

**Series 806****Mil-Aero Connectors****806-061 ThermaRex Cryogenic Jam Nut Receptacle**

Extreme low-temperature 806-061 ThermaRex receptacle connectors are rated to perform in temperatures as low as -195° C. Intended for use in sub-zero harsh applications such as space vehicles or aircraft zones subject to high altitude, while providing size and weight savings compared to conventional aerospace-grade circular connectors. Unique triple-start mating thread provides improved de-coupling resistance under vibration. Jam nut receptacle styles include integrated metric accessory thread or band platform.

**Features**

- Operating temperature -195°C to +200°C
- Special low-temperature 300G shock and aerospace vibration testing while submerged in liquid nitrogen
- Triple-start stub ACME mating thread
- High density #20HD arrangements for reduced size and weight plus #16, #12 and #8 standard and hybrid contact layouts
- Aerospace-grade materials, construction
- Band platform or accessory threads

**Specifications**

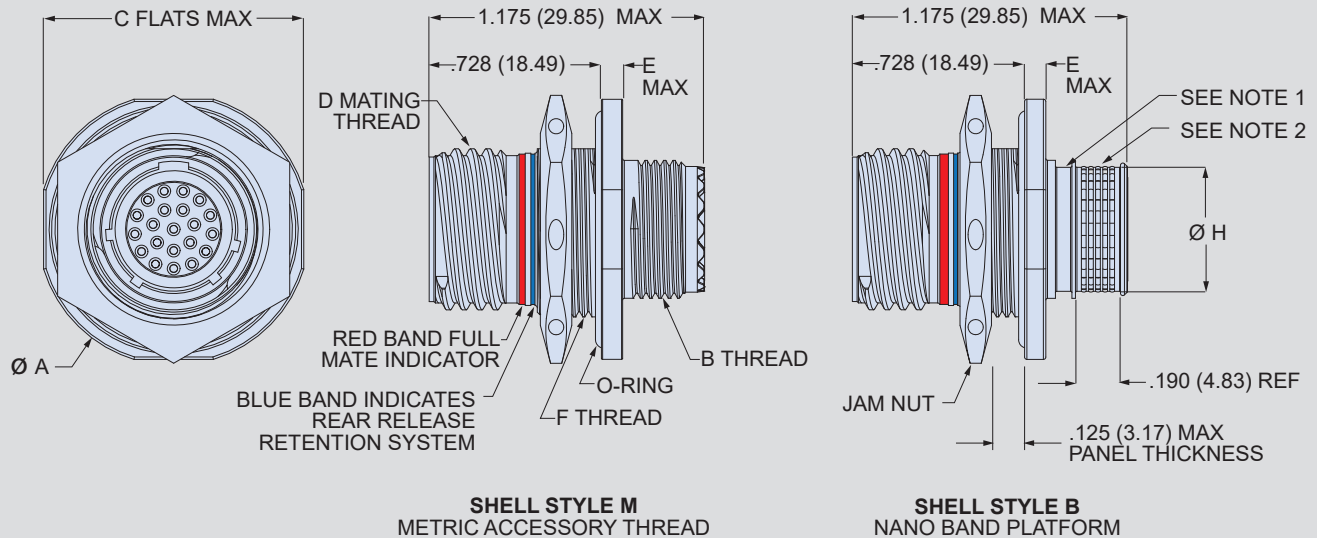
- Dielectric withstanding voltage  
#20HD contacts: 1800 VAC  
#16 contacts: varies, contact factory  
#12 contacts: varies, contact factory  
#8 contacts: varies, contact factory
- Mating durability: 500 cycles
- Mechanical shock: EIA-364-27, 300g.
- Vibration (sine): MIL-DTL-38999M, 60g.
- Vibration (random) EIA-364-28 Condition VI, Letter J, 43.92 Grms, +200°C
- High Impact shock: MIL-S-901 Grade A
- Humidity: EIA-364-31 Method 4
- Salt spray (dynamic): EIA-364-26, 500 hours (96 hours for nickel-plated versions)
- Fluid immersion: EIA-364-10
- Altitude immersion: EIA-364-03 75,000 feet altitude
- Indirect Lightning Strike: EIA-364-75 Type B Level 2 10kA Peak

**Connector Construction**

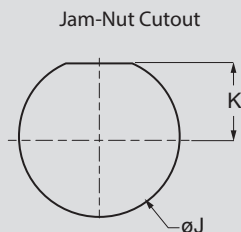
- Shell, hex nut: passivated CRES or Aluminum Alloy
- Contacts: copper alloy, gold plate
- Insulator: high grade rigid dielectric
- Interfacial seal, grommet: Duraelectric K low-temp silicone

| How To Order ThermaRex Series 806 Mil-Aero Jam-nut Receptacle |                                                                                                    |         |     |       |   |   |   |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---------|-----|-------|---|---|---|
| SAMPLE PART NUMBER                                            |                                                                                                    | 806-061 | -Z1 | 11-19 | S | M | A |
| Series / Basic Part No.                                       | 806-061 ThermaRex Cryogenic Jam Nut Receptacle                                                     |         |     |       |   |   |   |
| Material/Finish                                               | ME = Aluminum Alloy / Electroless Nickel<br>Z1 = Stainless Steel / Passivated                      |         |     |       |   |   |   |
| Shell Size/Insert Arr.                                        | See Table I                                                                                        |         |     |       |   |   |   |
| Contact Style                                                 | A = Pin connector less contacts      P = Pin<br>B = Socket connector Less contacts      S = Socket |         |     |       |   |   |   |
| Shell Style                                                   | M = Metric (Accessory Thread)<br>B = Band (platform for attaching cable shield.)                   |         |     |       |   |   |   |
| Polarization                                                  | A, B, C, D, E, F                                                                                   |         |     |       |   |   |   |

| Table I: Shell Size - Insert Arrangement |                    |    |    |   |  |                |                    |    |    |   |  |                |                    |    |    |   |
|------------------------------------------|--------------------|----|----|---|--|----------------|--------------------|----|----|---|--|----------------|--------------------|----|----|---|
| Contact Layout                           | Number of Contacts |    |    |   |  | Contact Layout | Number of Contacts |    |    |   |  | Contact Layout | Number of Contacts |    |    |   |
|                                          | 20HD               | 16 | 12 | 8 |  |                | 20HD               | 16 | 12 | 8 |  |                | 20HD               | 16 | 12 | 8 |
| 8-3                                      | 3                  |    |    |   |  | 10-2           |                    | 2  |    |   |  | 16-4           |                    |    | 4  |   |
| 9-5                                      | 5                  |    |    |   |  | 11-4           |                    | 4  |    |   |  | 16-7           |                    |    | 7  |   |
| 10-8                                     | 8                  |    |    |   |  | 12-5           |                    | 5  |    |   |  | 18-8           |                    |    | 8  |   |
| 11-10                                    | 10                 |    |    |   |  | 14-7           |                    | 7  |    |   |  | 20-11          |                    |    | 11 |   |
| 12-15                                    | 15                 |    |    |   |  | 16-12          |                    | 12 |    |   |  | 22-13          |                    |    | 13 |   |
| 14-20                                    | 20                 |    |    |   |  | 18-15          |                    | 15 |    |   |  | 24-19          |                    |    | 19 |   |
| 16-31                                    | 31                 |    |    |   |  | 20-22          |                    | 22 |    |   |  | 10-1           |                    |    |    | 1 |
| 18-41                                    | 41                 |    |    |   |  | 22-24          |                    | 24 |    |   |  | 16-2           |                    |    |    | 2 |
| 20-55                                    | 55                 |    |    |   |  | 24-35          |                    | 35 |    |   |  | 18-3           |                    |    |    | 3 |
| 22-69                                    | 69                 |    |    |   |  | 9-1            |                    |    | 1  |   |  | 20-4           |                    |    |    | 4 |
| 24-92                                    | 92                 |    |    |   |  | 12-2           |                    |    | 2  |   |  | 22-5           |                    |    |    | 5 |
| 8-1                                      |                    | 1  |    |   |  | 14-3           |                    |    | 3  |   |  | 24-8           |                    |    |    | 8 |



| Dimensions |               |                  |               |                        |                 |                  |               |
|------------|---------------|------------------|---------------|------------------------|-----------------|------------------|---------------|
| Shell Size | ØA Max        | B Thread         | C Max         | D Mating Thread        | E Max           | F Thread         | ØH            |
| 7          | .848 (21.54)  | M8X 1-6g-.100R   | .908 (23.06)  | .4375-.067P-.2L-TS-2A  | 0.100<br>(2.54) | M13 X 1-6g-.100R | .265 (6.73)   |
| 8          | .980 (24.89)  | M10 X 1-6g-.100R | .920 (23.37)  | .5000-.067P-.2L-TS-2A  |                 | M15 X 1-6g-.100R | .327 (8.31)   |
| 9          | 1.040 (26.42) | M12 X 1-6g-.100R | .980 (24.89)  | .5625-.067P-.2L-TS-2A  |                 | M16 X 1-6g-.100R | .406 (10.31)  |
| 10         | 1.110 (28.19) | M14 X 1-6g-.100R | 1.050 (26.67) | .6250-.067P-.2L-TS-2A  |                 | M18 X 1-6g-.100R | .484 (12.29)  |
| 11         | 1.160 (29.46) | M15 X 1-6g-.100R | 1.110 (28.19) | .6875-.067P-.2L-TS-2A  |                 | M19 X 1-6g-.100R | .524 (13.31)  |
| 12         | 1.230 (31.24) | M17 X 1-6g-.100R | 1.170 (29.72) | .7500-.067P-.2L-TS-2A  |                 | M21 X 1-6g-.100R | .603 (15.32)  |
| 14         | 1.360 (34.54) | M19 X 1-6g-.100R | 1.320 (33.53) | .8750-.067P-.2L-TS-2A  |                 | M24 X 1-6g-.100R | .681 (17.30)  |
| 16         | 1.515 (38.48) | M22 X 1-6g-.100R | 1.444 (36.68) | 1.000-.067P-.2L-TS-2A  |                 | M27 X 1-6g-.100R | .782 (19.86)  |
| 18         | 1.610 (40.89) | M25 X 1-6g-.100R | 1.570 (39.88) | 1.1250-.067P-.2L-TS-2A |                 | M30 X 1-6g-.100R | .899 (22.83)  |
| 20         | 1.850 (46.99) | M28 X 1-6g-.100R | 1.760 (44.70) | 1.250-.067P-.2L-TS-2A  |                 | M34 X 1-6g-.100R | 1.043 (26.49) |
| 22         | 2.010 (51.05) | M31 X 1-6g-.100R | 1.913 (48.59) | 1.3750-.067P-.2L-TS-2A | 0.128<br>(3.25) | M37 X 1-6g-.100R | 1.155 (29.34) |
| 24         | 2.195 (55.75) | M34 X 1-6g-.100R | 2.070 (52.58) | 1.500-.067P-.2L-TS-2A  |                 | M41 X 1-6g-.100R | 1.273 (32.33) |



| Recommended Mounting Hole |                                   |                                  |
|---------------------------|-----------------------------------|----------------------------------|
| SHELL SIZE                | K<br>+.005 (0.13)<br>0.000 (0.00) | J<br>+.005 (0.13)<br>0.00 (0.00) |
| 7                         | .224 (5.69)                       | .522 (13.26)                     |
| 8                         | .256 (6.50)                       | .601 (15.27)                     |
| 9                         | .287 (7.29)                       | .640 (16.26)                     |
| 10                        | .318 (8.08)                       | .719 (18.26)                     |
| 11                        | .350 (8.89)                       | .759 (19.28)                     |
| 12                        | .381 (9.68)                       | .837 (21.26)                     |
| 14                        | .443 (11.25)                      | .955 (24.26)                     |
| 16                        | .505 (12.83)                      | 1.073 (27.25)                    |
| 18                        | .568 (14.43)                      | 1.192 (30.28)                    |
| 20                        | .630 (16.00)                      | 1.349 (34.26)                    |
| 22                        | .693 (17.60)                      | 1.467 (37.26)                    |
| 24                        | .755 (19.18)                      | 1.624 (41.25)                    |

**NOTES:**

1. Boot groove for use with overmold strain relief or 809-060 heat shrink boots
2. Terminate shield with Glenair Band-Master ATS tool 601-108 and Glenair Nanoband