



## Description

### IP68/IP69K - Plastic connector

- UTS series is a range of industrial plastic circular connectors offering **IP68/IP69K water protection**.
- 4 shell sizes - up to 32 contact positions - are available with different contact styles in size 16 & size 20:
  - Machined contacts
  - Stamped & formed contacts
  - Coax contacts
  - Fibre optic contacts
- Other typical UTS features are:
  - Rapid & secure locking system
  - Extreme environmental sealing performances
  - Easy visual identification
  - Rapid wiring, cabling & installation
  - Suitable for a wide range of industrial applications

**UTS : Your first choice in waterproof connectors !**



## Technical characteristics

### Mechanical

- Durability: 250 matings & unmatings
- Vibration resistance: Sinusoidal vibrations per CEI 60512-4 - from 10 to 2000 Hz  
5 cycles 30 min. from -40°C to 105°C  
per MIL-STD 1344 method 1003
- Thermal shock:

### Electrical

- Current per contact max.:  
Size 16: 13A  
Size 20: 7.5A - machined contact  
5A - stamped & formed contact
- Insulation resistance:  $\geq 5000 \text{ M}\Omega$
- Test potential: 2000 VAC - #16 contact  
1500 VAC - #20 contact
- Working voltage: up to 400 V class III, PD 2 as per VDE  
up to 500 V as per UL1977  
see page 7 for more details

### Environmental

- Operating temperature: -40°C to + 105°C
- Flammability rating: UL94-V0
- Salt spray: 500 hours
- Sealing (mated):  
Dynamic IP68 - 10 m under water for 1 week per IEC60529  
Dynamic IP69K per DIN40050
- UV resistant:  
No mechanical degradation or important variation of color  
after 5 years of exposure in natural environment (equivalence  
exposure to sun and moisture as per ISO4892)

### Material

- Connectors + Backshell: Thermoplastic

### Contact accommodation

- UTS connectors accept TRIM TRIO® size 16 or size 20 (depending on arrangement) removable snap-lock contacts
- Contacts to be ordered separately (except PCB versions) - see from page 25 to 54

In accordance with UL requirements (UL ECBT2.E169916 and CSA ECBT8.E169916)



## Ordering information

| Type                                           | UTS | 6 | JC | 12 | 10 | S |
|------------------------------------------------|-----|---|----|----|----|---|
|                                                | UTS | 7 | -  | 12 | 10 | P |
|                                                | UTS | 1 | JC | 12 | 10 | S |
| <b>Connector type</b>                          |     |   |    |    |    |   |
| 0 Square flange receptacle                     |     |   |    |    |    |   |
| 6 Cable plug                                   |     |   |    |    |    |   |
| 7 Jam nut receptacle                           |     |   |    |    |    |   |
| 1 In-line receptacle                           |     |   |    |    |    |   |
| <b>Rear of the connector</b>                   |     |   |    |    |    |   |
| JC Backshell (only for plug & In-line version) |     |   |    |    |    |   |
| <b>Shell size</b> 10 - 12 - 14 - 18            |     |   |    |    |    |   |
| <b>Number of contacts</b> - see next page      |     |   |    |    |    |   |
| <b>Contact Gender</b>                          |     |   |    |    |    |   |
| P: Pin contacts / S: Socket contacts           |     |   |    |    |    |   |

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## UTS contact arrangements

| Size 10                                                                           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| <b>2W2</b>                                                                        | <b>3</b><br>(2+PE)                                                                | <b>3W3</b>                                                                        | <b>4</b> ♦                                                                        | <b>6</b>                                                                          |
|  |  |  |  |  |
| Contacts :<br>2 Ø2.4 (#12)<br>2 Ø1.0 (#20)                                        | Contacts* :<br>3 Ø 1.6 (#16)                                                      | Contacts :<br>3 Ø 1.6 (#16 )<br>3 Ø 1.0 (#20 )                                    | Contacts :<br>4 Ø 1.6 (#16 )                                                      | Contacts :<br>6 Ø 1 (#20)                                                         |

| Size 12                                                                             |                                                                                     |                                                                                     |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>4</b><br>(3+PE)                                                                  | <b>8</b> ♦                                                                          | <b>10</b>                                                                           |
|  |  |  |
| Contacts* :<br>4 Ø 1.6 (#16)                                                        | Contacts :<br>8 Ø 1.6 (#16)                                                         | Contacts :<br>10 Ø 1 (#20)                                                          |

| Size 14                                                                             |                                                                                     |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>7</b><br>(6+PE)                                                                  | <b>12</b> ♦                                                                         | <b>19</b>                                                                             |
|  |  |  |
| Contacts* :<br>7 Ø 1.6 (#16 )                                                       | Contacts :<br>12 Ø 1.6 (#16 )                                                       | Contacts :<br>19 Ø 1 (#20)                                                            |

| Size 18**                                                                           |                                                                                     |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>23</b> ♦                                                                         | <b>32</b>                                                                           |
|  |  |
| Contacts :<br>23 Ø 1.6 (#16)                                                        | Contacts :<br>32 Ø 1 (#20)                                                          |

\* Arrangements with advanced grounding cavity

\*\* For In-line version shell size 18, please consult us

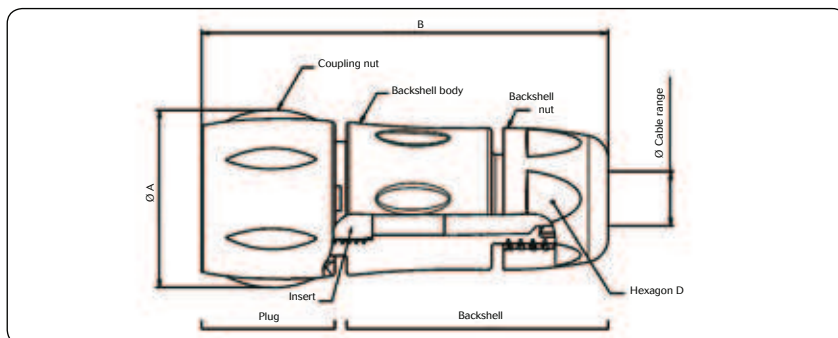
All arrangements are available in plug and jam nut versions.

Arrangements marked with ♦ are available in square flange version as well.

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## Cable plug with backshell for pin & socket contacts



| Shell size | Part numbers     |                  | Ø A   | B    | Ø Cable range<br>Standard seal | Ø Cable range<br>Reducing seal | Hexagon D |
|------------|------------------|------------------|-------|------|--------------------------------|--------------------------------|-----------|
|            | Male contact     | Female contact   |       |      |                                |                                |           |
| 10         | UTS6JC10 - - - P | UTS6JC10 - - - S | 26.7  | 63.2 | 2.5 / 8.0                      | 1.5 / 5.0                      | 18.5      |
| 12         | UTS6JC12 - - P   | UTS6JC12 - - S   | 30.15 | 66.7 | 5.0 / 12.0                     | 3.0 / 9.0                      | 24.0      |
| 14         | UTS6JC14 - - P   | UTS6JC14 - - S   | 35.1  | 71.5 | 7.0 / 14.0                     | 5.0 / 12.0                     | 26.0      |
| 18         | UTS6JC18 - - P   | UTS6JC18 - - S   | 42.0  | 81.3 | 9.0 / 18.0                     | 7.0 / 16.0                     | 33.0      |

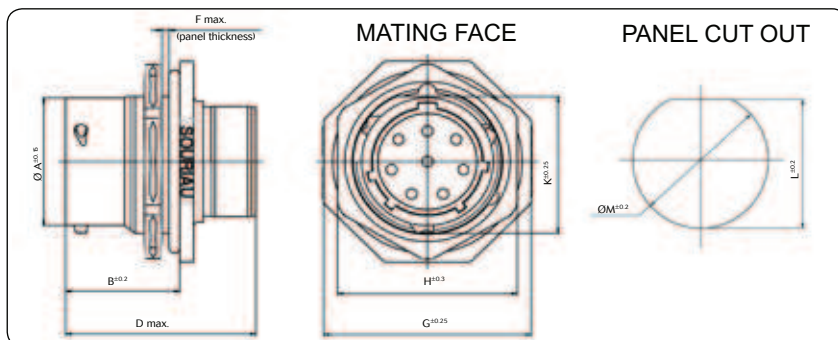
Coloured ring supplied as optional extra (see page 72).

Each plug has 2 seals to cover the specified cable range (see table).

The standard seal is preassembled. The second seal is supplied as loose piece together with a plug.



## Jam nut receptacle for pin & socket contacts



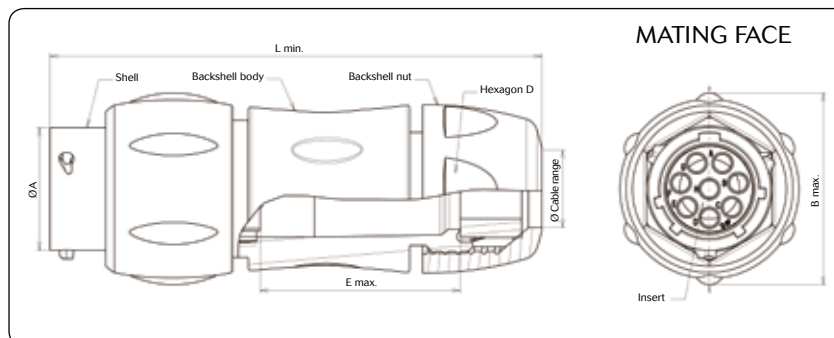
| Shell size | Part numbers   |                | Ø A  | B    | D max | F max | G    | H    | L    | Ø M  | Tightening torque |
|------------|----------------|----------------|------|------|-------|-------|------|------|------|------|-------------------|
|            | Male contact   | Female contact |      |      |       |       |      |      |      |      |                   |
| 10         | UTS710 - - - P | UTS710 - - - S | 14.9 | 19.3 | 33.9  | 3.2   | 27.0 | 22.2 | 16.5 | 17.7 | 3 N.m             |
| 12         | UTS712 - - P   | UTS712 - - S   | 19.0 | 19.3 | 33.9  | 3.2   | 31.8 | 27.0 | 21.2 | 22.5 | 4 N.m             |
| 14         | UTS714 - - P   | UTS714 - - S   | 22.2 | 19.3 | 33.9  | 3.2   | 34.9 | 30.2 | 24.3 | 25.7 | 5 N.m             |
| 18         | UTS718 - - P   | UTS718 - - S   | 28.5 | 19.3 | 33.9  | 3.2   | 41.3 | 36.6 | 30.6 | 32.0 | 5 N.m             |

Coloured ring supplied as optional extra (see page 72).

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## In-line receptacle for pin & socket contacts

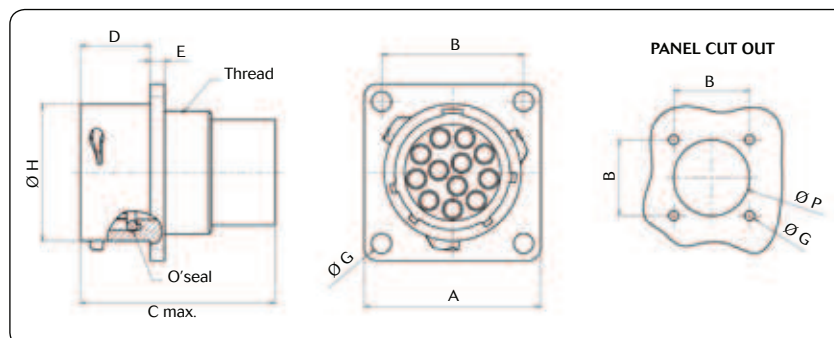


| Shell size | Part numbers   |                | Ø A  | L min. | B max | Ø Cable range<br>Standard seal | Ø Cable range<br>Reducing seal | Hexagon D | E max |        |
|------------|----------------|----------------|------|--------|-------|--------------------------------|--------------------------------|-----------|-------|--------|
|            | Male contact   | Female contact |      |        |       |                                |                                |           | Male  | Female |
| 10         | UTS1JC10 --- P | UTS1JC10 --- S | 14.9 | 70.0   | 26.7  | 2.5/8.0                        | 1.5/5.0                        | 18.5      | 31.0  | 38.0   |
| 12         | UTS1JC12 --- P | UTS1JC12 --- S | 19.0 | 74.0   | 30.1  | 5.0/12.0                       | 3.0/9.0                        | 24.0      | 34.0  | 41.5   |
| 14         | UTS1JC14 --- P | UTS1JC14 --- S | 22.2 | 78.5   | 35.1  | 7.0/14.0                       | 5.0/12.0                       | 26.0      | 38.0  | 45.5   |
| 18*        | UTS1JC18 --- P | UTS1JC18 --- S | 28.5 | 89.0   | 42.0  | 9.0/18.0                       | 7.0/16.0                       | 33.0      | 46.5  | 54.0   |

For shell size 18, please consult us  
Coloured ring supplied as optional extra (see page 72).



## Square flange receptacle



| Shell size | Part numbers |                | A $\pm 0.25$ | C max. |        | D $\pm 0.2$ | E $\pm 0.15$ | Ø H $\pm 0.15$ | Thread                   | PANEL CUT OUT |               |               |
|------------|--------------|----------------|--------------|--------|--------|-------------|--------------|----------------|--------------------------|---------------|---------------|---------------|
|            | Male contact | Female contact |              | Pin    | Socket |             |              |                |                          | B $\pm 0.25$  | Ø G $\pm 0.1$ | Ø P $\pm 0.1$ |
| 10         | UTS0104P     | UTS0104S       | 23.8         | 31.7   | 24.3   | 11.35       | 2.3          | 15.0           | 9/16 24 UNEF Class 2A    | 18.3          | 3.2           | 15.1          |
| 12         | UTS0128P     | UTS0128S       | 26.2         |        |        |             |              | 19.0           | 11/16 24 UNEF Class 2A   | 20.6          |               | 18.2          |
| 14         | UTS01412P    | UTS01412S      | 28.6         |        |        |             |              | 22.2           | 13/16 20 UNEF Class 2A   | 23.0          |               | 21.4          |
| 18         | UTS01823P    | UTS01823S      | 33.3         |        |        |             | 2.5          | 28.5           | 1" 1/16 18 UNEF Class 2A | 27.0          |               | 27.8          |

Coloured ring supplied as optional extra (see page 72).

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Note : all dimensions are in mm

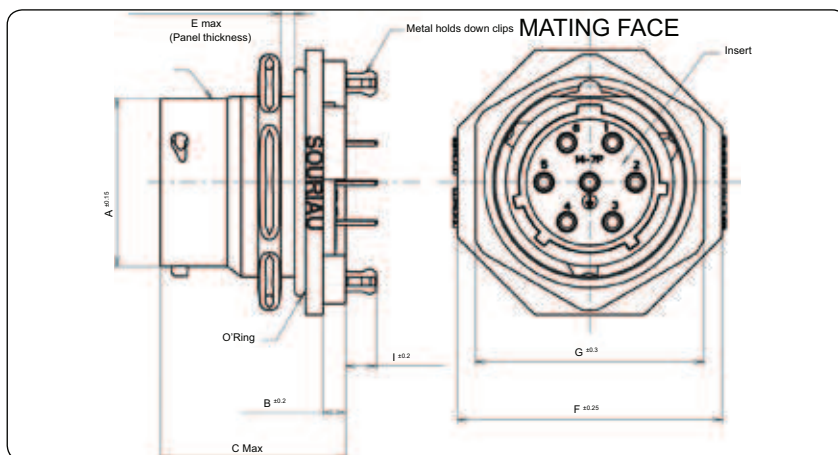
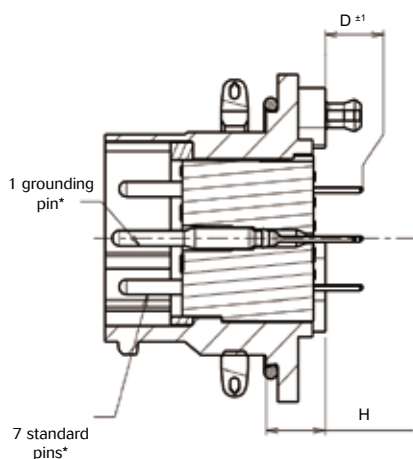




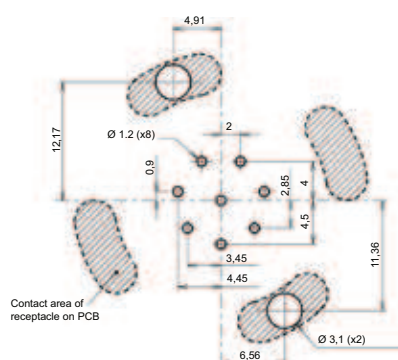
## PCB jam nut receptacle for male contacts



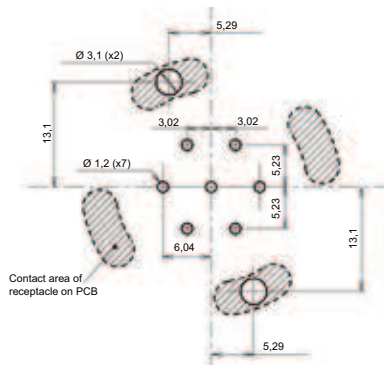
MALE CONNECTOR



DRILLING PATTERNS



UTS7128PSEK9



UTS7147PSEK9

| Shell size | Part number  | Nb of contacts | Ø A   | B   | C    | D   | E   | F    | G    | H       | I   | J    | Ø K  |
|------------|--------------|----------------|-------|-----|------|-----|-----|------|------|---------|-----|------|------|
| 12         | UTS7128PSEK9 | 8              | 19.0  | 3.0 | 25.0 | 3.6 | 3.2 | 31.8 | 27.0 | 6.5/6.8 | 4.0 | 21.2 | 22.5 |
| 14         | UTS7147PSEK9 | 7              | 22.14 | 3.0 | 25.0 | 3.6 | 3.2 | 34.9 | 30.2 | 7.0     | 4.0 | 24.3 | 25.7 |

\* Only for the UTS7147PSEK9 version

Other arrangements upon request.

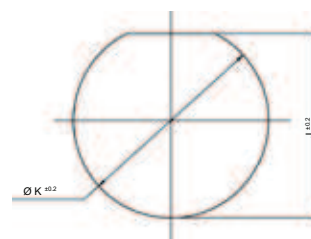
### Plating

- Plating for machined contacts
- Plating for stamped contacts

min 0.4 µm gold all over  
min 0.4 µm gold in contact  
area / 3 – 5 µm tin on solder tail

Other platings upon request

PANEL CUT OUT



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