



MIL-DTL 38999 Serie III  
Aluminium Series

# 8D - D38999 Aluminium Series



## Connector part numbers

| Basic Series  | 8D | 0 | - | 11 | W | 35 | P | N | ** |
|---|----|---|---|----|---|----|---|---|----|
| <b>Shell style:</b><br><b>0:</b> Square flange receptacle<br><b>1:</b> In line receptacle<br><b>7:</b> Jam nut receptacle<br><b>5:</b> Plug with RFI shielding.   |    |   |   |    |   |    |   |   |    |
| <b>Type:</b><br>-: Connectors with standard crimp contacts.<br><b>L:</b> Receptacle with long spill (male and female size #22D, #20).<br><b>C:</b> Receptacle with short spill (male and female #22D, #20, #16).<br><b>S:</b> Receptacle with specific spill (male et female #22D)<br><b>W:</b> Receptacle with male contacts #22D for wire wrap (3 wraps)<br><b>T:</b> Receptacle with male contacts #20 for wire wrap (2 wraps) |    |   |   |    |   |    |   |   |    |
| <b>Shell size:</b> 09 - 11 - 13 - 15 - 17 - 19 - 21 - 23 - 25   |    |   |   |    |   |    |   |   |    |
| <b>Plating:</b><br><b>W:</b> Olive drab cadmium<br><b>F:</b> Nickel<br><b>Z:</b> Green zinc cobalt<br><b>L:</b> Black zinc nickel   |    |   |   |    |   |    |   |   |    |
| <b>Contact layout:</b> See page 8 to 11   |    |   |   |    |   |    |   |   |    |
| <b>Contact type:</b><br><b>P:</b> Pin. <b>A:</b> Connector supplied less pin contact or with specific contacts (connector marking: A + orientation).<br><b>S:</b> Socket. <b>B:</b> Connector supplied less socket contact or with specific contacts (connector marking: B + orientation).  |    |   |   |    |   |    |   |   |    |
| <b>Orientation:</b> N, A, B, C, D & E (see page 58)   |    |   |   |    |   |    |   |   |    |
| <b>Spécification:</b><br><b>046:</b> Tinned straight spills<br><b>251:</b> Connector provided with power contacts (layouts with contact #8)<br><b>022:</b> Fuel tank<br><b>L:</b> For P or S contact type only, connectors delivered without contacts, connectors marking P or S plus orientation.  |    |   |   |    |   |    |   |   |    |

## MIL-DTL 38999 part numbers\*

| Basic Series   | D38999 | 20 | W | B | 35 | P | N | L |
|--|--------|----|---|---|----|---|---|---|
| <b>Shell style:</b><br><b>20:</b> Square flange receptacle<br><b>24:</b> Jam nut receptacle<br><b>26:</b> Plug with RFI shielding.   |        |    |   |   |    |   |   |   |
| <b>Plating:</b><br><b>W:</b> Olive drab cadmium<br><b>F:</b> Nickel  |        |    |   |   |    |   |   |   |
| <b>Shell size:</b> A - B - C - D - E - F - G - H - J   |        |    |   |   |    |   |   |   |
| <b>Contact layout:</b> See page 11 for layout according to MIL-DTL-38999   |        |    |   |   |    |   |   |   |
| <b>Contact type:</b><br><b>P:</b> Pin. <b>A:</b> Connector supplied less pin contact or with specific contacts (connector marking: A + orientation).<br><b>S:</b> Socket. <b>B:</b> Connector supplied less socket contact or with specific contacts (connector marking: B + orientation). |        |    |   |   |    |   |   |   |
| <b>Orientation:</b> N, A, B, C, D & E (see page 58)  |        |    |   |   |    |   |   |   |
| <b>L:</b> For P or S contact type only, connector delivered without contacts, connector marking P or S (without L)   |        |    |   |   |    |   |   |   |

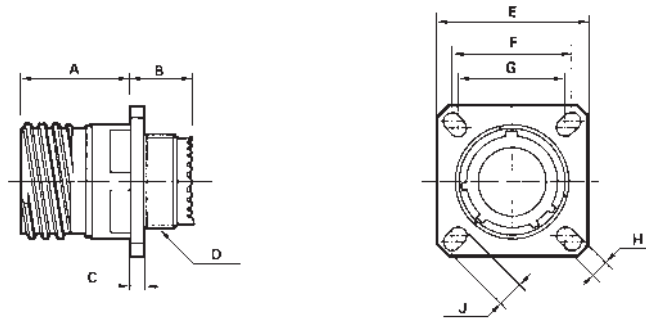
\* **Note:** To place an order of MIL connectors delivered without MIL removable crimp contacts and keep P or S plus orientation marking, it must be specify clearly on the order (by adding a suffix L at the end of the P/N or specified in comment).

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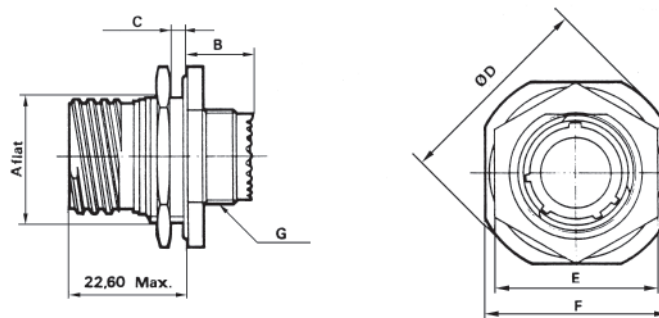
## Dimensions

### Receptacle type 0



| Shell size | A Max. | B Max. | C Max. | D thread   | E $\pm 0,30$ | F     | G     | H $\pm 0,20$ | J $\pm 0,20$ |
|------------|--------|--------|--------|------------|--------------|-------|-------|--------------|--------------|
| 09 (A)     | 20.90  | 10.60  | 2.50   | M12 x 1-6g | 23.80        | 18.26 | 15.09 | 3.25         | 5.49         |
| 11 (B)     | 20.90  | 10.60  | 2.50   | M15 x 1-6g | 26.20        | 20.62 | 18.26 | 3.25         | 4.93         |
| 13 (C)     | 20.90  | 10.60  | 2.50   | M18 x 1-6g | 28.60        | 23.01 | 20.62 | 3.25         | 4.93         |
| 15 (D)     | 20.90  | 10.60  | 2.50   | M22 x 1-6g | 31.00        | 24.61 | 23.01 | 3.25         | 4.93         |
| 17 (E)     | 20.90  | 10.60  | 2.50   | M25 x 1-6g | 33.30        | 26.97 | 24.61 | 3.25         | 4.93         |
| 19 (F)     | 20.90  | 10.60  | 2.50   | M28 x 1-6g | 36.50        | 29.36 | 26.97 | 3.25         | 4.93         |
| 21 (G)     | 20.10  | 11.40  | 3.20   | M31 x 1-6g | 39.70        | 31.75 | 29.36 | 3.25         | 4.93         |
| 23 (H)     | 20.10  | 11.40  | 3.20   | M34 x 1-6g | 42.90        | 34.93 | 31.75 | 3.91         | 6.15         |
| 25 (J)     | 20.10  | 11.40  | 3.20   | M37 x 1-6g | 46.00        | 38.10 | 34.93 | 3.91         | 6.15         |

### Receptacle type 7



| Shell size | A + 0,10 - 0,15 | B Max. | C Max. | D Max. | E Max. | F $\pm 0,40$ | G thread   |
|------------|-----------------|--------|--------|--------|--------|--------------|------------|
| 09 (A)     | 16.53           | 9.90   | 3.20   | 30.50  | 23.00  | 27.00        | M12 x 1-6g |
| 11 (B)     | 19.07           | 9.90   | 3.20   | 35.20  | 26.00  | 31.80        | M15 x 1-6g |
| 13 (C)     | 23.82           | 9.90   | 3.20   | 38.40  | 31.00  | 34.90        | M18 x 1-6g |
| 15 (D)     | 26.97           | 9.90   | 3.20   | 41.60  | 34.00  | 38.10        | M22 x 1-6g |
| 17 (E)     | 30.15           | 9.90   | 3.20   | 44.80  | 37.00  | 41.30        | M25 x 1-6g |
| 19 (F)     | 33.32           | 9.90   | 3.50   | 49.50  | 41.00  | 46.00        | M28 x 1-6g |
| 21 (G)     | 36.50           | 9.90   | 3.50   | 52.70  | 46.00  | 49.20        | M31 x 1-6g |
| 23 (H)     | 39.67           | 9.90   | 3.50   | 55.90  | 47.00  | 52.40        | M34 x 1-6g |
| 25 (J)     | 42.85           | 9.90   | 3.50   | 59.00  | 52.00  | 55.60        | M37 x 1-6g |

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## In line receptacle type 1



| Shell size | D thread   | Ø F   |
|------------|------------|-------|
| 09 (A)     | M12 x 1-6g | 15.90 |
| 11 (B)     | M15 x 1-6g | 19.05 |
| 13 (C)     | M18 x 1-6g | 22.25 |
| 15 (D)     | M22 x 1-6g | 25.40 |
| 17 (E)     | M25 x 1-6g | 30.15 |
| 19 (F)     | M28 x 1-6g | 31.75 |
| 21 (G)     | M31 x 1-6g | 34.75 |
| 23 (H)     | M34 x 1-6g | 37.10 |
| 25 (J)     | M37 x 1-6g | 41.30 |

## Plug type 5

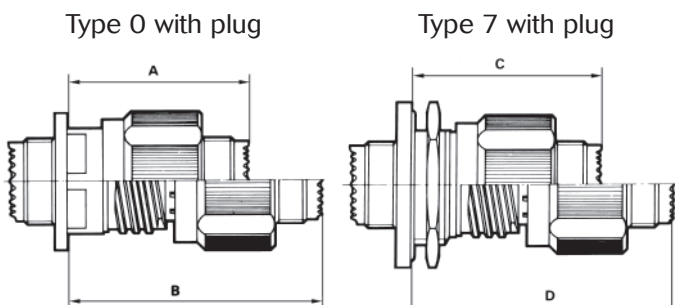


| Shell size | A Max. | B thread   | C Max. |
|------------|--------|------------|--------|
| 09 (A)     | 31.00  | M12 x 1-6g | 21.80  |
| 11 (B)     | 31.00  | M15 x 1-6g | 25.00  |
| 13 (C)     | 31.00  | M18 x 1-6g | 29.40  |
| 15 (D)     | 31.00  | M22 x 1-6g | 32.50  |
| 17 (E)     | 31.00  | M25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

## Maximum coupling torque on panel for jam nut receptacle (type 7)

| Shell                 | 09 (A) | 11 (B) | 13 (C) | 15 (D) | 17 (E) | 19 (F) | 21 (G) | 23 (H) | 25 (J) |
|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Coupling torque (N.m) | 6      | 8      | 10     | 13     | 20     | 23     | 25     | 26     | 28     |

## Mated connectors dimensions



| Shell size | A Max. | B Max. | C Max. | D Max. |
|------------|--------|--------|--------|--------|
| 09 (A)     | 37.00  | 52.30  | 38.30  | 53.60  |
| 11 (B)     | 37.00  | 52.30  | 38.30  | 53.60  |
| 13 (C)     | 37.00  | 52.30  | 38.50  | 53.80  |
| 15 (D)     | 37.00  | 52.30  | 38.50  | 53.80  |
| 17 (E)     | 37.00  | 52.30  | 38.50  | 53.80  |
| 19 (F)     | 37.00  | 52.30  | 38.50  | 53.80  |
| 21 (G)     | 36.00  | 51.30  | 38.50  | 53.80  |
| 23 (H)     | 36.00  | 51.30  | 38.50  | 53.80  |
| 25 (J)     | 36.00  | 51.30  | 38.50  | 53.80  |

Dimensions in millimeters

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## Receptacle with straight spill contacts



|             |             | Shell size   |              |            | 09<br>(A) | 11<br>(B) | 13<br>(C) | 15<br>(D) | 17<br>(E) | 19<br>(F) | 21<br>(G) | 23<br>(H) | 25<br>(J) |
|-------------|-------------|--------------|--------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|             |             | Contact size | Contact type | Spill type |           |           |           |           |           |           |           |           |           |
| <b>A</b>    |             | # 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      |           |           |           |           |
| <b>L2</b>   | <b>Min.</b> | # 22D        | M            | L & C      | 10.52     |           |           |           |           | 10.34     |           |           |           |
|             | <b>Max.</b> | # 22D        | M            | L & C      | 11.46     |           |           |           |           | 11.28     |           |           |           |
|             | <b>Min.</b> | # 22D        | F            | L & C      | 10.19     |           |           |           |           | 10.01     |           |           |           |
|             | <b>Max.</b> | # 22D        | F            | L & C      | 11.46     |           |           |           |           | 11.28     |           |           |           |
|             | <b>Min.</b> | # 22D        | M            | S          | 10.19     |           |           |           |           | 10.01     |           |           |           |
|             | <b>Max.</b> | # 22D        | M            | S          | 11.46     |           |           |           |           | 11.28     |           |           |           |
|             | <b>Min.</b> | # 22D        | F            | S          | 10.69     |           |           |           |           | 10.51     |           |           |           |
|             | <b>Max.</b> | # 22D        | F            | S          | 11.63     |           |           |           |           | 11.45     |           |           |           |
|             | <b>Min.</b> | # 20         | M            | C          | 10.36     |           |           |           |           | 10.18     |           |           |           |
|             | <b>Max.</b> | # 20         | M            | C          | 11.63     |           |           |           |           | 11.45     |           |           |           |
|             | <b>Min.</b> | # 20         | F            | C          | 10.69     |           |           |           |           | 10.51     |           |           |           |
|             | <b>Max.</b> | # 20         | F            | C          | 11.63     |           |           |           |           | 11.45     |           |           |           |
|             | <b>Min.</b> | # 16         | M            | C          | 10.69     |           |           |           |           | 10.51     |           |           |           |
|             | <b>Max.</b> | # 16         | M            | C          | 11.63     |           |           |           |           | 11.45     |           |           |           |
| <b>L3</b>   |             | # 22D        | M & F        | L          |           |           |           |           | 8.50      |           |           |           |           |
|             |             | # 22D        | M & F        | C          |           |           |           |           | 4.00      |           |           |           |           |
|             |             | # 22D        | M & F        | S          |           |           |           |           | 5.10      |           |           |           |           |
|             |             | # 20         | M & F        | C          |           |           |           |           | 5.10      |           |           |           |           |
|             |             | # 16         | M & F        | C          |           |           |           |           | 5.10      |           |           |           |           |
| <b>L4</b>   | <b>Min.</b> | # 22D        | M            | L & C      |           |           |           |           | 9.48      |           |           |           |           |
|             | <b>Max.</b> | # 22D        | M            | L & C      |           |           | 10.58     |           |           |           |           | 10.69     |           |
|             | <b>Min.</b> | # 22D        | F            | L & C      |           |           | 9.15      |           |           |           |           | 9.26      |           |
|             | <b>Max.</b> | # 22D        | F            | L & C      |           |           | 10.58     |           |           |           |           | 10.69     |           |
|             | <b>Min.</b> | # 22D        | M            | S          |           |           | 9.65      |           |           |           |           | 9.76      |           |
|             | <b>Max.</b> | # 22D        | M            | S          |           |           | 10.75     |           |           |           |           | 10.86     |           |
|             | <b>Min.</b> | # 22D        | F            | S          |           |           | 9.15      |           |           |           |           | 9.26      |           |
|             | <b>Max.</b> | # 22D        | F            | S          |           |           | 10.75     |           |           |           |           | 10.86     |           |
|             | <b>Min.</b> | # 20         | M            | C          |           |           | 9.65      |           |           |           |           | 9.76      |           |
|             | <b>Max.</b> | # 20         | M            | C          |           |           | 10.75     |           |           |           |           | 10.86     |           |
|             | <b>Min.</b> | # 20         | F            | C          |           |           | 9.65      |           |           |           |           | 9.76      |           |
|             | <b>Max.</b> | # 20         | F            | C          |           |           | 10.75     |           |           |           |           | 10.86     |           |
|             | <b>Min.</b> | # 16         | M            | C          |           |           | 9.65      |           |           |           |           | 9.76      |           |
|             | <b>Max.</b> | # 16         | M            | C          |           |           | 10.75     |           |           |           |           | 10.86     |           |
| <b>Min.</b> | # 16        | F            | C            |            |           | 9.65      |           |           |           |           | 9.76      |           |           |
| <b>Max.</b> | # 16        | F            | C            |            |           | 10.75     |           |           |           |           | 10.86     |           |           |

M : Male contact      F : Female contact      L : Long spill      C : Short spill      S : Specific spill      Dimensions in millimeters

# 8D - D38999 Aluminium Series



## Souriau backshells part numbers

| Basic series                        |     |     |     |     |     |     |     |     | 8D | 102 | B | 02 |
|-------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|---|----|
| <b>Shell style:</b>                 |     |     |     |     |     |     |     |     |    |     |   |    |
| 09                                  | 11  | 13  | 15  | 17  | 19  | 21  | 23  | 25  |    |     |   |    |
| 101                                 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 |    |     |   |    |
| <b>Plating:</b>                     |     |     |     |     |     |     |     |     |    |     |   |    |
| B: Olive drab cadmium               |     |     |     |     |     |     |     |     |    |     |   |    |
| F: Nickel                           |     |     |     |     |     |     |     |     |    |     |   |    |
| <b>Backshell type:</b>              |     |     |     |     |     |     |     |     |    |     |   |    |
| 02: Straight cable clamp            |     |     |     |     |     |     |     |     |    |     |   |    |
| 03: 90° cable clamp                 |     |     |     |     |     |     |     |     |    |     |   |    |
| 13: Backshell for heat shrink boots |     |     |     |     |     |     |     |     |    |     |   |    |

## Cross reference table

| Backshell type                                   | AS85049 Standard | SOURIAU part numbers |
|--|------------------|----------------------|
| Straight cable clamp                             | M85049/38-**-x   | 8D101x02             |
| 90° cable clamp                                  | M85049/39-**-x   | 8D101x03             |
| Backshell for heat shrink boots                  | M85049/69-**-x   | 8D101x13             |
| Backshell for screen termination and cable clamp | M85049/19**x**   | N/A                  |

x: Plating    \*\*: Shell size (See page 19 to 21)

# 8D - D38999 Aluminium Series



## Standard backshells part numbers

### Straight cable clamp (M85049/38)

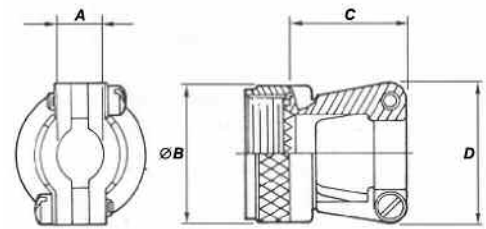
**Basic series** M85049 38 - 11 W

**Backshell type:**  
38: Straight cable clamp

**Nut type:**  
-: Without self-locking  
S: With self-locking

**Shell size:**  
09 - 11 - 13 - 15 - 17 - 19 - 21 - 23 - 25

**Plating (See table 3):**  
A and W for 38 type  
W and N for 38S type



See table 1 for dimensions

### 90° cable clamp (M85049/39)

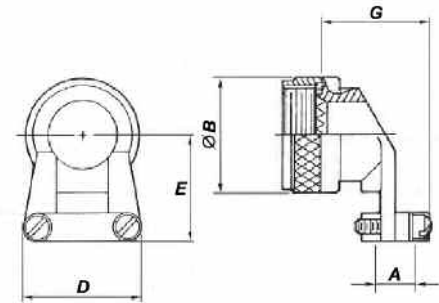
**Basic series** M85049 39 - 11 W

**Backshell type:**  
39: 90° cable clamp

**Nut type:**  
-: Without self-locking  
S: With self-locking

**Shell size:**  
09 - 11 - 13 - 15 - 17 - 19 - 21 - 23 - 25

**Plating (See table 3):**  
A and W for 39 type  
W and N for 39S type



See table 1 for dimensions

Table 1

| Shell size | A     |       | ØB<br>Max. | C<br>Max. | D<br>Max. | E     | G     |
|------------|-------|-------|------------|-----------|-----------|-------|-------|
|            | Min   | Max.  |            |           |           |       |       |
| 09         | 2.50  | 5.90  | 21.80      | 23.10     | 21.60     | 25.40 | 25.70 |
| 11         | 3.90  |       | 25.00      |           | 22.90     |       |       |
| 13         | 4.80  | 8.30  | 29.40      | 25.70     | 27.90     | 30.70 |       |
| 15         | 6.60  | 11.60 | 32.50      | 26.90     | 29.20     | 31.80 | 32.00 |
| 17         | 7.20  | 15.60 | 35.70      | 29.50     | 33.00     | 33.00 | 35.80 |
| 19         | 8.30  | 16.10 | 38.50      | 35.80     | 38.10     | 34.30 | 38.40 |
| 21         | 8.70  | 17.70 | 41.70      | 38.40     | 40.60     | 40.60 | 42.20 |
| 23         | 9.70  | 20.90 | 44.90      | 42.20     | 43.20     | 44.50 | 44.70 |
| 25         | 10.60 | 21.70 | 48.00      | 44.70     | 45.70     | 47.00 | 48.50 |

Dimensions in millimeters

# 8D - D38999 Aluminium Series



## Backshell for heat shrink boots (M85049/69)

**Basic series**      **M85049**    **69**    **11**    **A**    **D**

**Backshell type:**

**69:** Straight backshell for heat shrink boot

**Shell size:**

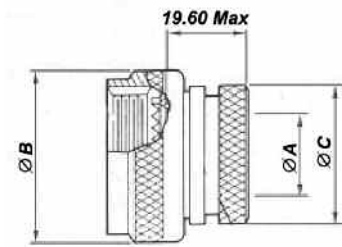
09 - 11 - 13 - 15 - 17 - 19 - 21 - 23 - 25

**Plating:**

**A:** see table 3

**Option:**

**Nothing:** Without drain hole  
**D:** With drain hole



See table 2 for dimensions

**Table 2**

| Shell size | ØB Max. | ØA Max. | ØC Max. |
|------------|---------|---------|---------|
| 09         | 19.10   | 6.35    | 13.55   |
| 11         | 21.60   | 9.50    | 15.40   |
| 13         | 25.40   | 12.70   | 19.70   |
| 15         | 29.20   | 15.90   | 21.30   |
| 17         | 31.80   | 19.00   | 24.50   |
| 19         | 35.60   | 20.60   | 26.50   |
| 21         | 39.40   | 23.80   | 30.90   |
| 23         | 41.90   | 27.00   | 34.40   |
| 25         | 47.00   | 30.20   | 36.65   |

Dimensions in millimeters

**Table 3**

| Plating     | Description                    | Salt spray |
|-------------|--------------------------------|------------|
| <b>A</b>    | Black anodise                  | 500 Hrs    |
| <b>N, F</b> | Nickel                         | 48 Hrs     |
| <b>W, B</b> | Olive drab cadmium over nickel | 500 Hrs    |



# 8D - D38999 Aluminium Series



## Backshell for screen termination and cable clamp (M85049/19)

### Basic Series

M85049/ 19 11 W 03

#### Shell style:

19: Backshell for screen termination and cable clamp

#### Shell size:

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

#### Plating:

W: Olive drab cadmium

N: Nickel

#### Clamp size indicator:

See table 4 and 5

### Table 4

| Shell size | A Max. | C Max. | Clamp indicator base on shell size |
|------------|--------|--------|------------------------------------|
| 09         |        | 19.10  | 01 - 02                            |
| 11         |        | 21.60  | 01 - 02 - 03                       |
| 13         |        | 25.40  | 02 - 03 - 04                       |
| 15         |        | 27.90  | 02 - 03 - 04 - 05                  |
| 17         | 38.10  | 31.80  | 02 - 03 - 04 - 05 - 06             |
| 19         |        | 35.60  | 03 - 04 - 05 - 06 - 07             |
| 21         |        | 38.10  | 03 - 04 - 05 - 06 - 07 - 08        |
| 23         |        | 41.90  | 03 - 04 - 05 - 06 - 07 - 09        |
| 25         |        | 44.50  | 04 - 05 - 06 - 07 - 08 - 10        |

### Table 5

| Clamp size indicator | B     |       | E     |
|----------------------|-------|-------|-------|
|                      | Min.  | Max.  |       |
| 01                   | 1.60  | 3.20  | 20.30 |
| 02                   | 3.20  | 6.35  | 25.40 |
| 03                   | 6.35  | 9.50  | 27.90 |
| 04                   | 7.90  | 12.70 | 30.50 |
| 05                   | 11.10 | 15.90 | 31.80 |
| 06                   | 14.30 | 19.00 | 35.60 |
| 07                   | 17.45 | 22.20 | 38.10 |
| 08                   | 20.60 | 24.40 | 41.90 |
| 09                   | 23.80 | 28.60 | 44.50 |
| 10                   | 27.00 | 31.75 | 48.30 |



See table 4 & 5 for dimensions

# 8D - D38999 Aluminium Series



## Caps

### Caps for receptacle (D38999/33 - S2453)

With stainless steel rope and eyelet



| Shell size | Part numbers    |                     |
|------------|-----------------|---------------------|
|            | Plating **      | Olive green plating |
| 9          | S2453-09W-**-** | D38999/33 W 09 R    |
| 11         | S2453-11W-**-** | D38999/33 W 11 R    |
| 13         | S2453-13W-**-** | D38999/33 W 13 R    |
| 15         | S2453-15W-**-** | D38999/33 W 15 R    |
| 17         | S2453-17W-**-** | D38999/33 W 17 R    |
| 19         | S2453-19W-**-** | D38999/33 W 19 R    |
| 21         | S2453-21W-**-** | D38999/33 W 21 R    |
| 23         | S2453-23W-**-** | D38999/33 W 23 R    |
| 25         | S2453-25W-**-** | D38999/33 W 25 R    |

With stainless steel rope and ring



| Shell size | Part numbers   |                     |
|------------|----------------|---------------------|
|            | Plating **     | Olive green plating |
| 9          | S2453-09W-**-1 | D38999/33 W 09 N    |
| 11         | S2453-11W-**-1 | D38999/33 W 11 N    |
| 13         | S2453-13W-**-1 | D38999/33 W 13 N    |
| 15         | S2453-15W-**-1 | D38999/33 W 15 N    |
| 17         | S2453-17W-**-1 | D38999/33 W 17 N    |
| 19         | S2453-19W-**-1 | D38999/33 W 19 N    |
| 21         | S2453-21W-**-1 | D38999/33 W 21 N    |
| 23         | S2453-23W-**-1 | D38999/33 W 23 N    |
| 25         | S2453-25W-**-1 | D38999/33 W 25 N    |

### Caps for plug (D38999/32 - S2454)

With stainless steel rope and eyelet



| Shell size | Part numbers   |                     |
|------------|----------------|---------------------|
|            | Plating **     | Olive green plating |
| 9          | S2454-09F-**-S | D38999/32 W 09 R    |
| 11         | S2454-11F-**-S | D38999/32 W 11 R    |
| 13         | S2454-13F-**-S | D38999/32 W 13 R    |
| 15         | S2454-15F-**-S | D38999/32 W 15 R    |
| 17         | S2454-17F-**-S | D38999/32 W 17 R    |
| 19         | S2454-19F-**-S | D38999/32 W 19 R    |
| 21         | S2454-21F-**-S | D38999/32 W 21 R    |
| 23         | S2454-23F-**-S | D38999/32 W 23 R    |
| 25         | S2454-25F-**-S | D38999/32 W 25 R    |

With stainless steel rope and ring



| Shell size | Part numbers   |                     |
|------------|----------------|---------------------|
|            | Plating **     | Olive green plating |
| 9          | S2454-09W-**-S | D38999/32 W 09 N    |
| 11         | S2454-11W-**-S | D38999/32 W 11 N    |
| 13         | S2454-13W-**-S | D38999/32 W 13 N    |
| 15         | S2454-15W-**-S | D38999/32 W 15 N    |
| 17         | S2454-17W-**-S | D38999/32 W 17 N    |
| 19         | S2454-19W-**-S | D38999/32 W 19 N    |
| 21         | S2454-21W-**-S | D38999/32 W 21 N    |
| 23         | S2454-23W-**-S | D38999/32 W 23 N    |
| 25         | S2454-25W-**-S | D38999/32 W 25 N    |

Plating - 34: Olive green cadmium - Plating - 12: Nickel. Note: caps available with nylon ropes. Consult us.

# 8D - D38999 Aluminium Series



## Connectors weight

|         | With contacts |        |                     |        |                     |        | Without contact |        |                     |        |                     |        |
|---------|---------------|--------|---------------------|--------|---------------------|--------|-----------------|--------|---------------------|--------|---------------------|--------|
|         | Plug (type 5) |        | Receptacle (type 0) |        | Receptacle (type 7) |        | Plug (type 5)   |        | Receptacle (type 0) |        | Receptacle (type 7) |        |
|         | Male          | Female | Male                | Female | Male                | Female | Male            | Female | Male                | Female | Male                | Female |
| 09 – 35 | 11.47         | 13.05  | 9.15                | 10.73  | 13.91               | 15.49  | 11.05           | 11.55  | 8.73                | 9.23   | 13.49               | 13.99  |
| 09 – 98 | 11.47         | 12.77  | 9.15                | 10.45  | 13.91               | 15.21  | 11.05           | 11.57  | 8.73                | 9.25   | 13.49               | 14.01  |
| 11 – 01 | 14.98         | 17.92  | 12.01               | 14.95  | 18.17               | 21.11  | 14.32           | 16.32  | 11.35               | 13.35  | 17.51               | 19.51  |
| 11 – 02 | 14.61         | 17.15  | 11.64               | 14.18  | 17.80               | 20.34  | 13.99           | 15.59  | 11.02               | 12.62  | 17.18               | 18.78  |
| 11 – 04 | 14.80         | 17.86  | 11.83               | 14.89  | 17.99               | 21.05  | 14.24           | 16.26  | 11.27               | 13.29  | 17.43               | 19.45  |
| 11 – 05 | 14.83         | 18.04  | 11.86               | 15.07  | 19.48               | 21.23  | 14.13           | 16.04  | 11.16               | 13.07  | 17.32               | 19.23  |
| 11 – 22 | 14.47         | 16.89  | 11.50               | 13.92  | 17.66               | 20.08  | 14.19           | 15.89  | 11.22               | 12.92  | 17.38               | 19.08  |
| 11 – 35 | 14.73         | 18.20  | 11.76               | 15.23  | 17.68               | 21.39  | 13.82           | 14.95  | 10.85               | 11.98  | 17.01               | 18.14  |
| 11 – 80 | 18.30         | 21.90  | 15.30               | 18.90  | 21.50               | 28.39  | 13.80           | 14.90  | 10.80               | 11.90  | 17.00               | 18.10  |
| 11 – 98 | 14.70         | 17.46  | 11.73               | 14.49  | 17.89               | 20.65  | 13.86           | 15.06  | 10.89               | 12.09  | 17.05               | 18.25  |
| 11 – 99 | 14.87         | 18.09  | 11.90               | 15.12  | 18.06               | 21.28  | 13.89           | 15.29  | 10.92               | 12.32  | 17.08               | 18.48  |
| 13 – 04 | 21.04         | 24.82  | 15.71               | 19.49  | 24.14               | 27.92  | 19.80           | 21.70  | 14.47               | 16.37  | 22.90               | 24.80  |
| 13 – 08 | 21.42         | 26.60  | 16.09               | 21.27  | 24.52               | 29.70  | 20.30           | 23.40  | 14.97               | 18.07  | 23.40               | 26.50  |
| 13 – 26 | 21.79         | 27.44  | 16.46               | 22.11  | 24.89               | 30.54  | 20.05           | 22.74  | 14.72               | 17.41  | 23.15               | 25.84  |
| 13 – 35 | 21.22         | 26.99  | 15.89               | 21.66  | 24.32               | 30.09  | 19.68           | 21.49  | 14.35               | 16.16  | 22.78               | 24.59  |
| 13 – 98 | 21.08         | 25.70  | 15.75               | 20.37  | 24.18               | 28.80  | 19.68           | 21.70  | 14.35               | 16.37  | 22.78               | 24.80  |
| 15 – 05 | 26.04         | 31.38  | 19.54               | 24.88  | 29.62               | 34.96  | 24.49           | 27.48  | 17.99               | 20.98  | 28.07               | 31.06  |
| 15 – 15 | 26.84         | 34.00  | 20.34               | 27.50  | 30.42               | 37.58  | 24.57           | 27.62  | 18.07               | 21.12  | 28.15               | 31.20  |
| 15 – 18 | 27.05         | 35.93  | 20.55               | 29.43  | 30.63               | 39.51  | 24.53           | 28.73  | 18.03               | 22.23  | 28.11               | 32.31  |
| 15 – 19 | 26.58         | 34.31  | 20.08               | 27.81  | 30.16               | 37.89  | 23.92           | 26.71  | 17.42               | 20.21  | 27.50               | 30.29  |
| 15 – 35 | 26.68         | 35.92  | 20.18               | 29.42  | 30.26               | 39.50  | 24.09           | 26.67  | 17.59               | 20.17  | 27.67               | 30.25  |
| 15 – 97 | 26.51         | 33.56  | 20.01               | 27.06  | 30.09               | 37.14  | 24.15           | 27.24  | 17.65               | 20.74  | 27.73               | 30.82  |
| 17 – 02 | 32.96         | 46.30  | 31.26               | 44.60  | 42.06               | 55.40  | 25.80           | 29.80  | 24.10               | 28.10  | 34.90               | 38.90  |
| 17 – 06 | 29.90         | 39.50  | 28.21               | 37.81  | 39.00               | 48.60  | 25.94           | 29.90  | 24.25               | 28.21  | 35.04               | 39.00  |
| 17 – 08 | 28.89         | 37.62  | 27.20               | 35.93  | 37.99               | 46.72  | 26.41           | 31.38  | 24.72               | 29.69  | 35.51               | 40.48  |
| 17 – 26 | 29.47         | 40.26  | 27.78               | 38.57  | 38.57               | 49.36  | 25.83           | 29.86  | 24.14               | 28.17  | 34.93               | 38.96  |
| 17 – 35 | 29.71         | 43.26  | 28.02               | 41.57  | 38.81               | 52.36  | 25.86           | 29.51  | 24.17               | 27.82  | 34.96               | 38.61  |
| 17 – 75 | 35.31         | 46.60  | 33.62               | 44.91  | 44.41               | 55.70  | 26.31           | 32.60  | 24.62               | 30.91  | 35.41               | 41.70  |
| 17 – 99 | 29.52         | 40.08  | 27.83               | 38.39  | 38.62               | 49.18  | 25.96           | 30.12  | 24.27               | 28.43  | 35.06               | 39.22  |
| 19 – 11 | 37.77         | 51.36  | 31.07               | 44.66  | 44.62               | 58.21  | 34.36           | 42.78  | 27.66               | 46.43  | 30.86               | 49.63  |
| 19 – 32 | 36.98         | 50.38  | 30.28               | 43.68  | 43.83               | 57.23  | 32.50           | 37.58  | 25.80               | 41.23  | 29.00               | 44.43  |
| 19 – 35 | 37.29         | 53.74  | 30.59               | 47.04  | 44.14               | 44.09  | 32.67           | 37.24  | 25.97               | 40.89  | 29.17               | 44.09  |
| 21 – 11 | 45.51         | 65.35  | 39.31               | 59.15  | 53.19               | 73.03  | 38.25           | 47.75  | 32.05               | 51.93  | 35.55               | 55.43  |
| 21 – 16 | 42.61         | 57.89  | 36.41               | 51.69  | 50.29               | 65.57  | 37.65           | 45.41  | 31.45               | 49.59  | 34.95               | 53.09  |
| 21 – 35 | 42.89         | 63.55  | 36.69               | 57.35  | 50.57               | 71.23  | 37.36           | 43.80  | 31.16               | 47.98  | 34.66               | 51.48  |
| 21 – 39 | 44.27         | 64.60  | 38.07               | 58.40  | 51.95               | 72.28  | 38.47           | 48.24  | 32.27               | 52.42  | 35.77               | 55.92  |
| 21 – 41 | 42.81         | 60.18  | 36.61               | 64.36  | 50.49               | 67.86  | 37.07           | 43.78  | 30.87               | 47.96  | 34.37               | 51.46  |
| 21 – 48 | 49.59         | 49.93  | 43.39               | 43.73  | 55.27               | 57.61  | 36.48           | 43.38  | 30.28               | 37.18  | 44.16               | 51.06  |
| 21 – 75 | 54.48         | 71.38  | 48.28               | 65.18  | 62.16               | 79.06  | 36.48           | 43.38  | 30.28               | 37.18  | 44.16               | 51.06  |
| 23 – 21 | 50.49         | 73.74  | 44.19               | 67.44  | 59.23               | 82.48  | 43.98           | 57.36  | 37.68               | 62.20  | 41.58               | 66.10  |
| 23 – 35 | 48.85         | 75.00  | 42.55               | 68.70  | 57.59               | 83.74  | 41.85           | 50.00  | 35.55               | 54.84  | 39.45               | 58.74  |
| 23 – 53 | 48.91         | 71.10  | 42.61               | 64.80  | 57.65               | 79.84  | 41.49           | 49.90  | 35.19               | 54.74  | 39.09               | 58.64  |
| 23 – 55 | 49.66         | 72.73  | 43.36               | 66.43  | 58.40               | 81.47  | 41.96           | 50.73  | 35.66               | 55.57  | 39.56               | 59.47  |
| 25 – 07 | 61.89         | 90.70  | 55.73               | 85.10  | 71.15               | 99.10  | 46.41           | 56.20  | 40.25               | 61.26  | 44.45               | 65.46  |
| 25 – 11 | 54.48         | 71.38  | 48.28               | 65.18  | 62.16               | 79.06  | 36.48           | 43.38  | 42.94               | 55.94  | 58.36               | 71.36  |
| 25 – 19 | 59.76         | 91.77  | 53.60               | 85.61  | 69.02               | 101.03 | 47.22           | 61.37  | 41.06               | 66.43  | 45.26               | 70.63  |
| 25 – 24 | 59.26         | 90.62  | 53.10               | 84.46  | 68.52               | 99.88  | 47.62           | 62.06  | 41.46               | 67.12  | 45.66               | 71.32  |
| 25 – 29 | 57.58         | 86.55  | 51.42               | 80.39  | 66.84               | 95.81  | 48.59           | 63.93  | 42.43               | 68.99  | 46.63               | 73.19  |
| 25 – 35 | 55.37         | 88.20  | 49.21               | 82.04  | 64.63               | 97.46  | 46.41           | 56.20  | 40.25               | 61.26  | 44.45               | 65.46  |
| 25 – 37 | 57.57         | 89.86  | 51.41               | 59.36  | 66.83               | 90.06  | 46.10           | 61.00  | 39.94               | 60.50  | 55.36               | 61.20  |
| 25 – 44 | 52.80         | 67.61  | 46.53               | 65.39  | 62.05               | 83.39  | 44.40           | 59.22  | 38.14               | 57.00  | 53.66               | 75.00  |
| 25 – 43 | 57.62         | 88.30  | 51.46               | 82.14  | 66.88               | 97.56  | 48.20           | 63.50  | 42.04               | 68.56  | 46.24               | 72.76  |
| 25 – 46 | 59.92         | 83.76  | 53.76               | 77.60  | 69.18               | 93.02  | 45.28           | 55.44  | 39.12               | 60.50  | 43.32               | 64.70  |
| 25 – 61 | 54.67         | 81.42  | 48.51               | 75.26  | 63.93               | 90.68  | 46.13           | 57.02  | 39.97               | 62.08  | 44.17               | 66.28  |
| 25 – 08 | 81.00         | 112.83 | 74.84               | 106.67 | 90.26               | 122.09 | 45.00           | 56.83  | 38.84               | 61.69  | 43.04               | 66.09  |
| 25 – 20 | 66.02         | 96.24  | 59.86               | 90.08  | 75.28               | 105.50 | 44.45           | 54.70  | 38.29               | 59.76  | 42.49               | 63.96  |
| 25 – 04 | 58.42         | 88.27  | 52.26               | 82.11  | 67.68               | 97.53  | 49.22           | 62.83  | 43.06               | 67.89  | 47.26               | 72.09  |

Weight in gram