Solutions for Box Mounting

8D Series
Receptacle with Clinch Nuts or Helicoils

Equivalent mounting retention of the receptacle ensured with only 4 clinch nuts or helicoils. Designed for severe applications.

User friendly  ■ Easy to install.

Selflocking  ■ Fast and secure.

Reduced mounting hardware  ■ Elimination of nuts and washers.

BEFORE
12 elements
4 screws
+ 4 nuts
+ 4 washers

AFTER
only 4 elements
4 screws

Esterline
Connection Technologies
### Description

- Square flange receptacle with 4 clinch nuts or 4 helicoils
- Clinch nut & helicoils are self-locking
- Rear mounting
- Easy to install, time saving
- Equivalent MIL level qualification as 38999 Series III
- Clinch nut & helicoil tested:
  - Impact test (drop 0.4 kg from height of 100 mm)
  - Push out test (130 N during 15 s max)
  - Wrench out test (1 N/m)

### Technical features

#### Mechanical

- **Shell**: Aluminum
- **Shells plating**:
  - Black zinc nickel (Z)
  - Cadmium olive drab (W)
  - Nickel (F)
- **Insulator**: Thermoplastic
- **Grommet and interfacial seal**: Silicone elastomer
- **Contact**: Copper alloy
- **Contact plating**: Gold over nickel plated
- **Endurance**:
  - 500 mating/unmating operations
- **Shock**:
  - 300 g, 3 ms according EN 2591-D2 method A
- **Vibration**:
  - Sinus: 10 to 2000 Hz, 3x12 hrs
  - Random: 50 to 2000 Hz, 2x8 Hrs
  - 25 to 2000 Hz, 2x8 Hrs
  - 5 to 2000 Hz, 100 to 300 Hz at ambient T°
  - Test with accessories in acc with EN 2591-D3
- **Contact retention**:

<table>
<thead>
<tr>
<th>Contacts size</th>
<th>26</th>
<th>22</th>
<th>20</th>
<th>16</th>
<th>12</th>
<th>8</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min force in N</td>
<td>30</td>
<td>44</td>
<td>67</td>
<td>111</td>
<td>111</td>
<td>111</td>
<td>200</td>
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</table>

### Electrical

#### Test voltage rating (Vrms)

<table>
<thead>
<tr>
<th>Service</th>
<th>sea level</th>
<th>at 21000 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>400</td>
<td>N/A</td>
</tr>
<tr>
<td>M</td>
<td>1300</td>
<td>800</td>
</tr>
<tr>
<td>N</td>
<td>1000</td>
<td>600</td>
</tr>
<tr>
<td>I</td>
<td>1800</td>
<td>1000</td>
</tr>
<tr>
<td>II</td>
<td>2300</td>
<td>1000</td>
</tr>
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</table>

#### Contact resistance

<table>
<thead>
<tr>
<th>Contacts size</th>
<th>26</th>
<th>22</th>
<th>20</th>
<th>16</th>
<th>12</th>
<th>8</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance mΩ</td>
<td>16</td>
<td>14.6</td>
<td>7.3</td>
<td>3.8</td>
<td>3.5</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Insulation resistance:

≥ 5 000 MΩ (under 500 Vdc)

#### Contact rating:

<table>
<thead>
<tr>
<th>Contacts size</th>
<th>26</th>
<th>22</th>
<th>20</th>
<th>16</th>
<th>12</th>
<th>8</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating (A)</td>
<td>3</td>
<td>5</td>
<td>7.5</td>
<td>13</td>
<td>23</td>
<td>45</td>
<td>80</td>
</tr>
</tbody>
</table>

#### Shell continuity

- Black zinc nickel (Z): 2.5 mΩ
- Cadmium olive drab (W): 2.5 mΩ
- Nickel (F): 1 mΩ

#### Shielding

- F: 65 dB at 10 GHz
- Z, F & W: 85 dB at 1 GHz
- Z & W: 50 dB at 10 GHz

### Environmental

#### Temperature range:

- W: -65°C to +175°C
- Z & F: -65°C to +200°C
- Sealing:
  - Mated connectors meet altitude immersion requirements of MIL-DTL-38999.
- Salt spray:
  - Z & W: 500 Hours
  - F: 48 Hours

### Resistance to fluids

- According to MIL-DTL-38999 standard
  - Gasoline: JP5 (OTAN F44)
  - Mineral hydraulic fluid: MIL-H-5606 (OTAN H515)
  - Synthetic hydraulic fluid: Skydrol 500 B4
- LD4 (SAE AS 1241)
  - Mineral lubricating: MIL-L-7870A (OTAN 0142)
  - Synthetic lubricating: MIL-L-23699 (OTAN 0156), MIL-L-7808
  - Cleaning fluid: MIL-C-87936 diluted
  - De-icing fluid: MIL-A-8243
  - Extinguishing fluid: Bromochloromethane
  - Cooling fluid: Coolanol
8D Series | Receptacle with Clinch Nuts or Helicoils

Ordering information

<table>
<thead>
<tr>
<th>Basic Series</th>
<th>8D</th>
<th>34</th>
<th>19</th>
<th>F</th>
<th>35</th>
<th>S</th>
<th>N</th>
</tr>
</thead>
</table>

**Shell style:**
- 34: Square flange receptacle with M3 clinch nuts, F & W only
- 35: Square flange receptacle with M3 helicoils, Z only
- 37: Square flange receptacle with UNC 4-40 helicoils, Z only
- 39: Square flange receptacle with UNC 4-40 clinch nuts, F & W only

**Contact length:** (consult us)
- : Connectors with standard crimp contacts
- C: Short PC tail
- L: Long PC tail

**Shell size:**

**Plating:**
- Z: Black zinc nickel
- F: Nickel
- W: Olive green cadmium

**Contact layout:**
Consult Souriau 38999 Series III catalog

**Contact type:**
- P: Pin
- S: Socket

**Orientation:**
- N, A, B, C, D & E

**Specification:**
- 046: Tin plated contact SnPb
- 046E: Tin plated contact Sn pure
- 046S: Tin plated contact SAC305
- 900: Contact without shoulder (gold plated)
- 901: Tin plated contact without shoulder SnPb
- 901E: Tin plated contact without shoulder Sn pure
- 901S: Tin plated contact without shoulder SAC305

Dimensions

**Mounted connectors** (with 8D5 connector)

2.5 Max.

3.95 Min. (shell 9 to 19)

3.15 Min. (shell 21 to 25)

Panel

Note: All dimensions are in millimeters (mm)
Square flange receptacle - type 34 & type 39

Short contact length
Min / Max - For other length please consult us

<table>
<thead>
<tr>
<th>Shell size</th>
<th>A ±0.3</th>
<th>B</th>
<th>C Max</th>
<th>D Max</th>
<th>E Max</th>
<th>Thread</th>
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<tbody>
<tr>
<td>9</td>
<td>27.79</td>
<td>18.26</td>
<td>20.90</td>
<td>10.60</td>
<td>2.50</td>
<td>M12x1-6g</td>
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<tr>
<td>11</td>
<td>30.15</td>
<td>20.62</td>
<td></td>
<td></td>
<td></td>
<td>M15x1-6g</td>
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<tr>
<td>13</td>
<td>32.54</td>
<td>23.01</td>
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<td></td>
<td></td>
<td>M18x1-6g</td>
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<tr>
<td>15</td>
<td>34.14</td>
<td>24.61</td>
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<td></td>
<td></td>
<td>M22x1-6g</td>
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<tr>
<td>17</td>
<td>36.5</td>
<td>26.97</td>
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<td></td>
<td></td>
<td>M25x1-6g</td>
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<tr>
<td>19</td>
<td>38.89</td>
<td>29.36</td>
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<td></td>
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<td>M28x1-6g</td>
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<tr>
<td>21</td>
<td>41.27</td>
<td>31.75</td>
<td>20.10</td>
<td>11.40</td>
<td>3.20</td>
<td>M31x1-6g</td>
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<tr>
<td>23</td>
<td>44.45</td>
<td>34.93</td>
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<td></td>
<td></td>
<td>M34x1-6g</td>
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<td>25</td>
<td>47.62</td>
<td>38.1</td>
<td></td>
<td></td>
<td></td>
<td>M37x1-6g</td>
</tr>
</tbody>
</table>

Short contact length
See table above.

Note: All dimensions are in millimeters (mm)

For further information contact us at technical-emear-ect@esterline.com (Europe - Asia - Africa)
technical-americas-ect@esterline.com (North America)
or visit our web site www.esterline-connection-technologies.com