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 broadline and universal ranges to complex system with integrated functions: filtering, high speed data transmission, hermetic seal, separation mechanism, remote handling, underwater mating, ...

![Industrial](image)

![Aeronautical](image)

![Equipment & system](image)

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

![Railway](image)

![Geophysics](image)

Manufacturing environment

Instrumentation

Automation & process

![Civil & military aircraft](image)

Helicopter

Weapon delivery system

Avionics

![Military marine](image)

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

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>ISO 9001</td>
<td>ISO 14001</td>
<td>Aeronautic Industry : EN 9100</td>
</tr>
</tbody>
</table>
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 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.

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.

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

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
<th>IP Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTS*</td>
<td>Plastic</td>
<td>IP68, IP69K</td>
</tr>
<tr>
<td>UTG*</td>
<td>Metal shielded</td>
<td>IP67/IP68, IP69K</td>
</tr>
<tr>
<td>UTP</td>
<td>Plastic</td>
<td>IP65</td>
</tr>
<tr>
<td>MBG</td>
<td>Push pull</td>
<td>Min 5000 matings</td>
</tr>
</tbody>
</table>

Size 16 contacts (1,6 mm)

- Machined
- Stamped & formed
- Coax**
- Fiber optic**

- MSM/MS0 series
  - 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 → 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
- Combine all contact styles in same connector
- Suitable for field service and maintenance
- 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 mating with 1/3 turn with an audible & sensitive "click"

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**

<table>
<thead>
<tr>
<th>Contact size</th>
<th># 16 (dia. 1.6mm)</th>
<th>#20 (dia. 1.0mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>250 V</td>
<td>125 V</td>
</tr>
<tr>
<td>Overvoltage category</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td>Pollution degree</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

**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 - 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

1. Step 1
2. Step 2
3. 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 - Major features and benefits

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 15)
- O-ring seal to guarantee sealing between plug and backshell

Backshells...accepting a wide range of cables

- Wide cable range
- Low installed cost with reduced number of components
- Size 10 2.5 to 8.0 mm
- Size 12 3.0 to 12.0 mm
- Size 14 5.0 to 14.0 mm

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

- Receptacle sealing cap
- Plug sealing cap
- Easy attachment to connector at any time

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

**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 ➔ products ➔ by connector type ➔ TRIM TRIO® ➔ contacts

In accordance with UL requirements
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.

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

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 ➔ 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!

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

<table>
<thead>
<tr>
<th>PN pin contact</th>
<th>PN socket</th>
<th>Nb of contacts x contact Ø</th>
<th>Shell size</th>
<th>Ø A</th>
<th>B</th>
<th>D Max</th>
<th>F Max</th>
<th>G</th>
<th>H</th>
<th>K</th>
<th>L</th>
<th>Ø M</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTS7103P</td>
<td>UTS7103S</td>
<td>3 x 1.6 mm</td>
<td>10</td>
<td>14.9</td>
<td>19.3</td>
<td>33.9</td>
<td>3.2</td>
<td>27.0</td>
<td>22.2</td>
<td>16.6</td>
<td>16.5</td>
<td>17.7</td>
</tr>
<tr>
<td>UTS7104P</td>
<td>UTS7104S</td>
<td>4 x 1.6 mm</td>
<td>12</td>
<td>19.0</td>
<td>19.3</td>
<td>33.9</td>
<td>3.2</td>
<td>31.8</td>
<td>27.0</td>
<td>20.8</td>
<td>21.2</td>
<td>22.5</td>
</tr>
<tr>
<td>UTS7106P</td>
<td>UTS7106S</td>
<td>6 x 1.0 mm</td>
<td>14</td>
<td>22.2</td>
<td>19.3</td>
<td>33.9</td>
<td>3.2</td>
<td>34.9</td>
<td>30.2</td>
<td>23.9</td>
<td>24.3</td>
<td>25.7</td>
</tr>
<tr>
<td>UTS7124P</td>
<td>UTS7124S</td>
<td>4 x 1.6 mm</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UTS7128P</td>
<td>UTS7128S</td>
<td>8 x 1.6 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UTS71210P</td>
<td>UTS71210S</td>
<td>10 x 1.0 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UTS7147P</td>
<td>UTS7147S</td>
<td>7 x 1.6 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UTS71412P</td>
<td>UTS71412S</td>
<td>12 x 1.6 mm</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UTS71419P</td>
<td>UTS71419S</td>
<td>9 x 1.0 mm</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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For more detail on contact arrangements, see page 8.
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Contacts to be ordered separately.
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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).
PCB jam nut receptacle for male contacts
UTS7147PSEK9

**Drilling Pattern**

- Shell size Ø A ±0.15
- B ±0.2
- C ±0.2
- D Max ±2
- E ±0.2
- F ±0.2
- G ±0.25
- H ±0.3
- J ±0.2
- L ±2
- Ø M ±0.2

SUITABLE FOR PCB THICKNESS UP TO 3.2 MM

**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

![Receptacle sealing cap](image)

**Part numbers**

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

#### Plug sealing cap

![Plug sealing cap](image)

**Part numbers**

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

#### Colour coding rings

- Green
- Yellow
- Red

**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