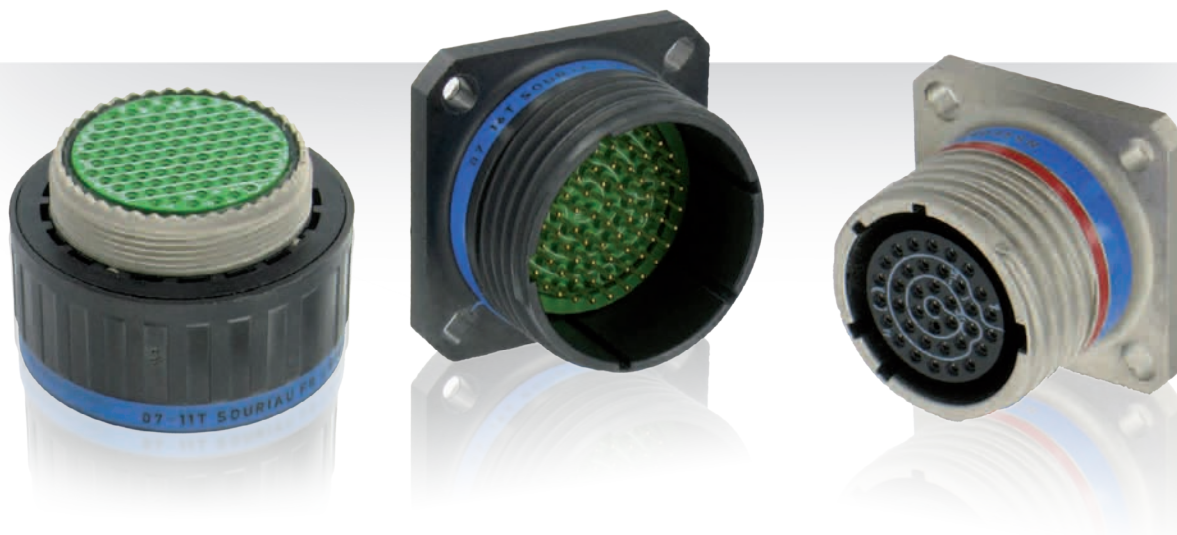




## 38999 Series III Composite Connectors

The RoHS connector with the best performance in weight saving and corrosion resistance for MilAero applications.

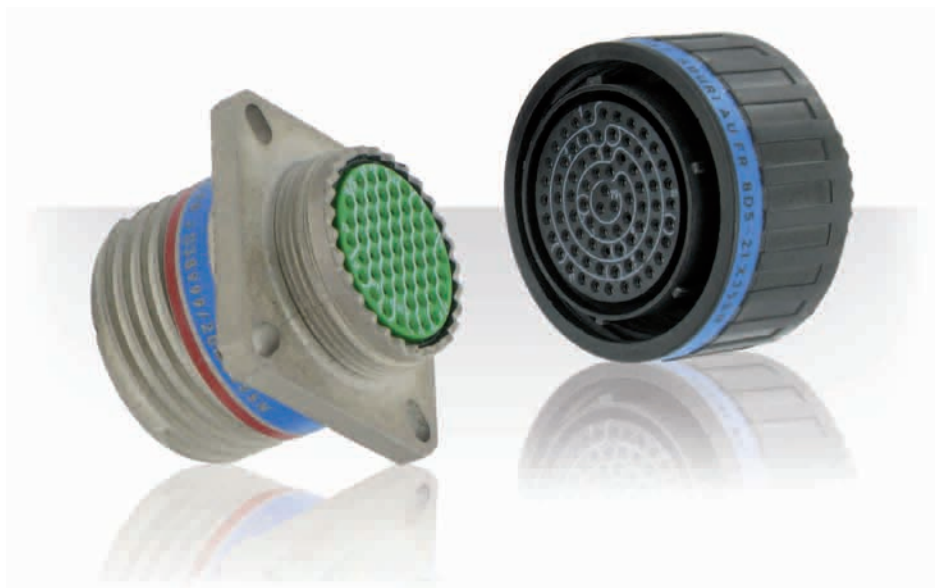
**MIL-DTL-38999 Standard** ■ Mechanical and climatic characteristics conforming to the MIL-DTL-38999. All layouts 38999 Series III available.

**Versatility** ■ Fully intermatable & interchangeable with qualified Series III plugs or receptacles. Available with plating for conductivity.

**Robust connector** ■ Suitable for applications with high vibrations. High corrosion resistant: 2000 hours salt spray withstanding.

**Weight saving** ■ Composite lighter compared to other material:





## Description

- High contact density layouts available
- Screw coupling, Shell size from 9 to 25
- Contact protection: 100% Scoop proof
- RFI - EMI shielding and shell to shell continuity
- Accessories (protective caps, backshells, etc...)
- Hermetic versions
- Optical layouts
- 230V layouts available (ABS22-19, ABS22-20, ABS22-21 & ABS22-22 qualified)

## Technical features

### Mechanical

- **Shell:** Composite
- **Shell plating:**
  - . Cadmium olive drab (J)
  - . Nickel (M) - RoHS Compliant
  - . Without plating (X) - RoHS Compliant
- **Insulator:** Thermoplastic
- **Grommet and interfacial seal:** Silicone elastomer
- **Contacts:** Copper alloy
- **Contacts plating:** Gold over nickel plated
- **Endurance:**
  - . 500 mating cycles
  - . 1500 mating cycles with specifics contacts
- **Shock:** 300g, 3 ms according EN 2591-D2 method A
- **Vibration:**
  - . Sinus:
    - . 10 à 2000 Hz, 3x12 hrs
    - . (60g, 140 - 2000 Hz) with T° cycling
  - . Random:
    - . 50 to 2000 Hz, 2x8 Hrs
    - . (1g2/ Hz, 100 - 2000Hz) at T° max.
    - . 25 to 2000 Hz, 2x8 Hrs
    - . (5g2/ Hz, 100 - 300Hz) at ambient T°

### Contact retention:

| Contacts size  | 26 | 22 | 20 | 16  | 12  | 8   | 4   |
|----------------|----|----|----|-----|-----|-----|-----|
| Min force in N | 30 | 44 | 67 | 111 | 111 | 111 | 200 |

### Electrical

#### Test voltage rating (Vrms)

| Service | sea level | at 21000 m |
|---------|-----------|------------|
| R       | 400       | N/A        |
| M       | 1 300     | 800        |
| N       | 1 000     | 600        |
| I       | 1 800     | 1 000      |
| II      | 2 300     | 1 000      |

#### Contact resistance

| Contacts size | 26 | 22   | 20  | 16  | 12  | 8 | 4 |
|---------------|----|------|-----|-----|-----|---|---|
| Resistance mΩ | 16 | 14.6 | 7.3 | 3.8 | 3.5 | 3 | 2 |

#### Insulation resistance:

≥ 5 000 MΩ (under 500 Vdc)

#### Contact rating:

| Contacts size | 26 | 22 | 20  | 16 | 12 | 8  | 4  |
|---------------|----|----|-----|----|----|----|----|
| Rating (A)    | 3  | 5  | 7.5 | 13 | 23 | 45 | 80 |

#### Shell continuity

- . Cadmium olive drab (J): 3 mΩ
- . Nickel (M): 3 mΩ

#### Shielding: J & M: 85 db at 1 GHz

### Environmental

#### Temperature range:

- . J: -65°C +175°C
- . M: -65°C +200°C
- . Without plating (X): -65°C +175°

#### Sealing:

Mated connectors meet altitude immersion requirements of MIL-DTL-38999.

#### Salt spray:

- . J: 2000 Hrs
- . M: 2000 Hrs
- . Without plating (X): 2000 Hrs

### 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-DTL-25769 diluted
- . De-icing fluid: MIL-A-8243
- . Extinguishing fluid: Bromochloromethane
- . Cooling fluid: Coolanol

## Connector part numbers

|                                                                                                                            |           |          |          |           |          |           |          |          |  |  |          |
|----------------------------------------------------------------------------------------------------------------------------|-----------|----------|----------|-----------|----------|-----------|----------|----------|--|--|----------|
| <b>Basic Series</b>                                                                                                        | <b>8D</b> | <b>0</b> | <b>-</b> | <b>11</b> | <b>J</b> | <b>35</b> | <b>P</b> | <b>N</b> |  |  | <b>L</b> |
| <b>Shell style:</b>                                                                                                        |           |          |          |           |          |           |          |          |  |  |          |
| 0: Square flange receptacle                                                                                                |           |          |          |           |          |           |          |          |  |  |          |
| 5: Plug with RFI shielding                                                                                                 |           |          |          |           |          |           |          |          |  |  |          |
| <b>Type:</b>                                                                                                               |           |          |          |           |          |           |          |          |  |  |          |
| - : Connectors with standard crimp contacts.                                                                               |           |          |          |           |          |           |          |          |  |  |          |
| L: Receptacle with long PC tail (male and female size #22D, #20).                                                          |           |          |          |           |          |           |          |          |  |  |          |
| C: Receptacle with short PC tail (male and female #22D, #20, #16, #12).                                                    |           |          |          |           |          |           |          |          |  |  |          |
| S: Receptacle with specific PC tail (male et female #22D)                                                                  |           |          |          |           |          |           |          |          |  |  |          |
| W: Receptacle with male contacts #22D for wire wrap (3 wraps)                                                              |           |          |          |           |          |           |          |          |  |  |          |
| T: Receptacle with male contacts #20 for wire wrap (2 wraps)                                                               |           |          |          |           |          |           |          |          |  |  |          |
| P: Receptacle with solder cup contacts - please consult us                                                                 |           |          |          |           |          |           |          |          |  |  |          |
| <b>Shell size: 09, 11, 13, 15, 17, 19, 21, 23, 25</b>                                                                      |           |          |          |           |          |           |          |          |  |  |          |
| <b>Plating:</b>                                                                                                            |           |          |          |           |          |           |          |          |  |  |          |
| J: Olive drab cadmium                                                                                                      |           |          |          |           |          |           |          |          |  |  |          |
| M: Nickel                                                                                                                  |           |          |          |           |          |           |          |          |  |  |          |
| X: Without plating                                                                                                         |           |          |          |           |          |           |          |          |  |  |          |
| <b>Contact layout:</b> See SOURIAU «8D Series - MIL-DTL-38999 Series III» catalog                                          |           |          |          |           |          |           |          |          |  |  |          |
| <b>Contact type:</b>                                                                                                       |           |          |          |           |          |           |          |          |  |  |          |
| P: Pin (500 mating/unmating)                                                                                               |           |          |          |           |          |           |          |          |  |  |          |
| H: Pin (1500 mating/unmating)                                                                                              |           |          |          |           |          |           |          |          |  |  |          |
| A: Connector supplied less pin contact or with specific contacts (connector marking: A + orientation)                      |           |          |          |           |          |           |          |          |  |  |          |
| S: Socket (500 mating/unmating)                                                                                            |           |          |          |           |          |           |          |          |  |  |          |
| J: Socket (1500 mating/unmating)                                                                                           |           |          |          |           |          |           |          |          |  |  |          |
| B: Connector supplied less socket contact or with specific contacts (connector marking: B + orientation)                   |           |          |          |           |          |           |          |          |  |  |          |
| <b>Orientation: N, A, B, C, D, E, T, V</b>                                                                                 |           |          |          |           |          |           |          |          |  |  |          |
| <b>Specification:</b>                                                                                                      |           |          |          |           |          |           |          |          |  |  |          |
| 046: Tinned straight PC tail                                                                                               |           |          |          |           |          |           |          |          |  |  |          |
| 251: Connector provided with power contacts (layouts with contact #8)                                                      |           |          |          |           |          |           |          |          |  |  |          |
| 022: Fuel tank                                                                                                             |           |          |          |           |          |           |          |          |  |  |          |
| 600: 230V qualified connector (T or V orientation mandatory - Consult us for available layouts)                            |           |          |          |           |          |           |          |          |  |  |          |
| <b>Special custom:</b>                                                                                                     |           |          |          |           |          |           |          |          |  |  |          |
| None: Standard plastic cap                                                                                                 |           |          |          |           |          |           |          |          |  |  |          |
| M: Antistatic plastic cap                                                                                                  |           |          |          |           |          |           |          |          |  |  |          |
| <b>L:</b> For P or S contact type only, connectors delivered without contacts, connectors marking P or S plus orientation. |           |          |          |           |          |           |          |          |  |  |          |

Note: PC tail contacts without shoulder also available. Please consult us.

## MIL-DTL-38999 part numbers\*

|                                                                                                                          |                |           |          |          |           |          |          |          |
|--------------------------------------------------------------------------------------------------------------------------|----------------|-----------|----------|----------|-----------|----------|----------|----------|
| <b>Basic Series</b>                                                                                                      | <b>D38999/</b> | <b>20</b> | <b>M</b> | <b>B</b> | <b>35</b> | <b>P</b> | <b>N</b> | <b>L</b> |
| <b>Shell style:</b>                                                                                                      |                |           |          |          |           |          |          |          |
| 20: Square flange receptacle                                                                                             |                |           |          |          |           |          |          |          |
| 26: Plug with RFI shielding.                                                                                             |                |           |          |          |           |          |          |          |
| <b>Plating:</b>                                                                                                          |                |           |          |          |           |          |          |          |
| J: Olive drab cadmium                                                                                                    |                |           |          |          |           |          |          |          |
| M: Nickel                                                                                                                |                |           |          |          |           |          |          |          |
| <b>Shell size: 09=A, 11=B, 13=C, 15=D, 17=E, 19=F, 21=G, 23=H, 25=J</b>                                                  |                |           |          |          |           |          |          |          |
| <b>Contact layout:</b> See SOURIAU «8D Series - MIL-DTL-38999 Series III» catalog for layouts according to MIL-DTL-38999 |                |           |          |          |           |          |          |          |
| <b>Contact type:</b>                                                                                                     |                |           |          |          |           |          |          |          |
| P: Pin (500 mating/unmating)                                                                                             |                |           |          |          |           |          |          |          |
| H: Pin (1500 mating/unmating)                                                                                            |                |           |          |          |           |          |          |          |
| A: Connector supplied less pin contact or with specific contacts (connector marking: A + orientation)                    |                |           |          |          |           |          |          |          |
| S: Socket (500 mating/unmating)                                                                                          |                |           |          |          |           |          |          |          |
| J: Socket (1500 mating/unmating)                                                                                         |                |           |          |          |           |          |          |          |
| B: Connector supplied less socket contact or with specific contacts (connector marking: B + orientation)                 |                |           |          |          |           |          |          |          |
| <b>Orientation: N, A, B, C, D, E</b>                                                                                     |                |           |          |          |           |          |          |          |
| <b>L:</b> For P or S contact type only, connector delivered without contacts, connector marking P or S (without L)       |                |           |          |          |           |          |          |          |

\* Note: To place an order of MIL connectors delivered without MIL removable crimp contacts and keep P or S plus orientation marking, it must be specify clearly on the order (by adding a suffix L at the end of the P/N or specified in comment).

## BACC part numbers

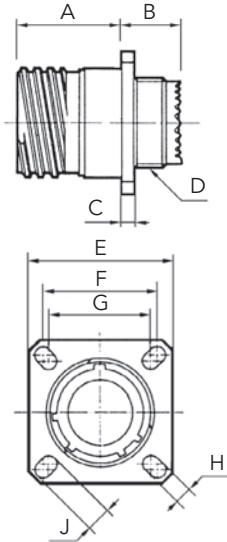
|                                                                                                                                                                |          |    |   |    |   |   |   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----|---|----|---|---|---|
| <b>Basic Series:</b><br><b>BACC63CT:</b> 8D5*M (composite plug)<br><b>BACC63CU:</b> 8D0*M (composite square flange receptacle)                                 | BACC63CT | 13 | - | 98 | P | N | H |
| <b>Shell size:</b><br>09=A, 11=B, 13=C, 15=D, 17=E, 19=F, 21=G, 23=H, 25=J                                                                                     |          |    |   |    |   |   |   |
| <b>Plating &amp; grounding:</b><br>- : Nickel plated, ungrounded<br>G: Nickel plated, grounded<br>D: Cadmium plated, ungrounded<br>C: Cadmium plated, grounded |          |    |   |    |   |   |   |
| <b>Contact layout:</b><br>See SOURIAU «8D Series - MIL-DTL-38999 Series III» catalog for layout according to BACC                                              |          |    |   |    |   |   |   |
| <b>Contact type:</b><br>P: Pin<br>S: Socket                                                                                                                    |          |    |   |    |   |   |   |
| <b>Orientation:</b><br>N, A, B, C, D, E                                                                                                                        |          |    |   |    |   |   |   |
| <b>Specification:</b><br>None: With contacts<br>H: Without contact & without filler plug                                                                       |          |    |   |    |   |   |   |

## EN3645 part numbers

|                                                                                                                                    |        |   |   |   |   |    |   |   |
|------------------------------------------------------------------------------------------------------------------------------------|--------|---|---|---|---|----|---|---|
| Basic Series                                                                                                                       | EN3645 | J | 6 | G | N | 35 | B | N |
| <b>Plating:</b><br>J: Olive drab cadmium<br>M: Nickel                                                                              |        |   |   |   |   |    |   |   |
| <b>Shell style:</b><br>0: Square flange receptacle<br>6: Plug                                                                      |        |   |   |   |   |    |   |   |
| <b>Shell size:</b><br>09=A, 11=B, 13=C, 15=D, 17=E, 19=F, 21=G, 23=H, 25=J                                                         |        |   |   |   |   |    |   |   |
| <b>Grounding:</b><br>N: Standard insert not grounded                                                                               |        |   |   |   |   |    |   |   |
| <b>Contact layout:</b><br>See SOURIAU «8D Series - MIL-DTL-38999 Series III» catalog for layout according to EN3645                |        |   |   |   |   |    |   |   |
| <b>Contact type:</b><br>A: Connector supplied less pin contact<br>B: Connector supplied less socket contact<br>F: Socket<br>M: Pin |        |   |   |   |   |    |   |   |
| <b>Orientation:</b><br>N, A, B, C, D, E                                                                                            |        |   |   |   |   |    |   |   |

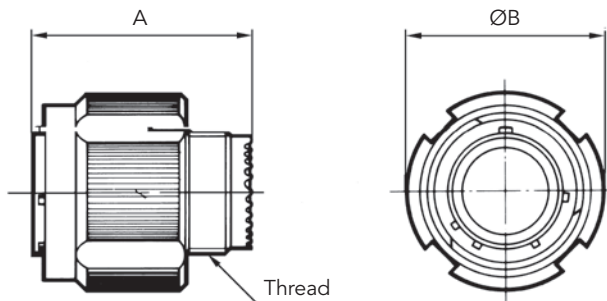
## Dimensions

### Receptacle type 0



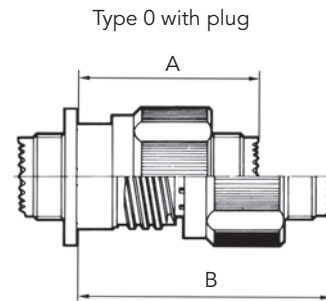
| Shell size | A Max | B Max | C Max | D Thread   | E $\pm 0.3$ | F     | G     | H $\pm 0.2$ | J $\pm 0.2$ |
|------------|-------|-------|-------|------------|-------------|-------|-------|-------------|-------------|
| 09 (A)     | 19.65 | 11.96 | 3.65  | M12 x 1-6g | 23.8        | 18.26 | 15.09 | 3.25        | 5.49        |
| 11 (B)     |       |       |       | M15 x 1-6g | 26.2        | 20.62 | 18.26 |             | 4.93        |
| 13 (C)     |       |       |       | M18 x 1-6g | 28.6        | 23.01 | 20.62 |             | 4.39        |
| 15 (D)     |       |       |       | M22 x 1-6g | 31          | 24.61 | 23.01 |             | 4.39        |
| 17 (E)     |       |       |       | M25 x 1-6g | 33.3        | 26.97 | 24.61 |             | 4.93        |
| 19 (F)     | 18.85 | 12.76 | 3.7   | M28 x 1-6g | 36.5        | 29.36 | 26.97 | 3.91        | 6.15        |
| 21 (G)     |       |       | 4.35  | M31 x 1-6g | 39.7        | 31.75 | 29.36 |             |             |
| 23 (H)     |       |       | 4.4   | M34 x 1-6g | 42.9        | 34.93 | 31.75 |             |             |
| 25 (J)     |       |       |       | M37 x 1-6g | 46          | 38.1  | 34.93 |             |             |

### Plug type 5



| Shell size | A Max | Thread     | ØB Max |
|------------|-------|------------|--------|
| 09 (A)     | 31.00 | M12 x 1-6g | 21.80  |
| 11 (B)     |       | M15 x 1-6g | 25.00  |
| 13 (C)     |       | M18 x 1-6g | 29.40  |
| 15 (D)     |       | M22 x 1-6g | 32.50  |
| 17 (E)     |       | M25 x 1-6g | 35.70  |
| 19 (F)     |       | M28 x 1-6g | 38.50  |
| 21 (G)     |       | M31 x 1-6g | 41.70  |
| 23 (H)     |       | M34 x 1-6g | 44.90  |
| 25 (J)     |       | M37 x 1-6g | 48.00  |

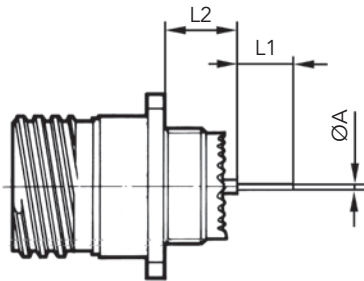
### Mated connectors



| Shell size | A Max | B Max |
|------------|-------|-------|
| 09 (A)     | 37.00 | 52.30 |
| 11 (B)     |       |       |
| 13 (C)     |       |       |
| 15 (D)     |       |       |
| 17 (E)     |       |       |
| 19 (F)     | 36.00 | 51.30 |
| 21 (G)     |       |       |
| 23 (H)     |       |       |
| 25 (J)     |       |       |

Note: All dimensions are in millimeters (mm)

# Receptacle with straight PC tail contacts



|    |     | Shell size   |              |              | 09 (A) | 11 (B) | 13 (C) | 15 (C) | 17 (E) | 19 (F) | 21 (G) | 23 (H) | 25 (J) |
|----|-----|--------------|--------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|    |     | Contact size | Contact type | PC tail type |        |        |        |        |        |        |        |        |        |
| A  |     | #22D         | M & F        | L & C        |        |        |        |        | 0.70   |        |        |        |        |
|    |     | #22D         | M & F        | S            |        |        |        |        | 0.50   |        |        |        |        |
|    |     | #20          | M & F        | C            |        |        |        |        | 0.70   |        |        |        |        |
|    |     | #16          | M & F        | C            |        |        |        |        | 1.15   |        |        |        |        |
| L1 |     | #22D         | M & F        | L            |        |        |        |        | 8.50   |        |        |        |        |
|    |     | #22D         | M & F        | C            |        |        |        |        | 4.00   |        |        |        |        |
|    |     | #22D         | M & F        | S            |        |        |        |        | 5.00   |        |        |        |        |
|    |     | #20          | M & F        | C            |        |        |        |        | 5.00   |        |        |        |        |
|    |     | #16          | M & F        | C            |        |        |        |        | 5.00   |        |        |        |        |
| L2 | Min | #22D         | M            | L & C        |        |        |        | 9.48   |        |        |        | 9.59   |        |
|    | Max | #22D         | M            | L & C        |        |        |        | 10.38  |        |        |        | 10.48  |        |
|    | Min | #22D         | F            | L & C        |        |        |        | 9.15   |        |        |        | 9.26   |        |
|    | Max | #22D         | F            | L & C        |        |        |        | 10.38  |        |        |        | 10.48  |        |
|    | Min | #22D         | M            | S            |        |        |        | 9.65   |        |        |        | 9.76   |        |
|    | Max | #22D         | M            | S            |        |        |        | 10.55  |        |        |        | 10.65  |        |
|    | Min | #22D         | F            | S            |        |        |        | 9.32   |        |        |        | 9.42   |        |
|    | Max | #22D         | F            | S            |        |        |        | 10.55  |        |        |        | 10.65  |        |
|    | Min | #20          | M            | C            |        |        |        | 9.65   |        |        |        | 9.76   |        |
|    | Max | #20          | M            | C            |        |        |        | 10.55  |        |        |        | 10.65  |        |
|    | Min | #20          | F            | C            |        |        |        | 9.65   |        |        |        | 9.76   |        |
|    | Max | #20          | F            | C            |        |        |        | 10.55  |        |        |        | 10.65  |        |
|    | Min | #16          | M            | C            |        |        |        | 9.65   |        |        |        | 9.76   |        |
|    | Max | #16          | M            | C            |        |        |        | 10.55  |        |        |        | 10.65  |        |
|    | Min | #16          | F            | C            |        |        |        | 9.65   |        |        |        | 9.76   |        |
|    | Max | #16          | F            | C            |        |        |        | 10.55  |        |        |        | 10.65  |        |

M: Male contact

F: Female contact

L: Long PC tail

C: Short PC tail

S: Specific PC tail

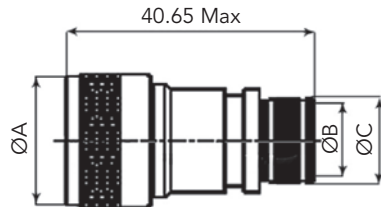
Note: All dimensions are in millimeters (mm)

Connectors weight - in gram ( $\pm 15\%$ )

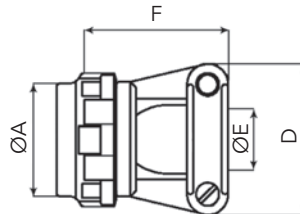
| Shell size & Layout |    | With contacts |        |                     |        | Without contacts |        |                     |        |
|---------------------|----|---------------|--------|---------------------|--------|------------------|--------|---------------------|--------|
|                     |    | Plug (type 5) |        | Receptacle (type 0) |        | Plug (type 5)    |        | Receptacle (type 0) |        |
|                     |    | Male          | Female | Male                | Female | Male             | Female | Male                | Female |
| 09                  | 35 | 8.5           | 10.1   | 7.8                 | 9.4    | 8.1              | 8.6    | 7.4                 | 7.9    |
|                     | 98 | 8.5           | 9.8    | 7.8                 | 9.1    | 8.1              | 8.6    | 7.4                 | 7.9    |
| 11                  | 01 | 12.8          | 15.7   | 10.4                | 13.3   | 12.1             | 14.1   | 9.7                 | 11.7   |
|                     | 02 | 11.5          | 14.1   | 09.3                | 11.8   | 10.9             | 12.5   | 8.7                 | 10.3   |
|                     | 04 | 12.6          | 15.7   | 10.2                | 13.3   | 12.0             | 14.1   | 9.7                 | 11.7   |
|                     | 05 | 12.6          | 15.8   | 10.2                | 13.4   | 11.9             | 13.8   | 9.5                 | 11.5   |
|                     | 22 | 11.4          | 13.8   | 9.1                 | 11.6   | 11.1             | 12.8   | 8.8                 | 10.6   |
|                     | 35 | 12.5          | 16.0   | 10.1                | 13.6   | 11.6             | 12.8   | 9.2                 | 10.4   |
|                     | 80 | 15.2          | 18.6   | 13.4                | 10.4   | 10.7             | 11.6   | 8.9                 | 9.4    |
|                     | 98 | 12.5          | 15.3   | 10.1                | 12.9   | 11.7             | 12.8   | 9.3                 | 10.5   |
|                     | 99 | 11.8          | 15.0   | 9.6                 | 12.8   | 10.8             | 12.2   | 8.6                 | 10.0   |
| 13                  | 04 | 17.2          | 20.9   | 13.7                | 17.5   | 15.6             | 17.9   | 12.4                | 14.3   |
|                     | 08 | 17.6          | 22.8   | 14.1                | 19.2   | 16.5             | 19.6   | 12.9                | 16.1   |
|                     | 26 | 17.9          | 23.6   | 14.4                | 20.1   | 16.2             | 18.9   | 12.7                | 15.4   |
|                     | 35 | 17.4          | 23.1   | 13.8                | 19.6   | 15.8             | 17.6   | 12.3                | 14.1   |
|                     | 98 | 17.2          | 21.8   | 13.7                | 18.3   | 15.8             | 17.9   | 12.3                | 14.3   |
| 15                  | 05 | 21.4          | 26.7   | 16.6                | 21.9   | 19.8             | 22.8   | 15.0                | 18.0   |
|                     | 15 | 22.2          | 29.3   | 17.4                | 24.5   | 19.9             | 23.0   | 15.1                | 18.1   |
|                     | 18 | 22.4          | 31.3   | 17.6                | 26.5   | 19.9             | 24.0   | 15.0                | 19.2   |
|                     | 19 | 22.0          | 29.6   | 17.1                | 24.8   | 19.2             | 22.0   | 14.5                | 17.2   |
|                     | 35 | 22.0          | 31.3   | 17.2                | 26.5   | 19.4             | 22.0   | 14.6                | 17.2   |
|                     | 97 | 21.8          | 28.9   | 17.1                | 24.1   | 19.4             | 22.6   | 14.7                | 17.8   |
| 17                  | 02 | 26.5          | 38.8   | 25.2                | 37.6   | 19.3             | 22.3   | 18.1                | 21.1   |
|                     | 06 | 25.9          | 35.5   | 23.2                | 32.8   | 21.9             | 25.9   | 19.2                | 23.2   |
|                     | 08 | 24.9          | 33.6   | 22.2                | 30.1   | 22.4             | 27.4   | 19.7                | 24.7   |
|                     | 26 | 25.5          | 36.3   | 22.8                | 33.6   | 21.8             | 25.9   | 19.2                | 23.1   |
|                     | 35 | 25.7          | 39.3   | 23.0                | 36.6   | 21.9             | 25.5   | 19.2                | 22.8   |
|                     | 75 | 31.3          | 42.6   | 28.6                | 39.9   | 22.3             | 28.6   | 19.6                | 25.9   |
| 19                  | 99 | 25.5          | 36.1   | 22.8                | 33.4   | 22.0             | 26.1   | 19.3                | 23.4   |
|                     | 11 | 32.1          | 45.7   | 26.1                | 39.7   | 28.7             | 37.1   | 22.7                | 31.1   |
|                     | 32 | 31.3          | 44.7   | 25.3                | 38.7   | 26.8             | 31.9   | 20.8                | 25.9   |
| 21                  | 35 | 31.6          | 48.1   | 25.6                | 42.0   | 27.1             | 31.6   | 21.0                | 25.6   |
|                     | 11 | 38.0          | 57.9   | 32.8                | 52.6   | 30.8             | 40.3   | 25.5                | 35.1   |
|                     | 16 | 35.1          | 50.4   | 29.9                | 45.2   | 30.2             | 37.9   | 24.9                | 32.7   |
|                     | 35 | 35.4          | 56.1   | 30.1                | 50.8   | 29.9             | 36.3   | 24.6                | 31.1   |
|                     | 39 | 36.8          | 57.1   | 31.5                | 51.9   | 31.0             | 40.8   | 25.7                | 35.5   |
|                     | 41 | 35.3          | 52.7   | 30.1                | 47.5   | 29.6             | 36.3   | 24.3                | 31.0   |
|                     | 48 | 42.4          | 62.4   | 37.7                | 57.7   | 29.3             | 36.2   | 24.6                | 31.5   |
| 23                  | 75 | 47.3          | 64.2   | 42.6                | 59.50  | 29.3             | 36.2   | 24.6                | 31.5   |
|                     | 21 | 43.1          | 66.3   | 38.0                | 61.2   | 36.5             | 49.9   | 31.5                | 44.8   |
|                     | 35 | 41.4          | 67.5   | 36.3                | 62.5   | 34.4             | 42.5   | 29.3                | 37.5   |
|                     | 53 | 41.5          | 63.6   | 36.4                | 58.6   | 34.1             | 42.4   | 29.0                | 37.4   |
| 25                  | 55 | 42.2          | 65.3   | 42.2                | 60.2   | 34.5             | 43.3   | 29.4                | 38.2   |
|                     | 07 | 53.6          | 90.05  | 49.0                | 84.8   | 37.8             | 51.8   | 33.2                | 46.6   |
|                     | 11 | 59.1          | 81.6   | 54.5                | 77.0   | 40.8             | 53.8   | 36.2                | 49.2   |
|                     | 19 | 51.7          | 83.7   | 46.6                | 78.6   | 39.2             | 53.3   | 34.0                | 48.2   |
|                     | 24 | 51.2          | 82.5   | 46.1                | 77.4   | 39.6             | 54.0   | 34.4                | 48.9   |
|                     | 29 | 49.5          | 78.5   | 44.4                | 73.4   | 40.5             | 55.9   | 35.4                | 50.7   |
|                     | 35 | 47.3          | 80.1   | 42.2                | 75.0   | 38.4             | 48.1   | 33.2                | 43.0   |
|                     | 37 | 49.3          | 80.4   | 45.5                | 76.2   | 37.8             | 51.5   | 34.0                | 47.3   |
|                     | 44 | 69.6          | 93.7   | 65.0                | 94.6   | 36.1             | 45.8   | 31.5                | 46.7   |
|                     | 43 | 49.6          | 80.2   | 44.4                | 75.1   | 40.1             | 55.4   | 35.0                | 50.3   |
|                     | 46 | 51.9          | 75.7   | 46.7                | 70.1   | 37.2             | 47.4   | 32.1                | 42.2   |
|                     | 61 | 46.6          | 73.4   | 41.5                | 68.2   | 38.1             | 48.9   | 32.9                | 43.8   |
|                     | 08 | 72.9          | 104.8  | 67.8                | 99.6   | 36.9             | 48.8   | 31.8                | 43.6   |
|                     | 20 | 57.9          | 88.2   | 52.8                | 83.0   | 36.4             | 46.6   | 31.3                | 41.5   |
|                     | 04 | 50.4          | 80.2   | 45.3                | 75.0   | 41.2             | 54.8   | 36.1                | 49.6   |

## Backshells

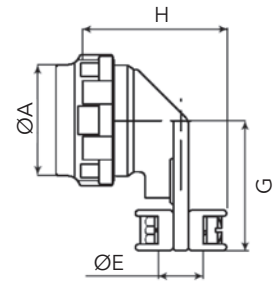
**Straight backshell for EMI/RFI heat shrink boots (Type 88)**



**Straight cable clamp (Type 91)**



**90° cable clamp (Type 92)**



| Shell size | ØA Max | ØB <sup>±0.10</sup> Entry size |       | ØC Entry size |       | D Max | E Max | F Max | G     | H     |
|------------|--------|--------------------------------|-------|---------------|-------|-------|-------|-------|-------|-------|
|            |        | 02                             | 03    | 02            | 03    |       |       |       |       |       |
| 09         | 21.80  | N/A                            | 6.35  | N/A           | 10.03 | 24.90 | 5.55  | 21.25 | 22.20 | 26.95 |
| 11         | 25.00  | N/A                            | 7.92  | N/A           | 11.61 | 26.00 | 6.70  | 24.30 | 23.80 | 27.95 |
| 13         | 29.40  | 7.92                           | 11.13 | 11.61         | 14.81 | 30.50 | 8.75  | 27.95 | 26.20 | 30.00 |
| 15         | 32.50  | 11.13                          | 14.27 | 14.81         | 17.96 | 33.00 | 11.70 | 27.95 | 28.60 | 33.00 |
| 17         | 35.70  | 12.70                          | 15.88 | 16.38         | 19.56 | 36.10 | 13.85 | 31.25 | 33.30 | 35.05 |
| 19         | 38.50  | 15.88                          | 19.05 | 19.56         | 22.73 | 38.60 | 15.60 | 35.80 | 34.95 | 36.85 |
| 21         | 41.70  | 15.88                          | 20.62 | 19.56         | 24.30 | 41.65 | 17.75 | 38.35 | 38.10 | 39.15 |
| 23         | 44.90  | 17.47                          | 23.83 | 21.06         | 27.51 | 45.00 | 19.80 | 42.15 | 41.30 | 41.15 |
| 25         | 48.00  | 19.05                          | 25.40 | 22.73         | 29.08 | 48.00 | 21.60 | 44.70 | 44.45 | 42.95 |

### Basic Series

M85049

91

11

M

### Backshell type:

88: Straight backshell for EMI/RFI heat shrink boots

91: Straight cable clamp

92: 90° cable clamp

### Shell size:

09, 11, 13, 15, 17, 19, 21, 23, 25

### Plating:

J: Olive drab cadmium over electroless nickel

M: Electroless nickel

T: Without plating (Type 91 & 92 only)

### Entry size (Type 88 only):

02: See table above

03: See table above

Note: All dimensions are in millimeters (mm)

For further information contact us at [contactmilaero@souriau.com](mailto:contactmilaero@souriau.com)  
or visit our web site [www.souriau.com](http://www.souriau.com)

## Product Range Extension

### High Density Composite version available

**SOURIAU offers a robust & reliable High Density solution derived from 38999 Series I, Series III & VG96912.**

**3 shell sizes available:**

- . Provides flexibility according to your application.

**A reliable & robust solution:**

- . Same well proven design as standard 38999 & VG96912.

**Significant space saving:**

- . Twice the number of contacts compared to size 13-35 with 22 contacts.
- . Two shell sizes smaller than a partially populated size 17-35 with 55 cavities.



See «High Density Connectors» product news on [www.souriau.com](http://www.souriau.com)

### Reinforced Sealing Composite version available

**Cost effective sealing solution, the best value for money. To be used when enhanced sealing is needed in harsh environment and as an alternative to hermetic glass bead.**

**Weight saving:**

- . Lightweight compared with hermetic versions.

**Excellent shock resistance:**

- . Better than hermetic glass seals.
- . Filtered receptacle are generally standard length.

**High performances:**

- . Reinforced sealing receptacle with male or female straight PC tails.
- . High hermeticity performance:  $10^{-7}$  atm.cm<sup>3</sup>/s.
- . 100 % scoop proof.
- . High density connectors.
- . Lower profile for compactness.



See «8D Series - MIL-DTL-38999 Series III» catalog on [www.souriau.com](http://www.souriau.com)

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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