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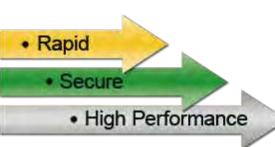
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UTS series IP68 / IP69K Plastic Connectors

Part of the TRIM TRIO® interconnect system



Company Profile



SOURIAU

The extreme environment interconnect specialist «from deep sea to deep space»

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



Aeronautical



Equipment & System

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



Railway Geophysics Manufacturing environment Instrumentation Automation & process Motorsport



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 distibutors 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

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1 Fight Participation

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.

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 customer's equipment.

Moreover UTS is part of the well-known TRIM TRIO® interconnect system with its more than 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 page 11-18



UTS discrete wire sealing page 19-24



UTS Hi seal page 55-62



UTS screw termination contacts - page 63-66



UTS RJ45 page 67-70





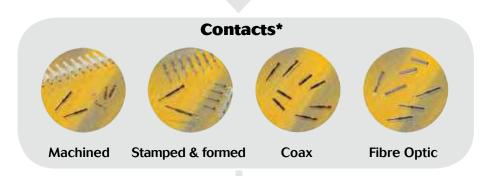


UTS provides a connection that performs faster, easier, safer and more reliable, it makes :



UTS, part of the TRIM TRIO® interconnect system

Any TRIM TRIO® contact can be used in any combination in any connector style





UTP Simplicity



UTS Sealed Plastic**



UTG Intensive Use



UTO Full Metal & Shielding



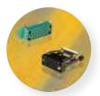
MBG Ultra Intensive Use



UTV Highly Ruggedized



MSM/MSO High Density



V.35 High Density DTE/DCE



MSG/MB High Density Low Profile

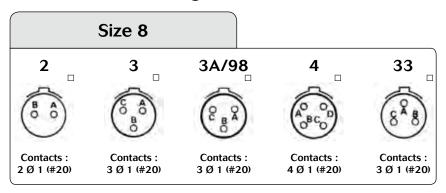


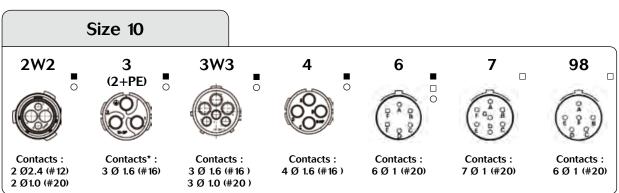
SMS Quick Mating

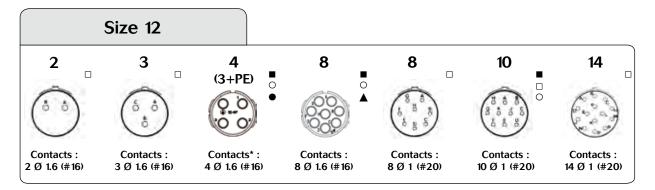
^{*} Only valid for contact #16 / **Except pre-equiped connectors

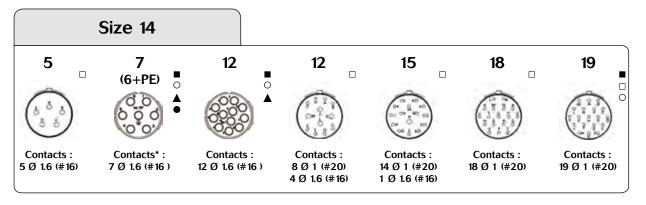


UTS contact arrangements









^{*}Arrangements with advanced grounding cavity (For other arrangements, First Mate, Last Break contacts are availble - see from page 27)



	Size 18			
11	23	32	30	RJ45
(5 6 6 6 8 8 8	·			
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

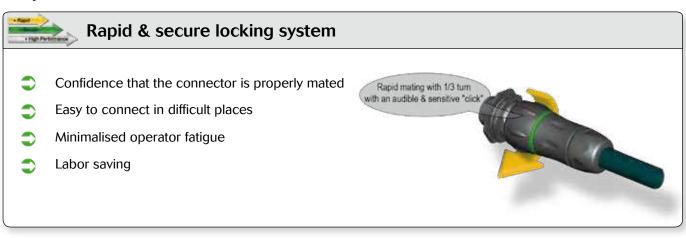
For specific arrangements, please consult us

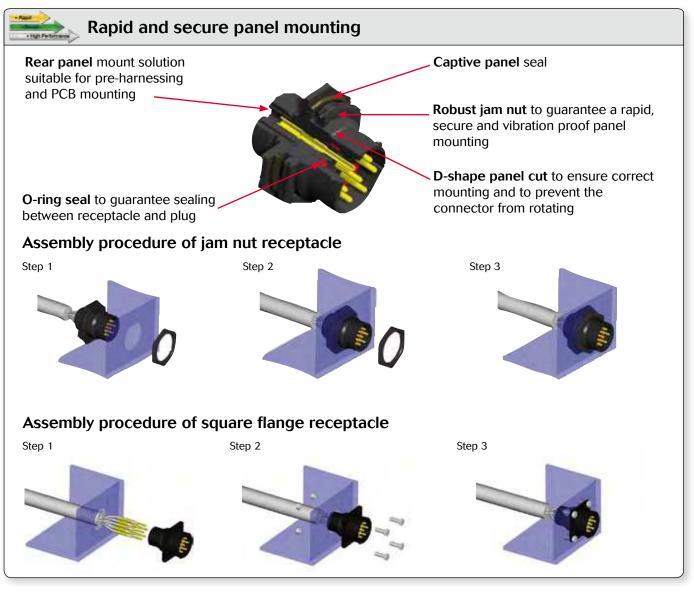
		VDE0110	UL1977			
		Overvoltage class III, pollution degree 2 / IEC 60664-1 (equivalent)	Type 2			
	Shell Nb of size contacts	2221#				
	10 3	320 V*	500 V**			
	12 4	400 V*	300 V			
#16	14 7					
Ø 1.6 mm	10 4					
	12 8	125 V	500 V**			
	14 12					
	18 231					
	10 6					
#20 Ø 1.0 mm	12 10 14 19	125 V	250 V**			
	18 321					
	2W2					
	10 2VV 2 2 x # 12 2 x # 20	200 V	500 V			
Mixed ¹	10 3W3 3 x #16 3 x #20	50 V	250 V			
	¹ Not certified	Note : all the written working voltage are in	Volts AC/DC			

UTS series



Major features & benefits

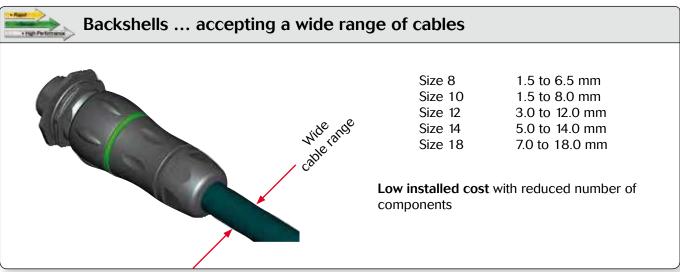


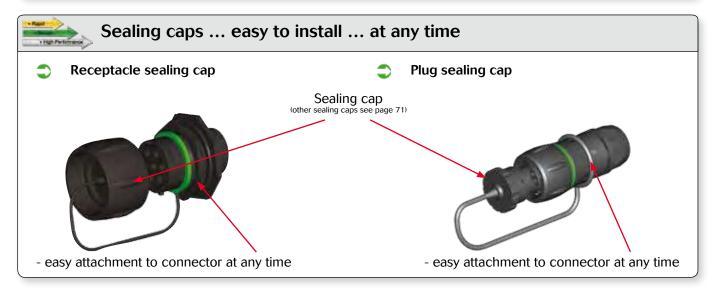


UTS series



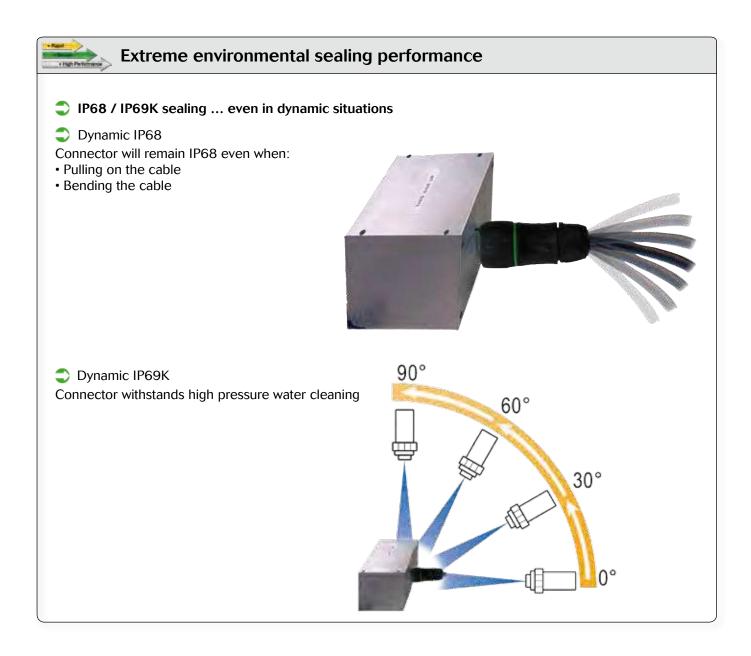






UTS: Your first choice in waterproof connectors!











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





Technical characteristics

Mechanical

Durability: 250 matings & unmatings
 Vibration resistance: Sinusoidal vibrations per

CEI 60512-4 - from 10 to 2000 Hz shock: 5 cycles 30 min. from -40°C to 105°C

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

Electrical

Current per contact max.:

Size 16: 13A

Size 20: 7.5A - machined contact

5A - stamped & formed contact

• Insulation resistance: $\geq 5000 \text{ M}\Omega$ • Test potential: $\geq 2000 \text{ VAC} - \#16 \text{ contact}$

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 accomodation

- 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)





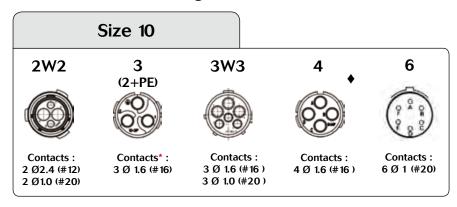


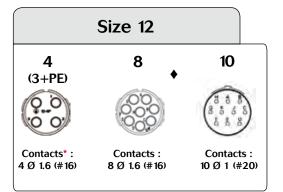
Ordering information

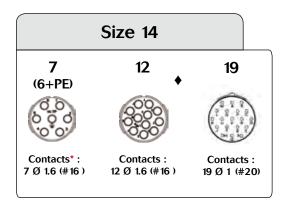
Туре	UTS UTS UTS	6 7 1	JC - JC	12 12 12	10 10 10	S P S
Connector type O Square flange receptacle Cable plug Jam nut receptacle In-line receptacle						
Rear of the connector JC Backshell (only for plug & In-line version)						
Shell size 10 - 12 - 14 - 18						
Number of contacts - see next page				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

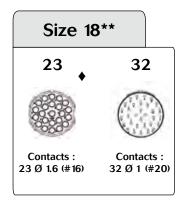


UTS contact arrangements









^{*} 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.

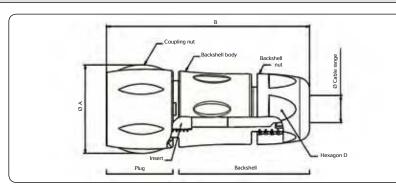
Arrangements marked with ♦ are available in square flange version as well.





Cable plug with backshell for pin & socket contacts





Chall size	Part nu	ımbers	G A	В	Ø Cable range	Ø Cable range	Hexagon D	
Shell size	Male contact	Female contact	ØA	В	Standard seal	Reducing seal		
10	UTS6JC10 P	UTS6JC10 S	26.7	63.2	2.5 / 8.0	1.5 / 5.0	18.5	
12	UTS6JC12 P	UTS6JC12 S	30.15	66.7	5.0 / 12.0	3.0 / 9.0	24.0	
14	UTS6JC14 P	UTS6JC14 S	35.1	71.5	7.0 / 14.0	5.0 / 12.0	26.0	
18	UTS6JC18 P	UTS6JC18 S	42.0	81.3	9.0 / 18.0	7.0 / 16.0	33.0	

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

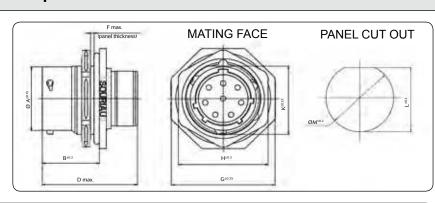
Each plug has 2 seals to cover the specified cable range (see table).

The standard seal is preassembled. The second seal is supplied as loose piece together with a plug.

+ Papel Participans

Jam nut receptacle for pin & socket contacts





Shell	Part numbers		·		D may	_				-	Tightening	
size	Male contact	Female contact	ØA	В	D max	F max	G	Н	L	ØМ	torque	
10	UTS710 P	UTS710 S	14.9	19.3	33.9	3.2	27.0	22.2	16.5	17.7	3 N.m	
12	UTS712 P	UTS712 S	19.0	19.3	33.9	3.2	31.8	27.0	21.2	22.5	4 N.m	
14	UTS714 P	UTS714 S	22.2	19.3	33.9	3.2	34.9	30.2	24.3	25.7	5 N.m	
18	UTS718 P	UTS718 S	28.5	19.3	33.9	3.2	41.3	36.6	30.6	32.0	5 N.m	

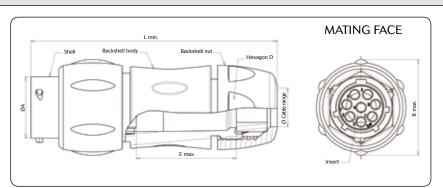
Coloured ring supplied as optional extra (see page 72).



+ Page Participance

In-line receptacle for pin & socket contacts





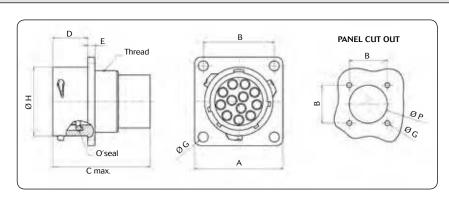
Shell	Part nu	Part numbers		Lunin	B max	Ø Cable range	Ø Cable range		E max	
size	Male contact	Female contact	ØA	L min.	B max	Standard seal Reducing seal		Hexagon D	Male	Female
10	UTS1JC10 P	UTS1JC10S	14.9	70.0	26.7	2.5/8.0	1.5/5.0	18.5	31.0	38.0
12	UTS1JC12 P	UTS1JC12 S	19.0	74.0	30.1	5.0/12.0	3.0/9.0	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).

+ Page Participator

Square flange receptacle





Shell	Part nu	Part numbers		C max.		D±0.2	F±0.15	Ø	Thread	PANEL CUT OUT				
size	Male contact	Female contact	A ^{±0.25}	Pin	Socket		_	H ^{±0.15}		B ^{±0.25}	Ø G ^{±0.1}	Ø P ^{±0.1}		
10	UTS0104P	UTS0104S	23.8					15.0	9/16 24 UNEF Class 2A	18.3		15.1		
12	UTS0128P	UTS0128S	26.2	1	242	24.3	242	11.05	2.3	19.0	11/16 24 UNEF Class 2A	20.6	2.2	18.2
14	UTS01412P	UTS01412S	28.6	31.7	24.3	11.35		22.2	13/16 20 UNEF Class 2A	23.0	3.2	21.4		
18	UTS01823P	UTS01823S	33.3				2.5	28.5	1"1/16 18 UNEF Class 2A	27.0		27.8		

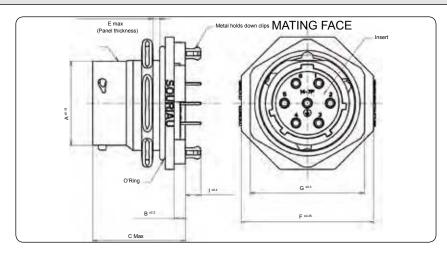
Coloured ring supplied as optional extra (see page 72).



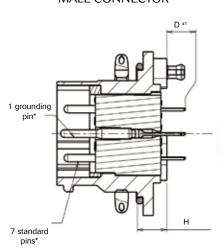


PCB jam nut receptacle for male contacts

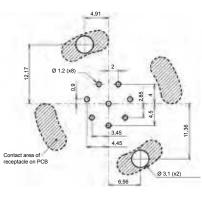




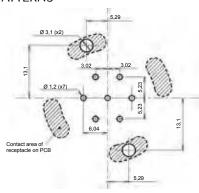
MALE CONNECTOR



DRILLING PATTERNS



UTS7128PSEK9



UTS7147PSEK9

Shell size	Part number	Nb of contacts	ØA	В	С	D	E	F	G	н	-	J	øк
12	UTS7128PSEK9	8	19.0	3.0	25.0	3.6	3.2	31.8	27.0	6.5/6.8	4.0	21.2	22.5
14	UTS7147PSEK9	7	22.14	3.0	25.0	3.6	3.2	34.9	30.2	7.0	4.0	24.3	25.7

^{*} Only for the UTS7147PSEK9 version

Other arrangements upon request.

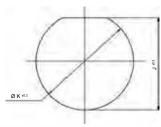
Plating

Plating for machined contactsPlating for stamped contacts

min 0.4 µm gold all over min 0.4 μm gold in contact area $13 - 5 \mu m$ tin on solder tail

Other platings upon request

PANEL CUT OUT







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 eas

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

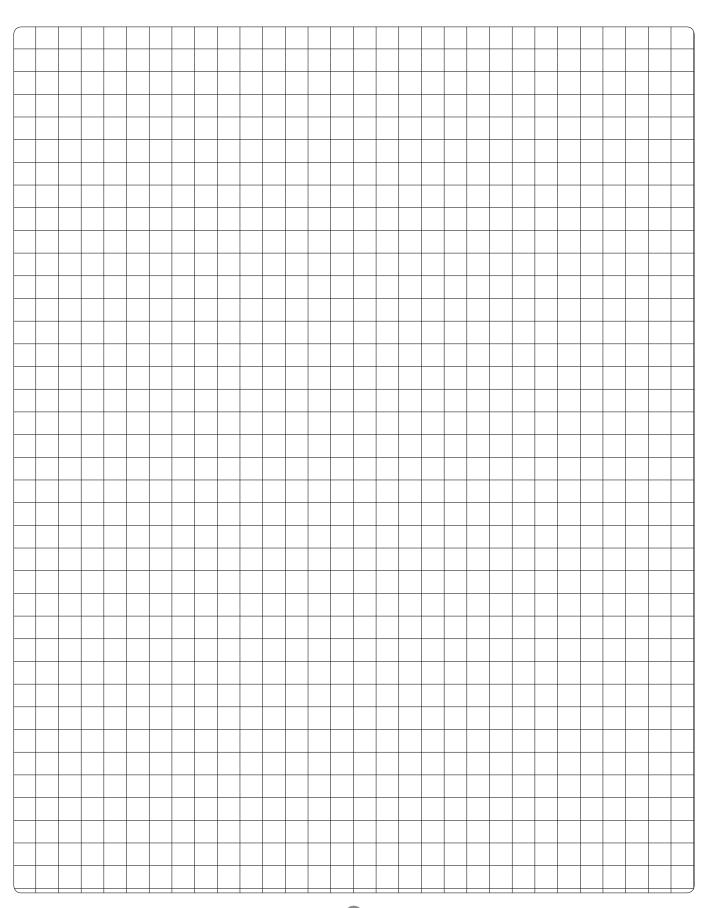
Pre-assembled PCB contacts

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

Stand-offs to allow ___ cleaning after soldering



Notes





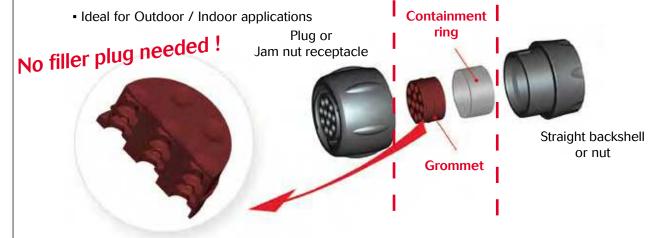




Description

Using proven grommet technology from SOURIAU's extensive knowledge of harsh environments, the UTS connector with grommet garanties a discrete wire sealing rated to IP67 (up to IP68 / IP69k for the easy handling version - with ergonomic backshell.

- \Box UTS version with grommet is a range of connectors offering IP67/69K water protection thanks to the three sealing barriers where membranes are pierced when a termination wire is loaded. Sealing level can reach IP68 / IP69K with a backshell.
- □ UTS with grommet is available :
 - In 3 shell sizes up to 12 contact positions
 - With female plug & male receptacle
- $\hfill\Box$ Major benefits for the UTS version with grommet are :
 - A discrete sealing solution
 - Easy to assemble







Technical characteristics

Mechanical

Durability: 250 matings & unmatings
 Vibration resistance: 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

• Wire insulation: Ø from 1.7 to 3.0 mm

Electrical

• Current per contact max.: 13A• Insulation resistance: $\geq 5000 \text{ M}\Omega$ • Test potential: 2000 VAC

• Working voltage: up to 400V class III, PD 2 as per VDE

up to 500V 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):

IP67/69K (up to IP68/69K with the easy handling backshell)

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: The

Thermoplastic

Contact accomodation

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

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





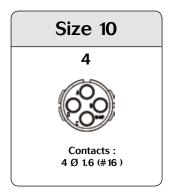


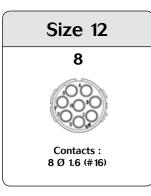
Ordering information

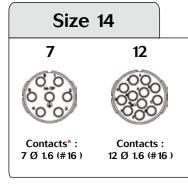
Туре	UTS UTS UTS	6 7 1	G G	JC N N	14 14 14	12 12 12	S P P
Connector type 1 In-line receptacle 6 Cable plug 7 Jam nut receptacle							
Grommet							
Rear of the connector JC Backshell N Nut							
Insert arrangements 10 12 14							
Number of contacts 4 8 7 - 12							
Contact Gender P Pin contacts - only for receptacle S Socket contacts - only for cable plug							



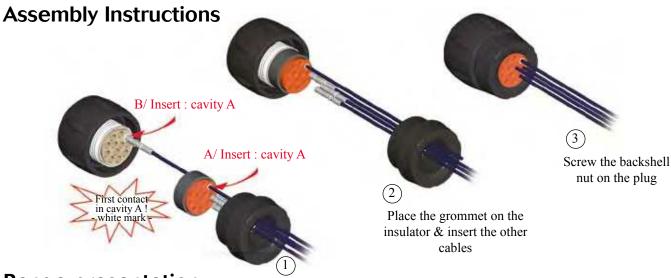
UTS discrete wire sealing contacts arrangements

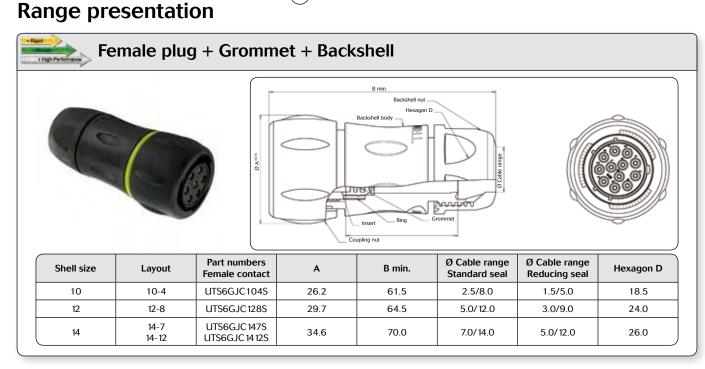






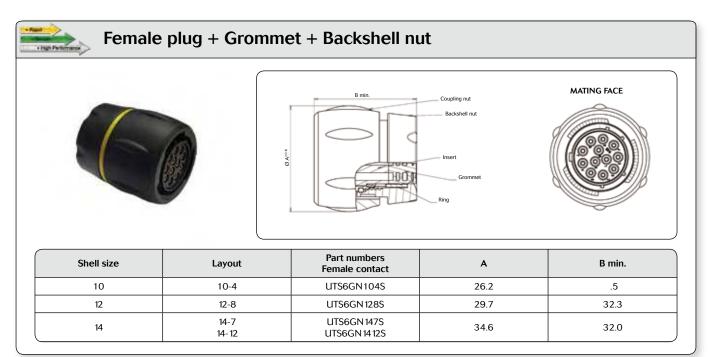
All arrangements are available in plug and jam nut versions.



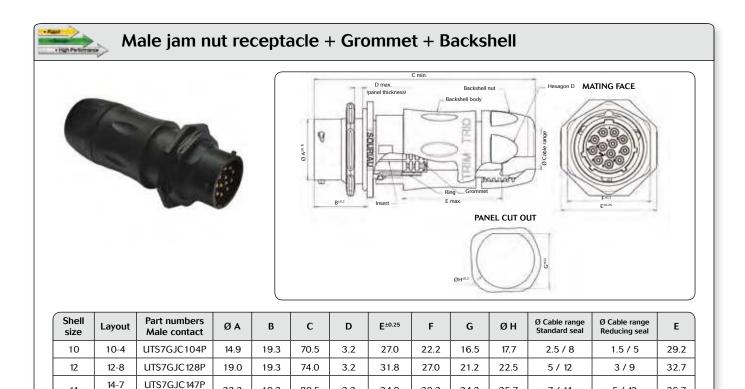








Coloured ring supplied as optional extra (see page 72).



UTS: Your first choice in waterproof connectors!

34.9

30.2

24.3

25.7

7 / 14

5 / 12

36.7

19.3

22.2

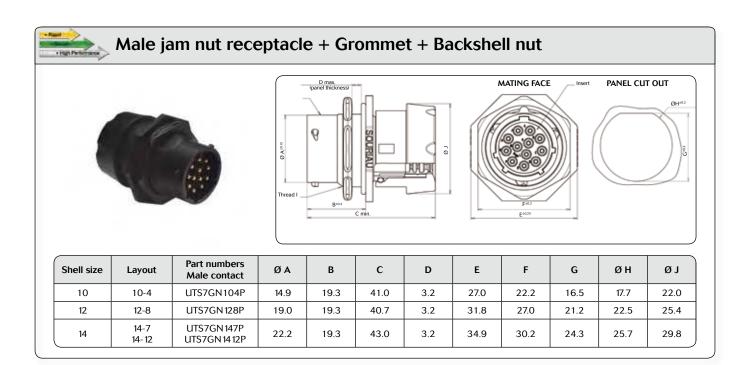
80.5

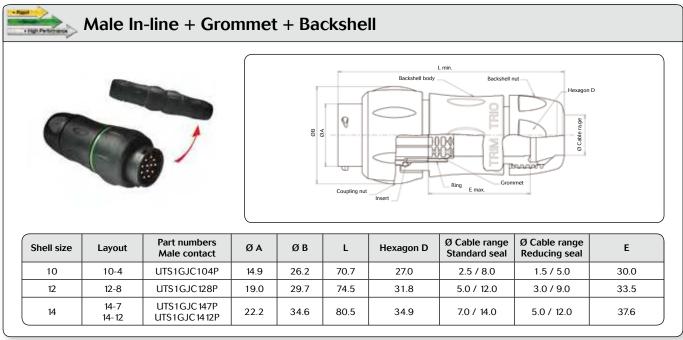
14

14-12

UTS7GJC1412P

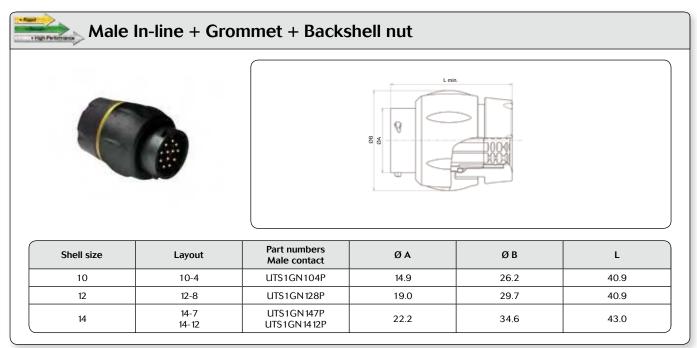






Coloured ring supplied as optional extra (see page 72).





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

RC/RM machined contacts size 16





Description

Size 16 machined contacts for TRIM TRIO® connectors

Size 16 RM/RC .0625" (1.6mm) diameter contacts are precision machined crimp snap-in pins and sockets for heavy duty top performance requirements. The socket inner spring supplies high contact pressure to ensure low resistance contact between pin and socket. The socket contact features closed entry to prevent probe damage. Crimp barrels have insulation grips for vibration support and are provided with a wire stop and inspection hole.

Typical benefits are:

- Easy mounting & dismounting
- Excellent cable retention as well as contact retention in the cavity
- Easy wire identification with color coding