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, you have the option to download the drawing and specifications, buy if available through distribution channels, Request a Quote and the ability to download multiple part numbers to a list to manage your needs.
## Military to Commercial Shell Style Conversion Table

### How to Order (Military)

<table>
<thead>
<tr>
<th>MILITARY</th>
<th>DESCRIPTION</th>
<th>COMMERCIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>D38999/20</td>
<td>Wall Mounting Receptacle</td>
<td>TVP00 or TVPS00 (AL &amp; SS); CTVP00, CTVP00 (Composite)</td>
</tr>
<tr>
<td>D38999/21</td>
<td>Hermetic Box Mounting Receptacle</td>
<td>TVPS02Y, TVPS02YN</td>
</tr>
<tr>
<td>D38999/23</td>
<td>Hermetic Jam Nut Receptacle</td>
<td>TV07Y, TV07YN</td>
</tr>
<tr>
<td>D38999/24</td>
<td>Jam Nut Receptacle</td>
<td>TV07, TV07 (AL &amp; SS); CT00, CT00 (Composite)</td>
</tr>
<tr>
<td>D38999/26</td>
<td>Straight Plug</td>
<td>TV06, TV06</td>
</tr>
<tr>
<td>D38999/25</td>
<td>Solder Mount Receptacle (Hermetic)</td>
<td>TVSI</td>
</tr>
<tr>
<td>D38999/27</td>
<td>Weld Mounted Receptacle (Hermetic)</td>
<td>TVSHI</td>
</tr>
</tbody>
</table>

### HOW TO ORDER: MILITARY

1. CONNECTOR TYPE

<table>
<thead>
<tr>
<th>Connector Type</th>
<th>Shell Style</th>
<th>Service Class</th>
<th>Shell Size/ Insert Arrangement</th>
<th>Contact Type</th>
<th>Alternate Keying Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>D38999/20</td>
<td>20 J G35 P</td>
<td></td>
<td></td>
<td>N</td>
<td></td>
</tr>
</tbody>
</table>

2. SHELL STYLE

<table>
<thead>
<tr>
<th>Shell Style</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Wall Mount Receptacle</td>
</tr>
<tr>
<td>21</td>
<td>Box Mount Receptacle Hermetic</td>
</tr>
<tr>
<td>26</td>
<td>Straight Plug</td>
</tr>
<tr>
<td>24</td>
<td>Jam Nut Receptacle</td>
</tr>
<tr>
<td>23</td>
<td>Jam Nut Receptacle Hermetic</td>
</tr>
<tr>
<td>25</td>
<td>Solder Mount Receptacle Hermetic</td>
</tr>
<tr>
<td>27</td>
<td>Weld Mounted Receptacle, <strong>Hermetic</strong> Only</td>
</tr>
</tbody>
</table>

### 3. SERVICE CLASS

<table>
<thead>
<tr>
<th>Military</th>
<th>Finish</th>
<th>RoHS</th>
<th>Material</th>
<th>Material/ Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Anodic Coating</td>
<td>■</td>
<td>Aluminum</td>
<td>200°C, 500 hour salt spray</td>
</tr>
<tr>
<td>F</td>
<td>Electroless Nickel</td>
<td>■</td>
<td>Aluminum</td>
<td>200°C, EMI shielding –65dB @ 10GHz, 48 hour salt spray</td>
</tr>
<tr>
<td>G</td>
<td>Electroless Nickel</td>
<td>■</td>
<td>Aluminum</td>
<td>200°C, Space grade, 48 hour salt spray</td>
</tr>
<tr>
<td>J</td>
<td>Olive Drab Cadmium</td>
<td>Composite</td>
<td></td>
<td>175°C, 2000 hours dynamic salt spray, EMI Shielding –50 dB@10 GHz specification min.</td>
</tr>
<tr>
<td>K</td>
<td>Passivated Stainless Steel</td>
<td>■</td>
<td>Stainless Steel</td>
<td>200°C, firewall capability, 500 hour salt spray resistance, EMI –45 dB @ 10 GHz specification min.</td>
</tr>
<tr>
<td>L</td>
<td>Stainless Steel w/ Nickel Plate</td>
<td>■</td>
<td>Stainless Steel</td>
<td>Corrosion resistant steel, 200°C, 500 hour salt spray, non firewall, EMI shielding –65dB @ 10GHz specification min.</td>
</tr>
<tr>
<td>M</td>
<td>Electroless Nickel</td>
<td>■</td>
<td>Composite</td>
<td>200°C, EMI shielding –65dB @ 10GHz, 2000 hours dynamic salt spray</td>
</tr>
<tr>
<td>N</td>
<td>Stainless Steel w/ Nickel Plate</td>
<td>■</td>
<td>Stainless Steel</td>
<td>Hermetic connectors, corrosion resistant steel, 200°C</td>
</tr>
<tr>
<td>S</td>
<td>Stainless Steel w/ Nickel Plate</td>
<td>■</td>
<td>Stainless Steel</td>
<td>Non-hermetic connectors, corrosion resistant steel, 200°C, firewall capability, 500 hour salt spray, EMI shielding –65dB @ 10GHz specification min.</td>
</tr>
<tr>
<td>T</td>
<td>Durmalon plated</td>
<td>■</td>
<td>Aluminum</td>
<td>Nickel-PTFE alternative to Cadmium, 175°C, 500 hour salt spray, EMI -50dB at 10GHz specification min.</td>
</tr>
<tr>
<td>W</td>
<td>Olive Drab Cadmium</td>
<td>■</td>
<td>Aluminum</td>
<td>175°C, 500 hour salt spray, EMI Shielding –50 dB@10 GHz specification min.</td>
</tr>
<tr>
<td>Y</td>
<td>Stainless Steel</td>
<td>■</td>
<td>Stainless Steel</td>
<td>Hermetic seal, 200°C passivated stainless steel</td>
</tr>
<tr>
<td>Z</td>
<td>Zinc-Nickel Plated</td>
<td>■</td>
<td>Aluminum</td>
<td>Zinc-Nickel Alternative to Cadmium, +175°C, 500 hour salt spray, EMI Shielding –50 dB @ 10 GHz specification min.</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>11</td>
<td>12</td>
<td>15</td>
<td>17</td>
<td>19</td>
<td>21</td>
<td>23</td>
<td>25</td>
<td></td>
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</table>

Amphenol Shell size

5. CONTACT TYPE

<table>
<thead>
<tr>
<th></th>
<th>P</th>
<th>S</th>
<th>H</th>
<th>J</th>
<th>A</th>
<th>B</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>500 Cycle Pin Contacts, if require Less Contacts place (LC) at the end of part number</td>
<td>500 Cycle Socket Contacts, if require Less Contacts place (LC) at the end of part number</td>
<td>Pin-Composite if you require 1500 Cycle Contacts</td>
<td>Socket-Composite if you require 1500 Cycle Contacts</td>
<td>Less Pin Contacts</td>
<td>Less Socket Contacts</td>
<td>Eyelet contacts, hermetics only</td>
</tr>
</tbody>
</table>

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.
**MIL-DTL-38999, Series III TV**

**How to Order (Commercial)**

### 1. SELECT A TYPE & CLASS

<table>
<thead>
<tr>
<th>Type &amp; Class</th>
<th>Shell Size- Insert Amp.</th>
<th>Contact Type</th>
<th>Alternate Position</th>
<th>PCB Length**</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVPS00RB-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### ALUMINUM

<table>
<thead>
<tr>
<th>RATES</th>
<th>Electroless Nickel</th>
<th>Olive Drab Cadmium</th>
<th>Durmalon</th>
<th>Black Zinc</th>
<th>Electroless Nickel (With Ground Plane)</th>
<th>Olive Drab Cadmium (With Ground Plane)</th>
<th>Marine Bronze</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Temperature</td>
<td>200˚C</td>
<td>175˚C</td>
<td>175˚C</td>
<td>200˚C</td>
<td>175˚C</td>
<td>200˚C</td>
</tr>
<tr>
<td></td>
<td>Salt Spray</td>
<td>48 Hrs</td>
<td>500 Hrs</td>
<td>500 Hrs</td>
<td>48 Hrs</td>
<td>500 Hrs</td>
<td>2,000 Hrs</td>
</tr>
<tr>
<td></td>
<td>EMI Shielding</td>
<td>-65dB @ 10GHz</td>
<td>-50dB @ 10GHz</td>
<td>-65dB @ 10GHz</td>
<td>-65dB @ 10GHz</td>
<td>-65dB @ 10GHz</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RoHS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### CONNECTOR TYPE & STYLE

- **Wall Mounting Receptacle**
  - TVPS00RF-
  - TVP00RW-
  - TVP00DT-
  - TVP00DZ-
  - TVP00RGF-
  - TVP00RGW-
  - TVPS00RB-
- **Box Mounting Receptacle**
  - TVPS02RF-
  - TVP02RW-
  - TVP02DT-
  - TVP02DZ-
  - TVP02RGF-
  - TVP02RGW-
  - TVPS02RB-
- **Line Receptacle**
  - TVS01RF-
  - TV01RW-
  - TV01DT-
  - TV01DZ-
  - TV01RGF-
  - TV01RGW-
  - TVS01RB-
- **Jam Nut Receptacle**
  - TVS07RF-
  - TV07RW-
  - TV07DT-
  - TV07DZ-
  - TV07RGF-
  - TV07RGW-
  - TVS07RB-
- **Plugs**
  - Straight Plug
    - TVS06RF-
    - TV06RW-
    - TV06DT-
    - TV06DZ-
    - TV06RGF-
    - TV06RGW-
    - TVS06RB-
  - Flange Mounted Plug
    - TVS09RF-
    - TV09RW-
    - TV09DT-
    - TV09DZ-
    - TV09RGF-
    - TV09RGW-
    - TVS09RB-
  - Straight Plug w Dualok
    - TVS56RF-
    - TV56RW-
    - TV56DT-
    - TV56DZ-
    - TV56RGF-
    - TV56RGW-
    - TVS56RB-
  - Straight Plug w Clutch-Lok*
    - -
    - -
    - -
    - -
    - -
    - -
    - -

#### Printed Circuit Board

- **Wall Mounting Receptacle**
  - TVPS00RF-
  - TVP00RW-
  - TVP00DT-
  - TVP00DZ-
  - TVPS00RB-
- **Box Mounting Receptacle**
  - TVPS02RF-
  - TVP02RW-
  - TVP02DT-
  - TVP02DZ-
  - TVPS02RB-
- **Jam Nut**
  - TVS07RF-
  - TV07RW-
  - TV07DT-
  - TV07DZ-
  - TV07RG-
  - TVS07RB-
- **Wall Mount (Double Flange)**
  - TVPS40RF-
  - TVP40RW-
  - TVP40DT-
  - TVP40DZ-
  - TVPS40RB-
- **Jam Nut (Double Flange)**
  - TVS47RF-
  - TV47RW-
  - TV47DT-
  - TV47DZ-
  - TVS47RB-
- **Wall Mount (Clinch Nuts)**
  - TVPS10RF-
  - TVP10RW-
  - TVP10DT-
  - TVP10DZ-
  - TVPS10RB-
- **Box Mount (Clinch Nuts)**
  - TVPS12RF-
  - TVP12RW-
  - TVP12DT-
  - TVP12DZ-
  - TVPS12RB-
- **Hermetic**
  - Box Mounting Receptacle
  - Jam Nut Receptacle
  - Solder Mount
  - Wall Mounting Receptacle

Hermetic only available in Stainless Steel

- Wall Mount Receptacle (00, 20)
- Line Receptacle (01)
- Box Mount Receptacle (02, 21)
- Straight Plug (06)
- Deep Reach Receptacle
- Solder Mount Hermetic Receptacle (I, 25)
- Lanyard Release Plug (29, 30, 31)

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.
MIL-DTL-38999, Series III TV
How to Order (Commercial)

### COMPOSITE

<table>
<thead>
<tr>
<th>Electroless Nickel</th>
<th>Olive Drab Cadmium</th>
<th>Electroless Nickel (With Ground Plane)</th>
<th>Olive Drab Cadmium (With Ground Plane)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200°C</td>
<td>175°C</td>
<td>200°C</td>
<td>175°C</td>
</tr>
<tr>
<td>2,000 Hrs</td>
<td>2,000 Hrs</td>
<td>2,000 Hrs</td>
<td>2,000 Hrs</td>
</tr>
<tr>
<td>-65dB @ 10GHz</td>
<td>-65dB @ 10GHz</td>
<td>-65dB @ 10GHz</td>
<td>-65dB @ 10GHz</td>
</tr>
</tbody>
</table>

### STAINLESS STEEL

<table>
<thead>
<tr>
<th>Passivated (Firewall)</th>
<th>Passivated (Non-Firewall)</th>
<th>Nickel Plated (Firewall)</th>
<th>Nickel Plated (Non-Firewall)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200°C</td>
<td>200°C</td>
<td>200°C</td>
<td>200°C</td>
</tr>
<tr>
<td>500 Hrs</td>
<td>500 Hrs</td>
<td>500 Hrs</td>
<td>500 Hrs</td>
</tr>
<tr>
<td>-65dB @ 10GHz</td>
<td>-65dB @ 10GHz</td>
<td>-65dB @ 10GHz</td>
<td>-50dB @ 10GHz</td>
</tr>
</tbody>
</table>

#### How to Order (Commercial)

- **COMPOSITE**
  - Electroless Nickel
  - Olive Drab Cadmium
  - Electroless Nickel (With Ground Plane)
  - Olive Drab Cadmium (With Ground Plane)

- **STAINLESS STEEL**
  - Passivated (Firewall)
  - Passivated (Non-Firewall)
  - Nickel Plated (Firewall)
  - Nickel Plated (Non-Firewall)

#### Combinations

- **CTVPS00RF-**
- **CTVP00RW-**
- **CTVP00RG-**
- **CTVP00RGW-**
- **CTVPS02RF-**
- **CTV02RW-**
- **CTV02RG-**
- **CTV02RGW-**
- **CTVPS07RF-**
- **CTV07RW-**
- **CTV07RG-**
- **CTV07RGW-**

#### Hermetic available only in Stainless Steel

- **CTVPS02Y-**
- **CTVP02YN-**
- **TVS07Y-**
- **TVS07YN-**
- **TVSIIY-**
- **TVSIIIYN-**

#### 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** Composite if you require 1500 Cycle Pin Contacts
- **J** Composite if you require 1500 Cycle Socket Contacts
- **X** Eyelet contacts, hermatics only

#### Instructions

1. **Type & Class**
2. **Shell Size & Insert Arrangement** See Pages 2-5
3. **Contact Type**
4. **Alternate Position**
5. **PCB Length**

**If Required**
### MIL-DTL-38999, Series III TV

**How to Order (Alternate Keying) Commercial**

#### 4. SELECT A ALTERNATE KEYING COMMERCIAL

<table>
<thead>
<tr>
<th>Shell Size</th>
<th>Key &amp; Keyway Arrangement Identification Letter</th>
<th>AR° or AP° BSC</th>
<th>BR° or BP° BSC</th>
<th>CR° or CP° BSC</th>
<th>DR° or DP° BSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>7, 7H</td>
<td>N°</td>
<td>120</td>
<td>240</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>9</td>
<td>N°</td>
<td>105</td>
<td>140</td>
<td>215</td>
<td>265</td>
</tr>
<tr>
<td>11, 13, and 15</td>
<td>N°</td>
<td>80</td>
<td>142</td>
<td>196</td>
<td>293</td>
</tr>
<tr>
<td>17 and 19</td>
<td>N°</td>
<td>80</td>
<td>142</td>
<td>196</td>
<td>293</td>
</tr>
<tr>
<td>21, 23, and 25</td>
<td>N°</td>
<td>80</td>
<td>142</td>
<td>188</td>
<td>280</td>
</tr>
<tr>
<td>25L, 33, and 37</td>
<td>N°</td>
<td>80</td>
<td>142</td>
<td>188</td>
<td>280</td>
</tr>
</tbody>
</table>

- **NOTE:** An “N” designation is used on D38999 military part number but not on the commercial versions.

#### 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.

#### Alignment Disc

![Alignment Disc Diagram]

<table>
<thead>
<tr>
<th>Shell Size</th>
<th>D Dia. ±.010</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>.234</td>
</tr>
<tr>
<td>11, 13</td>
<td>.350</td>
</tr>
<tr>
<td>15</td>
<td>.500</td>
</tr>
<tr>
<td>17</td>
<td>.725</td>
</tr>
<tr>
<td>19</td>
<td>.850</td>
</tr>
<tr>
<td>21, 23, and 25</td>
<td>.953</td>
</tr>
<tr>
<td>25</td>
<td>1.147</td>
</tr>
</tbody>
</table>

**5. PCB LENGTH FOR COMMERICAL ONLY**

<table>
<thead>
<tr>
<th>Contact Stickout</th>
<th>Pin Contacts</th>
<th>Pin Contacts with Alignment Disk</th>
</tr>
</thead>
<tbody>
<tr>
<td>.150&quot;</td>
<td>(P15)</td>
<td>(P15AD)</td>
</tr>
<tr>
<td>.250&quot;</td>
<td>(P25)</td>
<td>(P25AD)</td>
</tr>
<tr>
<td>.350&quot;</td>
<td>(P35)</td>
<td>(P35AD)</td>
</tr>
</tbody>
</table>

**5. PCB LENGTH FOR HD38999 ONLY**

<table>
<thead>
<tr>
<th>PCB tail stickout +/- .040 inch</th>
<th>Without Alignment Disk</th>
<th>With Alignment Disk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pins</td>
<td>Sockets</td>
<td>Pins</td>
</tr>
<tr>
<td>.100&quot; nominal</td>
<td>(P1*)</td>
<td>(S1)</td>
</tr>
<tr>
<td>.150&quot; nominal</td>
<td>(P15*)</td>
<td>(S15)</td>
</tr>
<tr>
<td>.200&quot; nominal</td>
<td>(P2)</td>
<td>(S2)</td>
</tr>
<tr>
<td>.250&quot; nominal</td>
<td>(P25*)</td>
<td>(S25)</td>
</tr>
<tr>
<td>.300&quot; nominal</td>
<td>(P3*)</td>
<td>(S3)</td>
</tr>
<tr>
<td>.350&quot; nominal</td>
<td>(P35)</td>
<td>(S35)</td>
</tr>
</tbody>
</table>

- **NOTE:** Not available in TV40 wall mount double flange receptacle or TV47 jam nut double flange receptacle styles.

Note: Standard tail diameter is 0.019 ± 0.001 Stick out is measured from the end of the connector shell to end of the contact.
# Boeing BACC63

## How to Order

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BACC63</td>
<td>CT</td>
<td>15</td>
<td>—</td>
<td>19</td>
<td>P</td>
<td>N</td>
<td>H</td>
</tr>
</tbody>
</table>

**COMPOSITE**

1. **BOEING NUMBER**
   - **BACC63**: Boeing

2. **STYLE**
   - **CT**: Composite Plug
   - **CU**: Composite Receptacle

3. **SHELL SIZE**
   - **15**: One Shell Size

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BACC63</td>
<td>DB</td>
<td>15-19</td>
<td>P</td>
<td>N</td>
<td>H</td>
</tr>
<tr>
<td>BACC63</td>
<td>DC</td>
<td>17-8</td>
<td>P</td>
<td>N</td>
<td>H</td>
</tr>
</tbody>
</table>

**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