

# Amphenol

## MIL-DTL-83723, Series III, Pyle®



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### MIL-DTL-83723 Series III, Pyle® Typical Markets:

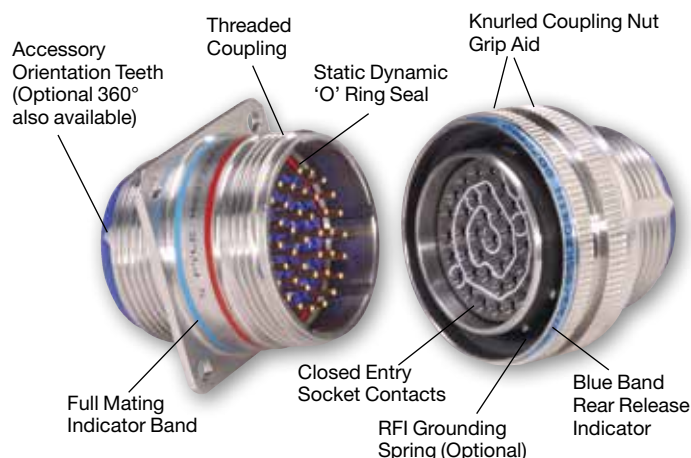
- Military & Commercial Aviation
  - High Temperature Applications, Harsh Environments
- Military Vehicles

**Amphenol**  
Aerospace

# MIL-DTL-83723, Series III, Pyle®

## Threaded or Bayonet, High Temp. Stainless Steel

Amphenol Aerospace offers the Pyle® Product line of MIL-DTL-83723\*, Series III Connectors.



Amphenol/Pyle 83723 Series III high temperature styles are capable of operation at 260° C/500°F. A 100% scoop-proof version of the high temperature connector is also available under specification ESC11/Pyle HTK Series. In addition, this connector series incorporates a unique sealing grommet that is capable of sealing on standard diameter wire as well as Kapton wire of reduced diameter.

The Pyle 83723 family provides connectors in environmental, firewall and hermetic classes that exceed the most stringent specification requirements.

MIL-DTL-83723, Series III Connectors are Available in a Wide Variety of Styles:

### THREADED STYLE CONNECTORS

- Stainless steel shells\*\* provide corrosion resistance
- Metal-to-metal bottoming
- Unique sealing grommet accepts a wide range of wire diameters
- Patented non-decoupling device in plugs - a self-locking clutch plate that provides greater resistance to decoupling than coupling during vibration

### BAYONET STYLE CONNECTORS

- Same quality features of the threaded style, but with 3 point bayonet coupling - quick turn to lock, visual confirmation of complete coupling

### HIGH TEMPERATURE STYLE CONNECTORS

- High temperature connector materials and contacts provide operation to 200°C and Firewall capability to 260°C
- Improved metal-to-metal bottoming design
- Unique sealing grommet accepts a wide range of wire diameters
- Improved 360° accessory orientation teeth provide greater performance under vibration
- Patented non-decoupling device (torque differential)
- Improved shell-to-shell conductivity with optional RFI grounding fingers
- Styles available that meet several European specifications, General Electric and Rolls Royce specifications
- Special Shell Geometry Styles available

### HERMETIC STYLE CONNECTORS

- Hermetic styles are available in threaded receptacles with solderwell or flat eyelet termination. PC Tail Designs are available on request.
- Designed for environmental moisture sealing with fused compression glass sealed inserts
- High temperature hermetics 200°C and 260°C Firewall

## Design Features (Threaded Style Shown)

The Amphenol MIL-DTL-83723, Series III family of connectors includes styles from Pyle National. These have proven technology for severe environments and are widely used in commercial and military aerospace markets. Amphenol/Pyle 83723 connectors incorporate many advantageous features, such as a unique threaded coupling mechanism that provides greater resistance to decoupling. This coupling mechanism eliminates the need for safety wiring and tends to couple during vibration - thus offering the user added assurance and a margin of safety.

### SERVICE RATINGS

| Service Rating | Recommended Operating AC Voltage at Sea Level | Test Voltage AC (RMS), 60 cps |            |            |             |
|----------------|-----------------------------------------------|-------------------------------|------------|------------|-------------|
|                |                                               | Sea Level                     | 50,000 ft. | 70,000 ft. | 110,000 ft. |
| I              | 600                                           | 1,500                         | 500        | 375        | 200         |

Please note that the electrical data given is not an establishment of electrical safety factors. This is left entirely in the designer's hands as he can best determine which peak voltage, switching surges, transients, etc. can be expected in a particular circuit.



\* MIL-DTL-83723 supersedes MIL-C-83723.

\*\* The Amphenol Pyle 83723 family is offered in stainless steel shell classes. See the Amphenol Matrix 83723 family for aluminum shell classes in the preceding section of this catalog.

# MIL-DTL-83723, Series III, Pyle®

## Manufacturer's Specifications

The Amphenol/Pyle® Product line of MIL-DTL-83723\*, Series III Connectors was developed for the higher operating temperatures inherent in today's high performance aircraft and aircraft engines.

**These connectors meet the performance requirements of the following manufacturer's specifications:**

- Boeing BACC63CM/CN\* Firewall
- European: ASD† EN2997
- General Electric: M50TF3564
- Rolls Royce/SBAC: ESC10 and ESC11



**ESC11**  
**Engine Connector**

### MIL-DTL-83723, SERIES III CONNECTOR PERFORMANCE CHARACTERISTICS

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                            |  |                |         |             |                 |             |                            |                  |             |                            |                  |             |                            |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--|----------------|---------|-------------|-----------------|-------------|----------------------------|------------------|-------------|----------------------------|------------------|-------------|----------------------------|
| Operating Temperature Data | Std: -85°F (-65°C) to 392°F (200°C)<br>Class K types meet fireproof test per MIL-DTL-83723 2000°F (1093°C)<br>High Temperature Series: Operates at 500°F (260°C)                                                                                                                                                                                                                                                                                                                                                                         |                            |  |                |         |             |                 |             |                            |                  |             |                            |                  |             |                            |
| Altitude                   | Sea Level to 110,000 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                            |  |                |         |             |                 |             |                            |                  |             |                            |                  |             |                            |
| Voltage Breakdown Rating   | Service Rating I<br>Sea Level .....1,500                      50,000 ft. ....500<br>70,000 ft. .... 375                      110,000 ft. .... 200                                                                                                                                                                                                                                                                                                                                                                                        |                            |  |                |         |             |                 |             |                            |                  |             |                            |                  |             |                            |
| Contact Rating             | Size 20 contacts ... 7.5 amperes max.<br>Size 16 contacts ... 13.0 amperes max.<br>Size 12 contacts ... 23 amperes max.                                                                                                                                                                                                                                                                                                                                                                                                                  |                            |  |                |         |             |                 |             |                            |                  |             |                            |                  |             |                            |
| Contact Retention Strength | Exceeds MIL-DTL-83723 requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            |  |                |         |             |                 |             |                            |                  |             |                            |                  |             |                            |
| Connector Durability       | 500 cycles per MIL-DTL-83723 for threaded coupling;<br>500 cycles per General Electric M50TF2321 for non-decoupling styles                                                                                                                                                                                                                                                                                                                                                                                                               |                            |  |                |         |             |                 |             |                            |                  |             |                            |                  |             |                            |
| Humidity                   | To 98% relative humidity, including condensation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |  |                |         |             |                 |             |                            |                  |             |                            |                  |             |                            |
| Exposure                   | Freezing rain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            |  |                |         |             |                 |             |                            |                  |             |                            |                  |             |                            |
| Non-Decoupling             | Exceeds requirements of MIL-DTL-83723/95 and 96.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |  |                |         |             |                 |             |                            |                  |             |                            |                  |             |                            |
| Vibration                  | Meets MIL-DTL-83723 of 41.7G's for 16 hours.; Boeing BACC63CM/CN for 36 hours<br>General Electric vibration spec. M50TF2321 and M50TF2238 for 36 hours, which includes:<br><table><tr><td>Temp. Extremes</td><td>G Level</td><td>Time Length</td></tr><tr><td>Room Temp. ....</td><td>60 G's ....</td><td>12 hrs. (4 hrs. each axis)</td></tr><tr><td>-65°F ±5°F .....</td><td>60 G's ....</td><td>12 hrs. (4 hrs. each axis)</td></tr><tr><td>350°F ±5°F .....</td><td>60 G's ....</td><td>12 hrs. (4 hrs. each axis)</td></tr></table> |                            |  | Temp. Extremes | G Level | Time Length | Room Temp. .... | 60 G's .... | 12 hrs. (4 hrs. each axis) | -65°F ±5°F ..... | 60 G's .... | 12 hrs. (4 hrs. each axis) | 350°F ±5°F ..... | 60 G's .... | 12 hrs. (4 hrs. each axis) |
| Temp. Extremes             | G Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Time Length                |  |                |         |             |                 |             |                            |                  |             |                            |                  |             |                            |
| Room Temp. ....            | 60 G's ....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 12 hrs. (4 hrs. each axis) |  |                |         |             |                 |             |                            |                  |             |                            |                  |             |                            |
| -65°F ±5°F .....           | 60 G's ....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 12 hrs. (4 hrs. each axis) |  |                |         |             |                 |             |                            |                  |             |                            |                  |             |                            |
| 350°F ±5°F .....           | 60 G's ....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 12 hrs. (4 hrs. each axis) |  |                |         |             |                 |             |                            |                  |             |                            |                  |             |                            |

### HERMETIC CONNECTOR PERFORMANCE CHARACTERISTICS

|                                                  |                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Thermal Shock</b>                             | No damage detrimental to the operation of the connector occurs when subjected to 10 cycles of thermal shock from 0°C to 90°C and back to 0°C.                                                                                                                                                             |
| <b>Physical Shock (Mated)</b>                    | 300 G's                                                                                                                                                                                                                                                                                                   |
| <b>Moisture Resistance (Mated)</b>               | 500 Megohms                                                                                                                                                                                                                                                                                               |
| <b>Insulation Resistance, High Temp. (Mated)</b> | 500 Megohms                                                                                                                                                                                                                                                                                               |
| <b>Corrosion (Unmated)</b>                       | Complies with MIL-DTL-83723 Req.                                                                                                                                                                                                                                                                          |
| <b>Temperature Life</b>                          | Fully functional for 1000 hours at 200°C (392°F) ambient. Internal temperature 238°C (460°F).                                                                                                                                                                                                             |
| <b>Air Leakage (Unmated)</b>                     | Less than .01 micron per cubic feet per hour on application of 15 PDS pressure differential across the connector.                                                                                                                                                                                         |
| <b>Altitude Immersion (Mated)</b>                | After 3 cycles immersed in salt water with pressure reduced to 1 in. Hg (75,000 ft. altitude) for 30 minutes and returned to atmosphere pressure. While connectors submerged insulation resistance should remain 1000 megohms minimum and support 1500 volts RMS applied without flash-over or breakdown. |
| <b>High Potential Voltage Altitude (Unmated)</b> | When tested in accordance with MIL-STD-202, Method 301, no flash-over or breakdown under simulated altitude conditions as shown:<br><b>Altitude/Service Rating I</b><br>50,000 ..... 500 AC-RMS<br>70,000 ..... 375 AC-RMS<br>110,000 ..... 200 AC-RMS                                                    |

\* BACC63CM supersedes BACC63BR and BACC63CN supersedes BACC63BT.

† ASD supersedes AECMA

# MIL-DTL-83723, Series III, Pyle®

## Sq. Flange Receptacle, Threaded - Quick Reference

### MIL-DTL-83723, SERIES III SQUARE FLANGE RECEPTACLE, THREADED COUPLING

Military: **M83723/82** with Sockets, Classes G, K

Military: **M83723/83** with Pins, Classes G, K

Commercial: **BT( J)-17**  
With 'O' ring seal, Classes G, K

Comm. Special for General Electric: **BJ-17**  
With Static Dynamic Seal, Stainless Steel, but not avail. in Firewall

**BJ8-17**  
Same as BJ-17 except with Scoop-proof recessed pins

**BN-17**  
Same as BJ-17 except Electro-deposited Nickel Base

**BN8-17**  
Same as BN-17 except with Scoop-proof recessed pins

**BNK-17**  
Same as BN except Stainless Steel Firewall

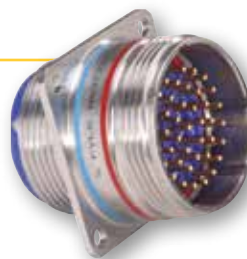
Special with Boeing Designation: **BACC63CN\*\***  
With 'O' ring seal, Stainless Steel Firewall, with Boeing approved contacts, Shell modifications with 360° teeth per MS3155

Comm. Special per Boeing Co. Spec.: **BSK-17**  
Stainless Steel Firewall with 'O' ring seal, qualified to Boeing, Y126 Variation - with Boeing approved contacts

Commercial ASD Designation: **EN2997 ( J)0**  
Meets ASD specifications  
200°C temp. (Classes K, S, Y),  
260°C high temp. (Classes KE, SE, YE)

Comm.- Meet Several European Stds: **BT( J)-17**  
With 'O' ring seal, Classes G, K  
Variations for Euro market specifications

**BJ( J)-17**  
With Static Dynamic Seal, Classes G, K  
Variations for Euro market specifications



**Square Flange Receptacle Threaded**

### SERVICE CLASSES\* MILITARY AND COMMERCIAL

|    |                                                                                            |
|----|--------------------------------------------------------------------------------------------|
| G  | Stainless steel, 200°C                                                                     |
| K  | Stainless steel, 200°C Firewall capability                                                 |
| S  | Stainless steel, 200°C Firewall capability, Grounding Spring                               |
| P  | Stainless steel, 200°C, Hermetic with Eyelet contacts                                      |
| Y  | Stainless Steel, 200°C, Hermetic with Solderwell contacts                                  |
| KE | Stainless Steel, High Temp. (260°C) Firewall capability                                    |
| SE | Stainless steel, High Temp. (260°C) Firewall capability, Grounding Spring                  |
| YE | Stainless Steel, High Temp. (260°C) Firewall capability, Hermetic with solderwell contacts |

\* For Classes A, R and W (aluminum shell types) - Amphenol supplies these in their Matrix 83723 family. See the preceding section of this catalog, 83723 III Matrix.



**Square Flange Receptacle, Threaded, per European Stds.**  
(Green Insert - High Temp 260°C;  
Blue insert - 200°C)

Commercial - Meet Society of British Aerospace Co./Rolls Royce Standards:

**ESC10 ( J)0**  
260°C Firewall (Classes KE, SE, YE),  
360° accessory teeth per MS3155

**ESC11 ( J)0**  
260°C Firewall (Classes KE, SE, YE),  
Scoop-proof recessed pins,  
360° accessory teeth per MS3155

ESC10 & ESC11 also available in Hermetic square flange receptacles - See Hermetic quick ref. page 369.

ESC11 with Scoop-Proof (Recessed pins):

**HTK-17**  
Standard ESC11, Class K Firewall, Scoop-proof, Variations for Euro market specifications

**HNK-17**  
Nickel finish, Class K Firewall  
Mating recept. has 'O' ring seal, Scoop-proof, Variations for Euro market specs

**HSK-17**  
Same as HTK, except this is a special designator for Boeing Co.

\*\* BACC63CN supersedes BACC63BT.

See how to order pages 374-381 for complete part numbers.

Bayonet style square flange receptacles are shown on page 385.

# MIL-DTL-83723, Series III, Pyle®

## Jam Nut Receptacle, Threaded - Quick Reference

### MIL-DTL-83723, SERIES III JAM NUT (D-HOLE MOUNT) RECEPTACLE, THREADED COUPLING

Military: **M83723/84** with Sockets, Classes G, K

Military: **M83723/85** with Pins, Classes G, K

Commercial: **BT( )-19**  
With 'O' ring seal, Classes G, K

Comm. Special for General Electric: **BJ-19**  
With Static Dynamic Seal, Stainless Steel, but not avail. in Firewall

**BJ8-19**  
Same as BJ-17 except with Scoop-proof recessed pins

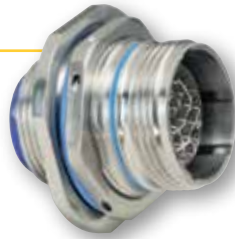
**BN-19**  
Same as BJ-17 except Electro-deposited Nickel Base

**BN8-19**  
Same as BN-17 except with Scoop-proof recessed pins

**BNK-19**  
Same as BN except Stainless Steel Firewall

Commercial ASD Designation: **EN2997 ( )7**  
Meets ASD specifications  
200°C temp. (Classes K, S, Y),  
260°C high temp. (Classes KE, SE, YE)

**NFL 54143 ( )7**



Jam Nut  
(D-Hole Mount)  
Receptacle,  
Threaded

### SERVICE CLASSES\* MILITARY AND COMMERCIAL

|    |                                                                                            |
|----|--------------------------------------------------------------------------------------------|
| G  | Stainless steel, 200°C                                                                     |
| K  | Stainless steel, 200°C Firewall capability                                                 |
| S  | Stainless steel, 200°C Firewall capability, Grounding Spring                               |
| P  | Stainless steel, 200°C, Hermetic with Eyelet contacts                                      |
| Y  | Stainless Steel, 200°C, Hermetic with Solderwell contacts                                  |
| KE | Stainless Steel, High Temp. (260°C) Firewall capability                                    |
| SE | Stainless steel, High Temp. (260°C) Firewall capability, Grounding Spring                  |
| YE | Stainless Steel, High Temp. (260°C) Firewall capability, Hermetic with solderwell contacts |

\* For Classes A, R and W (aluminum shell types) - Amphenol supplies these in their Matrix 83723 family. See the preceding section of this catalog, 83723 III Matrix.

Comm.- Meet Several European Stds: **BT( )-19**  
With 'O' ring seal, Classes G, K  
Variations for Euro market specifications

**BJ( )-19**  
With Static Dynamic Seal, Classes G, K  
Variations for Euro market specifications

Commercial - Meet Society of British Aerospace Co./Rolls Royce Standards: ESC10 & ESC11 jam nut receptacles are available in Hermetic only - See Hermetic quick ref. pages 369 & 370.

No Boeing Designated Jam nut receptacle.  
See how to order pages 374-381 for complete part numbers.

Bayonet style jam nut receptacles are shown on page 386.

# MIL-DTL-83723, Series III, Pyle®

## Plugs, Threaded - Quick Reference

### MIL-DTL-83723, SERIES III STANDARD STRAIGHT PLUG, THREADED COUPLING

Military: **M83723/86** with Sockets, Classes G, K

Military: **M83723/87** with Pins, Classes G, K

Commercial: **BT( )11**  
Mating recept. has 'O' ring seal,  
Classes G, K

Comm. Special for  
General Electric: **BJ-11**  
With Static Dynamic Seal,  
Stainless Steel, but not avail. in Firewall

**BJ8-11**  
Same as BJ-17 except with Scoop-proof  
recessed pins

**BN-11**  
Same as BJ-17 except Electro-deposited Nickel Base

**BN8-11**  
Same as BN-17 except with Scoop-proof recessed pins

**BNK-11**  
Same as BN except Stainless Steel Firewall



**Standard  
Straight Plug,  
Threaded**

No Boeing straight plug designations. No ASD or other European/ESC10 or ESC11  
straight plug designations. See page 387 for Bayonet style straight plug style.

### MIL-DTL-83723, SERIES III NON-DECOUPLING PLUG (UNIQUE SELF-LOCKING CLUTCH PLATE), THREADED COUPLING

Military: **M83723/95** with Sockets, Classes G, K  
**M83723/96** with Pins, Classes G, K  
**M83723/97** with EMI Grounding spring, with Pins  
**M83723/97** with EMI Grounding spring, with

Sockets

Commercial: **BT( )12**  
Mating recept. has 'O' ring seal,  
Classes G, K

Comm. Special for  
General Electric: **BJ-12**  
With Static Dynamic Seal,  
Stainless Steel, but not avail. in Firewall

**BJ8-12**  
Same as BJ-17 except with Scoop-proof  
recessed pins

**BN-12**  
Same as BJ-17 except Electro-deposited  
Nickel Base

**BN8-12**  
Same as BN-17 except with Scoop-proof  
recessed pins

**BNK-12**  
Same as BN except Stainless Steel Firewall

Special with Boeing  
Designation: **BACC63CM\*\***  
Mating recept. has 'O' ring seal,  
Stainless Steel Firewall, with Boeing  
approved contacts,  
Shell modifications with 360° teeth per  
MS3155

Comm. Special per  
Boeing Co. Spec.: **BSK-12**  
Stainless Steel Firewall qual. to Boeing,  
Y126 Variation - with Boeing approved  
contacts

\*\* BACC63CM supersedes BACC63BR.

See how to order pages 374-381 for complete part numbers.

No Bayonet style Non-Decoupling plug available.

### SERVICE CLASSES\* MILITARY AND COMMERCIAL

|    |                                                                              |
|----|------------------------------------------------------------------------------|
| G  | Stainless steel, 200°C                                                       |
| K  | Stainless steel, 200°C Firewall<br>capability                                |
| S  | Stainless steel, 200°C Firewall capa-<br>bility, Grounding Spring            |
| KE | Stainless Steel, High Temp. (260°C)<br>Firewall capability                   |
| SE | Stainless steel, High Temp. (260°C)<br>Firewall capability, Grounding Spring |

\* For Classes A, R and W (aluminum shell  
types) - Amphenol supplies these in their  
Matrix 83723 family. See the preceding  
section of this catalog, 83723 III Matrix.



### Non-Decoupling Plug, Threaded

Left - Green Insert - High Temp 260°C and  
360° Accessory Teeth;

Right - Blue insert - 200°C and 3 Accessory Teeth

Commercial

ASD Designation: **EN2997 ( )6**  
Meets ASD specifications  
200°C temp. (Classes K, S),  
260°C high temp. (Classes KE, SE)

Comm. - Meet Several

European Stds: **BT( )-12**  
Mating recept. has 'O' ring seal, Classes G, K  
Variations for Euro market specifications

**BJ( )-12**  
With Static Dynamic Seal, Classes G, K  
Variations for Euro market specifications

Commercial - Meet

Society of British Aerospace Co./Rolls

Royce Standards: **ESC10 ( )6**  
260°C Firewall (Classes KE, SE),  
360° accessory teeth per MS3155

**ESC11 ( )6**  
260°C Firewall (Classes KE, SE),  
Scoop-proof, 360° accessory teeth per

MS3155

ESC11 with Scoop-Proof

(Recessed pins): **HTK-12**  
Standard ESC11, Class K Firewall,  
Scoop-proof, Variations for Euro market specs

**HNK-12**  
Nickel finish, Class K Firewall  
Mating recept. has Static Dynamic seal,  
Scoop-proof, Variations for Euro market specs

**HSK-12**  
Same as HTK, except this is a special  
designator for Boeing Co.

# MIL-DTL-83723, Series III, Pyle®

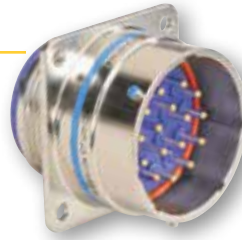
## Bayonet Plugs & Receptacles - Quick Reference

### MIL-DTL-83723, SERIES III SQUARE FLANGE RECEPTACLE, BAYONET COUPLING

Military: **M83723/71** with Sockets, Classes G, K

Military: **M83723/72** with Pins, Classes G, K

Commercial: **BY( )17**  
With 'O' ring seal, Classes G, K



Square Flange  
Receptacle  
with Bayonet  
Coupling

#### SERVICE CLASSES\* MILITARY AND COMMERCIAL

|   |                                            |
|---|--------------------------------------------|
| G | Stainless steel, 200°C                     |
| K | Stainless steel, 200°C Firewall capability |

\* For Classes A, R and W (aluminum shell types) - Amphenol supplies these in their Matrix 83723 family. See the preceding section of this catalog, 83723 III Matrix.

### MIL-DTL-83723, SERIES III JAM NUT (D-HOLE MOUNT) RECEPTACLE, BAYONET COUPLING

Military: **M83723/73** with Sockets, Classes G, K

Military: **M83723/74** with Pins, Classes G, K

Commercial: **BY( )19**  
With 'O' ring seal, Classes G, K



Jam Nut  
(D-Hole Mount)  
Receptacle  
with Bayonet  
Coupling

### MIL-DTL-83723, SERIES III STRAIGHT PLUG, BAYONET COUPLING

Military: **M83723/75** with Sockets, Classes G, K

Military: **M83723/76** with Pins, Classes G, K

Commercial: **BY( )10**  
With 'O' ring seal, Classes G, K



Straight Plug  
with Bayonet  
Coupling

Bayonet coupling connectors are offered in Military 83723 and Commercial equivalent designations. See how to order page 374. They are not included in Boeing, GE, ASD and other European specified connectors. Shell size 28 is not available in Bayonet coupling connectors.

83723 III

PYLE

# MIL-DTL-83723, Series III, Pyle®

## Hermetic Receptacles - Quick Reference

### MIL-DTL-83723, SERIES III HERMETIC SQUARE FLANGE RECEPTACLE, THREADED COUPLING



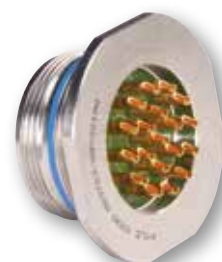
Hermetic  
Square Flange  
Receptacle,  
Threaded

|                                                                                    |                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Military:                                                                          | <b>M83723/88Y</b><br>Stainless Steel, Class Y,<br>Solderwell contacts                                                                                                                                                                                                                                                                                      |
| Military:                                                                          | <b>M83723/88P</b><br>Stainless Steel, Class P,<br>Eyelet contacts                                                                                                                                                                                                                                                                                          |
| Commercial:                                                                        | <b>BTY-17</b><br>Stainless Steel, 'O' ring Seal,<br>Solderwell or Eyelet contacts,<br>200°C or 260°C<br><b>BFY-17</b><br>Stainless Steel, Static Dynamic<br>Seal, Solderwell or Eyelet contacts,<br>200°C or 260°C<br><b>BNY-17</b><br>Stainless Steel, Static Dynamic<br>Seal, Electro-deposited Nickel, Solderwell or Eyelet contacts,<br>200°C or 260°C |
| Commercial<br>ASD Designation:                                                     | <b>EN2997Y0 / YE0</b><br>Meets ASD Specifications, Stainless Steel,<br>Class Y (200°C) / Class YE (260°C), Solderwell contacts                                                                                                                                                                                                                             |
| Commercial - Meet<br>Society of British<br>Aerospace Co./Rolls<br>Royce Standards: | <b>ESC10YE2</b><br>260°C Firewall, Stainless Steel, Class YE, Solderwell contacts<br><b>ESC11YE2</b><br>260°C Firewall, Stainless Steel, Class YE, Solderwell contacts,<br>Scoop-proof Recessed pins                                                                                                                                                       |
| PCB Tails available upon request                                                   |                                                                                                                                                                                                                                                                                                                                                            |

### SERVICE CLASSES HERMETIC MILITARY AND COMMERCIAL

|    |                                                                                                  |
|----|--------------------------------------------------------------------------------------------------|
| Y  | Stainless Steel, 200°C, Hermetic<br>with solderwell contacts                                     |
| P  | Stainless steel, 200°C, Hermetic with<br>eyelet contacts                                         |
| YE | Stainless Steel, High Temp. (260°C)<br>Firewall capability, Hermetic with<br>solderwell contacts |

### MIL-DTL-83723, SERIES III HERMETIC JAM NUT RECEPTACLE, THREADED COUPLING



Hermetic  
Jam Nut  
Receptacle,  
Threaded

|                                                                                    |                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Military:                                                                          | <b>M83723/89Y</b><br>Stainless Steel, Class Y, Solderwell contacts                                                                                                                                                                                                                                                                          |
| Military:                                                                          | <b>M83723/89P</b><br>Stainless Steel, Class Y, Eyelet contacts                                                                                                                                                                                                                                                                              |
| Commercial:                                                                        | <b>BTY-19</b><br>Stainless Steel, 'O' ring Seal, Solderwell or Eyelet contacts, 200°C or 260°C<br><b>BFY-19</b><br>Stainless Steel, Static Dynamic Seal, Solderwell or Eyelet contacts, 200°C or 260°C<br><b>BNY-19</b><br>Stainless Steel, Static Dynamic Seal, Electro-deposited Nickel, Solderwell or Eyelet<br>contacts, 200°C or 260°C |
| Commercial<br>ASD Designation:                                                     | <b>EN2997Y7 / YE7</b><br>Meets ASD Specifications, Stainless Steel,<br>Class Y (200°C) / Class YE (260°C), Solderwell contacts                                                                                                                                                                                                              |
| Commercial - Meet<br>Society of British<br>Aerospace Co./Rolls<br>Royce Standards: | <b>ESC10YE3</b><br>260°C Firewall, Stainless Steel, Class YE, Solderwell contacts<br><b>ESC11YE3</b><br>260°C Firewall, Stainless Steel, Class YE, Solderwell contacts,<br>Scoop-proof Recessed pins                                                                                                                                        |
| PCB Tails available upon request                                                   |                                                                                                                                                                                                                                                                                                                                             |

Commercial BTY, BFY and BNY meet  
European specifications and General  
Electric spec. GEM50TF3564, Classes  
A & B.

Shell sizes 20, 24 and 28, consult  
Amphenol Aerospace for availability.  
Hermetic style receptacles are not  
included in Boeing designations.

83723 III

PYLE

MIL-DTL-83723, Series III, Pyle®  
Hermetic Receptacles, cont. - Quick Reference

MIL-DTL-83723, SERIES III, HERMETIC SOLDER MOUNT/WELD MOUNT  
RECEPTACLE, THREADED COUPLING

- Military:

**M83723/90Y**  
Stainless Steel, Class Y,  
Solderwell contacts
- Military:

**M83723/90P**  
Stainless Steel, Class P,  
Eyelet contacts
- Commercial:

**BTY-14**  
Stainless Steel, 'O' ring Seal,  
Solderwell or Eyelet contacts,  
200°C or 260°C

**BFY-14**  
Stainless Steel, Static Dynamic  
Seal, Solderwell or Eyelet contacts,  
200°C or 260°C

**BNY-14**  
Stainless Steel, Static Dynamic  
Seal, Electro-deposited Nickel,  
Solderwell or Eyelet contacts,  
200°C or 260°C
- Commercial

ASD Designation:

**EN2997Y1 / YE1**  
Meets ASD Specifications, Stainless Steel,  
Class Y (200°C) / Class YE (260°C), Solderwell contacts
- Commercial - Meet

Society of British  
Aerospace Co./Rolls  
Royce Standards:

**ESC10YE1**  
260°C Firewall, Stainless Steel, Class YE, Solderwell contacts

**ESC11YE1**  
260°C Firewall, Stainless Steel, Class YE, Solderwell contacts,  
Scoop-proof Recessed pins
- PCB Tails available upon request



Hermetic  
Solder Mount/Weld  
Mount Receptacle,  
Threaded

| SERVICE CLASSES<br>HERMETIC<br>MILITARY AND COMMERCIAL |                                                                                            |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Y                                                      | Stainless Steel, 200°C, Hermetic with solderwell contacts                                  |
| P                                                      | Stainless steel, 200°C, Hermetic with eyelet contacts                                      |
| YE                                                     | Stainless Steel, High Temp. (260°C) Firewall capability, Hermetic with solderwell contacts |

Commercial BTY, BFY and BNY meet European specifications and General Electric spec. GEM50TF3564, Classes A & B.

Shell sizes 20, 24 and 28, consult Amphenol Aerospace for availability. Hermetic style receptacles are not included in Boeing designations.

83723 III

PYLE

## Insert Availability and Identification, Alternate Keying Positions

### INSERT ARRANGEMENTS

| Shell Size/<br>Insert<br>Arrangement | Service<br>Rating | Total<br>Contacts | Contact Size |    |    |    |
|--------------------------------------|-------------------|-------------------|--------------|----|----|----|
|                                      |                   |                   | 8            | 12 | 16 | 20 |
| 08-03                                | I                 | 3                 |              |    |    | 3  |
| 08-98                                | I                 | 3                 |              |    |    | 3  |
| 10-02**                              | I                 | 2                 |              |    |    | 2  |
| 10-05                                | I                 | 5                 |              |    |    | 5  |
| 10-06                                | I                 | 6                 |              |    |    | 6  |
| 10-20                                | I                 | 2                 |              |    | 2  |    |
| 12-03***                             | I                 | 3                 |              |    | 3  |    |
| 12-12                                | I                 | 12                |              |    |    | 12 |
| 14-04***                             | I                 | 4                 |              | 4  |    |    |
| 14-07***                             | I                 | 7                 |              |    | 7  |    |
| 14-12                                | I                 | 12                |              |    | 3  | 9  |
| 14-15                                | I                 | 15                |              |    |    | 15 |
| 16-10***                             | I                 | 10                |              |    | 10 |    |
| 16-24                                | I                 | 24                |              |    |    | 24 |
| 18-08                                | I                 | 8                 |              | 8  |    |    |
| 18-14***                             | I                 | 14                |              |    | 14 |    |
| 18-31                                | I                 | 31                |              |    |    | 31 |
| 20-16***                             | I                 | 16                |              |    | 16 |    |
| 20-25                                | I                 | 25                |              | 6  |    | 19 |
| 20-28**                              | I                 | 28                |              | 4  |    | 24 |
| 20-39                                | I                 | 39                |              |    | 2  | 37 |
| 20-41                                | I                 | 41                |              |    |    | 41 |
| 22-12**                              | I                 | 12                |              | 12 |    |    |
| 22-19***                             | I                 | 19                |              |    | 19 |    |
| 22-27                                | I                 | 27                |              |    | 27 |    |
| 22-32**                              | I                 | 32                |              | 6  |    | 26 |
| 22-39**                              | I                 | 39                |              |    | 12 | 27 |
| 22-55                                | I                 | 55                |              |    |    | 55 |
| 24-19†♦                              | I                 | 19                |              | 19 |    |    |
| 24-30†***                            | I                 | 30                |              |    | 30 |    |
| 24-43**                              | I                 | 43                |              |    | 20 | 23 |
| 24-46†♦♦                             | I                 | 46                | 2 Twinax     |    | 4  | 40 |
| 24-57                                | I                 | 57                |              | 2  |    | 55 |
| 24-61                                | I                 | 61                |              |    |    | 61 |
| 28-41†                               | I                 | 41                |              |    | 41 |    |
| 28-42†***                            | I                 | 42                |              |    | 42 |    |
| 28-91†*                              | I                 | 91                |              |    |    | 91 |

† Not an MS layout.

\* Special - consult Amphenol for availability.

\*\* Special Pyle with Matrix 83723 insert (ESC10 type, EN2997 Spec); consult Amphenol Aerospace for availability.

\*\*\* Boeing Qualified Arrangements (See Boeing How to Order page 376)

♦ 24-19 is a special ground plane insert with purchased size 12 Coax contacts; consult Amphenol for information.

♦♦ 24-46 is a special insert that accommodates size 8 twinax contacts with ground spring.

Size 8 and Size 12 cavities can accommodate Twinax or Coax contacts; consult Amphenol for information.

Sizes 20, 24 and 28 Hermetic; consult Amphenol Aerospace for availability.

Size 28 not available in Bayonet style.

### ALTERNATE KEYING POSITIONS (Rotation of key/keyway of shell)

To avoid cross-plugging problems in applications requiring the use of more than one connector of the same size and arrangement, alternate keying positions are available as indicated in the chart below. The diagram shows the engaging view of a receptacle shell with keyways. The insert is rotated counter-clockwise relative to the center-line. Plug shells would be the opposite of this diagram.

In the "Normal insert position" (position N), the insert center line coincides with the center-line of the master key/keyway of the shell. In the "alternate keying positions" (positions 6, 7, 8, 9 and Y), the minor keys/keyways are positioned with reference to master key/keyway as indicated in the keying position table.



Shown is Engaging Face View of  
Receptacle Shell with Keyways  
(Plug Shell Keys would be Opposite)

### ALTERNATE KEYING POSITIONS OF SHELL

| Shell Size                        | Polarizing Position | Key/Keyway Positions |     |     |     |
|-----------------------------------|---------------------|----------------------|-----|-----|-----|
|                                   |                     | A°                   | B°  | C°  | D°  |
| 8 thru 24                         | N                   | 105                  | 140 | 215 | 265 |
| 8 & 10                            | 6                   | 102                  | 132 | 248 | 320 |
|                                   | 7                   | 80                   | 118 | 230 | 312 |
|                                   | 8                   | 35                   | 140 | 205 | 275 |
|                                   | 9                   | 64                   | 155 | 234 | 304 |
| 10 only                           | Y††                 | 25                   | 115 | 220 | 270 |
| 12, 14, 16, 18, 20, 22, 24 and 28 | 6                   | 18                   | 149 | 192 | 259 |
|                                   | 7                   | 92                   | 152 | 222 | 342 |
|                                   | 8                   | 84                   | 152 | 204 | 334 |
|                                   | 9                   | 24                   | 135 | 199 | 240 |
|                                   | Y††                 | 98                   | 152 | 268 | 338 |

### ESC 11 (HTK SERIES) ONLY

| Shell Size | Polarizing Position | Key/Keyway Positions |     |     |     |
|------------|---------------------|----------------------|-----|-----|-----|
|            |                     | A°                   | B°  | C°  | D°  |
| 14 thru 24 | N                   | 95                   | 145 | 220 | 255 |
|            | 6                   | 101                  | 168 | 211 | 342 |
|            | 7                   | 18                   | 138 | 208 | 268 |
|            | 8                   | 26                   | 156 | 208 | 276 |
|            | 9                   | 120                  | 161 | 225 | 336 |

†† Position Y supersedes inactive positions 10 and Z designations. Ref. MIL-STD-1554.

For ordering Pyle 83723 accessories, contact Amphenol Aerospace.

For ordering information on Backshells, see Backshell section of this catalog, family J.

# MIL-DTL-83723, Series III, Pyle®

## Insert Arrangements

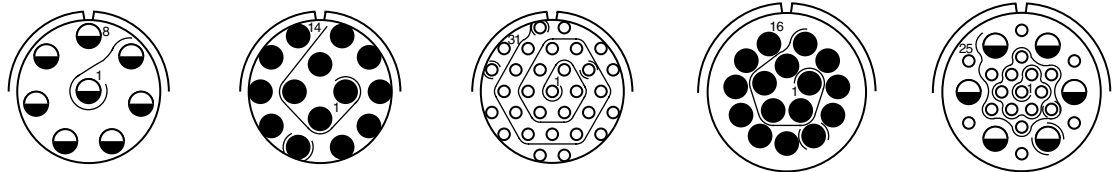
Front face of pin insert or rear face of socket insert illustrated



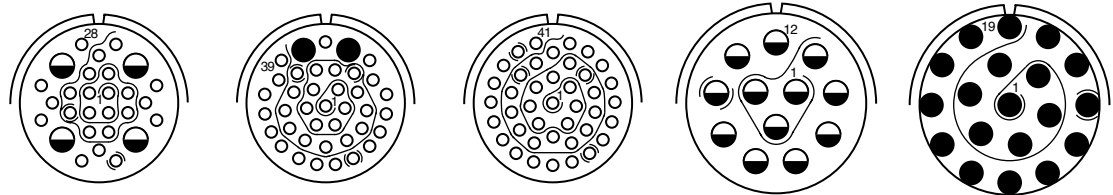
| Insert Arrangement | 08-03 | 08-98 | 10-02** | 10-05 | 10-06 | 10-20 | 12-03*** | 12-12 |
|--------------------|-------|-------|---------|-------|-------|-------|----------|-------|
| Service Rating     | I     | I     | I       | I     | I     | I     | I        | I     |
| Number of Contacts | 3     | 3     | 2       | 5     | 6     | 2     | 3        | 12    |
| Contact Size       | 20    | 20    | 20      | 20    | 20    | 16    | 16       | 20    |



| Insert Arrangement | 14-04*** | 14-07*** | 14-12** |    | 14-15 | 16-10*** | 16-24 |
|--------------------|----------|----------|---------|----|-------|----------|-------|
| Service Rating     | I        | I        | I       |    | I     | I        | I     |
| Number of Contacts | 4        | 7        | 9       | 3  | 15    | 10       | 24    |
| Contact Size       | 12       | 16       | 20      | 16 | 20    | 16       | 20    |



| Insert Arrangement | 18-08 | 18-14*** | 18-31 | 20-16*** | 20-25 |    |
|--------------------|-------|----------|-------|----------|-------|----|
| Service Rating     | I     | I        | I     | I        | I     |    |
| Number of Contacts | 8     | 14       | 31    | 16       | 19    | 6  |
| Contact Size       | 12    | 16       | 20    | 16       | 20    | 12 |



| Insert Arrangement | 20-28** |    | 20-39 |    | 20-41 | 22-12** |  | 22-19*** |
|--------------------|---------|----|-------|----|-------|---------|--|----------|
| Service Rating     | I       |    | I     |    | I     | I       |  | I        |
| Number of Contacts | 24      | 4  | 37    | 2  | 41    | 12      |  | 19       |
| Contact Size       | 20      | 12 | 20    | 16 | 20    | 12      |  | 16       |

† Not an MS layout.

\* Special - consult Amphenol Aerospace for availability.

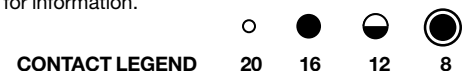
\*\* Special Pyle with Matrix 83723 insert (ESC10 type, EN2997 Spec); consult Amphenol Aerospace for availability.

\*\*\* Boeing Qualified Arrangements (See Boeing How to Order page 376)

Size 8 and Size 12 cavities can accommodate Twinax or Coax contacts; consult Amphenol Aerospace for information.

Sizes 20, 24 and 28 Hermetic; consult Amphenol Aerospace for availability.

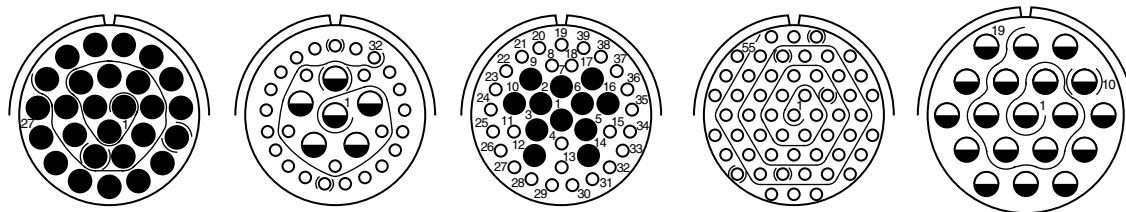
Size 28 not available in Bayonet style.



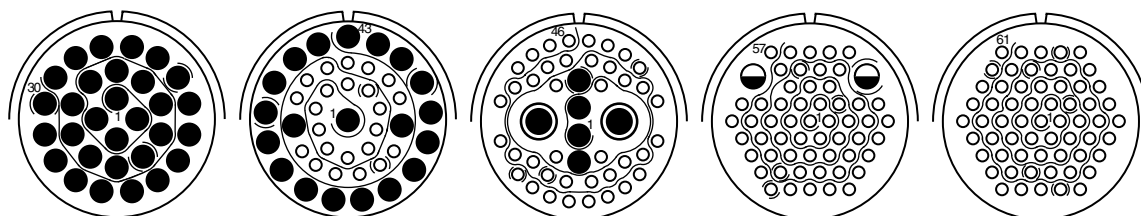
# MIL-DTL-83723, Series III, Pyle®

## Insert Arrangements

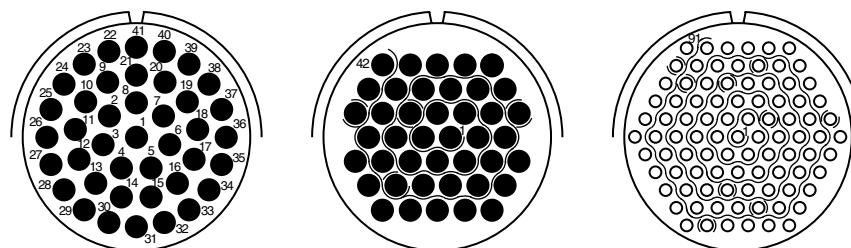
Front face of pin insert or rear face of socket insert illustrated



| Insert Arrangement | 22-27 | 22-32** |    | 22-39** |    |  | 22-55 | 24-19†♦ |
|--------------------|-------|---------|----|---------|----|--|-------|---------|
| Service Rating     | I     | I       |    | I       |    |  | I     | I       |
| Number of Contacts | 27    | 26      | 6  | 27      | 12 |  | 55    | 19      |
| Contact Size       | 16    | 20      | 12 | 20      | 16 |  | 20    | 12      |



| Insert Arrangement | 24-30†*** | 24-43** |    | 24-46†♦♦ |    |             | 24-57 | 24-61 |    |
|--------------------|-----------|---------|----|----------|----|-------------|-------|-------|----|
| Service Rating     | I         | I       |    | I        |    |             | I     | I     |    |
| Number of Contacts | 30        | 23      | 20 | 40       | 4  | 2           | 55    | 2     | 61 |
| Contact Size       | 16        | 20      | 16 | 20       | 16 | 8<br>Twinax | 20    | 12    | 20 |



| Insert Arrangement | 28-41† | 28-42†*** | 28-91†* |
|--------------------|--------|-----------|---------|
| Service Rating     | I      | I         | I       |
| Number of Contacts | 41     | 42        | 91      |
| Contact Size       | 16     | 16        | 20      |

† Not an MS layout.

\* Special - consult Amphenol Aerospace for availability.

\*\* Special Pyle with Matrix 83723 insert (ESC10 type, EN2997 Spec); consult Amphenol for availability.

\*\*\* Boeing Qualified Arrangements (See Boeing How to Order page 376)

♦ 24-19 is a special ground plane insert with purchased size 12 Coax contacts; consult Amphenol Aerospace for information.

♦♦ 24-46 is a special insert that accommodates size 8 twinax contacts with ground spring.

Sizes 20, 24 and 28 Hermetic; consult Amphenol Aerospace for availability.

Size 28 not available in Bayonet style.

### CONTACT LEGEND



83723 III

PYLE

|                           | 1.             | 2.                                       | 3.            | 4.                             | 5.                                 |
|---------------------------|----------------|------------------------------------------|---------------|--------------------------------|------------------------------------|
| MIL-DTL-83723, Series III | Connector Type | Connector Style and Contact Type (Crimp) | Service Class | Shell Size/ Insert Arrangement | Alternate Keying Position of Shell |
| <b>MILITARY</b>           | <b>M83723</b>  | <b>/82</b>                               | <b>G</b>      | <b>16-24</b>                   | <b>6</b>                           |

|                                           | 1.              | 2.            | 3.          | 4.                             | 5.           | 6.                                           | 7.                                 | 8.         |
|-------------------------------------------|-----------------|---------------|-------------|--------------------------------|--------------|----------------------------------------------|------------------------------------|------------|
| Amphenol® Pyle® MIL-DTL-83723, Series III | Connector Style | Service Class | Shell Style | Shell Size/ Insert Arrangement | Contact Type | Alternate Contact Finish or Without Contacts | Alternate Keying Position of Shell | Variations |
| <b>COMMERCIAL</b>                         | <b>BT</b>       | <b>G</b>      | <b>-17</b>  | <b>16-24</b>                   | <b>S</b>     | <b>D</b>                                     | <b>06</b>                          | <b>XXX</b> |

### Step 1. Military Connector Type

|               |                                                |
|---------------|------------------------------------------------|
| <b>M83723</b> | Designates MIL-DTL-83723 Series III Connectors |
|---------------|------------------------------------------------|

### Step 2. Select a Connector Style

(Refer to military specification slash sheet number).

(How to Order Hermetic Styles is provided on page 381).

|            | Designates                                                             |
|------------|------------------------------------------------------------------------|
| <b>/71</b> | Bayonet, Square Flange Receptacle, with sockets                        |
| <b>/72</b> | Bayonet, Square Flange Receptacle, with pins                           |
| <b>/73</b> | Bayonet, Jam Nut (D-Hole Mount) Recept., with sockets                  |
| <b>/74</b> | Bayonet, Jam Nut (D-Hole Mount) Recept., with pins                     |
| <b>/75</b> | Bayonet, Straight Plug, with sockets                                   |
| <b>/76</b> | Bayonet, Straight Plug, with pins                                      |
| <b>/82</b> | Threaded, Square Flange Receptacle, with sockets                       |
| <b>/83</b> | Threaded, Square Flange Receptacle, with pins                          |
| <b>/84</b> | Threaded, Jam Nut (D-Hole Mount) Recept., with sockets                 |
| <b>/85</b> | Threaded, Jam Nut (D-Hole Mount) Recept., with pins                    |
| <b>/86</b> | Threaded, Straight Plug, with sockets                                  |
| <b>/87</b> | Threaded, Straight Plug, with pins                                     |
| <b>/95</b> | Threaded, Non-Decoupling Plug, with sockets                            |
| <b>/96</b> | Threaded, Non-Decoupling Plug, with pins                               |
| <b>/97</b> | Threaded, Non-Decoupling Plug, with EMI Grounding spring, with sockets |
| <b>/98</b> | Threaded, Non-Decoupling Plug, with EMI Grounding spring, with pins    |

### Step 3. Select a Service Class

|          | Designates               |
|----------|--------------------------|
| <b>G</b> | Stainless Steel          |
| <b>K</b> | Stainless Steel Firewall |

Note: See Matrix 83723 styles for aluminum classes A, R and W.

### Step 4. Select a Shell Size & Insert Arrangement from chart on pg. 371.

(except size 28 is not available in Bayonet Style)

First number represents Shell Size, second number is the Insert Arrangement

### Step 5. Select an Alternate Keying Position - Rotation of master key/keyway of shell.

Use N for normal. Use 6, 7, 8, 9 or Y for alternate keying positions. See page 371 for descriptions.

### Step 1. Select a Commercial Connector Style Designed to be Equivalent to M83723, Series III

|           | Designates                                |
|-----------|-------------------------------------------|
| <b>BT</b> | Threaded with 'O' ring seal in receptacle |
| <b>BY</b> | Bayonet with 'O' ring seal in receptacle  |

(How to Order Hermetic Styles is provided on page 381).

### Step 2. Select a Service Class

|          | Designates               |
|----------|--------------------------|
| <b>G</b> | Stainless steel          |
| <b>K</b> | Stainless steel Firewall |

Note: See Matrix 83723 styles for aluminum classes A, R and W.

### Step 3. Select a Shell Style

|             | Designates                                                                                           |
|-------------|------------------------------------------------------------------------------------------------------|
| <b>-10</b>  | Straight Plug, Bayonet coupling only                                                                 |
| <b>-11</b>  | Straight Plug, Threaded coupling only                                                                |
| <b>-12</b>  | Non-Decoupling Plug, Threaded coupling only                                                          |
| <b>-12F</b> | Modification 360° accessory teeth per MS3155, EMI Grounding Spring on Plug only. For /97 & /98 only. |
| <b>-17</b>  | Square Flange Receptacle                                                                             |
| <b>-19</b>  | Jam Nut (D-Hole Mount) Receptacle                                                                    |

### Step 4. Select a Shell Size & Insert Arrangement from chart on pg. 371.

(except size 28 is not available in Bayonet Style)

First number represents Shell Size, second number is the Insert Arrangement.

### Step 5. Select a Contact Type (Crimp)

|          | Designates      |
|----------|-----------------|
| <b>P</b> | Pin Contacts    |
| <b>S</b> | Socket Contacts |

### Step 6. Alternate Contact Finish or without Contacts

|          | Designates            |
|----------|-----------------------|
| <b>D</b> | Gold per SAE AS39029* |
| <b>E</b> | Without contacts      |

### Step 7. Select an Alternate Keying Position - Rotation of master key/keyway of shell.

Use N for normal. Use 06, 07, 08, 09 or Y for alternate keying positions. See page 371 for descriptions.

### Step 8. Variations

Consult Amphenol Aerospace for information.

\*Supersedes MIL-C-39029

## How to Order – Pyle Commercial - Designed to Meet General Electric Specifications

|                                                                      | 1.                | 2.             | 3.                                         | 4.                                   | 5.              | 6.                                                 | 7.                                    | 8.          |
|----------------------------------------------------------------------|-------------------|----------------|--------------------------------------------|--------------------------------------|-----------------|----------------------------------------------------|---------------------------------------|-------------|
| Amphenol® Pyle®<br>MIL-DTL-83723, Series III                         | Connector<br>Type | Shell<br>Style | Shell Modification<br>(Accessory<br>Teeth) | Shell Size/<br>Insert<br>Arrangement | Contact<br>Type | Alternate Contact<br>Finish or Without<br>Contacts | Alternate Keying<br>Position of Shell | Variations  |
| <b>PYLE COMMERCIAL<br/>DESIGNED TO MEET<br/>G. E. SPECIFICATIONS</b> | <b>BJ</b>         | <b>-17</b>     | <b>E</b>                                   | <b>16-24</b>                         | <b>S</b>        | <b>D</b>                                           | <b>06</b>                             | <b>XXXX</b> |

### Step 1. Select a Commercial Connector Type Designed to Meet General Electric Specifications

|            | Designates                                                   |
|------------|--------------------------------------------------------------|
| <b>BJ</b>  | Threaded, Stainless Steel, Static/Dynamic Seal in receptacle |
| <b>BJ8</b> | Same as BJ except with Scoop-Proof Recessed pins             |
| <b>BN</b>  | Same as BJ except Electro-deposited Nickel Plated            |
| <b>BN8</b> | Same as BN except with Scoop-Proof Recessed pins             |
| <b>BNK</b> | Same as BN except Stainless Steel Firewall                   |

### Step 2. Select a Shell Style

|            | Designates                        |
|------------|-----------------------------------|
| <b>-10</b> | Bayonet Plug                      |
| <b>-11</b> | Threaded Straight Plug            |
| <b>-12</b> | Threaded Non-Decoupling Plug      |
| <b>-17</b> | Square Flange Receptacle          |
| <b>-19</b> | Jam Nut (D-Hole Mount) Receptacle |

### Step 3. Select a Shell Modification

|          | Designates                                                         |
|----------|--------------------------------------------------------------------|
| <b>E</b> | 360° Accessory Teeth per MS3155 Plug and Receptacle                |
| <b>F</b> | 360° Accessory Teeth per MS3155, EMI Grounding Spring on Plug only |
| <b>G</b> | 3 Accessory Teeth, EMI Grounding Spring on Plug only               |

### Step 4. Select a Shell Size & Insert Arrangement from chart on pg. 371.

First number represents Shell Size, second number is the Insert Arrangement.

### Step 5. Select a Contact Type (Crimp)

|          | Designates                     |
|----------|--------------------------------|
| <b>P</b> | Pin Contacts                   |
| <b>K</b> | #20 Pins with #18 crimpwell    |
| <b>S</b> | Socket Contacts                |
| <b>L</b> | #20 Sockets with #18 crimpwell |

### Step 6. Alternate Contact Finish or without Contacts

|          | Designates            |
|----------|-----------------------|
| <b>D</b> | Gold per SAE AS39029* |
| <b>E</b> | Without contacts      |

### Step 7. Select an Alternate Keying Position - Rotation of master key/keyway of shell.

Use N for normal. Use 06, 07, 08, 09 or Y for alternate keying positions. See page 371 for descriptions.

### Step 8. Variations (Primarily Designed for General Electric)

|             | Designates                                                               |
|-------------|--------------------------------------------------------------------------|
| <b>Y176</b> | 260°C per G.E. M50TF3564, Class B, No Accessory Teeth                    |
| <b>Y185</b> | Older style with 200°C Capability - European market (Superseded by Y163) |
| <b>Y186</b> | 260°C Capability per G. E. M50TF3564 Class B**                           |
| <b>Y188</b> | 200°C Capability per G. E. M50TF3564 Class A**                           |

Another variation available with molding groove for potting - consult Amphenol Aerospace for ordering information.

\* Supersedes MIL-C-39029

\*\* Also see Hermetic styles that meet G.E. specification M50TF3564, Classes A & B on page 381.

# MIL-DTL-83723, Series III, Pyle®

## How to Order – Boeing Designation (BACC63CM/CN\*) or Pyle Commercial Equivalent

| 1.                        |                | 2.          | 3.                                | 4.                                   | 5.                                        | 6.            | 7.                                 | 8.                      |
|---------------------------|----------------|-------------|-----------------------------------|--------------------------------------|-------------------------------------------|---------------|------------------------------------|-------------------------|
| MIL-DTL-83723, Series III | Connector Type | Shell Style | Boeing Spec. Qualified Shell Size | Shell Modification (Accessory Teeth) | Boeing Spec. Qualified Insert Arrangement | Contact Style | Alternate Keying Position of Shell | Without Contacts Option |
| BOEING CO. DESIGNATION    | BACC63         | CM          | 18                                | B                                    | 14                                        | P             | 8                                  | A                       |

| 1.                                           |                | 3.          | 4.                                   | 5.                             | 6.           | 7.                                           | 8.                                 |           |
|----------------------------------------------|----------------|-------------|--------------------------------------|--------------------------------|--------------|----------------------------------------------|------------------------------------|-----------|
| Amphenol® Pyle® MIL-DTL-83723, Series III    | Connector Type | Shell Style | Shell Modification (Accessory Teeth) | Shell Size/ Insert Arrangement | Contact Type | Alternate Contact Finish or Without Contacts | Alternate Keying Position of Shell | Variation |
| PYLE COMMERCIAL EQUIV. TO BOEING BACC63CM/CN | BSK            | -12         | E                                    | 18-14                          | P            | D                                            | 08                                 | XXX       |

### Step 1. Boeing Co. Designation

|               |                                                                                          |
|---------------|------------------------------------------------------------------------------------------|
| <b>BACC63</b> | Designates MIL-DTL-83723 Series III Boeing Designation BACC63CM/CN** Firewall Connectors |
|---------------|------------------------------------------------------------------------------------------|

(Refer to military specification slash sheet number.)

\*\* BACC63CM/CN supersedes BACC63BR/BT

### Step 2. Select a Connector Type

|           | Designates                                                   |
|-----------|--------------------------------------------------------------|
| <b>CM</b> | Threaded, Non-Decoupling Plug Stainless Steel Firewall       |
| <b>CN</b> | Threaded, Square Flange Receptacle, Stainless Steel Firewall |

### Step 3. Select a Boeing Specification Qualified Shell Size 12, 14, 16, 18, 20, 22, 24, 28

### Step 4. Select a Shell Modification

|          | Designates                                                         |
|----------|--------------------------------------------------------------------|
| <b>-</b> | Accessory Teeth per MIL-DTL-83723, Series III (normally 3 teeth)   |
| <b>B</b> | 360° Accessory Teeth per MS3155 Plug and Receptacle                |
| <b>D</b> | 360° Accessory Teeth per MS3155, EMI Grounding Spring on Plug only |

### Step 5. Select a Boeing Specification Qualified Insert Arrangement

12-03, 14-04, 14-07, 16-10, 18-14, 20-16, 22-19, 24-30, 28-42 (these incorporate Boeing approved contacts)

### Step 6. Select a Contact Type (Crimp)

|          | Designates                                   |
|----------|----------------------------------------------|
| <b>P</b> | Pin Contacts, Gold plate per SAE AS39029*    |
| <b>S</b> | Socket Contacts, Gold plate per SAE AS39029* |

### Step 7. Select an Alternate Keying Position - Rotation of master key/keyway of shell.

Use N for normal. Use 6, 7, 8, 9 or Y for alternate keying positions. See page 371 for descriptions.

### Step 8. Without Contacts Option

|          | Designates                                                                                                                                             |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A</b> | Without Contacts and Sealing Plugs (Letter 'A' to be used on purchase orders only, and will not appear on connector as part of connector part number). |

\*Supersedes MIL-C-39029

### Step 1. Commercial Connector Type Designed to be Equivalent to Boeing BACC63

|            | Designates                                |
|------------|-------------------------------------------|
| <b>BSK</b> | Threaded with 'O' ring seal in receptacle |

### Step 2. Select a Shell Style

|            | Designates                                                   |
|------------|--------------------------------------------------------------|
| <b>-12</b> | Threaded, Non-Decoupling Plug Stainless Steel Firewall       |
| <b>-17</b> | Threaded, Square Flange Receptacle, Stainless Steel Firewall |

### Step 3. Select a Shell Modification

No designation needed for shells with accessory teeth per MIL-DTL-83723, Series III (normally 3 teeth).

|          | Designates                                                         |
|----------|--------------------------------------------------------------------|
| <b>E</b> | 360° Accessory Teeth per MS3155 Plug and Receptacle                |
| <b>F</b> | 360° Accessory Teeth per MS3155, EMI Grounding Spring on Plug only |

### Step 4. Select a Shell Size & Insert Arrangement from chart on pg. 371.

Shell Sizes 12, 14, 18, 20, 24, 28 are available. Shell size and insert arrangement are written together. First number represents Shell Size, second number is the Insert Arrangement.

### Step 5. Select a Contact Type (Crimp)

|          | Designates      |
|----------|-----------------|
| <b>P</b> | Pin Contacts    |
| <b>S</b> | Socket Contacts |

### Step 6. Alternate Contact Finish or without Contacts

|          | Designates                         |
|----------|------------------------------------|
| <b>D</b> | Gold per SAE AS39029*              |
| <b>E</b> | Without contacts and sealing plugs |

### Step 7. Select an Alternate Keying Position - Rotation of master key/keyway of shell.

Omit for N for normal. Use 06, 07, 08, 09 or Y for alternate keying positions. See page 371 for descriptions.

### Step 8. Variation

|             | Designates                                                                    |
|-------------|-------------------------------------------------------------------------------|
| <b>Y126</b> | Contact Marking per MIL-DTL-83723/33 & /34 (Required with BACC63CM/CN Series) |

No variation suffix - connector will incorporate Mil-Spec AS39020 contacts

How to Order – ASD Designation

|                           | 1.             | 2.            | 3.          | 4.                            | 5.            | 6.                                 |
|---------------------------|----------------|---------------|-------------|-------------------------------|---------------|------------------------------------|
| MIL-DTL-83723, Series III | Connector Type | Service Class | Shell Style | Shell Size/Insert Arrangement | Contact Style | Alternate Keying Position of Shell |
| ASD DESIGNATION           | EN2997         | KE            | 6           | 16-24                         | F             | 6                                  |

Step 1. Select an ASD Designated/European Standards Connector Type

|        |                 |
|--------|-----------------|
|        | Designates      |
| EN2997 | ASD Designation |

Note: ASD supersedes AECMA Designation

Step 2. Select a Service Class

|     |                                                                |
|-----|----------------------------------------------------------------|
|     | Designates Standard Temperature Class                          |
| K   | Threaded, Stainless Steel, 200°C                               |
| S   | Threaded, Stainless Steel, EMI Grounding Spring on Plug, 200°C |
| Y*  | Stainless Steel Hermetic with Solderwell Contacts, 200°C       |
|     | Designates High Temperature Class                              |
| KE  | Threaded, Stainless Steel Firewall, 260°C                      |
| SE  | Threaded, Stainless Steel, EMI Grounding Spring on Plug, 260°C |
| YE* | Stainless Steel Hermetic with Solderwell Contacts, 260°C       |

\* No longer approved QPL supplier. Commercially equivalent is available, please contact a representative for more information.

Step 3. Select a Shell Style

|   |                                                  |
|---|--------------------------------------------------|
|   | Designates                                       |
| 0 | Threaded, Square Flange Receptacle               |
| 1 | Threaded, Solder Mount Receptacle, Hermetic only |
| 6 | Threaded Non-Decoupling Plug                     |
| 7 | Threaded Jam Nut (D-Hole Mount) Receptacle       |

Step 4. Select a Shell Size & Insert Arrangement from chart on pg. 371.

First number represents Shell Size, second number is the Insert Arrangement.

Step 5. Select a Contact Type (Crimp)

|   |                                |
|---|--------------------------------|
|   | Designates                     |
| M | Standard Pin Contacts          |
| C | #20 Pins with #18 crimpwell    |
| A | Pin Insert less Contacts       |
| F | Standard Socket Contacts       |
| D | #20 Sockets with #18 crimpwell |
| B | Socket Insert less Contacts    |

Step 6. Select an Alternate Keying Position - Rotation of master key/keyway of shell.

Use N for normal. Use 6, 7, 8, 9 or Y for alternate keying positions. See page 371 for descriptions.

# MIL-DTL-83723, Series III, Pyle®

## How to Order – Pyle Commercial Equivalents to ASD Designation/European Standards

|                                                                                                               | 1.             | 2.            | 3.          | 4.                                   | 5.                             | 6.           | 7.                                           | 8.                             | 9.         |
|---------------------------------------------------------------------------------------------------------------|----------------|---------------|-------------|--------------------------------------|--------------------------------|--------------|----------------------------------------------|--------------------------------|------------|
|                                                                                                               | Connector Type | Service Class | Shell Style | Shell Modification (Accessory Teeth) | Shell Size/ Insert Arrangement | Contact Type | Alternate Contact Finish or Without Contacts | Alternate Keying Pos. of Shell | Variations |
| Amphenol® Pyle® MIL-DTL-83723, Series III<br><b>PYLE COMMERCIAL DESIGNED TO MEET ASD &amp; EUROPEAN STDS.</b> | <b>BT</b>      | <b>G</b>      | <b>-12</b>  | <b>E</b>                             | <b>18-14</b>                   | <b>P</b>     | <b>D</b>                                     | <b>08</b>                      | <b>XXX</b> |

### Step 1. Select a Commercial Connector Type Designed to Meet ASD/European Standards

|           | Designates                                                   |
|-----------|--------------------------------------------------------------|
| <b>BT</b> | Threaded with 'O' ring seal in receptacle                    |
| <b>BJ</b> | Threaded, Stainless Steel, Static/Dynamic Seal in receptacle |

### Step 2. Select a Service Class

|          | Designates               |
|----------|--------------------------|
| <b>G</b> | Stainless steel          |
| <b>K</b> | Stainless steel Firewall |

### Step 3. Select a Shell Style

|            | Designates                                  |
|------------|---------------------------------------------|
| <b>-12</b> | Threaded, Non-Decoupling Plug               |
| <b>-17</b> | Threaded, Square Flange Receptacle          |
| <b>-19</b> | Threaded, Jam Nut (D-Hole Mount) Receptacle |

### Step 4. Select a Shell Modification

No designation needed for shells with accessory teeth per MIL-DTL-83723, Series III (normally 3 teeth).

|          | Designates                                                         |
|----------|--------------------------------------------------------------------|
| <b>E</b> | 360° Accessory Teeth per MS3155 Plug and Receptacle                |
| <b>F</b> | 360° Accessory Teeth per MS3155, EMI Grounding Spring on Plug only |

### Step 5. Select a Shell Size & Insert Arrangement from chart on pg. 371.

First number represents Shell Size, second number is the Insert Arrangement.

### Step 6. Select a Contact Type (Crimp)

|          | Designates      |
|----------|-----------------|
| <b>P</b> | Pin Contacts    |
| <b>S</b> | Socket Contacts |

### Step 7. Alt. Contact Finish or without Contacts

|          | Designates            |
|----------|-----------------------|
| <b>D</b> | Gold per SAE AS39029* |
| <b>E</b> | Without contacts      |

### Step 8. Select an Alternate Keying Position - Rotation of master key/keyway of shell.

Use N for normal. Use 06, 07, 08, 09 or Y for alternate keying positions. See page 371 for descriptions.

### Step 9. Variations (Designed for Meeting European Specifications)

|             | Designates                           |
|-------------|--------------------------------------|
| <b>Y144</b> | 260°C Capability (Euro Market)       |
| <b>Y163</b> | 200°C Capability (Euro Market)       |
| <b>Y175</b> | Older designation superseded by Y144 |

\*Supersedes MIL-C-39029

83723 III

PYLE

# MIL-DTL-83723, Series III, Pyle®

## How to Order – ESC10/11 for SBAC and Rolls Royce Standards

|                                                                     | 1.                | 2.               | 3.             | 4.                                   | 5.              | 6.                                    | 7.         |
|---------------------------------------------------------------------|-------------------|------------------|----------------|--------------------------------------|-----------------|---------------------------------------|------------|
| MIL-DTL-83723,<br>Series III                                        | Connector<br>Type | Service<br>Class | Shell<br>Style | Shell Size/<br>Insert<br>Arrangement | Contact<br>Type | Alternate Keying<br>Position of Shell | Variations |
| MEETS SOCIETY OF BRITISH<br>AEROSPACE CO./<br>ROLLS ROYCE STANDARDS | ESC10             | KE               | 0              | 16-24                                | S               | 6                                     | X          |

**Step 1.** Select a Connector Type that Meets European Specifications for Society of British Aerospace Co./Rolls Royce Standards

|       | Designates                                                                                |
|-------|-------------------------------------------------------------------------------------------|
| ESC10 | Threaded, Basic High Temperature Connector, 260°C Firewall                                |
| ESC11 | Threaded, High Temperature Connector (260°C Firewall) with 100% Scoop-Proof Recessed Pins |

### Step 2. Select a Service Class

|     | Designates High Temperature Class                                  |
|-----|--------------------------------------------------------------------|
| KE  | Threaded, Stainless Steel Firewall, 260°C                          |
| SE  | Threaded, Stainless Steel, EMI Grounding Spring on Plug, 260°C     |
| YE* | Threaded, Stainless Steel Hermetic with Solderwell Contacts, 260°C |

\* No longer approved QPL supplier. Commercially equivalent is available, please contact a representative for more information.

### Step 3. Select a Shell Style

|   | Designates                                                              |
|---|-------------------------------------------------------------------------|
| 0 | Threaded, Square Flange Receptacle with 360° Accessory Teeth per MS3155 |
| 1 | Threaded, Hermetic Solder Mount Receptacle                              |
| 2 | Threaded, Hermetic Square Flange Receptacle                             |
| 3 | Threaded, Hermetic Jam Nut (D-Hole Mount) Receptacle                    |
| 6 | Threaded, Non-Decoupling Plug with 360° Accessory Teeth per MS3155      |

### Step 4. Select a Shell Size & Insert Arrangement from chart on pg. 371.

First number represents Shell Size, second number is the Insert Arrangement.

### Step 5. Select a Contact Type (Crimp)

|   | Designates      |
|---|-----------------|
| P | Pin Contacts    |
| S | Socket Contacts |

All connectors are supplied without contacts except Shell Styles 1, 2 and 3

### Step 7. Select an Alternate Keying Position - Rotation of master key/keyway of shell.

Use N for normal. Use 6, 7, 8, 9 or Y for alternate keying positions. See page 371 for descriptions.

### Step 8. Variations

|           | Designates                     |
|-----------|--------------------------------|
| O (Alpha) | Basic Connector, no Variations |
| A         | Lockwire Holes on Plug         |

83723 III

PYLE

# MIL-DTL-83723, Series III, Pyle®

How to Order – Pyle Commercial Equivalent to ESC11  
European Specifications – Scoop-Proof only

|                           | 1.             | 2.          | 3.                             | 4.           | 5.             | 6.                                 | 7.         |
|---------------------------|----------------|-------------|--------------------------------|--------------|----------------|------------------------------------|------------|
| MIL-DTL-83723, Series III | Connector Type | Shell Style | Shell Size/ Insert Arrangement | Contact Type | Contact Finish | Alternate Keying Position of Shell | Variations |
| COMMERCIAL                | HTK            | 12          | 16-24                          | S            | D              | 06                                 | XXXX       |

## Step 1. Select a Commercial Connector Type Equivalent to ESC11 European Specifications

|     | Designates                                                                                                             |
|-----|------------------------------------------------------------------------------------------------------------------------|
| HTK | Threaded, Basic ESC-11, Class K (Choice of temperature rating 260° or 200° is in the Variations for this part number). |
| HNK | Same as HTK except Electroless Nickel Plated                                                                           |
| HSK | Same as HTK, except this is a special designator for Boeing Company                                                    |

## Step 2. Select a Shell Style

|     | Designates                                                       |
|-----|------------------------------------------------------------------|
| -12 | Threaded Non-Decoupling Plug with 100% Scoop-Proof Recessed Pins |
| -17 | Square Flange Receptacle with 100% Scoop-Proof Recessed Pins     |

## Step 3. Select a Shell Size & Insert Arrangement from chart on pg. 371.

Shell Sizes 12, 14, 18, 20, 24, 28 are available.  
Shell size and insert arrangement are written together. First number represents Shell Size, second number is the Insert Arrangement.

## Step 4. Select a Contact Type (Crimp)

|   | Designates      |
|---|-----------------|
| P | Pin Contacts    |
| S | Socket Contacts |

## Step 5. Select a Contact Finish or without Contacts

|   | Designates        |
|---|-------------------|
| D | Gold per AS39029* |
| E | Socket Contacts   |

Special High Temperature Contacts are another option - consult Amphenol Aerospace for ordering information.

## Step 6. Select an Alternate Keying Position - Rotation of master key/keyway of shell.

Use N for normal. Use 06, 07, 08, 09 or Y for alternate keying positions. See page 371 for descriptions.

## Step 7. Variations

|      | Designates |
|------|------------|
| Y144 | 260°C      |
| Y163 | 200°C      |

\*Supersedes MIL-C-39029

83723 III

PYLE

## How to Order – Hermetic, Military or Pyle Commercial

|                           | 1.             | 2.                                       | 3.            | 4.                             | 5.                                 |
|---------------------------|----------------|------------------------------------------|---------------|--------------------------------|------------------------------------|
| MIL-DTL-83723, Series III | Connector Type | Connector Style and Contact Type (Crimp) | Service Class | Shell Size/ Insert Arrangement | Alternate Keying Position of Shell |
| <b>MILITARY HERMETIC</b>  | <b>M83723</b>  | <b>/88</b>                               | <b>y</b>      | <b>16-24</b>                   | <b>6</b>                           |

|                                           | 1.              | 2.          | 3.                             | 4.           | 5.            | 6.                       | 7.                                 | 8.          |
|-------------------------------------------|-----------------|-------------|--------------------------------|--------------|---------------|--------------------------|------------------------------------|-------------|
| Amphenol® Pyle® MIL-DTL-83723, Series III | Connector Style | Shell Style | Shell Size/ Insert Arrangement | Contact Type | Contact Style | Alternate Contact Finish | Alternate Keying Position of Shell | Variations  |
| <b>COMMERCIAL HERMETIC</b>                | <b>BTY</b>      | <b>-17</b>  | <b>16-24</b>                   | <b>S</b>     | <b>1</b>      | <b>D</b>                 | <b>06</b>                          | <b>XXXX</b> |

### Step 1. Military Connector Type

|               |                                                |
|---------------|------------------------------------------------|
| <b>M83723</b> | Designates MIL-DTL-83723 Series III Connectors |
|---------------|------------------------------------------------|

### Step 2. Select a Military Hermetic Connector Style

(Refer to military specification slash sheet number.)

|            | Designates                                           |
|------------|------------------------------------------------------|
| <b>/88</b> | Hermetic, Threaded Square Flange Receptacle          |
| <b>/89</b> | Hermetic, Threaded Jam Nut (D-Hole Mount) Receptacle |
| <b>/90</b> | Hermetic, Threaded Solder Mounted Receptacle         |

### Step 3. Select a Service Class

|          | Designates                                                 |
|----------|------------------------------------------------------------|
| <b>Y</b> | Hermetic, Stainless Steel, 200°C, with Solderwell Contacts |
| <b>H</b> | Hermetic, Tin Plated Carbon Steel, 150° C                  |

For availability of a Plated Steel Shell, consult Amphenol Aerospace.

### Step 4. Select a Shell Size & Insert Arrangement from chart on pg. 371.

(Except sizes 24 and 28 are not available in Hermetic Styles.)  
First number represents Shell Size, second number is the Insert Arrangement

### Step 5. Select an Alternate Keying Position - Rotation of master key/keyway of shell.

Use N for normal. Use 6, 7, 8, 9 or Y for alternate keying positions. See page 371 for descriptions.

### Step 1. Select a Commercial Hermetic Connector Style

|            | Designates                                                                                     |
|------------|------------------------------------------------------------------------------------------------|
| <b>BTY</b> | Hermetic, Threaded, Stainless Steel, with 'O' ring seal                                        |
| <b>BFY</b> | Hermetic, Threaded, Stainless Steel, with Static/Dynamic Seal                                  |
| <b>BNY</b> | Hermetic, Threaded, Stainless Steel, Electro-deposited Nickel plated, with Static/Dynamic Seal |

### Step 2. Select a Shell Style

|            | Designates                        |
|------------|-----------------------------------|
| <b>-17</b> | Square Flange Receptacle          |
| <b>-19</b> | Jam Nut (D-Hole Mount) Receptacle |
| <b>-14</b> | Solder Mounted Receptacle         |

### Step 3. Select a Shell Size & Insert Arrangement from chart on pg. 371.

(Except sizes 24 and 28 are not available in Hermetic Styles.)  
First number represents Shell Size, second number is the Insert Arrangement

### Step 4. Select a Contact Type (Crimp)

|          | Designates   |
|----------|--------------|
| <b>P</b> | Pin Contacts |

### Step 5. Select a Contact Style

|          | Designates                          |
|----------|-------------------------------------|
| <b>1</b> | Solderwell Contacts (Mil-Spec Type) |
| <b>4</b> | Eyelet Contacts                     |

### Step 6. Alternate Contact Finish

|          | Designates                            |
|----------|---------------------------------------|
| <b>D</b> | .000050 (per MIL-DTL-83723, III) Gold |
| <b>V</b> | .000100 Gold                          |

### Step 7. Select an Alternate Keying Position - Rotation of master key/keyway of shell.

Omit for normal. Use 06, 07, 08, 09 or Y for alternate keying positions. See page 371 for descriptions.

### Step 8. Variations

|             | Designates                                   |
|-------------|----------------------------------------------|
| <b>Y144</b> | 260°C Capability (Euro Market)               |
| <b>Y163</b> | 200°C Capability (Euro Market)               |
| <b>Y186</b> | 260°C Capability per G.E. M50TF3564, Class B |
| <b>Y188</b> | 200°C Capability per G.E. M50TF3564, Class A |

# MIL-DTL-83723, Series III, Pyle®

## Square Flange Receptacle, Threaded Coupling

### PART #

**M83723/82 / M83723/83**  
**BT( )-17**  
**BJ/BJ8/BN/BN8/BNK-17**  
**BACC63CN**  
**BSK-17**  
**EN2997( )0**  
**BT( )/BJ( )-17**  
**ESC10( )0**  
**ESC11( )0**  
**HTK/HNK/HSK-17**



See Quick Reference page 365 for the variety of ordering options for square flange receptacles with threaded coupling.

The How to Order pages (374-381) give complete part number breakdowns.

† When fully mated with plug, this band will be covered.  
(Band is red on military types; can be red or blue on commercial types).

Inches

| Shell Size | A<br>±.005 | B<br>±.005 | D Dia.<br>Panel<br>Min. | F Dia.<br>Rear<br>Max. | H<br>Accessory Thread<br>Class 2A | J<br>Coupling Thread<br>Class 2A | P Dia.<br>Front<br>Max. | X Dia.<br>Panel<br>Min. |
|------------|------------|------------|-------------------------|------------------------|-----------------------------------|----------------------------------|-------------------------|-------------------------|
| 8          | .812       | .594       | .510                    | .500                   | .5000-20 UNF                      | .5625-24 UNF                     | .562                    | .620                    |
| 10         | .937       | .719       | .635                    | .625                   | .6250-24 UNEF                     | .6875-24 UNEF                    | .696                    | .748                    |
| 12         | 1.031      | .812       | .760                    | .750                   | .7500-20 UNEF                     | .8750-20 UNEF                    | .875                    | .913                    |
| 14         | 1.125      | .906       | .885                    | .875                   | .8750-20 UNEF                     | .9375-20 UNEF                    | .936                    | .980                    |
| 16         | 1.250      | .969       | 1.010                   | 1.000                  | 1.0000-20 UNEF                    | 1.0625-18 UNEF                   | 1.062                   | 1.107                   |
| 18         | 1.343      | 1.062      | 1.072                   | 1.062                  | 1.0625-18 UNEF                    | 1.1875-18 UNEF                   | 1.187                   | 1.209                   |
| 20         | 1.437      | 1.156      | 1.192                   | 1.187                  | 1.1875-18 UNEF                    | 1.3125-18 UNEF                   | 1.312                   | 1.337                   |
| 22         | 1.562      | 1.250      | 1.322                   | 1.312                  | 1.3125-18 UNEF                    | 1.4375-18 UNEF                   | 1.437                   | 1.452                   |
| 24         | 1.703      | 1.375      | 1.447                   | 1.437                  | 1.4375-18 UNEF                    | 1.5625-18 UNEF                   | 1.562                   | 1.577                   |
| 28         | 1.953      | 1.562      | 1.760                   | 1.750                  | 1.7500-18 UNEF                    | 1.8125-16 UNEF                   | 1.812                   | 1.827                   |

Millimeters

| Shell Size | A<br>±.005 | B<br>±.005 | D Dia.<br>Panel<br>Min. | F Dia.<br>Rear<br>Max. | P Dia.<br>Front<br>Max. | X Dia.<br>Panel<br>Min. |
|------------|------------|------------|-------------------------|------------------------|-------------------------|-------------------------|
| 8          | 20.62      | 15.09      | 12.95                   | 12.70                  | 14.27                   | 15.75                   |
| 10         | 23.80      | 18.26      | 16.13                   | 15.88                  | 17.68                   | 18.99                   |
| 12         | 26.19      | 20.62      | 19.30                   | 19.05                  | 22.23                   | 23.19                   |
| 14         | 28.58      | 23.01      | 22.48                   | 22.23                  | 23.77                   | 24.89                   |
| 16         | 31.75      | 24.61      | 25.65                   | 25.40                  | 26.97                   | 28.12                   |
| 18         | 34.11      | 26.97      | 27.23                   | 26.97                  | 30.15                   | 30.71                   |
| 20         | 36.50      | 29.36      | 30.28                   | 30.15                  | 33.32                   | 33.96                   |
| 22         | 39.67      | 31.75      | 33.58                   | 33.32                  | 36.50                   | 36.88                   |
| 24         | 43.26      | 34.93      | 36.75                   | 36.50                  | 39.67                   | 40.06                   |
| 28         | 49.61      | 39.67      | 44.70                   | 44.45                  | 46.02                   | 46.41                   |

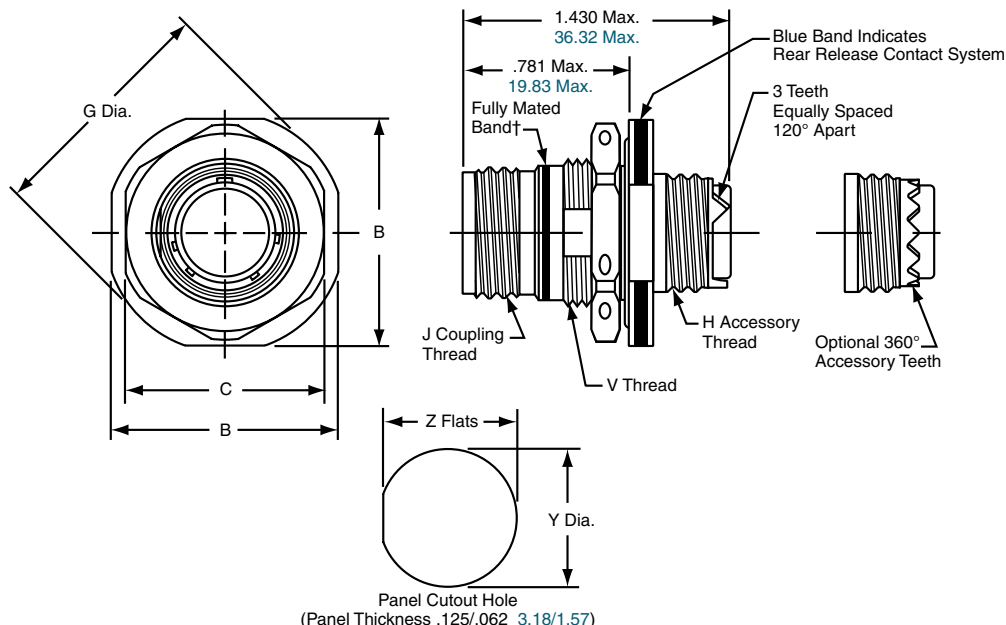
Shell sizes 8 and 10 are not available in Boeing BACC63 styles and commercial ESC11 styles.

Bayonet style square flange receptacles are shown on page 385.

Hermetic threaded style square flange receptacles are shown on page 388.

All dimensions for reference only.

## Jam Nut (D-Hole Mount) Receptacle, Threaded Coupling



### PART #

**M83723/84 / M83723/85**

**BT( )-19**

**BJ/BJ8/BN/BN8/BNK-19**

**EN2997( )7**

**BT( )/BJ( )-19**

See Quick Reference page 366 for the variety of ordering options for jam nut (D-hole mount) receptacles with threaded coupling.

The How to Order pages (374-381) give complete part number breakdowns.

† When fully mated with plug, this band will be covered.  
(Band is red on military types; can be red or blue on commercial types).

Inches

| Shell Size | B Max. | C Hex Max. | G Dia. Max. | H Accessory Thread Class 2A | J Coupling Thread Class 2A | V Thread Class 2A | Y Dia. ±.005 | Z Flats ±.005 |
|------------|--------|------------|-------------|-----------------------------|----------------------------|-------------------|--------------|---------------|
| 8          | .979   | .828       | 1.068       | .5000-20 UNF                | .5625-24 UNF               | .6250-20 UNEF     | .635         | .605          |
| 10         | 1.104  | .953       | 1.192       | .6250-24 UNEF               | .6875-24 UNEF              | .7500-20 UNEF     | .760         | .730          |
| 12         | 1.291  | 1.140      | 1.380       | .7500-20 UNEF               | .8750-20 UNEF              | .9380-20 UNEF     | .947         | .917          |
| 14         | 1.391  | 1.205      | 1.505       | .8750-20 UNEF               | .9375-20 UNEF              | 1.0000-20 UNEF    | 1.010        | .980          |
| 16         | 1.516  | 1.329      | 1.630       | 1.0000-20 UNEF              | 1.0625-18 UNEF             | 1.1250-18 UNEF    | 1.135        | 1.105         |
| 18         | 1.641  | 1.455      | 1.756       | 1.0625-18 UNEF              | 1.1875-18 UNEF             | 1.2500-18 UNEF    | 1.260        | 1.225         |
| 20         | 1.766  | 1.574      | 1.860       | 1.1875-18 UNEF              | 1.3125-18 UNEF             | 1.3750-18 UNEF    | 1.385        | 1.350         |
| 22         | 1.954  | 1.705      | 2.068       | 1.3125-18 UNEF              | 1.4375-18 UNEF             | 1.5000-18 UNEF    | 1.510        | 1.475         |
| 24         | 2.074  | 1.830      | 2.160       | 1.4375-18 UNEF              | 1.5625-18 UNEF             | 1.6250-18 UNEF    | 1.635        | 1.600         |
| 28         | 2.329  | 2.080      | —           | 1.7500-18 UNEF              | 1.8125-16 UNEF             | 1.8750-20 UNEF    | 1.885        | 1.850         |

Millimeters

| Shell Size | B Max. | C Hex Max. | G Dia. Max. | Y Dia. ±.13 | Z Flats ±.13 |
|------------|--------|------------|-------------|-------------|--------------|
| 8          | 24.87  | 21.03      | 27.13       | 16.13       | 15.37        |
| 10         | 28.04  | 24.21      | 30.28       | 19.30       | 18.54        |
| 12         | 32.79  | 28.96      | 35.05       | 24.05       | 23.29        |
| 14         | 35.33  | 30.61      | 38.23       | 25.65       | 24.89        |
| 16         | 38.51  | 33.76      | 41.40       | 28.83       | 28.07        |
| 18         | 41.68  | 36.96      | 44.60       | 32.00       | 31.12        |
| 20         | 44.86  | 39.98      | 47.24       | 35.18       | 34.29        |
| 22         | 49.63  | 43.31      | 52.53       | 38.35       | 37.47        |
| 24         | 52.68  | 46.48      | 80.26       | 41.53       | 40.64        |
| 28         | 59.16  | 52.83      | —           | 47.88       | 46.99        |

No Boeing Designated jam nut receptacles.

Bayonet style jam nut receptacles shown on page 386.

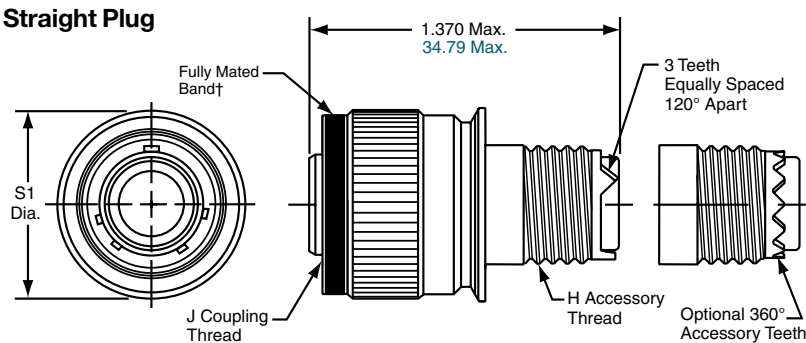
Hermetic threaded style jam nut receptacles shown on page 389.

All dimensions for reference only.

83723 III

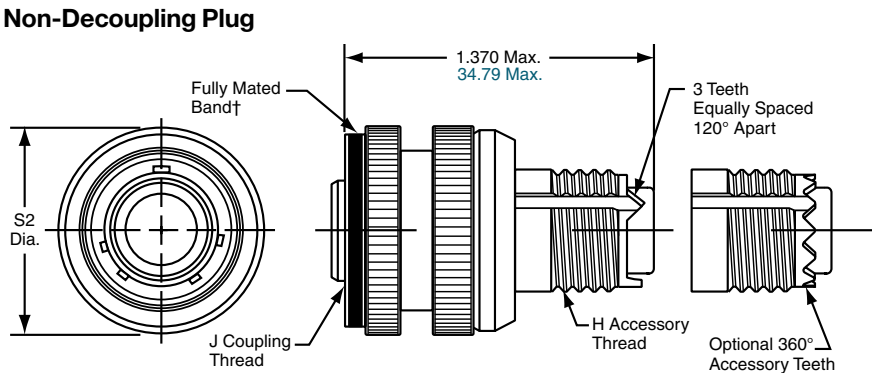
PYLE

MIL-DTL-83723, Series III, Pyle®  
Straight Plug and Non-Decoupling Plug, Threaded Coupling



**PART # STRAIGHT PLUG**  
**M83723/86 / M83723/87**  
**BT( )-11**  
**BJ/BJ8/BN/BN8/BNK-11**

See Quick Reference page 367 for the variety of ordering options for straight plugs with threaded coupling.  
The How to Order pages (374-381) give complete part number breakdowns.



**PART # NON-DECOUPLING PLUG**  
**M83723/95 / M83723/96**  
**M83723/97 / M83723/98**  
**BT( )-12**  
**BJ/BJ8/BN/BN8/BNK-12**  
**BACC63CM**  
**BSK-12**  
**EN2997( )6**  
**BT( )/BJ( )-12**  
**ESC10( )6**  
**ESC11( )6**  
**HTK/HNK/HSK-12**

† When fully mated with receptacle, this band will be covered. (Band is red on military types; can be red or blue on commercial types).

Inches

| Shell Size | H Accessory Thread Class 2A | J Coupling Thread Class 2A | S1 Dia. Max. | S2 Dia. Max. |
|------------|-----------------------------|----------------------------|--------------|--------------|
| 8          | .5000-20 UNF                | .5625-24 UNF               | .776         | .832         |
| 10         | .6250-24 UNEF               | .6875-24 UNEF              | .906         | .958         |
| 12         | .7500-20 UNEF               | .8750-20 UNEF              | 1.078        | 1.090        |
| 14         | .8750-20 UNEF               | .9375-20 UNEF              | 1.141        | 1.203        |
| 16         | 1.0000-20 UNEF              | 1.0625-18 UNEF             | 1.266        | 1.326        |
| 18         | 1.0625-18 UNEF              | 1.1875-18 UNEF             | 1.375        | 1.432        |
| 20         | 1.1875-18 UNEF              | 1.3125-18 UNEF             | 1.500        | 1.557        |
| 22         | 1.3125-18 UNEF              | 1.4375-18 UNEF             | 1.625        | 1.682        |
| 24         | 1.4375-18 UNEF              | 1.5625-18 UNEF             | 1.750        | 1.817        |
| 28         | 1.7500-18 UNEF              | 1.8125-16 UNEF             | 2.000        | 2.122        |

Millimeters

| Shell Size | S1 Dia. Max. | S2 Dia. Max. |
|------------|--------------|--------------|
| 8          | 19.71        | 21.13        |
| 10         | 23.01        | 24.33        |
| 12         | 27.38        | 27.68        |
| 14         | 28.98        | 30.55        |
| 16         | 32.15        | 33.68        |
| 18         | 34.92        | 36.37        |
| 20         | 38.10        | 39.54        |
| 22         | 41.27        | 42.72        |
| 24         | 44.45        | 46.15        |
| 28         | 50.80        | 53.89        |

Shell sizes 8 and 10 are not available in Boeing BACC63 styles and commercial ESC11 styles.  
Boeing designations are in non-decoupling plugs only; not in straight plug designations.  
ASD and European/ESC10 or ESC11 are in non-decoupling plugs only, not in straight plug designations.  
Bayonet style straight plugs shown on page 387.  
Bayonet style non-decoupling plugs are not available.

All dimensions for reference only.

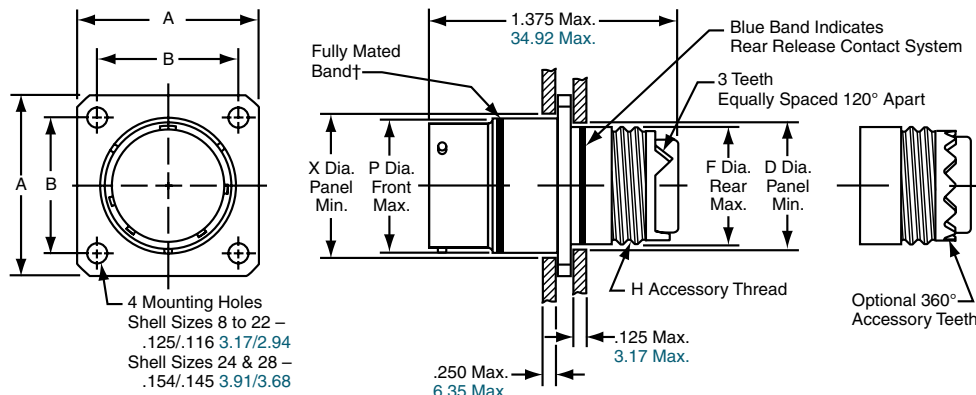
See Quick Reference page 367 for the variety of ordering options for non-decoupling plugs with threaded coupling.  
The How to Order pages (374-381) give complete part number breakdowns.

83723 III

PYLE

# MIL-DTL-83723, Series III, Pyle®

## Square Flange Receptacle, Bayonet Coupling



### PART #

**M83723/71 / M83723/72**

**BY( )-17**

See Quick Reference page 368 for the variety of ordering options for square flange receptacles with bayonet coupling.

The How to Order page 374 gives complete part number breakdowns.

† When fully mated with plug, this band will be covered.  
(Band is red on military types; can be red or blue on commercial types).

Inches

| Shell Size | A<br>±.005 | B<br>±.005 | D Dia.<br>Panel<br>Min. | F Dia.<br>Rear<br>Max. | H<br>Accessory Thread<br>Class 2A | P Dia.<br>Front<br>Max. | X Dia.<br>Panel<br>Min. |
|------------|------------|------------|-------------------------|------------------------|-----------------------------------|-------------------------|-------------------------|
| 8          | .812       | .594       | .510                    | .500                   | .5000-20 UNF                      | .562                    | .620                    |
| 10         | .937       | .719       | .635                    | .625                   | .6250-24 UNEF                     | .696                    | .748                    |
| 12         | 1.031      | .812       | .760                    | .750                   | .7500-20 UNEF                     | .875                    | .913                    |
| 14         | 1.125      | .906       | .885                    | .875                   | .8750-20 UNEF                     | .936                    | .980                    |
| 16         | 1.250      | .969       | 1.010                   | 1.000                  | 1.0000-20 UNEF                    | 1.062                   | 1.107                   |
| 18         | 1.343      | 1.062      | 1.072                   | 1.062                  | 1.0625-18 UNEF                    | 1.187                   | 1.209                   |
| 20         | 1.437      | 1.156      | 1.192                   | 1.187                  | 1.1875-18 UNEF                    | 1.312                   | 1.337                   |
| 22         | 1.562      | 1.250      | 1.322                   | 1.312                  | 1.3125-18 UNEF                    | 1.437                   | 1.452                   |
| 24         | 1.703      | 1.375      | 1.447                   | 1.437                  | 1.4375-18 UNEF                    | 1.562                   | 1.577                   |

Millimeters

| Shell Size | A<br>±.005 | B<br>±.005 | D Dia.<br>Panel<br>Min. | F Dia.<br>Rear<br>Max. | P Dia.<br>Front<br>Max. | X Dia.<br>Panel<br>Min. |
|------------|------------|------------|-------------------------|------------------------|-------------------------|-------------------------|
| 8          | 20.62      | 15.04      | 12.95                   | 12.70                  | 14.27                   | 15.75                   |
| 10         | 23.80      | 18.26      | 16.13                   | 15.88                  | 17.68                   | 18.99                   |
| 12         | 26.19      | 20.62      | 19.30                   | 19.05                  | 22.23                   | 23.19                   |
| 14         | 28.58      | 23.01      | 22.48                   | 22.23                  | 23.77                   | 24.89                   |
| 16         | 31.75      | 24.61      | 25.65                   | 25.40                  | 26.97                   | 28.12                   |
| 18         | 34.11      | 26.97      | 27.23                   | 26.97                  | 30.15                   | 30.71                   |
| 20         | 36.50      | 29.36      | 30.28                   | 30.15                  | 33.32                   | 33.96                   |
| 22         | 39.67      | 31.75      | 33.58                   | 33.32                  | 36.50                   | 36.88                   |
| 24         | 43.26      | 34.93      | 36.75                   | 36.50                  | 39.67                   | 40.06                   |

Bayonet coupling connectors are offered in Military 83723 and Commercial equivalent designations. They are not included in Boeing, GE, ASD and other European specified connectors.

Shell size 28 is not available in Bayonet coupling connectors.

All dimensions for reference only.

83723 III

PYLE

# MIL-DTL-83723, Series III, Pyle®

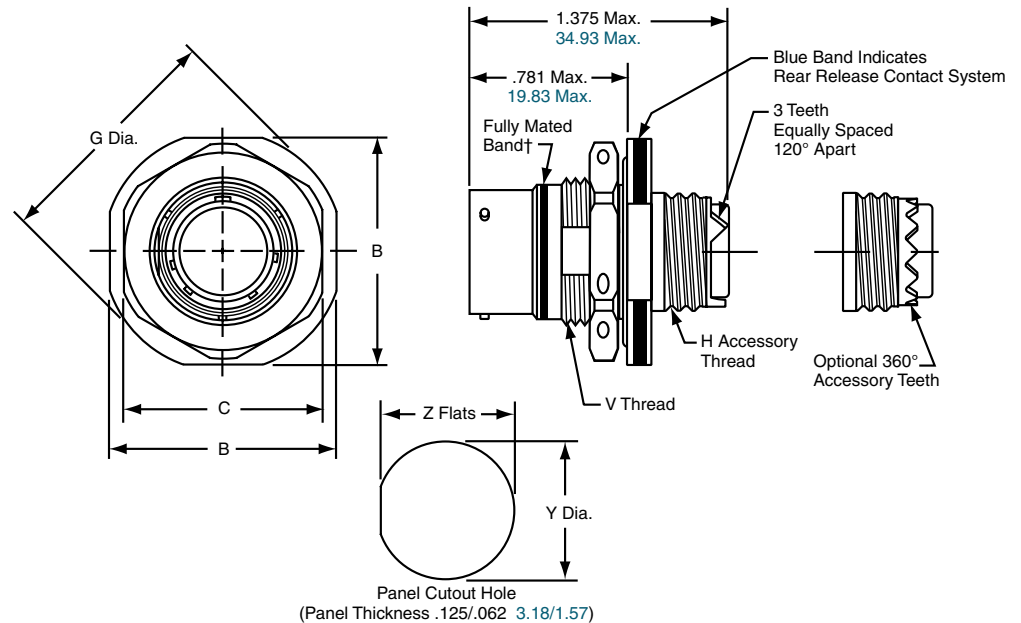
## Jam Nut (D-Hole Mount) Receptacle, Bayonet Coupling

### PART #

**M83723/73 / M83723/74**

**BY( )-19**

See Quick Reference page 368 for the variety of ordering options for jam nut D-hole mount receptacles with bayonet coupling. The How to Order page 374 gives complete part number breakdowns.



† When fully mated with plug, this band will be covered.  
(Band is red on military types; can be red or blue on commercial types).

Inches

| Shell Size | B Flats Max. | C Hex Max. | G Dia. Max. | H Accessory Thread Class 2A | V Thread Class 2A | Y Dia. ±.005 | Z Flats ±.005 |
|------------|--------------|------------|-------------|-----------------------------|-------------------|--------------|---------------|
| 8          | .979         | .828       | 1.068       | .5000-20 UNF                | .6250-20 UNEF     | .635         | .605          |
| 10         | 1.104        | .953       | 1.192       | .6250-24 UNEF               | .7500-20 UNEF     | .760         | .730          |
| 12         | 1.291        | 1.140      | 1.380       | .7500-20 UNEF               | .9380-20 UNEF     | .947         | .917          |
| 14         | 1.391        | 1.205      | 1.505       | .8750-20 UNEF               | 1.0000-20 UNEF    | 1.010        | .980          |
| 16         | 1.516        | 1.329      | 1.630       | 1.0000-20 UNEF              | 1.1250-20 UNEF    | 1.135        | 1.105         |
| 18         | 1.641        | 1.455      | 1.756       | 1.0625-18 UNEF              | 1.2500-18 UNEF    | 1.260        | 1.225         |
| 20         | 1.766        | 1.574      | 1.860       | 1.1875-18 UNEF              | 1.3750-18 UNEF    | 1.385        | 1.350         |
| 22         | 1.954        | 1.705      | 2.068       | 1.3125-18 UNEF              | 1.5000-18 UNEF    | 1.510        | 1.475         |
| 24         | 2.074        | 1.830      | 2.160       | 1.4375-18 UNEF              | 1.6250-18 UNEF    | 1.635        | 1.600         |

Millimeters

| Shell Size | B Flats Max. | C Hex Max. | G Dia. Max. | Y Dia. ±.13 | Z Flats ±.13 |
|------------|--------------|------------|-------------|-------------|--------------|
| 8          | 24.87        | 21.03      | 27.13       | 16.13       | 15.37        |
| 10         | 28.04        | 24.21      | 30.28       | 19.30       | 18.54        |
| 12         | 32.79        | 28.96      | 35.05       | 24.05       | 23.29        |
| 14         | 35.33        | 30.61      | 38.23       | 25.65       | 24.89        |
| 16         | 38.51        | 33.76      | 41.40       | 28.83       | 28.07        |
| 18         | 41.68        | 36.96      | 44.60       | 32.00       | 31.12        |
| 20         | 44.86        | 39.98      | 47.24       | 35.18       | 34.29        |
| 22         | 49.63        | 43.31      | 52.53       | 38.35       | 37.47        |
| 24         | 52.68        | 46.48      | 54.26       | 41.53       | 40.64        |

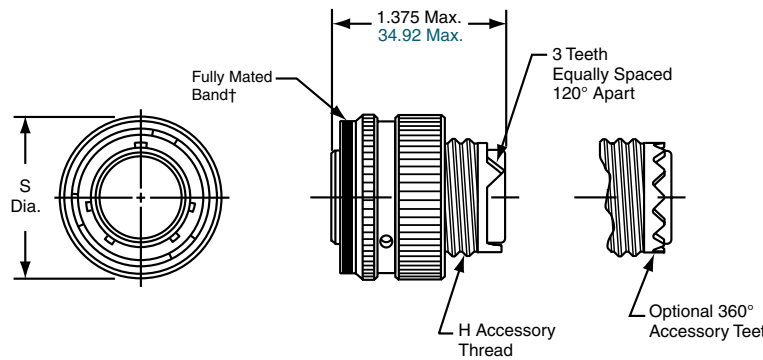
Bayonet coupling connectors are offered in Military 83723 and Commercial equivalent designations. They are not included in Boeing, GE, ASD and other European specified connectors.

Shell size 28 is not available in Bayonet coupling connectors.

All dimensions for reference only.

# MIL-DTL-83723, Series III, Pyle®

## Straight Plug, Bayonet Coupling



### PART #

**M83723/75 / M83723/76**

**BY( )-10**

See Quick Reference page 368 for the variety of ordering options for straight plugs with bayonet coupling. The How to Order page 374 gives complete part number breakdowns.

† When fully mated with receptacle, this band will be covered. (Band is red on military types; can be red or blue on commercial types).

Inches

| Shell Size | H Accessory Thread Class 2A | S Dia. Max. |
|------------|-----------------------------|-------------|
| 8          | .5000-20 UNF                | .765        |
| 10         | .6250-24 UNEF               | .906        |
| 12         | .7500-20 UNEF               | 1.078       |
| 14         | .8750-20 UNEF               | 1.125       |
| 16         | 1.0000-20 UNEF              | 1.266       |
| 18         | 1.0625-18 UNEF              | 1.375       |
| 20         | 1.1875-18 UNEF              | 1.505       |
| 22         | 1.3125-18 UNEF              | 1.625       |
| 24         | 1.4375-18 UNEF              | 1.755       |

Millimeters

| Shell Size | S Dia. Max. |
|------------|-------------|
| 8          | 19.43       |
| 10         | 23.01       |
| 12         | 27.38       |
| 14         | 28.57       |
| 16         | 32.15       |
| 18         | 34.92       |
| 20         | 38.22       |
| 22         | 41.27       |
| 24         | 44.57       |

Bayonet coupling connectors are offered in Military 83723 and Commercial equivalent designations. They are not included in Boeing, GE, ASD and other European specified connectors.

Shell size 28 is not available in Bayonet coupling connectors.

All dimensions for reference only.

83723 III

PYLE

MIL-DTL-83723, Series III, Pyle®

Hermetic Square Flange Mount Receptacle,  
Threaded Coupling

PART #

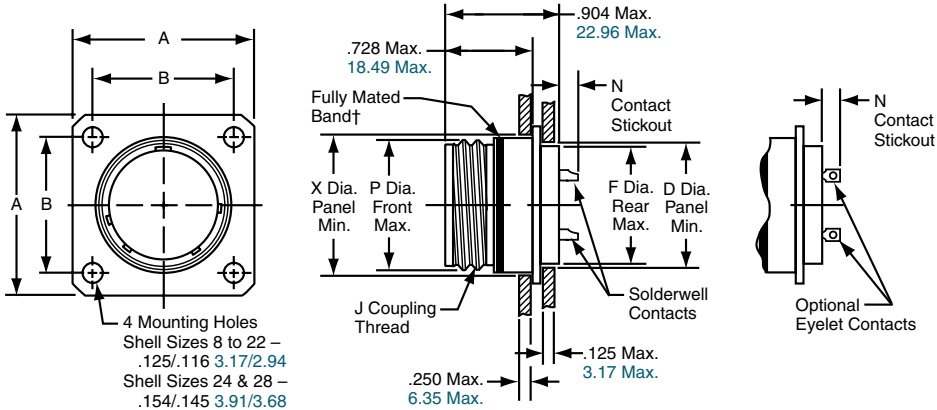
M83723/88Y /  
M83723/88P

BTY/BFY/BNY-17

EN2997Y0 / YE0

ESC10YE2

ESC11YE2



See Quick Reference page 369 for the variety of ordering options for hermetic square flange mount receptacles with threaded coupling.

The How to Order pages (377, 379, 381) give complete part number breakdowns.

† When fully mated with plug, this band will be covered.  
(Band is red on military types; can be red or blue on commercial types).

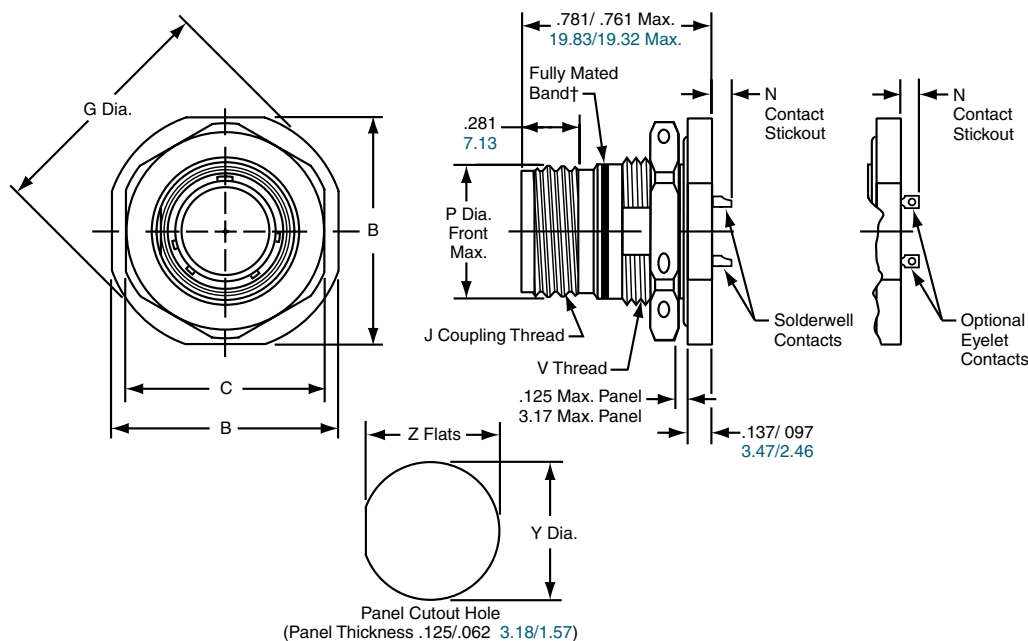
| Inches     |            |            |                      |                     |                               |                       |                          |                      |                      |
|------------|------------|------------|----------------------|---------------------|-------------------------------|-----------------------|--------------------------|----------------------|----------------------|
| Shell Size | A<br>±.010 | B<br>±.005 | D Dia.<br>Panel Min. | F Dia.<br>Rear Max. | J<br>Coupling Thread Class 2A | N<br>Contact Stickout |                          | P Dia.<br>Front Max. | X Dia.<br>Panel Min. |
|            |            |            |                      |                     |                               | Size 20<br>Contacts   | Size 12 & 16<br>Contacts |                      |                      |
| 8          | .812       | .594       | .510                 | .500                | .5625-24 UNF                  | .194 / .134           | .224 / .164              | .562                 | .572                 |
| 10         | .937       | .719       | .635                 | .625                | .6875-24 UNEF                 | .194 / .134           | .224 / .164              | .696                 | .706                 |
| 12         | 1.031      | .812       | .760                 | .750                | .8750-20 UNEF                 | .194 / .134           | .224 / .164              | .875                 | .885                 |
| 14         | 1.125      | .906       | .885                 | .875                | .9375-20 UNEF                 | .194 / .134           | .224 / .164              | .936                 | .946                 |
| 16         | 1.250      | .969       | 1.010                | 1.000               | 1.0625-18 UNEF                | .194 / .134           | .224 / .164              | 1.062                | 1.072                |
| 18         | 1.343      | 1.062      | 1.072                | 1.062               | 1.1875-18 UNEF                | .194 / .134           | .224 / .164              | 1.187                | 1.197                |
| 22         | 1.562      | 1.250      | 1.322                | 1.312               | 1.4375-18 UNEF                | .194 / .134           | .224 / .164              | 1.437                | 1.447                |

| Shell Size | A<br>±.25 | B<br>±.13 | D Dia.<br>Panel Min. | F Dia.<br>Rear Max. | P Dia.<br>Front Max. | X Dia.<br>Panel Min. |
|------------|-----------|-----------|----------------------|---------------------|----------------------|----------------------|
| 8          | 20.62     | 15.09     | 12.95                | 12.70               | 14.27                | 15.75                |
| 10         | 23.80     | 18.26     | 16.13                | 15.88               | 17.68                | 18.99                |
| 12         | 26.19     | 20.62     | 19.30                | 19.05               | 22.23                | 23.19                |
| 14         | 28.58     | 23.01     | 22.48                | 22.23               | 23.77                | 24.89                |
| 16         | 31.75     | 24.61     | 25.65                | 25.40               | 26.97                | 28.12                |
| 18         | 34.11     | 26.97     | 27.23                | 26.97               | 30.15                | 30.71                |
| 22         | 39.67     | 31.75     | 33.58                | 33.32               | 36.50                | 36.88                |

Hermetic style receptacles are not included in Boeing designations.  
Commercial hermetics meet some European and GE specifications.  
Hermetic styles are threaded coupling only.  
Shell sizes 20, 24 and 28, consult Amphenol for availability.  
All dimensions for reference only.

# MIL-DTL-83723, Series III, Pyle®

## Hermetic Jam Nut (D-Hole Mount) Receptacle, Threaded Coupling



### PART #

**M83723/89Y /  
M83723/89P**

**BTY/BFY/BNY-19**

**EN2997Y7 / YE7**

**ESC10YE3**

**ESC11YE3**

See Quick Reference page 369 for the variety of ordering options for hermetic jam nut D-hole mount receptacles with threaded coupling. The How to Order pages (377, 379, 381) give complete part number breakdowns.

† When fully mated with plug, this band will be covered.  
(Band is red on military types; can be red or blue on commercial types).

Inches

| Shell Size | B Flats Max. | C Hex Max. | G Dia. Max. | J Coupling Thread Class 2A | N Contact Stickout |                       | P Dia. Front Max. | V Thread Class 2A | Y Dia. ±.005 | Z Flats ±.005 |
|------------|--------------|------------|-------------|----------------------------|--------------------|-----------------------|-------------------|-------------------|--------------|---------------|
|            |              |            |             |                            | Size 20 Contacts   | Size 12 & 16 Contacts |                   |                   |              |               |
| 8          | .980         | .828       | 1.068       | .5625-24 UNF               | .180 / .120        | .210 / .150           | .562              | .6250-20 UNF      | .635         | .605          |
| 10         | 1.104        | .953       | 1.192       | .6875-24 UNEF              | .180 / .120        | .210 / .150           | .696              | .7500-20 UNEF     | .760         | .730          |
| 12         | 1.291        | 1.140      | 1.380       | .8750-20 UNEF              | .180 / .120        | .210 / .150           | .875              | .9380-20 UNEF     | .947         | .917          |
| 14         | 1.391        | 1.205      | 1.505       | .9375-20 UNEF              | .180 / .120        | .210 / .150           | .936              | 1.0000-20 UNEF    | 1.010        | .980          |
| 16         | 1.516        | 1.329      | 1.630       | 1.0625-18 UNEF             | .180 / .120        | .210 / .150           | 1.062             | 1.1250-18 UNEF    | 1.135        | 1.105         |
| 18         | 1.641        | 1.455      | 1.756       | 1.1875-18 UNEF             | .180 / .120        | .210 / .150           | 1.187             | 1.2500-18 UNEF    | 1.260        | 1.225         |
| 22         | 1.954        | 1.705      | 2.068       | 1.4375-18 UNEF             | .180 / .120        | .210 / .150           | 1.437             | 1.5000-18 UNEF    | 1.510        | 1.475         |

Millimeters

| Shell Size | B Flats Max. | C Hex Max. | G Dia. Max. | N Contact Stickout |                       | P Dia. Front Max. | Y Dia. ±.13 | Z Flats ±.13 |
|------------|--------------|------------|-------------|--------------------|-----------------------|-------------------|-------------|--------------|
|            |              |            |             | Size 20 Contacts   | Size 12 & 16 Contacts |                   |             |              |
| 8          | 24.89        | 21.03      | 27.13       | 4.57 / 3.05        | 5.33 / 3.81           | 14.27             | 16.13       | 15.37        |
| 10         | 28.04        | 24.21      | 30.28       | 4.57 / 3.05        | 5.33 / 3.81           | 17.68             | 19.30       | 18.54        |
| 12         | 32.79        | 28.96      | 35.05       | 4.57 / 3.05        | 5.33 / 3.81           | 22.23             | 24.05       | 23.29        |
| 14         | 35.33        | 30.61      | 38.23       | 4.57 / 3.05        | 5.33 / 3.81           | 23.77             | 25.65       | 24.89        |
| 16         | 38.51        | 33.76      | 41.40       | 4.57 / 3.05        | 5.33 / 3.81           | 26.97             | 28.83       | 28.07        |
| 18         | 41.68        | 36.96      | 44.60       | 4.57 / 3.05        | 5.33 / 3.81           | 30.15             | 32.00       | 31.12        |
| 22         | 49.63        | 43.31      | 52.53       | 4.57 / 3.05        | 5.33 / 3.81           | 36.47             | 38.35       | 37.47        |

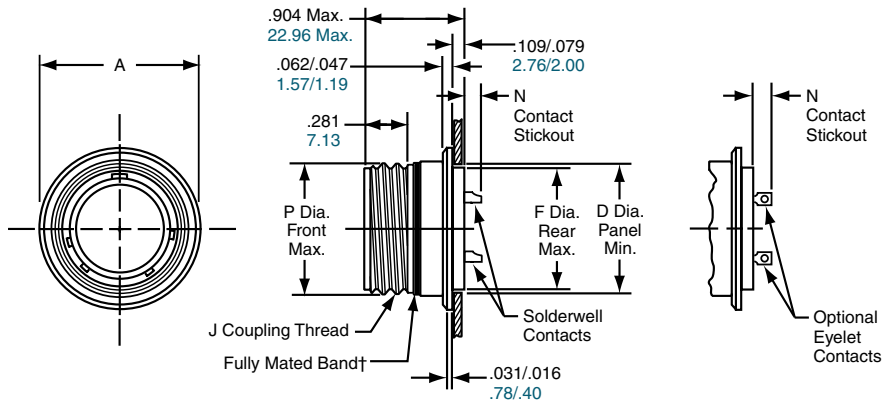
Hermetic style receptacles are not included in Boeing designations.  
Commercial hermetics meet some European and GE specifications.  
Hermetic styles are threaded coupling only.  
Shell sizes 20, 24 and 28, consult Amphenol for availability.  
All dimensions for reference only.

83723 III

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# MIL-DTL-83723, Series III, Pyle®

## Hermetic Solder Mount/Weld Mount Receptacle, Threaded Coupling



### PART #

**M83723/90Y /  
M83723/90P**

**BTY/BFY/BNY-14**

**EN2997Y1 / YE1**

**ESC10YE1**

**ESC11YE1**

See Quick Reference page 370 for the variety of ordering options for hermetic solder mount / weld mount receptacles with threaded coupling. The How to Order pages (377, 379, 381) give complete part number breakdowns.

† When fully mated with plug this band will be covered.  
(Band is red on military types; can be red or blue on commercial types).

Inches

| Shell Size | A Dia.<br>±.010 | D Dia.<br>Panel<br>Min. | F Dia.<br>Rear<br>Max. | J<br>Coupling Thread<br>Class 2A | N<br>Contact Stickout |                          | P Dia.<br>Front<br>Max. |
|------------|-----------------|-------------------------|------------------------|----------------------------------|-----------------------|--------------------------|-------------------------|
|            |                 |                         |                        |                                  | Size 20<br>Contacts   | Size 12 & 16<br>Contacts |                         |
| 8          | .713            | .510                    | .500                   | .5625-24 UNF                     | .194 / .134           | .224 / .164              | .562                    |
| 10         | .840            | .572                    | .562                   | .6875-24 UNEF                    | .194 / .134           | .224 / .164              | .696                    |
| 12         | 1.045           | .760                    | .750                   | .8750-20 UNEF                    | .194 / .134           | .224 / .164              | .875                    |
| 14         | 1.090           | .822                    | .812                   | .9375-20 UNEF                    | .194 / .134           | .224 / .164              | .936                    |
| 16         | 1.210           | .947                    | .937                   | 1.0625-18 UNEF                   | .194 / .134           | .224 / .164              | 1.062                   |
| 18         | 1.340           | 1.072                   | 1.062                  | 1.1875-18 UNEF                   | .194 / .134           | .224 / .164              | 1.187                   |
| 22         | 1.562           | 1.322                   | 1.312                  | 1.4375-18 UNEF                   | .194 / .134           | .224 / .164              | 1.437                   |

Millimeters

| Shell Size | A Dia.<br>±.25 | D Dia.<br>Panel<br>Min. | F Dia.<br>Rear<br>Max. | P Dia.<br>Front<br>Max. |
|------------|----------------|-------------------------|------------------------|-------------------------|
| 8          | 18.11          | 12.95                   | 12.70                  | 14.27                   |
| 10         | 21.34          | 14.53                   | 14.27                  | 17.68                   |
| 12         | 26.54          | 19.30                   | 19.05                  | 22.23                   |
| 14         | 27.69          | 20.88                   | 20.62                  | 23.77                   |
| 16         | 30.73          | 24.05                   | 23.80                  | 26.97                   |
| 18         | 34.04          | 27.23                   | 26.97                  | 30.15                   |
| 22         | 39.67          | 33.58                   | 33.32                  | 36.50                   |

Hermetic style receptacles are not included in Boeing designations.  
Commercial hermetics meet some European and GE specifications.  
Hermetic styles are threaded coupling only.  
Shell sizes 20, 24 and 28, consult Amphenol for availability.  
All dimensions for reference only.

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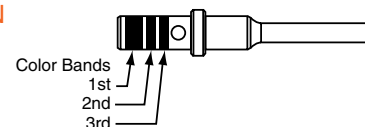
# MIL-DTL-83723, Series III, Pyle®

## Contact Information, Sealing Plugs, Tools

### STANDARD CRIMP CONTACTS - PIN PART NUMBERS / COLOR BANDS

| Contact Size | Pin MS Spec Number | Pin Pyle Part Number | Pin Color Bands |          |          |
|--------------|--------------------|----------------------|-----------------|----------|----------|
|              |                    |                      | 1st Band        | 2nd Band | 3rd Band |
| 20           | M39029/4-110       | BA-4020-36LD         | Brown           | Brown    | Black    |
| 16           | M39029/4-111       | BA-4016-36LD         | Brown           | Brown    | Brown    |
| 12           | M39029/4-113       | BA-4012-36LD         | Brown           | Brown    | Orange   |

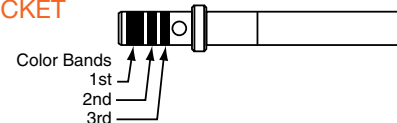
#### PIN



### STANDARD CRIMP CONTACTS - SOCKET PART NUMBERS / COLOR BANDS

| Contact Size | Socket MS Spec Number | Socket Pyle Part Number | Socket Color Bands |          |          |
|--------------|-----------------------|-------------------------|--------------------|----------|----------|
|              |                       |                         | 1st Band           | 2nd Band | 3rd Band |
| 20           | M39029/5-115          | BA-4120-36LD            | Brown              | Brown    | Green    |
| 16           | M39029/5-116          | BA-4116-36LD            | Brown              | Brown    | Blue     |
| 12           | M39029/5-118          | BA-4112-36LD            | Brown              | Brown    | Gray     |

#### SOCKET



Sockets feature 4 tine construction with supporting spring bands.

### STANDARD CRIMP CONTACT RATING

| Contact Size | Test Current Standard | Crimp Well Data |             |                 |             |
|--------------|-----------------------|-----------------|-------------|-----------------|-------------|
|              |                       | Well Diameter   |             | Min. Well Depth |             |
|              |                       | Inches          | Millimeters | Inches          | Millimeters |
| 20           | 7.5                   | .049            | 1.25        | .157            | 3.99        |
| 16           | 13.0                  | .067            | 1.70        | .250            | 6.35        |
| 12           | 23.0                  | .100            | 2.54        | .250            | 6.35        |

### STANDARD SEALING PLUGS

| Contact Size | Sealing Plug MS Number | Sealing Plug Pyle Number | Color  |
|--------------|------------------------|--------------------------|--------|
| 20           | MS27488-20             | BA-4020-59P              | Red    |
| 16           | MS27488-16             | BA-4016-59P              | Blue   |
| 12           | MS27488-12             | BA-4012-59P              | Yellow |

### TOOLS

| Contact Size | Crimp Tool  |             | Adjustable Turret |             | Checking Gauge for M22520/1-01 Crimping Tool |             | Insertion/Removal Tool |                 |                  |
|--------------|-------------|-------------|-------------------|-------------|----------------------------------------------|-------------|------------------------|-----------------|------------------|
|              | MS Number   | Pyle Number | MS Number         | Pyle Number | MS Number                                    | Pyle Number | MS Number              | Pyle Number     | Amphenol Number* |
| 20           | M22520/1-01 | TP-201354   | M22520/1-02       | TP-201355   | M22520/3                                     | TP-201356   | M81969/14-11           | TP-201343-20-BA | 10-538988-201    |
| 16           |             |             |                   |             |                                              |             | M81969/14-03           | TP-201343-16-BA | 10-538988-016    |
| 12           |             |             |                   |             |                                              |             | M81969/14-04           | TP-201343-12-BA | 10-538988-012    |

\* Amphenol part number for insertion/removal tool supersedes Pyle number

### BACKSHELLS

The section of this catalog called "Backshells" covers the backshells for MIL-DTL-83723, Series III Pyle connectors that are provided through Amphenol PCD. Please refer to this section for:

- Backshells for Connector Family "J", which includes MIL-DTL-26482 (Series II), MIL-DTL-5015 (MS3400), MIL-DTL-83723 (Series I & III).

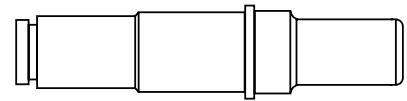
# MIL-DTL-83723, Series III, Pyle®

## Shielded Contacts, Thermocouple Contacts, Wire Sealing Information

### SHIELDED CONCENTRIC TWINAX CONTACTS

| Contact Size | Cable Accommodation     | Concentric Twinax Pin |
|--------------|-------------------------|-----------------------|
| #8 Twinax    | M17/176-00002           | BA-46T08-LD           |
| #8 Twinax    | PAN 6421 or JN1060ZB002 | BA-46TA08-LD          |

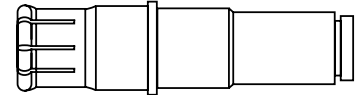
CONCENTRIC  
TWINAX PIN



Non-MS part; no color bands.

| Contact Size | Cable Accommodation     | Concentric Twinax Socket |
|--------------|-------------------------|--------------------------|
| #8 Twinax    | M17/176-00002           | BA-47T08-LD              |
| #8 Twinax    | PAN 6421 or JN1060ZB002 | BA-47TA08-LD             |

CONCENTRIC  
TWINAX SOCKET



Non-MS part; no color bands.

Concentric Twinax contacts are designed for protection from magnetic and electrostatic interference including nuclear electromagnetic pulse. Consult Amphenol for other size twinax and coax contacts available for use in MIL-DTL-83723, Series III Pyle connectors.

### THERMOCOUPLE - PIN PART NUMBERS / COLOR BANDS

| Contact Size | Material | Thermocouple Pin Pyle Part Number | Thermocouple Pin Color Bands |          |          |
|--------------|----------|-----------------------------------|------------------------------|----------|----------|
|              |          |                                   | 1st Band                     | 2nd Band | 3rd Band |
| 20           | Chromel  | BT-4020-10P                       | Brown                        | Orange   | Green    |
| 20           | Alumel   | BT-4020-10R                       | Brown                        | Orange   | Yellow   |
| 16           | Chromel  | BA-4016-10P                       | Green                        | Brown    | Violet   |
| 16           | Alumel   | BA-4016-10R                       | Green                        | Brown    | Blue     |

### THERMOCOUPLE - SOCKET PART NUMBERS / COLOR BANDS

| Contact Size | Material | Thermocouple Socket Pyle Part Number | Reference Thermocouple Socket MS Part Number | Thermocouple Socket Color Bands |          |          |
|--------------|----------|--------------------------------------|----------------------------------------------|---------------------------------|----------|----------|
|              |          |                                      |                                              | 1st Band                        | 2nd Band | 3rd Band |
| 20           | Chromel  | BT-4120-10P                          | —                                            | Brown                           | Yellow   | Brown    |
| 20           | Alumel   | BT-4120-10R                          | —                                            | Brown                           | Yellow   | Black    |
| 16           | Chromel  | BT-4116-10P                          | Ref M39029/10-522                            | Green                           | Red      | Red      |
| 16           | Alumel   | BT-4116-10R                          | Ref M39029/10-521                            | Green                           | Red      | Brown    |

### STANDARD & HIGH TEMPERATURE CRIMP CONTACTS WIRE SEALING DIAMETERS / STRIPPING LENGTHS

| Contact Size | Wire Size (AWG) | Finished Wire Outside |             |         |             | Stripping Lengths |             |         |             |
|--------------|-----------------|-----------------------|-------------|---------|-------------|-------------------|-------------|---------|-------------|
|              |                 | Minimum               |             | Maximum |             | Minimum           |             | Maximum |             |
|              |                 | Inches                | Millimeters | Inches  | Millimeters | Inches            | Millimeters | Inches  | Millimeters |
| 20           | 24, 22, 20      | .033                  | .84         | .083    | 2.11        | .140              | 3.56        | .202    | 5.13        |
| 16           | 20, 18, 16      | .047                  | 1.19        | .106    | 2.69        | .218              | 5.54        | .280    | 7.11        |
| 12           | 14, 12          | .075                  | 1.91        | .157    | 3.99        | .218              | 5.54        | .280    | 7.11        |

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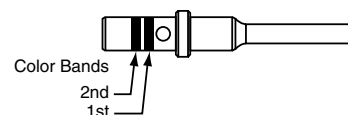
# MIL-DTL-83723, Series III, Pyle®

## Contact Information - European Specs

### CONTACTS THAT MEET EUROPEAN SPECIFICATIONS STANDARD CRIMP - PIN PART NUMBERS / COLOR BANDS

| Contact Size | Pin Pyle Part Number | Pin Color Bands |          |     |
|--------------|----------------------|-----------------|----------|-----|
|              |                      | 1st Band        | 2nd Band | Dot |
| 20           | BA-4020-36LD-Y165    | Red             | Red      | –   |
| 20/18*       | BA-402018-36LD-Y165  | Red             | Violet   | –   |
| 16           | BA-4016-36LD-Y165    | Blue            | Blue     | –   |
| 12           | BA-4012-36LD-Y165    | Yellow          | Yellow   | –   |

#### STANDARD PIN EUROPEAN SPEC

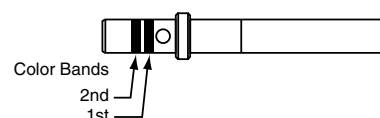


First band color is for contact size  
2nd band color is for AWG wire size

### CONTACTS THAT MEET EUROPEAN SPECIFICATIONS STANDARD CRIMP - SOCKET PART NUMBERS / COLOR BANDS

| Contact Size | Socket Pyle Part Number | Socket Color Bands |          |     |
|--------------|-------------------------|--------------------|----------|-----|
|              |                         | 1st Band           | 2nd Band | Dot |
| 20           | BA-4120-36LD-Y165       | Red                | Red      | –   |
| 20/18*       | BA-412018-36LD-Y165     | Red                | Violet   | –   |
| 16           | BA-4116-36LD-Y165       | Blue               | Blue     | –   |
| 12           | BA-4112-36LD-Y165       | Yellow             | Yellow   | –   |

#### STANDARD SOCKET EUROPEAN SPEC

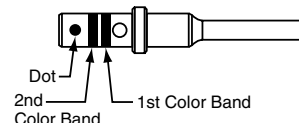


First band color is for contact size  
2nd band color is for AWG wire size

### CONTACTS THAT MEET EUROPEAN SPECIFICATIONS HIGH TEMPERATURE - PIN PART NUMBERS / COLOR BANDS

| Contact Size | Pin Pyle Part Number | Pin ESC30 Part Number | Pin Color Bands |          |       |
|--------------|----------------------|-----------------------|-----------------|----------|-------|
|              |                      |                       | 1st Band        | 2nd Band | Dot   |
| 20           | BA-4020-50LD         | ESC30-P20BC           | Red             | Red      | White |
| 20/18*       | BA-402018-50LD       | –                     | Red             | Violet   | White |
| 16           | BA-4016-50LD         | ESC30-P16BC           | Blue            | Blue     | White |
| 12           | BA-4012-50LD         | ESC30-P12BC           | Yellow          | Yellow   | White |

#### HIGH TEMPERATURE PIN EUROPEAN SPEC

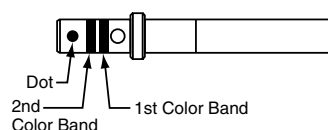


First band color is for contact size  
2nd band color is for AWG wire size  
Dot identifies High Temperature or Thermocouple contacts

### CONTACTS THAT MEET EUROPEAN SPECIFICATIONS HIGH TEMPERATURE - SOCKET PART NUMBERS / COLOR BANDS

| Contact Size | Socket Pyle Part Number | Socket ESC30 Part Number | Socket Color Bands |          |       |
|--------------|-------------------------|--------------------------|--------------------|----------|-------|
|              |                         |                          | 1st Band           | 2nd Band | Dot   |
| 20           | BA-4120-50LD            | ESC30-S20BC              | Red                | Red      | White |
| 20/18*       | BA-412018-50LD          | –                        | Red                | Violet   | White |
| 16           | BA-4116-50LD            | ESC30-S16BC              | Blue               | Blue     | White |
| 12           | BA-4112-50LD            | ESC30-S12BC              | Yellow             | Yellow   | White |

#### HIGH TEMPERATURE SOCKET EUROPEAN SPEC



First band color is for contact size  
2nd band color is for AWG wire size  
Dot identifies High Temperature or Thermocouple contacts

\* #20 contacts with #18 crimpwell

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**CONTACTS THAT MEET EUROPEAN SPECIFICATIONS  
THERMOCOUPLE - PIN  
PART NUMBERS / COLOR BANDS**

| Contact Size | Material | Pin Pyle Part Number | Pin ESC30 Part Number | Pin Color Bands |          |        |
|--------------|----------|----------------------|-----------------------|-----------------|----------|--------|
|              |          |                      |                       | 1st Band        | 2nd Band | Dot    |
| 20           | Chromel  | BT-4020-10P-Y165     | ESC30-P20NC           | Red             | Red      | Yellow |
| 20           | Alumel   | BT-4020-10R-Y165     | ESC30-P20NA           | Red             | Red      | Black  |
| 20/18*       | Chromel  | BT-402018-10P-Y165   | –                     | Red             | Violet   | Yellow |
| 20/18*       | Alumel   | BT-402018-10R-Y165   | –                     | Red             | Violet   | Black  |
| 16           | Chromel  | BT-4016-10P-Y165     | ESC30-P16NC           | Blue            | Blue     | Yellow |
| 16           | Alumel   | BT-4016-10R-Y165     | ESC30-P16NA           | Blue            | Blue     | Black  |

**CONTACTS THAT MEET EUROPEAN SPECIFICATIONS  
THERMOCOUPLE - SOCKET  
PART NUMBERS / COLOR BANDS**

| Contact Size | Material | Socket Pyle Part Number | Socket ESC30 Part Number | Socket Color Bands |          |        |
|--------------|----------|-------------------------|--------------------------|--------------------|----------|--------|
|              |          |                         |                          | 1st Band           | 2nd Band | Dot    |
| 20           | Chromel  | BT-4120-10P-Y165        | ESC30-S20NC              | Red                | Red      | Yellow |
| 20           | Alumel   | BT-4120-10R-Y165        | ESC30-S20NA              | Red                | Red      | Black  |
| 20/18*       | Chromel  | BT-412018-10P-Y165      | –                        | Red                | Violet   | Yellow |
| 20/18*       | Alumel   | BT-412018-10R-Y165      | –                        | Red                | Violet   | Black  |
| 16           | Chromel  | BT-4116-10P-Y165        | ESC30-S16NC              | Blue               | Blue     | Yellow |
| 16           | Alumel   | BT-4116-10R-Y165        | ESC30-S16NA              | Blue               | Blue     | Black  |

**HIGH TEMPERATURE  
SEALING PLUGS**

| Contact Size | Sealing Plug Pyle Number | Color  |
|--------------|--------------------------|--------|
| 20           | BT-4020-60P              | Red    |
| 16           | BT-4016-60P              | Blue   |
| 12           | BT-4012-60P              | Yellow |