Amphenol SOCAPEX

# JT

## MIL-DTL-38999 Series II



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# JT

## MIL-DTL-38999 Series II
## Subminiature cylindrical connectors



GENERAL CHARACTERISTICS

### Main features

- **Shell material**
  - Aluminium alloy
  - Carbon steel (for hermetic versions)
- **Finish**
  - Olive drab cadmium plating
  - Electroless nickel plating
  - Others (please consult us)
- 9 shell sizes from 08 to 24
- **Contacts**
  - More than 50 arrangements of contacts, including high density versions
  - Size 12, 16, 20, 22 D contacts
  - Crimp, PCB, signal and power contacts (cable soldering contacts are not included in this brochure, please consult us)
- **Contact protection**
  - improved interfacial seal ensures sealing around each contact
- **EMI/RFI protection**
  - Optional grounding fingers on the plug shell
- **Very low profile and light weight**

### Additional information

- Contacts
  (please refer to data sheet E114)
- Tooling
  (please refer to data sheet E119)
- Rear accessories
  (please refer to data sheet E121)

DESCRIPTION

The JT connectors are in accordance with MIL-DTL-38999 series II standard. These connectors were developed to meet the needs of the aerospace industries. They offer a large variety of contact arrangements and shell styles, with maximum weight/space savings and reliability.

*Light weight & space saving designed connectors for aerospace*

APPLICATIONS

- **Military and aeronautic applications**
- **Applications requiring very low profile**





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# TABLE OF CONTENTS

GENERAL CHARACTERISTICS . . . . . 1

TECHNICAL CHARACTERISTICS

- Mechanical characteristics . . . . . 3
- Environmental characteristics . . . . . 3
- Electrical characteristics . . . . . 4
- Insert arrangements . . . . . 5
- Coding – Polarization . . . . . 9
- Overall dimensions

  Wall mounting receptacle (front and back panel mounting) . . . . . 10
  Line receptacle . . . . . 11
  Box mounting receptacle (front panel mounting) . . . . . 11
  Box mounting receptacle (back panel mounting) . . . . . 12
  Straight plug . . . . . 12
  Jam nut receptacle . . . . . 13

PANEL DRILLING FOR WALL MOUNTING AND JAM NUT RECEPTACLES . . . . . 13

PRINTED CIRCUIT BOARD DRILLING . . . . . 14

HERMETIC RECEPTACLES

- Main characteristics . . . . . 17
- Overall dimensions

  Wall mounting receptacle . . . . . 17
  Box mounting receptacle . . . . . 18
  Jam nut receptacle . . . . . 18
  Solder mounting receptacle . . . . . 19

ACCESSORIES

- Protection caps . . . . . 20
- Plastic dust caps . . . . . 20
- Standard crimp and PCB contacts . . . . . 21
- Sealing plugs . . . . . 21
- Dummy receptacles . . . . . 21
- Holding support with dummy receptacles . . . . . 22
- Torque value for rear accessories . . . . . 22
- Pliers for plugs . . . . . 22

TOOLING

- Crimping tools . . . . . 22
- Insertion and removal tools . . . . . 22

CONNECTORS ORDERING INFORMATION

- Aluminium versions . . . . . 23
- Hermetic versions . . . . . 23
- Cross references (Amphenol and MIL-DTL-38999 series II designations) . . . . . 24

## Mechanical characteristics

- Thermoplastic insert
- Fluorinated silicone back insert and interfacial seal
- Durability: 500 cycles
- Contact retention force

| Contact size | 22D | 20 | 16 | 12 |
|---|---|---|---|---|
| Maximal load (N) | 45 | 67 | 110 | 110 |

## Environmental characteristics

- **Salt spray exposure and working temperature:**

Waterproof shells

| Shell material | Shell finish | Salt spray exposure per MIL. STD 1344/1009 | Working temperature | |
|---|---|---|---|---|
| | | | mini | maxi |
| Aluminium | Electroless nickel | 48 H | -65°C | +200°C |
| | Olive Drab cadmium | 500 H | -65°C | +175°C |

Hermetic shells

| Shell material | Shell finish | Salt spray exposure per MIL. STD 1344/1009 | Working temperature | |
|---|---|---|---|---|
| | | | mini | maxi |
| Carbon | — | 500 H | -65°C | +200°C |

- **Humidity:** per MIL - DTL - 38999: § 3.29
- **Air leakage:** < $1.10^{-7}$ $cm^3$ /s under 1 bar of pressure differential (hermetics only)
- **Fluid resistance (per MIL - DTL - 38999), § 3.33:**
  - MIL-L-7808 (lubricating oil)
  - MIL-L-23699 (lubricating oil)
  - MIL-H-5606 (hydraulic fluid)
  - Hydraulic fluid (Chevron M2V)
  - MIL-A-8243 (defrosting fluid)
  - MIL-C-87936 type I
  - MIL-T-5624 (JP5)
  - MIL-C-47220 or Coolanol 25 or equivalent
  - MIL-G-3056 type I (gasoline)
  - Isopropyl alcohol per TT-I-735 grade A or B mixed with mineral spirit TT-T-291 type 1 or P-D-680 type I

# Electrical characteristics

• **Contact rating:** nominal current per contact

| Contact size | 22D | 20 | 16 | 12 |
|---|---|---|---|---|
| Crimp (A) | 5 | 7.5 | 13 | 23 |
| Hermetic (A) | 3 | 5 | 10 | 17 |

• **Contact resistance**

| Contact size | 22D | 20 | 16 | 12 |
|---|---|---|---|---|
| Contact resistance (mΩ) | 8 | 4.7 | 2 | 1.1 |

• **Insulation resistance**

| Insulation resistance (500 V) | Crimp | Hermetic |
|---|---|---|
| Ambiant temperature | $\geq 10^5$ MΩ | $\geq 5 \times 10^3$ MΩ |
| Maximal temperature | $\geq 10^3$ MΩ | $\geq 5 \times 10^2$ MΩ |

• **Service rating**

| Service | Dielectric withstanding voltage (Vrms) | | | | | | | | Working voltage | |
|---|---|---|---|---|---|---|---|---|---|---|
| | At sea level | | 15000 meters | | 21000 meters | | 34000 meters | | | |
| | mated | unmated | mated | unmated | mated | unmated | mated | unmated | Vrms | Vdc |
| M | 1300 | 1300 | 800 | 550 | 800 | 350 | 800 | 200 | 400 | 550 |
| N | 1000 | 1000 | — | 400 | — | 260 | — | 200 | 300 | 450 |
| I | 1800 | 1800 | 1000 | 600 | 1000 | 400 | 1000 | 200 | 600 | 850 |
| II | 2300 | 2300 | 1000 | 800 | 1000 | 500 | 1000 | 200 | 900 | 1250 |

• **Dimensions of acceptable contacts and cables**

| Contact Size | Contact Diameter mm | Crimp barrel Diameter mm | Crimp barrel Depth mm | Acceptable cables Gauge AWG / Section mm² | | | | Outside diameter (mm) Min | Average | Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 22D | 0.76 | 0.88+/-0.03 | 3.58 | 22 | 24 | 26 | 28 | 0.76 | 1.20 | 1.37 |
| | | | | 0.38 | 0.22 | 0.15 | 0.095 | | | |
| 20 | 1 | 1.19+/-0.03 | 5.30 | 20 | 22 | 24 | | 1.02 | 1.83 | 2.11 |
| | | | | 0.60 | 0.38 | 0.22 | | | | |
| 16 | 1.57 | 1.70+/-0.03 | 5.30 | 16 | 18 | 20 | | 1.68 | 2.41 | 2.77 |
| | | | | 1.34 | 0.93 | 0.60 | | | | |
| 12 | 2.36 | 2.54+/-0.06 | 5.30 | 12 | 14 | | | 2.46 | 3.20 | 3.61 |
| | | | | 3.30 | 1.94 | | | | | |

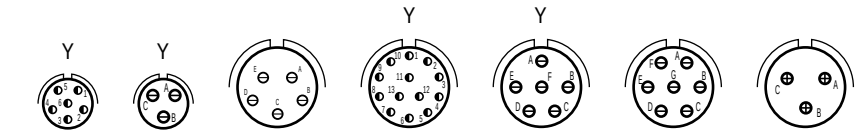
# Insert arrangements

## Front face view of male insert

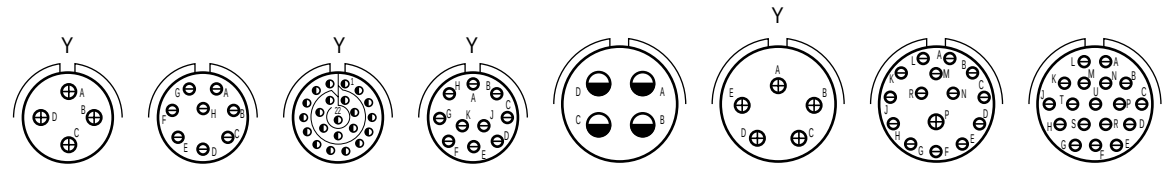
The major keyway is shown in the «normal» position

| Contact size | 22D | 20 | 16 | 12 |
|---|---|---|---|---|
| Caption | ◐ | ⊖ | ⊕ | ◒ |

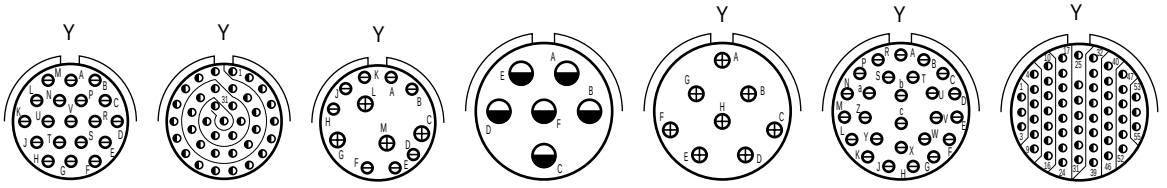
① Insert arrangement reference
② Service class
③ Number of contacts
④ Contact sizes



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ① | 8-35 | 8-98 | 10-05 | 10-35 | 10-98 | 10-99 | 12-03 |
| ② | M | I | I | M | I | I | II |
| ③ | 6 | 3 | 5 | 13 | 6 | 7 | 3 |
| ④ | 22D | 20 | 20 | 22D | 20 | 20 | 16 |



| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ① | 12-4 | 12-8 | 12-35 | 12-98 | 14-04 | 14-05 | 14-15 | 14-18 |
| ② | I | I | M | I | I | M | I | I |
| ③ | 4 | 8 | 22 | 10 | 4 | 5 | 14 1 | 18 |
| ④ | 16 | 20 | 22D | 20 | 12 | 16 | 20 16 | 20 |



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ① | 14-19 | 14-35 | 14-97 | 16-06 | 16-08 | 16-26 | 16-35 |
| ② | I | M | I | I | II | I | M |
| ③ | 19 | 37 | 8 4 | 6 | 8 | 26 | 55 |
| ④ | 20 | 22D | 20 16 | 12 | 16 | 20 | 22D |

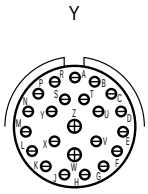
# Insert arrangements

## Front face view of male insert

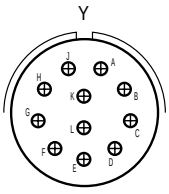
The major keyway is shown in the «normal» position

| Contact size | 22D | 20 | 16 | 12 |
|---|---|---|---|---|
| Caption | ◐ | ⊖ | ⊕ | ◒ |

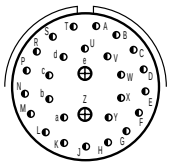
① Insert arrangement reference
② Service class
③ Number of contacts
④ Contact sizes



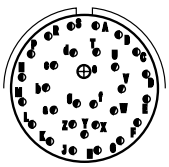

① 16-99
② I
③ 21 2
④ 20 16



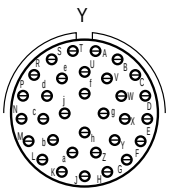

18-11
II
11
16



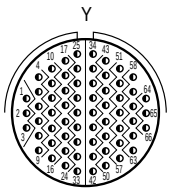
18-28
I
26 2
20 16



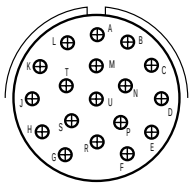
18-30
I
29 1
20 16



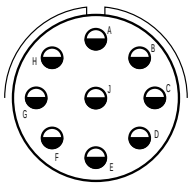

18-32
I
32
20



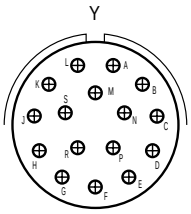

18-35
M
66
22D



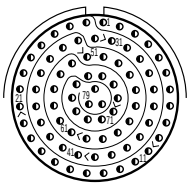
① 18-68
② I
③ 18
④ 16



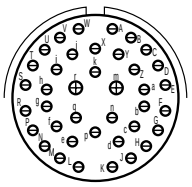
18-96
I
9
12



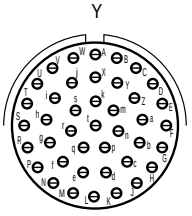

20-16
II
16
16



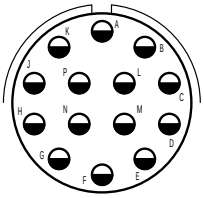
20-35
M
79
22D



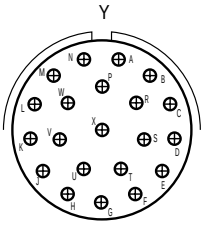
20-39
I
37 2
20 16



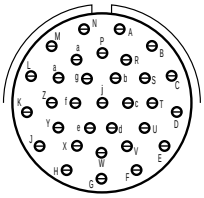

20-41
I
41
20



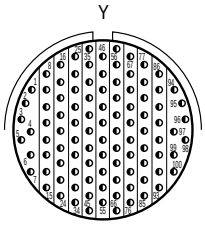
① 22-14
② I
③ 14
④ 12



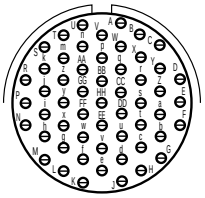

22-21
II
21
16



22-32
I
32
20




22-35
M
100
22D



22-55
I
55
20

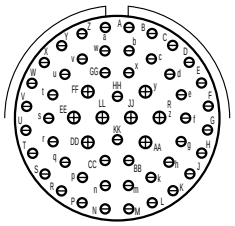
# Insert arrangements

## Front face view of male insert

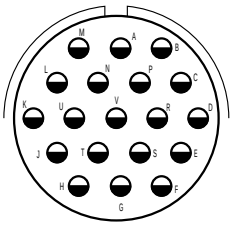
The major keyway is shown in the «normal» position

| Contact size | 22D | 20 | 16 | 12 |
|---|---|---|---|---|
| Caption | ◐ | ⊖ | ⊕ | ◒ |

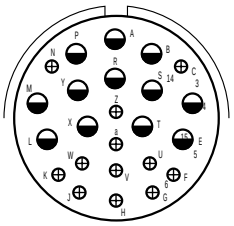
① Insert arrangement reference
② Service class
③ Number of contacts
④ Contact sizes



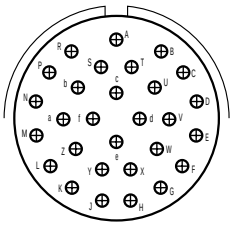
① 24-04
② I
③ 48 8
④ 20 16



24-19
I
19
12

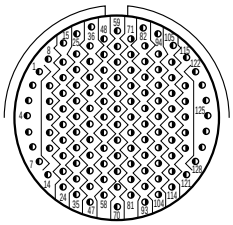


24-24
I
12 12
16 12



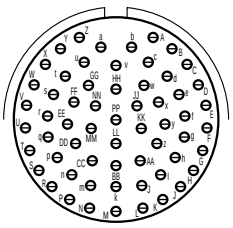
24-29
I
29
16

Y



24-35
M
128
22D

Y



① 24-61
② I
③ 61
④ 20

**Y:** Available in hermetic version

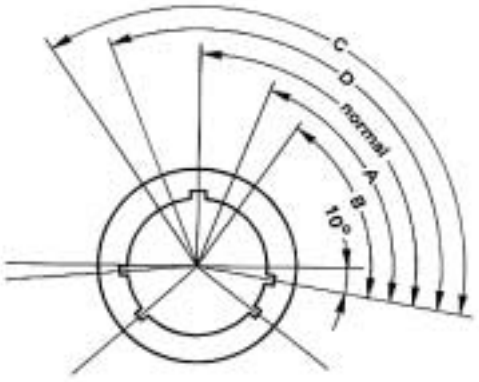
# Insert arrangements

| Arrangements of contacts | Hermetic (Y) | Service Rating | Total Contacts | Number and Size of Contacts | | | |
|---|---|---|---|---|---|---|---|
| | | | | 22D | 20 | 16 | 12 |
| 08-35 | x | M | 6 | 6 | | | |
| 08-98 | x | I | 3 | | 3 | | |
| 10-05 | | I | 5 | | 5 | | |
| 10-35 | x | M | 13 | 13 | | | |
| 10-98 | x | I | 6 | | 6 | | |
| 10-99 | | I | 7 | | 7 | | |
| 12-03 | x | II | 3 | | | 3 | |
| 12-04 | x | I | 4 | | | 4 | |
| 12-08 | x | I | 8 | | 8 | | |
| 12-35 | x | M | 22 | 22 | | | |
| 12-98 | x | I | 10 | | 10 | | |
| 14-04 | | I | 4 | | | | 4 |
| 14-05 | x | II | 5 | | | 5 | |
| 14-15 | x | I | 15 | | 14 | 1 | |
| 14-18 | x | I | 18 | | 18 | | |
| 14-19 | | I | 19 | | 19 | | |
| 14-35 | x | M | 37 | 37 | | | |
| 14-97 | x | I | 12 | | 8 | 4 | |
| 16-06 | x | I | 6 | | | | 6 |
| 16-08 | x | II | 8 | | | 8 | |
| 16-26 | x | I | 26 | | 26 | | |
| 16-35 | x | M | 55 | 55 | | | |
| 16-99 | x | I | 23 | | 21 | 2 | |
| 18-11 | x | II | 11 | | | 11 | |
| 18-28 | x | I | 28 | | 26 | 2 | |
| 18-30 | | I | 30 | | 29 | 1 | |
| 18-32 | x | I | 32 | | 32 | | |
| 18-35 | x | M | 66 | 66 | | | |
| 18-68 | | I | 18 | | | 18 | |
| 18-96 | | I | 9 | | | | 9 |
| 20-16 | x | II | 16 | | | 16 | |
| 20-35 | | M | 79 | 79 | | | |
| 20-39 | x | I | 39 | | 37 | 2 | |
| 20-41 | x | I | 41 | | 41 | | |
| 22-14 | | I | 14 | | | | 14 |
| 22-21 | x | II | 21 | | | 21 | |
| 22-32 | | I | 32 | | 32 | | |
| 22-35 | | M | 100 | 100 | | | |
| 22-55 | x | I | 55 | | 55 | | |
| 24-04 | | I | 56 | | 48 | 8 | |
| 24-19 | | I | 19 | | | | 19 |
| 24-24 | | I | 24 | | | 12 | 12 |
| 24-29 | | I | 29 | | | 29 | |
| 24-35 | | M | 128 | 128 | | | |
| 24-61 | x | I | 61 | | 61 | | |

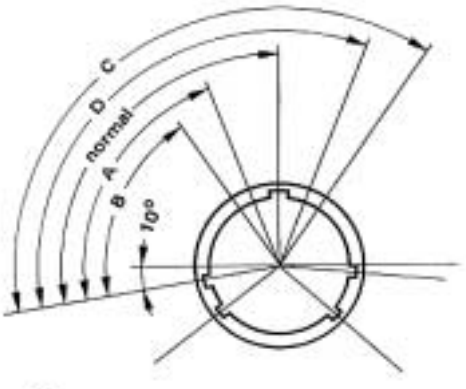
# Coding - polarization

To avoid cross-plugging problems in applications requiring the use of more than one MIL-DTL-38999 II connector of the same size, alternate key-rotations are available as indicated in the chart below. As shown in the accompanying diagram, the major key rotates clockwise from the secondary ones.

In the reference system, the polarization is shown by the letters A, B, C or D.




Plug - Front face shown



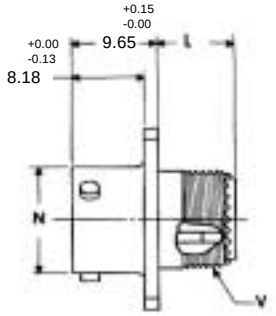

Receptacle - Front face shown

| Shell size | Position of the major keyway | | | | |
|---|---|---|---|---|---|
| | Normal | References | | | |
| | | 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° |

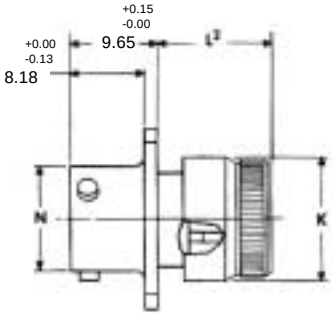
# Overall dimensions (All dimensions are in mm)

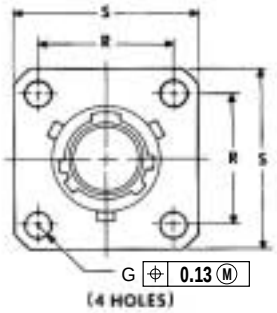
## Wall mounting receptacle (front panel mounting)

**JT00 RT**
**JMS 27472 T**




**JT 00RE**
**JMS 27472 E**

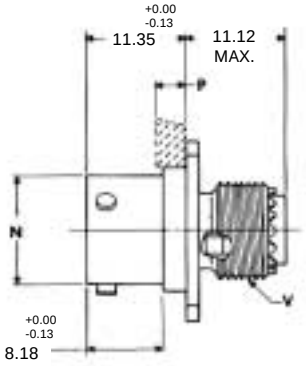


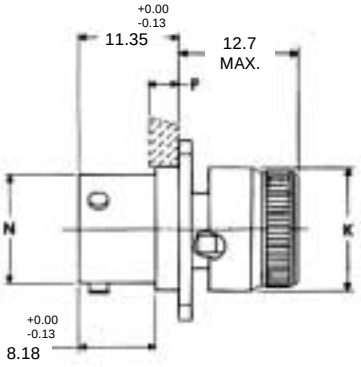

| Shell Size | N Dia. +0.025 -0.13 | L Max | V Thread UNEF Class 2A (plated) | L² Max | K Dia. Max | R | S ±0.41 | G ±0.13 |
|---|---|---|---|---|---|---|---|---|
| 8 | 12.01 | 12.70 | .4375-28 | 13.89 | 14.68 | 15.09 | 20.62 | 3.05 |
| 10 | 14.99 | 12.70 | .5625-24 | 13.89 | 17.86 | 18.26 | 23.82 | 3.05 |
| 12 | 19.05 | 12.70 | .6875-24 | 13.89 | 21.03 | 20.62 | 26.19 | 3.05 |
| 14 | 22.23 | 12.70 | .8125-20 | 13.89 | 24.21 | 23.01 | 28.58 | 3.05 |
| 16 | 25.4 | 12.70 | .9375-20 | 13.89 | 27.38 | 24.61 | 30.96 | 3.05 |
| 18 | 28.58 | 12.70 | 1.0625-18 | 13.89 | 30.56 | 26.97 | 33.32 | 3.05 |
| 20 | 31.75 | 12.70 | 1.1875-18 | 13.89 | 33.73 | 29.36 | 36.53 | 3.05 |
| 22 | 34.93 | 12.70 | 1.3125-18 | 13.89 | 36.91 | 31.75 | 39.67 | 3.05 |
| 24 | 38.10 | 12.70 | 1.4375-18 | 13.89 | 40.08 | 34.93 | 42.88 | 3.73 |

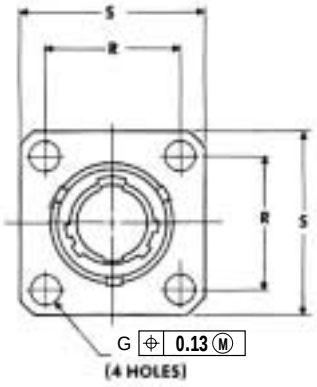
## Wall mounting receptacle (back panel mounting)

**JTPQ00 RT**
**JMS 27497 T**




**JTPQ00 RE**
**JMS 27497 E**

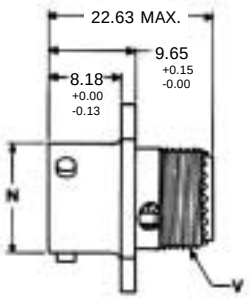


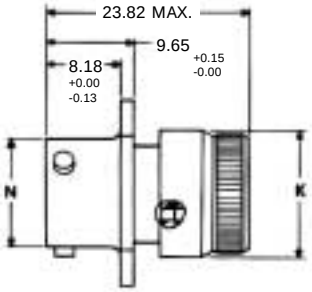

| Shell Size | N Dia. +0.025 -0.13 | P Max Panel Thickness | V Thread UNEF Class 2A (plated) | K Dia. Max | R | S ±0.41 | G ±0.13 |
|---|---|---|---|---|---|---|---|
| 8 | 12.01 | 3.61 | .4375-28 | 14.68 | 15.09 | 20.62 | 3.05 |
| 10 | 14.99 | 3.61 | .5625-24 | 17.86 | 18.26 | 23.82 | 3.05 |
| 12 | 19.05 | 3.61 | .6875-24 | 21.03 | 20.62 | 26.19 | 3.05 |
| 14 | 22.23 | 3.61 | .8125-20 | 24.21 | 23.01 | 28.58 | 3.05 |
| 16 | 25.4 | 3.61 | .9375-20 | 27.38 | 24.61 | 30.96 | 3.05 |
| 18 | 28.58 | 3.61 | 1.0625-18 | 30.56 | 26.97 | 33.32 | 3.05 |
| 20 | 31.75 | 3.61 | 1.1875-18 | 33.73 | 29.36 | 36.53 | 3.05 |
| 22 | 34.93 | 3.61 | 1.3125-18 | 36.91 | 31.75 | 39.67 | 3.05 |
| 24 | 38.10 | 3.61 | 1.4375-18 | 40.08 | 34.93 | 42.88 | 3.73 |

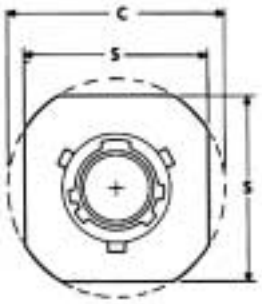
## Line receptacle

**JT01 RT**




**JT01 RE**

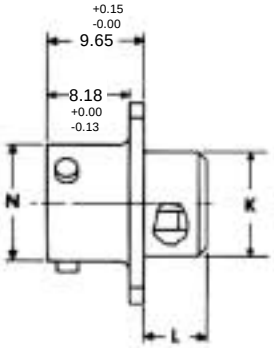


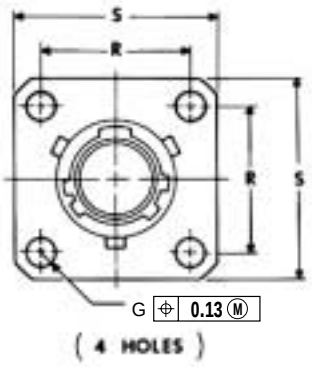




| Shell Size | N Dia. +0.025 -0.13 | V Thread UNEF Class 2A (plated) | K Dia. Max | C | S +0.43 -0.41 |
|---|---|---|---|---|---|
| 8 | 12.01 | .4375-28 | 14.68 | 24.51 | 16.75 |
| 10 | 14.99 | .5625-24 | 17.86 | 27.66 | 23.83 |
| 12 | 19.05 | .6875-24 | 21.03 | 30.05 | 26.19 |
| 14 | 22.23 | .8125-20 | 24.21 | 32.44 | 28.58 |
| 16 | 25.40 | .9375-20 | 27.38 | 34.82 | 30.96 |
| 18 | 28.58 | 1.0625-18 | 30.56 | 37.21 | 33.32 |
| 20 | 31.75 | 1.1875-18 | 33.73 | 40.36 | 36.53 |
| 22 | 34.93 | 1.3125-18 | 36.91 | 43.56 | 39.67 |
| 24 | 38.10 | 1.4375-18 | 40.08 | 46.69 | 42.88 |

## Box mounting receptacle (front panel mounting)

**JT 02 RE**
**JMS 27499 E**

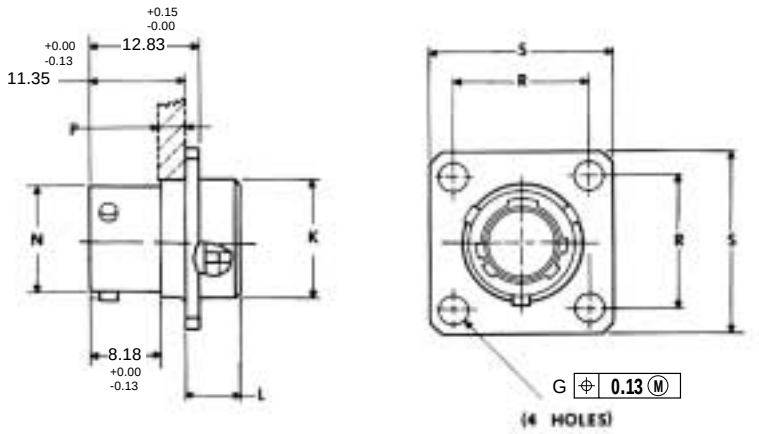



| Shell Size | N Dia. +0.025 -0.13 | L Max | K Dia. Max | R | S ±0.41 | G ±0.13 |
|---|---|---|---|---|---|---|
| 8 | 12.01 | 7.26 | 11.12 | 15.09 | 20.62 | 3.05 |
| 10 | 14.99 | 7.26 | 14.30 | 18.26 | 23.82 | 3.05 |
| 12 | 19.05 | 7.26 | 17.47 | 20.62 | 26.19 | 3.05 |
| 14 | 22.23 | 7.26 | 20.65 | 23.01 | 28.58 | 3.05 |
| 16 | 25.40 | 7.26 | 23.82 | 24.61 | 30.96 | 3.05 |
| 18 | 28.58 | 7.26 | 26.59 | 26.97 | 33.32 | 3.05 |
| 20 | 31.75 | 7.26 | 29.77 | 29.36 | 36.52 | 3.05 |
| 22 | 34.93 | 7.26 | 32.94 | 31.75 | 39.67 | 3.05 |
| 24 | 38.10 | 7.26 | 36.12 | 34.93 | 42.87 | 3.73 |

## Box mounting receptacle (back panel mounting)

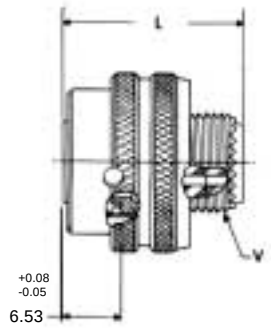
**JTP02 RE**
**JMS 27508 E**



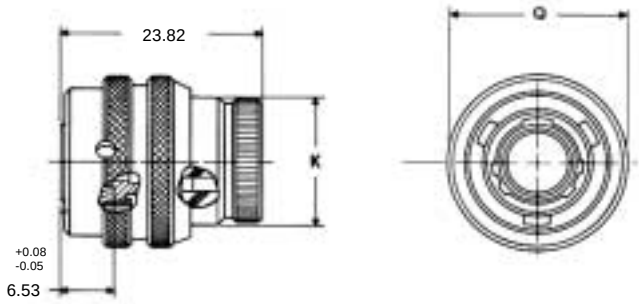

| Shell Size | N Dia. +0.025 -0.13 | P Max Panel Thickness | L Max | K Dia. Max | R | S ±0.41 | G ±0.13 |
|---|---|---|---|---|---|---|---|
| 8 | 12.01 | 3.73 | 5.72 | 13.49 | 15.09 | 20.62 | 3.05 |
| 10 | 14.99 | 3.86 | 5.72 | 16.66 | 18.26 | 23.82 | 3.05 |
| 12 | 19.05 | 3.86 | 5.72 | 21.03 | 20.62 | 26.19 | 3.05 |
| 14 | 22.23 | 3.86 | 5.72 | 24.21 | 23.01 | 28.58 | 3.05 |
| 16 | 25.40 | 3.86 | 5.72 | 27.38 | 24.61 | 30.96 | 3.05 |
| 18 | 28.58 | 3.86 | 5.72 | 30.56 | 26.97 | 33.32 | 3.05 |
| 20 | 31.75 | 4.55 | 5.72 | 33.73 | 29.36 | 36.53 | 3.05 |
| 22 | 34.93 | 4.55 | 5.72 | 36.91 | 31.75 | 39.67 | 3.05 |
| 24 | 38.10 | 4.29 | 5.72 | 40.08 | 34.93 | 42.86 | 3.73 |

## Straight plug

**JT06 RT / JTG06 RT**
**JMS 27473 T / JMS 27484 T**



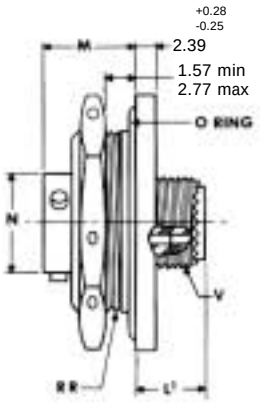

**JT06 RE / JTG06 RE**
**JMS 27473 E / JMS 27484 E**



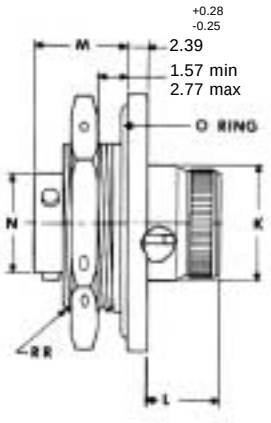

| Shell Size | M Max | V Thread UNEF Class 2A Modified | K Dia. Max | Q Dia. Max |
|---|---|---|---|---|
| 8 | 22.63 | .4375-28 | 14.68 | 18.64 |
| 10 | 22.63 | .5625-24 | 17.98 | 21.44 |
| 12 | 22.63 | .6875-24 | 21.03 | 25.81 |
| 14 | 22.63 | .8125-20 | 24.21 | 28.98 |
| 16 | 22.63 | .9375-20 | 27.38 | 32.13 |
| 18 | 22.63 | 1.0625-18 | 30.56 | 35.33 |
| 20 | 22.63 | 1.1875-18 | 33.73 | 38.10 |
| 22 | 22.63 | 1.3125-18 | 36.91 | 41.28 |
| 24 | 22.63 | 1.4375-18 | 40.08 | 44.45 |

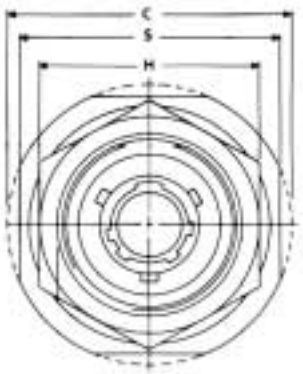
## Jam nut receptacle

**JT07 RT**
**JMS 27474 T**




**JT07 RE**
**JMS 27474 E**

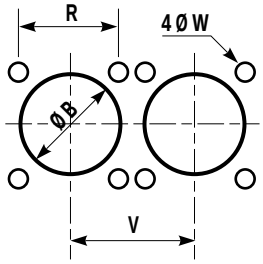


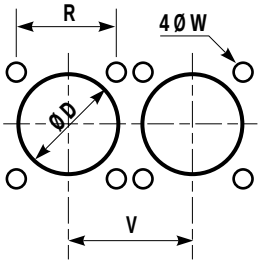

| Shell Size | N Dia. +0.025 -0.13 | M ±0.13 | RR Thread Class 2A (plated) | L¹ Max | V Thread UNEF Class 2A | L Max | K Dia. Max | C Max | H Hex +0.43 -0.41 | S ±0.41 | Max. torque value m/N |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 12.01 | 11.12 | .8750-20UNEF | 11.51 | .4375-28 | 12.29 | 14.68 | 35.31 | 26.97 | 31.75 | 5.65 |
| 10 | 14.99 | 11.12 | 1.0000-20UNEF | 11.51 | .5625-24 | 12.29 | 17.86 | 38.48 | 30.17 | 34.93 | 6.78 |
| 12 | 19.05 | 11.12 | 1.1250-18UNEF | 11.51 | .6875-24 | 12.29 | 21.03 | 41.66 | 33.32 | 38.10 | 8.48 |
| 14 | 22.23 | 11.12 | 1.2500-18UNEF | 11.51 | .8125-20 | 12.29 | 24.21 | 44.83 | 36.53 | 41.28 | 9.61 |
| 16 | 25.40 | 11.12 | 1.3750-18UNEF | 11.51 | .9375-20 | 12.29 | 27.38 | 49.61 | 39.67 | 45.24 | 10.74 |
| 18 | 28.58 | 11.12 | 1.5000-18UNEF | 11.51 | 1.0625-18 | 12.29 | 30.56 | 51.59 | 42.87 | 48.01 | 12.43 |
| 20 | 31.75 | 11.79 | 1.6250-18UNEF | 10.72 | 1.1875-18 | 11.51 | 33.73 | 54.76 | 46.02 | 51.21 | 13.56 |
| 22 | 34.93 | 11.79 | 1.7500-18UNS | 10.72 | 1.3125-18 | 11.51 | 36.91 | 57.91 | 50.80 | 54.36 | 14.69 |
| 24 | 38.10 | 11.79 | 1.8750-16UN | 10.72 | 1.4375-18 | 9.53 | 40.08 | 61.09 | 53.98 | 57.53 | 16.95 |

## Panel drilling for wall mounting and jam nut receptacles

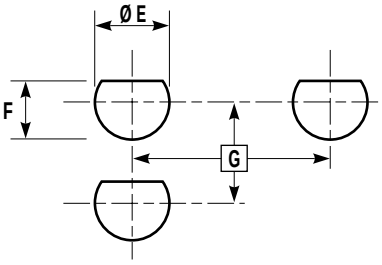
**Square flange receptacle back panel mounting**




**Square flange receptacle front panel mounting**




**Jam nut receptacle back panel mounting**



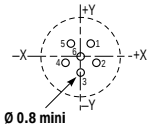

| Shell Size | R (mm) | B Min (mm) | V Min (mm) | W ±0.13 (mm) | D Min (mm) | E Min (mm) | F +0 -0.25 (mm) | G Min (mm) |
|---|---|---|---|---|---|---|---|---|
| 8 | 15.09 | 14.30 | 21.45 | 3.25 | 11.63 | 22.46 | 21.08 | 32.90 |
| 10 | 18.26 | 17.27 | 24.65 | 3.25 | 14.81 | 25.58 | 24.26 | 36.00 |
| 12 | 20.63 | 21.82 | 27.00 | 3.25 | 17.98 | 28.80 | 27.53 | 39.60 |
| 14 | 23.01 | 24.99 | 29.80 | 3.25 | 21.16 | 31.98 | 30.68 | 43.30 |
| 16 | 24.61 | 28.14 | 32.95 | 3.25 | 24.61 | 35.15 | 33.86 | 47.00 |
| 18 | 26.97 | 31.32 | 36.15 | 3.25 | 27.51 | 38.28 | 37.06 | 50.60 |
| 20 | 29.36 | 34.49 | 38.90 | 3.25 | 30.68 | 41.50 | 40.03 | 54.20 |
| 22 | 31.75 | 37.67 | 42.10 | 3.25 | 33.86 | 44.68 | 43.21 | 59.70 |
| 24 | 34.93 | 40.89 | 45.25 | 3.95 | 37.03 | 47.85 | 46.38 | 63.30 |

# Printed circuit board drilling

## Receptacles equipped with size 22D contacts

The marking of contact cavities is shown on the mating side view of the male receptacle.
The marking on the female plug is symmetrical in relation to the +X/-Y axis.

### 08-35

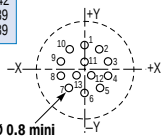



6 contacts
size 22D

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| 1 | + 1.14 | + 1.98 |
| 2 | + 1.98 | - 1.14 |
| 3 | 0 | - 2.29 |
| 4 | - 1.98 | - 1.14 |
| 5 | - 1.14 | + 1.98 |
| 6 | 0 | 0 |

### 10-35

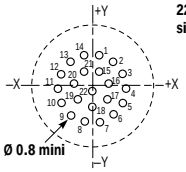
13 contacts
size 22D




| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| 1 | 0 | + 3.71 |
| 2 | + 2.16 | + 3.00 |
| 3 | + 3.51 | + 1.14 |
| 4 | + 3.51 | - 1.14 |
| 5 | + 2.16 | - 3.00 |
| 6 | 0 | - 3.71 |
| 7 | - 2.16 | - 3.00 |
| 8 | - 3.51 | - 1.14 |
| 9 | - 3.51 | + 1.14 |
| 10 | - 2.16 | + 3.00 |
| 11 | 0 | + 1.42 |
| 12 | + 1.24 | - 0.89 |
| 13 | - 1.24 | - 0.89 |

### 12-35

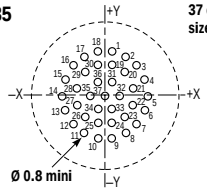
22 contacts
size 22D




| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| 1 | + 1.14 | + 5.00 |
| 2 | + 3.20 | + 4.01 |
| 3 | + 4.62 | + 2.24 |
| 4 | + 5.16 | 0 |
| 5 | + 4.62 | - 2.24 |
| 6 | + 3.20 | - 4.01 |
| 7 | + 1.14 | - 5.00 |
| 8 | - 1.14 | - 5.00 |
| 9 | - 3.20 | - 4.01 |
| 10 | - 4.62 | - 2.24 |
| 11 | - 5.16 | 0 |
| 12 | - 4.62 | + 2.24 |
| 13 | - 3.20 | + 4.01 |
| 14 | - 1.14 | + 5.00 |
| 15 | + 1.14 | + 2.72 |
| 16 | + 2.97 | + 0.66 |
| 17 | + 2.36 | - 1.91 |
| 18 | 0 | - 3.05 |
| 19 | - 2.36 | - 1.91 |
| 20 | - 2.97 | + 0.66 |
| 21 | - 1.14 | + 2.72 |
| 22 | 0 | - 0.76 |

### 14-35

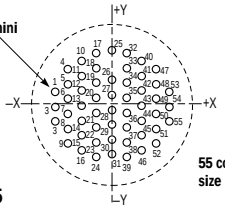
37 contacts
size 22D




| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| 1 | + 1.14 | + 6.65 |
| 2 | + 3.12 | + 5.51 |
| 3 | + 5.36 | + 4.06 |
| 4 | + 6.45 | + 2.03 |
| 5 | + 6.76 | - 0.25 |
| 6 | + 6.27 | - 2.49 |
| 7 | + 5.08 | - 4.45 |
| 8 | + 3.30 | - 5.89 |
| 9 | + 1.14 | - 6.65 |
| 10 | - 1.14 | - 6.65 |
| 11 | - 3.30 | - 5.89 |
| 12 | - 5.08 | - 4.45 |
| 13 | - 6.27 | - 2.49 |
| 14 | - 6.76 | - 0.25 |
| 15 | - 6.45 | + 2.03 |
| 16 | - 5.36 | + 4.06 |
| 17 | - 3.12 | + 5.51 |
| 18 | - 1.14 | + 6.65 |
| 19 | + 1.14 | + 4.35 |
| 20 | + 3.12 | + 3.02 |
| 21 | + 4.32 | + 1.02 |
| 22 | + 4.32 | - 1.27 |
| 23 | + 3.12 | - 3.23 |
| 24 | + 1.14 | - 4.37 |
| 25 | - 1.14 | - 4.37 |
| 26 | - 3.12 | - 3.23 |
| 27 | - 4.32 | - 1.27 |
| 28 | - 4.32 | + 1.02 |
| 29 | - 3.12 | + 3.02 |
| 30 | - 1.14 | + 4.37 |
| 31 | + 1.14 | + 1.88 |
| 32 | + 2.29 | - 0.10 |
| 33 | + 1.14 | - 2.08 |
| 34 | - 1.14 | - 2.08 |
| 35 | - 2.29 | - 0.10 |
| 36 | - 1.14 | + 1.88 |
| 37 | 0 | - 0.10 |

### 16-35

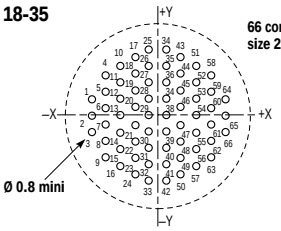
55 contacts
size 22D




| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| 1 | - 10.87 | + 6.12 |
| 2 | - 11.86 | + 3.91 |
| 3 | - 12.40 | + 1.55 |
| 4 | - 10.54 | 0 |
| 5 | - 12.40 | - 1.55 |
| 6 | - 10.87 | - 3.61 |
| 7 | - 10.87 | - 6.02 |
| 8 | - 8.43 | + 8.46 |
| 9 | - 8.43 | + 6.05 |
| 10 | - 8.43 | + 3.63 |
| 11 | - 8.43 | + 1.22 |
| 12 | - 8.43 | - 1.19 |
| 13 | - 8.43 | - 3.61 |
| 14 | - 8.43 | - 6.02 |
| 15 | - 8.43 | - 8.43 |
| 16 | - 6.32 | + 9.65 |
| 17 | - 6.32 | + 7.24 |
| 18 | - 6.32 | + 4.83 |
| 19 | - 6.32 | + 2.41 |
| 20 | - 6.32 | 0 |
| 21 | - 6.32 | - 2.41 |
| 22 | - 6.32 | - 4.83 |
| 23 | - 6.32 | - 7.24 |
| 24 | - 6.32 | - 9.65 |
| 25 | - 4.22 | + 10.87 |
| 26 | - 4.22 | + 8.46 |
| 27 | - 4.22 | + 6.05 |
| 28 | - 4.22 | + 3.63 |
| 29 | - 4.22 | + 1.22 |
| 30 | - 4.22 | - 1.19 |
| 31 | - 4.22 | - 3.61 |
| 32 | - 4.22 | - 6.02 |
| 33 | - 4.22 | - 8.43 |
| 34 | - 4.22 | - 10.85 |
| 35 | - 2.11 | + 12.07 |
| 36 | - 2.11 | + 9.65 |
| 37 | - 2.11 | + 7.24 |
| 38 | - 2.11 | + 4.83 |
| 39 | - 2.11 | + 2.41 |
| 40 | - 2.11 | 0 |
| 41 | - 2.11 | - 2.41 |
| 42 | - 2.11 | - 4.83 |
| 43 | - 2.11 | - 7.24 |
| 44 | - 2.11 | - 9.65 |
| 45 | - 2.11 | - 12.07 |
| 46 | 0 | + 10.87 |
| 47 | 0 | + 8.46 |
| 48 | 0 | + 6.05 |
| 49 | 0 | + 3.63 |
| 50 | 0 | + 1.22 |
| 51 | 0 | - 1.19 |
| 52 | 0 | - 3.61 |
| 53 | 0 | - 6.02 |
| 54 | 0 | - 8.43 |
| 55 | 0 | - 10.85 |
| 56 | + 2.11 | + 12.07 |
| 57 | + 2.11 | + 9.65 |
| 58 | + 2.11 | + 7.24 |
| 59 | + 2.11 | + 4.83 |
| 60 | + 2.11 | + 2.41 |
| 61 | + 2.11 | 0 |
| 62 | + 2.11 | - 2.41 |
| 63 | + 2.11 | - 4.83 |
| 64 | + 2.11 | - 7.24 |
| 65 | + 2.11 | - 9.65 |
| 66 | + 2.11 | - 12.07 |
| 67 | + 4.22 | + 10.87 |
| 68 | + 4.22 | + 8.46 |
| 69 | + 4.22 | + 6.05 |
| 70 | + 4.22 | + 3.63 |
| 71 | + 4.22 | + 1.22 |
| 72 | + 4.22 | - 1.19 |
| 73 | + 4.22 | - 3.61 |
| 74 | + 4.22 | - 6.02 |
| 75 | + 4.22 | - 8.43 |
| 76 | + 4.22 | - 10.85 |
| 77 | + 6.32 | + 9.65 |
| 78 | + 6.32 | + 7.24 |
| 79 | + 6.32 | + 4.83 |
| 80 | + 6.32 | + 2.41 |
| 81 | + 6.32 | 0 |
| 82 | + 6.32 | - 2.41 |
| 83 | + 6.32 | - 4.83 |
| 84 | + 6.32 | - 7.24 |
| 85 | + 6.32 | - 9.65 |
| 86 | + 8.43 | - 8.46 |
| 87 | + 8.43 | + 6.05 |
| 88 | + 8.43 | + 3.63 |
| 89 | + 8.43 | + 1.22 |
| 90 | + 8.43 | - 1.19 |
| 91 | + 8.43 | - 3.61 |
| 92 | + 8.43 | - 6.02 |
| 93 | + 8.43 | - 8.43 |
| 94 | + 10.87 | + 6.12 |
| 95 | + 11.86 | + 3.91 |
| 96 | + 12.40 | + 1.55 |
| 97 | + 10.54 | 0 |
| 98 | + 12.40 | - 1.55 |
| 99 | + 10.87 | - 3.61 |
| 100 | + 10.87 | - 6.02 |

### 18-35

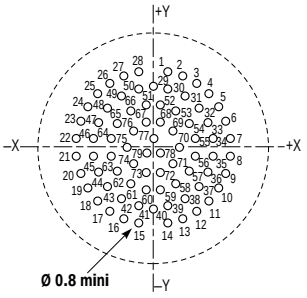
66 contacts
size 22D




| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| 1 | - 9.07 | + 2.29 |
| 2 | - 9.07 | 0 |
| 3 | - 9.07 | - 2.29 |
| 4 | - 7.09 | + 5.72 |
| 5 | - 7.09 | + 3.43 |
| 6 | - 7.09 | + 1.14 |
| 7 | - 7.09 | - 1.14 |
| 8 | - 7.09 | - 3.43 |
| 9 | - 7.09 | - 5.72 |
| 10 | - 5.11 | + 6.86 |
| 11 | - 5.11 | + 4.57 |
| 12 | - 5.11 | + 2.29 |
| 13 | - 5.11 | 0 |
| 14 | - 5.11 | - 2.29 |
| 15 | - 5.11 | - 4.57 |
| 16 | - 5.11 | - 6.86 |
| 17 | - 3.12 | + 8.00 |
| 18 | - 3.12 | + 5.72 |
| 19 | - 3.12 | + 3.43 |
| 20 | - 3.12 | + 1.14 |
| 21 | - 3.12 | - 1.14 |
| 22 | - 3.12 | - 3.43 |
| 23 | - 3.12 | - 5.72 |
| 24 | - 3.12 | - 8.00 |
| 25 | - 1.14 | + 9.14 |
| 26 | - 1.14 | + 6.86 |
| 27 | - 1.14 | + 4.57 |
| 28 | - 1.14 | + 2.29 |
| 29 | - 1.14 | 0 |
| 30 | - 1.14 | - 2.29 |
| 31 | - 1.14 | - 4.57 |
| 32 | - 1.14 | - 6.86 |
| 33 | - 1.14 | - 9.14 |
| 34 | + 1.14 | + 9.14 |
| 35 | + 1.14 | + 6.86 |
| 36 | + 1.14 | + 4.57 |
| 37 | + 1.14 | + 2.29 |
| 38 | + 1.14 | 0 |
| 39 | + 1.14 | - 2.29 |
| 40 | + 1.14 | - 4.57 |
| 41 | + 1.14 | - 6.86 |
| 42 | + 1.14 | - 9.14 |
| 43 | + 3.12 | + 8.00 |
| 44 | + 3.12 | + 5.72 |
| 45 | + 3.12 | + 3.43 |
| 46 | + 3.12 | + 1.14 |
| 47 | + 3.12 | - 1.14 |
| 48 | + 3.12 | - 3.43 |
| 49 | + 3.12 | - 5.72 |
| 50 | + 3.12 | - 8.00 |
| 51 | + 5.11 | - 6.86 |
| 52 | + 5.11 | + 4.57 |
| 53 | + 5.11 | + 2.29 |
| 54 | + 5.11 | 0 |
| 55 | + 5.11 | - 2.29 |
| 56 | + 5.11 | - 4.57 |
| 57 | + 5.11 | - 6.86 |
| 58 | + 7.09 | + 5.72 |
| 59 | + 7.09 | + 3.43 |
| 60 | + 7.09 | + 1.14 |
| 61 | + 7.09 | - 1.14 |
| 62 | + 7.09 | - 3.43 |
| 63 | + 7.09 | - 5.72 |
| 64 | + 9.07 | + 2.29 |
| 65 | + 9.07 | 0 |
| 66 | + 9.07 | - 2.29 |

### 20-35

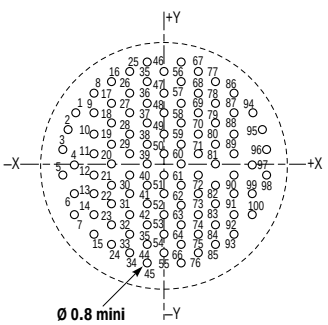
79 contacts
size 22D




| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| 1 | + 1.35 | + 10.82 |
| 2 | + 3.71 | + 10.26 |
| 3 | + 5.89 | + 9.19 |
| 4 | + 7.77 | + 7.67 |
| 5 | + 9.27 | + 5.77 |
| 6 | + 10.31 | + 3.58 |
| 7 | + 10.85 | + 1.22 |
| 8 | + 10.85 | - 1.22 |
| 9 | + 10.31 | - 3.58 |
| 10 | + 9.27 | - 5.77 |
| 11 | + 7.77 | - 7.67 |
| 12 | + 5.89 | - 9.19 |
| 13 | + 3.71 | - 10.26 |
| 14 | + 1.35 | - 10.82 |
| 15 | - 1.35 | - 10.82 |
| 16 | - 3.71 | - 10.26 |
| 17 | - 5.89 | - 9.19 |
| 18 | - 7.77 | - 7.67 |
| 19 | - 9.27 | - 5.77 |
| 20 | - 10.31 | - 3.58 |
| 21 | - 10.85 | - 1.22 |
| 22 | - 10.85 | + 1.22 |
| 23 | - 10.31 | + 3.58 |
| 24 | - 9.27 | + 5.77 |
| 25 | - 7.77 | + 7.67 |
| 26 | - 5.89 | + 9.19 |
| 27 | - 3.71 | + 10.26 |
| 28 | - 1.35 | + 10.82 |
| 29 | 0 | + 8.20 |
| 30 | + 2.49 | + 8.18 |
| 31 | + 4.67 | + 7.11 |
| 32 | + 6.55 | + 5.59 |
| 33 | + 7.90 | + 3.58 |
| 34 | + 8.43 | + 1.22 |
| 35 | + 8.43 | - 1.22 |
| 36 | + 7.90 | - 3.58 |
| 37 | + 6.55 | - 5.59 |
| 38 | + 4.67 | - 7.11 |
| 39 | + 2.49 | - 8.18 |
| 40 | 0 | - 8.84 |
| 41 | - 2.49 | - 8.18 |
| 42 | - 4.67 | - 7.11 |
| 43 | - 6.55 | - 5.59 |
| 44 | - 7.90 | - 3.58 |
| 45 | - 8.43 | - 1.22 |
| 46 | - 8.43 | + 1.22 |
| 47 | - 7.90 | + 3.58 |
| 48 | - 6.55 | + 5.59 |
| 49 | - 4.67 | + 7.11 |
| 50 | - 2.49 | + 8.18 |
| 51 | - 1.22 | + 6.12 |
| 52 | + 1.22 | + 6.12 |
| 53 | + 3.40 | + 5.05 |
| 54 | + 5.28 | + 3.53 |
| 55 | + 6.02 | + 1.22 |
| 56 | + 6.02 | - 1.22 |
| 57 | + 5.28 | - 3.53 |
| 58 | + 3.40 | - 5.05 |
| 59 | + 1.22 | - 6.12 |
| 60 | - 1.22 | - 6.12 |
| 61 | - 3.40 | - 5.05 |
| 62 | - 5.28 | - 3.53 |
| 63 | - 6.02 | - 1.22 |
| 64 | - 6.02 | + 1.22 |
| 65 | - 5.28 | + 3.53 |
| 66 | - 3.40 | + 5.05 |
| 67 | - 1.22 | + 3.71 |
| 68 | - 1.22 | + 3.71 |
| 69 | + 3.18 | + 2.29 |
| 70 | + 3.94 | 0 |
| 71 | + 3.18 | - 2.29 |
| 72 | + 1.22 | - 3.71 |
| 73 | - 1.22 | - 3.71 |
| 74 | - 3.18 | - 2.29 |
| 75 | - 3.94 | 0 |
| 76 | - 3.18 | + 2.29 |
| 77 | 0 | + 1.35 |
| 78 | + 1.22 | - 0.74 |
| 79 | - 1.22 | - 0.74 |

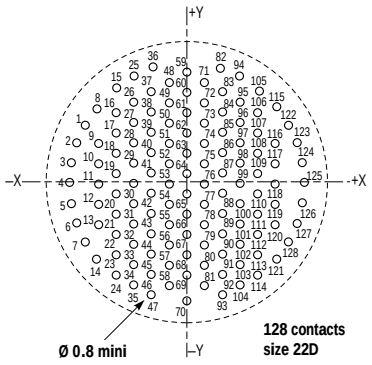
### 22-35

100 contacts
size 22D



## 24-35

128 contacts
size 22D




| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| 1 | - 2.17 | + 7.09 |
| 2 | - 13.21 | + 4.83 |
| 3 | - 13.87 | + 2.41 |
| 4 | - 14.10 | 0 |
| 5 | - 13.87 | - 2.41 |
| 6 | - 13.21 | - 4.83 |
| 7 | - 12.17 | - 7.09 |
| 8 | - 10.77 | + 9.07 |
| 9 | - 10.54 | + 4.83 |
| 10 | - 10.54 | + 2.41 |
| 11 | - 10.54 | 0 |
| 12 | - 10.54 | - 2.41 |
| 13 | - 10.54 | - 4.83 |
| 14 | - 10.77 | - 9.07 |
| 15 | - 8.43 | + 11.28 |
| 16 | - 8.43 | + 8.43 |
| 17 | - 8.43 | + 6.02 |
| 18 | - 8.43 | + 3.61 |
| 19 | - 8.43 | + 1.19 |
| 20 | - 8.43 | - 1.19 |
| 21 | - 8.43 | - 3.61 |
| 22 | - 8.43 | - 6.02 |

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| 23 | - 8.43 | - 8.43 |
| 24 | - 8.43 | - 10.85 |
| 25 | - 6.32 | + 12.60 |
| 26 | - 6.32 | + 9.65 |
| 27 | - 6.32 | + 7.24 |
| 28 | - 6.32 | + 4.83 |
| 29 | - 6.32 | + 2.41 |
| 30 | - 6.32 | 0 |
| 31 | - 6.32 | - 2.41 |
| 32 | - 6.32 | - 4.83 |
| 33 | - 6.32 | - 7.24 |
| 34 | - 6.32 | - 9.65 |
| 35 | - 6.32 | - 12.07 |
| 36 | - 4.06 | + 13.49 |
| 37 | - 4.22 | + 10.85 |
| 38 | - 4.22 | + 8.43 |
| 39 | - 4.22 | + 6.02 |
| 40 | - 4.22 | + 3.61 |
| 41 | - 4.22 | + 1.19 |
| 42 | - 4.22 | - 1.19 |
| 43 | - 4.22 | - 3.61 |
| 44 | - 4.22 | - 6.02 |

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| 45 | - 4.22 | - 8.43 |
| 46 | - 4.22 | - 10.85 |
| 47 | - 4.22 | - 13.26 |
| 48 | - 2.11 | +12.07 |
| 49 | - 2.11 | + 9.65 |
| 50 | - 2.11 | + 7.24 |
| 51 | - 2.11 | + 4.83 |
| 52 | - 2.11 | + 2.41 |
| 53 | - 2.11 | 0 |
| 54 | - 2.11 | - 2.41 |
| 55 | - 2.11 | - 4.83 |
| 56 | - 2.11 | - 7.24 |
| 57 | - 2.11 | - 9.65 |
| 58 | - 2.11 | - 12.07 |
| 59 | 0 | + 13.26 |
| 60 | 0 | + 10.85 |
| 61 | 0 | + 8.43 |
| 62 | 0 | + 6.02 |
| 63 | 0 | + 3.61 |
| 64 | 0 | + 1.19 |
| 65 | 0 | - 1.19 |
| 66 | 0 | - 3.61 |

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| 67 | 0 | - 6.02 |
| 68 | 0 | - 8.43 |
| 69 | 0 | - 0.85 |
| 70 | 0 | - 14.10 |
| 71 | + 2.11 | + 12.70 |
| 72 | + 2.11 | + 9.65 |
| 73 | + 2.11 | + 7.24 |
| 74 | + 2.11 | + 4.83 |
| 75 | + 2.11 | + 2.41 |
| 76 | + 2.11 | 0 |
| 77 | + 2.11 | - 2.41 |
| 78 | + 2.11 | - 4.83 |
| 79 | + 2.11 | - 7.24 |
| 80 | + 2.11 | - 9.65 |
| 81 | + 2.11 | - 12.07 |
| 82 | + 4.06 | + 13.49 |
| 83 | + 4.22 | + 10.85 |
| 84 | + 4.22 | + 8.43 |
| 85 | + 4.22 | + 6.02 |
| 86 | + 4.22 | + 3.61 |
| 87 | + 4.22 | + 1.19 |
| 88 | + 4.22 | - 1.19 |

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| 89 | + 4.22 | - 3.61 |
| 90 | + 4.22 | - 6.02 |
| 91 | + 4.22 | - 8.43 |
| 92 | + 4.22 | - 10.85 |
| 93 | + 4.22 | - 13.26 |
| 94 | + 6.32 | +12.60 |
| 95 | + 6.32 | + 9.65 |
| 96 | + 6.32 | + 7.24 |
| 97 | + 6.32 | + 4.83 |
| 98 | + 6.32 | + 2.41 |
| 99 | + 6.32 | 0 |
| 100 | + 6.32 | - 2.41 |
| 101 | + 6.32 | - 4.83 |
| 102 | + 6.32 | - 7.24 |
| 103 | + 6.32 | - 9.65 |
| 104 | + 6.32 | -12.07 |
| 105 | + 8.43 | +11.28 |
| 106 | + 8.43 | + 8.43 |
| 107 | + 8.43 | + 6.02 |
| 108 | + 8.43 | + 3.61 |
| 109 | + 8.43 | + 1.19 |
| 110 | + 8.43 | - 1.19 |

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| 111 | + 8.43 | - 3.61 |
| 112 | + 8.43 | - 6.02 |
| 113 | + 8.43 | - 8.43 |
| 114 | + 8.43 | - 10.85 |
| 115 | + 10.77 | + 9.07 |
| 116 | + 10.54 | + 4.83 |
| 117 | + 10.54 | + 2.41 |
| 118 | + 10.54 | 0 |
| 119 | + 10.54 | - 2.41 |
| 120 | + 10.54 | - 4.83 |
| 121 | + 10.77 | - 9.07 |
| 122 | + 12.07 | + 7.09 |
| 123 | + 13.21 | + 4.83 |
| 124 | + 13.87 | + 2.41 |
| 125 | + 14.10 | 0 |
| 126 | + 13.87 | - 2.41 |
| 127 | + 13.21 | - 4.83 |
| 128 | + 12.17 | - 7.09 |

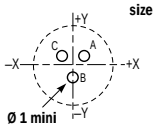
## *Receptacles equipped with size 20 contacts*

The marking of contact cavities is shown on the mating side view of the male receptacle.
The marking on the female plug is symmetrical in relation to the +X/-Y axis.

**08-98**

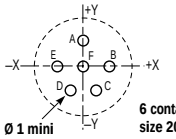
| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| A | + 1.65 | + 0.97 |
| B | 0 | - 1.91 |
| C | - 1.65 | + 0.97 |

3 contacts
size 20




**10-98**

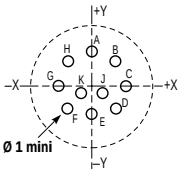
| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| A | 0 | + 3.30 |
| B | + 3.30 | 0 |
| C | + 1.65 | - 2.87 |
| D | - 1.65 | - 2.87 |
| E | - 3.30 | 0 |
| F | 0 | 0 |




6 contacts
size 20

**12-98**

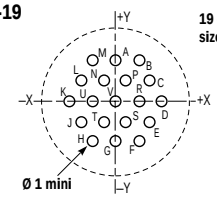
10 contacts
size 20




| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| A | 0 | + 4.95 |
| B | + 3.18 | + 3.81 |
| C | + 4.90 | + 0.76 |
| D | + 4.17 | - 2.67 |
| E | 0 | - 3.43 |
| F | - 4.17 | - 2.67 |
| G | - 4.90 | + 0.76 |
| H | - 3.18 | + 3.81 |
| J | + 1.65 | - 0.38 |
| K | - 1.65 | - 0.38 |

**14-19**

19 contacts
size 20




| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| A | 0 | + 5.72 |
| B | + 3.30 | + 5.72 |

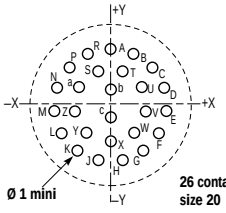
| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| C | + 4.95 | + 2.87 |
| D | + 6.60 | 0 |

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| E | + 4.95 | - 2.87 |
| F | + 3.30 | - 5.72 |
| G | 0 | - 5.72 |
| H | - 3.30 | - 5.72 |
| J | - 4.95 | - 2.87 |
| K | - 6.60 | 0 |
| L | - 4.95 | + 2.87 |
| M | - 3.30 | + 5.72 |
| N | - 1.65 | + 2.87 |
| P | + 1.65 | + 2.87 |
| R | + 3.30 | 0 |
| S | + 1.65 | - 2.87 |
| T | - 1.65 | - 2.87 |
| U | - 3.30 | 0 |
| V | 0 | 0 |

**16-26**

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| A | 0 | + 8.15 |
| B | + 3.33 | + 7.44 |
| C | + 6.07 | + 5.44 |
| D | + 7.75 | + 2.51 |

| Repère contact | x (mm) | y (mm) |
|---|---|---|
| E | + 8.10 | - 0.86 |
| F | + 7.06 | - 4.09 |
| G | + 4.80 | - 6.60 |
| H | + 1.70 | - 7.98 |

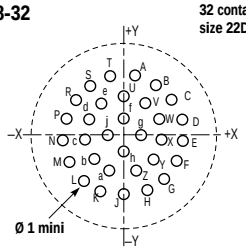



26 contacts
size 20

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| J | - 1.70 | - 7.98 |
| K | - 4.80 | - 6.60 |
| L | - 7.06 | - 4.09 |
| M | - 8.10 | - 0.86 |
| N | - 7.75 | + 2.51 |
| P | - 6.07 | + 5.44 |
| R | - 3.33 | + 7.44 |
| S | - 1.78 | + 4.50 |
| T | + 1.78 | + 4.50 |
| U | + 4.45 | + 2.39 |
| V | + 4.52 | - 0.91 |
| W | + 3.02 | - 3.84 |
| X | 0 | + 5.16 |
| Y | - 3.02 | - 3.84 |
| Z | - 4.52 | - 0.91 |
| a | - 4.45 | + 2.39 |
| b | 0 | + 1.65 |
| c | 0 | - 1.65 |

## 18-32

32 contacts
size 22D



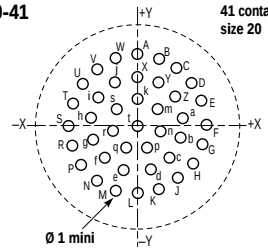

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| A | + 1.68 | + 8.97 |
| B | + 4.80 | + 7.75 |
| C | + 7.26 | + 5.51 |
| D | + 8.76 | + 2.49 |
| E | + 9.07 | - 0.84 |

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| F | + 8.15 | - 4.06 |
| G | + 6.15 | - 6.73 |
| H | + 3.30 | - 8.51 |
| J | 0 | - 9.12 |
| K | - 3.30 | - 8.51 |

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| L | - 6.15 | - 6.73 |
| M | - 8.15 | - 4.06 |
| N | - 9.07 | - 0.84 |
| P | - 8.76 | + 2.49 |
| R | - 7.26 | + 5.51 |
| S | - 4.80 | + 7.75 |
| T | - 1.68 | + 8.97 |
| U | 0 | + 5.84 |
| V | + 3.15 | + 4.90 |
| W | + 5.31 | + 2.41 |
| X | + 5.79 | - 0.84 |
| Y | + 4.42 | - 3.84 |
| Z | + 1.65 | - 5.61 |
| a | - 1.65 | - 5.61 |
| b | - 4.42 | - 3.84 |
| c | - 5.79 | - 0.84 |
| d | - 5.31 | + 2.41 |
| e | - 3.15 | + 4.90 |
| f | 0 | + 2.44 |
| g | + 2.44 | 0 |
| h | 0 | - 2.44 |
| j | - 2.44 | 0 |

## 20-41

41 contacts
size 20



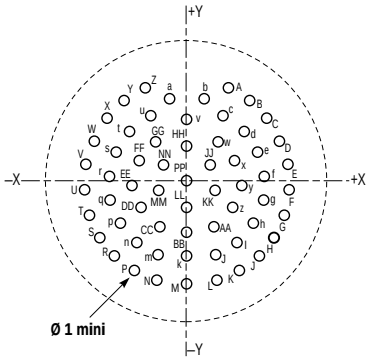

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| A | 0 | + 10.60 |
| B | + 3.28 | + 10.09 |
| C | + 6.23 | + 8.58 |
| D | + 8.58 | + 6.23 |
| E | + 10.09 | + 3.28 |
| F | + 10.60 | 0 |
| G | + 10.09 | - 3.28 |
| H | + 8.58 | - 6.23 |

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| J | + 6.23 | - 8.58 |
| K | + 3.28 | - 10.09 |
| L | 0 | - 10.60 |
| M | - 3.28 | - 10.09 |
| N | - 6.23 | - 8.58 |
| P | - 8.58 | - 6.23 |
| R | - 10.09 | - 3.28 |
| S | - 10.60 | 0 |

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| T | - 10.09 | + 3.28 |
| U | - 8.58 | + 6.23 |
| V | - 6.23 | + 8.58 |
| W | - 3.28 | +10.09 |
| X | 0 | + 7.20 |
| Y | + 3.35 | + 6.38 |
| Z | + 5.92 | + 4.09 |
| a | + 7.15 | + 0.87 |
| b | + 6.73 | - 2.55 |
| c | + 4.78 | - 5.39 |
| d | + 1.73 | - 6.99 |
| e | - 1.73 | - 6.99 |
| f | - 4.78 | - 5.39 |
| g | - 6.73 | - 2.55 |
| h | - 7.15 | + 0.87 |
| i | - 5.92 | + 4.09 |
| j | - 3.35 | + 6.38 |
| k | 0 | + 3.81 |
| m | + 2.98 | + 2.38 |
| n | + 3.71 | - 0.85 |
| p | + 1.66 | - 3.43 |
| q | + 1.66 | - 3.43 |
| r | - 3.71 | - 0.85 |
| s | - 2.98 | + 2.38 |
| t | 0 | 0 |

## 24-61

61 contacts
size 20

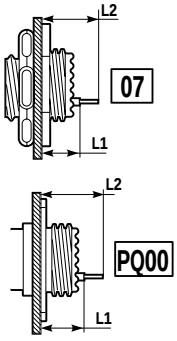



| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| A | + 4.98 | + 12.70 |
| B | + 7.98 | + 11.05 |
| C | + 10.49 | + 8.71 |
| D | + 12.32 | + 5.84 |
| E | + 13.39 | + 2.57 |
| F | + 13.61 | - 0.76 |
| G | + 12.98 | - 4.17 |
| H | + 11.53 | - 7.29 |
| J | + 9.35 | - 9.93 |
| K | + 6.58 | - 11.94 |
| L | + 3.40 | - 13.18 |
| M | 0 | - 13.64 |
| N | - 3.40 | - 13.18 |
| P | - 6.58 | - 11.94 |
| R | - 9.35 | - 9.93 |
| S | - 11.53 | - 7.29 |
| T | - 12.98 | - 4.17 |
| U | - 13.61 | - 0.76 |
| V | - 13.39 | + 2.57 |
| W | - 12.32 | + 5.84 |
| X | - 10.49 | + 8.71 |

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| Y | - 7.98 | + 11.05 |
| Z | - 4.98 | + 12.70 |
| a | - 1.73 | + 11.53 |
| b | + 1.73 | + 11.53 |
| c | + 4.39 | + 9.22 |
| d | + 7.24 | + 7.19 |
| e | + 9.19 | + 4.45 |
| f | + 10.13 | + 1.17 |
| g | + 9.96 | - 2.24 |
| h | + 8.66 | - 5.41 |
| i | | - 7.98 |
| j | + 6.38 | - 9.63 |
| k | + 3.38 | - 10.21 |
| m | 0 | - 9.63 |
| n | - 3.38 | - 7.98 |
| p | - 6.38 | - 5.41 |
| q | - 8.65 | - 2.24 |
| r | - 9.96 | + 1.17 |
| s | - 10.13 | + 4.45 |
| t | - 9.19 | + 7.19 |
| u | - 7.24 | + 9.22 |

| Cavity marking | x (mm) | y (mm) |
|---|---|---|
| v | 0 | + 8.59 |
| w | + 3.73 | + 8.66 |
| x | + 6.02 | + 3.10 |
| y | + 6.78 | - 0.25 |
| z | + 5.79 | - 3.53 |
| AA | + 3.33 | - 5.92 |
| BB | 0 | - 6.78 |
| CC | - 3.33 | - 5.92 |
| DD | - 5.79 | - 3.53 |
| EE | - 6.78 | - 0.25 |
| FF | - 6.02 | + 3.10 |
| GG | - 3.73 | + 5.66 |
| HH | 0 | + 5.08 |
| JJ | + 2.67 | + 2.39 |
| KK | + 3.43 | - 1.04 |
| LL | 0 | - 3.35 |
| MM | - 3.43 | - 1.04 |
| NN | - 2.67 | + 2.39 |
| PP | 0 | 0 |

### Standard PCB - tail dimensions at the rear of receptacles (in mm)




| | | | JT 07 CI | | JTPQ 00 CI |
|---|---|---|---|---|---|
| | | | Shell sizes 08 to 18 | Shell sizes 20 to 24 | Shell sizes 08 to 24 |
| P | L1 | min | 12.26 | 11.60 | 12.17 |
| | | max | 13.23 | 12.57 | 13.01 |
| | L2 | min | 17.16 | 16.50 | 17.07 |
| | | max | 18.33 | 17.67 | 18.11 |
| S (F423) | L1 | min | 12.06 | 11.40 | 11.97 |
| | | max | 13.03 | 12.37 | 12.81 |
| | L2 | min | 15.96 | 15.30 | 15.87 |
| | | max | 17.13 | 16.47 | 16.91 |

**Note:** dimensions given for pin contacts with 5 mm PCB-tails and socket contacts with 4 mm PCB tails.

Please refer to data sheet E114 for other PCB-tail versions.

# Hermetic receptacles

## Presentation

Hermetic receptacles JT-Y are used when a pressure differential is applied on one or the other side of the panel.

## Main characteristics

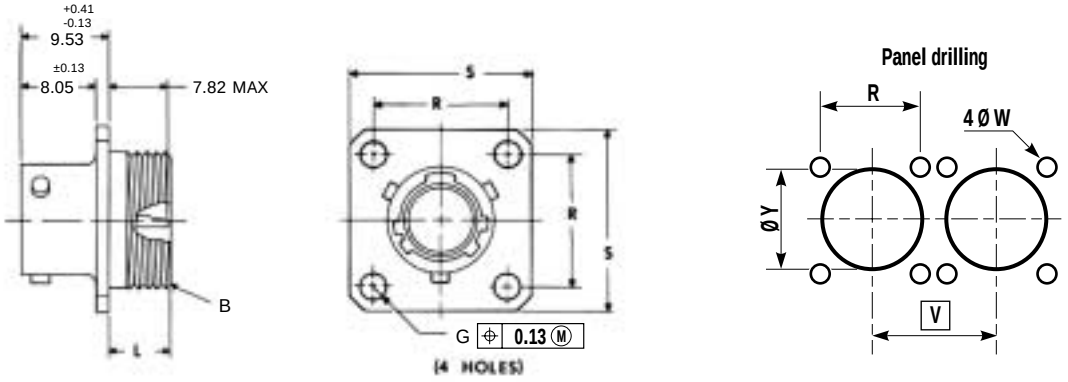
- 9 shell sizes (tin plated carbon steel)
- Tinned solder pin contacts (for PCB contacts, please consult us)
- Contact plating in active zone: gold
- Glass insert
- Interfacial seal
- Air leakage < $1.10^{-7}$ $cm^3/s$ under 1 bar of pressure differential

## Overall dimensions

(All dimensions are in mm)

### Wall mounting receptacle (front panel mounting)

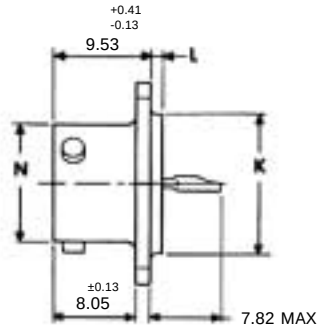
**JT00 Y**
**JMS 27475 Y**

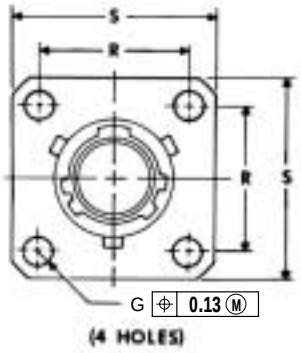


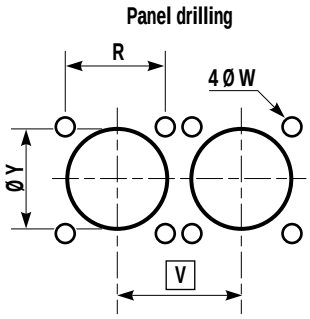

| Shell Size | L Max | R | S ±0.41 | G ±0.13 | Y Min | V Min | W ±0.13 | B Thread Class 2A |
|---|---|---|---|---|---|---|---|---|
| 8 | 24.51 | 15.09 | 20.62 | 3.05 | 14.81 | 21.45 | 3.25 | .5625-24UNEF |
| 10 | 27.66 | 18.26 | 23.83 | 3.05 | 17.98 | 24.65 | 3.25 | .6875-24UNEF |
| 12 | 30.05 | 20.62 | 26.19 | 3.05 | 21.16 | 27.00 | 3.25 | .8125-20UNEF |
| 14 | 32.44 | 23.01 | 28.58 | 3.05 | 24.61 | 29.80 | 3.25 | .9375-20UNEF |
| 16 | 34.82 | 24.61 | 30.96 | 3.05 | 27.51 | 32.95 | 3.25 | 1.0625-18UNEF |
| 18 | 37.21 | 26.97 | 33.32 | 3.05 | 30.68 | 36.15 | 3.25 | 1.1875-18UNEF |
| 20 | 40.36 | 29.36 | 36.53 | 3.05 | 33.86 | 38.90 | 3.25 | 1.3125-18UNEF |
| 22 | 43.56 | 31.75 | 39.67 | 3.05 | 37.03 | 42.10 | 3.25 | 1.4375-18UNEF |
| 24 | 46.69 | 34.93 | 42.86 | 3.73 | 40.48 | 45.25 | 3.95 | 1.5625-18UNEF |

## Box mounting receptacle (front panel mounting)

**JT02 Y**
**JMS 27476 Y**



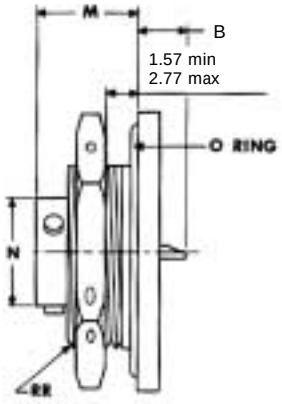



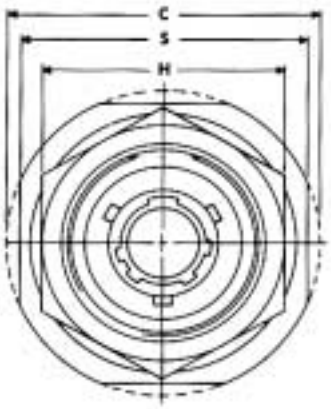



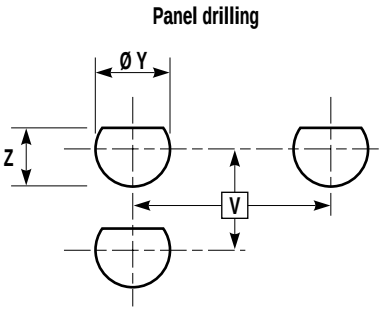

| Shell Size | N Dia. +0.025 -0.13 | L +0.15 -0.38 | K Dia. +0.02 -0.13 | R | S ±0.41 | G ±0.13 | Y Min (plated) | V Min | W |
|---|---|---|---|---|---|---|---|---|---|
| 8 | 12.01 | 24.51 | 14.27 | 15.09 | 20.62 | 3.05 | 14.78 | 21.45 | 3.25 |
| 10 | 14.99 | 27.66 | 17.07 | 18.26 | 23.83 | 3.05 | 17.59 | 24.65 | 3.25 |
| 12 | 19.05 | 30.05 | 19.84 | 20.62 | 26.19 | 3.05 | 20.34 | 27.00 | 3.25 |
| 14 | 22.23 | 32.44 | 23.01 | 23.01 | 28.58 | 3.05 | 23.79 | 29.80 | 3.25 |
| 16 | 25.40 | 34.82 | 26.19 | 24.61 | 30.96 | 3.05 | 26.71 | 32.95 | 3.25 |
| 18 | 28.58 | 37.21 | 29.36 | 26.97 | 33.32 | 3.05 | 29.95 | 36.15 | 3.25 |
| 20 | 31.75 | 40.36 | 31.75 | 29.36 | 36.53 | 3.05 | 32.23 | 38.90 | 3.25 |
| 22 | 34.93 | 43.56 | 34.93 | 31.75 | 39.67 | 3.05 | 35.42 | 42.10 | 3.25 |
| 24 | 38.10 | 46.69 | 38.10 | 34.93 | 42.86 | 3.73 | 38.86 | 45.25 | 3.95 |

## Jam nut receptacle

**JT07 Y**
**JMS 27477 Y**



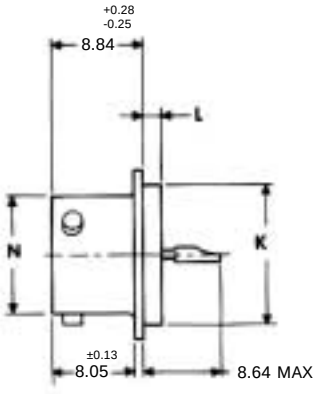



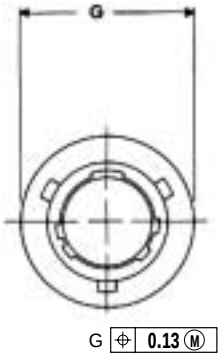



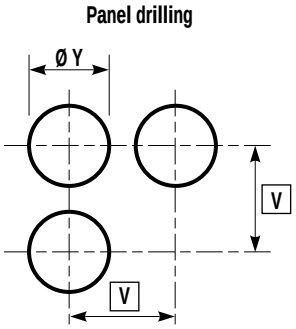

| Shell Size | N Dia. +0.025 -0.13 | M ±0.13 | RR Thread Class 2A | B +0 -0.25 | C Max | H +0.43 -0.41 | S ±0.41 | Y Min | Z +0 -0.25 | V Min |
|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 12.01 | 11.12 | .8750-20UNEF | 16.31 | 35.31 | 26.97 | 31.75 | 22.46 | 21.08 | 32.90 |
| 10 | 14.99 | 11.12 | 1.0000-20UNEF | 19.46 | 38.48 | 30.17 | 34.93 | 25.58 | 24.26 | 36.00 |
| 12 | 19.05 | 11.12 | 1.1250-18UNEF | 22.66 | 41.66 | 33.32 | 38.10 | 28.80 | 27.53 | 39.60 |
| 14 | 22.23 | 11.12 | 1.2500-18UNEF | 25.86 | 44.83 | 36.53 | 41.28 | 31.98 | 30.68 | 43.30 |
| 16 | 25.40 | 11.12 | 1.3750-18UNEF | 29.01 | 49.61 | 39.67 | 45.24 | 35.15 | 33.86 | 47.00 |
| 18 | 28.58 | 11.12 | 1.5000-18UNEF | 32.21 | 51.59 | 42.87 | 48.01 | 38.28 | 37.06 | 50.60 |
| 20 | 31.75 | 11.79 | 1.6250-18UNEF | 35.36 | 54.76 | 46.02 | 51.21 | 41.50 | 40.03 | 54.20 |
| 22 | 34.93 | 11.79 | 1.7500-18UNS | 38.56 | 57.91 | 50.80 | 54.36 | 44.68 | 43.21 | 59.70 |
| 24 | 38.10 | 11.79 | 1.8750-16UN | 41.71 | 61.09 | 53.98 | 57.53 | 47.85 | 46.38 | 63.30 |

# Solder mounting receptacle (front panel mounting)

**JTI Y**
**JMS 27478 Y**

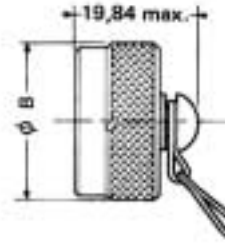


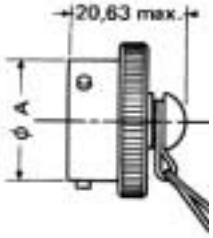




| Shell Size | N Dia. +0.025 -0.13 | L +0.28 -0.25 | K Dia. +0.02 -0.13 | G +0.28 -0.25 | Y Min ±0.13 | V Min |
|---|---|---|---|---|---|---|
| 8 | 12.01 | 1.98 | 14.27 | 17.45 | 14.80 | 19.45 |
| 10 | 14.99 | 1.98 | 17.07 | 20.24 | 17.60 | 22.25 |
| 12 | 19.05 | 1.98 | 19.84 | 23.01 | 20.40 | 26.60 |
| 4 | 22.23 | 1.98 | 23.01 | 26.19 | 23.50 | 29.80 |
| 16 | 25.40 | 1.98 | 26.19 | 29.36 | 26.70 | 32.95 |
| 18 | 28.58 | 1.98 | 29.36 | 32.54 | 29.90 | 36.15 |
| 20 | 31.75 | 1.98 | 31.75 | 34.93 | 32.30 | 38.90 |
| 22 | 34.93 | 2.72 | 34.93 | 38.10 | 35.50 | 42.10 |
| 24 | 38.10 | 2.72 | 38.10 | 41.28 | 38.60 | 45.25 |

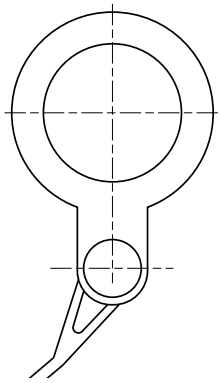
# Protection caps



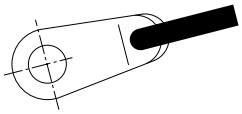

Protection cap for receptacles equipped with metallic chain or nylon cord (for shell types: 00, PQ00, 01, 07)



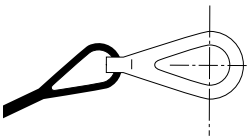

Protection cap for plugs equipped with metallic chain or nylon cord (for shell type: 06)



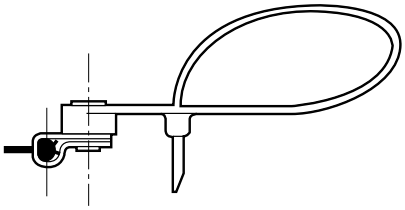
Termination of the chain or cord for jam nut receptacle protection caps (for shell type: 07)



Termination of the cord for square flange receptacle protection caps (for shell types: 00, PQ00)



Termination of the chain for plug, square flange and line receptacle protection caps (for shell types: 06, 00, PQ00,01)



Termination of the cord for plug and line receptacle protection caps (for shell types: 06,01)

*Cord length for plugs and line receptacles: 160 mm*
*Cord length for square flange and jam nut receptacles: 105 mm*
*Chain length for plugs and receptacles: from min. 77 to max 111mm*

| Shell size | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
|---|---|---|---|---|---|---|---|---|---|
| A Dia Max (mm) | 12.01 | 14.99 | 19.05 | 22.23 | 25.40 | 28.58 | 31.75 | 34.93 | 38.10 |
| A Dia Max (mm) | 15.98 | 19.08 | 23.47 | 26.65 | 9.75 | 33.10 | 36.43 | 39.60 | 42.85 |

| Caps series | B | EC | N | JT | 12 | 014 |
|---|---|---|---|---|---|---|

**Protection cap type**
**F:** For plug
**EC:** For square flange receptacle
**ER:** For jam nut receptacle
**P:** For line mounting receptacle

**Wire type**
**N:** Nylon cord (standard version)
**Blank:** Metallic chain

**Connector series**

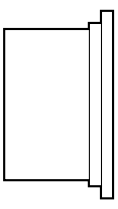
**Corresponding connector shell size**
08/10/12/14/16/18/20/22/24

**Finish**
**014:** Olive drab cadmium plated
**023:** Electroless nickel plated
For other finishes, please consult us

For MS designation, please refer to page 24

# Plastic dust caps

For protection during transport and storage, plastic dust caps are available upon request.



## Standard crimp contacts

| Contact Size | Pin contacts | | Socket contacts | |
|---|---|---|---|---|
| | Proprietary No | Military No | Proprietary No | Military No |
| 12 | 900005 | M39029/58-365 | 900015 | M39029/57-359 |
| 16 | 900000 | M39029/58-364 | 900010 | M39029/57-358 |
| 20 | 900001 | M39029/58-363 | 900011 | M39029/57-357 |
| 22D | 900004 | M39029/58-360 | 900014 | M39029/57-354 |

Above part numbers include standard 500 – cycle finish designation – gold plating over suitable underplate in accordance with MIL-C-39029.

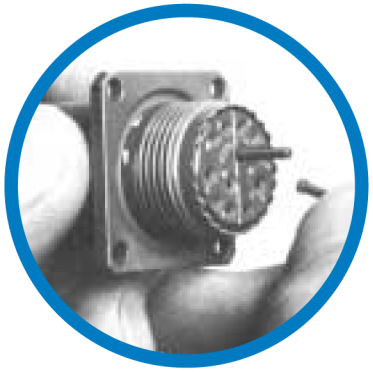
## Standard PCB contacts

| Contact Size | Pin contacts | Socket contacts |
|---|---|---|
| 20 | 900241 | consult us |
| 22D | 900245 | 900056 |

For other contacts (PCB, optical termini, thermocouple), please refer to data sheet E114.

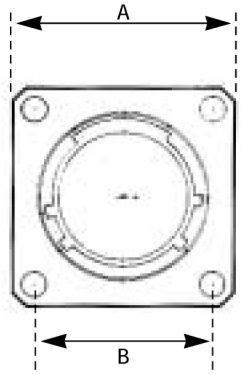
## Sealing plugs

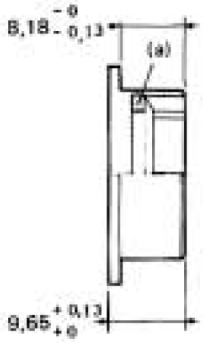
| Contact Size | Proprietary No | Military No |
|---|---|---|
| 12 | 900023 | MS27488-12 |
| 16 | 900020 | MS27488-16 |
| 20 | 900021 | MS27488-20 |
| 22D | 900022 | MS27488-22 |



## Dummy receptacles

| Shell Size | A | B |
|---|---|---|
| 8 | 20.63 | 15.09 |
| 10 | 23.83 | 18.26 |
| 12 | 26.19 | 20.63 |
| 14 | 28.58 | 23.01 |
| 16 | 30.96 | 24.61 |
| 18 | 33.33 | 26.97 |
| 20 | 36.53 | 29.36 |
| 22 | 39.68 | 31.75 |
| 24 | 48.88 | 34.93 |




(a): seal

| Dummy receptacle | SE | 00 | JT | 08 | 014 |
|---|---|---|---|---|---|

**Shell type**
**00:** derived from the JT wall mounting receptacle

**Connector series**

**Shell size**
08/10/12/14/16/18/20/22/24

**Finish**
**014:** Olive drab cadmium plated
**023:** Electroless nickel plated

## Holding support equipped with olive cadmium dummy receptacles

Amphenol Socapex reference: **809 893**



## Torque value for rear accessories

| Shell Size | Max. torque value (m/N) | Shell Size | Max. torque value (m/N) |
|---|---|---|---|
| 8 | 5.65 | 18 | 5.65 |
| 10 | 5.65 | 20 | 11.30 |
| 12 | 5.65 | 22 | 11.30 |
| 14 | 5.65 | 24 | 11.30 |
| 16 | 5.65 | | |

## Pliers for locking and unlocking of plugs

Amphenol Socapex reference: **809 860**



## Crimping tools



| Contact size | Contact type | Contact part number | | Crimping tool | | Positioner | |
|---|---|---|---|---|---|---|---|
| | | Proprietary No | Military No | Proprietary No | Military No | Proprietary No | Military No |
| 12 | P | 900 005 | M39029/58-365 | 809 857 | M22520/1-01 | 809 858 | M22520/1-04 |
| | S | 900 015 | M39029/57-359 | 809 857 | M22520/1-01 | 809 858 | M22520/1-04 |
| 16 | P | 900 000 | M39029/58-364 | 809 857 | M22520/1-01 | 809 858 | M22520/1-04 |
| | S | 900 010 | M39029/57-358 | 809 857 | M22520/1-01 | 809 858 | M22520/1-04 |
| 20 | P | 900 001 | M39029/58-363 | 809 857<br>809 801 | M22520/1-01<br>M22520/2-01 | 809 858<br>809 826 | M22520/1-04<br>M22520/2-10 |
| | S | 900 011 | M39029/57-357 | 809 857<br>809 801 | M22520/1-01<br>M22520/2-01 | 809 858<br>809 826 | M22520/1-04<br>M22520/2-10 |
| 22D | P | 900 004 | M39029/58-360 | 809 801 | M22520/2-01 | 809 810 | M22520/2-09 |
| | S | 900 014 | M39029/57-354 | 809 801 | M22520/2-01 | 809 811 | M22520/2-06 |

## Insertion and removal tools

### Plastic tools



| Contact Size | Insertion tools | | Removal tools | |
|---|---|---|---|---|
| | Proprietary No | Military No | Proprietary No | Military No |
| 12 | 809 859 | M81969/14-04 | 809 859 | M81969/14-04 |
| 16 | 809 855 | M81969/14-03 | 809 855 | M81969/14-03 |
| 20 | 809 854 | M81969/14-10 | 809 854 | M81969/14-10 |
| 22D | 809 856 | M81969/14-01 | 809 856 | M81969/14-01 |

### Metallic tools



| Contact size | Straight type | | Angle type | | | |
|---|---|---|---|---|---|---|
| | Insertion tools Proprietary No | Removal tools Proprietary No | Insertion tools Proprietary No | Insertion tools Military No | Removal tools Proprietary No | Removal tools Military No |
| 12 | — | — | 809 838 | M81969/8-09 | 809 839 | M81969/8-10 |
| 16 | 809 816 | 809 846 | 809 812 | M81969/8-07 | 809 820 | M81969/8-08 |
| 20 | 809 817 | 809 847 | 809 813 | M81969/8-05 | 809 821 | M81969/8-06 |
| 22D | 809 819 | 809 849 | 809 815 | M81969/8-01 | 809 823 | M81969/8-02 |

# Ordering information

## Amphenol designation – Aluminium versions

| Series | JT | 07 | RT | 14 | 35 | P | - | 014 | - |
|---|---|---|---|---|---|---|---|---|---|

**Shell type**
**00:** Wall mounting receptacle (front panel)
**PQ00:** Wall mounting receptacle (back panel)
**01:** Line receptacle
**02:** Box mounting receptacle (front panel – RE version only)
**P02:** Box mouting receptacle (back panel – RE version only)
**06:** Straight plug
**G06:** Straight plug with grounding fingers
**07:** Jam nut receptacle

**Service class and contact style**
**RT:** Environmental, with accessory threads, crimp contacts
(Supplied without rear accessories)
**RE:** Environmental, crimp contacts
(Supplied with grommet and compression nut)
Except for box mounting receptacle (JT02-JTP02): non-environmental
**CI:** PCB contacts

**Shell size**
8/10/12/14/16/18/20/22/24

**Insert arrangement**
*See on pages 5 to 7*

**Contact type**
**P:** Pin (connector delivered with contacts)
**S:** Socket (connector delivered with contacts)
**A:** Pin (connector delivered without contacts)
**B:** Socket (connector delivered without contacts)

**Polarization**
**Blank for normal or A, B, C, D.** *See coding system on page 9*

**Shell finish**
**014:** Olive drab cadmium plated
**023:** Electroless nickel plated
For other finishes, please consult us

**Deviation**

**F404:** Tinned PCB pin contacts
For other deviations (FXXX), please consult us

## Amphenol designation – Hermetic receptacles

| Series | JT | 07 | Y | 14 | 35 | P | - |
|---|---|---|---|---|---|---|---|

**Shell type**
**00:** Wall mounting receptacle
**02:** Box mounting receptacle
**07:** Jam nut receptacle
**I:** Solder mounting receptacle

**Service class and contact style**
**Y:** Hermetic with interfacial seal, solder contacts

**Shell size**
8/10/12/14/16/18/20/22/24

**Insert arrangement**
*See on pages 5 to 7 (arrangements marked with "Y")*

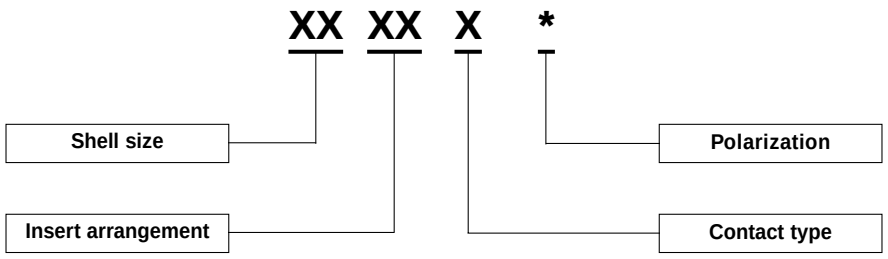
**Contact type**
**P:** Pin only

**Polarization**
Blank for normal or A, B, C, D. *See coding system on page 9*

# Cross references

## Connectors

| Version | Amphenol | MIL-DTL-38999 series II |
|---|---|---|
| Standard | JT00 RT XX-XX X * 014 | JMS 27472 T XX B XX X * |
| | JT00 RE XX-XX X * 014 | JMS 27472 E XX B XX X * |
| | JTPQ00 RT XX-XX X * 014 | JMS 27497 T XX B XX X * |
| | JTPQ00 RE XX-XX X * 014 | JMS 27497 E XX B XX X * |
| | JT01 RT XX-XX X * 014 | – |
| | JT01 RE XX-XX X * 014 | – |
| | JT02 RE XX-XX X * 014 | JMS 27499 E XX B XX X * |
| | JTP02 RE XX-XX X * 014 | JMS 27508 E XX B XX X * |
| | JT06 RT XX-XX X * 014 | JMS 27473 T XX B XX X * |
| | JT06 RE XX-XX X * 014 | JMS 27473 E XX B XX X * |
| | JTG06 RT XX-XX X * 014 | JMS 27484 T XX B XX X * |
| | JTG06 RE XX-XX X * 014 | JMS 27484 E XX B XX X * |
| | JT07 RT XX-XX X * 014 | JMS 27474 T XX B XX X * |
| | JT07 RE XX-XX X * 014 | JMS 27474 E XX B XX X * |
| Hermetics | JT00 Y XX-XX P * | JMS 27475 Y XX-XX P * |
| | JT02 Y XX-XX P * | JMS 27476 Y XX-XX P * |
| | JT07 Y XX-XX P * | JMS 27477 Y XX-XX P * |
| | JTI Y XX-XX P * | JMS 27478 Y XX-XX P * |




## Protection caps

| Amphenol designation | MS designation* |
|---|---|
| BF N JT XX 014 | – |
| BF JT XX 014 | JMS 27510 B XX C |
| BEC N JT XX 014 | JMS 27511 B XX R |
| BEC JT XX 014 | JMS 27511 B XX C |
| BER N JT XX 014 | JMS 27511 B XX R |
| BER JT XX 014 | JMS 27511 B XX N |
| BP N JT XX 014 | JMS 27511 B XX R |
| BP JT XX 014 | JMS 27511 B XX C |

XX: Shell size

* MS designations given as information only: the length of the chain or rope, as well as the attachment style could vary.

Do not hesitate to contact us for further information

Amphenol

Amphenol Socapex
*Mil/Aero & Industrial Business Unit*
948, Promenade de l'Arve - BP 29
F - 74311 Thyez Cedex
Tel.: +33 (0)4 50 89 28 00 - Fax: +33 (0)4 50 96 19 41
http://www.amphenol-socapex.com

Sales office in Paris
Tel.: +33 (0)1 49 05 30 00 - Fax: +33 (0)1 49 05 30 43

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