

New TRIM TRIO®



RoHS  
Compliant

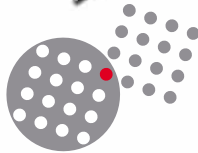
# UTS series

IP68 / IP69K Plastic Connector

• Rapid

• Secure

• High Performance



**SOURIAU**  
Connection Technology



# Company Profile

## SOURIAU

*Connectors and interconnect systems for harsh environments*

*The company designs, manufactures and markets high performance interconnect solutions for severe environments from industrial broadband and universal ranges to complex system with integrated functions: filtering, high speed data transmission, hermetic seal, separation mechanism, remote handling, underwater mating, ...*



*Industrial*



*Aeronautical*



*Equipment & system*

*The dedicated end markets for SOURIAU's products are aeronautical, defense-space and industrial*



*Railway  
Geophysics  
Manufacturing environment  
Instrumentation  
Automation & process*



*Civil & military aircraft  
Helicopter  
Weapon delivery system  
Avionics*



*Military marine  
Communications  
Satellites  
Launcher & missile*

*SOURIAU was established in 1917 and has been created by successive acquisitions of the industrial, aeronautical, defense and space activities of SOURIAU, JUPITER and BURNDY.*

*The Group's products are engineered and manufactured in the USA and Dominican Republic, Europe and Morocco, Japan and India, and sold by a worldwide sales and marketing organization, and in addition to SOURIAU's offices, a large network of licensed distributors and agents.*

*SOURIAU complies with most of national and international Quality Assurance Standards, production unit with ISO 14001*

**Quality Certificate  
Management System**

**ISO 9001**

**Environment Certificate  
Management System**

**ISO 14001**

**Quality Certificate  
Management System**

**Aeronautic Industry : EN 9100**

# UTS



## Contents

<b>Company profile</b> .....	2	Ergonomic plug.....	10
<b>Contents</b> .....	3	Backshells.....	10
<b>Description</b> .....	3	Sealing caps.....	10
<b>Overview TRIM TRIO®</b> .....	4	<b>UTS</b>	<b>11-16</b>
<b>Major features &amp; benefits</b>	<b>5-9</b>	Technical characteristics.....	11
Contact styles.....	5	Cable plug.....	12
Rapid and secure locking system....	6	Jam nut receptacle.....	13
Rapid and trouble free service.....	6	PCB jam nut receptacle.....	14
Extreme sealing performance.....	7	Accessories.....	15
Contact arrangements.....	8	What sealing is....	16
Rapid and secure panel mounting...	9	Industrial applications.....	17
PCB receptacle.....	9		

## Description

### IP68 / IP69K plastic circular connector with rapid locking system

“UTS” is the latest addition to the well known TRIM TRIO® interconnect system.

‘UTS’ is a range of Industrial circular multiway connectors available in 3 shell sizes and 9 contact arrangements.

The keywords for the new UTS are: Rapid – Secure – High performance

#### • Rapid

Rapid refers to the locking system and the total installed cost starting with the wiring & cabling and ending with the installation to the customers equipment. Rapid also refers to the total service on price request, samples and production deliveries.

#### • Secure

The secure locking system together with the secure and versatile TRIM TRIO® contacts are giving confidence to both the connection and the customers equipment.

Moreover UTS is part of the well known TRIM TRIO® interconnect system with its more then 40 years of field experience.

#### • High Performance

Extreme performance on water protection even in dynamic situations this in combination with a rapid and secure locking system makes UTS suitable for any high performance application.

UTS provides a connection that performs faster, easier, safer and more reliable, it makes :

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

# UTS - Part of TRIM TRIO® interconnect system

## Overview

UTS\* series  
Plastic  
IP68  
IP69K



UTO\* series  
Metal shielded  
IP67/IP68  
IP69K



UTG series  
Metal locking  
IP65



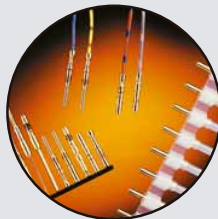
UTP series  
Plastic  
IP65



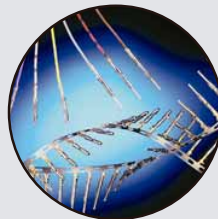
MBG series  
Push pull  
Min 5000  
matings



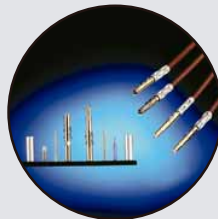
Size16 contacts (1,6 mm)



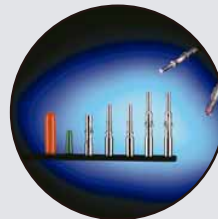
Machined



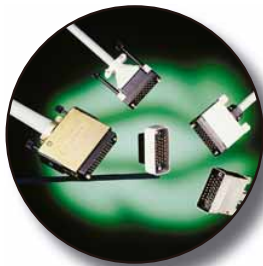
Stamped & formed



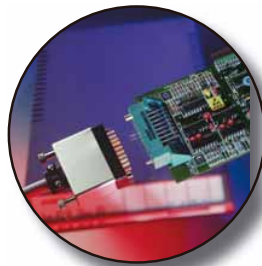
Coax\*\*



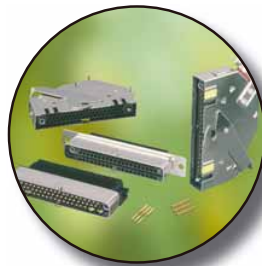
Fiber optic\*\*



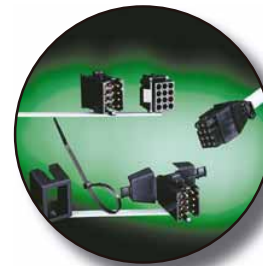
MSM/MS0series  
Cable & boardmount  
Jackscrew locking



V.35 series  
DTE/DCE  
Modem interface



MSG/MB series  
Cable & boardmount  
Lever locking



SMS series  
Cable & boardmount  
Rapid mating

\* Size 20 available for UTO & UTS

\*\* Coax & fiber optic available in #16

For more details about TRIM TRIO® connectors, refer to TRIM TRIO® catalogue or visit our website:  
[www.souriau.com](http://www.souriau.com) → products → by connector type → TRIM TRIO®

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

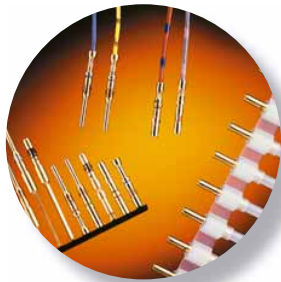
# UTS - Major features and benefits



**Different contact styles, selective loading, easy reparability, rapid crimping...rapid assembly**

## ➤ TRIM TRIO® contacts - The most versatile and modular contacts concept

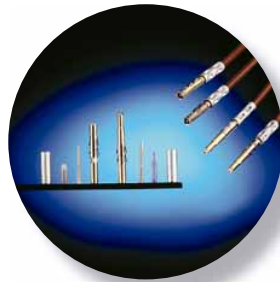
- Available in 4 different contact styles
- Suitable for field service and maintenance
- Combine all contact styles in same connector
- Established for more than 40 years



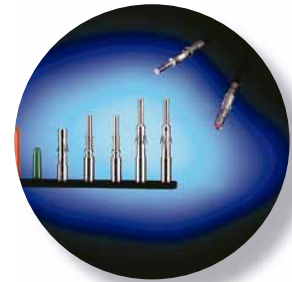
Machined



Stamped



Coax



Fiber optic

## ➤ Rapid crimping with TRIM TRIO® contacts

- Reliable and trouble free crimping
- Hand tools for maintenance and production
- Semi automatic bench press & applicators
- Stripper crimpers
- Contacts to be ordered separately
- Refer to TRIM TRIO® catalogue

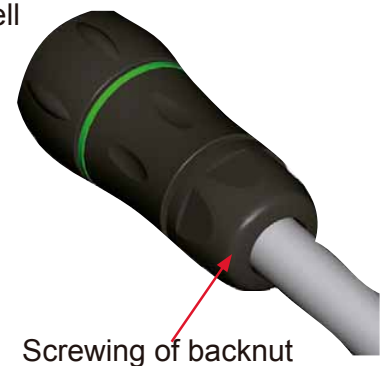
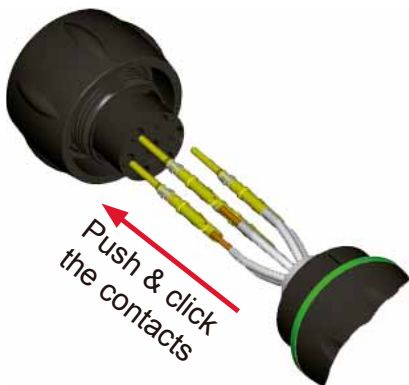


## ➤ Rapid assembly of contacts

- Push the contact in the cavity until it clicks»
- Selective loading
- Easy to repair

## ➤ Rapid assembly of backshell

- Limited number of components
- Integrated cable gland
- Backshell suitable for a wide range of cables



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

# UTS - Major features and benefits



## Rapid and secure locking system

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



## Rapid and trouble free service

- ➡ Fast delivery of samples, quotes and production volumes

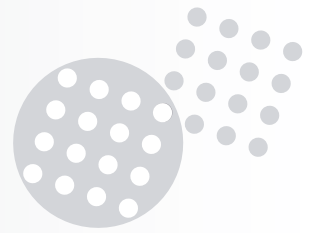
Worldwide network of:

- Sales units
- Distributors
- Agents



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

# UTS - Major features and benefits



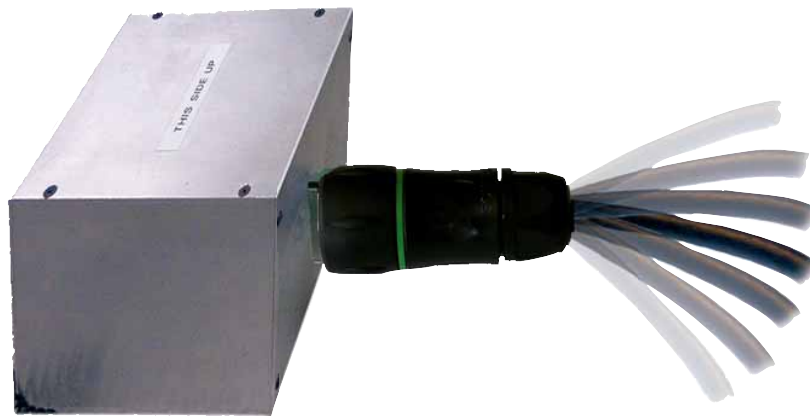
## Extreme environmental sealing performance

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

#### Dynamic IP68\*

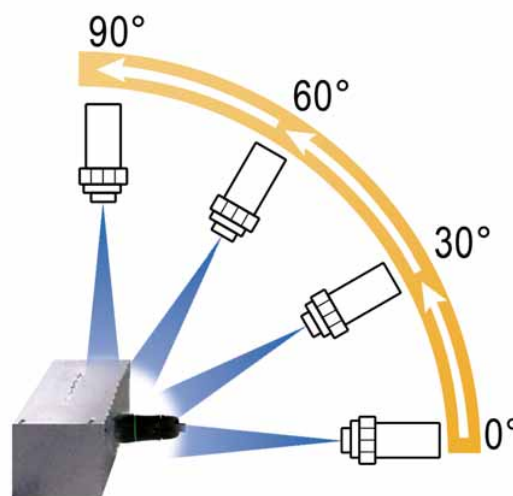
Connector will remain IP68 even when:

- Pulling on the cable
- Bending the cable



#### Dynamic IP69K\*

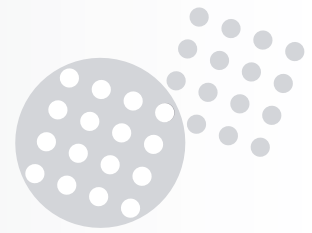
Connector withstands high pressure water cleaning



\* See table page 16 for more details

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

# UTS - Major features and benefits

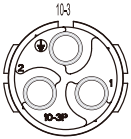
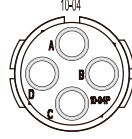
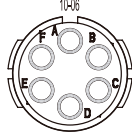
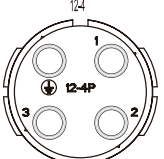
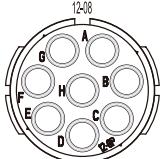
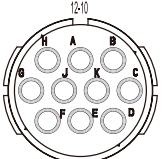
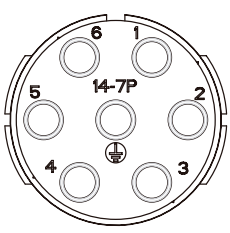
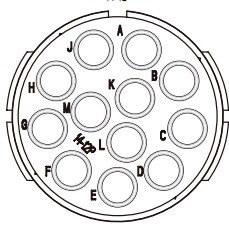
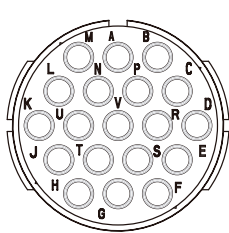


## Multiple contact arrangements with VDE 0110 performances

### Multiple contact arrangements within same connector size

- Different levels of current and rated voltages per VDE 0110
- Available in male and female gender
- Custom version upon request such as:
  - Mixed contact sizes
  - Power versions
  - High speed versions (RJ45, USB, BNC), upon request

### UTS insert arrangements, contact size, rated voltage per VDE 0110 & current ratings

Contact size	# 16 (dia. 1.6mm)		#20 (dia. 1.0mm)
Rated voltage	250 V	125 V	125 V
Overvoltage category	III	III	III
Pollution degree	3	3	3
Size 10	* 		
Number of contacts	3 (2+ grounding)	4	6
Max current (per contact)	13A (machined + stamped)	13A (machined + stamped)	7.5A (machined) / 5A (stamped)
Size 12	* 		
Number of contacts	4 (3 + grounding)	8	10
Max current (per contact)	13A (machined + stamped)	13A (machined + stamped)	7.5A (machined) / 5A (stamped)
Size 14	* 		
Number of contacts	7 (6 + grounding)	12	19
Max current (per contact)	13A (machined + stamped)	13A (machined + stamped)	7.5A (machined) / 5A (stamped)

\* Arrangements with advanced grounding cavity.

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



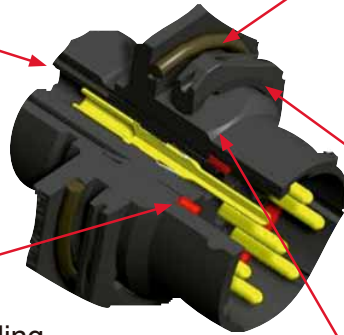
# UTS - Major features and benefits



## Rapid and secure panel mounting

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

**Captive** panel seal to prevent misalignment



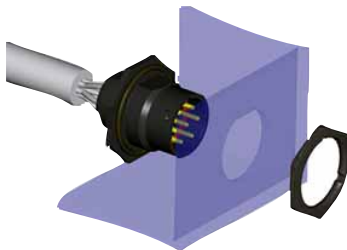
**Robust jam nut** to guarantee a rapid, secure and vibration proof panel mounting

**O-ring seal** to guarantee sealing between receptacle and plug

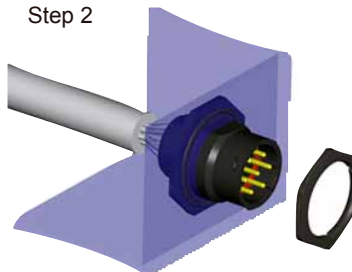
**D-shape panel cut** to ensure correct mounting and to prevent the connector from rotating

### Assembly procedure of jam nut receptacle

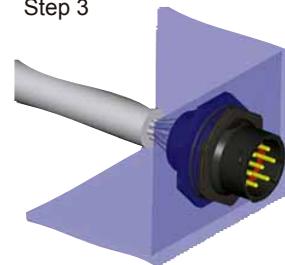
Step 1



Step 2



Step 3

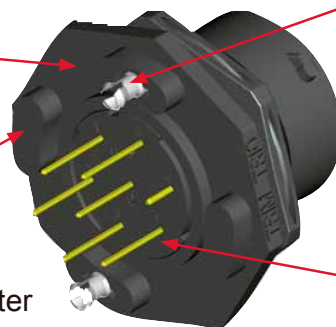


## PCB receptacle...low profile with rapid installation features

**Low profile housing** to limit space between panel and PCB

**Metal hold down clips**

- to lock the connector easily on the PCB and to release stress on solder joints
- Suitable for soldering in a metallised hole



**Pre-assembled PCB contacts**

- machined or stamped versions available
- different solder tails lengths possible
- different plating options

**Stand-offs** to allow cleaning after soldering

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

# UTS - Major features and benefits



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



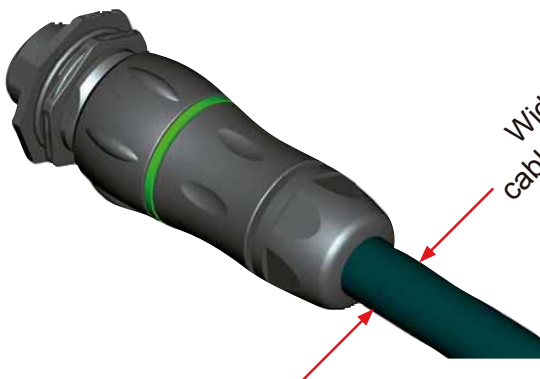
**O-ring seal** to guarantee sealing between plug and backshell

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

**Colored rings** available for visual identification (See accessories page 15)



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



Wide cable range

Size 10	2.5 to 8.0 mm
Size 12	3.0 to 12.0 mm
Size 14	5.0 to 14.0 mm

**Low installed cost** with reduced number of components



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

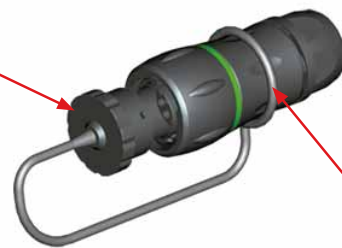
➡ **Receptacle sealing cap**



- easy attachment to connector at any time

Sealing cap

➡ **Plug sealing cap**



- easy attachment to connector at any time

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

# UTS



## Technical characteristics

### MECHANICAL

- Durability: 250 matings & unmatings
- Vibration resistance: Per CEI 60512-4
- Thermal shock: Per MIL-STD1344 method 1003

### ELECTRICAL

- Insulation resistance: 5000 MΩ min
- Test potential: 2000 VAC
- As per VDE specifications (see page 8 for more details)

### ENVIRONMENTAL

- Operating temp: -40°C to + 105°C
- Flammability rating: UL94V0 and NFF16101 level 2
- Sealing (mated): Dynamic IP68 – 10m 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 ISO 4892)
- Salt spray: 500 hours

### MATERIAL

- Connectors + Backshell: Thermoplastic



### PLATING (only for PCB version)

- Plating for machined contacts: min 0.4 μ gold all over
- Plating for stamped contacts: Min 0.4 μ gold in contact area  
3 – 5 μ tin on solder tail

Other platings upon request

### CONTACT ACCOMMODATION

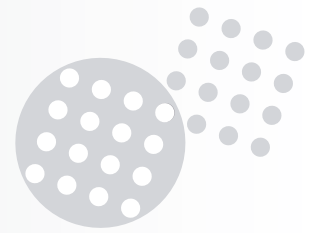
- “UTS” connectors accept TRIM TRIO® size 16 or size 20 (depending on arrangement) removable snap-lock contacts
- Contacts to be ordered separately (except PCB versions)
- Refer to TRIM TRIO® catalog for details or visit our website:

[www.souriau.com](http://www.souriau.com) → products → by connector type → TRIM TRIO® → contacts

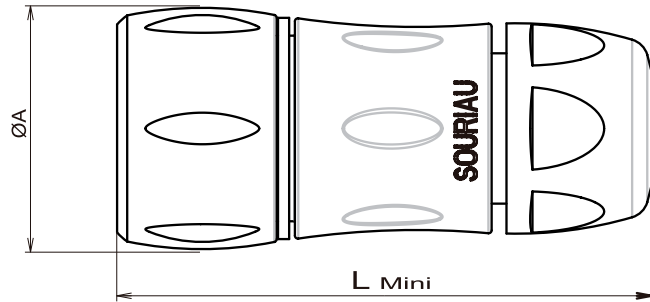
In accordance with UL requirements

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

# UTS



## Cable plug with backshell for pin and socket contacts (UTS6JC...P / UTS6JC...S)



Each plug has 2 seals to cover the specified cable range (See table below).  
The standard seal is preassembled  
The second seal is supplied as loose piece together with a plug.

PN pin contact	PN socket	Nb of contacts x contact Ø	Shell size	L	Ø A	Ø Cable range
UTS6JC103P	UTS6JC103S	3 x 1.6 mm	10	63.2	26.2	1.5 to 5.0 2.5 to 8.00 (standard)
UTS6JC104P	UTS6JC104S	4 x 1.6 mm				
UTS6JC106P	UTS6JC106S	6 x 1.0 mm				
UTS6JC124P	UTS6JC124S	4 x 1.6 mm	12	66.7	29.7	3.0 to 9.0 5.0 to 12.0 (standard)
UTS6JC128P	UTS6JC128S	8 x 1.6 mm				
UTS6JC1210P	UTS6JC1210S	10 x 1.0 mm				
UTS6JC147P	UTS6JC147S	7 x 1.6 mm	14	71.5	34.6	5.0 to 12.0 7.0 to 14.0 (standard)
UTS6JC1412P	UTS6JC1412S	12 x 1.6 mm				
UTS6JC1419P	UTS6JC1419S	19 x 1.0 mm				

For more detail on contact arrangements, see page 8.

Coloured ring supplied as optional extra (See page 15).

Contacts to be ordered separately.

For more details about TRIM TRIO® connectors, refer to TRIM TRIO® catalogue or visit our website:  
[www.souriau.com](http://www.souriau.com) → products → by connector type → TRIM TRIO® → contacts

*Note: All dimensions are in mm.*

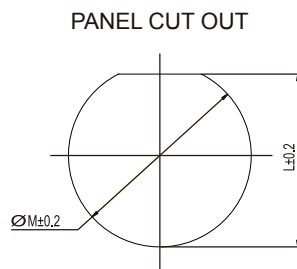
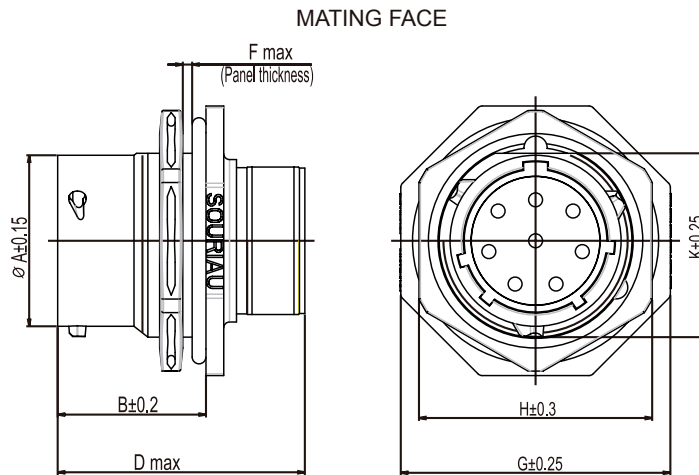
*Dimensions are not contractual and may be subject to modifications.*

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

# UTS



## Jam nut receptacle (wire version) for pin and socket contacts (UTS7...P / UTS7...S)



PN pin contact	PN socket	Nb of contacts x contact Ø	Shell size	Ø A	B	D Max	F Max	G	H	K	L	Ø M
UTS7103P	UTS7103S	3 x 1.6 mm	10	14.9	19.3	33.9	3.2	27.0	22.2	16.6	16.5	17.7
UTS7104P	UTS7104S	4 x 1.6 mm										
UTS7106P	UTS7106S	6 x 1.0 mm										
UTS7124P	UTS7124S	4 x 1.6 mm	12	19.0	19.3	33.9	3.2	31.8	27.0	20.8	21.2	22.5
UTS7128P	UTS7128S	8 x 1.6 mm										
UTS71210P	UTS71210S	10 x 1.0 mm										
UTS7147P	UTS7147S	7 x 1.6 mm	14	22.2	19.3	33.9	3.2	34.9	30.2	23.9	24.3	25.7
UTS71412P	UTS71412S	12 x 1.6 mm										
UTS71419P	UTS71419S	19 x 1.0 mm										

For more detail on contact arrangements, see page 8.

Coloured ring supplied as optional extra (See page 15).

Contacts to be ordered separately.

For more details about TRIM TRIO® connectors, refer to TRIM TRIO® catalogue or visit our website:  
[www.souriau.com](http://www.souriau.com) → products → by connector type → TRIM TRIO® → contacts

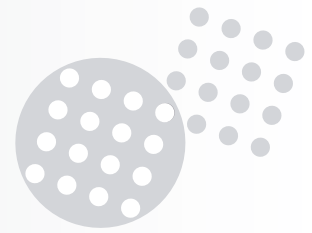
Note: All dimensions are in mm.

Dimensions are not contractual and may be subject to modifications.

For free hanging applications, connector can be equipped with the same backshell as for the plug (please consult us).

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

# UTS

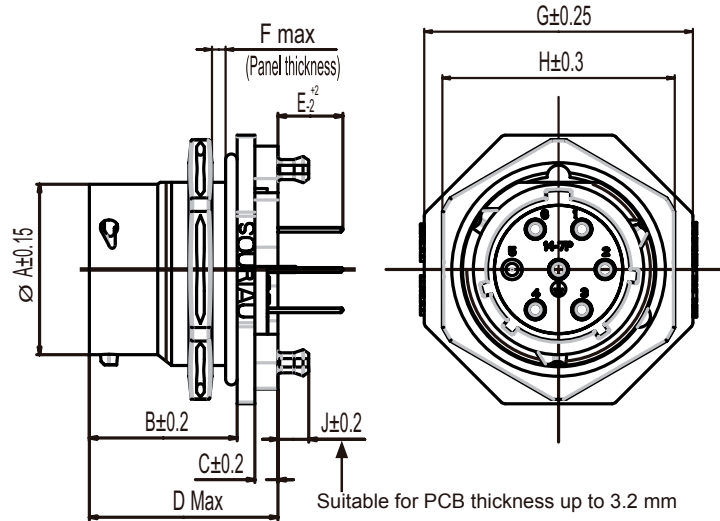


## PCB jam nut receptacle for male contacts

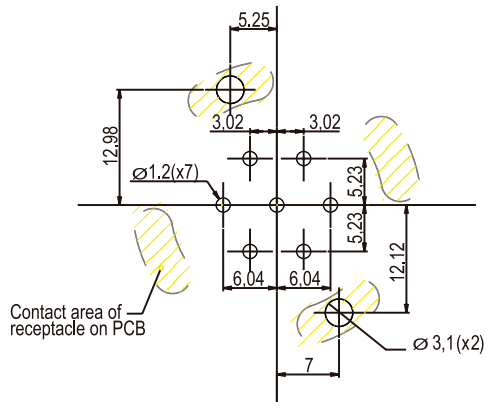
UTS7147PSEK9



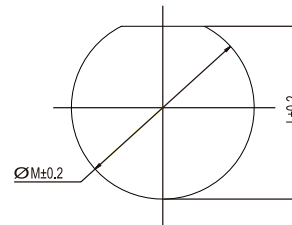
MATING FACE



DRILLING PATTERN



PANEL CUT OUT



Shell size	Ø A	B	C	D Max	E	F	G	H	J	L	Ø M
14	22.2	19.3	3	24.5	3.6	3.2	34.9	30.2	4	24.3	25.7

Other arrangements upon request.

Stamped and formed contacts.

Plating:

K9 (std) = Min 0.4µ Gold in contact area,

3 - 5µ Tin on solder tail

T = 3 - 5µ Tin all over

Note: All dimensions are in mm.

Dimensions are not contractual and may be subject to modifications.

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



## Accessories

### Receptacle sealing cap



#### Part numbers

Size 10: UTS10DCG  
Size 12: UTS12DCG  
Size 14: UTS14DCG

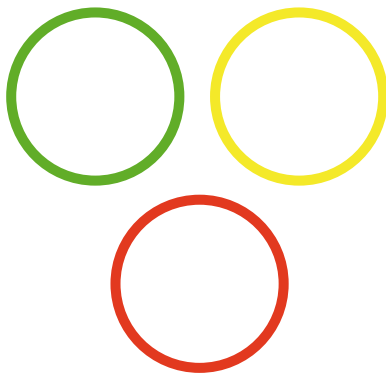
### Plug sealing cap



#### Part numbers

Size 10: UTS610DCG  
Size 12: UTS612DCG  
Size 14: UTS614DCG

### Colour coding rings



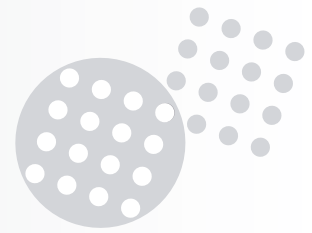
#### Part numbers for receptacle

Size 10: UTS710CCR\*  
Size 12: UTS712CCR\*  
Size 14: UTS714CCR\*  
\* Add G for Green, Y for Yellow, R for Red

#### Part numbers for plug

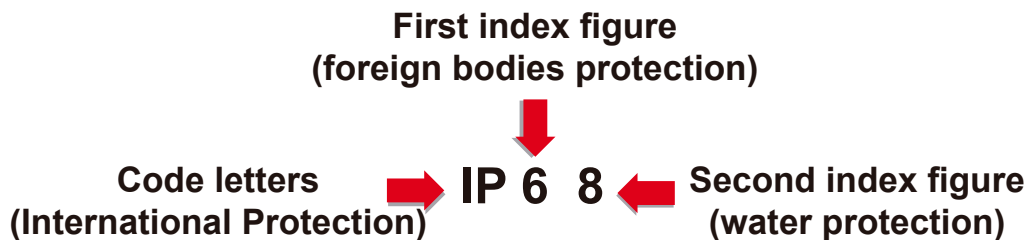
Size 10: UTS610CCR\*  
Size 12: UTS612CCR\*  
Size 14: UTS614CCR\*  
\* Add G for Green, Y for Yellow, R for Red

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



## What is sealing and how it is specified

- The connector's housing, sealing and locking mechanism protect the connection from external influences such as mechanical shocks, foreign bodies, humidity, dust, water and other fluids.
- The degree of protection is explained in IEC 60529, DIN EN60529 (DIN 40050) standards that categorize connections according to foreign body and water protection.
- The degree of protection is indicated by IP (International Protection) followed by 2 digits (See example below):



Index figure	Degree of protection	Index figure	Degree of protection
0	No protection against accidental contact. 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 50mm.	1	Drip-proof. Protection against vertical water drips.
2	Protection against contacts with the fingers. Protection against solid foreign bodies with a diameter bigger than 12mm.	2	Drip-proof. Protection against water drips up to a 15° angle.
3	Protection against tools, wires or similar objects with a diameter bigger than 2.5mm.. Protection against small solid bodies with a diameter bigger than 2.5mm.	3	Spray-proof. Protection against diagonal water drips up to a 60° angle.
4	As 3 however diameter is bigger than 1mm.	4	Splash-proof. Protection against splashed water from all directions.
5	Full protection against contacts. Protection against interior injurious dust deposits.	5	Hise-proof. Protection against water (out of a nozzle) from all directions.
6	Total protection against contacts. Protection against penetration of dust.	6	Protection against temporary flooding.
		7	Protection against temporary immersions.
		8	Protection against water pressure. Pressure to be specified by supplier.
		9K	High pressure hose-proof. Protection against high pressure water (out of a nozzle) from all directions.

↓

UTS offers high sealing performance IP68 / IP69K...  
Even in dynamic situations. ←

SOURIAU reserves the right to make any engineering refinements, alterations or improvements deemed necessary on its products.  
The dimensions appearing in this catalogue are thus subject to change without notice. When dimensions are critical detailed drawings should be requested.

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









# UTS - Suitable for a broad range of applications

Tunnel fans



Meteorological measurement systems



Traffic control



Its uses are endless!  
here are a few...

Parking detection systems



Videosurveillance



Lifting equipments



Oceanographic instrumentations



Coast guarding equipments

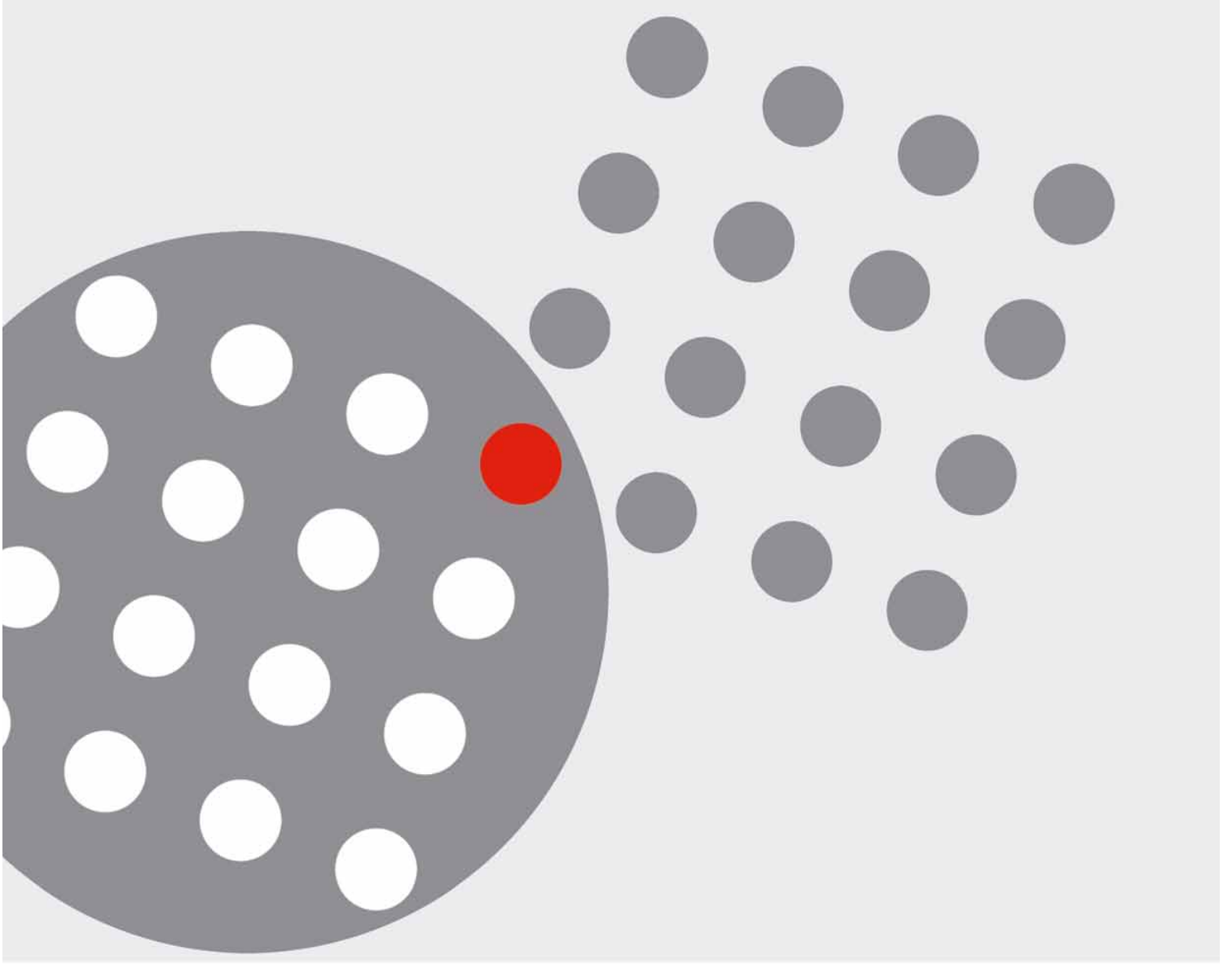


Broadcasting systems

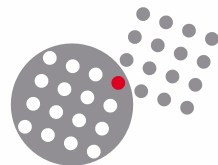


and there is more...:

- street maintenance,
- Wind mills,
- Off road equipment,
- Antenna dish,
- Solar technology,
- Machine tools,
- Lightning / theatre,
- Outdoor advertising,
- Food processing,
- Elevators & lifts,
- Measuring / Test / Inspection,
- Wheel chairs,
- Medical applications,
- etc...



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