



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 per MIL-STD 1344 method 1003
- Thermal shock:

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: 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

Type	UTS	6	JC	12	10	S
	UTS	7	-	12	10	P
	UTS	1	JC	12	10	S
Connector type						
0 Square flange receptacle						
6 Cable plug						
7 Jam nut receptacle						
1 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						

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UTS contact arrangements

Size 10				
2W2	3 (2+PE)	3W3	4 ♦	6
				
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		
4 (3+PE)	8 ♦	10
		
Contacts* : 4 Ø 1.6 (#16)	Contacts : 8 Ø 1.6 (#16)	Contacts : 10 Ø 1 (#20)

Size 14		
7 (6+PE)	12 ♦	19
		
Contacts* : 7 Ø 1.6 (#16)	Contacts : 12 Ø 1.6 (#16)	Contacts : 19 Ø 1 (#20)

Size 18**	
23 ♦	32
	
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

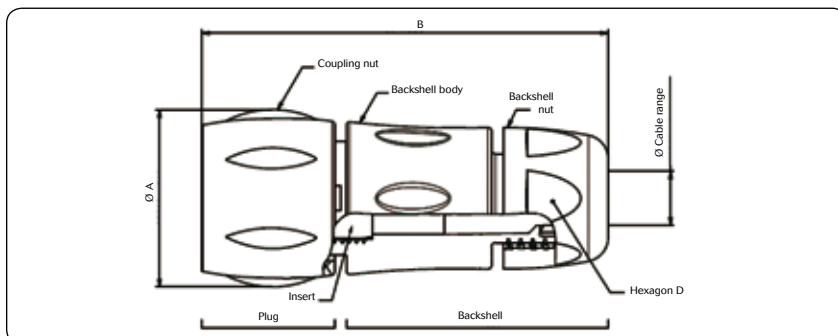
All arrangements are available in plug and jam nut versions.

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

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Cable plug with backshell for pin & socket contacts



Shell size	Part numbers		Ø A	B	Ø Cable range Standard seal	Ø Cable range Reducing seal	Hexagon D
	Male contact	Female contact					
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

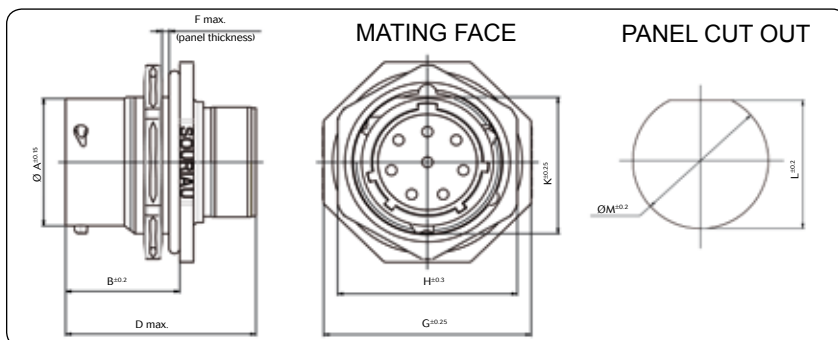
Coloured ring supplied as optional extra (see page 72).

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.



Jam nut receptacle for pin & socket contacts



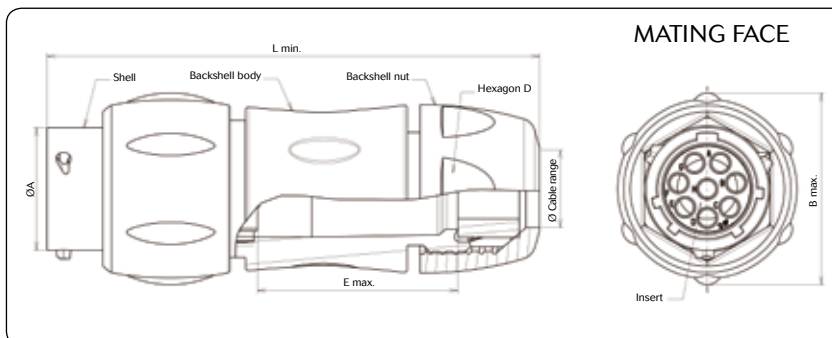
Shell size	Part numbers		Ø A	B	D max	F max	G	H	L	Ø M	Tightening torque
	Male contact	Female contact									
10	UTS710 - - - P	UTS710 - - - S	14.9	19.3	33.9	3.2	27.0	22.2	16.5	17.7	3 N.m
12	UTS712 - - P	UTS712 - - S	19.0	19.3	33.9	3.2	31.8	27.0	21.2	22.5	4 N.m
14	UTS714 - - P	UTS714 - - S	22.2	19.3	33.9	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).

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In-line receptacle for pin & socket contacts

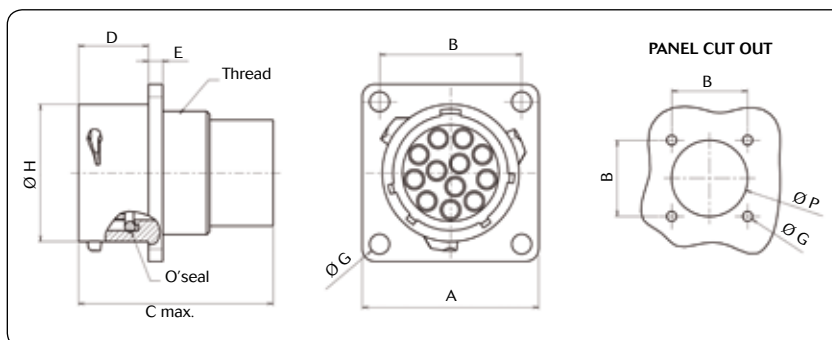


Shell size	Part numbers		Ø A	L min.	B max.	Ø Cable range Standard seal	Ø Cable range Reducing seal	Hexagon D	E max	
	Male contact	Female contact							Male	Female
10	UTS1JC10 --- P	UTS1JC10 --- S	14.9	70.0	26.7	2.5/8.0	1.5/5.0	18.5	31.0	38.0
12	UTS1JC12 --- P	UTS1JC12 --- S	19.0	74.0	30.1	5.0/12.0	3.0/9.0	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 ± 0.25	C max.		D ± 0.2	E ± 0.15	Ø H ± 0.15	Thread	PANEL CUT OUT		
	Male contact	Female contact		Pin	Socket					B ± 0.25	Ø G ± 0.1	Ø P ± 0.1
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).

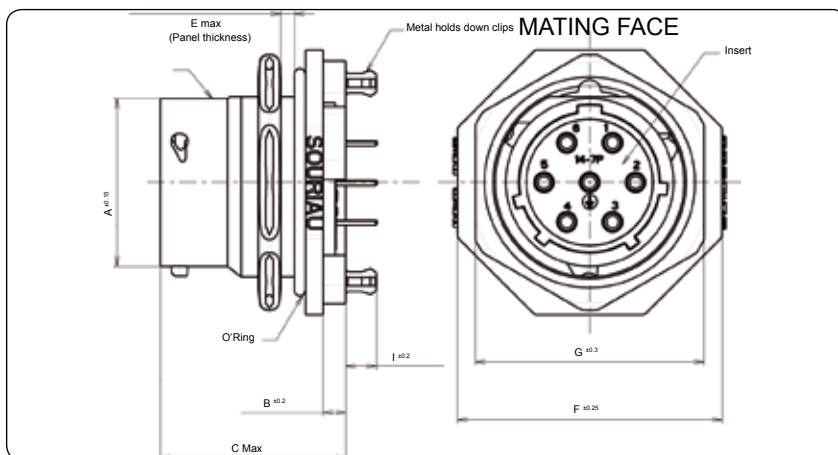
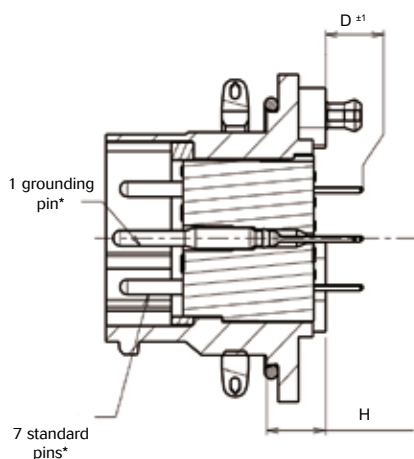
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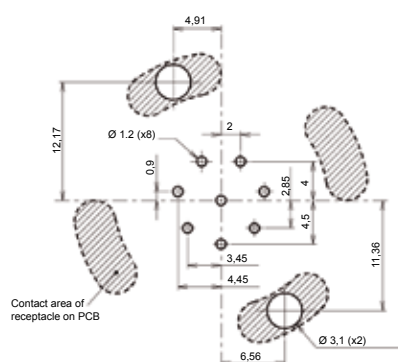
PCB jam nut receptacle for male contacts



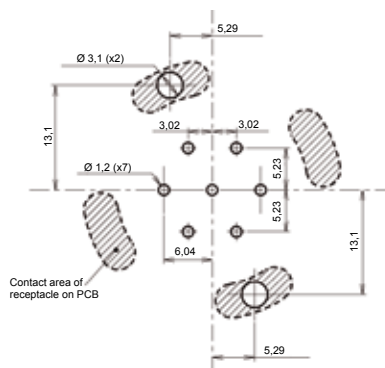
MALE CONNECTOR



DRILLING PATTERNS



UTS7128PSEK9



UTS7147PSEK9

Shell size	Part number	Nb of contacts	Ø A	B	C	D	E	F	G	H	I	J	Ø K
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.

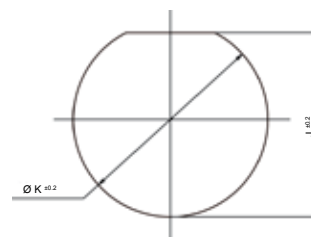
Plating

- Plating for machined contacts
- Plating for stamped contacts

min 0.4 µm gold all over
min 0.4 µm gold in contact
area / 3 – 5 µm tin on solder tail

Other platings upon request

PANEL CUT OUT

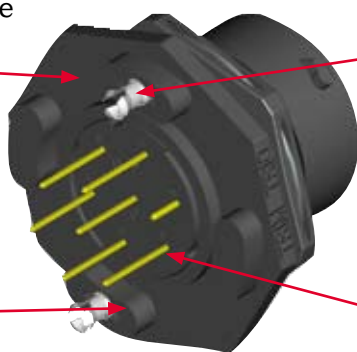


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PCB receptacle ... low profile with rapid installation features

Low profile housing to limit space between panel and PCB



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

Pre-assembled PCB contacts

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

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