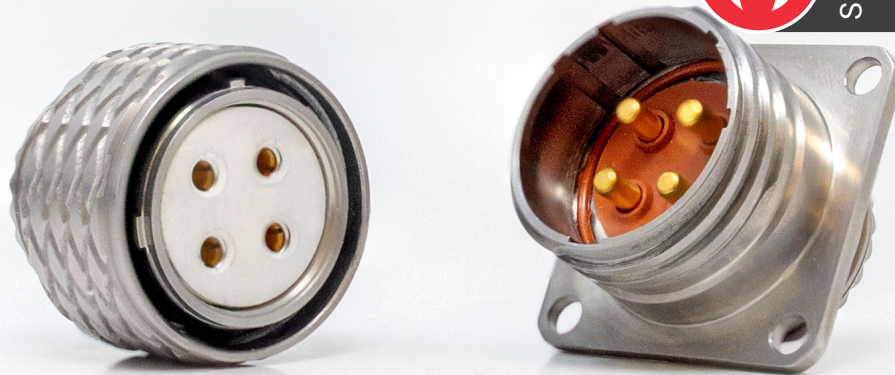


HIGH TEMPERATURE SERIES FIVE & SERIES III

High-temperature connectors for the hottest environments on Earth and beyond

PDS - 357

SERIES III



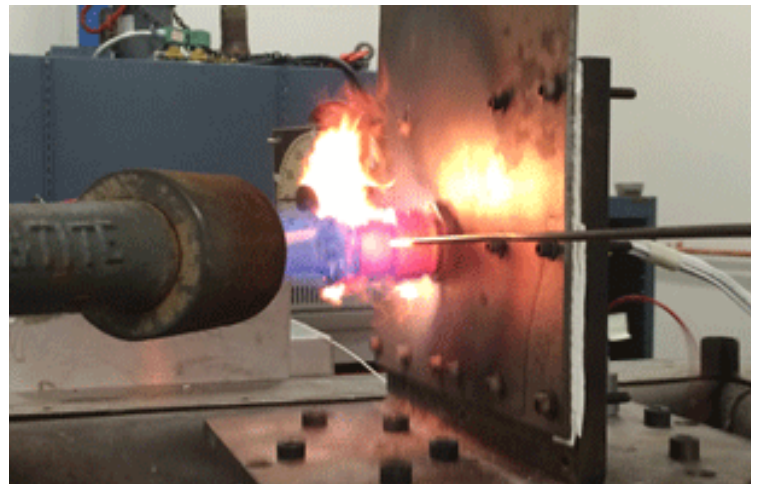
High Temperature Series Five and Series III connectors are the ideal solution for interconnects and electrical wire assemblies near engines, firewalls, and other high-heat sources. Built for applications with higher temperatures, such as hypersonic weapon systems, small module nuclear reactors, space launch vehicles, and other advanced aircraft, these high-heat connectors are built to operate at temperatures up to 572°F (300°C) for longer durations, with continuous duty at 500°F (260°C) assured. Using proven high-heat materials such as alumina ceramic inserts, high-temperature elastomeric seals, and much more, Amphenol High Temperature connectors can beat the heat.

The heat-resistant High Temperature Series connectors outperform standard mil-spec D38999 connectors under similar high-heat circumstances. Temper-Grip socket contacts come standard to ensure a ruggedized connection even during firewall testing at more than 2,000°F (1,093°C). Customized testing, including firewall testing under vibration, can be performed at Amphenol's advanced test lab in Sidney, NY. For applications up to 500°F (260°C), Amphenol's glass-filled rigid silicone is a proven insulator alternative to the alumina ceramic inserts with the same upgrades as the rest of the High Temperature Series.

As today's advanced propulsion systems achieve higher and higher speeds, the demand for connectors that can sustain high-heat environments has never been greater. Amphenol High Temperature connectors are the ultimate solution for high-heat applications that demand durability, reliability, and resistance to extreme heat.

FEATURES AND BENEFITS:

- Withstands exposure at 572 °F (300 °C) for up to 24 hours, 500 °F (260 °C) continuous duty
- Utilizes Temper-Grip socket contacts
- Nickel contacts available with thick gold plating
- One-piece alumina ceramic inserts and high-temperature elastomer seals
- Exceeds firewall performance of MIL-DTL-39999 connectors, up to 45 minutes and up to 2,200 °F (1,204 °C)
- Available in stainless steel and titanium shells
- Series Five are 20% smaller and up to 50% lighter than comparable D38999 connectors
- Improved resistance to cryogenic environments



HOW TO ORDER: HIGH TEMPERATURE CONNECTORS

S506HK-14-4PN

| 1. Connector Type | 2. Shell Style | 3. Service Class | 4. Shell Size - Insert Arrg. | 5. Contact Type | 6. Alternate Positions |
|-------------------|----------------|------------------|------------------------------|-----------------|------------------------|
| S5 | 06 | HK- | 14-4 | P | N |

1. Connector Type



| | |
|------------|--------------|
| S5 | Series Five |
| HTV | Series III** |

2. Shell Style*

*Other shell styles available consult Amphenol for more information

| | |
|-----------|-----------------------------------|
| 06 | Straight Plug pg 16 |
| 00 | Wall Mount Receptacle pg 18 |
| 01 | Line Mounting Receptacle pg 28 |

3. 260°C Service Class

| | | |
|-------------|--|---|
| *HK- | Passivated Stainless Steel |  |
| *HT- | Titanium |  |
| HS- | Passivated stainless steel with glass-filled silicone-rigid insert - 500°F (260°C) | |
| HU- | Titanium with glass-filled silicone rigid insert - 500°F (260°C) | |

6. Alternate Positions

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

See pages 15 for more information

5. Contact Type

| | |
|----------|---|
| P | Pin (Recommended for receptacles) |
| S | TemperGrip Socket (Recommended for plugs) |

4. Shell Size/ Insert Arrangement

See next page

*Currently in pre-production as of February 2024, all quotes will be issued with an "XP" prefix under an internal part number indicating that parts are built in our experimental production department. Some components may be strategically sourced by engineering, contact the factory for more details and updates on full production release!

**Please see Series III catalog for 2D drawings and available shell styles.

HIGH TEMPERATURE CONNECTORS

Alternate Positions

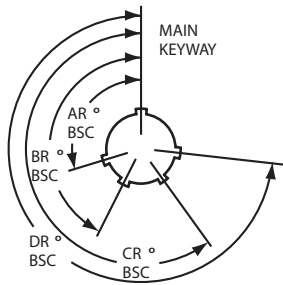
KEY/KEYWAY POSITION

| Key/Keyway Position | | | | | |
|---------------------|---|---|---|---|---|
| N | A | B | C | D | E |

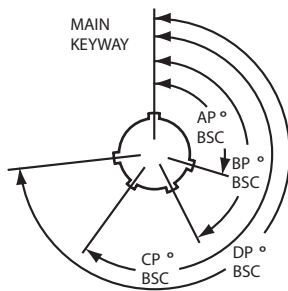
KEY/KEYWAY POSITION

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 |
|-------------------------------|--|----------------|----------------|----------------|----------------|
| 8 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 |
| 10 11 12 13 14 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 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 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 |

HIGH TEMPERATURE CONNECTORS

Insert Availability and Identification Chart

SERIES FIVE INSERT (S5)

| Series Five | Total Contacts | Service Rating | Contact Size | | |
|-------------|----------------|----------------|--------------|----|----|
| | | | 20 | 16 | 12 |
| 8-98 | 3 | I | 3 | | |
| 10-2 | 2 | I | | 2 | |
| 10-4 | 4 | I | 4 | | |
| 10-5 | 5 | I | 5 | | |
| 10-98 | 6 | I | 6 | | |
| 10-99 | 7 | I | 7 | | |
| 12-3 | 3 | II | | 3 | |
| 12-4 | 4 | I | | 4 | |
| 12-8 | 8 | I | 8 | | |
| 12-98 | 10 | I | 10 | | |
| 14-4 | 4 | I | | | 4 |
| 14-5 | 5 | II | | 5 | |
| 14-15 | 15 | I | 14 | 1 | |
| 14-18 | 18 | I | 18 | | |
| 14-19 | 19 | I | 19 | | |
| 14-68 | 8 | I | | 8 | |
| 14-97 | 12 | I | 8 | 4 | |

HIGH TEMPERATURE CONNECTORS

Insert Availability and Identification Chart

SERIES III INSERT (TV)

| Series III | Total Contacts | Service Rating | Contact Size | | | |
|------------|----------------|----------------|--------------|----|----|---|
| | | | 20 | 16 | 12 | 8 |
| 9-98 | 2 | M | 3 | | | |
| 9-98 | 3 | I | 3 | | | |
| 11-2 | 2 | I | | 2 | | |
| 11-4 | 4 | I | 4 | | | |
| 11-5 | 5 | I | 5 | | | |
| 11-98 | 6 | I | 6 | | | |
| 11-99 | 7 | II | 7 | | | |
| 13-4 | 4 | I | | 4 | | |
| 13-8 | 8 | I | 8 | | | |
| 13-98 | 10 | I | 10 | | | |
| 15-4 | 4 | I | | | 4 | |
| 15-5 | 5 | II | | 5 | | |
| 15-15 | 15 | I | 14 | 1 | | |
| 15-18 | 18 | I | 18 | | | |
| 15-19 | 19 | I | 19 | | | |
| 15-97 | 12 | I | 8 | 4 | | |
| 17-6 | 6 | I | | | 6 | |
| 17-8 | 8 | II | | 8 | | |
| 17-26 | 26 | I | 26 | | | |
| 17-52 | 2 | M | | | | 2 |
| 17-99 | 23 | I | 21 | 2 | | |
| 19-11 | 11 | II | | 11 | | |
| 19-28 | 28 | M | 26 | 2 | | |
| 19-32 | 32 | I | 32 | | | |
| 21-11 | 11 | I | | | 11 | |
| 21-16 | 16 | II | | 16 | | |
| 21-29 | 27 | I | 19 | 4 | 4 | |
| 21-39 | 39 | I | 37 | 2 | | |
| 21-41 | 41 | I | 41 | | | |

| Series III | Total Contacts | Service Rating | Contact Size | | | |
|------------|----------------|----------------|--------------|----|----|---|
| | | | 20 | 16 | 12 | 8 |
| 21-A48 | 4 | N | | | | 4 |
| 23-6 | 6 | M | | | | 6 |
| 23-14 | 14 | I | | | 14 | |
| 23-21 | 21 | II | | 21 | | |
| 23-53 | 53 | I | 53 | | | |
| 23-55 | 55 | I | 55 | | | |
| 25-4 | 56 | I | 48 | 8 | | |
| 25-8 | 8 | M | | | | 8 |
| 25-19 | 19 | I | | | 19 | |
| 25-20 | 30 | N | 10 | 13 | 4 | 3 |
| 25-24 | 24 | I | | 12 | 12 | |
| 25-26 | 25 | I | 16 | | 5 | 4 |
| 25-29 | 29 | I | 29 | | | |
| 25-37 | 37 | I | | 37 | | |
| 25-43 | 43 | I | 23 | 20 | | |
| 25-46 | 46 | I | 40 | 4 | | 2 |
| 25-61 | 61 | I | 61 | | | |
| 25-90 | 46 | I | 40 | 4 | | 2 |

HIGH TEMPERATURE SERIES FIVE (S5)

Insert Arrangements

Front face of pin inserts illustrated

| Shell Size & Insert Arrg. for: | | | | | | | | | |
|--------------------------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|
| Series Five | 8-98 | 10-2 | 10-4 | 10-5 | 10-98 | 10-99 | 12-3 | 12-4 | 12-8 |
| Service Rating | I | I | I | I | I | I | II | I | I |
| Number of Contacts | 3 | 2 | 4 | 5 | 6 | 7 | 3 | 4 | 8 |
| Contact Size | 20 | 16 | 20 | 20 | 20 | 20 | 16 | 16 | 20 |

| Shell Size & Insert Arrg. for: | | | | | | | | |
|--------------------------------|--------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Series Five | 12-98 | 14-4 | 14-5 | 14-15 | 14-18 | 14-19 | 14-68 | 14-97 |
| Service Rating | I | I | II | I | I | I | I | I |
| Number of Contacts | 10 | 4 | 5 | 14 1 | 18 | 19 | 8 | 8 4 |
| Contact Size | 20 | 12 | 16 | 20 16 | 20 | 20 | 16 | 20 16 |

*Note: Contact Amphenol factory for availability

| | | | |
|-----------------------|-----------|-----------|-----------|
| | | | |
| CONTACT LEGEND | 12 | 16 | 20 |

HIGH TEMPERATURE SERIES III (TV)

Insert Arrangements

Front face of pin inserts illustrated

| Shell Size & Insert Arrg. for: | | | | | | | | | | |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|-------------|--------------|
| Series III TV | 9-94 | 9-98 | 11-2 | 11-4 | 11-5 | 11-98 | 11-99 | 13-4 | 13-8 | 13-98 |
| Service Rating | M | I | I | I | I | I | I | I | I | I |
| Number of Contacts | 2 | 3 | 2 | 4 | 5 | 6 | 7 | 4 | 8 | 10 |
| Contact Size | 20 | 20 | 16 | 20 | 20 | 20 | 20 | 16 | 20 | 20 |

| Shell Size & Insert Arrg. for: | | | | | | | |
|--------------------------------|-------------|--------------|--------------|--------------|--------------|-------------|-------------|
| Series III TV | 15-4 | 15-15 | 15-18 | 15-19 | 15-97 | 17-6 | 17-8 |
| Service Rating | I | I | I | I | I | I | II |
| Number of Contacts | 4 | 14 | 1 | 18 | 8 | 6 | 8 |
| Contact Size | 12 | 20 | 16 | 20 | 20 | 16 | 16 |

| Shell Size & Insert Arrg. for: | | | | | | |
|--------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Series III TV | 17-26 | 17-52 | 17-99 | 19-11 | 19-28 | 19-32 |
| Service Rating | I | M | I | II | M | I |
| Number of Contacts | 26 | 2 | 21 | 11 | 26 | 32 |
| Contact Size | 20 | 8 | 20 | 16 | 20 | 20 |

| Shell Size & Insert Arrg. for: | | | | | |
|--------------------------------|--------------|--------------|--------------|--------------|--------------|
| Series III TV | 21-16 | 21-29 | 21-39 | 21-41 | 21-48 |
| Service Rating | II | I | I | I | N |
| Number of Contacts | 16 | 19 | 4 | 41 | 4 |
| Contact Size | 16 | 20 | 16 | 20 | 8 power |

*Note: Contact Amphenol factory for availability

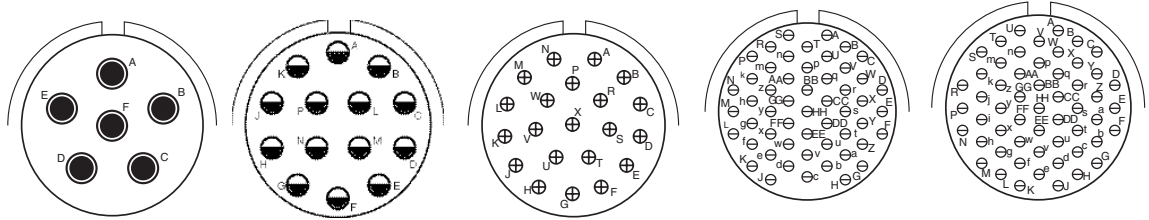


HIGH TEMPERATURE SERIES III (TV)

Insert Arrangements



Front face of pin inserts illustrated

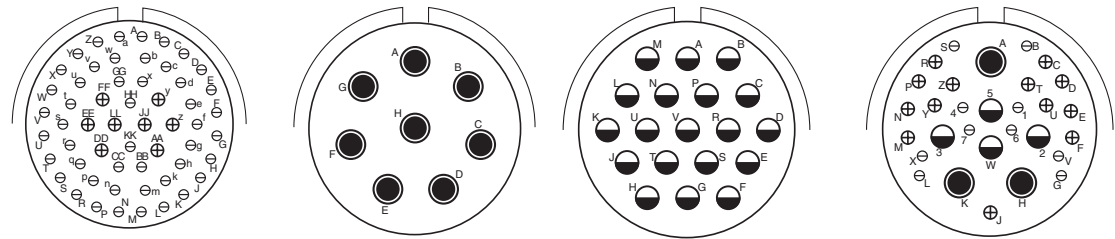


Shell Size & Insert Arr. for:

Series III TV

Service Rating
Number of Contacts
Contact Size

| | 23-6 | 23-14 | 23-21 | 23-53 | 23-55 |
|--------------------|----------|-------|-------|-------|-------|
| Service Rating | M | I | II | I | I |
| Number of Contacts | 6 | 14 | 21 | 53 | 55 |
| Contact Size | 8 Twinax | 12 | 16 | 20 | 20 |

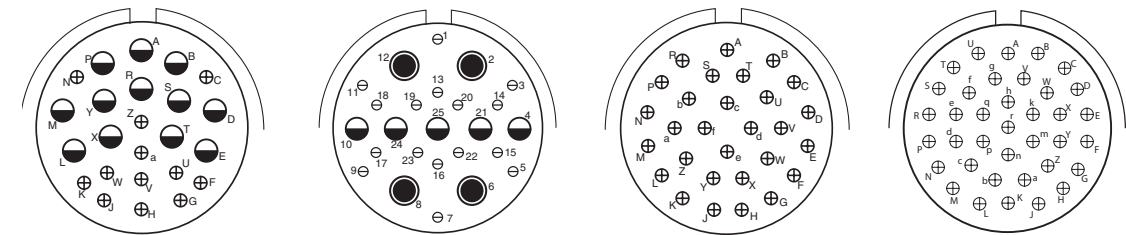


Shell Size & Insert Arr. for:

Series III TV

Service Rating
Number of Contacts
Contact Size

| | 25-4 | 25-8 | 25-19 | *** 25-20 |
|--------------------|-------|---------------|-------|---|
| Service Rating | I | Twinax / Coax | I | N |
| Number of Contacts | 48 8 | 8 | 19 | 10 13 3 4 |
| Contact Size | 20 16 | 8 | 12 | 20 16 8 12 Coax (With Matched Impedance) |

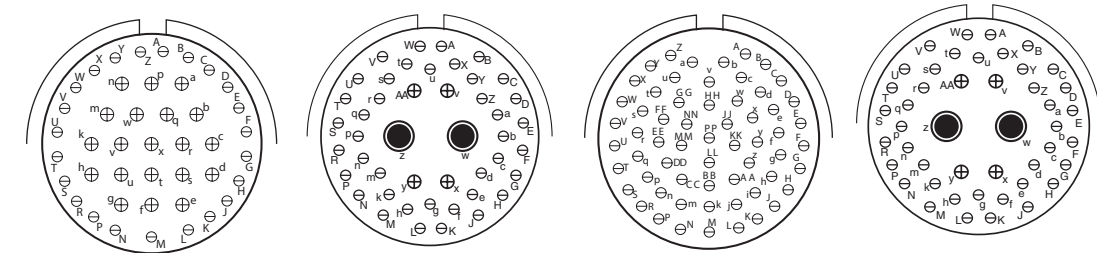


Shell Size & Insert Arr. for:

Series III TV

Service Rating
Number of Contacts
Contact Size

| | 25-24 | 25-26 | 25-29 | 25-37 |
|--------------------|-------|--------------|-------|-------|
| Service Rating | I | I | I | I |
| Number of Contacts | 12 12 | 16 5 4 | 29 | 37 |
| Contact Size | 16 12 | 20 12 8 Coax | 16 | 16 |



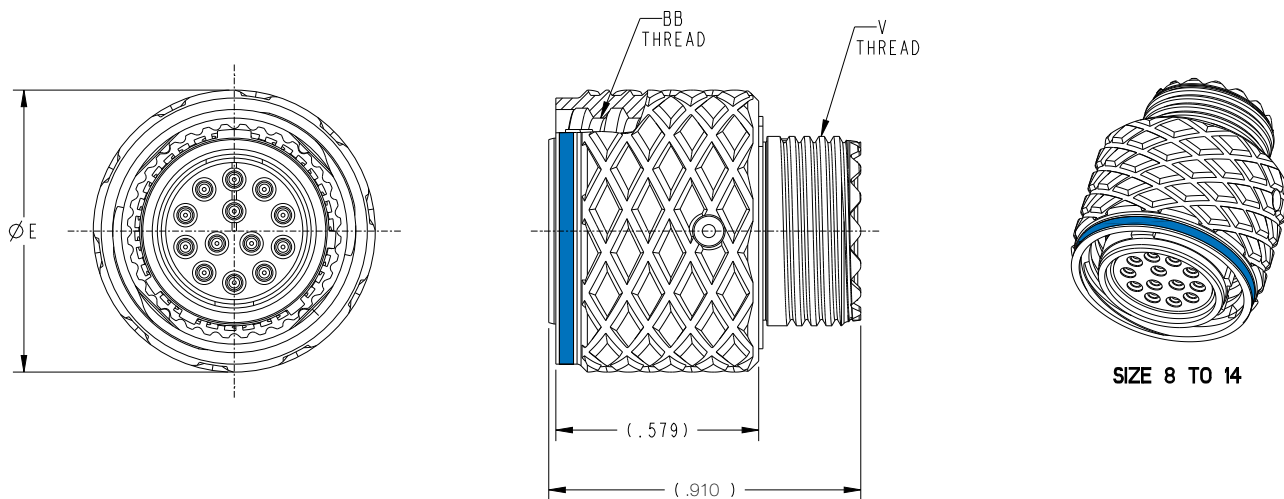
Shell Size & Insert Arr. for:

Series III TV

Service Rating
Number of Contacts
Contact Size

| | 25-43 | 25-46 | 25-61 | 25-90 |
|--------------------|-------|----------------|-------|---------|
| Service Rating | I | I | I | I |
| Number of Contacts | 23 20 | 40 4 2 | 61 | 40 4 2 |
| Contact Size | 20 16 | 20 16 8 Coax † | 20 | 20 16 8 |

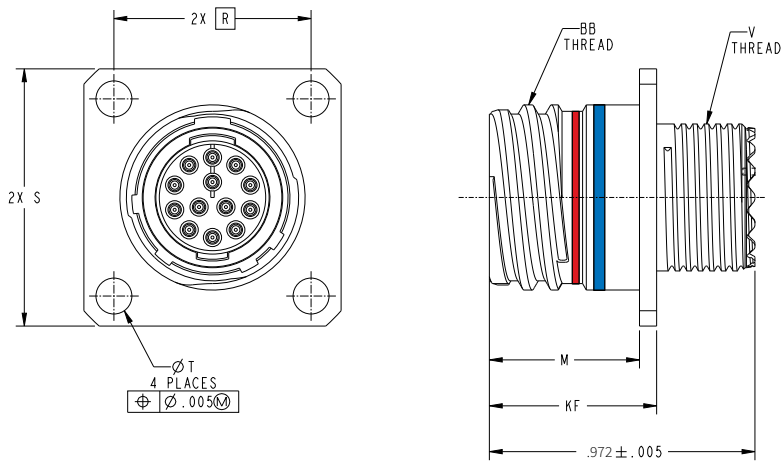
HIGH TEMPERATURE SERIES FIVE PLUG WITH ACCESSORY THREADS S506



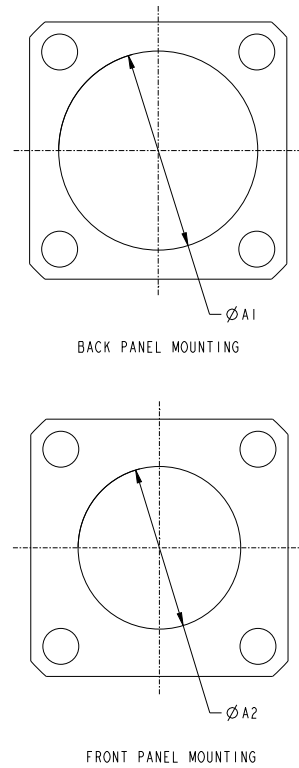
| Shell Size | BB Thread | V Thread* | ØE ±.005 |
|------------|------------------------|-------------------|-------------|
| 8 | .5600 - .1P - .2L - DS | .4375 - 28 - UNEF | .682 |
| 10 | .6800 - .1P - .2L - DS | .5625 - 24 - UNEF | .803 |
| 12 | .8000 - .1P - .2L - DS | .6875 - 24 - UNEF | .923 |
| 14 | .9200 - .1P - .2L - DS | .8125 - 20 - UNEF | 1.043 |

*Compatible with all D38999 Series II Accessories

HIGH TEMPERATURE SERIES FIVE WALL MOUNTING RECEPTACLE S500



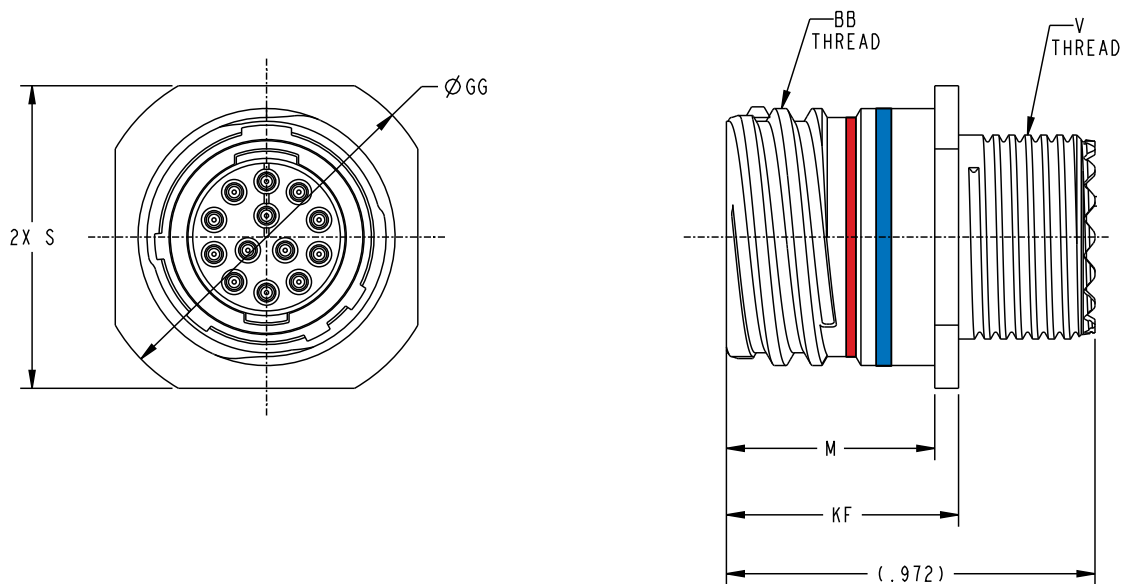
PANEL HOLE DIMENSIONS



| Shell Size | BB Thread | V Thread* | (ØA1) | (ØA2) | M ±.003 | R | S ±.012 | ØT ±.008 | KF ±.003 |
|------------|------------------------|-------------------|-------|-------|------------|------|------------|-------------|-------------|
| 8 | .5600 - .1P - .2L - DS | .4375 - 28 - UNEF | .606 | .468 | .5475 | .594 | .815 | .128 | .613 |
| 10 | .6800 - .1P - .2L - DS | .5625 - 24 - UNEF | .726 | .593 | .5475 | .719 | .941 | .128 | .613 |
| 12 | .8000 - .1P - .2L - DS | .6875 - 24 - UNEF | .846 | .718 | .5475 | .812 | 1.034 | .128 | .613 |
| 14 | .9200 - .1P - .2L - DS | .8125 - 20 - UNEF | .966 | .843 | .5475 | .906 | 1.128 | .128 | .613 |

*Compatible with all D38999 Series II Accessories

HIGH TEMPERATURE SERIES FIVE LINE MOUNTING RECEPTACLE S501



| Shell Size | BB Thread | V Thread* | M ±.003 | S ±.012 | ØGG ±.010 | KF ±.003 |
|------------|------------------------|-------------------|------------|------------|--------------|-------------|
| 8 | .5600 - .1P - .2L - DS | .4375 - 28 - UNEF | .5475 | .678 | .803 | .613 |
| 10 | .6800 - .1P - .2L - DS | .5625 - 24 - UNEF | .5475 | .798 | .923 | .613 |
| 12 | .8000 - .1P - .2L - DS | .6875 - 24 - UNEF | .5475 | .918 | 1.043 | .613 |
| 14 | .9200 - .1P - .2L - DS | .8125 - 20 - UNEF | .5475 | 1.038 | 1.163 | .613 |

*Compatible with all D38999 Series II Accessories