

**INTERMATEABLE • INTERMOUNTABLE • IAW**

# **SAE/AS81703 Series 3**

**HIGH SHOCK AND VIBRATION QUICK-RELEASE CONNECTORS**

JULY 2016



- Intermateable and intermountable with available AS81703 connectors
- Signal, power, and high-speed shielded contact arrangements
- Reliable fail-safe axial-pull lanyard equipped coupling
- Instant disconnect for critical quick-release systems
- Available integrated band porch for easy shield termination
- 360° saw teeth for accessory clocking
- Red full-mate indicator stripe
- Blind mate and rack-and-panel versions available
- Available backshells and accessories IAW AS81703
- Polarization keying for mis-mate prevention

# QUICK-RELEASE AS81703 Series 3 Type Connectors

Ideal for high shock / high vibration environments including military space and defense applications such as missile and payload deployment, the AS81703 provides jam-free, push-on, pull-off operation. Glenair's AS81703 Series 3 type connector series is intermateable and intermountable with currently available AS81703 mil-spec and commercial connectors, and offers several enhancements to the standard design: an integrated band porch for shield termination, 360° saw teeth for rear-end accessory clocking, and a red full-mate indicator stripe. The AS81703 Series 3 type connector is ideally suited for droppable stores, umbilical connect, rocket launch, and other extreme vibration and shock environments where rugged and reliable lanyard-release and push-pull mating is a must. Nineteen contact arrangements are available, including hybrid signal/power layouts, and a full complement of backshells and connector accessories is offered—with Glenair's high availability and quick delivery.



◀ Rack-and-panel plug with spring-assisted push-pull mating

# SERIES 253-020 AS81703 Series 3 Type Connectors

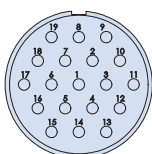


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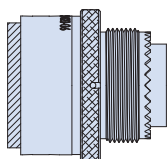
**Connector specifications, How-to-order,  
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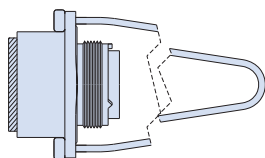
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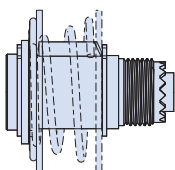
**253-020-06  
Straight plug**

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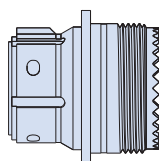
**253-020-08  
Lanyard-release plug**

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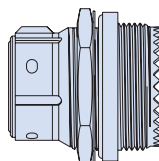
**253-020-09  
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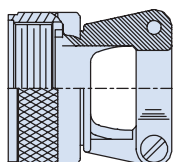
**253-020-00  
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Jam-nut receptacle**

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**Backshells and accessories**

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# SERIES 253-020 AS81703 Series 3 Type Connectors



## How to order

| How To Order  |   |
|---|---|
| <b>Sample Part Number</b>                           | 253-020 - 06 ME 19-7 P N  |
| <b>Basic Part Number</b>                            | AS81703 Series 3 type connector   |
| <b>Rear Option</b>                                  | - = Accessory threads B = Band porch (consult factory)  |
| <b>Connector Style (and AS cross-ref)</b>           | <b>00</b> = Sq. flange mount receptacle AS34241 type (MS3424)<br><b>06</b> = Straight plug AS34671 type (MS3467)<br><b>07</b> = Jam nut mount receptacle AS34641 type (MS3464)<br><b>08</b> = Lanyard release plug MS3468 type (no SAE equivalent)<br><b>09</b> = Rack & panel plug AS34461 type (MS3446) |
| <b>Material / Finish</b>                            | See Table I   |
| <b>Shell Size / Insert Arrangement</b>              | See Table II, diagrams on pgs. 4-5  |
| <b>Contact Styles</b>                               | <b>P</b> = Pin insert <b>A</b> = Pin insert less contacts (not available for -09 Plug)<br><b>S</b> = Socket insert <b>B</b> = Socket insert less contacts (not available for -09 Plug)  |
| <b>Insert Clocking Positions</b>                    | <b>N, W, X, Y, B, C</b> (See Table III)   |
| <b>Lanyard Ring Mod. Code (-08 Receptacle Only)</b> | <b>Omit</b> = Standard Lanyard Ring <b>812</b> = Lanyard Ring Rotated 90° from Master Keyway  |

| Code | Mil Class | Material       | Finish                               |
|------|-----------|----------------|--------------------------------------|
| C    | -         | Aluminum Alloy | Black Anodize                        |
| ME   | E         |                | Electroless Nickel                   |
| NF   | L         |                | O.D. Cadmium over Electroless Nickel |
| MT   | -         |                | Nickel-PTFE                          |
| ZR   | -         |                | Zinc-Nickel/Black (Tri-Valent CR)    |

| Insert Rotation and Insert Clocking Rotation  |   |
|---|---|
| <p>Master Keyway</p> <p>Pin insert rotated clockwise, Socket insert rotated counter-clockwise, relative to master key / keyway.</p> | <p>AS81703 Series 3 type connectors feature locksmith key/keyways. Plug connector keyways and receptacle connector keys are fixed for all sizes and contact arrangements.</p> <p>Alternate Insert Clocking is specified in the part number. Pin inserts are rotated clockwise, Socket inserts rotated counter-clockwise relative to the master key/keyway, to the positions indicated in the table below.</p> |

| Contact Arrangement | Contact Size & Quantity |     |     |
|---------------------|-------------------------|-----|-----|
|                     | #20                     | #16 | #12 |
| 3-50                | 3                       |     |     |
| 7-50                | 7                       |     |     |
| 12-6                | 6                       |     |     |
| 12-50               | 12                      |     |     |
| 19-4                |                         |     | 12  |
| 19-7                |                         |     | 7   |
| 19-12               |                         | 12  |     |
| 19-50               | 19                      |     |     |
| 27-2                |                         | 14  |     |
| 27-3                | 14                      | 2   |     |
| 27-5                |                         | 19  |     |
| 27-8                |                         | 6   | 4   |
| 27-11               | 12                      |     |     |
| 27-50               | 27                      |     |     |
| 37-2                |                         | 24  |     |
| 37-3                |                         |     | 12  |
| 37-50               | 37                      |     |     |
| 61-42               | 29                      | 4   | 8   |
| 61-50               | 61                      |     |     |

| Contact Arrangement | Alternate Insert Clocking Positions |     |         |          |      |          |
|---------------------|-------------------------------------|-----|---------|----------|------|----------|
|                     | N                                   | W   | X       | Y        | B    | C        |
| 3-50                | 0°                                  |     |         | 75°      |      |          |
| 7-50                | 0°                                  |     |         |          | 150° |          |
| 12-6                | 0°                                  | 25° | 45°     | 80°      | 150° | 220°     |
| 12-50               | 0°                                  | 15° | 50°     | 75°      | 150° | 225°     |
| 19-4                | 0°                                  |     |         | 22° 30'  | 135° | 247° 30' |
| 19-7                | 0°                                  |     |         | 75°      | 150° | 225°     |
| 19-12               | 0°                                  | 25° | 50°     | 75°      | 150° | 225°     |
| 19-50               | 0°                                  |     |         | 75°      | 150° | 225°     |
| 27-2                | 0°                                  | 25° | 50°     | 75°      | 150° | 225°     |
| 27-3                | 0°                                  | 25° | 50°     | 75°      | 150° | 225°     |
| 27-5                | 0°                                  |     |         | 75°      | 150° | 225°     |
| 27-8                | 0°                                  | 25° | 50°     | 75°      | 150° | 225°     |
| 27-11               | 0°                                  | 25° | 50°     | 75°      | 150° | 225°     |
| 27-50               | 0°                                  | 25° | 50°     | 75°      | 150° | 225°     |
| 37-2                | 0°                                  | 25° | 145°    | 227° 30' |      |          |
| 37-3                | 0°                                  | 20° | 70°     |          |      |          |
| 37-50               | 0°                                  | 25° | 50°     | 75°      | 150° | 225°     |
| 61-42               | 0°                                  |     | 67° 30' |          |      |          |
| 61-50               | 0°                                  |     |         | 75°      | 150° | 225°     |



## General information / test report summary

| Validation Test Summary. Tested IAW AS81703  |   |                           |                                |                              |                              |                                   |        |
|--|---|---------------------------|--------------------------------|------------------------------|------------------------------|-----------------------------------|--------|
| Test   | Requirement   |                           |                                |                              |                              |                                   | Result |
| Magnetic Permeability  | Relative Magnetic Permeability: $\leq 2.0 \text{ Mu}$   |                           |                                |                              |                              |                                   | Pass   |
| Maintenance Aging and Contact Forces   | Insertion Force: $\leq 15 \text{ lbs.}$ Removal Force: $\leq 10 \text{ lbs.}$   |                           |                                |                              |                              |                                   | Pass   |
| Gage Location and Retention  | Axial Displacement of the Test Gages: $\leq 0.012$  |                           |                                |                              |                              |                                   | Pass   |
| Operating Forces   | Shell Size  | Max Engagement force (lb) | Measured Engagement force (lb) | Min Disengagement force (lb) | Max Disengagement force (lb) | Measured Disengagement force (lb) | Pass   |
|  | 12  | 34                        | 15.2                           | 2                            | 34                           | 3.80                              |        |
|  |   |                           | 16.8                           |                              |                              | 4.05                              |        |
|  | 19  | 38                        | 16.2                           | 3                            | 38                           | 6.75                              |        |
|  |   |                           | 15.8                           |                              |                              | 8.06                              |        |
|  | 37  | 44                        | 19.7                           | 6                            | 44                           | 7.56                              |        |
|  |   |                           | 20.1                           |                              |                              | 7.72                              |        |
| Insulation Resistance, Room Temperature  | Insulation resistance shall be $>10,000$ megohms  |                           |                                |                              |                              |                                   | Pass   |
| Dielectric Withstanding Voltage  | No evidence of breakdown or flashover. Leakage Current $\leq 5 \text{ mA}$  |                           |                                |                              |                              |                                   | Pass   |
|  | Condition   | Service Rating I          | Service Rating II              |                              |                              |                                   |        |
|  | Sea Level   | 600 V AC                  | 1000 V AC                      |                              |                              |                                   |        |
|  | 70,000 ft.  | 300 V AC                  | 450 V AC                       |                              |                              |                                   |        |
| Thermal Shock  | Low Temperature: $-55^\circ \pm 3^\circ\text{C}$ • High Temperature: Class L $175^\circ \pm 3^\circ\text{C}$ ; Class E, $200^\circ \pm 3^\circ\text{C}$ . 5 cycles, 2 hour minimum soak. No damage detrimental to the connector   |                           |                                |                              |                              |                                   | Pass   |
| Insert Retention   | Inserts shall not be dislocated from the specified insert position as shown on the applicable MS drawing when an effective pressure differential of $75 \text{ lbs.f/in}^2$ is applied  |                           |                                |                              |                              |                                   | Pass   |
| Vibration  | 10 to 2,000 Hz and return to 10 Hz in 20 minutes. 12 cycles in 4 hours for X,Y, and Z Axes. Total 12 hrs. Amplitude of 0.06" double amplitude or 20g, whichever is less. Support wires 8" both ends. Electrical load 100 mA max, open circuit $<5\text{V}$ . Maximum initial R not to exceed 3 Ohms on individual loops. All samples measured no discontinuity on any axis. |                           |                                |                              |                              |                                   | Pass   |
| Shock  | 15g peak value, half-sine pulse, 11ms duration. One shock each direction on 3 major axes. Mated connectors shall not be damaged and there shall be no loosening of parts. All samples measured no discontinuity on any axis.  |                           |                                |                              |                              |                                   | Pass   |
| Insulation Resistance, Elevated Temperature  | After an exposure for 1000 hours at $200^\circ\text{C}$ , the insulation resistance shall be greater than 500 megohms, unmated condition  |                           |                                |                              |                              |                                   | Pass   |
| Moisture Resistance  | 10 cycles, low temperature subcycle 5 cycles. Initial and final mated insulation resistance measured $>100\text{Mohms}$ for all samples at $25^\circ$ , 500V, 12s.  |                           |                                |                              |                              |                                   | Pass   |
| Insulation Resistance  | Unmated, 500V, 120x, 10,000 megohms   |                           |                                |                              |                              |                                   | Pass   |
| Contact Resistance   | #24 AWG wires crimped to size 20 contacts. Test current 3A, maximum mV drop 45 mV   |                           |                                |                              |                              |                                   | Pass   |
| Contact Retention  | Axial load: 15 lb. Duration: 5 sec min. Rate: approx. 1lb/sec. Initial load of 2 lb before measuring contact displacement. Force applied in the direction tending to dislodge the contacts toward the rear of the connector. Displacement shall not exceed 0.012"   |                           |                                |                              |                              |                                   | Pass   |
| Magnetic Permeability  | Relative magnetic permeability of connector assemblies $< 2.0 \text{ Mu}$   |                           |                                |                              |                              |                                   | Pass   |
| Durability   | 500 mating cycles with no mechanical or electrical defects detrimental to operation   |                           |                                |                              |                              |                                   | Pass   |
| Salt Spray   | Unmated, 48 hours, 20% salt concentration. No exposure of basic metal due to corrosion which will affect performance.   |                           |                                |                              |                              |                                   | Pass   |
| Fluid Immersion, Lubricating Oil   | Unmated connectors immersed in MIL-PRF-7808 oil, 20 hours.  |                           |                                |                              |                              |                                   | Pass   |
| Contact Glenair for complete validation test reports: GT-15-93 (AS81703, series 3, class E) and GT-15-94 (AS81703, series 3, class L). |   |                           |                                |                              |                              |                                   |        |

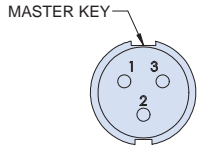
### MATERIALS/FINISHES

Shells, Jam Nuts, Lockwashers - Aluminum alloy

Insulators - High-grade rigid dielectric

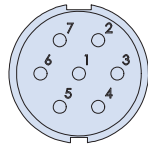
O-Rings, Grommets, Peripheral Seals - Fluorosilicone or equivalent

## Contact arrangements (pin face shown)



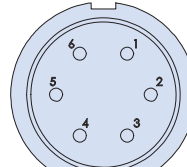
**3-50**

3X SIZE 20 CONTACT



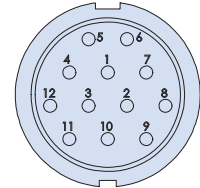
**7-50**

7X SIZE 20 CONTACT



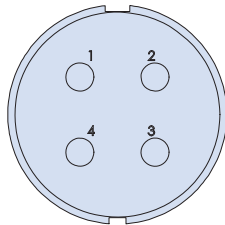
**12-6**

6X SIZE 20 CONTACT



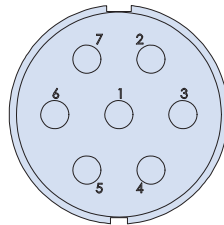
**12-50**

12X SIZE 20 CONTACT



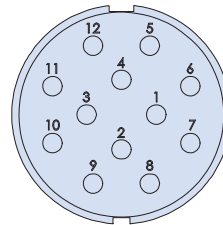
**19-4**

4X SIZE 12 CONTACT



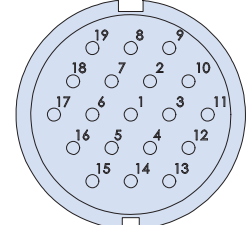
**19-7**

7X SIZE 12 CONTACT



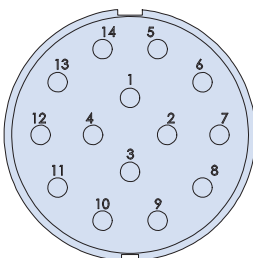
**19-12**

12 SIZE 16 CONTACT



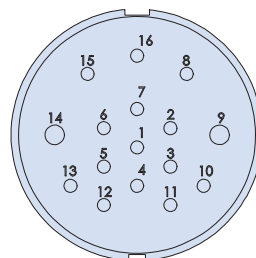
**19-50**

19X SIZE 20 CONTACT



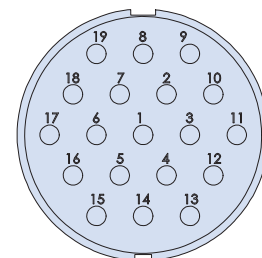
**27-2**

14X SIZE 16 CONTACT



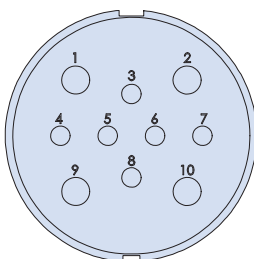
**27-3**

2X SIZE 16 CONTACT  
14X SIZE 20 CONTACT



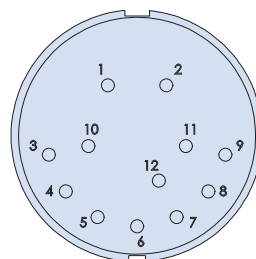
**27-5**

19X SIZE 16 CONTACT



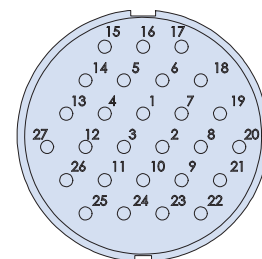
**27-8**

6X SIZE 16 CONTACT  
4X SIZE 12 CONTACT



**27-11**

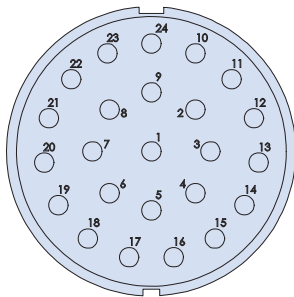
12X SIZE 20 CONTACT



**27-50**

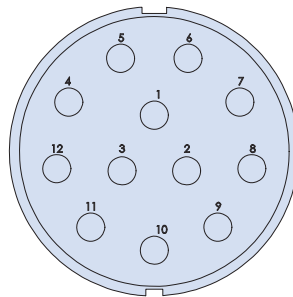
27X SIZE 20 CONTACT

## Contact arrangements (pin face shown)



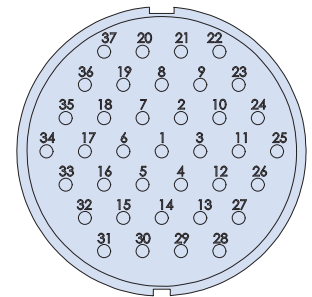
**37-2**

24X SIZE 16 CONTACT



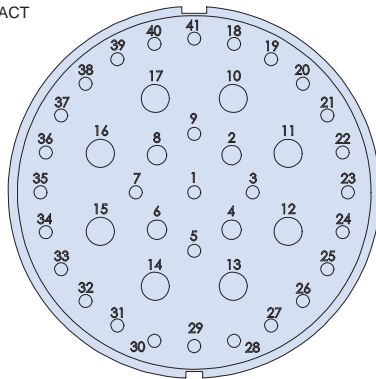
**37-3**

12X SIZE 12 CONTACT



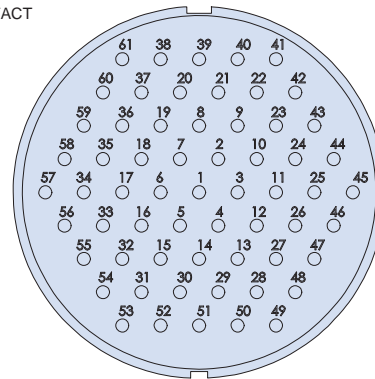
**37-50**

37X SIZE 20 CONTACT



**61-42**

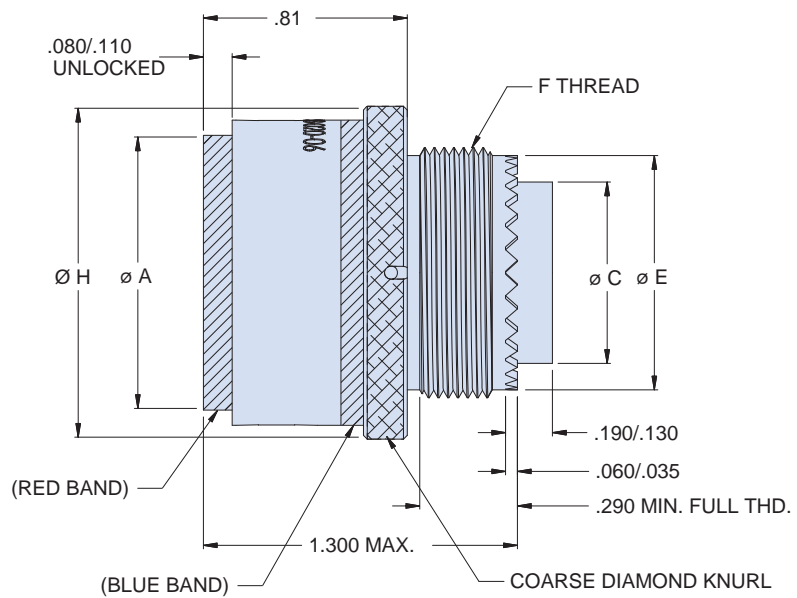
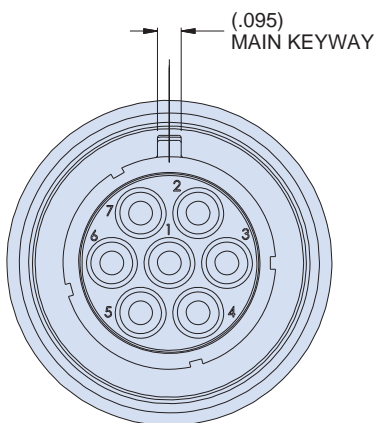
4X SIZE 16 CONTACT  
29X SIZE 20 CONTACT  
8X SIZE 12 CONTACTS



**61-50**

61X SIZE 20 CONTACT

| How To Order                           |  |   |    |    |      |   |   |
|--|--|---|----|----|------|---|---|
| <b>Sample Part Number</b>              | 253-020  | - | 06 | ME | 19-7 | P | N |
| <b>Basic Part Number</b>               | AS81703 Series 3 type connector  |   |    |    |      |   |   |
| <b>Rear Option</b>                     | - = Accessory threads    B = Band porch (consult factory)  |   |    |    |      |   |   |
| <b>Connector Style</b>                 | 06 = Straight plug                      AS34671 type (MS3467)  |   |    |    |      |   |   |
| <b>Material / Finish</b>               | C = Al Alloy/Black Anodize    ME = Al Alloy/Electroless Nickel<br>NF = Al Alloy/Cad O.D. Over Electroless Nickel    MT = Al Alloy/Nickel-PTFE<br>ZR = Al Alloy/Zinc-Nickel Black |   |    |    |      |   |   |
| <b>Shell Size / Insert Arrangement</b> | See Table II pg. 2, diagrams on pgs. 4-5   |   |    |    |      |   |   |
| <b>Contact Styles</b>                  | P = Pin insert                      A = Pin insert less contacts<br>S = Socket insert                B = Socket insert less contacts   |   |    |    |      |   |   |
| <b>Insert Clocking Positions</b>       | N, W, X, Y, B, C (See Table III pg. 2)   |   |    |    |      |   |   |



| -06 Plug Dimensions |           |         |          |      |          |      |                   |            |         |
|---------------------|-----------|---------|----------|------|----------|------|-------------------|------------|---------|
| Shell Size          | Ø A       |         | Ø C Max. |      | Ø E Max. |      | F Thd.            | H          |         |
|                     | In. ± .02 | mm ± .5 | In.      | mm   | In.      | mm   |                   | In. ± .025 | mm ± .6 |
| 3                   | .657      | 16.7    | .351     | 8.9  | .509     | 12.9 | ¼-24 UNEF-2A      | .925       | 23.5    |
| 7                   | .795      | 20.2    | .531     | 13.5 | .687     | 17.4 | ¾-20 UNEF-2A      | 1.062      | 27.0    |
| 12                  | .945      | 24.0    | .665     | 16.9 | .812     | 20.6 | 7/8-20 UNEF-2A    | 1.172      | 29.8    |
| 19                  | 1.090     | 27.7    | .790     | 20.1 | .937     | 23.8 | 1-20 UNEF-2A      | 1.328      | 33.7    |
| 27                  | 1.230     | 31.2    | .869     | 22.1 | .992     | 25.2 | 1 1/16-18 UNEF-2A | 1.475      | 37.5    |
| 37                  | 1.350     | 34.3    | .994     | 25.2 | 1.117    | 28.4 | 1 3/16-18 UNEF-2A | 1.610      | 40.9    |
| 61                  | 1.620     | 41.1    | 1.280    | 32.5 | 1.427    | 36.2 | 1 1/2-18 UNEF-2A  | 1.890      | 48.0    |



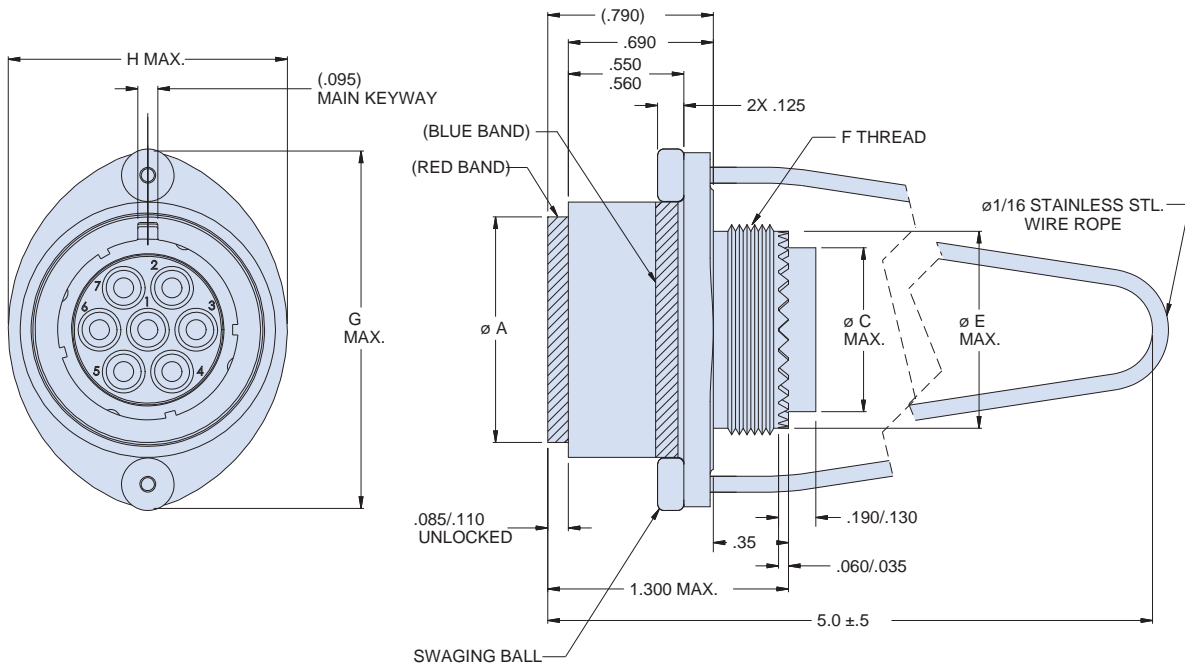
# AS81703 SERIES 3 TYPE CONNECTORS

## Lanyard-release plug

253-020-08



| How To Order                           |   |
|--|---|
| <b>Sample Part Number</b>              | 253-020 - 08 ME 19-7 P N  |
| <b>Basic Part Number</b>               | AS81703 Series 3 type connector   |
| <b>Rear Option</b>                     | - = Accessory threads B = Band porch (consult factory)  |
| <b>Connector Style</b>                 | 08 = Lanyard release plug MS3468 type (no SAE equivalent)   |
| <b>Material / Finish</b>               | C = Al Alloy/Black Anodize ME = Al Alloy/Electroless Nickel MT = Al Alloy/Nickel-PTFE<br>NF = Al Alloy/Cad O.D. Over Electroless Nickel ZR = Al Alloy/Zinc-Nickel Black |
| <b>Shell Size / Insert Arrangement</b> | See Table II pg. 2, diagrams on pgs. 4-5  |
| <b>Contact Styles</b>                  | P = Pin insert S = Socket insert A = Pin insert less contacts B = Socket insert less contacts   |
| <b>Insert Clocking Positions</b>       | N, W, X, Y, B, C (See Table III pg. 2)  |
| <b>Lanyard Ring Mod. Code</b>          | Omit = Standard Lanyard Ring 812 = Lanyard Ring Rotated 90° from Master Keyway  |



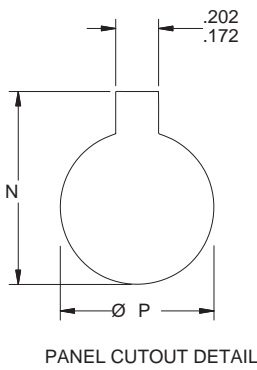
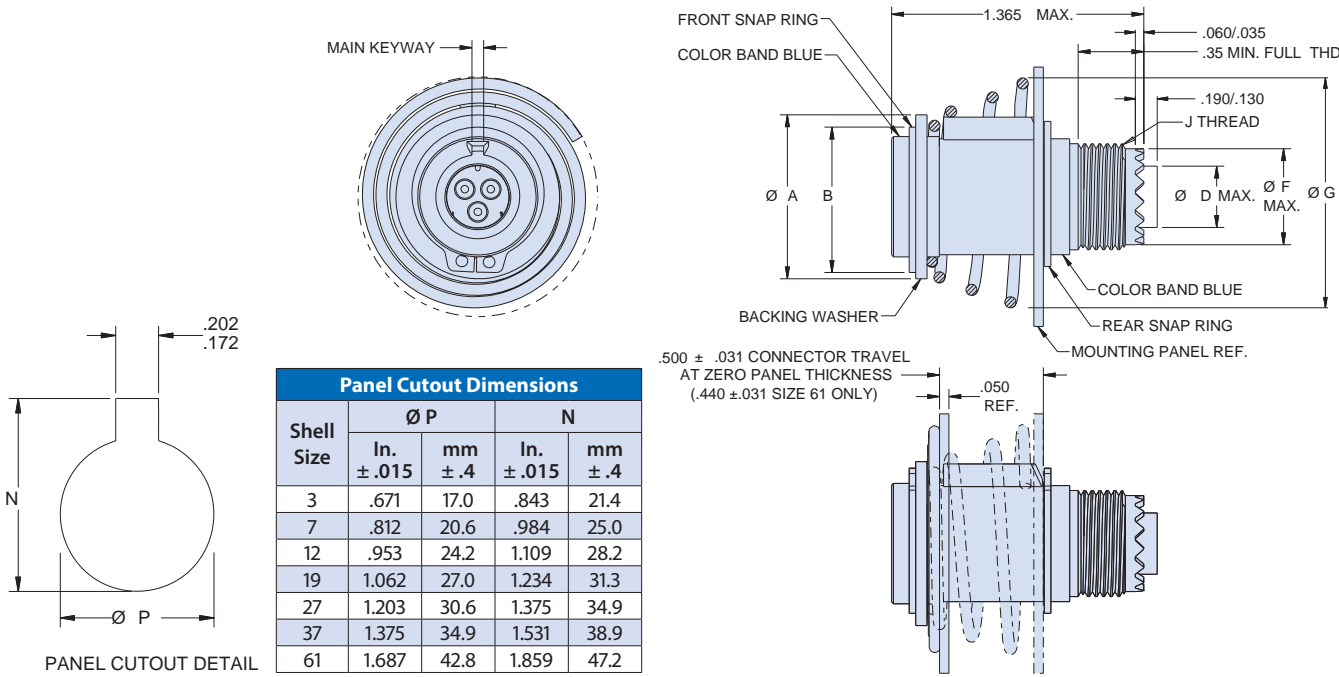
| -08 Lanyard-Release Plug Dimensions |                |              |          |      |          |      |                |        |      |        |      |
|-------------------------------------|----------------|--------------|----------|------|----------|------|----------------|--------|------|--------|------|
| Shell Size                          | Ø A            |              | Ø C Max. |      | Ø E Max. |      | F Thd.         | G Max. |      | H Max. |      |
|                                     | In.            | mm           | In.      | mm   | In.      | mm   |                | In.    | mm   | In.    | mm   |
| 3                                   | .657<br>.648   | 16.7<br>16.5 | .351     | 8.9  | .509     | 12.9 | ¼-24 UNEF-2A   | 1.261  | 32.0 | .925   | 23.5 |
| 7                                   | .793<br>.782   | 20.1<br>19.9 | .531     | 13.5 | .687     | 17.4 | ¾-20 UNEF-2A   | 1.411  | 35.8 | 1.062  | 27.0 |
| 12                                  | .942<br>.932   | 23.9<br>23.7 | .665     | 16.9 | .812     | 20.6 | ⅞-20 UNEF-2A   | 1.531  | 38.9 | 1.172  | 29.8 |
| 19                                  | 1.073<br>1.063 | 27.3<br>27.0 | .790     | 20.1 | .937     | 23.8 | 1-20 UNEF-2A   | 1.681  | 42.7 | 1.328  | 33.7 |
| 27                                  | 1.226<br>1.216 | 31.1<br>30.9 | .869     | 22.1 | .992     | 25.2 | 1 ⅛-18 UNEF-2A | 1.826  | 46.4 | 1.475  | 37.5 |
| 37                                  | 1.348<br>1.338 | 34.2<br>34.0 | .994     | 25.2 | 1.117    | 28.4 | 1 ¾-18 UNEF-2A | 1.915  | 48.6 | 1.610  | 40.9 |
| 61                                  | 1.614<br>1.604 | 41.0<br>40.7 | 1.280    | 32.5 | 1.427    | 36.2 | 1 ½-18 UNEF-2A | 2.235  | 56.8 | 1.890  | 48.0 |

# Rack-and-panel plug

253-020-09



| How To Order                           |  |   |    |    |      |   |   |
|--|--|---|----|----|------|---|---|
| <b>Sample Part Number</b>              | 253-020  | - | 09 | ME | 19-7 | P | N |
| <b>Basic Part Number</b>               | AS81703 Series 3 type connector  |   |    |    |      |   |   |
| <b>Rear Option</b>                     | -- = Accessory threads <b>B</b> = Band porch (consult factory)   |   |    |    |      |   |   |
| <b>Connector Style</b>                 | <b>09</b> = Rack & panel plug      AS34461 type (MS3446)   |   |    |    |      |   |   |
| <b>Material / Finish</b>               | <b>C</b> = Al Alloy/Black Anodize <b>ME</b> = Al Alloy/Electroless Nickel <b>MT</b> = Al Alloy/Nickel-PTFE<br><b>NF</b> = Al Alloy/Cad O.D. Over Electroless Nickel <b>ZR</b> = Al Alloy/Zinc-Nickel Black |   |    |    |      |   |   |
| <b>Shell Size / Insert Arrangement</b> | See Table II pg. 2, diagrams on pgs. 4-5   |   |    |    |      |   |   |
| <b>Contact Styles</b>                  | <b>P</b> = Pin insert <b>S</b> = Socket insert <b>A</b> = Pin insert less contacts <b>B</b> = Socket insert less contacts  |   |    |    |      |   |   |
| <b>Insert Clocking Positions</b>       | <b>N, W, X, Y, B, C</b> (See Table III pg. 2)  |   |    |    |      |   |   |



| Panel Cutout Dimensions |            |         |            |         |
|-------------------------|------------|---------|------------|---------|
| Shell Size              | Ø P        |         | N          |         |
|                         | In. ± .015 | mm ± .4 | In. ± .015 | mm ± .4 |
| 3                       | .671       | 17.0    | .843       | 21.4    |
| 7                       | .812       | 20.6    | .984       | 25.0    |
| 12                      | .953       | 24.2    | 1.109      | 28.2    |
| 19                      | 1.062      | 27.0    | 1.234      | 31.3    |
| 27                      | 1.203      | 30.6    | 1.375      | 34.9    |
| 37                      | 1.375      | 34.9    | 1.531      | 38.9    |
| 61                      | 1.687      | 42.8    | 1.859      | 47.2    |

| -09 Rack-and-Panel Plug Dimensions |                |              |          |      |          |      |          |      |          |      |                   |                                   |
|------------------------------------|----------------|--------------|----------|------|----------|------|----------|------|----------|------|-------------------|-----------------------------------|
| Shell Size                         | Ø A            |              | Ø B Max. |      | Ø D Max. |      | Ø F Max. |      | Ø G Max. |      | J Thd.            | Spring force when mated (lbs-in.) |
|                                    | In.            | mm           | In.      | mm   | In.      | mm   | In.      | mm   | In.      | mm   |                   |                                   |
| 3                                  | .891<br>.869   | 22.6<br>22.1 | .800     | 20.3 | .351     | 8.9  | .509     | 12.9 | 1.225    | 31.1 | 9/16-24 UNEF-2A   | 16 – 20                           |
| 7                                  | 1.172<br>1.150 | 29.8<br>29.2 | .990     | 25.1 | .531     | 13.5 | .687     | 17.4 | 1.356    | 34.4 | 3/4-20 UNEF-2A    | 16 – 20                           |
| 12                                 | 1.263<br>1.241 | 32.1<br>31.5 | 1.190    | 30.2 | .665     | 16.9 | .812     | 20.6 | 1.575    | 40.0 | 7/8-20 UNEF-2A    | 30 – 35                           |
| 19                                 | 1.391<br>1.369 | 35.3<br>34.8 | 1.320    | 33.5 | .790     | 20.1 | .937     | 23.8 | 1.715    | 43.6 | 1-20 UNEF-2A      | 40 – 50                           |
| 27                                 | 1.529<br>1.507 | 38.8<br>38.3 | 1.475    | 37.5 | .869     | 22.1 | .992     | 25.2 | 1.860    | 47.2 | 1 1/16-18 UNEF-2A | 43 – 50                           |
| 37                                 | 1.816<br>1.794 | 46.1<br>45.6 | 1.655    | 42.0 | .994     | 25.2 | 1.117    | 28.4 | 2.120    | 53.8 | 1 3/16-18 UNEF-2A | 45 – 53                           |
| 61                                 | 2.150<br>2.118 | 54.6<br>53.8 | 2.025    | 51.4 | 1.280    | 32.5 | 1.427    | 36.2 | 2.850    | 72.4 | 1 1/2-18 UNEF-2A  | 75 – 80                           |

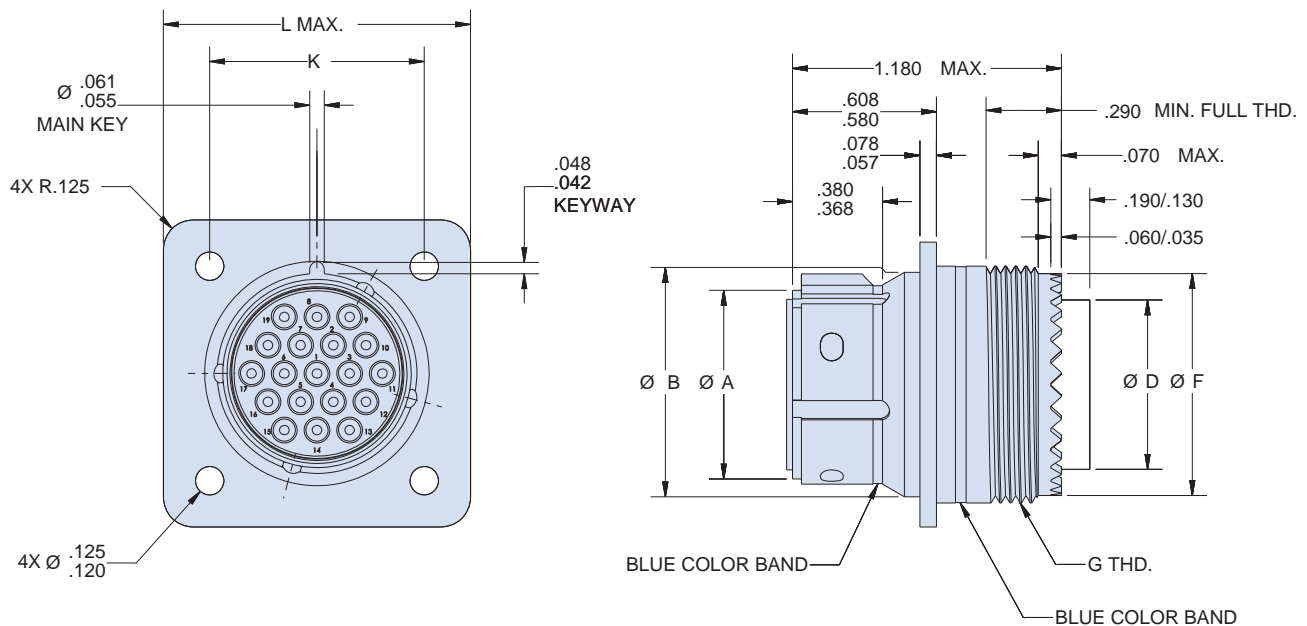
# AS81703 SERIES 3 TYPE CONNECTORS

## Wall-mount receptacle

253-020-00



| How To Order                           |  |   |    |    |      |   |   |
|--|--|---|----|----|------|---|---|
| <b>Sample Part Number</b>              | 253-020  | - | 00 | ME | 19-7 | P | N |
| <b>Basic Part Number</b>               | AS81703 Series 3 type connector  |   |    |    |      |   |   |
| <b>Rear Option</b>                     | - = Accessory threads    B = Band porch (consult factory)  |   |    |    |      |   |   |
| <b>Connector Style</b>                 | 00 = Sq. flange mount receptacle    AS34241 type (MS3424)  |   |    |    |      |   |   |
| <b>Material / Finish</b>               | C = Al Alloy/Black Anodize    ME = Al Alloy/Electroless Nickel<br>NF = Al Alloy/Cad O.D. Over Electroless Nickel    MT = Al Alloy/Nickel-PTFE<br>ZR = Al Alloy/Zinc-Nickel Black |   |    |    |      |   |   |
| <b>Shell Size / Insert Arrangement</b> | See Table II pg. 2, diagrams on pgs. 4-5   |   |    |    |      |   |   |
| <b>Contact Styles</b>                  | P = Pin insert    A = Pin insert less contacts<br>S = Socket insert    B = Socket insert less contacts   |   |    |    |      |   |   |
| <b>Insert Clocking Positions</b>       | N, W, X, Y, B, C (See Table III pg. 2)   |   |    |    |      |   |   |



| -00 Wall Mount Receptacle Dimensions |                |              |           |        |          |      |          |      |                   |       |      |        |      |
|--------------------------------------|----------------|--------------|-----------|--------|----------|------|----------|------|-------------------|-------|------|--------|------|
| Shell Size                           | Ø A            |              | Ø B       |        | Ø D Max. |      | Ø F Max. |      | G Thd.            | K     |      | L Max. |      |
|                                      | In.            | mm           | In. ±.003 | mm ±.1 | In.      | mm   | In.      | mm   |                   | In.   | mm   | In.    | mm   |
| 3                                    | .441<br>.431   | 11.2<br>10.9 | .573      | 14.6   | .351     | 8.9  | .509     | 12.9 | 9/16-24 UNEF-2A   | .625  | 15.9 | .896   | 22.8 |
| 7                                    | .576<br>.566   | 14.6<br>14.4 | .686      | 17.4   | .531     | 13.5 | .687     | 17.4 | 3/4-20 UNEF-2A    | .719  | 18.3 | 1.021  | 25.9 |
| 12                                   | .710<br>.700   | 18.0<br>17.8 | .823      | 20.9   | .665     | 16.9 | .812     | 20.6 | 7/8-20 UNEF-2A    | .812  | 20.6 | 1.114  | 28.3 |
| 19                                   | .849<br>.839   | 21.6<br>21.3 | .948      | 24.1   | .790     | 20.1 | .937     | 23.8 | 1-20 UNEF-2A      | .906  | 23.0 | 1.208  | 30.7 |
| 27                                   | 1.004<br>.994  | 25.5<br>25.2 | 1.132     | 28.8   | .869     | 22.1 | .992     | 25.2 | 1 1/16-18 UNEF-2A | .968  | 24.6 | 1.302  | 33.1 |
| 37                                   | 1.126<br>1.116 | 28.6<br>28.3 | 1.261     | 32.0   | .994     | 25.2 | 1.117    | 28.4 | 1 3/16-18 UNEF-2A | 1.187 | 30.1 | 1.458  | 37.0 |
| 61                                   | 1.414<br>1.404 | 35.9<br>35.7 | 1.573     | 40.0   | 1.280    | 32.5 | 1.427    | 36.2 | 1 1/2-18 UNEF-2A  | 1.438 | 36.5 | 1.797  | 45.6 |

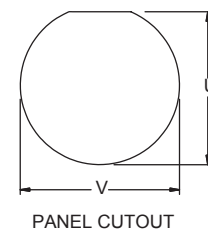
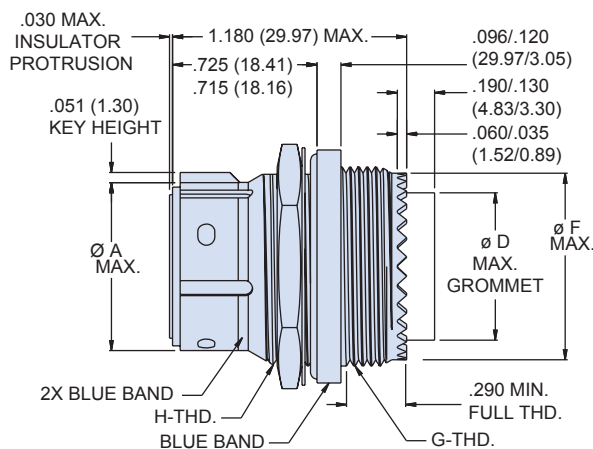
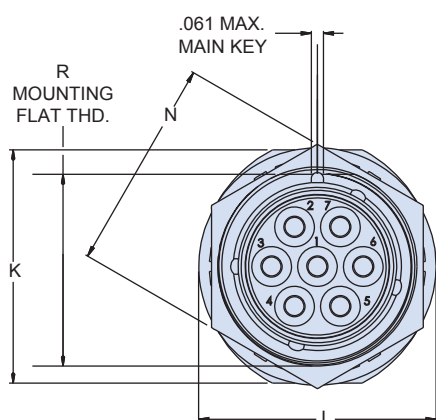
# AS81703 SERIES 3 TYPE CONNECTORS

## Jam nut receptacle

### 253-020-07



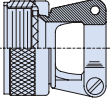
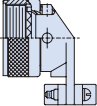
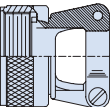
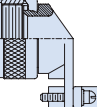
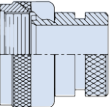
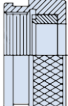
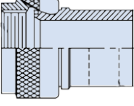
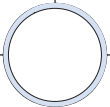
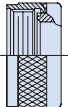
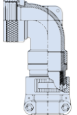
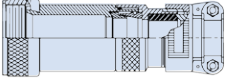
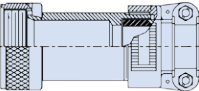
| How To Order                           |  |   |    |    |      |   |   |
|--|--|---|----|----|------|---|---|
| <b>Sample Part Number</b>              | 253-020  | - | 07 | ME | 19-7 | P | N |
| <b>Basic Part Number</b>               | AS81703 Series 3 type connector  |   |    |    |      |   |   |
| <b>Rear Option</b>                     | -- = Accessory threads <b>B</b> = Band porch (consult factory)   |   |    |    |      |   |   |
| <b>Connector Style</b>                 | 07 = Jam nut receptacle    AS34461 type (MS3446)   |   |    |    |      |   |   |
| <b>Material / Finish</b>               | C = Al Alloy/Black Anodize    ME = Al Alloy/Electroless Nickel    MT = Al Alloy/Nickel-PTFE<br>NF = Al Alloy/Cad O.D. Over Electroless Nickel    ZR = Al Alloy/Zinc-Nickel Black |   |    |    |      |   |   |
| <b>Shell Size / Insert Arrangement</b> | See Table II pg. 2, diagrams on pgs. 4-5   |   |    |    |      |   |   |
| <b>Contact Styles</b>                  | P = Pin insert    S = Socket insert    A = Pin insert less contacts    B = Socket insert less contacts   |   |    |    |      |   |   |
| <b>Insert Clocking Positions</b>       | N, W, X, Y, B, C (See Table III pg. 2)   |   |    |    |      |   |   |



| Shell Size | Panel Cutout |      |       |      |
|------------|--------------|------|-------|------|
|            | U            |      | V     |      |
|            | In.          | mm   | In.   | mm   |
| 3          | .538         | 13.7 | .577  | 14.7 |
|            | .534         | 13.6 | .567  | 14.4 |
| 7          | .665         | 16.9 | .701  | 17.8 |
|            | .661         | 16.8 | .961  | 24.4 |
| 12         | .788         | 20.0 | .826  | 21.0 |
|            | .784         | 19.9 | .816  | 20.7 |
| 19         | .973         | 24.7 | 1.013 | 25.7 |
|            | .969         | 24.6 | 1.003 | 25.5 |
| 27         | 1.099        | 27.9 | 1.138 | 28.9 |
|            | 1.095        | 27.8 | 1.128 | 28.7 |
| 37         | 1.224        | 31.1 | 1.263 | 32.1 |
|            | 1.220        | 31.0 | 1.253 | 31.8 |
| 61         | 1.471        | 37.4 | 1.514 | 38.5 |
|            | 1.467        | 37.3 | 1.504 | 38.2 |

| -07 Jam Nut Receptacle Dimensions |       |      |          |      |          |      |                   |                  |       |      |       |      |       |      |                |          |
|-----------------------------------|-------|------|----------|------|----------|------|-------------------|------------------|-------|------|-------|------|-------|------|----------------|----------|
| Shell Size                        | Ø A   |      | Ø D Max. |      | Ø F Max. |      | G Thd.            | H Thd.           | K     |      | L     |      | R     |      | N Mounting Nut |          |
|                                   | In.   | mm   | In.      | mm   | In.      | mm   |                   |                  | In.   | mm   | In.   | mm   | In.   | mm   | In.            | mm       |
| 3                                 | .441  | 11.2 | .351     | 8.9  | .509     | 12.9 | 9/16-24 UNEF-2A   | 9/16-24 UNEF-2A  | .765  | 19.4 | .765  | 19.4 | .523  | 13.3 | .625           | 15.9     |
|                                   | .431  | 10.9 |          |      |          |      |                   |                  | .735  | 18.7 | .735  | 18.7 |       |      |                |          |
| 7                                 | .576  | 14.6 | .531     | 13.5 | .687     | 17.4 | 3/4-20 UNEF-2A    | 11/16-24 UNEF-2A | .890  | 22.6 | .890  | 22.6 | .655  | 16.6 | .812           | 20.6     |
|                                   | .566  | 14.4 |          |      |          |      |                   |                  | .860  | 21.8 | .860  | 21.8 |       |      |                |          |
| 12                                | .710  | 18.0 | .665     | 16.9 | .812     | 20.6 | 7/8-20 UNEF-2A    | 13/16-20 UNEF-2A | 1.077 | 27.4 | 1.077 | 27.4 | .778  | 19.8 | .937           | 23.8     |
|                                   | .700  | 17.8 |          |      |          |      |                   |                  | 1.047 | 26.6 | 1.047 | 26.6 |       |      |                |          |
| 19                                | .849  | 21.6 | .790     | 20.1 | .937     | 23.8 | 1-20 UNEF-2A      | 1-20 UNEF-2A     | 1.171 | 29.7 | 1.202 | 30.5 | .963  | 24.5 | 1.062          | 27.0     |
|                                   | .839  | 21.3 |          |      |          |      |                   |                  | 1.141 | 29.0 | 1.172 | 29.8 |       |      |                |          |
| 27                                | 1.004 | 25.5 | .869     | 22.1 | .992     | 25.2 | 1 1/16-18 UNEF-2A | 1 1/8-18 UNEF-2A | 1.327 | 33.7 | 1.327 | 33.7 | 1.089 | 27.7 | 1.250          | 31.8     |
|                                   | .994  | 25.2 |          |      |          |      |                   |                  | 1.297 | 32.9 | 1.297 | 32.9 |       |      |                |          |
| 37                                | 1.126 | 28.6 | .994     | 25.2 | 1.117    | 28.4 | 1 3/16-18 UNEF-2A | 1 1/4-18 UNEF-2A | 1.450 | 36.8 | 1.515 | 38.5 | 1.214 | 30.8 | 1.375          | 34.9     |
|                                   | 1.116 | 28.3 |          |      |          |      |                   |                  | 1.445 | 36.7 | 1.485 | 37.7 |       |      |                |          |
| 61                                | 1.414 | 35.9 | 1.280    | 32.5 | 1.427    | 36.2 | 1 1/2-18 UNEF-2A  | 1 1/2-18 UNEF-2A | 1.864 | 47.3 | 1.890 | 48.0 | 1.463 | 37.2 | 1.688          | 42.9 ±.4 |
|                                   | 1.404 | 35.7 |          |      |          |      |                   |                  | 1.834 | 46.6 | 1.860 | 47.2 |       |      | ±.015          |          |

## Selection guide

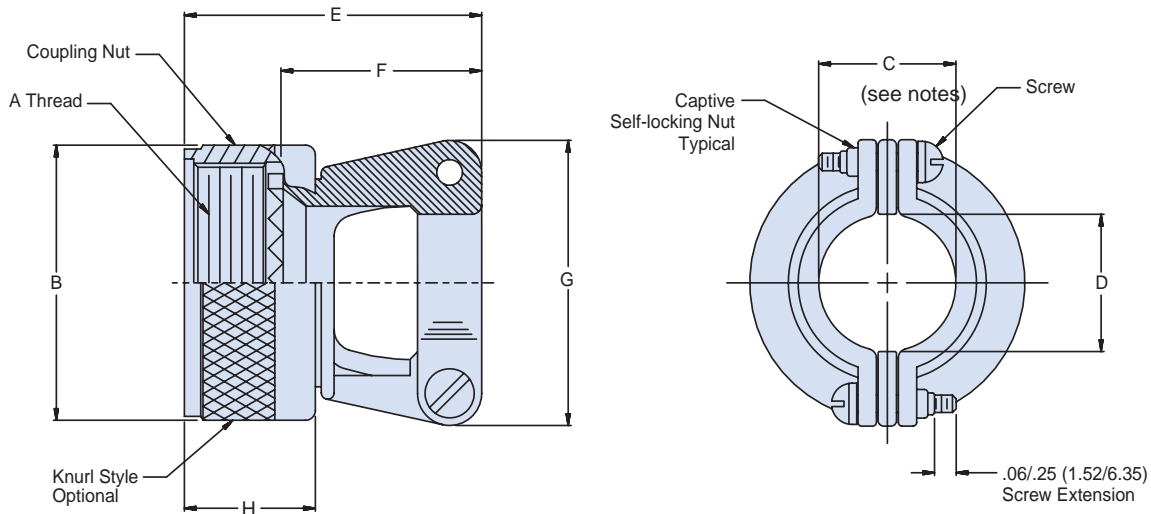
|   |   |         |
|---|---|---------|
|    | <b>Straight strain relief</b><br><b>AS85049/118</b>   | page 12 |
|    | <b>90° strain relief</b><br><b>AS85049/120</b>  | page 13 |
|    | <b>Straight strain relief</b><br><b>AS85049/52</b>  | page 14 |
|    | <b>90° strain relief</b><br><b>AS85049/51</b>   | page 15 |
|   | <b>Straight shrink boot adapter</b><br><b>AS85049/60-1</b>  | page 16 |
|  | <b>Straight shrink boot adapter</b><br><b>AS85049/60-2G</b>   | page 17 |
|  | <b>Straight crimp ring backshell and crimp ring</b><br><b>AS85049/26-1 and MS3419</b>               | page 18 |
|  | <b>Backshell Crimp Ring</b><br><b>AS85049/26-2</b>  | page 19 |
|  | <b>E-Nut (Self-Locking and Non-Self-Locking)</b><br><b>AS85049/31, MS3416 and MIL-DTL-85723/15N</b> | page 20 |
|  | <b>90° Environmental Backshell</b><br><b>AS85049/9 and MS3188B</b>                                  | page 21 |
|  | <b>Straight EMI/RFI Environmental Backshell</b><br><b>AS85049/10 and MS3437A</b>                    | page 22 |
|  | <b>Straight Environmental Backshell</b><br><b>AS85049/11 and MS3437B</b>                            | page 23 |

# Straight Strain Relief

## AS85049/118

|                                      |                    |                 |
|--------------------------------------|--------------------|-----------------|
| Product Series and Basic Part Number | Dash No. Table I   | Finish Table II |
| <b>M85049/118</b>                    | <b>S</b> <b>08</b> | <b>W</b>        |

**S** = Detented Self-Locking  
**N** = Non-Detented Self-Locking  
Use Dash (-) for Non-Self-Locking



| Dash No. | Screw Size | Shell Size | A Thread Class 2B | B Dia Max   | C Dim ± .031 (0.8) | D Min      | E Max Length | F Dim                      | G Dim Max   | H Dim Max    |
|----------|------------|------------|-------------------|-------------|--------------------|------------|--------------|----------------------------|-------------|--------------|
| 03       | 4-40       | 3          | 9/16-24 UNEF      | .95 (24.1)  | .219 (5.6)         | .22 (5.6)  | 1.14 (29.0)  | .77 (19.6)<br>.51 (13.0)   | .88 (22.4)  | .710 (18.00) |
| 12       | 4-40       | 7          | 3/4-20 UNEF       | 1.14 (29.0) | .344 (8.7)         | .35 (8.9)  | 1.38 (35.1)  | 1.01 (25.7)<br>.76 (19.3)  | 1.12 (28.4) | .710 (18.00) |
| 14       | 4-40       | 12         | 7/8-20 UNEF       | 1.26 (32.0) | .460 (11.7)        | .47 (11.9) | 1.38 (35.1)  | 1.01 (25.7)<br>.76 (19.3)  | 1.19 (30.3) | .710 (18.00) |
| 16       | 4-40       | 19         | 1-20 UNEF         | 1.39 (35.3) | .545 (13.8)        | .55 (14.0) | 1.50 (38.1)  | 1.13 (28.7)<br>.88 (22.4)  | 1.44 (36.6) | .710 (18.00) |
| 18       | 6-32       | 27         | 1 1/16-18 UNEF    | 1.51 (38.4) | .615 (15.6)        | .62 (15.7) | 1.75 (44.5)  | 1.38 (35.1)<br>1.13 (28.7) | 1.56 (39.6) | .710 (18.00) |
| 20       | 6-32       | 37         | 1 3/16-18 UNEF    | 1.64 (41.7) | .698 (17.7)        | .70 (17.8) | 1.88 (47.8)  | 1.51 (38.4)<br>1.25 (31.8) | 1.69 (42.9) | .710 (18.00) |
| 61       | 8-32       | 61         | 1 1/2-18 UNEF     | 1.95 (49.5) | .850 (21.6)        | .85 (21.6) | 2.13 (54.1)  | 1.76 (44.7)<br>1.51 (38.5) | 1.88 (47.8) | .710 (18.00) |

| Sym. | Material       | Finish                      |
|------|----------------|-----------------------------|
| A    | Aluminum Alloy | Black Anodize               |
| N    |                | Electroless Nickel          |
| W    |                | Cadmium, Olive Drab         |
| X    |                | Nickel Fluorocarbon Polymer |
| Z    |                | Zinc Nickel                 |

### NOTES

- Glenair Series 600 Backshell Assembly Tools are recommended for assembly/installation.
- Cable entry is measured with saddle bars closed and bottomed on clamp ears.
- Material/Finish:  
Clamp body, coupling nut, saddles - Al alloy or 300 Series SST/See Table II.  
Clamp screws and lock nuts - CRES/Passivated, Silver plate optional.  
Anti-rotation device - Corrosion resistant material

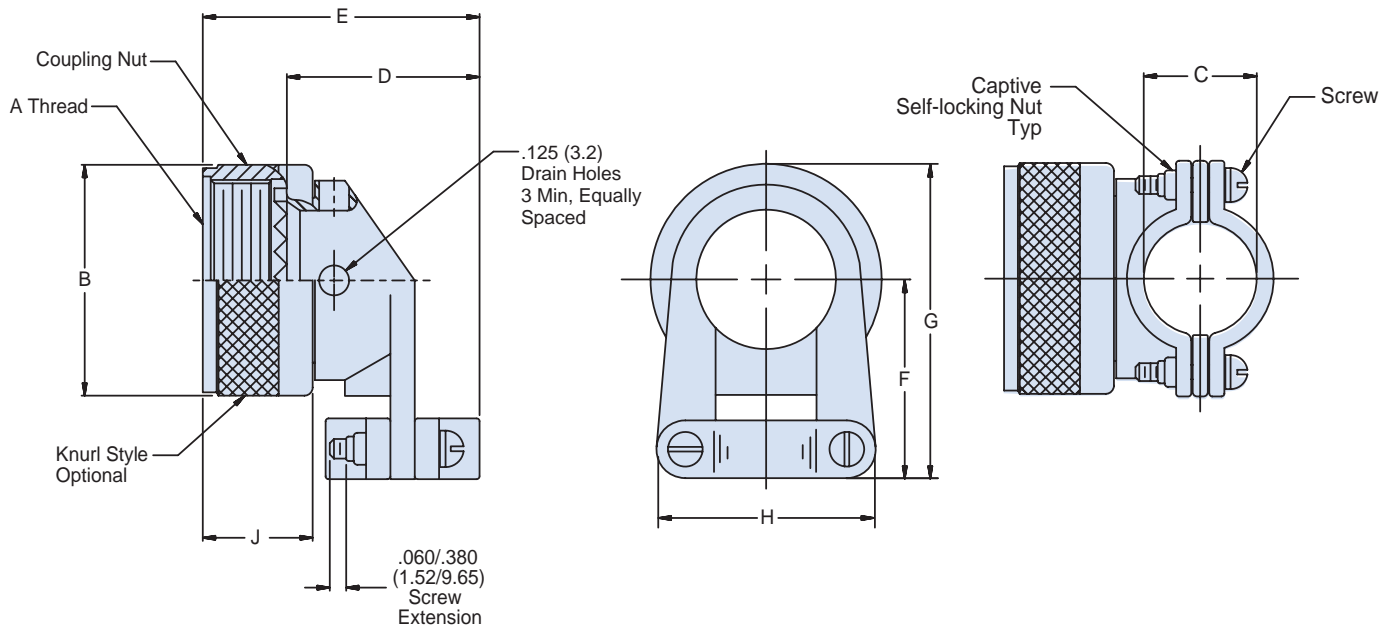
# BACKSHELLS AND ACCESSORIES FOR AS81703 SERIES 3 TYPE CONNECTORS

## 90° Strain Relief



### AS85049/120

|  |                                   |                                  |
|--|-----------------------------------|----------------------------------|
| <b>Product Series and Basic Part Number</b>  | <b>Dash No.</b><br><i>Table I</i> | <b>Finish</b><br><i>Table II</i> |
| <b>M85049/120</b>  | <b>S</b> <b>08</b>                | <b>W</b>                         |
| <i>S = Detented Self-Locking</i><br><i>N = Non-Detented Self-Locking</i><br><i>Use Dash (-) for Non-Self-Locking</i> |                                   |                                  |



**TABLE I: Dash Number, Shell Size, Thread and Dimensions**

| Dash No. | Screw Size | Shell Size | A Thread Class 2B | B Dia Max   | C Dim ±.031 (0.8) | D Max       | E Max Length | F Dim Max   | G Dim Max   | H Dim Max   | J Dim Max   |
|----------|------------|------------|-------------------|-------------|-------------------|-------------|--------------|-------------|-------------|-------------|-------------|
| 03       | 4-40       | 3          | 9/16-24 UNEF      | .95 (24.1)  | .219 (5.6)        | .93 (23.6)  | 1.29 (32.8)  | .84 (21.3)  | 1.32 (33.5) | .88 (22.4)  | .710 (18.0) |
| 12       | 4-40       | 7          | 3/4-20 UNEF       | 1.14 (29.0) | .344 (8.7)        | 1.21 (30.7) | 1.57 (39.9)  | .93 (23.6)  | 1.50 (38.1) | 1.12 (28.4) | .710 (18.0) |
| 14       | 4-40       | 12         | 7/8-20 UNEF       | 1.26 (32.0) | .460 (11.7)       | 1.27 (32.3) | 1.63 (41.4)  | 1.00 (25.4) | 1.62 (41.4) | 1.19 (30.2) | .710 (18.0) |
| 16       | 4-40       | 19         | 1-20 UNEF         | 1.39 (35.3) | .545 (13.8)       | 1.42 (36.1) | 1.78 (45.2)  | 1.06 (26.9) | 1.75 (44.5) | 1.44 (36.6) | .710 (18.0) |
| 18       | 6-32       | 27         | 11/16-18 UNEF     | 1.51 (38.4) | .615 (15.6)       | 1.53 (38.9) | 1.89 (48.0)  | 1.23 (31.2) | 1.99 (50.5) | 1.56 (39.6) | .710 (18.0) |
| 20       | 6-32       | 37         | 1 3/16-18 UNEF    | 1.64 (41.7) | .698 (17.7)       | 1.65 (41.9) | 2.01 (51.1)  | 1.30 (33.0) | 2.07 (52.6) | 1.69 (42.9) | .710 (18.0) |
| 61       | 8-32       | 61         | 1 1/2-18 UNEF     | 1.95 (49.5) | .850 (21.6)       | 1.90 (48.3) | 2.26 (57.4)  | 1.45 (36.8) | 2.43 (61.7) | 1.88 (47.8) | .710 (18.0) |

**TABLE II: Material and Finish**

| Sym. | Material       | Finish                      |
|------|----------------|-----------------------------|
| A    | Aluminum Alloy | Black Anodize               |
| N    |                | Electroless Nickel          |
| W    |                | Cadmium, Olive Drab         |
| X    |                | Nickel Fluorocarbon Polymer |
| Z    |                | Zinc Nickel                 |

### NOTES

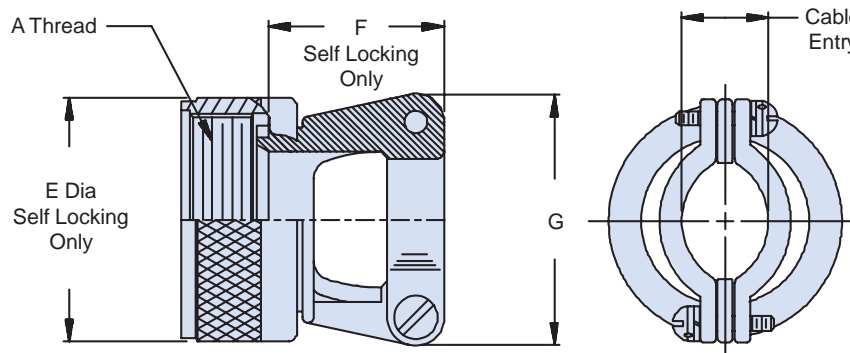
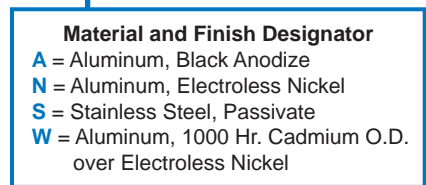
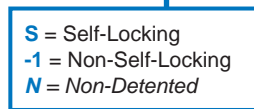
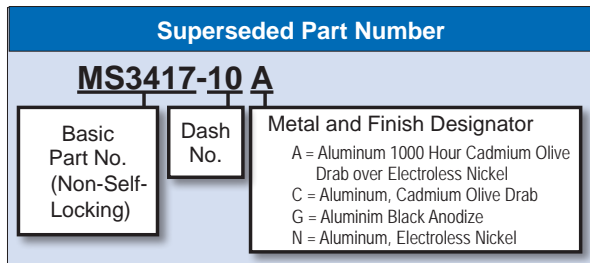
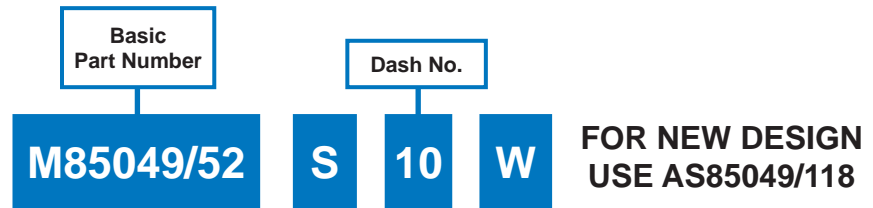
- Glenair Series 600 Backshell Assembly Tools are recommended for assembly and installation.
- Cable entry is measured with saddle bars closed and bottomed on clamp ears.
- Material/Finish:  
Clamp body, coupling nut, saddles - Al alloy or 300 Series SST/See Table II.  
Clamp screws and lock nuts - CRES/Passivated, Silver plate optional.  
Anti-rotation device - Corrosion resistant material

# BACKSHELLS AND ACCESSORIES FOR AS81703 SERIES 3 TYPE CONNECTORS

## Straight Strain Relief



### AS85049/52



**TABLE I: Shell Size, Cable Entry and Backshell Dimensions**

| Dash No. | Shell Size | A Thread Class 2B | Ø E Max Self-Locking |     | F Max Self-Locking |     | G Max        | Cable Entry |              |     |     |
|----------|------------|-------------------|----------------------|-----|--------------------|-----|--------------|-------------|--------------|-----|-----|
|          |            |                   | Min                  | Max | Min                | Max |              | Min         | Max          | Min | Max |
| 03*      | 3          | .562 - 24 UNEF    | -                    | -   | -                  | -   | .782 (19.9)  | .125 (3.2)  | .204 (5.2)   |     |     |
| 12       | 7          | .750 - 20 UNEF    | 1.135 (28.8)         |     | .98 (24.9)         |     | 1.003 (24.6) | .291 (7.4)  | .416 (10.6)  |     |     |
| 14       | 12         | .875 - 20 UNEF    | 1.260 (32.0)         |     | .98 (24.9)         |     | 1.061 (25.5) | .351 (8.9)  | .476 (12.1)  |     |     |
| 16       | 19         | 1.000 - 20 UNEF   | 1.385 (35.2)         |     | 1.10 (27.9)        |     | 1.234 (26.9) | .501 (12.7) | .626 (15.9)  |     |     |
| 18       | 27         | 1.062 - 18 UNEF   | 1.510 (38.4)         |     | 1.35 (34.3)        |     | 1.466 (35.4) | .518 (13.2) | .706 (17.9)  |     |     |
| 20       | 37         | 1.188 - 18 UNEF   | 1.635 (41.5)         |     | 1.98 (50.3)        |     | 1.572 (37.2) | .581 (14.8) | .831 (21.1)  |     |     |
| 61*      | 61         | 1.500 - 18 UNEF   | -                    | -   | -                  | -   | 1.775 (45.1) | .706 (17.9) | 1.081 (27.5) |     |     |

\* Not Available in Self Locking

### NOTES

1. Cable Entry is defined as the accommodation entry for the wire bundle or cable.
2. Dimensions are not intended for inspection criteria.
3. For complete dimensions, see the applicable Military Specification.

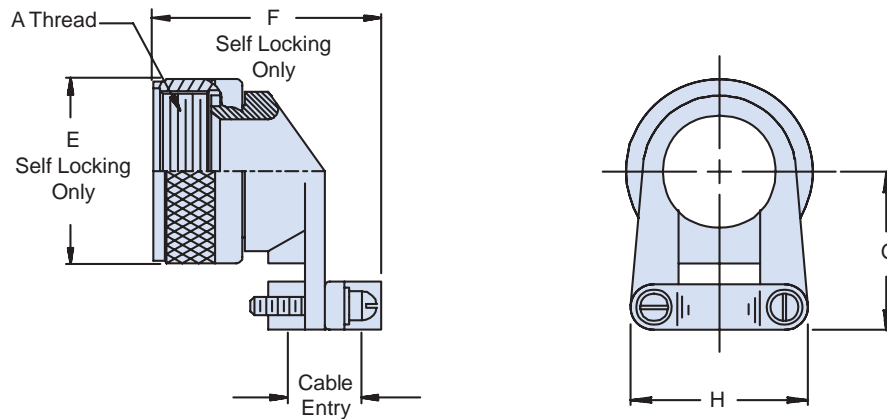
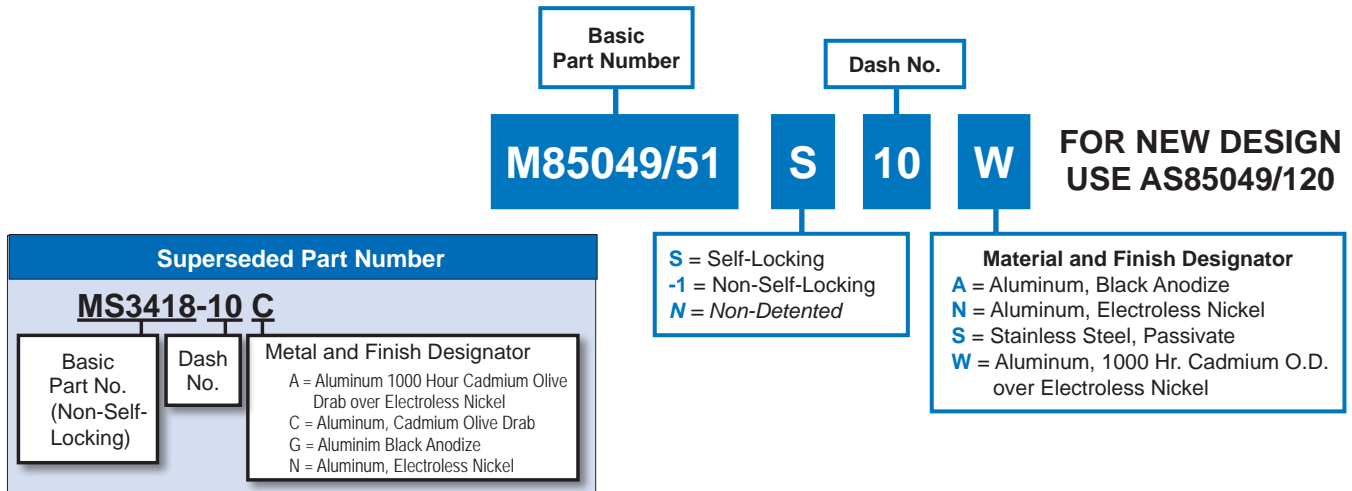


# BACKSHELLS AND ACCESSORIES FOR AS81703 SERIES 3 TYPE CONNECTORS



## 90° Strain Relief

### AS85049/51



**TABLE I: Shell Size, Cable Entry and Backshell Dimensions**

| Dash No. | Shell Size | A Thread Class 2B | Ø E Max Self-Locking |        | F Max Self-Locking |        | G     |        | H Max | Cable Entry |                          |
|----------|------------|-------------------|----------------------|--------|--------------------|--------|-------|--------|-------|-------------|--------------------------|
|          |            |                   |                      |        |                    |        | ±.062 | (1.6)  |       | Min         | Max                      |
| 3*       | 3          | .562 - 24 UNEF    | -                    | -      | -                  | -      | .777  | (19.7) | .782  | (19.9)      | .125 (3.2) .204 (5.2)    |
| 12       | 7          | .750 - 20 UNEF    | 1.135                | (28.8) | 1.532              | (38.9) | .867  | (22.0) | .968  | (24.6)      | .291 (7.4) .416 (10.6)   |
| 14       | 12         | .875 - 20 UNEF    | 1.260                | (32.0) | 1.592              | (40.4) | .930  | (23.6) | 1.003 | (25.5)      | .351 (8.9) .476 (12.1)   |
| 16       | 19         | 1.000 - 20 UNEF   | 1.385                | (35.2) | 1.741              | (44.2) | .994  | (25.2) | 1.061 | (26.9)      | .501 (12.7) .626 (15.9)  |
| 18       | 27         | 1.062 - 18 UNEF   | 1.510                | (38.4) | 1.853              | (47.1) | 1.171 | (29.7) | 1.394 | (35.4)      | .518 (13.2) .706 (17.9)  |
| 20       | 37         | 1.188 - 18 UNEF   | 1.635                | (41.5) | 1.978              | (50.2) | 1.234 | (31.2) | 1.466 | (37.2)      | .581 (14.8) .831 (21.1)  |
| 61*      | 61         | 1.500 - 18 UNEF   | -                    | -      | -                  | -      | 1.388 | (35.3) | 1.775 | (45.1)      | .706 (17.9) 1.081 (27.5) |

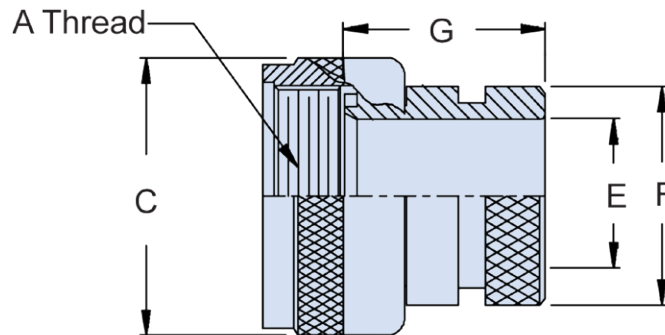
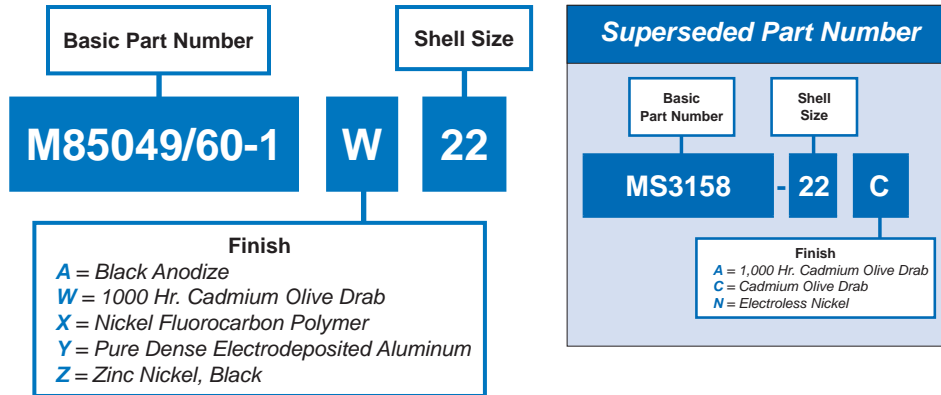
\* Not Available in Self Locking

### NOTES

1. Cable Entry is defined as the accommodation entry for the wire bundle or cable.
2. Dimensions are not intended for inspection criteria.
3. For complete dimensions, see the applicable Military Specification.

# Straight Shrink Boot Adapter

AS85049/60-1



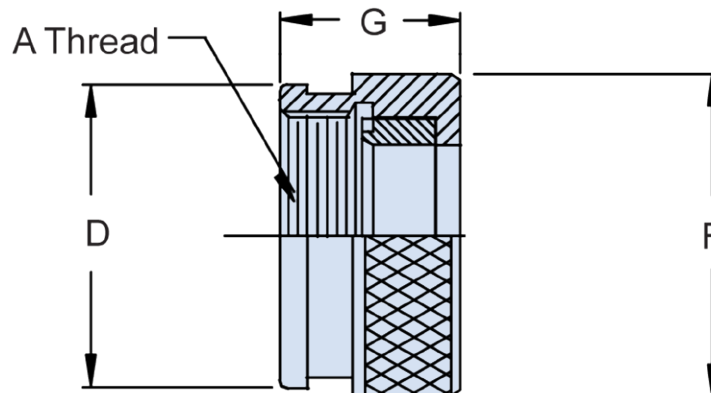
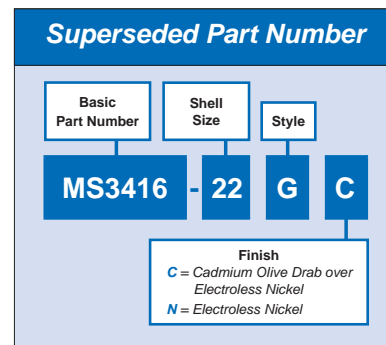
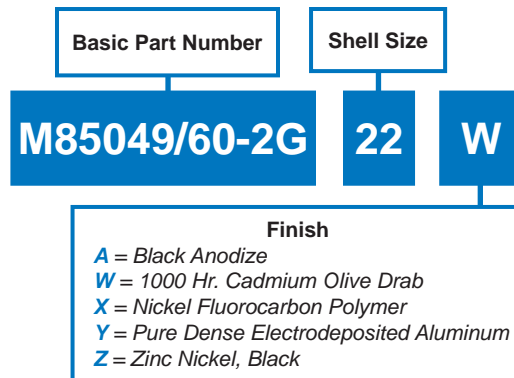
| TABLE I: Shell Size, Thread and Dimensions |            |                   |  |              |                                     |             |
|--|------------|-------------------|--|--------------|-------------------------------------|-------------|
| Dash No.                                   | Shell Size | A Thread Class 2B | C Dia Max<br>+.000 (0.0)<br>-.045 (1.14) | E Min Dia    | F Dia<br>+.000 (0.0)<br>-.020 (0.5) | G Max       |
| 3  | 3          | .562 - 24 UNEF    | .670 (17.0)                              | .250 (6.4)   | .533 (13.5)                         | .832 (21.1) |
| 12   | 7          | .750 - 20 UNEF    | .860 (21.8)                              | .491 (12.5)  | .774 (19.7)                         | .832 (21.1) |
| 14   | 12         | .875 - 20 UNEF    | .980 (24.9)                              | .565 (14.4)  | .838 (21.3)                         | .832 (21.1) |
| 16   | 19         | 1.000 - 20 UNEF   | 1.110 (28.2)                             | .690 (17.5)  | .963 (24.5)                         | .832 (21.1) |
| 18   | 27         | 1.062 - 18 UNEF   | 1.220 (31.0)                             | .769 (19.5)  | 1.042 (26.5)                        | .832 (21.1) |
| 20   | 37         | 1.188 - 18 UNEF   | 1.350 (34.3)                             | .894 (22.7)  | 1.217 (30.9)                        | .832 (21.1) |
| 61   | 61         | 1.500 - 18 UNEF   | 1.650 (41.9)                             | 1.174 (29.8) | 1.529 (38.8)                        | .832 (21.1) |

**NOTE**

1. For complete dimensions see the applicable Military Specification.

# Straight Shrink Boot Adapter

## AS85049/60-2G



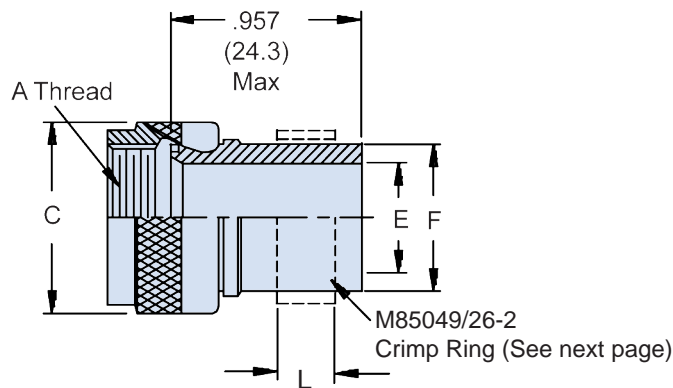
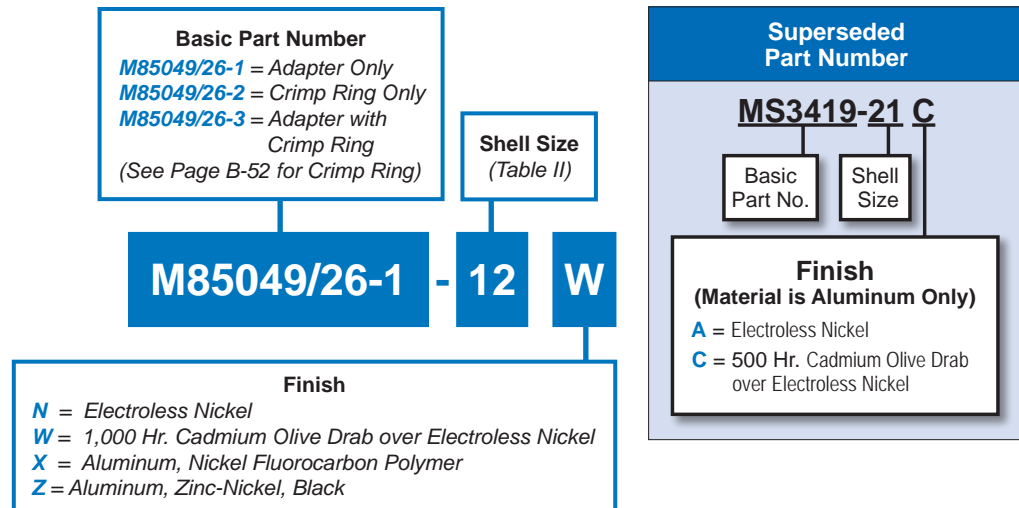
| TABLE I: Shell Size, Thread and Dimensions |            |                      |                                     |                                     |             |
|--|------------|----------------------|-------------------------------------|-------------------------------------|-------------|
| Dash No.                                   | Shell Size | A Thread<br>Class 2B | D Dia<br>+.000 (0.0)<br>-.020 (0.5) | F Dia<br>+.000 (0.0)<br>-.045 (1.1) | G<br>Max    |
| 3  | 3          | .562 - 24 UNEF       | .709 (18.0)                         | .750 (19.1)                         | .540 (13.7) |
| 12   | 7          | .750 - 20 UNEF       | .898 (22.8)                         | .938 (23.8)                         | .540 (13.7) |
| 14   | 12         | .875 - 20 UNEF       | 1.024 (26.0)                        | 1.063 (27.0)                        | .540 (13.7) |
| 16   | 19         | 1.000 - 20 UNEF      | 1.152 (29.3)                        | 1.238 (31.4)                        | .540 (13.7) |
| 18   | 27         | 1.062 - 18 UNEF      | 1.243 (31.6)                        | 1.310 (33.3)                        | .540 (13.7) |
| 20   | 37         | 1.188 - 18 UNEF      | 1.370 (34.8)                        | 1.436 (36.5)                        | .540 (13.7) |
| 61   | 61         | 1.500 - 18 UNEF      | 1.653 (42.0)                        | 1.748 (44.4)                        | .540 (13.7) |

**NOTE**

1. For complete dimensions see the applicable Military Specification.

# Straight Crimp Ring Backshell and Crimp Ring

## AS85049/26-1 and MS3419



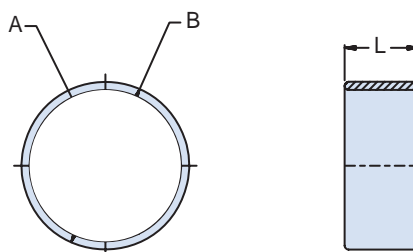
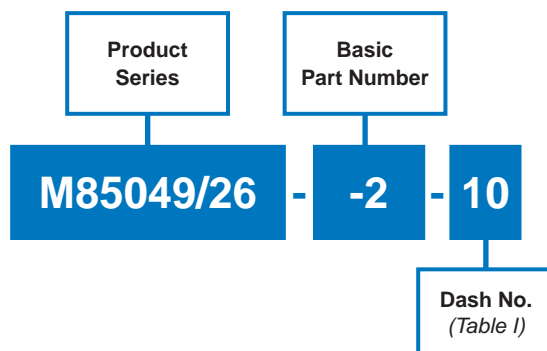
| TABLE I: Adapter Shell Size, Thread, and Dimensions |            |                   |              |              |              |
|---|------------|-------------------|--------------|--------------|--------------|
| Dash No.  | Shell Size | A Thread Class 2B | C Dia Max    | E Dia        | F Dia        |
| 3   | 3          | .562 - 24 UNEF    | .670 (17.0)  | .250 (6.4)   | .337 (8.6)   |
| 12  | 7          | .750 - 20 UNEF    | .860 (21.8)  | .420 (10.7)  | .500 (12.7)  |
| 14  | 12         | .875 - 20 UNEF    | .980 (24.9)  | .540 (13.7)  | .620 (15.7)  |
| 16  | 19         | 1.000 - 20 UNEF   | 1.110 (28.2) | .670 (17.0)  | .750 (19.1)  |
| 18  | 27         | 1.062 - 18 UNEF   | 1.220 (31.0) | .789 (20.0)  | .880 (22.4)  |
| 20  | 37         | 1.188 - 18 UNEF   | 1.350 (34.3) | .914 (23.2)  | 1.000 (25.4) |
| 61  | 61         | 1.500 - 18 UNEF   | 1.650 (41.9) | 1.210 (30.7) | 1.359 (34.5) |

### NOTES

- For complete dimensions see the applicable Military Specification.
- Metric dimensions (mm) are in parentheses.

# Backshell Crimp Ring

## AS85049/26-2



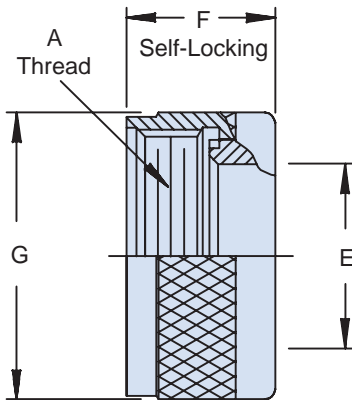
| TABLE I: Shell Size, Thread, Cable Entry and Dimensions |            |            |              |              |              |              |                           |   |
|---|------------|------------|--------------|--------------|--------------|--------------|---------------------------|---|
| Dash No.  | Shell Size | Color Code | A Dia        |              | B Dia        |              | L Dim<br>± ±.020<br>(0.5) | Installing Die Cat. No.<br>(See Note 2) |
|   |            |            | Min          | Max          | Min          | Max          |                           |   |
| 8   | 3          | GREEN      | .400 (10.2)  | .410 (10.4)  | .448 (11.4)  | .458 (11.6)  | .250 (6.4)                | GS405                                   |
| 12  | 7          | RED        | .585 (14.9)  | .595 (15.1)  | .660 (16.8)  | .680 (17.3)  | .440 (11.2)               | GS590                                   |
| 14  | 12         | BLUE       | .705 (17.9)  | .715 (18.2)  | .780 (19.8)  | .800 (20.3)  | .440 (11.2)               | GS710                                   |
| 16  | 19         | GREY       | .835 (21.2)  | .845 (21.5)  | .910 (23.1)  | .930 (23.6)  | .440 (11.2)               | GS840                                   |
| 18  | 27         | BROWN      | 1.005 (25.5) | 1.015 (25.8) | 1.080 (27.4) | 1.100 (27.9) | .440 (11.2)               | GS1010                                  |
| 20  | 37         | GREEN      | 1.125 (28.6) | 1.135 (28.8) | 1.200 (30.5) | 1.220 (31.0) | .440 (11.2)               | GS1130                                  |
| 61  | 61         | PURPLE     | 1.435 (36.4) | 1.445 (36.7) | 1.510 (38.4) | 1.530 (38.9) | .440 (11.2)               | GS1440                                  |

### NOTES

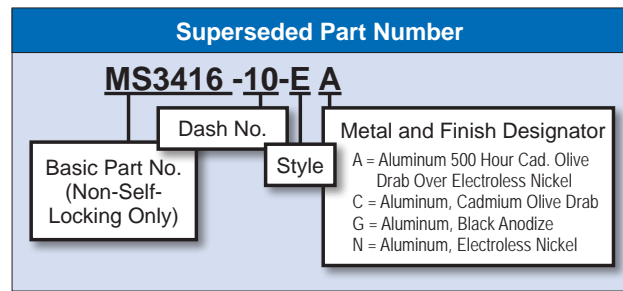
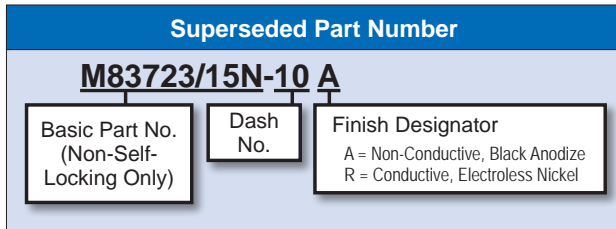
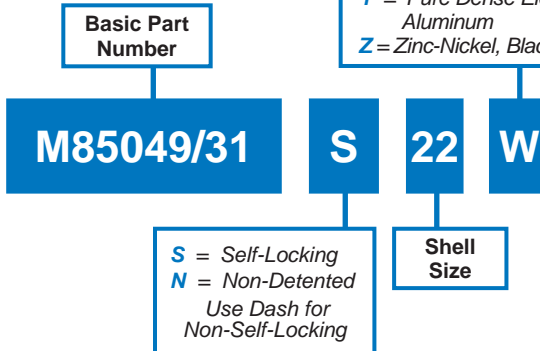
1. Assembly identified with manufacturer's name and part number, space permitting.
2. Crimp tool shall be the Thomas and Betts Installing Head catalog number 13640 or equivalent (see Table I).
3. The installing dies (Thomas and Betts Cat. No.--See Table I) shall be used with the Thomas and Betts Installing head Catalog Number 13640 or an equivalent tool.
4. Material/Finish: Copper/Tin Plate.
5. Metric dimensions (mm) are in parentheses.

# E-Nut (Self-Locking and Non-Self-Locking)

AS85049/31, MS3416 and MIL-DTL-85723/15N



**Finish**  
**A** = Anodize, Black  
**N** = Electroless Nickel  
**W** = 1,000 Hour Cadmium Olive Drab over Electroless Nickel  
**X** = Nickel Fluorocarbon Polymer  
**Y** = Pure Dense Electrodeposited Aluminum  
**Z** = Zinc-Nickel, Black



| TABLE I: Shell Size, Thread and Dimensions |                   |         |        |       |         |              |
|--|-------------------|---------|--------|-------|---------|--------------|
| Shell Size                                 | A Thread Class 2B | Ø E Max |        | F Max | Ø G Max |              |
| 3  | .562 - 24 UNEF    | .270    | (6.9)  | --    | --      |              |
| 7  | .750 - 20 UNEF    | .511    | (13.0) | .710  | (18.0)  | 1.135 (28.8) |
| 12   | .875 - 20 UNEF    | .585    | (14.9) | .710  | (18.0)  | 1.260 (32.0) |
| 19   | 1.000 - 20 UNEF   | .710    | (18.0) | .710  | (18.0)  | 1.385 (35.2) |
| 27   | 1.062 - 18 UNEF   | .789    | (20.0) | .710  | (18.0)  | 1.510 (38.4) |
| 37   | 1.188 - 18 UNEF   | .914    | (23.2) | .710  | (18.0)  | 1.635 (41.5) |
| 61   | 1.500 - 18 UNEF   | 1.194   | (30.3) | --    | --      |              |

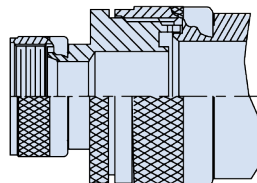
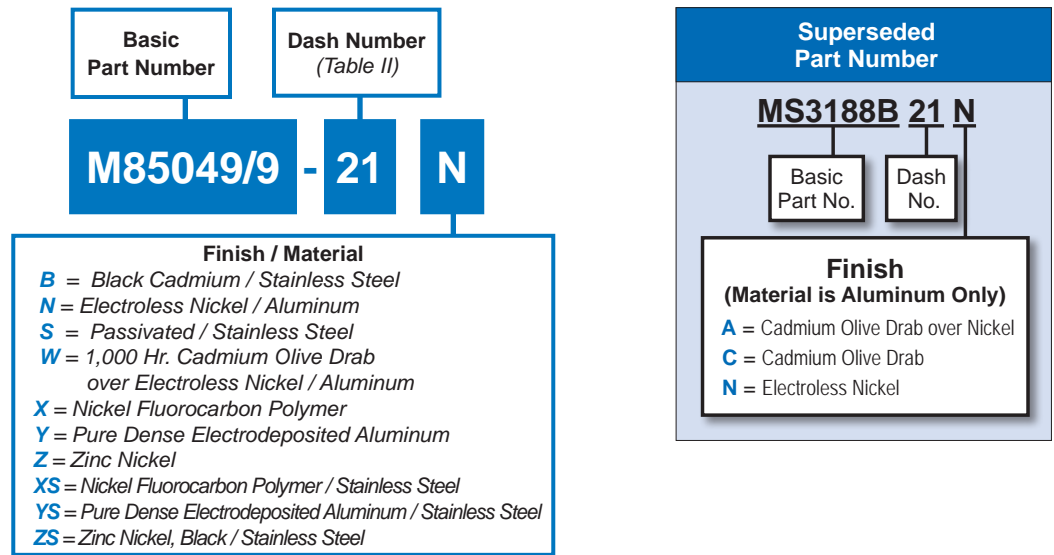
**NOTES**

1. For complete dimensions see the applicable Military Specification.
2. Metric dimensions (mm) are in parentheses.

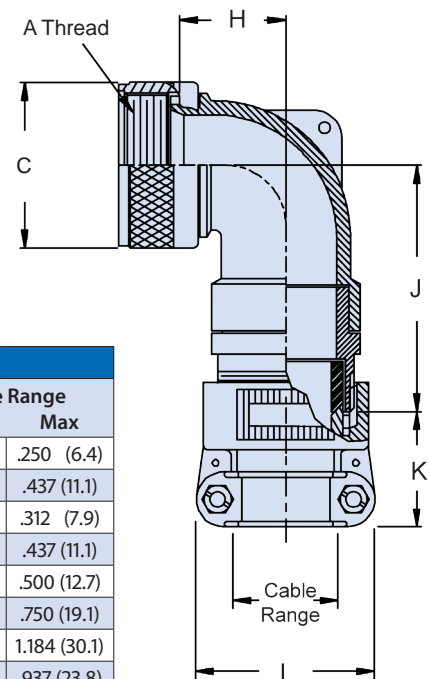
# BACKSHELLS AND ACCESSORIES FOR AS81703 SERIES 3 TYPE CONNECTORS 90° Environmental Backshell



## AS85049/9 and MS3188B



STYLE 2



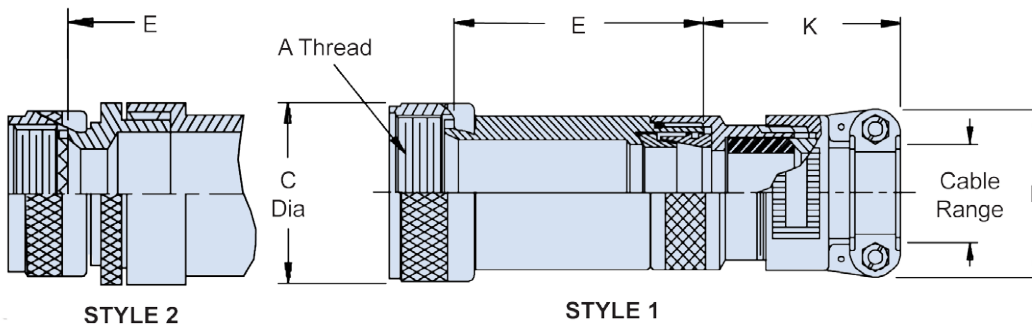
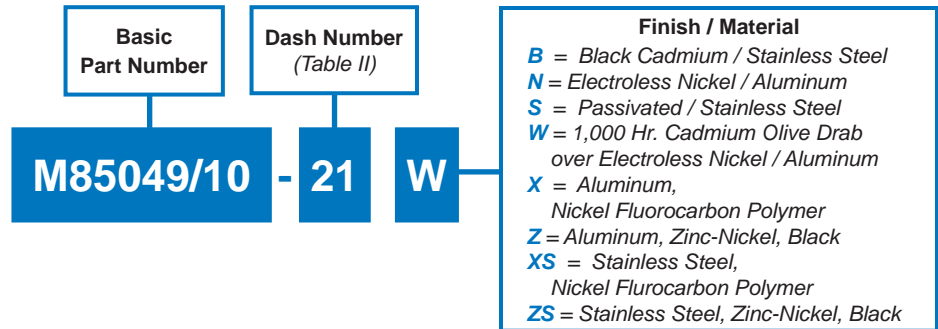
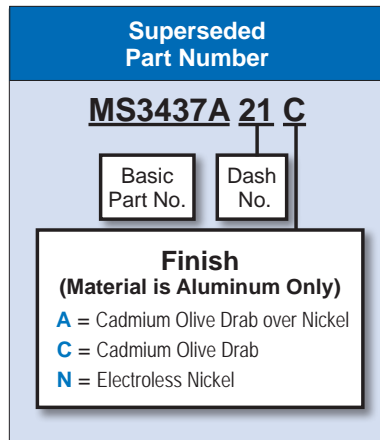
| Dash No. | Shell Size | A Thread Ref  | C Dia Max   | H Max        | J Max        | K Ref.       | L Max        | Cable Range Min | Cable Range Max |
|----------|------------|---------------|-------------|--------------|--------------|--------------|--------------|-----------------|-----------------|
| 1        | 03         | 9/16-24 UNEF  | .98 (24.9)  | .761 (19.3)  | 1.862 (47.3) | 1.027 (26.1) | .957 (24.3)  | .125 (3.2)      | .250 (6.4)      |
| 2        | 03         |               |             | 1.511 (38.4) | 1.382 (35.1) | 1.027 (26.1) | 1.145 (29.1) | .250 (6.4)      | .437 (11.1)     |
| 6        | 12         | 7/8-20 UNEF   | 1.28 (32.5) | .766 (19.5)  | 2.002 (50.9) | 1.027 (26.1) | .957 (24.3)  | .125 (3.2)      | .312 (7.9)      |
| 7        | 12         |               |             | .766 (19.5)  | 2.002 (50.9) | 1.027 (26.1) | 1.145 (29.1) | .250 (6.4)      | .437 (11.1)     |
| 8        | 12         |               |             | .766 (19.5)  | 1.397 (35.5) | 1.027 (26.1) | 1.332 (33.8) | .350 (8.9)      | .500 (12.7)     |
| 38       | 61         |               |             | 1.291 (32.8) | 2.442 (62.0) | 1.059 (26.9) | 1.551 (39.4) | .500 (12.7)     | .750 (19.1)     |
| 39       | 61         | 1-1/2-18 UNEF | 1.89 (48.0) | 1.291 (32.8) | 2.087 (53.0) | 1.375 (34.9) | 2.113 (53.7) | .875 (22.2)     | 1.184 (30.1)    |
| 53       | 61         |               |             | 1.291 (32.8) | 2.087 (53.0) | 1.156 (29.4) | 1.770 (45.0) | .625 (15.9)     | .937 (23.8)     |

### NOTES

1. For complete dimensions see the applicable Military Specification.
2. Metric dimensions (mm) are in parentheses.
3. When maximum cable entry is exceeded, Style 2 will be supplied.
4. Cable Range is defined as the accommodation range for the wire bundle or cable. Dimensions shown are not intended for inspection criteria.
5. Approximate chain lengths: Dash No. 01-12 = 5.0 (127.0); Dash No. 13-29 = 6.0 (152.4).

# Straight EMI/RFI Environmental Backshell

## AS85049/10 and MS3437A



**TABLE I: Shell Size and Dimensions**

| Dash No. | Shell Size | A Thread Class 2B | C Dia Max   |
|----------|------------|-------------------|-------------|
| 3        | 3          | .562 - 24 UNEF    | .67 (17.0)  |
| 12       | 7          | .750 - 20 UNEF    | .86 (21.8)  |
| 14       | 12         | .875 - 20 UNEF    | .98 (24.9)  |
| 16       | 19         | 1.000 - 20 UNEF   | 1.11 (28.2) |
| 18       | 27         | 1.062 - 18 UNEF   | 1.22 (31.0) |
| 20       | 37         | 1.188 - 18 UNEF   | 1.34 (34.0) |
| 61       | 61         | 1.500 - 18 UNEF   | 1.65 (41.9) |

**TABLE II: Dash No., Style, Shell Size, Dimensions and Cable Range**

| Dash No. | Shell Size | Style | E Max         | K Ref        | L Max        | Cable Range  |              |
|----------|------------|-------|---------------|--------------|--------------|--------------|--------------|
|          |            |       |               |              |              | Min          | Max          |
| 01       | 3          | 1     | 2.125 (54.0)  | 1.544 (39.2) | .957 (24.3)  | .125(3.2)    | .250(6.4)    |
| 02       | 3          | 1     | 3.125 (79.4)  | 1.544 (39.2) | .957 (24.3)  | .125(3.2)    | .250(6.4)    |
| 03       | 3          | 2     | 2.875 (73.0)  | 1.544 (39.2) | 1.145 (29.1) | .250(6.4)    | .437 (11.1)  |
| 04       | 3          | 2     | 3.875 (98.4)  | 1.544 (39.2) | 1.145 (29.1) | .250(6.4)    | .437 (11.1)  |
| 13       | 12         | 1     | 2.125 (54.0)  | 1.544 (39.2) | 1.145 (29.1) | .250(6.4)    | .437 (11.1)  |
| 14       | 12         | 1     | 3.125 (79.4)  | 1.544 (39.2) | 1.145 (29.1) | .250(6.4)    | .437 (11.1)  |
| 15       | 12         | 2     | 2.875 (73.0)  | 1.844 (46.8) | 1.332 (33.8) | .350(8.9)    | .625 (15.9)  |
| 16       | 12         | 2     | 3.875 (98.4)  | 1.844 (46.8) | 1.332 (33.8) | .350(8.9)    | .625 (15.9)  |
| 103      | 61         | 1     | 3.125 (79.4)  | 1.916 (48.7) | 1.551 (39.4) | .500 (12.7)  | .750 (19.1)  |
| 104      | 61         | 1     | 4.125 (104.8) | 1.916 (48.7) | 1.551 (39.4) | .500 (12.7)  | .750 (19.1)  |
| 105      | 61         | 1     | 3.125 (79.4)  | 2.000 (50.8) | 1.770 (45.0) | .625 (15.9)  | .937 (23.8)  |
| 106      | 61         | 1     | 4.125 (104.8) | 2.000 (50.8) | 1.770 (45.0) | .625 (15.9)  | .937 (23.8)  |
| 107      | 61         | 2     | 3.875 (98.4)  | 2.230 (56.6) | 2.113 (53.7) | .875 (22.2)  | 1.250 (31.8) |
| 108      | 61         | 2     | 4.875 (123.8) | 2.230 (56.6) | 2.113 (53.7) | .875 (22.2)  | 1.250 (31.8) |
| 109      | 61         | 2     | 3.875 (98.4)  | 2.024 (51.4) | 2.363 (60.0) | 1.000 (25.4) | 1.375 (34.9) |
| 110      | 61         | 2     | 4.875 (123.8) | 2.024 (51.4) | 2.363 (60.0) | 1.000 (25.4) | 1.375 (34.9) |
| 111      | 12         | 1     | 2.125 (54.0)  | 1.844 (46.8) | 1.332 (33.8) | .350 (8.9)   | .500 (12.7)  |
| 114      | 12         | 1     | 2.125 (54.0)  | 1.544 (39.2) | .957 (24.3)  | .125 (3.2)   | .312 (7.9)   |
| 115      | 12         | 1     | 3.125 (79.4)  | 1.544 (39.2) | .957 (24.3)  | .125 (3.2)   | .312 (7.9)   |
| 138      | 12         | 1     | 2.125 (54.0)  | 1.844 (46.8) | 1.332 (33.8) | .350 (8.9)   | .500 (12.7)  |
| 139      | 12         | 1     | 3.125 (79.4)  | 1.844 (46.8) | 1.332 (33.8) | .350 (8.9)   | .500 (12.7)  |

**NOTES**

1. For complete dimensions see the applicable Military Specification.
2. Metric dimensions (mm) are in parentheses.
3. Cable Range is defined as the accommodation range for the wire bundle or cable. Dimensions shown are not intended for inspection criteria.

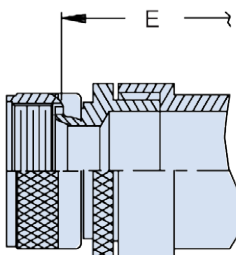
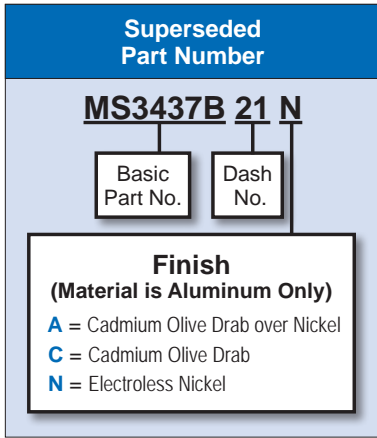


BACKSHELLS AND ACCESSORIES  
FOR AS81703 SERIES 3 TYPE CONNECTORS

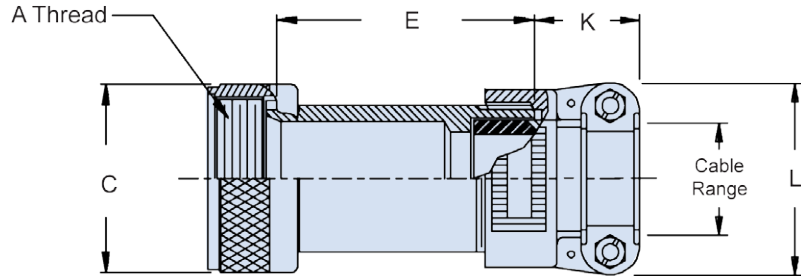
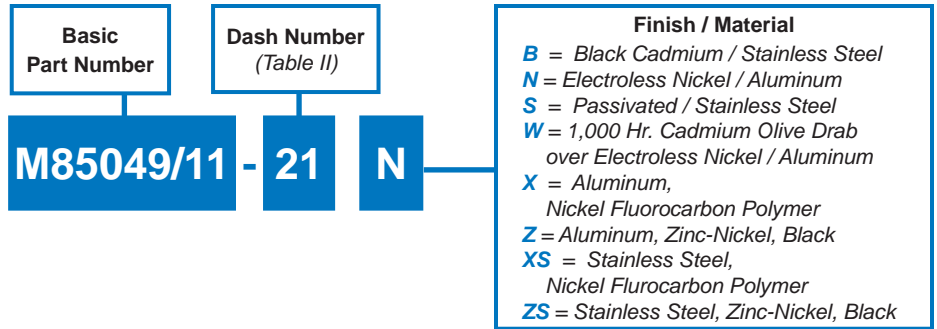


**Straight Environmental Backshell**

**AS85049/11 and MS3437B**



STYLE 2



STYLE 1

**TABLE I: Shell Size and Dimensions**

| Dash No. | Shell Size | A Thread Class 2B | C Dia Max   |
|----------|------------|-------------------|-------------|
| 3        | 3          | .562 - 24 UNEF    | .67 (17.0)  |
| 12       | 7          | .750 - 20 UNEF    | .86 (21.8)  |
| 14       | 12         | .875 - 20 UNEF    | .98 (24.9)  |
| 16       | 19         | 1.000 - 20 UNEF   | 1.11 (28.2) |
| 18       | 27         | 1.062 - 18 UNEF   | 1.22 (31.0) |
| 20       | 37         | 1.188 - 18 UNEF   | 1.34 (34.0) |
| 61       | 61         | 1.500 - 18 UNEF   | 1.65 (41.9) |

**TABLE II: Dash No., Style, Shell Size, Dimensions and Cable Range**

| Dash No. | Shell Size | Style | Dimensions and Cable Range |              |              |                 |                 |
|----------|------------|-------|----------------------------|--------------|--------------|-----------------|-----------------|
|          |            |       | E Max                      | K Ref        | L Max        | Cable Range Min | Cable Range Max |
| 01       | 3          | 1     | 2.125 (54.0)               | 1.027 (26.1) | .957 (24.3)  | .125(3.2)       | .250(6.4)       |
| 02       | 3          | 1     | 3.125 (79.4)               | 1.027 (26.1) | .957 (24.3)  | .125(3.2)       | .250(6.4)       |
| 03       | 3          | 2     | 2.875 (73.0)               | 1.027 (26.1) | 1.145 (29.1) | .250(6.4)       | .437 (11.1)     |
| 04       | 3          | 2     | 3.875 (98.4)               | 1.027 (26.1) | 1.145 (29.1) | .250(6.4)       | .437 (11.1)     |
| 13       | 12         | 1     | 2.125 (54.0)               | 1.027 (26.1) | 1.145 (29.1) | .250(6.4)       | .437 (11.1)     |
| 14       | 12         | 1     | 3.125 (79.4)               | 1.027 (26.1) | 1.145 (29.1) | .250(6.4)       | .437 (11.1)     |
| 15       | 12         | 2     | 2.875 (73.0)               | 1.027 (26.1) | 1.332 (33.8) | .350(8.9)       | .625 (15.9)     |
| 16       | 12         | 2     | 3.875 (98.4)               | 1.027 (26.1) | 1.332 (33.8) | .350(8.9)       | .625 (15.9)     |
| 103      | 61         | 1     | 3.125 (79.4)               | 1.059 (26.9) | 1.551 (39.4) | .500 (12.7)     | .750 (19.1)     |
| 104      | 61         | 1     | 4.125 (104.8)              | 1.059 (26.1) | 1.551 (39.4) | .500 (12.7)     | .750 (19.1)     |
| 105      | 61         | 1     | 3.125 (79.4)               | 1.156 (29.4) | 1.770 (45.0) | .625 (15.9)     | .937 (23.8)     |
| 106      | 61         | 1     | 4.125 (104.8)              | 1.156 (29.4) | 1.770 (45.0) | .625 (15.9)     | .937 (23.8)     |
| 107      | 61         | 2     | 3.875 (98.4)               | 1.375 (34.9) | 2.113 (53.7) | .875 (22.2)     | 1.250 (31.8)    |
| 108      | 61         | 2     | 4.875 (123.8)              | 1.375 (34.9) | 2.113 (53.7) | .875 (22.2)     | 1.250 (31.8)    |
| 109      | 61         | 2     | 3.875 (98.4)               | 1.500 (38.1) | 2.363 (60.0) | 1.000 (25.4)    | 1.375 (34.9)    |
| 110      | 61         | 2     | 4.875 (123.8)              | 1.500 (38.1) | 2.363 (60.0) | 1.000 (25.4)    | 1.375 (34.9)    |
| 111      | 12         | 1     | 2.125 (54.0)               | 1.027 (26.1) | 1.332 (33.8) | .350 (8.9)      | .500 (12.7)     |
| 114      | 12         | 1     | 2.125 (54.0)               | 1.027 (26.1) | .957 (24.3)  | .125 (3.2)      | .312 (7.9)      |
| 115      | 12         | 1     | 3.125 (79.4)               | 1.027 (26.1) | .957 (24.3)  | .125 (3.2)      | .312 (7.9)      |
| 138      | 12         | 1     | 2.125 (54.0)               | 1.027 (26.1) | 1.332 (33.8) | .350 (8.9)      | .500 (12.7)     |
| 139      | 12         | 1     | 3.125 (79.4)               | 1.027 (26.1) | 1.332 (33.8) | .350 (8.9)      | .500 (12.7)     |

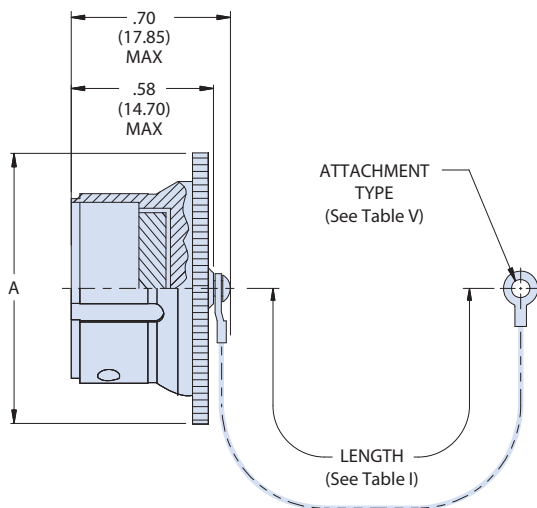
**NOTES**

1. For complete dimensions see the applicable Military Specification.
2. Metric dimensions (mm) are in parentheses.
3. Cable Range is defined as the accommodation range for the wire bundle or cable. Dimensions shown are not intended for inspection criteria.

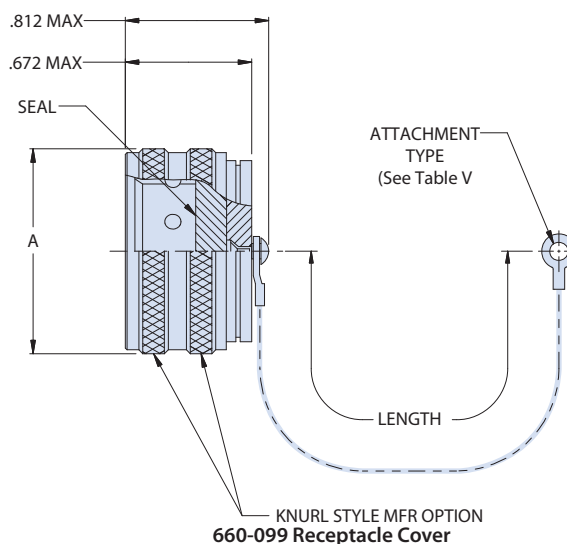
# Protective Covers

## 660-067 Plug Cover • 660-099 Receptacle Cover

| How To Order        |  |      |   |    |  |   |   |     |
|---------------------|--|------|---|----|--|---|---|-----|
| Sample Part Number  | 660  | -099 | M | 12 |  | R | 5 | -04 |
| Basic Part Number   | 660 = Protective cover for AS  |      |   |    |  |   |   |     |
| Connector Style     | -067 = Plug Cover -099 = Receptacle Cover  |      |   |    |  |   |   |     |
| Material / Finish   | B = Cadmium O.D. J = Gold Iridite over Cad Plate over Nickel<br>M = Electroless Nickel N = Cad Plate Olive Drab over Nickel<br>NF = Al Alloy/Cad O.D. Over Electroless Nickel (500 Hr. Salt Spray)<br>T = Cad Plate / Bright Dip over Nickel<br>C = Anodize Black (per AMS-A-8625 Type II Class 2) |      |   |    |  |   |   |     |
| Shell Size          | See Table I  |      |   |    |  |   |   |     |
| Contact Type        | A = Socket Contacts B = Pin Contacts<br>(Applicable to -067 Plug Cover only. Omit for receptacle cover)  |      |   |    |  |   |   |     |
| Attachment Type     | Table III  |      |   |    |  |   |   |     |
| Attachment Length   | In Inches. Note "Length Max" Table I for Plug Covers   |      |   |    |  |   |   |     |
| Ring Style Dash No. | Table IV, V  |      |   |    |  |   |   |     |



660-067 Plug Cover



660-099 Receptacle Cover

### NOTES

1. Equivalent Drawing No. DBASC76-\*
2. Metric dimensions (mm) are in parentheses.

### MATERIAL/FINISH

Cover - Aluminum Alloy / see Table II  
 Lockwasher, Nut, Rings, Rivets, Screw, Wire Rope Terminals - CRES / Passivate  
 Seal - Silicone (Plug Cover) Neoprene Sponge (Receptacle Cover)

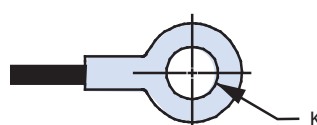
# Protective Covers

## 660-067 Plug Cover • 660-099 Receptacle Cover

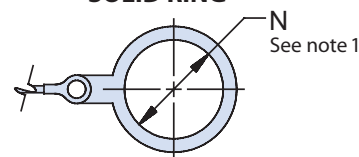
| Available Lanyard Types |                        |   |
|-------------------------|------------------------|---|
|                         |                        |   |
| Bead Chain<br>(Type D)  | Sash Chain<br>(Type S) | Wire or Nylon Rope<br>(Types F, G, H, K, R, T, U) |

| Lanyard Code |  |
|--------------|--|
| Code         | Description  |
| D            | Bead Chain, CRES, Passivated with Terminal         |
| E            | Link Chain, CRES, Passivated, with Clevis Terminal |
| F            | Wire Rope, Nylon Jacket with Terminal              |
| G            | Nylon Rope   |
| H            | Wire Rope, Teflon Jacket with Terminal             |
| N            | No Lanyard   |
| R            | Wire Rope, PVC Jacket with Terminal                |
| S            | #8 Sash Chain, CRES, Passivated                    |
| T            | Wire Rope, No Jacket, with Terminal                |
| U            | Wire Rope, Polyurethane Jacket with Terminal       |

### ATTACHMENT RING



### SOLID RING



| Table IV |                       |
|----------|-----------------------|
| Dash No  | K Dia<br>±.010 (0.25) |
| 01       | .140 (3.56)           |
| 02       | .182 (4.62)           |
| 03       | .191 (4.85)           |
| 04       | .197 (5.00)           |
| 05       | .167 (4.24)           |
| 06       | .125 (3.18)           |
| 07       | .218 (5.54)           |
| 09       | .156 (3.96)           |

| Table III |                      |
|-----------|----------------------|
| Dash No   | N Dia<br>±.015 (0.4) |
| 100       | .391 (9.9)           |
| 101       | .516 (13.1)          |
| 102       | .583 (14.8)          |
| 103       | .641 (16.3)          |
| 104       | .708 (18.0)          |
| 105       | .766 (19.5)          |
| 205       | .788 (20.0)          |
| 106       | .896 (22.2)          |
| 206       | .907 (23.0)          |
| 107       | 1.016 (25.8)         |
| 207       | 1.025 (26.0)         |
| 108       | 1.141 (29.0)         |
| 308       | 1.188 (30.18)        |
| 208       | 1.203 (30.6)         |
| 109       | 1.266 (32.2)         |
| 209       | 1.312 (33.32)        |
| 110       | 1.391 (35.3)         |
| 210       | 1.438 (36.53)        |
| 111       | 1.521 (38.63)        |
| 211       | 1.536 (39.01)        |
| 112       | 1.641 (41.68)        |
| 113       | 1.766 (44.86)        |
| 213       | 1.812 (46.02)        |
| 114       | 1.891 (48.03)        |
| 214       | 1.938 (49.23)        |
| 115       | 2.078 (52.78)        |
| 116       | 2.406 (61.11)        |
| 117       | 2.510 (63.75)        |

Table I: Shell Size, Attachment Length

| Size | A Max (Plug) | Attachment Length Max (Plug) | B Max (Receptacle) |
|------|--------------|------------------------------|--------------------|
| 3    | .73 (18.50)  | 3.11 (79.00)                 | .796 (20.2)        |
| 7    | .90 (22.80)  | 3.74 (95.00)                 | .933 (23.7)        |
| 12   | 1.07 (27.20) | 3.74 (95.00)                 | 1.140 (29.0)       |
| 19   | 1.20 (30.60) | 3.74 (95.00)                 | 1.228 (31.2)       |
| 27   | 1.36 (34.55) | 3.74 (95.00)                 | 1.383 (35.1)       |
| 37   | 1.49 (37.85) | 4.37 (111.00)                | 1.513 (38.4)       |
| 61   | 1.83 (46.45) | 4.37 (111.00)                | 1.829 (46.5)       |



The new  
MIL-DTL-38999  
go-to supplier



MIL-DTL-38999

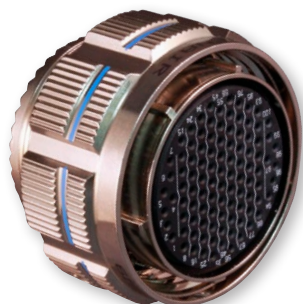
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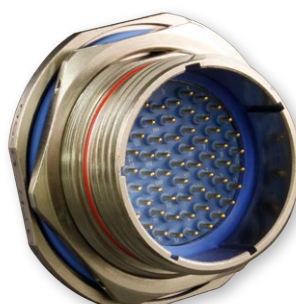
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### QPL MIL-DTL-38999 CONNECTORS



D38999/26 Plug



D38999/24 Jam nut receptacle



D38999/20 Wall mount receptacle

# MIL-DTL-38999 DERIVATIVES AND OTHER Mil-Aero Connector Specials



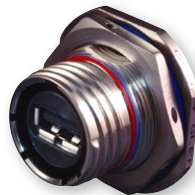
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SuperNine® EMI/EMP  
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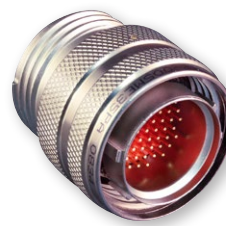
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Special extended-length bulkhead penetrators



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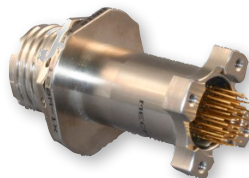
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Mounting flange  
modifications



Quick-disconnect push-pull  
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Integrated/housed  
electronics



Integrated band/  
boot porch



Blind-mate and  
low-extraction force

## NON-STANDARD CONTACT LAYOUTS



Hybrid power  
contact arrangement



Sealed Coax  
insert arrangement



Hybrid shielded contact/signal  
contact insert arrangement



Optronic (transmitter/receiver)  
contact arrangement



*Out of This World*  
**INTERCONNECT  
SOLUTIONS**

**Glenair, Inc.**

1211 Air Way • Glendale, California • 91201-2497

Telephone: 818-247-6000 • Fax: 818-500-9912 • sales@glenair.com

**www.glenair.com**

**Glenair Power  
Products Group**

860 N. Main Street Extension  
Wallingford, CT  
06492

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

**Glenair UK Ltd**

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

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

**Glenair Microway Systems**

7000 North Lawndale Avenue  
Lincolnwood, IL  
60712

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

**Glenair Nordic AB**

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

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

**Glenair Electric GmbH**

Schaberweg 28  
61348 Bad Homburg  
Germany

Telephone:  
06172 / 68 16 0  
Facsimile:  
06172 / 68 16 90  
info@glenair.de

**Glenair Iberica**

C/ La Vega, 16  
45612 Velada  
Spain

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

**Glenair Italia S.p.A.**

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

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

**Glenair France SARL**

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

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

**Glenair Korea**

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

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

