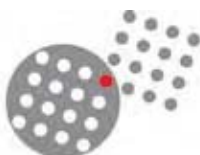


# UTS series IP68 / IP69K Plastic Connectors

Part of the TRIM TRIO® interconnect system



**SOURIAU**  
Connection Technology



# Overview

## UTS contact arrangements

Size 8						
<b>2</b>	<b>3</b>	<b>3A/98</b>	<b>4</b>	<b>33</b>		
Contacts : 2 Ø 1 (#20)	Contacts : 3 Ø 1 (#20)	Contacts : 3 Ø 1 (#20)	Contacts : 4 Ø 1 (#20)	Contacts : 3 Ø 1 (#20)		

Size 10						
<b>2W2</b>	<b>3 (2+PE)</b>	<b>3W3</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>98</b>
Contacts : 2 Ø2.4 (#12) 2 Ø1.0 (#20)	Contacts* : 3 Ø 1.6 (#16)	Contacts : 3 Ø 1.6 (#16) 3 Ø 1.0 (#20)	Contacts : 4 Ø 1.6 (#16)	Contacts : 6 Ø 1 (#20)	Contacts : 7 Ø 1 (#20)	Contacts : 6 Ø 1 (#20)

Size 12						
<b>2</b>	<b>3</b>	<b>4 (3+PE)</b>	<b>8</b>	<b>8</b>	<b>10</b>	<b>14</b>
Contacts : 2 Ø 1.6 (#16)	Contacts : 3 Ø 1.6 (#16)	Contacts* : 4 Ø 1.6 (#16)	Contacts : 8 Ø 1.6 (#16)	Contacts : 8 Ø 1 (#20)	Contacts : 10 Ø 1 (#20)	Contacts : 14 Ø 1 (#20)

Size 14						
<b>5</b>	<b>7 (6+PE)</b>	<b>12</b>	<b>12</b>	<b>15</b>	<b>18</b>	<b>19</b>
Contacts : 5 Ø 1.6 (#16)	Contacts* : 7 Ø 1.6 (#16)	Contacts : 12 Ø 1.6 (#16)	Contacts : 8 Ø 1 (#20) 4 Ø 1.6 (#16)	Contacts : 14 Ø 1 (#20) 1 Ø 1.6 (#16)	Contacts : 18 Ø 1 (#20)	Contacts : 19 Ø 1 (#20)

\* Arrangements with advanced grounding cavity (For other arrangements, First Mate, Last Break contacts are available - see from page 27)

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



# Overview

**Size 18**

<b>11</b>	<b>23</b>	<b>32</b>	<b>30</b>	<b>RJ45</b>
Contacts : 11 Ø 1.6 (#16)	Contacts : 23 Ø 1.6 (#16)	Contacts : 32 Ø 1 (#20)	Contacts : 29 Ø 1 (#20) 1 Ø 1.6 (#16)	

- UTS standard version
- UTS Hi seal version
- ▲ UTS discrete wire sealing version
- UTS with screw contact termination
- In-Line version

For specific arrangements, please consult us

## Working voltage according to VDE & UL standards

			VDE0110	UL1977
			Overvoltage class III, pollution degree 2 / IEC 60664-1 (equivalent)	Type 2
#16 Ø 1.6 mm	Shell size	Nb of contacts	320 V*	500 V**
	10	3	400 V*	
	12	4	125 V	500 V**
	14	7	125 V	
	18	23 <sup>1</sup>	200 V	
	#20 Ø 1.0 mm	10	4	50 V
12		8	200 V	
14		19	50 V	
18		32 <sup>1</sup>	50 V	
Mixed <sup>1</sup>	10	2W2 2 x #12 2 x #20	500 V	250 V
	10	3W3 3 x #16 3 x #20	500 V	

<sup>1</sup> Not certified

Note : all the written working voltage are in Volts AC/DC

\* tested by the VDE organism

\*\* certified by the UL organism (only for shell size 10, 12 & 14)

UTS : Your first choice in waterproof connectors !



# UTS series

## Major features & benefits



### Rapid & secure locking system

- ➡ Confidence that the connector is properly mated
- ➡ Easy to connect in difficult places
- ➡ Minimalised operator fatigue
- ➡ Labor saving

Rapid mating with 1/3 turn with an audible & sensitive "click"



### Rapid and secure panel mounting

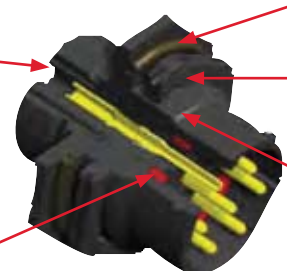
Rear panel mount solution suitable for pre-harnessing and PCB mounting

Captive panel seal

Robust jam nut to guarantee a rapid, secure and vibration proof panel mounting

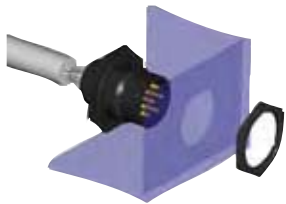
D-shape panel cut to ensure correct mounting and to prevent the connector from rotating

O-ring seal to guarantee sealing between receptacle and plug

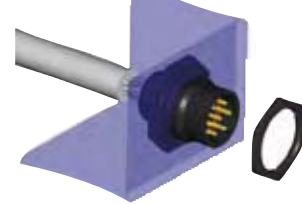


#### Assembly procedure of jam nut receptacle

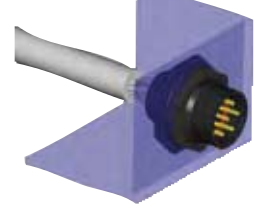
Step 1



Step 2

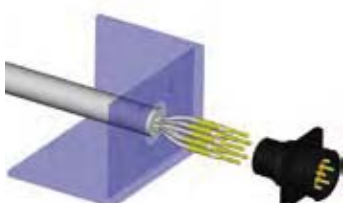


Step 3



#### Assembly procedure of square flange receptacle

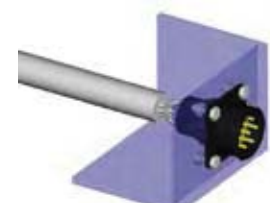
Step 1



Step 2



Step 3




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





# UTS series

**Ergonomic plug design with maximized cabling space and minimized connector length**




«Easy grip» bayonet coupling ring to allow quick and secure mating

Colored rings available for visual identification (see accessories page 72)

O-ring seal to guarantee sealing between plug and backshell

**Backshells ... accepting a wide range of cables**




Wide cable range

Size 8	1.5 to 6.5 mm
Size 10	1.5 to 8.0 mm
Size 12	3.0 to 12.0 mm
Size 14	5.0 to 14.0 mm
Size 18	7.0 to 18.0 mm

Low installed cost with reduced number of components


**Sealing caps ... easy to install ... at any time**

➡ Receptacle sealing cap



- easy attachment to connector at any time

➡ Plug sealing cap



- easy attachment to connector at any time

Sealing cap  
(other sealing caps see page 71)

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



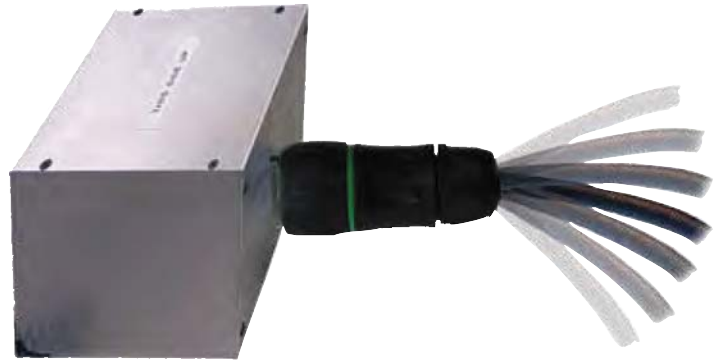
## Extreme environmental sealing performance

➡ IP68 / IP69K sealing ... even in dynamic situations

➡ Dynamic IP68

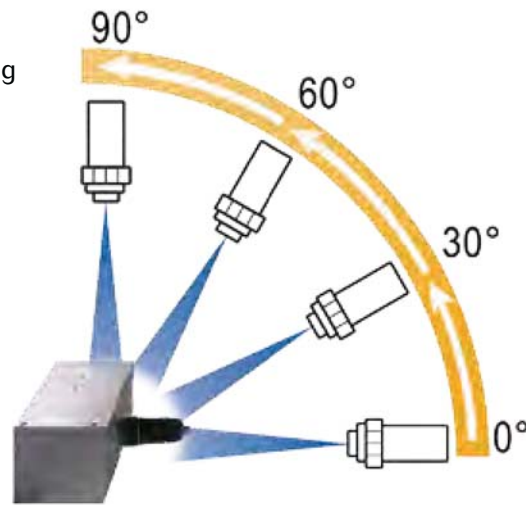
Connector will remain IP68 even when:

- Pulling on the cable
- Bending the cable



➡ Dynamic IP69K

Connector withstands high pressure water cleaning



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



## Description

### IP68/IP69K - Plastic connector

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

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



## Technical characteristics

### Mechanical

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

### Electrical

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

### Environmental

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

### Material

- Connectors + Backshell: Thermoplastic

### Contact accommodation

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

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

## Ordering information

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

UTS : Your first choice in waterproof connectors !













# UTS

## UTS contact arrangements




**Size 10**

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



**Size 12**

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

**Size 14**

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

**Size 18\*\***

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

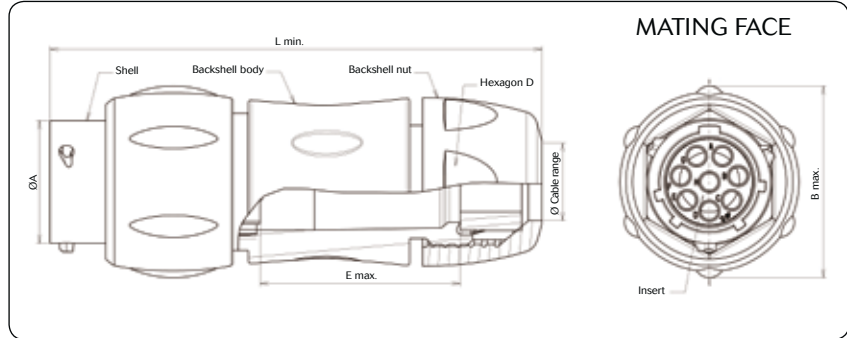
\* Arrangements with advanced grounding cavity  
 \*\* For In-line version shell size 18, please consult us

All arrangements are available in plug and jam nut versions.  
 Arrangements marked with ♦ are available in square flange version as well.

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



## In-line receptacle for pin & socket contacts

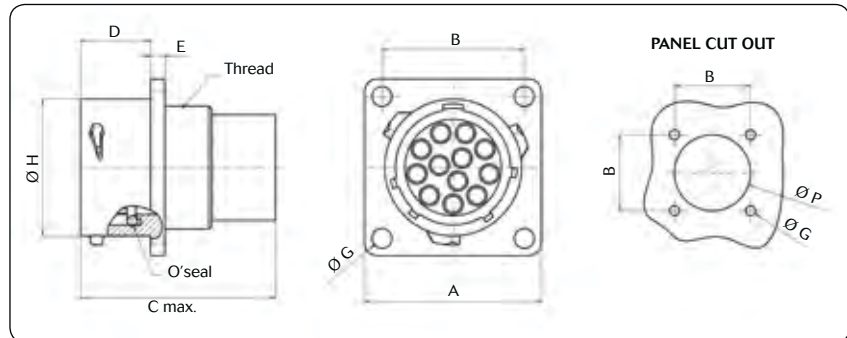


Shell size	Part numbers		Ø A	L min.	B max	Ø Cable range Standard seal	Ø Cable range Reducing seal	Hexagon D	E max	
	Male contact	Female contact							Male	Female
10	UTS1JC10 --- P	UTS1JC10 --- S	14.9	70.0	26.7	2.5/8.0	1.5/5.0	18.5	31.0	38.0
12	UTS1JC12 --- P	UTS1JC12 --- S	19.0	74.0	30.1	5.0/12.0	3.0/9.0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

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



## Square flange receptacle



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

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

## UTS : Your first choice in waterproof connectors !