





KPT/KPSE

MIL-C-26482 Series 1

KPT & KPSE MIL-C-26482 Series I connectors offer high density contact arrangements in a miniature circular metal shell. The connector is environmentally sealed and comes in two versions: a solder contact version (KPT) and a high performance crimp contact version (KPSE). Both conform to MIL-C-26482 and are intermateable, intermountable, and interchangeable with all MIL-C-26482 connectors, whether solder or crimp style is used. Both styles use a quick disconnect bayonet coupling for rapid positive mating and unmating of the connector. Both types meet all requirements of MIL-C-26482.

Applications

Military and Industrial environments requiring a miniature, high density, environmental connector.

- Power generators
- Engines
- Sensors
- Motion Control
- Off-road vehicles
- Earth moving equipment
- Ships
- Mobile equipment
- Industrial machinery
- Telecommunications

Features

Rugged shell

Aluminum alloy shell and hardware create a rugged connector with minimal weight. These connectors have been used extensively in commercial, military, and aerospace environments. Standard shells accept all MIL-C-26482 accessories.

Environmentally Sealed

Complete moisture sealing is achieved by combining four seals: shell, peripheral, interfacial, and wire. Wire Seal is accomplished by multiple ripple design, exceeding the wire sealing requirements of MIL-C-26482.

Resistant to Military Environments

These connectors will operate in temperatures from -67° to +257°F (-55° to +125°C) under the harshest possible conditions.

Wide Range of Wire Gauges and Current Carrying Capability

Up to 22 amps with wire gauges from size 24 up to size 16 AWG wire.

Resilient Insulator & Grommet

A resilient polychloroprene insulator and integrated rear wire sealing grommet

guarantees a liquid tight assembly. Crimp contacts are available that can be inserted from the rear of the connector. Solder contacts are permanently bonded into the insulator.

Solder or Crimp Gold Plated Contacts

Both solder (KPT) and crimp (KPSE) contacts are available. Both are gold plated per MIL-G-45204 Type II. KPSE crimp contacts are designed to MIL-C-39029 and can be crimped with the standard M22520/1 crimp tool. Socket contacts are closed to eliminate damage from test probes and to help correct misaligned pins during engagement. Contact insertion is from the rear of the connector. When the contact is fully inserted, it snaps securely into metal retention tines embedded in the insulator. Contact extraction is accomplished from the front with the proper extraction tool. Pressing the tool plunger pushes the contact out through the rear of the connector.

Agency Approvals

- MIL-C-26482
- VG 95 328

Cannon





Technical Specifications

NEW!

MATERIALS & FINISHES

| Shell | Aluminum alloy |
|-----------|---|
| Plating | Olive drab chromate coating over cadmium plating, black zinc cobalt or electroless nickel |
| Contacts | Copper alloy |
| Platings | Gold plate, 50 microinches minimum per MIL-G-45204 Type II. |
| Insulator | Resilient polychloroprene (Neoprene). KPSE insulators also encase a tough plastic wafer which contains metal contact retention tines for high reliability rentention of crimp contacts. |

ELECTRICAL DATA

Operating Voltage & Test Voltage:

| SERVICE | TEST | MAXIMUM OPERATING VOLTAGE | | TEST VOLTAGE | |
|---------|-------------|---------------------------|---------|--------------|---------|
| RATING* | ALTITUDE | DC | AC(RMS) | DC | AC(RMS) |
| 1 | Sea Level | 850 | 600 | 2100 | 1500 |
| 2 | | 1,275 | 1,000 | 3,200 | 2,300 |
| 1 | 70,000 feet | - | 300 | 535 | 375 |
| 2 | | - | 450 | 770 | 550 |

^{*}Each insulator layout has a specific "Service Rating". The Service Ratings for each layout are listed on page-KPT-13.

Current Rating

| CONTACT SIZE | RATED CURRENT (AMPS) | TEST CURRENT (AMPS) | POTENTIAL DROP (Millivolts) Initial |
|--------------|-------------------------|------------------------|---|
| 20 | 7.5 | 7.5 | < 55 |
| 16 | 22 | 13 | < 50 |

| Wire Range Sizes | 24 to 16 AWG |
|-----------------------|--|
| Contact Resistance | When tested to MIL-STD-1344 Method 3004 will not exceed voltage drops listed in table. Consult MIL-C-26482, 3.6.4 for details. |
| Insulation Resistance | 5,000 Megohms minimum at 77°F (25°C) |

MECHANICAL

| Operating Temperature | -67° to +257°F (-55° to +125°C) |
|-----------------------|---|
| Sealing | 48 hours in 6 feet of water per MIL-C-26482 4.6.14. Meets 10 and 20 day 50-95% humidity testing per MIL-STD-1344 Method 1002.2 per MIL-C-26482. |

Wire Sealing Range

| CONTACT | ANNO MUDE | NCHES(mm) | | |
|-----------------|------------------|-------------|-------------|-----------------|
| CONTACT SIZE | AWG WIRE SIZE | Min.(KPT) | Min. (KPSE) | Max. (KPT/KPSE) |
| 20 | 24, 22, and 20 | .060 (1.52) | .047 (1.19) | .083 (2.11) |
| 16 | 20, 18, and 16 | .066 (1.68) | .066 (1.68) | .109 (2.77) |

Cannon



Technical Specifications



| CONTACT SIZE | WIRE SIZE (AWG) | STRIP LENGTH INCHES (mm) |
|-----------------|--------------------|--------------------------------|
| 20 | 20-24 | .375 (9.5) |
| 16 | 16-20 | .250 (6.35) |

| Mating Life | 500 cycles minimum |
|---------------------------|--|
| Salt Spray | Unmated connectors and protective covers meet 48hour exposure to MIL-STD-1344 Method 1001 per MIL-C-26482. (Cadmium Plating) |
| Heat | +175°C (+347°F) for 1000 hours to MIL-STD-1344 Method 1005.1 per MIL-C-26482. |
| Chemical Resistance | 20 hour full immersion unmated in hydraulic fluid and lubricating oil per MIL-C-26482. |
| Vibration | 10 to 2,000Hz (15g's) 10 microseconds maximum discontinuity. To MIL-STD-1344 Method 2005 per MIL-C-26482. |
| Shock | 50g's. 11ms duration, three major axes. 10 microseconds maximum discontinuity. To MIL-STD-1344 Method 2004 per MIL-C-26482. |
| Contact Type | Solder or PC (KPT); Crimp (KPSE) |
| Number of Circuits | KPT: 2 to 61; KPSE: 3 to 61 |
| Contact Insertion (crimp) | Insertion from the rear of connector with simple hand tool. Front release with appropriate extraction tool. |
| Contact Retention | To MIL-STD-1344 Method 2007 per MIL-C-26482. |

| | CONTACT SIZE | AXIAL LOAD MIN. Newtons (lbs) |
|---|--------------|----------------------------------|
| I | 20 | 66.7 (15) |
| | 16 | 111.2 (25) |

| Polarization | Five Keyway, three point bayonet with optional rotational polarization. <u>See page KPT 13</u> . | |
|--------------|--|--|
| Approvals | ■MIL-C-26482 ■VG 95 328 | |

How to Order

There are three types of MIL-C-26482 Series 1 Connectors. KPT contains solder contacts. KPSE uses high performance crimp contacts and KPTB is a special purpose thru-bulkhead connector. Choose which series is best suited to your application and then construct the part number from the How-To- Order presentation on the next page. Photographs of typical assemblies and dimensions can be found on pages KPT 6 through KPT 13.

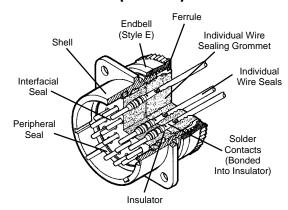
Cannon



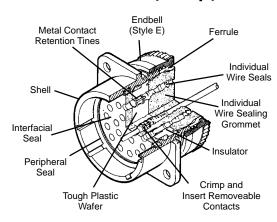
Specifications subject to change.



KPT (solder)

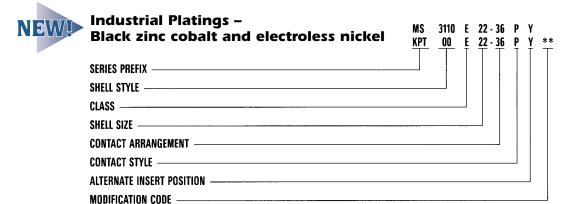


KPSE (crimp)



How to Order

KPT – Solder Contact Connectors



SERIES PREFIX

KPT - ITT Cannon prefix MS - MIL-C-26482 prefix

SHELL STYLE

| MS | Cannon KPT | Designation |
|------|------------|---|
| 3110 | 00 | wall mounting receptacle |
| 3111 | 01 | cable connecting receptacle |
| 3112 | 02 | box mounting receptacle (Class E only) |
| - | 03* | wall mounting receptacle without |
| | | grommet, ferrule and endbell |
| - | 04* | cable connecting receptacle without |
| | | grommet, ferrule and endbell |
| - | 05* | straight plug without grommet, |
| | | ferrule and endbell |
| 3116 | 06 | straight plug |
| 3114 | 07 | jam nut receptacle (available in |
| | | hermetic version also) |
| - | 08 | 90º angle plug |
| 3119 | В | thru-bulkhead receptacle (Class E only) |

^{*}Call for details

CLASS

- A general duty (not MS approved)
- 3 general duty with strain relief without grommet & ferrules (may be used for potting when strain relief is desired) (not MS approved)
- E grommet seal except on 02 and 3112 (MS specification)
- F grommet seal with strain relief (MS specification)
- J water tight gland seal with strain relief for jacketed cable (MS specification)
- P potted (MS specification)

SHELL SIZE

8, 10, 12, 14, 16, 18, 20, 22, and 24

CONTACT ARRANGEMENT

See contact arrangements - Pages KPT 12 and 13.

CONTACT STYLE

P - pin; S - socket

ALTERNATE INSERT POSITION

W, X, Y and Z. (Omit for normal.)

MODIFICATION CODE (NOT MS APPROVED)

A71 - Electroless nickel

A206 - Black zinc cobalt

DN - Shrink boot adapter

DZ - Shrink boot adapter for shielded cable

How to Order



KPSE – Crimp Contact Connectors



Industrial Platings -Black zinc cobalt and electroless nickel

| SERIES PREFIX SHELL STYLE CLASS | Ţ | T | Т | т. | |
|--|---|---|---|----|---|
| SHELL STYLE ———————————————————————————————————— | | | | | 1 |
| NACC | | | | | |
| ,LA30 | | | | | |
| SHELL SIZE — | | | | | |
| CONTACT ARRANGEMENT | | | | | |
| CONTACT TYPE — | | | | | |
| ALTERNATE INSERT POSITION | | | | |] |
| MODIFICATION CODE — | | | | | |

SERIES PREFIX

KPSE - ITT Cannon prefix

MS - MIL-C-26482 prefix SHELL STYLE

| SIILL | LOIILL | |
|-------|-------------|-------------------------------------|
| MS | Cannon KPSE | Designation |
| 3120 | 00 | wall mounting receptacle |
| 3121 | 01 | cable connecting receptacle |
| 3122 | 02 | box mounting receptacle (E only) |
| - | 03* | wall mounting receptacle without |
| | | ferrule and endbell |
| - | 04* | cable connecting receptacle without |
| | | ferrule and endbell |
| - | 05* | straight plug without ferrule |
| | | and endbell |
| 3126 | 06 | straight plug |
| 3124 | 07 | jam nut receptacle |
| - | 08 | 90º angle plug |
| | | |

^{*}Call for details

CLASS

- A general duty (not MS approved)
- B general duty with strain relief without grommet & ferrule (not MS approved)

3120 E 18 - 32 P X

- E grommet seal (MS specification)
- F grommet seal with strain relief (MS specification)
- J gland seal with strain relief for jacketed cable (not MS approved)
- P potted (MS specification)

SHELL SIZE

10, 12, 14, 16, 18, 20, 22, and 24

CONTACT ARRANGEMENT

See contact arrangements - Pages KPT 12 and 13.

CONTACT STYLE

P – pin S – socket

ALTERNATE INSERT POSITION

W, X, Y and Z. (Omit for normal.)

MODIFICATION CODE

FO - less contacts, not marked on connectors

A71 - Electroless nickel plating

A206- Black zinc cobalt plating

DN - Heat shrink boot adapter

DZ - Heat shrink boot adapter for shielded cable

KPTB – Thru Bulkhead Receptacle Connectors

- General Purpose
- Contains KPT socket insert
- Nonremovable contacts

KPTB connectors are a series of general purpose, Double ended pin and socket contacts miniature circular connectors, qualified for use in military applications. They are also widely used in industrial applications. The KPTB is a thru-bulkhead version with double faced pin and socket insert construction, allowing mating from both ends. They contain KPT socket inserts with feed-thru (pin/socket) non-removable contacts.

The thru-bulkhead receptacle is provided for applications requiring the disconnection of a power source from either side of a panel. A typical connector to be used if air leakage requirements are critical.



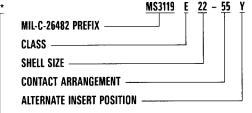
Industrial Platings -Black zinc cobalt and electroless nickel

KPTB 22 - 55 SERIES PREFIX -SHELL SIZE -CONTACT ARRANGEMENT CONTACT STYLE (pin & socket) ALTERNATE INSERT POSITION -**MODIFICATION CODE**

A71 - Electroless nickel

A206 - Black zinc cobalt

MODIFICATION CODE (NOT MS APPROVED)



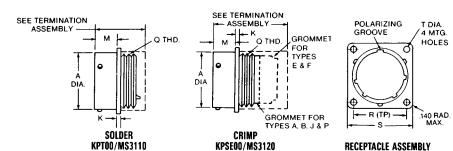
Wall Mounting Receptacles

MS3110 (MS service class E, F, J, P) MS3120 (MS service class E, F, P)

KPT00 KPSE00

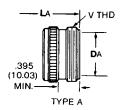


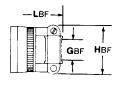




| Shell Size | A ±.003 (±.08) | K ±.016 (±.41) | M +.031 (+.79) 000 (00) | R* (TP) | S Max. | T ±.005 (±.13) | Q Thread Class 2A |
|---------------|-------------------|-------------------|-------------------------------|---------------|---------------|-------------------|----------------------|
| ‡8 | .471 (11.96) | .062 (1.57) | .431 (10.95) | .594 (15.09) | .828 (21.03) | .120 (3.05) | 7/16-28UNEF |
| 10 | .588 (14.96) | .062 (1.57) | .431 (10.95) | .719 (18.26) | .954 (24.23) | .120 (3.05) | 9/16-24UNEF |
| 12 | .748 (19.00) | .062 (1.57) | .431 (10.95) | .812 (20.62) | 1.047 (26.59) | .120 (3.05) | 11/16-24UNEF |
| 14 | .873 (22.17) | .062 (1.57) | .431 (10.95) | .906 (23.01) | 1.141 (28.98) | .120 (3.05) | 13/16-20UNEF |
| 16 | .998 (25.35) | .062 (1.57) | .431 (10.95) | .969 (24.61) | 1.234 (31.34) | .120 (3.05) | 15/16-20UNEF |
| 18 | 1.123 (28.52) | .062 (1.57) | .431 (10.95) | 1.062 (26.97) | 1.328 (33.73) | .120 (3.05) | 1-1/16-18UNEF |
| 20 | 1.248 (31.70) | .094 (2.39) | .556 (14.12) | 1.156 (29.36) | 1.453 (36.91) | .120 (3.05) | 1-3/16-18UNEF |
| 22 | 1.373 (34.87) | .094 (2.39) | .556 (14.12) | 1.250 (31.75) | 1.578 (40.08) | .120 (3.05) | 1-5/16-18UNEF |
| 24 | 1.498 (38.05) | .094 (2.39) | .589 (14.96) | 1.375 (34.92) | 1.703 (43.26) | .147 (3.73) | 1-7/16-18UNEF |

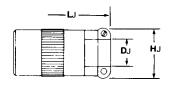
Endbells for Above



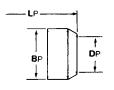




TYPE A



TYPE B and F



TYPE B AND F

TYPE E TYPE J

TYPE P TYPE E





Call for details

Shell LA GBF LBF DA V Thread **HBF** BE LE Size Min Max. Class 2A Min. Max. Max. Max Max. ‡8 1.444 (36.68) .335 (8.51) 1/2-28UNEF .115 (2.92) .828 (21.03) 1.922 (48.82) .608 (15.44) 1.328 (33.73) 10 .466 (11.84) 1.444 (36.68) 5/8-24UNEF .178 (4.52) .891 (22.63) 1.922 (48.82) .734 (18.64) 1.328 (33.73) 12 .591 (15.01) 1.444 (36.68) 3/4-20UNEF 1.328 (33.73) .302 (7.67)1.016 (25.81) 1.922 (48.82) .858 (21.79) 14 .705 (19.05) 1.444 (36.68) 7/8-20UNEF .365 (9.27) 1.141 (28.98) 1.922 (48.82) .984 (24.99) 1.328 (33.73) 16 .830 (21.08) 1.444 (36.68) 1-20UNEF .490 (12.45) 1.203 (30.56) 2.047 (51.99) 1.110 (28.19) 1.328 (33.73) 18 .948 (24.08) 1.444 (36.68) 1-3/16-18UNEF .615 (15.62) 1.469 (37.31) 2.078 (52.78) 1.234 (31.34) 1.328 (33.73) 20 1.043 (26.49) 1.728 (43.89) 1-3/16-18UNEF 1.469 (37.31) 2.344 (59.54) 1.360 (34.54) .615 (15.62) 22 1.198 (30.43) 1.728 (43.89) 1-7/16-18UNEF .740 (18.80) 1.656 (42.06) 1.344 (59.54) 1.484 (37.69) 1.531 (38.89) 24 1.293 (32.84) 1.738 (44.15) 1-7/16-18UNEF .790 (20.07) 1.750 (44.45) 2.406 (61.11) 1.610 (40.89) 1.594 (40.49)

Performance Specifications – Page KPT 2. Contacts, Wire Hole Fillers, Assembly Tools – Page KPT 14.

Contact Arrangements – Page KPT 12.

Potting Compound – Page ACC 5.

Mounting Hardware – Page ACC 1.

Heat Shrink Boots - Pages ACC 2-3.

| Dimensions are shown in inches (millimeters). | |
|---|--|
| Dimensions subject to change | |
| | |

| | | TYPE J | TYPE P | | | | |
|---------------|-------------------------|---------------|----------------|---------------|---------------|---------------|--|
| Shell Size | DJ Max./Min. | | | BP Max. | DP Min. | LP Max. | |
| ‡8 | .230/.168 (5.84/ 4.27) | .828 (21.03) | 2.271 (57.68) | .608 (15.44) | .317 (8.05) | 1.453 (36.91) | |
| 10 | .312/.205 (7.92/ 5.21) | .891 (22.63) | 2.271 (57.68) | .734 (18.64) | .434 (11.02) | 1.453 (36.91) | |
| 12 | .442/.338 (11.23/ 8.59) | 1.016 (25.81) | 2.411 (61.24) | .858 (21.79) | .548 (13.92) | 1.453 (36.91) | |
| 14 | .539/.416 (13.56/10.57) | 1.141 (28.98) | 2.599 (66.01) | .984 (24.99) | .673 (17.09) | 1.453 (36.91) | |
| 16 | .616/.550 (15.65/13.97) | 1.203 (30.56) | 2.943 (74.75) | 1.110 (28.19) | .798 (20.27) | 1.453 (36.91) | |
| 18 | .672/.600 (17.07/15.24) | 1.469 (37.31) | 3.172 (80.57) | 1.234 (31.34) | .899 (22.83) | 1.453 (36.91) | |
| 20 | .747/.635 (18.97/16.13) | 1.469 (37.31) | 3.610 (91.69) | 1.360 (34.54) | 1.024 (26.01) | 1.672 (42.47) | |
| 22 | .846/.670 (21.49/17.02) | 1.656 (42.06) | 3.766 (95.66) | 1.484 (37.69) | 1.149 (29.18) | 1.672 (42.47) | |
| 24 | .894/.740 (22.71/18.80) | 1.750 (44.45) | 3.985 (101.22) | 1.610 (40.89) | 1.274 (32.36) | 1.734 (44.04) | |

‡ Not available in KPSE



Cable Connecting Receptacle

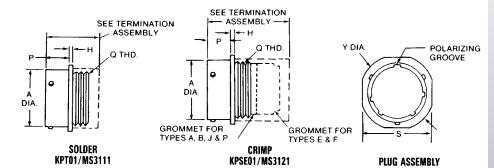
MS3111 (MS service class E, F, J, P) MS3121 (MS service class E, F, P)

KPT01 KPSE01

KPSE01



"E" Endbell Shown

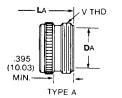


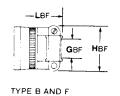
| Shell Size | A ±.003 (±.08) | H ±.016 (±.41) | P +.031 (+.79) 000 (00) | S Max. | Y Max. | Q Thread Class 2A |
|---------------|-------------------|-------------------|-------------------------------|---------------|---------------|----------------------|
| ‡8 | .471 (11.96) | .094 (2.39) | .400 (10.16) | .828 (21.03) | .958 (24.33) | 7/16-28UNEF |
| 10 | .588 (14.94) | .094 (2.39) | .400 (10.16) | .954 (24.23) | 1.082 (27.48) | 9/16-24UNEF |
| 12 | .748 (19.00) | .094 (2.39) | .400 (10.16) | 1.047 (26.59) | 1.176 (29.87) | 11/16-24UNEF |
| 14 | .873 (22.17) | .094 (2.39) | .400 (10.16) | 1.141 (28.98) | 1.270 (32.26) | 13/16-20UNEF |
| 16 | .998 (25.35) | .094 (2.39) | .400 (10.16) | 1.234 (31.34) | 1.364 (34.65) | 15/16-20UNEF |
| 18 | 1.123 (28.52) | .094 (2.39) | .400 (10.16) | 1.328 (33.73) | 1.458 (37.03) | 1-1/16-18UNEF |
| 20 | 1.248 (31.70) | .115 (2.92) | .535 (13.59) | 1.453 (36.91) | 1.582 (40.18) | 1-3/16-18UNEF |
| 22 | 1.373 (34.87) | .115 (2.92) | .535 (13.59) | 1.578 (40.08) | 1.708 (43.38) | 1-5/16-18UNEF |
| 24 | 1.498 (38.05) | .115 (2.92) | .568 (14.43) | 1.703 (43.26) | 1.832 (46.53) | 1-7/16-18UNEF |

‡Not available in KPSE *(TP) located within .010 T.P. with respect to diameter A and master keyway.

TYPE J

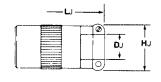
Endbells for Above

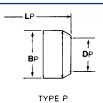






TYPE E





With Termination Assemblies

| | TYPE A | | | | TYPE B and F | TYPE E | | |
|---------------|---------------|---------------|----------------------|--------------|---------------|---------------|---------------|---------------|
| Shell Size | DA Min. | LA Max. | V Thread Class 2A | GBF Min. | HBF Max. | LBF Max. | BE Max. | LE Max. |
| ‡8 | .335 (8.51) | 1.444 (36.68) | 1/2-28UNEF | .115 (2.92) | .828 (21.03) | 1.922 (48.82) | .608 (15.44) | 1.328 (33.73) |
| 10 | .466 (11.84) | 1.444 (36.68) | 5/8-24UNEF | .178 (4.52) | .891 (22.63) | 1.922 (48.82) | .734 (18.64) | 1.328 (33.73) |
| 12 | .591 (15.01) | 1.444 (36.68) | 3/4-20UNEF | .302 (7.67) | 1.016 (25.81) | 1.922 (48.82) | .858 (21.79) | 1.328 (33.73) |
| 14 | .705 (19.05) | 1.444 (36.68) | 7/8-20UNEF | .365 (9.27) | 1.141 (28.98) | 1.922 (48.82) | .984 (24.99) | 1.328 (33.73) |
| 16 | .830 (21.08) | 1.444 (36.68) | 1-20UNEF | .490 (12.45) | 1.203 (30.56) | 2.047 (51.99) | 1.110 (28.19) | 1.328 (33.73) |
| 18 | .948 (24.08) | 1.444 (36.68) | 1-3/16-18UNEF | .615 (15.62) | 1.469 (37.31) | 2.078 (52.78) | 1.234 (31.34) | 1.328 (33.73) |
| 20 | 1.043 (26.49) | 1.728 (43.89) | 1-3/16-18UNEF | .615 (15.62) | 1.469 (37.31) | 2.344 (59.54) | 1.360 (34.54) | 1.531 (38.89) |
| 22 | 1.198 (30.43) | 1.728 (43.89) | 1-7/16-18UNEF | .740 (18.80) | 1.656 (42.06) | 1.344 (59.54) | 1.484 (37.69) | 1.531 (38.89) |
| 24 | 1.293 (32.84) | 1.738 (44.15) | 1-7/16-18UNEF | .790 (20.07) | 1.750 (44.45) | 2.406 (61.11) | 1.610 (40.89) | 1.594 (40.49) |

| | | TYPE J | | | TYPE P | |
|---------------|-------------------------|---------------|----------------|---------------|---------------|---------------|
| Shell Size | DJ Max./Min. | HJ Max. | ليا Max. | BP Max. | DP Min. | LP Max. |
| ‡8 | .230/.168 (5.84/ 4.27) | .828 (21.03) | 2.271 (57.68) | .608 (15.44) | .317 (8.05) | 1.453 (36.91) |
| 10 | .312/.205 (7.92/ 5.21) | .891 (22.63) | 2.271 (57.68) | .734 (18.64) | .434 (11.02) | 1.453 (36.91) |
| 12 | .442/.338 (11.23/ 8.59) | 1.016 (25.81) | 2.411 (61.24) | .858 (21.79) | .548 (13.92) | 1.453 (36.91) |
| 14 | .539/.416 (13.56/10.57) | 1.141 (28.98) | 2.599 (66.01) | .984 (24.99) | .673 (17.09) | 1.453 (36.91) |
| 16 | .616/.550 (15.65/13.97) | 1.203 (30.56) | 2.943 (74.75) | 1.110 (28.19) | .798 (20.27) | 1.453 (36.91) |
| 18 | .672/.600 (17.07/15.24) | 1.469 (37.31) | 3.172 (80.57) | 1.234 (31.34) | .899 (22.83) | 1.453 (36.91) |
| 20 | .747/.635 (18.97/16.13) | 1.469 (37.31) | 3.610 (91.69) | 1.360 (34.54) | 1.024 (26.01) | 1.672 (42.47) |
| 22 | .846/.670 (21.49/17.02) | 1.656 (42.06) | 3.766 (95.66) | 1.484 (37.69) | 1.149 (29.18) | 1.672 (42.47) |
| 24 | .894/.740 (22.71/18.80) | 1.750 (44.45) | 3.985 (101.22) | 1.610 (40.89) | 1.274 (32.36) | 1.734 (44.04) |



Call for details

Performance Specifications – Page KPT 2. Contacts, Wire Hole Fillers, Assembly Tools - Page KPT 14. Contact Arrangements – Page KPT 12. Potting Compound - Page ACC 5. Mounting Hardware - Page ACC 1.

Heat Shrink Boots – Pages ACC 2-3.

Dimensions are shown in inches (millimeters). Dimensions subject to change

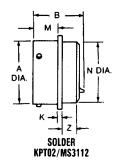
KPT

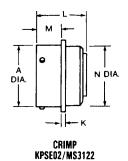


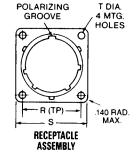
Box Mounting Receptacles

MS3112 (MS service class E) MS3122 (MS service class E) KPT02 KPSE02









Connector does not accommodate backshell.

| Shell Size | A 生.003 (生.08) | B Max | K ±.016 (±.41) | L Max. | M +.031 (+.79) 000 (.00) | N Dia. Max. | R* (TP) | S Max. | ↑ ±.005 | Z Max. |
|---------------|-------------------|---------------|-------------------|---------------|--------------------------------|-------------------|---------------|---------------|-------------|--------------|
| ‡8 | .471 (11.96) | .978 (12.14) | .062 (1.57) | 1.320 (33.07) | .431 (10.95) | .469 (11.91) | .594 (15.09) | .828 (21.03) | .120 (3.05) | .354 (8.99) |
| 10 | .588 (14.96) | .978 (12.14) | 062 (1.57) | 1.320 (33.07) | .431 (10.95) | .593 (15.06) | .719 (18.26) | .954 (24.23) | .120 (3.05) | .354 (8.99) |
| 12 | .748 (19.00) | .978 (12.14) | .062 (1.57) | 1.320 (33.07) | .431 (10.95) | .719 (18.26) | .812 (20.62) | 1.047 (26.59) | .120 (3.05) | .354 (8.99) |
| 14 | .873 (22.17) | .978 (12.14) | .062 (1.57) | 1.320 (33.07) | .431 (10.95) | .843 (21.41) | .906 (23.01) | 1.141 (28.98) | .120 (3.05) | .354 (8.99) |
| 16 | .998 (25.35) | .978 (12.14) | .062 (1.57) | 1.320 (33.07) | .431 (10.95) | .969 (24.61) | .969 (24.61) | 1.234 (31.34) | .120 (3.05) | .354 (8.99) |
| 18 | 1.123 (28.52) | .978 (12.14) | .062 (1.57) | 1.320 (33.07) | .431 (10.95) | 1.093 (27.76) | 1.062 (26.97) | 1.328 (33.73) | .120 (3.05) | .354 (8.99) |
| 20 | 1.248 (31.70) | 1.196 (30.38) | .094 (2.39) | 1.367 (34.72) | .556 (14.12) | 1.219 (30.96) | 1.156 (29.36) | 1.453 (36.91) | .120 (3.05) | .417 (10.59) |
| 22 | 1.373 (34.87) | 1.196 (30.38) | .094 (2.39) | 1.367 (34.72) | .556 (14.12) | 1.343 (34.11) | 1.250 (31.75) | 1.578 (40.08) | .120 (3.05) | .417 (10.59) |
| 24 | 1.498 (38.05) | 1.196 (30.98) | .094 (2.39) | 1.418 (36.02) | .589 (14.96) | 1.469 (37.31) | 1.375 (34.92) | 1.703 (43.26) | .147 (3.73) | .445 (11.30) |

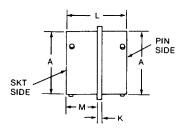
[‡]Not available in KPSE *(TP) located within .010 T.P. with respect to diameter A and master keyway.

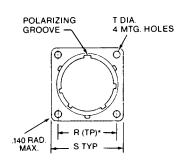
Thru Bulkhead Receptacles

MS3119 (MS service class E)



KPTB





*(T.P.) located within .010 T.P. with respect to diameter A and master keyway.

| Performance Specifications – Page KPT 2 |
|---|
| Contacts, Wire Hole Fillers, Assembly Tools – <u>Page KPT 14</u> . |
| Contact Arrangements – Page KPT 12. |

| Shell Size | A Dia. ±.003 (±.08) | K ±.016 (±.406) | L Max. | +.031 (+.79) 000 (00) | R* (TP) | S Max. | T ±.005 (±.127) |
|---------------|------------------------|--------------------|---------------|--------------------------|---------------|---------------|--------------------|
| 8 | .471 (11.96) | .062 (1.57) | 1.125 (28.58) | .562 (14.27) | .594 (15.09) | .828 (21.03) | .120 (3.05) |
| 10 | .588 (14.94) | .062 (1.57) | 1.125 (28.58) | .562 (14.27) | .719 (18.26) | .954 (24.23) | .120 (3.05) |
| 12 | .748 (18.00) | .062 (1.57) | 1.125 (28.58) | .562 (14.27) | .812 (20.62) | 1.047 (26.59) | .120 (3.05) |
| 14 | .873 (22.17) | .062 (1.57) | 1.125 (28.58) | .562 (14.27) | .906 (23.01) | 1.141 (28.98) | .120 (3.05) |
| 16 | .998 (25.35) | .062 (1.57) | 1.125 (28.58) | .562 (14.27) | .969 (24.61) | 1.234 (31.34) | .120 (3.05) |
| 18 | 1.123 (28.52) | .062 (1.57) | 1.125 (28.58) | .562 (14.27) | 1.062 (26.97) | 1.328 (33.73) | .120 (3.05) |
| 20 | 1.248 (31.70) | .094 (2.39) | 1.406 (35.71) | .688 (17.48) | 1.156 (29.36) | 1.453 (36.91) | .120 (3.05) |
| 22 | 1.373 (34.87) | .094 (2.39) | 1.406 (35.71) | .688 (17.48) | 1.250 (31.76) | 1.578 (40.08) | .120 (3.05) |
| 24 | 1.498 (38.05) | .094 (2.39) | 1.406 (35.71) | .688 (17.48) | 1.375 (34.92) | 1.703 (43.26) | .147 (3.73) |

Dimensions are shown in inches (millimeters). Dimensions subject to change

Mounting Hardware - Page ACC 1.

DP

Dimensions

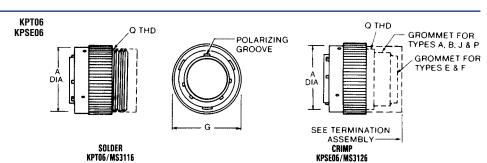
PACK TO

Straight Plugs

MS3116 (MS service class E, F, J, P) MS3126 (MS service class E, F, P)



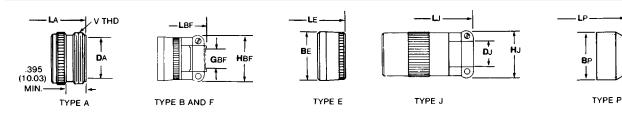
"F" Endbell Shown



| Shell Size | A dia. Max | G Max | J ±.010 (±0.25) | Q Thread Class 2A |
|---------------|---------------|---------------|--------------------|----------------------|
| ‡8 | .765 (19.43) | .782 (19.86) | .353 (8.99) | 7/16-28UNEF |
| 10 | .840 (21.34) | .926 (23.52) | .353 (8.99) | 9/16-24UNEF |
| 12 | .999 (25.38) | 1.043 (26.49) | .353 (8.99) | 11/16-24UNEF |
| 14 | 1.139 (28.93) | 1.183 (30.05) | .353 (8.99) | 13/16-20UNEF |
| 16 | 1.261 (32.03) | 1.305 (33.15) | .353 (8.99) | 15/16-20UNEF |
| 18 | 1.337 (33.96) | 1.391 (35.33) | .353 (8.99) | 1-1/16-18UNEF |
| 20 | 1.477 (37.52) | 1.531 (38.89) | .415 (10.54) | 1-3/16-18UNEF |
| 22 | 1.602 (40.69) | 1.656 (42.06) | .415 (10.54) | 1-5/16-18UNEF |
| 24 | 1.723 (43.76) | 1.777 (45.14) | .415 (10.54) | 1-7/16-18UNEF |

[‡]Not available in KPSE

Endbells for Above



| | | TYPE A | | | TYPE B and F | | TYPE E | | |
|---------------|---------------|---------------|----------------------|---------------|---------------|--------------|---------------|---------------|--|
| Shell Size | LA Max. | DA Min. | V Thread Class 2A | LBF Max. | HBF Max | GBF Min. | BE Max. | LE Max. | |
| ‡8 | 1.440 (36.58) | .335 (8.51) | 1/2-28UNEF | 1.906 (48.41) | .828 (21.03) | .115 (2.02) | .608 (15.44) | 1.328 (33.73) | |
| 10 | 1.440 (36.58) | .466 (11.84) | 5/8-24UNEF | 1.906 (48.41) | .891 (22.63) | .178 (4.52) | .734 (18.64) | 1.328 (33.73) | |
| 12 | 1.440 (36.58) | .591 (15.01) | 3/4-20UNEF | 1.906 (48.41) | 1.016 (25.81) | .302 (7.67) | .858 (21.79) | 1.328 (33.73) | |
| 14 | 1.440 (36.58) | .705 (19.05) | 7/8-20UNEF | 1.906 (48.41) | 1.141 (28.98) | .365 (9.27) | .984 (24.99) | 1.328 (33.73) | |
| 16 | 1.440 (36.58) | .830 (21.08) | 1-20UNEF | 2.047 (51.99) | 1.203 (30.56) | .490 (12.45) | 1.110 (28.19) | 1.328 (33.73) | |
| 18 | 1.662 (42.21) | .948 (24.08) | 1-3/16-18UNEF | 2.078 (52.78) | 1.469 (37.31) | .615 (15.62) | 1.234 (31.34) | 1.328 (33.73) | |
| 20 | 1.662 (42.21) | 1.043 (26.49) | 1-3/16-18UNEF | 2.250 (57.15) | 1.469 (37.31) | .615 (15.62) | 1.360 (34.54) | 1.453 (36.91) | |
| 22 | 1.662 (42.21) | 1.198 (30.43) | 1-7/16-18UNEF | 2.250 (57.15) | 1.656 (42.06) | .740 (18.80) | 1.484 (37.69) | 1.453 (36.91) | |
| 24 | 1.672 (42.47) | 1.293 (32.84) | 1-7/16-18UNEF | 2.312 (58.72) | 1.750 (44.45) | .790 (20.07) | 1.610 (40.89) | 1.510 (38.54) | |

| | | TYPE . | J | | TYPE P | |
|---------------|----------------|---------------|-------------------------|---------------|---------------|---------------|
| Shell Size | し Max. | HJ Max. | DJ Max./Min. | LP Max. | DP Min. | BP Max. |
| ‡8 | 2.271 (57.68) | .828 (21.03) | .230/.168 (5.84/ 4.27) | 1.500 (38.10) | .317 (8.05) | .608 (15.44) |
| 10 | 2.271 (57.68) | .891 (22.63) | .321/.205 (7.92/ 5.21) | 1.500 (38.10) | .434 (11.02) | .734 (18.64) |
| 12 | 2.411 (61.24) | 1.016 (25.81) | .442/.338 (11.23/ 8.59) | 1.500 (38.10) | .548 (13.92) | .858 (21.79) |
| 14 | 2.599 (66.01) | 1.141 (28.98) | .539/.416 (13.56/10.57) | 1.500 (38.10) | .673 (17.09) | .984 (24.99) |
| 16 | 2.943 (74.75) | 1.203 (30.56) | .616/.550 (15.65/13.97) | 1.500 (38.10) | .798 (20.27) | 1.110 (28.19) |
| 18 | 3.172 (80.57) | 1.469 (37.31) | .672/.600 (17.07/15.24) | 1.500 (38.10) | .899 (22.83) | 1.234 (31.34) |
| 20 | 3.610 (91.69) | 1.469 (37.31) | .747/.635 (18.97/16.13) | 1.609 (40.87) | 1.024 (26.01) | 1.360 (34.54) |
| 22 | 3.766 (95.66) | 1.656 (42.06) | .846/.670 (21.49/17.02) | 1.609 (40.87) | 1.149 (29.18) | 1.484 (37.69) |
| 24 | 3.985 (101.22) | 1.750 (44.45) | .894/.740 (22.71/18.80) | 1.687 (42.85) | 1.274 (32.36) | 1.610 (40.89) |

‡Not available in KPSE



Plug includes grounding finger barrel, call for details.

Performance Specifications - Page KPT 2.

Contacts, Wire Hole Fillers, Assembly Tools – Page KPT 14.

Contact Arrangements – Page KPT 12.

Potting Compound – Page ACC 5.

Heat Shrink Boots - Pages ACC 2-3.

Dimensions are shown in inches (millimeters).

Dimensions subject to change

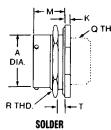
Jam Nut Receptacles

MS3114 (MS service class E, F, P) MS3124 (MS service class E, F, P)

KPT07 KPSE07

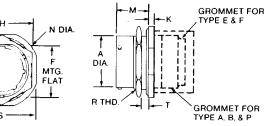






KPT07/MS3114

MTG.

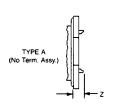


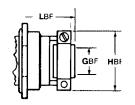
CRIMP KPSE07/MS3124

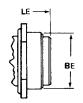
| | | | | | M | | | | T | |
|---------------|---------------|-------------------|--------------------|-------------------|--------------------------|---------------|---------------|----------------------------|-------------------|----------------------|
| Shell Size | ±.003 (±0.08) | F ±.005 (.130) | H ±.017 (±0.43) | K ±.020 (±.05) | +.031 (+.08) 000 (00) | N Max. | S max. | Panel M i n. | Thickness Max. | R thread Class 2A |
| ‡8 | .471 (11.96) | .525 (13.34) | .750 (19.05) | .117 (2.97) | .691 (17.55) | 1.078 (27.38) | .954 (24.23) | .062 (1.57) | .125 (3.17) | 9/16-24UNEF |
| 10 | .588 (14.93) | .650 (16.51) | .875 (22.22) | .117 (2.97) | .691 (17.55) | 1.203 (30.56) | 1.078 (27.38) | .062 (1.57) | .125 (3.17) | 11/16-24UNEF |
| 12 | .748 (19.00) | .813 (20.65) | 1.062 (26.97) | .117 (2.97) | .691 (17.55) | 1.319 (35.33) | 1.266 (32.16) | .062 (1.57) | .125 (3.17) | 7/8-20UNEF |
| 14 | .873 (22.17) | .937 (23.80) | 1.188 (30.17) | .117 (2.97) | .691 (17.55) | 1.516 (38.51) | 1.391 (35.33) | .062 (1.57) | .125 (3.17) | 1-20UNEF |
| 16 | .988 (25.35) | 1.061 (26.95) | 1.312 (33.32) | .117 (2.97) | .691 (17.55) | 1.641 (41.68) | 1.516 (38.51) | .062 (1.57) | .125 (3.17) | 1-1/8-18UNEF |
| 18 | 1.123 (28.52) | 1.186 (30.12) | 1.438 (36.25) | .117 (2.97) | .691 (17.55) | 1.766 (44.86) | 1.641 (41.68) | .062 (1.57) | .125 (3.17) | 1-1/4-18UNEF |
| 20 | 1.248 (31.70) | 1.311 (33.30) | 1.562 (39.67) | .148 (3.76) | .879 (22.33) | 1.954 (49.63) | 1.828 (46.43) | .062 (1.57) | .250 (6.35) | 1-3/8-18UNEF |
| 22 | 1.373 (34.87) | 1.436 (36.47) | 1.688 (42.87) | .148 (3.76) | .879 (22.33) | 2.078 (52.78) | 1.954 (49.63) | .062 (1.57) | .250 (6.35) | 1-1/2-18UNEF |
| 24 | 1.498 (38.05) | 1.561 (39.65) | 1.812 (46.02) | .148 (3.76) | .912 (23.16) | 2.203 (55.96) | 2.078 (52.78) | .062 (1.57) | .250 (6.35) | 1-5/8-18UNEF |

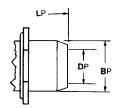
‡Not available in KPSE

Endbells for Above









| | TYPE A | | TYPE B AND F | | TYI | ТҮРЕ Е | | TYPE P | | |
|---------------|-------------|---------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|--|
| Shell Size | Z Max. | HBF Max. | GBF Min. | LBF Max. | BE Max. | LE Max. | BP Max. | DP Min. | LP Max. | |
| 8 | .312 (7.92) | .828 (21.03) | .115 (2.92) | 1.906 (48.41) | .608 (15.44) | 1.344 (34.14) | .608 (15.44) | .317 (8.05) | 1.391 (35.33) | |
| 10 | .312 (7.92) | .891 (22.63) | .178 (4.52) | 1.906 (48.41) | .734 (18.64) | 1.344 (34.14) | .734 (18.64) | .434 (11.02) | 1.391 (35.33) | |
| 12 | .312 (7.92) | 1.016 (25.81) | .302 (7.67) | 1.906 (48.41) | .858 (21.79) | 1.344 (34.14) | .858 (21.79) | .548 (13.92) | 1.391 (35.33) | |
| 14 | .312 (7.92) | 1.141 (28.98) | .365 (9.27) | 1.906 (48.41) | .984 (24.99) | 1.344 (34.14) | .984 (24.99) | .673 (17.09) | 1.391 (35.33) | |
| 16 | .312 (7.92) | 1.203 (30.56) | .490 (12.45) | 2.047 (51.99) | 1.110 (28.19) | 1.344 (34.14) | 1.110 (28.19) | .798 (20.27) | 1.391 (35.33) | |
| 18 | .312 (7.92) | 1.469 (37.31) | .615 (15.62) | 2.078 (52.78) | 1.234 (31.34) | 1.344 (34.14) | 1.234 (31.34) | .899 (22.83) | 1.391 (35.33) | |
| 20 | .193 (4.90) | 1.469 (37.31) | .615 (15.62) | 2.328 (59.13) | 1.360 (34.54) | 1.594 (40.49) | 1.360 (34.54) | 1.024 (26.01) | 1.641 (41.68) | |
| 22 | .193 (4.90) | 1.656 (42.06) | .740 (18.80) | 2.328 (59.13) | 1.484 (37.69) | 1.594 (40.49) | 1.484 (37.69) | 1.149 (29.18) | 1.641 (41.68) | |
| 24 | .150 (3.81) | 1.750 (44.45) | .790 (20.07) | 2.453 (62.31) | 1.610 (40.89) | 1.641 (41.68) | 1.610 (40.89) | 1.274 (32.36) | 1.703 (43.26) | |

Performance Specifications - Page KPT 2. Contacts, Wire Hole Fillers, Assembly Tools - Page KPT 14.

Contact Arrangements - Page KPT 12. Potting Compound - Page ACC 5.

Dimensions are shown in inches (millimeters). Dimensions subject to change

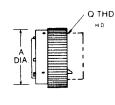


Right Angle Plugs

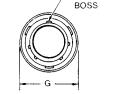
KPT08 KPSE08

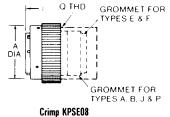


"F" Endbell Shown



Solder KPT08





| Performance Specifications – Page KPT 2. |
|--|
| Contacts, Wire Hole Fillers, Assembly Tools – Page KPT 14. |
| Contact Arrangements – Page KPT 12. |

Potting Compound - Page ACC 5.

| | KPT/ | KPSE | |
|---------------|----------------|---------------|----------------------|
| Shell Size | A Dia. Max. | G Max. | Q Thread Class 2A |
| ‡8 | .765 (19.43) | .782 (19.86) | 7/16-28UNEF |
| 10 | .840 (21.34) | .926 (23.52) | 9/16-24UNEF |
| 12 | .999 (25.38) | 1.043 (26.49) | 11/16-24UNEF |
| 14 | 1.139 (28.93) | 1.183 (30.05) | 13/16-20UNEF |
| 16 | 1.261 (32.03) | 1.305 (33.15) | 15/16-20UNEF |
| 18 | 1.337 (33.96) | 1.391 (35.33) | 1-1/16-18UNEF |
| 20 | 1.477 (37.52) | 1.531 (38.89) | 1-3/16-18UNEF |
| 22 | 1.602 (40.69) | 1.656 (42.09) | 1-5/16-18UNEF |
| 24 | 1.723 (43.76) | 1.777 (45.13) | 1-7/16-18UNEF |

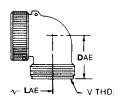
POLARIZING

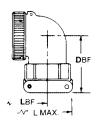
‡Not available in KPSE.

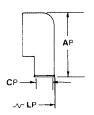
NOTE: for size 10 and 24 consult factory for availability in type A, B, E and F.

For size 8 consult factory for availability in Type P.

Endbells for Above







| | TYPE A AND E | | | TYPE B AND F | | | | TYPE P | | E P |
|---------------|---------------|---------------|----------------------|---------------|---------------|---------------|----------------------|---------------|---------------|--------------|
| Shell Size | LAE Max. | DAE Max. | V Thread Class 2A | DBF Max. | LBF Max. | L Max. | V Thread Class 2A | AP Max. | LP Max. | CP Min. |
| ‡8 | 1.421 (36.09) | .822 (20.88) | 1/2-28UNEF | 1.238 (31.44) | 1.421 (36.09) | 1.842 (46.79) | 1/2-28UNEF | — (—) | - () | — (—) |
| 10 | 1.484 (37.69) | .853 (21.67) | 5/8-28UNEF | 1.269 (32.24) | 1.484 (37.69) | 1.937 (49.20) | 5/8-28UNEF | 1.030 (26.16) | 1.380 (35.05) | .252 (6.40) |
| 12 | 1.546 (39.27) | .916 (23.27) | 3/4-20UNEF | 1.395 (35.43) | 1.546 (39.27) | 1.937 (49.20) | 3/4-20UNEF | 1.030 (26.16) | 1.567 (39.80) | .252 (6.40) |
| 14 | 1.577 (40.05) | .978 (24.84) | 7/8-20UNEF | 1.519 (38.58) | 1.577 (40.05) | 2.124 (53.95) | 7/8-20UNEF | 1.030 (26.16) | 1.567 (39.80) | .283 (7.19) |
| 16 | 1.609 (40.87) | 1.041 (26.44) | 1-20UNEF | 1.582 (40.18) | 1.609 (40.87) | 2.203 (55.96) | 1-20UNEF | 1.280 (32.51) | 1.567 (39.80) | .355 (9.02) |
| 18 | 1.734 (44.04) | 1.103 (28.70) | 1-3/16-18UNEF | 1.644 (41.76) | 1.734 (44.04) | 2.380 (60.45) | 1-3/16-18UNEF | 1.280 (32.51) | 1.755 (44.58) | .530 (13.46) |
| 20 | 1.879 (47.73) | 1.166 (29.62) | 1-3/16-18UNEF | 1.707 (43.36) | 1.879 (47.73) | 2.629 (66.78) | 1-3/16-18UNEF | 1.530 (38.86) | 1.782 (45.26) | .562 (14.27) |
| 22 | 2.035 (51.69) | 1.245 (31.62) | 1-7/16-18UNEF | 1.884 (47.85) | 2.035 (51.69) | 2.629 (66.78) | 1-7/16-18UNEF | 1.530 (38.86) | 1.782 (45.26) | .562 (14.27) |
| 24 | 2.035 (51.69) | 1.322 (33.58) | 1-7/16-18UNEF | 1.963 (49.86) | 2.035 (51.69) | 2.895 (73.53) | 1-7/16-18UNEF | 1.780 (45.21) | 2.087 (53.01) | .610 (15.49) |

‡Not available in KPSE. NOTE: For size 10 and 24 consult factory for availability in type A, B, E and F. For size 8 consult factory for availability in Type P.

Dimensions are shown in inches (millimeters). Dimensions subject to change



Layouts by Shell Size

LEGEND

- **▲** KPT
- **KPSE**
- Authorized per MIL-C-26482 (NAVY)

Not MS approved

Drawing not to scale; mating face view of pin insert shown (socket view is opposite)

Shell Size 8



Series Shell Size/Layout No. of Contacts



▲ △ 8-3 3-#20





Shell Size 10



10-98





Shell Size 12



3-#16



12-10

Shell Size 14

14-5 5-#16

8-#20 4-#16



Series Shell Size/Layout No. of Contacts



10-6

Shell Size 16











Series Shell Size/Layout No. of Contacts





Shell Size 20









Series Shell Size/Layout No. of Contacts

Series Shell Size/Layout

18-30

29-#20 1-#16

18-32 32-#20

20-16

20-24 24-#20

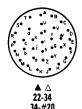
37-#20 2-#16

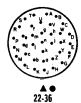
Shell Size 22



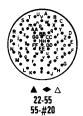
21-#16







22-41 27-#20 14-#16



No. of Contacts



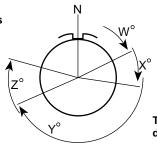
Series Shell Size/Layout No. of Contacts

61-#20

Layouts by Number of Contacts



Mating Face view of pin inserts



Alternate Insert Position

The five positions (W, X, Y, Z and Normal) differ in degree of rotation for varous sizes and arrangements.

| NO. | OF CON | TACTS | SER | IES | SHELL SIZE | LAYOUT | DE | GREES O | F ROTAT | ION | SERVICE |
|---------|------------|--------------|------------|-----------|------------|--------|-----|---------|---------|-----|---------|
| TOTAL | #20 | #16 | KPT | KPSE | | | w | X | Y | Z | RATING |
| 2 | 2 | | • | | 8 | 8-2 | 58 | 122 | - | - | 1 |
| 3 | 3 | | • | | 8 | 8-3 | 60 | 210 | - | - | 1 |
| 3 | 3 | | • | | 8 | 8-33 | 90 | - | - | - | 1 |
| 3 | | 3 | • | • | 12 | 12-3 | - | - | 180 | - | 2 |
| 4 | 4 | | • | | 8 | 8-4 | 45 | - | - | - | 1 |
| 5 | | 5 | • | • | 14 | 14-5 | 40 | 92 | 184 | 273 | 2 |
| 6 | 6 | | • | • | 10 | 10-6 | 90 | - | - | - | 1 |
| 6 | 6 | | • | | 10 | 10-98 | 90 | 180 | 240 | 270 | 1 |
| 7 | 7 | | • | | 10 | 10-7* | 90 | - | - | - | 1 |
| 8 | 8 | | • | | 12 | 12-8 | 90 | 112 | 203 | 292 | 1 |
| 8 | | 8 | • | • | 16 | 16-8 | 54 | 152 | 180 | 331 | 2 |
| 10 | 10 | | • | • | 12 | 12-10 | 60 | 155 | 270 | 295 | 1 |
| 11 | | 11 | • | • | 18 | 18-11 | 62 | 119 | 241 | 340 | 2 |
| 12 | 8 | 4 | • | • | 14 | 14-12 | 43 | 90 | - | - | 1 |
| 15 | 14 | 1 | • | • | 14 | 14-15 | 17 | 110 | 155 | 234 | 1 |
| 16 | | 16 | • | • | 20 | 20-16 | 238 | 318 | 333 | 347 | 2 |
| 18 | 18 | | • | | 14 | 14-18 | 15 | 90 | 180 | 270 | 1 |
| 19 | 19 | | • | • | 14 | 14-19 | 30 | 165 | 315 | - | 1 |
| 21 | | 21 | • | • | 22 | 22-21 | 16 | 135 | 175 | 349 | 2 |
| 23 | 22 | 1 | • | | 16 | 16-23 | 158 | 270 | - | - | 1 |
| 23 | 21 | 2 | • | | 16 | 16-99 | 66 | 156 | 223 | 340 | 1 |
| 24 | 24 | | • | | 20 | 20-24 | 70 | 145 | 215 | 290 | 1 |
| 26 | 26 | | • | • | 16 | 16-26 | 60 | - | 275 | 338 | 1 |
| 30 | 29 | 1 | • | | 18 | 18-30 | 180 | 193 | 285 | 350 | 1 |
| 32 | 32 | | • | • | 18 | 18-32 | 85 | 138 | 222 | 265 | 1 |
| 32 | 32 | | • | | 22 | 22-32 | 72 | 145 | 215 | 288 | 1 |
| 34 | 34 | | • | | 22 | 22-34 | 62 | 142 | 218 | 298 | 1 |
| 36 | 36 | | • | | 22 | 22-36* | 72 | 144 | 216 | 288 | 1 |
| 39 | 37 | 2 | • | • | 20 | 20-39 | 63 | 144 | 252 | 333 | 1 |
| 41 | 41 | | • | | 20 | 20-41 | 45 | 126 | 225 | - | 1 |
| 41 | 27 | 14 | • | | 22 | 22-41 | 39 | 135 | 264 | - | 2 |
| 55 | 55 | | • | • | 22 | 22-55 | 30 | 142 | 226 | 314 | 1 |
| 61 | 61 | | • | • | 24 | 24-61 | 90 | 180 | 270 | 324 | 1 |
| * indic | ates conta | ct arrangeme | ents are i | not to MI | L-C-26482. | - | - | - | - | - | - |

Operating Voltage & Test Voltage:

| | SERVICE | TEST | MAXIMUM OPE | RATING VOLTAGE | TEST VOLTAGE | |
|---|---------|-------------|-------------|----------------|--------------|---------|
| | RATING* | ALTITUDE | DC | AC(RMS) | DC | AC(RMS) |
| ſ | 1 | Sea Level | 850 | 600 | 2100 | 1500 |
| ſ | 2 | Sea Level | 1,275 | 1,000 | 3,200 | 2,300 |
| ſ | 1 | 70,000 feet | - | 300 | 535 | 375 |
| | 2 | 70,000 1661 | - | 450 | 770 | 550 |

 $[\]hbox{``Each insulator layout has a specific ``Service Rating'' indicated in last column.}\\$



Crimp Contacts

| | Contact Size | Part Number |
|-----------------|--------------|---------------|
| | 20 | 030-9036-021 |
| Pin | 16 | 030-9032-030 |
| | 20 | 031-9074-030 |
| Socket | 16 | 031-9095-028 |
| Wire Hole | 20 | 225-1012-000 |
| Filler | 16 | 225-1011-000 |
| | | 192990-2050 |
| | 20 | (M22520/1-01) |
| | 16 | 192990-2050 |
| Crimp Tool | | (M22520/1-01) |
| | | TH1A |
| | 20 | (M22520/1-02) |
| Turret | 16 | TH1A |
| | | (M22520/1-02) |
| | 20 | MS24256A20 |
| Insertion Tool | 16 | MS24256A16 |
| | 20 | MS24256R20 |
| Extraction Tool | 16 | MS24256R16 |

KPSE Crimp Kit Kit includes: Crimp Tool

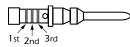
Locator

Insertion Tools 16 + 20 Extraction Tools 16 + 20 Contact Insertion Lubricant Assembly Instructions Rugged Case



Contact Identification

(To MIL-C-39029)

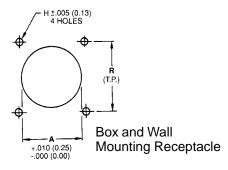


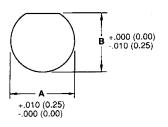
| Contact Size | Color Bands on Contacts | | | | |
|--------------|-------------------------|--------|--------|--|--|
| | 1st | 2nd | 3rd | | |
| 20 pin | RED | YELLOW | BLACK | | |
| 20 socket | RED | GREEN | WHITE | | |
| 16 pin | RED | RED | GREY | | |
| 16 socket | RED | YELLOW | VIOLET | | |

KPT/KPSE Selection Guide Shell **Endbells Cable Clamps** Styles: Plug E - No Clamp **≻**06 B & F - Standard Clamp Receptacles - Extender 00 MS-3057-C 90° **MATES WITH** 01 - Gland Seal MS-3057-A **Plastic Gland Seal** 02 **Heat Shrink DN** - Non Shielded **Heat Shrink Boot** DZ - Shielded 07 PG - Gland Seal **KPTB** P - Potting Cup

PACK TO

Panel Cutouts





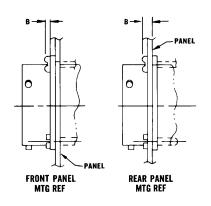
Jam Nut Receptacle

| SHELL SIZE | A dia inch FRONT | nes(mm) REAR | R - inches(mm) | H <u>+</u> .005 | Screw* | Α | В |
|---------------|---------------------|-----------------|----------------|-----------------|--------|---------------|---------------|
| 8‡ | .500 (12.70) | .551 (14.0) | .594 (15.09) | .125 (3.17) | #4 | .578 (14.68) | .540 (13.72) |
| 10 | .630 (16.00) | .669 (17.0) | .719 (18.26) | .125 (3.17) | #4 | .703 (17.86) | .665 (16.89) |
| 12 | .751 (19.75) | .866 (22.0) | .812 (20.62) | .125 (3.17) | #4 | .890 (22.61) | .828 (21.02) |
| 14 | .876 (22.25) | .984 (25.0) | .906 (23.01) | .125 (3.17) | #4 | 1.015 (25.78) | .952 (24.18) |
| 16 | 1.001 (25.43) | 1.102 (28.0) | .969 (24.61) | .125 (3.17) | #4 | 1.140 (28.96) | 1.076 (27.33) |
| 18 | 1.126 (28.60) | 1.220 (31.0) | 1.062 (26.97) | .125 (3.17) | #4 | 1.265 (32.13) | 1.201 (30.51) |
| 20 | 1.251 (31.78) | 1.358 (34.5) | 1.156 (29.36) | .125 (3.17) | #4 | 1.390 (35.31) | 1.326 (33.68) |
| 22 | 1.376 (34.95) | 1.476 (37.5) | 1.250 (31.75) | .125 (3.17) | #4 | 1.515 (38.48) | 1.451 (36.86) |
| 24 | 1.501 (38.13) | 1.614 (41.0) | 1.375 (34.92) | .155 (3.94) | #6 | 1.640 (41.66) | 1.576 (40.03) |

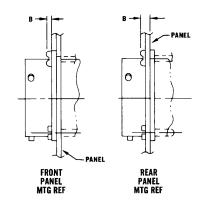
[‡] Not available in KPSE connectors.

Panel Thickness

Wall Mounting and Box Mounting Receptacle



Thru-Bulkhead Receptacle

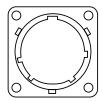


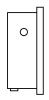
| Size | B Max panel and screw head | Size | B Max panel and screw head | | |
|------|----------------------------|------|----------------------------|--|--|
| 8 | inches (mm) | 8 | inches (mm) | | |
| 10 | | 10 | | | |
| 12 | .087 | 12 | .218 | | |
| 14 | | 14 | (5.54) | | |
| 16 | (2.21) | 16 | | | |
| 18 | | 18 | | | |
| 20 | .212 | 20 | .334 (8.74) | | |
| 22 | (5.38) | 22 | .001 (0.71) | | |
| 24 | (6.55) | 24 | .311 (7.90) | | |

^{*} See Accessories on page ACC 1 for sealing screws.

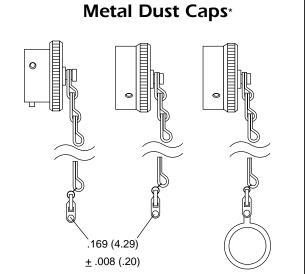


Dummy Receptacles





See page KPT 15 for panel cutouts.



| | | | FOR RECEPTACLE | | | | |
|------------|-------------|-------------|-----------------------------|---|--|--|--|
| SHELL SIZE | PART NUMBER | FOR PLUGS | Flanged* With Sash Chain | Jam Nut* With Sash Chain and Ring | | | |
| 8 | MS3115-8 | MS3180-8CA | MS3181-8CA | MS3181-8NA | | | |
| 10 | MS3115-10 | MS3180-10CA | MS3181-10CA | MS3181-10NA | | | |
| 12 | MS3115-12 | MS3180-12CA | MS3181-12CA | MS3181-12NA | | | |
| 14 | MS3115-14 | MS3180-14CA | MS3181-14CA | MS3181-14NA | | | |
| 16 | MS3115-16 | MS3180-16CA | MS3181-16CA | MS3181-16NA | | | |
| 18 | MS3115-18 | MS3180-18CA | MS3181-18CA | MS3181-18NA | | | |
| 20 | MS3115-20 | MS3180-20CA | MS3181-20CA | MS3181-20NA | | | |
| 22 | MS3115-22 | MS3180-22CA | MS3181-22CA | MS3181-22NA | | | |
| 24 | MS3115-24 | MS3180-24CA | MS3181-24CA | MS3181-24NA | | | |

^{*}Sash chain version for attachment to mounting screw on flanged receptacles. Sash chain with ring for mounting to jam nut receptacle.

Assembly Instructions

AACK TO

KPT Solder Contacts

- Slide the rear accessories over the wire bundle in the proper sequence for re-assembly: cable clamp and/or endbell first, then ferrule, and (if used) the coupling nut.
- 2. Insert individual wires through the proper holes in the grommet.
- 3. Solder wires to appropriate contacts on the rear of the connector. ITT Cannon document RPI234 covers standard soldering practices and is available upon request by fax or mail. Please call.
- 4. Fixture the connector for reassembly using the endbell assembly tools on page ACC 4 or a mating connector with contacts installed.
- Slide the grommet down the wires (lubricating the grommet with isopropyl alcohol will help).
- 6. Fill all unused grommet cavities with a wire hole filler to maintain the sealing integrity of the connector.
- 7. Slide coupling nut, ferrule, and endbell accessories over rear of the connector and tighten. Torque as follows:

| SIZE | TORQUE (INCH/LBS) |
|---------------|----------------------|
| 8, 10, 12, 14 | 10 - 15 |
| 16, 18 | 15- 25 |
| 20, 22, 24 | 25 - 35 |

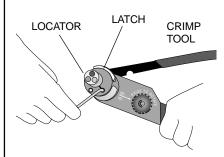
KPSE Crimp Tool Operation

Hand Crimp Tool

1. Strip the wires to the appropriate length.

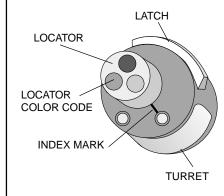
| CONTACT SIZE | STRIP LENGTH |
|-----------------|-----------------|
| 20 | 3/16" (4.8) |
| 16 | 1/4" (6.4) |

2. Open the 192990-2050 (M22520/1-01) crimp tool by squeezing the handles. Push the latch on TH1A (M22520/1-02)to pop up the locator on the turret. Attach the turret to the 192990-2050 crimp tool using the two captive hex bolts in the turret.

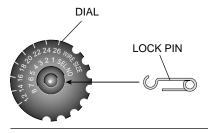


3. Select the proper locator position for your contact by rotating the locator until the proper color is aligned with the index mark. Push locator back down until it snaps into position.

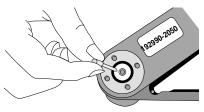
| CONTACT SIZE | LOCATOR COLOR | | | | |
|-----------------|------------------|--|--|--|--|
| 20 | RED | | | | |
| 16 | BLUE | | | | |



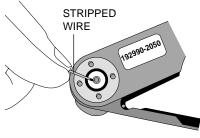
4. Adjust dial for proper wire gauge. To change the dial setting remove the lock pin and lift center of dial. Turn to the desired wire gauge. Replace lock pin on dial.



5. Cycle the tool before inserting the contact to be sure the tool is in the open position. Drop the contact, mating end first, into the crimp cavity of the tool. Squeeze the tool handle just enough to grip the contact without actually crimping it.



6. Insert the stripped wire into the contact with a slight twisting motion. Be sure all wire strands are inside the contact. Squeeze the handle to cycle the tool. The handle will not release until the contact is completely crimped.



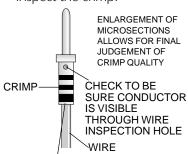
Specifications subject to change



Assembly Instructions

(continued)

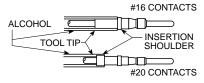
7. Remove the crimped contact. Pull on the wire slightly to be sure it is properly crimped. Be sure the contact is not bent or damaged in any way. Visually inspect the crimp:



INSULATION SHOULD BUTT UP AGAINST THE END OF THE CONTACT.

Insertion of Contacts

- 1. Slide the rear accessories over the wire bundle in the proper sequence for re-assembly: cable clamp and/or endbell first, then ferrule, and coupling nut.
- 2. Using the proper insertion tool from the chart on page KPT 14. slide the tool over the wire side of the contact until the tool bottoms on the contact.

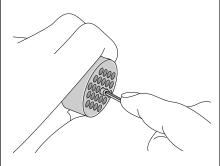


The tool for size 16 contacts butts against the shoulder of the contact. The rear, or insulation support, of the size 20 contacts butts against an internal shoulder in the tool tip.

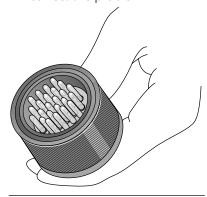
3. Dip the contact and tool tip in isopropyl alcohol (do not use any lubricant other than isopropyl alcohol). Hold the tool perpendicular to the rear of the connector. Beginning with the center cavity and working outwards in a circular pattern, insert the wired

Crimp Tool Operation | Insertion of Contacts (continued)

contact into the rear of the connector until the contact snaps into place. A light pull on the wire will assure that the contact is locked securely.



- 4. Fill any unused cavities with contacts. A wire hole filler must be inserted into the grommet behind the unused contacts to maintain the sealing integrity of the connector.
- 5. Check the mating face of the connector to insure that all the same size contacts are on the same plane (fully inserted). If not, the contact is not fully inserted. Remove the contact using the proper extraction tool and procedure and reinsert. Do not attempt to reinsert the insertion tool to correct the problem.

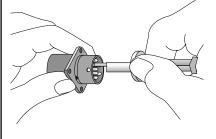


6. Fixture the connector for reassembly using the endbell assembly tools on page ACC 4 or a mating connector with contacts installed. Slide the connector accessories back down the cable over the rear of the connector and tighten. Torque as follows:

| SIZE | TORQUE (INCH/LBS) |
|---------------|----------------------|
| 8, 10, 12, 14 | 10 - 15 |
| 16, 18 | 15- 25 |
| 20, 22, 24 | 25 - 35 |

Extraction of Contacts

- 1. Remove the endbell accessories and slide them back over the wires.
- 2. Use the proper extraction tool from the chart on page
- 3. On the mating face of the connector, insert the tool over the contact and into the insulator until the tool bottoms. While keeping an even pressure against the tool, push the plunger on the tool shaft forward with your thumb and index finger. This will release the contact from the retention tine and push it toward the rear of the connector.



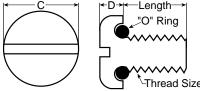
4. Carefully remove extraction tool from the connector. Pull the wire by hand to completely remove the contact from the rear of the connector.



Sealing Screws



Sealing screws are designed with a groove underneath the head to incorporate an O-ring. When tightened, the O-ring is compressed against the connector flange to form an air, water, and gas-tight seal. These screws are also vibration resistant. The reservoir beneath the



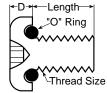
| Lengtn "O" Ring |
|-----------------|
| |
| Thread Size |

| SLOTTED | PAN HEAD | | | | | |
|-----------|------------|--------|-------|-------|---------|-------|
| PART | | | | | CLEAR | HOLE |
| NUMBER | THREAD | LENGTH | C MAX | D MAX | MIN | MAX |
| S-440-3/8 | | 3/8" | | | | |
| S-440-1/2 | 4-40NC-2A | 1/2" | .220" | .069" | .125" | .129" |
| S-440-5/8 | 1-40INO-2A | 5/8" | .220 | | 1.120 | .123 |
| S-440-3/4 | | 3/4" | | | | |
| S-632-3/8 | | 3/8" | | | | |
| S-632-1/2 | 6-32NC-2A | 1/2" | .271" | .083" | 4 4 7 " | .152" |
| S-632-5/8 | 6-32NC-2A | 5/8" | .271 | | .147" | |
| S-632-3/4 | | 3/4" | | | | |
| METRIC | | | | | | |
| SM4-12MM | M4 | 12MM | CALL | CALL | CALL | CALL |
| SM5-12MM | M5 | 12MM | CALL | CALL | CALL | CALL |

Additional threads, lengths, and styles available. Call for ordering information.

head confines the O-ring and permits full metal-to-metal contact between the screw and the connector flange. Sealing screws can be reused without spoiling the sealing action. Sealing screws are used in conjunction with the nutplates below.



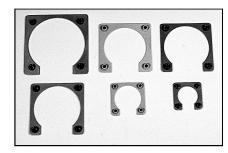


| PHILLIPS PAN HEAD (meets MS3212 & MS3213) | | | | | | | | | |
|---|-------------|--------|-------|-------|-------|-------|--|--|--|
| PART | | | | | CLEAR | HOLE | | | |
| NUMBER | THREAD | LENGTH | C MAX | D MAX | MIN | MAX | | | |
| R-440-3/8 | | 3/8" | | | | | | | |
| R-440-1/2 | 4-40NC-2A | 1/2" | .238 | .080" | .125" | .129" | | | |
| R-440-5/8 | 4-40INC-2A | 5/8" | | | | .123 | | | |
| R-440-3/4 | | 3/4" | | | | | | | |
| R-632-3/8 | | 3/8" | | | | | | | |
| R-632-1/2" | 6-32NC-2A | 1/2" | .294" | .097" | .147" | .152" | | | |
| R-632-5/8" | 0 02.10 2/1 | 5/8" | | | ' ' ' | | | | |
| R-632-3/4" | | 3/4" | | | | | | | |

Material: Passivated stainless steel screws, silicone rubber O-rings

Nut Plates

Nut plates are flat metal brackets containing four captive nuts that are used to mount flanged receptacles to a panel. They eliminate the nightmare of working with loose nuts in a confined area and effectively distribute the screw tension across the back of the panel. These cost effective devices are "self-wrenching", drawing the bracket up to be automatically aliqned. Our plates are a C shape design which allows you to slip the nut plate over the wire bundle just prior to mounting. The bracket is aluminum alloy with Alodine plating and the nuts are steel alloy plated with cadmium. Nut plates mate with above Sealing Screws.

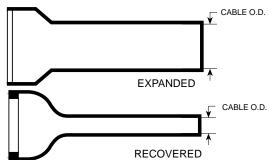


| Connector St | yles | Commercial Industrial | MIL-C-5015 Style | MIL-C-26482 S | Style | MI | L-C-38999 Style | |
|--------------|--------|-----------------------|------------------|-------------------------------------|-----------------|-----------------|-----------------|-------------------|
| Part Number | Thread | Sure-Seal, APD, SLC | CA/MS CB/CR | KPT, KPSE, PV70, MS3470, Trident | PV72, MS3472 | KJL Series I | KJ Series II | KJA Series III |
| M85528/2-8A | 4-40 | | 8/8\$ | 8 | | | 8 | |
| M85528/2-10A | 4-40 | | 10S/10SL | 10 | | 9 | 10 | Α |
| M85528/2-10B | 6-32 | | | | 10 | | | |
| M85528/2-12A | 4-40 | | 12/12S | 12 | 10 | 11 | 12 | В |
| M85528/2-12B | 6-32 | | | | 12 | | | |
| M85528/2-14A | 4-40 | APD1,4,7 SSF2,3,4 | 14/14S | 14 | | 13 | 14 | С |
| M85528/2-14B | 6-32 | | | | 14 | | | |
| M85528/2-16A | 4-40 | | 16/16S | 16 | | 15 | 14 | D |
| M85528/2-16B | 6-32 | SLC10 | | | 16 | | | |
| M85528/2-18A | 4-40 | SSF8,9,10 | 18 | 18 | | 17 | 18 | E |
| M85528/2-18B | 6-32 | | | | 18 | | | |
| M85528/2-20A | 4-40 | | 20 | 20 | | 19 | 20 | F |
| M85528/2-20B | 6-32 | | | | 20 | | | |
| M85528/2-22A | 4-40 | | 22 | 22 | | 21 | 22 | G |
| M85528/2-22B | 6-32 | | | | 22 | | | |
| M85528/2-24A | 6-32 | | | | 24 | 25 | | J |
| M85528/2-24B | 6-32 | | 24 | 24 | | 23 | 24 | Н |
| M85528/2-25A | 6-32 | | | | | 25 | | |
| M85528/2-28A | 6-32 | | 28 | 24 Neptune only | | | | |
| M85528/2-32A | 6-32 | | 32 | | | | | |
| M85528/2-36A | 6-32 | | 36 | | | | | |



Heat Shrink Boots

Standard Heat Shrink Boots are supplied in flame retardant polyolefin with an adhesive inner liner. A High Shrink Ratio version for sealing smaller wire bundles is also listed. The adhesive liner is heat activated and bonds to the underlying surface filling small voids. When cool, the adhesive forms a barrier against water, moisture, dirt, and other environmental contaminants. The lip on the connector end of the recovered boot fits into the sealing groove on the M and N style endbells used with CAVMS, CB, CR and KPT/KPSE connectors. Operating temperature is -67°F (-55°C) to +275°F (+135°C). These boots are also available in halogen free polyolefin, semirigid polyolefin, silicone, or Viton, with or without adhesive liner. Call for ordering information. See page ACC 5 for Heat Shrink Gun.

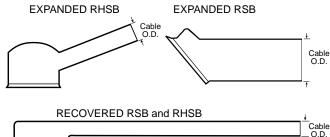


| Note: Allow at least 20% | recovery f | for proper lir | ner adhesion | 1) | | | | | | RECO ¹ | VERED | |
|--------------------------|--|----------------|--------------|----------|----------------|----------|----------|----------|----------|-------------------|----------|--------|
| CABLE O.D. INCH | IFS | | | • | | | | | | | | |
| MAX (expanded) | 0.25 | 0.30 | 0.38 | 0.45 | 0.88 | 1.01 | 1.16 | 1.34 | 1.47 | 1.72 | 1.97 | 2.47 |
| MIN | 0.08 | 0.10 | 0.12 | 0.14 | 0.25 | 0.29 | 0.33 | 0.39 | 0.41 | 0.44 | 0.51 | 0.69 |
| CABLE O.D. MM | | 1 41.4 | | | 1 11-1 | | | | | | J | |
| MAX | (6.3) | (7.6) | (9.6) | (11.4) | (22.3) | (25.6) | (29.5) | (34.0) | (37.3) | (43.7) | (50.0) | (62.7) |
| MIN | (2.1) | (2.6) | (3.0) | (3.6) | (6.3) | (7.4) | (8.4) | (10.0) | (10.4) | (11.1) | (13.0) | (17.5) |
| PART NUMBER - | HSB1 | HSB2 | HSB3 | HSB4 | SB1 | SB2 | SB3 | SB4 | SB5 | SB6 | SB7 | SB8 |
| CA-Bayonet N=N | | | | | ODI | ODE | OBO | ODT | ODO | ODO | ODI | OBO |
| CB10SL-M | • | IVI—IVI GITIG | laca Ena | Jon | • | • | | | | | | |
| CB10SL-N | • | | | | • | • | | | | | | |
| CB12S-M | <u> </u> | • | | | • | • | | • | | | | |
| CB12S-N | • | + - | | | • | • | | | | | | |
| CB14S-M | <u> </u> | • | | | • | • | | • | | | | |
| CB14S-N | • | • | | | • | • | | • | | | | |
| CB16-M | | • | | | | • | | • | | | | |
| CB16-N | <u> </u> | • | | + | | • | | • | | | | |
| CB16S-M | | • | | + | | • | | • | | | | |
| CB16S-N | | • | | + | • | 1 | | • | | | | |
| CB18-M | | + - | • | + | † - | + | • | • | | | | |
| CB18-N | | • | | | | • | | • | | | | |
| CB20-M | | + - | • | • | | | | • | • | • | | |
| CB20-N | | | • | + - | | | | • | • | | | |
| CB22-M | | | • | • | | | | • | • | • | | |
| CB22-N | | | • | | | | | • | • | | | |
| CB24-M | | | + - | • | | | | | | • | • | |
| CB24-N | | | | • | | | | | | • | • | |
| CB28-M | | | | • | | | | | | • | • | |
| CB28-N | | | | • | | | | | | • | • | |
| CB32-M | | | | <u> </u> | | | | | | _ | • | • |
| CB32-N | | | | | | | | | | | • | • |
| CB36-M | | | | | | | | | | | • | • |
| CB36-N | | | | | | | | | | | • | • |
| CR40-N | | | | | | | | | | | | |
| KPT/KPSE DN/ | DΖ | | | | | | | | | | | |
| KPT08 | • | | | | | | | | | | | |
| KPT10 | • | | | | • | • | | | | | | |
| KPT12 | | | | | <u> </u> | • | • | • | | | | |
| KPT14 | | • | | | | | • | • | | | | |
| KPT16 | | | • | | | | | • | | | | |
| KPT18 | | | • | | | | | • | • | • | | |
| KPT20 | | | | • | | | | | • | • | | |
| KPT22 | 1 | | | • | | | | | | • | • | |
| KPT24 | | | | • | | | | | | • | • | |
| T=Trident TN=Tr | ident N | eptune_ | | | | | | | | | | |
| T10 | A | | | | A | A | | | | | | |
| T12 | | A | | | | A | | A | | | | |
| T14 | | A | | | | | A | A | | | | |
| T16 | | | A | | | | A | A | A | | | |
| T18 | | | A | A | | | | A | A | A | | |
| T20 | | | | A | | | | | A | A | | |
| T22 | | | | A | | | | | | A | A | |
| T24 | | | | A | | | | | | A | A | |
| TN16 | A | | | | A | A | | | | | | |
| TN24 | | A | | | 1 | A | | A | | | | |

Right Angle Heat Shrink Boots



Right Angle Heat Shrink Boots are supplied in flame retardant polyolefin with an adhesive inner liner. A High Shrink Ratio version for sealing smaller wire bundles is also listed. The adhesive liner is heat activated and bonds to the underlying surface filling small voids. When cool, the adhesive forms a barrier against water, moisture, dirt, and other environmental contaminants. The lip on the connector end of the recovered boot fits into the sealing groove on the M and N style endbells used with CA/MS, CB, CR and KPT/KPSE connectors. Operating temperature is -67°F (-55°C) to +275°F (+135°C). These boots are also available in halogen free polyolefin, semi-rigid polyolefin, silicone, or Viton, with or without adhesive liner. Call for ordering information. See page ACC 5 for Heat Shrink Gun.



| ote: Allow at least 20 | % recovery fo | or proper line | er adhesion |) | | | | | | | | |
|------------------------|---------------|----------------|----------------|----------|----------|----------|----------|--|-------------|----------|----------|--------|
| CABLE O.D. INC | HES | | | | | | | | | | | |
| MAX (expanded) | 0.24 | 0.30 | 0.38 | 0.45 | 0.88 | 1.01 | 1.16 | 1.34 | 1.47 | 1.72 | 1.97 | 2.47 |
| MIN | 0.08 | 0.10 | 0.12 | 0.14 | 0.25 | 0.29 | 0.30 | 0.38 | 0.41 | 0.44 | 0.56 | 0.69 |
| CABLE O.D. MM | | 1 01.0 | | | 0.20 | 0.20 | 0.00 | 0.00 | | | 0.00 | 0.00 |
| MAX | (6.0) | (7.5) | (9.6) | (11.4) | (22.3) | (25.6) | (29.5) | (34.0) | (37.3) | (43.7) | (50.0) | (62.7) |
| MIN | (2.0) | (2.5) | (3.0) | (3.6) | (6.3) | (7.4) | (7.6) | (9.6) | (10.4) | (11.1) | (14.2) | (17.5 |
| | | | | | | | | | | | | _ ` ′ |
| PART NUMBER - | | RHSB2 | | | RSB1 | RSB2 | RSB3 | RSB4 | RSB5 | RSB6 | RSB7 | RSB8 |
| CA-Bayonet N=N | | VI=M Shie | ded Endi | pell | | | | | | | | |
| CB10SL-M | • | | | | • | • | • | | | | | |
| CB10SL-N | • | | | | • | • | | | | | | |
| CB12S-M | | • | | | • | • | • | | | | | |
| CB12S-N | • | | | | • | • | | | | | | |
| CB14S-M | | • | | | • | • | • | • | | | | |
| CB14S-N | | • | | | • | • | • | | | | | |
| CB16-M | | • | | | | • | • | • | | | | |
| CB16-N | | • | | | | • | • | • | | | | |
| CB16S-M | | • | | | | • | • | • | | | | |
| CB16S-N | | • | | | | • | • | • | | | | |
| CB18-M | | | • | | | | • | • | • | | | |
| CB18-N | | | • | | | • | • | • | | | | |
| CB20-M | | | • | | | | <u> </u> | • | • | • | | |
| CB20-N | | | • | | | | | • | • | <u> </u> | | |
| CB22-M | | | • | | | | | • | • | • | | |
| CB22-N | | | • | | | | | • | • | • | | |
| CB24-M | | | | • | | | | | | • | | |
| CB24-N | - | | | • | | | | | | | | |
| | - | | | _ | | | | | | | | |
| CB28-M | | | | • | | | | | | • | • | |
| CB28-N | | | | • | | | | | | • | • | |
| CB32-M | | | | | | | | | | | • | • |
| CB32-N | | | | | | | | | | | • | |
| CB36-M | | | | | | | | | | | | • |
| CB36-N | | | | | | | | | | | | • |
| CR40-N | | | | | | | | | | | | |
| KPT/KPSE DN | /DZ | | | | | | | | | | | |
| KPT08 | • | | | | • | • | | | | | | |
| KPT10 | • | | | | • | • | • | | | | | |
| KPT12 | | • | | | | • | • | • | | | | |
| KPT14 | | • | | | | • | • | • | | | | |
| KPT16 | | | • | | | | <u> </u> | • | • | | | |
| KPT18 | | | • | | | | | • | | • | | |
| KPT20 | 1 | | - - | • | | | | | | | | |
| KPT22 | | | | | | | | | | | | |
| KPT24 | | | | | | | | | | | _ | |
| T=Trident TN=T | Trick out N | ntune | | | | | | | | | | |
| T=Indent IN=1 T10 | | ptune | | | | | | | | | | |
| | | _ | | | A | A | A | | | | | |
| T12 | | A | | | | A | A | A | - | - | | |
| T14 | | A | <u> </u> | | | A | A | <u> </u> | | | | |
| T16 | | | A | | | | | A | A | | | |
| T18 | | | A | | | | | A | A | A | A | |
| T20 | | | | A | | | | | A | A | A | |
| T22 | | | | A | | | | | | A | A | |
| T24 | | | | A | | | | | | | A | |
| TN16 | A | | | | A | A | | | | | | |
| TN24 | 1 | A | | | | A | A | A | | | | |



TG70 Strap Wrench

The Strap wrench is used to connect or disconnect coupling nuts in a confined space, or to tighten or loosen endbells without damaging the connector plating. A strap wrench also



increases torque, allowing you to more easily mate or unmate a connector pair. Substitute tools, such as a pipe wrench or pliers, should never be used due to the high probability of severe damage to the connector plating or the coupling mechanism.

TG69P Non-Marring Adjustable Endbell Pliers For Field Service

The TG69P pliers have resilient jaws and are used to tighten or remove endbells without damaging the

connector plating. The pliers are adjustable and will accommodate all of the connector sizes in this catalog. Substitute tools, such as a pipe wrench or metal jaw pliers, should never be used



due to the high probability of severe damage to the connector plating.

600 Series Production System

The 600 series is a complete system for the proper assembly and torquing of connector endbells. The System includes a bench mounted or hand-held torque wrench, plug and receptacle holders, and a range of endbell tightening tools. When used together, these tools provide the user with consistent endbell installations. Each item is shipped with detailed assembly instructions.

Plug and receptacle holders







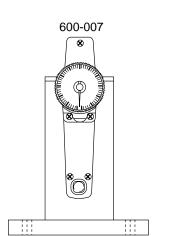


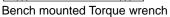
600B005-*R

600B005-*P

600D005-*R

600D005-*P







600-004

| Hand | l held |
|------|--------|
|------|--------|

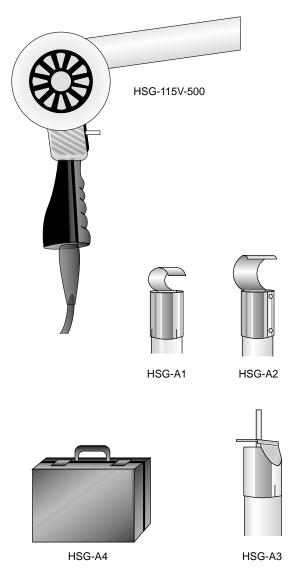
| | MIL-C | :-5015 | MIL-C-26482 | | | |
|--------|----------------|---------------|-----------------------------------|-------------|--|--|
| | for MSE, F, B, | R, CA, CB, CR | for KPT,KPTSE, PV, MS311_, MS347_ | | | |
| Size | Receptacles | Plugs | Receptacles | Plugs | | |
| 8/8S | 600B005-8R | 600B005-8P | 600D005-8R | 600D005-8P | | |
| 10S/SL | 600B005-10R | 600B005-10P | 600D005-10R | 600D005-10P | | |
| 12/12S | 600B005-12R | 600B005-12P | 600D005-12R | 600D005-12P | | |
| 14/14S | 600B005-14R | 600B005-14P | 600D005-14R | 600D005-14P | | |
| 16/16S | 600B005-16R | 600B005-16P | 600D005-16R | 600D005-16P | | |
| 18 | 600B005-18R | 600B005-18P | 600D005-18R | 600D005-18P | | |
| 20 | 600B005-20R | 600B005-20P | 600D005-20R | 600D005-20P | | |
| 22 | 600B005-22R | 600B005-22P | 600D005-22R | 600D005-22P | | |
| 24 | 600B005-24R | 600B005-24P | 600D005-24R | 600D005-24P | | |
| 28 | 600B005-28R | 600B005-28P | - | - | | |
| 32 | 600B005-32R | 600B005-32P | - | - | | |
| 36 | 600B005-36R | 600B005-36P | - | - | | |

| | MIL-C-38999 Series I | | MIL-C-38999 Series II | | MIL-C-38999 Series III | | | |
|------|----------------------|-------------|-----------------------|--------------|------------------------|--------|--------------|--------------|
| | for KJL | | for KJ | | for KJA | | | |
| Size | Receptacles | Plugs | Receptacles | Plugs | Shel | l Size | Receptacles | Plugs |
| 9 | 600F005-9R | 600F005-9P | 600FF005-9R | 600FF005-9P | Α | 9 | 600H005-9R# | 600H005-9P# |
| 11 | 600F005-11R | 600F005-11P | 600FF005-11R | 600FF005-11P | В | 11 | 600H005-11R# | 600H005-11P# |
| 13 | 600F005-13R | 600F005-13P | 600FF005-13R | 600FF005-13P | С | 13 | 600H005-13R# | 600H005-13P# |
| 15 | 600F005-15R | 600F005-15P | 600FF005-15R | 600FF005-15P | D | 15 | 600H005-15R# | 600H005-15P# |
| 17 | 600F005-17R | 600F005-17P | 600FF005-17R | 600FF005-17P | Е | 17 | 600H005-17R# | 600H005-17P# |
| 19 | 600F005-19R | 600F005-19P | 600FF005-19R | 600FF005-19P | F | 19 | 600H005-19R# | 600H005-19P# |
| 21 | 600F005-21R | 600F005-21P | 600FF005-21R | 600FF005-21P | G | 21 | 600H005-21R# | 600H005-21P# |
| 23 | 600F005-23R | 600F005-23P | 600FF005-23R | 600FF005-23P | Н | 23 | 600H005-23R# | 600H005-23P# |
| 25 | 600F005-25R | 600F005-25P | 600FF005-25R | 600FF005-25P | J | 25 | 600H005-25R# | 600H005-25P# |

Add polarizations: N, A, B, C, D, E

The Panduit HSG-115V-500 heat gun is a general purpose tool designed for all types of heat shrink boots and tubing. The air intake adjustment varies the temperature from 500°F (260°C) to 650°F (344°C). The unit operates on 115 Vac at 11 amps. The tools comes with an adjustable stand and a neoprene AC cord. The bearings, brushes, and heating element are replaceable.

| PART NUMBER | DESCRIPTION | | | |
|----------------|---|--|--|--|
| HEAT TOOLS | | | | |
| HSG-115V-500 | General purpose tool - For use on all types of heat shrink tubing and boots Air intake regulator varies temperature from 500°F (260°C) to 650°F (344°C) 115 Volt, 11 AMP. Neoprene jacketed cord with molded strain relief Adjustable stand included. Replaceable bearings, brushes and heating elements. | | | |
| ACCESSORIES | | | | |
| HSG-A1 | Deflector tube. Directs heat around the tubing to reduce shrink time. For tubing up to 3/4" diameter. | | | |
| HSG-A2 | Deflector tube for tubing up to 1-1/2" diameter. | | | |
| HSG-A3 | Concentrator tube to direct heat toward tubing and away from heat sensitive components. | | | |
| HSG-A4 | Black polyethylene carrying case.Stores gun, stand, and all three accessories. | | | |



3M

Potting System

3M Scotch-Weld™ EPX Potting Systems consists of a self leveling Duo-Pak epoxy potting compound cartridge, an EPX applicator, and an EPX nozzle for precise mixing. 3M's two part epoxy potting compound is for use with the KPT, KPSE, CA/MS, CB, and CR series "P" style endbells. The EPX system provides an easy way to meter, mix and dispense potting compound. 3M's non-corrosive epoxy potting compound is specially formulated for electronic applications. Available in Black and Clear.

Manual Gun: EPX-Applicator (shown)
Pneumatic Gun: EAS50P

Nozzle: EPX-NOZZLE

Potting Compound
DP270-BLACK
DP270-CLEAR
DP100 PLUS-CLEAR
4-minute work life; Rapid setup
for automotive applications

Nationwide and abroad... pricing and delivery information is just around the corner.

USA Sales Offices

Corporate Headquarters

2180 Hornig Road Philadelphia, PA 19116-4289 1-800-523-0727 215-673-0400 FAX: 215-552-8022

800 Hart Road, Suite 260 Barrington, IL 60010-2630 1-877-539-5364 847-382-9300 FAX: 847-382-9768 354 McDonnell Street Suite Six Lewisville, TX 75057-4832 1-800-780-8463

1915 N. Bendix Drive South Bend, IN 46628-1603 1-800-348-2996 219-287-2911 FAX: 219-287-7289 3951 South Plaza Drive Suite 240 Santa Ana, CA 92704-6954 1-800-692-2186 714-428-1188 FAX: 714-428-1194

7168 Waldemar Drive Building #116 Indianapolis, IN 46268-2183 1-800-428-5081 317-328-7700

FAX: 317-328-7717

45 Stiles Road, Suite 206 Salem, NH 03079-4808 1-877-751-1168 603-898-3444 FAX: 603-898-7872

International Sales Offices

Canada

316 Colborne Street West Whitby, Ontario L1N 1X3, CANADA 1-800-575-1500 905-668-2155 FAX: 905-665-1166

PEI-Genesis UKLTD

Unit 23, Headley Park 10 Woodley, Reading, Berkshire RG5 4SW 0118 969 3444 FAX: 0118 969 4777

Export Sales Office

9 Dexter Street Selden, NY 11784-2273, USA 516-696-8140 FAX: 516-696-0299

A full line of connectors to meet your needs.

Sure-Seal® — Small, low cost, and reliable.

Clip Lock Circular — User friendly and built to last.

Slide Lock Circular — Easy to assemble and maintain.

Slide Lock Environmental — Designed for demanding, under-the-hood applications.

APD — Rugged, high performance connectors at a low-total applied cost.

Trident Ringlock, Trident Neptune, and Trident Neptune Metal — Small, low cost, and reliable.

Standard-K — Lightweight, reliable, and economical.

CA/MS-E/F/R — Standard MS Circular to MIL-C-5015.

CA-Bayonet — Rugged with a quick-mating bayonet lock.

KPT/KPSE — High-density contact arrangements in a miniature circular metal shell

PV — Designed for use in demanding, high-reliability environments.

KJL — High density contact arrangements in a miniature shell.

KJ — High-density contact arrangements in a low-profile, miniature circular shell.

KJA — High-density contact arrangements in a miniature circular shell.

MIKQ — Rugged, lightweight connector offering high performance in a small package.

MIKM — Rugged, lightweight connector in a small package.

MDSM — High-density, shielded connectors for today's commercial industry.

MDM — High strength and lightweight with an extremely small interconnect.

D-Sub — A variety of styles and accessories makes this an economical solution to many interconnect problems.

DL/DLD/DLM — Economical and versatile, high-density connectors.





Connector Solution Guide

for Commercial, Industrial, Harsh Environment and Military Applications

