1.220 (30.99) | .089 (2.26) |
| 69 | 1 | 1.358 (34.49) | .315 (8.00) | 1.525 (38.74) | .089 (2.26) |
| | 2 | 1.351 (34.32) | .295 (7.49) | 1.525 (38.74) | .089 (2.26) |
| 100 | 3 | 1.456 (36.98) | .361 (9.17) | 1.805 (45.85) | .118 (3.00) |
| | 4 | 1.520 (38.61) | .401 (10.18) | 1.805 (45.85) | .118 (3.00) |

Notes:

- Shell sizes 9-69 front mounting (Figure 1) and rear mounting (Figure 2) cutouts accommodate #2-56 screws.
- Shell size 100 front mounting (Figure 3) and rear mounting (Figure 4) cutouts accommodate #4-40 screws.

Series 101 only

| SIZE | FIGURE | A +.004 (0.10) -.000 (0.00) | B +.004 (0.10) -.000 (0.00) | C +.005 (0.13) -.000 (0.00) | D +.005 (0.13) -.000 (0.00) |
|------|--------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| 9 | 1 | .408 (10.36) | .172 (4.37) | .570 (14.48) | .089 (2.26) |
| | 2 | .378 (9.60) | .217 (5.51) | .570 (14.48) | .089 (2.26) |
| 15 | 1 | .588 (14.94) | .172 (4.37) | .720 (18.29) | .089 (2.26) |
| | 2 | .528 (13.41) | .217 (5.51) | .720 (18.29) | .089 (2.26) |
| 21 | 1 | .708 (17.98) | .172 (4.37) | .870 (22.10) | .089 (2.26) |
| | 2 | .678 (17.22) | .217 (5.51) | .870 (22.10) | .089 (2.26) |
| 25 | 1 | .808 (20.52) | .172 (4.37) | .970 (26.64) | .089 (2.26) |
| | 2 | .778 (19.76) | .217 (5.51) | .970 (26.64) | .089 (2.26) |
| 31 | 1 | .958 (24.33) | .172 (4.37) | 1.120 (28.45) | .089 (2.26) |
| | 2 | .928 (23.57) | .217 (5.51) | 1.120 (28.45) | .089 (2.26) |
| 37 | 1 | 1.108 (28.14) | .172 (4.37) | 1.270 (32.26) | .089 (2.26) |
| | 2 | 1.078 (27.38) | .217 (5.51) | 1.270 (32.26) | .089 (2.26) |
| 51 | 1 | 1.058 (26.87) | .215 (5.46) | 1.220 (30.99) | .089 (2.26) |
| | 2 | 1.028 (26.11) | .261 (6.63) | 1.220 (30.99) | .089 (2.26) |

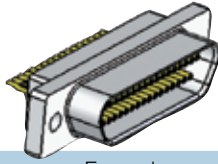
Notes:

- Sizes 69 & 100 are not applicable for 101 series plastic connectors.

Inches (mm)
All dimensions for reference only

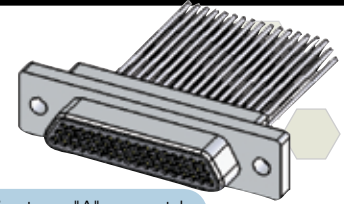
Qualified to M83513 (slash sheets 01 thru 04)

Series 100, 102 & 104



Example:
100RN09S- 4A5FM2-20

Description: metal shell size 9 rcpt, nickel finish, 26 AWG wire type "A", non-std wire length 20 inches with M2 low profile jackscrews.



100 R X XXX X - X X X X XX - XXX

Connector Series

- 100** = metal shell per M83513
- 102** = all plastic (dimensionally identical to metal shell per M83513)
- 104** = stainless steel (dimensionally identical to metal shell per M83513)

Insulator Material

- R** = Polyphenylene Sulfide (Ryton)

Shell Finish Omit for series 102 & 104

- A** = anodize
- C** = cadmium
- G** = gold
- I** = irridite/alodine
- N** = electroless nickel
- T** = tin

Connector Size (number of contacts)

- 09, 15, 21, 25, 31, 37, 51, 69, 100
- All sizes I.A.W. M83513 except size 69 (non-military)

Connector Type

- P** = Plug (pin)
- S** = Receptacle (socket)

Wire Size (AWG.)

- 1** = 32
- 2** = 30
- 3** = 28
- 4** = 26 (M83513 standard) *off shelf
- 5** = 25 (solid wire only)
- 6** = 24
- Omit for solder cup contacts

Wire Type

General Applications:

- A** = 7 strd, per NEMA-HP3 (MIL-W-16878/4)
- B** = 7 strd, per NEMA-HP3 (formerly MIL-W-16878/6)
- C** = 19 strd, per NEMA-HP3 (formerly MIL-W-16878/4)
- D** = 19 strd, per NEMA-HP3 (formerly MIL-W-16878/6)

Military/Aerospace Applications:

- E** = per MIL-W-22759/11 (M83513 standard)
- F** = per MIL-W-22759/33 (space grade)
- L** = solid wire uninsulated
- Omit for solder cup contacts

Non Std. Length (Inches)

- Stranded Wire (no decimal values)
e.g. **1** = 1 inches, **100** = 100 inches
- Solid Wire (0.109 < length < 1.00)
e.g. **110** = .110 inches, **999** = .999 inches

Hardware (pre-installed by factory)

- B** = standard mounting holes
- P** = jackpost
- M2** = low profile jackscrew, allen head
- M3** = high profile jackscrew, allen head
- M5** = low profile jackscrew, slot head
- M6** = high profile jackscrew, slot head
- L** = captive low profile jackscrew
- K** = captive high profile jackscrew
- F** = forward float mount
- R** = reverse float mount

Wire Length ((inches +1.00/-0.00))

- A** = 18.00
- B** = 36.00
- C** = 72.00
- D** = 0.500 (solid wire only +0.20/-0.00)
- E** = 1.00 (solid wire only +0.20/-0.00)
- F** = Non std. length
- Omit for solder cup contacts

Wire Color / Finish

- 1** = all white (M83513 standard) *off shelf
- 2** = all yellow
- 3** = solid wire uninsulated, tin plated
- 4** = solid wire uninsulated, gold plated
- 5** = color coded per MIL-STD-681, system 1
- 6** = 1st 10 colors blk. thru wht. repeated (M83513 standard) *off shelf
- Omit for solder cup contacts

Features

Plastic and metal shells are intermateable and intermountable. Available in sizes 9 thru 100, solder cup or crimp termination. Wide selection of wire sizes, types, and color finish. Wide selection of hardware options.

Inches (mm)
All dimensions for reference only

Qualified to M83513 (slash sheets 01 thru 04)

Solder Cup Termination:

M83513/XX - X X

Specification Sheet

- 01 = plug (pin)
- 02 = receptacle (socket)

Insert Arrangement

- A = 9
- B = 15
- C = 21
- D = 25
- E = 31
- F = 37
- G = 51
- H = 100

Shell Finish

- C = cadmium
- N = electroless nickel
- P = passivated stainless steel

Crimp Termination:

M83513/XX - X XX X

Specification Sheet

- 03 = plug (pin)
- 04 = receptacle (socket)

Insert Arrangement

- A = 9
- B = 15
- C = 21
- D = 25
- E = 31
- F = 37
- G = 51
- H = 100

Shell Finish

- C = cadmium
- N = electroless nickel
- P = passivated stainless steel

Wire Type (inches +1.00/-0.00)

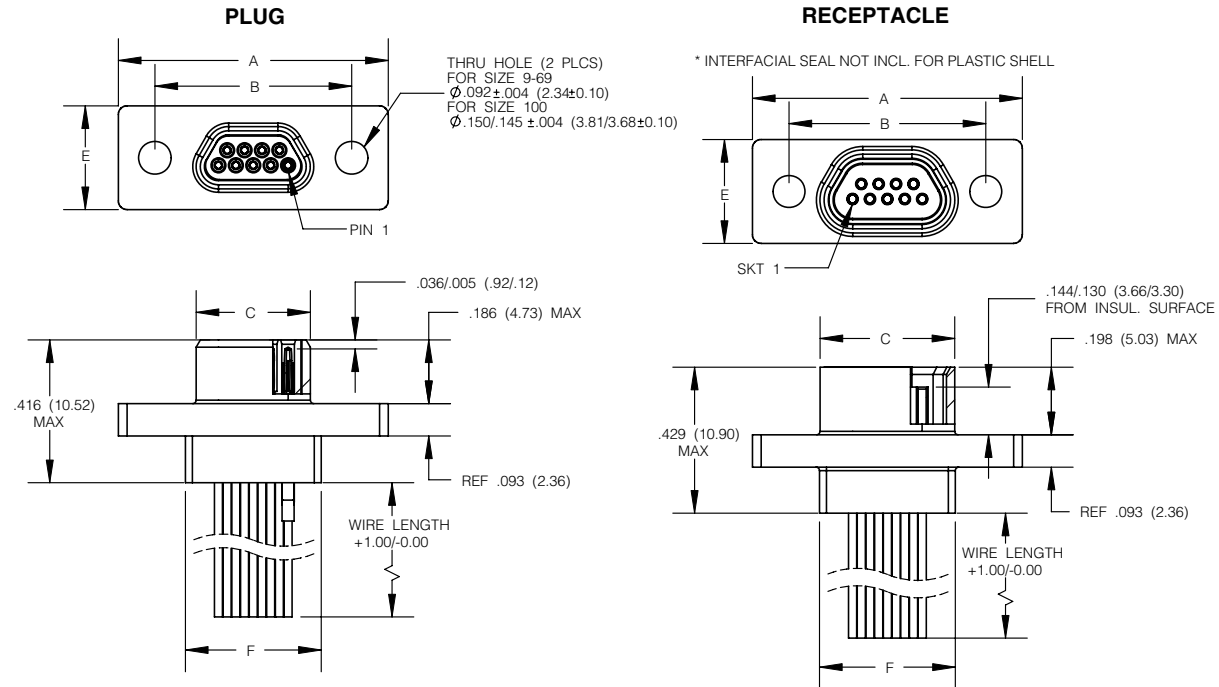
- 01 = M22759/11-26-9, 18"
- 02 = M22759/11-26-9, 36"
- 03 = M22759/11-26-(*), 18"
- 04 = M22759/11-26-(*), 36"
- 05 = A-A-59551, type S, 25 AWG, except shall be gold plated 10 micro-inches; 0.5"
- 06 = A-A-59551, type S, 25 AWG, except shall be gold plated 10 micro-inches; 1.0"
- 07 = A-A-59551, type S, 25 AWG, tin plated 100 micro-inches; 0.5"
- 08 = A-A-59551, type S, 25 AWG, tin plated 100 micro-inches; 1.0"
- 09 = M22759/33-26-9, 18"
- 10 = M22759/33-26-9, 36"
- 11 = M22759/33-26-(*), 18"
- 12 = M22759/33-26-(*), 36"
- 13 = M22759/11-26-9, 72"
- 14 = M22759/11-26-(*), 72"
- 15 = M22759/33-26-9, 72"
- 16 = M22759/33-26-(*), 72"
- 17 = 04035-26A-9, 18"
- 18 = 04035-26A-9, 36"
- 19 = 04035-26A-9, 72"
- 20 = 04035-26A-(*), 18"
- 21 = 04035-26A-(*), 36"
- 22 = 04035-26A-(*), 72"

Inches (mm)
All dimensions for reference only

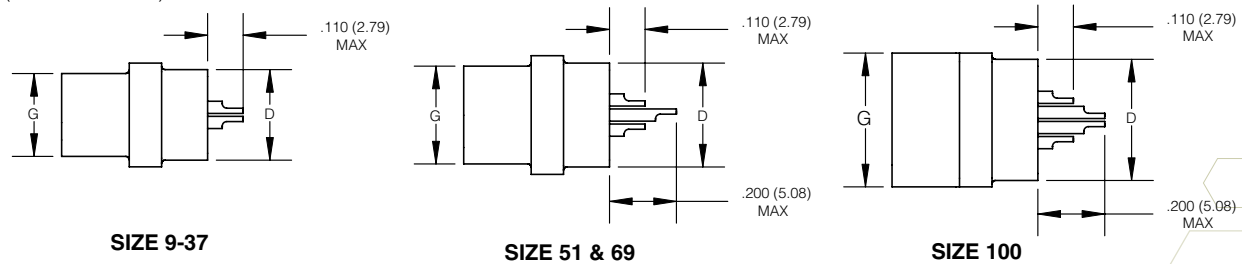


Qualified to M83513 (slash sheets 01 thru 04)

WIRE TERMINATION (M83513/03 & /04)



SOLDER CUP TERMINATION PLUG / RECEPTACLE (M83513/01 & /02)

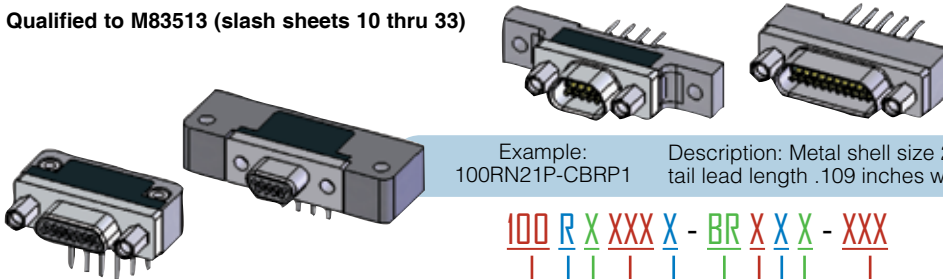


| SIZE | A MAX | B $\pm .005$ (0.13) | C MAX | | D MAX | E MAX | F MAX | G MAX | |
|------|---------------|------------------------|---------------|---------------|-------------|--------------|---------------|-------------|--------------|
| | | | PLUG | RCPT | | | | PLUG | RCPT |
| 09 | .785 (19.94) | .565 (14.35) | .334 (8.48) | .402 (10.21) | .270 (6.86) | .308 (7.82) | .400 (10.16) | .185 (4.70) | .253 (6.43) |
| 15 | .935 (23.75) | .715 (18.16) | .484 (12.29) | .552 (13.97) | .270 (6.86) | .308 (7.82) | .550 (13.97) | .185 (4.70) | .253 (6.43) |
| 21 | 1.085 (27.56) | .865 (21.97) | .634 (16.10) | .702 (17.83) | .270 (6.86) | .308 (7.82) | .700 (17.78) | .185 (4.70) | .253 (6.43) |
| 25 | 1.185 (30.10) | .965 (24.51) | .734 (18.64) | .802 (20.37) | .270 (6.86) | .308 (7.82) | .800 (20.32) | .185 (4.70) | .253 (6.43) |
| 31 | 1.335 (33.91) | 1.115 (28.32) | .884 (22.45) | .952 (24.18) | .270 (6.86) | .308 (7.82) | .950 (24.13) | .185 (4.70) | .253 (6.43) |
| 37 | 1.485 (37.72) | 1.265 (32.13) | 1.034 (26.26) | 1.102 (27.99) | .270 (6.86) | .308 (7.82) | 1.100 (27.94) | .185 (4.70) | .253 (6.43) |
| 51 | 1.435 (36.45) | 1.215 (30.86) | .984 (24.99) | 1.052 (26.72) | .310 (7.87) | .351 (8.92) | 1.050 (26.67) | .229 (5.82) | .296 (7.52) |
| 69 | 1.735 (44.07) | 1.515 (38.48) | 1.289 (32.74) | 1.357 (34.47) | .310 (7.87) | .351 (8.92) | 1.350 (34.29) | .229 (5.82) | .296 (7.52) |
| 100 | 2.170 (55.12) | 1.800 (45.72) | 1.384 (35.13) | 1.508 (38.10) | .360 (9.14) | .394 (10.01) | 1.442 (36.63) | .271 (6.88) | .394 (10.01) |

Inches (mm)
All dimensions for reference only

Series 100, 102 & 104 - How to Order

Qualified to M83513 (slash sheets 10 thru 33)



Example: 100RN21P-CBRP1 Description: Metal shell size 21 plug, nickel finish, CBR termination, PCB tail lead length .109 inches with jackposts included

100 R X XXX X - BR X X X - XXX

Connector Series

- 100** = metal shell per M83513
- 102** = all plastic (dimensionally identical to metal shell per M83513)
- 104** = stainless steel (dimensionally identical to metal shell per M83513)

Insulator Material

R = Polyphenylene Sulfide (Ryton)

Shell Finish

- Omit for series 102 & 104
- A** = anodize
 - C** = cadmium
 - G** = gold
 - I** = irridite/alodine
 - N** = electroless nickel
 - T** = tin

Connector Size (number of contacts)

09, 15, 21, 25, 31, 37, 51, 69, 100
All sizes I.A.W. M83513 except size 69 (non-military)

Connector Type

- P** = Plug (pin)
- S** = Receptacle (socket)

Non Std. Wire Length (Inches)

(0.109 < length < 1.00)
e.g. **125** = .125 inches

Lead Length (inches)

- 1** = .109 ± .015
- 2** = .140 ± .015
- 3** = .172 ± .015
- 4** = .250 ± .015
- F** = non std. length

Threaded Insert (pre-installed)

T = threaded insert (PCB mounting option)
Omit for no threaded insert

Hardware for BS, BR, CBR & C6: (pre-installed)

- P** = jackpost
Omit for no jackpost
- Hardware for C16: (pre-installed)**
- B** = standard mounting holes
- M2** = low profile jackscrew, allen head
- M3** = high profile jackscrew, allen head
- M5** = low profile jackscrew, slot head
- M6** = high profile jackscrew, slot head
- L** = captive low profile jackscrew
- K** = captive high profile jackscrew
- F** = forward float mount
- R** = reverse float mount

Termination Type

- BS** = straight PCB per M83513/22 thru /27
- BR** = 90° PCB per M83513/16 thru /21
- CBR** = narrow 90° PCB per M83513/10 thru /15
- C6** = straight PCB per M83513/28 thru /33
- C16** = straight PCB with flange (C6 PC configuration)

M83513 Ordering Information
Printed Circuit Board Termination:

M83513/XX - X XX X X

Specification Sheet

- 10** = plug (pin), CBR type, sizes 9-37
- 11** = plug (pin), CBR type, size 51
- 12** = plug (pin), CBR type, size 100
- 13** = receptacle (socket), CBR type, sizes 9-37
- 14** = receptacle (socket), CBR type, size 51
- 15** = receptacle (socket), CBR type, size 100
- 16** = plug (pin), BR type, sizes 9-37
- 17** = plug (pin), BR type, size 51
- 18** = plug (pin), BR type, size 100
- 19** = receptacle (socket), BR type, sizes 9-37
- 20** = receptacle (socket), BR type, size 51
- 21** = receptacle (socket), BR type, size 100
- 22** = plug (pin), BS type, sizes 9-37
- 23** = plug (pin), BS type, size 51
- 24** = plug (pin), BS type, size 100
- 25** = receptacle (socket), BS type, sizes 9-37
- 26** = receptacle (socket), BS type, size 51
- 27** = receptacle (socket), BS type, size 100
- 28** = plug (pin), C6 type, sizes 9-37
- 29** = plug (pin), C6 type, size 51
- 30** = plug (pin), C6 type, size 100
- 31** = receptacle (socket), C6 type, sizes 9-37
- 32** = receptacle (socket), C6 type, size 51
- 33** = receptacle (socket), C6 type, size 100

Hardware

- N** = no jackpost or threaded insert
- P** = jackpost
- T** = threaded insert
- W** = jackpost and threaded insert

Shell Finish

- C** = cadmium
- N** = electroless nickel
- P** = passivated stainless steel

Lead Length (inches)

- 01** = .109 ± .015
- 02** = .140 ± .015
- 03** = .172 ± .015

Insert Arrangement

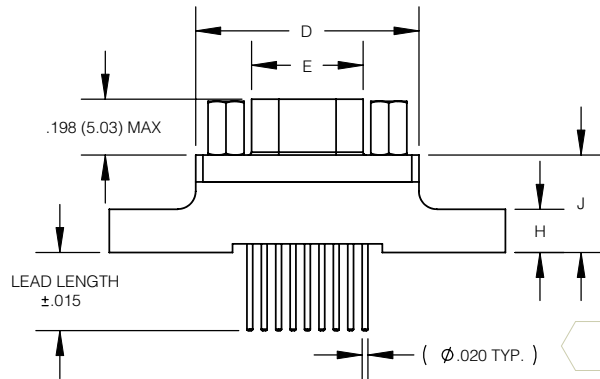
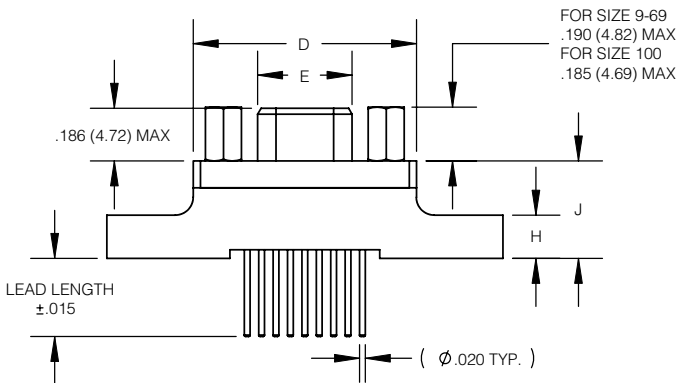
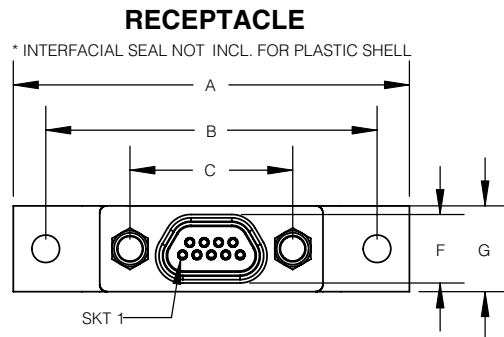
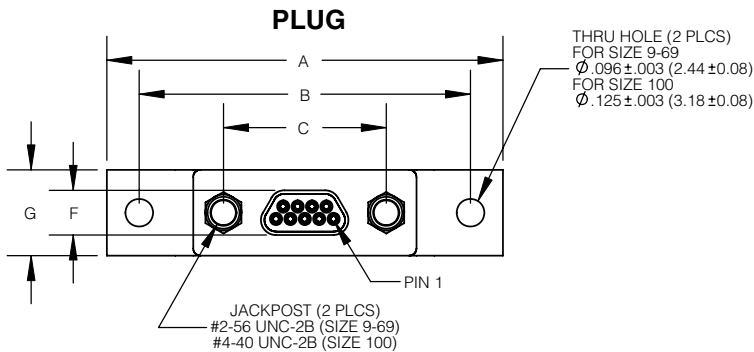
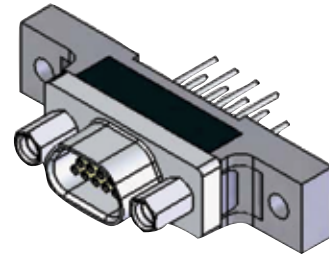
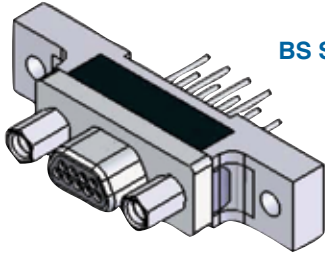
- A** = 9
- B** = 15
- C** = 21
- D** = 25
- E** = 31
- F** = 37
- G** = 51 (applicable for spec sheet 11, 14, 17, 20, 23, 26, 29 & 32)
- H** = 100 (applicable for spec sheet 12, 15, 18, 21, 24, 27, 30 & 33)

Features

- Available in sizes 9 thru 100, straight and right angle PCB termination.
- Solid copper 24 AWG PCB leads, tin plated, and solder dipped.
- Wide selection of hardware options.
- Consult Amphenol Aerospace for other wire size termination.

Qualified to M83513 (slash sheets 22 thru 27)

BS STRAIGHT PCB CONFIGURATIONS



| SIZE | A MAX | B ±.005 (0.13) | C ±.005 (0.13) | D MAX | E MAX | | F MAX | | G MAX | H MAX | J MAX |
|------|---------------|-------------------|-------------------|---------------|---------------|---------------|-------------|--------------|--------------|-------------|--------------|
| | | | | | PLUG | RCPT | PLUG | RCPT | | | |
| 09 | 1.390 (35.31) | 1.150 (29.21) | .565 (14.35) | .785 (19.84) | .334 (8.48) | .402 (10.21) | .185 (4.70) | .253 (6.43) | .308 (7.82) | .165 (4.19) | .355 (9.02) |
| 15 | 1.390 (35.31) | 1.150 (29.21) | .715 (18.16) | .935 (23.75) | .484 (12.29) | .552 (13.97) | .185 (4.70) | .253 (6.43) | .308 (7.82) | .165 (4.19) | .355 (9.02) |
| 21 | 1.690 (43.93) | 1.450 (36.83) | .865 (21.97) | 1.085 (27.56) | .634 (16.10) | .702 (17.83) | .185 (4.70) | .253 (6.43) | .308 (7.82) | .165 (4.19) | .355 (9.02) |
| 25 | 1.740 (44.20) | 1.500 (38.10) | .965 (24.51) | 1.185 (30.10) | .734 (18.64) | .802 (20.37) | .185 (4.70) | .253 (6.43) | .308 (7.82) | .165 (4.19) | .355 (9.02) |
| 31 | 2.040 (51.82) | 1.800 (45.72) | 1.115 (28.32) | 1.335 (33.91) | .884 (22.45) | .952 (24.18) | .185 (4.70) | .253 (6.43) | .308 (7.82) | .165 (4.19) | .355 (9.02) |
| 37 | 2.340 (59.44) | 2.100 (53.34) | 1.265 (32.13) | 1.485 (37.72) | 1.034 (26.26) | 1.102 (27.99) | .185 (4.70) | .253 (6.43) | .308 (7.82) | .165 (4.19) | .355 (9.02) |
| 51 | 2.270 (67.66) | 2.000 (50.80) | 1.215 (30.86) | 1.435 (36.45) | .984 (24.99) | 1.052 (26.72) | .228 (5.79) | .296 (7.52) | .351 (8.92) | .165 (4.19) | .355 (9.02) |
| 69 | 2.870 (72.90) | 2.600 (66.04) | 1.515 (38.48) | 1.735 (44.07) | 1.289 (32.74) | 1.357 (34.47) | .228 (5.79) | .296 (7.52) | .351 (8.92) | .165 (4.19) | .355 (9.02) |
| 100 | 3.070 (77.98) | 2.800 (71.12) | 1.800 (45.72) | 2.170 (55.12) | 1.384 (35.13) | 1.508 (38.10) | .271 (6.88) | .394 (10.01) | .460 (11.68) | .303 (7.70) | .550 (12.70) |

Inches (mm)
All dimensions for reference only

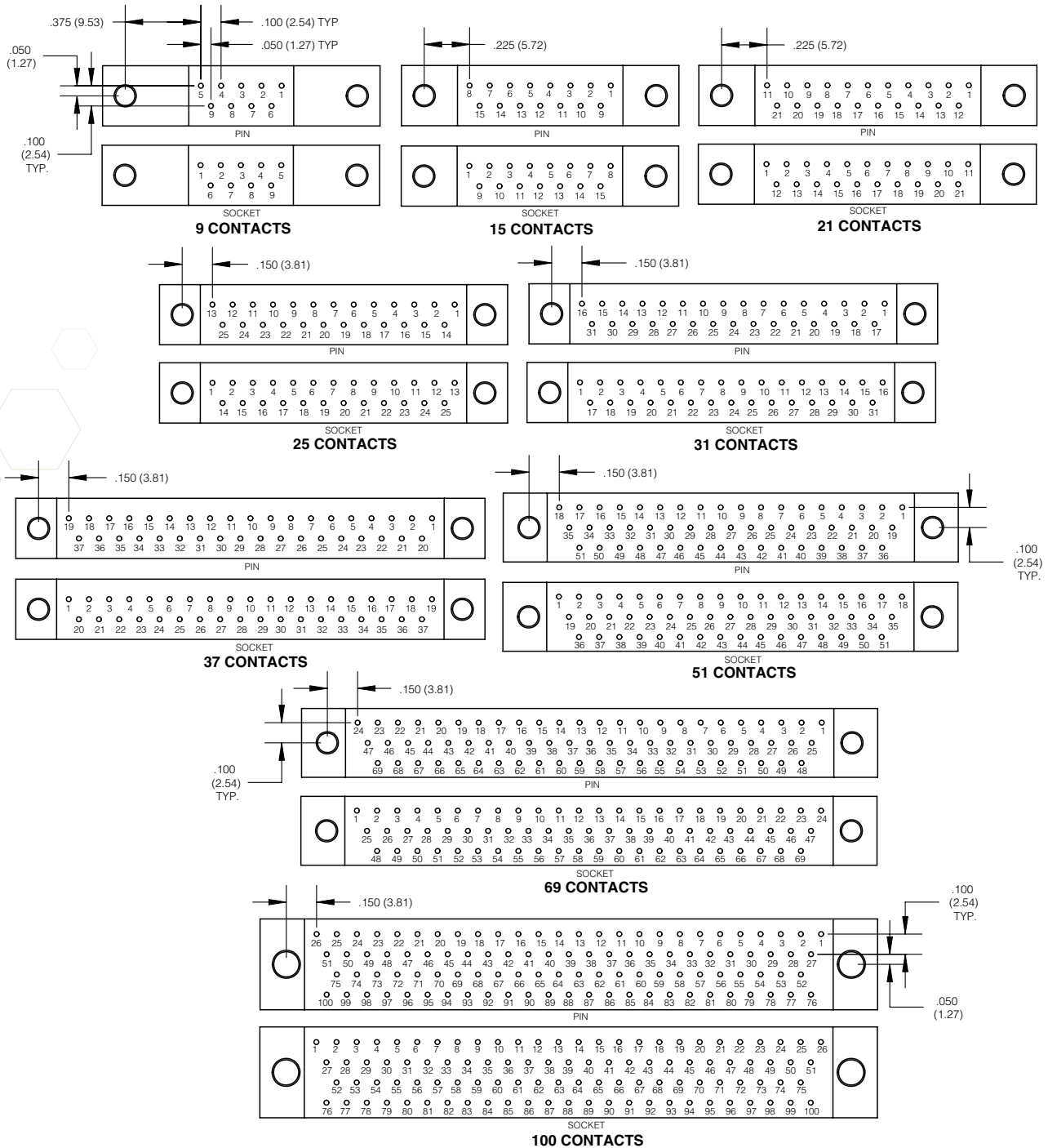
Series 100, 101, 102 & 104

Qualified to M83513 (slash sheets 22 thru 27)
Series 101, 102 & 104 are non QPL

BS STRAIGHT PCB CONFIGURATIONS (REAR VIEW)

.100 (2.54) x .100 (2.54) grid pattern, offset .050 (1.27)

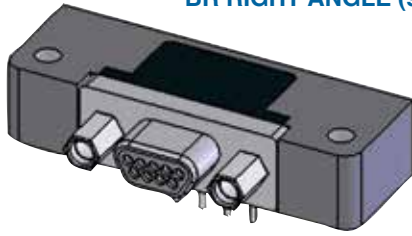
Cavity identification numbers are for reference only and do not appear on the connector.



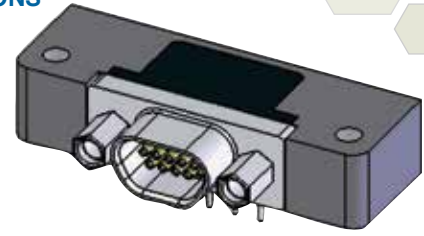
Inches (mm)
All dimensions for reference only

Qualified to M83513 (slash sheets 16 thru 21)

BR RIGHT ANGLE (90 DEG) PCB CONFIGURATIONS

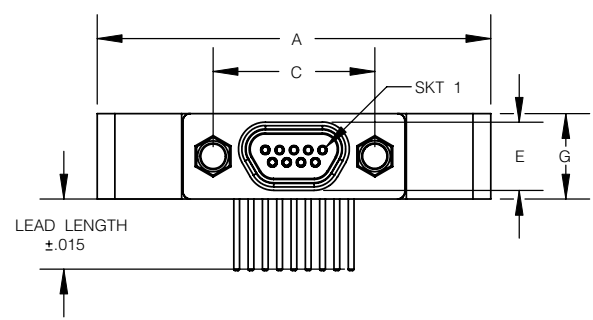
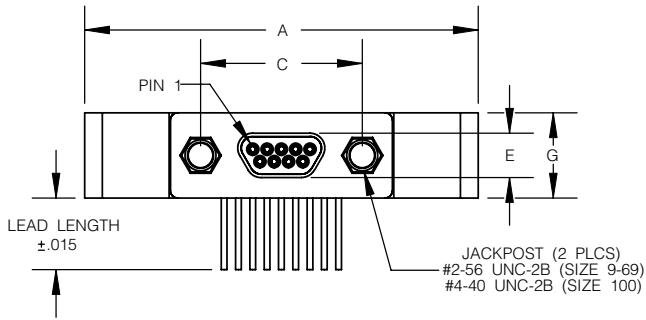


PLUG



RECEPTACLE

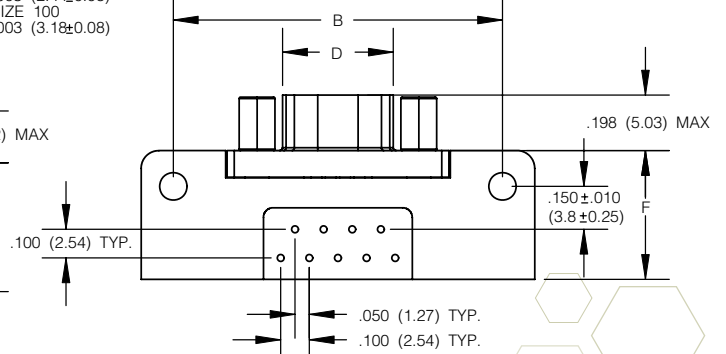
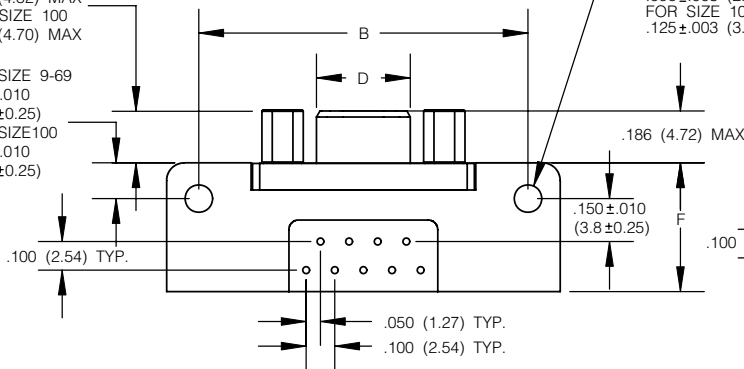
* INTERFACIAL SEAL NOT INCL. FOR PLASTIC SHELL



FOR SIZE 9-69
.190 (4.82) MAX
FOR SIZE 100
.185 (4.70) MAX

FOR SIZE 9-69
.125 \pm .010
(3.18 \pm 0.25)
FOR SIZE 100
.225 \pm .010
(5.72 \pm 0.25)

THRU HOLE (2 PLCS)
FOR SIZE 9-69
.096 \pm .003 (2.44 \pm 0.08)
FOR SIZE 100
.125 \pm .003 (3.18 \pm 0.08)



| SIZE | A MAX | B $\pm.007$ (0.18) | C $\pm.005$ (0.13) | D MAX | | E MAX | | F MAX | G MAX |
|------|---------------|-----------------------|-----------------------|---------------|---------------|-------------|--------------|--------------|--------------|
| | | | | PLUG | RCPT | PLUG | RCPT | | |
| 09 | 1.390 (35.31) | 1.150 (29.21) | .565 (14.35) | .334 (8.48) | .402 (10.21) | .185 (4.70) | .253 (6.43) | .455 (11.56) | .308 (7.82) |
| 15 | 1.540 (39.12) | 1.300 (33.02) | .715 (18.16) | .484 (12.29) | .552 (13.97) | .185 (4.70) | .253 (6.43) | .455 (11.56) | .308 (7.82) |
| 21 | 1.690 (42.93) | 1.450 (36.83) | .865 (21.97) | .634 (16.10) | .702 (17.83) | .185 (4.70) | .253 (6.43) | .455 (11.56) | .308 (7.82) |
| 25 | 1.790 (45.47) | 1.550 (39.37) | .965 (24.51) | .734 (18.64) | .802 (20.37) | .185 (4.70) | .253 (6.43) | .455 (11.56) | .308 (7.82) |
| 31 | 2.040 (51.82) | 1.800 (45.72) | 1.115 (28.32) | .884 (22.45) | .952 (24.18) | .185 (4.70) | .253 (6.43) | .455 (11.56) | .308 (7.82) |
| 37 | 2.340 (59.44) | 2.100 (53.34) | 1.265 (32.13) | 1.034 (26.26) | 1.102 (27.99) | .185 (4.70) | .253 (6.43) | .455 (11.56) | .308 (7.82) |
| 51 | 1.875 (47.63) | 1.600 (40.64) | 1.215 (30.86) | .984 (24.99) | 1.052 (26.72) | .228 (5.79) | .296 (7.52) | .565 (14.35) | .351 (8.92) |
| 69 | 2.500 (63.50) | 2.200 (55.88) | 1.515 (38.48) | 1.289 (32.74) | 1.357 (34.47) | .228 (5.79) | .296 (7.52) | .565 (14.35) | .351 (8.92) |
| 100 | 2.780 (70.61) | 2.500 (63.50) | 1.800 (45.72) | 1.386 (35.15) | 1.508 (38.10) | .271 (6.88) | .394 (10.01) | .765 (19.43) | .394 (10.01) |

Inches (mm)
All dimensions for reference only

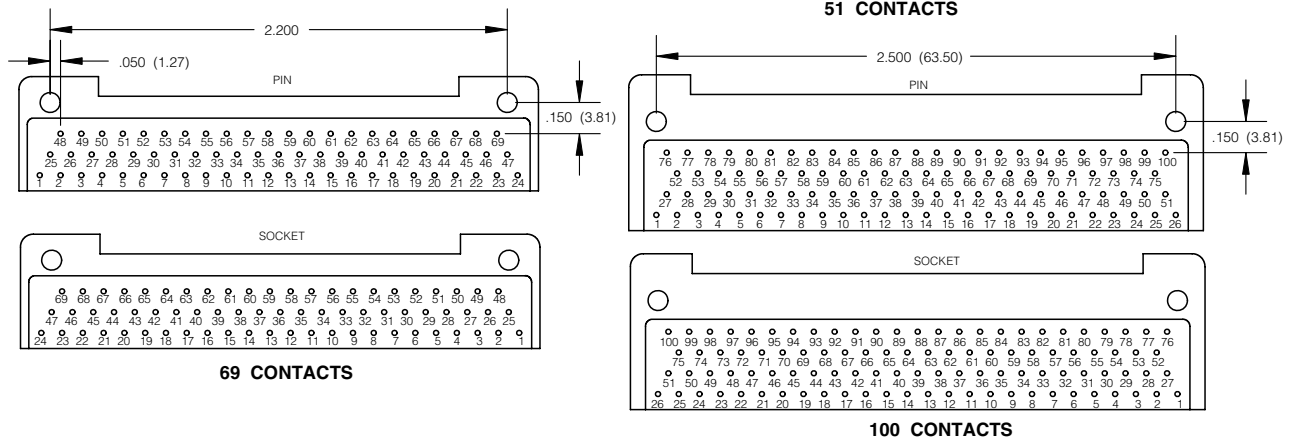
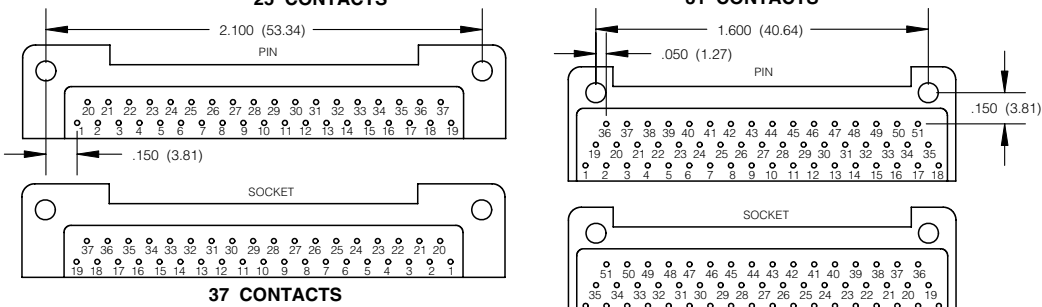
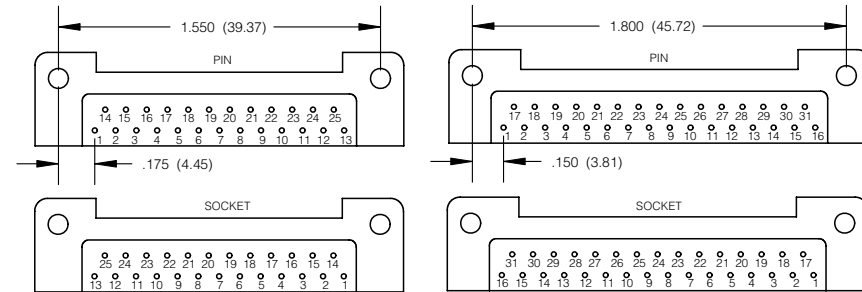
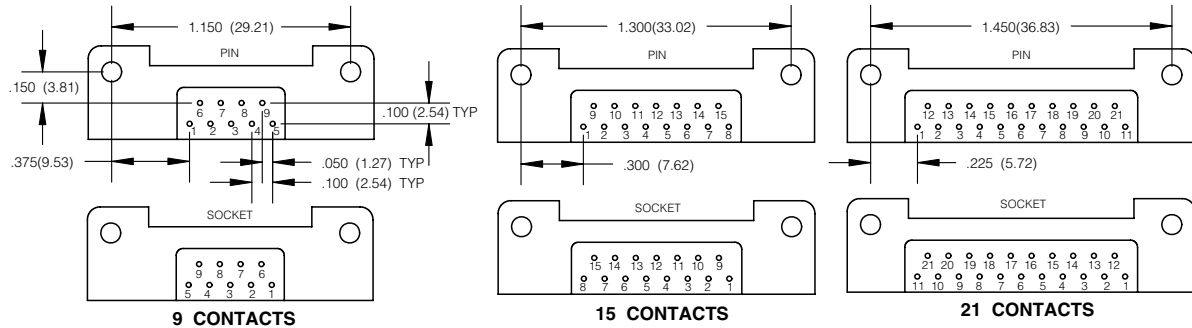
Series 100, 101, 102 & 104

Qualified to M83513 (slash sheets 16 thru 21)
Series 101, 102 & 104 are non QPL

BR RIGHT ANGLE (90 DEG) PCB CONFIGURATIONS

.100 (2.54) x .100 (2.54) grid pattern, offset .050 (1.27)

Cavity identification numbers are for reference only and do not appear on the connector.



Inches (mm)
All dimensions for reference only

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

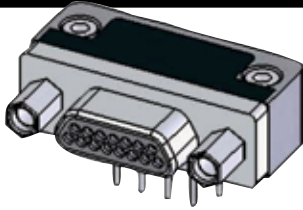
Micro-D

Terrapin

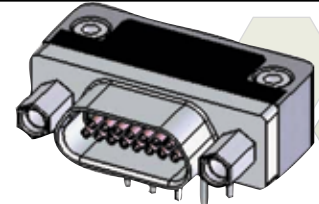
Nexus

Qualified to M83513 (slash sheets 10 thru 15)

CBR RIGHT ANGLE (90 DEG) NARROW PROFILE PCB CONFIGURATIONS

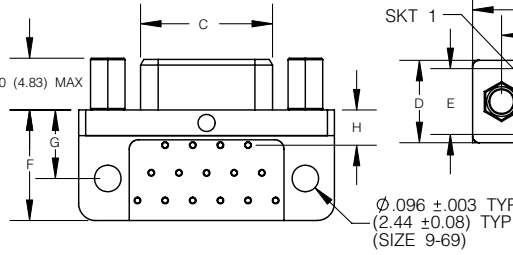
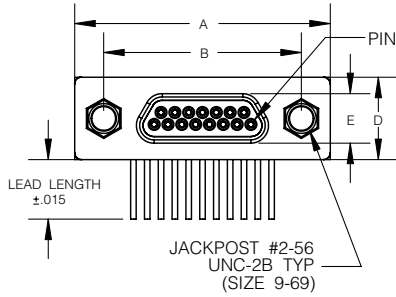


PLUG

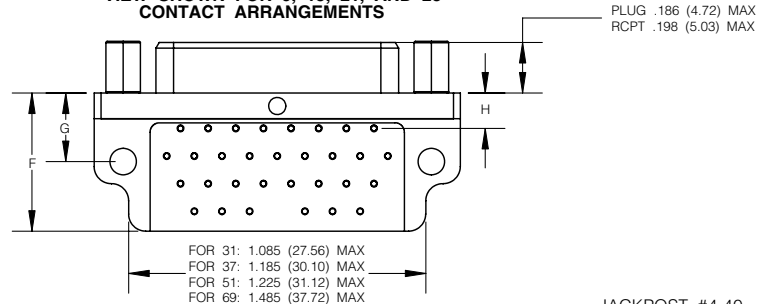


RECEPTACLE

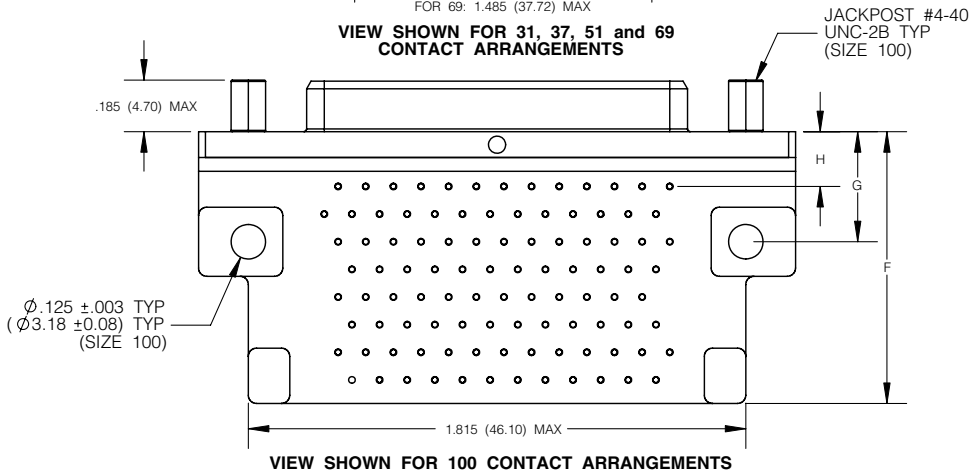
*INTERFACIAL SEAL NOT INCL. FOR PLASTIC SHELL



VIEW SHOWN FOR 9, 15, 21, AND 25 CONTACT ARRANGEMENTS



VIEW SHOWN FOR 31, 37, 51 and 69 CONTACT ARRANGEMENTS



VIEW SHOWN FOR 100 CONTACT ARRANGEMENTS

| SIZE | A MAX | B ±.005 (0.13) | C MAX | | D MAX | E MAX | | F MAX | G ±.010 (0.25) | H ±.010 (0.25) |
|------|---------------|-------------------|---------------|---------------|--------------|-------------|--------------|---------------|-------------------|-------------------|
| | | | PLUG | RCPT | | PLUG | RCPT | | | |
| 09 | .785 (19.94) | .565 (14.35) | .334 (8.48) | .402 (10.21) | .308 (7.82) | .185 (4.70) | .253 (6.43) | .420 (10.67) | .250 (6.35) | .230 (5.81) |
| 15 | .935 (23.75) | .715 (18.16) | .484 (12.29) | .552 (13.97) | .308 (7.82) | .185 (4.70) | .253 (6.43) | .420 (10.67) | .250 (6.35) | .130 (3.30) |
| 21 | 1.085 (27.56) | .865 (21.97) | .634 (16.10) | .702 (17.83) | .308 (7.82) | .185 (4.70) | .253 (6.43) | .420 (10.67) | .250 (6.35) | .130 (3.30) |
| 25 | 1.185 (30.10) | .965 (24.51) | .734 (18.64) | .802 (20.37) | .308 (7.82) | .185 (4.70) | .253 (6.43) | .420 (10.67) | .250 (6.35) | .130 (3.30) |
| 31 | 1.335 (33.91) | 1.115 (28.32) | .884 (22.45) | .952 (24.18) | .308 (7.82) | .185 (4.70) | .253 (6.43) | .520 (13.21) | .250 (6.35) | .130 (3.30) |
| 37 | 1.485 (37.72) | 1.265 (32.13) | 1.034 (26.26) | 1.102 (27.99) | .308 (7.82) | .185 (4.70) | .253 (6.43) | .520 (13.21) | .250 (6.35) | .130 (3.30) |
| 51 | 1.435 (36.45) | 1.215 (30.86) | .984 (24.99) | 1.052 (26.72) | .351 (8.92) | .228 (5.79) | .296 (7.52) | .650 (16.15) | .300 (7.62) | .150 (3.81) |
| 69 | 1.735 (44.07) | 1.515 (38.48) | 1.289 (32.74) | 1.357 (34.47) | .351 (8.92) | .228 (5.79) | .296 (7.52) | .755 (19.18) | .300 (7.62) | .150 (3.81) |
| 100 | 2.170 (55.12) | 1.800 (45.72) | 1.386 (35.15) | 1.508 (38.10) | .394 (10.01) | .271 (6.88) | .394 (10.01) | 1.000 (25.40) | .400 (10.16) | .200 (5.08) |

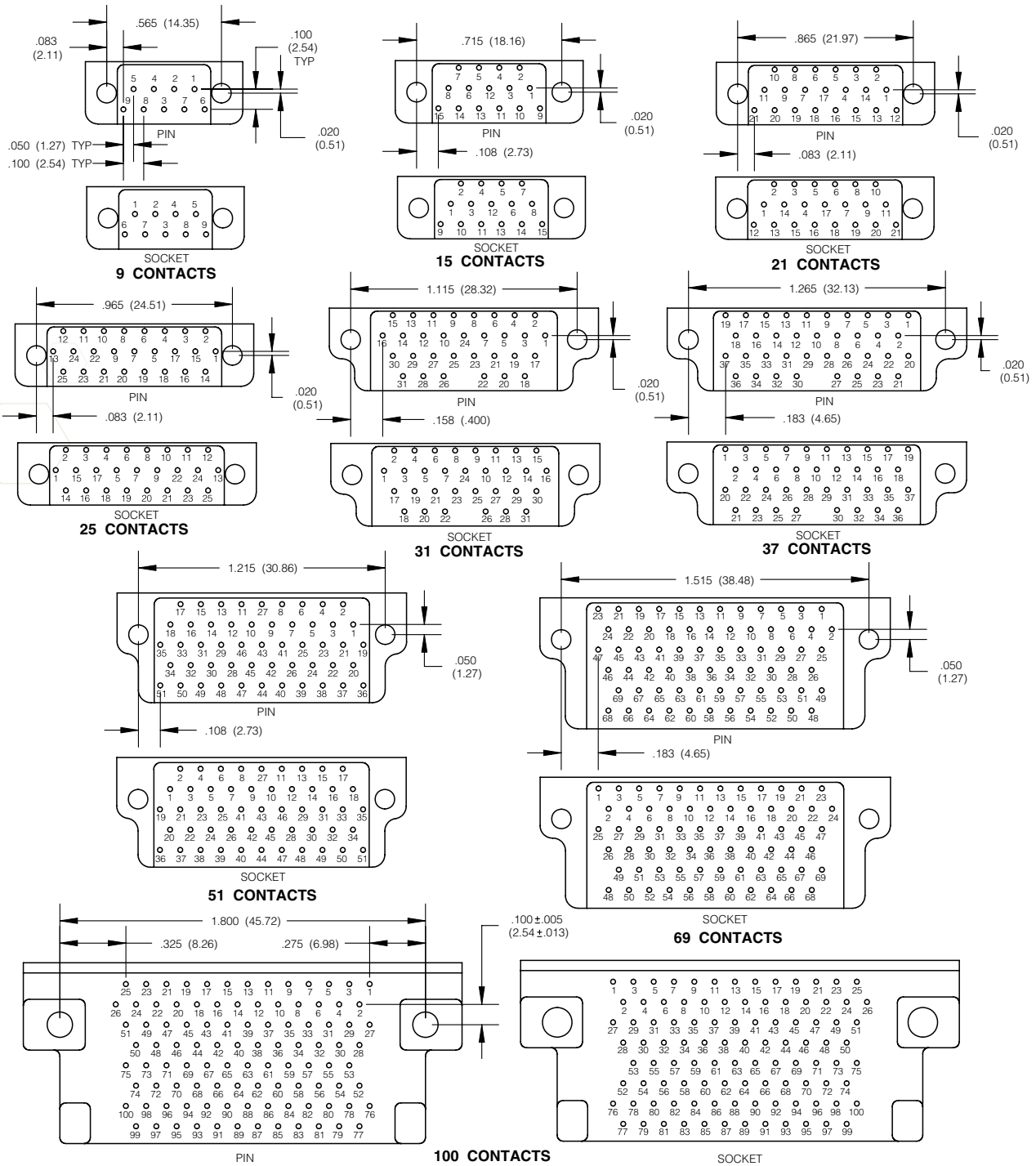
Inches (mm)
All dimensions for reference only

Qualified to M83513 (slash sheets 10 thru 15) Series 101, 102 & 104 are non QPL

CBR RIGHT ANGLE (90 DEG) NARROW PROFILE PCB CONFIGURATIONS

.100 (2.54) x .100 (2.54) grid pattern, offset .050 (1.27)

Cavity identification numbers are for reference only and do not appear on the connector.



Inches (mm)
 All dimensions for reference only

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

Accessories

2M

HD38999

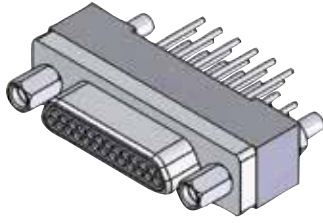
Micro-D

Terrapin

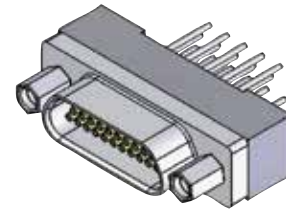
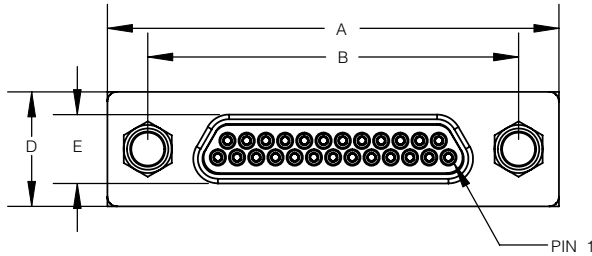
Nexus

Qualified to M83513 (slash sheets 28 thru 33)

C6 STRAIGHT PCB TERMINATION TYPE CONFIGURATIONS

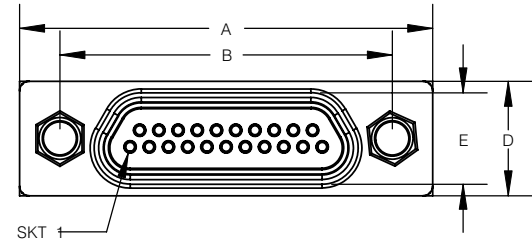


PLUG



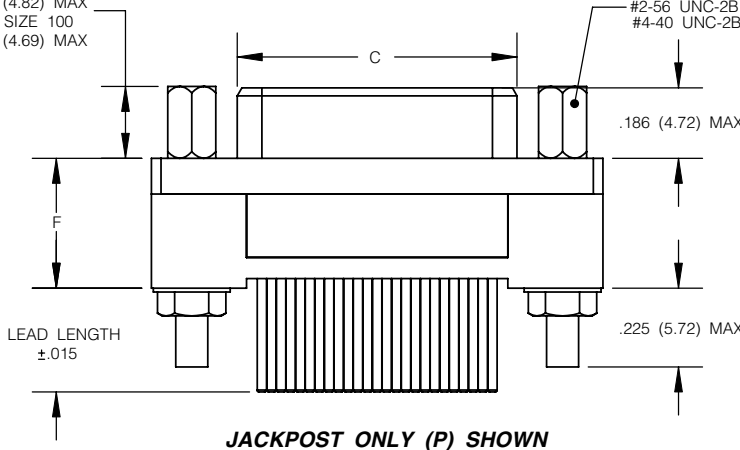
RECEPTACLE

* INTERFACIAL SEAL NOT INCL. FOR PLASTIC SHELL

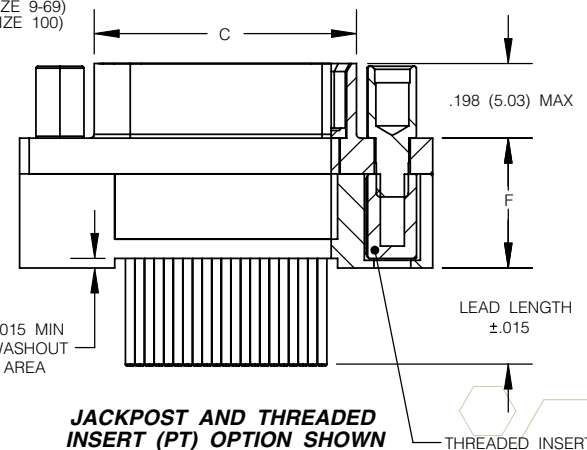


FOR SIZE 9-69
.190 (4.82) MAX
FOR SIZE 100
.185 (4.69) MAX

JACKPOST (2 PLCS)
#2-56 UNC-2B (SIZE 9-69)
#4-40 UNC-2B (SIZE 100)



JACKPOST ONLY (P) SHOWN

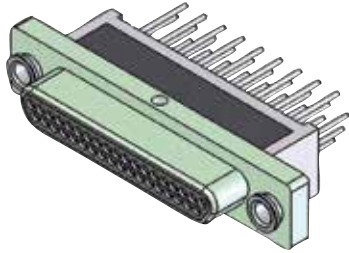


JACKPOST AND THREADED INSERT (PT) OPTION SHOWN

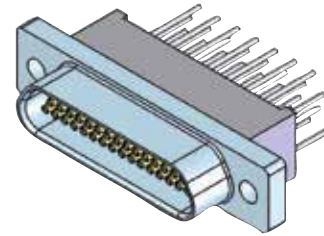
| SIZE | A MAX | B ±.005 (0.13) | C MAX | | D MAX | E MAX | | F MAX |
|------|---------------|-------------------|---------------|---------------|--------------|-------------|--------------|--------------|
| | | | PLUG | RCPT | | PLUG | RCPT | |
| 09 | .785 (19.94) | .565 (14.35) | .334 (8.48) | .402 (10.21) | .310 (7.87) | .185 (4.70) | .253 (6.43) | .335 (8.51) |
| 15 | .935 (23.75) | .715 (18.16) | .484 (12.29) | .552 (13.97) | .310 (7.87) | .185 (4.70) | .253 (6.43) | .335 (8.51) |
| 21 | 1.085 (27.56) | .865 (21.97) | .634 (16.10) | .702 (17.83) | .310 (7.87) | .185 (4.70) | .253 (6.43) | .335 (8.51) |
| 25 | 1.185 (30.10) | .965 (24.51) | .734 (18.64) | .802 (20.37) | .310 (7.87) | .185 (4.70) | .253 (6.43) | .335 (8.51) |
| 31 | 1.335 (33.91) | 1.115 (28.32) | .884 (22.45) | .952 (24.18) | .310 (7.87) | .185 (4.70) | .253 (6.43) | .335 (8.51) |
| 37 | 1.485 (37.72) | 1.265 (32.13) | 1.034 (26.26) | 1.102 (27.99) | .310 (7.87) | .185 (4.70) | .253 (6.43) | .335 (8.51) |
| 51 | 1.435 (36.45) | 1.215 (30.86) | .984 (24.99) | 1.052 (26.72) | .400 (10.16) | .228 (5.79) | .296 (7.52) | .335 (8.51) |
| 69 | 1.735 (44.07) | 1.515 (38.48) | 1.289 (32.74) | 1.357 (34.47) | .400 (10.16) | .228 (5.79) | .296 (7.52) | .335 (8.51) |
| 100 | 2.160 (54.86) | 1.800 (45.72) | 1.384 (35.13) | 1.508 (38.10) | .510 (12.95) | .271 (6.88) | .394 (10.01) | .430 (10.92) |

Inches (mm)
All dimensions for reference only

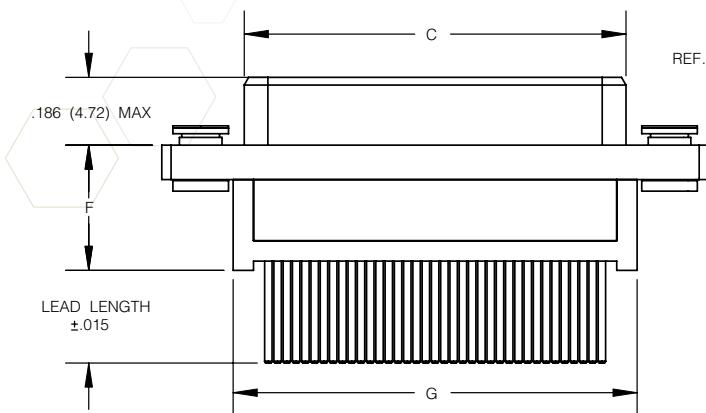
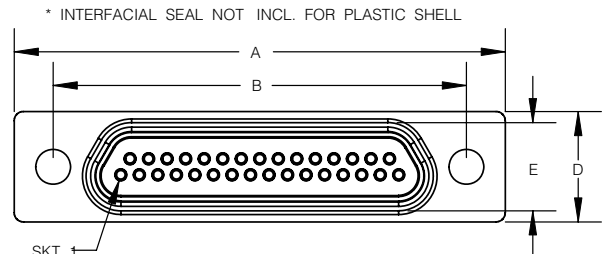
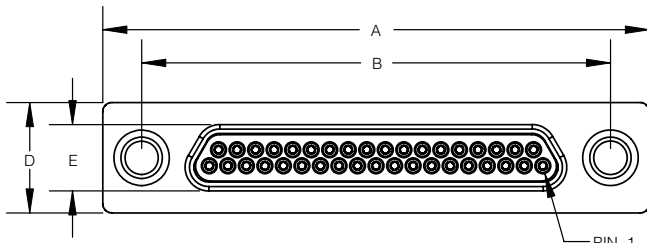
C16 STRAIGHT PCB WITH FLANGE TERMINATION TYPE



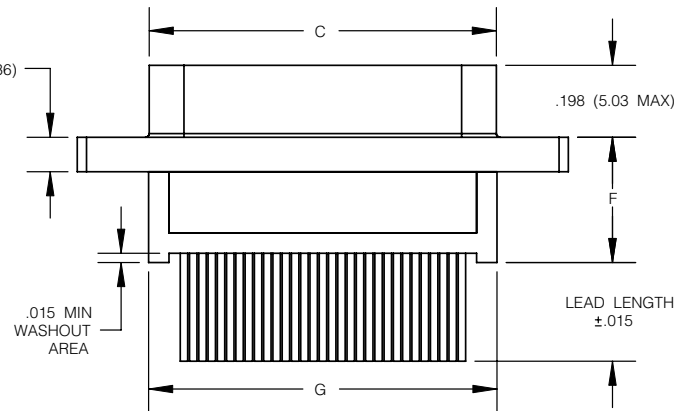
PLUG



RECEPTACLE



FORWARD FLOAT MOUNT (F) SHOWN



STANDARD MOUNTING HOLE (B) SHOWN

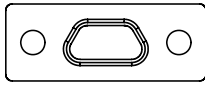
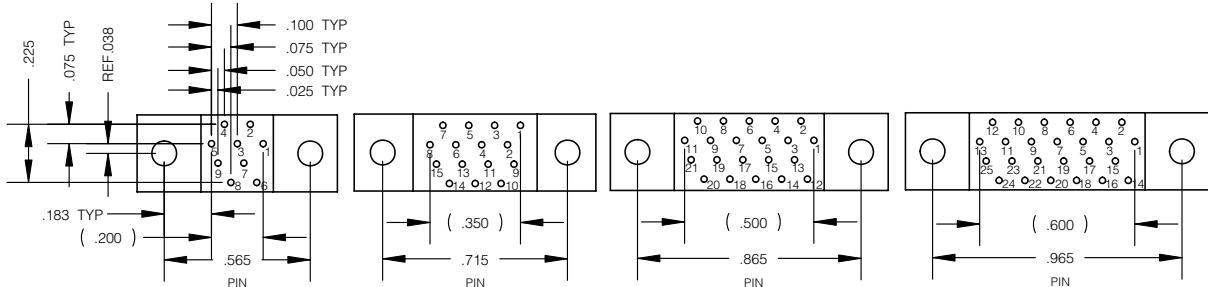
| SIZE | A MAX | B ±.005 (0.13) | C MAX | | D MAX | E MAX | | F MAX | G MAX |
|------|---------------|-------------------|---------------|---------------|--------------|-------------|--------------|--------------|---------------|
| | | | PLUG | RCPT | | PLUG | RCPT | | |
| 09 | .785 (19.94) | .565 (14.35) | .334 (8.48) | .402 (10.21) | .310 (7.87) | .185 (4.70) | .253 (6.43) | .335 (8.51) | .395 (10.03) |
| 15 | .935 (23.75) | .715 (18.16) | .484 (12.29) | .552 (13.97) | .310 (7.87) | .185 (4.70) | .253 (6.43) | .335 (8.51) | .545 (13.84) |
| 21 | 1.085 (27.56) | .865 (21.97) | .634 (16.10) | .702 (17.83) | .310 (7.87) | .185 (4.70) | .253 (6.43) | .335 (8.51) | .695 (17.65) |
| 25 | 1.185 (30.10) | .965 (24.51) | .734 (18.64) | .802 (20.37) | .310 (7.87) | .185 (4.70) | .253 (6.43) | .335 (8.51) | .795 (20.19) |
| 31 | 1.335 (33.91) | 1.115 (28.32) | .884 (22.45) | .952 (24.18) | .310 (7.87) | .185 (4.70) | .253 (6.43) | .335 (8.51) | .945 (24.00) |
| 37 | 1.485 (37.72) | 1.265 (32.13) | 1.034 (26.26) | 1.102 (27.99) | .310 (7.87) | .185 (4.70) | .253 (6.43) | .335 (8.51) | 1.095 (27.81) |
| 51 | 1.435 (36.45) | 1.215 (30.86) | .984 (24.99) | 1.052 (26.72) | .400 (10.16) | .228 (5.79) | .296 (7.52) | .335 (8.51) | 1.050 (26.67) |
| 69 | 1.735 (44.07) | 1.515 (38.48) | 1.289 (32.74) | 1.357 (34.47) | .400 (10.16) | .228 (5.79) | .296 (7.52) | .335 (8.51) | 1.350 (34.29) |
| 100 | 2.160 (54.86) | 1.800 (45.72) | 1.384 (35.13) | 1.508 (38.10) | .510 (12.95) | .271 (6.88) | .394 (10.01) | .430 (10.92) | 1.450 (36.83) |

Inches (mm)
All dimensions for reference only

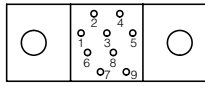
Qualified to M83513 (slash sheets 28 thru 33) Series 101, 102 & 104 are non QPL

C6 & C16 VERTICAL MOUNT (TERMINATION VIEW)

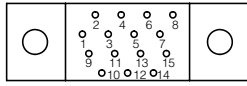
Cavity identification numbers are for reference only and do not appear on the connector.



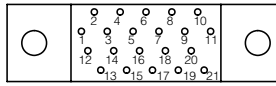
MATING FACE VIEW



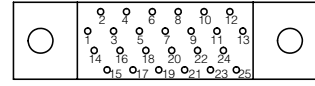
SOCKET
9 CONTACTS



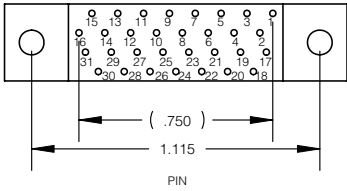
SOCKET
15 CONTACTS



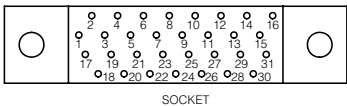
SOCKET
21 CONTACTS



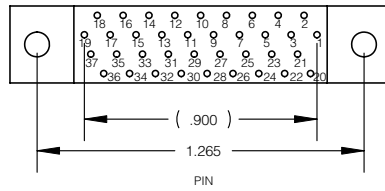
SOCKET
25 CONTACTS



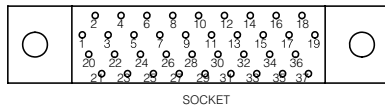
PIN



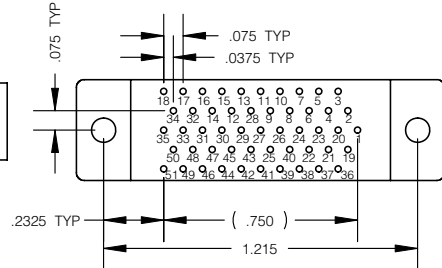
SOCKET
31 CONTACTS



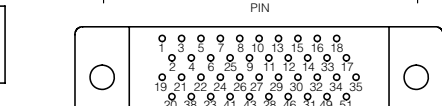
PIN



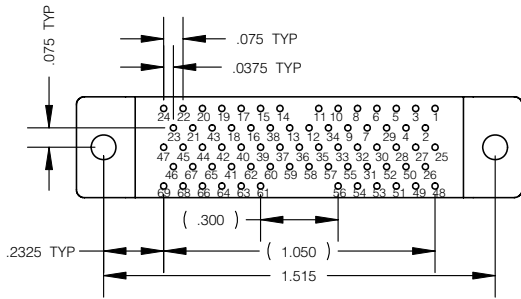
SOCKET
37 CONTACTS



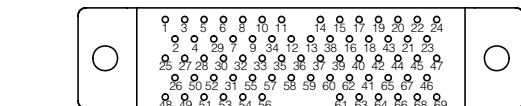
PIN



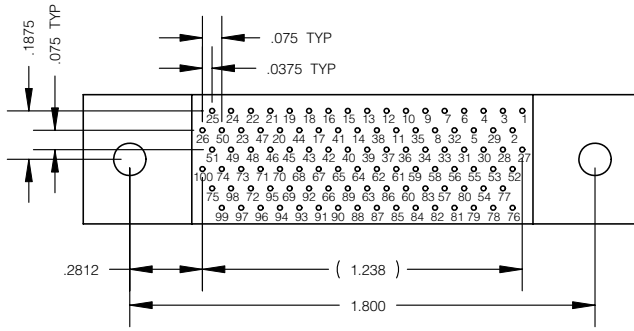
SOCKET
51 CONTACTS



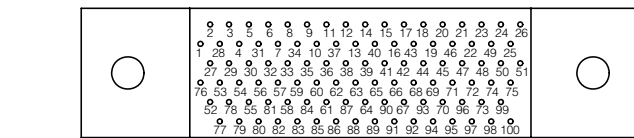
PIN



SOCKET
69 CONTACTS

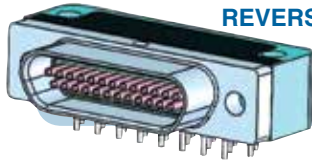


PIN



SOCKET
100 CONTACTS

Inches (mm)
All dimensions for reference only



REVERSED POLARIZATION CBR TERMINATION TYPE NARROW (90 DEGREE) PCB

Example:
110RN21P-CBRP1

Description: metal shell size 21 plug, reversed polarization, nickel finish, CBR termination, PCB tail lead length .109 inches with jackposts included.

110 R X XXX X - CBR X X X - XXX

Connector Series
110 = reversed CBR type
metal shell per M83513

Insulator Material
R = Polyphenylene Sulfide (Ryton)

Shell Finish
A = anodize
C = cadmium
G = gold
I = irridite/alodine
N = electroless nickel
T = tin

Connector Size (number of contacts)
09, 15, 21, 25, 31, 37, 51, 69, 100
All sizes I.A.W. M83513 except size 69 (non-military)

Connector Type
P = Plug (pin)
S = Receptacle (socket)

Non Std. Wire Length
(0.109 < length < 1.00)
e.g. 125 = .125 inches

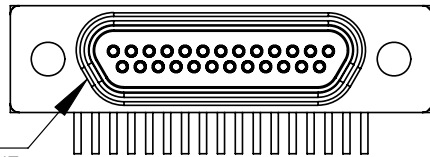
Lead Length (inches)
1 = .109 ± .015
2 = .140 ± .015
3 = .172 ± .015
4 = .250 ± .015
F = non std. length (add to end of part no.)

Threaded Insert (pre-installed)
T = threaded insert (PCB mounting option)
Omit for no threaded insert

Hardware (pre-installed)
P = jackpost
Omit for no jackpost

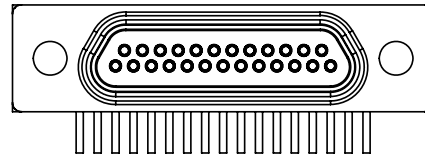
Termination Type
CBR = narrow 90° PCB (dimensionally same as M83513/10 thru /15)

REVERSED POLARIZATION CBR CONNECTOR



POLARIZATION / "D" SHAPE KEYSTONE

STANDARD CBR CONNECTOR

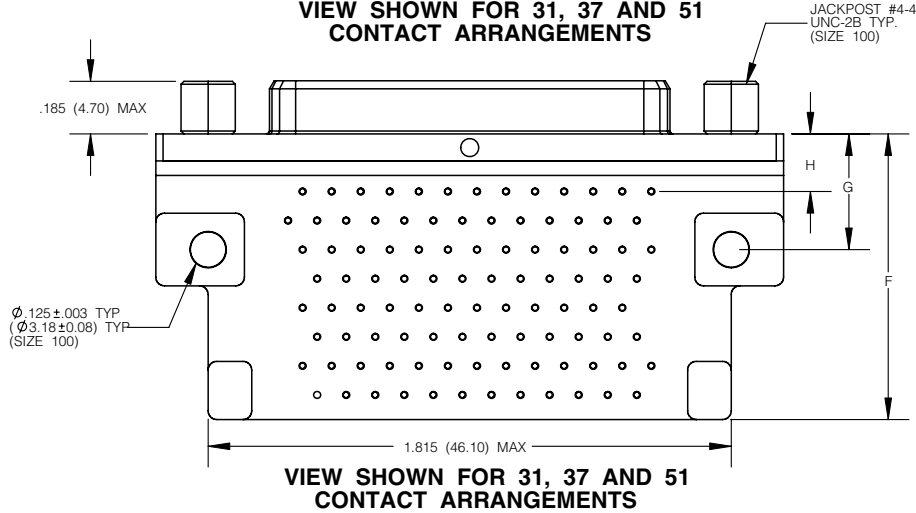
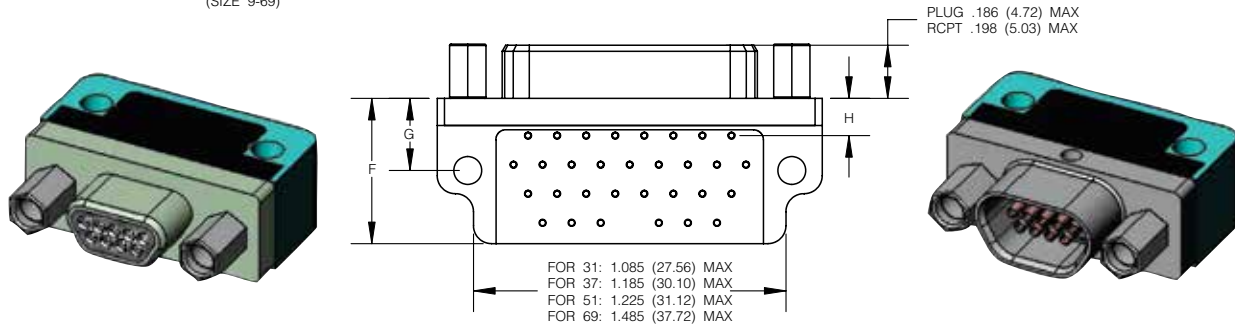
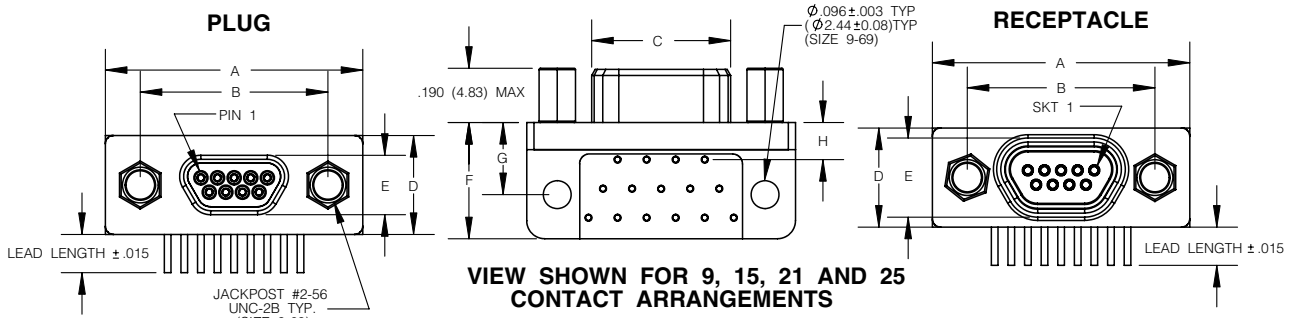


Features

- Polarization is reversed from a standard series 100 CBR type connector.
- Available in sizes 9 thru 100, right angle PCB termination.
- Solid copper 24 AWG PCB leads, tin plated, and solder dipped.
- Wide selection of hardware options.

Inches (mm)
All dimensions for reference only

REVERSE POLARIZATION CBR RIGHT ANGLE (90 DEG) NARROW PROFILE PCB CONFIGURATIONS



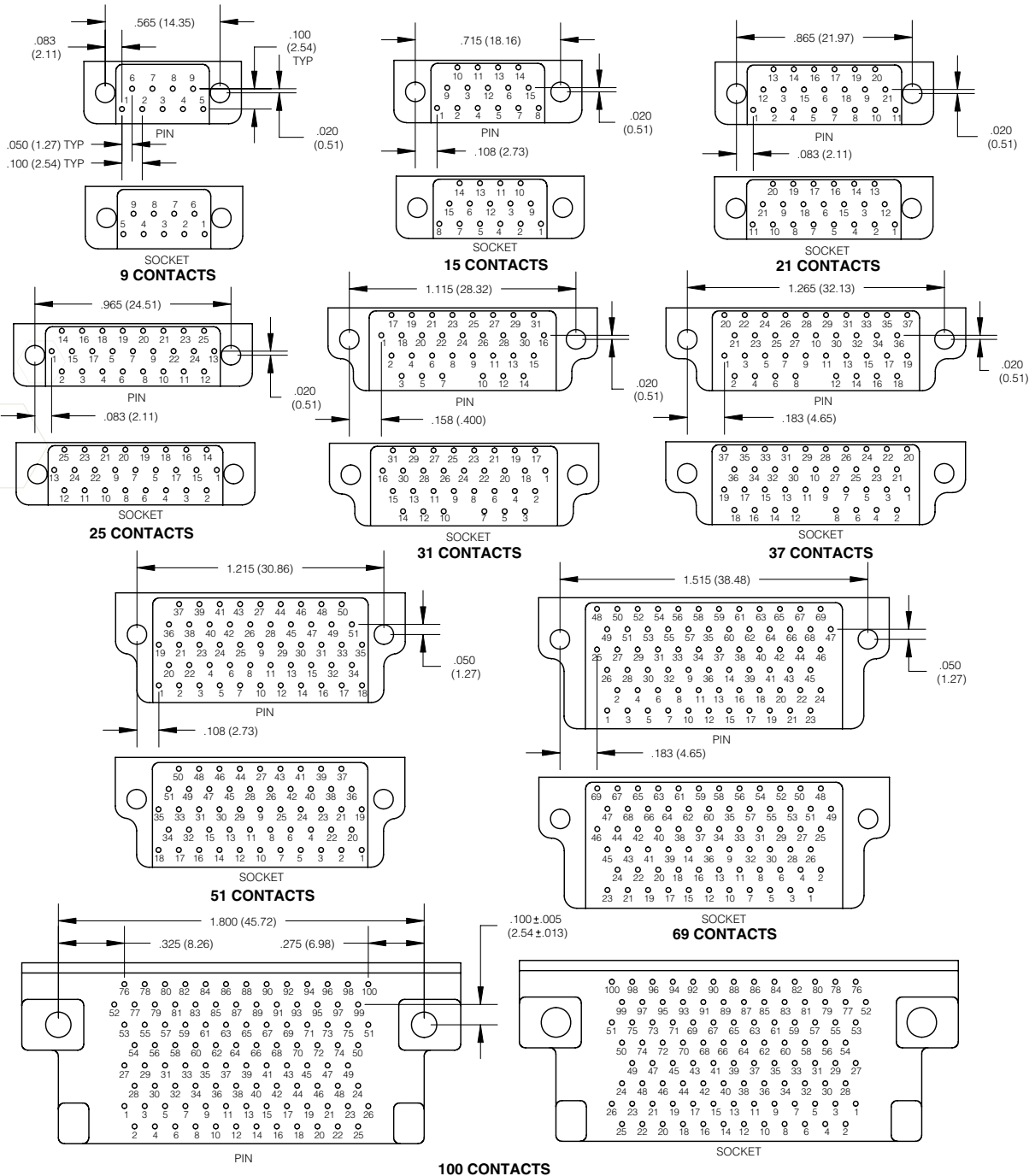
| SIZE | A MAX | B ±.005 (0.13) | C MAX | | D MAX | E MAX | | F MAX | G ±.010 (0.25) | H ±.010 (0.25) |
|------|---------------|-------------------|---------------|---------------|--------------|-------------|--------------|---------------|-------------------|-------------------|
| | | | PLUG | RCPT | | PLUG | RCPT | | | |
| 09 | .785 (19.94) | .565 (14.35) | .334 (8.48) | .402 (10.21) | .308 (7.82) | .185 (4.70) | .253 (6.43) | .420 (10.67) | .250 (6.35) | .230 (5.81) |
| 15 | .935 (23.75) | .715 (18.16) | .484 (12.29) | .552 (13.97) | .308 (7.82) | .185 (4.70) | .253 (6.43) | .420 (10.67) | .250 (6.35) | .130 (3.30) |
| 21 | 1.085 (27.56) | .865 (21.97) | .634 (16.10) | .702 (17.83) | .308 (7.82) | .185 (4.70) | .253 (6.43) | .420 (10.67) | .250 (6.35) | .130 (3.30) |
| 25 | 1.185 (30.10) | .965 (24.51) | .734 (18.64) | .802 (20.37) | .308 (7.82) | .185 (4.70) | .253 (6.43) | .420 (10.67) | .250 (6.35) | .130 (3.30) |
| 31 | 1.335 (33.91) | 1.115 (28.32) | .884 (22.45) | .952 (24.18) | .308 (7.82) | .185 (4.70) | .253 (6.43) | .520 (13.21) | .250 (6.35) | .130 (3.30) |
| 37 | 1.485 (37.72) | 1.265 (32.13) | 1.034 (26.26) | 1.102 (27.99) | .308 (7.82) | .185 (4.70) | .253 (6.43) | .520 (13.21) | .250 (6.35) | .130 (3.30) |
| 51 | 1.435 (36.45) | 1.215 (30.86) | .984 (24.99) | 1.052 (26.72) | .351 (8.92) | .228 (5.79) | .296 (7.52) | .650 (16.15) | .300 (7.62) | .150 (3.81) |
| 69 | 1.735 (44.07) | 1.515 (38.48) | 1.289 (32.74) | 1.357 (34.47) | .351 (8.92) | .228 (5.79) | .296 (7.52) | .755 (19.18) | .300 (7.62) | .150 (3.81) |
| 100 | 2.170 (55.12) | 1.800 (45.72) | 1.386 (35.15) | 1.508 (38.10) | .394 (10.01) | .271 (6.88) | .394 (10.01) | 1.000 (25.40) | .400 (10.16) | .200 (5.08) |

Inches (mm)
All dimensions for reference only

REVERSE POLARIZATION CBR RIGHT ANGLE (90 DEG) NARROW PROFILE PCB CONFIGURATIONS

.100 (2.54) x .100 (2.54) grid pattern, offset .050 (1.27)

Cavity identification numbers are for reference only and do not appear on the connector.



Inches (mm)
All dimensions for reference only

Qualified to M83513 (slash sheets 06 thru 09)

Example:
101R09P-4A5FM2-20

Description: Plastic shell size 9 plug, 26 AWG wire type "A", non-std wire length 20 inches with M2 low profile jackscrews.

101 R XXX X - X X X X XX - XXX

Connector Series

101 = all plastic shell

Insulator Material

R = Polyphenylene Sulfide (Ryton)

Connector Size (number of contacts)

09, 15, 21, 25, 31, 37, 51

Connector Type

P = plug (pin)
S = receptacle (socket)

Wire Size (AWG.)

1 = 32
2 = 30
3 = 28
4 = 26 (M83513 standard) *off shelf
5 = 25 (solid wire only)
6 = 24
Omit for solder cup contacts

Wire Type

General Applications:

A = 7 strd, per NEMA-HP3 (MIL-W-16878/4)
B = 7 strd, per NEMA-HP3 ((MIL-W-16878/6)
C = 19 strd, per NEMA-HP3 (MIL-W-16878/4)
D = 19 strd, per NEMA-HP3 (MIL-W-16878/6)

Military/Aerospace Applications:

E = per MIL-W-22759/11 (M83513 standard)
F = per MIL-W-22759/33 (space grade)
L = solid wire uninsulated
Omit for solder cup contacts

Non Std. Length (Inches)

Stranded Wire (no decimal values)
e.g. 1 = 1 inches, 100 = 100 inches
Solid Wire (0.109 < length < 1.00)
e.g. 110 = .110 inches, 999 = .999 inches

Hardware (pre-installed by factory)

B = standard mounting holes
P = jackpost
M2 = low profile jackscrew, allen head
M3 = high profile jackscrew, allen head
M5 = low profile jackscrew, slot head
M6 = high profile jackscrew, slot head
L = captive low profile jackscrew
K = captive high profile jackscrew
F = forward float mount
R = reverse float mount

Wire Length ((inches +1.00/-0.00)

A = 18.00
B = 36.00
C = 72.00
D = 0.500 (solid wire only +0.20/-0.00)
E = 1.00 (solid wire only +0.20/-0.00)
F = Non std. length (add to end of part no.)
Omit for solder cup contacts

Wire Color / Finish

1 = all white (M83513 standard) *off shelf
2 = all yellow
3 = solid wire uninsulated, tin plated
4 = solid wire uninsulated, gold plated
5 = color coded per mil-std-681, system 1
6 = 1st 10 colors blk. thru wht. repeated (M83513 standard) *off shelf
Omit for solder cup contacts

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

Micro-D

Terrapin

Nexus



Inches (mm)
All dimensions for reference only

M83513 Solder Cup or Crimp Termination - How to Order

Qualified to M83513 (slash sheets 06 thru 09)

Solder Cup Termination:

M83513/XX - X

Specification Sheet
06 = plug (pin)
07 = receptacle (socket)

Insert Arrangement
A = 9
B = 15
C = 21
D = 25
E = 31
F = 37
G = 51

Sizes 69 & 100 not available per M83513

Note: Mounting and mating hardware to be ordered separately per M83513.

Crimp Termination:

M83513/XX - X XX

Specification Sheet
08 = plug (pin)
09 = receptacle (socket)

Insert Arrangement
A = 9
B = 15
C = 21
D = 25
E = 31
F = 37
G = 51

Sizes 69 & 100 not available per M83513

Wire Type (inches +1.00/-0.00)

- 01** = M22759/11-26-9, 18"
- 02** = M22759/11-26-9, 36"
- 03** = M22759/11-26-(*), 18"
- 04** = M22759/11-26-(*), 36"
- 05** = A-A-59551, type S, 25 AWG, except shall be gold plated 10 micro-inches; 0.5"
- 06** = A-A-59551, type S, 25 AWG, except shall be gold plated 10 micro-inches; 1.0"
- 07** = A-A-59551, type S, 25 AWG, tin plated 100 micro-inches; 0.5"
- 08** = A-A-59551, type S, 25 AWG, tin plated 100 micro-inches; 1.0"
- 09** = M22759/33-26-9, 18"
- 10** = M22759/33-26-9, 36"
- 11** = M22759/33-26-(*), 18"
- 12** = M22759/33-26-(*), 36"
- 13** = M22759/11-26-9, 72"
- 14** = M22759/11-26-(*), 72"
- 15** = M22759/33-26-9, 72"
- 16** = M22759/33-26-(*), 72"
- 17** = 04035-26A-9, 18"
- 18** = 04035-26A-9, 36"
- 19** = 04035-26A-9, 72"
- 20** = 04035-26A-(*), 18"
- 21** = 04035-26A-(*), 36"
- 22** = 04035-26A-(*), 72"

Inches (mm)
 All dimensions for reference only

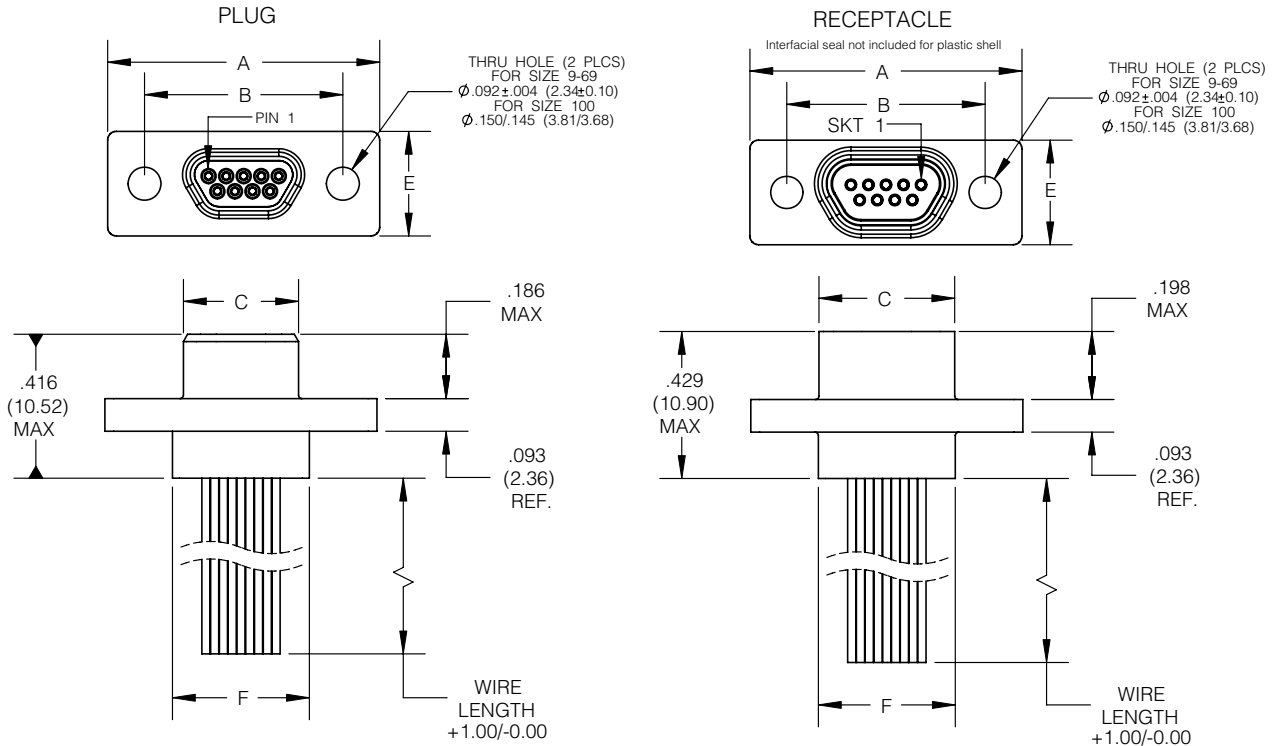
- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

Qualified to M83513 (slash sheets 06 thru 09)



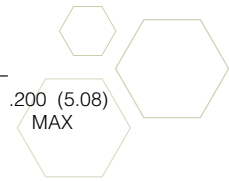
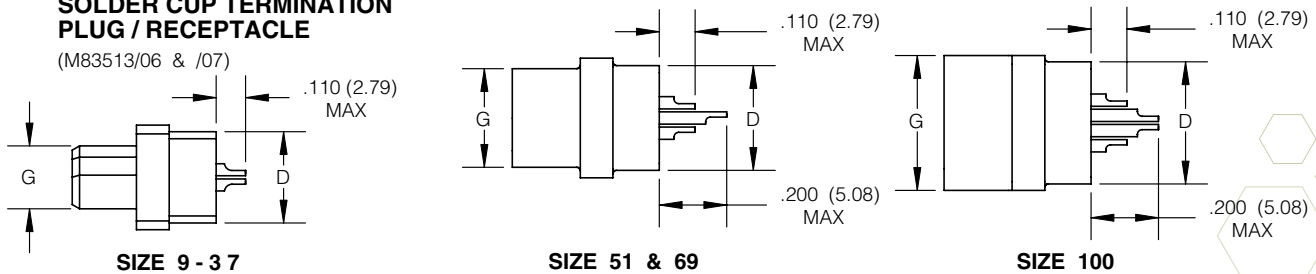
WIRE TERMINATION

(M83513/08 & /09)



SOLDER CUP TERMINATION PLUG / RECEPTACLE

(M83513/06 & /07)

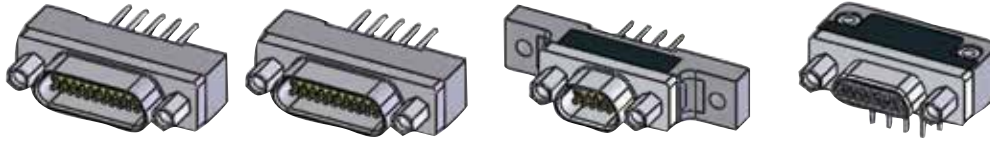


| SIZE | A MAX | B $\pm .005$ (0.13) | C MAX | | D MAX | E MAX | F MAX | G MAX | |
|------|---------------|------------------------|--------------|---------------|-------------|-------------|---------------|-------------|-------------|
| | | | PLUG | RCPT | | | | PLUG | RCPT |
| 09 | .788 (20.02) | .565 (14.35) | .292 (7.42) | .380 (9.65) | .173 (4.39) | .218 (5.54) | .408 (10.36) | .134 (3.40) | .218 (5.54) |
| 15 | .938 (23.82) | .715 (18.16) | .442 (11.23) | .530 (13.46) | .173 (4.39) | .218 (5.54) | .588 (14.17) | .134 (3.40) | .218 (5.54) |
| 21 | 1.088 (27.64) | .865 (21.97) | .592 (15.04) | .680 (17.27) | .173 (4.39) | .218 (5.54) | .708 (17.98) | .134 (3.40) | .218 (5.54) |
| 25 | 1.188 (30.18) | .965 (24.51) | .692 (17.58) | .780 (19.81) | .173 (4.39) | .218 (5.54) | .808 (20.56) | .134 (3.40) | .218 (5.54) |
| 31 | 1.338 (33.98) | 1.115 (28.32) | .842 (21.39) | .930 (23.62) | .173 (4.39) | .218 (5.54) | .958 (24.33) | .134 (3.40) | .218 (5.54) |
| 37 | 1.488 (37.80) | 1.265 (32.13) | .992 (25.20) | 1.080 (27.43) | .173 (4.39) | .218 (5.54) | 1.108 (28.14) | .134 (3.40) | .218 (5.54) |
| 51 | 1.438 (36.52) | 1.215 (30.86) | .942 (23.93) | 1.030 (26.16) | .220 (5.59) | .260 (6.60) | 1.058 (26.87) | .177 (4.49) | .260 (6.60) |

Inches (mm)
All dimensions for reference only



Series 101- How to Order



Example:
101R21P-CBRP1

Description: plastic shell size 21 plug, CBR termination, PCB tail lead length .109 inches with jackposts included.

100 R XX X - BR X X X - XXX

Connector Series
101 = all plastic shell

Insulator Material
R = Polyphenylene Sulfide (Ryton)

Connector Size (number of contacts)
09, 15, 21, 25, 31, 37, 51

Connector Type
P = plug (pin)
S = receptacle (socket)

Non Std. Wire Length (Inches)
(0.109 < length < 1.00)
e.g. 125 = .125 inches

Lead Length (inches)
1 = .109 ± .015
2 = .140 ± .015
3 = .172 ± .015
4 = .250 ± .015
F = non std. length (add to end of part no.)

Threaded Insert (pre-installed)
T = threaded insert (PCB mounting option)
Omit for no threaded insert

Hardware for BS, BR, CBR: (pre-installed)
P = jackpost
Omit for no jackpost

Termination Type
BS = straight PCB per M83513/22 thru /27
BR = 90° PCB per M83513/16 thru /21
CBR = narrow 90° PCB per M83513/10 thru /15

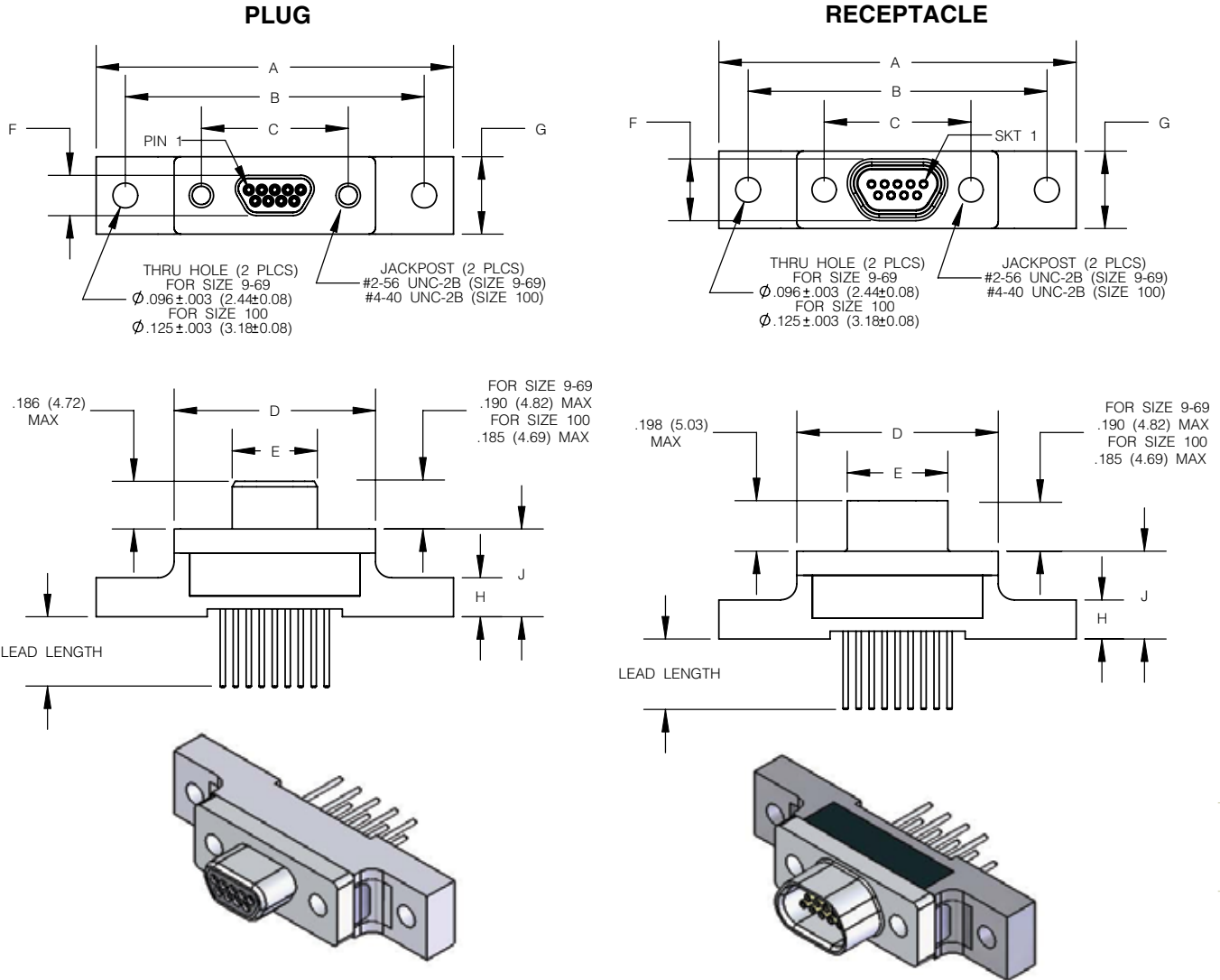
Features

- Available in sizes 9 thru 51, straight and right angle PCB termination.
- Solid copper 24 AWG PCB leads, tin plated, and solder dipped.
- Wide selection of hardware options.
- Consult Amphenol Aerospace for other wire size termination.

Inches (mm)
All dimensions for reference only

BS STRAIGHT PCB TERMINATION TYPE (MATES ONLY WITH SERIES 101)

Refer to page 147 for straight PC configurations.



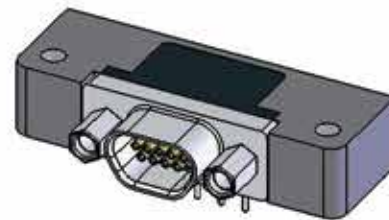
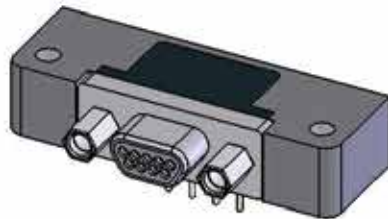
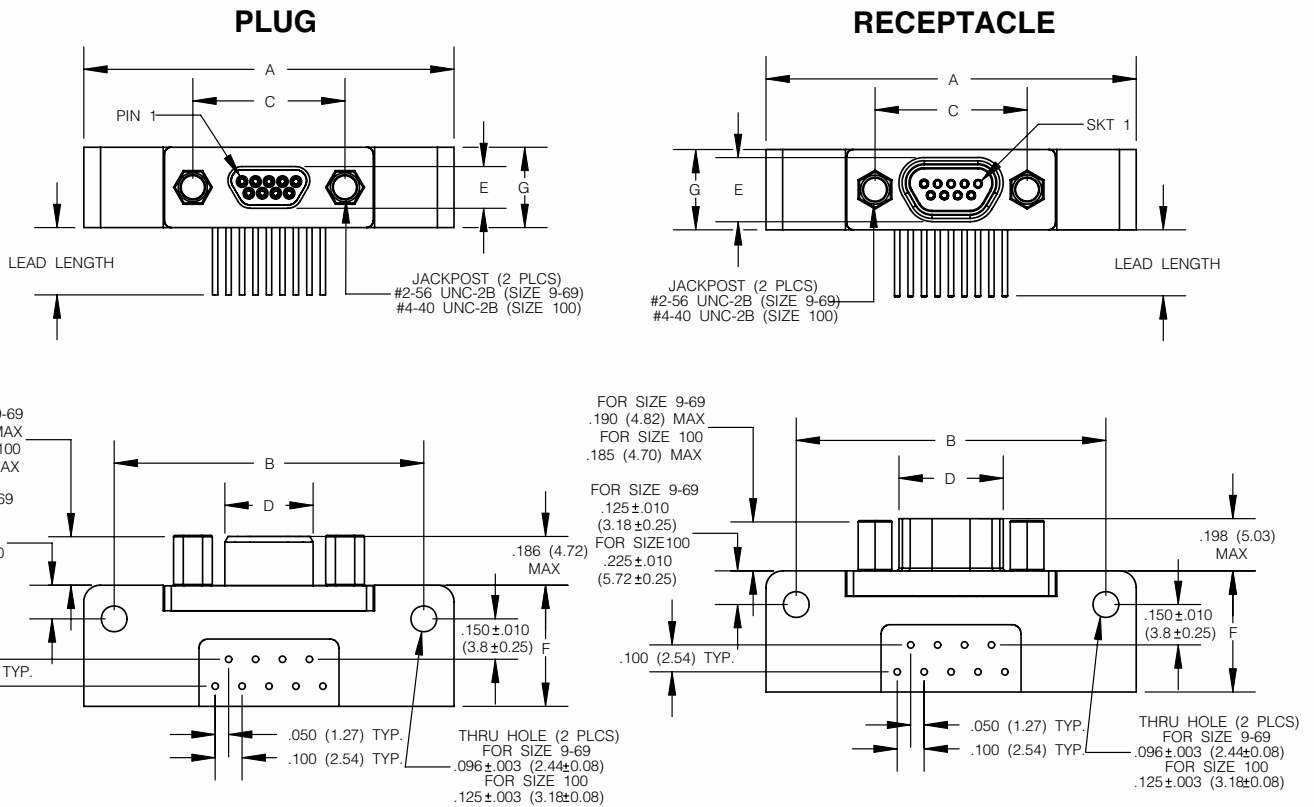
| SIZE | A MAX | B ±.007 (0.18) | C ±.005 (0.13) | D MAX | E MAX | | F MAX | |
|------|---------------|-------------------|-------------------|---------------|--------------|---------------|-------------|-------------|
| | | | | | PLUG | RCPT | PLUG | RCPT |
| 09 | 1.390 (35.31) | 1.150 (29.21) | .565 (14.35) | .788 (20.02) | .292 (7.42) | .380 (9.65) | .134 (3.40) | .218 (5.54) |
| 15 | 1.390 (35.31) | 1.150 (29.21) | .715 (18.16) | .938 (23.82) | .442 (11.23) | .530 (13.46) | .134 (3.40) | .218 (5.54) |
| 21 | 1.690 (43.93) | 1.450 (36.83) | .865 (21.97) | 1.088 (27.64) | .592 (15.04) | .680 (17.27) | .134 (3.40) | .218 (5.54) |
| 25 | 1.740 (44.20) | 1.500 (38.10) | .965 (24.51) | 1.188 (30.18) | .692 (17.58) | .780 (19.81) | .134 (3.40) | .218 (5.54) |
| 31 | 2.040 (51.82) | 1.800 (45.72) | 1.115 (28.32) | 1.338 (33.98) | .842 (21.39) | .930 (23.62) | .134 (3.40) | .218 (5.54) |
| 37 | 2.340 (59.44) | 2.100 (53.34) | 1.265 (32.13) | 1.488 (37.80) | .992 (25.20) | 1.080 (27.43) | .134 (3.40) | .218 (5.54) |
| 51 | 2.270 (67.66) | 2.000 (50.80) | 1.215 (30.86) | 1.438 (36.53) | .942 (23.93) | 1.030 (26.16) | .177 (4.49) | .260 (6.60) |

Inches (mm)
All dimensions for reference only

Contacts & Tools
2M Specs
2M801
2M803
2M804
2M805
2M Accessories
HD38999
Micro-D
Terrapin
Nexus

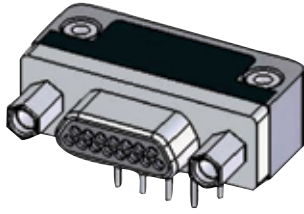
BR 90 DEGREE PCB TERMINATION TYPE (MATES ONLY WITH SERIES 101)

Refer to page 149 for right angle (90 DEG) PC configurations.



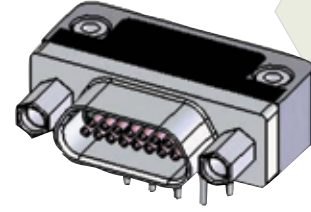
| SIZE | A MAX | B ±.007 (0.18) | C ±.005 (0.13) | D MAX | | E MAX | | F MAX | G MAX |
|------|---------------|-------------------|-------------------|--------------|---------------|-------------|-------------|--------------|-------------|
| | | | | PLUG | RCPT | PLUG | RCPT | | |
| 09 | 1.390 (35.31) | 1.150 (29.21) | .565 (14.35) | .292 (7.42) | .380 (9.65) | .134 (3.40) | .218 (5.54) | .455 (11.56) | .218 (5.54) |
| 15 | 1.540 (39.12) | 1.300 (33.02) | .715 (18.16) | .442 (11.23) | .530 (13.46) | .134 (3.40) | .218 (5.54) | .455 (11.56) | .218 (5.54) |
| 21 | 1.690 (42.93) | 1.450 (36.83) | .865 (21.97) | .592 (15.04) | .680 (17.27) | .134 (3.40) | .218 (5.54) | .455 (11.56) | .218 (5.54) |
| 25 | 1.790 (45.47) | 1.550 (39.37) | .965 (24.51) | .692 (17.58) | .780 (19.81) | .134 (3.40) | .218 (5.54) | .455 (11.56) | .218 (5.54) |
| 31 | 2.040 (51.82) | 1.800 (45.72) | 1.115 (28.32) | .842 (21.39) | .930 (23.62) | .134 (3.40) | .218 (5.54) | .455 (11.56) | .218 (5.54) |
| 37 | 2.340 (59.44) | 2.100 (53.34) | 1.265 (32.13) | .992 (25.20) | 1.080 (27.43) | .134 (3.40) | .218 (5.54) | .455 (11.56) | .218 (5.54) |
| 51 | 1.875 (47.63) | 1.600 (40.64) | 1.215 (30.86) | .942 (23.93) | 1.030 (26.16) | .177 (4.49) | .260 (6.60) | .565 (14.35) | .260 (6.60) |

Inches (mm)
All dimensions for reference only

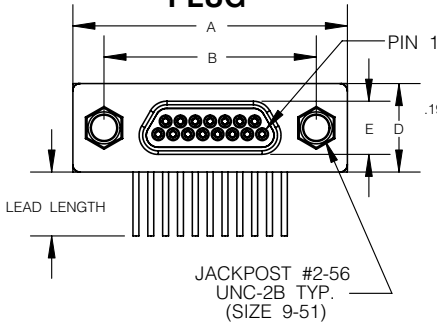


CBR 90 DEGREE PCB TERMINATION TYPE

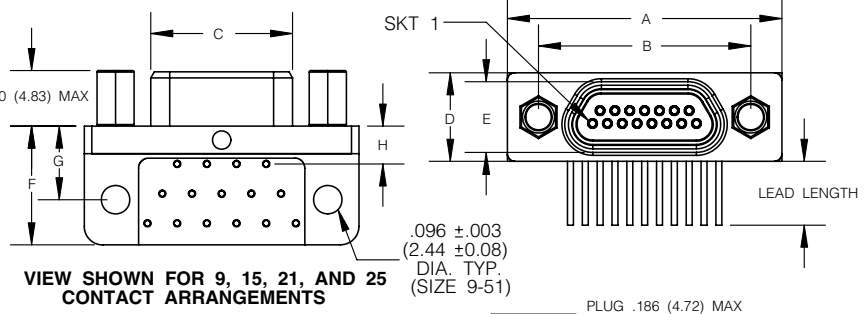
Refer to page 151 for right angle (90 DEG) narrow profile PCB configurations.



PLUG

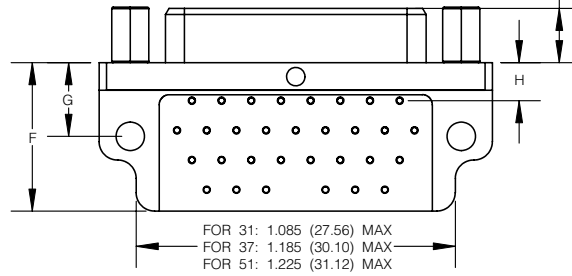


RECEPTACLE

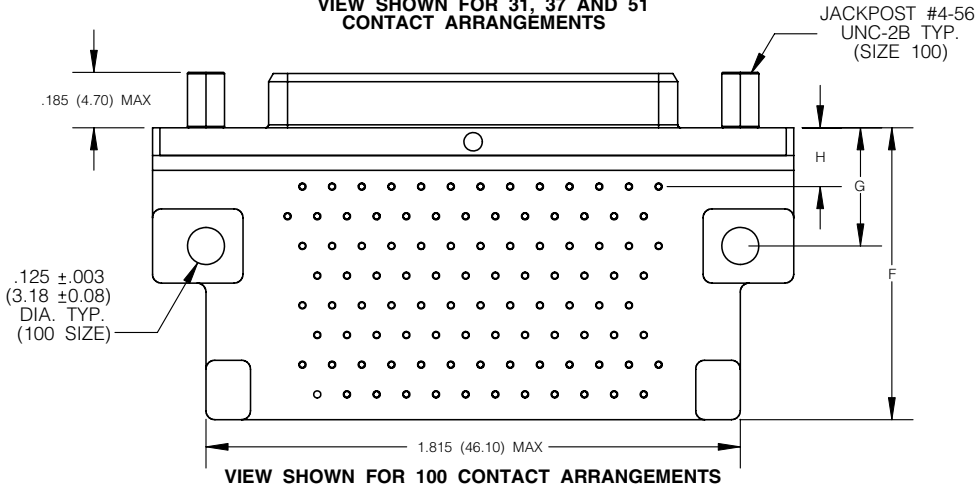


VIEW SHOWN FOR 9, 15, 21, AND 25 CONTACT ARRANGEMENTS

PLUG .186 (4.72) MAX
RCPT .198 (5.03) MAX



VIEW SHOWN FOR 31, 37 AND 51 CONTACT ARRANGEMENTS



VIEW SHOWN FOR 100 CONTACT ARRANGEMENTS

| SIZE | A MAX | B ±.005 (0.13) | C MAX | | D MAX | E MAX | | F MAX | G ±.010 (0.25) | H ±.010 (0.25) |
|------|---------------|-------------------|--------------|---------------|-------------|-------------|-------------|--------------|-------------------|-------------------|
| | | | PLUG | RCPT | | PLUG | RCPT | | | |
| 09 | .788 (20.02) | .565 (14.35) | .292 (7.42) | .380 (9.65) | .218 (5.54) | .134 (3.40) | .218 (5.54) | .420 (10.67) | .250 (6.35) | .230 (5.81) |
| 15 | .938 (23.82) | .715 (18.16) | .442 (11.23) | .530 (13.46) | .218 (5.54) | .134 (3.40) | .218 (5.54) | .420 (10.67) | .250 (6.35) | .130 (3.30) |
| 21 | 1.088 (27.64) | .865 (21.97) | .592 (15.04) | .680 (17.27) | .218 (5.54) | .134 (3.40) | .218 (5.54) | .420 (10.67) | .250 (6.35) | .130 (3.30) |
| 25 | 1.188 (30.18) | .965 (24.51) | .692 (17.58) | .780 (19.81) | .218 (5.54) | .134 (3.40) | .218 (5.54) | .420 (10.67) | .250 (6.35) | .130 (3.30) |
| 31 | 1.338 (33.98) | 1.115 (28.32) | .842 (21.39) | .930 (23.62) | .218 (5.54) | .134 (3.40) | .218 (5.54) | .520 (13.21) | .250 (6.35) | .130 (3.30) |
| 37 | 1.488 (37.80) | 1.265 (32.13) | .992 (25.20) | 1.080 (27.43) | .218 (5.54) | .134 (3.40) | .218 (5.54) | .520 (13.21) | .250 (6.35) | .130 (3.30) |
| 51 | 1.438 (36.52) | 1.215 (30.86) | .942 (23.93) | 1.030 (26.16) | .260 (6.60) | .177 (4.49) | .260 (6.60) | .650 (16.15) | .300 (7.62) | .150 (3.81) |

Inches (mm)
All dimensions for reference only

Series MDCE- How to Order

Suitable for M83513 connectors

MDCE-XXX - X

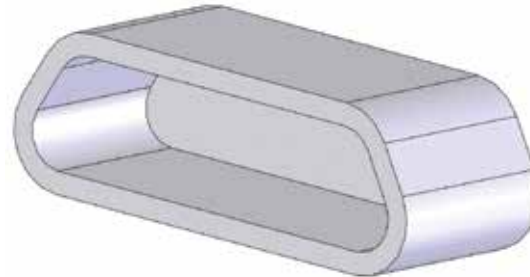
Connector Size
(number of contacts)

- 09
- 15
- 21
- 25
- 31
- 37
- 51
- 69
- 100

Connector Type

- P = plug (pin)
- S = receptacle (socket)

| P/N |
|-----------|
| MDCE-09P |
| MDCE-15P |
| MDCE-21P |
| MDCE-25P |
| MDCE-31P |
| MDCE-37P |
| MDCE-51P |
| MDCE-69P |
| MDCE-100P |
| MDCE-09S |
| MDCE-15S |
| MDCE-21S |
| MDCE-25S |
| MDCE-31S |
| MDCE-37S |
| MDCE-51S |
| MDCE-69S |
| MDCE-100S |

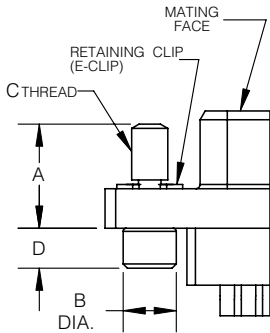


MATERIAL: Statically dissipative
Color: pink / black

Inches (mm)
All dimensions for reference only

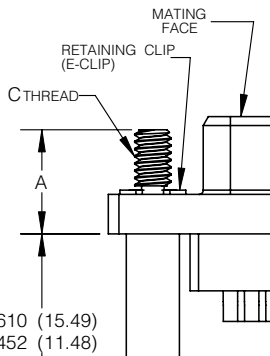
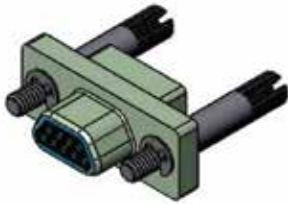
Qualified to M83513/05

LOW PROFILE JACKSCREW ASSEMBLY



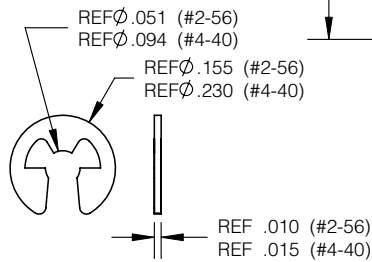
| SHELL SIZE | 9-69 | | 100 | |
|-----------------|-----------------------|----------------------|-----------------------|----------------------|
| AMPHENOL P/N | HM05-05 | HM05-02 | HM05-15 | HM05-12 |
| P/N CODE | M5 | M2 | M5 | M2 |
| MIL-SPEC P/N | M83513/05-05 (SLOT) | M83513/05-02 (ALLEN) | M83513/05-15 (SLOT) | M83513/05-12 (ALLEN) |
| Dim. A | .258/.235 (6.55/5.97) | | .287±.005 (7.29±0.13) | |
| Dim. B | .125 (3.18) | | .187 (4.75) | |
| Dim. C (THREAD) | #2-56 UNC-2A | | #4-40 UNC-2A | |
| Dim. D | .103/.070 (2.62/1.78) | | .098 (2.49) | |
| Dim. E (HEX) | N/A | | | |

HIGH PROFILE JACKSCREW ASSEMBLY

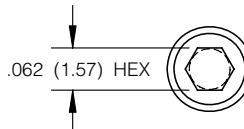


| SHELL SIZE | 9-69 | | 100 | |
|-----------------|-----------------------|----------------------|-----------------------|----------------------|
| AMPHENOL P/N | HM05-06 | HM05-03 | HM05-16 | HM05-13 |
| P/N CODE | M6 | M3 | M6 | M3 |
| MIL-SPEC P/N | M83513/05-06 (SLOT) | M83513/05-03 (ALLEN) | M83513/05-16 (SLOT) | M83513/05-13 (ALLEN) |
| Dim. A | .258/.235 (6.55/5.97) | | .287±.005 (7.29±0.13) | |
| Dim. B | .125 (3.18) | | .187 (4.75) | |
| Dim. C (THREAD) | #2-56 UNC-2A | | #4-40 UNC-2A | |
| Dim. D | N/A | | | |
| Dim. E (HEX) | N/A | | | |

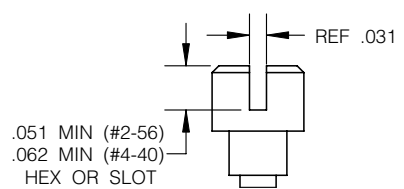
RETAINING CLIP DETAIL



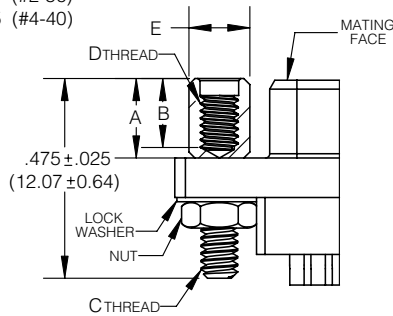
ALLEN HEAD DETAIL



SLOT HEAD DETAIL

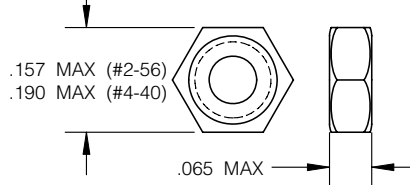


JACKPOST ASSEMBLY

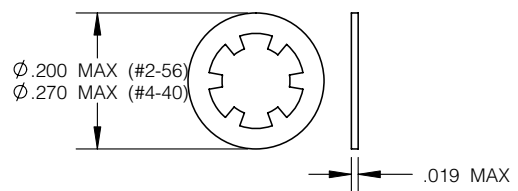


| SHELL SIZE | 9-69 | 100 |
|-----------------|-----------------------|-----------------------|
| AMPHENOL P/N | HM05-07 | HM05-17 |
| P/N CODE | P | |
| MIL-SPEC P/N | M83513/05-07 | M83513/05-17 |
| Dim. A | .190/.185 (4.83/4.70) | .185/.180 (4.70/4.58) |
| Dim. B | .155 (3.94) | .170 (4.32) |
| Dim. C (THREAD) | #2-56 UNC-2A | #4-40 UNC-2A |
| Dim. D | #2-56 UNC-2B | #4-40 UNC-2B |
| Dim. E (HEX) | .125 (3.18) | .187 (4.75) |

NUT DETAIL



LOCKWASHER DETAIL



Inches (mm)
All dimensions for reference only

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

2M

HD38999

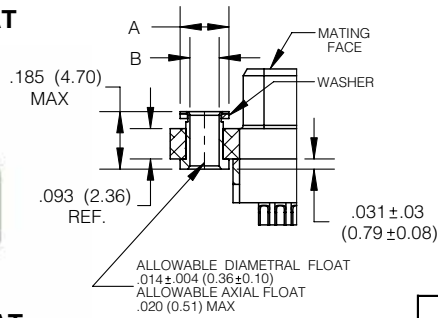
Micro-D

Terrapin

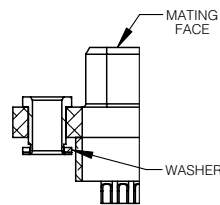
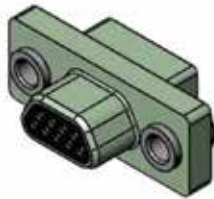
Nexus

- * Custom hardware pre-installed
- * Captive hardware provides secure mounting
- * For special design hardware, consult Amphenol sales for more options

FORWARD FLOAT

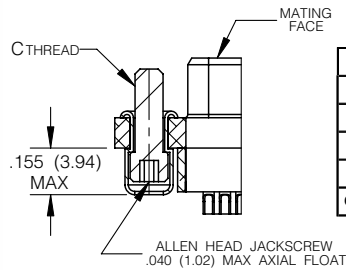
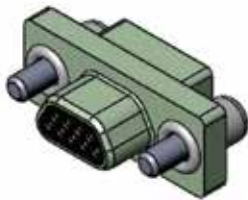


REVERSE FLOAT (SAME DIMENSIONS AS FORWARD FLOAT)



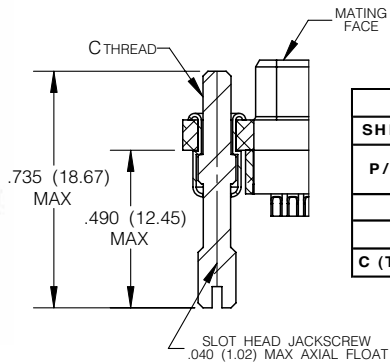
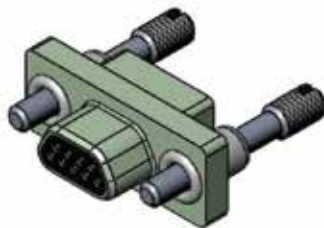
| FLOAT MOUNT | | |
|-------------|--|---------------------------|
| SHELL SIZE | 9-69 | 100 |
| P/N CODE | F = FORWARD FLOAT R = REVERSE FLOAT | |
| A | .150 ± .003 (3.81 ± .076) | .174 ± .005 (4.40 ± 0.13) |
| B | .090 ± .0015 (2.99 ± .0038) | .116 ± .002 (2.95 ± .051) |
| C (THREAD) | N/A | |

LOW PROFILE CAPTIVE JACKSCREW



| LOW PROFILE CAPTIVE | | |
|---------------------|--------------|--------------|
| SHELL SIZE | 9-69 | 100 |
| P/N CODE | L | |
| A | N/A | |
| B | N/A | |
| C (THREAD) | #2-56 UNC-2A | #4-40 UNC-2A |

HIGH PROFILE CAPTIVE JACKSCREW



| HIGH PROFILE CAPTIVE | | |
|----------------------|--------------|--------------|
| SHELL SIZE | 9-69 | 100 |
| P/N CODE | K | |
| A | N/A | |
| B | N/A | |
| C (THREAD) | #2-56 UNC-2A | #4-40 UNC-2A |

Inches (mm)
All dimensions for reference only

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

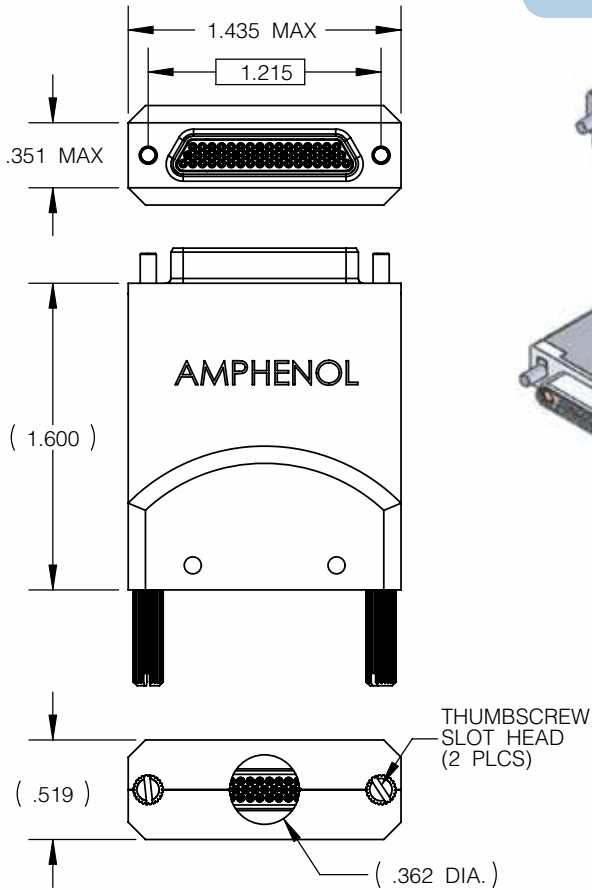
2M Accessories

HD38999

Micro-D

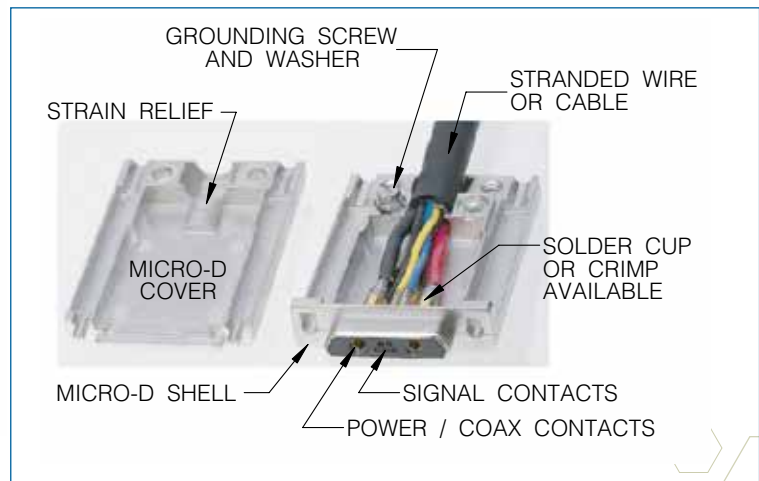
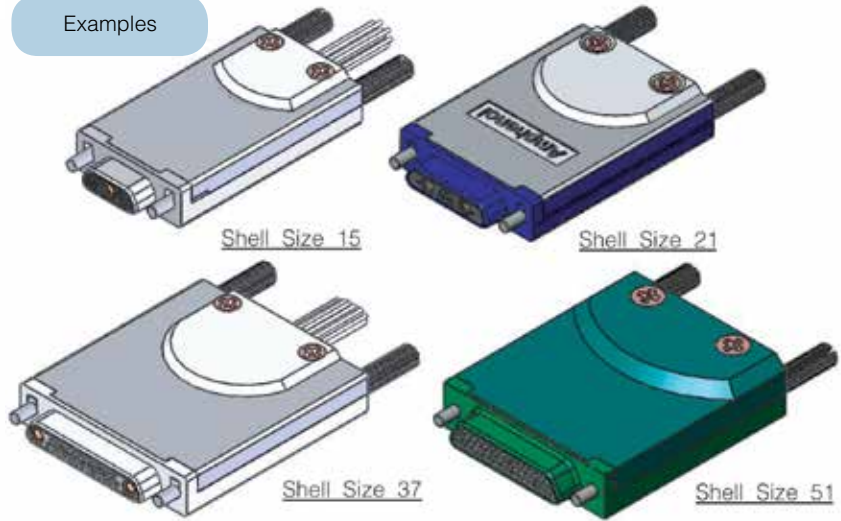
Terrapin

Nexus



SHELL SIZE 51 SHOWN
(CONSULT AMPHENOL AEROSPACE FOR OTHER SIZES OR INSERT PATTERNS)

Examples



Features

- Easy assembly
- All-in-one Micro-D connector and EMI backshell
- Eliminate the use of retaining clip (E-clip) hardware
- Built in strain relief
- Grounding screw and washer included
- Solder cup and wire termination available
- Sizes 9 thru 100 available
- Standard MIL-DTL-83513 insert pattern or custom insert pattern available
- Signal / Power / Coaxial contacts available
- Consult Amphenol Aerospace for angled cable exit or specific cable diameter requirement

Material & Finishes

Material: Aluminum alloy
(consult Amphenol Aerospace for zinc alloy)

Finish: Electroless nickel

Hardware: Stainless steel

Performance Information

- D.W.V. 600 VAC (at sea level)
- Insulation resistance: 5000 megaohms min.
- Temperature rating: -55 deg C to +125 deg C (+85 deg C for zinc alloy)
- Designed to meet MIL-DTL-83513 performance standards

Inches (mm)
All dimensions for reference only

Series MBS - How to Order

Suitable for M83513 Connectors

Example:
MBS-09N-EA00-M5

Description: Metal backshell size 9, nickel finish, cable exit "A" straight with "M5" hardware

MBS - **XXX** **X** - **E** **X** **XX** **XX**

MBS = EMI Backshell
(aluminum alloy material)

Connector Size (number of contacts)
09, 15, 21, 25, 31, 37, 51, 100

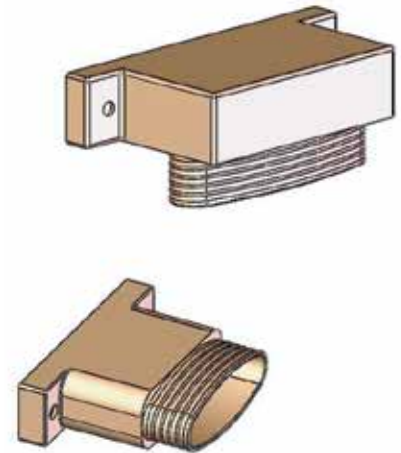
Shell Finish
C = cadmium
N = electroless nickel
G = gold
Z = customer specified plating
(e.g. olive drab camium)

Exit Shape
E = elliptical

Cable Exit Size
A, B, C, D, E, F, G, H
See page 172 for straight exit
See page 173 for right angle exit

Exit Angle
00 = straight
90 = right angle

Hardware
M5 = low profile jackscrew (slot head)
M6 = high profile jackscrew (slot head)
P = jackpost
Omit for no hardware



Features

- The Amphenol Micro-D EMI backshell series MBS is designed for use with M83513 connectors.
- It is a reliable means of providing EMI and strain relief for harnessed connectors.
- Available for sizes 9 thru 100.
- Available in straight or 90 deg exit angle (consult Amphenol Aerospace for 45 deg or alternate exit angle).
- Backshells are machined from aluminum alloy and are offered with various plating options.

Performance Information

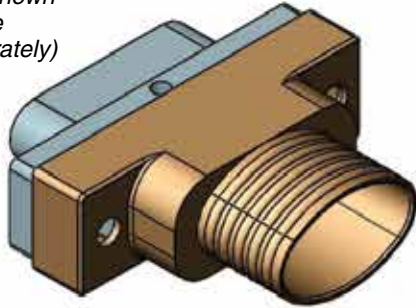
- Magnetic permeability (MIL-I-17214): less than 2 mu
- Shielding efficiency: to 1 GHz, 60 db to > 100 db
- Vibration (per MIL-STD-1344 Method 2004, condition C): No damage or discontinuity between shell and shield

Inches (mm)
All dimensions for reference only

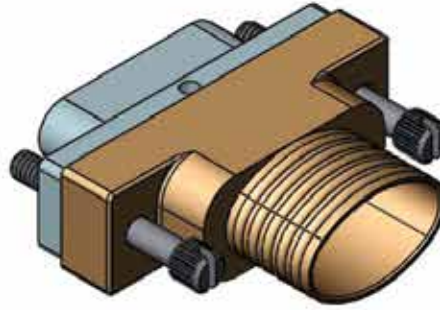
- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

Suitable for M83513 Connectors

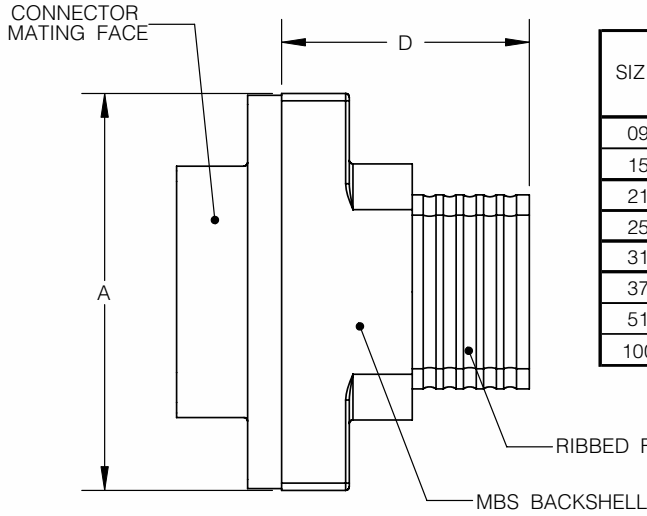
Connector shown for reference (order separately)



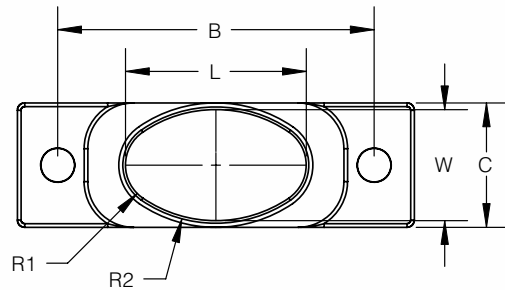
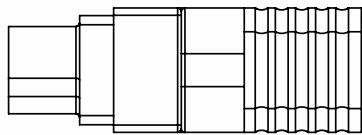
NO HARDWARE SHOWN



WITH HARDWARE SHOWN



| SIZE | A MAX | B ±.005 (0.13) | C ±.005 (0.13) | D ±.020 (0.51) |
|------|---------------|-------------------|-------------------|-------------------|
| 09 | .785 (19.94) | .565 (14.35) | .340 (8.64) | .762 (19.35) |
| 15 | .935 (23.75) | .715 (18.16) | .340 (8.64) | .812 (20.62) |
| 21 | 1.085 (27.56) | .865 (21.97) | .340 (8.64) | .862 (21.89) |
| 25 | 1.185 (30.10) | .965 (24.51) | .340 (8.64) | .912 (23.16) |
| 31 | 1.335 (33.91) | 1.115 (28.32) | .340 (8.64) | .952 (24.18) |
| 37 | 1.485 (37.72) | 1.265 (32.13) | .340 (8.64) | .992 (25.20) |
| 51 | 1.435 (36.45) | 1.215 (30.86) | .400 (10.16) | 1.072 (27.32) |
| 100 | 2.175 (55.25) | 1.800 (45.72) | .450 (11.43) | 1.137 (28.88) |



| SIZE | W ±.010 (0.25) | L ±.010 (0.25) | R1 ±.010 (0.25) | R2 ±.020 (0.51) | AVAILABLE ON SIZE |
|------|-------------------|-------------------|--------------------|--------------------|-------------------|
| A | .290 (7.37) | .344 (8.74) | .109 (2.77) | .182 (4.62) | 09 THRU 100 |
| B | .290 (7.37) | .494 (12.55) | .109 (2.77) | .353 (8.97) | 15 THRU 100 |
| C | .290 (7.37) | .644 (16.36) | .109 (2.77) | .757 (19.23) | 21 THRU 100 |
| D | .304 (7.72) | .744 (18.90) | .109 (2.77) | .940 (23.88) | 25 THRU 100 |
| E | .304 (7.72) | .894 (22.71) | .109 (2.77) | 1.488 (37.80) | 31 THRU 100 |
| F | .304 (7.72) | .994 (25.25) | .109 (2.77) | 1.893 (48.08) | 37 THRU 100 |
| G | .304 (7.72) | 1.044 (26.52) | .109 (2.77) | 2.128 (54.05) | 37 AND 100 |
| H | .384 (9.75) | 1.524 (38.71) | .125 (3.18) | 3.187 (80.95) | 100 ONLY |

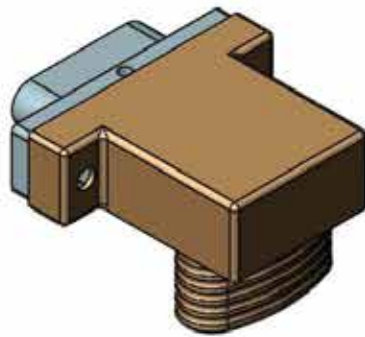
Inches (mm)
All dimensions for reference only

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

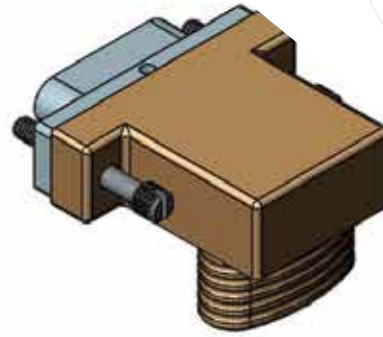
Series MBS

Suitable for M83513 Connectors

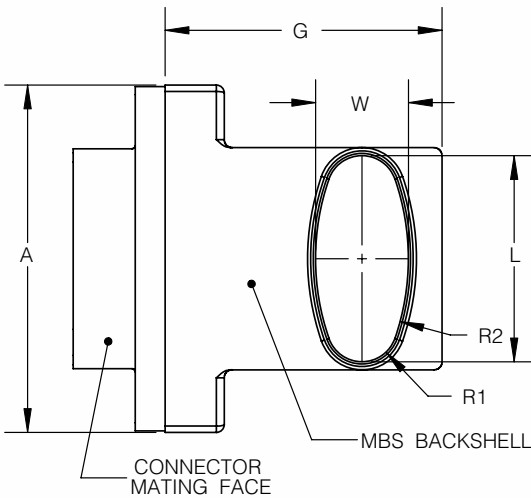
Connector shown for reference (order separately)



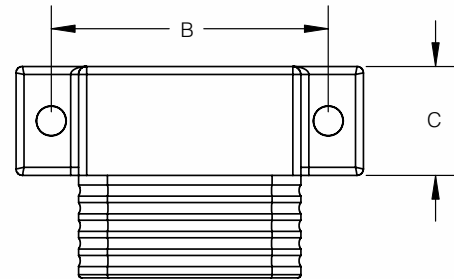
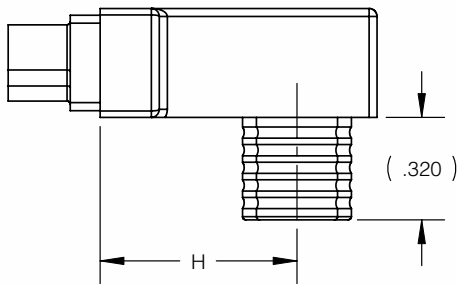
NO HARDWARE SHOWN



WITH HARDWARE SHOWN



| SIZE | A MAX | B ±.005 (0.13) | C ±.005 (0.13) | G MAX | H ±.010 (0.25) |
|------|---------------|-------------------|-------------------|--------------|-------------------|
| 09 | .785 (19.94) | .565 (14.35) | .340 (8.64) | .865 (21.97) | .615 (15.62) |
| 15 | .935 (23.75) | .715 (18.16) | .340 (8.64) | .865 (21.97) | .615 (15.62) |
| 21 | 1.085 (27.56) | .865 (21.97) | .340 (8.64) | .865 (21.97) | .615 (15.62) |
| 25 | 1.185 (30.10) | .965 (24.51) | .340 (8.64) | .885 (22.48) | .625 (15.88) |
| 31 | 1.335 (33.91) | 1.115 (28.32) | .340 (8.64) | .885 (22.48) | .625 (15.88) |
| 37 | 1.485 (37.72) | 1.265 (32.13) | .340 (8.64) | .885 (22.48) | .625 (15.88) |
| 51 | 1.435 (36.45) | 1.215 (30.86) | .400 (10.16) | .925 (23.50) | .645 (16.38) |
| 100 | 2.175 (55.25) | 1.800 (45.72) | .450 (11.43) | .980 (24.89) | .657 (16.69) |



| SIZE | W ±.010 (0.25) | L ±.010 (0.25) | R1 ±.010 (0.25) | R2 ±.020 (0.51) | AVAILABLE ON SIZE |
|------|-------------------|-------------------|--------------------|--------------------|-------------------|
| A | .290 (7.37) | .344 (8.74) | .109 (2.77) | .182 (4.62) | 09 THRU 100 |
| B | .290 (7.37) | .494 (12.55) | .109 (2.77) | .353 (8.97) | 15 THRU 100 |
| C | .290 (7.37) | .644 (16.36) | .109 (2.77) | .757 (19.23) | 21 THRU 100 |
| D | .304 (7.72) | .744 (18.90) | .109 (2.77) | .940 (23.88) | 25 THRU 100 |
| E | .304 (7.72) | .894 (22.71) | .109 (2.77) | 1.488 (37.80) | 31 THRU 100 |
| F | .304 (7.72) | .994 (25.25) | .109 (2.77) | 1.893 (48.08) | 37 THRU 100 |
| G | .304 (7.72) | 1.044 (26.52) | .109 (2.77) | 2.128 (54.05) | 37 AND 100 |
| H | .384 (9.75) | 1.524 (38.71) | .125 (3.18) | 3.187 (80.95) | 100 ONLY |

Inches (mm)
All dimensions for reference only

Example:
100RN09P/S-B

Description: metal shell size 9 plug and receptacle, nickel finish, with standard mounting holes.

100 R X XXX - P/S - X

Connector Series

- 100** = metal shell per M83513
- 101** = all plastic per M83513/06 thru /09
- 102** = all plastic (dimensionally identical to metal shell per M83513)
- 104** = stainless steel per M83513

Insulator Material

R = Polyphenylene Sulfide (Ryton)

Shell Finish (omit for series 101, 102 & 104)

- A** = anodize
- C** = cadmium
- G** = gold
- I** = irridite/alodine
- N** = electroless nickel
- T** = tin

Connector Size (number of contacts)

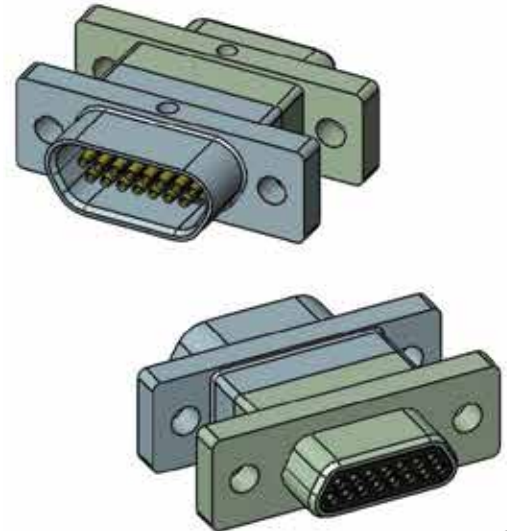
09, 15, 21, 25, 31, 37, 51, 69, 100
All sizes I.A.W. M83513 except size 69 (non-military)

Connector Type

P/S = connector saver (plug and receptacle)

Hardware (pre-installed by Amphenol Aerospace)

- B** = standard mounting holes
- F** = standard float mount
- R** = reverse float mount
- P** = jackpost



Features

- Space reduction (2-in-1 connector)
- Opposite mating genders
- No termination required; ready for use

Inches (mm)
All dimensions for reference only

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

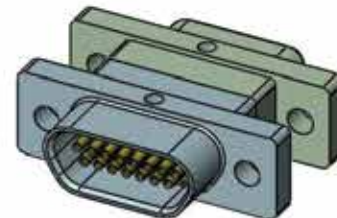
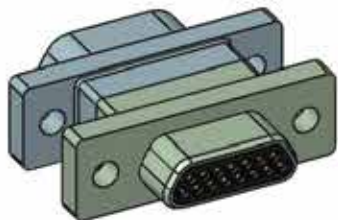
2M Accessories

HD38999

Micro-D

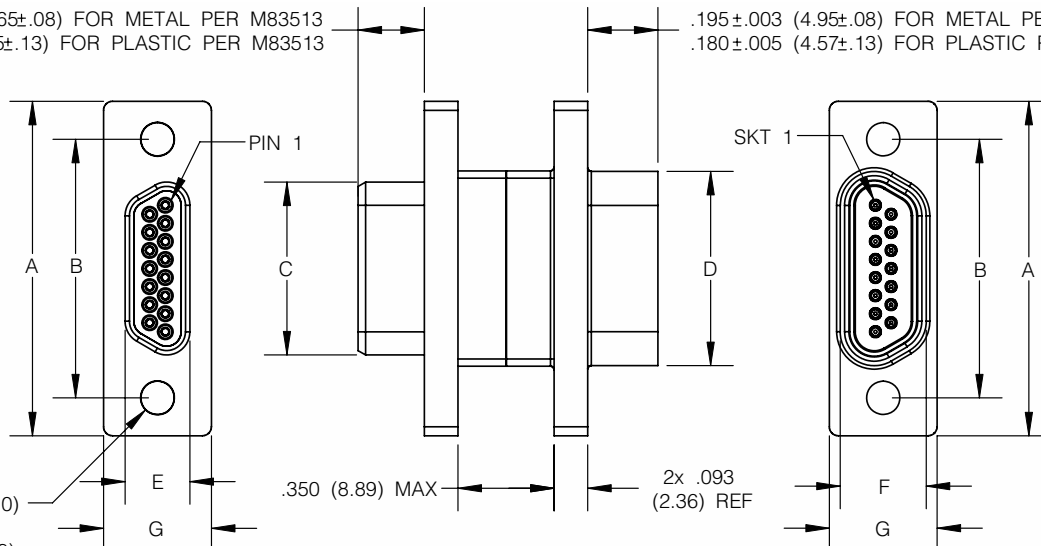
Terrapin

Nexus



.183±.003 (4.65±.08) FOR METAL PER M83513
.199±.005 (5.05±.13) FOR PLASTIC PER M83513

.195±.003 (4.95±.08) FOR METAL PER M83513
.180±.005 (4.57±.13) FOR PLASTIC PER M83513



PLUG / RCPT
FOR SIZES 9-69
Ø.092±.004 (2.34±.10)
FOR SIZE 100
Ø.150/.145 (3.81/3.68)

PLUG

RECEPTACLE

(Face seal included for 100 series only)

100, 102 & 104 SERIES

| SIZE | A MAX | B ±.005 (0.13) | C MAX | D MAX | E MAX | F MAX | G MAX |
|------|---------------|-------------------|---------------|---------------|-------------|--------------|--------------|
| 09 | .785 (19.94) | .565 (14.35) | .334 (8.48) | .402 (10.21) | .185 (4.70) | .253 (6.43) | .308 (7.82) |
| 15 | .935 (23.75) | .715 (18.16) | .484 (12.29) | .552 (13.97) | .185 (4.70) | .253 (6.43) | .308 (7.82) |
| 21 | 1.085 (27.56) | .865 (21.97) | .634 (16.10) | .702 (17.83) | .185 (4.70) | .253 (6.43) | .308 (7.82) |
| 25 | 1.185 (30.10) | .965 (24.51) | .734 (18.64) | .802 (20.37) | .185 (4.70) | .253 (6.43) | .308 (7.82) |
| 31 | 1.335 (33.91) | 1.115 (28.32) | .884 (22.45) | .952 (24.18) | .185 (4.70) | .253 (6.43) | .308 (7.82) |
| 37 | 1.485 (37.72) | 1.265 (32.13) | 1.034 (26.26) | 1.102 (27.99) | .185 (4.70) | .253 (6.43) | .308 (7.82) |
| 51 | 1.435 (36.45) | 1.215 (30.86) | .984 (24.99) | 1.052 (26.72) | .228 (5.79) | .296 (7.52) | .351 (8.92) |
| 69 | 1.735 (44.07) | 1.515 (38.48) | 1.289 (32.74) | 1.357 (34.47) | .228 (5.79) | .296 (7.52) | .351 (8.92) |
| 100 | 2.160 (54.86) | 1.800 (45.72) | 1.384 (35.13) | 1.508 (38.10) | .271 (6.88) | .394 (10.01) | .394 (10.01) |

101 SERIES ONLY (Sizes 69 & 100 are not applicable)

| SIZE | A MAX | B ±.005 (0.13) | C MAX | D MAX | E MAX | F MAX | G MAX |
|------|---------------|-------------------|--------------|---------------|-------------|-------------|-------------|
| 09 | .788 (20.02) | .565 (14.35) | .292 (7.42) | .380 (9.65) | .134 (3.40) | .218 (5.54) | .218 (5.54) |
| 15 | .938 (23.82) | .715 (18.16) | .442 (11.23) | .530 (13.46) | .134 (3.40) | .218 (5.54) | .218 (5.54) |
| 21 | 1.088 (27.64) | .865 (21.97) | .592 (15.04) | .680 (17.27) | .134 (3.40) | .218 (5.54) | .218 (5.54) |
| 25 | 1.188 (30.18) | .965 (24.51) | .692 (17.58) | .780 (19.81) | .134 (3.40) | .218 (5.54) | .218 (5.54) |
| 31 | 1.338 (33.98) | 1.115 (28.32) | .842 (21.39) | .930 (23.62) | .134 (3.40) | .218 (5.54) | .218 (5.54) |
| 37 | 1.488 (37.80) | 1.265 (32.13) | .992 (25.20) | 1.080 (27.43) | .134 (3.40) | .218 (5.54) | .218 (5.54) |
| 51 | 1.438 (36.52) | 1.215 (30.86) | .942 (23.93) | 1.030 (26.16) | .177 (4.49) | .260 (6.60) | .260 (6.60) |

Inches (mm)
All dimensions for reference only

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

Micro-D

Terrapin

Nexus

Example: 105R21P-4A5A1 **Description:** Ryton material strip connector, size 21 plug, wire termination, 26 AWG, 7-strd per NEMA-HP3, color coded per MIL-STD-681 (sys 1), 18" long with one guide pin on one end of the connector.

105 R XXX X - X X X - X X XXX

Connector Series
105 = Strip Connector

Insulator Material
R = Polyphenylene Sulfide (Ryton)

Number of Contacts
1 to 30 (no guide pins)
1 to 29 (guide pin on one end)
1 to 28 (guide pin on both ends)

Connector Type
P = plug (pin)
S = Receptacle (socket)

Wire Size (Awg.)
1 = 32
2 = 30
3 = 28
4 = 26 (stranded)
5 = 25 (solid uninsulated)
6 = 24
Omit for solder cup contacts

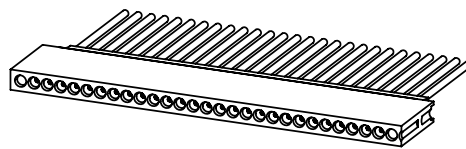
Wire Type
Naval Applications:
A = 7 strd, per NEMA-HP3 (MIL-W-16878/4)
B = 7 strd, per NEMA-HP3 (MIL-W-16878/6)
C = 19 strd, per NEMA-HP3 (MIL-W-16878/4)
D = 19 strd, per NEMA-HP3 (MIL-W-16878/6)
Military/Aerospace Applications:
E = per MIL-W-22759/11 (M83513 standard)
F = per MIL-W-22759/33 (space grade)
L = solid wire uninsulated
Omit for solder cup contacts

Non Std. Length (Inches)
Stranded Wire (no decimal values)
e.g. 1 = 1 inches, 100 = 100 inches
Solid Wire (0.109 < length < 1.00)
e.g. 110 = .110 inches, 999 = .999 inches

Guide pin
Guide pin for receptacle; guide pin hole for plug
1 = one end
2 = both end
Omit for no guide pins

Wire Length (inches +1.00/-0.00)
A = 18.00
B = 36.00
C = 72.00
D = 0.500 (solid wire only +0.20/-0.00)
E = 1.00 (solid wire only +0.20/-0.00)
F = non std. length (add to end of part no.)
Omit for solder cup contacts

Wire Color / Finish
1 = all white (M83513 standard) *off shelf
2 = all yellow
3 = solid wire uninsulated, tin plated
4 = solid wire uninsulated, gold plated
5 = color coded per mil-std-681, system 1
6 = 1st 10 colors blk. thru wht. repeated (M83513 standard) *off shelf"
Omit for solder cup contacts



Features

- One piece insulator: Polyphenylene sulfide (Ryton)
- Contacts (1-30 positions): Copper alloy, gold plate
- Guide pin (optional, one or both ends): 300 series stainless steel
- Wide selection of wire sizes, types, and color finish.
- Coupling feature: Friction
- Contact spacing: .050" (1.27) center

Inches (mm)
All dimensions for reference only

Series 105 - Plastic

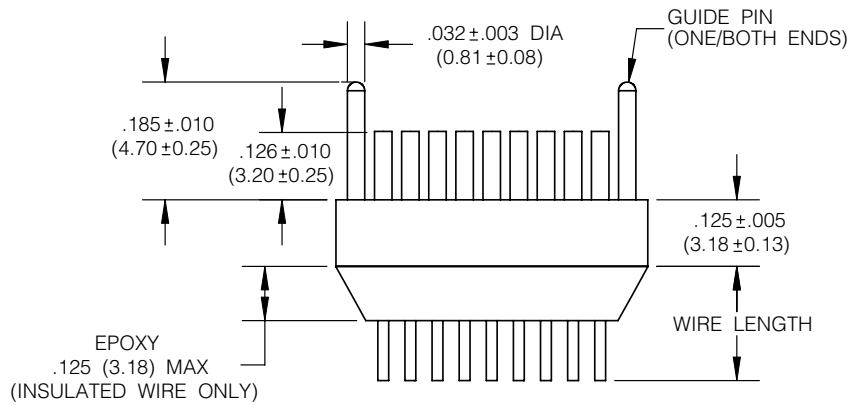
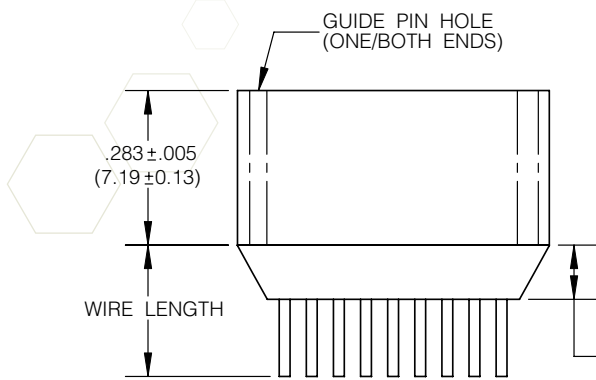
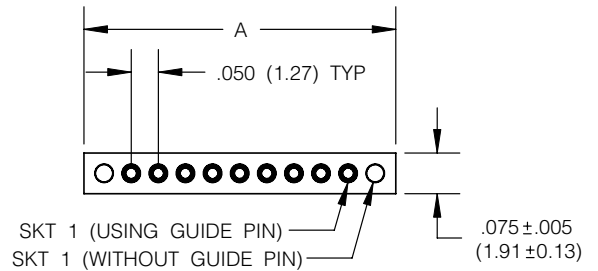
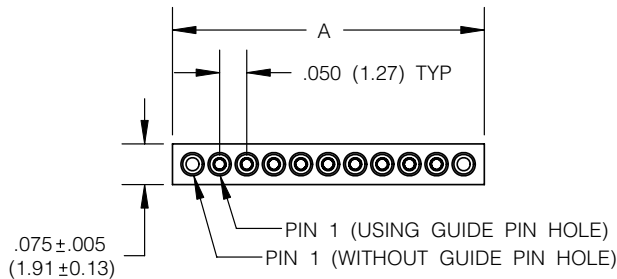
.050" contact spacing



PLUG



RECEPTACLE



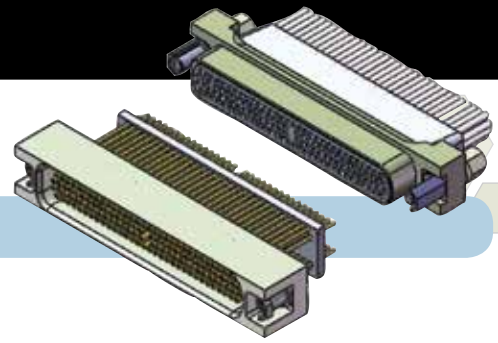
| SIZE | A ±.005 (0.13) |
|------|-------------------|
| 01 | .075 (1.91) |
| 02 | .125 (3.18) |
| 03 | .175 (4.45) |
| 04 | .225 (5.72) |
| 05 | .275 (6.99) |
| 06 | .325 (8.25) |
| 07 | .375 (9.52) |
| 08 | .425 (10.80) |
| 09 | .475 (12.07) |
| 10 | .525 (13.34) |
| 11 | .575 (14.61) |
| 12 | .625 (15.88) |
| 13 | .675 (17.15) |
| 14 | .725 (18.42) |
| 15 | .775 (19.69) |

| SIZE | A ±.005 (0.13) |
|------|-------------------|
| 16 | .825 (20.96) |
| 17 | .875 (22.23) |
| 18 | .925 (23.50) |
| 19 | .975 (24.77) |
| 20 | 1.025 (26.04) |
| 21 | 1.075 (27.31) |
| 22 | 1.125 (28.58) |
| 23 | 1.175 (29.85) |
| 24 | 1.225 (31.12) |
| 25 | 1.275 (32.39) |
| 26 | 1.325 (33.66) |
| 27 | 1.375 (34.93) |
| 28 | 1.425 (36.20) |
| 29 | 1.475 (37.47) |
| 30 | 1.525 (38.74) |

Inches (mm)
All dimensions for reference only

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

.050" contact spacing



Example:
106RN120P-BS

Description: metal shell size 120 plug, nickel finish, vertical PCB mount, with polarizing hardware.

106 R X XXX X - X X X - XX

Connector Series

106 = Hi-density card connector

Insulator Material

R = Polyphenylene Sulfide (Ryton)

Shell Finish

- A = anodize
- C = cadmium
- G = gold
- I = irridite/alodine
- N = electroless nickel
- T = tin

Connector Size

50, 54, 58, 62, 66, 70, 74, 104, 112, 120, 128, 136, 144, 152

Connector Type

- P = Plug (pin)
- S = Receptacle (socket)

Wire Length (inches +1.00/-0.00)
e.g. 1 = 1 inches, 100 = 100 inches
Omit for PCB termination

Wire Color / Finish

- 1 = all white (M83513 standard) *off shelf
- 2 = all yellow
- 6 = 1st 10 colors blk. thru wht. repeated (M83513 standard) *off shelf

Omit for PCB termination

Wire Type

General Applications:

- A = 7 strd, per NEMA-HP3 (formerly MIL-W-16878/4)
- B = 7 strd, per NEMA-HP3 (formerly MIL-W-16878/6)
- C = 19 strd, per NEMA-HP3 (formerly MIL-W-16878/4)
- D = 19 strd, per NEMA-HP3 (formerly MIL-W-16878/6)

Termination Type

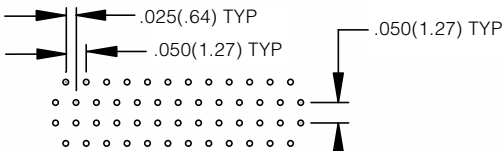
Wire Harness (Wire Size AWG):

- 2 = 30
- 3 = 28
- 4 = 26 (M83513 standard) *off shelf
- 6 = 24

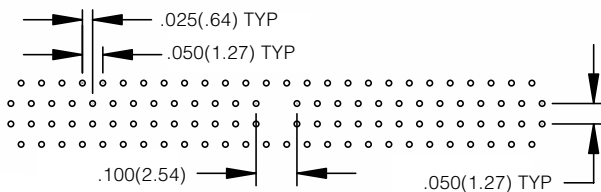
Vertical PCB Mount:

BS = Straight PCB Termination

CONTACT ARRANGEMENTS



SIZES 50-74



SIZES 104-152

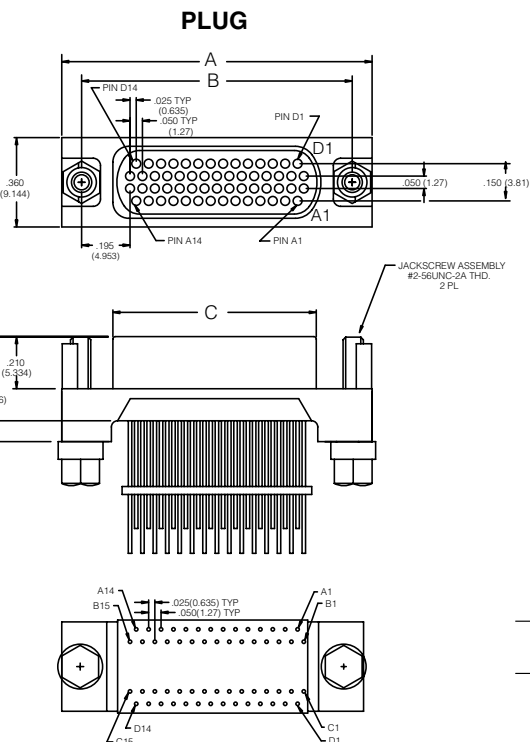
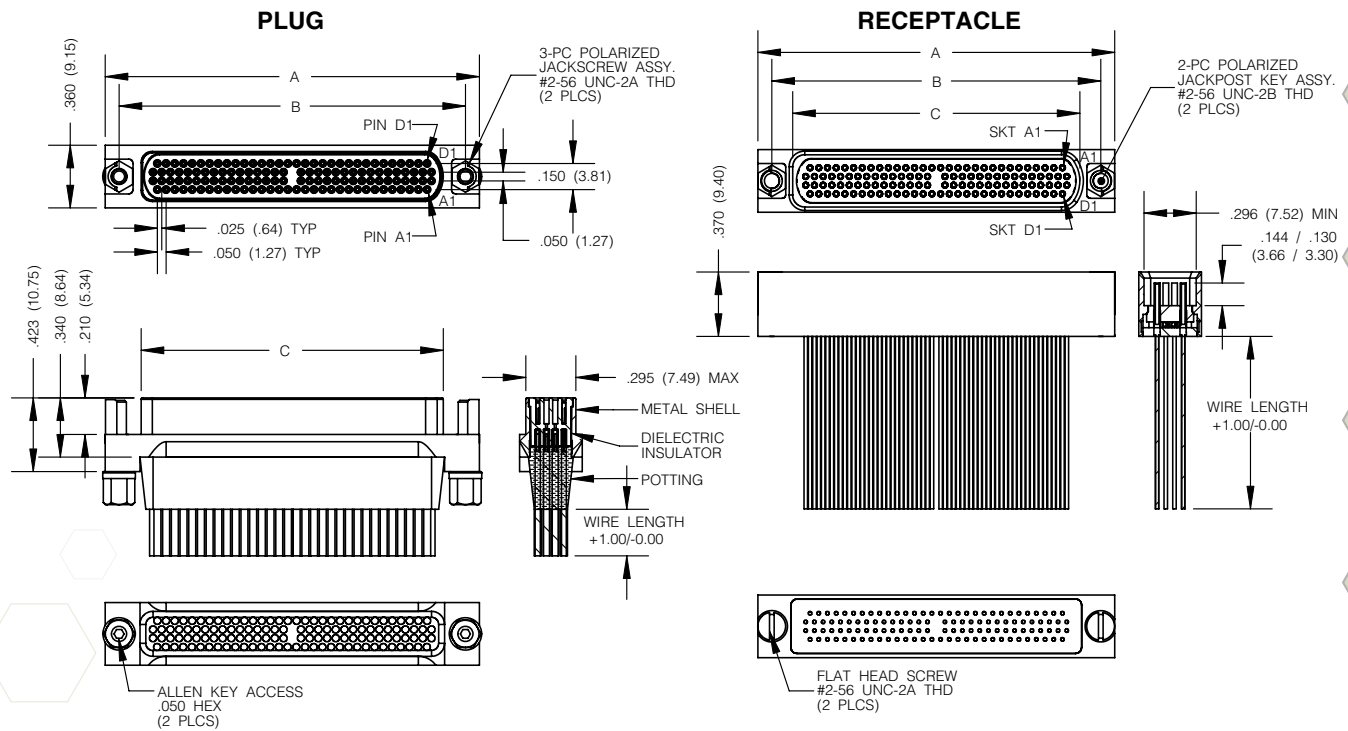
| SIZE | A ±.005 (0.13) | B ±.005 (0.13) | C MAX | |
|------|-------------------|-------------------|---------------|---------------|
| | | | PLUG | RCPT |
| 50 | 1.150 (29.21) | .990 (24.15) | .741 (18.82) | .747 (18.97) |
| 54 | 1.200 (30.48) | 1.040 (26.62) | .791 (20.09) | .797 (20.24) |
| 58 | 1.250 (31.75) | 1.090 (27.69) | .841 (21.36) | .847 (21.51) |
| 62 | 1.300 (33.02) | 1.140 (28.96) | .891 (22.63) | .897 (22.78) |
| 66 | 1.350 (34.29) | 1.190 (30.23) | .941 (23.90) | .947 (24.05) |
| 70 | 1.400 (35.56) | 1.240 (31.50) | .991 (25.17) | .997 (25.32) |
| 74 | 1.450 (36.83) | 1.290 (32.77) | 1.041 (26.44) | 1.047 (26.59) |
| 104 | 1.850 (46.99) | 1.690 (42.93) | 1.441 (36.60) | 1.447 (36.75) |
| 112 | 1.950 (49.53) | 1.790 (45.47) | 1.541 (39.14) | 1.547 (39.29) |
| 120 | 2.050 (52.07) | 1.890 (48.01) | 1.641 (41.68) | 1.647 (41.83) |
| 128 | 2.150 (54.61) | 1.990 (50.55) | 1.741 (44.22) | 1.747 (44.37) |
| 136 | 2.250 (57.15) | 2.090 (53.09) | 1.841 (46.76) | 1.847 (46.91) |
| 144 | 2.350 (59.69) | 2.190 (55.63) | 1.941 (49.30) | 1.947 (49.45) |
| 152 | 2.450 (62.23) | 2.290 (58.17) | 2.041 (51.84) | 2.047 (51.99) |

Features

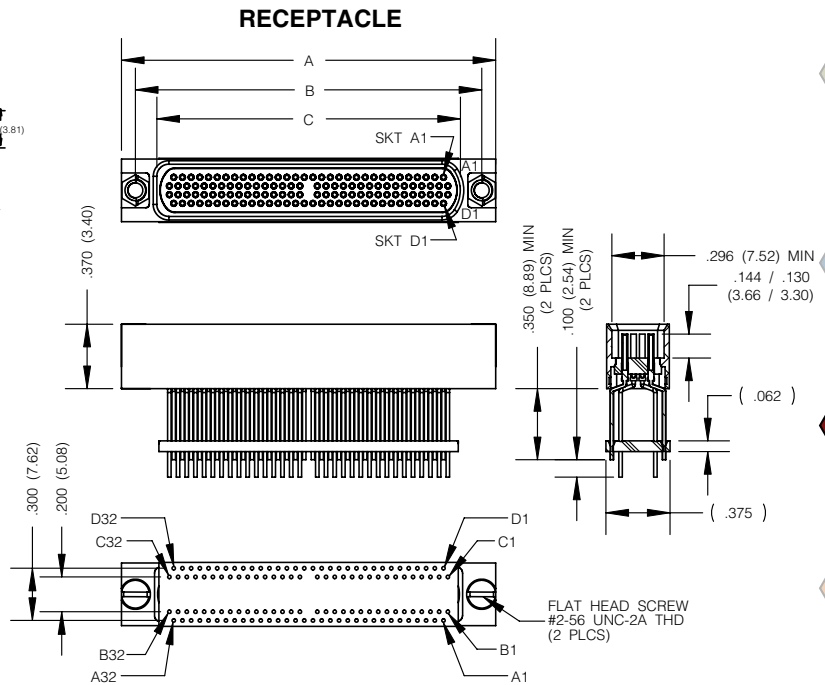
Designed for a space conscious industry. Provides an extremely dense and reliable interconnection for card-to-card and card-to-cable applications. Connector performance per M83513 specifications. Available in vertical mount for thru-hole applications and wire harness termination styles for both plug and receptacle. Wide selection of wire sizes (24 thru 30). Shell employs a polarizing "D" shape for correct mating.

Inches (mm)
All dimensions for reference only

Wire harness (stranded wire termination)



VERTICAL PCB MOUNT (24 AWG WIRE, TIN DIPPED)



CONSULT AMPHENOL AEROSPACE FOR SPECIFIC PCB CONFIGURATIONS

Inches (mm)
All dimensions for reference only

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

Accessories 2M

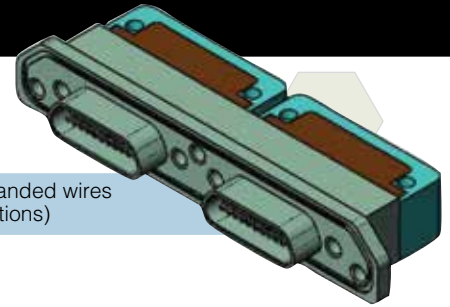
HD38999

Micro-D

Terrapin

Nexus

.050" contact spacing



Example:
M13-21S6APC11-000

Description: metal shell size 21 receptacle, nickel finish, 18" stranded wires per M22759/11, jackposts only, C-filter value 1000 pF (no deviations)

M13 21 P 1 2 P T C 1 1 - 000

Connector Series

M13 = Filtered Micro-D

Connector Size (number of contacts)

09, 15, 21, 25, 31 and 37

Connector Type

P = Plug (pin)
S = Receptacle (socket)

Termination Type

1 = vertical PCB "BS"
2 = vertical PCB "C6"
4 = right angle PCB "CBB"
5 = solid wire straight
6 = stranded wire

Wire / Lead Length (inches)

1 = .109 +/- .015
2 = .140 +/- .015
3 = .172 +/- .015
4 = .250 +/- .015

For Termination Type 6 (inches +1.00/-0.00):

A = 18.00 per M22759/11-26 (mil-std-681, system 1)
B = 36.00 per M22759/11-26 (mil-std-681, system 1)
C = 72.00 per M22759/11-26 (mil-std-681, system 1)

Deviation

XXX (000 is standard part)

Plating

1 = Electroless Nickel
2 = Tin
3 = Cadmium (Clear Chromate)
4 = Gold
5 = Zn Ni

Filter Value (pF +100%/-0%)

A = 200
B = 400
C = 800
1 = 1000
2 = 2000
4 = 4000
8 = 8000
T = 10,000
H = 16,000
0 = MIXED CAP

Filter Type

P = Pi-Filter
C = C-Filter
0 = non-filtered equivalent part

Insert Option

T = Threaded Insert (PCB terminations only)
Omit if not used

Mounting Hardware

A = .093" diameter mounting hole
B = .125" diameter mounting hole
L = Jackpost (loose)
P = Jackpost (fixed)

Material & Finishes

Connector Shell: Aluminum Alloy
Insulator: Polyphenyl Sulfide (PPS)
Seals: Silicone Rubber or Equivalent
Pin Contact: Beryllium Copper with 50 micro inches gold over nickel plating
Socket Contact: Copper alloy with 50 micro inches gold over nickel plating
Hardware: 300 series stainless steel
PCB Terminals: Gold plated copper alloy, solder dipped
Capacitors: Planar ceramic array
Inductors: Ferrite
EMI Ground Spring: Beryllium Copper
Encapsulant: Thermally conductive epoxy

Quality Conformance Inspection

Series M13 connectors have been extensively qualified per the requirements of MIL-DTL-83513. All products shipped have the following inspection tests:

- 100% visual and mechanical inspections
 - 100% capacitance, DWV, insulation resistance and dissipation factor testing
 - Sample insertion loss testing (AQL 1.0%)
- For high reliability applications, the following inspection tests or certifications are also available:
- Thermal shock
 - Elevated temperature voltage conditioning
 - Elevated temperature insulation resistance and capacitance
 - Outgassing per JSC-SPR-0022 for space-borne applications
 - Baseline and single lot date code manufacturing
 - Other tests as required (consult the Amphenol Aerospace)

Features

Amphenol M13 connector series is a range of filtered MIL-DTL-83513 Micro-D products for military and aerospace applications. These extremely small filter connectors employ monolithic planar capacitors in a rugged, high density package ideally suited for applications where space and weight is restricted. Available in a variety of filter types and mechanical configurations including wired harnesses and PCB terminations. The M13 series are fully intermateable with all standard MIL-DTL-83513 connectors and meet the applicable performance and environmental requirements.

Inches (mm)
All dimensions for reference only

.050" contact spacing

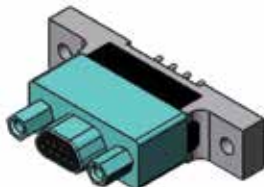
C-Filter Specifications

| Filter Circuits | | C, CLR, LRC | | | | | |
|---|----------|-------------|---------|----------|-----------|-----------|------------|
| | | 150-300 | 300-500 | 600-1200 | 1200-3200 | 4000-8000 | 8000-16000 |
| Capacitance (pF) (@ 25 C, 1 kHz and 1.0 VRMS) | | | | | | | |
| Insertion Loss (dB min.) | .1 MHz | - | - | - | - | - | - |
| (per MIL-STD-220) | 1 MHz | - | - | - | - | - | - |
| (@ 25C and no load) | 10 MHz | - | - | 2 | 5 | 13 | 18 |
| | 100 MHz | 6 | 12 | 17 | 24 | 33 | 40 |
| | 1000 MHz | 25 | 31 | 38 | 43 | 54 | 60 |
| Working Voltage (VDC) (@ 25 C and sea level) | | 100 | | | | | |
| Dielectric Withstanding Voltage (VDC) (@25 C and 50 mA max. charging current) | | 300 | | | | | |
| Insulation Resistance (Gohms) | | | | | | | |
| (@25 C and working voltage) | | 5 | | | | | |
| Contact Current Rating (continuous max. DC amperes) | | 3 | | | | | |
| Filter RF Current Rating (amperes) (max. @ any frequency) | | 0.3 | | | | | |

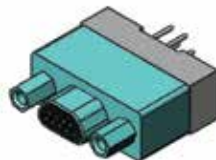
Pi-Filter Specifications

| Filter Circuits | | Pi | | | | | |
|---|----------|---------|---------|----------|-----------|-----------|------------|
| | | 150-300 | 300-500 | 600-1200 | 1200-3200 | 4000-8000 | 8000-16000 |
| Capacitance (pF) (@ 25 C, 1 kHz and 1.0 VRMS) | | | | | | | |
| Insertion Loss (dB min.) | .1 MHz | - | - | - | - | - | - |
| (per MIL-STD-220) | 1 MHz | - | - | - | - | - | 3 |
| (@ 25 C and no load) | 10 MHz | - | - | 2 | 5 | 13 | 18 |
| | 100 MHz | 7 | 12 | 18 | 26 | 45 | 57 |
| | 1000 MHz | 30 | 42 | 53 | 60 | 60 | 60 |
| Working Voltage (VDC) (@25 C and sea level) | | 100 | | | | | |
| Dielectric Withstanding Voltage (VDC) (@25 C and 50 mA max. charging current) | | 300 | | | | | |
| Insulation Resistance (Gohms) | | | | | | | |
| (@25 C and working voltage) | | 5 | | | | | |
| Contact Current Rating (Continuous max. DC amperes) | | 3 | | | | | |
| Filter RF Current Rating (amperes) (max. @ any frequency) | | 0.3 | | | | | |

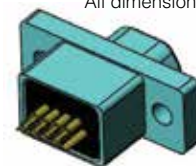
Inches (mm)
All dimensions for reference only



Termination Type 1 Vertical PCB "BS"



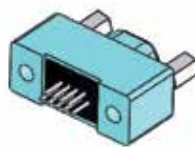
Termination Type 2 Vertical PCB "C6"



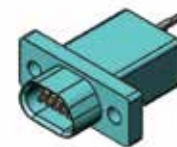
Termination Type 3 Solder Cup



Termination Type 4 Right Angle PCB "CBR"



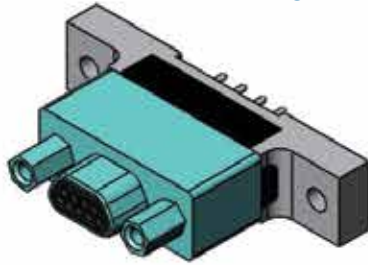
Termination Type 5 Solid Wire Straight



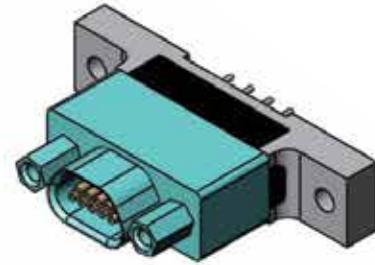
Termination Type 6 Stranded Wire

.050" contact spacing

BS TERMINATION TYPE 1 VERTICAL PCB

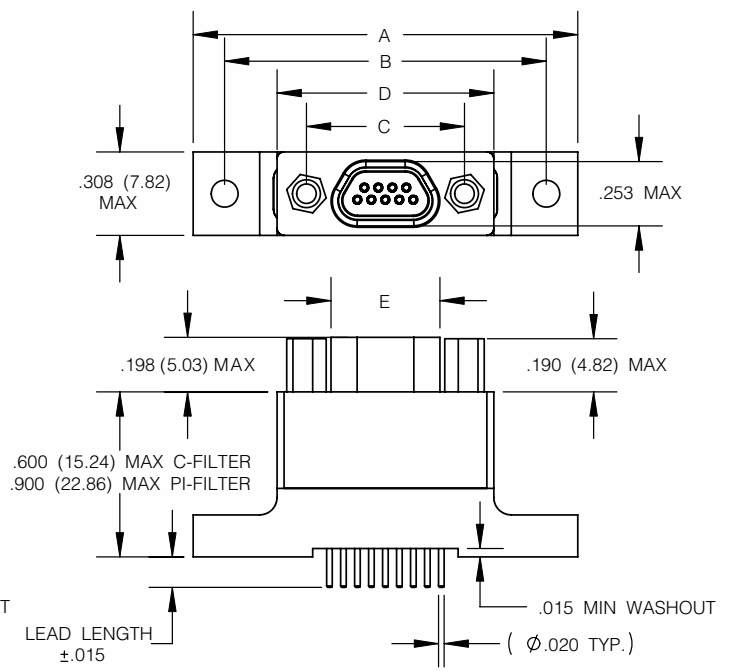
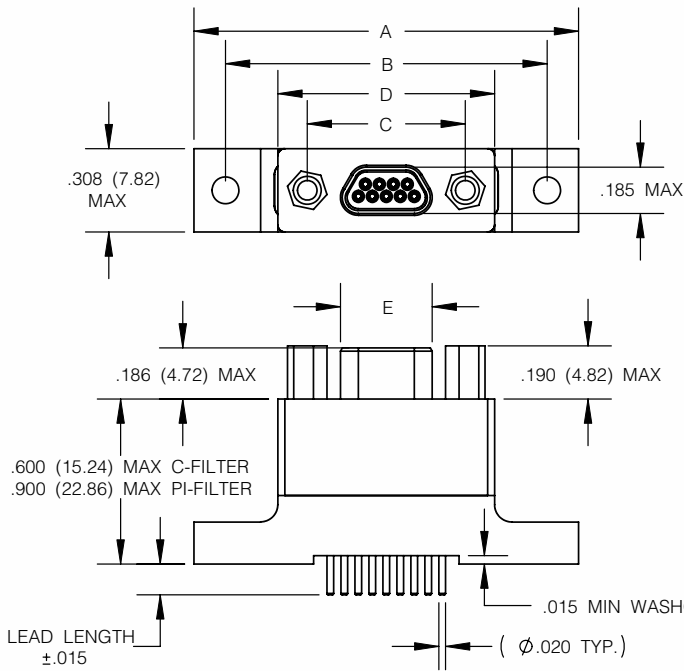


PLUG



RECEPTACLE

* INTERFACIAL SEAL INCLUDED



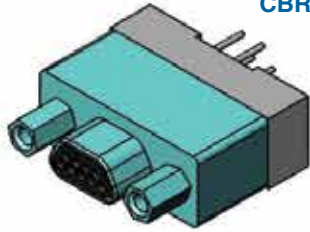
| SIZE | A MAX. | B ±.005 (0.13) | C ±.005 (0.13) | D MAX. | C MAX. | |
|------|---------------|-------------------|-------------------|---------------|---------------|---------------|
| | | | | | PLUG | RCPT |
| 09 | 1.390 (35.31) | 1.150 (29.21) | .565 (14.35) | .785 (19.84) | .334 (8.48) | .402 (10.21) |
| 15 | 1.390 (35.31) | 1.150 (29.21) | .715 (18.16) | .935 (23.75) | .484 (12.29) | .552 (13.97) |
| 21 | 1.690 (43.93) | 1.450 (36.83) | .865 (21.97) | 1.085 (27.56) | .634 (16.10) | .702 (17.83) |
| 25 | 1.740 (44.20) | 1.500 (38.10) | .965 (24.51) | 1.185 (30.10) | .734 (18.64) | .802 (20.37) |
| 31 | 2.040 (51.82) | 1.800 (45.72) | 1.115 (28.32) | 1.335 (33.91) | .884 (22.45) | .952 (24.18) |
| 37 | 2.340 (59.44) | 2.100 (53.34) | 1.265 (32.13) | 1.485 (37.72) | 1.034 (26.26) | 1.102 (27.99) |

Refer to page 149 for Vertical Mount PC Configurations (Rear View)

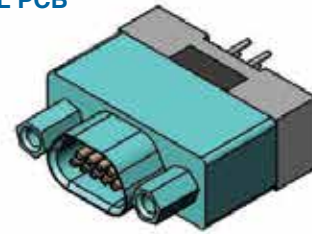
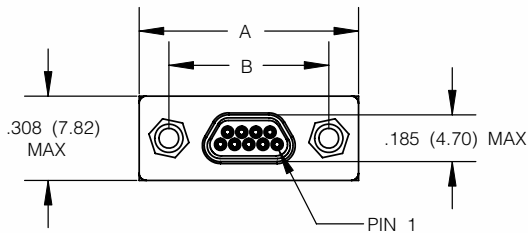
Inches (mm)
All dimensions for reference only

.050" contact spacing

CBR TERMINATION TYPE 2 VERTICAL PCB

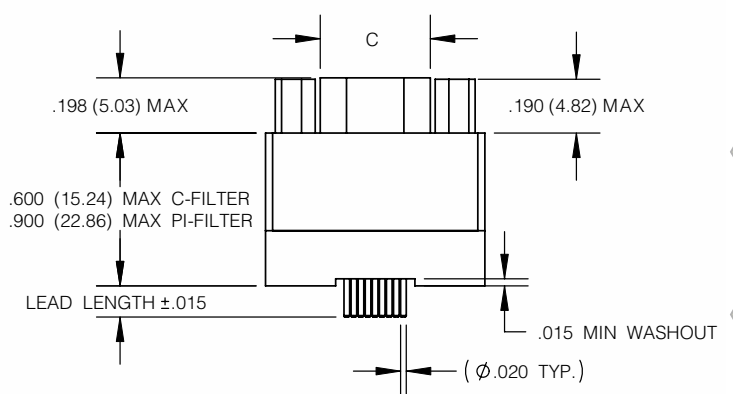
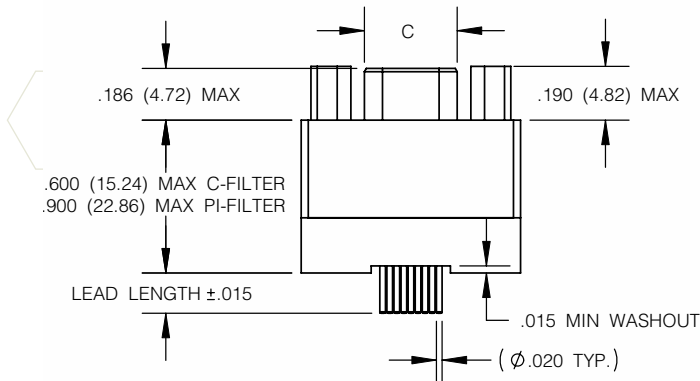
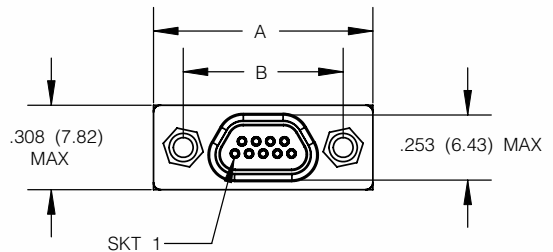


PLUG



RECEPTACLE

* INTERFACIAL SEAL INCLUDED



| SIZE | A MAX. | B ±.005 (0.13) | C MAX. | |
|------|---------------|-------------------|---------------|---------------|
| | | | PLUG | RCPT |
| 09 | .785 (19.94) | .565 (14.35) | .334 (8.48) | .402 (10.21) |
| 15 | .935 (23.75) | .715 (18.16) | .484 (12.29) | .552 (13.97) |
| 21 | 1.085 (27.56) | .865 (21.97) | .634 (16.10) | .702 (17.83) |
| 25 | 1.185 (30.10) | .965 (24.51) | .734 (18.64) | .802 (20.37) |
| 31 | 1.335 (33.91) | 1.115 (28.32) | .884 (22.45) | .952 (24.18) |
| 37 | 1.485 (37.72) | 1.265 (32.13) | 1.034 (26.26) | 1.102 (27.99) |

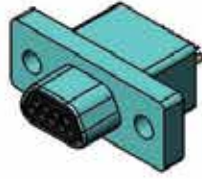
Refer to page 156 for vertical mount PC Configurations (Rear View)

Inches (mm)
All dimensions for reference only

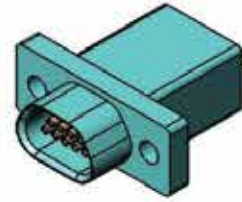
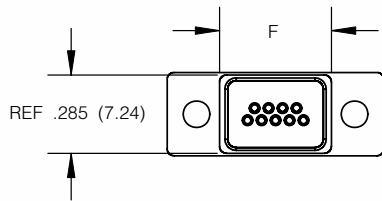
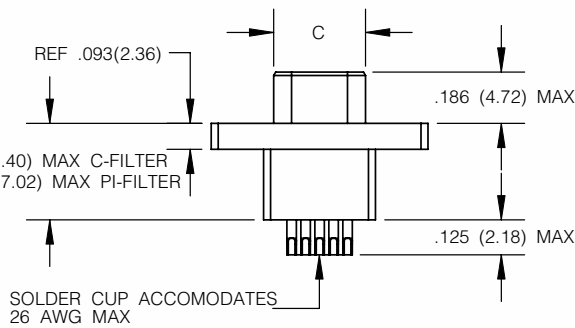
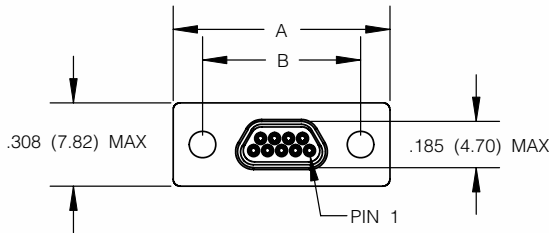
- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- Accessories
- 2M
- HD38999
- Micro-D
- Terrapin
- Nexus

.050" contact spacing

SOLDER CUP TERMINATION TYPE 3

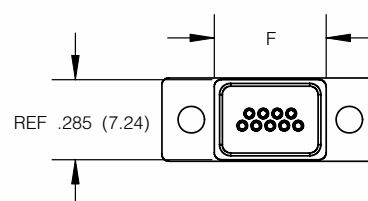
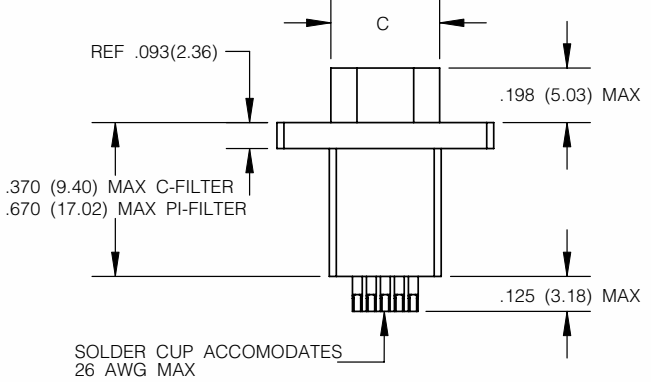
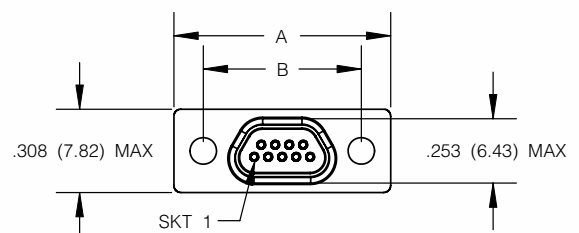


PLUG



RECEPTACLE

* INTERFACIAL SEAL INCLUDED



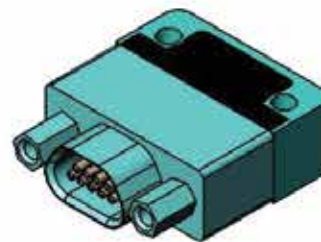
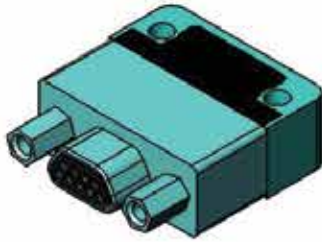
| SIZE | A MAX | B ±.005 (0.13) | C MAX | | F MAX |
|------|---------------|-------------------|---------------|---------------|---------------|
| | | | PLUG | RCPT | |
| 09 | .785 (19.94) | .565 (14.35) | .334 (8.48) | .402 (10.21) | .400 (10.16) |
| 15 | .935 (23.75) | .715 (18.16) | .484 (12.29) | .552 (13.97) | .550 (13.97) |
| 21 | 1.085 (27.56) | .865 (21.97) | .634 (16.10) | .702 (17.83) | .700 (17.78) |
| 25 | 1.185 (30.10) | .965 (24.51) | .734 (18.64) | .802 (20.37) | .800 (20.32) |
| 31 | 1.335 (33.91) | 1.115 (28.32) | .884 (22.45) | .952 (24.18) | .950 (24.13) |
| 37 | 1.485 (37.72) | 1.265 (32.13) | 1.034 (26.26) | 1.102 (27.99) | 1.100 (27.94) |

Inches (mm)
All dimensions for reference only

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

.050" contact spacing

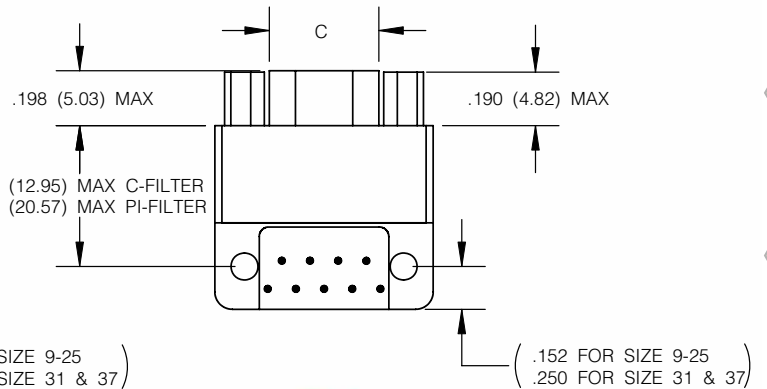
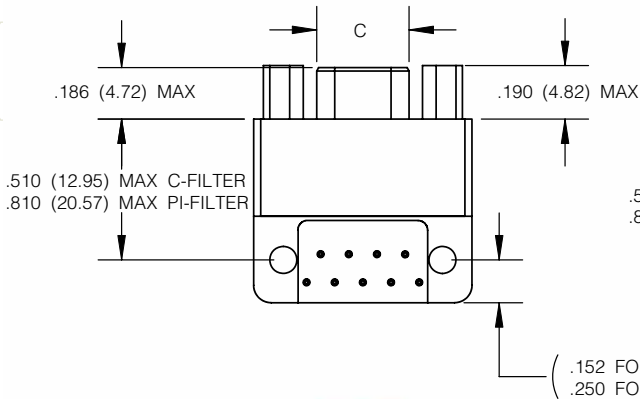
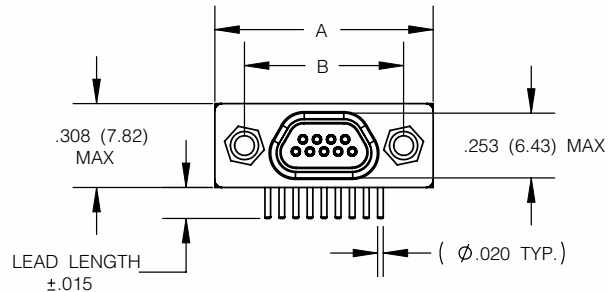
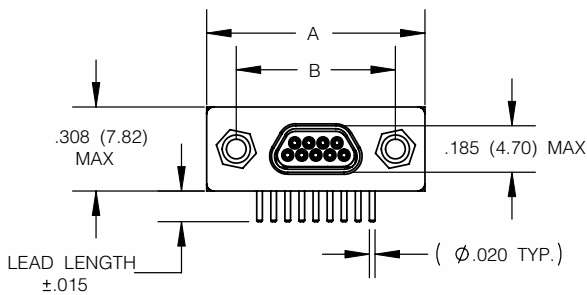
CBR TERMINATION TYPE 4 RIGHT ANGLE PCB



PLUG

RECEPTACLE

* INTERFACIAL SEAL INCLUDED



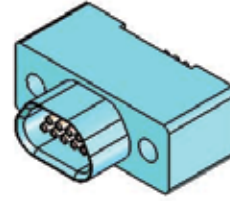
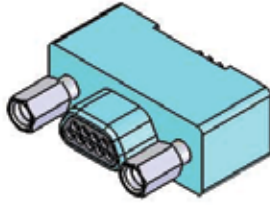
| SIZE | A MAX | B ±.005 (0.13) | C MAX | |
|------|---------------|-------------------|---------------|---------------|
| | | | PLUG | RCPT |
| 09 | .785 (19.94) | .565 (14.35) | .334 (8.48) | .402 (10.21) |
| 15 | .935 (23.75) | .715 (18.16) | .484 (12.29) | .552 (13.97) |
| 21 | 1.085 (27.56) | .865 (21.97) | .634 (16.10) | .702 (17.83) |
| 25 | 1.185 (30.10) | .965 (24.51) | .734 (18.64) | .802 (20.37) |
| 31 | 1.335 (33.91) | 1.115 (28.32) | .884 (22.45) | .952 (24.18) |
| 37 | 1.485 (37.72) | 1.265 (32.13) | 1.034 (26.26) | 1.102 (27.99) |

Refer to page 153 for Right Angle (90 Deg) Narrow Profile PC Configurations

Inches (mm)
All dimensions for reference only

.050" contact spacing

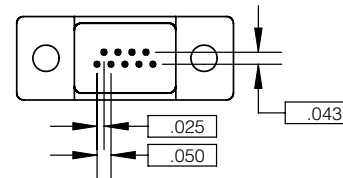
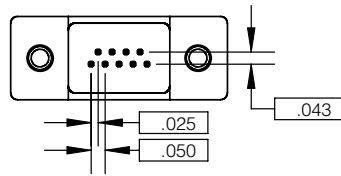
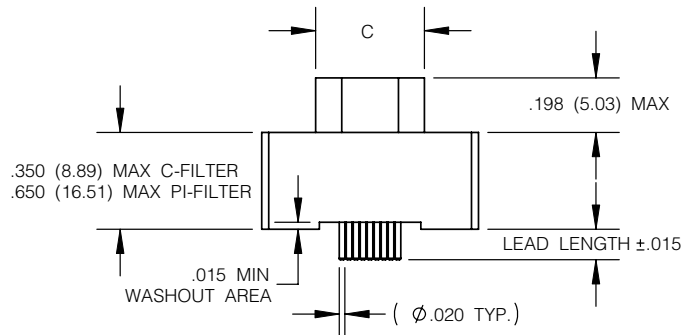
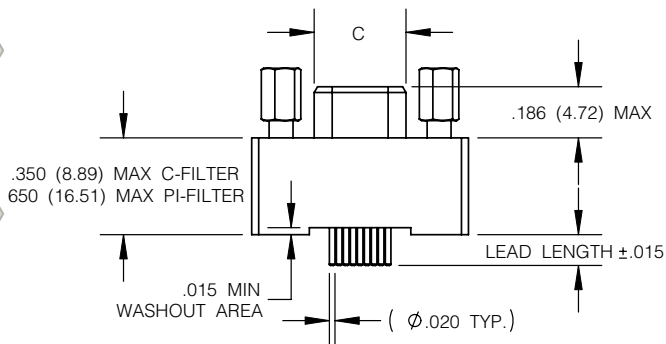
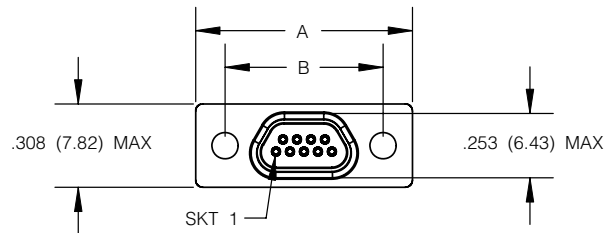
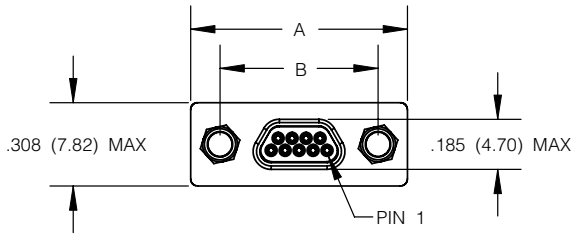
SOLID WIRE TERMINATION TYPE 5 STRAIGHT



PLUG

RECEPTACLE

* INTERFACIAL SEAL INCLUDED



| SIZE | A MAX | B ±.005 (0.13) | C MAX | |
|------|---------------|-------------------|---------------|---------------|
| | | | PLUG | RCPT |
| 09 | .785 (19.94) | .565 (14.35) | .334 (8.48) | .402 (10.21) |
| 15 | .935 (23.75) | .715 (18.16) | .484 (12.29) | .552 (13.97) |
| 21 | 1.085 (27.56) | .865 (21.97) | .634 (16.10) | .702 (17.83) |
| 25 | 1.185 (30.10) | .965 (24.51) | .734 (18.64) | .802 (20.37) |
| 31 | 1.335 (33.91) | 1.115 (28.32) | .884 (22.45) | .952 (24.18) |
| 37 | 1.485 (37.72) | 1.265 (32.13) | 1.034 (26.26) | 1.102 (27.99) |

Inches (mm)
All dimensions for reference only

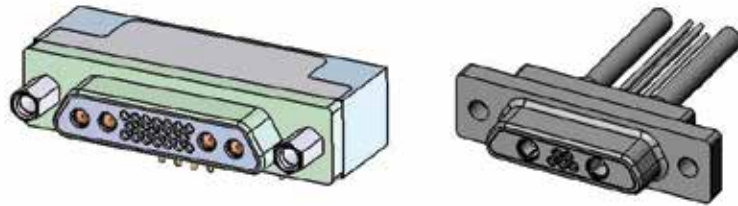
Panel mount w/o-ring seal, Surface mount/straddle mount high temperature

Need A Special Connector?

Amphenol has designed a range of specialty connectors to meet your specific requirements. Our connectors are designed to be compact, robust, and multi-functional. Please contact Amphenol Aerospace for more information.

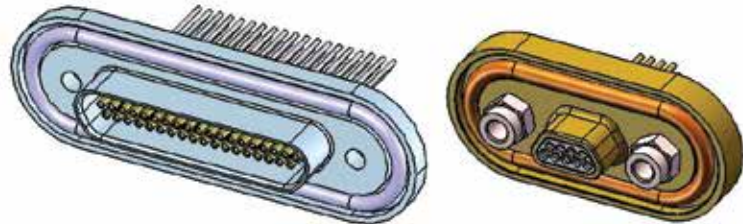
Combo/Hybrid Micro-D

- Suitable for compact designs
- Coax / Power / Signal contacts
- Metal or plastic shell
- Available sizes 9 thru 100
- Available in various shell finishes
- Wire or PCB termination
- Standard to custom hardware available



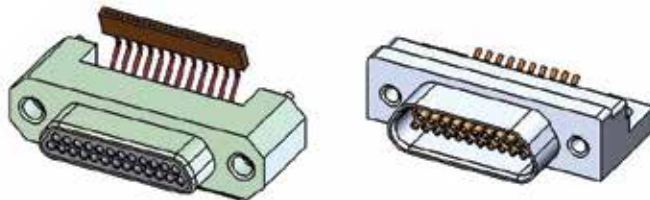
Panel Mount W/O-Ring Seal

- Suitable for external panel applications
- Meets IP-67 sealing requirement
- Metal or plastic shell
- Available sizes 9 thru 100
- Available in various shell finishes
- Wire or PCB termination
- Standard to custom hardware available
- Blind mounting holes



Surface Mount/Straddle Mount

- Suitable for limited board space
- Vertical or horizontal mount
- .050" pad spacing
- Metal or plastic shell
- Available sizes 9 thru 37
- Standard to custom hardware available



High Temperature Micro-D (200°C)

- Suitable for oil and gas applications
- Metal or plastic shell
- Special high temp dielectric insulator
- High temp solder
- Available sizes 9 thru 100
- Available in various shell finishes
- Wire gauge range 32 AWG to 24 AWG
- Multiple wire lengths (+1.00 / -0.00)
- Standard to custom hardware available



Contacts
& Tools

2M Specs

2M801

2M803

2M804

2M805

2M
Accessories

HD38999

Micro-D

Terrapin

Nexus

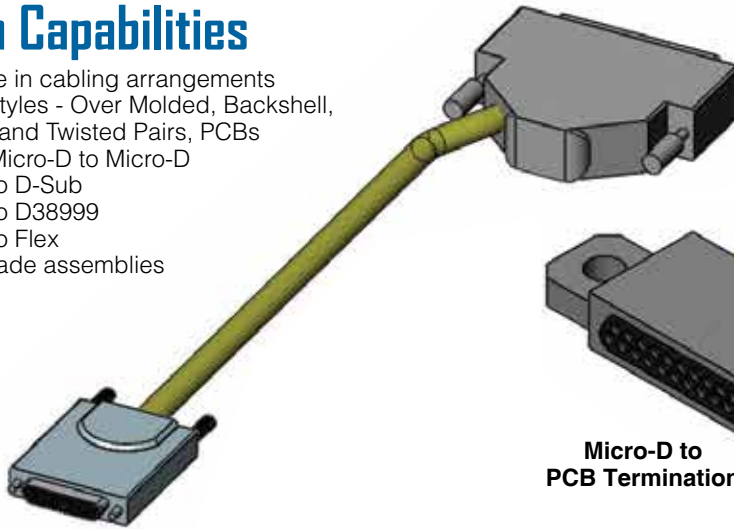
- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

Amphenol designs and manufactures the Right Solution for your needs!

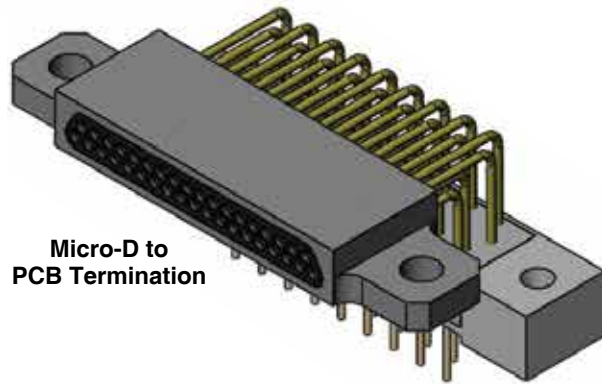
Premium service, fast response time...
imagine the possibilities!

Design Capabilities

- Specialize in cabling arrangements
- Cabling styles - Over Molded, Backshell, Shielded and Twisted Pairs, PCBs
- Multiple Micro-D to Micro-D
- Micro-D to D-Sub
- Micro-D to D38999
- Micro-D to Flex
- Space grade assemblies



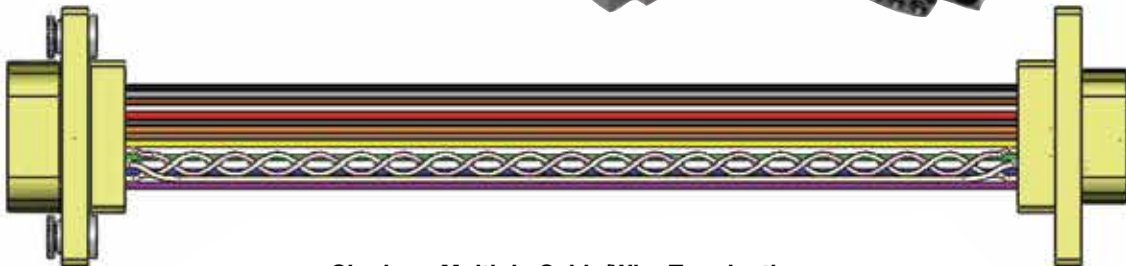
Single or Multiple Cable/Wire Terminations (Micro-D to D-SUB, Shielded Teflon Cable)



Micro-D to PCB Termination



Micro-D to header or other products termination



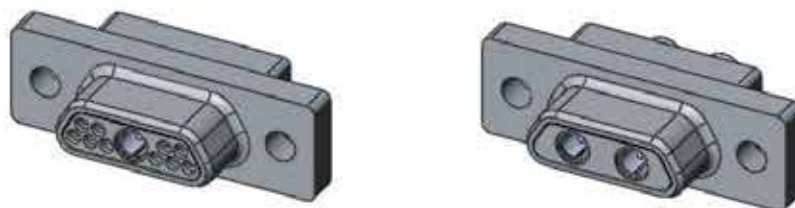
Single or Multiple Cable/Wire Terminations (Micro-D to Micro-D, Twisted Pairs Available)

Design Capabilities

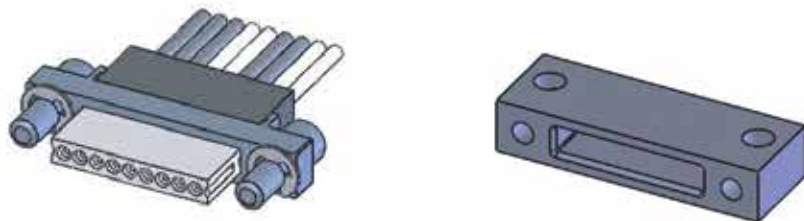
- Contact arrangements up to 372 positions
- Contact styles - Fiber Optic, Power, Signal, RF
- Mounting styles - SMT, Through Hole, Press Fit, Solder Cup, Blind Mate
- Custom contact lengths for multiple PCB thickness
- Custom connector shell designs available
- Standard to custom hardware available



**Custom Insert Pattern
(Signal & Power or
coax Contacts)**



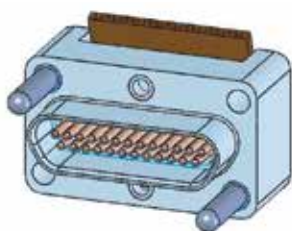
**Custom Strip Line Connector
with Mounting Features**



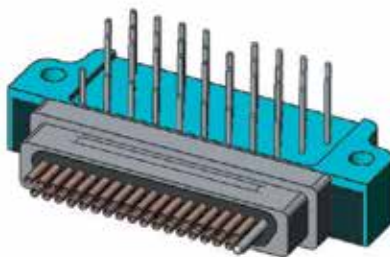
**Double or Multiple Bay
(Vertical/Horizontal
Orientation)**



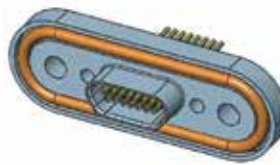
**Custom Surface Mount
with Guide Pins and Threaded
Mounting Features**



**Custom Shell, PCB Connector
(CBR Termination Shown)**



IP-67 O-Ring Panel Mount



Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

Micro-D

Terrapin

Nexus

| AWG | DIAMETER | |
|------------|----------|--------|
| | (INCH) | (MM) |
| 0000 (4/0) | 0.46 | 11.684 |
| 000 (3/0) | 0.4096 | 10.404 |
| 00 (2/0) | 0.3648 | 9.266 |
| 0 (1/0) | 0.3249 | 8.252 |
| 1 | 0.2893 | 7.348 |
| 2 | 0.2576 | 6.544 |
| 3 | 0.2294 | 5.827 |
| 4 | 0.2043 | 5.189 |
| 5 | 0.1819 | 4.621 |
| 6 | 0.162 | 4.115 |
| 7 | 0.1443 | 3.665 |
| 8 | 0.1285 | 3.264 |
| 9 | 0.1144 | 2.906 |
| 10 | 0.1019 | 2.588 |
| 11 | 0.0907 | 2.305 |
| 12 | 0.0808 | 2.053 |
| 13 | 0.072 | 1.828 |
| 14 | 0.0641 | 1.628 |
| 15 | 0.0571 | 1.45 |
| 16 | 0.0508 | 1.291 |
| 17 | 0.0453 | 1.15 |
| 18 | 0.0403 | 1.024 |
| 19 | 0.0359 | 0.912 |
| 20 | 0.032 | 0.812 |
| 21 | 0.0285 | 0.723 |
| 22 | 0.0253 | 0.644 |
| 23 | 0.0226 | 0.573 |
| 24 | 0.0201 | 0.511 |
| 25 | 0.0179 | 0.455 |
| 26 | 0.0159 | 0.405 |
| 27 | 0.0142 | 0.361 |
| 28 | 0.0126 | 0.321 |
| 29 | 0.0113 | 0.286 |
| 30 | 0.01 | 0.255 |
| 31 | 0.00893 | 0.227 |
| 32 | 0.00795 | 0.202 |
| 33 | 0.00708 | 0.18 |
| 34 | 0.0063 | 0.16 |
| 35 | 0.00561 | 0.143 |
| 36 | 0.005 | 0.127 |
| 37 | 0.00445 | 0.113 |
| 38 | 0.00397 | 0.101 |
| 39 | 0.00353 | 0.0897 |
| 40 | 0.00314 | 0.0799 |

| PIN | BASE COLOR | 1st STRIPE | 2nd STRIPE | 3rd STRIPE |
|-----|------------|------------|------------|------------|
| 1 | BLACK | - | - | - |
| 2 | BROWN | - | - | - |
| 3 | RED | - | - | - |
| 4 | ORANGE | - | - | - |
| 5 | YELLOW | - | - | - |
| 6 | GREEN | - | - | - |
| 7 | BLUE | - | - | - |
| 8 | VIOLET | - | - | - |
| 9 | GREY | - | - | - |
| 10 | WHITE | - | - | - |
| 11 | WHITE | BLACK | - | - |
| 12 | WHITE | BROWN | - | - |
| 13 | WHITE | RED | - | - |
| 14 | WHITE | ORANGE | - | - |
| 15 | WHITE | YELLOW | - | - |
| 16 | WHITE | GREEN | - | - |
| 17 | WHITE | BLUE | - | - |
| 18 | WHITE | VIOLET | - | - |
| 19 | WHITE | GREY | - | - |
| 20 | WHITE | BLACK | BROWN | - |
| 21 | WHITE | BLACK | RED | - |
| 22 | WHITE | BLACK | ORANGE | - |
| 23 | WHITE | BLACK | YELLOW | - |
| 24 | WHITE | BLACK | GREEN | - |
| 25 | WHITE | BLACK | BLUE | - |
| 26 | WHITE | BLACK | VIOLET | - |
| 27 | WHITE | BLACK | GREY | - |
| 28 | WHITE | BROWN | RED | - |
| 29 | WHITE | BROWN | ORANGE | - |
| 30 | WHITE | BROWN | YELLOW | - |
| 31 | WHITE | BROWN | GREEN | - |
| 32 | WHITE | BROWN | BLUE | - |
| 33 | WHITE | BROWN | VIOLET | - |
| 34 | WHITE | BROWN | GREY | - |
| 35 | WHITE | RED | ORANGE | - |
| 36 | WHITE | RED | YELLOW | - |
| 37 | WHITE | RED | GREEN | - |
| 38 | WHITE | RED | BLUE | - |
| 39 | WHITE | RED | VIOLET | - |
| 40 | WHITE | RED | GREY | - |
| 41 | WHITE | ORANGE | YELLOW | - |
| 42 | WHITE | ORANGE | GREEN | - |
| 43 | WHITE | ORANGE | BLUE | - |
| 44 | WHITE | ORANGE | VIOLET | - |
| 45 | WHITE | ORANGE | GREY | - |
| 46 | WHITE | YELLOW | GREEN | - |
| 47 | WHITE | YELLOW | BLUE | - |
| 48 | WHITE | YELLOW | VIOLET | - |
| 49 | WHITE | YELLOW | GREY | - |
| 50 | WHITE | GREEN | BLUE | - |

| PIN | BASE COLOR | 1st STRIPE | 2nd STRIPE | 3rd STRIPE |
|-----|------------|------------|------------|------------|
| 51 | WHITE | GREEN | VIOLET | - |
| 52 | WHITE | GREEN | GREY | - |
| 53 | WHITE | BLUE | VIOLET | - |
| 54 | WHITE | BLUE | GREY | - |
| 55 | WHITE | VIOLET | GREY | - |
| 56 | WHITE | BLACK | BROWN | RED |
| 57 | WHITE | BLACK | BROWN | ORANGE |
| 58 | WHITE | BLACK | BROWN | YELLOW |
| 59 | WHITE | BLACK | BROWN | GREEN |
| 60 | WHITE | BLACK | BROWN | BLUE |
| 61 | WHITE | BLACK | BROWN | VIOLET |
| 62 | WHITE | BLACK | BROWN | GREY |
| 63 | WHITE | BLACK | RED | ORANGE |
| 64 | WHITE | BLACK | RED | YELLOW |
| 65 | WHITE | BLACK | RED | GREEN |
| 66 | WHITE | BLACK | RED | BLUE |
| 67 | WHITE | BLACK | RED | VIOLET |
| 68 | WHITE | BLACK | RED | GREY |
| 69 | WHITE | BLACK | ORANGE | YELLOW |
| 70 | WHITE | BLACK | ORANGE | GREEN |
| 71 | WHITE | BLACK | ORANGE | BLUE |
| 72 | WHITE | BLACK | ORANGE | VIOLET |
| 73 | WHITE | BLACK | ORANGE | GREY |
| 74 | WHITE | BLACK | YELLOW | GREEN |
| 75 | WHITE | BLACK | YELLOW | BLUE |
| 76 | WHITE | BLACK | YELLOW | VIOLET |
| 77 | WHITE | BLACK | YELLOW | GREY |
| 78 | WHITE | BLACK | GREEN | BLUE |
| 79 | WHITE | BLACK | GREEN | VIOLET |
| 80 | WHITE | BLACK | GREEN | GREY |
| 81 | WHITE | BLACK | BLUE | VIOLET |
| 82 | WHITE | BLACK | BLUE | GREY |
| 83 | WHITE | BLACK | VIOLET | GREY |
| 84 | WHITE | BROWN | RED | ORANGE |
| 85 | WHITE | BROWN | RED | YELLOW |
| 86 | WHITE | BROWN | RED | GREEN |
| 87 | WHITE | BROWN | RED | BLUE |
| 88 | WHITE | BROWN | RED | VIOLET |
| 89 | WHITE | BROWN | RED | GREY |
| 90 | WHITE | BROWN | ORANGE | YELLOW |
| 91 | WHITE | BROWN | ORANGE | GREEN |
| 92 | WHITE | BROWN | ORANGE | BLUE |
| 93 | WHITE | BROWN | ORANGE | VIOLET |
| 94 | WHITE | BROWN | ORANGE | GREY |
| 95 | WHITE | BROWN | YELLOW | GREEN |
| 96 | WHITE | BROWN | YELLOW | BLUE |
| 97 | WHITE | BROWN | YELLOW | VIOLET |
| 98 | WHITE | BROWN | YELLOW | GREY |
| 99 | WHITE | BROWN | GREEN | BLUE |
| 100 | WHITE | BROWN | GREEN | VIOLET |

| Mil-Spec | Amphenol | Mil-Spec | Amphenol | Mil-Spec | Amphenol |
|----------------|----------------|----------------|----------------|----------------|----------------|
| M83513/01-AC | 100RC09P-B | M83513/03-A15C | 100RN09P-4F1CB | M83513/03-C12N | 100RC21P-4F6BB |
| M83513/01-AN | 100RN09P-B | M83513/03-A15N | 100RN09P-4F1CB | M83513/03-C13C | 100RC21P-4E1CB |
| M83513/01-BC | 100RC15P-B | M83513/03-A16C | 100RC09P-4F6CB | M83513/03-C13N | 100RN21P-4E1CB |
| M83513/01-BN | 100RN15P-B | M83513/03-A16N | 100RN09P-4F6CB | M83513/03-C14C | 100RC21P-4E6CB |
| M83513/01-CC | 100RC21P-B | M83513/03-B01C | 100RC15P-4E1AB | M83513/03-C14N | 100RN21P-4E6CB |
| M83513/01-CN | 100RN21P-B | M83513/03-B01N | 100RN15P-4E1AB | M83513/03-C15C | 100RC21P-4F1CB |
| M83513/01-DC | 100RC25P-B | M83513/03-B02C | 100RC15P-4E1BB | M83513/03-C15N | 100RN21P-4F1CB |
| M83513/01-DN | 100RN25P-B | M83513/03-B02N | 100RN15P-4E1BB | M83513/03-C16C | 100RC21P-4F6CB |
| M83513/01-EC | 100RC31P-B | M83513/03-B03C | 100RC15P-4E6AB | M83513/03-C16N | 100RN21P-4F6CB |
| M83513/01-EN | 100RN31P-B | M83513/03-B03N | 100RN15P-4E6AB | M83513/03-D01C | 100RC25P-4E1AB |
| M83513/01-FC | 100RC37P-B | M83513/03-B04C | 100RC15P-4E6BB | M83513/03-D01N | 100RN25P-4E1AB |
| M83513/01-FN | 100RN37P-B | M83513/03-B04N | 100RN15P-4E6BB | M83513/03-D02C | 100RC25P-4E1BB |
| M83513/01-GC | 100RC51P-B | M83513/03-B05C | 100RC15P-5L4DB | M83513/03-D02N | 100RN25P-4E1BB |
| M83513/01-GN | 100RN51P-B | M83513/03-B05N | 100RN15P-5L4DB | M83513/03-D03C | 100RC25P-4E6AB |
| M83513/01-HC | 100RC100P-B | M83513/03-B06C | 100RC15P-5L4EB | M83513/03-D03N | 100RN25P-4E6AB |
| M83513/01-HN | 100RN100P-B | M83513/03-B06N | 100RN15P-5L4EB | M83513/03-D04C | 100RC25P-4E6BB |
| M83513/02-AC | 100RC09S-B | M83513/03-B07C | 100RC15P-5L3DB | M83513/03-D04N | 100RN25P-4E6BB |
| M83513/02-AN | 100RN09S-B | M83513/03-B07N | 100RN15P-5L3DB | M83513/03-D05C | 100RC25P-5L4DB |
| M83513/02-BC | 100RC15S-B | M83513/03-B08C | 100RC15P-5L3EB | M83513/03-D05N | 100RN25P-5L4DB |
| M83513/02-BN | 100RN15S-B | M83513/03-B08N | 100RN15P-5L3EB | M83513/03-D06C | 100RC25P-5L4EB |
| M83513/02-CC | 100RC21S-B | M83513/03-B09C | 100RC15P-4F1AB | M83513/03-D06N | 100RN25P-5L4EB |
| M83513/02-CN | 100RN21S-B | M83513/03-B09N | 100RN15P-4F1AB | M83513/03-D07C | 100RC25P-5L3DB |
| M83513/02-DC | 100RC25S-B | M83513/03-B10C | 100RC15P-4F1BB | M83513/03-D07N | 100RN25P-5L3DB |
| M83513/02-DN | 100RN25S-B | M83513/03-B10N | 100RN15P-4F1BB | M83513/03-D08C | 100RC25P-5L3EB |
| M83513/02-EC | 100RC31S-B | M83513/03-B11C | 100RC15P-4F6AB | M83513/03-D08N | 100RN25P-5L3EB |
| M83513/02-EN | 100RN31S-B | M83513/03-B11N | 100RN15P-4F6AB | M83513/03-D09C | 100RC25P-4F1AB |
| M83513/02-FC | 100RC37S-B | M83513/03-B12C | 100RC15P-4F6BB | M83513/03-D09N | 100RN25P-4F1AB |
| M83513/02-FN | 100RN37S-B | M83513/03-B12N | 100RC15P-4F6BB | M83513/03-D10C | 100RC25P-4F1BB |
| M83513/02-GC | 100RC51S-B | M83513/03-B13C | 100RC15P-4E1CB | M83513/03-D10N | 100RN25P-4F1BB |
| M83513/02-GN | 100RN51S-B | M83513/03-B13N | 100RN15P-4E1CB | M83513/03-D11C | 100RC25P-4F6AB |
| M83513/02-HC | 100RC100S-B | M83513/03-B14C | 100RC15P-4E6CB | M83513/03-D11N | 100RN25P-4F6AB |
| M83513/02-HN | 100RN100S-B | M83513/03-B14N | 100RN15P-4E6CB | M83513/03-D12C | 100RC25P-4F6BB |
| M83513/03-A01C | 100RC09P-4E1AB | M83513/03-B15C | 100RC15P-4F1CB | M83513/03-D12N | 100RN25P-4F6BB |
| M83513/03-A01N | 100RN09P-4E1AB | M83513/03-B15N | 100RN15P-4F1CB | M83513/03-D13C | 100RC25P-4E1CB |
| M83513/03-A02C | 100RC09P-4E1BB | M83513/03-B16C | 100RC15P-4F6CB | M83513/03-D13N | 100RN25P-4E1CB |
| M83513/03-A02N | 100RN09P-4E1BB | M83513/03-B16N | 100RN15P-4F6CB | M83513/03-D14C | 100RC25P-4E6CB |
| M83513/03-A03C | 100RC09P-4E6AB | M83513/03-C01C | 100RC21P-4E1AB | M83513/03-D14N | 100RN25P-4E6CB |
| M83513/03-A03N | 100RN09P-4E6AB | M83513/03-C01N | 100RN21P-4E1AB | M83513/03-D15C | 100RC25P-4F1CB |
| M83513/03-A04C | 100RC09P-4E6BB | M83513/03-C02C | 100RC21P-4E1BB | M83513/03-D15N | 100RN25P-4F1CB |
| M83513/03-A04N | 100RN09P-4E6BB | M83513/03-C02N | 100RN21P-4E1BB | M83513/03-D16C | 100RC25P-4F6CB |
| M83513/03-A05C | 100RC09P-5L4DB | M83513/03-C03C | 100RC21P-4E6AB | M83513/03-D16N | 100RN25P-4F6CB |
| M83513/03-A05N | 100RN09P-5L4DB | M83513/03-C03N | 100RN21P-4E6AB | M83513/03-E01C | 100RC31P-4E1AB |
| M83513/03-A06C | 100RC09P-5L4EB | M83513/03-C04C | 100RC21P-4E6BB | M83513/03-E01N | 100RN31P-4E1AB |
| M83513/03-A06N | 100RN09P-5L4EB | M83513/03-C04N | 100RN21P-4E6BB | M83513/03-E02C | 100RC31P-4E1BB |
| M83513/03-A07C | 100RC09P-5L3DB | M83513/03-C05C | 100RC21P-5L4DB | M83513/03-E02N | 100RN31P-4E1BB |
| M83513/03-A07N | 100RN09P-5L3DB | M83513/03-C05N | 100RN21P-5L4DB | M83513/03-E03C | 100RC31P-4E6AB |
| M83513/03-A08C | 100RC09P-5L3EB | M83513/03-C06C | 100RC21P-5L4EB | M83513/03-E03N | 100RN31P-4E6AB |
| M83513/03-A08N | 100RN09P-5L3EB | M83513/03-C06N | 100RN21P-5L4EB | M83513/03-E04C | 100RC31P-4E6BB |
| M83513/03-A09C | 100RC09P-4F1AB | M83513/03-C07C | 100RC21P-5L3DB | M83513/03-E04N | 100RN31P-4E6BB |
| M83513/03-A09N | 100RN09P-4F1AB | M83513/03-C07N | 100RN21P-5L3DB | M83513/03-E05C | 100RC31P-5L4DB |
| M83513/03-A10C | 100RC09P-4F1BB | M83513/03-C08C | 100RC21P-5L3EB | M83513/03-E05N | 100RN31P-5L4DB |
| M83513/03-A10N | 100RN09P-4F1BB | M83513/03-C08N | 100RN21P-5L3EB | M83513/03-E06C | 100RC31P-5L4EB |
| M83513/03-A11C | 100RC09P-4F6AB | M83513/03-C09C | 100RC21P-4F1AB | M83513/03-E06N | 100RN31P-5L4EB |
| M83513/03-A11N | 100RN09P-4F6AB | M83513/03-C09N | 100RN21P-4F1AB | M83513/03-E07C | 100RC31P-5L3DB |
| M83513/03-A12C | 100RC09P-4F6BB | M83513/03-C10C | 100RC21P-4F1BB | M83513/03-E07N | 100RN31P-5L3DB |
| M83513/03-A12N | 100RN09P-4F6BB | M83513/03-C10N | 100RN21P-4F1BB | M83513/03-E08C | 100RC31P-5L3EB |
| M83513/03-A13C | 100RC09P-4E1CB | M83513/03-C11C | 100RC21P-4F6AB | M83513/03-E08N | 100RN31P-5L3EB |
| M83513/03-A13N | 100RN09P-4E1CB | M83513/03-C11N | 100RN21P-4F6AB | M83513/03-E09C | 100RC31P-4F1AB |
| M83513/03-A14C | 100RC09P-4E6CB | M83513/03-C12C | 100RC21P-4F6BB | M83513/03-E09N | 100RN31P-4F1AB |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

Micro-D

Terrapin

Nexus

Contacts & Tools
2M Specs
2M801
2M803
2M804
2M805
2M Accessories
HD38999
Micro-D
Terrapin
Nexus

| Mil-Spec | Amphenol | Mil-Spec | Amphenol | Mil-Spec | Amphenol |
|----------------|----------------|----------------|-----------------|----------------|----------------|
| M83513/03-E10C | 100RC31P-4F1BB | M83513/03-G07N | 100RN51P-5L3DB | M83513/04-A05C | 100RC09S-5L4DB |
| M83513/03-E10N | 100RN31P-4F1BB | M83513/03-G08C | 100RC51P-5L3EB | M83513/04-A05N | 100RN09S-5L4DB |
| M83513/03-E11C | 100RC31P-4F6AB | M83513/03-G08N | 100RN51P-5L3EB | M83513/04-A06C | 100RC09S-5L4EB |
| M83513/03-E11N | 100RN31P-4F6AB | M83513/03-G09C | 100RC51P-4F1AB | M83513/04-A06N | 100RN09S-5L4EB |
| M83513/03-E12C | 100RC31P-4F6BB | M83513/03-G09N | 100RN51P-4F1AB | M83513/04-A07C | 100RC09S-5L3DB |
| M83513/03-E12N | 100RC31P-4F6BB | M83513/03-G10C | 100RC51P-4F1BB | M83513/04-A07N | 100RN09S-5L3DB |
| M83513/03-E13C | 100RC31P-4E1CB | M83513/03-G10N | 100RN51P-4F1BB | M83513/04-A08C | 100RC09S-5L3EB |
| M83513/03-E13N | 100RN31P-4E1CB | M83513/03-G11C | 100RC51P-4F6AB | M83513/04-A08N | 100RN09S-5L3EB |
| M83513/03-E14C | 100RC31P-4E6CB | M83513/03-G11N | 100RN51P-4F6AB | M83513/04-A09C | 100RC09S-4F1AB |
| M83513/03-E14N | 100RN31P-4E6CB | M83513/03-G12C | 100RC51P-4F6BB | M83513/04-A09N | 100RN09S-4F1AB |
| M83513/03-E15C | 100RC31P-4F1CB | M83513/03-G12N | 100RC51P-4F6BB | M83513/04-A10C | 100RC09S-4F1BB |
| M83513/03-E15N | 100RN31P-4F1CB | M83513/03-G13C | 100RC51P-4E1CB | M83513/04-A10N | 100RN09S-4F1BB |
| M83513/03-E16C | 100RC31P-4F6CB | M83513/03-G13N | 100RN51P-4E1CB | M83513/04-A11C | 100RC09S-4F6AB |
| M83513/03-E16N | 100RN31P-4F6CB | M83513/03-G14C | 100RC51P-4E6CB | M83513/04-A11N | 100RN09S-4F6AB |
| M83513/03-F01C | 100RC37P-4E1AB | M83513/03-G14N | 100RN51P-4E6CB | M83513/04-A12C | 100RC09S-4F6BB |
| M83513/03-F01N | 100RN37P-4E1AB | M83513/03-G15C | 100RC51P-4F1CB | M83513/04-A12N | 100RC09S-4F6BB |
| M83513/03-F02C | 100RC37P-4E1BB | M83513/03-G15N | 100RN51P-4F1CB | M83513/04-A13C | 100RC09S-4E1CB |
| M83513/03-F02N | 100RN37P-4E1BB | M83513/03-G16C | 100RC51P-4F6CB | M83513/04-A13N | 100RN09S-4E1CB |
| M83513/03-F03C | 100RC37P-4E6AB | M83513/03-G16N | 100RN51P-4F6CB | M83513/04-A14C | 100RC09S-4E6CB |
| M83513/03-F03N | 100RN37P-4E6AB | M83513/03-H01C | 100RC100P-4E1AB | M83513/04-A14N | 100RN09S-4E6CB |
| M83513/03-F04C | 100RC37P-4E6BB | M83513/03-H01N | 100RN100P-4E1AB | M83513/04-A15C | 100RC09S-4F1CB |
| M83513/03-F04N | 100RN37P-4E6BB | M83513/03-H02C | 100RC100P-4E1BB | M83513/04-A15N | 100RN09S-4F1CB |
| M83513/03-F05C | 100RC37P-5L4DB | M83513/03-H02N | 100RN100P-4E1BB | M83513/04-A16C | 100RC09S-4F6CB |
| M83513/03-F05N | 100RN37P-5L4DB | M83513/03-H03C | 100RC100P-4E6AB | M83513/04-A16N | 100RN09S-4F6CB |
| M83513/03-F06C | 100RC37P-5L4EB | M83513/03-H03N | 100RN100P-4E6AB | M83513/04-B01C | 100RC15S-4E1AB |
| M83513/03-F06N | 100RN37P-5L4EB | M83513/03-H04C | 100RC100P-4E6BB | M83513/04-B01N | 100RN15S-4E1AB |
| M83513/03-F07C | 100RC37P-5L3DB | M83513/03-H04N | 100RN100P-4E6BB | M83513/04-B02C | 100RC15S-4E1BB |
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| M83513/03-F11C | 100RC37P-4F6AB | M83513/03-H08N | 100RN100P-5L3EB | M83513/04-B06C | 100RC15S-5L4EB |
| M83513/03-F11N | 100RN37P-4F6AB | M83513/03-H09C | 100RC100P-4F1AB | M83513/04-B06N | 100RN15S-5L4EB |
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| M83513/03-F14C | 100RC37P-4E6CB | M83513/03-H11N | 100RN100P-4F6AB | M83513/04-B09C | 100RC15S-4F1AB |
| M83513/03-F14N | 100RN37P-4E6CB | M83513/03-H12C | 100RC100P-4F6BB | M83513/04-B09N | 100RN15S-4F1AB |
| M83513/03-F15C | 100RC37P-4F1CB | M83513/03-H12N | 100RC100P-4F6BB | M83513/04-B10C | 100RC15S-4F1BB |
| M83513/03-F15N | 100RN37P-4F1CB | M83513/03-H13C | 100RC100P-4E1CB | M83513/04-B10N | 100RN15S-4F1BB |
| M83513/03-F16C | 100RC37P-4F6CB | M83513/03-H13N | 100RN100P-4E1CB | M83513/04-B11C | 100RC15S-4F6AB |
| M83513/03-F16N | 100RN37P-4F6CB | M83513/03-H14C | 100RC100P-4E6CB | M83513/04-B11N | 100RN15S-4F6AB |
| M83513/03-G01C | 100RC51P-4E1AB | M83513/03-H14N | 100RN100P-4E6CB | M83513/04-B12C | 100RC15S-4F6BB |
| M83513/03-G01N | 100RN51P-4E1AB | M83513/03-H15C | 100RC100P-4F1CB | M83513/04-B12N | 100RC15S-4F6BB |
| M83513/03-G02C | 100RC51P-4E1BB | M83513/03-H15N | 100RN100P-4F1CB | M83513/04-B13C | 100RC15S-4E1CB |
| M83513/03-G02N | 100RN51P-4E1BB | M83513/03-H16C | 100RC100P-4F6CB | M83513/04-B13N | 100RN15S-4E1CB |
| M83513/03-G03C | 100RC51P-4E6AB | M83513/03-H16N | 100RN100P-4F6CB | M83513/04-B14C | 100RC15S-4E6CB |
| M83513/03-G03N | 100RN51P-4E6AB | M83513/04-A01C | 100RC09S-4E1AB | M83513/04-B14N | 100RN15S-4E6CB |
| M83513/03-G04C | 100RC51P-4E6BB | M83513/04-A01N | 100RN09S-4E1AB | M83513/04-B15C | 100RC15S-4F1CB |
| M83513/03-G04N | 100RN51P-4E6BB | M83513/04-A02C | 100RC09S-4E1BB | M83513/04-B15N | 100RN15S-4F1CB |
| M83513/03-G05C | 100RC51P-5L4DB | M83513/04-A02N | 100RN09S-4E1BB | M83513/04-B16C | 100RC15S-4F6CB |
| M83513/03-G05N | 100RN51P-5L4DB | M83513/04-A03C | 100RC09S-4E6AB | M83513/04-B16N | 100RN15S-4F6CB |
| M83513/03-G06C | 100RC51P-5L4EB | M83513/04-A03N | 100RN09S-4E6AB | M83513/04-C01C | 100RC21S-4E1AB |
| M83513/03-G06N | 100RN51P-5L4EB | M83513/04-A04C | 100RC09S-4E6BB | M83513/04-C01N | 100RN21S-4E1AB |
| M83513/03-G07C | 100RC51P-5L3DB | M83513/04-A04N | 100RN09S-4E6BB | M83513/04-C02C | 100RC21S-4E1BB |

| Mil-Spec | Amphenol | Mil-Spec | Amphenol | Mil-Spec | Amphenol |
|----------------|----------------|----------------|----------------|----------------|-----------------|
| M83513/04-C02N | 100RN21S-4E1BB | M83513/04-D16C | 100RC25S-4F6CB | M83513/04-F13N | 100RN37S-4E1CB |
| M83513/04-C03C | 100RC21S-4E6AB | M83513/04-D16N | 100RN25S-4F6CB | M83513/04-F14C | 100RC37S-4E6CB |
| M83513/04-C03N | 100RN21S-4E6AB | M83513/04-E01C | 100RC31S-4E1AB | M83513/04-F14N | 100RN37S-4E6CB |
| M83513/04-C04C | 100RC21S-4E6BB | M83513/04-E01N | 100RN31S-4E1AB | M83513/04-F15C | 100RC37S-4F1CB |
| M83513/04-C04N | 100RN21S-4E6BB | M83513/04-E02C | 100RC31S-4E1BB | M83513/04-F15N | 100RN37S-4F1CB |
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| M83513/04-C05N | 100RN21S-5L4DB | M83513/04-E03C | 100RC31S-4E6AB | M83513/04-F16N | 100RN37S-4F6CB |
| M83513/04-C06C | 100RC21S-5L4EB | M83513/04-E03N | 100RN31S-4E6AB | M83513/04-G01C | 100RC51S-4E1AB |
| M83513/04-C06N | 100RN21S-5L4EB | M83513/04-E04C | 100RC31S-4E6BB | M83513/04-G01N | 100RN51S-4E1AB |
| M83513/04-C07C | 100RC21S-5L3DB | M83513/04-E04N | 100RN31S-4E6BB | M83513/04-G02C | 100RC51S-4E1BB |
| M83513/04-C07N | 100RN21S-5L3DB | M83513/04-E05C | 100RC31S-5L4DB | M83513/04-G02N | 100RN51S-4E1BB |
| M83513/04-C08C | 100RC21S-5L3EB | M83513/04-E05N | 100RN31S-5L4DB | M83513/04-G03C | 100RC51S-4E6AB |
| M83513/04-C08N | 100RN21S-5L3EB | M83513/04-E06C | 100RC31S-5L4EB | M83513/04-G03N | 100RN51S-4E6AB |
| M83513/04-C09C | 100RC21S-4F1AB | M83513/04-E06N | 100RN31S-5L4EB | M83513/04-G04C | 100RC51S-4E6BB |
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| M83513/04-C10C | 100RC21S-4F1BB | M83513/04-E07N | 100RN31S-5L3DB | M83513/04-G05C | 100RC51S-5L4DB |
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| M83513/04-C11C | 100RC21S-4F6AB | M83513/04-E08N | 100RN31S-5L3EB | M83513/04-G06C | 100RC51S-5L4EB |
| M83513/04-C11N | 100RN21S-4F6AB | M83513/04-E09C | 100RC31S-4F1AB | M83513/04-G06N | 100RN51S-5L4EB |
| M83513/04-C12C | 100RC21S-4F6BB | M83513/04-E09N | 100RN31S-4F1AB | M83513/04-G07C | 100RC51S-5L3DB |
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| M83513/04-C13N | 100RN21S-4E1CB | M83513/04-E11C | 100RC31S-4F6AB | M83513/04-G08N | 100RN51S-5L3EB |
| M83513/04-C14C | 100RC21S-4E6CB | M83513/04-E11N | 100RN31S-4F6AB | M83513/04-G09C | 100RC51S-4F1AB |
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| M83513/04-C15N | 100RN21S-4F1CB | M83513/04-E13C | 100RC31S-4E1CB | M83513/04-G10N | 100RN51S-4F1BB |
| M83513/04-C16C | 100RC21S-4F6CB | M83513/04-E13N | 100RN31S-4E1CB | M83513/04-G11C | 100RC51S-4F6AB |
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| M83513/04-D01C | 100RC25S-4E1AB | M83513/04-E14N | 100RN31S-4E6CB | M83513/04-G12C | 100RC51S-4F6BB |
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| M83513/04-D02C | 100RC25S-4E1BB | M83513/04-E15N | 100RN31S-4F1CB | M83513/04-G13C | 100RC51S-4E1CB |
| M83513/04-D02N | 100RN25S-4E1BB | M83513/04-E16C | 100RC31S-4F6CB | M83513/04-G13N | 100RN51S-4E1CB |
| M83513/04-D03C | 100RC25S-4E6AB | M83513/04-E16N | 100RN31S-4F6CB | M83513/04-G14C | 100RC51S-4E6CB |
| M83513/04-D03N | 100RN25S-4E6AB | M83513/04-F01C | 100RC37S-4E1AB | M83513/04-G14N | 100RN51S-4E6CB |
| M83513/04-D04C | 100RC25S-4E6BB | M83513/04-F01N | 100RN37S-4E1AB | M83513/04-G15C | 100RC51S-4F1CB |
| M83513/04-D04N | 100RN25S-4E6BB | M83513/04-F02C | 100RC37S-4E1BB | M83513/04-G15N | 100RN51S-4F1CB |
| M83513/04-D05C | 100RC25S-5L4DB | M83513/04-F02N | 100RN37S-4E1BB | M83513/04-G16C | 100RC51S-4F6CB |
| M83513/04-D05N | 100RN25S-5L4DB | M83513/04-F03C | 100RC37S-4E6AB | M83513/04-G16N | 100RN51S-4F6CB |
| M83513/04-D06C | 100RC25S-5L4EB | M83513/04-F03N | 100RN37S-4E6AB | M83513/04-H01C | 100RC100S-4E1AB |
| M83513/04-D06N | 100RN25S-5L4EB | M83513/04-F04C | 100RC37S-4E6BB | M83513/04-H01N | 100RN100S-4E1AB |
| M83513/04-D07C | 100RC25S-5L3DB | M83513/04-F04N | 100RN37S-4E6BB | M83513/04-H02C | 100RC100S-4E1BB |
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| M83513/04-D08C | 100RC25S-5L3EB | M83513/04-F05N | 100RN37S-5L4DB | M83513/04-H03C | 100RC100S-4E6AB |
| M83513/04-D08N | 100RN25S-5L3EB | M83513/04-F06C | 100RC37S-5L4EB | M83513/04-H03N | 100RN100S-4E6AB |
| M83513/04-D09C | 100RC25S-4F1AB | M83513/04-F06N | 100RN37S-5L4EB | M83513/04-H04C | 100RC100S-4E6BB |
| M83513/04-D09N | 100RN25S-4F1AB | M83513/04-F07C | 100RC37S-5L3DB | M83513/04-H04N | 100RN100S-4E6BB |
| M83513/04-D10C | 100RC25S-4F1BB | M83513/04-F07N | 100RN37S-5L3DB | M83513/04-H05C | 100RC100S-5L4DB |
| M83513/04-D10N | 100RN25S-4F1BB | M83513/04-F08C | 100RC37S-5L3EB | M83513/04-H05N | 100RN100S-5L4DB |
| M83513/04-D11C | 100RC25S-4F6AB | M83513/04-F08N | 100RN37S-5L3EB | M83513/04-H06C | 100RC100S-5L4EB |
| M83513/04-D11N | 100RN25S-4F6AB | M83513/04-F09C | 100RC37S-4F1AB | M83513/04-H06N | 100RN100S-5L4EB |
| M83513/04-D12C | 100RC25S-4F6BB | M83513/04-F09N | 100RN37S-4F1AB | M83513/04-H07C | 100RC100S-5L3DB |
| M83513/04-D12N | 100RC25S-4F6BB | M83513/04-F10C | 100RC37S-4F1BB | M83513/04-H07N | 100RN100S-5L3DB |
| M83513/04-D13C | 100RC25S-4E1CB | M83513/04-F10N | 100RN37S-4F1BB | M83513/04-H08C | 100RC100S-5L3EB |
| M83513/04-D13N | 100RN25S-4E1CB | M83513/04-F11C | 100RC37S-4F6AB | M83513/04-H08N | 100RN100S-5L3EB |
| M83513/04-D14C | 100RC25S-4E6CB | M83513/04-F11N | 100RN37S-4F6AB | M83513/04-H09C | 100RC100S-4F1AB |
| M83513/04-D14N | 100RN25S-4E6CB | M83513/04-F12C | 100RC37S-4F6BB | M83513/04-H09N | 100RN100S-4F1AB |
| M83513/04-D15C | 100RC25S-4F1CB | M83513/04-F12N | 100RC37S-4F6BB | M83513/04-H10C | 100RC100S-4F1BB |
| M83513/04-D15N | 100RN25S-4F1CB | M83513/04-F13C | 100RC37S-4E1CB | M83513/04-H10N | 100RN100S-4F1BB |

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|----------------|-----------------|---------------|---------------|---------------|---------------|
| M83513/04-H11C | 100RC100S-4F6AB | M83513/08-B08 | 101R15P-5L3EB | M83513/08-F03 | 101R37P-4E6AB |
| M83513/04-H11N | 100RN100S-4F6AB | M83513/08-B09 | 101R15P-4F1AB | M83513/08-F04 | 101R37P-4E6BB |
| M83513/04-H12C | 100RC100S-4F6BB | M83513/08-B10 | 101R15P-4F1BB | M83513/08-F05 | 101R37P-5L4DB |
| M83513/04-H12N | 100RC100S-4F6BB | M83513/08-B11 | 101R15P-4F6AB | M83513/08-F06 | 101R37P-5L4EB |
| M83513/04-H13C | 100RC100S-4E1CB | M83513/08-B12 | 101R15P-4F6BB | M83513/08-F07 | 101R37P-5L3DB |
| M83513/04-H13N | 100RN100S-4E1CB | M83513/08-B13 | 101R15P-4E1CB | M83513/08-F08 | 101R37P-5L3EB |
| M83513/04-H14C | 100RC100S-4E6CB | M83513/08-B14 | 101R15P-4E6CB | M83513/08-F09 | 101R37P-4F1AB |
| M83513/04-H14N | 100RN100S-4E6CB | M83513/08-B15 | 101R15P-4F1CB | M83513/08-F10 | 101R37P-4F1BB |
| M83513/04-H15C | 100RC100S-4F1CB | M83513/08-B16 | 101R15P-4F6CB | M83513/08-F11 | 101R37P-4F6AB |
| M83513/04-H15N | 100RN100S-4F1CB | M83513/08-C01 | 101R21P-4E1AB | M83513/08-F12 | 101R37P-4F6BB |
| M83513/04-H16C | 100RC100S-4F6CB | M83513/08-C02 | 101R21P-4E1BB | M83513/08-F13 | 101R37P-4E1CB |
| M83513/04-H16N | 100RN100S-4F6CB | M83513/08-C03 | 101R21P-4E6AB | M83513/08-F14 | 101R37P-4E6CB |
| M83513/05-02 | HM05-02 | M83513/08-C04 | 101R21P-4E6BB | M83513/08-F15 | 101R37P-4F1CB |
| M83513/05-03 | HM05-03 | M83513/08-C05 | 101R21P-5L4DB | M83513/08-F16 | 101R37P-4F6CB |
| M83513/05-05 | HM05-05 | M83513/08-C06 | 101R21P-5L4EB | M83513/08-G01 | 101R51P-4E1AB |
| M83513/05-06 | HM05-06 | M83513/08-C07 | 101R21P-5L3DB | M83513/08-G02 | 101R51P-4E1BB |
| M83513/05-07 | HM05-07 | M83513/08-C08 | 101R21P-5L3EB | M83513/08-G03 | 101R51P-4E6AB |
| M83513/05-12 | HM05-12 | M83513/08-C09 | 101R21P-4F1AB | M83513/08-G04 | 101R51P-4E6BB |
| M83513/05-13 | HM05-13 | M83513/08-C10 | 101R21P-4F1BB | M83513/08-G05 | 101R51P-5L4DB |
| M83513/05-15 | HM05-15 | M83513/08-C11 | 101R21P-4F6AB | M83513/08-G06 | 101R51P-5L4EB |
| M83513/05-16 | HM05-16 | M83513/08-C12 | 101R21P-4F6BB | M83513/08-G07 | 101R51P-5L3DB |
| M83513/05-17 | HM05-17 | M83513/08-C13 | 101R21P-4E1CB | M83513/08-G08 | 101R51P-5L3EB |
| M83513/06-A | 101R09P-B | M83513/08-C14 | 101R21P-4E6CB | M83513/08-G09 | 101R51P-4F1AB |
| M83513/06-B | 101R15P-B | M83513/08-C15 | 101R21P-4F1CB | M83513/08-G10 | 101R51P-4F1BB |
| M83513/06-C | 101R21P-B | M83513/08-C16 | 101R21P-4F6CB | M83513/08-G11 | 101R51P-4F6AB |
| M83513/06-D | 101R25P-B | M83513/08-D01 | 101R25P-4E1AB | M83513/08-G12 | 101R51P-4F6BB |
| M83513/06-E | 101R31P-B | M83513/08-D02 | 101R25P-4E1BB | M83513/08-G13 | 101R51P-4E1CB |
| M83513/06-F | 101R37P-B | M83513/08-D03 | 101R25P-4E6AB | M83513/08-G14 | 101R51P-4E6CB |
| M83513/06-G | 101R51P-B | M83513/08-D04 | 101R25P-4E6BB | M83513/08-G15 | 101R51P-4F1CB |
| M83513/07-A | 101R09S-B | M83513/08-D05 | 101R25P-5L4DB | M83513/08-G16 | 101R51P-4F6CB |
| M83513/07-B | 101R15S-B | M83513/08-D06 | 101R25P-5L4EB | M83513/09-A01 | 101R09S-4E1AB |
| M83513/07-C | 101R21S-B | M83513/08-D07 | 101R25P-5L3DB | M83513/09-A02 | 101R09S-4E1BB |
| M83513/07-D | 101R25S-B | M83513/08-D08 | 101R25P-5L3EB | M83513/09-A03 | 101R09S-4E6AB |
| M83513/07-E | 101R31S-B | M83513/08-D09 | 101R25P-4F1AB | M83513/09-A04 | 101R09S-4E6BB |
| M83513/07-F | 101R37S-B | M83513/08-D10 | 101R25P-4F1BB | M83513/09-A05 | 101R09S-5L4DB |
| M83513/07-G | 101R51S-B | M83513/08-D11 | 101R25P-4F6AB | M83513/09-A06 | 101R09S-5L4EB |
| M83513/08-A01 | 101R09P-4E1AB | M83513/08-D12 | 101R25P-4F6BB | M83513/09-A07 | 101R09S-5L3DB |
| M83513/08-A02 | 101R09P-4E1BB | M83513/08-D13 | 101R25P-4E1CB | M83513/09-A08 | 101R09S-5L3EB |
| M83513/08-A03 | 101R09P-4E6AB | M83513/08-D14 | 101R25P-4E6CB | M83513/09-A09 | 101R09S-4F1AB |
| M83513/08-A04 | 101R09P-4E6BB | M83513/08-D15 | 101R25P-4F1CB | M83513/09-A10 | 101R09S-4F1BB |
| M83513/08-A05 | 101R09P-5L4DB | M83513/08-D16 | 101R25P-4F6CB | M83513/09-A11 | 101R09S-4E6AB |
| M83513/08-A06 | 101R09P-5L4EB | M83513/08-E01 | 101R31P-4E1AB | M83513/09-A12 | 101R09S-4F6BB |
| M83513/08-A07 | 101R09P-5L3DB | M83513/08-E02 | 101R31P-4E1BB | M83513/09-A13 | 101R09S-4E1CB |
| M83513/08-A08 | 101R09P-5L3EB | M83513/08-E03 | 101R31P-4E6AB | M83513/09-A14 | 101R09S-4E6CB |
| M83513/08-A09 | 101R09P-4F1AB | M83513/08-E04 | 101R31P-4E6BB | M83513/09-A15 | 101R09S-4F1CB |
| M83513/08-A10 | 101R09P-4F1BB | M83513/08-E05 | 101R31P-5L4DB | M83513/09-B01 | 101R15S-4E1AB |
| M83513/08-A11 | 101R09P-4F6AB | M83513/08-E06 | 101R31P-5L4EB | M83513/09-B02 | 101R15S-4E1BB |
| M83513/08-A12 | 101R09P-4F6BB | M83513/08-E07 | 101R31P-5L3DB | M83513/09-B03 | 101R15S-4E6AB |
| M83513/08-A13 | 101R09P-4E1CB | M83513/08-E08 | 101R31P-5L3EB | M83513/09-B04 | 101R15S-4E6BB |
| M83513/08-A14 | 101R09P-4E6CB | M83513/08-E09 | 101R31P-4F1AB | M83513/09-B05 | 101R15S-5L4DB |
| M83513/08-A15 | 101R09P-4F1CB | M83513/08-E10 | 101R31P-4F1BB | M83513/09-B06 | 101R15S-5L4EB |
| M83513/08-A16 | 101R09P-4F6CB | M83513/08-E11 | 101R31P-4F6AB | M83513/09-B07 | 101R15S-5L3DB |
| M83513/08-B01 | 101R15P-4E1AB | M83513/08-E12 | 101R31P-4F6BB | M83513/09-B08 | 101R15S-5L3EB |
| M83513/08-B02 | 101R15P-4E1BB | M83513/08-E13 | 101R31P-4E1CB | M83513/09-B09 | 101R15S-4F1AB |
| M83513/08-B03 | 101R15P-4E6AB | M83513/08-E14 | 101R31P-4E6CB | M83513/09-B10 | 101R15S-4F1BB |
| M83513/08-B04 | 101R15P-4E6BB | M83513/08-E15 | 101R31P-4F1CB | M83513/09-B11 | 101R15S-4E6AB |
| M83513/08-B05 | 101R15P-5L4DB | M83513/08-E16 | 101R31P-4F6CB | M83513/09-B12 | 101R15S-4F6BB |
| M83513/08-B06 | 101R15P-5L4EB | M83513/08-F01 | 101R37P-4E1AB | M83513/09-B13 | 101R15S-4E1CB |
| M83513/08-B07 | 101R15P-5L3DB | M83513/08-F02 | 101R37P-4E1BB | M83513/09-B14 | 101R15S-4E6CB |

| Mil-Spec | Amphenol | Mil-Spec | Amphenol | Mil-Spec | Amphenol |
|---------------|---------------|-----------------|----------------|-----------------|-----------------|
| M83513/09-B15 | 101R15S-4F1CB | M83513/09-F14 | 101R37S-4E6CB | M83513/10-D02CP | 100RC25P-CBRP2 |
| M83513/09-C01 | 101R21S-4E1AB | M83513/09-F15 | 101R37S-4F1CB | M83513/10-D02NN | 100RN25P-CBR2 |
| M83513/09-C02 | 101R21S-4E1BB | M83513/09-G01 | 101R51S-4E1AB | M83513/10-D02NP | 100RN25P-CBRP2 |
| M83513/09-C03 | 101R21S-4E6AB | M83513/09-G02 | 101R51S-4E1BB | M83513/10-D03CN | 100RC25P-CBR3 |
| M83513/09-C04 | 101R21S-4E6BB | M83513/09-G03 | 101R51S-4E6AB | M83513/10-D03CP | 100RC25P-CBRP3 |
| M83513/09-C05 | 101R21S-5L4DB | M83513/09-G04 | 101R51S-4E6BB | M83513/10-D03NN | 100RN25P-CBR3 |
| M83513/09-C06 | 101R21S-5L4EB | M83513/09-G05 | 101R51S-5L4DB | M83513/10-D03NP | 100RN25P-CBRP3 |
| M83513/09-C07 | 101R21S-5L3DB | M83513/09-G06 | 101R51S-5L4EB | M83513/10-E01CN | 100RC31P-CBR1 |
| M83513/09-C08 | 101R21S-5L3EB | M83513/09-G07 | 101R51S-5L3DB | M83513/10-E01CP | 100RC31P-CBRP1 |
| M83513/09-C09 | 101R21S-4F1AB | M83513/09-G08 | 101R51S-5L3EB | M83513/10-E01NN | 100RN31P-CBR1 |
| M83513/09-C10 | 101R21S-4F1BB | M83513/09-G09 | 101R51S-4F1AB | M83513/10-E01NP | 100RN31P-CBRP1 |
| M83513/09-C11 | 101R21S-4E6AB | M83513/09-G10 | 101R51S-4F1BB | M83513/10-E02CN | 100RC31P-CBR2 |
| M83513/09-C12 | 101R21S-4F6BB | M83513/09-G11 | 101R51S-4E6AB | M83513/10-E02CP | 100RC31P-CBRP2 |
| M83513/09-C13 | 101R21S-4E1CB | M83513/09-G12 | 101R51S-4F6BB | M83513/10-E02NN | 100RN31P-CBR2 |
| M83513/09-C14 | 101R21S-4E6CB | M83513/09-G13 | 101R51S-4E1CB | M83513/10-E02NP | 100RN31P-CBRP2 |
| M83513/09-C15 | 101R21S-4F1CB | M83513/09-G14 | 101R51S-4E6CB | M83513/10-E03CN | 100RC31P-CBR3 |
| M83513/09-D01 | 101R25S-4E1AB | M83513/09-G15 | 101R51S-4F1CB | M83513/10-E03CP | 100RC31P-CBRP3 |
| M83513/09-D02 | 101R25S-4E1BB | M83513/10-A01CN | 100RC09P-CBR1 | M83513/10-E03NN | 100RN31P-CBR3 |
| M83513/09-D03 | 101R25S-4E6AB | M83513/10-A01CP | 100RC09P-CBRP1 | M83513/10-E03NP | 100RN31P-CBRP3 |
| M83513/09-D04 | 101R25S-4E6BB | M83513/10-A01NN | 100RN09P-CBR1 | M83513/10-F01CN | 100RC37P-CBR1 |
| M83513/09-D05 | 101R25S-5L4DB | M83513/10-A01NP | 100RN09P-CBRP1 | M83513/10-F01CP | 100RC37P-CBRP1 |
| M83513/09-D06 | 101R25S-5L4EB | M83513/10-A02CN | 100RC09P-CBR2 | M83513/10-F01NN | 100RN37P-CBR1 |
| M83513/09-D07 | 101R25S-5L3DB | M83513/10-A02CP | 100RC09P-CBRP2 | M83513/10-F01NP | 100RN37P-CBRP1 |
| M83513/09-D08 | 101R25S-5L3EB | M83513/10-A02NN | 100RN09P-CBR2 | M83513/10-F02CN | 100RC37P-CBR2 |
| M83513/09-D09 | 101R25S-4F1AB | M83513/10-A02NP | 100RN09P-CBRP2 | M83513/10-F02CP | 100RC37P-CBRP2 |
| M83513/09-D10 | 101R25S-4F1BB | M83513/10-A03CN | 100RC09P-CBR3 | M83513/10-F02NN | 100RN37P-CBR2 |
| M83513/09-D11 | 101R25S-4E6AB | M83513/10-A03CP | 100RC09P-CBRP3 | M83513/10-F02NP | 100RN37P-CBRP2 |
| M83513/09-D12 | 101R25S-4F6BB | M83513/10-A03NN | 100RN09P-CBR3 | M83513/10-F03CN | 100RC37P-CBR3 |
| M83513/09-D13 | 101R25S-4E1CB | M83513/10-A03NP | 100RN09P-CBRP3 | M83513/10-F03CP | 100RC37P-CBRP3 |
| M83513/09-D14 | 101R25S-4E6CB | M83513/10-B01CN | 100RC15P-CBR1 | M83513/10-F03NN | 100RN37P-CBR3 |
| M83513/09-D15 | 101R25S-4F1CB | M83513/10-B01CP | 100RC15P-CBRP1 | M83513/10-F03NP | 100RN37P-CBRP3 |
| M83513/09-E01 | 101R31S-4E1AB | M83513/10-B01NN | 100RN15P-CBR1 | M83513/11-G01CN | 100RC51P-CBR1 |
| M83513/09-E02 | 101R31S-4E1BB | M83513/10-B01NP | 100RN15P-CBRP1 | M83513/11-G01CP | 100RC51P-CBRP1 |
| M83513/09-E03 | 101R31S-4E6AB | M83513/10-B02CN | 100RC15P-CBR2 | M83513/11-G01NN | 100RN51P-CBR1 |
| M83513/09-E04 | 101R31S-4E6BB | M83513/10-B02CT | 100RC15P-CBR2 | M83513/11-G01NP | 100RN51P-CBRP1 |
| M83513/09-E05 | 101R31S-5L4DB | M83513/10-B02CP | 100RC15P-CBRP2 | M83513/11-G02CN | 100RC51P-CBR2 |
| M83513/09-E06 | 101R31S-5L4EB | M83513/10-B02NN | 100RN15P-CBR2 | M83513/11-G02CP | 100RC51P-CBRP2 |
| M83513/09-E07 | 101R31S-5L3DB | M83513/10-B02NP | 100RN15P-CBRP2 | M83513/11-G02NN | 100RN51P-CBR2 |
| M83513/09-E08 | 101R31S-5L3EB | M83513/10-B03CN | 100RC15P-CBR3 | M83513/11-G02NP | 100RN51P-CBRP2 |
| M83513/09-E09 | 101R31S-4F1AB | M83513/10-B03CP | 100RC15P-CBRP3 | M83513/11-G03CN | 100RC51P-CBR3 |
| M83513/09-E10 | 101R31S-4F1BB | M83513/10-B03NN | 100RN15P-CBR3 | M83513/11-G03CP | 100RC51P-CBRP3 |
| M83513/09-E11 | 101R31S-4E6AB | M83513/10-B03NP | 100RN15P-CBRP3 | M83513/11-G03NN | 100RN51P-CBR3 |
| M83513/09-E12 | 101R31S-4F6BB | M83513/10-C01CN | 100RC21P-CBR1 | M83513/11-G03NP | 100RN51P-CBRP3 |
| M83513/09-E13 | 101R31S-4E1CB | M83513/10-C01CP | 100RC21P-CBRP1 | M83513/12-H01CN | 100RC100P-CBR1 |
| M83513/09-E14 | 101R31S-4E6CB | M83513/10-C01NN | 100RN21P-CBR1 | M83513/12-H01CP | 100RC100P-CBRP1 |
| M83513/09-E15 | 101R31S-4F1CB | M83513/10-C01NP | 100RN21P-CBRP1 | M83513/12-H01NN | 100RN100P-CBR1 |
| M83513/09-F01 | 101R37S-4E1AB | M83513/10-C02CN | 100RC21P-CBR2 | M83513/12-H01NP | 100RN100P-CBRP1 |
| M83513/09-F02 | 101R37S-4E1BB | M83513/10-C02CP | 100RC21P-CBRP2 | M83513/12-H02CN | 100RC100P-CBR2 |
| M83513/09-F03 | 101R37S-4E6AB | M83513/10-C02NN | 100RN21P-CBR2 | M83513/12-H02CP | 100RC100P-CBRP2 |
| M83513/09-F04 | 101R37S-4E6BB | M83513/10-C02NP | 100RN21P-CBRP2 | M83513/12-H02NN | 100RN100P-CBR2 |
| M83513/09-F05 | 101R37S-5L4DB | M83513/10-C03CN | 100RC21P-CBR3 | M83513/12-H02NP | 100RN100P-CBRP2 |
| M83513/09-F06 | 101R37S-5L4EB | M83513/10-C03CP | 100RC21P-CBRP3 | M83513/12-H03CN | 100RC100P-CBR3 |
| M83513/09-F07 | 101R37S-5L3DB | M83513/10-C03NN | 100RN21P-CBR3 | M83513/12-H03CP | 100RC100P-CBRP3 |
| M83513/09-F08 | 101R37S-5L3EB | M83513/10-C03NP | 100RN21P-CBRP3 | M83513/12-H03NN | 100RN100P-CBR3 |
| M83513/09-F09 | 101R37S-4F1AB | M83513/10-D01CN | 100RC25P-CBR1 | M83513/12-H03NP | 100RN100P-CBRP3 |
| M83513/09-F10 | 101R37S-4F1BB | M83513/10-D01CP | 100RC25P-CBRP1 | M83513/13-A01CN | 100RC09S-CBR1 |
| M83513/09-F11 | 101R37S-4E6AB | M83513/10-D01NN | 100RN25P-CBR1 | M83513/13-A01CP | 100RC09S-CBRP1 |
| M83513/09-F12 | 101R37S-4F6BB | M83513/10-D01NP | 100RN25P-CBRP1 | M83513/13-A01NN | 100RN09S-CBR1 |
| M83513/09-F13 | 101R37S-4E1CB | M83513/10-D02CN | 100RC25P-CBR2 | M83513/13-A01NP | 100RN09S-CBRP1 |

Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

Micro-D

Terrapin

Nexus

| | Mil-Spec | Amphenol | Mil-Spec | Amphenol | Mil-Spec | Amphenol |
|------------------|-----------------|----------------|-----------------|----------------|-----------------|--------------|
| Contacts & Tools | M83513/13-A02CN | 100RC09S-CBR2 | M83513/13-F01NN | 100RN37SCBR1 | M83513/16-C01CP | 100RC21PBRP1 |
| | M83513/13-A02CP | 100RC09S-CBRP2 | M83513/13-F01NP | 100RN37SCBRP1 | M83513/16-C01NN | 100RN21PCBR1 |
| | M83513/13-A02NN | 100RN09S-CBR2 | M83513/13-F02CN | 100RC37SCBR2 | M83513/16-C01NP | 100RN21PBRP1 |
| 2M Specs | M83513/13-A02NP | 100RN09S-CBRP2 | M83513/13-F02CP | 100RC37SCBRP2 | M83513/16-C02CN | 100RC21PBR2 |
| | M83513/13-A03CN | 100RC09S-CBR3 | M83513/13-F02NN | 100RN37SCBR2 | M83513/16-C02CP | 100RC21PBRP2 |
| | M83513/13-A03CP | 100RC09S-CBRP3 | M83513/13-F02NP | 100RN37SCBRP2 | M83513/16-C02NN | 100RN21PBR2 |
| 2M801 | M83513/13-A03NN | 100RN09S-CBR3 | M83513/13-F03CN | 100RC37SCBR3 | M83513/16-C02NP | 100RN21PBRP2 |
| | M83513/13-A03NP | 100RN09S-CBRP3 | M83513/13-F03CP | 100RC37SCBRP3 | M83513/16-C03CN | 100RC21PBR3 |
| | M83513/13-B01CN | 100RC15S-CBR1 | M83513/13-F03NN | 100RN37SCBR3 | M83513/16-C03CP | 100RC21PBRP3 |
| 2M803 | M83513/13-B01CP | 100RC15S-CBRP1 | M83513/13-F03NP | 100RN37SCBRP3 | M83513/16-C03NN | 100RN21PBR3 |
| | M83513/13-B01NN | 100RN15S-CBR1 | M83513/14-G01CN | 100RC51SCBR1 | M83513/16-C03NP | 100RN21PBRP3 |
| | M83513/13-B01NP | 100RN15S-CBRP1 | M83513/14-G01CP | 100RC51SCBRP1 | M83513/16-D01CN | 100RC25PBR1 |
| 2M804 | M83513/13-B02CN | 100RC15S-CBR2 | M83513/14-G01NN | 100RN51SCBR1 | M83513/16-D01CP | 100RC25PBRP1 |
| | M83513/13-B02CP | 100RC15S-CBRP2 | M83513/14-G01NP | 100RN51SCBRP1 | M83513/16-D01NN | 100RN25PBR1 |
| | M83513/13-B02CT | 100RC15S-CBR2 | M83513/14-G02CN | 100RC51SCBR2 | M83513/16-D01NP | 100RN25PBRP1 |
| 2M805 | M83513/13-B02NN | 100RN15S-CBR2 | M83513/14-G02CP | 100RC51SCBRP2 | M83513/16-D02CN | 100RC25PBR2 |
| | M83513/13-B02NP | 100RN15S-CBRP2 | M83513/14-G02NN | 100RN51SCBR2 | M83513/16-D02CP | 100RC25PBRP2 |
| | M83513/13-B03CN | 100RC15S-CBR3 | M83513/14-G02NP | 100RN51SCBRP2 | M83513/16-D02NN | 100RN25PBR2 |
| 2M801 | M83513/13-B03CP | 100RC15S-CBRP3 | M83513/14-G03CN | 100RC51SCBR3 | M83513/16-D02NP | 100RN25PBRP2 |
| | M83513/13-B03NN | 100RN15S-CBR3 | M83513/14-G03CP | 100RC51SCBRP3 | M83513/16-D03CN | 100RC25PBR3 |
| | M83513/13-B03NP | 100RN15S-CBRP3 | M83513/14-G03NN | 100RN51SCBR3 | M83513/16-D03CP | 100RC25PBRP3 |
| 2M804 | M83513/13-C01CN | 100RC21S-CBR1 | M83513/14-G03NP | 100RN51SCBRP3 | M83513/16-D03NN | 100RN25PBR3 |
| | M83513/13-C01CP | 100RC21S-CBRP1 | M83513/15-H01CN | 100RC100SCBR1 | M83513/16-D03NP | 100RN25PBRP3 |
| | M83513/13-C01NN | 100RN21S-CBR1 | M83513/15-H01CP | 100RC100SCBRP1 | M83513/16-E01CN | 100RC31PBR1 |
| 2M805 | M83513/13-C01NP | 100RN21S-CBRP1 | M83513/15-H01NN | 100RN100SCBR1 | M83513/16-E01CP | 100RC31PBRP1 |
| | M83513/13-C02CN | 100RC21S-CBR2 | M83513/15-H01NP | 100RN100SCBRP1 | M83513/16-E01NN | 100RN31PBR1 |
| | M83513/13-C02CP | 100RC21S-CBRP2 | M83513/15-H02CN | 100RC100SCBR2 | M83513/16-E01NP | 100RN31PBRP1 |
| 2M Accessories | M83513/13-C02NN | 100RN21S-CBR2 | M83513/15-H02CP | 100RC100SCBRP2 | M83513/16-E02CN | 100RC31PBR2 |
| | M83513/13-C02NP | 100RN21S-CBRP2 | M83513/15-H02NN | 100RN100SCBR2 | M83513/16-E02CP | 100RC31PBRP2 |
| | M83513/13-C03CN | 100RC21S-CBR3 | M83513/15-H02NP | 100RN100SCBRP2 | M83513/16-E02NN | 100RN31PBR2 |
| 2M805 | M83513/13-C03CP | 100RC21S-CBRP3 | M83513/15-H03CN | 100RC100SCBR3 | M83513/16-E02NP | 100RN31PBRP2 |
| | M83513/13-C03NN | 100RN21S-CBR3 | M83513/15-H03CP | 100RC100SCBRP3 | M83513/16-E03CN | 100RC31PBR3 |
| | M83513/13-C03NP | 100RN21S-CBRP3 | M83513/15-H03NN | 100RN100SCBR3 | M83513/16-E03CP | 100RC31PBRP3 |
| 2M Accessories | M83513/13-D01CN | 100RC25SCBR1 | M83513/15-H03NP | 100RN100SCBRP3 | M83513/16-E03NN | 100RN31PBR3 |
| | M83513/13-D01CP | 100RC25SCBRP1 | M83513/16-A01CN | 100RC09SBR1 | M83513/16-E03NP | 100RN31PBRP3 |
| | M83513/13-D01NN | 100RN25SCBR1 | M83513/16-A01CP | 100RC09PBRP1 | M83513/16-F01CN | 100RC37PBR1 |
| 2M Accessories | M83513/13-D01NP | 100RN25SCBRP1 | M83513/16-A01NN | 100RN09PBR1 | M83513/16-F01CP | 100RC37PBRP1 |
| | M83513/13-D02CN | 100RC25SCBR2 | M83513/16-A01NP | 100RN09PBRP1 | M83513/16-F01NN | 100RN37PBR1 |
| | M83513/13-D02CP | 100RC25SCBRP2 | M83513/16-A02CN | 100RC09PBR2 | M83513/16-F01NP | 100RN37PBRP1 |
| HD38999 | M83513/13-D02NN | 100RN25SCBR2 | M83513/16-A02CP | 100RC09PBRP2 | M83513/16-F02CN | 100RC37PBR2 |
| | M83513/13-D02NP | 100RN25SCBRP2 | M83513/16-A02NN | 100RN09PBR2 | M83513/16-F02CP | 100RC37PBRP2 |
| | M83513/13-D03CN | 100RC25SCBR3 | M83513/16-A02NP | 100RN09PBRP2 | M83513/16-F02NN | 100RN37PBR2 |
| HD38999 | M83513/13-D03CP | 100RC25SCBRP3 | M83513/16-A03CN | 100RC09PBR3 | M83513/16-F02NP | 100RN37PBRP2 |
| | M83513/13-D03NN | 100RN25SCBR3 | M83513/16-A03CP | 100RC09PBRP3 | M83513/16-F03CN | 100RC37PBR3 |
| | M83513/13-D03NP | 100RN25SCBRP3 | M83513/16-A03NN | 100RN09PBR3 | M83513/16-F03CP | 100RC37PBRP3 |
| Micro-D | M83513/13-E01CN | 100RC31SCBR1 | M83513/16-A03NP | 100RN09PBRP3 | M83513/16-F03NN | 100RN37PBR3 |
| | M83513/13-E01CP | 100RC31SCBRP1 | M83513/16-B01CN | 100RC15PBR1 | M83513/16-F03NP | 100RN37PBRP3 |
| | M83513/13-E01NN | 100RN31SCBR1 | M83513/16-B01CP | 100RC15PBRP1 | M83513/17-G01CN | 100RC51PBR1 |
| Micro-D | M83513/13-E01NP | 100RN31SCBRP1 | M83513/16-B01NN | 100RN15PBR1 | M83513/17-G01CP | 100RC51PBRP1 |
| | M83513/13-E02CN | 100RC31SCBR2 | M83513/16-B01NP | 100RN15PBRP1 | M83513/17-G01NN | 100RN51PBR1 |
| | M83513/13-E02CP | 100RC31SCBRP2 | M83513/16-B02CN | 100RC15PBR2 | M83513/17-G01NP | 100RN51PBRP1 |
| Terrapin | M83513/13-E02NN | 100RN31SCBR2 | M83513/16-B02CP | 100RC15PBRP2 | M83513/17-G02CN | 100RC51PBR2 |
| | M83513/13-E02NP | 100RN31SCBRP2 | M83513/16-B02NN | 100RN15PBR2 | M83513/17-G02CP | 100RC51PBRP2 |
| | M83513/13-E03CN | 100RC31SCBR3 | M83513/16-B02NP | 100RN15PBRP2 | M83513/17-G02NN | 100RN51PBR2 |
| Terrapin | M83513/13-E03CP | 100RC31SCBRP3 | M83513/16-B03CN | 100RC15PBR3 | M83513/17-G02NP | 100RN51PBRP2 |
| | M83513/13-E03NN | 100RN31SCBR3 | M83513/16-B03CP | 100RC15PBRP3 | M83513/17-G03CN | 100RC51PBR3 |
| | M83513/13-E03NP | 100RN31SCBRP3 | M83513/16-B03NN | 100RN15PBR3 | M83513/17-G03CP | 100RC51PBRP3 |
| Nexus | M83513/13-F01CN | 100RC37SCBR1 | M83513/16-B03NP | 100RN15PBRP3 | M83513/17-G03NN | 100RN51PBR3 |
| | M83513/13-F01CP | 100RC37SCBRP1 | M83513/16-C01CN | 100RC21PBR1 | M83513/17-G03NP | 100RN51PBRP3 |

| Mil-Spec | Amphenol | Mil-Spec | Amphenol | Mil-Spec | Amphenol |
|-----------------|---------------|-----------------|---------------|-----------------|---------------|
| M83513/18-H01CN | 100RC100PBR1 | M83513/19-D03NP | 100RN25SBRP3 | M83513/22-A03NN | 100RN09PBS3 |
| M83513/18-H01CP | 100RC100PBRP1 | M83513/19-E01CN | 100RC31SBR1 | M83513/22-A03NP | 100RN09PBSP3 |
| M83513/18-H01NN | 100RN100PBR1 | M83513/19-E01CP | 100RC31SBRP1 | M83513/22-B01CN | 100RC15PBS1 |
| M83513/18-H01NP | 100RN100PBRP1 | M83513/19-E01NN | 100RN31SBR1 | M83513/22-B01CP | 100RC15PBSP1 |
| M83513/18-H02CN | 100RC100PBR2 | M83513/19-E01NP | 100RN31SBRP1 | M83513/22-B01NN | 100RN15PBS1 |
| M83513/18-H02CP | 100RC100PBRP2 | M83513/19-E02CN | 100RC31SBR2 | M83513/22-B01NP | 100RN15PBSP1 |
| M83513/18-H02NN | 100RN100PBR2 | M83513/19-E02CP | 100RC31SBRP2 | M83513/22-B02CN | 100RC15PBS2 |
| M83513/18-H02NP | 100RN100PBRP2 | M83513/19-E02NN | 100RN31SBR2 | M83513/22-B02CP | 100RC15PBSP2 |
| M83513/18-H03CN | 100RC100PBR3 | M83513/19-E02NP | 100RN31SBRP2 | M83513/22-B02NN | 100RN15PBS2 |
| M83513/18-H03CP | 100RC100PBRP3 | M83513/19-E03CN | 100RC31SBR3 | M83513/22-B02NP | 100RN15PBSP2 |
| M83513/18-H03NN | 100RN100PBR3 | M83513/19-E03CP | 100RC31SBRP3 | M83513/22-B01CT | 100RC15P-BST1 |
| M83513/18-H03NP | 100RN100PBRP3 | M83513/19-E03NN | 100RN31SBR3 | M83513/22-B03CN | 100RC15PBS3 |
| M83513/19-A01CN | 100RN09SBRP1 | M83513/19-E03NP | 100RN31SBRP3 | M83513/22-B03CP | 100RC15PBSP3 |
| M83513/19-A01CP | 100RC09SBRP1 | M83513/19-F01CN | 100RC37SBR1 | M83513/22-B03NN | 100RN15PBS3 |
| M83513/19-A01NN | 100RN09SBR1 | M83513/19-F01CP | 100RC37SBRP1 | M83513/22-B03NP | 100RN15PBSP3 |
| M83513/19-A01NP | 100RN09SBRP1 | M83513/19-F01NN | 100RN37SBR1 | M83513/22-C01CN | 100RC21PBS1 |
| M83513/19-A02CN | 100RC09SBR2 | M83513/19-F01NP | 100RN37SBRP1 | M83513/22-C01CP | 100RC21PBSP1 |
| M83513/19-A02CP | 100RC09SBRP2 | M83513/19-F02CN | 100RC37SBR2 | M83513/22-C01NN | 100RN21PBS1 |
| M83513/19-A02NN | 100RN09SBR2 | M83513/19-F02CP | 100RC37SBRP2 | M83513/22-C01NP | 100RN21PBSP1 |
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| M83513/19-A03CN | 100RC09SBR3 | M83513/19-F02NP | 100RN37SBRP2 | M83513/22-C02CP | 100RC21PBSP2 |
| M83513/19-A03CP | 100RC09SBRP3 | M83513/19-F03CN | 100RC37SBR3 | M83513/22-C02NN | 100RN21PBS2 |
| M83513/19-A03NN | 100RN09SBR3 | M83513/19-F03CP | 100RC37SBRP3 | M83513/22-C02NP | 100RN21PBSP2 |
| M83513/19-A03NP | 100RN09SBRP3 | M83513/19-F03NN | 100RN37SBR3 | M83513/22-C03CN | 100RC21PBS3 |
| M83513/19-B01CN | 100RC15SBR1 | M83513/19-F03NP | 100RN37SBRP3 | M83513/22-C03CP | 100RC21PBSP3 |
| M83513/19-B01CP | 100RC15SBRP1 | M83513/20-G01CN | 100RC51SBR1 | M83513/22-C03NN | 100RN21PBS3 |
| M83513/19-B01NN | 100RN15SBR1 | M83513/20-G01CP | 100RC51SBRP1 | M83513/22-C03NP | 100RN21PBSP3 |
| M83513/19-B01NP | 100RN15SBRP1 | M83513/20-G01NN | 100RN51SBR1 | M83513/22-D01CN | 100RC25PBS1 |
| M83513/19-B02CN | 100RC15SBR2 | M83513/20-G01NP | 100RN51SBRP1 | M83513/22-D01CP | 100RC25PBSP1 |
| M83513/19-B02CP | 100RC15SBRP2 | M83513/20-G02CN | 100RC51SBR2 | M83513/22-D01NN | 100RN25PBS1 |
| M83513/19-B02NN | 100RN15SBR2 | M83513/20-G02CP | 100RC51SBRP2 | M83513/22-D01NP | 100RN25PBSP1 |
| M83513/19-B02NP | 100RN15SBRP2 | M83513/20-G02NN | 100RN51SBR2 | M83513/22-D02CN | 100RC25PBS2 |
| M83513/19-B03CN | 100RC15SBR3 | M83513/20-G02NP | 100RN51SBRP2 | M83513/22-D02CP | 100RC25PBSP2 |
| M83513/19-B03CP | 100RC15SBRP3 | M83513/20-G03CN | 100RC51SBR3 | M83513/22-D02NN | 100RN25PBS2 |
| M83513/19-B03NN | 100RN15SBR3 | M83513/20-G03CP | 100RC51SBRP3 | M83513/22-D02NP | 100RN25PBSP2 |
| M83513/19-B03NP | 100RN15SBRP3 | M83513/20-G03NN | 100RN51SBR3 | M83513/22-D03CN | 100RC25PBS3 |
| M83513/19-C01CN | 100RC21SBR1 | M83513/20-G03NP | 100RN51SBRP3 | M83513/22-D03CP | 100RC25PBSP3 |
| M83513/19-C01CP | 100RC21SBRP1 | M83513/21-H01CN | 100RC100SBR1 | M83513/22-D03NN | 100RN25PBS3 |
| M83513/19-C01NN | 100RN21SBR1 | M83513/21-H01CP | 100RC100SBRP1 | M83513/22-D03NP | 100RN25PBSP3 |
| M83513/19-C01NP | 100RN21SBRP1 | M83513/21-H01NN | 100RN100SBR1 | M83513/22-E01CN | 100RC31PBS1 |
| M83513/19-C02CN | 100RC21SBR2 | M83513/21-H01NP | 100RN100SBRP1 | M83513/22-E01CP | 100RC31PBSP1 |
| M83513/19-C02CP | 100RC21SBRP2 | M83513/21-H02CN | 100RC100SBR2 | M83513/22-E01NN | 100RN31PBS1 |
| M83513/19-C02NN | 100RN21SBR2 | M83513/21-H02CP | 100RC100SBRP2 | M83513/22-E01NP | 100RN31PBSP1 |
| M83513/19-C02NP | 100RN21SBRP2 | M83513/21-H02NN | 100RN100SBR2 | M83513/22-E02CN | 100RC31PBS2 |
| M83513/19-C03CN | 100RC21SBR3 | M83513/21-H02NP | 100RN100SBRP2 | M83513/22-E02CP | 100RC31PBSP2 |
| M83513/19-C03CP | 100RC21SBRP3 | M83513/21-H03CN | 100RC100SBR3 | M83513/22-E02NN | 100RN31PBS2 |
| M83513/19-C03NN | 100RN21SBR3 | M83513/21-H03CP | 100RC100SBRP3 | M83513/22-E02NP | 100RN31PBSP2 |
| M83513/19-C03NP | 100RN21SBRP3 | M83513/21-H03NN | 100RN100SBR3 | M83513/22-E03CN | 100RC31PBS3 |
| M83513/19-D01CN | 100RC25SBR1 | M83513/21-H03NP | 100RN100SBRP3 | M83513/22-E03CP | 100RC31PBSP3 |
| M83513/19-D01CP | 100RC25SBRP1 | M83513/22-A01CN | 100RC09PBS1 | M83513/22-E03NN | 100RN31PBS3 |
| M83513/19-D01NN | 100RN25SBR1 | M83513/22-A01CP | 100RC09PBSP1 | M83513/22-E03NP | 100RN31PBSP3 |
| M83513/19-D01NP | 100RN25SBRP1 | M83513/22-A01NN | 100RN09PBS1 | M83513/22-F01CN | 100RC37PBS1 |
| M83513/19-D02CN | 100RC25SBR2 | M83513/22-A01NP | 100RN09PBSP1 | M83513/22-F01CP | 100RC37PBSP1 |
| M83513/19-D02CP | 100RC25SBRP2 | M83513/22-A02CN | 100RC09PBS2 | M83513/22-F01NN | 100RN37PBS1 |
| M83513/19-D02NN | 100RN25SBR2 | M83513/22-A02CP | 100RC09PBSP2 | M83513/22-F01NP | 100RN37PBSP1 |
| M83513/19-D02NP | 100RN25SBRP2 | M83513/22-A02NN | 100RN09PBS2 | M83513/22-F02CN | 100RC37PBS2 |
| M83513/19-D03CN | 100RC25SBR3 | M83513/22-A02NP | 100RN09PBSP2 | M83513/22-F02CP | 100RC37PBSP2 |
| M83513/19-D03CP | 100RC25SBRP3 | M83513/22-A03CN | 100RC09PBS3 | M83513/22-F02NN | 100RN37PBS2 |
| M83513/19-D03NN | 100RN25SBR3 | M83513/22-A03CP | 100RC09PBSP3 | M83513/22-F02NP | 100RN37PBSP2 |

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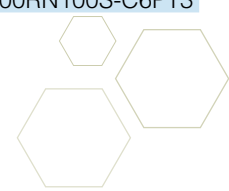
| Mil-Spec | Amphenol | Mil-Spec | Amphenol | Mil-Spec | Amphenol |
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| M83513/22-F03CN | 100RC37PBS3 | M83513/25-C02NN | 100RN21SBS2 | M83513/27-H02CP | 100RC100SBSP2 |
| M83513/22-F03CP | 100RC37PBSP3 | M83513/25-C02NP | 100RN21SBSP2 | M83513/27-H02NN | 100RN100SBS2 |
| M83513/22-F03NN | 100RN37PBS3 | M83513/25-C03CN | 100RC21SBS3 | M83513/27-H02NP | 100RN100SBSP2 |
| M83513/22-F03NP | 100RN37PBSP3 | M83513/25-C03CP | 100RC21SBSP3 | M83513/27-H03CN | 100RC100SBS3 |
| M83513/23-G01CN | 100RC51PBS1 | M83513/25-C03NN | 100RN21SBS3 | M83513/27-H03CP | 100RC100SBSP3 |
| M83513/23-G01CP | 100RC51PBSP1 | M83513/25-C03NP | 100RN21SBSP3 | M83513/27-H03NN | 100RN100SBS3 |
| M83513/23-G01NN | 100RN51PBS1 | M83513/25-D01CN | 100RC25SBS1 | M83513/27-H03NP | 100RN100SBSP3 |
| M83513/23-G01NP | 100RN51PBSP1 | M83513/25-D01CP | 100RC25SBSP1 | M83513/28-A01CN | 100RC09P-C61 |
| M83513/23-G02CN | 100RC51PBS2 | M83513/25-D01NN | 100RN25SBS1 | M83513/28-A01CP | 100RC09P-C6P1 |
| M83513/23-G02CP | 100RC51PBSP2 | M83513/25-D01NP | 100RN25SBSP1 | M83513/28-A01CT | 100RC09P-C6T1 |
| M83513/23-G02NN | 100RN51PBS2 | M83513/25-D02CN | 100RC25SBS2 | M83513/28-A01CW | 100RC09P-C6PT1 |
| M83513/23-G02NP | 100RN51PBSP2 | M83513/25-D02CP | 100RC25SBSP2 | M83513/28-A01NN | 100RN09P-C61 |
| M83513/23-G03CN | 100RC51PBS3 | M83513/25-D02NN | 100RN25SBS2 | M83513/28-A01NP | 100RN09P-C6P1 |
| M83513/23-G03CP | 100RC51PBSP3 | M83513/25-D02NP | 100RN25SBSP2 | M83513/28-A01NT | 100RN09P-C6T1 |
| M83513/23-G03NN | 100RN51PBS3 | M83513/25-D03CN | 100RC25SBS3 | M83513/28-A01NW | 100RN09P-C6PT1 |
| M83513/23-G03NP | 100RN51PBSP3 | M83513/25-D03CP | 100RC25SBSP3 | M83513/28-A02CN | 100RC09P-C62 |
| M83513/24-H01CN | 100RC100PBS1 | M83513/25-D03NN | 100RN25SBS3 | M83513/28-A02CP | 100RC09P-C6P2 |
| M83513/24-H01CP | 100RC100PBSP1 | M83513/25-D03NP | 100RN25SBSP3 | M83513/28-A02CT | 100RC09P-C6T2 |
| M83513/24-H01NN | 100RN100PBS1 | M83513/25-E01CN | 100RC31PBS1 | M83513/28-A02CW | 100RC09P-C6PT2 |
| M83513/24-H01NP | 100RN100PBSP1 | M83513/25-E01CP | 100RC31SBSP1 | M83513/28-A02NN | 100RN09P-C62 |
| M83513/24-H02CN | 100RC100PBS2 | M83513/25-E01NN | 100RN31PBS1 | M83513/28-A02NP | 100RN09P-C6P2 |
| M83513/24-H02CP | 100RC100PBSP2 | M83513/25-E01NP | 100RN31SBSP1 | M83513/28-A02NT | 100RN09P-C6T2 |
| M83513/24-H02NN | 100RN100PBS2 | M83513/25-E02CN | 100RC31PBS2 | M83513/28-A02NW | 100RN09P-C6PT2 |
| M83513/24-H02NP | 100RN100PBSP2 | M83513/25-E02CP | 100RC31SBSP2 | M83513/28-A03CN | 100RC09P-C63 |
| M83513/24-H03CN | 100RC100PBS3 | M83513/25-E02NN | 100RN31PBS2 | M83513/28-A03CP | 100RC09P-C6P3 |
| M83513/24-H03CP | 100RC100PBSP3 | M83513/25-E02NP | 100RN31PBSP2 | M83513/28-A03CT | 100RC09P-C6T3 |
| M83513/24-H03NN | 100RN100PBS3 | M83513/25-E03CN | 100RC31PBS3 | M83513/28-A03CW | 100RC09P-C6PT3 |
| M83513/24-H03NP | 100RN100PBSP3 | M83513/25-E03CP | 100RC31SBSP3 | M83513/28-A03NN | 100RN09P-C63 |
| M83513/25-A01CN | 100RC09SBS1 | M83513/25-E03NN | 100RN31PBS3 | M83513/28-A03NP | 100RN09P-C6P3 |
| M83513/25-A01CP | 100RC09SBSP1 | M83513/25-E03NP | 100RN31PBSP3 | M83513/28-A03NT | 100RN09P-C6T3 |
| M83513/25-A01NN | 100RN09SBS1 | M83513/25-F01CN | 100RC37PBS1 | M83513/28-A03NW | 100RN09P-C6PT3 |
| M83513/25-A01NP | 100RN09SBSP1 | M83513/25-F01CP | 100RC37SBSP1 | M83513/28-B01CN | 100RC15P-C61 |
| M83513/25-A02CN | 100RC09SBS2 | M83513/25-F01NN | 100RN37PBS1 | M83513/28-B01CP | 100RC15P-C6P1 |
| M83513/25-A02CP | 100RC09SBSP2 | M83513/25-F01NP | 100RN37PBSP1 | M83513/28-B01CT | 100RC15P-C6T1 |
| M83513/25-A02NN | 100RN09SBS2 | M83513/25-F02CN | 100RC37PBS2 | M83513/28-B01CW | 100RC15P-C6PT1 |
| M83513/25-A02NP | 100RN09SBSP2 | M83513/25-F02CP | 100RC37SBSP2 | M83513/28-B01NN | 100RN15P-C61 |
| M83513/25-A03CN | 100RC09SBS3 | M83513/25-F02NN | 100RN37PBS2 | M83513/28-B01NP | 100RN15P-C6P1 |
| M83513/25-A03CP | 100RC09SBSP3 | M83513/25-F02NP | 100RN37PBSP2 | M83513/28-B01NT | 100RN15P-C6T1 |
| M83513/25-A03NN | 100RN09SBS3 | M83513/25-F03CN | 100RC37PBS3 | M83513/28-B01NW | 100RN15P-C6PT1 |
| M83513/25-A03NP | 100RN09SBSP3 | M83513/25-F03CP | 100RC37PBSP3 | M83513/28-B02CN | 100RC15P-C62 |
| M83513/25-B01CN | 100RC15SBS1 | M83513/25-F03NN | 100RN37PBS3 | M83513/28-B02CP | 100RC15P-C6P2 |
| M83513/25-B01CP | 100RC15SBSP1 | M83513/25-F03NP | 100RN37PBSP3 | M83513/28-B02CT | 100RC15P-C6T2 |
| M83513/25-B01NN | 100RN15SBS1 | M83513/26-G01CN | 100RC51SBS1 | M83513/28-B02CW | 100RC15P-C6PT2 |
| M83513/25-B01NP | 100RN15SBSP1 | M83513/26-G01CP | 100RC51SBSP1 | M83513/28-B02NN | 100RN15P-C62 |
| M83513/25-B01CT | 100RC15S-BST1 | M83513/26-G01NN | 100RN51SBS1 | M83513/28-B02NP | 100RN15P-C6P2 |
| M83513/25-B02CN | 100RC15SBS2 | M83513/26-G01NP | 100RN51SBSP1 | M83513/28-B02NT | 100RN15P-C6T2 |
| M83513/25-B02CP | 100RC15SBSP2 | M83513/26-G02CN | 100RC51SBS2 | M83513/28-B02NW | 100RN15P-C6PT2 |
| M83513/25-B02NN | 100RN15SBS2 | M83513/26-G02CP | 100RC51SBSP2 | M83513/28-B03CN | 100RC15P-C63 |
| M83513/25-B02NP | 100RN15SBSP2 | M83513/26-G02NN | 100RN51SBS2 | M83513/28-B03CP | 100RC15P-C6P3 |
| M83513/25-B03CN | 100RC15SBS3 | M83513/26-G02NP | 100RN51SBSP2 | M83513/28-B03CT | 100RC15P-C6T3 |
| M83513/25-B03CP | 100RC15SBSP3 | M83513/26-G03CN | 100RC51SBS3 | M83513/28-B03CW | 100RC15P-C6PT3 |
| M83513/25-B03NN | 100RN15SBS3 | M83513/26-G03CP | 100RC51SBSP3 | M83513/28-B03NN | 100RN15P-C63 |
| M83513/25-B03NP | 100RN15SBSP3 | M83513/26-G03NN | 100RN51SBS3 | M83513/28-B03NP | 100RN15P-C6P3 |
| M83513/25-C01CN | 100RC21SBS1 | M83513/26-G03NP | 100RN51SBSP3 | M83513/28-B03NT | 100RN15P-C6T3 |
| M83513/25-C01CP | 100RC21SBSP1 | M83513/27-H01CN | 100RC100SBS1 | M83513/28-B03NW | 100RN15P-C6PT3 |
| M83513/25-C01NN | 100RN21SBS1 | M83513/27-H01CP | 100RC100SBSP1 | M83513/28-C01CN | 100RC21P-C61 |
| M83513/25-C01NP | 100RN21SBSP1 | M83513/27-H01NN | 100RN100SBS1 | M83513/28-C01CP | 100RC21P-C6P1 |
| M83513/25-C02CN | 100RC21SBS2 | M83513/27-H01NP | 100RN100SBSP1 | M83513/28-C01CT | 100RC21P-C6T1 |
| M83513/25-C02CP | 100RC21SBSP2 | M83513/27-H02CN | 100RC100SBS2 | M83513/28-C01CW | 100RC21P-C6PT1 |

| Mil-Spec | Amphenol | Mil-Spec | Amphenol | Mil-Spec | Amphenol |
|-----------------|----------------|-----------------|----------------|-----------------|-----------------|
| M83513/28-C01NN | 100RN21P-C61 | M83513/28-E02NW | 100RN31P-C6PT2 | M83513/30-G01CT | 100RC100P-C6T1 |
| M83513/28-C01NP | 100RN21P-C6P1 | M83513/28-E03CN | 100RC31P-C63 | M83513/30-G01CW | 100RC100P-C6PT1 |
| M83513/28-C01NT | 100RN21P-C6T1 | M83513/28-E03CP | 100RC31P-C6P3 | M83513/30-G01NN | 100RN100P-C61 |
| M83513/28-C01NW | 100RN21P-C6PT1 | M83513/28-E03CT | 100RC31P-C6T3 | M83513/30-G01NP | 100RN100P-C6P1 |
| M83513/28-C02CN | 100RC21P-C62 | M83513/28-E03CW | 100RC31P-C6PT3 | M83513/30-G01NT | 100RN100P-C6T1 |
| M83513/28-C02CP | 100RC21P-C6P2 | M83513/28-E03NN | 100RN31P-C63 | M83513/30-G01NW | 100RN100P-C6PT1 |
| M83513/28-C02CT | 100RC21P-C6T2 | M83513/28-E03NP | 100RN31P-C6P3 | M83513/29-G02CN | 100RC100P-C62 |
| M83513/28-C02CW | 100RC21P-C6PT2 | M83513/28-E03NT | 100RN31P-C6T3 | M83513/30-G02CP | 100RC100P-C6P2 |
| M83513/28-C02NN | 100RN21P-C62 | M83513/28-E03NW | 100RN31P-C6PT3 | M83513/30-G02CT | 100RC100P-C6T2 |
| M83513/28-C02NP | 100RN21P-C6P2 | M83513/28-F01CN | 100RC37P-C61 | M83513/30-G02CW | 100RC100P-C6PT2 |
| M83513/28-C02NT | 100RN21P-C6T2 | M83513/28-F01CP | 100RC37P-C6P1 | M83513/30-G02NN | 100RN100P-C62 |
| M83513/28-C02NW | 100RN21P-C6PT2 | M83513/28-F01CT | 100RC37P-C6T1 | M83513/30-G02NP | 100RN100P-C6P2 |
| M83513/28-C03CN | 100RC21P-C63 | M83513/28-F01CW | 100RC37P-C6PT1 | M83513/30-G02NT | 100RN100P-C6T2 |
| M83513/28-C03CP | 100RC21P-C6P3 | M83513/28-F01NN | 100RN37P-C61 | M83513/30-G02NW | 100RN100P-C6PT2 |
| M83513/28-C03CT | 100RC21P-C6T3 | M83513/28-F01NP | 100RN37P-C6P1 | M83513/30-G03CN | 100RC100P-C63 |
| M83513/28-C03CW | 100RC21P-C6PT3 | M83513/28-F01NT | 100RN37P-C6T1 | M83513/30-G03CP | 100RC100P-C6P3 |
| M83513/28-C03NN | 100RN21P-C63 | M83513/28-F01NW | 100RN37P-C6PT1 | M83513/30-G03CT | 100RC100P-C6T3 |
| M83513/28-C03NP | 100RN21P-C6P3 | M83513/28-F02CN | 100RC37P-C62 | M83513/30-G03CW | 100RC100P-C6PT3 |
| M83513/28-C03NT | 100RN21P-C6T3 | M83513/28-F02CP | 100RC37P-C6P2 | M83513/30-G03NN | 100RN100P-C63 |
| M83513/28-C03NW | 100RN21P-C6PT3 | M83513/28-F02CT | 100RC37P-C6T2 | M83513/30-G03NP | 100RN100P-C6P3 |
| M83513/28-D01CN | 100RC25P-C61 | M83513/28-F02CW | 100RC37P-C6PT2 | M83513/30-G03NT | 100RN100P-C6T3 |
| M83513/28-D01CP | 100RC25P-C6P1 | M83513/28-F02NN | 100RN37P-C62 | M83513/30-G03NW | 100RN100P-C6PT3 |
| M83513/28-D01CT | 100RC25P-C6T1 | M83513/28-F02NP | 100RN37P-C6P2 | M83513/31-A01CN | 100RC09S-C61 |
| M83513/28-D01CW | 100RC25P-C6PT1 | M83513/28-F02NT | 100RN37P-C6T2 | M83513/31-A01CP | 100RC09S-C6P1 |
| M83513/28-D01NN | 100RN25P-C61 | M83513/28-F02NW | 100RN37P-C6PT2 | M83513/31-A01CT | 100RC09S-C6T1 |
| M83513/28-D01NP | 100RN25P-C6P1 | M83513/28-F03CN | 100RC37P-C63 | M83513/31-A01CW | 100RC09S-C6PT1 |
| M83513/28-D01NT | 100RN25P-C6T1 | M83513/28-F03CP | 100RC37P-C6P3 | M83513/31-A01NN | 100RN09S-C61 |
| M83513/28-D01NW | 100RN25P-C6PT1 | M83513/28-F03CT | 100RC37P-C6T3 | M83513/31-A01NP | 100RN09S-C6P1 |
| M83513/28-D02CN | 100RC25P-C62 | M83513/28-F03CW | 100RC37P-C6PT3 | M83513/31-A01NT | 100RN09S-C6T1 |
| M83513/28-D02CP | 100RC25P-C6P2 | M83513/28-F03NN | 100RN37P-C63 | M83513/31-A01NW | 100RN09S-C6PT1 |
| M83513/28-D02CT | 100RC25P-C6T2 | M83513/28-F03NP | 100RN37P-C6P3 | M83513/31-A02CN | 100RC09S-C62 |
| M83513/28-D02CW | 100RC25P-C6PT2 | M83513/28-F03NT | 100RN37P-C6T3 | M83513/31-A02CP | 100RC09S-C6P2 |
| M83513/28-D02NN | 100RN25P-C62 | M83513/28-F03NW | 100RN37P-C6PT3 | M83513/31-A02CT | 100RC09S-C6T2 |
| M83513/28-D02NP | 100RN25P-C6P2 | M83513/29-G01CN | 100RC51P-C61 | M83513/31-A02CW | 100RC09S-C6PT2 |
| M83513/28-D02NT | 100RN25P-C6T2 | M83513/29-G01CP | 100RC51P-C6P1 | M83513/31-A02NN | 100RN09S-C62 |
| M83513/28-D02NW | 100RN25P-C6PT2 | M83513/29-G01CT | 100RC51P-C6T1 | M83513/31-A02NP | 100RN09S-C6P2 |
| M83513/28-D03CN | 100RC25P-C63 | M83513/29-G01CW | 100RC51P-C6PT1 | M83513/31-A02NT | 100RN09S-C6T2 |
| M83513/28-D03CP | 100RC25P-C6P3 | M83513/29-G01NN | 100RN51P-C61 | M83513/31-A02NW | 100RN09S-C6PT2 |
| M83513/28-D03CT | 100RC25P-C6T3 | M83513/29-G01NP | 100RN51P-C6P1 | M83513/31-A03CN | 100RC09S-C63 |
| M83513/28-D03CW | 100RC25P-C6PT3 | M83513/29-G01NT | 100RN51P-C6T1 | M83513/31-A03CP | 100RC09S-C6P3 |
| M83513/28-D03NN | 100RN25P-C63 | M83513/29-G01NW | 100RN51P-C6PT1 | M83513/31-A03CT | 100RC09S-C6T3 |
| M83513/28-D03NP | 100RN25P-C6P3 | M83513/29-G02CN | 100RC51P-C62 | M83513/31-A03CW | 100RC09S-C6PT3 |
| M83513/28-D03NT | 100RN25P-C6T3 | M83513/29-G02CP | 100RC51P-C6P2 | M83513/31-A03NN | 100RN09S-C63 |
| M83513/28-D03NW | 100RN25P-C6PT3 | M83513/29-G02CT | 100RC51P-C6T2 | M83513/31-A03NP | 100RN09S-C6P3 |
| M83513/28-E01CN | 100RC31P-C61 | M83513/29-G02CW | 100RC51P-C6PT2 | M83513/31-A03NT | 100RN09S-C6T3 |
| M83513/28-E01CP | 100RC31P-C6P1 | M83513/29-G02NN | 100RN51P-C62 | M83513/31-A03NW | 100RN09S-C6PT3 |
| M83513/28-E01CT | 100RC31P-C6T1 | M83513/29-G02NP | 100RN51P-C6P2 | M83513/31-B01CN | 100RC15S-C61 |
| M83513/28-E01CW | 100RC31P-C6PT1 | M83513/29-G02NT | 100RN51P-C6T2 | M83513/31-B01CP | 100RC15S-C6P1 |
| M83513/28-E01NN | 100RN31P-C61 | M83513/29-G02NW | 100RN51P-C6PT2 | M83513/31-B01CT | 100RC15S-C6T1 |
| M83513/28-E01NP | 100RN31P-C6P1 | M83513/29-G03CN | 100RC51P-C63 | M83513/31-B01CW | 100RC15S-C6PT1 |
| M83513/28-E01NT | 100RN31P-C6T1 | M83513/29-G03CP | 100RC51P-C6P3 | M83513/31-B01NN | 100RN15S-C61 |
| M83513/28-E01NW | 100RN31P-C6PT1 | M83513/29-G03CT | 100RC51P-C6T3 | M83513/31-B01NP | 100RN15S-C6P1 |
| M83513/28-E02CN | 100RC31P-C62 | M83513/29-G03CW | 100RC51P-C6PT3 | M83513/31-B01NT | 100RN15S-C6T1 |
| M83513/28-E02CP | 100RC31P-C6P2 | M83513/29-G03NN | 100RN51P-C63 | M83513/31-B01NW | 100RN15S-C6PT1 |
| M83513/28-E02CT | 100RC31P-C6T2 | M83513/29-G03NP | 100RN51P-C6P3 | M83513/31-B02CN | 100RC15S-C62 |
| M83513/28-E02CW | 100RC31P-C6PT2 | M83513/29-G03NT | 100RN51P-C6T3 | M83513/31-B02CP | 100RC15S-C6P2 |
| M83513/28-E02NN | 100RN31P-C62 | M83513/29-G03NW | 100RN51P-C6PT3 | M83513/31-B02CT | 100RC15S-C6T2 |
| M83513/28-E02NP | 100RN31P-C6P2 | M83513/30-G01CN | 100RC100P-C61 | M83513/31-B02CW | 100RC15S-C6PT2 |
| M83513/28-E02NT | 100RN31P-C6T2 | M83513/30-G01CP | 100RC100P-C6P1 | M83513/31-B02NN | 100RN15S-C62 |

- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- Accessories
- 2M
- HD38999
- Micro-D
- Terrapin
- Nexus

Contacts & Tools
2M Specs
2M801
2M803
2M804
2M805
2M Accessories
HD38999
Micro-D
Terrapin
Nexus

| Mil-Spec | Amphenol | Mil-Spec | Amphenol | Mil-Spec | Amphenol |
|-----------------|----------------|-----------------|----------------|-----------------|-----------------|
| M83513/31-B02NP | 100RN15S-C6P2 | M83513/31-E01CN | 100RC31S-C61 | M83513/32-G02CW | 100RC51S-C6PT2 |
| M83513/31-B02NT | 100RN15R-C6T2 | M83513/31-E01CP | 100RC31S-C6P1 | M83513/32-G02NN | 100RN51S-C62 |
| M83513/31-B02NW | 100RN15S-C6PT2 | M83513/31-E01CT | 100RC31S-C6T1 | M83513/32-G02NP | 100RN51S-C6P2 |
| M83513/31-B03CN | 100RC15S-C63 | M83513/31-E01CW | 100RC31S-C6PT1 | M83513/32-G02NT | 100RN51S-C6T2 |
| M83513/31-B03CP | 100RC15S-C6P3 | M83513/31-E01NN | 100RN31S-C61 | M83513/32-G02NW | 100RN51S-C6PT2 |
| M83513/31-B03CT | 100RC15S-C6T3 | M83513/31-E01NP | 100RN31S-C6P1 | M83513/32-G03CN | 100RC51S-C63 |
| M83513/31-B03CW | 100RC15S-C6PT3 | M83513/31-E01NT | 100RN31S-C6T1 | M83513/32-G03CP | 100RC51S-C6P3 |
| M83513/31-B03NN | 100RN15S-C63 | M83513/31-E01NW | 100RN31S-C6PT1 | M83513/32-G03CT | 100RC51S-C6T3 |
| M83513/31-B03NP | 100RN15S-C6P3 | M83513/31-E02CN | 100RC31S-C62 | M83513/32-G03CW | 100RC51S-C6PT3 |
| M83513/31-B03NT | 100RN15S-C6T3 | M83513/31-E02CP | 100RC31S-C6P2 | M83513/32-G03NN | 100RN51S-C63 |
| M83513/31-B03NW | 100RN15S-C6PT3 | M83513/31-E02CT | 100RC31S-C6T2 | M83513/32-G03NP | 100RN51S-C6P3 |
| M83513/31-C01CN | 100RC21S-C61 | M83513/31-E02CW | 100RC31S-C6PT2 | M83513/32-G03NT | 100RN51S-C6T3 |
| M83513/31-C01CP | 100RC21S-C6P1 | M83513/31-E02NN | 100RN31S-C62 | M83513/32-G03NW | 100RN51S-C6PT3 |
| M83513/31-C01CT | 100RC21S-C6T1 | M83513/31-E02NP | 100RN31S-C6P2 | M83513/33-H01CN | 100RC100S-C61 |
| M83513/31-C01CW | 100RC21S-C6PT1 | M83513/31-E02NT | 100RN31S-C6T2 | M83513/33-H01CP | 100RC100S-C6P1 |
| M83513/31-C01NN | 100RN21S-C61 | M83513/31-E02NW | 100RN31S-C6PT2 | M83513/33-H01CT | 100RC100S-C6T1 |
| M83513/31-C01NP | 100RN21S-C6P1 | M83513/31-E03CN | 100RC31S-C63 | M83513/33-H01CW | 100RC100S-C6PT1 |
| M83513/31-C01NT | 100RN21S-C6T1 | M83513/31-E03CP | 100RC31S-C6P3 | M83513/33-H01NN | 100RN100S-C61 |
| M83513/31-C01NW | 100RN21S-C6PT1 | M83513/31-E03CT | 100RC31S-C6T3 | M83513/33-H01NP | 100RN100S-C6P1 |
| M83513/31-C02CN | 100RC21S-C62 | M83513/31-E03CW | 100RC31S-C6PT3 | M83513/33-H01NT | 100RN100S-C6T1 |
| M83513/31-C02CP | 100RC21S-C6P2 | M83513/31-E03NN | 100RN31S-C63 | M83513/33-H01NW | 100RN100S-C6PT1 |
| M83513/31-C02CT | 100RC21S-C6T2 | M83513/31-E03NP | 100RN31S-C6P3 | M83513/33-H02CN | 100RC100S-C62 |
| M83513/31-C02CW | 100RC21S-C6PT2 | M83513/31-E03NT | 100RN31S-C6T3 | M83513/33-H02CP | 100RC100S-C6P2 |
| M83513/31-C02NN | 100RN21S-C62 | M83513/31-E03NW | 100RN31S-C6PT3 | M83513/33-H02CT | 100RC100S-C6T2 |
| M83513/31-C02NP | 100RN21S-C6P2 | M83513/31-F01CN | 100RC37S-C61 | M83513/33-H02CW | 100RC100S-C6PT2 |
| M83513/31-C02NT | 100RN21S-C6T2 | M83513/31-F01CP | 100RC37S-C6P1 | M83513/33-H02NN | 100RN100S-C62 |
| M83513/31-C02NW | 100RN21S-C6PT2 | M83513/31-F01CT | 100RC37S-C6T1 | M83513/33-H02NP | 100RN100S-C6P2 |
| M83513/31-C03CN | 100RC21S-C63 | M83513/31-F01CW | 100RC37S-C6PT1 | M83513/33-H02NT | 100RN100S-C6T2 |
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| M83513/31-C03CT | 100RC21S-C6T3 | M83513/31-F01NP | 100RN37S-C6P1 | M83513/33-H03CN | 100RC100S-C63 |
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| M83513/31-C03NN | 100RN21S-C63 | M83513/31-F01NW | 100RN37S-C6PT1 | M83513/33-H03CT | 100RC100S-C6T3 |
| M83513/31-C03NP | 100RN21S-C6P3 | M83513/31-F02CN | 100RC37S-C62 | M83513/33-H03CW | 100RC100S-C6PT3 |
| M83513/31-C03NT | 100RN21S-C6T3 | M83513/31-F02CP | 100RC37S-C6P2 | M83513/33-H03NN | 100RN100S-C63 |
| M83513/31-C03NW | 100RN21S-C6PT3 | M83513/31-F02CT | 100RC37S-C6T2 | M83513/33-H03NP | 100RN100S-C6P3 |
| M83513/31-D01CN | 100RC25S-C61 | M83513/31-F02CW | 100RC37S-C6PT2 | M83513/33-H03NT | 100RN100S-C6T3 |
| M83513/31-D01CP | 100RC25S-C6P1 | M83513/31-F02NN | 100RN37S-C62 | M83513/33-H03NW | 100RN100S-C6PT3 |
| M83513/31-D01CT | 100RC25S-C6T1 | M83513/31-F02NP | 100RN37S-C6P2 | | |
| M83513/31-D01CW | 100RC25S-C6PT1 | M83513/31-F02NT | 100RN37S-C6T2 | | |
| M83513/31-D01NN | 100RN25S-C61 | M83513/31-F02NW | 100RN37S-C6PT2 | | |
| M83513/31-D01NP | 100RN25S-C6P1 | M83513/31-F03CN | 100RC37S-C63 | | |
| M83513/31-D01NT | 100RN25S-C6T1 | M83513/31-F03CP | 100RC37S-C6P3 | | |
| M83513/31-D01NW | 100RN25S-C6PT1 | M83513/31-F03CT | 100RC37S-C6T3 | | |
| M83513/31-D02CN | 100RC25S-C62 | M83513/31-F03CW | 100RC37S-C6PT3 | | |
| M83513/31-D02CP | 100RC25S-C6P2 | M83513/31-F03NN | 100RN37S-C63 | | |
| M83513/31-D02CT | 100RC25S-C6T2 | M83513/31-F03NP | 100RN37S-C6P3 | | |
| M83513/31-D02CW | 100RC25S-C6PT2 | M83513/31-F03NT | 100RN37S-C6T3 | | |
| M83513/31-D02NN | 100RN25S-C62 | M83513/31-F03NW | 100RN37S-C6PT3 | | |
| M83513/31-D02NP | 100RN25S-C6P2 | M83513/32-G01CN | 100RC51S-C61 | | |
| M83513/31-D02NT | 100RN25S-C6T2 | M83513/32-G01CP | 100RC51S-C6P1 | | |
| M83513/31-D02NW | 100RN25S-C6PT2 | M83513/32-G01CT | 100RC51S-C6T1 | | |
| M83513/31-D03CN | 100RC25S-C63 | M83513/32-G01CW | 100RC51S-C6PT1 | | |
| M83513/31-D03CP | 100RC25S-C6P3 | M83513/32-G01NN | 100RN51S-C61 | | |
| M83513/31-D03CT | 100RC25S-C6T3 | M83513/32-G01NP | 100RN51S-C6P1 | | |
| M83513/31-D03CW | 100RC25S-C6PT3 | M83513/32-G01NT | 100RN51S-C6T1 | | |
| M83513/31-D03NN | 100RN25S-C63 | M83513/32-G01NW | 100RN51S-C6PT1 | | |
| M83513/31-D03NP | 100RN25S-C6P3 | M83513/32-G02CN | 100RC51S-C62 | | |
| M83513/31-D03NT | 100RN25S-C6T3 | M83513/32-G02CP | 100RC51S-C6P2 | | |
| M83513/31-D03NW | 100RN25S-C6PT3 | M83513/32-G02CT | 100RC51S-C6T2 | | |



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 Web: www.amphenolpcd.com
 E-mail: milaero@amphenolpcd.com



Contacts
& Tools

2M Specs

2M801

2M803

2M804

2M805

2M
Accessories

HD38999

Micro-D

Terrapin

Nexus

TERRAPIN

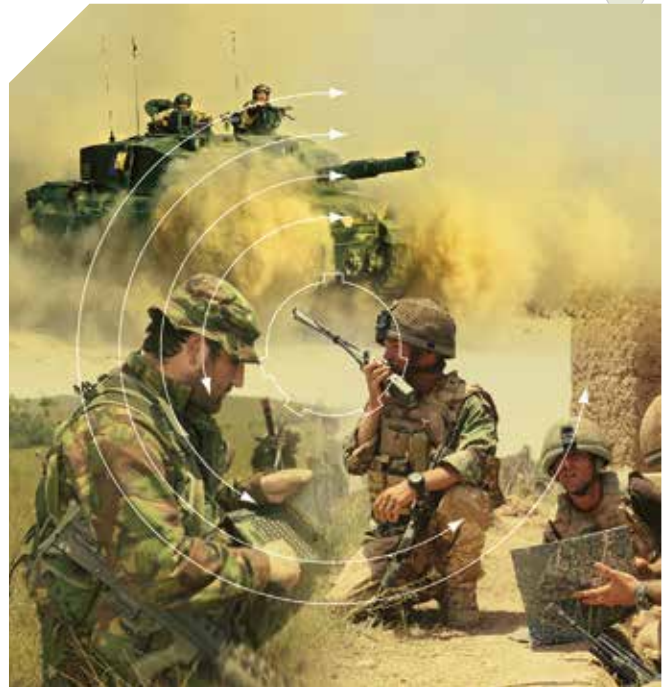
Miniature Rugged Connector Series

Terrapin shells are machined from brass giving an increased number of mating cycles and higher degree of robustness over traditional aluminium connectors. Five different keying options are available to prevent mis-mating; N, A, B, C and D. Standard plating is non-reflective black-silver, alternative plating finishes are available upon request.

Terrapin is available in two different styles of mating; either push-pull, being a break-away connector with no moving parts, or latch, which has an additional coupling ring allowing connections to be locked together. The same plug can be mated to either push-pull or latch receptacles. Both styles of product are waterproof to IP68 in both their mated and unmated conditions.

Amphenol offers a full range of cable harness solutions with standard or customized overmolding. Alternatively, for field termination, both integral and threaded backshell connectors can be terminated with screen retention straps and heat shrink boots giving.

The customized design specification of Terrapin lends itself to a variety of applications. Originally designed for soldier mounted applications such as Radios, Headsets and GPS units, Terrapin is also suitable for Gigabit Ethernet and USB 2.0 and therefore widely used on Computer Systems, LAN Switches and Routers. The high degree of sealing offered by Terrapin makes it perfect for Unmanned Ground Sensors and Surveillance equipment. Whatever the application, Terrapin offers space savings and improved durability over traditional interconnect products.



Terrapin Range Extension – Current Developments:

The below technical solutions are either new or currently under development. Please consult factory for the latest availability update and to obtain technical drawings and performance specification for these items.

- **SCEP**

An enhanced version of Terrapin connectors with improved blind-mate scoop proofing along with visual mating indicators. In part numbering, replace “SCE2” with “SCEP” and construct the rest of the part number as usual.

- **MicroB USB**

A standard MicroB USB interface packaged in the sealed Terrapin connector style.

- **Additional Grounding Post**

A customized version of the standard jam-nut connector to facilitate grounding of the shell.

- **Co-ax Contacts**

The integration of co-ax contacts to enable RF termination in the Terrapin connector style.

- **Power Contacts**

Standard Terrapin style connectors with contact arrangements to suit wire gauge greater than 20AWG.

- **Fiber Optic**

A fiber optic connection housed in the latched Terrapin connector style.



White dot on push pull connector indicates main key.

White line on latch connector indicates main key and open/closed situation.

White line on plug connector indicates main key.



Contacts & Tools

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2M Accessories

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Terrapin

Nexus

Terrapin Terminology

L1T



Body

Backshell

Crimp ferrule

L1K



Coupling ring

Integral backshell

01K



Integral backshell for
direct screen termination

Terrapin Mating Options

Chassis Mount Plug SCE2-B-76A

The same chassis mount plug will mate with both push-pull and latch receptacles



Push-pull Inline Receptacle SCE2-B-01K



Latch Inline Receptacle SCE2-B-L1K



Contacts
& Tools

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Example: SCE2-B-76A06-07SN-002 | (985) for optional grounding spring in L1K and L1T | (981) castellated panel nut

| SCE2- | B- | XXX | XX- | XX | -X | X- | XXX |
|-------------------|---|---|-----------------------------------|---|---|--|--|
| Series identifier | Plating finish B = Black Silver (RoHS) | Style Plugs 76A 67A 06K 06T 76T Receptacles 01K L1K 01T L1T 07A 71A | Shell size and Insert Arrangement | number of contacts 06-07 07-10A 07-12 07-14 08-19 09-26 10-37 (See page 206) | Contact style P = Pins S = Sockets | Key orientation N = Normal A B C D (See diagrams below) | Variant code 001 PC Tails 002 Solder Cups 003 Backshell |

Terrapin Plug and Receptacle Keyway Orientation

| Keyway orientation letter | PLUG keyway orientation | RECEPTACLE keyway orientation | Keyway orientation letter | PLUG keyway orientation | RECEPTACLE keyway orientation |
|---------------------------|-------------------------|-------------------------------|---------------------------|-------------------------|-------------------------------|
| N | | | C | | |
| A | | | D | | |
| B | | | | | |

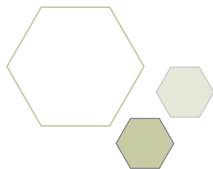
Series identifier SCEP denotes additional color indicators for main key and enhanced blind mate, scoop proofing.



| Test/parameter | Description |
|---------------------------------------|--|
| Electrical | |
| Current Rating | 23 AWG contacts: 3A d.c. 20 AWG contacts: 7.5A d.c. |
| Shell to Shell Continuity | 10mΩ max (screened) 200mΩ max (unscreened) |
| Contact Resistance | Size 20 and 23 contacts: 5mΩ initial 10mΩ maximum |
| Insulation Resistance | 5000MΩ minimum |
| Working Voltage | AC (RMS) 400V |
| Dielectric Withstanding Voltage | 2mA maximum leakage |
| Technical | |
| Mating Durability | 2000+ cycles |
| Backshell Overtorque | 25 lb.f.in. |
| Panel Nut Overtorque | 30 lb.f.in. |
| Non-magnetic | Yes |
| Environmental | |
| Operating Temperature Range | -55°C to +125°C |
| Temperature Endurance | 250 hours +125°C |
| Sealing (mated and unmated) | IP68, 1 hour at 2 metres* |
| Air Leakage | Less than 1cc per hour |
| Salt Spray | 1000 hours |
| Altitude Immersion | 70,000 Feet |
| RoHS Compliant | Yes |
| Suitable for RoHS compliant Soldering | Yes |

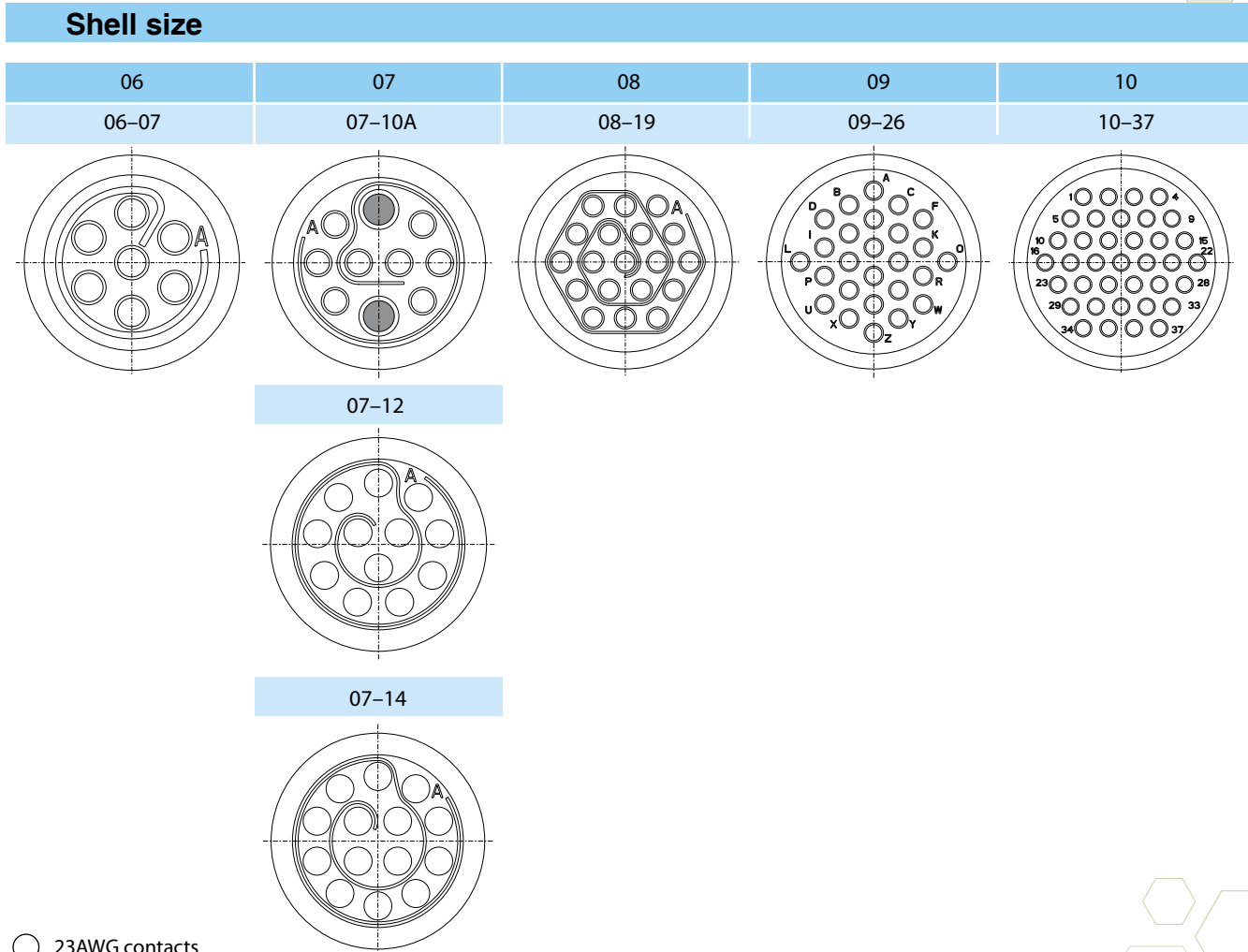
*Contact the factory if greater depth/duration of sealing is required

- Contacts & Tools
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- 2M805
- Accessories
- 2M
- HD38999
- Micro-D
- Terrapin
- Nexus



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- Micro-D
- Terrapin
- Nexus

View shown for reference / View from rear of plug*

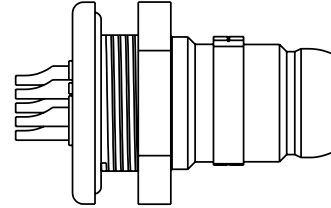


- 23AWG contacts
- 20AWG contacts

*View from rear of receptacle is mirror image of above.

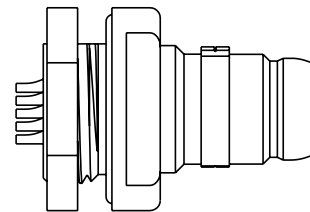
SCE2-X-76A

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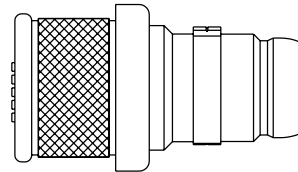
SCE2-X-67A

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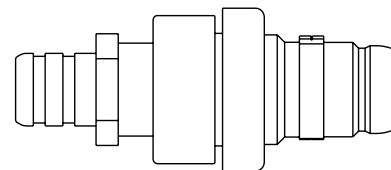
SCE2-X-06K

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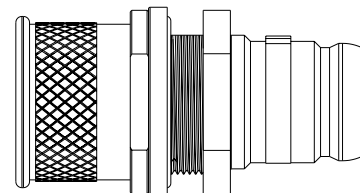
SCE2-X-06T

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SCE2-X-76T

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2M803

2M804

2M805

2M Accessories

HD38999

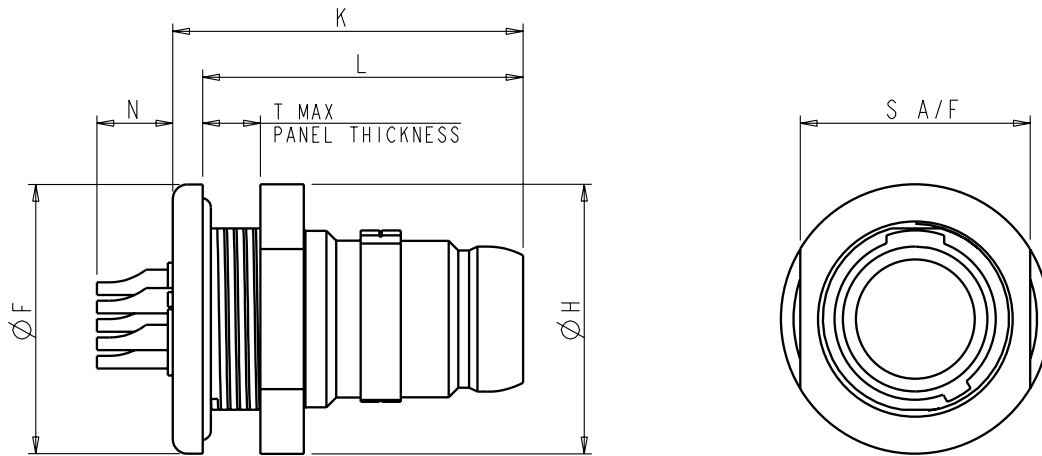
Micro-D

Terrapin

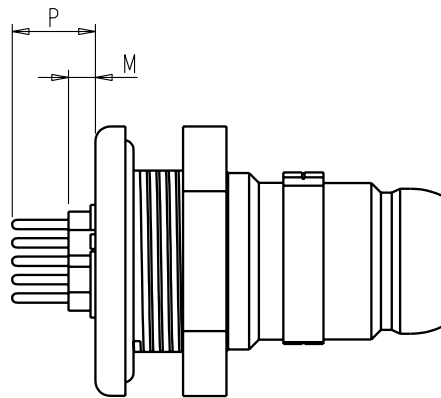
Nexus

SCE2-X-76AXX-XXSX-XXX

- Rear Mount Jam Nut Plug



SOLDER CUP TYPE (-002)



PC TAIL TYPE (-001)

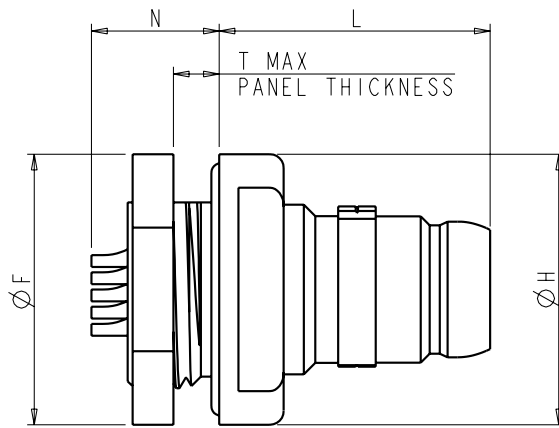
| Shell Size | ØF | ØH | K | L | M | N | P | S A/F | T Max |
|------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|--------------|-------------|
| Size 06 | .550 (13.97) | .550 (13.97) | .716 (18.19) | .655 (16.64) | .055 (1.40) | .155 (3.94) | .170 (4.32) | .470 (11.94) | .118 (3.00) |
| Size 07 | .620 (15.75) | .600 (15.24) | .716 (18.19) | .655 (16.64) | .055 (1.40) | .155 (3.94) | .170 (4.32) | .510 (12.95) | .118 (3.00) |
| Size 08 | .760 (19.30) | .760 (19.30) | .716 (18.19) | .655 (16.64) | .055 (1.40) | .155 (3.94) | .170 (4.32) | .706 (17.93) | .118 (3.00) |
| Size 09 | .890 (22.61) | .830 (21.08) | .802 (20.37) | .725 (18.42) | N/A | .085 (2.16) | .100 (2.54) | .745 (18.92) | .118 (3.00) |
| Size 10 | .930 (20.62) | .900 (22.86) | .802 (20.37) | .725 (18.42) | N/A | .085 (2.16) | .100 (2.54) | .808 (20.52) | .125 (3.18) |

All dimensions are in inches (mm shown in brackets) and are for reference only. Figure enlarged scale.

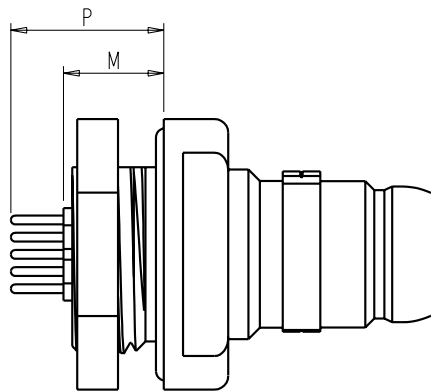
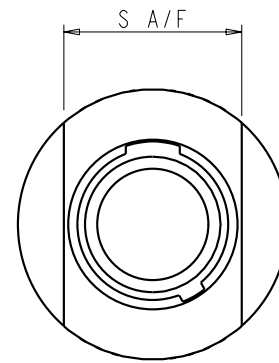
Front Mount Jam Nut Plug

SCE2-X-67AXX-XXSX-XXX

- Front Mount Jam Nut Plug



SOLDER CUP TYPE (-002)



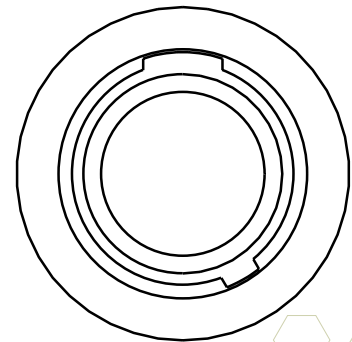
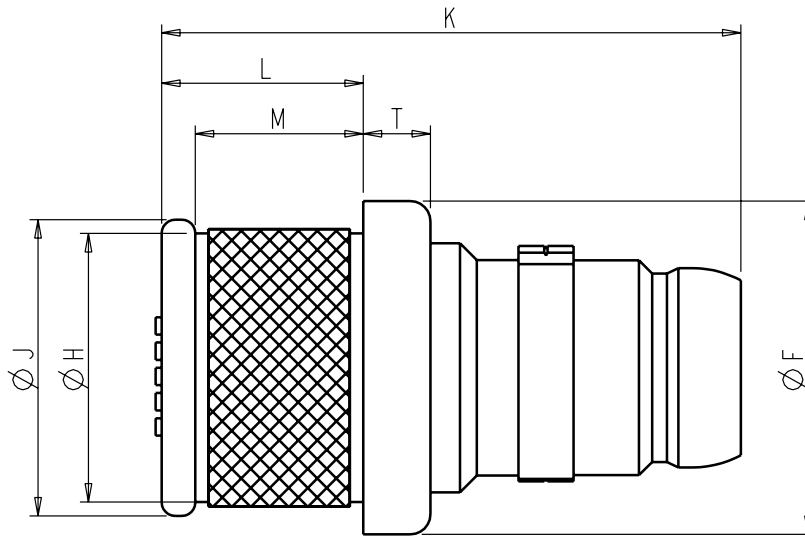
PC TAIL TYPE (-001)

| Shell Size | ØF | ØH | L | M | N | P | S A/F | T Max |
|------------|--------------|--------------|--------------|-------------|-------------|--------------|--------------|-------------|
| Size 06 | .590 (14.99) | .590 (14.99) | .592 (13.04) | .324 (8.23) | .279 (7.09) | .424 (10.78) | .525 (13.34) | .100 (2.54) |
| Size 07 | .620 (15.75) | .620 (15.75) | .592 (13.04) | .324 (8.23) | .279 (7.09) | .424 (10.78) | .685 (17.40) | .100 (2.54) |
| Size 08 | .760 (19.30) | .760 (19.30) | .592 (13.04) | .324 (8.23) | .279 (7.09) | .424 (10.78) | .825 (20.96) | .100 (2.54) |
| Size 09 | .890 (22.61) | .890 (22.61) | .662 (16.82) | .254 (6.45) | .209 (5.31) | .354 (8.99) | .955 (24.26) | .100 (2.54) |
| Size 10 | .930 (23.62) | .930 (23.62) | .662 (16.82) | .254 (6.45) | .209 (5.31) | .354 (8.99) | .995 (25.27) | .100 (2.54) |

All dimensions are in inches (mm shown in brackets) and are for reference only. Figure enlarged scale.

SCE2-X-06KXX-XXSX

- Inline Plug Integral Backshell



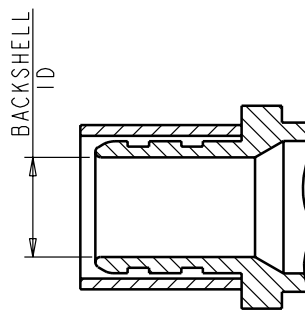
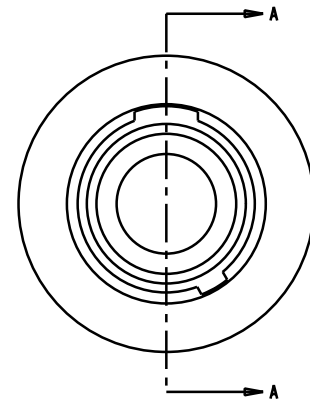
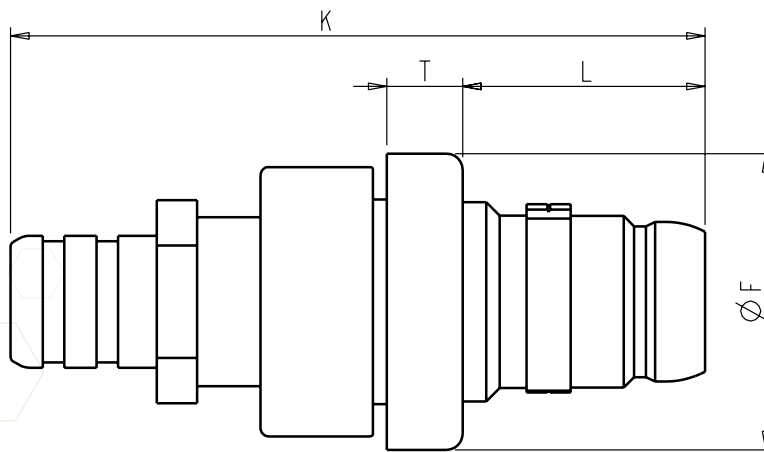
| Shell Size | ØF | ØH | ØJ | K | L | M | T |
|------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|
| Size 06 | .495 (12.57) | .412 (10.46) | .440 (11.18) | .862 (21.89) | .300 (7.62) | .250 (6.35) | .100 (2.54) |
| Size 07 | .575 (14.61) | .460 (11.68) | .505 (12.83) | .862 (21.89) | .300 (7.62) | .250 (6.35) | .100 (2.54) |
| Size 08 | .650 (16.51) | .593 (15.06) | .620 (15.75) | .862 (21.89) | .300 (7.62) | .250 (6.35) | .100 (2.54) |
| Size 09 | .725 (18.42) | .651 (16.54) | .690 (17.53) | .932 (23.67) | .300 (7.62) | .250 (6.35) | .100 (2.54) |
| Size 10 | .800 (20.32) | .721 (18.31) | .760 (19.30) | .932 (23.67) | .300 (7.62) | .250 (6.35) | .100 (2.54) |

All dimensions are in inches (mm shown in brackets) and are for reference only. Figure enlarged scale.

Inline Plug Threaded Backshell

SCE2-X-06TXX-XXSX-003

- Inline Plug Threaded Backshell

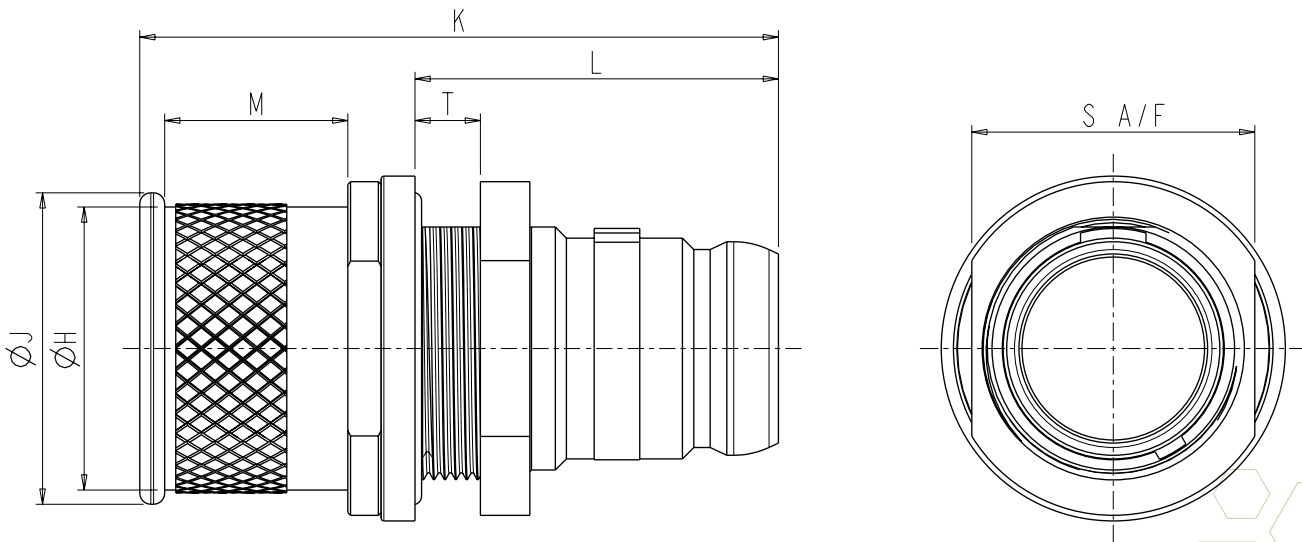


| Shell Size | ØF | K | L | T | Backshell ID |
|------------|--------------|---------------|--------------|-------------|--------------|
| | | | | | -003 |
| Size 06 | .550 (13.97) | 1.292 (32.82) | .451 (11.46) | .141 (3.58) | .185 (4.70) |
| Size 07 | .630 (16.00) | 1.292 (32.82) | .451 (11.46) | .141 (3.58) | .265 (6.73) |
| Size 08 | .705 (17.91) | 1.292 (32.82) | .451 (11.46) | .141 (3.58) | .345 (8.76) |
| Size 09 | .780 (19.81) | 1.362 (34.60) | .521 (13.23) | .141 (3.58) | .425 (10.80) |
| Size 10 | .855 (21.72) | 1.362 (34.60) | .521 (13.23) | .141 (3.58) | .505 (12.83) |

All dimensions are in inches (mm shown in brackets) and are for reference only. Figure enlarged scale.

SCE2-X-76TXX-XXSX-XXX

- Rear Mount Jam Nut Plug (Screw On Backshell)

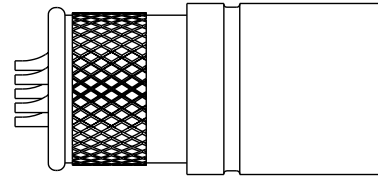


| Shell Size | ØH | ØJ | K | L | M | S A/F | T Max |
|------------|--------------|--------------|---------------|--------------|-------------|--------------|-------------|
| Size 06 | .460 (11.68) | .490 (12.45) | 1.150 (29.21) | .655 (16.64) | .330 (8.38) | .470 (11.94) | .125 (3.18) |
| Size 07 | .600 (15.24) | .645 (16.83) | 1.150 (29.21) | .655 (16.64) | .330 (8.38) | .510 (12.95) | .125 (3.18) |
| Size 08 | .730 (18.54) | .770 (19.56) | 1.150 (29.21) | .655 (16.64) | .330 (8.38) | .706 (17.93) | .125 (3.18) |
| Size 09 | .790 (20.07) | .830 (21.08) | 1.220 (30.99) | .725 (18.42) | .330 (8.38) | .745 (18.92) | .125 (3.18) |
| Size 10 | .860 (21.84) | .900 (22.86) | 1.220 (30.99) | .725 (18.42) | .330 (8.38) | .808 (20.52) | .125 (3.18) |

All dimensions are in inches (mm shown in brackets) and are for reference only. Figure enlarged scale.

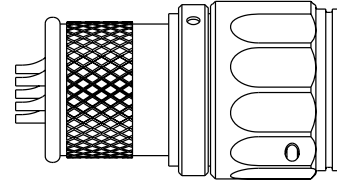
SCE2-X-01K

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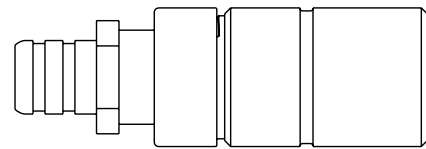
SCE2-X-L1K

Page 215



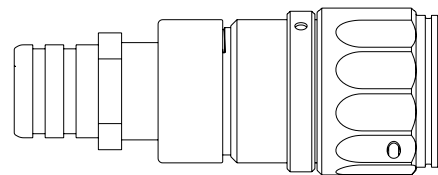
SCE2-X-01T

Page 216



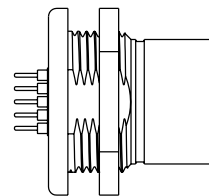
SCE2-X-L1T

Page 217



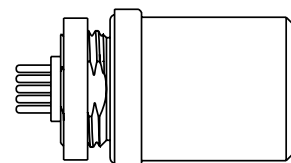
SCE2-X-07A

Page 218



SCE2-X-71A

Page 219



Contacts
& Tools

2M Specs

2M801

2M803

2M804

2M805

2M
Accessories

HD38999

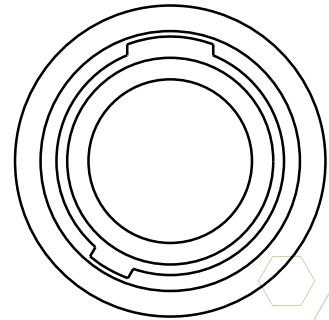
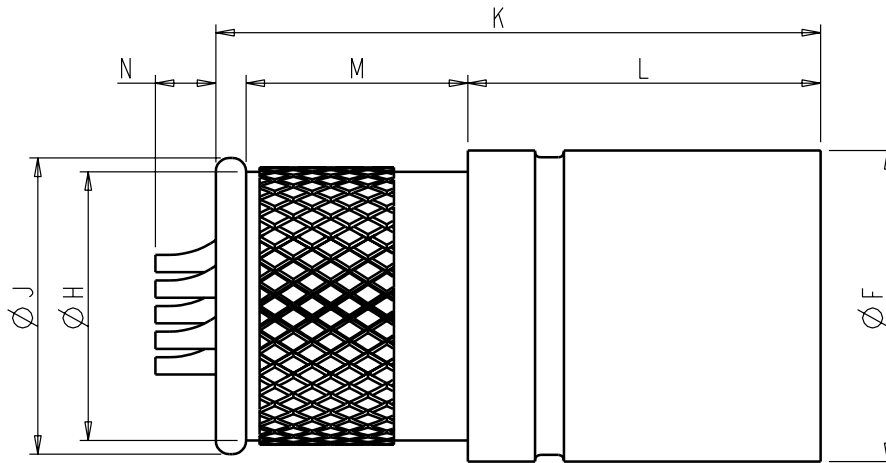
Micro-D

Terrapin

Nexus

SCE2-X-01KXX-XXPX

- Inline Receptacle, Integral Backshell



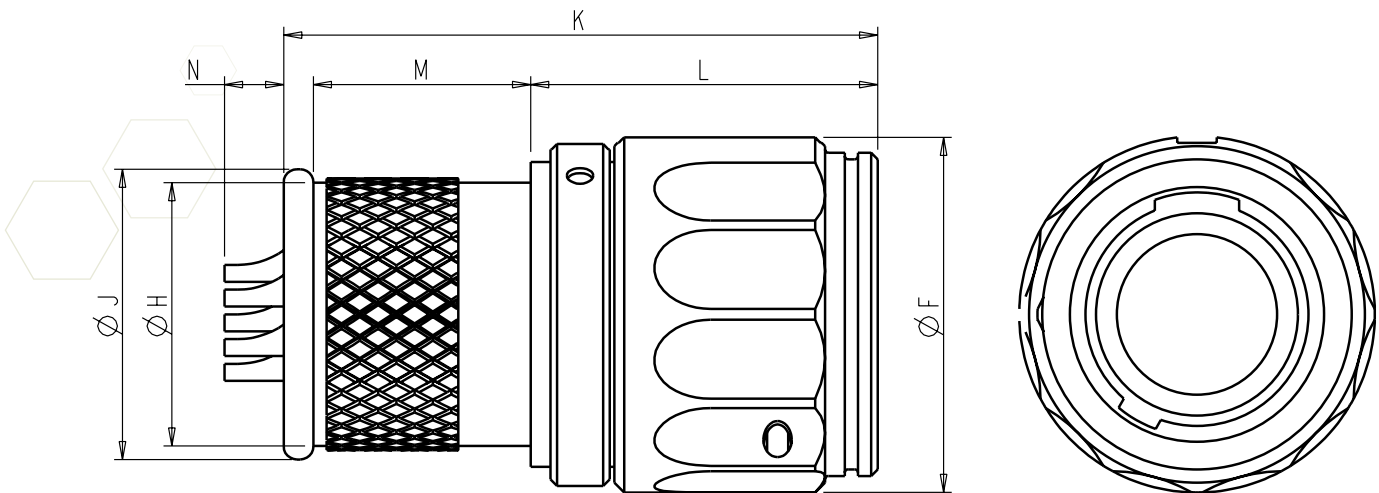
| Shell Size | ØF | ØH | ØJ | K | L | M | N |
|------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|
| Size 06 | .462 (11.73) | .399 (10.13) | .440 (11.18) | .900 (22.86) | .525 (13.34) | .330 (8.38) | .090 (2.29) |
| Size 07 | .575 (14.61) | .460 (11.68) | .505 (12.83) | .900 (22.86) | .525 (13.34) | .330 (8.38) | .090 (2.29) |
| Size 08 | .620 (15.75) | .581 (14.76) | .620 (15.75) | .900 (22.86) | .525 (13.34) | .330 (8.38) | .090 (2.29) |
| Size 09 | .691 (17.55) | .651 (16.54) | .690 (17.53) | .970 (24.64) | .525 (13.34) | .400 (10.16) | .020 (0.51) |
| Size 10 | .761 (19.33) | .721 (18.31) | .760 (19.30) | .970 (24.64) | .525 (13.34) | .400 (10.16) | .020 (0.51) |

All dimensions are in inches (mm shown in brackets) and are for reference only. Figure enlarged scale.

Inline Latching Receptacle, Integral Backshell

SCE2-X-L1KXX-XXPX

- Inline Latching Receptacle, Integral Backshell

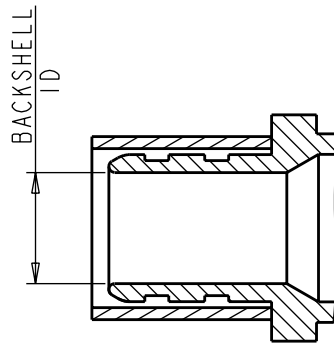
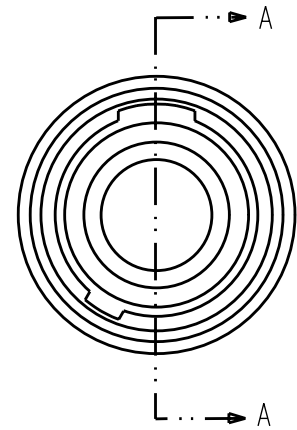
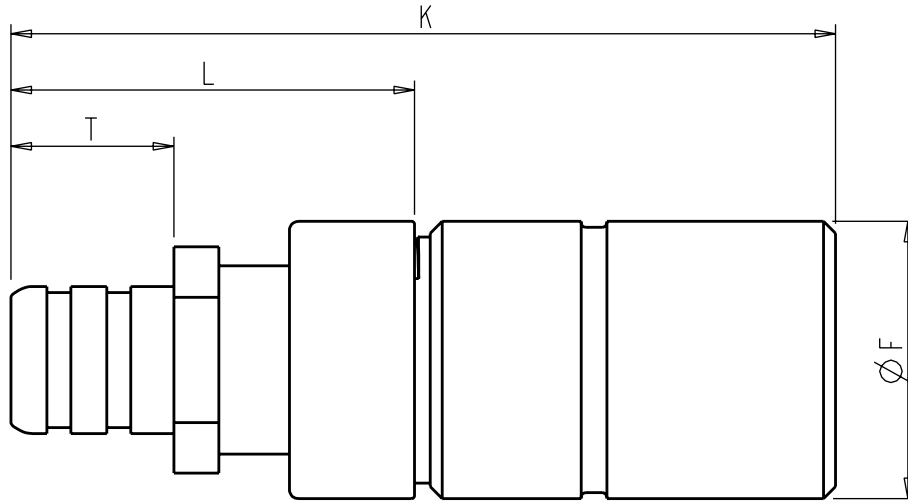


| Shell Size | ØF | ØH | ØJ | K | L | M | N |
|------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|
| Size 06 | .540 (13.75) | .399 (10.14) | .440 (11.18) | .902 (22.91) | .527 (13.39) | .330 (8.38) | .090 (2.29) |
| Size 07 | .610 (15.50) | .447 (11.35) | .505 (12.83) | .902 (22.91) | .527 (13.39) | .330 (8.38) | .090 (2.29) |
| Size 08 | .699 (17.75) | .581 (14.75) | .620 (15.75) | .902 (22.91) | .527 (13.39) | .330 (8.38) | .090 (2.29) |
| Size 09 | .770 (19.56) | .651 (16.54) | .690 (17.53) | .972 (24.69) | .527 (13.39) | .400 (10.16) | .090 (2.29) |
| Size 10 | .840 (21.34) | .721 (18.31) | .760 (19.30) | .972 (24.69) | .527 (13.39) | .400 (10.16) | .090 (2.29) |

All dimensions are in inches (mm shown in brackets) and are for reference only. Figure enlarged scale.

SCE2-X-01TXX-XXPX-003

- Inline Receptacle, Threaded Backshell



SECTION A-A
-003 ACCESSORY

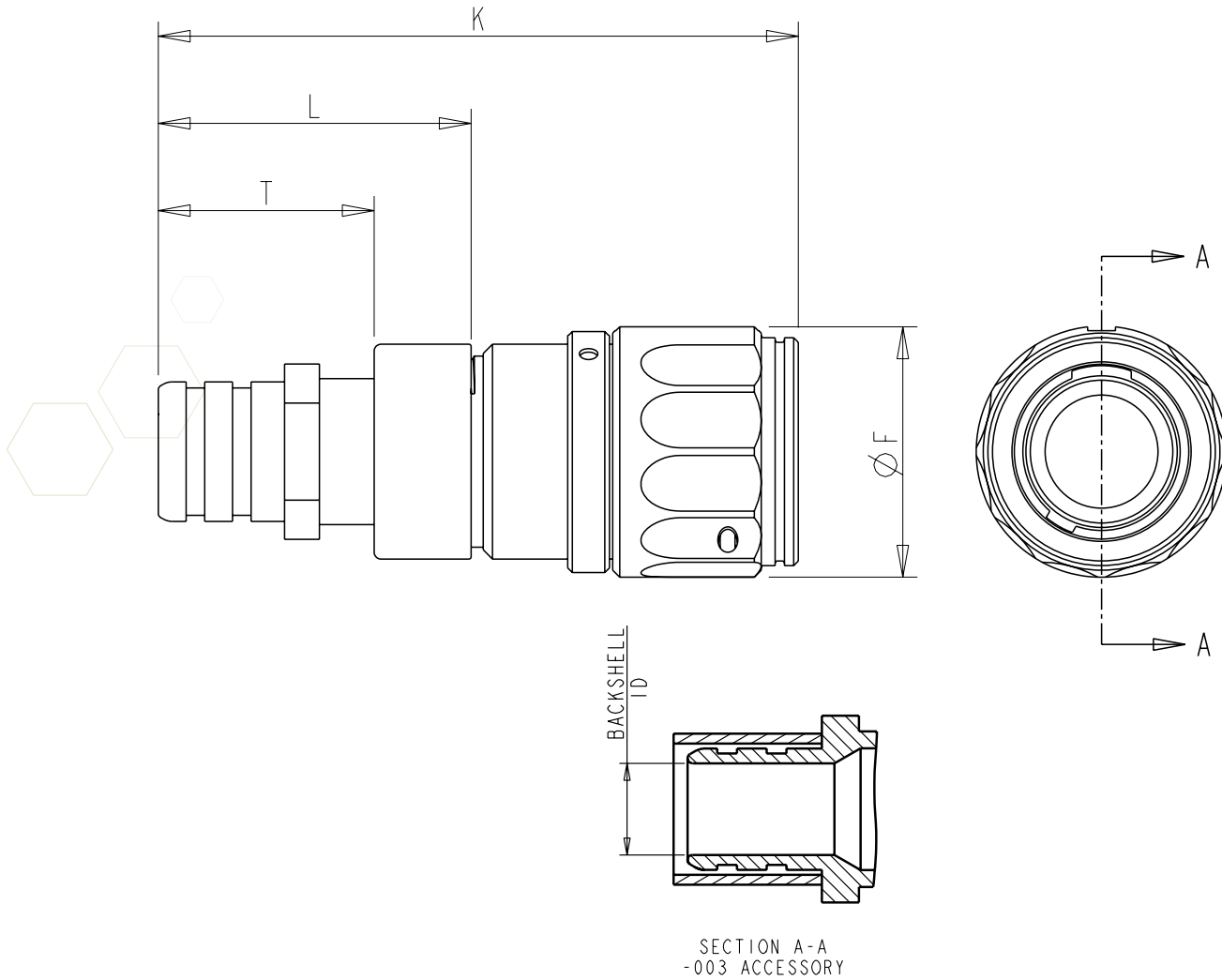
| Shell Size | ØF | K | L | T | Backshell ID |
|------------|--------------|---------------|--------------|-------------|--------------|
| | | | | | -003 |
| Size 06 | .462 (11.73) | 1.377 (34.98) | .674 (17.12) | .272 (6.91) | .185 (4.70) |
| Size 07 | .575 (14.61) | 1.377 (34.98) | .674 (17.12) | .272 (6.91) | .265 (6.73) |
| Size 08 | .620 (15.75) | 1.377 (34.98) | .674 (17.12) | .272 (6.91) | .345 (8.76) |
| Size 09 | .690 (17.53) | 1.447 (36.75) | .674 (17.12) | .272 (6.91) | .425 (10.80) |
| Size 10 | .760 (19.30) | 1.447 (36.75) | .674 (17.12) | .272 (6.91) | .505 (12.83) |

All dimensions are in inches (mm shown in brackets) and are for reference only. Figure enlarged scale.

Inline Latching Receptacle, Threaded Backshell

SCE2-X-L1TXX-XXPX-003

- Inline Latching Receptacle, Threaded Backshell



SECTION A-A
-003 ACCESSORY

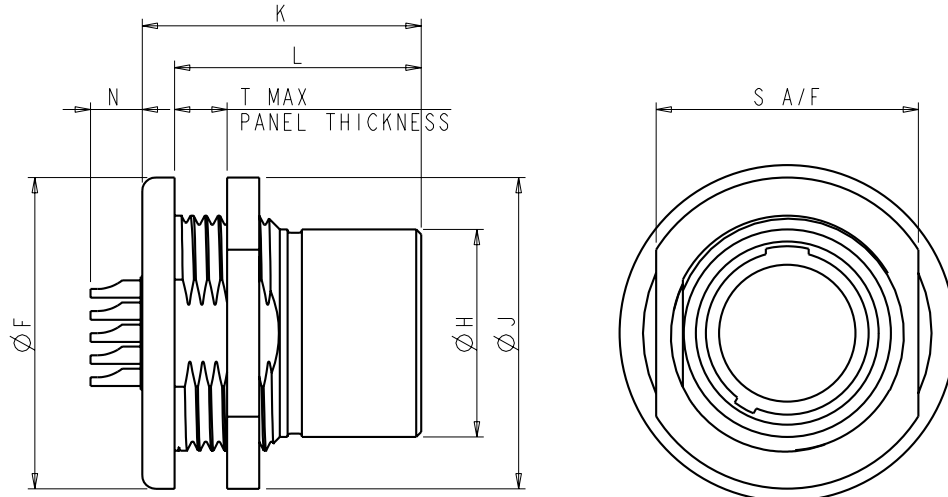
| Shell Size | ØF | K | L | T | Backshell ID |
|------------|--------------|---------------|--------------|--------------|--------------|
| | | | | | -003 |
| Size 06 | .538 (13.67) | 1.379 (35.03) | .674 (17.12) | .465 (11.81) | .185 (4.70) |
| Size 07 | .610 (15.50) | 1.379 (35.03) | .674 (17.12) | .465 (11.81) | .265 (6.73) |
| Size 08 | .699 (17.75) | 1.379 (35.03) | .674 (17.12) | .465 (11.81) | .345 (8.76) |
| Size 09 | .770 (19.56) | 1.449 (36.80) | .674 (17.12) | .465 (11.81) | .425 (10.80) |
| Size 10 | .840 (21.34) | 1.449 (36.80) | .674 (17.12) | .465 (11.81) | .505 (12.83) |

All dimensions are in inches (mm shown in brackets) and are for reference only. Figure enlarged scale.

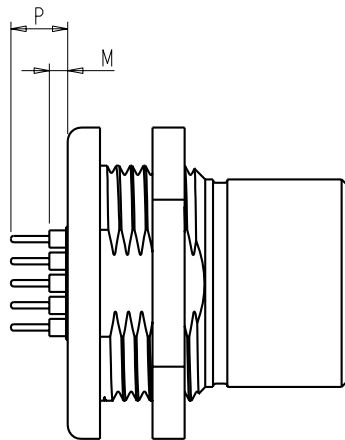
- Contacts & Tools
- 2M Specs
- 2M801
- 2M803
- 2M804
- 2M805
- 2M Accessories
- HD38999
- Micro-D
- Terrapin
- Nexus

SCE2-X-07AXX-XXPX-XXX

- Rear Mount Jam Nut Receptacle



SOLDER CUP TYPE (-002)



PC TAIL TYPE (-001)

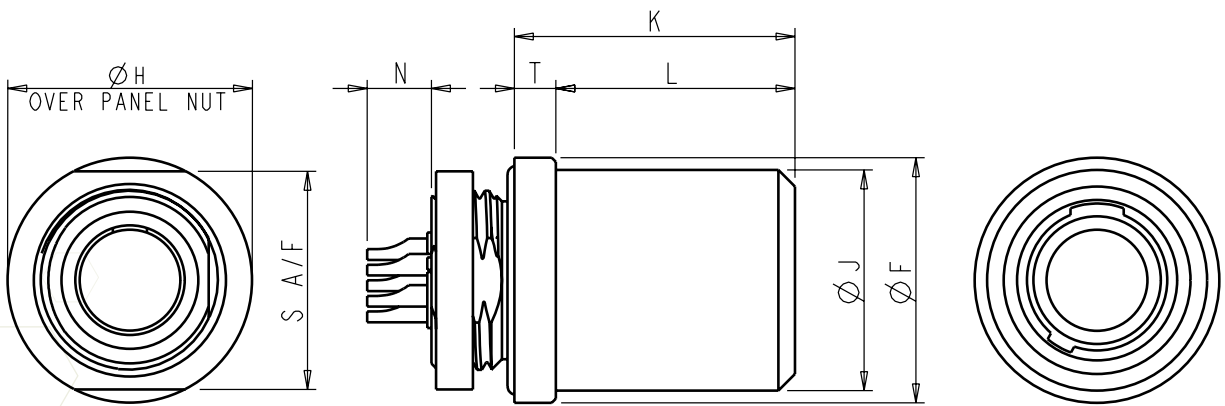
| Shell Size | ØF | ØH | ØJ | K | L | M | N | P | S A/F | T Max |
|------------|---------------|--------------|---------------|--------------|--------------|-------------|-------------|-------------|--------------|-------------|
| Size 06 | .750 (19.05) | .462 (11.73) | .750 (19.05) | .835 (21.21) | .738 (18.75) | .055 (1.40) | .155 (3.94) | .170 (4.42) | .672 (17.07) | .157 (4.45) |
| Size 07 | .895 (22.73) | .575 (14.61) | .895 (22.73) | .835 (21.21) | .738 (18.75) | .055 (1.40) | .155 (3.94) | .170 (4.42) | .750 (19.05) | .157 (4.45) |
| Size 08 | .930 (23.62) | .620 (15.75) | .930 (23.62) | .835 (21.21) | .738 (18.75) | .055 (1.40) | .155 (3.94) | .170 (4.42) | .825 (20.96) | .157 (4.45) |
| Size 09 | 1.005 (25.53) | .690 (17.53) | 1.005 (25.53) | .905 (22.99) | .808 (20.52) | N/A | .080 (2.03) | .170 (4.42) | .900 (22.86) | .157 (4.45) |
| Size 10 | 1.080 (27.43) | .760 (19.30) | 1.080 (27.43) | .905 (22.99) | .808 (20.52) | N/A | .080 (2.03) | .170 (4.42) | .975 (24.77) | .157 (4.45) |

All dimensions are in inches (mm shown in brackets) and are for reference only. Figure enlarged scale.

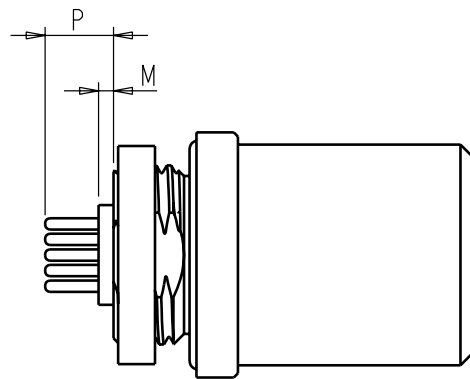
Front Mount Receptacle, Threaded

SCE2-X-71AXX-XXPX-XXX

- Front Mount Receptacle, Threaded



SOLDER CUP TYPE (-002)



PC TAIL TYPE (-001)

| Shell Size | $\varnothing F$ | $\varnothing J$ | $\varnothing H$ | K | L | M | N | P | S A/F | T |
|------------|-----------------|-----------------|-----------------|--------------|--------------|-------------|-------------|-------------|--------------|-------------|
| Size 06 | .590 (14.99) | .462 (11.73) | .590 (14.99) | .877 (22.28) | .677 (17.20) | .015 (0.38) | .113 (2.87) | .130 (3.30) | .525 (13.34) | .100 (2.54) |
| Size 07 | .620 (15.75) | .575 (14.61) | .620 (15.75) | .877 (22.28) | .677 (17.20) | .015 (0.38) | .113 (2.87) | .130 (3.30) | .685 (17.40) | .100 (2.54) |
| Size 08 | .760 (19.30) | .620 (15.75) | .760 (19.30) | .877 (22.28) | .677 (17.20) | .015 (0.38) | .113 (2.87) | .130 (3.30) | .825 (20.96) | .100 (2.54) |
| Size 09 | .890 (22.61) | .690 (17.53) | .890 (22.61) | .947 (24.05) | .747 (18.97) | N/A | .113 (2.87) | .060 (1.52) | .955 (24.26) | .100 (2.54) |
| Size 10 | .930 (20.62) | .760 (19.30) | .930 (20.62) | .947 (24.05) | .747 (18.97) | N/A | .113 (2.87) | .060 (1.52) | .995 (25.27) | .100 (2.54) |

All dimensions are in inches (mm shown in brackets) and are for reference only. Figure enlarged scale.

Cap assembly part numbering

Example: 390-5056-06-130-02 | See Pages 219-222 for drawings

| 390- | XXXX- | XX- | XXX- | XX |
|--------------------------|-------------------------------|----------------------|--------------------------|----------------------------|
| Series identifier | Cap style | Shell size | Cord length in mm | Accessories |
| | 5056 Metal for receptacle | 06 07 08 09 | 060 130 180 | 01 02 03 04 05 |
| | 5057 Metal for plug | 10 | | See table on pages 221-224 |
| | 5063 Rubber for receptacle | | | |
| | 5064 Rubber for plug | | | |

Heat Shrink Boots

- Part number: 123GB-0798-XX-X-0
XX = shell size, for example: 06, 07, 08, 09, or 10
X = S for straight or R for right angled



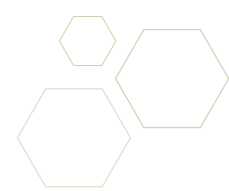
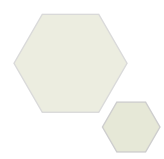
Braid Retention Strap

- Part number: 123GB-0799-0
Tooling available on request



Castellated Panel Nut

- Add deviation (981)
Tooling available on request



Contacts & Tools

2M Specs

2M801

2M803

2M804

2M805

2M Accessories

HD38999

Micro-D

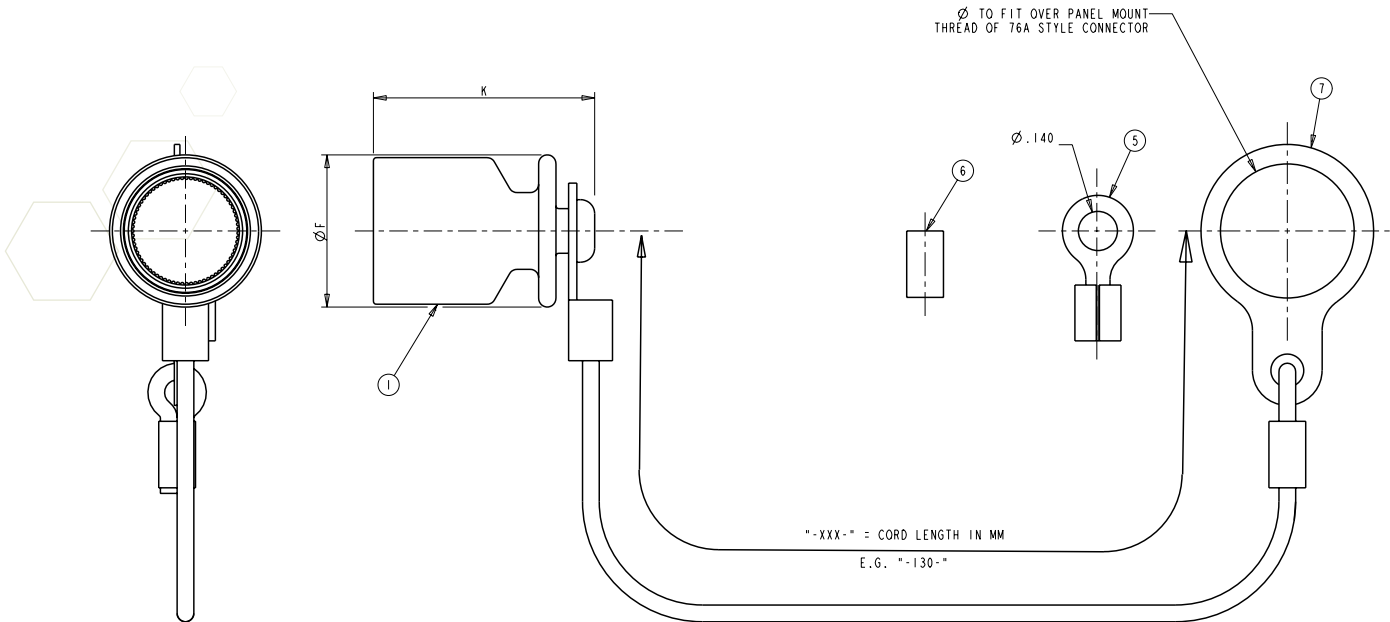
Terrapin

Nexus

Metal Dust Cap Assembly for Plugs

390-5057-XX-XXX-XX

- Metal Dust Cap Assembly for Plugs



| Shell size | Part number | Item 1 Cap | |
|------------|--------------------|-----------------|--------------|
| | | $\varnothing F$ | K |
| 06 | 390-5057-06-XXX-XX | .464 (11.79) | .794 (20.17) |
| 07 | 390-5057-07-XXX-XX | .545 (13.84) | .794 (20.17) |
| 08 | 390-5057-08-XXX-XX | .620 (15.75) | .794 (20.17) |
| 09 | 390-5057-09-XXX-XX | .695 (17.65) | .794 (20.17) |
| 10 | 390-5057-10-XXX-XX | .770 (19.56) | .794 (20.17) |

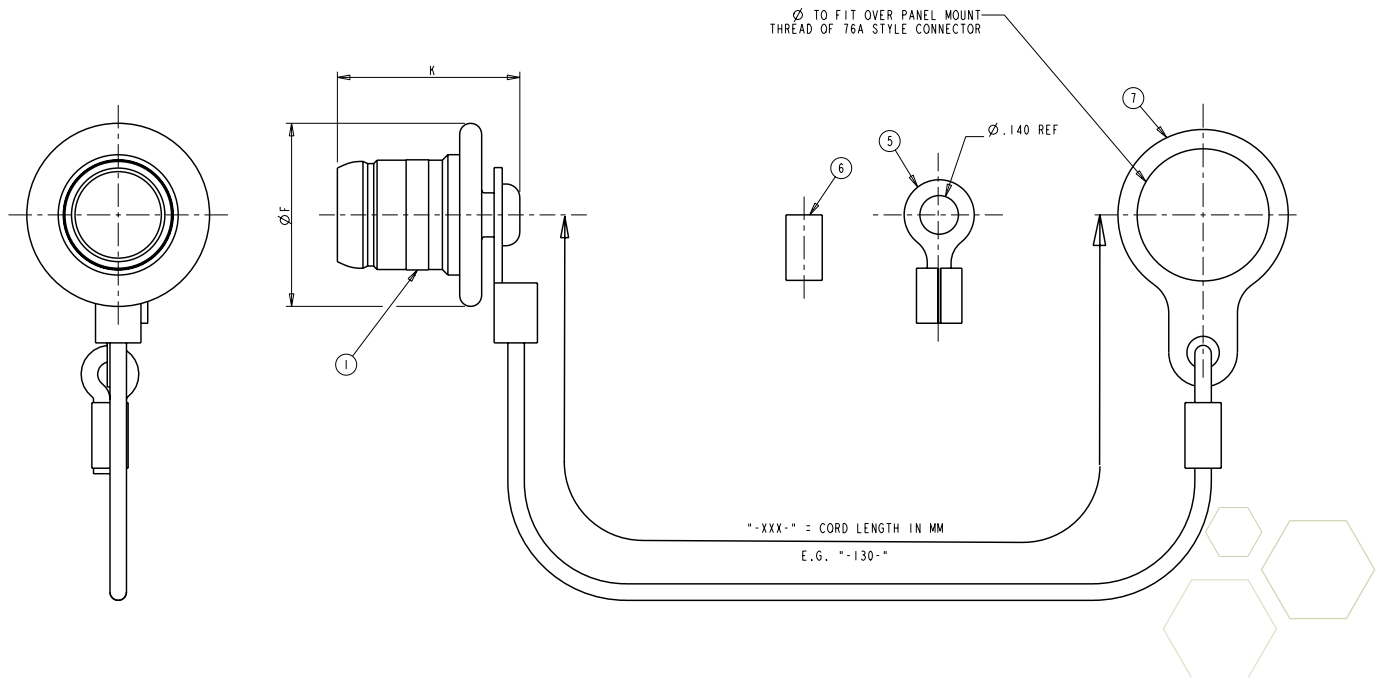
| Supplied with | | | |
|--------------------|------------------|-------------------------|------------------------|
| Part number | Item 5 Eyelet | Item 6 Crimp ferrule | Item 7 Large eyelet |
| 390-5057-XX-XXX-01 | - | - | - |
| 390-5057-XX-XXX-02 | - | 1 | - |
| 390-5057-XX-XXX-03 | 1 | - | - |
| 390-5057-XX-XXX-04 | 1 | 1 | - |
| 390-5057-XX-XXX-05 | - | - | 1 |

All dimensions are in inches (mm shown in brackets) and are for reference only. Figure enlarged scale.

Metal Dust Cap Assembly for Receptacles

390-5056-XX-XXX-XX

- Metal Dust Cap Assembly for Receptacles



| Shell size | Part number | Item 1 Cap | |
|------------|--------------------|---------------|--------------|
| | | ØF | K |
| 06 | 390-5056-06-XXX-XX | .575 (14.61) | .664 (16.87) |
| 07 | 390-5056-07-XXX-XX | .575 (14.61) | .664 (16.87) |
| 08 | 390-5056-08-XXX-XX | .750 (19.05) | .664 (16.87) |
| 09 | 390-5056-09-XXX-XX | .825 (20.95) | .664 (16.87) |
| 10 | 390-5056-10-XXX-XX | .900 (22.86) | .664 (16.87) |

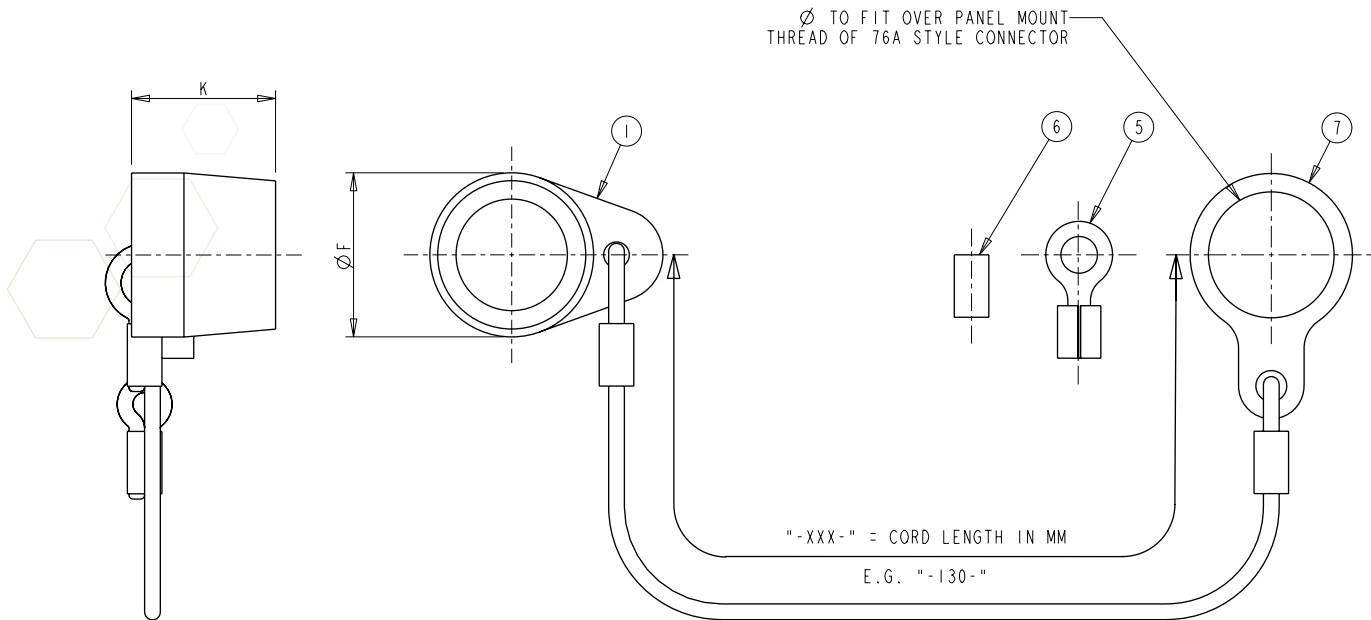
| Supplied with | | | |
|--------------------|------------------|-------------------------|------------------------|
| Part number | Item 5 Eyelet | Item 6 Crimp ferrule | Item 7 Large eyelet |
| 390-5056-XX-XXX-01 | - | - | - |
| 390-5056-XX-XXX-02 | - | 1 | - |
| 390-5056-XX-XXX-03 | 1 | - | - |
| 390-5056-XX-XXX-04 | 1 | 1 | - |
| 390-5056-XX-XXX-05 | - | - | 1 |

All dimensions are in inches (mm shown in brackets) and are for reference only. Figure enlarged scale.

Rubber Dust Cap Assembly for Plugs

390-5064-XX-XXX-XX

- Rubber Dust Cap Assembly for Plugs



| Shell size | Part number | Item 1 Cap | |
|------------|--------------------|---------------|--------------|
| | | ØF | K |
| 06 | 390-5064-06-XXX-XX | .450 (11.43) | .550 (13.97) |
| 07 | 390-5064-07-XXX-XX | .525 (13.34) | .550 (13.97) |
| 08 | 390-5064-08-XXX-XX | .595 (15.11) | .550 (13.97) |
| 09 | 390-5064-09-XXX-XX | .665 (16.89) | .550 (13.97) |
| 10 | 390-5064-10-XXX-XX | .735 (18.67) | .550 (13.97) |

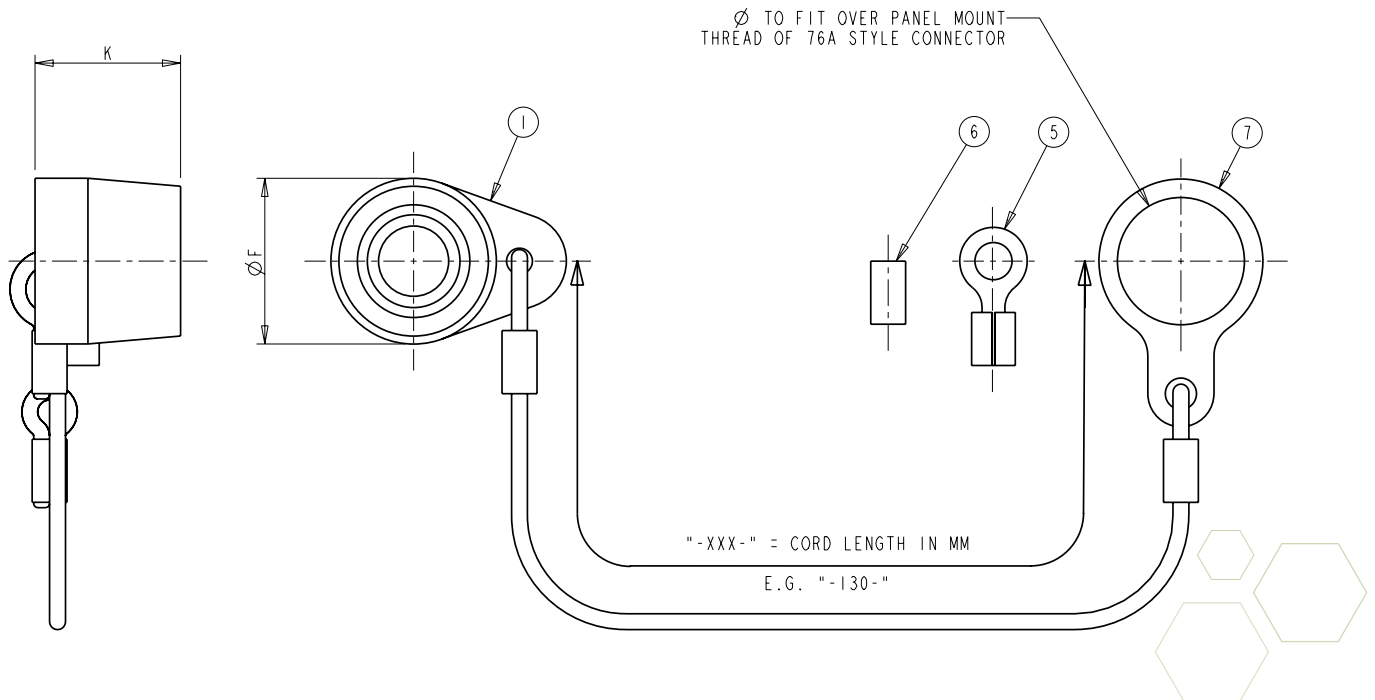
| Supplied with | | | |
|--------------------|------------------|-------------------------|------------------------|
| Part number | Item 5 Eyelet | Item 6 Crimp ferrule | Item 7 Large eyelet |
| 390-5064-XX-XXX-01 | - | - | - |
| 390-5064-XX-XXX-02 | - | 1 | - |
| 390-5064-XX-XXX-03 | 1 | - | - |
| 390-5064-XX-XXX-04 | 1 | 1 | - |
| 390-5064-XX-XXX-05 | - | - | 1 |

All dimensions are in inches (mm shown in brackets) and are for reference only. Figure enlarged scale.

Rubber Dust Cap Assembly for Receptacles

390-5063-XX-XXX-XX

- Rubber Dust Cap Assembly for Receptacles



| Shell size | Part number | Item 1 Cap | |
|------------|--------------------|---------------|--------------|
| | | ØF | K |
| 06 | 390-5063-06-XXX-XX | .450 (11.43) | .550 (13.97) |
| 07 | 390-5063-07-XXX-XX | .525 (13.34) | .550 (13.97) |
| 08 | 390-5063-08-XXX-XX | .595 (15.11) | .550 (13.97) |
| 09 | 390-5063-09-XXX-XX | .665 (16.89) | .550 (13.97) |
| 10 | 390-5063-10-XXX-XX | .735 (18.67) | .550 (13.97) |

| Supplied with | | | |
|--------------------|------------------|-------------------------|------------------------|
| Part number | Item 5 Eyelet | Item 6 Crimp ferrule | Item 7 Large eyelet |
| 390-5063-XX-XXX-01 | - | - | - |
| 390-5063-XX-XXX-02 | - | 1 | - |
| 390-5063-XX-XXX-03 | 1 | - | - |
| 390-5063-XX-XXX-04 | 1 | 1 | - |
| 390-5063-XX-XXX-05 | - | - | 1 |

All dimensions are in inches (mm shown in brackets) and are for reference only. Figure enlarged scale.

Overmolded cable harnesses using Terrapin connectors



Amphenol designs, build prototypes and manufactures a wide range of both standard and customized cable harness assemblies utilizing overmold technology. The Terrapin connector range has been designed specifically to lend itself to this method of termination.

Amphenol's capability in manufacturing is matched by our engineering expertise; we are able to offer a full design and development service from drawing conception to production delivery. Overmolding has fast become widely recognized for the benefits it brings to equipment used in both military and harsh environment situations.

Military/harsh environment situations

- Both standard and custom profile moldings available
- In-house design and prototype facility
- Aesthetically uniform product
- Repeatable high complexity moldings
- Low cost and repair by replacement
- Robust and tamper-proof
- Straight and angled moldings
- Low profile moldings
- Finger grips, logos and tactile indicators optional
- Mold material suitable for NBC washdown
- High degree of sealing – IP68

Typical applications

- Chemical detection units
- Comms units
- Display modules
- GPS
- Headsets
- Hubs
- LAN Switches
- Radios
- Routers
- Ruggedized laptops
- Sensor units
- Surveillance and rangefinders
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For 50 years, Amphenol Nexus Technologies has been designing and manufacturing superior quality: electro-mechanical devices; low-voltage connectors; waterproof, breakaway connectors, commercial telephone plugs and jacks; push-button switches; and much more.

Amphenol Nexus Technologies offers a wide selection of configurations that are focused on the current market needs for small, lightweight ruggedized interconnect devices. We can design and build to your requirements with rapid turnaround. Experience why so many military and commercial customers choose to connect with Amphenol Nexus Technologies.

Products include:

- Mil-Spec Qualified M55116 Connectors
- Miniaturized M55116-type TAC Connectors
- 7- and 10-Pin Waterproof, Breakaway Connectors
- Ruggedized Telephone Plugs and Jacks
- Military Microphone Plugs and Jacks
- Push-Button Switches
- Miniature Connectors
- Connector Specials



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Miniature M55116- Type Connectors

New military and commercial applications are demanding a reduction in connector size and weight without a loss of performance. Amphenol NEXUS Technologies has met that demand with its new Miniature M55116-Type TAC Connectors for soldier-worn applications, radio systems, and ruggedized communications systems.

TAC Connectors are designed and manufactured to the exacting specifications of MIL-DTL-55116 requirements at half the size of the standard connectors.

Amphenol NEXUS Technologies TAC Connectors are the ideal choice to reduce size and weight and still maintain many of the same performance benefits wherever a M55116 connector is needed on a newly designed system.

Features

- Both plug and receptacle are 50% smaller than the standard M55116 connectors (M55116/4 and M55116/10, as a comparison)
- Standard plugs have rigid contacts; jacks have spring-loaded contacts with solder cup terminals
- Molded-in spring-loaded contacts provide self-cleaning feature and eliminate issues with pin/socket open contacts
- Standard wire strain relief accommodates .125 & .250 cable diameter

Options

Shell Styles

- | | |
|--------------------|---------------|
| • In-Line Plug | # of Contacts |
| • Panel-Mount Plug | • 6-pin |
| • In-Line Jack | • 7-pin |
| • Panel-Mount Jack | • 10-pin |

In-Line Rear Accessories

- | | |
|----------------------|---------------|
| • Wire Strain Relief | Contact Types |
| • Over-Molded | • Solder Cup |
| | • PCB |

Part Numbers

| Part Number | Connector Style |
|-------------|---|
| MAP-56-30 | 6-Conductor Plug |
| MAP-57-30 | 7-Conductor Plug |
| MAP-56-50 | 6-Conductor Plug (for Overmolding) |
| MAP-57-50 | 7-Conductor Plug (for Overmolding) |
| MAJ-16-00 | 6-Conductor Panel Mount Receptacle |
| MAJ-17-00 | 7-Conductor Panel Mount Receptacle |
| MAJ-56-30 | 6-Conductor In-Line Receptacle |
| MAJ-57-30 | 7-Conductor In-Line Receptacle |
| MAP-60-50 | 10-Conductor Plug (for Overmolding) |
| MAP-60-00 | 10-Conductor Panel-Mount Plug |
| MAJ-60-50 | 10-Conductor In-Line Jack (for Overmolding) |
| MAJ-60-00 | 10-Conductor Panel-Mount Jack |

TAC Connector Product Series compared to M55116 mated pair



Technical Specifications

| | |
|------------------------|---|
| Shell: | Stainless Steel, Passivated |
| Finish: | Sand Blast, finish type E300 IAW MIL-F-14072 |
| Mating: | Bayonet Coupling |
| Temperature: | -55°C to +85°C |
| Insert Material: | Thermoset Plastic |
| Contacts: | Gold-plated Brass / Silver-plated BeCu (Springs) |
| Current Rating: | 0.5 amperes |
| Voltage Rating: | 60V max |
| Dielectric | Withstanding Voltage; Sea Level: 500V |
| Insulation Resistance: | 1000 megaohms min, except for connectors unmated after immersion test shall not be less than 100 megaohms |
| Contact Resistance: | .05 max |

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Features

- Plug and Jack breakaway connectors designed to function in severe environments
- Watertight in up to 6 feet of water
- Molded-in wiping-action contacts provide self-cleaning feature and eliminate issues with pin/socket open contacts
- Designed for multiple cable diameters
- Miniature versions are 50% smaller than standard connectors while maintaining many of the same performance characteristics AJ-107BRS AP-107 Connector Miniaturization

Options

- 7- or 10-pin (miniature version only) contacts
- Solder-type contacts or insulation-piercing contacts
- Wire strain relief or over-molded versions available for all plugs and jacks
- Panel mount versions are available for both front- and rear-mount panels
- Shielding is available in all connector choices
- All standard connector options also available in miniaturized versions

Applications

- C4I Systems
- Military Vehicles
- Commercial Aircraft
- Telecommunications Equipment
- Missiles and Ordnance
- Medical Equipment
- Commercial / Industrial Equipment

Technical Specifications

| | |
|---------------------------|--|
| Shell: | Aluminum |
| Plating: | Black Anodize (standard); Black Chrome (shielded) |
| Insert: | Thermoset Plastic |
| Contacts: | Gold-plated Brass (Jacks) / Gold-plated BeCu (Plugs) |
| Mating: | Axial push-pull motion |
| Engagement Force: | ≤ 14 lbs. |
| Disengagement Force: | 8 - 12 lbs. |
| Mating Cycles: | 5,000 |
| Temperature: | -55°C to +85°C |
| Contact Current Capacity: | 3 amperes |
| Contact Resistance: | ≤ 150 mV |



Part Descriptions

| Nexus Part Number | Connector Type | # of Contacts | Contact Type | Rear Accessory |
|-------------------|---|---------------|---------------------|-------------------------------|
| AP-107 | Plug | 7 | Insulation Piercing | None |
| AJ-107 | Jack | 7 | Insulation Piercing | None |
| AP-107DR | Plug | 7 | Insulation Piercing | Overmold Cap |
| AJ-107DR | Jack | 7 | Insulation Piercing | Overmold Cap |
| AP-107DRS | Plug, Shielded | 7 | Insulation Piercing | Overmold Cap |
| AJ-107DRS | Jack, Shielded | 7 | Insulation Piercing | Overmold Cap |
| AP-107BR | Plug | 7 | Solder | Wire Strain Relief |
| AJ-107BR | Jack | 7 | Solder | Wire Strain Relief |
| AP-107BRS | Plug, Shielded | 7 | Solder | Wire Strain Relief |
| AJ-107BRS | Jack, Shielded | 7 | Solder | Wire Strain Relief |
| AP-117OM | Plug, Miniature | 7 | Solder | Overmold |
| AJ-117OM | Jack, Miniature | 7 | Solder | Overmold |
| AP-117BR | Plug, Miniature | 7 | Solder | Wire Strain Relief (.148 max) |
| AJ-117BR | Jack, Miniature | 7 | Solder | Wire Strain Relief (.148 max) |
| AP-117BRXL | Plug, Miniature | 7 | Solder | Wire Strain Relief (.250 max) |
| AJ-117BRXL | Jack, Miniature | 7 | Solder | Wire Strain Relief (.250 max) |
| AP-117LR-AL | Plug, Miniature w/Threaded Locking Ring | 7 | Solder | Wire Strain Relief (.250 max) |
| AJ-117LR-AL | Jack, Miniature w/Threaded Locking Ring | 7 | Solder | Wire Strain Relief (.250 max) |
| AP-117PLR | Plug, Miniature w/Threaded Locking Ring | 7 | Solder | Overmold |
| AJ-117PLR | Jack, Miniature w/Threaded Locking Ring | 7 | Solder | Overmold |
| AJ-117PM | Front Panel-Mount Jack, Miniature | 7 | Solder | None |
| AJ-117PMDC | Rear Panel-Mount Jack, Miniature | 7 | Solder | None |
| AP-110OM | Plug, Miniature | 10 | Solder | Overmold |
| AJ-110OM | Jack, Miniature | 10 | Solder | Overmold |
| AP-110OMS | Plug, Miniature, Shielded | 10 | Solder | Overmold |
| AJ-110OMS | Jack, Miniature, Shielded | 10 | Solder | Overmold |

Mating Chart

| | | JACKS | | | | | | | | | | | | | |
|----------------------------|---------------|--------|----------|-----------|----------|-----------|----------|-----------|----------|-------------|------------|----------|-----------|----------|------------|
| 7- and 10-PIN MATING CHART | | AJ-107 | AJ-107BR | AJ-107BSR | AJ-107DR | AJ-107DRS | AJ-1100M | AJ-1100MS | AJ-117BR | TLBRXL11-FV | TL-PL11-FV | OM117-FV | AJ-117PLR | AJ-117PM | AJ-117PMDC |
| PLUGS | AP-107 | X | | | | | | | | | | | | | |
| | AP-107BR | | X | | | | | | | | | | | | |
| | AP-107BRS | | | X | | | | | | | | | | | |
| | AP-107DR | | | | X | | | | | | | | | | |
| | AP-107DRS | | | | | X | | | | | | | | | |
| | AP-1100M | | | | | | X | | | | | | | | |
| | AP-1100MS | | | | | | | X | | | | | | | |
| | AP-117BR | | | | | | | | X | | | | | X | X |
| | AP-117BRXL | | | | | | | | | X | | | | X | X |
| | AP-117LR-AL X | | | | | | | | | | X | | | | |
| | AP-117OM | | | | | | | | | | | X | | X | X |
| | AP-117PLR | | | | | | | | | | | | X | | |

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Amphenol is pleased to introduce the next level of performance for interconnect systems with a complete range of Higher Density products. The New HD series from Amphenol are available as Circular and Rectangular connectors shells as well as dedicated PCB mount interconnects. Having full compatibility with well known Mil spec/standards in mind. Amphenol developed the HD Series connectors (see HD38999 section in this catalog) as a straight forward extension of existing series i.e.: MIL-DTL-38999 or EN4165... The contacts, even of a smaller size than usual, are part of EAS 39029 standards: a guarantee of performance, cost effectiveness and large availability. Higher Density means up to 50% more contacts for the same shell size!

30 contacts size 23 instead of 20 contacts size 22
50% more with same size insert

EN4165/ARINC 809/ SIM Monomodule Push Pull Connector

These modular push-pull composite SIM connectors are available in shielded or not-shielded versions, featuring 7 keying positions, and fitted with EN4165 / SIM modules (for contacts from gage 8 to 23, as per MIL-C-39029 or EN3155 spec.). They are lightweight, compact and easy-to-use, then perfectly suited for in-flight entertainment and cabin systems applications. They are flexible and suited for all configurations of installation, thanks to the broad range of backshells and fixing-on-structure devices. Designed and qualified according to Arinc 809 and EN4165 spec.



EN4165/SIM High Density Insert

The #23 High-density SIM module is an exclusive innovation of Amphenol. Based on standard EN4165 SIM modules, the HD modules have 30 size 23 contacts (BACC47) – an increase of more than 50% over #22 modules. HD SIM Modules are available with or without peripheral sealing and are fully compatible with all EN4165 / SIM connector series.

Features

- Operating temperature -55° C to +175° C
- Shell: Thermoplastic
- Seal: Silicone elastomer
- Dielectric withstanding Voltage (sea level) 1000 volts ac, rms 50 Hz
- Insulation Resistance at ambient temperature: 5000 Megohms minimum between any pair of contacts
- Contact maximum current: wire gauge 22 = 5 Amp
- Wire range 22-26



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