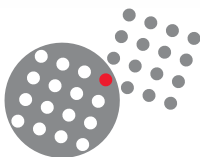




# UTS Series

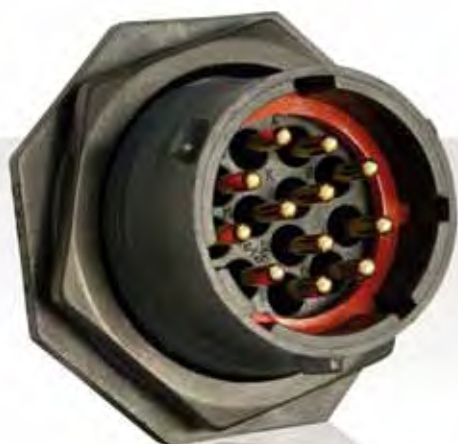
Dynamic IP68/69K • UV Resistant • UL/IEC Compliant



**SOURIAU**







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UTS series.

UTS Series

# Overview

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# UTS Series

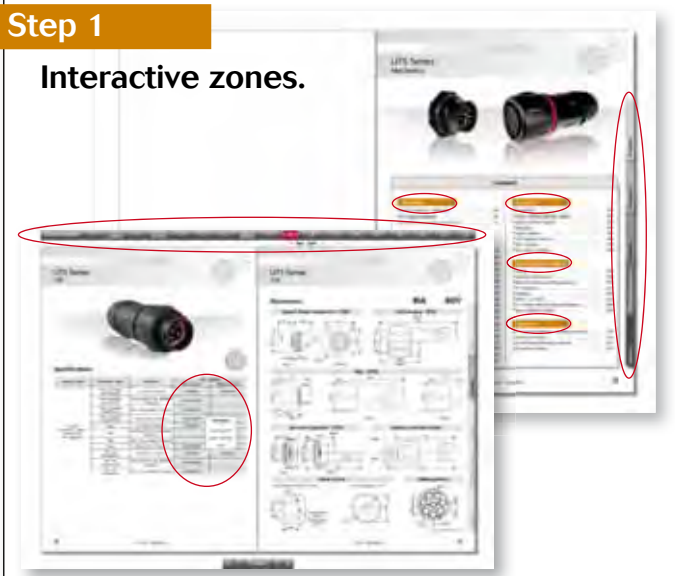
## Overview



SOURIAU is pleased to announce the arrival of a brand new catalog containing some significant improvements to simplify the connector selection process and provide easy access to key information. In this version you can see all layouts at a glance, download 2D drawings and 3D models. Then, when your choice is made, you can click on the part number and buy online.

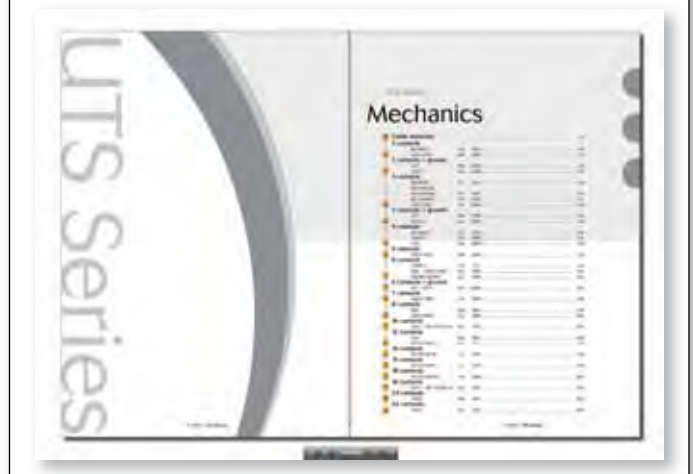
### Step 1

Interactive zones.



### Step 2

Clearer understanding of the range.



### Step 3

Easy access to supporting material such as prints and CAD models. In just two pages you can gather together details of all accessories, contacts, tools etc required for your application.



# UTS Series

## Overview



### UTS range overview

**The UTS series is a plastic connector range but rugged enough to withstand industrial applications.**

The bayonet coupling system makes it simple to use. With only a 1/3 twist of the coupling ring, connectors are mated with an audible and sensitive "click".



**UTS series is a wide range...**

Based on multiple power & signal connectors and offers everything from box mounted receptacles and cable mounted plugs to cable mounted in-line and PCB mounted receptacles. Almost all ways to accommodate wires exist: Crimp, Solder, Screw termination.



Screw termination version

**The philosophy of the UTS series is built around three key elements:**

#### Dynamic IP68/69K



UTS series is rated at IP68/69K... even in dynamic conditions. This means that it remain sealed even when used continuously underwater or cleaned using a high pressure hose and cable is moving.

This extreme level of performance is achievable with jacketed cable or discrete wires.

If this same level of performance is required even when connectors are not mated, we have UTS Hi Seal; a product designed to remain watertight if an environmental cap is not fitted or if the equipment is likely to get wet when cables have been disconnected.

#### UV Resistant



In most applications, our connectors are exposed to extreme climatic conditions; it was therefore key for us to select the materials best able to cope with the targeted environment.

Part of our product qualification process involved subjecting connectors to a simulated five years of exposure to various elements including Temperature, UV and Humidity.

The results were positive in that there were no visible signs of weakness, such as cracking or crazing.

#### UL/IEC Compliant



The outmost priority for any electrical installation is to protect personnel from any shock hazard.

In North America, Underwriters Laboratories insisted that connector manufacturers, depending of the application, respect their standards. The UTS series had thus been qualified and is certified by this organisation.

In Europe and in Asia, IEC standards are better known and trusted by end users. Like its American equivalent, the IEC refers to safety rules. The UTS series was obviously designed to respect these rules.

# UTS Series Overview



## UTS range

### UTS discrete wire sealing

See page 9

### UTS Series



Sealed: IP68/69K  
UV resistant  
UL/IEC compliant



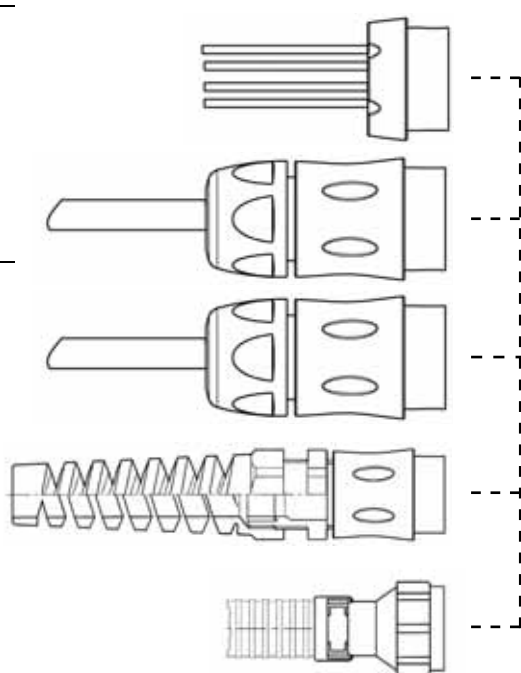
Corrosion-proof  
Plastic housing

### UTS screw termination



Just screw the wires  
to the connector !

No special tools  
required, use a  
standard screwdriver



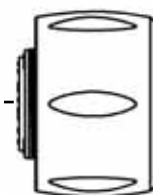
### Crimp contact

- machined
- stamped and formed
- coaxial
- fibre optics



### Screw termination contact

### Solder contact



Plug

### UTS Hi seal



Sealed unmated: IP68/69K  
MIL-C-26482 compatible  
UV resistant  
UL/IEC compliant

### Sealed Unmated

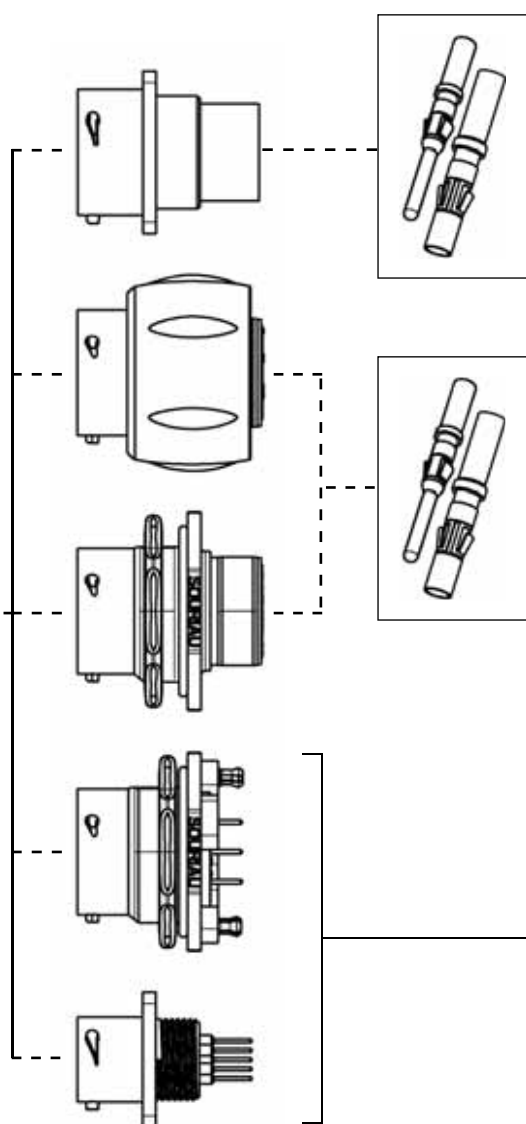


Corrosion-proof  
Plastic housing

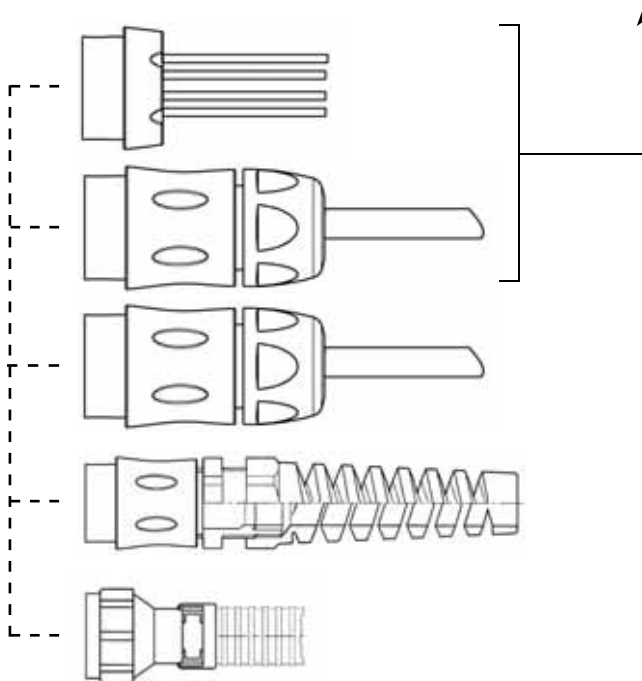
# UTS Series Overview



## overview



Receptacle



### UTS PCB contacts

Stand-offs to allow cleaning after soldering

Metal hold down clips  
- to lock the connector easily on the PCB and to release stress on solder joints  
- suitable for soldering in a metalised hole

Low profile housing to limit space between panel and PCB

Pre-assembled PCB contacts  
- machined or stamped versions available  
- different solder tails lengths possible  
- different plating options



#### Mechanical

- Durability:  
250 matings & unmatings per MIL-C-26482
- 1 • Vibration resistance (all UTS versions except UTS Screw termination contacts):  
Sinusoidal vibrations per CEI 60512-4 - from 10 to 2000 Hz
- Thermal shock:  
5 cycles 30 min. from -40°C to 105°C per MIL-STD 1344 method 1003

#### Environmental

- 2 • Operating temperature:  
from -40°C to +105°C  
40/100/21 per NFF 61-030
- Flammability rating:  
UL94-V0 (all UTS except the Hi seal) - see page 165  
UL94-HB (UTS Hi seal only) - see page 165  
I2F3 according to NFF 16101 and NFF 16102
- 3 • Salt spray:  
≥500 hours
- 4 • UV resistant:  
No mechanical degradation or important variation of colour after 5 years of exposure in natural environment (equivalence exposure to sun and moisture as per ISO4892)
- 5 • Sealing:
  - UTS Standard: IP68/IP69K (mated)
  - UTS Hi seal: IP68/IP69K (mated and unmated)
  - UTS Discrete wire sealing: IP67/69K (up to IP68 with easy handling backshell)
  - UTS Screw termination contacts: IP68/IP69K
 Note: IPx8: 10m underwater during 1 week
- Fluid resistance:
  - Gasoil
  - Mineral oil
  - Acid bath
  - Basic bath





### characteristics



#### Electrical

- See each layout page

#### Material

- Body connector + Backshell:  
Thermoplastic
- Insert:
  - UTS Standard, UTS Discrete wire sealing, UTS Screw termination contacts:  
Thermoplastic
  - UTS Hi seal handsolder & UTS Hi seal with PC tails contacts:  
Elastomer
- Contacts:  
See page 140
- Nut:  
Metal
- Halogen free
- RoHS compliant & conform to the Chinese standard SJ/T1166-2006 (Chinese RoHS equivalent)
- In accordance with:
  - UL 1977:  
Certificat ECBT2  
File number: E169916
  - CSA C22.2 n°182.3:  
Certificat ECBT8  
File number: E169916





utis series.

# Mechanics

|                            |     |      |  |     |
|----------------------------|-----|------|--|-----|
| <b>Cable assembly</b>      |     |      |  | 14  |
| <b>2 contacts</b>          |     |      |  |     |
| 8E2/8D2:                   | 7A  | 32V  |  | 20  |
| 12E2/12D2:                 | 16A | 150V |  | 24  |
| <b>2 contacts + ground</b> |     |      |  |     |
| 103:                       | 16A | 300V |  | 28  |
| 142G1:                     | 40A | 300V |  | 32  |
| <b>3 contacts</b>          |     |      |  |     |
| 8E3/8D3:                   | 7A  | 32V  |  | 36  |
| 8E3A/8E98                  |     |      |  |     |
| 8D3A/8D98:                 | 7A  | 50V  |  | 40  |
| 8E33/8D3:                  | 7A  | 50V  |  | 44  |
| 12E3/12D3:                 | 16A | 150V |  | 48  |
| <b>3 contacts + ground</b> |     |      |  |     |
| 124 - 12E4/12D4:           | 16A | 300V |  | 52  |
| 183G1:                     | 32A | 300V |  | 56  |
| <b>4 contacts</b>          |     |      |  |     |
| 8E4/8D4:                   | 7A  | 32V  |  | 60  |
| 102W2:                     | 25A | 150V |  | 64  |
| 104:                       | 13A | 150V |  | 68  |
| <b>5 contacts</b>          |     |      |  |     |
| 14E5/14D5:                 | 16A | 150V |  | 72  |
| <b>6 contacts</b>          |     |      |  |     |
| 103W3:                     | 5A  | 32V  |  | 76  |
| 106 - 10E6/10D6:           | 7A  | 32V  |  | 80  |
| 10E98/10D98:               | 7A  | 50V  |  | 84  |
| <b>6 contacts + ground</b> |     |      |  |     |
| 147 - 14E7:                | 16A | 300V |  | 88  |
| <b>7 contacts</b>          |     |      |  |     |
| 10E7/10D7:                 | 7A  | 50V  |  | 92  |
| <b>8 contacts</b>          |     |      |  |     |
| 128:                       | 10A | 80V  |  | 96  |
| 12E8/12D8:                 | 6A  | 32V  |  | 100 |
| <b>10 contacts</b>         |     |      |  |     |
| 1210 - 12E10/12D10:        | 6A  | 50V  |  | 104 |
| <b>12 contacts</b>         |     |      |  |     |
| 1412:                      | 10A | 63V  |  | 108 |
| 14E12/14D12:               | 4A  | 50V  |  | 112 |
| <b>14 contacts</b>         |     |      |  |     |
| 12E14/12D14:               | 5A  | 32V  |  | 116 |
| <b>15 contacts</b>         |     |      |  |     |
| 14E15/14D15:               | 4A  | 50V  |  | 120 |
| <b>18 contacts</b>         |     |      |  |     |
| 14E18/14D18:               | 5A  | 50V  |  | 124 |
| <b>19 contacts</b>         |     |      |  |     |
| 1419 - 14E19/14D19:        | 5A  | 32V  |  | 128 |
| <b>23 contacts</b>         |     |      |  |     |
| 1823:                      | 9A  | 63V  |  | 132 |
| <b>32 contacts</b>         |     |      |  |     |
| 1832:                      | 4A  | 32V  |  | 136 |

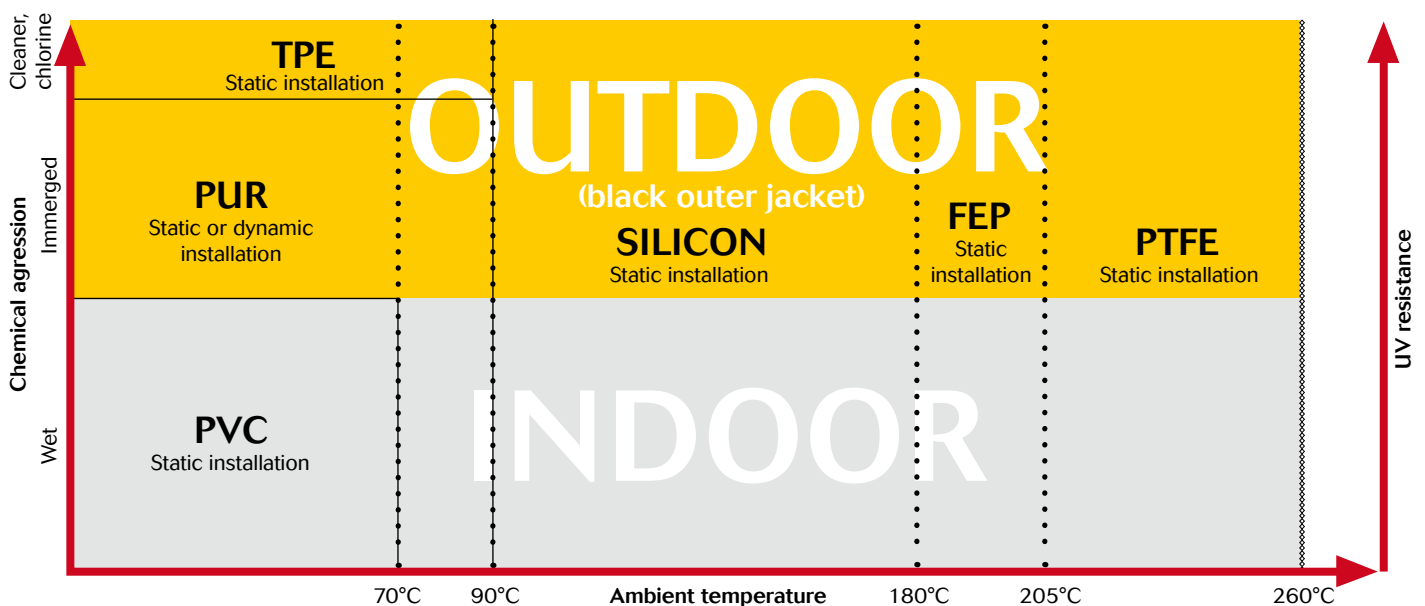


### Cable assembly

Souriau provides connectors in various applications for more than 90 years in the most extreme environment. Being conscious about the difficulty to find a quick and a reliable harness manufacturer, we decided years ago to start in house cable assembly production. It allows customers to reduce the number of suppliers, and to take advantage of the "best in class" quality of the Souriau group. Overmoulding is a process that further enhances the sealing properties of the UTS range, especially over many years of use. Overmoulding provides the opportunity to change the cable exit from straight through 90 degrees and avoid any stress on the cable terminated to the connector. Also, as the wires are encapsulated inside the moulding, a barrier is created which prevents from any liquid from entering the equipment through the connector if the cable jacket is breached.

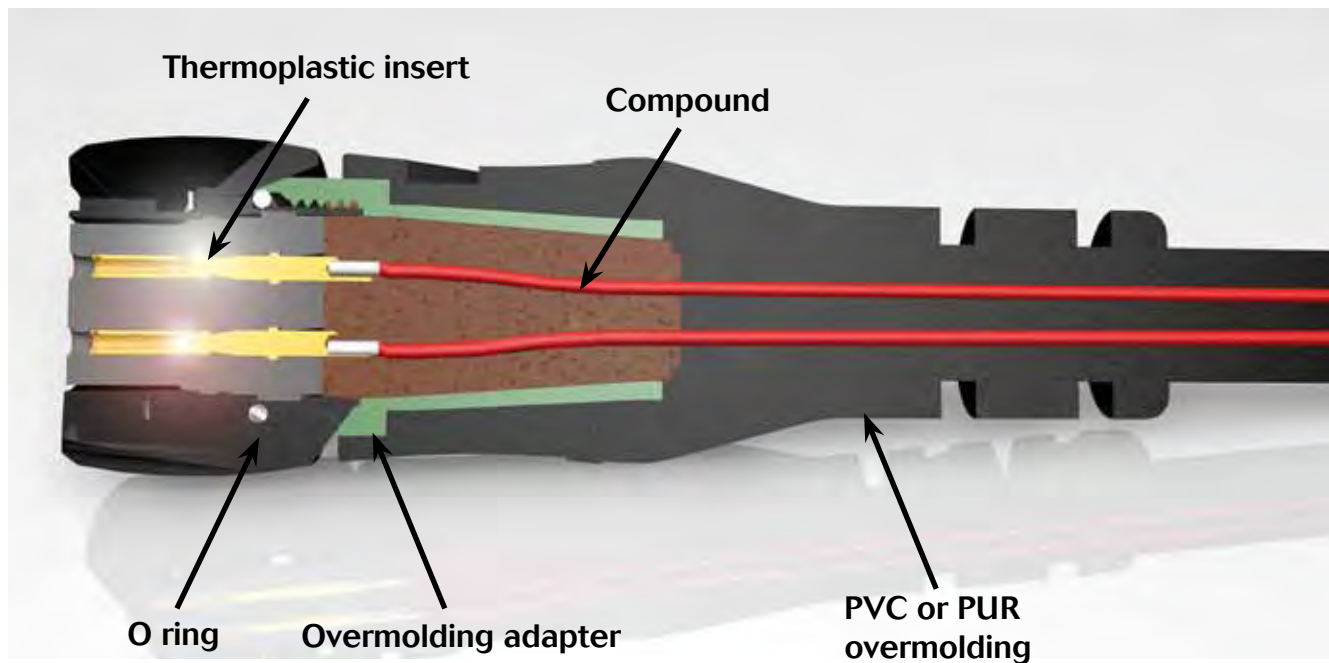


### How to choose the outer jacket material





### Overmolding description



### Discrete connector



### Overmoulded connector





### Harnesses

#### Overmoulded harnesses, straight ending



| Connector type | Number of ways | Voltage | Current UL | Current IEC | Harmonised cable part number* | Part number (length: 1 m.) |                     |
|----------------|----------------|---------|------------|-------------|-------------------------------|----------------------------|---------------------|
|                |                |         |            |             |                               | Male                       | Female              |
| UTS standard   | 2+PE           | 600 V   | 44 A       | 40 A        | HO5 VV - F 3Gg10              | HAUTS0V142G1PST100         | HAUTS0V142G1SST100  |
|                | 2+PE           | 500 V   | 10 A       | 16 A        | HO5 VV - F 3x1.5              | HAUTS0V103PST100           | HAUTS0V103SST100    |
|                | 3+PE           | 500 V   | 10 A       | 16 A        | HO5 VV - F 3G1.5              | HAUTS0V103PEPST100         | HAUTS0V103PESST100  |
|                | 3+PE           | 250 V   | 24 A       | 32 A        | HO5 VV - F 40G0.5             | HAUTS0V183G1PST100         | HAUTS0V183G1SST100  |
|                | 3+PE           | 500 V   | 10 A       | 16 A        | HO5 VV - F 4G1.5              | HAUTS0V124PEPST100         | HAUTS0V124PESST100  |
|                | 4              | 500 V   | 10 A       | 13 A        | HO5 VV - F 4x1.5              | HAUTS0V104PST100           | HAUTS0V104SST100    |
|                | 3              | 500 V   | 10 A       | 5 A         | HO5 VV - F 7G0.5              | HAUTS0V103W3PST100         | HAUTS0V103W3SST100  |
|                | 6              | 250 V   | 5 A        | 7 A         | HO5 VV - F 7x0.5              | HAUTS0V106PST100           | HAUTS0V106SST100    |
|                | 6+PE           | 500 V   | 10 A       | 16 A        | HO5 VV - F 7G1.5              | HAUTS0V147PEPST100         | HAUTS0V147PESST100  |
|                | 8              | 500 V   | 10 A       | 10 A        | HO5 VV - F 8x1.5              | HAUTS0V128PST100           | HAUTS0V128SST100    |
|                | 10             | 250 V   | 5 A        | 6 A         | HO5 VV - F 10G0.5             | HAUTS0V1210PST100          | HAUTS0V1210SST100   |
|                | 12             | 500 V   | 10 A       | 10 A        | HO5 VV - F 12x1.5             | HAUTS0V1412PST100          | HAUTS0V1412SST100   |
|                | 19             | 250 V   | 5 A        | 5 A         | HO5 VV - F 21G0.5             | HAUTS0V1419PST100          | HAUTS0V1419SST100   |
|                | 23             | 500 V   | 10 A       | 9 A         | HO5 VV - F 25G1.5             | HAUTS0V1823PST100          | HAUTS0V1823SST100   |
|                | 32             | 250 V   | 5 A        | 4 A         | HO5 VV - F 40G0.5             | HAUTS0V1832PST100          | HAUTS0V1832SST100   |
| UTS Hi seal    | 2              | 250 V   | 7 A        | 7 A         | HO5 VV - F 2x0.5              | HAUTS0V8E2PST100           | HAUTS0V8E2SST100    |
|                | 2              | 650 V   | 13 A       | 16 A        | HO5 VV - F 2x1.5              | HAUTS0V12E2PST100          | HAUTS0V12E2SST100   |
|                | 3              | 250 V   | 7 A        | 7 A         | HO5 VV - F 3x0.5              | HAUTS0V8E3PST100           | HAUTS0V8E3SST100    |
|                | 3              | 250 V   | 7 A        | 7 A         | HO5 VV - F 3x0.5              | HAUTS0V8E3APST100          | HAUTS0V8E3ASST100   |
|                | 3              | 250 V   | 7 A        | 7 A         | HO5 VV - F 3x0.5              | HAUTS0V8E33PST100          | HAUTS0V8E33SST100   |
|                | 3              | 650 V   | 13 A       | 16 A        | HO5 VV - F 3x1.5              | HAUTS0V12E3PST100          | HAUTS0V12E3SST100   |
|                | 4              | 250 V   | 7 A        | 7 A         | HO5 VV - F 4x0.5              | HAUTS0V8E4PST100           | HAUTS0V8E4SST100    |
|                | 5              | 650 V   | 12 A       | 16 A        | HO5 VV - F 4G1.5              | HAUTS0V14E5PST100          | HAUTS0V14E5SST100   |
|                | 6              | 250 V   | 5 A        | 7 A         | HO5 VV - F 7x0.5              | HAUTS0V10E6PST100          | HAUTS0V10E6SST100   |
|                | 6              | 250 V   | 6 A        | 7 A         | HO5 VV - F 7x0.5              | HAUTS0V10E98PST100         | HAUTS0V10E98SST100  |
|                | 6+PE           | 500 V   | 10 A       | 16 A        | HO5 VV - F 7G1.5              | HAUTS0V14E7PEPST100        | HAUTS0V14E7PESST100 |
|                | 7              | 250 V   | 6 A        | 7 A         | HO5 VV - F 7x0.5              | HAUTS0V10E7PST100          | HAUTS0V10E7SST100   |
|                | 8              | 250 V   | 5 A        | 6 A         | HO5 VV - F 10G0.5             | HAUTS0V12E8PST100          | HAUTS0V12E8SST100   |
|                | 10             | 250 V   | 5 A        | 6 A         | HO5 VV - F 10G0.5             | HAUTS0V12E10PST100         | HAUTS0V12E10SST100  |
|                | 12             | 250 V   | 5 A        | 4 A         | HO5 VV - F 12G0.5             | HAUTS0V14E12PST100         | HAUTS0V14E12SST100  |
|                | 14             | 250 V   | 5 A        | 5 A         | HO5 VV - F 14G0.5             | HAUTS0V12E14PST100         | HAUTS0V12E14SST100  |
|                | 15             | 650 V   | 12 A       | 4 A         | HO5 VV - F 18G0.5             | HAUTS0V14E15PST100         | HAUTS0V14E15SST100  |
|                | 18             | 250 V   | 4 A        | 4 A         | HO5 VV - F 18G0.5             | HAUTS0V14E18PST100         | HAUTS0V14E18SST100  |
|                | 19             | 250 V   | 4 A        | 5 A         | HO5 VV - F 40G0.5             | HAUTS0V14E19PST100         | HAUTS0V14E19SST100  |

\* see page 18

3 m & 5 m version available on demand

Eg: 3m HAUTS0V...300

5m HAUTS0V...500



### Harnesses

#### Overmoulded harnesses, right angle ending



| Connector type | Number of ways | Voltage | Current UL | Current IEC | Harmonised cable part number* | Part number (length: 1 m.) |                     |
|----------------|----------------|---------|------------|-------------|-------------------------------|----------------------------|---------------------|
|                |                |         |            |             |                               | Male                       | Female              |
| UTS standard   | 2+PE           | 600 V   | 44 A       | 40 A        | HO5 VV - F 3Gg10              | HAUTS0V142G1PRA100         | HAUTS0V142G1SRA100  |
|                | 2+PE           | 500 V   | 10 A       | 16 A        | HO5 VV - F 3x1.5              | HAUTS0V103PRA100           | HAUTS0V103SRA100    |
|                | 3+PE           | 500 V   | 10 A       | 16 A        | HO5 VV - F 3G1.5              | HAUTS0V183G1PRA100         | HAUTS0V183G1SRA100  |
|                | 3+PE           | 250 V   | 24 A       | 32 A        | HO5 VV - F 40G0.5             | HAUTS0V183G1PRA100         | HAUTS0V183G1SRA100  |
|                | 3+PE           | 500 V   | 10 A       | 16 A        | HO5 VV - F 4G1.5              | HAUTS0V124PEPRA100         | HAUTS0V124PESRA100  |
|                | 4              | 500 V   | 10 A       | 13 A        | HO5 VV - F 4x1.5              | HAUTS0V104PRA100           | HAUTS0V104SRA100    |
|                | 3              | 500 V   | 10 A       | 5 A         | HO5 VV - F 7G0.5              | HAUTS0V103W3PRA100         | HAUTS0V103W3SRA100  |
|                | 6              | 250 V   | 5 A        | 7 A         | HO5 VV - F 7x0.5              | HAUTS0V106PRA100           | HAUTS0V106SRA100    |
|                | 6+PE           | 500 V   | 10 A       | 16 A        | HO5 VV - F 7G1.5              | HAUTS0V147PEPRA100         | HAUTS0V147PESRA100  |
|                | 8              | 500 V   | 10 A       | 10 A        | HO5 VV - F 8x1.5              | HAUTS0V128PRA100           | HAUTS0V128SRA100    |
|                | 10             | 250 V   | 5 A        | 6 A         | HO5 VV - F 10G0.5             | HAUTS0V1210PRA100          | HAUTS0V1210SRA100   |
|                | 12             | 500 V   | 10 A       | 10 A        | HO5 VV - F 12x1.5             | HAUTS0V1412PRA100          | HAUTS0V1412SRA100   |
|                | 19             | 250 V   | 5 A        | 5 A         | HO5 VV - F 21G0.5             | HAUTS0V1419PRA100          | HAUTS0V1419SRA100   |
|                | 23             | 500 V   | 10 A       | 9 A         | HO5 VV - F 25G1.5             | HAUTS0V1823PRA100          | HAUTS0V1823SRA100   |
|                | 32             | 250 V   | 5 A        | 4 A         | HO5 VV - F 40G0.5             | HAUTS0V1832PRA100          | HAUTS0V1832SRA100   |
| UTS Hi seal    | 2              | 250 V   | 7 A        | 7 A         | HO5 VV - F 2x0.5              | HAUTS0V8E2PRA100           | HAUTS0V8E2SRA100    |
|                | 2              | 650 V   | 13 A       | 16 A        | HO5 VV - F 2x1.5              | HAUTS0V12E2PRA100          | HAUTS0V12E2SRA100   |
|                | 3              | 250 V   | 7 A        | 7 A         | HO5 VV - F 3x0.5              | HAUTS0V8E3PRA100           | HAUTS0V8E3SRA100    |
|                | 3              | 250 V   | 7 A        | 7 A         | HO5 VV - F 3x0.5              | HAUTS0V8E3APRA100          | HAUTS0V8E3ASRA100   |
|                | 3              | 250 V   | 7 A        | 7 A         | HO5 VV - F 3x0.5              | HAUTS0V8E33PRA100          | HAUTS0V8E33SRA100   |
|                | 3              | 650 V   | 13 A       | 16 A        | HO5 VV - F 3x1.5              | HAUTS0V12E3PRA100          | HAUTS0V12E3SRA100   |
|                | 4              | 250 V   | 7 A        | 7 A         | HO5 VV - F 4x0.5              | HAUTS0V8E4PRA100           | HAUTS0V8E4SRA100    |
|                | 5              | 650 V   | 12 A       | 16 A        | HO5 VV - F 4G1.5              | HAUTS0V14E5PRA100          | HAUTS0V14E5SRA100   |
|                | 6              | 250 V   | 5 A        | 7 A         | HO5 VV - F 7x0.5              | HAUTS0V10E6PRA100          | HAUTS0V10E6SRA100   |
|                | 6              | 250 V   | 6 A        | 7 A         | HO5 VV - F 7x0.5              | HAUTS0V10E98PRA100         | HAUTS0V10E98SRA100  |
|                | 6+PE           | 500 V   | 10 A       | 16 A        | HO5 VV - F 7G1.5              | HAUTS0V14E7PEPRA100        | HAUTS0V14E7PESRA100 |
|                | 7              | 250 V   | 6 A        | 7 A         | HO5 VV - F 7x0.5              | HAUTS0V10E7PRA100          | HAUTS0V10E7SRA100   |
|                | 8              | 250 V   | 5 A        | 6 A         | HO5 VV - F 10G0.5             | HAUTS0V12E8PRA100          | HAUTS0V12E8SRA100   |
|                | 10             | 250 V   | 5 A        | 6 A         | HO5 VV - F 10G0.5             | HAUTS0V12E10PRA100         | HAUTS0V12E10SRA100  |
|                | 12             | 250 V   | 5 A        | 4 A         | HO5 VV - F 12G0.5             | HAUTS0V14E12PRA100         | HAUTS0V14E12SRA100  |
|                | 14             | 250 V   | 5 A        | 5 A         | HO5 VV - F 14G0.5             | HAUTS0V12E14PRA100         | HAUTS0V12E14SRA100  |
|                | 15             | 650 V   | 12 A       | 4 A         | HO5 VV - F 18G0.5             | HAUTS0V14E15PRA100         | HAUTS0V14E15SRA100  |
|                | 18             | 250 V   | 4 A        | 4 A         | HO5 VV - F 18G0.5             | HAUTS0V14E18PRA100         | HAUTS0V14E18SRA100  |
|                | 19             | 250 V   | 4 A        | 5 A         | HO5 VV - F 40G0.5             | HAUTS0V14E19PRA100         | HAUTS0V14E19SRA100  |

\* see page 18

3 m & 5 m version available on demand

Eg: 3m HAUTS0V...300

5m HAUTS0V...500

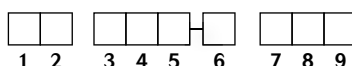


### Cable information

|                              |                                                                                                                                  |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Range of temperature:</b> | Occasional flexing: -5°C up to +70°C<br>Fixed installation: -40°C up to +80°C                                                    |
| <b>Rated voltage:</b>        | U0/U: 300/500 V                                                                                                                  |
| <b>Wire section :</b>        | Arrangement with #16 contact: wire section 1.5 mm <sup>2</sup><br>Arrangement with #20 contact: wire section 0.5 mm <sup>2</sup> |
| <b>Harmonized reference:</b> | H05 VVF XX                                                                                                                       |

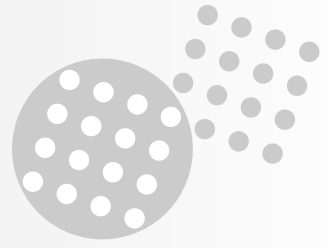
### Standardization of European cable - DIN VDE 0281/DIN VDE 0282/DIN VDE 0292

#### Harmonized wire coding system



| 1.<br>Basic type      | 2.<br>Working voltage | 3.<br>Insulating      | 4.<br>Sheath-cladding material | 5.<br>Special features         | 6.<br>Conductor types                   | 7.<br>Number of conductors | 8.<br>Protective conductor         | 9.<br>Conductor cross-sectional   |
|-----------------------|-----------------------|-----------------------|--------------------------------|--------------------------------|-----------------------------------------|----------------------------|------------------------------------|-----------------------------------|
| H:<br>Harmonized Type | 03:<br>300/300 V.     | V:<br>PVC             | V:<br>PVC                      | H:<br>Ribbon cable, separable  | U:<br>Single wire                       |                            | X:<br>Without protective conductor | Area specified in mm <sup>2</sup> |
| A:<br>National Type   | 05:<br>300/500 V.     | R:<br>Rubber          | R:<br>Rubber                   | H2: Ribbon cable non-separable | R:<br>Multi-wire                        |                            | G:<br>With protective conductor    |                                   |
|                       | 07:<br>450/750 V.     | S:<br>Silicone Rubber | N:<br>Cloroprene Rubber        |                                | K:<br>Fine wire (permanently installed) |                            |                                    |                                   |
|                       |                       |                       | J:<br>Glass-filament braiding  |                                | F:<br>Fine wire (flexible)              |                            |                                    |                                   |
|                       |                       |                       | T:<br>Textile braiding         |                                | H:<br>Super fine wire                   |                            |                                    |                                   |
|                       |                       |                       |                                |                                | Y:<br>Tinsel strand                     |                            |                                    |                                   |

Example: Harmonized type, 300/500V, PVC insulating, PVC sheath- cladding, Fine wire, 3x1.5 cross-sectional: H05VVF3x1.5



### Standardization of American cable

#### Nomenclature Key

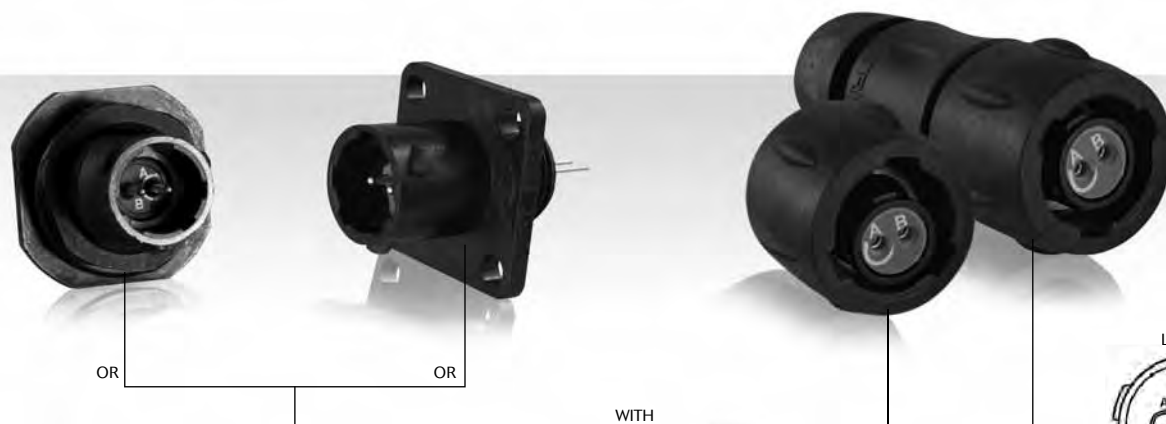
|              |                                                                                               |
|--------------|-----------------------------------------------------------------------------------------------|
| <b>S:</b>    | Service Grade (also means extra hard service when not followed by J, V, or P)                 |
| <b>J:</b>    | Hard Service                                                                                  |
| <b>V:</b>    | Vacuum cleaner cord (also light duty cable)                                                   |
| <b>P:</b>    | Parallel cord (also known as zip cord) – Always light duty                                    |
| <b>E:</b>    | Thermoplastic Elastomer (UL/NEC designation ONLY)                                             |
| <b>O:</b>    | Oil Resistant*                                                                                |
| <b>T:</b>    | Thermoplastic                                                                                 |
| <b>W:</b>    | Outdoor-includes sunlight resistant jacket and wet location rated conductors (formerly "W-A") |
| <b>H:</b>    | Heater cable                                                                                  |
| <b>VW-1:</b> | Flame retardant                                                                               |
| <b>FT2:</b>  | Flame retardant                                                                               |

#### Definitions of Cable Types

|               |                                                                                                                |
|---------------|----------------------------------------------------------------------------------------------------------------|
| <b>SVT:</b>   | Thermoplastic insulated vacuum cleaner cord, with or without 3rd conductor for grounding purposes; 300V. (PVC) |
| <b>SJT:</b>   | Junior hard service, thermoplastic insulated conductors and jacket. 300V. (PVC)                                |
| <b>SJTW:</b>  | Same as SJT except outdoor rated. (PVC)                                                                        |
| <b>SJTO:</b>  | Same as SJT but oil resistant outer jacket. (PVC)                                                              |
| <b>SJTOW:</b> | Same as SJTO except outdoor rated. (PVC)                                                                       |
| <b>ST:</b>    | Hard service cord with all thermoplastic construction, 600V. (PVC)                                             |
| <b>STW:</b>   | Same as ST except outdoor rated. (PVC)                                                                         |
| <b>STO:</b>   | Same as ST but with oil resistant outer jacket. (PVC)                                                          |
| <b>STOW:</b>  | Same as STO except outdoor rated. (PVC)                                                                        |

# UTS Series

## 8E2/8D2



## Specifications

| Contact type                          | Connector type                                               | Backshell           | Part number       |                   |
|---------------------------------------|--------------------------------------------------------------|---------------------|-------------------|-------------------|
|                                       |                                                              |                     | Male insert       | Female insert     |
| Handsolder electrical contacts loaded | Square flange receptacle                                     | Without (Fig.1)     | <b>UTS08E2P</b>   | <b>UTS08E2S</b>   |
|                                       | Plug                                                         | Without (Fig.6)     | <b>UTS68E2P</b>   | <b>UTS68E2S</b>   |
|                                       |                                                              | Cable gland (Fig.7) | <b>UTS6JC8E2P</b> | <b>UTS6JC8E2S</b> |
|                                       | Jam nut receptacle                                           | Without (Fig.3)     | <b>UTS78E2P</b>   | <b>UTS78E2S</b>   |
| PCB contacts loaded                   | Square flange receptacle                                     | Without (Fig.2)     | <b>UTS08D2P</b>   | <b>UTS08D2S</b>   |
|                                       | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.5)     | <b>UTS78D2P32</b> | <b>UTS78D2S32</b> |
|                                       | Jam nut receptacle with stand off and without hold down clip | Without (Fig.4)     | <b>UTS78D2P</b>   | <b>UTS78D2S</b>   |

Sealed unmated



## Dimensions

### Square flange receptacle - UTS0

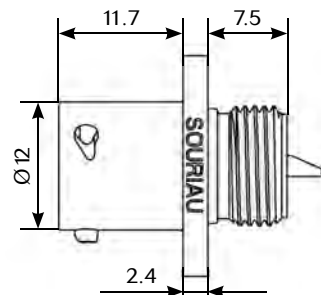


Fig. 1

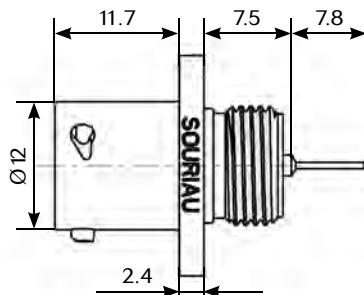
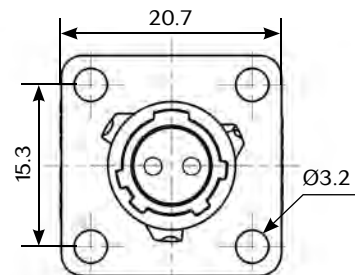


Fig. 2



Front view

### Jam nut receptacle - UTS7

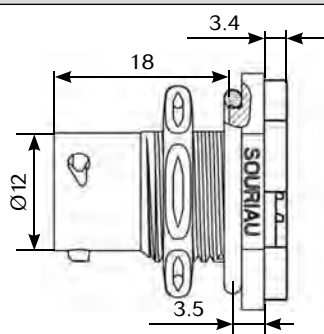


Fig. 3

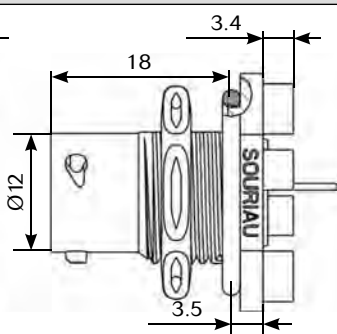


Fig. 4

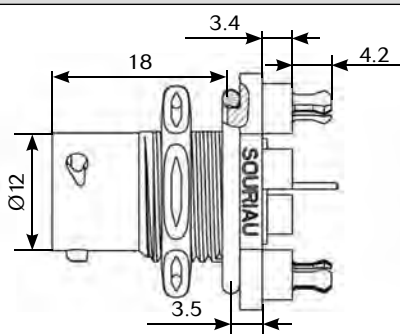
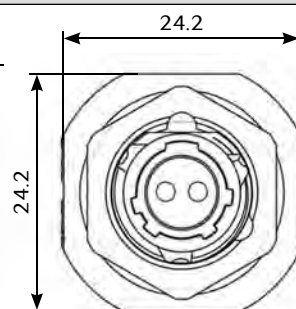


Fig. 5



Front view

### Plug - UTS6

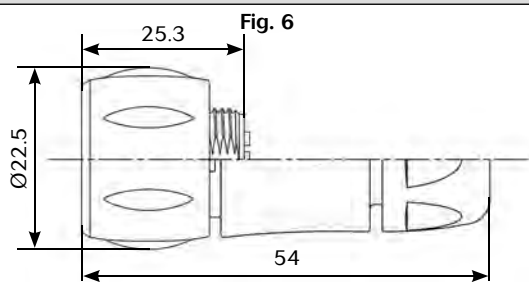
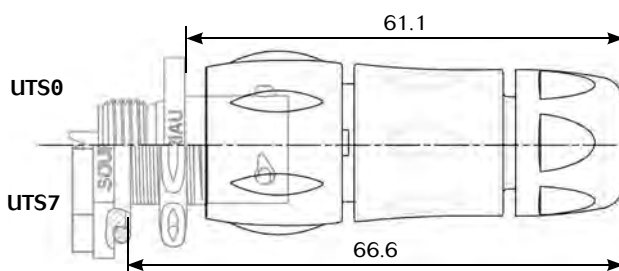


Fig. 6

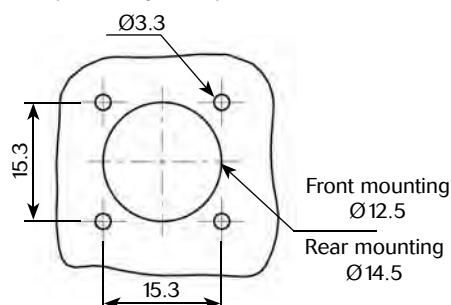
Fig. 7

### Mated connector length

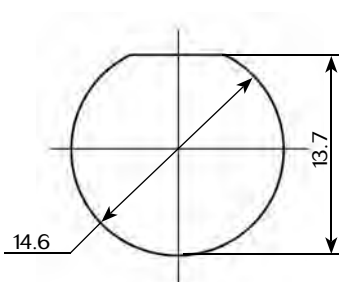


### Panel cut out

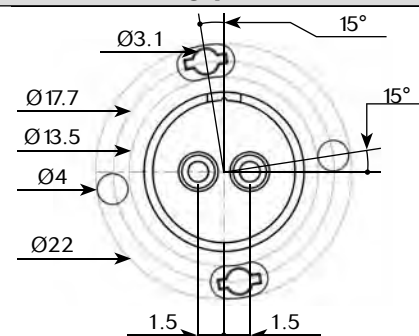
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



### Drilling pattern



Note: all dimensions are in mm

# UTS Series

## 8E2/8D2



### Accessories

#### Jam nut sealing caps



| Part number |
|-------------|
| UTS8DCG     |



Metal terminal

| Part number |
|-------------|
| UTS8DCGR    |

#### Square flange sealing cap



Metal terminal

| Part number |
|-------------|
| UTS8DCGE    |

#### Plug protective cap



IP40

| Part number |
|-------------|
| UTS68C      |

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005585A      | 85005594 |

#### Gasket



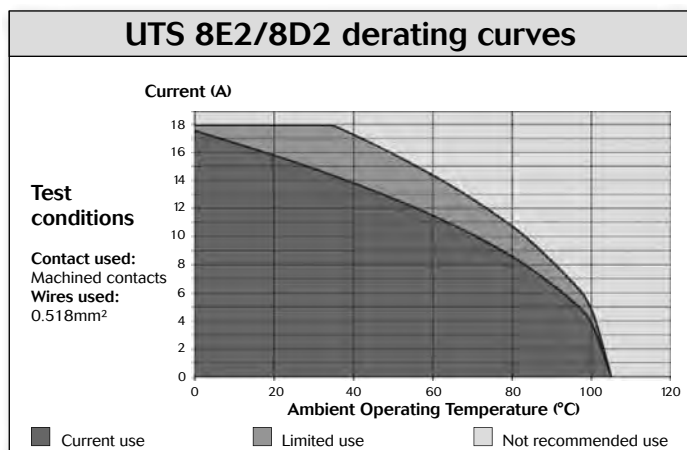
| Part numbers / neoprene |
|-------------------------|
| UTFD11B                 |

#### Electrical characteristics

**UL**  
7A 250V UL94 HB

**CSA**  
7A 250V UL94 HB

**IEC**  
7A 32V 1.5kV 3



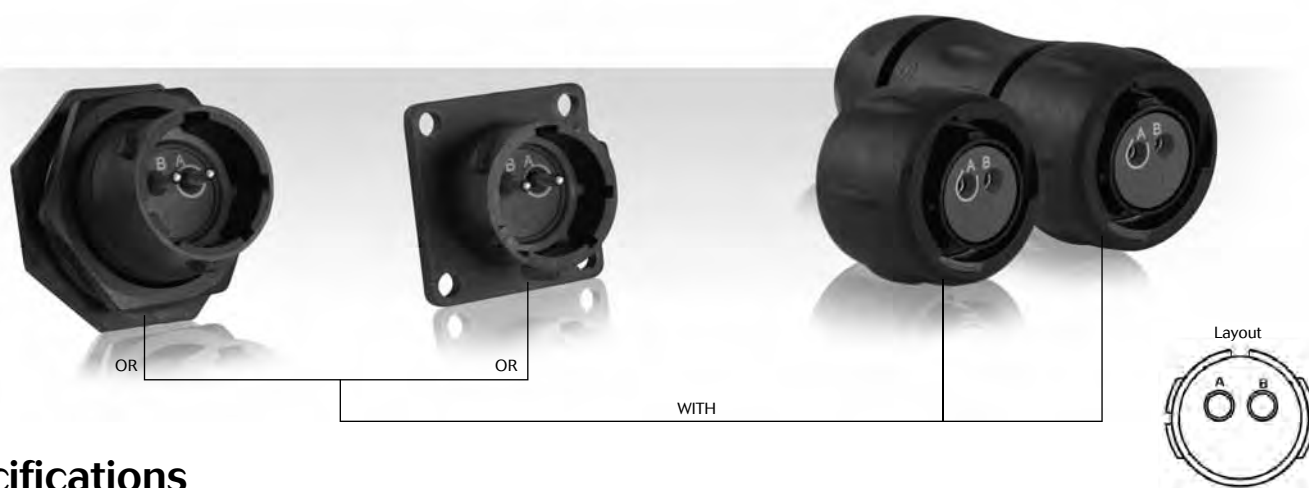
# UTS Series

## 8E2/8D2



# UTS Series

## 12E2/12D2



## Specifications

| Contact type                          | Connector type                                               | Backshell           | Part number        |                    |
|---------------------------------------|--------------------------------------------------------------|---------------------|--------------------|--------------------|
|                                       |                                                              |                     | Male insert        | Female insert      |
| Handsolder electrical contacts loaded | Square flange receptacle                                     | Without (Fig.1)     | <b>UTS012E2P</b>   | <b>UTS012E2S</b>   |
|                                       | Plug                                                         | Without (Fig.6)     | <b>UTS612E2P</b>   | <b>UTS612E2S</b>   |
|                                       |                                                              | Cable gland (Fig.7) | <b>UTS6JC12E2P</b> | <b>UTS6JC12E2S</b> |
|                                       | Jam nut receptacle                                           | Without (Fig.3)     | <b>UTS712E2P</b>   | <b>UTS712E2S</b>   |
| PCB contacts loaded                   | Square flange receptacle                                     | Without (Fig.2)     | <b>UTS012D2P</b>   | <b>UTS012D2S</b>   |
|                                       | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.5)     | <b>UTS712D2P32</b> | <b>UTS712D2S32</b> |
|                                       | Jam nut receptacle with stand off and without hold down clip | Without (Fig.4)     | <b>UTS712D2P</b>   | <b>UTS712D2S</b>   |

Sealed unmated



## Dimensions

### Square flange receptacle - UTS0

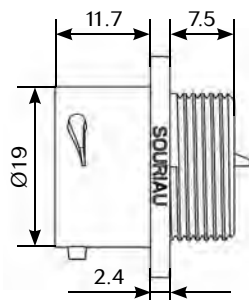


Fig. 1

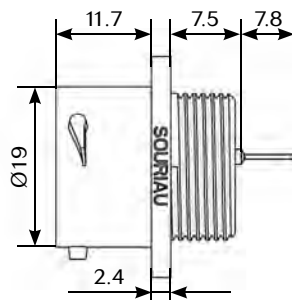
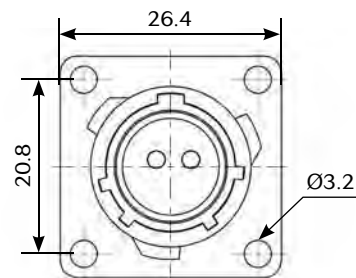


Fig. 2



Front view

### Jam nut receptacle - UTS7

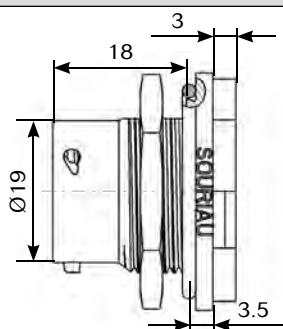


Fig. 3

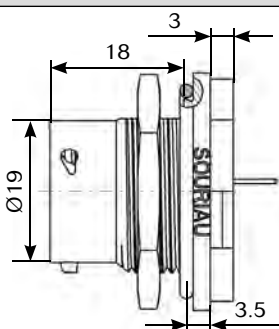


Fig. 4

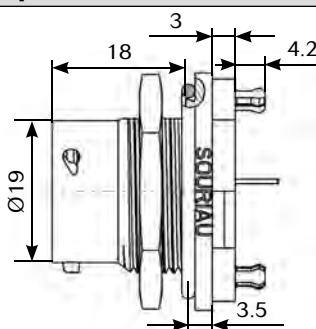
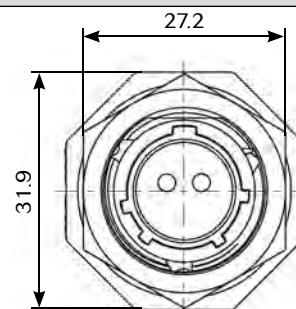


Fig. 5



Front view

### Plug - UTS6

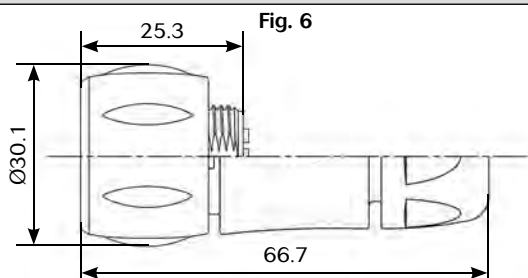
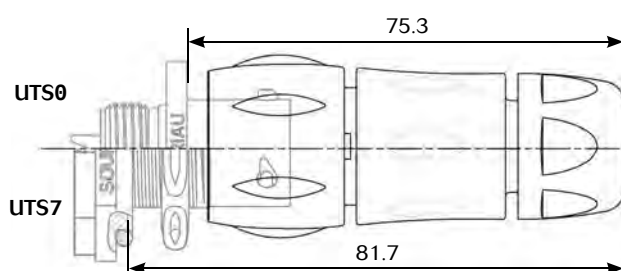


Fig. 6

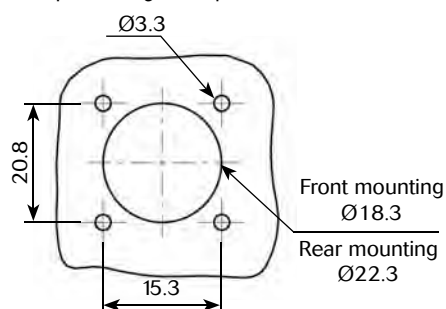
Fig. 7

### Mated connector length

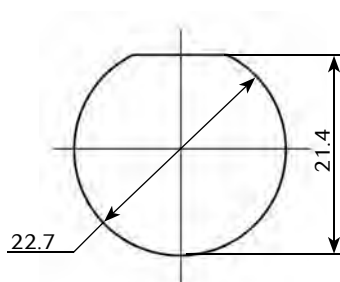


### Panel cut out

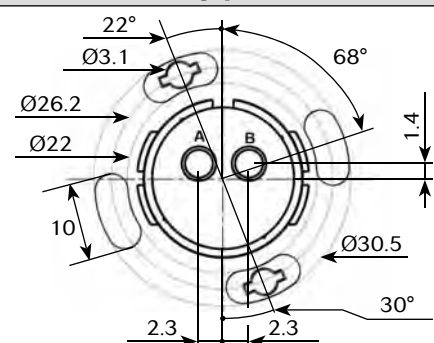
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



### Drilling pattern



Note: all dimensions are in mm

# UTS Series

## 12E2/12D2



### Accessories

#### Jam nut sealing caps



| Part number |
|-------------|
| UTS12DCG    |



Metal terminal

| Part number |
|-------------|
| UTS12DCGR   |

#### Plug sealing cap



| Part number |
|-------------|
| UTS612DCG   |

#### Square flange sealing cap



Metal terminal

| Part number |
|-------------|
| UTS12DCGE   |

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005587A      | 85005596 |

#### Gasket



| Part numbers / neoprene |
|-------------------------|
| UTFD13B                 |

#### Color coding rings

G for Green

Y for Yellow

R for Red



| Part numbers |            |
|--------------|------------|
| Receptacles  | Plugs      |
| UTS712CCRR   | UTS612CCRR |
| UTS712CCRY   | UTS612CCRY |
| UTS712CCRG   | UTS612CCRG |

\* Add G for Green, Y for Yellow, R for Red

#### Electrical characteristics

**UL**

13A 650V UL94 HB

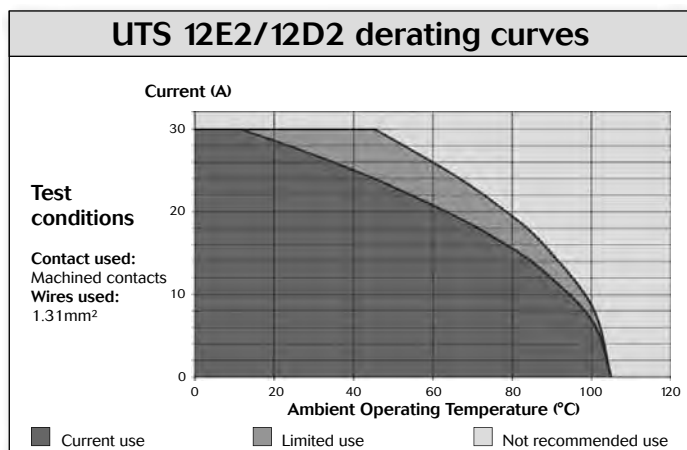
**CSA**

13A 650V UL94 HB

**IEC**

16A 150V 2.5kV 3



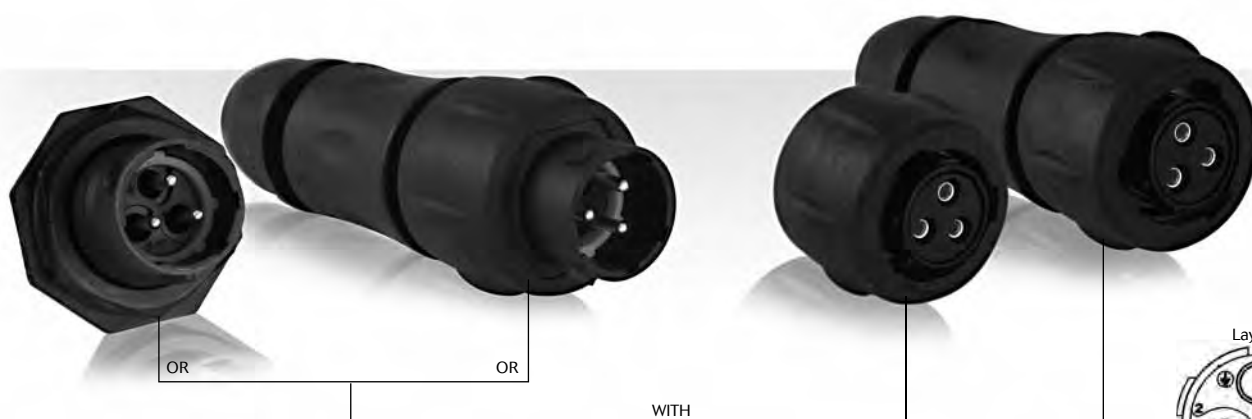
# UTS Series

## 12E2/12D2



# UTS Series

## 103



## Specifications

| Contact type                                 | Connector type          | Backshell           | Part number       |                   |
|----------------------------------------------|-------------------------|---------------------|-------------------|-------------------|
|                                              |                         |                     | Male insert       | Female insert     |
| Crimp contacts supply separately see page 31 | Free hanging receptacle | Cable gland (Fig.1) | <b>UTS1JC103P</b> | <b>UTS1JC103S</b> |
|                                              | Plug                    | Without (Fig.2)     | <b>UTS6103P</b>   | <b>UTS6103S</b>   |
|                                              |                         | Cable gland (Fig.3) | <b>UTS6JC103P</b> | <b>UTS6JC103S</b> |
| PCB contacts supply separately see page 31   | Jam nut receptacle      | Without (Fig.4)     | <b>UTS7103P</b>   | <b>UTS7103S</b>   |



## Dimensions

### Free hanging - UTS1

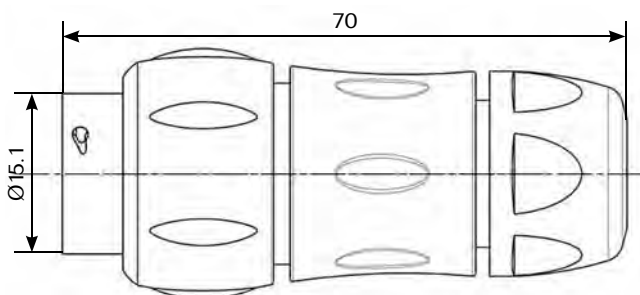


Fig. 1

### Plug - UTS6

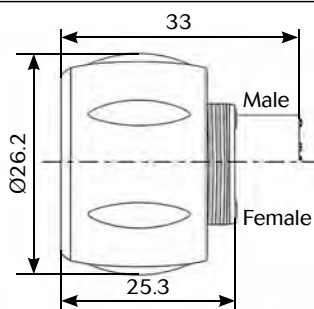


Fig. 2

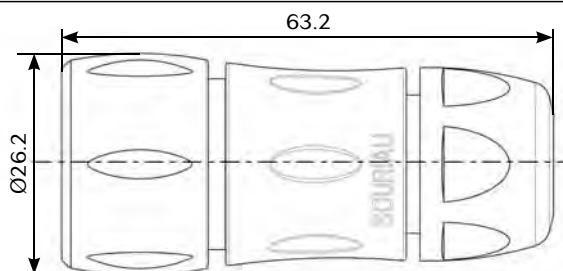


Fig. 3

### Jam nut receptacle - UTS7

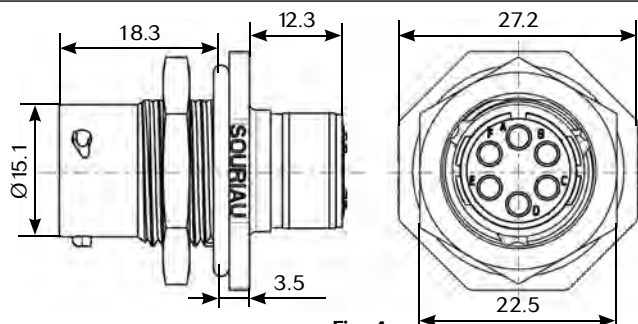
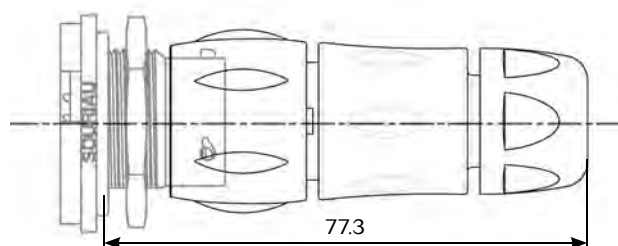


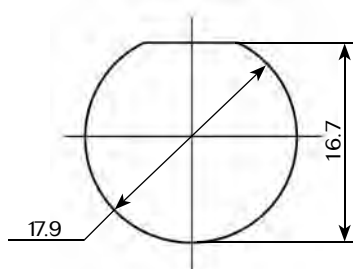
Fig. 4

### Mated connector length - UTS7

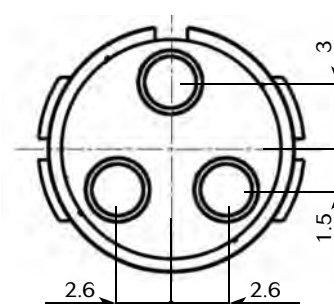


### Panel cut out

Jam nut receptacle - UTS7



### Drilling pattern



Note: all dimensions are in mm



### Accessories and tooling

#### Jam nut sealing caps



Part number  
UTS10DCG



Metal terminal

Part number  
UTS10DCGR

#### Handle



Part number  
SHANGLES

#### Tool kit



Part number  
TOOLKIT

#### Plug sealing cap



Part number  
UTS610DCG

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005586A      | 85005595 |

#### Gasket



Part numbers / neoprene  
UTFD12B

#### Crimp tooling



| Contacts                       | Contact size                        | Part number of head |
|--------------------------------|-------------------------------------|---------------------|
| RM/RC 28M1K <sup>(1)</sup>     | Standard contacts<br>#16<br>Ø 1.6mm | S16RCM20            |
| RM/RC 24M9K <sup>(1)</sup>     |                                     | S16RCM20            |
| RM/RC 20M13K <sup>(1)</sup>    |                                     | S16RCM20            |
| RM/RC 20M12K <sup>(1)</sup>    |                                     | S16RCM20            |
| RM/RC 16M23K <sup>(1)</sup>    |                                     | S16RCM16            |
| RM/RC 14M50K <sup>(1)</sup>    |                                     | S16RCM1450          |
| RM/RC 14M30K <sup>(1)</sup>    |                                     | S16RCM14            |
| SM/SC 24ML1TK6 <sup>(1)</sup>  |                                     | S16SCM20            |
| SM/SC 20ML1TK6 <sup>(1)</sup>  |                                     | S16SCM20            |
| SM/SC 16ML1TK6 <sup>(1)</sup>  |                                     | S16SCML1            |
| SM/SC 14ML1TK6 <sup>(1)</sup>  |                                     | S16SCML1            |
| SM/SC 16ML11TK6 <sup>(1)</sup> |                                     | S16SCML11           |
| RMDXK10D28K                    | Coaxial contacts                    | M10S-1J             |
| RCDXK1D28K                     |                                     | M10S-1J             |
| RM/RC DX60xxD28K               |                                     | M10S-1J             |
| RM/RC DXK10D28 + york090       |                                     | M10S-1J             |
| RM/RC DX60xxD28                |                                     | M10S-1J             |

(1): example of plating, for other plating see UTS catalog page 143

#### Color coding rings

G for Green



Y for Yellow

R for Red

| Part numbers |            |
|--------------|------------|
| Receptacles  | Plugs      |
| UTS710CCRR   | UTS610CCRR |
| UTS710CCRY   | UTS610CCRY |
| UTS710CCRG   | UTS610CCRG |

\* Add G for Green, Y for Yellow, R for Red



## Contacts

| #16         | Contact type                          | AWG   | Part number                  |                              | Max wire Ø | Max insulator Ø |
|-------------|---------------------------------------|-------|------------------------------|------------------------------|------------|-----------------|
|             |                                       |       | Male                         | Female                       |            |                 |
| Crimp       | Machined                              | 30-28 | RM28M1K <sup>(1)</sup>       | RC28M1K <sup>(1)</sup>       | 0.55       | 1.1             |
|             |                                       | 26-24 | RM24M9K <sup>(1)</sup>       | RC24M9K <sup>(1)</sup>       | 0.8        | 1.6             |
|             |                                       | 22-20 | RM20M13K <sup>(1)</sup>      | RC20M13K <sup>(1)</sup>      | 1.18       | 1.8             |
|             |                                       | 22-20 | RM20M12K <sup>(1)</sup>      | RC20M12K <sup>(1)</sup>      | 1.18       | 2.2             |
|             |                                       | 20-16 | RM16M23K <sup>(1)</sup>      | RC16M23K <sup>(1)</sup>      | 1.8        | 3.2             |
|             |                                       | 16-14 | RM14M50K <sup>(1)</sup>      | RC14M50K <sup>(1)</sup>      | 2.05       | 3.2             |
|             |                                       | 16-14 | RM14M30K <sup>(1)</sup>      | RC14M30K <sup>(1)</sup>      | 2.28       | 3.2             |
|             | Stamped & formed reeled contacts      | 26-24 | SM24M1TK6 <sup>(1)(2)</sup>  | SC24M1TK6 <sup>(1)(2)</sup>  | 0.89-1.28  | -               |
|             |                                       | 22-20 | SM20M1TK6 <sup>(1)(2)</sup>  | SC20M1TK6 <sup>(1)(2)</sup>  | 1.17-2.08  | -               |
|             |                                       | 18-16 | SM16M1TK6 <sup>(1)(2)</sup>  | SC16M1TK6 <sup>(1)(2)</sup>  | 3.0        | -               |
|             |                                       | 18-16 | SM16M11TK6 <sup>(1)(2)</sup> | SC16M11TK6 <sup>(1)(2)</sup> | 2.0-3.0    | -               |
|             |                                       | 14    | SM14M1TK6 <sup>(1)(2)</sup>  | SC14M1TK6 <sup>(1)(2)</sup>  | 3.2        | -               |
| PCB         | Machined <sup>(3)</sup>               | -     | RM20M12E8K <sup>(1)</sup>    | RC20M12E84K <sup>(1)</sup>   | -          | -               |
| Coaxial     | Cable Multipiece                      | -     | RMDXK10D28                   | RCDXK1D28                    | -          | -               |
|             | Cable Monocrimp                       | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
|             | Twisted pair Multipiece               | -     | RMDXK10D28 + york090         | RCDXK1D28 + york090          | -          | -               |
|             | Twisted pair Monocrimp                | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
| Fiber optic | POF contacts<br>Plastic optical fibre | -     | RMPOF1000                    | RCPOF1000B                   | -          | -               |

(1): Example of plating, for other plating see page 143

(2): Loose piece contact available if putting L. Example: SM20ML1-TK6

(3): For dimensions see page 148

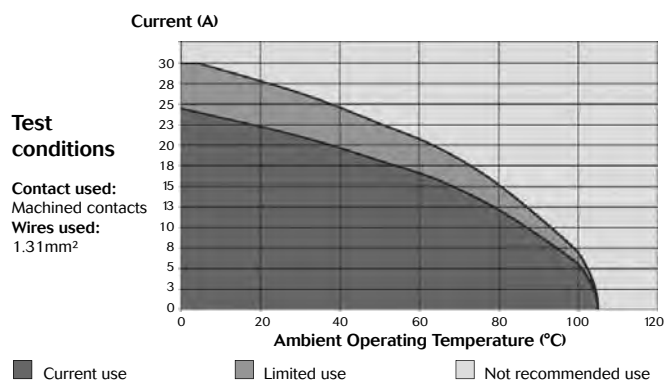
### Electrical characteristics

**UL**  
10A 500V UL94 V-0

**CSA**  
7A 500V UL94 V-0

**IEC**  
16A 300V 4kV 3  
Temperature elevation: 50°C

### UTS 103 derating curves



# UTS Series 142G1



## Specifications

| Contact type                                   | Connector type           | Backshell            | Part number         |                      |
|------------------------------------------------|--------------------------|----------------------|---------------------|----------------------|
|                                                |                          |                      | Male insert         | Female insert        |
| Crimp contacts supplied separately see page 35 | Square flange receptacle | Without (Fig. 1)     | <b>UTS0142G1P</b>   |                      |
|                                                | Free hanging receptacle  | Cable gland (Fig. 6) | <b>UTS1JC142G1P</b> | <b>UTS1JC142G1S</b>  |
|                                                | Plug                     | Without (Fig. 3)     | <b>UTS6142G1P</b>   | <b>UTS6142G1S</b>    |
|                                                |                          | Cable gland (Fig. 4) | <b>UTS6JC142G1P</b> | <b>UTS6JC142G1S</b>  |
|                                                | Jam nut receptacle       | Without (Fig. 2)     | <b>UTS7142G1P</b>   | <b>UTS7142G1S</b>    |
|                                                | NPT threaded receptacle  | Without (Fig. 5)     |                     | <b>UTS7142G1SNPT</b> |

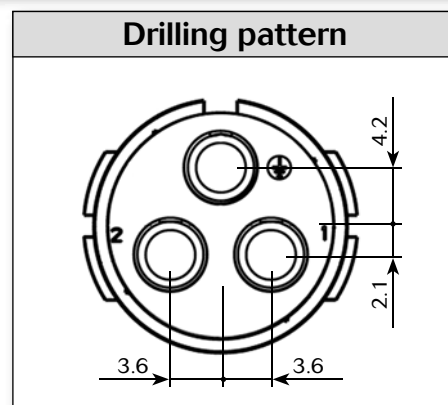
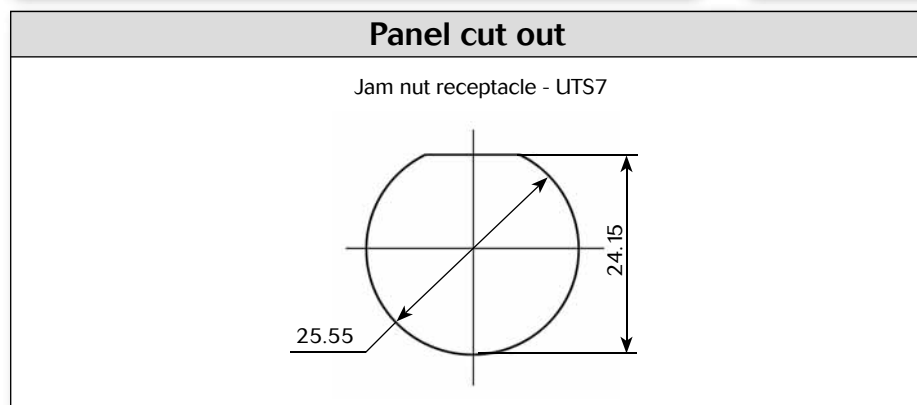
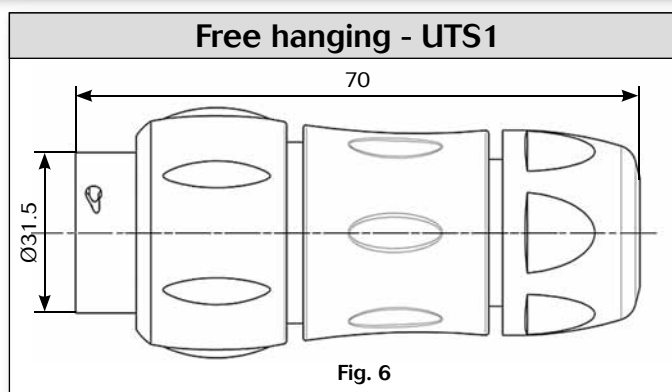
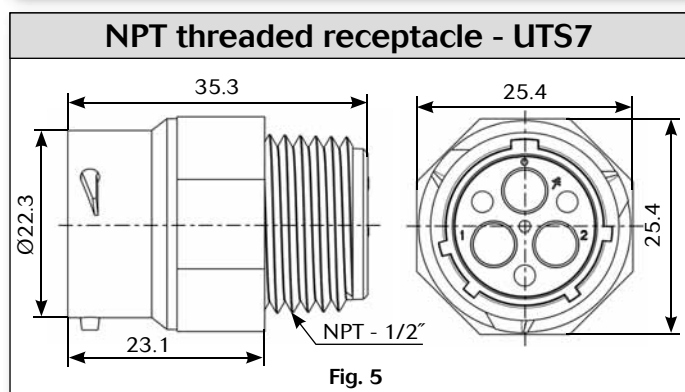
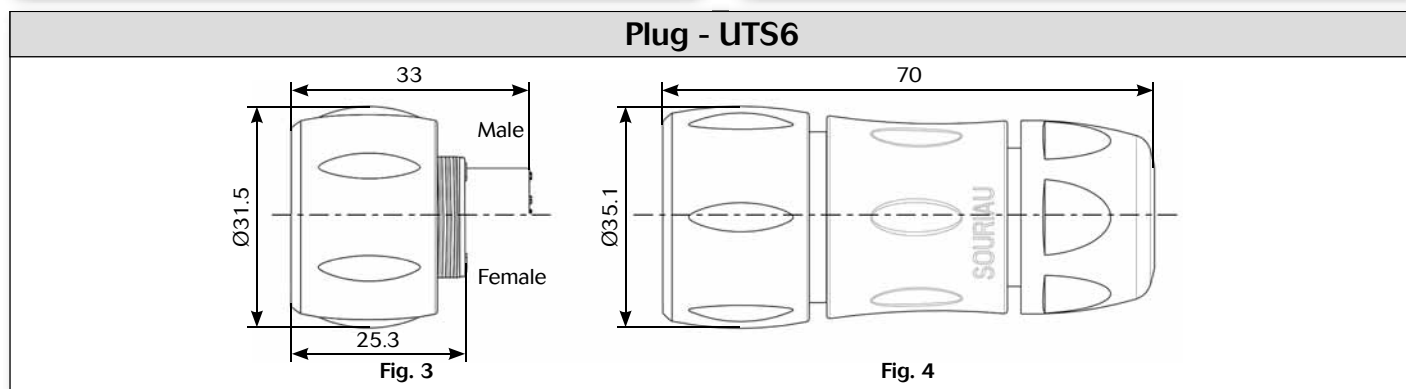
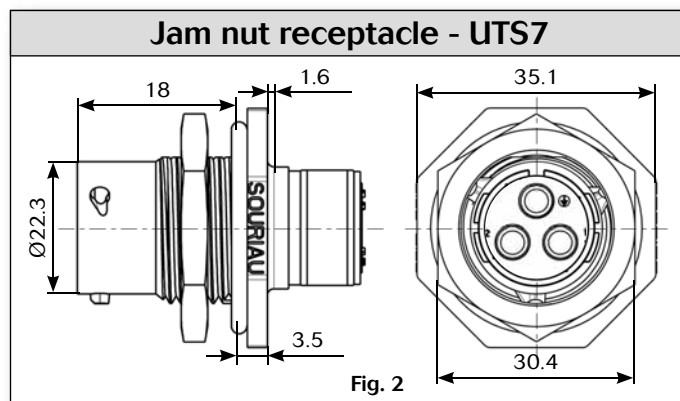
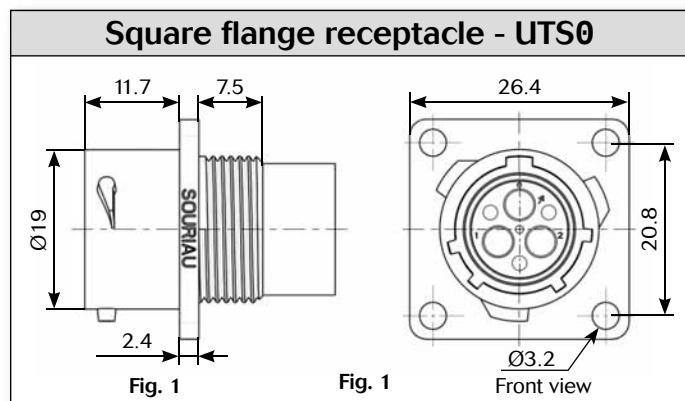
# UTS Series

## 142G1



2 + ground  
40A/300V  
per IEC 61984

## Dimensions



Note: all dimensions are in mm

# UTS Series 142G1



## Accessories and tooling

### Jam nut sealing caps



|             |
|-------------|
| Part number |
| UTS14DCG    |



Metal terminal

|             |
|-------------|
| Part number |
| UTS14DCGR   |

### Hand tool



|             |
|-------------|
| Part number |
| M317        |

### Plug sealing cap



|             |
|-------------|
| Part number |
| UTS614DCG   |

### Positioner + locator setting



|             |
|-------------|
| Part number |
| VGE10078A   |

### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005588A      | 85005597 |

### Gasket



|                         |
|-------------------------|
| Part numbers / neoprene |
| UTFD14B                 |

### Extraction tool



|             |
|-------------|
| Part number |
| 51060210936 |

### Color coding rings

G for Green



Y for Yellow



R for Red

| Part numbers |            |
|--------------|------------|
| Receptacles  | Plugs      |
| UTS714CCRR   | UTS614CCRR |
| UTS714CCRY   | UTS614CCRY |
| UTS714CCRG   | UTS614CCRG |

\* Add G for Green, Y for Yellow, R for Red

# UTS Series

## 142G1



**2 + ground**  
**40A/300V**  
per IEC 61984

### Contacts

| #8    | Contact type | AWG | Part number              |                          | Max wire Ø | Max insulator Ø |
|-------|--------------|-----|--------------------------|--------------------------|------------|-----------------|
|       |              |     | Male                     | Female                   |            |                 |
| Crimp | Machined     | 16  | 82913601A <sup>(1)</sup> | 82913600A <sup>(1)</sup> | -          | 6.5             |
|       |              | 14  | 82913603A <sup>(1)</sup> | 82913602A <sup>(1)</sup> | -          |                 |
|       |              | 12  | 82913605A <sup>(1)</sup> | 82913604A <sup>(1)</sup> | -          |                 |
|       |              | 10  | 82913607A <sup>(1)</sup> | 82913606A <sup>(1)</sup> | -          |                 |
|       |              | 8   | 82913609A <sup>(1)</sup> | 82913608A <sup>(1)</sup> | -          |                 |

(1): Example of plating, for other plating see page 143

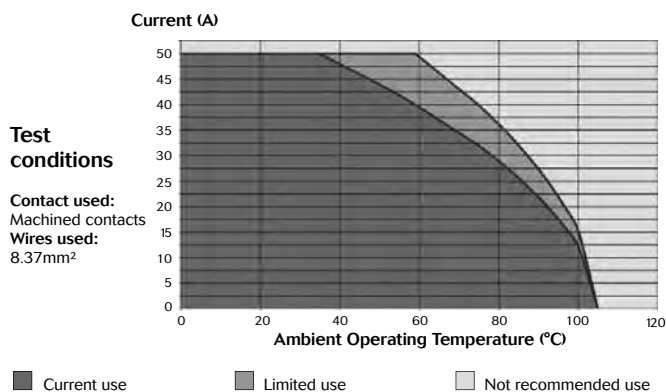
### Electrical characteristics

**UL**  
 44A 600V UL94 V-0

**CSA**  
 30A 600V UL94 V-0

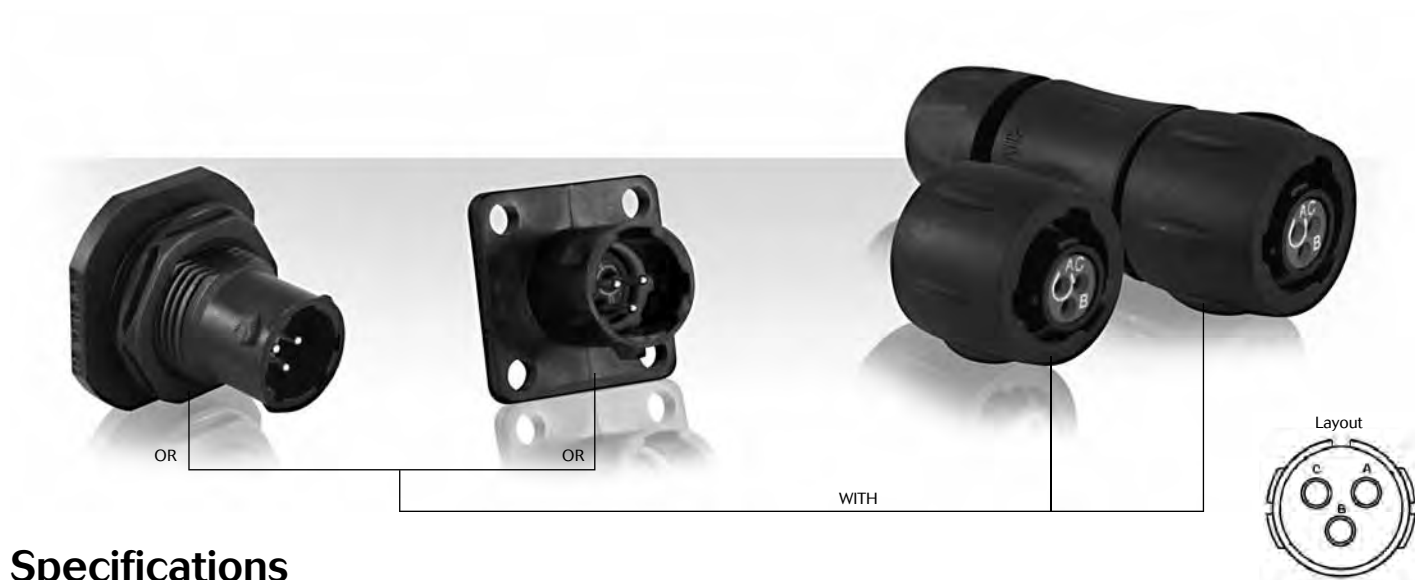
**IEC**  
 40A 300V 4kV 3

### UTS 142G1 derating curves



# UTS Series

## 8E3/8D3



## Specifications

| Contact type                          | Connector type                                               | Backshell           | Part number       |                   |
|---------------------------------------|--------------------------------------------------------------|---------------------|-------------------|-------------------|
|                                       |                                                              |                     | Male insert       | Female insert     |
| Handsolder electrical contacts loaded | Square flange receptacle                                     | Without (Fig.1)     | <b>UTS08E3P</b>   | <b>UTS08E3S</b>   |
|                                       | Plug                                                         | Without (Fig.6)     | <b>UTS68E3P</b>   | <b>UTS68E3S</b>   |
|                                       |                                                              | Cable gland (Fig.7) | <b>UTS6JC8E3P</b> | <b>UTS6JC8E3S</b> |
|                                       | Jam nut receptacle                                           | Without (Fig.3)     | <b>UTS78E3P</b>   | <b>UTS78E3S</b>   |
| PCB contacts loaded                   | Square flange receptacle                                     | Without (Fig.2)     | <b>UTS08D3P</b>   | <b>UTS08D3S</b>   |
|                                       | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.5)     | <b>UTS78D3P32</b> | <b>UTS78D3S32</b> |
|                                       | Jam nut receptacle with stand off and without hold down clip | Without (Fig.4)     | <b>UTS78D3P</b>   | <b>UTS78D3S</b>   |

Sealed unmated



## Dimensions

### Square flange receptacle - UTS0

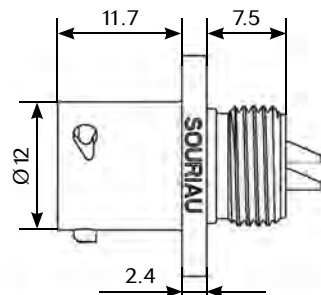


Fig. 1

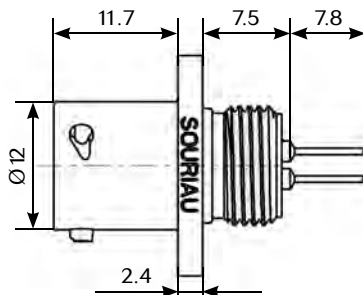
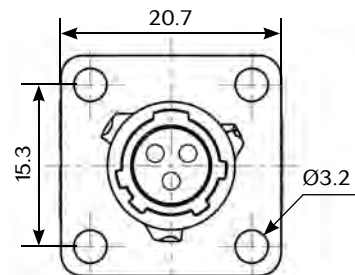


Fig. 2



Front view

### Jam nut receptacle - UTS7

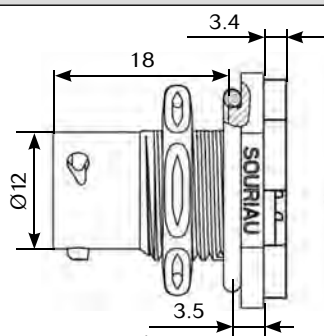


Fig. 3

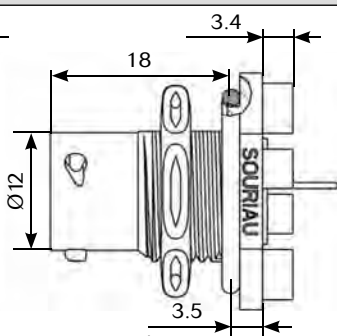


Fig. 4

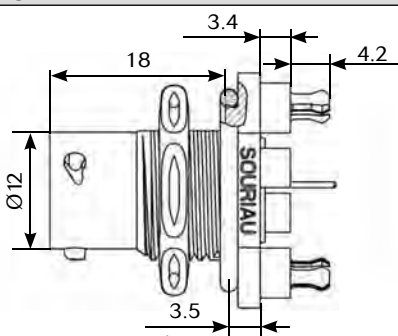
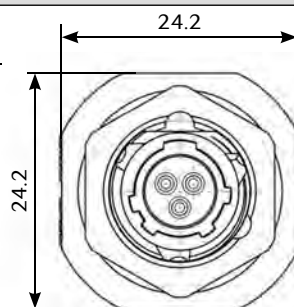


Fig. 5



Front view

### Plug - UTS6

Fig. 6

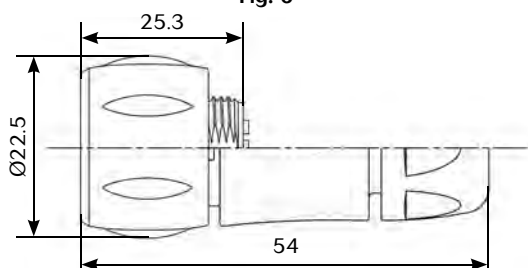
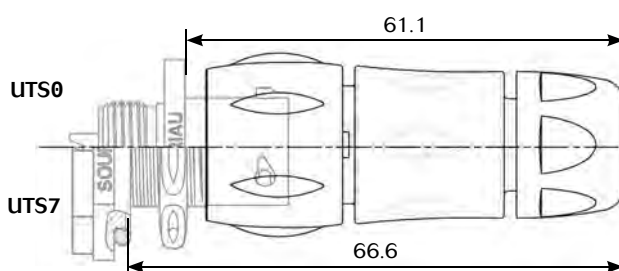


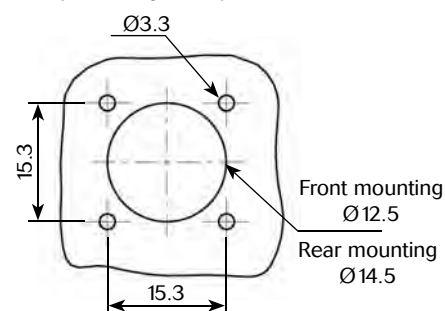
Fig. 7

### Mated connector length

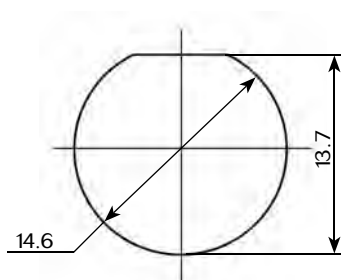


### Panel cut out

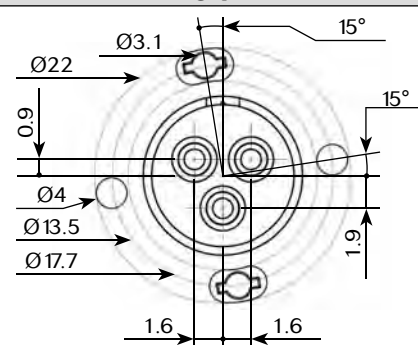
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



### Drilling pattern



Note: all dimensions are in mm

# UTS Series 8E3/8D3



## Accessories

### Jam nut sealing caps



| Part number |
|-------------|
| UTS8DCG     |



Metal terminal

| Part number |
|-------------|
| UTS8DCGR    |

### Square flange sealing cap



Metal terminal

| Part number |
|-------------|
| UTS8DCGE    |

### Plug protective cap



IP40

| Part number |
|-------------|
| UTS68C      |

### Plastic protective cap



#### Part numbers

| Receptacle cap | Plug cap |
|----------------|----------|
| 85005585A      | 85005594 |

### Gasket



#### Part numbers / neoprene

|         |
|---------|
| UTFD11B |
|---------|

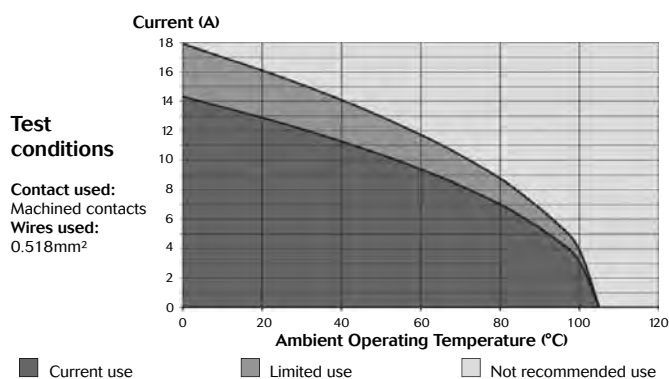
### Electrical characteristics

**UL**  
7A 250V UL94 HB

**CSA**  
7A 250V UL94 HB

**IEC**  
7A 32V 1.5kV 3

### UTS 8E3/8D3 derating curves



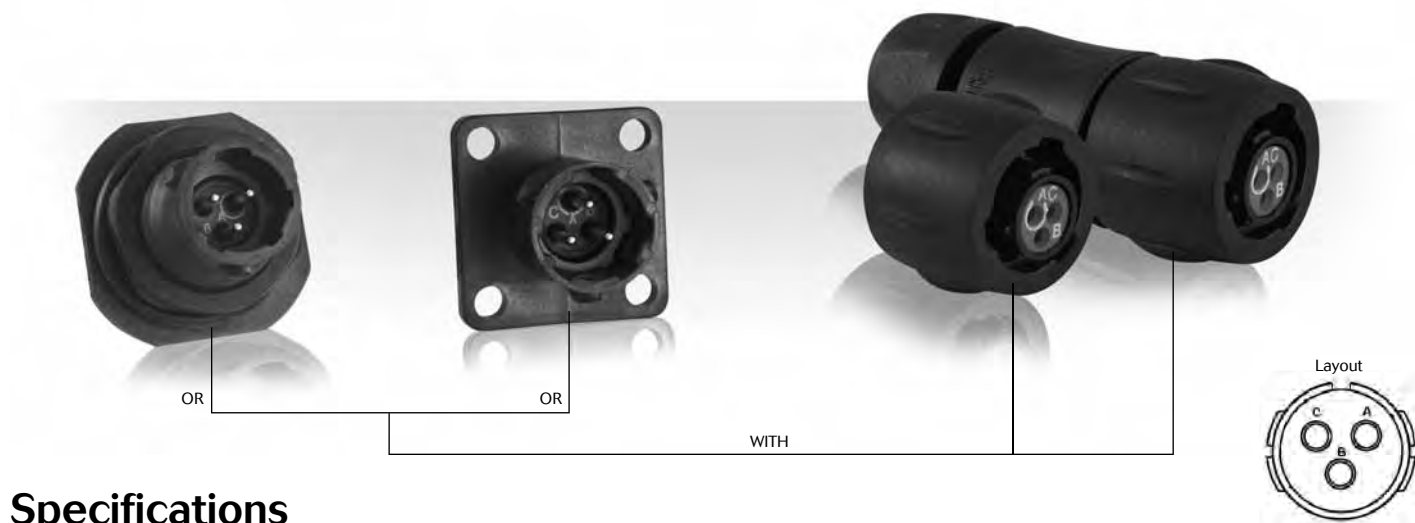
# UTS Series

## 8E3/8D3



# UTS Series

## 8E3A/8E98 - 8D3A/8D98



## Specifications

| Contact type                           | Connector type                                               | Backshell           | Part number |               |
|----------------------------------------|--------------------------------------------------------------|---------------------|-------------|---------------|
|                                        |                                                              |                     | Male insert | Female insert |
| Hand solder electrical contacts loaded | Square flange receptacle                                     | Without (Fig.1)     | UTS08E3AP   | UTS08E3AS     |
|                                        |                                                              |                     | UTS08E98P   | UTS08E98S     |
|                                        | Plug                                                         | Without (Fig.6)     | UTS68E3AP   | UTS68E3AS     |
|                                        |                                                              |                     | UTS68E98P   | UTS68E98S     |
|                                        |                                                              | Cable gland (Fig.7) | UTS6JC8E3AP | UTS6JC8E3AS   |
|                                        |                                                              |                     | UTS6JC8E98P | UTS6JC8E98S   |
|                                        | Jam nut receptacle                                           | Without (Fig.3)     | UTS78E3AP   | UTS78E3AS     |
|                                        |                                                              |                     | UTS78E98P   | UTS78E98S     |
| PCB contacts loaded                    | Square flange receptacle                                     | Without (Fig.2)     | UTS08D3AP   | UTS08D3AS     |
|                                        |                                                              |                     | UTS08D98P   | UTS08D98S     |
|                                        | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.5)     | UTS78D3AP32 | UTS78D3AS32   |
|                                        |                                                              |                     | UTS78D98P32 | UTS78D98S32   |
|                                        | Jam nut receptacle with stand off and without hold down clip | Without (Fig.4)     | UTS78D3AP   | UTS78D3AS     |
|                                        |                                                              |                     | UTS78D98P   | UTS78D98S     |

Sealed unmatred

# UTS Series

## 8E3A/8E98 - 8D3A/8D98



3 contacts  
7A/50V  
per IEC 61984

## Dimensions

### Square flange receptacle - UTS0

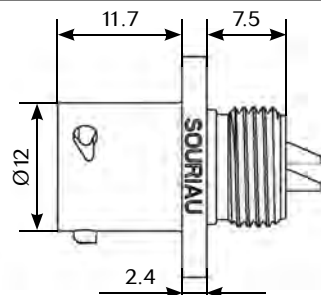


Fig. 1

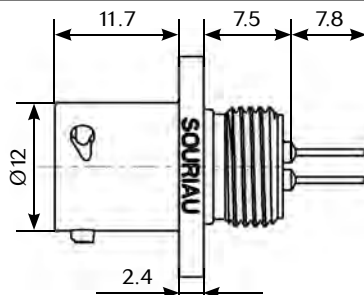
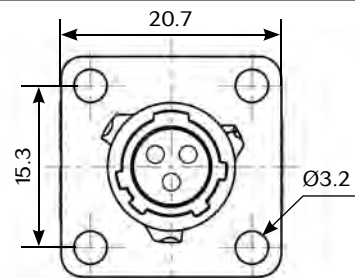


Fig. 2



Front view

### Jam nut receptacle - UTS7

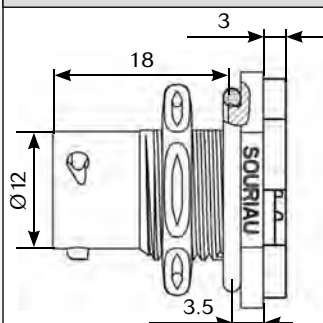


Fig. 3

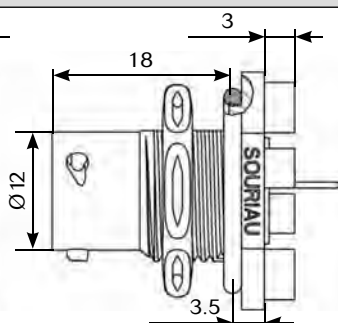


Fig. 4

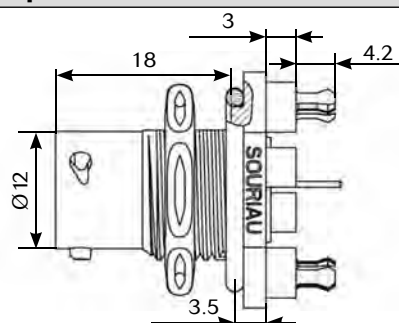
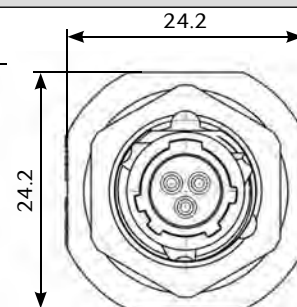


Fig. 5



Front view

### Plug - UTS6

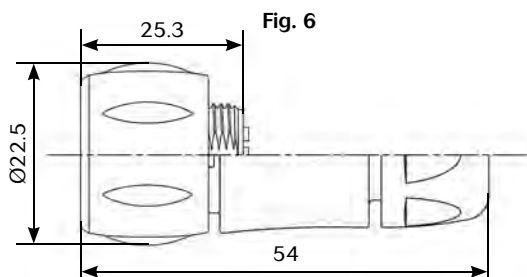
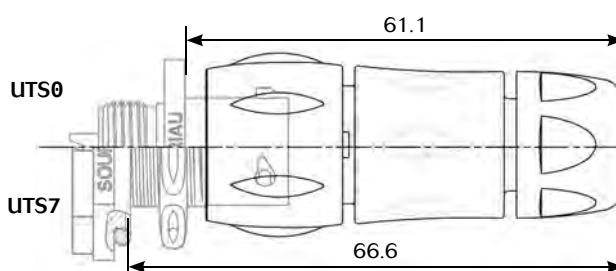


Fig. 6



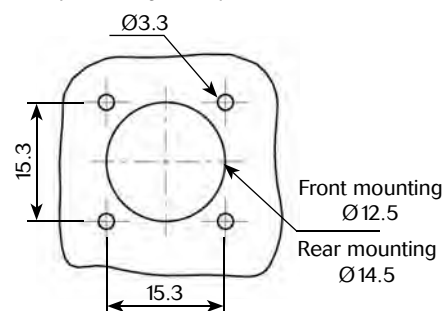
Fig. 7

### Mated connector length

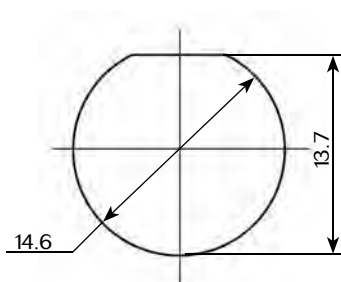


### Panel cut out

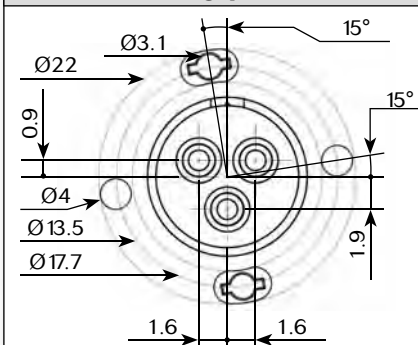
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



### Drilling pattern



Note: all dimensions are in mm

# UTS Series

## 8E3A/8E98 - 8D3A/8D98



### Accessories

#### Jam nut sealing caps



| Part number |
|-------------|
| UTS8DCG     |



Metal terminal

| Part number |
|-------------|
| UTS8DCGR    |

#### Square flange sealing cap



Metal terminal

| Part number |
|-------------|
| UTS8DCGE    |

#### Plug protective cap



IP40

| Part number |
|-------------|
| UTS68C      |

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005585A      | 85005594 |

#### Gasket



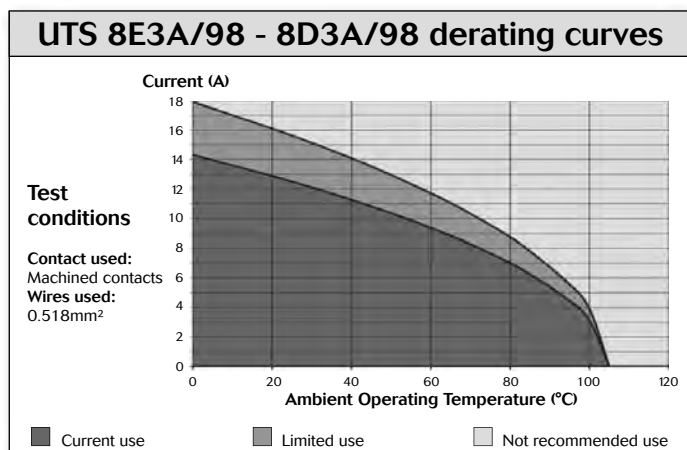
| Part numbers / neoprene |
|-------------------------|
| UTFD11B                 |

#### Electrical characteristics

**UL**  
7A 250V UL94 HB

**CSA**  
7A 250V UL94 HB

**IEC**  
7A 50V 1.5kV 3



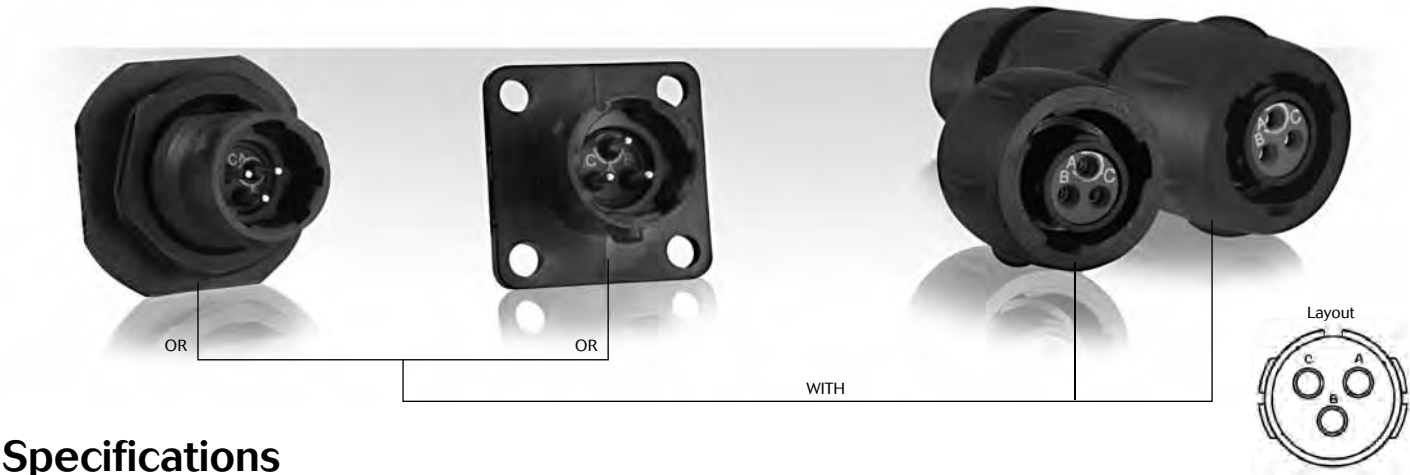
# UTS Series

8E3A/8E98 - 8D3A/8D98



# UTS Series

## 8E33/8D33



### Specifications

| Contact type                          | Connector type                                               | Backshell           | Part number |               |
|---------------------------------------|--------------------------------------------------------------|---------------------|-------------|---------------|
|                                       |                                                              |                     | Male insert | Female insert |
| Handsolder electrical contacts loaded | Square flange receptacle                                     | Without (Fig.1)     | UTS08E33P   | UTS08E33S     |
|                                       | Plug                                                         | Without (Fig.6)     | UTS68E33P   | UTS68E33S     |
|                                       |                                                              | Cable gland (Fig.7) | UTS6JC8E33P | UTS6JC8E33S   |
|                                       | Jam nut receptacle                                           | Without (Fig.3)     | UTS78E33P   | UTS78E33S     |
| PCB contacts loaded                   | Square flange receptacle                                     | Without (Fig.2)     | UTS08D33P   | UTS08D33S     |
|                                       | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.5)     | UTS78D33P32 | UTS78D33S32   |
|                                       | Jam nut receptacle with stand off and without hold down clip | Without (Fig.4)     | UTS78D33P   | UTS78D33S     |

Sealed unmated



## Dimensions

### Square flange receptacle - UTS0

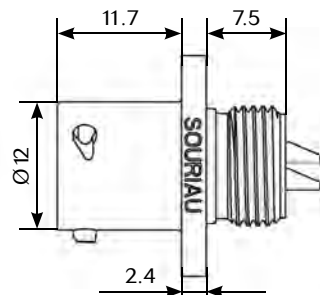


Fig. 1

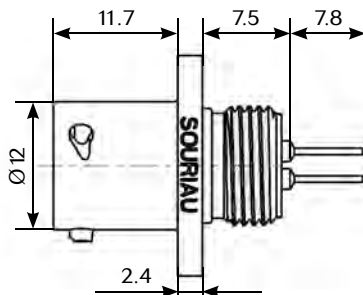
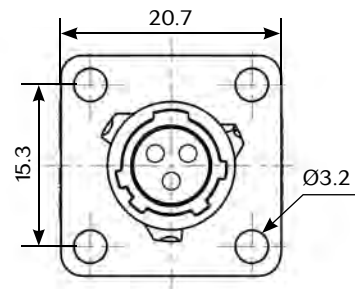


Fig. 2



Front view

### Jam nut receptacle - UTS7

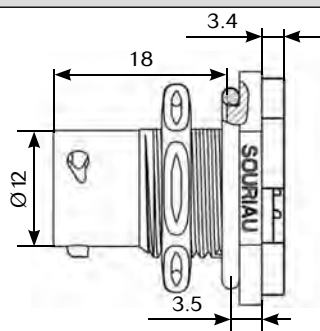


Fig. 3

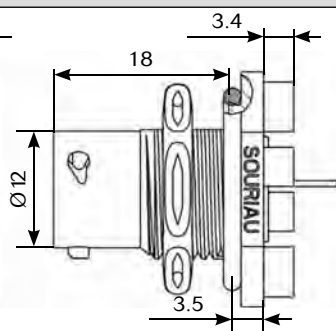


Fig. 4

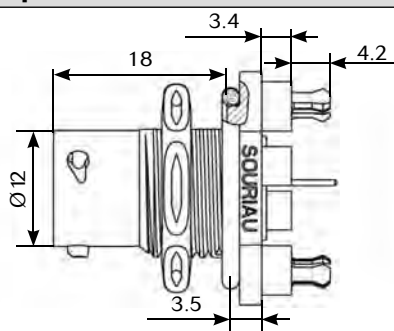
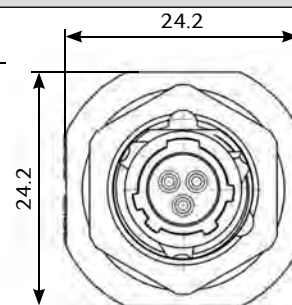


Fig. 5



Front view

### Plug - UTS6

Fig. 6

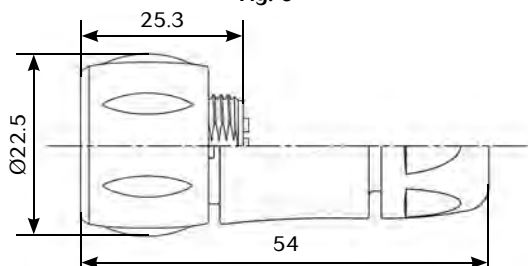
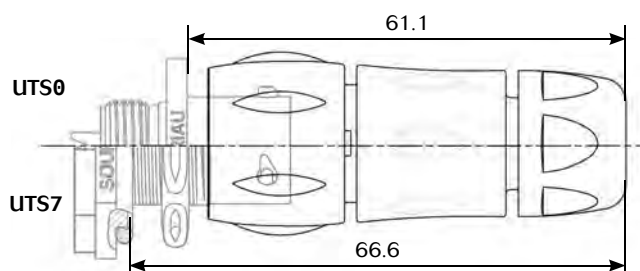


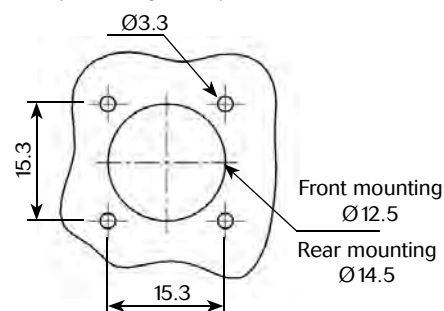
Fig. 7

### Mated connector length

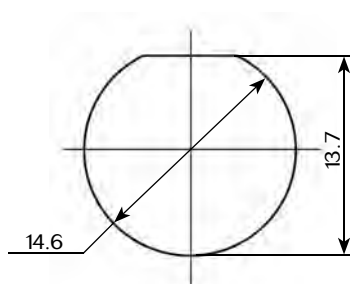


### Panel cut out

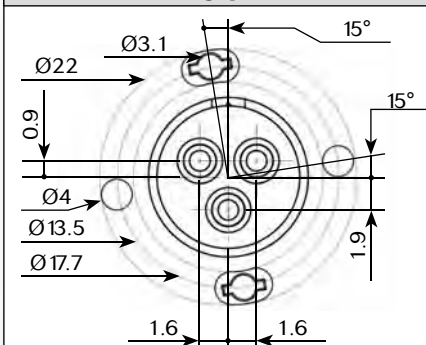
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



### Drilling pattern



Note: all dimensions are in mm

# UTS Series

## 8E33/8D33



### Accessories

#### Jam nut sealing caps



| Part number |
|-------------|
| UTS8DCG     |



Metal terminal

| Part number |
|-------------|
| UTS8DCGR    |

#### Square flange sealing cap



Metal terminal

| Part number |
|-------------|
| UTS8DCGE    |

#### Plug protective cap



IP40

| Part number |
|-------------|
| UTS68C      |

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005585A      | 85005594 |

#### Gasket



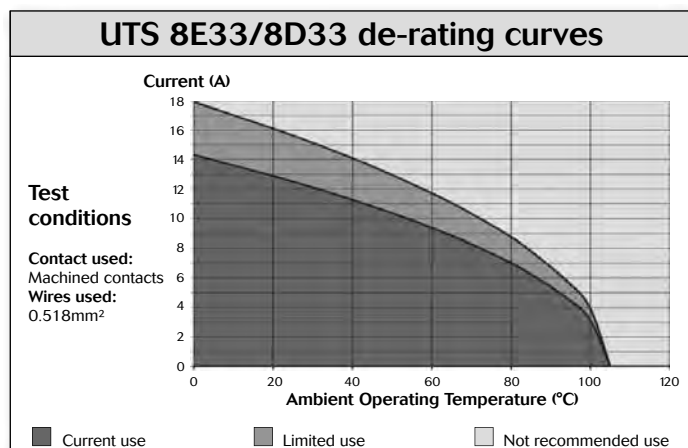
| Part numbers / neoprene |
|-------------------------|
| UTFD11B                 |

#### Electrical characteristics

**UL**  
7A 250V UL94 HB

**CSA**  
7A 250V UL94 HB

**IEC**  
7A 50V 1.5kV 3



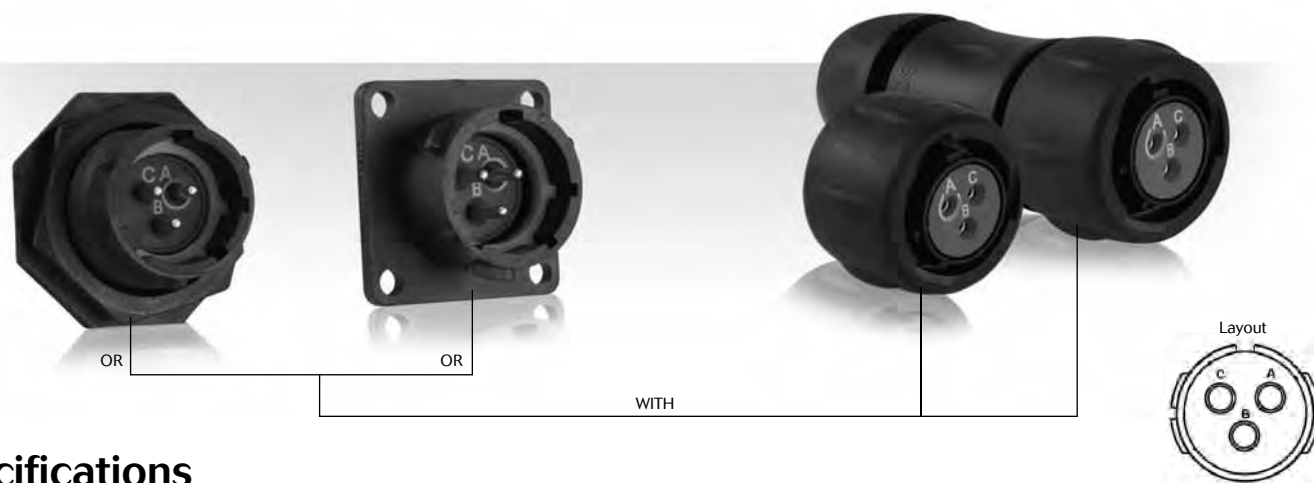
# UTS Series

## 8E33/8D33



# UTS Series

## 12E3/12D3



## Specifications

| Contact type                          | Connector type                                               | Backshell           | Part number        |                    |
|---------------------------------------|--------------------------------------------------------------|---------------------|--------------------|--------------------|
|                                       |                                                              |                     | Male insert        | Female insert      |
| Handsolder electrical contacts loaded | Square flange receptacle                                     | Without (Fig.6)     | <b>UTS012E3P</b>   | <b>UTS012E3S</b>   |
|                                       | Plug                                                         | Without (Fig.1)     | <b>UTS612E3P</b>   | <b>UTS612E3S</b>   |
|                                       |                                                              | Cable gland (Fig.2) | <b>UTS6JC12E3P</b> | <b>UTS6JC12E3S</b> |
|                                       | Jam nut receptacle                                           | Without (Fig.3)     | <b>UTS712E3P</b>   | <b>UTS712E3S</b>   |
| PCB contacts loaded                   | Square flange receptacle                                     | Without (Fig.7)     | <b>UTS012D3P</b>   | <b>UTS012D3S</b>   |
|                                       | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.5)     | <b>UTS712D3P32</b> | <b>UTS712D3S32</b> |
|                                       | Jam nut receptacle with stand off and without hold down clip | Without (Fig.4)     | <b>UTS712D3P</b>   | <b>UTS712D3S</b>   |

Sealed unmated



## Dimensions

### Plug - UTS6

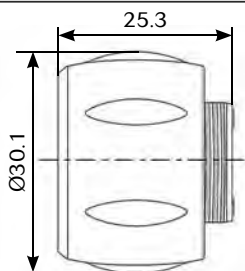


Fig. 1

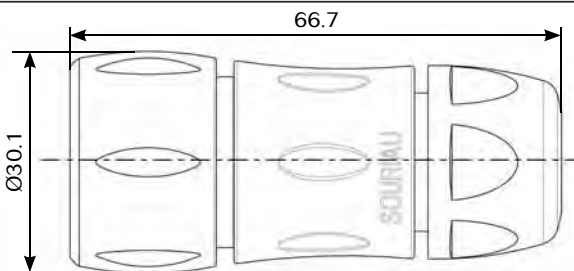


Fig. 2

### Jam nut receptacle - UTS7

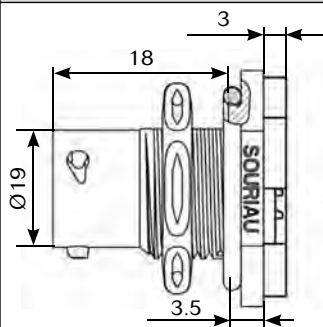


Fig. 3

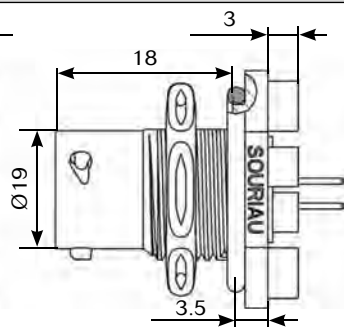


Fig. 4

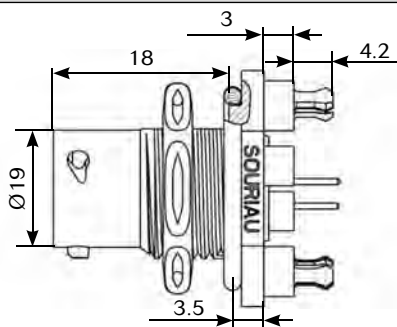
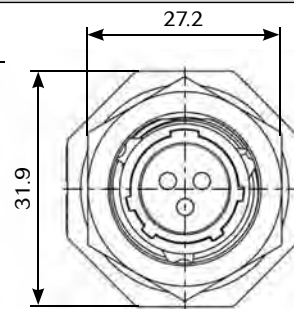


Fig. 5



Front view

### Square flange receptacle - UTS0

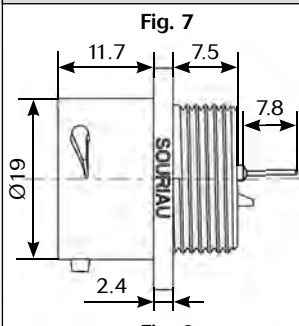
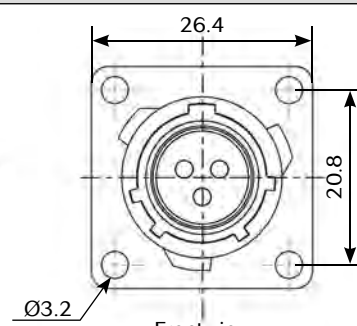
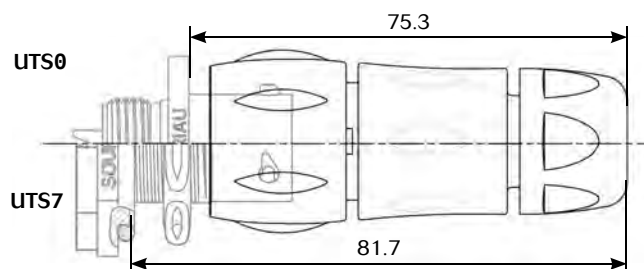


Fig. 6



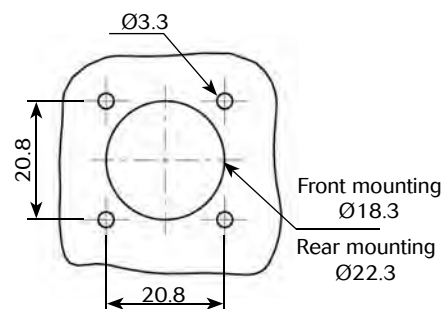
Front view

### Mated connector length

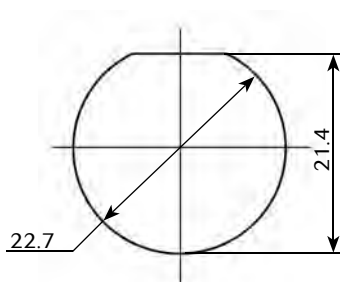


### Panel cut out

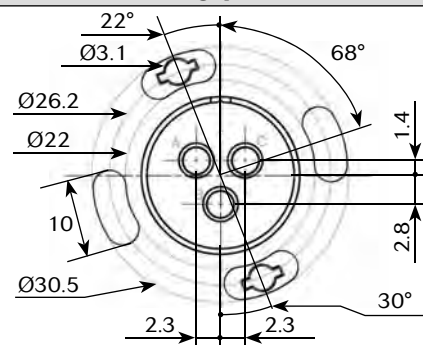
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



### Drilling pattern



Note: all dimensions are in mm

# UTS Series

## 12E3/12D3



### Accessories

#### Jam nut sealing caps



| Part number |
|-------------|
| UTS12DCG    |



Metal terminal

| Part number |
|-------------|
| UTS12DCGR   |

#### Plug sealing cap



| Part number |
|-------------|
| UTS612DCG   |

#### Square flange sealing cap



Metal terminal

| Part number |
|-------------|
| UTS12DCGE   |

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005587A      | 85005596 |

#### Gasket



| Part numbers / neoprene |
|-------------------------|
| UTFD13B                 |

#### Color coding rings

G for Green

Y for Yellow

R for Red



| Part numbers |            |
|--------------|------------|
| Receptacles  | Plugs      |
| UTS712CCR    | UTS612CCR  |
| UTS712CCRY   | UTS612CCRY |
| UTS712CCRG   | UTS612CCRG |

\* Add G for Green, Y for Yellow, R for Red

#### Electrical characteristics

**UL**

13A 650V UL94 HB

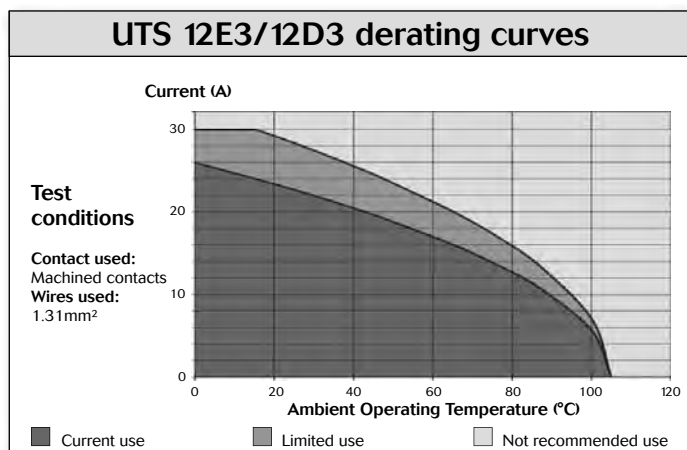
**CSA**

13A 650V UL94 HB

**IEC**

16A 150V 2.5kV 3



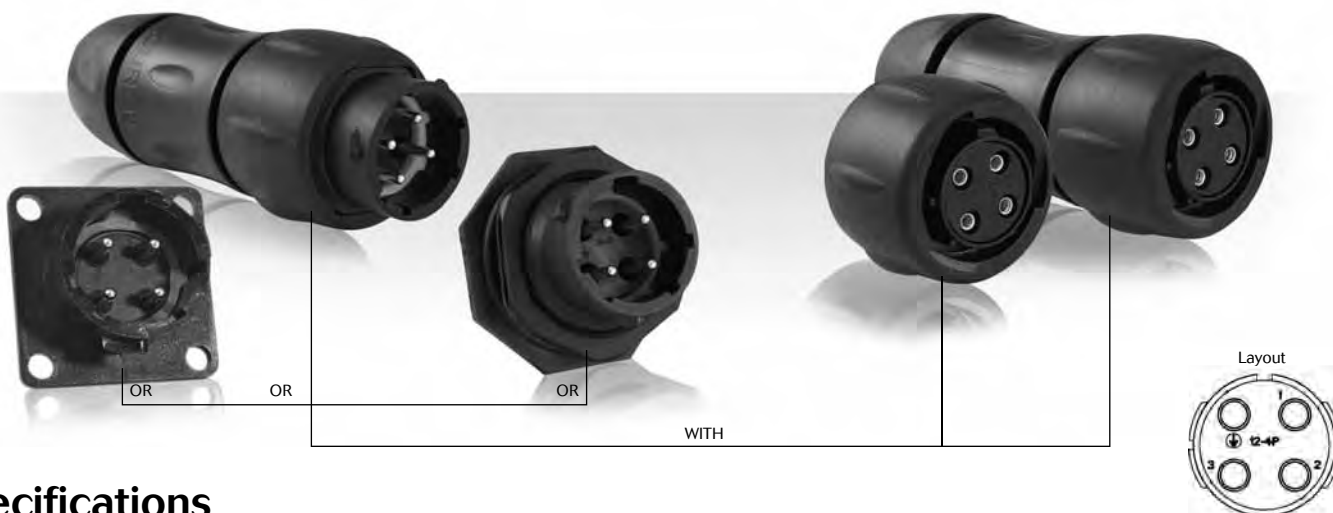
# UTS Series

## 12E3/12D3



# UTS Series

## 124 - 12E4/12D4



## Specifications

| Contact type                                 | Connector type                                               | Backshell            | Part number          |                      |
|----------------------------------------------|--------------------------------------------------------------|----------------------|----------------------|----------------------|
|                                              |                                                              |                      | Male insert          | Female insert        |
| Crimp contacts supply separately see page 55 | Square flange receptacle                                     | Without (Fig.1)      | <b>UTS0124P</b>      |                      |
|                                              | Jam nut receptacle                                           | Without (Fig.5)      | <b>UTS7124P</b>      | <b>UTS7124S</b>      |
|                                              | Free hanging receptacle                                      | Cable gland (Fig.13) | <b>UTS1JC124P</b>    | <b>UTS1JC124S</b>    |
|                                              | Plug                                                         | Without (Fig.11)     | <b>UTS6124P</b>      | <b>UTS6124S</b>      |
|                                              |                                                              | Cable gland (Fig.12) | <b>UTS6JC124P</b>    | <b>UTS6JC124S</b>    |
| Hand solder electrical contacts loaded       | Square flange receptacle                                     | Without (Fig.3)      | <b>UTS012E4P</b>     | <b>UTS012E4S</b>     |
|                                              | Jam nut receptacle                                           | Without (Fig.10)     | <b>UTS712E4P</b>     | <b>UTS712E4S</b>     |
|                                              | Plug                                                         | Without (Fig.11)     | <b>UTS612E4P</b>     | <b>UTS612E4S</b>     |
|                                              | Plug                                                         | Cable gland (Fig.12) | <b>UTS6JC12E4P</b>   | <b>UTS6JC12E4S</b>   |
| Screw contacts loaded                        | Jam nut receptacle                                           | Without (Fig.7 & 8)  | <b>UTS7124PSCR</b>   | <b>UTS7124SSCR</b>   |
|                                              | Plug                                                         | Without (Fig.11)     | <b>UTS6124PSCR</b>   | <b>UTS6124SSCR</b>   |
|                                              |                                                              | Cable gland (Fig.12) | <b>UTS6JC124PSCR</b> | <b>UTS6JC124SSCR</b> |
|                                              | Free hanging receptacle                                      | Cable gland (Fig.13) | <b>UTS1JC124PSCR</b> |                      |
| PCB contacts supply separately see page 55   | Square flange receptacle                                     | Without (Fig.4)      | <b>UTS0124P</b>      |                      |
|                                              | Jam nut receptacle                                           | Without (Fig.6)      | <b>UTS7124P</b>      | <b>UTS7124S</b>      |
| PCB contacts loaded                          | Square flange receptacle                                     | Without (Fig.2)      | <b>UTS012D4P</b>     | <b>UTS012D4S</b>     |
|                                              | Jam nut receptacle with stand off and without hold down clip | Without (Fig.9)      | <b>UTS712D4P</b>     | <b>UTS712D4S</b>     |
|                                              | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.9)      | <b>UTS712D4P32</b>   | <b>UTS712D4S32</b>   |

Sealed unmatred

# UTS Series

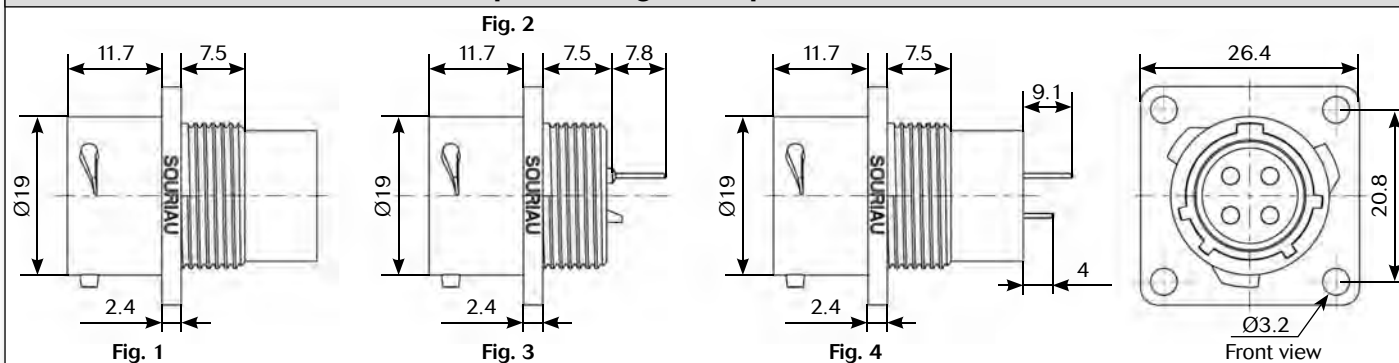
## 124 - 12E4/12D4



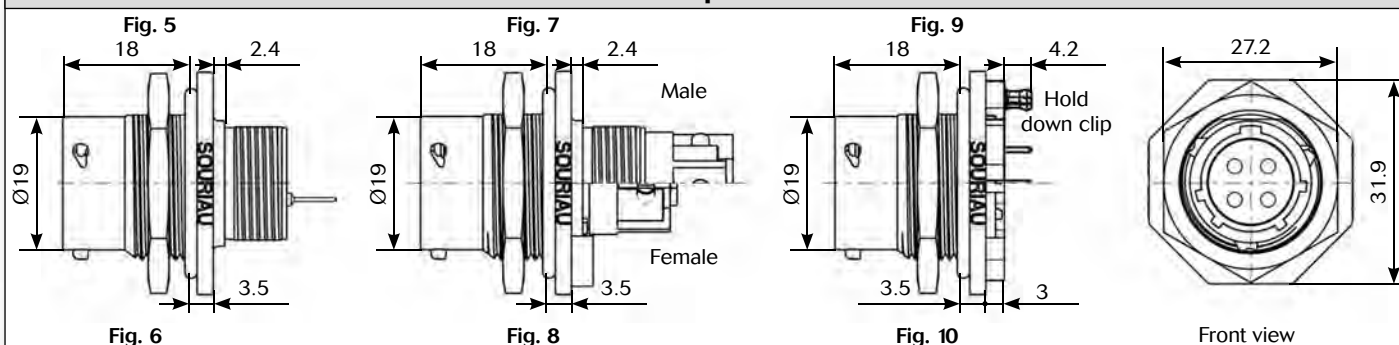
3 + ground  
16A/300V  
per IEC 61984

## Dimensions

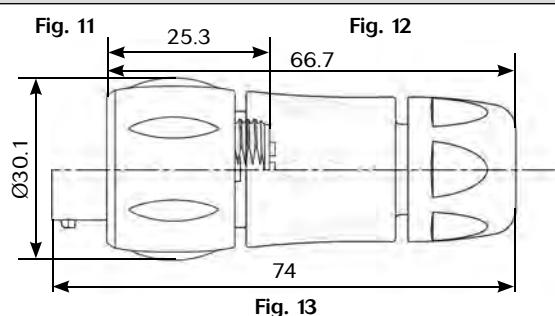
### Square flange receptacle - UTS0



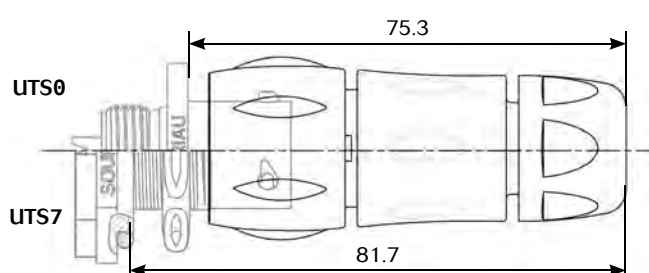
### Jam nut receptacle - UTS7



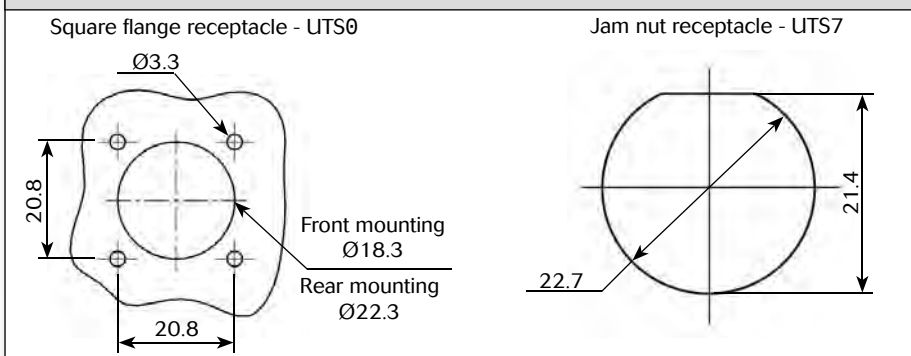
### Free hanging - UTS1 / Plug - UTS6



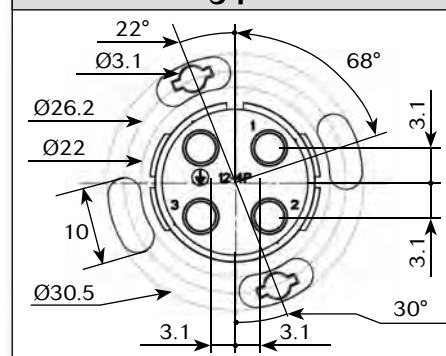
### Mated connector length



### Panel cut out



### Drilling pattern



Note: all dimensions are in mm

# UTS Series

## 124 - 12E4/12D4



### Accessories and tooling

#### Jam nut sealing caps



Part number  
UTS12DCG



Metal terminal

Part number  
UTS12DCGR

#### Handle



Part number  
SHANGLES

#### Tool kit



Part number  
TOOLKIT

#### Plug sealing cap



Part number  
UTS612DCG

#### Square flange sealing cap



Metal terminal

Part number  
UTS12DCGE

#### Plastic protective cap



Part numbers

| Receptacle cap | Plug cap |
|----------------|----------|
| 85005587A      | 85005596 |

#### Gasket



Part numbers / neoprene

UTFD13B

#### Crimp tooling



| Contacts                       | Contact size                        | Part number of head |
|--------------------------------|-------------------------------------|---------------------|
| RM/RC 28M1K <sup>(1)</sup>     | Standard contacts<br>#16<br>Ø 1.6mm | S16RCM20            |
| RM/RC 24M9K <sup>(1)</sup>     |                                     | S16RCM20            |
| RM/RC 20M13K <sup>(1)</sup>    |                                     | S16RCM20            |
| RM/RC 20M12K <sup>(1)</sup>    |                                     | S16RCM20            |
| RM/RC 16M23K <sup>(1)</sup>    |                                     | S16RCM16            |
| RM/RC 14M50K <sup>(1)</sup>    |                                     | S16RCM1450          |
| RM/RC 14M30K <sup>(1)</sup>    |                                     | S16RCM14            |
| SM/SC 24ML1TK6 <sup>(1)</sup>  |                                     | S16SCM20            |
| SM/SC 20ML1TK6 <sup>(1)</sup>  |                                     | S16SCM20            |
| SM/SC 16ML1TK6 <sup>(1)</sup>  |                                     | S16SCML1            |
| SM/SC 14ML1TK6 <sup>(1)</sup>  |                                     | S16SCML1            |
| SM/SC 16ML11TK6 <sup>(1)</sup> |                                     | S16SCML11           |
| RMDXK10D28K                    | Coaxial contacts                    | M10S-1J             |
| RCDXK1D28K                     |                                     | M10S-1J             |
| RM/RC DX60xxD28K               |                                     | M10S-1J             |
| RM/RC DXK10D28 + york090       |                                     | M10S-1J             |
| RM/RC DX60xxD28                |                                     | M10S-1J             |

(1): example of plating, for other plating see UTS catalog page 143

#### Color coding rings

G for Green



Y for Yellow

R for Red

Part numbers

| Receptacles | Plugs      |
|-------------|------------|
| UTS712CCRR  | UTS612CCRR |
| UTS712CCRY  | UTS612CCRY |
| UTS712CCRG  | UTS612CCRG |

\* Add G for Green, Y for Yellow, R for Red

# UTS Series

## 124 - 12E4/12D4



3 + ground  
16A/300V  
per IEC 61984

## Contacts

| #16         | Contact type                          | AWG   | Part number                  |                              | Max wire Ø | Max insulator Ø |
|-------------|---------------------------------------|-------|------------------------------|------------------------------|------------|-----------------|
|             |                                       |       | Male                         | Female                       |            |                 |
| Crimp       | Machined                              | 30-28 | RM28M1K <sup>(1)</sup>       | RC28M1K <sup>(1)</sup>       | 0.55       | 1.1             |
|             |                                       | 26-24 | RM24M9K <sup>(1)</sup>       | RC24M9K <sup>(1)</sup>       | 0.8        | 1.6             |
|             |                                       | 22-20 | RM20M13K <sup>(1)</sup>      | RC20M13K <sup>(1)</sup>      | 1.18       | 1.8             |
|             |                                       | 22-20 | RM20M12K <sup>(1)</sup>      | RC20M12K <sup>(1)</sup>      | 1.18       | 2.2             |
|             |                                       | 20-16 | RM16M23K <sup>(1)</sup>      | RC16M23K <sup>(1)</sup>      | 1.8        | 3.2             |
|             |                                       | 16-14 | RM14M50K <sup>(1)</sup>      | RC14M50K <sup>(1)</sup>      | 2.05       | 3.2             |
|             |                                       | 16-14 | RM14M30K <sup>(1)</sup>      | RC14M30K <sup>(1)</sup>      | 2.28       | 3.2             |
|             | Stamped & formed reeled contacts      | 26-24 | SM24M1TK6 <sup>(1)(2)</sup>  | SC24M1TK6 <sup>(1)(2)</sup>  | 0.89-1.28  | -               |
|             |                                       | 22-20 | SM20M1TK6 <sup>(1)(2)</sup>  | SC20M1TK6 <sup>(1)(2)</sup>  | 1.17-2.08  | -               |
|             |                                       | 18-16 | SM16M1TK6 <sup>(1)(2)</sup>  | SC16M1TK6 <sup>(1)(2)</sup>  | 3.0        | -               |
|             |                                       | 18-16 | SM16M11TK6 <sup>(1)(2)</sup> | SC16M11TK6 <sup>(1)(2)</sup> | 2.0-3.0    | -               |
|             |                                       | 14    | SM14M1TK6 <sup>(1)(2)</sup>  | SC14M1TK6 <sup>(1)(2)</sup>  | 3.2        | -               |
| PCB         | Machined <sup>(3)</sup>               | -     | RM20M12E8K <sup>(1)</sup>    | RC20M12E84K <sup>(1)</sup>   | -          | -               |
| Coaxial     | Cable Multipiece                      | -     | RMDXK10D28                   | RCDXK1D28                    | -          | -               |
|             | Cable Monocrimp                       | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
|             | Twisted pair Multipiece               | -     | RMDXK10D28 + york090         | RCDXK1D28 + york090          | -          | -               |
|             | Twisted pair Monocrimp                | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
| Fiber optic | POF contacts<br>Plastic optical fibre | -     | RMPOF1000                    | RCPOF1000B                   | -          | -               |

(1): Example of plating, for other plating see page 143

(2): Loose piece contact available if putting L. Example: SM20ML1-TK6

(3): For dimensions see page 148

Mechanics

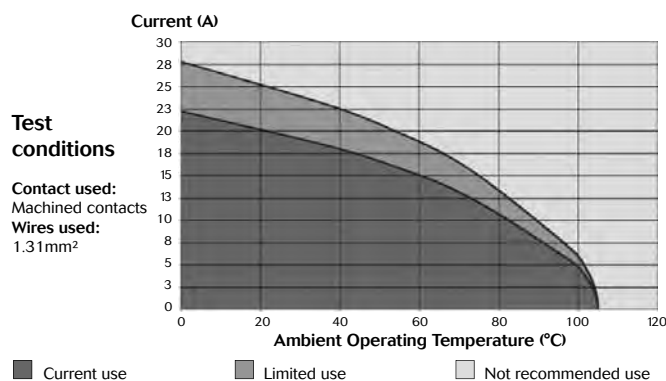
## Electrical characteristics

UL  
10A 500V UL94 V-0

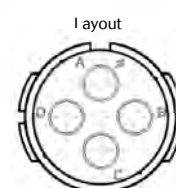
CSA  
7A 500V UL94 V-0

IEC  
16A 300V 4kV 3  
Temperature elevation: 50°C

## UTS 124 derating curves



# UTS Series 183G1



## Specifications

| Contact type                                 | Connector type          | Backshell           | Part number         |                      |
|----------------------------------------------|-------------------------|---------------------|---------------------|----------------------|
|                                              |                         |                     | Male insert         | Female insert        |
| Crimp contacts supply separately see page 59 | NPT threaded receptacle | Without (Fig.1)     |                     | <b>UTS7183G1SNPT</b> |
|                                              | Plug                    | Without (Fig.2)     | <b>UTS6183G1P</b>   |                      |
|                                              | Plug                    | Cable gland (Fig.3) | <b>UTS6JC183G1P</b> |                      |



## Dimensions

### NPT threaded receptacle - UTS7

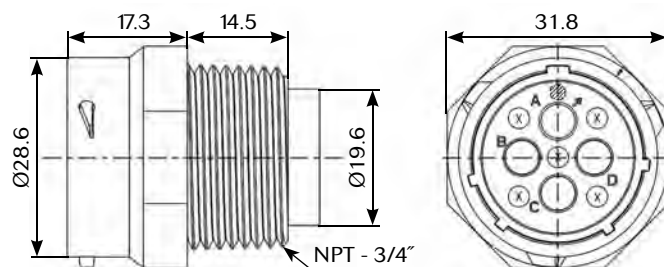


Fig. 1

### Plug - UTS6

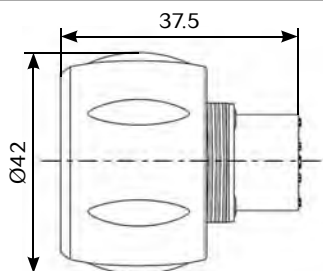


Fig. 2

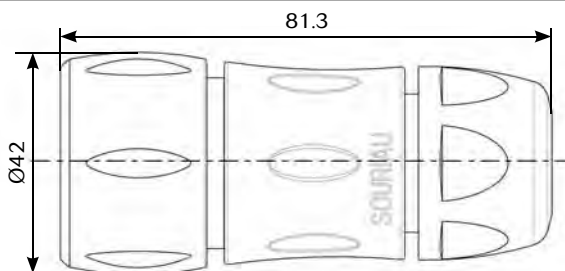
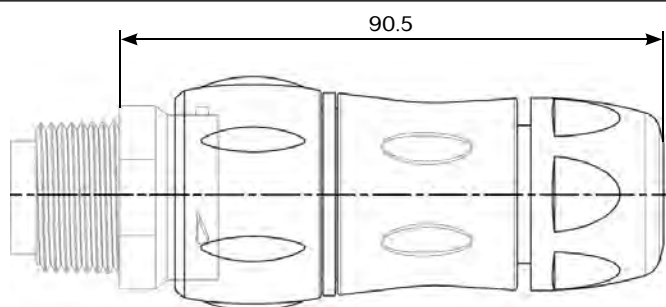
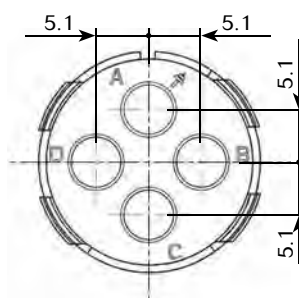


Fig. 3

### Mated connector length - UTS6JC



### Drilling pattern



Note: all dimensions are in mm

# UTS Series 183G1



## Accessories and tooling

### Jam nut sealing caps



|             |
|-------------|
| Part number |
| UTS14DCG    |



Metal terminal

|             |
|-------------|
| Part number |
| UTS14DCGR   |

### Hand tool



|             |
|-------------|
| Part number |
| M317        |

### Plug sealing cap



|             |
|-------------|
| Part number |
| UTS614DCG   |

### Positioner + locator setting



|             |
|-------------|
| Part number |
| VGE10078A   |

### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005590A      | 85005599 |

### Gasket



|                         |
|-------------------------|
| Part numbers / neoprene |
| UTFD14B                 |

### Extraction tool



|             |
|-------------|
| Part number |
| 51060210936 |

### Color coding rings

G for Green

Y for Yellow

R for Red



| Part numbers |            |
|--------------|------------|
| Receptacles  | Plugs      |
| UTS714CCRR   | UTS614CCRR |
| UTS714CCRY   | UTS614CCRY |
| UTS714CCRG   | UTS614CCRG |

\* Add G for Green, Y for Yellow, R for Red

# UTS Series

## 183G1



**3 + ground**  
**32A/300V**  
per IEC 61984

## Contacts

| #8    | Contact type | AWG | Part number              |                          | Max wire Ø | Max insulator Ø |
|-------|--------------|-----|--------------------------|--------------------------|------------|-----------------|
|       |              |     | Male                     | Female                   |            |                 |
| Crimp | Machined     | 16  | 82913601A <sup>(1)</sup> | 82913600A <sup>(1)</sup> | -          | 6.5             |
|       |              | 14  | 82913603A <sup>(1)</sup> | 82913602A <sup>(1)</sup> | -          |                 |
|       |              | 12  | 82913605A <sup>(1)</sup> | 82913604A <sup>(1)</sup> | -          |                 |
|       |              | 10  | 82913607A <sup>(1)</sup> | 82913606A <sup>(1)</sup> | -          |                 |
|       |              | 8   | 82913609A <sup>(1)</sup> | 82913608A <sup>(1)</sup> | -          |                 |

(1): Example of plating, for other plating see page 143

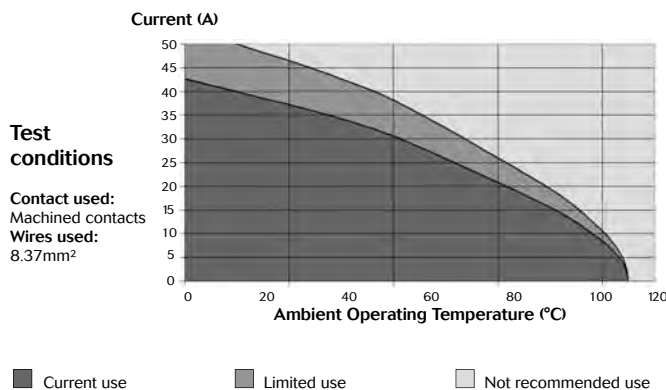
### Electrical characteristics

**UL**  
23A 600V UL94 V-0

**CSA**  
23A 600V UL94 V-0

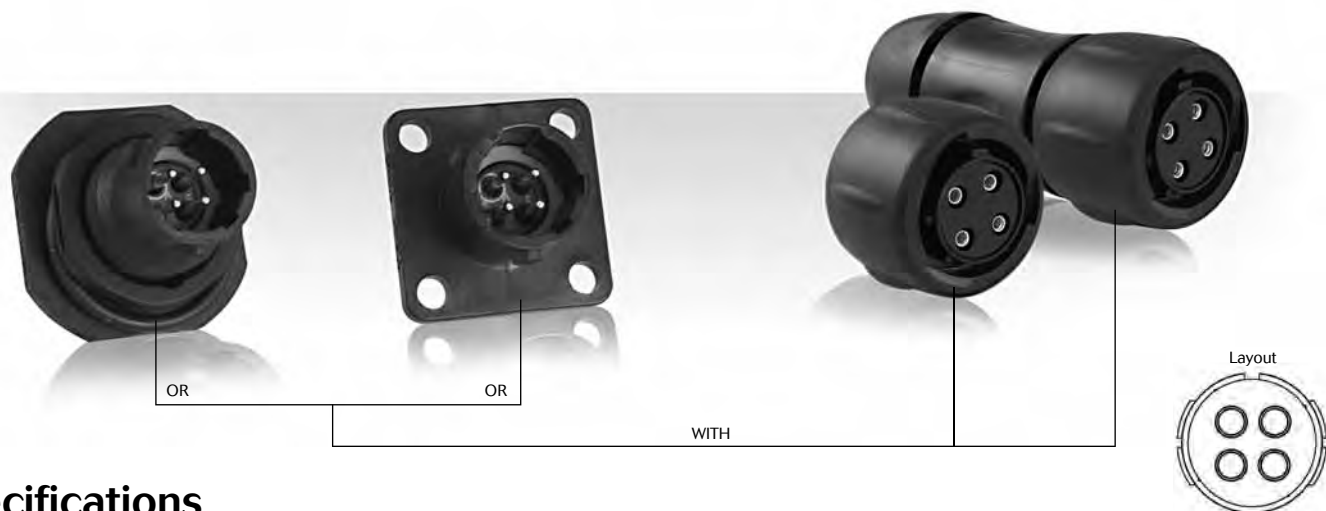
**IEC**  
32A 300V 4kV 3

### UTS 183G1 derating curves



# UTS Series

## 8E4/8D4



### Specifications

| Contact type                          | Connector type                                               | Backshell           | Part number |               |
|---------------------------------------|--------------------------------------------------------------|---------------------|-------------|---------------|
|                                       |                                                              |                     | Male insert | Female insert |
| Handsolder electrical contacts loaded | Square flange receptacle                                     | Without (Fig.1)     | UTS08E4P    | UTS08E4S      |
|                                       | Plug                                                         | Without (Fig.6)     | UTS68E4P    | UTS68E4S      |
|                                       |                                                              | Cable gland (Fig.7) | UTS6JC8E4P  | UTS6JC8E4S    |
|                                       | Jam nut receptacle                                           | Without (Fig.3)     | UTS78E4P    | UTS78E4S      |
| PCB contacts loaded                   | Square flange receptacle                                     | Without (Fig.2)     | UTS08D4P    | UTS08D4S      |
|                                       | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.5)     | UTS78D4P32  | UTS78D4S32    |
|                                       | Jam nut receptacle with stand off and without hold down clip | Without (Fig.4)     | UTS78D4P    | UTS78D4S      |

Sealed unmated



## Dimensions

### Square flange receptacle - UTS0

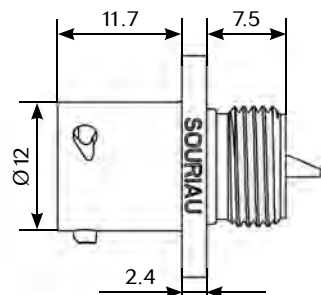


Fig. 1

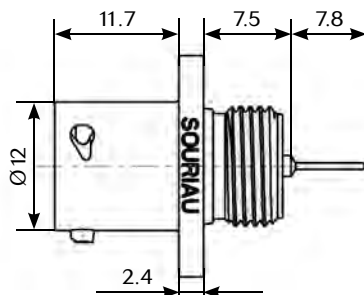
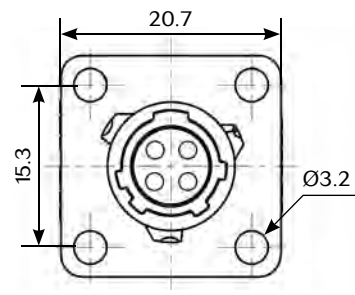


Fig. 2



Front view

### Jam nut receptacle - UTS7

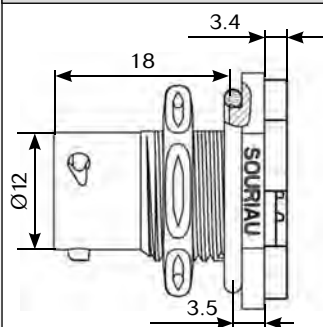


Fig. 3

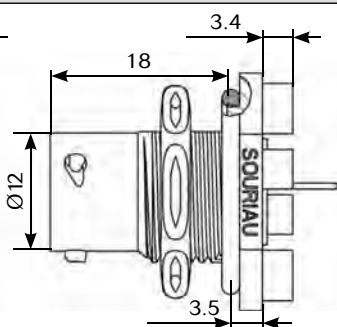


Fig. 4

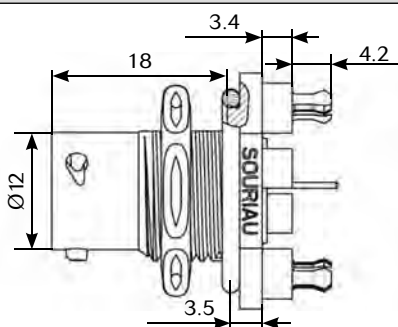
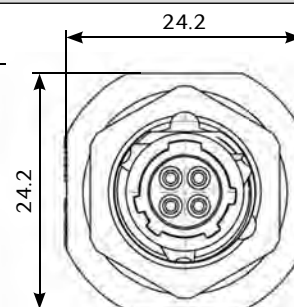


Fig. 5



Front view

### Plug - UTS6

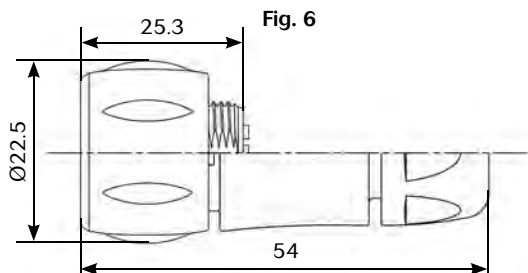
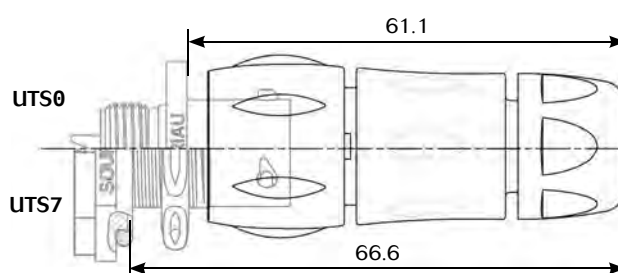


Fig. 6

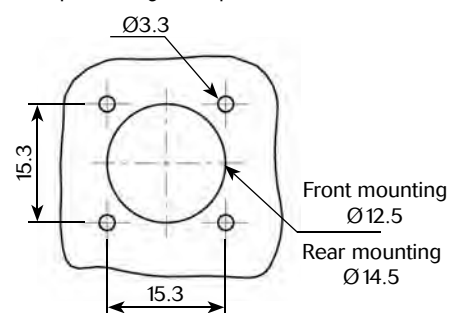
Fig. 7

### Mated connector length

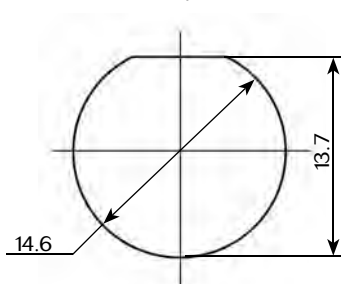


### Panel cut out

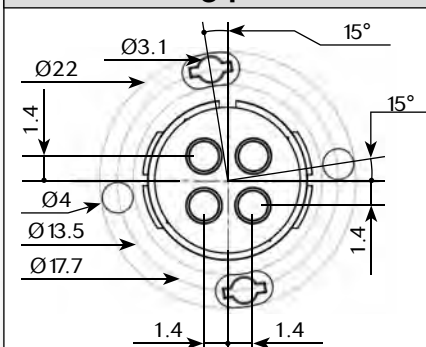
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



### Drilling pattern



Note: all dimensions are in mm

# UTS Series

## 8E4/8D4



### Accessories

#### Jam nut sealing caps



| Part number |
|-------------|
| UTS8DCG     |



Metal terminal

| Part number |
|-------------|
| UTS8DCGR    |

#### Square flange sealing cap



Metal terminal

| Part number |
|-------------|
| UTS8DCGE    |

#### Plug protective cap



IP40

| Part number |
|-------------|
| UTS68C      |

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005585A      | 85005594 |

#### Gasket



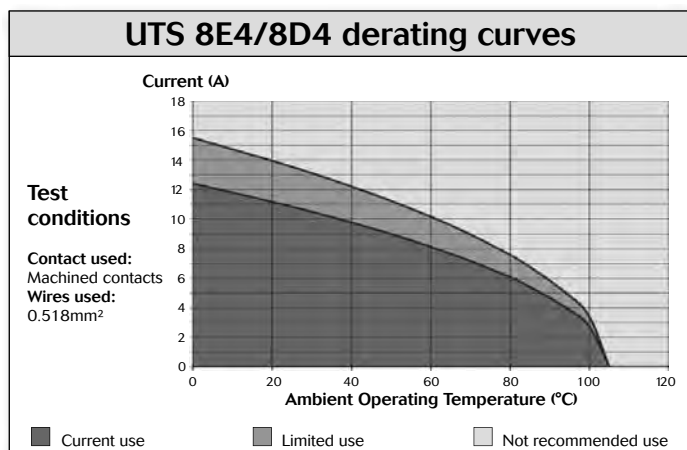
| Part numbers / neoprene |
|-------------------------|
| UTFD11B                 |

#### Electrical characteristics

**UL**  
7A 250V UL94 HB

**CSA**  
7A 250V UL94 HB

**IEC**  
7A 32V 1.5kV 3



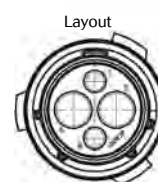
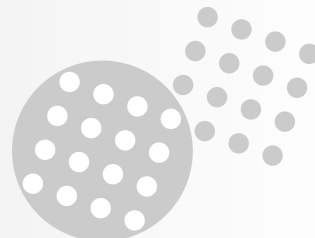
# UTS Series

## 8E4/8D4



# UTS Series

102W2 (2x# 12 + 2x#20)



## Specifications

| Contact type                                 | Connector type          | Backshell           | Part number         |                     |
|----------------------------------------------|-------------------------|---------------------|---------------------|---------------------|
|                                              |                         |                     | Male insert         | Female insert       |
| Crimp contacts supply separately see page 67 | Free hanging receptacle | Cable gland (Fig.1) | <b>UTS1JC102W2P</b> | <b>UTS1JC102W2S</b> |
|                                              | Plug                    | Without (Fig.2)     | <b>UTS6102W2P</b>   | <b>UTS6102W2S</b>   |
|                                              | Plug                    | Cable gland (Fig.3) | <b>UTS6JC102W2P</b> | <b>UTS6JC102W2S</b> |
|                                              | Jam nut receptacle      | Without (Fig.4)     | <b>UTS7102W2P</b>   | <b>UTS7102W2S</b>   |

# UTS Series

102W2 (2x#12 + 2x#20)



4 contacts  
25A/150V  
per IEC 61984

## Dimensions

### Free hanging - UTS1

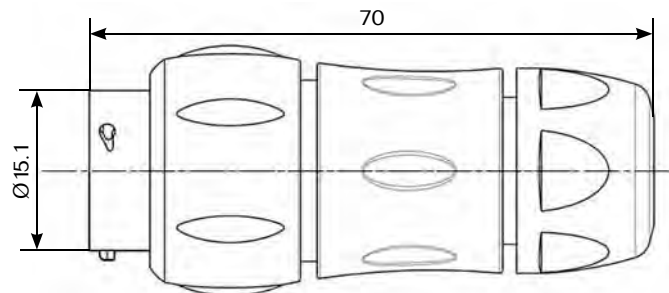


Fig. 1

### Plug - UTS6

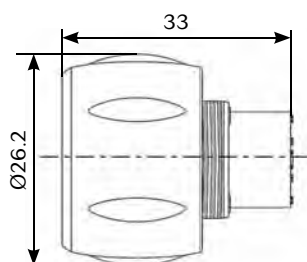


Fig. 2 Male

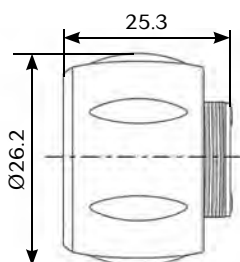


Fig. 2 Female

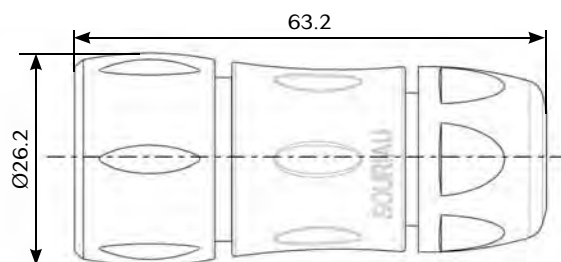


Fig. 3

### Jam nut receptacle - UTS7

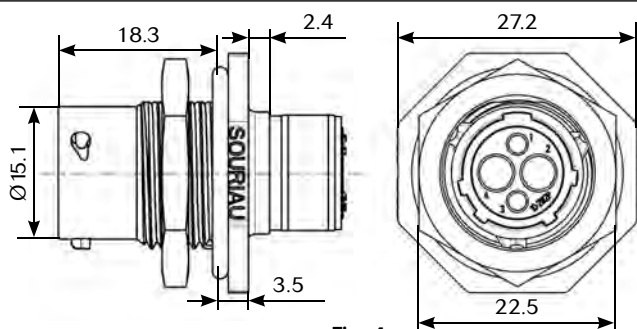
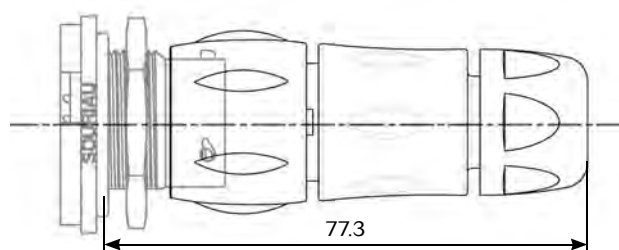


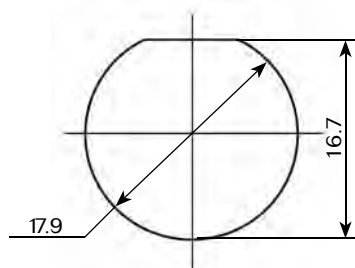
Fig. 4

### Mated connector length - UTS7

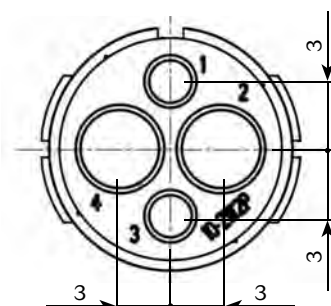


### Panel cut out

Jam nut receptacle - UTS7



### Drilling pattern



Note: all dimensions are in mm

# UTS Series

102W2 (2x#12 + 2x#20)



## Accessories and tooling

### Jam nut sealing caps



Part number  
UTS10DCG



Metal terminal

Part number  
UTS10DCGR

### Plug sealing cap



Part number  
UTS610DCG

### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005586A      | 85005595 |

### Gasket



Part numbers / neoprene  
UTFD12B

### Color coding rings

G for Green

Y for Yellow

R for Red



| Part numbers |            |
|--------------|------------|
| Receptacles  | Plugs      |
| UTS710CCRR   | UTS610CCRR |
| UTS710CCRY   | UTS610CCRY |
| UTS710CCRG   | UTS610CCRG |

\* Add G for Green, Y for Yellow, R for Red

### Crimp tooling #20



Part number  
SHANDLES



Part number  
TOOLKIT



| Contacts                    | Contact size                      | Part number of head |
|-----------------------------|-----------------------------------|---------------------|
| RM/RC 24W3K <sup>(1)</sup>  | Standard contacts<br>#20<br>Ø 1mm | S20RM               |
| RM/RC 20W3K <sup>(1)</sup>  |                                   | S20RM               |
| RM/RC 18W3K <sup>(1)</sup>  |                                   | S20RM               |
| SM/SC 24W3S <sup>(2)</sup>  |                                   | S20SCM20            |
| SM/SC 24WL3S <sup>(3)</sup> |                                   | S20SCM20            |
| SM/SC 20W3S <sup>(2)</sup>  |                                   | S20SCM20            |
| SM/SC 20WL3S <sup>(3)</sup> |                                   | S20SCM20            |

(1): example of plating, for other plating see UTS catalog page 148

(2): contact reeled (3): loose contact

### Crimp tooling #12



Part number hand tool  
M317



Part number  
positioner + locator setting  
VGE10078A



Part number  
extraction tool  
51060210924

# UTS Series

102W2 (2x#12 + 2x#20)



4 contacts  
25A/150V  
per IEC 61984

## Contacts

| #20   | Contact type                        | AWG   | Part number              |                          | Max insulator Ø |
|-------|-------------------------------------|-------|--------------------------|--------------------------|-----------------|
|       |                                     |       | Male                     | Female                   |                 |
| Crimp | Machined                            | 26-24 | RM24W3K <sup>(1)</sup>   | RC24W3K <sup>(1)</sup>   | 1.58            |
|       |                                     | 22-20 | RM20W3K <sup>(1)</sup>   | RC20W3K <sup>(1)</sup>   | 1.58            |
|       |                                     | 20-18 | RM18W3K <sup>(1)</sup>   | RC18W3K <sup>(1)</sup>   | 2.1             |
|       | stamped & formed<br>reeled contacts | 26-24 | SM24W3TK6 <sup>(2)</sup> | SC24W3TK6 <sup>(2)</sup> | 0.89-1.58       |
|       |                                     | 26-24 | SM24W3S26 <sup>(2)</sup> | SC24W3S25 <sup>(2)</sup> | 0.89-1.58       |
|       |                                     | 22-20 | SM20W3TK6 <sup>(2)</sup> | SC20W3TK6 <sup>(2)</sup> | 1.17-2.08       |
|       |                                     | 22-20 | SM20W3S26 <sup>(2)</sup> | SC20W3S25 <sup>(2)</sup> | 1.17-2.08       |
|       |                                     |       |                          |                          |                 |
| PCB   | Machined <sup>(3)</sup>             | -     | RMW5016K                 | RCW5016K                 | -               |
| #12   |                                     |       |                          |                          |                 |
| Crimp | Machined                            | 22    | 82911457NA               | 82911456A                | 4.9             |
|       |                                     | 20    | 82911459NA               | 82911458A                |                 |
|       |                                     | 18    | 82911461NA               | 82911460A                |                 |
|       |                                     | 16    | 82911463NA               | 82911462A                |                 |
|       |                                     | 14    | 82911465NA               | 82911464A                |                 |
|       |                                     | 12    | 82911467NA               | 82911466A                |                 |

(1): Example of plating, for other plating see page 143

(2): Loose piece contact available if putting L. Example: SM20ML1-TK6

(3): For dimensions see page 148

Mechanics

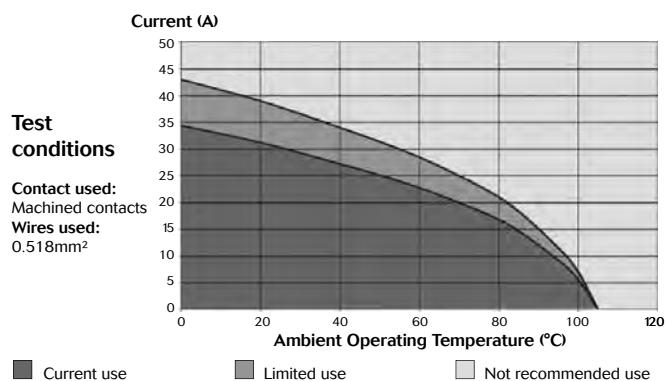
### Electrical characteristics

UL  
20A 500V UL94 V-0

CSA  
18A 500V UL94 V-0

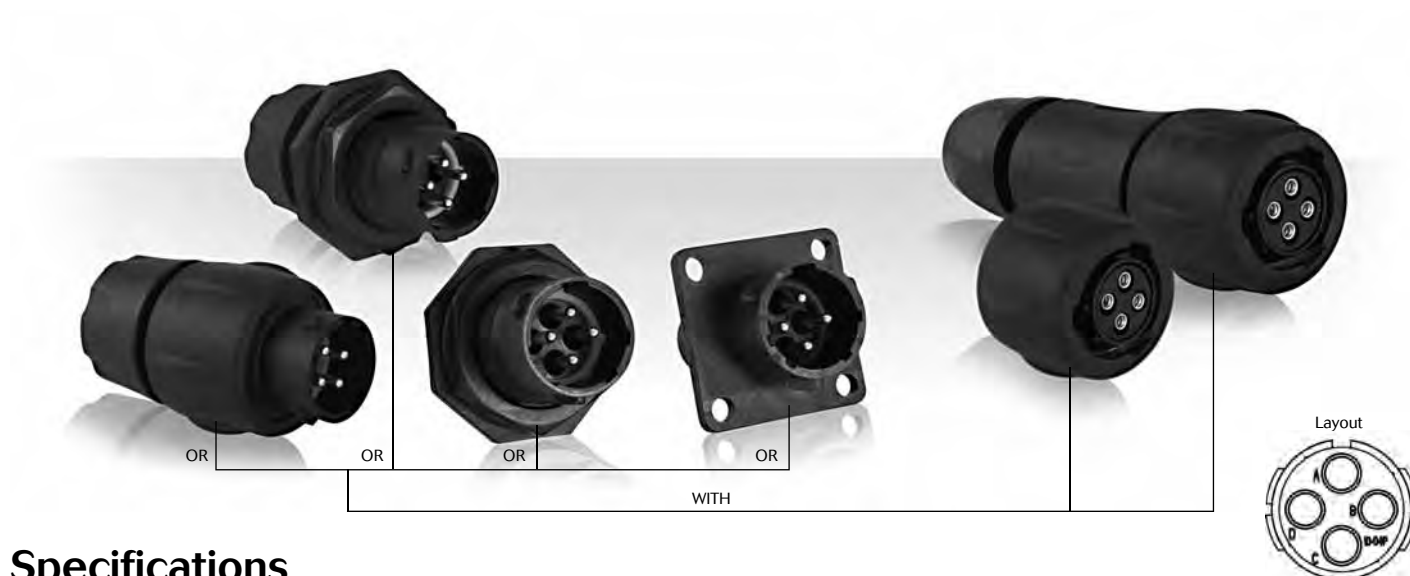
IEC  
25A 150V 2.5kV 3  
Temperature elevation: 50°C

### UTS 102W2 derating curves



# UTS Series

## 104

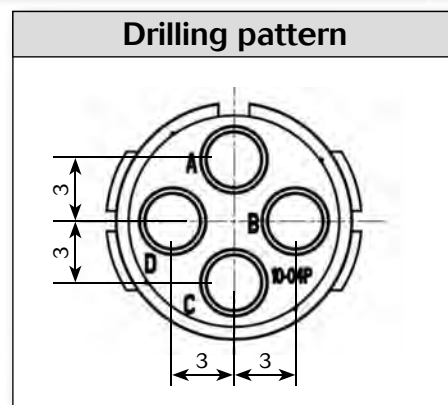
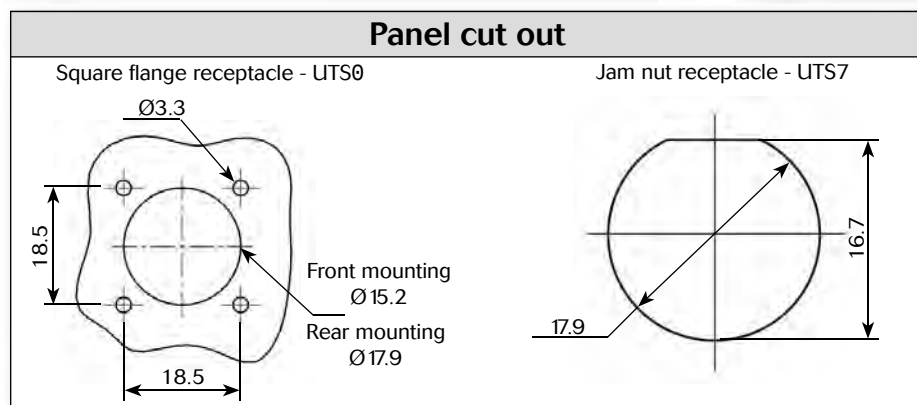
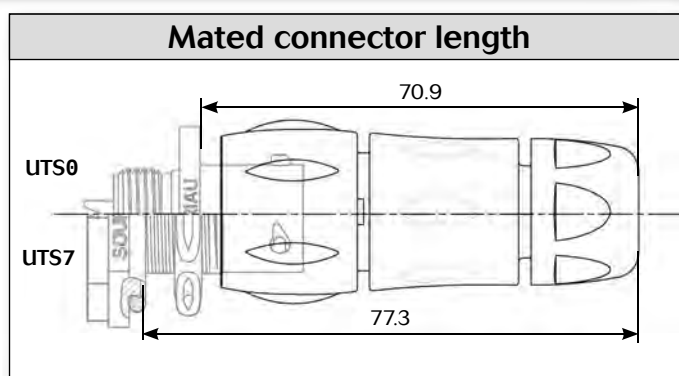
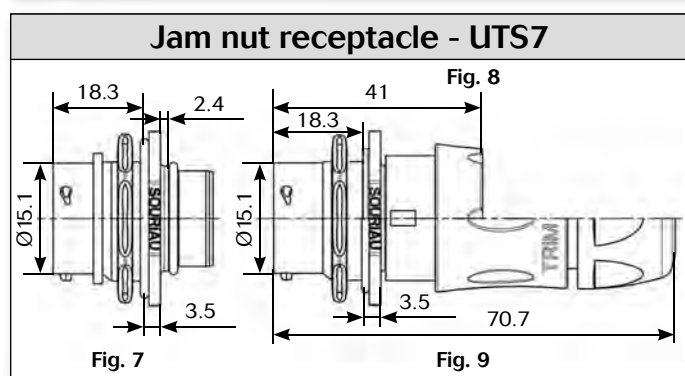
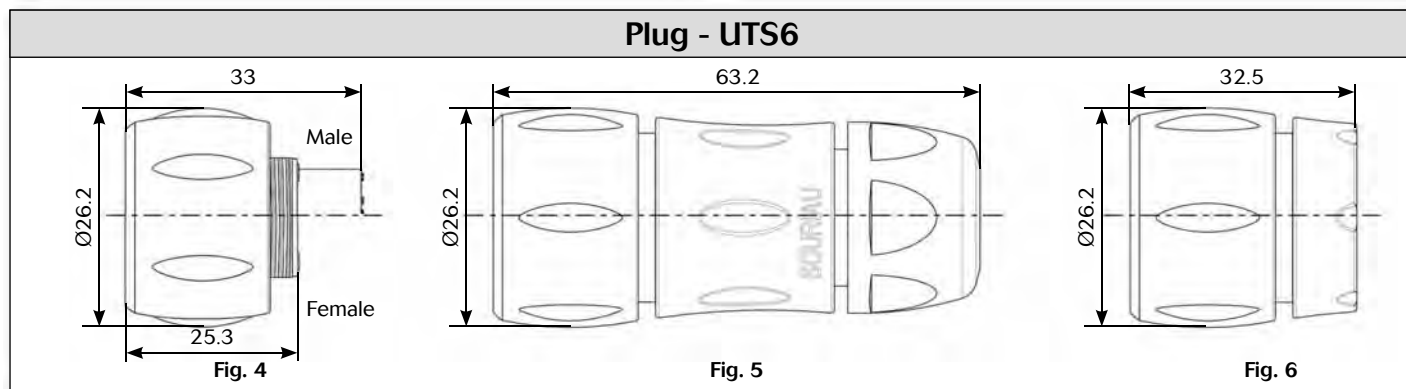
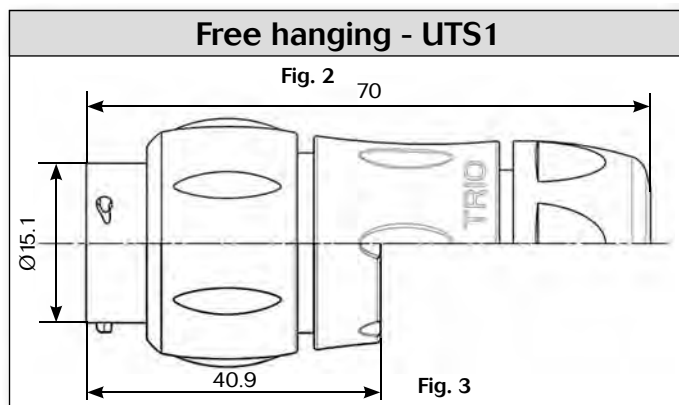
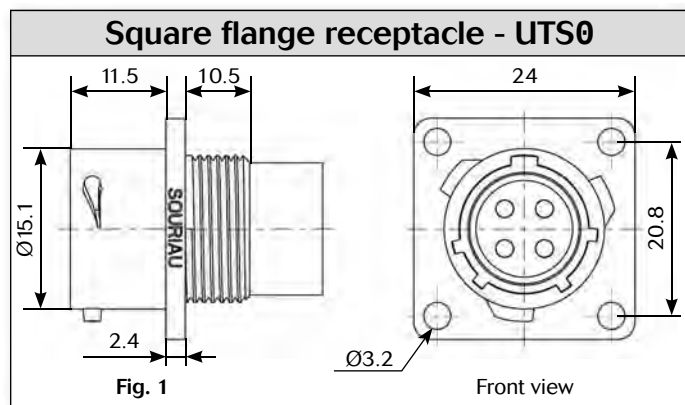


## Specifications

| Contact type                                              | Connector type           | Backshell                       | Part number        |                    |
|-----------------------------------------------------------|--------------------------|---------------------------------|--------------------|--------------------|
|                                                           |                          |                                 | Male insert        | Female insert      |
| Crimp<br>contact supply<br>separately<br>see next page 71 | Square flange receptacle | Without (Fig.1)                 | <b>UTS0104P</b>    | <b>UTS0104S</b>    |
|                                                           | Free hanging receptacle  | Cable gland and grommet (Fig.2) | <b>UTS1GJC104P</b> |                    |
|                                                           | Free hanging receptacle  | Nut and grommet (Fig.3)         | <b>UTS1GN104P</b>  |                    |
|                                                           | Free hanging receptacle  | Cable gland (Fig.2)             | <b>UTS1JC104P</b>  | <b>UTS1JC104S</b>  |
|                                                           | Plug                     | Without (Fig.4)                 | <b>UTS6104P</b>    | <b>UTS6104S</b>    |
|                                                           | Plug                     | Cable gland and grommet (Fig.5) |                    | <b>UTS6GJC104S</b> |
|                                                           | Plug                     | Nut and grommet (Fig.6)         |                    | <b>UTS6GN104S</b>  |
|                                                           | Plug                     | Cable gland (Fig.5)             | <b>UTS6JC104P</b>  | <b>UTS6JC104S</b>  |
|                                                           | Jam nut receptacle       | Without (Fig.7)                 | <b>UTS7104P</b>    | <b>UTS7104S</b>    |
|                                                           | Jam nut receptacle       | Cable gland and grommet (Fig.9) | <b>UTS7GJC104P</b> |                    |
|                                                           | Jam nut receptacle       | Nut and grommet (Fig.8)         | <b>UTS7GN104P</b>  |                    |



## Dimensions



Note: all dimensions are in mm



### Accessories and tooling

#### Jam nut sealing caps



Part number  
UTS10DCG



Metal terminal

Part number  
UTS10DCGR

#### Handle



Part number  
SHANGLES

#### Tool kit



Part number  
TOOLKIT

#### Plug sealing cap



Part number  
UTS610DCG

#### Square flange sealing cap



Metal terminal

Part number  
UTS10DCGE

#### Plastic protective cap



Part numbers

| Receptacle cap | Plug cap |
|----------------|----------|
| 85005586A      | 85005595 |

#### Gasket



Part numbers / neoprene  
UTFD12B

#### Crimp tooling



| Contacts                      | Contact size                        | Part number of head |
|-------------------------------|-------------------------------------|---------------------|
| RM/RC 28M1K <sup>(1)</sup>    | Standard contacts<br>#16<br>Ø 1.6mm | S16RCM20            |
| RM/RC 24M9K <sup>(1)</sup>    |                                     | S16RCM20            |
| RM/RC 20M13K <sup>(1)</sup>   |                                     | S16RCM20            |
| RM/RC 20M12K <sup>(1)</sup>   |                                     | S16RCM20            |
| RM/RC 16M23K <sup>(1)</sup>   |                                     | S16RCM16            |
| RM/RC 14M50K <sup>(1)</sup>   |                                     | S16RCM1450          |
| RM/RC 14M30K <sup>(1)</sup>   |                                     | S16RCM14            |
| SM/SC 24ML1TK6 <sup>(1)</sup> |                                     | S16SCM20            |
| SM/SC 20ML1TK6 <sup>(1)</sup> |                                     | S16SCM20            |
| SM/SC 16ML1TK6 <sup>(1)</sup> |                                     | S16SCML1            |
| SM/SC 14ML1TK6 <sup>(1)</sup> |                                     | S16SCML1            |
| SM/SC 16ML1TK6 <sup>(1)</sup> |                                     | S16SCML11           |
| RMDXK10D28K                   | Coaxial contacts                    | M10S-1J             |
| RCDXK1D28K                    |                                     | M10S-1J             |
| RM/RC DX60xxD28K              |                                     | M10S-1J             |
| RM/RC DXK10D28 + york090      |                                     | M10S-1J             |
| RM/RC DX60xxD28               |                                     | M10S-1J             |

(1): example of plating, for other plating see UTS catalog page 143

#### Color coding rings

G for Green



Y for Yellow

R for Red

Part numbers

| Receptacles | Plugs      |
|-------------|------------|
| UTS710CCRR  | UTS610CCRR |
| UTS710CCRY  | UTS610CCRY |
| UTS710CCRG  | UTS610CCRG |

\* Add G for Green, Y for Yellow, R for Red



## Contacts

| #16         | Contact type                          | AWG   | Part number                  |                              | Max wire Ø | Max insulator Ø |
|-------------|---------------------------------------|-------|------------------------------|------------------------------|------------|-----------------|
|             |                                       |       | Male                         | Female                       |            |                 |
| Crimp       | Machined                              | 30-28 | RM28M1K <sup>(1)</sup>       | RC28M1K <sup>(1)</sup>       | 0.55       | 1.1             |
|             |                                       | 26-24 | RM24M9K <sup>(1)</sup>       | RC24M9K <sup>(1)</sup>       | 0.8        | 1.6             |
|             |                                       | 22-20 | RM20M13K <sup>(1)</sup>      | RC20M13K <sup>(1)</sup>      | 1.18       | 1.8             |
|             |                                       | 22-20 | RM20M12K <sup>(1)</sup>      | RC20M12K <sup>(1)</sup>      | 1.18       | 2.2             |
|             |                                       | 20-16 | RM16M23K <sup>(1)</sup>      | RC16M23K <sup>(1)</sup>      | 1.8        | 3.2             |
|             |                                       | 16-14 | RM14M50K <sup>(1)</sup>      | RC14M50K <sup>(1)</sup>      | 2.05       | 3.2             |
|             |                                       | 16-14 | RM14M30K <sup>(1)</sup>      | RC14M30K <sup>(1)</sup>      | 2.28       | 3.2             |
|             | Stamped & formed reeled contacts      | 26-24 | SM24M1TK6 <sup>(1)(2)</sup>  | SC24M1TK6 <sup>(1)(2)</sup>  | 0.89-1.28  | -               |
|             |                                       | 22-20 | SM20M1TK6 <sup>(1)(2)</sup>  | SC20M1TK6 <sup>(1)(2)</sup>  | 1.17-2.08  | -               |
|             |                                       | 18-16 | SM16M1TK6 <sup>(1)(2)</sup>  | SC16M1TK6 <sup>(1)(2)</sup>  | 3.0        | -               |
|             |                                       | 18-16 | SM16M11TK6 <sup>(1)(2)</sup> | SC16M11TK6 <sup>(1)(2)</sup> | 2.0-3.0    | -               |
|             |                                       | 14    | SM14M1TK6 <sup>(1)(2)</sup>  | SC14M1TK6 <sup>(1)(2)</sup>  | 3.2        | -               |
| PCB         | Machined <sup>(3)</sup>               | -     | RM20M12E8K <sup>(1)</sup>    | RC20M12E84K <sup>(1)</sup>   | -          | -               |
| Coaxial     | Cable Multipiece                      | -     | RMDXK10D28                   | RCDXK1D28                    | -          | -               |
|             | Cable Monocrimp                       | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
|             | Twisted pair Multipiece               | -     | RMDXK10D28 + york090         | RCDXK1D28 + york090          | -          | -               |
|             | Twisted pair Monocrimp                | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
| Fiber optic | POF contacts<br>Plastic optical fibre | -     | RMPOF1000                    | RCPOF1000B                   | -          | -               |

(1): Example of plating, for other plating see page 143

(2): Loose piece contact available if putting L. Example: SM20ML1-TK6

(3): For dimensions see page 148

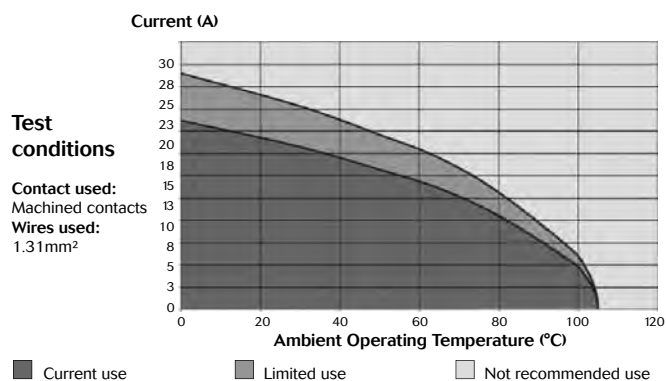
### Electrical characteristics

**UL**  
10A 500V UL94 V-0

**CSA**  
7A 500V UL94 V-0

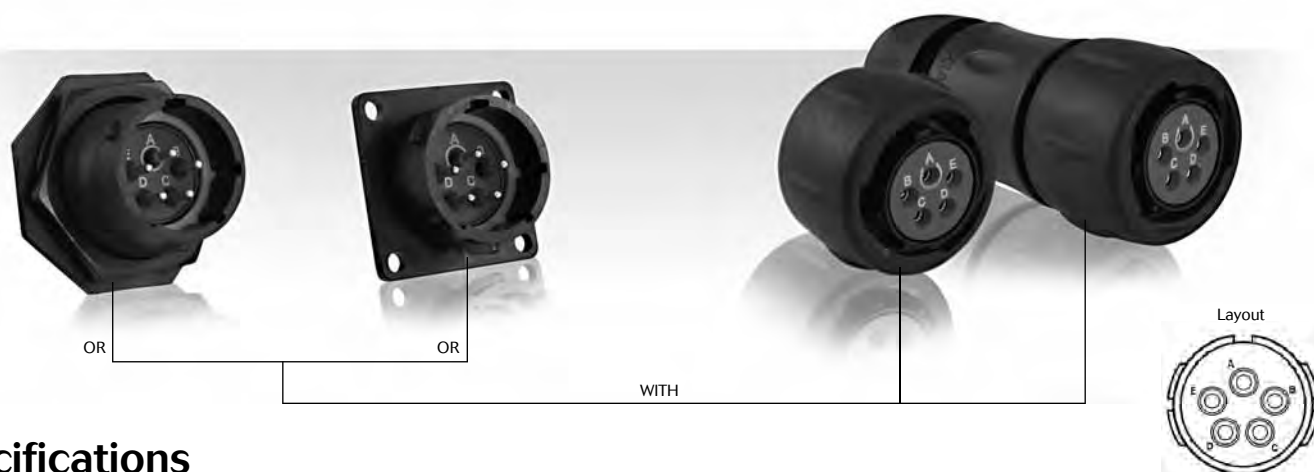
**IEC**  
13A 150V 2.5kV 3

### UTS 104 derating curves



# UTS Series

## 14E5/14D5



## Specifications

| Contact type                          | Connector type                                               | Backshell           | Part number        |                    |
|---------------------------------------|--------------------------------------------------------------|---------------------|--------------------|--------------------|
|                                       |                                                              |                     | Male insert        | Female insert      |
| Handsolder electrical contacts loaded | Square flange receptacle                                     | Without (Fig.6)     | <b>UTS014E5P</b>   | <b>UTS014E5S</b>   |
|                                       | Plug                                                         | Without (Fig.1)     | <b>UTS614E5P</b>   | <b>UTS614E5S</b>   |
|                                       |                                                              | Cable gland (Fig.2) | <b>UTS6JC14E5P</b> | <b>UTS6JC14E5S</b> |
|                                       | Jam nut receptacle                                           | Without (Fig.3)     | <b>UTS714E5P</b>   | <b>UTS714E5S</b>   |
| PCB contacts loaded                   | Square flange receptacle                                     | Without (Fig.6)     | <b>UTS014D5P</b>   | <b>UTS014D5S</b>   |
|                                       | Jam nut receptacle with hold down clips                      | Without (Fig.4)     | <b>UTS714D5P32</b> | <b>UTS714D5S32</b> |
|                                       | Jam nut receptacle with stand off and without hold down clip | Without (Fig.5)     | <b>UTS714D5P</b>   | <b>UTS714D5S</b>   |

Sealed unmated



## Dimensions

### Plug - UTS6

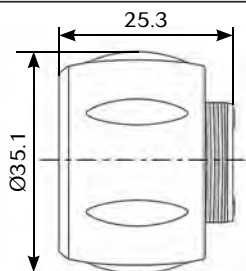


Fig. 1

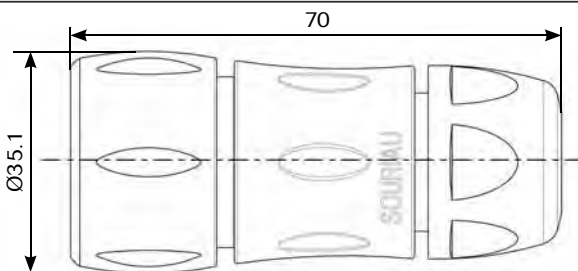


Fig. 2

### Jam nut receptacle - UTS7

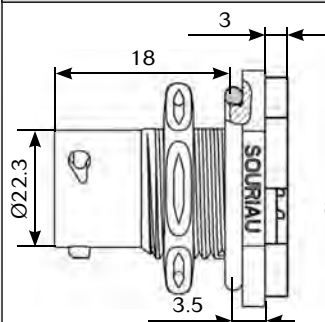


Fig. 3

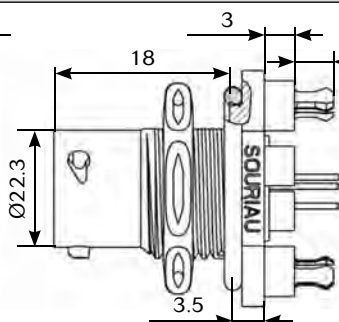


Fig. 4

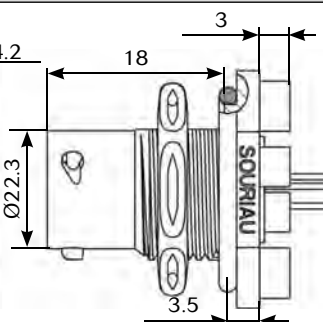
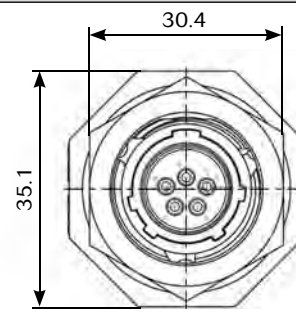


Fig. 5



Front view

### Square flange receptacle - UTS0

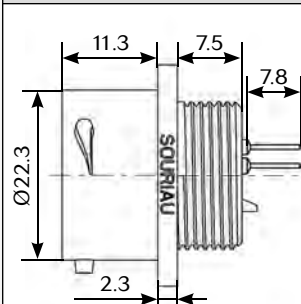
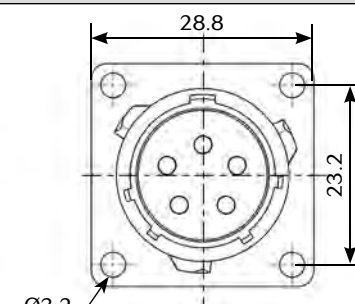
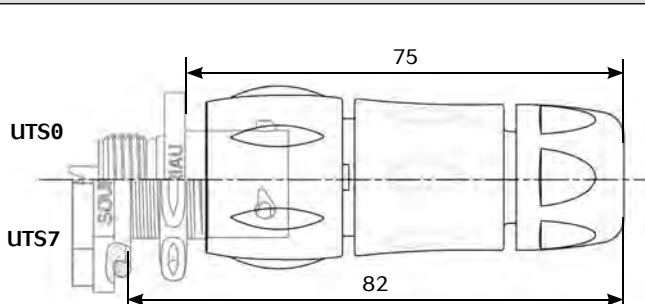


Fig. 6



Front view

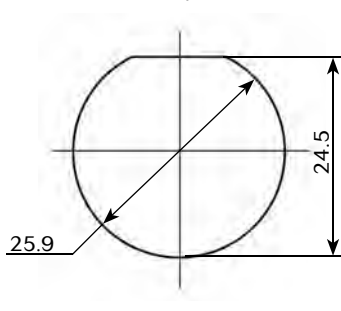
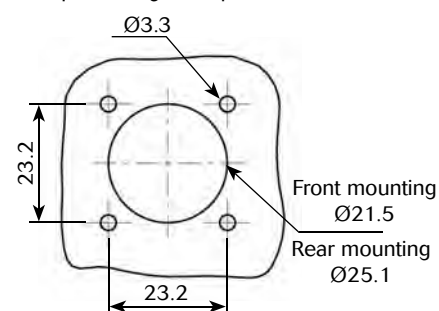
### Mated connector length



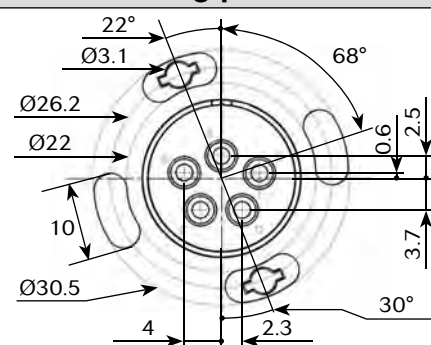
### Panel cut out

Square flange receptacle - UTS0

Jam nut receptacle - UTS7



### Drilling pattern



Note: all dimensions are in mm

# UTS Series

## 14E5/14D5



### Accessories

#### Jam nut sealing caps



| Part number |
|-------------|
| UTS14DCG    |



Metal terminal

| Part number |
|-------------|
| UTS14DCGR   |

#### Plug sealing cap



| Part number |
|-------------|
| UTS614DCG   |

#### Square flange sealing cap



Metal terminal

| Part number |
|-------------|
| UTS14DCGE   |

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005588A      | 85005597 |

#### Gasket



| Part numbers / neoprene |
|-------------------------|
| UTFD14B                 |

#### Color coding rings

G for Green

Y for Yellow

R for Red



| Part numbers |            |
|--------------|------------|
| Receptacles  | Plugs      |
| UTS714CCRR   | UTS614CCRR |
| UTS714CCRY   | UTS614CCRY |
| UTS714CCRG   | UTS614CCRG |

\* Add G for Green, Y for Yellow, R for Red

#### Electrical characteristics

**UL**

12A 650V UL94 HB

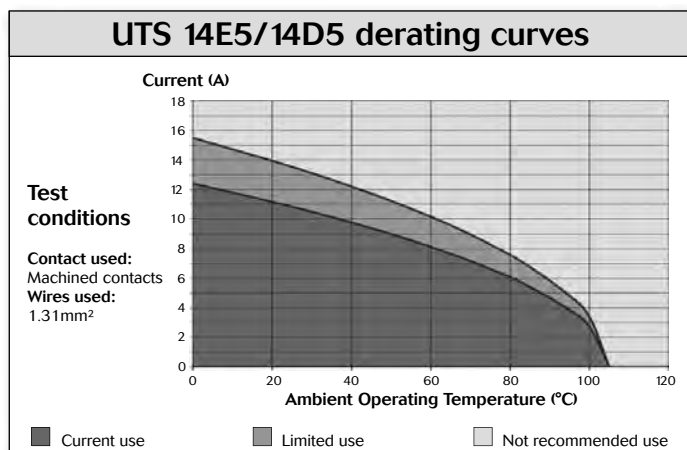
**CSA**

12A 650V UL94 HB

**IEC**

16A 150V 2.5kV 3



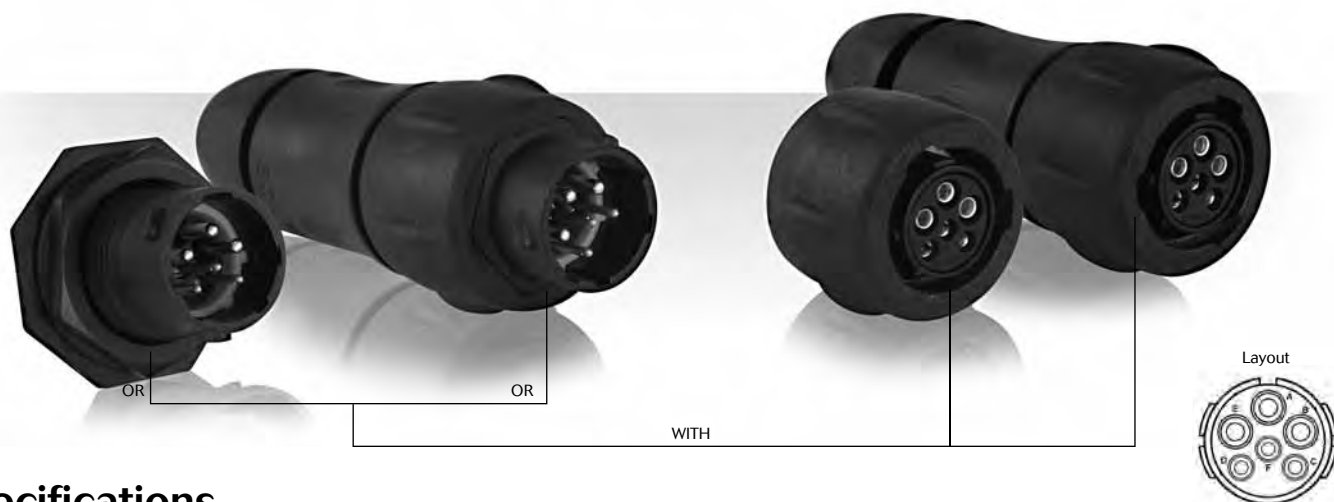
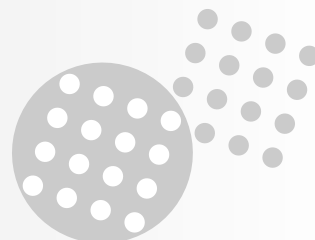
# UTS Series

## 14E5/14D5



# UTS Series

103W3 (3x#16 + 3x#20)



## Specifications

| Contact type                                 | Connector type                                               | Backshell           | Part number         |                     |
|----------------------------------------------|--------------------------------------------------------------|---------------------|---------------------|---------------------|
|                                              |                                                              |                     | Male insert         | Female insert       |
| Crimp contacts supply separately see page 79 | Free hanging receptacle                                      | Cable gland (Fig.1) | <b>UTS1JC103W3P</b> | <b>UTS1JC103W3S</b> |
|                                              | Plug                                                         | Without (Fig.2)     | <b>UTS6103W3P</b>   | <b>UTS6103W3S</b>   |
|                                              | Plug                                                         | Cable gland (Fig.3) | <b>UTS6JC103W3P</b> | <b>UTS6JC103W3S</b> |
|                                              | Jam nut receptacle                                           | Without (Fig.4)     | <b>UTS7103W3P</b>   | <b>UTS7103W3S</b>   |
| PCB contacts supply separately see page 79   | Jam nut receptacle with stand off and without hold down clip | Without (Fig.4)     | <b>UTS7103W3P</b>   | <b>UTS7103W3S</b>   |

# UTS Series

103W3 (3x#16 + 3x#20)



6 contacts  
5A/32V  
per IEC 61984

## Dimensions

### Free hanging - UTS1

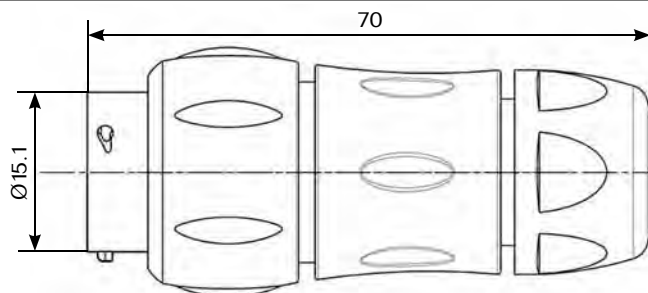


Fig. 1

### Plug - UTS6

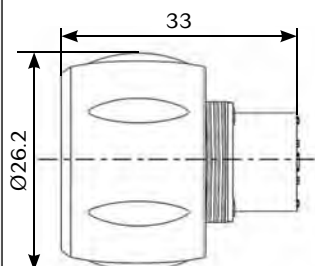


Fig. 2 Male

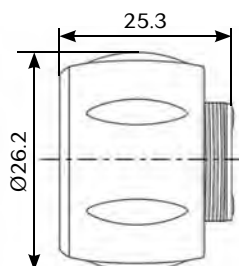


Fig. 2 Female

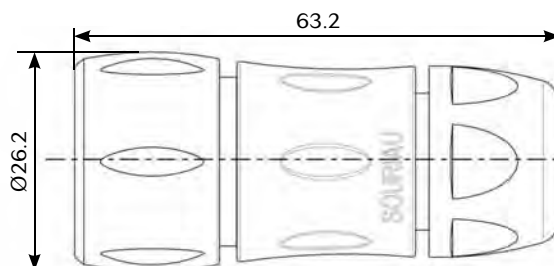


Fig. 3

### Jam nut receptacle - UTS7

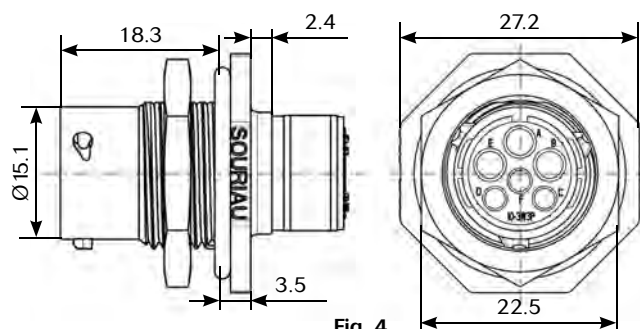
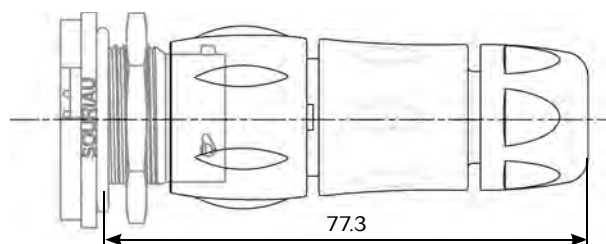


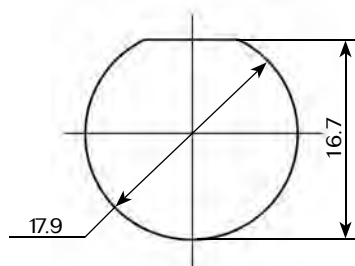
Fig. 4

### Mated connector length - UTS7

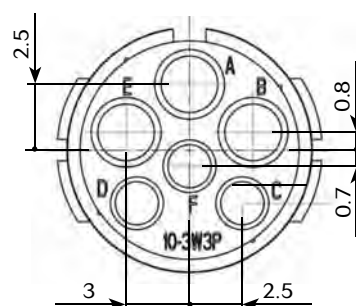


### Panel cut out

Jam nut receptacle - UTS7



### Drilling pattern



Note: all dimensions are in mm

# UTS Series

103W3 (3x#16 + 3x#20)



## Accessories and tooling

### Jam nut sealing caps



Part number

UTS10DCG



Metal terminal

Part number

UTS10DCGR

### Handle



Part number

SHANGLES

### Tool kit



Part number

TOOLKIT

### Plug sealing cap



Part number

UTS610DCG

### Square flange sealing cap



Metal terminal

Part number

UTS10DCGE

### Plastic protective cap



Part numbers

Receptacle  
cap

85005586A

Plug cap

85005595

### Gasket



Part numbers / neoprene

UTFD12B

### Color coding rings

G for Green

Y for  
Yellow

R for Red

Part numbers

Receptacles

UTS710CCRR

UTS710CCRY

UTS710CCRG

Plugs

UTS610CCRR

UTS610CCRY

UTS610CCRG

\* Add G for Green, Y for Yellow, R for Red

### Crimp tooling

| Contacts                       | Contact size                        | Part number of head |
|--------------------------------|-------------------------------------|---------------------|
| RM/RC 28M1K <sup>(1)</sup>     | Standard contacts<br>#16<br>Ø 1.6mm | S16RCM20            |
| RM/RC 24M9K <sup>(1)</sup>     |                                     | S16RCM20            |
| RM/RC 20M13K <sup>(1)</sup>    |                                     | S16RCM20            |
| RM/RC 20M12K <sup>(1)</sup>    |                                     | S16RCM20            |
| RM/RC 16M23K <sup>(1)</sup>    |                                     | S16RCM16            |
| RM/RC 14M50K <sup>(1)</sup>    |                                     | S16RCM1450          |
| RM/RC 14M30K <sup>(1)</sup>    |                                     | S16RCM14            |
| SM/SC 24ML1TK6 <sup>(1)</sup>  |                                     | S16SCM20            |
| SM/SC 20ML1TK6 <sup>(1)</sup>  |                                     | S16SCM20            |
| SM/SC 16ML1TK6 <sup>(1)</sup>  |                                     | S16SCML1            |
| SM/SC 14ML1TK6 <sup>(1)</sup>  |                                     | S16SCML1            |
| SM/SC 16ML11TK6 <sup>(1)</sup> |                                     | S16SCML11           |
| RMDXK10D28K                    | Coaxial contacts                    | M10S-1J             |
| RCDXK1D28K                     |                                     | M10S-1J             |
| RM/RC DX60xxD28K               |                                     | M10S-1J             |
| RM/RC DXK10D28 + yorK090       |                                     | M10S-1J             |
| RM/RC DX60xxD28                |                                     | M10S-1J             |
| RM/RC 24W3K <sup>(1)</sup>     | Standard contacts<br>#20<br>Ø 1mm   | S20RCM              |
| RM/RC 20W3K <sup>(1)</sup>     |                                     | S20RCM              |
| RM/RC 18W3K <sup>(1)</sup>     |                                     | S20RCM              |
| SM/SC 24W3S <sup>(2)</sup>     |                                     | S20SCM20            |
| SM/SC 24WL3S <sup>(3)</sup>    |                                     | S20SCM20            |
| SM/SC 20W3S <sup>(2)</sup>     |                                     | S20SCM20            |
| SM/SC 20WL3S <sup>(3)</sup>    |                                     | S20SCM20            |

(1): example of plating, for other plating see UTS catalog page 143

(2): contact reeled

(3): loose contac

# UTS Series

103W3 (3x#16 + 3x#20)



6 contacts  
5A/32V  
per IEC 61984

## Contacts

| #16         | Contact type                          | AWG   | Part number                  |                              | Max wire Ø | Max insulator Ø |
|-------------|---------------------------------------|-------|------------------------------|------------------------------|------------|-----------------|
|             |                                       |       | Male                         | Female                       |            |                 |
| Crimp       | Machined                              | 30-28 | RM28M1K <sup>(1)</sup>       | RC28M1K <sup>(1)</sup>       | 0.55       | 1.1             |
|             |                                       | 26-24 | RM24M9K <sup>(1)</sup>       | RC24M9K <sup>(1)</sup>       | 0.8        | 1.6             |
|             |                                       | 22-20 | RM20M13K <sup>(1)</sup>      | RC20M13K <sup>(1)</sup>      | 1.18       | 1.8             |
|             |                                       | 22-20 | RM20M12K <sup>(1)</sup>      | RC20M12K <sup>(1)</sup>      | 1.18       | 2.2             |
|             |                                       | 20-16 | RM16M23K <sup>(1)</sup>      | RC16M23K <sup>(1)</sup>      | 1.8        | 3.2             |
|             |                                       | 16-14 | RM14M50K <sup>(1)</sup>      | RC14M50K <sup>(1)</sup>      | 2.05       | 3.2             |
|             |                                       | 16-14 | RM14M30K <sup>(1)</sup>      | RC14M30K <sup>(1)</sup>      | 2.28       | 3.2             |
|             | Stamped & formed reeled contacts      | 26-24 | SM24M1TK6 <sup>(1)(2)</sup>  | SC24M1TK6 <sup>(1)(2)</sup>  | 0.89-1.28  | -               |
|             |                                       | 22-20 | SM20M1TK6 <sup>(1)(2)</sup>  | SC20M1TK6 <sup>(1)(2)</sup>  | 1.17-2.08  | -               |
|             |                                       | 18-16 | SM16M1TK6 <sup>(1)(2)</sup>  | SC16M1TK6 <sup>(1)(2)</sup>  | 3.0        | -               |
|             |                                       | 18-16 | SM16M11TK6 <sup>(1)(2)</sup> | SC16M11TK6 <sup>(1)(2)</sup> | 2.0-3.0    | -               |
|             |                                       | 14    | SM14M1TK6 <sup>(1)(2)</sup>  | SC14M1TK6 <sup>(1)(2)</sup>  | 3.2        | -               |
| PCB         | Machined <sup>(3)</sup>               | -     | RM20M12E8K <sup>(1)</sup>    | RC20M12E84K <sup>(1)</sup>   | -          | -               |
| Coaxial     | Cable Multipiece                      | -     | RMDXK10D28                   | RCDXK1D28                    | -          | -               |
|             | Cable Monocrimp                       | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
|             | Twisted pair Multipiece               | -     | RMDXK10D28 + york090         | RCDXK1D28 + york090          | -          | -               |
|             | Twisted pair Monocrimp                | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
| Fiber optic | POF contacts<br>Plastic optical fibre | -     | RMP0F1000                    | RCPOF1000B                   | -          | -               |
| #20         |                                       |       |                              |                              |            |                 |
| Crimp       | Machined                              | 26-24 | RM24W3K <sup>(1)</sup>       | RC24W3K <sup>(1)</sup>       | -          | 1.58            |
|             |                                       | 22-20 | RM20W3K <sup>(1)</sup>       | RC20W3K <sup>(1)</sup>       | -          | 1.58            |
|             |                                       | 20-18 | RM18W3K <sup>(1)</sup>       | RC18W3K <sup>(1)</sup>       | -          | 2.1             |
|             | Stamped & formed reeled contacts      | 26-24 | SM24W3TK6 <sup>(2)</sup>     | SC24W3TK6 <sup>(2)</sup>     | -          | 0.89-1.58       |
|             |                                       | 26-24 | SM24W3S26 <sup>(2)</sup>     | SC24W3S25 <sup>(2)</sup>     | -          | 0.89-1.58       |
|             |                                       | 22-20 | SM20W3TK6 <sup>(2)</sup>     | SC20W3TK6 <sup>(2)</sup>     | -          | 1.17-2.08       |
|             |                                       | 22-20 | SM20W3S26 <sup>(2)</sup>     | SC20W3S25 <sup>(2)</sup>     | -          | 1.17-2.08       |
| PCB         | Machined <sup>(3)</sup>               | -     | RMW5016K                     | RCW5016K                     | -          | -               |

(1): Example of plating, for other plating see page 143

(2): Loose piece contact available if putting L. Example: SM20ML1-TK6

(3): For dimensions see page 148

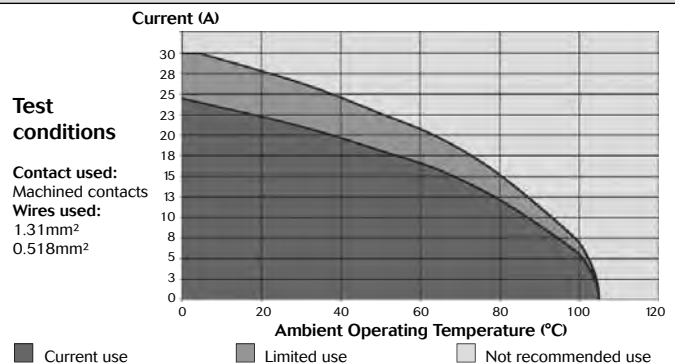
### Electrical characteristics

UL  
10A 500V UL94 V-0

CSA  
7A 500V UL94 V-0

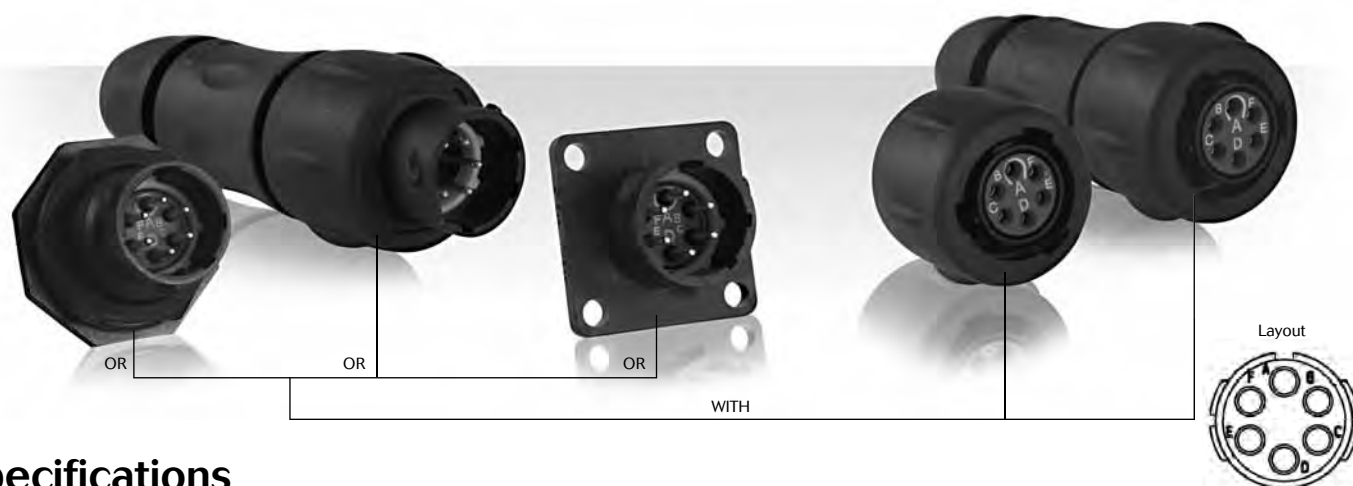
IEC  
5A 32V 1.5kV 3  
Temperature elevation: 50°C

### UTS 103W3 derating curves



# UTS Series

## 106 - 10E6/10D6



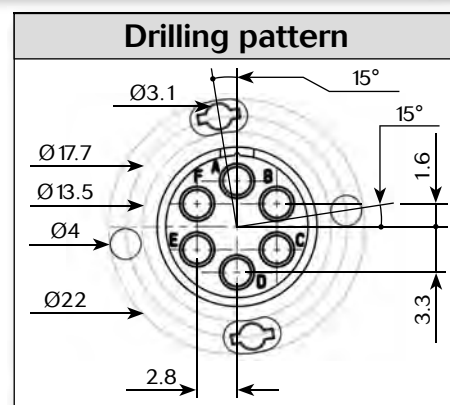
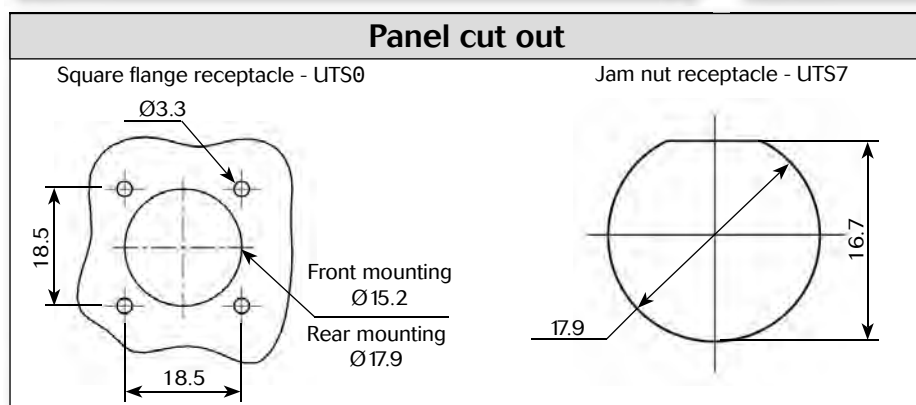
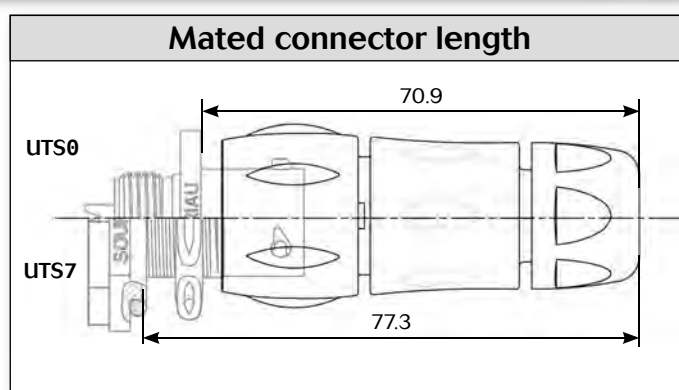
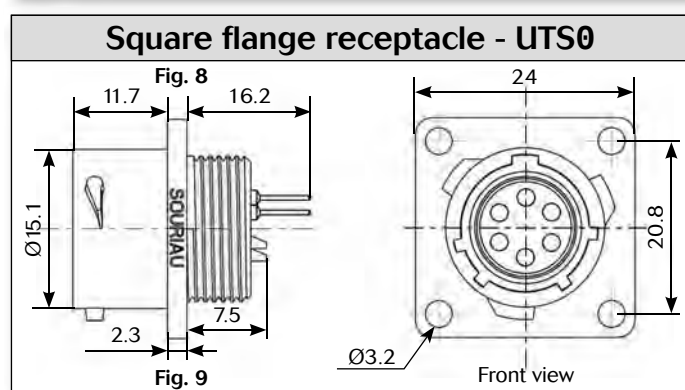
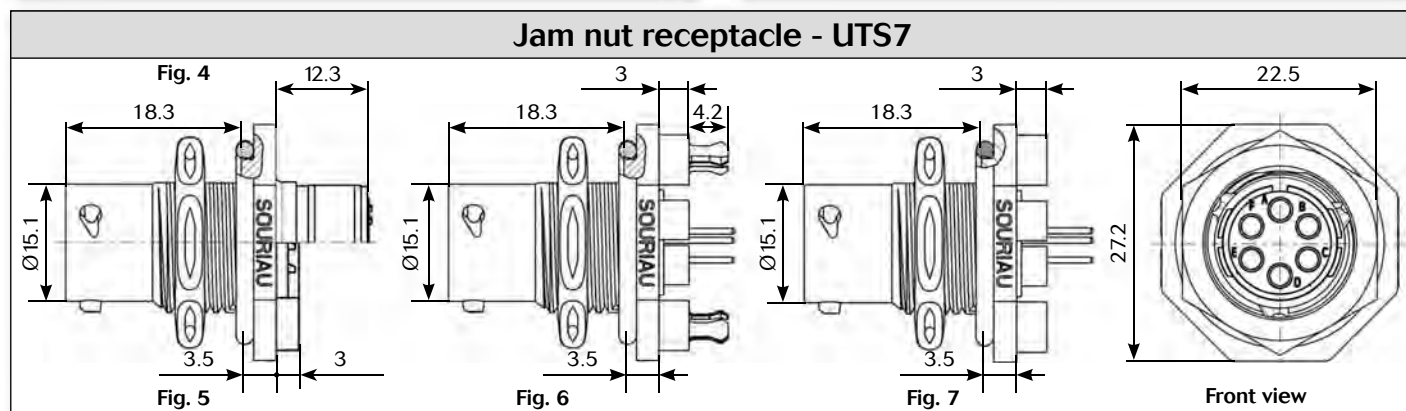
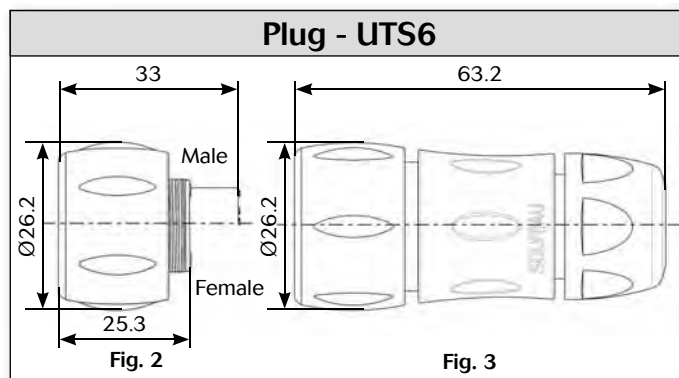
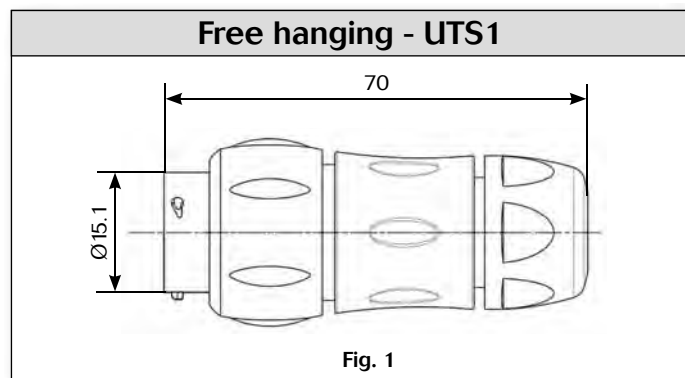
## Specifications

| Contact type                                 | Connector type                                               | Backshell           | Part number        |                    |
|----------------------------------------------|--------------------------------------------------------------|---------------------|--------------------|--------------------|
|                                              |                                                              |                     | Male insert        | Female insert      |
| Crimp contacts supply separately see page 83 | Free hanging receptacle                                      | Cable gland (Fig.1) | <b>UTS1JC106P</b>  | <b>UTS1JC106S</b>  |
|                                              | Plug                                                         | Without (Fig.2)     | <b>UTS6106P</b>    | <b>UTS6106S</b>    |
|                                              | Plug                                                         | Cable gland (Fig.3) | <b>UTS6JC106P</b>  | <b>UTS6JC106S</b>  |
|                                              | Jam nut receptacle                                           | Without (Fig.4)     | <b>UTS7106P</b>    | <b>UTS7106S</b>    |
| Handsolder electrical contacts loaded        | Square flange receptacle                                     | Without (Fig.9)     | <b>UTS010E6P</b>   | <b>UTS010E6S</b>   |
|                                              | Plug                                                         | Without (Fig.2)     | <b>UTS610E6P</b>   | <b>UTS610E6S</b>   |
|                                              |                                                              | Cable gland (Fig.3) | <b>UTS6JC10E6P</b> | <b>UTS6JC10E6S</b> |
|                                              | Jam nut receptacle                                           | Without (Fig.5)     | <b>UTS710E6P</b>   | <b>UTS710E6S</b>   |
| PCB contacts supply separately see page 83   | Jam nut receptacle                                           | Without (Fig.4)     | <b>UTS7106P</b>    | <b>UTS7106S</b>    |
| PCB contacts loaded                          | Square flange receptacle                                     | Without (Fig.8)     | <b>UTS010D6P</b>   | <b>UTS010D6S</b>   |
|                                              | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.6)     | <b>UTS710D6P32</b> | <b>UTS710D6S32</b> |
|                                              | Jam nut receptacle with stand off and without hold down clip | Without (Fig.7)     | <b>UTS710D6P</b>   | <b>UTS710D6S</b>   |

Sealed unmatred



## Dimensions



Note: all dimensions are in mm

# UTS Series

## 106 - 10E6/10D6



### Accessories and tooling

| Jam nut sealing caps                                                              |                                                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|  |  |
| Part number                                                                       | Part number                                                                       |
| UTS10DCG                                                                          | UTS10DCGR                                                                         |

| Handle                                                                             |
|------------------------------------------------------------------------------------|
|  |
| Part number                                                                        |
| SHANGLES                                                                           |

| Tool kit                                                                            |
|-------------------------------------------------------------------------------------|
|  |
| Part number                                                                         |
| TOOLKIT                                                                             |

| Plug sealing cap                                                                   |
|------------------------------------------------------------------------------------|
|  |
| Part number                                                                        |
| UTS610DCG                                                                          |

| Square flange sealing cap                                                          |
|------------------------------------------------------------------------------------|
|  |
| Part number                                                                        |
| UTS10DCGE                                                                          |

| Plastic protective cap                                                              |          |
|-------------------------------------------------------------------------------------|----------|
|  |          |
| Part numbers                                                                        |          |
| Receptacle cap                                                                      | Plug cap |
| 85005586A                                                                           | 85005595 |

| Gasket                                                                              |
|-------------------------------------------------------------------------------------|
|  |
| Part numbers / neoprene                                                             |
| UTFD12B                                                                             |

| Crimp tooling                                                                       |                                   |                     |
|-------------------------------------------------------------------------------------|-----------------------------------|---------------------|
|  |                                   |                     |
| Contacts                                                                            | Contact size                      | Part number of head |
| RM/RC 24W3K <sup>(1)</sup>                                                          | Standard contacts<br>#20<br>Ø 1mm | S20RM               |
| RM/RC 20W3K <sup>(1)</sup>                                                          |                                   | S20RM               |
| RM/RC 18W3K <sup>(1)</sup>                                                          |                                   | S20RM               |
| SM/SC 24W3S <sup>(2)</sup>                                                          |                                   | S20SCM20            |
| SM/SC 24WL3S <sup>(3)</sup>                                                         |                                   | S20SCM20            |
| SM/SC 20W3S <sup>(2)</sup>                                                          |                                   | S20SCM20            |
| SM/SC 20WL3S <sup>(3)</sup>                                                         |                                   | S20SCM20            |

(1): example of plating, for other plating see UTS catalog page 143  
 (2): contact reeled  
 (3): loose contact

| Color coding rings                       |                                                                                                                                                                                                                                                                                                   |              |  |             |       |            |            |            |            |            |            |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--|-------------|-------|------------|------------|------------|------------|------------|------------|
| G for Green<br>Y for Yellow<br>R for Red | <table border="1"> <thead> <tr> <th colspan="2">Part numbers</th> </tr> <tr> <th>Receptacles</th> <th>Plugs</th> </tr> </thead> <tr> <td>UTS710CCRR</td> <td>UTS610CCRR</td> </tr> <tr> <td>UTS710CCRY</td> <td>UTS610CCRY</td> </tr> <tr> <td>UTS710CCRG</td> <td>UTS610CCRG</td> </tr> </table> | Part numbers |  | Receptacles | Plugs | UTS710CCRR | UTS610CCRR | UTS710CCRY | UTS610CCRY | UTS710CCRG | UTS610CCRG |
| Part numbers                             |                                                                                                                                                                                                                                                                                                   |              |  |             |       |            |            |            |            |            |            |
| Receptacles                              | Plugs                                                                                                                                                                                                                                                                                             |              |  |             |       |            |            |            |            |            |            |
| UTS710CCRR                               | UTS610CCRR                                                                                                                                                                                                                                                                                        |              |  |             |       |            |            |            |            |            |            |
| UTS710CCRY                               | UTS610CCRY                                                                                                                                                                                                                                                                                        |              |  |             |       |            |            |            |            |            |            |
| UTS710CCRG                               | UTS610CCRG                                                                                                                                                                                                                                                                                        |              |  |             |       |            |            |            |            |            |            |

\* Add G for Green, Y for Yellow, R for Red

# UTS Series

## 106 - 10E6/10D6



6 contacts  
7A/32V  
per IEC 61984

## Contacts

| #20   | Contact type                     | AWG   | Part number              |                          | Max wire Ø | Max insulator Ø |
|-------|----------------------------------|-------|--------------------------|--------------------------|------------|-----------------|
|       |                                  |       | Male                     | Female                   |            |                 |
| Crimp | Machined                         | 26-24 | RM24W3K <sup>(1)</sup>   | RC24W3K <sup>(1)</sup>   | -          | 1.58            |
|       |                                  | 22-20 | RM20W3K <sup>(1)</sup>   | RC20W3K <sup>(1)</sup>   | -          | 1.58            |
|       |                                  | 20-18 | RM18W3K <sup>(1)</sup>   | RC18W3K <sup>(1)</sup>   | -          | 2.1             |
|       | stamped & formed reeled contacts | 26-24 | SM24W3TK6 <sup>(2)</sup> | SC24W3TK6 <sup>(2)</sup> | -          | 0.89-1.58       |
|       |                                  | 26-24 | SM24W3TK6 <sup>(2)</sup> | SC24W3TK6 <sup>(2)</sup> | -          | 0.89-1.58       |
|       |                                  | 22-20 | SM20W3TK6 <sup>(2)</sup> | SC20W3TK6 <sup>(2)</sup> | -          | 1.17-2.08       |
|       |                                  | 22-20 | SM20W3TK6 <sup>(2)</sup> | SC20W3TK6 <sup>(2)</sup> | -          | 1.17-2.08       |
|       |                                  |       |                          |                          |            |                 |
| PCB   | Machined <sup>(3)</sup>          | -     | RMW5016K                 | RCW5016K                 | -          | -               |

(1): Example of plating, for other plating see page 143

(2): Loose piece contact available if putting L. Example: SM20ML1-TK6

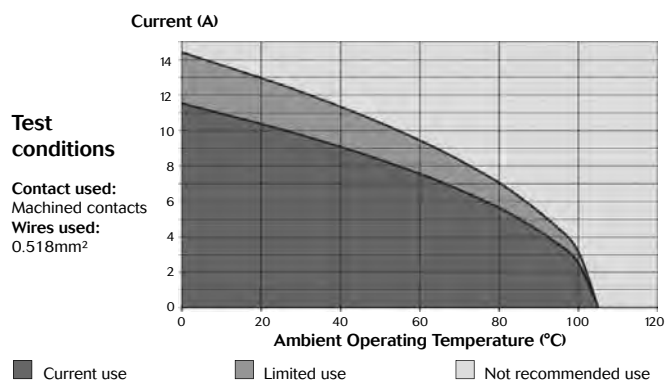
(3): For dimensions see page 148

Mechanics

## Electrical characteristics

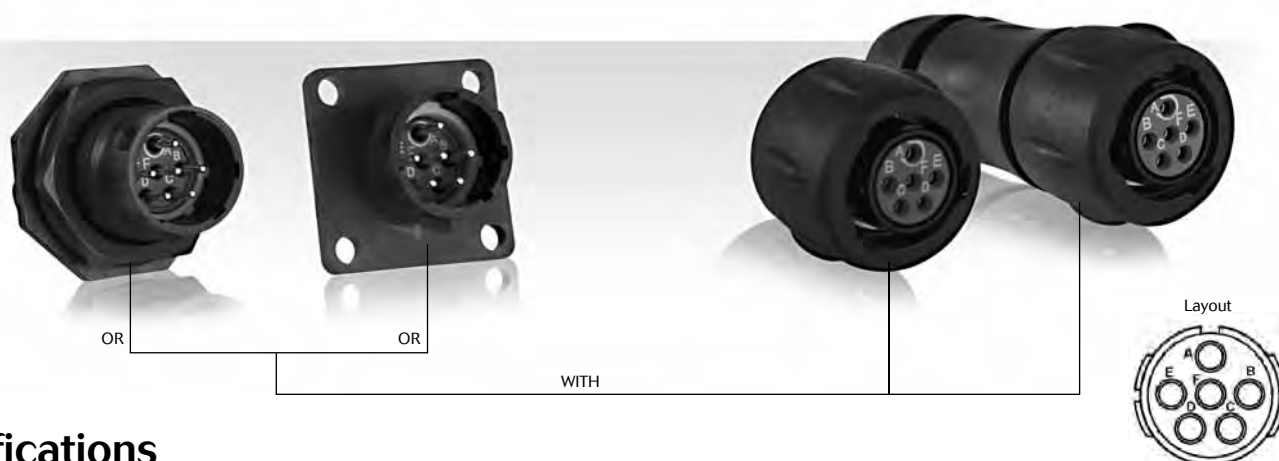
|                  |                      |
|------------------|----------------------|
| <b>UTS 106</b>   | <b>UTS 10E6/10D6</b> |
| <b>UL</b>        | <b>UL</b>            |
| 5A 250V UL94 V-0 | 6A 250V UL94 HB      |
| <b>CSA</b>       | <b>CSA</b>           |
| 4A 250V UL94 V-0 | 6A 250V UL94 HB      |
| <b>IEC</b>       |                      |
| 7A 32V 1.5kV 3   |                      |

## UTS 106 - 10E6/10D6 derating curves



# UTS Series

## 10E98/10D98



## Specifications

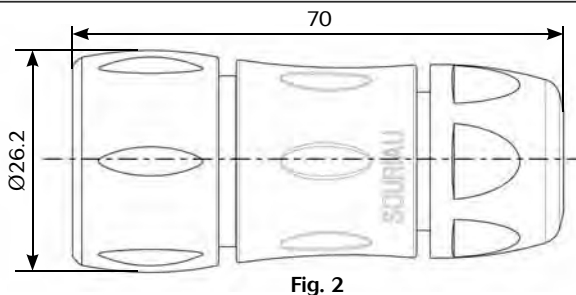
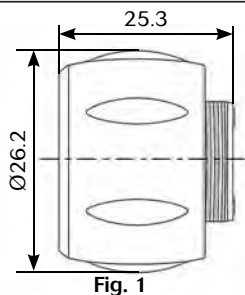
| Contact type                          | Connector type                                               | Backshell           | Part number         |                     |
|---------------------------------------|--------------------------------------------------------------|---------------------|---------------------|---------------------|
|                                       |                                                              |                     | Male insert         | Female insert       |
| Handsolder electrical contacts loaded | Square flange receptacle                                     | Without (Fig.6)     | <b>UTS010E98P</b>   | <b>UTS010E98S</b>   |
|                                       | Plug                                                         | Without (Fig.1)     | <b>UTS610E98P</b>   | <b>UTS610E98S</b>   |
|                                       |                                                              | Cable gland (Fig.2) | <b>UTS6JC10E98P</b> | <b>UTS6JC10E98S</b> |
|                                       | Jam nut receptacle                                           | Without (Fig.3)     | <b>UTS710E98P</b>   | <b>UTS710E98S</b>   |
| PCB contacts loaded                   | Square flange receptacle                                     | Without (Fig.7)     | <b>UTS010D98P</b>   | <b>UTS010D98S</b>   |
|                                       | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.4)     | <b>UTS710D98P32</b> | <b>UTS710D98S32</b> |
|                                       | Jam nut receptacle with stand off and without hold down clip | Without (Fig.5)     | <b>UTS710D98P</b>   | <b>UTS710D98S</b>   |

Sealed unmated

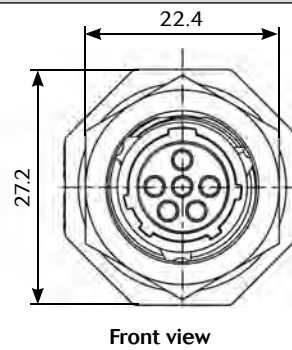
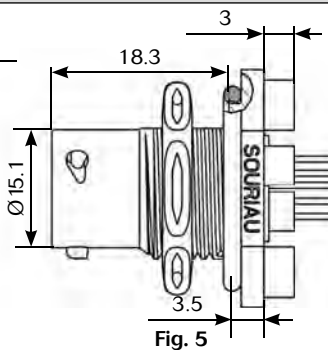
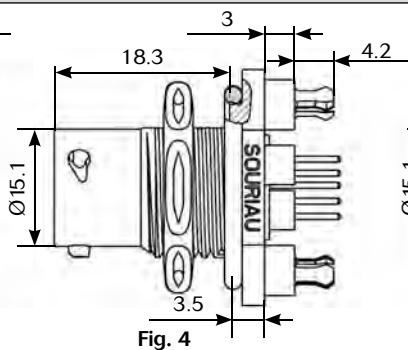
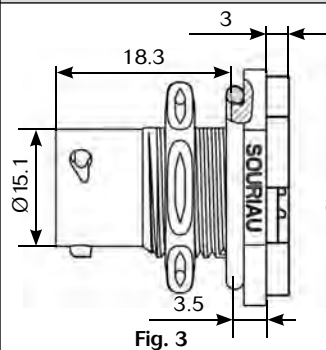


## Dimensions

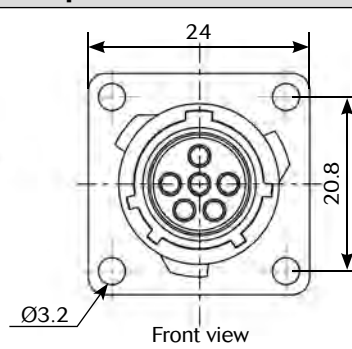
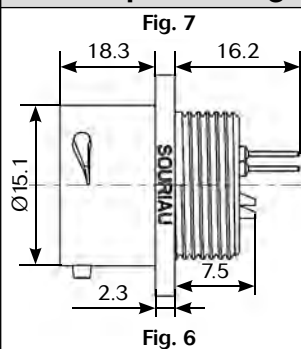
### Plug - UTS6



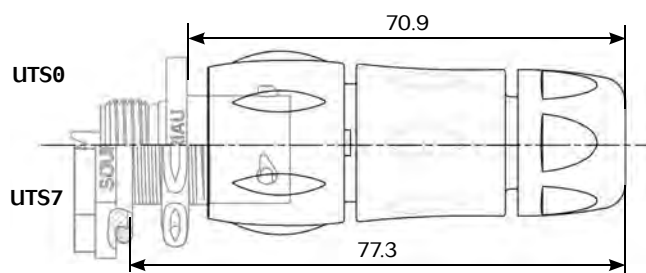
### Jam nut receptacle - UTS7



### Square flange receptacle - UTS0

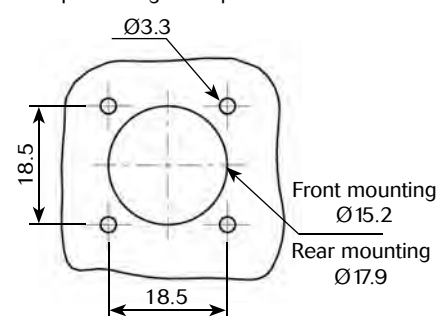


### Mated connector length

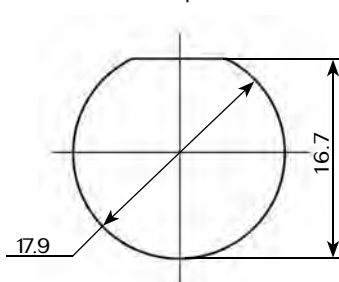


### Panel cut out

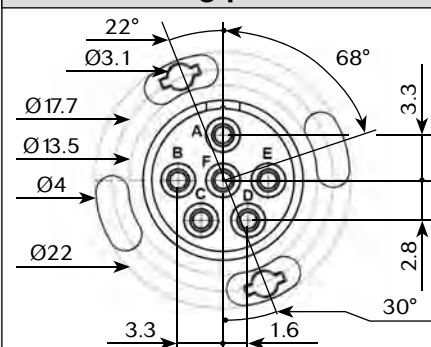
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



### Drilling pattern



Note: all dimensions are in mm

# UTS Series

## 10E98/10D98



### Accessories

#### Jam nut sealing caps



| Part number |
|-------------|
| UTS10DCG    |



Metal terminal

| Part number |
|-------------|
| UTS10DCGR   |

#### Plug protective cap



| Part number |
|-------------|
| UTS610DCG   |

#### Square flange sealing cap



Metal terminal

| Part number |
|-------------|
| UTS10DCGE   |

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005586A      | 85005595 |

#### Gasket



| Part numbers / neoprene |
|-------------------------|
| UTFD12B                 |

#### Color coding rings

G for Green

Y for Yellow

R for Red



| Part numbers |            |
|--------------|------------|
| Receptacles  | Plugs      |
| UTS710CCRR   | UTS610CCRR |
| UTS710CCRY   | UTS610CCRY |
| UTS710CCRG   | UTS610CCRG |

\* Add G for Green, Y for Yellow, R for Red

#### Electrical characteristics

**UL**

6A 250V UL94 HB

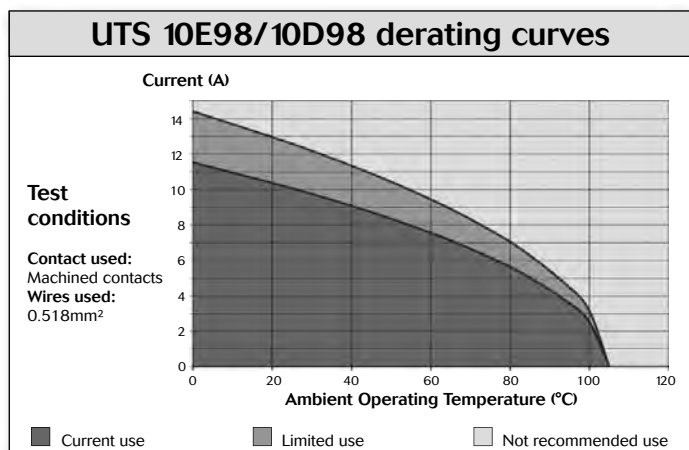
**CSA**

6A 250V UL94 HB

**IEC**

7A 50V 1.5kV 3



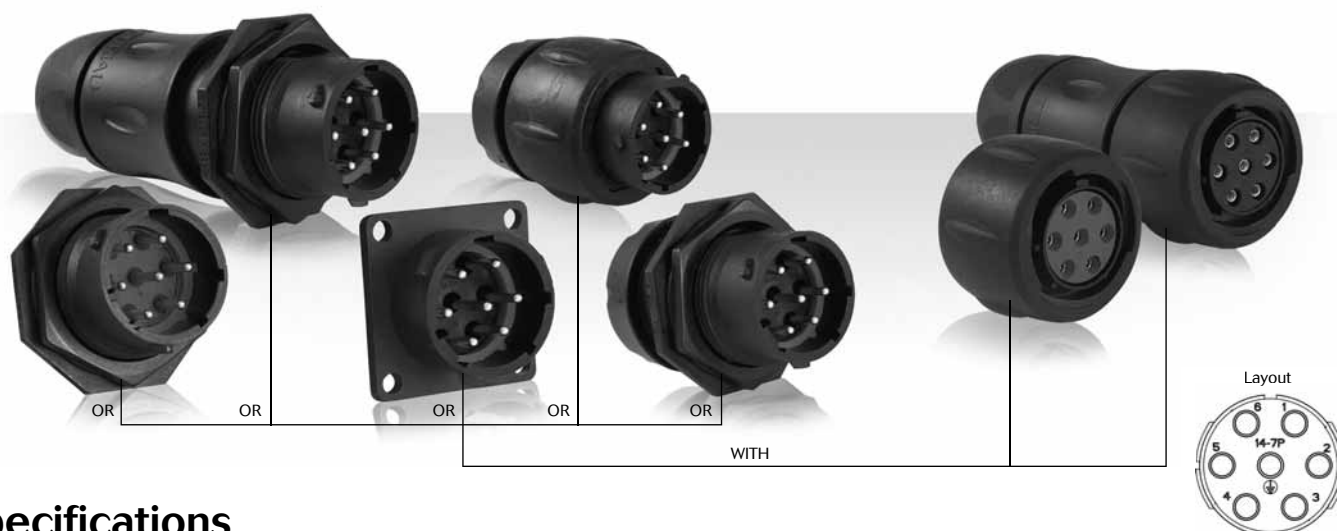
# UTS Series

10E98/10D98



# UTS Series

## 147 - 14E7/14D7



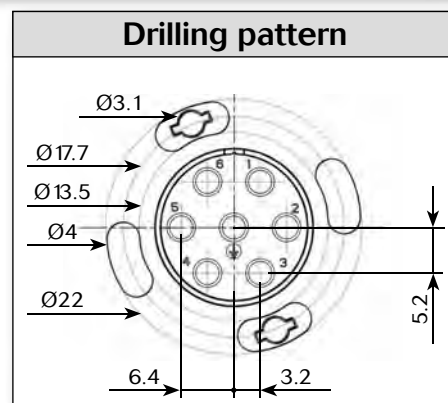
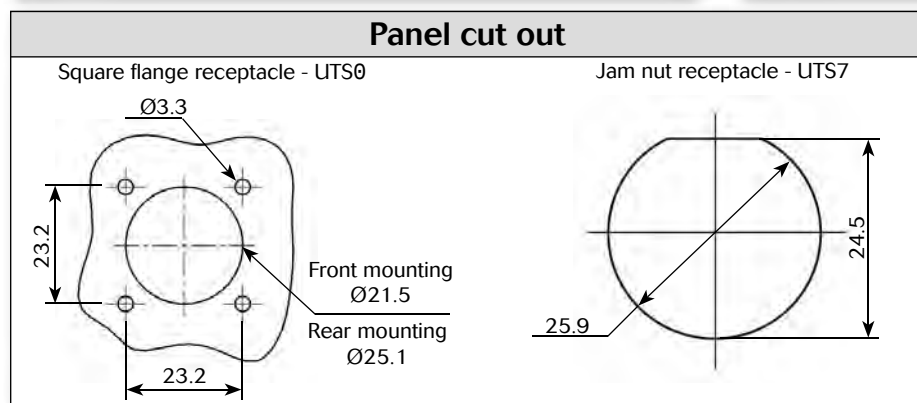
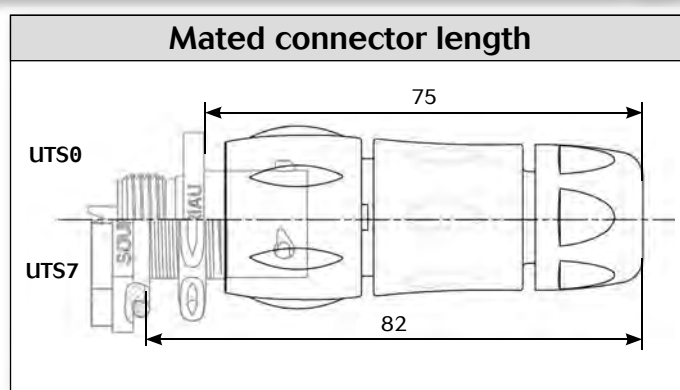
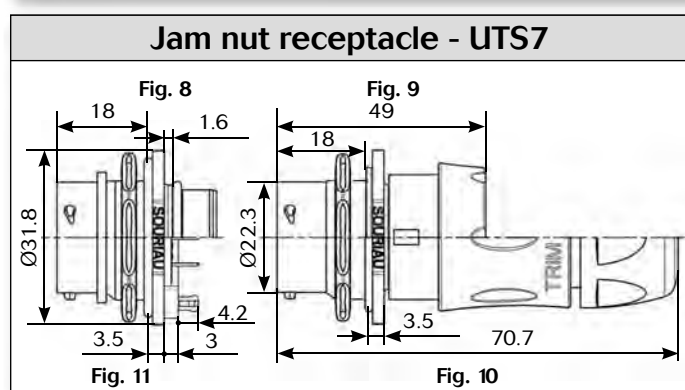
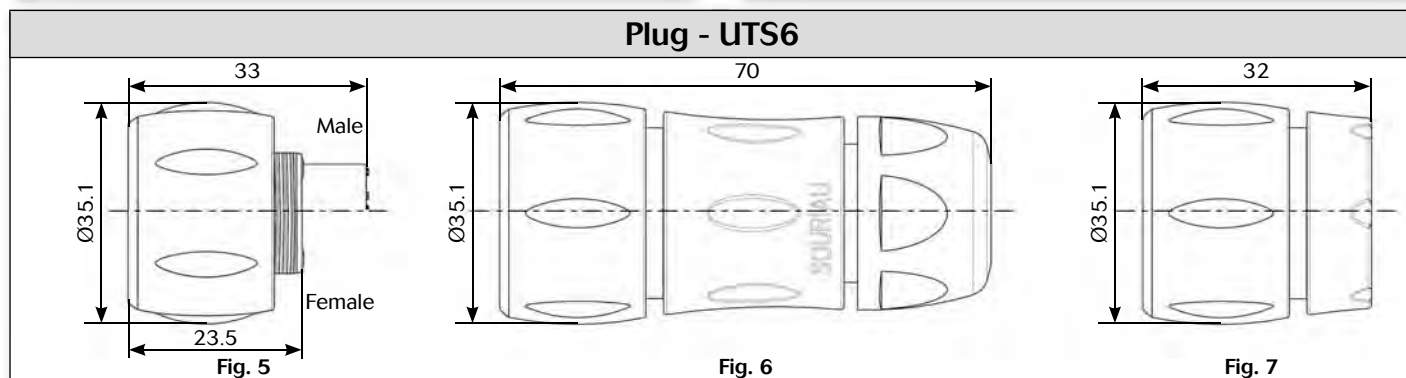
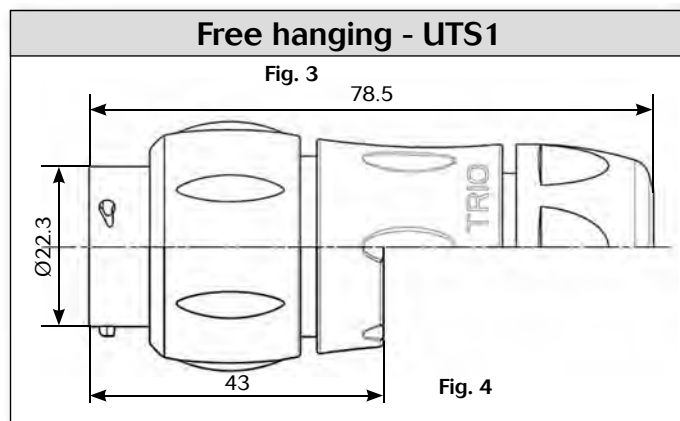
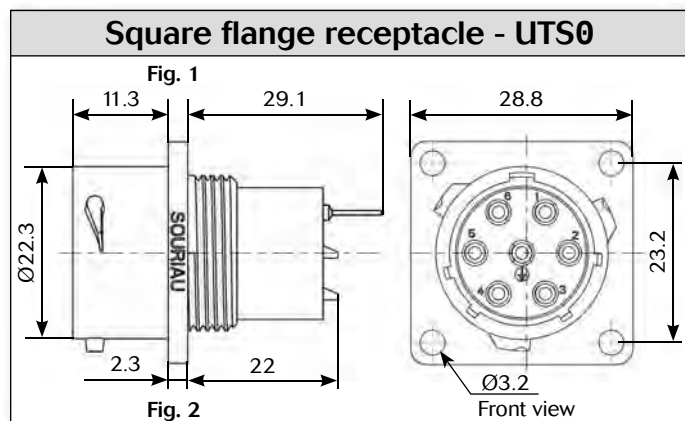
## Specifications

| Contact type                                 | Connector type                                               | Backshell                                  | Part number          |                      |
|----------------------------------------------|--------------------------------------------------------------|--------------------------------------------|----------------------|----------------------|
|                                              |                                                              |                                            | Male insert          | Female insert        |
| Crimp contacts supply separately see page 91 | Square flange receptacle                                     | Without (Fig.2)                            | <b>UTS0147P</b>      |                      |
|                                              | Free hanging receptacle                                      | Cable gland and grommet (Fig.3)            | <b>UTS16JC147P</b>   |                      |
|                                              | Free hanging receptacle                                      | Nut and grommet (Fig.4)                    | <b>UTS16N147P</b>    |                      |
|                                              | Free hanging receptacle                                      | Cable gland (Fig.3)                        | <b>UTS1JC147P</b>    | <b>UTS1JC147S</b>    |
|                                              | Plug                                                         | Without (Fig.5)                            | <b>UTS6147P</b>      | <b>UTS6147S</b>      |
|                                              | Plug                                                         | Cable gland and grommet (Fig.6)            |                      | <b>UTS66JC147S</b>   |
|                                              | Plug                                                         | Nut and grommet (Fig.7)                    |                      | <b>UTS66N147S</b>    |
|                                              | Plug                                                         | Cable gland (Fig.6)                        | <b>UTS6JC147P</b>    | <b>UTS6JC147S</b>    |
|                                              | Jam nut receptacle                                           | Without (Fig.8)                            | <b>UTS7147P</b>      | <b>UTS7147S</b>      |
|                                              | Jam nut receptacle                                           | Cable gland and grommet (Fig.10)           | <b>UTS76JC147P</b>   |                      |
|                                              | Jam nut receptacle                                           | Nut and grommet (Fig.9)                    | <b>UTS76N147P</b>    |                      |
| Handsolder electrical contacts loaded        | Square flange receptacle                                     | Without (Fig.2)                            | <b>UTS014E7P</b>     | <b>UTS014E7S</b>     |
|                                              | Plug                                                         | Cable gland (Fig.6)                        | <b>UTS6JC14E7P</b>   | <b>UTS6JC14E7S</b>   |
|                                              | Jam nut receptacle                                           | Without (Fig.11)                           | <b>UTS714E7P</b>     | <b>UTS714E7S</b>     |
| PCB contacts loaded                          | Square flange receptacle                                     | Without (Fig.1)                            | <b>UTS014D7P</b>     | <b>UTS014D7S</b>     |
|                                              | Jam nut receptacle with stand off and hold down clips        | Without (Fig.11)                           | <b>UTS714D7P32</b>   | <b>UTS714D7S32</b>   |
|                                              | Jam nut receptacle with stand off and without hold down clip | Without (Fig.11)                           | <b>UTS714D7P</b>     | <b>UTS714D7S</b>     |
|                                              | Jam nut receptacle                                           | With stand off and hold down clip (Fig.11) | <b>UTS7147PSEK9</b>  |                      |
| Screw contacts loaded                        | Jam nut receptacle                                           | Without (Fig.8)                            | <b>UTS7147PSCR</b>   | <b>UTS7147SSCR</b>   |
|                                              | Free hanging receptacle                                      | Cable gland (Fig.3)                        | <b>UTS1JC147PSCR</b> |                      |
|                                              | Plug                                                         | Cable gland (Fig.6)                        | <b>UTS6JC147PSCR</b> | <b>UTS6JC147SSCR</b> |

Sealed unmatred



## Dimensions



Note: all dimensions are in mm

# UTS Series

## 147 - 14E7/14D7



### Accessories and tooling

#### Jam nut sealing caps



Part number  
UTS14DCG



Metal terminal

Part number  
UTS14DCGR

#### Handle



Part number  
SHANGLES

#### Tool kit



Part number  
TOOLKIT

#### Plug sealing cap



Part number  
UTS614DCG

#### Square flange sealing cap



Metal terminal

Part number  
UTS14DCGE

#### Crimp tooling



| Contacts                       | Contact size                        | Part number of head |
|--------------------------------|-------------------------------------|---------------------|
| RM/RC 28M1K <sup>(1)</sup>     | Standard contacts<br>#16<br>Ø 1.6mm | S16RCM20            |
| RM/RC 24M9K <sup>(1)</sup>     |                                     | S16RCM20            |
| RM/RC 20M13K <sup>(1)</sup>    |                                     | S16RCM20            |
| RM/RC 20M12K <sup>(1)</sup>    |                                     | S16RCM20            |
| RM/RC 16M23K <sup>(1)</sup>    |                                     | S16RCM16            |
| RM/RC 14M50K <sup>(1)</sup>    |                                     | S16RCM1450          |
| RM/RC 14M30K <sup>(1)</sup>    |                                     | S16RCM14            |
| SM/SC 24ML1TK6 <sup>(1)</sup>  |                                     | S16SCM20            |
| SM/SC 20ML1TK6 <sup>(1)</sup>  |                                     | S16SCM20            |
| SM/SC 16ML1TK6 <sup>(1)</sup>  |                                     | S16SCML1            |
| SM/SC 14ML1TK6 <sup>(1)</sup>  |                                     | S16SCML1            |
| SM/SC 16ML11TK6 <sup>(1)</sup> |                                     | S16SCML11           |
| RMDXK10D28K                    | Coaxial contacts                    | M10S-1J             |
| RCDXK1D28K                     |                                     | M10S-1J             |
| RM/RC DX60xxD28K               |                                     | M10S-1J             |
| RM/RC DXK10D28 + york090       |                                     | M10S-1J             |
| RM/RC DX60xxD28                |                                     | M10S-1J             |

(1): example of plating, for other plating see UTS catalog page 143

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005588A      | 85005597 |

#### Gasket



Part numbers / neoprene  
UTFD14B

#### Color coding rings

G for Green

Y for Yellow

R for Red



| Part numbers |            |
|--------------|------------|
| Receptacles  | Plugs      |
| UTS714CCRR   | UTS614CCRR |
| UTS714CCRY   | UTS614CCRY |
| UTS714CCRG   | UTS614CCRG |

\* Add G for Green, Y for Yellow, R for Red

# UTS Series

## 147 - 14E7/14D7



6 + ground  
16A/300V  
per IEC 61984

## Contacts

| #16         | Contact type                          | AWG   | Part number                  |                              | Max wire Ø | Max insulator Ø |
|-------------|---------------------------------------|-------|------------------------------|------------------------------|------------|-----------------|
|             |                                       |       | Male                         | Female                       |            |                 |
| Crimp       | Machined                              | 30-28 | RM28M1K <sup>(1)</sup>       | RC28M1K <sup>(1)</sup>       | 0.55       | 1.1             |
|             |                                       | 26-24 | RM24M9K <sup>(1)</sup>       | RC24M9K <sup>(1)</sup>       | 0.8        | 1.6             |
|             |                                       | 22-20 | RM20M13K <sup>(1)</sup>      | RC20M13K <sup>(1)</sup>      | 1.18       | 1.8             |
|             |                                       | 22-20 | RM20M12K <sup>(1)</sup>      | RC20M12K <sup>(1)</sup>      | 1.18       | 2.2             |
|             |                                       | 20-16 | RM16M23K <sup>(1)</sup>      | RC16M23K <sup>(1)</sup>      | 1.8        | 3.2             |
|             |                                       | 16-14 | RM14M50K <sup>(1)</sup>      | RC14M50K <sup>(1)</sup>      | 2.05       | 3.2             |
|             |                                       | 16-14 | RM14M30K <sup>(1)</sup>      | RC14M30K <sup>(1)</sup>      | 2.28       | 3.2             |
|             | Stamped & formed reeled contacts      | 26-24 | SM24M1TK6 <sup>(1)(2)</sup>  | SC24M1TK6 <sup>(1)(2)</sup>  | 0.89-1.28  | -               |
|             |                                       | 22-20 | SM20M1TK6 <sup>(1)(2)</sup>  | SC20M1TK6 <sup>(1)(2)</sup>  | 1.17-2.08  | -               |
|             |                                       | 18-16 | SM16M1TK6 <sup>(1)(2)</sup>  | SC16M1TK6 <sup>(1)(2)</sup>  | 3.0        | -               |
|             |                                       | 18-16 | SM16M11TK6 <sup>(1)(2)</sup> | SC16M11TK6 <sup>(1)(2)</sup> | 2.0-3.0    | -               |
|             |                                       | 14    | SM14M1TK6 <sup>(1)(2)</sup>  | SC14M1TK6 <sup>(1)(2)</sup>  | 3.2        | -               |
| PCB         | Machined <sup>(3)</sup>               | -     | RM20M12E8K <sup>(1)</sup>    | RC20M12E84K <sup>(1)</sup>   | -          | -               |
| Coaxial     | Cable Multipiece                      | -     | RMDXK10D28                   | RCDXK1D28                    | -          | -               |
|             | Cable Monocrimp                       | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
|             | Twisted pair Multipiece               | -     | RMDXK10D28 + york090         | RCDXK1D28 + york090          | -          | -               |
|             | Twisted pair Monocrimp                | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
| Fiber optic | POF contacts<br>Plastic optical fibre | -     | RMPOF1000                    | RCPOF1000B                   | -          | -               |

(1): Example of plating, for other plating see page 143

(2): Loose piece contact available if putting L. Example: SM20ML1-TK6

(3): For dimensions see page 148

Mechanics

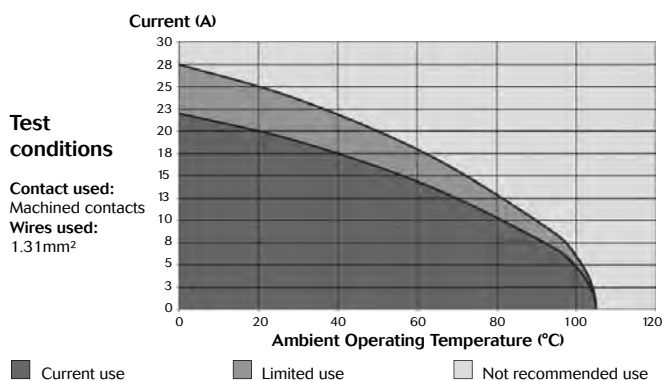
### Electrical characteristics

UL  
10A 500V UL94 V-0

CSA  
7A 500V UL94 V-0

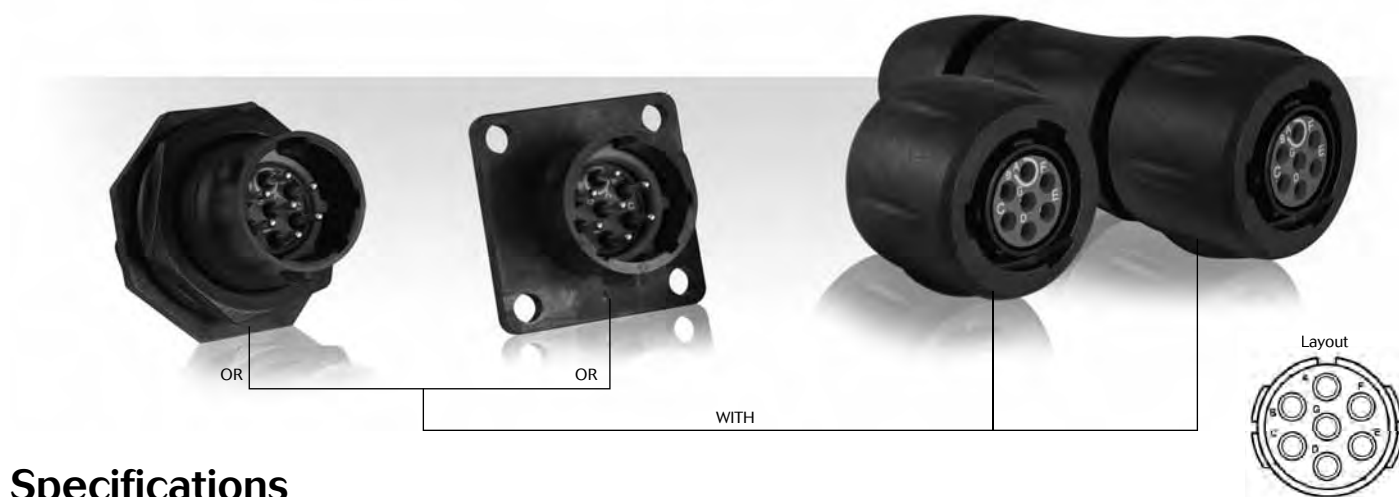
IEC  
16A 300V 4kV 3  
Temperature elevation: 50°C

### UTS 147 derating curves



# UTS Series

## 10E7/10D7



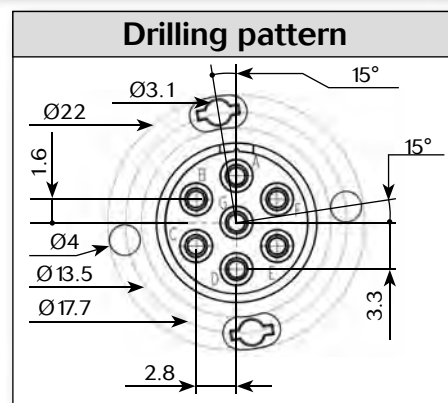
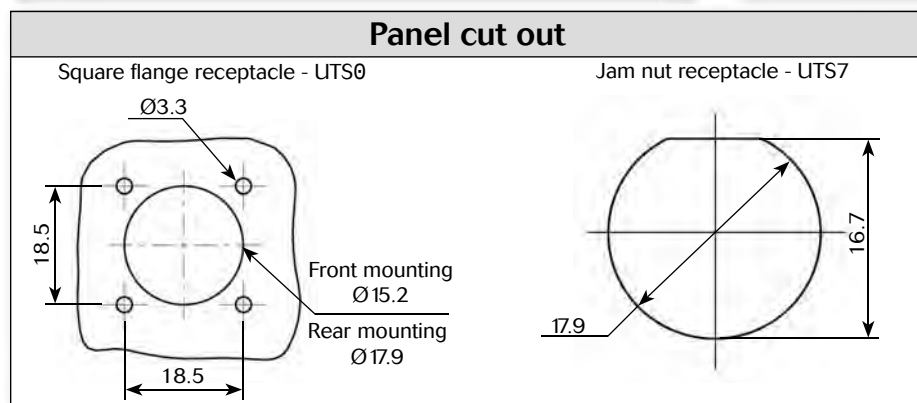
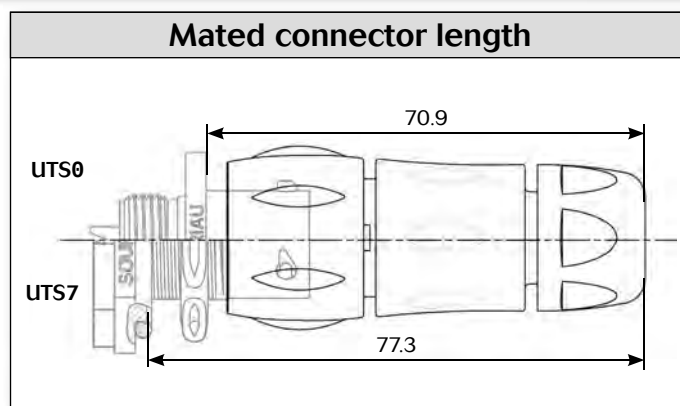
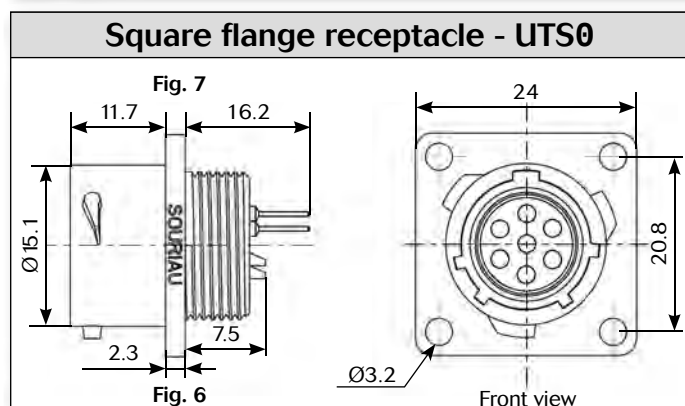
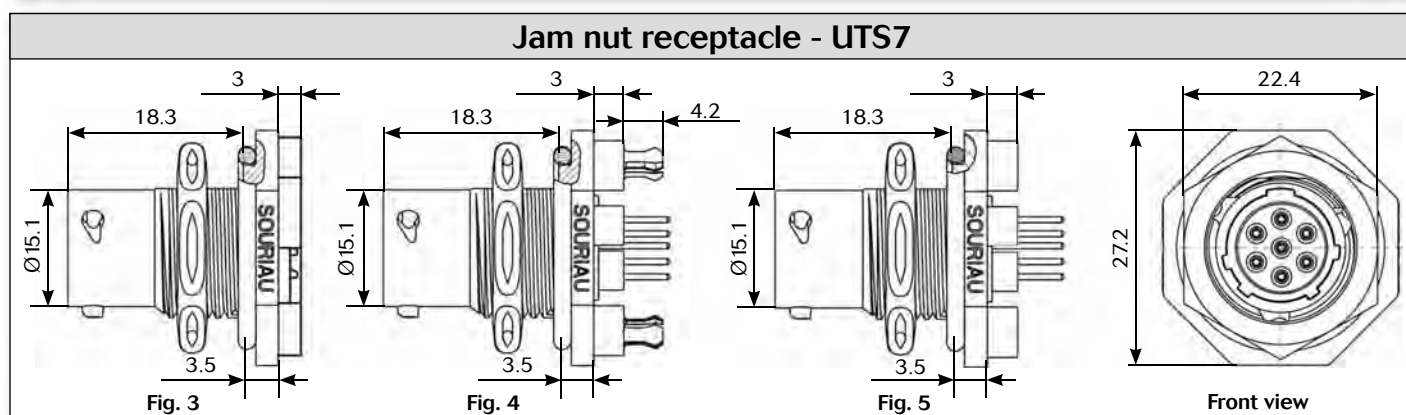
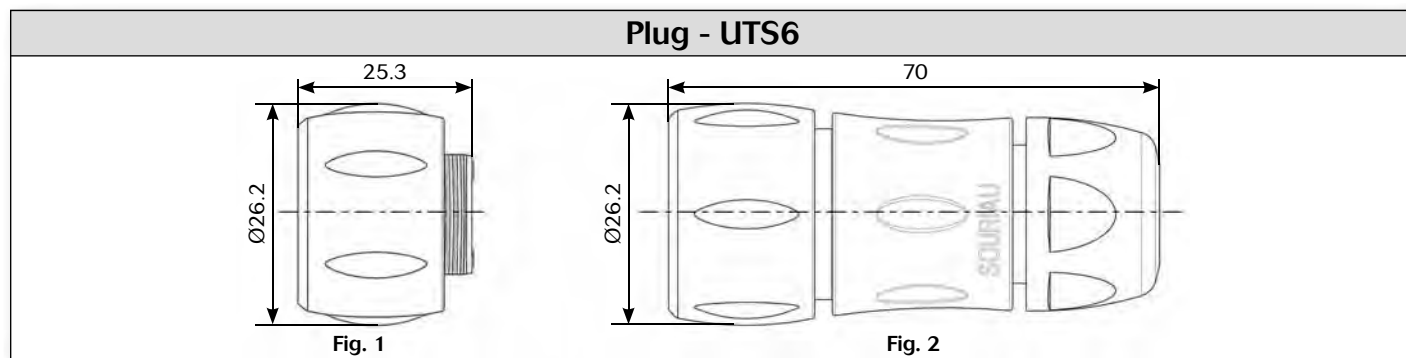
## Specifications

| Contact type                           | Connector type                                               | Backshell           | Part number        |                    |
|----------------------------------------|--------------------------------------------------------------|---------------------|--------------------|--------------------|
|                                        |                                                              |                     | Male insert        | Female insert      |
| Hand solder electrical contacts loaded | Square flange receptacle                                     | Without (Fig.6)     | <b>UTS010E7P</b>   | <b>UTS010E7S</b>   |
|                                        | Plug                                                         | Without (Fig.1)     | <b>UTS610E7P</b>   | <b>UTS610E7S</b>   |
|                                        |                                                              | Cable gland (Fig.2) | <b>UTS6JC10E7P</b> | <b>UTS6JC10E7S</b> |
|                                        | Jam nut receptacle                                           | Without (Fig.3)     | <b>UTS710E7P</b>   | <b>UTS710E7S</b>   |
| PCB contacts loaded                    | Square flange receptacle                                     | Without (Fig.7)     | <b>UTS010D7P</b>   | <b>UTS010D7S</b>   |
|                                        | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.4)     | <b>UTS710D7P32</b> | <b>UTS710D7S32</b> |
|                                        | Jam nut receptacle with stand off and without hold down clip | Without (Fig.5)     | <b>UTS710D7P</b>   | <b>UTS710D7S</b>   |

Sealed unmated



## Dimensions



Note: all dimensions are in mm

# UTS Series

## 10E7/10D7



### Accessories

#### Jam nut sealing caps



| Part number |
|-------------|
| UTS10DCG    |



Metal terminal

| Part number |
|-------------|
| UTS10DCGR   |

#### Plug sealing cap



| Part number |
|-------------|
| UTS610DCG   |

#### Square flange sealing cap



Metal terminal

| Part number |
|-------------|
| UTS10DCGE   |

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005586A      | 85005595 |

#### Gasket



| Part numbers / neoprene |
|-------------------------|
| UTFD12B                 |

#### Color coding rings

G for Green

Y for Yellow

R for Red



| Part numbers |            |
|--------------|------------|
| Receptacles  | Plugs      |
| UTS710CCRR   | UTS610CCRR |
| UTS710CCRY   | UTS610CCRY |
| UTS710CCRG   | UTS610CCRG |

\* Add G for Green, Y for Yellow, R for Red

#### Electrical characteristics

**UL**

6A 250V UL94 HB

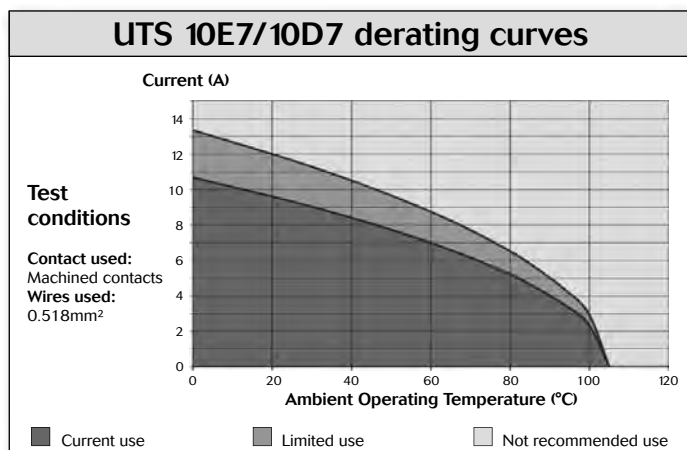
**CSA**

6A 250V UL94 HB

**IEC**

7A 50V 1.5kV 3



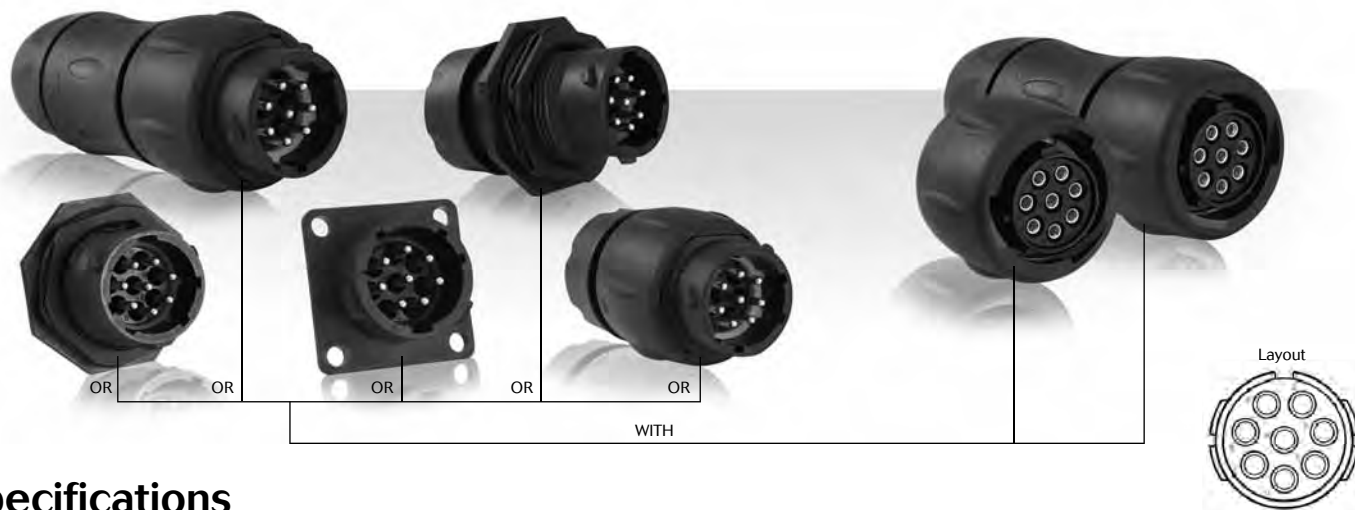
# UTS Series

## 10E7/10D7



# UTS Series

## 128

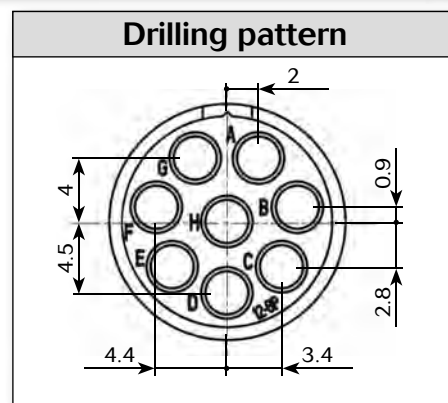
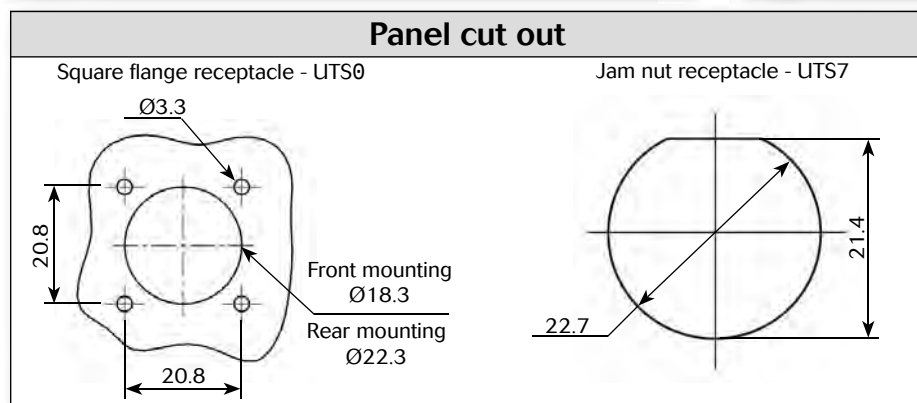
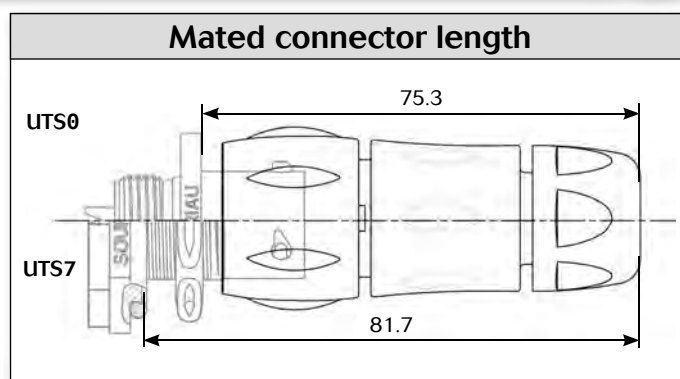
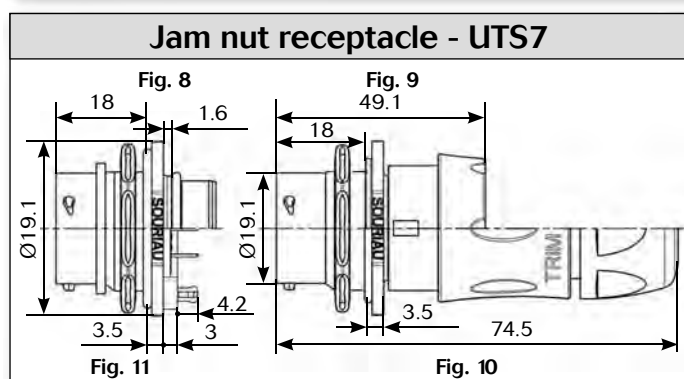
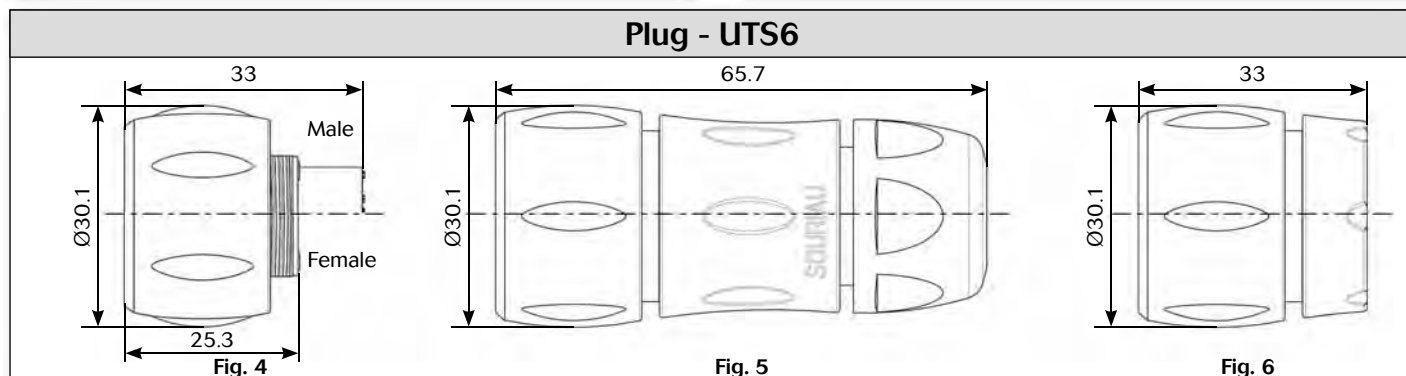
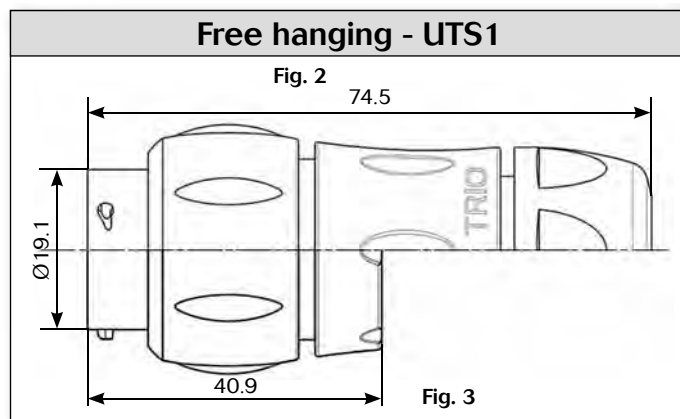
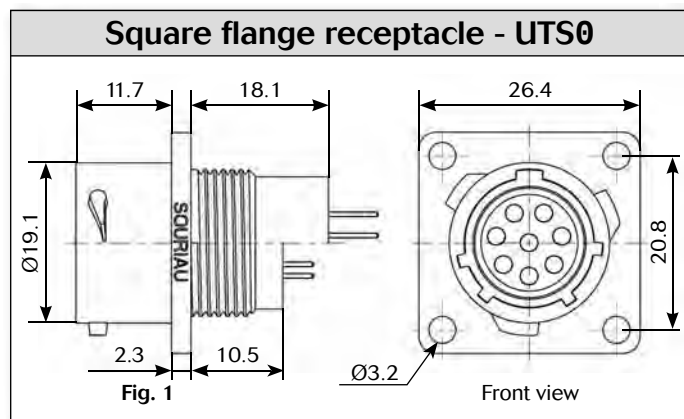


## Specifications

| Contact type                                 | Connector type           | Backshell                                   | Part number         |                    |
|----------------------------------------------|--------------------------|---------------------------------------------|---------------------|--------------------|
|                                              |                          |                                             | Male insert         | Female insert      |
| Crimp contacts supply separately see page 99 | Square flange receptacle | Without (Fig. 1)                            | <b>UTS0128P</b>     | <b>UTS0128S</b>    |
|                                              | Free hanging receptacle  | Cable gland and grommet (Fig. 2)            | <b>UTS1GJC128P</b>  |                    |
|                                              | Free hanging receptacle  | Nut and grommet (Fig. 3)                    | <b>UTS1GN128P</b>   |                    |
|                                              | Free hanging receptacle  | Cable gland (Fig. 2)                        | <b>UTS1JC128P</b>   | <b>UTS1JC128S</b>  |
|                                              | Plug                     | Without (Fig. 4)                            | <b>UTS6128P</b>     | <b>UTS6128S</b>    |
|                                              | Plug                     | Cable gland and grommet (Fig. 5)            |                     | <b>UTS6GJC128S</b> |
|                                              | Plug                     | Nut and grommet (Fig. 6)                    |                     | <b>UTS6GN128S</b>  |
|                                              | Plug                     | Cable gland (Fig. 5)                        | <b>UTS6JC128P</b>   | <b>UTS6JC128S</b>  |
|                                              | Jam nut receptacle       | Without (Fig. 8)                            | <b>UTS7128P</b>     | <b>UTS7128S</b>    |
|                                              | Jam nut receptacle       | Cable gland and grommet (Fig. 10)           | <b>UTS7GJC128P</b>  |                    |
|                                              | Jam nut receptacle       | Nut and grommet (Fig. 9)                    | <b>UTS7GN128P</b>   |                    |
| PCB contacts loaded                          | Jam nut receptacle       | With stand off and hold down clip (Fig. 11) | <b>UTS7128PSEK9</b> |                    |



## Dimensions





### Accessories and tooling

#### Jam nut sealing caps



Part number  
**UTS12DCG**



Metal terminal

Part number  
**UTS12DCGR**

#### Handle



Part number  
**SHANGLES**

#### Tool kit



Part number  
**TOOLKIT**

#### Plug sealing cap



Part number  
**UTS612DCG**

#### Square flange sealing cap



Metal terminal

Part number  
**UTS12DCGE**

#### Plastic protective cap



Part numbers

| Receptacle cap   | Plug cap        |
|------------------|-----------------|
| <b>85005587A</b> | <b>85005596</b> |

#### Gasket



Part numbers / neoprene  
**UTFD13B**

#### Crimp tooling



| Contacts                      | Contact size                        | Part number of head |
|-------------------------------|-------------------------------------|---------------------|
| RM/RC 28M1K <sup>(1)</sup>    | Standard contacts<br>#16<br>Ø 1.6mm | <b>S16RCM20</b>     |
| RM/RC 24M9K <sup>(1)</sup>    |                                     | <b>S16RCM20</b>     |
| RM/RC 20M13K <sup>(1)</sup>   |                                     | <b>S16RCM20</b>     |
| RM/RC 20M12K <sup>(1)</sup>   |                                     | <b>S16RCM20</b>     |
| RM/RC 16M23K <sup>(1)</sup>   |                                     | <b>S16RCM16</b>     |
| RM/RC 14M50K <sup>(1)</sup>   |                                     | <b>S16RCM1450</b>   |
| RM/RC 14M30K <sup>(1)</sup>   |                                     | <b>S16RCM14</b>     |
| SM/SC 24ML1TK6 <sup>(1)</sup> |                                     | <b>S16SCM20</b>     |
| SM/SC 20ML1TK6 <sup>(1)</sup> |                                     | <b>S16SCM20</b>     |
| SM/SC 16ML1TK6 <sup>(1)</sup> |                                     | <b>S16SCML1</b>     |
| SM/SC 14ML1TK6 <sup>(1)</sup> |                                     | <b>S16SCML1</b>     |
| SM/SC 16ML1TK6 <sup>(1)</sup> |                                     | <b>S16SCML11</b>    |
| RMDXK10D28K                   | Coaxial contacts                    | <b>M10S-1J</b>      |
| RCDXK1D28K                    |                                     | <b>M10S-1J</b>      |
| RM/RC DX60xxD28K              |                                     | <b>M10S-1J</b>      |
| RM/RC DXK10D28 + york090      |                                     | <b>M10S-1J</b>      |
| RM/RC DX60xxD28               |                                     | <b>M10S-1J</b>      |

(1): example of plating, for other plating see UTS catalog page 143

#### Color coding rings

G for Green



Y for Yellow

R for Red

Part numbers

| Receptacles       | Plugs             |
|-------------------|-------------------|
| <b>UTS712CCRR</b> | <b>UTS612CCRR</b> |
| <b>UTS712CCRY</b> | <b>UTS612CCRY</b> |
| <b>UTS712CCRG</b> | <b>UTS612CCRG</b> |

\* Add G for Green, Y for Yellow, R for Red



## Contacts

| #16         | Contact type                          | AWG   | Part number                  |                              | Max wire Ø | Max insulator Ø |
|-------------|---------------------------------------|-------|------------------------------|------------------------------|------------|-----------------|
|             |                                       |       | Male                         | Female                       |            |                 |
| Crimp       | Machined                              | 30-28 | RM28M1K <sup>(1)</sup>       | RC28M1K <sup>(1)</sup>       | 0.55       | 1.1             |
|             |                                       | 26-24 | RM24M9K <sup>(1)</sup>       | RC24M9K <sup>(1)</sup>       | 0.8        | 1.6             |
|             |                                       | 22-20 | RM20M13K <sup>(1)</sup>      | RC20M13K <sup>(1)</sup>      | 1.18       | 1.8             |
|             |                                       | 22-20 | RM20M12K <sup>(1)</sup>      | RC20M12K <sup>(1)</sup>      | 1.18       | 2.2             |
|             |                                       | 20-16 | RM16M23K <sup>(1)</sup>      | RC16M23K <sup>(1)</sup>      | 1.8        | 3.2             |
|             |                                       | 16-14 | RM14M50K <sup>(1)</sup>      | RC14M50K <sup>(1)</sup>      | 2.05       | 3.2             |
|             |                                       | 16-14 | RM14M30K <sup>(1)</sup>      | RC14M30K <sup>(1)</sup>      | 2.28       | 3.2             |
|             | Stamped & formed reeled contacts      | 26-24 | SM24M1TK6 <sup>(1)(2)</sup>  | SC24M1TK6 <sup>(1)(2)</sup>  | 0.89-1.28  | -               |
|             |                                       | 22-20 | SM20M1TK6 <sup>(1)(2)</sup>  | SC20M1TK6 <sup>(1)(2)</sup>  | 1.17-2.08  | -               |
|             |                                       | 18-16 | SM16M1TK6 <sup>(1)(2)</sup>  | SC16M1TK6 <sup>(1)(2)</sup>  | 3.0        | -               |
|             |                                       | 18-16 | SM16M11TK6 <sup>(1)(2)</sup> | SC16M11TK6 <sup>(1)(2)</sup> | 2.0-3.0    | -               |
|             |                                       | 14    | SM14M1TK6 <sup>(1)(2)</sup>  | SC14M1TK6 <sup>(1)(2)</sup>  | 3.2        | -               |
| PCB         | Machined <sup>(3)</sup>               | -     | RM20M12E8K <sup>(1)</sup>    | RC20M12E84K <sup>(1)</sup>   | -          | -               |
| Coaxial     | Cable Multipiece                      | -     | RMDXK10D28                   | RCDXK1D28                    | -          | -               |
|             | Cable Monocrimp                       | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
|             | Twisted pair Multipiece               | -     | RMDXK10D28 + york090         | RCDXK1D28 + york090          | -          | -               |
|             | Twisted pair Monocrimp                | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
| Fiber optic | POF contacts<br>Plastic optical fibre | -     | RMPOF1000                    | RCPOF1000B                   | -          | -               |

(1): Example of plating, for other plating see page 143

(2): Loose piece contact available if putting L. Example: SM20ML1-TK6

(3): For dimensions see page 148

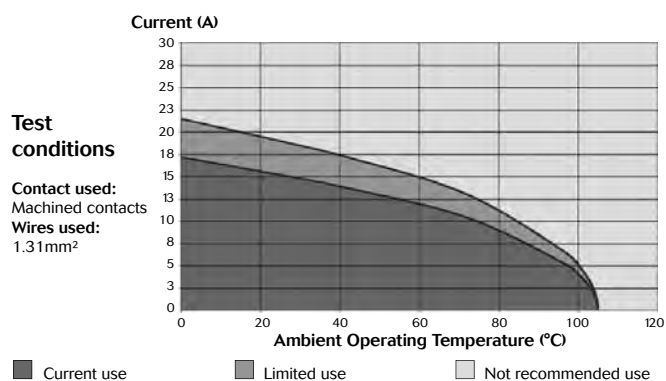
## Electrical characteristics

**UL**  
10A 500V UL94 V-0

**CSA**  
7A 500V UL94 V-0

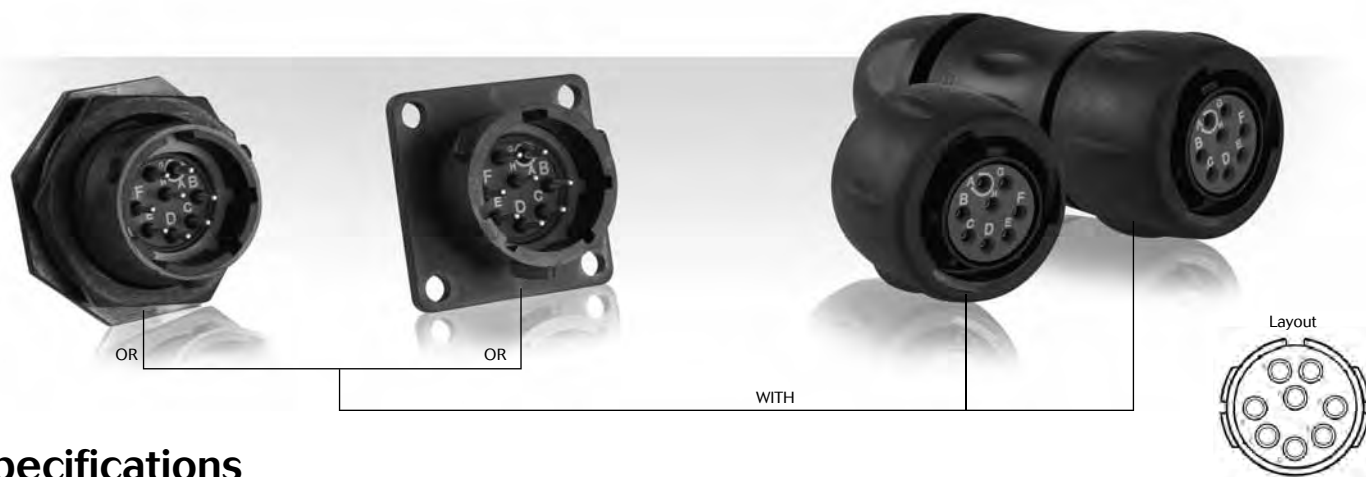
**IEC**  
10A 80V 1.5kV 3

## UTS 128 derating curves



# UTS Series

## 12E8/12D8



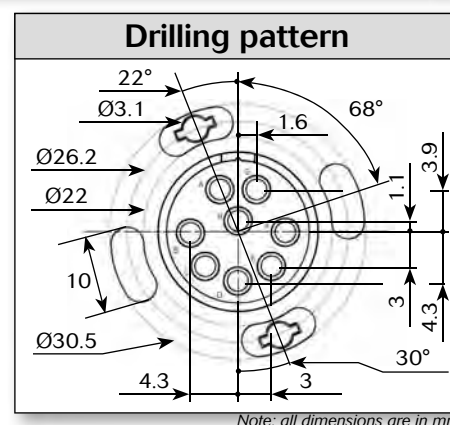
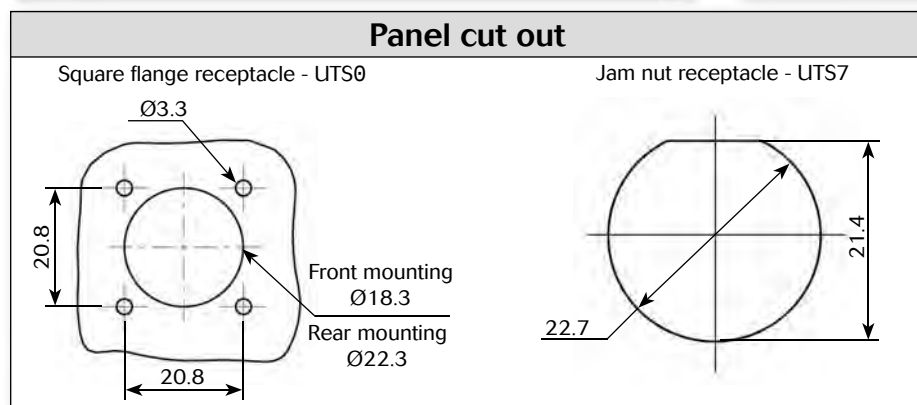
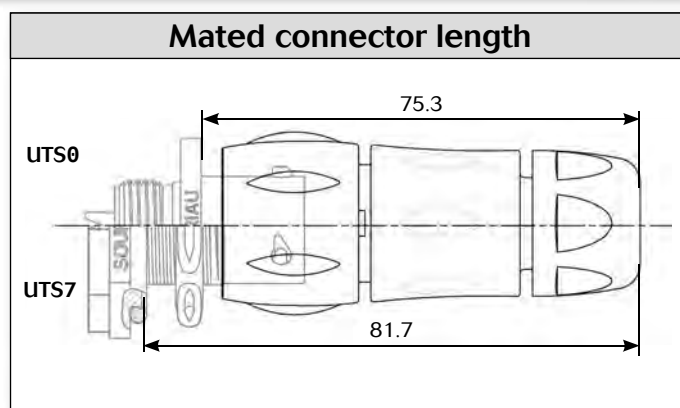
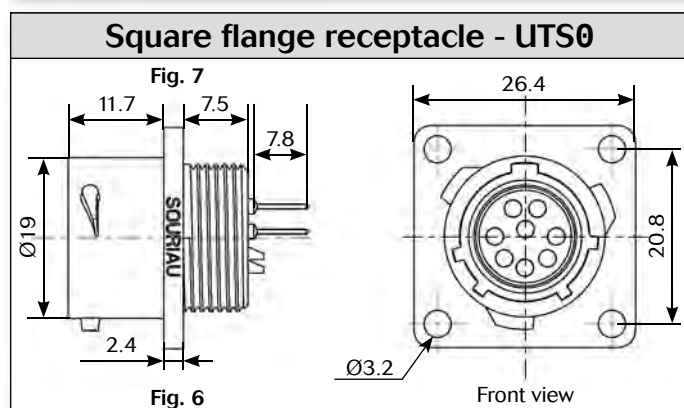
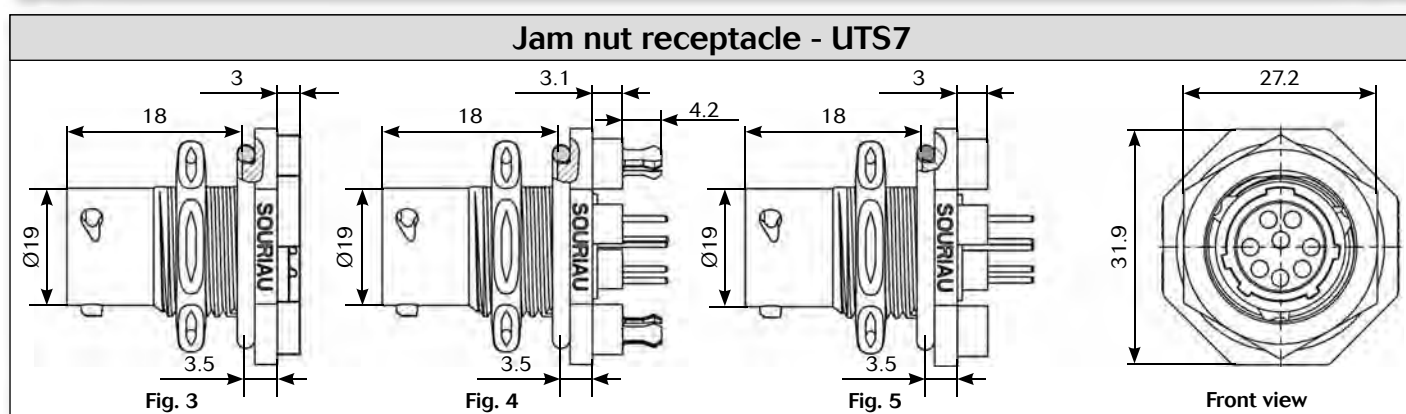
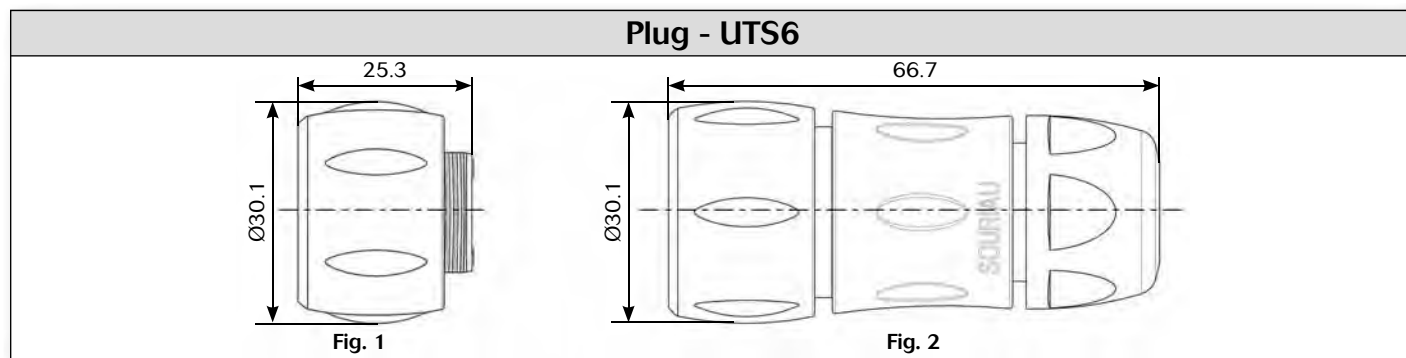
## Specifications

| Contact type                           | Connector type                                               | Backshell           | Part number        |                    |
|----------------------------------------|--------------------------------------------------------------|---------------------|--------------------|--------------------|
|                                        |                                                              |                     | Male insert        | Female insert      |
| Hand solder electrical contacts loaded | Square flange receptacle                                     | Without (Fig.6)     | <b>UTS012E8P</b>   | <b>UTS012E8S</b>   |
|                                        | Plug                                                         | Without (Fig.1)     | <b>UTS612E8P</b>   | <b>UTS612E8S</b>   |
|                                        |                                                              | Cable gland (Fig.2) | <b>UTS6JC12E8P</b> | <b>UTS6JC12E8S</b> |
|                                        | Jam nut receptacle                                           | Without (Fig.3)     | <b>UTS712E8P</b>   | <b>UTS712E8S</b>   |
| PCB contacts loaded                    | Square flange receptacle                                     | Without (Fig.7)     | <b>UTS012D8P</b>   | <b>UTS012D8S</b>   |
|                                        | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.4)     | <b>UTS712D8P32</b> | <b>UTS712D8S32</b> |
|                                        | Jam nut receptacle with stand off and without hold down clip | Without (Fig.5)     | <b>UTS712D8P</b>   | <b>UTS712D8S</b>   |

Sealed unmated



## Dimensions



# UTS Series

## 12E8/12D8



### Accessories

#### Jam nut sealing caps



| Part number |
|-------------|
| UTS12DCG    |



Metal terminal

| Part number |
|-------------|
| UTS12DCGR   |

#### Plug sealing cap



| Part number |
|-------------|
| UTS612DCG   |

#### Square flange sealing cap



Metal terminal

| Part number |
|-------------|
| UTS12DCGE   |

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005587A      | 85005596 |

#### Gasket



| Part numbers / neoprene |
|-------------------------|
| UTFD13B                 |

#### Color coding rings

G for Green

Y for Yellow

R for Red



| Part numbers |            |
|--------------|------------|
| Receptacles  | Plugs      |
| UTS712CCRR   | UTS612CCRR |
| UTS712CCRY   | UTS612CCRY |
| UTS712CCRG   | UTS612CCRG |

\* Add G for Green, Y for Yellow, R for Red

#### Electrical characteristics

**UL**

4.5A 250V UL94 HB

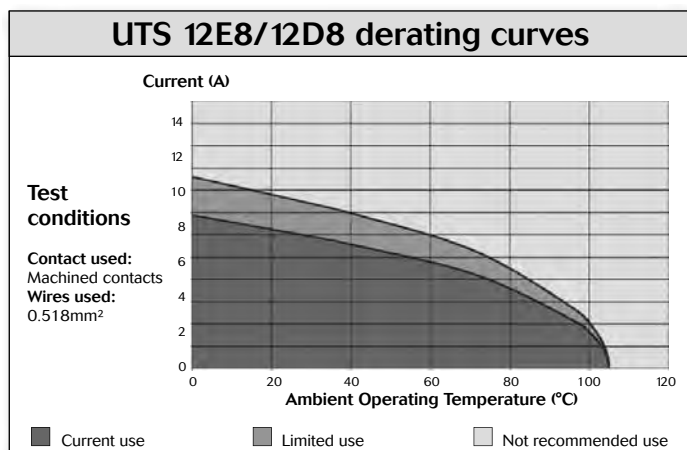
**CSA**

4.5A 250V UL94 HB

**IEC**

6A 32V 1.5kV 3



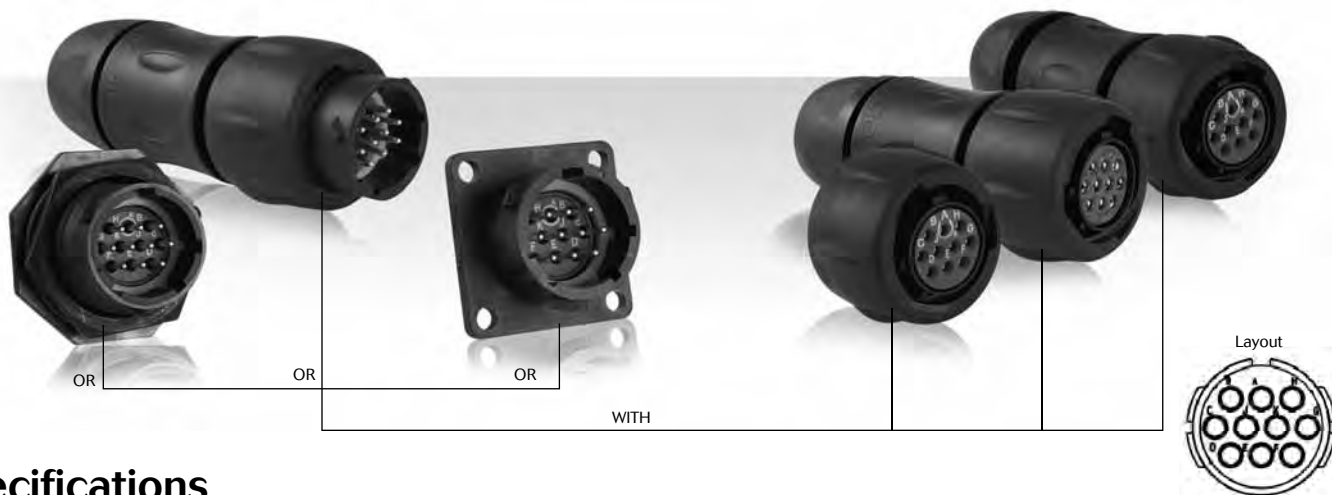
# UTS Series

## 12E8/12D8



# UTS Series

## 1210 - 12E10/12D10



## Specifications

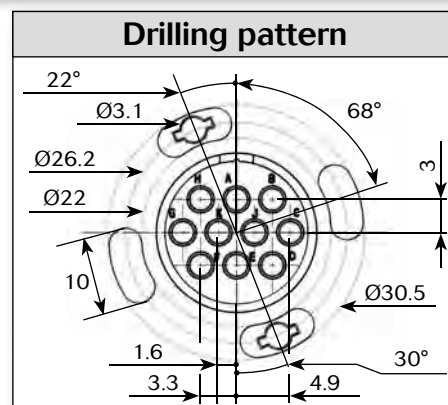
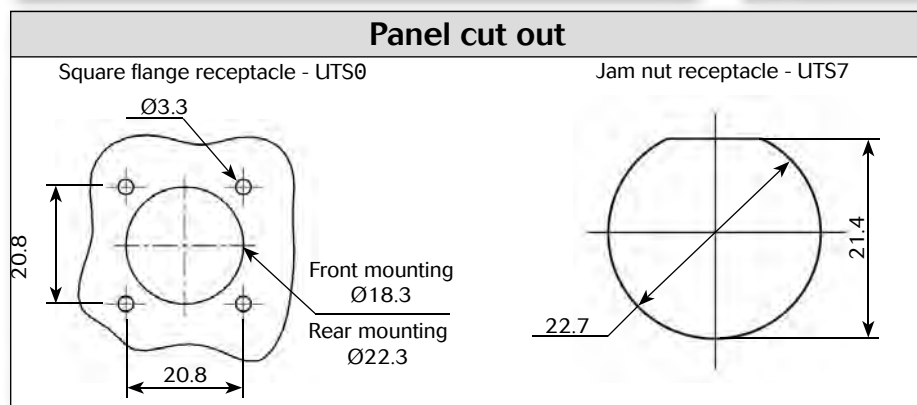
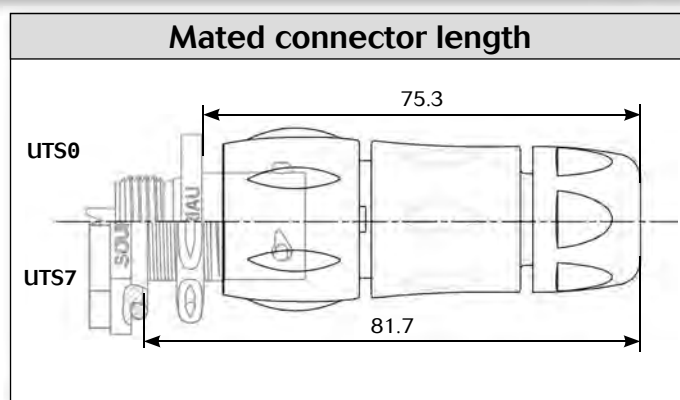
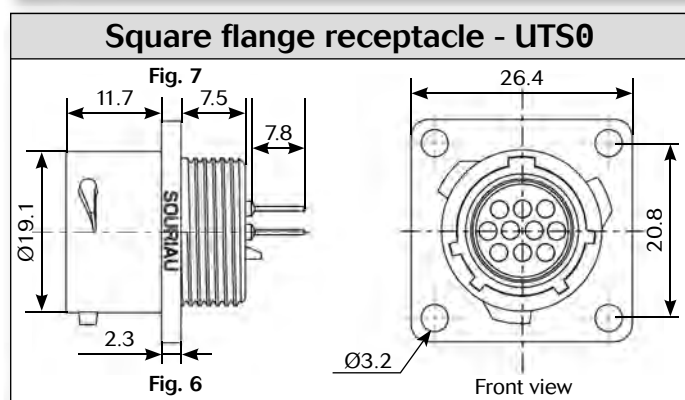
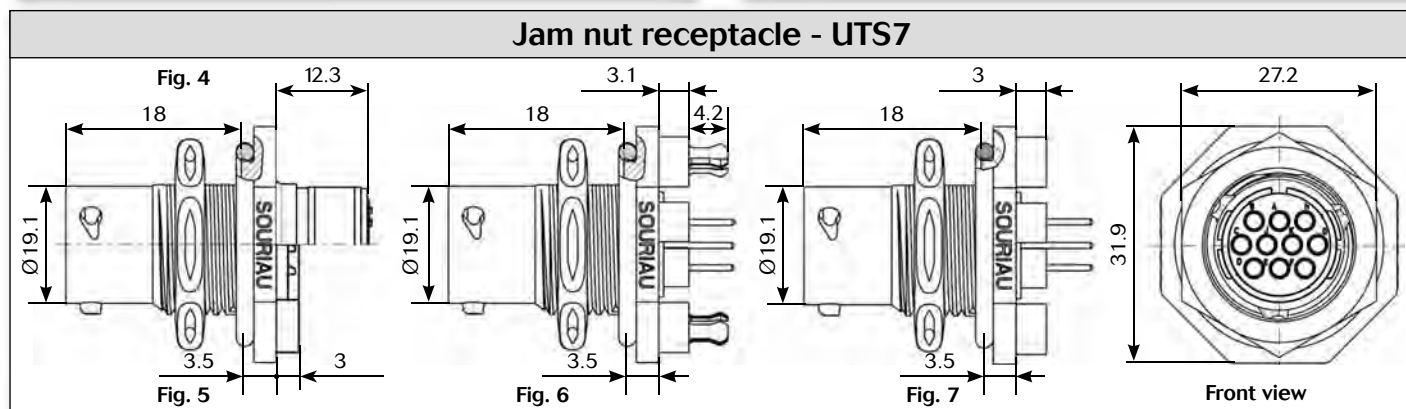
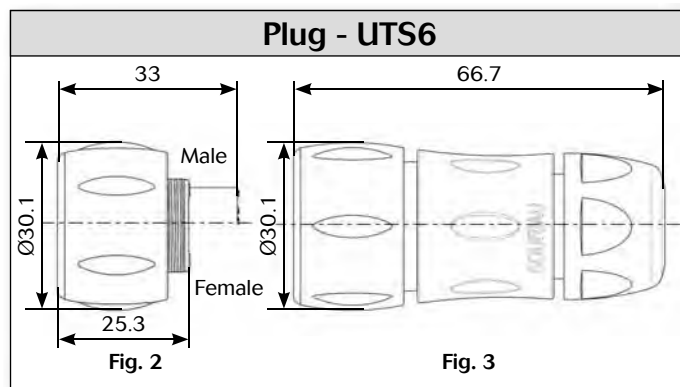
| Contact type                                 | Connector type                                               | Backshell           | Part number         |                     |
|----------------------------------------------|--------------------------------------------------------------|---------------------|---------------------|---------------------|
|                                              |                                                              |                     | Male insert         | Female insert       |
| Crimp contacts supply separately see page107 | Free hanging receptacle                                      | Cable gland (Fig.1) | <b>UTS1JC1210P</b>  | <b>UTS1JC1210S</b>  |
|                                              | Plug                                                         | Without (Fig.2)     | <b>UTS61210P</b>    | <b>UTS61210S</b>    |
|                                              | Plug                                                         | Cable gland (Fig.3) | <b>UTS6JC1210P</b>  | <b>UTS6JC1210S</b>  |
|                                              | Jam nut receptacle                                           | Without (Fig.4)     | <b>UTS71210P</b>    | <b>UTS71210S</b>    |
| Handsolder electrical contacts loaded        | Square flange receptacle                                     | Without (Fig.6)     | <b>UTS012E10P</b>   | <b>UTS012E10S</b>   |
|                                              | Plug                                                         | Without (Fig.2)     | <b>UTS612E10P</b>   | <b>UTS612E10S</b>   |
|                                              |                                                              | Cable gland (Fig.3) | <b>UTS6JC12E10P</b> | <b>UTS6JC12E10S</b> |
|                                              | Jam nut receptacle                                           | Without (Fig.5)     | <b>UTS712E10P</b>   | <b>UTS712E10S</b>   |
| PCB contacts loaded                          | Square flange receptacle                                     | Without (Fig.7)     | <b>UTS012D10P</b>   | <b>UTS012D10S</b>   |
|                                              | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.6)     | <b>UTS712D10P32</b> | <b>UTS712D10S32</b> |
|                                              | Jam nut receptacle with stand off and without hold down clip | Without (Fig.7)     | <b>UTS712D10P</b>   | <b>UTS712D10S</b>   |

Sealed unmated

**Free hanging - UTS1**



Fig. 1



105

# UTS Series

## 1210 - 12E10/12D10



### Accessories and tooling

| Jam nut sealing caps                                                              |                                                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|  |  |
| Part number                                                                       | Part number                                                                       |
| UTS12DCG                                                                          | UTS12DCGR                                                                         |

| Handle                                                                             |
|------------------------------------------------------------------------------------|
|  |
| Part number                                                                        |
| SHANGLES                                                                           |

| Tool kit                                                                            |
|-------------------------------------------------------------------------------------|
|  |
| Part number                                                                         |
| TOOLKIT                                                                             |

| Plug sealing cap                                                                   |
|------------------------------------------------------------------------------------|
|  |
| Part number                                                                        |
| UTS612DCG                                                                          |

| Square flange sealing cap                                                          |
|------------------------------------------------------------------------------------|
|  |
| Part number                                                                        |
| UTS12DCGE                                                                          |

| Plastic protective cap                                                              |          |
|-------------------------------------------------------------------------------------|----------|
|  |          |
| Part numbers                                                                        |          |
| Receptacle cap                                                                      | Plug cap |
| 85005587A                                                                           | 85005596 |

| Gasket                                                                              |
|-------------------------------------------------------------------------------------|
|  |
| Part numbers / neoprene                                                             |
| UTFD13B                                                                             |

| Crimp tooling                                                                       |                                   |                     |
|-------------------------------------------------------------------------------------|-----------------------------------|---------------------|
|  |                                   |                     |
| Contacts                                                                            | Contact size                      | Part number of head |
| RM/RC 24W3K <sup>(1)</sup>                                                          | Standard contacts<br>#20<br>Ø 1mm | S20RM               |
| RM/RC 20W3K <sup>(1)</sup>                                                          |                                   | S20RM               |
| RM/RC 18W3K <sup>(1)</sup>                                                          |                                   | S20RM               |
| SM/SC 24W3S <sup>(2)</sup>                                                          |                                   | S20SCM20            |
| SM/SC 24WL3S <sup>(3)</sup>                                                         |                                   | S20SCM20            |
| SM/SC 20W3S <sup>(2)</sup>                                                          |                                   | S20SCM20            |
| SM/SC 20WL3S <sup>(3)</sup>                                                         |                                   | S20SCM20            |

(1): example of plating, for other plating see UTS catalog page 143  
 (2): contact reeled  
 (3): loose contact

| Color coding rings                       |                                                                                                                                                                                                                                                                                                   |              |  |             |       |            |            |            |            |            |            |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--|-------------|-------|------------|------------|------------|------------|------------|------------|
| G for Green<br>Y for Yellow<br>R for Red | <table border="1"> <thead> <tr> <th colspan="2">Part numbers</th> </tr> <tr> <th>Receptacles</th> <th>Plugs</th> </tr> </thead> <tr> <td>UTS712CCRR</td> <td>UTS612CCRR</td> </tr> <tr> <td>UTS712CCRY</td> <td>UTS612CCRY</td> </tr> <tr> <td>UTS712CCRG</td> <td>UTS612CCRG</td> </tr> </table> | Part numbers |  | Receptacles | Plugs | UTS712CCRR | UTS612CCRR | UTS712CCRY | UTS612CCRY | UTS712CCRG | UTS612CCRG |
| Part numbers                             |                                                                                                                                                                                                                                                                                                   |              |  |             |       |            |            |            |            |            |            |
| Receptacles                              | Plugs                                                                                                                                                                                                                                                                                             |              |  |             |       |            |            |            |            |            |            |
| UTS712CCRR                               | UTS612CCRR                                                                                                                                                                                                                                                                                        |              |  |             |       |            |            |            |            |            |            |
| UTS712CCRY                               | UTS612CCRY                                                                                                                                                                                                                                                                                        |              |  |             |       |            |            |            |            |            |            |
| UTS712CCRG                               | UTS612CCRG                                                                                                                                                                                                                                                                                        |              |  |             |       |            |            |            |            |            |            |

\* Add G for Green, Y for Yellow, R for Red

# UTS Series

## 1210 - 12E10/12D10



10 contacts  
6A/50V  
per IEC 61984

## Contacts

| #20   | Contact type                     | AWG   | Part number              |                          | Max wire Ø | Max insulator Ø |
|-------|----------------------------------|-------|--------------------------|--------------------------|------------|-----------------|
|       |                                  |       | Male                     | Female                   |            |                 |
| Crimp | Machined                         | 26-24 | RM24W3K <sup>(1)</sup>   | RC24W3K <sup>(1)</sup>   | -          | 1.58            |
|       |                                  | 22-20 | RM20W3K <sup>(1)</sup>   | RC20W3K <sup>(1)</sup>   | -          | 1.58            |
|       |                                  | 20-18 | RM18W3K <sup>(1)</sup>   | RC18W3K <sup>(1)</sup>   | -          | 2.1             |
|       | stamped & formed reeled contacts | 26-24 | SM24W3TK6 <sup>(2)</sup> | SC24W3TK6 <sup>(2)</sup> | -          | 0.89-1.58       |
|       |                                  | 26-24 | SM24W3TK6 <sup>(2)</sup> | SC24W3TK6 <sup>(2)</sup> | -          | 0.89-1.58       |
|       |                                  | 22-20 | SM20W3TK6 <sup>(2)</sup> | SC20W3TK6 <sup>(2)</sup> | -          | 1.17-2.08       |
|       |                                  | 22-20 | SM20W3TK6 <sup>(2)</sup> | SC20W3TK6 <sup>(2)</sup> | -          | 1.17-2.08       |
|       |                                  |       |                          |                          |            |                 |
| PCB   | Machined <sup>(3)</sup>          | -     | RMW5016K                 | RCW5016K                 | -          | -               |

(1): Example of plating, for other plating see page 143

(2): Loose piece contact available if putting L. Example: SM20ML1-TK6

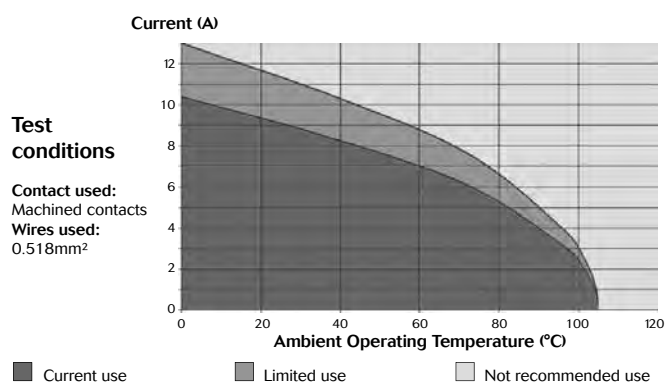
(3): For dimensions see page 148

Mechanics

## Electrical characteristics

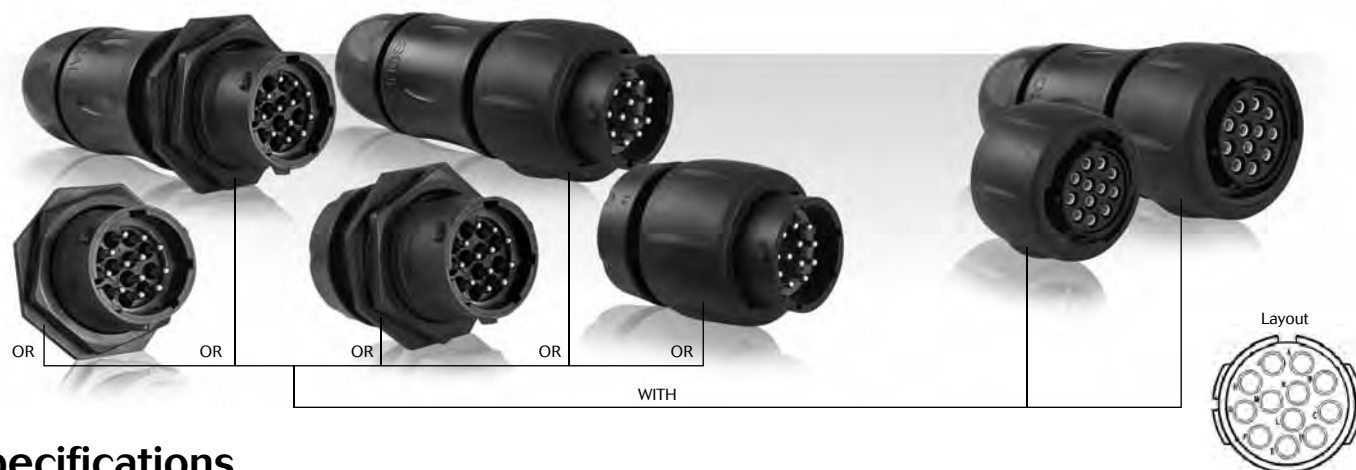
|                  |                        |
|------------------|------------------------|
| <b>UTS 1210</b>  | <b>UTS 12E10/12D10</b> |
| <b>UL</b>        | <b>UL</b>              |
| 5A 250V UL94 V-0 | 4.5A 250V UL94 HB      |
| <b>CSA</b>       | <b>CSA</b>             |
| 4A 250V UL94 V-0 | 4.5A 250V UL94 HB      |
| <b>IEC</b>       |                        |
| 6A 50V 1.5kV 3   |                        |

## UTS 1210 - 12E10/12D10 derating curves



# UTS Series

## 1412

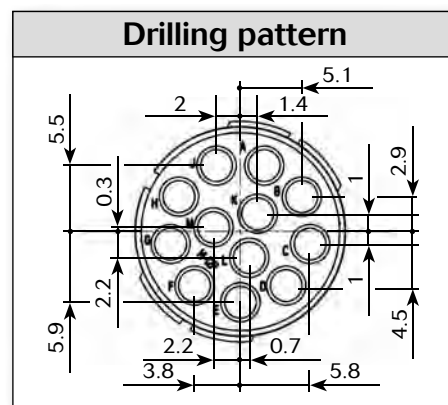
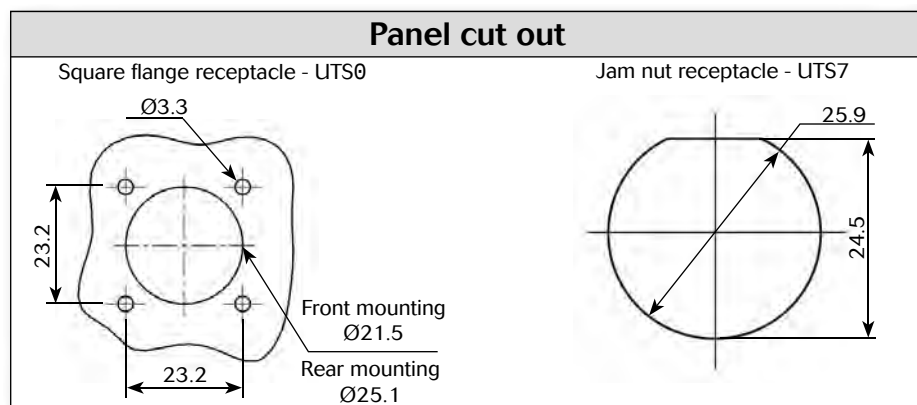
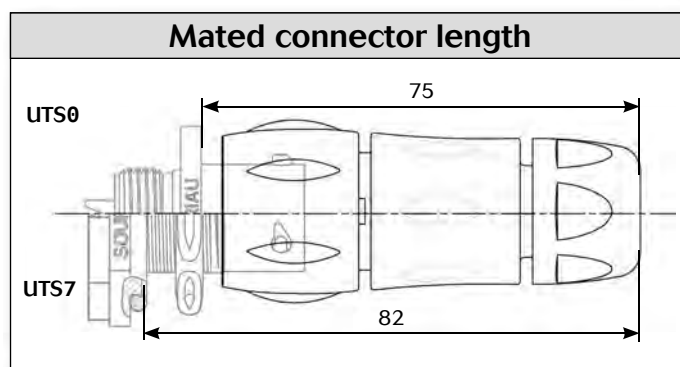
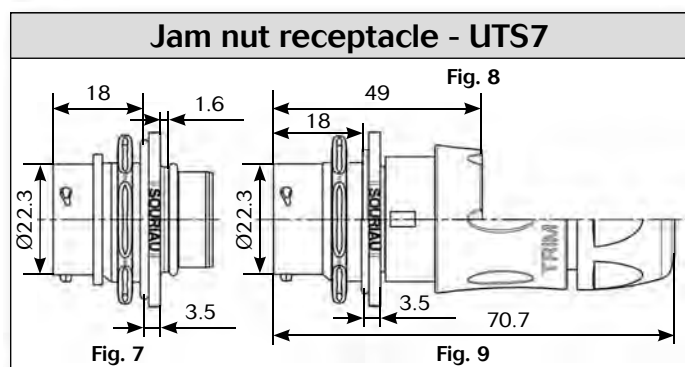
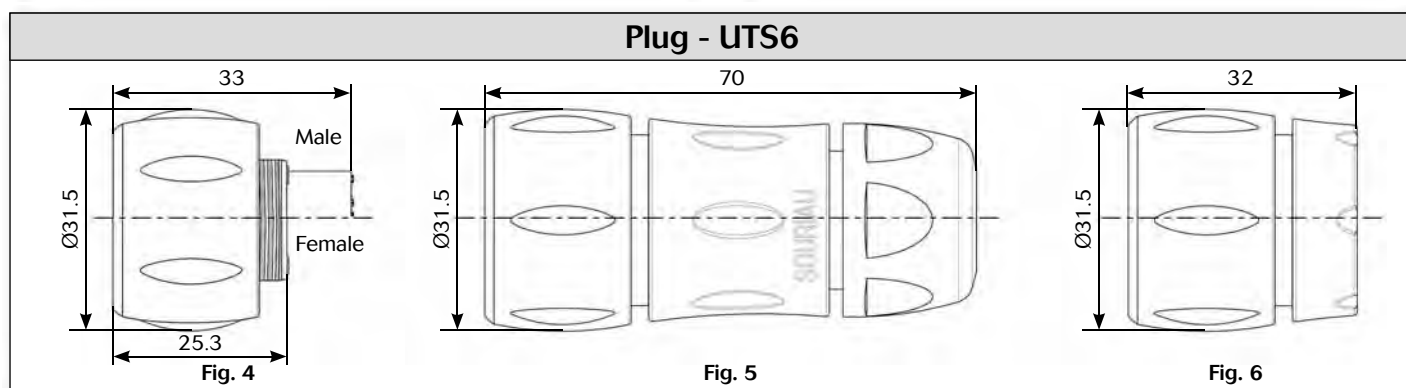
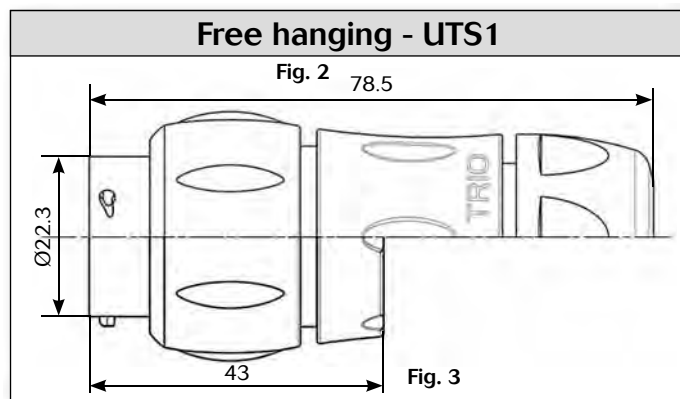
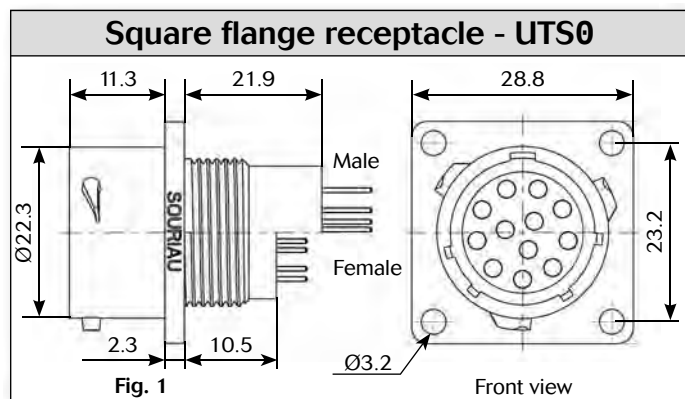


## Specifications

| Contact type                                  | Connector type           | Backshell                       | Part number         |                     |
|-----------------------------------------------|--------------------------|---------------------------------|---------------------|---------------------|
|                                               |                          |                                 | Male insert         | Female insert       |
| Crimp contacts supply separately see page 111 | Square flange receptacle | Without (Fig.1)                 | <b>UTS01412P</b>    | <b>UTS01412S</b>    |
|                                               | Free hanging receptacle  | Cable gland and grommet (Fig.2) | <b>UTS1GJC1412P</b> |                     |
|                                               | Free hanging receptacle  | Nut and grommet (Fig.3)         | <b>UTS1GN1412P</b>  |                     |
|                                               | Free hanging receptacle  | Cable gland (Fig.2)             | <b>UTS1JC1412P</b>  | <b>UTS1JC1412S</b>  |
|                                               | Plug                     | Without (Fig.4)                 | <b>UTS61412P</b>    | <b>UTS61412S</b>    |
|                                               | Plug                     | Cable gland and grommet (Fig.5) |                     | <b>UTS6GJC1412S</b> |
|                                               | Plug                     | Nut and grommet (Fig.6)         |                     | <b>UTS6GN1412S</b>  |
|                                               | Plug                     | Cable gland (Fig.5)             | <b>UTS6JC1412P</b>  | <b>UTS6JC1412S</b>  |
|                                               | Jam nut receptacle       | Without (Fig.7)                 | <b>UTS71412P</b>    | <b>UTS71412S</b>    |
|                                               | Jam nut receptacle       | Cable gland and grommet (Fig.9) | <b>UTS7GJC1412P</b> |                     |
|                                               | Jam nut receptacle       | Nut and grommet (Fig.8)         | <b>UTS7GN1412P</b>  |                     |
| PCB contacts supply separately see page 111   | Square flange receptacle | Without (Fig.1)                 | <b>UTS01412P</b>    | <b>UTS01412S</b>    |
|                                               | Jam nut receptacle       | Without (Fig.7)                 | <b>UTS71412P</b>    | <b>UTS71412S</b>    |



## Dimensions



Note: all dimensions are in mm



### Accessories and tooling

#### Jam nut sealing caps



Part number  
**UTS14DCG**



Metal terminal

Part number  
**UTS14DCGR**

#### Handle



Part number  
**SHANGLES**

#### Tool kit



Part number  
**TOOLKIT**

#### Plug sealing cap



Part number  
**UTS614DCG**

#### Square flange sealing cap



Metal terminal

Part number  
**UTS14DCGE**

#### Crimp tooling



| Contacts                      | Contact size                        | Part number of head |
|-------------------------------|-------------------------------------|---------------------|
| RM/RC 28M1K <sup>(1)</sup>    | Standard contacts<br>#16<br>Ø 1.6mm | S16RCM20            |
| RM/RC 24M9K <sup>(1)</sup>    |                                     | S16RCM20            |
| RM/RC 20M13K <sup>(1)</sup>   |                                     | S16RCM20            |
| RM/RC 20M12K <sup>(1)</sup>   |                                     | S16RCM20            |
| RM/RC 16M23K <sup>(1)</sup>   |                                     | S16RCM16            |
| RM/RC 14M50K <sup>(1)</sup>   |                                     | S16RCM1450          |
| RM/RC 14M30K <sup>(1)</sup>   |                                     | S16RCM14            |
| SM/SC 24ML1TK6 <sup>(1)</sup> |                                     | S16SCM20            |
| SM/SC 20ML1TK6 <sup>(1)</sup> |                                     | S16SCM20            |
| SM/SC 16ML1TK6 <sup>(1)</sup> |                                     | S16SCML1            |
| SM/SC 14ML1TK6 <sup>(1)</sup> |                                     | S16SCML1            |
| SM/SC 16ML1TK6 <sup>(1)</sup> |                                     | S16SCML11           |
| RMDXK10D28K                   | Coaxial contacts                    | M10S-1J             |
| RCDXK1D28K                    |                                     | M10S-1J             |
| RM/RC DX60xxD28K              |                                     | M10S-1J             |
| RM/RC DXK10D28 + york090      |                                     | M10S-1J             |
| RM/RC DX60xxD28               |                                     | M10S-1J             |

(1): example of plating, for other plating see UTS catalog page 143

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005588A      | 85005597 |

#### Gasket



Part numbers / neoprene  
**UTFD14B**

#### Color coding rings

G for Green

Y for Yellow

R for Red



| Part numbers |            |
|--------------|------------|
| Receptacles  | Plugs      |
| UTS714CCRR   | UTS614CCRR |
| UTS714CCRY   | UTS614CCRY |
| UTS714CCRG   | UTS614CCRG |

\* Add G for Green, Y for Yellow, R for Red



## Contacts

| #16         | Contact type                          | AWG   | Part number                  |                              | Max wire Ø | Max insulator Ø |
|-------------|---------------------------------------|-------|------------------------------|------------------------------|------------|-----------------|
|             |                                       |       | Male                         | Female                       |            |                 |
| Crimp       | Machined                              | 30-28 | RM28M1K <sup>(1)</sup>       | RC28M1K <sup>(1)</sup>       | 0.55       | 1.1             |
|             |                                       | 26-24 | RM24M9K <sup>(1)</sup>       | RC24M9K <sup>(1)</sup>       | 0.8        | 1.6             |
|             |                                       | 22-20 | RM20M13K <sup>(1)</sup>      | RC20M13K <sup>(1)</sup>      | 1.18       | 1.8             |
|             |                                       | 22-20 | RM20M12K <sup>(1)</sup>      | RC20M12K <sup>(1)</sup>      | 1.18       | 2.2             |
|             |                                       | 20-16 | RM16M23K <sup>(1)</sup>      | RC16M23K <sup>(1)</sup>      | 1.8        | 3.2             |
|             |                                       | 16-14 | RM14M50K <sup>(1)</sup>      | RC14M50K <sup>(1)</sup>      | 2.05       | 3.2             |
|             |                                       | 16-14 | RM14M30K <sup>(1)</sup>      | RC14M30K <sup>(1)</sup>      | 2.28       | 3.2             |
|             | Stamped & formed reeled contacts      | 26-24 | SM24M1TK6 <sup>(1)(2)</sup>  | SC24M1TK6 <sup>(1)(2)</sup>  | 0.89-1.28  | -               |
|             |                                       | 22-20 | SM20M1TK6 <sup>(1)(2)</sup>  | SC20M1TK6 <sup>(1)(2)</sup>  | 1.17-2.08  | -               |
|             |                                       | 18-16 | SM16M1TK6 <sup>(1)(2)</sup>  | SC16M1TK6 <sup>(1)(2)</sup>  | 3.0        | -               |
|             |                                       | 18-16 | SM16M11TK6 <sup>(1)(2)</sup> | SC16M11TK6 <sup>(1)(2)</sup> | 2.0-3.0    | -               |
|             |                                       | 14    | SM14M1TK6 <sup>(1)(2)</sup>  | SC14M1TK6 <sup>(1)(2)</sup>  | 3.2        | -               |
| PCB         | Machined <sup>(3)</sup>               | -     | RM20M12E8K <sup>(1)</sup>    | RC20M12E84K <sup>(1)</sup>   | -          | -               |
| Coaxial     | Cable Multipiece                      | -     | RMDXK10D28                   | RCDXK1D28                    | -          | -               |
|             | Cable Monocrimp                       | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
|             | Twisted pair Multipiece               | -     | RMDXK10D28 + york090         | RCDXK1D28 + york090          | -          | -               |
|             | Twisted pair Monocrimp                | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
| Fiber optic | POF contacts<br>Plastic optical fibre | -     | RMPOF1000                    | RCPOF1000B                   | -          | -               |

(1): Example of plating, for other plating see page 143

(2): Loose piece contact available if putting L. Example: SM20ML1-TK6

(3): For dimensions see page 148

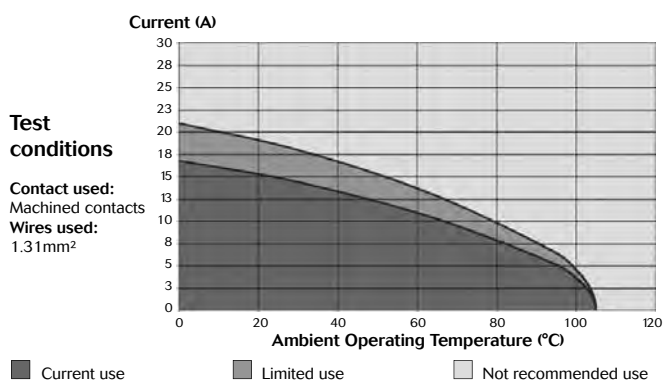
### Electrical characteristics

**UL**  
10A 500V UL94 V-0

**CSA**  
7A 500V UL94 V-0

**IEC**  
10A 63V 1.5kV 3

### UTS 1412 derating curves



# UTS Series

14E 12/14D 12 (4x#16 + 8x#20)



## Specifications

| Contact type                          | Connector type                                               | Backshell           | Part number         |                     |
|---------------------------------------|--------------------------------------------------------------|---------------------|---------------------|---------------------|
|                                       |                                                              |                     | Male insert         | Female insert       |
| Handsolder electrical contacts loaded | Square flange receptacle                                     | Without (Fig.6)     | <b>UTS014E12P</b>   | <b>UTS014E12S</b>   |
|                                       | Plug                                                         | Without (Fig.1)     | <b>UTS614E12P</b>   | <b>UTS614E12S</b>   |
|                                       |                                                              | Cable gland (Fig.2) | <b>UTS6JC14E12P</b> | <b>UTS6JC14E12S</b> |
|                                       | Jam nut receptacle                                           | Without (Fig.3)     | <b>UTS714E12P</b>   | <b>UTS714E12S</b>   |
| PCB contacts loaded                   | Square flange receptacle                                     | Without (Fig.6)     | <b>UTS014D12P</b>   | <b>UTS014D12S</b>   |
|                                       | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.4)     | <b>UTS714D12P32</b> | <b>UTS714D12S32</b> |
|                                       | Jam nut receptacle with stand off and without hold down clip | Without (Fig.5)     | <b>UTS714D12P</b>   | <b>UTS714D12S</b>   |

Sealed unmated

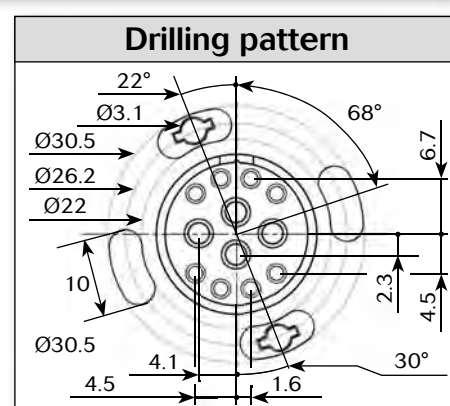
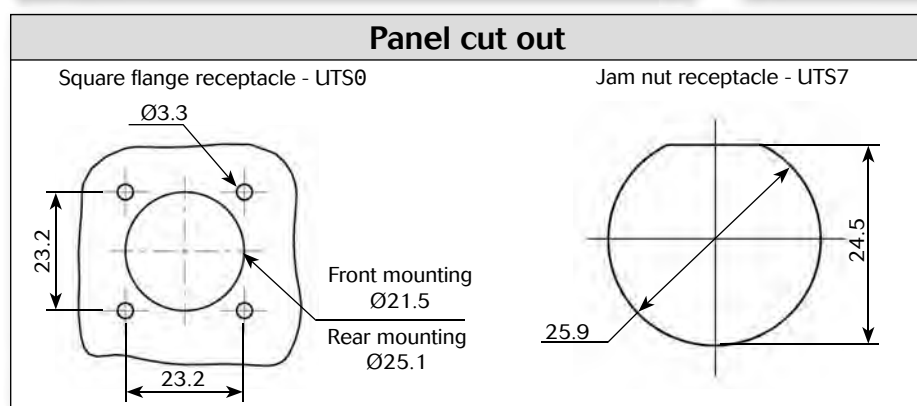
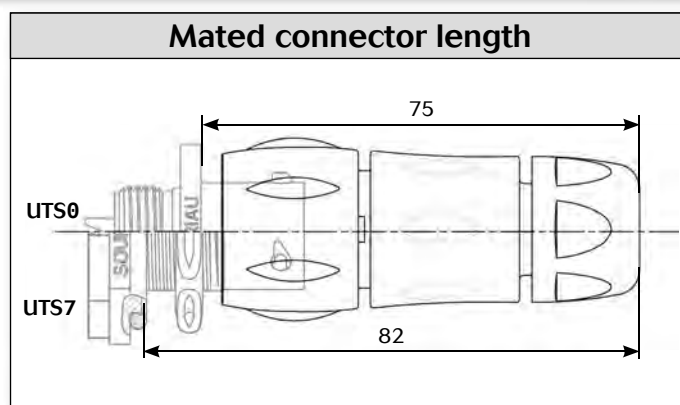
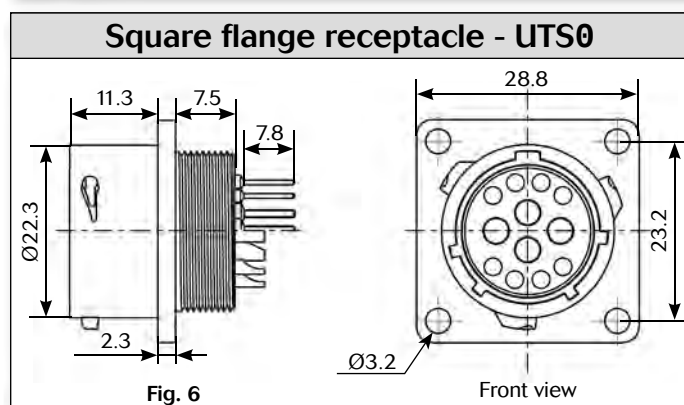
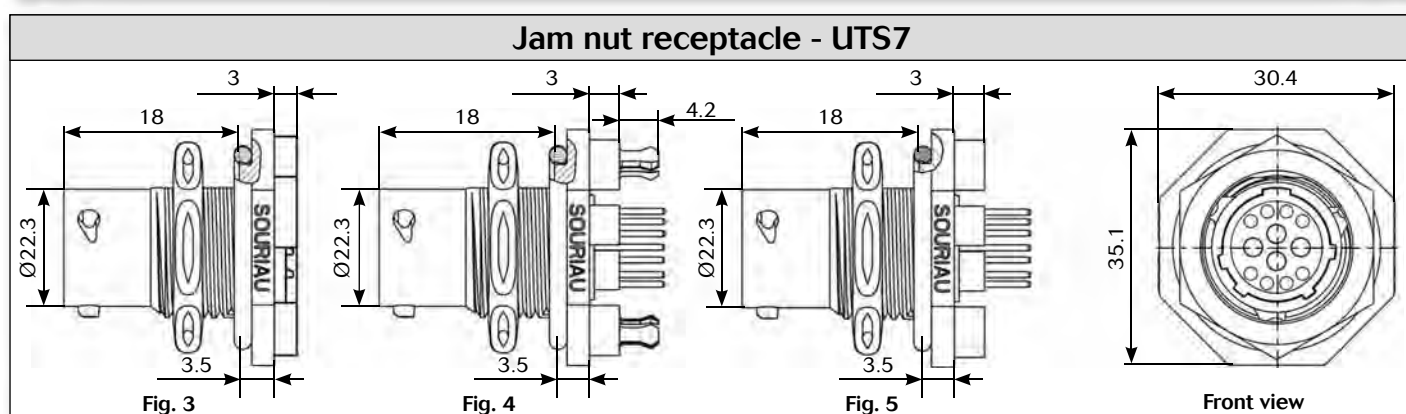
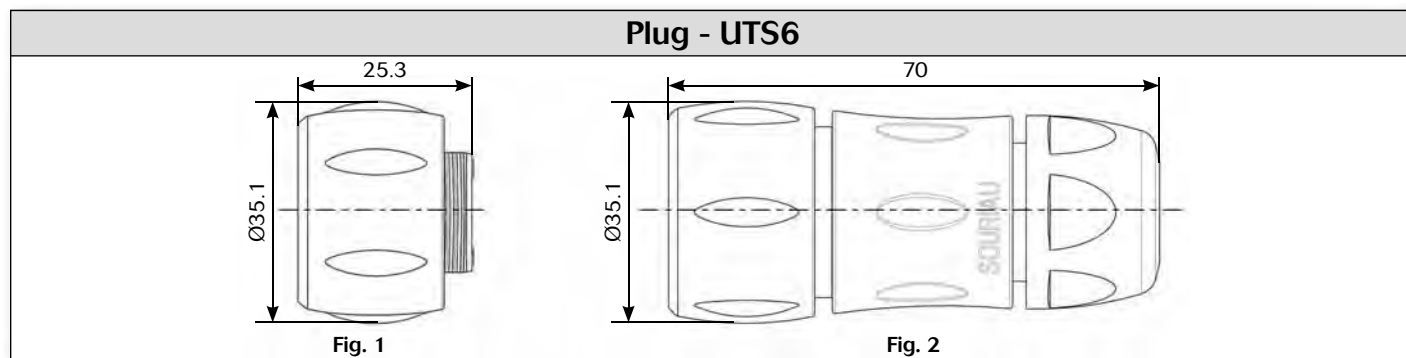
# UTS Series

14E 12/14D 12 (4x#16 + 8x#20)



12 contacts  
4A/50V  
per IEC 61984

## Dimensions



Note: all dimensions are in mm

# UTS Series

14E 12/14D 12 (4x#16 + 8x#20)



## Accessories

### Jam nut sealing caps



Part number  
UTS14DCG



Metal terminal

Part number  
UTS14DCGR

### Plug sealing cap



Part number  
UTS614DCG

### Square flange sealing cap



Metal terminal

Part number  
UTS14DCGE

### Plastic protective cap



#### Part numbers

| Receptacle cap | Plug cap |
|----------------|----------|
| 85005588A      | 85005597 |

### Gasket



Part numbers / neoprene  
UTFD14B

### Color coding rings

G for Green



Y for Yellow

R for Red

#### Part numbers

| Receptacles | Plugs      |
|-------------|------------|
| UTS714CCRR  | UTS614CCRR |
| UTS714CCRY  | UTS614CCRY |
| UTS714CCRG  | UTS614CCRG |

\* Add G for Green, Y for Yellow, R for Red

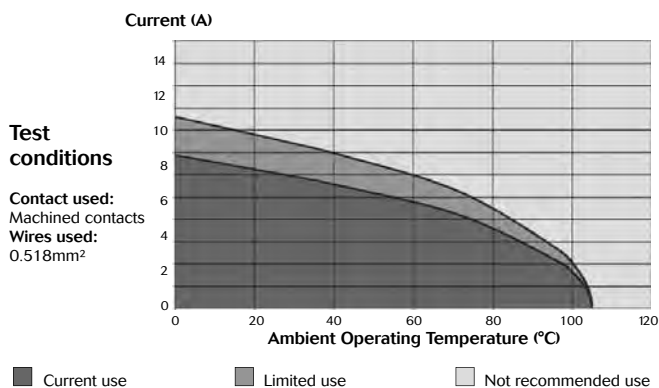
### Electrical characteristics

**UL**  
4.5A 250V UL94 HB

**CSA**  
4.5A 250V UL94 HB

**IEC**  
4A 50V 1.5kV 3

### UTS 14E12/14D12 derating curves



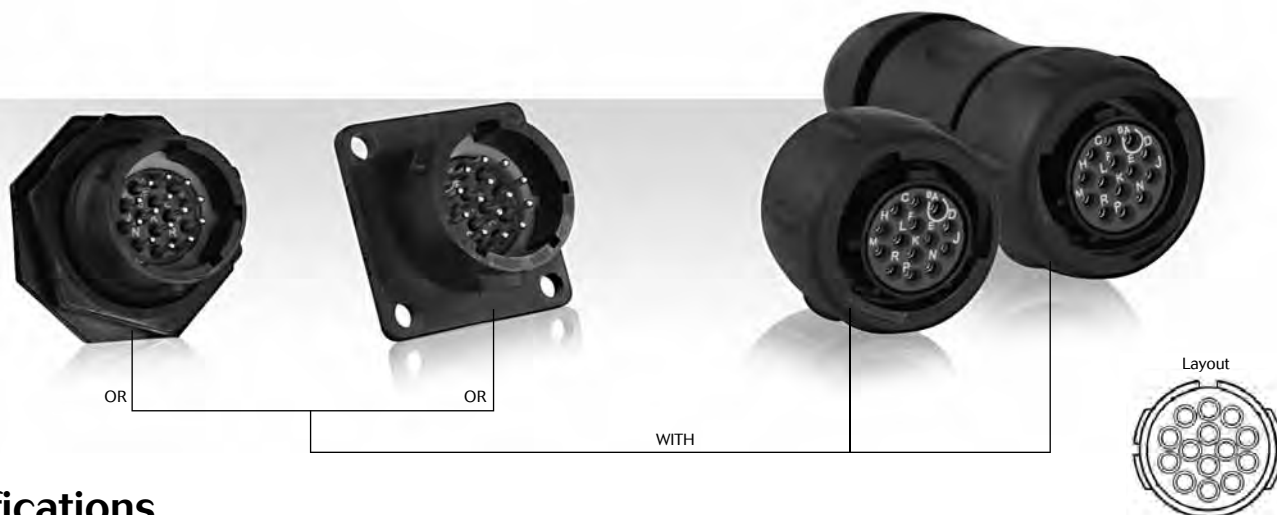
# UTS Series

14E 12/14D 12 (4x#16 + 8x#20)



# UTS Series

## 12E14/12D14



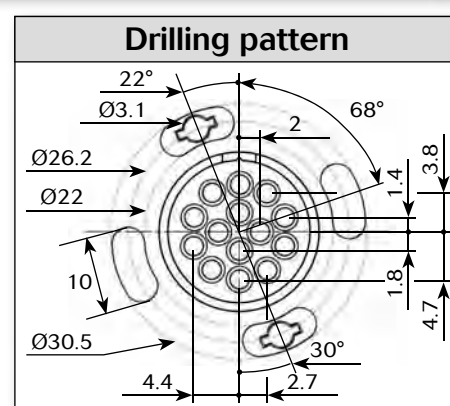
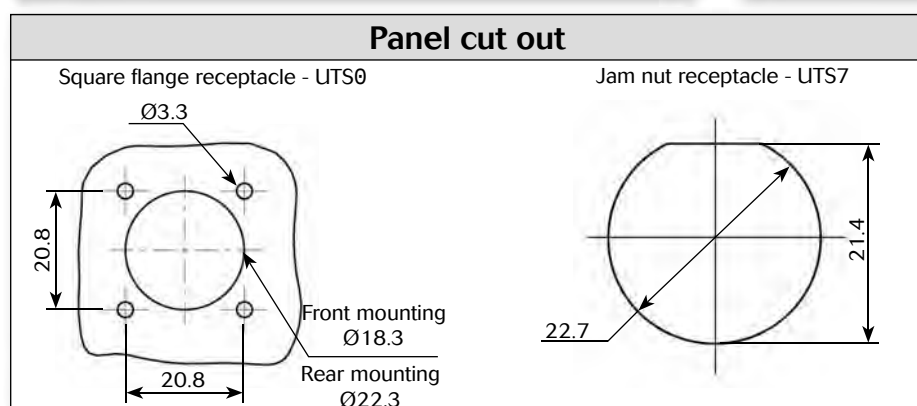
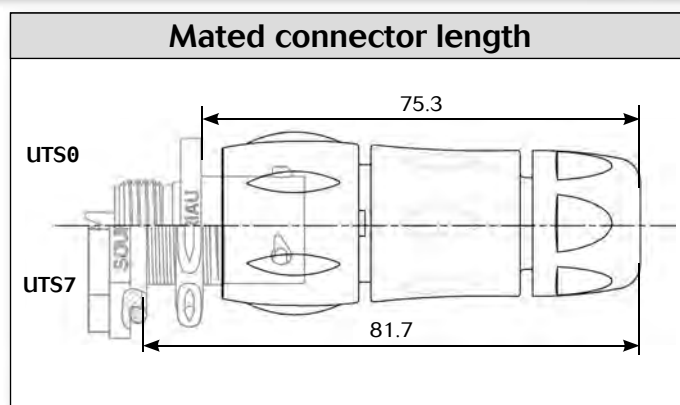
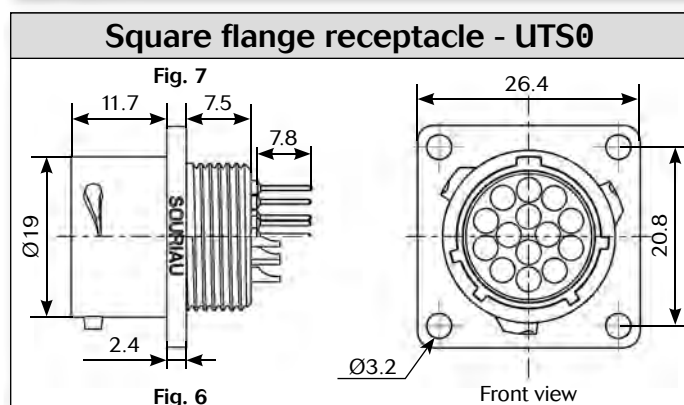
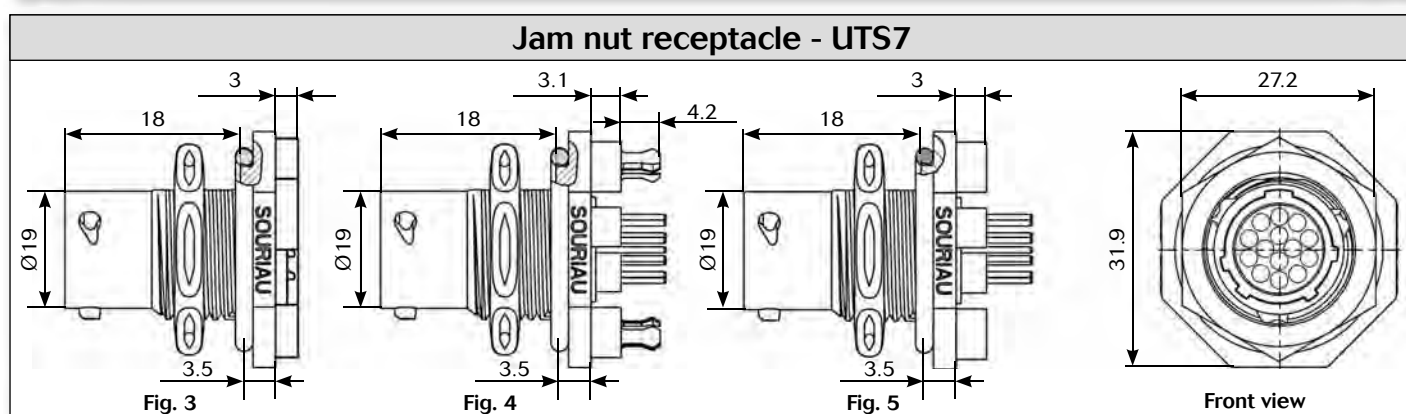
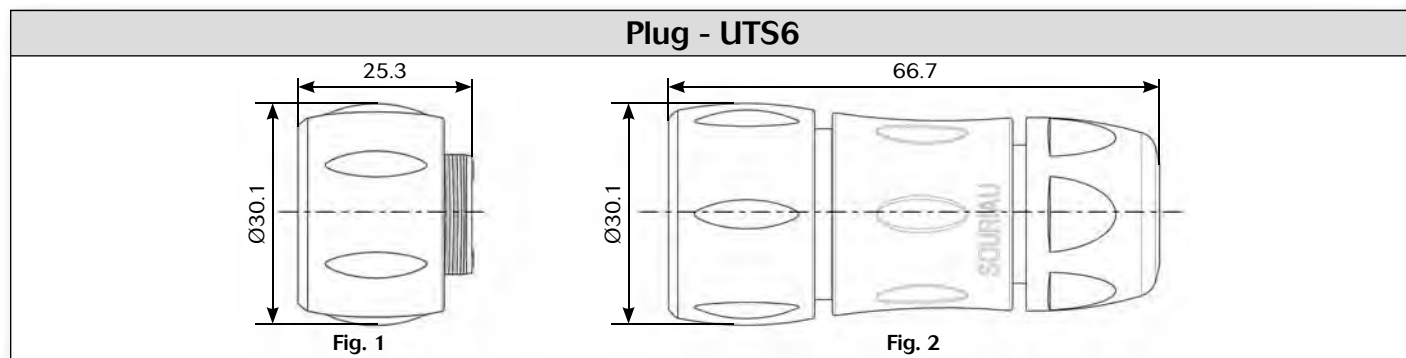
## Specifications

| Contact type                          | Connector type                                               | Backshell           | Part number         |                     |
|---------------------------------------|--------------------------------------------------------------|---------------------|---------------------|---------------------|
|                                       |                                                              |                     | Male insert         | Female insert       |
| Handsolder electrical contacts loaded | Square flange receptacle                                     | Without (Fig.6)     | <b>UTS012E14P</b>   | <b>UTS012E14S</b>   |
|                                       | Plug                                                         | Without (Fig.1)     | <b>UTS612E14P</b>   | <b>UTS612E14S</b>   |
|                                       |                                                              | Cable gland (Fig.2) | <b>UTS6JC12E14P</b> | <b>UTS6JC12E14S</b> |
|                                       | Jam nut receptacle                                           | Without (Fig.3)     | <b>UTS712E14P</b>   | <b>UTS712E14S</b>   |
| PCB contacts loaded                   | Square flange receptacle                                     | Without (Fig.7)     | <b>UTS012D14P</b>   | <b>UTS012D14S</b>   |
|                                       | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.4)     | <b>UTS712D14P32</b> | <b>UTS712D14S32</b> |
|                                       | Jam nut receptacle with stand off and without hold down clip | Without (Fig.5)     | <b>UTS712D14P</b>   | <b>UTS712D14S</b>   |

Sealed unmated



## Dimensions



Note: all dimensions are in mm

# UTS Series

## 12E14/12D14



### Accessories

#### Jam nut sealing caps



| Part number |
|-------------|
| UTS12DCG    |



Metal terminal

| Part number |
|-------------|
| UTS12DCGR   |

#### Plug sealing cap



| Part number |
|-------------|
| UTS612DCG   |

#### Square flange sealing cap



Metal terminal

| Part number |
|-------------|
| UTS12DCGE   |

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005587A      | 85005596 |

#### Gasket



| Part numbers / neoprene |
|-------------------------|
| UTFD13B                 |

#### Color coding rings

G for Green

Y for Yellow

R for Red



| Part numbers |            |
|--------------|------------|
| Receptacles  | Plugs      |
| UTS712CCRR   | UTS612CCRR |
| UTS712CCRY   | UTS612CCRY |
| UTS712CCRG   | UTS612CCRG |

\* Add G for Green, Y for Yellow, R for Red

#### Electrical characteristics

**UL**

4.5A 250V UL94 HB

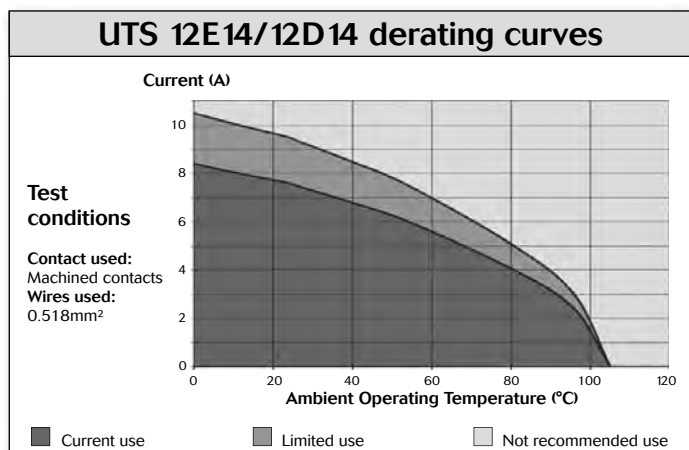
**CSA**

4.5A 250V UL94 HB

**IEC**

5A 32V 1.5kV 3



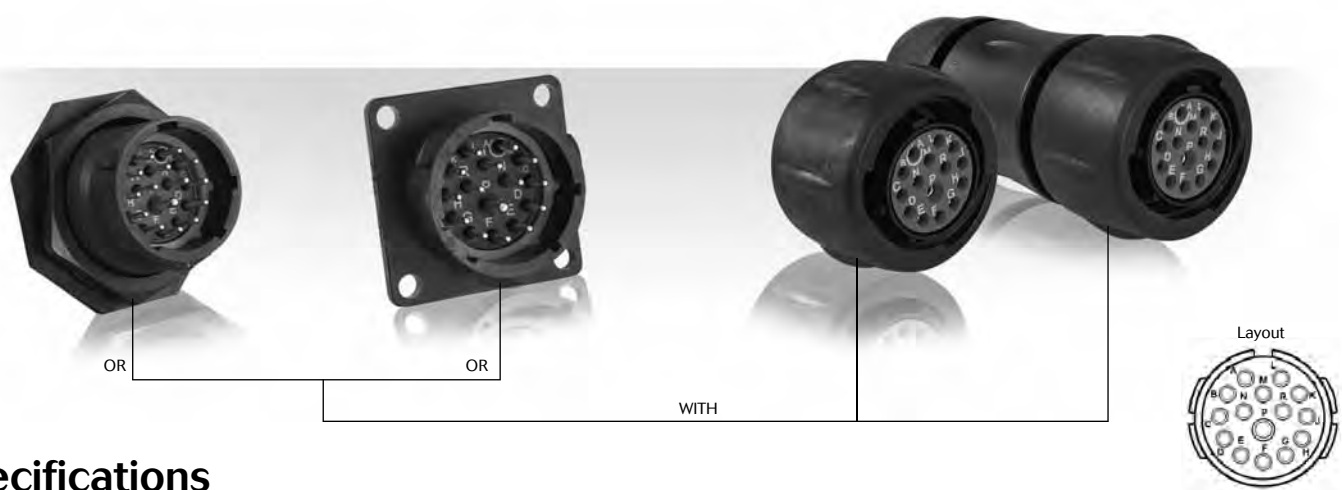
# UTS Series

## 12E 14/12D 14



# UTS Series

## 14E 15/14D 15



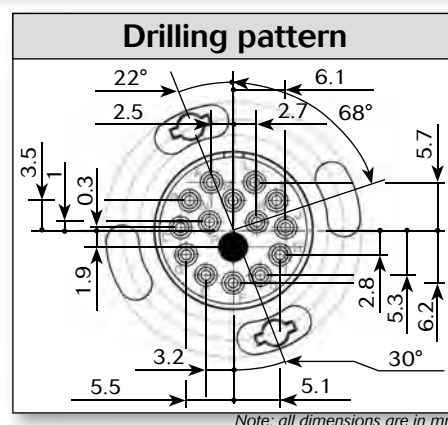
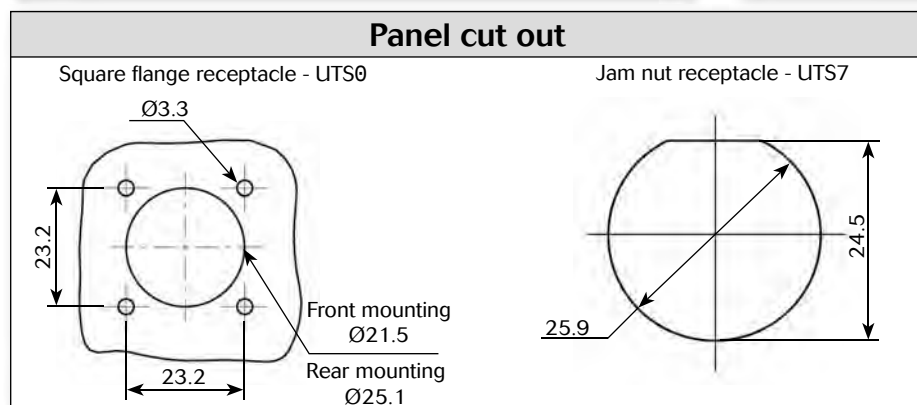
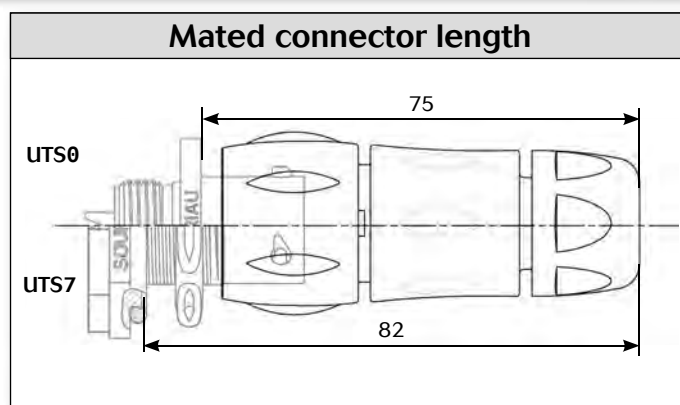
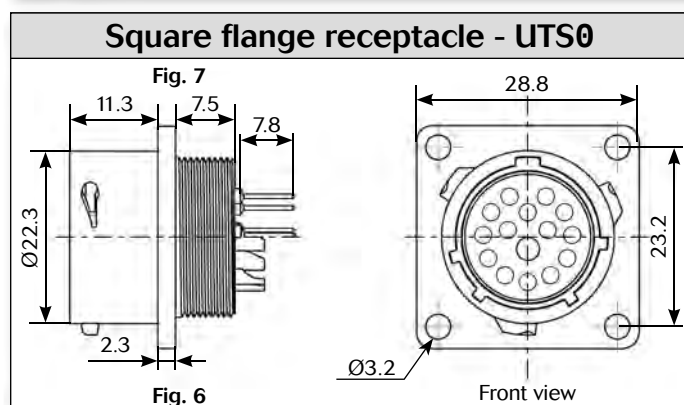
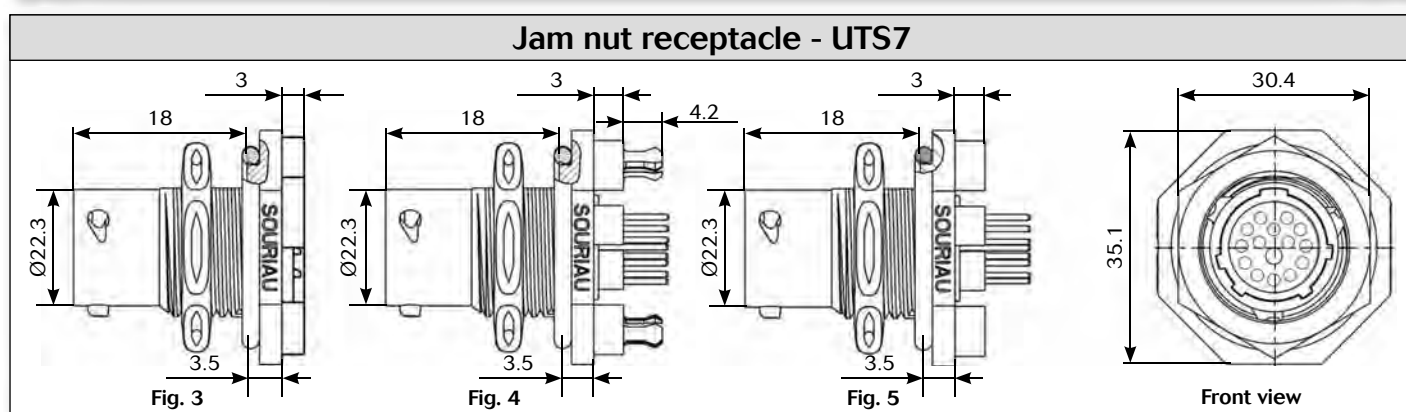
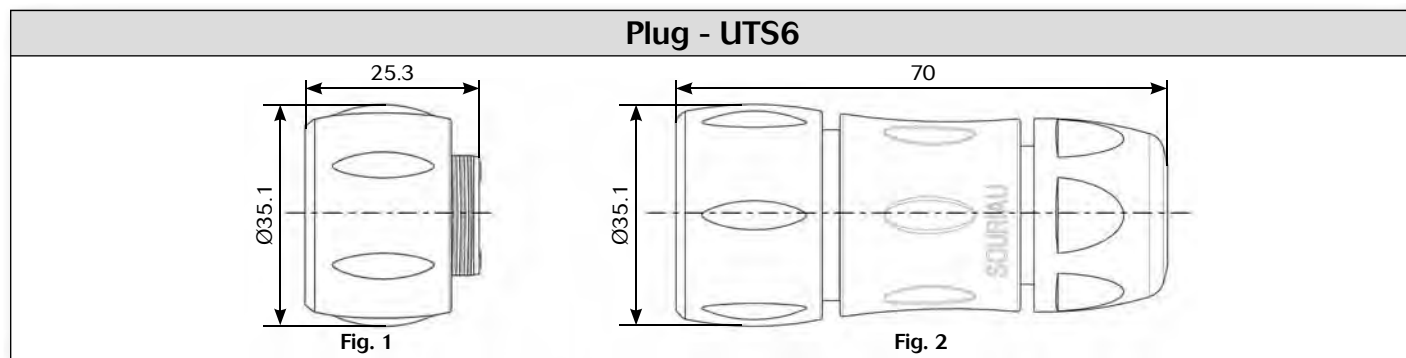
### Specifications

| Contact type                          | Connector type                                               | Backshell           | Part number  |               |
|---------------------------------------|--------------------------------------------------------------|---------------------|--------------|---------------|
|                                       |                                                              |                     | Male insert  | Female insert |
| Handsolder electrical contacts loaded | Square flange receptacle                                     | Without (Fig.6)     | UTS014E15P   | UTS014E15S    |
|                                       | Plug                                                         | Without (Fig.1)     | UTS614E15P   | UTS614E15S    |
|                                       |                                                              | Cable gland (Fig.2) | UTS6JC14E15P | UTS6JC14E15S  |
|                                       | Jam nut receptacle                                           | Without (Fig.3)     | UTS714E15P   | UTS714E15S    |
| PCB contacts loaded                   | Square flange receptacle                                     | Without (Fig.7)     | UTS014D15P   | UTS014D15S    |
|                                       | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.4)     | UTS714D15P32 | UTS714D15S32  |
|                                       | Jam nut receptacle with stand off and without hold down clip | Without (Fig.5)     | UTS714D15P   | UTS714D15S    |

Sealed unmated



## Dimensions



# UTS Series

## 14E 15/14D 15



### Accessories

#### Jam nut sealing caps



| Part number |
|-------------|
| UTS14DCG    |



Metal terminal

| Part number |
|-------------|
| UTS14DCGR   |

#### Plug sealing cap



| Part number |
|-------------|
| UTS614DCG   |

#### Square flange sealing cap



Metal terminal

| Part number |
|-------------|
| UTS14DCGE   |

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005588A      | 85005597 |

#### Gasket



| Part numbers / neoprene |
|-------------------------|
| UTFD14B                 |

#### Color coding rings

G for Green

Y for Yellow

R for Red



| Part numbers |            |
|--------------|------------|
| Receptacles  | Plugs      |
| UTS714CCRR   | UTS614CCRR |
| UTS714CCRY   | UTS614CCRY |
| UTS714CCRG   | UTS614CCRG |

\* Add G for Green, Y for Yellow, R for Red

#### Electrical characteristics

**UL**

12A 650V UL94 HB

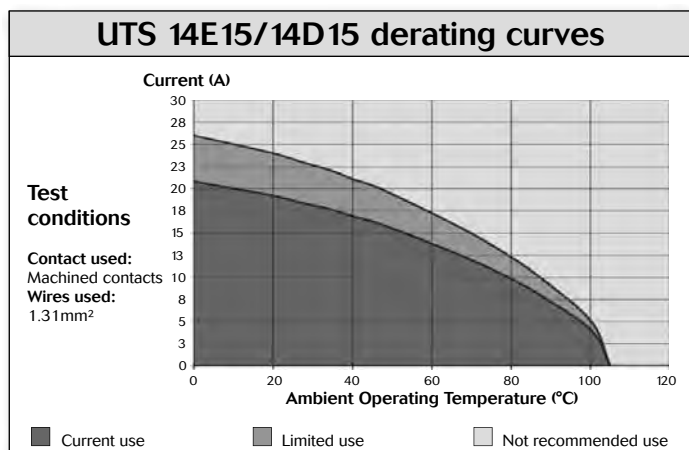
**CSA**

12A 650V UL94 HB

**IEC**

4A 50V 1.5kV 3



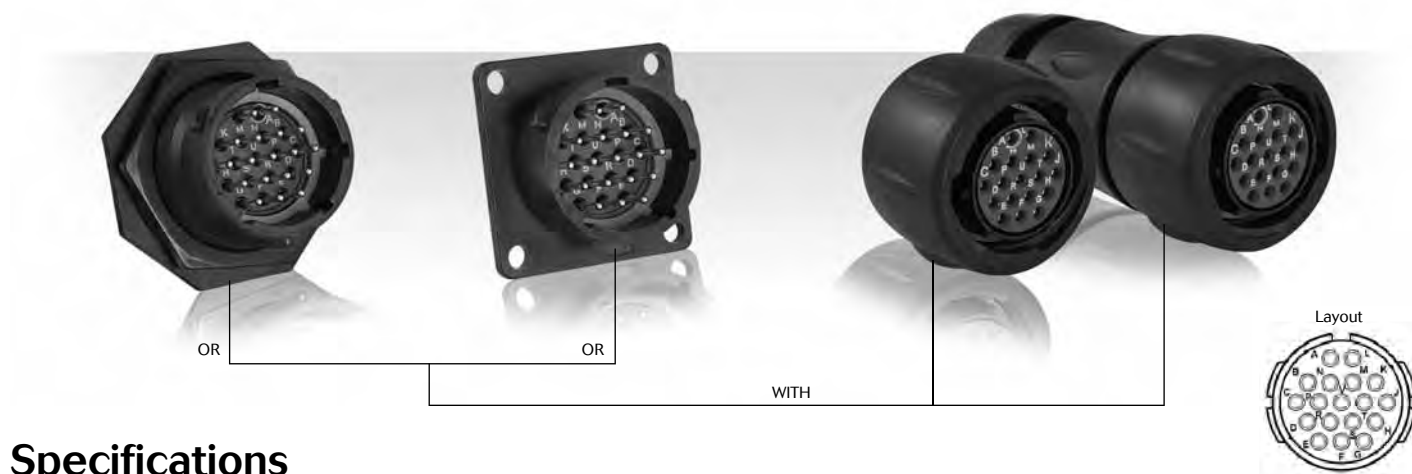
# UTS Series

## 14E 15/14D 15



# UTS Series

## 14E18/14D18



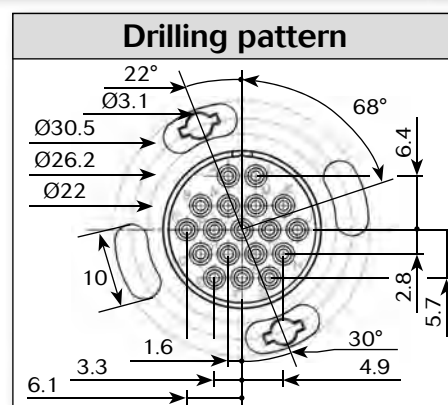
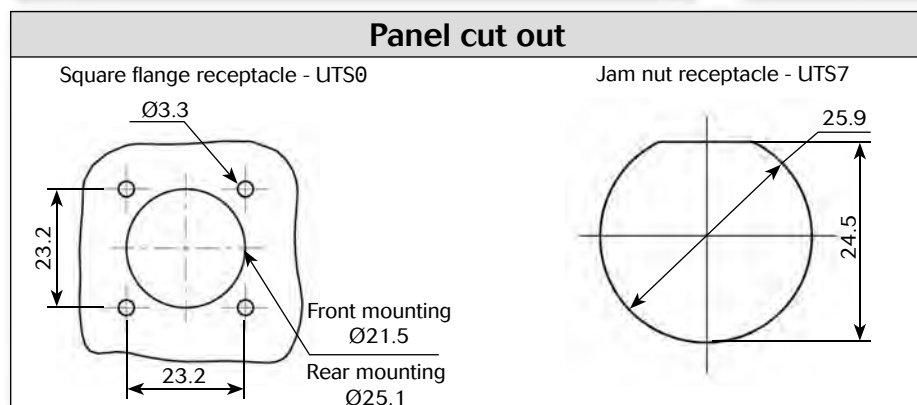
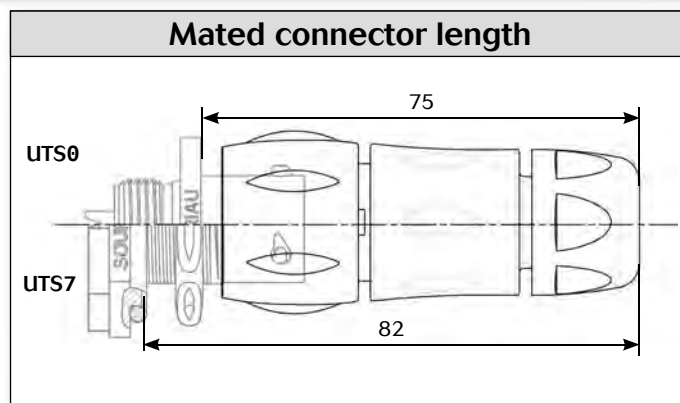
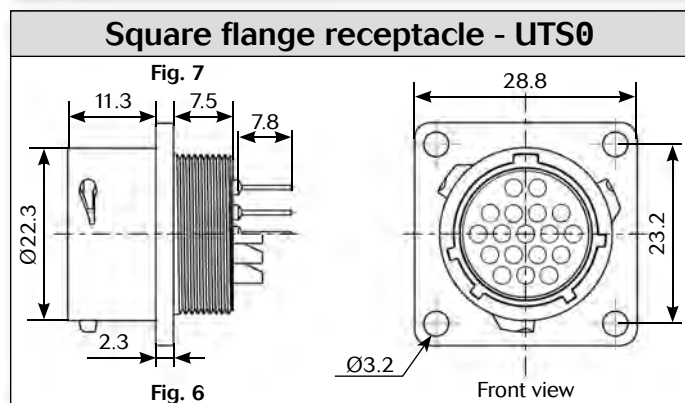
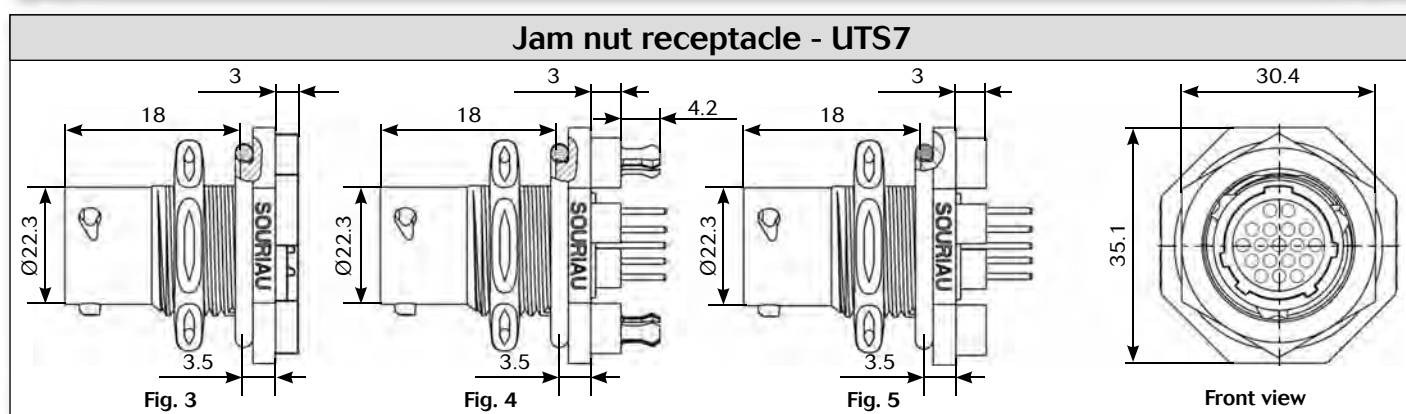
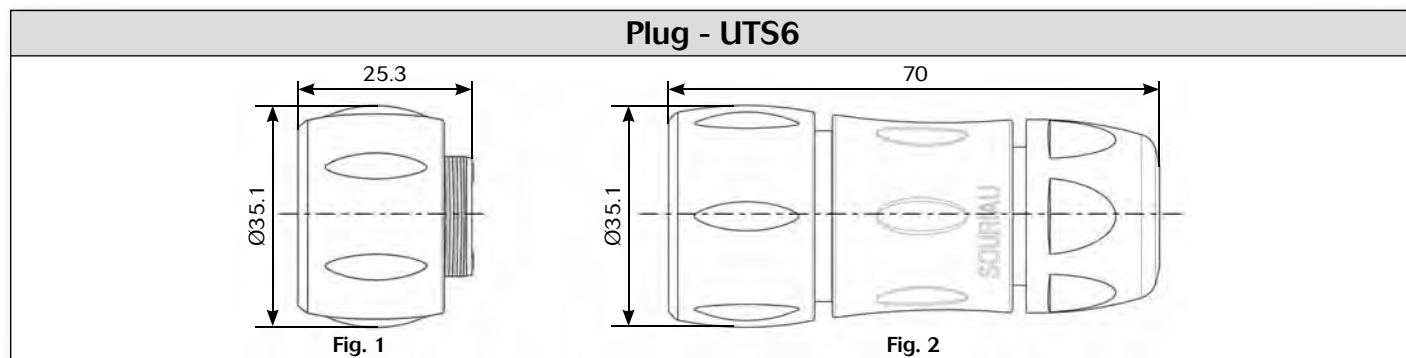
## Specifications

| Contact type                          | Connector type                                               | Backshell           | Part number         |                     |
|---------------------------------------|--------------------------------------------------------------|---------------------|---------------------|---------------------|
|                                       |                                                              |                     | Male insert         | Female insert       |
| Handsolder electrical contacts loaded | Square flange receptacle                                     | Without (Fig.6)     | <b>UTS014E18P</b>   | <b>UTS014E18S</b>   |
|                                       | Plug                                                         | Without (Fig.1)     | <b>UTS614E18P</b>   | <b>UTS614E18S</b>   |
|                                       |                                                              | Cable gland (Fig.2) | <b>UTS6JC14E18P</b> | <b>UTS6JC14E18S</b> |
|                                       | Jam nut receptacle                                           | Without (Fig.3)     | <b>UTS714E18P</b>   | <b>UTS714E18S</b>   |
| PCB contacts loaded                   | Square flange receptacle                                     | Without (Fig.7)     | <b>UTS014D18P</b>   | <b>UTS014D18S</b>   |
|                                       | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.4)     | <b>UTS714D18P32</b> | <b>UTS714D18S32</b> |
|                                       | Jam nut receptacle with stand off and without hold down clip | Without (Fig.5)     | <b>UTS714D18P</b>   | <b>UTS714D18S</b>   |

Sealed unmated



## Dimensions



# UTS Series

## 14E18/14D18



### Accessories

#### Jam nut sealing caps



| Part number |
|-------------|
| UTS14DCG    |



Metal terminal

| Part number |
|-------------|
| UTS14DCGR   |

#### Plug sealing cap



| Part number |
|-------------|
| UTS614DCG   |

#### Square flange sealing cap



Metal terminal

| Part number |
|-------------|
| UTS14DCGE   |

#### Plastic protective cap



| Part numbers   |          |
|----------------|----------|
| Receptacle cap | Plug cap |
| 85005588A      | 85005597 |

#### Gasket



| Part numbers / neoprene |
|-------------------------|
| UTFD14B                 |

#### Color coding rings

G for Green

Y for Yellow

R for Red



| Part numbers |            |
|--------------|------------|
| Receptacles  | Plugs      |
| UTS714CCRR   | UTS614CCRR |
| UTS714CCRY   | UTS614CCRY |
| UTS714CCRG   | UTS614CCRG |

\* Add G for Green, Y for Yellow, R for Red

#### Electrical characteristics

**UL**

4A 250V UL94 HB

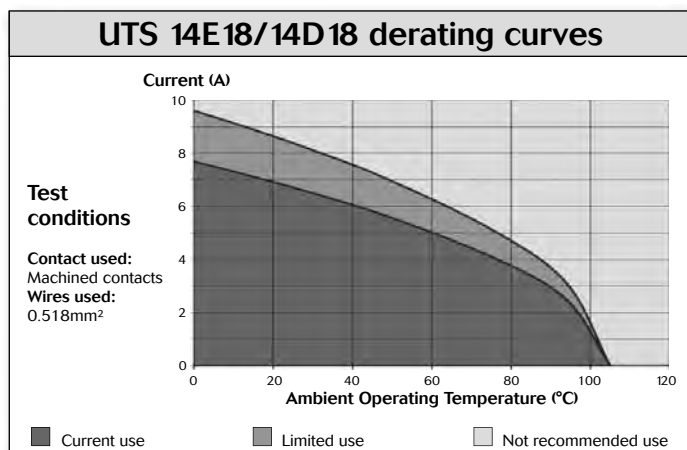
**CSA**

4A 250V UL94 HB

**IEC**

5A 50V 1.5kV 3



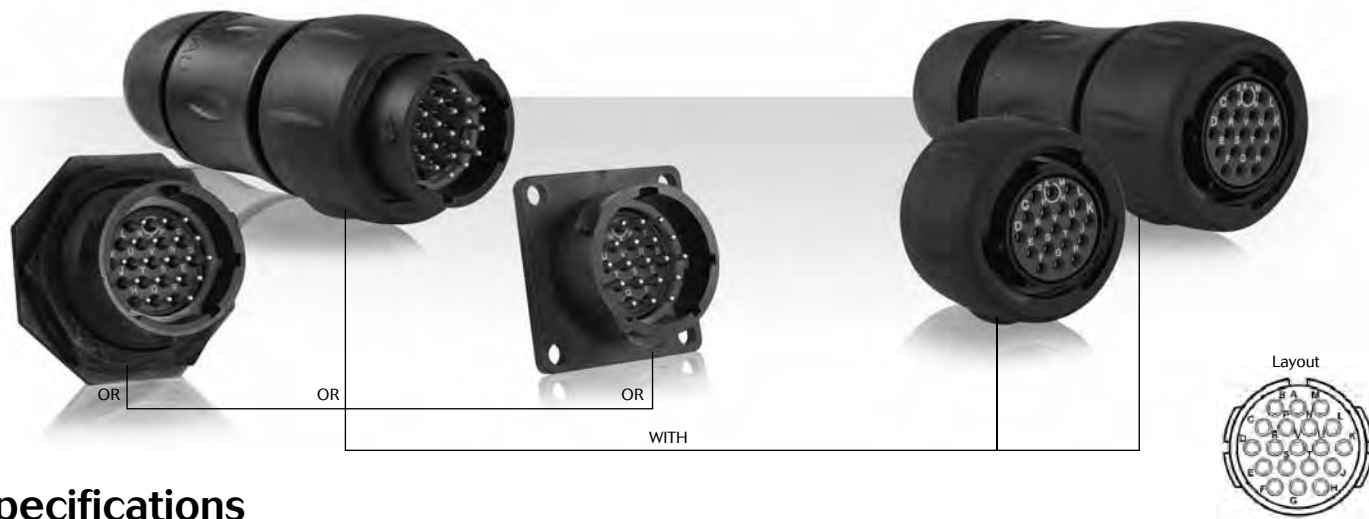
# UTS Series

## 14E18/14D18



# UTS Series

## 1419 - 14E19/14D19



## Specifications

| Contact type                                  | Connector type                                               | Backshell           | Part number         |                     |
|-----------------------------------------------|--------------------------------------------------------------|---------------------|---------------------|---------------------|
|                                               |                                                              |                     | Male insert         | Female insert       |
| Crimp contacts supply separately see page 131 | Free hanging receptacle                                      | Cable gland (Fig.1) | <b>UTS1JC1419P</b>  | <b>UTS1JC1419S</b>  |
|                                               | Plug                                                         | Without (Fig.2)     | <b>UTS61419P</b>    | <b>UTS61419S</b>    |
|                                               | Plug                                                         | Cable gland (Fig.3) | <b>UTS6JC1419P</b>  | <b>UTS6JC1419S</b>  |
|                                               | Jam nut receptacle                                           | Without (Fig.4)     | <b>UTS71419P</b>    | <b>UTS71419S</b>    |
| PCB contacts supply separately see page 131   | Jam nut receptacle                                           | Without (Fig.4)     | <b>UTS71419P</b>    | <b>UTS71419S</b>    |
| Handsolder electrical contacts loaded         | Square flange receptacle                                     | Without (Fig.8)     | <b>UTS014E19P</b>   | <b>UTS014E19S</b>   |
|                                               | Plug                                                         | Without (Fig.2)     | <b>UTS614E19P</b>   | <b>UTS614E19S</b>   |
|                                               |                                                              | Cable gland (Fig.3) | <b>UTS6JC14E19P</b> | <b>UTS6JC14E19S</b> |
|                                               | Jam nut receptacle                                           | Without (Fig.5)     | <b>UTS714E19P</b>   | <b>UTS714E19S</b>   |
| PCB contacts loaded                           | Square flange receptacle                                     | Without (Fig.9)     | <b>UTS014D19P</b>   | <b>UTS014D19S</b>   |
|                                               | Jam nut receptacle with stand off and with hold down clips   | Without (Fig.6)     | <b>UTS714D19P32</b> | <b>UTS714D19S32</b> |
|                                               | Jam nut receptacle with stand off and without hold down clip | Without (Fig.7)     | <b>UTS714D19P</b>   | <b>UTS714D19S</b>   |

Sealed unmated

## Square flange receptacle

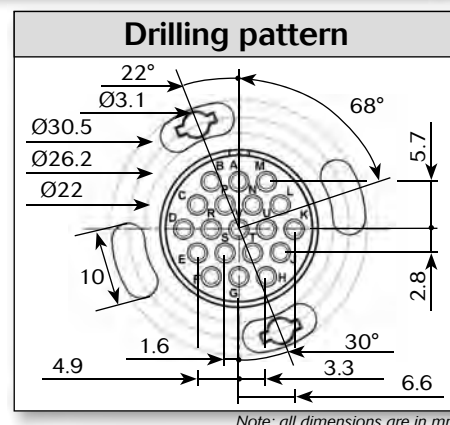
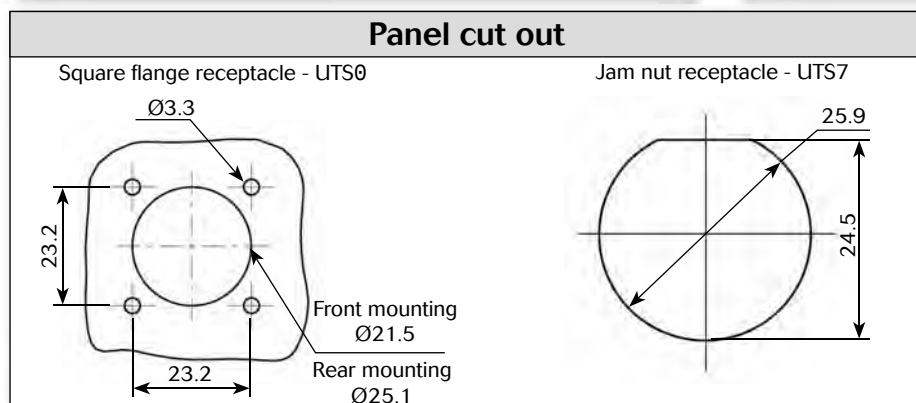
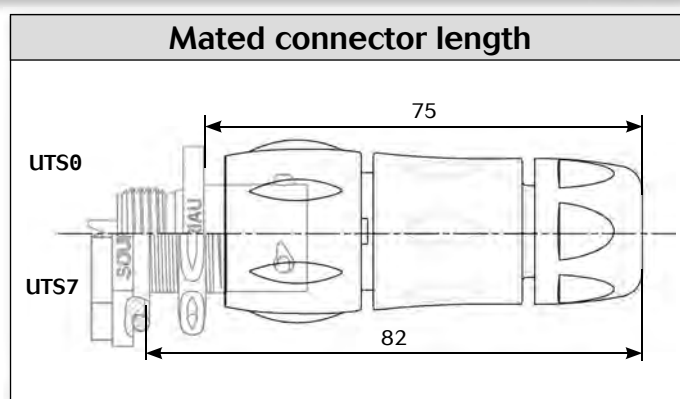
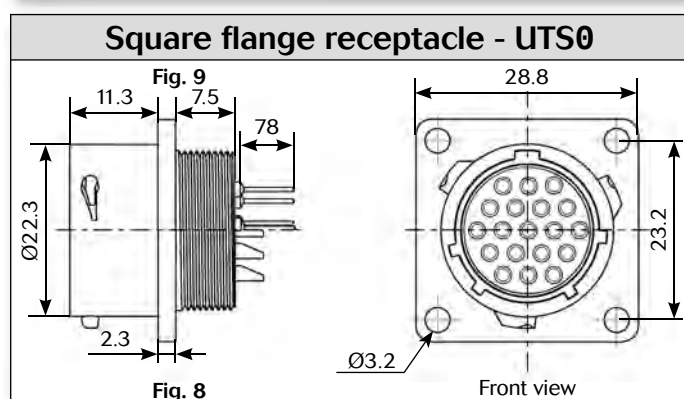
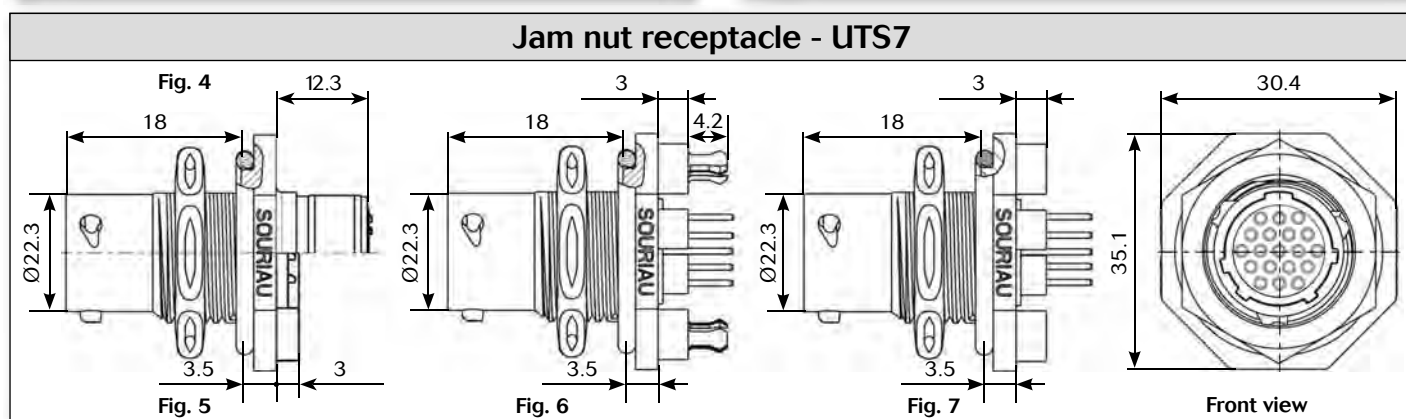
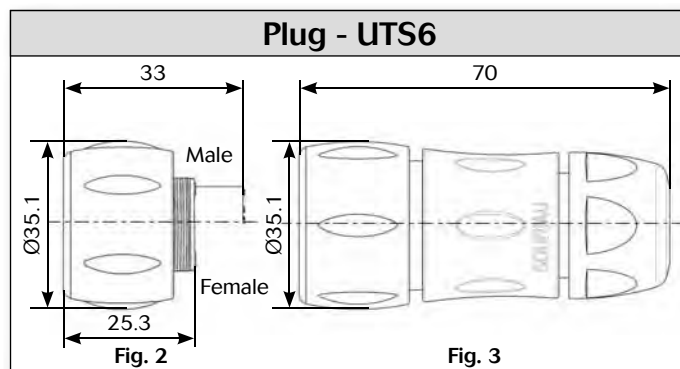
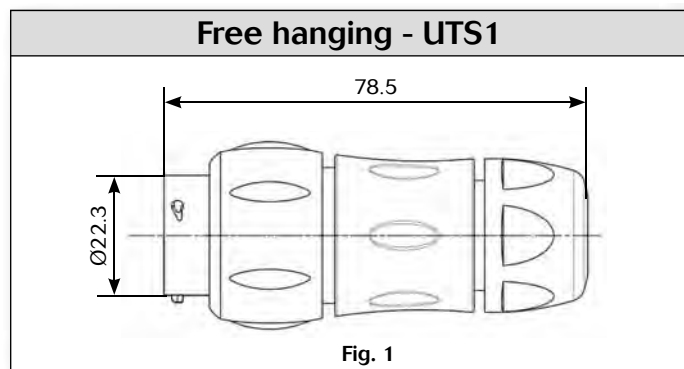
# UTS Series

## 1419 - 14E19/14D19



19 contacts  
5A/32V  
per IEC 61984

## Dimensions



# UTS Series

## 1419 - 14E19/14D19



### Accessories and tooling

| Jam nut sealing caps                                                              |                                                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|  |  |
| Part number                                                                       | Part number                                                                       |
| UTS14DCG                                                                          | UTS14DCGR                                                                         |

| Handle                                                                             |
|------------------------------------------------------------------------------------|
|  |
| Part number                                                                        |
| SHANGLES                                                                           |

| Tool kit                                                                            |
|-------------------------------------------------------------------------------------|
|  |
| Part number                                                                         |
| TOOLKIT                                                                             |

| Plug sealing cap                                                                   |
|------------------------------------------------------------------------------------|
|  |
| Part number                                                                        |
| UTS614DCG                                                                          |

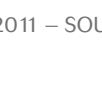
| Square flange sealing cap                                                          |
|------------------------------------------------------------------------------------|
|  |
| Part number                                                                        |
| UTS14DCGE                                                                          |

| Plastic protective cap                                                              |          |
|-------------------------------------------------------------------------------------|----------|
|  |          |
| Part numbers                                                                        |          |
| Receptacle cap                                                                      | Plug cap |
| 85005588A                                                                           | 85005597 |

| Gasket                                                                              |
|-------------------------------------------------------------------------------------|
|  |
| Part numbers / neoprene                                                             |
| UTFD14B                                                                             |

| Crimp tooling                                                                       |                                                                                      |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |  |
| Contacts                                                                            | Contact size                                                                         | Part number of head                                                                  |
| RM/RC 24W3K <sup>(1)</sup>                                                          | Standard contacts<br>#20<br>Ø 1mm                                                    | S20RM                                                                                |
| RM/RC 20W3K <sup>(1)</sup>                                                          |                                                                                      | S20RM                                                                                |
| RM/RC 18W3K <sup>(1)</sup>                                                          |                                                                                      | S20RM                                                                                |
| SM/SC 24W3S <sup>(2)</sup>                                                          |                                                                                      | S20SCM20                                                                             |
| SM/SC 24WL3S <sup>(3)</sup>                                                         |                                                                                      | S20SCM20                                                                             |
| SM/SC 20W3S <sup>(2)</sup>                                                          |                                                                                      | S20SCM20                                                                             |
| SM/SC 20WL3S <sup>(3)</sup>                                                         |                                                                                      | S20SCM20                                                                             |

(1): example of plating, for other plating see UTS catalog page 143  
 (2): contact reeled  
 (3): loose contact

| Color coding rings |                                                                                     |
|--------------------|-------------------------------------------------------------------------------------|
| G for Green        |  |
| Y for Yellow       |  |
| R for Red          |  |
| Part numbers       |                                                                                     |
| Receptacles        | Plugs                                                                               |
| UTS714CCRR         | UTS614CCRR                                                                          |
| UTS714CCRY         | UTS614CCRY                                                                          |
| UTS714CCRG         | UTS614CCRG                                                                          |

\* Add G for Green, Y for Yellow, R for Red

# UTS Series

## 1419 - 14E19/14D19



19 contacts  
5A/32V  
per IEC 61984

## Contacts

| #20   | Contact type                     | AWG   | Part number              |                          | Max wire Ø | Max insulator Ø |
|-------|----------------------------------|-------|--------------------------|--------------------------|------------|-----------------|
|       |                                  |       | Male                     | Female                   |            |                 |
| Crimp | Machined                         | 26-24 | RM24W3K <sup>(1)</sup>   | RC24W3K <sup>(1)</sup>   | -          | 1.58            |
|       |                                  | 22-20 | RM20W3K <sup>(1)</sup>   | RC20W3K <sup>(1)</sup>   | -          | 1.58            |
|       |                                  | 20-18 | RM18W3K <sup>(1)</sup>   | RC18W3K <sup>(1)</sup>   | -          | 2.1             |
|       | stamped & formed reeled contacts | 26-24 | SM24W3TK6 <sup>(2)</sup> | SC24W3TK6 <sup>(2)</sup> | -          | 0.89-1.58       |
|       |                                  | 26-24 | SM24W3TK6 <sup>(2)</sup> | SC24W3TK6 <sup>(2)</sup> | -          | 0.89-1.58       |
|       |                                  | 22-20 | SM20W3TK6 <sup>(2)</sup> | SC20W3TK6 <sup>(2)</sup> | -          | 1.17-2.08       |
|       |                                  | 22-20 | SM20W3TK6 <sup>(2)</sup> | SC20W3TK6 <sup>(2)</sup> | -          | 1.17-2.08       |
|       |                                  |       |                          |                          |            |                 |
| PCB   | Machined <sup>(3)</sup>          | -     | RMW5016K                 | RCW5016K                 | -          | -               |

(1): Example of plating, for other plating see page 143

(2): Loose piece contact available if putting L. Example: SM20ML1-TK6

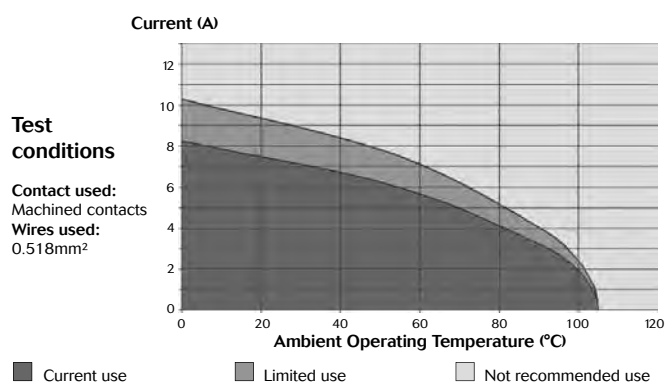
(3): For dimensions see page 148

Mechanics

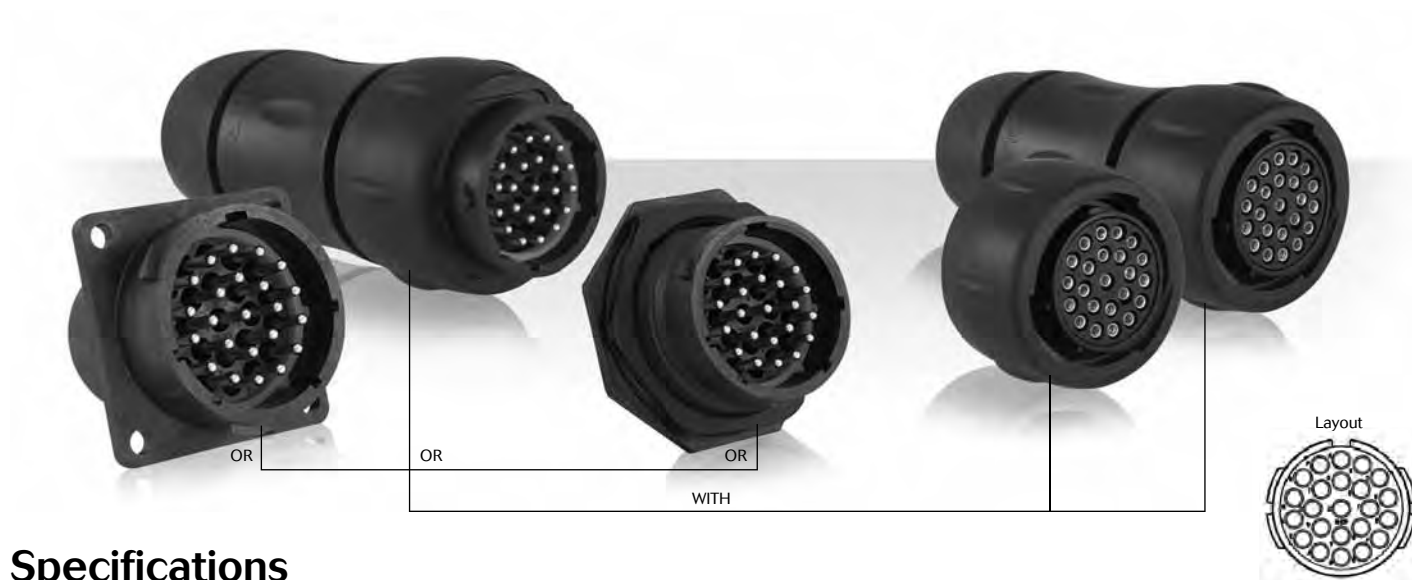
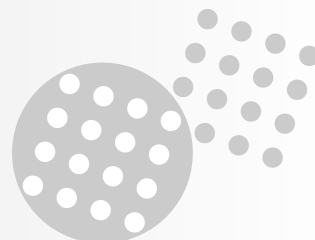
## Electrical characteristics

|                  |                        |
|------------------|------------------------|
| <b>UTS 1419</b>  | <b>UTS 14E19/14D19</b> |
| <b>UL</b>        | <b>UL</b>              |
| 5A 250V UL94 V-0 | 4A 250V UL94 HB        |
| <b>CSA</b>       | <b>CSA</b>             |
| 4A 250V UL94 V-0 | 4A 250V UL94 HB        |
| <b>IEC</b>       |                        |
| 5A 32V 1.5kV 3   |                        |

## UTS 1419 - 14E19/14D19 derating curves



# UTS Series 1823

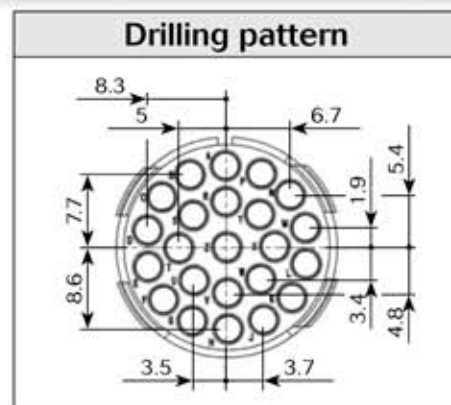
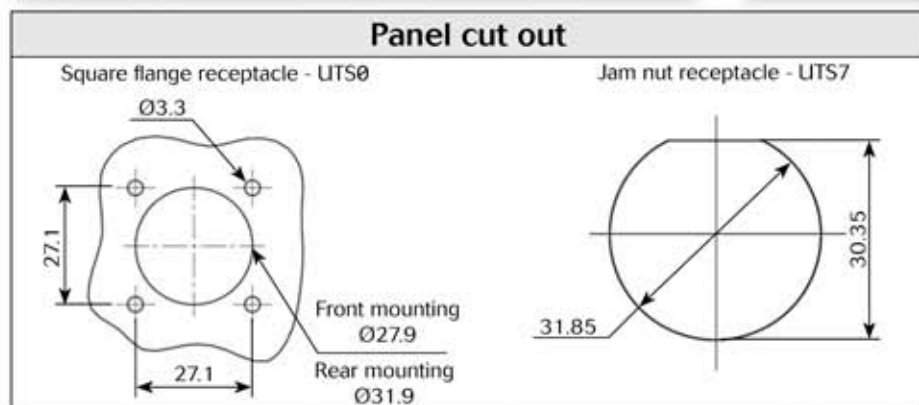
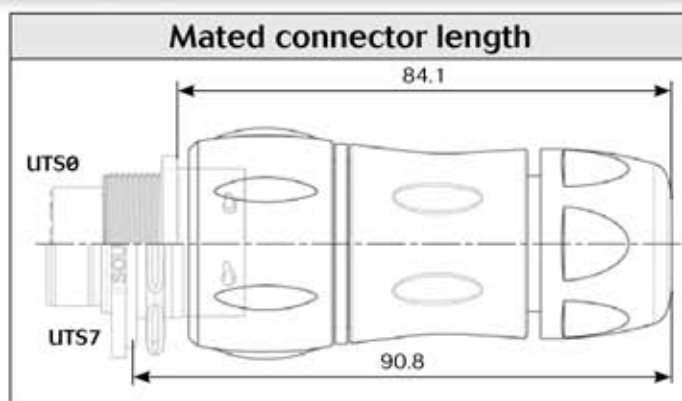
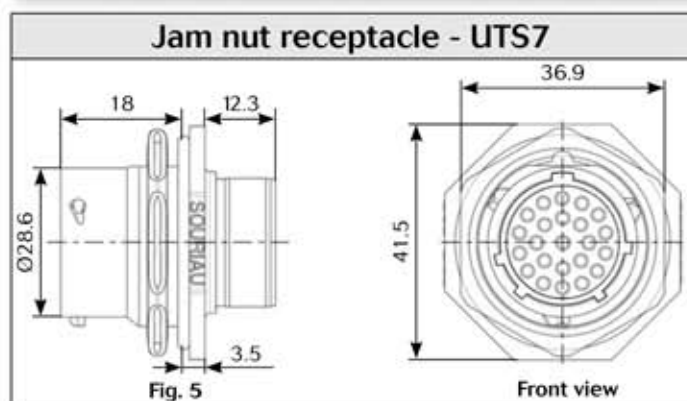
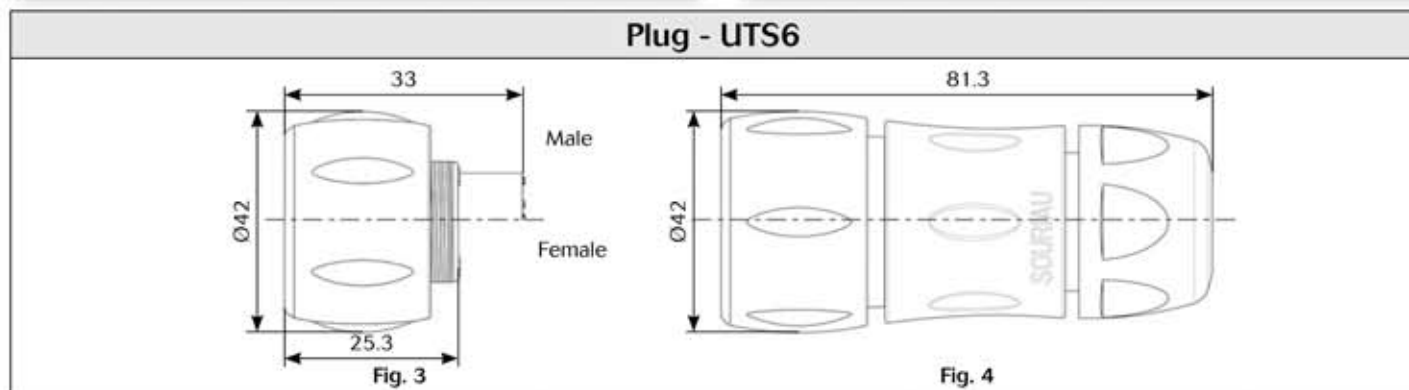
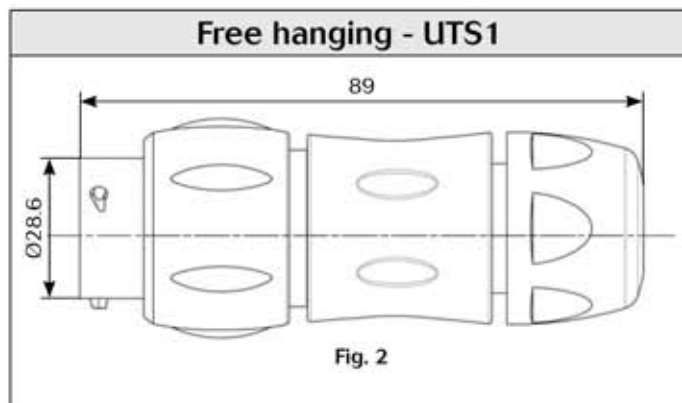
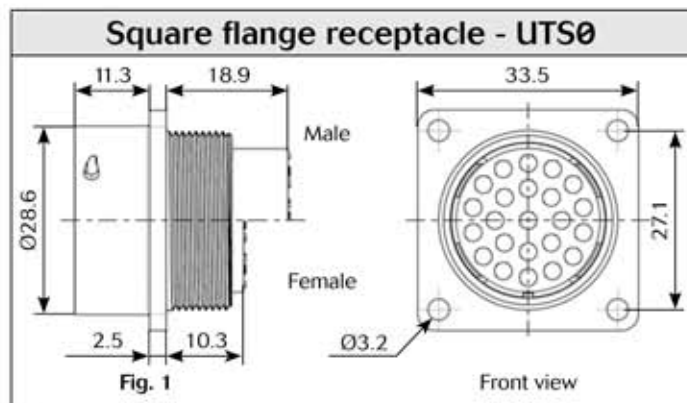


## Specifications

| Contact type                                  | Connector type           | Backshell           | Part number        |                    |
|-----------------------------------------------|--------------------------|---------------------|--------------------|--------------------|
|                                               |                          |                     | Male insert        | Female insert      |
| Crimp contacts supply separately see page 135 | Square flange receptacle | Without (Fig.1)     | <b>UTS01823P</b>   | <b>UTS01823S</b>   |
|                                               | Free hanging receptacle  | Cable gland (Fig.2) | <b>UTS1JC1823P</b> | <b>UTS1JC1823S</b> |
|                                               | Plug                     | Without (Fig.3)     | <b>UTS61823P</b>   | <b>UTS61823S</b>   |
|                                               | Plug                     | Cable gland (Fig.4) | <b>UTS6JC1823P</b> | <b>UTS6JC1823S</b> |
|                                               | Jam nut receptacle       | Without (Fig.5)     | <b>UTS71823P</b>   | <b>UTS71823S</b>   |
| PCB contacts supply separately see page 135   | Square flange receptacle | Without (Fig.1)     | <b>UTS01823P</b>   | <b>UTS01823S</b>   |
|                                               | Jam nut receptacle       | Without (Fig.5)     | <b>UTS71823P</b>   | <b>UTS71823S</b>   |



### Dimensions



Note: all dimensions are in mm



### Accessories and tooling

#### Jam nut sealing caps



Part number  
UTS18DCG



Metal terminal

Part number  
UTS18DCGR

#### Handle



Part number  
SHANGLES

#### Tool kit



Part number  
TOOLKIT

#### Plug sealing cap



Part number  
UTS618DCG

#### Square flange sealing cap



Metal terminal

Part number  
UTS18DCGE

#### Plastic protective cap



Part numbers

| Receptacle cap | Plug cap  |
|----------------|-----------|
| 8500-5590A     | 8500-5599 |

#### Gasket



Part numbers / neoprene  
UTFD16B

#### Crimp tooling



| Contacts                       | Contact size                        | Part number of head |
|--------------------------------|-------------------------------------|---------------------|
| RM/RC 28M1K <sup>(1)</sup>     | Standard contacts<br>#16<br>Ø 1.6mm | S16RCM20            |
| RM/RC 24M9K <sup>(1)</sup>     |                                     | S16RCM20            |
| RM/RC 20M13K <sup>(1)</sup>    |                                     | S16RCM20            |
| RM/RC 20M12K <sup>(1)</sup>    |                                     | S16RCM20            |
| RM/RC 16M23K <sup>(1)</sup>    |                                     | S16RCM16            |
| RM/RC 14M50K <sup>(1)</sup>    |                                     | S16RCM1450          |
| RM/RC 14M30K <sup>(1)</sup>    |                                     | S16RCM14            |
| SM/SC 24ML1TK6 <sup>(1)</sup>  |                                     | S16SCM20            |
| SM/SC 20ML1TK6 <sup>(1)</sup>  |                                     | S16SCM20            |
| SM/SC 16ML1TK6 <sup>(1)</sup>  |                                     | S16SCML1            |
| SM/SC 14ML1TK6 <sup>(1)</sup>  |                                     | S16SCML1            |
| SM/SC 16ML11TK6 <sup>(1)</sup> |                                     | S16SCML11           |
| RMDXK10D28K                    | Coaxial contacts                    | M10S-1J             |
| RCDXK1D28K                     |                                     | M10S-1J             |
| RM/RC DX60xxD28K               |                                     | M10S-1J             |
| RM/RC DXK10D28 + yor090        |                                     | M10S-1J             |
| RM/RC DX60xxD28                |                                     | M10S-1J             |

(1): example of plating, for other plating see UTS catalog page 143

# UTS Series

## 1823



23 contacts  
9A/63V  
per IEC 61984

## Contacts

| #16         | Contact type                          | AWG   | Part number                  |                              | Max wire Ø | Max insulator Ø |
|-------------|---------------------------------------|-------|------------------------------|------------------------------|------------|-----------------|
|             |                                       |       | Male                         | Female                       |            |                 |
| Crimp       | Machined                              | 30-28 | RM28M1K <sup>(1)</sup>       | RC28M1K <sup>(1)</sup>       | 0.55       | 1.1             |
|             |                                       | 26-24 | RM24M9K <sup>(1)</sup>       | RC24M9K <sup>(1)</sup>       | 0.8        | 1.6             |
|             |                                       | 22-20 | RM20M13K <sup>(1)</sup>      | RC20M13K <sup>(1)</sup>      | 1.18       | 1.8             |
|             |                                       | 22-20 | RM20M12K <sup>(1)</sup>      | RC20M12K <sup>(1)</sup>      | 1.18       | 2.2             |
|             |                                       | 20-16 | RM16M23K <sup>(1)</sup>      | RC16M23K <sup>(1)</sup>      | 1.8        | 3.2             |
|             |                                       | 16-14 | RM14M50K <sup>(1)</sup>      | RC14M50K <sup>(1)</sup>      | 2.05       | 3.2             |
|             |                                       | 16-14 | RM14M30K <sup>(1)</sup>      | RC14M30K <sup>(1)</sup>      | 2.28       | 3.2             |
|             | Stamped & formed reeled contacts      | 26-24 | SM24M1TK6 <sup>(1)(2)</sup>  | SC24M1TK6 <sup>(1)(2)</sup>  | 0.89-1.28  | -               |
|             |                                       | 22-20 | SM20M1TK6 <sup>(1)(2)</sup>  | SC20M1TK6 <sup>(1)(2)</sup>  | 1.17-2.08  | -               |
|             |                                       | 18-16 | SM16M1TK6 <sup>(1)(2)</sup>  | SC16M1TK6 <sup>(1)(2)</sup>  | 3.0        | -               |
|             |                                       | 18-16 | SM16M11TK6 <sup>(1)(2)</sup> | SC16M11TK6 <sup>(1)(2)</sup> | 2.0-3.0    | -               |
|             |                                       | 14    | SM14M1TK6 <sup>(1)(2)</sup>  | SC14M1TK6 <sup>(1)(2)</sup>  | 3.2        | -               |
| PCB         | Machined <sup>(3)</sup>               | -     | RM20M12E8K <sup>(1)</sup>    | RC20M12E84K <sup>(1)</sup>   | -          | -               |
| Coaxial     | Cable Multipiece                      | -     | RMDXK10D28                   | RCDXK1D28                    | -          | -               |
|             | Cable Monocrimp                       | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
|             | Twisted pair Multipiece               | -     | RMDXK10D28 + york090         | RCDXK1D28 + york090          | -          | -               |
|             | Twisted pair Monocrimp                | -     | RMDX60xxD28                  | RCDX60xxD28                  | -          | -               |
| Fiber optic | POF contacts<br>Plastic optical fibre | -     | RMPOF1000                    | RCPOF1000B                   | -          | -               |

(1): Example of plating, for other plating see page 143

(2): Loose piece contact available if putting L. Example: SM20ML1-TK6

(3): For dimensions see page 148

Mechanics

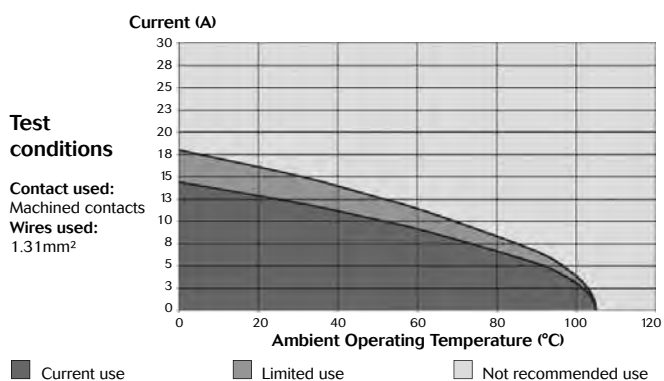
## Electrical characteristics

UL  
10A 500V UL94 V-0

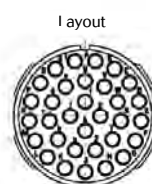
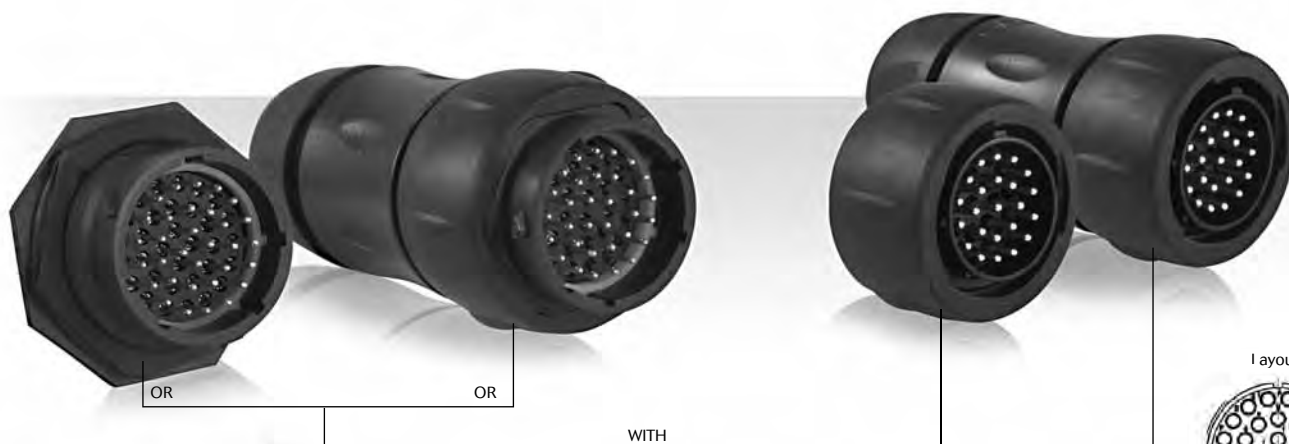
CSA  
7A 500V UL94 V-0

IEC  
9A 63V 1.5kV 3

## UTS 1823 derating curves



# UTS Series 1832

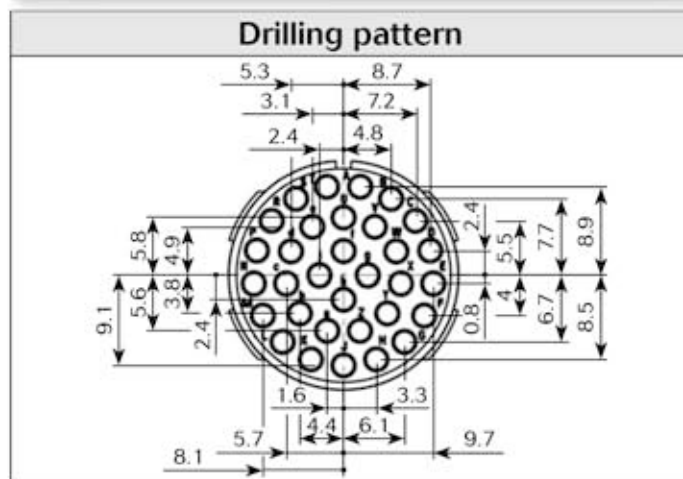
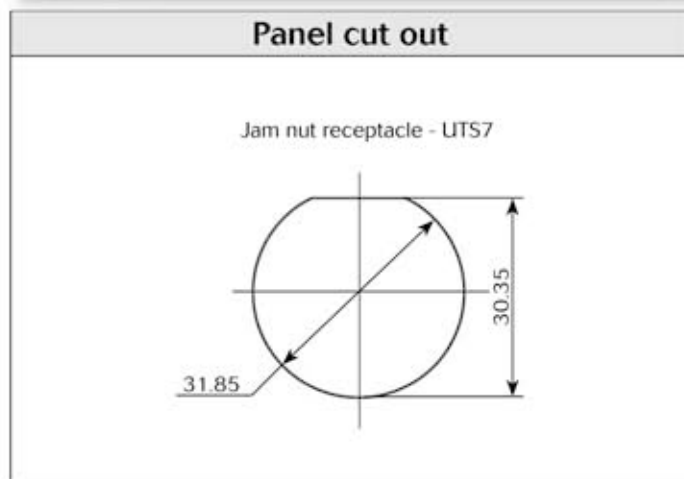
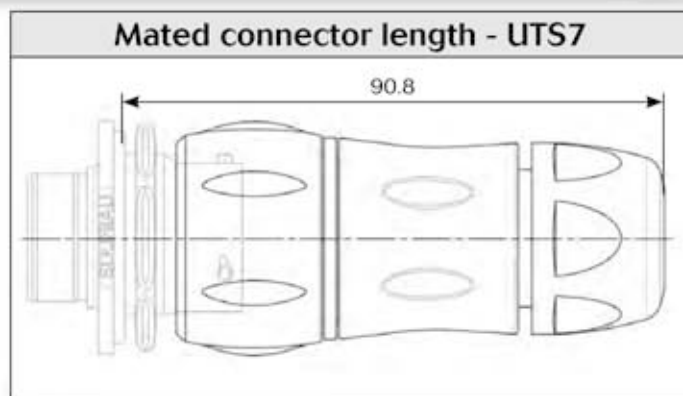
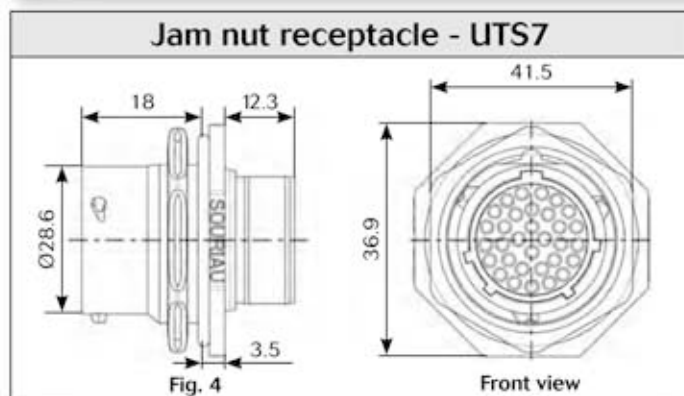
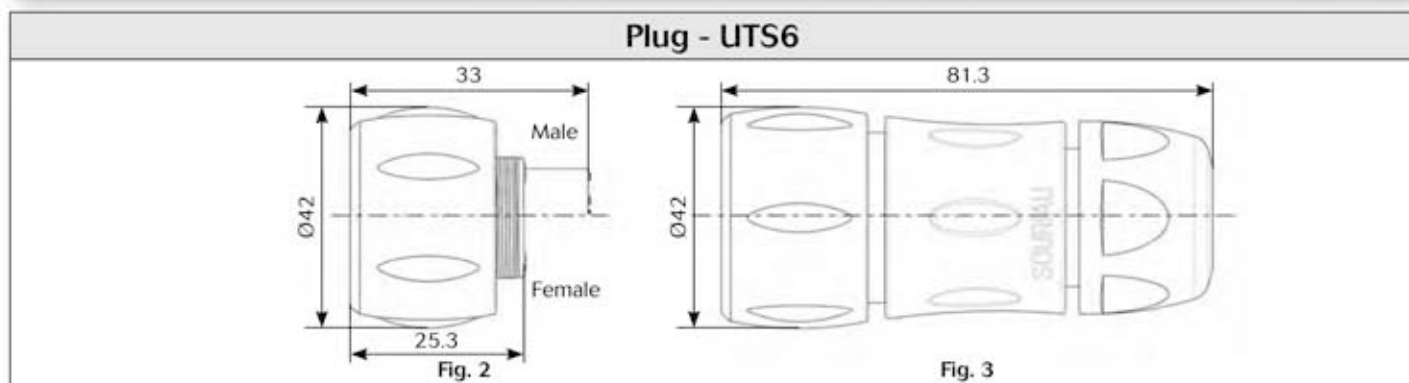
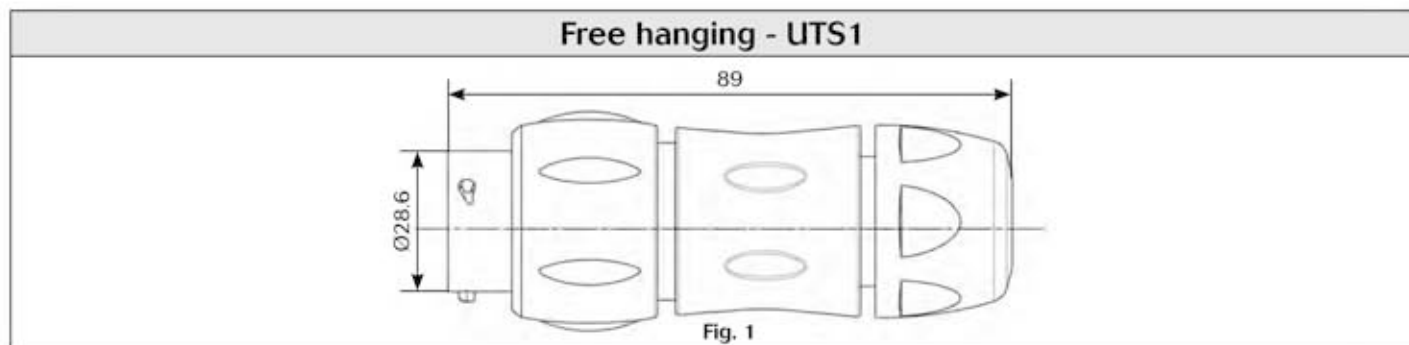


## Specifications

| Contact type                                          | Connector type             | Backshell           | Part number        |                    |
|-------------------------------------------------------|----------------------------|---------------------|--------------------|--------------------|
|                                                       |                            |                     | Male insert        | Female insert      |
| Crimp<br>contact supply<br>separately<br>see page 139 | Free hanging<br>receptacle | Cable gland (Fig.1) | <b>UTS1JC1832P</b> | <b>UTS1JC1832S</b> |
|                                                       | Plug                       | Without (Fig.2)     | <b>UTS61832P</b>   | <b>UTS61832S</b>   |
|                                                       | Plug                       | Cable gland (Fig.3) | <b>UTS6JC1832P</b> | <b>UTS6JC1832S</b> |
|                                                       | Jam nut<br>receptacle      | Without (Fig.4)     | <b>UTS71832P</b>   | <b>UTS71832S</b>   |
| PCB<br>contacts supply<br>separately<br>see page 139  | Jam nut<br>receptacle      | Without (Fig.4)     | <b>UTS71832P</b>   | <b>UTS71832S</b>   |



### Dimensions



Note: all dimensions are in mm



### Accessories and tooling

#### Jam nut sealing caps



Part number  
**UTS18DCG**



Metal terminal

Part number  
**UTS18DCGR**

#### Handle



Part number  
**SHANGLES**

#### Tool kit



Part number  
**TOOLKIT**

#### Plug sealing cap



Part number  
**UTS618DCG**

#### Square flange sealing cap



Metal terminal

Part number  
**UTS18DCGE**

#### Plastic protective cap



Part numbers

| Receptacle cap    | Plug cap         |
|-------------------|------------------|
| <b>8500-5590A</b> | <b>8500-5599</b> |

#### Gasket



Part numbers / neoprene  
**UTFD16B**

#### Crimp tooling



| Contacts                    | Contact size                      | Part number of head |
|-----------------------------|-----------------------------------|---------------------|
| RM/RC 24W3K <sup>(1)</sup>  | Standard contacts<br>#20<br>Ø 1mm | <b>S20RM</b>        |
| RM/RC 20W3K <sup>(1)</sup>  |                                   | <b>S20RM</b>        |
| RM/RC 18W3K <sup>(1)</sup>  |                                   | <b>S20RM</b>        |
| SM/SC 24W3S <sup>(2)</sup>  |                                   | <b>S20SCM20</b>     |
| SM/SC 24WL3S <sup>(3)</sup> |                                   | <b>S20SCM20</b>     |
| SM/SC 20W3S <sup>(2)</sup>  |                                   | <b>S20SCM20</b>     |
| SM/SC 20WL3S <sup>(3)</sup> |                                   | <b>S20SCM20</b>     |

(1): example of plating, for other plating see UTS catalog page 143

(2): contact reeled

(3): loose contact

# UTS Series 1832



32 contacts  
4A/32V  
per IEC 61984

## Contacts

| #20   | Contact type                        | AWG   | Part number              |                          | Max wire Ø | Max insulator Ø |
|-------|-------------------------------------|-------|--------------------------|--------------------------|------------|-----------------|
|       |                                     |       | Male                     | Female                   |            |                 |
| Crimp | Machined                            | 26-24 | RM24W3K <sup>(1)</sup>   | RC24W3K <sup>(1)</sup>   | -          | 1.58            |
|       |                                     | 22-20 | RM20W3K <sup>(1)</sup>   | RC20W3K <sup>(1)</sup>   | -          | 1.58            |
|       |                                     | 20-18 | RM18W3K <sup>(1)</sup>   | RC18W3K <sup>(1)</sup>   | -          | 2.1             |
|       | stamped & formed<br>reeled contacts | 26-24 | SM24W3TK6 <sup>(2)</sup> | SC24W3TK6 <sup>(2)</sup> | -          | 0.89-1.58       |
|       |                                     | 26-24 | SM24W3TK6 <sup>(2)</sup> | SC24W3TK6 <sup>(2)</sup> | -          | 0.89-1.58       |
|       |                                     | 22-20 | SM20W3TK6 <sup>(2)</sup> | SC20W3TK6 <sup>(2)</sup> | -          | 1.17-2.08       |
|       |                                     | 22-20 | SM20W3TK6 <sup>(2)</sup> | SC20W3TK6 <sup>(2)</sup> | -          | 1.17-2.08       |
|       |                                     |       |                          |                          |            |                 |
| PCB   | Machined <sup>(3)</sup>             | -     | RMW5016K                 | RCW5016K                 | -          | -               |

(1): Example of plating, for other plating see page 143

(2): Loose piece contact available if putting L. Example: SM20ML1-TK6

(3): For dimensions see page 148

Mechanics

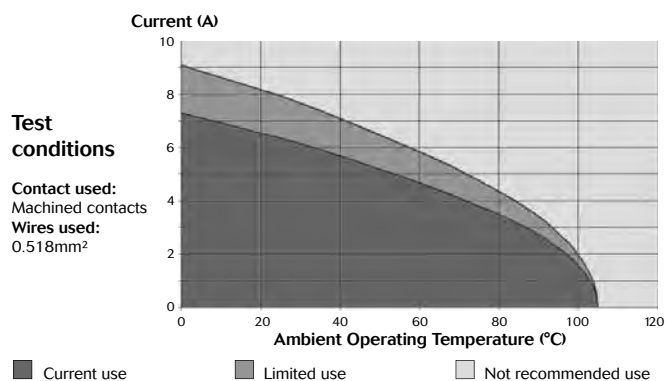
### Electrical characteristics

**UL**  
5A 250V UL94 V-0

**CSA**  
4A 250V UL94 V-0

**IEC**  
4A 32V 1.5kV 3

### UTS 1832 derating curves





uits  
series.

# Contacts

|                                        |     |
|----------------------------------------|-----|
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## Contacts



### Description

The UTS series is delivered with (solder and PCB versions) or without contact (crimp version). When contacts are not loaded, this series offers the unique possibility to use the same contact in any layout as long as it receives the same active part size. Thus it is possible to buy only one contact reference and equip all connectors even if housings are different.

The main benefit is the standardisation which means reduction of inventory cost.

Bearing in mind that any additional tool or complicated assembly process should be avoided, our contacts are based on a snap-in principle which avoid the use of an insertion tool.

Crimp contacts are available in different versions:



• machined



• stamped & formed



• coaxial



• fiber optic

In addition, UTS series can obviously be equipped with solder contacts, PCB contacts, screw termination.



## Contact plating selector guide

As soon as you know what contact size you need, you next have to decide on which type to use.

Souriau proposes mainly two different types of electrical contacts:

- Machined
- Stamped & formed

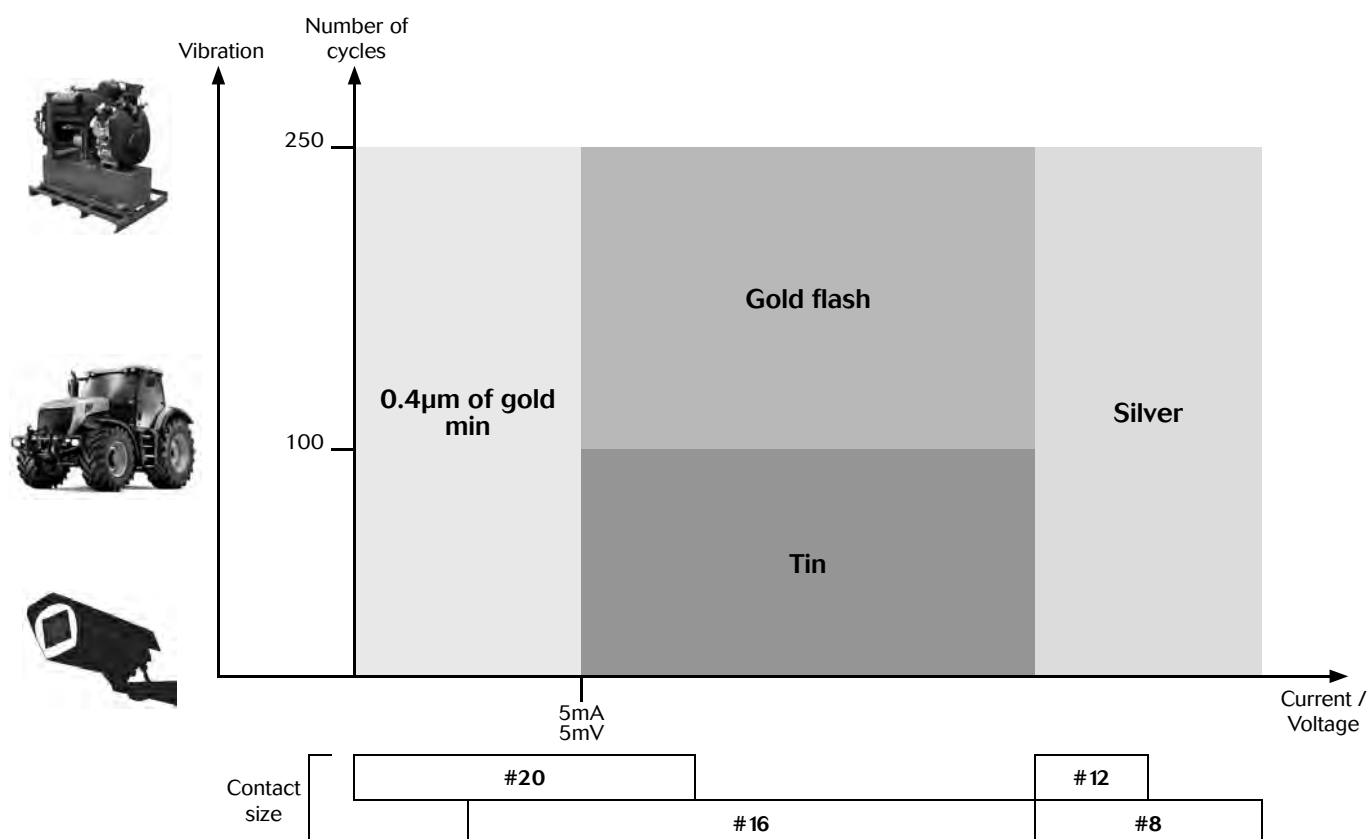
Machined contacts are generally chosen for low quantities purpose as well as a better solution for power applications.

Stamped & formed contacts offer the ability to be crimped automatically which makes them more suitable for high volume production applications.

Then comes the question: What plating should I choose ?

Hereunder is a graph with criteria to guide you:

*NB: do not mix different plating (e.g. tin plated pin contact with gold plated socket contact).*





### Contact selector guide

#### Contact preloaded

| Electrical characteristics:<br>contact resistance |          |       |
|---------------------------------------------------|----------|-------|
| #20<br>Ø1mm                                       | Machined | < 4mΩ |
| #16<br>Ø1.6mm                                     | Machined | < 3mΩ |

#### Available platings (contact preloaded)

Min 0.4μ gold over 2μ Ni

#### Contact supply separately

| Electrical characteristics:<br>contact resistance |                  |        |
|---------------------------------------------------|------------------|--------|
| #20<br>Ø1mm                                       | Machined         | < 6mΩ  |
|                                                   | Stamped & formed | < 15mΩ |
| #16<br>Ø1.6mm                                     | Machined         | < 3mΩ  |
|                                                   | Stamped & formed | < 6mΩ  |
| #12<br>Ø2.4mm                                     | Machined         | < 5mΩ  |
| #8<br>Ø3.6mm                                      | Machined         | < 5mΩ  |

#### Available platings (contact supply separately)

|            |                                                                                            |
|------------|--------------------------------------------------------------------------------------------|
| A          | 2μ Ni + 2μ Ag                                                                              |
| J          | Gold flash over 2μ Ni                                                                      |
| K          | Min 0.4μ gold over 2μ Ni                                                                   |
| S31        | Active part: Gold flash over Ni<br>Crimp area: Nickel                                      |
| S18        | Active part: 0.75μ gold min<br>over 2μ Ni<br>Crimp area: 1.3μ tin over Ni<br>Other: Nickel |
| S25<br>S26 | Active part: 0.75μ Au over Ni<br>Crimp area: flash Au over Ni                              |
| T          | T: 2μ Ni mini all over +<br>3 to 5 μm Sn all over                                          |
| TK6        | 2-5μ Sn pre-plated                                                                         |

### Packaging

Conscious of the wide variety of applications, contact packaging has been considered for small series (bulk packaging) and high volume production (reeled contacts):

#### Size contacts #20 & #16



- 25 pieces bulk packing (stamped & formed contacts)



- 50 pieces bulk packing (machined contacts)



- 1000 pieces bulk packing (machined contacts)



- 3000 pieces reeled (stamped & formed contacts)



- 5000 pieces reeled (machined contacts)

#### Size contacts #12 & #8



- 100 pieces bulk packing (stamped & formed contacts)



### Crimp contacts

#### Standard version



| Contact size   | Type             | Wire size |           | Part number                   |                               | Max wire Ø | Max insulator Ø    | Plating available                 |
|----------------|------------------|-----------|-----------|-------------------------------|-------------------------------|------------|--------------------|-----------------------------------|
|                |                  | AWG       | mm²       | Male                          | Female                        |            |                    |                                   |
| #20<br>Ø1 mm   | Machined         | 26-24     | 0.13-0.20 | RM24W3K                       | RC24W3K                       |            | 1.58 max           | K                                 |
|                | Stamped & Formed | 26-24     | 0.13-0.25 | SM24W3 - (1)                  | SC24W3 - (1)                  |            | 0.89-1.58          | TK6<br>S25 (female)<br>S26 (male) |
|                |                  |           |           | SM24WL3 - (2)                 | SC24WL3 - (2)                 |            |                    |                                   |
|                | Machined         | 22-20     | 0.32-0.52 | RM20W3K                       | RC20W3K                       |            | 1.58 max           | K                                 |
|                | Stamped & Formed | 22-20     | 0.35-0.5  | SM20W3 - (1)                  | SC20W3 - (1)                  |            | 1.17-2.08          | TK6<br>S25 (female)<br>S26 (male) |
|                |                  |           |           | SM20WL3 - (2)                 | SC20WL3 - (2)                 |            |                    |                                   |
| #16<br>Ø1.6 mm | Machined         | 20-18     | 0.50-0.93 | RM18W3K                       | RC18W3K                       |            | 2.10 max           | K                                 |
|                | Machined         | 30-28     | 0.05-0.08 | RM28M1 -                      | RC28M1 -                      | 0.55       | 1.1                | K, J, T                           |
|                | Machined         | 26-24     | 0.13-0.2  | RM24M9 -                      | RC24M9 -                      | 0.8        | 1.6                | K, J, T                           |
|                | Stamped & Formed | 26-24     | 0.13-0.25 | SM24M1 - (1)<br>SM24ML1 - (2) | SC24M1 - (1)<br>SC24ML1 - (2) | 0.89-1.28  | Insulation grip    | S31, S18, TK6                     |
|                |                  |           |           |                               |                               |            |                    |                                   |
|                | Machined         | 22-20     | 0.32-0.52 | RM20M13 -<br>RM20M12 -        | RC20M13 -<br>RC20M12 -        | 1.18       | 1.8<br>2.2         | K, J, T                           |
|                |                  |           |           |                               |                               |            |                    |                                   |
|                | Stamped & Formed | 22-20     | 0.35-0.5  | SM20M1 - (1)<br>SM20ML1 - (2) | SC20M1 - (1)<br>SC20ML1 - (2) | 1.17-2.08  | Insulation grip    | S31, S18, TK6                     |
|                |                  |           |           |                               |                               |            |                    |                                   |
|                | Machined         | 20-16     | 0.52-1.5  | RM16M23 -                     | RC16M23 -                     | 1.8        | 3.2                | K, J, T                           |
|                | Stamped & Formed | 18-16     | 0.8-1.5   | SM16M1 - (1)<br>SM16ML1 - (2) | SC16M1 - (1)<br>SC16ML1 - (2) | 3.0        | No insulation grip | S31, S18, TK6                     |
|                |                  |           |           |                               |                               |            |                    |                                   |
| #12<br>Ø2.4 mm | Machined         | 22        | 0.13-0.4  | 82911457NA                    | 82911456A                     | -          | 4.9                | A, K                              |
|                |                  | 20        | 0.5       | 82911459NA                    | 82911458A                     |            |                    |                                   |
|                |                  | 18        | 0.75-1.0  | 82911461NA                    | 82911460A                     |            |                    |                                   |
|                |                  | 16        | 1.5       | 82911463NA                    | 82911462A                     |            |                    |                                   |
|                |                  | 14        | 2.5       | 82911465NA                    | 82911464A                     |            |                    |                                   |
|                |                  | 12        | 4         | 82911467NA                    | 82911466A                     |            |                    |                                   |
| #8<br>Ø3.6 mm  | Machined         | 16        | 1.5       | 82913601A                     | 82913600A                     | -          | 6.5                | A                                 |
|                |                  | 14        | 2.5       | 82913603A                     | 82913602A                     |            |                    |                                   |
|                |                  | 12        | 4         | 82913605A                     | 82913604A                     |            |                    |                                   |
|                |                  | 10        | 6.0       | 82913607A                     | 82913606A                     |            |                    |                                   |
|                |                  | 8         | 10.0      | 82913609A                     | 82913608A                     |            |                    |                                   |

(1) contact reeled (2) loose contact

Example: RM24W3K - Size #20, Machined, AWG24 wire.



## Crimp contacts

### First Mate Last Break contacts

| Contact size                                      | Type     | Wire size |           | Part number |             | Max wire Ø | Max insulator Ø |  |      | Plating available |
|---------------------------------------------------|----------|-----------|-----------|-------------|-------------|------------|-----------------|-------------------------------------------------------------------------------------|------|-------------------|
|                                                   |          | AWG       | mm²       | Male        | Female      |            |                 | Front                                                                               | Rear |                   |
| #16<br>Ø1.6 mm<br>Longer male contact (+1mm)      | Machined | 30-28     | 0.05-0.08 | RM28M1GE1□  | -           | 0.55       | 1.1             | -                                                                                   | Red  | □ =<br>K, J or T  |
|                                                   |          | 26-24     | 0.13-0.2  | RM24M9GE1□  |             | 0.8        | 1.6             | Red                                                                                 | Red  |                   |
|                                                   |          | 22-20     | 0.32-0.52 | RM20M13GE1□ |             | 1.18       | 1.8             | Black                                                                               | Red  |                   |
|                                                   |          |           |           | RM20M12GE1□ |             |            | 2.2             | Blue                                                                                | Red  |                   |
|                                                   |          | 20-16     | 0.52-1.5  | RM16M23GE1□ |             | 1.8        | 3.2             | -                                                                                   | Red  |                   |
|                                                   |          | 16-14     | 1.5-2.5   | RM14M50GE1□ |             | 2.05       | -               | -                                                                                   | Red  |                   |
|                                                   |          | 16-14     | 1.5-2.5   | RM14M30GE1□ |             | 2.28       | -               | -                                                                                   | Red  |                   |
| #16<br>Ø1.6 mm<br>Shorter female contact (-0.7mm) | Machined | 30-28     | 0.05-0.08 | -           | RC28M1GE7□  | 0.55       | 1.1             | -                                                                                   | Blue | □ =<br>K, J or T  |
|                                                   |          | 26-24     | 0.13-0.2  |             | RC24M9GE7□  | 0.8        | 1.6             | Red                                                                                 | Blue |                   |
|                                                   |          | 22-20     | 0.32-0.52 |             | RC20M13GE7□ | 1.18       | 1.8             | Black                                                                               | Blue |                   |
|                                                   |          |           |           |             | RC20M12GE7□ |            | 2.2             | Blue                                                                                | Blue |                   |
|                                                   |          | 20-16     | 0.52-1.5  |             | RC16M23GE7□ | 1.8        | 3.2             | -                                                                                   | Blue |                   |
|                                                   |          | 16-14     | 1.5-2.5   |             | RC14M50GE7□ | 2.05       | -               | -                                                                                   | Blue |                   |
|                                                   |          | 16-14     | 1.5-2.5   |             | RC14M30GE7□ | 2.28       | -               | -                                                                                   | Blue |                   |

Example: RM16M3GE1K - Size # 16, Machined, Longer male, AWG16 wire.

### How to make FMLB / LMFB connection

| Contact 1<br>Contact 2  | Standard male contact | Standard female contact | Longer male contact |
|-------------------------|-----------------------|-------------------------|---------------------|
| Standard male contact   |                       | ✓                       |                     |
| Standard female contact | ✓                     |                         | ✓<br>FMLB           |
| Shorter female contact  | ✓<br>LMFB             |                         |                     |

First Mate Last Break contacts should be chosen only if the cavity is not marked with the earth symbol. For cavities marked with the earth symbol, standard contacts will fulfill the same role as a first mate, last break contact used in a standard cavity.



Ground symbol



## #16 coaxial contacts

### Coaxial contact range

We provide 2 types of coaxial contacts suitable for 50 or 75Ω, coaxial cable or twisted pair cable.

#### Monocrimp coaxial contact

- The monocrimp one-piece coaxial contacts offer high reliability plus the economic advantage of a 95% reduction in installation time over conventional assembly methods.
- This economy is achieved by simultaneously crimping both the inner conductor and outer braid or drain wire.



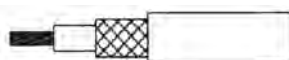
#### Multipiece crimp coaxial contact

- The inner conductor and outer braid is crimped individually.
- The thermoplastic insulating bushing in the outer body is designed to accept and permanently retain the inner contact.
- An outer ferrule is used to connect the braid to the outer contact and provide cable support to ensure against bending and vibration.



#### Suitable for Coaxial cable or Twisted cable

- For jacket diameter from 1.78 to 3.05mm  
Inner conductor up to 2.44mm diameter



- For jacket diameter from 0.64 to 1.45mm  
Inner conductor from AWG30 to AWG24



#### Contacts for coaxial cable summary

| Contact type | Contact range |                | Contact part number with cable combination | Cabling notice      |
|--------------|---------------|----------------|--------------------------------------------|---------------------|
|              | Male contact  | Female contact |                                            |                     |
| Multipiece   | RMDXK10D28    | RCDXK1D28      | See page 176                               | See pages 180 & 181 |
| Monocrimp    | RMDX60xxD28   | RCDX60xxD28    |                                            | See page 182        |

#### Contacts for twisted pairs cable summary

| Contact type | Contact range           |                        | Contact part number with cable combination | Cabling notice |
|--------------|-------------------------|------------------------|--------------------------------------------|----------------|
|              | Male contact            | Female contact         |                                            |                |
| Multipiece   | RMDXK10D28<br>+ YORK090 | RCDXK1D28<br>+ YORK090 | See page 177                               | See page 178   |
| Monocrimp    | RMDX60xxD28             | RCDX60xxD28            |                                            | See page 179   |



## PCB contacts

### PCB contacts

#### PCB soldering

UTS range can be carried out with a wave soldering process, but not reflow soldering process.  
All high temperature processes are prohibited.

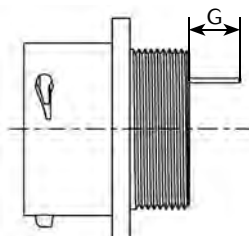


| Contact size  | Type          | Part number |             | Plating  |
|---------------|---------------|-------------|-------------|----------|
|               |               | Male        | Female      |          |
| #20<br>Ø1mm   | Short version | RMW50A7K    | RCW50A7K    | K        |
|               | Long version  | RMW5016K    | RCW5016K    |          |
| #16<br>Ø1.6mm | Short version | RM20M12E8□  | RC20M12E8□  | □=K or T |
|               | Long version  | RM20M12E83□ | RC20M12E83□ |          |
|               |               |             | RC20M12E84□ |          |

Exemple: **RM50A7K** - Size #20, Short version, male.

#### Nominal length (G)

Dimension of dipsolder contacts out of connector (contacts to be ordered separately).



#### UTS0

| Connector size | Pin contact |              | Socket contact |              |              |
|----------------|-------------|--------------|----------------|--------------|--------------|
|                | RM20M12E8*□ | RM20M12E83*□ | RC20M12E8*□    | RC20M12E83*□ | RC20M12E84*□ |
| 10             | 4           | 9.1          | 3.3            | 8.5          | 12.1         |
| 12             | 4           | 9.1          | 3.3            | 8.5          | 12.1         |
| 14             | 4           | 9.1          | 3.3            | 8.5          | 12.1         |
| 16             | 4           | 9.1          | 3.3            | 8.5          | 12.1         |

#### UTS7

| Connector size | Pin contact |              |          |          | Socket contact |              |          |          |
|----------------|-------------|--------------|----------|----------|----------------|--------------|----------|----------|
|                | RM20M12E8*□ | RM20M12E83*□ | RMW50A7K | RMW5016K | RC20M12E8*□    | RC20M12E83*□ | RCW50A7K | RCW5016K |
| 10             | 4.1         | 9.2          | 9.51     | 10.41    | 4.65           | 8.5          | 2.4      | 3.04     |
| 12             | 4           | 9.2          | 9.51     | 10.41    | 3.3            | 8.5          | 2.4      | 3.04     |
| 14             | 4           | 9.2          | 9.51     | 10.41    | 3.3            | 8.5          | 2.4      | 3.04     |
| 16             | 4           | 9.2          | 9.51     | 10.41    | 3.3            | 8.5          | 2.4      | 3.04     |

\* Plating indication: see plating table



Fibre optic contacts

| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Size 16 Fibre optic contacts for TRIM TRIO® connectors</b></p> <p>Size 16 Fibre optic contacts are optical contacts designed for the integration of optical links in all TRIM TRIO® cable connectors.</p> <p><b>The Fibre optic contacts are designed to accommodate:</b></p> <ul style="list-style-type: none"><li>• Plastic Optical Fibre (POF)<br/>1 mm core and 2.2 mm jacket</li><li>• Plastic Clad Fibre (PCF)<br/>230µm core and 2.2 mm jacket</li></ul> <p><b>Typical features and benefits are:</b></p> <ul style="list-style-type: none"><li>• Socket contact is spring loaded to avoid any air gap between the two optical faces.</li><li>• Low insertion loss is provided by high precision pieces.</li><li>• Single jumpers, multiway harness and active device housings can be supplied regarding customer requirement.</li></ul> |



| Technical characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Performance</b></p> <ul style="list-style-type: none"><li>• Fibre type: .....POF</li><li>• Wave length:.....650 nm</li><li>• Optical insertion loss (typ.): .....2 dB max.</li><li>• Jacketed external diameter:.....2.2mm</li><li>• Temperature range:.....-25°C to +70°C</li><li>• Cable retention:.....49N</li><li>• Mating cycles without cleaning:.....50</li><li>• Max. mating cycles:.....500</li></ul> <p><b>Construction</b></p> <ul style="list-style-type: none"><li>• Contact body: Copper alloy</li></ul> <p><b>Connector accommodation</b></p> <p>Any TRIM TRIO® size 16 contact can be used in any contact position in any connector in the TRIM TRIO® size 16 interconnection system : UTP, UTS, UTG, UTO.</p> |



### Fibre optic contacts

#### Ordering information

##### POF Contacts (Plastic Optical Fibre)

Male contact.....RMPOF1000

Female contact.....RCP0F1000B

#### POF Contact (Plastic Optical Fibre)

##### STANDARD TOOLING KIT - P/N 80MS0004

The *standard tooling kit* is made of the part numbers below that can be ordered separately as well.

| Part numbers | Descriptions                                                   |
|--------------|----------------------------------------------------------------|
| 80WD0005     | Stripping tool                                                 |
| 80WD0025     | Automatic stripping tool for Ø 0.5 mm, 0.6 mm, 0.7 mm & 3.8 mm |
| 80WM0006     | Ruler                                                          |
| 80WP0005     | Polishing plate                                                |
| 80WP0013     | Non slip base (to hold the polishing plate)                    |
| 80WP0014     | Polishing disk (grain size 9µm)                                |
| 80WP0018     | Polishing tool                                                 |
| 80WP0019     | Polishing disk (grain size 30µm)                               |
| 80WS0002     | Crimping plier                                                 |

##### SPECIFIC TOOLING LIST - can be ordered only separately

| Part numbers | Descriptions    |
|--------------|-----------------|
| 80WG0010     | Needle          |
| 80WG0015     | Capsule         |
| 80WG0016     | Syringe         |
| 80WN0005     | Dry air spray   |
| 80WN0006     | Optical paper   |
| 80WN0012     | Dropping bottle |
| 80WN0008     | Wiping solvent  |

# UTS Series

## Contacts





utis  
series.

# Technical information

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## Tooling

### Automatic crimping tools



**Mecal is leader in manufacturing tooling for crimping terminals over a stripped wire.**

Established in 1976, Mecal has become one of the world's leading companies dedicated to the design and manufacture of semi automatic production tools for strip fed, open barrel crimp terminals, serving the Automotive, Telecom and Datacomm industry.



**The extreme environment interconnect specialist "from deep sea to deep space".**

Souriau designs manufactures and markets high performance interconnect solutions for severe environments dedicated to the aerospace, defence, light and heavy industry markets.

**Souriau has been working in partnership with Mecal for a good number of years. With sales offices located in all major industrial regions of the world, the combined strengths of both organisations has resulted in a truly global solution to all your production tooling needs.**



Mini Applicator



Stripper



Presses

Mecal sales network:

[www.mecal.net/eng/retevendita.php](http://www.mecal.net/eng/retevendita.php)

# UTS Series

## Technical information



### Crimptooling table

#### Standard contacts

| Contact size | Part number                                                 | Head       | Handles  |
|--------------|-------------------------------------------------------------|------------|----------|
| #20<br>1mm   | RM/RC 24W3 -                                                | S20RCM     | SHANDLES |
|              | RM/RC 20W3 -                                                |            |          |
|              | RM/RC 18W3 -                                                |            |          |
|              | SM 24W3S- <sup>(1)</sup><br>SC 24W3S- <sup>(1)</sup>        | S20SCM20   |          |
|              | SM 24WL3S- <sup>(2)</sup><br>SC 24WL3S- <sup>(2)</sup>      |            |          |
|              | SM/SC 20W3S- <sup>(1)</sup><br>SM/SC 20WL3S- <sup>(2)</sup> |            |          |
|              |                                                             |            |          |
| #16<br>1.6mm | RM/RC 28M1-                                                 | S16RCM20   |          |
|              | RM/RC 24M9-                                                 |            |          |
|              | RM/RC 20M13-                                                |            |          |
|              | RM/RC 20M12-                                                |            |          |
|              | RM/RC 16M23-                                                | S16RCM16   |          |
|              | RM/RC 14M50-                                                | S16RCM1450 |          |
|              | RM/RC 14M30-                                                | S16RCM14   |          |
|              | SM/SC 24M1-<br>SM/SC 24ML1-                                 | S16SCM20   |          |
|              | SM/SC 20M1-<br>SM/SC 20ML1-                                 |            |          |
|              | SM/SC 16M1-<br>SM/SC 16ML1-                                 | S16SCML1   |          |
|              | SM/SC 14M1-<br>SM/SC 14ML1-                                 |            |          |
|              | SM/SC 16M11-<br>SM/SC 16ML11-                               | S16SCML11  |          |



(1) contact reeled (2) loose contact

Note: endurance of SHANDLES tool = 5 000 cycles.

| Contact size | Part number              | Tool with separate locator |                              |     | Extraction tools |
|--------------|--------------------------|----------------------------|------------------------------|-----|------------------|
|              |                          | Hand tool                  | Positioner + locator setting |     |                  |
| #12<br>2.4mm | 8291 1457N- / 8291 1456- | M317                       | VGE10077A                    | 1-2 | 5106020924       |
|              | 8291 1459N- / 8291 1458- |                            |                              | 2   |                  |
|              | 8291 1461N- / 8291 1460- |                            |                              | 2   |                  |
|              | 8291 1463N- / 8291 1462- |                            |                              | 3   |                  |
|              | 8291 1465N- / 8291 1464- |                            |                              | 3   |                  |
|              | 8291 1467N- / 8291 1466- |                            |                              | 4   |                  |
| #8<br>3.6mm  | 8291 3601A / 8291 3600A  | M317                       | VGE10078A                    | 3   | 51060210936      |
|              | 8291 3603A / 8291 3602A  |                            |                              | 3   |                  |
|              | 8291 3605A / 8291 3604A  |                            |                              | 4   |                  |
|              | 8291 3607A / 8291 3606A  |                            |                              | 5   |                  |
|              | 8291 3609A / 8291 3608A  |                            |                              | 6/7 |                  |
|              |                          |                            |                              |     |                  |

#### Specific contacts

| Contact size                             | Part number  | Hand tools<br>(SHANDLES) head | Tool with separate locator |                              |     | Extraction tools |
|------------------------------------------|--------------|-------------------------------|----------------------------|------------------------------|-----|------------------|
|                                          |              |                               | Hand tool                  | Positioner + locator setting |     |                  |
| # 16<br>Ø 1.6mm<br>Longer RM<br>contact  | RM28M1GE1-   | S16RCM20                      |                            |                              |     | RX2025GE1        |
|                                          | RM24M9GE1-   |                               |                            |                              |     |                  |
|                                          | RM20M13GE1-  |                               |                            |                              |     |                  |
|                                          | RM16M23 GE1- | S16RCM16                      | MH860                      | MH86186                      | 6/8 |                  |
|                                          | RM14M50 GE1- | S16RCM1450                    | M317                       | UH25                         | 3   |                  |
|                                          | RM14M30 GE1- | S16RCM14                      |                            |                              |     |                  |
| # 16<br>Ø 1.6mm<br>Shorter RC<br>contact | RC28M1GE7-   | S16RCM20                      | MH860                      | MH86164G                     | 4/6 |                  |
|                                          | RC24M9GE7-   |                               |                            |                              | 5/6 |                  |
|                                          | RC20M13GE7-  |                               |                            |                              | 5/7 |                  |
|                                          | RC20M12GE7-  |                               |                            |                              | 6/8 |                  |
|                                          | RC16M23GE7-  | S16RCM16                      | M317                       | UH25                         | 3   |                  |
|                                          | RC14M50GE7-  | S16RCM1450                    |                            |                              |     |                  |
|                                          | RC14M30GE7-  | S16RCM14                      |                            |                              |     |                  |

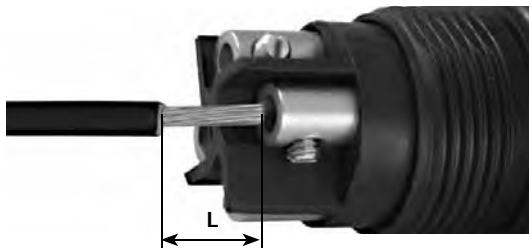
#### Coaxial contacts

See cabling notice chapter Appendices, pages 178 to 182.

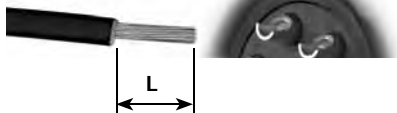


### Assembly instruction

#### Wire stripping crimp version

|                                                                                     | Part number                                                                 |                                                                             | Stripping length L (mm) |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------|
|                                                                                     | Male                                                                        | Female                                                                      |                         |
| <b>Machined contact</b>                                                             | #16                                                                         |                                                                             |                         |
|    | RM28M1- / RM24M9- / RM20M13- / RM20M12-                                     | RC28M1- / RC24M9- / RC20M13- / RC20M12-                                     | 4.8                     |
|                                                                                     | RM16M23- / RM14M50- / RM14M30-                                              | RC16M23- / RC14M50- / RC14M30-                                              | 7.1                     |
|                                                                                     | #20                                                                         |                                                                             |                         |
|                                                                                     | RM24W3- / RM20W3- / RM18W3-                                                 | RC24W3- / RC20W3- / RC18W3-                                                 | 4.8                     |
| <b>Stamped &amp; formed</b>                                                         | #16                                                                         |                                                                             |                         |
| <b>Without insulation support</b>                                                   |                                                                             |                                                                             |                         |
|   | SM24M1- / SM24ML1- / SM20M1- / SM20ML1                                      | SC24M1- / SC24ML1- / SC20M1- / SC20ML1-                                     | 4                       |
|                                                                                     | SM16M11- / SM16ML11-                                                        | SC16M11- / SC16ML11-                                                        | 4.65                    |
| <b>With insulation support</b>                                                      |                                                                             |                                                                             |                         |
|  | SM16M1- / SM16ML1-                                                          | SC16M1- / SC16ML1-                                                          | 6.35                    |
|                                                                                     | SM14M1- / SM14ML1-                                                          | SC16M11- / SC16ML11-                                                        | 6.35                    |
| <b>Screw contacts</b>                                                               | Power contacts #12                                                          |                                                                             |                         |
|  | 8291 1457- / 8291 1459- / 8291 1461- / 8291 1463- / 8291 1465- / 8291 1467- | 8291 1456- / 8291 1458- / 8291 1460- / 8291 1462- / 8291 1464- / 8291 1466- | 7 to 8                  |
|                                                                                     | Power contacts #8                                                           |                                                                             |                         |
|                                                                                     | 8291 3601- / 8291 3603- / 8291 3605- / 8291 3607- / 8291 3609-              | 8291 3600- / 8291 3602- / 8291 3604- / 8291 3606- / 8291 3608-              | 6.5 to 7.5              |
|                                                                                     | Contact delivered with connector                                            |                                                                             | 5.8                     |

#### Wire stripping solder version

|                                                                                     | Part number |        | Stripping length L (mm) |
|-------------------------------------------------------------------------------------|-------------|--------|-------------------------|
|                                                                                     | Male        | Female |                         |
| <b>Machined contact</b>                                                             | #16 & #20   |        | 5                       |
|  |             |        |                         |

# UTS Series

## Technical information



### Crimping

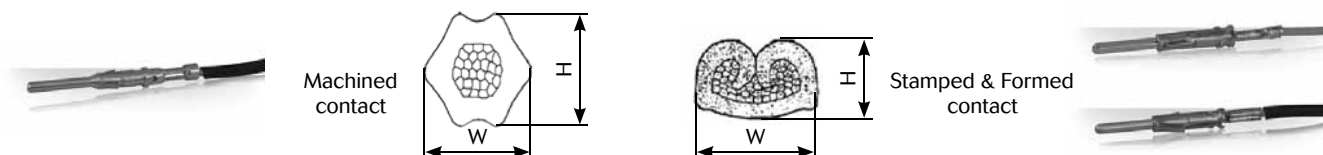
One of the key factors which affects the performance of a connector, is the way contacts are terminated. Crimped connections are nowadays seen as the best solution to ensure quality throughout the lifetime of the product. Here are some reasons why we recommend this method of termination for UTS connectors:

#### Advantages (Extract from the IEC 60352-2):

- Efficient processing of connections at each production level
- Processing by fully-automatic or semi- automatic crimping machines, or with hand operated tools
- No cold-soldered joints
- No degradation of the spring characteristic of female contacts by the soldering temperature

- No health risk from heavy metal and flux steam
- Preservation of conductor flexibility behind the crimped connection
- No burnt, discolored and overheated wire insulation
- Good connections with reproducible electrical and mechanical performances
- Easy production control.

To ensure that the crimp tooling is performing according to original specifications, it is important to carry out regular checks. A common way to check the performance of tooling is with a simple pull test, ideally using a dedicated electric pull tester. Minimum recommended full forces are indicated in the tables below:



| Active contact part       | Contact type           | Die location on heads | Wire section range | Section (mm²) | Tensile straight test (mini) | Height (Mm)<br>H (±0.075) | Width (Mm)<br>W (±0.075) | Head's P/N |
|---------------------------|------------------------|-----------------------|--------------------|---------------|------------------------------|---------------------------|--------------------------|------------|
| Machined contacts size 20 | RM/RC 24W3*            | 26/24                 | AWG 26             | 0.12 min      | 15 N                         | 0.95                      | 1.27                     | S20RCM     |
|                           |                        |                       | AWG 24             | 0.25 max      | 32 N                         |                           |                          |            |
|                           | RM/RC 20W3*            | 22/20                 | AWG 22             | 0.32 min      | 40 N                         | 1.26                      | 1.78                     |            |
|                           |                        |                       | AWG 20             | 0.50 max      | 60 N                         |                           |                          |            |
|                           | RM/RC 18W3*            | 20/18                 | AWG 20             | 0.50 max      | 60 N                         | 1.35                      | 1.86                     |            |
|                           |                        |                       | AWG 18             | 0.82 max      | 90 N                         |                           |                          |            |
| S & F contacts size 20    | SM/SC 24WL3TK6*        | 26/24                 | AWG 26             | 0.12 min      | 15 N                         | 0.80                      | 1.49                     | S20SCM20   |
|                           |                        |                       | AWG 24             | 0.25 max      | 32 N                         |                           |                          |            |
|                           | SM/SC 20WL3TK6*        | 22/20                 | AWG 22             | 0.32 min      | 40 N                         | 1.01                      | 1.53                     |            |
|                           |                        |                       | AWG 20             | 0.50 max      | 60 N                         |                           |                          |            |
| Machined contacts size 16 | RM/RC 28M1K*           | 30/28                 | AWG 30             | 0.05 min      | 11 N                         | 1.14                      | 1.41                     | S16RCM20   |
|                           |                        |                       | AWG 28             | 0.08 max      | 11 N                         |                           |                          |            |
|                           | RM/RC 24M9K*           | 26/24                 | AWG 26             | 0.12 min      | 15 N                         | 1.15                      | 1.41                     |            |
|                           |                        |                       | AWG 24             | 0.25 max      | 32 N                         |                           |                          |            |
|                           | RM/RC 20M13K*          | 22/20                 | AWG 22             | 0.32 min      | 40 N                         | 1.26                      | 1.76                     |            |
|                           |                        |                       | AWG 20             | 0.50 max      | 60 N                         |                           |                          |            |
|                           |                        |                       | AWG 22             | 0.32 min      | 40 N                         |                           |                          |            |
|                           | AWG 20                 |                       | 0.50 max           | 60 N          |                              |                           |                          |            |
|                           | RM/RC 16M23K*          | 20                    | AWG 20             | 0.50 max      | 60 N                         | 1.66                      | 2.18                     | S16RCM16   |
|                           |                        | 18                    | AWG 18             | 0.82 max      | 90 N                         | 1.80                      | 2.28                     |            |
|                           |                        | 16                    | AWG 16             | 1.50 max      | 150 N                        | 1.96                      | 2.43                     |            |
|                           | RM/RC 14M30K*          | 16                    | AWG 16             | 1.50 min      | 150 N                        | 2.10                      | 2.68                     | S16RCM14   |
|                           |                        | 14                    | AWG 14             | 2.50 min      | 230 N                        | 2.30                      | 2.78                     |            |
|                           | RM/RC 14M50K*          | 16                    | AWG 16             | 1.50 min      | 150 N                        | 2.09                      | 2.59                     | S16RCM1450 |
|                           |                        | 14                    | AWG 14             | 2.50 max      | 230 N                        | 2.26                      | 2.71                     |            |
|                           | S & F contacts size 16 | SM/SC 24ML1TK6*       | 26/24              | AWG 26        | 0.12 min                     | 15 N                      | 0.84                     | 1.50       |
| AWG 24                    |                        |                       |                    | 0.25 max      | 32 N                         |                           |                          |            |
| SM/SC 20ML1TK6*           |                        | 22/20                 | AWG 22             | 0.32 min      | 40 N                         | 1.02                      | 1.54                     |            |
|                           |                        |                       | AWG 20             | 0.50 max      | 60 N                         |                           |                          |            |
| SM/SC 16ML11TK6*          |                        | 18                    | AWG 18             | 0.82 min      | 90 N                         | 1.32                      | 2.09                     | S16SCML11  |
|                           |                        | 16                    | AWG 16             | 1.50 max      | 150 N                        | 1.36                      | 2.10                     |            |
| SM/SC 16ML1TK6*           |                        | 18                    | AWG 18             | 0.82 min      | 90 N                         | 1.49                      | 2.02                     | S16SCML1   |
|                           |                        | 16                    | AWG 16             | 1.50 max      | 150 N                        | 1.7                       | 2.05                     |            |
| SM/SC14ML1TK6*            |                        | 14                    | AWG 14             | 2.50 max      | 230 N                        | 1.79                      | 2.58                     |            |

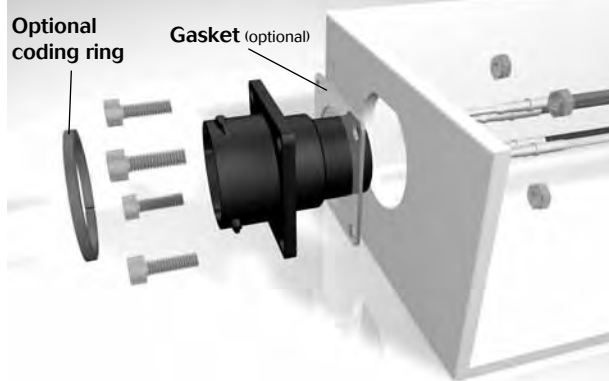
(1): example of plating, for other plating see page 143



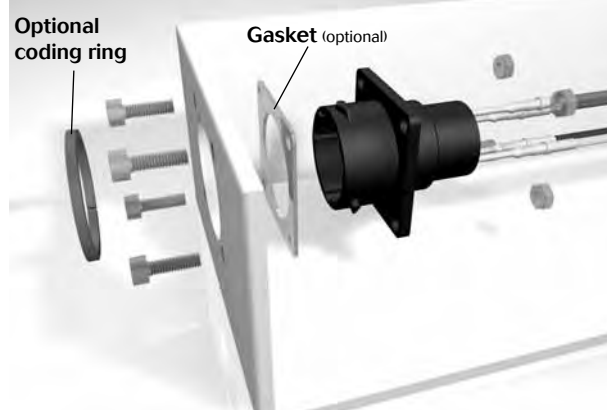
### UTS 0 assembly (mounting suggestion)

- Strip wires, crimp or solder contacts
- Insert contacts into connector cavities (insert manually or use tool RTM205 crimp contacts only)
- Place receptacle in the panel cut-out, with optional gasket
- Secure receptacle with screws (not supplied)

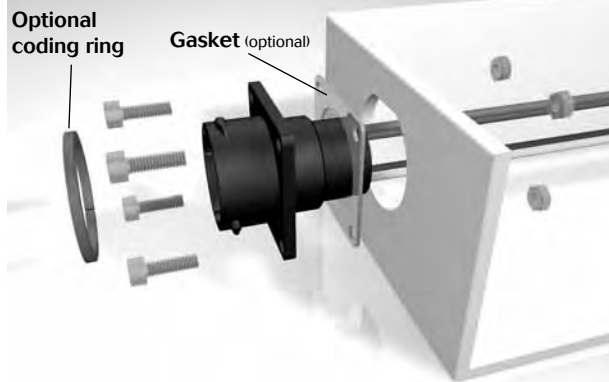
**Front mounting : Crimp version**



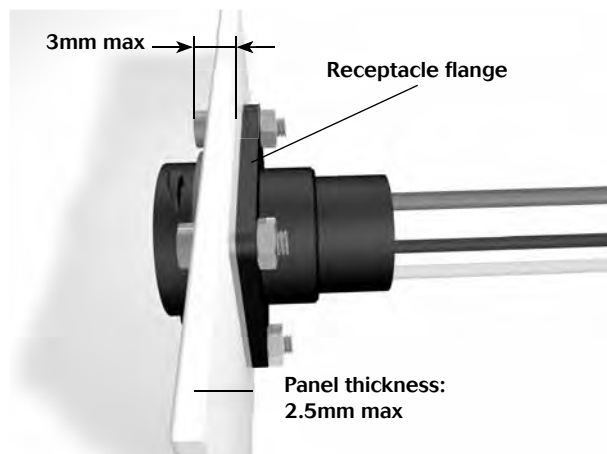
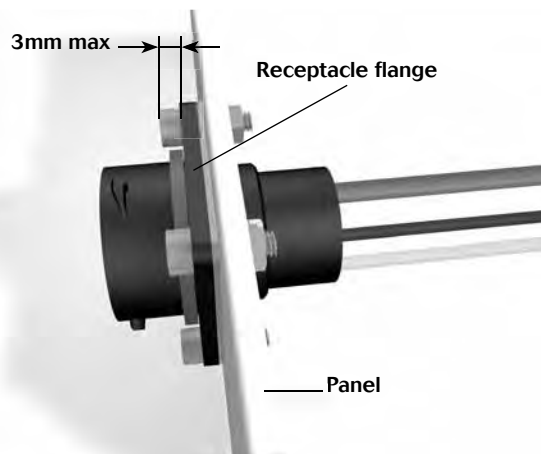
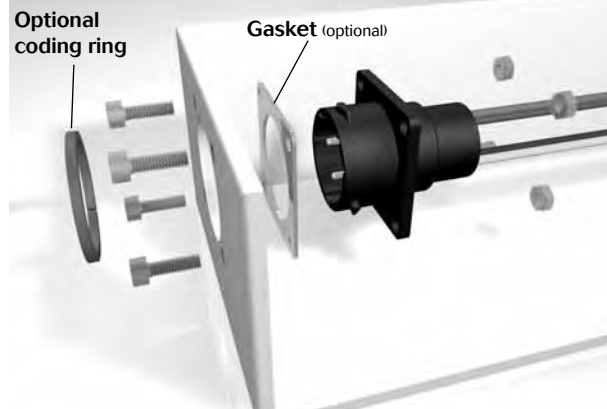
**Rear mounting : Crimp version**



**Front mounting : Solder version**



**Rear mounting : Solder version**



# UTS Series

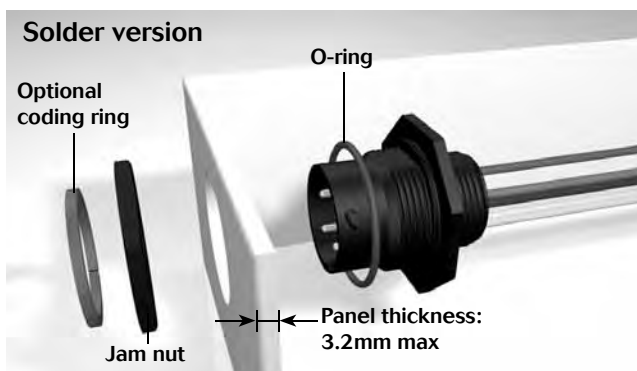
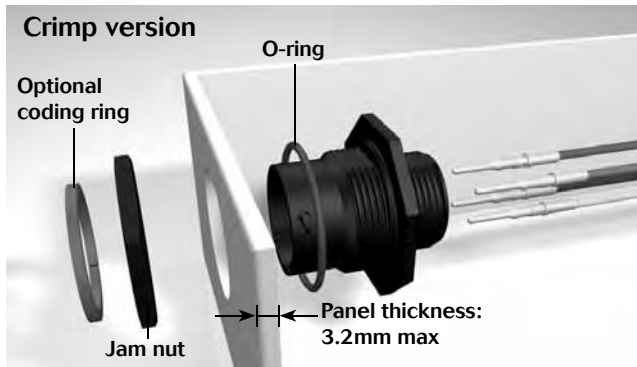
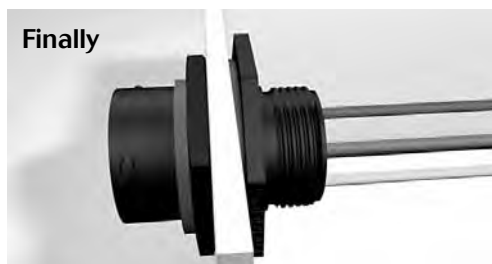
## Technical information



### UTS 7 assembly (mounting suggestion)

- Strip wires, crimp or solder contacts
- Insert contacts into connector cavities (insert manually or use tool RTM205 crimp contacts only)
- Seat o-ring, place receptacle in the panel cut-out
- Tighten jam nut

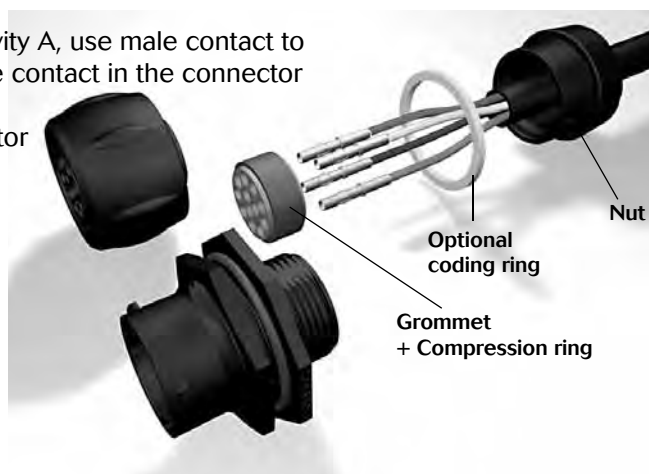
| Shell size | Jam nut torque (Nm) | Tool tightening | Ø Wire           |                       |
|------------|---------------------|-----------------|------------------|-----------------------|
|            |                     |                 | Standard version | Discrete wire sealing |
| 8          | 1.5                 | 19.05           | 3.2 mm max.      | from 1.7 mm to 3.0 mm |
| 10         | 3                   | 22.25           |                  |                       |
| 12         | 4                   | 27.15           |                  |                       |
| 14         | 5                   | 30.19           |                  |                       |
| 18         | 5                   | 36.5            |                  |                       |



### UTS 6 GN / UTS 7 GN assembly

- Slide accessories on the cable (make sure to keep compression ring on the grommet)
- Strip wires and crimp contacts
- Insert first contact into the grommet (first contact in cavity A, use male contact to pierce the grommet, no tool is required), then insert the contact in the connector cavity A (insert manually or use tool RTM205)
- Place the grommet and compression ring on the insulator
- Insert the other contacts
- Tighten nut (recommended torque: see note)

| Shell size | Nut tightening torque (Nm) | Ø Wire                |
|------------|----------------------------|-----------------------|
| 10         | 1                          | from 1.7 mm to 3.0 mm |
| 12         | 1.5                        |                       |
| 14         | 1.5                        |                       |

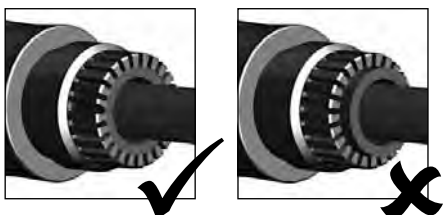




### Assembly instruction

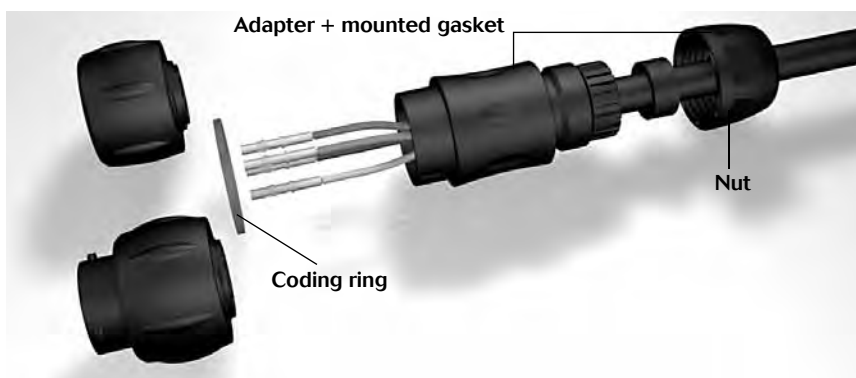
#### UTS 1 JC / UTS 6 JC assembly: Crimp version

- Slide accessories on the cable



Make sure the seal is positioned as shown.

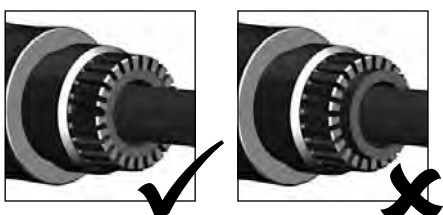
- Strip external cable jacket
- Strip wires and crimp contacts
- Insert contacts into connector cavities (insert manually or use tool RTM205)
- Tight adapter with plug, choose right seal (waste the other seal), tight nut with adapter (recommended torque values to be applied according to the table - right)
- Caution: only one of both delivered gasket should be used !



| Shell size | Recommended jacket strip length (mm) |        | Adapter tightening torque (Nm) | Nut tightening torque (Nm) | Ø Cable range Standard seal | Ø Cable range Reducing seal | Ø Wire      |
|------------|--------------------------------------|--------|--------------------------------|----------------------------|-----------------------------|-----------------------------|-------------|
|            | Male                                 | Female |                                |                            |                             |                             |             |
| 10         | 21                                   | 29     | 1.5                            | 2                          | 2.5/8.0                     | 1.5/5.0                     | 3.2 mm max. |
| 12         | 25                                   | 33     | 2                              | 2.5                        | 5.0/12.0                    | 3.0/9.0                     |             |
| 14         | 29                                   | 36     | 3                              | 2.5                        | 7.0/14.0                    | 5.0/12.0                    |             |
| 18         | 37                                   | 45     | 4                              | 3.5                        | 9.0/18.0                    | 7.0/16.0                    |             |

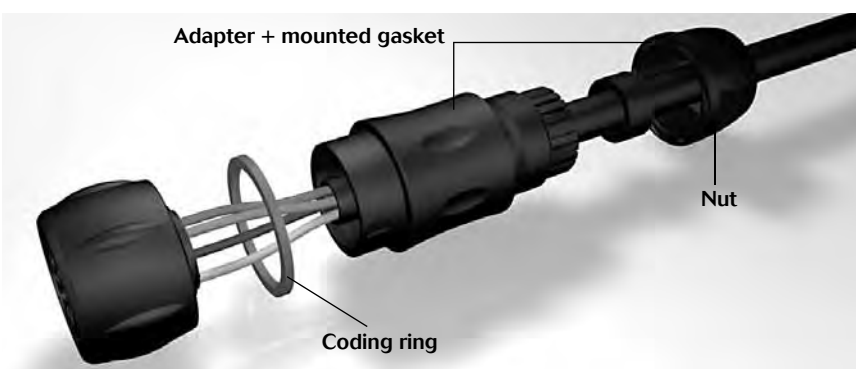
#### UTS 6 JC assembly: Solder version

- Slide accessories on the cable



Make sure the seal is positioned as shown.

- Strip external cable jacket
- Strip wires and solder contacts
- Tight adapter with plug, choose right seal (waste the other seal), tight nut with adapter (recommended torque values to be applied according to the table - right)
- Caution: only one of both delivered gasket should be used !



| Shell size | Recommended jacket strip length (mm) | Adapter tightening torque (Nm) | Nut tightening torque (Nm) | Ø Cable range Standard seal | Ø Cable range Reducing seal | Ø Wire      |
|------------|--------------------------------------|--------------------------------|----------------------------|-----------------------------|-----------------------------|-------------|
|            | Male                                 |                                |                            |                             |                             |             |
| 8          | 17                                   | 1                              | 0.75                       | 2.5/6.5                     | 1.5/5.0                     | 3.2 mm max. |
| 10         | 21                                   | 1.5                            | 2                          | 2.5/8.0                     | 1.5/5.0                     |             |
| 12         | 25                                   | 2                              | 2.5                        | 5.0/12.0                    | 3.0/9.0                     |             |
| 14         | 29                                   | 3                              | 2.5                        | 7.0/14.0                    | 5.0/12.0                    |             |

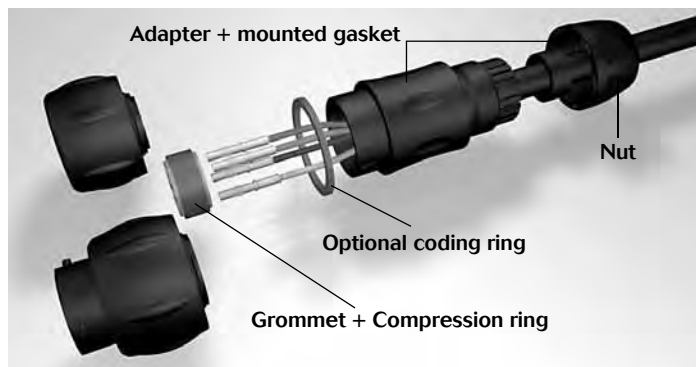
# UTS Series

## Technical information



### UTS 1 GJC / UTS 6 GJC assembly

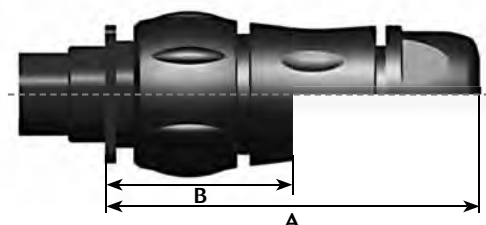
- Slide accessories on the cable (make sure to keep compression ring on the grommet)
- Strip external cable jacket
- Strip wires and crimp contacts
- Insert first contact into the grommet (first contact in cavity A, the contact pierces the grommet, no tool is required), then insert the contact in the connector cavity A (insert manually or use tool RTM205)
- Place the grommet and compression ring on the insulator
- Insert the other contacts
- Tight adapter with plug, choose right seal (waste the other seal), tight nut with adapter (recommended torque values to be applied according to the table - right).



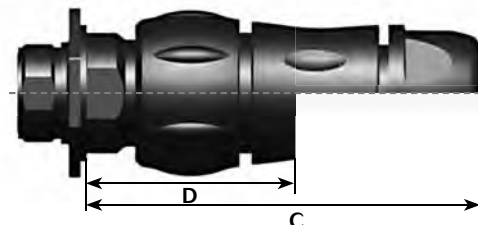
| Shell size | Recommended jacket strip length (mm) |        | Adapter tightening torque (Nm) | Nut tightening torque (Nm) | Ø Cable range Standard seal | Ø Cable range Reducing seal | Ø Wire                |
|------------|--------------------------------------|--------|--------------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------|
|            | Male                                 | Female |                                |                            |                             |                             |                       |
| 10         | 21                                   | 29     | 1.5                            | 2                          | 2.5/8.0                     | 1.5/5.0                     | from 1.7 mm to 3.0 mm |
| 12         | 25                                   | 33     | 2                              | 2.5                        | 5.0/12.0                    | 3.0/9.0                     |                       |
| 14         | 29                                   | 36     | 3                              | 2.5                        | 7.0/14.0                    | 5.0/12.0                    |                       |

### Mated connector length

UTS0 + UTS6



UTS7 + UTS6

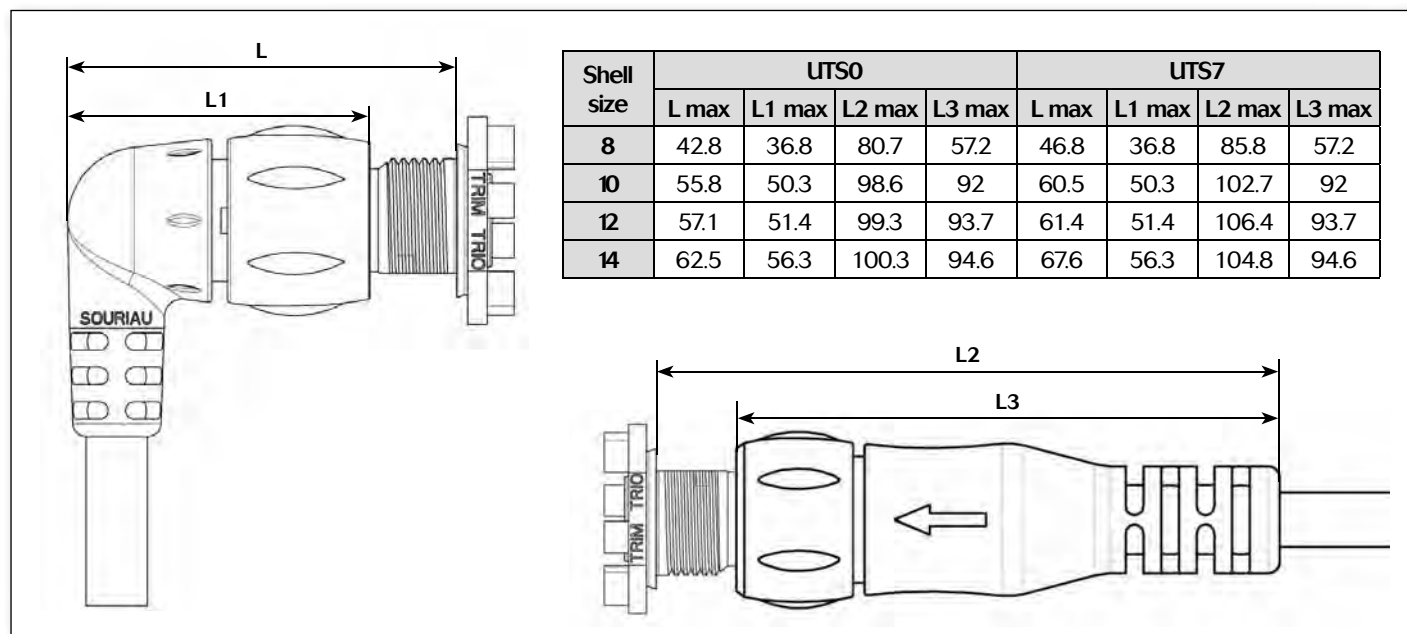


| Shell size | UTS0<br>+ UTS6 EN JC & CJC | UTS0<br>+ UTS6 EN GN | UTS7<br>+ UTS6 EN JC & CJC | UTS7<br>+ UTS6 EN GN |
|------------|----------------------------|----------------------|----------------------------|----------------------|
|            | A max                      | B max                | C max                      | D max                |
| 8          | 61.1                       | -                    | 66.6                       | -                    |
| 10         | 73.2                       | 39.6                 | 77.3                       | 43.7                 |
| 12         | 77.6                       | 39.4                 | 81.7                       | 43.5                 |
| 14         | 83.5                       | 40                   | 87.6                       | 44.1                 |
| 18         | 93.1                       | -                    | 97.2                       | -                    |

Note: all dimensions are in mm



## Dimensions overmoulded harnesses



## Extraction tools

| Contact size | Extractor   |
|--------------|-------------|
| #20          | RX20D44     |
| #16          | RX2025GE1   |
| #12          | 51060210924 |
| #8           | 51060210936 |



### Extraction tools instruction for size 16

#### Special case with the tool RX2025GE1:

A - When setting up in the cell, keep firmly the tool by the hexagonal metallic part and insert tool in cavity.

B - Push the tool by the handle to extract the contact.



#### Extraction:

Place the tool into the cavity from front face of the connector, push on the handle, then remove the contact..



## Rated current & working voltage

### Current carrying capacity

The current carrying capacity of a connector is limited by the thermal properties of materials used in its construction. The amount of current that can be handled depends on the size of cable used, the ambient temperature and the heat that is generated inside the connector. Part 3 of the IEC 60512 standard determines through a derating curve, the maximum current permissible, which varies from one layout to another (Fig.1 & Fig.2). Wire size plays an important role as well, since they help to dissipate heat and avoid overheating (Fig.1 & Fig.3).

Please note that the curve should be adjusted when dealing with potential hot spots, which can occur as a result of unequal loading of current across a number of contacts. As a general rule, it is best to avoid locating power handling contacts in the middle of the connector; try to locate them towards the edge where heat can be dissipated more effectively. Eventually you should find a level which represents the permissible operating range:

Fig.1: UTS 12-4 – 1.5mm<sup>2</sup> wires

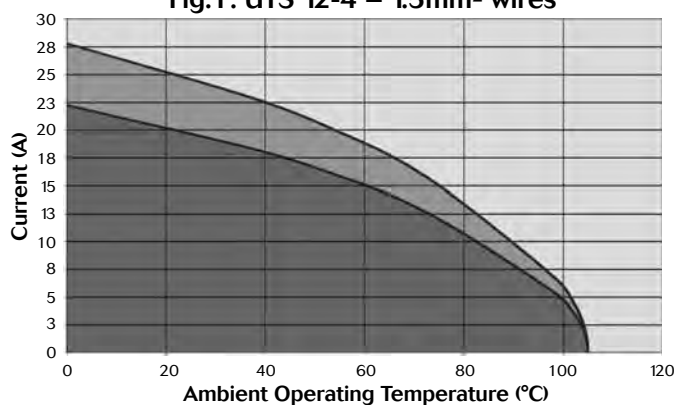


Fig.2: UTS 12-8 – 1.5mm<sup>2</sup> wires

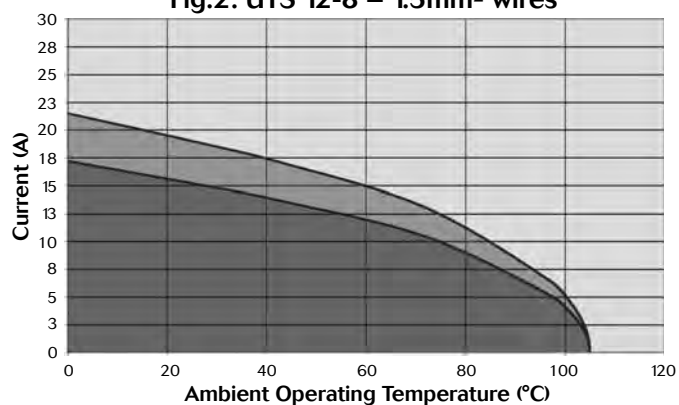
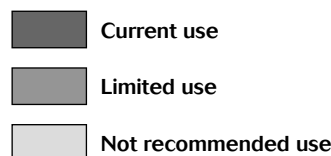
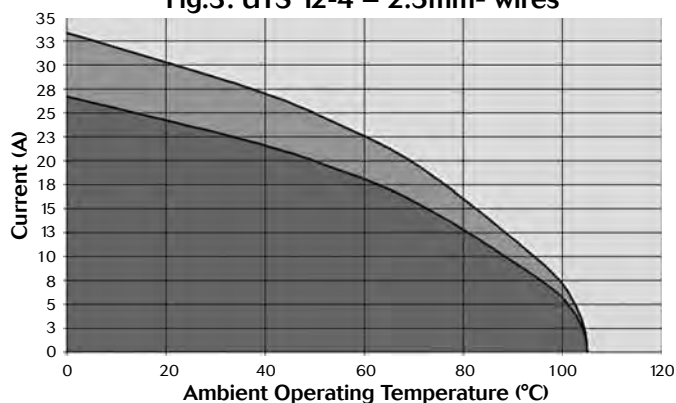


Fig.3: UTS 12-4 – 2.5mm<sup>2</sup> wires



The **rated current** is defined as uninterrupted continuous current that a connector can take when all contacts are energized simultaneously without exceeding the maximum limit of temperature. The earth contact is never loaded.



### UV resistance

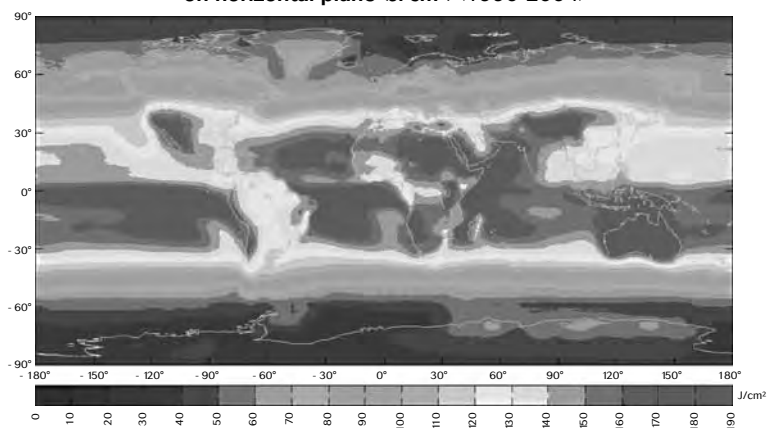
Solar radiation affects all materials, but plastics can be susceptible to extreme degradation over time. The choice of materials for the UTS series was therefore a critical consideration.

All over the world we are not exposed to the same amount of energy given by the sun. The chart shown here clearly illustrates this.

So we performed test according to the ISO 4892-2 and simulated 5 years exposure to outdoor environments (temperature, humidity, etc...)

After this period there was no significant colour variation, no crazing, no cracking and no major variation of mechanical properties.

Yearly mean of daily irradiation in UV (280-400 nm)  
on horizontal plane (J/cm<sup>2</sup>) (1990-2004)





### There are two main standards for industrial connectors: UL94 & UL1977

## UL94

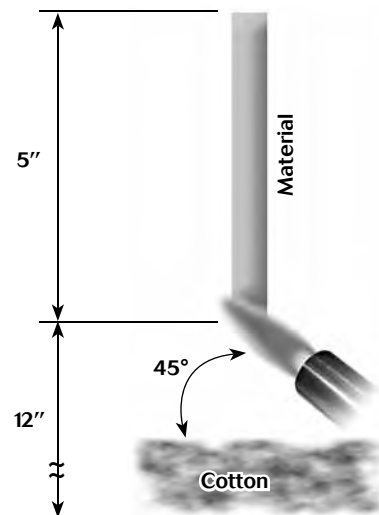
This standard is dedicated to plastics flammability. It characterises how the material burns in various orientation and thicknesses.

The UTS series has been rated at **V-0** & **HB**.

Procedure: A specimen is supported in a vertical or horizontal position and a flame is applied to the bottom of the specimen. The flame is applied for ten seconds and then removed until flaming stops, at which time the flame is reapplied for another ten seconds and then removed. Two sets of five specimens are tested. The two sets are conditioned under different conditions.

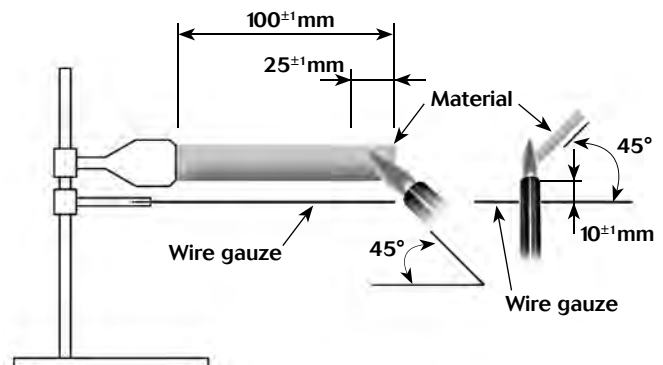
#### V-0 Vertical burning:

- Specimens must not burn with flaming combustion for more than 10 seconds after either test flame application.
- Total flaming combustion time must not exceed 50 seconds for each set of 5 specimens.
- Specimens must not burn with flaming or glowing combustion up to the specimen holding clamp.
- Specimens must not drip flaming particles that ignite the cotton.
- No specimen can have glowing combustion remain for longer than 30 seconds after removal of the test flame.



#### HB Horizontal burning:

- A material classed HB shall not have a burning rate exceeding 40 mm per minute over a 75 mm span for specimens having a thickness of 3.0 to 13 mm.
- A material classed HB shall not have a burning rate exceeding 75 mm per minute over a 75 mm span for specimens having a thickness less than 3.0 mm.
- A material classed HB shall cease to burn before the 100 mm reference mark.





### Underwriter Laboratories

## UL 1977

There are several standards which deal with plug and receptacle. Each of them is only for a small area of applications. It could be telecommunication, Etc. The UL 1977 covers single and multipole connectors intended for factory assembly.

Requirements apply to devices in taking into account intensity and voltage. There are categories as follows:

|        | 0      | 30 V<br>(42 V peak) | 600 V   |
|--------|--------|---------------------|---------|
| 0      | Type 0 | Type 1A             | Type 1A |
| 8.3 A  |        |                     |         |
| 31 A   |        | Type 2              | Type 3  |
| 200 A  |        |                     |         |
| 1000 A | Type 4 |                     |         |

According to above table, the level of performance that has to be reached could be different. Most of them are explained in the following page.

## Insulating materials:

Material uses for electrical insulation, as a minimum, have to comply with the characteristics shown below:

### • Minimum ratings for polymeric materials

| Type | Flame rating | Relative thermal index (RTI)<br>Electrical/mechanical w/o impact */** |
|------|--------------|-----------------------------------------------------------------------|
| 0    | -            | 50/50                                                                 |
| 1A   | HB           | 50/50                                                                 |
| 1B   | HB           | 50/50                                                                 |
| 2    | HB           | 50/50                                                                 |
| 3    | HB           | 50/50                                                                 |
| 4    | HB           | 50/50                                                                 |

\* The RTI of the material shall not be lower than the temperature measured during the Temperature Test.

\*\* For a thickness less than that for which a value has been established, the RTI of the minimum thickness with an established value shall be used.

## Assembly:

Connector has to be keyed to prevent any mismatching that can damage the machine or hurt the user. In the same way, plugs and sockets have to be equipped to protect persons against contact with live parts.

Finally the identified grounding contact shall be located so that the corresponding electrical continuity has to be completed before any other contact.



## UL1977

### Spacing:

For a 250V max connector, distance through air or over material shall be 1.2mm whereas from 250V to 600V connector the spacing is 3.2 minimum. These distances have to be taken between uninsulated live parts as shown in the matrix below:

• **Applicability of spacing requirements**

| Type | Uninsulated live part - uninsulated live part of opposite polarity | Uninsulated live part - uninsulated grounded metal part | Uninsulated live part - exposed dead metal part |
|------|--------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------|
| 0    | No                                                                 | No                                                      | No                                              |
| 1A   | Yes                                                                | Yes                                                     | Yes                                             |
| 1B   | Yes                                                                | Yes                                                     | No                                              |
| 2    | Yes                                                                | Yes                                                     | Yes                                             |
| 3    | Yes                                                                | Yes                                                     | Yes                                             |
| 4    | Yes                                                                | Yes                                                     | Yes                                             |

An alternative way to determine voltage rating is with the Dielectric-Withstand test. If during one minute there is no arc-over or breakdown the rated voltage is given as given below:

- a) 500 volts for a type 1B device
- b) 1000 volts plus twice rated voltage for types 1A, 2, 3 and 4 devices.

### Marking:

A device shall be legibly marked with the manufacturer's trade name, trade mark, or other descriptive marking by which the organisation responsible for the product may be identified. (Exception: If the device is too small, or where the legibility would be difficult to attain, the manufacturer's name, trademark, or other descriptive marking may appear on the smallest unit container or carton)

The following shall be marked on the device or on the smallest unit container or carton or on a stuffer sheet in the smallest unit container or carton:

- a) The catalogue number or an equivalent designation
- b) The electrical rating in both volts and amperes, if assigned
- c) Whether ac or dc, if restricted
- d) Flammability class, if identified

Example - Marking for the arrangement 10-3: **10A 500V UL94 V-0**



### IEC 61984

The norm is dedicated to connectors with rated voltage above 50V and up to 1000V and rated currents up to 125A per contact. But depending of your application connectors should be compliant with another standard. This has to be double checked with the customer.

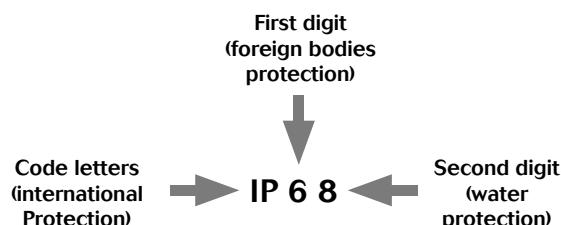
There are lot of constructional requirements and performances specified in that standard. Most of them are illustrated in greater details hereafter.

### Provisions for earthing:

The UTS connector is intended to be used on Class II systems. Even if the purpose of our connector is not to interrupt current, we often see a need to add a protective earth contact. Then this one shall be a "First mate, last break" style. Critically, among all of the normal assumptions we make in designing a connector, this contact has to be considered as a live part and must be protected against electric shock by double or reinforced insulation.

### IP Code:

IP is a coding system defined by the IEC 60529 to indicate the degrees of protection provided by an enclosure. The aim of this is to give information regarding the accessibility of live parts against ingress of water and other foreign bodies.



| 1 <sup>st</sup> digit | Degree of protection                                                                                                                                                | 2 <sup>nd</sup> digit | Degree of protection                                                           |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------------------------------------|
| 0                     | No protection against accidental contact.<br>No protection against solid foreign bodies.                                                                            | 0                     | No protection against water.                                                   |
| 1                     | Protection against contacts with any large area by hand and against large solid foreign bodies with a diameter bigger than 50 mm.                                   | 1                     | Drip-proof.<br>Protection against vertical water drips.                        |
| 2                     | Protection against contacts with the fingers.<br>Protection against solid foreign bodies with a diameter bigger than 12 mm.                                         | 2                     | Drip-proof.<br>Protection against water drips up to a 15° angle.               |
| 3                     | Protection against tools, wires or similar objects with a diameter bigger than 2.5 mm.<br>Protection against small solid bodies with a diameter bigger than 2.5 mm. | 3                     | Spray-proof.<br>Protection against diagonal water drips up to a 60° angle.     |
| 4                     | As 3 however diameter is bigger than 1 mm.                                                                                                                          | 4                     | Splash-proof.<br>Protection against splashed water from all directions.        |
| 5                     | Full protection against contacts. Protection against interior injurious dust deposits.                                                                              | 5                     | Hose-proof.<br>Protection against water (out of a nozzle) from all directions. |
| 6                     | Total protection against contacts.<br>Protection against penetration of dust.                                                                                       | 6                     | Protection against temporary flooding.                                         |
|                       |                                                                                                                                                                     | 7                     | Protection against temporary immersions.                                       |
|                       |                                                                                                                                                                     | 8                     | Protection against water pressure.<br>Pressure to be specified by supplier.    |

UTS offers high sealing performance IP68 / 69K...  
Even in dynamic situations.

In addition to the IEC 60529 we conjointly use the DIN 40050 part 9 which are dedicated to road vehicles. The main differences are:

- **First digit:** 5 replaced by 5K, 6 by 6K. In the DIN the tested equipment is not depressurized as it is in the IEC.
- **Second digit:** 5K and 6K has been added and are equivalent respectively to 5 and 6 but with higher pressure. 9K which represents the High pressure cleaning.

|    |                                                                                                            |
|----|------------------------------------------------------------------------------------------------------------|
| 9K | High pressure hose-proof.<br>Protection against high pressure water (out of a nozzle) from all directions. |
|----|------------------------------------------------------------------------------------------------------------|



### IEC 61984

#### Overvoltage

UTS connectors are qualified to be used on systems rated at Overvoltage category III

Per the IEC 60664-1 (formerly VDE 0110) each category is linked to the end application and where the device will be implemented:

- **Category IV** (primary overcurrent protection equipment):  
Origin of the installation
- **Category III** (Any fixed installation with a permanent connection)  
Fixed installation and equipment and for cases where the reliability and the availability is subject to special requirements
- **Category II** (Domestic appliances):  
Energy consuming equipment to be supplied from the fixed installation
- **Category I** (Protected electronic circuit):  
For connection to circuit in which measures are taken to limit transient overvoltage.

#### Pollution degree

Per the IEC 60664-1 (formerly VDE 0110) the environment affects the performance of the insulation. Particles can build a bridge between two metal parts. As a rule dust mixed with water can be conductive and more generally speaking metal dust is conductive. Finally, the standard defines 4 levels of pollution:

- **Degree 1** (Air conditioned dry room):  
No pollution or only dry, non conductive pollution occurs. The pollution has no influence.
- **Degree 2** (Personal computer in a residential area):  
Only non conductive pollution occurs except that occasionally a temporary conductivity caused by condensation is to be expected.
- **Degree 3** (Machine tools):  
Conductive pollution occurs or dry non-conductive pollution occurs which becomes conductive due to condensation which is to be expected.
- **Degree 4** (Equipments on roof, locomotives):  
Continuous conductivity occurs due to conductive dust, rain or other wet conditions.

Finally, the harsher the environment is, the longer clearance and creepage distances should be. Nonetheless, according the IEC 61984, enclosure rated at IP54 or higher can be dimensioned for a lower pollution degree. This applies to mated connectors disengaged for test and maintenance.

#### Marking

The marking should give enough details to the user to know what the main characteristics are and without going deep in technical documentation. Below examples identify the suitability of the connector:

- **Example 1:**  
Marking of a connector with rated current 16A, rated voltage 400V, rated impulse voltage 6kV and pollution degree 3, 2 and 1 for use in any system, preferably unearthed or delta-earthed systems:

16A 400V 6kV 3

- **Example 2:**  
Marking of a connector with rated current 16A, rated insulation voltages line-to-earth 250V, line-to-line 400V, rated impulse voltage 4kV and pollution degree 3, 2 and 1 for use in earthed systems:

16A 250V 400V 4kV 3



### What is NEMA rating ?

- NEMA ratings vs IP ratings

Whereas IP ratings only consider protection against ingress of foreign bodies - first digit - and ingress of water (second digit), NEMA ratings consider these but also verify protection from external ice, corrosive materials, oil immersion, etc.

The correlation between NEMA & IP being limited only to dust and water, we can state that a NEMA type is *equivalent to* an IP rating but it is not possible to say the contrary.

Below a list of some NEMA standards:

| Enclosure rating | IP20 | IP22 | IP55 | IP64 | IP65 | IP66 | IP67 |
|------------------|------|------|------|------|------|------|------|
| Type 1           | •    |      |      |      |      |      |      |
| Type 3           |      |      |      | •    |      |      |      |
| Type 3R          |      | •    |      |      |      |      |      |
| Type 3S          |      |      |      | •    |      |      |      |
| Type 4           |      |      |      |      |      | •    |      |
| Type 4X          |      |      |      |      |      | •    |      |
| Type 6           |      |      |      |      |      |      | •    |
| Type 12          |      |      | •    |      |      |      |      |
| Type 13          |      |      |      |      | •    |      |      |

• indicates compliance



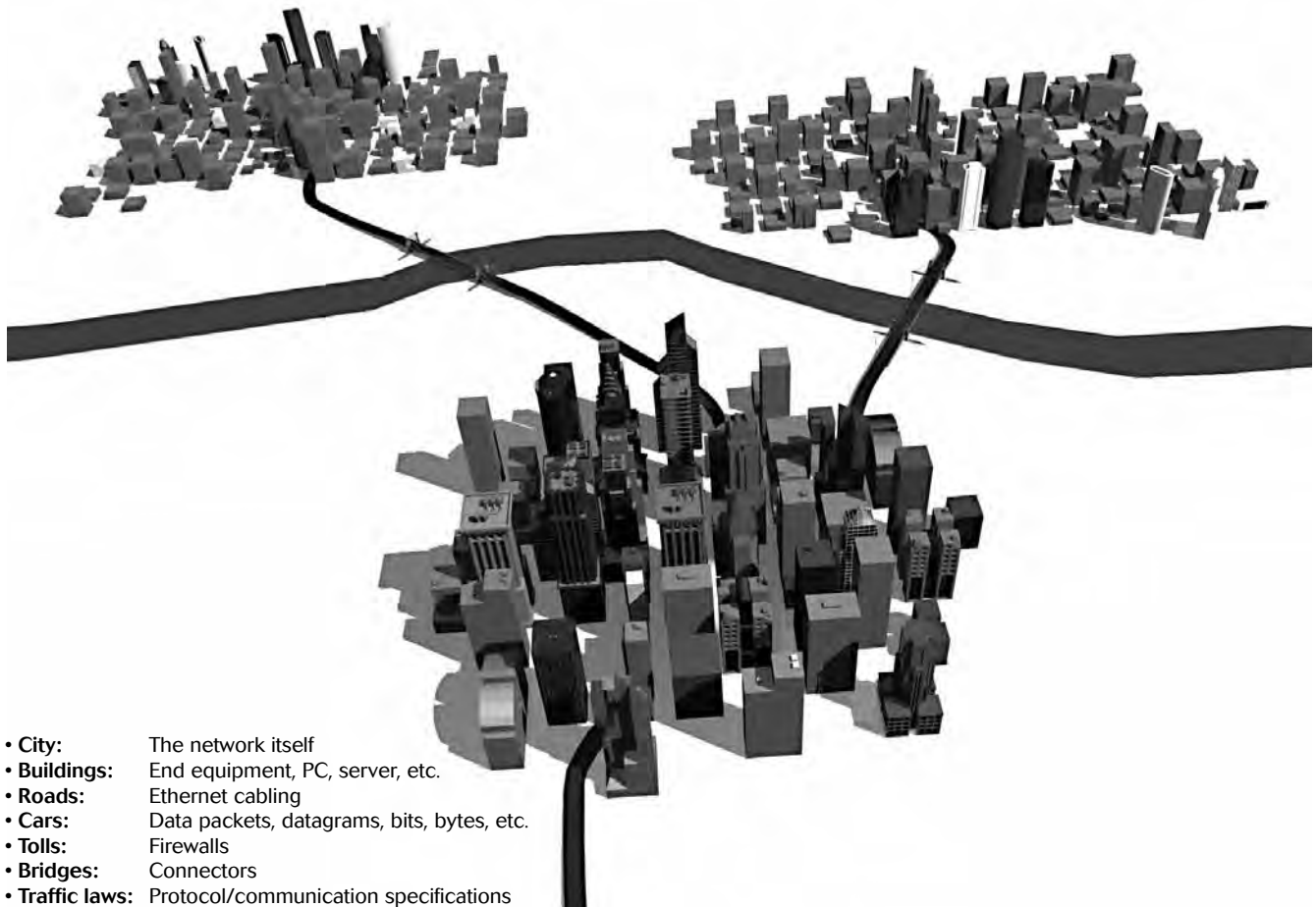
Type 6 rating can be either Type 6 or Type 6P - please see below:

|    |      |                                                                                                                                                                                                                                                                                                                        |
|----|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6  | IP67 | Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment, falling dirt, hose-directed water, the entry of water during occasional temporary submersion at a limited depth and damage from external ice formation. |
| 6P | IP67 | Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment, falling dirt, hose-directed water, the entry of water during prolonged submersion at a limited depth and damage from external ice formation.            |



### Ethernet for the layman

In order to explain basic Ethernet theory, we can use a functional comparison to a busy city with highways, buildings, and cars. To illustrate this, the table below provides correlation between the different components/pieces/links that encompass Ethernet network connectivity, and the larger scale infrastructure of a metropolitan city.



- **City:** The network itself
- **Buildings:** End equipment, PC, server, etc.
- **Roads:** Ethernet cabling
- **Cars:** Data packets, datagrams, bits, bytes, etc.
- **Tolls:** Firewalls
- **Bridges:** Connectors
- **Traffic laws:** Protocol/communication specifications

### Ethernet Basics

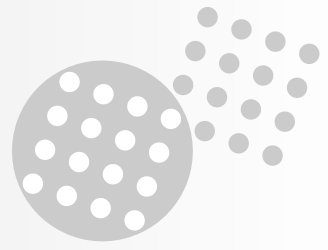
Ethernet is a widely used communications protocol that is used to transmit data packets (datagrams) between network devices. Imagine a highway in a large metropolitan area six lanes wide at rush hour. The vehicles on the highway need rules to follow so that they get to their destination without crashing into each other. In an Ethernet network link, there could be 100 million bits of information transmitted in one second. In the Ethernet standard, there exist rules to govern packet structure, transmission requirements, error correction, communication with end equipment, etc.

### Examining the differences between 100Mhz, 100 Base TX, Cat5e; what does it all mean?

When discussing connectors and Ethernet, there are a few key details to be aware of:

- 100Mhz is a measurement of Frequency for the signal
  - Comparable to the Speed Limit of a highway
- 100BaseTX (or Fast Ethernet) is an Ethernet link standard and identifies available link bandwidth. The bandwidth is measured in units of Mbits/S (megabits per second)
  - Comparable to the number of cars that pass a point in one second
- Cat5e is an EIA/TIA standard for performance and physical characteristics for cables and connectors
  - Comparable to performance specifications of the car and highway

In connectors and cables, Fast Ethernet uses 2 pairs, one for transmit, one for receive. This way data traffic can flow in both directions simultaneously.



### Ethernet for the layman

#### Souriau offering:

Standard solutions.

UTS Hi seal size 8, 4 contacts

- 1 (Pair 1) < A
- 2 (Pair 1) < C
- 3 (Pair 2) < B
- 4 (Pair 2) < D



**8E4/8D4**  
4 Ø 1 (#20)

UTS size 10, 6 contacts

- 1 (Pair 1) < A
- 2 (Pair 1) < B
- 3 (Pair 2) < E
- 4 (Pair 2) < D



**10G/10E6/10D6**  
6 Ø 1 (#20)

Shielding continuity done in cavity C&F.  
Note: Shielding can be replaced by DC power.

UTS size 12, 10 contacts

- 1 (Pair 1) < C
- 2 (Pair 1) < B
- 3 (Pair 2) < G
- 4 (Pair 2) < H



**12 10/12E10/12D10**  
10 Ø 1 (#20)

#### What about using coax contacts ?

Ethernet twisted pairs carry a symmetrical (balanced) signal. Once terminated into a coax contact, the inner core will be protected by a shield - but not the outer contact. Because of EMI issues, the signal will no longer be balanced. Conclusion - it does not work and is not recommended.

#### What about using Quadrax contacts ?

The Quadrax contact is used in railway applications because of the use of quad cable. In this specific market, the standard Ethernet twisted pairs wires cannot be offered, they are too thin and often solid (not stranded).

In the rest of industry, UTP (Unshielded Twisted Pairs) cables are widely used. The Quadrax contact is not designed to terminate them. And thus, are not advised for industrial applications.

#### Conclusion

To carry 100Mb/s data signal, 100BaseTX or Fast Ethernet recommends the use of Cat5e connectors as well as Cat5e cable with the support of a 100MHz signal. Nevertheless, a 100Mb/s signal can be transmitted in certain conditions (short distance, only one connector, lower frequency but a different code) thru many other connection materials - not necessarily Cat5e rated.

# UTS Series

Technical information





uits  
series.

# Appendices

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### #16 coaxial contacts

#### Coaxial cable - Contact monocrimp and multipiece

| Cable type                    | Impe-<br>dance | Contact type | Ø over jacket |          | Ø over dielectric |      | Inner cond size<br>Ext. Ø mm | Ø outer braid |          | Male contact kit for coaxial cable | Female contact kit for coaxial cable |
|-------------------------------|----------------|--------------|---------------|----------|-------------------|------|------------------------------|---------------|----------|------------------------------------|--------------------------------------|
|                               |                |              | inch          | mm       | inch              | mm   |                              | inch          | mm       |                                    |                                      |
| RG161/U                       | 75             | Multi piece  | 0.09          | 2.29     | 0.057             | 1.45 |                              |               |          | RMDXK10D28                         | RCDXK1D28                            |
| RG179A/U                      | 75             |              | 0.105         | 2.67     | 0.063             | 1.6  | 0.3                          | 0.084         | 2.13 max |                                    |                                      |
| RG179B/U                      | 75             |              | 0.105         | 2.67     | 0.063             | 1.6  | 0.3                          | 0.084         | 2.13 max |                                    |                                      |
| RG187/U                       | 75             |              | 0.11          | 2.79 max | 0.06              | 1.52 | 0.3                          |               |          |                                    |                                      |
| RG188/U                       | 50             |              | 0.11          | 2.79 max | 0.06              | 1.52 | 0.51                         | 0.078         | 1.98 max |                                    |                                      |
| RG174/U                       | 50             |              | 0.11          | 2.92     | 0.06              | 1.52 | 0.48                         | 0.088         | 2.24 max |                                    |                                      |
| AMPHENOL 21-598               | 50             |              | 0.105         | 2.67     | 0.06              | 1.52 | 0.48                         |               |          |                                    |                                      |
| RG196/U                       | 50             |              | 0.08          | 2.03 max | 0.034             | 0.86 | 0.3                          |               |          |                                    |                                      |
| RG178A/U                      | 50             |              | 0.075         | 1.91     | 0.034             | 0.86 | 0.3                          | 0.054         | 1.37 max |                                    |                                      |
| RG188A/U                      | 50             | Mono crimp   | 0.110         | 2.79     | 0.06              | 1.52 | 0.51                         | 0.078         | 1.98 max | RMDX6036D28                        | RCDX6036D28                          |
| KX21TVT (europe)<br>RG178 B/U | 50             |              | 0.075         | 1.91     | 0.034             | 0.86 | 0.3                          | 0.054         | 1.37 max | RMDX6034D28                        | RCDX6034D28                          |
| RG178 / BU                    | 50             |              | 0.075         | 1.91     | 0.034             | 0.86 | 0.3                          | 0.054         | 1.37 max | RMDX6050D28                        | RCDX6016D28                          |
| RG174/U                       | 50             |              | 0.115         | 2.92     | 0.06              | 1.52 | 0.48                         | 0.088         | 2.24 max | RMDX6032D28                        | RCDX6032D28                          |
| RG188A/U                      | 50             |              | 0.11          | 2.79     | 0.06              | 1.52 | 0.51                         | 0.078         | 1.98 max | RMDX6036D28                        | RCDX6036D28                          |
| RG316/U                       | 50             |              | 0.107         | 2.72     | 0.6               | 1.52 | 0.51                         | 0.078         | 2.05 max | RMDX6036D28                        | RCDX6036D28                          |
| raychem 5024A3111             | 50             |              | 0.12          | 3.05     | 0.083             | 2.11 | 0.64                         | 0.097         | 2.46     | RMDX6052D28                        | RCDX6052D28                          |
| raychem 5026e1614             | 50             |              | 0.083         | 2.11     | 0.05              | 1.27 | 0.48                         | 0.067         | 1.7      | RMDX6036D28                        | RCDX6036D28                          |
| surprenant pn 8134            | -              | Multi piece  | 0.1           | 2.54     | 0.058             | 1.47 | 0.3                          |               |          | RMDXK10D28                         | RCDXK1D28                            |
| PRD PN 247AS-C123-001         | -              | Mono crimp   | 0.103         | 2.62     | 0.06              | 1.52 | 0.51                         | 0.078         | 1.98     | RMDX6018D28                        | RCDX6018D28                          |
| PRD PN 247AS-C1251            | -              |              | 0.092         | 2.34     | 0.05              | 1.27 | 0.64                         | 0.067         | 1.7      | RMDX6018D28                        | RCDX6018D28                          |
| JUDD C15013010902             | -              |              | 0.087         | 2.13     | 0.05              | 1.27 | 0.48                         | 0.066         | 1.67     | RMDX6036D28                        | RCDX6036D28                          |
| CDC PIN22939200               | -              |              | 0.09          | 2.29     | 0.048             | 1.22 | 0.3                          | 0.064         | 1.63     | RMDX6046D28                        | RCDX6016D28                          |
| CDC PIN22939200               | -              |              | 0.09          | 2.29     | 0.048             | 1.22 | 0.3                          | 0.064         | 1.63     | RMDX6050D28                        | RCDX6016D28                          |
| CDC PIN245670000              | -              |              | 0.104         | 2.64     | 0.067             | 1.7  | 0.3                          | 0.083         | 2.11     | RMDX6050D28                        | RCDX6016D28                          |
| ampex                         | -              |              | 0.114         | 2.9      | 0.075             | 1.91 | 0.38                         | 0.09          | 1.29     | RMDX6032D28                        | RCDX6032D28                          |
| TI PN 920580                  | -              |              | 0.7           | 1.78     | 0.038             | 0.96 | 0.48                         | 0.054         | 1.37     | RMDX6024D28                        | RCDX6024D28                          |
| Honeywell PN 58000062         | -              |              | 0.12          | 3.05     | 0.077             | 1.96 | 0.41 solid                   | 0.096         | 2.44     | RMDX6026D28                        | RCDX6026D28                          |
| -                             | -              |              | 0.104         | 2.64     | 0.067             | 1.7  | 0.3                          |               | 2.11     | RMDX6050D28                        | -                                    |
| -                             | -              |              | 0.09          | 2.29     | 0.048             | 1.22 | 0.3                          |               | 1.63     | RMDX6050D28                        | -                                    |
| -                             | -              |              | 0.114         | 2.9      | 0.075             | 1.91 | 0.38                         |               | 1.29     | RMDX6032D28                        | RCDX6032D28                          |
| -                             | -              |              | 0.07          | 1.78     | 0.038             | 0.96 | 0.48                         |               | 1.37     | RMDX6024D28                        | RCDX6024D28                          |
| -                             | -              |              | 0.12          | 3.05     | 0.077             | 1.96 | 0.41                         |               | 2.44     | RMDX6026D28                        | RCDX6026D28                          |



### Twisted cable - Contact monocrimp and multipiece

| Cable type                                                | Contact type | Inner AWG cond | Ø over jacket (single wire) |          | Inner cond size     |           | Ø outer braid |         | Male contact kit for coaxial cable | Female contact kit for coaxial cable |
|-----------------------------------------------------------|--------------|----------------|-----------------------------|----------|---------------------|-----------|---------------|---------|------------------------------------|--------------------------------------|
|                                                           |              |                | inch                        | mm       | Stranded definition | Ext. Ø mm | inch          | mm      |                                    |                                      |
| 2#24 stranded mil w 16878 type B                          | Multi piece  | 24             | 0.049                       | 1.24 max | 7/.008              |           | -             | -       | RMDXK10D28                         | RCDXK1D28                            |
| 2 #24 solid mil-w-76 type LW                              |              | 24             | 0.047                       | 1.12 max | 1/.0201             |           | -             | -       | RMDXK10D28                         | RCDXK1D28                            |
| 2 #26 stranded mil w 76 type LW or mil w16878 type b&e    |              | 26             | 0.043                       | 1.09 max | 7/.0063             | 0.16      | -             | -       | RMDXK10D28                         | RCDXK1D28                            |
| 2 #28 solid mil-w-81822/3                                 |              | 28             | 0.028                       | 0.71 max |                     |           | -             | -       | RMDXK10D28                         | RCDXK1D28                            |
| TWISTED PAIR 1/.201 SOLID MIL w 76 TYPE lw or MIL W 16878 |              | 26             | 0.044                       | 1.12 max | 1/.0201             | 0.511     | -             | -       | RMDXK10D28                         | RCDXK1D28                            |
| twisted pair solid mil w 81822/3                          |              | 28             | 0.028                       | 0.71 max | 1/.0126             | 0.32      | -             | -       | RMDXK10D28                         | RCDXK1D28                            |
| #28 7/.0036 per Hitachi spec ec-711 (13-2820)             | Mono crimp   | -              | 0.046                       | 1.17     | 7/.0036             | -         | -             | -       | RMDX6031D28 + YORX090              | RCDX6031D28 + YORX090                |
| 20218201                                                  |              | -              | 0.028                       | 0.71     | -                   | -         | -             | -       | RMDX6031D28 + YORX090              | RCDX6031D28 + YORX090                |
| #30 solid                                                 |              | -              | 0.025                       | 0.64     | -                   | -         | -             | -       | RMDX6015D28 + YORX090              | RCDX6015D28 + YORX090                |
| #26 7/.0063                                               |              | 26             | 0.028                       | 0.71     | 7/.063              | 0.16      | -             | -       | RMDX6031D28 + YORX090              | RCDX6031D28 + YORX090                |
| #26 19/.004                                               |              | 26             | 0.049                       | 1.24     | 19/.004             | -         | -             | -       | RMDX6019D28 + YORX090              | RCDX6019D28 + YORX090                |
| #24 7/.008                                                |              | 24             | 0.049                       | 1.24     | 7/.008              | -         | -             | -       | RMDX6019D28 + YORX090              | RCDX6019D28 + YORX090                |
| #24 19/.005                                               |              | 24             | 0.057                       | 1.45     | 19/.005             | -         | -             | -       | RMDX6019D28 + YORX090              | RCDX6019D28 + YORX090                |
| -                                                         |              | 26             | -                           | 1.25     | -                   | -         | -             | 19x0.1  | RMDX6019D28 + YORX090              | RCDX6019D28 + YORX090                |
| -                                                         |              | 24             | -                           | 1.25     | -                   | -         | -             | 7x0.2   | RMDX6019D28 + YORX090              | RCDX6019D28 + YORX090                |
| -                                                         |              | 24             | -                           | 1.45     | -                   | -         | -             | 19x0.13 | RMDX6019D28 + YORX090              | RCDX6019D28 + YORX090                |
| -                                                         |              | 26             | -                           | 0.7      | -                   | -         | -             | 7x0.16  | RMDX6031D28 + YORX090              | RCDX6031D28 + YORX090                |

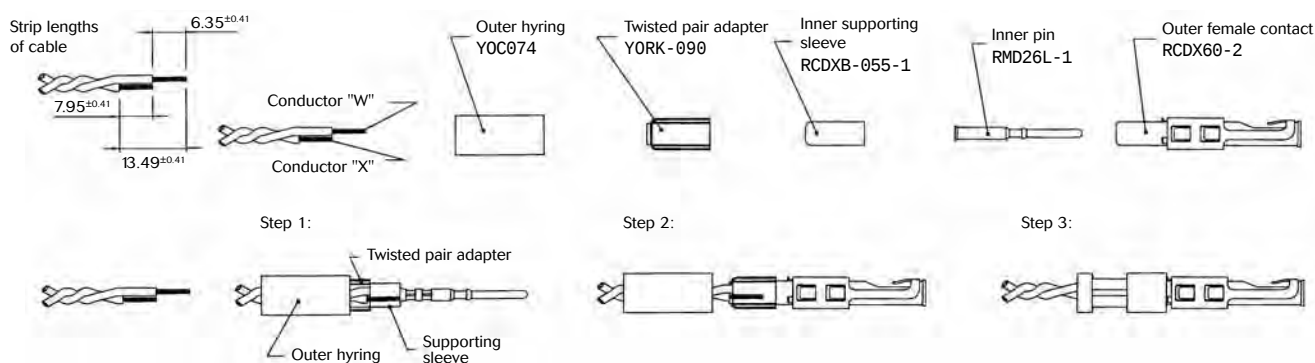


### #16 coaxial contacts

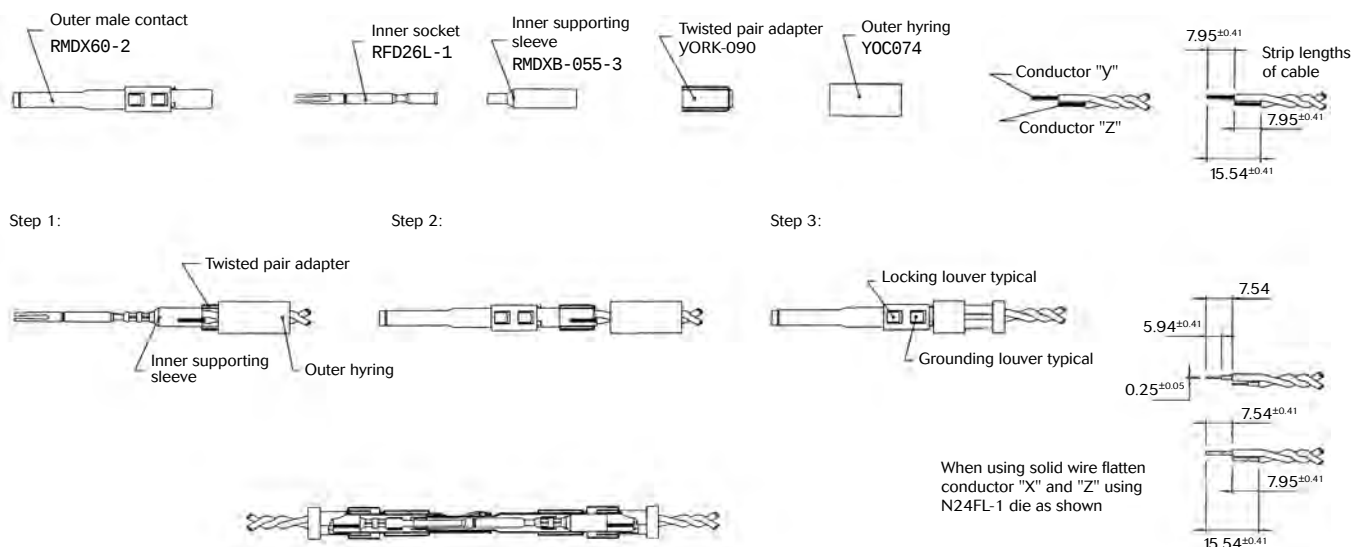
#### Twisted pair cable multipiece contact cabling

| Cable reference                                           | Contact type | Male contact | Female contact | Crimp tool | Die set | Stop bushing | Cable strip length  |   |   | Inner conductor crimp |       | Braid crimp |       |
|-----------------------------------------------------------|--------------|--------------|----------------|------------|---------|--------------|---------------------|---|---|-----------------------|-------|-------------|-------|
|                                                           |              |              |                |            |         |              | A                   | B | C | g dim                 | t dim | g dim       | t dim |
| 2#24 stranded mil w 16878 type B                          | Multi piece  | RMDXK10D28   | RCDXK1D28      | M10S1J     | -       | -            | See assembly notice |   |   |                       |       |             |       |
| 2 #24 solid mil-w-76 type LW                              |              |              |                |            |         |              |                     |   |   |                       |       |             |       |
| 2 #26 stranded mil w 76 type LW or mil w16878 type B & E  |              |              |                |            |         |              |                     |   |   |                       |       |             |       |
| 2 #28 solid mil-w-81822/3                                 |              |              |                |            |         |              |                     |   |   |                       |       |             |       |
| twisted pair 1/.201 solid mil w 76 type LW or mil w 16878 |              |              |                |            |         |              |                     |   |   |                       |       |             |       |
| twisted pair solid mil w 81822/3                          |              |              |                |            |         |              |                     |   |   |                       |       |             |       |

#### Female contact



#### Male contact



Note : all dimensions are in mm

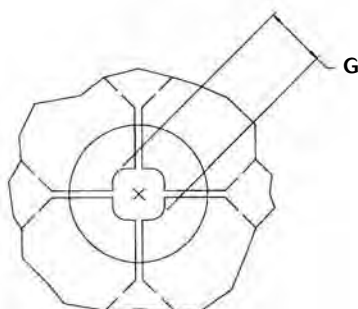
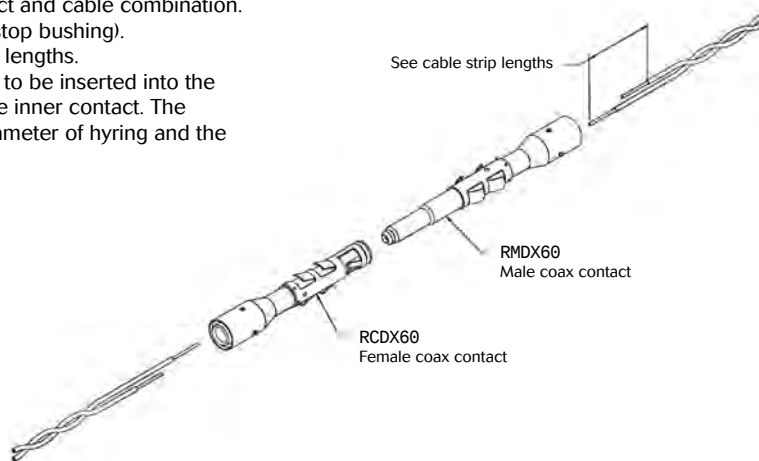
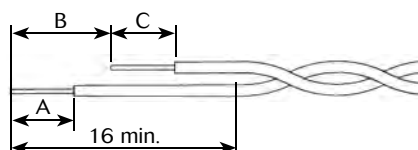


### Twisted pair cable monocrimp contact cabling

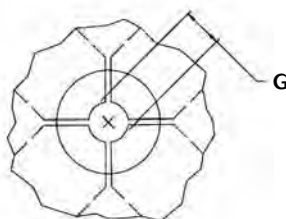
| Cable reference                              | Contact type | Male contact          | Female contact        | Crimp tool | Die set                                             | Stop bushing | Cable strip length |     |      | Inner conductor crimp |              | Braid crimp  |              |
|----------------------------------------------|--------------|-----------------------|-----------------------|------------|-----------------------------------------------------|--------------|--------------------|-----|------|-----------------------|--------------|--------------|--------------|
|                                              |              |                       |                       |            |                                                     |              | A                  | B   | C    | g dim                 | t dim        | g dim        | t dim        |
| #28 7/0036 per Hitachi spec ec-711 (13-2820) | Mono crimp   | RMDX6031D28 + YORX090 | RCDX6031D28 + YORX090 | M10S1J     | S80                                                 | SL105        | 4.7                | 6.1 | 4.32 | 1.30 to 1.12          | 1.4 to 1.22  | 2.97 to 2.84 | 3.07 to 2.9  |
| 20218204                                     |              |                       |                       |            | S80                                                 | SL105        | 3.94               | 6.1 | 3.16 | 1.30 to 1.17          | 1.4 to 1.22  | 2.97 to 2.84 | 3.07 to 2.79 |
| #30 solid                                    |              |                       |                       |            | S83                                                 | SL105        | 4.7                | 6.1 | 4.06 | 1.22 to 1.12          | 1.35 to 1.22 | 2.97 to 2.84 | 3.12 to 2.95 |
| #26 7/0063                                   |              |                       |                       |            | S80                                                 | SL105        | 4.7                | 6.1 | 4.06 | 1.30 to 1.17          | 1.4 to 1.22  | 2.97 to 2.84 | 3.07 to 2.9  |
| #26 19/004                                   |              |                       |                       |            | M10SG8 ASSY'Y TOOL DIE SET STOP BUSHING M10S1J TOOL |              | 4.7                | 6.1 | 4.06 | 1.22 to 1.17          | 1.35 to 1.22 | 2.84 to 2.79 | 3.12 to 2.97 |
| #24 7/008                                    |              |                       |                       |            |                                                     |              | 4.7                | 6.1 | 4.06 | 1.22 to 1.17          | 1.35 to 1.22 | 2.84 to 2.79 | 3.12 to 2.97 |
| #24 19/005                                   |              |                       |                       |            |                                                     |              | 4.7                | 6.1 | 4.06 | 1.22 to 1.17          | 1.35 to 1.22 | 2.84 to 2.79 | 3.12 to 2.97 |
| AWG26 (19x0.1)                               |              |                       |                       |            | M10SG8 crimping kit                                 |              | 4.7                | 6   | 4    |                       |              |              |              |
| AWG24 (7x0.2)                                |              |                       |                       |            |                                                     |              |                    |     |      |                       |              |              |              |
| AWG24 (19x0.13)                              |              |                       |                       |            |                                                     |              |                    |     |      |                       |              |              |              |
| AWG26 (7x0.16)                               |              |                       |                       |            | S80                                                 | SL150        |                    |     |      |                       |              |              |              |

- Select appropriate monocrimp coax twisted pair contact and cable combination.
- Select appropriate crimp tooling (hand tool, S-die set, stop bushing).
- Strip the twisted pair cable to the designated wire strip lengths.
- Insert the stripped cable into the contact. One cable is to be inserted into the inside diameter of hying, and pushed forward into the inner contact. The second cable is to be inserted between the outside diameter of hying and the inside diameter of the outer contact body.
- Crimp the contact.

Cable strip length



Braid crimp (G) to be measured with die set fully closed



Inner conductor crimp (G) to be measured with die set fully closed

Note : all dimensions are in mm



### #16 coaxial contacts

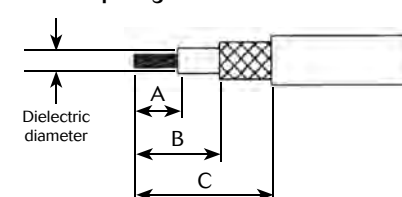
#### Multipiece male contact with coax cable

| Cable reference       | Contact                 | Hyring complemen-<br>tary<br>compoments | Outer contact crimp tool |              | Inner contact crimp tool |              | Cable strip length |      |       |
|-----------------------|-------------------------|-----------------------------------------|--------------------------|--------------|--------------------------|--------------|--------------------|------|-------|
|                       |                         |                                         | Crimp tool M10S1J        |              | Crimp tool M10S1J        |              |                    |      |       |
|                       |                         |                                         | Die set                  | Stop bushing | Die set                  | Stop bushing | A                  | B    | C     |
| RG161U                | Male:<br><br>RMDXK10D28 | YOC074                                  | S221                     | SL471        | S23D2                    | SL46D2       | 4.37               | 7.95 | 15.88 |
| RG179                 |                         |                                         |                          |              |                          |              | 4.37               | 7.95 | 15.88 |
| RG187U                |                         |                                         |                          |              |                          |              | 4.37               | 7.95 | 15.88 |
| RG188/U               |                         |                                         |                          |              |                          |              | 4.37               | 7.95 | 15.88 |
| RG174/U               |                         | YOC074 +<br>RMDXB0553                   |                          |              | S26D2                    |              | 4.37               | 7.95 | 15.88 |
| RG178A/U              |                         |                                         |                          |              | S23D2                    |              | 7.54               | 9.12 | 17.53 |
| RG196U                |                         |                                         |                          |              |                          |              | 7.54               | 9.12 | 17.53 |
| AMPHENOL<br>21-598    |                         |                                         |                          |              | YOC074                   |              | -                  | 4.37 | 7.95  |
| surprenant<br>pn 8134 |                         | -                                       |                          |              |                          |              | 4.37               | 7.95 | 15.88 |

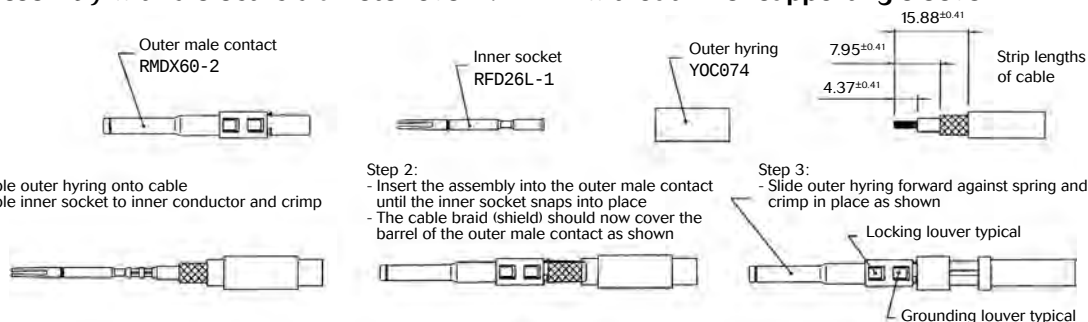
#### Multipiece kit details

|                     |            |                         |
|---------------------|------------|-------------------------|
| RMDXK10D28 includes | RMDX602D28 | Outer contact           |
|                     | RFD26L1D28 | Inner contact           |
|                     | YOC074     | Outer hyring            |
|                     | RMDXB0553  | Inner supporting sleeve |

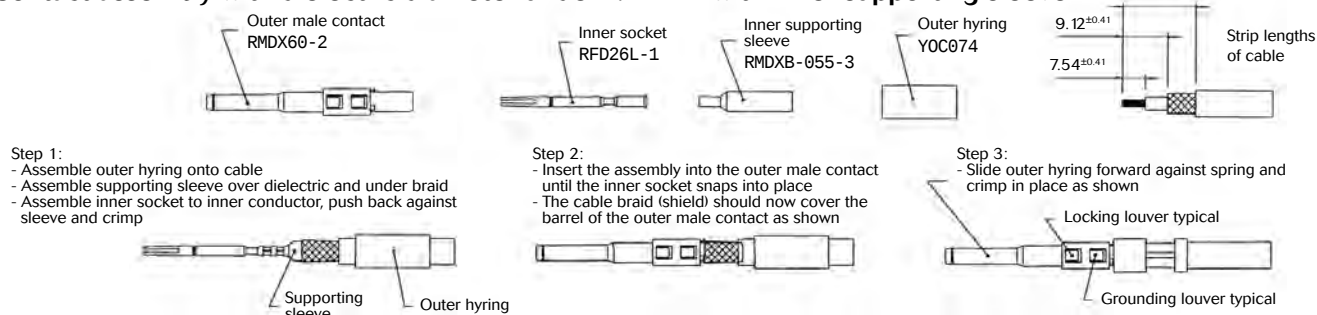
#### Cable strip length



#### Contact assembly with dielectric diameter over 1.4mm - without inner supporting sleeve



#### Contact assembly with dielectric diameter under 1.4mm - with inner supporting sleeve



Note : all dimensions are in mm



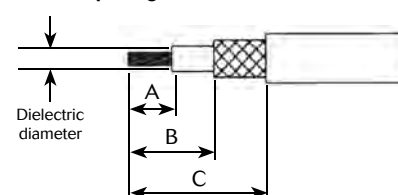
### Multipiece female contact with coax cable

| Cable reference       | Contact              | Hying complementary compoments | Outer contact crimp tool |              | Inner contact crimp tool |              | Cable strip length |   |       |
|-----------------------|----------------------|--------------------------------|--------------------------|--------------|--------------------------|--------------|--------------------|---|-------|
|                       |                      |                                | Crimp tool M10S1J        |              | Crimp tool M10S1J        |              |                    |   |       |
|                       |                      |                                | Die set                  | Stop bushing | Die set                  | Stop bushing | A                  | B | C     |
|                       |                      |                                |                          |              |                          |              |                    |   |       |
| RG161U                | Female:<br>RCDXK1D28 | YOC074                         | S221                     | SL471        | S23D2                    | SL46D2       | 4.37               | - | 11.13 |
| RG179                 |                      |                                |                          |              |                          |              | 4.37               |   | 11.13 |
| RG187U                |                      |                                |                          |              |                          |              | 4.37               |   | 11.13 |
| RG188/U               |                      |                                |                          |              |                          |              | 4.37               |   | 11.13 |
| RG174/U               |                      | YOC074 +<br>RMDXB0553          |                          |              | S26D2                    |              | 4.37               |   | 11.13 |
| RG178A/U              |                      |                                |                          |              | S23D2                    |              | 6.35               |   | 11.13 |
| RG196U                |                      |                                |                          |              |                          |              | 6.35               |   | 11.13 |
| AMPHENOL<br>21-598    |                      |                                |                          |              | YOC074                   |              | -                  |   | 4.37  |
| surprenant<br>pn 8134 |                      | -                              |                          |              |                          |              | 4.37               |   | 11.13 |

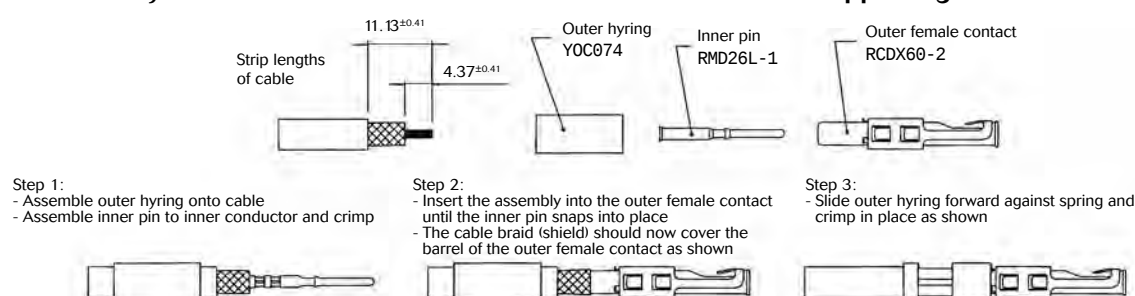
#### Multipiece kit details

|                    |            |                         |
|--------------------|------------|-------------------------|
| RCDXK1D28 includes | RCDX602D28 | Outer contact           |
|                    | RMD26L1D28 | Inner contact           |
|                    | YOC074     | Outer hying             |
|                    | RCDXB0553  | Inner supporting sleeve |

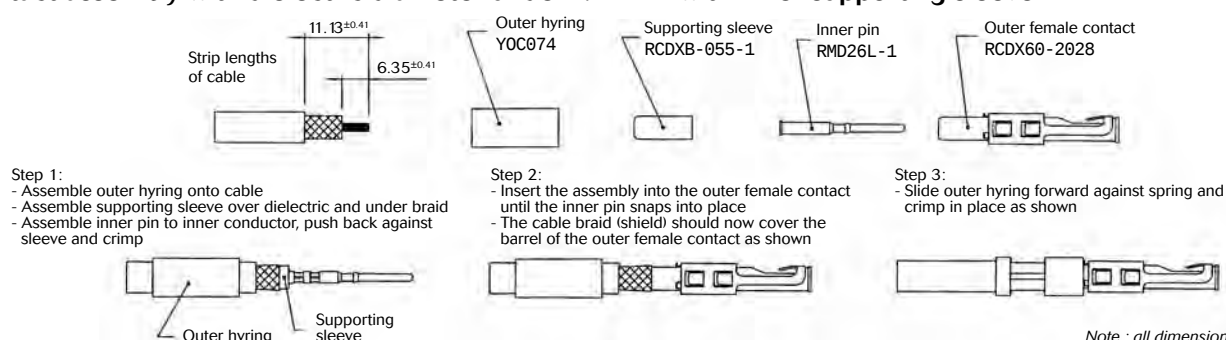
#### Cable strip length



#### Contact assembly with dielectric diameter over 1.4mm - without inner supporting sleeve



#### Contact assembly with dielectric diameter under 1.4mm - with inner supporting sleeve



Note : all dimensions are in mm



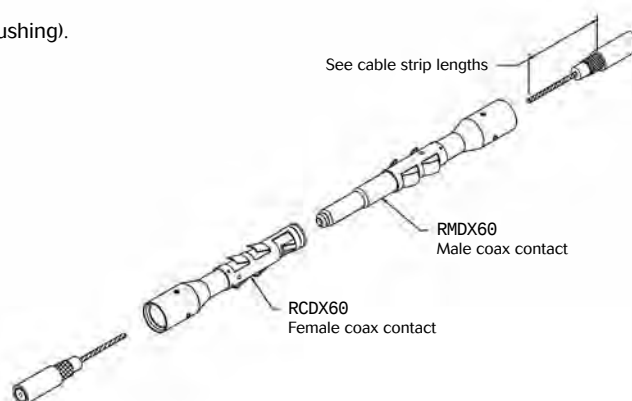
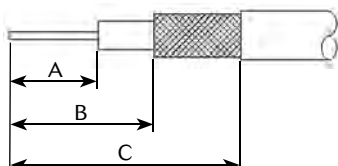
### #16 coaxial contacts

#### Coax cable with monocrimp contact cabling

| Cable reference                     | Male contact | Female contact | Crimp tool | Die set                                                      | Stop bushing | Cable strip length |      |       | Inner conductor crimp |           | Braid crimp |           |
|-------------------------------------|--------------|----------------|------------|--------------------------------------------------------------|--------------|--------------------|------|-------|-----------------------|-----------|-------------|-----------|
|                                     |              |                |            |                                                              |              | A                  | B    | C     | g dim                 | t dim     | g dim       | t dim     |
| CDC PIN22939200                     | RMDX6046D28  | RCDX6016D28    | M10S1J     | S80                                                          | SL105        | 4.19               | 5.97 | 8.51  | 1.30/1.17             | 1.40/1.22 | 2.77/2.64   | 3.02/2.84 |
| CDC PIN22939200                     | RMDX6046D28  | RCDX6016D28    |            | S87                                                          | SL105        | 5.08               | 6.35 | 8.89  | 1.30/1.17             | 1.40/1.22 | 2.77/2.64   | 3.02/2.84 |
| CDC PIN245670000                    | RMDX6050D28  | RCDX6016D28    |            | S80                                                          | SL105        | 5.08               | 6.35 | 8.89  | 1.30/1.17             | 1.40/1.22 | 2.97/2.84   | 3.12/2.95 |
| KX21TVT (europe)<br>RG178 B/U       | RMDX6034D28  | RCDX6034D28    |            | S82                                                          | SL105        | 5.08               | 6.35 | 8.89  | 1.30/1.17             | 1.32/1.17 | 2.84/2.74   | 3.07/2.9  |
| RG178 / BU                          | RMDX6050D28  | RCDX6016D28    |            | S87                                                          | SL105        | 5.08               | 6.35 | 8.89  | 1.30/1.17             | 1.40/1.22 | 2.77/2.64   | 3.02/2.84 |
| ampex                               | RMDX6032D28  | RCDX6032D28    |            | S80                                                          | SL105        | 5.08               | 6.35 | 11.68 | 1.30/1.17             | 1.40/1.22 | 2.97/2.84   | 3.12/2.95 |
| TI PN 920580                        | RMDX6024D28  | RCDX6024D28    |            | S82                                                          | SL105        | 5.08               | 6.35 | 8.89  | 1.35/1.19             | 1.42/1.27 | 2.87/2.74   | 3.07/2.9  |
| RG174/U                             | RMDX6032D28  | RCDX6032D28    |            | S80                                                          | SL105        | 5.08               | 6.35 | 11.68 | 1.30/1.17             | 1.40/1.22 | 2.97/2.84   | 3.12/2.95 |
| Honeywell PN 58000062               | RMDX6026D28  | RCDX6026D28    |            | S82                                                          | SL105        | 5.08               | 6.35 | 8.89  | 1.35/1.19             | 1.42/1.27 | 2.87/2.74   | 3.07/2.9  |
| RG188A/U                            | RMDX6036D28  | RCDX6036D28    |            | S80                                                          | SL105        | 5.08               | 6.35 | 11.68 | 1.30/1.17             | 1.40/1.22 | 2.97/2.84   | 3.12/2.95 |
| RG316/U                             | RMDX6036D28  | RCDX6036D28    |            | S80                                                          | SL105        | 5.08               | 6.35 | 11.68 | 1.30/1.17             | 1.40/1.22 | 2.97/2.84   | 3.12/2.95 |
| PRD PN 247AS-C123-001               | RMDX6018D28  | RCDX6018D28    |            | M10SG8 ASSY'Y<br>TOOL DIE SET<br>STOP BUSHING<br>M10S1J TOOL |              | 5.08               | 6.35 | 8.89  | 1.22/1.17             | 1.35/1.22 | 2.92/2.79   | 3.12/2.97 |
| PRD PN 247AS-C1251                  | RMDX6018D28  | RCDX6018D28    |            | M10SG8 ASSY'Y<br>TOOL DIE SET<br>STOP BUSHING<br>M10S1J TOOL |              | 5.08               | 6.35 | 8.89  | 1.22/1.17             | 1.35/1.22 | 2.92/2.79   | 3.12/2.97 |
| raychem 5024A3111                   | RMDX6052D28  | RCDX6052D28    |            | S88                                                          | SL105        | 5.08               | 6.35 | 11.68 | 1.37/1.27             | 1.45/1.32 | 2.92/2.79   |           |
| raychem 5026e1614                   | RMDX6036D28  | RCDX6036D28    |            | M10SG8 ASSY'Y<br>TOOL DIE SET<br>STOP BUSHING<br>M10S1J TOOL |              | 5.08               | 6.35 | 8.89  | 1.22/1.17             | 1.35/1.22 | 2.92/2.79   | 3.12/2.97 |
| JUDD C15013010902                   | RMDX6036D28  | RCDX6036D28    |            | M10SG8 ASSY'Y<br>TOOL DIE SET<br>STOP BUSHING<br>M10S1J TOOL |              | 5.08               | 6.35 | 8.89  | 1.22/1.17             | 1.35/1.22 | 2.92/2.79   | 3.12/2.97 |
| inner cond. #30,<br>braid diam 2.64 | RMDX6050D28  | -              |            | S80                                                          | SL105        | 5.1                | 6.35 | 8.9   | -                     | -         | -           | -         |
| inner cond. #30,<br>braid diam 2.29 | RMDX6050D28  | -              |            | S87                                                          | SL105        | 4.2                | 6.35 | 8.5   | -                     | -         | -           | -         |
| inner cond. #28,<br>braid diam 2.9  | RMDX6032D28  | RCDX6032D28    |            | S80                                                          | SL105        | 5.1                | 6.35 | 11.7  | -                     | -         | -           | -         |
| inner cond. #26,<br>braid diam 1.78 | RMDX6024D28  | RCDX6024D28    |            | S82                                                          | SL105        | 5.1                | 6.35 | 8.9   | -                     | -         | -           | -         |
| inner cond. #26,<br>braid diam 3.05 | RMDX6026D28  | RCDX6026D28    |            | S82                                                          | SL105        | 5.1                | 6.35 | 8.9   | -                     | -         | -           | -         |

- Select appropriate cable and contact combination.
- Select appropriate crimp tooling (hand tool, S-die set, stop bushing).
- Strip coax cable to the designated wire strip lengths.
- Insert the stripped coax into the rear of the contact.
- Crimp the contact.

Cable strip length



Note : all dimensions are in mm



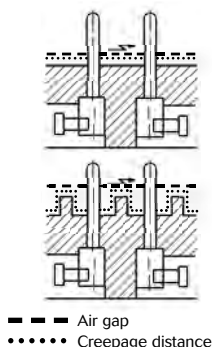
### Glossary of terms

- **Clearance**

Per the IEC 60664-1 it is the shortest distance between two conductive parts even over the air.

- **Creepage distance**

Per the IEC 60664-1 it represents the shortest distance along the surface of the insulating material between two conductive parts.



- **Working voltage**

Per the IEC 60664-1 it is the highest r.m.s. value of A.C. or D.C. voltage across any particular insulation which can occur when the equipment is supplied at rated voltage.

- **Rated impulse voltage**

Impulse withstands voltage value assigned by the manufacturer to the equipment or to a part of it characterizing the specified withstand capability of its insulation against transient overvoltage.

- **Working current**

It is the maximum continuous and not interrupted current able to be carried by all contacts without exceeding the maximum temperature of the insulating material.

- **Transient voltage**

Extract from the IEC 60664-1: Short duration overvoltage of a few millisecond or less, oscillatory or non-oscillatory, usually highly damped.

- **CTI (Comparative Tracking Index)**

The CTI value is commonly used to characterize the electrical breakdown properties of an insulating material. It allows users to know the tendency to create creepage paths. This value represents the maximum voltage after 50 drops of ammonium chloride solution without any breakdown.

- **RTI (Relative temperature Index):**

Extract from ULs website:

"Maximum service temperature for a material, where a class of critical property will not be unacceptably compromised through chemical thermal degradation, over the reasonable life of an electrical product, relative to a reference material having a confirmed, acceptable corresponding performance defined RTI.

- **RTI Elec:** Electrical RTI, associated with critical electrical insulating properties.

- **RTI Mech Imp:** Mechanical Impact RTI, associated with critical impact resistance, resilience and flexibility properties.

- **RTI Mech Str:** Mechanical Strength (Mechanical without Impact) RTI, associated with critical mechanical strength where impact resistance, resilience and flexibility are not essential"

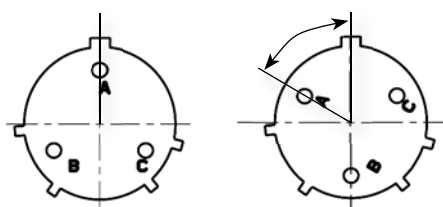


### Discrimination/Keying methods

In applications where similar connectors are used next to each other, mismatching can be a reason for disturbances, system failure or even danger to operating personnel.

To eliminate mismatching, all TRIM TRIO® connectors can be equipped with discrimination keys, which offer unlimited possibilities for an error avoiding interconnection system.

The other way around is to rotate the insert into the shell.



N (Normal)

Other keys

*Note: Insert rotated in body  
(viewed from front face of male insert)*

Connectors with rotated inserts can be ordered by adding the suffix W, X, Y or Z to the standard part number.

e.g. **UTS6JC104S** (N key) → **UTS6JC104SW** (W key)

| Shell size | Layout              | Discrimination keys degrees |      |      |      |
|------------|---------------------|-----------------------------|------|------|------|
|            |                     | W                           | X    | Y    | Z    |
| 8          | 8E2                 | 58°                         | 122° |      |      |
|            | 8E3<br>8E3A         | 60°                         | 210° |      |      |
|            | 8E4                 | 45°                         |      |      |      |
|            | 8E33                | 90°                         |      |      |      |
| 10         | 102W2<br>103<br>104 |                             |      |      |      |
|            | 106<br>10E6<br>10E7 | 90°                         |      |      |      |
|            | 10E98               | 90°                         | 180° | 240° | 270° |
| 12         | 12E2                |                             |      |      |      |
|            | 12E3                |                             |      | 180° |      |
|            | 124<br>128          |                             |      |      |      |
|            | 12E8                | 90°                         | 112° | 203° | 292° |
|            | 1210<br>12E10       | 60°                         | 155° | 270° | 295° |
|            | 12E14               | 45°                         |      |      |      |
| 14         | 14E5                | 40°                         | 92°  | 184° | 273° |
|            | 142G1<br>147        |                             |      |      |      |
|            | 1412                | 60°                         |      |      |      |
|            | 14E12               | 43°                         | 90°  |      |      |
|            | 14E15               | 17°                         | 110° | 155° | 234° |
|            | 14E18               | 15°                         | 90°  | 180° | 270° |
|            | 1419                | 30°                         | 165° | 315° |      |
|            | 14E19               | 30°                         | 165° | 315° |      |
| 18         | 18E11               | 62°                         | 119° | 241° | 340° |
|            | 1823                |                             | 158° |      | 270° |
|            | 18E30               | 180°                        | 193° | 285° | 350° |
|            | 1832<br>18E32       | 85°                         | 138° | 222° | 265° |



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# UTS Series

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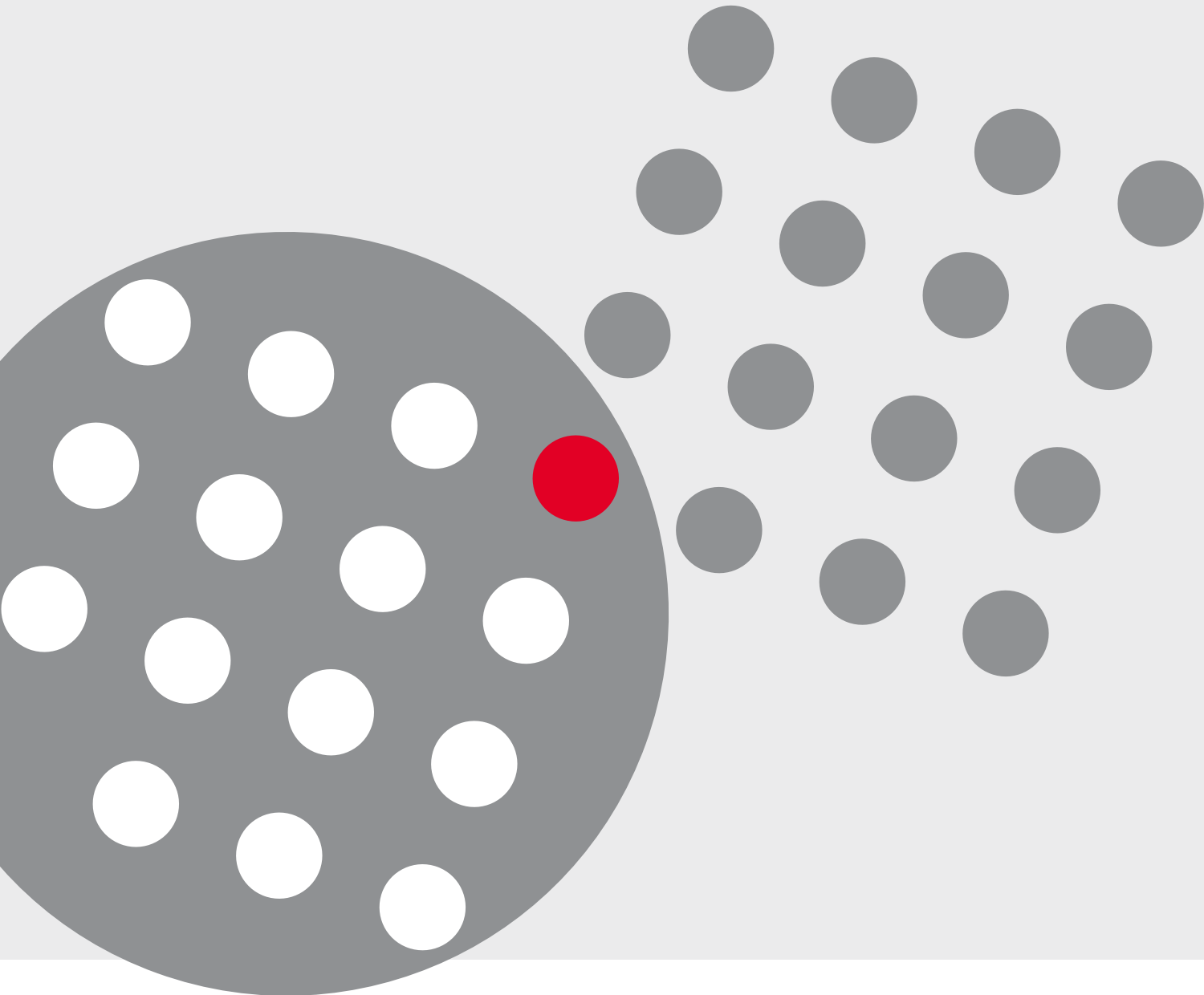
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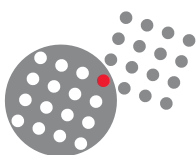
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