




## 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

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## 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
- Thermal shock: 5 cycles 30 min. from -40°C to 105°C per MIL-STD 1344 method 1003

### Electrical

- Current per contact max.:  
Size 16: 13A  
Size 20: 7.5A - machined contact  
5A - stamped & formed contact
- Insulation resistance: ≥ 5000 MΩ
- 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

## UTS contact arrangements




**Size 10**

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



**Size 12**

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

**Size 14**

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

**Size 18\*\***

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

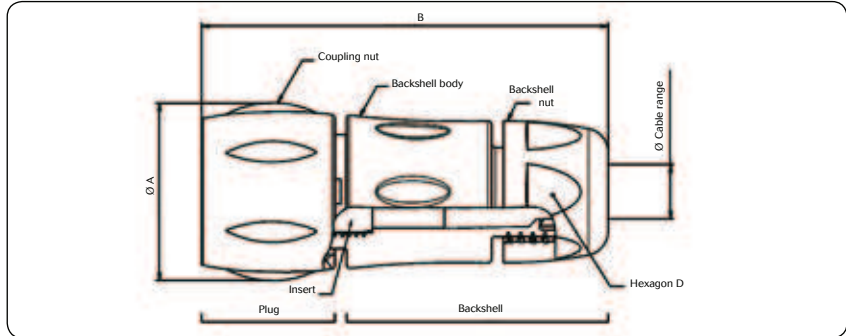
\* Arrangements with advanced grounding cavity  
 \*\* For In-line version shell size 18, please consult us

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**



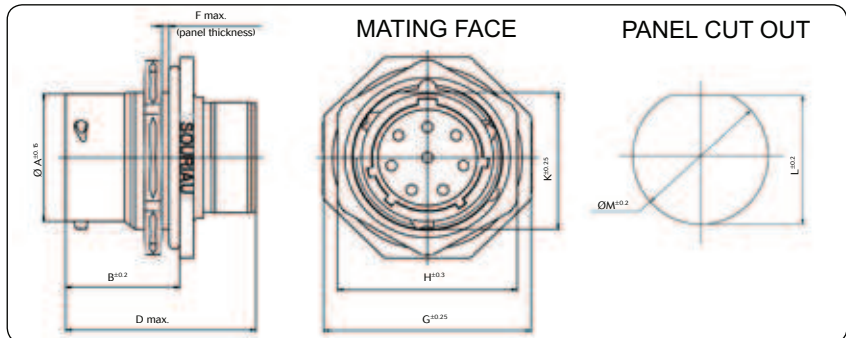
| Shell size | Part numbers     |                  | Ø A   | B    | Ø Cable range<br>Standard seal | Ø Cable range<br>Reducing seal | Hexagon D |
|------------|------------------|------------------|-------|------|--------------------------------|--------------------------------|-----------|
|       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

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

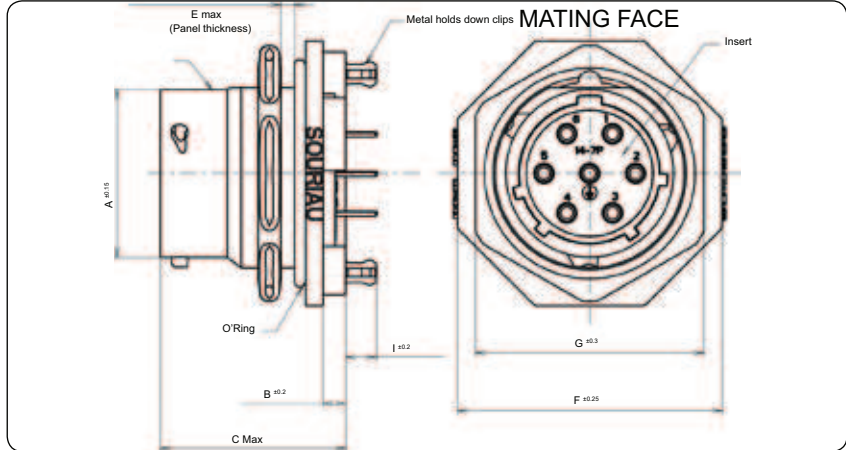
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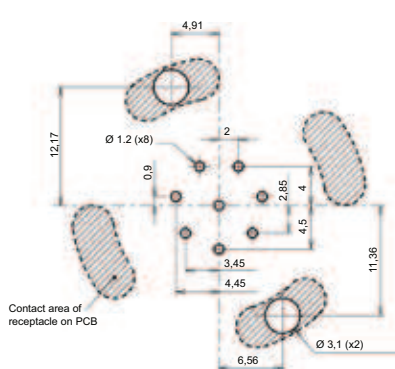
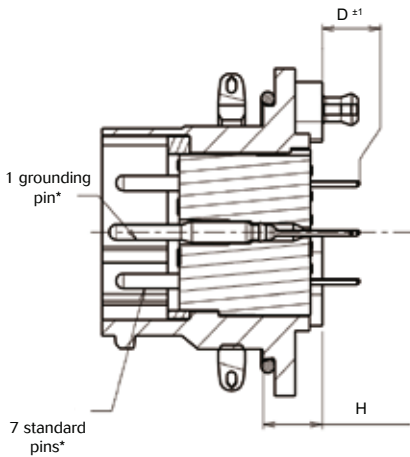
## PCB jam nut receptacle for male contacts



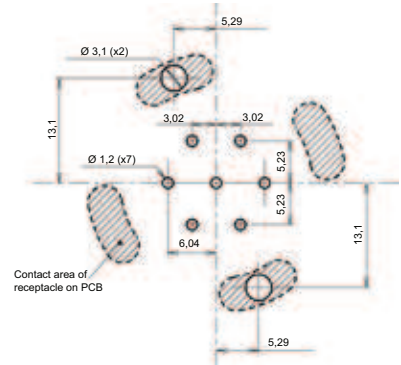
MALE CONNECTOR



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.

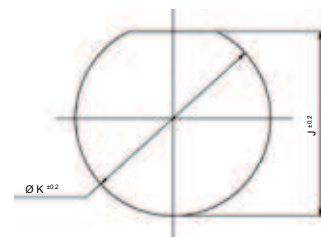
### Plating

- 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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