USAF: F04606-90-D-0941

J1: (DATA) MS27499E14F35SB (p.13)

J2: (AUDIO) MS27499E14F35~~SA~~ (p.13)

J3: (CAC PWR) MS27499E12F98P (p.13)

J4: (Remote) JTP02RE-10-35P (MS27508E10F35P) (p.14)

JTP - MS27508
JT - MS27499

G. W. Henry

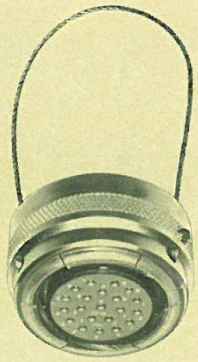
# Bendix® Subminiature Cylindrical Connectors

12-090-6


**MIL-C-38999 Series I • II**

ALLIED Amphenol Products

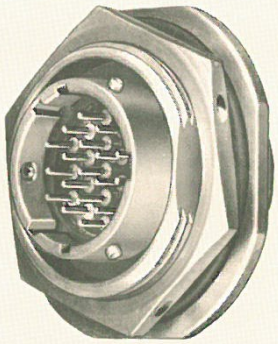
# JT/LJT
# specials



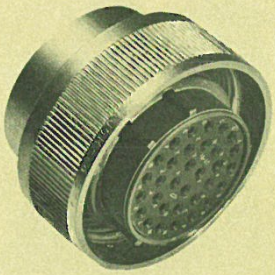
**FAIL-SAFE**

This connector has been designed for those special applications needing a quick disconnect. Many of the JT features have been designed into the "fail-safe." Including: five key polarization, three point bayonet lock coupling, standard insert arrangements and mating interchangeability with JT receptacles. By designing six segments into the ramp sleeve it was possible to assure complete separation regardless of coupling orientation. If bayonet pins on receptacle shell have not been completely coupled into position, the segments (upon lanyard pull) will release the entire receptacle without damage. The fail-safe is also available in an LJT configuration.

The FJT filter connector utilizes a miniature ferrite filter device around each contact of an electrical receptacle, eliminating the need for conventional bulky filtering methods. This combination filter connector package reduces weight, space, cost, and adds reliability for providing EMC.

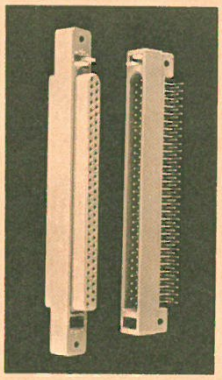


**FILTER**



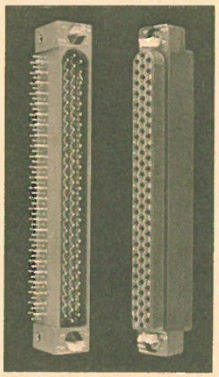
**AJ**

Specially designed connectors for underwater and other fluid immersion applications are available in all Bendix® JT/LJT insert arrangements. Aquacon AJ (immersible JT) or AL (immersible LJT) Series connectors offer 1500PSI capability, visual mating indication to assure proper sealing and mating, and design flexibility at low cost. Corrosion resistant materials and environment proof molded cable terminations provide a connector well suited to immersed usage. AJ and AL Series Aquacon connectors represent the utmost in general purpose immersible connectors.



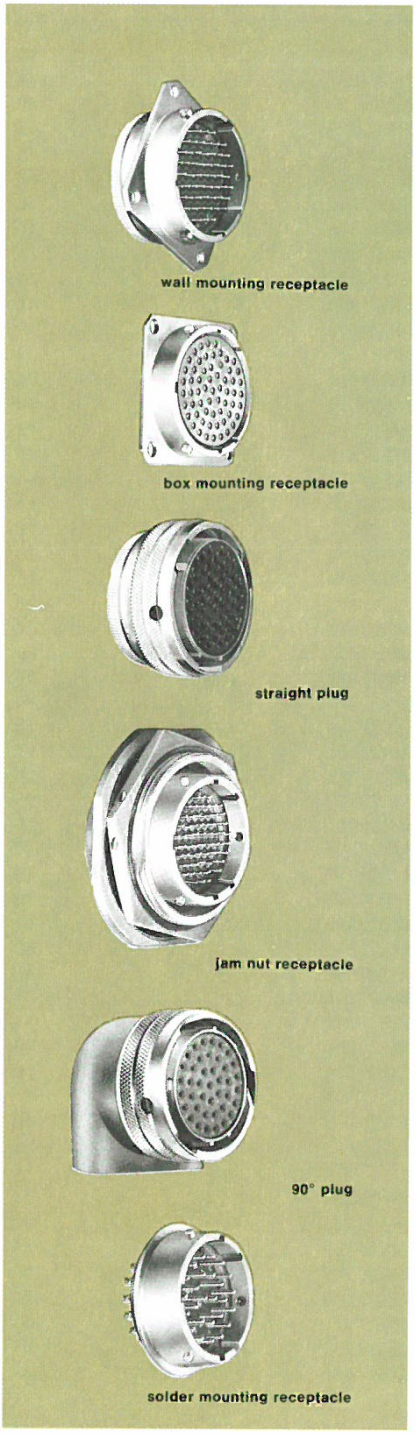
**MINIATURE RECTANGULAR**

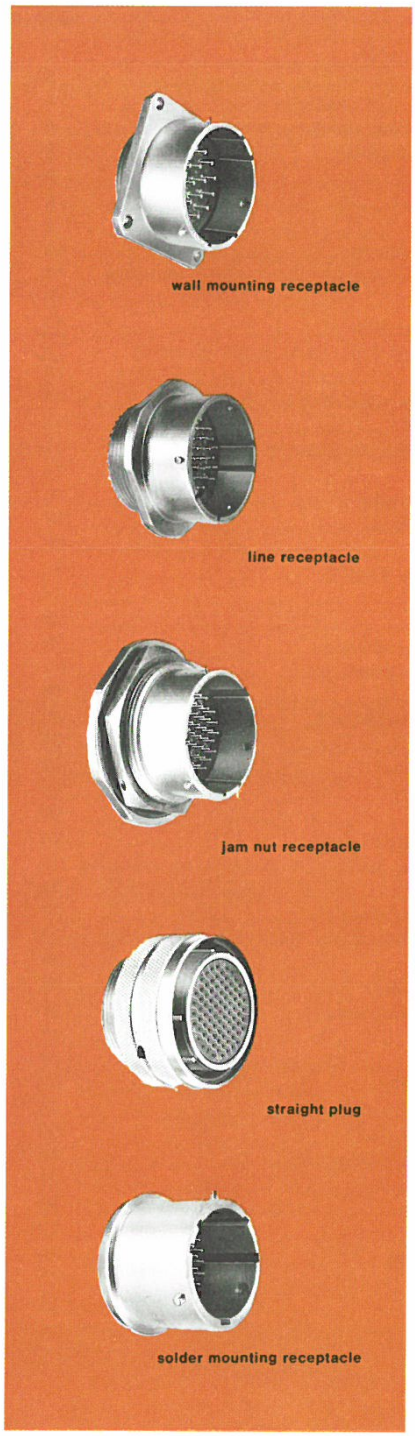
10-285416 and 10-285418 miniature rectangular connector uses size 22D crimp contacts and is available in either a 39 or 59 contact arrangement. Both contact arrangements have a 2 row pattern. The receptacle is designed for printed circuit board mounting. This connector has a potential of 256 polarization positions and uses standard JT application tools. 10-285392 and 10-285393 environmental printed circuit board rectangular connector utilizes size 20 crimp contacts and is available in either a 40 or 76 contact arrangement. This connector has a potential of 36 polarization positions and uses standard JT application tools. Insert and shell are one piece unitized construction molded from a dielectric material of high temperature glass fiber filled epoxy.



**ENVIRONMENTAL RECTANGULAR**

# JT/LJT
# the miniature cylindrical for every application




**Bendix® LJT Series and JT Series connectors are qualified to MIL-C-38999, Series I and II respectively. These connectors were developed to meet the needs of the aerospace industries, and provided the impetus for development of the MIL-C-38999 specifications.**

The Bendix® Connector JT series is unique because of its thin, space saving design. This connector series is available in a complete selection of shell styles, sizes, contact arrangements and crimp or solder contact option. In addition to its weight and space saving features, the JT offers excellent electrical capabilities. Rigid dimensional tolerance requirements make the JT highly reliable.

For those applications where a "Scoop Proof" feature is required, we have available the LJT series of connectors. All of the design features of the JT are included in the LJT, the basic difference being the JT is a shorter, lighter connector.

Where proof of high reliability and lot control is required, MS approved equivalents to most of the proprietary JT and LJT connectors are covered in this catalog section.

## COMPONENTS

Shell components are impact extruded or machined bar stock aluminum. Standard plating on shell components is cadmium over nickel. Many finishes are optional, see "Specifications," (page 3). Hermetic seal receptacles are available in carbon steel or stainless steel shells. Dependable 5 key/keyway polarization with bayonet lock coupling is incorporated to aid and assure positive mating.

Insert material is epoxy compound reinforced with glass fibers. With excellent electrical characteristics, this exceptional material provides durable protection for molded in solder type contacts. Contrasting letter or number designations are used on insert faces.

Fluorinated silicone interfacial seal wafer is featured on the mating face of "crimp type pin" inserts. This assures complete electrical isolation of pins when connector halves are mated. In addition a main joint gasket is installed in the receptacles for moisture sealing between connector halves. Both features are also available for hermetic receptacles.

## CONTACTS

Standard contact plating is 50 micro inches minimum gold (100 micro inches optional) and contacts are available in sizes 12, 16, 20, 22, 22M and 22D. All socket contacts are probe proof. Crimp type contacts (rear removable) are featured in JT-R connectors. High density insert patterns are available.

## OPTIONAL FEATURES

High temperature capability of 392°F is available only in JTS or LJTS crimp type connectors. High temperature qualities are accomplished by included gold plated contacts, high temperature shell plating, stainless steel coupling nut spring, and epoxy inserts/fluorinated silicone grommet combination. Standard temperature capability for both solder and crimp is 302°F.

The JTN or LJTN type connectors are available for $N_2O_4$ resistance provided they are mated and un-grommeted rear faces are suitably protected.

For complete listing and definition of connector types, shell styles, and service classes, see How to Order, Page 52.

# JT/LJT
# specifications

## Contact Rating

| Contact Size | Test Current | | Maximum Millivolt Drop Crimp | Maximum Millivolt Drop Solder | |
|---|---|---|---|---|---|
| | Standard | Hermetic | | Standard | Hermetic |
| 22M | 3 | 2 | 30 | 20 | 60 |
| 22D | 5 | | 40 | | |
| 22 | 5 | 3 | 40 | 20 | 85 |
| 20 | 7.5 | 5 | 35 | 20 | 60 |
| 16 | 13 | 10 | 25 | 20 | 85 |
| 12 | 23 | 17 | 25 | | 85 |

| Contact Size | CRIMP WELL DATA | | SOLDER WELL DATA | |
|---|---|---|---|---|
| | Well Diameter | Nominal Well Depth | Well Diameter | Nominal Well Depth |
| 22M | .029 ±.001 | .141 | .029 +.004 −.000 | .094 |
| 22D | .0345±.0010 | .141 | | |
| 22 | .0365±.0010 | .141 | .036 +.004 −.000 | .094 |
| 20 | .047 ±.001 | .209 | .044 +.004 −.000 | .125 |
| 16 | .067 ±.001 | .209 | .078 +.004 −.002 | .141 |
| 12 | .100 ±.002 | .209 | | |

## Service Rating*

| Service Rating | Suggested Operating Voltage (Sea Level) | | Test Voltage (Sea Level) | Test Voltage 50,000 Ft. | Test Voltage 70,000 Ft. | Test Voltage 110,000 Ft. |
|---|---|---|---|---|---|---|
| | AC (RMS) | DC | | | | |
| M | 400 | 550 | 1300 VRMS | 550 VRMS | 350 VRMS | 200 VRMS |
| I | 600 | 850 | 1800 VRMS | 600 VRMS | 400 VRMS | 200 VRMS |
| II | 900 | 1250 | 2300 VRMS | 800 VRMS | 500 VRMS | 200 VRMS |

*Please note that the establishment of electrical safety factors is left entirely in the designer's hands, since he is in the best position to know what peak voltages, switching surges, transients, etc., can be expected in a particular circuit.

## Finish Data

| Aluminum Shell Components Non-Hermetic | | | | |
|---|---|---|---|---|
| Finish | Suffix | | Indicated Finish Standard for JT Types Listed Below | Standard for LJT Types Listed Below |
| | Military | Proprietary | | |
| Cadmium Plated Nickel Base | MS (A) | | JT/JTG/JTL/JTP | LJT/LJTP |
| Bright Cadmium | | (001) | | |
| Olive Drab Cadmium Plate | | (003) | | |
| Grey Anodize | | (004) | | |
| Anodic Coating (Alumilite) | MS (C) | (005) | JTS/JTPS/JTLS | LJTPS/LJTS |
| Bright Nickel | | (009) | | |
| Chromate Treated (Iridite 14-2) | | (011) | JTN/JTPN/JTLN | LJTN/LJTPN |
| Olive Drab Cadmium Plate Nickel Base | MS (B) | (014) | | |
| Electroless Nickel | MS (F) | (023) | | |

| Hermetic Connectors | | | | |
|---|---|---|---|---|
| Material/Finish | Suffix | | Indicated Finish Standard for JT Types Listed Below | Indicated Finish Standard for LJT Types Listed Below |
| | Military | Proprietary | | |
| Carbon Steel Shell Tin Plated Shell and Contacts | MS (D) | | JT( )H/JT( )Y JTL( )H/JTL( )Y | LJT( )Y/LJT( )H |
| Carbon Steel Shell Gold Plated Shell and Contacts | | *(101) | | |
| Stainless Steel Shell | MS (E) | (150) | JTS( )Y JTLS( )Y | LJTS( )Y |

*Suffix (101) may be used for non hermetic types from standard finish column; contacts only will be 100 millionths inch minimum gold plate. These finishes are available on other JT and LJT connectors. Contact the factory for additional variations.

# JT/LJT
# insert availability and identification;
## alternate positions

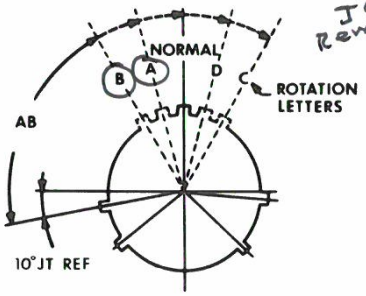
J1 (Data)  J2 (Audio)

### JT MASTER KEY/KEYWAY ROTATION

| AB ANGLE OF ROTATION (Degrees) | | | | | |
|---|---|---|---|---|---|
| Shell Size | Normal | A | B | C | D |
| 8 | 100° | 82° | — | — | 118° |
| 10 | 100° | 86° | 72° | 128° | 114° |
| 12 | 100° | 80° | 68° | 132° | 120° |
| 14 | 100° | 79° | 66° | 134° | 121° |
| 16 | 100° | 82° | 70° | 130° | 118° |
| 18 | 100° | 82° | 70° | 130° | 118° |
| 20 | 100° | 82° | 70° | 130° | 118° |
| 22 | 100° | 85° | 74° | 126° | 115° |
| 24 | 100° | 85° | 74° | 126° | 115° |

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

AB angles shown are viewed from the front face of the connector, a receptacle is shown below. The angles for the plug are exactly the same except the direction of rotation is opposite of that shown for the receptacle.




RELATIVE POSSIBLE POSITION OF ROTATED MASTER KEYWAY.
(front face of receptacle shown)

J4 Remote

J3 AC PWR

| JT | LJT | Solder | Crimp | Hermetics Class H | Hermetics Class Y* | Service Rating | Total Contacts | Contact Size 22D | 22M | 22 | 20 | 16 | 12 | 8†† (Coax) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8-2 | | P | | | | M | 2 | | | | 2 | | | |
| | | | | | | | | | | | | | | |
| 8-3 | | X | N/A | P | | M | 3 | | | | 3 | | | |
| | 9-3 | X | | | | | | | | | | | | |
| 8-6 | | X | X | P | P | M | 6 | | 6 | | | | | |
| | 9-6 | X | X | P | P | | | | | | | | | |
| | | | | | | M | 7 | | 7 | | | | | |
| | 9-7 | X | | | | | | | | | | | | |
| | | | | | | I | 2 | | | | 2 | | | |
| | 9-22 | X | | | | | | | | | | | | |
| 8-35 | | | X | P | P | M | 6 | 6 | | | | | | |
| | 9-35 | | X | P | P | | | | | | | | | |
| 8-44 | | | X | P | P | M | 4 | | | 4 | | | | |
| | 9-44 | | X | | | | | | | | | | | |
| 8-97 | | X | | | | M | 4 | | 2 | | 2 | | | |
| | | | | | | | | | | | | | | |
| 8-98 | | S | X | P | P | I | 3 | | | | 3 | | | |
| | 9-98 | X | X | P | P | | | | | | | | | |
| | | | | | | I | 2 | | | | | 2 | | |
| | 11-2 | | 2 | P** | | | | | | | | | | |
| 10-4 | | | 3 | | | I | 4 | | | | 4 | | | |
| | 11-4 | X | 2 | | | | | | | | | | | |
| 10-5 | | X | X | P | P | I | 5 | | | | 5 | | | |
| | 11-5 | X | P | | | | | | | | | | | |
| | | | | | | I | 6 | | | | 6 | | | |
| | 11-6 | S | | | | | | | | | | | | |
| 10-13 | | X | X | P | P | M | 13 | | 13 | | | | | |
| | 11-13 | X | X | P | P | | | | | | | | | |
| 10-35 | | | X | P | P | M | 13 | 13 | | | | | | |
| | 11-35 | | X | P | P | | | | | | | | | |
| 10-98 | | X | X | P | P | I | 6 | | | | 6 | | | |
| | 11-98 | X | X | P | P | | | | | | | | | |
| 10-99 | | | X | P | P | I | 7 | | | | 7 | | | |
| | 11-99 | | P | | | | | | | | | | | |
| 12-3 | | X | X | P | P | II | 3 | | | | | 3 | | |
| | 13-3 | | P | | | | | | | | | | | |
| 12-4 | | X | X | P | P | I | 4 | | | | | 4 | | |
| | 13-4 | X | X | P | P | | | | | | | | | |
| 12-8 | | X | X | P | P | I | 8 | | | | 8 | | | |
| | 13-8 | X | X | P | P | | | | | | | | | |
| 12-22 | | | X | P | P | M | 22 | | 22 | | | | | |
| | 13 22 | X | X | P | P | | | | | | | | | |
| 12-35 | | | X | P | P | M | 22 | 22 | | | | | | |
| | 13-35 | | X | P | P | | | | | | | | | |
| 12-98 | | X | X | P | P | I | 10 | | | | 10 | | | |
| | 13-98 | X | X | P | P | | | | | | | | | |
| 14-4 | | | 2 | | | I | 4 | | | | | | 4 | |
| | 15-4 | | 3 | | | | | | | | | | | |
| 14-5 | | X | X | P | P | II | 5 | | | | | 5 | | |
| | 15-5 | X | X | | | | | | | | | | | |
| 14-15 | | X | X | P | P | I | 15 | | | | 14 | 1 | | |
| | 15-15 | X | X | P | P | | | | | | | | | |
| 14-18 | | X | X | P | P | I | 18 | | | | 18 | | | |
| | 15-18 | X | X | P | P | | | | | | | | | |
| 14-19 | | X | 3 | | | I | 19 | | | | 19 | | | |
| | 15-19 | | 2 | | | | | | | | | | | |

(P) Pin inserts only (check factory for socket availability)
(S) Socket inserts only (check factory for pin availability)
(2) Not tooled for RP or 02RE.
(3) Pin insert only, not tooled for RP or 02RE (check factory for availability)
*Y is same as H with interfacial seal
**Tooled with special terminal only (check factory for availability of standard terminal)
††Coax contacts only

# JT/LJT
# insert availability and identification;
## alternate positions (continued)

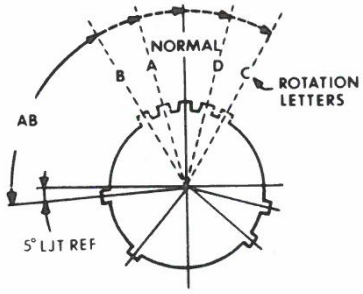
J1, J2
Data, Audio

### LJT MASTER KEY/KEYWAY ROTATION

| AB ANGLE OF ROTATION (Degrees) | | | | | |
|---|---|---|---|---|---|
| Shell Size | Normal | A | B | C | D |
| 9 | 95° | 77° | — | — | 113° |
| 11 | 95° | 81° | 67° | 123° | 109° |
| 13 | 95° | 75° | 63° | 127° | 115° |
| 15 | 95° | 74° | 61° | 129° | 116° |
| 17 | 95° | 77° | 65° | 125° | 113° |
| 19 | 95° | 77° | 65° | 125° | 113° |
| 21 | 95° | 77° | 65° | 125° | 113° |
| 23 | 95° | 80° | 69° | 121° | 110° |
| 25 | 95° | 80° | 69° | 121° | 110° |

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

AB angles shown are viewed from the front face of the connector, a receptacle is shown below. The angles for the plug are exactly the same except the direction of rotation is opposite of that shown for the receptacle.




RELATIVE POSSIBLE POSITION OF ROTATED MASTER KEYWAY.
(front face of receptacle shown)

| JT | LJT | Solder | Crimp | Hermetics Class H | Hermetics Class Y* | Service Rating | Total Contacts | Contact Size 22D | 22M | 22 | 20 | 16 | 12 | 8†† (Coax) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14-35 | | | X | P | P | M | 37 | 37 | | | | | | |
| | 15-35 | | X | P | P | | | | | | | | | |
| 14-37 | | X | X | P | P | M | 37 | | 37 | | | | | |
| | 15-37 | X | X | P | P | | | | | | | | | |
| 14-68 | | | 2 | | | I | 8 | | | | | 8 | | |
| | 15-68 | | 3 | | | | | | | | | | | |
| 14-97 | | | 2 | P | P | I | 12 | | | | 8 | 4 | | |
| | 15-97 | X | 2 | P | P | | | | | | | | | |
| 16-6 | | | X | P | P | I | 6 | | | | | | 6 | |
| | 17-6 | | X | P | P | | | | | | | | | |
| 16-8 | | X | X | P | P | II | 8 | | | | | 8 | | |
| | 17-8 | X | X | P | P | | | | | | | | | |
| 16-13 | | | 2 | | | I | 13 | | | | | 13 | | |
| | 17-13 | | 3 | | | | | | | | | | | |
| 16-26 | | X | X | P | P | I | 26 | | | | 26 | | | |
| | 17-26 | X | X | P | P | | | | | | | | | |
| 16-35 | | | X | P | P | M | 55 | 55 | | | | | | |
| | 17-35 | X | X | P | P | | | | | | | | | |
| 16-42 | | | X | P | P | M | 42 | | | 42 | | | | |
| | 17-42 | | P | | | | | | | | | | | |
| 16-55 | | X | X | P | P | M | 55 | | 55 | | | | | |
| | 17-55 | X | X | | | | | | | | | | | |
| 16-99 | | X | X | P | P | I | 23 | | | | 21 | 2 | | |
| | 17-99 | X | X | | | | | | | | | | | |
| 18-11 | | X | X | P | P | II | 11 | | | | | 11 | | |
| | 19-11 | X | X | P | P | | | | | | | | | |
| 18-28 | | X | X | P | P | I | 28 | | | | 26 | 2 | | |
| | 19-28 | X | P | | | | | | | | | | | |
| 18-30 | | X | X | P | | I | 30 | | | | 29 | 1 | | |
| | 19-30 | X | P | | | | | | | | | | | |
| 18-32 | | X | X | P | P | I | 32 | | | | 32 | | | |
| | 19-32 | X | X | P | P | | | | | | | | | |
| 18-35 | | | X | P | P | M | 66 | 66 | | | | | | |
| | 19-35 | | X | P | P | | | | | | | | | |
| 18-53 | | X | X | | | M | 53 | | | 53 | | | | |
| | 19-53 | | P | | | | | | | | | | | |
| 18-66 | | X | X | P | P | M | 66 | | 66 | | | | | |
| | 19-66 | | X | P | P | | | | | | | | | |
| | | | | | | M | 67 | | 67 | | | | | |
| | 19-67 | X | 3 | | | | | | | | | | | |
| 18-68 | | | 2 | | | I | 18 | | | | | 18 | | |
| | 19-68 | | 3 | | | | | | | | | | | |
| 18-96 | | | 2 | | | I | 9 | | | | | | 9 | |
| 20-1 | | | X | P | P | M | 79 | | 79 | | | | | |
| | 21-1 | | X | | | | | | | | | | | |
| 20-2 | | | X | | | M | 65 | | | 65 | | | | |
| | 21-2 | | P | | | | | | | | | | | |
| 20-11 | | | 2 | | | I | 11 | | | | | | 11 | |
| | 21-11 | | 2 | | | | | | | | | | | |
| 20-16 | | X | X | P | P | II | 16 | | | | | 16 | | |
| | 21-16 | X | X | P | P | | | | | | | | | |
| | | | | | | I | 24 | | | | 24 | | | |
| | 21-24 | X | | | | | | | | | | | | |
| | | | | | | I | 25 | | | | 25 | | | |
| | 21-25 | X | | | | | | | | | | | | |

(P) Pin inserts only (check factory for socket availability)
(S) Socket inserts only (check factory for pin availability)
(2) Not tooled for RP or 02RE
(3) Pin insert only, not tooled for RP or 02RE (check factory for availability)
*Y is same as H with interfacial seal
††Coax contacts only

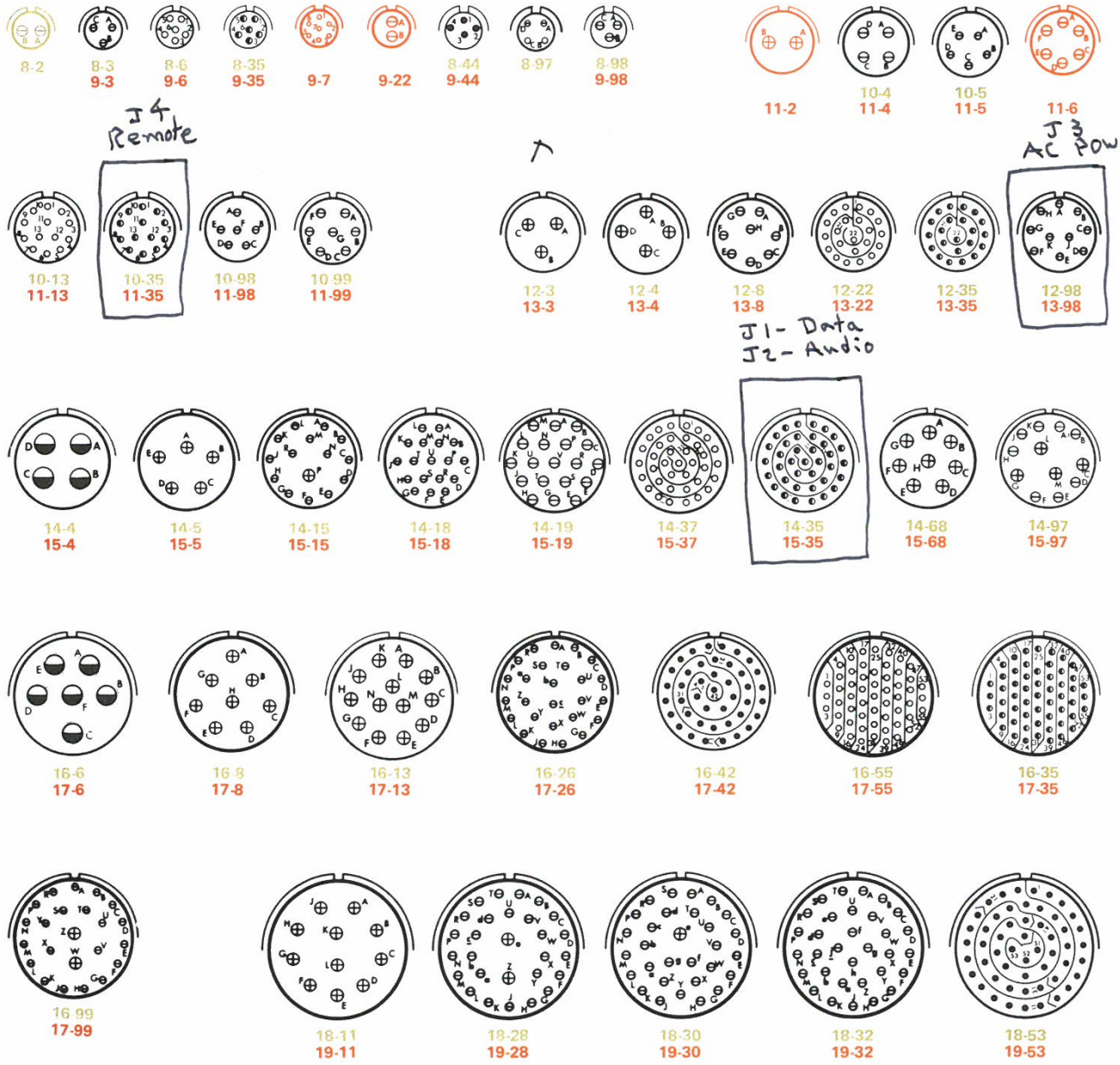
# JT/LJT
# insert availability and identification
## (continued)

| JT | LJT | Solder | Crimp | Hermetics Class H | Hermetics Class Y* | Service Rating | Total Contacts | Contact Size 22D | 22M | 22 | 20 | 16 | 12 | 8†† (Coax) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | |
| | 21-27 | X | | | | I | 27 | | | | 27 | | | |
| 20-35 | | | X | | | M | 79 | 79 | | | | | | |
| | 21-35 | | X | | | | | | | | | | | |
| 20-39 | | X | X | P | P | I | 39 | | | | 37 | 2 | | |
| | 21-39 | X | X | | | | | | | | | | | |
| 20-41 | | X | X | P | P | I | 41 | | | | 41 | | | |
| | 21-41 | X | X | | | | | | | | | | | |
| | | | | | | M | 4 | | | | | | | 4† |
| | 21-75 | | 2 | | | | | | | | | | | |
| 22-1 | | | X | | | M | 100 | | 100 | | | | | |
| | 23-1 | | X | | | | | | | | | | | |
| 22-2 | | X | X | P | P | M | 85 | | | 85 | | | | |
| | 23-2 | X | X | P | P | | | | | | | | | |
| 22-14 | | | 2 | | | I | 14 | | | | | | 14 | |
| | 23-14 | | 3 | | | | | | | | | | | |
| 22-21 | | X | X | P | P | II | 21 | | | | | 21 | | |
| | 23-21 | X | X | P | P | | | | | | | | | |
| 22-32 | | X | X | P | | I | 32 | | | | 32 | | | |
| | 23-32 | X | P | | | | | | | | | | | |
| | | | | | | I | 34 | | | | 34 | | | |
| | 23-34 | X | | | | | | | | | | | | |
| 22-35 | | | X | | | M | 100 | 100 | | | | | | |
| | 23-35 | | X | | | | | | | | | | | |
| | | | | | | I | 36 | | | | 36 | | | |
| | 23-36 | X | | | | | | | | | | | | |
| 22-53 | | | P | | | I | 53 | | | | 53 | | | |
| | 23-53 | X | X | P | P | | | | | | | | | |
| 22-55 | | X | X | P | P | I | 55 | | | | 55 | | | |
| | 23-55 | | 3 | | | | | | | | | | | |
| | | | | | | II | 16 | | | | | 16 | | |
| | 23-97 | X | | | | | | | | | | | | |
| | | | | | | II | 11 | | | | | 11 | | |
| | 23-99 | X | | | | | | | | | | | | |
| 24-1 | | | X | P | | M | 128 | | 128 | | | | | |
| | 25-1 | | X | | | | | | | | | | | |
| 24-2 | | | X | | | M | 100 | | | 100 | | | | |
| | 25-2 | | X | P | P | | | | | | | | | |
| 24-4 | | | X | P | P | I | 56 | | | | 48 | 8 | | |
| | 25-4 | | X | | | | | | | | | | | |
| 24-19 | | | 3 | | | I | 19 | | | | | | 19 | |
| | 25-19 | | 2 | | | | | | | | | | | |
| 24-24 | | | X | P | P | I | 24 | | | | | 12 | 12 | |
| | 25-24 | | X | | | | | | | | | | | |
| 24-29 | | | X | P | P | I | 29 | | | | | 29 | | |
| | 25-29 | X | X | | | | | | | | | | | |
| 24-35 | | | X | | | M | 128 | 128 | | | | | | |
| | 25-35 | | X | | | | | | | | | | | |
| 24-37 | | | 2 | | | I | 37 | | | | | 37 | | |
| | 25-37 | | 3 | | | | | | | | | | | |
| 24-43 | | | 3 | | | I | 43 | | | | 23 | 20 | | |
| | 25-43 | X | 2 | P | P | | | | | | | | | |
| | | | | | | I | 46 | | | | 40 | 4 | | 2† |
| | 25-46 | | 2 | | | | | | | | | | | |
| 24-61 | | X | X | P | P | I | 61 | | | | 61 | | | |
| | 25-61 | X | X | P | P | | | | | | | | | |

(P) Pin inserts only (check factory for socket availability)
(S) Socket inserts only (check factory for pin availability)
(2) Not tooled for RP or 02RE
(3) Pin insert only, not tooled for RP or 02RE (check factory for availability)
*Y is same as H with interfacial seal
†For RG180/U and RG195/U cables only (check factory for other cable applications)
††Coax contacts only

# JT/LJT
# insert arrangements

black arrangements — JT or LJT
green arrangements — JT only
orange arrangements — LJT only

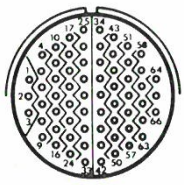



front face of pin inserts illustrated

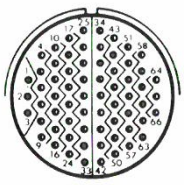
CONTACT LEGEND 8 12 16 20 22 22M 22D

# JT/LJT
# insert arrangements

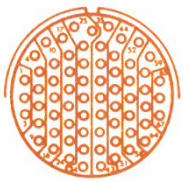
black arrangements — JT or LJT
green arrangements — JT only
orange arrangements — LJT only



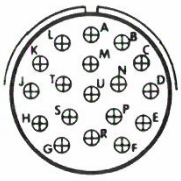
18-66
**19-66**



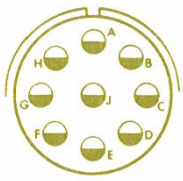
18-35
**19-35**



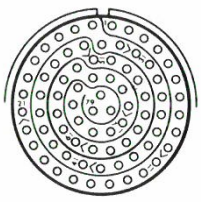
**19-67**



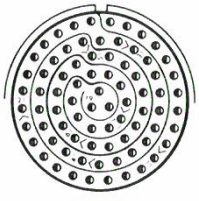
18-68
**19-68**



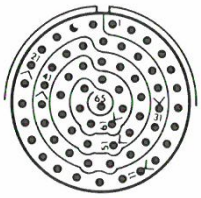
18-96



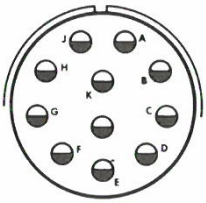
20-1
**21-1**



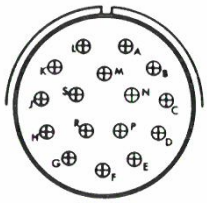
20-35
**21-35**



20-2
**21-2**

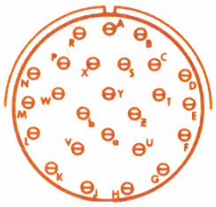


20-11
**21-11**



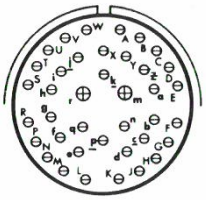
20-16
**21-16**

**21-24**

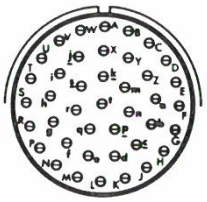


**21-25**

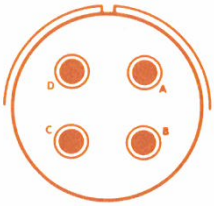
**21-27**



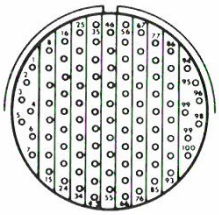
20-39
**21-39**



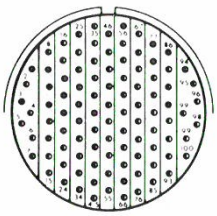
20-41
**21-41**



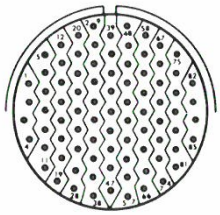
**21-75**



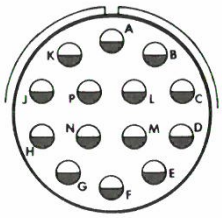
22-1
**23-1**



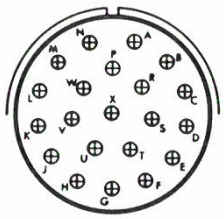
22-35
**23-35**



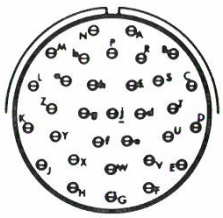
22-2
**23-2**



22-14
**23-14**



22-21
**23-21**

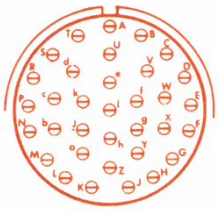


22-32
**23-32**

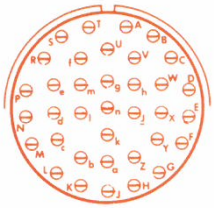
front face of pin inserts illustrated

# JT/LJT
# insert arrangements

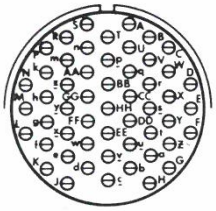
black arrangements — JT or LJT
green arrangements — JT only
orange arrangements — LJT only



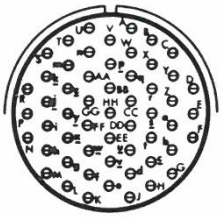
23-34



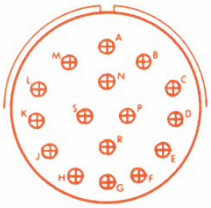
23-36



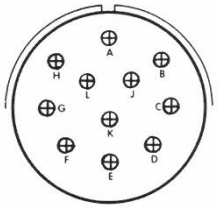
22-53
23-53



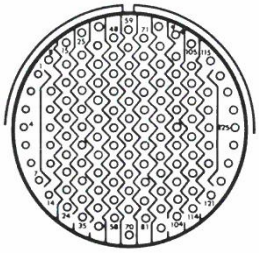
22-55
23-55



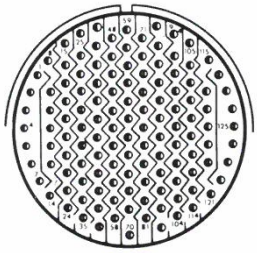
23-97



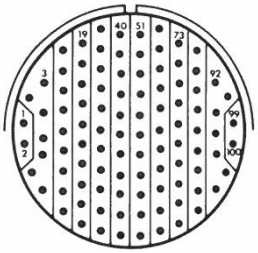
23-99



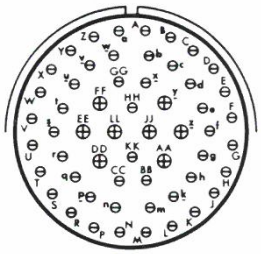
24-1
25-1



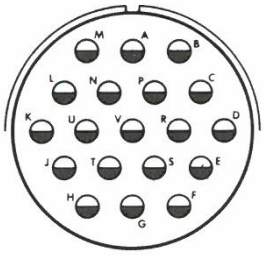
24-35
25-35



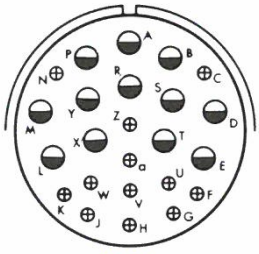
24-2
25-2



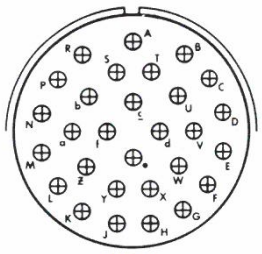
24-4
25-4



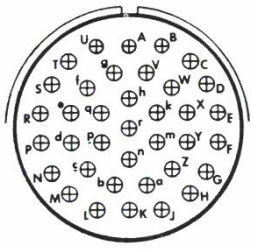
24-19
25-19



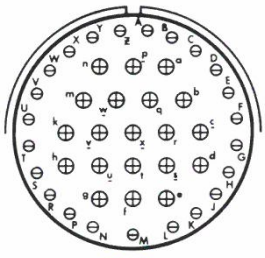
24-24
25-24



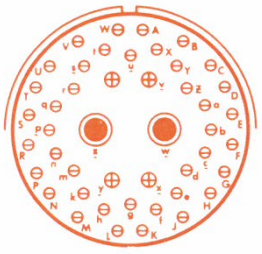
24-29
25-29



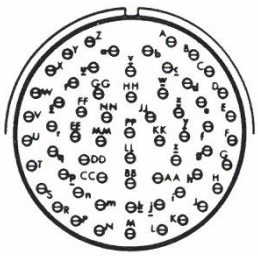
24-37
25-37



24-43
25-43



25-46

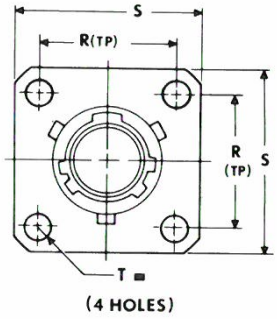


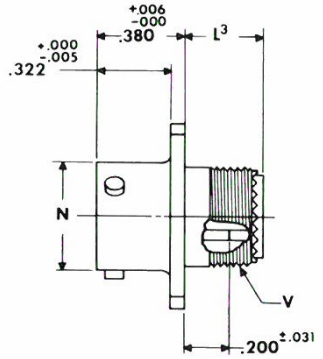
24-61
25-61

front face of pin inserts illustrated

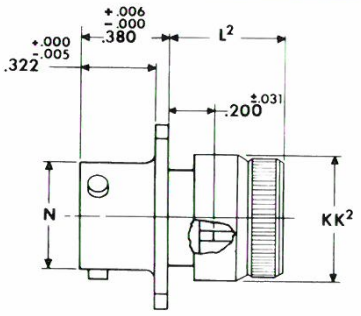
CONTACT LEGEND 8 12 16 20 22 22M 22D

# JT – Crimp
# JT00R (MS27472)
## wall mounting receptacle

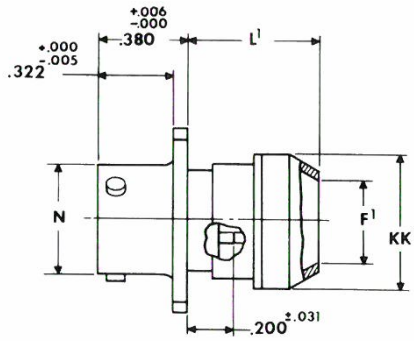


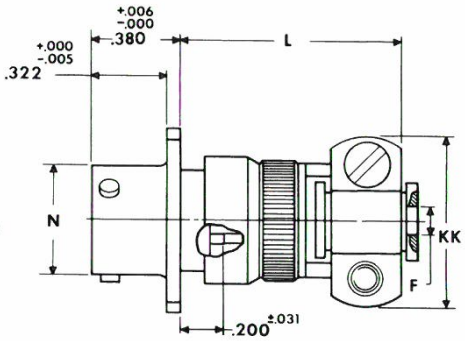

*JT00RT-XX-XXX (MS27472T)
**JTS00RT-XX-XXX (MS27479T)
***JTN00RT-XX-XXX




*JT00RE-XX-XXX (MS27472E)
**JTS00RE-XX-XXX (MS27479E)
***JTN00RE-XX-XXX




*JT00RP-XX-XXX (MS27472P)
**JTS00RP-XX-XXX
***JTN00RP-XX-XXX




*JT00RE-XX-XXX(SR)
**JTS00RE-XX-XXX(SR)
***JTN00RE-XX-XXX(SR)

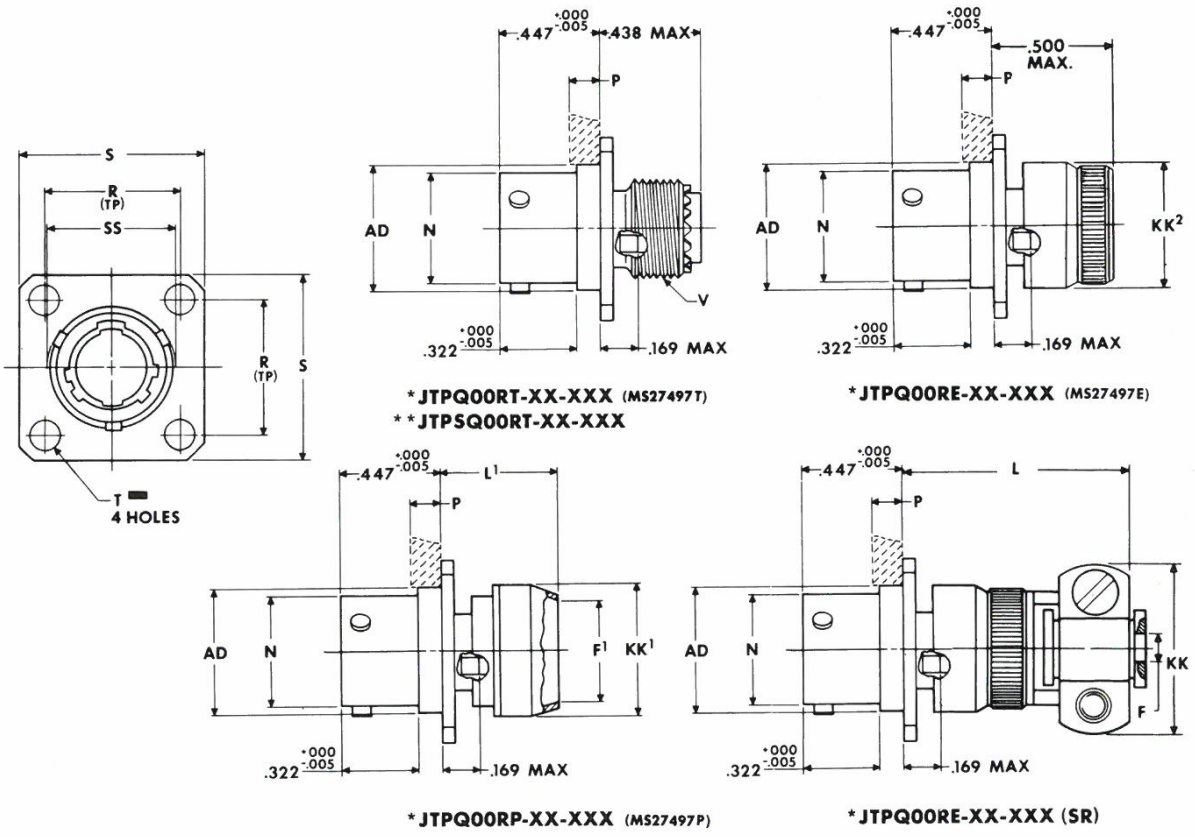
■ ⊕ .005 DIA Ⓜ

*To complete order number see page 52
**High temperature version, to complete order number see page 52
***Clear iridite finish (gold color), $N_2O_4$ resistant, to complete order number see page 52

| Shell Size | KK Max. | KK¹ Dia. Max. | KK² Dia. Max. | F Dia. +.010 −.025 | F¹ Dia. | L Max. | L¹ Max. | L² Max. | L³ Max. | R (TP) | S ±.016 | T ±.005 | N +.001 −.005 | V Thread Modified | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | Class 2A | Modified Major Dia. |
| 8 | .812 | .625 | .578 | .125 | .444 | 1.094 | .609 | .547 | .500 | .594 | .812 | .120 | .473 | .4375-28UNEF | .421– .417 |
| 10 | .875 | .750 | .703 | .188 | .558 | 1.094 | .609 | .547 | .500 | .719 | .938 | .120 | .590 | .5625-24UNEF | .542– .538 |
| 12 | 1.000 | .875 | .828 | .312 | .683 | 1.094 | .609 | .547 | .500 | .812 | 1.031 | .120 | .750 | .6875-24UNEF | .667– .663 |
| 14 | 1.125 | 1.000 | .953 | .375 | .808 | 1.344 | .609 | .547 | .500 | .906 | 1.125 | .120 | .875 | .8125-20UNEF | .791– .787 |
| 16 | 1.188 | 1.125 | 1.078 | .500 | .909 | 1.344 | .609 | .547 | .500 | .969 | 1.219 | .120 | 1.000 | .9375-20UNEF | .916– .912 |
| 18 | 1.438 | 1.250 | 1.203 | .625 | 1.034 | 1.344 | .609 | .547 | .500 | 1.062 | 1.312 | .120 | 1.125 | 1.0625-18UNEF | 1.034–1.030 |
| 20 | 1.438 | 1.375 | 1.328 | .625 | 1.159 | 1.344 | .609 | .547 | .500 | 1.156 | 1.438 | .120 | 1.250 | 1.1875-18UNEF | 1.158–1.154 |
| 22 | 1.625 | 1.500 | 1.453 | .750 | 1.284 | 1.469 | .609 | .547 | .500 | 1.250 | 1.562 | .120 | 1.375 | 1.3125-18UNEF | 1.283–1.279 |
| 24 | 1.719 | 1.625 | 1.578 | .800 | 1.409 | 1.469 | .688 | .547 | .500 | 1.375 | 1.688 | .147 | 1.500 | 1.4375-18UNEF | 1.408–1.404 |

All dimensions for reference only

# JT – Crimp
# JTPQ00R (MS27497)
## wall mounting receptacle
## (back panel mounting)



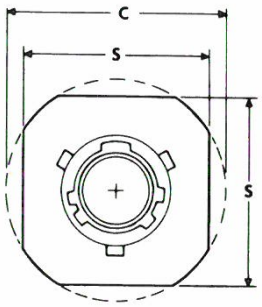

⊕ .005 DIA Ⓜ

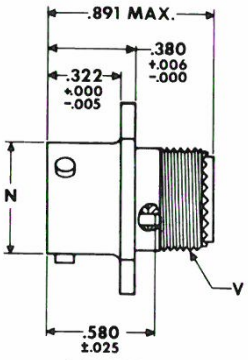
*To complete order number see page 52
**High temperature version, to complete order number see page 52

| Shell Size | F Dia. +.010 −.025 | F[1] Dia. ±.010 | L Max. | L[1] Max. | N Dia. +.001 −.005 | P Max. Panel Thickness | R (TP) | S ±.016 | T Dia. ±.005 | V Thread UNEF Class 2A (Plated) | AD Dia. ±.005 | KK Max. | KK[1] Dia. Max. | KK[2] Dia. Max. | SS Dia. +.000 −.016 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | .125 | .444 | 1.140 | .468 | .473 | .142 | .594 | .812 | .120 | .4375-28 | .516 | .781 | .625 | .578 | .563 |
| 10 | .188 | .558 | 1.140 | .468 | .590 | .142 | .719 | .938 | .120 | .5625-24 | .633 | .844 | .750 | .703 | .680 |
| 12 | .312 | .683 | 1.140 | .468 | .750 | .142 | .812 | 1.031 | .120 | .6875-24 | .802 | .969 | .875 | .828 | .859 |
| 14 | .375 | .808 | 1.375 | .468 | .875 | .142 | .906 | 1.125 | .120 | .8125-20 | .927 | 1.094 | 1.000 | .953 | .984 |
| 16 | .500 | .909 | 1.375 | .468 | 1.000 | .142 | .969 | 1.219 | .120 | .9375-20 | 1.052 | 1.154 | 1.125 | 1.078 | 1.108 |
| 18 | .625 | 1.034 | 1.375 | .468 | 1.125 | .142 | 1.062 | 1.312 | .120 | 1.0625-18 | 1.177 | 1.406 | 1.250 | 1.203 | 1.233 |
| 20 | .625 | 1.159 | 1.375 | .468 | 1.250 | .142 | 1.156 | 1.438 | .120 | 1.1875-18 | 1.302 | 1.406 | 1.375 | 1.328 | 1.358 |
| 22 | .750 | 1.284 | 1.516 | .468 | 1.375 | .142 | 1.250 | 1.562 | .120 | 1.3125-18 | 1.427 | 1.594 | 1.500 | 1.453 | 1.483 |
| 24 | .800 | 1.409 | 1.500 | .540 | 1.500 | .142 | 1.375 | 1.688 | .147 | 1.4375-18 | 1.552 | 1.688 | 1.625 | 1.578 | 1.610 |

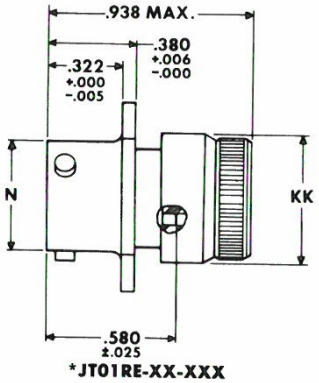
All dimensions for reference only.

# JT – Crimp
# JT01R
## line receptacle

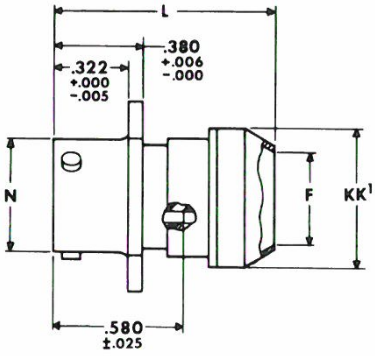


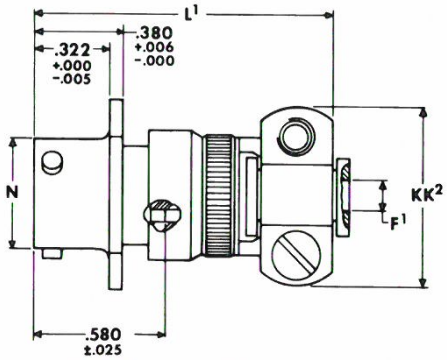

*JT01RT-XX-XXX
**JTS01RT-XX-XXX
***JTN01RT-XX-XXX




*JT01RE-XX-XXX
**JTS01RE-XX-XXX
***JTN01RE-XX-XXX




*JT01RP-XX-XXX
**JTS01RP-XX-XXX
***JTN01RP-XX-XXX



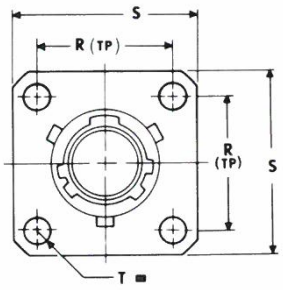

*JT01RE-XX-XXX(SR)
**JTS01RE-XX-XXX(SR)
***JTN01RE-XX-XXX(SR)

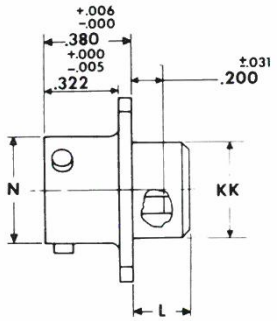
*To complete order number see page 52
**High temperature version, to complete order number see page 52
***Clear iridite finish (gold color), $N_2O_4$ resistant, to complete order number see page 52

| Shell Size | KK Dia. Max. | KK¹ Dia. Max. | KK² Dia. Max. | C Max. | F Dia. ±.010 | F¹ Dia. +.010 −.025 | L Max. | L¹ Max. | N Dia. +.001 −.005 | S +.017 −.016 | V Thread Modified | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Class 2A (Plated) | Modified Major Dia. |
| 8 | .578 | .625 | .812 | .965 | .444 | .125 | 1.031 | 1.562 | .473 | .812 | .4375-28UNEF | .421– .417 |
| 10 | .703 | .750 | .875 | 1.089 | .558 | .188 | 1.031 | 1.562 | .590 | .938 | .5625-24UNEF | .542– .538 |
| 12 | .828 | .875 | 1.000 | 1.183 | .683 | .312 | 1.031 | 1.562 | .750 | 1.031 | .6875-24UNEF | .667– .663 |
| 14 | .953 | 1.000 | 1.125 | 1.277 | .808 | .375 | 1.031 | 1.812 | .875 | 1.125 | .8125-20UNEF | .791– .787 |
| 16 | 1.078 | 1.125 | 1.188 | 1.371 | .909 | .500 | 1.031 | 1.812 | 1.000 | 1.219 | .9375-20UNEF | .916– .912 |
| 18 | 1.203 | 1.250 | 1.438 | 1.465 | 1.034 | .625 | 1.031 | 1.812 | 1.125 | 1.312 | 1.0625-18UNEF | 1.034–1.030 |
| 20 | 1.328 | 1.375 | 1.438 | 1.589 | 1.159 | .625 | 1.031 | 1.812 | 1.250 | 1.438 | 1.1875-18UNEF | 1.158–1.154 |
| 22 | 1.453 | 1.500 | 1.625 | 1.715 | 1.284 | .750 | 1.031 | 1.938 | 1.375 | 1.562 | 1.3125-18UNEF | 1.283–1.279 |
| 24 | 1.578 | 1.625 | 1.719 | 1.838 | 1.409 | .800 | 1.109 | 1.938 | 1.500 | 1.688 | 1.4375-18UNEF | 1.408–1.404 |

All dimensions for reference only

# JT – Crimp
# JT02R (MS27499)
## box mounting receptacle




*JT02RE-XX-XXX (MS27499E)
**JTS02RE-XX-XXX (MS27504E)
***JTN02RE-XX-XXX
*JT02RP-XX-XXX
**JTS02RP-XX-XXX
***JTN02RP-XX-XXX

⌖ .005 DIA Ⓜ

*To complete order number see page 52.
**High temperature version, to complete order number see page 52.
***Clear iridite finish (gold color), $N_2O_4$ resistant, to complete order number see page 52.

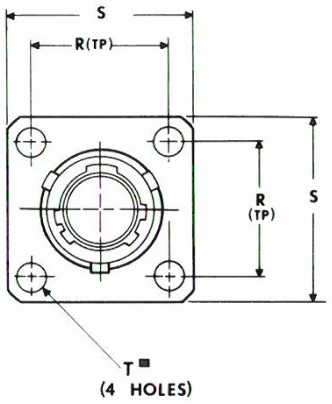
| Shell Size | L Max. | KK Max. | N +.001 −.005 | S ±.016 | R (TP) | T ±.005 |
|---|---|---|---|---|---|---|
| 8 | .286 | .438 | .473 | .812 | .594 | .120 |
| 10 | .286 | .563 | .590 | .938 | .719 | .120 |
| 12 | .286 | .688 | .750 | 1.031 | .812 | .120 |
| 14 | .286 | .813 | .875 | 1.125 | .906 | .120 |
| 16 | .286 | .938 | 1.000 | 1.219 | .969 | .120 |
| 18 | .286 | 1.047 | 1.125 | 1.312 | 1.062 | .120 |
| 20 | .286 | 1.172 | 1.250 | 1.438 | 1.156 | .120 |
| 22 | .286 | 1.297 | 1.375 | 1.562 | 1.250 | .120 |
| 24 | .286 | 1.422 | 1.500 | 1.688 | 1.375 | .147 |

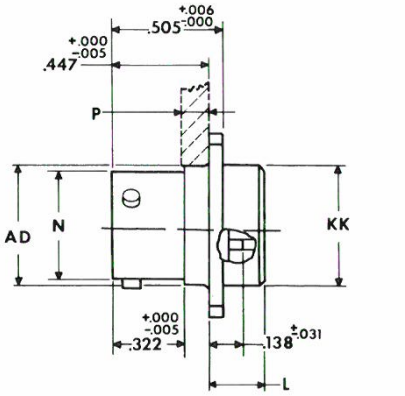
J3
J1 J2

All dimensions for reference only

NOTE: For applications requiring an environmental seal please refer to JT00R, see page 10.

# JT – Crimp
# JTP02R (MS27508)
## box mounting receptacle
(back panel mounting)




*JTP02RE-XX-XXX (MS27508E)
**JTPN02RE-XX-XXX
***JTPS02RE-XX-XXX
*JTP02RP-XX-XXX
**JTPN02RP-XX-XXX
***JTPS02RP-XX-XXX

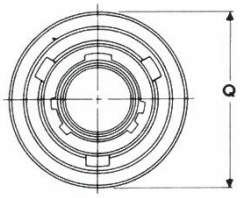
■ ⊕ .005 DIA Ⓜ

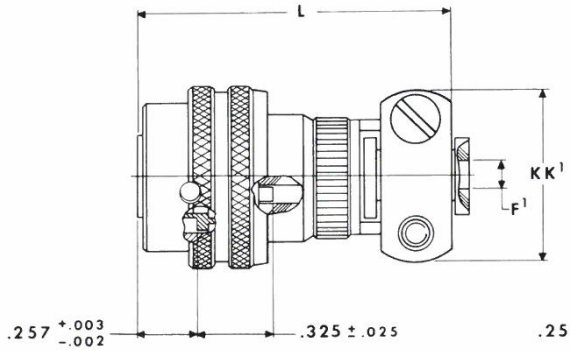
*To complete order number see page 52.
**High temperature version, to complete order number see page 52.
***Clear iridite finish (gold color), $N_2O_4$ resistant, to complete order number see page 52.

| Shell Size | N Dia. +.001 −.005 | R (TP) | S ±.016 | L Max. | AD Dia. ±.005 | T Dia. ±.005 | P Max. Panel Thickness | KK Max. |
|---|---|---|---|---|---|---|---|---|
| 8 | .473 | .594 | .812 | .225 | .516 | .120 | .147 | .531 |
| 10 | .590 | .719 | .938 | .225 | .633 | .120 | .152 | .656 |
| 12 | .750 | .812 | 1.031 | .225 | .802 | .120 | .152 | .828 |
| 14 | .875 | .906 | 1.125 | .225 | .927 | .120 | .152 | .953 |
| 16 | 1.000 | .969 | 1.219 | .225 | 1.052 | .120 | .152 | 1.078 |
| 18 | 1.125 | 1.062 | 1.312 | .225 | 1.177 | .120 | .152 | 1.203 |
| 20 | 1.250 | 1.156 | 1.438 | .225 | 1.302 | .120 | .179 | 1.328 |
| 22 | 1.375 | 1.250 | 1.562 | .225 | 1.427 | .120 | .179 | 1.453 |
| 24 | 1.500 | 1.375 | 1.688 | .225 | 1.552 | .147 | .169 | 1.578 |

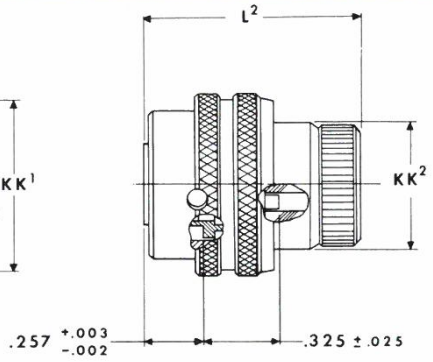
All dimensions for reference only

# JT – Crimp
# JT06R (MS27473)
## straight plug

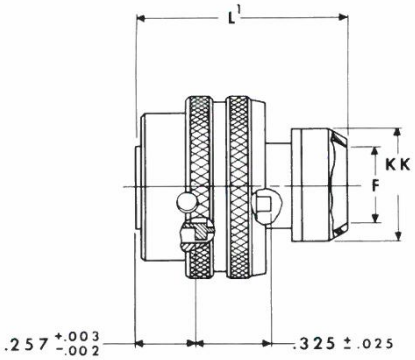


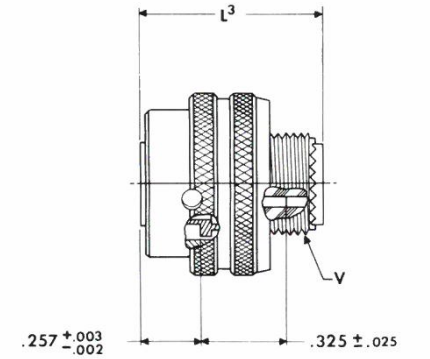

*JT06RE-XX-XXX(SR)
**JTS06RE-XX-XXX(SR)
***JTN06RE-XX-XXX(SR)




*JT06RE-XX-XXX (MS27473E)
**JTS06RE-XX-XXX (MS27480E)
***JTN06RE-XX-XXX




*JT06RP-XX-XXX (MS27473P)
**JTS06RP-XX-XXX
***JTN06RP-XX-XXX



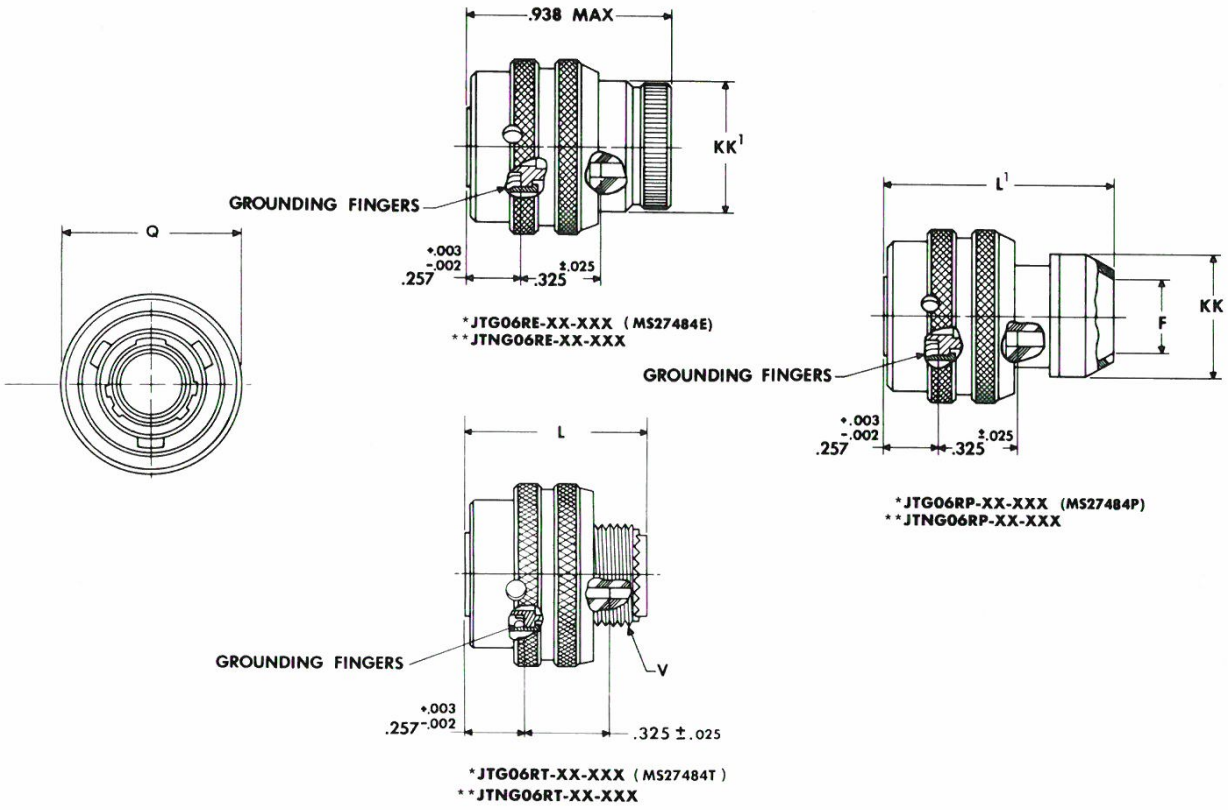

*JT06RT-XX-XXX (MS27473T)
**JTS06RT-XX-XXX (MS27480T)
***JTN06RT-XX-XXX

*To complete order number see page 52
**High temperature version, to complete order number see page 52
***Clear iridite finish (gold color), $N_2O_4$ resistant, to complete order number see page 52

| Shell Size | KK Dia. Max. | KK1 Max. | KK2 Max. | F Dia. | F1 Dia. +.010 −.025 | L Max. | L1 Max. | L2 Max. | L3 Max. | Q Dia. Max. | V Thread Modified | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Class 2A | Modified Major Dia. |
| 8 | .625 | .812 | .578 | .444 | .125 | 1.562 | 1.000 | .938 | .891 | .734 | .4375-28UNEF | .421– .417 |
| 10 | .750 | .875 | .703 | .558 | .188 | 1.562 | 1.000 | .938 | .891 | .844 | .5625-24UNEF | .542– .538 |
| 12 | .875 | 1.000 | .828 | .683 | .312 | 1.562 | 1.000 | .938 | .891 | 1.016 | .6875-24UNEF | .667– .663 |
| 14 | 1.000 | 1.125 | .953 | .808 | .375 | 1.812 | 1.000 | .938 | .891 | 1.141 | .8125-20UNEF | .791– .787 |
| 16 | 1.125 | 1.188 | 1.078 | .909 | .500 | 1.812 | 1.000 | .938 | .891 | 1.265 | .9375-20UNEF | .916– .912 |
| 18 | 1.250 | 1.438 | 1.203 | 1.034 | .625 | 1.812 | 1.000 | .938 | .891 | 1.391 | 1.0625-18UNEF | 1.034–1.030 |
| 20 | 1.375 | 1.438 | 1.328 | 1.159 | .625 | 1.812 | 1.000 | .938 | .891 | 1.500 | 1.1875-18UNEF | 1.158–1.154 |
| 22 | 1.500 | 1.625 | 1.453 | 1.284 | .750 | 1.938 | 1.000 | .938 | .891 | 1.625 | 1.3125-18UNEF | 1.283–1.279 |
| 24 | 1.625 | 1.719 | 1.578 | 1.409 | .800 | 1.938 | 1.062 | .938 | .891 | 1.750 | 1.4375-18UNEF | 1.408–1.404 |

All dimensions for reference only

# JT – Crimp
# JTG06R (MS27484)
## straight plug
## (with grounding fingers)

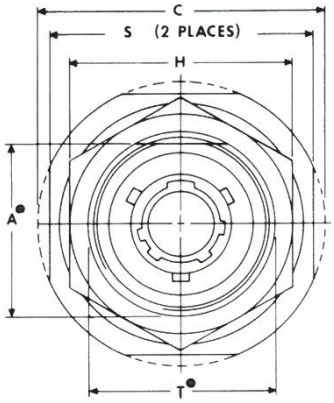


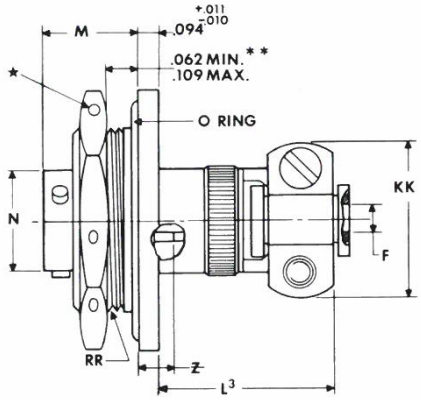

*To complete order number see page 52
**Clear finish (gold color), $N_2O_4$ resistant, to complete order number see page 52

| Shell Size | L Max. | L¹ Max. | Q Dia. Max. | KK Dia. Max. | KK¹ Max. | F Dia. | V Thread Modified | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Class 2A | Modified Major Dia. |
| 8 | .891 | 1.000 | .734 | .625 | .578 | .444 | .4375-28UNEF | .421- .417 |
| 10 | .891 | 1.000 | .844 | .750 | .703 | .558 | .5625-24UNEF | .542- .538 |
| 12 | .891 | 1.000 | 1.016 | .875 | .828 | .683 | .6875-24UNEF | .667- .663 |
| 14 | .891 | 1.000 | 1.141 | 1.000 | .953 | .808 | .8125-20UNEF | .791- .787 |
| 16 | .891 | 1.000 | 1.265 | 1.125 | 1.078 | .909 | .9375-20UNEF | .916- .912 |
| 18 | .891 | 1.000 | 1.391 | 1.250 | 1.203 | 1.034 | 1.0625-18UNEF | 1.034-1.030 |
| 20 | .891 | 1.000 | 1.500 | 1.375 | 1.328 | 1.159 | 1.1875-18UNEF | 1.158-1.154 |
| 22 | .891 | 1.000 | 1.625 | 1.500 | 1.453 | 1.284 | 1.3125-18UNEF | 1.283-1.279 |
| 24 | .891 | 1.062 | 1.750 | 1.625 | 1.578 | 1.409 | 1.4375-18UNEF | 1.408-1.404 |

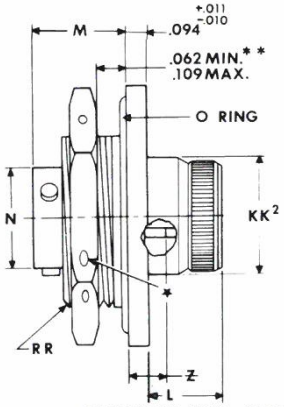
All dimensions for reference only

# JT – Crimp
# JT07R (MS27474)
## jam nut receptacle

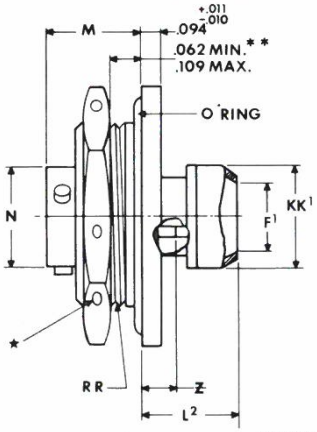


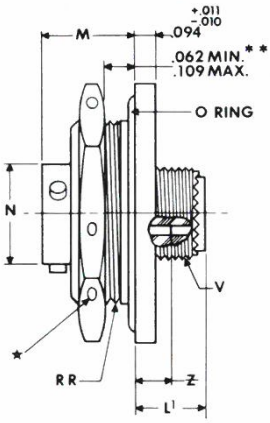

*JT07RE-XX-XXX(SR)
***JTS07RE-XX-XXX(SR)
****JTN07RE-XX-XXX(SR)




*JT07RE-XX-XXX (MS27474E)
***JTS07RE-XX-XXX (MS27481E)
****JTN07RE-XX-XXX




*JT07RP-XX-XXX (MS27474P)
***JTS07RP-XX-XXX
****JTN07RP-XX-XXX



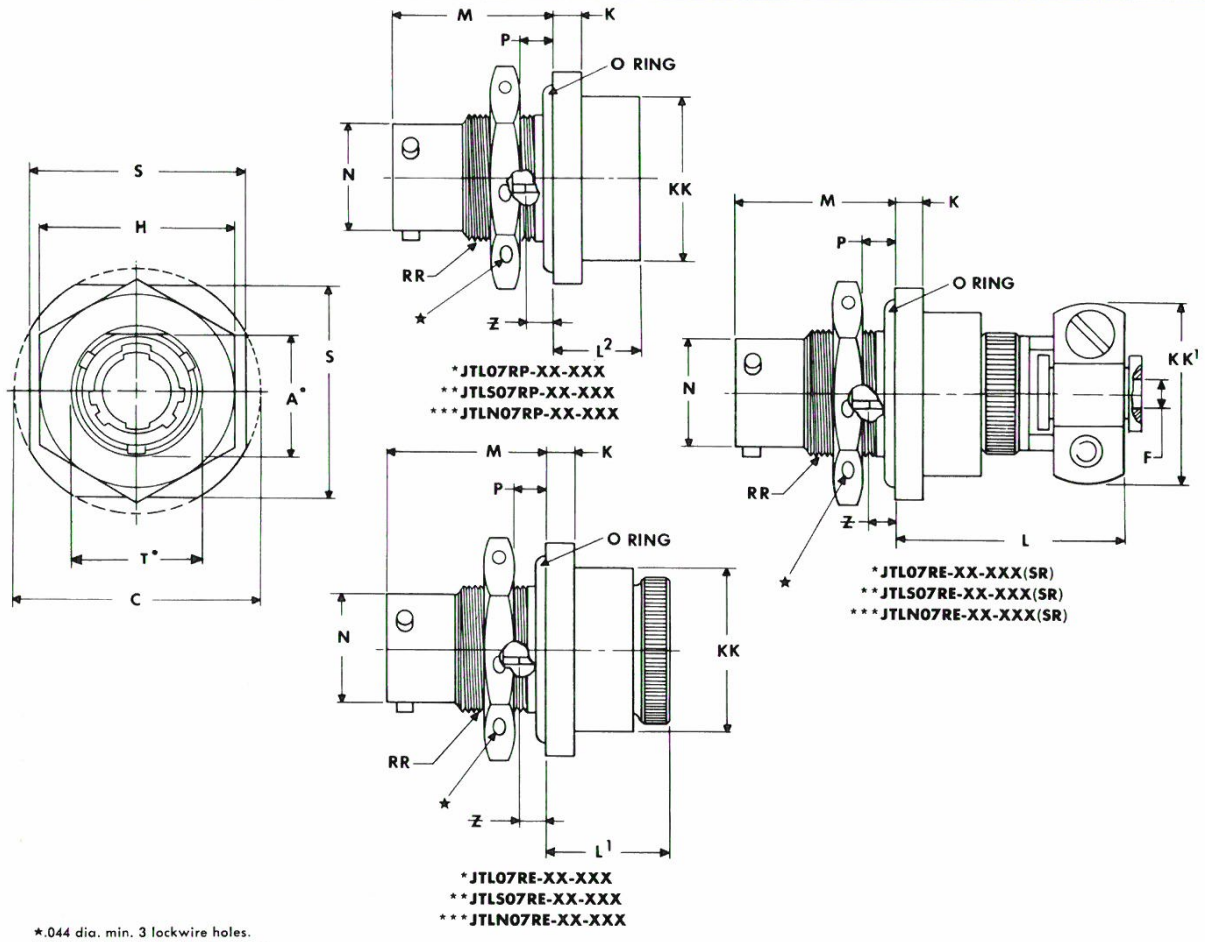

*JT07RT-XX-XXX (MS27474T)
***JTS07RT-XX-XXX (MS27481T)
****JTN07RT-XX-XXX

*.059 dia. min. 3 lockwire holes.
•"D" shaped mtg. hole dimensions.
*To complete order number see page 52
**Panel thickness.
***High temperature version, to complete order number see page 52
****Clear iridite finish (gold color) $N_2O_4$ resistant, to complete order number see page 52

| Sh. Sz. | A• +.000 −.010 | KK Max. | KK1 Dia. Max. | KK2 Dia. Max. | L Max. | L1 Max. | L2 Max. | L3 Max. | F Dia. +.010 −.025 | F1 Dia. | M ±.005 | H Hex +.017 −.016 | S ±.016 | Z ±.031 | RR Thread (Plated) Class 2A | V Thread Modified | | C Max. | T• +.010 −.000 | N +.001 −.005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | Class 2A | Modified Major Dia. | | | |
| 8 | .830 | .812 | .625 | .578 | .484 | .453 | .563 | 1.047 | .125 | .444 | .438 | 1.062 | 1.250 | .144 | .8750-20UNEF | .4375-28UNEF | .421- .417 | 1.390 | .884 | .473 |
| 10 | .955 | .875 | .750 | .703 | .484 | .453 | .563 | 1.047 | .188 | .558 | .438 | 1.188 | 1.375 | .144 | 1.0000-20UNEF | .5625-24UNEF | .542- .538 | 1.515 | 1.007 | .590 |
| 12 | 1.084 | 1.000 | .875 | .828 | .484 | .453 | .563 | 1.047 | .312 | .683 | .438 | 1.312 | 1.500 | .144 | 1.1250-18UNEF | .6875-24UNEF | .667- .663 | 1.640 | 1.134 | .750 |
| 14 | 1.208 | 1.125 | 1.000 | .953 | .484 | .453 | .563 | 1.297 | .375 | .808 | .438 | 1.438 | 1.625 | .144 | 1.2500-18UNEF | .8125-20UNEF | .791- .787 | 1.765 | 1.259 | .875 |
| 16 | 1.333 | 1.188 | 1.125 | 1.078 | .484 | .453 | .563 | 1.297 | .500 | .909 | .438 | 1.562 | 1.781 | .144 | 1.3750-18UNEF | .9375-20UNEF | .916- .912 | 1.953 | 1.384 | 1.000 |
| 18 | 1.459 | 1.438 | 1.250 | 1.203 | .484 | .453 | .563 | 1.297 | .625 | 1.034 | .438 | 1.688 | 1.890 | .144 | 1.5000-18UNEF | 1.0625-18UNEF | 1.034-1.030 | 2.031 | 1.507 | 1.125 |
| 20 | 1.576 | 1.438 | 1.375 | 1.328 | .453 | .422 | .531 | 1.266 | .625 | 1.159 | .464 | 1.812 | 2.016 | .118 | 1.6250-18UNEF | 1.1875-18UNEF | 1.158-1.154 | 2.156 | 1.634 | 1.250 |
| 22 | 1.701 | 1.625 | 1.500 | 1.453 | .453 | .422 | .531 | 1.391 | .750 | 1.284 | .464 | 2.000 | 2.140 | .118 | 1.7500-18UNS | 1.3125-18UNEF | 1.283-1.279 | 2.280 | 1.759 | 1.375 |
| 24 | 1.826 | 1.719 | 1.625 | 1.578 | .375 | .422 | .609 | 1.391 | .800 | 1.409 | .464 | 2.125 | 2.265 | .118 | 1.8750-16UN | 1.4375-18UNEF | 1.408-1.404 | 2.405 | 1.884 | 1.500 |

All dimensions for reference only

# JT – Crimp
# JTL07R
## jam nut receptacle
### (pygmy jam nut mounting dimensions)



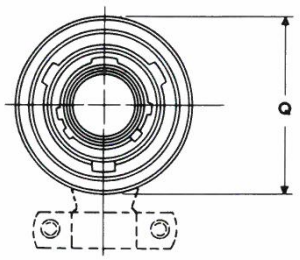

★.044 dia. min. 3 lockwire holes.
•"D" shaped mtg. hole dimensions.
*To complete order number see page 52
**High temperature version, to complete order number see page 52
***Clear iridite finish (gold color) $N_2O_4$ resistant, to complete order number see page 52

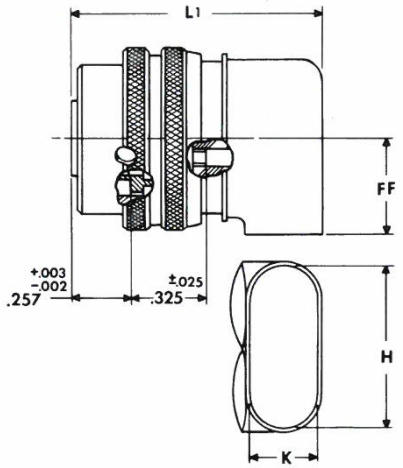
| Sh. Sz. | C Max. | L Max. | $L^1$ Max. | $L^2$ Max. | P Panel Thickness Min. | P Panel Thickness Max. | A +.000 −.010 | T +.010 −.000 | K +.011 −.010 | KK Max. | $KK^1$ Max. | RR Thread Class 2A | F Dia. +.010 −.025 | M ±.005 | N Dia. +.001 −.005 | H Hex +.017 −.016 | S ±.016 | Z ±.026 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 1.077 | 1.062 | .641 | .375 | .062 | .125 | .542 | .572 | .125 | .688 | .812 | .5625-24UNEF | .125 | .630 | .473 | .750 | .938 | .047 |
| 10 | 1.203 | 1.062 | .641 | .375 | .062 | .125 | .669 | .697 | .125 | .812 | .875 | .6875-24UNEF | .188 | .630 | .590 | .875 | 1.062 | .047 |
| 12 | 1.390 | 1.062 | .641 | .375 | .062 | .125 | .830 | .844 | .125 | .938 | 1.000 | .8750-20UNEF | .312 | .630 | .750 | 1.062 | 1.250 | .047 |
| 14 | 1.515 | 1.062 | .641 | .375 | .062 | .125 | .955 | 1.007 | .125 | 1.062 | 1.125 | 1.0000-20UNEF | .375 | .630 | .875 | 1.188 | 1.375 | .047 |
| 16 | 1.640 | 1.062 | .641 | .375 | .062 | .125 | 1.084 | 1.134 | .125 | 1.188 | 1.188 | 1.1250-18UNEF | .500 | .630 | 1.000 | 1.312 | 1.500 | .047 |
| 18 | 1.765 | 1.062 | .641 | .375 | .062 | .125 | 1.208 | 1.259 | .125 | 1.312 | 1.438 | 1.2500-18UNEF | .625 | .630 | 1.125 | 1.438 | 1.625 | .047 |
| 20 | 1.953 | 1.062 | | .328 | .062 | .250 | 1.333 | 1.384 | .156 | 1.469 | 1.438 | 1.3750-18UNEF | .625 | .755 | 1.250 | 1.562 | 1.812 | .172 |
| 22 | 2.075 | 1.062 | | .328 | .062 | .250 | 1.459 | 1.507 | .156 | 1.594 | 1.625 | 1.5000-18UNEF | .750 | .755 | 1.375 | 1.688 | 1.938 | .172 |
| 24 | 2.203 | 1.062 | | .328 | .062 | .250 | 1.575 | 1.634 | .156 | 1.719 | 1.719 | 1.6250-18UNEF | .800 | .755 | 1.500 | 1.812 | 2.062 | .172 |

All dimensions for reference only

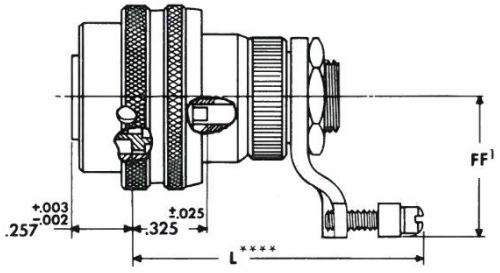
# JT – Crimp
# JT08R (MS27500)
## 90° plug

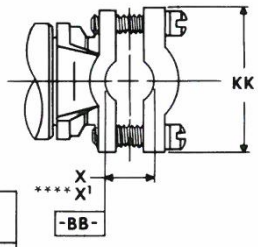
*JT08RP-XX-XXX
**JTS08RP-XX-XXX
***JTN08RP-XX-XXX




*JT08RE-XX-XXX (MS27500E)
**JTS08RE-XX-XXX
***JTN08RE-XX-XXX
*JT08RE-XX-XXX(SR)
**JTS08RE-XX-XXX(SR)
***JTN08RE-XX-XXX(SR)



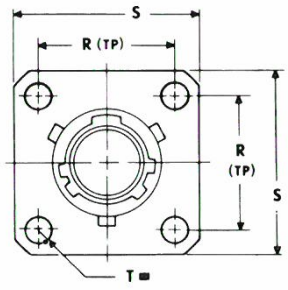



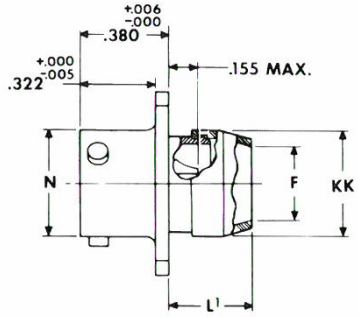

*To complete order number see page 52
**High temperature version, to complete order number see page 52
***Clear iridite finish (gold color) $N_2O_4$ resistant, to complete order number see page 52
****Dimensions L and $X^1$ are applicable when the end of the screw is flush with surface BB.

| Shell Size | KK Max. | FF Max. | FF1 Max. | Q Dia. Max. | X Min. Cable | X1 Max. Cable | H | K | L Max. | L1 Max. |
|---|---|---|---|---|---|---|---|---|---|---|
| 8 | .755 | .438 | .984 | .734 | .082 | .234 | .547 | .156 | 1.578 | 1.125 |
| 10 | .755 | .516 | 1.016 | .844 | .082 | .234 | .709 | .188 | 1.578 | 1.156 |
| 12 | .817 | .594 | 1.078 | 1.016 | .114 | .328 | .829 | .281 | 1.656 | 1.250 |
| 14 | .943 | .656 | 1.203 | 1.141 | .176 | .457 | 1.000 | .438 | 1.844 | 1.406 |
| 16 | 1.067 | .719 | 1.265 | 1.265 | .238 | .634 | 1.021 | .500 | 2.000 | 1.469 |
| 18 | 1.149 | .781 | 1.328 | 1.391 | .208 | .614 | 1.145 | .562 | 2.046 | 1.531 |
| 20 | 1.399 | .844 | 1.359 | 1.500 | .302 | .608 | 1.270 | .625 | 2.125 | 1.594 |
| 22 | 1.399 | .906 | 1.421 | 1.625 | .302 | .823 | 1.395 | .688 | 2.250 | 1.656 |
| 24 | 1.587 | .969 | 1.703 | 1.750 | .332 | .853 | 1.520 | .750 | 2.422 | 1.797 |

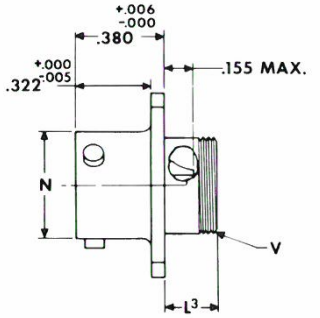
All dimensions for reference only

# JT – Solder
# JT00 (MS27334)
## wall mounting receptacle

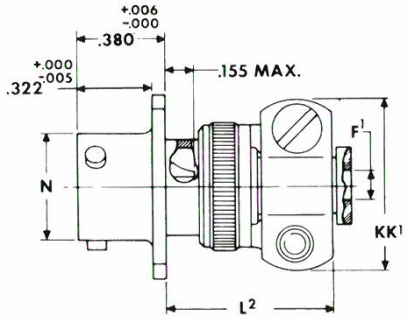



*JT00P-XX-XXX (MS27334P)
**JTN00P-XX-XXX




*JT00A-XX-XXX
*JT00C-XX-XXX (MS27334T)
**JTN00A-XX-XXX
**JTN00C-XX-XXX




*JT00A-XX-XXX(SR)
**JTN00A-XX-XXX(SR)

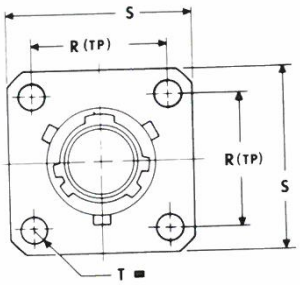
▬ ⌖ .005 DIA Ⓜ

*To complete order number see page 52.
**Clear iridite finish (gold color), $N_2O_4$ resistant, to complete order number see page 52.
NOTE: For availability of back panel mounting types, check with our sales office nearest you.

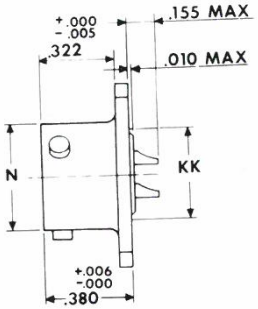
| Shell Size | N +.001 −.005 | F Dia. Min. | F1 +.010 −.025 | S ±.016 | R (TP) | T ±.005 | KK Dia. Max. | KK1 Max. | V Thread Modified | | L1 Max. | L2 Max. | L3 Max. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Size Class 2A | Modified Major Dia. | | | |
| 8 | .473 | .312 | .125 | .812 | .594 | .120 | .500 | .812 | .4375-28UNEF | .421– .417 | .422 | .734 | .234 |
| 10 | .590 | .429 | .188 | .938 | .719 | .120 | .625 | .875 | .5625-24UNEF | .542– .538 | .422 | .734 | .234 |
| 12 | .750 | .543 | .312 | 1.031 | .812 | .120 | .750 | 1.000 | .6875-24UNEF | .667– .663 | .422 | .734 | .234 |
| 14 | .875 | .668 | .375 | 1.125 | .906 | .120 | .875 | 1.125 | .8125-20UNEF | .791– .787 | .422 | .797 | .234 |
| 16 | 1.000 | .793 | .500 | 1.219 | .969 | .120 | 1.000 | 1.188 | .9375-20UNEF | .916– .912 | .422 | .797 | .234 |
| 18 | 1.125 | .894 | .625 | 1.312 | 1.062 | .120 | 1.109 | 1.438 | 1.0625-18UNEF | 1.034–1.030 | .422 | .797 | .234 |
| 20 | 1.250 | 1.019 | .625 | 1.438 | 1.156 | .120 | 1.234 | 1.438 | 1.1875-18UNEF | 1.158–1.154 | .422 | .859 | .234 |
| 22 | 1.375 | 1.144 | .750 | 1.562 | 1.250 | .120 | 1.359 | 1.625 | 1.3125-18UNEF | 1.283–1.279 | .422 | .859 | .234 |
| 24 | 1.500 | 1.269 | .800 | 1.688 | 1.375 | .147 | 1.484 | 1.719 | 1.4375-18UNEF | 1.408–1.404 | .422 | .922 | .313 |

All dimensions for reference only

# JT – Solder
# JT02 (MS27335)
## box mounting receptacle




(4 HOLES)




*JT02P-XX-XXX
*JT02A-XX-XXX
*JT02C-XX-XXX (MS27335T)
**JTN02P-XX-XXX
**JTN02A-XX-XXX
**JTN02C-XX-XXX

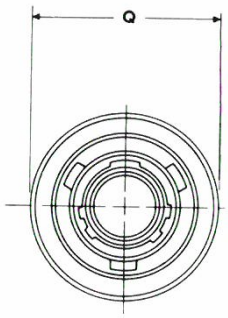
■ ⊕ .005 DIA Ⓜ

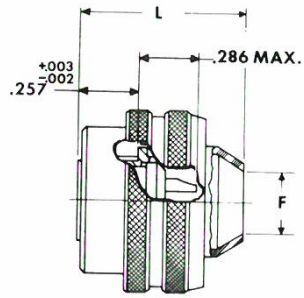
*To complete order number see page 52.
**Clear iridite finish (gold color), $N_2O_4$ resistant. To complete order number see page 52.
NOTE: For availability of back panel mounting types, check with our sales office nearest you.

| Shell Size | N +.001 −.005 | KK Max. | R (TP) | S ±.016 | T ±.005 |
|---|---|---|---|---|---|
| 8 | .473 | .391 | .594 | .812 | .120 |
| 10 | .590 | .508 | .719 | .938 | .120 |
| 12 | .750 | .622 | .812 | 1.031 | .120 |
| 14 | .875 | .749 | .906 | 1.125 | .120 |
| 16 | 1.000 | .872 | .969 | 1.219 | .120 |
| 18 | 1.125 | .976 | 1.062 | 1.312 | .120 |
| 20 | 1.250 | 1.101 | 1.156 | 1.438 | .120 |
| 22 | 1.375 | 1.226 | 1.250 | 1.562 | .120 |
| 24 | 1.500 | 1.351 | 1.375 | 1.688 | .147 |

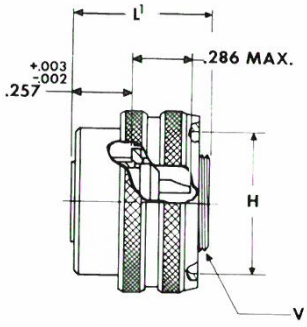
All dimensions for reference only

# JT – Solder
# JT06 (MS27336)
## straight plug

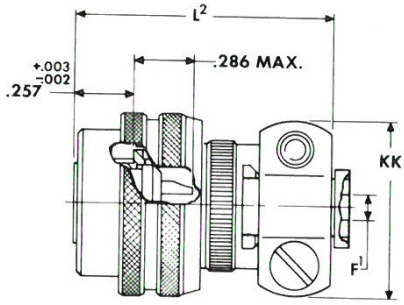



*JT06P-XX-XXX (MS27336P)
**JTN06P-XX-XXX




*JT06A-XX-XXX (MS27336T)
**JTN06A-XX-XXX



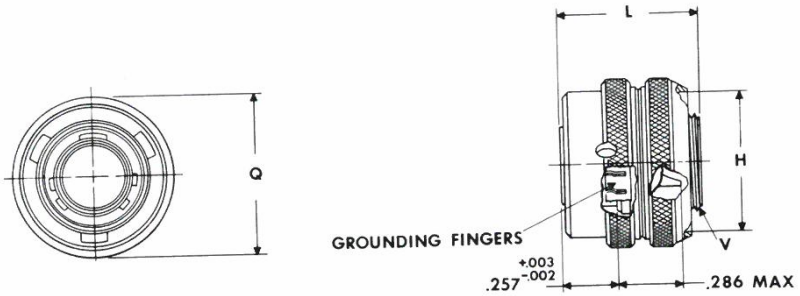

*JT06A-XX-XXX(SR)
**JTN06A-XX-XXX(SR)

*To complete order number see page 52
**Clear iridite finish (gold color) $N_2O_4$ resistant, to complete order number see page 52

| Shell Size | L Max. | L¹ Max. | L² Max. | F Min. | F¹ +.010 −.025 | KK Max. | H +.010 −.001 | V Thread Modified | | Q Max. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Size Class 2A | Modified Major Dia. | |
| 8 | .812 | .625 | 1.109 | .312 | .125 | .812 | .620 | .4375-28UNEF | .421– .417 | .734 |
| 10 | .812 | .625 | 1.109 | .429 | .188 | .875 | .746 | .5625-24UNEF | .542– .538 | .844 |
| 12 | .812 | .625 | 1.109 | .543 | .312 | 1.000 | .870 | .6875-24UNEF | .667– .663 | 1.016 |
| 14 | .812 | .625 | 1.172 | .668 | .375 | 1.125 | .996 | .8125-20UNEF | .791– .787 | 1.141 |
| 16 | .828 | .625 | 1.172 | .793 | .500 | 1.188 | 1.122 | .9375-20UNEF | .916– .912 | 1.265 |
| 18 | .828 | .625 | 1.172 | .894 | .625 | 1.438 | 1.246 | 1.0625-18UNEF | 1.034–1.030 | 1.391 |
| 20 | .828 | .625 | 1.234 | 1.019 | .625 | 1.438 | 1.372 | 1.1875-18UNEF | 1.158–1.154 | 1.500 |
| 22 | .828 | .625 | 1.234 | 1.144 | .750 | 1.625 | 1.496 | 1.3125-18UNEF | 1.283–1.279 | 1.625 |
| 24 | .906 | .688 | 1.297 | 1.269 | .800 | 1.719 | 1.622 | 1.4375-18UNEF | 1.408–1.404 | 1.750 |

All dimensions for reference only

# JT – Solder
# JTG06A
## straight plug
## (with grounding fingers)




*JTG06A-XX-XXX
**JTNG06A-XX-XXX

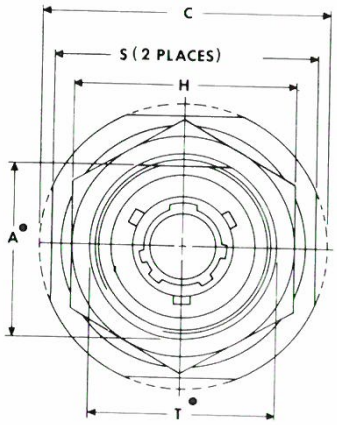
*To complete order number see page 52.

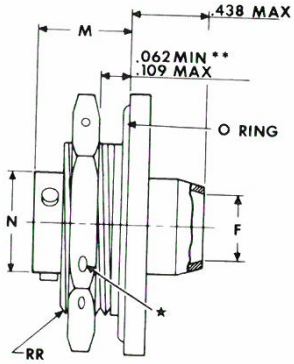
**Coupling nut is clear iridite finish (gold color), shell and grounding fingers are gold plated, $N_2O_4$ resistant, to complete order number see page 52.

| Shell Size | L Max. | Q Dia. Max. | V Thread Modified | | H Dia. +.010 −.001 |
|---|---|---|---|---|---|
| | | | Size Class 2A | Modified Major Dia. | |
| 8 | .625 | .734 | .4375-28UNEF | .421– .417 | .620 |
| 10 | .625 | .844 | .5625-24UNEF | .542– .538 | .746 |
| 12 | .625 | 1.016 | .6875-24UNEF | .667– .663 | .870 |
| 14 | .625 | 1.141 | .8125-20UNEF | .791– .787 | .996 |
| 16 | .625 | 1.265 | .9375-20UNEF | .916– .912 | 1.122 |
| 18 | .625 | 1.391 | 1.0625-18UNEF | 1.034–1.030 | 1.246 |
| 20 | .625 | 1.500 | 1.1875-18UNEF | 1.158–1.154 | 1.372 |
| 22 | .625 | 1.625 | 1.3125-18UNEF | 1.283–1.279 | 1.496 |
| 24 | .688 | 1.750 | 1.4375-18UNEF | 1.408–1.404 | 1.622 |

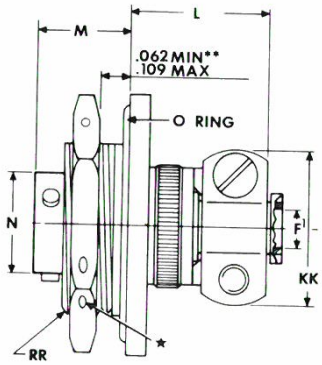
All dimensions for reference only

# JT – Solder
# JT07 (MS27337)
## jam nut receptacle

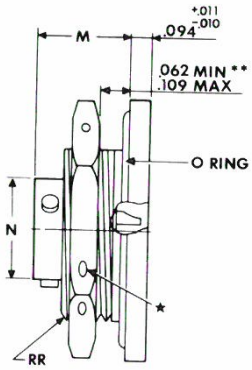



*JT07P-XX-XXX (MS27337P)
***JTN07P-XX-XXX




*JT07A-XX-XXX(SR)
***JTN07A-XX-XXX(SR)



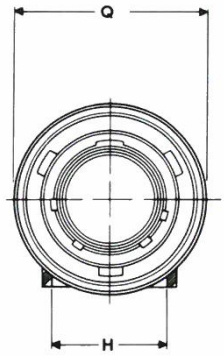

*JT07A-XX-XXX
*JT07C-XX-XXX
***JTN07A-XX-XXX
***JTN07C-XX-XXX

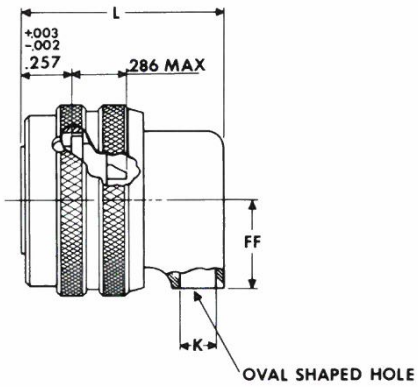
★.59 dia. min. 3 lockwire holes.
•"D" shaped mtg. hole dimensions
*To complete order number see page 52
**Panel Thickness.
***Clear iridite finish (gold color) $N_2O_4$ resistant, to complete order number see page 52

| Shell Size | L Max. | M ±.005 | N +.001 −.005 | RR Thread Class 2A | KK Max. | C Max. | S ±.016 | H +.017 −.016 | T• +.010 −.000 | A• +.000 −.010 | F Min. | F1 +.010 −.025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | .666 | .438 | .473 | .8750-20UNEF | .812 | 1.390 | 1.250 | 1.062 | .884 | .830 | .312 | .125 |
| 10 | .666 | .438 | .590 | 1.0000-20UNEF | .875 | 1.515 | 1.375 | 1.188 | 1.007 | .955 | .429 | .188 |
| 12 | .666 | .438 | .750 | 1.1250-18UNEF | 1.000 | 1.640 | 1.500 | 1.312 | 1.134 | 1.084 | .543 | .312 |
| 14 | .729 | .438 | .875 | 1.2500-18UNEF | 1.125 | 1.765 | 1.625 | 1.438 | 1.259 | 1.208 | .668 | .375 |
| 16 | .729 | .438 | 1.000 | 1.3750-18UNEF | 1.188 | 1.953 | 1.781 | 1.562 | 1.384 | 1.333 | .793 | .500 |
| 18 | .729 | .438 | 1.125 | 1.5000-18UNEF | 1.438 | 2.031 | 1.890 | 1.688 | 1.507 | 1.459 | .894 | .625 |
| 20 | .765 | .464 | 1.250 | 1.6250-18UNEF | 1.438 | 2.156 | 2.016 | 1.812 | 1.634 | 1.576 | 1.019 | .625 |
| 22 | .765 | 464 | 1.375 | 1.7500-18UNS | 1.625 | 2.280 | 2.140 | 2.000 | 1.759 | 1.701 | 1.144 | .750 |
| 24 | .828 | .464 | 1.500 | 1.8750-16UN | 1.719 | 2.405 | 2.265 | 2.125 | 1.884 | 1.826 | 1.269 | .800 |

All dimensions for reference only

# JT – Solder
# JT08
## 90° plug



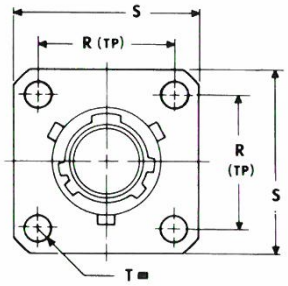

***JT08P-XX-XXX**
****JTN08P-XX-XXX**

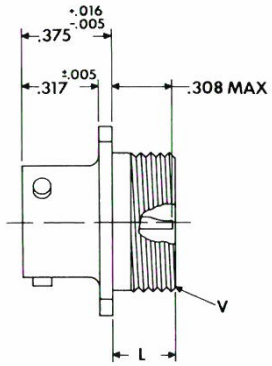
*To complete order number see page 52
**Clear iridite finish (gold color), $N_2O_4$ resistant, to complete number see page 52

| Shell Size | L Max. | FF Max. | K Min. | H Min. | Q Max. |
|---|---|---|---|---|---|
| 8 | .891 | .391 | .126 | .396 | .734 |
| 10 | .906 | .438 | .141 | .532 | .844 |
| 12 | .938 | .516 | .173 | .694 | 1.016 |
| 14 | 1.031 | .594 | .266 | .814 | 1.141 |
| 16 | 1.188 | .656 | .423 | .985 | 1.265 |
| 18 | 1.250 | .719 | .485 | 1.006 | 1.391 |
| 20 | 1.312 | .781 | .547 | 1.130 | 1.500 |
| 22 | 1.375 | .844 | .610 | 1.255 | 1.625 |
| 24 | 1.516 | .906 | .673 | 1.380 | 1.750 |

All dimensions for reference only

# JT – Hermetic
# JT00 (MS27475)
## wall mounting receptacle




*JT00H-XX-XXX
*JT00H-XX-XXX (101)
*JT00H-XX-XXX (150)
**JT00Y-XX-XXX (MS27475YXXDXXX)
***JTS00Y-XX-XXX (MS27482YXXEXXX)

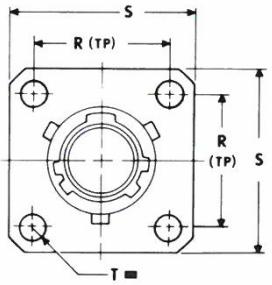
⌖ .005 DIA Ⓜ

*To complete order number see page 52
**Interfacial seal wafer, to complete order number see page 52
***High temperature version, interfacial seal wafer with stainless steel to complete order number see page 52

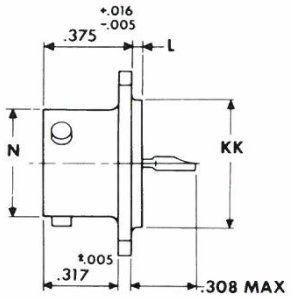
| Shell Size | N +.001 −.005 | S ±.016 | R (TP) | T ±.005 | V Thread Size Class 2A | L Max. |
|---|---|---|---|---|---|---|
| 8 | .473 | .812 | .594 | .120 | .5625-24UNEF | .234 |
| 10 | .590 | .938 | .719 | .120 | .6875-24UNEF | .234 |
| 12 | .750 | 1.031 | .812 | .120 | .8125-20UNEF | .234 |
| 14 | .875 | 1.125 | .906 | .120 | .9375-20UNEF | .234 |
| 16 | 1.000 | 1.219 | .969 | .120 | 1.0625-18UNEF | .234 |
| 18 | 1.125 | 1.312 | 1.062 | .120 | 1.1875-18UNEF | .234 |
| 20 | 1.250 | 1.438 | 1.156 | .120 | 1.3125-18UNEF | .234 |
| 22 | 1.375 | 1.562 | 1.250 | .120 | 1.4375-18UNEF | .234 |
| 24 | 1.500 | 1.688 | 1.375 | .147 | 1.5625-18UNEF | .313 |

All dimensions for reference only

# JT – Hermetic
# JT02 (MS27476)
## box mounting receptacle




(4 HOLES)




***JT02H-XX-XXX**
***JT02H-XX-XXX(101)**
***JT02H-XX-XXX(150)**
****JT02Y-XX-XXX** (MS27476YXXDXXX)
*****JTS02Y-XX-XXX** (MS27476YXXEXXX)

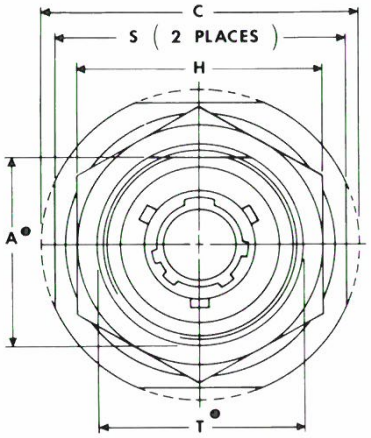
■ ⊕ .005 DIA Ⓜ

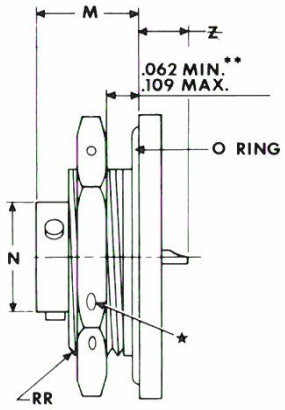
*To complete order number see page 52 .
**Interfacial seal wafer, to complete order number see page 52 .
***High temperature version, interfacial seal wafer with stainless steel shell, to complete order number see page 52 .

| Shell Size | L +.006 −.015 | KK +.001 −.005 | S ±.016 | R (TP) | T ±.005 | N +.001 −.005 |
|---|---|---|---|---|---|---|
| 8 | .051 | .562 | .812 | .594 | .120 | .473 |
| 10 | .051 | .672 | .938 | .719 | .120 | .590 |
| 12 | .051 | .781 | 1.031 | .812 | .120 | .750 |
| 14 | .051 | .906 | 1.125 | .906 | .120 | .875 |
| 16 | .051 | 1.031 | 1.219 | .969 | .120 | 1.000 |
| 18 | .051 | 1.156 | 1.312 | 1.062 | .120 | 1.125 |
| 20 | .051 | 1.250 | 1.438 | 1.156 | .120 | 1.250 |
| 22 | .080 | 1.375 | 1.562 | 1.250 | .120 | 1.375 |
| 24 | .080 | 1.500 | 1.688 | 1.375 | .147 | 1.500 |

All dimensions for reference only

# JT – Hermetic
# JT07 (MS27477)
## jam nut receptacle



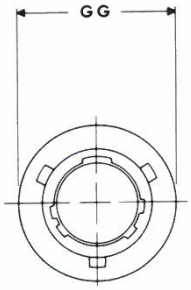

***JT07H-XX-XXX**
***JT07H-XX-XXX(101)**
***JT07H-XX-XXX(150)**
*****JT07Y-XX-XXX (MS27477YXXDXXX)**
******JTS07Y-XX-XXX (MS27483YXXEXXX)**

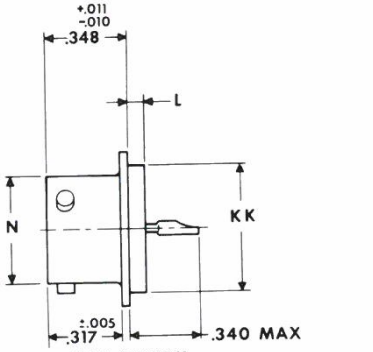
★.059 dia. min. 3 lockwire holes.
•"D" shaped mtg. hole dimensions.
*To complete order number see page 52
**Panel thickness.
***Interfacial seal wafer, to complete order number see page 52 .
****High temperature version, interfacial seal wafer with stainless steel shell, to complete order number see page 52

| Shell Size | M ±.005 | Z Max. | RR Thread Class 2A | N +.001 −.005 | C Max. | S ±.016 | H +.017 −.016 | T• +.010 −.000 | A• +.000 −.010 |
|---|---|---|---|---|---|---|---|---|---|
| 8 | .438 | .244 | .8750-20UNEF | .473 | 1.390 | 1.250 | 1.062 | .884 | .830 |
| 10 | .438 | .244 | 1.0000-20UNEF | .590 | 1.515 | 1.375 | 1.188 | 1.007 | .955 |
| 12 | .438 | .244 | 1.1250-18UNEF | .750 | 1.640 | 1.500 | 1.312 | 1.134 | 1.084 |
| 14 | .438 | .244 | 1.2500-18UNEF | .875 | 1.765 | 1.625 | 1.438 | 1.259 | 1.208 |
| 16 | .438 | .244 | 1.3750-18UNEF | 1.000 | 1.953 | 1.781 | 1.562 | 1.384 | 1.333 |
| 18 | .438 | .244 | 1.5000-18UNEF | 1.125 | 2.031 | 1.890 | 1.688 | 1.507 | 1.459 |
| 20 | .464 | .218 | 1.6250-18UNEF | 1.250 | 2.156 | 2.016 | 1.812 | 1.634 | 1.576 |
| 22 | .464 | .218 | 1.7500-18UNS | 1.375 | 2.280 | 2.140 | 2.000 | 1.759 | 1.701 |
| 24 | .464 | .218 | 1.8750-16UN | 1.500 | 2.405 | 2.265 | 2.125 | 1.884 | 1.826 |

All dimensions for reference only

# JT – Hermetic
# JTI (MS27478)
## solder mounting receptacle




*JTIH-XX-XXX
*JTIH-XX-XXX(101)
*JTIH-XX-XXX(150)
**JTIY-XX-XXX (MS27478YXXDXXX)
***JTSIY-XX-XXX (MS27503YXXEXXX)

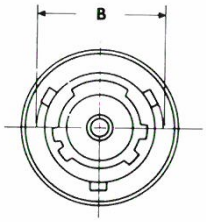
*To complete order number see page 52
**Interfacial seal wafer, to complete order number see page 52
***High temperature version, interfacial seal wafer with stainless steel shell, to complete order number see page 52

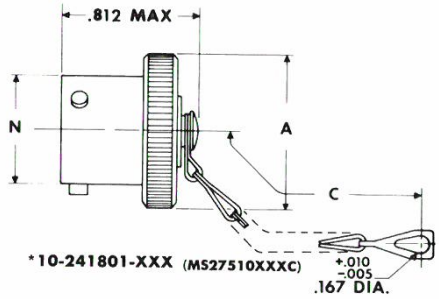
| Shell Size | L +.011 −.010 | KK +.001 −.005 | GG +.011 −.010 | N +.001 −.005 |
|---|---|---|---|---|
| 8 | .078 | .562 | .687 | .473 |
| 10 | .078 | .672 | .797 | .590 |
| 12 | .078 | .781 | .906 | .750 |
| 14 | .078 | .906 | 1.031 | .875 |
| 16 | .078 | 1.031 | 1.156 | 1.000 |
| 18 | .078 | 1.156 | 1.281 | 1.125 |
| 20 | .078 | 1.250 | 1.375 | 1.250 |
| 22 | .107 | 1.375 | 1.500 | 1.375 |
| 24 | .107 | 1.500 | 1.625 | 1.500 |

All dimensions for reference only

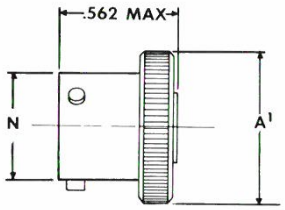
Weld mounting hermetic receptacle also available. Consult factory for availabity & dimensions.

# JT – Accessories
## plug protection cap




*10-241801-XXX (MS27510XXXC)




*10-241853-XXX (MS27352XXX)

*For MS stamping identification, accessories must be ordered by MS part number. If ordered by 10- part number, they will be stamped with said number.*

***To complete order number, add shell size and suffix number.**

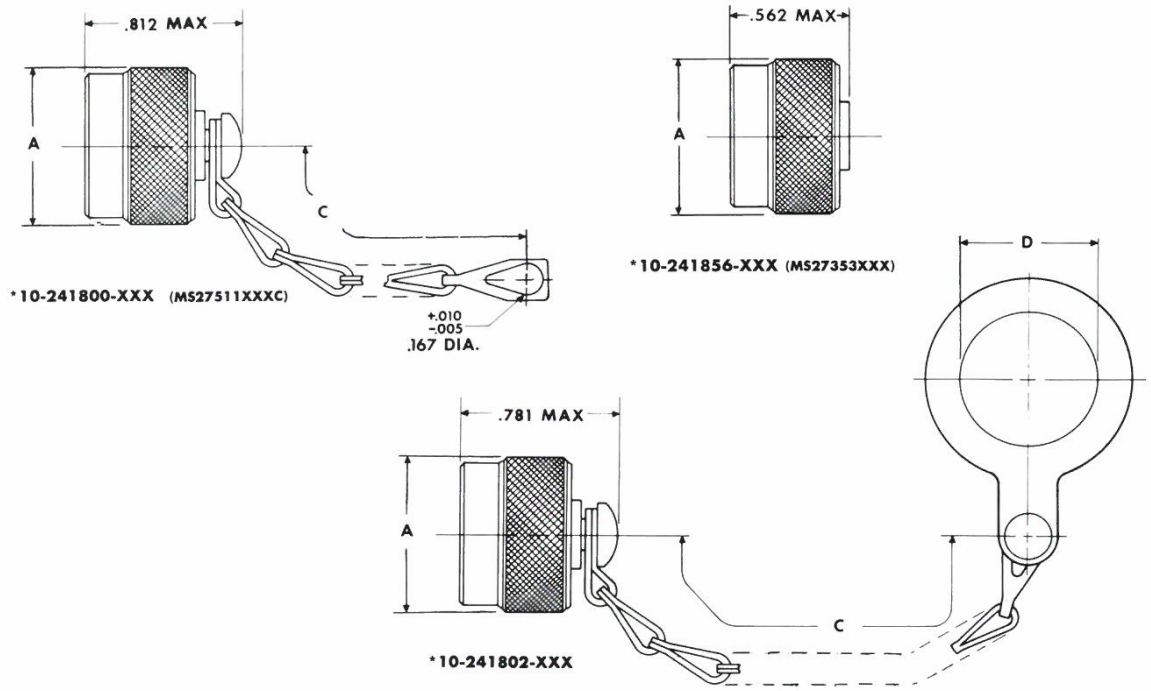
**For example, shell size 10 with cadmium plate, nickel base, 10-241801-107, MS27510A10C or MS27352A10.**

| Shell Size | A Dia. Max. | A1 Dia. Max. | B +.000 −.016 | C Approx. | N Dia. +.001 −.005 |
|---|---|---|---|---|---|
| 8 | .719 | .703 | .563 | 3.000 | .473 |
| 10 | .844 | .828 | .680 | 3.000 | .590 |
| 12 | 1.000 | .984 | .859 | 3.500 | .750 |
| 14 | 1.125 | 1.109 | .984 | 3.500 | .875 |
| 16 | 1.250 | 1.234 | 1.108 | 3.500 | 1.000 |
| 18 | 1.375 | 1.359 | 1.233 | 3.500 | 1.125 |
| 20 | 1.500 | 1.484 | 1.358 | 4.000 | 1.250 |
| 22 | 1.625 | 1.609 | 1.483 | 4.000 | 1.375 |
| 24 | 1.750 | 1.734 | 1.610 | 4.000 | 1.500 |

All dimensions for reference only.

| FINISH | 10- No. SUFFIX | MS No. SUFFIX WITH CHAIN | MS No. SUFFIX WITHOUT CHAIN |
|---|---|---|---|
| Chromate treat | -XX0 | | |
| Bright cadmium plate | -XX1 | | |
| Black anodize | -XX2 | | |
| Cadmium plate olive drab | -XX3 | | |
| Grey anodize | -XX4 | | |
| Anodic coating | -XX5 | CXXC | CXX |
| Tin zinc plate | -XX6 | | |
| Cadmium plate nickel base | -XX7 | AXXC | AXX |
| Bright nickel | -XX8 | | |
| Olive drab, cadmium, nickel base | -XX9 | BXXC | BXX |
| Electroless nickel | -XXG | FXXC | FXX |

# JT – Accessories
## receptacle protection caps




*For MS stamping identification, accessories must be ordered by MS part number. If ordered by 10- part number, they will be stamped with said number.*

***To complete order number, add shell size and suffix number.**

**For example, shell size 10 with cadmium plate, nickel base, 10-241800-107, MS27511A10C or MS27353A10.**

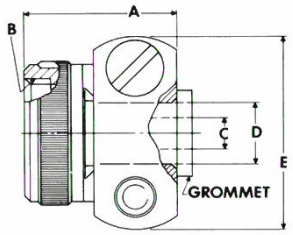
| Shell Size | A Dia. Max. | C Approx. | D +.010 −.000 |
|---|---|---|---|
| 8 | .719 | 3.000 | .891 |
| 10 | .844 | 3.000 | 1.016 |
| 12 | 1.000 | 3.500† | 1.141 |
| 14 | 1.125 | 3.500 | 1.266 |
| 16 | 1.250 | 3.500 | 1.391 |
| 18 | 1.375 | 3.500 | 1.516 |
| 20 | 1.500 | 4.000 | 1.641 |
| 22 | 1.625 | 4.000 | 1.766 |
| 24 | 1.750 | 4.000 | 1.891 |

All dimensions for reference only.

†3.000 for MS27511

| FINISH | 10- No. SUFFIX | MS No. SUFFIX WITH CHAIN | MS No. SUFFIX WITHOUT CHAIN |
|---|---|---|---|
| Chromate treat | -XX0 | | |
| Bright cadmium plate | -XX1 | | |
| Black anodize | -XX2 | | |
| Cadmium plate olive drab | -XX3 | | |
| Grey anodize | -XX4 | | |
| Anodic coating | -XX5 | CXXC | CXX |
| Tin zinc plate | -XX6 | | |
| Cadmium plate nickel base | -XX7 | AXXC | AXX |
| Bright nickel | -XX8 | | |
| Olive drab, cadmium, nickel base | -XX9 | BXXC | BXX |
| Electroless nickel | -XXG | FXXC | FXX |

# JT – Accessories
## cable clamp
## (solder type)




***10-241055-XXX (MS27342X-XX-2)**

*For MS stamping identification, accessories must be ordered by MS part number. If ordered by 10- part number, they will be stamped with said number.*

***To complete order number, add shell size and suffix number.**

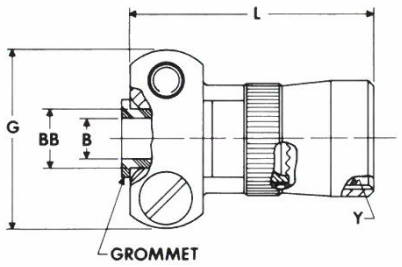
| Finish | 10- No. Suffix | MS No. Suffix |
|---|---|---|
| Chromate treat | -XX0 | |
| Bright cadmium plate | -XX1 | |
| Black anodize | -XX2 | |
| Cadmium plate olive drab | -XX3 | |
| Grey anodize | -XX4 | |
| Anodic coating | -XX5 | |
| Tin zinc plate | -XX6 | |
| Cadmium plate nickel base | -XX7 | A-XX-2 |
| Bright nickel | -XX8 | |
| Olive drab, cadmium, nickel base | -XX9 | B-XX-2 |
| Electroless nickel | -XXG | |

**For example shell size 10 with cadmium plate, nickel base, 10-241055-107 or MS27342A-10-2**

| Shell Size | A Ref. | B Thread Class 2B | C Dia. +.010 −.025 | D Dia. +.000 −.011 | E Max. |
|---|---|---|---|---|---|
| 8 | .582 | .4375-28UNEF | .125 | .250 | .812 |
| 10 | .582 | .5625-24UNEF | .188 | .312 | .875 |
| 12 | .582 | .6875-24UNEF | .312 | .438 | 1.000 |
| 14 | .644 | .8125-20UNEF | .375 | .562 | 1.125 |
| 16 | .644 | .9375-20UNEF | .500 | .625 | 1.188 |
| 18 | .644 | 1.0625-18UNEF | .625 | .750 | 1.438 |
| 20 | .707 | 1.1875-18UNEF | .625 | .750 | 1.438 |
| 22 | .707 | 1.3125-18UNEF | .750 | .938 | 1.625 |
| 24 | .707 | 1.4375-18UNEF | .800 | 1.000 | 1.719 |

**All dimensions for reference only.**

# JT – Accessories
## Cable Clamp
## (crimp type)




***10-405982-XXX (MS27506XXX-2)**

*For MS stamping identification, accessories must be ordered by MS part number. If ordered by 10- part number, they will be stamped with said number.*

***To complete order number, add shell size and suffix number.**

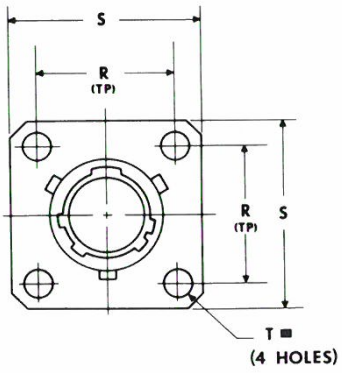
| Finish | 10- No. Suffix | MS No. Suffix |
|---|---|---|
| Chromate treat | -XX0 | |
| Bright cadmium plate | -XX1 | |
| Black anodize | -XX2 | |
| Cadmium plate olive drab | -XX3 | |
| Grey anodize | -XX4 | |
| Anodic coating | -XX5 | CXX-2 |
| Tin zinc plate | -XX6 | |
| Cadmium plate nickel base | -XX7 | AXX-2 |
| Bright nickel | -XX8 | |
| Olive drab, cadmium, nickel base | -XX9 | BXX-2 |
| Electroless nickel | -XXG | FXX-2 |

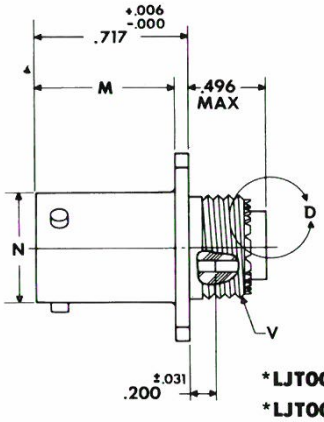
For example shell size 10 with cadmium plate, nickel base, 10-405982-107 or MS27506A10-2

| Shell Size | G Max. | L Max. | Y Thread (Modified) Size Class 2B | Y Thread (Modified) Modified Minor Dia. | BB Dia. +.000 −.011 | Screw Size | B Dia. +.010 −.025 |
|---|---|---|---|---|---|---|---|
| 8 | .775 | .984 | .4375-28UNEF | .399 – .405 | .250 | 6-32UNC | .125 |
| 10 | .837 | .984 | .5625-24UNEF | .524 – .529 | .312 | 6-32UNC | .188 |
| 12 | .963 | .984 | .6875-24UNEF | .649 – .654 | .438 | 6-32UNC | .312 |
| 14 | 1.087 | 1.234 | .8125-20UNEF | .766 – .771 | .562 | 6-32UNC | .375 |
| 16 | 1.150 | 1.234 | .9375-20UNEF | .891 – .896 | .625 | 6-32UNC | .500 |
| 18 | 1.400 | 1.234 | 1.0625-18UNEF | 1.002 – 1.007 | .750 | 8-32UNC | .625 |
| 20 | 1.400 | 1.234 | 1.1875-18UNEF | 1.135 – 1.140 | .750 | 8-32UNC | .625 |
| 22 | 1.587 | 1.359 | 1.3125-18UNEF | 1.252 – 1.257 | .938 | 8-32UNC | .750 |
| 24 | 1.681 | 1.281 | 1.4375-18UNEF | 1.377 – 1.382 | 1.000 | 8-32UNC | .800 |

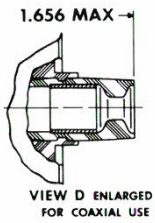
All dimensions for reference only.

# LJT – Crimp
# LJT00R (MS27466)
## wall mounting receptacle

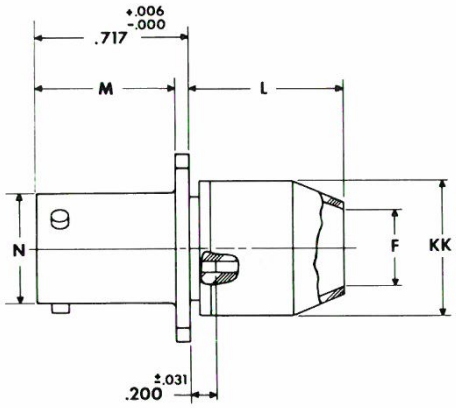



***LJT00RE-XX-XXX** (MS27466E)
***LJT00RT-XX-XXX** (MS27466T)




VIEW D ENLARGED
FOR COAXIAL USE ONLY




***LJT00RP-XX-XXX** (MS27466P)

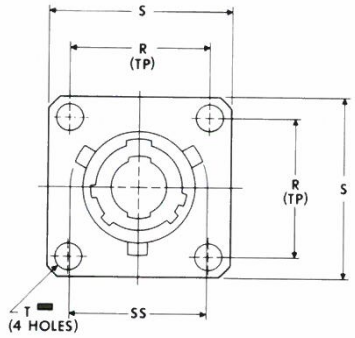
■ ⊕ .005 DIA Ⓜ

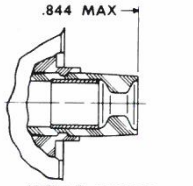
*To complete order number see page 52.

| Shell Size | M +.000 −.005 | V Thread Class 2A (Plated) | N +.001 −.005 | S ±.016 | R (TP) | T Dia. ±.005 | F Dia. | KK Dia. Max. | L Max. |
|---|---|---|---|---|---|---|---|---|---|
| 9 | .632 | .4375-28UNEF | .572 | .938 | .719 | .128 | .327 | .608 | .813 |
| 11 | .632 | .5625-24UNEF | .700 | 1.031 | .812 | .128 | .444 | .734 | .813 |
| 13 | .632 | .6875-24UNEF | .850 | 1.125 | .906 | .128 | .558 | .858 | .813 |
| 15 | .632 | .8125-20UNEF | .975 | 1.219 | .969 | .128 | .683 | .984 | .813 |
| 17 | .632 | .9375-20UNEF | 1.100 | 1.312 | 1.062 | .128 | .808 | 1.110 | .813 |
| 19 | .632 | 1.0625-18UNEF | 1.207 | 1.438 | 1.156 | .128 | .909 | 1.234 | .813 |
| 21 | .602 | 1.1875-18UNEF | 1.332 | 1.562 | 1.250 | .128 | 1.034 | 1.360 | .906 |
| 23 | .602 | 1.3125-18UNEF | 1.457 | 1.688 | 1.375 | .147 | 1.159 | 1.484 | .906 |
| 25 | .602 | 1.4375-18UNEF | 1.582 | 1.812 | 1.500 | .147 | 1.284 | 1.610 | .906 |

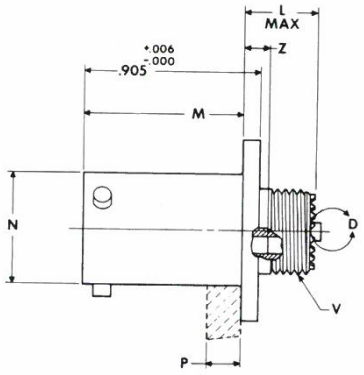
All dimensions for reference only

# LJT – Crimp
# LJTPQ00R (MS27656)
## wall mounting receptacle
## (back panel mounting)

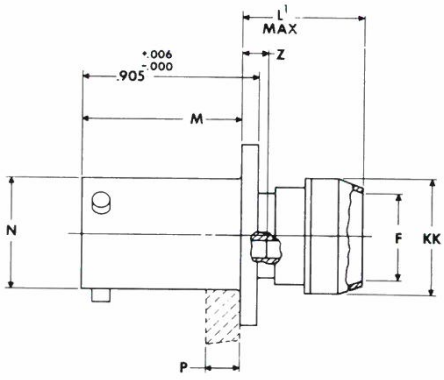



VIEW D ENLARGED
FOR COAXIAL USE ONLY




***LJTPQ00RE-XX-XXX** (MS27656E)




***LJTPQ00RP-XX-XXX** (MS27656P)

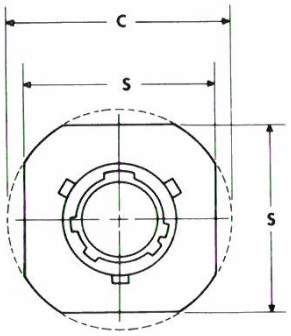
⊕ .005 DIA Ⓜ

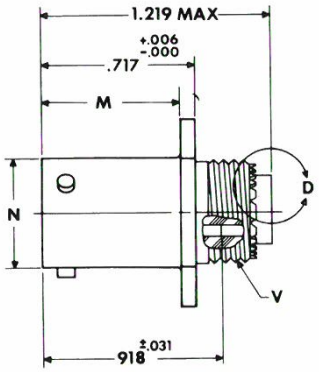
*To complete order number see page 52

| Shell Size | F Dia ±.010 | L Max. | L1 Max. | M +.000 −.005 | N Dia. | P Max. Panel Thickness | R (TP) | S +.011 −.010 | T Dia. ±.005 | V Thread UNEF Class 2A (Plated) | Z Max. | KK Dia. Max. | SS Dia. +.000 −.016 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | .444 | .453 | .641 | .820 | .572 | .234 | .719 | .938 | .128 | .4375-28 | .138 | .625 | .662 |
| 11 | .558 | .453 | .641 | .820 | .700 | .234 | .812 | 1.031 | .128 | .5625-24 | .138 | .750 | .810 |
| 13 | .683 | .453 | .641 | .820 | .850 | .234 | .906 | 1.125 | .128 | .6875-24 | .138 | .875 | .960 |
| 15 | .808 | .453 | .641 | .820 | .975 | .234 | .969 | 1.219 | .128 | .8125-20 | .138 | 1.000 | 1.085 |
| 17 | .909 | .453 | .641 | .820 | 1.100 | .234 | 1.062 | 1.312 | .128 | .9375-20 | .138 | 1.125 | 1.210 |
| 19 | 1.034 | .453 | .641 | .820 | 1.207 | .234 | 1.156 | 1.438 | .128 | 1.0625-18 | .138 | 1.250 | 1.317 |
| 21 | 1.159 | .484 | .672 | .790 | 1.332 | .204 | 1.250 | 1.562 | .128 | 1.1875-18 | .168 | 1.375 | 1.442 |
| 23 | 1.284 | .484 | .672 | .790 | 1.457 | .204 | 1.375 | 1.688 | .147 | 1.3125-18 | .168 | 1.500 | 1.567 |
| 25 | 1.409 | .484 | .672 | .790 | 1.582 | .193 | 1.500 | 1.812 | .147 | 1.4375-18 | .168 | 1.625 | 1.692 |

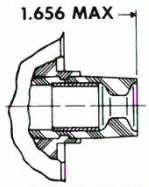
All dimensions for reference only.

# LJT – Crimp
# LJT01R
## line receptacle




***LJT01RE-XX-XXX**
***LJT01RT-XX-XXX**



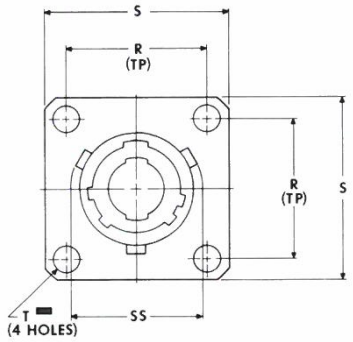

VIEW D ENLARGED
FOR COAXIAL USE ONLY

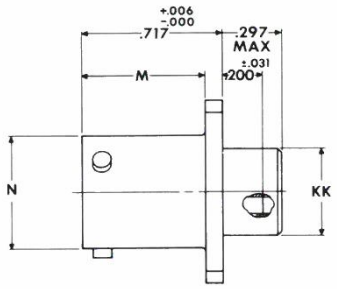
*To complete order number see page 52.

| Shell Size | M +.000 −.005 | N +.001 −.005 | S ±.016 | C Max. | V Thread Ref. Class 2A (Plated) |
|---|---|---|---|---|---|
| 9 | .632 | .572 | .938 | 1.094 | .4375-28UNEF |
| 11 | .632 | .700 | 1.031 | 1.188 | .5625-24UNEF |
| 13 | .632 | .850 | 1.125 | 1.281 | .6875-24UNEF |
| 15 | .632 | .975 | 1.219 | 1.375 | .8125-20UNEF |
| 17 | .632 | 1.100 | 1.312 | 1.469 | .9375-20UNEF |
| 19 | .632 | 1.207 | 1.438 | 1.594 | 1.0625-18UNEF |
| 21 | .602 | 1.332 | 1.562 | 1.719 | 1.1875-18UNEF |
| 23 | .602 | 1.457 | 1.688 | 1.844 | 1.3125-18UNEF |
| 25 | .602 | 1.582 | 1.812 | 1.969 | 1.4375-18UNEF |

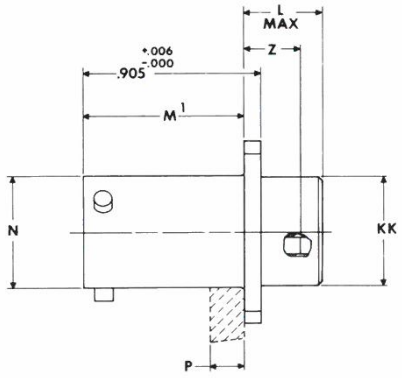
All dimensions for reference only

# LJT – Crimp
# LJT02R (MS27496)
# LJTP02R (MS27505) (back panel mounting)
## box mounting receptacle




***LJT02RE-XX-XXX** (MS27496E)




***LJTP02RE-XX-XXX** (MS27505E)

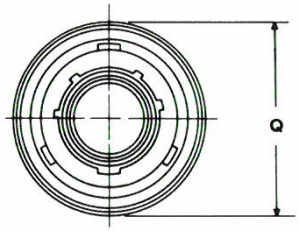
⊕ .005 DIA Ⓜ

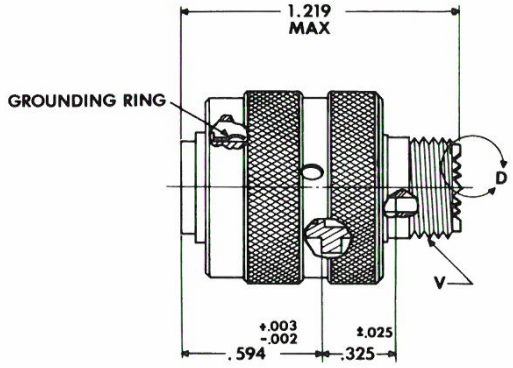
*To complete order number see page 52.

| Shell Size | L Max. | M +.000 −.005 | M 1 +.000 −.005 | N Dia. +.001 −.005 | P Max. Panel Thickness | R (TP) | S +.011 −.010 | T Dia. ±.005 | Z ±.031 | KK Dia. +.006 −.005 | SS Dia. +.000 −.016 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | .203 | .632 | .820 | .572 | .234 | .719 | .938 | .128 | .107 | .433 | .662 |
| 11 | .203 | .632 | .820 | .700 | .234 | .812 | 1.031 | .128 | .107 | .557 | .810 |
| 13 | .203 | .632 | .820 | .850 | .234 | .906 | 1.125 | .128 | .107 | .676 | .960 |
| 15 | .203 | .632 | .820 | .975 | .234 | .969 | 1.219 | .128 | .107 | .801 | 1.085 |
| 17 | .203 | .632 | .820 | 1.100 | .234 | 1.062 | 1.312 | .128 | .107 | .926 | 1.210 |
| 19 | .203 | .632 | .820 | 1.207 | .234 | 1.156 | 1.438 | .128 | .107 | 1.032 | 1.317 |
| 21 | .234 | .602 | .790 | 1.332 | .204 | 1.250 | 1.562 | .128 | .137 | 1.157 | 1.442 |
| 23 | .234 | .602 | .790 | 1.457 | .204 | 1.375 | 1.688 | .147 | .137 | 1.282 | 1.567 |
| 25 | .234 | .602 | .790 | 1.582 | .193 | 1.500 | 1.812 | .147 | .137 | 1.407 | 1.692 |

All dimensions for reference only

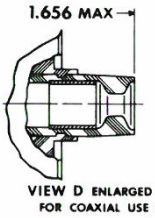
# LJT – Crimp
# LJT06R (MS27467)
## straight plug



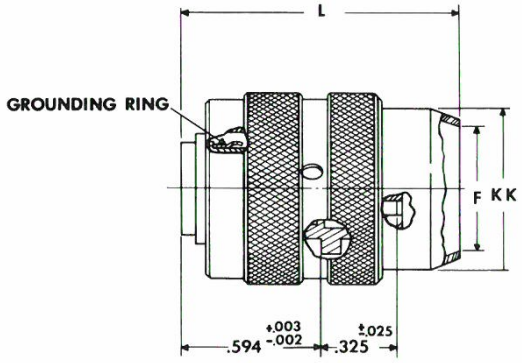




*LJT06RE-XX-XXX (MS27467E)

*LJT06RT-XX-XXX (MS27467T)




VIEW D ENLARGED
FOR COAXIAL USE ONLY



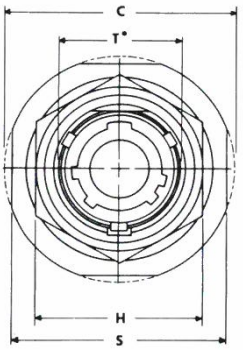

*LJT06RP-XX-XXX (MS27467P)

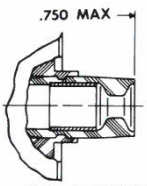
*To complete order number see page 52.

| Shell Size | L Max. | V Thread Class 2A (Plated) | Q Max. | F Dia. | KK Dia. Max. |
|---|---|---|---|---|---|
| 9 | 1.531 | .4375-28UNEF | .844 | .327 | .608 |
| 11 | 1.531 | .5625-24UNEF | .969 | .444 | .734 |
| 13 | 1.531 | .6875-24UNEF | 1.141 | .558 | .858 |
| 15 | 1.531 | .8125-20UNEF | 1.266 | .683 | .984 |
| 17 | 1.531 | .9375-20UNEF | 1.391 | .808 | 1.110 |
| 19 | 1.531 | 1.0625-18UNEF | 1.500 | .909 | 1.234 |
| 21 | 1.625 | 1.1875-18UNEF | 1.625 | 1.034 | 1.360 |
| 23 | 1.625 | 1.3125-18UNEF | 1.750 | 1.159 | 1.484 |
| 25 | 1.625 | 1.4375-18UNEF | 1.875 | 1.284 | 1.610 |

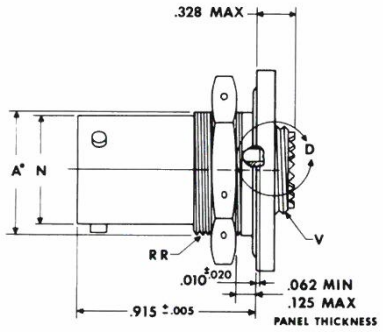
All dimensions for reference only

# LJT – Crimp
# LJT07R (MS27468)
## jam nut receptacle

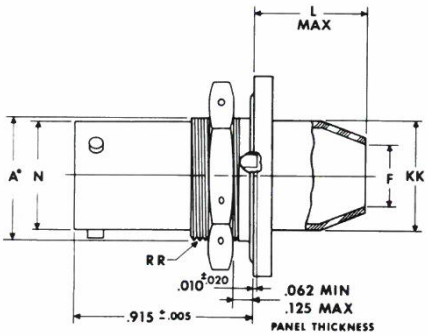



VIEW D ENLARGED
FOR COAXIAL USE ONLY




***LJT07RE-XX-XXX** (MS27468E)
***LJT07RT-XX-XXX** (MS27468T)



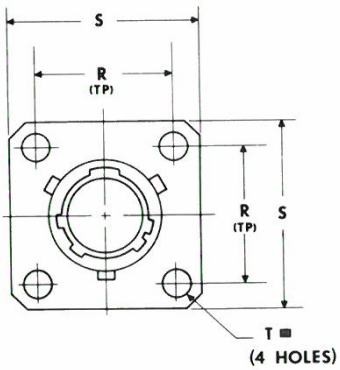

***LJT07RP-XX-XXX** (MS27468P)

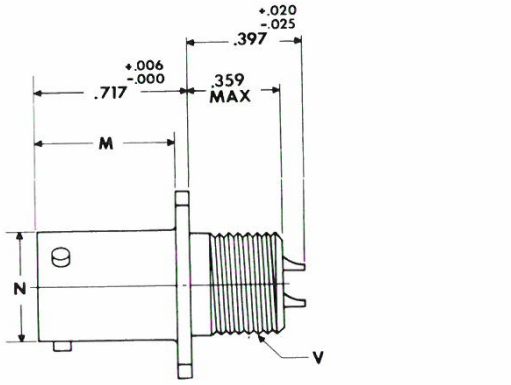
•"D" shaped mtg. hole dimensions
*To complete order number see page 52

| Shell Size | RR Thread Class 2A (Plated) | N +.001 −.005 | A• +.000 −.010 | T• +.010 −.000 | C Max. | H Hex +.017 −.016 | S ±.016 | V Thread Class 2A (Plated) | KK Dia. Max. | F Dia. | L Max. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | .6875-24UNEF | .572 | .669 | .697 | 1.199 | .875 | 1.062 | .4375-28UNEF | .608 | .327 | .625 |
| 11 | .8125-20UNEF | .700 | .769 | .822 | 1.386 | 1.000 | 1.250 | .5625-24UNEF | .734 | .444 | .625 |
| 13 | 1.0000-20UNEF | .850 | .955 | 1.007 | 1.511 | 1.188 | 1.375 | .6875-24UNEF | .858 | .558 | .625 |
| 15 | 1.1250-18UNEF | .975 | 1.084 | 1.134 | 1.636 | 1.312 | 1.500 | .8125-20UNEF | .984 | .683 | .625 |
| 17 | 1.2500-18UNEF | 1.100 | 1.208 | 1.259 | 1.761 | 1.438 | 1.625 | .9375-20UNEF | 1.110 | .808 | .625 |
| 19 | 1.3750-18UNEF | 1.207 | 1.333 | 1.384 | 1.949 | 1.562 | 1.812 | 1.0625-18UNEF | 1.234 | .909 | .656 |
| 21 | 1.5000-18UNEF | 1.332 | 1.459 | 1.507 | 2.073 | 1.688 | 1.938 | 1.1875-18UNEF | 1.360 | 1.034 | .750 |
| 23 | 1.6250-18UNEF | 1.457 | 1.580 | 1.634 | 2.199 | 1.812 | 2.062 | 1.3125-18UNEF | 1.484 | 1.159 | .750 |
| 25 | 1.7500-18UNS | 1.582 | 1.709 | 1.759 | 2.323 | 2.000 | 2.188 | 1.4375-18UNEF | 1.610 | 1.284 | .750 |

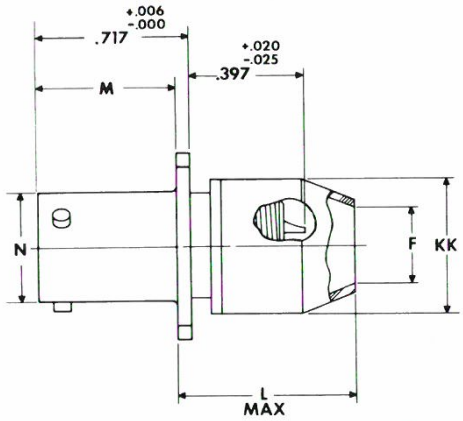
All dimensions for reference only

# LJT – Solder
# LJT00 (MS20026)
## wall mounting receptacle




*LJT00T-XX-XXX (MS20026T)




*LJT00P-XX-XXX

T ■ .005 DIA Ⓜ

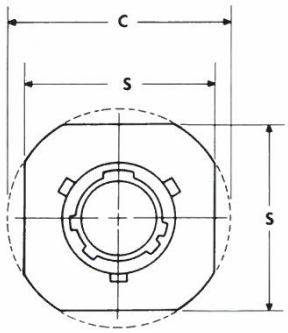
*To complete order number see page 52 .

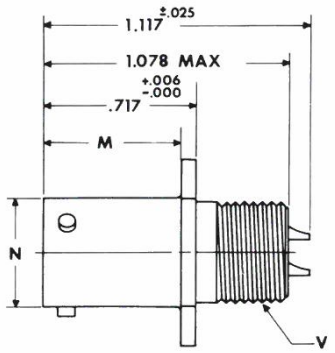
NOTE: For availability of back panel mounting types, check with our sales office nearest you.

| Shell Shell | M +.000 −.005 | V Thread Class 2A UNEF (Plated) | N +.001 −.005 | S ±.016 | R (TP) | T Dia. ±.005 | F Dia. | KK Dia. Max. | L Max. |
|---|---|---|---|---|---|---|---|---|---|
| 9 | .632 | .4375-28 | .572 | .938 | .719 | .128 | .327 | .608 | .625 |
| 11 | .632 | .5625-24 | .700 | 1.031 | .812 | .128 | .444 | .734 | .625 |
| 13 | .632 | .6875-24 | .850 | 1.125 | .906 | .128 | .558 | .858 | .625 |
| 15 | .632 | .8125-20 | .975 | 1.219 | .969 | .128 | .683 | .984 | .625 |
| 17 | .632 | .9375-20 | 1.100 | 1.312 | 1.062 | .128 | .808 | 1.110 | .625 |
| 19 | .632 | 1.0625-18 | 1.207 | 1.438 | 1.156 | .128 | .909 | 1.234 | .625 |
| 21 | .602 | 1.1875-18 | 1.332 | 1.562 | 1.250 | .128 | 1.034 | 1.360 | .703 |
| 23 | .602 | 1.3125-18 | 1.457 | 1.688 | 1.375 | .147 | 1.159 | 1.484 | .703 |
| 25 | .602 | 1.4375-18 | 1.582 | 1.812 | 1.500 | .147 | 1.284 | 1.610 | .703 |

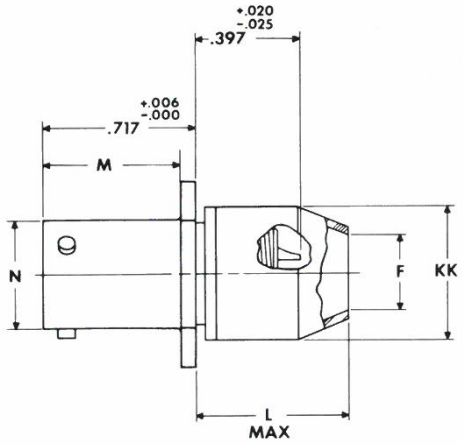
All dimensions for reference only

# LJT – Solder
# LJT01 (MS20027)
## line receptacle




*LJT01T-XX-XXX (MS20027T)



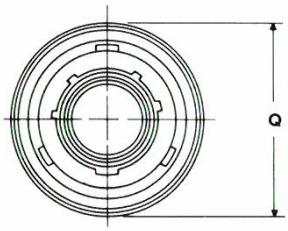

*LJT01P-XX-XXX

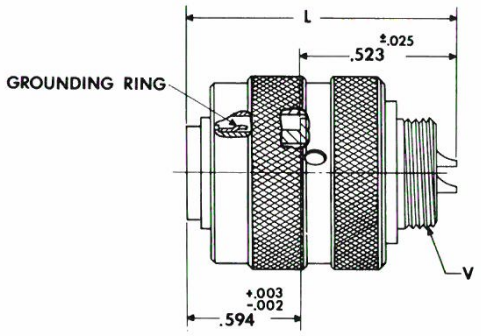
*To complete order number see page 52

| Shell Size | M +.000 −.005 | V Thread Class 2A UNEF (Plated) | N +.001 −.005 | S ±.016 | C Max. | F Dia. | KK Dia. Max. | L Max. |
|---|---|---|---|---|---|---|---|---|
| 9 | .632 | .4375-28 | .572 | .938 | 1.094 | .327 | .608 | .625 |
| 11 | .632 | .5625-24 | .700 | 1.031 | 1.188 | .444 | .734 | .625 |
| 13 | .632 | .6875-24 | .850 | 1.125 | 1.281 | .558 | .858 | .625 |
| 15 | .632 | .8125-20 | .975 | 1.219 | 1.375 | .683 | .984 | .625 |
| 17 | .632 | .9375-20 | 1.100 | 1.312 | 1.469 | .808 | 1.110 | .625 |
| 19 | .632 | 1.0625-18 | 1.207 | 1.438 | 1.594 | .909 | 1.234 | .625 |
| 21 | .602 | 1.1875-18 | 1.332 | 1.562 | 1.719 | 1.034 | 1.360 | .703 |
| 23 | .602 | 1.3125-18 | 1.457 | 1.688 | 1.844 | 1.159 | 1.484 | .703 |
| 25 | .602 | 1.4375-18 | 1.582 | 1.812 | 1.969 | 1.284 | 1.610 | .703 |

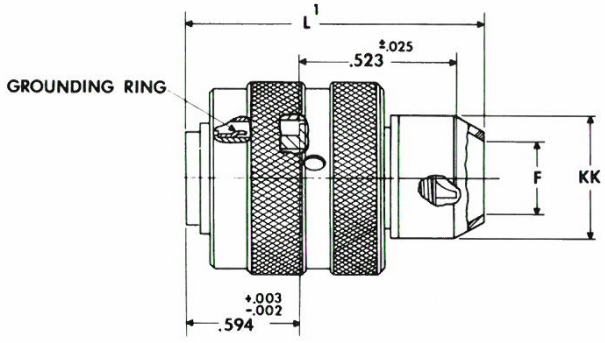
All dimensions for reference only

# LJT – Solder
# LJT06 (MS20028)
## straight plug




*LJT06T-XX-XXX (MS20028T)



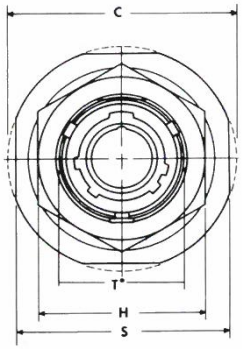

*LJT06P-XX-XXX

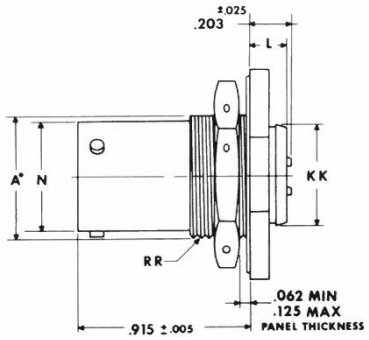
*To complete order number see page 52.

| Shell Size | V Thread Class 2A UNEF (Plated) | Q Max. | L Max. | L1 Max. | F Dia. | KK Dia. Max. |
|---|---|---|---|---|---|---|
| 9 | .4375-28 | .844 | 1.128 | 1.488 | .327 | .608 |
| 11 | .5625-24 | .969 | 1.128 | 1.488 | .444 | .734 |
| 13 | .6875-24 | 1.141 | 1.128 | 1.488 | .558 | .858 |
| 15 | .8125-20 | 1.266 | 1.128 | 1.488 | .683 | .984 |
| 17 | .9375-20 | 1.391 | 1.128 | 1.488 | .808 | 1.110 |
| 19 | 1.0625-18 | 1.500 | 1.128 | 1 488 | .909 | 1.234 |
| 21 | 1.1875-18 | 1.625 | 1.128 | 1.566 | 1.034 | 1.360 |
| 23 | 1.3125-18 | 1.750 | 1.128 | 1.566 | 1.159 | 1.484 |
| 25 | 1.4375-18 | 1.875 | 1.191 | 1.644 | 1.284 | 1.610 |

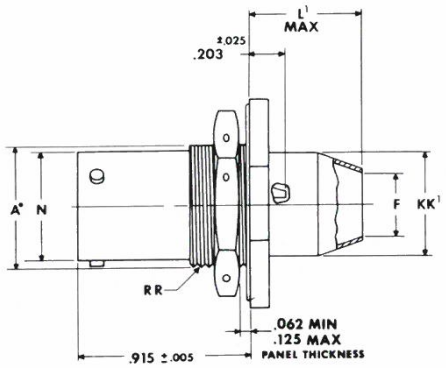
All dimensions for reference only

# LJT – Solder
# LJT07 (MS20029)
## jam nut receptacle




***LJT07T-XX-XXX** (MS20029T)



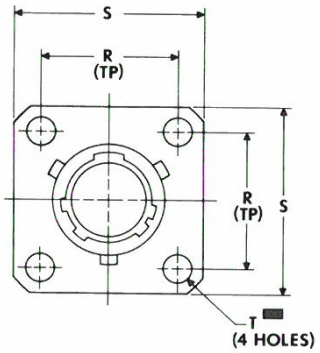

***LJT07P-XX-XXX** (MS20029P)

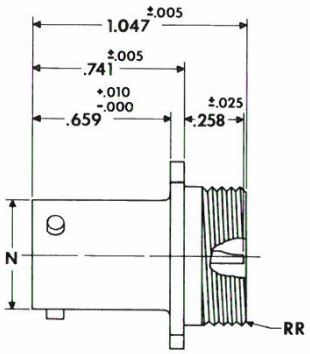
•"D" shaped mtg. hole dimensions.
*To complete order number see page 52

| Shell Size | L Max. | L¹ Max. | KK +.011 −.000 | KK¹ Dia. Max. | F Dia. | RR Thread Class 2A (Plated) | N +.001 −.005 | A• +.000 −.010 | T• +.010 −.000 | C Max. | H Hex +.017 −.016 | S ±.016 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | .234 | .625 | .516 | .608 | .327 | .6875-24UNEF | .572 | .669 | .697 | 1.199 | .875 | 1.062 |
| 11 | .234 | .625 | .642 | .734 | .444 | .8125-20UNEF | .700 | .769 | .822 | 1.386 | 1.000 | 1.250 |
| 13 | .234 | .625 | .766 | .858 | .558 | 1.0000-20UNEF | .850 | .955 | 1.007 | 1.511 | 1.188 | 1.375 |
| 15 | .234 | .625 | .892 | .984 | .683 | 1.1250-18UNEF | .975 | 1.084 | 1.134 | 1.636 | 1.312 | 1.500 |
| 17 | .234 | .625 | 1.018 | 1.110 | .808 | 1.2500-18UNEF | 1.100 | 1.208 | 1.259 | 1.761 | 1.438 | 1.625 |
| 19 | .266 | .625 | 1.142 | 1.234 | .909 | 1.3750-18UNEF | 1.207 | 1.333 | 1.384 | 1.949 | 1.562 | 1.812 |
| 21 | .266 | .656 | 1.268 | 1.360 | 1.034 | 1.5000-18UNEF | 1.332 | 1.459 | 1.507 | 2.073 | 1.688 | 1.938 |
| 23 | .266 | .750 | 1.392 | 1.484 | 1.159 | 1.6250-18UNEF | 1.457 | 1.580 | 1.634 | 2.199 | 1.812 | 2.062 |
| 25 | .266 | .750 | 1.518 | 1.610 | 1.284 | 1.7500-18UNS | 1.582 | 1.709 | 1.759 | 2.323 | 2.000 | 2.188 |

All dimensions for reference only

# LJT – Hermetic
# LJT00 (MS27469)
## wall mounting receptacle




***LJT00H-XX-XXX**
****LJT00Y-XX-XXX** (MS27469YXXD)
*****LJTS00Y-XX-XXX** (MS27469YXXE)

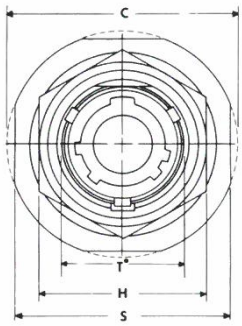
⊕ .005 DIA Ⓜ

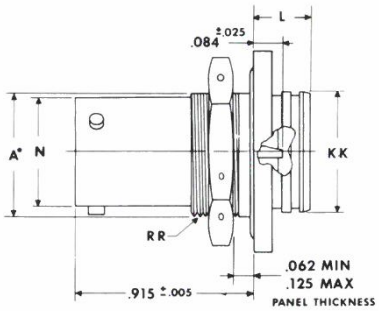
*To complete order number see page 52
**Interfacial seal wafer, to complete order number see page 52 .
***High temperature version, interfacial seal wafer with stainless steel shell. to complete order number see page 52

| Shell Size | N Dia. +.001 −.005 | R (TP) | S ±.016 | RR Thread Class 2A | T Dia. ±.005 |
|---|---|---|---|---|---|
| 9 | .572 | .719 | .938 | .6875-24UNEF | .128 |
| 11 | .700 | .812 | 1.031 | .8125-20UNEF | .128 |
| 13 | .850 | .906 | 1.125 | .9375-20UNEF | .128 |
| 15 | .975 | .969 | 1.219 | 1.0625-18UNEF | .128 |
| 17 | 1.100 | 1.062 | 1.312 | 1.1875-18UNEF | .128 |
| 19 | 1.207 | 1.156 | 1.438 | 1.3125-18UNEF | .128 |
| 21 | 1.332 | 1.250 | 1.562 | 1.4375-18UNEF | .128 |
| 23 | 1.457 | 1.375 | 1.688 | 1.5625-18UNEF | .147 |
| 25 | 1.582 | 1.500 | 1.812 | 1.6875-18UNEF | .147 |

All dimensions for reference only

# LJT – Hermetic
# LJT07 (MS27470)
## jam nut receptacle



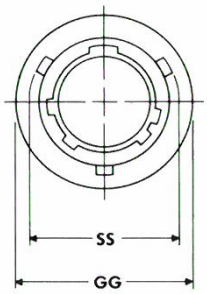

***LJT07H-XX-XXX**
****LJT07Y-XX-XXX** (MS27470YXXD)
*****LJTS07Y-XX-XXX** (MS27470YXXE)

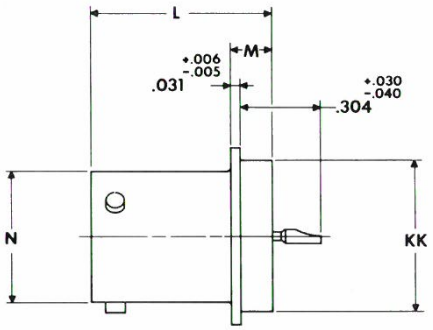
•"D" shaped mtg. hole dimensions.
*To complete order number see page 52
**Interfacial seal wafer, to complete order number see page 52 .
***High temperature version, interfacial seal wafer with stainless steel shell, to complete order number see page 52 .

| Shell Size | L Max. | KK +.011 −.000 | RR Thread Class 2A (Plated) | N +.000 −.005 | A• +.000 −.010 | T• +.010 −.000 | C Max. | H Hex +.017 −.016 | S ±.016 |
|---|---|---|---|---|---|---|---|---|---|
| 9 | .297 | .642 | .6875-24UNEF | .572 | .669 | .697 | 1.199 | .875 | 1.062 |
| 11 | .297 | .766 | .8125-20UNEF | .700 | .769 | .822 | 1.386 | 1.000 | 1.250 |
| 13 | .297 | .892 | 1.0000-20UNEF | .850 | .955 | 1.007 | 1.511 | 1.188 | 1.375 |
| 15 | .297 | 1.018 | 1.1250-18UNEF | .975 | 1.084 | 1.134 | 1.636 | 1.312 | 1.500 |
| 17 | .297 | 1.142 | 1.2500-18UNEF | 1.100 | 1.208 | 1.259 | 1.761 | 1.438 | 1.625 |
| 19 | .328 | 1.268 | 1.3750-18UNEF | 1.207 | 1.333 | 1.384 | 1.949 | 1.562 | 1.812 |
| 21 | .328 | 1.392 | 1.5000-18UNEF | 1.332 | 1.459 | 1.507 | 2.073 | 1.688 | 1.938 |
| 23 | .328 | 1.518 | 1.6250-18UNEF | 1.457 | 1.580 | 1.634 | 2.199 | 1.812 | 2.062 |
| 25 | .328 | 1.642 | 1.7500-18UNS | 1.582 | 1.709 | 1.759 | 2.328 | 2.000 | 2.188 |

All dimensions for reference only

# LJT – Hermetic
# LJTI (MS27471)
## solder mounting receptacle




***LJTIH-XX-XXX**
****LJTIY-XX-XXX** (MS27471YXXD)
*****LJTSIY-XX-XXX** (MS27471YXXE)

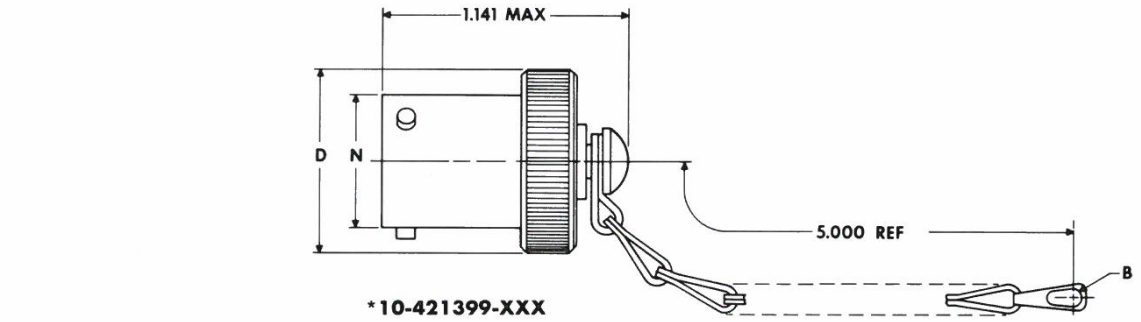
*To complete order number see page 52
**Interfacial seal wafer, to complete order number see page 52 .
***High temperature version, interfacial seal wafer with stainless steel shell, to complete order number see page 52

| Shell Size | N Dia. +.001 −.005 | SS Dia. +.000 −.016 | L +.011 −.000 | M +.006 −.005 | GG Dia. +.011 −.010 | KK Dia. +.001 −.005 |
|---|---|---|---|---|---|---|
| 9 | .572 | .662 | .789 | .125 | .750 | .672 |
| 11 | .700 | .810 | .789 | .125 | .844 | .781 |
| 13 | .850 | .960 | .789 | .125 | .969 | .906 |
| 15 | .975 | 1.085 | .789 | .125 | 1.094 | 1.031 |
| 17 | 1.100 | 1.210 | .789 | .125 | 1.218 | 1.156 |
| 19 | 1.207 | 1.317 | .789 | .125 | 1.312 | 1.250 |
| 21 | 1.332 | 1.442 | .789 | .125 | 1.438 | 1.375 |
| 23 | 1.457 | 1.567 | .821 | .156 | 1.563 | 1.500 |
| 25 | 1.582 | 1.692 | .821 | .156 | 1.688 | 1.625 |

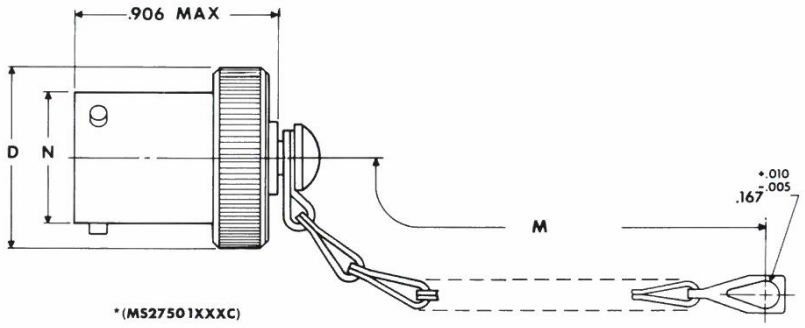
All dimensions for reference only

Weld mounting hermetic receptacle also available. Consult factory for availabity & dimensions.

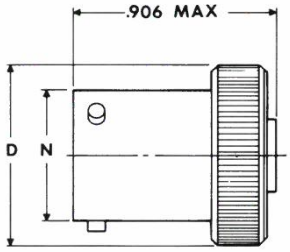
# LJT – Accessories
## plug protection cap




*10-421399-XXX




*(MS27501XXXC)




*10-275196-XXX (MS20048XXX)

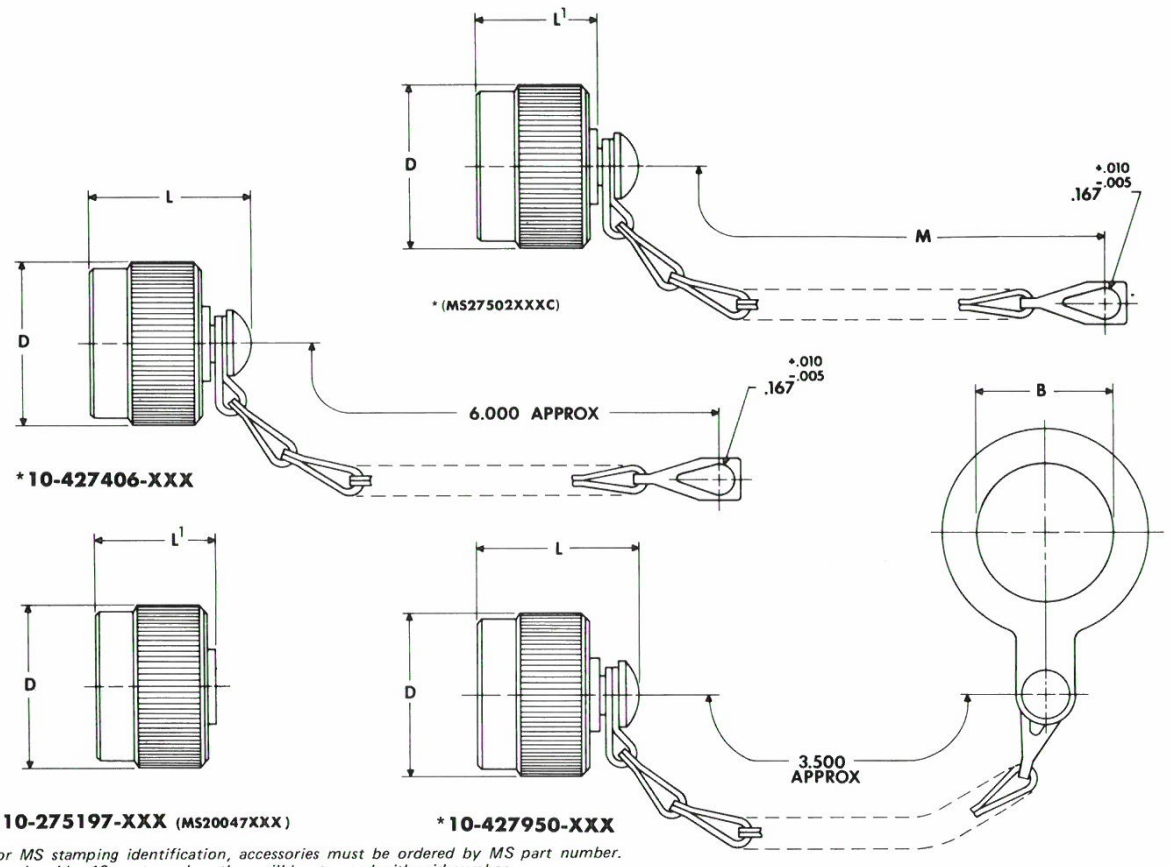
*To complete order number, add shell size and suffix number.
For example, shell size 11 with cadmium plate, nickel base, 10-421399-117, MS27501A11C or MS20048A11

| Shell Size | B Dia. Ref. | D Dia. Max. | M ±.250 | N Dia. +.001 −.005 |
|---|---|---|---|---|
| 9 | .180 | .812 | 3.000 | .572 |
| 11 | .180 | .938 | 3.000 | .700 |
| 13 | .180 | 1.062 | 3.500 | .850 |
| 15 | .180 | 1.188 | 3.500 | .975 |
| 17 | .180 | 1.312 | 3.500 | 1.100 |
| 19 | .209 | 1.438 | 3.500 | 1.207 |
| 21 | .209 | 1.562 | 4.000 | 1.332 |
| 23 | .209 | 1.688 | 4.000 | 1.457 |
| 25 | .209 | 1.812 | 4.000 | 1.582 |

All dimensions for reference only.

| Finish | 10- No. Suffix | MS No. Suffix With Chain | MS No. Suffix Without Chain |
|---|---|---|---|
| Chromate treat | -XX0 | | |
| Bright cadmium plate | -XX1 | | |
| Black anodize | -XX2 | | |
| Cadmium plate olive drab | -XX3 | | |
| Grey anodize | -XX4 | | |
| Anodic coating | -XX5 | | |
| Tin zinc plate | -XX6 | | |
| Cadmium plate nickel base | -XX7 | AXXC | AXX |
| Bright nickel | -XX8 | | |
| Olive drab, cadmium, nickel base | -XX9 | BXXC | BXX |
| Electroless nickel | -XXG | FXXC | FXX |

# LJT – Accessories
## receptacle protection caps




*For MS stamping identification, accessories must be ordered by MS part number. If ordered by 10- part number, they will be stamped with said number.*

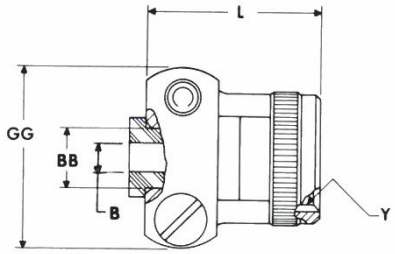
***To complete order number, add shell size and suffix number.**
**For example, shell size 11 with cadmium plate, nickel base, 10-427406-117, MS27502A11C or MS20047A11**

| Shell Size | B Dia. +.010 −.000 | D Dia. Max. | L Max. | $L^1$ Max. | M ±.250 |
|---|---|---|---|---|---|
| 9 | .703 | .844 | 1.070 | .844 | 3.000 |
| 11 | .844 | .969 | 1.070 | .844 | 3.000 |
| 13 | 1.016 | 1.125 | 1.070 | .844 | 3.500 |
| 15 | 1.141 | 1.250 | 1.070 | .844 | 3.500 |
| 17 | 1.266 | 1.406 | 1.070 | .844 | 3.500 |
| 19 | 1.391 | 1.500 | 1.070 | .844 | 3.500 |
| 21 | 1.516 | 1.625 | 1.070 | .844 | 4.000 |
| 23 | 1.641 | 1.750 | 1.070 | .844 | 4.000 |
| 25 | 1.766 | 1.875 | 1.089 | .875 | 4.000 |

All dimensions for reference only.

| Finish | 10- No. Suffix | MS No. Suffix With Chain | MS No. Suffix Without Chain |
|---|---|---|---|
| Chromate treat | -XX0 | | |
| Bright cadmium plate | -XX1 | | |
| Black anodize | -XX2 | | |
| Cadmium plate olive drab | -XX3 | | |
| Grey anodize | -XX4 | | |
| Anodic coating | -XX5 | CXXC | |
| Tin zinc plate | -XX6 | | |
| Cadmium plate nickel base | -XX7 | AXXC | AXX |
| Bright nickel | -XX8 | | |
| Olive drab, cadmium, nickel base | -XX9 | BXXC | BXX |
| Electroless nickel | -XXG | FXXC | |

# LJT – Accessories
## cable clamp




***10-436792-XXX**

*To complete order number, add shell size and suffix number.

| Finish | 10- No. Suffix |
|---|---|
| Chromate treat | -XX0 |
| Bright cadmium plate | -XX1 |
| Black anodize | -XX2 |
| Cadmium plate olive drab | -XX3 |
| Grey anodize | -XX4 |
| Anodic coating | -XX5 |
| Tin zinc plate | -XX6 |
| Cadmium plate nickel base | -XX7 |
| Bright nickel | -XX8 |
| Olive drab, cadmium, nickel base | -XX9 |
| Electroless nickel | -XXG |

For example, shell size 11 with cadmium plate, nickel base, 10-436792-117

| Shell Size | B Dia. +.010 −.025 | L Max. | Y Thread Class 2B (Plated) | GG Max. | BB Dia. +.000 −.011 |
|---|---|---|---|---|---|
| 9 | .125 | .859 | .4375-28UNEF | .775 | .250 |
| 11 | .188 | .859 | .5625-24UNEF | .837 | .312 |
| 13 | .312 | .859 | .6875-24UNEF | .963 | .438 |
| 15 | .375 | 1.109 | .8125-20UNEF | 1.087 | .562 |
| 17 | .500 | 1.109 | .9375-20UNEF | 1.150 | .625 |
| 19 | .625 | 1.109 | 1.0625-18UNEF | 1.400 | .750 |
| 21 | .625 | 1.109 | 1.1875-18UNEF | 1.400 | .750 |
| 23 | .750 | 1.234 | 1.3125-18UNEF | 1.587 | .938 |
| 25 | .800 | 1.234 | 1.4375-18UNEF | 1.681 | 1.000 |

All dimensions for reference only.

# JT/LJT
# contacts, sealing plugs plastic dust caps

| Contact Size | JT/LJT Pins | | JT Sockets | | LJT Sockets | |
|---|---|---|---|---|---|---|
| | Proprietary No. | MS No. | Proprietary No. | MS No. | Proprietary No. | MS No. |
| 8 (Coax) | 21-33102-21 | M39029/60-367 | | | 21-33102-21 | M39029/59-366 |
| 12 | 10-251415-12H | M39029/58-365 | 10-251416-125 | M39029/57-359 | 10-407035-125 | M39029/56-353 |
| 16 | 10-251415-165 | M39029/58-364 | 10-251416-165 | M39029/57-358 | 10-407035-165 | M39029/56-352 |
| 20 | 10-251415-205 | M39029/58-363 | 10-497401-205 | M39029/57-357 | 10-497403-205 | M39029/56-351 |
| 22 | 10-251415-225 | M39029/58-362 | 10-251416-225 | M39029/57-356 | 10-407035-225 | M39029/56-350 |
| 22M | 10-251415-235 | M39029/58-361 | 10-251416-235 | M39029/57-355 | 10-407035-235 | M39029/56-349 |
| 22D | 10-251415-725 | M39029/58-360 | 10-251416-725 | M39029/57-354 | 10-407035-725 | M39029/56-348 |

Plating
5 .00005 Min Gold over Nickel
4 .00001 Min Gold over Copper

**PLASTIC DUST CAPS**

| JT | LJT | Plug | Receptacle |
|---|---|---|---|
| 8 | | 10-70500-10 | 10-70506-10S |
| | 9 | 10-70506-14 | 10-70500-10 |
| 10 | | 10-70506-14 | 10-70506-12 |
| | 11 | 10-70506-16 | 10-70500-12 |
| 12 | | 10-70506-16 | 10-70506-14 |
| | 13 | 10-70506-18 | 10-70500-14 |
| 14 | | 10-70506-18 | 10-70506-16 |
| | 15 | 10-70506-20 | 10-70500-16 |
| 16 | | 10-70506-20 | 10-70506-18 |
| | 17 | 10-70506-22 | 10-70500-18 |
| 18 | | 10-70506-22 | 10-70506-20 |
| | 19 | 10-70506-24 | 10-70500-20 |
| 20 | | 10-70506-24 | 10-70506-22 |
| | 21 | 10-70576-24 | 10-70500-22 |
| 22 | | 10-70576-24 | 10-70506-24 |
| | 23 | 10-70506-28 | 10-70500-24 |
| 24 | | 10-70506-28 | 10-70576-24 |
| | 25 | 10-70575-24 | 10-70506-28 |

| Contact Size | Sealing Plugs | |
|---|---|---|
| | Proprietary No. | MS No. |
| 8 (Coax) | 10-482099-8 | |
| 12 | 10-405996-12 | MS27488-12 |
| 16 | 10-405996-16 | MS27488-16 |
| 20 | 10-405996-20 | MS27488-20 |
| 22 | 10-405996-24 | MS27488-22 |
| 22M | 10-405996-24 | MS27488-22 |
| 22D | 10-405996-24 | MS27488-22 |

# JT/LJT
# application tools

The following data includes information pertaining to the application tools which have been established for crimping, inserting, and removing the size 12, 16, 20, 22D and 22M contacts incorporated in the JT-R, LJT-R and MIL-C-38999 (MS) series connectors as applicable.

Refer to Table I.

All crimping tools included are the "full cycling" type and when used as specified in the installation instructions (L-624 and L-844) covering the JT-R, LJT-R, and MS series connectors will provide reliable crimped wire to contact terminations. There is a possibility of additional crimping tools other than those included being available at present or in the future for this specific application.

TABLE I

| Crimping Tool | Turret Die or Positioner | Contact Size Type | Connector Series |
|---|---|---|---|
| MS3198-1 | MS3198-6P | 22, 22D and 22M Socket | JT-R and MS-JT-R |
| MS3198-1 | MS3198-7P | 22, 22D and 22M Socket | LJT-R and MS-LJT-R |
| MS3198-1 | MS3198-8P | 22, 22D and 22M Pin | JT-R, LJT-R and all MS |
| MS3198-1 | MS3198-9P | 20 Pin and 20 Socket | JT-R, LJT-R and all MS |
| MS3191-4 | MS3191-9T | 12, 16, 20 Pin and Socket | JT-R, LJT-R and all MS |
| M22520/1-01 | M22520/1-04 | 12, 16, 20 Pin and Socket | JT-R, LJT-R and all MS |
| M22520/2-01 | M22520/2-06 | 22D Socket | JT-R and MS-JT-R |
| M22520/2-01 | M22520/2-07 | 22D Socket | LJT-R and MS-LJT-R |
| M22520/2-01 | M22520/2-09 | 22D Pin | JT-R, LJT-R and all MS |
| M22520/2-01 | M22520/2-10 | 20 Pin and Socket | JT-R, LJT-R and all MS |
| M22520/2-01 | M22520/2-31 | 8 Coaxial (inner) Pin and Socket | LJT-R, MS-LJT-R |
| M22910/7-1 | M22910/7-15 | 8 Coaxial (outer) Pin and Socket | LJT-R, MS-LJT-R |
| M22520/5-01 | M22520/5-05 | 8 Coaxial (outer) Pin and Socket | LJT-R, MS-LJT-R |
| M22520/5-01 | M22520/5-09 | 8 Coaxial (outer) Pin and Socket | LJT-R, MS-LJT-R |
| M22520/5-01 | M22520/5-41 | 8 Coaxial (outer) Pin and Socket | LJT-R, MS-LJT-R |

*The above crimping tools and positioners are available from the approved tool manufacturer.*

### Removal Tools for Unwired Contacts

| Used with Contact Size | Tool P/N |
|---|---|
| 12 | 11-10050-5 |
| 16 | 11-10050-4 |
| 20 | 11-10050-3 |
| 22 | 11-10050-2 |
| 22M | 11-10050-6 |
| 22D | 11-10050-1 |

MS/JT-R/LJT-R/METAL AND PLASTIC CONTACT INSERTION AND REMOVAL TOOLS

### Plastic Insertion and Removal Tools

| Used with Contact Size | MS Tool P/N | Color Code |
|---|---|---|
| 12 | MS27534-12* | Yellow/White |
| 16 | MS27534-16* | Blue/White |
| 20 | MS27534-20* | Red/White |
| 22 | MS27509A22 | Brown |
| | MS27509R22 | White |
| 22M, 22D | MS27534-22D* | Green/White |

*Double ended insertion/removal tool. Use color end for insertion, white end for removal.

### Metal Insertion Tools

| Used with Contact Size | ECD Tool P/N | | Color Code |
|---|---|---|---|
| | Angle Type | Straight Type | |
| 12 | 11-8674-12 | 11-8794-12 | Yellow |
| 16 | 11-8674-16 | 11-8794-16 | Blue |
| 20 | 11-8674-20 | 11-8794-20 | Red |
| 22 | 11-8674-22 | 11-8794-22 | Brown |
| 22M, 22D | 11-8674-24 | 11-8794-24 | Black |

### Metal Removal Tools

| Used with Contact Size | ECD Tool P/N | Color Code |
|---|---|---|
| 12 | 11-8675-12 | Yellow/White |
| 16 | 11-8675-16 | Blue/White |
| 20 | 11-8675-20 | Red/White |
| 22 | 11-8675-22 | Brown/White |
| 22M, 22D | 11-8675-24 | Black/White |

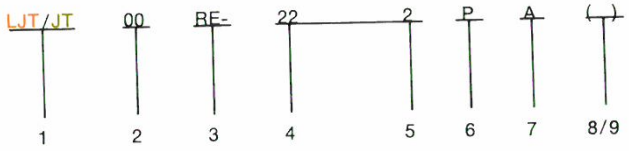
NOTE: The 11-8674, 11-8675, and 11-8794 Metal Contact Insertion and Removal Tools will accommodate wires having the maximum outside diameter as follows: Contact size 12—.155, 16—.109, 20—.077, 22—.060, 22D—.050, 22M—.050. When wire diameters are in excess of those specified, the plastic tool must be used.

# JT/LJT
# how to order

### PROPRIETARY PART NUMBER

To more easily illustrate ordering procedure, part number JT00RE-22-2PA ( ) is shown as follows:

### PART NUMBER




See code below:

1. Connector Type:
   - JT designates standard Junior Tri-Lock Connector,
     LJT designates long Junior Tri-Lock Connector
   - LJTS/JTS designates high temperature connector
   - LJTN/JTN designates chemical and fuel resistant
   - JTL designates Pygmy mounting dimensions
   - JTLN designates Pygmy mounting dimensions—chemical resistant
   - JTLS designates Pygmy mounting dimensions — high temperature
   - LJTP/JTP designates back panel mounted
   - LJTPN/JTPN designates back panel mounted — chemical resistant
   - LJTPS/JTPS designates back panel mounted — high temperature
   - JTG* designates plug with grounding fingers
   - JTNG* designates plug with grounding fingers — chemical resistant

**Grounding fingers standard on all LJT plugs.*

2. Shell Style:
   - 00 designates wall mount receptacle
   - 01 designates line mount receptacle
   - 02 designates box mount receptacle
   - 06 designates straight plug
   - 07 designates jam nut receptacle
   - 08 designates 90-degree plug
   - I designates solder mount receptacle — hermetic

3. Service Class:

"P" for potting applications — These connectors are supplied with a potting boot.† All shells are designed with integral features to retain potting boots.†

"A" for general duty applications — Threaded rear design.† Can be supplied with strain relief "A (SR)."

"C" for pressurized applications. Threaded rear design.† Can be supplied with strain relief "C (SR)."

"H" for hermetic applications — Fused compression glass sealed inserts. Leakage rate less than .01 micron cu. ft./hr. ($1 \times 10^{-7}$ cc/sec.) at 15 psi differential.

"Y" same as "H" with interfacial seal.

"T" for MS27599A applications — General duty — pressurized (receptacles only).

"RP" for potting crimp applications — Supplied with spacer grommet and potting boot.†

"RE" for environmental crimp applications — Supplied with a grommet and compression nut.† Can be supplied with strain relief integral with compression nut "RE (SR)." ( JT Series only. )

"RT" for environmental applications — Supplied without rear accessories. Design provides serrations on rear threads of shells.

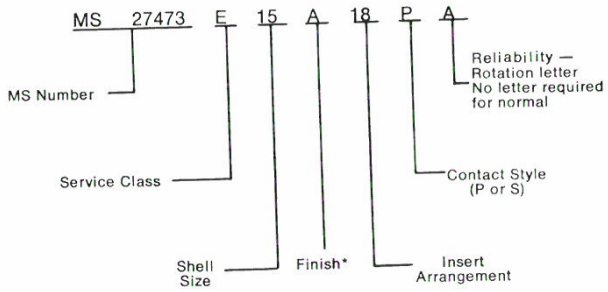
For additional information defining complete description of service class, consult factory.

4. JT shell sizes available from 8 through 24. LJT shell sizes available from 9 through 25. (Page 4 through 8)
5. 22-2 designates insert arrangement. Refer to following pages for additional insert patterns. (Page 6 through 8)
6. P designates pin contacts. S for socket contacts.
7. A designates a rotated connector assembly. Other basic rotations are B, C, and D. No letter required for normal (no rotation) position. (Page 4)
8. SR designates a strain relief clamp. Strain reliefs are available only on A, C, and RE class connectors.
9. Finish variation suffix.

*†Not applicable to box mounting style.*

| Finish | Finish Suffix | Finish plus SR Suffix |
|---|---|---|
| Cadmium Plated Nickel Base | | (SR) |
| Bright Cadmium | (001) | (304) |
| Olive Drab Cadmium Plate | (003) | (301) |
| Grey Anodize | (004) | (382) |
| Anodic Coating (Alumilite) | (005) | (300) |
| Bright Nickel | (009) | (362) |
| Chromate Treated (Iridite 14-2) | (011) | (344) |
| Olive Drab Cadmium Plate Nickel Base | (014) | (386) |

### MILITARY TYPES




**For finish variations, see finish data. (Page 3)*
*For MS depictions and dimensional data see applicable MIL-Spec. (MIL-C-38999, MIL-C-27599).*

Bendix Federal Vendor Identification/FSCM 77820

## SALES OFFICES

### Military/Aerospace

**ATLANTA, GA**
**800-526-9020**

**NEW ENGLAND**
**603-893-5033**
382 Main Street
Salem, NH 03079

**CHICAGO, IL**
**219-489-2832**

**DALLAS, TX**
**214-343-8420**
9550 Forest Lane (Suite 125)
Dallas, TX 75231

**DAYTON, OH**
**513-294-0461**
3131 South Dixie Dr. #222
Dayton, OH 45439

**FT. WAYNE, IN**
**219-489-2832**

**LOS ANGELES, CA**
**714-855-4454**
Suite 101
23185 LaCadena Drive
Laguna Hills, CA 92653

**MINNEAPOLIS, MN**
**612-452-5906**
3445 Washington Dr. Suite 100
Eagan, MN 55122

**NEW YORK METROPOLITAN**
**201-288-1710**
P.O. Box 1948
Teterboro, NJ 07608

**ORLANDO, FL**
**305-291-8536**

**PHILADELPHIA, PA**
**201-288-1710**

**PHOENIX, AZ**
**602-972-8020**

**SAN FRANCISCO, CA**
**408-732-8990**
465 S. Mathilda Avenue (Suite 301)
Sunnyvale, CA 94086

**SEATTLE, WA**
**206-455-0066**
925 116th Ave., N.E.
Suite 247, P.O. Box 726
Bellevue, WA 98009

**SIDNEY, NY**
**607-563-5324**
40–60 Delaware Street
Sidney, NY 13838-1395

**ST. LOUIS, MO**
**314-298-0399**
3751 Pennridge Square (Suite 100)
Bridgeton, MO 63044

**TULSA/WICHITA**
**918-496-9401**

**WASHINGTON, DC**
**800-526-9020**
**201-288-1710**

### Commercial/Industrial

**ATLANTA, GA**
**404-394-6298**
(Branch of Greensboro)

**NEW ENGLAND**
**603-893-5033**
382 Main Street
Salem, NH 03079

**BOULDER, CO**
**303-443-4780**
Front Range Marketing
3100 Arapahoe Rd. (Suite 404)
Boulder, CO 80303

**CHICAGO, IL**
**312-986-2330**
125 Windsor (Suite 109)
Oak Brook, IL 60521

**DALLAS, TX**
**214-343-8420**
9550 Forest Lane (Suite 125)
Dallas, TX 75243

**DAYTON, OH**
**513-294-0461**
3131 S. Dixie Drive (Suite 222)
Dayton, OH 45439

**DETROIT, MI**
**313-722-1420**
(Branch of Dayton)

**GREENSBORO, NC**
919-292-9273
2306 W. Meadowview Road (Suite 117)
Greensboro, NC 27407

**HOUSTON, TX**
**713-525-1118**
(Branch of Dallas)

**INDIANAPOLIS, IN**
**317-842-3245**
Leslie M. DeVoe Co.
4371 E. 82nd St. (Suite D)
Indianapolis, IN 46250

**KNOXVILLE, TN**
**615-690-6765**
(Branch of Greensboro)

**LOS ANGELES, CA**
**213-532-3180**
454 Carson Plaza Drive (Suite 204)
Carson, CA 90746-3248

**MIAMI, FL**
**305-392-6688**
(Branch of Greensboro)

**MILWAUKEE, WI**
**414-542-9566**
(Branch of Chicago)

**MINNEAPOLIS, MN**
**612-452-5906**
Eagan West Office Bldg. (Suite 100)
3445 Washington Drive
Eagan, MN 55122

**NEW YORK METROPOLITAN**
**516-582-4466**
300 Wheeler Rd (Suite 203)
Hauppauge, NY 11788

**ORLANDO, FL**
**305-678-5504**
1031 S. Semoran Blvd.
Winter Park, FL 32792

**PHOENIX, AZ**
**602-265-3227**
810 E. Camelback Rd. (Suite 3C)
Phoenix, AZ 85014

**ST. LOUIS, MO**
**314-298-0399**
3751 Pennridge Square (Suite 100)
Bridgeton, MO 63044

**SALT LAKE CITY, UT**
**801-364-6481**
(Branch of Boulder)

**SAN DIEGO, CA**
**619-272-5451**
(Branch of Los Angeles)

**SAN FRANCISCO, CA**
**408-732-8990**
465 S. Mathilda Avenue (Suite 301)
Sunnyvale, CA 94086

**SEATTLE, WA**
**206-455-2525**
925 116th Ave. N.E. (Suite 247)
Bellevue, WA 98009

**WASHINGTON, DC**
**301-459-8484**
8201 Corporate Dr. (Suite 740)
Landover, MD 20785

## DISTRIBUTORS
### Corporate Headquarters

**AVNET ELECTRONICS**
**HAMILTON/AVNET ELECTRONICS**
10950 Washington Blvd.
Culver City, CA 90230
213-558-2000

**HALL-MARK ELECTRONICS CORP.**
11333 Pagemill Rd
Dallas, TX 75243
214-343-5000

**POWELL ELECTRONICS, INC.**
S. Island Rd. & Enterprise Ave.
Box 8765
Philadelphia, PA 19101
215-365-1900

**SCHWEBER ELECTRONICS CORP.**
Jericho Turnpike
Westbury, NY 11590
516-334-7474

**C. TENNANT ELECTRONICS**
1051 Blake Street
Box 13328
Edwardsville, KS 66113
913-441-1801

## INTERNATIONAL OPERATIONS

**CANADA**
**Montreal, PQ**
**514-482-5520**
3285 Cavendish Blvd. (Suite 645)
Montreal, PQ H4B 2L9

**OTTAWA, ON**
**613-226-2727**
112 Colonnade Rd
Nepean, ON K2E 7L6

**TORONTO, ON**
**416-291-4401**
TWX: 610-492-4379
Telex: 065 25210
44 Metropolitan Rd.
Scarborough, ON M1R 2T9

**VANCOUVER, BC**
**604-278-7636**
10711 Cambie Rd. (Suite 230)
Richmond, BC V6X 3C9

## EUROPE

**AUSTRIA**
Amphenol Ges m.b.H.
Tautenhayngasse 22.
A-1151 Wien (Vienna).
Tel: (0222) 925 166
TLX: (847) 132661

**ENGLAND**
Amphenol Limited
Thanet Way
Whitstable, Kent CT5 3JF
Tel: 02 27-26 44 11
TLX: (851) 96157

**FRANCE**
UMD Amphenol
Avenue de Gray-
21 Chemin Du Defois
39100 Dole
Tel: (84) 72 81 13
TLX: (842) 360264

**W. GERMANY**
Amphenol-Tuchel Electronics GmbH
August-Haeusser Str. 10
7100 Heilbronn
Tel: (07131) 486-1
TLX: (841) 728816

**ITALY**
Amphenol Italia S.R.L.
Via Senato 6/B 20020 Arese (Mi)
Tel: 0039 2 938 51 61 (r.a.)
TLX: (334) 899 SICEMI

**NETHERLANDS**
Amphenol Benelux
Postbus 253
P/A Ambachtsweg, 3-4
3401 MK Ijsselstein
Tel: 31-3408-86824
TLX: 47203 ILBV NL

**SWEDEN**
Amphenol Scandinavia AB
Kanalvaegen 1
S194 61 Upplands Vaesby
Tel: (08) 760-88035
TLX: (854) 17890

## FAR EAST

**HONG KONG**
Amphenol East Asia, Ltd.
Room 513-14
World Commerce Centre
Harbour City, 11 Canton Rd.
TST, Kowloon, Hong Kong
Tel: 3-681283/4
TLX: 39289 AMPHL HX

**INDIA**
Amphetronix Ltd.
Plot No. 105
Bhosari Industrial Area
P.B. No. 1 Poona, 411026
Tel: 83363
TLX: (953) 145-337

**JAPAN**
DAITO SHOJI CO., LTD.
3, Shimamachi 1- Chome
Higashiku, Osaka 540
Tel: 03 264 0221
TLX: 00529-6522



Printed in U.S.A. VO 3/85

**AMPHENOL PRODUCTS HEADQUARTERS**
**312-983-3500**
4300 Commerce Court
Lisle, IL 60532

**Bendix Connector Operations**
**607-563-5324**
40–60 Delaware Street
Sidney, New York 13838-1395

# So YOU Want To Know Connectors

## A Handy Reference Guide

ALLIED Amphenol Products

CONTENTS:



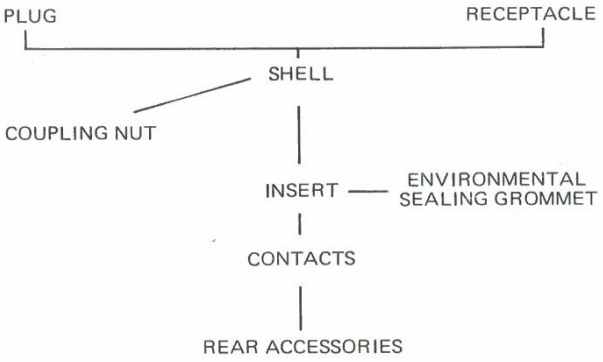
This booklet is intended to be used as a ready reference to typical standard, miniature and sub-miniature cylindrical connector part numbers and terminology. Reading its brief pages will not make you a connector expert, but should guide you in becoming familiar with the product, to better serve our customers with a really great connector line.

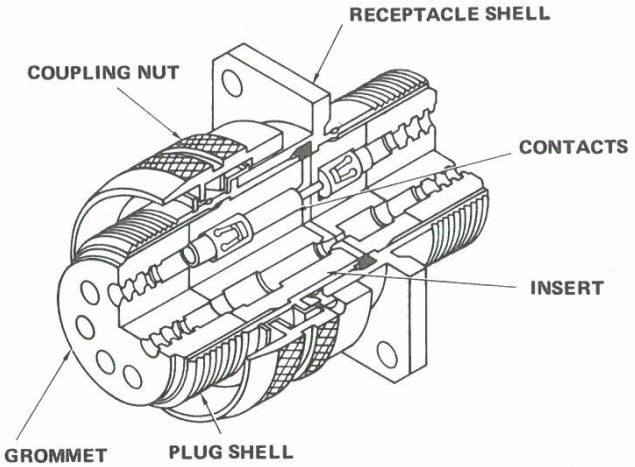
# SECTION I

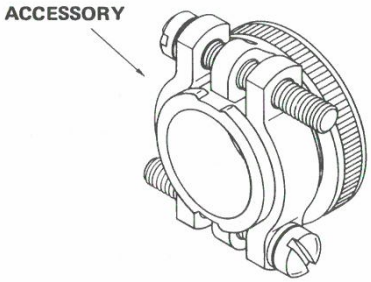
## NOMENCLATURE: CYLINDRICAL CONNECTORS

**Basic Components**

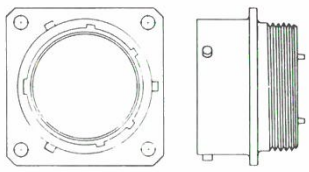
1. **Shell (Houses Insert & Contacts)**
2. **Insert (Dielectric Contact Insulator) Pin or Socket**
3. **Contact (Wire End Termination) (Signal Joining Part)**
4. **Coupling Nut**
5. **Accessories (Wire Seals, Cable Seals, Wire Support, etc.)**



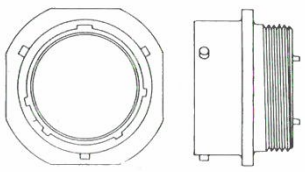



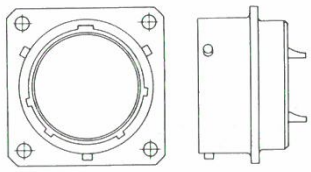

## SHELL STYLES



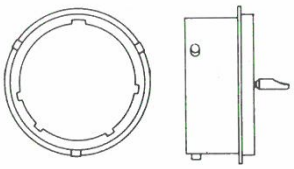
**Wall Mount Recept.**



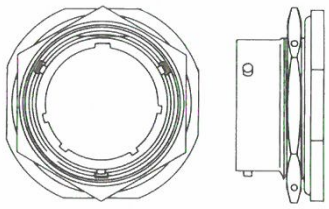
**Cable Connecting Plug.**



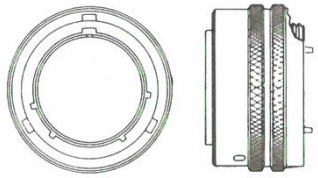
**Box Mount Recept.**



**Solder Mount Recept. (Hermetic)**



**Jam Nut Recept.**



**Straight Plug**

## SHELL STYLES, Cont.

COUPLING
Threaded, Bayonet

**SHELL SIZES (Typical MIL-C-5015)**

| | | | |
|---|---|---|---|
| 8S | 14S | 18 | 28 |
| 10S | 14 | 20 | 32 |
| 10SL | 16S | 22 | 36 |
| 12S | 16 | 24 | 40 |
| 12 | | | |

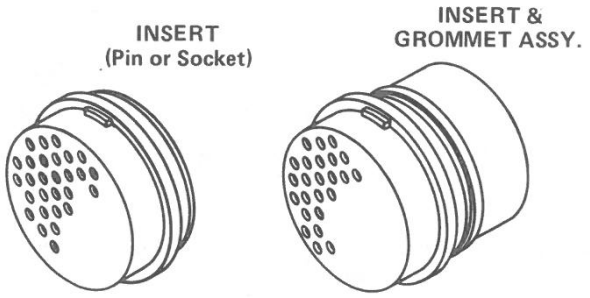
Short contact "S" designates short (length)
Short contact "SL" designates long (length)

**Shell size denotes mating thread diameter in 16'ths of an inch. ie. a size 8 shell denotes 8/16 of an inch with a .5000-28 UNEF thread.**

**STYLE DESIGNATION**

| PLUG | SHELL STYLES |
|---|---|
| 06 | Straight |
| 08 | 90° |
| 09 | Flange Mount Recept |
| 05 | Straight, Less Rear Accessory |
| **RECEPTACLE** | **SHELL STYLES** |
| 00 | Wall Mount |
| 01 | Cable Connecting Plug |
| 02 | Box Mount |
| 03 | Wall Mount, Less Rear Accessory |
| 07 | Jam Nut |
| IH | Solder Mount Hermetic |

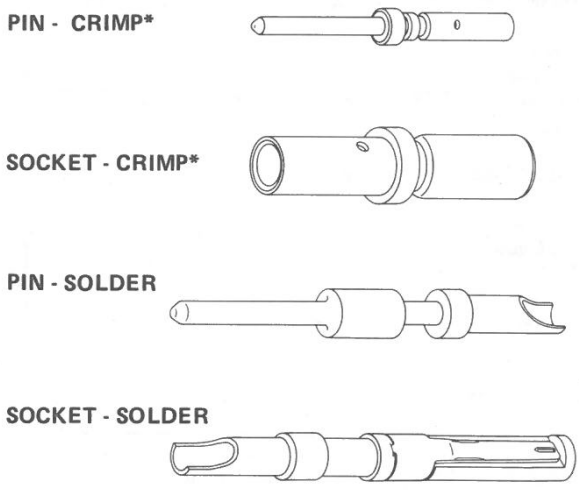
## INSERTS




- Solder
- Crimp
  - – Metal Clip Retention
  - – Dielectric Retention

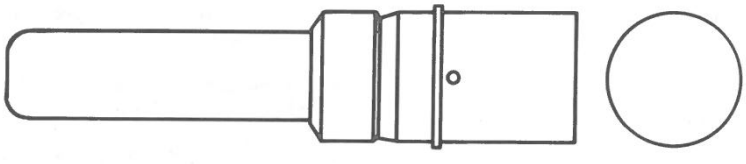
May include a soft front interfacial seal (Bonded) if dielectric is hard, and a rear sealing grommet separate or attached.

## CONTACTS

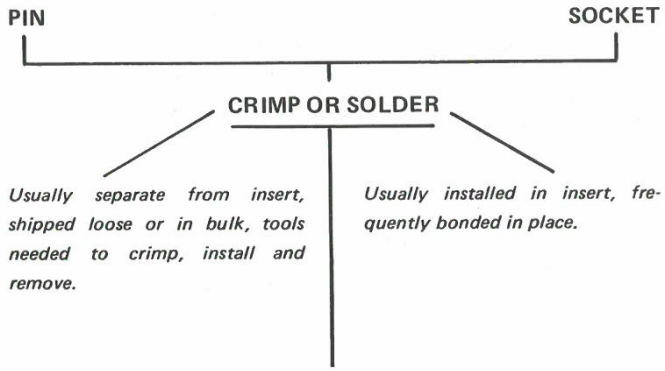



*Crimp are removable

**SIZE BY WIRE GAUGE**




## CONTACTS




SOLDERLESS WRAP
PC STUD
COAXIAL
THERMOCOUPLE
TRIAXIAL
FIBER OPTIC

### CONTACT SIZES

| Contact Size | 22D | 22M | 22 | 20 | 16 |
|---|---|---|---|---|---|
| American Wire Gauge Wire Size | 22-28 | 24-28 | 22-26 | 20-24 | 16-22 |
| **Contact Size** | **12** | **8** | **4** | **0** | |
| American Wire Gauge Wire Size | 12-14 | 8-10 | 4-6 | 0-2 | |

## ACCESSORIES

- Adapters — Straight — 90° — Conduit, Environmental, Weatherproof, Open Wire Bundle, EMI, etc.
- Compression Ring — Wire Sealing
- Clamp — Cable Sealing
- Strain Relief — Clamp, Kellems Grip
- Potting Boot — Straight — Angle — Universal

## KNOW THE LANGUAGE

### 25 COMMON TERMS YOU SHOULD KNOW

- Shell - Houses Insert and Contacts
- Insert - The dielectric or insulating inner core, holds contacts
- Coupling Nut - Outer threaded or grooved ring which holds mated pair together
- Jam Nut - Nut that holds receptacle to a panel
- Bayonet Coupling - A non threaded, triple ramp type of coupling
- Contacts - Mechanical Tip to which wire is terminated
- * Pin Contact - Male half of a mated pair of contacts
- Socket Contact - Female half of a mated pair of contacts
- Solder Contact - A contact to which wire is joined by soldering
- Crimp Contact - A contact to which wire is joined by mechanical squeeze
- * Plug - The cable/coupling half of a mating pair
- Receptacle - The panel/receiving half of a mating pair
- Mating Pair - Two connectors that couple together
- Plating - The metal finish applied to contacts and or shell components (protective)
- Grommet - Resilient part at back of insert (attached or separate) gives wire moisture seal
- Gland - Resilient ring in rear accessory provides seal on wire jacket
- Sealing Plug - Plastic type slug, placed in unused grommet holes to seal
- Grounding Fingers - A metal strap around plug shell for positive shell to shell connection
- Hermetic - A connector with fused glass insert for air tightness
- Mating/Unmating Forces - Torque required to couple/uncouple a mating pair
- Rear Termination - An accessory which threads to back of shell
- Strain Relief - A type of accessory which clamps wires for support
- Potting Boot - A type of accessory which forms a mold for potting compound
- EMI or RFI Backshell - A type of accessory to terminate wire shielding
- Interfacial Seal - A resilient part on the face of pin inserts which provides moisture seal

*Note: Male half always goes into female.*

# SECTION II

## MAJOR MIL-SPECIFICATIONS BY TYPE

### STANDARD MS MIL-C-5015
### Heavy Duty MIL-C-22992
### Proprietary Variations

- Older larger series of connectors
- Found on many pieces of military equipment
- Mostly heavy current carrying connectors
- Early types had only solder type contacts
- Later revision to MIL SPEC also added crimp type contacts
- Bendix supplies the solder type to the MIL SPEC
- Bendix supplies both solder and crimp versions under proprietary part numbers
- Several variations of basic MIL-C-5015 and MIL-C-22992 Types are available in the same and additional contact arrangements, such as the QWL, QWLD, 10-214000 Series, 10-244000 Series and others, and can be found in the Bendix Catalog
- See Bendix Electrical Connector Catalog Sections: MIL-C-5015 Cylindrical, MIL-C-5015 modifications, Heavy Duty Cylindrical, Commercial Aircraft Cylindrical
- Basic part number for MIL-C-5015 Series as supplied by Bendix is MS310X A, C, E, F, P or R
- MIL-C-5015 Threaded Coupling - 1 Key/Keyway shell polarization

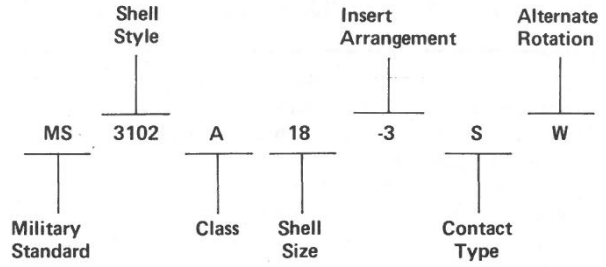
**SHELL STYLES**

| | |
|---|---|
| 3100 | Wall Mount Receptacle |
| 3101 | Cable Connecting Plug |
| 3102 | Box Mount Receptacle |
| 3106 | Straight Plug |
| 3108 | 90° Plug |

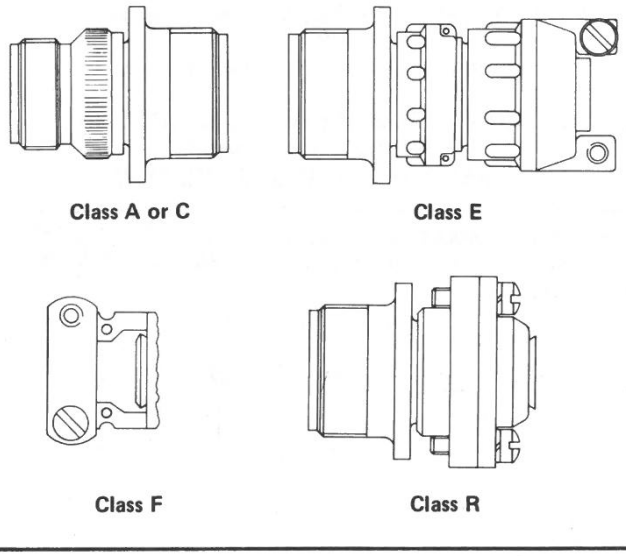
**CONTACT SIZES**

| Contact Size | 16 | 12 | 8 | 4 | 0 |
|---|---|---|---|---|---|
| American Wire Gauge Wire Size | 16-22 | 12-14 | 8-10 | 4-6 | 0-2 |

MIL-C-5015 PART NUMBERS




MIL-C-5015




**MATING HALVES**

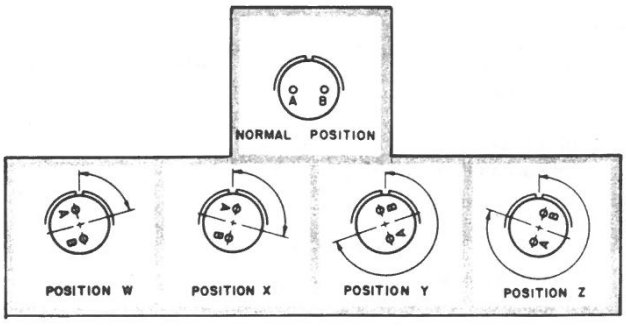
- Plugs: MS3106, MS3108, MS3101
- Receptacles: MS3100, MS3102

**Other Non-MIL - Mates Flange Mounted**

- Flange Mounted Plug: FP3106
- Thru-Bulkhead Receptacle: TBF

See also 10-74XXX & 10-873XX catalog section MIL-C-5015 Mods. For Jam nut receptacles (Non-MIL)

**ALTERNATE POSITIONS OF INSERT ARRANGEMENTS**



## HEAVY DUTY CYLINDRICAL CONNECTORS

- CLASS L - for the heaviest electrical loads
  Current range 40 to 200 amperes
  Direct current or single/three phase, 60/400 Hertz alternating current
  Automatic grounding for safety
- QWLD - for most power and control circuits
  Military qualified connectors and commercial equivaltents available
  Increased shell size for greater durability than similar standard connectors
- Class L and QWLD have 5 key/keyway shell polarization and Double Stub Thread Coupling
- QWLD - a more economical, compact heavy duty design for commercial power and control applications; single key shell polarization and double stub thread coupling

## MIL-C-22992 SERIES CONNECTORS CLASSES C, R and L PART NUMBER BREAKDOWN

The ordering procedure for QWLD MS-APPROVED CONNECTORS is illustrated by part number MS17343R20N27PW as shown below:

PART NUMBER

| MS17343 | R | 20 | N | 27 | P | W |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

See code below:

1. MS Numbers
   - MS17343 designates wall mount receptacle.
   - MS17344 designates straight plug.
   - MS17345 designates cable connecting plug.
   - MS17346 designates box mount receptacle.
   - MS17347 designates jam nut receptacle with rear accessory threads (wall mount).
   - MS17348 designates jam nut receptacle (box mount).

2. Class
   C designates pressurized. . . used where circuit integrity is protected by a pressure differential.
   R designates environmental. . . (see Heavy Duty Cylindrical Catalog for definition).

3. Shell Size
   Available in shell sizes 12 through 44. See catalog for dimensional data.

4. Shell Finish
   C for conductive or N for non-conductive.

5. Insert Arrangement
   Current MS insert arrangements are listed in catalog 12-052, Heavy Duty Cylindrical.

6. Contact Type
   "P" designates pin contacts. "S" for socket contacts.

7. Alternate Insert Rotations:
   Used to prevent cross-mating of connectors. Absense of a letter in this space indicates normal ($0^{o}$) position of the insert. See catalog for alternate insert rotation illustrations.

See catalog 12-052 for proprietary equivalents such as HK Series and 10-194XXX Series. Also see publication L-1080 for QWL Series.

The ordering procedure for CLASS "L" CONNECTORS is illustrated by part number MS90555C32412SY as shown below:

PART NUMBER

| MS90555 | C | 32 | 4 | 12 | S | Y |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

See code below:

1. MS Numbers
   - MS90555 designates wall mount receptacle (power source).
   - MS90556 designates straight plug.
   - MS90557 designates cable connecting plug without coupling ring.
   - MS90558 designated wall mount receptacle with coupling ring (equipment end).

2. Shell Finish
   C (conductive) for AC or N (non-conductive) for DC circuits.

3. Shell Size
   Relates directly to current carrying capability.
   Size 28 - 40 amperes.
   Size 32 - 60 amperes.
   Size 44 - 100 amperes.
   Size 52 - 200 amperes.

4. Main Shell Key/keyway Position
   N designates normal position. Three other positions (4, 5 and 6) of the main shell key/keyway prevent cross-mating or incompatible voltages. Refer to the individual connector style descriptions in catalog 12-052 for applicability.

5. Insert Arrangement
   Determined by connector size (current carrying capability) and cable configuration to be accommodated. See catalog for insert arrangement pattern illustrations.

6. Contact Type
   "P" designates pin contacts. "S" for socket contacts. MS90555 and MS90557 are supplied with socket contacts only. MS90556 and MS90558 are supplied with pin contacts only.

7. Alternate Insert Rotation
   Used to prevent cross-mating of incompatible frequencies. Absense of a letter in this space indicates normal ($0^{o}$) position of the insert. See catalog for individual insert arrangement descriptions.

# SECTION III

## MAJOR MIL-SPECIFICATIONS BY TYPE
## MINIATURE MIL-C-26482
## MIL-C-83723 Series I

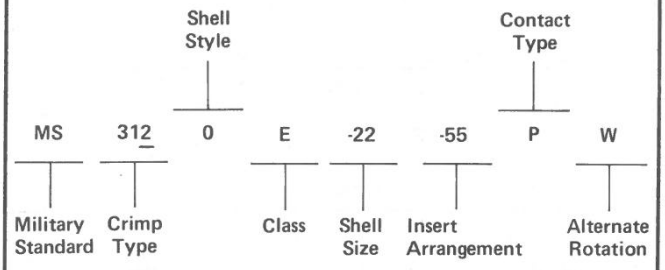
MINIATURE PT - TYPES ("PYGMY"), MIL-C-26482

- Widely used smaller connectors
- Extensive use on military equipment including aircraft as well as commercial applications
- Available with either crimp or solder type contacts
- 3 point bayonet coupling
- Popular low cost series
- 5 Key/keyway shell polarization
- Bendix supplies MIL SPEC Types as well as proprietary versions
- MS311X or PT, solder type contacts (Series I)
- MS312X or PT-SE, crimp type contacts (front release) (Series I)
- MS347X or PTS-DR, crimp type contacts (rear release) (Series II)
- Modifications of Basic Series are:
- PT-CE, crimp type contacts (front removable) no MIL P/N, intermates with MS Connectors
- PC, double stub threaded coupling - (available with either crimp or solder contacts) no MIL P/N, does not intermate with PT Types
- SP, same as PT except wider flanges for back panel mounting, anodic coating, no MIL P/N, intermates
- DC, same as PT except resistant to aircraft fluids, no MIL P/N, intermates
- There are other modifications and specials available
- For details on above Series see Bendix Electrical Connector Catalog Sections "Miniature Cylindrical", "Commercial Aircraft Cylindricals"

MIL-C-26482 Series II is the same as MIL-C-83723 Series I and will intermate with all PT connectors. The Series features rear removable contacts — accessories are ordered separately. MIL-C-83723 Series I has been superseded by MIL-C-26482 Series II.

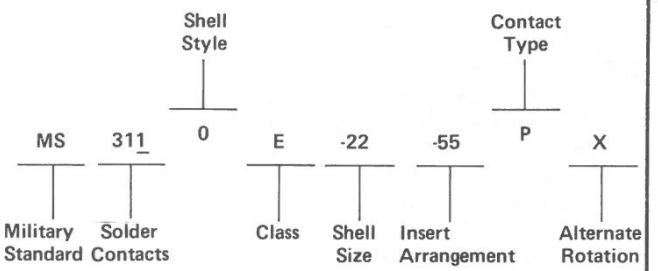
MIL-C-26482 PART NUMBERS

PT CRIMP SERIES I



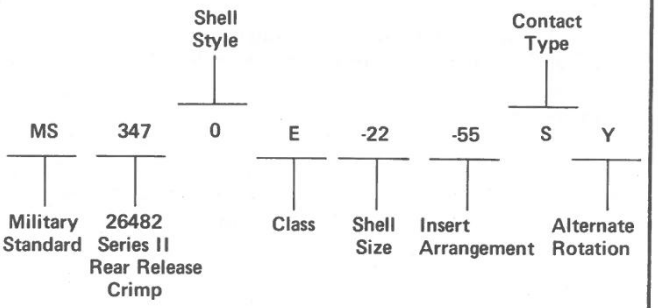

MIL-C-26482 PART NUMBERS

PT SOLDER SERIES I




MIL-C-26482 PART NUMBERS

PTS-DR, SERIES II
REAR RELEASE CRIMP



## PYGMY CRIMP CONNECTORS
## PART NUMBER BREAKDOWN

### PROPRIETARY PART NUMBER CONSTRUCTION FOR PYGMY CRIMP CONNECTORS

To more easily illustrate ordering procedures, part number PT00SE-20-41PW (SR) is broken down as follows:

PART NUMBER

| PT | 00 | SE- | 20 - 41 | P | W | (SR) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 5 | 6 | 7 | 8 |

See code below:

1. Connector Families:
   PT designates standard olive drab cadmium plated Tri-Lock Coupling connector.
   SP designates connector similar to PT except for anodic coating and larger flange and mounting holes for back panel mounting

2. Shell Styles:
   "00" designates wall mount receptacle.
   "01" designates cable connecting plug.
   "02" designates box mount receptacle.
   "06" designates straight plug.
   "07" designates jam nut receptacle.
   "08" designates 90° plug.

3. Service Classes:
   "SE" designates environmental crimp.
   "SP" designates potted type crimp.
   Both of the above are Bendix proprietary versions of the MIL-C-26482 Series I crimp contact connector and offer 15 lbs. contact retention for size 20 contacts, 25 lbs. for size 16 contacts.
   "CE" designates environmental crimp.
   "CP" designates potted type crimp.
   Both of the above are *original* Bendix crimp connectors and offer 7 lbs. contact retention for size 20 contacts, 9 lbs. for size 16 contacts.

4. "20" designates shell size. Shell sizes available are 8 through 24.

5. "20-41" designates insert arrangement.

6. "P" designates pin contacts. "S" for socket contacts.

7. "W" designates that insert is rotated in its shell from the standard position to alternate position W. The basic rotations are W, X, Y, and Z. No letter required for normal (no rotation) position.

8. "SR" designates a strain relief clamp. Deviation suffixes would be inserted here. For example, (005) would indicate the metal parts (except contacts) would have anodic coating.

### PART NUMBER NOMENCLATURES FOR MS/PT CRIMP CONNECTORS TO MIL-C-26482 SPECIFICATION

To more easily illustrate ordering procedures, part number MS3120E-20-41PW is broken down as follows:

PART NUMBER

| MS | 312 | 0 | E- | 20 - 41 | P | W |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 6 | 7 | 8 |

See code below:

1. Military Standard

2. "312"designates basic family number for Mil-Spec 26482 crimp type.

3. Shell Styles:
   "0" designates wall mount receptacle.
   "1" designates cable connecting plug.
   "2" designates box mount receptacle.
   "4" designates jam nut receptacle.
   "6" designates straight plug.
   "7" designates box mount receptacle with dual mounting holes.
   "8" designates wall mount receptacle with dual mounting holes.

4. Service Classes:
   "E" designates environmental resisting connector.
   "F" designates environmental resisting connector with strain relief.
   "P" designates potted type with potting boot.

5. "20" designates shell size. Shell sizes available are 8 through 24.

6. "20-41" designates insert arrangement.

7. "P" designates pin contacts. "S" for socket contacts.

8. "W" designates that the insert is rotated in its shell from the standard position to alternate position W. The basic rotations are W, X, Y, and Z. No letter required for normal (no rotation) position.

CROSS REFERENCE - COMMERCIAL PT TO COMPARABLE MILITARY MS TYPES

| BENDIX P/N | MS P/N | BENDIX P/N | MS P/N |
|---|---|---|---|
| PT00SE | MS3120E | PT06SE (SR) | MS3126F |
| PT01SE | MS3121E | MF00SE (SR) | MS3128F |
| PT02SE | MS3122E | PT07SE (SR) | MS3124F |
| PT06SE | MS3126E | PT08SE (SR) | NONE |
| MF02SE | MS3127E | PT00SP | MS3120P |
| MF00SE | MS3128E | PT01SP | MS3121P |
| PT07SE | MS3124E | PT02SP | MS3122P |
| PT08SE | NONE | PT06SP | MS3126P |
| PT00SE (SR) | MS3120F | PT07SP | MS3124P |
| PT01SE (SR) | MS3121F | | |

## PYGMY SOLDER CONNECTORS
## PART NUMBER BREAKDOWN

### PART NUMBER NOMENCLATURE FOR PYGMY SOLDER CONNECTOR

To more easily illustrate ordering procedure, part number PT00A-20-41PW(SR) is shown as follows:

PART NUMBER

| PT | 00 | A- | 20 - 41 | P | W | (SR) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 5 | 6 | 7 | 8 |

See code below:

1. Connector Families:
   PT designates standard olive drab cadmium plated tri lock coupling connector. This is the Bendix proprietary version of the MIL-C-26482 solder contact connector.
   PC designates a bright cadmium plated connector with double stud thread coupling.
   SP designates a connector similar to PT except for anodic coated and larger flange and mounting holes for back panel mounting.

2. Shell Styles:
   "00" designates wall mount receptacle.
   "01" designates cable connecting plug.
   "02" designates box mount receptacle.
   "06" designates straight plug.
   "07" designates jam nut receptacle.
   PTB designates thru-bulkhead receptacle.
   PTI designates solder-mount receptacle.

3. Service Classes:
   "A" designates general duty back shell.
   "C" designates pressurized receptacle.
   "E" designates environmental resisting with grommet and nut.
   "P" designates potted with potting boot.
   "W" designates clamp assembly for moisture-proofing, multi-jacketed cables.
   "H" designates hermetic seal receptacle.

4. "20" designates shell size. Shell sizes available 6 through 24.

5. "20-41" designates insert arrangements.

6. "P" designates pin contacts. "S" for socket contacts.

7. "W" designates that insert is rotated in its shell from the standard position to alternate position W. The basic rotations are W, X, Y, and Z. No letter required for normal (no rotation) position.

8. "SR" designates a strain relief clamp. Deviation suffixes would be inserted here. For example: (005) would indicate the metal parts (except contacts) would have alumilite plating.

### PART NUMBER NOMENCLATURES FOR MS/PT SOLDER CONNECTOR TO MIL-C-26482 SPECIFICATION

To more easily illustrate ordering procedures, part number MS3110E-20-41PW is broken down as follows:

PART NUMBER

| MS | 311 | 0 | E- | 20 - 41 | P | W |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 6 | 7 | 8 |

See code below:

1. Military Standard

2. "311" designates basic family number for MIL Spec 26482 solder type.

3. Shell Styles:
   "0" designates wall mount receptacle.
   "1" designates cable connecting plug.
   "2" designates box connecting plug.
   "4" designates jam nut plug.
   "6" designates straight plug.

4. Service Classes:
   "E" designates environmental resisting connectors with grommet and clamping nut.
   "F" designates environmental resisting connectors with grommet and strain relief.
   "P" designates potted type with potting boot.

5. "20" designates shell size. Shell size available 8 through 24.

6. "20-41" designates insert arrangement.

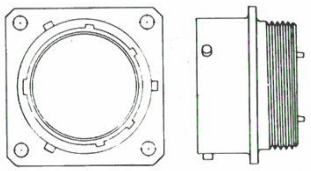
7. "P" designates pin contacts. "S" for socket contacts.

8. "W" designates that insert is rotated in its shell from the standard position to alternate position W. The basic rotations are W, X, Y, and Z. No letter required for normal (no rotation) position.

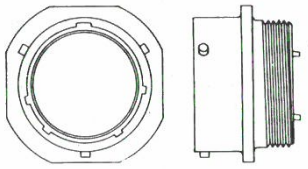
CROSS REFERENCE COMMERCIAL PT TO COMPARABLE MILITARY MS TYPES

| BENDIX P/N | MS P/N | BENDIX P/N | MS P/N |
|---|---|---|---|
| PT00A | NONE | PT00E (SR) | MS3110F |
| PT01A | NONE | PT01E (SR) | MS3111F |
| PT02A | NONE | PT02E (SR) | NONE |
| PT06A | NONE | PT06E (SR) | MS3116F |
| PT07A | NONE | PT07E (SR) | MS3114F |
| PT00C | NONE | PT00P | MS3110P |
| PT02C | NONE | PT01P | MS3111P |
| PT07C | NONE | PT02P | NONE |
| PTB | MS3119 Ref | PT06P | MS3116P |
| | | PT07P | MS3114P |
| PT00E | MS3110E | PT00W | NONE |
| PT01E | MS3111E | PT01W | NONE |
| PT02E | MS3112E | PT02W | NONE |
| PT06E | MS3116E | PT06W | NONE |
| PT07E | MS3114E | PT02H | NONE |
| | | PT07H | MS3114H |
| | | PT1H | MS3113H |

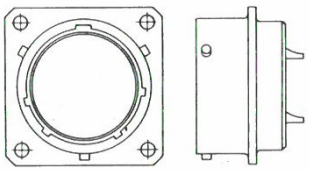
## PYGMY SHELL STYLES



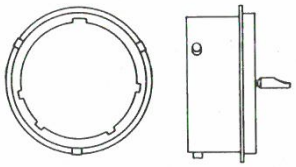
Wall Mount Recept.



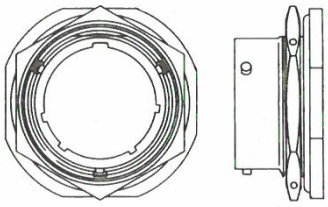
Cable Connecting Plug



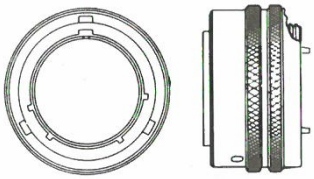
Box Mount Recept.



Solder Mount Recept. (Hermetic)

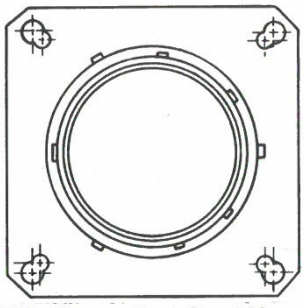


Jam Nut Recept.



Straight Plug

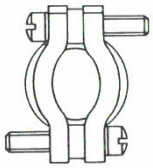
Also see PTB - Through Bulkhead, Double-ended Receptacle in catalog.



Wide Flange - Back Panel Mount:
MS3127 Box Mount, MS3128 Wall Mount

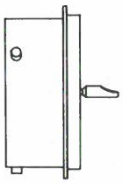
## MIL-C-26482

Class E

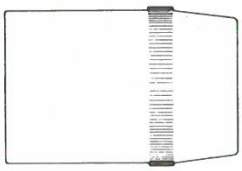


Class F

Class P



Class H



Class W
(Non-MIL)

## SHELL SIZES

| | | | | |
|---|---|---|---|---|
| 6 | 10 | 14 | 18 | 22 |
| 8 | 12 | 16 | 20 | 24 |

## CONTACT SIZES

| Contact Size | 20 | 16 | 12 |
|---|---|---|---|
| American Wire Gauge Wire Size | 20-24 | 16-20 | 12-14 |

# SECTION IV

## MAJOR MIL-SPECIFICATIONS BY TYPE SUBMINIATURE MIL-C-38999 MIL-C-27599

### SUBMINIATURE – JT/LJT, TRI-START, SJT

- Preferred for new design by the Military
- Greatest growth potential of all cylindricals
- "State of the Art" technology and performance
- MIL-C-27599 has molded-in solder type contacts
- MIL-C-38999 has rear release, crimp removable contacts
- SJT has features of both the JT and LJT and is becoming a NATO preferred connector in Europe
- MIL-C-38999 Series I & II will not intermate
- MIL-C-27599 Series I & II will not intermate
- MIL-C-38999 and MIL-C-27599, Series I and II will intermate respectively
- See Bendix Catalog Sections 12-090-6, "Subminiature Cylindrical Connectors Designed to MIL-C-38999 and MIL-C-27599"; 12-092-1, "Tri-Start Connector - MIL-C-38999 Series III"; and 12-091-4, "SJT", for additional information.

### MIL-C-27599

**Series I (LJT - Solder)**

- 100% Scoop Proof
- Molded in solder type contacts
- Options include PCB, wire wrap contacts
- High contact density (128 contacts)
- Shell grounding fingers standard on all plugs
- Intermateable with MIL-C-38999 Series I
- Bayonet coupling
- 5 key/keyway polarization with 4 alternate clockings

**Series II (JT - Solder)**

- Low profile, light weight, non-scoop proof
- Molded in solder type contacts
- Options include PCB, wire wrap contacts
- High contact density (128 contacts)
- Shell grounding fingers available as option on plug
- Intermateable with MIL-C-38999 Series II
- Bayonet coupling
- 5 key/keyway polarization with 4 alternate clockings

### MIL-C-38999

**Series I (LJT-R)**

- 100% Scoop Proof
- High density arrangements (128 contacts)
- Contact sizes 12 through 22D plus size 16, 12, 8 coax
- Bayonet coupling
- DOD preferred
- Corrosion Resistant (500 hr. salt spray)
- Removable crimp, PCB, wire wrap and coax contacts available
- Options include Hermetics, Filters and Thermocouples
- 5 key/keyway polarization with 4 alternate clockings
- Shell grounding fingers are standard on all plugs
- Triple web grommet seal
- Available in a failsafe lanyard release plug

**Series II (JT-R)**

- High density arrangements (128 contacts)
- Low silhouette, light weight non-scoop proof
- Bayonet coupling
- Contact sizes 12 through 22D plus size 16 & 12 coax
- 5 key/keyway polarization with 4 alternate clockings
- Removable crimp, PCB, wire wrap and coax contacts available
- Corrosion resistant (500 hr. salt spray)
- Options include Hermetics, Filters and Thermocouples
- Shell grounding fingers on plugs are an option
- Triple web grommet seal

# JT/LJT
# how to order

### PROPRIETARY PART NUMBER

To more easily illustrate ordering procedure, part number JT00RE-22-2PA ( ) is shown as follows:

### PART NUMBER

| LJT/JT | 00 | RE- | 22 | - | 2 | P | A | ( ) |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | | 5 | 6 | 7 | 8/9 |

See code below:

1. Connector Type:
   - JT designates standard Junior Tri-Lock Connector
   - LJT designates long Junior Tri-Lock Connector
   - LJTS/JTS designates high temperature connector
   - LJTN/JTN designates chemical and fuel resistant
   - JTL designates Pygmy mounting dimensions
   - JTLN designates Pygmy mounting dimensions – chemical resistant
   - JTLS designates Pygmy mounting dimensions – high temperature
   - LJTPQ/JTPQ designates back panel mounted
   - LJTPN/JTPN designates back panel mounted – chemical resistant
   - LJTPSQ/JTPSQ designates back panel mounted – high temperature
   - JTG* designates plug with grounding fingers
   - JTNG* designates plug with grounding fingers – chemical resistant

**Grounding fingers standard on all LJT plugs.*

2. Shell Style:
   - 00 designates wall mount receptacle
   - 01 designates line mount plug
   - 02 designates box mount receptacle
   - 06 designates straight plug
   - 07 designates jam nut receptacle
   - 08 designates 90-degree plug
   - I designates solder mount receptacle — hermetic

3. Service Class:

"P" for potting applications — These connectors are supplied with a potting boot.† All shells are designed with integral features to retain potting boots.†

"A" for general duty applications — Threaded rear design.† Can be supplied with strain relief "A (SR)."

"C" for pressurized applications. Threaded rear design.† Can be supplied with strain relief "C (SR)."

"H" for hermetic applications — Fused compression glass sealed inserts. Leakage rate less than .01 micron cu. ft./hr. ($1 \times 10^{-7}$ cc/sec.) at 15 psi differential.

"Y" same as "H" with interfacial seal.

"T" for MS27599A applications — General duty — pressurized (receptacles only).

"RP" for potting crimp applications — Supplied with spacer grommet and potting boot.†

"RE" for environmental crimp applications — Supplied with a grommet and compression nut.† Can be supplied with strain relief integral with compression nut "RE (SR)." (JT Series only.)

"RT" for environmental applications — Supplied without rear accessories. Design provides serrations on rear threads of shells.

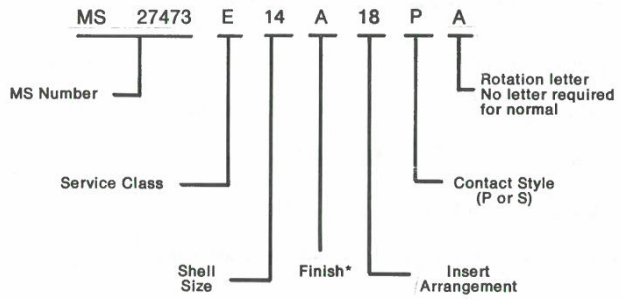
For additional information defining complete description of service class, consult factory.

4. JT shell sizes available from 8 through 24. LJT shell sizes available from 9 through 25.
5. -2 designates insert arrangement.
6. P designates pin contacts. S for socket contacts.
7. A designates a rotated master key/keyway. Other basic rotations are B, C, and D. No letter required for normal (no rotation) position.
8. SR designates a strain relief clamp. Strain reliefs are available only on A, C, and RE class connectors.
9. Finish variation suffix.

*†Not applicable to box mounting style.*

| Finish | Finish Suffix | Finish plus SR Suffix |
|---|---|---|
| Cadmium Plated Nickel Base | | (SR) |
| Bright Cadmium | (001) | (304) |
| Olive Drab Cadmium Plate | (003) | (301) |
| Grey Anodize | (004) | (382) |
| Anodic Coating (Alumilite) | (005) | (300) |
| Bright Nickel | (009) | (362) |
| Chromate Treated (Iridite 14-2) | (011) | (344) |
| Olive Drab Cadmium Plate Nickel Base | (014) | (386) |

### MILITARY TYPES




**For finish variations, see finish data.*

*For MS depictions and dimensional data see applicable MIL-Spec. (MIL-C-38999, MIL-C-27599).*

# JT/LJT specifications

## Contact Rating

| Contact Size | Test Current | | Maximum Millivolt Drop Crimp | Maximum Millivolt Drop Solder | |
|---|---|---|---|---|---|
| | Standard | Hermetic | | Standard | Hermetic |
| 22M | 3 | 2 | 30 | 20 | 60 |
| 22D | 5 | 3 | 40 | 20 | 85 |
| 22 | 5 | 3 | 40 | 20 | 85 |
| 20 | 7.5 | 5 | 35 | 20 | 60 |
| 16 | 13 | 10 | 25 | 20 | 85 |
| 12 | 23 | 17 | 25 | Not Available | 85 |

| Contact Size | CRIMP WELL DATA | | SOLDER WELL DATA | |
|---|---|---|---|---|
| | Well Diameter | Nominal Well Depth | Well Diameter | Nominal Well Depth |
| 22M | .029 ±.001 | .141 | .029+.004 −.000 | .094 |
| 22D | .0345±.0010 | .141 | .0355±.0010 | .094 |
| 22 | .0365±.0010 | .141 | .036+.004 −.000 | .094 |
| 20 | .047 ±.001 | .209 | .044+.004 −.000 | .125 |
| 16 | .067 ±.001 | .209 | .078+.004 −.002 | .141 |
| 12 | .100 ±.002 | .209 | Not Available | |

## Service Rating*

| Service Rating | Suggested Operating Voltage (Sea Level) | | Test Voltage (Sea Level) | Test Voltage 50,000 Ft. | Test Voltage 70,000 Ft. | Test Voltage 110,000 Ft. |
|---|---|---|---|---|---|---|
| | AC (RMS) | DC | | | | |
| M | 400 | 550 | 1300 VRMS | 550 VRMS | 350 VRMS | 200 VRMS |
| I | 600 | 850 | 1800 VRMS | 600 VRMS | 400 VRMS | 200 VRMS |
| II | 900 | 1250 | 2300 VRMS | 800 VRMS | 500 VRMS | 200 VRMS |

*Please note that the establishment of electrical safety factors is left entirely in the designer's hands, since he is in the best position to know what peak voltages, switching surges, transients, etc., can be expected in a particular circuit.

## Finish Data

| Aluminum Shell Components Non-Hermetic | | | | |
|---|---|---|---|---|
| Finish | Suffix | | Indicated Finish Standard for JT Types Listed Below | Indicated Finish Standard for LJT Types Listed Below |
| | Military | Proprietary | | |
| Cadmium Plated Nickel Base | MS (A) | | JT/JTG/JTL/JTP/JTPQ | LJT/LJTP/LJTPQ |
| Bright Cadmium | | (001) | | |
| Olive Drab Cadmium Plate | | (003) | | |
| Grey Anodize | | (004) | | |
| Anodic Coating (Alumilite) | MS (C) | (005) | JTS/JTPS/JTLS/JTPSQ | LJTPS/LJTS/LJTSQ |
| Bright Nickel | | (009) | | |
| Chromate Treated (Iridite 14-2) | | (011) | JTN/JTPN/JTLN | LJTN/LJTPN |
| Olive Drab Cadmium Plate Nickel Base | MS (B) | (014) | | |
| Electroless Nickel | MS (F) | (023) | | |

## Hermetic Material/Finish

| Shell | Contact | Type | Shell | Contact | Type |
|---|---|---|---|---|---|
| Carbon Steel Tin Plated | Tin Plated | JT-H, JT-Y, LJT-Y | Stainless Steel | .0001 Gold Plated | LJT-H, JT-H (150) |
| Carbon Steel Tin Plated | .00005 Gold Plated | MS (D) | Carbon Steel Gold Plated | .0001 Gold Plated | JT-H (101), JT-Y (101) |
| Stainless Steel | .00005 Gold Plated | LJTS-Y, MS (E) | Carbon Steel Tin Plated | .0001 Gold Plated | JT-H (102), JT-Y (102) |

*Suffix (101) may be used for non hermetic types from standard finish column; contacts only will be 100 millionths inch minimum gold plate. These finishes are available on other JT and LJT connectors. Contact the factory for additional variations.

## MIL-C-38999 – LJT-R/JT-R and Accessories
## Cross Reference List

| Series or Accessory | MS Part No. | Bendix Part No. | Description |
|---|---|---|---|
| Ac | MS20047AXX | 10-275197-XX7 | Cap, Recept. Series I, |
| Ac | MS20047BXX | 10-275197-XX9 | No Chain |
| Ac | MS20047FXX | 10-275197-XXG | |
| Ac | MS20048AXX | 10-275196-XX7 | Cap, Plug Series I, |
| Ac | MS20048BXX | 10-275196-XX9 | No Chain |
| Ac | MS20048FXX | 10-275196-XXG | |
| Ac | MS27342AXX-1 | 10-440390-XX7 (Series II) | Adapter |
| Ac | MS27342BXX-1 | 10-440390-XX9 (Series II) | |
| Ac | MS27342CXX-1 | 10-440390-XX5 (Series II) | |
| Ac | MS27342FXX-1 | 10-440390-XXG (Series II) | |
| Ac | MS27342AXX-2 | 10-241055 Series II | |
| Ac | MS27342BXX-2 | 10-457452 Series I | |
| Ac | MS27342CXX-2 | | |
| Ac | MS27342FXX-2 | | |
| Ac | MS27352AXX | 10-241853-XX7 | Cap, Plug Series II, |
| Ac | MS27352BXX | 10-241853-XX9 | No Chain |
| Ac | MS27352CXX | 10-241853-XX5 | |
| Ac | MS27532FXX | 10-241853-XXG | |
| Ac | MS27353AXX | 10-241856-XX7 | Cap, Recept. Series II, |
| Ac | MS27353BXX | 10-241856-XX9 | No Chain |
| Ac | MS27353CXX | 10-241856-XX5 | |
| Ac | MS27353FXX | 10-241856-XXG | |
| I | MS27466EXXAXXP/S | LJTOOREXX-XXP/S | Wall Mount Receptacle |
| I | MS27466EXXBXXP/S | LJTOOREXX-XXP/S (014) | |
| I | MS27466EXXFXXP/S | LJTOOREXX-XXP/S (023) | |
| I | MS27466TXXAXXP/S | LJTOORTXX-XXP/S | |
| I | MS27466TXXBXXP/S | LJTOORTXX-XXP/S (014) | |
| I | MS27466TXXFXXP/S | LJTOORTXX-XXP/S (023) | |
| I | MS27466PXXAXXP/S | LJTOORPXX-XXP/S | |
| I | MS27466PXXBXXP/S | LJTOORPXX-XXP/S (014) | |
| I | MS27466PXXFXXP/S | LJTOORPXX-XXP/S (023) | |
| I | MS27467EXXAXXP/S | LJTO6REXX-XXP/S | Straight Plug |
| I | MS27467EXXBXXP/S | LJTO6REXX-XXP/S (014) | |
| I | MS27467EXXFXXP/S | LJTO6REXX-XXP/S (023) | |
| I | MS27467TXXAXXP/S | LJTO6RTXX-XXP/S | |
| I | MS27467TXXBXXP/S | LJTO6RTXX-XXP/S (014) | |
| I | MS27467TXXFXXP/S | LJTO6RTXX-XXP/S (023) | |
| I | MS27467PXXAXXP/S | LJTO6RPXX-XXP/S | Straight Plug |
| I | MS27467PXXBXXP/S | LJTO6RPXX-XXP/S (014) | |
| I | MS27467PXXFXXP/S | LJTO6RPXX-XXP/S (023) | |
| I | MS27468EXXAXXP/S | LJTO7REXX-XXP/S | Jam Nut Mount Receptacle |
| I | MS27468EXXBXXP/S | LJTO7REXX—XXP/S (014) | |
| I | MS27468EXXFXXP/S | LJTO7REXX-XXP/S (023) | |
| I | MS27468TXXAXXP/S | LJTO7RTXX-XXP/S | |
| I | MS27468TXXBXXP/S | LJTO7RTXX-XXP/S (014) | |
| I | MS27468TXXFXXP/S | LJTO7RTXX-XXP/S (023) | |
| I | MS27468PXXAXXP/S | LJTO7RPXX-XXP/S | |
| I | MS27468PXXBXXP/S | LJTO7RPXX-XXP/S (014) | |
| I | MS27468PXXFXXP/S | LJTO7RPXX-XXP/S (023) | |
| I | MS27469YXXDXXP | LJTOOYXX-XXP | Wall Mount Receptacle, |
| I | MS27469YXXEXXP | LJTSOOYXX-XXP | Hermetic Seal |
| I | MS27470YXXDXXP | LJTO7YXX-XXP | Jam Nut Mount Receptacle, |
| I | MS27470YXXEXXP | LJTSO7YXX-XXP | Hermetic Seal |
| I | MS27471YXXDXXP | LJTIYXX-XXP | Solder Mount Receptacle, |
| I | MS27471YXXEXXP | LJTSIYXX-XXP | Hermetic Seal |

| Series or Accessory | MS Part No. | Bendix Part No. | Description |
|---|---|---|---|
| II | MS27472EXXAXXP/S | JTOOREXX-XXP/S | Wall Mount Receptacle |
| II | MS27472EXXBXXP/S | JTOOREXX-XXP/S (014) | |
| II | MS27472EXXCXXP/S | JTSOOREXX-XXP/S | |
| II | MS27472EXXFXXP/S | JTOOREXX-XXP/S (023) | |
| II | MS27472TXXAXXP/S | JTOORTXX-XXP/S | |
| II | MS27472TXXBXXP/S | JTOORTXX-XXP/S (014) | |
| II | MS27472TXXCXXP/S | JTSOORTXX-XXPS | |
| II | MS27472TXXFXXP/S | JTOORTXX-XXP/S (023) | |
| II | MS27472PXXAXXP/S | JTOORPXX-XXP/S | |
| II | MS27472PXXBXXP/S | JTOORPXX-XXP/S (014) | |
| II | MS27472PXXCXXP/S | JTSOORPXX-XXP/S | |
| II | MS27472PXXFXXP/S | JTOORPXX-XXP/S (023) | |
| II | MS27473EXXAXXP/S | JTO6REXX-XXP/S | Straight Plug |
| II | MS27473EXXBXXP/S | JTO6REXXP/S (014) | |
| II | MS27473EXXCXXP/S | JTSO6REXX-XXP/S | |
| II | MS27473EXXFXXP/S | JTO6REXX-XXP/S (023) | |
| II | MS27473TXXAXXP/S | JTO6RTXX-XXP/S | |
| II | MS27473TXXBXXP/S | JTO6RTXX-XXP/S (014) | |
| II | MS27473TXXCXXP/S | JTSO6RTXX-XXPS | |
| II | MS27473TXXFXXP/S | JTO6RTXX-XXP/S (023) | |
| II | MS27473PXXAXXP/S | JTO6RPXX-XXP/S | |
| II | MS27473PXXBXXP/S | JTO6RPXX-XXP/S (014) | |
| II | MS27473PXXCXXP/S | JTSO6RPXX-XXP/S | |
| II | MS27473PXXFXXP/S | JTO6RPXX-XXP/S (023) | |
| II | MS27474EXXAXXP/S | JTO7REXX-XXP/S | Jam Nut Mount Receptacle |
| II | MS27474EXXBXXP/S | JTO7REXX-XXP/S (014) | |
| II | MS27474EXXCXXP/S | JTSO7REXX-XXP/S | |
| II | MS27474EXXFXXP/S | JTO7REXX-XXP/S (023) | |
| II | MS27474TXXAXXP/S | JTO7RTXX-XXP/S | |
| II | MS27474TXXBXXP/S | JTO7RTXX-XXP/S (014) | |
| II | MS27474TXXCXXP/S | JTSO7RTXX-XXP/S | |
| II | MS27474TXXFXXP/S | JTO7RTXX-XXP/S (023) | |
| II | MS27474PXXAXXP/S | JTO7RPXX-XXP/S | |
| II | MS27474PXXBXXP/S | JTO7RPXX-XXP/S (014) | |
| II | MS27474PXXCXXP/S | JTSO7RPXX-XXP/S | |
| II | MS27474PXXFXXP/S | JTO7RPXX-XXP/S (023) | |
| II | MS27475YXXDXXP | JTOOYXX-XXP | Wall Mount Receptacle, |
| II | MS27475YXXEXXP | JTSOOYXX-XXP | Hermetic Seal |
| II | MS27476YXXDXXP | JTO2YXX-XXP | Box Mount Receptacle, |
| II | MS27476YXXEXXP | JTSO2YXX-XXP | Hermetic Seal |
| II | MS27477YXXDXXP | JTO7YXX-XXP | Jam Nut Mount Receptacle, |
| II | MS27477YXXEXXP | JTSO7YXX-XXP | Hermetic Seal |
| II | MS27478YXXDXXP | JTIYXX-XXP | Solder Mount Receptacle, |
| II | MS27478YXXEXXP | JTSIYXX-XXP | Hermetic Seal |
| II | MS27479EXXCXXP/S | JTSOOREXX-XXP/S | Wall Mount Receptacle, |
| II | MS27479TXXCXXP/S | JTSOORTXX-XXP/S | Inactive, Use MS27472 |
| II | MS27480EXXCXXP/S | JTSO6REXX-XXP/S | Straight Plug, Inactive, |
| II | MS27480TXXCXXP/S | JTSO6RTXX-XXP/S | Use MS27473 |
| II | MS27481EXXCXXP/S | JTSO7REXX-XXP/S | Jam Nut Mount Receptacle, |
| II | MS27481TXXCXXP/S | JTSO7RTXX-XXP/S | Inactive, Use MS27474 |
| II | MS27482YXXEXXP | JTSOOYXX-XXP | Wall Mt. Recept., Herm. Seal, Inactive, Use MS27475 |
| II | MS27483YXXEXXP | JTSO7YXX-XXP | Jam Nut Mt. Receptacle, Hermetic Seal, Inactive, Use MS27477 |

| Series or Accessory | MS Part No. | Bendix Part No. | Description |
|---|---|---|---|
| II | MS27484EXXAXXP/S | JTGO6REXX-XXP/S | Straight Plug with Grounding Spring |
| II | MS27484EXXBXXP/S | JTGO6REXX-XXP/S (014) | |
| II | MS27484EXXFXXP/S | JTGO6REXX-XXP/S (023) | |
| II | MS27484TXXAXXP/S | JTGO6RTXX-XXP/S | |
| II | MS27484TXXBXXP/S | JTGO6RTXX-XXP/S (014) | |
| II | MS27484TXXFXXP/S | JTGO6RTXX-XXP/S (023) | |
| II | MS27484PXXAXXP/S | JTGO6RPXX-XXP/S | |
| II | MS27484PXXBXXP/S | JTGO6RPXX-XXP/S (014) | |
| II | MS27484PXXFXXP/S | JTGO6RPXX-XXP/S (023) | |
| Ac | MS27485AXX | 10-528399-XX7 | Ring, Potting Boot, Series II |
| Ac | MS27485BXX | 10-528399-XX9 | |
| Ac | MS27485CXX | 10-528399-XX5 | |
| Ac | MS27485FXX | 10-528399-XXG | |
| Ac | MS27486-XX-1 | 10-241912-XX | Potting, Boot, Straight, Series II |
| Ac | MS27486-XX-2 | 10-241990-XX | Potting, Boot, 90°, Series II |
| Ac | MS27487-XX-1 | 10-450910-XX, Includes MS27489 | Kit, EMR Adapter, Straight, Series I & II |
| Ac | MS27487-XX-2 | 10-450911-XX | Kit, EMR Adapter, 90°, Series I & II |
| Ac | MS27488-12 | 10-405996-12 | Plug, Sealing Grommet |
| Ac | MS27488-16 | 10-405996-16 | |
| Ac | MS27488-20 | 10-405996-20 | |
| Ac | MS27488-22 | 10-405996-24 | |
| Ac | MS27489-XXX | 10-352425-XX | Adapter, Reducer EMR for Use with MS27487 |
| I | MS27490-XX | 10-407035-XX5 | Contact - Socket |
| II | MS27491-XX | 10-251416-XX5 | Contact - Socket |
| II | MS27492-XX | 10-251416-XXH | Contact - Socket, Inactive, Use MS27491 |
| II | MS27493-XX | 10-251415-XX5 | Contact - Pin |
| II | MS27494-XX | 10-251415-XXH | Contact - Pin, Inactive, Use MS27493 |
| I & II | MS27495R-XX | 11-8675-XX | Tool, Contact, Removable Metal |
| I & II | MS27495A-XX | 11-8674-XX | Tool, Contact, Assy. Metal |
| I | MS27496EXXAXXP/S | LJTO2REXX-XXP/S | Box Mount Receptacle |
| I | MS27496EXXBXXP/S | LJTO2REXX-XXP/S (014) | |
| I | MS27496EXXFXXP/S | LJTO2REXX-XXP/S (023) | |
| II | MS27497EXXAXXP/S | JTPQOOREXX-XXP/S | Back Panel,Wall Mt Recept |
| II | MS27497EXXBXXP/S | JTPQOOREXX-XXP/S (014) | |
| II | MS27497EXXCXXP/S | JTPSQOOREXX-XXP/S | |
| II | MS27497EXXFXXP/S | JTPQOOREXX-XXP/S (023) | |
| II | MS27497TXXAXXP/S | JTPQOORTXX-XXP/S | |
| II | MS27497TXXBXXP/S | JTPQOORTXX-XXP/S (014) | |
| II | MS27497TXXCXXP/S | JTPSQOORTXX-XXP/S | |
| II | MS27497TXXFXXP/S | JTPQOORTXX-XXP/S (023) | |
| II | MS27497PXXAXXP/S | JTPQOO2PXX-XXP/S | |
| II | MS27497PXXBXXP/S | JTPQOO2PXX-XXP/S (014) | |
| II | MS27497PXXCXXP/S | JTPSQOO2PXX-XXP/S | |
| II | MS27497PXXFXXP/S | JTPQOORPXX-XXP/S (023) | |
| II | MS27497VXXAXXP/S | JTPOOREXX-XXP/S | |
| II | MS27497VXXBXXP/S | JTPOOREXX-XXP/S (014) | |
| II | MS27497VXXCXXP/S | JTPSOOREXX-XXP/S | |
| II | MS27497VXXFXXP/S | JTPOOREXX-XXP/S (023) | |

| Series or Accessory | MS Part No. | Bendix Part No. | Description |
|---|---|---|---|
| I | MS27498EXXAXXP/S | LJTO8REXX-XXP/S | 90° Plug, Inactive for Design |
| I | MS27498EXXBXXP/S | LJTO8REXX-XXP/S (014) | |
| II | MS27499EXXAXXP/S | JTO2REXX-XXP/S | Box Mount Receptacle |
| II | MS27499EXXBXXP/S | JTO2REXX-XXP/S (014) | |
| II | MS27499EXX6XXP/S | JTSO2REXX-XXP/S | |
| II | MS27499EXXFXXP/S | JTO2REXX-XXP/S (023) | |
| II | MS27500EXXAXXP/S | JTO8REXX-XXP/S | 90° Plug, Inactive for Design |
| II | MS27500EXXBXXP/S | JTO8REXX-XXP/S (014) | |
| I | MS27501AXXC | 10-421399-XX7 | Cover, Plug, with chain |
| I | MS27501BXXC | 10-421399-XX9 | |
| I | MS27501FXXC | 10-421399-XXG | |
| I | MS27502AXXC | 10-427406-XX7 | Cover, Receptacle, with chain |
| I | MS27502BXXC | 10-427406-XX9 | |
| I | MS27502FXXC | 10-427406-XXG | |
| II | MS27503YXXEXXP | JTSIYXX-XXP | Solder Mt. Receptacle, Hermetic Seal Inactive, Use MS27503 |
| II | MS27504EXXCXXP/S | JTSOOREXX-XXP/S | Box Mount Receptacle, Inactive, Use MS27499 |
| I | MS27505EXXAXXP/S | LJTPO2REXX-XXP/S | Back Panel Wall Mt.Recept. |
| I | MS27505EXXBXXP/S | LJTPO2REXX-XXP/S (014) | |
| I | MS27505EXXFXXP/S | LJTPO2REXX-XXP/S (023) | |
| I | MS27506AXX-1 | 10-436792-XX7 | Adapter, Strain Relief, Clamp Bars |
| I | MS27506BXX-1 | 10-436792-XX9 | |
| I | MS27506FXX-1 | 10-436792-XXG | |
| II | MS27506AXX-2 | 10-433992-XX7 | |
| II | MS27506BXX-2 | 10-433992-XX9 | |
| II | MS27506CXX-2 | 10-433992-XX5 | |
| II | MS27506FXX-2 | 10-433992-XXG | |
| I & II | MS27507A-XX | 10-415693-XX7 | Adapter, 90° Strain Relief, Clamp Bars |
| I & II | MS27507B-XX | 10-415693-XX9 | |
| I & II | MS27507C-XX | 10-415693-XX5 | |
| I & II | MS27507F-XX | 10-415693-XXG | |
| II | MS27508EXXAXXP/S | JTPO2REXX-XXP/S | Back Panel Box Mt.Recept. |
| II | MS27508EXXBXXP/S | JTPO2REXX-XXP/S (014) | |
| II | MS27508EXXCXXP/S | JTPSO2REXX-XXP/S | |
| II | MS27508EXXFXXP/S | JTPO2REXX-XXP/S (023) | |
| I & II | MS27509R-XX | 10-296943-XX | Tool, Contact Removal and Assembly, Plastic Inactive, Use MS27534 |
| I & II | MS27509A-XX | 10-296940-XX | |
| II | MS27510AXXC | 10-241801-XX7 | Cap, Plug with chain |
| II | MS27510BXXC | 10-241801-XX9 | |
| II | MS27510CXXC | 10-241801-XX5 | |
| II | MS27510FXXC | 10-241801-XXG | |
| II | MS27511AXXC | 10-241800-XX7 | Cap, Receptacle, with chain |
| II | MS27511BXXC | 10-241800-XX9 | |
| II | MS27511CXXC | 10-241800-XX5 | |
| II | MS27511FXXC | 10-241800-XXG | |
| II | MS27511AXXR | 10-241866-XX7 | Cap, Receptacle with wire rope |
| II | MS27511BXXR | 10-241866-XX9 | |
| II | MS27511CXXR | 10-241866-XX5 | |
| II | MS27511FXXR | 10-241866-XXG | |
| II | MS27510( )XXR | 10-241864- | Cap, Plug with wire rope |
| II | MS27511( )XXN | 10-241802- | Cap, Receptacle, Jam Nut with chain |

| Series or Accessory | MS Part No. | Bendix Part No. | Description |
|---|---|---|---|
| II | MS27512-XXA | 10-101917-XX7 | Nut, Hex |
| II | MS27512-XXB | 10-101917-XX9 | |
| II | MS27512-XXC | 10-101917-XX5 | |
| II | MS27512-XXE | 10-260548-XX | |
| II | MS27512-XXF | 10-101917-XXG | |
| II | MS27513EXXAXXP/S | JTO2REXX-XXP/S | Box Mount Receptacle, |
| II | MS27513EXXAXXP/S | JTO2REXX-XXP/S (014) | Full Length Grommet |
| II | MS27513EXXCXXP/S | JTSO2REXX-XXP/S | |
| II | MS27513EXXFXXP/S | JTO2REXX-XXP/S (023) | |
| I | MS27514-XXA | 10-123017-XX7 | Nut, Hex |
| I | MS27514-XXB | 10-123017-XX9 | |
| I | MS27514-XXE | 10-195959-XX | |
| I | MS27514-XXF | 10-123017-XXG | |
| I | MS27515EXXAXXP/S | LJTPOOREXX-XXP/S | Back Panel Wall Mt. Recept. |
| I | MS27515EXXBXXP/S | LJTPOOREXX-XXP/S (014) | Inactive , Use MS27656 |
| I & II | MS27534-12 | 10-538988-12 | Tool, Contact Insertion/ |
| I & II | MS27534-16 | 10-538988-16 | Removal, Plastic |
| I & II | MS27534-20 | 10-538988-20 | |
| I & II | MS27534-22D | 10-538988-22D | |
| I | MS27535 | 21-33101-XX | Contact, Socket, Shielded |
| I | MS27536 | 21-33102-XX | Contact, Pin, Shielded |
| I | MS27652EXXFXXP/S | LJTSOOREXX-XXP/S (023) | Wall Mount Receptacle, |
| I | MS27652TXXFXXP/S | LJTSOORTXX-XXP/S (023) | Inactive, Use MS27466 |
| I | MS27653EXXFXXP/S | LJTSO6REXX-XXP/S (023) | Straight Plug, Inactive, |
| I | MS27653TXXFXXP/S | LJTSO6RTXX-XXP/S (023) | Use MS27467 |
| I | MS27654EXXFXXP/S | LJTPSOOREXX-XXP/S (023) | Back Panel Wall Mt.Recept. |
| I | MS27654TXXFXXP/S | LJTPSOORTXX-XXP/S (023) | Inactive, Use MS27656 |
| I | MS27655-XX | 10-407035-XXH | Contact, Socket, Inactive, Use MS27490 |
| I | MS27656EXXAXXP/S | LJTPQOOREXX-XXP/S | Back Panel Wall Mt.Recept. |
| I | MS27656EXXFXXP/S | LJTPQOOREXX-XXP/S(014) | |
| I | MS27656EXXFXXP/S | LJTPQOOREXX-XXP/S(023) | |

| Series or Accessory | MS Part No. | Bendix Part No. | Description |
|---|---|---|---|
| I | MS27656TXXAXXP/S | LJTPQOORTXX-XXP/S | Back Panel Wall Mt. R |
| I | MS27656TXXBXXP/S | LJTPQOORTXX-XXP/S(014) | |
| I | MS27656TXXFXXP/S | LJTPQOORTXX-XXP/S(063) | |
| I | MS27656PXXAXXP/S | LJTPQOORPXX-XXP/S | Back Panel Wall Mt.Rece |
| I | MS27656PXXBXXP/S | LJTPQOORPXX-XXP/S(014) | |
| I | MS27656PXXFXXP/S | LJTPQOORPXX-XXP/S(023) | |
| I | MS27661EXXAXXP/S | 87-538800/74 | Straight Plug, Lanyard |
| I | MS27661EXXBXXP/S | 88-538800/74 | Release |
| I | MS27661EXXFXXP/S | 91-538800/74 | |
| I | MS27662EXXAXXC | LJTB-XX-XXX | Thru-Bulkhead Mt.Rece |
| I | MS27662EXXBXXC | LJTB-XX-XXX | |
| I | MS27662EXXCXXC | LJTB-XX-XXX | |
| I | MS27662EXXFXXC | LJTB-XX-XXX | |
| I & II | MS27663AXX-1 | 10-482790-XX7 | Adapter Nut Non-Metall |
| I & II | MS27663BXX-1 | 10-482790-XX9 | (Nylon Only) |
| I & II | MS27663CXX-1 | 10-482790-XX5 | |
| I & II | MS27663FXX-1 | 10-482790-XX6 | |
| I & II | MS27663AXX-2 | 10-482494-XX7 | Adapter 90° Non-Metall |
| I & II | MS27663BXX-2 | 10-482494-XX9 | (Nylon Only) |
| I & II | MS27663CXX-2 | 10-482494-XX5 | |
| I & II | MS27663FXX-2 | 10-482494-XX6 | |
| II | MS27664EXXAXXP/S | JTPQOOREXX-XXP/S | Back Panel Wall Mt.Rec |
| II | MS27664EXXBXXP/S | JTPQOOREXX-XXP/S (014) | Inactive Use MS27497 |
| II | MS27664EXXCXXP/S | JTPSQOOREXX-XXP/S | |
| II | MS27664EXXFXXP/S | JTPQOOREXX-XXP/S (023) | |
| II | MS27664TXXAXXP/S | JTPQOORTXX-XXP/S | |
| II | MS27664TXXBXXP/S | JTPQOORTXX-XXP/S (014) | |
| II | MS27664TXXCXXP/S | JTPSQOORTXX-XXP/S | |
| II | MS27664TXXFXXP/S | JTPQOORTXX-XXP/S (023) | |
| I | MS27665 | | Rack and Panel, Cancell |
| | MS27666 | DNS | |
| II | MS27667EXXBXXC | JTB-XX-XX | Thru-Bulkhead Utz Rec |
| II | MS27667EXXCXXC | JTB-XX-XX | |
| II | MS27667EXXFXXC | JTB-XX-XX | |
| | MS27668 | DNS | |
| | MS27669 | DNS | |
| | MS27670 | DNS | |

# TRI-START specifications

## MIL-C-38999 SERIES III (TV)

- 100% Scoop Proof
- High density contact arrangements
- Contact sizes 12 through 22D plus size 8 coax
- Removable crimp, PCB, wire wrap, coax, triax, and fiber optic contact styles available
- Options include Hermetics, Filters, and Thermocouples
- Self locking, quick disconnect threaded coupling
- Corrosion resistant - shells of stainless steel or cadmium plate over nickel withstand a 500 hour salt spray exposure
- Moisture resistance - improved interfacial seal design prevents electrolytic erosion of contacts
- EMI shielding - designed to obtain metal to metal coupling, the TV connector provides a superior EMI shielding capability
- Vibration/Shock - operates under severe, high temperature shock, testing through 200°C
- Firewall capability - available in stainless steel shell, class K
- Locksmith keying - 5 key/keyway polarization provides 5 alternate clockings
- Shell grounding fingers are standard on all plugs
- Triple web grommet seal
- DOD preferred
- Available in a failsafe lanyard release plug

### Contact Rating

| Contact Size | Test Current | | Maximum Millivolt Drop* | |
|---|---|---|---|---|
| | Crimp | Hermetic | Crimp | Hermetic |
| 22D | 5 | 3 | 40 | 85 |
| 20 | 7.5 | 5 | 35 | 60 |
| 16 | 13 | 10 | 25 | 85 |
| 12 | 23 | 17 | 25 | 85 |

*Maximum Millivolt Drop Data is determined by measuring resistance of mated contacts from end to end.

| Contact Size | CRIMP WELL DATA | | HERMETIC DATA | |
|---|---|---|---|---|
| | Well Diameter | Nominal Well Depth | Well Diameter | Nominal Well Depth |
| 22D | .0345 ± .0010 | .141 | .036 $^{+.004}_{-.000}$ | .094 |
| 20 | .047 ± .001 | .209 | .044 $^{+.004}_{-.000}$ | .125 |
| 16 | .067 ± .001 | .209 | .078 $^{+.004}_{-.002}$ | .141 |
| 12 | .100 ± .002 | .209 | .116 $^{+.004}_{-.002}$ | .141 |

### Finish Data

| Non-Hermetic Shell Components | | |
|---|---|---|
| Finish | Suffix | |
| | Military | Proprietary |
| Anodic Coating (Non-Conductive) | C | RX(005) |
| Electroless Nickel | F | RF |
| Olive Drab Cadmium Plate Nickel Base | W | RW |
| Stainless Steel with Nickel Plate | N | RN |
| Stainless Steel | K | RK |
| **Hermetic Connectors** | | |
| Material/Finish | Suffix | |
| | Military | Proprietary |
| Stainless Steel | Y | Y |
| Stainless Steel, Nickel Plate | N | YN |

### Service Rating*

| Service Rating | Suggested Operating Voltage (Sea Level) | | Test Voltage (Sea Level) | Test Voltage 50,000 Ft. | Test Voltage 70,000 Ft. | Test Voltage 110,000 Ft. |
|---|---|---|---|---|---|---|
| | AC (RMS) | DC | | | | |
| M | 400 | 550 | 1300 VRMS | 550 VRMS | 350 VRMS | 200 VRMS |
| I | 600 | 850 | 1800 VRMS | 600 VRMS | 400 VRMS | 200 VRMS |
| II | 900 | 1250 | 2300 VRMS | 800 VRMS | 500 VRMS | 200 VRMS |

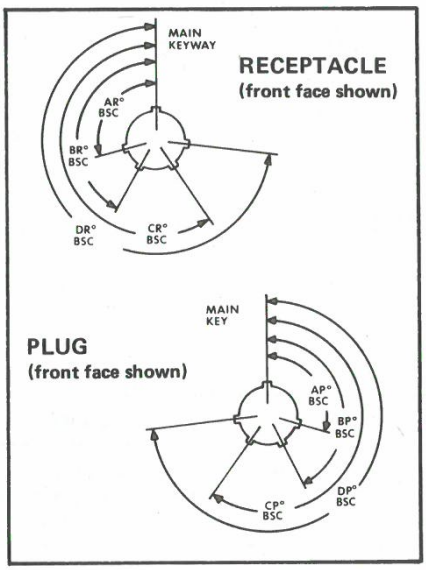
*Please note that the establishment of electrical safety factors is left entirely in the designer's hands, since he is in the best position to know what peak voltage, switching surges, transients, etc., can be expected in a particular circuit.

# TRI-START insert availability and identification; alternate positions

**MIL-C-38999 SERIES III (Tri-Start)**
**Main key/keyway polarization**

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

NOTES: 1. All angles are BSC
2. The insert arrangement does not rotate with main key/keyway.



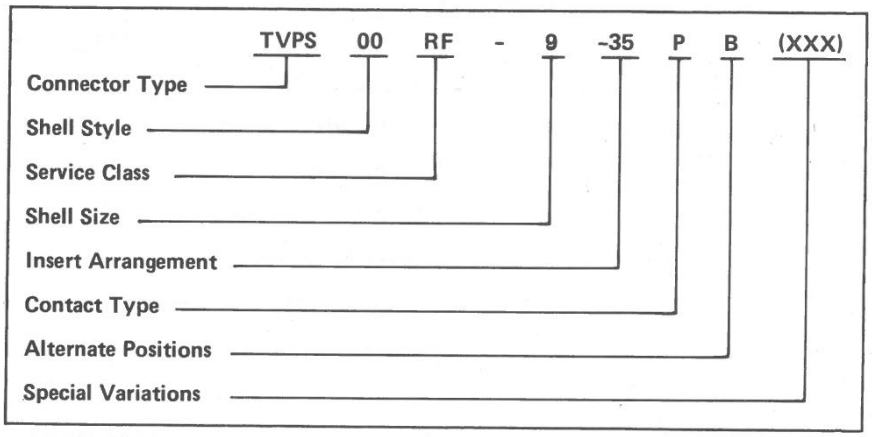

| Tri-Start | Crimp* | Hermetics** Class Y | Service Rating | Total Contacts | Contact Size 22D | 20 | 16 | 12 | 8 (coax) |
|---|---|---|---|---|---|---|---|---|---|
| 9-35 | X | P | M | 6 | 6 | | | | |
| 9-98 | X | P | I | 3 | | 3 | | | |
| 11-35 | X | | M | 13 | 13 | | | | |
| 11-98 | X | P | I | 6 | | 6 | | | |
| 13-8 | X | P | I | 8 | | 8 | | | |
| 13-35 | X | P | M | 22 | 22 | | | | |
| 13-98 | X | P | I | 10 | | 10 | | | |
| 15-5 | X | P | II | 5 | | | 5 | | |
| 15-15 | X | P | I | 15 | | 14 | 1 | | |
| 15-18 | X | ● | I | 18 | | 18 | | | |
| 15-19 | X | | I | 19 | | 19 | | | |
| 15-35 | X | ● | M | 37 | 37 | | | | |
| 15-97 | X | ● | I | 12 | | 8 | 4 | | |
| 17-6 | X | | I | 6 | | | | 6 | |
| 17-8 | X | P | II | 8 | | | 8 | | |
| 17-26 | X | ● | I | 26 | | 26 | | | |
| 17-35 | X | | M | 55 | 55 | | | | |
| 17-99 | X | | I | 23 | | 21 | 2 | | |
| 19-11 | X | P | II | 11 | | | 11 | | |
| 19-32 | X | ● | I | 32 | | 32 | | | |
| 19-35 | X | ● | M | 66 | 66 | | | | |
| 21-11 | X | | I | 11 | | | | 11 | |
| 21-16 | X | ● | II | 16 | | | 16 | | |
| 21-35 | X | | M | 79 | 79 | | | | |
| 21-39 | X | | I | 39 | | 37 | 2 | | |
| 21-41 | X | ● | I | 41 | | 41 | | | |
| 21-75 | ● | | M | 4 | | | | | 4† |
| 23-21 | X | ● | II | 21 | | | 21 | | |
| 23-35 | X | | M | 100 | 100 | | | | |
| 23-53 | X | ● | I | 53 | | 53 | | | |
| 25-4 | X | | I | 56 | | 48 | 8 | | |
| 25-19 | X | | I | 19 | | | | 19 | |
| 25-24 | X | ● | I | 24 | | | 12 | 12 | |
| 25-29 | X | | I | 29 | | | 29 | | |
| 25-35 | X | | M | 128 | 128 | | | | |
| 25-43 | X | | I | 43 | | 23 | 20 | | |
| 25-46 | X | | I | 46 | | 40 | 4 | | 2† |
| 25-61 | X | P | I | 61 | | 61 | | | |

X Completely tooled.
● Majority of tooling is completed (check home office for availability).
P Pin inserts only (check home office for socket availability).
*Size 16, 12, and 8 Coaxial Contacts available. See Bendix Electrical Components Division Coaxial Contact Catalog 12-130.
**Optional solder or eyelet termination, hermetic inserts only.
†For RG180/U and RG195/U cables only (Check home office for other cable applications)

# TRI-START
# how to order

## Proprietary Part Number

Bendix Tri-Start Connectors can be ordered by coded part number. Ordering procedure is illustrated by part number TVPS00RF-9-35PB( ) as shown below:




**Connector Type**
TV designates Tri-Start series connector
TVP designates back panel mounted receptacle
TVS designates 200°C rating
TVPS designates back panel mounted, 200°C rated receptacle

**Shell Style**
00 designates wall mount receptacle
02 designates box mount receptacle
06 designates straight plug
07 designates jam nut receptacle
designates solder mount receptacle, hermetic only

**Service Class**
RX nonconductive-anodic coated aluminum, 500 hour salt spray, 200°C (requires special variation suffix 005)
RF electroless nickel plated aluminum, optimum EMI shielding effectiveness –65db @ 10GHz specification min., 48 hour salt spray, 200°C
K corrosion resistant stainless steel, firewall capability, plus 500 hour salt spray resistance, EMI –45 db @ 10 GHz specification min., 200°C
W corrosion resistant olive drab cadmium plate aluminum, 500 hour extended salt spray, EMI –50db @ 10GHz specification min., 175°C
Y hermetic seal, passivated stainless steel, 200°C
RN (non-hermetic connectors), nickel plated stainless steel, optimum EMI shielding effectiveness –65 db @ 10 GHz specification min., 48 hour salt spray, 200°C
YN (hermetic connectors), nickel plated stainless steel, 200°C

**Shell Size**
MIL-C-38999, Size 9 – 25

| A | B | C | D | E | F | G | H | J | MIL Shell Size |
|---|---|---|---|---|---|---|---|---|---|
| 9 | 11 | 13 | 15 | 17 | 19 | 21 | 23 | 25 | Bendix Shell Size |

**Insert Arrangement**
MIL-C-38999, see insert arrangement chart, page 17

**Contact Type**
P designates pin contacts
S designates socket contacts

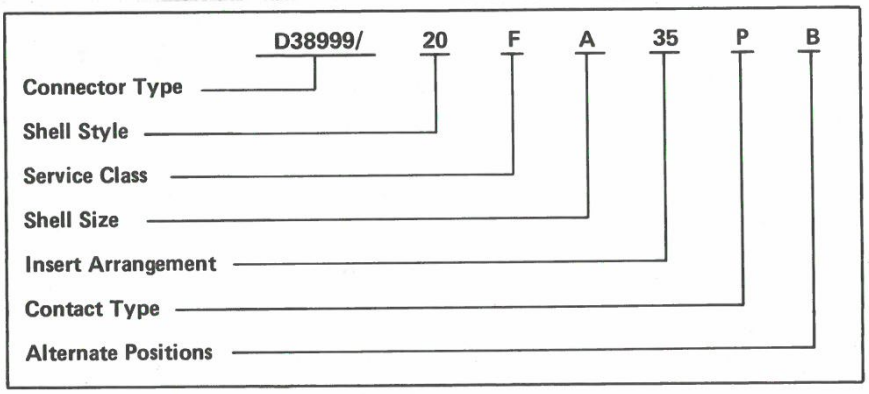
**Alternate Positions**
Locksmith keying - rotation of minor keys. See page 17

**Special Variations**
(100) eyelet termination (hermetic)
(005) anodic coating

# TRI-START
# how to order

## Military Part Number

To more easily illustrate ordering procedure by military designation, part number D38999/20FA35PB is shown as follows:




**Connector Type**
D38999/ designates MIL-C-38999 Series III Connector

**Shell Style**
20 designates wall mount receptacle
21 designates box mount receptacle, hermetic
23 jam nut receptacle, hermetic
24 jam nut receptacle
25 solder mount receptacle, hermetic
26 straight plug
27 weld mount receptacle, hermetic

**Service Class**
C nonconductive-anodic coated aluminum, 500 hours salt spray, 200°C
F electroless nickel plated aluminum, optimum EMI shielding effectiveness-65db @ 10GHz specification min., 48 hour salt spray, 200°C
K corrosion resistant stainless steel, firewall capability, plus 500 hour salt spray resistance, EMI –45 db @ 10GHz specification min., 200°C
W corrosion resistant olive drab cadmium plate aluminum, 500 hour extended salt spray, EMI –50 db @ 10GHz specification min., 175°C
Y hermetic seal, passivated stainless steel, 200°C
N (non-hermetic connectors), nickel plated stainless steel, optimum EMI shielding effectiveness –65db @ 10 GHz specification min., 48 hour salt spray, 200°C
N (hermetic connectors), nickel plated stainless steel, 200°C

**Shell Size**
MIL-C-38999, sizes 9 – 25

| A | B | C | D | E | F | G | H | J | MIL Shell Size |
|---|---|---|---|---|---|---|---|---|---|
| 9 | 11 | 13 | 15 | 17 | 19 | 21 | 23 | 25 | Bendix Shell Size |

**Insert Arrangement**
MIL-C-38999, see insert arrangement chart, page 17

**Contact Type**
P designates pin contacts
S designates socket contacts

**Alternate Positions**
Locksmith keying - rotation of minor keys. See page 17
(Use N for normal)

Bendix Federal Vendor Identification/FSCM 77820

# SJT

- 100% Scoop Proof - basic LJT lengths
- Bayonet coupling
- 5 key/keyway polarization with 4 alternate clockings
- Rear release crimp contacts
- PCB, wire wrap and coax contacts available
- High density insert patterns
- Shell grounding fingers are an option on the plug
- Options include Hermetics, Filters, and Thermocouples

# how to order

**PART NUMBER**

To more easily illustrate ordering procedure, part number SJT00RT-18-66PA( ) is shown as follows:

PART NUMBER

| SJT | 00 | RT | 18 | – | 66 | P | A | ( ) |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | | 5 | 6 | 7 | 8 |

See code below:

1. Connector Type:
   SJT designates standard scoop proof Junior Tri-Lock Connector
   SJTS designates high temperature connector
   SJTG designates plug with grounding fingers
   SJTP designates back panel mounted.
2. Shell Style:
   00 designates wall mount receptacle
   06 designates straight plug
   07 designates jam nut receptacle
   I designates solder mount receptacle—hermetic
3. Service Class:
   "Y" for hermetic applications . . . fused compression glass sealed inserts. Leakage rate less than .01 micron cu. ft./hr. ($1 \times 10^{-7}$ cc/sec.) at 15 psi differential, with interfacial seal.
   "RT" for environmental applications—supplied without rear accessories. Design provides serrations on rear threads of shells.
   For additional information defining complete description of service class, consult factory.
4. SJT shell sizes available from 8 through 24
5. –66 designates insert arrangement.
6. P designates pin contacts. S for socket contacts.
7. A designates a rotated connector assembly. Other basic rotations are B, C and D. No letter required for normal (no rotation) position
8. Finish variation suffix.

# SECTION V

## CROSS REFERENCE BY MIL-SPEC TO COMPETITOR'S PART NUMBER

### MIL-C-5015 (SOLDER TYPE)
**Typical Part No. - MS310X**

| | Bendix | Amphenol | Cannon |
|---|---|---|---|
| Class | A, C, E, F, R | A, C, E, F, B, R | A, C, E, F, B, K, R |
| Proprietary Part No. (A.N. - M.S.) | GP, SC, SF CS, SG, SB SM | 97-, 69- | CA |
| Shell Style: | | | |
| MS3100 | X | X | X |
| MS3101 | X | X | X |
| MS3102 | X | X | X |
| MS3103 | X | X | X |
| MS3106 | X | X | X |
| MS3107 | DNS | X | X |
| MS3108 | X | X | X |

Bendix Proprietary Intermates: 10-214XXX,
10-244XXX (Crimp Types — Front Removal)
Bendix Proprietary Non-Intermates: (5015 Type)
QWL, QWLD
See also MIL-C-22992
See catalog for BT - High Temperature

### MIL-C-5015 (CRIMP - FRONT RELEASE)
**Typical Part No. - MS340X**

| Bendix | Matrix | S.A.E. | Flight |
|---|---|---|---|
| DNS | (Limited) | MOXD, MIXD | FC |

### MIL-C-5015 (CRIMP - REAR RELEASE)
**Typical Part No. - MS345X**

| Bendix | Cannon | Matrix | S.A.E. |
|---|---|---|---|
| *DNS | CV345X | 944X, 9816 | M5X |

### MIL-C-83723 SERIES II (CRIMP-REAR RELEASE)
**Typical Part No. - M83723**

| Bendix | Cannon | Matrix |
|---|---|---|
| DNS | CVA | M7230X |

### MIL-C-22992
**Typical Part No. - MS1734X**

| Bendix | |
|---|---|
| 10-194XXX | No other Suppliers in United States to MIL |

### MIL-C-22992 CLASS L (POWER CONNECTOR)
**Typical Part No. - MS9055X**

| Bendix | Amphenol | Matrix | Burndy |
|---|---|---|---|
| 10-473XXX | 229- | MHDOX | B55XC |

*Do Not Supply (DNS)

### MIL-C-26482 (SOLDER TYPE) SERIES I
**Typical Part No. - MS311X**

| | Bendix | Burndy | Cannon | Veam |
|---|---|---|---|---|
| Type | PT | BT | KPT | VPT |
| Shell Style: | | | | |
| MS3110 | X | X | X | X |
| MS3111 | X | X | X | X |
| MS3112 | X | X | X | X |
| MS3113 | X | X | X | X |
| MS3116 | X | X | X | X |
| MS3114 | X | X | X | X |

### MIL-C-26482 (CRIMP-FRONT RELEASE) SERIES I
**Typical Part No. - MS312X**

| | Bendix | Burndy | Cannon | Veam |
|---|---|---|---|---|
| Type | PT-SE | LTE, LTF | KP-SE | VPTXXSE |
| Shell Style: | | | | |
| MS3120 | X | X | X | X |
| MS3121 | X | | | |
| MS3122 | X | X | X | X |
| MS3126 | X | X | X | X |
| MS3124 | X | X | X | X |
| MS3127 | | X | | |
| MS3128 | | X | | |

Bendix Proprietary Intermates: DC, SP, BP, Also PT - CE

### MIL-C-26482 (CRIMP REAR RELEASE) SERIES II
**Typical Part No. - MS347X**

| Bendix | Cannon | Amphenol | Deutsch | Matrix |
|---|---|---|---|---|
| PTS | PV | 118- | AF | MB |

### MIL-C-81511 (CRIMP-REAR RELEASE) SERIES I & II
**Typical Part No. - M81511/0X**

| Bendix | Amphenol | Cinch |
|---|---|---|
| DNS | 348- | 348- |

### MIL-C-81511 (CRIMP-REAR RELEASE) SERIES III & IV
**Typical Part No. - M81511/4X**

| Bendix | Deutsch |
|---|---|
| DNS | B815 |

### NAS 1599 (CRIMP-REAR RELEASE)
**Typical Part No. - NAS 16XX**

| Bendix | Cannon | Deutsch | Pyle National |
|---|---|---|---|
| DNS | KV, PV | 380XX | ET, EP |

– INTERMATING CHART –

| MIL Series | All 5015 | All* 26482 | All 26500 | Series I 38999 | Series II 38999 | Series III 38999 | Series I 27599 | Series II 27599 | Series I 83723 | Series II 82723 | Series III 83723 | Series I & II 81511 | Series III & IV 81511 | Bayonet NAS 1599 | Thread NAS 1599 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| All 5015 | X | | | | | | | | | X | | | | | |
| All *26482 | | X | | | | | | | X | | | | | | |
| All 26500 | | | X | | | | | | | | X | | | | |
| Series I 38999 | | | | X | | | X | | | | | | | | |
| Series II 38999 | | | | | X | | | | | | | | | | |
| Series III 38999 | | | | | | X | | | | | | | | | |
| Series I 27599 | | | | X | | | X | | | | | | | | |
| Series II 27599 | | | | | X | | | X | | | | | | | |
| Series I 83723 | | X | | | | | | | X | | | | | | |
| Series II 83723 | X | | | | | | | | | X | | | | | |
| Series III 83723 | | | X | | | | | | | | | | | | |
| Series I & II 81511 | | | | | | | | | | | | X | X | | |
| Series III & IV 81511 | | | | | | | | | | | | X | X | | |
| Bayonet NAS 1599 | | | | | | | | | | | | | | X | |
| Threaded NAS 1599 | | | | | | | | | | | | | | | X |

*Except Push Pull Coupling

## CROSS REFERENCE BY MIL-SPEC TO COMPETITORS' PART NO.

## MIL-C-38999 (CRIMP REAR RELEASE) SERIES I, II, III, AND IV

| Series | Bendix | Cannon | Amphenol | Matrix | G & H | Pyle-National | Plessey |
|---|---|---|---|---|---|---|---|
| I | LJT-R | KJL | 418-1X | MB91X | DNS | DNS | DNS |
| II | JT-R | KJ | 418-2X | MB92X | DNS | DNS | CT-R |
| III | TV-R | DNS | DNS | *MT93X | DNS | *T3K-XX | DNS |
| IV | DNS | DNS | DNS | DNS | BLXX | DNS | DNS |

* Stainless Steel Only

## MIL-SPEC CROSS REFERENCE DATA AND GENERAL INFORMATION

| MIL SPEC | Description | Bendix Proprietary Mates | Contact Termination & Removal | Contact Sizes in Series (Wire Gauge) | Coupling Method | Other Notes |
|---|---|---|---|---|---|---|
| MIL-C-5015 | Power type connectors large contacts. Older series had solder contacts, newer crimp | CS, SM<br>TBF 10-72XXX<br>GP, SC, SF, SG, SB, FP<br>10-214XXX<br>10-244XXX<br>10-87XXX etc. | Solder or Crimp front or rear removal | 16 thru 0 | threaded | 310X solder<br>340X crimp F.R.<br>345X crimp R.R. |
| MIL-C-26482<br>*Series I crimp | Miniature connector - medium size contacts - both power and signal currents solder or crimp contacts | PT, PT-SE, PT-CE,<br>PTS-DR, BP, SP,<br>DC | solder or crimp front or rear removal | 20, 16, 12 | bayonet<br>threaded<br>version Non-MIL | 311X solder<br>312X crimp F.R.<br>347X crimp R.R. |
| MIL-C-22992 | Power type connector - heavy duty - MIL-C-5015 insert patterns rugged. Solder or crimp contacts for Class "L" (either for Non-MIL) | QWLD 10-193XXX<br>Class "L" 10-473XXX<br>HK - potted backshell | solder MS1734X crimp for Class "L" | 16 thru 0 | threaded (quick thread) double stub | Class "L" Series is for heavy power<br>MS 9055X Class "L" |
| MIL-C-83723<br>*Series I & II | Series I mates with MIL-C-26482<br>Series II mates with MIL-C-5015<br>Series III mates with MIL-C-26500 | as above for applicable series | crimp rear removal | 20, 16, 12, 8, 0 | threaded & bayonet depends on series | 83723/1 thru 14<br>36 thru 49 Series I,<br>17 thru 27 - 29 -30 -33 -34 -35 -50 -52 -53<br>Series II, 7X -8X -9X<br>Series III |
| MIL-C-38999 | Subminiature - hi-contact density Crimp contact<br>Series I scoop-proof | Series I LJT-R<br>Also see MIL-C-27599 | crimp rear removal | 22D, 20, 16, 12<br>(8, 12, 16 Coax) | bayonet | Intermates with I of MIL-C-27599 |
| | Series II light weight, low profile | Series II JT-R<br>also see MIL-C-27599 | crimp rear removal | 22D, 20, 16, 12<br>(12, 16 Coax) | bayonet | Intermates with II of MIL-C-27599 |
| | Series III - hi-performance, but suitable for general duty | Series III TV-R | crimp rear removal | 22D, 20, 16, 12<br>(8, 12, 16 Coax) | threaded | Available in class K firewall and lanyard release |
| | Series IV Breech-Lok | None | crimp rear release | 22D, 20, 16, 12<br>(8, 12, 16 Coax) | breech-lok | Does not meet total performance requirements of Series III |
| MIL-C-26500* | Miniature connector - medium size contacts - both power & signal currents - solder and crimp contacts | None | crimp front removal | 20, 16, 12 | bayonet | Intermates with Series III of MIL-C-83723 |
| MIL-C-81511* | Subminiature - hi-contact density - crimp contacts, Series I & II front release, Series III & IV rear release | None | crimp front (gang) & rear removal | 22, 20, 16, 12 | bayonet | M81511/0X F.R.<br>M81511/4X R.R. |
| MIL-C-27599 | Subminiature similar to MIL-C-38999 except has non-removable solder - contacts, fully mateable with MIL-C-38999 | LJT-T, P - Series I<br>LJT-A,C,P, - Series II | solder | 22, 20, 16 | bayonet | intermates with Series I & II of MIL-C-38999 |

*Denotes Inactive

# SECTION VI

## QUALIFIED PRODUCTS LIST BY CONNECTOR SPECIFICATION

*A General Note: Connector manufacturers also supply many of the accessories.

| QUALIFIED PRODUCT LIST | MANUFACTURER |
|---|---|
| QPL-5015-26 | |
| Solder Type (MS 3100 Series) | Amphenol, Bendix, I.T.T. Cannon |
| Front Release Crimp (MS 3400 Series) | Flight, Matrix, SAE |
| Rear Release Crimp (MS 3450 Series) | I.T.T. Cannon, Matrix, SAE |
| *Accessories Only | Glenair, Sunbank, Electro-Adapter, Electro-Sonic Components, Raychem, Triangle Electronics |
| QPL-26482-15 | |
| Series I — Solder (MS 3110 Series) | Bendix, Burndy, I.T.T. Cannon, Veam, General Connector |
| Hermetics Only | Glasseal Products, Deutsch, Sealtron |
| Series I — Crimp (MS 3120 Series) | Bendix, Burndy, Deutsch, I.T.T. Cannon, Veam, General Connector |
| Series II - Solder (MS 3440 Series) | Connector Industries, Deutsch |
| Series II - Crimp (MS 3470 Series) | Amphenol, Bendix, I.T.T. Cannon, Deutsch, Matrix |
| *Accessories Only | Sunbank, Electro-Sonic Components, Glenair |
| QPL-83723-7 | |
| Series I | Superseded by and transferred to MIL-C-26482 Series II |
| Series II | Matrix, I.T.T. Cannon |
| Series III | Matrix, Amphenol, TRW Cinch, Deutsch, Pyle-National |
| Hermetics Only | Connector Industries |
| *Accessories Only | Glenair, Sunbank, Raychem |

**NOTE:**

QPL listings change often. Manufacturers can be added or dropped at any time. This listing is currently correct, but will definitely change with time. Please check the current QPL when accurate information is required.

| QUALIFIED PRODUCT LIST | MANUFACTURERS |
|---|---|
| QPL-38999-29 | |
| Series I | Amphenol, Bendix, I.T.T. Cannon, Matrix |
| Series II | Amphenol, Bendix, I.T.T., Cannon, Plessey, Matrix |
| Hermetics Only | Hermetic Seal |
| Series III | Bendix, Matrix, Pyle-National |
| Series IV | G & H Technology |
| *Accessories Only | Glenair, Sunbank, Aero-Electric |
| QPL-22992-17 | |
| MS 17340 Series (QWLD) | Bendix |
| Class "L" (MS 90555 Series) | Bendix, Amphenol, Burndy |
| QPL-27599-4 | Bendix |
| QPL-26500-17 | Amphenol, Pyle-National, TRW Cinch |
| *Accessories Only | Glenair |
| QPL-81511 | Amphenol, TRW Cinch, Deutsch |
| QPL-38300 | Amphenol, Microdot, TRW Cinch |
| QPL-81582 | TRW Cinch |
| QPL-81703 | Deutsch |
| QPL-39029-9 (Contacts) | |
| MIL-C-26482 Series I | Amphenol, Bendix, Burndy, Deutsch, General Connector, I.T.T. Cannon, Pyle-National, Tri-Star, TRW Cinch, Veam |
| MIL-C-26482 II | Amphenol, Bendix, Burndy, Deutsch, I.T.T. Cannon, Matrix, Pyle National, Tri-Star, TRW Cinch |
| MIL-C-38999 | Amphenol, Bendix, Burndy, G & H Technology, I.T.T. Cannon, Tri-Star, AMP, Matrix |
| MIL-C-22999 Class "L" | Amphenol, Bendix, Burndy, |
| Others | May include all of the above, plus Continental Connector, Flight, Hughes, Raychem, SAE, Viking, Winchester |

## CURRENT QPL SUPPLIER ADDRESSES

AMP, Inc.
P. O. Box 3608
Harrisburg, Pennsylvania 17105

Amphenol Connector Division
The Bunker-Ramo Corporation
2801 South 25th Avenue
Broadview, Illinois 60153

The Bendix Corporation
Electrical Components Division
Sidney, New York 13838

Burndy Corporation
Richards Avenue
Norwalk, Connecticut 06852

I.T.T. - Cannon Electric
Division of I.T.T. Corporation
10550 Talbert Ave.
Fountain Valley, California 92708

TRW Cinch NuLine
1015 South Sixth Street
Minneapolis, Minnesota 55415

Deutsch Company
Electronics Components Division
Municipal Airport
Banning, California 92220

General Connector Corporation
80 Bridge Street
Newton, Massachusetts 02158

Glasseal Products Company, Inc.
725 Commerce Road
Linden, New Jersey 07036

Glenair, Inc.
1211 Air Way
Glendale, California 91201

G & H Technology
1649 17th Street
Santa Monica, California 90404

Matrix Science Corporation
435 Maple Avenue
Torrance, California 90503

The Pyle National Company
Connector Division
1334 North Kostner Avenue
Chicago, Illinois 60651

Stanford Applied Engineering, Inc.
3080 Airway Drive
Costa Mesa, CA 92626

Flight Connector Corporation
14128 Lemoli Avenue
Hawthorne, California 90250

## MILITARY SPECIFICATION SUMMARY

| | |
|---|---|
| MIL-C-3655C | 11 April 1980 |
| Supplement 1 | 11 April 1980 |
| No QPL | |

This specification covers a series of RF connectors (TWINAX) used with RF incorporating a twisted pair of conductors.

| | |
|---|---|
| MIL-C-5051G | 23 March 1976 |
| Supplement 1 | 23 March 1976 |
| Amendment 4 | 9 May 1980 |
| QPL-5015-26 | 30 May 1979 |
| Amendment 1 | 31 October 1979 |

This specification and associated Military Standards were recently revised to include crimp contacts, both front and rear release. The insert arrangements are now listed in MIL-STD-1651 dated 27 June 1975 and cover the popular old AND arrangements. Several inactive arrangements have been re-established in the listing. The specification provides for Classes A, B, C, D, E, F, H, J, K, L, P, R, U, W and Y. We presently supply Classes A, C, E, F, P and R, solder only.

| | |
|---|---|
| MIL-C-22992E | 28 August 1974 |
| Amendment 2 | 7 February 1980 |
| QPL-22992-17 | 19 October 1979 |

This specification covers our QWLD heavy-duty series connectors in Classes C and R and our new Class L power connector. Classes C and R incorporate the same insert patterns (See MIL-STD-1651) as supplied under MIL-C-5015. The two series are not, however, intermateable. The Class L connector is used in power distribution circuits.

| | |
|---|---|
| MIL-C-24308A | 22 September 1969 |
| Amendment 6 | 30 April 1980 |
| QPL-24308-28 | 11 May 1981 |

This specification covers a miniature rectangular connector with either solder or crimp contacts.

| | |
|---|---|
| MIL-C-26482G | 5 September 1975 |
| Supplement 1 | 5 September 1975 |
| Amendment 3 | 11 October 1978 |
| QPL-26482-15 | 1 August 1979 |
| Amendment 1 | 3 July 1980 |

The coordinated version (Rev. E) of this specification covered the original miniature quick disconnect series of connectors consisting of: a) Bayonet lock coupling ring with either solder or crimp front release contacts and b) Push-Pull coupling ring with either solder or crimp front release contacts.

MIL-C-26482G is a complete update of this specification. It incorporates the Series I having solder and crimp front release contacts. Crimp rear release contacts Series II have been added. (NOTE: THE PUSH-PULL SERIES (DEUTSCH) HAS BEEN DELETED FROM THIS SPECIFICATION AND PLACED UNDER ITS OWN SPEC NUMBER MIL-C-81703 (NAVY).

| | |
|---|---|
| MIL-C-26500E (USAF) | 12 March 1973 |
| Amendment 3 | 25 June 1981 |
| QPL-26500-18 | 13 April 1976 |

This specification features a 200°C requirement and has provisions for threaded and bayonet lock coupling rings. Only crimp front release contacts are used and these are covered in contact specification MIL-C-26636. Five classes of connectors are listed, i.e. Classes R, H, E, F and G.

MIL-C-26500 is now inactive for design. USAF/AFLC-MMGEP letter t Distribution dated 26 January 1976 points out potential safety hazard if used.

| | |
|---|---|
| MIL-C-27599 (USAF) | 10 January 1966 |
| Amendment 5 | 20 October 1971 |
| QPL-27599-4 | 21 January 1976 |

This specification represents an advancement in the state of the art and covers only the solder contact connectors. It is a companion specification to MIL-C-38999 and like series in each spec are interchangeable and intermateable. Two series are included. Series I covers our heavy-duty fully scoop-proof LJT connectors. Series II covers our miniature pancake JT connectors. This specification is now being revised and one of the major up-date features is the removal of the "degrading samples". The QC format will be similar to MIL-C-38999. Classes T and P are available in the spec.

| | |
|---|---|
| MIL-C-38999H | 27 February 1981 |
| QPL-38999-29 | 30 September 1981 |

The newest and most popular of all circular connector specifications contains four series. Series I is a general duty, scoop-proof, bayonet coupling connector having rear release crimp contacts. Series II is a lightweight, low profile, bayonet coupling connector having rear release crimp type contacts. Series III is a scoop-proof, self-locking, threaded coupling connector with rear release crimp contacts designed for improved vibration resistance, moisture sealing and EMI shielding effectiveness. Series IV is a scoop-proof, Breech-Lok coupling connector with rear release crimp contacts. This specification has been selected as the DOD preferred connector for new design. See MIL-STD-1353 for applications.

| | |
|---|---|
| MIL-C-39012B | 9 April 1970 |
| Amendment 2 | 14 October 1976 |
| Supplement 1B | 1 November 1979 |
| QPL-39012-42 | 16 October 1981 |

This specification covers general requirements for radio-frequency (RF) connectors in Classes 1 & 2 and Categories A, B, C, and D. Bendix is qualified for over 125 part numbers.

| | |
|---|---|
| MIL-C-39029B | 21 December 1977 |
| Amendment 2 | 16 February 1980 |
| QPL-39029-9 | 18 August 1980 |
| Amendment 1 | 14 November 1980 |

This is a general specification covering contacts only. It is intended to become the only contact spec. Each contact, standard, shielded, PCB, wire wrap and thermocouple, is covered by its own slash sheet which details specific requirements.

| | |
|---|---|
| MIL-C-55302C | 15 January 1980 |
| QPL-55302-23 | 14 May 1980 |

This specification covers printed circuit board connectors, subassemblies, and accessories.

| | |
|---|---|
| MIL-C-49142 | 17 April 1978 |
| Supplement 1 | 17 April 1978 |
| No QPL | |

This specification covers Triaxial connectors. Bendix is currently in the process of qualifying.

| | |
|---|---|
| MIL-C-55339 | 1 July 1971 |
| Amendment 4 | 28 February 1979 |
| QPL-55339-10 | 11 June 1980 |

Bendix qualified to M55339/17-00274 only. This specification covers several adapters which join RF connectors having different sizes and characteristics.

MIL-C-81511 Inactive for New Design

This specification covers four series of connectors incorporating dielectric retention for the contacts in both a gang release or individual release system. Series I, gang release, with long shells is intermateable with Series III having individual contact release also with long shells. Series II, gang release, with lightweight short shells is intermateable with Series IV having individual contact release also with lightweight short shells.

| | |
|---|---|
| MIL-C-83723D | 27 December 1977 |
| Supplement 1 | 27 December 1977 |
| QPL-83723-7 | 30 November 1979 |

This specification evolved from NAS 1599 and carries forward the hard face socket insert, rear release contact concept. It covers three series. Series I has been made inactive and superseded by Series II of MIL-C-26482. Series II has been made inactive and superseded by the rear release version of MIL-C-5015. Series III is intermateable but not interchangeable with MIL-C-26500 connectors having either bayonet lock or threaded coupling rings. All three series are rated at 200°C.

| | |
|---|---|
| MIL-C-83733B (USAF) | 10 December 1980 |
| Supplement 1 | 10 December 1980 |
| QPL-83733-1 (USAF) | 31 January 1975 |

This specification covers a series of rear release rectangular connectors.

| | |
|---|---|
| MIL-C-85049 | 16 January 1980 |
| QPL | No QPL'd suppliers at this time |

This specification covers accessories for cylindrical connectors. It is intended to delete the accessories from the various connector specifications and consolidate them in this document.

| | |
|---|---|
| MIL-C-81969 | 11 January 1979 |
| Supplement 1 | 11 January 1979 |
| QPL | No QPL'd suppliers at this time |

This specification covers connector insertion/removal tools and is intended to replace all other tool specifications.

# SECTION VII

## WHAT DO YOU NEED TO SELL?

√ A BASIC PRODUCT KNOWLEDGE

- Nomenclature (component parts)
- Typical terms or descriptive words
- Pertinent references to MIL-SPEC
- Cross reference Bendix P/N to MIL P/N

√ A CATALOG

- Know how it is organized
- Keep it current
- Add your own notes for reference

√ KNOW YOUR ORGANIZATION AND OURS

- Who has pricing & delivery data
- Who has technical data
- Who can expedite
- Who can negotiate
- A back up for each of the above

√ KNOW YOURSELF AND YOUR COMPETITORS

- What is negotiable at your account
- What are your strong points
- What are your weak points
- What are your protection points
- Who is your competition

√ KNOW YOUR CUSTOMERS

WHAT ARE THEIR NEEDS?

- Company Needs - Personal Needs

LEARN TO LISTEN (AND TO SEE)

- What are they saying?
- What do they mean?
  - how they say it may mean more than what they say
  - what you both see may say more than conversation

EACH ACCOUNT IS UNIQUE

- Don't use a carbon copy approach
- Let your customers know you see them **that** way

TAKE TIME TO KNOW THE PEOPLE YOU DEAL WITH

- Both at your account and your own facility
- Manage your time and territory like assets
- If business or potential isn't there, maybe you shouldn't be

## *CONCLUSION*

The data in this booklet was designed to provide you with the basic information needed to know the product. In order to effectively sell, it is important to remember that knowing your customer and your product go hand in hand. The sale begins with you!

We have a great line, you can sell on the quality that it is. Don't promise more than you can deliver, simply tell it like it is. You may lose some sales, but your credibility will grow.

**AMPHENOL PRODUCTS HEADQUARTERS**
**312-983-3500**
4300 Commerce Court
Lisle, IL 60532

**Bendix Connector Operations**
**607-563-5324**
40–60 Delaware Street
Sidney, New York 13838-1395

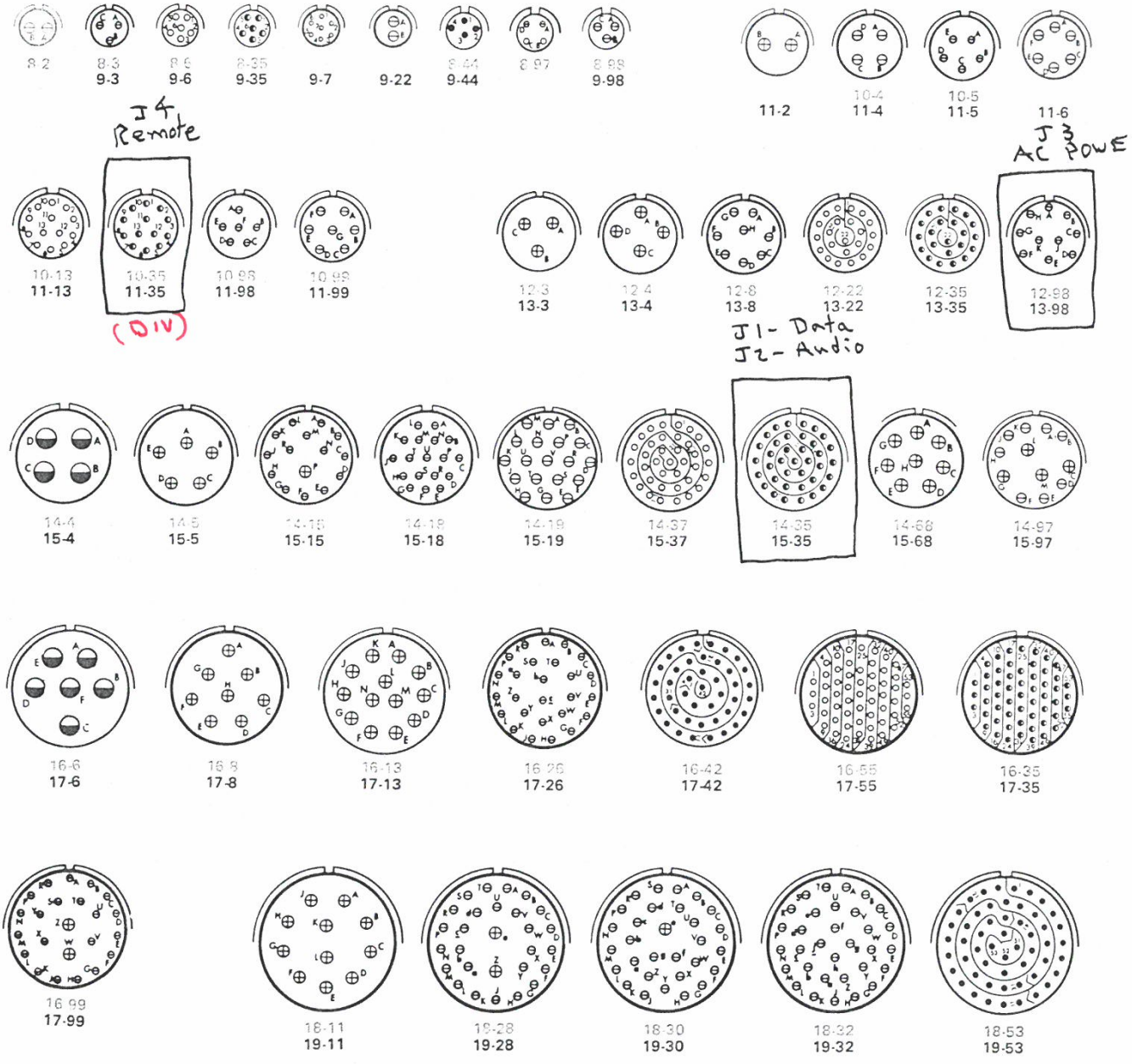
L-1102-1 Printed in U.S.A. 5/85

HAL COMMUNICATIONS CORP. MSCON1.WK1
ST-8000A MS CONNECTORS
DECEMBER 11, 1990

| ST-8000A CONNECTOR | J1 | J2 | J3 | J4 | J5 |
|---|---|---|---|---|---|
| USAF SPECIFICATION: | | | (Adapter) | | |
| Use | Data I/O | Audio I/O | AC Power | Remote Control | Diversity (Optional) |
| Specified P/N | MS27508E14F35SB | MS27508E14F35SA | MS27472E12F98P | MS27508E10F35P | MS27508E10F35S |
| Connector Type | BOX MTG PLUG - Int | BOX MTG PLUG - Int | WALL MTG RECPT | BOX MTG PLUG - Int | BOX MTG PLUG - Int |
| Cable Clamp | N/R | N/R | MS27506F12-2 | N/R | N/R |
| No. of Pins | 37 (Socket) | 37 (Socket) | 10 (Pin) | 13 (Pin) | 13 (Socket) |
| Contact Size | No. 22D | No. 22D | No. 20 | No. 22D | No. 22D |
| Current Rating | 5 Amps | 5 Amps | 7.5 Amps | 5 Amps | 5 Amps |
| Service Rating | "M" | "M" | "I" | "M" | "M" |
| Test Voltage | 1300 VRMS | 1300 VRMS | 1800 VRMS | 1300 VRMS | 1300 VRMS |
| Plating | Electroless Nickel | Electroless Nickel | Electroless Nickel | Electroless Nickel | Electroless Nickel |
| MATING CONNECTOR: | | | | | |
| Mating Cable Conn | MS27473E14F35PB | MS27473E14F35PA | MS27473E12F98S | MS27473E10F35S | MS27473E12F98P |
| Cable Clamp | MS27506F14-2 | MS27506F14-2 | MS27506F12-2 | MS27506F10-2 | MS27506F10-2 |
| ~~JT06RE (Incl Clamp)~~ | ~~JT06RE-14-35PB(SR)~~ | ~~JT06RE-14-35PA(SR)~~ | ~~JT06RE-12-98S(SR)~~ | ~~JT06RE-10-35S(SR)~~ | ~~JT06RE-10-35P(SR)~~ |
| No. of Pins | 37 (Socket) | 37 (Socket) | 10 (Pin) | 13 (Pin) | 13 (Socket) |
| Contact Size | No. 22D | No. 22D | No. 20 | No. 22D | No. 22D |
| CRIMP TOOLING | | | | | |
| Crimp Tool | MS3198-1 | MS3198-1 | MS3198-1 | MS3198-1 | MS3198-1 |
| Die (Socket) | MS3198-6P | MS3198-6P | MS3198-9P | MS3198-6P | MS3198-6P |
| Die (Pin) | MS3198-8P | MS3198-8P | MS3198-9P | MS3198-8P | MS3198-8P |
| MIL SPEC | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II |
| QPL Sources QPL-38999-29 | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix |

# JT/LJT
# insert arrangements

black arrangements — JT or LJT
green arrangements — JT only
orange arrangements — LJT only




front face of pin inserts illustrated

CONTACT LEGEND 8 12 16 20 22 22M 22D

# JT/LJT
# insert availability and identification;
## alternate positions

J1 (Data)

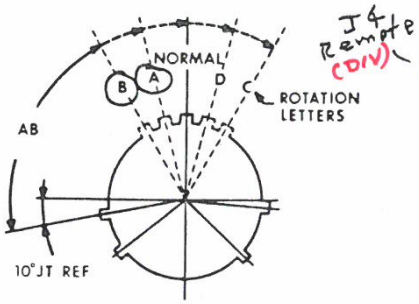
J2 (Audio)

### JT MASTER KEY/KEYWAY ROTATION

| Shell Size | AB ANGLE OF ROTATION (Degrees) Normal | A | B | C | D |
|---|---|---|---|---|---|
| 8 | 100° | 82° | — | — | 118° |
| 10 | 100° | 86° | 72° | 128° | 114° |
| 12 | 100° | 80° | 68° | 132° | 120° |
| 14 | 100° | 79° | 66° | 134° | 121° |
| 16 | 100° | 82° | 70° | 130° | 118° |
| 18 | 100° | 82° | 70° | 130° | 118° |
| 20 | 100° | 82° | 70° | 130° | 118° |
| 22 | 100° | 85° | 74° | 126° | 115° |
| 24 | 100° | 85° | 74° | 126° | 115° |

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

AB angles shown are viewed from the front face of the connector, a receptacle is shown below. The angles for the plug are exactly the same except the direction of rotation is opposite of that shown for the receptacle.




RELATIVE POSSIBLE POSITION OF ROTATED MASTER KEYWAY. (front face of receptacle shown)

J4 Remote (DIV)

J3 AC PWR

| JT | LJT | Solder | Crimp | Hermetics Class H | Hermetics Class Y* | Service Rating | Total Contacts | Contact Size 22D | 22M | 22 | 20 | 16 | 12 | 8†† (Coax) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8-2 | | P | | | | M | 2 | | | | 2 | | | |
| 8-3 | | X | N/A | P | | M | 3 | | | | 3 | | | |
| | 9-3 | X | | | | | | | | | | | | |
| 8-6 | | X | X | P | P | M | 6 | | 6 | | | | | |
| | 9-6 | X | X | P | P | | | | | | | | | |
| | | | | | | M | 7 | | 7 | | | | | |
| | 9-7 | X | | | | | | | | | | | | |
| | | | | | | I | 2 | | | | 2 | | | |
| | 9-22 | X | | | | | | | | | | | | |
| 8-35 | | | X | P | P | M | 6 | 6 | | | | | | |
| | 9-35 | | X | P | P | | | | | | | | | |
| 8-44 | | | X | P | P | M | 4 | | | 4 | | | | |
| | 9-44 | | X | | | | | | | | | | | |
| 8-97 | | X | | | | M | 4 | | 2 | | 2 | | | |
| 8-98 | | S | X | P | P | I | 3 | | | | 3 | | | |
| | 9-98 | X | X | P | P | | | | | | | | | |
| | | | | | | I | 2 | | | | | 2 | | |
| | 11-2 | | 2 | P** | | | | | | | | | | |
| 10-4 | | | 3 | | | I | 4 | | | | 4 | | | |
| | 11-4 | X | 2 | | | | | | | | | | | |
| 10-5 | | X | X | P | P | I | 5 | | | | 5 | | | |
| | 11-5 | X | P | | | | | | | | | | | |
| | | | | | | I | 6 | | | | 6 | | | |
| | 11-6 | S | | | | | | | | | | | | |
| 10-13 | | X | X | P | P | M | 13 | | 13 | | | | | |
| | 11-13 | X | X | P | P | | | | | | | | | |
| 10-35 | | | X | P | P | M | 13 | 13 | | | | | | |
| | 11-35 | | X | P | P | | | | | | | | | |
| 10-98 | | X | X | P | P | I | 6 | | | | 6 | | | |
| | 11-98 | X | X | P | P | | | | | | | | | |
| 10-99 | | | X | P | P | I | 7 | | | | 7 | | | |
| | 11-99 | | P | | | | | | | | | | | |
| 12-3 | | X | X | P | P | II | 3 | | | | | 3 | | |
| | 13-3 | | P | | | | | | | | | | | |
| 12-4 | | X | X | P | P | I | 4 | | | | | 4 | | |
| | 13-4 | X | X | P | P | | | | | | | | | |
| 12-8 | | X | X | P | P | I | 8 | | | | 8 | | | |
| | 13-8 | X | X | P | P | | | | | | | | | |
| 12-22 | | | X | P | P | M | 22 | | 22 | | | | | |
| | 13-22 | X | X | P | P | | | | | | | | | |
| 12-35 | | | X | P | P | M | 22 | 22 | | | | | | |
| | 13-35 | | X | P | P | | | | | | | | | |
| 12-98 | | X | X | P | P | I | 10 | | | | 10 | | | |
| | 13-98 | X | X | P | P | | | | | | | | | |
| 14-4 | | | 2 | | | I | 4 | | | | | | 4 | |
| | 15-4 | | 3 | | | | | | | | | | | |
| 14-5 | | X | X | P | P | II | 5 | | | | | 5 | | |
| | 15-5 | X | X | | | | | | | | | | | |
| 14-15 | | X | X | P | P | I | 15 | | | | 14 | 1 | | |
| | 15-15 | X | X | P | P | | | | | | | | | |
| 14-18 | | X | X | P | P | I | 18 | | | | 18 | | | |
| | 15-18 | X | X | P | P | | | | | | | | | |
| 14-19 | | X | 3 | | | I | 19 | | | | 19 | | | |
| | 15-19 | | 2 | | | | | | | | | | | |

(P) Pin inserts only (check factory for socket availability)
(S) Socket inserts only (check factory for pin availability)
(2) Not tooled for RP or 02RE.
(3) Pin insert only, not tooled for RP or 02RE (check factory for availability)
*Y is same as H with interfacial seal
**Tooled with special terminal only (check factory for availability of standard terminal)
††Coax contacts only

# JT/LJT
# insert availability and identification;
## alternate positions (continued)

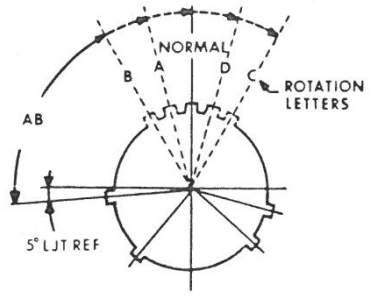
J1, J2
Data, Audio

### LJT MASTER KEY/KEYWAY ROTATION

| AB ANGLE OF ROTATION (Degrees) | | | | | |
|---|---|---|---|---|---|
| Shell Size | Normal | A | B | C | D |
| 9 | 95° | 77° | — | — | 113° |
| 11 | 95° | 81° | 67° | 123° | 109° |
| 13 | 95° | 75° | 63° | 127° | 115° |
| 15 | 95° | 74° | 61° | 129° | 116° |
| 17 | 95° | 77° | 65° | 125° | 113° |
| 19 | 95° | 77° | 65° | 125° | 113° |
| 21 | 95° | 77° | 65° | 125° | 113° |
| 23 | 95° | 80° | 69° | 121° | 110° |
| 25 | 95° | 80° | 69° | 121° | 110° |

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

AB angles shown are viewed from the front face of the connector, a receptacle is shown below. The angles for the plug are exactly the same except the direction of rotation is opposite of that shown for the receptacle.

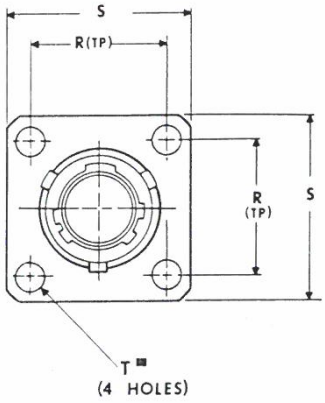


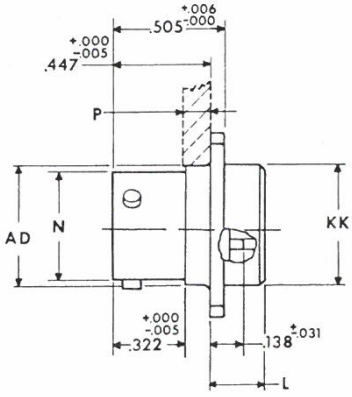

RELATIVE POSSIBLE POSITION OF ROTATED MASTER KEYWAY.
(front face of receptacle shown)

| JT | LJT | Solder | Crimp | Hermetics Class H | Hermetics Class Y* | Service Rating | Total Contacts | Contact Size 22D | 22M | 22 | 20 | 16 | 12 | 8†† (Coax) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14-35 | | | X | P | P | M | 37 | 37 | | | | | | |
| | 15-35 | | X | P | P | | | | | | | | | |
| 14-37 | | X | X | P | P | M | 37 | | 37 | | | | | |
| | 15-37 | X | X | P | P | | | | | | | | | |
| 14-68 | | | 2 | | | I | 8 | | | | | 8 | | |
| | 15-68 | | 3 | | | | | | | | | | | |
| 14-97 | | | 2 | P | P | I | 12 | | | | 8 | 4 | | |
| | 15-97 | X | 2 | P | P | | | | | | | | | |
| 16-6 | | | X | P | P | I | 6 | | | | | | 6 | |
| | 17-6 | | X | P | P | | | | | | | | | |
| 16-8 | | X | X | P | P | II | 8 | | | | | 8 | | |
| | 17-8 | X | X | P | P | | | | | | | | | |
| 16-13 | | | 2 | | | I | 13 | | | | | 13 | | |
| | 17-13 | | 3 | | | | | | | | | | | |
| 16-26 | | X | X | P | P | I | 26 | | | | 26 | | | |
| | 17-26 | X | X | P | P | | | | | | | | | |
| 16-35 | | | X | P | P | M | 55 | 55 | | | | | | |
| | 17-35 | X | X | P | P | | | | | | | | | |
| 16-42 | | | X | P | P | M | 42 | | | 42 | | | | |
| | 17-42 | | P | | | | | | | | | | | |
| 16-55 | | X | X | P | P | M | 55 | | 55 | | | | | |
| | 17-55 | X | X | | | | | | | | | | | |
| 16-99 | | X | X | P | P | I | 23 | | | | 21 | 2 | | |
| | 17-99 | X | X | | | | | | | | | | | |
| 18-11 | | X | X | P | P | II | 11 | | | | | 11 | | |
| | 19-11 | X | X | P | P | | | | | | | | | |
| 18-28 | | X | X | P | P | I | 28 | | | | 26 | 2 | | |
| | 19-28 | X | P | | | | | | | | | | | |
| 18-30 | | X | X | P | | I | 30 | | | | 29 | 1 | | |
| | 19-30 | X | P | | | | | | | | | | | |
| 18-32 | | X | X | P | P | I | 32 | | | | 32 | | | |
| | 19-32 | X | X | P | P | | | | | | | | | |
| 18-35 | | | X | P | P | M | 66 | 66 | | | | | | |
| | 19-35 | | X | P | P | | | | | | | | | |
| 18-53 | | X | X | | | M | 53 | | | 53 | | | | |
| | 19-53 | | P | | | | | | | | | | | |
| 18-66 | | X | X | P | P | M | 66 | | 66 | | | | | |
| | 19-66 | | X | P | P | | | | | | | | | |
| | | | | | | M | 67 | | 67 | | | | | |
| | 19-67 | X | 3 | | | | | | | | | | | |
| 18-68 | | | 2 | | | I | 18 | | | | | 18 | | |
| | 19-68 | | 3 | | | | | | | | | | | |
| 18-96 | | | 2 | | | I | 9 | | | | | | 9 | |
| 20-1 | | | X | P | P | M | 79 | | 79 | | | | | |
| | 21-1 | | X | | | | | | | | | | | |
| 20-2 | | | X | | | M | 65 | | | 65 | | | | |
| | 21-2 | | P | | | | | | | | | | | |
| 20-11 | | | 2 | | | I | 11 | | | | | | 11 | |
| | 21-11 | | 2 | | | | | | | | | | | |
| 20-16 | | X | X | P | P | II | 16 | | | | | 16 | | |
| | 21-16 | X | X | P | P | | | | | | | | | |
| | | | | | | I | 24 | | | | 24 | | | |
| | 21-24 | X | | | | | | | | | | | | |
| | | | | | | I | 25 | | | | 25 | | | |
| | 21-25 | X | | | | | | | | | | | | |

(P) Pin inserts only (check factory for socket availability)
(S) Socket inserts only (check factory for pin availability)
(2) Not tooled for RP or 02RE
(3) Pin insert only, not tooled for RP or 02RE (check factory for availability)
*Y is same as H with interfacial seal
††Coax contacts only

# JT – Crimp
# JTP02R (MS27508)
## box mounting receptacle
## (back panel mounting)




*JTP02RE-XX-XXX (MS27508E)
**JTPN02RE-XX-XXX
***JTPS02RE-XX-XXX
*JTP02RP-XX-XXX
**JTPN02RP-XX-XXX
***JTPS02RP-XX-XXX

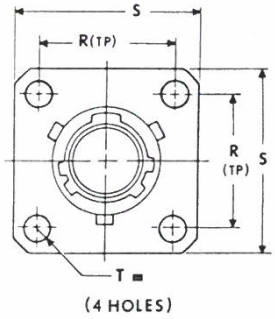
■ ⊕ .005 DIA Ⓜ

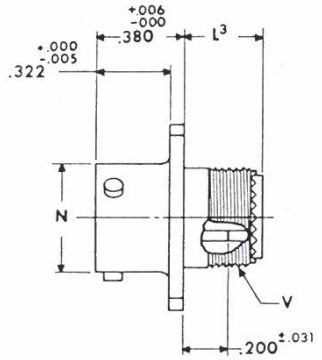
*To complete order number see page 52.
**High temperature version, to complete order number see page 52.
***Clear iridite finish (gold color), $N_2O_4$ resistant, to complete order number see page 52.

| Shell Size | N Dia. +.001 −.005 | R (TP) | S ±.016 | L Max. | AD Dia. ±.005 | T Dia. ±.005 | P Max. Panel Thickness | KK Max. |
|---|---|---|---|---|---|---|---|---|
| 8 | .473 | .594 | .812 | .225 | .516 | .120 | .147 | .531 |
| 10 | .590 | .719 | .938 | .225 | .633 | .120 | .152 | .656 |
| 12 | .750 | .812 | 1.031 | .225 | .802 | .120 | .152 | .828 |
| 14 | .875 | .906 | 1.125 | .225 | .927 | .120 | .152 | .953 |
| 16 | 1.000 | .969 | 1.219 | .225 | 1.052 | .120 | .152 | 1.078 |
| 18 | 1.125 | 1.062 | 1.312 | .225 | 1.177 | .120 | .152 | 1.203 |
| 20 | 1.250 | 1.156 | 1.438 | .225 | 1.302 | .120 | .179 | 1.328 |
| 22 | 1.375 | 1.250 | 1.562 | .225 | 1.427 | .120 | .179 | 1.453 |
| 24 | 1.500 | 1.375 | 1.688 | .225 | 1.552 | .147 | .169 | 1.578 |

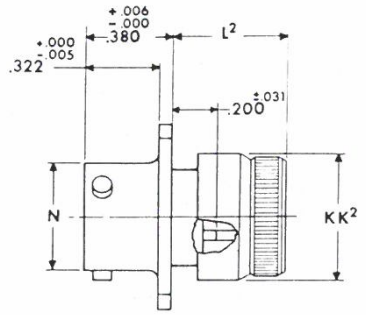
All dimensions for reference only

# JT – Crimp
# JT00R (MS27472)
## wall mounting receptacle

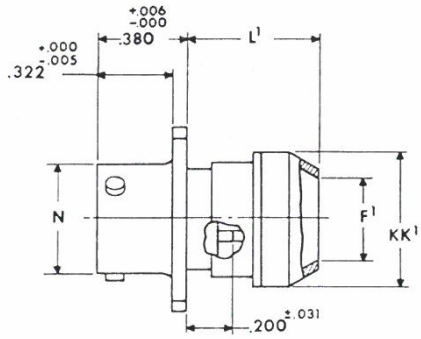


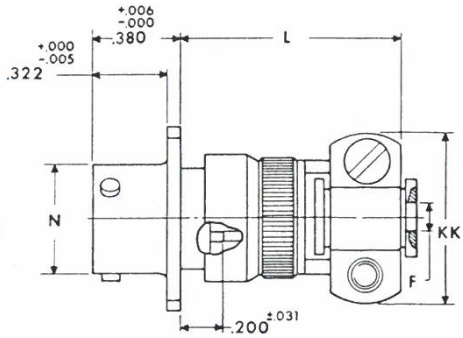

*JT00RT-XX-XXX (MS27472T)
**JTS00RT-XX-XXX (MS27479T)
***JTN00RT-XX-XXX




*JT00RE-XX-XXX (MS27472E)
**JTS00RE-XX-XXX (MS27479E)
***JTN00RE-XX-XXX




*JT00RP-XX-XXX (MS27472P)
**JTS00RP-XX-XXX
***JTN00RP-XX-XXX




*JT00RE-XX-XXX(SR)
**JTS00RE-XX-XXX(SR)
***JTN00RE-XX-XXX(SR)

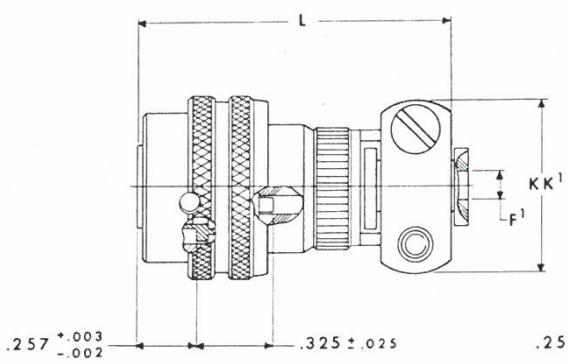
= ⌖ .005 DIA Ⓜ

*To complete order number see page 52
**High temperature version, to complete order number see page 52
***Clear iridite finish (gold color), $N_2O_4$ resistant, to complete order number see page 52

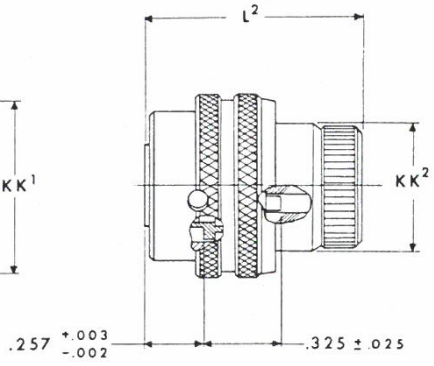
| Shell Size | KK Max. | KK¹ Dia. Max. | KK² Dia. Max. | F Dia. +.010 −.025 | F¹ Dia. | L Max. | L¹ Max. | L² Max. | L³ Max. | R (TP) | S ±.016 | T ±.005 | N +.001 −.005 | V Thread Modified | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | Class 2A | Modified Major Dia. |
| 8 | .812 | .625 | .578 | .125 | .444 | 1.094 | .609 | .547 | .500 | .594 | .812 | .120 | .473 | .4375-28UNEF | .421– .417 |
| 10 | .875 | .750 | .703 | .188 | .558 | 1.094 | .609 | .547 | .500 | .719 | .938 | .120 | .590 | .5625-24UNEF | .542– .538 |
| 12 | 1.000 | .875 | .828 | .312 | .683 | 1.094 | .609 | .547 | .500 | .812 | 1.031 | .120 | .750 | .6875-24UNEF | .667– .663 |
| 14 | 1.125 | 1.000 | .953 | .375 | .808 | 1.344 | .609 | .547 | .500 | .906 | 1.125 | .120 | .875 | .8125-20UNEF | .791– .787 |
| 16 | 1.188 | 1.125 | 1.078 | .500 | .909 | 1.344 | .609 | .547 | .500 | .969 | 1.219 | .120 | 1.000 | .9375-20UNEF | .916– .912 |
| 18 | 1.438 | 1.250 | 1.203 | .625 | 1.034 | 1.344 | .609 | .547 | .500 | 1.062 | 1.312 | .120 | 1.125 | 1.0625-18UNEF | 1.034–1.030 |
| 20 | 1.438 | 1.375 | 1.328 | .625 | 1.159 | 1.344 | .609 | .547 | .500 | 1.156 | 1.438 | .120 | 1.250 | 1.1875-18UNEF | 1.158–1.154 |
| 22 | 1.625 | 1.500 | 1.453 | .750 | 1.284 | 1.469 | .609 | .547 | .500 | 1.250 | 1.562 | .120 | 1.375 | 1.3125-18UNEF | 1.283–1.279 |
| 24 | 1.719 | 1.625 | 1.578 | .800 | 1.409 | 1.469 | .688 | .547 | .500 | 1.375 | 1.688 | .147 | 1.500 | 1.4375-18UNEF | 1.408–1.404 |

All dimensions for reference only

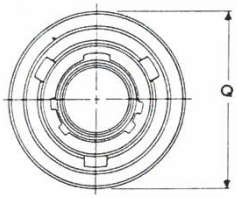
# JT – Crimp
# JT06R (MS27473)
## straight plug

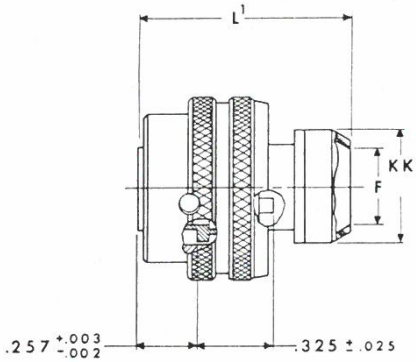



*JT06RE-XX-XXX(SR)
**JTS06RE-XX-XXX(SR)
***JTN06RE-XX-XXX(SR)

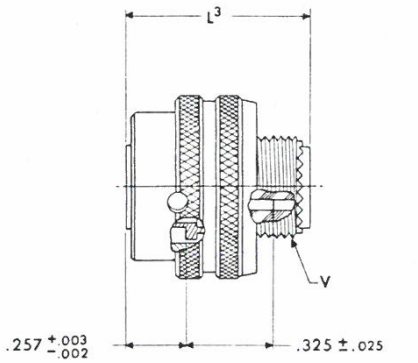



*JT06RE-XX-XXX (MS27473E)
**JTS06RE-XX-XXX (MS27480E)
***JTN06RE-XX-XXX




*JT06RP-XX-XXX (MS27473P)
**JTS06RP-XX-XXX
***JTN06RP-XX-XXX



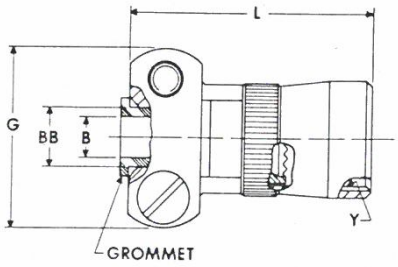

*JT06RT-XX-XXX (MS27473T)
**JTS06RT-XX-XXX (MS27480T)
***JTN06RT-XX-XXX

*To complete order number see page 52
**High temperature version, to complete order number see page 52
***Clear iridite finish (gold color), $N_2O_4$ resistant, to complete order number see page 52

| Shell Size | KK Dia. Max. | KK1 Max. | KK2 Max. | F Dia. | F1 Dia. +.010 −.025 | L Max. | L1 Max. | L2 Max. | L3 Max. | Q Dia. Max. | V Thread Modified | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Class 2A | Modified Major Dia. |
| 8 | .625 | .812 | .578 | .444 | .125 | 1.562 | 1.000 | .938 | .891 | .734 | .4375-28UNEF | .421– .417 |
| 10 | .750 | .875 | .703 | .558 | .188 | 1.562 | 1.000 | .938 | .891 | .844 | .5625-24UNEF | .542– .538 |
| 12 | .875 | 1.000 | .828 | .683 | .312 | 1.562 | 1.000 | .938 | .891 | 1.016 | .6875-24UNEF | .667– .663 |
| 14 | 1.000 | 1.125 | .953 | .808 | .375 | 1.812 | 1.000 | .938 | .891 | 1.141 | .8125-20UNEF | .791– .787 |
| 16 | 1.125 | 1.188 | 1.078 | .909 | .500 | 1.812 | 1.000 | .938 | .891 | 1.265 | .9375-20UNEF | .916– .912 |
| 18 | 1.250 | 1.438 | 1.203 | 1.034 | .625 | 1.812 | 1.000 | .938 | .891 | 1.391 | 1.0625-18UNEF | 1.034–1.030 |
| 20 | 1.375 | 1.438 | 1.328 | 1.159 | .625 | 1.812 | 1.000 | .938 | .891 | 1.500 | 1.1875-18UNEF | 1.158–1.154 |
| 22 | 1.500 | 1.625 | 1.453 | 1.284 | .750 | 1.938 | 1.000 | .938 | .891 | 1.625 | 1.3125-18UNEF | 1.283–1.279 |
| 24 | 1.625 | 1.719 | 1.578 | 1.409 | .800 | 1.938 | 1.062 | .938 | .891 | 1.750 | 1.4375-18UNEF | 1.408–1.404 |

All dimensions for reference only

# JT – Accessories
## Cable Clamp
### (crimp type)




*10-405982-XXX (MS27506XXX-2)

*For MS stamping identification, accessories must be ordered by MS part number. If ordered by 10- part number, they will be stamped with said number.*

*To complete order number, add shell size and suffix number.

| Finish | 10- No. Suffix | MS No. Suffix |
|---|---|---|
| Chromate treat | -XX0 | |
| Bright cadmium plate | -XX1 | |
| Black anodize | -XX2 | |
| Cadmium plate olive drab | -XX3 | |
| Grey anodize | -XX4 | |
| Anodic coating | -XX5 | CXX-2 |
| Tin zinc plate | -XX6 | |
| Cadmium plate nickel base | -XX7 | AXX-2 |
| Bright nickel | -XX8 | |
| Olive drab, cadmium, nickel base | -XX9 | BXX-2 |
| Electroless nickel | -XXG | FXX-2 |

For example shell size 10 with cadmium plate, nickel base, 10-405982-107 or MS27506A10-2

| Shell Size | G Max. | L Max. | Y Thread (Modified) Size Class 2B | Y Thread (Modified) Modified Minor Dia. | BB Dia. +.000 −.011 | Screw Size | B Dia. +.010 −.025 |
|---|---|---|---|---|---|---|---|
| 8 | .775 | .984 | .4375-28UNEF | .399 – .405 | .250 | 6-32UNC | .125 |
| 10 | .837 | .984 | .5625-24UNEF | .524 – .529 | .312 | 6-32UNC | .188 |
| 12 | .963 | .984 | .6875-24UNEF | .649 – .654 | .438 | 6-32UNC | .312 |
| 14 | 1.087 | 1.234 | .8125-20UNEF | .766 – .771 | .562 | 6-32UNC | .375 |
| 16 | 1.150 | 1.234 | .9375-20UNEF | .891 – .896 | .625 | 6-32UNC | .500 |
| 18 | 1.400 | 1.234 | 1.0625-18UNEF | 1.002 – 1.007 | .750 | 8-32UNC | .625 |
| 20 | 1.400 | 1.234 | 1.1875-18UNEF | 1.135 – 1.140 | .750 | 8-32UNC | .625 |
| 22 | 1.587 | 1.359 | 1.3125-18UNEF | 1.252 – 1.257 | .938 | 8-32UNC | .750 |
| 24 | 1.681 | 1.281 | 1.4375-18UNEF | 1.377 – 1.382 | 1.000 | 8-32UNC | .800 |

J4, J5 –
J3 –
J1, J2 –

All dimensions for reference only.

HAL COMMUNICATIONS CORP. MSCON1.WK1
ST-8000A MS CONNECTORS
DECEMBER 11, 1990

| ST-8000A CONNECTOR | J1 | J2 | J3 | J4 | J5 |
|---|---|---|---|---|---|
| USAF SPECIFICATION: | | | | | |
| Use | Data I/O | Audio I/O | AC Power | Remote Control | Diversity (Optional) |
| Specified P/N | MS27508E14F35SB | MS27508E14F35SA | MS27472E12F98P | MS27508E10F35P | MS27508E10F35S |
| Connector Type | BOX MTG PLUG - Int | BOX MTG PLUG - Int | WALL MTG RECPT | BOX MTG PLUG - Int | BOX MTG PLUG - Int |
| Cable Clamp | N/R | N/R | MS27506F12-2 | N/R | N/R |
| | | | | | |
| No. of Pins | 37 (Socket) | 37 (Socket) | 10 (Pin) | 13 (Pin) | 13 (Socket) |
| Contact Size | No. 22D | No. 22D | No. 20 | No. 22D | No. 22D |
| Current Rating | 5 Amps | 5 Amps | 7.5 Amps | 5 Amps | 5 Amps |
| Service Rating | "M" | "M" | "I" | "M" | "M" |
| Test Voltage | 1300 VRMS | 1300 VRMS | 1800 VRMS | 1300 VRMS | 1300 VRMS |
| Plating | Electroless Nickel | Electroless Nickel | Electroless Nickel | Electroless Nickel | Electroless Nickel |
| MATING CONNECTOR: | | | | | |
| Mating Cable Conn | MS27473E14F35PB | MS27473E14F35PA | MS27473E12F98S | MS27473E10F35S | MS27473E12F98P |
| Cable Clamp | MS27506F14-2 | MS27506F14-2 | MS27506F12-2 | MS27506F10-2 | MS27506F10-2 |
| JT06RE (Incl Clamp) | JT06RE-14-35PB(SR) | JT06RE-14-35PA(SR) | JT06RE-12-98S(SR) | JT06RE-10-35S(SR) | JT06RE-10-35P(SR) |
| No. of Pins | 37 (Socket) | 37 (Socket) | 10 (Pin) | 13 (Pin) | 13 (Socket) |
| Contact Size | No. 22D | No. 22D | No. 20 | No. 22D | No. 22D |
| CRIMP TOOLING | | | | | |
| Crimp Tool | MS3198-1 | MS3198-1 | MS3198-1 | MS3198-1 | MS3198-1 |
| Die (Socket) | MS3198-6P | MS3198-6P | MS3198-9P | MS3198-6P | MS3198-6P |
| Die (Pin) | MS3198-8P | MS3198-8P | MS3198-9P | MS3198-8P | MS3198-8P |
| MIL SPEC | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II |
| QPL Sources QPL-38999-29 | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix |

Hamilton Avnet ELECTRONICS
AN AVNET COMPANY
(SELLER)

Quotation No. A

Page 1 of 1

Customer/Buyer

HAL COMMUNICATIONS CORP.
P.O. BOX 365
URBANA, IL 61801

Date JUNE 30, 1988

Attention TERRY STOLTEY
Customer Reference:

# QUOTATION

| QUANTITY | DESCRIPTION OF PRODUCTS | UNIT PRICE | DELIVERY |
|---|---|---|---|
| 20 | MS27499E12F98O | 22.52 | 1PC 10 WEEK<br>19 PCS 18 W |
| 2 | MS27473E12F98S | 23.57 | 10 WEEKS |
| 20 | JTP02RE-10-35P | 21.39 | 1 WEEK |
| 2 | MATING CONNECTOR FOR JTP02RE-10-35P | 20.90 | 1 WEEK |
| 20 | MS27499E12F358B | 25.96 | 1 WEEK |
| 2 | MS27473E12F35PB | 25.85 | 10 WEEKS |
| 20 | MS27499E14F358A | 30.50 | 9PCS 1 WEEK<br>11 PCS 18 W |
| 2 | MS27473E12F35PA | 27.50 | 1WEEK |

The terms and conditions on the reverse side are also a part hereof, including Seller's Limited Warranty and Limitation of Liabilities (Item 5). The terms and conditions of sale set forth on the face and reverse sides hereof constitute an offer by Seller and may only be accepted on the exact terms set forth and no other terms and conditions shall be controlling. These terms and conditions supersede the terms and conditions of Buyer's purchase order or any other documents submitted by Buyer with respect to the Products described hereon.

Terms: NET 30
Our Sales Engineer in Your Area Is:
Inside Sales Contact: ANGELA
FOB: Destination ☐ Factory ☐ Our Plant ☐

WE THANK YOU FOR THIS OPPORTUNITY TO BID ON YOUR REQUIREMENTS AND LOOK FORWARD TO SERVING YOUR FUTURE NEEDS.

By mark Daniels GS
Quotes & Contract Manager
MARK DANIELS GENERAL MANAGER

HA018 REV 1-87

CUSTOMER

TIME ELECTRONICS
An Avnet Company

330 SOVEREIGN COURT
ST. LOUIS, MO 63011-4491
(314) 391-6444

Quotation No. 5798

Page 1 of 1

HAL COMMUNICATION
P.O. BOX 365
URBANA, IL 61801

Date JUNE 28, 1988

ATTN: TERRY STOLTEY

CLOSE DATE: 6-27-88

| QUANTITY | DESCRIPTION | | UNIT PRICE | DELIVERY |
|---|---|---|---|---|
| 20 | MS27499E12F98P | MFG-CAN | 20.05 | STK |
| 2 | MS27473E12F98S | CAN | 38.15 | STK |
| 20 | JTP02RE-10-35P | | NO BID | |
| 2 | BENDIX | | NO BID | |
| 20 | MS27499E12F35SB | CAN | 36.95 | 18-20 WKS |
| 2 | MS27473E12F35PB | CAN | 40.15 | 8 WKS |
| 20 | MS27499E14F35SA | CAN | 28.95 | STK |
| 2 | MS27473E14F35PA | CAN | 39.55 | STK |

QUOTATION

Our Sales Engineer in Your Area Is: KEN MEYER

Terms: 1/10/30

F.O.B.: SP

The prices quoted herein represent currently established prices and are no higher than would be quoted to any other customer, either industrial or agencies of United States Government, for similar material in like quantities. Unless otherwise stated herein, these prices are firm for all deliveries made to your company within 30 (thirty) days from the date of this quotation. In the event of a price increase by our supplier, we reserve the right to renegotiate the prices quoted on those items subject to the price increase.

## NOTICE OF LIMITATIONS ON WARRANTIES AND DAMAGES

Seller makes no express or implied warranty with respect to the items described herein, AND SUCH ITEMS ARE PURCHASED "AS IS", except that Seller acknowledges responsibility for any such items not meeting manufacturer's specifications. Seller's responsibility hereunder for items not meeting manufacturer's specifications is expressly limited to either (i) refund of purchaser's purchase price for such items (without interest) or (ii) repair and/or replacement of such items, at Seller's election, and such remedy shall be exclusive and in lieu of all others. Seller will not be liable for personal injury or property damage and will in no event be responsible for or have any obligations or liabilities for incidental or consequential damages.

**WE THANK YOU FOR THIS OPPORTUNITY TO BID ON YOUR REQUIREMENTS AND LOOK FORWARD TO SERVING YOUR FUTURE NEEDS.**

By Dan Kelch
DAN KELCH -05
AUTHORIZED SIGNATURE

CUSTOMER COPY

SUPERIOR PRINTING
1303 NORTH HARRIS AVE.
CHAMPAIGN, ILLINOIS 61820
TELEPHONE 217/352-4226

~~SUNDAY~~ ~~August~~ 4

8/19/91

28VDC ST8000A/B

MS CONN:

DC POWER IN: 12-3 INSERT

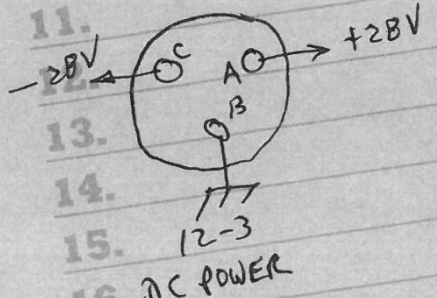
CHASSIS MS27508E12F3P

CABLE MS27473E12F3S

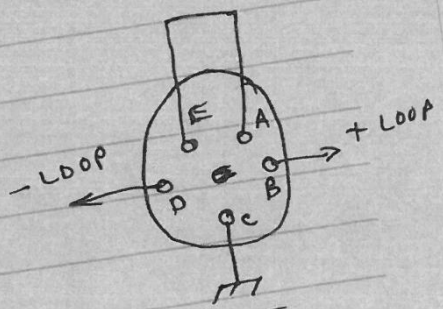
LOOP: 10-5 INSERT

CHASSIS MS27508E10F5S

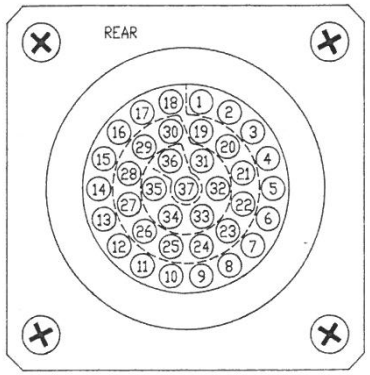
CABLE MS27473E10F5P

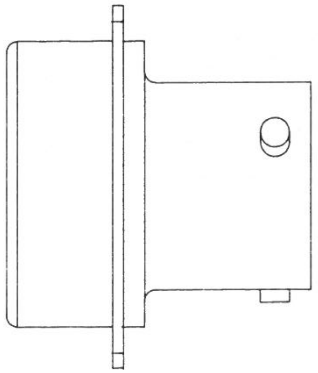


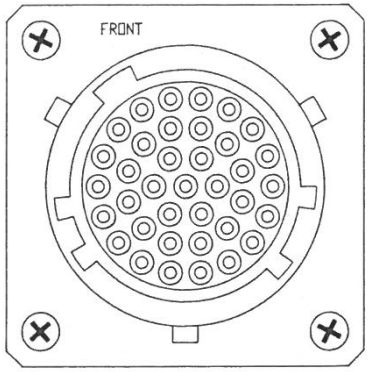

12-3
DC POWER




10-5
LOOP



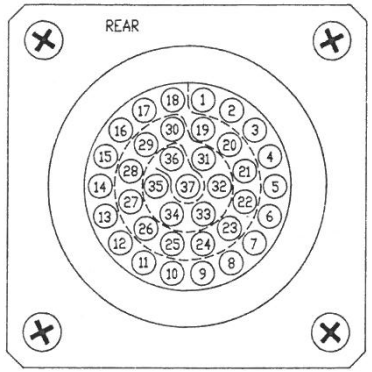


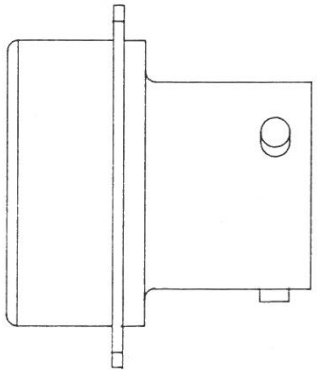

| REV. | DATE | BY |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

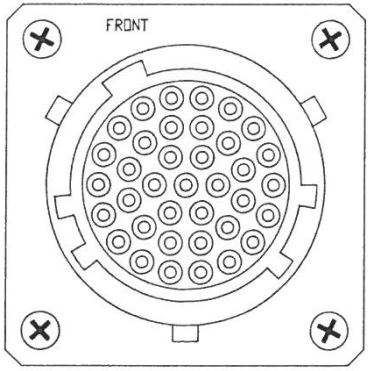
HAL COMMUNICATIONS CORP.
BOX 365, URBANA, IL 61801

ST8000A AUDIO CONNECTOR
E14F35SA

| | |
|---|---|
| DATE 12/18/90 | SCALE NONE |
| DRN BY SCH<br>APP BY | NO. C1436 |






| REV. | DATE | BY |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

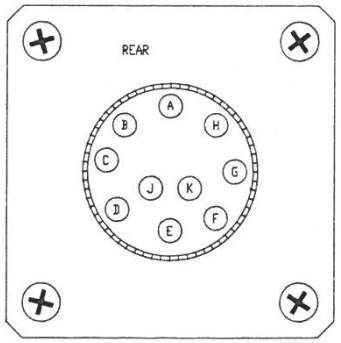
HAL COMMUNICATIONS CORP.
BOX 365, URBANA, IL 61801

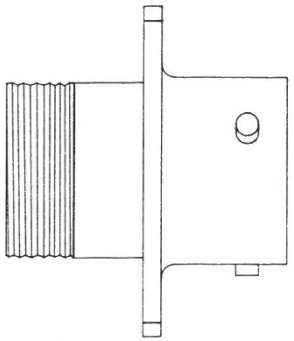
ST8000A DATA CONNECTOR
E14F35SB

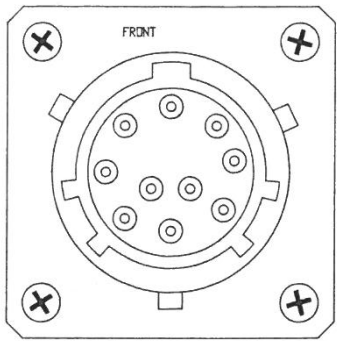
DATE 12/17/90 | SCALE NONE

DRN BY SCH
APP BY

NO. C1435



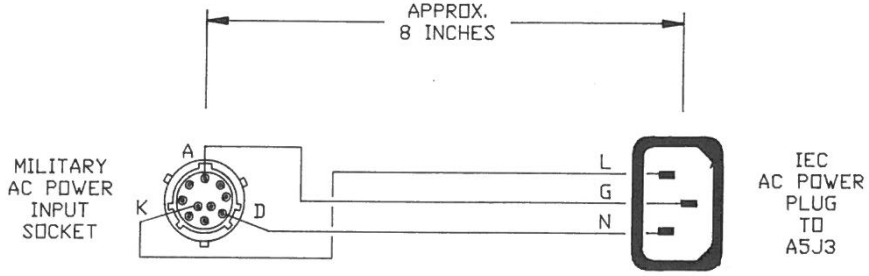



| REV. | DATE | BY |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

HAL COMMUNICATIONS CORP.
BOX 365, URBANA, IL 61801

ST8000A POWER CONNECTOR
E12F98P

| | |
|---|---|
| DATE 12/18/90 | SCALE NONE |
| DRN BY SCH<br>APP BY | NO. C1437 |




MS274E12F98P
(viewed from mating side)
USE WITH
MS27506F12
CABLE CLAMP

IEC POWER
PLUG

IEC PLUG AND CABLE
FROM
HAL P/N 333-17250
AC POWER CABLE

HAL P/N: 960-80015
1 ea REQUIRED PER ST-8000A

| REV. | DATE | BY |
|---|---|---|
| A | 01/19/91 | GWH |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

HAL COMMUNICATIONS CORP.
BOX 365, URBANA, IL 61801

ST-8000A MIL AC POWER
ADAPTER CABLE A5WP1

| | |
|---|---|
| DATE 12/14/90 | SCALE NONE |
| DRN BY GWH<br>APP BY | NO. ACADPTR |

HAL COMMUNICATIONS CORP. MSCON.WK1
ST-8000A MS CONNECTORS
NOVEMBER 11, 1990
REV: 12/11/90

| ST-8000A CONNECTOR | J1 | J2 | J3 | J4 | J5 |
|---|---|---|---|---|---|
| USAF SPECIFICATION: | | | | | |
| Use | Data I/O | Audio I/O | AC Power | Remote Control | Diversity (Optional) |
| Specified P/N | MS27499E14F35SB | MS27499E14F35SA | MS27499E12F98P | JTP02RE-10-35P | MS27508E10F35S |
| Connector Type | BOX MTG - External | BOX MTG - External | BOX MTG - External | BOX MTG - Internal | BOX MTG - Internal |
| Equiv (MS/JT) | JT02RE-14-35SB | JT02RE-14-35SA | JT02RE-12-98P | MS27508E10F35P | JTP02RE-10-35S |
| Box MTG Internal | MS27508E14F35SB | MS27508E14F35SA | MS27508E12F98P | MS27508E10F35P | MS27508E10F35S |
| Equiv (JTP) | JTP02RE-14-35SB | JTP02RE-14-35SA | JTP02RE-12-98P | JTP02RE-10-35P | JTP02RE-10-35S |
| No. of Pins | 37 (Socket) | 37 (Socket) | 10 (Pin) | 13 (Pin) | 13 (Socket) |
| Contact Size | No. 22D | No. 22D | No. 20 | No. 22D | No. 22D |
| Current Rating | 5 Amps | 5 Amps | 7.5 Amps | 5 Amps | 5 Amps |
| Service Rating | "M" | "M" | "I" | "M" | "M" |
| Test Voltage | 1300 VRMS | 1300 VRMS | 1800 VRMS | 1300 VRMS | 1300 VRMS |
| Plating | Electroless Nickel | Electroless Nickel | Electroless Nickel | Electroless Nickel | Electroless Nickel |
| MATING CONNECTOR: | | | | | |
| Mating Cable Conn | MS27473E14F35PB | MS27473E14F35PA | MS27473E12F98S | MS27473E10F35S | MS27473E10F35P |
| Cable Clamp | MS27506F14-2 | MS27506F14-2 | MS27506F12-2 | MS27506F10-2 | MS27506F10-2 |
| JT06RE (Incl Clamp) | JT06RE-14-35PB(SR) | JT06RE-14-35PA(SR) | JT06RE-12-98S(SR) | JT06RE-10-35S(SR) | JT06RE-10-35P(SR) |
| No. of Pins | 37 (Socket) | 37 (Socket) | 10 (Pin) | 13 (Pin) | 13 (Socket) |
| Contact Size | No. 22D | No. 22D | No. 20 | No. 22D | No. 22D |
| CRIMP TOOLING | | | | | |
| Crimp Tool | MS3198-1 | MS3198-1 | MS3198-1 | MS3198-1 | MS3198-1 |
| Die (Socket) | MS3198-6P | MS3198-6P | MS3198-9P | MS3198-6P | MS3198-6P |
| Die (Pin) | MS3198-8P | MS3198-8P | MS3198-9P | MS3198-8P | MS3198-8P |
| MIL SPEC | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II |
| QPL Sources QPL-38999-29 | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix |

HAL COMMUNICATIONS CORP. MSCON.WK1
ST-8000A MS CONNECTORS
NOVEMBER 11, 1990

| ST-8000A CONNECTOR | J1 | J2 | J3 | J4 | J5 |
|---|---|---|---|---|---|
| USAF SPECIFICATION: | | | | | |
| Use | Data I/O | Audio I/O | AC Power | Remote Control | Diversity (Optional) |
| Specified P/N | MS27499E14F35SB | MS27499E14F35SA | MS27499E12F98P | JTP02RE-10-35P | MS27508E10F35S |
| Connector Type | BOX MTG - External | BOX MTG - External | BOX MTG - External | BOX MTG - Internal | BOX MTG - Internal |
| Equiv (MS/JT) | JT02RE-14-35SB | JT02RE-14-35SA | JT02RE-12-98P | MS27508E10F35P | JTP02RE-10-35S |
| Box MTG Internal | MS27508E14F35SB | MS27508E14F35SA | MS27508E12F98P | MS27508E10F35P | MS27508E10F35S |
| Equiv (JTP) | JTP02RE-14-35SB | JTP02RE-14-35SA | JTP02RE-12-98P | JTP02RE-10-35P | JTP02RE-10-35S |
| No. of Pins | 37 (Socket) | 37 (Socket) | 10 (Pin) | 13 (Pin) | 13 (Socket) |
| Contact Size | No. 22D | No. 22D | No. 20 | No. 22D | No. 22D |
| Current Rating | 5 Amps | 5 Amps | 7.5 Amps | 5 Amps | 5 Amps |
| Service Rating | "M" | "M" | "I" | "M" | "M" |
| Test Voltage | 1300 VRMS | 1300 VRMS | 1800 VRMS | 1300 VRMS | 1300 VRMS |
| Plating | Electroless Nickel | Electroless Nickel | Electroless Nickel | Electroless Nickel | Electroless Nickel |
| MATING CONNECTOR: | | | | | |
| Mating Cable Conn | MS27473E14F35PB | MS27473E14F35PA | MS27472E12F98S | MS27472E12F98S | MS27472E12F98P |
| Cable Clamp | MS27506F14-2 | MS27506F14-2 | MS27506F12-2 | MS27506F10-2 | MS27506F10-2 |
| JT06RE (Incl Clamp) | JT06RE-14-35PB(SR) | JT06RE-14-35PA(SR) | JT06RE-12-98S(SR) | JT06RE-10-35S(SR) | JT06RE-10-35P(SR) |
| No. of Pins | 37 (Socket) | 37 (Socket) | 10 (Pin) | 13 (Pin) | 13 (Socket) |
| Contact Size | No. 22D | No. 22D | No. 20 | No. 22D | No. 22D |
| CRIMP TOOLING | | | | | |
| Crimp Tool | MS3198-1 | MS3198-1 | MS3198-1 | MS3198-1 | MS3198-1 |
| Die (Socket) | MS3198-6P | MS3198-6P | MS3198-9P | MS3198-6P | MS3198-6P |
| Die (Pin) | MS3198-8P | MS3198-8P | MS3198-9P | MS3198-8P | MS3198-8P |
| MIL SPEC | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II |
| QPL Sources QPL-38999-29 | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix |

**SATURDAY**
**DECEMBER**
**1**

1. or Bendix JTOORE-12-98P (SR)
2. " JTO1RE-12-98P (SR)
3.
4. ~~MS27472E12F98P~~
5. or
6. MS27472E12F98P
7. and MS27342A-12-2
8.
9.
10.
11.
12.
13.
14.
15.
16.
17.
18.
19.
20.

*Happy Holidays*

HAL COMMUNICATIONS CORP. MSCON1.WK1
ST-8000A MS CONNECTORS
DECEMBER 11, 1990

| ST-8000A CONNECTOR | J1 | J2 | J3 | J4 | J5 |
|---|---|---|---|---|---|
| USAF SPECIFICATION: | | | | | |
| Use | Data I/O | Audio I/O | AC Power | Remote Control | Diversity (Optional) |
| Specified P/N | MS27508E14F35SB | MS27508E14F35SA | MS27472E12F98P | MS27508E10F35P | MS27508E10F35S |
| Connector Type | BOX MTG PLUG - Int | BOX MTG PLUG - Int | WALL MTG RECPT | BOX MTG PLUG - Int | BOX MTG PLUG - Int |
| Cable Clamp | N/R | N/R | MS27506F12-2 | N/R | N/R |
| | | | | | |
| No. of Pins | 37 (Socket) | 37 (Socket) | 10 (Pin) | 13 (Pin) | 13 (Socket) |
| Contact Size | No. 22D | No. 22D | No. 20 | No. 22D | No. 22D |
| Current Rating | 5 Amps | 5 Amps | 7.5 Amps | 5 Amps | 5 Amps |
| Service Rating | "M" | "M" | "I" | "M" | "M" |
| Test Voltage | 1300 VRMS | 1300 VRMS | 1800 VRMS | 1300 VRMS | 1300 VRMS |
| Plating | Electroless Nickel | Electroless Nickel | Electroless Nickel | Electroless Nickel | Electroless Nickel |
| MATING CONNECTOR: | | | | | |
| Mating Cable Conn | MS27473E14F35PB | MS27473E14F35PA | MS27473E12F98S | MS27473E10F35S | MS27473E12F98P |
| Cable Clamp | MS27506F14-2 | MS27506F14-2 | MS27506F12-2 | MS27506F10-2 | MS27506F10-2 |
| JT06RE (Incl Clamp) | JT06RE-14-35PB(SR) | JT06RE-14-35PA(SR) | JT06RE-12-98S(SR) | JT06RE-10-35S(SR) | JT06RE-10-35P(SR) |
| No. of Pins | 37 (Socket) | 37 (Socket) | 10 (Pin) | 13 (Pin) | 13 (Socket) |
| Contact Size | No. 22D | No. 22D | No. 20 | No. 22D | No. 22D |
| CRIMP TOOLING | | | | | |
| Crimp Tool | MS3198-1 | MS3198-1 | MS3198-1 | MS3198-1 | MS3198-1 |
| Die (Socket) | MS3198-6P | MS3198-6P | MS3198-9P | MS3198-6P | MS3198-6P |
| Die (Pin) | MS3198-8P | MS3198-8P | MS3198-9P | MS3198-8P | MS3198-8P |
| MIL SPEC | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II |
| QPL Sources QPL-38999-29 | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix |

U.S. Patent Number 4,317,209 -- FSK standard

EK-VT100-UG-003 ---------- Digital Electronics Corp.
VT100 User's Guide

12. NOTES

a. When government drawings, specifications, and other data are used for any purpose other than in connection definitely related government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the government may have formulated, furnished, or in anyway supplied the drawing, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

b. All signal connections to the modem are made on the rear panel and shall be made available with MS connectors. A minimum of four connectors are required, labeled J1-thru-J4, with pin arrangements as follows:

Connector type: BENDIX MS27499E14F35SB

| | |
|---|---|
| J1- 1 THRU-6 | no connection (N.C.) |
| 7 | demod undetected mark output |
| 8 | N.C. |
| 9 | demod undetected space output |
| 10 | carrier detect output |
| 11 | N.C. |
| 12 | demod analog ground |
| 13 | ground |
| 14 | ground |
| 15 | keyline |
| 16 | keyline |
| 17-18 | N.C. |
| 19 | transmit clock output |
| 20 | mod digital data input |
| 21 | demod Mid-Bit clock |
| 22 | demod digital data output (RS-232) |
| 23 | demod digital data output MIL-188 |
| 24 | mod analog ground |
| 25 | ground |
| 26 | ground |
| 27-thru-35 | N.C. |
| 36 | mod analog ground |
| 37 | shield |

Connector type: BENDIX MS27499E14F35SA

| | |
|---|---|
| J2-1 | mod FSK output |
| 2 | N.C. |

| | | |
|---|---|---|
| 3 | ---------- | mod FSK output |
| 4 | ---------- | N.C. |
| 5 | ---------- | Keyline |
| 6 | ---------- | Keyline |
| 7 | ---------- | N.C. |
| 8 | ---------- | N.C. |
| 9 | ---------- | N.C. |
| 10 | ---------- | demod FSK input |
| 11 | ---------- | N.C. |
| 12 | ---------- | demod FSK input |
| 13-thru-36 | ---------- | N.C. |
| 37 | ---------- | shield |

Connector type: MS27499E12F98P

| | | |
|---|---|---|
| J3-A | ---------- | ground |
| B-C | ---------- | N.C |
| D | ---------- | neutral |
| E-thru-J | ---------- | N.C |
| K | ---------- | hot |

Connector type: JTP02RE-10-35P

| | | |
|---|---|---|
| J4-1 | ---------- | data input |
| 2 | ---------- | status input (CTS) |
| 3 | ---------- | data output |
| 4 | ---------- | status output (RTS) |
| 5 | ---------- | status output (CTS) |
| 6 | ---------- | ground |
| 7-thru-13 | ---------- | N.C. |

Mating electrical connectors shall be furnished with the modem for four connectors located in the modems rear panel, including all associated mechanical parts.

18 October 1990

Re: ST-8000A DIVERSITY CONNECTOR (A5J5):

As per discussions of this morning, the ST-8000A rear panel will include holes for a diversity connector on the rear panel. This connector (J5) will be mounted between J1 (DATA I/O) and J2 (AUDIO I/O). All non-diversity ST-8000A FSK Modems (USAF Contract Modems) will also have an aluminum cover-plate that covers the J5 mounting location.

For future reference, when required, the Diversity Connector will be the following type:

MS2708E10F35S: Size 10 shell, 13 No. 22D socket pins, Standard key-way location, Box Receptacle, Back of Panel Mounting.

This connector is the reverse sex of J4, the REMOTE CONTROL I/O connector. The 10-35 insert (13 pin) meets the MIL-STD-454, Req. 10 specification for spare pins (2 or more for 5 active pins). Pin connections should be the same as used on MODEM Connector J2 (pins 1 through 5).

Connector J5 will only be installed when the "DIVERSITY OPTION" is purchased. Units shipped against the present USAF order will have the cover plate and not the connector installed at location "A5J5". Use of the cover plate and back of panel mounting allow simple up-grading of all ST-8000A's to include diversity.

The mating connector and clamp required to make a diversity cable is:

MS27473E10F35P and MS27506F10 clamp
or
JT06RE-10-35P(SR) - Clamp included

A "Diversity Cable" will require two of the above connectors and a five-wire shielded cable (No. 22 wire) connecting pins 1 through 5 of each connector (5 = ground; shield connects to connector shell).

Alternate: Connect pin 6 (or other unused pin) to chassis ground inside the rear panel and use this pin for the cable shield wire.

GWH

October 1, 1990

Re: MS Connectors for ST-8000A
To: LAS, ABW

The USAF Contract specifies four MS connectors to be used on the ST-8000A rear panel. These are evidently the same part numbers used on the Frederick 1280A/M. Three of the specified connectors mount on the outside of the rear panel; one mounts on the inside. The USAF (and Frederick) specification is not consistent.

The specified connectors are:

| | | |
|---|---|---|
| Connector J1: | MS27499E14F35SB | (Bendix JT02RE-14-35SB) |
| Connector J2: | MS27499E14F35SA | (Bendix JT02RE-14-35SA) |
| Connector J3: | MS27499E12F98P | (Bendix JT02RE-12-98P) |
| Connector J4: | Bendix JTP02RE-10-35P | (MS27508E10F35P) |

HAL will request that all rear panel connectors be of the MS27508 style - mount from the inside of the rear panel. The part numbers for this variation are:

| | | |
|---|---|---|
| Connector J1: | MS27508E14F35SB | (Bendix JTP02RE-14-35SB) |
| Connector J2: | MS27508E14F35SA | (Bendix JTP02RE-14-35SA) |
| Connector J3: | MS27508E12F98P | (Bendix JTP02RE-12-98P) |
| Connector J4: | MS27508E10F35P | (Bendix JTP02RE-10-35P) |

The contract also requires that HAL supply mating connectors and hardware for all rear panel connectors. Using the nomenclature that "P1" mates to "J1", etc:

| | | |
|---|---|---|
| Plug P1: | MS27473E14F35PB | Cable Clamp: MS2750614x-2 |
| Plug P2: | MS27473E14F35PA | Cable Clamp: MS2750614x-2 |
| Plug P3: | MS27473E12F98S | Cable Clamp: MS2750612x-2 |
| Plug P4: | MS27473E10F35S | Cable Clamp: MS2750610x-2 |

Note "x" = "finish" to match Plug - ask supplier!

Bendix also indicates that one of the series of part numbers includes the cable clamp. The equivalent part numbers for this option are:

| | |
|---|---|
| Plug P1: | JT06RE-14-35PB(SR) |
| Plug P2: | JT06RE-14-35PA(SR) |
| Plug P3: | JT06RE-12-98S(SR) |
| Plug P4: | JT06RE-10-35S(SR) |

I suggest that we submit all of the above numbers for price and delivery quotation as soon as possible. We will need a total of 250 sets of connectors, plugs, and cable clamps to meet the USAF requirements. We should probably intend to order 275 to 300 sets to be sure that we have enough for prototypes and testing.

GWH

J1: MS27499E14F35SB

(MIL-C-38999H) → Connector, Box Mounting Flange, Crimp Type, Bayonet Coupling, SERIES

- E - Class = Environment Resisting.
- 14 - Shell Size
- F - Finish - Elect. Cond., electroless nickel IAW MIL-C-26074 class 3 or 4, grade B, "finish shall be dull."
- 35 - Contact Arrangement
- S - Contact Style = Socket
- B - Polarization (Figs, P. 50, MIL-C-38999H) = 66° for 14 Shell

Bendix P/N:
JT02RE-14-35SB
BACK-PANEL VERSION: MS27508E14F35SB / JTP02RE-14-35SB

J2: MS27499E14F35SA
As above, but with 79° rotation/polarization.

Bendix P/N: JT02RE-14-35SA
Back Panel Version: MS27508E14F35SB / JTP02RE-14-35SA

J3: MS27499E12F98P
As above, but:
12 - Shell size.
98 - Contact Arrangement
P = Contact = Pins
( ) = Normal Polarization = 100°

Bendix P/N: JT02RE-12-98P
Back-Panel Version: MS27508E12F98P / JTP02RE-12-98P

J4: JTP02RE-10-35P

JTP02-MS27508 Style → BACK PANEL MOUNTING

~~RE - Dot~~

RE - as before
10 - shell size
35 - Insert style
P - Pins
( ) - standard Polarization = 100°

MIL P/N: MS27508E10F35P
(A)?

Exterior Mtg. Version: MS27499E10F35P/JT02RE-10-35P

Mating Connectors & Hardware

J1 (MS27499/27508E14F35SB)

MS27473E14F35PB / JT06RE-14-35PB (SR)

includes clamp.

J2 (MS27499/27508E14F35SA)

MS27473E14F35PA / JT06RE-14-35PA (SR)

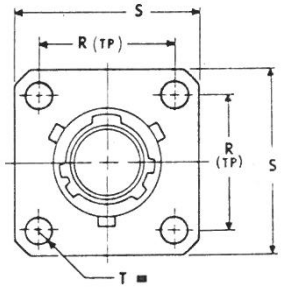
J3 (MS27499/27508-E12F98P)

MS27473E12F98S / JT06RE-12-98S (SR)

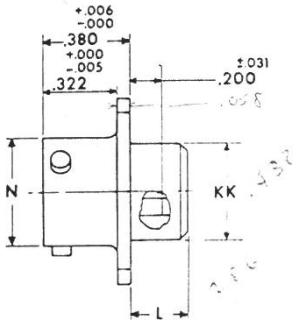
J4 (MS27499/27508E10F35P)

MS27473E10F35S / JT06RE-10-35S (SR)

# JT-crimp
# JT02R (MS27499)
## box mounting receptacle




( 4 HOLES )




*JT02RE-XX-XXX (MS27499E)
**JTS02RE-XX-XXX (MS27504E)
***JTN02RE-XX-XXX
*JT02RP-XX-XXX
**JTS02RP-XX-XXX
***JTN02RP-XX-XXX

⌖ .005 DIA Ⓜ

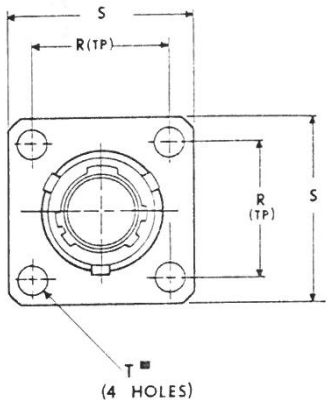
*To complete order number see page 52.
**High temperature version, to complete order number see page 52.
***Clear iridite finish (gold color), $N_2O_4$ resistant, to complete order number see page 52.

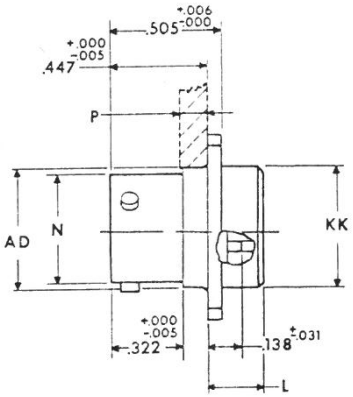
| Shell Size | L Max. | KK Max. | N +.001 −.005 | S ±.016 | R (TP) | T ±.005 |
|---|---|---|---|---|---|---|
| 8 | .286 | .438 | .473 | .812 | .594 | .120 |
| 10 | .286 | .563 | .590 | .938 | .719 | .120 |
| 12 | .286 | .688 | .750 | 1.031 | .812 | .120 |
| 14 | .286 | .813 | .875 | 1.125 | .906 | .120 |
| 16 | .286 | .938 | 1.000 | 1.219 | .969 | .120 |
| 18 | .286 | 1.047 | 1.125 | 1.312 | 1.062 | .120 |
| 20 | .286 | 1.172 | 1.250 | 1.438 | 1.156 | .120 |
| 22 | .286 | 1.297 | 1.375 | 1.562 | 1.250 | .120 |
| 24 | .286 | 1.422 | 1.500 | 1.688 | 1.375 | .147 |

All dimensions for reference only

NOTE: For applications requiring an environmental seal please refer to JT00R, see page 10.

# JT-crimp
# JTP02R (MS27508)
## box mounting receptacle
### (back panel mounting)




*JTP02RE-XX-XXX (MS27508E)
**JTPN02RE-XX-XXX
***JTPS02RE-XX-XXX
*JTP02RP-XX-XXX
**JTPN02RP-XX-XXX
***JTPS02RP-XX-XXX

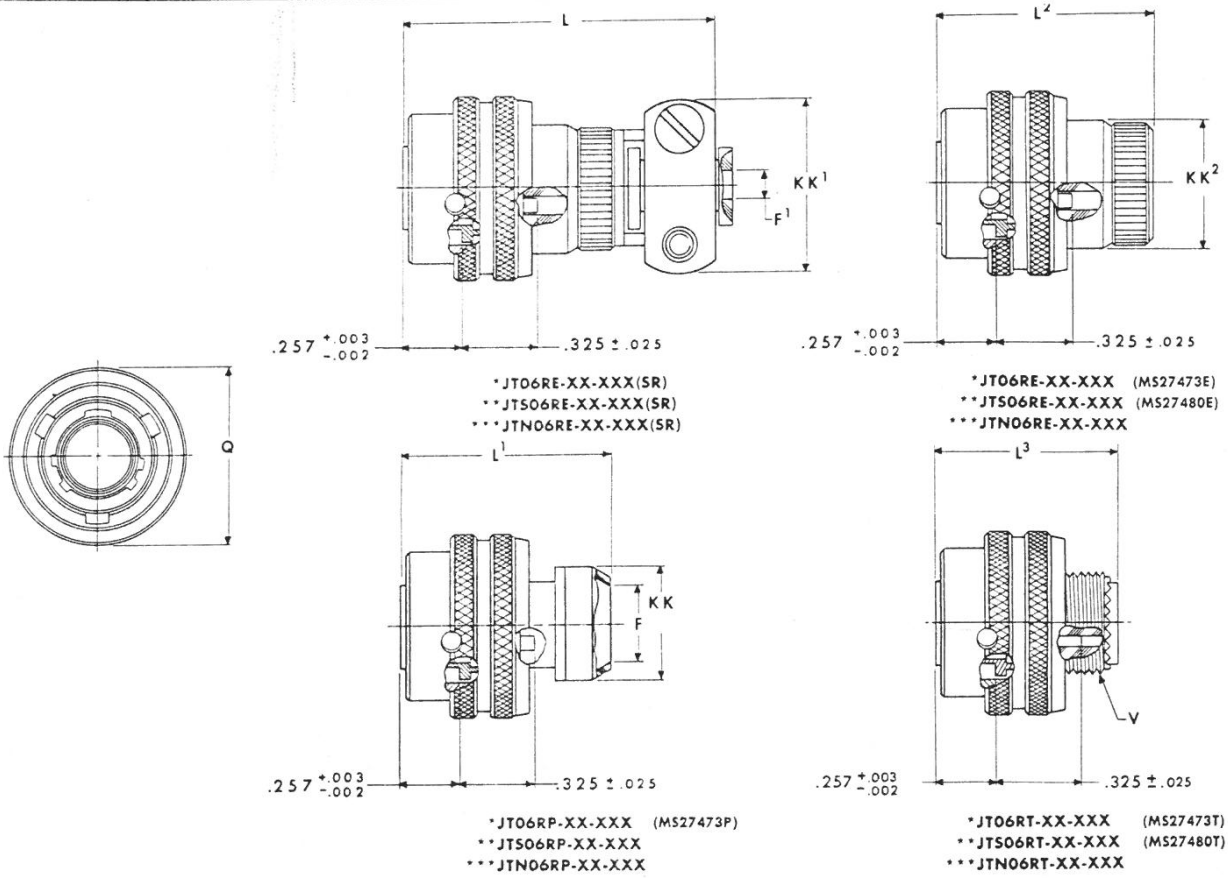
■ ⌖ .005 DIA Ⓜ

*To complete order number see page 52.
**High temperature version, to complete order number see page 52.
***Clear iridite finish (gold color), $N_2O_4$ resistant, to complete order number see page 52.

| Shell Size | N Dia. +.001 −.005 | R (TP) | S ±.016 | L Max. | AD Dia. ±.005 | T Dia. ±.005 | P Max. Panel Thickness | KK Max. |
|---|---|---|---|---|---|---|---|---|
| 8 | .473 | .594 | .812 | .225 | .516 | .120 | .147 | .531 |
| 10 | .590 | .719 | .938 | .225 | .633 | .120 | .152 | .656 |
| 12 | .750 | .812 | 1.031 | .225 | .802 | .120 | .152 | .828 |
| 14 | .875 | .906 | 1.125 | .225 | .927 | .120 | .152 | .953 |
| 16 | 1.000 | .969 | 1.219 | .225 | 1.052 | .120 | .152 | 1.078 |
| 18 | 1.125 | 1.062 | 1.312 | .225 | 1.177 | .120 | .152 | 1.203 |
| 20 | 1.250 | 1.156 | 1.438 | .225 | 1.302 | .120 | .179 | 1.328 |
| 22 | 1.375 | 1.250 | 1.562 | .225 | 1.427 | .120 | .179 | 1.453 |
| 24 | 1.500 | 1.375 | 1.688 | .225 | 1.552 | .147 | .169 | 1.578 |

All dimensions for reference only

# JT-crimp
# JT06R (MS27473)
## straight plug




*JT06RE-XX-XXX(SR)
**JTS06RE-XX-XXX(SR)
***JTN06RE-XX-XXX(SR)

*JT06RE-XX-XXX (MS27473E)
**JTS06RE-XX-XXX (MS27480E)
***JTN06RE-XX-XXX

*JT06RP-XX-XXX (MS27473P)
**JTS06RP-XX-XXX
***JTN06RP-XX-XXX

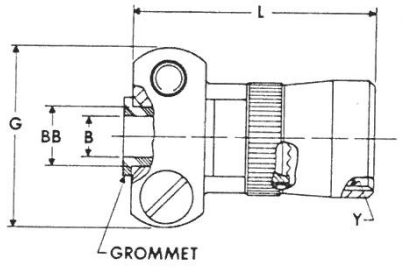
*JT06RT-XX-XXX (MS27473T)
**JTS06RT-XX-XXX (MS27480T)
***JTN06RT-XX-XXX

*To complete order number see page 52
**High temperature version, to complete order number see page 52
***Clear iridite finish (gold color), $N_2O_4$ resistant, to complete order number see page 52

| Shell Size | KK Dia. Max. | KK1 Max. | KK2 Max. | F Dia. | F1 Dia. +.010 −.025 | L Max. | L1 Max. | L2 Max. | L3 Max. | Q Dia. Max. | V Thread Modified | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Class 2A | Modified Major Dia. |
| 8 | .625 | .812 | .578 | .444 | .125 | 1.562 | 1.000 | .938 | .891 | .734 | .4375-28UNEF | .421– .417 |
| 10 | .750 | .875 | .703 | .558 | .188 | 1.562 | 1.000 | .938 | .891 | .844 | .5625-24UNEF | .542– .538 |
| 12 | .875 | 1.000 | .828 | .683 | .312 | 1.562 | 1.000 | .938 | .891 | 1.016 | .6875-24UNEF | .667– .663 |
| 14 | 1.000 | 1.125 | .953 | .808 | .375 | 1.812 | 1.000 | .938 | .891 | 1.141 | .8125-20UNEF | .791– .787 |
| 16 | 1.125 | 1.188 | 1.078 | .909 | .500 | 1.812 | 1.000 | .938 | .891 | 1.265 | .9375-20UNEF | .916– .912 |
| 18 | 1.250 | 1.438 | 1.203 | 1.034 | .625 | 1.812 | 1.000 | .938 | .891 | 1.391 | 1.0625-18UNEF | 1.034–1.030 |
| 20 | 1.375 | 1.438 | 1.328 | 1.159 | .625 | 1.812 | 1.000 | .938 | .891 | 1.500 | 1.1875-18UNEF | 1.158–1.154 |
| 22 | 1.500 | 1.625 | 1.453 | 1.284 | .750 | 1.938 | 1.000 | .938 | .891 | 1.625 | 1.3125-18UNEF | 1.283–1.279 |
| 24 | 1.625 | 1.719 | 1.578 | 1.409 | .800 | 1.938 | 1.062 | .938 | .891 | 1.750 | 1.4375-18UNEF | 1.408–1.404 |

All dimensions for reference only

# JT-accessories
## cable clamps
### (crimp type)




***10-405982-XXX** (MS27506XXX-2)

*For MS stamping identification, accessories must be ordered by MS part number. If ordered by 10- part number, they will be stamped with said number.*

*To complete order number, add shell size and suffix number.

| Finish | 10- No. Suffix | MS No. Suffix |
|---|---|---|
| Chromate treat | -XX0 | |
| Bright cadmium plate | -XX1 | |
| Black anodize | -XX2 | |
| Cadmium plate olive drab | -XX3 | |
| Grey anodize | -XX4 | |
| Anodic coating | -XX5 | CXX-2 |
| Tin zinc plate | -XX6 | |
| Cadmium plate nickel base | -XX7 | AXX-2 |
| Bright nickel | -XX8 | |
| Olive drab, cadmium, nickel base | -XX9 | BXX-2 |
| Electroless nickel | -XXG | FXX-2 |

For example shell size 10 with cadmium plate, nickel base, 10-405982-107 or MS27506A10-2

| Shell Size | G Max. | L Max. | Y Thread (Modified) | | BB Dia. +.000 −.011 | Screw Size | B Dia. +.010 −.025 |
|---|---|---|---|---|---|---|---|
| | | | Size Class 2B | Modified Minor Dia. | | | |
| 8 | .775 | .984 | .4375-28UNEF | .399 – .405 | .250 | 6-32UNC | .125 |
| 10 | .837 | .984 | .5625-24UNEF | .524 – .529 | .312 | 6-32UNC | .188 |
| 12 | .963 | .984 | .6875-24UNEF | .649 – .654 | .438 | 6-32UNC | .312 |
| 14 | 1.087 | 1.234 | .8125-20UNEF | .766 – .771 | .562 | 6-32UNC | .375 |
| 16 | 1.150 | 1.234 | .9375-20UNEF | .891 – .896 | .625 | 6-32UNC | .500 |
| 18 | 1.400 | 1.234 | 1.0625-18UNEF | 1.002 – 1.007 | .750 | 8-32UNC | .625 |
| 20 | 1.400 | 1.234 | 1.1875-18UNEF | 1.135 – 1.140 | .750 | 8-32UNC | .625 |
| 22 | 1.587 | 1.359 | 1.3125-18UNEF | 1.252 – 1.257 | .938 | 8-32UNC | .750 |
| 24 | 1.681 | 1.281 | 1.4375-18UNEF | 1.377 – 1.382 | 1.000 | 8-32UNC | .800 |

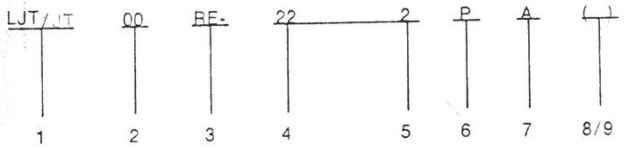
All dimensions for reference only.

# JT/LJT
# how to order

### PROPRIETARY PART NUMBER

To more easily illustrate ordering procedure, part number JT00RE-22-2PA ( ) is shown as follows:

### PART NUMBER




See code below:

1. Connector Type:
   JT designates standard Junior Tri-Lock Connector.
   LJT designates long Junior Tri-Lock Connector
   LJTS/JTS designates high temperature connector
   LJTN/JTN designates chemical and fuel resistant
   JTL designates Pygmy mounting dimensions
   JTLN designates Pygmy mounting dimensions—chemical resistant
   JTLS designates Pygmy mounting dimensions — high temperature
   LJTP/JTP designates back panel mounted
   LJTPN/JTPN designates back panel mounted — chemical resistant
   LJTPS/JTPS designates back panel mounted — high temperature
   JTG* designates plug with grounding fingers
   JTNG* designates plug with grounding fingers — chemical resistant

*Grounding fingers standard on all LJT plugs.*

2. Shell Style:
   00 designates wall mount receptacle
   01 designates line mount receptacle
   02 designates box mount receptacle
   06 designates straight plug
   07 designates jam nut receptacle
   08 designates 90-degree plug
   I designates solder mount receptacle — hermetic

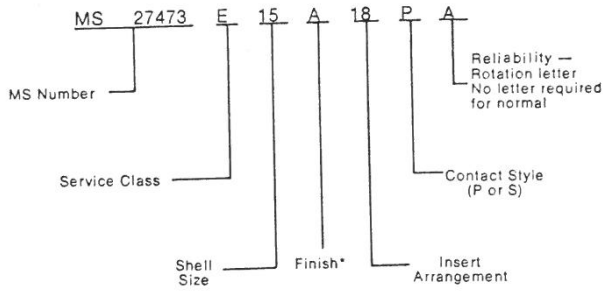
3. Service Class:
   "P" for potting applications — These connectors are supplied with a potting boot.† All shells are designed with integral features to retain potting boots.†
   "A" for general duty applications — Threaded rear design.† Can be supplied with strain relief "A (SR)."
   "C" for pressurized applications. Threaded rear design.† Can be supplied with strain relief "C (SR)."
   "H" for hermetic applications — Fused compression glass sealed inserts. Leakage rate less than .01 micron cu. ft./hr. ($1 \times 10^{-3}$ cc/sec.) at 15 psi differential.
   "Y" same as "H" with interfacial seal.
   "T" for MS27599A applications — General duty — pressurized (receptacles only).
   "RP" for potting crimp applications — Supplied with spacer grommet and potting boot.†
   "RE" for environmental crimp applications — Supplied with a grommet and compression nut.† Can be supplied with strain relief integral with compression nut "RE (SR)." ( JT Series only. )
   "RT" for environmental applications — Supplied without rear accessories. Design provides serrations on rear threads of shells.
   For additional information defining complete description of service class, consult factory.

4. JT shell sizes available from 8 through 24. LJT shell sizes available from 9 through 25. (Page 4 through 8)
5. 22-2 designates insert arrangement. Refer to following pages for additional insert patterns. (Page 6 through 8)
6. P designates pin contacts. S for socket contacts.
7. A designates a rotated connector assembly. Other basic rotations are B, C, and D. No letter required for normal (no rotation) position. (Page 4)
8. SR designates a strain relief clamp. Strain reliefs are available only on A, C, and RE class connectors.
9. Finish variation suffix.

*†Not applicable to box mounting style.*

| Finish | Finish Suffix | Finish plus SR Suffix |
|---|---|---|
| Cadmium Plated Nickel Base | | (SR) |
| Bright Cadmium | (001) | (304) |
| Olive Drab Cadmium Plate | (003) | (301) |
| Grey Anodize | (004) | (382) |
| Anodic Coating (Alumilite) | (005) | (300) |
| Bright Nickel | (009) | (362) |
| Chromate Treated (Iridite 14-2) | (011) | (344) |
| Olive Drab Cadmium Plate Nickel Base | (014) | (386) |

### MILITARY TYPES




*For finish variations, see finish data. (Page 3)*
*For MS depictions and dimensional data see applicable MIL-Spec. (MIL-C-38999, MIL-C-27599).*

Bendix Federal Vendor Identification/FSCM 77820

MS27499 ...

12-090-6 JT/LJT

211J

# LJT

# LJT

miniature cylindrical connectors
designed to MIL-C-38999, MIL-C-27599

Bendix Electrical Components Division

HAL Communications Corp.
October 18, 1990

#794 Connector Pricing & Delivery Per Hamilton/Avnet

| | Connector | Price | Delivery |
|---|---|---|---|
| spec. | MS27499E14F35SB | $19.70 | 13 - 2WKS / BALANCE 18 WKS |
| | MS27499E14F35SA | $19.70 | 13 - 2WKS / BALANCE 18 WKS |
| | MS27499E12F98P | $14.60 | 115 - 2WKS / BALANCE 18 WKS |
| | MS27508E10F35P | $14.70 | 207 - 2WKS / BALANCE 4 WKS |
| var. | MS27508E14F35SB | $19.86 | 49 - 2WKS / BALANCE 18 WKS |
| | MS27508E14F35SA | $19.86 | 241 - 2WKS / BALANCE 18 WKS |
| | MS27508E12F98P | $14.77 | 138 - 2WKS / BALANCE 12 WKS |
| | MS27508E10F35P | $14.70 | 207 - 2WKS / BALANCE 4 WKS |
| mates | MS27473E14F35PB | $17.82 | 18 WKS |
| | MS27473E14F35PA | $17.82 | 18 WKS |
| | MS27473E12F98S | $15.27 | 12 WKS |
| | MS27473E10F35S | $14.53 | 16 WKS |
| clamps | MS27506F14 | $5.84 | 1 WK |
| | MS27506F14 | $5.84 | 1 WK |
| | MS27506F12 | $5.58 | 261 - 1WK / BALANCE 18 WKS |
| | MS27506F10 | $5.34 | 18 WKS |
| w/clamp | JT06RE-14-35PB(SR) | $21.27 | 18 - 2WKS /35 -10WKS /BAL.18WKS |
| | JT06RE-14-35PA(SR) | $21.27 | 18 - 2WKS / BALANCE 10 WKS |
| | JT06RE-12-98S(SR) | $18.30 | 100 - 2WKS / BALANCE 10 WKS |
| | JT06RE-10-35S(SR) | $17.71 | 65 - 2WKS /149 -4WKS /BAL.10WKS |

HAL Communications Corp.
October 18, 1990

#794 Connector Pricing & Delivery Per Hamilton/Avnet

| | Connector | Price | Delivery |
|---|---|---|---|
| spec. | MS27499E14F35SB | $19.70 | 13 - 2WKS / BALANCE 18 WKS |
| | MS27499E14F35SA | $19.70 | 13 - 2WKS / BALANCE 18 WKS |
| | MS27499E12F98P | $14.60 | 115 - 2WKS / BALANCE 18 WKS |
| | MS27508E10F35P | $14.70 | 207 - 2WKS / BALANCE 4 WKS |
| var. | MS27508E14F35SB | $19.86 | 49 - 2WKS / BALANCE 18 WKS |
| | MS27508E14F35SA | $19.86 | 241 - 2WKS / BALANCE 18 WKS |
| | MS27508E12F98P | $14.77 | 138 - 2WKS / BALANCE 12 WKS |
| | MS27508E10F35P | $14.70 | 207 - 2WKS / BALANCE 4 WKS |
| mates | MS27473E14F35PB | $17.82 | 18 WKS |
| | MS27473E14F35PA | $17.82 | 18 WKS |
| | MS27473E12F98S | $15.27 | 12 WKS |
| | MS27473E10F35S | $14.53 | 16 WKS |
| clamps | MS27506F14 | $5.84 | 1 WK |
| | MS27506F14 | $5.84 | 1 WK |
| | MS27506F12 | $5.58 | 261 - 1WK / BALANCE 18 WKS |
| | MS27506F10 | $5.34 | 18 WKS |
| w/clamp | JT06RE-14-35PB(SR) | $21.27 | 18 - 2WKS /35 -10WKS /BAL.18WKS |
| | JT06RE-14-35PA(SR) | $21.27 | 18 - 2WKS / BALANCE 10 WKS |
| | JT06RE-12-98S(SR) | $18.30 | 100 - 2WKS / BALANCE 10 WKS |
| | JT06RE-10-35S(SR) | $17.71 | 65 - 2WKS /149 -4WKS /BAL.10WKS |

# JT/LJT specifications

## Contact Rating

| Contact Size | Test Current | | Maximum Millivolt Drop Crimp | Maximum Millivolt Drop Solder | |
|---|---|---|---|---|---|
| | Standard | Hermetic | | Standard | Hermetic |
| 22M | 3 | 2 | 30 | 20 | 60 |
| 22D | 5 | | 40 | | |
| 22 | 5 | 3 | 40 | 20 | 85 |
| 20 | 7.5 | 5 | 35 | 20 | 60 |
| 16 | 13 | 10 | 25 | 20 | 85 |
| 12 | 23 | 17 | 25 | | 85 |

| Contact Size | CRIMP WELL DATA | | SOLDER WELL DATA | |
|---|---|---|---|---|
| | Well Diameter | Nominal Well Depth | Well Diameter | Nominal Well Depth |
| 22M | .029 ±.001 | .141 | .029 +.004 −.000 | .094 |
| 22D | .0345±.0010 | .141 | | |
| 22 | .0365±.0010 | .141 | .036 +.004 −.000 | .094 |
| 20 | .047 ±.001 | .209 | .044 +.004 −.000 | .125 |
| 16 | .067 ±.001 | .209 | .078 +.004 −.002 | .141 |
| 12 | .100 ±.002 | .209 | | |

## Service Rating*

| Service Rating | Suggested Operating Voltage (Sea Level) | | Test Voltage (Sea Level) | Test Voltage 50,000 Ft. | Test Voltage 70,000 Ft. | Test Voltage 110,000 Ft. |
|---|---|---|---|---|---|---|
| | AC (RMS) | DC | | | | |
| M | 400 | 550 | 1300 VRMS | 550 VRMS | 350 VRMS | 200 VRMS |
| I | 600 | 850 | 1800 VRMS | 600 VRMS | 400 VRMS | 200 VRMS |
| II | 900 | 1250 | 2300 VRMS | 800 VRMS | 500 VRMS | 200 VRMS |

*Please note that the establishment of electrical safety factors is left entirely in the designer's hands, since he is in the best position to know what peak voltages, switching surges, transients, etc., can be expected in a particular circuit.

## Finish Data

| Aluminum Shell Components Non-Hermetic | | | | |
|---|---|---|---|---|
| Finish | Suffix | | Indicated Finish Standard for JT Types Listed Below | Indicated Finish Standard for LJT Types Listed Below |
| | Military | Proprietary | | |
| Cadmium Plated Nickel Base | MS (A) | | JT/JTG/JTL/JTP | LJT/LJTP |
| Bright Cadmium | | (001) | | |
| Olive Drab Cadmium Plate | | (003) | | |
| Grey Anodize | | (004) | | |
| Anodic Coating (Alumilite) | MS (C) | (005) | JTS/JTPS/JTLS | LJTPS/LJTS |
| Bright Nickel | | (009) | | |
| Chromate Treated (Iridite 14-2) | | (011) | JTN/JTPN/JTLN | LJTN/LJTPN |
| Olive Drab Cadmium Plate Nickel Base | MS (B) | (014) | | |
| Electroless Nickel | MS (F) | (023) | | |

| Hermetic Connectors | | | | |
|---|---|---|---|---|
| Material/Finish | Suffix | | Indicated Finish Standard for JT Types Listed Below | Indicated Finish Standard for LJT Types Listed Below |
| | Military | Proprietary | | |
| Carbon Steel Shell Tin Plated Shell and Contacts | MS (D) | | JT( )H/JT( )Y JTL( )H/JTL( )Y | LJT( )Y/LJT( )H |
| Carbon Steel Shell Gold Plated Shell and Contacts | | *(101) | | |
| Stainless Steel Shell | MS (E) | (150) | JTS( )Y JTLS( )Y | LJTS( )Y |

*Suffix (101) may be used for non hermetic types from standard finish column; contacts only will be 100 millionths inch minimum gold plate. These finishes are available on other JT and LJT connectors. Contact the factory for additional variations.

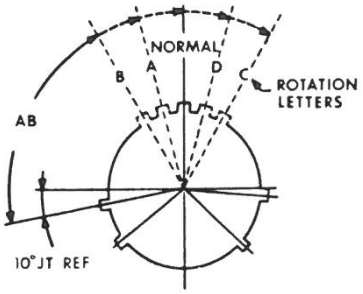
# JT/LJT insert availability and identification; alternate positions

### JT MASTER KEY/KEYWAY ROTATION

| AB ANGLE OF ROTATION (Degrees) | | | | | |
|---|---|---|---|---|---|
| Shell Size | Normal | A | B | C | D |
| 8 | 100° | 82° | — | — | 118° |
| 10 | 100° | 86° | 72° | 128° | 114° |
| 12 | 100° | 80° | 68° | 132° | 120° |
| 14 | 100° | 79° | 66° | 134° | 121° |
| 16 | 100° | 82° | 70° | 130° | 118° |
| 18 | 100° | 82° | 70° | 130° | 118° |
| 20 | 100° | 82° | 70° | 130° | 118° |
| 22 | 100° | 85° | 74° | 126° | 115° |
| 24 | 100° | 85° | 74° | 126° | 115° |

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

AB angles shown are viewed from the front face of the connector, a receptacle is shown below. The angles for the plug are exactly the same except the direction of rotation is opposite of that shown for the receptacle.




RELATIVE POSSIBLE POSITION OF ROTATED MASTER KEYWAY.
(front face of receptacle shown)

| JT | LJT | Solder | Crimp | Hermetics Class H | Hermetics Class Y* | Service Rating | Total Contacts | Contact Size 22D | 22M | 22 | 20 | 16 | 12 | 8†† (Coax) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8-2 | | P | | | | M | 2 | | | | 2 | | | |
| 8-3 | | X | N/A | P | | M | 3 | | | | 3 | | | |
| | 9-3 | X | | | | | | | | | | | | |
| 8-6 | | X | X | P | P | M | 6 | | 6 | | | | | |
| | 9-6 | X | X | P | P | | | | | | | | | |
| | | | | | | M | 7 | | 7 | | | | | |
| | 9-7 | X | | | | | | | | | | | | |
| | | | | | | I | 2 | | | | 2 | | | |
| | 9-22 | X | | | | | | | | | | | | |
| 8-35 | | | X | P | P | M | 6 | 6 | | | | | | |
| | 9-35 | | X | P | P | | | | | | | | | |
| 8-44 | | | X | P | P | M | 4 | | | 4 | | | | |
| | 9-44 | | X | | | | | | | | | | | |
| 8-97 | | X | | | | M | 4 | | 2 | | 2 | | | |
| 8-98 | | S | X | P | P | I | 3 | | | | 3 | | | |
| | 9-98 | X | X | P | P | | | | | | | | | |
| | | | | | | I | 2 | | | | | 2 | | |
| | 11-2 | | 2 | P** | | | | | | | | | | |
| 10-4 | | | 3 | | | I | 4 | | | | 4 | | | |
| | 11-4 | X | 2 | | | | | | | | | | | |
| 10-5 | | X | X | P | P | I | 5 | | | | 5 | | | |
| | 11-5 | X | P | | | | | | | | | | | |
| | | | | | | I | 6 | | | | 6 | | | |
| | 11-6 | S | | | | | | | | | | | | |
| 10-13 | | X | X | P | P | M | 13 | | 13 | | | | | |
| | 11-13 | X | X | P | P | | | | | | | | | |
| 10-35 | | | X | P | P | M | 13 | (13) | | | | | | |
| | 11-35 | | X | P | P | | | | | | | | | |
| 10-98 | | X | X | P | P | (I) | 6 | | | | (6) | | | |
| | 11-98 | X | X | P | P | | | | | | | | | |
| 10-99 | | | X | P | P | I | 7 | | | | 7 | | | |
| | 11-99 | | P | | | | | | | | | | | |
| 12-3 | | X | X | P | P | II | 3 | | | | | 3 | | |
| | 13-3 | | P | | | | | | | | | | | |
| 12-4 | | X | X | P | P | I | 4 | | | | | 4 | | |
| | 13-4 | X | X | P | P | | | | | | | | | |
| 12-8 | | X | X | P | P | I | 8 | | | | 8 | | | |
| | 13-8 | X | X | P | P | | | | | | | | | |
| 12-22 | | | X | P | P | M | 22 | | 22 | | | | | |
| | 13 22 | X | X | P | P | | | | | | | | | |
| 12-35 | | | X | P | P | M | 22 | 22 | | | | | | |
| | 13-35 | | X | P | P | | | | | | | | | |
| 12-98 | | X | X | P | P | (I) | 10 | | | | (10) | | | |
| | 13-98 | X | X | P | P | | | | | | | | | |
| 14-4 | | | 2 | | | I | 4 | | | | | | 4 | |
| | 15-4 | | 3 | | | | | | | | | | | |
| 14-5 | | X | X | P | P | II | 5 | | | | | 5 | | |
| | 15-5 | X | X | | | | | | | | | | | |
| 14-15 | | X | X | P | P | I | 15 | | | | 14 | 1 | | |
| | 15-15 | X | X | P | P | | | | | | | | | |
| 14-18 | | X | X | P | P | I | 18 | | | | 18 | | | |
| | 15-18 | X | X | P | P | | | | | | | | | |
| 14-19 | | X | 3 | | | I | 19 | | | | 19 | | | |
| | 15-19 | | 2 | | | | | | | | | | | |

J3 (POWER) →

(P) Pin inserts only (check factory for socket availability)
(S) Socket inserts only (check factory for pin availability)
(2) Not tooled for RP or 02RE.
(3) Pin insert only, not tooled for RP or 02RE (check factory for availability)
*Y is same as H with interfacial seal
**Tooled with special terminal only (check factory for availability of standard terminal)
††Coax contacts only

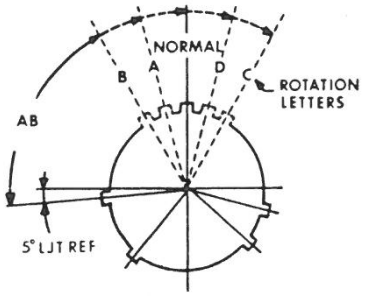
# JT/LJT insert availability and identification; alternate positions (continued)

**LJT MASTER KEY/KEYWAY ROTATION**

| AB ANGLE OF ROTATION (Degrees) | | | | | |
|---|---|---|---|---|---|
| Shell Size | Normal | A | B | C | D |
| 9 | 95° | 77° | — | — | 113° |
| 11 | 95° | 81° | 67° | 123° | 109° |
| 13 | 95° | 75° | 63° | 127° | 115° |
| 15 | 95° | 74° | 61° | 129° | 116° |
| 17 | 95° | 77° | 65° | 125° | 113° |
| 19 | 95° | 77° | 65° | 125° | 113° |
| 21 | 95° | 77° | 65° | 125° | 113° |
| 23 | 95° | 80° | 69° | 121° | 110° |
| 25 | 95° | 80° | 69° | 121° | 110° |

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

AB angles shown are viewed from the front face of the connector, a receptacle is shown below. The angles for the plug are exactly the same except the direction of rotation is opposite of that shown for the receptacle.



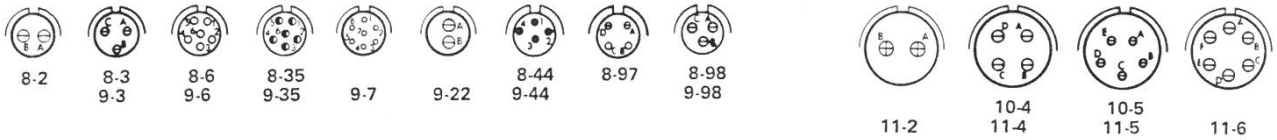

RELATIVE POSSIBLE POSITION OF ROTATED MASTER KEYWAY.
(front face of receptacle shown)

| JT | LJT | Solder | Crimp | Hermetics Class H | Hermetics Class Y* | Service Rating | Total Contacts | Contact Size 22D | 22M | 22 | 20 | 16 | 12 | 8†† (Coax) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14-35 | | | X | P | P | M | 37 | 37 | | | | | | |
| | 15-35 | | X | P | P | | | | | | | | | |
| 14-37 | | X | X | P | P | M | 37 | | 37 | | | | | |
| | 15-37 | X | X | P | P | | | | | | | | | |
| 14-68 | | | 2 | | | I | 8 | | | | | 8 | | |
| | 15-68 | | 3 | | | | | | | | | | | |
| 14-97 | | | 2 | P | P | I | 12 | | | | 8 | 4 | | |
| | 15-97 | X | 2 | P | P | | | | | | | | | |
| 16-6 | | | X | P | P | I | 6 | | | | | | 6 | |
| | 17-6 | | X | P | P | | | | | | | | | |
| 16-8 | | X | X | P | P | II | 8 | | | | | 8 | | |
| | 17-8 | X | X | P | P | | | | | | | | | |
| 16-13 | | | 2 | | | I | 13 | | | | | 13 | | |
| | 17-13 | | 3 | | | | | | | | | | | |
| 16-26 | | X | X | P | P | I | 26 | | | | 26 | | | |
| | 17-26 | X | X | P | P | | | | | | | | | |
| 16-35 | | | X | P | P | M | 55 | 55 | | | | | | |
| | 17-35 | X | X | P | P | | | | | | | | | |
| 16-42 | | | X | P | P | M | 42 | | | 42 | | | | |
| | 17-42 | | P | | | | | | | | | | | |
| 16-55 | | X | X | P | P | M | 55 | | 55 | | | | | |
| | 17-55 | X | X | | | | | | | | | | | |
| 16-99 | | X | X | P | P | I | 23 | | | | 21 | 2 | | |
| | 17-99 | X | X | | | | | | | | | | | |
| 18-11 | | X | X | P | P | II | 11 | | | | | 11 | | |
| | 19-11 | X | X | P | P | | | | | | | | | |
| 18-28 | | X | X | P | P | I | 28 | | | | 26 | 2 | | |
| | 19-28 | X | P | | | | | | | | | | | |
| 18-30 | | X | X | P | | I | 30 | | | | 29 | 1 | | |
| | 19-30 | X | P | | | | | | | | | | | |
| 18-32 | | X | X | P | P | I | 32 | | | | 32 | | | |
| | 19-32 | X | X | P | P | | | | | | | | | |
| 18-35 | | | X | P | P | M | 66 | 66 | | | | | | |
| | 19-35 | | X | P | P | | | | | | | | | |
| 18-53 | | X | X | | | M | 53 | | | 53 | | | | |
| | 19-53 | | P | | | | | | | | | | | |
| 18-66 | | X | X | P | P | M | 66 | | 66 | | | | | |
| | 19-66 | | X | P | P | | | | | | | | | |
| | | | | | | M | 67 | | 67 | | | | | |
| | 19-67 | X | 3 | | | | | | | | | | | |
| 18-68 | | | 2 | | | I | 18 | | | | | 18 | | |
| | 19-68 | | 3 | | | | | | | | | | | |
| 18-96 | | | 2 | | | I | 9 | | | | | | 9 | |
| | | | | | | | | | | | | | | |
| 20-1 | | | X | P | P | M | 79 | | 79 | | | | | |
| | 21-1 | | X | | | | | | | | | | | |
| 20-2 | | | X | | | M | 65 | | | 65 | | | | |
| | 21-2 | | P | | | | | | | | | | | |
| 20-11 | | | 2 | | | I | 11 | | | | | | 11 | |
| | 21-11 | | 2 | | | | | | | | | | | |
| 20-16 | | X | X | P | P | II | 16 | | | | | 16 | | |
| | 21-16 | X | X | P | P | | | | | | | | | |
| | | | | | | I | 24 | | | | 24 | | | |
| | 21-24 | X | | | | | | | | | | | | |
| | | | | | | I | 25 | | | | 25 | | | |
| | 21-25 | X | | | | | | | | | | | | |

(P) Pin inserts only (check factory for socket availability)
(S) Socket inserts only (check factory for pin availability)
(2) Not tooled for RP or 02RE
(3) Pin insert only, not tooled for RP or 02RE (check factory for availability)
*Y is same as H with interfacial seal
††Coax contacts only

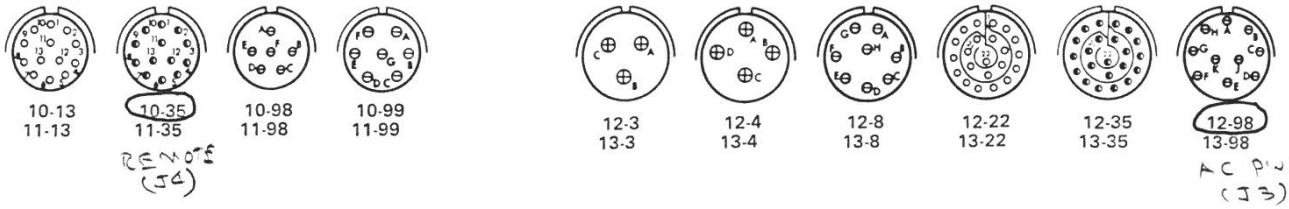
# JT/LJT
# insert arrangements

black arrangements — JT or LJT
green arrangements — JT only
orange arrangements — LJT only



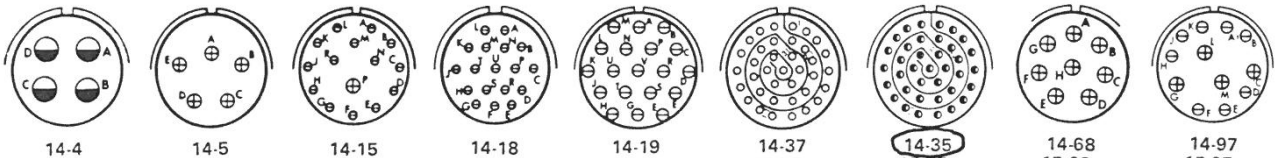
8-2 | 8-3, 9-3 | 8-6, 9-6 | 8-35, 9-35 | 9-7 | 9-22 | 8-44, 9-44 | 8-97 | 8-98, 9-98

11-2 | 10-4, 11-4 | 10-5, 11-5 | 11-6

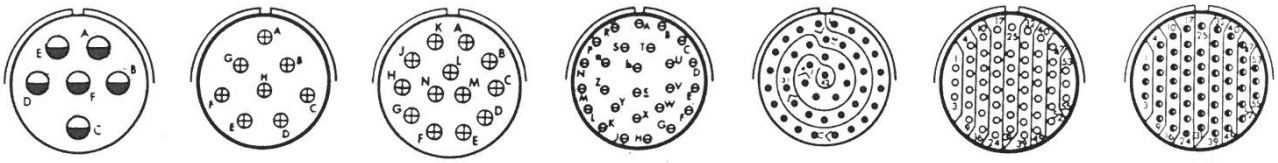


10-13, 11-13 | 10-35, 11-35 | 10-98, 11-98 | 10-99, 11-99

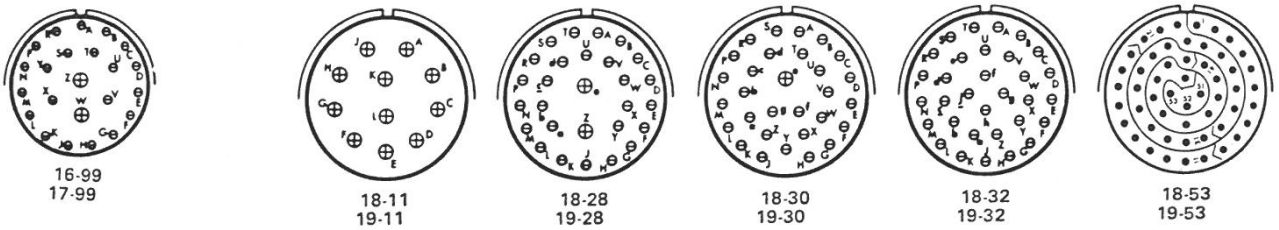
12-3, 13-3 | 12-4, 13-4 | 12-8, 13-8 | 12-22, 13-22 | 12-35, 13-35 | 12-98, 13-98



14-4, 15-4 | 14-5, 15-5 | 14-15, 15-15 | 14-18, 15-18 | 14-19, 15-19 | 14-37, 15-37 | 14-35, 15-35 | 14-68, 15-68 | 14-97, 15-97



16-6, 17-6 | 16-8, 17-8 | 16-13, 17-13 | 16-26, 17-26 | 16-42, 17-42 | 16-55, 17-55 | 16-35, 17-35



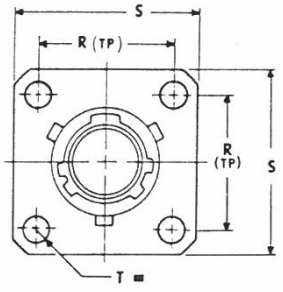
16-99, 17-99 | 18-11, 19-11 | 18-28, 19-28 | 18-30, 19-30 | 18-32, 19-32 | 18-53, 19-53

front face of pin inserts illustrated

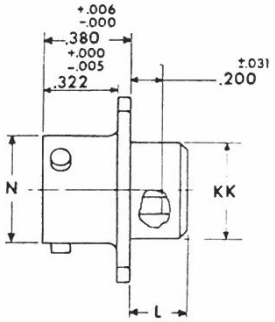
CONTACT LEGEND — 8 | 12 | 16 | 20 | 22 | 22M | 22D

# JT – Crimp
# JT02R (MS27499)
## box mounting receptacle

J1 = MS27499E14F35SB
J2 = MS27499E14F35SA
J3 = MS27499E12F98P




( 4 HOLES )




*JT02RE-XX-XXX (MS27499E)
**JTS02RE-XX-XXX (MS27504E)
***JTN02RE-XX-XXX
*JT02RP-XX-XXX
**JTS02RP-XX-XXX
***JTN02RP-XX-XXX

■ ⊕ .005 DIA Ⓜ

*To complete order number see page 52.
**High temperature version, to complete order number see page 52.
***Clear iridite finish (gold color), $N_2O_4$ resistant, to complete order number see page 52.

| Shell Size | L Max. | KK Max. | N +.001 −.005 | S ±.016 | R (TP) | T ±.005 |
|---|---|---|---|---|---|---|
| 8 | .286 | .438 | .473 | .812 | .594 | .120 |
| 10 | .286 | .563 | .590 | .938 | .719 | .120 |
| 12 | .286 | .688 | .750 | 1.031 | .812 | .120 |
| 14 | .286 | .813 | .875 | 1.125 | .906 | .120 |
| 16 | .286 | .938 | 1.000 | 1.219 | .969 | .120 |
| 18 | .286 | 1.047 | 1.125 | 1.312 | 1.062 | .120 |
| 20 | .286 | 1.172 | 1.250 | 1.438 | 1.156 | .120 |
| 22 | .286 | 1.297 | 1.375 | 1.562 | 1.250 | .120 |
| 24 | .286 | 1.422 | 1.500 | 1.688 | 1.375 | .147 |

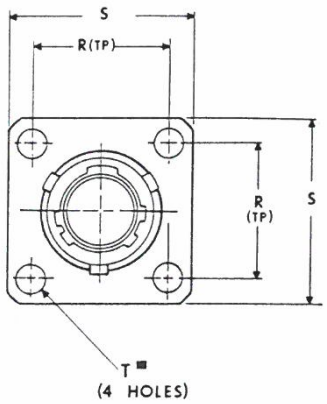
J3 — 12
J1, J2 — 14

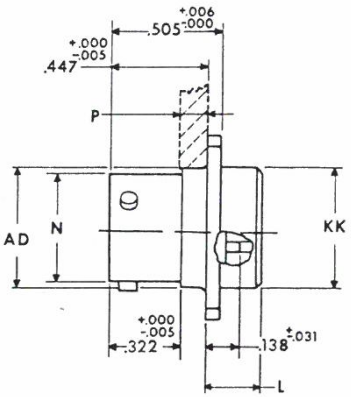
All dimensions for reference only

NOTE: For applications requiring an environmental seal please refer to JT00R, see page 10.

# JT – Crimp
# JTP02R (MS27508)
## box mounting receptacle
## (back panel mounting)

J4 = JTP02RE-10-35P (MS27508)




*JTP02RE-XX-XXX (MS27508E)
**JTPN02RE-XX-XXX
***JTPS02RE-XX-XXX
*JTP02RP-XX-XXX
**JTPN02RP-XX-XXX
***JTPS02RP-XX-XXX

■ ⊕ .005 DIA Ⓜ

*To complete order number see page 52.
**High temperature version, to complete order number see page 52.
***Clear iridite finish (gold color), $N_2O_4$ resistant, to complete order number see page 52.

J4

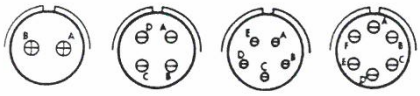
| Shell Size | N Dia. +.001 −.005 | R (TP) | S ±.016 | L Max. | AD Dia. ±.005 | T Dia. ±.005 | P Max. Panel Thickness | KK Max. |
|---|---|---|---|---|---|---|---|---|
| 8 | .473 | .594 | .812 | .225 | .516 | .120 | .147 | .531 |
| 10 | .590 | .719 | .938 | .225 | .633 | .120 | .152 | .656 |
| 12 | .750 | .812 | 1.031 | .225 | .802 | .120 | .152 | .828 |
| 14 | .875 | .906 | 1.125 | .225 | .927 | .120 | .152 | .953 |
| 16 | 1.000 | .969 | 1.219 | .225 | 1.052 | .120 | .152 | 1.078 |
| 18 | 1.125 | 1.062 | 1.312 | .225 | 1.177 | .120 | .152 | 1.203 |
| 20 | 1.250 | 1.156 | 1.438 | .225 | 1.302 | .120 | .179 | 1.328 |
| 22 | 1.375 | 1.250 | 1.562 | .225 | 1.427 | .120 | .179 | 1.453 |
| 24 | 1.500 | 1.375 | 1.688 | .225 | 1.552 | .147 | .169 | 1.578 |

All dimensions for reference only

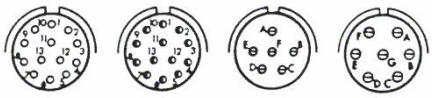
# JT/LJT
# insert arrangements

black arrangements — JT or LJT
green arrangements — JT only
orange arrangements — LJT only

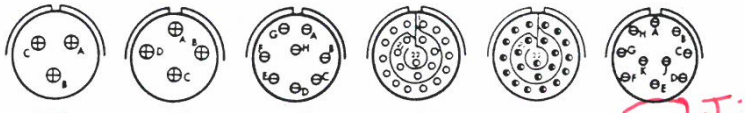
8-2 | 8-3 **9-3** | 8-6 **9-6** | 8-35 **9-35** | **9-7** | **9-22** | 8-44 **9-44** | 8-97 | 8-98 **9-98**



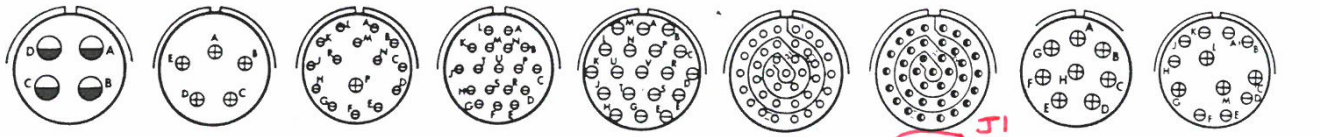
**11-2** | 10-4 **11-4** | 10-5 **11-5** | **11-6**



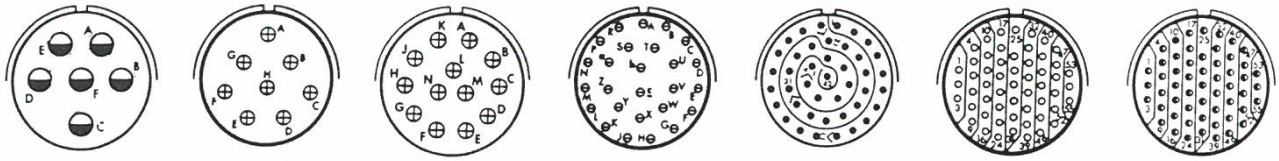
10-13 **11-13** | 10-35 **11-35** | 10-98 **11-98** | 10-99 **11-99**



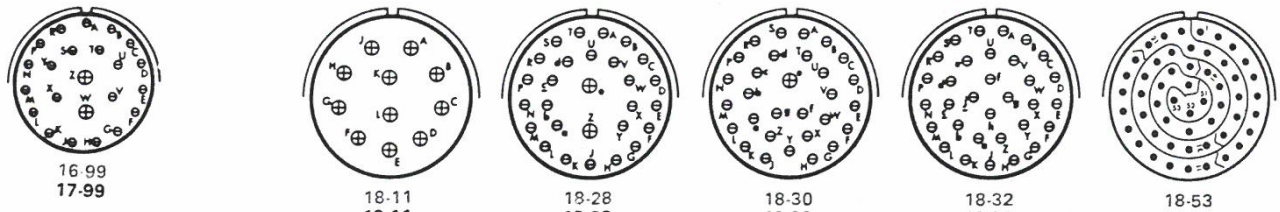
12-3 **13-3** | 12-4 **13-4** | 12-8 **13-8** | 12-22 **13-22** | 12-35 **13-35** | 12-98 **13-98**



14-4 **15-4** | 14-5 **15-5** | 14-15 **15-15** | 14-18 **15-18** | 14-19 **15-19** | 14-37 **15-37** | 14-35 **15-35** | 14-68 **15-68** | 14-97 **15-97**



16-6 **17-6** | 16-8 **17-8** | 16-13 **17-13** | 16-26 **17-26** | 16-42 **17-42** | 16-55 **17-55** | 16-35 **17-35**



16-99 **17-99** | 18-11 **19-11** | 18-28 **19-28** | 18-30 **19-30** | 18-32 **19-32** | 18-53 **19-53**

front face of pin inserts illustrated

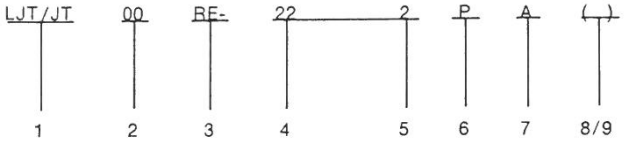
CONTACT LEGEND — 8 | 12 | 16 | 20 | 22 | 22M | 22D

# JT/LJT
# how to order

### PROPRIETARY PART NUMBER

To more easily illustrate ordering procedure, part number JT00RE-22-2PA ( ) is shown as follows:

### PART NUMBER




See code below:

1. Connector Type:
   - JT designates standard Junior Tri-Lock Connector, LJT designates long Junior Tri-Lock Connector
   - LJTS/JTS designates high temperature connector
   - LJTN/JTN designates chemical and fuel resistant
   - JTL designates Pygmy mounting dimensions
   - JTLN designates Pygmy mounting dimensions—chemical resistant
   - JTLS designates Pygmy mounting dimensions — high temperature
   - LJTP/JTP designates back panel mounted
   - LJTPN/JTPN designates back panel mounted — chemical resistant
   - LJTPS/JTPS designates back panel mounted — high temperature
   - JTG* designates plug with grounding fingers
   - JTNG* designates plug with grounding fingers — chemical resistant

**Grounding fingers standard on all LJT plugs.*

2. Shell Style:
   - 00 designates wall mount receptacle
   - 01 designates line mount receptacle
   - 02 designates box mount receptacle
   - 06 designates straight plug
   - 07 designates jam nut receptacle
   - 08 designates 90-degree plug
   - I designates solder mount receptacle — hermetic

3. Service Class:

"P" for potting applications — These connectors are supplied with a potting boot.† All shells are designed with integral features to retain potting boots.†

"A" for general duty applications — Threaded rear design.† Can be supplied with strain relief "A (SR)."

"C" for pressurized applications. Threaded rear design.† Can be supplied with strain relief "C (SR)."

"H" for hermetic applications — Fused compression glass sealed inserts. Leakage rate less than .01 micron cu. ft./hr. ($1 \times 10^{-7}$ cc/sec.) at 15 psi differential.

"Y" same as "H" with interfacial seal.

"T" for MS27599A applications — General duty — pressurized (receptacles only).

"RP" for potting crimp applications — Supplied with spacer grommet and potting boot.†

"RE" for environmental crimp applications — Supplied with a grommet and compression nut.† Can be supplied with strain relief integral with compression nut "RE (SR)." ( JT Series only. )

"RT" for environmental applications — Supplied without rear accessories. Design provides serrations on rear threads of shells.

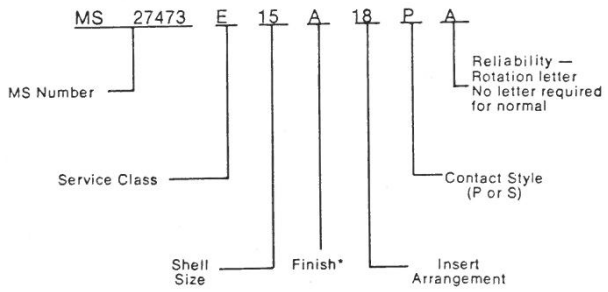
For additional information defining complete description of service class, consult factory.

4. JT shell sizes available from 8 through 24. LJT shell sizes available from 9 through 25. (Page 4 through 8)
5. 22-2 designates insert arrangement. Refer to following pages for additional insert patterns. (Page 6 through 8)
6. P designates pin contacts. S for socket contacts.
7. A designates a rotated connector assembly. Other basic rotations are B, C, and D. No letter required for normal (no rotation) position. (Page 4)
8. SR designates a strain relief clamp. Strain reliefs are available only on A, C, and RE class connectors.
9. Finish variation suffix.

*†Not applicable to box mounting style.*

| Finish | Finish Suffix | Finish plus SR Suffix |
|---|---|---|
| Cadmium Plated Nickel Base | | (SR) |
| Bright Cadmium | (001) | (304) |
| Olive Drab Cadmium Plate | (003) | (301) |
| Grey Anodize | (004) | (382) |
| Anodic Coating (Alumilite) | (005) | (300) |
| Bright Nickel | (009) | (362) |
| Chromate Treated (Iridite 14-2) | (011) | (344) |
| Olive Drab Cadmium Plate Nickel Base | (014) | (386) |

### MILITARY TYPES




**For finish variations, see finish data. (Page 3)*

*For MS depictions and dimensional data see applicable MIL-Spec. (MIL-C-38999, MIL-C-27599).*

Bendix Federal Vendor Identification/FSCM 77820

# JT/LJT
# specifications

## Contact Rating

| Contact Size | Test Current | | Maximum Millivolt Drop Crimp | Maximum Millivolt Drop Solder | |
|---|---|---|---|---|---|
| | Standard | Hermetic | | Standard | Hermetic |
| 22M | 3 | 2 | 30 | 20 | 60 |
| 22D | 5 | | 40 | | |
| 22 | 5 | 3 | 40 | 20 | 85 |
| 20 | 7.5 | 5 | 35 | 20 | 60 |
| 16 | 13 | 10 | 25 | 20 | 85 |
| 12 | 23 | 17 | 25 | | 85 |

| Contact Size | CRIMP WELL DATA | | SOLDER WELL DATA | |
|---|---|---|---|---|
| | Well Diameter | Nominal Well Depth | Well Diameter | Nominal Well Depth |
| 22M | .029 ±.001 | .141 | .029+.004 −.000 | .094 |
| 22D | .0345±.0010 | .141 | | |
| 22 | .0365±.0010 | .141 | .036+.004 −.000 | .094 |
| 20 | .047 ±.001 | .209 | .044+.004 −.000 | .125 |
| 16 | .067 ±.001 | .209 | .078+.004 −.002 | .141 |
| 12 | .100 ±.002 | .209 | | |

## Service Rating*

| Service Rating | Suggested Operating Voltage (Sea Level) | | Test Voltage (Sea Level) | Test Voltage 50,000 Ft. | Test Voltage 70,000 Ft. | Test Voltage 110,000 Ft. |
|---|---|---|---|---|---|---|
| | AC (RMS) | DC | | | | |
| M | 400 | 550 | 1300 VRMS | 550 VRMS | 350 VRMS | 200 VRMS |
| I | 600 | 850 | 1800 VRMS | 600 VRMS | 400 VRMS | 200 VRMS |
| II | 900 | 1250 | 2300 VRMS | 800 VRMS | 500 VRMS | 200 VRMS |

*Please note that the establishment of electrical safety factors is left entirely in the designer's hands, since he is in the best position to know what peak voltages, switching surges, transients, etc., can be expected in a particular circuit.

## Finish Data

| Aluminum Shell Components Non-Hermetic | | | | |
|---|---|---|---|---|
| Finish | Suffix | | Indicated Finish Standard for JT Types Listed Below | Standard for LJT Types Listed Below |
| | Military | Proprietary | | |
| Cadmium Plated Nickel Base | MS (A) | | JT/JTG/JTL/JTP | LJT/LJTP |
| Bright Cadmium | | (001) | | |
| Olive Drab Cadmium Plate | | (003) | | |
| Grey Anodize | | (004) | | |
| Anodic Coating (Alumilite) | MS (C) | (005) | JTS/JTPS/JTLS | LJTPS/LJTS |
| Bright Nickel | | (009) | | |
| Chromate Treated (Iridite 14-2) | | (011) | JTN/JTPN/JTLN | LJTN/LJTPN |
| Olive Drab Cadmium Plate Nickel Base | MS (B) | (014) | | |
| Electroless Nickel | MS (F) | (023) | | |

| Hermetic Connectors | | | | |
|---|---|---|---|---|
| Material/Finish | Suffix | | Indicated Finish Standard for JT Types Listed Below | Indicated Finish Standard for LJT Types Listed Below |
| | Military | Proprietary | | |
| Carbon Steel Shell Tin Plated Shell and Contacts | MS (D) | | JT( )H/JT( )Y JTL( )H/JTL( )Y | LJT( )Y/LJT( )H |
| Carbon Steel Shell Gold Plated Shell and Contacts | | *(101) | | |
| Stainless Steel Shell | MS (E) | (150) | JTS( )Y JTLS( )Y | LJTS( )Y |

*Suffix (101) may be used for non hermetic types from standard finish column; contacts only will be 100 millionths inch minimum gold plate. These finishes are available on other JT and LJT connectors. Contact the factory for additional variations.

May 6, 1988
NAS Mil Connectors

| Part Number | H/A | Delivery | Hall-Mark | Delivery | Time | Delivery |
|---|---|---|---|---|---|---|
| MS27499E12F98P | $22.71 | 1 Week | $21.68 | 18 Weeks | $26.05 | Stock |
| JTP02RE-10-35P | $21.58 | 14 Weeks | $20.67 | 18 Weeks | $23.85 | 4 Weeks |
| MS27499E14F35SB | $30.77 | 18 Weeks | $29.13 | 18 Weeks | $26.25 | Stock |
| MS27499E14F35SA | $30.77 | 8 Weeks | $29.15 | 18 Weeks | $29.35 | Stock |

21 Jun 88

R-0223 Modems
Pax River
Rear Panel Connectors

| Conn.No. | Pin | Signal | to Chassis |
|---|---|---|---|
| J1 | 7 | CH1 Undetected Mk. Out | TB1-5 |
| | 9 | CH1 Undetected Sp. Out | TB1-6 |
| | 12 | CH1 Analog Gnd | TB1-11 |
| | 20 | CH2 Digital Data In | TB2-7 |
| | 22 | CH1 Digital Data Out(RS232) | TB1-7 |
| | 23 | CH1 Digital Data Out(MIL188) | TB1-8 |
| | 24 | CH2 Analog Gnd | TB2-11 |
| | 21 | MIDBIT Clock | TB1-3 |
| | 36 | CH2 Analog Gnd | TB2-12 |
| J1= Bendix MS27499E14F35SB | | | |
| J2 | 10 | CH1 FSK In | TB1-9 |
| | 12 | CH1 FSK In | TB1-10 |
| | 1 | CH2 FSK Out | TB2-9 |
| | 3 | CH2 FSK Out | TB2-10 |
| J2= Bendix MS27499E14F35SA | | | |
| J3 | A | Gnd | Line Cord Grn/Yel |
| | D | Neutral | Line Cord Blue |
| | K | Hot | Line Cord Brn |
| J3= Bendix MS27499E12F98P | | | |
| J4 | 1 | Remote Data In | J5-1 |
| | 2 | Remote CTS | J5-3 |
| | 3 | Data Out | J5-2 |
| | 4 | RTS | J5-5 |
| | 5 | CTS | J5-4 |
| | 6 | Gnd | J5-7 |
| J4= Bendix JTP02RE-10-35P | | | |

(MS27508E10A35P)

HAL COMMUNICATIONS CORP. MSCON1.WK1
ST-8000A MS CONNECTORS
DECEMBER 11, 1990

| ST-8000A CONNECTOR | J1 | J2 | J3 | J4 | J5 |
|---|---|---|---|---|---|
| USAF SPECIFICATION: | | | | | |
| Use | Data I/O | Audio I/O | AC Power | Remote Control | Diversity (Optional) |
| Specified P/N | MS27508E14F35SB | MS27508E14F35SA | MS27472E12F98P | MS27508E10F35P | MS27508E10F35S |
| Connector Type | BOX MTG PLUG - Int | BOX MTG PLUG - Int | WALL MTG RECPT | BOX MTG PLUG - Int | BOX MTG PLUG - Int |
| Cable Clamp | N/R | N/R | MS27506F12-2 | N/R | N/R |
| No. of Pins | 37 (Socket) | 37 (Socket) | 10 (Pin) | 13 (Pin) | 13 (Socket) |
| Contact Size | No. 22D | No. 22D | No. 20 | No. 22D | No. 22D |
| Current Rating | 5 Amps | 5 Amps | 7.5 Amps | 5 Amps | 5 Amps |
| Service Rating | "M" | "M" | "I" | "M" | "M" |
| Test Voltage | 1300 VRMS | 1300 VRMS | 1800 VRMS | 1300 VRMS | 1300 VRMS |
| Plating | Electroless Nickel | Electroless Nickel | Electroless Nickel | Electroless Nickel | Electroless Nickel |
| MATING CONNECTOR: | | | | | |
| Mating Cable Conn | MS27473E14F35PB | MS27473E14F35PA | MS27473E12F98S | MS27473E10F35S | MS27473E12F98P |
| Cable Clamp | MS27506F14-2 | MS27506F14-2 | MS27506F12-2 | MS27506F10-2 | MS27506F10-2 |
| JT06RE (Incl Clamp) | JT06RE-14-35PB(SR) | JT06RE-14-35PA(SR) | JT06RE-12-98S(SR) | JT06RE-10-35S(SR) | JT06RE-10-35P(SR) |
| No. of Pins | 37 (Socket) | 37 (Socket) | 10 (Pin) | 13 (Pin) | 13 (Socket) |
| Contact Size | No. 22D | No. 22D | No. 20 | No. 22D | No. 22D |
| CRIMP TOOLING | | | | | |
| Crimp Tool | MS3198-1 | MS3198-1 | MS3198-1 | MS3198-1 | MS3198-1 |
| Die (Socket) | MS3198-6P | MS3198-6P | MS3198-9P | MS3198-6P | MS3198-6P |
| Die (Pin) | MS3198-8P | MS3198-8P | MS3198-9P | MS3198-8P | MS3198-8P |
| MIL SPEC | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II | MIL-C-38999 Series II |
| QPL Sources QPL-38999-29 | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix | Amphenol, Bendix, ITT, Cannon, Plessey, Matrix |

# Electrical Connectors

2110

Bendix

Electrical
Components
Division

This publication is intended to illustrate and briefly describe the connector product line of The Bendix Corporation, Electrical Components Division. All connectors are designed and produced in accordance with exacting engineering, manufacturing and quality requirements, and are backed by the reputation and expertise of the Division. Each type of connector is available in a variety of configurations.

The Connector Selection Guide is intended to assist in determining the general type of connector required by the user, and is arranged both by industry and basic connector characteristics. Once a type of connector is selected, a short description can then be found in the body of the publication.

Detailed information concerning any particular connector type may be found in the catalog referenced after each description. To obtain these catalogs, or for further information regarding electrical connectors, contact the Electrical Components Division Sales Office nearest you. The enclosed card has also been prepared to assist in obtaining desired connector literature.

# Connector Selection Guide

| Bendix Connector Style / Industry | Cylindrical | | | | | | | | | | | | | Rectangular | | | | Cyl. or Rect. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Heavy Duty | | Miniature | | | Subminiature | | | | | | | | | | | | |
| | AN/MS | QWLD | PT/MS | PT–CE | PT–SE & MS | JT/MS | JT–RE & MS | LJT/MS | LJT/RE & MS | SJT | TRI-START | AQUACON | BREAKAWAY | B³ LOW MATING FORCE | PRINTED CIRCUIT BOARD | RACK AND PANEL | ARINC TYPE | FILTER |
| MARINE/GEOPHYSICAL | | | | | | | | | | | | | | | | | | |
| Military | • | • | • | • | | • | | | | | | • | | • | • | • | | • |
| Underwater | | • | | | | | | | | | | • | | | • | | | |
| Pleasure Craft | | | • | • | | | | | | | | | | | | | | |
| EXPLORATION | • | • | • | • | | • | • | | | • | | • | | • | • | | | • |
| EDP | | | | | | | | | | | | | | | | | | |
| Numerical Control | • | | • | | | • | | | | | | | | • | • | • | • | • |
| Computers | • | | | | • | | • | | | | | | | • | • | • | • | • |
| AEROSPACE | | | | | | | | | | | | | | | | | | |
| Aircraft | • | | • | • | • | • | • | • | • | • | • | | • | • | • | • | • | • |
| Missiles | | | • | | | • | • | • | • | • | • | | • | • | • | • | | • |
| Avionics | • | | • | • | • | • | • | • | • | • | • | | • | • | • | • | | • |
| Grd Support | • | • | • | • | • | • | • | • | • | • | • | | • | • | • | • | | • |
| Ordnance | • | • | • | • | • | • | • | • | • | • | • | | • | • | • | • | | • |
| Spacecraft | | | | | | • | • | • | • | | • | | • | • | • | | | • |
| COMMUNICATIONS | | | | | | | | | | | | | | | | | | |
| Radio | • | • | • | • | • | • | • | • | • | • | • | | | • | • | • | | • |
| Radio/Telephone | • | | • | • | • | • | • | • | • | • | • | | | • | • | • | | • |
| Broadcasting | | | | | | • | • | | | • | | | | • | • | • | | • |
| INDUSTRIAL | | | | | | | | | | | | | | | | | | |
| Machine Tools | • | • | • | • | • | • | • | | | | | | | | • | • | | |
| Instrumentation/Automation | • | • | • | • | • | • | • | | | | • | | | • | • | • | • | • |
| Power Distribution | • | • | • | • | • | | | | | | | | | | | • | | • |
| TRANSPORTATION | | | | | | | | | | | | | | | | | | |
| Motor Vehicles | • | | • | | • | | | | | | • | | | • | | • | | |
| Railroads | • | • | • | • | • | | | | | | • | | | • | | • | | |
| Recreational Vehicles | | | | | • | | | | | | • | | | | • | • | | |
| MEDICAL | | | • | | • | • | | | | • | | | | • | • | | | • |
| INSTRUMENTATION | | | • | | | | | | | • | | | | • | • | • | | • |
| NUCLEAR | | • | | | | • | • | • | • | • | • | | | • | • | • | | • |
| **Covered by Catalog Number** | 12-040<br>12-021<br>12-020 | 12-052 | 12-070 | 12-070 | 12-070 | 12-090 | 12-090 | 12-090 | 12-090 | 12-091 | 12-092 | 12-140 | SL-102 | SL-305<br>SL-311 | 12-033 | 12-034 | 12-034 | 12-120 |

| | CYLINDRICAL | | | | | | | | | | | | RECTANGULAR | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Subminiature | | | | Miniature | | | | | | Special | | | | | |
| | JT | LJT | SJT | Tri-Start | PT | PTS-DR | PC | AN/MS | BT | Power | Aquacon | Filter | PCB | Rack & Panel | ARINC | B³ |
| RATINGS | | | | | | | | | | | | | | | | |
| max circuits | 128 | | | | 61 | | | 104 | 55 | 104 | 128 | | 240 | 102 | 106 | 400 |
| contact/awg size | 28-12 | | | | 20-12 | | | 16-0 | 16-4 | 20-4/0 | 24-12 | | 24-20 | 26-4 | 22 | 28-22 |
| max temp (°F) | 392 | | | | 257 | 392 | 257 | 257 | 1000 | 257 | | | | | | 257 |
| PHYSICAL | | | | | | | | | | | | | | | | |
| coupling B-bayonet<br>T-threaded | B | B | B | T | B | B | T | T | T | T | T | BT | | | | |
| wire termination<br>B-wire bundle<br>J-jacketed cable | BJ | BJ | BJ | BJ | BJ | BJ | BJ | BJ | B | J | J | | | | | |
| SPECIFICATIONS | | | | | | | | | | | | | | | | |
| MIL approved | • | • | | • | • | • | | • | | • | | | • | • | | |
| commercial | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |

RF CONNECTORS are available from our Microwave Sales Department for any industrial, commercial, military or private enterprise imaginable. Consult the Sidney plant for our complete literature on Bendix' Square-Cut line of RF connectors.

## CONTENTS

# Subminiature Cylindrical

## MIL-C-38999, MIL-C-27599

### DESIGN CHARACTERISTICS

- **Lightweight, compact, hi-contact density** cylindrical
- **Operating voltage to 900 VAC (RMS)** at sea level
- **Environmental resistant**
- **Quick positive coupling** assured by three point bayonet coupling system
- **Visual confirmation** of complete coupling
- **Eliminates mismating** by the use of five key/keyway guide design
- **Error proof alternate positioning** insured by rotation of master keyway location during machining of shell

### CUSTOMER OPTIONS

- **Five mounting styles** provide maximum flexibility in product design
- **Nine shell sizes** - 8 through 24
- **Fifty-six different contact arrangements** - to accommodate minimum of three circuits to a maximum of one hundred and twenty-eight circuits
- **Solder or crimp** rear release contacts
- **Size 22D to 12 contacts** accepting wire sizes 28 through 12 AWG
- **Eight finishes** provide protection in a wide variety of corrosive and mechanical environments
- **Coaxial (shielded) contacts** optional
- **Hermetic seal (glass fusion) receptacles**

### JT, MS-JT

1. For applications requiring maximum weight/space savings and reliability. Also available in designs approved to MIL-C-38999 Series II (crimp termination) and MIL-C-27599 Series II (solder termination).

Catalog 12-090

### LJT

2. Popular 100% "scoop-proof" (recessed pins) version of the JT family. Shell design is such that contacts cannot be bent or damaged by improper mating. The LJT offers maximum contact protection against bending and user aggressiveness. Also available in designs approved to MIL-C-38999 Series I (crimp termination) and MIL-C-27599 Series I (solder termination).

Catalog 12-090

### SJT

3. A further expansion of the basic JT family, incorporating the LJT 100% scoop-proof feature and standard mounting dimensions of JT and Pygmy types.

Catalog 12-091

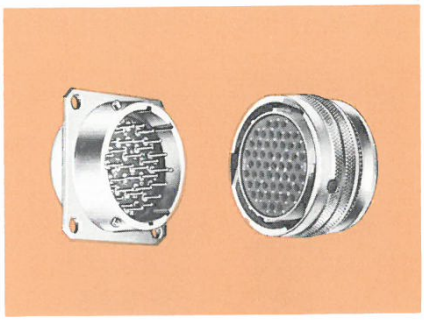
### TRI-START*

4. Designed for general duty as well as severe environmental applications the Tri-Start completely mates in one full turn. Lockwiring is eliminated in this self locking, quick coupling connector. Superior EMI shielding is achieved through the combination of grounding fingers and solid metal to metal mating. Universal mounting holes for front or rear mounting, and locksmith metal keying to aid in blind mating, come with the Tri-Start. Potential contact damage is minimized in this 100% "scoop proof" MIL-C-38999 Series III connector. Threaded Coupling.

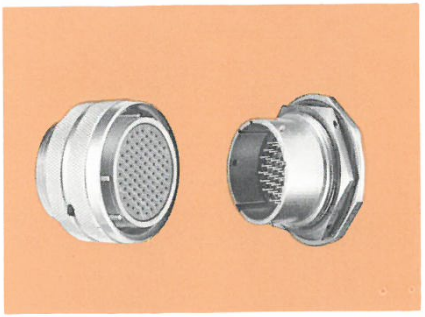
Catalog 12-092

* U.S. Pat. No. 4,109,990

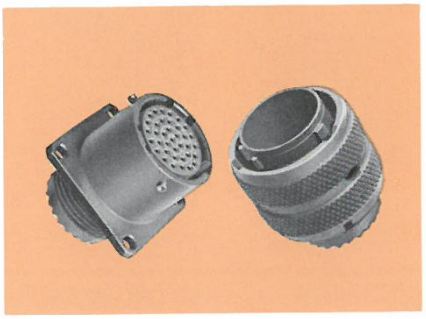
1



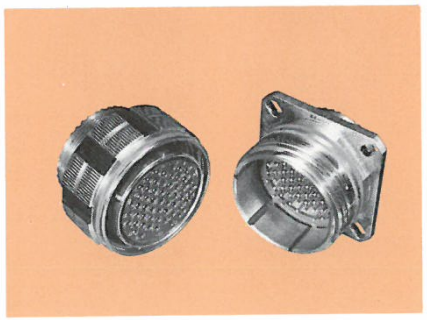
2



3



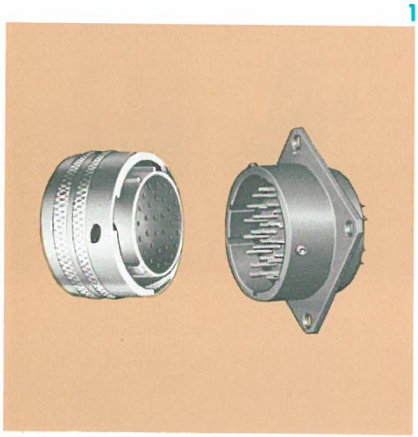
4



# Miniature Cylindrical (Pygmy)

**MIL-C-26482, MIL-C-83723**

1



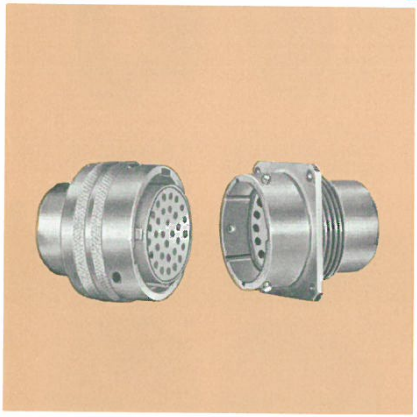
## DESIGN CHARACTERISTICS

- **Medium size,** widely used cylindrical
- **Operating voltage to 900 VAC (RMS)** at sea level
- **Environmental resistant**
- **Quick positive coupling** assured by three point bayonet coupling system
- **Visual confirmation** of complete coupling
- **Eliminates mismating** by the use of five key/keyway design

## CUSTOMER OPTIONS

- **Seven mounting styles** provide optimum flexibility in product design
- **Ten shell sizes** - 6 through 24
- **Solder or crimp** front and rear release contacts
- **Sizes 20 through 12 contacts** accept wire sizes 20 through 12 AWG
- **Six finishes** provide protection in a wide variety of corrosive and mechanical environments
- **Coaxial (shielded) and thermocouple contact** options
- **Hermetic seal (glass fusion) receptacles**
- **Threaded coupling series** available
- **Alternate positioning**

2

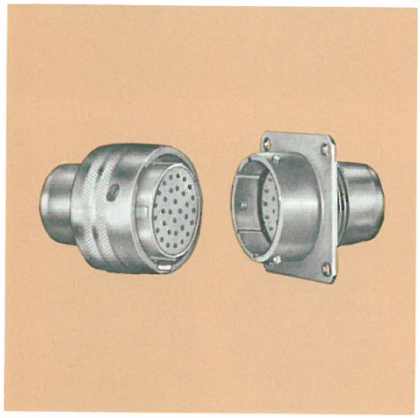


## PT, MS-PT

1. Basis of popular "Pygmy" line, incorporating bayonet coupling and **solder** contacts. Also available in MS approved designs to MIL-C-26482, Service Classes E, F and P.

Catalog 12-070

3



## PT-SE, MS-PT-SE

2. A derivative of the Pygmy line incorporating **crimp,** front release removable contacts with a metal clip retention system. The MS version is approved to MIL-C-26482 with MIL-C-23216 geometry contacts.

Catalog 12-070

## PT-CE

3. Lowest cost Pygmy type connector, featuring **crimp,** front release removable contacts and a voidless one piece insert and grommet assembly offering continuous dielectric separation between contacts.

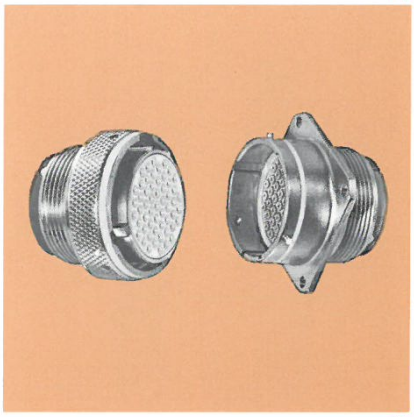
Catalog 12-070

## PTS-DR, MS-PTS-DR

4. A series featuring the latest innovations in miniature cylindrical connector technology including **crimp** rear-release removable contacts, dielectric retention, electroless nickel plate, poly (amide-imide) inserts with "hard faced" closed entry socket design, and temperature capabilities to 392°F. Also obtainable as MS versions in accordance with MIL-C-26482 and MIL-C-83723.

Catalog 12-076

4

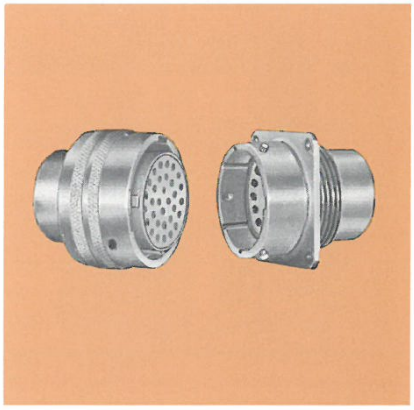


## SP

5. **Solder** contacts and corrosion resistant hard anodic alumilite finish. Receptacles have been designed with enlarged flanges and mounting holes, providing for optimum back panel mounting.

Catalog 12-070

5



## SP-SE, SP-CE

Features of the SP, SE and CE type connectors are merged to offer **crimp,** front release removable contacts with either metal or non-metal contact retention, in a corrosion resistant bayonet coupling design.

Catalog 12-070

## PC

6. An additional derivative of the Pygmy line with double stub thread coupling, **solder** contacts and single key polarization. The series will meet the performance requirements of MIL-C-26482 and MIL-C-83723.

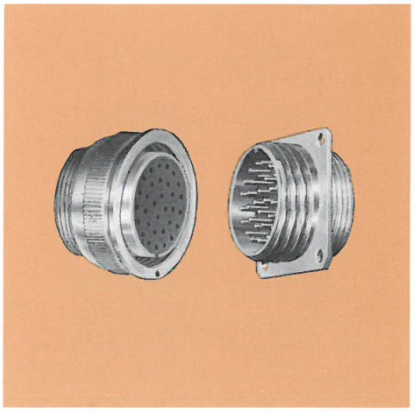
Catalog 12-070

## PC-SE, PC-CE

Threaded coupling and **crimp,** front release removable contacts. Engineered for applications requiring a threaded coupling and the convenience of crimp contacts.

Consult Sales Office

6



# Cylindrical

## MIL-C-5015
## MIL-C-5015 modifications

1

### DESIGN CHARACTERISTICS

- **Medium-heavy weight,** time-tested cylindrical
- **Operating voltages to 3000 VAC (RMS)** at sea level
- **Environmental resistant**
- **Threaded coupling**

### CUSTOMER OPTIONS

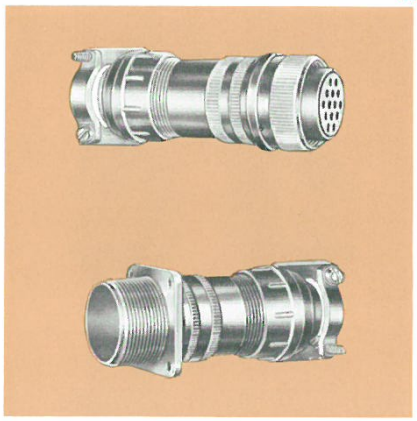
- **Five mounting styles** in strict accordance with military specification
- **Four additional styles** to expand user mounting options
- **Nineteen shell sizes** - 8S through 48
- **Two-hundred and seventy-three contact arrangements** - accommodating from a minimum of one to a maximum of 104 circuits
- **Solder or crimp** (MS Modified only) front release contacts
- **Sizes 16 to 0 contacts** accepting wire sizes 16 through 0 AWG
- **Coaxial (shielded) and thermocouple contact** options
- **Alternate positioning**

### MS-A, MS-C, MS-E, MS-R

1. Produced in strict accordance with MIL-C-5015. For use with open bundle wiring on airborne electrical equipment, and other environmental resistant applications.
Class A, Solid Shell - intended for general connector usage.
Class C, Pressurized - for use on pressurized bulkheads or pressure barriers. Unique Bendix design allows pressurization of connectors with either pin or socket contact arrangements.
Class E, Environmental Resisting - ideally suited for installations where condensation, vibration and rapid changes in pressure or temperature are considerations.
Class R, Lightweight Environmental Resisting - shorter in length and lighter in weight than Class E designs, yet offers reliable service under difficult conditions.

Catalog 12-020

2



### SC-P

Similiar to MIL-C-5015 cylindricals with additional insert arrangements and pre-primed inserts and potting boots.

Catalog 12-021

### 10-72XXX SERIES

Similiar to MIL-C-5015 cylindricals with additional arrangements and axial compression type clamping nut for sealing to jacketed cable.

Catalog 12-021

### 10-214XXX SERIES

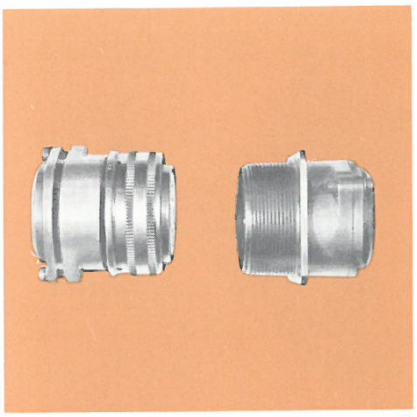
2. Similar to MIL-C-5015 cylindricals with additional insert arrangements, crimp contacts, cable accessories and clamping bars for cable sealing and strain relief on armored jacketed cable types such as MIL-C-915 and others.

Catalog 12-021

# Commercial Aircraft Cylindrical

high temperature
fluid resistant

1



## DESIGN CHARACTERISTICS

- **Engineered for Aircraft usage,** especially selected materials and configurations
- **Operating voltages to 3000 VAC (RMS)** at sea level
- **Environmental resistant**

## CUSTOMER OPTIONS

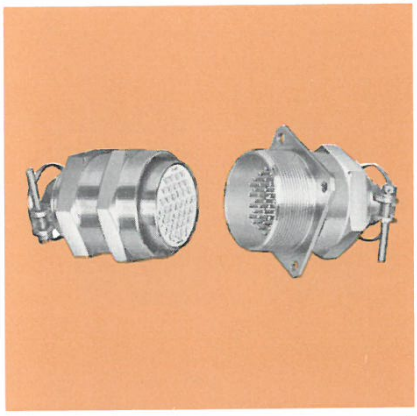
- **Four mounting styles** compatible with airframe wiring
- **Eleven shell sizes** - 8S through 32
- **Multiple contact arrangements** - accommodating from 1 through 55 circuits
- **Sizes 16 to 4 crimp contacts** in materials suitable for high temperature ratings
- **Stainless steel and aluminum shells** to provide protection in hostile environments
- **Alternate positioning**

### BT-M

1. Firewall connector for service where high temperature performance and direct exposure to flame are prevalent. Supplied with cable clamp for open wire bundle cabling. Continuous duty rated at 450°F.

Catalog 12-101

2



### BT-RA

2. Firewall connector suitable for applications requiring continuous temperature operation to 1000°F. Components used also provide resistance to radiation and oxidation.

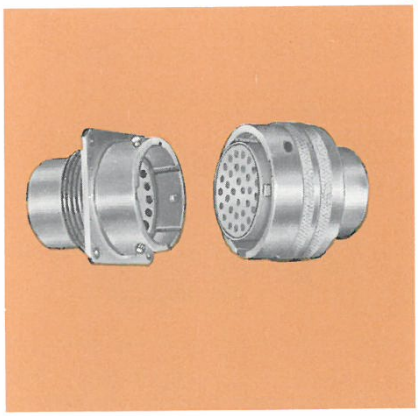
Catalog 12-101

### DC

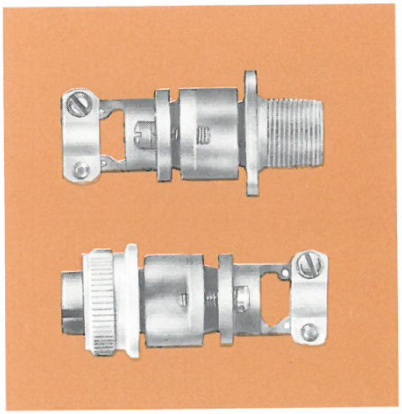
3. Approved for DC-8, DC-9 and DC-10 aircraft applications. Connectors resist corona, ozone, skydrol, synthetic oils, hydrazine, and oxydizing acids. MIL-C-26482 performance with a temperature range capability of –65° to +300°F.

Catalog 12-101

3



4



### 10-244XXX SERIES

4. Designed specifically for aircraft engine compartment applications. Operating temperature rated to 400°F, with fluid resisting components.

Catalog 12-101

# Heavy Duty Cylindrical

MIL-C-22992

## DESIGN CHARACTERISTICS

- **Heavy duty, largest size** cylindrical
- **Current ratings to 200 amps**
- **Environmental resistant**
- **Quick mating, vibration resistant** threaded coupling
- **Easily maintainable** double stub thread

## CUSTOMER OPTIONS

- **Nine mounting styles** to accommodate power and control circuitry
- **Eighteen shell sizes** from 10 through 52
- **Wide assortment of contact arrangements** - accommodating from 1 through a maximum of 104 circuits
- **Solder or crimp contacts**
- **Sizes 20 to 4/0 contacts** accepting wire sizes 20 through 4/0 AWG
- **Designed for use with jacketed cable**
- **Alternate positioning**

## CLASS "L"

1. Highly suitable for industrial or military applications and is designed to meet demands of heavy power interconnections in current ranges of 40 to 200 amps. As safety is an all important factor, the connectors are designed with a programmed coupling sequence to provide making of grounded or neutral circuits prior to mating of power circuits. At unmating, the power circuits are broken before the ground or neutral. A unique arc quencing capability also provides a positive safety feature if the connectors are inadvertently disconnected under load. A 5 key polarizing system is used to assure that circuits with incompatible power characteristics (voltage, phase and frequency) cannot be mated. Cable lay patterns have been taken into account in the design of contact arrangements to facilitate termination of large conductors. Qualified to MIL-C-22992, Class L.

Catalog 12-052

## QWLD

2. Heavy duty waterproof series with 5 key polarization for power and control circuits. Qualified to MIL-C-22992.

Catalog 12-052

## QWL

3. An additional waterproof series, but with single key polarization. A more compact heavy duty connector, meeting the performance requirements of MIL-C-22992.

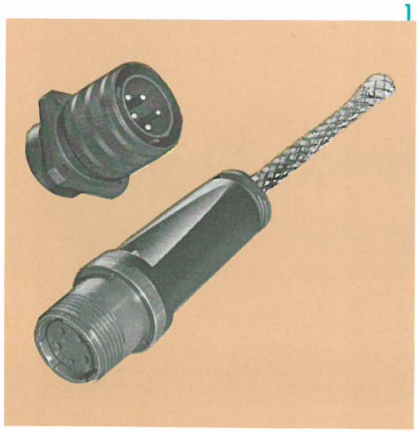
Brochure L-1080

## QDP

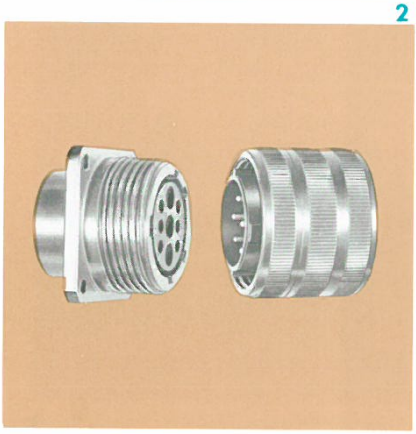
Featuring Pygmy crimp (PT-SE) inserts in QWLD type shells. Designed for applications which require heavy duty shells and finish, and higher contact density insert arrangements.

Product Data Sheet 65

1



2



3

# Special Purpose Cylindrical

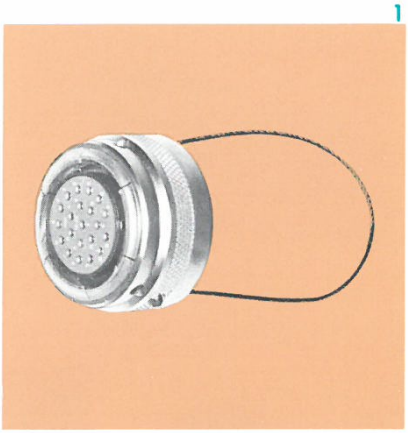
"breakaway"
aquacon
filter
nuclear

## "BREAKAWAY"

1. Designed to provide quick disconnect of a connector plug and receptacle with axial pull. The "breakaway release" is available in two series, the "fail safe" which will disconnect even when not fully mated, and the "twist pull" which will disconnect only in a fully mated condition. The breakaway concept incorporates MIL-C-26482 or MIL-C-38999 receptacles and especially designed plugs with the release mechanism. Mating is accomplished in normal fashion while disconnect is by axial pull on the coupling nut (via lanyard or other means) or manual rotational unmating.

Brochure SL-102

1



## AQUACON (IMMERSIBLE)

2. Designed for oceanic (underwater) or fluid immersion applications, offering 1500 psi capability, metal to metal coupling, "O" ring sealing, visual mating indicator, and design flexibility, at low cost. Available with hard dielectric inserts to MIL-C-38999 as the AJ Series. Threaded coupling.

Catalog 12-140

2

## FILTER

3. Designed to provide EMI protection for sensitive circuits. Each circuit is individually filtered within the connector, eliminating the need for costly and bulky exterior network filters. Filter contacts in MF, HF, VHF and UHF ranges are available in filter connectors, intermateable and intermountable with MIL-C-38999, MIL-C-27599, MIL-C-26482, MIL-C-83723, and MIL-C-5015 connectors.

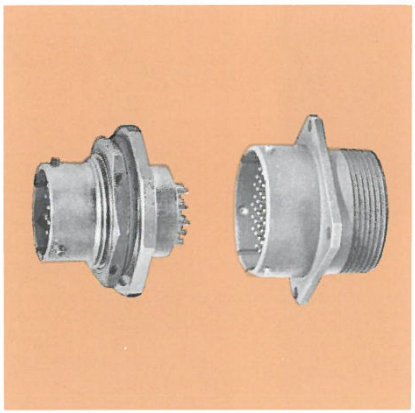
Catalog 12-120

## NUCLEAR

Engineering and production capabilities, as well as a committed involvement in meeting the special requirements of the industry are characteristic of our nuclear connector program. Environmental conditions including radiation, temperature, pressure and corrosion, as well as life and specification requirements, are taken into consideration in the design of nuclear-oriented connectors. Basic designs incorporate shell materials such as stainless steel and a variety of complementary insert materials including silicone, hypalon, glass and ceramics.

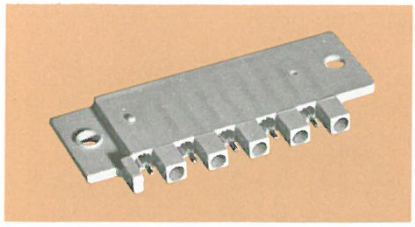
Consult Sidney Plant

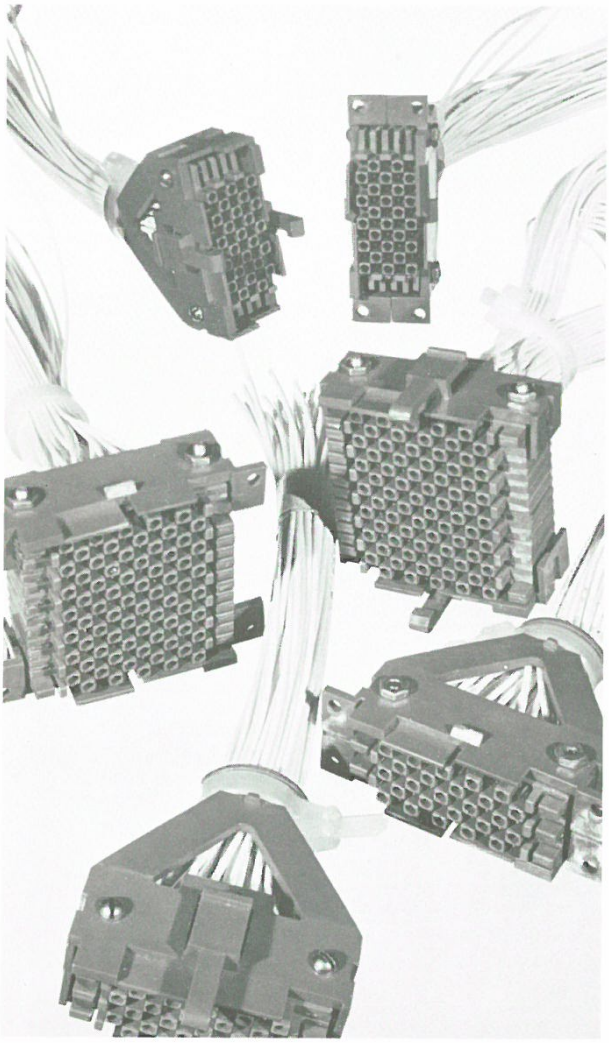
3



# Printed Circuit Board

**$B^3$ modular "building block"**
**low mating force**





- FUNCTIONAL PROTOTYPE/LABORATORY TOOL
  the $B^3$ module is intended for long term work table or lab use
  rear release, rear removable, replaceable, low mating force contacts, using standard application tools
  removable, replaceable components

- REAL FLEXIBLITY FOR THE DESIGNER/PROTOTYPER
  build your own low mating force modular connectors
  virtually unlimited combinations of X - Y axis growth, polarization, wire bundle strain relief
  assemble "as you need" modular buildups in Two Piece, Rack and Panel, Latchable Plug and Receptacle, or PCB Input/Output Connector configurations
  low mating force interconnection innovation at a fraction of prototype cost
  prototype or breadboard interconnections can be changed with a minimum of expense and lost time
  crimp or PC stud termination
  contacts on .100 inch center to center spacing, square grid

- AVAILABLE IN A HANDY KIT
  to provide an inexpensive introduction to LOW MATING FORCE INTERCONNECTIONS.

Brochure SL-311

# Printed Circuit Board

**$B^3$ bristle brush bunch**
**low mating force**

## DESIGN CHARACTERISTICS

- 70 to 90% reduction in mating force. Only 1/2 ounce typical contact engaging and separating forces
- High circuit count interconnections to 400 contacts per connector
- Two, three and four row patterns, 10 to 100 contacts per row, in one contact per row increments
- Over 20,000 mating cycles with Bendix $B^3$ Bristle Brush Bunch contacts*
- 0.100 in. center to center contact spacing, square grid
- Superior electrical characteristics - redundant current paths, low constrictive resistance, stable time/life contact resistance, uniform current densities
- Serviceability - removable crimp contacts, repairable PC stud and solderless wrap contacts
- Board support structure reinforcing reduced
- High performance polyester dielectric moldings

## CUSTOMER OPTIONS

- Variety of contact terminations and platings
- Accessories to suit latching, piloting and polarization variations
- Up to 256 keyed mating polarizations

## MOTHER BOARD, DAUGHTER BOARD

1., 2. Two piece PCB Connector featuring crimp removable, PCB Stud or solderless wrap contacts in the MB Series and field repairable 90° PCB Stud contacts in the DB Series.

## INPUT/OUTPUT

3. Rear release, rear removable crimp contacts for discrete wire cabling. I/O Connector Series mates with standard MB and PC Receptacle Series to provide external inputs/outputs.

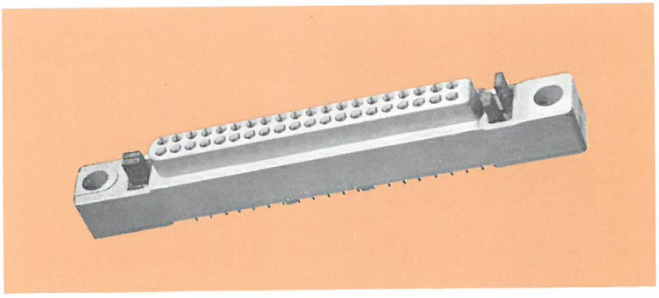
## PC

4. 90° PCB Stud contacts for side mounting on board. Mates with DB and I/O Series.

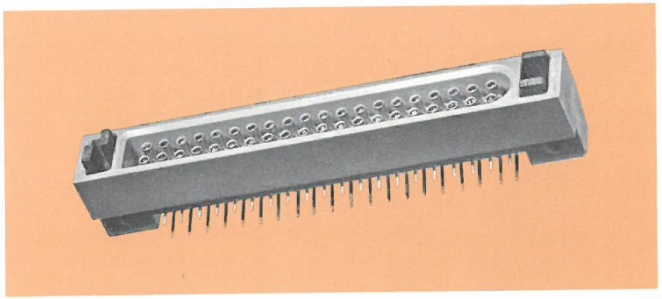
Catalog SL-305

*U.S. Pat. No. 3,725,844

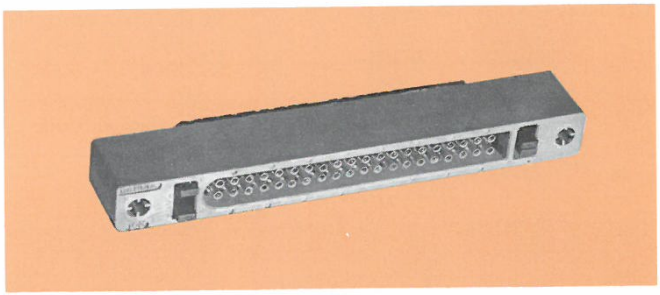
1



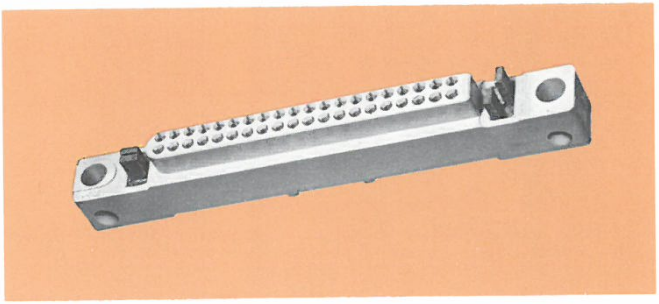
2



3



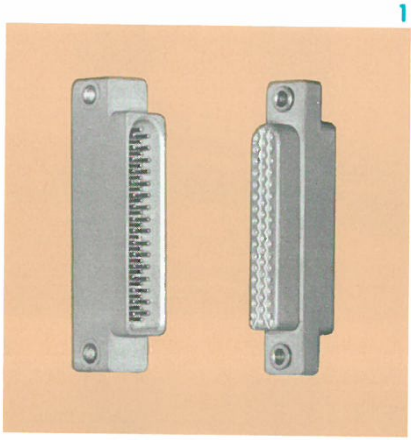
4



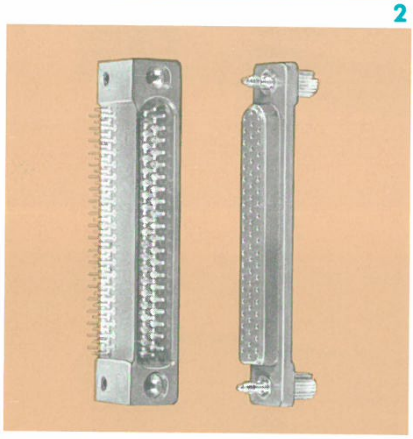
# Printed Circuit Board

MIL-C-55302

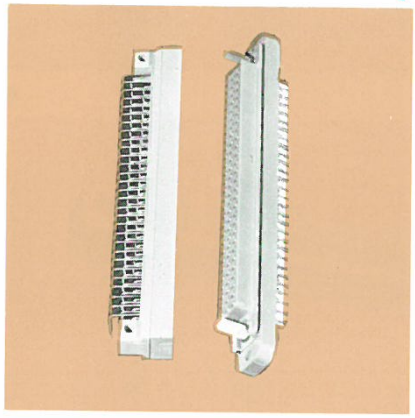
1



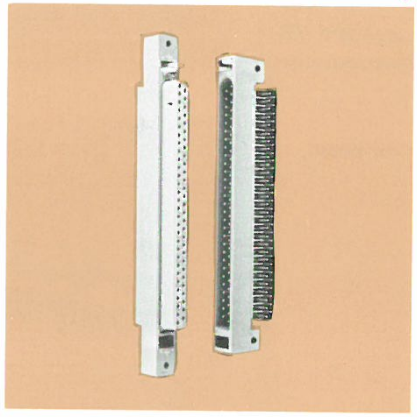
2



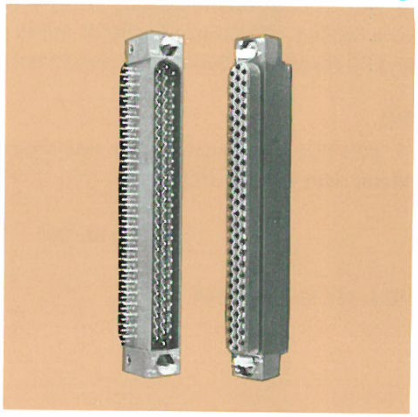
3



4



5



Designed to provide reliable interconnection means with printed circuit boards. Available with a variety of contact spacings with crimp, solder or printed circuit contacts. Qualified to MIL-C-55302.[1]

## PCB90A, M55302/67-69

1. .090" center to center contact spacing, with printed circuit or crimp insertable terminations in the mother board side and crimp insertable contacts in the plug.

Catalog 12-033

## PCB100A, M55302/70-71

2. .100" center to center contact spacing, with 90° printed circuit contacts in the mother board side and solder or crimp contacts in the plug.

Catalog 12-033

## PCB100B, M55302/76-77

3. .100" center to center contact spacing, with 90° printed circuit contacts in the daughter board side and straight closed entry sockets with optional tail lengths in the mother board. Also available with tuning fork contacts with solderless wrap terminations in mother board. Floating contacts in both plug and receptacle allow up to .010" misalignment at mating. Accessory polarization provides up to 64 possible positions.

Catalog 12-033

## PCB100C, M55302/74-75

4. .100" center to center contact spacing, with 90° or straight molded in pin contacts in the receptacle, and JT/MIL-C-38999 crimp sockets in the plug. Receptacle is designed to facilitate wave soldering to the printed circuit board. Polarization devices located in each assembly provide 256 possible keying combinations.

Catalog 12-033

## PCB150A, M55302/72-73

5. .150" center to center contact spacing, with 90° pins in the receptacle and JT/MIL-C-38999 crimp sockets in the plug. Receptacle is designed for wave soldering to the printed circuit board. Featuring an environmentally sealed plug and receptacle with 36 polarizing positions.

Catalog 12-033

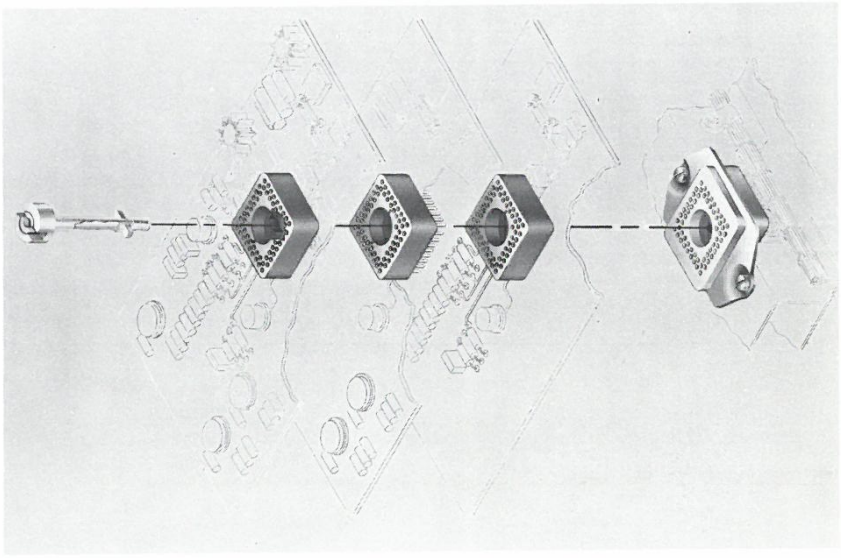
# Printed Circuit Board/ Rectangular

## centre, rack and panel/ARINC (MIL-C-81659) Type

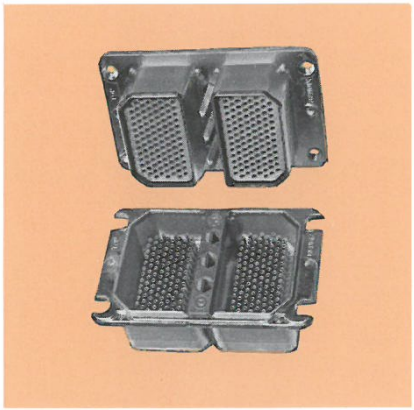
### CENTRE

1. Designed to mount at or near the center of printed circuit boards to provide a greater number of electrical connections between circuit boards, shorter PCB conductor runs, eliminate crossovers, and minimize multi-layer buildups. The PCB packaging concept offered by the Centre connector provides a simple, rugged method of mounting and interconnecting boards and chassis, reduces back panel wiring, and acts as the exit/entry point for interconnections between similiar connector stacks and external connectors in the system. The Centre system consists of multiple PCB connectors, a chassis connector, and module stack hold down.

Catalog 12-033



2



### LPX

2. The Bendix LPX rack and panel connector features crimp, rear removable contacts and a one piece aluminum die-cast shell which is available in double and single styles. Plating on the shell is cadmium with an after treatment of yellow chromate.

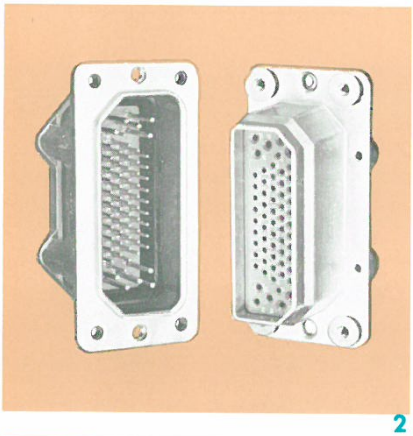
LPX connectors can also be made available with field repairable, solderless wrap contacts and are intermountable and intermateable with existing ARINC and MIL-C-81659 types.

Catalog 12-034

# Rectangular

## rack and panel
## MIL-C-21617, MIL-C-26518

1



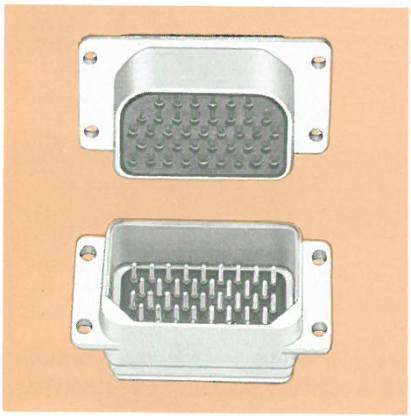
Designed for use when the coupling requirements of cylindrical connectors are impractical, such as blind or inaccessible mating applications. Available in a variety of shell styles and mounting options, with crimp and solder contacts in various insert arrangements.

### LPSRC

1. Rack and panel connectors designed for general duty applications. Available with rear release, crimp insertable contacts and five different insert patterns. Contacts come in sizes 22 through 8 and arrangements of 24 to 133. Both plug and receptacle shells are die cast aluminum and cadmium plated with a chromate after treatment.

Catalog 12-034

2

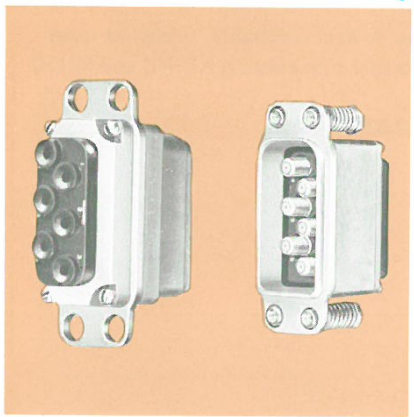


### SR

2. Intended for sliding rack applications, the SR series meets the requirements of MIL-C-21617. Contacts are solder type in sizes 20 through 4 and available in arrangements of 2 through 57. Shells are die cast aluminum and cadmium plated with a chromate after treatment.

Catalog 12-034

3



### LE

3. Front release, rear removable contacts in rack and panel connectors of the MIL-C-26518 type. Standard crimp type contacts are available in two insert arrangements offering patterns of 52 or 102 circuit possibilities. Unique metal web receptacle shell for EMI protection available for coaxial arrangements. Grommet seal for optimum environmental performance.

Catalog 12-034

# Special Products

**shorting plugs**
**coaxial contacts**
**application tools**
**custom cabling**

## SHORTING PLUGS

1. Designed to provide specific circuit functions such as safety shorting and electrical commoning. Available as modified plugs or receptacles in all standard lines. Specifically engineered to meet individual applications.

Product Data Sheet 84

## COAXIAL CONTACTS

2. Designed in crimp or solder versions to fit various RG and special cables for almost all basic multi-contact connector styles. Interchangeable with power contacts in many standard insert arrangements.

Catalog 12-130

## APPLICATION TOOLING

3. Crimp, insertion and removal tools for all connector styles including coax connectors.

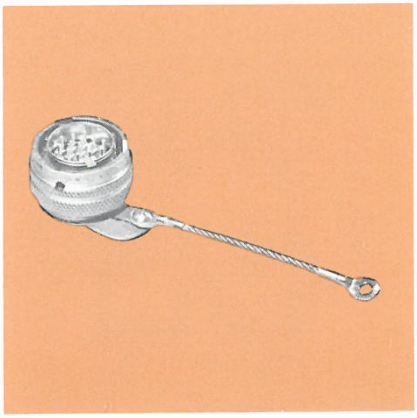
Consult catalog sections or Sidney plant.

## CUSTOM CABLING

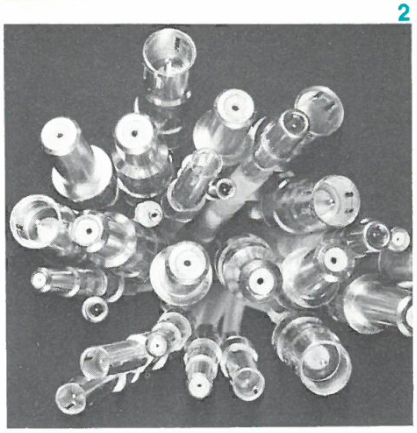
4. The Electrical Components Division maintains a custom cabling department to design and manufacture high quality cabling for industrial, aerospace, oceanic and military applications. Careful consideration is given to all aspects of a particular installation, with major emphasis given to environmental, reliability and cost requirements. Experienced engineering, model shop, and production personnel; complete molding, braiding, and fabrication capabilities, and a wide variety of tooling, are available to assist you with your cabling needs. If desired, cabling mockup service can be furnished. For further information, contact the Cabling and Special Products Group at the Sidney, N. Y. Plant.

Brochure SL-317

1

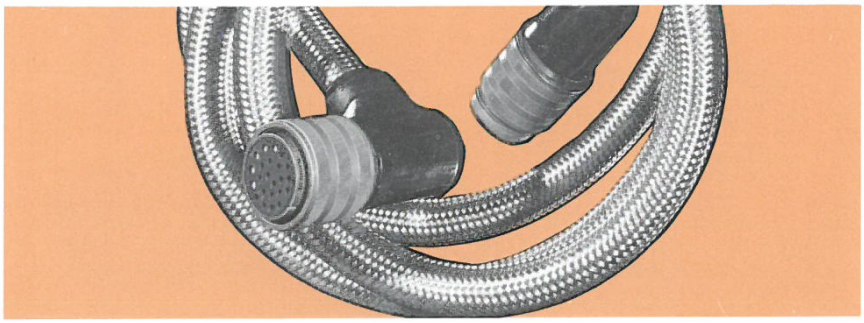


2



3

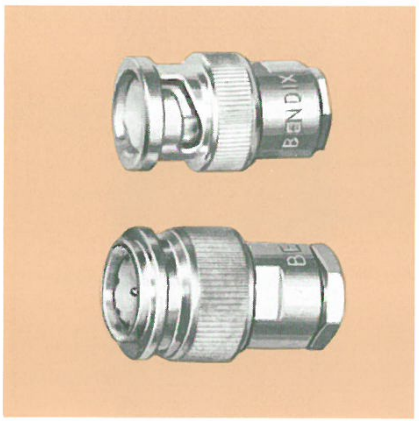
4



# RF Connectors

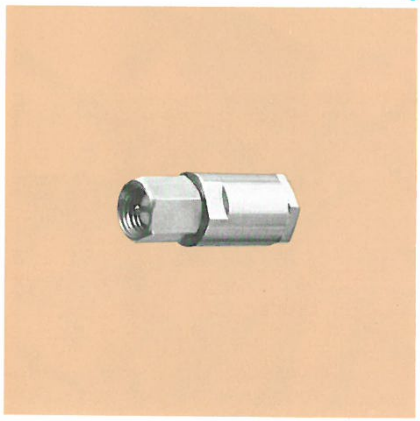
MIL-C-39012, MIL-C-49142, MIL-C-25516
MIL-C-55235, MIL-A-55339

1

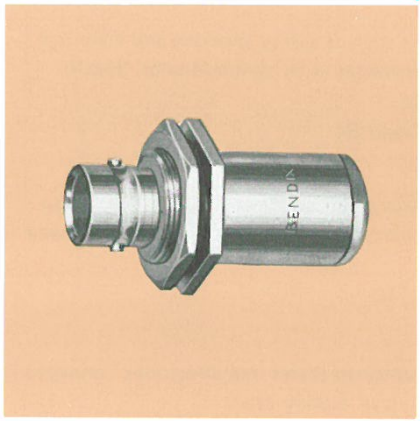



2

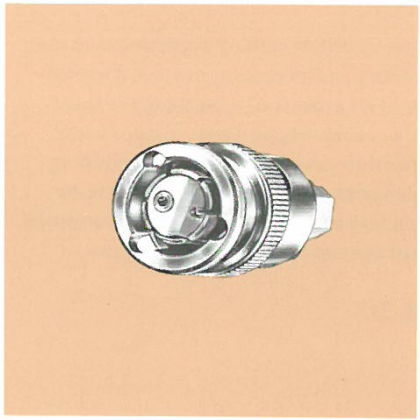
3



4



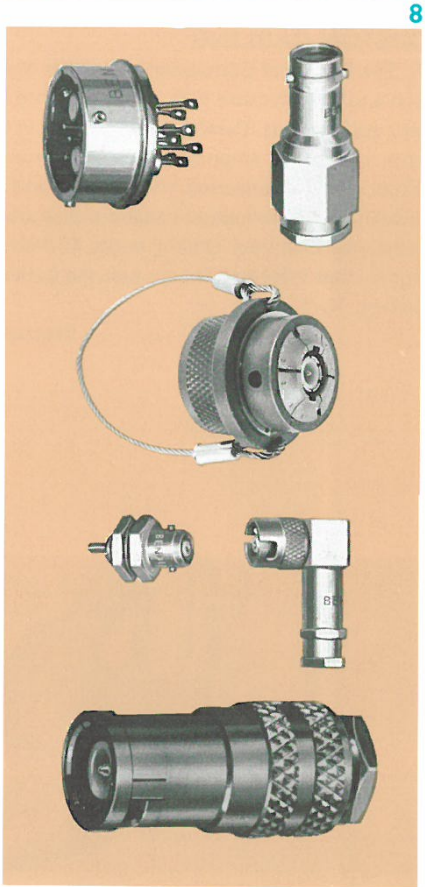

5



6

7

8



# RF Connectors

MIL-C-39012, MIL-C-49142, MIL-C-25516
MIL-C-55235, MIL-A-55339

## BNC, TNC SQUARE-CUT SERIES* MIL-C-39012

1. Small, lightweight and environmental characterize connectors in this series. In bayonet-lock or threaded coupling versions, the choice is yours, you get positive contact captivation and the new 30 second Square-Cut termination system. Excellent electrical performance is available to 11 GHz at temperatures to 250°C with a rated 500 volts.

Catalog 12-150

## N SQUARE-CUT SERIES* MIL-C-39012

2. Designed for general purpose medium size RF cable such as RG-8/U, this weatherproof, Square-Cut terminated, threaded coupling connector has a 1500 volt rating and an 11 GHz frequency limit.

Catalog 12-150

## SMA SQUARE-CUT SERIES* MIL-C-39012

3. Available in a threaded coupling and the Square-Cut termination system, these sub-miniature, light-weight connectors offer 170 to 335 volt ratings with excellent operating characteristics up to 18 GHz.

Catalog 12-150

## C, SC SERIES MIL-C-39012

4. Offered in crimp-on or SQUARE-CUT versions with improved cable clamping to give positive electrical contact, these medium size bayonet-lock or threaded coupling connectors have a 50 ohm impedance and operate up to peak voltages of 1000 volts and frequencies up to 11 GHz.

## TWINAX SERIES

5. Offered with bayonet-lock or threaded couplings and clamping or crimp-on hardware for twinax cable. Twinax is described as an insulated twisted pair contained in an outer shield which is limited to very low frequency signal applications because of high transmission looses above 10 MGz.

Brochure SL-326

## TRIAX SERIES MIL-C-49142

6. Offered with bayonet-lock or threaded couplings and clamping or crimp-on hardware for triax cable. Triax is described as an insulated center conductor contained in two concentric outer shields, insulated from each other, providing three separate cable conductor paths.

Brochure SL-327

## ISOLATED GROUND

7. Used where outer conductor must be insulated from the bulkhead or enclosure.

## SPECIALS

8.
- Hermetic Multi Coax Series - We manufacture custom, glass seal, multi coax connectors in standard pin arrangements to mate with our standard JT/LJT connectors or custom arrangements for your special requirements.
- High Voltage Series - Available in bayonet-lock or threaded coupling versions where a 5000 volt rating is required.
- Fail Safe Series - Square-Cut connectors designed with a lanyard release for quick disconnect applications. Avialable in BNC and TNC.

Brochure SL-325

- DM, ADM Series MIL-C-25516 - Leak proof and fully immersible in liquid fuel and vapors describe this miniature coax connector with a superior cable gripping mechanism. Several polarities are available in the clamping or crimp-on hardware.

Brochure SL-328

- TPS Series MIL-C-55235 - A triple pin bayonet - lock coupling is featured in this space and weight saving connector. Excellent enviornmental and electrical characteristics make it suitable for military communications and surveillance systems.

Brochure SL-330

*U.S. Patent No. 3,373,243