# MIL-DTL-38999 Connectors

**FOR MILITARY, AEROSPACE AND HARSH ENVIRONMENTS**

8-26




Amphenol
Aerospace

# About Amphenol® Aerospace

## Your Source for Interconnect Products

Amphenol Aerospace

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### ABOUT AMPHENOL AEROSPACE:

Amphenol Aerospace, a Division of Amphenol Corporation, is one of the largest manufacturers of interconnect products in the world for the Military, Commercial Aerospace and Industrial markets. Amphenol designs, manufactures and markets circular and rectangular, electronic, fiber optic, EMI/EMP filter, and a variety of special applications connectors and interconnect systems.

Our state-of-the-art facility is nestled at the foothills of the Catskill Mountains in Sidney, NY. The Amphenol complex houses many technologies including CNC machining, die-casting, molding, impact and extruding, plating, screw machining and process controls. Our fully equipped material evaluation lab and engineering organization utilize the latest in computer aided design software and analysis tools, allowing us to design, test, and qualify advanced interconnect systems. Amphenol's interconnect products are supplied to thousands of OEMs worldwide and are supported by our worldwide sales and engineering force, including the largest global network of electronic distributors.





CARE

**Customer-Centric:**
Our **#1 priority** is our customers who deserve quality product on time.

**Accountable:**
Clear owners, clear actions, clear results.

**Reliable:**
What we build matters and quality is imperative.

**Enthusiastic:**
Challenges create rewarding opportunities. Enthusiasm is contagious and we will spread it.

### QUALITY ASSURANCE:

Amphenol Aerospace has been awarded both AS9100 - Revision C and ISO9001:2008 Quality Assurance Certifications.

# MIL-DTL-38999, Series I LJT, II JT, III TV, HD

## Insert Availability and Identification Chart

| Series JT II | Series LJT I | Series TV III | Military III | MIL-DTL-27599 JT/LJT Solder | Crimp | Hermetics Class H | Hermetics Class Y | Hermetics TV* | Service Rating | Total Contacts | Contact Size 23 HD | 22D | 22M | 22 | 20 | 16 | 16 (CX) | 12 | 12 (TX) | 12 (CX) | 10 (P) | 8 (P) | 8 (CX) | 8†† (TX) | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7-D2 | | | | | | | M | 2 | | 2 | | | | | | | | | | | | | |
| 8-2■ | | | | P | | | | | M | 2 | | | | | 2 | | | | | | | | | | |
| 8-3■ | | | | X | NA | P | P | | M | 3 | | | | | 3 | | | | | | | | | | |
| | 9-3■ | | | X | | | | | | | | | | | | | | | | | | | | | |
| | | 9-5★■ | | | | | | | G | 1 | | | | | | | | | | | | | | 1 | |
| 8-6 | | | | X | X | P | P | | M | 6 | | | 6 | | | | | | | | | | | | |
| | 9-6 | | | X | X | P | P | | | | | | | | | | | | | | | | | | |
| | 9-7■ | | | X | | | | | M | 7 | | | 7 | | | | | | | | | | | | |
| | | 9-9■ | A23 | | X | | | | N | 9 | 9 | | | | | | | | | | | | | | |
| | | 9-12■ | | | ◆ | | | | M | 1 | | | | | | | | 1 | | | | | | | |
| | 9-22■ | | | X | | | | | I | 2 | | | | | 2 | | | | | | | | | | |
| 8-35 | | | | | X | P | P | | M | 6 | | 6 | | | | | | | | | | | | | |
| | 9-35 | 9-35 | A35 | | X | P | P | P | | | | | | | | | | | | | | | | | |
| 8-44 | | | | | X | P | P | | M | 4 | | | | 4 | | | | | | | | | | | |
| | 9-44 | | | | X | | | | | | | | | | | | | | | | | | | | |
| | | 9-94■ | | | ◆ | | | | M | 2 | | | | | 2 | | | | | | | | | | |
| 8-97■ | | | | X | | | | | M | 4 | | | 2 | | 2 | | | | | | | | | | |
| 8-98 | | | | S | X | P | P | | I | 3 | | | | | 3 | | | | | | | | | | |
| | 9-98 | 9-98 | A98 | X | X | P | P | P | | | | | | | | | | | | | | | | | |
| | | 11-1■ | | | ◆ | | | | I | 1 | | | | | | | | | | | | | | 1 | |
| | 11-2★ | 11-2★ | B2 | | X | P** | | | I | 2 | | | | | | 2 | | | | | | | | | |
| 10-4 | | | | | 3 | | | | I | 4 | | | | | 4 | | | | | | | | | | |
| | 11-4 | 11-4 | B4 | X | 2 | | | | | | | | | | | | | | | | | | | | |
| 10-5 | | | | X | X | P | P | | I | 5 | | | | | 5 | | | | | | | | | | |
| | 11-5 | 11-5 | B5 | X | X | | | P | | | | | | | | | | | | | | | | | |
| | 11-6■ | | | S | | | | | I | 6 | | | | | 6 | | | | | | | | | | |
| | | 11-12■ | | | ◆ | | | | II | 1 | | | | | | | | 1 | | | | | | | |
| 10-13 | | | | X | X | P/S | P/S | | M | 13 | | | 13 | | | | | | | | | | | | |
| | 11-13 | | | X | X | P/S | P/S | | | | | | | | | | | | | | | | | | |
| | | 11-19■ | B23 | | X | | | | N | 19 | 19 | | | | | | | | | | | | | | |
| 10-35 | | | | | X | P/S | P/S | | M | 13 | | 13 | | | | | | | | | | | | | |
| | 11-35 | 11-35 | B35 | | X | P/S | P/S | P | | | | | | | | | | | | | | | | | |
| | | 11-54■ | | | X | | | | II | 4 | | 4 | | | | | | | | | | | | | |
| 10-98 | | | | X | X | P/S | P/S | | I | 6 | | | | | 6 | | | | | | | | | | |
| | 11-98 | 11-98 | B98 | X | X | P/S | P/S | P | | | | | | | | | | | | | | | | | |
| 10-99 | | | | | X | P | P | | I | 7 | | | | | 7 | | | | | | | | | | |
| | 11-99 | 11-99 | B99 | | X | | | P | | | | | | | | | | | | | | | | | |
| 12-3 | | | | X | X | P | P | | II | 3 | | | | | | 3 | | | | | | | | | |
| | 13-3■ | | | | P | | | | | | | | | | | | | | | | | | | | |
| 12-4 | | | | X | X | P | P | | I | 4 | | | | | | 4 | | | | | | | | | |
| | 13-4★ | 13-4★ | C4 | X | X | P | P | P | | | | | | | | | | | | | | | | | |
| 12-8 | | | | X | X | P | P | | I | 8 | | | | | 8 | | | | | | | | | | |
| | 13-8 | 13-8 | C8 | X | X | P | P | P | | | | | | | | | | | | | | | | | |
| | | 13-13■« | | | | | | | I, Fiber Optic | 4 | | | | | | 2** | | 2 | | | | | | | |
| 12-22 | | | | | X | P/S | P/S | | M | 22 | | | 22 | | | | | | | | | | | | |
| | 13-22 | | | X | X | P/S | P/S | | | | | | | | | | | | | | | | | | |
| | | 13-26■ | | | ◆ | | | | M | 8 | | 6 | | | | | | 2 | | | | | | | |
| | | 13-32■ | | C23 | ◆ | | | | N | 32 | 32 | | | | | | | | | | | | | | |
| 12-35 | | | | | X | P/S | P/S | | M | 22 | | 22 | | | | | | | | | | | | | |
| | 13-35 | 13-35 | C35 | | X | P/S | P/S | P | | | | | | | | | | | | | | | | | |
| | | 13-63■ | | | ◆ | | | | I | 4 | | | | | | 2 | | 2 | | | | | | | |
| 12-98 | | | | X | X | P/S | P/S | | I | 10 | | | | | 10 | | | | | | | | | | |
| | 13-98 | 13-98 | C98 | X | X | P/S | P/S | P | | | | | | | | | | | | | | | | | |

X Completely tooled.
\+ Majority of tooling is completed (contact Amphenol Aerospace for availability).
◆ Not tooled for 02-R.
P Available with Pin contacts only
S Available with Socket contacts only
P/S Available with Pin contacts or Socket contacts
★ Ground plane proprietary option available. Arrg. 9-5 is exclusively ground plane type.
■ Not Mil-Qualified.
✧ 21-75 is Mil-Qualified with twinax contacts only.
Note: MS connector 21-75 is supplied with size 8 twinax. Commercial connector 21-75 is supplied with size 8 coax.
■ **HD** designates High Density 38999 Series III insert patterns which use size 23 contacts only. Not rated over 175°C.

^ Supplied with D38999/62-A for Twinax, D38999/62-B for Coax
* Hermetic inserts - solder termination standard. (Contact Amphenol Aerospace for optional PCB or eyelet termination).
** Two size 16 contacts dedicated to fiber optics. See the Fiber Optic section for more information.
*** For use in MIL-STD-1760 applications (see pages 75 and 76).
† For RG 180/U and RG 195/U cables only.
†† Size 8 Coax and Twinax are interchangeable.

(2) Not Tooled for RP or 02RE
(3) Pin inserts only, not tooled for RP or 02RE (Consult Amphenol Aerospace for avail.)
(5) MS Connector 21-79 has provision for two size 8 coax contacts. Coax contacts are not supplied unless specified by customer.
≈ Patterns come with D38999/62 sealing boots
« 13-13 contacts supplied with power contacts, fiber contacts sourced separately

# MIL-DTL-38999, Series I LJT, II JT, III TV, HD

## Insert Availability and Identification Chart

Amphenol Aerospace



| Series JT II | Series LJT I | Series TV III | Military III | MIL-DTL-27599 JT/LJT Solder | Crimp | Hermetics Class H | Hermetics Class Y | Hermetics TV* | Service Rating | Total Contacts | Contact Size 23 HD | 22D | 22M | 22 | 20 | 16 | 16 (CX) | 12 | 12 (TX) | 12 (CX) | 10 (P) | 8 (P) | 8 (CX) | 8†† (TX) | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 13-CB■ | | | S | | | | M | | | 4 | | | | | | 2 | | | | | | | |
| | | 15-AC■ | | | ◆ | | | | M | 26 | | 24 | | | | 2 | | | | | | | | | |
| | | 15-AT■ | | | X | | | | I | 13 | | 10 | | | | | | 3 | | | | | | | |
| | | 15-BA■ | | | ◆ | | | | M | 25 | | 22 | | | | 3 | | | | | | | | | |
| 14-4■ | | | | | 2 | | | | I | 4 | | | | | | | | 4 | | | | | | | |
| | 15-4■ | 15-4■ | | | 2 | | | | | | | | | | | | | | | | | | | | |
| 14-5 | | | | X | X | P | P | | II | 5 | | | | | | 5 | | | | | | | | | |
| | 15-5★ | 15-5★ | D5 | X | X | P | P | P | | | | | | | | | | | | | | | | | |
| 14-15 | | | | X | X | P | P | | I | 15 | | | | | 14 | 1 | | | | | | | | | |
| | 15-15 | 15-15 | D15 | X | X | P/S | P/S | P | I | | | | | | | | | | | | | | | | |
| 14-18 | | | | X | X | P/S | P/S | | I | 18 | | | | | 18 | | | | | | | | | | |
| | 15-18 | 15-18 | D18 | X | X | P/S | P/S | P | | | | | | | | | | | | | | | | | |
| 14-19■ | | | | X | X | | | | I | 19 | | | | | 19 | | | | | | | | | | |
| | 15-19 | 15-19 | D19 | | X | P | P | P | | | | | | | | | | | | | | | | | |
| 14-35 | | | | | X | P | P | | M | 37 | | 37 | | | | | | | | | | | | | |
| | 15-35 | 15-35 | D35 | | X | P/S | P/S | P | | | | | | | | | | | | | | | | | |
| 14-37 | | | | X | X | P | P | | M | 37 | | | 37 | | | | | | | | | | | | |
| | 15-37 | | | X | X | P | P | | | | | | | | | | | | | | | | | | |
| | | 15-55■ | D23 | | X | | | | N | 55 | 55 | | | | | | | | | | | | | | |
| 14-68■ | | | | | 2 | | P | P | I | 8 | | | | | | 8 | | | | | | | | | |
| | 15-68■ | 15-68■ | | X | X | | | | | | | | | | | | | | | | | | | | |
| 14-97 | | | | | X | P | P | | I | 12 | | | | | 8 | 4 | | | | | | | | | |
| | 15-97 | 15-97 | D97 | X | X | P | | P | | | | | | | | | | | | | | | | | |
| | 17-2 | 17-2 | E2 | | X | | | | M | 39 | | 38 | | | | | | | | | | | | 1 | |
| | | 17-3≈ | E3≈ | | X | | | | M | 39 | | 38 | | | | | | | | | | | | 1 | |
| | | 17-EA■ | | | ◆ | | | | M | 19 | | 10 | | | 3 | 2 | | 4 | | | | | | | |
| | | 17-EC■ | | | ◆ | | | | M | 41 | | 32 | | | 9 | | | | | | | | | | |
| | | 17-EG■ | | | ◆ | | | | M | | | 16 | | | | | | 4 | | | | | | | |
| | | 17-EL■ | | | ◆ | | | | M | 19 | | 16 | | | | | | 2 | | | | | | 1 | |
| 16-6 | | | | | X | P | P | | I | 6 | | | | | | | | 6 | | | | | | | |
| | 17-6 | 17-6 | E6 | | X | P | P | P | | | | | | | | | | | | | | | | | |
| 16-8 | | | | X | X | P | P | | II | 8 | | | | | | 8 | | | | | | | | | |
| | 17-8★ | 17-8★ | E8 | X | X | P/S | P/S | P | | | | | | | | | | | | | | | | | |
| | | 17-11 | E11 | | X | | | | N | 11 | | | | | 8 | | | | 2 | 1 | | | | | |
| 16-13■ | | | | | 2 | | | | I | 13 | | | | | | 13 | | | | | | | | | |
| | 17-13■ | 17-13■ | | | 2 | | | | | | | | | | | | | | | | | | | | |
| | 17-22■ | 17-22★■ | | | ◆ | | | | CX | 4 | | | | | | | | | | 2 | | | 2 | | |
| | 17-25■ | 17-25■ | | | 2 | | | | M | 24 | | 22 | | | | | | | | | | | 2 | | |
| 16-26 | | | | X | X | P/S | P/S | | I | 26 | | | | | 26 | | | | | | | | | | |
| | 17-26 | 17-26 | E26 | X | X | P/S | P/S | P | | | | | | | | | | | | | | | | | |
| 16-35 | | | | | X | P | P | | M | 55 | | 55 | | | | | | | | | | | | | |
| | 17-35 | 17-35 | E35 | X | X | P | P | P | | | | | | | | | | | | | | | | | |
| 16-42 | | | | | X | | | | M | 42 | | | | 42 | | | | | | | | | | | |
| | 17-42■ | | | | P | | | | | | | | | | | | | | | | | | | | |
| | | 17-52■ | | | X | | | | M | 2 | | | | | | | | | | | | | | 2 | |
| 16-55 | | | | X | X | P/S | P/S | | M | 55 | | | 55 | | | | | | | | | | | | |
| | 17-55 | | | X | X | P/S | P/S | | | | | | | | | | | | | | | | | | |
| | | 17-60■ | | | X | | | | I/CX | 10 | | 8 | | | | | | | | | | | 2 | | |
| | | 17-73■ | E23 | | X | | | | N | 73 | 73 | | | | | | | | | | | | | | |
| 16-99 | | | | X | X | P | P | | I | 23 | | | | | 21 | 2 | | | | | | | | | |
| | 17-99 | 17-99 | E99 | X | X | P | P | | | | | | | | | | | | | | | | | | |
| | | 19-AD | | | X | | | | Inst. | 17 | | | | | 16 | | | | | | | | | 1 | |
| | | 19-A4■ | | | ◆ | | | | M | 4 | | | | | | | | | | | | | | 4 | |
| | | 19-FA■ | | | ◆ | | | | M | 23 | | 6 | | | 8 | 7 | | 2 | | | | | | | |
| 18-11 | | | | X | X | P | P | | II | 11 | | | | | | 11 | | | | | | | | | |
| | 19-11★ | 19-11★ | F11 | X | X | P | P | P | | | | | | | | | | | | | | | | | |
| | | 19-17■ | | | ◆ | | | | M | 17 | | 10 | | | 1 | 4 | | | | | | | | 2 | |
| | 19-18 | 19-18 | F18 | | 2 | | | | M | 18 | | 14 | | | | | | | | | | | | 4 | |
| | | 19-19≈ | F19≈ | | 2 | | | | M | 18 | | 14 | | | | | | | | | | | | 4 | |
| 18-28 | | | | X | X | | | | I | 28 | | | | | 26 | 2 | | | | | | | | | |
| | 19-28■ | 19-28 | F28 | X | P | | | | | | | | | | | | | | | | | | | | |
| 18-30 | | | | X | X | | | | I | 30 | | | | | 29 | 1 | | | | | | | | | |
| | 19-30■ | 19-30■ | | X | P | | | | | | | | | | | | | | | | | | | | |
| | | 19-31■ | | | X | | | | M | 15 | | 12 | | | | | | 1 | | | | | 2 | | |

# MIL-DTL-38999, Series I LJT, II JT, III TV, HD

## Insert Availability and Identification Chart

(CX)= Coax, (P)=Power, (TX)= Twinax

| Series JT II | Series LJT I | Series TV III | Military III | MIL-DTL-27599 JT/LJT Solder | Crimp | Hermetics Class H | Hermetics Class Y | Hermetics TV* | Service Rating | Total Contacts | Contact Size 23 HD | 22D | 22M | 22 | 20 | 16 | 16 (CX) | 12 | 12 (TX) | 12 (CX) | 10 (P) | 8 (P) | 8 (CX) | 8†† (TX) | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18-32 | | | | X | X | P/S | P/S | | I | 32 | | | | | 32 | | | | | | | | | | |
| | 19-32 | 19-32 | F32 | X | X | P/S | P/S | P | | | | | | | | | | | | | | | | | | |
| 18-35 | | | | | X | P | P | | M | 66 | | 66 | | | | | | | | | | | | | |
| | 19-35 | 19-35 | F35 | | X | P | 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 | | | | | | | | | | | | | | | | | | | |
| | 19-67■ | | | X | 3 | S | S | | M | 67 | | | 67 | | | | | | | | | | | | |
| 18-68■ | | | | | 2 | | | | I | 18 | | | | | | 18 | | | | | | | | | |
| | 19-68■ | 19-68■ | | | 3 | | | | | | | | | | | | | | | | | | | | | |
| 18-96■ | | | | | 2 | | | | I | 9 | | | | | | | | 9 | | | | | | | |
| | | 19-88■ | F23 | | X | | | | N | 88 | 88 | | | | | | | | | | | | | | |
| 20-1 | | | | | X | P | P | | M | 79 | | | 79 | | | | | | | | | | | | |
| | | 21-AJ■ | | | ◆ | | | | M | 20 | | | | | 18 | | | | | | | | | 2 | |
| | | 21-AZ■ | | | X | | | | II | 22 | | 19 | | | | | | | | | | 3 | | | |
| | 21-1 | | | | X | P/S | P/S | | M | | | | | | | | | | | | | | | | |
| 20-2 | | | | | X | | | | M | 65 | | | | 65 | | | | | | | | | | | |
| | 21-2■ | | | | X | | | | M | | | | | | | | | | | | | | | | |
| 20-11■ | | | | | 3 | | | | I | 11 | | | | | | | | 11 | | | | | | | |
| | 21-11★ | 21-11★ | G11 | | X | | | | I | | | | | | | | | | | | | | | | |
| 20-16 | | | | X | X | P/S | P/S | | II | 16 | | | | | | 16 | | | | | | | | | |
| | 21-16★ | 21-16★ | G16 | X | X | P | P | P | II | | | | | | | | | | | | | | | | |
| | | 21-21 ■ | | | | | | | M | 41 | | 32 | | | | | | 9 | | | | | | | |
| | 21-25■ | | | | | | | | I | 25 | | | | | 25 | | | | | | | | | | |
| | 21-27■ | | | X | | | | | I | 27 | | | | | 27 | | | | | | | | | | |
| | | 21-29 | G29 | | X | | | | I | 27 | | | | | 19 | 4 | | 4 | | | | | | | |
| 20-35 | | | | | X | P | P | | M | 79 | | 79 | | | | | | | | | | | | | |
| | 21-35 | 21-35 | G35 | | X | P/S | P/S | P | M | | | | | | | | | | | | | | | | |
| 20-39 | | | | X | X | P | P | | I | 39 | | | | | 37 | 2 | | | | | | | | | |
| | 21-39 | 21-39 | G39 | X | X | P | P | P | | | | | | | | | | | | | | | | | |
| 20-41 | | | | X | X | P | P | | I | 41 | | | | | 41 | | | | | | | | | | |
| | 21-41 | 21-41 | G41 | X | X | P/S | P/S | P | | | | | | | | | | | | | | | | | |
| | | 21-42■ | | | ◆ | | | | I | | | | | | | | | | | | | | | | 2 |
| | | `21-A48■ | | | | | | | N | 4 | | | | | | | | | | | | 4 | | | |
| | | `21-B48■ | | | | | | | N | 4 | | | | | | | | | | | | 4 | | | |
| | | `21-C48■ | | | | | | | N | 4 | | | | | | | | | | | | 4 | | | |
| | | 21-72■ | | | ◆ | | | | I | | | | | | | 6 | | | | | | | | | 2 |
| | 21-75★ | 21-75★✧ | G75 | | 2 | | | | N M | 4 | | | | | | | | | | | | | 4 | (4) | |
| | | 21-76★✧≈ | G76^ | | 2 | | | | N M | 4 | | | | | | | | | | | | | 4 | (4) | |
| | 21-79■ | 21-79■ | | | 2 | | | | II | 19 | | 17 | | | | | | | | | | | 2 | (2) | |
| | | 21-121■ | G23 | | X | | | | N | 121 | 121 | | | | | | | | | | | | | | |
| 22-1 | | | | | X | P/S | P/S | | M | 100 | | | 100 | | | | | | | | | | | | |
| | 23-1 | | | | X | P | P | | | | | | | | | | | | | | | | | | |
| 22-2 | | | | X | X | P | P | | M | 85 | | | | 85 | | | | | | | | | | | |
| | 23-2 | | | X | X | P | P | | | | | | | | | | | | | | | | | | |
| | 23-6★■ | 23-6★■ | | X | P | | | | M | 6 | | | | | | | | | | | | | | 6 | |
| 22-14■ | | | | | 2 ◆ | | | | I | 14 | | | | | | | | 14 | | | | | | | |
| | 23-14■ | 23-14■ | | | 2 ◆ | | | | | | | | | | | | | | | | | | | | |
| 22-21 | | | | X | X | P | P | | II | 21 | | | | | | 21 | | | | | | | | | |
| | 23-21★ | 23-21★ | H21 | X | X | P | P | P | | | | | | | | | | | | | | | | | |
| 22-32 | | | | X | X | P | P | | I | 32 | | | | | 32 | | | | | | | | | | |
| | 23-32■ | | | X | P | | | | | | | | | | | | | | | | | | | | |
| | 23-34■ | | | X | | | | | I | 34 | | | | | 34 | | | | | | | | | | |
| 22-35 | | | | | X | P/S | P/S | | M | 100 | | 100 | | | | | | | | | | | | | |
| | 23-35 | 23-35 | H35 | | X | P | P | P | | | | | | | | | | | | | | | | | |
| 22-53■ | | | | | P | | | | I | 53 | | | | | 53 | | | | | | | | | | |
| | 23-53 | 23-53 | H53 | X | X | P/S | P/S | P | | | | | | | | | | | | | | | | | |
| | | 23-54 ■ | | | X | | | | M | 53 | | 40 | | | | 9 | | 4 | | | | | | | |
| 22-55 | | | | X | X | P | P | | I | 55 | | | | | 55 | | | | | | | | | | |
| | 23-55 | 23-55 | H55 | | X | | | P | | | | | | | | | | | | | | | | | |
| | | 23-63 ■ | | | ◆ | | | | M | 57 | | 49 | | | | | 4 | | | 4 | | | | | |
| | 23-97■ | | | X | | | | | II | 16 | | | | | | 16 | | | | | | | | | |
| | 23-99■ | | | X | | | | | II | 11 | | | | | | 11 | | | | | | | | | |
| | | 23-151 ■ | H23 | ◆ | X | | | | N | 151 | 151 | | | | | | | | | | | | | | |

**` 21-A48 size 8 contacts for size 8AWG wire. 21-B48 size 8 contact for size 10AWG wire. 21-C48 size 8 contact for size12AWG wire.**

# MIL-DTL-38999, Series I LJT, II JT, III TV, HD

## Insert Availability and Identification Chart

Amphenol Aerospace

(CX)= Coax, (P)=Power, (TX)= Twinax

| Series JT II | Series LJT I | Series TV III | Military III | MIL-DTL-27599 JT/LJT Solder | Crimp | Hermetics Class H | Hermetics Class Y | Hermetics TV* | Service Rating | Total Contacts | Contact Size 23 HD | 22D | 22M | 22 | 20 | 16 | 16 (CX) | 12 | 12 (TX) | 12 (CX) | 10 (P) | 8 (P) | 8 (CX) | 8†† (TX) | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24-1 | | | | | X | P | P | | M | 128 | | | 128 | | | | | | | | | | | | |
| | 25-1 | | | | X | P | P | | | | | | | | | | | | | | | | | | |
| 24-2 | | | | | X | | | | M | 100 | | | | 100 | | | | | | | | | | | |
| | 25-2 | | | | X | | | | | | | | | | | | | | | | | | | | |
| 24-4 | | | | | X | P | P | | I | 56 | | | | | 48 | 8 | | | | | | | | | |
| | 25-4 | 25-4 | J4 | | X | | | P | | | | | | | | | | | | | | | | | |
| | 25-7■ | 25-7 | J7 | | X | | | | M TX | 99 | | 97 | | | | | | | | | | | | 2 | |
| | | 25-9≈ | J9≈ | | X | | | | M TX | 99 | | 97 | | | | | | | | | | | | 2 | |
| | | 25-8★ | J8 | | ◆ | | | | TX | 8 | | | | | | | | | | | | | | 8 | |
| | | 25-10★≈ | J10≈ | | ◆ | | | | TX | 8 | | | | | | | | | | | | | | 8 | |
| | | 25-11*** | J11 | | 2 | | | | N | 11 | | | | | 2 | | | | | | 9 | | | | |
| | | 25-16■ | | | ◆ | | | | M | 8 | | | | | 6 | | | | | | | | | | 2 |
| | | 25-17■ | | | ◆ | | | | M | 42 | | 36 | | | | | | | | | | | | 6 | |
| 24-19■ | | | | | X | P | P | | I | 19 | | | | | | | | 19 | | | | | | | |
| | 25-19★ | 25-19★ | J19 | | X | | | P | | | | | | | | | | | | | | | | | |
| | 25-20■ | 25-20*** | J20 | | 2 ◆ | | | | N | 30 | | | | | 10 | 13 | | | | 4 | | | | 3 | |
| | | 25-21***≈ | J21≈ | | 2 ◆ | | | | N | 30 | | | | | 10 | 13 | | | | 4 | | | | 3 | |
| 24-24 | | | | | X | P | P | | I | 24 | | | | | | 12 | | 12 | | | | | | | |
| | 25-24★ | 25-24★ | J24 | | X | P | P | | | | | | | | | | | | | | | | | | |
| | | 25-26■★ | | | ✦ | | | | I | 25 | | | | | 16 | | | 5 | | | | | 4 | | |
| 24-29 | | | | | X | | | | I | 29 | | | | | | 29 | | | | | | | | | |
| | 25-29★ | 25-29★ | J29 | X | X | | | | | | | | | | | | | | | | | | | | |
| 24-35 | | | | | X | P | P | | New | 128 | | 128 | | | | | | | | | | | | | |
| | 25-35 | 25-35 | J35 | | X | P | P | P | M | | | | | | | | | | | | | | | | |
| 24-37 | | | | | X | | | | I | 37 | | | | | | 37 | | | | | | | | | |
| | 25-37★ | 25-37★ | J37 | | X | | | | | | | | | | | | | | | | | | | | |
| | | 25-41■ | | | ◆ | | | | N Inst. | 41 | | 22 | | | 3 | 11 | | | | 2 | | | | 3 | |
| 24-43■ | | | | | 3 | | | | I | 43 | | | | | 23 | 20 | | | | | | | | | |
| | 25-43 | 25-43 | J43 | X | 2 ◆ | | | | | | | | | | | | | | | | | | | | |
| | 25-46 | 25-46 | J46 | | 2 ◆ | | | | I | 46 | | | | | 40 | 4 | | | | | | | 2 | | |
| | | 25-47≈ | J47≈ | | 2 ◆ | | | | I | 46 | | | | | 40 | 4 | | | | | | | 2 | | |
| 24-61 | | | | X | X | P | P | | I | 61 | | | 61 | | | | | | | | | | | | |
| | 25-61 | 25-61 | J61 | X | X | P | P | P | | | | | | | | | | | | | | | | | |
| | | 25-88 | | | ◆ | | | | CX | 8 | | | | | | | | | | | | | 8 | | |
| | | 25-90 | J90 | | ◆ | | | | I | 46 | | | | | 40 | 4 | | | | | | | | 2 | |
| | | 25-91≈ | J91≈ | | ◆ | | | | I | 46 | | | | | 40 | 4 | | | | | | | | 2 | |
| | | 25-187 ■ | J23 | | X | | | | N | 187 | 187 | | | | | | | | | | | | | | |
| | | 25-1A ■ | | | ◆ | | | | N | 8 | | | | | | 4 | | | | | | | | | 4 |
| | | 25-AK■ | | | ◆ | | | | M | 42 | | 36 | | | | | | | | | | | 6 | | |
| | | 25-AT ■ | | | X | | | | M | 60 | | 31 | | | 12 | 13 | | | | 2 | | | | 2 | |
| | | 25-F4 ■ | | | X | | | | M/I | 66 | | 49 | | | | 13 | | 4 | | | | | | | |

38999
III
II
I
SJT
Access
Aquacon

X Completely tooled.
\+ Majority of tooling is completed (contact Amphenol Aerospace for availability).
◆ Not tooled for 02-R.
P Available with Pin contacts only
S Available with Socket contacts only
P/S Available with Pin contacts or Socket contacts
★ Ground plane proprietary option available. Arrg. 9-5, 26-62 is exclusively ground plane type.
■ Not Mil-Qualified.
✧ 21-75 is Mil-Qualified with twinax contacts only.
* Hermetic inserts - solder termination standard. (Contact Amphenol Aerospace for optional PCB or eyelet termination).
^ Supplied with D38999/62-A for Twinax, D38999/62-B for Coax

■ HD High Density which use size 23 contacts only. Not rated over 175°C.
** Two size 16 contacts dedicated to fiber optics. See the Fiber Optic Section for more information.
*** For use in MIL-STD-1760 applications (see pages 75 and 76).
† For RG 180/U and RG 195/U cables only.
†† Size 8 Coax and Twinax are interchangeable.
(2) Not Tooled for RP or 02RE
(3) Pin inserts only, not tooled for RP or 02RE (Consult Amphenol for avail.)
(4) MS connector 21-75 is supplied with size 8 twinax. Commercial connector 21-75 is supplied with size 8 coax.
(5) MS Connector 21-79 has provision for two size 8 coax contacts. Coax contacts are not supplied unless specified by customer.
≈ Patterns come with D38999/62 sealing boots

# MIL-DTL-38999, Series I LJT, II JT, III TV, HD

## Insert Availability and Identification Chart

### TV SERIES III-PYLE (T3)

#### SELECT SHELL SIZE - SPECIAL INSERT ARRANGEMENT

**(Not Mil-Spec Qualified)**

| Shell Size-Insert Arrg. | Crimp | Hermetics* | Service Rating | Total Contacts | Comments | Contact Size 22D | 20 | 16 | 12 |
|---|---|---|---|---|---|---|---|---|---|
| 9-2 | X | | I | 2 | Formerly Pyle | | 2 | | |
| 15-4 | X | | II | 4 | Formerly Pyle | | | 4 | |
| 15-25 | X | | M | 25 | Formerly Pyle | 22 | | 3 | |
| 17-20 | X | | M | 20 | Formerly Pyle | 16 | | | 4 |
| 21-12 | X | | I | 12 | Formerly Pyle | | 3 | | 9 |
| 21-21 | X | | M/Inst. | 41 | Improved sealing | 32 | | | 9 |
| 21-99 | X | | M | 16 | Formerly Pyle | 5 | | | 11 |
| 25-92 | X | | M | 101 | Formerly Pyle | 92 | | 9 | |
| 25-97 | X | | M | 42 | Formerly Pyle | 26 | | 3 | 13 |

### LJT SERIES I-PYLE

#### SELECT SHELL SIZE - SPECIAL INSERT ARRANGEMENT AND SIZE

**(Not Mil-Spec Qualified)**

| Shell Size-Insert Arrg. | Crimp | Service Rating | Total Contacts | Comments | Contact Size 22D | 20 | 16 | 12 |
|---|---|---|---|---|---|---|---|---|
| 25-64 | X | | 64 | Formerly Pyle | 40 | 8 | 10 | 6 |

### XL38999-NON-STANDARD SHELL SIZES

**- Special Insert Arrangement**

| Shell Size-Insert Arrg. | Crimp | Hermetics* | Service Rating | Total Contacts | Contact Size 22D | 20 | 8 | 4 | 0 |
|---|---|---|---|---|---|---|---|---|---|
| 25L-3 | X | | II | 3 | | | 1 | 2 | |
| 25L-7 | X | | II | 7 | | | 7 | | |
| 33-3 | X | | II | 3 | | | | 1 | 2 |
| 33-5 | X | | II | 5 | | | | 5 | |
| 33-6 | X | | II | 6 | | | 2 | 4 | |
| 37-5 | X | | II | 4 | | | | | 4 |

**(Insert arrangements requiring non-standard shells)**

X Completely tooled.
\+ Majority of tooling is completed (contact Amphenol Aerospace for availability).
◆ Not tooled for 02-R.
P Pin inserts only (contact Amphenol Aerospace for socket availability).
★ Ground plane proprietary option available. Arrangement 9-5, 25-62 is exclusively ground plane type.
■ Not Mil-Qualified.
* Hermetic inserts - solder termination standard. (Contact Amphenol Aerospace for optional PCB or eyelet termination).
** Two size 16 contacts dedicated to fiber optics. See the Fiber Optic section for more information.
*** For use in MIL-STD-1760 applications (pgs. 75 and 76).
† For RG 180/U and RG 195/U cables only.
†† Size 8 Coax and Twinax are interchangeable.
Note: 25L-3 and 25L-7 use longer shells.
(PWR) Suffix at end of part number to replace coax, twinax, and fiber contacts with power contacts.

Amphenol Aerospace

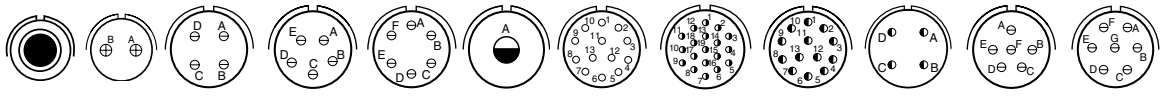
## Insert Arrangements

**Front face of pin inserts illustrated**

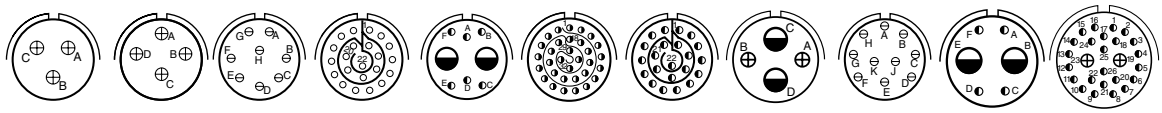




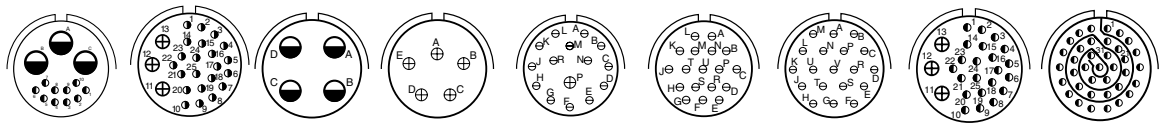
| Shell Size & Insert Arrg. for: | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series II JT | | 8-2 | 8-3 | | 8-6 | | | | | 8-35 | 8-44 | | 8-97 | 8-98 | |
| Series I LJT | | | 9-3 | | 9-6 | 9-7 | | | 9-22 | 9-35 | 9-44 | | | 9-98 | |
| Series III TV | 7-D2 | | | 9-5 | | | 9-9 HD | 9-12 | | 9-35 | | 9-94 | | 9-98 | |
| Service Rating | M | M | M | Grounded | M | M | N | M | I | M | M | M | M | I | |
| # Contacts | 2 | 2 | 3 | 1 | 6 | 7 | 9 | 1 | 2 | 6 | 4 | 2 | 2 2 | 3 | |
| Contact Size | 22D | 20 | 20 | 8 (TX) | 22M | 22M | 23 | 12 | 20 | 22D | 22 | 20 | 22M 20 | 20 | |



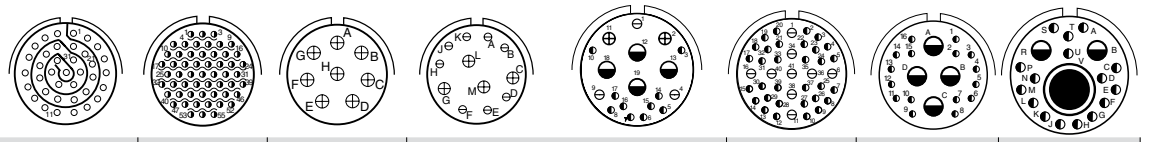
| Shell Size & Insert Arrg. for: | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series II JT | | | 10-4 | 10-5 | | | 10-13 | | 10-35 | | 10-98 | 10-99 | |
| Series I LJT | | 11-2 | 11-4 | 11-5 | 11-6 | | 11-13 | | 11-35 | | 11-98 | 11-99 | |
| Series III TV | 11-1 | 11-2 | 11-4 | 11-5 | | 11-12 | | 11-19 HD | 11-35 | 11-54 | 11-98 | 11-99 | |
| Service Rating | I | I | I | I | I | II | M | N | M | II | I | I | |
| # Contacts | 1 | 2 | 4 | 5 | 6 | 1 | 13 | 19 | 13 | 4 | 6 | 7 | |
| Contact Size | 8 (TX) | 16 | 20 | 20 | 20 | 12 | 22M | 23 | 22D | 22D | 20 | 20 | |



| Shell Size & Insert Arrg. for: | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series II JT | 12-3 | 12-4 | 12-8 | 12-22 | | | 12-35 | | | 12-98 | | | | |
| Series I LJT | 13-3 | 13-4 | 13-8 | 13-22 | | | 13-35 | | | 13-98 | | | | |
| Series III TV | | 13-4 | 13-8 | | 13-26 | 13-32 HD | 13-35 | 13-63 | | 13-98 | 13-CB | | 15-AC | |
| Service Rating | II | I | I | M | M | N | M | I | | I | M | | M | |
| # Contacts | 3 | 4 | 8 | 22 | 6 | 2 | 32 | 22 | 2 | 2 | 10 | 4 | 2 | 24 | 2 |
| Contact Size | 16 | 16 | 20 | 22M | 22D | 12 | 23 | 22D | 16 | 12 | 20 | 22D | 12 | 22D | 16 |



| Shell Size & Insert Arrg. for: | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series II JT | | | 14-4 | 14-5 | | 14-15 | | 14-18 | 14-19 | | | 14-35 | | |
| Series I LJT | | | 15-4 | 15-5 | | 15-15 | | 15-18 | 15-19 | | | 15-35 | | |
| Series III TV | 15-AT | 15-BA | 15-4 | 15-5 | | 15-15 | | 15-18 | 15-19 | 15-25 | | 15-35 | | |
| Service Rating | I | M | I | II | | I | | I | I | M | | M | | |
| # Contacts | 10 | 3 | 22 | 3 | 4 | 5 | 14 | 1 | 18 | 19 | 22 | 3 | 37 | |
| Contact Size | 22D | 12 | 22D | 16 | 12 | 16 | 20 | 16 | 20 | 20 | 22D | 16 | 22D | |



| Shell Size & Insert Arrg. for: | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series II JT | 14-37 | | 14-68 | 14-97 | | | | | | | | | | | |
| Series I LJT | 15-37 | | 15-68 | 15-97 | | | | | | | | | | | |
| Series III TV | | 15-55 HD | 15-68 | 15-97 | | 17-EA | | | 17-EC | | 17-EG | | 17-EL | | |
| Service Rating | M | N | I | I | | M | | | M | | M | | M | | |
| # Contacts | 37 | 55 | 8 | 8 | 4 | 10 | 3 | 2 | 4 | 32 | 9 | 16 | 4 | 16 | 2 | 1 |
| Contact Size | 22M | 23 | 16 | 20 | 16 | 22D | 20 | 16 | 12 | 22D | 20 | 22D | 12 | 22D | 12 | 8 |

(CX)= Coax, (P)=Power, (TX)= Twinax

HD: High Density HD38999 (use size 23 contacts only)

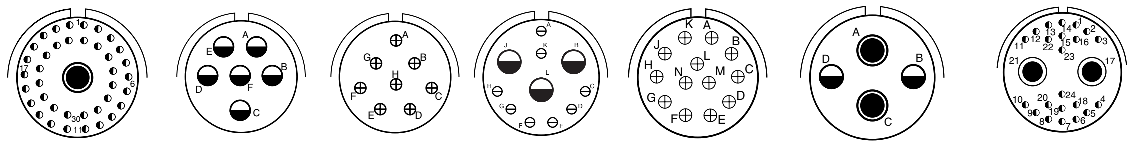
^ Supplied with D38999/62-A for Twinax, D38999/62-B for Coax

| CONTACT LEGEND | 8 | 10 | 12 | 16 | 20 | 22 | 22M | 22D | 23 |
|---|---|---|---|---|---|---|---|---|---|

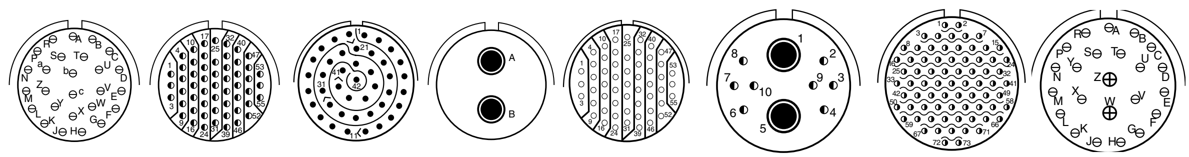
# MIL-DTL-38999, Series I LJT, II JT, III TV, HD

## Insert Arrangements

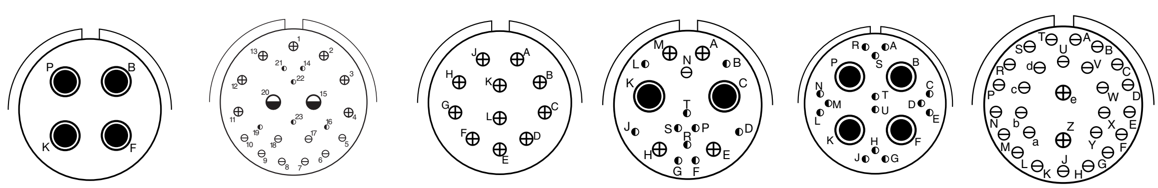
**Front face of pin inserts illustrated**



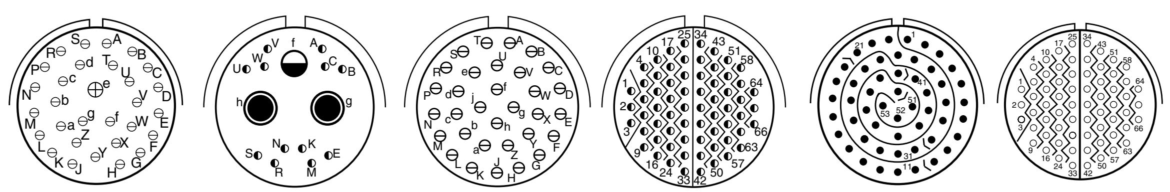
| Shell Size & Insert Arrg. for: | | | | | | | |
|---|---|---|---|---|---|---|---|
| Series II JT | | 16-6 | 16-8 | | 16-13 | | |
| Series I LJT | 17-2 \| 17-3^ | 17-6 | 17-8 | | 17-13 | 17-22 | 17-25 |
| Series III TV | 17-2 \| 17-3^ | 17-6 | 17-8 | 17-11 | 17-13 | 17-22 | 17-25 |
| Service Rating | M | I | II | N | I | Coax | M |
| Number of Contacts | 38 1 | 6 | 8 | 1 2 8 | 13 | 2 2 | 22 2 |
| Contact Size | 22D 8 (TX) | 12 | 16 | 12 (CX) 12 (TX) 20 | 16 | 12 (CX) 8 (CX) | 22D 8 (CX) |



| Shell Size & Insert Arrg. for: | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Series II JT | 16-26 | 16-35 | 16-42 | | 16-55 | | | 16-99 |
| Series I LJT | 17-26 | 17-35 | 17-42 | | 17-55 | | | 17-99 |
| Series III TV | 17-26 | 17-35 | | 17-52 | | 17-60 | 17-73 HD | 17-99 |
| Service Rating | I | M | M | M | M | I/Coax | N | I |
| Number of Contacts | 26 | 55 | 42 | 2 | 55 | 8 2 | 73 | 21 2 |
| Contact Size | 20 | 22D | 22 | 8 (TX) | 22M | 22D 8 (CX) | 23 | 20 16 |



| Shell Size & Insert Arrg. for: | | | | | | |
|---|---|---|---|---|---|---|
| Series II JT | | | 18-11 | | | 18-28 |
| Series I LJT | | | 19-11 | | 19-18 \| 19-19^ | 19-28 |
| Series III TV | 19-A4 | 19-FA | 19-11 | 19-17 | 19-18 \| 19-19^ | 19-28 |
| Service Rating | M | M | II | M | M | M |
| Number of Contacts | 4 | 6 8 7 2 | 11 | 10 1 4 2 | 14 4 | 26 2 |
| Contact Size | 8 (TX) | 22D 20 16 12 | 16 | 22D 20 16 8 (TX) | 22D 8 (TX) | 20 16 |



| Shell Size & Insert Arrg. for: | | | | | | |
|---|---|---|---|---|---|---|
| Series II JT | 18-30 | | 18-32 | 18-35 | 18-53 | 18-66 |
| Series I LJT | 19-30 | | 19-32 | 19-35 | 19-53 | 19-66 |
| Series III TV | | 19-31 | 19-32 | 19-35 | | |
| Service Rating | I | M | 1 | M | M | M |
| Number of Contacts | 29 1 | 12 1 2 | 32 | 66 | 53 | 66 |
| Contact Size | 20 16 | 22D 12 8 (CX) | 20 | 22D | 22 | 22M |



**CONTACT LEGEND** 8 10 12 16 20 22 22M 22D 23

(CX)= Coax, (P)=Power, (TX)= Twinax

HD: High Density HD38999 (use size 23 contacts only)

^ Supplied with D38999/62-A for Twinax, D38999/62-B for Coax

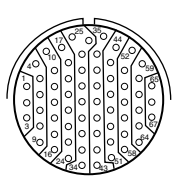
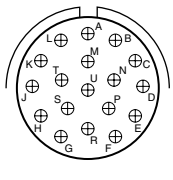
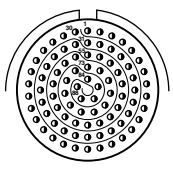
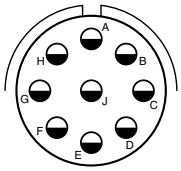
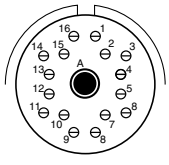
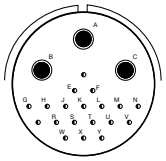
# MIL-DTL-38999, Series I LJT, II JT, III TV, HD

## Insert Arrangements

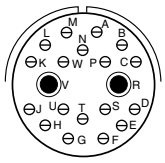
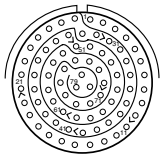
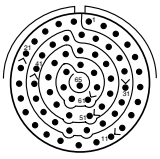
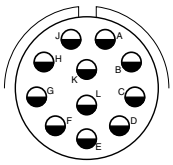
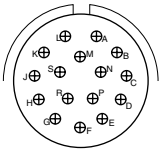
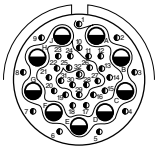
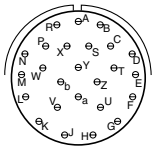
Amphenol Aerospace

**Front face of pin inserts illustrated**

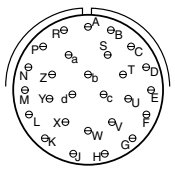
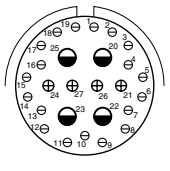
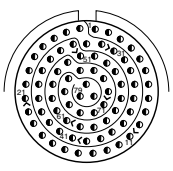
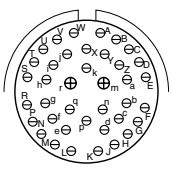
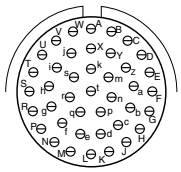
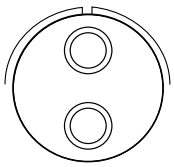


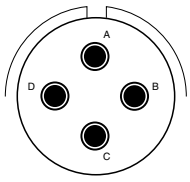
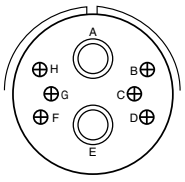
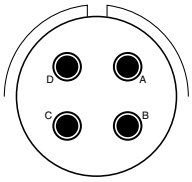
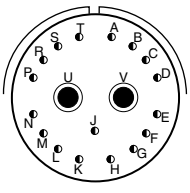
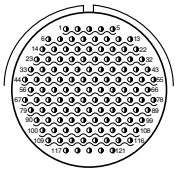
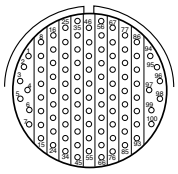
| Shell Size & Insert Arrg. for: | | | | | | |
|---|---|---|---|---|---|---|
| **Series II JT** | | 18-68 | | 18-96 | | |
| **Series I LJT** | 19-67 | 19-68 | | | | |
| **Series III TV** | | 19-68 | 19-88 HD | | 19-AD | 21-AZ |
| Service Rating | M | I | N | I | Inst. | II |
| Number of Contacts | 67 | 18 | 88 | 9 | 16 1 | 19 3 |
| Contact Size | 22M | 16 | 23 | 12 | 20 8 (TX) | 22D 8 (P) |

| Shell Size & Insert Arrg. for: | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Series II JT** | | 20-1 | 20-2 | 20-11 | 20-16 | | |
| **Series I LJT** | | 21-1 | 21-2 | 21-11 | 21-16 | | 21-25 |
| **Series III TV** | 21-AJ | | | 21-11 | 21-16 | 21-21 | |
| Service Rating | M | M | II | I | II | M | I |
| Number of Contacts | 18 2 | 79 | 65 | 11 | 16 | 32 9 | 25 |
| Contact Size | 20 8 (TX) | 22M | 22 | 12 | 16 | 22D 12 | 20 |

| Shell Size & Insert Arrg. for: | | | | | | |
|---|---|---|---|---|---|---|
| **Series II JT** | | | 20-35 | 20-39 | 20-41 | |
| **Series I LJT** | 21-27 | | 21-35 | 21-39 | 21-41 | |
| **Series III TV** | | 21-29 | 21-35 | 21-39 | 21-41 | 21-42 |
| Service Rating | I | I | M | I | I | I |
| Number of Contacts | 27 | 19 4 4 | 79 | 37 2 | 41 | 2 |
| Contact Size | 20 | 20 16 12 | 22D | 20 16 | 20 | 4 |

| Shell Size & Insert Arrg. for: | | | | | | |
|---|---|---|---|---|---|---|
| **Series II JT** | | | | | | 22-1 |
| **Series I LJT** | | | 21-75 \| 21-76^ | 21-79 | | 23-1 |
| **Series III TV** | 21-A48 | 21-72 | 21-75 \| 21-76^ | 21-79 | 21-121 HD | |
| Service Rating | M | I | N | II | N | M |
| Number of Contacts | 4 | 6 2 | 4 | 17 (See Note) | 121 | 100 |
| Contact Size | 8 (P) | 16 4 | (See Note) | 22D | 23 | 22M |

HD: High Density HD38999 (use size 23 contacts only)
Note: MS connector 21-75 is supplied with four size 8 twinax contacts.
Commercial connector 21-75 is supplied with four size 8 coax contacts.
MS connector 21-79 has provision for two size 8 coax contacts.
Coax contacts are not supplied unless specified by customers.
^ Supplied with D38999/62-A for Twinax, D38999/62-B for Coax

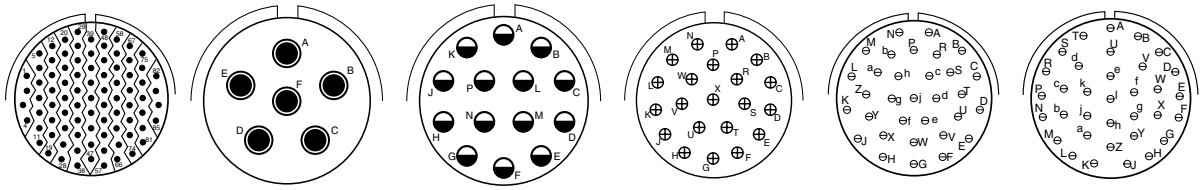
(CX)= Coax, (P)=Power, (TX)= Twinax

| CONTACT LEGEND | 8 | 10 | 12 | 16 | 20 | 22 | 22M | 22D | 23 |
|---|---|---|---|---|---|---|---|---|---|

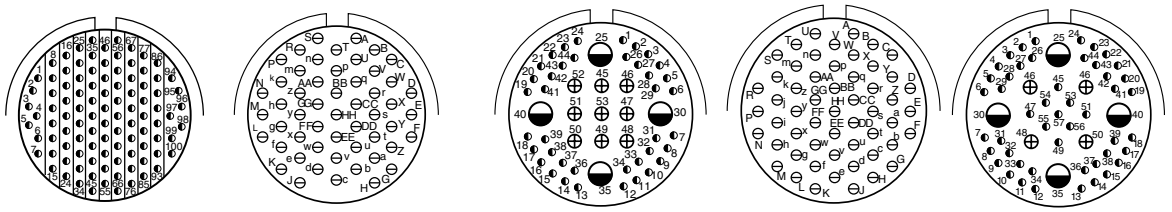
# MIL-DTL-38999, Series I LJT, II JT, III TV, HD

## Insert Arrangements

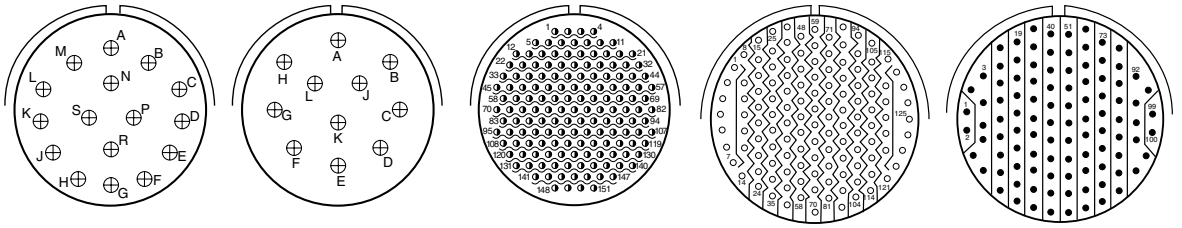
**Front face of pin inserts illustrated**



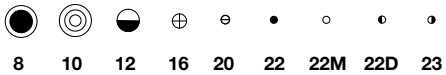
| Shell Size & Insert Arrg. for: | | | | | | |
|---|---|---|---|---|---|---|
| Series II JT | 22-2 | | 22-14 | 22-21 | 22-32 | |
| Series I LJT | 23-2 | 23-6 | 23-14 | 23-21 | 23-32 | 23-34 |
| Series III TV | | 23-6 | 23-14 | 23-21 | | |
| Service Rating | M | M | I | II | I | I |
| # Contacts | 85 | 6 | 14 | 21 | 32 | 34 |
| Contact Size | 22 | 8 (TX) | 12 | 16 | 20 | 20 |



| Shell Size & Insert Arrg. for: | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Series II JT | 22-35 | 22-53 | | | | 22-55 | | | |
| Series I LJT | 23-35 | 23-53 | | | | 23-55 | | | |
| Series III TV | 23-35 | 23-53 | 23-54 | | | 23-55 | 23-63 | | |
| Service Rating | M | I | M | | | I | M | | |
| # Contacts | 100 | 53 | 40 | 9 | 4 | 55 | 49 | 4 | 4 |
| Contact Size | 22D | 20 | 22D | 16 | 12 | 20 | 22D | 16 (CX) | 12 (CX) |



| Shell Size & Insert Arrg. for: | | | | | |
|---|---|---|---|---|---|
| Series II JT | | | | 24-1 | 24-2 |
| Series I LJT | 23-97 | 23-99 | | 25-1 | 25-2 |
| Series III TV | | | 23-151 HD | | |
| Service Rating | II | II | N | M | M |
| # Contacts | 16 | 11 | 151 | 128 | 100 |
| Contact Size | 16 | 16 | 23 | 22M | 22 |



**CONTACT LEGEND** 8 10 12 16 20 22 22M 22D 23

(CX)= Coax, (P)=Power, (TX)= Twinax

HD: High Density HD38999 (use size 23 contacts only)

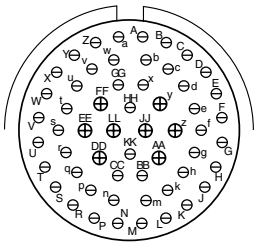
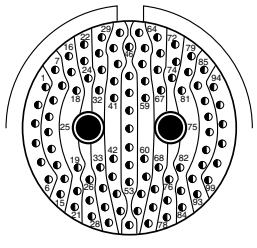
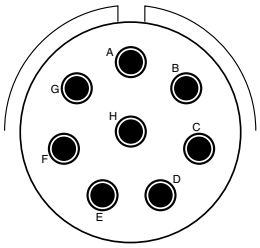
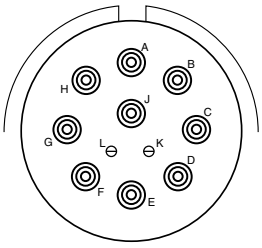
^ Supplied with D38999/62-A for Twinax, D38999/62-B for Coax

## Insert Arrangements

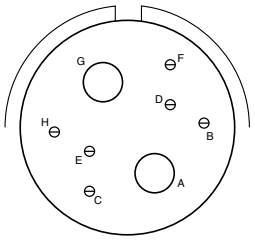
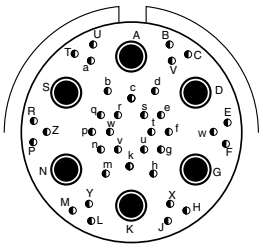
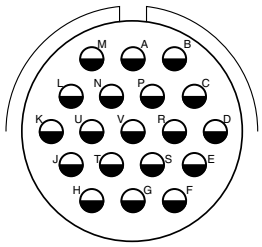
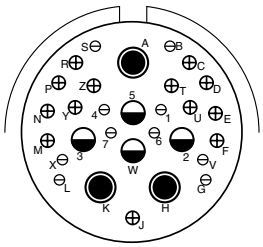
Amphenol Aerospace

Front face of pin inserts illustrated

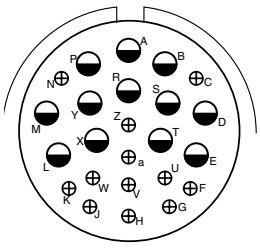
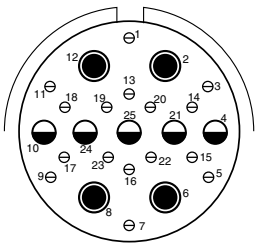
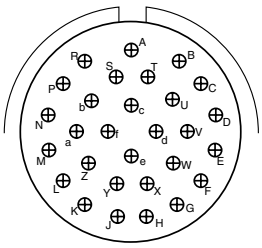
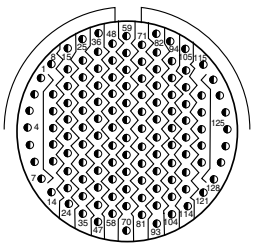


| Shell Size & Insert Arrg. for: | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Series II JT | 24-4 | | | | | | | |
| Series I LJT | 25-4 | | 25-7 \| 25-9^ | | | | 25-11 | |
| Series III TV | 25-4 | | 25-7 \| 25-9^ | | 25-8 \| 25-10^ \| 25-88 | | 25-11*** | |
| Service Rating | I | | M | | Twinax / Coax | | N | |
| # Contacts | 48 | 8 | 97 | 2 | 8 | | 2 | 9 |
| Contact Size | 20 | 16 | 22D | 8 (TX) | 8 (TX) / 8 (CX) (88) | | 20 | 10 |

| Shell Size & Insert Arrg. for: | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Series II JT | | | | | 24-19 | | | | | |
| Series I LJT | | | | | 25-19 | | 25-20 \| 25-21^ | | | |
| Series III TV | 25-16 | | 25-17 \| 25-AK | | 25-19 | | *** 25-20 \| 25-21^ | | | |
| Service Rating | M | | M | | I | | N | | | |
| # Contacts | 6 | 2 | 36 | 6 | 19 | | 10 | 13 | 4 | 3 |
| Contact Size | 20 | 4 | 22D | 8 (TX) \| 8 (CX) | 12 | | 20 | 16 | 12 (CX) | 8 (TX) |
| | | | | | | | (With Matched Impedance) | | | |

| Shell Size & Insert Arrg. for: | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Series II JT | 24-24 | | | | | 24-29 | | 24-35 | | |
| Series I LJT | 25-24 | | | | | 25-29 | | 25-35 | | |
| Series III TV | 25-24 | | 25-26 | | | 25-29 | | 25-35 | | |
| Service Rating | I | | I | | | I | | M | | |
| # Contacts | 12 | 12 | 16 | 5 | 4 | 29 | | 128 | | |
| Contact Size | 16 | 12 | 20 | 12 | 8 (CX) | 16 | | 22D | | |

(CX)= Coax, (P)=Power, (TX)= Twinax

*** For use in MIL-STD-1760 applications (see pages 76 and 77).

HD: High Density HD38999 (use size 23 contacts only)

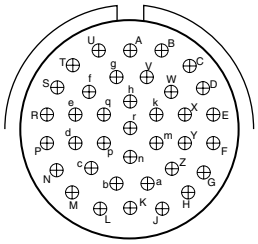
^ Supplied with D38999/62-A for Twinax, D38999/62-B for Coax

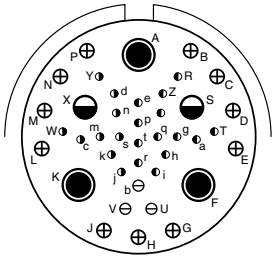
| CONTACT LEGEND | 8 | 10 | 12 | 16 | 20 | 22 | 22M | 22D | 23 |
|---|---|---|---|---|---|---|---|---|---|

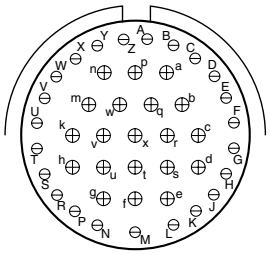
# MIL-DTL-38999, Series I LJT, II JT, III TV, HD

## Insert Arrangements

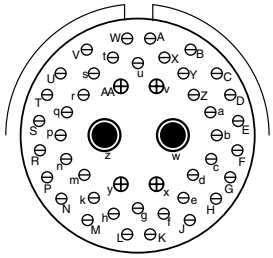
**Front face of pin inserts illustrated**

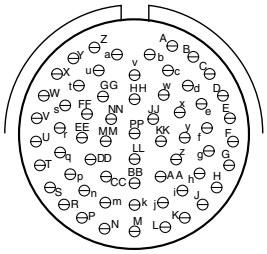


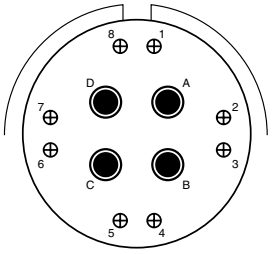


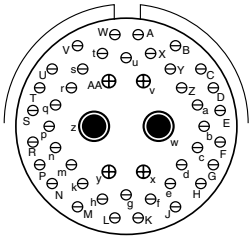


| Shell Size & Insert Arrg. for: | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Series II JT** | 24-37 | | | | | | | | 24-43 | | |
| **Series I LJT** | 25-37 | | | | | | | | 25-43 | | |
| **Series III TV** | 25-37 | | | 25-41 | | | | | 25-43 | | |
| Service Rating | I | | | N/Inst. | | | | | I | | |
| # Contacts | 37 | 22 | 3 | 11 | 2 | 3 | | | 23 | 20 | |
| Contact Size | 16 | 22D | 20 | 16 | 12 (CX) | 8 (TX) | | | 20 | 16 | |

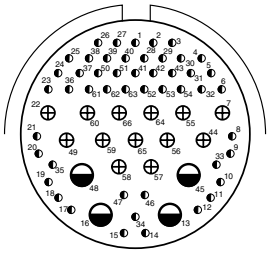


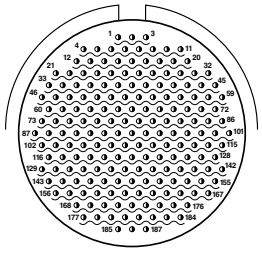


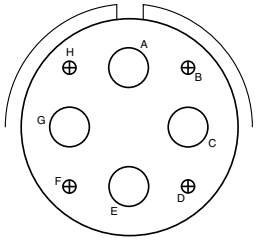


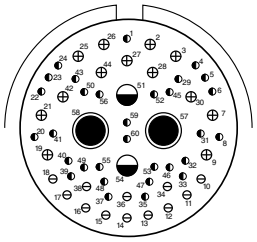


| Shell Size & Insert Arrg. for: | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Series II JT** | | | | 24-61 | | | | | | | |
| **Series I LJT** | 25-46 \| 25-47^ | | | 25-61 | | | | | | | |
| **Series III TV** | 25-46 \| 25-47^ | | | 25-61 | | | 25-62 | | 25-90 \| 25-91^ | | |
| Service Rating | I | | | I | | | I | | I | | |
| # Contacts | 40 | 4 | 2 | 61 | | | 8 | 4 | 40 | 4 | 2 |
| Contact Size | 20 | 16 | 8 (CX) † | 20 | | | 16 | 8 | 20 | 16 | 8 (TX) |
| | | | | | | | Ground Plane Only | | | | |









| Shell Size & Insert Arrg. for: | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Series II JT** | | | | | | | | | | | |
| **Series I LJT** | | | | | | | | | | | |
| **Series III TV** | 25-F4 | | | 25-187 HD | | | 25-1A | | 25-AT | | | | |
| Service Rating | Size 22D=M, Balance =I | | | N | | | N | | N | | | | |
| # Contacts | 49 | 13 | 4 | 187 | | | 4 | 4 | 31 | 12 | 13 | 2 | 2 |
| Contact Size | 22D | 16 | 12 | 23 | | | 16 | 4 | 22D | 20 | 16 | 12 | 10 |

**CONTACT LEGEND** 8 · 10 · 12 · 16 · 20 · 22 · 22M · 22D · 23

(CX)= Coax, (P)=Power, (TX)= Twinax

† Coax contacts for RG180/U or RG195/U cable.

HD: High Density HD38999 (use size 23 contacts only)

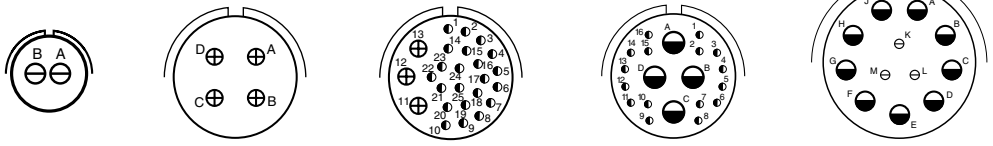
^ Supplied with D38999/62-A for Twinax, D38999/62-B for Coax

# MIL-DTL-38999, Series III TV

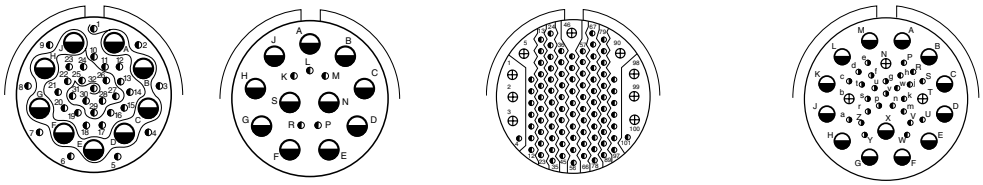
## Special Insert Arrangements

Amphenol Aerospace

**Front face of pin inserts illustrated**



| Shell Size & Insert Arrg. for: | | | | | |
|---|---|---|---|---|---|
| **Series III TV** | **9-2** | **15-4*** | **15-25** | **17-20** | **21-12** |
| Service Rating | I | II | M | M | I |
| # Contacts | 2 | 4 | 22 3 | 16 4 | 3 9 |
| Contact Size | 20 | 16 | 22D 16 | 22D 12 | 20 12 |

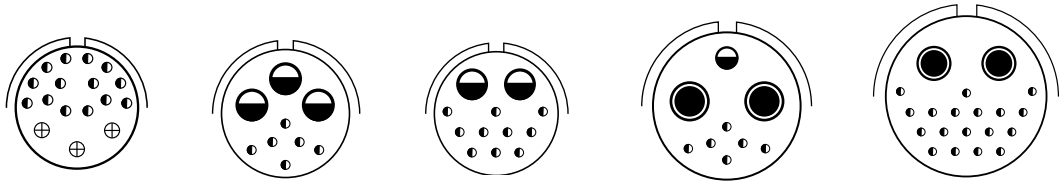


| Shell Size & Insert Arrg. for: | | | | |
|---|---|---|---|---|
| **Series III TV** | **21-21** | **21-99** | **25-92** | **25-97** |
| Service Rating | M/Inst. | M | M | M |
| # Contacts | 32 9 | 5 11 | 92 9 | 26 3 13 |
| Contact Size | 22D 12 | 22D 12 | 22D 16 | 22D 16 12 |

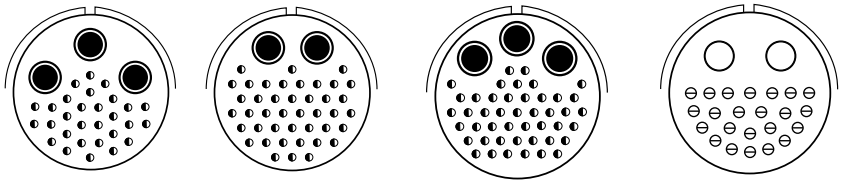
## Tracer Power/Signal Arrangements-Direct Current (VDC) With and Without Ground

Available now with Amphenol's **Tracer Rapid Prototyping Insert Technology**, contact **tracer@amphenol-aao.com**
Contact factory for lead time on standard D38999 insert technology.

TRACER
Rapid Prototyping



| Shell Size & Insert Arrg. for: | | | | | |
|---|---|---|---|---|---|
| **Series III TV** | **13-AX** | **15-AX** | **15-AZ** | **17-AZ** | **19-AX** |
| Service Rating | M | II | II | II | II |
| # Contacts | 3 14 | 3 6 | 2 10 | 2 1 6 | 2 18 |
| Contact Size | 16 22D | 12 22D | 12 22D | 8 12 22D | 8 22D |



| Shell Size & Insert Arrg. for: | | | | |
|---|---|---|---|---|
| **Series III TV** | **23-AZ** | **23-AX** | **25-AX** | **25-22** |
| Service Rating | II | II | II | M |
| # Contacts | 3 29 | 2 42 | 3 46 | 2 23 |
| Contact Size | 8 22D | 8 22D | 8 22D | 4 20 |



| CONTACT LEGEND | 4 | 8 | 10 | 12 | 16 | 20 | 22 | 22M | 22D | 23* |
|---|---|---|---|---|---|---|---|---|---|---|

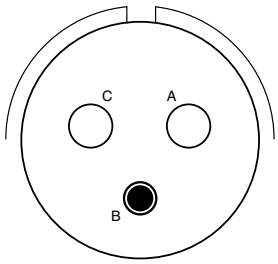
A

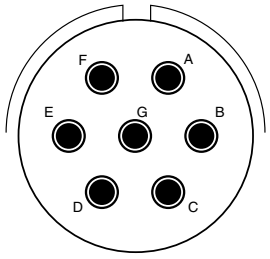
# MIL-DTL-38999, Series III TV

## Special Insert Arrangements-XL38999 Series

### Non-Standard Shells or Large Contacts

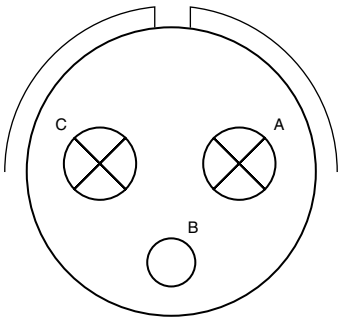
**Front face of pin inserts illustrated**

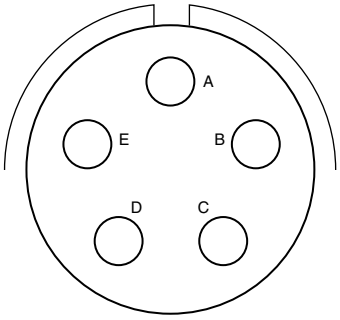


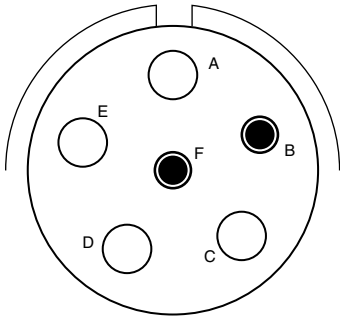




Shell Size & Insert Arrg. for:

| Series III TV | 25L-3 | | 25L-7 |
|---|---|---|---|
| Service Rating | II | | II |
| # Contacts | 1 | 2 | 7 |
| Contact Size | 8 | 4 | 8 |

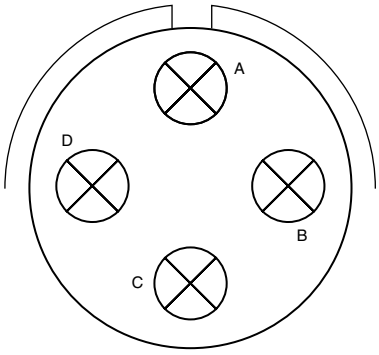



Shell Size & Insert Arrg. for:

| Series III TV | 33-3 | | 33-5 | 33-6 | |
|---|---|---|---|---|---|
| Service Rating | II | | II | II | |
| # Contacts | 1 | 2 | 5 | 2 | 4 |
| Contact Size | 4 | 0 | 4 | 8 | 4 |

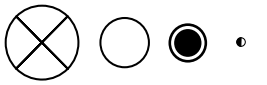



Shell Size & Insert Arrg. for:

| Series III TV | 37-5 |
|---|---|
| Service Rating | II |
| # Contacts | 4 |
| Contact Size | 0 |

NOTE: Some specials shown here were formerly known as Pyle arrangements. Consult Amphenol for how to order information for connectors with these inserts.
Consult Amphenol Aerospace for longer shell drawings.

**CONTACT LEGEND**



Amphenol Aerospace

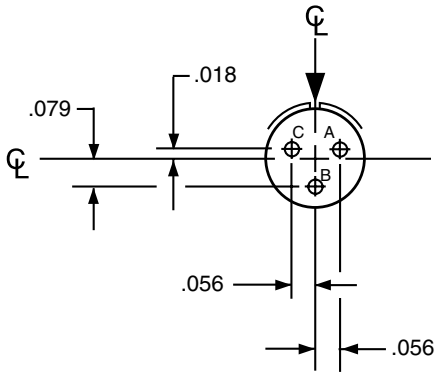


## Insert Arrangements

### INSERT ARRANGEMENT #8-3 / 9-3

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III | Number of Contacts | Contact Size | Service Rating |
|---|---|---|---|---|---|---|
| Insert Designation: | 8-3 | 9-3 | NA | 3 | 20 | M |

**Contact Locations**
Front face of pin insert shown

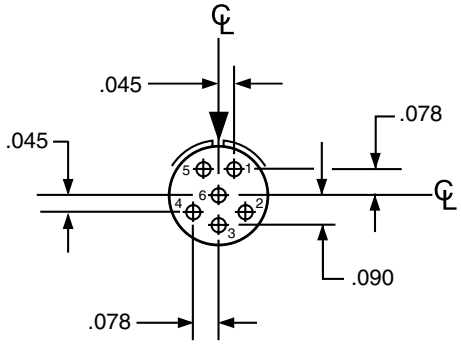



*Service Rating: M for MIL-DTL-38999

### INSERT ARRANGEMENT #8-35 / 9-35

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III | Number of Contacts | Contact Size | Service Rating |
|---|---|---|---|---|---|---|
| Insert Designation: | 8-35 | 9-35 | 9-35 | 6 | 22D | M |

**Contact Locations**
Front face of pin insert shown




All dimensions for reference only. For alternate rotations see page 47 for Series III, page 87 for Series II, and page 115 for Series I.
Note: Shown in this catalog are the most common insert patterns for PCB applications. For availability of other arrangements, consult Amphenol Aerospace.

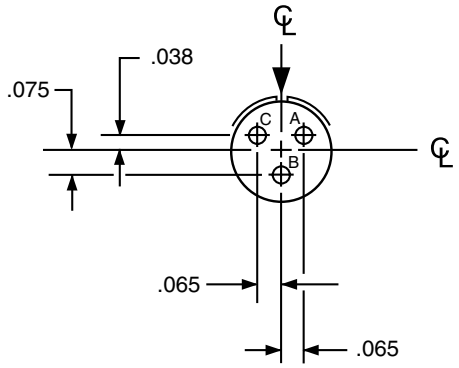
# PCB Contacts 38999, Series I LJT, II JT, III TV

## Insert Arrangements

### INSERT ARRANGEMENT #8-98 / 9-98

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III | Number of Contacts | Contact Size | Service Rating |
|---|---|---|---|---|---|---|
| Insert Designation: | 8-98 | 9-98 | 9-98 | 3 | 20 | I |

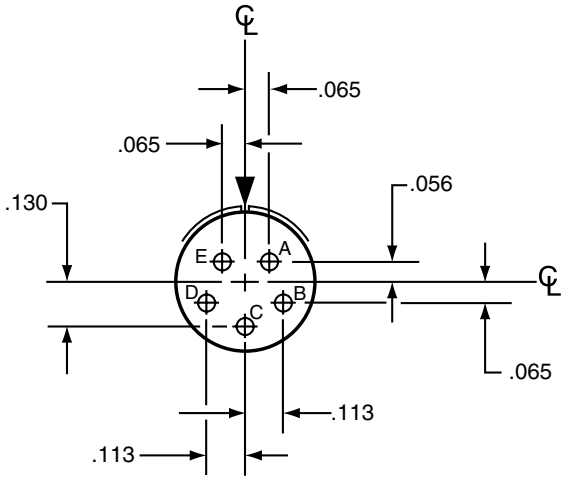
**Contact Locations**
Front face of pin insert shown




### INSERT ARRANGEMENT #10-5 / 11-5

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III | Number of Contacts | Contact Size | Service Rating |
|---|---|---|---|---|---|---|
| Insert Designation: | 10-5 | 11-5 | 11-5 | 5 | 20 | I |

**Contact Locations**
Front face of pin insert shown




All dimensions for reference only. For alternate rotations see page 47 for Series III, page 87 for Series II, and page 115 for Series I.
Note: Shown in this catalog are the most common insert patterns for PCB applications. For availability of other arrangements, consult Amphenol Aerospace.

Amphenol Aerospace

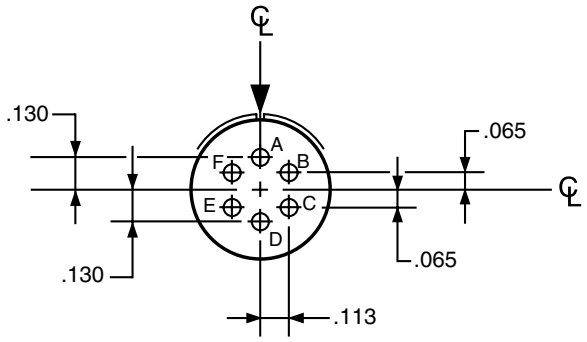


## Insert Arrangements

### INSERT ARRANGEMENT #10-6 / 11-6

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III | Number of Contacts | Contact Size | Service Rating |
|---|---|---|---|---|---|---|
| Insert Designation: | NA | 11-6 | NA | 6 | 20 | I |

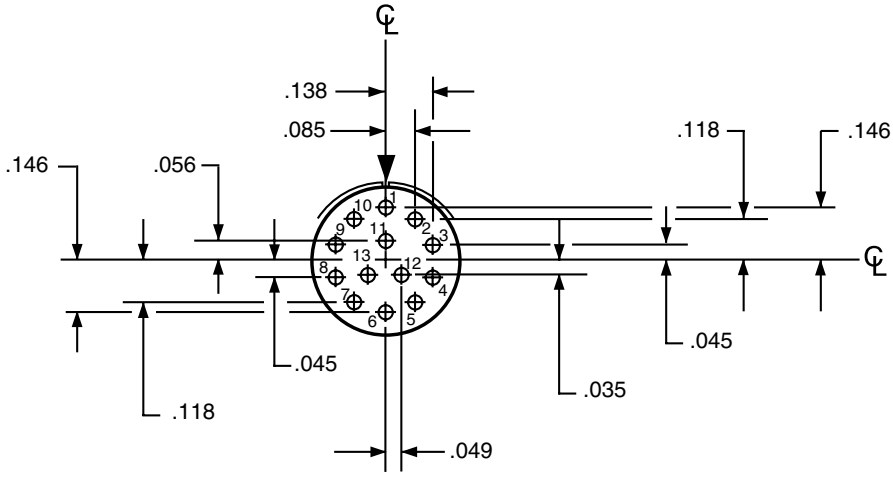
**Contact Locations**
Front face of pin insert shown




### INSERT ARRANGEMENT #10-35 / 11-35

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III | Number of Contacts | Contact Size | Service Rating |
|---|---|---|---|---|---|---|
| Insert Designation: | 10-35 | 11-35 | 11-35 | 13 | 22D | M |

**Contact Locations**
Front face of pin insert shown




All dimensions for reference only. For alternate rotations see page 47 for Series III, page 87 for Series II, and page 115 for Series I.
Note: Shown in this catalog are the most common insert patterns for PCB applications. For availability of other arrangements, consult Amphenol Aerospace.

# PCB Contacts 38999, Series I LJT, II JT, III TV

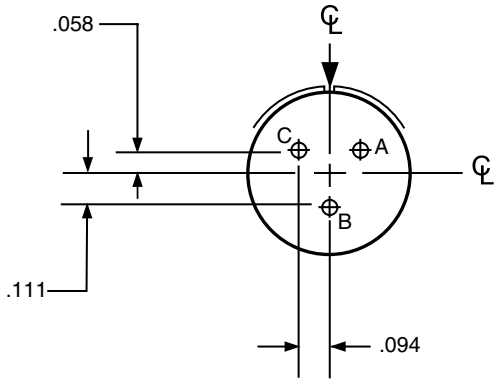
## Insert Arrangements

### INSERT ARRANGEMENT #12-3 / 13-3

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III | Number of Contacts | Contact Size | Service Rating |
|---|---|---|---|---|---|---|
| Insert Designation: | 12-3 | 13-3 | NA | 3 | 16 | II |

**Contact Locations**

Front face of pin insert shown

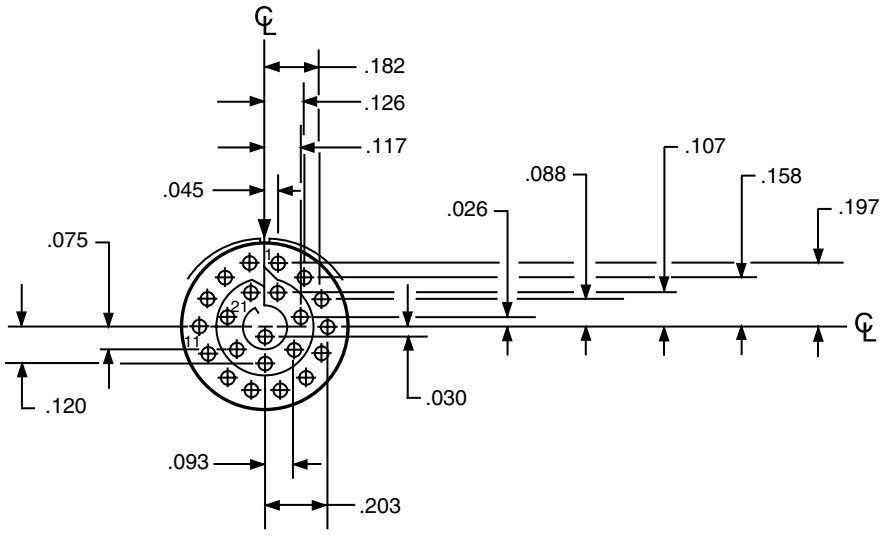



### INSERT ARRANGEMENT #12-35 / 13-35

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III | Number of Contacts | Contact Size | Service Rating |
|---|---|---|---|---|---|---|
| Insert Designation: | 12-35 | 13-35 | 13-35 | 22 | 22D | M |

**Contact Locations**

Front face of pin insert shown



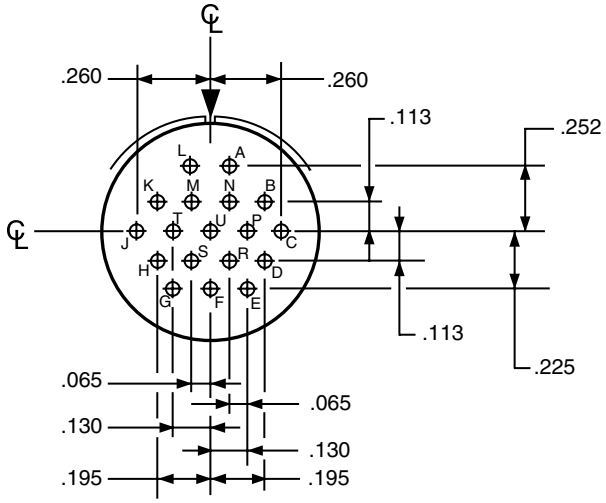

All dimensions for reference only. For alternate rotations see page 47 for Series III, page 87 for Series II, and page 115 for Series I.
Note: Shown in this catalog are the most common insert patterns for PCB applications. For availability of other arrangements, consult Amphenol Aerospace.

## Insert Arrangements

### INSERT ARRANGEMENT #14-18 / 15-18

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III | Number of Contacts | Contact Size | Service Rating |
|---|---|---|---|---|---|---|
| Insert Designation: | 14-18 | 15-18 | 15-18 | 18 | 20 | I |

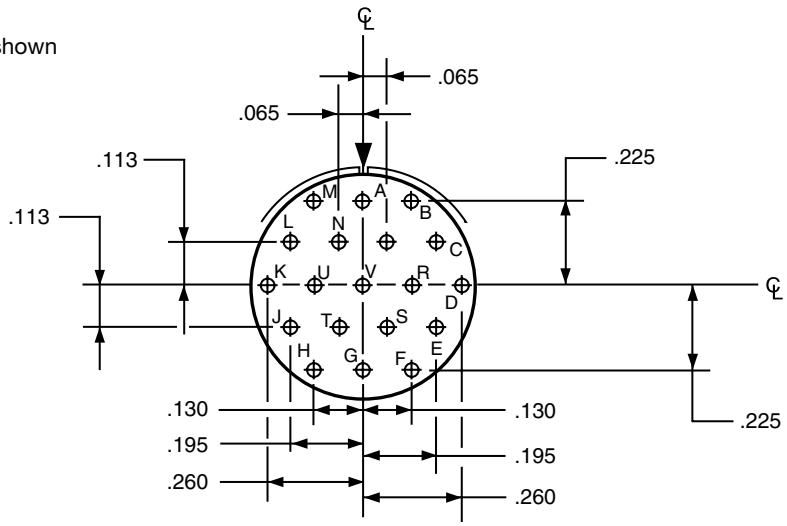
**Contact Locations**
Front face of pin insert shown




### INSERT ARRANGEMENT #14-19 / 15-19

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III | Number of Contacts | Contact Size | Service Rating |
|---|---|---|---|---|---|---|
| Insert Designation: | 14-19 | 15-19 | 15-19 | 19 | 20 | I |

**Contact Locations**
Front face of pin insert shown




All dimensions for reference only. For alternate rotations see page 47 for Series III, page 87 for Series II, and page 115 for Series I.
Note: Shown in this catalog are the most common insert patterns for PCB applications. For availability of other arrangements, consult Amphenol Aerospace.

# PCB Contacts 38999, Series I LJT, II JT, III TV

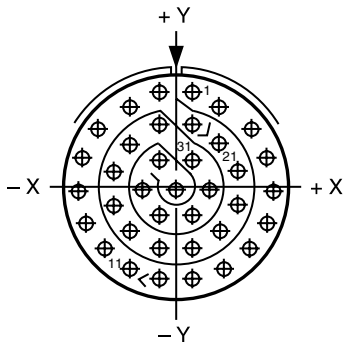
## Insert Arrangements

### INSERT ARRANGEMENT #14-35 / 15-35

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III |
|---|---|---|---|
| Insert Designation: | 14-35 | 15-35 | 15-35 |

| Number of Contacts | Contact Size | Service Rating |
|---|---|---|
| 37 | 22D | M |

**Contact Locations**
Front face of pin insert shown




| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| 1 | +.045 | +.262 |
| 2 | +.123 | +.217 |
| 3 | +.211 | +.160 |
| 4 | +.254 | +.080 |
| 5 | +.266 | –.010 |
| 6 | +.247 | –.098 |
| 7 | +.200 | –.175 |
| 8 | +.130 | –.232 |
| 9 | +.045 | –.262 |
| 10 | –.045 | –.262 |
| 11 | –.130 | –.232 |
| 12 | –.200 | –.175 |
| 13 | –.247 | –.098 |
| 14 | –.266 | –.010 |
| 15 | –.254 | +.080 |
| 16 | –.211 | +.160 |
| 17 | –.123 | +.217 |
| 18 | –.045 | +.262 |

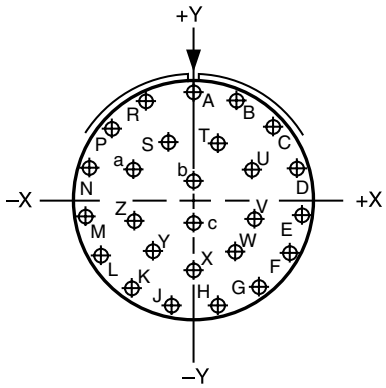
| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| 19 | +.045 | +.172 |
| 20 | +.123 | +.119 |
| 21 | +.170 | +.040 |
| 22 | +.170 | –.050 |
| 23 | +.123 | –.127 |
| 24 | +.045 | –.172 |
| 25 | –.045 | –.172 |
| 26 | –.123 | –.127 |
| 27 | –.170 | –.050 |
| 28 | –.170 | +.040 |
| 29 | –.123 | +.119 |
| 30 | –.045 | +.172 |
| 31 | +.045 | +.074 |
| 32 | +.090 | –.004 |
| 33 | +.045 | –.082 |
| 34 | –.045 | –.082 |
| 35 | –.090 | –.004 |
| 36 | –.045 | +.074 |
| 37 | .000 | –.004 |

### INSERT ARRANGEMENT #16-26 / 17-26

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III |
|---|---|---|---|
| Insert Designation: | NA | 17-26 | 17-26 |

| Number of Contacts | Contact Size | Service Rating |
|---|---|---|
| 26 | 20 | I |

**Contact Locations**
Front face of pin insert shown




| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| A | .000 | +.321 |
| B | +.131 | +.293 |
| C | +.239 | +.214 |
| D | +.305 | +.099 |
| E | +.319 | –.034 |
| F | +.278 | –.161 |
| G | +.189 | –.260 |
| H | +.067 | –.314 |
| J | –.067 | –.314 |
| K | –.189 | –.260 |
| L | –.278 | –.161 |
| M | –.319 | –.034 |
| N | –.305 | +.099 |
| P | –.239 | +.214 |

| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| R | –.131 | +.293 |
| S | –.070 | +.177 |
| T | +.070 | +.177 |
| U | +.175 | +.094 |
| V | +.178 | –.036 |
| W | +.119 | –.151 |
| X | .000 | –.203 |
| Y | –.119 | –.151 |
| Z | –.178 | –.036 |
| a | –.175 | +.094 |
| b | .000 | +.065 |
| c | .000 | –.065 |

All dimensions for reference only. For alternate rotations see page 47 for Series III, page 87 for Series II, and page 115 for Series I.
Note: Shown in this catalog are the most common insert patterns for PCB applications. For availability of other arrangements, consult Amphenol Aerospace.

## Insert Arrangements



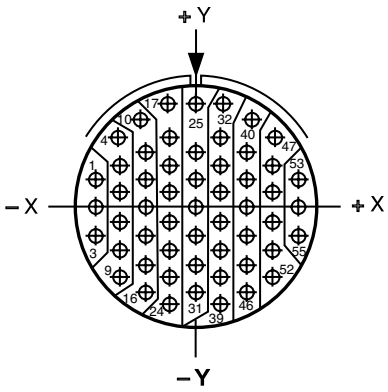
### INSERT ARRANGEMENT #16-35 / 17-35

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III |
|---|---|---|---|
| Insert Designation: | 16-35 | 17-35 | 17-35 |

| Number of Contacts | Contact Size | Service Rating |
|---|---|---|
| 55 | 22D | M |

**Contact Locations**

Front face of pin insert shown




| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| 1 | –.312 | +.086 |
| 2 | –.312 | –.004 |
| 3 | –.312 | –.094 |
| 4 | –.242 | +.221 |
| 5 | –.234 | +.131 |
| 6 | –.234 | +.041 |
| 7 | –.234 | –.049 |
| 8 | –.234 | –.139 |
| 9 | –.234 | –.229 |
| 10 | –.172 | +.279 |
| 11 | –.156 | +.176 |
| 12 | –.156 | +.086 |
| 13 | –.156 | –.004 |
| 14 | –.156 | –.094 |
| 15 | –.156 | –.184 |
| 16 | –.156 | –.274 |
| 17 | –.089 | +.316 |
| 18 | –.078 | +.221 |
| 19 | –.078 | +.131 |
| 20 | –.078 | +.041 |
| 21 | –.078 | –.049 |
| 22 | –.078 | –.139 |
| 23 | –.078 | –.229 |
| 24 | –.078 | –.319 |
| 25 | .000 | +.329 |
| 26 | .000 | +.176 |
| 27 | .000 | +.086 |

| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| 28 | .000 | –.004 |
| 29 | .000 | –.094 |
| 30 | .000 | –.184 |
| 31 | .000 | –.274 |
| 32 | +.089 | +.316 |
| 33 | +.078 | +.221 |
| 34 | +.078 | +.131 |
| 35 | +.078 | +.041 |
| 36 | +.078 | –.049 |
| 37 | +.078 | –.139 |
| 38 | +.078 | –.229 |
| 39 | +.078 | –.319 |
| 40 | +.172 | +.279 |
| 41 | +.156 | +.176 |
| 42 | +.156 | +.086 |
| 43 | +.156 | –.004 |
| 44 | +.156 | –.094 |
| 45 | +.156 | –.184 |
| 46 | +.156 | –.274 |
| 47 | +.242 | +.221 |
| 48 | +.234 | +.131 |
| 49 | +.234 | +.041 |
| 50 | +.234 | –.049 |
| 51 | +.234 | –.139 |
| 52 | +.234 | –.229 |
| 53 | +.312 | +.086 |
| 54 | +.312 | –.004 |
| 55 | +.312 | –.094 |

All dimensions for reference only. For alternate rotations see page 47 for Series III, page 87 for Series II, and page 115 for Series I.
Note: Shown in this catalog are the most common insert patterns for PCB applications. For availability of other arrangements, consult Amphenol Aerospace.

# PCB Contacts 38999, Series I LJT, II JT, III TV

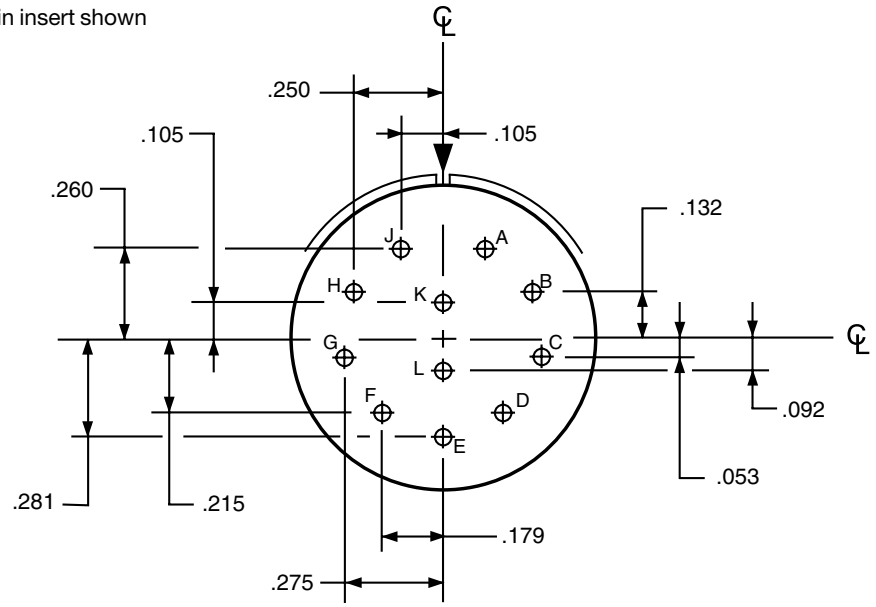
## Insert Arrangements

### INSERT ARRANGEMENT #18-11 / 19-11

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I |
|---|---|---|
| Insert Designation: | 18-11 | 19-11 |

| Number of Contacts | Contact Size | Service Rating |
|---|---|---|
| 11 | 16 | II |

**Contact Locations**
Front face of pin insert shown

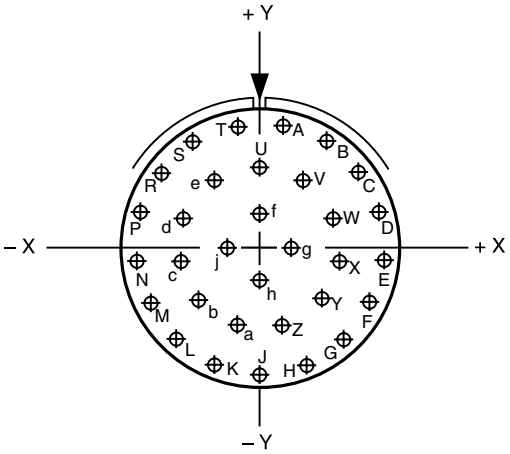



### INSERT ARRANGEMENT #18-32 / 19-32

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III |
|---|---|---|---|
| Insert Designation: | 18-32 | 19-32 | 19-32 |

| Number of Contacts | Contact Size | Service Rating |
|---|---|---|
| 32 | 20 | I |

**Contact Locations**
Front face of pin insert shown




| Contact Hole Locations | | |
|---|---|---|
| Contact Letter | Location | |
| | X Axis | Y Axis |
| A | +.066 | +.353 |
| B | +.189 | +.305 |
| C | +.286 | +.217 |
| D | +.345 | +.098 |
| E | +.357 | –.033 |
| F | +.321 | –.160 |
| G | +.242 | –.265 |
| H | +.130 | –.335 |
| J | .000 | –.359 |
| K | –.130 | –.335 |
| L | –.242 | –.265 |
| M | –.321 | –.160 |
| N | –.357 | –.033 |
| P | –.345 | +.098 |
| R | –.286 | +.217 |
| S | –.189 | +.305 |

| Contact Hole Locations | | |
|---|---|---|
| Contact Letter | Location | |
| | X Axis | Y Axis |
| T | –.066 | +.353 |
| U | .000 | +.230 |
| V | +.124 | +.193 |
| W | +.209 | +.095 |
| X | +.228 | –.033 |
| Y | +.174 | –.151 |
| Z | +.065 | –.221 |
| a | –.065 | –.221 |
| b | –.174 | –.151 |
| c | –.228 | –.033 |
| d | –.209 | +.095 |
| e | –.124 | +.193 |
| f | .000 | +.096 |
| g | +.096 | .000 |
| h | .000 | –.096 |
| j | –.096 | .000 |

All dimensions for reference only. For alternate rotations see page 47 for Series III, page 87 for Series II, and page 115 for Series I.
Note: Shown in this catalog are the most common insert patterns for PCB applications. For availability of other arrangements, consult Amphenol Aerospace.

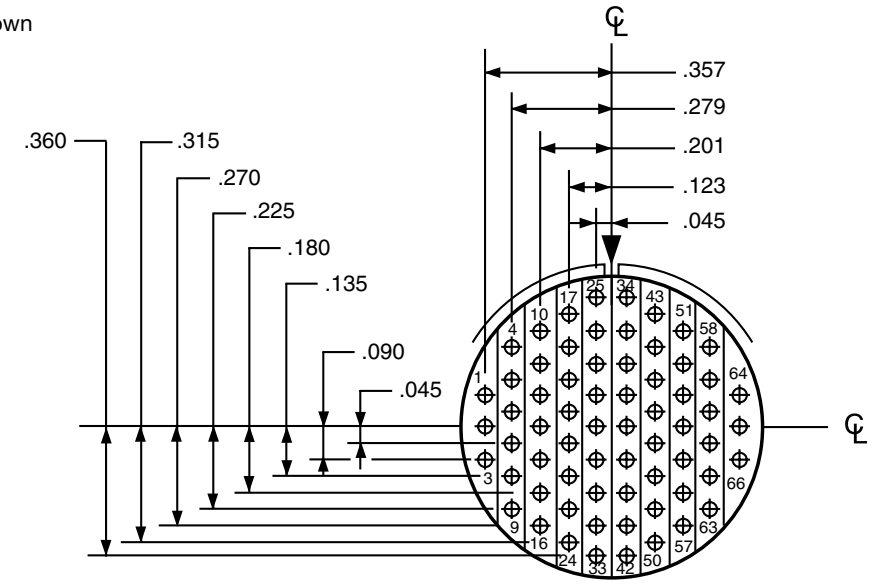
## Insert Arrangements

### INSERT ARRANGEMENT #18-35 / 19-35

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III |
|---|---|---|---|
| Insert Designation: | 18-35 | 19-35 | 19-35 |

| Number of Contacts | Contact Size | Service Rating |
|---|---|---|
| 66 | 22D | M |

**Contact Locations**
Front face of pin insert shown

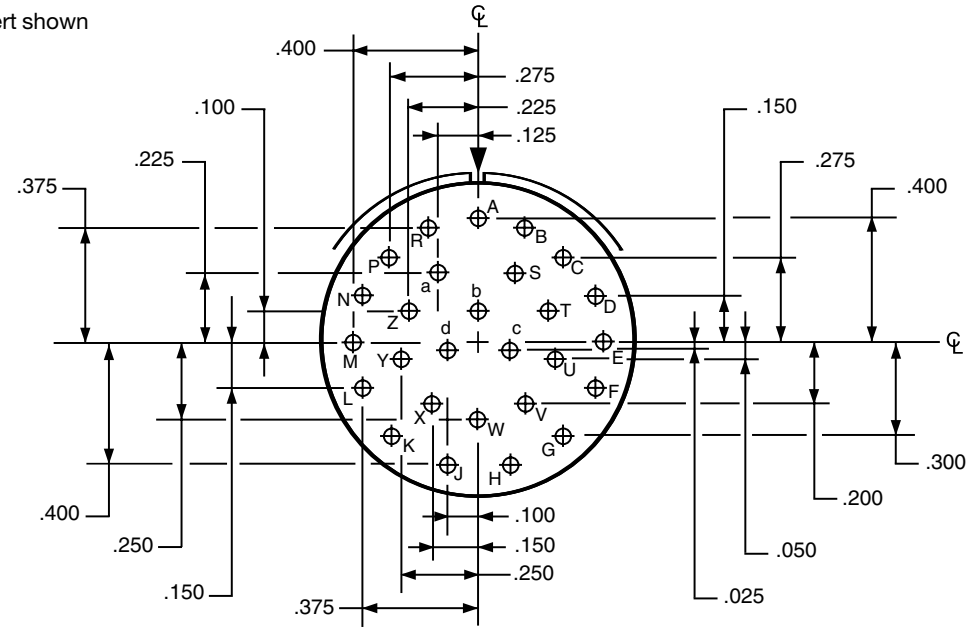



### INSERT ARRANGEMENT #20-27 / 21-27

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III |
|---|---|---|---|
| Insert Designation: | 20-27 | 21-27 | NA |

| Number of Contacts | Contact Size | Service Rating |
|---|---|---|
| 27 | 20 | I |

**Contact Locations**
Front face of pin insert shown




All dimensions for reference only. For alternate rotations see page 47 for Series III, page 87 for Series II, and page 115 for Series I.
Note: Shown in this catalog are the most common insert patterns for PCB applications. For availability of other arrangements, consult Amphenol Aerospace.

# PCB Contacts 38999, Series I LJT, II JT, III TV

## Insert Arrangements

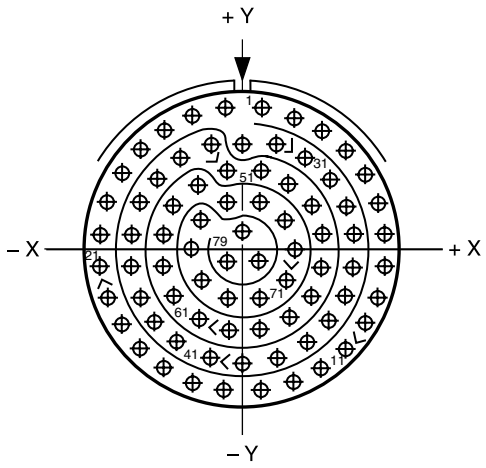
### INSERT ARRANGEMENT #20-35 / 21-35

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III |
|---|---|---|---|
| Insert Designation: | 20-35 | 21-35 | 21-35 |

| Number of Contacts | Contact Size | Service Rating |
|---|---|---|
| 79 | 22D | M |

**Contact Locations**

Front face of pin insert shown




| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| 1 | +.053 | +.426 |
| 2 | +.146 | +.404 |
| 3 | +.232 | +.362 |
| 4 | +.306 | +.302 |
| 5 | +.365 | +.227 |
| 6 | +.406 | +.141 |
| 7 | +.427 | +.048 |
| 8 | +.427 | –.048 |

| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| 9 | +.406 | –.141 |
| 10 | +.365 | –.227 |
| 11 | +.306 | –.302 |
| 12 | +.232 | –.362 |
| 13 | +.146 | –.404 |
| 14 | +.053 | –.426 |
| 15 | –.053 | –.426 |
| 16 | –.146 | –.404 |
| 17 | –.232 | –.362 |
| 18 | –.306 | –.302 |
| 19 | –.365 | –.227 |
| 20 | –.406 | –.141 |
| 21 | –.427 | –.048 |
| 22 | –.427 | +.048 |
| 23 | –.406 | +.141 |
| 24 | –.365 | +.227 |
| 25 | –.306 | +.302 |
| 26 | –.232 | +.362 |
| 27 | –.146 | +.404 |
| 28 | –.053 | +.426 |
| 29 | .000 | +.323 |
| 30 | +.098 | +.322 |
| 31 | +.184 | +.280 |
| 32 | +.258 | +.220 |
| 33 | +.311 | +.141 |
| 34 | +.332 | +.048 |
| 35 | +.332 | –.048 |
| 36 | +.311 | –.141 |
| 37 | +.258 | –.220 |
| 38 | +.184 | –.280 |
| 39 | +.098 | –.322 |
| 40 | .000 | –.347 |
| 41 | –.098 | –.322 |
| 42 | –.184 | –.280 |

| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| 43 | –.258 | –.220 |
| 44 | –.311 | –.141 |
| 45 | –.332 | –.048 |
| 46 | –.332 | +.048 |
| 47 | –.311 | +.141 |
| 48 | –.258 | +.220 |
| 49 | –.184 | +.280 |
| 50 | –.098 | +.322 |
| 51 | –.048 | +.241 |
| 52 | +.048 | +.241 |
| 53 | +.134 | +.199 |
| 54 | +.208 | +.139 |
| 55 | +.237 | +.048 |
| 56 | +.237 | –.048 |
| 57 | +.208 | –.139 |
| 58 | +.134 | –.199 |
| 59 | +.048 | –.241 |
| 60 | –.048 | –.241 |
| 61 | –.134 | –.199 |
| 62 | –.208 | –.139 |
| 63 | –.237 | –.048 |
| 64 | –.237 | +.048 |
| 65 | –.208 | +.139 |
| 66 | –.134 | +.199 |
| 67 | –.048 | +.146 |
| 68 | +.048 | +.146 |
| 69 | +.125 | +.090 |
| 70 | +.155 | .000 |
| 71 | +.125 | –.090 |
| 72 | +.048 | –.146 |
| 73 | –.048 | –.146 |
| 74 | –.125 | –.090 |
| 75 | –.155 | .000 |
| 76 | –.125 | +.090 |
| 77 | .000 | +.053 |
| 78 | +.048 | –.029 |
| 79 | –.048 | –.029 |

All dimensions for reference only. For alternate rotations see page 47 for Series III, page 87 for Series II, and page 115 for Series I.
Note: Shown in this catalog are the most common insert patterns for PCB applications. For availability of other arrangements, consult Amphenol Aerospace.

## Insert Arrangements

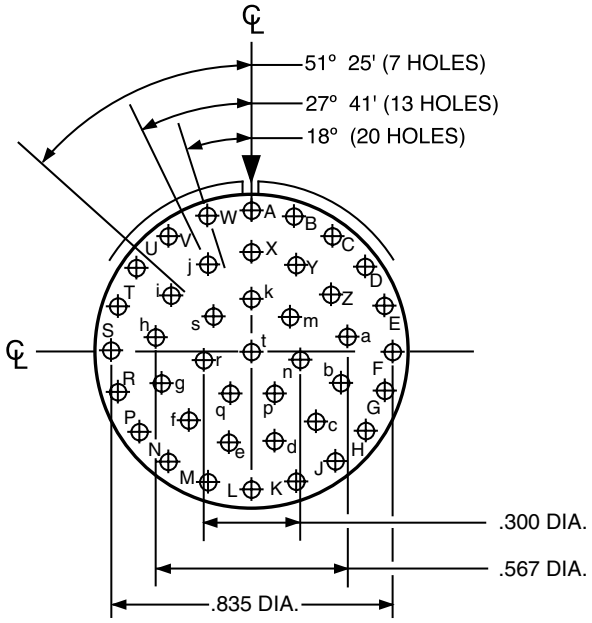


### INSERT ARRANGEMENT #20-41 / 21-41

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III |
|---|---|---|---|
| Insert Designation: | 20-41 | 21-41 | 21-41 |

| Number of Contacts | Contact Size | Service Rating |
|---|---|---|
| 41 | 20 | I |

**Contact Locations**
Front face of pin insert shown




All dimensions for reference only. For alternate rotations see page 47 for Series III, page 87 for Series II, and page 115 for Series I.
Note: Shown in this catalog are the most common insert patterns for PCB applications. For availability of other arrangements, consult Amphenol Aerospace.

# PCB Contacts 38999, Series I LJT, II JT, III TV

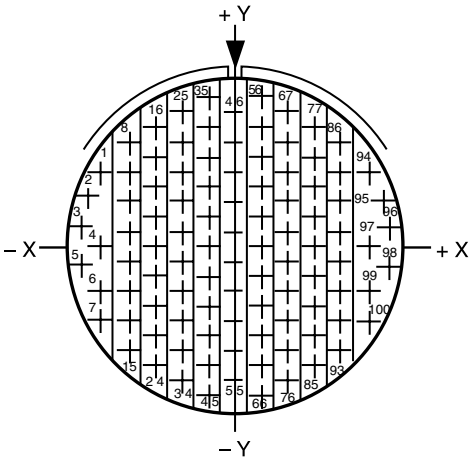
## Insert Arrangements

### INSERT ARRANGEMENT #22-35 / 23-35

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III |
|---|---|---|---|
| Insert Designation: | 22-35 | 23-35 | 23-35 |

| Number of Contacts | Contact Size | Service Rating |
|---|---|---|
| 100 | 22D | M |

**Contact Locations**
Front face of pin insert shown




| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| 1 | –.428 | +.241 |
| 2 | –.467 | +.154 |
| 3 | –.488 | +.061 |
| 4 | –.415 | .000 |
| 5 | –.488 | –.061 |
| 6 | –.428 | –.142 |
| 7 | –.428 | –.237 |
| 8 | –.332 | +.333 |
| 9 | –.332 | +.238 |
| 10 | –.332 | +.143 |
| 11 | –.332 | +.048 |
| 12 | –.332 | –.047 |
| 13 | –.332 | –.142 |
| 14 | –.332 | –.237 |
| 15 | –.332 | –.332 |
| 16 | –.249 | +.380 |
| 17 | –.249 | +.285 |
| 18 | –.249 | +.190 |
| 19 | –.249 | +.095 |

| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| 20 | –.249 | .000 |
| 21 | –.249 | –.095 |
| 22 | –.249 | –.190 |
| 23 | –.249 | –.285 |
| 24 | –.249 | –.380 |
| 25 | –.166 | +.428 |
| 26 | –.166 | +.333 |
| 27 | –.166 | +.238 |
| 28 | –.166 | +.143 |
| 29 | –.166 | +.048 |
| 30 | –.166 | –.047 |
| 31 | –.166 | –.142 |
| 32 | –.166 | –.237 |
| 33 | –.166 | –.332 |
| 34 | –.166 | –.427 |
| 35 | –.083 | +.475 |
| 36 | –.083 | +.380 |
| 37 | –.083 | +.285 |
| 38 | –.083 | +.190 |
| 39 | –.083 | +.095 |
| 40 | –.083 | .000 |
| 41 | –.083 | –.095 |
| 42 | –.083 | –.190 |
| 43 | –.083 | –.285 |
| 44 | –.083 | –.380 |
| 45 | –.083 | –.475 |
| 46 | .000 | +.428 |
| 47 | .000 | +.333 |
| 48 | .000 | +.238 |
| 49 | .000 | +.143 |
| 50 | .000 | +.048 |
| 51 | .000 | –.047 |
| 52 | .000 | –.142 |
| 53 | .000 | –.237 |
| 54 | .000 | –.332 |
| 55 | .000 | –.427 |
| 56 | +.083 | +.475 |
| 57 | +.083 | +.380 |
| 58 | +.083 | +.285 |
| 59 | +.083 | +.190 |

| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| 60 | +.083 | +.095 |
| 61 | +.083 | .000 |
| 62 | +.083 | –.095 |
| 63 | +.083 | –.190 |
| 64 | +.083 | –.285 |
| 65 | +.083 | –.380 |
| 66 | +.083 | –.475 |
| 67 | +.166 | +.428 |
| 68 | +.166 | +.333 |
| 69 | +.166 | +.238 |
| 70 | +.166 | +.143 |
| 71 | +.166 | +.048 |
| 72 | +.166 | –.047 |
| 73 | +.166 | –.142 |
| 74 | +.166 | –.237 |
| 75 | +.166 | –.332 |
| 76 | +.166 | –.427 |
| 77 | +.249 | +.380 |
| 78 | +.249 | +.285 |
| 79 | +.249 | +.190 |
| 80 | +.249 | +.095 |
| 81 | +.249 | .000 |
| 82 | +.249 | –.095 |
| 83 | +.249 | –.190 |
| 84 | +.249 | –.285 |
| 85 | +.249 | –.380 |
| 86 | +.332 | +.333 |
| 87 | +.332 | +.238 |
| 88 | +.332 | +.143 |
| 89 | +.332 | +.048 |
| 90 | +.332 | –.047 |
| 91 | +.332 | –.142 |
| 92 | +.332 | –.237 |
| 93 | +.332 | –.332 |
| 94 | +.428 | +.241 |
| 95 | +.467 | +.154 |
| 96 | +.488 | +.061 |
| 97 | +.415 | .000 |
| 98 | +.488 | –.061 |
| 99 | +.428 | –.142 |
| 100 | +.428 | –.237 |

All dimensions for reference only. For alternate rotations see page 47 for Series III, page 87 for Series II, and page 115 for Series I.
Note: Shown in this catalog are the most common insert patterns for PCB applications. For availability of other arrangements, consult Amphenol Aerospace.

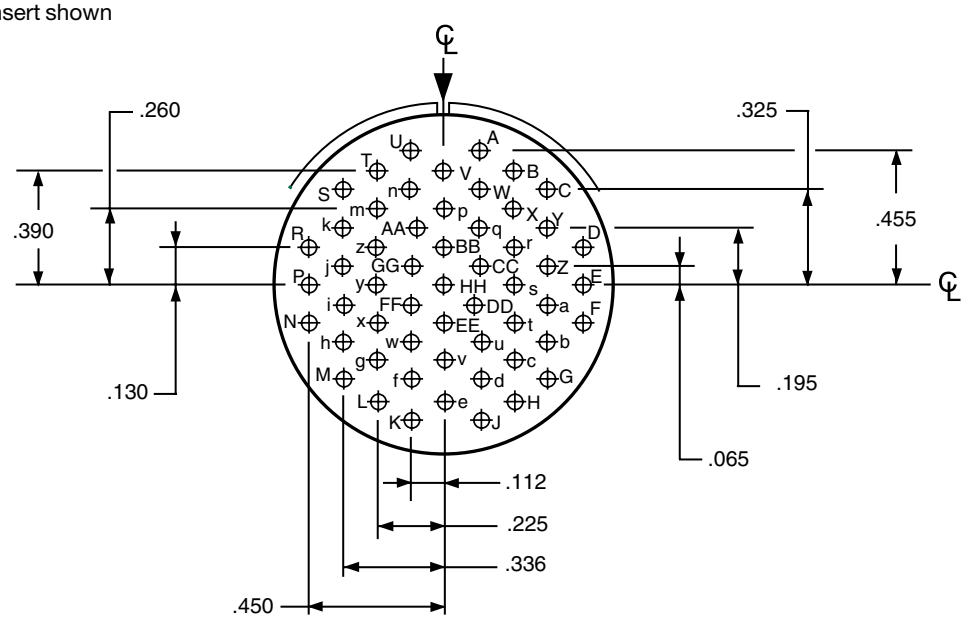
## Insert Arrangements

### INSERT ARRANGEMENT #22-55 / 23-55

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III |
|---|---|---|---|
| Insert Designation: | 22-55 | 23-55 | 23-55 |

| Number of Contacts | Contact Size | Service Rating |
|---|---|---|
| 55 | 20 | I |

**Contact Locations**
Front face of pin insert shown

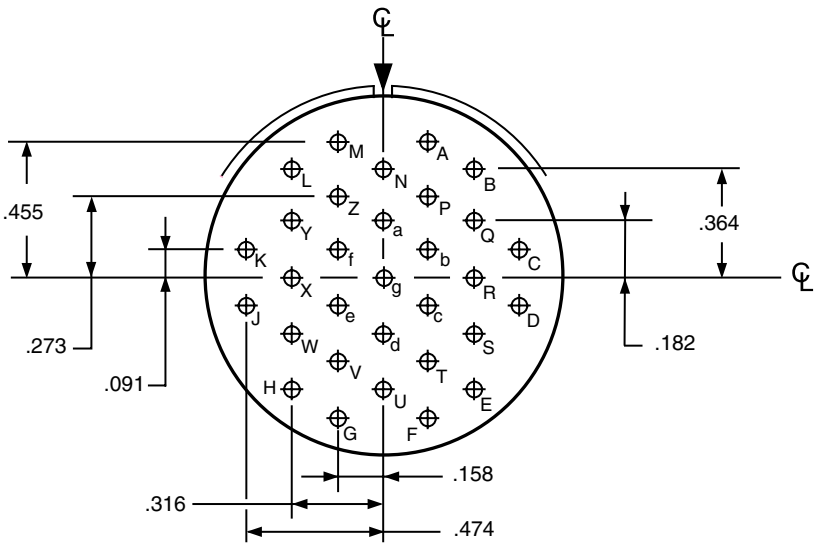



### INSERT ARRANGEMENT #24-31 / 25-31

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III |
|---|---|---|---|
| Insert Designation: | 24-31 | NA | NA |

| Number of Contacts | Contact Size | Service Rating |
|---|---|---|
| 31 | 16 | I |

**Contact Locations**
Front face of pin insert shown




All dimensions for reference only. For alternate rotations see page 47 for Series III, page 87 for Series II, and page 115 for Series I.
Note: Shown in this catalog are the most common insert patterns for PCB applications. For availability of other arrangements, consult Amphenol Aerospace.

# PCB Contacts 38999, Series I LJT, II JT, III TV

## Insert Arrangements

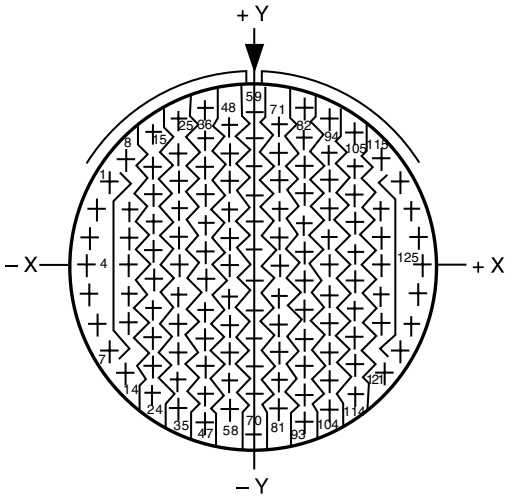
### INSERT ARRANGEMENT #24-35 / 25-35

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III |
|---|---|---|---|
| Insert Designation: | 24-35 | 25-35 | 25-35 |

| Number of Contacts | Contact Size | Service Rating |
|---|---|---|
| 128 | 22D | M |

**Contact Locations**

Front face of pin insert shown




| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| 1 | –.479 | +.279 |
| 2 | –.520 | +.190 |
| 3 | –.546 | +.095 |
| 4 | –.555 | .000 |
| 5 | –.546 | –.095 |
| 6 | –.520 | –.190 |
| 7 | –.479 | –.279 |
| 8 | –.424 | +.357 |
| 9 | –.415 | +.190 |
| 10 | –.415 | +.095 |
| 11 | –.415 | .000 |
| 12 | –.415 | –.095 |
| 13 | –.415 | –.190 |
| 14 | –.424 | –.357 |
| 15 | –.332 | +.444 |
| 16 | –.332 | +.332 |
| 17 | –.332 | +.237 |
| 18 | –.332 | +.142 |
| 19 | –.332 | +.047 |
| 20 | –.332 | –.047 |
| 21 | –.332 | –.142 |
| 22 | –.332 | –.237 |
| 23 | –.332 | –.332 |
| 24 | –.332 | –.427 |
| 25 | –.249 | +.496 |
| 26 | –.249 | +.380 |
| 27 | –.249 | +.285 |
| 28 | –.249 | +.190 |

| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| 29 | –.249 | +.095 |
| 30 | –.249 | .000 |
| 31 | –.249 | –.095 |
| 32 | –.249 | –.190 |
| 33 | –.249 | –.285 |
| 34 | –.249 | –.380 |
| 35 | –.249 | –.475 |
| 36 | –.160 | +.531 |
| 37 | –.166 | +.427 |
| 38 | –.166 | +.332 |
| 39 | –.166 | +.237 |
| 40 | –.166 | +.142 |
| 41 | –.166 | +.047 |
| 42 | –.166 | –.047 |
| 43 | –.166 | –.142 |
| 44 | –.166 | –.237 |
| 45 | –.166 | –.332 |
| 46 | –.166 | –.427 |
| 47 | –.166 | –.522 |
| 48 | –.083 | +.475 |
| 49 | –.083 | +.380 |
| 50 | –.083 | +.285 |
| 51 | –.083 | +.190 |
| 52 | –.083 | +.095 |
| 53 | –.083 | .000 |
| 54 | –.083 | –.095 |
| 55 | –.083 | –.190 |
| 56 | –.083 | –.285 |
| 57 | –.083 | –.380 |
| 58 | –.083 | –.475 |
| 59 | .000 | +.522 |
| 60 | .000 | +.427 |
| 61 | .000 | +.332 |
| 62 | .000 | +.237 |
| 63 | .000 | +.142 |
| 64 | .000 | +.047 |
| 65 | .000 | –.047 |
| 66 | .000 | –.142 |
| 67 | .000 | –.237 |
| 68 | .000 | –.332 |
| 69 | .000 | –.427 |
| 70 | .000 | –.555 |
| 71 | +.083 | +.475 |
| 72 | +.083 | +.380 |
| 73 | +.083 | +.285 |
| 74 | +.083 | +.190 |
| 75 | +.083 | +.095 |
| 76 | +.083 | .000 |
| 77 | +.083 | –.095 |
| 78 | +.083 | –.190 |

| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| 79 | +.083 | –.285 |
| 80 | +.083 | –.380 |
| 81 | +.083 | –.475 |
| 82 | +.160 | +.531 |
| 83 | +.166 | +.427 |
| 84 | +.166 | +.332 |
| 85 | +.166 | +.237 |
| 86 | +.166 | +.142 |
| 87 | +.166 | +.047 |
| 88 | +.166 | –.047 |
| 89 | +.166 | –.142 |
| 90 | +.166 | –.237 |
| 91 | +.166 | –.332 |
| 92 | +.166 | –.427 |
| 93 | +.166 | –.522 |
| 94 | +.249 | +.496 |
| 95 | +.249 | +.380 |
| 96 | +.249 | +.285 |
| 97 | +.249 | +.190 |
| 98 | +.249 | +.095 |
| 99 | +.249 | .000 |
| 100 | +.249 | –.095 |
| 101 | +.249 | –.190 |
| 102 | +.249 | –.285 |
| 103 | +.249 | –.380 |
| 104 | +.249 | –.475 |
| 105 | +.332 | +.444 |
| 106 | +.332 | +.332 |
| 107 | +.332 | +.237 |
| 108 | +.332 | +.142 |
| 109 | +.332 | +.047 |
| 110 | +.332 | –.047 |
| 111 | +.332 | –.142 |
| 112 | +.332 | –.237 |
| 113 | +.332 | –.332 |
| 114 | +.332 | –.427 |
| 115 | +.424 | +.357 |
| 116 | +.415 | +.190 |
| 117 | +.415 | +.095 |
| 118 | +.415 | .000 |
| 119 | +.415 | –.095 |
| 120 | +.415 | –.190 |
| 121 | +.424 | –.357 |
| 122 | +.479 | +.279 |
| 123 | +.520 | +.190 |
| 124 | +.546 | +.095 |
| 125 | +.555 | .000 |
| 126 | +.546 | –.095 |
| 127 | +.520 | –.190 |
| 128 | +.479 | –.279 |

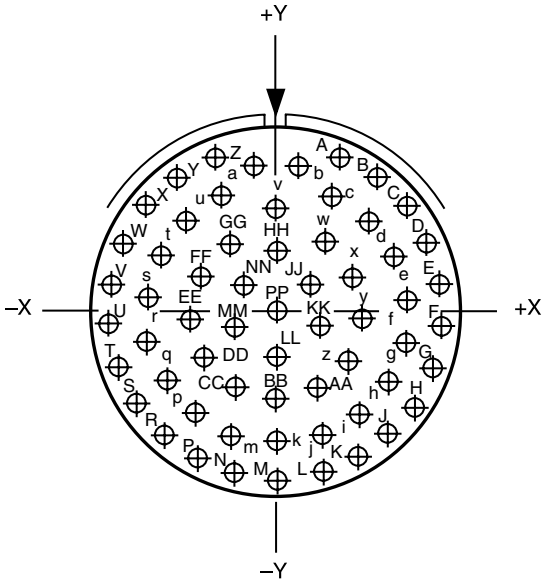
All dimensions for reference only. For alternate rotations see page 47 for Series III, page 87 for Series II, and page 115 for Series I.
Note: Shown in this catalog are the most common insert patterns for PCB applications. For availability of other arrangements, consult Amphenol Aerospace.

## INSERT ARRANGEMENT #24-61 / 25-61

| Connector Type: | JT MIL-DTL-38999 Series II | LJT MIL-DTL-38999 Series I | Tri-Start MIL-DTL-38999 Series III |
|---|---|---|---|
| Insert Designation: | 24-61 | 25-61 | 25-61 |

| Number of Contacts | Contact Size | Service Rating |
|---|---|---|
| 61 | 20 | I |

**Contact Locations**
Front face of pin insert shown




| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| A | +.196 | +.500 |
| B | +.314 | +.435 |
| C | +.413 | +.343 |
| D | +.485 | +.230 |
| E | +.527 | +.101 |
| F | +.536 | –.030 |
| G | +.511 | –.164 |
| H | +.454 | –.287 |
| J | +.368 | –.391 |
| K | +.259 | –.470 |
| L | +.134 | –.519 |
| M | .000 | –.537 |
| N | –.134 | –.519 |
| P | –.259 | –.470 |
| R | –.368 | –.391 |
| S | –.454 | –.287 |
| T | –.511 | –.164 |
| U | –.536 | –.030 |
| V | –.527 | +.101 |
| W | –.485 | +.230 |
| X | –.413 | +.343 |
| Y | –.314 | +.435 |
| Z | –.196 | +.500 |
| a | –.068 | +.454 |
| b | +.068 | +.454 |
| c | +.173 | +.363 |
| d | +.285 | +.283 |
| e | +.362 | +.175 |
| f | +.399 | +.046 |
| g | +.392 | –.088 |

| Contact Hole Locations | | |
|---|---|---|
| Contact Number | Location | |
| | X Axis | Y Axis |
| h | +.341 | –.213 |
| i | +.251 | –.314 |
| j | +.133 | –.379 |
| k | .000 | –.402 |
| m | –.133 | –.379 |
| n | –.251 | –.314 |
| p | –.341 | –.213 |
| q | –.392 | –.088 |
| r | –.399 | +.046 |
| s | –.362 | +.175 |
| t | –.285 | +.283 |
| u | –.173 | +.363 |
| v | .000 | +.338 |
| w | +.147 | +.223 |
| x | +.237 | +.122 |
| y | +.267 | –.010 |
| z | +.228 | –.139 |
| AA | +.131 | –.233 |
| BB | .000 | –.267 |
| CC | –.131 | –.233 |
| DD | –.228 | –.139 |
| EE | –.267 | –.010 |
| FF | –.237 | +.122 |
| GG | –.147 | +.223 |
| HH | .000 | +.200 |
| JJ | +.105 | +.094 |
| KK | +.135 | –.041 |
| LL | .000 | –.132 |
| MM | –.135 | –.041 |
| NN | –.105 | +.094 |
| PP | .000 | .000 |

All dimensions for reference only. For alternate rotations see page 47 for Series III, page 87 for Series II, and page 115 for Series I.
Note: Shown in this catalog are the most common insert patterns for PCB applications. For availability of other arrangements, consult Amphenol Aerospace.

# MIL-DTL-38999, Series I LJT, II JT, III TV, HD

## Contact Ratings/ Service Ratings

### CONTACT RATING FOR TV III, HD, JT II, LJT I, SJT

| Contact Size | Test Current (Amps) | | Maximum Millivolt Drop Crimp* | Maximum Millivolt Drop |
|---|---|---|---|---|
| | Crimp | Hermetic | | Hermetic* |
| 23 | 5 | 3 | 73 | 85 |
| 22M | 3 | 2 | 45 | 60 |
| 22D | 5 | 3 | 73 | 85 |
| 22 | 5 | 3 | 73 | 85 |
| 20 | 7.5 | 5 | 55 | 60 |
| 16 | 13 | 10 | 49 | 85 |
| 12 | 23 | 17 | 42 | 85 |
| 10 (Power) | 33 | NA | 33 | NA |
| 8 (Power) | 65 | NA | 26 | NA |
| 4 | 80 | NA | 23 | NA |
| 0 | 150 | NA | 21 | NA |

*When tested using silver plated wire.

| Contact Size | Crimp Well Data | | Solder Well Data | |
|---|---|---|---|---|
| | Well Diameter | Normal Well Depth | Well Diameter | Nominal Well Depth |
| 23 | .0345 ± .0010 | .141 | .0345 ± .0010 | .130 |
| 22M | .028 ± .001 | .141 | .029 +.004 – .000 | |
| 22D | .0345 ± .0010 | .141 | .036 +.004 -.000 | .094 |
| 22 | .0365 ± .0010 | .141 | .036 +.004 -.000 | .094 |
| 20 | .047 ± .001 | .209 | .044 +.004 -.004 | .125 |
| 16 | .067 ± .001 | .209 | .078 +.000 -.004 | .141 |
| 12 | .100 ± .002 | .209 | .116 +.004 -.002 | .141 |
| 10 (Power) | .137 ± .002 | .355 | NA | NA |
| 8 | .181 ± .002 | .490 | NA | NA |
| 4 | .281 ± .002 | .490 | NA | NA |
| 0 | .453 ± .002 | .585 | NA | NA |

### MIL-DTL-38999 SERIES III STANDARD 500 CYCLE CONTACTS FOR TV AND CTV, P & S

| Contact Size | TV/CTV Pins | | TV/CTV Sockets | |
|---|---|---|---|---|
| | Military No. | Supersedes | Military No. | Supersedes |
| 8 (Coax)* | M39029/60-367 | MS27536 | M39029/59-366 | MS27535 |
| 8 (Power) | Contact Factory | " | " | " |
| 8 (Twinax) | M39029/90-529** | N/A | M39029/91-530 | N/A |
| 10 (Power) | M39029/58-528 | N/A | M39029/56-527 | N/A |
| 12 | M39029/58-365 | MS27493-12 | M39029/56-353 | MS27490-12 |
| 16 | M39029/58-364 | MS27493-16 | M39029/56-352 | MS27490-16 |
| 20 | M39029/58-363 | MS27493-20 | M39029/56-351 | MS27490-20 |
| 22D | M39029/58-360 | MS27493-22D | M39029/56-348 | MS27490-22D |
| 4 | N/A | N/A | N/A | N/A |
| 0 | N/A | N/A | N/A | N/A |

Above part numbers include standard 500 cycle finish designation - gold plating over suitable underplate in accordance with SAE AS39029. For other finish variations, consult Amphenol Aerospace.

*For use with RG180B/U and RG195A/U cable. For other size 8 coax or optional sizes 12 and 16 coax contacts available for use in Tri-Start connectors, see High Speed catalog or consult Amphenol Aerospace.

### MIL-DTL-38999 SERIES III 1500 CYCLE CONTACTS, CLASSES H & J

| Contact Size | CTV Pins | | | CTV Sockets | | |
|---|---|---|---|---|---|---|
| | Commercial No. | Military No. | Supersedes | Commercial No. | Military No. | Supersedes |
| 12 | 10-597072-2X | M39029/107-623 | – | 10-597073-2X | M39029/106-617 | – |
| 16 | 10-597068-2X | M39029/107-622 | – | 10-597069-2X | M39029/106-616 | – |
| 20 | 10-597064-2X | M39029/107-621 | – | 10-597065-2X | M39029/106-615 | – |
| 22D | 10-597058-3X | M39029/107-620 | – | 10-597061-2X | M39029/106-614 | – |

## MIL-DTL-38999 SERIES II JT/ SERIES I LJT/SJT SERIES CRIMP CONTACTS

| Contact Size | JT/LJT/SJT Pins MS No. | JT Socket MS No. | LJT/SJT Sockets MS No. |
|---|---|---|---|
| 8 (Coax)* | M39029/60-367 | NA | M39029/59-366 |
| 8 (Twinax) | M39029/90-529** | NA | M39029/91-530 |
| 10 (Power) | M39029/58-528 | NA | M39029/56-527 |
| 12 | M39029/58-365 | M39029/57-359 | M39029/56-353 |
| 16 | M39029/58-364 | M39029/57-358 | M39029/56-352 |

| Contact Size | JT/LJT Pins MS No. | JT Socket MS No. | LJT/SJT Sockets MS No. |
|---|---|---|---|
| 20 | M39029/58-363 | M39029/57-357 | M39029/56-351 |
| 22 | M39029/58-362 | M39029/57-356 | M39029/56-350 |
| 22M | M39029/58-361 | M39029/57-355 | M39029/56-349 |
| 22D | M39029/58-360 | M39029/57-354 | M39029/56-348 |

## MIL-DTL-38999 SERIES III TV/ I LJT THERMOCOUPLE CONTACTS

| Contact Size | Material | JT/LJT Pins | JT Sockets | LJT Sockets |
|---|---|---|---|---|
| 20 | Chromel | 10-407862-310 | 10-407863-310 | 10-407236-310 |
| | Alumel | 10-407862-320 | 10-407863-320 | 10-407865-320 |
| | Iron | 10-407862-335 | 10-407863-335 | 10-407865-335 |
| | Constantan | 10-407862-342 | 10-407863-342 | 10-407865-342 |

Partial Listing. If you do not see the contact for your application, consult Amphenol Aerospace.

## MIL-DTL-38999 SERIES III TV/ I LJT THERMOCOUPLE CONTACTS PYLE VERSION

| Contact Size | Pins (II JT/I LJT) | | Sockets (LJT) | | Material |
|---|---|---|---|---|---|
| | Spec Number | Pyle Number | Spec Number | Pyle Number | |
| 22D | M39029/87-472 | T3-4022-10P | M39029/88-484 | T3-4122-10P | CHROMEL |
| 22D | M39029/87-471 | T3-4022-10R | M39029/88-483 | T3-4122-10R | ALUMEL |
| 20 | M39029/87-476 | T3-4020-10P | M39029/88-488 | T3-4120-10P | CHROMEL |
| 20 | M39029/87-475 | T3-4020-10R | M39029/88-487 | T3-4120-10R | ALUMEL |
| 16 | M39029/87-480 | T3-4016-10P | M39029/88-492 | T3-4116-10P | CHROMEL |
| 16 | M39029/87-479 | T3-4016-10R | M39029/88-491 | T3-4116-10R | ALUMEL |

Above part numbers include standard finish designation - gold plating over suitable underplate in accordance with MIL-DTL-39029. For other finishes, consult Amphenol Aerospace. Note: 22M and 22D contacts are interchangeable. *For use with RG180B/U and RG195A/U cable. For other size 8 coax or optional sizes 12 and 18 coax contacts available for use in JT/LJT connectors, Refer to the High Speed Catalog. ** For use with 17/M176-00002 cable.

## MIL-DTL-38999 SERIES III SEALING PLUGS

| Contact Size | Commercial No. | Military No. |
|---|---|---|
| 8 (Coax) | 10-482099-8 | N/A |
| 8 (Twinax) | T3-4008-59P | N/A |
| 8 (Power) | 10-405996-83 | MS27488-8-3 |
| 10 (Power) | T3-4010-59P | M85049/81-10 |
| 12 | 10-405996-122 | MS27488-12-2 |
| 16 | 10-405996-162 | MS27488-16-2 |
| 20 | 10-405996-202 | MS27488-20-2 |
| 22D | 10-405996-222 | MS27488-22-2 |
| 4 | 10-405996-43 | MS27488-4-3 |
| 0 | 10-405996-03 | MS27488-0-3 |

## MIL-DTL-38999 SERIES II JT/ I LJT SEALING PLUGS

| Contact Size | Commercial No. | Military No. |
|---|---|---|
| 8 (Coax) | 10-482099-8 | MS27488-8 |
| 8 (Twinax) | T3-4008-59P | N/A |
| 10 (Power) | 10-576225 | N/A |
| 12 | 10-405996-122 | MS27488-12-2 |
| 16 | 10-405996-162 | MS27488-16-2 |
| 20 | 10-405996-202 | MS27488-20-2 |
| 22 | 10-405996-222 | MS27488-22-2 |
| 22M | 10-405996-222 | MS27488-22-2 |
| 22D | 10-405996-222 | MS27488-22-2 |

## SJT SEALING PLUGS

| Contact Size | Commercial No. |
|---|---|
| 8 (Coax) | 10-482099-8 |
| 8 (Twinax) | 10-482099-8 |
| 10 (Power) | NA |
| 12 | 10-405996-012 Yellow |
| 16 | 10-405996-016 Blue |
| 20 | 10-405996-020 Red |
| 22 | 10-405996-022 Black |
| 22M | 10-405996-022 Black |
| 22D | 10-405996-022 Black |

** For use with M17/M176-00002 cable.

† Optional design - see slash sheet MS39029.

For other contact options available for use in Tri-Start connectors (wire wrap, thermocouple, fiber optic), consult Amphenol.

# MIL-DTL-38999, Series I LJT, II JT, III TV

## Thermocouple Contacts/Sealing Plugs/Finishing Data

### SERVICE RATING**

| Service Rating | Suggested Oper. 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 | 500 | 1300 VRMS | 550 VRMS | 350 VRMS | 200 VRMS |
| N | 300 | 450 | 1000 VRMS | 400 VRMS | 260 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 they are in the best position to know what peak voltage, switching surges, transients, etc. can be expected in a particular circuit.

### FINISH DATA MIL-DTL-38999, TRI-START, SERIES III TV

| ALUMINUM SHELL COMPONENTS NON-HERMETIC* | | |
|---|---|---|
| Finish | Service Class | |
| | Military | Commercial |
| Anodic Coating (Non-Conductive) | C | RX** |
| Electroless Nickel | F (Metal) | RF |
| | M (Composite) | |
| Olive Drab Cadmium Plate Nickel Base | W (Metal) | RW |
| | J (Composite) | |
| Stainless Steel with Nickel Plate (non-firewall) | L | |
| Stainless Steel with Nickel Plate (firewall) | S | RS |
| Stainless Steel | K | RK |
| Durmalon plated | T | DT |
| Zinc-Nickel Plated | Z | DZ |
| AP-93 (Tri-Nickel Alloy) | AA | DS |
| Tin Zinc | V | DV |
| Electroless Nickel Space Grade | G | RF with (453) mod code |
| AP-93 (Tri-Nickel Alloy) | AA- | DS |

**Add Suffix (005) to part number.

| HERMETIC SHELL COMPONENTS | | |
|---|---|---|
| Material/Finish | Service Class | |
| | Military | Commercial |
| Stainless Steel | Y | Y |
| Stainless Steel with Nickel Plate | N | YN |

### FINISH DATA MIL-DTL-38999, SERIES I LJT, II JT

| ALUMINUM SHELL COMPONENTS NON-HERMETIC | | | | | |
|---|---|---|---|---|---|
| Finish | Suffix | | Finish Plus "SR" Suffix | Indicated Finish Standard for JT Types Listed Below | Indicated Finish Standard for LJT Types Listed Below |
| | Military | Commercial | | | |
| Cadmium Plated Nickel Base | MS (A) | – | (SR) | JT/JTG/JTL/JTP | LJT/LJTP |
| Anodic Coating (Alumilite) | MS (C) | (005) | (300) | JTS/JTPS/JTLS | LJTPS/LJTS |
| Chromate Treated (Iridite 14-2) | | (011) | (344) | JTN/JTPN/JTLN | LJTN/LJTPN |
| Olive Drab Cadmium Plate Nickel Base | MS (B) | (014) | (386) | | |
| Electroless Nickel | MS (F) | (023) | (424) | | |
| Nickel-PTFE Durmalon | | (045) | | | |
| Black Zinc Nickel | | (033) | | | |
| AP-93 (Tri-Nickel Alloy) | | (075) | | | |
| Space Grade | | (453) | | | |

| HERMETIC CONNECTORS | | | | |
|---|---|---|---|---|
| Finish | Suffix | | Indicated Finish Standard for JT Types Listed Below | Indicated Finish Standard for LJT Types Listed Below |
| | Military | Commercial | | |
| Carbon Steel Shell Tin Plated Shell and Contacts | | | JT( )H / JT( )Y JTL( )H / JTL( )Y | LJT( )Y LJT( )H |
| Carbon Steel Shell Tin Plated Shell and Gold Plated Contacts | MS (D) | | | |
| Stainless Steel Shell Gold Plated Contacts | MS (E) | (162) | JTS( )Y JTLS( )Y | LJTS( )Y |

# Amphenol RoHS Compliant Platings

## Alternative to Cadmium

Amphenol Aerospace



## DURMALON™

Amphenol's Answer to EU RoHS/ELV/Cadmium Free Restrictions

Commercial, industrial & military markets are rapidly moving away from restricted materials such as Cadmium (Cd) & Hexavalent Chromium (Cr(VI)). Both of these restricted materials are toxic and are known carcinogens. Amphenol is offering an alternative finish that complies with all customer requirements tied to these specifications.

MIL-DTL-38999, Rev L has established new service classes for alternative finishes addressing these requirements for Cadmium replacement. Amphenol is using this and European Union Directive 2002/95/EC RoHS (Regulation of Hazardous Substances) as a guide to qualification for all domestic, global, commercial, industrial, & military specifications requiring the reduction or elimination of these restricted materials.

Amphenol has qualified Durmalon, with internal part number coding "DT" finish, which meets or exceeds the 38999 designated class "T" finish, Nickel Fluorocarbon Polymer. Durmalon is also EU RoHS compliant and is Cadmium free, Lead free, and Hexavalent Chromium free.

Cadmium has been applied to numerous components of land, sea and air weapon systems and NASA systems for many years as it provides sacrificial corrosion protection and excellent lubricity for threaded applications.

The Defense Logistics Agency (DLA) has added the following cadmium alternative finishes to MIL-DTL-38999, Rev L (and other connector specs):

- Nickel Fluorocarbon Polymer
- Zinc-Nickel
- Tri-Nickel Alloy (Rev N)

DURMALON™
Alternative to Cadmium



## APPLICATIONS

Interest for non-hazardous alternative finishes is gaining momentum & many customers are currently using Durmalon for a broad number of applications. Durmalon combines the unique lubrication and anti-wetting properties of PTFE with corrosion resistance, high conductivity and EU RoHS compliance in a non-reflective finish.

## AMPHENOL'S DURMALON™

Durmalon, like Olive-Drab Cadmium plating (Class W), meets 500 hours of dynamic salt spray, combined with 500 mating cycles and meets specified millivolt drop shell-to-shell conductivity. Durmalon also meets a 200° C temperature rating. Durmalon has been proven to meet this requirement as well as Potassium Formate-Deicer fluid testing performed by Boeing.

## BLACK ZINC NICKEL

Black Zinc Nickel is Amphenol's 2nd RoHS Compliant Plating Alternative to Cadmium Amphenol is now offering a new RoHS compliant alternative to Cadmium. Black Zinc Nickel is a non-reflective and conductive black finish approved for 500 hrs salt spray making it an excellent choice for harsh environments. Black Zinc Nickel has been qualified by the DLA, with internal part number coding "DZ" finish, which meets or exceeds the 38999 designated class "Z" finish. Black Zinc Nickel is compatible with other platings and available on a wide variety of connectors and accessories including all MIL-DTL-38999 Series III connectors.

## TRI-NICKEL ALLOY (AP-93)

Amphenol's AP-93 plating meets 1,000 hours of dynamic salt spray, combined with 500 mating cycles, and meets a 200° C temperature rating. AP-93 conforms to class 'AA' in MIL-DTL-38999 and additionally meets 360 hours of S02 corrosion resistance and is fully intermateable with cadmium.

| Requirements | Cadmium | Durmalon™ | Black Zinc Nickel | AP-93 |
|---|---|---|---|---|
| **Coupling Torque** Post 500 hr. salt | ■ | ■ | ■ | ■ |
| **Shell to Shell Conductivity** <2.5 millivolts | ■ | ■ | ■ | ■ |
| **Cycles of Durability** 500 mates | ■ | ■ | ■ | ■ |
| **Salt Spray** Dynamic 500 hours | ■ | ■ | ■ | |
| **Salt Spray** Dynamic 1000 hours | | | | ■ |
| **Temperature Rating** 175° C | ■ | ■ | ■ | ■ |
| **Temperature Rating** 200° C | | | | ■ |
| Non-Reflective | ■ | ■ | ■ | |
| EU RoHS/ELV Compliant* | | ■ | ■ | ■ |
| Non-Magnetic | ■ | ■ | ■ | ■ |
| De-icing Fluid** | | ■ | ■ | ■ |

* Meets EU RoHS/ELV maximum concentration values (MCV) of 1000 ppm (0.1% w/w) or (0.01% w/w) per homogenous material.

** Potassium Formate/Acetate based de-icing fluids.

Note: Specifications are subject to change without notice.

# MIL-DTL-38999, Series III, TV

# A



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Amphenol Aerospace



## TRI-START™ MIL-DTL-38999 SERIES III WITH METAL SHELLS - ALUMINUM, STAINLESS STEEL, CLASS K FIREWALL

Amphenol® Tri-Start MIL-DTL-38999* Series III Connectors offer the highest performance capabilities for both general duty and severe environment applications. Meeting or exceeding MIL-DTL-38999 Series III requirements, the Tri-Start connector with standard metal shells (aluminum or stainless steel with several finish options) offers these features:

- **EMI Shielding** - solid metal-to-metal coupling, grounding fingers, electroless nickel plating, and thicker wall sections provide superior EMI shielding capability of 65dB minimum at 10 GHz
- **Contact Protection** - recessed pins in this 100% scoop-proof connector minimize potential contact damage
- **Moisture Resistance** - improved interfacial seal design helps prevent electrolytic erosion of contacts
- **Corrosion Resistance** - shells of stainless steel or cadmium over nickel plating withstand a 500 hour salt spray exposure
- **Vibration/Shock** - operates under severe high temperature vibration, through 200°C
- **Firewall Capability** - available in a stainless steel shell, class RK, RS
- **Lockwiring Eliminated** - unique, self-locking, quick coupling connector eliminates lockwiring
- **Quick Coupling** - completely mates and self-locks in a 360° turn of the coupling nut
- **Inventory Support Commonality** - uses standard MIL-DTL-38999 contacts, application tools, insert arrangements
- **Electrostatic Discharge Protection (ESD)** - protection for sensitive circuitry without diodes, varistors, etc., with the use of the Faraday Cage principle which shunts high voltage, high current discharge events (see page Amphenol Filter Section)
- **Hermetic**- air leakage limited to 1 X $10^{-7}$ $cm^3$ per second optional
- **Qualified Specifications** - Stainless Steel qualified to BACC63DB/DC and Composite BACC63CT/CU Specifications



PASSIVATED STAINLESS STEEL



ELECTROLESS NICKEL PLATED ALUMINUM



BLACK ZINC NICKEL PLATED



DURMALON PLATED ALUMINUM



OLIVE DRAB CADMIUM



ELECTRO DEPOSITED NICKEL OVER STAINLESS STEEL



COMPOSITE NICKEL



COMPOSITE BLACK ZINC



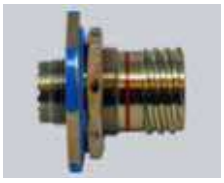
COMPOSITE DURMALON



COMPOSITE CADMIUM



AP-93 ALUMINUM/ STAINLESS



MARINE BRONZE

# MIL-DTL-38999, Series III TV

## Options

### OFFER MORE VERSATILITY & OPTIONS THAN ANY OTHER INTERCONNECTION FAMILY!

| | |
|---|---|
|  | HD38999 |
|  | DUALOK |
|  | FILTER |
|  | PC TAILS |
|  | FAIL SAFE |
|  | FIBER OPTICS |
|  | HIGH SPEED |
|  | HERMETIC |
|  | FLEX |

High reliability and increased versatility best describe Amphenol MIL-DTL-38999, Series III circular connectors. Originally designed for the harshest of environments and most demanding of applications, Amphenol MIL-DTL-38999 Series III, Tri-Start connectors continue to evolve in pace with the needs of an ever-changing market.

Amphenol Tri-Start connectors can be configured with a number of application specific technologies like:

- High Density HD38999
- Dualok
- PC Tails
- Filters
- Fail Safe
- Fiber Optics
- High Speed Contacts
- Hermetics
- Flex

Flexibility aids in design optimization through the combination of different technologies within a common, time-tested, harsh environment connector body.

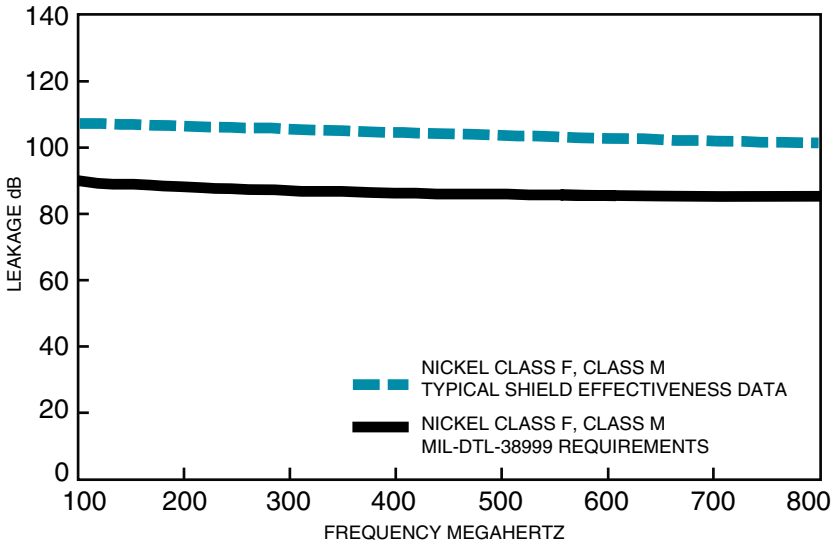
For more information about options, please call 800-678-0141 or visit www.amphenol-aerospace.com.



Applicable Patents:
Tri-Start™ Connector Patent 4,109,990.
Composite Connector Patents:
4,268,103; 4,648,670; 4,682,832; 4,703,987.

## TRI-START, SERIES III TYPICAL SHIELDING EFFECTIVENESS TEST DATA

EMI/EMP SHIELDING EFFECTIVENESS dB
TESTING BY TRIAXIAL METHOD




## AMPHENOL® TRI-START CONNECTORS PROVIDE EMI/EMP SHIELDING CAPABILITY WHICH EXCEEDS MIL-DTL-38999 SERIES III REQUIREMENTS.

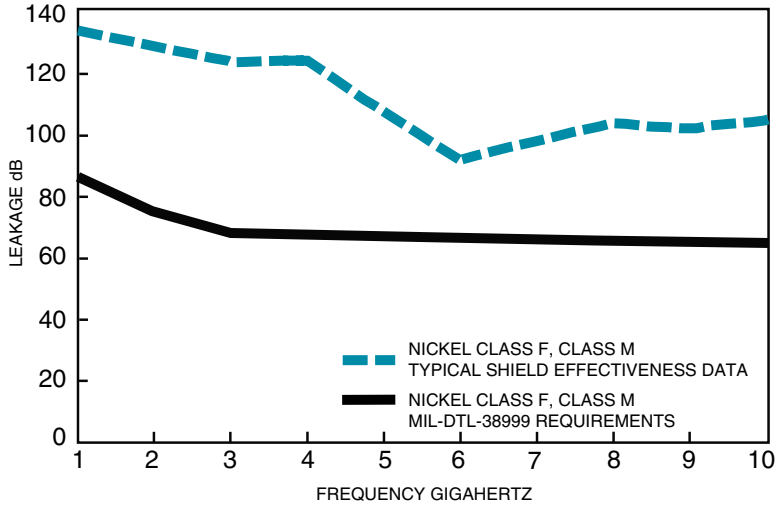
The TV and CTV Series III connector with standard solid metal-to-metal coupling, EMI grounding fingers and conductive finishes have proven to be the ultimate in EMI/EMP shielding effectiveness. The charts illustrate shielding effectiveness data which is typical of Tri-Start connectors tested with the nickel finish (Class F-metal, Class M-composite) over a wide frequency range.

The vibration capability of the Tri-Start Series is shown in the chart below. This illustrates the most severe vibration envelope of any qualified connector available today.

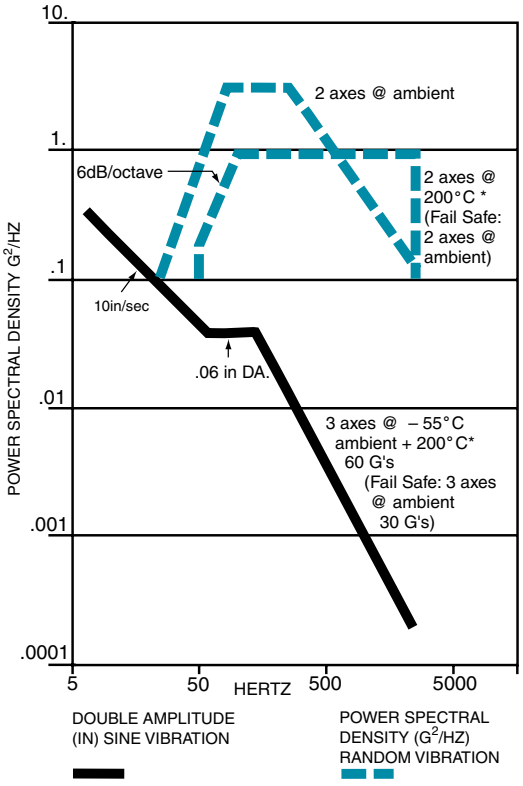
These capabilities along with a +200°C, -65°C temperature rating and superior moisture sealing protection provide the user with a connector that can withstand the most rigorous application.

## TRI-START, SERIES III TYPICAL SHIELDING EFFECTIVENESS TEST DATA

EMI/EMP SHIELDING EFFECTIVENESS dB
TESTING BY MODE STIRRING METHOD




## TRI-START VIBRATION CRITERIA




* Dependant on shell finish

Test data beyond 2GHz is subject to equipment variation.

NOTE: For test data information on the new Dualok, high vibration connectors, consult Amphenol Aerospace.

# MIL-DTL-38999, Series III TV

## Weight Comparisons (Composite vs. Metal)

Depending on the shell style, shell size and contact count, weight savings can range from 17% to 40% compared to standard aluminum product.

**Tri-Start Weight in Ounces** (includes contacts)

| | Wall Mount Receptacle (00) + Military D38999/20 | | | | | | Jam Nut Receptacle (07) + Military D38999/24 | | | | | | Plug (06) + Military D38999/26 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Stainless Steel | | Aluminum | | Composite | | Stainless | | Aluminum | | Composite | | Stainless Steel | | Aluminum | | Composite | |
| | Pin | Socket | Pin | Socket | Pin | Socket | Pin | Socket | Pin | Socket | Pin | Socket | Pin | Socket | Pin | Socket | Pin | Socket |
| 9-35 | .7216 | .7840 | .3248 | .3777 | .2588 | .3121 | 1.1472 | 1.2096 | .4416 | .5040 | .3489 | .4413 | 1.0736 | 1.1360 | .4236 | .4625 | .2606 | .2994 |
| 9-98 | .7216 | .7776 | .2496 | .3056 | .1664 | .2224 | 1.1472 | 1.2032 | .4416 | .4976 | .3744 | .4640 | 1.0736 | 1.1296 | .3968 | .4624 | .2991 | .2337 |
| 11-35 | .9488 | 1.0800 | .3632 | .4960 | .2753 | .4081 | 1.4304 | 1.5632 | .5936 | .7264 | .4679 | .6007 | 1.2480 | 1.3808 | .5312 | .6389 | .3450 | .4582 |
| 11-98 | .9488 | 1.0620 | .3632 | .4768 | .2753 | .3889 | 1.4304 | 1.5440 | .5936 | .7072 | .4679 | .5815 | 1.2480 | 1.3616 | .5330 | .6283 | .3468 | .4457 |
| 13-8 | 1.2096 | 1.3888 | .4800 | .6592 | .3696 | .5488 | 1.9104 | 2.0896 | .7664 | .9456 | .6560 | .8352 | 1.8048 | 1.9840 | .7936 | .9728 | .5237 | .5952 |
| 13-35 | 1.2160 | 1.4320 | .4864 | .7024 | .3762 | .5922 | 1.9168 | 2.1328 | .7728 | .9888 | .6136 | .8296 | 1.8112 | 2.0272 | .8000 | .8472 | .5301 | .6531 |
| 13-98 | 1.2160 | 1.4016 | .4864 | .6720 | .3762 | .5618 | 1.9168 | 2.1024 | .7728 | .9584 | .6136 | .7992 | 1.8112 | 1.9968 | .7978 | .9856 | .5244 | .7157 |
| 15-5 | 1.5312 | 1.7904 | .6352 | .8944 | .5027 | .7619 | 2.3792 | 2.6384 | .9728 | 1.2320 | .7749 | 1.0341 | 2.2704 | 2.5456 | .9632 | 1.1719 | .6450 | .8467 |
| 15-18 | 1.5456 | 1.8416 | .7760 | .9456 | .6432 | .8128 | 2.3936 | 2.6896 | .9872 | 1.2832 | .8544 | 1.1504 | 2.2848 | 2.5808 | .9776 | 1.2736 | .6594 | .8208 |
| 15-35 | 1.5424 | 1.8768 | .6464 | .9808 | .5139 | .8483 | 2.3904 | 2.7344 | .9840 | 1.3280 | .7861 | 1.1301 | 2.2816 | 2.6256 | 1.2179 | 1.3184 | .8961 | 1.0002 |
| 17-6 | 2.1488 | 2.5904 | .9360 | 1.3776 | .7812 | 1.2228 | 2.9152 | 3.3568 | 1.2336 | 1.6752 | .9940 | 1.4356 | 2.5008 | 3.1024 | 1.1408 | 1.7424 | .8160 | 1.4176 |
| 17-26 | 2.1344 | 2.5600 | .9216 | 1.3472 | .7668 | 1.1924 | 2.9008 | 3.3264 | 1.2192 | 1.6448 | .9796 | 1.4052 | 2.4864 | 2.9120 | 1.1264 | 1.3343 | .8017 | .8062 |
| 17-35 | 2.1360 | 2.6640 | .9232 | 1.4512 | .7684 | 1.2964 | 2.9024 | 3.4304 | 1.2208 | 1.7488 | .9812 | 1.5092 | 2.4880 | 3.0160 | 1.1280 | 1.5497 | .8033 | 1.2144 |
| 19-11 | 2.2592 | 2.6656 | .9696 | 1.4528 | .7925 | 1.2757 | 3.4352 | 3.9184 | 1.4720 | 1.9552 | 1.2033 | 1.6865 | 2.9808 | 3.4640 | 1.3472 | 1.8304 | .9632 | 1.4464 |
| 19-32 | 2.1888 | 2.7264 | .9760 | 1.5136 | .7989 | 1.3365 | 3.4416 | 3.9792 | 1.4784 | 2.0160 | 1.2097 | 1.7473 | 2.9872 | 3.5248 | 1.3536 | 1.8912 | .9696 | 1.5072 |
| 19-35 | 2.1920 | 2.8432 | .9792 | 1.6304 | .8021 | 1.4533 | 3.4448 | 4.0960 | 1.4816 | 2.1328 | 1.2129 | 1.8641 | 2.9904 | 3.6416 | 1.3568 | 2.0080 | .9728 | 1.6240 |
| 21-11 | 2.7456 | 3.4640 | 1.3088 | 2.0272 | 1.1088 | 1.8272 | 3.9712 | 4.6896 | 1.8128 | 2.5312 | 1.6128 | 2.3312 | 3.4448 | 4.1632 | 1.7344 | 2.5312 | 1.3039 | 1.8710 |
| 21-16 | 2.6784 | 3.3168 | 1.2416 | 1.8800 | 1.0422 | 1.6806 | 3.9040 | 4.5424 | 1.7456 | 2.3840 | 1.4505 | 2.0889 | 3.3776 | 4.0160 | 1.6672 | 2.3168 | 1.2352 | 1.8736 |
| 21-35 | 2.6672 | 3.4992 | 1.2304 | 2.0624 | 1.0310 | 1.8630 | 3.8928 | 4.7248 | 1.7344 | 2.5664 | 1.4393 | 2.2713 | 3.3664 | 4.1984 | 1.6560 | 2.2309 | 1.2255 | 1.8003 |
| 21-41 | 2.6768 | 3.3600 | 1.2400 | 1.9232 | 1.0406 | 1.7238 | 3.9024 | 4.5856 | 1.7440 | 2.4272 | 1.4489 | 2.1321 | 3.3760 | 3.5792 | 1.6656 | 1.8688 | 1.2336 | 1.4368 |
| 23-21 | 3.0352 | 3.8624 | 1.4496 | 2.2768 | 1.2279 | 2.0551 | 4.2368 | 5.0640 | 1.9440 | 2.7712 | 1.6368 | 2.4640 | 3.7920 | 4.6192 | 1.9216 | 2.7488 | 1.4637 | 2.2896 |
| 23-35 | 3.0240 | 4.0448 | 1.4384 | 2.4592 | 1.2167 | 2.2375 | 4.2256 | 5.2464 | 1.9328 | 2.9536 | 1.6256 | 2.6464 | 3.7808 | 4.8016 | 1.9104 | 2.6087 | 1.4525 | 2.1507 |
| 23-53 | 2.8992 | 3.9072 | 1.4560 | 2.4816 | 1.2343 | 2.2599 | 4.2432 | 5.1088 | 1.9504 | 2.8160 | 1.6432 | 2.5088 | 3.7984 | 4.6640 | 1.9280 | 2.7936 | 1.4672 | 2.2384 |
| 25-4 | 3.4512 | 4.4800 | 1.7312 | 2.8816 | 1.4864 | 2.1904 | 4.8048 | 5.8272 | 2.2016 | 3.2480 | 1.9568 | 2.8720 | 4.2224 | 5.2496 | 2.2128 | 3.2560 | 1.7133 | 2.4163 |
| 25-19 | 3.5312 | 4.7264 | 1.8112 | 3.0064 | 1.5664 | 2.7616 | 4.8848 | 6.0816 | 2.2816 | 3.4784 | 2.0368 | 3.2336 | 4.3024 | 5.4992 | 2.2928 | 3.4896 | 1.7933 | 2.7058 |
| 25-20 | 3.8190 | 4.7150 | 2.0173 | 3.1125 | 1.7733 | 2.8512 | 5.1430 | 6.0380 | 2.4877 | 3.5421 | 2.1872 | 3.2416 | 4.4350 | 5.3300 | 2.2580 | 3.0182 | 1.8288 | 2.8928 |
| 25-35 | 3.4416 | 4.6656 | 1.7216 | 2.9456 | 1.4776 | 2.7016 | 4.7952 | 6.0192 | 2.1920 | 3.4160 | 1.8915 | 3.1155 | 4.2128 | 5.4368 | 2.2032 | 3.4272 | 1.7037 | 2.9277 |
| 25-61 | 3.4304 | 4.4848 | 1.7282 | 2.7648 | 1.4841 | 2.5208 | 4.7840 | 5.8384 | 2.1808 | 3.2352 | 1.8803 | 2.9347 | 4.2016 | 5.2560 | 2.1920 | 3.2464 | 1.6912 | 2.7456 |

All weight measurements are for reference only.

# High Vibration Dualok, 38999 Series III Type

## Features and Benefits

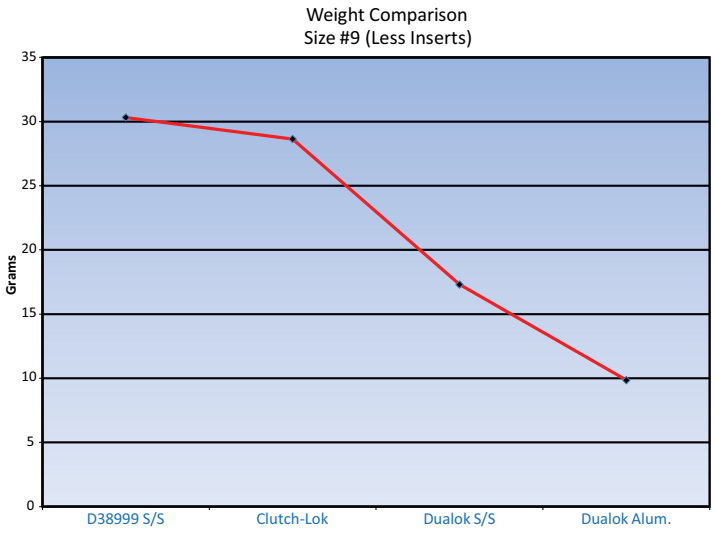
The Dualok represents the latest in high performance connector designs from Amphenol. Featuring a newly developed locking mechanism, the Dualok plug ensures rock-solid coupling and metal-to-metal bottoming in the most severe vibration environments.

*New High Vibration Dualok Connector*



### DUALOK FEATURES AND BENEFITS INCLUDE:

- Mates with standard D38999 receptacles and utilizes standard D38999 inserts.
- Designed to withstand and stay mated under vibration levels that exceed MIL-DTL-38999 levels
- Dualok stainless steel provides a weight savings of up to 42% compared to standard D38999 stainless steel designs
- Stainless steel, aluminum, composite materials of constructio
- Dualok aluminum provides ~ 10% weight reduction over D38999 Aluminum
- Coupling mechanism that does not “settle” under vibration levels exceeding MIL-DTL-38999
- Metal-to-metal bottoming for maximum EMI shielding under extreme vibration




### OPTIONAL SHELL GEOMETRIES

Amphenol offers a number of different shell configurations to fit your needs

- Deep Reach Shells - For increased panel thickness (DR3), (DR5), (DR7)
- Stand-off Flange Shells - For attachments to Printed Circuit Boards.
- Connector with Integral Strain Reliefs







# High Density Interconnects

## HD38999: 9 to 187 Contacts

The HD38999 family of connectors has 30% more contact density than the highest density Mil Spec 38999 connectors of its size. This series of connectors was designed to utilize mil-specified 38999 components with the exception of the contacts and inserts arrangement. Utilizing existing mil-qualified 39029 size 23 contacts and 38999 insert materials, these connectors are essentially a drop-in replacement for the standard 38999 connector.




This connector design benefits users in a couple of different ways. For those users who need to increase the amount of contacts in their application, the HD38999 series allows them to do so without increasing the size of their connector. For users who are looking to decrease the overall size of their system, they can do so by using smaller shell sizes without decreasing the number of contacts.

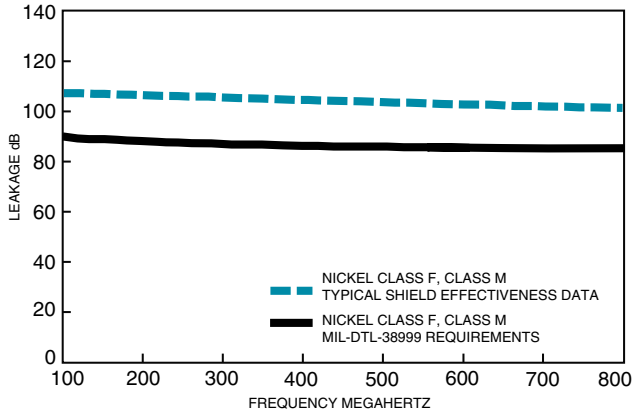
Amphenol has qualified this series of connectors to the requirements of MIL-DTL-38999. Amphenol also manufacturers this high density series in Filter, Hermetic and customized versions to fit our customer's needs. Please contact us if additional information is required.

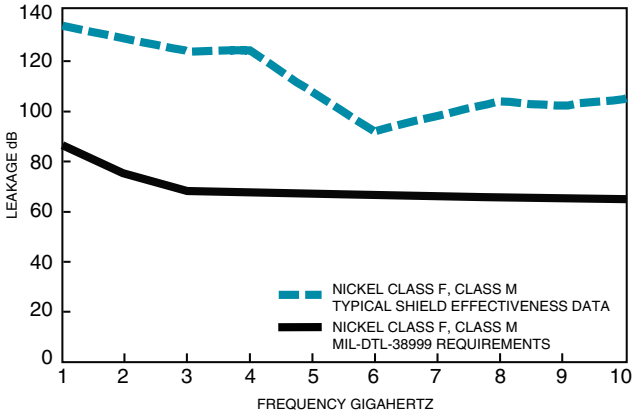
## TECHNICAL DATA

HD38999 series was designed to meet and/or exceed the specifications of MIL-DTL-38999. The connector series has been tested to all the requirements of 38999 with the use of AS39029 size 23 contacts. Test reports are available upon request. The following is a summary of some of the performance requirements.

### EMI SHIELDING EFFECTIVENESS:

Solid metal to metal coupling, EMI grounding fingers and conductive finishes have proven to be the ultimate in EMI/EMP shielding effectiveness. The following chart illustrated shielding effectiveness data which is typical in HD38999 connectors.




### ELECTRICAL:

22 AWG: 5.0 AMPS
24 AWG: 3.0 AMPS
26 AWG: 2.0 AMPS
28 AWG: 1.5 AMPS

Insulation Resistance: 5000 megohms min.@500 VDC 25C
Dielectric Withstanding Voltage: 1000 VRMS@sea level

### MECHANICAL:

| | | |
|---|---|---|
| Metallic Shells: | Material: | Aluminum alloy, Stainless Steel |
| | Protection: | Electroless Nickel, O.D. Cadmium, Durmalon (Nickel PTFE), Zinc Nickel |
| Composite Shells: | Material: | Thermoplastic |
| | Protection: | Electroless Nickel, O.D. Cadmium, Durmalon (Nickel PTFE), Zinc Nickel |
| Contacts: | Material: | Copper Alloy |
| | Protection: | Gold over Nickel |
| Insert Retention to Shell: | | 100 psi in axial load |
| Durability: | | 500 full mating and unmating cycles |
| Vibration: | | 60G sine per MIL-DTL-38999L Para 4.5.23.2.1<br>5G2 Random per EIA-364-28E, Test condition A<br>1G2 Random per EIA-364-28E, Test condition I |
| Shock: | | Per EIA-364-27B, 300g |

### ENVIRONMENTAL:

| | |
|---|---|
| Operating Temperature: | –65°C to +175°C |
| Salt Spray: Metallized: | Electroless Nickel: 48 hours<br>Anodic Coating, O. D. Cadmium, Durmalon, Zinc Nickel: 500 hours |
| Salt Spray Composite: | Electroless Nickel: 2000 hours<br>O. D. Cadmium, Durmalon, Zinc Nickel: 500 hours |

# Custom Designed HD38999 Connectors and Alignment Disks

Amphenol Aerospace



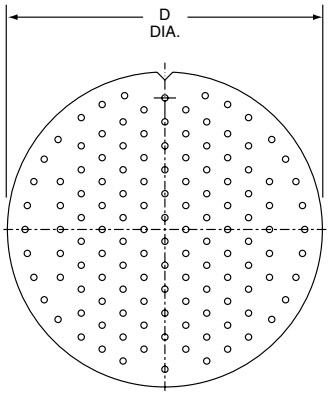
**NEW CUSTOM DESIGNED HD38999 CONNECTORS - PROVIDE MORE INTERCONNECT SOLUTIONS:**

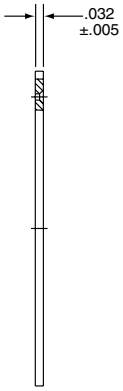
HD38999 High Density

## ALIGNMENT DISKS

Alignment disks keep contacts aligned for easier insertion into circuit boards. These are typically ordered with the connector - see step 7 of How to Order on page 47.



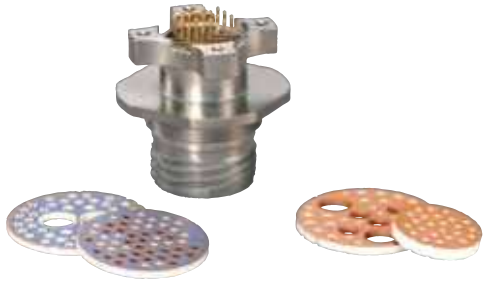



| Shell Size | D Dia. ±.010 |
|---|---|
| 9 | .234 |
| 11 | .350 |
| 13 | .500 |
| 15 | .725 |
| 17 | .750 |
| 19 | .850 |
| 21 | .953 |
| 23 | 1.147 |
| 25 | 1.250 |

## FILTERED HD38999 CONNECTORS - FOR EMI/EMP PROTECTION

High density patterns are available in filter 38999 connectors - consult Amphenol Aerospace for ordering.



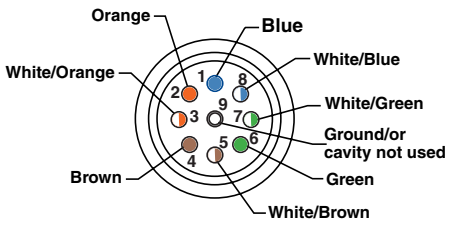
## HD38999 FOR GIGABIT ETHERNET APPLICATIONS

The HD38999 is available for high speed (Gigabit Ethernet) data transmission in the size 9-9 insert pattern.

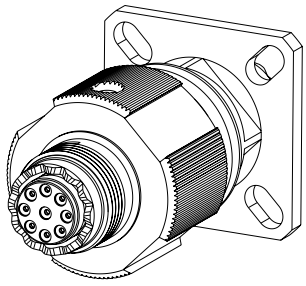
Data transmission performance of this connector insert:

- 10 Base T, 100 Base TX, and 1000 Base T networks using Cat 5e per TIA/EIA568B and Class D per ISO/IEC 11801.
  (Test report available - consult Amphenol Aerospace for more information)

*Signal-Ground Pin Configuration*
*Wiring Recommendations*




*View Rear of Connector*



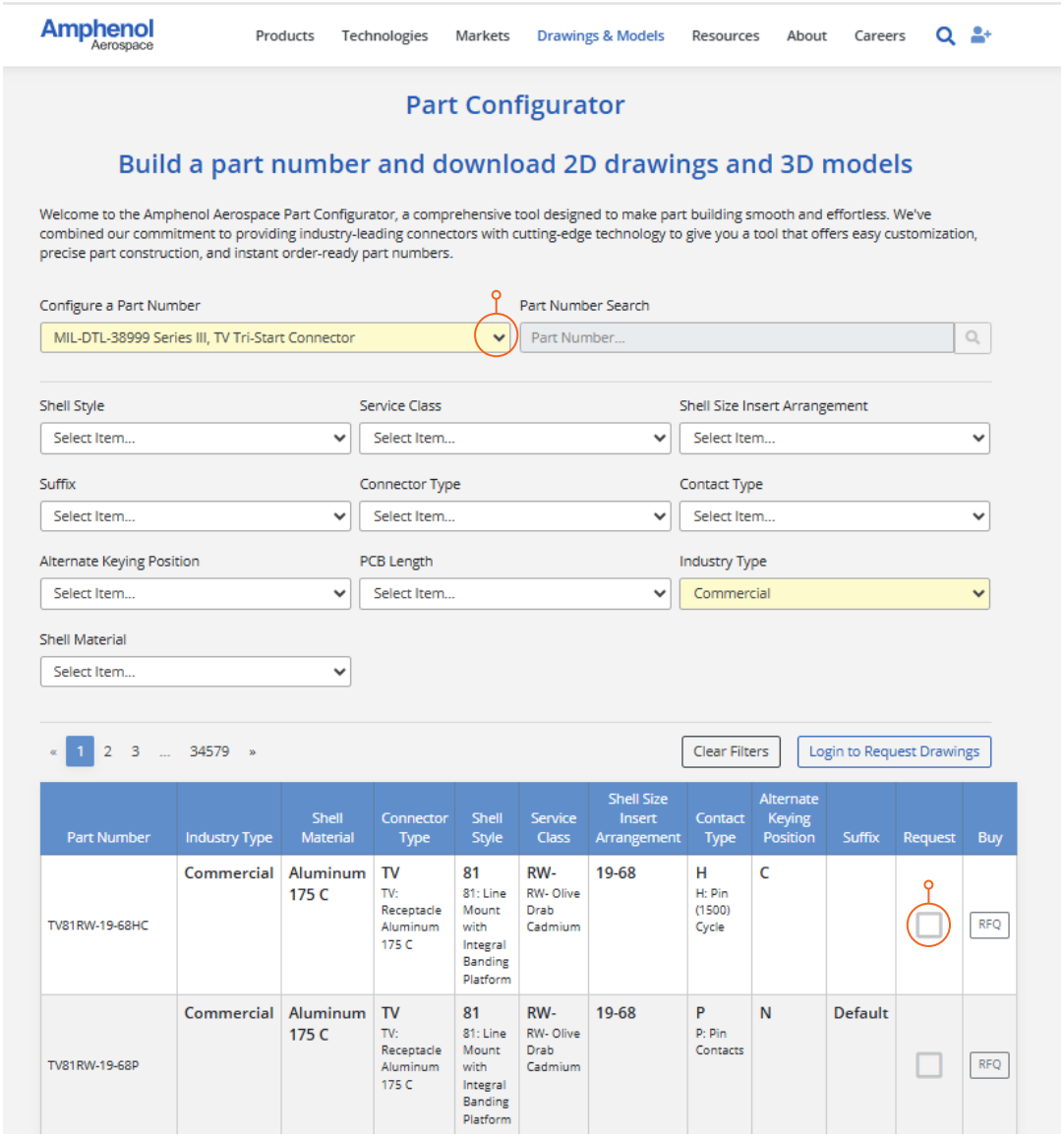
*HD38999 Connector with 9-9 Insert Pattern (Rear View)*

# MIL-DTL-38999, Series III TV, Configurator

## Online at www.amphenol-aerospace.com

Now you can build a part number for Military and Commercial MIL-DTL-38999 Series III through our online configurator, located on the home page of www.amphenol-aerospace.com.




After building a part number, request the drawing and model, specifications, buy if available through distribution channels. Try it today.

# Military to Commercial Shell Style Conversion Table

Amphenol Aerospace

## How to Order (Military)

| MILITARY | DESCRIPTION | COMMERCIAL |
|---|---|---|
| D38999/20 | Wall Mounting Receptacle | TVP00 or TVPS00 (AL & SS); CTVP00, CTVPS00 (Composite) |
| D38999/21 | Hermetic Box Mounting Receptacle | TVPS02Y, TVPS02YN |
| D38999/23 | Hermetic Jam Nut Receptacle | TVS07Y, TVS07N |
| D38999/24 | Jam Nut Receptacle | TV07, TVS07 (AL & SS); CTV07, CTVS07 (Composite) |
| D38999/26 | Straight Plug | TV06, TVS06 |
| D38999/25 | Solder Mount Receptacle (Hermetic) | TVSI |
| D38999/27 | Weld Mounted Receptacle (Hermetic) | TVSHI |

## HOW TO ORDER: MILITARY

| 1. Connector Type | 2. Shell Style | 3. Service Class | 4. Shell Size– Insert Arrangement | 5. Contact Type | 6. Alternate Keying Position |
|---|---|---|---|---|---|
| D38999/ | 20 | J | G35 | P | N |

### 1. CONNECTOR TYPE

| | |
|---|---|
| 38999/ | MIL-DTL-38999 III |

### 2. SHELL STYLE

| | |
|---|---|
| 20 | Wall Mount Receptacle |
| 21 | Box Mount Receptacle (Hermetic) |
| 26 | Straight Plug |
| 24 | Jam Nut Receptacle |
| 23 | Jam Nut Receptacle (Hermetic) |
| 25 | Solder Mount Receptacle (Hermetic) |
| 27 | Weld Mounted Receptacle, (Hermetic) |

### 3. SERVICE CLASS

| Military | Finish | RoHS | Material | Material/ Description |
|---|---|---|---|---|
| AA- | AP-93 | ■ | Aluminum | Tri-Nickel Alloy,1000 Hr., 200°C, -65dB@100Hz* (D38999/20/24/26 only) |
| C | Anodic Coating | ■ | Aluminum | 200°C, 500 hour salt spray |
| F | Electroless Nickel | ■ | Aluminum | 200°C, EMI shielding –65dB @ 10GHz, 48 hour salt spray |
| G | Electroless Nickel | ■ | Aluminum | 200°C, Space grade, 48 hour salt spray |
| J | Olive Drab Cadmium | | Composite | 175°C, 2000 hours dynamic salt spray, EMI Shielding –50 dB@10 GHz specification min. |
| K | Passivated Stainless Steel | ■ | Stainless Steel | 200°C, firewall capability, 500 hour salt spray resistance, EMI –45 dB @ 10 GHz specification min. |
| L | Stainless Steel w/ Nickel Plate | ■ | Stainless Steel | Corrosion resistant steel, 200°C, 500 hour salt spray, , non firewall, EMI shielding –65dB @ 10GHz specification min. |
| M | Electroless Nickel | ■ | Composite | 200°C, EMI shielding –65dB @ 10GHz, 2000 hours dynamic salt spray |
| N | Stainless Steel w/ Nickel Plate (Hermetic) | ■ | Stainless Steel | Hermetic connectors, corrosion resistant steel, 200°C |
| S | Stainless Steel w/ Nickel Plate | ■ | Stainless Steel | Corrosion resistant steel, 200°, firewall capability, 500 hour salt spray, EMI shielding –65dB @ 10GHz specification min. |
| T | Durmalon plated | ■ | Aluminum | Nickel-PTFE alternative to Cadmium, 175°C, 500 hour salt spray, EMI -50dB at 10GHz specification min. |
| W | Olive Drab Cadmium | | Aluminum | 175°C , 500 hour salt spray, EMI Shielding –50 dB@10 GHz specification min. |
| Y | Stainless Steel (Hermetic) | ■ | Stainless Steel | Hermetic seal, 200°C passivated stainless steel |
| Z | Zinc-Nickel Plated | ■ | Aluminum | Zinc-Nickel Alternative to Cadmium, +175°C, 500 hour salt spray, EMI Shielding –50 dB @ 10 GHz specification min. |

# MIL-DTL-38999, Series III TV

## How to Order (Military)

### 4. SELECT A SHELL SIZE & INSERT ARRANGEMENT SEE PAGES 2-5

Shell Size & Insert Arrangements are on pages 2-5. First number represents Shell Size, second number is the Insert Arrangement.

Triple Start Threads

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

### 5. CONTACT TYPE

| | |
|---|---|
| P | 500 Cycle Pin Contacts |
| S | 500 Cycle Socket Contacts |
| H | 1500 Pin Cycle Contacts |
| J | 1500 Socket Cycle Contacts |
| A | Less Pin Contacts |
| B | Less Socket Contacts |
| X | Eyelet contacts (Hermetic) |

### 6. ALTERNATE KEY POSITION

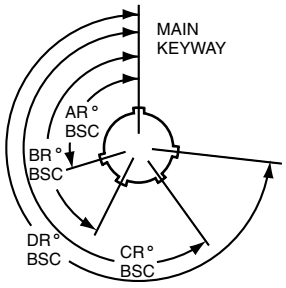
Key/Keyway Position

| N | A | B | C | D | E |
|---|---|---|---|---|---|

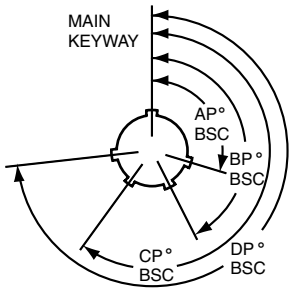
### KEY/KEYWAY POSITION

A plug with a given rotation letter will mate with a receptacle with the same rotation letter. The angles for a given connector are the same whether it contains pins or sockets. Master key stays fixed, minor keys rotate. Inserts are not rotated in conjunction with the master key/keyway.

**RECEPTACLE**
**(front face shown)**




**PLUG**
**(front face shown)**




| Shell Size | Key & Keyway Arrangement Identification Letter | AR° or AP° BSC | BR° or BP° BSC | CR° or CP° BSC | DR° or DP° BSC |
|---|---|---|---|---|---|
| A (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 |
| B (11) C (13) D (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 |
| E (17) F (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 |
| G (21) H (23) J (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 |

Amphenol Aerospace

## How to Order (Commercial)

### PART NUMBER KEY

| 1. Type | 2. Shell Style | 3. Service Class | 4. Shell Size & Insert Arrangement | 5. Contact Type | 6. Alternate Position* | 7.1 PCB Termination | 7.2 PCB Length | 7.3 PCB Acc | 7.4 PCB Tinning Option |
|---|---|---|---|---|---|---|---|---|---|
| TVP | 00 | RW | 11-4 | P | A | P | 45 | AD | T1 |

** Alternate Position leave blank for Normal*

| RATED 175° | | |
|---|---|---|
| 1. TYPE | TV | Tri-Start-175° |
| | TVP | Panel Mounted Receptacle-175° |
| | PTV | Potted Version-175° |
| | PTVP | Panel Mounted Potted Version Receptacle-175° |

| RATED 200° | | |
|---|---|---|
| 1. TYPE | TVS | Tri-Start-200° |
| | TVPS | Panel Mounted Receptacle-200° |
| | PTVS | Potted Version-200° |
| | PTVPS | Panel Mounted Potted Version-200° |

| COMPOSITE 175° | | |
|---|---|---|
| 1. TYPE | CTV | Composite Tri-Start-175° |
| | CTVP | Composite Back Panel Mounted -175° Receptacle |

| COMPOSITE 200° | | |
|---|---|---|
| 1. TYPE | CTVS | Composite Tri-Start-200° |
| | CTVPS | Composite Back Panel Mounted -200° Receptacle |

| RECEPTACLE CRIMP | | |
|---|---|---|
| 2. SHELL STYLE | 02 | Box Mount Recptacle Panel Mount |
| | 00 | Wall Mount Receptacle Panel Mount |
| | 80 | Wall Mount with Integral Banding Platform |
| | 07 | Jam Nut Receptacle |
| | 87 | Jam Nut with Integral Banding Plaform |
| | 01 | Inline Receptacle |
| | 81 | Line Mount with Integral Banding Platform |

| PLUG | | |
|---|---|---|
| 2. SHELL STYLE | 06 | Straight Plug |
| | 09 | Flange Mount Plug |
| | 56 | Straight Plug with Dualok |
| | 96 | Plug with Integral Banding Platform |
| | 76 | Plug with Integral Strain Relief |

| RECEPTACLE WITH PCB CONTACTS | | |
|---|---|---|
| 2. SHELL STYLE | 02 | PCB Box Mount Receptacle |
| | 12 | PCB Box Mount Receptacle Clinch Nuts |
| | 13 | PCB Box Mount Receptacle Metric Clinch Nuts |
| | 00 | PCB Wall Mount Receptacle |
| | 10 | PCB Wall Mount Receptacle Clinch Nuts |
| | 11 | PCB Wall Mount Receptacle Metric Clinch Nuts |
| | 40 | PCB Wall Mount Receptacle Double Flange |
| | 42 | PCB Wall Mount with Integrated Helicoils |
| | 43 | PCB Wall Mount Double Flange with Nut Plate |
| | 07 | PCB Jam Nut Receptacle |
| | 17 | PCB Jam Nut, Washout Standoffs Receptacle |
| | 18 | PCB Jam Nut, Flush Flange |
| | 47 | PCB Jam Nut Double Flange Receptacle |
| | 48 | PCB Jam Nut, Reduced Flange with Double Flange |
| | 97 | PCB Jam Nut, Reduced Flange |
| | 98 | PCB Jam Nut, Reduced Flange with Standoffs |

| RECEPTACLE HERMETIC (STAINLESS STEEL) | | |
|---|---|---|
| 2. SHELL STYLE | 02 | Box Mount Receptacle Hermetic |
| | 07 | Jam Nut Receptacle Hermetic |
| | I | Solder Mount Receptacle Hermetic |
| | HI | Weld Mount Receptacle Hermetic |



**Wall Mount Receptacle (00, 20)**



**Line Receptacle (01)**



**Box Mount Receptacle (02, 21)**



**Straight Plug (06)**



**Lanyard Release Plug (29, 30, 31)**

# MIL-DTL-38999, Series III TV

## How to Order (Commercial)

| 3. SERVICE CLASS | ALUMINUM 175°C | | |
|---|---|---|---|
| | DT- | Durmalon: 500 hrs. salt spray, -50dB@10GHz | RoHS |
| | DZ- | Black Zinc: 500 hrs. salt spray, -50dB@10GHz | RoHS |
| | RW- | Olive Drab Cadmium: 500 hrs. salt spray, -65dB@10GHz | |
| | RGW- | Olive Drab Cadmium: (with Ground Plane) | |
| | DW- | Corrosion Resistant Olive Drab Cadmium: 1000 hrs. salt spray | |

| 3. SERVICE CLASS | ALUMINUM 200°C | | |
|---|---|---|---|
| | RF- | Electroless Nickel-48 hrs. salt spray, -65dB@10GHz | RoHS |
| | RGF- | Electroless Nickel (with ground plane) | RoHS |
| | RB- | Marine Bronze: 2,000 hr. salt spray, -65dB@10GHz | RoHS |
| | DS- | AP-93: Tri-Nickel Alloy, Aluminum, 1000 Hr., 200°C, -65dB@100Hz* | RoHS |
| | DB- | Black Electroless Nickel: 100 hr. salt spray | RoHS |

| 3. SERVICE CLASS | COMPOSITE 175°C | | |
|---|---|---|---|
| | RW- | Olive Drab Cadmium: 500 hrs. salt spray, -65dB@10GHz | |
| | RGW- | Olive Drab Cadmium: (with Ground Plane) | |
| | DT- | Durmalon: 500 hrs. salt spray, -50dB@10GHz | RoHS |
| | DZ- | Black Zinc: 500 hrs. salt spray, -50dB@10GHz | RoHS |

| 3. SERVICE CLASS | COMPOSITE 200°C | | |
|---|---|---|---|
| | RF- | Electroless Nickel: 48 hrs. salt spray, -65dB@10GHz | RoHS |
| | RGF- | Electroless Nickel: (with ground plane) | RoHS |

| 3. SERVICE CLASS | STAINLESS STEEL 200°C | | |
|---|---|---|---|
| | RK- | Passivated (Firewall): 500 hrs. salt, -65dB@10GHz | RoHS |
| | RKN- | Passivated (Non-Firewall): 500 hrs. salt, -65dB@10GHz | RoHS |
| | RS- | Nickel Plated (Firewall): 500 hrs. salt, -65dB@10GHz | RoHS |
| | RL- | Nickel Plated (Non-Firewall): 500 hrs. salt, -50dB@10GHz | RoHS |
| | DSN- | AP-93: Tri-Nickel Alloy (Non-Firewall) Consult factory for details | RoHS |
| | DSK- | AP-93: Tri-Nickel Alloy (Firewall) Consult factory for details | RoHS |

| 4. SHELL SIZE & INSERT ARRANGEMENT | |
|---|---|
| PAGE 2-5 | First number represents Shell Size, second number is the Insert Arrangement. |

Insert arrangements using multi-axial (i.e. coax, twinax, triax shielded) contacts should not be used in firewall applications. *Coaxial arrangements are not available in firewall classes.

| 5. CONTACT TYPE | |
|---|---|
| P | 500 Cycle Pin Contacts, if require Less Contacts place (LC) at the end of part number |
| S | 500 Cycle Socket Contacts, if require Less Contacts place (LC) at the end of part number |
| H | 1500 Cycle Pin Contacts |
| J | 1500 Cycle Socket Contacts |
| X | Eyelet contacts, hermetics only |

**Jam Nut Receptacle (07, 24)**



**Flange Mounting Plug (09)**



**Deep Reach Receptacle** Consult Amphenol Aerospace



**Solder Mount Hermetic Receptacle (I, 25)**



Amphenol Aerospace

# How to Order (Alternate Keying) Commercial

## PART NUMBER KEY

Note: Step 5 and 7.1 PCB Termination must match

| 1. Type | 2. Shell Style | 3. Service Class | 4. Shell Size & Insert Arrangement | 5. Contact Type | 6. Alternate Position* | 7.1 PCB Termination | 7.2 PCB Length | 7.3 PCB Acc | 7.4 PCB Tinning Option |
|---|---|---|---|---|---|---|---|---|---|
| TVP | 00 | RW | 11-4 | P | A | P | 45 | AD | T1 |



## 6. ALTERNATE KEYING

| 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* Blank | 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* Blank | 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* Blank | 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* Blank | 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 |
| 25L, 33, and 37 | N* Blank | 80 | 142 | 188 | 293 |
| | A | 135 | 170 | 188 | 310 |
| | B | 49 | 169 | 188 | 244 |
| | C | 66 | 140 | 188 | 257 |
| | D | 62 | 145 | 188 | 280 |
| | E | 79 | 153 | 188 | 272 |

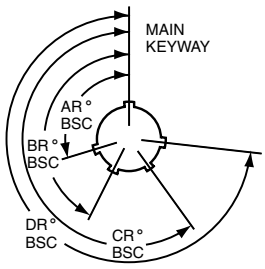
*Alternate Position leave blank for Normal*

### 6. SELECT A ALTERNATE KEYING COMMERCIAL

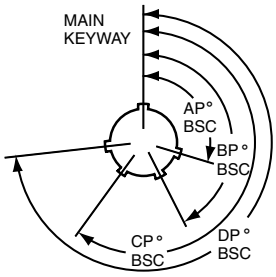
### KEY/KEYWAY POSITION

A plug with a given rotation letter will mate with a receptacle with the same rotation letter. The angles for a given connector are the same whether it contains pins or sockets. Master key stays fixed, minor keys rotate. Inserts are not rotated in conjunction with the master key/keyway.

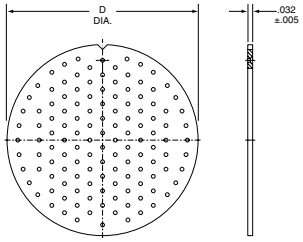
### RECEPTACLE (FRONT FACE SHOWN)




### PLUG (FRONT FACE SHOWN)




### Alignment Disc




| Shell Size | D Dia. ±.010 |
|---|---|
| 9 | .234 |
| 11 | .350 |
| 13 | .500 |
| 15 | .725 |
| 17 | .750 |
| 19 | .850 |
| 21 | .953 |
| 23 | 1.147 |
| 25 | 1.250 |

### 7.1 TERMINATION

| | |
|---|---|
| P | Pin |
| S | Socket |

### 7.2 PCB LENGTH

| | |
|---|---|
| 10 | .100" |
| 15 | .150" |
| 20 | .200" |
| 25 | .250" |
| 30 | .300" |
| 35 | .350" |
| 40 | .400" |
| 45 | .450" |

Note: Nominal (±) .040"

### 7.3 ACCESSORIES

| | |
|---|---|
| AD | Alignment Disc |
| | No Disc |

### 7.4 TINNING OPTIONS

| | |
|---|---|
| | Standard Gold Plating |
| T | Tin-Lead Solder |
| T1 | Tin-Silver Solder |
| T2 | SAC 305 (lead Free) |

Example Configuration: "P15" PCB Connector with .150 length gold plated contacts

Example Configuration: "S25T" PCB connector with .250 stickout length, gold plated contacts with tin-lead solder

Example Configuration: "P45ADT1" PCB connector with .450 stickout length, gold plated contacts with tin-silver solder and an alignment disc

# Boeing BACC63

## How to Order

### HOW TO ORDER - BOEING BACC63 CT & CU

| 1. Boeing Basic Number | 2. Style | 3. Shell Size | 4. Shell Finish & Contact | 5. Insert Arrangement | 6. Contact Type | 7. Alternate Keying Position | 8. Ordering Option |
|---|---|---|---|---|---|---|---|
| BACC63 | CT | 15 | – | 19 | P | N | H |

### COMPOSITE

**1. BOEING NUMBER**

| | |
|---|---|
| BACC63 | Boeing |

**2. STYLE**

| | |
|---|---|
| CT | Composite Plug |
| CU | Composite Receptacle |

**3. SHELL SIZE**

| | |
|---|---|
| 15 | Shell Size 9-25 |

**4. SHELL FINISH & CONTACT**

| | |
|---|---|
| C | CT Style Only. Cadmium Plated, Grounded |
| D | Cadmium Plated, ungrounded |
| G | Nickel Plated, Grounded |
| – | Nickel Plated, Ungrounded |

**5. INSERT ARRANGEMENTS-**
Consult Amphenol Aerospace for insert arrangements available.

**6. CONTACT TYPE**

| | |
|---|---|
| P | Pin |
| S | Socket |

**7. ALTERNATE KEYING POSITION**

| | |
|---|---|
| N | Normal |
| A-E | Alternates |

**8. ORDERING OPTIONS**

| | |
|---|---|
| H | Without Contacts & Seal Plugs |
| Blank | With Contacts & Seal Plugs |

### HOW TO ORDER - BOEING BACC63 DB & DC

| 1. Boeing Basic Number | 2. Style | 3. Shell Size-Insert Arrangement | 4. Contact Type | 5. Alternate Keying Position | 6. Ordering Option |
|---|---|---|---|---|---|
| BACC63 | DB | 15-19 | P | N | H |
| BACC63 | DC | 17-8 | P | N | H |

### STAINLESS STEEL

**1. BOEING NUMBER**

| | |
|---|---|
| BACC63 | Boeing |

**2. SELECT A STYLE**

| | |
|---|---|
| DB | Stainless Steel Plug |
| DC | Stainless Steel Receptacle |

**3. SELECT A SHELL SIZE & INSERT ARRANGEMENT**
SEE PAGES 2-5
Shell Size & Insert Arrangements are on pages 2-5. First number represents Shell Size, second number is the Insert Arrangement. Please include the dash.

**4. CONTACT TYPE**

| | |
|---|---|
| P | Pin |
| S | Socket |

**5. ALTERNATE KEYING POSITION**

| | |
|---|---|
| N | Normal |
| A-E | Alternates |

**6. ORDERING OPTION**

| | |
|---|---|
| H | Without Contacts & Seal Plugs |
| Blank | With Contacts & Seal Plugs |

# Wall Mounting Receptacle

## Military (D38999/20), Commercial (TVP00, TVPS00, CTVP00, CTVPS00)

Amphenol Aerospace

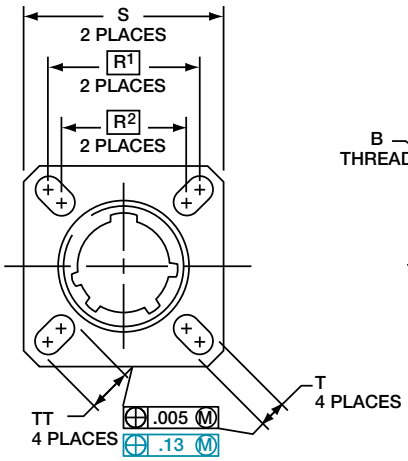
**PART NUMBER BUILDER Page 45-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

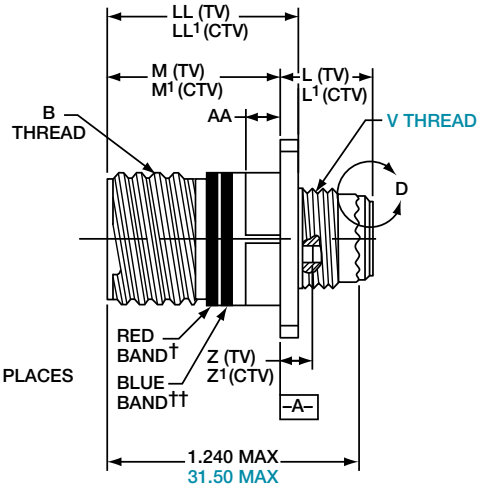
**MILITARY**
D38999/20

**Commercial**

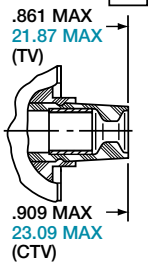
| ALUMINUM | | STAINLESS STEEL | COMPOSITE |
|---|---|---|---|
| TVP00RW | TVPS00RF | TVPS00RK | CTVP00RW |
| TVP00DT | TVPS00RB | TVPS00RKN | CTVP00RGF |
| TVP00DZ | TVPS00DB | TVPS00RS | CTVP00RGW |
| TVP00DW | TVPS00DS | TVPS00RL | CTVP00DT |
| TVP00RGF | | TVPS00DSN | CTVP00DZ |
| TVP00RGW | | TVPS00DSK | CTVPS00RF |



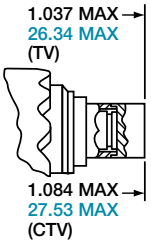


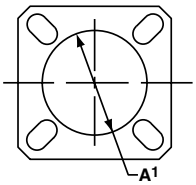

VIEW D
FOR SIZE 8 COAXIAL ONLY,
RELATIVE TO –A–



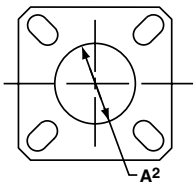

VIEW D
FOR SIZE 8 TWINAX ONLY,
RELATIVE TO –A–




**PANEL HOLE DIMENSIONS**




BACK PANEL MOUNTING




FRONT PANEL MOUNTING

† Red band indicates fully mated
†† Blue band indicates rear release contact retention system

Inches

| Shell Size | MS Shell Size Code | B Thread Class 2A 0.1P=0.3L-TS (Plated) | L Max. (TV) | L1 Max. (CTV) | M +.000 –.005 (TV) | M1 +.000 –.005 (CTV) | R1 | R2 | S Max. | T ±.008 | Z. Max. (TV) | Z1 Max. (CTV) | A1 Back Panel Mount | A2 Front Panel Mount | AA Max. Panel Thickness | LL +.006 –.000 (TV) | LL1 ±.005 (CTV) | TT ±.008 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | A | .6250 | .469 | .514 | .820 | .773 | .719 | .594 | .948 | .128 | .153 | .198 | .655 | .516 | .234 | .905 | .908 | .216 |
| 11 | B | .7500 | .469 | .514 | .820 | .773 | .812 | .719 | 1.043 | .128 | .153 | .198 | .796 | .625 | .234 | .905 | .908 | .194 |
| 13 | C | .8750 | .469 | .514 | .820 | .773 | .906 | .812 | 1.137 | .128 | .153 | .198 | .922 | .750 | .234 | .905 | .908 | .194 |
| 15 | D | 1.0000 | .469 | .514 | .820 | .773 | .969 | .906 | 1.232 | .128 | .153 | .198 | 1.047 | .906 | .234 | .905 | .908 | .173 |
| 17 | E | 1.1875 | .469 | .514 | .820 | .773 | 1.062 | .969 | 1.323 | .128 | .153 | .198 | 1.219 | 1.016 | .234 | .905 | .908 | .194 |
| 19 | F | 1.2500 | .469 | .514 | .820 | .773 | 1.156 | 1.062 | 1.449 | .128 | .153 | .198 | 1.297 | 1.141 | .234 | .905 | .908 | .194 |
| 21 | G | 1.3750 | .500 | .545 | .790 | .741 | 1.250 | 1.156 | 1.575 | .128 | .183 | .228 | 1.442 | 1.266 | .204 | .905 | .904 | .194 |
| 23 | H | 1.5000 | .500 | .545 | .790 | .741 | 1.375 | 1.250 | 1.701 | .154 | .183 | .228 | 1.547 | 1.375 | .204 | .905 | .904 | .242 |
| 25 | J | 1.6250 | .500 | .545 | .790 | .741 | 1.500 | 1.375 | 1.823 | .154 | .183 | .228 | 1.672 | 1.484 | .204 | .905 | .904 | .242 |

Millimeters

| Shell Size | MS Shell Size Code | L Max. (TV) | L1 Max. (CTV) | M +.00 –.13 (TV) | M1 +.00 –.13 (CTV) | R1 | R2 | S Max. | T ±.20 | V Thread Metric | Z. Max. (TV) | Z1 Max. (CTV) | A1 Back Panel Mount | A2 Front Panel Mount | AA Max. | LL +.15 –.00 (TV) | LL1 ±.13 (CTV) | TT ±.20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | A | 11.91 | 13.06 | 20.83 | 19.63 | 18.26 | 15.09 | 24.1 | 3.25 | M12X1-6g | 3.89 | 5.03 | 16.66 | 13.11 | 5.94 | 22.99 | 23.06 | 5.49 |
| 11 | B | 11.91 | 13.06 | 20.83 | 19.63 | 20.62 | 18.26 | 26.5 | 3.25 | M15X1-6g | 3.89 | 5.03 | 20.22 | 15.88 | 5.94 | 22.99 | 23.06 | 4.93 |
| 13 | C | 11.91 | 13.06 | 20.83 | 19.63 | 23.01 | 20.62 | 28.9 | 3.25 | M18X1-6g | 3.89 | 5.03 | 23.42 | 19.05 | 5.94 | 22.99 | 23.06 | 4.93 |
| 15 | D | 11.91 | 13.06 | 20.83 | 19.63 | 24.61 | 23.01 | 31.3 | 3.25 | M22X1-6g | 3.89 | 5.03 | 26.59 | 23.01 | 5.94 | 22.99 | 23.06 | 4.39 |
| 17 | E | 11.91 | 13.06 | 20.83 | 19.63 | 26.97 | 24.61 | 33.7 | 3.25 | M25X1-6g | 3.89 | 5.03 | 30.96 | 25.81 | 5.94 | 22.99 | 23.06 | 4.93 |
| 19 | F | 11.91 | 13.06 | 20.83 | 19.63 | 29.36 | 26.97 | 36.9 | 3.25 | M28X1-6g | 3.89 | 5.03 | 32.94 | 28.98 | 5.94 | 22.99 | 23.06 | 4.93 |
| 21 | G | 12.70 | 13.84 | 20.07 | 18.82 | 31.75 | 29.36 | 40.1 | 3.25 | M31X1-6g | 4.65 | 5.79 | 36.12 | 32.16 | 5.18 | 22.99 | 22.96 | 4.93 |
| 23 | H | 12.70 | 13.84 | 20.07 | 18.82 | 34.93 | 31.75 | 43.3 | 3.91 | M34X1-6g | 4.65 | 5.79 | 39.29 | 34.93 | 5.18 | 22.99 | 22.96 | 6.15 |
| 25 | J | 12.70 | 13.84 | 20.07 | 18.82 | 38.10 | 34.93 | 46.4 | 3.91 | M37X1-6g | 4.65 | 5.79 | 42.47 | 37.69 | 5.18 | 22.99 | 22.96 | 6.15 |

All dimensions for reference only ☐ Designates true position dimensioning

# Line Receptacle

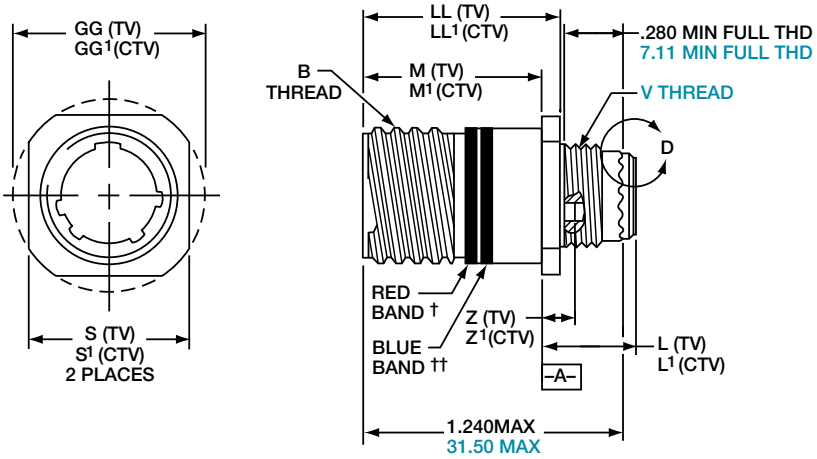
## Commercial (TV01, TVS01, CTV01, CTVS01)

**PART NUMBER BUILDER Page 45-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

Commercial

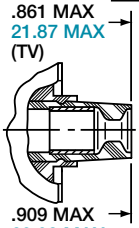
| ALUMINUM | | STAINLESS STEEL | COMPOSITE |
|---|---|---|---|
| TV01RW | TVS01RF | TVS01RK | CTVS01RF |
| TV01DT | TVS01RB | TVS01RKN | CTV01RW |
| TV01DW | TVS01DB | TVS01RS | CTV01RGF |
| TV01DZ | TVS01DS | TVS01RL | CTV01RGW |
| TV01RGF | | TVS01DSK | CTV01DT |
| TV01RGW | | TVS01DSN | CTV01DZ |



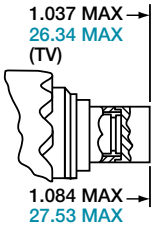



† Red band indicates fully mated
†† Blue band indicates rear release contact retention system

VIEW D
FOR SIZE 8 COAXIAL ONLY,
RELATIVE TO –A–




VIEW D
FOR SIZE 8 TWINAX ONLY,
RELATIVE TO –A–




Inches

| Shell Size | MS Shell Size Code | B Thread 0.1P-0.3L-TS-2A (Plated) | M +.000 –.005 (TV) | M1 +.000 –.005 (CTV) | L Max. (TV) | L1 Max. (CTV) | S ±.010 (TV) | S1 ±.010 (CTV) | Z Max (TV) | Z1 Max (CTV) | GG ±.010 (TV) | GG1 ±.010 (CTV) | LL +.006 –.000 (TV) | LL1 ±.005 (CTV) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | A | .6250 | .820 | .773 | .469 | .514 | .675 | .635 | .153 | .198 | .812 | .699 | .905 | .908 |
| 11 | B | .7500 | .820 | .773 | .469 | .514 | .800 | .765 | .153 | .198 | .905 | .875 | .905 | .908 |
| 13 | C | .8750 | .820 | .773 | .469 | .514 | .925 | .885 | .153 | .198 | 1.093 | 1.007 | .905 | .908 |
| 15 | D | 1.0000 | .820 | .773 | .469 | .514 | 1.050 | 1.100 | .153 | .198 | 1.219 | 1.140 | .905 | .908 |
| 17 | E | 1.1875 | .820 | .773 | .469 | .514 | 1.238 | 1.197 | .153 | .198 | 1.375 | 1.229 | .905 | .908 |
| 19 | F | 1.2500 | .820 | .773 | .469 | .514 | 1.300 | 1.260 | .153 | .198 | 1.469 | 1.380 | .905 | .908 |
| 21 | G | 1.3750 | .790 | .741 | .500 | .545 | 1.425 | 1.385 | .183 | .228 | 1.625 | 1.493 | .905 | .904 |
| 23 | H | 1.5000 | .790 | .741 | .500 | .545 | 1.550 | 1.510 | .183 | .228 | 1.750 | 1.626 | .905 | .904 |
| 25 | J | 1.6250 | .790 | .741 | .500 | .545 | 1.675 | 1.635 | .183 | .228 | 1.875 | 1.777 | .905 | .904 |

Millimeters

| Shell Size | MS Shell Size Code | M +.00–.013 (TV) | M1 +.00 –.13 (CTV) | L Max. (TV) | L1 Max. (CTV) | S ±.25 (TV) | S1 ±.010 (CTV) | V Thread Metric | Z Max (TV) | Z1 Max (CTV) | GG ±.25 (TV) | GG1 ±.25 (CTV) | LL +.15 –.00 (TV) | LL1 ±.13 (CTV) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | A | 20.83 | 19.63 | 11.91 | 13.06 | 17.15 | 16.13 | M12X1-6g | 3.89 | 5.03 | 20.62 | 17.75 | 22.99 | 23.06 |
| 11 | B | 20.83 | 19.63 | 11.91 | 13.06 | 20.32 | 19.43 | M15X1-6g | 3.89 | 5.03 | 22.99 | 22.22 | 22.99 | 23.06 |
| 13 | C | 20.83 | 19.63 | 11.91 | 13.06 | 23.50 | 22.47 | M18X1-6g | 3.89 | 5.03 | 27.76 | 25.57 | 22.99 | 23.06 |
| 15 | D | 20.83 | 19.63 | 11.91 | 13.06 | 26.67 | 27.94 | M22X1-6g | 3.89 | 5.03 | 30.96 | 28.95 | 22.99 | 23.06 |
| 17 | E | 20.83 | 19.63 | 11.91 | 13.06 | 31.45 | 30.40 | M25X1-6g | 3.89 | 5.03 | 34.93 | 31.21 | 22.99 | 23.06 |
| 19 | F | 20.83 | 19.63 | 11.91 | 13.06 | 33.02 | 32.00 | M28X1-6g | 3.89 | 5.03 | 37.31 | 35.05 | 22.99 | 23.06 |
| 21 | G | 20.07 | 18.82 | 12.70 | 13.84 | 36.20 | 35.18 | M31X1-6g | 4.65 | 5.79 | 41.28 | 37.92 | 22.99 | 22.96 |
| 23 | H | 20.07 | 18.82 | 12.70 | 13.84 | 39.37 | 38.35 | M34X1-6g | 4.65 | 5.79 | 44.45 | 41.30 | 22.99 | 22.96 |
| 25 | J | 20.07 | 18.82 | 12.70 | 13.84 | 42.55 | 41.53 | M37X1-6g | 4.65 | 5.79 | 47.63 | 45.13 | 22.99 | 22.96 |

All dimensions for reference only

# Box Mounting Receptacle

## Commercial (TVP02, TVPS02, CTVP02, CTVPS02)

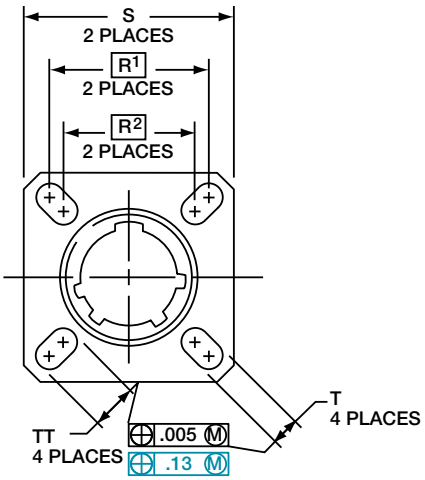
**PART NUMBER BUILDER Page 45-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

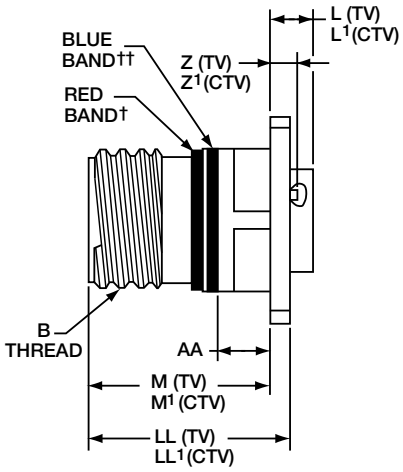
Commercial

| ALUMINUM | | STAINLESS STEEL | COMPOSITE |
|---|---|---|---|
| TVP02RW | TVPS02RF | TVPS02RK | CTVPS02RF |
| TVP02DT | TVPS02RB | TVPS02RKN | CTVP02RW |
| TVP02DW | TVPS02DB | TVPS02RS | CTVP02RGF |
| TVP02DZ | TVPS02DS | TVPS02RL | CTVP02RGW |
| TVP02RGF | | TVPS02DSK | CTVP02DT |
| TVP02RGW | | TVPS02DSN | CTVP02DZ |

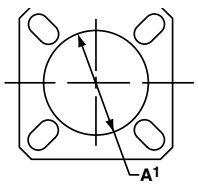




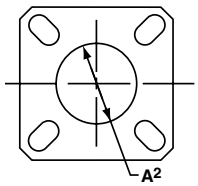



**PANEL HOLE DIMENSIONS**




BACK PANEL MOUNTING




FRONT PANEL MOUNTING

† Red band indicates fully mated
†† Blue band indicates rear release contact retention system

Consult Amphenol Aerospace for availability of composite box mount receptacles.

Inches

| Shell Size | MS Shell Size Code | B Thread Class 2A 0.1P=0.3L-TS (Plated) | L Max. (TV) | L1 Max. (CTV) | M +.000 –.005 (TV) | M1 +.000 –.005 (CTV) | R1 | R2 | S Max. | T ±.008 | Z. Max. (TV) | Z1 Max. (CTV) | A1 Back Panel Mount | A2 Front Panel Mount | AA Max. Panel Thickness | LL +.006 –.000 (TV) | LL1 ±.005 (CTV) | TT ±.008 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | A | .6250 | .205 | .250 | .820 | .773 | .719 | .594 | .948 | .128 | .153 | .198 | .650 | .510 | .234 | .905 | .908 | .216 |
| 11 | B | .7500 | .205 | .250 | .820 | .773 | .812 | .719 | 1.043 | .128 | .153 | .198 | .800 | .620 | .234 | .905 | .908 | .194 |
| 13 | C | .8750 | .205 | .250 | .820 | .773 | .906 | .812 | 1.137 | .128 | .153 | .198 | .910 | .740 | .234 | .905 | .908 | .194 |
| 15 | D | 1.0000 | .205 | .250 | .820 | .773 | .969 | .906 | 1.232 | .128 | .153 | .198 | 1.040 | .900 | .234 | .905 | .908 | .173 |
| 17 | E | 1.1875 | .205 | .250 | .820 | .773 | 1.062 | .969 | 1.323 | .128 | .153 | .198 | 1.210 | 1.010 | .234 | .905 | .908 | .194 |
| 19 | F | 1.2500 | .205 | .250 | .820 | .773 | 1.156 | 1.062 | 1.449 | .128 | .153 | .198 | 1.280 | 1.130 | .234 | .905 | .908 | .194 |
| 21 | G | 1.3750 | .235 | .280 | .790 | .741 | 1.250 | 1.156 | 1.575 | .128 | .183 | .228 | 1.410 | 1.250 | .204 | .905 | .904 | .194 |
| 23 | H | 1.5000 | .235 | .280 | .790 | .741 | 1.375 | 1.250 | 1.701 | .154 | .183 | .228 | 1.530 | 1.360 | .204 | .905 | .904 | .242 |
| 25 | J | 1.6250 | .235 | .280 | .790 | .741 | 1.500 | 1.375 | 1.823 | .154 | .183 | .228 | 1.660 | 1.470 | .204 | .905 | .904 | .242 |

Millimeters

| Shell Size | MS Shell Size Code | L Max. (TV) | L1 Max. (CTV) | M +.00 –.13 (TV) | M1 +.00 –.13 (CTV) | R1 | R2 | S Max. | T ±.20 | Z. Max. (TV) | Z1 Max. (CTV) | A1 Back Panel Mount | A2 Front Panel Mount | AA Max. | LL +.15 –.00 (TV) | LL1 ±.13 (CTV) | TT ±.20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | A | 5.21 | 6.35 | 20.83 | 19.63 | 18.26 | 15.09 | 24.1 | 3.25 | 3.89 | 5.03 | 16.66 | 13.11 | 5.94 | 22.99 | 23.06 | 5.49 |
| 11 | B | 5.21 | 6.35 | 20.83 | 19.63 | 20.62 | 18.26 | 26.5 | 3.25 | 3.89 | 5.03 | 20.22 | 15.88 | 5.94 | 22.99 | 23.06 | 4.93 |
| 13 | C | 5.21 | 6.35 | 20.83 | 19.63 | 23.01 | 20.62 | 28.9 | 3.25 | 3.89 | 5.03 | 23.42 | 19.05 | 5.94 | 22.99 | 23.06 | 4.93 |
| 15 | D | 5.21 | 6.35 | 20.83 | 19.63 | 24.61 | 23.01 | 31.3 | 3.25 | 3.89 | 5.03 | 26.59 | 23.01 | 5.94 | 22.99 | 23.06 | 4.39 |
| 17 | E | 5.21 | 6.35 | 20.83 | 19.63 | 26.97 | 24.61 | 33.7 | 3.25 | 3.89 | 5.03 | 30.96 | 25.81 | 5.94 | 22.99 | 23.06 | 4.93 |
| 19 | F | 5.21 | 6.35 | 20.83 | 19.63 | 29.36 | 26.97 | 36.9 | 3.25 | 3.89 | 5.03 | 32.94 | 28.98 | 5.94 | 22.99 | 23.06 | 4.93 |
| 21 | G | 5.97 | 7.11 | 20.07 | 18.82 | 31.75 | 29.36 | 40.1 | 3.25 | 4.65 | 5.79 | 36.12 | 32.16 | 5.18 | 22.99 | 22.96 | 4.93 |
| 23 | H | 5.97 | 7.11 | 20.07 | 18.82 | 34.92 | 31.75 | 43.3 | 3.91 | 4.65 | 5.79 | 39.29 | 34.93 | 5.18 | 22.99 | 22.96 | 6.15 |
| 25 | J | 5.97 | 7.11 | 20.07 | 18.82 | 38.10 | 34.92 | 46.4 | 3.91 | 4.65 | 5.79 | 42.47 | 37.69 | 5.18 | 22.99 | 22.96 | 6.15 |

All dimensions for reference only

☐ Designates true position dimensioning

# Jam Nut Receptacle

## Military (D38999/24), Commercial (TV07, TVS07, CTV07, CTVS07)

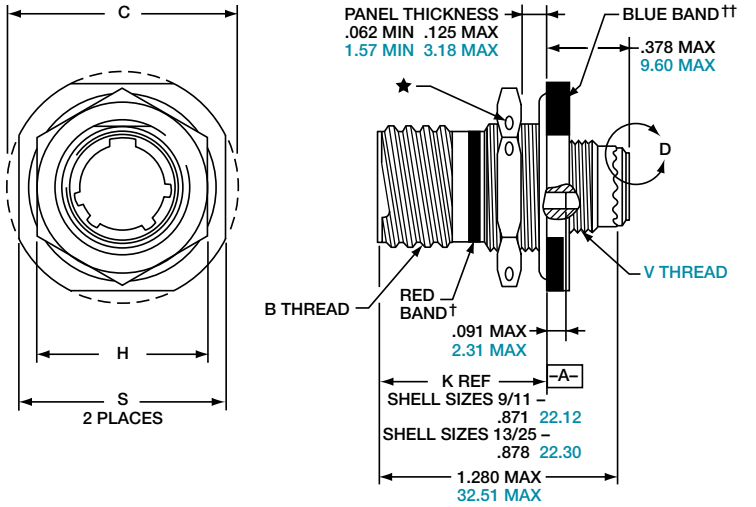
**PART NUMBER BUILDER Page 45-47**
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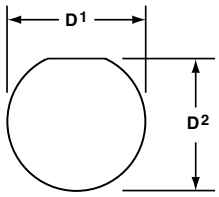
**MILITARY**
D38999/24

**Commercial**

| ALUMINUM | | STAINLESS STEEL | COMPOSITE |
|---|---|---|---|
| TV07RW | TVS07RF | TVS07RK | CTVS07RF |
| TV07DT | TVS07RB | TVS07RKN | CTV07RW |
| TV07DW | TVS07DB | TVS07RS | CTV07RGF |
| TV07DZ | TVS07DS | TVS07RL | CTV07RGW |
| TV07RGF | | TVS07DSK | CTV07DT |
| TV07RGW | | TVS07DSN | CTV07DZ |




**PANEL HOLE DIMENSIONS**




JAM NUT D-HOLE MOUNTING

† Red band indicates fully mated
†† Blue band indicates rear release contact retention system
★ .059 dia min.
1.5 dia min., 3 lockwire holes Formed lockwire hole design (6 holes) is optional

Inches

| Shell Size | MS Shell Size Code | B Thread Class 2A 0.1P-0.3L-TS (Plated) | C Max. | D¹ +.010 –.000 | D² +.000 –.010 | H Hex +.017 –.016 | S ±.010 |
|---|---|---|---|---|---|---|---|
| 9 | A | .6250 | 1.199 | .693 | .657 | .875 | 1.062 |
| 11 | B | .7500 | 1.386 | .825 | .770 | 1.000 | 1.250 |
| 13 | C | .8750 | 1.511 | 1.010 | .955 | 1.188 | 1.375 |
| 15 | D | 1.0000 | 1.636 | 1.135 | 1.085 | 1.312 | 1.500 |
| 17 | E | 1.1875 | 1.761 | 1.260 | 1.210 | 1.438 | 1.625 |
| 19 | F | 1.2500 | 1.949 | 1.385 | 1.335 | 1.562 | 1.812 |
| 21 | G | 1.3750 | 2.073 | 1.510 | 1.460 | 1.688 | 1.938 |
| 23 | H | 1.5000 | 2.199 | 1.635 | 1.585 | 1.812 | 2.062 |
| 25 | J | 1.6250 | 2.323 | 1.760 | 1.710 | 2.000 | 2.188 |

Millimeters

| Shell Size | MS Shell Size Code | C Max. | D¹ +.25 –.00 | D² +.00 –.25 | H Hex +.43 –.41 | S ±.25 | V Thread Metric |
|---|---|---|---|---|---|---|---|
| 9 | A | 30.45 | 17.60 | 16.70 | 22.23 | 26.97 | M12X1-6g |
| 11 | B | 35.20 | 20.96 | 19.59 | 25.40 | 31.75 | M15X1-6g |
| 13 | C | 38.38 | 25.65 | 24.26 | 30.18 | 34.93 | M18X1-6g |
| 15 | D | 41.55 | 28.83 | 27.56 | 33.32 | 38.10 | M22X1-6g |
| 17 | E | 44.73 | 32.01 | 30.73 | 36.53 | 41.28 | M25X1-6g |
| 19 | F | 49.50 | 35.18 | 33.91 | 39.67 | 46.02 | M28X1-6g |
| 21 | G | 52.65 | 38.35 | 37.08 | 42.80 | 49.23 | M31X1-6g |
| 23 | H | 55.85 | 41.53 | 40.26 | 46.02 | 52.37 | M34X1-6g |
| 25 | J | 59.00 | 44.70 | 43.43 | 50.80 | 55.58 | M37X1-6g |

All dimensions for reference only NOTE: Deep reach receptacles are available for panel thicknesses up to .750 max.

# Straight Plug

## Military (D38999/26), Commercial (TV06, TVS06, CTV06, CTVS06)

Amphenol Aerospace

**PART NUMBER BUILDER** Page 45-47
**ONLINE CONFIGURATOR** www.amphenol-aerospace.com

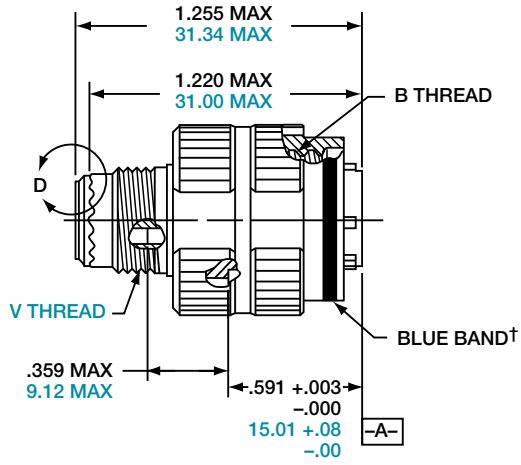


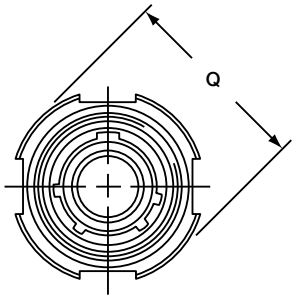
**MILITARY**
D38999/26

Commercial

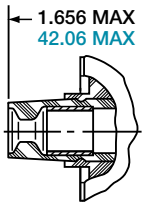
| ALUMINUM | | STAINLESS STEEL | COMPOSITE |
|---|---|---|---|
| TV06RW | TVS06RF | TVS06RK | CTVS06RF |
| TV06DT | TVS06RB | TVS06RKN | CTV06RW |
| TV06DW | TVS06DB | TVS06RS | CTV06RGF |
| TV06DZ | TVS06DS | TVS06RL | CTV06RGW |
| TV06RGF | | TVS06DSK | CTV06DT |
| TV06RGW | | TVS06DSN | CTV06DZ |

METAL

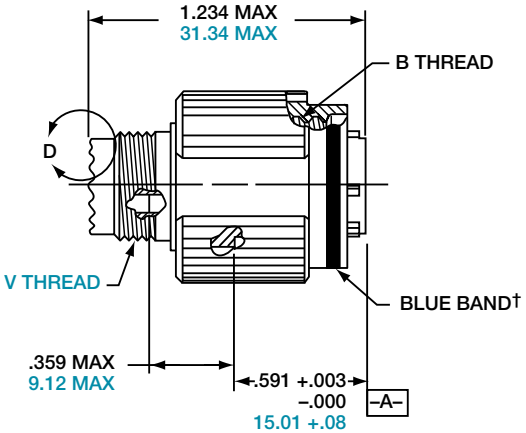


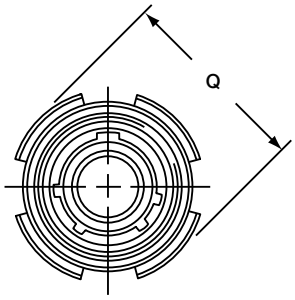




VIEW D
FOR SIZE 8 COAXIAL ONLY,
RELATIVE TO –A–

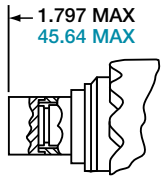



COMPOSITE




VIEW D
FOR SIZE 8 TWINAX ONLY,
RELATIVE TO –A–




† Blue band indicates rear release contact retention system

Inches

| Shell Size | MS Shell Size Code | B Thread 0.1P-0.3L-TS-2B (Plated) | Q Dia. Max. |
|---|---|---|---|
| 9 | A | .6250 | .858 |
| 11 | B | .7500 | .984 |
| 13 | C | .8750 | 1.157 |
| 15 | D | 1.0000 | 1.280 |
| 17 | E | 1.1875 | 1.406 |
| 19 | F | 1.2500 | 1.516 |
| 21 | G | 1.3750 | 1.642 |
| 23 | H | 1.5000 | 1.768 |
| 25 | J | 1.6250 | 1.890 |

Millimeters

| Shell Size | MS Shell Size Code | Q Max. | V Thread Metric |
|---|---|---|---|
| 9 | A | 21.8 | M12X1-6g |
| 11 | B | 25.0 | M15X1-6g |
| 13 | C | 29.4 | M18X1-6g |
| 15 | D | 32.5 | M22X1-6g |
| 17 | E | 35.7 | M25X1-6g |
| 19 | F | 38.5 | M28X1-6g |
| 21 | G | 41.7 | M31X1-6g |
| 23 | H | 44.9 | M34X1-6g |
| 25 | J | 48.0 | M37X1-6g |

All dimensions for reference only.

# Flange Mounting Plug

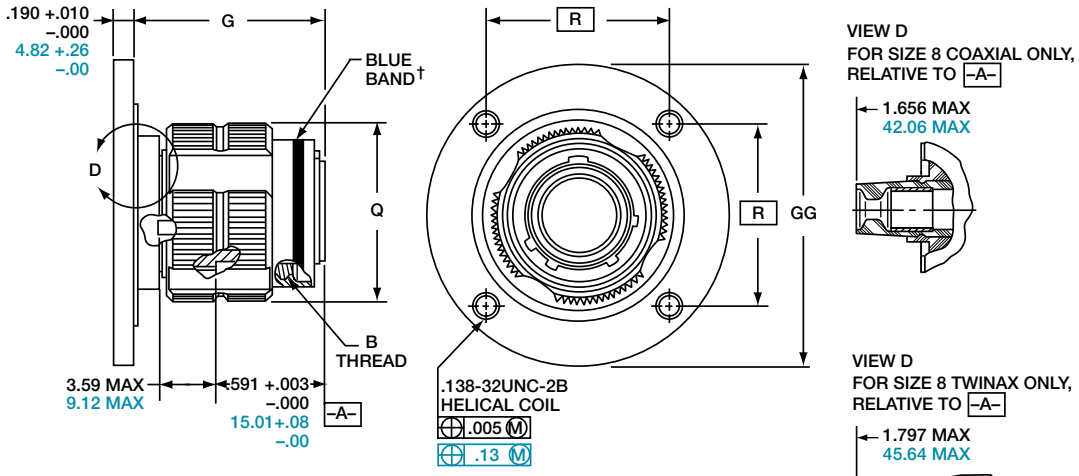
## Commercial (TV09, TVS09, CTV09, CTVPS09)



**PART NUMBER BUILDER Page 45-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

Commercial

| ALUMINUM | | STAINLESS STEEL | COMPOSITE |
|---|---|---|---|
| TV09RW | TVS09RF | TVS09RK | CTVS09RF |
| TV09DT | TVS09RB | TVS09RKN | CTV09RW |
| TV09DW | TVS09DB | TVS09RS | CTV09RGF |
| TV09DZ | TVS09DS | TVS09RL | CTV09RGW |
| TV09RGF | | TVS09DSK | CTV09DT |
| TV09RGW | | TVS09DSN | CTV09DZ |




† Blue band indicates rear release contact retention system

Inches

| Shell Size | MS Shell Size Coded | B Thread 0.1P-0.3L-TS-2A (Plated) | G ±.060 | Q Dia. Max | R | GG Dia ±.005 |
|---|---|---|---|---|---|---|
| 9** | A | .6250 | 1.106 | .859 | 1.038 | 1.838 |
| 11 | B | .7500 | 1.106 | .969 | 1.115 | 1.948 |
| 13** | C | .8750 | 1.106 | 1.141 | 1.240 | 2.124 |
| 15 | D | 1.0000 | 1.106 | 1.266 | 1.327 | 2.248 |
| 17 | E | 1.1875 | 1.106 | 1.391 | 1.417 | 2.375 |
| 19 | F | 1.2500 | 1.356 | 1.500 | 1.557 | 2.495 |
| 21 | G | 1.3750 | 1.356 | 1.625 | 1.624 | 2.568 |
| 23 | H | 1.5000 | 1.356 | 1.750 | 1.713 | 2.723 |
| 25 | J | 1.6250 | 1.356 | 1.875 | 1.801 | 2.848 |

Millimeters

| Shell Size | MS Shell Size Coded | G ±1.52 | Q Dia. Max | R | GG Dia ±.13 |
|---|---|---|---|---|---|
| 9** | A | 28.09 | 21.82 | 26.37 | 46.69 |
| 11 | B | 28.09 | 24.62 | 28.32 | 49.48 |
| 13** | C | 28.09 | 28.98 | 31.50 | 53.95 |
| 15 | D | 28.09 | 32.16 | 33.71 | 57.10 |
| 17 | E | 28.09 | 35.33 | 35.99 | 60.33 |
| 19 | F | 34.44 | 38.10 | 39.55 | 63.37 |
| 21 | G | 34.44 | 41.28 | 41.25 | 65.23 |
| 23 | H | 34.44 | 44.45 | 43.51 | 69.16 |
| 25 | J | 34.44 | 47.63 | 45.75 | 72.34 |

All dimensions for reference only
** Partially tooled. Consult Amphenol Aerospace for availability

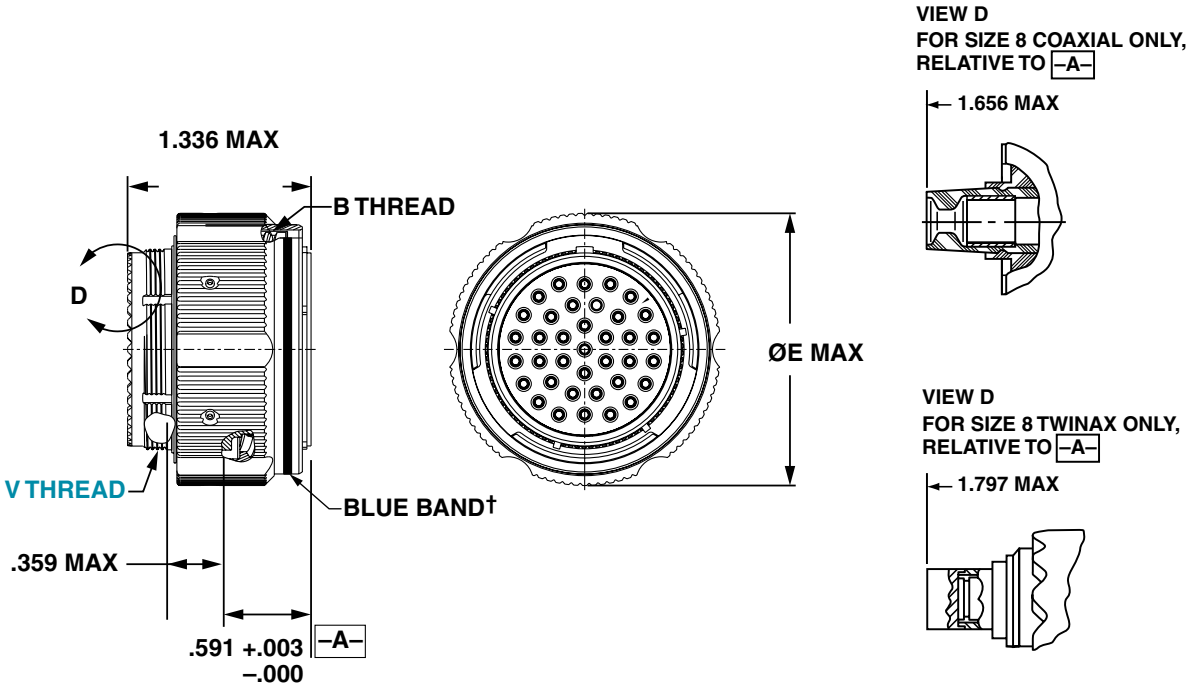
☐ Designates true position dimensioning

## Commercial Plug (TV56, TVS56)

**PART NUMBER BUILDER Page 45-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

Commercial

| ALUMINUM | STAINLESS STEEL |
|---|---|
| TV56RW | TVS56RK |
| TV56DT | TVS56RKN |
| TV56DW | TVS56RS |
| TV56DZ | TVS56RL |
| TV56RGF | TVS56DSK |
| TV56RGW | TVS56DSN |
| TVS56RF | |
| TVS56RB | |
| TVS56DB | |
| TVS56DS | |




| Shell Size | B Thread 0.1-0.3L-TS-2B (Plated) | E Dia. Max. | Q Dia. Max. Metric | V Thread Metric. |
|---|---|---|---|---|
| 9 | .6250 | .953 | 24.2 | M12X1-6g |
| 11 | .7500 | 1.053 | 26.7 | M15X1-6g |
| 13 | .8750 | 1.252 | 31.8 | M18X1-6g |
| 15 | 1.0000 | 1.365 | 34.6 | M22X1-6g |
| 19 | 1.2500 | 1.605 | 40.7 | M28X1-6g |
| 21 | 1.3750 | 1.735 | 44.0 | M31X1-6g |
| 25 | 1.6250 | 1.975 | 50.1 | M37X1-6g |

All dimensions for reference only.
Most common options are shown;
other options are available.

# Wall Mount with Integral Banding Platform

## TVP80, TVPS80

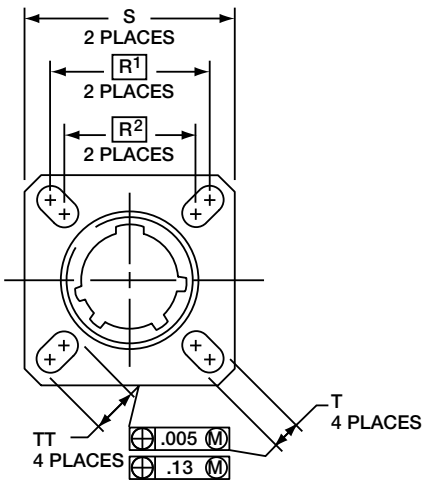
Commercial

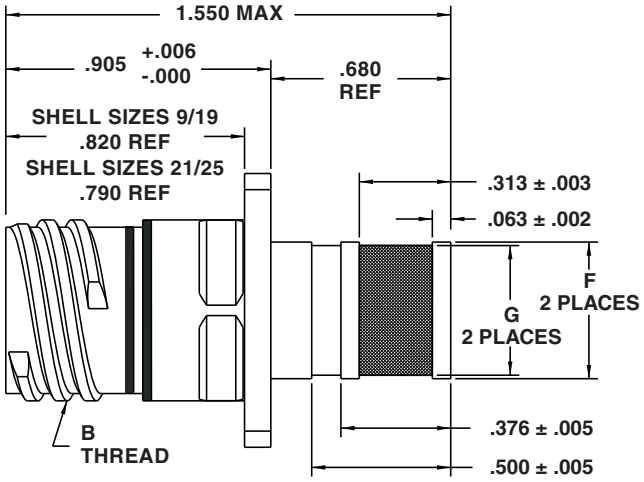
**ALUMINUM**

TVP80RW TVP80RGF TVPS80DB
TVP80DT TVP80RGW TVPS80DS
TVP80DW TVPS80RF
TVP80DZ TVPS80RB

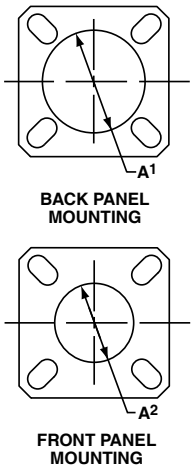
**STAINLESS STEEL**

TVPS80RK TVPS80RL
TVPS80RKN TVPS80DSK
TVPS80RS TVPS80DSN




Panel Hole Dimensions




| Shell Size | MS Shell Size Code | G +.005 -.000 | F +.003 -.002 | B Thread Class 2A 0.1P-0.3L-TS (Plated) | R1 | R2 | S Max | T ±.008 | $A^1$ Back Panel Mount | $A^2$ Front Panel Mount | TT ±.008 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | A | .416 | .472 | .6250 | .719 | .594 | .948 | .128 | .655 | .516 | .216 |
| 11 | B | .524 | .580 | .7500 | .812 | .719 | 1.043 | .128 | .796 | .625 | .194 |
| 13 | C | .652 | .708 | .8750 | .906 | .812 | 1.137 | .128 | .922 | .750 | .194 |
| 15 | D | .810 | .866 | 1.0000 | .969 | .906 | 1.232 | .128 | 1.047 | .906 | .173 |
| 17 | E | .928 | .984 | 1.1875 | 1.062 | .969 | 1.323 | .128 | 1.219 | 1.016 | .194 |
| 19 | F | 1.046 | 1.102 | 1.2500 | 1.156 | 1.062 | 1.449 | .128 | 1.297 | 1.141 | .194 |
| 21 | G | 1.164 | 1.220 | 1.3750 | 1.250 | 1.156 | 1.575 | 128 | 1.442 | 1.266 | .194 |
| 23 | H | 1.282 | 1.338 | 1.5000 | 1.375 | 1.250 | 1.701 | .154 | 1.547 | 1.375 | .242 |
| 25 | J | 1.400 | 1.456 | 1.6250 | 1.500 | 1.375 | 1.823 | .154 | 1.672 | 1.484 | .242 |

☐ Designates true position dimensioning

# Jam Nut with Integral Banding Platform

## TV87, TVS87

Amphenol Aerospace



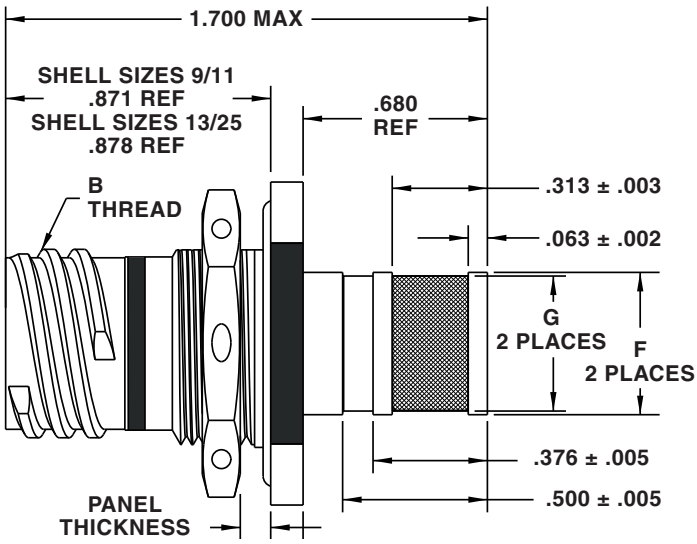
Commercial

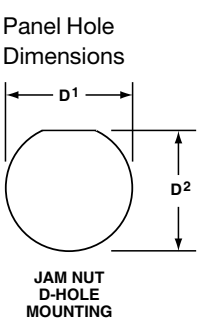
**ALUMINUM**

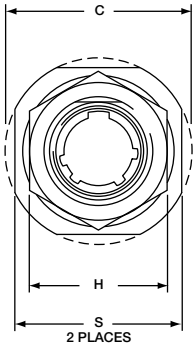
TV87RW TV87RGF TVS87DB
TV87DT TV87RGW TVS87DS
TV87DW TVS87RF
TV87DZ TVS87RB

**STAINLESS STEEL**

TVS87RK TVS87RL
TVS87RKN TVS87DSK
TVS87RS TVS87DSN




All dimensions for reference only.
Most common options are shown; other options are available.

| Shell Size | MS Shell Size Code | G +.005 -.000 | F +.003 -.002 | B Thread Class 2A 0.1P-0.3L-TS (Plated) | C Max. | $D^1$ +.010 -.000 | $D^2$ +.010 -.000 | H Hex +.017 -.016 | S ±.010 |
|---|---|---|---|---|---|---|---|---|---|
| 9 | A | .416 | .472 | .6250 | 1.199 | .693 | .657 | .875 | 1.062 |
| 11 | B | .524 | .580 | .7500 | 1.386 | .825 | .770 | 1.000 | 1.250 |
| 13 | C | .652 | .708 | .8750 | 1.511 | 1.010 | .955 | 1.188 | 1.375 |
| 15 | D | .810 | .866 | 1.0000 | 1.636 | 1.135 | 1.085 | 1.312 | 1.500 |
| 17 | E | .928 | .984 | 1.1875 | 1.761 | 1.260 | 1.210 | 1.438 | 1.625 |
| 19 | F | 1.046 | 1.102 | 1.2500 | 1.949 | 1.385 | 1.335 | 1.562 | 1.812 |
| 21 | G | 1.164 | 1.220 | 1.3750 | 2.073 | 1.510 | 1.460 | 1.688 | 1.938 |
| 23 | H | 1.282 | 1.338 | 1.5000 | 2.199 | 1.635 | 1.585 | 1.812 | 2.062 |
| 25 | J | 1.400 | 1.456 | 1.6250 | 2.323 | 1.760 | 1.710 | 2.000 | 2.188 |

# Plug with Integral Strain Relief

## TV76, TVS76

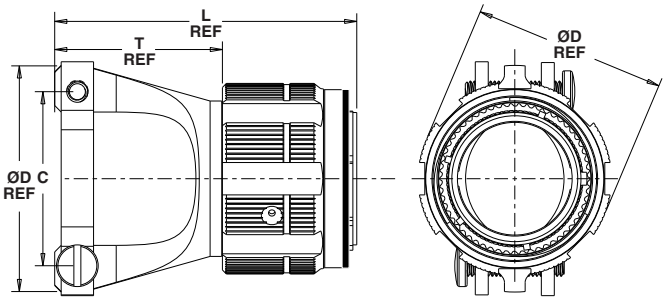
Commercial

**ALUMINUM**

| | | |
|---|---|---|
| TV76RW | TV76RGF | TVS76DB |
| TV76DT | TV76RGW | TVS76DS |
| TV76DW | TVS76RF | |
| TV76DZ | TVS76RB | |

**STAINLESS STEEL**

| | |
|---|---|
| TVS76RK | TVS76RL |
| TVS76RKN | TVS76DSK |
| TVS76RS | TVS76DSN |




| Shell Size | MS Shell Size Code | A Max. | C | D DIA REF | L REF | T REF |
|---|---|---|---|---|---|---|
| 9 | A | 0.859 | 0.688 | 0.950 | 1.890 | 0.815 |
| 11 | B | 0.969 | 0.812 | 1.110 | 1.985 | 0.910 |
| 13 | C | 1.141 | 0.945 | 1.270 | 2.080 | 1.005 |
| 15 | D | 1.266 | 1.062 | 1.430 | 2.175 | 1.100 |
| 17 | E | 1.391 | 1.250 | 1.590 | 2.270 | 1.195 |
| 19 | F | 1.500 | 1.344 | 1.750 | 2.365 | 1.290 |
| 21 | G | 1.625 | 1.500 | 1.880 | 2.490 | 1.415 |
| 23 | H | 1.750 | 1.656 | 2.010 | 2.615 | 1.540 |
| 25 | J | 1.875 | 1.781 | 2.150 | 2.740 | 1.665 |

# Plug with Integral Banding Platform

## TV96, TVS96

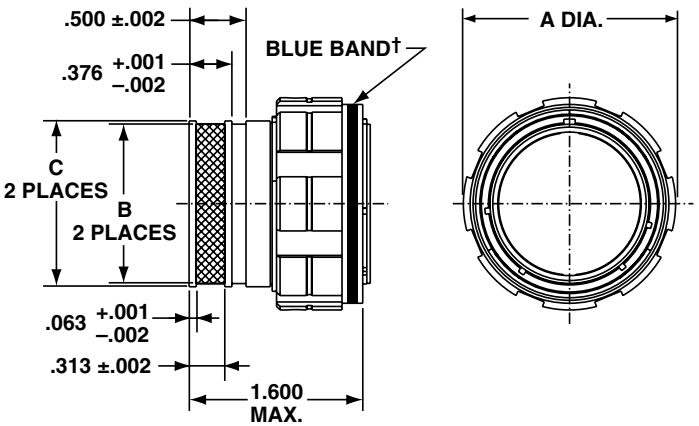
Commercial

**ALUMINUM**

| | | |
|---|---|---|
| TV96RW | TV96RGF | TVS96DB |
| TV96DT | TV96RGW | TVS96DS |
| TV96DW | TVS96RF | |
| TV96DZ | TVS96RB | |

**STAINLESS STEEL**

| | |
|---|---|
| TVS96RK | TVS96RL |
| TVS96RKN | TVS96DSK |
| TVS96RS | TVS96DSN |




All dimensions for reference only.
Most common options are shown; other options are available.

| Shell Size | MS Shell Size Code | A Max. | B +.005 -.000 | C +.003 -.002 |
|---|---|---|---|---|
| 9 | A | .859 | .416 | .472 |
| 11 | B | .969 | .524 | .580 |
| 13 | C | 1.141 | .652 | .708 |
| 15 | D | 1.266 | .810 | .866 |
| 17 | E | 1.391 | .928 | .984 |
| 19 | F | 1.500 | 1.046 | 1.102 |
| 21 | G | 1.625 | 1.164 | 1.220 |
| 23 | H | 1.750 | 1.282 | 1.338 |
| 25 | J | 1.875 | 1.400 | 1.456 |

# RotoLok High Vibration Plug Solutions

## Add the (474) suffix to the end of TV06 or TVS06 Part Number

Amphenol Aerospace



Amphenol extends its high vibration family of products with the RotoLok plugs. These plugs have been tried and tested for years in the field and remain a trusted product for high vibration requirements in the most demanding of environments.

Please refer to page 33 How-to-order. Add suffix (474) to modification code to order RotoLok high vibration plug

**Example: TVS06DS-11-985 (474)**
**TV06 - add suffix (474)**
**TVS06 - add suffix (474)**

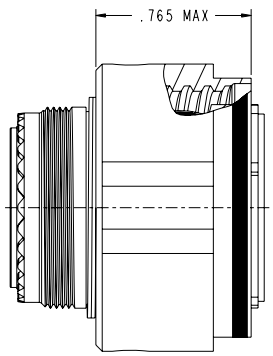


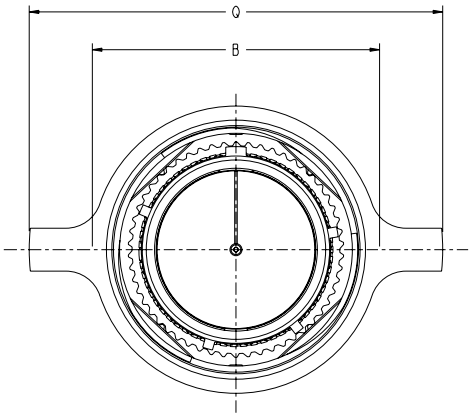
- All Aluminum shell sizes available in most finishes
- Intermateable with any MIL-DTL-38999 Series III receptacle and accessory
- Improves electrical performance by minimizing contact fretting
- EMI/RFI shielding advantages of D38999 Series III plugs

# Wing Nut Plug

## Add the (734) suffix to the end of TV06 or TVS06 Part Number

**Example: TV06RW-17-35P (734)**
**TV06 - add suffix (734)**
**TVS06 - add suffix (734)**




| Shell Size | B Thread 0.1P-0.3L-YS (Plated) | B Dia Max. | B Dia. Max. | Q Dia. Max. |
|---|---|---|---|---|
| 9 | .6250 | .830 | .830 | 1.485 |
| 11 | .7500 | .935 | .935 | 1.598 |
| 13 | .8750 | 1.106 | 1.106 | 1.772 |
| 15 | 1.0000 | 1.234 | 1.234 | 1.898 |
| 17 | 1.1875 | 1.371 | 1.371 | 2.024 |
| 19 | 1.2500 | 1.478 | 1.478 | 2.134 |
| 21 | 1.3750 | 1.605 | 1.605 | 2.256 |
| 23 | 1.5000 | 1.722 | 1.722 | 2.382 |
| 25 | 1.6250 | 1.849 | 1.849 | 2.677 |

# PCB Wall Mounting Receptacle (Back Panel Mounting)

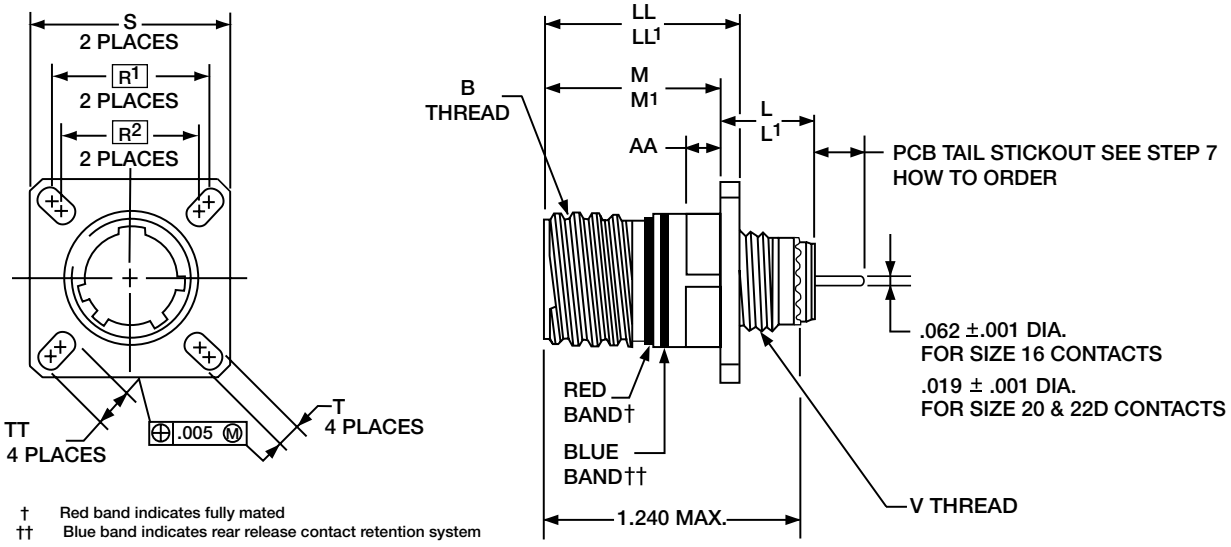
## Commercial (TVP00, TVPS00, CTVP00, CTVPS00)

**PART NUMBER BUILDER Page 45-47**

**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

Commercial

| ALUMINUM | STAINLESS STEEL | COMPOSITE |
|---|---|---|
| TVP00RW | TVPS00RK | CTVP00RW |
| TVP00DT | TVPS00RKN | CTVP00DT |
| TVP00DW | TVPS00RS | CTVP00DZ |
| TVP00DZ | TVPS00RL | CTVPS00RF |
| TVPS00RF | TVPS00DSK | |
| TVPS00RB | TVPS00DSN | |
| TVPS00DB | | |
| TVPS00DS | | |




† Red band indicates fully mated
†† Blue band indicates rear release contact retention system

| Shell Size | B Thread Class 2A (Plated) 0.1P-0.3L-TS | L Max. (TV) | L¹ Max. (CTV) | M +.000 −.005 (TV) | M¹ +.000 −.005 (CTV) | R1 | R2 | S Max. | T +.008 −.006 | V Thread Metric | AA Max. Panel Thickness | LL +.006 −.000 (TV) | LL¹ ±.005 (CTV) | TT +.008 −.006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | .6250 | .469 | .514 | .820 | .773 | .719 | .594 | .948 | .128 | M12X1-6g | .234 | .905 | .908 | .216 |
| 11 | .7500 | .469 | .514 | .820 | .773 | .812 | .719 | 1.043 | .128 | M15X1-6g | .234 | .905 | .908 | .194 |
| 13 | .8750 | .469 | .514 | .820 | .773 | .906 | .812 | 1.137 | .128 | M18X1-6g | .234 | .905 | .908 | .194 |
| 15 | 1.0000 | .469 | .514 | .820 | .773 | .969 | .906 | 1.232 | .128 | M22X1-6g | .234 | .905 | .908 | .173 |
| 17 | 1.1875 | .469 | .514 | .820 | .773 | 1.062 | .969 | 1.323 | .128 | M25X1-6g | .234 | .905 | .908 | .194 |
| 19 | 1.2500 | .469 | .514 | .820 | .773 | 1.156 | 1.062 | 1.449 | .128 | M28X1-6g | .234 | .905 | .908 | .194 |
| 21 | 1.3750 | .500 | .545 | .790 | .741 | 1.250 | 1.156 | 1.575 | .128 | M31X1-6g | .204 | .905 | .904 | .194 |
| 23 | 1.5000 | .500 | .545 | .790 | .741 | 1.375 | 1.250 | 1.701 | .154 | M34X1-6g | .204 | .905 | .904 | .242 |
| 25 | 1.6250 | .500 | .545 | .790 | .741 | 1.500 | 1.375 | 1.823 | .154 | M37X1-6g | .204 | .905 | .904 | .242 |

All dimensions for reference only.
Most common options are shown; other options are available.

☐ Designates true position dimensioning

# PCB Wall Mounting Receptacle (Back Panel Mounting) (With Clinch Nuts)

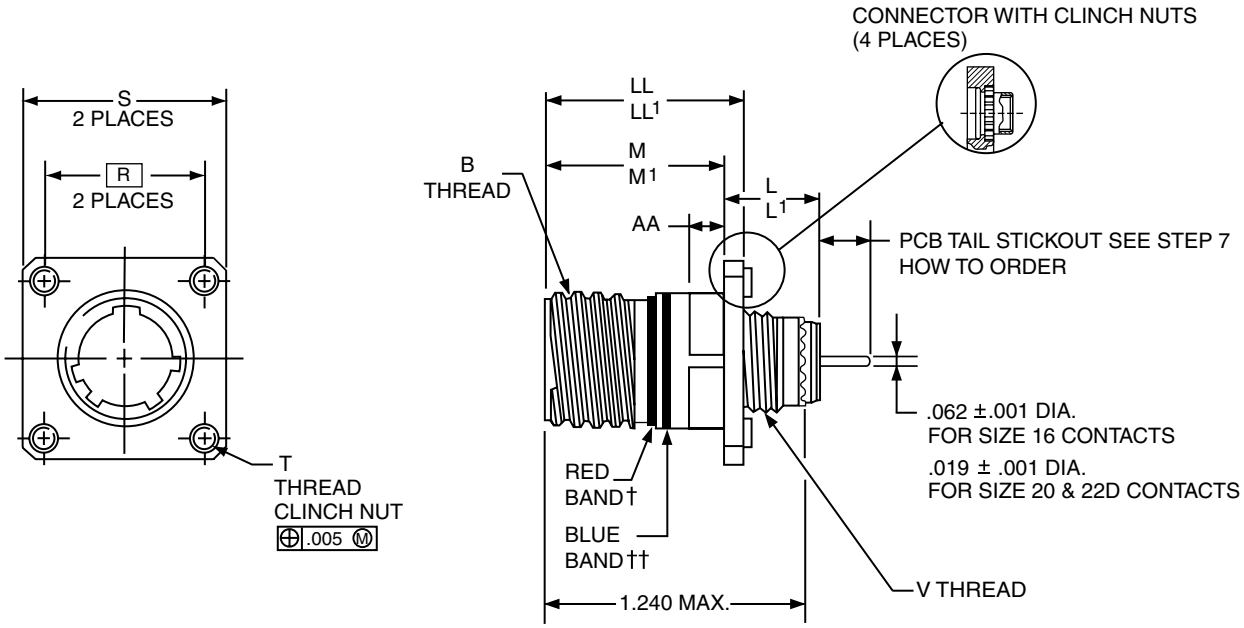
## Commercial (TVP10, TVPS10, CTP10, CTVP10, CTVPS10, TVP11, TVPS11, CTVP11, CTVPS11)



**PART NUMBER BUILDER** Page 45-47
**ONLINE CONFIGURATOR** www.amphenol-aerospace.com

Commercial

| ALUMINUM | | STAINLESS STEEL | | COMPOSITE | |
|---|---|---|---|---|---|
| TVP10DT | TVP11DT | TVPS10RK | TVPS11RK | CTVP10RW | CTVP11RW |
| TVP10DW | TVP11DW | TVPS10RKN | TVPS11RKN | CTVP10DT | CTVP11DT |
| TVP10DZ | TVP11DZ | TVPS10RS | TVPS11RS | CTVP10DZ | CTVP11DZ |
| TVP10RW | TVP11RW | TVPS10RL | TVPS11RL | CTVPS10RF | CTVPS11RF |
| TVPS10RF | TVPS11RF | TVPS10DSK | TVPS11DSK | | |
| TVPS10RB | TVPS11RB | TVPS10DSN | TVPS11DSN | | |
| TVPS10DB | TVPS11DB | | | | |
| TVPS10DS | TVPS11DS | | | | |




| Shell Size | B Thread Class 2A (Plated) 0.1P-0.3L-TS | L Max. (TV) | L1 Max. (CTV) | M +.000 −.005 (TV) | M1 +.000 −.005 (CTV) | R | S Max. (TV) | S Max. (CTV) | T Thread | V Thread Metric | AA Max. Panel Thickness | LL +.006 −.000 (TV) | LL1 ±.005 (CTV) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | .6250 | .469 | .514 | .820 | .773 | .719 | 1.094 | .942 | .112-40UNC-3B | M12X1-6g | .234 | .905 | .908 |
| 11 | .7500 | .469 | .514 | .820 | .773 | .812 | 1.187 | 1.037 | .112-40UNC-3B | M15X1-6g | .234 | .905 | .908 |
| 13 | .8750 | .469 | .514 | .820 | .773 | .906 | 1.281 | 1.131 | .112-40UNC-3B | M18X1-6g | .234 | .905 | .908 |
| 15 | 1.0000 | .469 | .514 | .820 | .773 | .969 | 1.344 | 1.226 | .112-40UNC-3B | M22X1-6g | .234 | .905 | .908 |
| 17 | 1.1875 | .469 | .514 | .820 | .773 | 1.062 | 1.437 | 1.316 | .112-40UNC-3B | M25X1-6g | .234 | .905 | .908 |
| 19 | 1.2500 | .469 | .514 | .820 | .773 | 1.156 | 1.531 | 1.442 | .112-40UNC-3B | M28X1-6g | .234 | .905 | .908 |
| 21 | 1.3750 | .500 | .545 | .790 | .741 | 1.250 | 1.625 | 1.568 | .112-40UNC-3B | M31X1-6g | .204 | .905 | .904 |
| 23 | 1.5000 | .500 | .545 | .790 | .741 | 1.375 | 1.750 | 1.694 | .138-32UNC-3B | M34X1-6g | .204 | .905 | .904 |
| 25 | 1.6250 | .500 | .545 | .790 | .741 | 1.500 | 1.875 | 1.816 | .138-32UNC-3B | M37X1-6g | .204 | .905 | .904 |

All dimensions for reference only.
Consult Amphenol for more information on ordering connectors with clinch nuts.
Most common options are shown; other options are available.

☐ Designates true position dimensioning
† Red band indicates fully mated
†† Blue band indicates rear release contact retention system

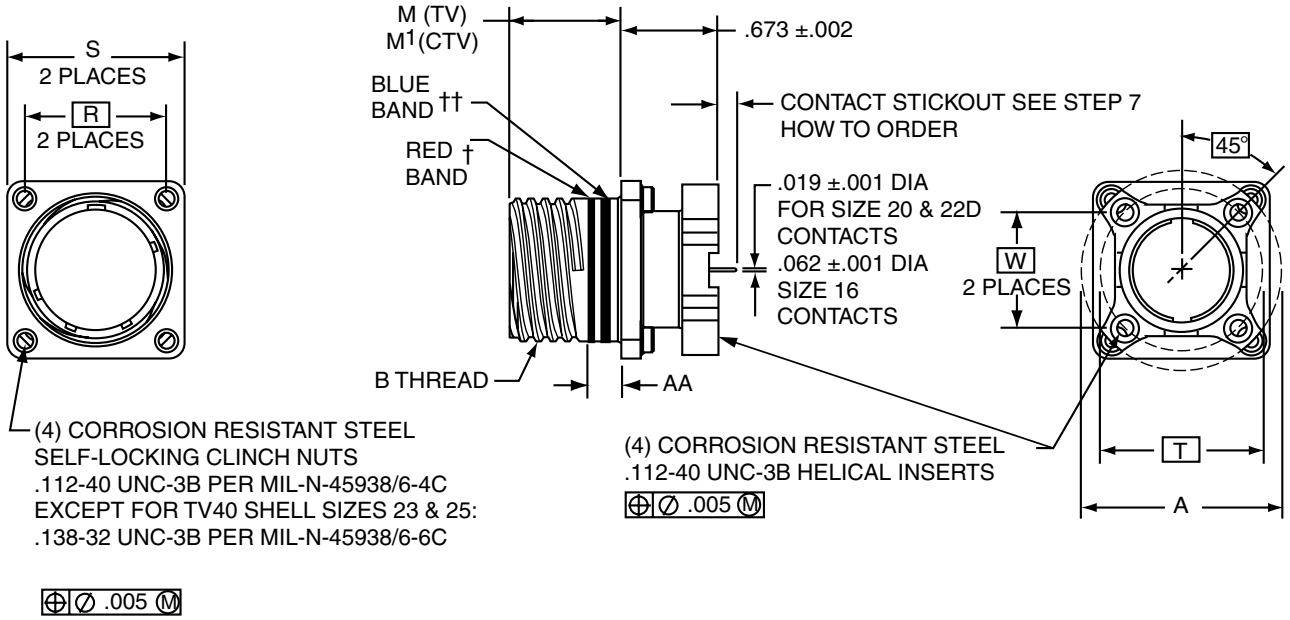
# PCB Wall Mounting Double Flange Receptacle

## Commercial (TVP40, TVPS40, CTVP40, CTVPS40)

**PART NUMBER BUILDER Page 45-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

Commercial

| ALUMINUM | STAINLESS STEEL | COMPOSITE |
|---|---|---|
| TVP40RW | TVPS40RK | CTVP40RW |
| TVP40DT | TVPS40RKN | CTVP40DT |
| TVP40DW | TVPS40RS | CTVP40DZ |
| TVP40DZ | TVPS40RL | CTVPS40RF |
| TVPS40RF | TVPS40DSK | |
| TVPS40RB | TVPS40DSN | |
| TVPS40DB | | |
| TVPS40DS | | |




| Shell Size | MS Shell Size Code (For Ref.) | A Dia. ±.005 (TV) | A Dia. ±.005 (CTV) | B Thread Class 2A (Plated) 0.1P-0.3L-TS | M +.000 −.005 | M¹ ±.003 (CTV) | R (Panel Mount) (CTV) | R (Panel Mount (TV) | S Max. (TV) | S Max. (CTV) | AA Max. Panel Thickness | PCB Mounting Dimensions | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | T Dia. (TV) TP | W (CTV) TP |
| 9 | A | NA | 1.016 | .6250 | .820 | .770 | .719 | N/A | 1.134 | .949 | .234 | NA | .532 |
| 11 | B | 1.062 | 1.148 | .7500 | .820 | .770 | .812 | .766 | 1.227 | 1.042 | .234 | . .850 | .601 |
| 13 | C | 1.250 | 1.250 | .8750 | .820 | .770 | .906 | .859 | 1.321 | 1.136 | .234 | .994 | .703 |
| 15 | D | 1.375 | 1.375 | 1.0000 | .820 | .770 | .969 | .938 | 1.381 | 1.230 | .234 | 1.119 | .791 |
| 17 | E | 1.500 | 1.500 | 1.1875 | .820 | .770 | 1.062 | 1.016 | 1.477 | 1.323 | .234 | 1.237 | .875 |
| 19 | F | 1.625 | 1.625 | 1.2500 | .820 | .770 | 1.156 | 1.110 | 1.598 | 1.449 | .234 | 1.379 | .975 |
| 21 | G | 1.750 | 1.750 | 1.3750 | .820 | .738 | 1.250 | 1.206 | 1.724 | 1.573 | .204 | 1.489 | 1.053 |
| 23 | H | 1.875 | 1.875 | 1.5000 | .820 | .738 | 1.375 | 1.312 | 1.850 | 1.699 | .204 | 1.619 | 1.195 |
| 25 | J | 2.000 | 2.000 | 1.6250 | .820 | .738 | 1.500 | 1.438 | 1.972 | 1.823 | .204 | 1.744 | 1.233 |

All dimensions for reference only.

☐ Designates true position dimensioning
† Red band indicates fully mated
†† Blue band indicates rear release contact retention system

A

# PCB Wall Mounting Double Flange Receptacle

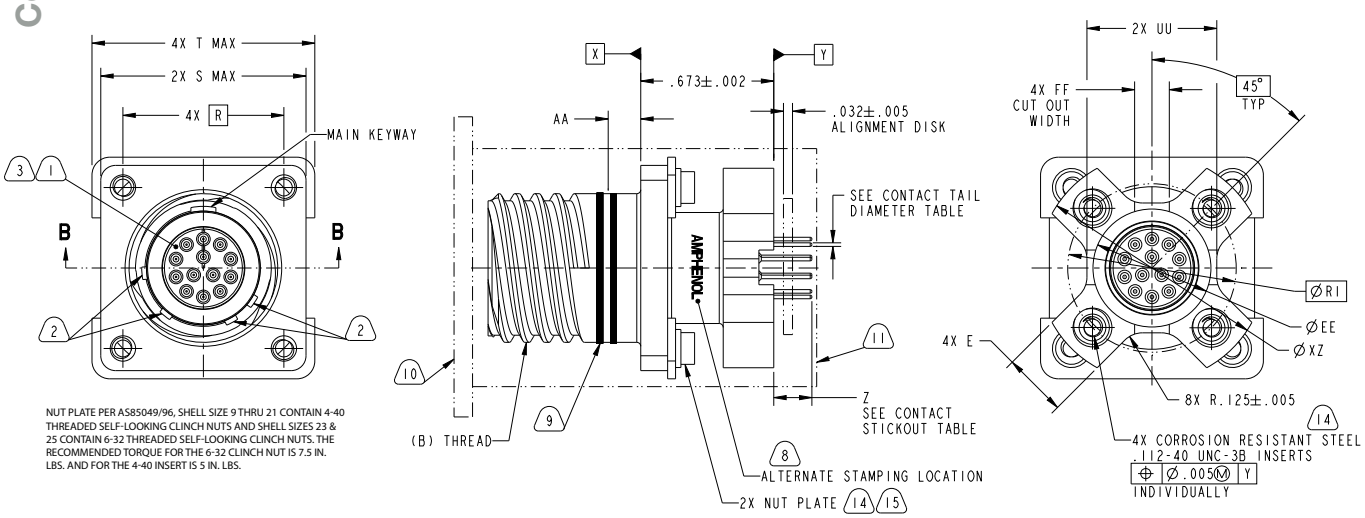
## Commercial (CTVP43, CTVPS43)

Amphenol Aerospace

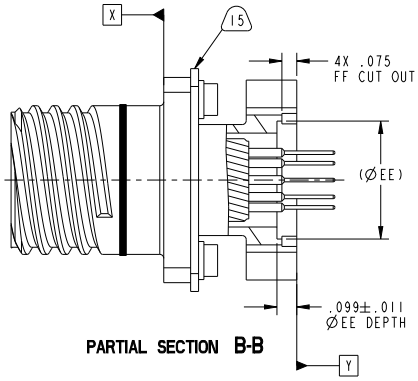
**PART NUMBER BUILDER Page 45-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

Commercial

**COMPOSITE**
**CTVPS43RF**
**CTVP43RW**
**CTVP43DT**
**CTVP43DZ**




FX-787852-35( ) ARRANGEMENT SHOWN




PARTIAL SECTION B-B

| Shell Size | MS Shell Size Code (For Ref.) | A Dia. ±.005 (CTV) | B Thread Class 2A (Plated) 0.1P-0.3L-TS | M¹ ±.003 (CTV) | R (Panel Mount) (CTV) | S Max. (CTV) | T Max. | AA Max. Panel Thickness | PCB Mounting W (CTV) TP |
|---|---|---|---|---|---|---|---|---|---|
| 9 | A | 1.016 | .6250 | .770 | .719 | .949 | 1.034 | .234 | .532 |
| 11 | B | 1.148 | .7500 | .770 | .812 | 1.042 | 1.124 | .234 | .601 |
| 13 | C | 1.250 | .8750 | .770 | .906 | 1.136 | 1.218 | .234 | .703 |
| 15 | D | 1.375 | 1.0000 | .770 | .969 | 1.230 | 1.295 | .234 | .791 |
| 17 | E | 1.500 | 1.1875 | .770 | 1.062 | 1.323 | 1.405 | .234 | .875 |
| 19 | F | 1.625 | 1.2500 | .770 | 1.156 | 1.449 | 1.550 | .234 | .975 |
| 21 | G | 1.750 | 1.3750 | .738 | 1.250 | 1.573 | 1.680 | .204 | 1.053 |
| 23 | H | 1.875 | 1.5000 | .738 | 1.375 | 1.699 | 1.800 | .204 | 1.195 |
| 25 | J | 2.000 | 1.6250 | .738 | 1.500 | 1.823 | 1.906 | .204 | 1.233 |

All dimensions for reference only.

☐ Designates true position dimensioning
† Red band indicates fully mated
†† Blue band indicates rear release contact retention system

A

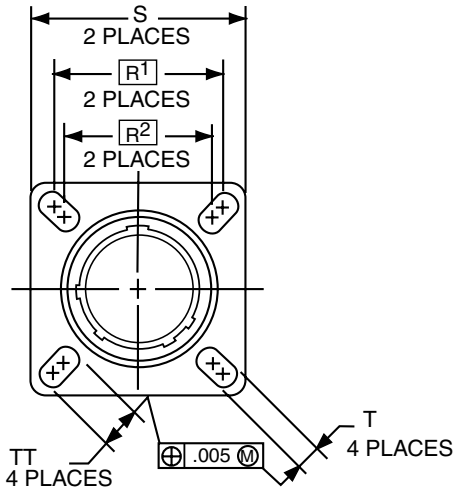
# PCB Box Mounting Receptacle

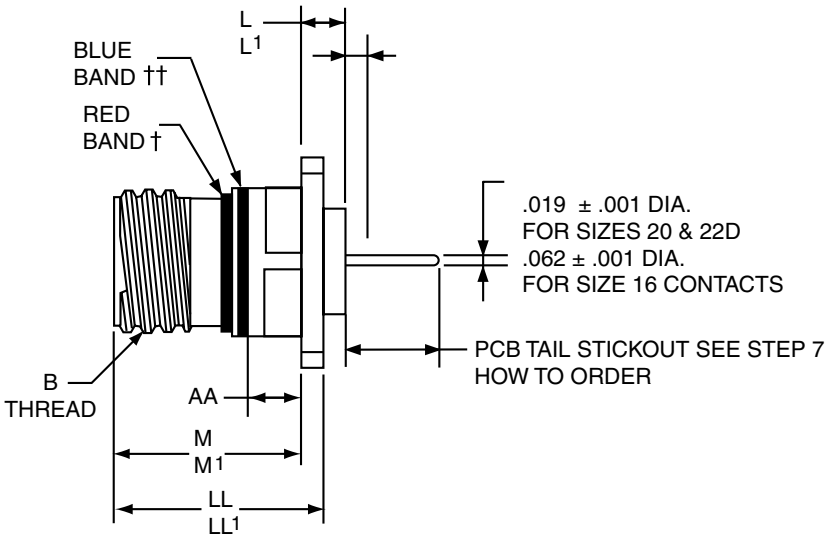
## Commercial (TVP02, TVPS02, CTVP02, CTVPS02)

**PART NUMBER BUILDER Page 45-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

Commercial

| ALUMINUM | STAINLESS STEEL | COMPOSITE |
|---|---|---|
| TVP02RW | TVPS02RK | CTVP02RW |
| TVP02DT | TVPS02RKN | CTVP02DT |
| TVP02DW | TVPS02RS | CTVP02DZ |
| TVP02DZ | TVPS02RL | CTVPS02RF |
| TVPS02RF | TVPS02DSK | |
| TVPS02RB | TVPS02DSN | |
| TVPS02DB | | |
| TVPS02DS | | |




| Shell Size | B Thread Class 2A (Plated) 0.1P-0.3L-TS | L Max. (TV) | L¹ Max. (CTV) | M +.000 −.005 (TV) | M¹ +.000 −.005 (CTV) | R1 | R2 | S Max. | T +.008 −.006 | AA Max. Panel Thickness | LL +.006 −.000 (TV) | LL¹ ±.005 (CTV) | TT ±.008 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | .6250 | .205 | .250 | .820 | .773 | .719 | .594 | .948 | .128 | .234 | .905 | .908 | .216 |
| 11 | .7500 | .205 | .250 | .820 | .773 | .812 | .719 | 1.043 | .128 | .234 | .905 | .908 | .194 |
| 13 | .8750 | .205 | .250 | .820 | .773 | .906 | .812 | 1.137 | .128 | .234 | .905 | .908 | .194 |
| 15 | 1.0000 | .205 | .250 | .820 | .773 | .969 | .906 | 1.232 | .128 | .234 | .905 | .908 | .173 |
| 17 | 1.1875 | .205 | .250 | .820 | .773 | 1.062 | .969 | 1.323 | .128 | .234 | .905 | .908 | .194 |
| 19 | 1.2500 | .205 | .250 | .820 | .773 | 1.156 | 1.062 | 1.449 | .128 | .234 | .905 | .908 | .194 |
| 21 | 1.3750 | .235 | .280 | .790 | .741 | 1.250 | 1.156 | 1.575 | .128 | .204 | .905 | .904 | .194 |
| 23 | 1.5000 | .235 | .280 | .790 | .741 | 1.375 | 1.250 | 1.701 | .154 | .204 | .905 | .904 | .242 |
| 25 | 1.6250 | .235 | .280 | .790 | .741 | 1.500 | 1.375 | 1.823 | .154 | .204 | .905 | .904 | .242 |

All dimensions for reference only.
Most common options are shown; other options are available.

☐ Designates true position dimensioning
† Red band indicates fully mated
†† Blue band indicates rear release contact retention system

# PCB Box Mounting Receptacle (With Clinch Nuts)

Amphenol Aerospace

## Commercial (TVP12, TVPS12, CTVP12, CTVPS12, TVP13, TVPS13, CTVP13, CTVPS13)

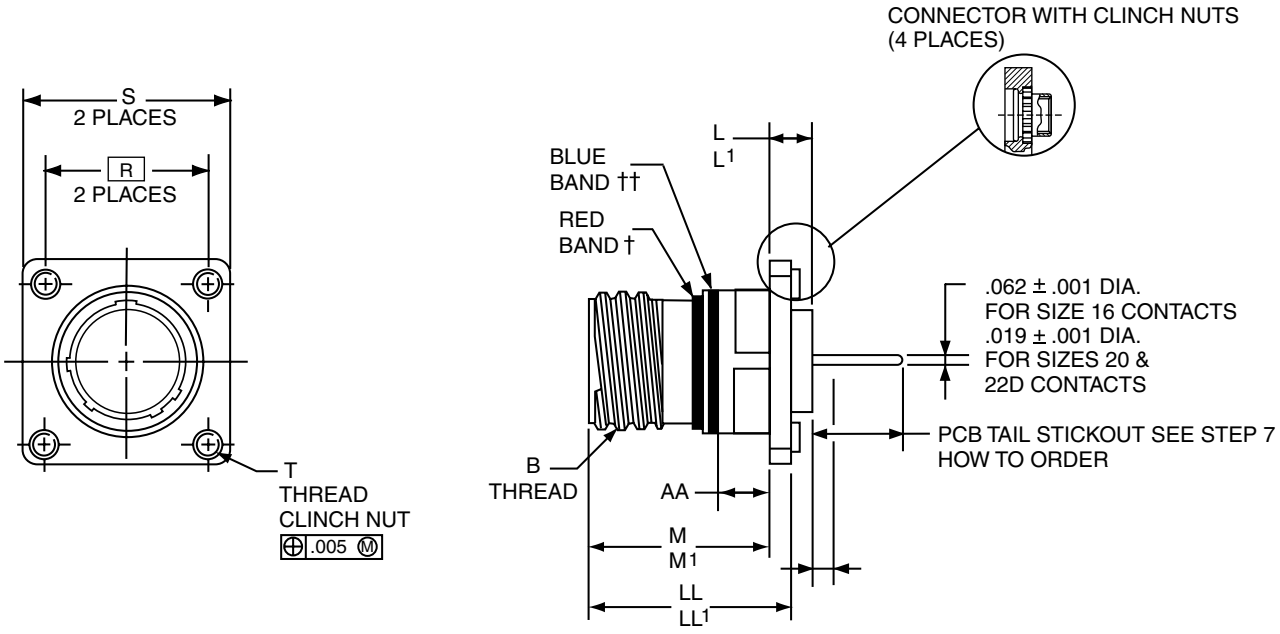
**PART NUMBER BUILDER Page 45-47**

**ONLINE CONFIGURATOR www.amphenol-aerospace.com**



Commercial

| ALUMINUM | | STAINLESS STEEL | | COMPOSITE | |
|---|---|---|---|---|---|
| TVP12RW | TVP13RW | TVPS12RK | TVPS13RK | CTVP12RW | CTVP13RW |
| TVP12DT | TVP13DT | TVPS12RKN | TVPS13RKN | CTVP12DZ | CTVP13DZ |
| TVP12DW | TVP13DW | TVPS12RS | TVPS13RS | CTVP12DT | CTVP13DT |
| TVP12DZ | TVP13DZ | TVPS12RL | TVPS13RL | CTVPS12RF | CTVPS13RF |
| TVPS12RF | TVPS13RF | TVPS12DSK | TVPS13DSK | | |
| TVPS12RB | TVPS13RB | TVPS12DSN | TVPS13DSN | | |
| TVPS12DB | TVPS13DB | | | | |
| TVPS12DS | TVPS13DS | | | | |




| Shell Size | B Thread Class 2A (Plated) 0.1P-0.3L-TS | L Max. (TV) | L¹ Max. (CTV) | M +.000 −.005 (TV) | M¹ +.000 −.005 (CTV) | R | S Max. | T Thread | AA Max. Panel Thickness | LL +.006 −.000 (TV) | LL¹ +.006 −.000 (CTV) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | .6250 | .205 | .250 | .820 | .773 | .719 | 1.041 | .112-40UNC-3B | .234 | .905 | .908 |
| 11 | .7500 | .205 | .250 | .820 | .773 | .812 | 1.135 | .112-40UNC-3B | .234 | .905 | .908 |
| 13 | .8750 | .205 | .250 | .820 | .773 | .906 | 1.228 | .112-40UNC-3B | .234 | .905 | .908 |
| 15 | 1.0000 | .205 | .250 | .820 | .773 | .969 | 1.291 | .112-40UNC-3B | .234 | .905 | .908 |
| 17 | 1.1875 | .205 | .250 | .820 | .773 | 1.062 | 1.385 | .112-40UNC-3B | .234 | .905 | .908 |
| 19 | 1.2500 | .205 | .250 | .820 | .773 | 1.156 | 1.479 | .112-40UNC-3B | .234 | .905 | .908 |
| 21 | 1.3750 | .235 | .280 | .790 | .741 | 1.250 | 1.573 | .112-40UNC-3B | .204 | .905 | .904 |
| 23 | 1.5000 | .235 | .280 | .790 | .741 | 1.375 | 1.760 | .112-40UNC-3B | .204 | .905 | .904 |
| 25 | 1.6250 | .235 | .280 | .790 | .741 | 1.500 | 1.885 | .112-40UNC-3B | .204 | .905 | .904 |

All dimensions for reference only.
Most common options are shown; other options are available.

☐ Designates true position dimensioning
† Red band indicates fully mated
†† Blue band indicates rear release contact retention system

A

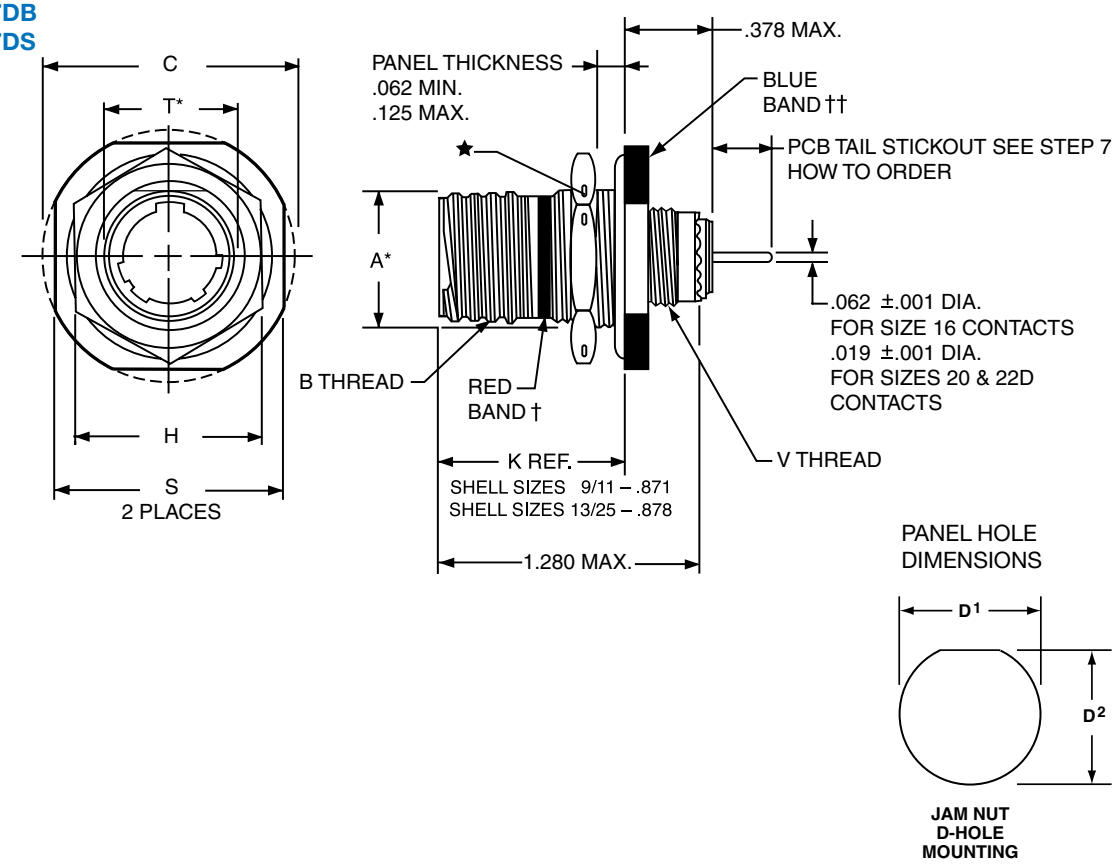
# PCB Jam Nut Receptacle

## Commercial (TV07, TVS07, CTV07, CTVS07)

**PART NUMBER BUILDER Page 45-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

Commercial

| ALUMINUM | STAINLESS STEEL | COMPOSITE |
|---|---|---|
| TV07RW | TVS07RK | CTV07RW |
| TV07DT | TVS07RKN | CTV07DT |
| TV07DW | TVS07RS | CTV07DZ |
| TV07DZ | TVS07RL | CTVS07RF |
| TVS07RF | TVS07DSK | |
| TVS07RB | TVS07DSN | |
| TVS07DB | | |
| TVS07DS | | |




| Shell Size | A* +.000 –.010 | B Thread Class 2A (Plated) 0.1P-0.3L-TS | C Max. | D¹ +.010 –.000 | D² +.010 –.000 | H Hex +.017 –.016 | S ±.010 | T +.010 –.000 | V Thread Metric |
|---|---|---|---|---|---|---|---|---|---|
| 9 | .669 | .6250 | 1.199 | .700 | .670 | .875 | 1.062 | .697 | M12X1-6g |
| 11 | .769 | .7500 | 1.386 | .825 | .770 | 1.000 | 1.250 | .822 | M15X1-6g |
| 13 | .955 | .8750 | 1.511 | 1.010 | .955 | 1.188 | 1.375 | 1.007 | M18X1-6g |
| 15 | 1.084 | 1.0000 | 1.636 | 1.135 | 1.085 | 1.312 | 1.500 | 1.134 | M22X1-6g |
| 17 | 1.208 | 1.1875 | 1.761 | 1.260 | 1.210 | 1.438 | 1.625 | 1.259 | M25X1-6g |
| 19 | 1.333 | 1.2500 | 1.949 | 1.385 | 1.335 | 1.562 | 1.812 | 1.384 | M28X1-6g |
| 21 | 1.459 | 1.3750 | 2.073 | 1.510 | 1.460 | 1.688 | 1.938 | 1.507 | M31X1-6g |
| 23 | 1.575 | 1.5000 | 2.199 | 1.635 | 1.585 | 1.812 | 2.062 | 1.634 | M34X1-6g |
| 25 | 1.709 | 1.6250 | 2.323 | 1.760 | 1.710 | 2.000 | 2.188 | 1.759 | M37X1-6g |

All dimensions for reference only.
Most common options are shown; other options are available.

† Red band indicates fully mated
†† Blue band indicates rear release contact retention system
★ .059 dia. min. 3 lockwire holes. Formed lockwire hole design (6 holes) is optional.*"D" shaped mounting hole dimensions

# PCB Jam Nut with Washout Standoffs Receptacle

## Commercial (TV17, TVS17, TVPS17)

Amphenol Aerospace

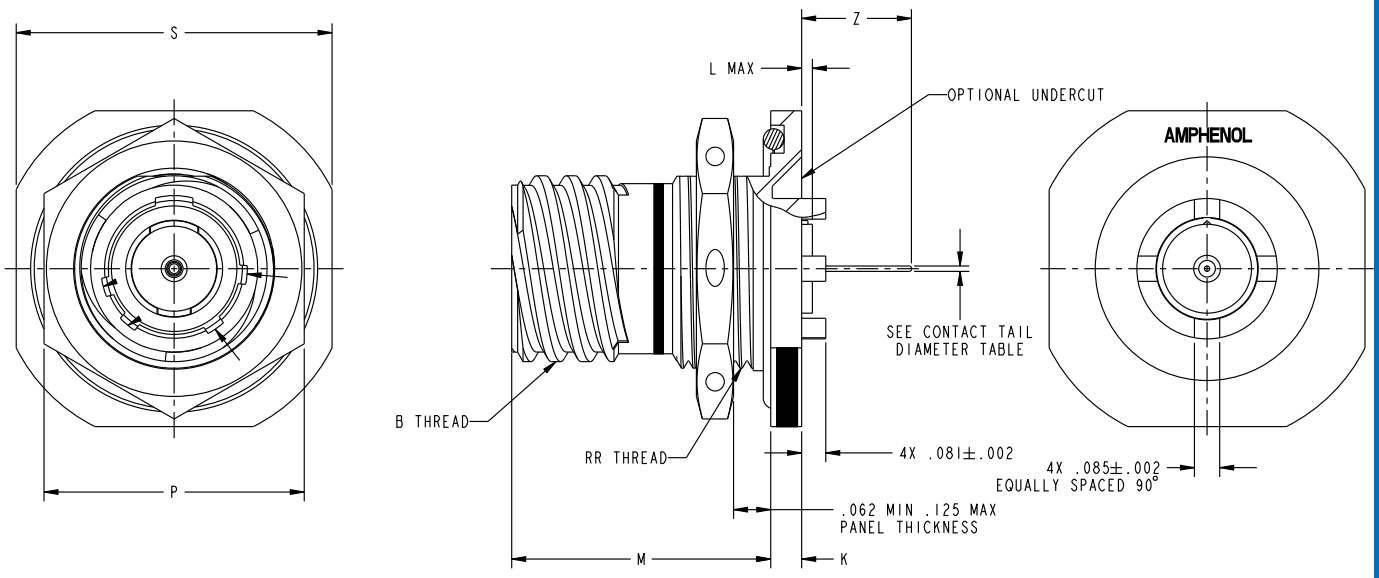
**PART NUMBER BUILDER Page 45-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

Commercial

| ALUMINUM | STAINLESS STEEL |
|---|---|
| TV17RW | TVPS17RK |
| TV17DT | TVPS17RKN |
| TV17DW | TVPS17RS |
| TV17DZ | TVPS17RL |
| TVS17RF | TVPS17DSK |
| TVS17RB | TVPS17DSN |
| TVS17DB | |
| TVS17DS | |








All dimensions for reference only.
Most common options are shown;
other options are available.

| Shell Size | B THREAD CLASS 2A (PLATED) PER 9-3200-2 | K +.010 -.005 | L MAX | M | P HEX +.017 -.016 | S +.011 -.010 | RR Thread (Plated) 9-7543 |
|---|---|---|---|---|---|---|---|
| 9 | 6250-0.1P-0.3L-TS | .104 | .056 | .871 | .875 | 1.062 | M17X1-6g 0.100R |
| 11 | 7500-0.1P-0.3L-TS | .104 | .056 | .871 | 1.000 | 1.250 | M20X1-6g 0.100R |
| 13 | 8750-0.1P-0.3L-TS | .104 | .049 | .878 | 1.188 | 1.375 | M25X1-6g 0.100R |
| 15 | 1.0000-0.1P-0.3L-TS | .104 | .049 | .878 | 1.312 | 1.500 | M28X1-6g 0.100R |
| 17 | 1.1875-0.1P-0.3L-TS | .104 | .049 | .878 | 1.438 | 1.625 | M32X1-6g 0.100R |
| 19 | 1.2500-0.1P-0.3L-TS | .135 | .018 | .878 | 1.562 | 1.812 | M35X1-6g 0.100R |
| 21 | 1.3750-0.1P-0.3L-TS | .135 | .018 | .878 | 1.688 | 1.938 | M38X1-6g 0.100R |
| 23 | 1.5000-0.1P-0.3L-TS | .135 | .018 | .878 | 1.812 | 2.062 | M41X1-6g 0.100R |
| 25 | 1.6250-0.1P-0.3L-TS | .135 | .018 | .878 | 2.000 | 2.188 | M44X1-6g 0.100R |

# PCB Jam Nut Receptacle Flush Flange

## Commercial (TV18, TVS18, CTV18, CTVS18)

**PART NUMBER BUILDER Page 45-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

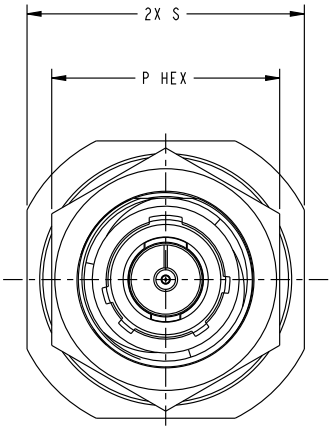
Commercial

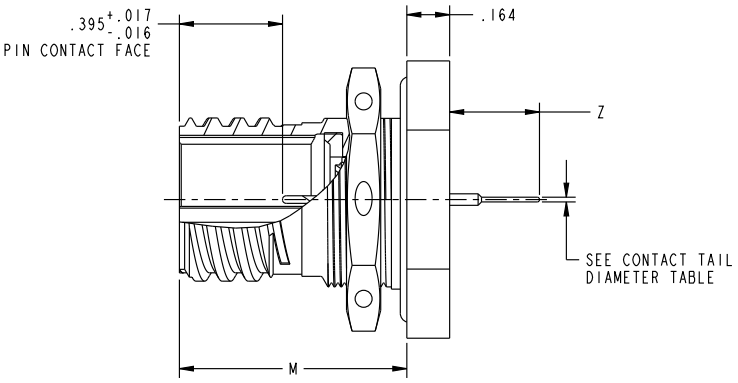
**ALUMINUM**
TV18RW
TV18DT
TV18DW
TV18DZ
TVS18RB
TVS18RF
TVS18DB
TVS18DS

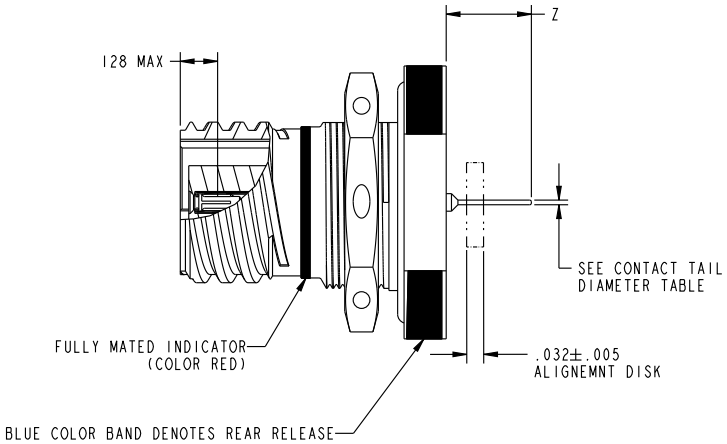
**STAINLESS STEEL**
TVS18RK
TVS18RKN
TVS18RS
TVS18RL
TVS18DSK
TVS18DSN

**COMPOSITE**
CTV18RW
CTV18DT
CTV18DZ
CTVS18RF






All dimensions for reference only.
Most common options are shown;
other options are available.

| Shell Size | BB THREAD PER MIL-DTL-38999 CLASS 2A | A +.010 -.005 | M | P HEX +.017 -.016 | S +.011 -.010 | RR THREAD (METRIC) |
|---|---|---|---|---|---|---|
| 9 | .6250-0.1P-0.3L-TS | .104 | .871 | 875 | 1.062 | M17X1-6g 0.100R |
| 11 | .7500-0.1P-0.3L-TS | .104 | .871 | 1.000 | 1.250 | M20X1-6g 0.100R |
| 13 | .8750-0.1P-0.3L-TS | .104 | .878 | 1.188 | 1.375 | M25X1-6g 0.100R |
| 15 | 1.0000-0.1P-0.3L-TS | .104 | .878 | 1.312 | 1.500 | M28X1-6g 0.100R |
| 17 | 1.1875-0.1P-0.3L-TS | .104 | .878 | 1.438 | 1.625 | M32X1-6g 0.100R |
| 19 | 1.2500-0.1P-0.3L-TS | .135 | .878 | 1.562 | 1.812 | M35X1-6g 0.100R |
| 21 | 1.3750-0.1P-0.3L-TS | .135 | .878 | 1.688 | 1.938 | M38X1-6g 0.100R |
| 23 | 1.5000-0.1P-0.3L-TS | .135 | .878 | 1.812 | 2.062 | M41X1-6g 0.100R |
| 25 | 1.6250-0.1P-0.3L-TS | .135 | .878 | 2.000 | 2.188 | M44X1-6g 0.100R |

# PCB Jam Nut Receptacle, 3 Post Reduced Flange

## Commercial (TV38, TVS38)

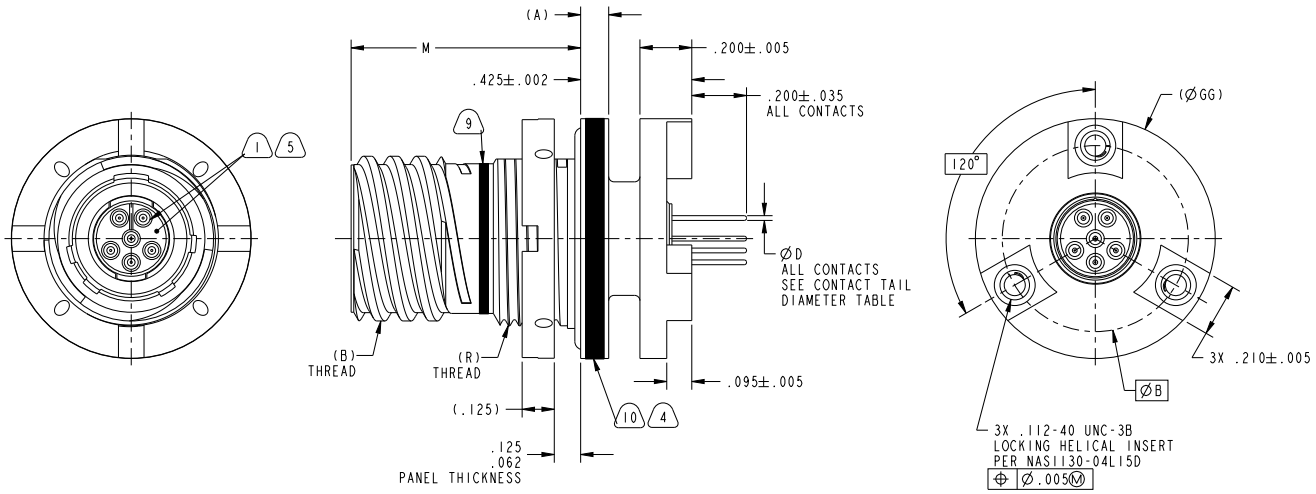
Amphenol Aerospace



**PART NUMBER BUILDER Page 45-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

Commercial

| ALUMINUM | STAINLESS STEEL |
|---|---|
| TV38RW | TVS38RK |
| TV38DT | TVS38RKN |
| TV38DW | TVS38RS |
| TV38DZ | TVS38RL |
| TVS38RF | TVS38DSK |
| TVS38RB | TVS38DSN |
| TVS38DB | |
| TVS38DS | |




| Shell Size | BB THREAD PER MIL-DTL-38999 CLASS 2A | A +.010 -.005 | Ø B | Ø M ±.004 | Ø GG MAX | RR Thread (Metric) |
|---|---|---|---|---|---|---|
| 9 | 6250-0.1P-0.3L-TS | .104 | .706 | .871 | .915 | M17X1-6g 0.100R |
| 11 | 7500-0.1P-0.3L-TS | .104 | .833 | .871 | 1.042 | M20X1-6g 0.100R |
| 13 | 8750-0.1P-0.3L-TS | .104 | 1.031 | .878 | 1.240 | M25X1-6g 0.100R |
| 15 | 1.0000-0.1P-0.3L-TS | .104 | 1.148 | .878 | 1.375 | M28X1-6g 0.100R |
| 17 | 1.1875-0.1P-0.3L-TS | .104 | 1.421 | .878 | 1.630 | M32X1-6g 0.100R |
| 19 | 1.2500-0.1P-0.3L-TS | .135 | 1.607 | .878 | 1.816 | M35X1-6g 0.100R |
| 21 | 1.3750-0.1P-0.3L-TS | .135 | 1.733 | .878 | 1.942 | M38X1-6g 0.100R |
| 23 | 1.5000-0.1P-0.3L-TS | .135 | 1.858 | .878 | 2.067 | M41X1-6g 0.100R |
| 25 | 1.6250-0.1P-0.3L-TS | .135 | 1.981 | .878 | 2.190 | M44X1-6g 0.100R |

All dimensions for reference only.
Most common options are shown; other options are available.

† Red band indicates fully mated
†† Blue band indicates rear release contact retention system
★ .059 dia. min. 3 lockwire holes. Formed lockwire hole design (6 holes) is optional.*"D" shaped mounting hole dimensions

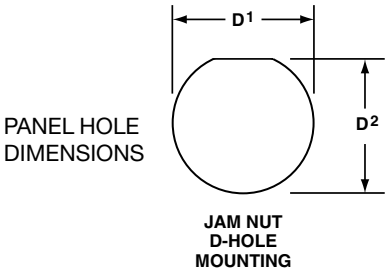
# PCB Jam Nut Receptacle, Double Flange

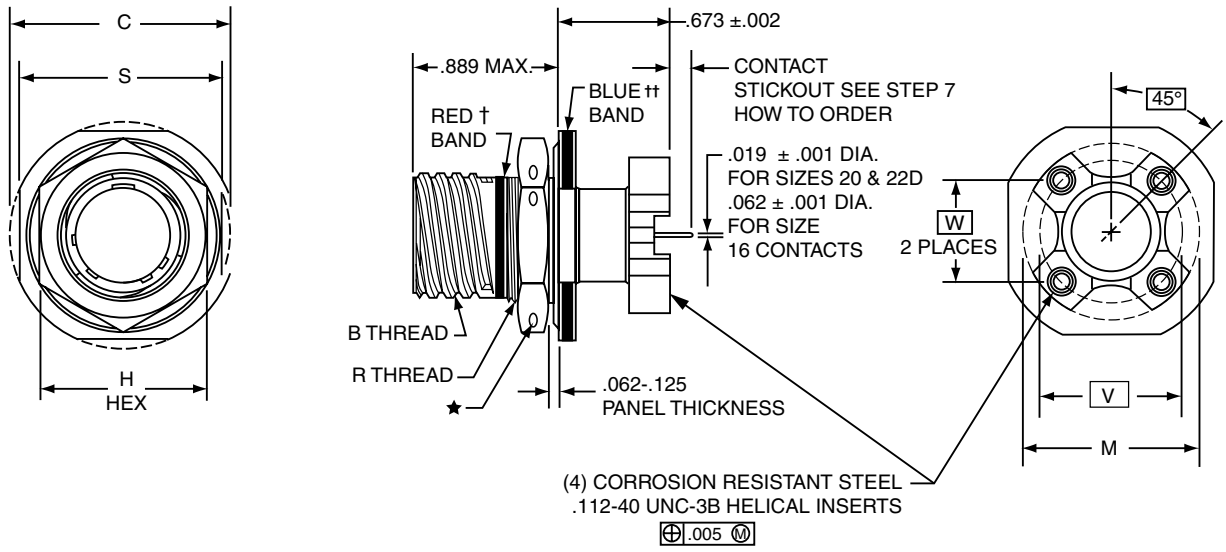
## Commercial (TV47,TVS47, CTV47, CTVS47)

**PART NUMBER BUILDER Page 45-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

Commercial

| ALUMINUM | STAINLESS STEEL | COMPOSITE |
|---|---|---|
| TV47RW | TVS47RK | CTV47RW |
| TV47DT | TVS47RKN | CTV47DT |
| TV47DW | TVS47RS | CTV47DZ |
| TV47DZ | TVS47RL | CTVS47RF |
| TVS47RF | TVS47DSK | |
| TVS47RB | TVS47DSN | |
| TVS47DB | | |
| TVS47DS | | |




| Shell Size | MS Shell Size Code (For Ref.) | B Thread Class 2A 0.1P-0.3L-TS (Plated) | C ±.005 (Jam Nut Flange Dia. | D¹ +.010 –.000 | D² +.000 –.010 | H Hex +.017 –.016 | M Dia. ±.005 (TV ) | M Dia. ±.005 (CTV) | R Thread Metric (Plated) | S +.011 –.010 | PCB Mounting Dimensions V Dia. (TV) TP | PCB Mounting Dimensions W (CTV) TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | A | .6250 | 1.188 | .700 | .670 | .875 | 1.062 | 1.016 | M17X1-6g0.100R | 1.062 | .753 | .532 |
| 11 | B | .7500 | 1.375 | .825 | .770 | 1.000 | 1.062 | 1.148 | M20X1-6g0.100R | 1.250 | .850 | .601 |
| 13 | C | .8750 | 1.500 | 1.010 | .955 | 1.188 | 1.250 | 1.250 | M25X1-6g0.100R | 1.375 | .994 | .703 |
| 15 | D | 1.0000 | 1.625 | 1.135 | 1.085 | 1.312 | 1.375 | 1.375 | M28X1-6g0.100R | 1.500 | 1.119 | .791 |
| 17 | E | 1.1875 | 1.750 | 1.260 | 1.210 | 1.438 | 1.500 | 1.500 | M32X1-6g0.100R | 1.625 | 1.237 | .875 |
| 19 | F | 1.2500 | 1.937 | 1.385 | 1.335 | 1.562 | 1.625 | 1.625 | M35X1-6g0.100R | 1.812 | 1.379 | .975 |
| 21 | G | 1.3750 | 2.062 | 1.510 | 1.460 | 1.688 | 1.750 | 1.750 | M38X1-6g0.100R | 1.937 | 1.489 | 1.053 |
| 23 | H | 1.5000 | 2.188 | 1.635 | 1.585 | 1.812 | 1.875 | 1.875 | M41X1-6g0.100R | 2.062 | 1.644 | 1.145 |
| 25 | J | 1.6250 | 2.312 | 1.760 | 1.710 | 2.000 | 2.000 | 2.000 | M44X1-6g0.100R | 2.188 | 1.744 | 1.233 |

All dimensions for reference only.
† Red band indicates fully mated
†† Blue band indicates rear release contact retention system.

★ .059 dia. min. (1.5 dia. min.) 3 lockwire holes.
Formed lockwire hole design (6 holes) is optional.

# PCB Jam Nut Receptacle, Reduced Double Flange

## Commercial (TV48,TVS48, CTV48, CTVS48)

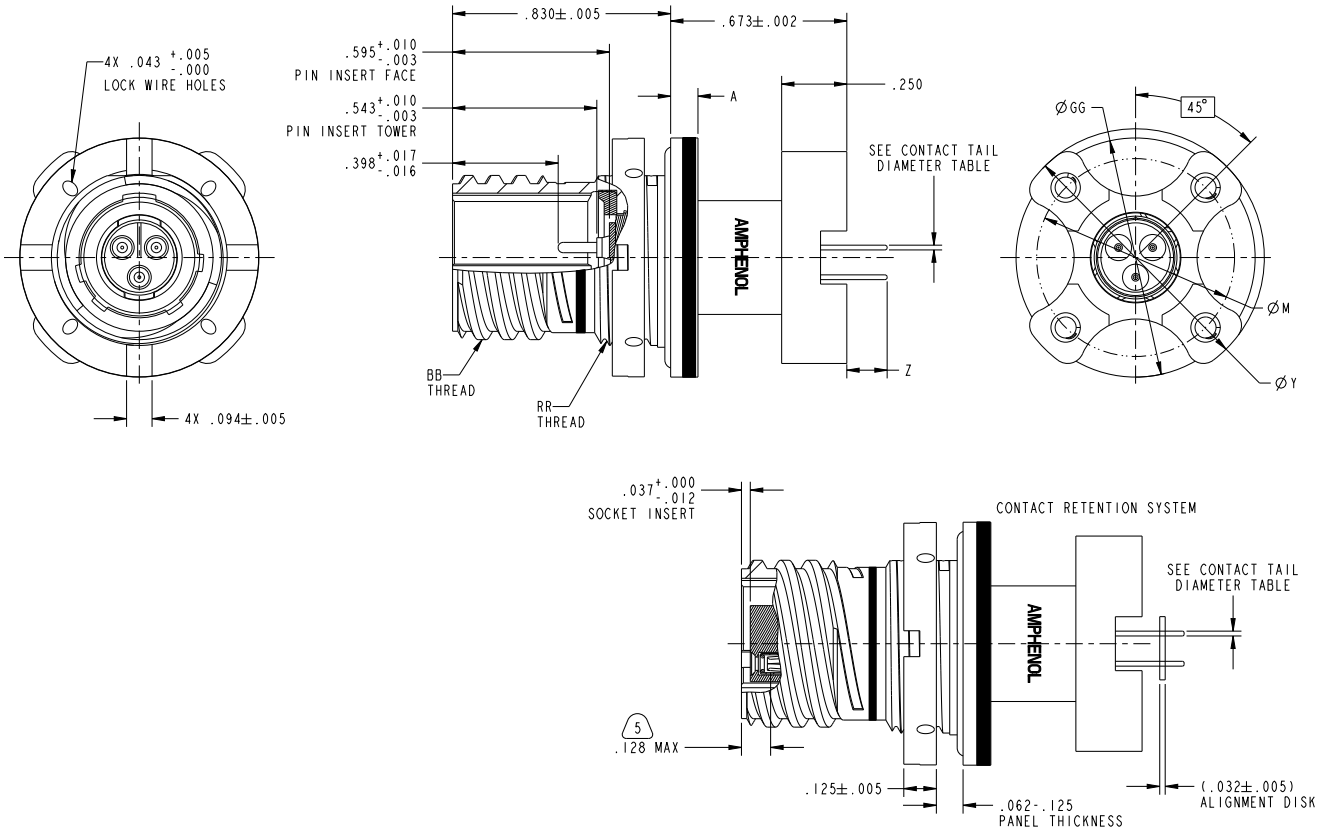
Amphenol Aerospace

**PART NUMBER BUILDER Page 45-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

Commercial

| ALUMINUM | | STAINLESS STEEL | COMPOSITE |
|---|---|---|---|
| TV48RW | TVS48RF | TVS48RK | CTV48RW |
| TV48RF | TVS48RB | TVS48RKN | CTV48DT |
| TV48DT | TVS48DB | TVS48RS | CTV48DZ |
| TV48DW | TVS48DS | TVS48RL | CTVS48RF |
| TV48DZ | | TVS48DSK | |
| | | TVS48DSN | |






| Shell Size | BB THREAD PER MIL-DTL-38999 CLASS 2A | A +.010 -.005 | Ø M | Ø Y ±.005 | Ø GG MAX | RR Thread (Metric) |
|---|---|---|---|---|---|---|
| 9 | 6250-0.1P-0.3L-TS | .104 | .753 | .982 | .915 | M17X1-6g 0.100R |
| 11 | 7500-0.1P-0.3L-TS | .104 | .850 | 1.062 | 1.042 | M20X1-6g 0.100R |
| 13 | 8750-0.1P-0.3L-TS | .104 | .994 | 1.250 | 1.240 | M25X1-6g 0.100R |
| 15 | 1.0000-0.1P-0.3L-TS | .104 | 1.119 | 1.375 | 1.375 | M28X1-6g 0.100R |
| 17 | 1.1875-0.1P-0.3L-TS | .104 | 1.237 | 1.500 | 1.630 | M32X1-6g 0.100R |
| 19 | 1.2500-0.1P-0.3L-TS | .135 | 1.379 | 1.625 | 1.816 | M35X1-6g 0.100R |
| 21 | 1.3750-0.1P-0.3L-TS | .135 | 1.489 | 1.750 | 1.942 | M38X1-6g 0.100R |
| 23 | 1.5000-0.1P-0.3L-TS | .135 | 1.644 | 1.875 | 2.067 | M41X1-6g 0.100R |
| 25 | 1.6250-0.1P-0.3L-TS | .135 | 1.744 | 2.000 | 2.190 | M44X1-6g 0.100R |

All dimensions for reference only.
† Red band indicates fully mated
†† Blue band indicates rear release contact retention system.

# PCB Jam Nut Receptacle, Reduce Flange with Standoffs

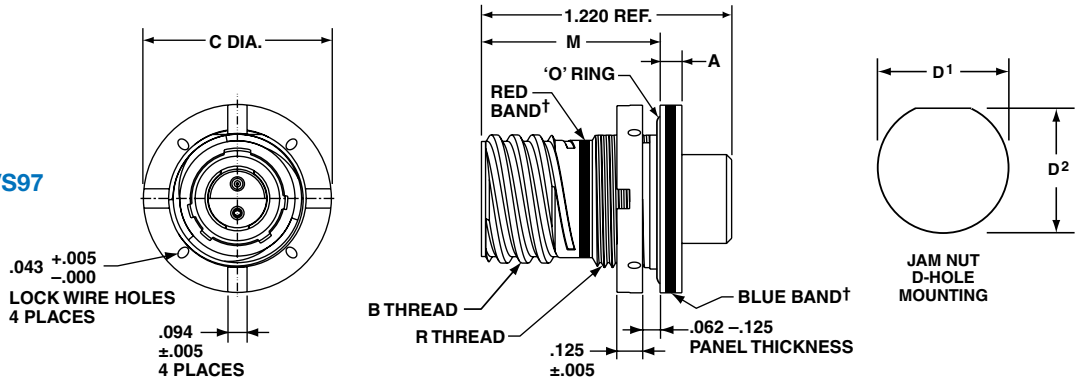
## Commercial (TV97, TVS97, TV98, TVS98)

**PART NUMBER BUILDER Page 45-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

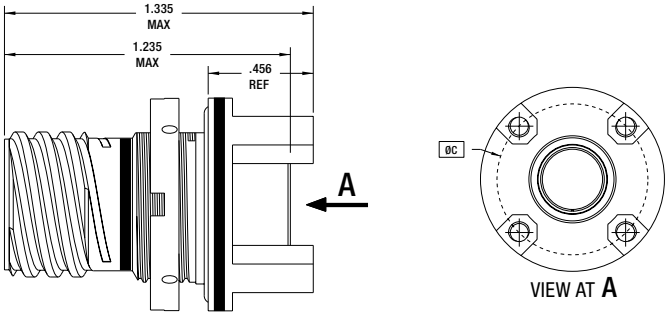
Commercial

| ALUMINUM | | STAINLESS STEEL | |
|---|---|---|---|
| TV97DT | TV98DT | TVS97RK | TVS98RK |
| TV97DW | TV98DW | TVS97RKN | TVS98RKN |
| TV97DZ | TV98DZ | TVS97RS | TVS98RS |
| TV97RW | TV98RW | TVS97RL | TVS98RL |
| TVS97DB | TVS98DB | TVS97DSK | TVS98DSK |
| TVS97RB | TVS98RB | TVS97DSN | TVS98DSN |
| TVS97RF | TVS98RF | | |

TVS97



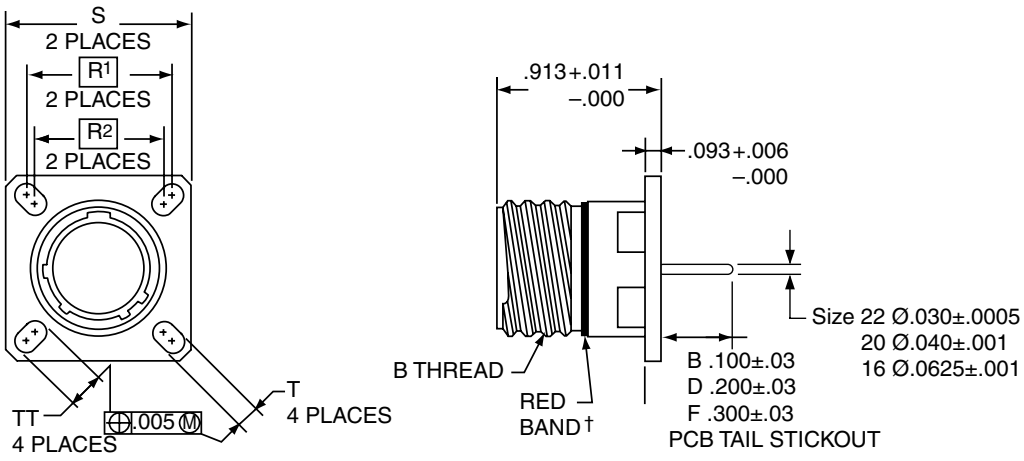

TVS98




*Reduced Flange connectors come wtih a spanner nut to replace with a hex nut add (730) mode code to end of part number

| Shell Size | Footprint Reduction | Ø B Max | Ø GG Max | Ø C MAX |
|---|---|---|---|---|
| 9 | 42% | .443 | .915 | .744 |
| 11 | 46% | .567 | 1.042 | .862 |
| 13 | 37% | .680 | 1.240 | 1.020 |
| 15 | 36% | .811 | 1.357 | 1.141 |
| 17 | 21% | .936 | 1.630 | 1.385 |
| 19 | 21% | 1.042 | 1.816 | 1.531 |
| 21 | 21% | 1.167 | 1.942 | 1.656 |
| 23 | 21% | 1.292 | 2.067 | 1.782 |
| 25 | 22% | 1.417 | 2.190 | 1.910 |

| Shell Size | MS Shell Size Code | B Thread Class 2A 0.1P-0.3L-TS (Plated) | A +.010 –.005 | C Dia. Max. | D1 +.010 –.000 | D2 +.000 –.010 | M | R Thread (Plated) 9-7543 |
|---|---|---|---|---|---|---|---|---|
| 9 | A | .6250 | .104 | .915 | .693 | .657 | .871 | M17X1-6g |
| 11 | B | .7500 | .104 | 1.042 | .825 | .770 | .871 | M20X1-6g |
| 13 | C | .8750 | .104 | 1.240 | 1.010 | .955 | .878 | M25X1-6g |
| 15 | D | 1.0000 | .104 | 1.357 | 1.135 | 1.085 | .878 | M28X1-6g |
| 17 | E | 1.1875 | .104 | 1.630 | 1.260 | 1.210 | .878 | M32X1-6g |
| 19 | F | 1.2500 | .135 | 1.816 | 1.385 | 1.335 | .878 | M35X1-6g |
| 21 | G | 1.3750 | .135 | 1.942 | 1.510 | 1.460 | .878 | M38X1-6g |
| 23 | H | 1.5000 | .135 | 2.067 | 1.635 | 1.585 | .878 | M41X1-6g |
| 25 | J | 1.6250 | .135 | 2.190 | 1.760 | 1.710 | .878 | M44X1-6g |




| | 1. | 2. | 3. | 4. | 5. | 6. |
|---|---|---|---|---|---|---|
| **PART #** See chart below | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/Alt. Keying | Shell Finish | Tail Length |
| | 10-626 | 501 | -35 | P | 1 | B |

## HOW TO ORDER

### 1. BASE NUMBER:

| | |
|---|---|
| **10-626** | Base Number for MIL-DTL-38999 Series III Hermetic with PCB Tail |

### 2. SELECT A CODED SHELL SIZE:

See chart below **501-509**, designates size 9-25 shell size.
Example: **501** = Size 9 Shell

### 3. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29. Please enter the second number which represents the Insert Arrangement number.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 4. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 47 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

### 5. SELECT A SHELL FINISH:

| | |
|---|---|
| **1** | Hermetic seal, passivated Stainless Steel, 200°C |
| **2** | Hermetic seal, Stainless Steel w/Nickel Plate |
| **3** | Carbon Steel w/reflowed tin plate |

### 6. SELECT A TAIL LENGTH:

| | |
|---|---|
| **B** | .100±.03 |
| **D** | .200±.03 |
| **F** | .300±.03 |

| Shell Size | Part Number | B Thread 0.1P-0.3L-TS (Plated) | R1 | R2 | S ±.010 | T ±.008 | TT ±.008 |
|---|---|---|---|---|---|---|---|
| 9 | 10-626**501**-XXX | .6250 | .719 | .594 | .938 | .128 | .216 |
| 11 | **502**-XXX | .7500 | .812 | .719 | 1.031 | .128 | .194 |
| 13 | **503**-XXX | .8750 | .906 | .812 | 1.125 | .128 | .194 |
| 15 | **504**-XXX | 1.0000 | .969 | .906 | 1.219 | .128 | .173 |
| 17 | **505**-XXX | 1.1875 | 1.062 | .969 | 1.312 | .128 | .194 |
| 19 | **506**-XXX | 1.2500 | 1.156 | 1.062 | 1.438 | .128 | .194 |
| 21 | **507**-XXX | 1.3750 | 1.250 | 1.156 | 1.562 | .128 | .194 |
| 23 | **508**-XXX | 1.5000 | 1.375 | 1.250 | 1.688 | .154 | .242 |
| 25 | **509**-XXX | 1.6250 | 1.500 | 1.375 | 1.812 | .154 | .242 |

All dimensions for reference.

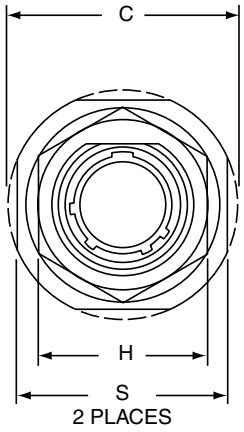
☐ Designates true position dimensioning

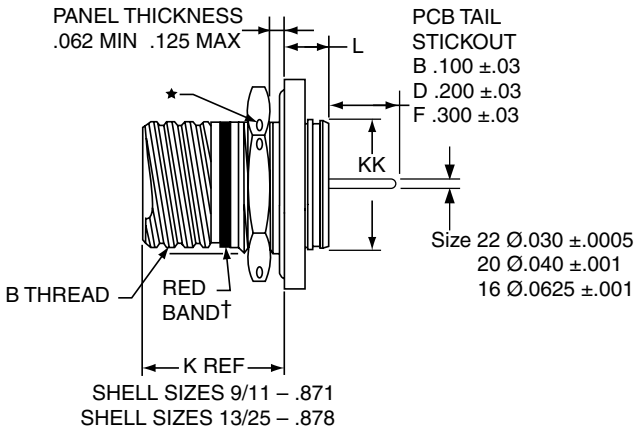
† Red band indicates fully mated

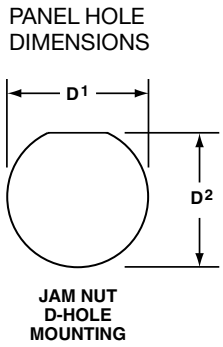
NOTE: Consult Amphenol Aerospace for availability of non-glass-sealed versions with printed circuit tail contacts.

# PCB Hermetic Jam Nut Receptacle

## Commercial




| | 1. | 2. | 3. | 4. | 5. | 6. |
|---|---|---|---|---|---|---|
| **PART #** See chart below | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/Alt. Keying | Shell Finish | Tail Length |
| | 10-626 | 47 | -35 | P | 1 | B |

## HOW TO ORDER

### 1. BASE NUMBER:

| | |
|---|---|
| **10-626** | Base Number for MIL-DTL-38999 Series III Hermetic with PCB Tail |

### 2. SELECT A CODED SHELL SIZE:

See chart below **471-479**, designates size 9-25 shell size.

### 3. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29. Please enter the second number which represents the Insert Arrangement number.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 4. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 47 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

### 5. SELECT A SHELL FINISH:

| | |
|---|---|
| **1** | Hermetic seal, passivated Stainless Steel, 200°C |
| **2** | Hermetic seal, Stainless Steel w/Nickel Plate |
| **3** | Carbon Steel w/reflowed tin plate |

### 6. SELECT A TAIL LENGTH:

| | |
|---|---|
| **B** | 100 ±.03 |
| **D** | .200 ±.03 |
| **F** | .300 ±.03 |

† Red band indicates fully mated

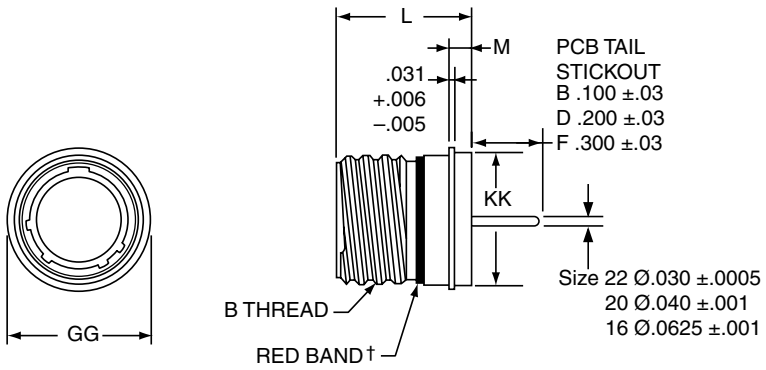
★ .059 dia. min. (1.5 dia. min.) 3 lockwire holes. Formed lockwire hole design (6 holes) is optional.

| Shell Size | Part Number | B Thread Class 2A 0.1P-0.3L-TS (Plated) | C Max | D1 +.010 –.000 | D2 +.000 –.010 | H Hex +.017 –.016 | L Max | S ±.010 | KK +.011 –.000 |
|---|---|---|---|---|---|---|---|---|---|
| 9 | **10-626**471-XXX | .6250 | 1.199 | .700 | .670 | .875 | .357 | 1.062 | .642 |
| 11 | 472-XXX | .7500 | 1.386 | .825 | .770 | 1.000 | .357 | 1.250 | .766 |
| 13 | 473-XXX | .8750 | 1.511 | 1.010 | .955 | 1.188 | .357 | 1.375 | .892 |
| 15 | 474-XXX | 1.0000 | 1.636 | 1.135 | 1.085 | 1.312 | .357 | 1.500 | 1.018 |
| 17 | 475-XXX | 1.1875 | 1.761 | 1.260 | 1.210 | 1.438 | .357 | 1.625 | 1.142 |
| 19 | 476-XXX | 1.2500 | 1.949 | 1.385 | 1.335 | 1.562 | .381 | 1.182 | 1.268 |
| 21 | 477-XXX | 1.3750 | 2.073 | 1.510 | 1.460 | 1.688 | .381 | 1.938 | 1.392 |
| 23 | 478-XXX | 1.5000 | 2.199 | 1.635 | 1.585 | 1.812 | .381 | 2.062 | 1.518 |
| 25 | 479-XXX | 1.6250 | 2.323 | 1.760 | 1.710 | 2.000 | .381 | 2.188 | 1.642 |

All dimensions for reference only.

# PCB Hermetic Solder Mounting Receptacle

## Commercial




| | 1. | 2. | 3. | 4. | 5. | 6. |
|---|---|---|---|---|---|---|
| **PART #** See chart below | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/Alt. Keying | Shell Finish | Tail Length |
| | 10-626 | 481 | -35 | P | 1 | B |

## HOW TO ORDER

### 1. BASE NUMBER:

| | |
|---|---|
| **10-626** | Base Number for MIL-DTL-38999 Series III Hermetic with PCB Tail |

### 2. SELECT A CODED SHELL SIZE:

See chart below 481-489, designates size 9-25 shell size.

### 3. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29. Please enter the second number which represents the Insert Arrangement number.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 4. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 47 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

### 5. SELECT A SHELL FINISH:

| | |
|---|---|
| **1** | Hermetic seal, passivated Stainless Steel, 200°C |
| **2** | *Hermetic seal, Stainless Steel w/Nickel Plate |
| **3** | *Carbon Steel w/reflowed tin plate |

### 6. SELECT A TAIL LENGTH:

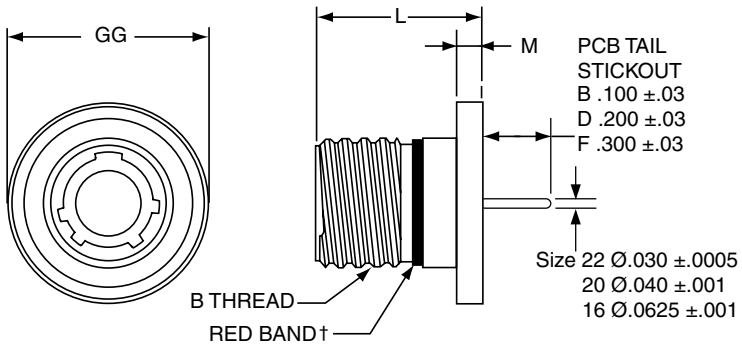
| | |
|---|---|
| **B** | .100±.03 |
| **D** | .200±.03 |
| **F** | .300±.03 |

† Red band indicates fully mated

| Shell Size | Part Number | B Thread Class 2A 0.1P-0.3L-TS (Plated) | L +.011 –.005 | M +.006 –.005 | GG Dia. +.011 –.010 | KK Dia +.011 –.005 |
|---|---|---|---|---|---|---|
| 9 | **10-626**481-XXX | .6250 | .806 | .125 | .750 | .672 |
| 11 | 482-XXX | .7500 | .806 | .125 | .844 | .781 |
| 13 | 483-XXX | .8750 | .806 | .125 | .969 | .906 |
| 15 | 484-XXX | 1.0000 | .806 | .125 | 1.094 | 1.031 |
| 17 | 485-XXX | 1.1875 | .806 | .125 | 1.218 | 1.156 |
| 19 | 486-XXX | 1.2500 | .806 | .125 | 1.312 | 1.250 |
| 21 | 487-XXX | 1.3750 | .806 | .125 | 1.438 | 1.375 |
| 23 | 488-XXX | 1.5000 | .838 | .156 | 1.563 | 1.500 |
| 25 | 489-XXX | 1.6250 | .838 | .156 | 1.688 | 1.625 |

# PCB Hermetic Weld Mounting Receptacle

## Commercial




† Red band indicates fully mated

| | 1. | 2. | 3. | 4. | 5. | 6. |
|---|---|---|---|---|---|---|
| **PART #** See chart below | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/Alt. Keying | Shell Finish | Tail Length |
| | 10-626 | 491 | -35 | P | 1 | B |

## HOW TO ORDER

### 1. BASE NUMBER:

| | |
|---|---|
| 10-626 | Base Number for MIL-DTL-38999 Series III Hermetic with PCB Tail |

### 2. SELECT A CODED SHELL SIZE:

See chart below 491-499, designates size 9-25 shell size.

### 3. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29. Please enter the second number which represents the Insert Arrangement number.

| | |
|---|---|
| -35 | Designates Insert Arrangement Number |

### 4. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 47 for alternate rotation letters to use.

| | |
|---|---|
| P | Designates Pin Contacts in Normal Position |
| S | Designates Socket Contacts in Normal Position |

### 5. SELECT A SHELL FINISH:

| | |
|---|---|
| 1 | Hermetic seal, passivated Stainless Steel, 200°C |
| 2 | *Hermetic seal, Stainless Steel w/Nickel Plate |
| 3 | *Carbon Steel w/reflowed tin plate |

### 6. SELECT A TAIL LENGTH:

| | |
|---|---|
| B | .100±.03 |
| D | .200±.03 |
| F | .300±.03 |

| Shell Size | Part Number | B Thread Class 2A 0.1P-0.3L-TS (Plated) | L +.011 –.000 | M +.006 –.005 | GG Dia. +.011 –.010 |
|---|---|---|---|---|---|
| 9 | **10-626**491-XXX | .6250 | .806 | .125 | .973 |
| 11 | 492-XXX | .7500 | .806 | .125 | 1.095 |
| 13 | 493-XXX | .8750 | .806 | .125 | 1.221 |
| 15 | 494-XXX | 1.0000 | .806 | .125 | 1.347 |
| 17 | 495-XXX | 1.1875 | .806 | .125 | 1.434 |
| 19 | 496-XXX | 1.2500 | .806 | .125 | 1.579 |
| 21 | 497-XXX | 1.3750 | .806 | .125 | 1.721 |
| 23 | 498-XXX | 1.5000 | .838 | .156 | 1.886 |
| 25 | 499-XXX | 1.6250 | .838 | .156 | 1.973 |

* Not available for weld mount. All dimensions for reference only.

# Hermetic Box Mounting Receptacle

## Military (D38999/21), Commercial (TVPS02)

Amphenol Aerospace

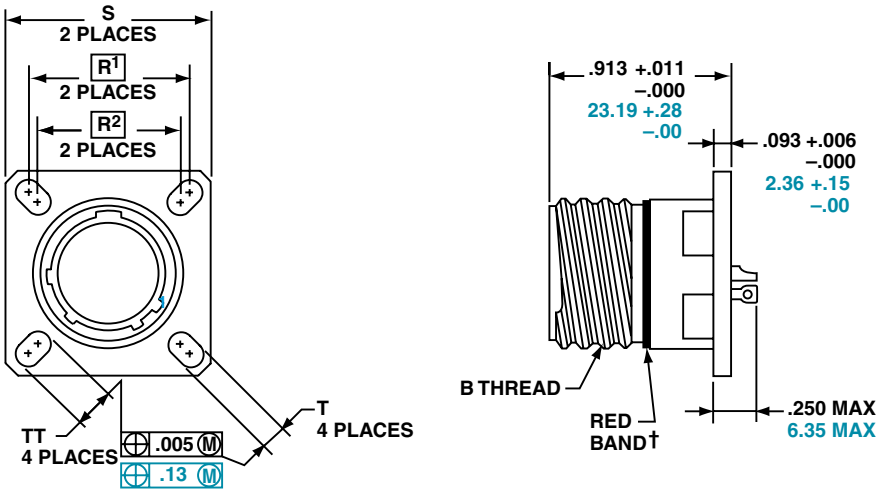


**PART NUMBER BUILDER Page 43-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

**MILITARY**
**D38999/21**

Commercial

**STAINLESS STEEL**
**TVPS02Y**
**TVPS02YN**




† Red band indicates fully mated

NOTE: Consult Amphenol Aerospace for availability of non-glass-sealed versions with printed circuit tail contacts.

Inches

| Shell Size | MS Shell Size Coded | B Thread 0.1P-0.3L-TS (Plated) | R1 | R2 | S ±.010 | T ±.008 | TT ±.008 |
|---|---|---|---|---|---|---|---|
| 9 | A | .6250 | .719 | .594 | .938 | .128 | .216 |
| 11 | B | .7500 | .812 | .719 | 1.031 | .128 | .194 |
| 13 | C | .8750 | .906 | .812 | 1.125 | .128 | .194 |
| 15 | D | 1.0000 | .969 | .906 | 1.219 | .128 | .173 |
| 17 | E | 1.1875 | 1.062 | .969 | 1.312 | .128 | .194 |
| 19 | F | 1.2500 | 1.156 | 1.062 | 1.438 | .128 | .194 |
| 21 | G | 1.3750 | 1.250 | 1.156 | 1.562 | .128 | .194 |
| 23 | H | 1.5000 | 1.375 | 1.250 | 1.688 | .154 | .242 |
| 25 | J | 1.6250 | 1.500 | 1.375 | 1.812 | .154 | .242 |

Millimeters

| Shell Size | MS Shell Size Coded | R1 | R2 | S ±.25 | T ±.20 | TT ±.20 |
|---|---|---|---|---|---|---|
| 9 | A | 18.26 | 15.09 | 23.83 | 3.25 | 5.49 |
| 11 | B | 20.62 | 18.26 | 26.19 | 3.25 | 4.93 |
| 13 | C | 23.01 | 20.62 | 28.58 | 3.25 | 4.93 |
| 15 | D | 24.61 | 23.01 | 30.96 | 3.25 | 4.39 |
| 17 | E | 26.97 | 24.61 | 33.32 | 3.25 | 4.93 |
| 19 | F | 29.36 | 26.97 | 36.53 | 3.25 | 4.93 |
| 21 | G | 31.75 | 29.36 | 39.67 | 3.25 | 4.93 |
| 23 | H | 34.93 | 31.75 | 42.88 | 3.91 | 6.15 |
| 25 | J | 38.10 | 34.93 | 46.02 | 3.91 | 6.15 |

All dimensions for reference only

☐ Designates true position dimensioning

# Hermetic Jam Nut Receptacle

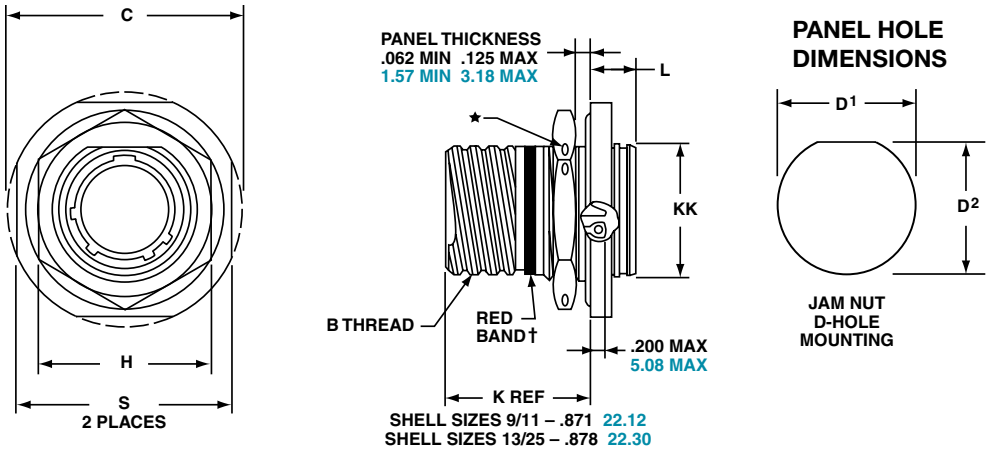
## Military (D38999/23), Commercial (TVS07)

**PART NUMBER BUILDER Page 43-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

**MILITARY**
**D38999/23**

Commercial

**STAINLESS STEEL**
**TVS07Y**
**TVS07YN**




† Red band indicates fully mated

★ .059 dia min.
1.5 dia min. 3 lockwire holes Formed lockwire hole design (6 holes) is optional.

Inches

| Shell Size | MS Shell Size code | B Thread Class 2A 0.1P-0.3L-TS (Plated) | C Max | D¹ +.010 –.000 | D² +.000 –.010 | H Hex +.017 –.016 | L Max | S ±.010 | KK +.011 –.000 |
|---|---|---|---|---|---|---|---|---|---|
| 9 | A | .6250 | 1.199 | .693 | .657 | .875 | .357 | 1.062 | .642 |
| 11 | B | .7500 | 1.386 | .825 | .770 | 1.000 | .357 | 1.250 | .766 |
| 13 | C | .8750 | 1.511 | 1.010 | .955 | 1.188 | .357 | 1.375 | .892 |
| 15 | D | 1.0000 | 1.636 | 1.135 | 1.085 | 1.312 | .357 | 1.500 | 1.018 |
| 17 | E | 1.1875 | 1.761 | 1.260 | 1.210 | 1.438 | .357 | 1.625 | 1.142 |
| 19 | F | 1.2500 | 1.949 | 1.385 | 1.335 | 1.562 | .381 | 1.812 | 1.268 |
| 21 | G | 1.3750 | 2.073 | 1.510 | 1.460 | 1.688 | .381 | 1.938 | 1.392 |
| 23 | H | 1.5000 | 2.199 | 1.635 | 1.585 | 1.812 | .381 | 2.062 | 1.518 |
| 25 | J | 1.6250 | 2.323 | 1.760 | 1.710 | 2.000 | .381 | 2.188 | 1.642 |

Millimeters

| Shell Size | MS Shell Size code | C Max | D¹ +.25 –.00 | D² +.00 –.25 | H Hex +.43 –.41 | L Max | S ±.25 | KK +.28 –.00 |
|---|---|---|---|---|---|---|---|---|
| 9 | A | 30.45 | 17.60 | 16.70 | 22.23 | 9.07 | 26.97 | 16.31 |
| 11 | B | 35.20 | 20.96 | 19.59 | 25.40 | 9.07 | 31.75 | 19.46 |
| 13 | C | 38.38 | 25.65 | 24.26 | 30.18 | 9.07 | 34.93 | 22.66 |
| 15 | D | 41.55 | 28.83 | 27.56 | 33.32 | 9.07 | 38.10 | 25.86 |
| 17 | E | 44.73 | 32.01 | 30.73 | 36.53 | 9.07 | 41.28 | 29.01 |
| 19 | F | 49.50 | 35.18 | 33.91 | 39.67 | 9.68 | 46.02 | 32.21 |
| 21 | G | 52.65 | 38.35 | 37.08 | 42.80 | 9.68 | 49.23 | 35.36 |
| 23 | H | 55.85 | 41.53 | 40.26 | 46.02 | 9.68 | 52.37 | 38.56 |
| 25 | J | 59.00 | 44.70 | 43.43 | 50.80 | 9.68 | 55.58 | 41.71 |

All dimensions for reference only

# Hermetic Solder Mounting Receptacle

## Military (D38999/25), Commercial (TVSI)

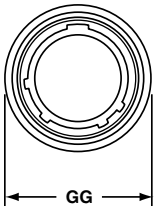


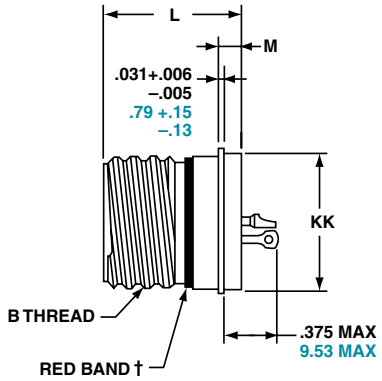
**PART NUMBER BUILDER Page 43-47**
**ONLINE CONFIGURATOR www.amphenol-aerospace.com**

**MILITARY**
**D38999/25**

Commercial

**STAINLESS STEEL**
**TVSIY**
**TVSIYN**




† Red band indicates fully mated

Inches

| Shell Size | MS Shell Size Code | B Thread Class 2A 0.1P-0.3L-TS (Plated) | L +.011 –.005 | M +.006 –.005 | GG Dia. +.011 –.010 | KK Dia +.011 –.005 |
|---|---|---|---|---|---|---|
| 9 | A | .6250 | .806 | .125 | .750 | .672 |
| 11 | B | .7500 | .806 | .125 | .844 | .781 |
| 13 | C | .8750 | .806 | .125 | .969 | .906 |
| 15 | D | 1.0000 | .806 | .125 | 1.094 | 1.031 |
| 17 | E | 1.1875 | .806 | .125 | 1.218 | 1.156 |
| 19 | F | 1.2500 | .806 | .125 | 1.312 | 1.250 |
| 21 | G | 1.3750 | .806 | .125 | 1.438 | 1.375 |
| 23 | H | 1.5000 | .838 | .156 | 1.563 | 1.500 |
| 25 | J | 1.6250 | .838 | .156 | 1.688 | 1.625 |

Millimeters

| Shell Size | MS Shell Size Code | L +.28 –.00 | M +.15 –.13 | GG Dia. +.28 –.25 | KK Dia +.03 –.13 |
|---|---|---|---|---|---|
| 9 | A | 20.47 | 3.18 | 19.05 | 17.07 |
| 11 | B | 20.47 | 3.18 | 21.44 | 19.84 |
| 13 | C | 20.47 | 3.18 | 24.61 | 23.01 |
| 15 | D | 20.47 | 3.18 | 27.79 | 26.19 |
| 17 | E | 20.47 | 3.18 | 30.94 | 29.36 |
| 19 | F | 20.47 | 3.18 | 33.32 | 31.75 |
| 21 | G | 20.47 | 3.18 | 36.53 | 34.93 |
| 23 | H | 21.29 | 3.96 | 39.70 | 38.10 |
| 25 | J | 21.29 | 3.96 | 42.88 | 41.28 |

# Hermetic Wall Mounting Receptacle

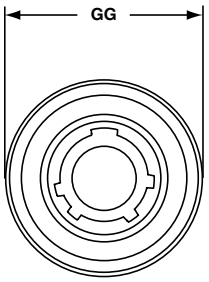
## Military (D38999/27), Commercial (TVSHIY)

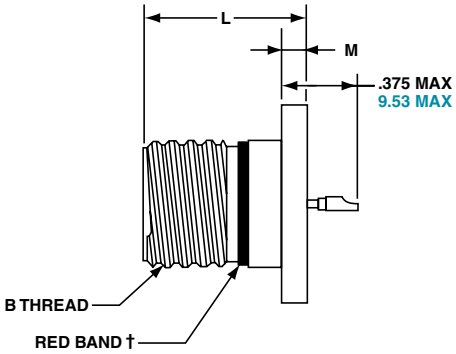
**PART NUMBER BUILDER Page 42-46**
**ONLINE CONFIGURATOR**
**www.amphenol-aerospace.com**

**MILITARY**
**D38999/27**

Commercial

**STAINLESS STEEL**
**TVSHIY**
**TVSHIYN**




† Red band indicates fully mated

Inches

| Shell Size | MS Shell Size Code | B Thread Class 2A 0.1P-0.3L-TS (Plated) | L +.011 –.000 | M +.006 –.005 | GG Dia. +.011 –.010 |
|---|---|---|---|---|---|
| 9 | A | .6250 | .806 | .125 | .973 |
| 11 | B | .7500 | .806 | .125 | 1.095 |
| 13 | C | .8750 | .806 | .125 | 1.221 |
| 15 | D | 1.0000 | .806 | .125 | 1.347 |
| 17 | E | 1.1875 | .806 | .125 | 1.434 |
| 19 | F | 1.2500 | .806 | .125 | 1.579 |
| 21 | G | 1.3750 | .806 | .125 | 1.721 |
| 23 | H | 1.5000 | .838 | .156 | 1.886 |
| 25 | J | 1.6250 | .838 | .156 | 1.973 |

Millimeters

| Shell Size | MS Shell Size Code | L +.28 –.00 | M +.15 –.13 | GG Dia. +.25 –.00 |
|---|---|---|---|---|
| 9 | A | 20.47 | 3.18 | 24.71 |
| 11 | B | 20.47 | 3.18 | 27.81 |
| 13 | C | 20.47 | 3.18 | 31.01 |
| 15 | D | 20.47 | 3.18 | 34.21 |
| 17 | E | 20.47 | 3.18 | 36.42 |
| 19 | F | 20.47 | 3.18 | 40.11 |
| 21 | G | 20.47 | 3.18 | 43.71 |
| 23 | H | 21.29 | 3.96 | 47.90 |
| 25 | J | 21.29 | 3.96 | 50.11 |

All dimensions for reference only

# Series III, TV Breakaway Fail-Safe Connectors

## Quick-Disconnect with an Axial Pull of Lanyard

Amphenol® Tri-Start Breakaway Fail-Safe Connectors provide unequaled performancein environments requiring instant disengagement.
The "Breakaway" Fail-Safe connector family offers a wide range of electrical and mechanical features:

- Instant decoupling and damage free separation
- Completely intermateable with standard receptacles (D38999/20 and /24)
- Inventory support commonality through the use of standard insert arrangements and contacts

Breakaway unmating is initiated by applying a pull force to the lanyard which causes the operating sleeve on the plug to move away from the receptacle. Coupling segments on the plug then move away from the mating receptacle while expanding, thus releasing the receptacle. After completion of the unmating sequence, spring compression returns the sleeve and segments to their original positions. Unmating of the plug may also be accomplished by normal rotation of the coupling ring without affecting the breakaway capability.

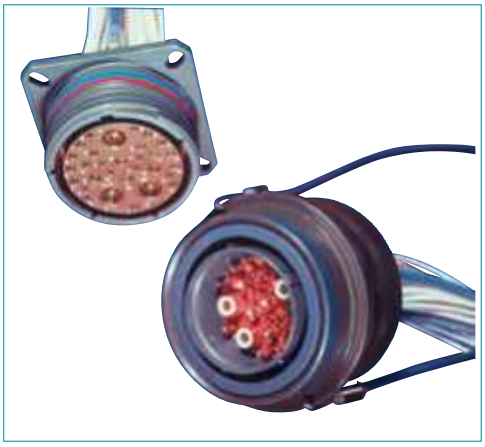


TYPE 2 TYPE 6 TYPE 1

**Amphenol offers a variety of lanyard plug styles including MIL-STD-1760 types 1, 2 and 6 for Stores Management applications.**

The Tri-Start Breakaway Fail-Safe connector exceeds the MIL-Spec Series III requirements for EMI/EMP shielding and features include:

- Solid metal-to-metal coupling
- EMI grounding fingers
- Conductive finishes

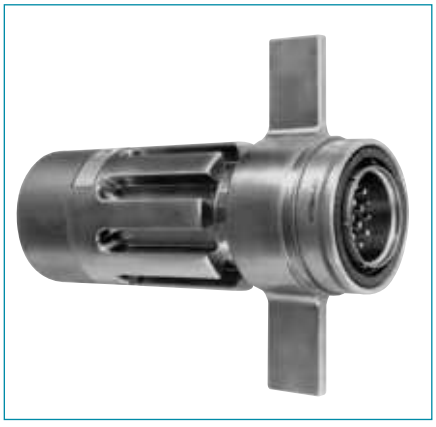


*Breakaway with Coax Contacts*

Amphenol Breakaway Fail-Safe connectors are qualified to MIL-DTL-38999/29, /30 and /31 (for MIL-STD-1760 Stores Management applications). Amphenol also manufactures custom breakaway connectors including those with:

- Highly durable non-metallic operating sleeves in a variety of lengths and diameters
- Increased pull-force capability
- Low-profile designs
- Custom lanyard lengths and backshells
- Low force separation capabilities
- Low insertion/separation force contacts
- Non-cadmium finishes

Contact your local Amphenol representative. Whether you need a standard Breakaway, one of our custom Breakaways, or a unique Breakaway design.



Special configuration Fail-Safe used on space telescope application. Lanyard is replaced by a swivel ring for remote disconnect and "wing arms" have been added for manual actuation accessibility by gloved astronauts.

# TV Breakaway Fail-Safe Lanyard Release Plug

## Military (D38999/29 & D38999/30)

Amphenol Aerospace

### HOW TO ORDER - MILITARY

| 1. DOD Number Prefix | 2. Spec Sheet Number | 3. Service Class | 4. Shell Size | 5. Insert Arrangement | 6. Lanyard Length Code | 7. Alternate Keying Position |
|---|---|---|---|---|---|---|
| D38999/ | 29 | F | E | 35 | P | N |

#### 1. DOD NUMBER PREFIX

| | |
|---|---|
| D38999/ | Designates MIL-DTL-38999, Series III, Tri-Start Connector |

#### 2. SPECIFICATION SHEET NUMBER

| | |
|---|---|
| 29 | Lanyard Release Plug with pin contacts |
| 30 | Lanyard Release Plug with socket contacts |

#### 3. SERVICE CLASS

| | |
|---|---|
| F | Designates electroless nickel plated aluminum, optimum EMI shielding effectiveness –65dB@10 GHz specification min., 48 hour salt spray, 200°C |
| W | Designates corrosion resistant olive drab cadmium plate aluminum, 500 hour extended salt spray, EMI –50dB@10 GHz specification min., 175°C |

#### 4. & 5. INSERT AVAILABILITY

| Shell Size- Insert Arrangement | Military Shell Size- Insert Arrangement | Commercial Basic Part# Shell & Insert Arrg. Code | Service Rating | Total Contacts | Contact Size | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 22D | 20 | 16 | 12 | 12 Coax | 8 Coax | 8 Twinax |
| 11-2 | N/A | 88/91-556508 | I | 2 | | | 2 | | | | |
| 11-35 | N/A | 06 | M | 13 | 13 | | | | | | |
| 11-98 | N/A | 07 | I | 6 | | 6 | | | | | |
| 13-4 | N/A | 10 | I | 4 | | | 4 | | | | |
| 13-8 | N/A | 11 | I | 8 | | 8 | | | | | |
| 13-35 | N/A | 14 | M | 22 | 22 | | | | | | |
| 13-98 | N/A | 13 | I | 10 | | 10 | | | | | |
| 15-5 | N/A | 18 | II | 5 | | | 5 | | | | |
| 15-15 | N/A | 23 | I | 15 | | 14 | 1 | | | | |
| 15-18 | N/A | 22 | I | 18 | | 18 | | | | | |
| 15-19 | N/A | 19 | I | 19 | | 19 | | | | | |
| 15-35 | N/A | 20 | M | 37 | 37 | | | | | | |
| 15-97 | N/A | 21 | I | 12 | | 8 | 4 | | | | |
| 17-6 | E-6 | 27 | I | 6 | | | | 6 | | | |
| 17-8 | E-8 | 28 | II | 8 | | | 8 | | | | |
| 17-26 | E-26 | 29 | I | 26 | | 26 | | | | | |
| 17-35 | E-35 | 30 | M | 55 | 55 | | | | | | |
| 17-99 | E-99 | 31 | I | 23 | | 21 | 2 | | | | |
| 19-11 | F-11 | 37 | II | 11 | | | 11 | | | | |
| 19-32 | F-32 | 39 | I | 32 | | 32 | | | | | |
| 19-35 | F-35 | 40 | M | 66 | 66 | | | | | | |
| 21-11 | G-11 | 47 | I | 11 | | | | 11 | | | |
| 21-16 | G-16 | 48 | II | 16 | | | 16 | | | | |
| 21-35 | G-35 | 49 | M | 79 | 79 | | | | | | |
| 21-39 | G-39 | 51 | I | 39 | | 37 | 2 | | | | |
| 21-41 | G-41 | 50 | I | 41 | | 41 | | | | | |
| 23-21 | H-21 | 57 | II | 21 | | | 21 | | | | |
| 23-35 | H-35 | 58 | M | 100 | 100 | | | | | | |
| 23-53 | H-53 | 59 | I | 53 | | 53 | | | | | |
| 23-54 | H-54 | 61 | M | 53 | 40 | | 9 | 4 | | | |
| 23-55 | H-55 | 60 | I | 55 | | 55 | | | | | |
| 25-4 | J-4 | 71 | I | 56 | | 48 | 8 | | | | |
| 25-19 | J-19 | 66 | I | 19 | | | | 19 | | | |
| 25-20 | J-20 | 74 | N | 30 | | 10 | 13 | | 4 | | 3 |
| 25-24 | J-24 | 72 | I | 24 | | | 12 | 12 | | | |
| 25-29 | J-29 | 67 | I | 29 | | | 29 | | | | |
| 25-35 | J-35 | 68 | M | 128 | 128 | | | | | | |
| 25-43 | J-43 | 69 | I | 43 | | 23 | 20 | | | | |
| 25-46 | J-46 | 73 | I | 46 | | 40 | 4 | | | 2* | |
| 25-61 | J-61 | 70 | I | 61 | | 61 | | | | | |

# TV Breakaway Fail-Safe Lanyard Release Plug

## Military (D38999/29 & D38999/30)

### 6. MILITARY LANYARD LENGTH CODE

Table II

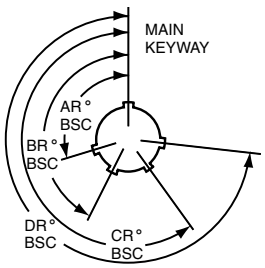
| Lanyard Length (in.) ± .236 | Lanyard Length (mm) ± 6.0 | Lanyard Length Code For Part Number |
|---|---|---|
| 4.016 | 102 | A |
| 4.528 | 115 | B |
| 5.000 | 127 | C |
| 5.512 | 140 | D |
| 6.024 | 153 | E |
| 6.535 | 166 | F |
| 7.008 | 178 | G |
| 7.520 | 191 | H |
| 7.992 | 203 | I |
| 8.503 | 216 | J |
| 9.016 | 229 | K |
| 9.528 | 242 | L |
| 10.000 | 254 | M |
| 10.512 | 267 | N |
| 11.024 | 280 | P |
| 11.535 | 293 | R |
| 12.008 | 305 | S |
| 12.520 | 318 | T |
| 13.031 | 331 | U |
| 14.016 | 356 | V |
| 15.000 | 381 | W |
| 16.024 | 407 | X |
| 17.008 | 432 | Y |
| 18.031 | 458 | Z |

### 7. MILITARY ALTERNATE KEYING POSITION

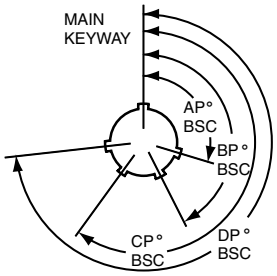
For alternate positions of connector (to prevent cross-mating) (N indicates normal).

| Shell Size | Key & Keyway Arrangement Identification Letter | AR° or AP° BSC | BR° or BP° BSC | CR° or CP° BSC | DR° or DP° BSC |
|---|---|---|---|---|---|
| 7, 7H | N* | 120 | 240 | NA | NA |
| | A | 132 | 248 | | |
| | B | 80 | 230 | | |
| | C | 140 | 275 | | |
| | D | 155 | 234 | | |
| | E | 131 | 197 | | |
| 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 |
| 25L, 33, and 37 | N* | 80 | 142 | 188 | 293 |
| | A | 135 | 170 | 188 | 310 |
| | B | 49 | 169 | 188 | 244 |
| | C | 66 | 140 | 188 | 257 |
| | D | 62 | 145 | 188 | 280 |
| | E | 79 | 153 | 188 | 272 |

**RECEPTACLE (FRONT FACE SHOWN)**




**PLUG (FRONT FACE SHOWN)**



## HOW TO ORDER - COMMERCIAL

Ordering procedure for example part number 88-556529-EP is shown below:

| 1. Service Class | 2. Connector Type Identification | 3. Shell Size & Insert Arrg. Code | 4. Required Field | 5. Lanyard Length Code | 6. Contact Type/Alternate Keying Position |
|---|---|---|---|---|---|
| 88 | -5565 | 29 | 0 | E | P |

### 1. SERVICE CLASS

| | |
|---|---|
| 88 | Designates corrosion resistant olive drab cadmium plate over nickel, 500 hour extended salt spray, EMI –50dB @ 10 GHz specification min., 175°C |
| 91 | Designates electroless nickel plated aluminum, optimum EMI shielding effectiveness –65dB @ 10 GHz specification min., 48 hour salt spray, 200°C |

These are standard finishes. Consult Amphenol Aerospace for other variations.

### 2. CONNECTOR TYPE IDENTIFICATION

| | |
|---|---|
| -5565 | Designates MIL-DTL-38999, Series III Tri-Start Lanyard Release Plug |

### 3. SELECT A COMMERCIAL SHELL SIZE & INSERT ARRANGEMENT CODE

MIL-DTL-38999, see insert availability chart on page 71.

### 4. REQUIRED FIELD

| | |
|---|---|
| 0 | THE REQUIRED FIELD IS ALWAYS A 0 |

### 5. SELECT A LANYARD LENGTH CODE

| Lanyard Length (in.) ± .236 | Lanyard Length (mm) ± 6.0 | Lanyard Length Code For Part Number |
|---|---|---|
| 4.016 | 102 | A |
| 4.528 | 115 | B |
| 5.000 | 127 | C |
| 5.512 | 140 | D |
| 6.024 | 153 | E |
| 6.535 | 166 | F |
| 7.008 | 178 | G |
| 7.520 | 191 | H |
| 7.992 | 203 | I |
| 8.503 | 216 | J |
| 9.016 | 229 | K |
| 9.528 | 242 | L |
| 10.000 | 254 | M |
| 10.512 | 267 | N |
| 11.024 | 280 | P |
| 11.535 | 293 | R |
| 12.008 | 305 | S |
| 12.520 | 318 | T |
| 13.031 | 331 | U |
| 14.016 | 356 | V |
| 15.000 | 381 | W |
| 16.024 | 407 | X |
| 17.008 | 432 | Y |
| 18.031 | 458 | Z |

### 6. SELECT A CONTACT TYPE/ALTERNATE KEYING POSITION

P designates pin, S designates socket for normal positioning of contacts. When an alternate position of the connector is required to prevent cross-mating, a different letter (other than P or S) is used. See alternate positioning on page 73, then convert to Amphenol Commercial coding by the following chart.

| Pin Contacts | | Socket Contacts | |
|---|---|---|---|
| MS Letter | Amphenol letter | MS Letter | Amphenol Letter |
| PN | P (normal) | SN | S (normal) |
| PA | G | SA | H |
| PB | I | SB | J |
| PC | K | SC | L |
| PD | M | SD | N |
| PE | R | SE | T |

# Fail-Safe Lanyard Release Plug-Crimp, Metal

## Military (D38999/29 & D38999/30), Commercial (88-5565 & 91-5565)

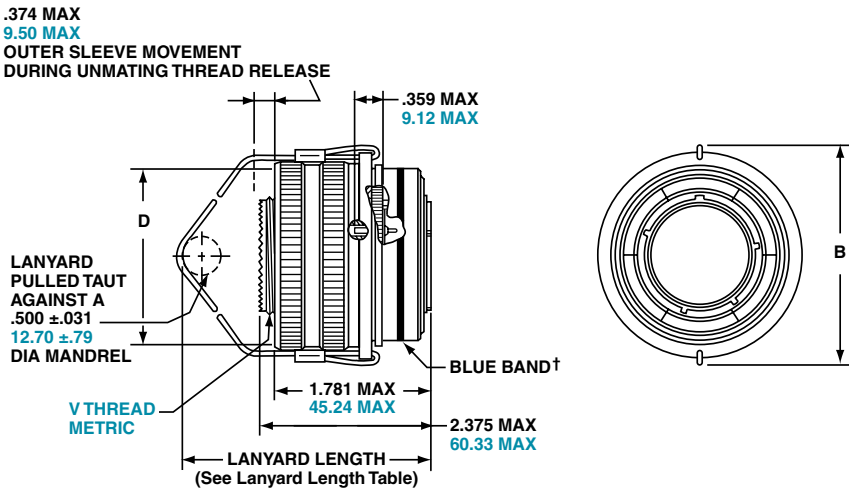
PART NUMBER BUILDER Page 72-74
ONLINE CONFIGURATOR www.amphenol-aerospace.com

**MILITARY**
D38999/29 Pin
D38999/30 Socket

Commercial

**STAINLESS STEEL**
88-5565
91-5565

METAL




† Blue band indicates rear release contact retention system

Inches

| Shell Size | MS Shell Size Code | B Max | D Max Accessory Dia. |
|---|---|---|---|
| 11 | B | 1.846 | 1.109 |
| 13 | C | 1.972 | 1.250 |
| 15 | D | 2.079 | 1.375 |
| 17 | E | 2.205 | 1.500 |
| 19 | F | 2.301 | 1.625 |
| 21 | G | 2.472 | 1.750 |
| 23 | H | 2.594 | 1.875 |
| 25 | J | 2.705 | 2.000 |

Millimeters

| Shell Size | MS Shell Size Code | B Max | D Max Accessory Dia. | V Thread Metric |
|---|---|---|---|---|
| 11 | B | 46.89 | 28.17 | M15X1.0-6g |
| 13 | C | 50.09 | 31.75 | M18X1.0-6g |
| 15 | D | 52.81 | 34.93 | M22X1.0-6g |
| 17 | E | 56.01 | 38.10 | M25X1.0-6g |
| 19 | F | 58.45 | 41.28 | M28X1.0-6g |
| 21 | G | 62.79 | 44.45 | M31X1.0-6g |
| 23 | H | 65.89 | 47.63 | M34X1.0-6g |
| 25 | J | 68.71 | 50.08 | M37X1.0-6g |

## Applications- Lanyard Release Plug

## HOW TO ORDER - BY MILITARY PART NUMBER FAIL-SAFE D38999/31

Ordering procedure for example part number D38999/31WE20PN1 is shown below:

| 1. DOD Number Prefix | 2. Spec Sheet Number | 3. Service Class | 4. Lanyard Length Code | 5. Insert Arrangement | 6. Contact Style | 7. Alternate Keying Position | 8. Type Number |
|---|---|---|---|---|---|---|---|
| D38999/ | 31 | W | E | 20 | P | N | 1 |

### 1. DOD NUMBER PREFIX

| | |
|---|---|
| D38999/ | MIL-DTL-38999, Series III Tri-Start Connectors |

### 2. SPECIFICATION SHEET NUMBER

| | |
|---|---|
| 31 | Designates Lanyard Release Plug for MIL-STD-1760 with pin contacts |

### 3. SERVICE CLASS

| | |
|---|---|
| F | Electroless nickel plated aluminum, optimum EMI shielding effectiveness –65dB @ 10 GHz specification min., 48 hour salt spray, 200°C |
| W | Corrosion resistant olive drab cadmium plate aluminum, 500 hour extended salt spray, EMI –50dB @ 10 GHz specification min., 175°C |

### 4. LANYARD LENGTH CODE

| Lanyard Length (in.) ±.236 | Lanyard Length (mm.) ± 6.0 | Lanyard Length Code for Part Number |
|---|---|---|
| 6.024 | 153.0 | E |
| 6.535 | 166.0 | F |
| 7.008 | 178.0 | G |
| 7.520 | 191.0 | H |
| 7.992 | 203.0 | I |
| 8.504 | 216.0 | J |
| 9.016 | 229.0 | K |
| 9.528 | 242.0 | L |

### 5. INSERT ARRANGEMENT

| | |
|---|---|
| 11 | 25-11 |
| 20 | 25-20 |

### 6. CONTACT STYLE-P & A ARE VALID OPTIONS

| | |
|---|---|
| P | Replaces the “no designation” option in the PIN on revision C and earlier revision of the Mil-Spec. |
| A | Designates supplied less contacts. |

### 7. ALTERNATE KEYING POSITION

| | |
|---|---|
| N | Is required for normal position. |

### 8. TYPE NUMBER
### TYPE 1, 2 OR 6. SEE DRAWINGS ON PAGE 77.

For accessories for lanyard release plugs see Accessories section.

**MILITARY**
D38999/31

**TYPE 6**
88-555875/76
91-555875/76

**TYPE 2**
88-558518/19
91-558518/19

**TYPE 1-Longer Shell**
T3W-16B25-XXXX

# TV Breakaway Fail-Safe Lanyard Release

## Military (D38999/31) for MIL-STD-1760 Crimp, Metal

PART NUMBER BUILDER
Page 76

**MILITARY**
D38999/31

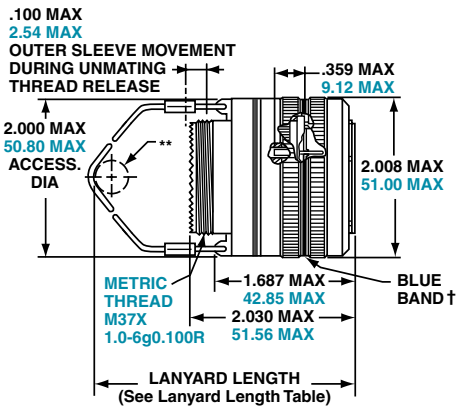
**TYPE 6**
88-555875/76
91-555875/76

**TYPE 2**
88-558518/19
91-558518/19

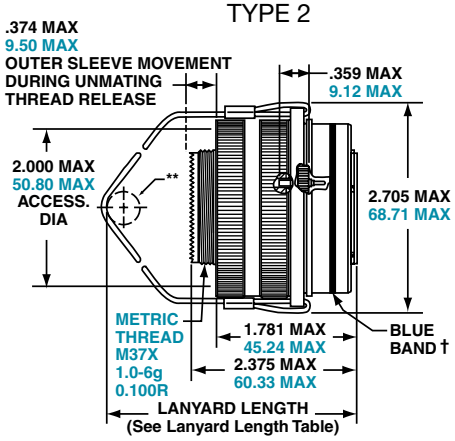
**TYPE 1**
T3W-16B25-XXXX

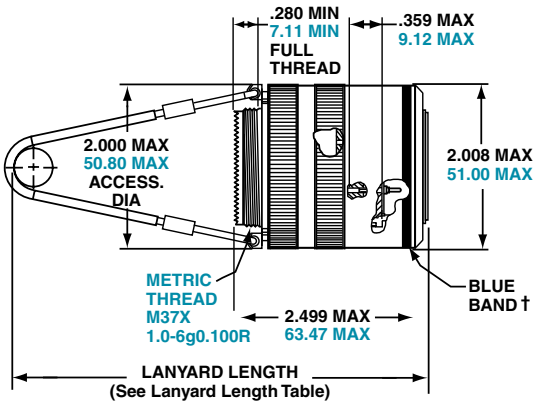
PIN CONTACTS ONLY, SHELL SIZE 25 ONLY

TYPE 6




TYPE 2




TYPE 1
(LONGER SHELL)

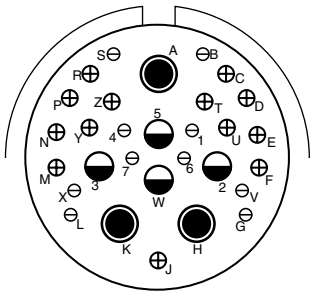
† Blue band indicates rear release contact retention system

** Lanyard pulled taut against a .500 ± .13 dia. Mandrel

All dimensions for reference only

| TRI-START LANYARD SEPARATION FORCES | | |
|---|---|---|
| Shell Size | Straight Plug (lbs. max.) | 15 Degree Pull (lbs. max.) |
| 25 | 90 | 100 |

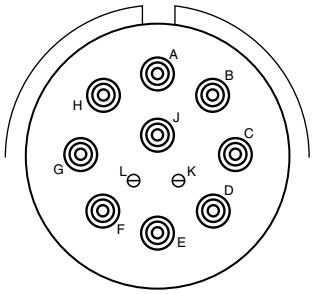
### INSERT AVAILABILITY FAIL SAFE D38999/31 FOR MIL-STD-1760




**25-20 PRIMARY INTERFACE SIGNAL SET**

| PIN CONTACT DATA FOR MIL-STD-1760 | | | | | | |
|---|---|---|---|---|---|---|
| Insert Arrangement | Service Rating | Total Contacts | Contact | | | |
| | | | 20 | 16 | 12 (Coax) | 8 (Twinax) |
| 25-20 | N | 30 | 10 | 13 | 4 | 3 |

| CONTACTS FOR 25-20 PATTERN | | | | | | | |
|---|---|---|---|---|---|---|---|
| Shell Size | Arrg. Number | Number of Contacts | Size Contacts | Service Rating | Contact Location | Standard Contacts | |
| | | | | | | Pin | Socket |
| 25 | -20 | 3 | 8 | Twinax | A, H, K | M39029/90-529 | M39029/91-530 |
| | | 4 | 12 | Coax | 2,3 | M39029/28-211 | M39029/75-416 |
| | | | | | W, 5 | M39029/102-558 | M39029/103-559 |
| | | 13 | 16 | N | C, D, E, F, J, M, N, P, R, T, U, Y, Z | M39029/58-364 | M39029/56-352 |
| | | 10 | 20 | N | B, G, L, S, V, X, 1, 4, 6, 7 | M39029/58-363 | M39029/56-351 |




**25-11 AUXILIARY POWER SIGNAL SET**

| Insert Arrangement | Service Rating | Total Contacts | Contact Size | |
|---|---|---|---|---|
| | | | 20 | 10 (power) |
| 25-11 | N | 11 | 2 | 9 |

Contact Legend

8 (twinax) 10 (power) 12 (coax) 16 20

# TV Breakaway Fail-Safe Lanyard Release

## Commercial version of D38999/31, Type 6

Amphenol Aerospace



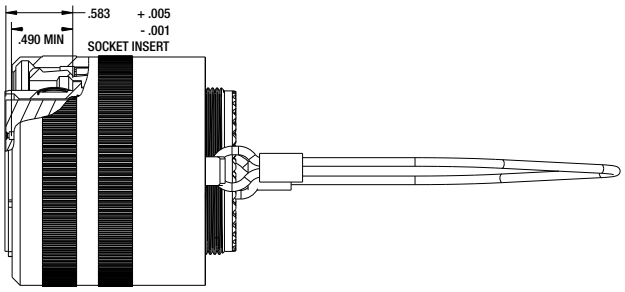


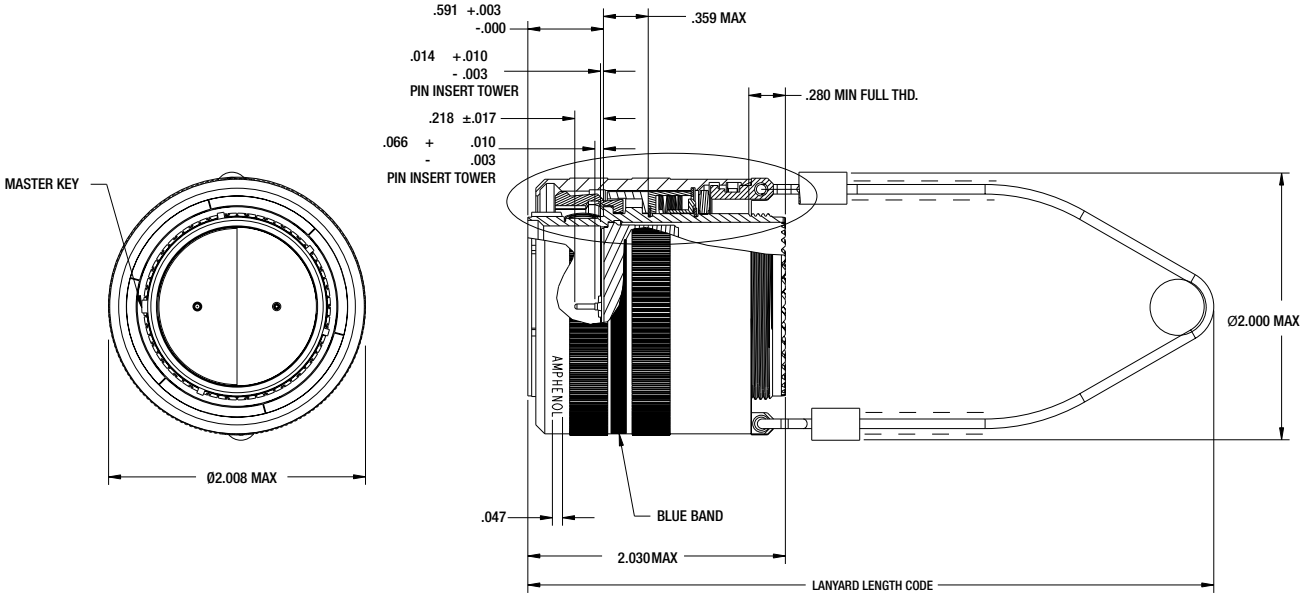
### QUICK-DISCONNECT WITH AN AXIAL PULL OF LANYARD

Amphenol offers a commercial version of D38999/31 series III, type 6 connectors. Built from the same time-tested and quality components used in its Mil-Spec counterpart, Amphenol's commercial variant is designed to accept a wider variety of insert arrangements the Mil-Spec does not include. Available in shell size 25, these fail-safe connectors adopt an incredible amount of versatility without sacrificing performance or durability. Consult Amphenol Aerospace for more information.

### FEATURES AND BENEFITS

- More versatile than the mil-spec
- 25 lanyards lengths
- Available in all size 25 arrangements
- Low force separation capabilities
- Compatible with all mil-spec backshells and accessories
- Mates to existing D38999 receptacles



# TV Breakaway Fail-Safe Lanyard Release Connector

## Commercial (88-725010, 88-725014, 88-725041) Version of D38999/31 Type 6

## HOW TO ORDER

| 1. Service Class | 2. Shell Style | 3. Insert Arrg. | 4. Alternate Keying Position (End A) | 5. Lanyard Length Code |
|---|---|---|---|---|
| 88- | 725010- | 04 | P | K |

### 1. FINISH*

| | |
|---|---|
| 88- | Olive Drab Cadmium |
| 91- | Electroless Nickel |

* Contact Amphenol for availability of other finishes.

### 2. SHELL STYLE

| | |
|---|---|
| 725010- | D38999/31 Type 6 |
| 725014- | Extended Backskirt |
| 725041- | Integrated Banding Platform |

### 3. INSERT ARRANGEMENT

| | |
|---|---|
| 04 | 25-4 |
| 07 | 25-7 |
| 11 | 25-11 |
| 17 | 25-17 |
| 20 | 25-20 |
| 24 | 25-24 |
| 26 | 25-26 |
| 29 | 25-29 |
| 35 | 25-35 |
| 37 | 25-37 |
| 41 | 25-41 |
| 43 | 25-43 |
| 46 | 25-46 |
| 61 | 25-61 |
| 62 | 25-62 |
| 90 | 25-90 |
| F4 | 25-F4 |
| 187 | 25-187 |

### 4. KEYING

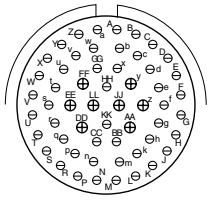
| Key Position | Pin | Socket |
|---|---|---|
| N | P | S |
| A | G | H |
| B | I | J |
| C | K | L |
| D | M | N |
| E | R | T |

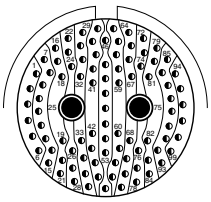
### 5. LANYARD LENGTH CODE

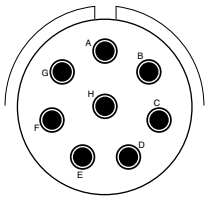
| Lanyard Length (in.) ± .236 | Lanyard Length (mm) ± 6.0 | Lanyard Length Code For Part Number |
|---|---|---|
| 4.016 | 102 | A |
| 4.528 | 115 | B |
| 5.000 | 127 | C |
| 5.512 | 140 | D |
| 6.024 | 153 | E |
| 6.535 | 166 | F |
| 7.008 | 178 | G |
| 7.520 | 191 | H |
| 7.992 | 203 | I |
| 8.503 | 216 | J |
| 9.016 | 229 | K |
| 9.528 | 242 | L |
| 10.000 | 254 | M |
| 10.512 | 267 | N |
| 11.024 | 280 | P |
| 11.535 | 293 | R |
| 12.008 | 305 | S |
| 12.520 | 318 | T |
| 13.031 | 331 | U |
| 14.016 | 356 | V |
| 15.000 | 381 | W |
| 16.024 | 407 | X |
| 17.008 | 432 | Y |
| 18.031 | 458 | Z |

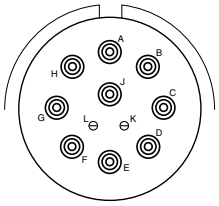
## INSERT ARRANGEMENTS

Shell Size & Insert Arrg. for:



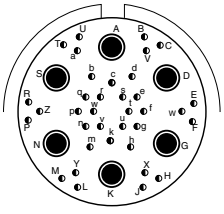


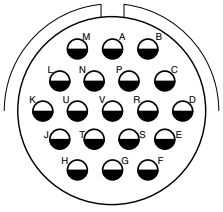


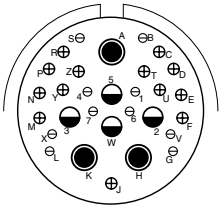


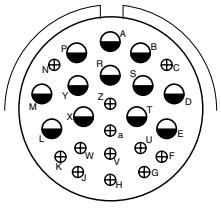
| Series III TV | 25-04 | | 25-07 | | 25-08 | 25-11*** | |
|---|---|---|---|---|---|---|---|
| Service Rating | I | | M | | Twinax | N | |
| Number of Contacts | 48 | 8 | 97 | 2 | 8 | 2 | 9 |
| Contact Size | 20 | 16 | 22D | 8 Twinax | 8 Twinax | 20 | 10 |

Shell Size & Insert Arrg. for:









| Series III TV | 25-17 | | 25-19 | 25-20*** | | | | 25-24 | |
|---|---|---|---|---|---|---|---|---|---|
| Service Rating | M | | I | N | | | | I | |
| Number of Contacts | 36 | 6 | 19 | 10 | 13 | 3 | 4 | 12 | 12 |
| Contact Size | 22D | 8 Twinax | 12 | 20 | 16 | 8 Twinax | 12 Coax | 16 | 12 |

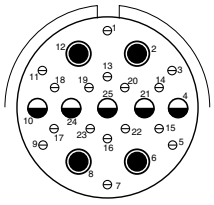
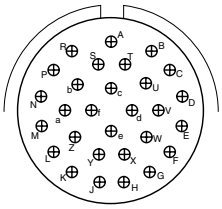
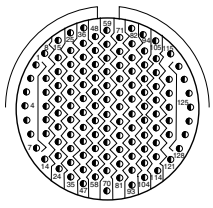
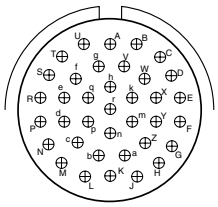
# Insert Arrangements

## Commercial (88-725010 & 88-725014) Version of D38999/31 Type 6

Amphenol Aerospace

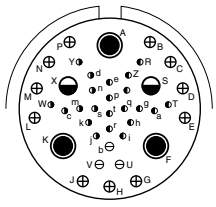
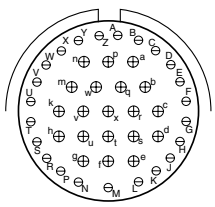
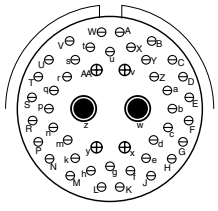
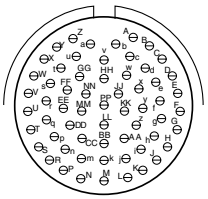


Shell Size & Insert Arrg. for:

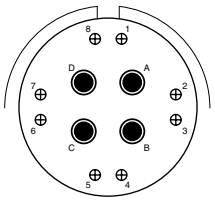
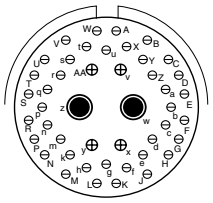
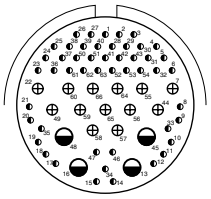
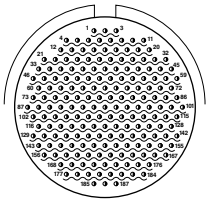
| Series III TV | 25-26 | | | 25-29 | 25-35 | 25-37 |
|---|---|---|---|---|---|---|
| Service Rating | I | | | I | M | I |
| Number of Contacts | 16 | 5 | 4 | 29 | 128 | 37 |
| Contact Size | 20 | 12 | 8 Coax | 16 | 22D | 16 |

Shell Size & Insert Arrg. for:

| Series III TV | 25-41 | | | | | 25-43 | | 25-46 | | | 25-61 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Service Rating | N/Inst. | | | | | I | | I | | | I |
| Number of Contacts | 22 | 3 | 11 | 2 | 3 | 23 | 20 | 40 | 4 | 2 | 61 |
| Contact Size | 22D | 20 | 16 | 12 Coax | 8 Twinax | 20 | 16 | 20 | 16 | 8 Coax † | 20 |

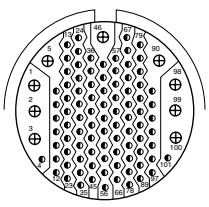
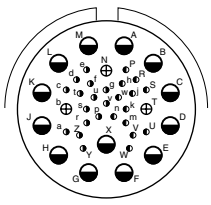
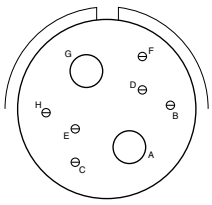
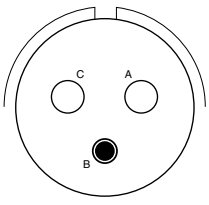
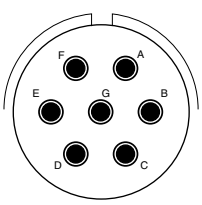
Shell Size & Insert Arrg. for:

| Series III TV | 25-62 | | 25-90 | | | 25-F4 | | | 25-187 HD |
|---|---|---|---|---|---|---|---|---|---|
| Service Rating | I | | I | | | Size 22D=M, Balance =I | | | N |
| Number of Contacts | 8 | 4 | 40 | 4 | 2 | 49 | 13 | 4 | 187 |
| Contact Size | 16 | 8 | 20 | 16 | 8 Twinax | 22D | 16 | 12 | 23 |
| | Ground Plane Only | | | | | | | | |

## SPECIALS

Shell Size & Insert Arrg. for:

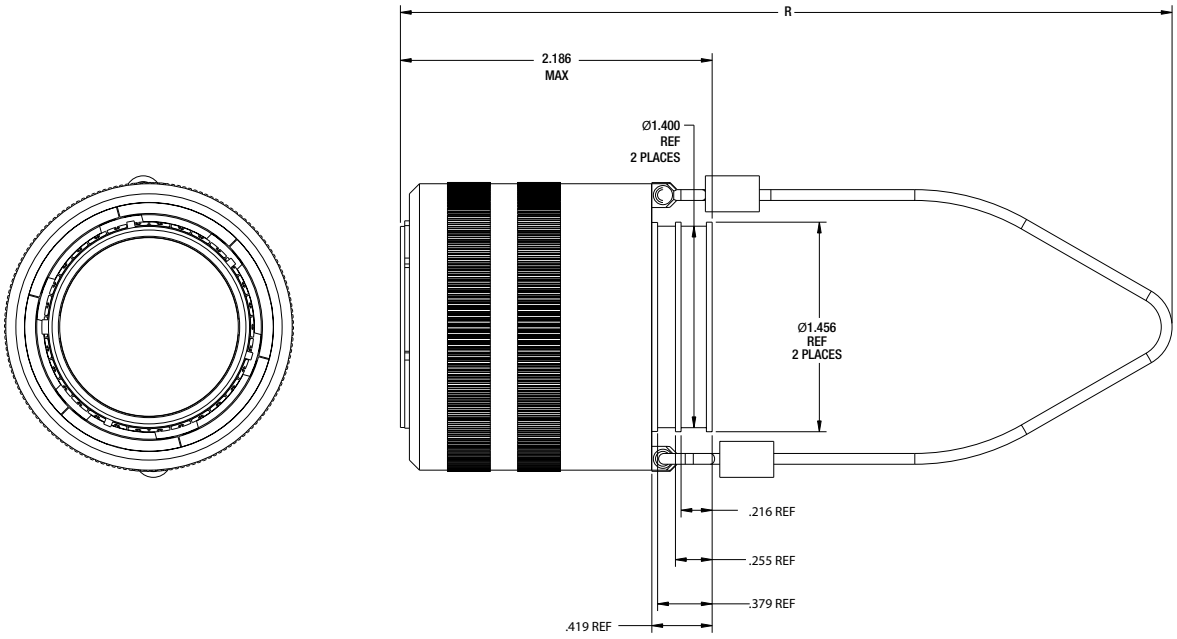






| Series III TV | 25-92 | | 25-97 | | | 25-16 | | 25L-3 | | 25L-7 |
|---|---|---|---|---|---|---|---|---|---|---|
| Service Rating | M | | M | | | M | | II | | II |
| Number of Contacts | 92 | 9 | 26 | 3 | 13 | 6 | 2 | 1 | 2 | 7 |
| Contact Size | 22D | 16 | 22D | 16 | 12 | 20 | 4 | 8 | 4 | 8 |

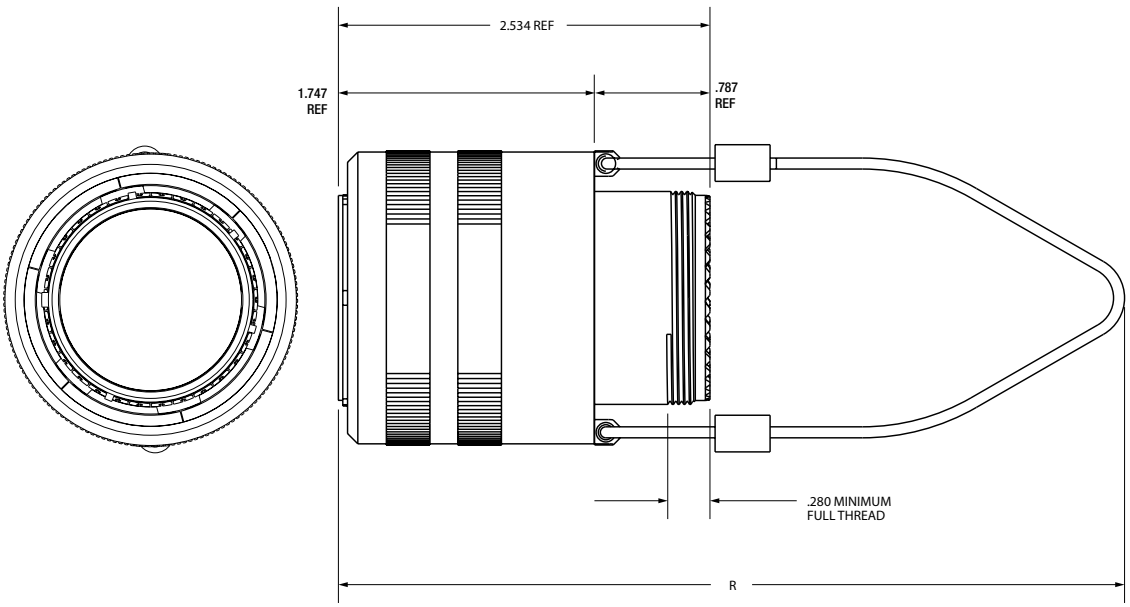
# TV Breakaway Fail-Safe Lanyard Release Connector

## Commercial (88-725014 & 88-725041) Version of D38999/31 Type 6

### 88-725041 INTEGRATED BANDING PLATFORM




### 88-725014 EXTENDED BACKSKIRT



## METAL SHELLS WITH COMPOSITE OPERATING SLEEVE

New Hybrid Lanyard Breakaway Fail-Safe connector with a composite thermoplastic outer operating sleeve for greater durability.

This new hybrid breakaway is the breakaway of choice for the Navy F-18 Program. Amphenol's hybrid lanyard design offers greater durability over D38999 aluminum and composite designs because of its ability to handle abuse taken after weapons release.

Other advantages include:

- Lower profile compared to full metal breakaway Fail-Safe connectors
- Less weight

This Hybrid Breakaway meets the applicable requirements of MIL-DTL-38999/31 including random & sine vibration, ice resistance, fluid immersion and hydrolytic stability tests. (Test reports are available upon request).

Currently the hybrid breakaway is available in shell sizes 25 and 17. It uses standard inserts available for breakaway plugs sizes 25 and 17, and is also available with inserts 25-20 and 25-11 for MIL-STD-1760. These hybrid connectors will accommodate the standard backshells for breakaway connectors shown on Accessories section or the backshell section.

Consult Amphenol Aerospace for ordering of the new hybrid breakaway connectors.



*New Hybrid Lanyard Release Plugs (Metal inside shells and Composite, lower profile outer sleeves)*

| CONDITION/TEST | DESCRIPTION | REFERENCE |
|---|---|---|
| Durability | 400 complete mating/unmating cycles | MIL-DTL-38999/31D |
| High Impact Shock | Nine hammer blows from 1,3 and 5 feet, three each in three axes on mounting panel. | MIL-S- 901D |
| Vibration | 10 to 2000Hz in three perpendicular axes, 4 hours in each axis for a total of 12 hours with no fracturing or breaking of parts. | MIL-STD-202F, Method 204 |
| Ice Resistance | Pull tested after conditioned with Ice water at -18C for 35 minutes. | MIL-DTL-38999/31D |
| Fail Safe Disengagement | Rotationaly unmated 180° from full mate position and pull tested in both a straight direction and at 15°. | MIL-DTL-38999/31D |
| High Speed Pull Separation | 100 cycles at 30 feet per second. | MIL-DTL-38999/31D |

## STORES MANAGEMENT TYPE II, RAIL LAUNCH

**Plugs and Receptacles that meet MIL-STD-1760**

Amphenol provides a Breakaway Rail Launch connector that is designed for use on aircraft that carry rail launch missiles such as AMRAAM.

These connectors are designed for blindmating of stores on rail launch applications. They consist of a buffer plug and a missile receptacle that meet the specifications of MIL-STD-1760 Stores Management. Other features and benefits include:

- Designed to MIL-C-83538 specifications
- Bayonet and push pull coupling
- Use standard MIL-DTL-38999 crimp termination with power, coax and twinax contacts also available
- Buffer provides flame barrier
- Buffers are replaceable

Consult Amphenol Aerospace for more information and ordering.



*Stores Management Type II Rail Launch Connectors*

# MIL-DTL-38999/ 27599, Series II JT
# MIL-DTL-38999/ 27599, Series I LJT



Series I LJT



Series II JT

## FEATURES & BENEFITS

Amphenol® LJT and JT Series subminiature cylindrical connectors are qualified to MIL-DTL-38999*, Series I and II respectively. These connectors were developed to meet the needs of the aerospace industry, and provided the impetus for development of the MIL-C-38999 specifications, which has been superseded by MIL-DTL-38999. Meeting or exceeding MIL-DTL-38999 requirements, Amphenol® JT/LJT connectors feature:

- Lightweight, Space Saving Design
- Contact Protection - 100% scoop-proof LJT design prevents bent pins and short circuits during mating
- Quick Positive Coupling - 3 point bayonet lock system
- Mismating Eliminated - with 5 key/keyway design
- Error Proof Alternate Positioning - insured by different key/ keyway locations
- EMI Shielding - grounding fingers standard in LJT Series; optional in JT Series
- Nine Shell Sizes and a Variety of Shell Styles
- Contact Options - size 8, 10, 12, 16, 20, 22M and 22D Crimp, Solder, PCB, Wire wrap, Coax, Twinax, Triax, Thermocouple, Fiber Optic and Filter
- Fixed Solder Contacts - Amphenol MIL-DTL-38999 Series I LJT and II JT, are available in solder versions as both Commercial and Military qualified to MIL-DTL-27599
- Hermetic - air leakage limited to 1 X 10-7 cm3 per second optional
- “Breakaway” Lanyard Release Style - available in LJT plugs. Provides quick disconnect of the connector plug and receptacle with axial pull on the lanyard. See pages 137-142.
- Inventory Support Commonality - uses standard MIL-DTL-38999 contacts, insert arrangements and application tools.
- RoHS Compliant Product Available - Consult Amphenol Aerospace Operations.

### TABLE OF CONTENTS


MIL-DTL-38999, Series I and II

| | |
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| Shell Size & Insert Arrangement Availability | 2-5 |
| Insert Arrangement Drawings | 7-11 |
| PCB Insert Arrangements | 15-29 |
| Contact rating/Service Rating/Sealing Plugs | 30-32 |
| Series II | 94-121 |
| Series I | 122-151 |

# MIL-DTL-38999, Series II JT
# MIL-DTL-38999, Series I LJT



## 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 32). 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 a rigid dielectric with excellent electrical characteristics, providing durable protection for molded-in solder type contacts. Contrasting letter or number designations are used on insert faces.

A 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 receptacle for moisture sealing between connector halves. Both features are also available for hermetic receptacles.



MIL-DTL-38999
Series I LJT

## CONTACTS

Maximum design flexibility is built into the JT/LJT Series, with a minimum of 2 to a maximum of 128 circuits per connector in a wide variety of contact arrangements. Contacts are available in sizes 8, 10, 12, 16, 20, 22, 22D and 22M with standard 50 micro inch minimum gold plating (100 micro inches optional). All socket contacts are probe proof. Crimp type rear removable contacts are featured in JT-R and LJT-R connectors. Solder termination contacts are also available, as well as PCB, wire wrap, thermocouple, fiber optic, coaxial, triaxial and twinax contact options.



MIL-DTL-38999
Series II JT

## OPTIONAL FEATURES

High temperature capability of 392°F is available only in JTS or LJTS crimp type connectors. High temperature versions feature 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 information on Fail-Safe Lanyard Release style plugs,
see pages 142.

Where proof of high reliability and lot control is required, MS approved equivalents to most proprietary JT and LJT connectors are available.

* MIL-DTL-38999 Series I supersedes MIL-C-38999 Series I.
MIL-DTL-38999 Series II supersedes MIL-C-38999 Series II.

# MIL-DTL-38999/ 27599, Series II JT

B



## TABLE OF CONTENTS FOR SECTION B


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How to Order (Military) . . . . . 95-96
How to Order (Commercial) . . . . . 97-99

### JT Shell Styles:

Crimp Wall Mounting Receptacle JT00R (MS27472) 100
Crimp Wall Mounting Receptacle for Back Panel Mounting JTPQ00R (MS27497) . . . . . 101
Crimp Line Receptacle JT01R . . . . . 102
Crimp Box Mounting Receptacles JT02RE (MS27499), JT02RE(053) (MS27513) . . . . . 103
Crimp Box Mounting Receptacle for Back Panel Mounting JTP02R (MS27508) . . . . . 104
Crimp Jam Nut Receptacle JT07R (MS27474) . . 105
Crimp Jam Nut Receptacle (Miniature Jam Nut Mounting Dimensions) JTL07R . . . . . 106
Crimp Straight Plug JT06R (MS27473) . . . . . 107
Crimp Straight Plug with Grounding Fingers JTG06R (MS27484) . . . . . 108
Crimp 90° Plug JT08R (MS27500) . . . . . 109

### HERMETIC:

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PCB Box Mounting Receptacle, Back Panel (JTP02R) . . . . . 116
PCB jam Nut Receptacle (JT07) . . . . . 117
PCB Wall Mounting Receptacle Hermetic (JT00). . 118
PCB box Mounting Receptacle Hermetic (JT02) . . 119
PCB Jam Nut Receptacle Hermetic (JT07) . . . . 120
PCB Solder Mounting Receptacle Hermetic (JTI) . 121

### Accessories:

Section F . . . . . 165-184


B

# Military to Commercial Shell Style Conversion Table

## How to Order (Military)

| MILITARY | DESCRIPTION | COMMERCIAL |
|---|---|---|
| MS27472 | Crimp Wall Mounting Receptacle | JT00 |
| MS27497 | Crimp Wall Mounting Receptacle (Back Panel Mounting) | JTPQ00 |
| MS27499 | Crimp Box Mounting Receptacle | JT02, JTS02, JTN02 |
| MS27513 | Crimp Box Mounting Receptacle with grommet | JT02, JTS02, JTN02 |
| MS27508 | Crimp Box Mounting Receptacle (Back Panel Mounting) | JTP02, JTPN02, JTPS02 |
| MS27473 | Crimp Straight Plug | JT06, JTS06, JTN06 |
| MS27484 | Crimp Straight Plug with Grounding Fingers | JTG06, JTNG06 |
| MS27474 | Crimp Jam Nut Receptacle | JT07, JTS07, JTN07 |
| MS27500 | Crimp 90° plug | JT08, JTS08, JTN08 |
| MS27475 | Hermetic Wall Mounting Receptacle | JT00 |
| MS27476 | Hermetic Box Mounting Receptacle | JT02, JTS02 |
| MS27477 | Hermetic Jam Nut Receptacle | |
| MS27478 | Hermetic Solder Mounting Receptacle | JTSIY |
| | MIL-DTL-27599 | |
| MS27334 | Solder Wall Mounting Receptacle | JT00 |
| MS27335 | Solder Box Mounting Receptacle | JT02 |
| MS27336 | Solder Straight Plug | JT06 |
| MS27337 | Solder Jam Mounting Receptacle | JT07 |

## HOW TO ORDER - MILITARY SERIES II

| 1. MS Number | 2. Service Class | 3. Shell Size | 4. Finishes | 5. Insert Arrangement | 6. Contact Style (P or S) | 7. Alternate Keying Position |
|---|---|---|---|---|---|---|
| MS27472 | E | 14 | A | 18 | P | A |

| 1. MS NUMBER SERIES II JT | |
|---|---|
| MS27472 | Crimp Wall Mount Receptacle |
| MS27497 | Crimp Wall Mount Receptacle (Back Panel Mounting) |
| MS27499 | Crimp Box Mounting Receptacle |
| MS27513 | Crimp Box Mounting Receptacle with grommet |
| MS27508 | Crimp Box Mounting Receptacle (Back Panel Mounting) |
| MS27473 | Crimp Straight Plug |
| MS27484 | Crimp Straight Plug with Grounding Fingers |
| MS27474 | Crimp Jam Nut Receptacle |
| MS27500 | Crimp 90° plug |
| MS27475 | Hermetic Wall Mounting Receptacle |
| MS27476 | Hermetic Box Mounting Receptacle |
| MS27477 | Hermetic Jam Nut Receptacle |
| MS27478 | Hermetic Solder Mounting Receptacle |
| MIL-DTL-27599 | |
| MS27334 | Solder Wall Mount Receptacle |
| MS27335 | Solder Box Mounting Receptacle |
| MS27336 | Solder Straight Plug |
| MS27337 | Solder Jam Mounting Receptacle |

Service Class continues on next page.

# MIL-DTL-38999/27599, Series II JT

## How to Order (Military)

### 2. SERVICE CLASS

| CRIMP | | SOLDER | | | |
|---|---|---|---|---|---|
| WALL MOUNT (472) | BOX MOUNT (499) | WALL MOUNT (334) | JAM NUT (337) | BOX MOUNT (335) | |
| WALL MOUNT BPM (497) | BOX MOUNT GROMMET (513) | STRAIGHT PLUG (336) | | | |
| STRAIGHT PLUG (473) | BOX MOUNT BPM (508) | | | | |
| STRAIGHT PLUG GF (484) | 90° Plug (500) | | | | |
| JAM NUT (474) | | | | | |
| E | E | | | | Environmental crimp applications. Box Mount versions using spacer grommets are not environmental. |
| P | | P | P | | Potting crimp applications. Supplied with spacer grommet and potting boot. |
| T | | T | | T | Environmental applications. Supplied without rear accessories. Design provides serrations on rear threads of shells. |

### 2. HERMETIC SERVICE CLASS

| | |
|---|---|
| WALL MOUNT (475) | |
| BOX MOUNT (476) | |
| JAM NUT (477) | |
| SOLDER MOUNT (478) | |
| Y | Hermetically interfacial seal |

### 3. & 5. SHELL SIZE

See table on page 2-5

Shell Size & Insert Arrangement are on pages 2-5. First number represents Shell Size, second number is the Insert Arrangement. Place Shell Size in box 3 and Insert Arrangement in box 5.

### 4. FINISHES

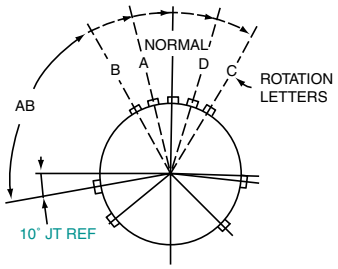
| Finish | Military Finish Data |
|---|---|
| Cadmium plated nickel base 175°C | A |
| Olive drab cadmium plate nickel base 175°C | B |
| Electroless nickel 200°C | F |
| Electroless nickel, space compatible 200°C | |
| Anodic coating (Alumilite) 200°C | C |
| Chromate treated (Iridite 14-2) 125°C | |
| Passivated steel 200°C | E |
| Nickel-PTFE 175°C | |

### 4. HERMETIC FINISHES

| | |
|---|---|
| Carbon steel shell tin plated & contacts | D |
| Stainless steel shell passivated | N |
| Stainless steel nickel plated | N |

### 6. CONTACTS

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




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

### 7. ALTERNATE KEYING POSITION

| 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° |

### 7. SELECT AN ALTERNATE KEYING POSITION

"A" designates Alternate keying connector assembly. Other basic alternate keys are "B", "C" and "D". No letter required for normal rotation (no rotation) position.

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. Only the master key/keyway rotates in the shell, and the minor keys are fixed.
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.

The "N" designation is not referenced in part number, it is omitted.

## How to Order (Commercial)

| 1. Type & Style | 2. Service Class | 3. Shell Size-Insert Arrg. | 4. Contact Type | 5. Alternate Position | 6. Strain Relief/Finish Variation Suffix | |
|---|---|---|---|---|---|---|
| JT00 | RT | 9-35 | P | B | SR | (014) |

| 1. CONNECTOR TYPE | |
|---|---|
| JT | Standard Junior Tri-Lock |
| JTS | High Temperature Connector |
| JTN | Chemical and Fuel Resistant |
| JTL | Miniature Mounting Dimensions |
| JTLN | Miniature Mounting Dimensions/Chemical Resistant |
| JTLS | Miniature Mounting Dimensions/High Temperature |
| JTG | Plug with Grounding Fingers |
| JTNG | Plug with Grrounding Fingers Chemical and Fuel Dimensions |

| 2. SHELL STYLE RECEPTACLE CRIMP | |
|---|---|
| 02 | Box Mount Recptacle Panel Mount |
| 00 | Wall Mount Receptacle Panel Mount |
| 07 | Jam Nut Receptacle |
| 01 | Inline Receptacle |

| 2. SHELL STYLE PLUG | |
|---|---|
| 06 | Straight Plug |
| 08 | 90° Plug |

| 2. HERMETIC | |
|---|---|
| 00 | Wall Mounting Receptacle |
| 02 | Box Mounting Receptacle |
| 07 | Jam Nut Receptacle |
| I | Solder Mounting Receptacle |

| 2. RECEPTACLE WITH PCB CONTACTS | |
|---|---|
| 88/91 56973 | Wall Mount Receptacle (Back Panel) See page 106 |
| 88/91 56974 | Box Mounting Receptace (Back Panel) See page 107 |
| 88/91 56975 | Jam Nut Receptacle See page 108 |
| 10-62643 | Wall Mounting Receptacle (Hermetic) See page 109 |
| 10-62646 | Box Mounting Receptacle (Hermetic) See page 110 |
| 10-62644 | Jam Nut Receptacle (Hermetic) See page 111 |
| 10-62645 | Solder Mount Receptacle (Hermetic) See page 112 |

**Wall Mounting Receptacle**



**Box Mounting Receptacle**



**Straight Plug**



**Jam Nut Receptacle**



**90° Plug**



**Solder Mounting Receptacle**



# MIL-DTL-38999/ 27599, Series II JT

## How to Order (Commercial)

### 2. SELECT A SERVICE CLASS

| 1. Type & Style | 2. Service Class | 3. Shell Size- Insert Arrg. | 4. Contact Type | 5. Alternate Position | 6. Strain Relief/Finish Variation Suffix | |
|---|---|---|---|---|---|---|
| JT00 | RT | 9-35 | P | B | SR | (014) |

**2. SERVICE CLASS**

| CRIMP | | | SOLDER | | | | |
|---|---|---|---|---|---|---|---|
| WALL MOUNT | BOX MOUNT | JAMNUT (JTL) | WALL MOUNT | STRAIGHT PLUG | STRAIGHT PLUG GR | 90° PLUG GR | |
| WALL MOUNT BPM | BOX MOUNT BACKPANEL | 90° PLUG | BOX MOUNT | | | | |
| LINE | | | JAM NUT | | | | |
| STRAIGHT PLUG | | | | | | | |
| STRAIGHT PLUG GF | | | | | | | |
| JAM NUT | | | | | | | |
| RE | RE | | | | | | Environmental crimp applications. Box Mount versions using spacer grommets are not environmental. |
| RP | | RP | P | P | | P | Potting crimp applications. Supplied with spacer grommet and potting boot. |
| RT | | RT | | | | | Environmental applications. Supplied without rear accessories. Design provides serrations on rear threads of shells. |
| | | | A | A | A | | General applications- applicable with strain relief. |
| | | | C | | | | Pressurized applications- applicable with strain relief. |

**2. HERMETIC SERVICE CLASS**

| | |
|---|---|
| WALL MOUNT | |
| BOX MOUNT | |
| JAM NUT | |
| SOLDER MOUNT | |
| Y | Hermetically interfacial seal |
| H | Hermetic applications- Fused compression glass sealed inserts. Leakage rate less than .01 micron cu. ft./hr. (1 x 10-7 cc/sec.) at 15 psi differential. |

### 3. SELECT A SHELL SIZE & INSERT ARRANGEMENT SEE PAGE 2-5

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

| 1. Type & Style | 2. Service Class | 3. Shell Size- Insert Arrg. | 4. Contact Type | 5. Alternate Position | 6. Special Variations |
|---|---|---|---|---|---|
| | | 22-2 | P | | |

**4. CONTACT TYPE**

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

## How to Order (Commercial)



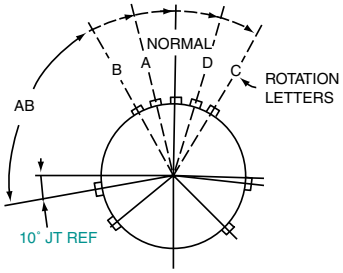
| 1. Connector Type | 2. Service Class | 3. Shell Size Insert Arrg. | 4. Contact Type | 5. Alternate Position | 6. Special Variations |
|---|---|---|---|---|---|
| | | | | A | |

### 5. SELECT AN ALTERNATE KEYING POSITION

"A" designates Alternate keying connector assembly. Other basic alternate keys are "B", "C" and "D". No letter required for normal rotation (no rotation) position.

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. Only the master key/keyway rotates in the shell, and the minor keys are fixed.
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.

The "N" designation is not referenced in part number, it is omitted.




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

### JT 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° |

| 1. Connector Type | 2. Service Class | 3. Shell Size-Insert Arrg. | 4. Contact Type | 5. Alternate Position | 6. Special Variations |
|---|---|---|---|---|---|
| | | | | | ( ) |

### 6. SELECT A STRAIN RELIEF OPTION OR FINISH VARIATION SUFFIX

Strain Relief Options: "SR" designates a strain relief clamp. Strain reliefs are available only on Service Class "A", "C" and "RE" (see step 2. Service Class) Finish Variation Suffix: See finish variations available in table to your right.

### 6. STRAIN RELIEF OR FINISHES

| Finish | Military Finish Data | Finish Suffix | Finish Plus "SR" Suffix |
|---|---|---|---|
| AP-93 Tri-Nickel Alloy, Aluminum, 1000 Hr., 200°C, -65dB@100Hz* | | (075) | |
| Cadmium plated nickel base 175°C | A | | (SR) |
| Olive drab cadmium plate nickel base 175°C | B | (014) | (386) |
| Electroless nickel 200°C | F | (023) | (424) |
| Electroless nickel, space compatible 200°C | | (453) | (467) |
| Anodic coating (Alumilite) 200°C | C | (005) | (300) |
| Chromate treated (Iridite 14-2) 125°C | | (011) | (344) |
| Passivated steel 200°C | E | - | - |
| Nickel-PTFE 175°C | | (045) | (582) |
| Zinc-Nickel Plated 175°C | | (033) | |
| **HERMETIC FINISHES** | | | |
| Carbon steel shell tin plated & contacts | D | (468) | |
| Stainless steel shell passivated | N | (162) | |
| Stainless steel nickel plated | N | () | |

# Wall Mounting Receptacle - Crimp

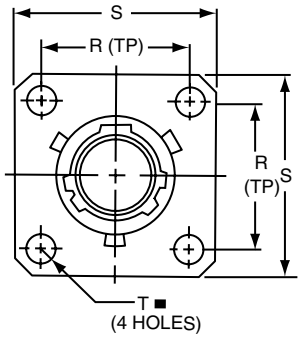
## Military (MS27472 & MS27479), Commercial (JT00, JTS00 & JTN00) (SR)

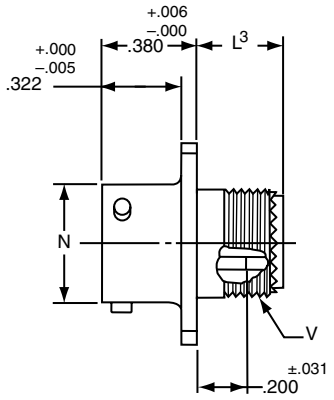
PART NUMBER BUILDER Page 86-90

**MILITARY**
MS27472E
MS27472P
MS27472T
MS27479E
MS27479T

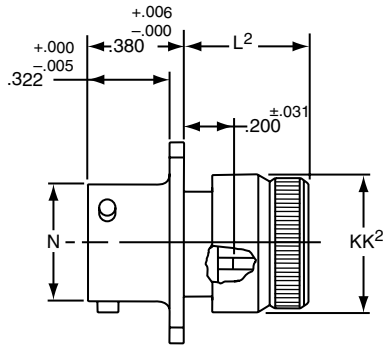
Commercial

JT00RT, JT00RE, JT00RP
JTS00RT, JTS00RE, JTS00RP
JTN00RT, JTN00RE, JTN00RP

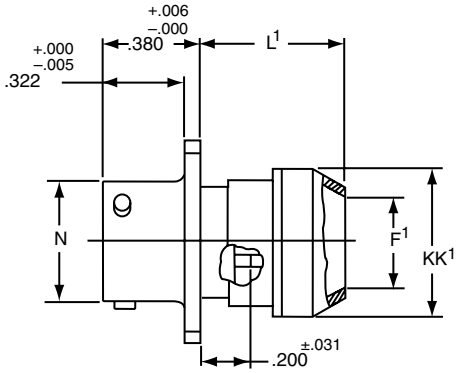


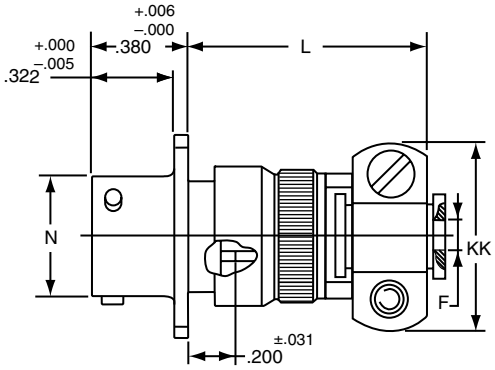

| | Commercial | Military |
|---|---|---|
| * | JT00RT-XX-XXX | MS27472T |
| ** | JTS00RT-XX-XXX | MS27479T |
| *** | JTN00RT-XX-XXX | |




| | Commercial | Military |
|---|---|---|
| * | JT00RE-XX-XXX | MS27472E |
| ** | JTS00RE-XX-XXX | MS27479E |
| *** | JTN00RE-XX-XXX | |




| | Commercial | Military |
|---|---|---|
| * | JT00RP-XX-XXX | MS27472P |
| ** | JTS00RP-XX-XXX | |
| *** | JTN00RP-XX-XXX | |




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

■ ⊕ .005 DIA Ⓜ

* Standard Junior Tri-Lock
** High temperature version
*** Clear iridite finish (gold color), $N_2O_4$ resistant

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

All dimensions for reference only.

# Wall Mounting Receptacle (Back Panel) - Crimp

## Military (MS27497), Commercial (JTPQ00 & JTPSQ00)

Amphenol Aerospace

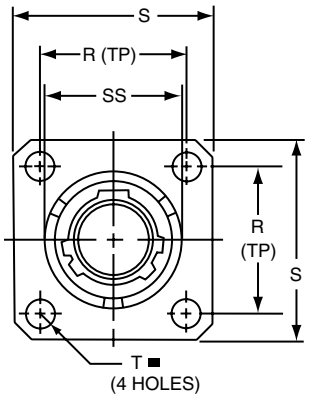


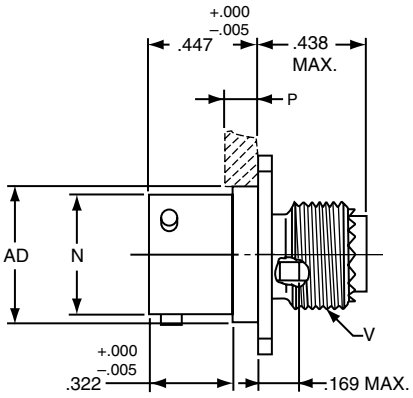
**PART NUMBER BUILDER Page 86-90**

**MILITARY**
**MS27497E**
**MS27497P**
**MS27497T**

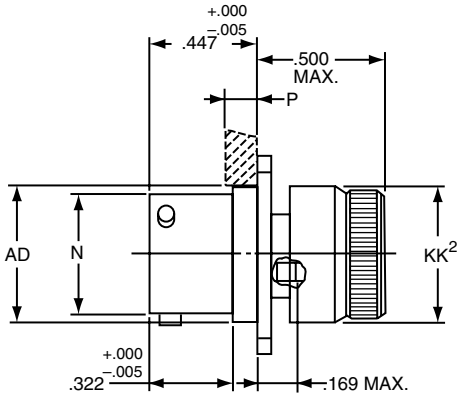
Commercial

**JTPQ00RE, JTPQ00RP, JTPQ00RT**
**JTPSQ00RT**

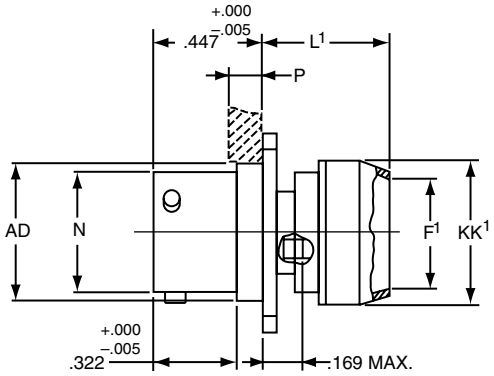


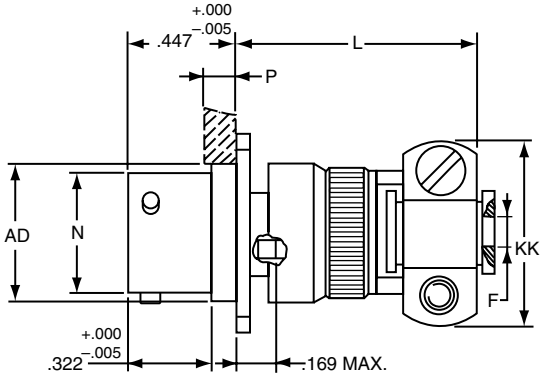

| | Commercial | Military |
|---|---|---|
| * | JTPQ00RT-XX-XXX | MS27497T |
| ** | JTPSQ00RT-XX-XXX | |




| | Commercial | Military |
|---|---|---|
| * | JTPQ00RE-XX-XXX | MS27497E |




| | Commercial | Military |
|---|---|---|
| * | JTPQ00RP-XX-XXX | MS27497P |




| | Commercial |
|---|---|
| * | JTPQ00RE-XX-XXX (SR) |

■ ⊕ .005 DIA Ⓜ

* Standard Junior Tri-Lock
** High temperature version

| Shell Size | F Dia. +.010 –.025 | F¹ Dia. ±.010 | L Max. | L¹ Max. | N +.001 –.005 | P Max. Panel Thickness | R (TP) | S ±.016 | T ±.005 | V Thread UNEF Class 2A (Plated) | AD Dia. ±.005 | KK Max. | KK¹ Dia. Max. | KK² 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 |

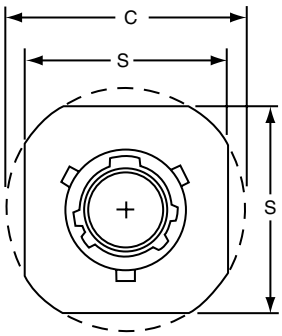
# Line Receptacle - Crimp

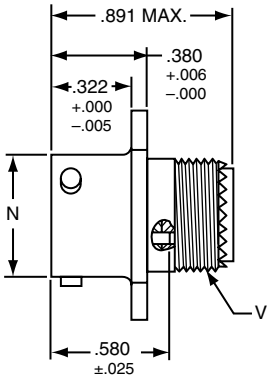
## Commercial (JT01, JTS01 & JTN01)

PART NUMBER BUILDER Page 86-90

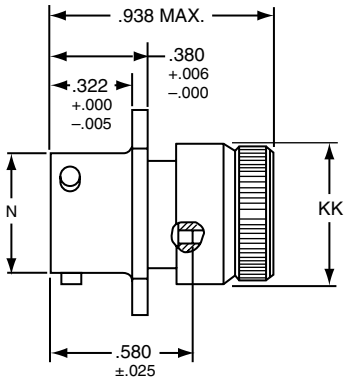
Commercial

**JT01RE, JT01RP, JT01RT**
**JTS01RE, JTS01RP, JTS01RT**
**JTN01RE, JTN01RP, JTN01RT**

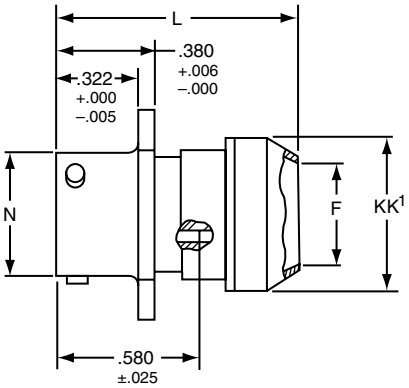


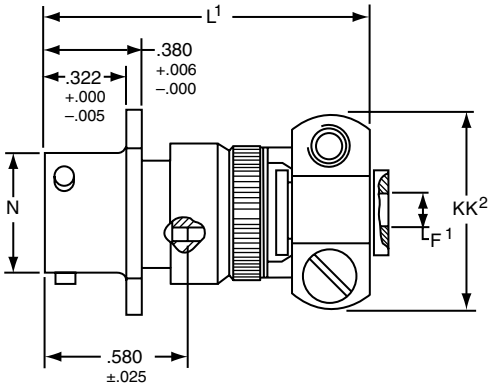

Commercial
* JT01RT-XX-XXX
** JTS01RT-XX-XXX
*** JTN01RT-XX-XXX




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




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




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

* Standard Junior Tri-Lock
** High temperature version
*** Clear iridite finish (gold color), $N_2O_4$ resistant

| Shell Size | C Max. | F Dia. +.010 | F[1] Dia. +.010 –.025 | L Max. | L[1] Max. | N Dia. +.001 –.005 | S +.017 –.016 | V Thread UNEF Class 2A (Plated) | KK Dia. Max. | KK[1] Dia. Max. | KK[2] Max. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | .965 | .444 | .125 | 1.031 | 1.562 | .473 | .812 | .4375-28 | .578 | .625 | .812 |
| 10 | 1.089 | .558 | .188 | 1.031 | 1.562 | .590 | .938 | .5625-24 | .703 | .750 | .875 |
| 12 | 1.183 | .683 | .312 | 1.031 | 1.562 | .750 | 1.031 | .6875-24 | .828 | .875 | 1.000 |
| 14 | 1.277 | .808 | .375 | 1.031 | 1.812 | .875 | 1.125 | .8125-20 | .953 | 1.000 | 1.125 |
| 16 | 1.371 | .909 | .500 | 1.031 | 1.812 | 1.000 | 1.219 | .9375-20 | 1.078 | 1.125 | 1.188 |
| 18 | 1.465 | 1.034 | .625 | 1.031 | 1.812 | 1.125 | 1.312 | 1.0625-18 | 1.203 | 1.250 | 1.438 |
| 20 | 1.589 | 1.159 | .625 | 1.031 | 1.812 | 1.250 | 1.438 | 1.1875-18 | 1.328 | 1.375 | 1.438 |
| 22 | 1.715 | 1.284 | .750 | 1.031 | 1.938 | 1.375 | 1.562 | 1.3125-18 | 1.453 | 1.500 | 1.625 |
| 24 | 1.838 | 1.409 | .800 | 1.109 | 1.938 | 1.500 | 1.688 | 1.4375-18 | 1.578 | 1.625 | 1.719 |

All dimensions for reference only.

# Box Mounting Receptacle - Crimp

## Military (MS27499 & MS27513), Commercial (JT02) (053)

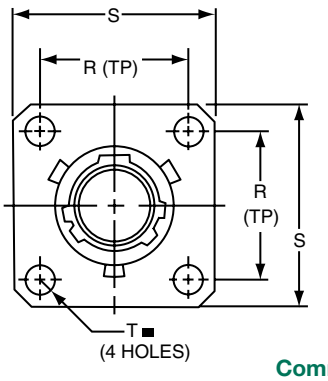
Amphenol Aerospace

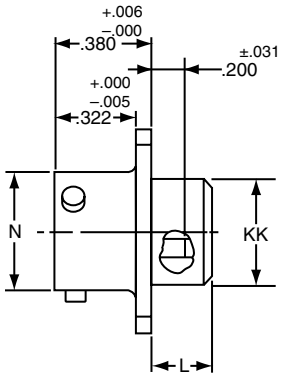
PART NUMBER BUILDER Page 86-90

**MILITARY**
**MS27499E**
**MS27513E**

Commercial

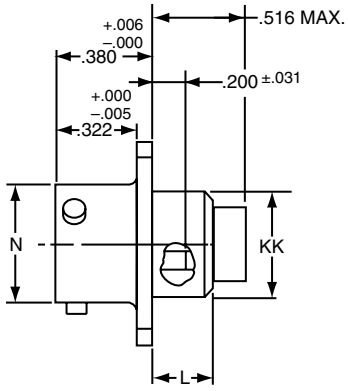
**JT02RE**
**JTS02RE**
**JTN02RE**




| Commercial | Military |
|---|---|
| * JT02RE-XX-XXX | MS27499E |
| ** JTS02RE-XX-XXX | |
| *** JTN02RE-XX-XXX | |

| Commercial- With Grommet | Military- With Grommet |
|---|---|
| * JT02RE-XX-XXX (053) | MS27513E |
| ** JTS02RE-XX-XXX (053) | |
| *** JTN02RE-XX-XXX (053) | |




■ ⊕ .005 DIA Ⓜ

* Standard Junior Tri-Lock
** High temperature version
*** Clear iridite finish (gold color), $N_2O_4$ resistant

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

All dimensions for reference only.
NOTE: For applications requiring an environmental seal, please refer to JT00R, page 92.

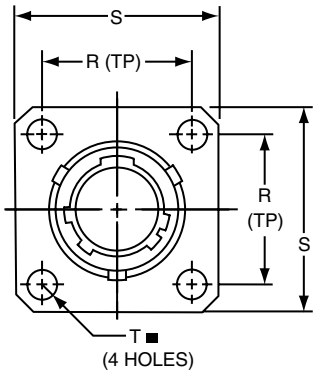
# Box Mounting Receptacle (Back Panel Mounting)

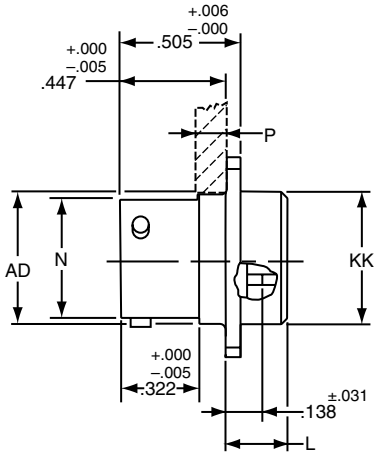
## Military (MS27508), Commercial (JTP02, JTPS02 & JTPN02)

PART NUMBER BUILDER Page 86-90

**MILITARY**
**MS27508E**

Commercial
**JTP02RE**
**JTPS02RE**
**JTPN02RE**




| | Commercial | Military |
|---|---|---|
| * | JTP02RE-XX-XXX | MS27508E |
| ** | JTPS02RE-XX-XXX | |
| *** | JTPN02RE-XX-XXX | |

■ Ⓢ .005 DIA Ⓜ

* Standard Junior Tri-Lock
** High temperature version
*** Clear iridite finish (gold color), $N_2O_4$ resistant

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

# Jam Nut Receptacle

## Military (MS27474), Commercial (JT07, JTS07 & JTN07) (SR)

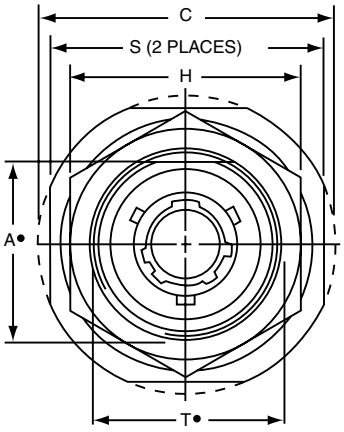
Amphenol Aerospace

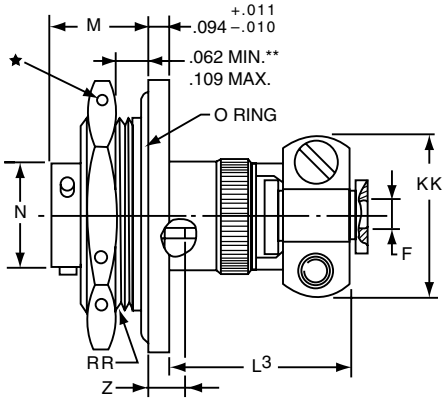
**PART NUMBER BUILDER Page 86-90**

**MILITARY**
**MS27474E**
**MS27474P**
**MS27474T**

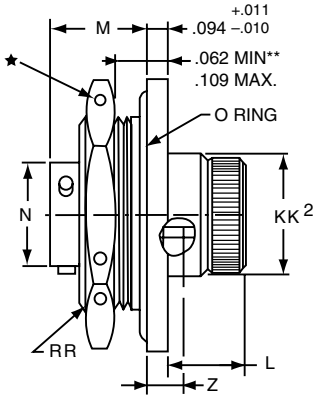
Commercial

**JT07RE, JT07RP, JT07RT**
**JTS07RE, JTS07RP, JT0S7RT**
**JTN07RE, JTN07RP, JTN07RT**

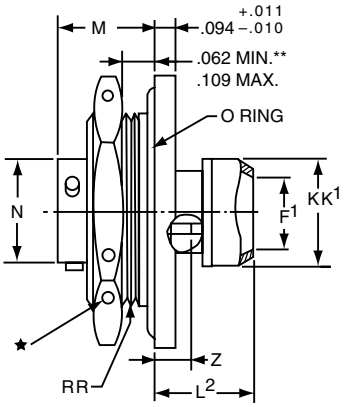


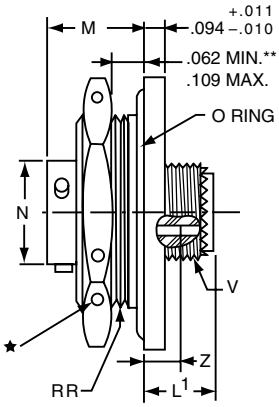

**Commercial**
* JT07RE-XX-XXX (SR)
*** JTS07RE-XX-XXX (SR)
****JTN07RE-XX-XXX (SR)




| Commercial | Military |
|---|---|
| * JT07RE-XX-XXX | MS27474E |
| *** JTS07RE-XX-XXX | |
| ****JTN07RE-XX-XXX | |




| Commercial | Military |
|---|---|
| * JT07RP-XX-XXX | MS27474P |
| *** JTS07RP-XX-XXX | |
| ****JTN07RP-XX-XXX | |




| Commercial | Military |
|---|---|
| * JT07RT-XX-XXX | MS27474T |
| *** JTS07RT-XX-XXX | |
| ****JTN07RT-XX-XXX | |

★ .059 Dia. Min. 3 lockwire holes.
Formed lockwire hole design (6 holes) is optional.
\+ "D" shaped mounting hole dimensions.
* Standard Junior Tri-Lock
** Panel Thickness
*** High temperature version
**** Clear iridite finish (gold color), $N_2O_4$ resistant

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

All dimensions for reference only.

# Jam Nut Receptacle - Miniature Mounting Dimensions Crimp

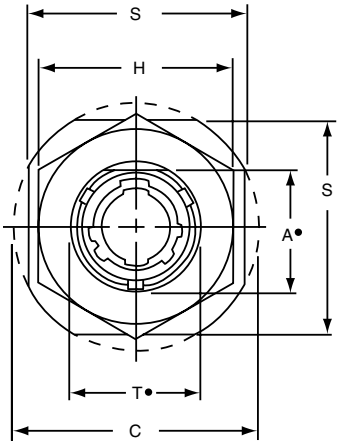
## Commercial (JTL07, JTLS07 & JTLN07) (SR)

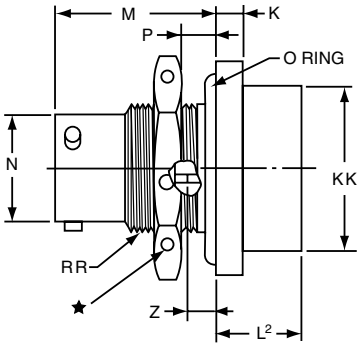


PART NUMBER BUILDER Page 86-90

Commercial

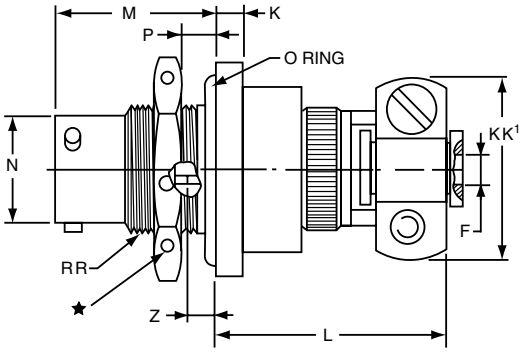
**JTL07RE, JTL07RP**
**JTLS07RE, JT0S7RP**
**JTLN07RE**



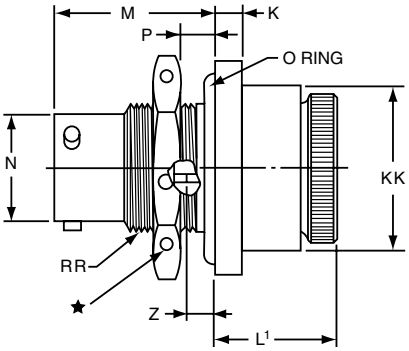

**Commercial**

* **JTL07RP-XX-XXX**
*** **JTLS07RP-XX-XXX**
**** **JTLN07RP-XX-XXX**




**Commercial**

* **JTL07RE-XX-XXX (SR)**
*** **JTLS07RE-XX-XXX (SR)**
**** **JTLN07RE-XX-XXX (SR)**




**Commercial**

* **JTL07RE-XX-XXX**
*** **JTLS07RE-XX-XXX**
**** **JTLN07RE-XX-XXX**

★ .059 Dia. Min. 3 lockwire holes. Formed lockwire hole design (6 holes) is optional.
\+ "D" shaped mounting hole dimensions.
* Miniature mounting dimensions
*** High temperature version
**** Clear iridite finish (gold color), $N_2O_4$ resistant

| Shell Size | A+ +.000 –.010 | C Max. | F Dia. +.010 –.025 | H Hex +.017 –.016 | K +.011 –.010 | L Max. | L¹ Max. | L² Max. | M ±.005 | N Dia. +.001 –.005 | P Panel Thickness Min. | P Panel Thickness Max. | S ±.016 | T+ +.010 –.000 | Z ±.026 | KK Dia. Max. | KK¹ Max. | RR Thread Class 2A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | .542 | 1.077 | .125 | .750 | .125 | 1.062 | .641 | .375 | .630 | .473 | .062 | .125 | .938 | .572 | .047 | .688 | .812 | .5625-24UNEF |
| 10 | .669 | 1.203 | .188 | .875 | .125 | 1.062 | .641 | .375 | .630 | .590 | .062 | .125 | 1.062 | .697 | .047 | .812 | .875 | .6875-24UNEF |
| 12 | .830 | 1.390 | .312 | 1.062 | .125 | 1.062 | .641 | .375 | .630 | .750 | .062 | .125 | 1.250 | .844 | .047 | .938 | 1.000 | .8750-20UNEF |
| 14 | .955 | 1.515 | .375 | 1.188 | .125 | 1.062 | .641 | .375 | .630 | .875 | .062 | .125 | 1.375 | 1.007 | .047 | 1.062 | 1.125 | 1.0000-20UNEF |
| 16 | 1.084 | 1.640 | .500 | 1.312 | .125 | 1.062 | .641 | .375 | .630 | 1.000 | .062 | .125 | 1.500 | 1.134 | .047 | 1.188 | 1.188 | 1.1250-18UNEF |
| 18 | 1.208 | 1.765 | .625 | 1.438 | .125 | 1.062 | .641 | .375 | .630 | 1.125 | .062 | .125 | 1.625 | 1.259 | .047 | 1.312 | 1.438 | 1.2500-18UNEF |
| 20 | 1.333 | 1.953 | .625 | 1.562 | .156 | 1.062 | .703 | .328 | .755 | 1.250 | .062 | .250 | 1.812 | 1.384 | .172 | 1.469 | 1.438 | 1.3750-18UNEF |
| 22 | 1.459 | 2.075 | .750 | 1.688 | .156 | 1.062 | .703 | .328 | .755 | 1.375 | .062 | .250 | 1.938 | 1.507 | .172 | 1.594 | 1.625 | 1.5000-18UNEF |
| 24 | 1.575 | 2.203 | .800 | 1.812 | .156 | 1.062 | .703 | .328 | .755 | 1.500 | .062 | .250 | 2.062 | 1.634 | .172 | 1.719 | 1.719 | 1.6250-18UNEF |

All dimensions for reference only.

# Straight Plug

## Military (MS27473), Commercial (JT06, JTS06 & JTN06) (SR)

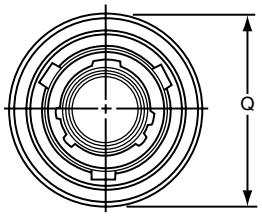
Amphenol Aerospace

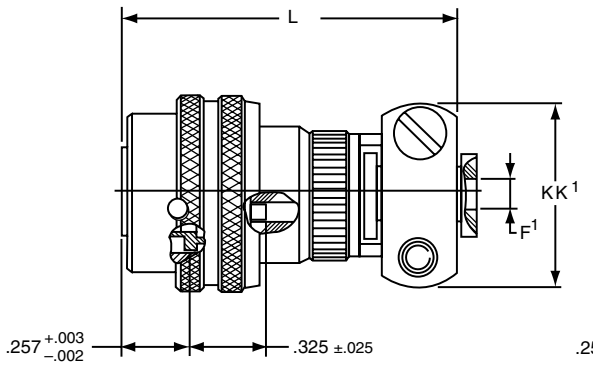
**PART NUMBER BUILDER Page 86-90**

**MILITARY**
**MS27473E**
**MS27473P**
**MS27473T**

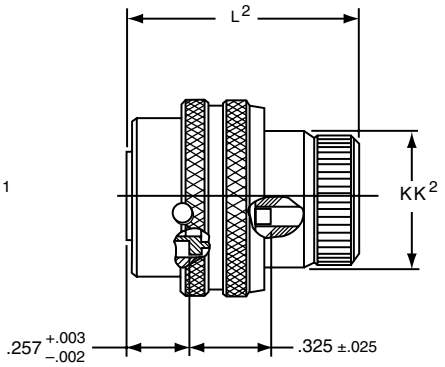
Commercial

**JT06RE, JT06RP, JT06RT**
**JTS06RE, JT0S6RP, JT0S6RT**
**JTN06RE, JTN06RP, JTN06RT**

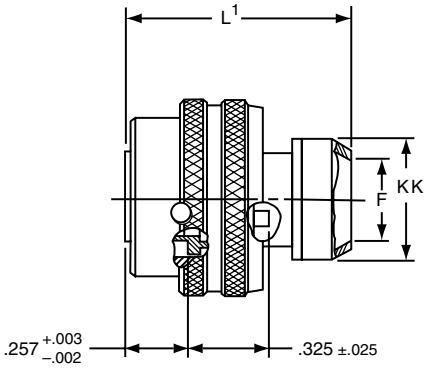


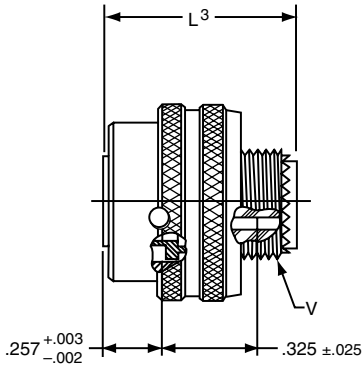

**Commercial**
* JT06RE-XX-XXX (SR)
** JTS06RE-XX-XXX (SR)
*** JTN06RE-XX-XXX(SR)




**Commercial** **Military**
* JT06RE-XX-XXX **MS27473E**
** JTS06RE-XX-XXX
*** JTN06RE-XX-XXX




**Commercial** **Military**
* JT06RP-XX-XXX **MS27473P**
** JTS06RP-XX-XXX
*** JTN06RP-XX-XXX




**Commercial** **Military**
* JT06RT-XX-XXX **MS27473T**
** JTS06RT-XX-XXX
*** JTN06RT-XX-XXX

* Standard Junior Tri-Lock
** High temperature version
***Clear iridite finish (gold color), $N_2O_4$ resistant

| Shell Size | F Dia. | F¹ Dia. +.001 –.025 | L Max. | L¹ Max. | L² Max. | L³ Max. | Q Dia Max. | V Thread Modified | | KK Dia. Max. | KK¹ Max. | KK² Dia. Max. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Class 2A UNEF | Modified Major Dia. | | | |
| 8 | .444 | .125 | 1.562 | 1.000 | .938 | .891 | .734 | .4375-28 | .421 – .417 | .625 | .812 | .578 |
| 10 | .558 | .188 | 1.562 | 1.000 | .938 | .891 | .844 | .5625-24 | .542 – .538 | .750 | .875 | .703 |
| 12 | .683 | .312 | 1.562 | 1.000 | .938 | .891 | 1.016 | .6875-24 | .667 – .663 | .875 | 1.000 | .828 |
| 14 | .808 | .375 | 1.812 | 1.000 | .938 | .891 | 1.141 | .8125-20 | .791 – .787 | 1.000 | 1.125 | .953 |
| 16 | .909 | .500 | 1.812 | 1.000 | .938 | .891 | 1.265 | .9375-20 | .916 – .912 | 1.125 | 1.188 | 1.078 |
| 18 | 1.034 | .625 | 1.812 | 1.000 | .938 | .891 | 1.391 | 1.0625-18 | 1.034 – 1.030 | 1.250 | 1.438 | 1.203 |
| 20 | 1.159 | .625 | 1.812 | 1.000 | .938 | .891 | 1.500 | 1.1875-18 | 1.158 – 1.154 | 1.375 | 1.438 | 1.328 |
| 22 | 1.284 | .750 | 1.938 | 1.000 | .938 | .891 | 1.625 | 1.3125-18 | 1.283 – 1.279 | 1.500 | 1.625 | 1.453 |
| 24 | 1.409 | .800 | 1.938 | 1.062 | .938 | .891 | 1.750 | 1.4375-18 | 1.408 – 1.404 | 1.625 | 1.719 | 1.578 |

All dimensions for reference only.

# Straight Plug (With Grounding Fingers) - Crimp

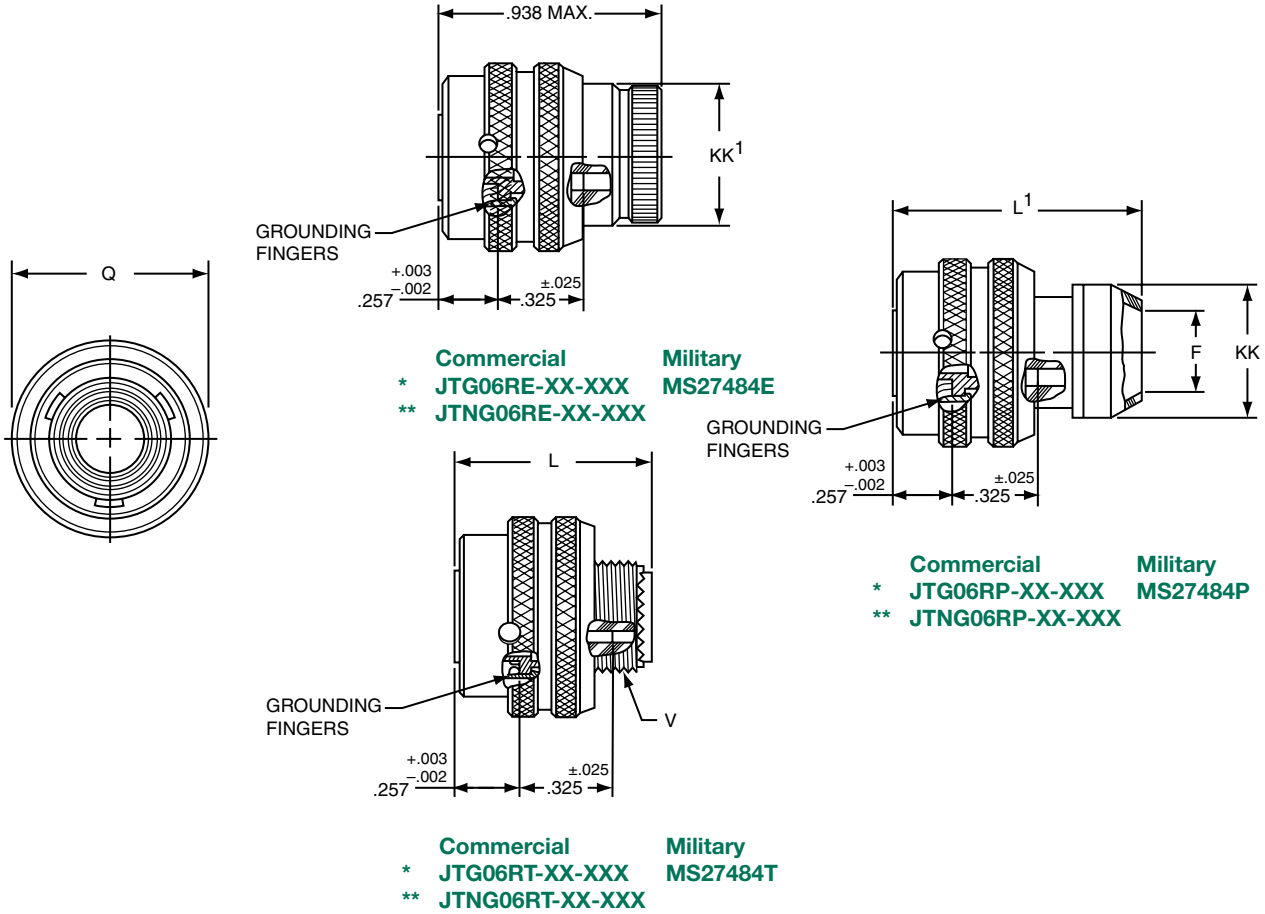
## Military (MS27484), Commercial (JTG06 & JTNG06)

PART NUMBER BUILDER Page 86-90

**MILITARY**
**MS27484E**
**MS27484P**
**MS27484T**

Commercial

**JTG06RE, JTG06RP, JTG02RT**
**JTNG06RE, JTNG06RP, JTNG06RT**




| | Commercial | Military |
|---|---|---|
| * | JTG06RE-XX-XXX | MS27484E |
| ** | JTNG06RE-XX-XXX | |

| | Commercial | Military |
|---|---|---|
| * | JTG06RP-XX-XXX | MS27484P |
| ** | JTNG06RP-XX-XXX | |

| | Commercial | Military |
|---|---|---|
| * | JTG06RT-XX-XXX | MS27484T |
| ** | JTNG06RT-XX-XXX | |

* Plug with grounding fingers
** Clear iridite finish (gold color), N2O4 resistant

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

All dimensions for reference only.

# 90° Plug - Crimp

## Military (MS27500), Commercial (JT08R, JTS08 & JTN08)

Amphenol Aerospace

PART NUMBER BUILDER Page 86-90

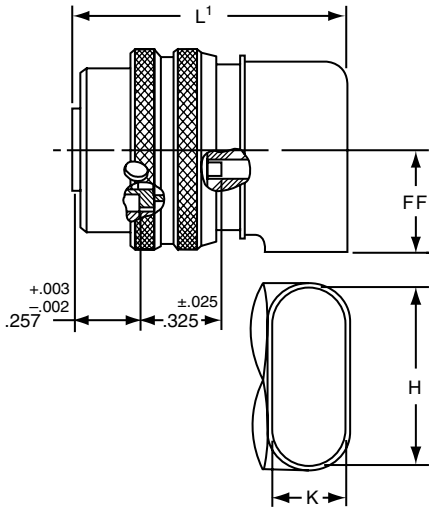
**MILITARY**
**MS27500E**

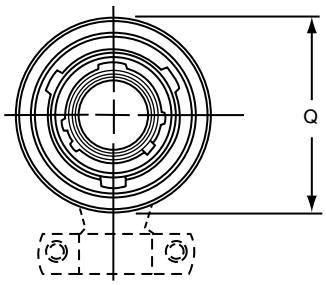
Commercial

**JT08RE, JT08RP**
**JTS08RE, JT0S8RP**
**JTN08RE, JTN08RP**

**Commercial**

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



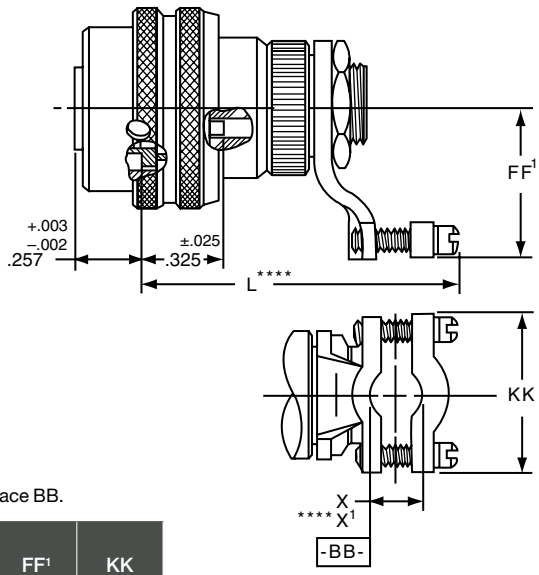




**Commercial**

* JT08RE-XX-XXX
** JTS08RE-XX-XXX
*** JTN08RE-XX-XXX

**Military**

**MS27500E**




* Standard Junior Tri-Lock
** High temperature version
*** Clear iridite finish (gold color), $N_2O_4$ resistant
**** Dimensions L and X¹ are applicable when the end of the screw is flush with the surface BB.

| Shell Size | H ±.010 | K ±.010 | L Max. | L¹ Max. | Q Dia. Max. | X Min. Cable | X¹ Max. Cable | FF Max. | FF¹ Max. | KK Max. |
|---|---|---|---|---|---|---|---|---|---|---|
| 8 | .547 | .156 | 1.578 | 1.125 | .734 | .082 | .234 | .438 | .984 | .755 |
| 10 | .709 | .188 | 1.578 | 1.156 | .844 | .082 | .234 | .516 | 1.016 | .755 |
| 12 | .829 | .281 | 1.656 | 1.250 | 1.016 | .114 | .328 | .594 | 1.078 | .817 |
| 14 | 1.000 | .438 | 1.844 | 1.406 | 1.141 | .176 | .457 | .656 | 1.203 | .943 |
| 16 | 1.021 | .500 | 2.000 | 1.469 | 1.265 | .238 | .634 | .719 | 1.265 | 1.067 |
| 18 | 1.145 | .562 | 2.046 | 1.531 | 1.391 | .208 | .614 | .781 | 1.328 | 1.149 |
| 20 | 1.270 | .625 | 2.125 | 1.594 | 1.500 | .302 | .608 | .844 | 1.359 | 1.399 |
| 22 | 1.395 | .688 | 2.250 | 1.656 | 1.625 | .302 | .823 | .906 | 1.421 | 1.399 |
| 24 | 1.520 | .750 | 2.422 | 1.797 | 1.750 | .332 | .853 | .969 | 1.703 | 1.587 |

All dimensions for reference only.

# Wall Mounting Receptacle -Hermetic

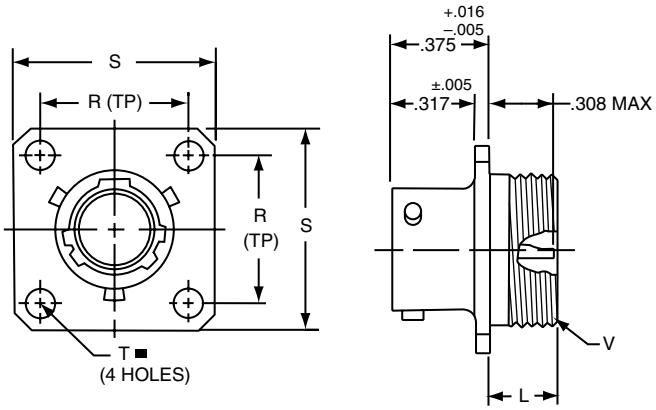
## Military (MS27475 & MS27482), Commercial (JT00 & JTS00)

PART NUMBER BUILDER Page 86-90

**MILITARY**
**MS27475Y**
**MS27482Y**

Commercial

**JT00H, JT00Y**
**JTS00Y**




■ ⊖ .005 DIA Ⓜ

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

| Commercial | Military |
|---|---|
| * JT00H-XX-XXX | |
| ** JT00Y-XX-XXX | MS27475YXXDXXX |
| *** JTS00Y-XX-XXX | MS27482YXXEXXX |

* Standard Junior Tri-Lock
** Interfacial seal wafer
*** High temperature version, interfacial seal wafer with stainless steel shell

# Box Mounting Receptacle - Hermetic

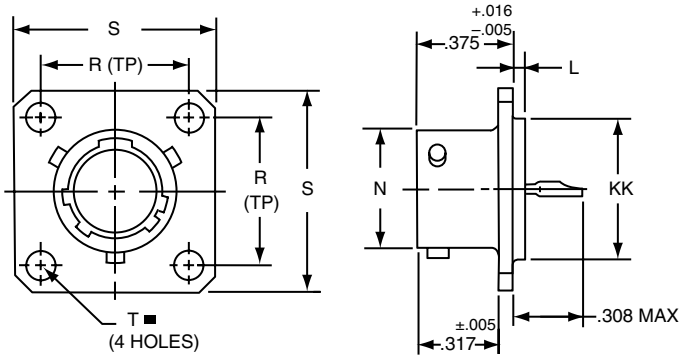
## Military (MS27476), Commercial (JT02 & JTS02)

PART NUMBER BUILDER Page 86-90

**MILITARY**
**MS27476Y**

Commercial

**JT02H, JT02Y**
**JTS02Y**




■ ⊕ .005 DIA Ⓜ

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

| Commercial | Military |
|---|---|
| * JT02H-XX-XXX | |
| ** JT02Y-XX-XXX | MS27476YXXDXXX |
| *** JTS02Y-XX-XXX | MS27476YXXEXXX |

* Standard Junior Tri-Lock
** Interfacial seal wafer
*** High temperature version, interfacial seal wafer with stainless steel shell

All dimensions for reference only.

# Jam Nut Receptacle - Hermetic

## Military (MS27477 & MS27483), Commercial (JT07 & JTS07)

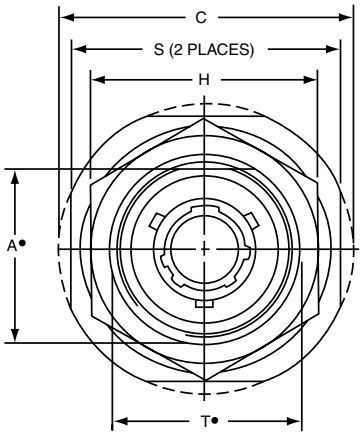


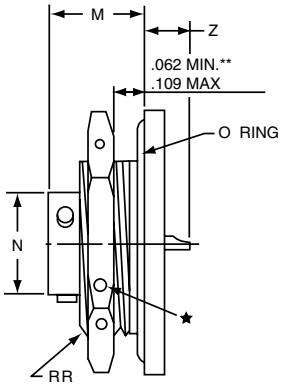
**PART NUMBER BUILDER Page 86-90**

**MILITARY**
**MS27477Y**
**MS27483Y**

Commercial

**JT07H, JT07Y**
**JTS07Y**




* Standard Junior Tri-Lock
★ .059 Dia. Min. 3 lockwire holes. Formed lockwire hole design (6 holes) is optional.
\+ "D" shaped mounting hole dimensions.
** Panel Thickness
*** Interfacial seal wafer
**** High temperature version, interfacial seal wafer with stainless steel shell

**Commercial**

*** JT07H-XX-XXX**
***** JT07Y-XX-XX**
******JTS07Y-XX-XXX**

**Military**

**MS27477YXXDXXX**
**MS27483YXXEXXX**

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

# Solder Mounting Receptacle - Hermetic

## Military (MS27478 & MS27503), Commercial (JTI & JTSI)

**PART NUMBER BUILDER Page 86-90**

**MILITARY**
**MS27478Y**
**MS27503Y**

Commercial

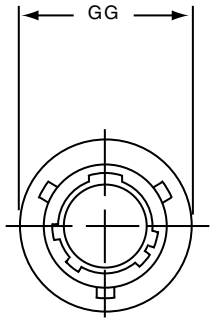
**JTIH, JTIY**
**JTSIY**

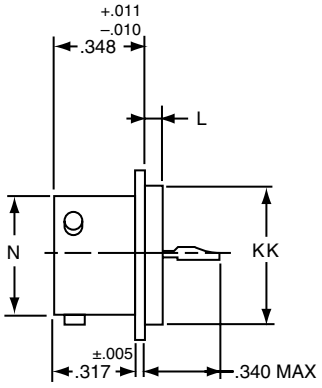
**Commercial**

*** JTIH-XX-XXX**
**** JTIY-XX-XX**
***** JTSIY-XX-XXX**

**Military**

**MS27478YXXDXXX**
**MS27503YXXEXXX**




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

* Standard Junior Tri-Lock
** Interfacial seal wafer
*** High temperature version, interfacial seal wafer with stainless steel shell

All dimensions for reference only. Weld mounting hermetic receptacle also available. Consult Amphenol Aerospace for availability and dimensions.

# Wall Mounting Receptacle - Solder

## Military (MS27334), Commercial (JT00 & JTN00)

**Military qualified to MIL-DTL-27599**

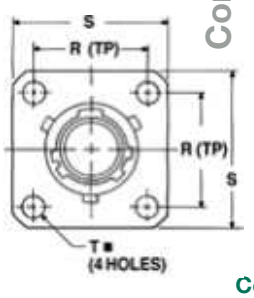
PART NUMBER BUILDER Page 86-90

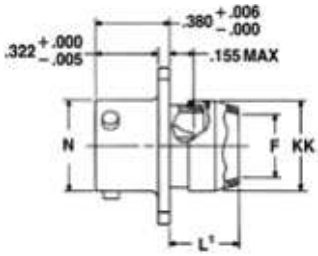
**MILITARY**
**MS27334P**
**MS27334T**

Commercial

**JT00A, JT00C, JT00P**
**JTN00A, JTN00C, JTN00P**

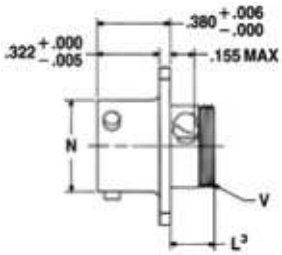
* Standard Junior Tri-Lock
NOTE: For availability of back panel mounting types, consult Amphenol Aerospace.



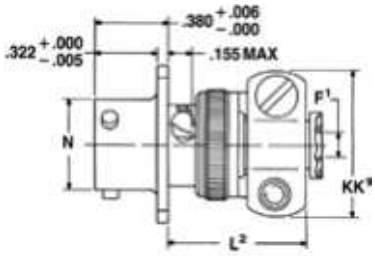

**Commercial**
***JT00P-XX-XXX**
***JTN00P-XX-XXX**

**Military**
**MS27334P**




**Commercial**
***JT00A-XX-XXX**
***JT00C-XX-XXX**
***JTN00A-XX-XXX**
***JTN00C-XX-XXX**

**Military**
**MS27334T**




**Commercial**
***JT00A-XX-XXX(SR)**
***JTN00A-XX-XXX(SR)**
***JTN00C-XX-XXX(SR)**

■ Ⓢ .005 DIA Ⓜ

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

# Box Mounting Receptacle - Solder

## Military (MS27335), Commercial (JT02 & JTN02)

**Military qualified to MIL-DTL-27599**

PART NUMBER BUILDER Page 86-90

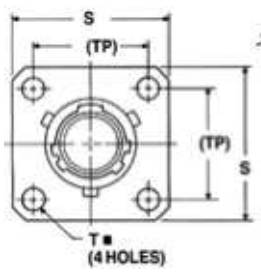
**MILITARY**
**MS27335T**

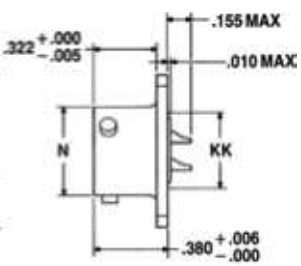
Commercial

**JT02A, JT02C, JT02P**
**JTN02A, JTN02C, JTN02P**

* Standard Junior Tri-Lock
NOTE: For availability of back panel mounting types, consult Amphenol Aerospace.

■ Ⓢ .005 DIA Ⓜ




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

All dimensions for reference only.

# Straight Plug - Solder

## Military (MS27336), Commercial (JT06 & JTN06)

Amphenol Aerospace

**Military qualified to MIL-DTL-27599**



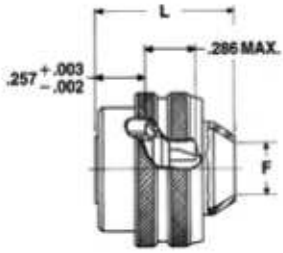
PART NUMBER BUILDER Page 86-90

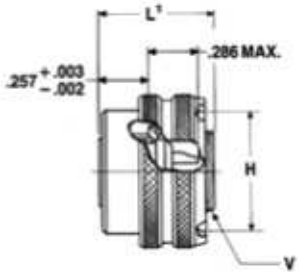
**MILITARY**
**MS27336P**
**MS27336T**

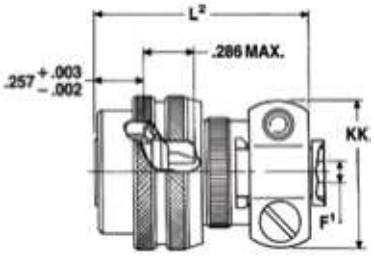
Commercial

**JT06A, JT06P**
**JTN06A, JTN06P**




*Standard Junior Tri-Lock

**Commercial**
***JT06P-XX-XXX**
***JTN06P-XX-XXX**

**Military**
**MS27336P**

**Commercial**
***JT06A-XX-XXX**
***JTN06A-XX-XXX**

**Military**
**MS27336T**

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

| Shell Size | F Min. | F+.010 –.025 | H +.010 –.001 | L Max. | LMax. | LMax. | Q Max. | V Thread Modified | | KK Max. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Size Class 2A | Modified Major Dia. | |
| 8 | .312 | .125 | .635 | .812 | .625 | 1.109 | .734 | .4375-28UNEF | .421 - .417 | .812 |
| 10 | .429 | .188 | .734 | .812 | .625 | 1.109 | .844 | .5625-24UNEF | .542 - .538 | .875 |
| 12 | .543 | .312 | .870 | .812 | .625 | 1.109 | 1.016 | .6875-24UNEF | .667 - .663 | 1.000 |
| 14 | .668 | .375 | .996 | .812 | .625 | 1.172 | 1.141 | .8125-20UNEF | .791 - .787 | 1.125 |
| 16 | .793 | .500 | 1.122 | .828 | .625 | 1.172 | 1.265 | .9375-20UNEF | .916 - .912 | 1.188 |
| 18 | .894 | .625 | 1.246 | .828 | .625 | 1.172 | 1.391 | 1.0625-18UNEF | 1.034 - 1.030 | 1.438 |
| 20 | 1.019 | .625 | 1.372 | .828 | .625 | 1.234 | 1.500 | 1.1875-18UNEF | 1.158 - 1.154 | 1.438 |
| 22 | 1.144 | .750 | 1.496 | .828 | .625 | 1.234 | 1.625 | 1.3125-18UNEF | 1.283 - 1.279 | 1.625 |
| 24 | 1.269 | .800 | 1.622 | .906 | .688 | 1.297 | 1.750 | 1.4375-18UNEF | 1.408 - 1.404 | 1.719 |

# Straight Plug (With Grounding Ring)

## Commercial (JTG06 & JTNG06)

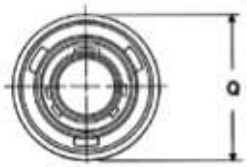
**Military qualified to MIL-DTL-27599**

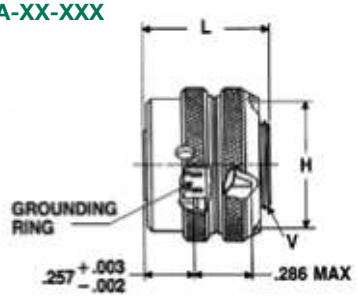
PART NUMBER BUILDER Page 86-90

Commercial

**JTG06A**
**JTNG06A**

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




* Plug with grounding fingers

** Coupling nut is clear iridite finish (gold color), shell and grounding fingers are gold plated N2O4 resistant.

| Shell Size | H Dia. +.010 –.001 | L Max. | Q Dia. Max. | V Thread Modified | |
|---|---|---|---|---|---|
| | | | | Size Class 2A | Modified Major Dia. |
| 8 | .635 | .625 | .734 | .4375-28UNEF | .421 - .417 |
| 10 | .734 | .625 | .844 | .5625-24UNEF | .542 - .538 |
| 12 | .870 | .625 | 1.016 | .6875-24UNEF | .667 - .663 |
| 14 | .996 | .625 | 1.141 | .8125-20UNEF | .791 - .787 |
| 16 | 1.122 | .625 | 1.265 | .9375-20UNEF | .916 - .912 |
| 18 | 1.246 | .625 | 1.391 | 1.0625-18UNEF | 1.034 - 1.030 |
| 20 | 1.372 | .625 | 1.500 | 1.1875-18UNEF | 1.158 - 1.154 |
| 22 | 1.496 | .625 | 1.625 | 1.3125-18UNEF | 1.283 - 1.279 |
| 24 | 1.622 | .688 | 1.750 | 1.4375-18UNEF | 1.408 - 1.404 |

All dimensions for reference only.

# Jam Mounting Receptacle - Solder

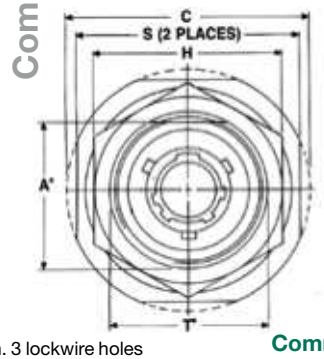
## Military (MS27337), Commercial (JT07 & JTN07)

**Military qualified to MIL-DTL-27599**

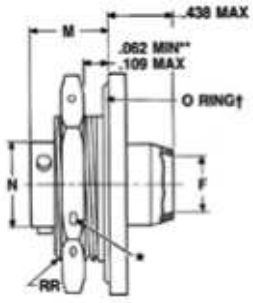
PART NUMBER BUILDER Page 86-90

**MILITARY**
**MS27337P**

Commercial
**JT07A, JT07C, JT07P**
**JTN07A, JTN07C, JTN07P**

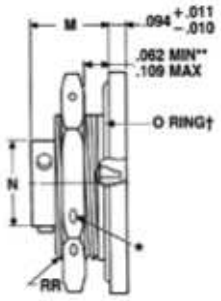



H .059 dia. min. 3 lockwire holes
+ "D" shaped mounting hole dimensions.
* Standard Junior Tri-Lock
** Panel thickness
† O Ring not furnished with MS27337

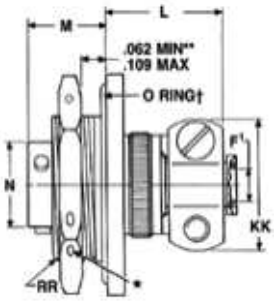



**Commercial**
***JT07P-XX-XXX**
***JTN07P-XX-XXX**

**Military**
**MS27337P**




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




**Commercial**
***JT07A-XX-XXX(SR)**
***JTN07A-XX-XXX(SR)**
***JTN07C-XX-XXX(SR)**

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

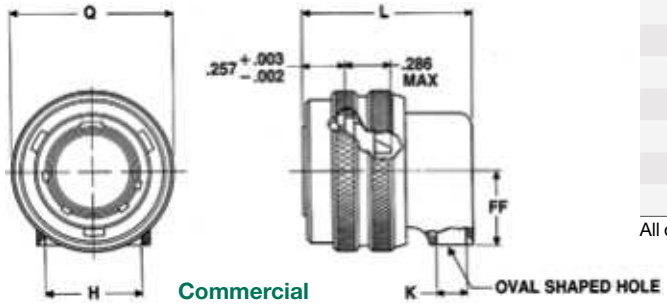
# 90° Plug - Solder

## Commercial (JT08 & JTN08)

**Military qualified to MIL-DTL-27599**

PART NUMBER BUILDER Page 86-90

Commercial
**JT08P**
**JTN08P**




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

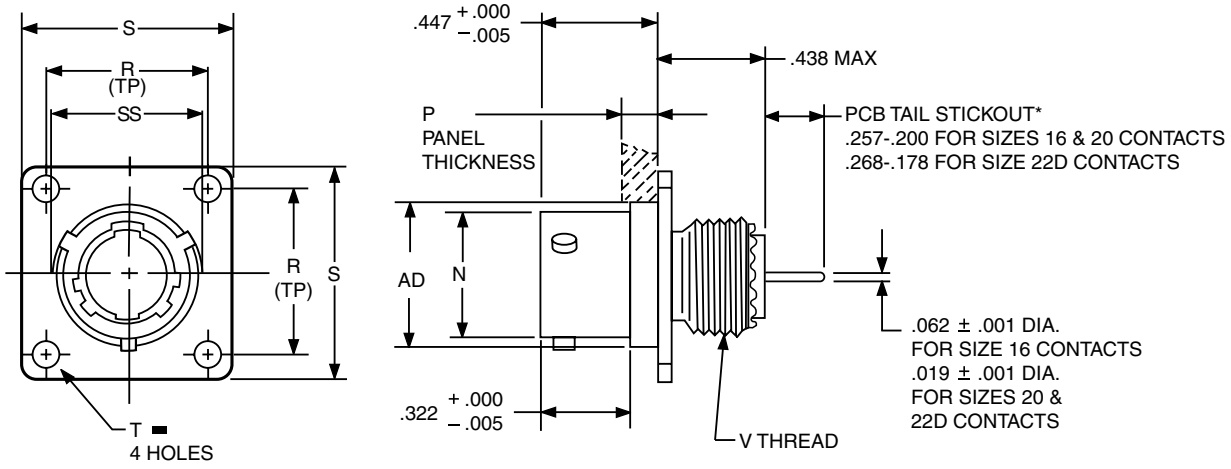
| Shell Size | H Min. | K Min. | L Max. | Q Max. | FF Max. |
|---|---|---|---|---|---|
| 8 | .396 | .126 | .891 | .734 | .391 |
| 10 | .532 | .141 | .906 | .844 | .438 |
| 12 | .694 | .173 | .938 | 1.016 | .516 |
| 14 | .814 | .266 | 1.031 | 1.141 | .594 |
| 16 | .985 | .423 | 1.188 | 1.265 | .656 |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

All dimensions for reference only.

# PCB Wall Mounting Receptacle

## Commercial (JTPQ00R)

Amphenol Aerospace




| | 1. | 2. | 3. | 4. | 5. |
|---|---|---|---|---|---|
| **PART #** See chart below | Shell Finish | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/Alt. Keying |
| | 88/91 | 569 | 73X | - 35 | P |

## HOW TO ORDER

### 1. SELECT A SHELL FINISH:

| | |
|---|---|
| **88** | Designates olive drab cadmium plated connector shell |
| **91** | Designates electroless nickel plated connector shell |

Consult Amphenol Aerospace for ordering of composite styles.

### 2. BASE NUMBER:

| | |
|---|---|
| **569** | Base Number |

### 3. SELECT A CODED SHELL SIZE:

See chart below **731-739**, designates size 9-25 shell size.
Example: **731** = Size 9 Shell

### 4. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 5. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 90 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

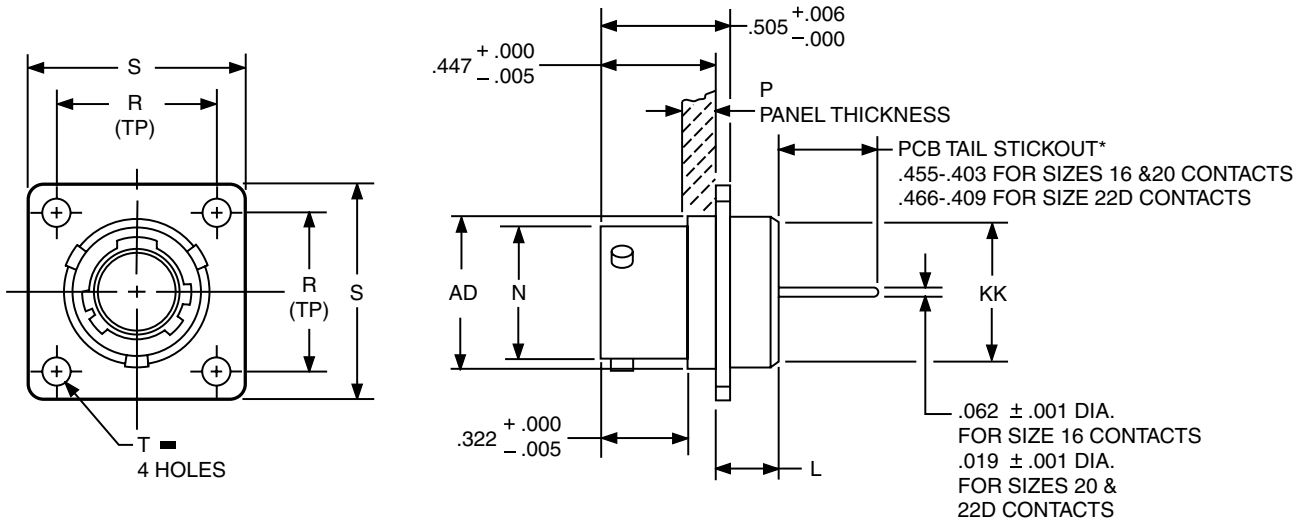
▬ Ⓟ .005 DIA Ⓜ

| Shell Size | Coded Shell Size | N +.001 −.005 | P Max. Panel Thickness | R (TP) | S ±.016 | T Dia. ±.005 | V Thread Class 2A (Plated) | AD Dia. ±.005 | SS Dia. +.000 −.016 |
|---|---|---|---|---|---|---|---|---|---|
| 8 | **731** | .473 | .142 | .594 | .812 | .120 | .4375-28 UNEF | .516 | .563 |
| 10 | **732** | .590 | .142 | .719 | .938 | .120 | .5625-24 UNEF | .633 | .680 |
| 12 | **733** | .750 | .142 | .812 | 1.031 | .120 | .6875-24 UNEF | .802 | .859 |
| 14 | **734** | .875 | .142 | .906 | 1.125 | .120 | .8125-20 UNEF | .927 | .984 |
| 16 | **735** | 1.000 | .142 | .969 | 1.219 | .120 | .9375-20 UNEF | 1.052 | 1.108 |
| 18 | **736** | 1.125 | .142 | 1.062 | 1.312 | .120 | 1.0625-18 UNEF | 1.177 | 1.233 |
| 20 | **737** | 1.250 | .142 | 1.156 | 1.438 | .120 | 1.1875-18 UNEF | 1.302 | 1.358 |
| 22 | **738** | 1.375 | .142 | 1.250 | 1.562 | .120 | 1.3125-18 UNEF | 1.427 | 1.483 |
| 24 | **739** | 1.500 | .142 | 1.375 | 1.688 | .147 | 1.4375-18 UNEF | 1.552 | 1.610 |

All dimensions for reference only. Most common options are shown; other options are available.

# PCB Box Mounting Receptacle (Back Panel Mounting)

## Commercial (JTP02R)




| | 1. | 2. | 3. | 4. | 5. |
|---|---|---|---|---|---|
| **PART #** See chart below | Shell Finish | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/Alt. Keying |
| | 88/91 | 569 | 74X | - 35 | P |

## HOW TO ORDER

### 1. SELECT A SHELL FINISH:

| | |
|---|---|
| **88** | Designates olive drab cadmium plated connector shell |
| **91** | Designates electroless nickel plated connector shell |

Consult Amphenol Aerospace for ordering of composite styles.

### 2. BASE NUMBER:

| | |
|---|---|
| **569** | Base Number |

### 3. SELECT A CODED SHELL SIZE:

See chart below **741-749**, designates size 9-25 shell size.
Example: **741** = Size 9 Shell

### 4. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 5. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 90 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

▬ ⊕ .005 DIA Ⓜ

| Shell Size | Coded Shell Size | L Max. | N +.001 −.005 | P Max. Panel Thickness | R (TP) | S ±.016 | T Dia. ±.005 | AD Dia. ±.005 | KK Dia. Max. |
|---|---|---|---|---|---|---|---|---|---|
| 8 | **741** | .225 | .473 | .147 | .594 | .812 | .120 | .516 | .531 |
| 10 | **742** | .225 | .590 | .152 | .719 | .938 | .120 | .633 | .656 |
| 12 | **743** | .225 | .750 | .152 | .812 | 1.031 | .120 | .802 | .828 |
| 14 | **744** | .225 | .875 | .152 | .906 | 1.125 | .120 | .927 | .953 |
| 16 | **745** | .225 | 1.000 | .152 | .969 | 1.219 | .120 | 1.052 | 1.078 |
| 18 | **746** | .225 | 1.125 | .152 | 1.062 | 1.312 | .120 | 1.177 | 1.203 |
| 20 | **747** | .225 | 1.250 | .179 | 1.156 | 1.438 | .120 | 1.302 | 1.328 |
| 22 | **748** | .225 | 1.375 | .179 | 1.250 | 1.562 | .120 | 1.427 | 1.453 |
| 24 | **749** | .225 | 1.500 | .169 | 1.375 | 1.688 | .147 | 1.552 | 1.578 |

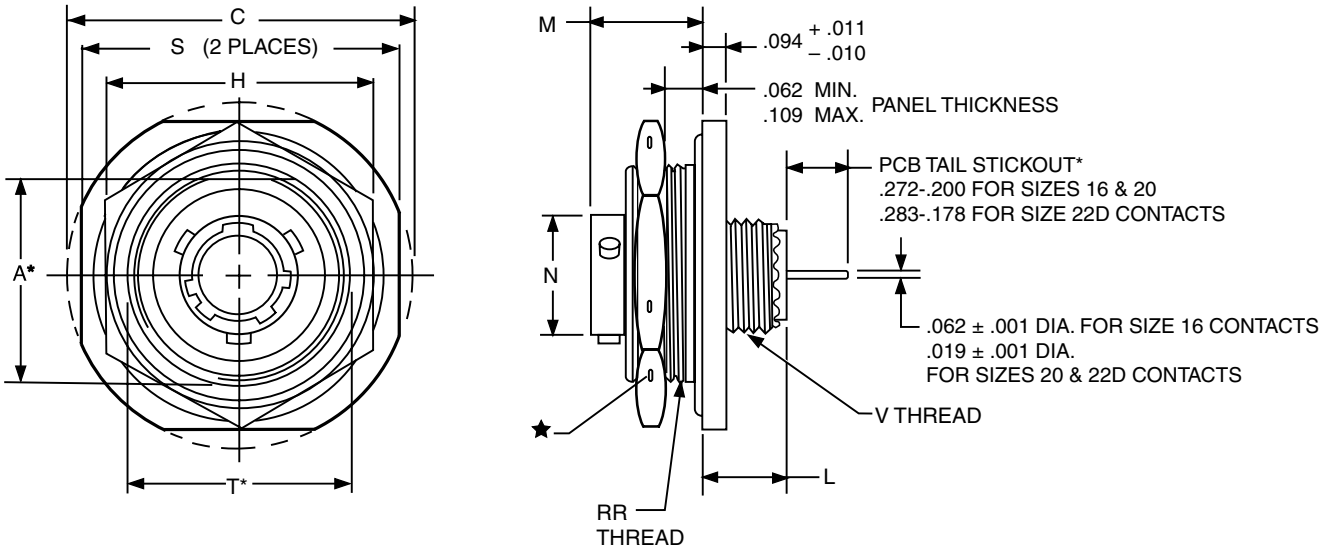
All dimensions for reference only. Most common options are shown; other options are available

# PCB Jam Nut Receptacle

## Commercial (JT07)

Amphenol Aerospace






| | 1. | 2. | 3. | 4. | 5. |
|---|---|---|---|---|---|
| **PART #** See chart below | Shell Finish | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/Alt. Keying |
| | 88/91 | 569 | 75X | - 35 | P |

## HOW TO ORDER

### 1. SELECT A SHELL FINISH:

| | |
|---|---|
| **88** | Designates olive drab cadmium plated connector shell |
| **91** | Designates electroless nickel plated connector shell |

Consult Amphenol Aerospace for ordering of composite styles.

### 2. BASE NUMBER:

| | |
|---|---|
| **569** | Base Number |

### 3. SELECT A CODED SHELL SIZE:

See chart below **751-759**, designates size 9-25 shell size.
Example: **751** = Size 9 Shell

### 4. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 5. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 90 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

| Shell Size | Coded Shell Size | A* +.000 –.010 | C Max. | H Hex +.017 –.016 | L Max. | M ±.005 | N +.001 –.005 | S ±.016 | T* +.010 –.000 | V Thread Class 2A (Plated) | RR Thread Class 2A (Plated) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | **751** | .830 | 1.390 | 1.062 | .453 | .438 | .473 | 1.250 | .884 | .4375-28 UNEF | .8750-20 UNEF |
| 10 | **752** | .955 | 1.515 | 1.188 | .453 | .438 | .590 | 1.375 | 1.007 | .5625-24 UNEF | 1.0000-20 UNEF |
| 12 | **753** | 1.084 | 1.640 | 1.312 | .453 | .438 | .750 | 1.500 | 1.134 | .6875-24 UNEF | 1.1250-18 UNEF |
| 14 | **754** | 1.208 | 1.765 | 1.438 | .453 | .438 | .875 | 1.625 | 1.259 | .8125-20 UNEF | 1.2500-18 UNEF |
| 16 | **755** | 1.333 | 1.953 | 1.562 | .453 | .438 | 1.000 | 1.781 | 1.384 | .9375-20 UNEF | 1.3750-18 UNEF |
| 18 | **756** | 1.459 | 2.031 | 1.688 | .453 | .438 | 1.125 | 1.890 | 1.507 | 1.0625-18 UNEF | 1.5000-18 UNEF |
| 20 | **757** | 1.576 | 2.156 | 1.812 | .422 | .464 | 1.250 | 2.016 | 1.634 | 1.1875-18 UNEF | 1.6250-18 UNEF |
| 22 | **758** | 1.701 | 2.280 | 2.000 | .422 | .464 | 1.375 | 2.140 | 1.759 | 1.3125-18 UNEF | 1.7500-18 UNS |
| 24 | **759** | 1.826 | 2.405 | 2.125 | .422 | .464 | 1.500 | 2.265 | 1.884 | 1.4375-18 UNEF | 1.8750-16 UN |

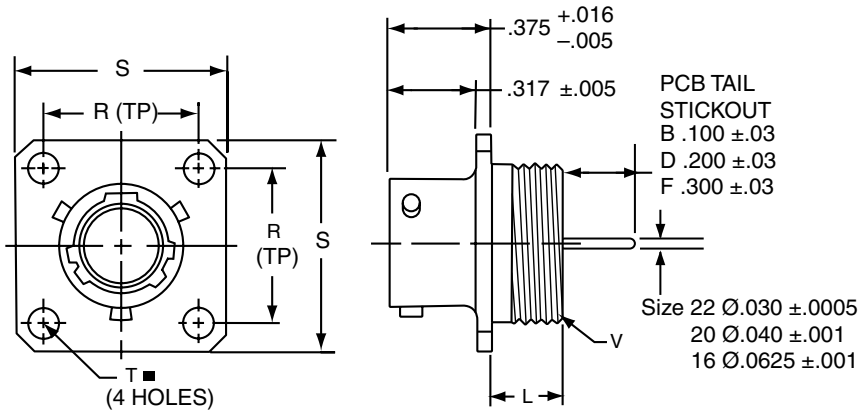
All dimensions for reference only.
Most common options are shown; other options are available

★ .059 dia. min. 3 lockwire holes.
Formed lockwire hole design (6 holes) is optional.

* "D" shaped mounting hole dimensions

# PCB Wall Mounting Receptacle Hermetic

## Commercial (JT00)




| | 1. | 2. | 3. | 4. | 5. | 6. |
|---|---|---|---|---|---|---|
| **PART #** See chart below | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/ Alt. Keying Position | Shell Finish | Tail Length |
| | 10-626 | 431 | -35 | P | 1 | B |

## HOW TO ORDER

### 1. BASE NUMBER:

| | |
|---|---|
| **10-626** | Base Number for MIL-DTL-38999 Series III Hermetic with PCB Tail |

### 2. SELECT A CODED SHELL SIZE:

See chart below **431-439**, designates size 9-25 shell size.

### 3. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 4. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 90 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

### 5. SELECT A SHELL FINISH:

| | |
|---|---|
| **1** | Hermetic seal, passivated Stainless Steel, 200°C |
| **2** | Hermetic seal, Stainless Steel w/Nickel Plate |
| **3** | Carbon Steel w/reflowed tin plate |

### 6. SELECT A TAIL LENGTH:

| | |
|---|---|
| **B** | .100±.03 |
| **D** | .200±.03 |
| **F** | .300±.03 |

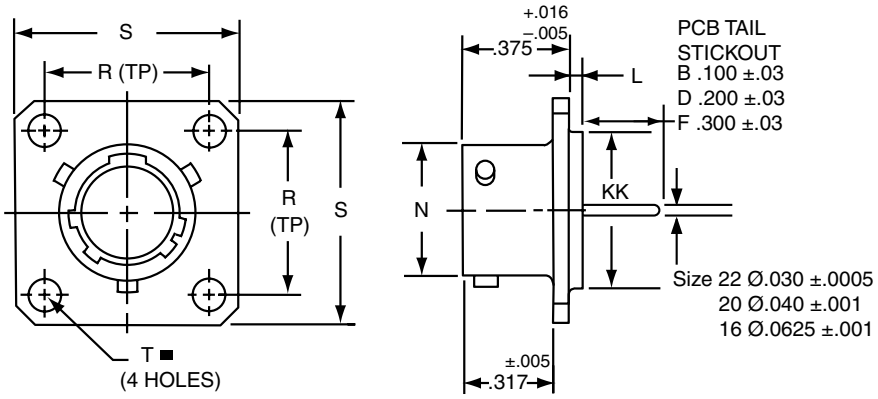
▬ ⌖ .005 DIA Ⓜ

| Shell Size | Part Number | L Max. | N +.001 –.005 | R (TP) | S ±.016 | T ±.005 | V Thread Class 2A |
|---|---|---|---|---|---|---|---|
| 8 | 10-626**431**-XXX | .234 | .473 | .594 | .812 | .120 | .5625-24UNEF |
| 10 | **432**-XXX | .234 | .590 | .719 | .938 | .120 | .6875-24UNEF |
| 12 | **433**-XXX | .234 | .750 | .812 | 1.031 | .120 | .8125-20UNEF |
| 14 | **434**-XXX | .234 | .875 | .906 | 1.125 | .120 | .9375-20UNEF |
| 16 | **435**-XXX | .234 | 1.000 | .969 | 1.219 | .120 | 1.0625-18UNEF |
| 18 | **436**-XXX | .234 | 1.125 | 1.062 | 1.312 | .120 | 1.1875-18UNEF |
| 20 | **437**-XXX | .234 | 1.250 | 1.156 | 1.438 | .120 | 1.3125-18UNEF |
| 22 | **438**-XXX | .234 | 1.375 | 1.250 | 1.562 | .120 | 1.4375-18UNEF |
| 24 | **439**-XXX | .313 | 1.500 | 1.375 | 1.688 | .147 | 1.5625-18UNEF |

# PCB Box Mounting Receptacle Hermetic

## Commercial JT02

Amphenol Aerospace




| | 1. | 2. | 3. | 4. | 5. | 6. |
|---|---|---|---|---|---|---|
| **PART #** See chart below | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/ Alt. Keying Position | Shell Finish | Tail Length |
| | 10-626 | 46 | -35 | P | 1 | B |

## HOW TO ORDER

### 1. BASE NUMBER:

| | |
|---|---|
| **10-626** | Base Number for MIL-DTL-38999 Series III Hermetic with PCB Tail |

### 2. SELECT A CODED SHELL SIZE:

See chart below **461-469**, designates size 9-25 shell size.

### 3. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 4. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 90 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

### 5. SELECT A SHELL FINISH:

| | |
|---|---|
| **1** | Hermetic seal, passivated Stainless Steel, 200°C |
| **2** | Hermetic seal, Stainless Steel w/Nickel Plate |
| **3** | Carbon Steel w/reflowed tin plate |

### 6. SELECT A TAIL LENGTH:

| | |
|---|---|
| **B** | .100±.03 |
| **D** | .200±.03 |
| **F** | .300±.03 |

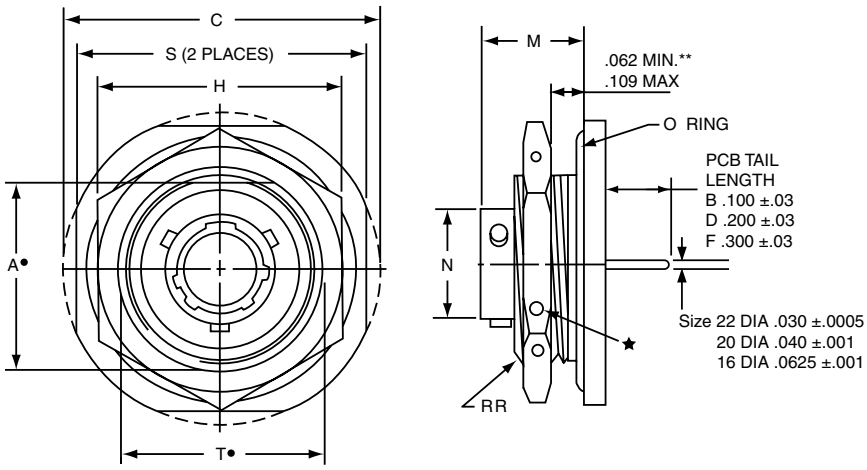
■ ⌖ .005 DIA Ⓜ

| Shell Size | Part Number | L +.006 −.015 | N +.001 −.005 | R (TP) | S ±.016 | T ±.005 | KK +.001 −.005 |
|---|---|---|---|---|---|---|---|
| 8 | 10-626**461**-XXX | .051 | .473 | .594 | .812 | .120 | .562 |
| 10 | **462**-XXX | .051 | .590 | .719 | .938 | .120 | .672 |
| 12 | **463**-XXX | .051 | .750 | .812 | 1.031 | .120 | .781 |
| 14 | **464**-XXX | .051 | .875 | .906 | 1.125 | .120 | .906 |
| 16 | **465**-XXX | .051 | 1.000 | .969 | 1.219 | .120 | 1.031 |
| 18 | **466**-XXX | .051 | 1.125 | 1.062 | 1.312 | .120 | 1.156 |
| 20 | **467**-XXX | .051 | 1.250 | 1.156 | 1.438 | .120 | 1.250 |
| 22 | **468**-XXX | .080 | 1.375 | 1.250 | 1.562 | .120 | 1.375 |
| 24 | **469**-XXX | .080 | 1.500 | 1.375 | 1.688 | .147 | 1.500 |

All dimensions for reference only.

# PCB Jam Nut Receptacle Hermetic

## Commercial (JT07)




| | 1. | 2. | 3. | 4. | 5. | 6. |
|---|---|---|---|---|---|---|
| **PART #** See chart below | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/ Alt. Keying Position | Shell Finish | Tail Length |
| | 10-626 | 441 | -35 | P | 1 | B |

## HOW TO ORDER

### 1. BASE NUMBER:

| | |
|---|---|
| **10-626** | Base Number for MIL-DTL-38999 Series III Hermetic with PCB Tail |

### 2. SELECT A CODED SHELL SIZE:

See chart below **441-449**, designates size 9-25 shell size.

### 3. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 4. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 90 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

### 5. SELECT A SHELL FINISH:

| | |
|---|---|
| **1** | Hermetic seal, passivated Stainless Steel, 200°C |
| **2** | Hermetic seal, Stainless Steel w/Nickel Plate |
| **3** | Carbon Steel w/reflowed tin plate |

### 6. SELECT A TAIL LENGTH:

| | |
|---|---|
| **B** | .100±.03 |
| **D** | .200±.03 |
| **F** | .300±.03 |

| Shell Size | Part Number | A+ +.000 −.010 | C Max. | H +.017 −.016 | M ±.005 | N +.001 −.005 | S ±.016 | T+ +.010 −.000 | RR Thread Class 2A |
|---|---|---|---|---|---|---|---|---|---|
| 8 | 10-626**441**-XXX | .830 | 1.390 | 1.062 | .438 | .473 | 1.250 | .884 | .8750-20UNEF |
| 10 | **442**-XXX | .955 | 1.515 | 1.188 | .438 | .590 | 1.375 | 1.007 | 1.0000-20UNEF |
| 12 | **443**-XXX | 1.084 | 1.640 | 1.312 | .438 | .750 | 1.500 | 1.134 | 1.1250-18UNEF |
| 14 | **444**-XXX | 1.208 | 1.765 | 1.438 | .438 | .875 | 1.625 | 1.259 | 1.2500-18UNEF |
| 16 | **445**-XXX | 1.333 | 1.953 | 1.562 | .438 | 1.000 | 1.781 | 1.384 | 1.3750-18UNEF |
| 18 | **446**-XXX | 1.459 | 2.031 | 1.688 | .438 | 1.125 | 1.890 | 1.507 | 1.5000-18UNEF |
| 20 | **447**-XXX | 1.576 | 2.156 | 1.812 | .464 | 1.250 | 2.016 | 1.634 | 1.6250-18UNEF |
| 22 | **448**-XXX | 1.701 | 2.280 | 2.000 | .464 | 1.375 | 2.140 | 1.759 | 1.7500-18UNS |
| 24 | **449**-XXX | 1.826 | 2.405 | 2.125 | .464 | 1.500 | 2.265 | 1.884 | 1.8750-16UN |

★ .059 Dia. Min. 3 lockwire holes. Formed lockwire hole design (6 holes) is optional.

\+ "D" shaped mounting hole dimensions.

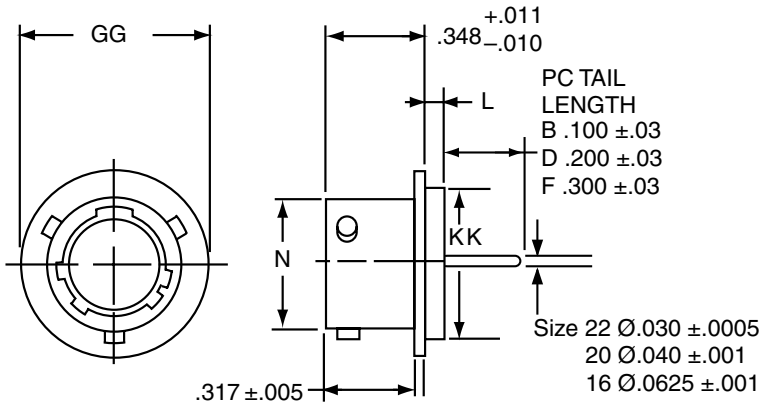
** Panel Thickness

All dimensions for reference only.

# PCB Solder Mounting Receptacle Hermetic

## Commercial (JTI)

Amphenol Aerospace




| | 1. | 2. | 3. | 4. | 5. | 6. |
|---|---|---|---|---|---|---|
| **PART #** See chart below | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/ Alt. Keying Position | Shell Finish | Tail Length |
| | 10-626 | 451 | -35 | P | 1 | B |

## HOW TO ORDER

### 1. BASE NUMBER:

| | |
|---|---|
| **10-626** | Base Number for MIL-DTL-38999 Series III Hermetic with PCB Tail |

### 2. SELECT A CODED SHELL SIZE:

See chart below **451-459**, designates size 9-25 shell size.

### 3. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 4. CONTACT TYPE/KEYING POSITIONS:

Refer to page 90 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

### 5. SELECT A SHELL FINISH:

| | |
|---|---|
| **1** | Hermetic seal, passivated Stainless Steel, 200°C |
| **2** | Hermetic seal, Stainless Steel w/Nickel Plate |
| **3** | Carbon Steel w/reflowed tin plate |

### 6. SELECT A TAIL LENGTH:

| | |
|---|---|
| **B** | .100±.03 |
| **D** | .200±.03 |
| **F** | .300±.03 |

| Shell Size | Part Number | L +.011 –.010 | N +.001 –.005 | GG +.011 –.010 | KK +.001 –.005 |
|---|---|---|---|---|---|
| 8 | 10-626**451**-XXX | .078 | .473 | .687 | .562 |
| 10 | **452**-XXX | .078 | .590 | .797 | .672 |
| 12 | **453**-XXX | .078 | .750 | .906 | .781 |
| 14 | **454**-XXX | .078 | .875 | 1.031 | .906 |
| 16 | **455**-XXX | .078 | 1.000 | 1.156 | 1.031 |
| 18 | **456**-XXX | .078 | 1.125 | 1.281 | 1.156 |
| 20 | **457**-XXX | .078 | 1.250 | 1.375 | 1.250 |
| 22 | **458**-XXX | .107 | 1.375 | 1.500 | 1.375 |
| 24 | **459**-XXX | .107 | 1.500 | 1.625 | 1.500 |

All dimensions for reference only.
Weld mounting hermetic receptacle also available.
Consult Amphenol Aerospace for availability and dimensions.

# MIL-DTL-38999/ 27599, Series I LJT

C



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C

# Military to Commercial Shell Style Conversion Table

Amphenol Aerospace

## How to Order (Military)

| MILITARY | DESCRIPTION | COMMERCIAL |
|---|---|---|
| MS27466 | Crimp Wall Mounting Receptacle | LJT00 |
| MS27656 | Crimp Wall Mounting Receptacle (Back Panel) | LJTPQ00 |
| MS27496 | Crimp Box Mounting Receptacle | LJT02, LJTP02 |
| MS27505 | Crimp Box Mounting Receptacle (Back Panel) | LJTP02 |
| MS27467 | Crimp Straight Plug | LJT06 |
| MS27468 | Crimp Jam Nut Receptacle | LJT07 |
| MS27469 | Hermetic Wall Mounting Receptacle | LJT00, LJTS00 |
| MS27470 | Hermetic Jam Nut Receptacle | LJT07, LJTS07 |
| MS27471 | Hermetic Solder Mounting Receptacle | LJTIH, LJTIY, LJTSIY |
| | MIL-DTL-27599 | |
| MS20026 | Solder Wall Mounting Receptacle | LJT00 |
| MS20027 | Solder Line Receptacle | LJT01 |
| MS20028 | Solder Straight Plug | LJT06 |
| MS20029 | Solder Jam Mounting Receptacle | LJT07 |



## HOW TO ORDER - MILITARY SERIES I

| 1. MS Number | 2. Service Class | 3. Shell Size | 4. Finishes | 5. Insert Arrangement | 6. Contact Style (P or S) | 7. Alternate Keying Position |
|---|---|---|---|---|---|---|
| MS27466 | E | 14 | A | 18 | P | A |

### 1. MS NUMBER SERIES I LJT

| | |
|---|---|
| MS27466 | Crimp Wall Mounting Receptacle |
| MS27656 | Crimp Wall Mounting Receptacle (Back Panel Mounting) |
| MS27496 | Crimp Box Mounting Receptacle |
| MS27505 | Crimp Box Mounting Receptacle (Back Panel Mounting) |
| MS27467 | Crimp Straight Plug |
| MS27468 | Crimp Jam Nut Receptacle |
| MS27469 | Hermetic Wall Mounting Receptacle |
| MS27470 | Hermetic Jam Nut Receptacle |
| MS27471 | Hermetic Solder Mounting Receptacle |
| MIL-DTL-27599 | |
| MS20026 | Solder Wall Mounting Receptacle |
| MS20027 | Solder Line Receptacle |
| MS20028 | Solder Straight Plug |
| MS20029 | Solder Jam Nut Receptacle |

### 2. SERVICE CLASS

| CRIMP | | SOLDER | | |
|---|---|---|---|---|
| WALL MOUNT (466) | BOX MOUNT (496) | WALL MOUNT (026) | JAM NUT (029) | |
| WALL MOUNT BPM (656) | BOX MOUNT BPM (505) | LINE (027) | | |
| STRAIGHT PLUG (467) | | STRAIGHT PLUG (028) | | |
| JAM NUT (468) | | | | |
| E | E | | | Environmental crimp applications. Box Mount versions using spacer grommets are not environmental. |
| P | | | P | Potting crimp applications. Supplied with spacer grommet and potting boot. |
| T | | T | | Environmental applications. Supplied without rear accessories. Design provides serrations on rear threads of shells. |

### 2. HERMETIC SERVICE CLASS

| | |
|---|---|
| WALL MOUNT (469) | |
| JAM NUT (470) | |
| SOLDER MOUNT (471) | |
| Y | Hermetically interfacial seal |

# MIL-DTL-38999/ 27599, Series I LJT

## How to Order (Military)

| 1. | 2. | 3. | 4. | 5. | 6. | 7. |
|---|---|---|---|---|---|---|
| MS Number | Service Class | Shell Size | Finishes | Insert Arrangement | Contact Style (P or S) | Alternate Keying Position |
| MS27466 | E | 15 | A | 18 | P | A |

### 3. SHELL SIZE

See table on page 2-5

Shell Size & Insert Arrangement are on pages 2-5. First number represents Shell Size, second number is the Insert Arrangement. Place Shell Size in box 3 and Insert Arrangement in box 5.

### 4. FINISHES

| Finish | Military Finish Data |
|---|---|
| Cadmium plated nickel base 175°C | A |
| Olive drab cadmium plate nickel base 175°C | B |
| Electroless nickel 200°C | F |
| Electroless nickel, space compatible 200°C | |
| Anodic coating (Alumilite) 200°C | C |
| Chromate treated (Iridite 14-2) 125°C | |
| Passivated steel 200°C | E |
| Nickel-PTFE 175°C | |
| **HERMETIC FINISHES** | |
| Carbon steel shell tin plated & contacts | D |
| Stainless steel shell passivated | E |
| Stainless steel nickel plated | N |

### 5. INSERT ARRANGEMENT

See table on page 2-5

### 6. CONTACTS

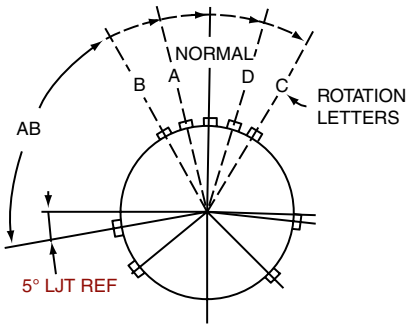
| | |
|---|---|
| P | Pin Contacts |
| S | Socket Contacts |

### 7. ALTERNATE KEYING POSITION

"A" designates Alternate keying connector assembly. Other basic alternate keys are "B", "C" and "D". No letter required for normal rotation (no rotation) position.

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. Only the master key/keyway rotates in the shell, and the minor keys are fixed. 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.

The "N" designation is not referenced in part number, it is omitted.




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

**LJT** 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° |

## How to Order (Commercial)

Amphenol Aerospace



| 1. Table & Style | 2. Service Class | 3. Shell Size -Insert Arrg. | 4. Contact Style (P or S) | 5. Alternate Keying Position | 6. Strain Relief/Finish Variation Suffix** |
|---|---|---|---|---|---|
| LJT00 | RT | 9-35 | P | B | (014) |

** If Required

| 1. CONNECTOR TYPE | |
|---|---|
| LJT | Long Junior Tri-Lock |
| LJTS | High Temperature Connector |
| LJTN | Chemical and Fuel Resistant |
| LJTPQ | Wall Mount Receptacle Back Panel |
| LJTPSQ | Wall Mount Receptacle Back Panel High Temperature |
| LJTPNQ | Wall Mount Receptacle Back Panel Chemical and Fuel Resistant |
| LJTP | Box Mount Receptacle Back Panel |
| LJTPS | Box Mount Receptalce Back Panel Mounted High Temperature |
| LJTPN | Box Mount Receptacle Back Panel Chemical and Fuel Resistant |

| 2. SHELL STYLE RECEPTACLE CRIMP | |
|---|---|
| 02 | Box Mount Recptacle Panel Mount |
| 00 | Wall Mount Receptacle Panel Mount |
| 07 | Jam Nut Receptacle |
| 01 | Inline Receptacle |

| 2. SHELL STYLE PLUG | |
|---|---|
| 06 | Straight Plug |
| 08 | 90° Plug |

| 2. HERMETIC | |
|---|---|
| 00 | Wall Mounting Receptacle |
| 07 | Jam Nut Receptacle |
| I | Solder Mounting Receptacle |

| 2. RECEPTACLE WITH PCB CONTACTS | |
|---|---|
| 88/91 569 | Wall Mounting Receptacle (Back Panel) See page 131 |
| 88/91 628 | Wall Mounting Receptacle (Back Panel) (Clinch Nut) see page 132 |
| 88/91 569 | Box Mounting Receptacle (Back Panel) See page 133 |
| 88/91 628 | Box Mounting Receptacle (Back Panel)(Clinch Nut) see page 134 |
| 88/91 569 | Jam Nut Receptacle see page 135 |
| 10-626 | Hermetic Wall Mount Receptacle see page 136 |
| 10-626 | Hermetic Jam Nut Receptacle see page 137 |
| 10-626 | Hermetic Solder Mounting Receptacle see page 138 |

**Wall Mounting Receptacle**



**Line Receptacle**



**Jam Nut Receptacle**



**Straight Plug**



**Solder Mounting Receptacle**



**Lanyard Release Plug**

(See pages 94-96 for ordering)



# MIL-DTL-38999/ 27599, Series I LJT

## How to Order (Commercial)

### 2. SERVICE CLASS

| CRIMP | | |
|---|---|---|
| WALL MOUNT<br>PLUG<br>LINE<br>JAM NUT | Box Mount | Crimp Contacts/ Connectors |
| RP | | Potting crimp applications. Supplied with spacer grommet and potting boot.†† |
| RE | RE | Environmental crimp applications. Supplied with a grommet and compression nut. Can be supplied with strain relief integral with compression nut "RE(SR)". |
| RT | | Environmental applications. Supplied without rear accessories. Design provides serrations on rear threads of shells. |

| SOLDER | |
|---|---|
| WALL MOUNT | Solder Contacts/ Connectors |
| LINE | |
| STRAIGHT PLUG | |
| JAM NUT | |
| P | Potting applications: These connectors are supplied with a potting boot. All shells are designed with integral features to retain potting boots. |
| C | Pressurized applications |
| T | MIL-DTL-27599 applications-general duty, pressurized (receptacle only) (LJT only molded in solder type contacts) Not applicable with Box Mount Styles |
| **HERMETIC** | |
| WALL MOUNT | |
| JAM NUT | |
| SOLDER MOUNTING RECEPTACLE | |
| Y | Same as "H" with interfacial seal. |
| H | Hermetic applications- Fused compression glass sealed inserts. Leakage rate less than .01 micron cu. ft./hr. (1 x 10-7 cc/sec.) at 15 psi differential. |

### 3. SHELL SIZE & INSERT ARRANGEMENT
SEE PAGE 2-5

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

| 4. CONTACTS | |
|---|---|
| P | Pin Contacts |
| S | Socket Contacts |

# How to Order (Commercial)

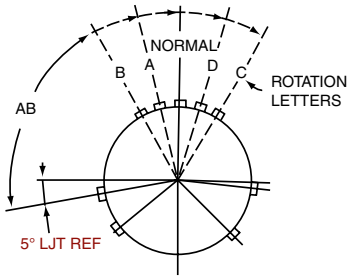


### 5. ALTERNATE KEYING POSITION

"A" designates Alternate keying connector assembly. Other basic alternate keys are "B", "C" and "D". No letter required for normal rotation (no rotation) position.

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. Only the master key/keyway rotates in the shell, and the minor keys are fixed.
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.

The "N" designation is not referenced in part number, it is omitted.




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

**LJT** 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° |

### 6. SELECT A STRAIN RELIEF OPTION OR FINISH VARIATION SUFFIX

Strain Relief Options: "SR" designates a strain relief clamp. Strain reliefs are available only on Service Class "C" and "RE" (see step 3. Service Class)
Finish Variation Suffix: See finish variations available in table to your right.

**6. HERMETIC FINISHES**

| Finish | Finish Suffix |
|---|---|
| Carbon steel shell tin plated & contacts | (468) |
| Stainless steel shell passivated | (162) |
| Stainless steel nickel plated | () |

**6. FINISHES**

| Finish | Finish Suffix | Finish Plus "SR" Suffix |
|---|---|---|
| | | Class RE and C Only |
| AP-93 Tri-Nickel Alloy, Aluminum, 1000 Hr., 200°C, -65dB@100Hz* | (075) | |
| Cadmium plated nickel base 175°C | | (SR) |
| Olive drab cadmium plate nickel base 175°C | (014) | (386) |
| Electroless nickel 200°C | (023) | (424) |
| Electroless nickel, space compatible 200°C | (453) | (467) |
| Anodic coating (Alumilite) 200°C | (005) | (300) |
| Chromate treated (Iridite 14-2) 125°C | (011) | (344) |
| Passivated steel 200°C | - | - |
| Nickel-PTFE 175°C | (045) | (582) |
| Zinc-Nickel Plated 175°C | (033) | |

# Wall Mounting Receptacle - Crimp

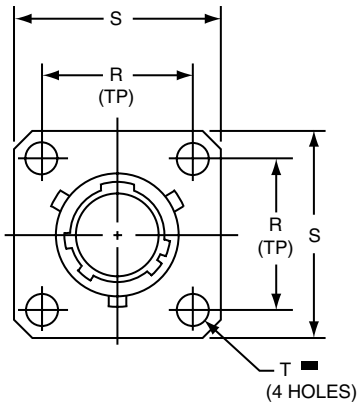
## Military (MS27466), Commercial (LJT00R)

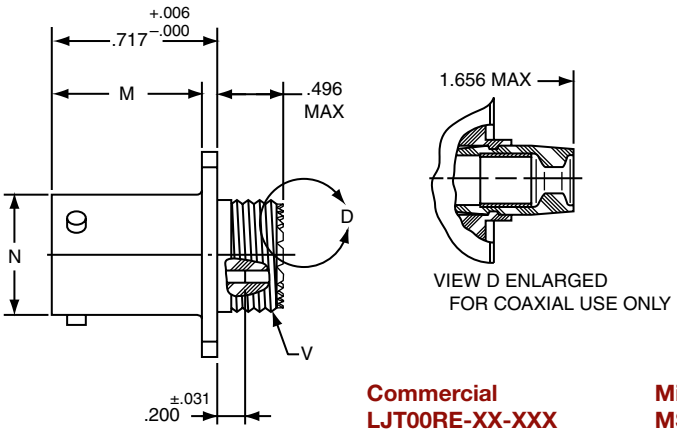
PART NUMBER BUILDER Page 114-118

**MILITARY**
**MS27466E**
**MS27466P**
**MS27466T**

Commercial

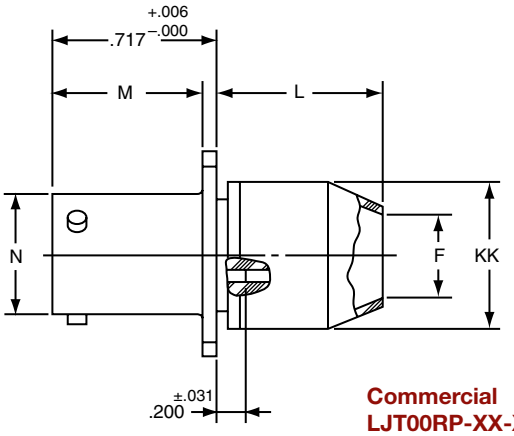
**LJT00RE**
**LJT00RP**
**LJT00RT**




**Commercial**
**LJT00RE-XX-XXX**
**LJT00RT-XX-XXX**

**Military**
**MS27466E**
**MS27466T**




**Commercial**
**LJT00RP-XX-XXX**

**Military**
**MS27466P**

▬ ⊕ .005 DIA Ⓜ

| Shell Size | F Dia. ±.010 | L Max. | M +.000 −.005 | N +.001 −.005 | R (TP) | S ±.016 | T Dia. ±.005 | V Thread Class 2A (Plated) | KK Dia. Max |
|---|---|---|---|---|---|---|---|---|---|
| 9 | .444 | .813 | .632 | .572 | .719 | .938 | .128 | .4375-28 UNEF | .608 |
| 11 | .558 | .813 | .632 | .700 | .812 | 1.031 | .128 | .5625-24 UNEF | .734 |
| 13 | .683 | .813 | .632 | .850 | .906 | 1.125 | .128 | .6875-24 UNEF | .858 |
| 15 | .808 | .813 | .632 | .975 | .969 | 1.219 | .128 | .8125-20 UNEF | .984 |
| 17 | .909 | .813 | .632 | 1.100 | 1.062 | 1.312 | .128 | .9375-20 UNEF | 1.110 |
| 19 | 1.034 | .813 | .632 | 1.207 | 1.156 | 1.438 | .128 | 1.0625-18 UNEF | 1.234 |
| 21 | 1.159 | .906 | .602 | 1.332 | 1.250 | 1.562 | .128 | 1.1875-18 UNEF | 1.360 |
| 23 | 1.284 | .906 | .602 | 1.457 | 1.375 | 1.688 | .147 | 1.3125-18 UNEF | 1.484 |
| 25 | 1.409 | .906 | .602 | 1.582 | 1.500 | 1.812 | .147 | 1.4375-18 UNEF | 1.610 |

All dimensions for reference only.

# Wall Mounting Receptacle (Back Panel Mounting)

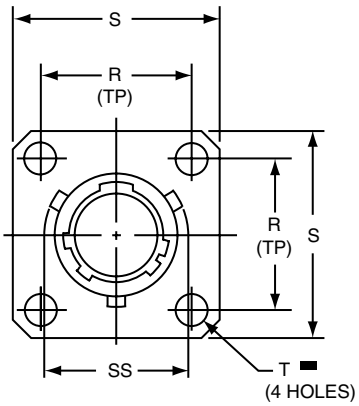
## Military (MS27656), Commercial (LJTPQ00R)

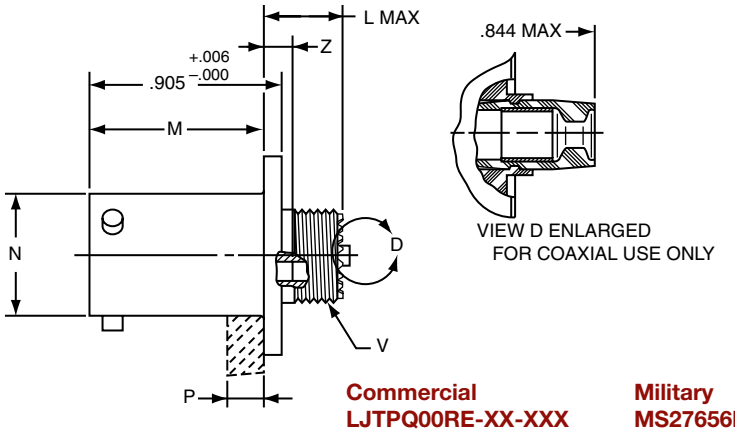
Amphenol Aerospace



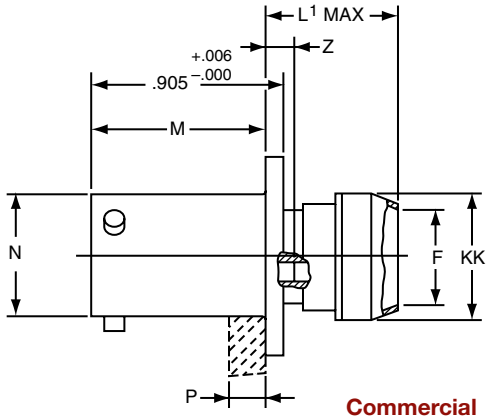
PART NUMBER BUILDER Page 114-118

| | | |
|---|---|---|
| **MILITARY** | Commercial | **LJTQ00RE** |
| **MS27656E** | | **LJTPQ00RP** |
| **MS27656P** | | **LJTPQ00RT** |
| **MS27656T** | | |




**Commercial** **Military**
**LJTPQ00RE-XX-XXX** **MS27656E**
**LJTPQ00RT-XX-XXX** **MS27656T**




**Commercial** **Military**
**LJTPQ00RP-XX-XXX** **MS27656P**

■ ⊕ .005 DIA Ⓜ

| Shell Size | F Dia. ±.010 | L Max. | L[1] Max. | M +.000 −.005 | N Dia. | P Max. Panel Thickness | R (TP) | S +.011 −.010 | T Dia. ±.005 | V Thread Class 2A (Plated) | Z Max | KK Dia. Max | SS Dia. +.000 −.016 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | .444 | .453 | .641 | .820 | .572 | .234 | .719 | .938 | .128 | .4375-28 UNEF | .138 | .625 | .662 |
| 11 | .558 | .453 | .641 | .820 | .700 | .234 | .812 | 1.031 | .128 | .5625-24 UNEF | .138 | .750 | .810 |
| 13 | .683 | .453 | .641 | .820 | .850 | .234 | .906 | 1.125 | .128 | .6875-24 UNEF | .138 | .875 | .960 |
| 15 | .808 | .453 | .641 | .820 | .975 | .234 | .969 | 1.219 | .128 | .8125-20 UNEF | .138 | 1.000 | 1.085 |
| 17 | .909 | .453 | .641 | .820 | 1.100 | .234 | 1.062 | 1.312 | .128 | .9375-20 UNEF | .138 | 1.125 | 1.210 |
| 19 | 1.034 | .453 | .641 | .820 | 1.207 | .234 | 1.156 | 1.438 | .128 | 1.0625-18 UNEF | .138 | 1.250 | 1.317 |
| 21 | 1.159 | .484 | .672 | .790 | 1.332 | .204 | 1.250 | 1.562 | .128 | 1.1875-18 UNEF | .168 | 1.375 | 1.442 |
| 23 | 1.284 | .484 | .672 | .790 | 1.457 | .204 | 1.375 | 1.688 | .147 | 1.3125-18 UNEF | .168 | 1.500 | 1.567 |
| 25 | 1.409 | .484 | .672 | .790 | 1.582 | .193 | 1.500 | 1.812 | .147 | 1.4375-18 UNEF | .168 | 1.625 | 1.692 |

All dimensions for reference only.
Note: MS27656 superseded MS 27515.

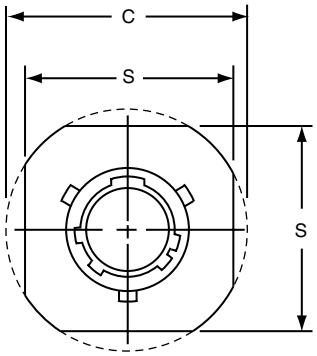
# Line Receptacle - Crimp

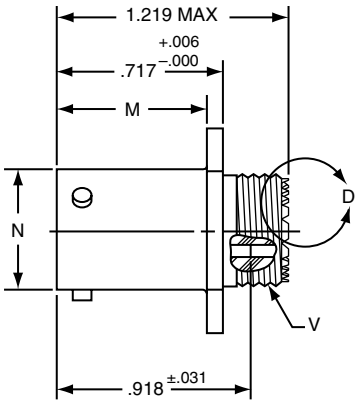
## Commercial (LJT01R)

PART NUMBER BUILDER Page 114-118

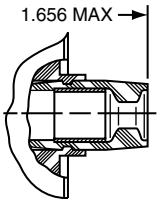
Commercial

**LJT01RE**
**LJT01RT**
**LJT01RP**




**Commercial**
**LJT01RE-XX-XXX**
**LJT01RT-XX-XXX**
**LJT01RP-XX-XXX**




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FOR COAXIAL USE ONLY

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

All dimensions for reference only.

# Box Mounting Receptacle (Back Panel Mounting)

## Military (MS27496 & MS27505), Commercial (LJT02R & LJTP02R)

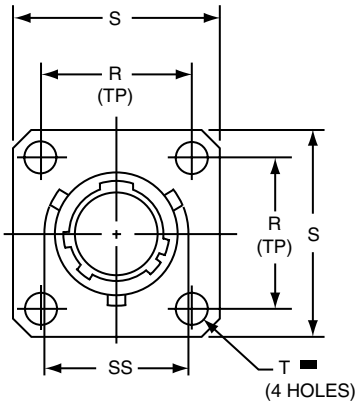
Amphenol Aerospace

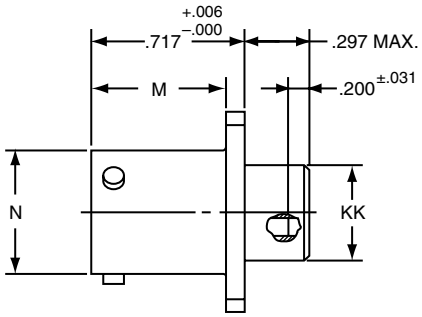
PART NUMBER BUILDER Page 114-118

**MILITARY**
**MS27496E**
**MS27505E**

Commercial

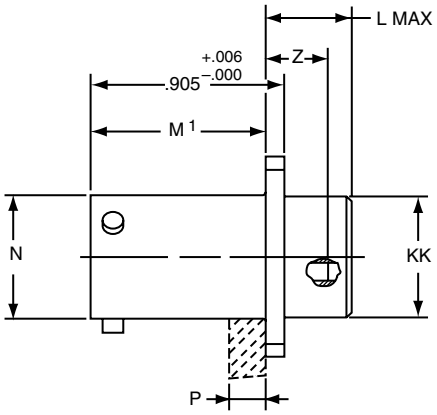
**LJT02RE**
**LJTP02RE (Back Panel Mounting)**




**Commercial**
**LJT02RE-XX-XXX**

**Military**
**MS27496E**




**Commercial**
**LJTP02RE-XX-XXX**

**Military**
**MS27505E**

■ ⌖ .005 DIA Ⓜ

| Shell Size | L Max. | M +.000 −.005 | M¹ +.001 −.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.

# Jam Nut Receptacle - Crimp

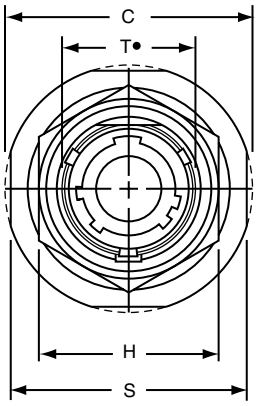
## Military (MS27468), Commercial (LJT07R)

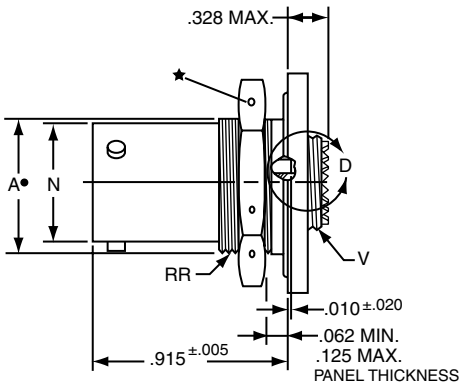
PART NUMBER BUILDER Page 114-118

**MILITARY**
**MS27468E**
**MS27468P**
**MS27468T**

Commercial

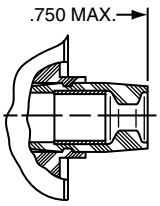
**LJT07RE, LJT07RP, LJT07RT**



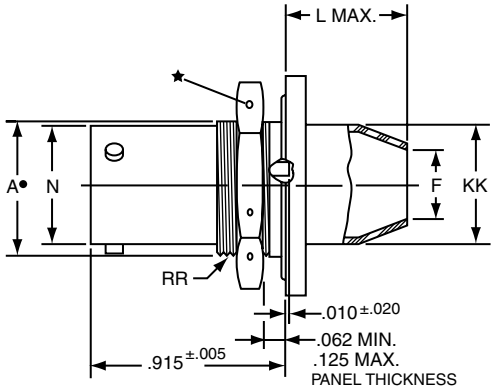




**Commercial**
**LJT07RE-XX-XXX**
**LJT07RT-XX-XXX**

**Military**
**MS27468E**
**MS27468T**




VIEW D ENLARGED
FOR COAXIAL USE ONLY




**Commercial**
**LJT07RP-XX-XXX**

**Military**
**MS27468P**

★ .059 Dia. Min. 3 lockwire holes.
Formed lockwire hole design (6 holes) is optional.

\+ "D" shaped mounting hole dimensions.

| Shell Size | A+ +.000 −.010 | C Max. | F Dia. ±.010 | H Hex +.017 −.016 | L Max. | N +.001 −.005 | S ±.016 | T+ +.010 −.000 | V Thread Class 2A (Plated) | KK Dia. Max. | RR Thread Class 2A (Plated) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | .669 | 1.199 | .444 | .875 | .625 | .572 | 1.062 | .697 | .4375-28 UNEF | .608 | .6875-24 UNEF |
| 11 | .769 | 1.386 | .558 | 1.000 | .625 | .700 | 1.250 | .822 | .5625-24 UNEF | .734 | .8125-20 UNEF |
| 13 | .955 | 1.511 | .683 | 1.188 | .625 | .850 | 1.375 | 1.007 | .6875-24 UNEF | .858 | 1.0000-20 UNEF |
| 15 | 1.084 | 1.636 | .808 | 1.312 | .625 | .975 | 1.500 | 1.134 | .8125-20 UNEF | .984 | 1.1250-18 UNEF |
| 17 | 1.208 | 1.761 | .909 | 1.438 | .625 | 1.100 | 1.625 | 1.259 | .9375-20 UNEF | 1.110 | 1.2500-18 UNEF |
| 19 | 1.333 | 1.949 | 1.034 | 1.562 | .656 | 1.207 | 1.812 | 1.384 | 1.0625-18 UNEF | 1.234 | 1.3750-18 UNEF |
| 21 | 1.459 | 2.073 | 1.159 | 1.688 | .750 | 1.332 | 1.938 | 1.507 | 1.1875-18 UNEF | 1.360 | 1.5000-18 UNEF |
| 23 | 1.580 | 2.199 | 1.284 | 1.812 | .750 | 1.457 | 2.062 | 1.634 | 1.3125-18 UNEF | 1.484 | 1.6250-18 UNEF |
| 25 | 1.709 | 2.323 | 1.409 | 2.000 | .750 | 1.582 | 2.188 | 1.759 | 1.4375-18 UNEF | 1.610 | 1.7500-18 UNS |

All dimensions for reference only.

# Straight Plug - Crimp

## Military (MS27467), Commercial (LJT06R)

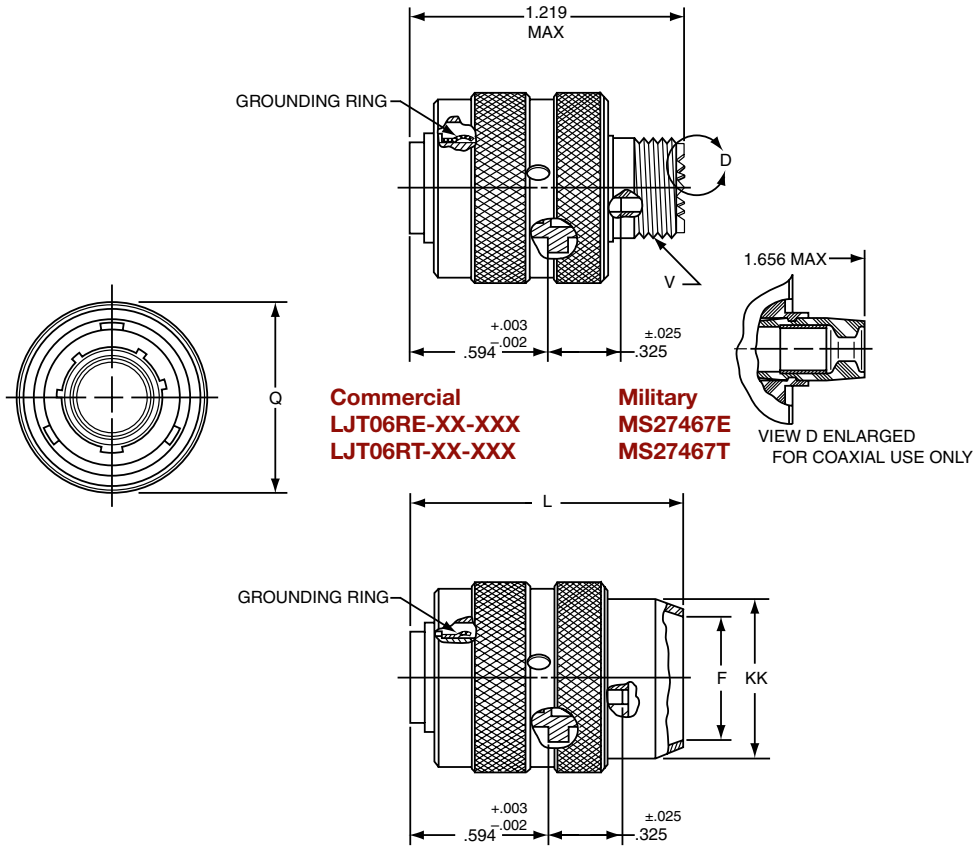
Amphenol Aerospace

**PART NUMBER BUILDER** Page 114-118

**MILITARY**
**MS27467E**
**MS27467P**
**MS27467T**

Commercial

**LJT06RE, LJT02RP, LJT02RT**




**Commercial**
**LJT06RE-XX-XXX**
**LJT06RT-XX-XXX**

**Military**
**MS27467E**
**MS27467T**

**Commercial**
**LJT06RP-XX-XXX**

**Military**
**MS27467P**

| Shell Size | F Dia. ±.010 | L Max. | Q Max. | V Thread Class 2A (Plated) | KK Dia. Max. |
|---|---|---|---|---|---|
| 9 | .444 | 1.531 | .844 | .4375-28 UNEF | .608 |
| 11 | .528 | 1.531 | .969 | .5625-24 UNEF | .734 |
| 13 | .683 | 1.531 | 1.141 | .6875-24 UNEF | .858 |
| 15 | .808 | 1.531 | 1.266 | .8125-20 UNEF | .984 |
| 17 | .909 | 1.531 | 1.391 | .9375-20 UNEF | 1.110 |
| 19 | 1.034 | 1.531 | 1.500 | 1.0625-18 UNEF | 1.234 |
| 21 | 1.159 | 1.625 | 1.625 | 1.1875-18 UNEF | 1.360 |
| 23 | 1.284 | 1.625 | 1.750 | 1.3125-18 UNEF | 1.484 |
| 25 | 1.409 | 1.625 | 1.875 | 1.4375-18 UNEF | 1.610 |

All dimensions for reference only.

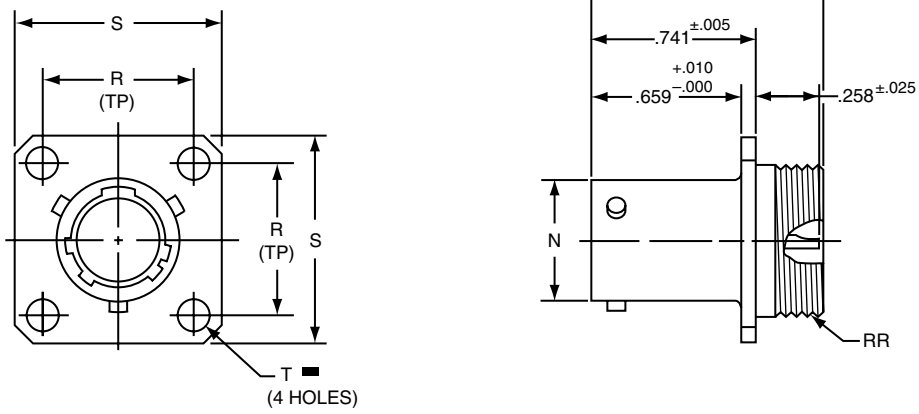
# Wall Mounting Receptacle - Hermetic

## Military (MS27469), Commercial (LJT00)

PART NUMBER BUILDER Page 114-118

**MILITARY** MS27469Y

Commercial **LJT00H, LJT00Y** LJTS00Y




| Commercial | Military |
|---|---|
| * LJT00H-XX-XXX | |
| ** LJT00Y-XX-XXX | MS27469YXXD |
| *** LJTS00Y-XX-XXX | MS27469YXXE |

▬ ⌖ .005 DIA Ⓜ

* Long Junior Tri-Lock
** Interfacial seal wafer
*** High temperature version, interfacial seal wafer with stainless steel shell

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

All dimensions for reference only.

# Jam Nut Receptacle - Hermetic

## Military (MS27470) Commercial (LJT07 & LJTS07)

Amphenol Aerospace

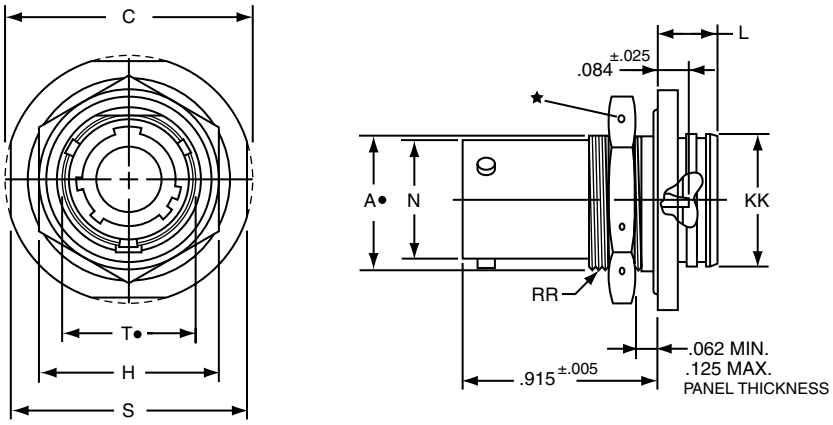


**PART NUMBER BUILDER Page 114-118**

**MILITARY** **MS27470Y**

Commercial

**LJT07H, LJT07Y** **LJTS07Y**




| | Commercial | Military |
|---|---|---|
| * | LJT07H-XX-XXX | |
| ** | LJT07Y-XX-XXX | MS27470YXXD |
| *** | LJTS07Y-XX-XXX | MS27470YXXE |

★ .059 Dia. Min. 3 lockwire holes. Formed lockwire hole design (6 holes) is optional.
\+ "D" shaped mounting hole dimensions.
* *Long Junior Tri-Lock
** Interfacial seal wafer
*** High temperature version, interfacial seal wafer with stainless steel shell

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

All dimensions for reference only.

# Solder Mounting Receptacle - Hermetic

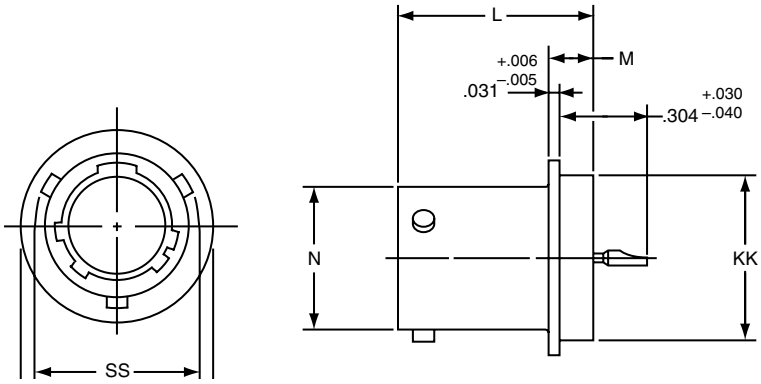
## Military (MS27471), Commercial (LJTI & LJTSI)

PART NUMBER BUILDER Page 114-118

**MILITARY**
**MS27471Y**

Commercial

**LJTIH, LJTIY**
**LJTSIY**




| Commercial | Military |
|---|---|
| * LJTIH-XX-XXX | |
| ** LJTIY-XX-XXX | MS27471YXXD |
| *** LJTSIY-XX-XXX | MS27471YXXE |

* Long Junior Tri-Lock
** Interfacial seal wafer
*** High temperature version, interfacial seal wafer with stainless steel shell

| 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 Amphenol Aerospace for availability and dimensions.

# Wall Mounting Receptacle - Solder

## Military (MS20026), Commercial (LJT00)

Amphenol Aerospace



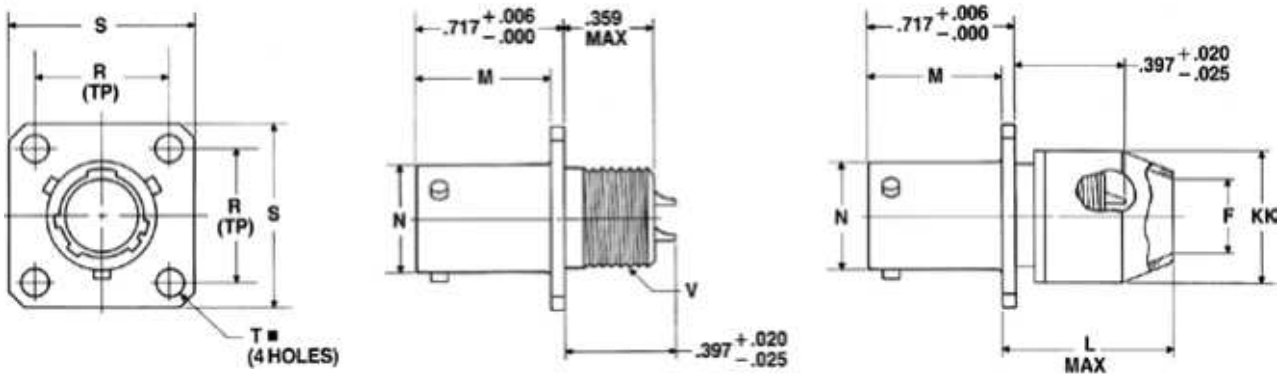
PART NUMBER BUILDER Page 114-118

**Military qualified to MIL-DTL-27599**

**MILITARY**
**MS20020T**

Commercial

**LJT00T, LJT00C, LJT00P**




**Commercial**
**LJT00T-XX-XXX**
**LJT00C-XX-XXX**

**Military**
**MS20026T**

**Commercial**
**LJT00P-XX-XXX**

■ Ⓢ .005 DIA Ⓜ

NOTE: For availability of back panel mounting types, check with nearest sales office or call Amphenol Aerospace.

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

# Line Receptacle - Solder

## Military (MS20027), Commercial (LJT01)

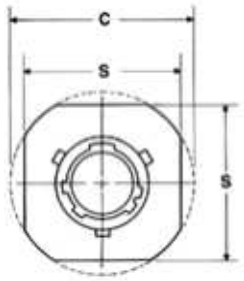
PART NUMBER BUILDER Page 114-118

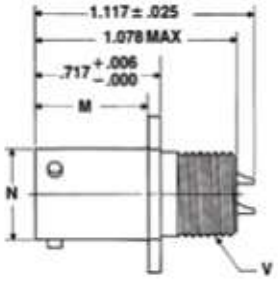
**Military qualified to MIL-DTL-27599**

**MILITARY**
**MS20027T**

Commercial

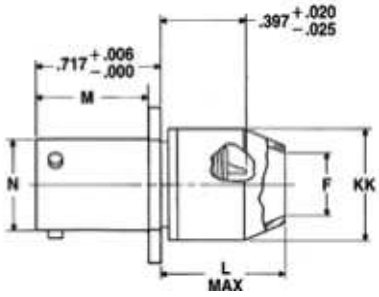
**LJT01T, LJT01C, LJT01P**




**Commercial**
**LJT01T-XX-XXX**
**LJT01C-XX-XXX**

**Military**
**MS20027T**




**Commercial**
**LJT01P-XX-XXX**

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

# Straight Plug -Solder

## Military (MS20028), Commercial (LJT06)

Amphenol Aerospace



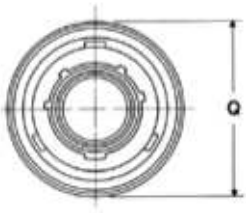
**Military qualified to MIL-DTL-27599**

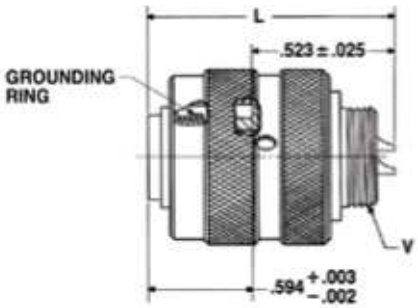
PART NUMBER BUILDER Page 114-118

**MILITARY**
**MS20028T**

Commercial

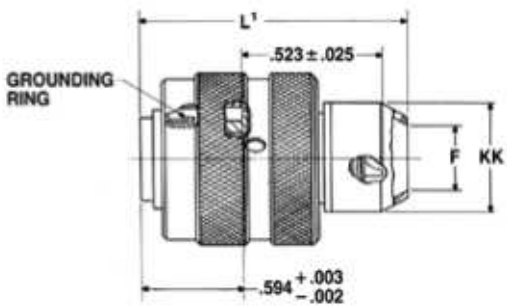
**LJT06T, LJT06C, LJT06P,**




**Commercial**
**LJT06T-XX-XXX**
**LJT06C-XX-XXX**

**Military**
**MS20028T**




**Commercial**
**LJT06P-XX-XXX**

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



C

# Jam Nut Receptacle - Solder

## Military (MS20029), Commercial (LJT07)

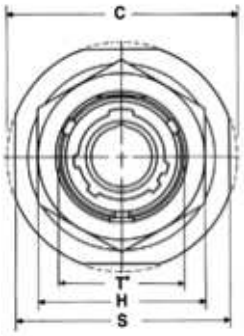
PART NUMBER BUILDER Page 114-118

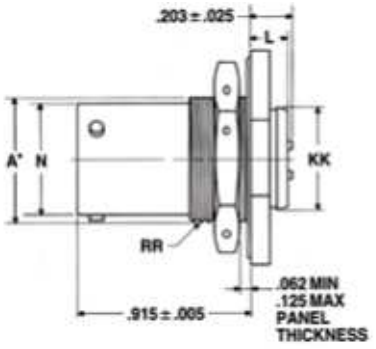
**Military qualified to MIL-DTL-27599**

**MILITARY**
**MS20029P**

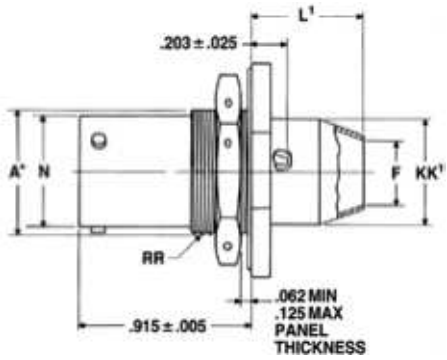
Commercial

**LJT07P, LJT07T**




**Commercial**
**LJT07T-XX-XXX**




**Commercial**
**LJT07P-XX-XXX**

**Military**
**MS20029P**

+ "D" shaped mounting hole dimensions

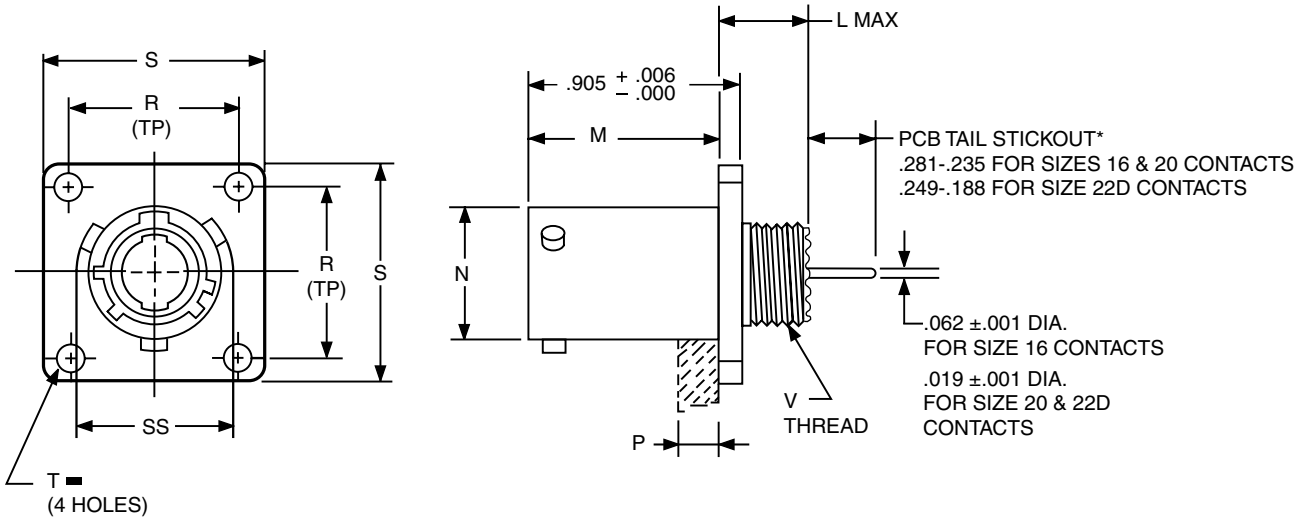
| Shell Size | A+ +.000 −.010 | C Max. | F Dia. | H Hex +.017 −.016 | L Max. | L' Max. | N +.001 −.005 | S ±.016 | T+ +.010 −.000 | KK +.011 −.000 | KK' Dia. Max. | RR Thread Class 2A (Plated) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | .669 | 1.199 | .327 | .875 | .234 | .625 | .572 | 1.062 | .697 | .516 | .608 | .6875-24UNEF |
| 11 | .769 | 1.386 | .444 | 1.000 | .234 | .625 | .700 | 1.250 | .822 | .642 | .734 | .8125-20UNEF |
| 13 | .955 | 1.511 | .558 | 1.188 | .234 | .625 | .850 | 1.375 | 1.007 | .766 | .858 | 1.0000-20UNEF |
| 15 | 1.084 | 1.636 | .683 | 1.312 | .234 | .625 | .975 | 1.500 | 1.134 | .892 | .984 | 1.1250-18UNEF |
| 17 | 1.208 | 1.761 | .808 | 1.438 | .234 | .625 | 1.100 | 1.625 | 1.259 | 1.018 | 1.110 | 1.2500-18UNEF |
| 19 | 1.333 | 1.949 | .909 | 1.562 | .266 | .625 | 1.207 | 1.812 | 1.384 | 1.142 | 1.234 | 1.3750-18UNEF |
| 21 | 1.459 | 2.073 | 1.034 | 1.688 | .266 | .656 | 1.332 | 1.938 | 1.507 | 1.268 | 1.360 | 1.5000-18UNEF |
| 23 | 1.580 | 2.199 | 1.159 | 1.812 | .266 | .750 | 1.457 | 2.062 | 1.634 | 1.392 | 1.484 | 1.6250-18UNEF |
| 25 | 1.709 | 2.323 | 1.284 | 2.000 | .266 | .750 | 1.582 | 2.188 | 1.759 | 1.518 | 1.610 | 1.7500-18UNS |

All dimensions for reference only.

# PCB Wall Mounting Receptacle (Back Panel Mounting)

## Commercial (LJTPQ00)






| | 1. | 2. | 3. | 4. | 5. |
|---|---|---|---|---|---|
| **PART #** See chart below | Shell Finish | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/Alt. Keying |
| | 88/91 | 569 | 70X | -35 | P |

## HOW TO ORDER

### 1. SELECT A SHELL FINISH:

| | |
|---|---|
| **88** | Designates olive drab cadmium plated connector shell |
| **91** | Designates electroless nickel plated connector shell |

Consult Amphenol Aerospace for ordering of composite styles.

### 2. BASE NUMBER:

| | |
|---|---|
| **569** | Base Number |

### 3. SELECT A CODED SHELL SIZE:

See chart below **701-709**, designates size 9-25 shell size. Example: **701** = Size 9 Shell

### 4. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 5. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 118 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

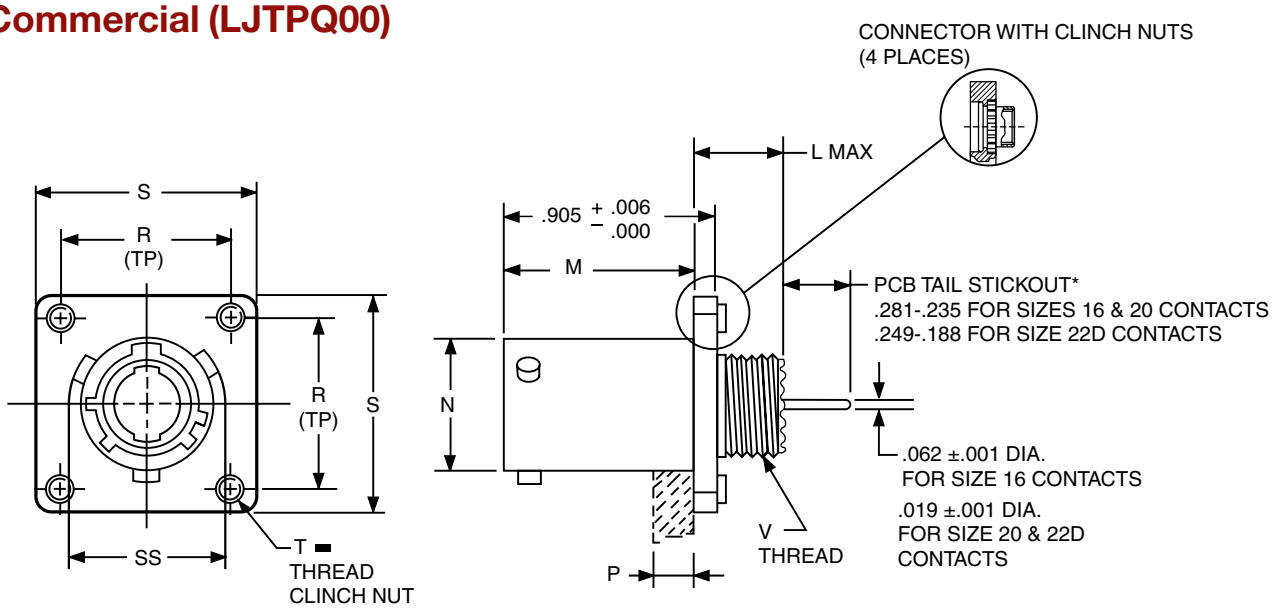
▬ ⊕ .005 DIA Ⓜ

| Shell Size | Coded Shell Size | L Max. | M +.000 −.005 | N Dia. | P Max. Panel Thickness | R (TP) | S +.011 −.010 | T Dia. ±.005 | V Thread Class 2A (Plated) | SS Dia. +.000 −.016 |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | **701** | .453 | .820 | .572 | .234 | .719 | .938 | .128 | .4375-28 UNEF | .662 |
| 11 | **702** | .453 | .820 | .700 | .234 | .812 | 1.031 | .128 | .5625-24 UNEF | .810 |
| 13 | **703** | .453 | .820 | .850 | .234 | .906 | 1.125 | .128 | .6875-24 UNEF | .960 |
| 15 | **704** | .453 | .820 | .975 | .234 | .969 | 1.219 | .128 | .8125-20 UNEF | 1.085 |
| 17 | **705** | .453 | .820 | 1.100 | .234 | 1.062 | 1.312 | .128 | .9375-20 UNEF | 1.210 |
| 19 | **706** | .453 | .820 | 1.207 | .234 | 1.156 | 1.438 | .128 | 1.0625-18 UNEF | 1.317 |
| 21 | **707** | .484 | .790 | 1.332 | .204 | 1.250 | 1.562 | .128 | 1.1875-18 UNEF | 1.442 |
| 23 | **708** | .484 | .790 | 1.457 | .204 | 1.375 | 1.688 | .147 | 1.3125-18 UNEF | 1.567 |
| 25 | **709** | .484 | .790 | 1.582 | .193 | 1.500 | 1.812 | .147 | 1.4375-18 UNEF | 1.692 |

All dimensions for reference only.
Most common options are shown; other options are available.

# PCB Wall Mounting Receptacle (Back Panel Mounting) (With Clinch Nuts)

## Commercial (LJTPQ00)




| | 1. | 2. | 3. | 4. | 5. |
|---|---|---|---|---|---|
| **PART #** See chart below | Shell Finish | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/Alt. Keying |
| | 88/91 | 628 | 70X | - 35 | P |

## HOW TO ORDER

### 1. SELECT A SHELL FINISH:

| | |
|---|---|
| **88** | Designates olive drab cadmium plated connector shell |
| **91** | Designates electroless nickel plated connector shell |

Consult Amphenol Aerospace for ordering of composite styles.

### 2. BASE NUMBER:

| | |
|---|---|
| **628** | Base Number |

### 3. SELECT A CODED SHELL SIZE:

See chart below **701-709**, designates size 9-25 shell size. Example: **701** = Size 9 Shell

### 4. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 5. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 118 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

▬ ⊕ .005 DIA Ⓜ

| Shell Size | Coded Shell Size | L Max. | M +.000 −.005 | N Dia. | P Max. Panel Thickness | R (TP) | S +.011 −.010 | T Thread | V Thread Class 2A (Plated) | SS Dia. +.000 −.016 |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | **701** | .453 | .820 | .572 | .234 | .719 | .938 | .112-40UNJC-3B | .4375-28 UNEF | .662 |
| 11 | **702** | .453 | .820 | .700 | .234 | .812 | 1.031 | .112-40UNJC-3B | .5625-24 UNEF | .810 |
| 13 | **703** | .453 | .820 | .850 | .234 | .906 | 1.125 | .112-40UNJC-3B | .6875-24 UNEF | .960 |
| 15 | **704** | .453 | .820 | .975 | .234 | .969 | 1.219 | .112-40UNJC-3B | .8125-20 UNEF | 1.085 |
| 17 | **705** | .453 | .820 | 1.100 | .234 | 1.062 | 1.312 | .112-40UNJC-3B | .9375-20 UNEF | 1.210 |
| 19 | **706** | .453 | .820 | 1.207 | .234 | 1.156 | 1.438 | .112-40UNJC-3B | 1.0625-18 UNEF | 1.317 |
| 21 | **707** | .484 | .790 | 1.332 | .204 | 1.250 | 1.562 | .112-40UNJC-3B | 1.1875-18 UNEF | 1.442 |
| 23 | **708** | .484 | .790 | 1.457 | .204 | 1.375 | 1.688 | .138-32UNJC-3B | 1.3125-18 UNEF | 1.567 |
| 25 | **709** | .484 | .790 | 1.582 | .193 | 1.500 | 1.812 | .138-32UNJC-3B | 1.4375-18 UNEF | 1.692 |

All dimensions for reference only.

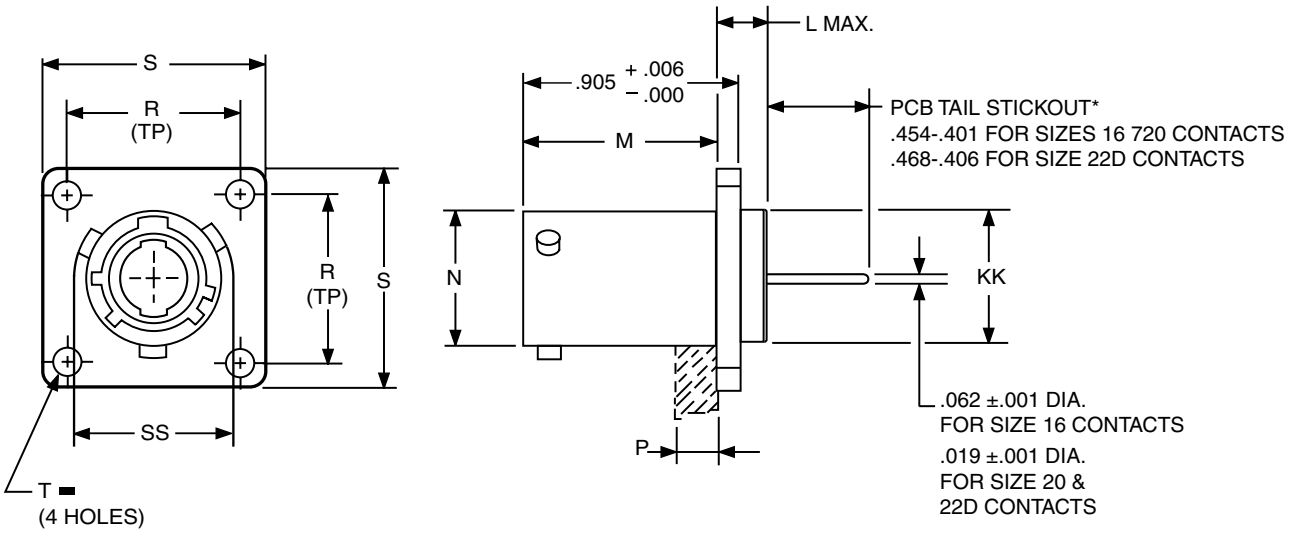
*Consult Amphenol for more information on ordering connectors with clinch nuts. There is also a 3mm clinch nut available (part number 88/91-628401/409)

Most common options are shown; other options are available.

# PCB Box Mounting Receptacle (Back Panel Mounting)

## Commercial (LJTP02)






| | 1. | 2. | 3. | 4. | 5. |
|---|---|---|---|---|---|
| **PART #** See chart below | Shell Finish | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/Alt. Keying |
| | 88/91 | 569 | 71X | - 35 | P |

## HOW TO ORDER

### 1. SELECT A SHELL FINISH:

| | |
|---|---|
| **88** | Designates olive drab cadmium plated connector shell |
| **91** | Designates electroless nickel plated connector shell |

Consult Amphenol Aerospace for ordering of composite styles.

### 2. BASE NUMBER:

| | |
|---|---|
| **569** | Base Number |

### 3. SELECT A CODED SHELL SIZE:

See chart below **711-719**, designates size 9-25 shell size. Example: **711**= Size 9 Shell

### 4. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 5. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 118 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

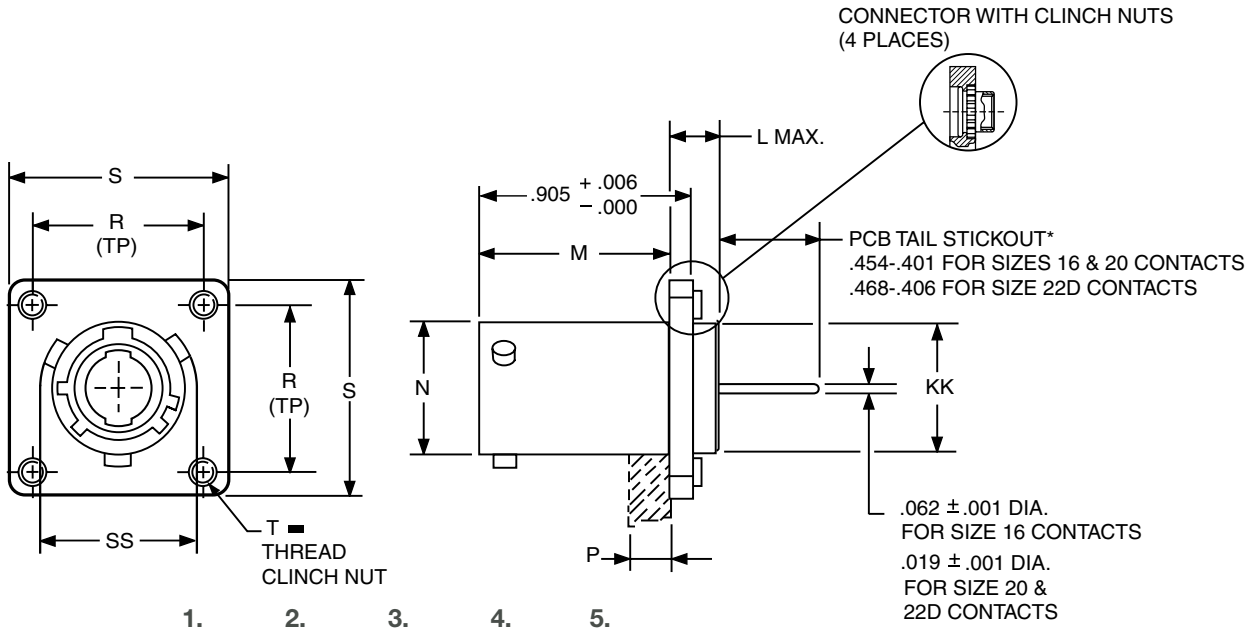
▬ ⊕ .005 DIA Ⓜ

| Shell Size | Coded Shell Size | L Max. | M +.000 −.005 | N +.001 −.005 | P Max. Panel Thickness | R (TP) | S +.011 −.010 | T Dia. ±.005 | KK Dia. +.006 −.005 | SS Dia. +.000 −.016 |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | **711** | .203 | .820 | .572 | .234 | .719 | .938 | .128 | .433 | .662 |
| 11 | **712** | .203 | .820 | .700 | .234 | .812 | 1.031 | .128 | .557 | .810 |
| 13 | **713** | .203 | .820 | .850 | .234 | .906 | 1.125 | .128 | .676 | .960 |
| 15 | **714** | .203 | .820 | .975 | .234 | .969 | 1.219 | .128 | .801 | 1.085 |
| 17 | **715** | .203 | .820 | 1.100 | .234 | 1.062 | 1.312 | .128 | .926 | 1.210 |
| 19 | **716** | .203 | .820 | 1.207 | .234 | 1.156 | 1.438 | .128 | 1.032 | 1.317 |
| 21 | **717** | .234 | .790 | 1.332 | .204 | 1.250 | 1.562 | .128 | 1.157 | 1.442 |
| 23 | **718** | .234 | .790 | 1.457 | .204 | 1.375 | 1.688 | .147 | 1.282 | 1.567 |
| 25 | **719** | .234 | .790 | 1.582 | .193 | 1.500 | 1.812 | .147 | 1.407 | 1.692 |

All dimensions for reference only.
Most common options are shown; other options are available.

# PCB Box Mounting Receptacle (Back Panel Mounting) (With Clinch Nuts)

## Commercial (LJTP02)




| | 1. | 2. | 3. | 4. | 5. |
|---|---|---|---|---|---|
| **PART #** See chart below | Shell Finish | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/Alt. Keying |
| | 88/91 | 628 | 71X | -35 | P |

## HOW TO ORDER

### 1. SELECT A SHELL FINISH:

| | |
|---|---|
| **88** | Designates olive drab cadmium plated connector shell |
| **91** | Designates electroless nickel plated connector shell |

Consult Amphenol Aerospace for ordering of composite styles.

### 2. BASE NUMBER:

| | |
|---|---|
| **628** | Base Number |

### 3. SELECT A CODED SHELL SIZE:

See chart below **711-719**, designates size 9-25 shell size. Example: **711** = Size 9 Shell

### 4. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 5. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 118 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

▬ Ⓣ .005 DIA Ⓜ

| Shell Size | Coded Shell | L Max. | M +.000 –.005 | N +.001 –.005 | P Max. Panel Thickness | R (TP) | S +.011 –.010 | T Thread | KK Dia. +.006 –.005 | SS Dia. +.000 –.016 |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | **711** | .203 | .820 | .572 | .234 | .719 | 1.031 | .112-40UNJC-3B | .433 | .662 |
| 11 | **712** | .203 | .820 | .700 | .234 | .812 | 1.125 | .112-40UNJC-3B | .557 | .810 |
| 13 | **713** | .203 | .820 | .850 | .234 | .906 | 1.172 | .112-40UNJC-3B | .676 | .960 |
| 15 | **714** | .203 | .820 | .975 | .234 | .969 | 1.281 | .112-40UNJC-3B | .801 | 1.085 |
| 17 | **715** | .203 | .820 | 1.100 | .234 | 1.062 | 1.375 | .112-40UNJC-3B | .926 | 1.210 |
| 19 | **716** | .203 | .820 | 1.207 | .234 | 1.156 | 1.469 | .112-40UNJC-3B | 1.032 | 1.317 |
| 21 | **717** | .234 | .790 | 1.332 | .204 | 1.250 | 1.625 | .112-40UNJC-3B | 1.157 | 1.442 |
| 23 | **718** | .234 | .790 | 1.457 | .204 | 1.375 | 1.750 | .138-32UNJC-3B | 1.282 | 1.567 |
| 25 | **719** | .234 | .790 | 1.582 | .193 | 1.500 | 1.875 | .138-32UNJC-3B | 1.407 | 1.692 |

All dimensions for reference only.

*Consult Amphenol for more information on ordering connectors with clinch nuts. There is also a 3mm clinch nut available (part number 88/91-628410/419)

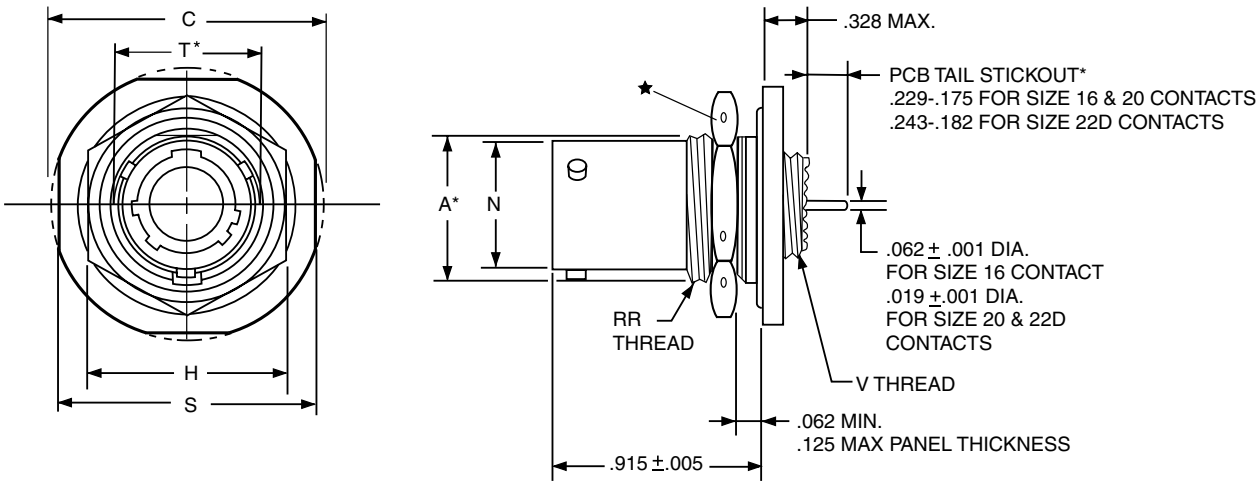
Most common options are shown; other options are available.

# PCB Jam Nut Receptacle

## Commercial (LJT07)

Amphenol Aerospace






| | 1. | 2. | 3. | 4. | 5. |
|---|---|---|---|---|---|
| **PART #** See chart below | Shell Finish | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/Alt. Keying |
| | 88/91 | 569 | 72X | - 35 | P |

## HOW TO ORDER

### 1. SELECT A SHELL FINISH:

| | |
|---|---|
| **88** | Designates olive drab cadmium plated connector shell |
| **91** | Designates electroless nickel plated connector shell |

Consult Amphenol Aerospace for ordering of composite styles.

### 2. BASE NUMBER:

| | |
|---|---|
| **569** | Base Number |

### 3. SELECT A CODED SHELL SIZE:

See chart below **721-729**, designates size 9-25 shell size.
Example: **721** = Size 9 Shell

### 4. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 5. CONTACT TYPE/ KEYING POSITIONS:

Refer to page 118 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

| Shell Size | Coded Shell | A* +.000 −.010 | C Max. | H Hex +.017 −.016 | L Max. | N +.001 −.005 | S ±.016 | T* +.010 −.000 | V Thread Class 2A (Plated) | RR Thread Class 2A (Plated) |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | **721** | .669 | 1.199 | .875 | .625 | .572 | 1.062 | .697 | .4375-28 UNEF | .6875-24 UNEF |
| 11 | **722** | .769 | 1.386 | 1.000 | .625 | .700 | 1.250 | .822 | .5625-24 UNEF | .8125-20 UNEF |
| 13 | **723** | .955 | 1.511 | 1.188 | .625 | .850 | 1.375 | 1.007 | .6875-24 UNEF | 1.0000-20 UNEF |
| 15 | **724** | 1.084 | 1.636 | 1.312 | .625 | .975 | 1.500 | 1.134 | .8125-20 UNEF | 1.1250-18 UNEF |
| 17 | **725** | 1.208 | 1.761 | 1.438 | .625 | 1.100 | 1.625 | 1.259 | .9375-20 UNEF | 1.2500-18 UNEF |
| 19 | **726** | 1.333 | 1.949 | 1.562 | .656 | 1.207 | 1.812 | 1.384 | 1.0625-18 UNEF | 1.3750-18 UNEF |
| 21 | **727** | 1.459 | 2.073 | 1.688 | .750 | 1.332 | 1.938 | 1.507 | 1.1875-18 UNEF | 1.5000-18 UNEF |
| 23 | **728** | 1.580 | 2.199 | 1.812 | .750 | 1.457 | 2.062 | 1.634 | 1.3125-18 UNEF | 1.6250-18 UNEF |
| 25 | **729** | 1.709 | 2.323 | 2.000 | .750 | 1.582 | 2.188 | 1.759 | 1.4375-18 UNEF | 1.7500-18 UNS |

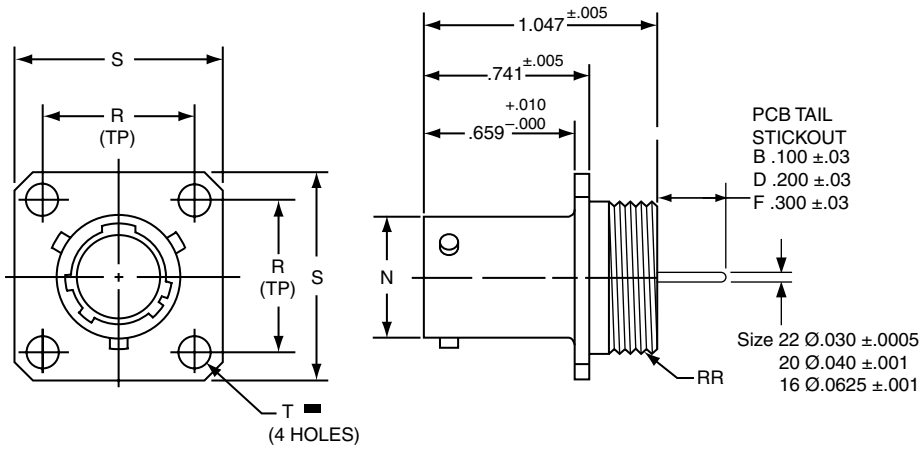
All dimensions for reference only.
Most common options are shown; other options are available.

★ .059 dia. min. 3 lockwire holes.
Formed lockwire hole design (6 holes) is optional.

* "D" shaped mounting hole dimensions

# PCB Hermetic Wall Mounting Receptacle

## Commercial (LJT00)




| | 1. | 2. | 3. | 4. | 5. | 6. |
|---|---|---|---|---|---|---|
| **PART #** See chart below | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/ Alt. Keying Position | Shell Finish | Tail Length |
| | 10-626 | 401 | -35 | P | 1 | B |

## HOW TO ORDER

### 1. BASE NUMBER:

| | |
|---|---|
| **10-626** | Base Number for MIL-DTL-38999 Series III Hermetic with PCB Tail |

### 2. SELECT A CODED SHELL SIZE:

See chart below **401-409**, designates size 9-25 shell size.

### 3. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 4. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 118 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

### 5. SELECT A SHELL FINISH:

| | |
|---|---|
| **1** | Hermetic seal, passivated Stainless Steel, 200°C |
| **2** | Hermetic seal, Stainless Steel w/Nickel Plate |
| **3** | Carbon Steel w/reflowed tin plate |

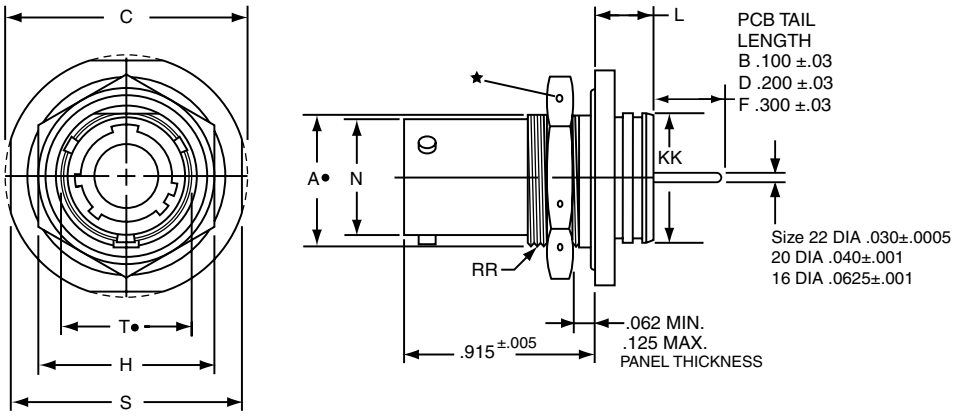
### 6. SELECT A TAIL LENGTH:

| | |
|---|---|
| **B** | .100±.03 |
| **D** | .200±.03 |
| **F** | .300±.03 |

▬ Ⓣ .005 DIA Ⓜ

| Shell Size | Part Number | N Dia. +.001 −.005 | R TP) | S ±.016 | T Dia. ±.005 | RR Thread Class 2A |
|---|---|---|---|---|---|---|
| 9 | 10-626**401**-XXX | .572 | .719 | .938 | .128 | .6875-24 UNEF |
| 11 | **402**-XXX | .700 | .812 | 1.031 | .128 | .8125-20 UNEF |
| 13 | **403**-XXX | .850 | .906 | 1.125 | .128 | .9375-20 UNEF |
| 15 | **404**-XXX | .975 | .969 | 1.219 | .128 | 1.0625-18 UNEF |
| 17 | **405**-XXX | 1.100 | 1.062 | 1.312 | .128 | 1.1875-18 UNEF |
| 19 | **406**-XXX | 1.207 | 1.156 | 1.438 | .128 | 1.3125-18 UNEF |
| 21 | **407**-XXX | 1.332 | 1.250 | 1.562 | .128 | 1.4375-18 UNEF |
| 23 | **408**-XXX | 1.457 | 1.375 | 1.688 | .147 | 1.5625-18 UNEF |
| 25 | **409**-XXX | 1.582 | 1.500 | 1.812 | .147 | 1.6875-18 UNEF |

All dimensions for reference only.




| | 1. | 2. | 3. | 4. | 5. | 6. |
|---|---|---|---|---|---|---|
| **PART #** See chart below | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/ Alt. Keying Position | Shell Finish | Tail Length |
| | 10-626 | 411 | -35 | P | 1 | B |

## HOW TO ORDER

### 1. BASE NUMBER:

| | |
|---|---|
| **10-626** | Base Number for MIL-DTL-38999 Series III Hermetic with PCB Tail |

### 2. SELECT A CODED SHELL SIZE:

See chart below **411-419**, designates size 9-25 shell size. Example: **411** = Size 9 Shell

### 3. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 4. CONTACT TYPE/ KEYING POSITIONS:

Refer to page 118 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

### 5. SELECT A SHELL FINISH:

| | |
|---|---|
| **1** | Hermetic seal, passivated Stainless Steel, 200°C |
| **2** | Hermetic seal, Stainless Steel w/Nickel Plate |
| **3** | Carbon Steel w/reflowed tin plate |

### 6. SELECT A TAIL LENGTH

| | |
|---|---|
| **B** | .100±.03 |
| **D** | .200±.03 |
| **F** | .300±.03 |

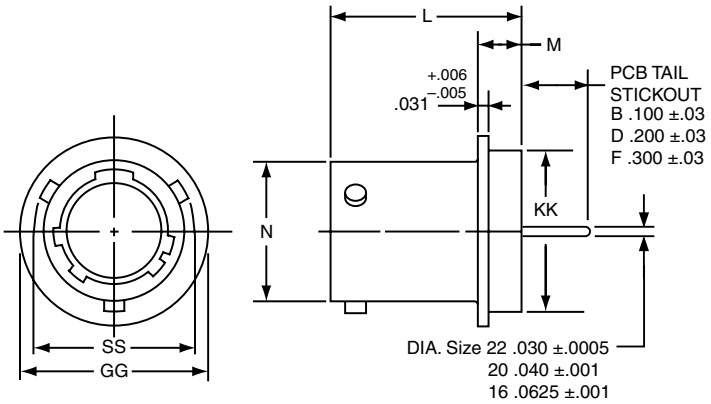
All dimensions for reference only.
Weld mounting hermetic receptacle also available.
Consult Amphenol for availability and dimensions.

| Shell Size | Part Number | A+ +.000 −.010 | C Max. | H Hex +.017 −.016 | L Max. | N +.000 −.005 | S ±.016 | T+ +.010 −.000 | KK +.011 −.000 | RR Thread Class 2A (Plated) |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | **10-626411**-XXX | .669 | 1.199 | .875 | .297 | .572 | 1.062 | .697 | .642 | .6875-24 UNEF |
| 11 | **412**-XXX | .769 | 1.386 | 1.000 | .297 | .700 | 1.250 | .822 | .766 | .8125-20 UNEF |
| 13 | **413**-XXX | .955 | 1.511 | 1.188 | .297 | .850 | 1.375 | 1.007 | .892 | 1.0000-20 UNEF |
| 15 | **414**-XXX | 1.084 | 1.636 | 1.312 | .297 | .975 | 1.500 | 1.134 | 1.018 | 1.1250-18 UNEF |
| 17 | **415**-XXX | 1.208 | 1.761 | 1.438 | .297 | 1.100 | 1.625 | 1.259 | 1.142 | 1.2500-18 UNEF |
| 19 | **416**-XXX | 1.333 | 1.949 | 1.562 | .328 | 1.207 | 1.812 | 1.384 | 1.268 | 1.3750-18 UNEF |
| 21 | **417**-XXX | 1.459 | 2.073 | 1.688 | .328 | 1.332 | 1.938 | 1.507 | 1.392 | 1.5000-18 UNEF |
| 23 | **418**-XXX | 1.580 | 2.199 | 1.812 | .328 | 1.457 | 2.062 | 1.634 | 1.518 | 1.6250-18 UNEF |
| 25 | **419**-XXX | 1.709 | 2.328 | 2.000 | .328 | 1.582 | 2.188 | 1.759 | 1.642 | 1.7500-18 UNS |

All dimensions for reference only.

# PCB Hermetic Solder Mounting Receptacle

## Commercial (LJTI)




| | 1. | 2. | 3. | 4. | 5. | 6. |
|---|---|---|---|---|---|---|
| **PART #** See chart below | Base Number | Coded Shell Size | Insert Arrg. | Contact Type/ Alt. Keying Position | Shell Finish | Tail Length |
| | 10-626 | 421 | -35 | P | 1 | B |

## HOW TO ORDER

### 1. BASE NUMBER:

| | |
|---|---|
| **10-626** | Base Number for MIL-DTL-38999 Series III Hermetic with PCB Tail |

### 2. SELECT A CODED SHELL SIZE:

See chart below **421-429**, designates size 9-25 shell size. Example: **421** = Size 9 Shell

### 3. SELECT AN INSERT ARRANGEMENT:

Refer to insert availability chart on page 2-5 and pin-out illustrations on pages 15-29.

| | |
|---|---|
| **-35** | Designates Insert Arrangement Number |

### 4. CONTACT TYPE/ALTERNATE KEYING POSITIONS:

Refer to page 118 for alternate rotation letters to use.

| | |
|---|---|
| **P** | Designates Pin Contacts in Normal Position |
| **S** | Designates Socket Contacts in Normal Position |

### 5. SELECT A SHELL FINISH:

| | |
|---|---|
| **1** | Hermetic seal, passivated Stainless Steel, 200°C |
| **2** | Hermetic seal, Stainless Steel w/Nickel Plate |
| **3** | Carbon Steel w/reflowed tin plate |

### 6. SELECT A TAIL LENGTH:

| | |
|---|---|
| **B** | .100±.03 |
| **D** | .200±.03 |
| **F** | .300±.03 |

All dimensions for reference only.
Weld mounting hermetic receptacle also available.
Consult Amphenol for availability and dimensions.

| Shell Size | Part Number | N Dia. +.001 −.005 | SS Dia. +.000 −.016 | L +.011 −.000 | M +.006 −.005 | GG Dia. +.011 −.010 | KK Dia. +.001 −.005 |
|---|---|---|---|---|---|---|---|
| 9 | 10-626**421**-XXX | .572 | .662 | .789 | .125 | .750 | .672 |
| 11 | **422**-XXX | .700 | .810 | .789 | .125 | .844 | .781 |
| 13 | **423**-XXX | .850 | .960 | .789 | .125 | .969 | .906 |
| 15 | **424**-XXX | .975 | 1.085 | .789 | .125 | 1.094 | 1.031 |
| 17 | **425**-XXX | 1.100 | 1.210 | .789 | .125 | 1.218 | 1.156 |
| 19 | **426**-XXX | 1.207 | 1.317 | .789 | .125 | 1.312 | 1.250 |
| 21 | **427**-XXX | 1.332 | 1.442 | .789 | .125 | 1.438 | 1.375 |
| 23 | **428**-XXX | 1.457 | 1.567 | .821 | .156 | 1.563 | 1.500 |
| 25 | **429**-XXX | 1.582 | 1.692 | .821 | .156 | 1.688 | 1.625 |

# Lanyard Release Plug How to Order, cont.



## HOW TO ORDER-MILITARY FAIL SAFE MS27661

| 1. MS Number | 2. Service Class | 3. Shell Size | 4. Finish | 5. Insert Arrg. | 6. Contact Style | 7. Alternate Position |
|---|---|---|---|---|---|---|
| MS27661 | T | 17 | B | 35 | P | A |

### 1. MS27661 NUMBER

MS Number designates MIL-DTL-38999, Series I LJT Lanyard Release Plug

### 2. SELECT A SERVICE CLASS

| | |
|---|---|
| E | For environmental crimp applications (inactive for new design) |
| T | For environmental crimp applications with serrations on rear threads of shell |

### 3. SELECT A SHELL SIZE

MIL-DTL-38999, sizes 11 through 25, see chart on page 141.

### 4. SELECT A FINISH

| | |
|---|---|
| B | Designates corrosion resistant olive drab cadmium plated aluminum, 500 hour extended salt spray, EMI shielding effectiveness –50dB @ 10 GHz specification min., 175°C |
| F | Designates electroless nickel plated aluminum, 48 hour salt spray, EMI shielding effectiveness –65dB @10 GHz500 specification min., 200°C |

These are standard finishes. Consult Amphenol Aerospace for variations.

### 5. SELECT AN INSERT ARRANGEMENT

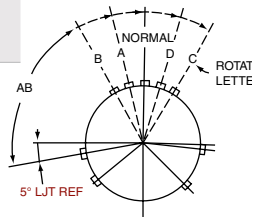
MIL-DTL-38999, see insert identification chart on page 141.

### 6. SELECT A CONTACT STYLE

| | |
|---|---|
| P | Designates Lanyard Release plug with pin contacts |
| S | Designates Lanyard Release plug with socket contacts |

### 7. ALTERNATE KEYING POSITION

For alternate position of connector (to prevent cross-mating) see LJT key/keyway rotation below. (No letter is required for normal)




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

LJT 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° |

## HOW TO ORDER-COMMERCIAL FAIL SAFE 88-5388 OR 91-5388

| 1. Finish | 2. Connector Type Identification | 3. Shell Size & Insert Arrangement | 4. Lanyard Length Code | 5. Contact Type Alternate Rotation of Insert |
|---|---|---|---|---|
| 88 | 5388 | 29 | 40 | P |

### 1. SELECT A FINISH

| | |
|---|---|
| 88 | Designates corrosion resistant olive drab cadmium plate over nickel, 500 hour extended salt spray, EMI –50dB @ 10 GHz specification min., 175°C |
| 91 | Designates electroless nickel plated aluminum, optimum EMI shielding effectiveness –65dB @ 10 GHz specification min., 48 hour salt spray, 200°C |

These are standard finishes. Consult Amphenol Aerospace, Sidney, NY for variations.

### 2. CONNECTOR TYPE IDENTIFICATION

| | |
|---|---|
| 5388 | Designates MIL-DTL-38999, Series I LJT Lanyard Release Plug |

### 3. SELECT A SHELL SIZE & INSERT ARRANGEMENT

Shell sizes are MIL-DTL-38999, Series III from sizes 11 thru 25. The basic part number selected specifies the insert arrangement. See Table I (page 141) for coded part number that correlates to insert arrangement.

### 4. SELECT A LANYARD LENGTH CODE

See Table II (page 141) for lanyard length code number.

### 5. SELECT A CONTACT TYPE/ALTERNATE ROTATION OF INSERT

| | |
|---|---|
| P | Designates Lanyard Release plug with pin contacts |
| S | Designates Lanyard Release plug with socket contacts |

When an alternate position of the connector is required to prevent cross-mating, a different letter (other than P or S) is used. See alternate positioning for LJT (to your left), then convert to Amphenol commercial coding by the following chart below.

| Pin Contacts | | Socket Contacts | |
|---|---|---|---|
| MS Letter | Amphenol Letter | MS Letter | Amphenol Letter |
| P | P (normal) | S | S (normal) |
| PA | E | SA | F |
| PB | R | SB | T |
| PC | W | SC | X |
| PD | Y | SD | Z |

# Series I, LJT Breakaway Fail Safe

## Lanyard Release Plug Insert Availability

### INSERT AVAILABILITY

| Shell Size / Insert Arrangement | Service Rating | Total Contacts | Contact Size | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 22D | 20 | 16 | 12 | 12 Coax | 8 Coax* | 8 Twinax |
| 11-2 | I | 2 | | | 2 | | | | |
| 11-35 | M | 13 | 13 | | | | | | |
| 11-98 | I | 6 | | 6 | | | | | |
| 13-4 | I | 4 | | | 4 | | | | |
| 13-8 | I | 8 | | 8 | | | | | |
| 13-35 | M | 22 | 22 | | | | | | |
| 13-98 | I | 10 | | 10 | | | | | |
| 15-5 | II | 5 | | | 5 | | | | |
| 15-15 | I | 15 | | 14 | 1 | | | | |
| 15-18 | I | 18 | | 18 | | | | | |
| 15-19 | I | 19 | | 19 | | | | | |
| 15-35 | M | 37 | 37 | | | | | | |
| 15-97 | I | 12 | | 8 | 4 | | | | |
| 17-6 | I | 6 | | | | 6 | | | |
| 17-8 | II | 8 | | | 8 | | | | |
| 17-26 | I | 26 | | 26 | | | | | |
| 17-35 | M | 55 | 55 | | | | | | |
| 17-99 | I | 23 | | 21 | 2 | | | | |
| 19-11 | II | 11 | | | 11 | | | | |
| 19-32 | I | 32 | | 32 | | | | | |
| 19-35 | M | 66 | 66 | | | | | | |
| 21-11 | I | 11 | | | | 11 | | | |
| 21-16 | II | 16 | | | 16 | | | | |
| 21-35 | M | 79 | 79 | | | | | | |
| 21-39 | I | 39 | | 37 | 2 | | | | |
| 21-41 | I | 41 | | 41 | | | | | |
| 23-21 | II | 21 | | | 21 | | | | |
| 23-35 | M | 100 | 100 | | | | | | |
| 23-53 | I | 53 | | 53 | | | | | |
| 23-54 | M | 53 | 40 | | 9 | 4 | | | |
| 23-55 | I | 55 | | 55 | | | | | |
| 25-4 | I | 56 | | 48 | 8 | | | | |
| 25-19 | I | 19 | | | | 19 | | | |
| 25-20 | N | 30 | | 10 | 13 | | 4 | | 3 |
| 25-24 | I | 24 | | | 12 | 12 | | | |
| 25-29 | I | 29 | | | 29 | | | | |
| 25-35 | M | 128 | 128 | | | | | | |
| 25-43 | I | 43 | | 23 | 20 | | | | |
| 25-46 | I | 46 | | 40 | 4 | | | 2* | |
| 25-61 | I | 61 | | 61 | | | | | |

| LJT Lanyard Separation Forces | | |
|---|---|---|
| Size | T-Straight Plug (lbs. max.) | U-15 Degree Pull (lbs. Max.) |
| 9 | Not Available | Not Available |
| 11 | 15 | 20 |
| 13 | 20 | 25 |
| 15 | 25 | 30 |
| 17 | 30 | 35 |
| 19 | 35 | 45 |
| 21 | 45 | 55 |
| 23 | 55 | 65 |
| 25 | 65 | 75 |

* For RG 180/U and RG 195/U cables only. (Check Amphenol Aerospace, Sidney, NY for other cable applications). For availability of other insert arrangements and accessories consult Amphenol Aerospace.

### TABLE I
### INSERT ARRANGEMENT CODE

| Basic Part Number | MIL-DTL-38999 Insert Arrangement |
|---|---|
| 88/91-538808 | 11-99 |
| 06 | 11-35 |
| 07 | 11-98 |
| 10 | 13-4 |
| 11 | 13-8 |
| 13 | 13-98 |
| 14 | 13-35 |
| 18 | 15-5 |
| 22 | 15-18 |
| 19 | 15-19 |
| 20 | 15-35 |
| 27 | 17-6 |
| 28 | 17-8 |
| 29 | 17-26 |
| 30 | 17-35 |
| 31 | 17-99 |
| 37 | 19-11 |
| 39 | 19-32 |
| 40 | 19-35 |
| 47 | 21-11 |
| 48 | 21-16 |
| 49 | 21-35 |
| 50 | 21-41 |
| 51 | 21-39 |
| 57 | 23-21 |
| 58 | 23-35 |
| 59 | 23-53 |
| 60 | 23-55 |
| 66 | 25-19 |
| 74 | 25-4 |
| 67 | 25-29 |
| 68 | 25-35 |
| 69 | 25-43 |
| 70 | 25-61 |
| 71 | 25-46 |
| 72 | 25-2 |

### TABLE II
### LANYARD LENGTH CODES

| Lanyard Length (in.) ±.250 | MS | Commercial Code |
|---|---|---|
| 4.000 | | 40 |
| 4.250 | | 41 |
| 4.500 | | 42 |
| 4.750 | | 43 |
| 5.000 | | 50 |
| 5.250 | | 51 |
| 5.500 | | 52 |
| 5.750 | | 53 |
| 6.000 | No | 60 |
| 6.250 | Code | 61 |
| 6.500 | | 62 |
| 6.750 | Std. | 63 |
| 7.000 | Length | 70 |
| 7.250 | 6.250 | 71 |
| 7.500 | | 72 |
| 7.750 | | 73 |
| 8.000 | | 80 |
| 8.250 | | 81 |
| 8.500 | | 82 |
| 8.750 | | 83 |
| 9.000 | | 90 |
| 9.250 | | 91 |
| 9.500 | | 92 |
| 9.750 | | 93 |

# Series I, LJT Breakaway Fail Safe

## Quick-Disconnect with Axial Pull of Lanyard

Amphenol Aerospace



Amphenol LJT Breakaway Fail Safe Connectors provide unequaled performance in environments requiring instant disengagement.

Designed to provide quick disconnect of a connector plug and receptacle with an axial pull on the lanyard, the "Breakaway" Fail Safe connector family offers a wide range of electrical and mechanical features:

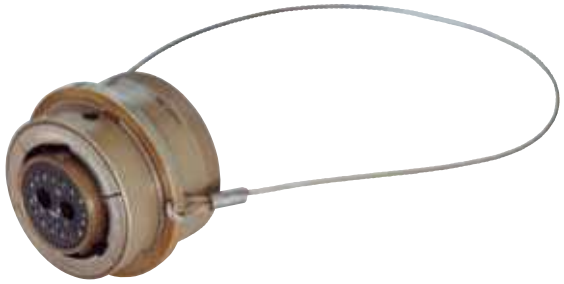
- Instant decoupling and damage free separation
- Completely intermateable with standard LJT receptacles
- Inventory support commonality through the use of standard insert arrangements and contacts

Breakaway un-mating is initiated by applying a pull force to the lanyard which causes the operating sleeve on the plug to move away from the receptacle. Coupling segments on the plug then move away from the mating receptacle while expanding, thus releasing the receptacle. After completion of the un-mating sequence, spring compression returns the sleeve and segments to their original positions. Un-mating of the plug may also be accomplished by normal rotation of the coupling ring without affecting the breakaway capability.

The LJT Breakaway Fail Safe connector features which provide EMI EMP shielding in excess of MIL-DTL-38999 Series I requirements:

- Solid metal-to-metal coupling
- EMI grounding fingers
- Conductive finishes

Contact Amphenol Aerospace for more information on breakaway, quick-disconnect connectors. Other Amphenol cylindrical families (MIL-DTL-38999 Series III, MIL-DTL-26482, MIL-DTL-83723) also offer breakaway quick-disconnect connectors.



### LJT Breakaway Fail Safe

In addition to standard Breakaway connectors, Amphenol also manufactures custom breakaway connectors including those with:

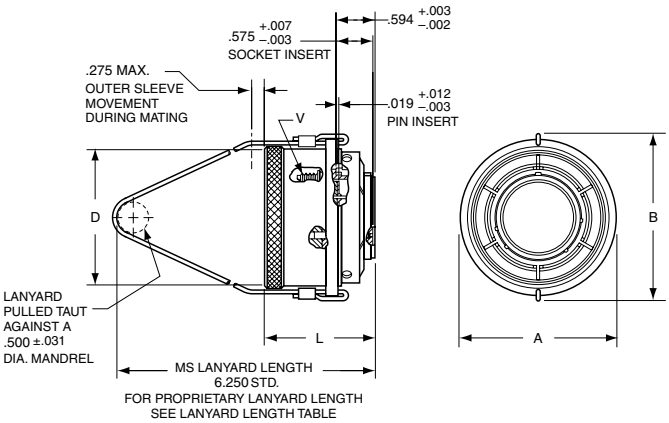
- Increased pull-force capability
- Custom lanyard lengths and backshells
- Low force separation capabilities
- Low insertion/separation force contacts
- Non-cadmium finishes

Custom JT Series Breakaway designs have been developed for special applications; however the LJT Series is recommended over the JT Series for the quick-disconnect breakaway style.

# Lanyard Release Plug - Fail Safe

## Military (MS27661)
## Commercial (LJT 88-5388/91-5388)

To complete order number see page 141.




| Shell Size | A Dia. Max. | B Max. | D Max. Accessory Dia. | L Max. | V Thread UNEF Class 2A (Plated) |
|---|---|---|---|---|---|
| 11 | 1.393 | 1.797 | .740 | 1.703 | .5625-24 |
| 13 | 1.558 | 1.969 | .926 | 1.703 | .6875-24 |
| 15 | 1.669 | 2.078 | 1.051 | 1.703 | .8125-20 |
| 17 | 1.797 | 2.203 | 1.176 | 1.703 | .9375-20 |
| 19 | 1.926 | 2.323 | 1.300 | 1.703 | 1.0625-18 |
| 21 | 2.054 | 2.469 | 1.426 | 1.703 | 1.1875-18 |
| 23 | 2.183 | 2.594 | 1.551 | 1.703 | 1.3125-18 |
| 25 | 2.293 | 2.703 | 1.676 | 1.766 | 1.4375-18 |

All dimensions for reference only.

# D



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Insert Availability . . . . . 155

## SJT SHELL STYLES:

Crimp Wall Mounting Receptacle SJT00RT. . . . 156
Crimp Wall Mount Receptacle Back Panel Mount SJTP00RT . . . . . 156
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# Features, Specifications



Amphenol® SJT connectors combine unique design features of the scoop-proof LJT series within standard mounting dimensions of JT types. Available in a wide range of shell sizes, finishes, insert arrangements and accessories.

## Components

Standard connectors use aluminum shells. Standard plating on shell components is cadmium over nickel with many optional finishes available. A dependable 5-key/keyway shell polarization with bayonet-lock coupling is incorporated to aid and assure positive mating.

The insert material is a high-temperature, rigid dielectric polymer providing excellent electrical characteristics. A fluorinated silicone interfacial seal is featured on the mating face of the pin inserts, assuring complete electrical isolation of the pins when connector halves are mated. Contrasting letter or number designations are used on the insert faces. A main joint gasket is installed in the receptacles for moisture sealing between connector halves.

Serrated and threaded shells, with a moisture sealing pilot for back shells, accept a wide range of accessories. Hermetic seal receptacles are available in carbon steel or stainless steel shells.

## Contacts

Rear insertable/rear release crimp contacts are standard in SJT connectors. Power contacts are available in sizes 10, 12, 16, 20, 22M and 22D. All socket contacts are probe proof. Standard contact plating is 50 mμ minimum gold. Coaxial contacts are available in sizes 8, 12 and 16 to accommodate a wide range of coaxial cables; see Coaxial contact information in the High Speed Contact section of this catalog. Size 8 and 12 Twinax contacts are also available; see Concentric Twinax contact information in the High Speed Contact section of this catalog.

## Optional Features

Special adaptations of the SJT are available for hermetic and high temperature applications. The SJTS high temperature connector is rated at 392°F. SJT hermetic receptacles are described on page 150.

## Specials

Special types are available, such as connectors less contacts and circular rack and panel connectors with solderless wrap contacts. A complete listing of connector types, shell styles and service classes appears on page 146, How to Order. For further information on special application requirements, contact an Amphenol Sales Person or visit www.amphenol-aerospace.com for more information.



## SJT features:

- 100% scoop-proof design – basic MIL-DTL-38999 Series I* lengths
- Standard mounting dimensions – MIL-DTL-38999, Series II** dimensions
- Compliance with European Specifications – PAN6433-2, LN29729, VG96912



## CONTACT RATING

| Contact Size | Test Current | | Maximum Millivolt Drop Crimp* | Maximum Millivolt Drop Hermetic |
|---|---|---|---|---|
| | Standard | Hermetic | | |
| 22M | 3 | 2 | 45 | 60 |
| 22D | 5 | 3 | 73 | 85 |
| 22 | 5 | 3 | 73 | 85 |
| 20 | 7.5 | 5 | 55 | 60 |
| 16 | 13 | 10 | 49 | 85 |
| 12 | 23 | 17 | 42 | 85 |
| 10 Power | 33 | NA | 33 | NA |

* When using silver plated wire

| Contact Size | Crimp Well Data | |
|---|---|---|
| | Well Diameter | Min. Well Depth |
| 22M | .028 ±.001 | .141 |
| 22D | .0345 ±.0010 | .141 |
| 22 | .0365 ±.0010 | .141 |
| 20 | .047 ±.001 | .209 |
| 16 | .067 ±.001 | .209 |
| 12 | .100 ±.002 | .209 |
| 10 (Power) | .137 ±.002 | .355 |

## 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 |
| N | 300 | 450 | 1000 VRMS | 400 VRMS | 260 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 possible position to know what peak voltage, switching surges, transients, etc., can be expected in a particular circuit.

# SJT

## How to Order, Alternate Rotations

| 1. Connector Type SJT, Shell Style, Service Class | 2. Shell Size-Insert Arrangement. | 3. Contact Type | 4. Alternate Keying Position | 5. Finish Variations Suffix |
|---|---|---|---|---|
| SJT00RT | 18-66 | P | A | (XXX) |

| CONNECTOR TYPE & STYLE | | SJT SERIES: Standard Scoop-Proof Junior Tri-Lock | SJT SERIES: High Temperature | SJT SERIES: Back Panel Mounted |
|---|---|---|---|---|
| Receptacle Crimp | Wall Mounting Receptacle (without rear accessories) | SJT00RT | | SJTP00RT |
| Receptacle Crimp | Box Mounting Receptacle (with grommet & nut) (can be supplied with strain relief intergral) | | | SJTP02RE |
| Receptacle Crimp | Jam Nut Receptacle (without rear accessories) | SJT07RT | | |
| Plugs | Straight Plug | SJT06RT | | |
| Plugs | Straight Plug with Grounding Fingers | SJTG06RT | | |
| Fused compression glass sealed inserts. Leakage rate less than 1.0x10-6 cc/sec at 15 psi differential; with interfacial seal. | | | | |
| Hermetic | Jam Nut Receptacle | SJT07Y | | |
| Hermetic | Solder Mounting Receptacle | SJTIY | | |

### 2. SHELL SIZE & INSERT ARRANGEMENT

SEE PAGE 146

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

### 3. CONTACT TYPE

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

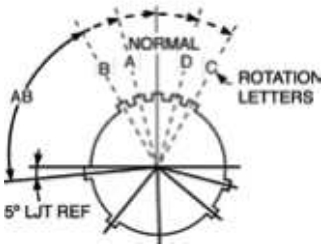
### 4. ALTERNATE KEYING POSITION

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.

**KEY/KEYWAY ROTATION**
**AB ANGLE OF ROTATION (DEGREES)**

| Shell Size | Normal | A | B | C | D |
|---|---|---|---|---|---|
| 8 | 95 | | | | |
| 10 | 95 | 81 | 67 | 123 | 109 |
| 12 | 95 | 75 | 63 | 127 | 115 |
| 14 | 95 | 74 | 61 | 129 | 116 |
| 16 | 95 | 77 | 65 | 125 | 113 |
| 18 | 95 | 77 | 65 | 125 | 113 |
| 20 | 95 | 77 | 65 | 125 | 113 |
| 22 | 95 | 80 | 69 | 121 | 110 |
| 24 | 95 | 80 | 69 | 121 | 110 |




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

### 5. FINISH VARIATION SUFFIX

| Finish | Suffix |
|---|---|
| Aluminum Shell Components Non-Hermetic | SJT/SJTG |
| Bright Cadmium Plated Nickel Base | Blank Default |
| Anodic Coating (Alumilite) | (005) |
| Chromate Treated (Iridite 14-2) | (011) |
| Olive Drab Cadmium Plate Nickel Base | (014) |
| Electroless Nickel Coating | (023) |
| Hermetic Connectors | |
| Carbon Steel Shell, Tin Plated Shell and Contacts | SJT( )Y |
| Stainless Steel Shell, Gold Plated Contacts | Consult Amphenol |

# Insert Availability and Identification



| | | | | | Contact Size | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Shell Size | Crimp | Hermetics* Class Y | Service Rating | Total Contacts | 22D | 22M | 22 | 20 | 16 | 12 | 12 (Coax) | 10 (Power) | 8 (Coax) | 8††† (Twinax) |
| 8-6 | X | | M | 6 | | 6 | | | | | | | | |
| 8-35 | X | | M | 6 | 6 | | | | | | | | | |
| 8-44 | X | | M | 4 | | | 4 | | | | | | | |
| 8-98 | X | | I | 3 | | | | 3 | | | | | | |
| 10-2 | X | | I | 2 | | | | | 2 | | | | | |
| 10-4 | □ | | I | 4 | | | | 4 | | | | | | |
| 10-5 | X | | I | 5 | | | | 5 | | | | | | |
| 10-13 | X | | M | 13 | | 13 | | | | | | | | |
| 10-35 | X | | M | 13 | 13 | | | | | | | | | |
| 10-98 | X | | I | 6 | | | | 6 | | | | | | |
| 12-4 | X | | I | 4 | | | | | 4 | | | | | |
| 12-8 | X | | I | 8 | | | | 8 | | | | | | |
| 12-22 | X | | M | 22 | | 22 | | | | | | | | |
| 12-35 | X | | M | 22 | 22 | | | | | | | | | |
| 12-98 | X | X | I | 10 | | | | 10 | | | | | | |
| 14-5 | X | | II | 5 | | | | | 5 | | | | | |
| 14-15 | X | | I | 15 | | | | 14 | 1 | | | | | |
| 14-18 | X | | I | 18 | | | | 18 | | | | | | |
| 14-19 | X | X | I | 19 | | | | 19 | | | | | | |
| 14-35 | X | X | M | 37 | 37 | | | | | | | | | |
| 14-37 | X | X | M | 37 | | 37 | | | | | | | | |
| 14-97 | X | | I | 12 | | | | 8 | 4 | | | | | |
| 16-2 | □ | | M | 39 | 38 | | | | | | | | | 1** |
| 16-6 | X | | I | 6 | | | | | | 6 | | | | |
| 16-8 | X | | II | 8 | | | | | 8 | | | | | |
| 16-13 | □ | | I | 13 | | | | | 13 | | | | | |
| 16-26 | X | | I | 26 | | | | 26 | | | | | | |
| 16-35 | X | | M | 55 | 55 | | | | | | | | | |
| 16-42 | X | | M | 42 | | | 42 | | | | | | | |
| 16-55 | X | | M | 55 | | 55 | | | | | | | | |
| 16-99 | X | X | I | 23 | | | | 21 | 2 | | | | | |
| 18-11 | X | | II | 11 | | | | | 11 | | | | | |
| 18-32 | X | | I | 32 | | | | 32 | | | | | | |
| 18-35 | X | X | M | 66 | 66 | | | | | | | | | |
| 18-66 | X | X | M | 66 | | 66 | | | | | | | | |
| 20-1 | X | X | M | 79 | | 79 | | | | | | | | |
| 20-2 | X | | M | 65 | | | 65 | | | | | | | |
| 20-11 | X | | I | 11 | | | | | | 11 | | | | |
| 20-16 | X | | II | 16 | | | | | 16 | | | | | |
| 20-35 | X | X | M | 79 | 79 | | | | | | | | | |
| 20-39 | X | | I | 39 | | | | 37 | 2 | | | | | |
| 20-41 | X | | I | 41 | | | | 41 | | | | | | |
| 20-75 | □ | | M | 4 | | | | | | | | | 4†† | |
| 20-79 | □ | | II | 19 | 17 | | | | | | | | 2† | |
| 22-1 | X | X | M | 100 | | 100 | | | | | | | | |
| 22-2 | X | | M | 85 | | | 85 | | | | | | | |
| 22-21 | X | | II | 21 | | | | | 21 | | | | | |
| 22-35 | X | X | M | 100 | 100 | | | | | | | | | |
| 22-53 | X | | I | 53 | | | | 53 | | | | | | |
| 24-1 | X | | M | 128 | | 128 | | | | | | | | |
| 24-2 | X | | M | 100 | | | 100 | | | | | | | |
| 24-4 | X | | I | 56 | | | | 48 | 8 | | | | | |
| 24-7 | X | | M | 99 | 97 | | | | | | | | | 2** |
| 24-11 | □ | | N | 11 | | | | 2 | | | | 9 | | |
| 24-19 | X | | I | 19 | | | | | | 19 | | | | |
| 24-20 | □ | | N | 30 | | | | 10 | 13*** | | 4 | | | 3 |
| 24-24 | X | | I | 24 | | | | | 12 | 12 | | | | |
| 24-29 | X | | I | 29 | | | | | 29 | | | | | |
| 24-35 | X | | M | 128 | 128 | | | | | | | | | |
| 24-37 | X | | I | 37 | | | | | 37 | | | | | |
| 24-43 | □ | | I | 43 | | | | 23 | 20 | | | | | |
| 24-46 | □ | | I | 46 | | | | 40 | 4 | | | | 2†† | |
| 24-61 | X | | I | 61 | | | | 61 | | | | | | |

□ Not tooled for 02-RE

* Pin inserts only (contact Amphenol for socket availability).

** twinax contacts for MIL-C-17/176-00002 cable.

*** Two size 16 contacts dedicated to fiber optics. Consult Amphenol or Fiber Optic Section for more information.

† Must be ordered separately

†† Coax Contacts for RG180 or RG195 cable.

††† Size 8 Coax and Twinax are interchangeable.

For availability of size 12 twinax contacts, consult Amphenol Aerospace.

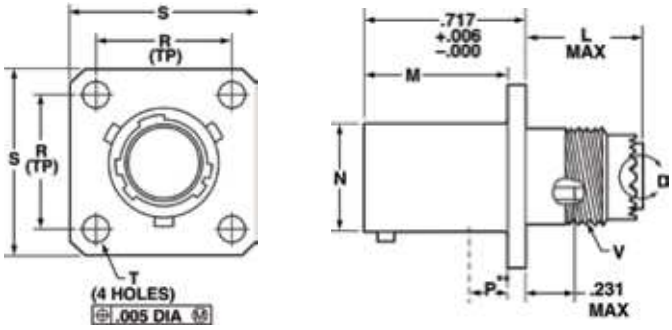
# SJT00RT – Crimp

## Wall Mounting Receptacle

PART NUMBER BUILDER Page 145

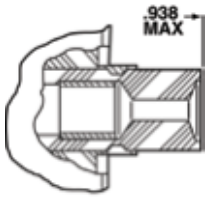
Commercial

**SJT00RT**




Note: Standard wall mount may be back panel mounted where panel thickness does not exceed these dimensions.
For thicker panel applications, SJTP00RT should be used.

| Shell Size | L Max | M +.000 –.005 | R (TP) | S ±.016 | T ±.005 | V Thread Modified Class 2A UNEF (Plated) | V Thread Modified Modified Major Dia. | | N +.001 –.005 | P** Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 8 | .500 | .632 | .594 | .812 | .120 | .4375-28 | .421 – | .417 | .473 | .117 |
| 10 | .500 | .632 | .719 | .938 | .120 | .5625-24 | .542 – | .538 | .590 | .117 |
| 12 | .500 | .632 | .812 | 1.031 | .120 | .6875-24 | .667 – | .663 | .750 | .117 |
| 14 | .500 | .632 | .906 | 1.125 | .120 | .8125-20 | .791 – | .787 | .875 | .117 |
| 16 | .500 | .632 | .969 | 1.219 | .120 | .9375-20 | .916 – | .912 | 1.000 | .117 |
| 18 | .500 | .632 | 1.062 | 1.312 | .120 | 1.0625-18 | 1.034 – | 1.030 | 1.125 | .117 |
| 20 | .500 | .602 | 1.156 | 1.438 | .120 | 1.1875-18 | 1.158 – | 1.154 | 1.250 | .087 |
| 22 | .500 | .602 | 1.250 | 1.562 | .120 | 1.3125-18 | 1.283 – | 1.279 | 1.375 | .087 |
| 24 | .550 | .602 | 1.375 | 1.688 | .147 | 1.4375-18 | 1.408 – | 1.404 | 1.500 | .055 |




VIEW D ENLARGED
FOR COAXIAL USE ONLY

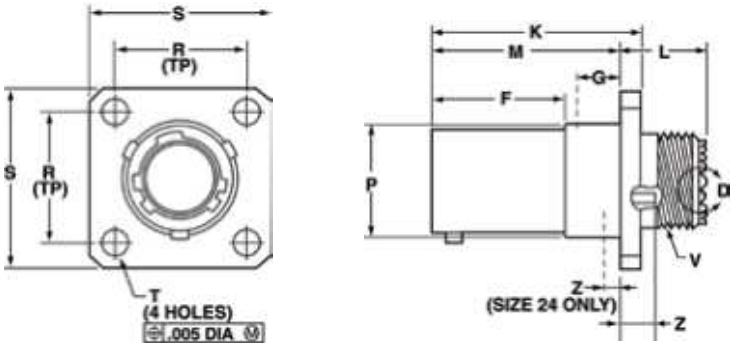
# SJTP00RT – Crimp

## Wall Mounting Receptacle (Back Panel Mounting)

PART NUMBER BUILDER Page 145

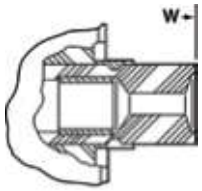
Commercial

**SJTP00RT**




| Shell Size | F +.000 –.005 | K +.006 –.000 | L Max. | M +.000 –.005 | R (TP) | S +.011 –.010 | T ±.005 | Z ±.031 | V Thread Class 2A (Plated) UNEF | P Dia. +.001 –.005 | W Max. | G Max. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | .609 | .945 | .539 | .860 | .594 | .812 | .120 | .062 | .4375-28 | .516 | .812 | .345 |
| 10 | .609 | .945 | .539 | .860 | .719 | .938 | .120 | .062 | .5625-24 | .633 | .812 | .345 |
| 12 | .609 | .945 | .539 | .860 | .812 | 1.031 | .120 | .062 | .6875-24 | .802 | .812 | .345 |
| 14 | .609 | .945 | .539 | .860 | .906 | 1.125 | .120 | .062 | .8125-20 | .927 | .812 | .345 |
| 16 | .609 | .945 | .539 | .860 | .969 | 1.219 | .120 | .062 | .9375-20 | 1.052 | .812 | .345 |
| 18 | .609 | .945 | .539 | .860 | 1.062 | 1.312 | .120 | .062 | 1.0625-18 | 1.177 | .812 | .345 |
| 20 | .609 | .945 | .539 | .860 | 1.156 | 1.438 | .120 | .062 | 1.1875-18 | 1.302 | .812 | .345 |
| 22 | .609 | .945 | .539 | .860 | 1.250 | 1.562 | .120 | .062 | 1.3125-18 | 1.427 | .812 | .345 |
| 24 | .750 | 1.085 | .493 | 1.000 | 1.375 | 1.688 | .147 | .078 | 1.4375-18 | 1.552 | .781 | .452 |

All dimensions for reference only.




VIEW D ENLARGED
FOR COAXIAL USE ONLY

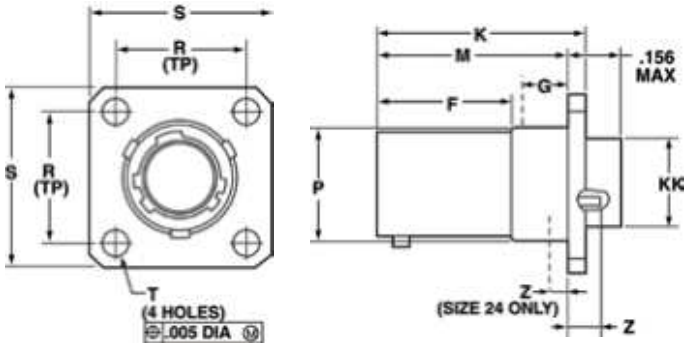
# SJTP02RE – Crimp

## Box Mounting Receptacle (Back Panel Mounting)

PART NUMBER BUILDER Page 145

Commercial

**SJTP02RE**




| Shell Size | F +.000 −.005 | K +.006 −.000 | M +.000 −.005 | R (TP) | S +.011 −.010 | T ±.005 | Z ±.031 | P Dia. +.001 −.005 | KK Dia. +.005 −.002 | G Max. |
|---|---|---|---|---|---|---|---|---|---|---|
| 8 | .609 | .945 | .860 | .594 | .812 | .120 | .062 | .516 | .417 | .345 |
| 10 | .609 | .945 | .860 | .719 | .938 | .120 | .062 | .633 | .538 | .345 |
| 12 | .609 | .945 | .860 | .812 | 1.031 | .120 | .062 | .802 | .663 | .345 |
| 14 | .609 | .945 | .860 | .906 | 1.125 | .120 | .062 | .927 | .787 | .345 |
| 16 | .609 | .945 | .860 | .969 | 1.219 | .120 | .062 | 1.052 | .912 | .345 |
| 18 | .609 | .945 | .860 | 1.062 | 1.312 | .120 | .062 | 1.177 | 1.030 | .345 |
| 20 | .609 | .945 | .860 | 1.156 | 1.438 | .120 | .062 | 1.302 | 1.154 | .345 |
| 22 | .609 | .945 | .860 | 1.250 | 1.562 | .120 | .062 | 1.427 | 1.279 | .345 |
| 24 | .750 | 1.085 | 1.000 | 1.375 | 1.688 | .147 | .078 | 1.552 | 1.404 | .452 |

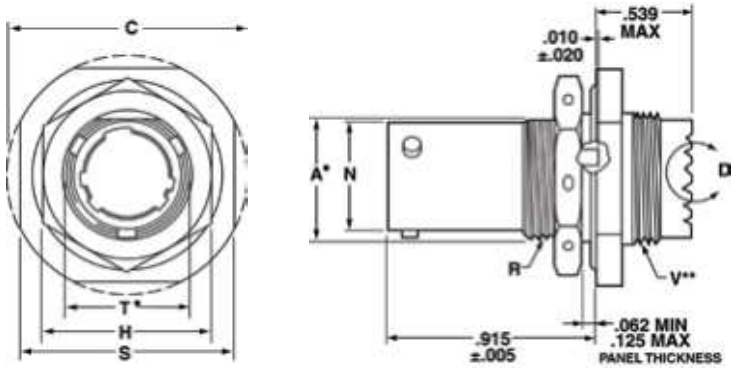
# SJT07RT – Crimp

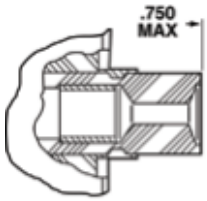
## Jam Nut Receptacle

PART NUMBER BUILDER Page 145

Commercial

**SJT07RT**




VIEW D ENLARGED FOR SIZE 8 COAXIAL USE ONLY

- "D" shaped panel cut-out dimensions

** Oversize threads. Check accessory threads before ordering

| Shell Size | A• +.000 −.010 | H Hex +.017 −.016 | S ±.016 | V Thread Class 2A UNEF (Plated) | R Thread Class 2A UNEF (Plated) | N +.001 −.005 | C Max. | T• +.010 −.000 |
|---|---|---|---|---|---|---|---|---|
| 8 | .542 | .750 | .938 | .5625-24 | .5625-24 | .473 | 1.078 | .572 |
| 10 | .669 | .875 | 1.062 | .6875-24 | .6875-24 | .590 | 1.203 | .697 |
| 12 | .830 | 1.062 | 1.250 | .8125-20 | .8750-20 | .750 | 1.391 | .884 |
| 14 | .955 | 1.188 | 1.375 | .9375-20 | 1.0000-20 | .875 | 1.515 | 1.007 |
| 16 | 1.084 | 1.312 | 1.500 | 1.0625-18 | 1.1250-18 | 1.000 | 1.641 | 1.134 |
| 18 | 1.208 | 1.438 | 1.625 | 1.1875-18 | 1.2500-18 | 1.125 | 1.766 | 1.259 |
| 20 | 1.333 | 1.562 | 1.812 | 1.3125-18 | 1.3750-18 | 1.250 | 1.953 | 1.384 |
| 22 | 1.459 | 1.688 | 1.938 | 1.4375-18 | 1.5000-18 | 1.375 | 2.078 | 1.507 |
| 24 | 1.580 | 1.812 | 2.062 | 1.4375-18 | 1.6250-18 | 1.500 | 2.203 | 1.634 |

All dimensions for reference only.

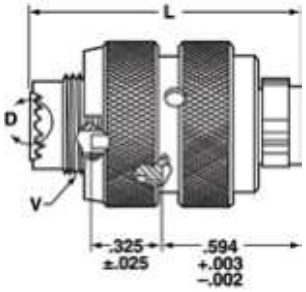
# SJT06RT/SJTG06RT – Crimp

## Straight Plug/Straight Plug (with Grounding Fingers)

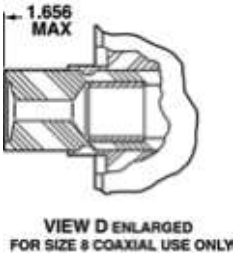
PART NUMBER BUILDER Page 145

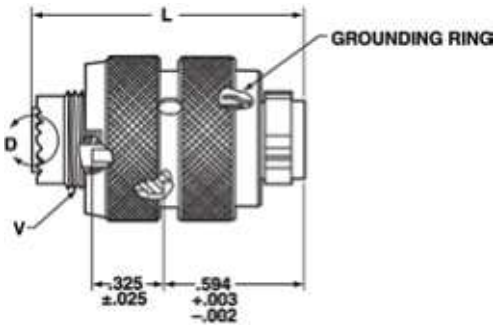
Commercial

**SJT06RT**
**SJTG06RT**




**SJT06RT**







**SJTG06RT**

| Shell Size | L Max | Q Dia. Max. | V Thread Class 2A UNEF (Plated) | V Thread Modified Major Dia. | |
|---|---|---|---|---|---|
| 8 | 1.219 | .734 | .4375-28 | .421 – | .417 |
| 10 | 1.219 | .844 | .5625-24 | .542 – | .538 |
| 12 | 1.219 | 1.016 | .6875-24 | .667 – | .663 |
| 14 | 1.219 | 1.141 | .8125-20 | .791 – | .787 |
| 16 | 1.219 | 1.265 | .9375-20 | .916 – | .912 |
| 18 | 1.219 | 1.391 | 1.0625-18 | 1.034 – | 1.030 |
| 20 | 1.219 | 1.500 | 1.1875-18 | 1.158 – | 1.154 |
| 22 | 1.219 | 1.625 | 1.3125-18 | 1.283 – | 1.279 |
| 24 | 1.258 | 1.750 | 1.4375-18 | 1.408 – | 1.404 |

All dimensions for reference only.

# SJTIY – Hermetic

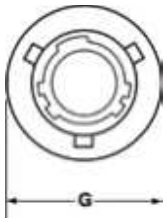
## Solder Mounting Receptacle

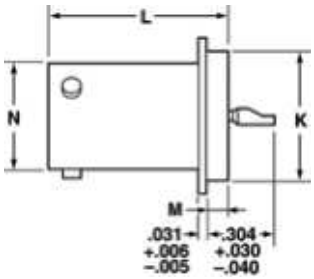


**PART NUMBER BUILDER Page 145**

Commercial

**SJTIY**




| Shell Size | L +.011 −.000 | M +.006 −.005 | G Dia. +.011 −.010 | K Dia. +.001 −.005 | N +.001 −.005 |
|---|---|---|---|---|---|
| 8 | .789 | .125 | .687 | .562 | .473 |
| 10 | .789 | .125 | .797 | .672 | .590 |
| 12 | .789 | .125 | .906 | .781 | .750 |
| 14 | .789 | .125 | 1.031 | .906 | .875 |
| 16 | .789 | .125 | 1.156 | 1.031 | 1.000 |
| 18 | .789 | .125 | 1.281 | 1.156 | 1.125 |
| 20 | .789 | .125 | 1.375 | 1.250 | 1.250 |
| 22 | .821 | .156 | 1.500 | 1.375 | 1.375 |
| 24 | .821 | .156 | 1.625 | 1.500 | 1.500 |

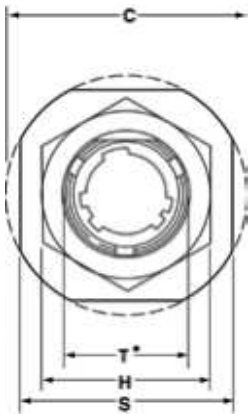
# SJT07Y – Hermetic

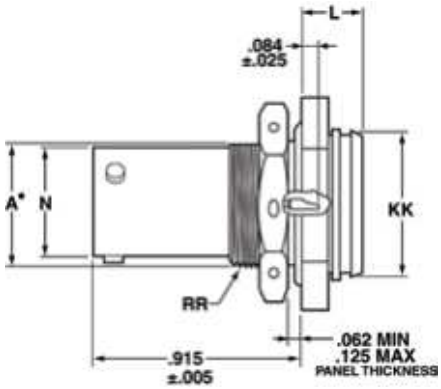
## Jam Nut Receptacle

**PART NUMBER BUILDER Page 145**

Commercial

**SJT07Y**




- "D" shaped panel cut-out dimensions

| Shell Size | N +.001 −.005 | C Max. | A• +.000 −.010 | L Max. | H Hex +.017 −.016 | S ±.016 | KK +.011 −.000 | RR Thread Class 2A UNEF (Plated) | T• +.010 −.000 |
|---|---|---|---|---|---|---|---|---|---|
| 8 | .473 | 1.078 | .542 | .297 | .750 | .938 | .642 | .5625-24 | .572 |
| 10 | .590 | 1.203 | .669 | .297 | .875 | 1.062 | .766 | .6875-24 | .697 |
| 12 | .750 | 1.391 | .830 | .297 | 1.062 | 1.250 | .892 | .8750-20 | .884 |
| 14 | .875 | 1.515 | .955 | .297 | 1.188 | 1.375 | 1.018 | 1.0000-20 | 1.007 |
| 16 | 1.000 | 1.641 | 1.084 | .297 | 1.312 | 1.500 | 1.142 | 1.1250-18 | 1.134 |
| 18 | 1.125 | 1.766 | 1.208 | .328 | 1.438 | 1.625 | 1.268 | 1.2500-18 | 1.259 |
| 20 | 1.250 | 1.953 | 1.333 | .328 | 1.562 | 1.812 | 1.392 | 1.3750-18 | 1.384 |
| 22 | 1.375 | 2.078 | 1.459 | .328 | 1.688 | 1.938 | 1.518 | 1.5000-18 | 1.507 |
| 24 | 1.500 | 2.203 | 1.580 | .328 | 1.812 | 2.062 | 1.642 | 1.6250-18 | 1.634 |

All dimensions for reference only.

# Aquacon Series

# E



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Contact Installation . . . . . 173

# Aquacon Immersible Connectors

## Design Features

The Amphenol® Aquacon Series of connectors has been designed to provide maximum service in oceanic or fluid immersion applications.

The AJ Aquacon offers the following features:

- 1500 PSI Capability
- “O” Ring Sealing, Thread
- Threaded Coupling
- Visual Mating Indication
- Design Flexibility

A specially designed aluminum bronze coupling nut and type 316 stainless steel shells resist corrosion and provide a pressure withstanding connector. Positive threaded coupling. “O” rings, and a color band visual indicator assure sealing and proper mating. A rear accessory thread provides for the use of EMI hardware or molding adapters.

Aquacon Connectors are available in a straight plug and two receptacle styles (see photos at right), with numerous MIL-DTL-38999 insert patterns

AJ Aquacons use JT (38999 type) inserts that incorporate contact sizes 22D, 22M, 22, 20 or 16. AS Aquacons use SJT (38999 type) inserts that incorporate size 12 contacts.

Hermetically sealed (1 X $10^{-6}$ cc/sec leakage rate) arrangements are also available.



**STRAIGHT PLUG**
**AJ6 / AS6**



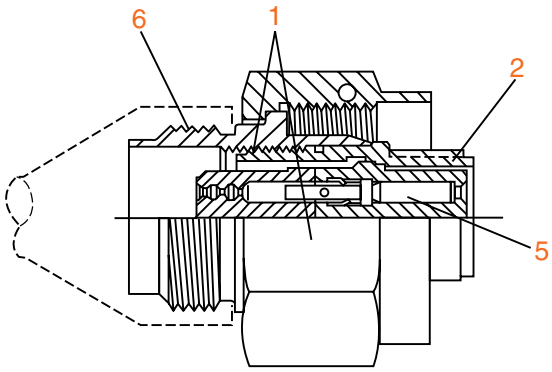
**HERMETIC**
**JAM NUT RECEPTACLE**
**AJ7H/AS7H**

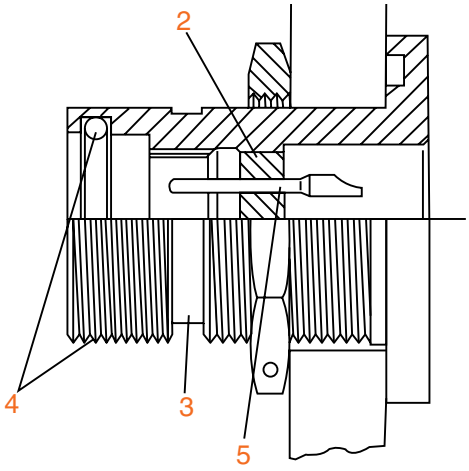
**NON-HERMETIC**
**JAM NUT RECEPTACLE**
**AJ7 / AS7**



**HERMETIC**
**SQUARE FLANGE**
**RECEPTACLE**
**AJ0H**

### DESIGN FEATURES OF AQUACON SERIES CONNECTORS




1. Corrosion resistant aluminum bronze coupling nut and stainless steel sleeve
2. Hermetic and non-hermetic inserts in MIL-DTL-38999 patterns. Glass or hard dielectric material.
3. Visual mating indicator
4. 1500 PSI sealing capability assured by threaded coupling and “O” ring
5. Pin or socket contacts in either plug or receptacle
6. Environmental resistant molded cable terminations with or without EMI accessory

# Aquacon Series

## Specifications, Alternate Positioning

### AQUACON CONTACT RATINGS

| Contact Size | Test Current | | Maximum Millivolt Drop | | | Crimp Well Data | | Solder Well Data | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Standard | Hermetic | Crimp | Solder | Solder Hermetic | Diameter | Depth | Diameter | | Depth |
| 22M | 3 | 2 | 30 | 20 | 60 | .029 ±.001 | .141 | .029 | +.004 –.000 | .094 |
| 22D | 5 | – | 40 | – | – | .0345 ±.001 | .141 | – | | – |
| 22 | 5 | 3 | 40 | 20 | 85 | .0365 ±.001 | .141 | .036 | +.004 –.000 | .094 |
| 20 | 7.5 | 5 | 35 | 20 | 60 | .047 ±.001 | .209 | .044 | +.004 –.000 | .125 |
| 16 | 13 | 10 | 25 | 20 | 85 | .067 ±.001 | .209 | .078 | +.004 –.002 | .141 |
| 12 | 23 | 17 | 25 | 20 | 85 | .100 ±.002 | .209 | .116 ±.004 | | .151 |

### AQUACON SERVICE RATINGS

| Service Rating | Suggested Operating Voltage (Sea Level) | |
|---|---|---|
| | AC (RMS) | DC |
| M | 400 | 550 |
| I | 600 | 850 |
| II | 900 | 1250 |

The establishment of electrical safety factors is left entirely in the designer's hands, as he can best determine what peak voltage, swtiching surges, transients, etc. can be expected in a particular circuit.

### ALTERNATE POSITIONING

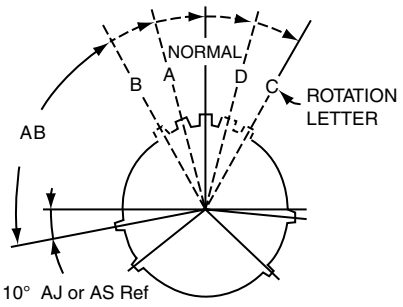
Alternate positioning of connectors allows connectors with identical insert arrangements to be mounted side by side by providing a positive means of eliminating inadvertent cross-mating or cross- plugging.

Alternate positioning of Aquacon Series is achieved by a rotation of the master key/keyway, relative to the insert, as part of the shell manufacturing operation.

Recommended practice is to use alternate position inserts only when necessary.

### AQUACON 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 |




RELATIVE POSSIBLE POSITION OF ROTATED MASTER KEYWAY

(FRONT FACE OF AJ or AS RECEPTACLE SHOWN)

# Insert Availability



| Aquacon Shell Size | Solder | Crimp | Hermetic* | Service Rating** | Total Contacts | Contact Size | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 22D | 22M | 22 | 20 | 16 | 12 |
| 8-3 | X | | X | M | 3 | | | | 3 | | |
| 8-6 | X | X | X | M | 6 | | 6 | | | | |
| 8-35 | | X | X | M | 6 | 6 | | | | | |
| 8-44 | | X | | M | 4 | | | 4 | | | |
| 8-98 | | X | X | I | 3 | | | | 3 | | |
| 10-5 | X | X | X | I | 5 | | | | 5 | | |
| 10-13 | X | X | X | M | 13 | | 13 | | | | |
| 10-35 | | X | X | M | 13 | 13 | | | | | |
| 10-98 | X | X | X | I | 6 | | | | 6 | | |
| 12-3 | X | X | X | II | 3 | | | | | 3 | |
| 12-8 | X | X | X | I | 8 | | | | 8 | | |
| 12-35 | | X | X | M | 22 | 22 | | | | | |
| 12-98 | X | X | X | I | 10 | | | | 10 | | |
| 14-5 | X | X | X | II | 5 | | | | | 5 | |
| 14-15 | X | X | | I | 15 | | | | 14 | 1 | |
| 14-18 | X | X | X | I | 18 | | | | 18 | | |
| 14-35 | | X | X | M | 37 | 37 | | | | | |
| 14-37 | X | X | X | M | 37 | | 37 | | | | |
| 16-6† | | X | X | I | 6 | | | | | | 6 |
| 16-8 | X | X | X | II | 8 | | | | | 8 | |
| 16-26 | X | X | X | I | 26 | | | | 26 | | |
| 16-35 | | X | X | M | 55 | 55 | | | | | |
| 16-55 | X | X | X | M | 55 | | 55 | | | | |
| 18-11 | X | X | | II | 11 | | | | | 11 | |
| 18-32 | X | X | X | I | 32 | | | | 32 | | |
| 18-35 | | X | X | M | 66 | 66 | | | | | |
| 18-66 | X | X | X | M | 66 | | 66 | | | | |
| 20-1 | | X | | M | 79 | | 79 | | | | |
| 20-2 | | X | | M | 65 | | | 65 | | | |
| 20-16 | X | X | X | II | 16 | | | | | 16 | |
| 20-35 | | X | | M | 79 | 79 | | | | | |
| 20-39 | X | X | | I | 39 | | | | 37 | 2 | |
| 20-41 | X | X | X | I | 41 | | | | 41 | | |
| 22-2 | X | X | | M | 85 | | | 85 | | | |
| 22-21 | X | X | X | II | 21 | | | | | 21 | |
| 22-32 | X | | | I | 32 | | | | 32 | | |
| 22-35 | | X | | M | 100 | 100 | | | | | |
| 22-55 | X | X | X | I | 55 | | | | 55 | | |
| 24-19† | | X | X | I | 19 | | | | | | 19 |
| 24-24† | | X | | I | 24 | | | | | 12 | 12 |
| 24-35 | | X | | M | 128 | 128 | | | | | |
| 24-61 | X | X | | I | 61 | | | | 61 | | |

* Tooled for pin inserts only (contact Amphenol for socket availability).

** See specifications

† AS Aquacon version - these arrangements use SJT (38999 type) patterns that incorporate size 12 contacts. See how to order page 157.

Additional insert arrangements may be made available upon request.

# Aquacon Series

## Insert Arrangements

**Front face of pin inserts illustrated**

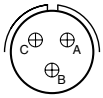
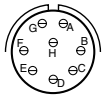


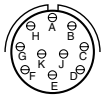
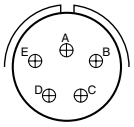
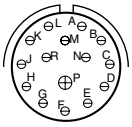
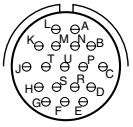




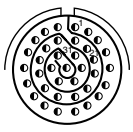
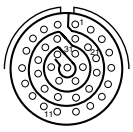
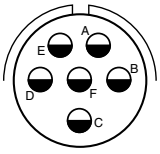
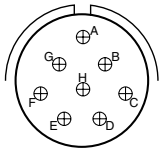
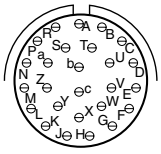
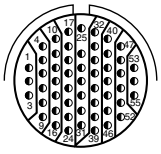



| Insert Arrangement | 8-3 | 8-6 | 8-35 | 8-44 | 8-98 | 10-5 | 10-13 | 10-35 |
|---|---|---|---|---|---|---|---|---|
| Service Rating | M | M | M | M | I | I | M | M |
| Number of Contacts | 3 | 6 | 6 | 4 | 3 | 5 | 13 | 13 |
| Contact Size | 20 | 22M | 22D | 22 | 20 | 20 | 22M | 22D |

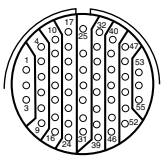
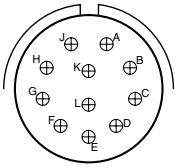
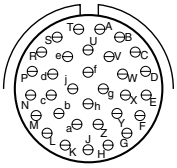
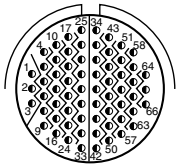
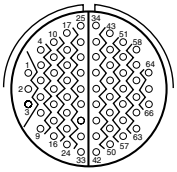
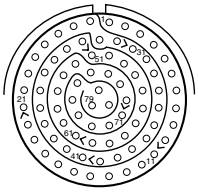




| Insert Arrangement | 10-98 | 12-3 | 12-8 | 12-35 | 12-98 | 14-5 | 14-15 | | 14-18 |
|---|---|---|---|---|---|---|---|---|---|
| Service Rating | I | II | I | M | I | II | I | | I |
| Number of Contacts | 6 | 3 | 8 | 22 | 10 | 5 | 14 | 1 | 18 |
| Contact Size | 20 | 16 | 20 | 22D | 20 | 16 | 20 | 16 | 20 |

| Insert Arrangement | 14-35 | 14-37 | 16-6† | 16-8 | 16-26 | 16-35 |
|---|---|---|---|---|---|---|
| Service Rating | M | M | I | II | I | M |
| Number of Contacts | 37 | 37 | 6 | 8 | 26 | 55 |
| Contact Size | 22D | 22M | 12 | 16 | 20 | 22D |

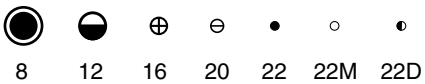







| Insert Arrangement | 16-55 | 18-11 | 18-32 | 18-35 | 18-66 | 20-1 |
|---|---|---|---|---|---|---|
| Service Rating | M | II | I | M | M | M |
| Number of Contacts | 55 | 11 | 32 | 66 | 66 | 79 |
| Contact Size | 22M | 16 | 20 | 22D | 22M | 22M |

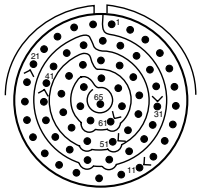
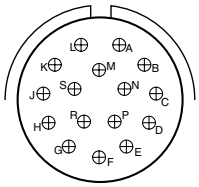
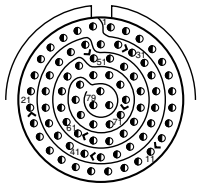
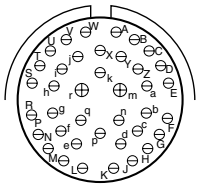
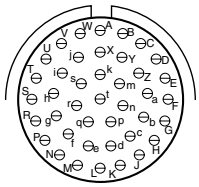
See page 153 for service ratings and contact sizes.

† AS Aquacon version - uses an SJT (38999 type) pattern with size 12 contacts. See how to order page 157.

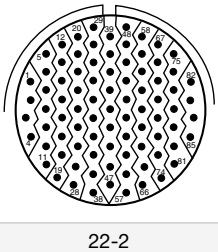
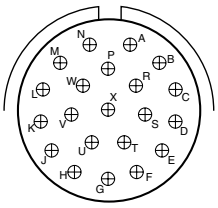
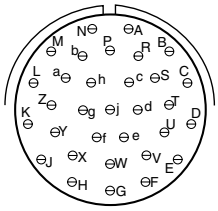
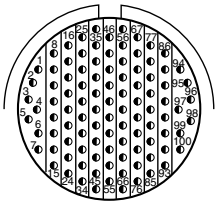
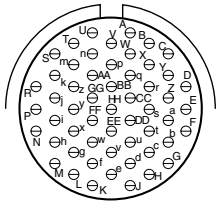
CONTACT LEGEND



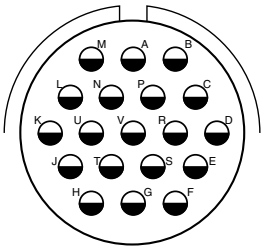
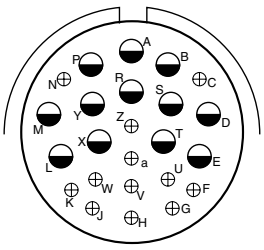
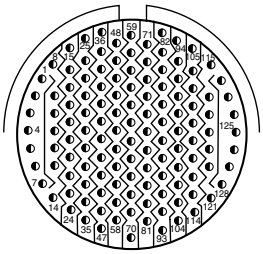
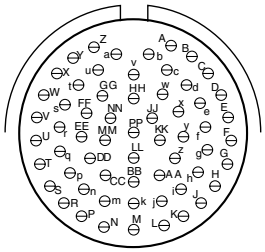
**Front face of pin inserts illustrated**

| Insert Arrangement | 20-2 | 20-16 | 20-35 | 20-39 | | 20-41 |
|---|---|---|---|---|---|---|
| Service Rating | M | II | M | I | | I |
| Number of Contacts | 65 | 16 | 79 | 37 | 2 | 41 |
| Contact Size | 22 | 16 | 22D | 20 | 16 | 20 |

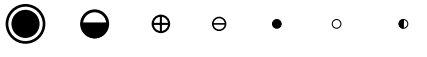
| Insert Arrangement | 22-2 | 22-21 | 22-32 | 22-35 | 22-55 |
|---|---|---|---|---|---|
| Service Rating | M | II | I | M | I |
| Number of Contacts | 85 | 21 | 32 | 100 | 55 |
| Contact Size | 22 | 16 | 20 | 22D | 20 |

| Insert Arrangement | 24-19† | 24-24† | | 24-35 | 24-61 |
|---|---|---|---|---|---|
| Service Rating | I | I | | M | I |
| Number of Contacts | 19 | 12 | 12 | 128 | 61 |
| Contact Size | 12 | 16 | 12 | 22D | 20 |

See page 153 for service ratings and contact sizes.
† AS Aquacon version - uses an SJT (38999 type) pattern with size 12 contacts. See how to order page 157.

CONTACT LEGEND



8 12 16 20 22 22M 22D

# AJ Aquacon

## How to Order

| 1. Connector & Shell Style | 2. Contact Type | 3. Shell Size – Insert Arrangement | 4. Contact Configuration | 5. Insert Rotation | 6. Special Variation |
|---|---|---|---|---|---|
| AJ6 | R - | 20-41 | S | A | (445) |

CONNECTOR TYPE & STYLE

| | | AQUACON IMMERSIBLE CONNECTORS | |
|---|---|---|---|
| | | Aquacon with JT (38999 Type) Inserts | Aquacon with SJT (38999 Type) inserts- size 12 contacts only |
| Receptacle Crimp | Jam Nut Receptacle | AJ7 | AS7 |
| Plugs | Straight Plug | AJ6 | AS6 |

Fused compression glass sealed inserts. Leakage rate less than 1.0x10-6 cc/sec at 15 psi differential; with interfacial seal.

| | | | |
|---|---|---|---|
| Hermetic | Jam Nut Receptacle | AJ7 | AS7 |
| | Square Flange | AJ0 | |

### 2. CONTACT TYPE

| | |
|---|---|
| Receptacle | |
| C | Non-Removable Solder Termination |
| R | Removable Crimp Termination |
| H | Hermetic (Glass Seal) Solder Termination (Receptacles only) |
| Plug | |
| C | Non-Removable Solder Termination |

### 5. ALTERNATE POSITIONING

Alternate positioning of Aquacon Series is achieved by a rotation of the master key/keyway, relative to the insert, as part of the shell manufacturing operation.
Recommended practice is to use alternate position inserts only when necessary.

### AQUACON 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 |

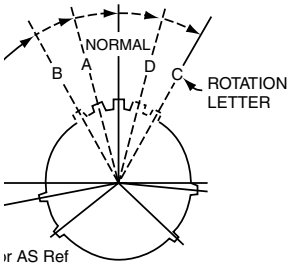
### 3. SELECT A SHELL SIZE & INSERT ARRANGEMENT SEE PAGES 2-5

Shell Size & Insert Arrangements are on pages 2-5. First number represents Shell Size, second number is the Insert Arrangement.

### 4. CONTACTS

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

Hermetics are available only in pin contacts.




LATIVE POSSIBLE POSITION OF ROTATED MASTER KEYWAY

[ FACE OF AJ or AS RECEPTACLE SHOWN)

### 6. SPECIAL VARIATIONS

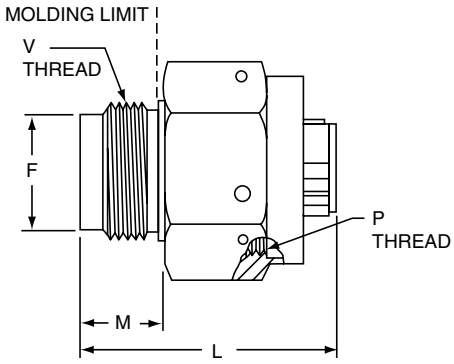
| | |
|---|---|
| (168) | Rear Accessory Thread for Non-Hermetic Jam Nut Receptacle only. |
| (445) | Hex Coupling and Rear Accessory Threads for Straight Plug only. |

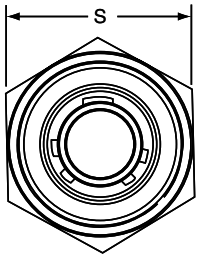
Consult Amphenol Aerospace for other options and special variations available.
See how to order protection caps on page 162.

**PART NUMBER BUILDER Page 157**

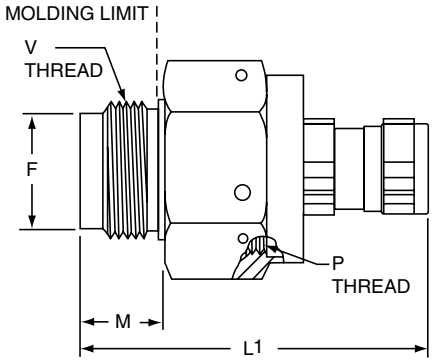
Commercial

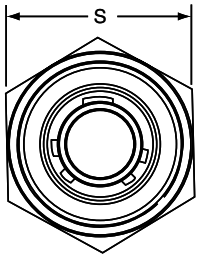
**AJ6X-**
**AS6X-**




**AJ6X-XX-XXX(445)**




**AS6X-XX-XXX(445)**

AJ Aquacons use JT (38999 type) inserts that incorporate contact sizes 22D, 22M, 22, 20 or 16. AS Aquacons use SJT (38999 type) inserts that incorporate size 12 contacts

| Shell Size | F Dia. +.000 −.005 | L Max. (AJ) | L1 Max. (AS) | M ±.010 | P Thread Class 2B | S Hex ±.016 | V Thread Class 2A UNEF |
|---|---|---|---|---|---|---|---|
| 8 | .477 | 1.067 | 1.430 | .360 | .750-20 UNEF | .875 | .5625-24 |
| 10 | .602 | 1.067 | 1.430 | .360 | .875-20 UNEF | 1.000 | .6875-24 |
| 12 | .727 | 1.062 | 1.430 | .360 | 1.000-20 UNEF | 1.125 | .8125-20 |
| 14 | .852 | 1.062 | 1.430 | .360 | 1.125-18 UNEF | 1.250 | .9375-20 |
| 16 | .977 | 1.062 | 1.430 | .360 | 1.250-18 UNEF | 1.375 | 1.0625-18 |
| 18 | 1.102 | 1.062 | 1.430 | .360 | 1.375-18 UNEF | 1.500 | 1.1875-18 |
| 20 | 1.227 | 1.312 | 1.680 | .610 | 1.500-18 UNEF | 1.625 | 1.3125-18 |
| 22 | 1.352 | 1.312 | 1.680 | .610 | 1.625-18 UNEF | 1.750 | 1.4375-18 |
| 24 | 1.477 | 1.312 | 1.680 | .610 | 1.750-18 UNS | 1.875 | 1.5625-18 |

All dimensions for reference only.

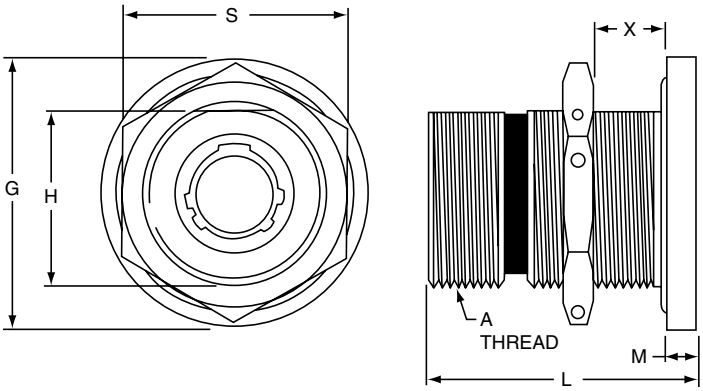
# AJ7H / AS7H Aquacon

## Hermetic Jam Nut Receptacle

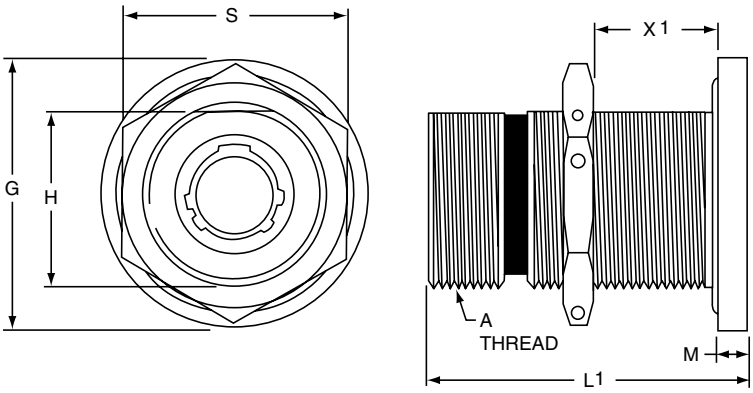
PART NUMBER BUILDER Page 157

Commercial

AJ7H-
AS7H-




AJ7H-XX-XXX(XXX)




AS7H-XX-XXX(XXX)

AJ Aquacons use JT (38999 type) inserts that incorporate contact sizes 22D, 22M, 22, 20 or 16. AS Aquacons use SJT (38999 type) inserts that incorporate size 12 contacts

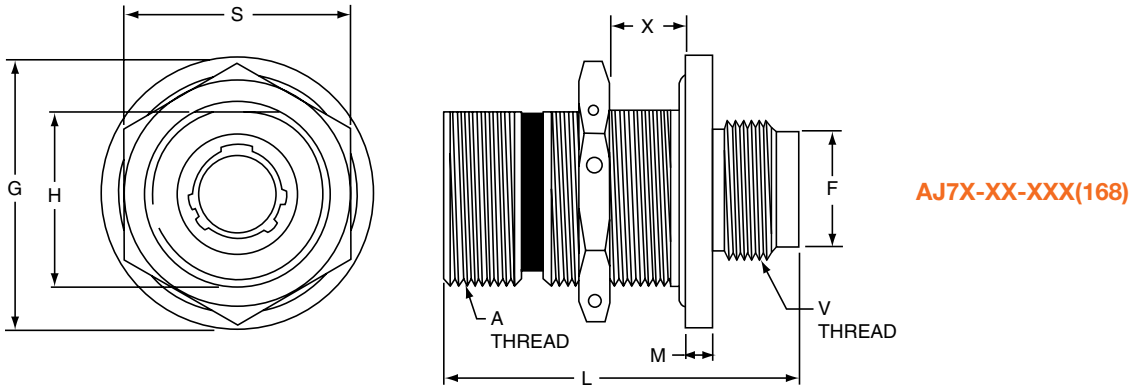
| Shell Size | A Thread Class 2A | G Dia. | H +.000 –.000 | L ±.010 (Hermetic AJ) | L1 +.000 –.010 (Hermetic AS) | M | S Hex ±.016 | X Bulkhead Thickness (AJ) | X1 Bulkhead Thickness (AS) |
|---|---|---|---|---|---|---|---|---|---|
| 8 | .750-20 UNEF | 1.125 | .700 | 1.125 | 1.500 | .125 | .938 | .03 – .31 | .06 – .72 |
| 10 | .875-20 UNEF | 1.250 | .825 | 1.125 | 1.500 | .125 | 1.062 | .03 – .31 | .06 – .72 |
| 12 | 1.000-20 UNEF | 1.406 | .950 | 1.125 | 1.500 | .125 | 1.188 | .03 – .31 | 06 – .72 |
| 14 | 1.125-18 UNEF | 1.531 | 1.075 | 1.125 | 1.500 | .125 | 1.312 | .03 – .31 | 06 – .72 |
| 16 | 1.250-18 UNEF | 1.654 | 1.200 | 1.125 | 1.500 | .125 | 1.438 | .03 – .31 | 06 – .72 |
| 18 | 1.375-18 UNEF | 1.844 | 1.325 | 1.125 | 1.500 | .125 | 1.562 | .03 – .31 | 06 – .72 |
| 20 | 1.500-18 UNEF | 2.000 | 1.450 | 1.250 | 1.500 | .188 | 1.688 | .03 – .38 | 06 – .65 |
| 22 | 1.625-18 UNEF | 2.125 | 1.575 | 1.250 | 1.500 | .188 | 1.812 | .03 – .38 | 06 – .65 |
| 24 | 1.750-18 UNS | 2.250 | 1.700 | 1.250 | 1.500 | .188 | 2.000 | .03 – .38 | 06 – .65 |

All dimensions for reference only.

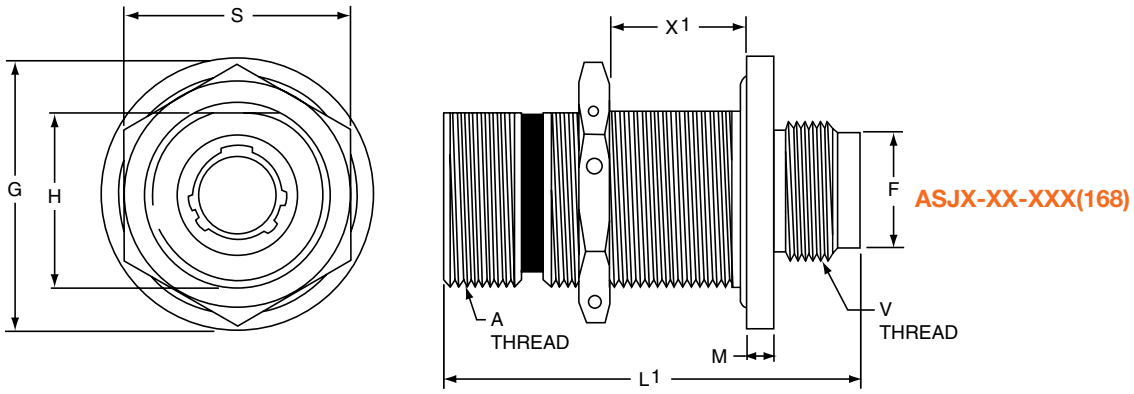
**PART NUMBER BUILDER Page 157**

Commercial

**AJ7X-**
**ASJX-**




**AJ7X-XX-XXX(168)**




**ASJX-XX-XXX(168)**

AJ Aquacons use JT (38999 type) inserts that incorporate contact sizes 22D, 22M, 22, 20 or 16. AS Aquacons use SJT (38999 type) inserts that incorporate size 12 contacts

| Shell Size | A Thread Class 2A | F +.000 –.005 | G Dia. | H +.000 –.005 | L ±.010 (AJ) | L1 +.000 –.010 (AS) | M | S Hex ±.016 | V Thread Class 2A UNEF | X Bulkhead Thickness (AJ) | X1 Bulkhead Thickness (AS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | .750-20 UNEF | .477 | 1.125 | .700 | 1.484 | 1.750 | .125 | .938 | .5625-24 | .03 – .31 | .03 – .58 |
| 10 | .875-20 UNEF | .602 | 1.250 | .825 | 1.484 | 1.750 | .125 | 1.062 | .6875-24 | .03 – .31 | .03 – .58 |
| 12 | 1.000-20 UNEF | .727 | 1.406 | .950 | 1.484 | 1.750 | .125 | 1.188 | .8125-20 | .03 – .31 | .03 – .58 |
| 14 | 1.125-18 UNEF | .852 | 1.531 | 1.075 | 1.484 | 1.750 | .125 | 1.312 | .9375-20 | .03 – .31 | .03 – .58 |
| 16 | 1.250-18 UNEF | .977 | 1.654 | 1.200 | 1.484 | 1.750 | .125 | 1.438 | 1.0625-18 | .03 – .31 | .03 – .58 |
| 18 | 1.375-18 UNEF | 1.102 | 1.844 | 1.325 | 1.484 | 1.750 | .125 | 1.562 | 1.1875-18 | .03 – .31 | .03 – .58 |
| 20 | 1.500-18 UNEF | 1.227 | 2.000 | 1.450 | 1.609 | 1.750 | .188 | 1.688 | 1.3125-18 | .03 – .38 | .03 – .50 |
| 22 | 1.625-18 UNEF | 1.352 | 2.125 | 1.575 | 1.609 | 1.750 | .188 | 1.812 | 1.4375-18 | .03 – .38 | .03 – .50 |
| 24 | 1.750-18 UNS | 1.477 | 2.250 | 1.700 | 1.609 | 1.750 | .188 | 2.000 | 1.5625-18 | .03 – .38 | .03 – .50 |

All dimensions for reference only.

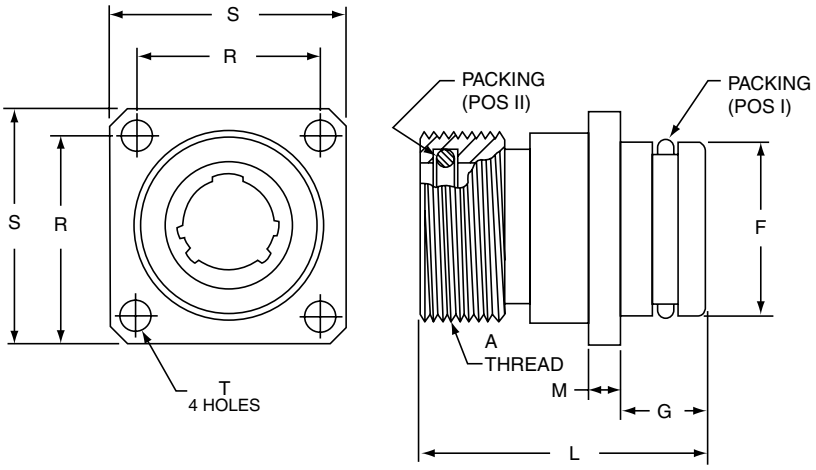
# AJ0H Aquacon

## Hermetic Square Flange Receptacle

PART NUMBER BUILDER Page 157

Commercial

AJOH-

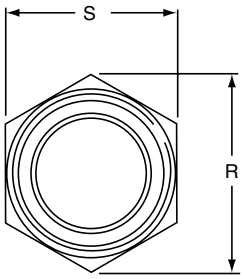


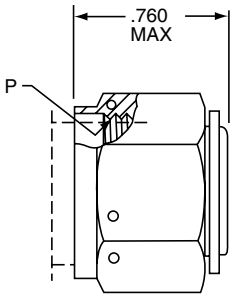

AJ0H-XX-XXX(XXX)

The Aquacon Hermetic Square Flange Receptacle is available in AJ style only which incorporates contact sizes 22D, 22M, 22, 20 or 16.

| Shell Size | A Thread Class 2A | F Dia. +.000 –.001 | G ±.030 | L | M | R | S | T ±.005 | Packing Pos I Part Number | Packing Pos II Part Number |
|---|---|---|---|---|---|---|---|---|---|---|
| 8 | .750-20 UNEF | .685 | .344 | 1.125 | .125 | .719 | .938 | .128 | 10-90351-15 | 10-90351-14 |
| 10 | .875-20 UNEF | .810 | .344 | 1.125 | .125 | .812 | 1.031 | .128 | 10-90351-17 | 10-90351-16 |
| 12 | 1.000-20 UNEF | .935 | .344 | 1.125 | .125 | .906 | 1.125 | .128 | 10-90351-19 | 10-90351-18 |
| 14 | 1.125-18 UNEF | 1.060 | .344 | 1.125 | .125 | .969 | 1.219 | .128 | 10-90351-21 | 10-90351-20 |
| 16 | 1.250-18 UNEF | 1.185 | .344 | 1.125 | .125 | 1.062 | 1.312 | .128 | 10-90351-23 | 10-90351-22 |
| 18 | 1.375-18 UNEF | 1.248 | .344 | 1.125 | .125 | 1.156 | 1.438 | .128 | 10-90351-24 | 10-90351-24 |
| 20 | 1.500-18 UNEF | 1.373 | .375 | 1.219 | .188 | 1.250 | 1.562 | .128 | 10-90351-26 | 10-90351-26 |
| 22 | 1.625-18 UNEF | 1.498 | .375 | 1.219 | .188 | 1.375 | 1.688 | .147 | 10-90351-28 | 10-90351-28 |
| 24 | 1.750-18 UNS | 1.623 | .375 | 1.219 | .188 | 1.500 | 1.812 | .147 | 10-90351-29 | 10-90351-29 |

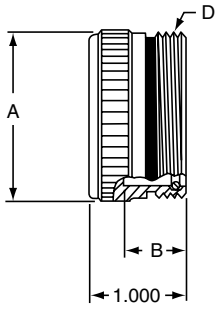
All dimensions for reference only.

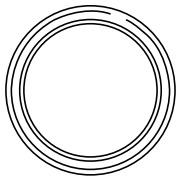



## RECEPTACLE PROTECTION CAP
## 10-377664-XX

| Shell Size | P Thread Class 2A | R Ref. | S Hex +.005 –.010 |
|---|---|---|---|
| 8 | .750-20 UNEF | 1.010 | .875 |
| 10 | .875-20 UNEF | 1.155 | 1.000 |
| 12 | 1.000-20 UNEF | 1.299 | 1.125 |
| 14 | 1.125-18 UNEF | 1.443 | 1.250 |
| 16 | 1.250-18 UNEF | 1.588 | 1.375 |
| 18 | 1.375-18 UNEF | 1.732 | 1.500 |
| 20 | 1.500-18 UNEF | 1.876 | 1.625 |
| 22 | 1.625-18 UNEF | 2.021 | 1.750 |
| 24 | 1.750-18 UNS | 2.165 | 1.875 |



## PLUG PROTECTION CAP
## 10-399623-XX

| Shell Size | A Dia. Max. | B +.031 –.000 | D Thread Class 2A |
|---|---|---|---|
| 8 | .771 | .625 | .750-20 UNEF |
| 10 | .898 | .625 | .875-20 UNEF |
| 12 | 1.010 | .625 | 1.000-20 UNEF |
| 14 | 1.137 | .625 | 1.125-18 UNEF |
| 16 | 1.264 | .625 | 1.250-18 UNEF |
| 18 | 1.392 | .625 | 1.375-18 UNEF |
| 20 | 1.519 | .688 | 1.500-18 UNEF |
| 22 | 1.646 | .688 | 1.625-18 UNEF |
| 24 | 1.744 | .688 | 1.750-18 UNS |

All dimensions for reference only.

## HOW TO ORDER PROTECTION CAPS

| Protection Cap Style | | Cap Size (Correlates to Connector Shell Size) |
|---|---|---|
| For Receptacle Connector | 10-377664 - | 20 |
| For Plug Connector | 10-399623 - | 20 |

# Aquacon Series

## Installation Instructions, Application Tools

### MOLDING

Suggested method of assembly to cable for Aquacon plugs and cable connecting receptacles is molding. The mold sealing diameter has been designed to use a common mold for both plug and receptacle in a given shell size.

### SEALING

In a mated condition, the red visual mating indicator band must be fully concealed by the plug coupling nut to assure to reliable, pressure rated sealed joint. Failure to fully tighten the coupling nut may allow leakage through the main joint seal. The red visual mating indicator is so located that only a full and proper mating of the plug and receptacle will cause the indicator to be fully hidden by the plug coupling nut.

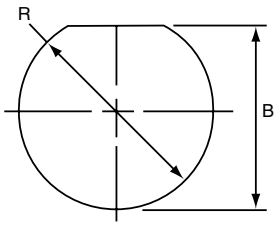


Red Visual Mating Indicator Band

### MOUNTING SURFACES

The integrity of an "O" ring hydrostatic shell is dependent upon the flatness of the surface on which the receptacle is mounted. Surface finishes of 23 microns or less are recommended for "O" ring sealing areas when jam nut or through bulkhead receptacles are mounted.

MOUNTING CUTOUTS




Rear mount jam nut

| Shell Size | B +.010 −.000 | R +.010 −.000 |
|---|---|---|
| 8 | .705 | .759 |
| 10 | .830 | .884 |
| 12 | .955 | 1.007 |
| 14 | 1.080 | 1.134 |
| 16 | 1.205 | 1.259 |
| 18 | 1.330 | 1.384 |
| 20 | 1.455 | 1.507 |
| 22 | 1.580 | 1.634 |
| 24 | 1.705 | 1.759 |

### RECEPTACLE "O" RING RACKING REQUIREMENTS ARP 568 UNIFORM DASH NUMBER

| Shell Size | Main Joint Seal | Shell to Mounting Surface Seal |
|---|---|---|
| | | Jam Nut |
| 8 | ARP-014 | ARP-019 |
| 10 | ARP-016 | ARP-021 |
| 12 | ARP-018 | ARP-023 |
| 14 | ARP-020 | ARP-025 |
| 16 | ARP-022 | ARP-027 |
| 18 | ARP-024 | ARP-029 |
| 20 | ARP-026 | ARP-030 |
| 22 | ARP-028 | ARP-031 |
| 24 | ARP-029 | ARP-032 |

### CONVERSION TABLE SALT WATER DEPTH TO HYDROSTATIC PRESSURE

| Salt-Water Depth in Feet | Pounds per Sq. Inch | Salt-Water Depth in Feet | Pounds per Sq. Inch |
|---|---|---|---|
| 10 | 4 | 2,000 | 890 |
| 25 | 11 | 2,500 | 1,113 |
| 50 | 22 | 3,000 | 1,335 |
| 75 | 33 | 4,000 | 1,780 |
| 100 | 45 | 5,000 | 2,225 |
| 200 | 89 | 6,000 | 2,670 |
| 250 | 111 | 7,000 | 3,115 |
| 300 | 134 | 7,500 | 3,338 |
| 400 | 178 | 8,000 | 3,560 |
| 500 | 223 | 9,000 | 4,005 |
| 600 | 267 | 10,000 | 4,450 |
| 750 | 334 | 15,000 | 6,675 |
| 800 | 356 | 20,000 | 8,900 |
| 1,000 | 445 | 25,000 | 11,125 |

### APPLICATION TOOLING

| Contact Size | Crimping Tool | Positioner | Insertion Tool* | Removal Tool* | Sealing Plug* | Color Code | Reference Publication |
|---|---|---|---|---|---|---|---|
| 22M | M22520/2-01 | M22520/2-09† | 11-8674-24†† | 11-8675-24†† | 10-405996-22 | Black | L-624 |
| 22D | M22520/2-01 | M22520/2-09† | 11-8674-24†† | 11-8675-24†† | 10-405996-22 | Black | |
| 22 | M22520/2-01 | M22520/2-09† | 11-8674-22†† | 11-8675-22†† | 10-405996-22 | Black | |
| 20 | M22520/1-01 | M22520/1-04 | 11-8674-20†† | 11-8675-20†† | 10-405996-20 | Red | |
| 16 | M22520/1-01 | M22520/1-04 | 11-8674-16†† | 11-8675-16†† | 10-405996-16 | Blue | |
| 12 | M22520/1-01 | M2520/1-04 | 11-8674-12†† | 11-8675-12†† | 10-405996-12 | Yellow | |

* Amphenol Part Numbers
† Pin only. Use M22520/2-06 for socket contacts.
†† Contact Daniels Manufacturing Co. or Astro Tool Corp. for availability.
** Available online at www.amphenol-aerospace.com/termination instructions

Amphenol Aerospace



## CONTACT INSTALLATION

### WIRE AND CABLE PREPARATION

1. Cut wire or cable to desired length. Strip insulation from end of wire in accordance with the following table. Hot wire stripping methods are recommended. Avoid nicking or cutting wire strands.

### WIRE STRIP LENGTH IN INCHES

| Contact Type | Contact Size | | | | | |
|---|---|---|---|---|---|---|
| | 22M | 22D | 22 | 20 | 16 | 12 |
| Solder | 1/8 | – | 1/8 | 5/32 | 5/32 | |
| Crimp | 1/8 – 5/32 | | | 7/32 – 1/4 | | |

### SOLDER CONTACT TERMINATION

1. Clean conductors and pre-tin with a good grade 60/40 tin-lead solder to 1/16 inch.
2. Pre-tin contact solder well.
3. With connector in a suitable holding device, solder wells facing operator, and the cutaway portion of the wells up, insert pre-tinned conductor into contact well. Apply heat to closed side of wire well to make joint. Remove heat and allow joint to cool.
4. A resistance soldering unit of approximately 125 watts is recommended. If a soldering iron is used, do not exceed 20 watts for size 22M, 22D and 22 contacts; 80 watts for size 20: and 150 watts for size 16 and 12 contacts.
5. Wipe or brush excess flux from terminations.

### CRIMP CONTACT TERMINATION

1. Select proper crimping tool and positioner from Application Tooling table on previous page.
2. Position wire in wire well. Wire must be visible in the inspection hole provided.
3. With the wire in place, insert the contact fully into the crimping tool. Squeeze the crimping tool handles to the full extent of their travel. The recommended crimping tools are the “full cycling” type and will not release until a complete crimp is made. Release pressure on handles and remove the completed crimped contact/wire assembly.

### CONTACT INSERTION

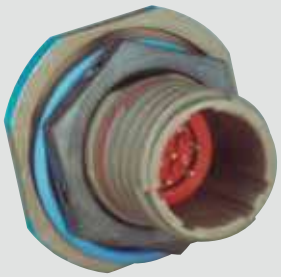
1. Select proper insertion tool from Application Tooling table on previous page.
2. With contact/wire assembly properly positioned in the insertion tool, push forward, directly in line with the grommet hole, until the contact is felt to snap into place.
3. Remove insertion tool.
   All unused contact positions must be filled with uncrimped contacts. In addition, sealing plugs (see Application Tooling table) should be inserted in all unused grommet holes.

### CONTACT REMOVAL

1. Select proper removal tool from Application Tooling table on previous page.
2. Carefully insert removal tool until contact to be removed is released. Aquacon contacts are rear release, rear removable.
3. Remove contact.

# Accessories and Tools for MIL-DTL-38999 Series III, II, I and SJT

F





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# MIL-DTL-38999 Backshells

Amphenol Aerospace



Amphenol offers a full range of accessories that are designed to enhance the performance of Amphenol 38999 connectors, both military and non-military.

Backshells are an integral part of any circular connector when it comes to reliable cable connections. Amphenol divisions team up globally to provide a very large assortment of backshells for use with 38999 Series of connectors, as well as other circular series.

This Accessories and Tools section covers what is offered from Amphenol Aerospace, Sidney, NY. For MIL-DTL-38999 Series III, II, I and SJT (reference table of contents on preceding page).

The section of this catalog called “Backshells” covers the backshell and adapters that are provided through the Amphenol PCD/Amphenol India divisions. Please refer to this section for:

- Backshells for Connector Family “L”, which includes MIL-DTL-38999 Series III and Series IV
- Backshells for Connector Family “K”, which includes MIL-DTL-38999 Series I and Series II
- Backshells for Connector Family “J”, which includes MIL-DTL-24682 (Matrix, Series 2), MIL-DTL-5015 (Matrix, MS3400 Series), MIL-DTL-83723 (Series I & III), MIL-DTL-81703 (Series III)



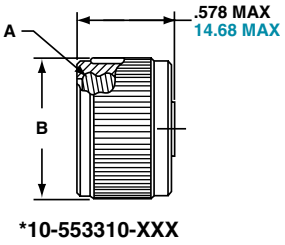
The variety of types of backshells and adapters covered in the Backshells section of this catalog include:

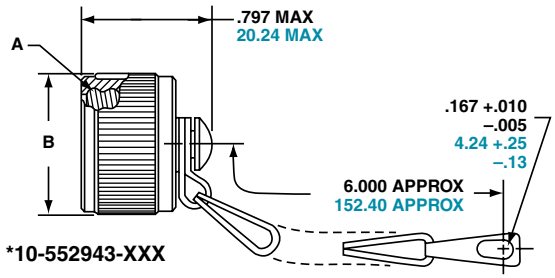
- Non-environmental backshells
- Environmental backshells
- Non-environmental EMI/RFI backshells
- Environmental EMI/RFI backshells
- Shrink boot adapters
- Crimp ring adapters
- Band lock adapters
- Pre-shield adapters

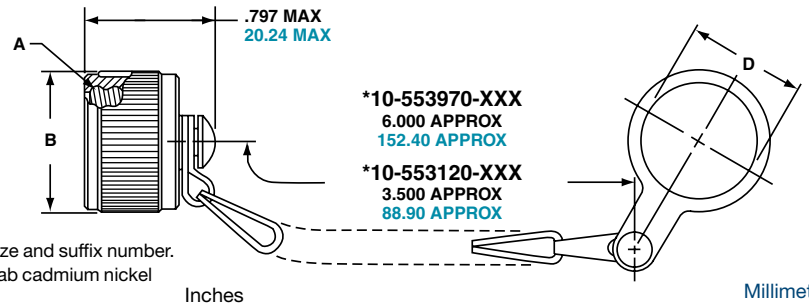
For more information contact:
Amphenol Aerospace: www.amphenol-aerospace.com (phone: 800-678-0141)
or visit www.backshellworld.com or email: sales@backshellworld.com

# MIL-DTL-38999, Series III TV

## Receptacle Protection Cap




* To complete order number, add shell size and suffix number. For example, shell size 11 with olive drab cadmium nickel base, 10-552943-119

Inches

| Shell Size | A Thread Class 2B 0.1P-0.3L-TS | B Dia. Max. | D Dia. +.010 –.000 |
|---|---|---|---|
| 9 | .6250 | .875 | .703 |
| 11 | .7500 | 1.000 | .844 |
| 13 | .8750 | 1.125 | 1.016 |
| 15 | 1.0000 | 1.250 | 1.141 |
| 17 | 1.1875 | 1.438 | 1.266 |
| 19 | 1.2500 | 1.500 | 1.391 |
| 21 | 1.3750 | 1.625 | 1.516 |
| 23 | 1.5000 | 1.750 | 1.641 |
| 25 | 1.6250 | 1.875 | 1.766 |

All dimensions for reference only.

Millimeters

| Shell Size | MS Shell Size Code | B Dia. Max. | D Dia. +.25 –.00 |
|---|---|---|---|
| 9 | A | 22.23 | 17.86 |
| 11 | B | 25.40 | 21.44 |
| 13 | C | 28.58 | 25.81 |
| 15 | D | 31.75 | 28.98 |
| 17 | E | 36.53 | 32.16 |
| 19 | F | 38.10 | 35.33 |
| 21 | G | 41.28 | 38.51 |
| 23 | H | 44.45 | 41.68 |
| 25 | J | 47.63 | 44.86 |

### TV SERIES III MS METAL PROTECTION CAPS

| Shell Size | MS Shell Size Code | MS Receptacle Protection Cap |
|---|---|---|
| 9 | A | D38999/33W9X* |
| 11 | B | D38999/33W11X* |
| 13 | C | D38999/33W13X* |
| 15 | D | D38999/33W15X* |
| 17 | E | D38999/33W17X* |
| 19 | F | D38999/33W19X* |
| 21 | G | D38999/33W21X* |
| 23 | H | D38999/33W23X* |
| 25 | J | D38999/33W25X* |

* To complete order number, replace X with applicable letter as follows:

R - designates eyelet type

N - designates washer type

MS metal protection caps are supplied with service class W which designates corrosion resistant olive drab cadmium plate aluminum.

Consult Amphenol Aerospace for more detailed information on ordering MS Metal protection caps.

| Finish | 10-No Suffix |
|---|---|
| Olive Drab, Cadmium, Nickel base | -XX9 |
| Electroless Nickel | -XXG |

Consult Amphenol Aerospace for availability of stainless steel protection caps.

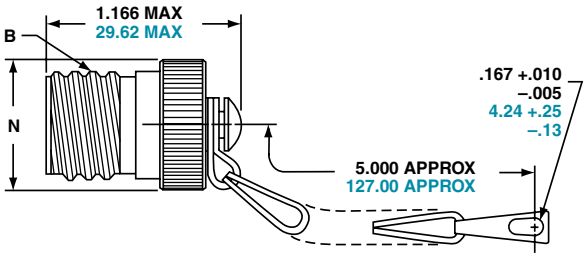
### TV SERIES III PLASTIC PROTECTION CAPS

| Shell Size | Receptacle |
|---|---|
| 9 | 10-70500-10 |
| 11 | 10-70500-12 |
| 13 | 10-70500-14 |
| 15 | 10-70500-16 |
| 17 | 10-70500-19 |
| 19 | 10-70500-20 |
| 21 | 10-70500-22 |
| 23 | 10-70500-24 |
| 25 | 10-70524-1 |

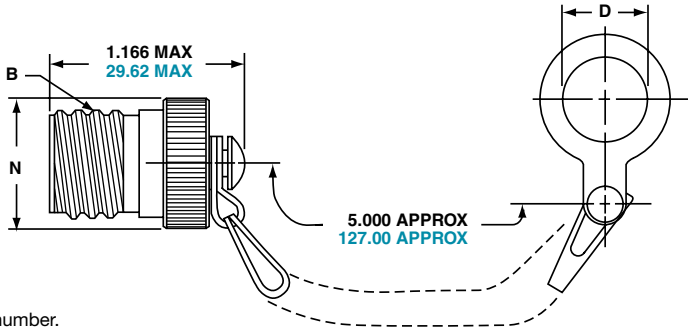
# Plug Protection Cap



*10-552944-XXX




*10-553998-XXX




* To complete order number, add shell size and suffix number. For example, shell size 11 with olive drab cadmium nickel base, 10-552944-119

Inches

| Shell Size | A Thread Class 2B 0.1P-0.3L-TS | D Dia. +.010 –.000 | N Dia. Max. |
|---|---|---|---|
| 9 | .6250 | .516 | .895 |
| 11 | .7500 | .641 | 1.000 |
| 13 | .8750 | .766 | 1.171 |
| 15 | 1.0000 | .891 | 1.299 |
| 17 | 1.1875 | 1.016 | 1.436 |
| 19 | 1.2500 | 1.141 | 1.543 |
| 21 | 1.3750 | 1.266 | 1.670 |
| 23 | 1.5000 | 1.343 | 1.787 |
| 25 | 1.6250 | 1.516 | 1.914 |

Millimeters

| Shell Size | MS Shell Size Code | D Dia. +.25 –.00 | N Dia. Max. |
|---|---|---|---|
| 9 | A | 13.11 | 22.73 |
| 11 | B | 16.28 | 25.40 |
| 13 | C | 19.46 | 29.74 |
| 15 | D | 22.63 | 32.99 |
| 17 | E | 25.81 | 36.47 |
| 19 | F | 28.98 | 39.19 |
| 21 | G | 32.16 | 42.42 |
| 23 | H | 34.11 | 45.39 |
| 25 | J | 38.51 | 48.62 |

All dimensions for reference only.

## TV SERIES III MS METAL PROTECTION CAPS

| Shell Size | MS Shell Size Code | MS Plug Protection Cap |
|---|---|---|
| 9 | A | D38999/32W9X* |
| 11 | B | D38999/32W11X* |
| 13 | C | D38999/32W13X* |
| 15 | D | D38999/32W15X* |
| 17 | E | D38999/32W17X* |
| 19 | F | D38999/32W19X* |
| 21 | G | D38999/32W21X* |
| 23 | H | D38999/32W23X* |
| 25 | J | D38999/32W25X* |

* To complete order number, replace X with applicable letter as follows:

R - designates eyelet type

N - designates washer type

MS metal protection caps are supplied with service class W which designates corrosion resistant olive drab cadmium plate aluminum.

Consult Amphenol Aerospace for more detailed information on ordering MS Metal protection caps.

| Finish | 10-No Suffix |
|---|---|
| Olive Drab, Cadmium, Nickel base | -XX9 |
| Electroless Nickel | -XXG |

Consult Amphenol Aerospace for availability of stainless steel protection caps.

## TV SERIES III PLASTIC PROTECTION CAPS

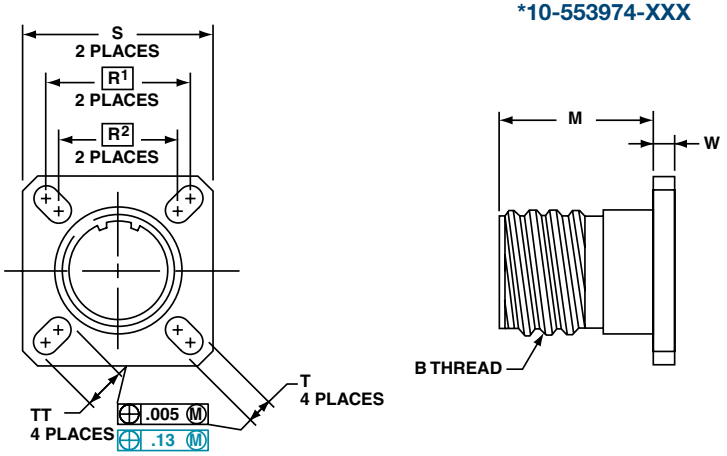
| Shell Size | Plug |
|---|---|
| 9 | 10-70506-14 |
| 11 | 10-70506-16 |
| 13 | 10-70500-18 |
| 15 | 10-70500-20 |
| 17 | 10-70500-22 |
| 19 | 10-70500-24 |
| 21 | 10-70524-1 |
| 23 | 10-70506-28 |
| 25 | 10-70500-28 |

# MIL-DTL-38999, Series III TV

## Dummy Receptacle

**PART NUMBER REFERENCE.**
**SEE NOTE BELOW TO COMPLETE.**

***10-553974-XXX**




* To complete order number, add shell size and suffix number. For example, shell size 11 with olive drab cadmium nickel base, 10-553974-119

Inches

| Shell Size | MS Shell Size Coded | B Thread 0.1P-0.3L-TS (Plated) | M +.020 −.000 | R1 | R2 | S ±.010 | T ±.008 −.006 | W ±.010 | TT ±.008 −.006 |
|---|---|---|---|---|---|---|---|---|---|
| 9 | A | .6250 | .822 | .719 | .594 | .938 | .128 | .098 | .216 |
| 11 | B | .7500 | .822 | .812 | .719 | 1.031 | .128 | .098 | .194 |
| 13 | C | .8750 | .822 | .906 | .812 | 1.125 | .128 | .098 | .194 |
| 15 | D | 1.0000 | .822 | .969 | .906 | 1.219 | .128 | .098 | .173 |
| 17 | E | 1.1875 | .822 | 1.062 | .969 | 1.312 | .128 | .098 | .194 |
| 19 | F | 1.2500 | .822 | 1.156 | 1.062 | 1.438 | .128 | .098 | .194 |
| 21 | G | 1.3750 | .791 | 1.250 | 1.156 | 1.562 | .128 | .125 | .194 |
| 23 | H | 1.5000 | .791 | 1.375 | 1.250 | 1.688 | .154 | .125 | .242 |
| 25 | J | 1.6250 | .791 | 1.500 | 1.375 | 1.812 | .154 | .125 | .242 |

| Finish | 10-No Suffix |
|---|---|
| Olive Drab, Cadmium, Nickel Base | -XX9 |
| Electroless Nickel | -XXG |

Millimeters

| Shell Size | MS Shell Size Coded | M +.51 −.00 | R1 | R2 | S ±.25 | T +.20 −.15 | W ±.25 | TT +.20 −.15 |
|---|---|---|---|---|---|---|---|---|
| 9 | A | 20.88 | 18.26 | 15.09 | 23.83 | 3.25 | 2.49 | 5.49 |
| 11 | B | 20.88 | 20.62 | 18.26 | 26.19 | 3.25 | 2.49 | 4.93 |
| 13 | C | 20.88 | 23.01 | 20.62 | 28.58 | 3.25 | 2.49 | 4.93 |
| 15 | D | 20.88 | 24.61 | 23.01 | 30.96 | 3.25 | 2.49 | 4.93 |
| 17 | E | 20.88 | 26.97 | 24.61 | 33.32 | 3.25 | 2.49 | 4.93 |
| 19 | F | 20.88 | 29.36 | 26.97 | 36.53 | 3.25 | 2.49 | 4.93 |
| 21 | G | 20.09 | 31.75 | 29.36 | 39.67 | 3.25 | 3.18 | 4.93 |
| 23 | H | 20.09 | 34.93 | 31.75 | 42.88 | 3.91 | 3.18 | 6.15 |
| 25 | J | 20.09 | 38.10 | 34.93 | 46.02 | 3.91 | 3.18 | 6.15 |

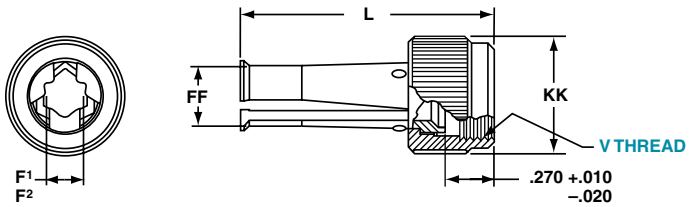
All dimensions for reference only.

Designates true position dimensioning.

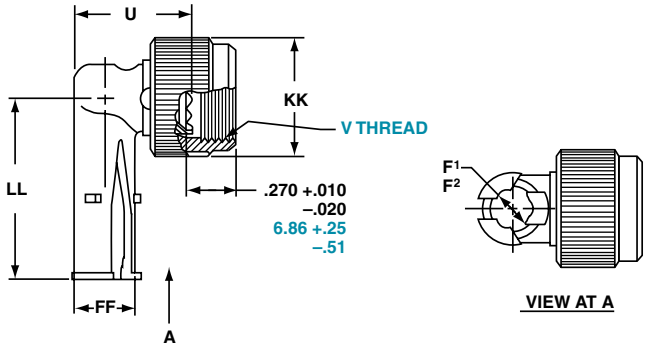
# Cable Clamps



**Straight Style**
***10-552681-XXX metal coupling**




**90 Degree Elbow Style**
***10-552682-XXX metal coupling**




* To complete order number, see suffix chart below. Examples: Clamp with metal coupling nut for shell size 11 with olive drab cadmium nickel base, 10-552681-119.

Inches

| Shell Size | MS Shell Size Code | F¹ Min. Dia. Cable | F² Max. Dia. Cable | L Max. | U Max. | FF Dia. Max. | KK Dia. Max. | LL Max. |
|---|---|---|---|---|---|---|---|---|
| 9 | A | .094 | .203 | 1.431 | .656 | .347 | .629 | 1.015 |
| 11 | B | .141 | .250 | 1.431 | .688 | .394 | .756 | 1.062 |
| 13 | C | .172 | .323 | 1.431 | .750 | .467 | .883 | 1.125 |
| 15 | D | .203 | .422 | 1.431 | .859 | .566 | 1.011 | 1.328 |
| 17 | E | .234 | .500 | 1.431 | .937 | .644 | 1.138 | 1.392 |
| 19 | F | .265 | .562 | 1.431 | 1.000 | .706 | 1.265 | 1.453 |
| 21 | G | .297 | .625 | 1.492 | 1.062 | .769 | 1.393 | 1.609 |
| 23 | H | .328 | .703 | 1.492 | 1.141 | .847 | 1.488 | 1.656 |
| 25 | J | .359 | .765 | 1.492 | 1.203 | .909 | 1.616 | 1.719 |

| Finish | 10-No Suffix |
|---|---|
| Olive Drab, Cadmium Nickel Base | -XX9 |
| Electroless Nickel | -XXG |

Millimeters

| Shell Size | MS Shell Size Code | F¹ Min. Dia. Cable | F² Max. Dia. Cable | L Max. | U Max. | V Thread Metric | FF Dia. Max. | KK Dia. Max. | LL Max. |
|---|---|---|---|---|---|---|---|---|---|
| 9 | A | 2.39 | 5.16 | 36.35 | 16.66 | M12X1-6H | 8.81 | 15.98 | 25.78 |
| 11 | B | 3.58 | 6.35 | 36.35 | 17.48 | M15X1-6H | 10.01 | 19.20 | 26.97 |
| 13 | C | 4.37 | 8.20 | 36.35 | 19.05 | M18X1-6H | 11.86 | 22.43 | 28.58 |
| 15 | D | 5.16 | 10.72 | 36.35 | 21.82 | M22X1-6H | 14.38 | 25.68 | 33.73 |
| 17 | E | 5.94 | 12.70 | 36.35 | 23.80 | M25X1-6H | 16.36 | 28.91 | 35.36 |
| 19 | F | 6.73 | 14.27 | 36.35 | 25.40 | M28X1-6H | 17.93 | 32.13 | 36.91 |
| 21 | G | 7.54 | 15.88 | 37.90 | 26.97 | M31X1-6H | 19.53 | 35.38 | 40.87 |
| 23 | H | 8.83 | 17.86 | 37.90 | 28.98 | M34X1-6H | 21.51 | 37.80 | 42.06 |
| 25 | J | 9.12 | 19.43 | 37.90 | 30.56 | M37X1-6H | 23.09 | 41.05 | 43.66 |

# 38999, Series III TV Breakaway Fail Safe

## Backshells, Dummy Contacts, Wire Combs

**Amphenol offers a full range of accessories that are designed to enhance the performance of Amphenol Breakaway connectors.**

**Low Profile Backshells in shell size 25 with the following features:**

- Olive drab cadmium finish
- 90 degree termination
- Low profile design with three heights ranging from 1.010 to 1.660
- Rear access covers to help ease harness assembly and repairability
- Amphenol part numbers: 10-640000-XXX



BACKSHELLS ARE OFFERED FOR USE WITH BREAKAWAY FAIL SAFE CONNECTORS IN THREE HEIGHTS



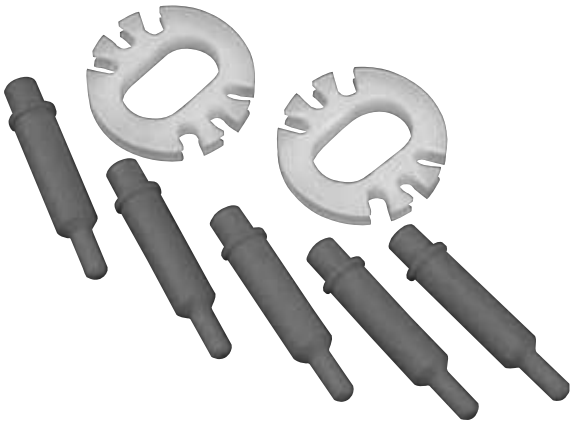
### DUMMY CONTACTS

- Available in size 12 and size 8
- Provide a cost effective alternative for sealing unused contact cavities
- Size 8 part number: T3-4008-59P
- Size 12 part number: T3-4012-59P

### WIRE COMBS

- Available for the 25-20 insert pattern to help to stabilize and prevent contact side loading
- Amphenol part number: 21-33626-XXX

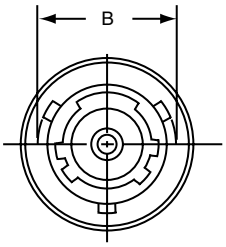
For information on how to order these accessory products for Breakaway Fail Safe connectors, consult Amphenol Aerospace.

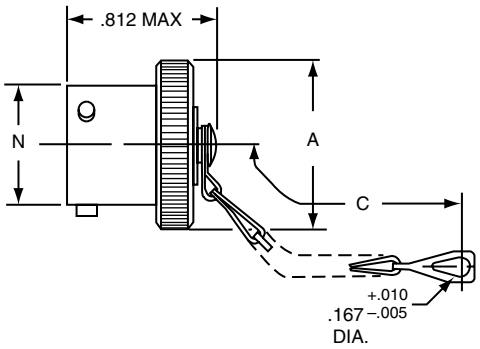


ACCESSORY PRODUCTS FOR BREAKAWAY CONNECTORS: DUMMY CONTACTS AND WIRE COMBS

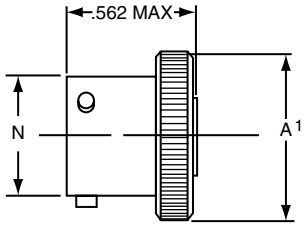
# Plug Protection Cap






***10-547138-XXX (MS27510XXXC)**




***10-241853-XXX (MS27510XXXA)**

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 would be 10-241853-107, MS27510A10C or MS27510A10A.

| Shell Size | A Dia. Max. | A[1] 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.

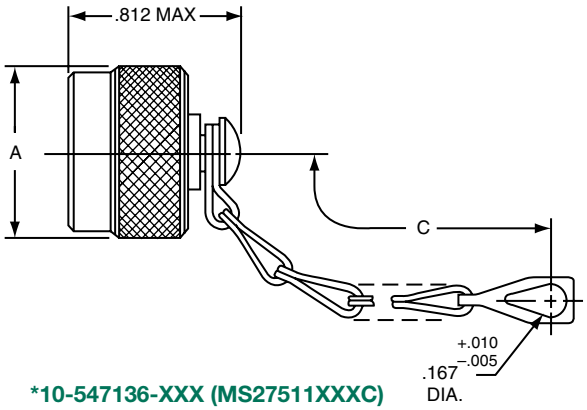
| Finish | 10-Number Suffix | MS Number Suffix with chain | MS Number Suffix without chain |
|---|---|---|---|
| Chromate Treat | -XX0 | | |
| Anodic Coating | -XX5 | CXXC | CXXA |
| Cadmium Plate Nickel Base | -XX7 | AXXC | AXXA |
| Olive Drab, Cadmium, Nickel Base | -XX9 | BXXC | BXXA |
| Electroless Nickel | -XXG | FXXC | FXXA |

## SERIES II JT
## PLASTIC PROTECTION CAPS

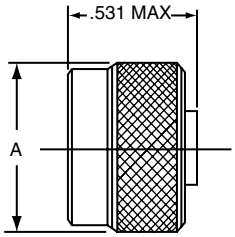
| Shell Size | | Plug |
|---|---|---|
| 8 | | 10-70500-10 |
| | 9 | 10-70506-14 |
| 10 | | 10-70506-14 |
| | 11 | 10-70506-16 |
| 12 | | 10-70506-16 |
| | 13 | 10-70506-18 |
| 14 | | 10-70506-18 |
| | 15 | 10-70506-20 |
| 16 | | 10-70506-20 |
| | 17 | 10-70506-22 |
| 18 | | 10-70506-22 |
| | 19 | 10-70506-24 |
| 20 | | 10-70506-24 |
| | 21 | 10-70576-24 |
| 22 | | 10-70576-24 |
| | 23 | 10-70506-28 |
| 24 | | 10-70506-28 |
| | 25 | 10-558651-25 |

# MIL-DTL-38999, Series II JT

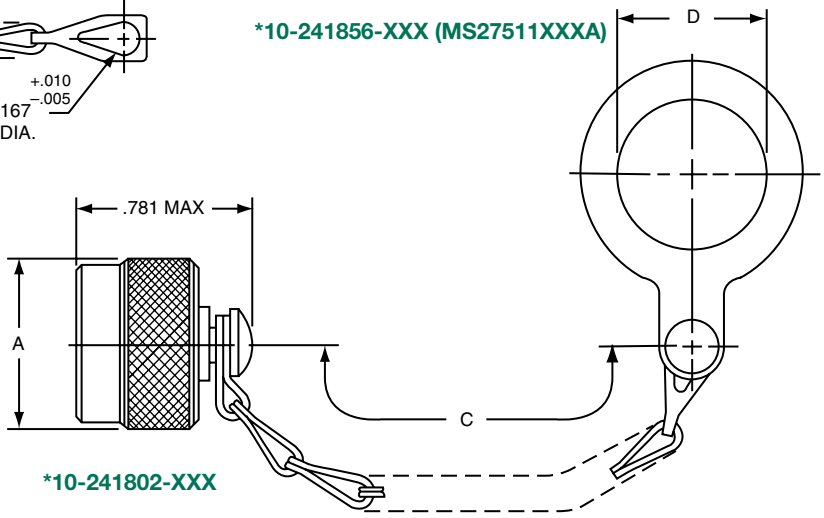
## Receptacle Protection Cap




*10-547136-XXX (MS27511XXXC)




*10-241856-XXX (MS27511XXXA)




*10-241802-XXX

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 would be 10-241802-107, MS27511A10C, MS27511A10A

| 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 |

† 3.000 for MS27511

All dimensions for reference only.

| Finish | 10-Number Suffix | MS Number Suffix with chain | MS Number Suffix without chain |
|---|---|---|---|
| Chromate Treat | -XX0 | | |
| Anodic Coating | -XX5 | CXXC | CXXA |
| Cadmium Plate Nickel Base | -XX7 | AXXC | AXXA |
| Olive Drab, Cadmium, Nickel Base | -XX9 | BXXC | BXXA |
| Electroless Nickel | -XXG | FXXC | FXXA |

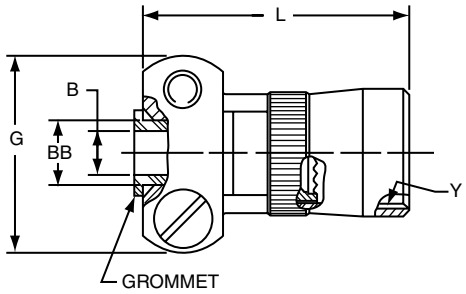
### SERIES II JT PLASTIC PROTECTION CAPS

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

Amphenol Aerospace



## Strain Relief (Crimp Type)




***10-405982-XXX (MS27506XXX-2 REFERENCE M85049/49)**

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-Number Suffix | MS27506 Suffix | M85049/49 Suffix |
|---|---|---|---|
| Chromate Treat | -XX0 | | NA |
| Anodic Coating | -XX5 | CXX-2 | (-2-XXA) |
| Cadmium Plate Nickel Base | -XX7 | AXX-2 | NA |
| Olive drab, Cadmium, Nickel base | -XX9 | BXX-2 | (-2-XXW) |
| Electroless Nickel | -XXG | FXX-2 | (-2-XXN) |

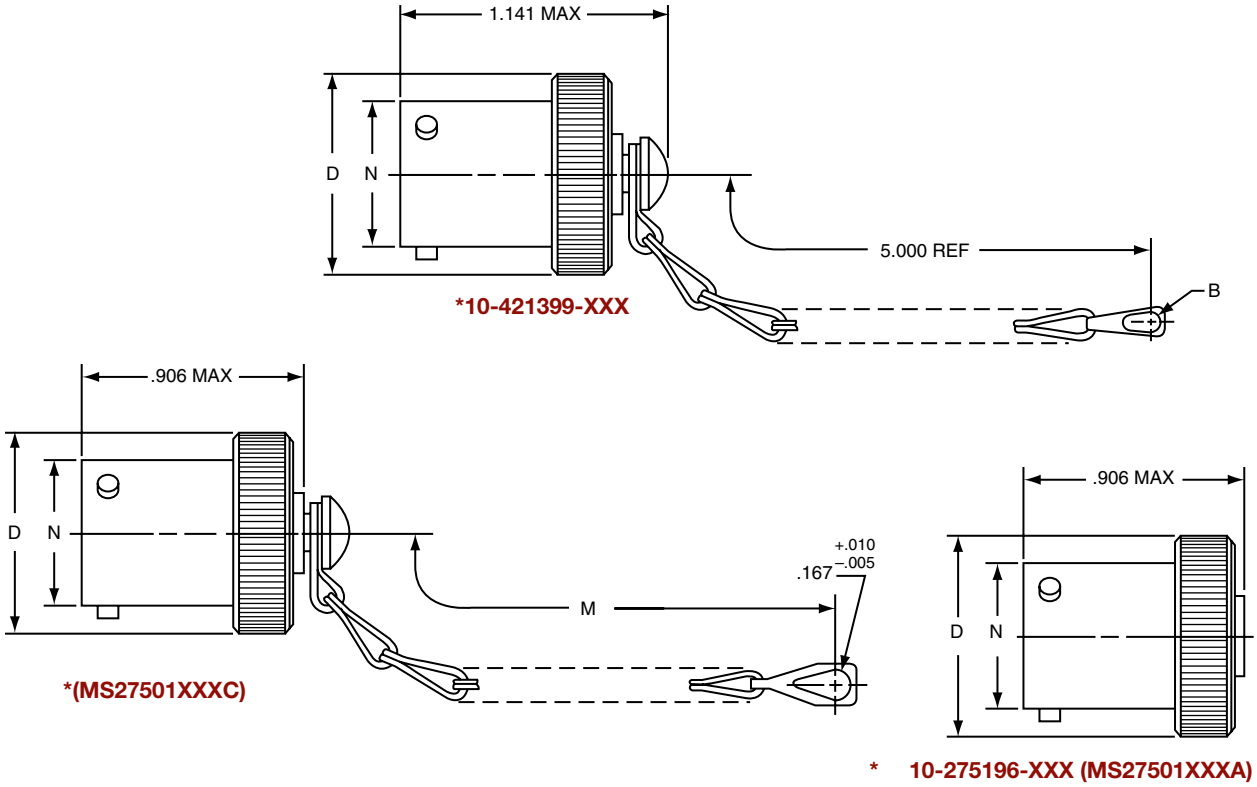
For example: Shell size 10 with cadmium plate, nickel base would be 10-405982-107 or M85049/49-2-10W

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

All dimensions for reference only.
Note: For solder type cable clamp 10-241055-XXX (M85049/49) consult Amphenol Aerospace.

# MIL-DTL-38999, Series I LJT

## Plug Protection Cap




* To complete order number, add shell size and suffix number.
For example, shell size 11 with cadmium plate, nickel base would be 10-421399-117, MS27501A11C, MS27501A11A.

| 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 |

| Finish | 10- Number Suffix | MS Number Suffix with chain | MS Number Suffix without chain |
|---|---|---|---|
| Chromate Treat | -XX0 | | |
| Anodic Coating | -XX5 | | |
| Cadmium Plate Nickel Base | -XX7 | AXXC | AXXA |
| Olive Drab, Cadmium, Nickel Base | -XX9 | BXXC | BXXA |
| Electroless Nickel | -XXG | FXXC | FXXA |

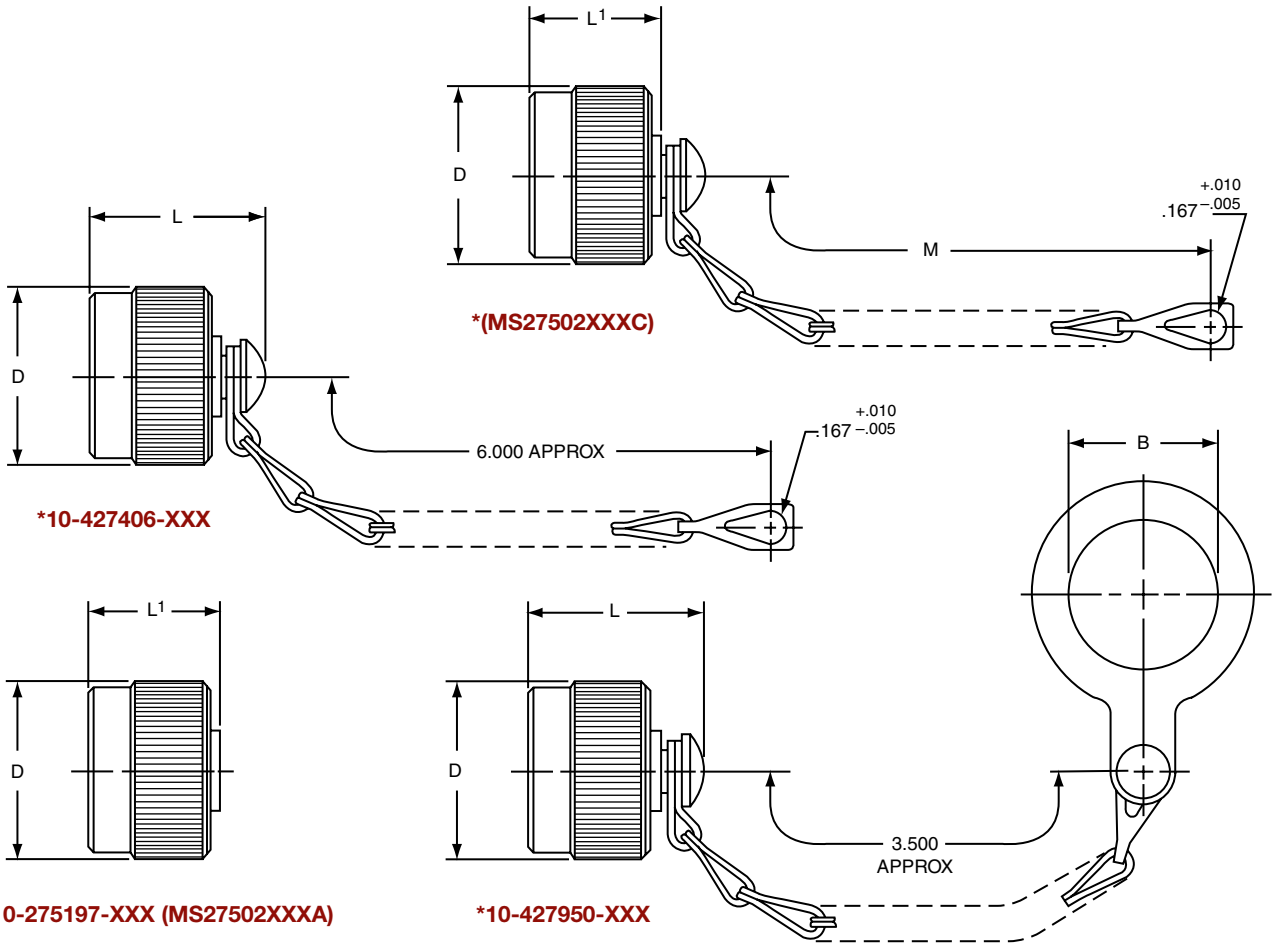
All dimensions for reference only.

### SERIES I LJT PLASTIC PROTECTION CAPS

| Shell Size | | Plug |
|---|---|---|
| 8 | | 10-70500-10 |
| | 9 | 10-70506-14 |
| 10 | | 10-70506-14 |
| | 11 | 10-70506-16 |
| 12 | | 10-70506-16 |
| | 13 | 10-70506-18 |
| 14 | | 10-70506-18 |
| | 15 | 10-70506-20 |
| 16 | | 10-70506-20 |
| | 17 | 10-70506-22 |
| 18 | | 10-70506-22 |
| | 19 | 10-70506-24 |
| 20 | | 10-70506-24 |
| | 21 | 10-70576-24 |
| 22 | | 10-70576-24 |
| | 23 | 10-70506-28 |
| 24 | | 10-70506-28 |
| | 25 | 10-558651-25 |

## Receptacle Protection Cap






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 would be 10-427406-117, MS27502A11C, MS27502A11A.

| Shell Size | B Dia. +.010 −.000 | D Dia. Max. | L Max. | L¹ 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 |

| Finish | 10-Number Suffix | MS Number Suffix with chain | MS Number Suffix without chain |
|---|---|---|---|
| Chromate Treat | -XX0 | | |
| Anodic Coating | -XX5 | CXXC | CXXA |
| Cadmium Plate Nickel Base | -XX7 | AXXC | AXXA |
| Olive Drab, Cadmium, Nickel Base | -XX9 | BXXC | BXXA |
| Electroless Nickel | -XXG | FXXC | FXXA |

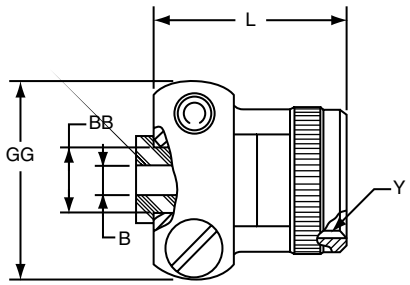
All dimensions for reference only.

### SERIES I LJT PLASTIC PROTECTION CAPS

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

# MIL-DTL-38999, Series I LJT

## Strain Relief (Solder Type)




***10-436792-XXX**

For military type cable clamp see MS27506 or M85049/49 on page 174.
*To complete order number, add shell size and suffix number.

| Finish | 10-Number Suffix |
|---|---|
| Chromate treat | -XX0 |
| Anodic coating | -XX5 |
| Cadmium Plate Nickel Base | -XX7 |
| Olive Drab, Cadmium, Nickel Base | -XX9 |
| Electroless Nickel | -XXG |

For example: Shell size 11 with cadmium plate, nickel base would be 10-436792-117.

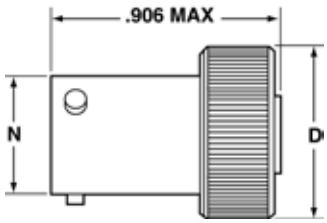
| Shell Size | B Dia. +.010 –.025 | L Max. | Y Thread Class 2B (Plated) | GG Max. | BB Dia. +.000 –.011 |
|---|---|---|---|---|---|
| 9 | .125 | .859 | .4375-28 UNEF | .775 | .250 |
| 11 | .188 | .859 | .5625-24 UNEF | .837 | .312 |
| 13 | .312 | .859 | .6875-24 UNEF | .963 | .438 |
| 15 | .375 | 1.109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

All dimensions for reference only.

# Plug Protection Cap/Receptacle Protection Cap

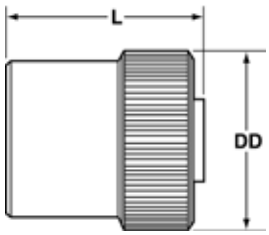


## PLUG PROTECTION CAP

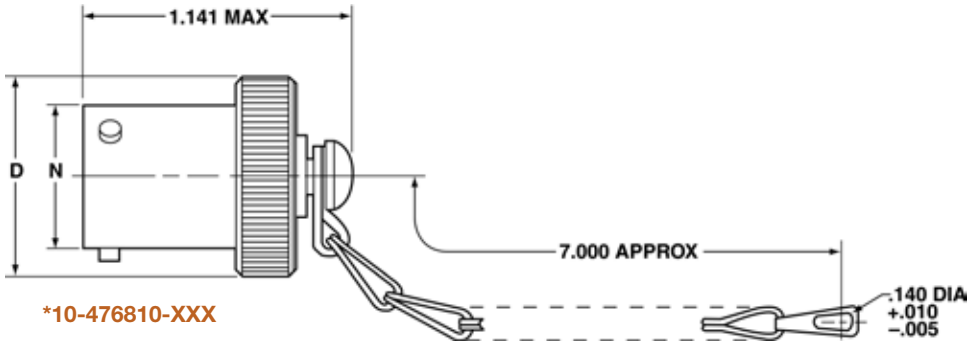



*10-476801-XXX

## RECEPTACLE PROTECTION CAP




*10-325943-XXX




*10-476810-XXX

* To complete order number, add shell size and suffix number. For example, shell size 10 with bright cadmium plated nickel base, 10-476810-107.

| Plug Shell Size | D Dia. Max. | N Dia. +.001 –.005 |
|---|---|---|
| 8 | .688 | .473 |
| 10 | .812 | .590 |
| 12 | .969 | .750 |
| 14 | 1.094 | .875 |
| 16 | 1.219 | 1.000 |
| 18 | 1.344 | 1.125 |
| 20 | 1.469 | 1.250 |
| 22 | 1.594 | 1.375 |
| 24 | 1.719 | 1.500 |

All dimensions for reference only

* To complete order number, add shell size and suffix number. For example, shell size 10 with bright cadmium plated nickel base, 10-325943-107.

| Receptacle Shell Size | DD Dia. Max. | L Max. |
|---|---|---|
| 8 | .734 | .828 |
| 10 | .844 | .828 |
| 12 | 1.016 | .828 |
| 14 | 1.141 | .828 |
| 16 | 1.265 | .828 |
| 18 | 1.391 | .828 |
| 20 | 1.500 | .828 |
| 22 | 1.625 | .828 |
| 24 | 1.750 | .859 |

| Protection Cap Finish | Suffix |
|---|---|
| Bright Cadmium Plated Nickel Base | XX7 |
| Anodic Coating (Alumilite) | XX5 |
| Chromate Treated (Iridite 14-2) | XX0 |
| Olive Drab Cadmium Plate Nickel Base | XX9 |
| Electroless Nickel Coating | XXG |

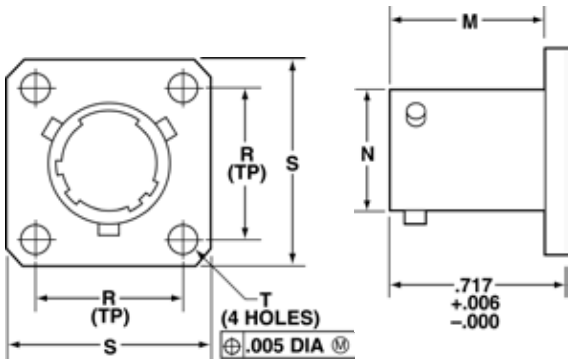
## SJT
## PLASTIC PROTECTION CAPS

| Shell Size | Plug | Receptacle |
|---|---|---|
| 8 | 10-70500-10 | 10-70506-10S |
| 10 | 10-70500-14 | 10-70506-12 |
| 12 | 10-70500-16 | 10-70506-14 |
| 14 | 10-70500-18 | 10-70506-16 |
| 16 | 10-70500-20 | 10-70506-18 |
| 18 | 10-70500-22 | 10-70506-20 |
| 20 | 10-70500-24 | 10-70506-22 |
| 22 | 10-70524-1 | 10-70506-24 |
| 24 | 10-70506-28 | 10-70524-1 |

# SJT – Accessories

## Dummy Receptacle, Cable Clamp

### DUMMY RECEPTACLE




*10-476807-XXX

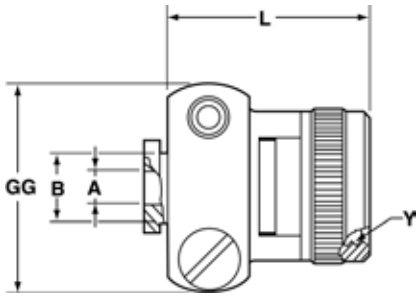
| Dummy Receptacle Finish | Suffix |
|---|---|
| Bright Cadmium Plated Nickel Base | XX7 |
| Anodic Coating (Alumilite) | XX5 |
| Chromate Treated (Iridite 14-2) | XX0 |
| Olive Drab Cadmium Plate Nickel Base | XX9 |
| Electroless Nickel Coating | XXG |

* To complete order number, add shell size and suffix number. For example, shell size 10 with bright cadmium plated nickel base, 10-476807-107.

| Dummy Receptacle Shell Size | D Dia. Max. | L Max. |
|---|---|---|
| 8 | .734 | .828 |
| 10 | .844 | .828 |
| 12 | 1.016 | .828 |
| 14 | 1.141 | .828 |
| 16 | 1.265 | .828 |
| 18 | 1.391 | .828 |
| 20 | 1.500 | .828 |
| 22 | 1.625 | .828 |
| 24 | 1.750 | .859 |

All dimensions for reference only

### CABLE CLAMP




*10-476808-XXX

| Cable Clamp Finish | Suffix |
|---|---|
| Bright Cadmium Plated Nickel Base | XX7 |
| Anodic Coating (Alumilite) | XX5 |
| Chromate Treated (Iridite 14-2) | XX0 |
| Olive Drab Cadmium Plate Nickel Base | XX9 |
| Electroless Nickel Coating | XXG |

* To complete order number, add shell size and suffix number. For example, shell size 10 with bright cadmium plated nickel base, 10-476808-107.

| Cable Clamp Shell Size | A Dia. +.010 –.025 | B Dia. +.000 –.011 | L Max. | Y Thread Class 2B UNEF (Plated) | GG Max. |
|---|---|---|---|---|---|
| 8 | .125 | .250 | .922 | .4375-28 | .775 |
| 10 | .188 | .312 | .922 | .5625-24 | .837 |
| 12 | .312 | .438 | .922 | .6875-24 | .963 |
| 14 | .375 | .562 | 1.172 | .8125-20 | 1.087 |
| 16 | .500 | .625 | 1.172 | .9375-20 | 1.150 |
| 18 | .625 | .750 | 1.172 | 1.0625-18 | 1.400 |
| 20 | .625 | .750 | 1.172 | 1.1875-18 | 1.400 |
| 22 | .750 | .938 | 1.297 | 1.3125-18 | 1.587 |
| 24 | .800 | 1.000 | 1.297 | 1.4375-18 | 1.681 |

All dimensions for reference only

# MIL-DTL-38999, Series III TV, II JT, I LJT

## Universal "Header Assembly" for Flex Print or PC Board

Amphenol Aerospace

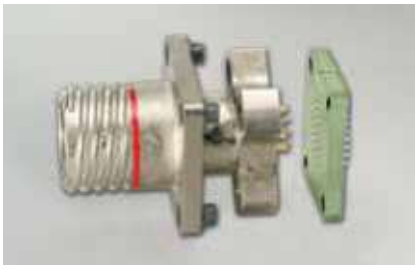


### MOUNTS TO ALL MIL-DTL-38999

The universal header assembly from Amphenol provides for easy separation of the connector from the board.

The header assembly is comprised of a short pin/socket contact. The tail end of the contact is soldered to the through hole of the flex or printed circuit board. The socket is embedded in the insulator, making electrical contact with the printed circuit tail of the connector.





**HEADERS PROVIDE EASY SEPARATION OF THE CONNECTOR FROM THE PC BOARD.**

### FEATURES AND BENEFITS:

- Circular and square header assemblies available
- Cost and time savings in the manufacturing process
- Assemblies can be vapor phase or wave soldered to flex/printed circuit board
- Allows electrical testing when installed properly.
- Connector assemblies can be easily removed from and reattached to the header assembly.

### MOUNTING APPLICATIONS

- Amphenol **square** universal headers are slotted to allow mounting to all series of MIL-DTL-38999 or MIL-DTL-26482 connectors without special alterations.
- Amphenol **circular** universal headers are designed to accommodate the rear flange of PCB Board Mount shells, series MIL-DTL-38999 connectors without special alterations.
- The header assembly can be attached to connectors with standard flange placement or directly to the circuit board.
- Connectors with dual flange mounting hardware can be provided to allow easy mounting to the panel or the header assembly.
  - Forward flange would mount the connector to the panel
  - Rear flange would be used to mount to the header assembly.
- Various types of captivated or loose attaching screws can be utilized for unique applications.

* For information on Header Assemblies for MIL-DTL-26482 connector, consult Amphenol Aerospace.

### MOUNTING TO RECTANGULAR ARINC CONNECTORS

- Headers for ARINC connector arrangements accommodate up to 150 pins
- Consult Amphenol Canada, Ontario for ARINC configurations.

### MATERIALS

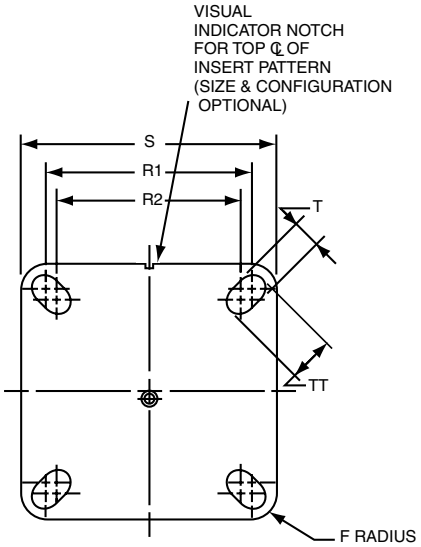
- Body is molded or machined from FR-4.
- Electrical engagement areas of the header contact are plated with .00003 inches minimum of gold over .00005 inches minimum of nickel.

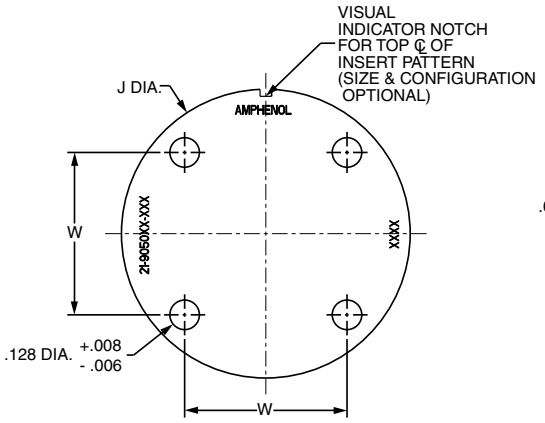
See drawing of standard header on next page.

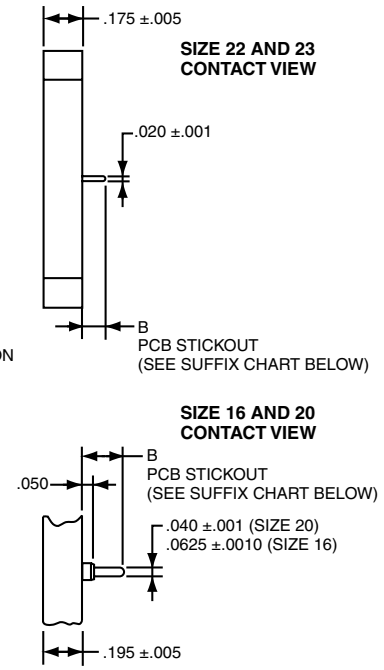
# MIL-DTL-38999, Series III TV, II JT, I LJT

## Universal "Header Assembly" for Flex Print or PC Board

The drawing below shows the standard header assembly for use with MIL-DTL-38999 connectors.




NOTE:
Size 16 accepts .048 to .064 dia. PCB tails.
Size 20 accepts .037 to .043 dia. PCB tails.
Size 22 & 23 accepts .018 to .022 dia. PCB tails

| Square Assembly Part Number | Shell Size | F Radius | S ± .005 | T + .008 − .006 | R1 TP† | R2 TP† | TT + .008 − .006 |
|---|---|---|---|---|---|---|---|
| 21-904008-XX( ) | 8/9 | .094 | .938 | .128 | .719 | .594 | .216 |
| 21-904010-XX( ) | 10/11 | .094 | 1.031 | .128 | .812 | .719 | .194 |
| 21-904012-XX( ) | 12/13 | .094 | 1.125 | .128 | .906 | .812 | .194 |
| 21-904014-XX( ) | 14/15 | .125 | 1.219 | .128 | .969 | .906 | .173 |
| 21-904016-XX( ) | 16/17 | .125 | 1.312 | .128 | 1.062 | .969 | .194 |
| 21-904018-XX( ) | 18/19 | .125 | 1.438 | .128 | 1.156 | 1.062 | .194 |
| 21-904020-XX( ) | 20/21 | .125 | 1.562 | .128 | 1.250 | 1.156 | .194 |
| 21-904022-XX( ) | 22/23 | .125 | 1.688 | .154 | 1.375 | 1.250 | .242 |
| 21-904024-XX( ) | 24/25 | .125 | 1.812 | .154 | 1.500 | 1.375 | .242 |

† TP designates true position dimensioning.

| Circular Assembly Part Number | Shell Size | J Dia. ± .005 | W |
|---|---|---|---|
| 21-905008-XX( ) | 8/9 | 1.016 | .532 |
| 21-905010-XX( ) | 10/11 | 1.062 | .601 |
| 21-905012-XX( ) | 12/13 | 1.250 | .703 |
| 21-905014-XX( ) | 14/15 | 1.375 | .791 |
| 21-905016-XX( ) | 16/17 | 1.500 | .875 |
| 21-905018-XX( ) | 18/19 | 1.625 | .975 |
| 21-905020-XX( ) | 20/21 | 1.750 | 1.053 |
| 21-905022-XX( ) | 22/23 | 1.875 | 1.145 |
| 21-905024-XX( ) | 24/25 | 2.000 | 1.233 |

## HOW TO ORDER INFORMATION FOR HEADER ASSEMBLY WITH MIL-DTL-38999 CONNECTORS

| 1. Series | 2. Type | 3. Shell Size & Insert Arrg. | 4. PCB Suffix |
|---|---|---|---|
| 21- | 9040 | 08-03 | 1 |

| 1. SERIES | |
|---|---|
| 21- | Header Assembly |

| 2. TYPE | |
|---|---|
| 9040 | Square |
| 9050 | Circular |

### 3. SELECT A SHELL SIZE & INSERT ARRANGEMENT SEE PAGES 2-5

Shell Size & Insert Arrangements are on pages 2-5. First number represents Shell Size, second number is the Insert Arrangement. The dash is required. See MIL-STD-1560 or 1669 document for coordinates of inserts.

* Shell size designation for MIL-DTL-38999 Series I, II, III and IV and MIL-DTL-26482 Series 1 and 2.

| 4. CONTACT PCB STICKOUT | | |
|---|---|---|
| Suffix | Shell Size* | Contact PCB Stickout Length B ± .015 Stickout |
| 1 | 08 | .120 |
| 1 | 09 | .120 |
| 2 | 10 | .185 |
| 3 | 12 | .270 |
| NA | 14 | |
| NA | 15 | |
| 2 | 16 | .185 |
| 3 | 16 | .270 |
| | 18 | |
| 2 | 20 | .185 |
| 3 | 20 | .270 |
| 1 | 22 | .120 |
| 2 | 22 | .185 |
| 3 | 22 | .270 |
| 1 | 23 | .120 |
| | 24 | |
| | 25 | |

# Application Tools

The following data includes information pertaining to the application tools which have been established for crimping, inserting, and removing contacts incorporated in the TV, CTV and MIL-DTL-38999 Series III connectors. For additional information on coax, twinax and triax contact tools, see High Speed Contact section of this catalog.

All crimping tools included are the "full cycling" type and when used as specified in the installation instructions L-624 covering the TV, CTV 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.



## CRIMPING TOOLS

| Contact Size/Type | Crimping Tool | Turret Die or Positioner |
|---|---|---|
| 12 Pin and Socket | M22520/1-01 | M22520/1-04 |
| 16 Pin and Socket | M22520/1-01<br>M22520/7-01 | M22520/1-04<br>M22520/7-04 |
| 20 Pin and Socket | M22520/1-01<br>M22520/2-01<br>M22520/7-01 | M22520/1-04<br>M22520/2-10<br>M22520/7-08 |
| 22, 22D, 22M Pin | M22520/2-01<br>M22520/7-01 | M22520/2-09<br>M22520/7-07 |
| 22, 22D, 22M Socket Series I, III | M22520/2-01<br>M22520/7-01 | M22520/2-07<br>M22520/7-05 |
| 22D Socket Series II | M22520/2-01<br>M22520/7-01 | M22520/2-06<br>M22520/7-06 |
| 8 Twinax Center Pin and Socket | M22520/2-01 | M22520/2-37 |
| 8 Twinax Intermediate Outer Pin & Socket | M22520/5-01 | M22520/5-200 |

| Contact Size/Type | Crimping Tool | Turret Die or Positioner |
|---|---|---|
| 8 Coaxial Inner Pin and Socket | M22520/2-01 | M22520/2-31 |
| 8 Coaxial Outer Pin and Socket | M22520/5-01 | M22520/5-05<br>Die Closure B |
| | M22520/5-01 | M22520/5-41<br>Die Closure B |
| | M22520/10-01 | M22520/10-07<br>Die Closure B |
| 16 Coaxial Inner Pin and Socket | M22520/2-01 | M22520/2-35 |
| 16 Coaxial Outer Pin and Socket | M22520/4-01 | M22520/4-02 |
| 12 Coaxial Inner Pin and Socket | M22520/2-01 | M22520/2-34 |
| 12 Coaxial Outer Pin and Socket | M22520/31-01 | M22520/31-02 |
| 10 (Power) | TP-201423 | |

Where 2 or 3 tools are listed for a contact size, only one tool and its die or positioner are required to crimp the contact. The above crimping tools and positioners are available from the approved tool manufacturer.

## INSERTION TOOLS

| Use with Contact Size | Plastic Tools | | Metal Tools | | | |
|---|---|---|---|---|---|---|
| | | | Angle Type | | Straight Type Commercial Part No. | Color |
| | MS Part Number | Color | MS Part No. | Commercial Part No. | | |
| 10 (Power | M81969/14-05* | Gray / (White) | M81969/8-11 | † | † | Green |
| 12 | M81969/14-04* | Yellow / (White) | M81969/8-09 | 11-8674-12†† | 11-8794-12†† | Yellow |
| 16 | M81969/14-03* | Blue / (White) | M81969/8-07 | 11-8674-16†† | 11-8794-16†† | Blue |
| 20 | M81969/14-10* | Red / (Orange) | M81969/8-05 | 11-8674-20†† | 11-8794-20†† | Red |
| 22 | M81969/14-09 | Brown/White | M81969/8-03 | 11-8674-22†† | 11-8794-22†† | Brown |
| 22D, 22M | M81969/14-01* | Green / (White) | M81969/8-01 | 11-8674-24†† | 11-8794-24†† | Black |
| 8 Coaxial | None Required | | | | | |
| 8 Twinax | None | | None | None | | Red |

## REMOVAL TOOLS

| Use with Contact Size | Plastic Tools | | Metal Tools | | | | |
|---|---|---|---|---|---|---|---|
| | | | | Angle Type | | Straight Type Commercial Part No. | Color |
| | MS Part Number | Color | For Unwired Contacts Commercial Part No. | MS Part No. | Commercial Part No. | | |
| 10 (Power) | M81969/14-05* | (Gray) / White | † | M81969/8-12 | † | † | Green / White |
| 12 | M81969/14-04* | (Yellow) / White | 11-10050-11†† | M81969/8-10 | 11-8675-12†† | 11-8795-12†† | Yellow / White |
| 16 | M81969/14-03* | (Blue) / White | 11-10050-10†† | M81969/8-08 | 11-8675-16†† | 11-8795-16†† | Blue / White |
| 20 | M81969/14-10* | (Orange) / Red | 11-10050-9†† | M81969/8-06 | 11-8675-20†† | 11-8795-20†† | Red / Orange |
| 22 | M81969/14-09* | (Brown)/White | 11-10050-8†† | M81969/8-04 | 11-8675-22†† | 11-8795-22†† | Brown/White |
| 22D, 22M | M81969/14-01* | (Green) / White | 11-10050-7†† | M81969/8-02 | 11-8675-24†† | 11-8795-24†† | Green / White |
| 8 Coaxial | M81969/14-12 | Green | None | None | 11-9170†† | DRK264-8††† | N/A |
| 8 Twinax | M81969/14-12 | Green | None | None | 11-9170†† | N/A | N/A |

For information about contacts see page 30. The M81969/8, 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: dia. is .155, size 16: dia. is .109, size 20: dia. is .077, size 22D: dia. is .050. When wire diameters exceed those specified, the plastic tools must be used.

* Double end insertion/removal tool.

** Twinax insertion tools are available only in a straight type, metal version.

† To be determined.

†† Contact Daniels Manufacturing Co. or Astro Tool Corp. for availability.

††† Daniels Manufacturing Co. part number

# 38999, Series I LJT, II JT, III TV, & SJT

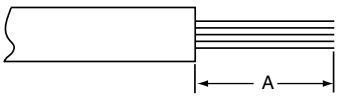
## Assembly Instructions

### WIRE STRIPPING

1. Strip wire to required length. (See Figure at right). When using hot wire stripping, do not wipe melted insulation material on wire strands; with mechanical strippers do not cut or nick strands.
2. See Table 1 for proper finished outside wire dimensions.
3. Twist strands together to form a firm bundle.
4. Insert stripped wire into contact applying slight pressure until wire insulation butts against wire well. Check inspection hole to see that wire strands are visible. If there are strayed wire strands, entire wire end should be re-twisted.

When wire is stripped and properly installed into contact, the next step is to crimp the wire inside the contact by using the proper crimping tool.

### STRIPPING DIMENSIONS




| Wire Size | A |
|---|---|
| 22. 22M, 22D | .125 (3.18) |
| 20 | .188 (4.77) |
| 16 | .188 (4.77) |
| 12 | .188 (4.77) |

**Table 1**

| Contact Size | Wire Dimension (inches)** | |
|---|---|---|
| | Min. | Max. |
| 10 | .135 | .162 |
| 12 | .097 | .142 |
| 16 | .065 | .109 |
| 20 | .040 | .077 |
| 22 | .034 | .060 |
| 22M, 22D | .030 | .050 |

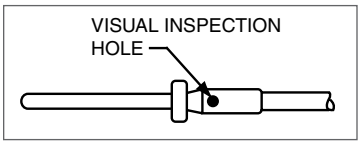
** Min. diameters to insure moisture proof assembly; max. diameters to permit use of metal removal tools.

### CRIMPING

See table on preceding page for recommended M22520 series crimping tools, turret head or positioner selection settings according to contact size, part number and wire gauge size.



1. Insert stripped wire into contact crimp pot. Wire must be visible through inspection hole.
2. Using correct crimp tool and locator, cycle the tool once to be sure the indentors are open, insert contact and wire into locator. Squeeze tool handles firmly and completely to insure a proper crimp. The tool will not release unless the crimp indentors in the tool head have been fully actuated.
3. Release crimped contact and wire from tool. Be certain the wire is visible through inspection hole in contact.



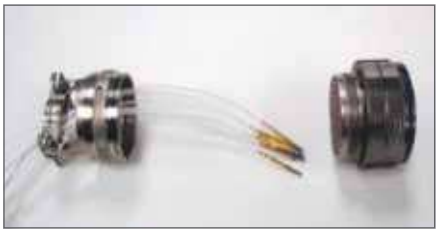




Examples of M22520 Series Crimping Tools:
Shown top: tool used for small size 22, 22D and 22M contacts.
Shown bottom: tool used for size 20, 16 or 12 contacts and has a positioner that can be dialed for each contact size.

### CONTACT INSERTION

1. First remove hardware from the plug and receptacle and slide the hardware over wires in proper sequence.





Note: All plastic tools are double-ended. The colored side is the insertion tool and the white side is the removal tool.

2. Use proper plastic or metal insertion tool for corresponding contact. (Consult Insertion Tool table on preceding page). Slide correct tool (with plastic tool use colored end) over wire insulation and slide forward until tool bottoms against rear contact shoulder.



Plastic tool with contact in proper position.



Metal tool with contact.

3. Next align the tool and contact up to the properly identified cavity at rear of connector plug. Use firm, even pressure; do not use excessive pressure. It is recommended to start at the center cavity. Contact must be aligned with grommet hole and not inserted at an angle. Push forward until contact is felt to snap into position within insert.



Continued on next page.

## CONTACT INSERTION, CONT.

4. Remove tool and pull back lightly on wire, making sure contact stays properly seated and isn't dragged back with the tool. Repeat operation with remainder of contacts to be inserted, beginning with the center cavity and working outward in alternating rows.



5. After all contacts are inserted, fill any empty cavities with wire sealing plugs. (Refer to sealing plug charts for Series III on page 29, for Series I & II and SJT see page 30-31.



6. Reassemble plug or receptacle hardware - slide forward and tighten using connector pliers. Connector holding tools are recommended while tightening back accessories. When using strain relief, center wires at bar clamp. Slide clamp grommet into position and tighten clamp bar screws. When tightening screws, pressure should be applied in the same direction that clamp is threaded to rear threads of connector. When not using clamp grommet, build up wire bundle with vinyl tape so clamp bar will maintain pressure on wires.



CAUTION, when inserting or removing contacts, do not spread or rotate tool tips.

## CONTACT REMOVAL

1. Remove hardware from plug or receptacle and slide hardware back along wire bundle.



2. Use proper plastic or metal removal tool for corresponding contact. (Consult Removal Tool table on page 167). Slide correct size tool over wire insulation.



Use white end of plastic tool for removal of contacts.

3. Insert plastic or metal removal tool into contact cavity until tool tips enter rear grommet and come to a positive stop. Hold tool tip firmly against positive stop on contact shoulder. Grip wire and simultaneously remove tool and contact. (On occasion, it may be necessary to remove tool, rotate 90° and reinsert.)



Removal of contacts with metal tool.