UTS Series

Dynamic IP68/69K • UV Resistant • UL/IEC Compliant

SOURIAU

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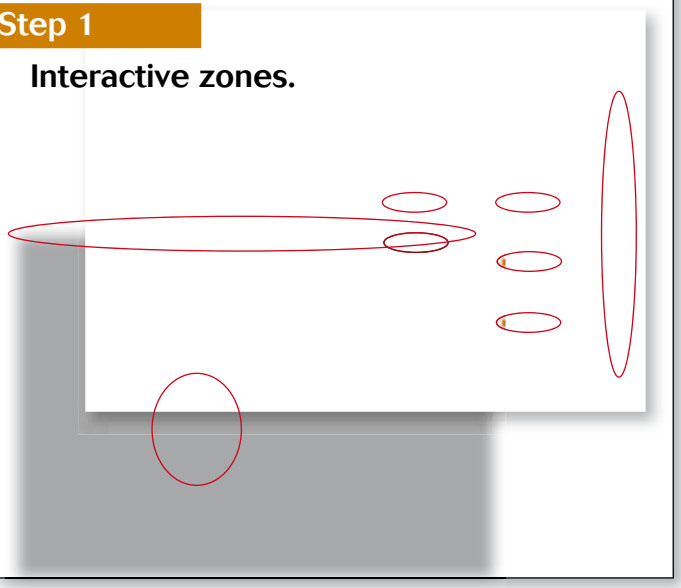
Overview

**SOURIAU is pleased to announce the arrival of a brand new catalog containing some significant improvements to simplify the connector selection process and provide easy access to key information. In this version you can see all layouts at a glance, download 2D drawings and 3D models.
Then, when your choice is made, you can click on the part number and buy online.**

Step 1

Interactive zones.

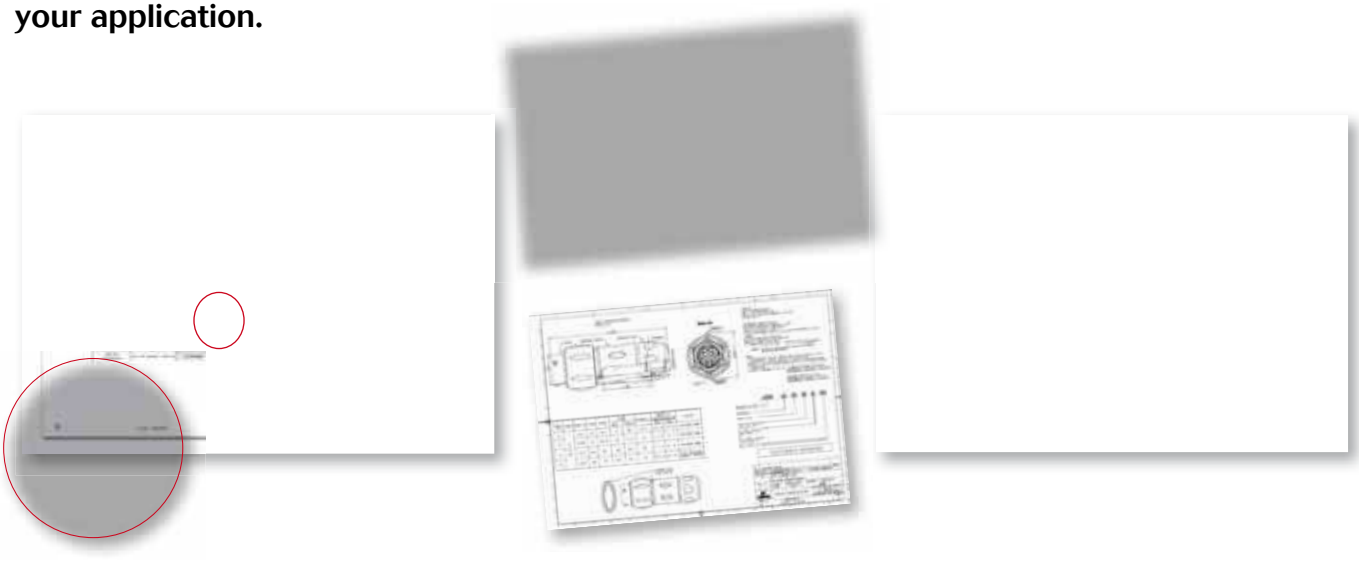


Step 2

Clearer understanding of the range.

Step 3

Easy access to supporting material such as prints and CAD models. In just two pages you can gather together details of all accessories, contacts, tools etc required for your application.



UTS range overview

The UTS series is a plastic connector range but rugged enough to withstand industrial applications.

The bayonet coupling system makes it simple to use.
With only a 1/3 twist of the coupling ring, connectors are mated with an audible and sensitive "click".

UTS series is a wide range...

Based on multiple power & signal connectors and offers everything from box mounted receptacles and cable mounted plugs to cable mounted in-line and PCB mounted receptacles. Almost all ways to accommodate wires exist: Crimp, Solder, Screw termination.

Screw termination version

The philosophy of the UTS series is built around three key elements:

Dynamic IP68/69K

UTS series is rated at IP68/69K… even in dynamic conditions. This means that it remain sealed even when used continuously underwater or cleaned using a high pressure hose and cable is moving.

This extreme level of performance is achievable with jacketed cable or discrete wires.

If this same level of performance is required even when connectors are not mated, we have UTS Hi Seal; a product designed to remain watertight if an environmental cap is not fitted or if the equipment is likely to get wet when cables have been disconnected.

UV Resistant

In most applications, our connectors are exposed to extreme climatic conditions; it was therefore key for us to select the materials best able to cope with the targeted environment.

Part of our product qualification process involved subjecting connectors to a simulated five years of exposure to various elements including Temperature, UV and Humidity.

The results were positive in that there were no visible signs of weakness, such as cracking or crazing.

UL/IEC Compliant

The outmost priority for any electrical installation is to protect personnel from any shock hazard.

In North America, Underwriters Laboratories insisted that connector manufacturers, depending of the application, respect their standards. The UTS series had thus been qualified and is certified by this organisation.

In Europe and in Asia, IEC standards are better known and trusted by end users. Like its American equivalent, the IEC refers to safety rules. The UTS series was obviously designed to respect these rules.

UTS Series
Overview

UTS range

UTS discrete wire sealing

See page 9

UTS Series

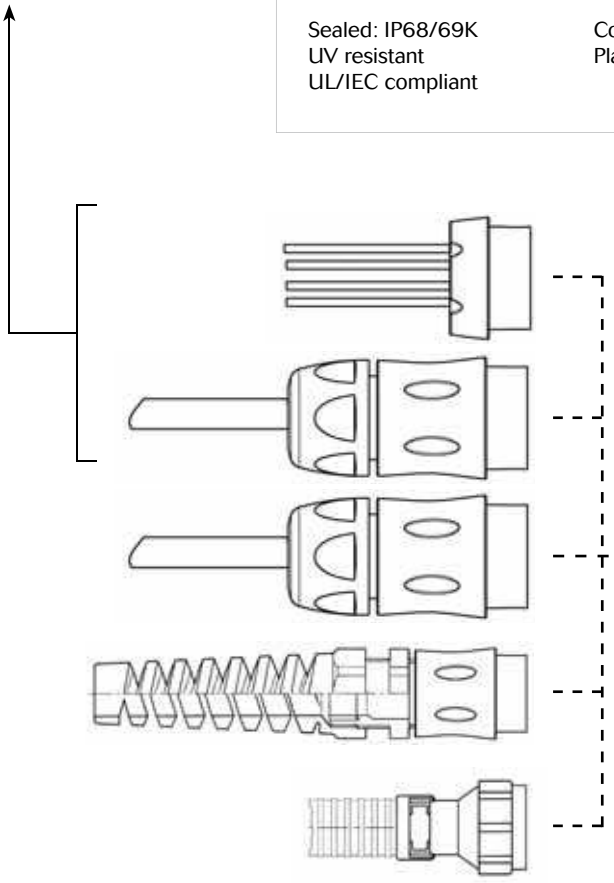
Sealed: IP68/69K
UV resistant
UL/IEC compliant

Corrosion-proof
Plastic housing

UTS screw termination

Just screw the wires to the connector !

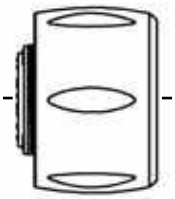
No special tools required, use a standard screwdriver



Crimp contact
- machined
- stamped and formed
- coaxial
- fibre optics

Screw termination contact

Solder contact



Plug

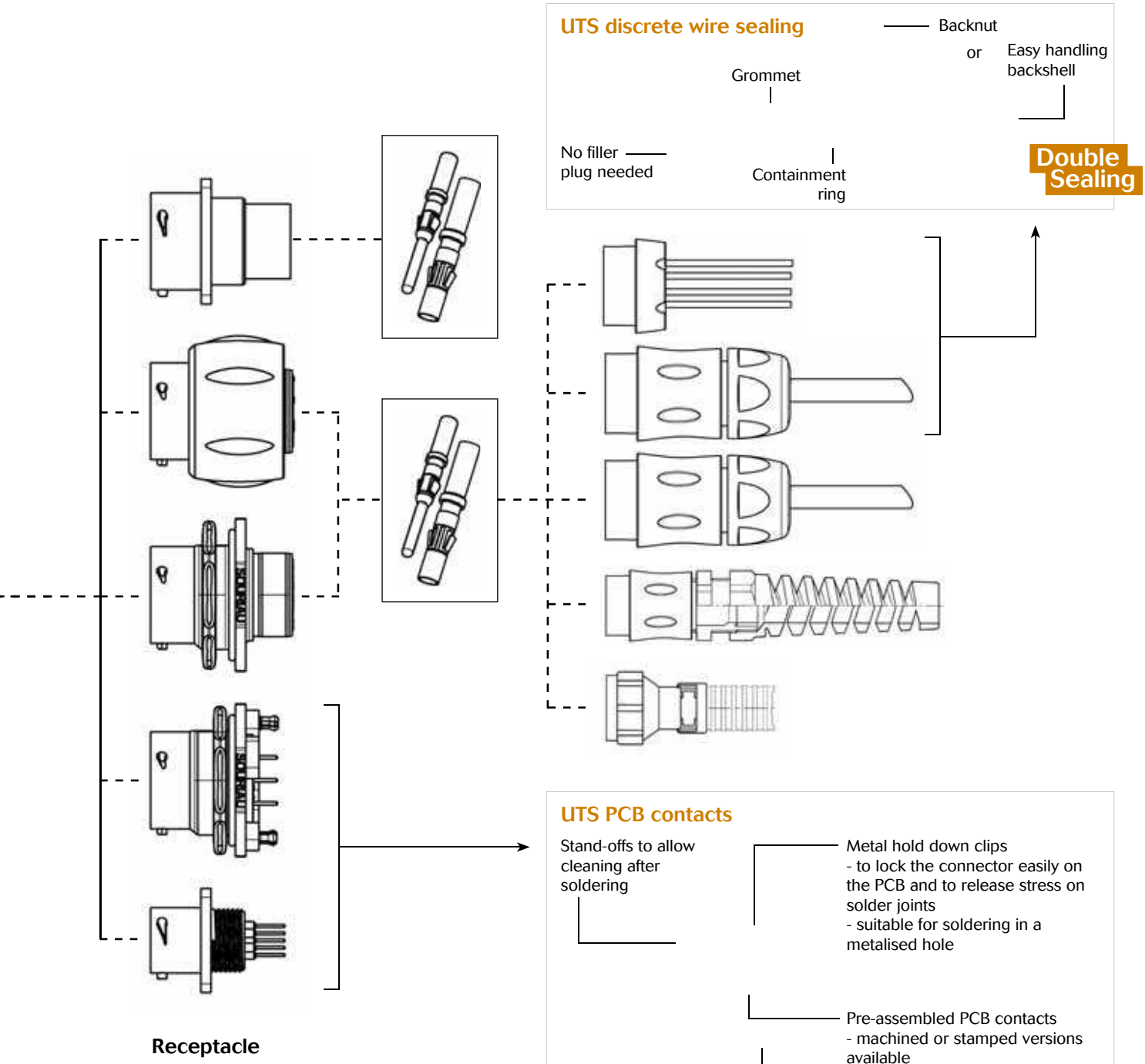
UTS Hi seal

Sealed Unmated

Sealed unmated: IP68/69K
MIL-C-26482 compatible
UV resistant
UL/IEC compliant

Corrosion-proof
Plastic housing

overview



Mechanical

• Durability:
250 matings & unmatings per MIL-C-26482

1 • Vibration resistance (all UTS versions except UTS Screw termination contacts):
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

Environmental

2 • Operating temperature:
from -40°C to +105°C
40/100/21 per NFF 61-030

• Flammability rating:
UL94-V0 (all UTS except the Hi seal) - see page 165
UL94-HB (UTS Hi seal only) - see page 165
I2F3 according to NFF 16101 and NFF 16102

3 • Salt spray:
≥500 hours

4 • UV resistant:
No mechanical degradation or important variation of colour after 5 years of exposure in natural environment (equivalence exposure to sun and moisture as per ISO4892)

5 • Sealing:
- UTS Standard: IP68/IP69K (mated)
- UTS Hi seal: IP68/IP69K (mated and unmated)
- UTS Discrete wire sealing: IP67/69K (up to IP68 with easy handling backshell)
- UTS Screw termination contacts: IP68/IP69K
Note: IPx8: 10m underwater during 1 week

• Fluid resistance:
- Gasoil
- Mineral oil
- Acid bath
- Basic bath

1

3

characteristics

Electrical

• See each layout page

Material

• Body connector + Backshell:
Thermoplastic

• Insert:
- UTS Standard, UTS Discrete wire sealing, UTS Screw termination contacts:
Thermoplastic
- UTS Hi seal handsolder & UTS Hi seal with PC tails contacts:
Elastomer

• Contacts:
See page 140

• Nut:
Metal

• Halogen free

• RoHS compliant & conform to the Chinese standard SJ/T1166-2006 (Chinese RoHS equivalent)

• In accordance with:
- UL 1977:
Certificat ECBT2
File number: E169916
- CSA C22.2 n°182.3:
Certificat ECBT8
File number: E169916

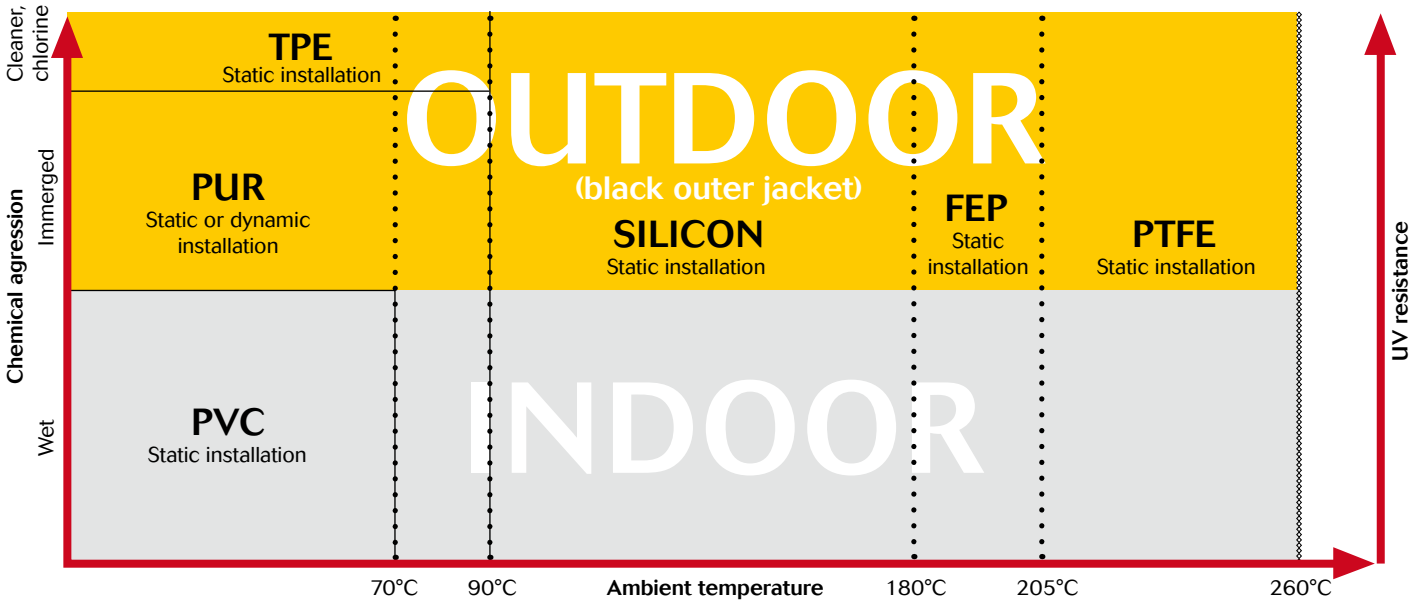
uTS Series

Mechanics

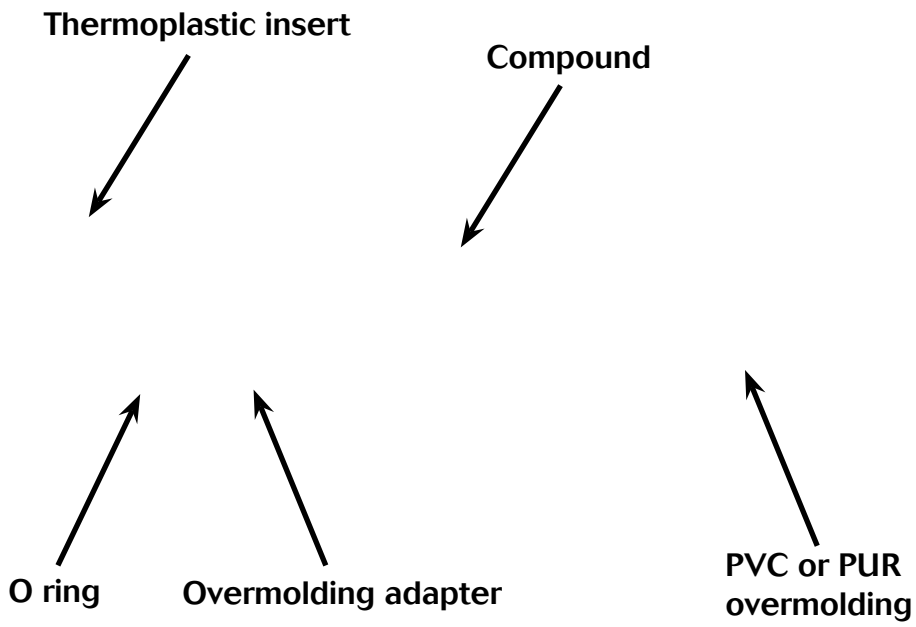
Cable assembly

Souriau provides connectors in various applications for more than 90 years in the most extreme environment. Being conscious about the difficulty to find a quick and a reliable harness manufacturer, we decided years ago to start in house cable assembly production. It allows customers to reduce the number of suppliers, and to take advantage of the "best in class" quality of the Souriau group. Overmoulding is a process that further enhances the sealing properties of the UTS range, especially over many years of use. Overmoulding provides the opportunity to change the cable exit from straight through 90 degrees and avoid any stress on the cable terminated to the connector. Also, as the wires are encapsulated inside the moulding, a barrier is created which prevents from any liquid from entering the equipment through the connector if the cable jacket is breached.

How to choose the outer jacket material



Overmolding description



Discrete connector

If cable jacket is breached...

...water ingress unhampered, leading to damage.

Overmoulded connector

If cable jacket is breached...

...prevents water ingress via capillary action.

Harnesses

Overmoulded harnesses, straight ending

Connector type	Number of ways	Voltage	Current UL	Current IEC	Harmonised cable part number*	Part number (length: 1m.)	
						Male	Female
UTS standard	2+PE	600 V	44 A	40 A	HO5 VV - F 3Gg10	HAUTS0V142G1PST100	HAUTS0V142G1SST100
	2+PE	500 V	10 A	16 A	HO5 VV - F 3x1.5	HAUTS0V103PST100	HAUTS0V103SST100
	3+PE	500 V	10 A	16 A	HO5 VV - F 3G1.5	HAUTS0V103PEPST100	HAUTS0V103PESST100
	3+PE	250 V	24 A	32 A	HO5 VV - F 40G0.5	HAUTS0V183G1PST100	HAUTS0V183G1SST100
	3+PE	500 V	10 A	16 A	HO5 VV - F 4G1.5	HAUTS0V124PEPST100	HAUTS0V124PESST100
	4	500 V	10 A	13 A	HO5 VV - F 4x1.5	HAUTS0V104PST100	HAUTS0V104SST100
	3	500 V	10 A	5 A	HO5 VV - F 7G0.5	HAUTS0V103W8PST100	HAUTS0V103W8SST100
	6	250 V	5 A	7 A	HO5 VV - F 7x0.5	HAUTS0V106PST100	HAUTS0V106SST100
	6+PE	500 V	10 A	16 A	HO5 VV - F 7G1.5	HAUTS0V147PEPST100	HAUTS0V147PESST100
	8	500 V	10 A	10 A	HO5 VV - F 8x1.5	HAUTS0V128PST100	HAUTS0V128SST100
	10	250 V	5 A	6 A	HO5 VV - F 10G0.5	HAUTS0V1210PST100	HAUTS0V1210SST100
	12	500 V	10 A	10 A	HO5 VV - F 12x1.5	HAUTS0V1412PST100	HAUTS0V1412SST100
	19	250 V	5 A	5 A	HO5 VV - F 21G0.5	HAUTS0V1419PST100	HAUTS0V1419SST100
	23	500 V	10 A	9 A	HO5 VV - F 25G1.5	HAUTS0V1823PST100	HAUTS0V1823SST100
	32	250 V	5 A	4 A	HO5 VV - F 40G0.5	HAUTS0V1832PST100	HAUTS0V1832SST100
UTS Hi seal	2	250 V	7 A	7 A	H05 VV - F 2x0.5	HAUTS0V8E2PST100	HAUTS0V8E2SST100
	2	650 V	13 A	16 A	HO5 VV - F 2x1.5	HAUTS0V12E2PST100	HAUTS0V12E2SST100
	3	250 V	7 A	7 A	HO5 VV - F 3x0.5	HAUTS0V8E3PST100	HAUTS0V8E3SST100
	3	250 V	7 A	7 A	HO5 VV - F 3x0.5	HAUTS0V8E3APST100	HAUTS0V8E3ASST100
	3	250 V	7 A	7 A	HO5 VV - F 3x0.5	HAUTS0V8E33PST100	HAUTS0V8E33SST100
	3	650 V	13 A	16 A	HO5 VV - F 3x1.5	HAUTS0V12E3PST100	HAUTS0V12E3SST100
	4	250 V	7 A	7 A	HO5 VV - F 4x0.5	HAUTS0V8E4PST100	HAUTS0V8E4SST100
	5	650 V	12 A	16 A	HO5 VV - F 4G1.5	HAUTS0V14E5PST100	HAUTS0V14E5SST100
	6	250 V	5 A	7 A	HO5 VV - F 7x0.5	HAUTS0V10E6PST100	HAUTS0V10E6SST100
	6	250 V	6 A	7 A	HO5 VV - F 7x0.5	HAUTS0V10E98PST100	HAUTS0V10E98SST100
	6+PE	500 V	10 A	16 A	HO5 VV - F 7G1.5	HAUTS0V14E7PEPST100	HAUTS0V14E7PESST100
	7	250 V	6 A	7 A	HO5 VV - F 7x0.5	HAUTS0V10E7PST100	HAUTS0V10E7SST100
	8	250 V	5 A	6 A	HO5 VV - F 10G0.5	HAUTS0V12E8PST100	HAUTS0V12E8SST100
	10	250 V	5 A	6 A	HO5 VV - F 10G0.5	HAUTS0V12E10PST100	HAUTS0V12E10SST100
	12	250 V	5 A	4 A	HO5 VV - F 12G0.5	HAUTS0V14E12PST100	HAUTS0V14E12SST100
	14	250 V	5 A	5 A	HO5 VV - F 14G0.5	HAUTS0V12E14PST100	HAUTS0V12E14SST100
	15	650 V	12 A	4 A	HO5 VV - F 18G0.5	HAUTS0V14E15PST100	HAUTS0V14E15SST100
	18	250 V	4 A	4 A	HO5 VV - F 18G0.5	HAUTS0V14E18PST100	HAUTS0V14E18SST100
	19	250 V	4 A	5 A	HO5 VV - F 40G0.5	HAUTS0V14E19PST100	HAUTS0V14E19SST100

* see page 18

3 m & 5 m version available on demand
Eg: 3m HAUTS0V. . . 300
5m HAUTS0V. . . 500

Harnesses

Overmoulded harnesses, right angle ending

Connector type	Number of ways	Voltage	Current UL	Current IEC	Harmonised cable part number*	Part number (length: 1m.)	
						Male	Female
UTS standard	2+PE	600 V	44 A	40 A	HO5 VV - F 3Gg10	HAUTS0V142G1PRA100	HAUTS0V142G1SRA100
	2+PE	500 V	10 A	16 A	HO5 VV - F 3x1.5	HAUTS0V103PRA100	HAUTS0V103SRA100
	3+PE	500 V	10 A	16 A	HO5 VV - F 3G1.5	HAUTS0V183G1PRA100	HAUTS0V183G1SRA100
	3+PE	250 V	24 A	32 A	HO5 VV - F 40G0.5	HAUTS0V183G1PRA100	HAUTS0V183G1SRA100
	3+PE	500 V	10 A	16 A	HO5 VV - F 4G1.5	HAUTS0V124PEPRA100	HAUTS0V124PESRA100
	4	500 V	10 A	13 A	HO5 VV - F 4x1.5	HAUTS0V104PRA100	HAUTS0V104SRA100
	3	500 V	10 A	5 A	HO5 VV - F 7G0.5	HAUTS0V103W8PRA100	HAUTS0V103W8SRA100
	6	250 V	5 A	7 A	HO5 VV - F 7x0.5	HAUTS0V106PRA100	HAUTS0V106SRA100
	6+PE	500 V	10 A	16 A	HO5 VV - F 7G1.5	HAUTS0V147PEPRA100	HAUTS0V147PESRA100
	8	500 V	10 A	10 A	HO5 VV - F 8x1.5	HAUTS0V128PRA100	HAUTS0V128SRA100
	10	250 V	5 A	6 A	HO5 VV - F 10G0.5	HAUTS0V1210PRA100	HAUTS0V1210SRA100
	12	500 V	10 A	10 A	HO5 VV - F 12x1.5	HAUTS0V1412PRA100	HAUTS0V1412SRA100
	19	250 V	5 A	5 A	HO5 VV - F 21G0.5	HAUTS0V1419PRA100	HAUTS0V1419SRA100
	23	500 V	10 A	9 A	HO5 VV - F 25G1.5	HAUTS0V1823PRA100	HAUTS0V1823SRA100
	32	250 V	5 A	4 A	HO5 VV - F 40G0.5	HAUTS0V1832PRA100	HAUTS0V1832SRA100
UTS Hi seal	2	250 V	7 A	7 A	H05 VV - F 2x0.5	HAUTS0V8E2PRA100	HAUTS0V8E2SRA100
	2	650 V	13 A	16 A	HO5 VV - F 2x1.5	HAUTS0V12E2PRA100	HAUTS0V12E2SRA100
	3	250 V	7 A	7 A	HO5 VV - F 3x0.5	HAUTS0V8E3PRA100	HAUTS0V8E3SRA100
	3	250 V	7 A	7 A	HO5 VV - F 3x0.5	HAUTS0V8E3APRA100	HAUTS0V8E3ASRA100
	3	250 V	7 A	7 A	HO5 VV - F 3x0.5	HAUTS0V8E33PRA100	HAUTS0V8E33SRA100
	3	650 V	13 A	16 A	HO5 VV - F 3x1.5	HAUTS0V12E3PRA100	HAUTS0V12E3SRA100
	4	250 V	7 A	7 A	HO5 VV - F 4x0.5	HAUTS0V8E4PRA100	HAUTS0V8E4SRA100
	5	650 V	12 A	16 A	HO5 VV - F 4G1.5	HAUTS0V14E5PRA100	HAUTS0V14E5SRA100
	6	250 V	5 A	7 A	HO5 VV - F 7x0.5	HAUTS0V10E6PRA100	HAUTS0V10E6SRA100
	6	250 V	6 A	7 A	HO5 VV - F 7x0.5	HAUTS0V10E98PRA100	HAUTS0V10E98SRA100
	6+PE	500 V	10 A	16 A	HO5 VV - F 7G1.5	HAUTS0V14E7PEPRA100	HAUTS0V14E7PESRA100
	7	250 V	6 A	7 A	HO5 VV - F 7x0.5	HAUTS0V10E7PRA100	HAUTS0V10E7SRA100
	8	250 V	5 A	6 A	HO5 VV - F 10G0.5	HAUTS0V12E8PRA100	HAUTS0V12E8SRA100
	10	250 V	5 A	6 A	HO5 VV - F 10G0.5	HAUTS0V12E10PRA100	HAUTS0V12E10SRA100
	12	250 V	5 A	4 A	HO5 VV - F 12G0.5	HAUTS0V14E12PRA100	HAUTS0V14E12SRA100
	14	250 V	5 A	5 A	HO5 VV - F 14G0.5	HAUTS0V12E14PRA100	HAUTS0V12E14SRA100
	15	650 V	12 A	4 A	HO5 VV - F 18G0.5	HAUTS0V14E15PRA100	HAUTS0V14E15SRA100
	18	250 V	4 A	4 A	HO5 VV - F 18G0.5	HAUTS0V14E18PRA100	HAUTS0V14E18SRA100
	19	250 V	4 A	5 A	HO5 VV - F 40G0.5	HAUTS0V14E19PRA100	HAUTS0V14E19SRA100

* see page 18

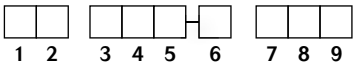
3 m & 5 m version available on demand
Eg: 3m HAUTS0V. . . 300
5m HAUTS0V. . . 500

Cable information

Range of temperature:	Occasional flexing: -5°C up to +70°C Fixed installation: -40°C up to +80°C
Rated voltage:	U0/U: 300/500 V
Wire section :	Arrangement with #16 contact: wire section 1.5 mm² Arrangement with #20 contact: wire section 0.5 mm²
Harmonized reference:	H05 VVF XX

Standardization of European cable - DIN VDE 0281/DIN VDE 0282/DIN VDE 0292

Harmonized wire coding system



1. Basic type	2. Working voltage	3. Insulating	4. Sheath-cladding material	5. Special features	6. Conductor types	7. Number of conductors	8. Protective conductor	9. Conductor cross-sectional
H: Harmonized Type	03: 300/300 V.	V: PVC	V: PVC	H: Ribbon cable, separable	U: Single wire		X: Without protective conductor	Area specified in mm²
A: National Type	05: 300/500 V.	R: Rubber	R: Rubber	H2: Ribbon cable non-separable	R: Multi-wire		G: With protective conductor	
	07: 450/750 V.	S: Silicone Rubber	N: Cloroprene Rubber		K: Fine wire (permanently installed)			
			J: Glass-filament braiding		F: Fine wire (flexible)			
			T: Textile braiding		H: Super fine wire			
					Y: Tinsel strand			

Example: Harmonized type, 300/500V, PVC insulating, PVC sheath- cladding, Fine wire, 3x1.5 cross-sectional: H05VVF3x1.5

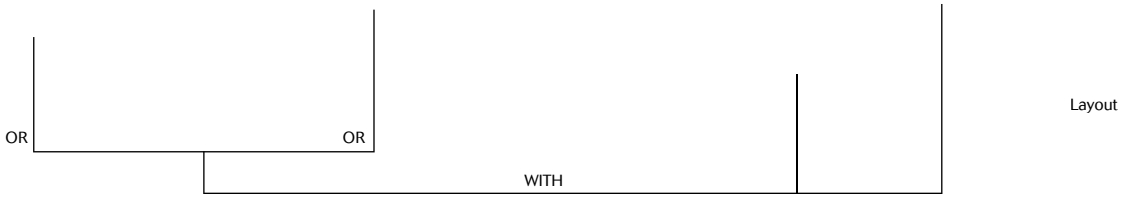
Standardization of American cable

Nomenclature Key

S: Service Grade (also means extra hard service when not followed by J, V, or P)
J: Hard Service
V: Vacuum cleaner cord (also light duty cable)
P: Parallel cord (also known as zip cord) – Always light duty
E: Thermoplastic Elastomer (UL/NEC designation ONLY)
O: Oil Resistant*
T: Thermoplastic
W: Outdoor-includes sunlight resistant jacket and wet location rated conductors (formerly "W-A")
H: Heater cable
VW-1: Flame retardant
FT2: Flame retardant

Definitions of Cable Types

SVT: Thermoplastic insulated vacuum cleaner cord, with or without 3rd conductor for grounding purposes; 300V. (PVC)
SJT: Junior hard service, thermoplastic insulated conductors and jacket. 300V. (PVC)
SJTW: Same as SJT except outdoor rated. (PVC)
SJTO: Same as SJT but oil resistant outer jacket. (PVC)
SJTOW: Same as SJTO except outdoor rated. (PVC)
ST: Hard service cord with all thermoplastic construction, 600V. (PVC)
STW: Same as ST except outdoor rated. (PVC)
STO: Same as ST but with oil resistant outer jacket. (PVC)
STOW: Same as STO except outdoor rated. (PVC)



Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.1)	**UTS08E2P**	**UTS08E2S**
	Plug	Without (Fig.6)	**UTS68E2P**	**UTS68E2S**
		Cable gland (Fig.7)	**UTS6JC8E2P**	**UTS6JC8E2S**
	Jam nut receptacle	Without (Fig.3)	**UTS78E2P**	**UTS78E2S**
PCB contacts loaded	Square flange receptacle	Without (Fig.2)	**UTS08D2P**	**UTS08D2S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.5)	**UTS78D2P32**	**UTS78D2S32**
	Jam nut receptacle with stand off and withouthold down clip	Without (Fig.4)	**UTS78D2P**	**UTS78D2S**

Sealed unmated

Dimensions

Square flange receptacle - UTS0

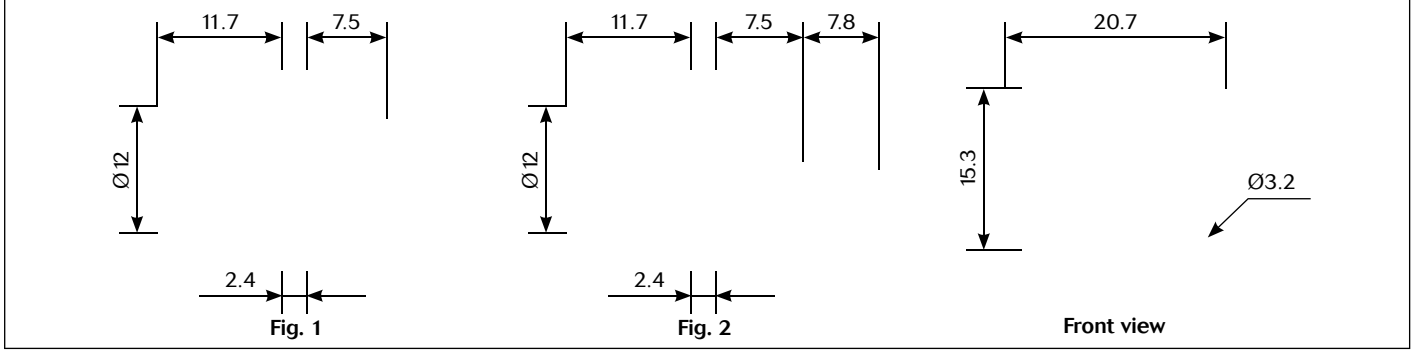


Fig. 1 Fig. 2 Front view

Jam nut receptacle - UTS7

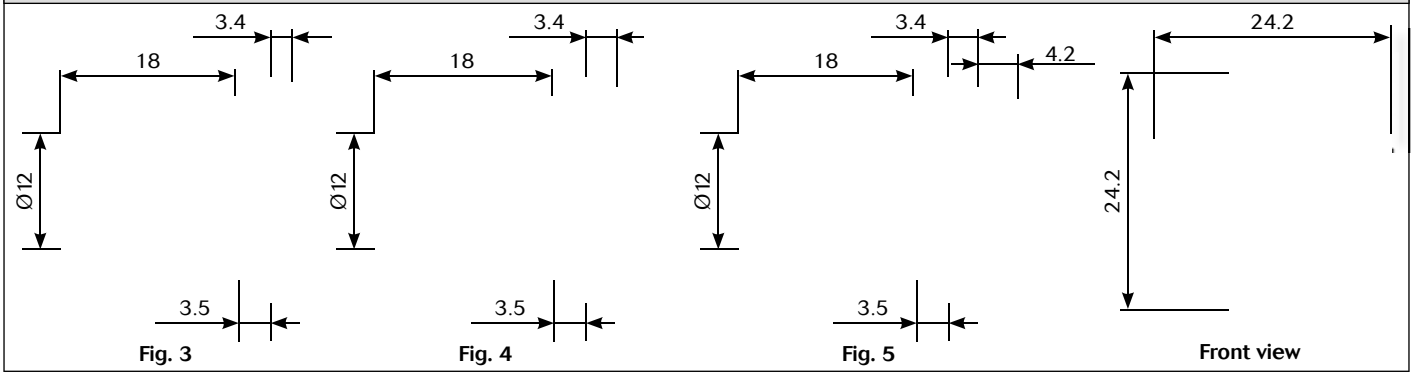


Fig. 3 Fig. 4 Fig. 5 Front view

Plug - UTS6

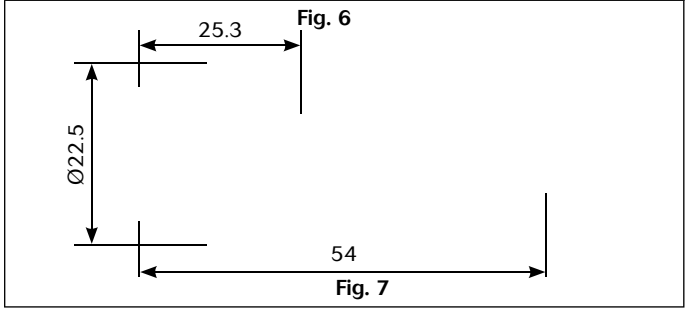
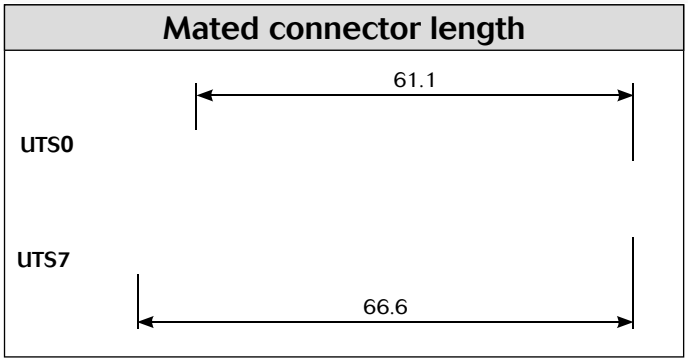
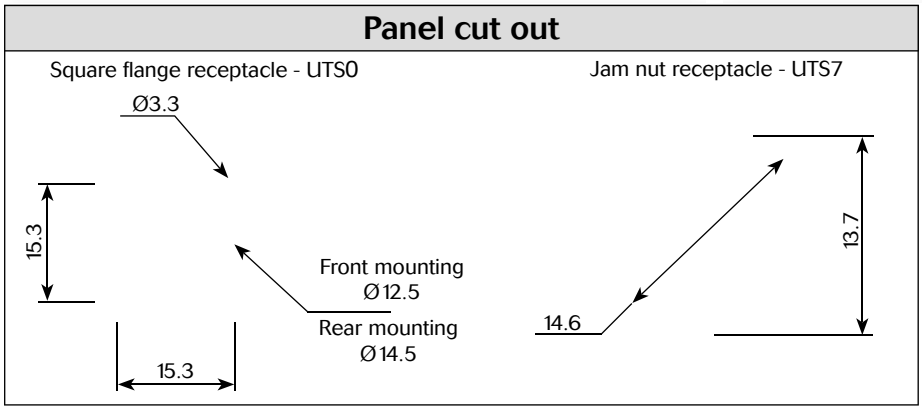


Fig. 6 Fig. 7

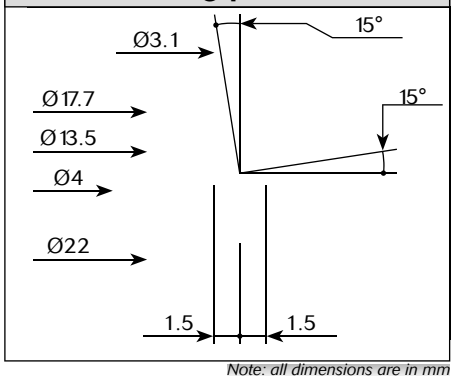
Mated connector length



Panel cut out



Drilling pattern



Note: all dimensions are in mm

Mechanics

Accessories

Jam nut sealing caps

Metal terminal

Part number	Part number
UTS8DCG	UTS8DCGR

Square flange sealing cap

Metal terminal

Part number
UTS8DCGE

Plug protective cap

IP40

Part number
UTS68C

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005585A	85005594

Gasket

Part numbers / neoprene
UTFD11B

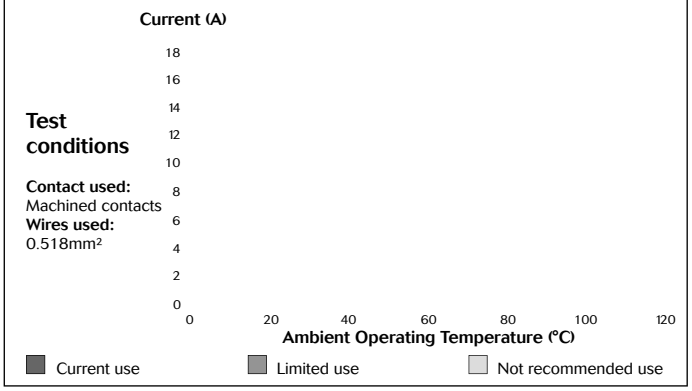
Electrical characteristics

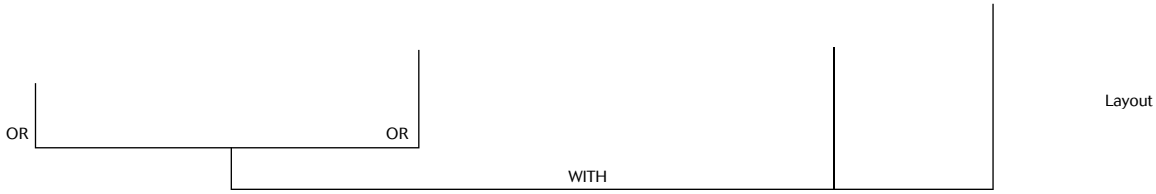
UL
7A 250V UL94 HB

CSA
7A 250V UL94 HB

IEC
7A 32V 1.5kV 3

UTS 8E2/8D2 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.1)	**UTS012E2P**	**UTS012E2S**
	Plug	Without (Fig.6)	**UTS612E2P**	**UTS612E2S**
		Cable gland (Fig.7)	**UTS6JC12E2P**	**UTS6JC12E2S**
	Jam nut receptacle	Without (Fig.3)	**UTS712E2P**	**UTS712E2S**
PCB contacts loaded	Square flange receptacle	Without (Fig.2)	**UTS012D2P**	**UTS012D2S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.5)	**UTS712D2P32**	**UTS712D2S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.4)	**UTS712D2P**	**UTS712D2S**

Sealed unmated

Dimensions

Square flange receptacle - UTS0

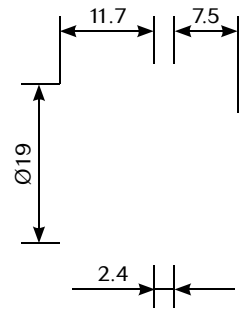


Fig. 1

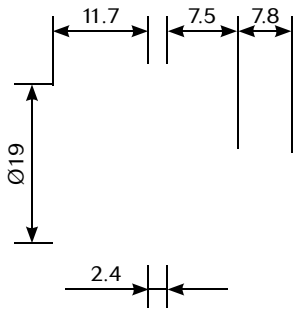
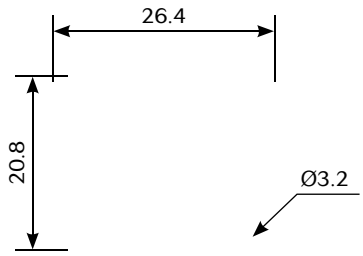


Fig. 2



Front view

Jam nut receptacle - UTS7

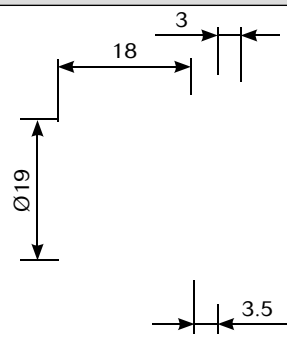


Fig. 3

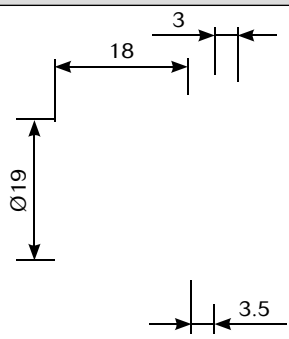


Fig. 4

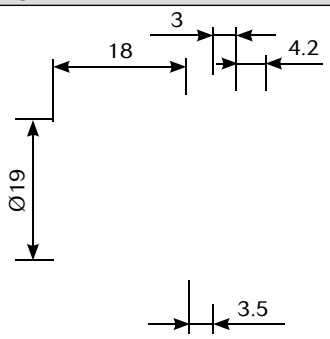
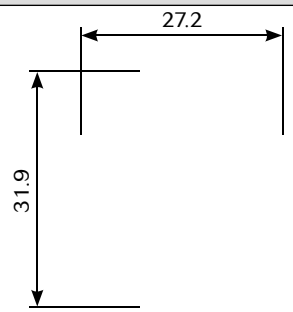


Fig. 5



Front view

Plug - UTS6

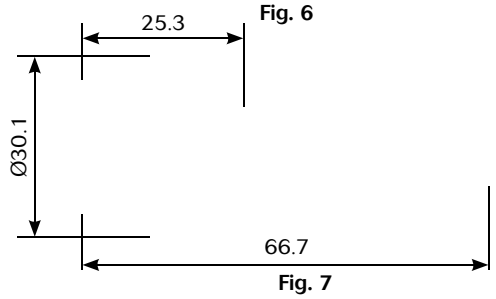
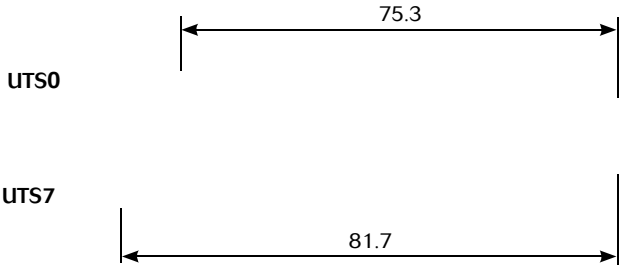
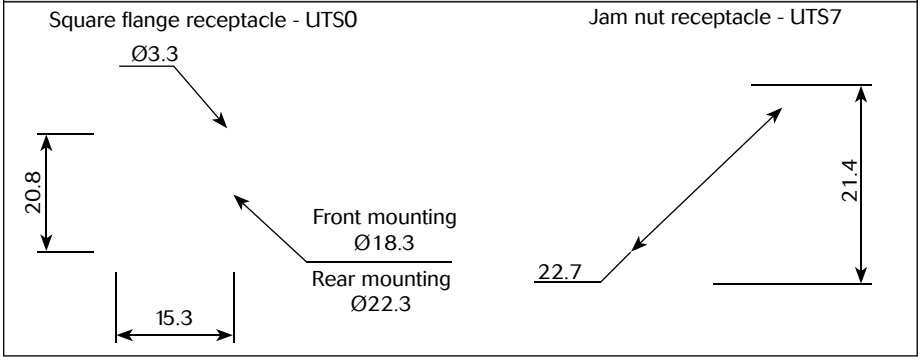


Fig. 6 Fig. 7

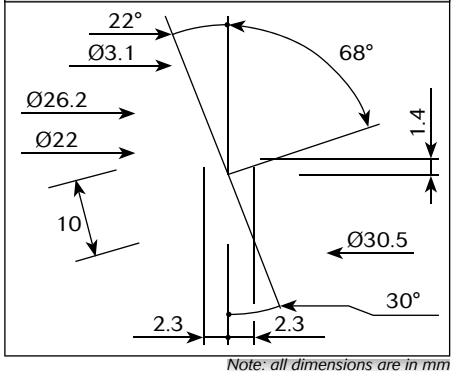
Mated connector length



Panel cut out



Drilling pattern



Note: all dimensions are in mm

Accessories

Jam nut sealing caps

Metal terminal

Part number
UTS12DCG

Part number
UTS12DCGR

Plug sealing cap

Part number
UTS612DCG

Square flange sealing cap

Metal terminal

Part number
UTS12DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005587A	85005596

Gasket

Part numbers / neoprene
UTFD13B

Color coding rings

G for Green

Y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS712CCRR	UTS612CCRR
UTS712CCRY	UTS612CCRY
UTS712CCRG	UTS612CCRG

* Add G for Green, Y for Yellow, R for Red

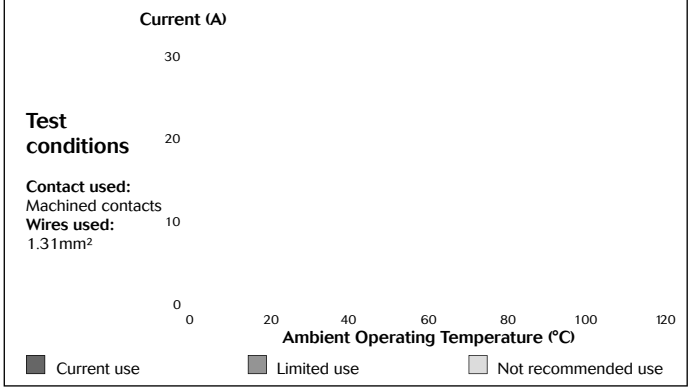
Electrical characteristics

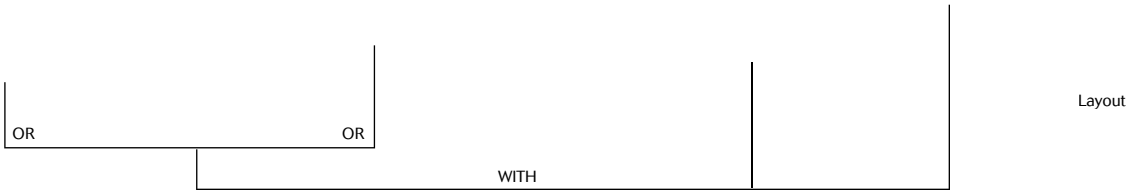
UL
13A 650V UL94 HB

CSA
13A 650V UL94 HB

IEC
16A 150V 2.5kV 3

UTS 12E2/12D2 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Crimp contacts supply separately see page 31	Free hanging receptacle	Cable gland (Fig.1)	**UTS1JC103P**	**UTS1JC103S**
	Plug	Without (Fig.2)	**UTS6103P**	**UTS6103S**
		Cable gland (Fig.3)	**UTS6JC103P**	**UTS6JC103S**
PCB contacts supply separately see page 31	Jam nut receptacle	Without (Fig.4)	**UTS7103P**	**UTS7103S**

2 + ground
16A/300V
per IEC 61984

Dimensions

Free hanging - UTS1

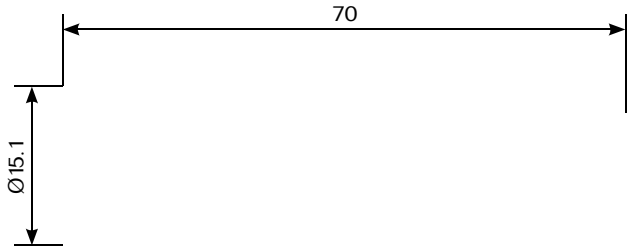


Fig. 1

Plug - UTS6

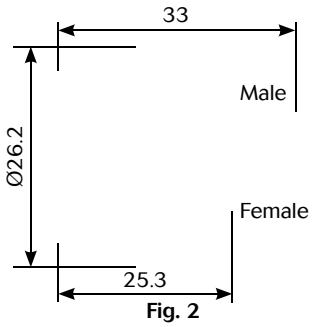


Fig. 2

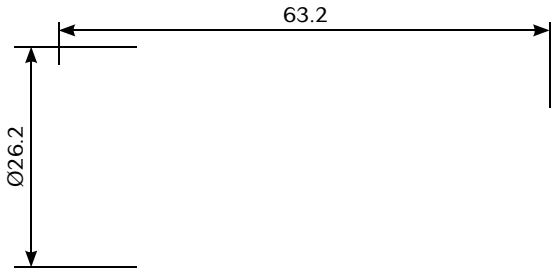


Fig. 3

Jam nut receptacle - UTS7

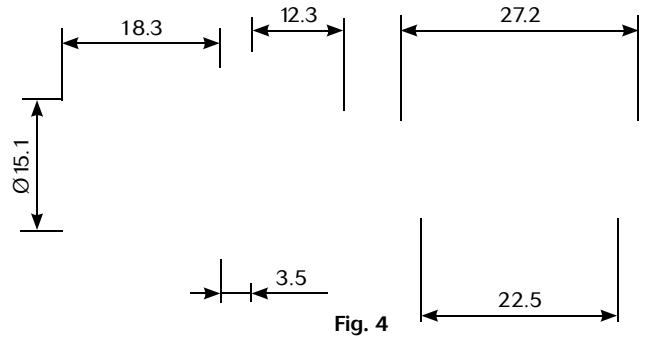
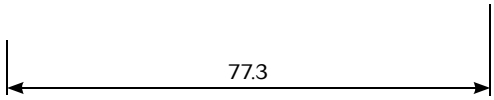


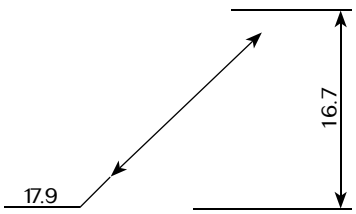
Fig. 4

Mated connector length - UTS7

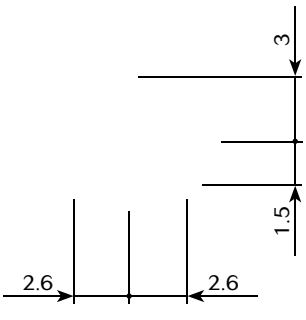


Panel cut out

Jam nut receptacle - UTS7



Drilling pattern



Note: all dimensions are in mm

Accessories and tooling

Jam nut sealing caps

Part number
UTS10DCG

Metal terminal

Part number
UTS10DCGR

Handle

Part number
SHANDLES

Tool kit

Part number
TOOLKIT

Plug sealing cap

Part number
UTS610DCG

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005586A	85005595

Gasket

Part numbers / neoprene
UTFD12B

Color coding rings

G for Green

y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS710CCRR	UTS610CCRR
UTS710CCRY	UTS610CCRY
UTS710CCRG	UTS610CCRG

* Add G for Green, y for Yellow, R for Red

Crimp tooling

Contacts	Contact size	Part number of head
RM RC 28M1K(1)	Standard contacts #16 Ø 1.6mm	S16RCM20
RM RC 24M9K(1)		S16RCM20
RM RC 20M13K(1)		S16RCM20
RM RC 20M12K(1)		S16RCM20
RM RC 16M23K(1)		S16RCM16
RM RC 14M50K(1)		S16RCM1450
RM RC 14M30K(1)		S16RCM14
SM SC 24M1TK6(1)		S16SCM20
SM SC 20M1TK6(1)		S16SCM20
SM SC 16M1TK6(1)		S16SCM1
SM SC 14M1TK6(1)		S16SCM1
SM SC 16M11TK6(1)		S16SCM11
RMDXK10D28K	Coaxial contacts	M10S-1J
RCDXK1D28K		M10S-1J
RM RC DX60xxD28K		M10S-1J
RM RC DXK10D28 + yor k090		M10S-1J
RM RC DX60xxD28		M10S-1J

(1): example of plating, for other plating see UTS catalog page 143

Contacts

#16	Contact type	AWG	Part number		Max wire Ø	Max insulator Ø
			Male	Female		
Crimp	Machined	30-28	RM28MLK(1)	RC28MLK(1)	0.55	1.1
		26-24	RM24M9K(1)	RC24M9K(1)	0.8	1.6
		22-20	RM20ML3K(1)	RC20ML3K(1)	1.18	1.8
		22-20	RM20ML2K(1)	RC20ML2K(1)	1.18	2.2
		20-16	RML6M23K(1)	RC16M23K(1)	1.8	3.2
		16-14	RML4M50K(1)	RC14M50K(1)	2.05	3.2
		16-14	RML4M30K(1)	RC14M30K(1)	2.28	3.2
	Stamped & formed reeled contacts	26-24	SM24MLTK6(1)(2)	SC24MLTK6(1)(2)	0.89-1.28	-
		22-20	SM20MLTK6(1)(2)	SC20MLTK6(1)(2)	1.17-2.08	-
		18-16	SML6MLTK6(1)(2)	SC16MLTK6(1)(2)	3.0	-
		18-16	SML6ML1TK6(1)(2)	SC16ML1TK6(1)(2)	2.0-3.0	-
		14	SML4MLTK6(1)(2)	SC14MLTK6(1)(2)	3.2	-
PCB	Machined (3)	-	RM20ML2E8K(1)	RC20ML2E84K(1)	-	-
Coaxial	Cable Multipiece	-	RMDXK10D28	RCDXK1D28	-	-
	Cable Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
	Twisted pair Multipiece	-	RMDXK10D28 + yor k090	RCDXK1D28 + yor k090	-	-
	Twisted pair Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
Fiber optic	POF contacts Plastic optical fibre	-	RMPOF1000	RCPOF1000B	-	-

(1): Example of plating, for other plating see page 143
(2): Loose piece contact available if putting L. Example: **SM20ML1- TK6**
(3): For dimensions see page 148

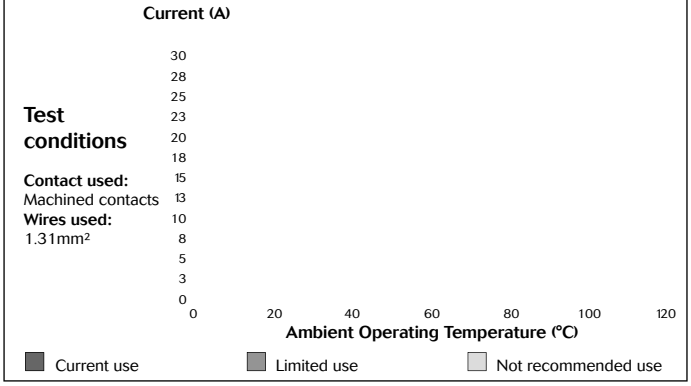
Electrical characteristics

UL
10A 500V UL94 V-0

CSA
7A 500V UL94 V-0

IEC
16A 300V 4kV 3
Temperature elevation: 50°C

UTS 103 derating curves



UTS Series
142G1

Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Crimp contacts supplied separately see page 35	Square flange receptacle	Without (Fig. 1)	**UTS0142G1P**	
	Free hanging receptacle	Cable gland (Fig. 6)	**UTS1JC142G1P**	**UTS1JC142G1S**
	Plug	Without (Fig. 3)	**UTS6142G1P**	**UTS6142G1S**
		Cable gland (Fig. 4)	**UTS6JC142G1P**	**UTS6JC142G1S**
	Jam nut receptacle	Without (Fig. 2)	**UTS7142G1P**	**UTS7142G1S**
	NPT threaded receptacle	Without (Fig. 5)		**UTS7142G1SNPT**

Dimensions

Square flange receptacle - UTS0

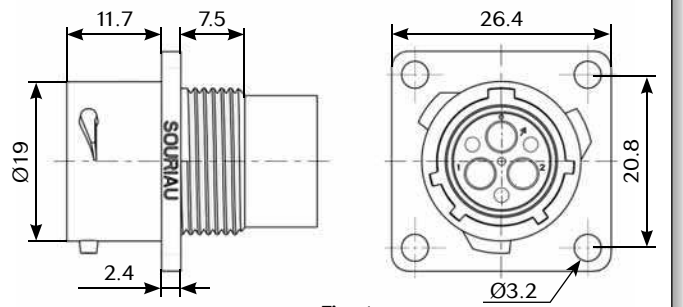


Fig. 1 Fig. 1

Jam nut receptacle - UTS7

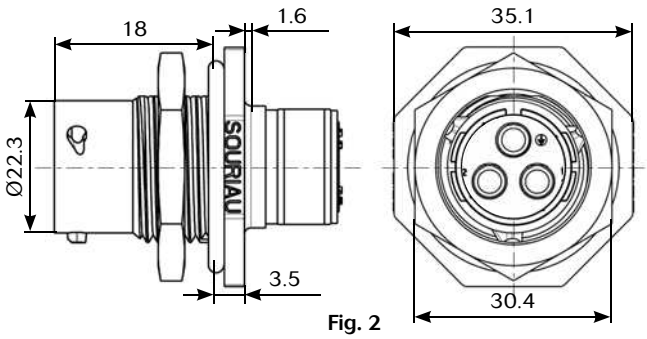


Fig. 2

Plug - UTS6

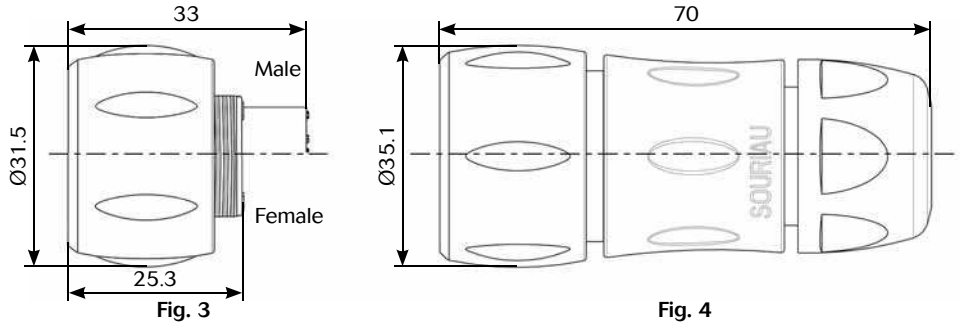


Fig. 3 Fig. 4

NPT threaded receptacle - UTS7

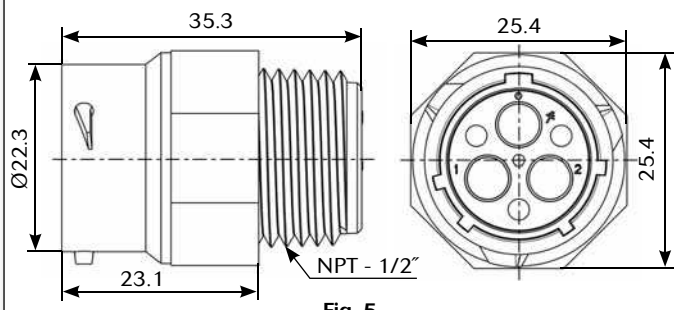


Fig. 5

Free hanging - UTS1

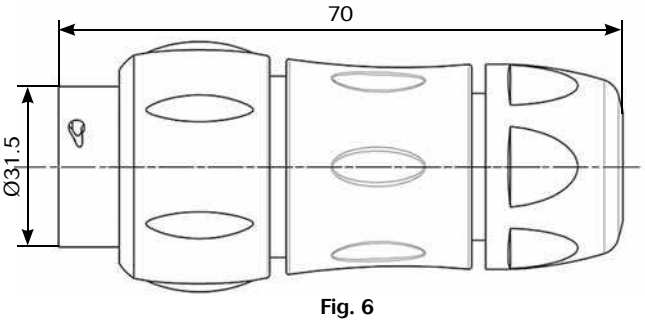
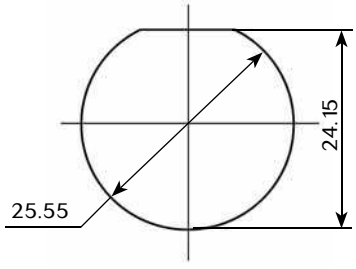


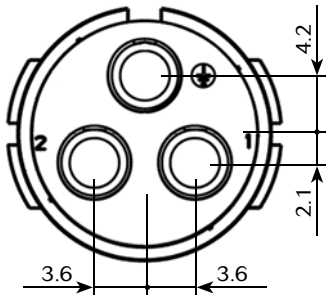
Fig. 6

Panel cut out

Jam nut receptacle - UTS7



Drilling pattern



Note: all dimensions are in mm

Mechanics

Accessories and tooling

Jam nut sealing caps

Part number
UTS14DCG

Metal terminal

Part number
UTS14DCGR

Hand tool

Part number
MB17

Plug sealing cap

Part number
UTS614DCG

Positioner + locator setting

Part number
VGE10078A

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005588A	85005597

Gasket

Part numbers / neoprene
UTFD14B

Extraction tool

Part number
51060210936

Color coding rings

G for Green

y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS714CCRR	UTS614CCRR
UTS714CCRY	UTS614CCRY
UTS714CCRG	UTS614CCRG

* Add G for Green, y for Yellow, R for Red

Contacts

#8	Contact type	AWG	Part number		Max wire Ø	Max insulator Ø
			Male	Female		
Crimp	Machined	16	**82913601A**(1)	**82913600A**(1)	-	6.5
		14	**82913603A**(1)	**82913602A**(1)	-	
		12	**82913605A**(1)	**82913604A**(1)	-	
		10	**82913607A**(1)	**82913606A**(1)	-	
		8	**82913609A**(1)	**82913608A**(1)	-	

(1): Example of plating, for other plating see page 143

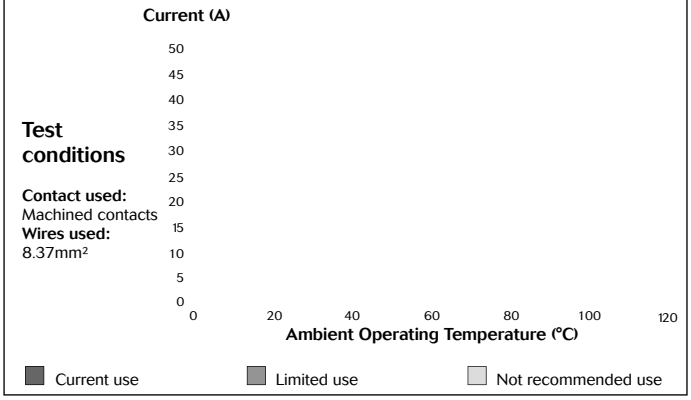
Electrical characteristics

UL
44A 600V UL94 V-0

CSA
30A 600V UL94 V-0

IEC
40A 300V 4kV 3

UTS 142G1 derating curves



Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.1)	**UTS08E3P**	**UTS08E3S**
	Plug	Without (Fig.6)	**UTS68E3P**	**UTS68E3S**
		Cable gland (Fig.7)	**UTS6JC8E3P**	**UTS6JC8E3S**
	Jam nut receptacle	Without (Fig.3)	**UTS78E3P**	**UTS78E3S**
PCB contacts loaded	Square flange receptacle	Without (Fig.2)	**UTS08D3P**	**UTS08D3S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.5)	**UTS78D3P32**	**UTS78D3S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.4)	**UTS78D3P**	**UTS78D3S**

Sealed unmated

Dimensions

Square flange receptacle - UTS0

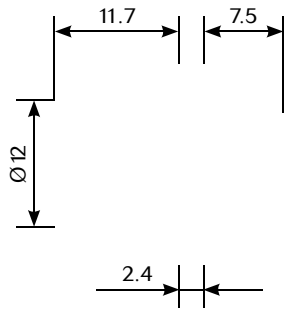


Fig. 1

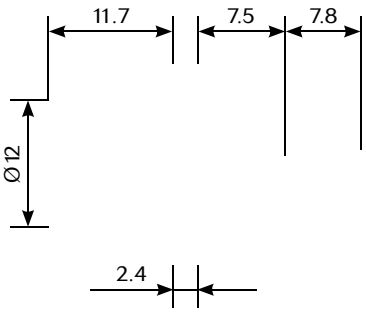
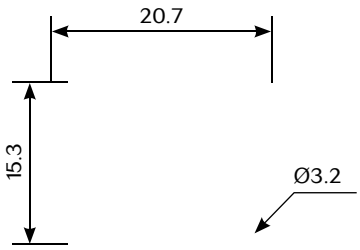


Fig. 2



Front view

Jam nut receptacle - UTS7

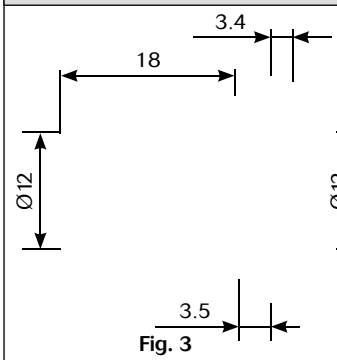


Fig. 3

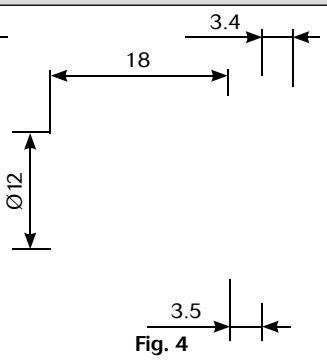


Fig. 4

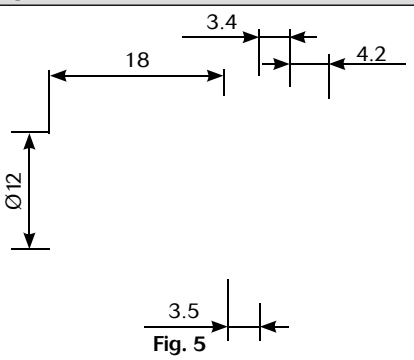
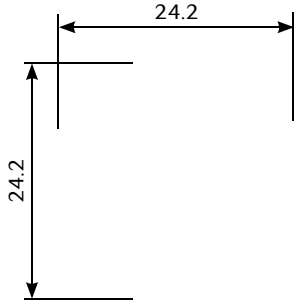


Fig. 5



Front view

Plug - UTS6

Fig. 6

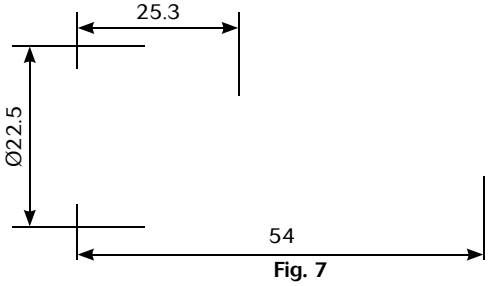
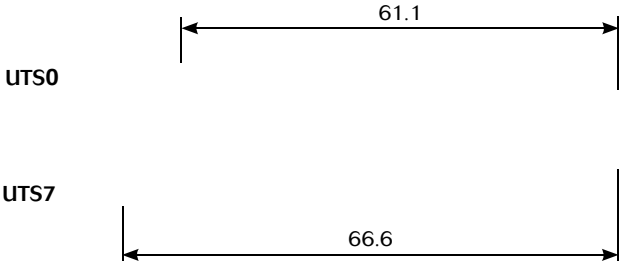


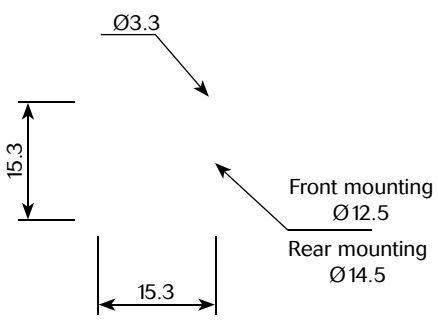
Fig. 7

Mated connector length

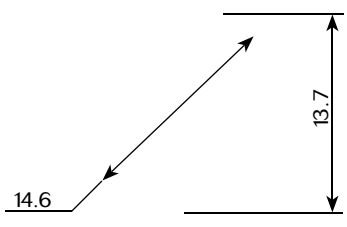


Panel cut out

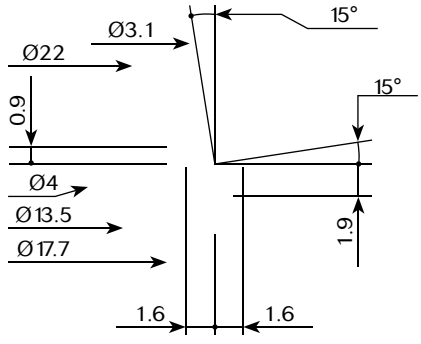
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



Drilling pattern



Note: all dimensions are in mm

Accessories

Jam nut sealing caps

Part number
UTS8DCG

Metal terminal

Part number
UTS8DCGR

Square flange sealing cap

Metal terminal

Part number
UTS8DCGE

Plug protective cap

IP40

Part number
UTS68C

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005585A	85005594

Gasket

Part numbers / neoprene
UTFD11B

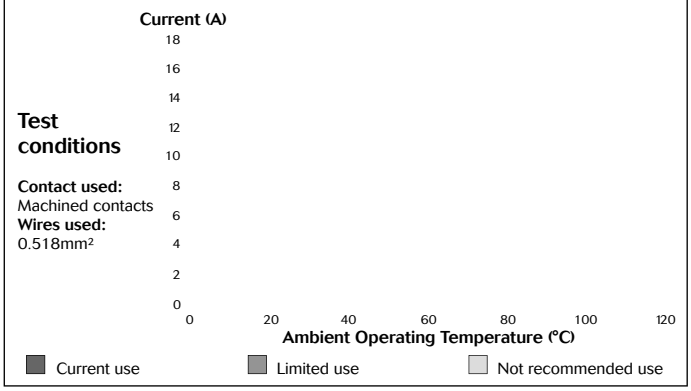
Electrical characteristics

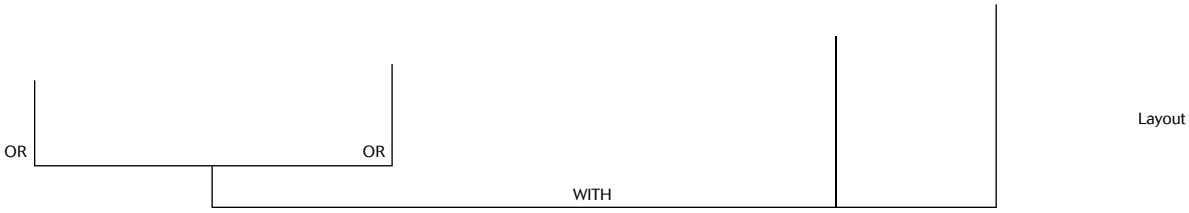
UL
7A 250V UL94 HB

CSA
7A 250V UL94 HB

IEC
7A 32V 1.5kV 3

UTS 8E3/8D3 derating curves





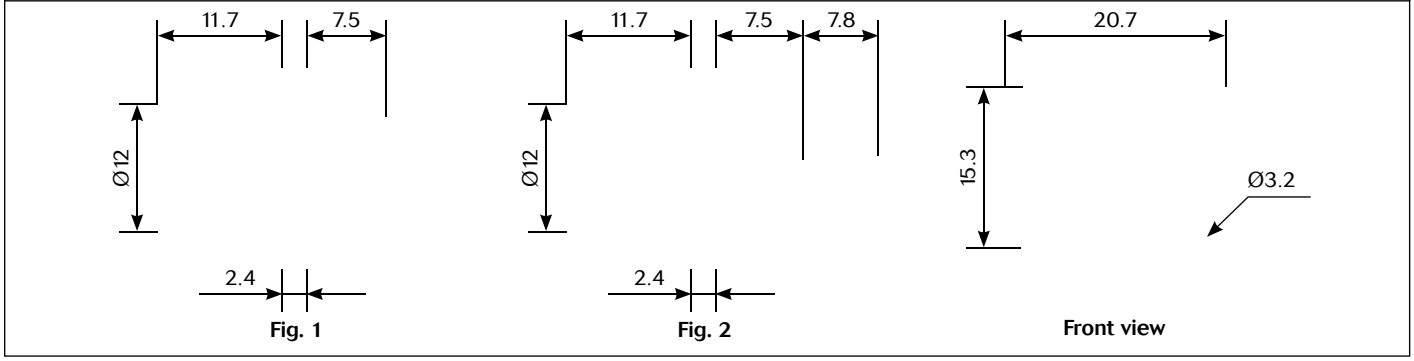
Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.1)	UTS08E3AP	UTS08E3AS
			UTS08E98P	UTS08E98S
	Plug	Without (Fig.6)	UTS68E3AP	UTS68E3AS
			UTS68E98P	UTS68E98S
		Cable gland (Fig.7)	UTS6JC8E3AP	UTS6JC8E3AS
			UTS6JC8E98P	UTS6JC8E98S
	Jam nut receptacle	Without (Fig.3)	UTS78E3AP	UTS78E3AS
			UTS78E98P	UTS78E98S
PCB contacts loaded	Square flange receptacle	Without (Fig.2)	UTS08D3AP	UTS08D3AS
			UTS08D98P	UTS08D98S
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.5)	UTS78D3AP32	UTS78D3AS32
			UTS78D98P32	UTS78D98S32
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.4)	UTS78D3AP	UTS78D3AS
			UTS78D98P	UTS78D98S

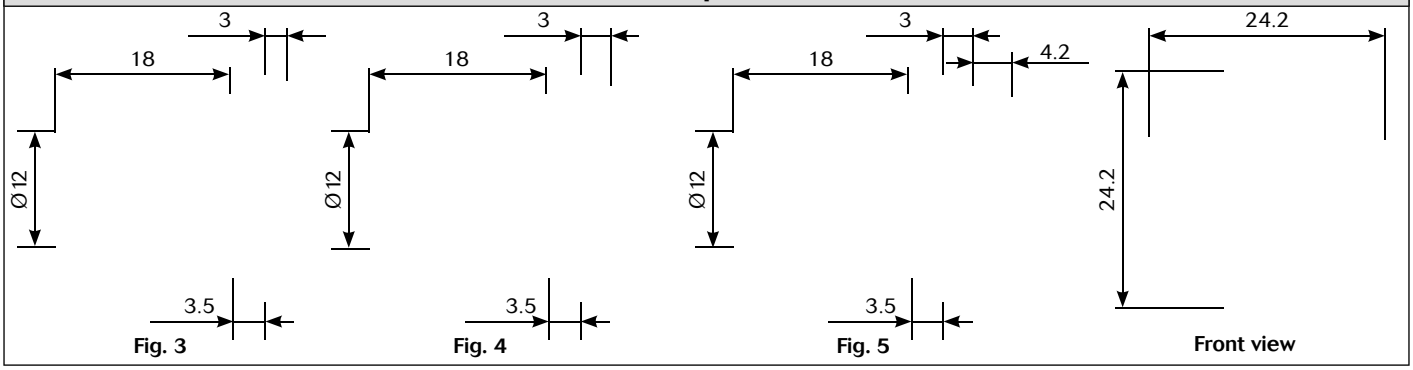
Sealed unmated

Dimensions

Square flange receptacle - UTS0



Jam nut receptacle - UTS7



Plug - UTS6

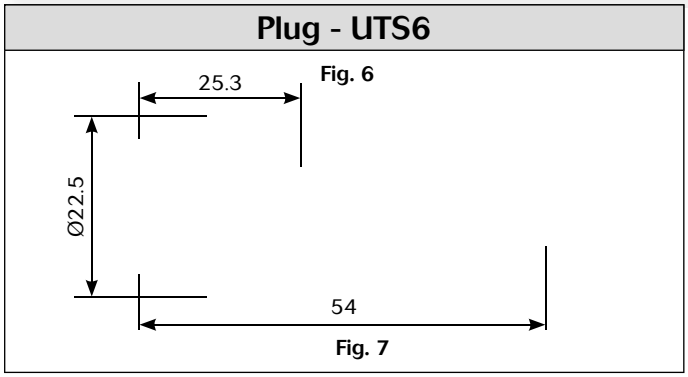
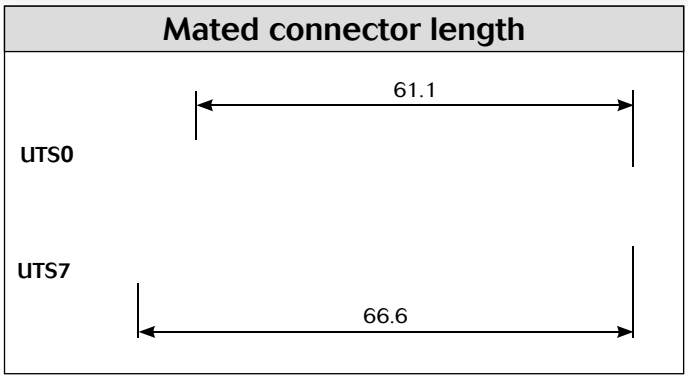
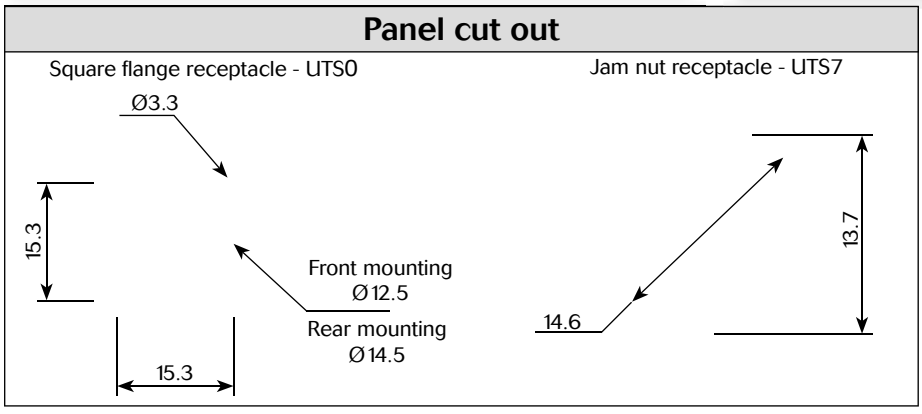


Fig. 6

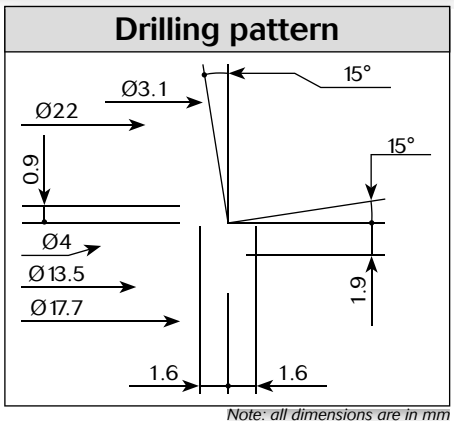
Mated connector length



Panel cut out



Drilling pattern



Note: all dimensions are in mm

Accessories

Jam nut sealing caps

Part number
UTS8DCG

Metal terminal

Part number
UTS8DCGR

Square flange sealing cap

Metal terminal

Part number
UTS8DCGE

Plug protective cap

IP40

Part number
UTS68C

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005585A	85005594

Gasket

Part numbers / neoprene
UTFD11B

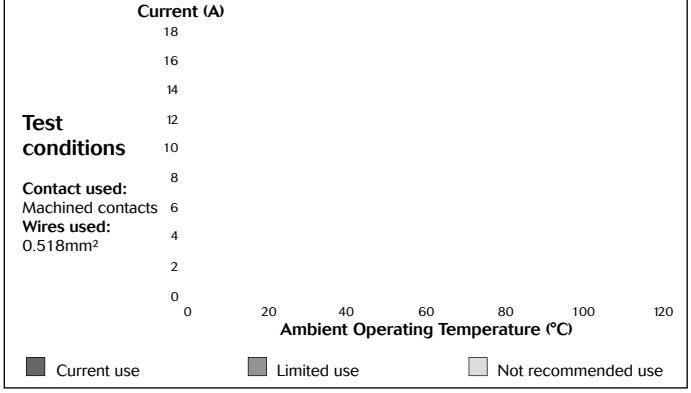
Electrical characteristics

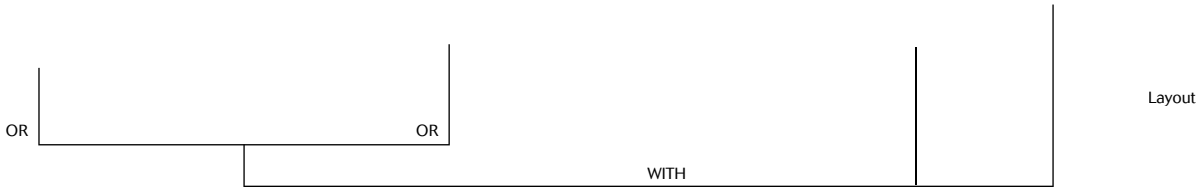
UL
7A 250V UL94 HB

CSA
7A 250V UL94 HB

IEC
7A 50V 1.5kV 3

UTS 8E3A/98 - 8D3A/98 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.1)	**UTS08E33P**	**UTS08E33S**
	Plug	Without (Fig.6)	**UTS68E33P**	**UTS68E33S**
		Cable gland (Fig.7)	**UTS6JC8E33P**	**UTS6JC8E33S**
	Jam nut receptacle	Without (Fig.3)	**UTS78E33P**	**UTS78E33S**
PCB contacts loaded	Square flange receptacle	Without (Fig.2)	**UTS08D33P**	**UTS08D33S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.5)	**UTS78D33P32**	**UTS78D33S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.4)	**UTS78D33P**	**UTS78D33S**

Sealed unmated

Dimensions

Square flange receptacle - UTS0

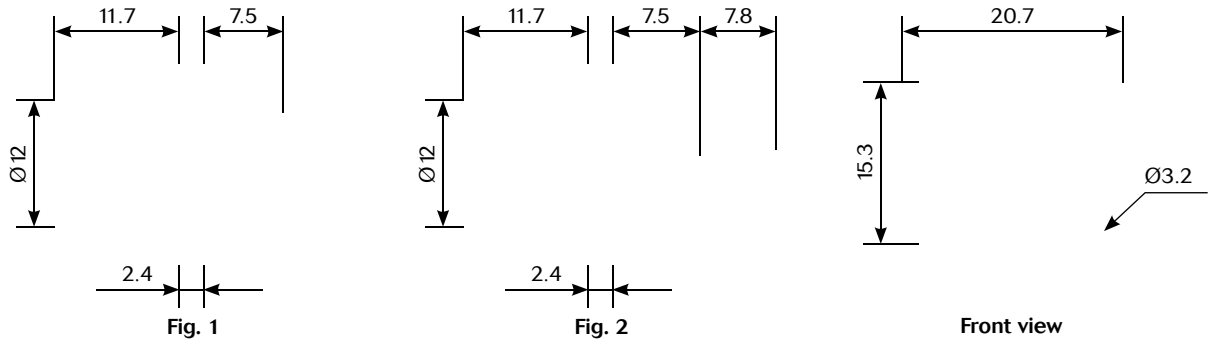


Fig. 1 Fig. 2 Front view

Jam nut receptacle - UTS7

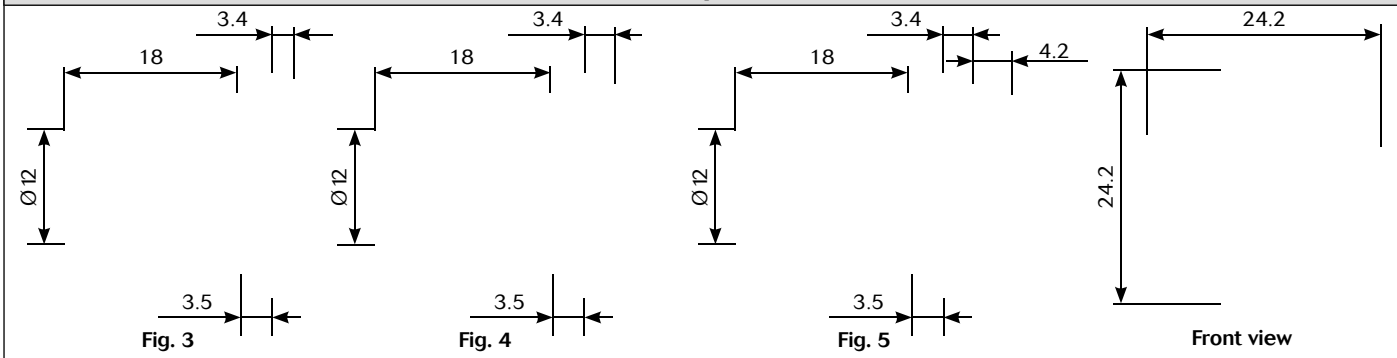


Fig. 3 Fig. 4 Fig. 5 Front view

Plug - UTS6

Fig. 6

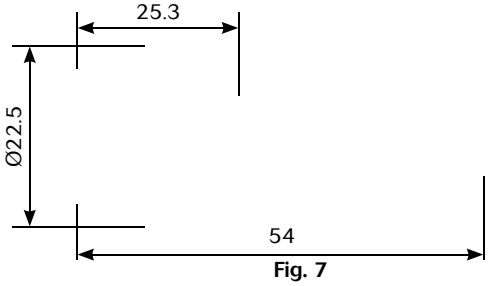
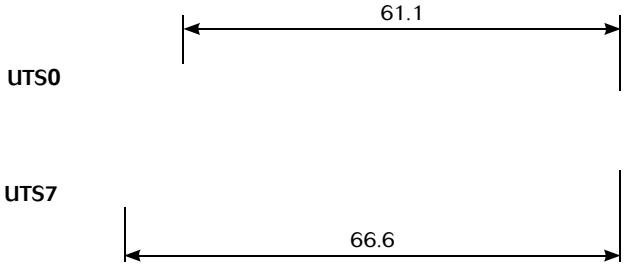
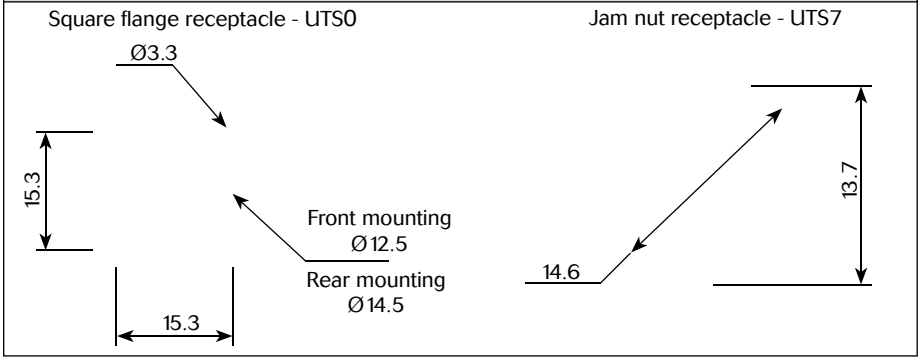


Fig. 7

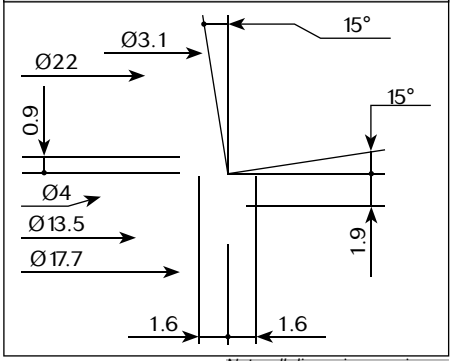
Mated connector length



Panel cut out



Drilling pattern



Note: all dimensions are in mm

Accessories

Jam nut sealing caps

Metal terminal

Part number	Part number
UTS8DCG	UTS8DCGR

Square flange sealing cap

Metal terminal

Part number
UTS8DCGE

Plug protective cap

IP40

Part number
UTS68C

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005585A	85005594

Gasket

Part numbers / neoprene
UTFD11B

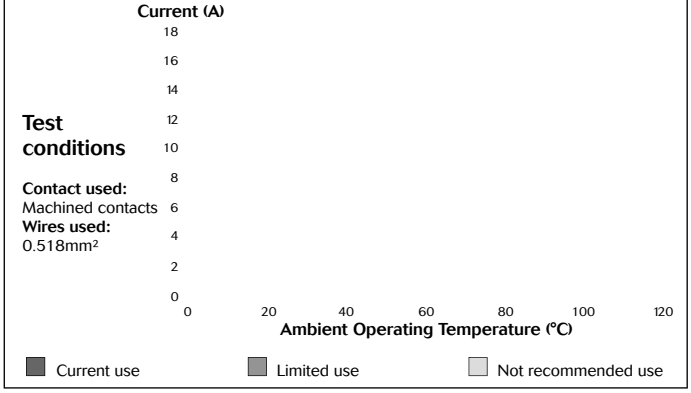
Electrical characteristics

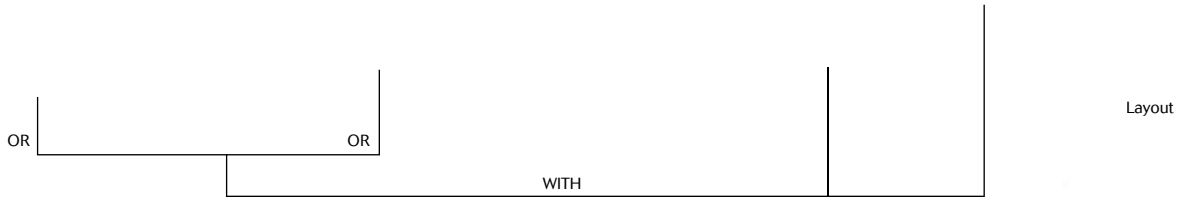
UL
7A 250V UL94 HB

CSA
7A 250V UL94 HB

IEC
7A 50V 1.5kV 3

UTS 8E33/8D33 de-rating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.6)	**UTS012E3P**	**UTS012E3S**
	Plug	Without (Fig.1)	**UTS612E3P**	**UTS612E3S**
		Cable gland (Fig.2)	**UTS6JC12E3P**	**UTS6JC12E3S**
	Jam nut receptacle	Without (Fig.3)	**UTS712E3P**	**UTS712E3S**
PCB contacts loaded	Square flange receptacle	Without (Fig.7)	**UTS012D3P**	**UTS012D3S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.5)	**UTS712D3P32**	**UTS712D3S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.4)	**UTS712D3P**	**UTS712D3S**

Sealed unmated

Dimensions

Plug - UTS6

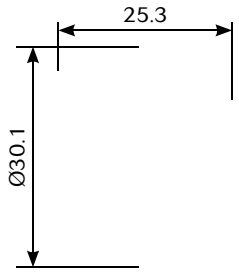


Fig. 1

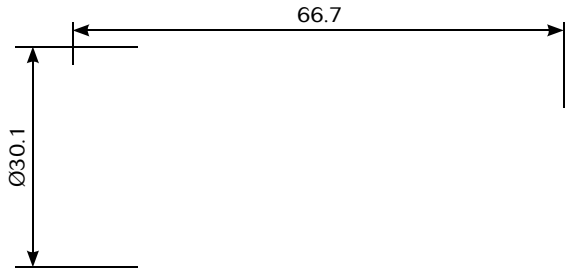


Fig. 2

Jam nut receptacle - UTS7

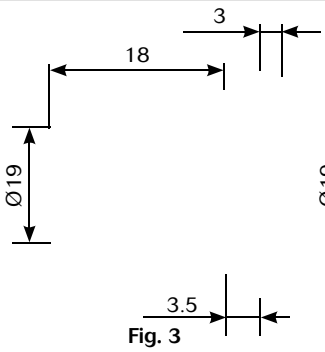


Fig. 3

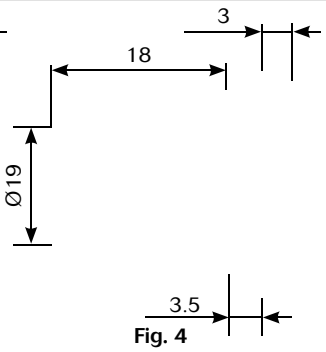


Fig. 4

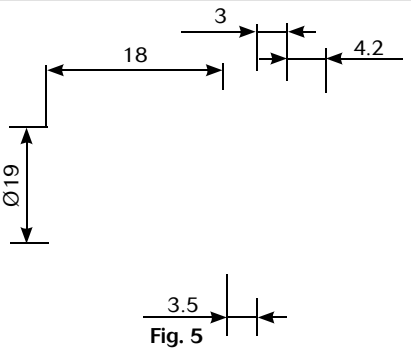
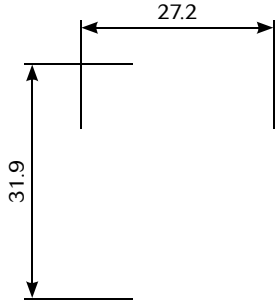


Fig. 5



Front view

Square flange receptacle - UTS0

Fig. 7

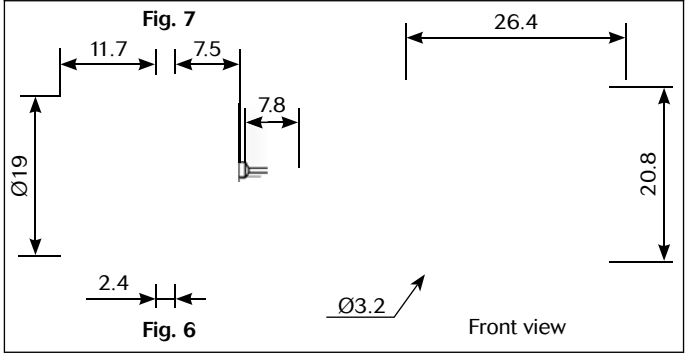
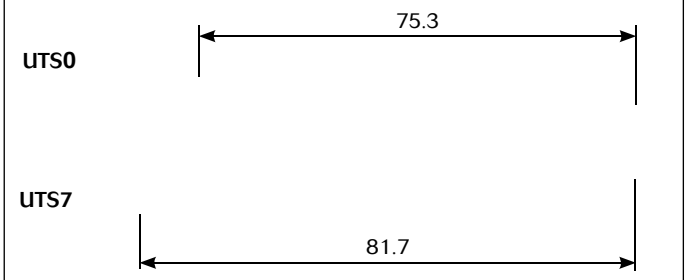


Fig. 6

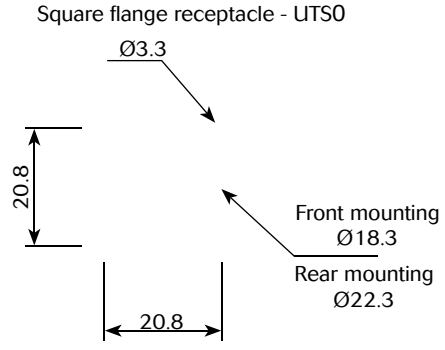
Front view

Mated connector length

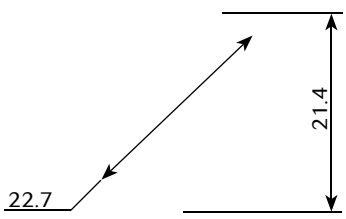


Panel cut out

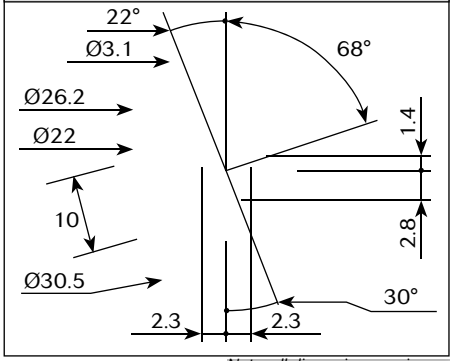
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



Drilling pattern



Note: all dimensions are in mm

Accessories

Jam nut sealing caps

Metal terminal

Part number	Part number
UTS12DCG	UTS12DCGR

Plug sealing cap

Part number
UTS612DCG

Square flange sealing cap

Metal terminal

Part number
UTS12DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005587A	85005596

Gasket

Part numbers / neoprene
UTFD13B

Color coding rings

G for Green

Y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS712CCRR	UTS612CCRR
UTS712CCRY	UTS612CCRY
UTS712CCRG	UTS612CCRG

* Add G for Green, Y for Yellow, R for Red

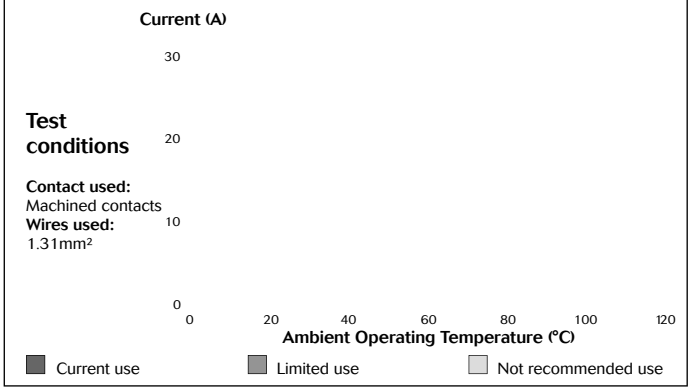
Electrical characteristics

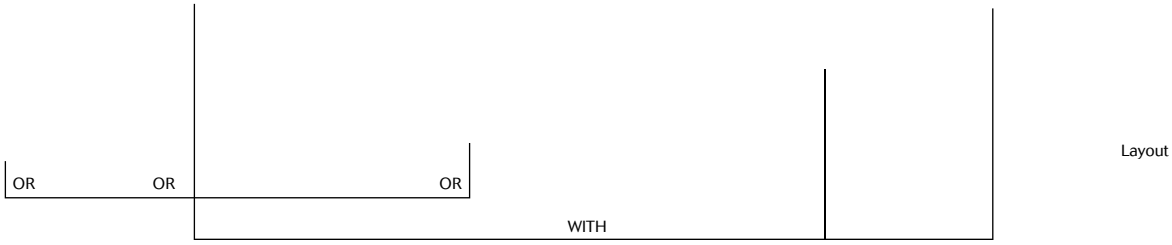
UL
13A 650V UL94 HB

CSA
13A 650V UL94 HB

IEC
16A 150V 2.5kV 3

UTS 12E3/12D3 derating curves





Layout

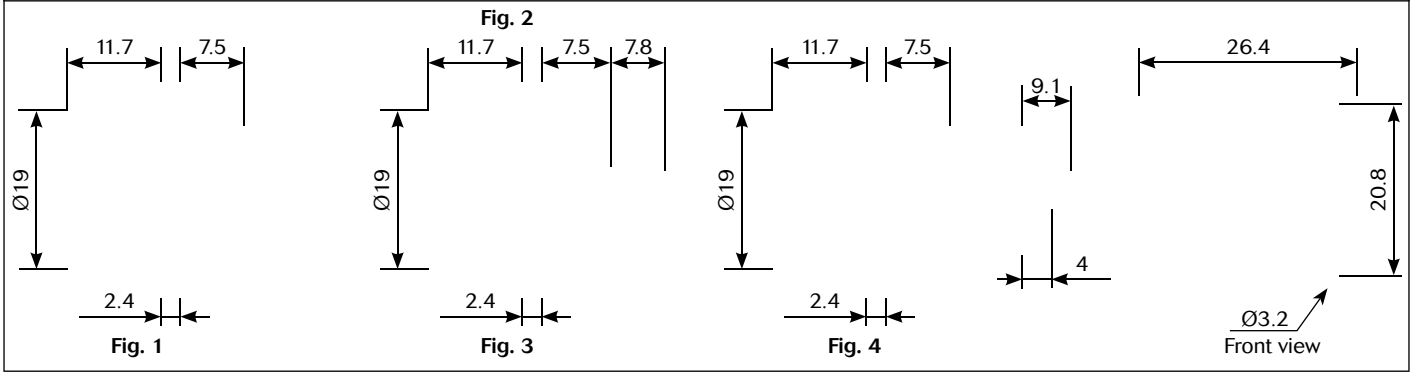
Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Crimp contacts supply separately see page 55	Square flange receptacle	Without (Fig. 1)	**UTS0124P**	
	Jam nut receptacle	Without (Fig. 5)	**UTS7124P**	**UTS7124S**
	Free hanging receptacle	Cable gland (Fig. 13)	**UTS1JC124P**	**UTS1JC124S**
	Plug	Without (Fig. 11)	**UTS6124P**	**UTS6124S**
		Cable gland (Fig. 12)	**UTS6JC124P**	**UTS6JC124S**
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig. 3)	**UTS012E4P**	**UTS012E4S**
	Jam nut receptacle	Without (Fig. 10)	**UTS712E4P**	**UTS712E4S**
	Plug	Without (Fig. 11)	**UTS612E4P**	**UTS612E4S**
	Plug	Cable gland (Fig. 12)	**UTS6JC12E4P**	**UTS6JC12E4S**
Screw contacts loaded	Jam nut receptacle	Without (Fig. 7 & 8)	**UTS7124PSCR**	**UTS7124SSCR**
	Plug	Without (Fig. 11)	**UTS6124PSCR**	**UTS6124SSCR**
		Cable gland (Fig. 12)	**UTS6JC124PSCR**	**UTS6JC124SSCR**
	Free hanging receptacle	Cable gland (Fig. 13)	**UTS1JC124PSCR**	
PCB contacts supply separately see page 55	Square flange receptacle	Without (Fig. 4)	**UTS0124P**	
	Jam nut receptacle	Without (Fig. 6)	**UTS7124P**	**UTS7124S**
PCB contacts loaded	Square flange receptacle	Without (Fig. 2)	**UTS012D4P**	**UTS012D4S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig. 9)	**UTS712D4P**	**UTS712D4S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig. 9)	**UTS712D4P32**	**UTS712D4S32**

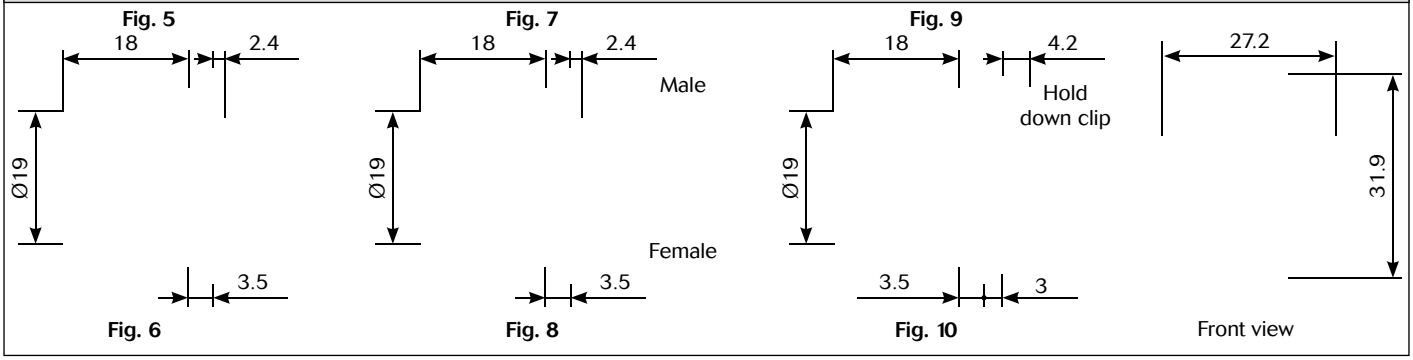
Sealed unmated

Dimensions

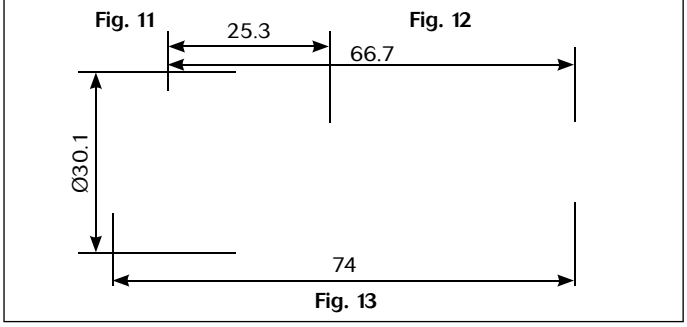
Square flange receptacle - UTS0



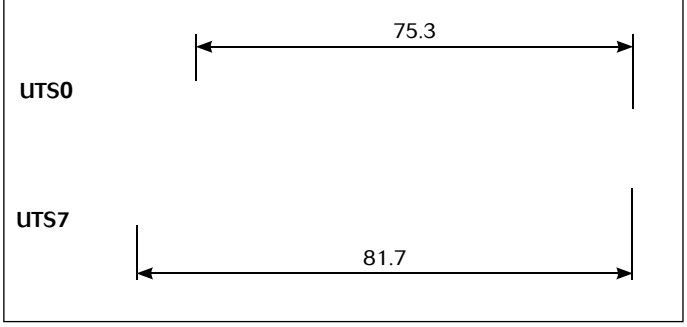
Jam nut receptacle - UTS7



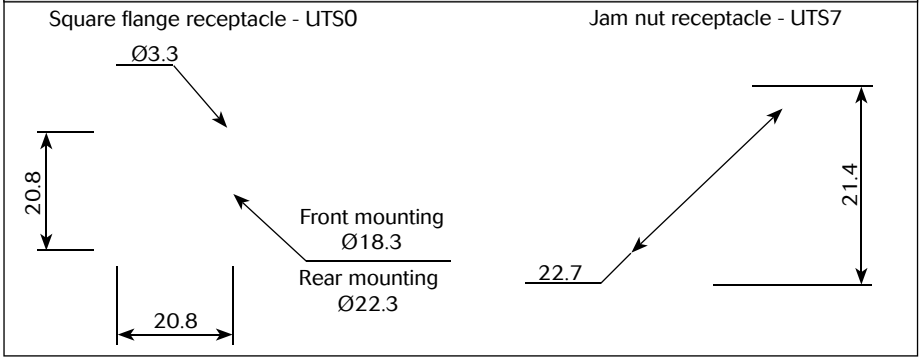
Free hanging - UTS1 / Plug - UTS6



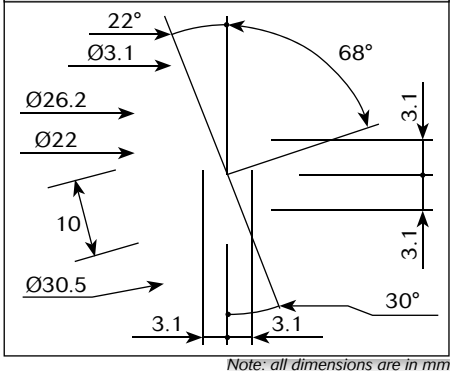
Mated connector length



Panel cut out



Drilling pattern



Note: all dimensions are in mm

Mechanics

Accessories and tooling

Jam nut sealing caps

Part number
UTS12DCG

Metal terminal

Part number
UTS12DCGR

Handle

Part number
SHANDLES

Tool kit

Part number
TOOLKIT

Plug sealing cap

Part number
UTS612DCG

Square flange sealing cap

Metal terminal

Part number
UTS12DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005587A	85005596

Gasket

Part numbers / neoprene
UTFD13B

Color coding rings

G for Green

y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS712CCRR	UTS612CCRR
UTS712CCRY	UTS612CCRY
UTS712CCRG	UTS612CCRG

* Add G for Green, y for Yellow, R for Red

Crimp tooling

Contacts	Contact size	Part number of head
RMRC 28M1K(1)	Standard contacts #16 Ø 1.6mm	S16RCM20
RMRC 24M9K(1)		S16RCM20
RMRC 20M13K(1)		S16RCM20
RMRC 20M12K(1)		S16RCM20
RMRC 16M23K(1)		S16RCM16
RMRC 14M50K(1)		S16RCM1450
RMRC 14M30K(1)		S16RCM14
SMSC 24ML1TK6(1)		S16SCM20
SMSC 20ML1TK6(1)		S16SCM20
SMSC 16ML1TK6(1)		S16SCM1
SMSC 14ML1TK6(1)		S16SCM1
SMSC 16ML11TK6(1)		S16SCM11
RMDXK10D28K	Coaxial contacts	M10S-1J
RCDXK1D28K		M10S-1J
RMRC DX60xxD28K		M10S-1J
RMRC DXK10D28 + yor k090		M10S-1J
RMRC DX60xxD28		M10S-1J

(1): example of plating, for other plating see UTS catalog page 143

3 + ground
16A/300V
per IEC 61984

Contacts

#16	Contact type	AWG	Part number		Max wire Ø	Max insulator Ø
			Male	Female		
Crimp	Machined	30-28	RM28MLK(1)	RC28MLK(1)	0.55	1.1
		26-24	RM24M9K(1)	RC24M9K(1)	0.8	1.6
		22-20	RM20ML3K(1)	RC20ML3K(1)	1.18	1.8
		22-20	RM20ML2K(1)	RC20ML2K(1)	1.18	2.2
		20-16	RML6M23K(1)	RC16M23K(1)	1.8	3.2
		16-14	RML4M50K(1)	RC14M50K(1)	2.05	3.2
		16-14	RML4M30K(1)	RC14M30K(1)	2.28	3.2
	Stamped & formed reeled contacts	26-24	SM24MLTK6(1)(2)	SC24MLTK6(1)(2)	0.89-1.28	-
		22-20	SM20MLTK6(1)(2)	SC20MLTK6(1)(2)	1.17-2.08	-
		18-16	SML6MLTK6(1)(2)	SC16MLTK6(1)(2)	3.0	-
		18-16	SML6ML1TK6(1)(2)	SC16ML1TK6(1)(2)	2.0-3.0	-
		14	SML4MLTK6(1)(2)	SC14MLTK6(1)(2)	3.2	-
PCB	Machined (3)	-	RM20ML2E8K(1)	RC20ML2E84K(1)	-	-
Coaxial	Cable Multipiece	-	RMDXK10D28	RCDXK1D28	-	-
	Cable Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
	Twisted pair Multipiece	-	RMDXK10D28 + yor k090	RCDXK1D28 + yor k090	-	-
	Twisted pair Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
Fiber optic	POF contacts Plastic optical fibre	-	RMPOF1000	RCPOF1000B	-	-

(1): Example of plating, for other plating see page 143
(2): Loose piece contact available if putting L. Example: **SM20ML1- TK6**
(3): For dimensions see page 148

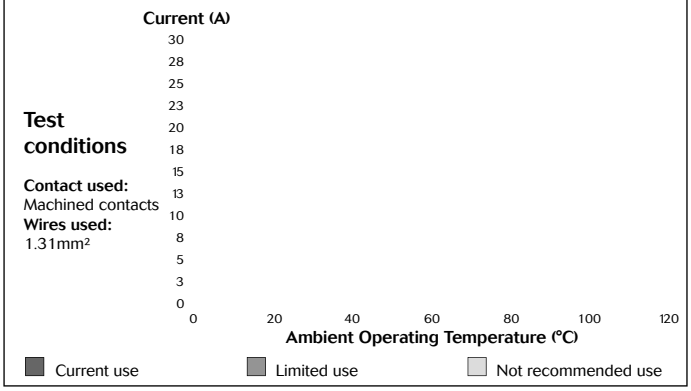
Electrical characteristics

UL
10A 500V UL94 V-0

CSA
7A 500V UL94 V-0

IEC
16A 300V 4kV 3
Temperature elevation: 50°C

UTS 124 derating curves



Mechanics

I ayout

Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Crimp contacts supply separately see page 59	NPT threaded receptacle	Without (Fig.1)		**UTS7183G1SNPT**
	Plug	Without (Fig.2)	**UTS6183G1P**	
	Plug	Cable gland (Fig.3)	**UTS6JC183G1P**	

Dimensions

NPT threaded receptacle - UTS7

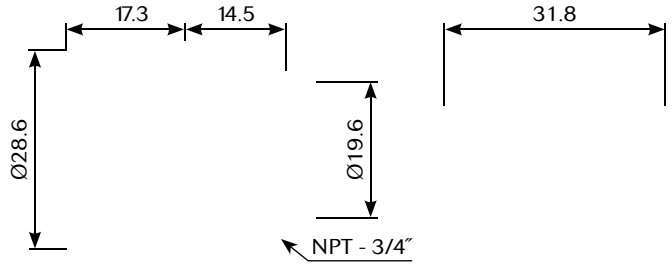


Fig. 1

Plug - UTS6

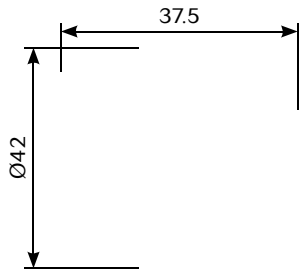


Fig. 2

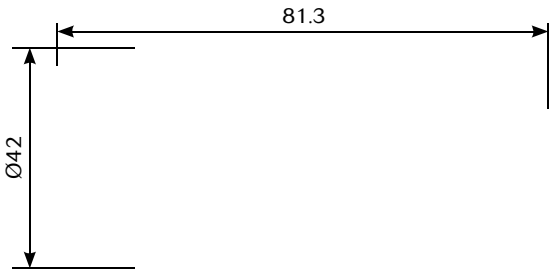
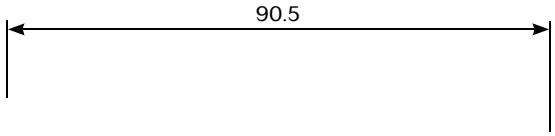
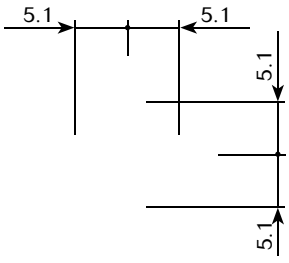


Fig. 3

Mated connector length - UTS6JC



Drilling pattern



Note: all dimensions are in mm

Accessories and tooling

Jam nut sealing caps

Part number
UTS14DCG

Metal terminal

Part number
UTS14DCGR

Hand tool

Part number
M317

Plug sealing cap

Part number
UTS614DCG

Positioner + locator setting

Part number
VGE10078A

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005590A	85005599

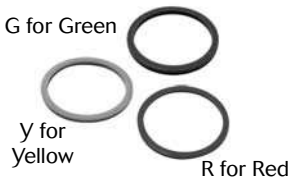
Gasket

Part numbers / neoprene
UTFD14B

Extraction tool

Part number
51060210936

Color coding rings



Part numbers	
Receptacles	Plugs
UTS714CCRR	UTS614CCRR
UTS714CCRY	UTS614CCRY
UTS714CCRG	UTS614CCRG

* Add G for Green, y for Yellow, R for Red

Contacts

#8	Contact type	AWG	Part number		Max wire Ø	Max insulator Ø
			Male	Female		
Crimp	Machined	16	**82913601A**(1)	**82913600A**(1)	-	6.5
		14	**82913603A**(1)	**82913602A**(1)	-	
		12	**82913605A**(1)	**82913604A**(1)	-	
		10	**82913607A**(1)	**82913606A**(1)	-	
		8	**82913609A**(1)	**82913608A**(1)	-	

(1): Example of plating, for other plating see page 143

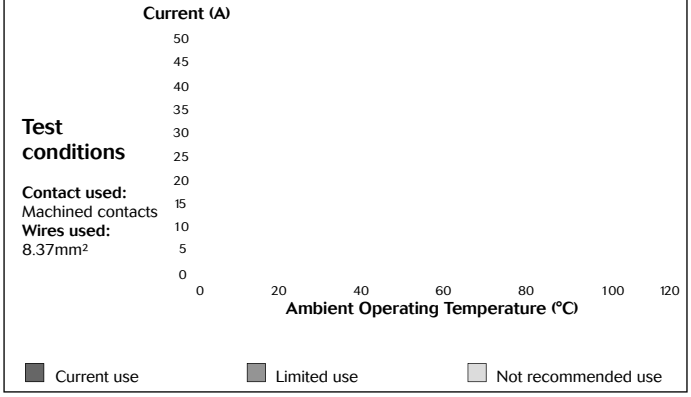
Electrical characteristics

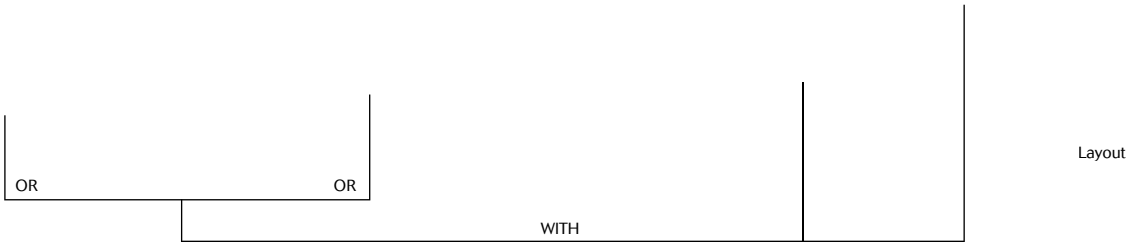
UL
23A 600V UL94 V-0

CSA
23A 600V UL94 V-0

IEC
32A 300V 4kV 3

UTS 183G1 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.1)	**UTS08E4P**	**UTS08E4S**
	Plug	Without (Fig.6)	**UTS68E4P**	**UTS68E4S**
		Cable gland (Fig.7)	**UTS6JC8E4P**	**UTS6JC8E4S**
	Jam nut receptacle	Without (Fig.3)	**UTS78E4P**	**UTS78E4S**
PCB contacts loaded	Square flange receptacle	Without (Fig.2)	**UTS08D4P**	**UTS08D4S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.5)	**UTS78D4P32**	**UTS78D4S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.4)	**UTS78D4P**	**UTS78D4S**

Sealed unmated

Dimensions

Square flange receptacle - UTS0

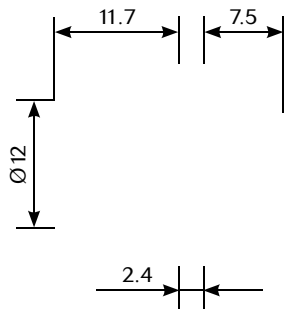


Fig. 1

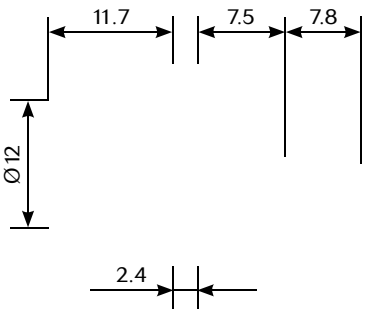
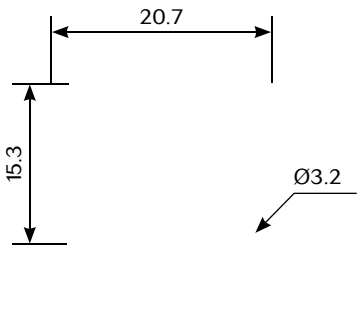


Fig. 2



Front view

Jam nut receptacle - UTS7

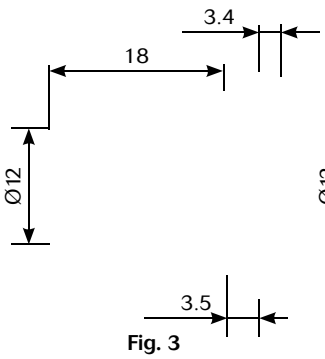


Fig. 3

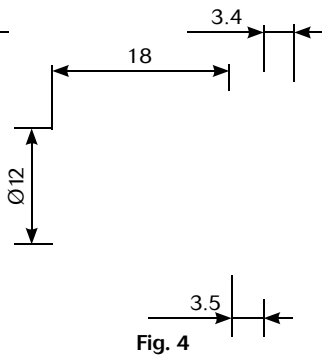


Fig. 4

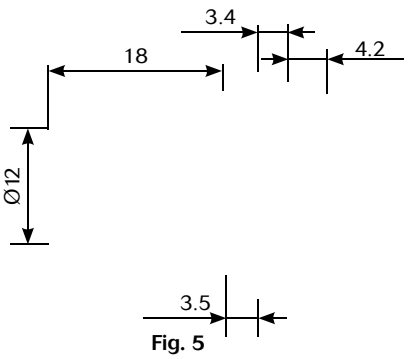
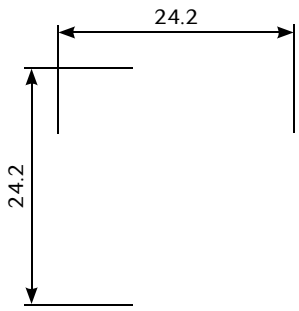


Fig. 5



Front view

Plug - UTS6

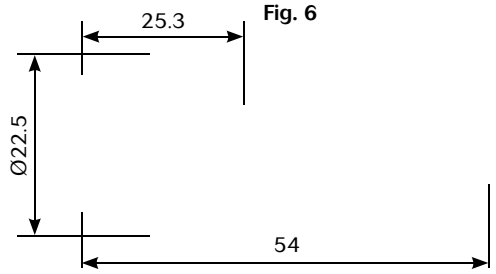
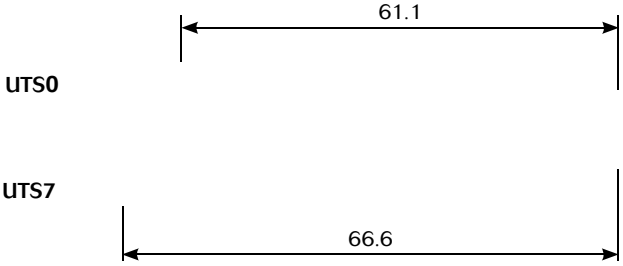


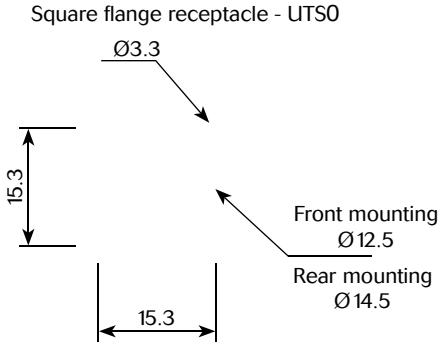
Fig. 6 Fig. 7

Mated connector length

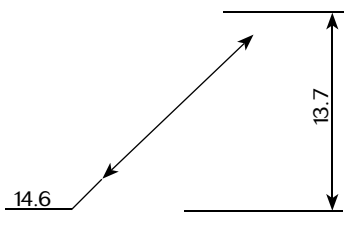


Panel cut out

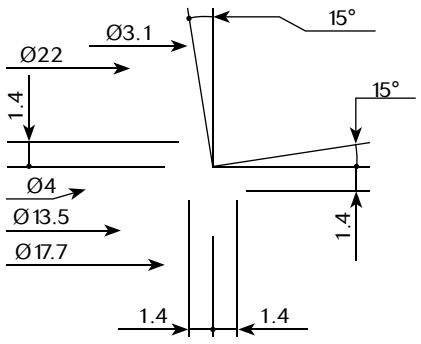
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



Drilling pattern



Note: all dimensions are in mm

Accessories

Jam nut sealing caps

Metal terminal

Part number	Part number
UTS8DCG	UTS8DCGR

Square flange sealing cap

Metal terminal

Part number
UTS8DCGE

Plug protective cap

IP40

Part number
UTS68C

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005585A	85005594

Gasket

Part numbers / neoprene
UTFD11B

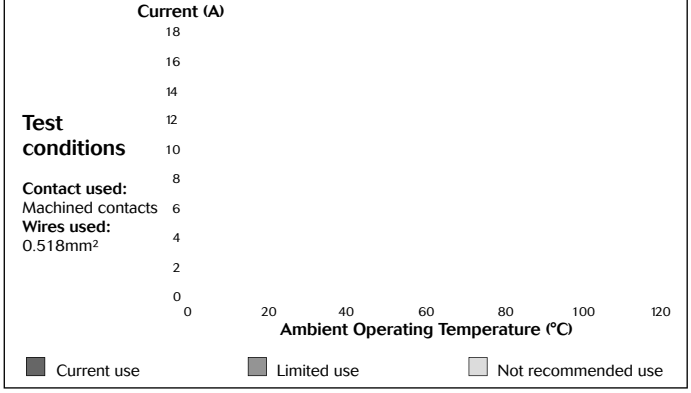
Electrical characteristics

UL
7A 250V UL94 HB

CSA
7A 250V UL94 HB

IEC
7A 32V 1.5kV 3

UTS 8E4/8D4 derating curves



Layout

Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Crimp contacts supply separately see page 67	Free hanging receptacle	Cable gland (Fig.1)	**UTS1JC102W2P**	**UTS1JC102W2S**
	Plug	Without (Fig.2)	**UTS6102W2P**	**UTS6102W2S**
	Plug	Cable gland (Fig.3)	**UTS6JC102W2P**	**UTS6JC102W2S**
	Jam nut receptacle	Without (Fig.4)	**UTS7102W2P**	**UTS7102W2S**

Dimensions

Free hanging - UTS1

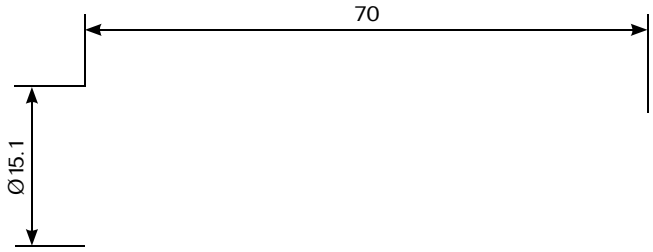


Fig. 1

Plug - UTS6

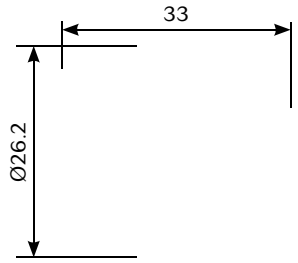


Fig. 2 Male

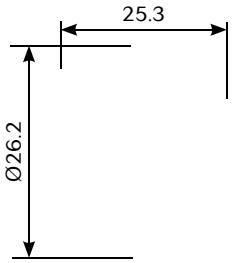


Fig. 2 Female

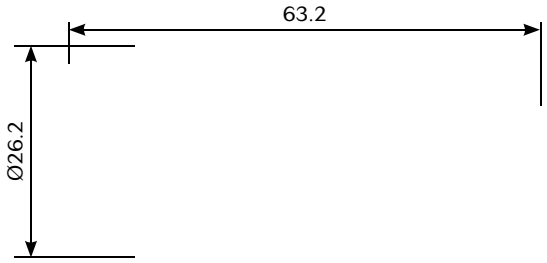


Fig. 3

Jam nut receptacle - UTS7

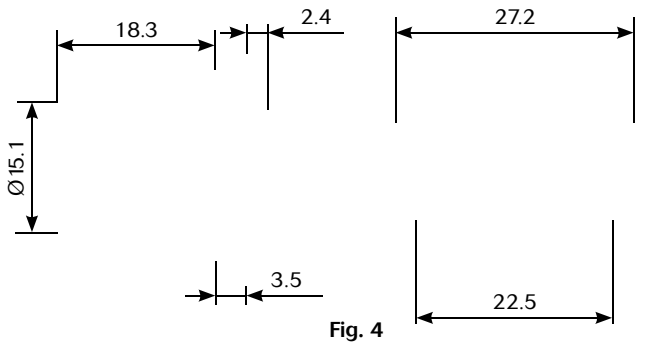
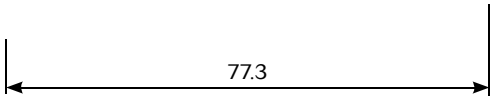


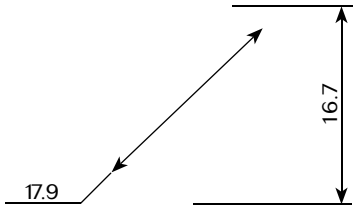
Fig. 4

Mated connector length - UTS7

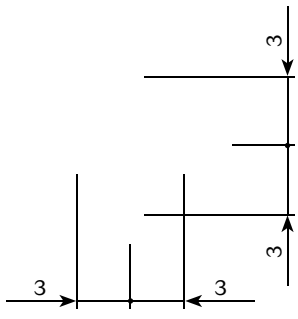


Panel cut out

Jam nut receptacle - UTS7



Drilling pattern



Note: all dimensions are in mm

Accessories and tooling

Jam nut sealing caps

Metal terminal

Part number
UTS10DCG

Part number
UTS10DCGR

Plug sealing cap

Part number
UTS610DCG

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005586A	85005595

Gasket

Part numbers / neoprene
UTFD12B

Color coding rings

G for Green

y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS710CCRR	UTS610CCRR
UTS710CCRY	UTS610CCRY
UTS710CCRG	UTS610CCRG

* Add G for Green, y for Yellow, R for Red

Crimp tooling #20

Part number
SHANDLES

Part number
TOOLKIT

Contacts	Contact size	Part number of head
RM RC 24W3K(1)	Standard contacts #20 Ø 1mm	S20RM
RM RC 20W3K(1)		S20RM
RM RC 18W3K(1)		S20RM
SM SC 24W3S(2)		S20SCM20
SM SC 24WL3S(3)		S20SCM20
SM SC 20W3S(2)		S20SCM20
SM SC 20WL3S(3)		S20SCM20

(1): example of plating, for other plating see UTS catalog page 148
(2): contact reeled (3): loose contact

Crimp tooling #12

Part number hand tool
M81 7

Part number positioner + locator setting
VGE10078A

Part number extraction tool
51060210924

Contacts

#20	Contact type	AWG	Part number		Max insulator Ø
			Male	Female	
Crimp	Machined	26-24	RM24W3K (1)	RC24W3K (1)	1.58
		22-20	RM20W3K (1)	RC20W3K (1)	1.58
		20-18	RM18W3K (1)	RC18W3K (1)	2.1
	stamped & formed reeled contacts	26-24	SM24W3TK6 (2)	SC24W3TK6 (2)	0.89-1.58
		26-24	SM24W3S26 (2)	SC24W3S25 (2)	0.89-1.58
		22-20	SM20W3TK6 (2)	SC20W3TK6 (2)	1.17-2.08
		22-20	SM20W3S26 (2)	SC20W3S25 (2)	1.17-2.08
PCB	Machined (3)	-	RMW5016K	RCW5016K	-
#12					
Crimp	Machined	22	82911457NA	82911456A	4.9
		20	82911459NA	82911458A	
		18	82911461NA	82911460A	
		16	82911463NA	82911462A	
		14	82911465NA	82911464A	
		12	82911467NA	82911466A	

(1): Example of plating, for other plating see page 143
(2): Loose piece contact available if putting L. Example: **SM20ML1- TK6**
(3): For dimensions see page 148

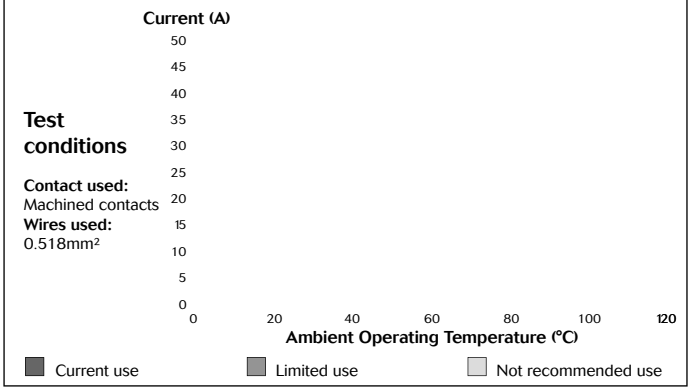
Electrical characteristics

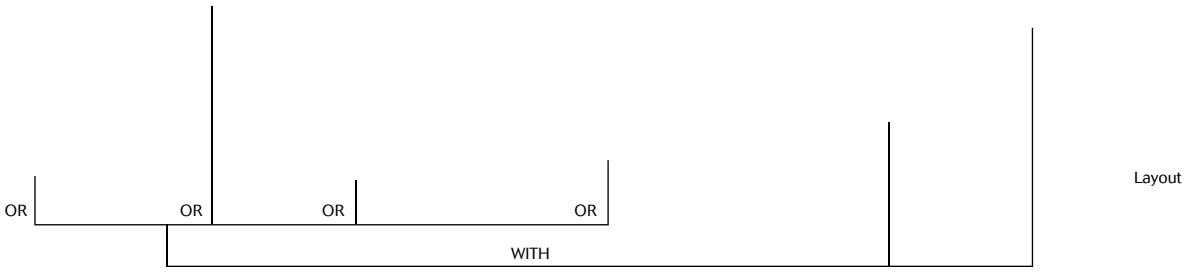
UL
20A 500V UL94 V-0

CSA
18A 500V UL94 V-0

IEC
25A 150V 2.5kV 3
Temperature elevation: 50°C

UTS 102W2 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Crimp contact supply separately see next page 71	Square flange receptacle	Without (Fig.1)	**UTS0104P**	**UTS0104S**
	Free hanging receptacle	Cable gland and grommet (Fig.2)	**UTS1GJC104P**	
	Free hanging receptacle	Nut and grommet (Fig.3)	**UTS1GN104P**	
	Free hanging receptacle	Cable gland (Fig.2)	**UTS1JC104P**	**UTS1JC104S**
	Plug	Without (Fig.4)	**UTS6104P**	**UTS6104S**
	Plug	Cable gland and grommet (Fig.5)		**UTS6GJC104S**
	Plug	Nut and grommet (Fig.6)		**UTS6GN104S**
	Plug	Cable gland (Fig.5)	**UTS6JC104P**	**UTS6JC104S**
	Jam nut receptacle	Without (Fig.7)	**UTS7104P**	**UTS7104S**
	Jam nut receptacle	Cable gland and grommet (Fig.9)	**UTS7GJC104P**	
	Jam nut receptacle	Nut and grommet (Fig.8)	**UTS7GN104P**	

4 contacts
13A/150V
per IEC 61984

Dimensions

Square flange receptacle - UTS0

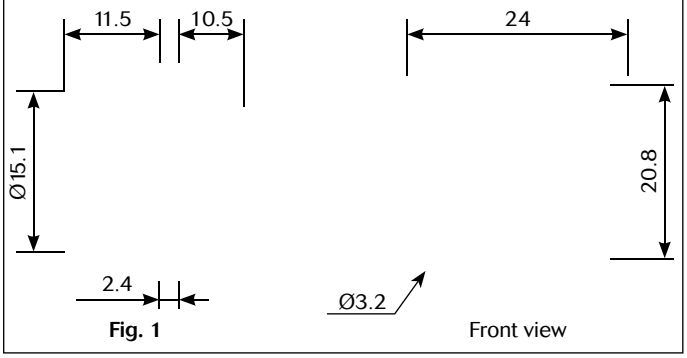


Fig. 1

Free hanging - UTS1

Fig. 2

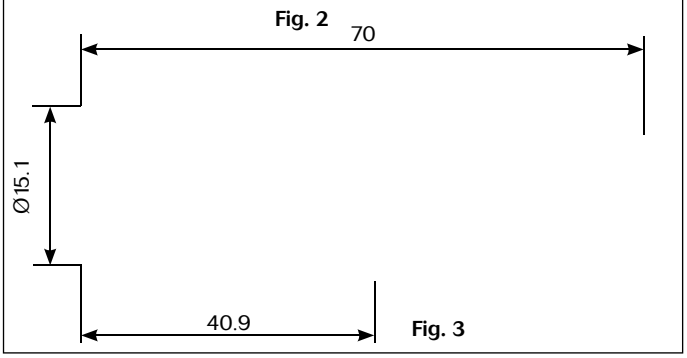


Fig. 3

Plug - UTS6

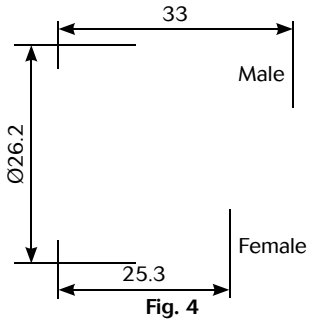


Fig. 4

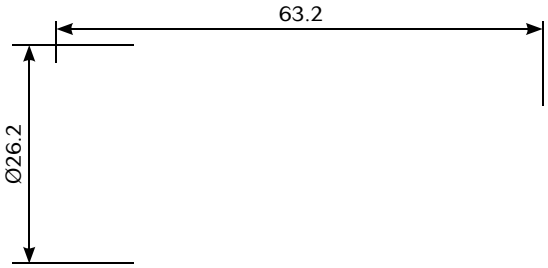


Fig. 5

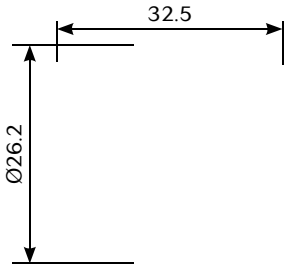


Fig. 6

Jam nut receptacle - UTS7

Fig. 8

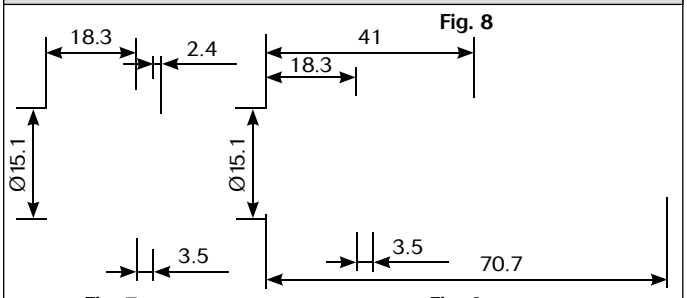
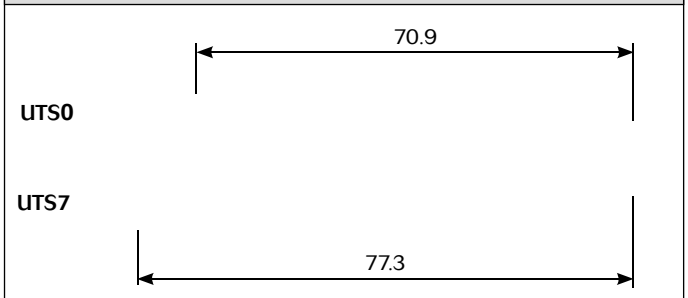
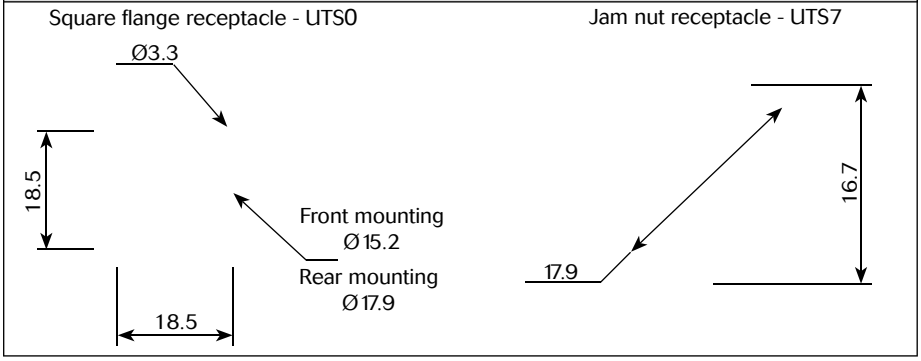


Fig. 7 Fig. 9

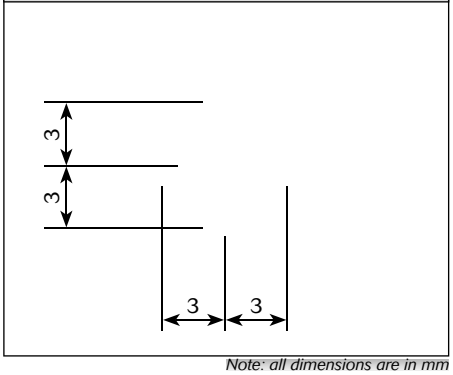
Mated connector length



Panel cut out



Drilling pattern



Note: all dimensions are in mm

Accessories and tooling

Jam nut sealing caps

Part number
UTS10DCG

Metal terminal

Part number
UTS10DCGR

Handle

Part number
SHANDLES

Tool kit

Part number
TOOLKIT

Plug sealing cap

Part number
UTS610DCG

Square flange sealing cap

Metal terminal

Part number
UTS10DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005586A	85005595

Gasket

Part numbers / neoprene
UTFD12B

Color coding rings

G for Green

y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS710CCRR	UTS610CCRR
UTS710CCRY	UTS610CCRY
UTS710CCRG	UTS610CCRG

* Add G for Green, y for Yellow, R for Red

Crimp tooling

Contacts	Contact size	Part number of head
RM RC 28M1K(1)	Standard contacts #16 Ø 1.6mm	S16RCM20
RM RC 24M9K(1)		S16RCM20
RM RC 20M13K(1)		S16RCM20
RM RC 20M12K(1)		S16RCM20
RM RC 16M23K(1)		S16RCM16
RM RC 14M50K(1)		S16RCM1450
RM RC 14M30K(1)		S16RCM14
SM SC 24M1TK6(1)		S16SCM20
SM SC 20M1TK6(1)		S16SCM20
SM SC 16M1TK6(1)		S16SCM1
SM SC 14M1TK6(1)		S16SCM1
SM SC 16M11TK6(1)		S16SCM11
RMDXK10D28K	Coaxial contacts	M10S-1J
RCDXK1D28K		M10S-1J
RM RC DX60xxD28K		M10S-1J
RM RC DXK10D28 + yor k090		M10S-1J
RM RC DX60xxD28		M10S-1J

(1): example of plating, for other plating see UTS catalog page 143

Contacts

#16	Contact type	AWG	Part number		Max wire Ø	Max insulator Ø
			Male	Female		
Crimp	Machined	30-28	RM28MLK(1)	RC28MLK(1)	0.55	1.1
		26-24	RM24M9K(1)	RC24M9K(1)	0.8	1.6
		22-20	RM20ML3K(1)	RC20ML3K(1)	1.18	1.8
		22-20	RM20ML2K(1)	RC20ML2K(1)	1.18	2.2
		20-16	RML6M23K(1)	RC16M23K(1)	1.8	3.2
		16-14	RML4M50K(1)	RC14M50K(1)	2.05	3.2
		16-14	RML4M30K(1)	RC14M30K(1)	2.28	3.2
	Stamped & formed reeled contacts	26-24	SM24MLTK6(1)(2)	SC24MLTK6(1)(2)	0.89-1.28	-
		22-20	SM20MLTK6(1)(2)	SC20MLTK6(1)(2)	1.17-2.08	-
		18-16	SML6MLTK6(1)(2)	SC16MLTK6(1)(2)	3.0	-
		18-16	SML6ML1TK6(1)(2)	SC16ML1TK6(1)(2)	2.0-3.0	-
		14	SML4MLTK6(1)(2)	SC14MLTK6(1)(2)	3.2	-
PCB	Machined (3)	-	RM20ML2E8K(1)	RC20ML2E84K(1)	-	-
Coaxial	Cable Multipiece	-	RMDXK10D28	RCDXK1D28	-	-
	Cable Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
	Twisted pair Multipiece	-	RMDXK10D28 + yor k090	RCDXK1D28 + yor k090	-	-
	Twisted pair Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
Fiber optic	POF contacts Plastic optical fibre	-	RMPOF1000	RCPOF1000B	-	-

(1): Example of plating, for other plating see page 143
(2): Loose piece contact available if putting L. Example: **SM20ML1- TK6**
(3): For dimensions see page 148

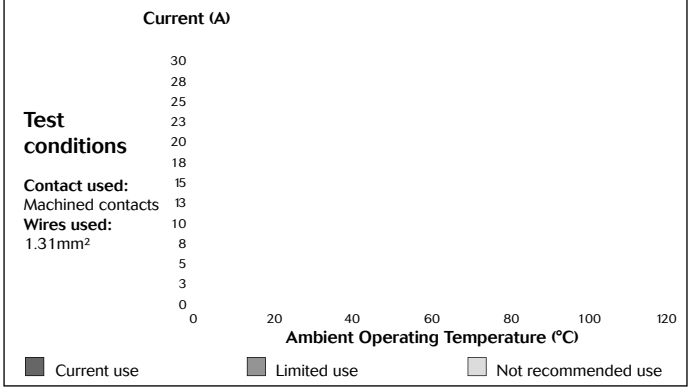
Electrical characteristics

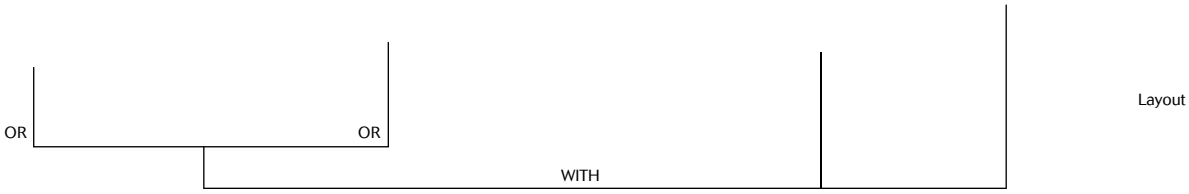
UL
10A 500V UL94 V-0

CSA
7A 500V UL94 V-0

IEC
13A 150V 2.5kV 3

UTS 104 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.6)	**UTS014E5P**	**UTS014E5S**
	Plug	Without (Fig.1)	**UTS614E5P**	**UTS614E5S**
		Cable gland (Fig.2)	**UTS6JC14E5P**	**UTS6JC14E5S**
	Jam nut receptacle	Without (Fig.3)	**UTS714E5P**	**UTS714E5S**
PCB contacts loaded	Square flange receptacle	Without (Fig.6)	**UTS014D5P**	**UTS014D5S**
	Jam nut receptacle with hold down clips	Without (Fig.4)	**UTS714D5P32**	**UTS714D5S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.5)	**UTS714D5P**	**UTS714D5S**

Sealed unmated

Dimensions

Plug - UTS6

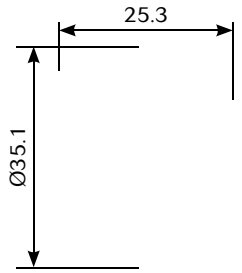


Fig. 1

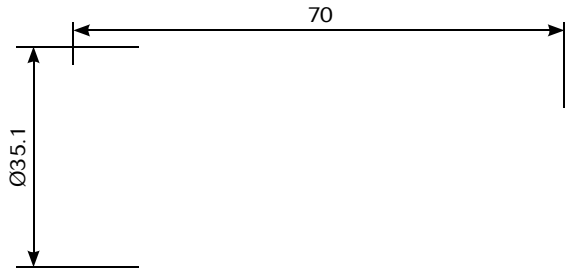


Fig. 2

Jam nut receptacle - UTS7

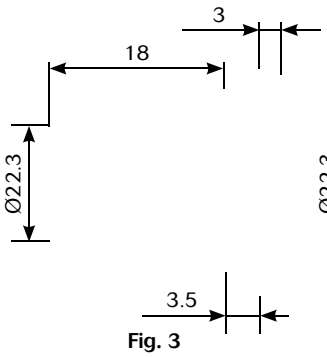


Fig. 3

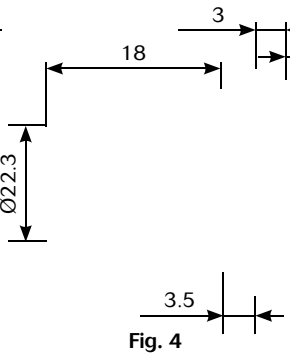


Fig. 4

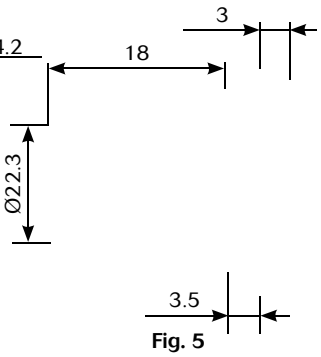
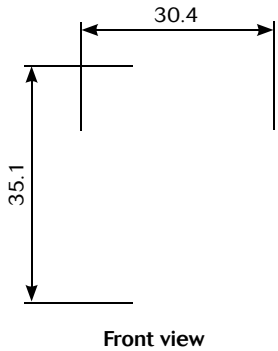


Fig. 5



Front view

Square flange receptacle - UTS0

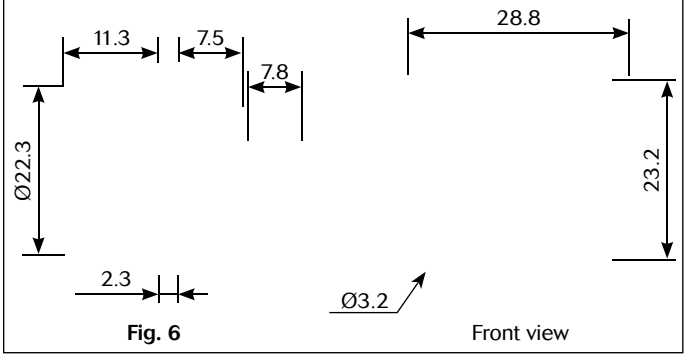
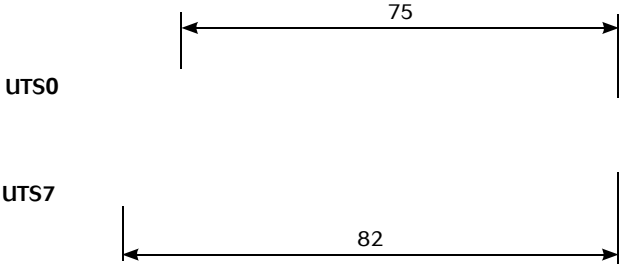


Fig. 6

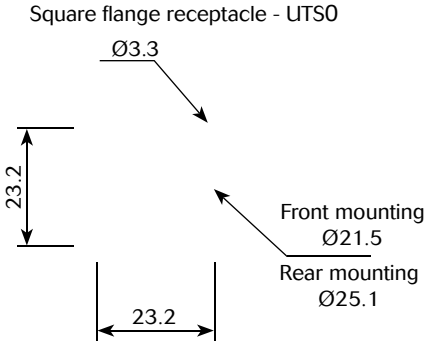
Front view

Mated connector length

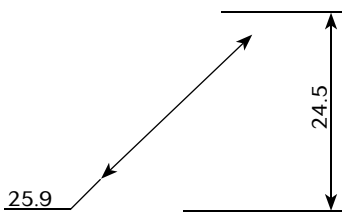


Panel cut out

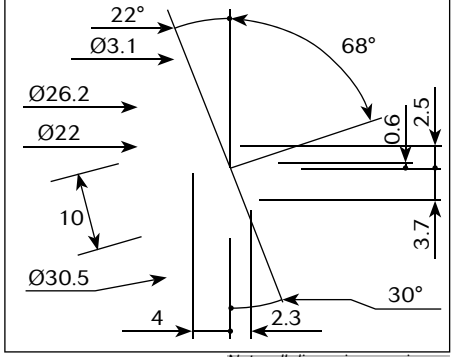
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



Drilling pattern



Note: all dimensions are in mm

Mechanics

Accessories

Jam nut sealing caps

Metal terminal

Part number	Part number
UTS14DCG	UTS14DCGR

Plug sealing cap

Part number
UTS614DCG

Square flange sealing cap

Metal terminal

Part number
UTS14DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005588A	85005597

Gasket

Part numbers / neoprene
UTFD14B

Color coding rings

G for Green

Y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS714CCRR	UTS614CCRR
UTS714CCRY	UTS614CCRY
UTS714CCRG	UTS614CCRG

* Add G for Green, Y for Yellow, R for Red

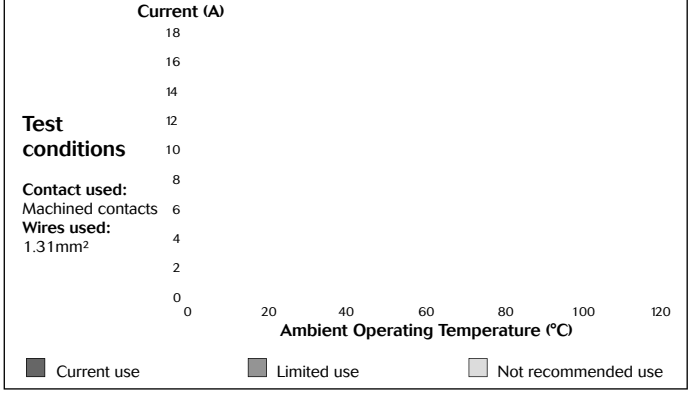
Electrical characteristics

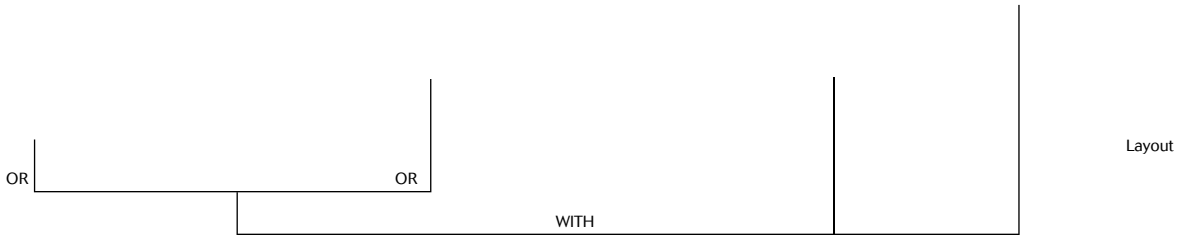
UL
12A 650V UL94 HB

CSA
12A 650V UL94 HB

IEC
16A 150V 2.5kV 3

UTS 14E5/14D5 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Crimp contacts supply separately see page 79	Free hanging receptacle	Cable gland (Fig.1)	**UTS1JC103W3P**	**UTS1JC103W3S**
	Plug	Without (Fig.2)	**UTS6103W3P**	**UTS6103W3S**
	Plug	Cable gland (Fig.3)	**UTS6JC103W3P**	**UTS6JC103W3S**
	Jam nut receptacle	Without (Fig.4)	**UTS7103W3P**	**UTS7103W3S**
PCB contacts supply separately see page 79	Jam nut receptacle with stand off and without hold down clip	Without (Fig.4)	**UTS7103W3P**	**UTS7103W3S**

Dimensions

Free hanging - UTS1

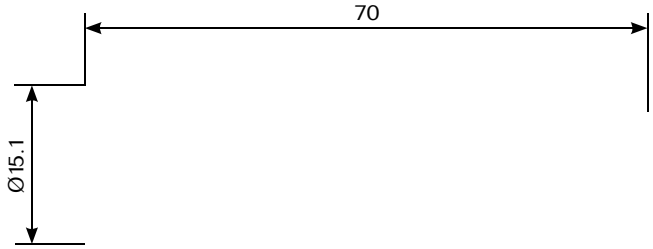


Fig. 1

Plug - UTS6

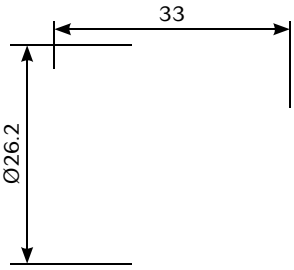


Fig. 2 Male

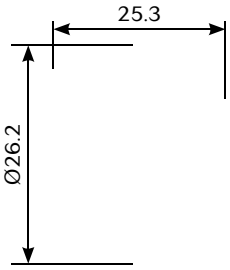


Fig. 2 Female

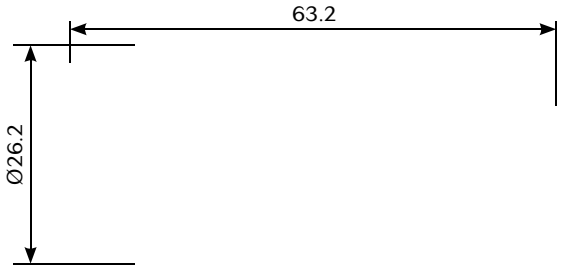


Fig. 3

Jam nut receptacle - UTS7

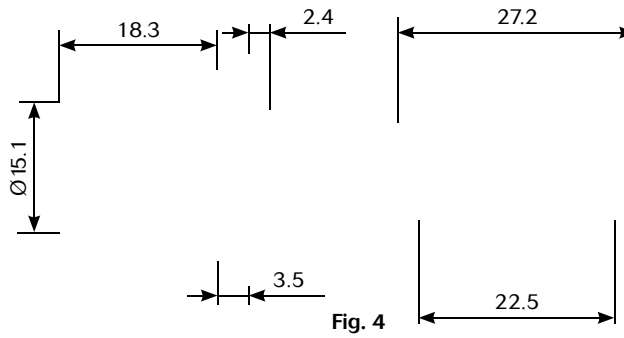
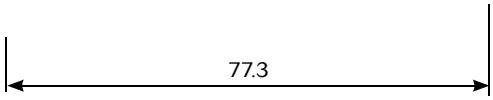


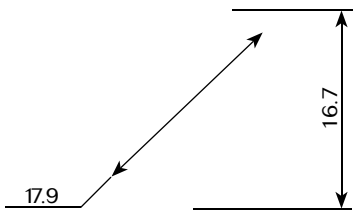
Fig. 4

Mated connector length - UTS7

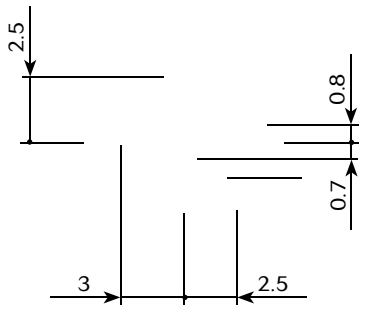


Panel cut out

Jam nut receptacle - UTS7



Drilling pattern



Note: all dimensions are in mm

Accessories and tooling

Jam nut sealing caps

Metal terminal

Part number	Part number
UTS10DCG	UTS10DCGR

Handle

Part number
SHANDLES

Tool kit

Part number
TOOLKIT

Plug sealing cap

Part number
UTS610DCG

Square flange sealing cap

Metal terminal

Part number
UTS10DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005586A	85005595

Gasket

Part numbers / neoprene
UTFD12B

Color coding rings

G for Green

y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS710CCRR	UTS610CCRR
UTS710CCRY	UTS610CCRY
UTS710CCRG	UTS610CCRG

* Add G for Green, y for Yellow, R for Red

Crimp tooling

Contacts	Contact size	Part number of head
RM RC 28M1K(1)	Standard contacts #16 Ø 1.6mm	S16RCM20
RM RC 24M9K(1)		S16RCM20
RM RC 20M13K(1)		S16RCM20
RM RC 20M12K(1)		S16RCM20
RM RC 16M23K(1)		S16RCM16
RM RC 14M50K(1)		S16RCM1450
RM RC 14M30K(1)		S16RCM14
SM SC 24M1TK6(1)		S16SCM20
SM SC 20M1TK6(1)		S16SCM20
SM SC 16M1TK6(1)		S16SCM1
SM SC 14M1TK6(1)		S16SCM1
SM SC 16M11TK6(1)		S16SCM11
RMDXK10D28K	Coaxial contacts	M10S-1J
RCDXK1D28K		M10S-1J
RM RC DX60xxD28K		M10S-1J
RM RC DXK10D28 + yor k090		M10S-1J
RM RC DX60xxD28		M10S-1J
RM RC 24W3K(1)	Standard contacts #20 Ø 1mm	S20RCM
RM RC 20W3K(1)		S20RCM
RM RC 18W3K(1)		S20RCM
SM SC 24W3S(2)		S20SCM20
SM SC 24WL3S(3)		S20SCM20
SM SC 20W3S(2)		S20SCM20
SM SC 20WL3S(3)		S20SCM20

(1): example of plating, for other plating see UTS catalog page 143
(2): contact reeled
(3): loose contac

Contacts

#16	Contact type	AWG	Part number		Max wire Ø	Max insulator Ø
			Male	Female		
Crimp	Machined	30-28	RM28M1K(1)	RC28M1K(1)	0.55	1.1
		26-24	RM24M9K(1)	RC24M9K(1)	0.8	1.6
		22-20	RM20M13K(1)	RC20M13K(1)	1.18	1.8
		22-20	RM20M12K(1)	RC20M12K(1)	1.18	2.2
		20-16	RM16M23K(1)	RC16M23K(1)	1.8	3.2
		16-14	RM14M50K(1)	RC14M50K(1)	2.05	3.2
		16-14	RM14M30K(1)	RC14M30K(1)	2.28	3.2
	Stamped & formed reeled contacts	26-24	SM24M1TK6(1)(2)	SC24M1TK6(1)(2)	0.89-1.28	-
		22-20	SM20M1TK6(1)(2)	SC20M1TK6(1)(2)	1.17-2.08	-
		18-16	SM16M1TK6(1)(2)	SC16M1TK6(1)(2)	3.0	-
		18-16	SM16M11TK6(1)(2)	SC16M11TK6(1)(2)	2.0-3.0	-
		14	SM14M1TK6(1)(2)	SC14M1TK6(1)(2)	3.2	-
PCB	Machined (3)	-	RM20M12E8K(1)	RC20M12E84K(1)	-	-
Coaxial	Cable Multipiece	-	RMDXK10D28	RCDXK1D28	-	-
	Cable Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
	Twisted pair Multipiece	-	RMDXK10D28 + yor k090	RCDXK1D28 + yor k090	-	-
	Twisted pair Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
Fiber optic	POF contacts Plastic optical fibre	-	RMPOF1000	RCPOF1000B	-	-

#20						
Crimp	Machined	26-24	RM24W3K(1)	RC24W3K(1)	-	1.58
		22-20	RM20W3K(1)	RC20W3K(1)	-	1.58
		20-18	RM18W3K(1)	RC18W3K(1)	-	2.1
	Stamped & formed reeled contacts	26-24	SM24W3TK6(2)	SC24W3TK6(2)	-	0.89-1.58
		26-24	SM24W3S26(2)	SC24W3S25(2)	-	0.89-1.58
		22-20	SM20W3TK6(2)	SC20W3TK6(2)	-	1.17-2.08
		22-20	SM20W3S26(2)	SC20W3S25(2)	-	1.17-2.08
PCB	Machined (3)	-	RMW5016K	RCW5016K	-	-

(1): Example of plating, for other plating see page 143 (2): Loose piece contact available if putting L. Example: **SM20M1L- TK6** (3): For dimensions see page 148

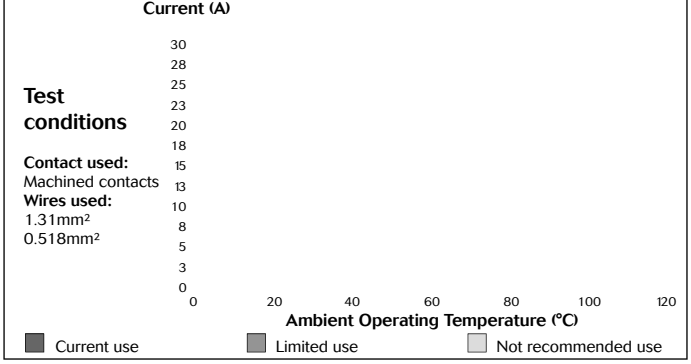
Electrical characteristics

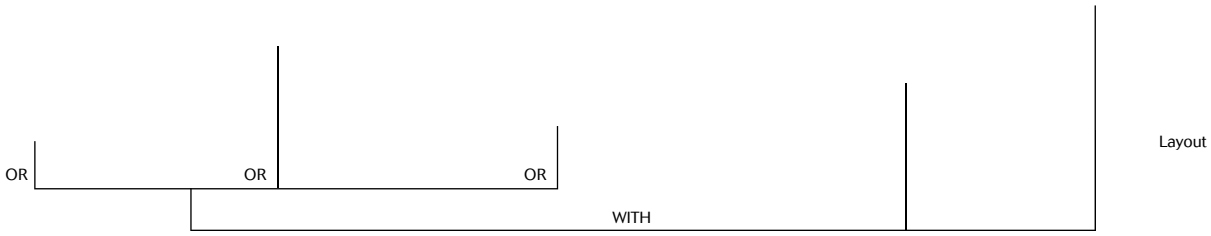
UL
10A 500V UL94 V-0

CSA
7A 500V UL94 V-0

IEC
5A 32V 1.5kV 3
Temperature elevation: 50°C

UTS 103W3 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Crimp contacts supply separately see page 83	Free hanging receptacle	Cable gland (Fig.1)	**UTS1JC106P**	**UTS1JC106S**
	Plug	Without (Fig.2)	**UTS6106P**	**UTS6106S**
	Plug	Cable gland (Fig.3)	**UTS6JC106P**	**UTS6JC106S**
	Jam nut receptacle	Without (Fig.4)	**UTS7106P**	**UTS7106S**
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.9)	**UTS010E6P**	**UTS010E6S**
	Plug	Without (Fig.2)	**UTS610E6P**	**UTS610E6S**
		Cable gland (Fig.3)	**UTS6JC10E6P**	**UTS6JC10E6S**
	Jam nut receptacle	Without (Fig.5)	**UTS710E6P**	**UTS710E6S**
PCB contacts supply separately see page 83	Jam nut receptacle	Without (Fig.4)	**UTS7106P**	**UTS7106S**
PCB contacts loaded	Square flange receptacle	Without (Fig.8)	**UTS010D6P**	**UTS010D6S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.6)	**UTS710D6P32**	**UTS710D6S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.7)	**UTS710D6P**	**UTS710D6S**

Sealed unmated

Dimensions

Free hanging - UTS1

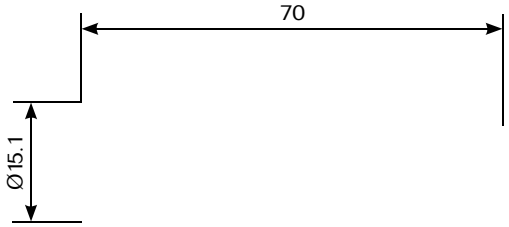


Fig. 1

Plug - UTS6

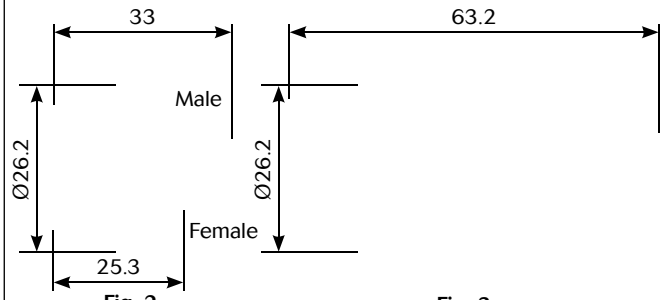


Fig. 2 Fig. 3

Jam nut receptacle - UTS7

Fig. 4

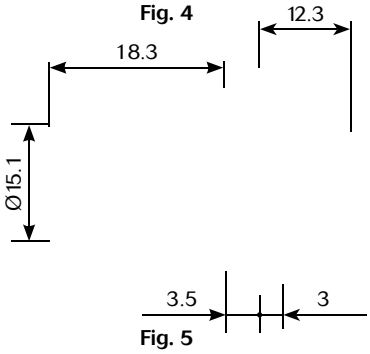


Fig. 5

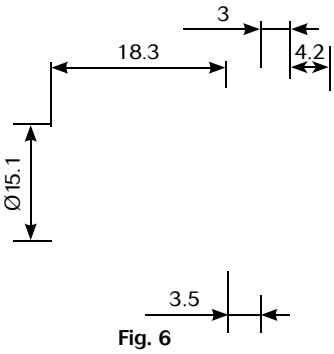


Fig. 6

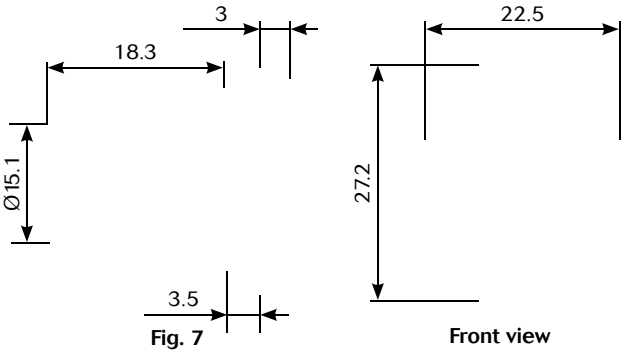


Fig. 7 Front view

Square flange receptacle - UTS0

Fig. 8

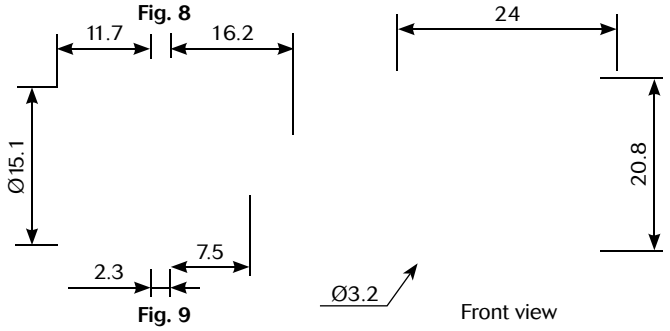
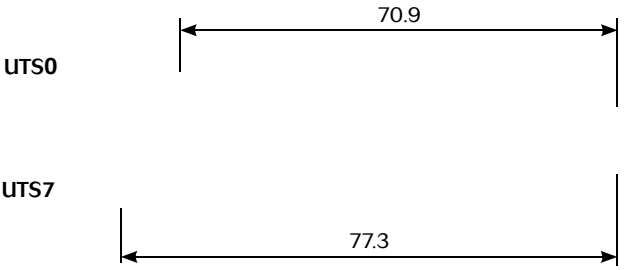
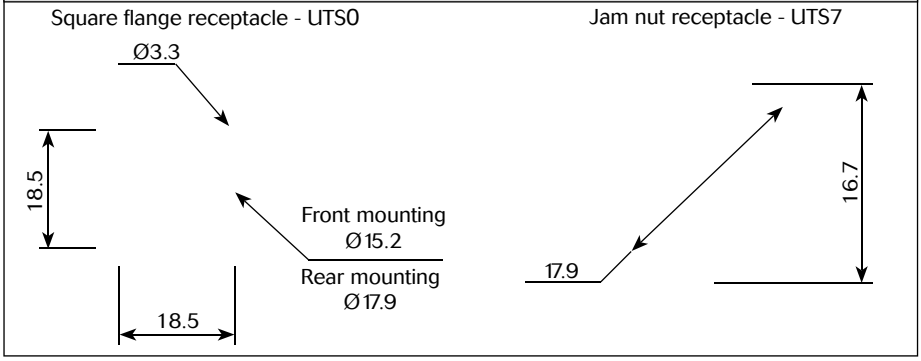


Fig. 9 Front view

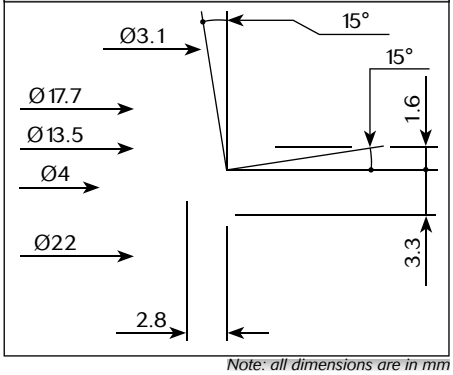
Mated connector length



Panel cut out



Drilling pattern



Note: all dimensions are in mm

Mechanics

Accessories and tooling

Jam nut sealing caps

Metal terminal

Part number	Part number
UTS10DCG	UTS10DCGR

Handle

Part number
SHANDLES

Tool kit

Part number
TOOLKIT

Plug sealing cap

Part number
UTS610DCG

Square flange sealing cap

Metal terminal

Part number
UTS10DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005586A	85005595

Gasket

Part numbers / neoprene
UTFD12B

Crimp tooling

Contacts	Contact size	Part number of head
RM RC 24WBK(1)	Standard contacts #20 Ø 1mm	S20RM
RM RC 20WBK(1)		S20RM
RM RC 18WBK(1)		S20RM
SM SC 24WBS(2)		S20SCM20
SM SC 24WL3S(3)		S20SCM20
SM SC 20WBS(2)		S20SCM20
SM SC 20WL3S(3)		S20SCM20

(1): example of plating, for other plating see UTS catalog page 143
(2): contact reeled
(3): loose contact

Color coding rings

G for Green

y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS710CCRR	UTS610CCRR
UTS710CCRY	UTS610CCRY
UTS710CCRG	UTS610CCRG

* Add G for Green, y for Yellow, R for Red

6 contacts
7A/32V
per IEC 61984

Contacts

#20	Contact type	AWG	Part number		Max wire Ø	Max insulator Ø
			Male	Female		
Crimp	Machined	26-24	RM24V3K(1)	RC24V3K(1)	-	1.58
		22-20	RM20V3K(1)	RC20V3K(1)	-	1.58
		20-18	RM18V3K(1)	RC18V3K(1)	-	2.1
	stamped & formed reeled contacts	26-24	SM24V3TK6(2)	SC24V3TK6(2)	-	0.89-1.58
		26-24	SM24V3TK6(2)	SC24V3TK6(2)	-	0.89-1.58
		22-20	SM20V3TK6(2)	SC20V3TK6(2)	-	1.17-2.08
		22-20	SM20V3TK6(2)	SC20V3TK6(2)	-	1.17-2.08
PCB	Machined (3)	-	RMW5016K	RCW5016K	-	-

(1): Example of plating, for other plating see page 143
(2): Loose piece contact available if putting L. Example: **SM20ML1- TK6**
(3): For dimensions see page 148

Electrical characteristics

UTS 106
UL
5A 250V UL94 V-0

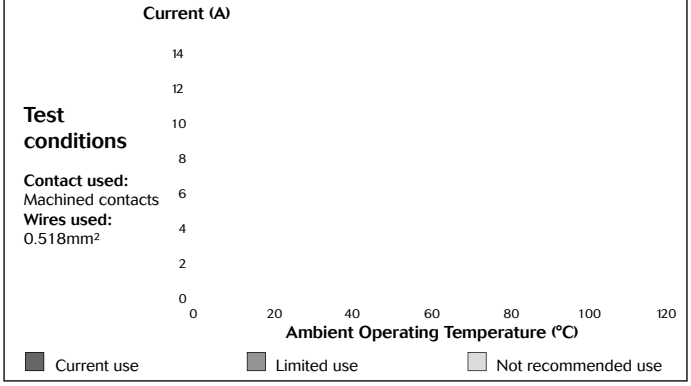
CSA
4A 250V UL94 V-0

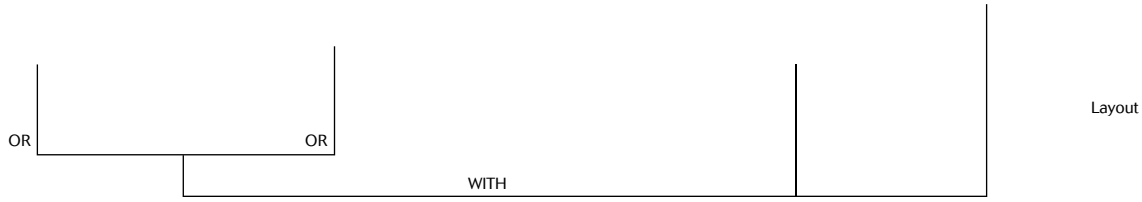
UTS 10E6/10D6
UL
6A 250V UL94 HB

CSA
6A 250V UL94 HB

IEC
7A 32V 1.5kV 3

UTS 106 - 10E6/10D6 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.6)	**UTS010E98P**	**UTS010E98S**
	Plug	Without (Fig.1)	**UTS610E98P**	**UTS610E98S**
		Cable gland (Fig.2)	**UTS6JC10E98P**	**UTS6JC10E98S**
	Jam nut receptacle	Without (Fig.3)	**UTS710E98P**	**UTS710E98S**
PCB contacts loaded	Square flange receptacle	Without (Fig.7)	**UTS010D98P**	**UTS010D98S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.4)	**UTS710D98P32**	**UTS710D98S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.5)	**UTS710D98P**	**UTS710D98S**

Sealed unmated

Dimensions

Plug - UTS6

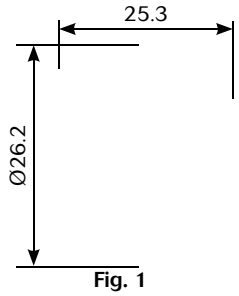


Fig. 1

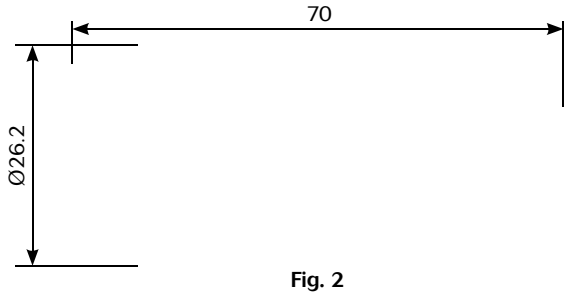


Fig. 2

Jam nut receptacle - UTS7

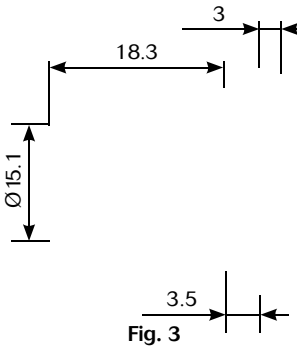


Fig. 3

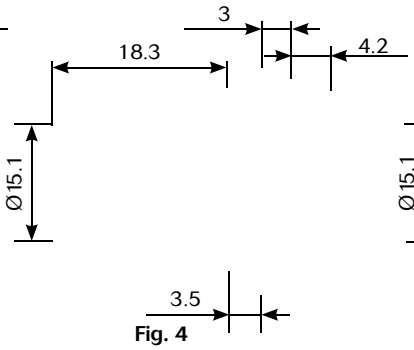


Fig. 4

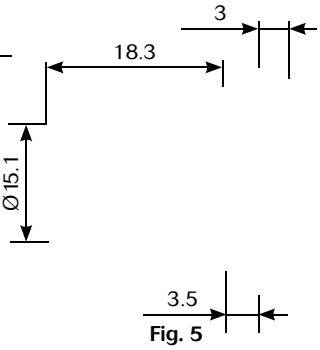
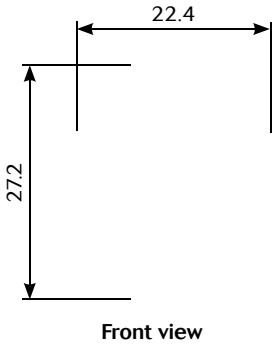


Fig. 5



Front view

Square flange receptacle - UTS0

Fig. 7

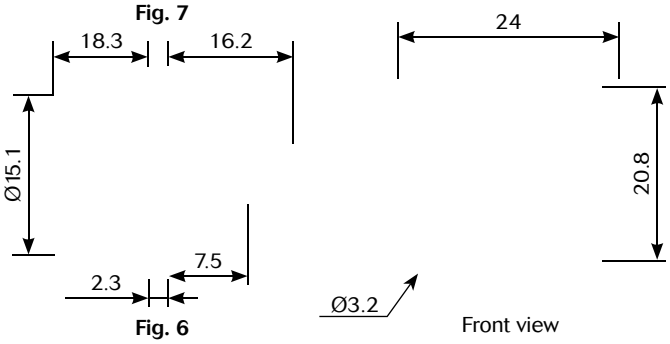
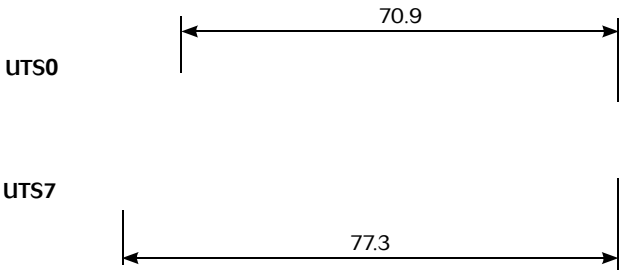


Fig. 6

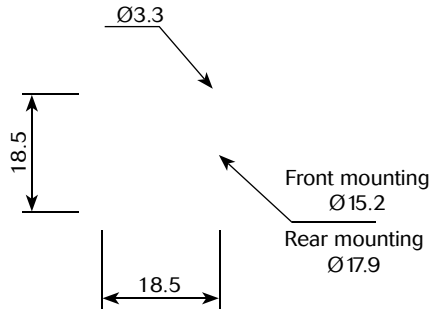
Front view

Mated connector length

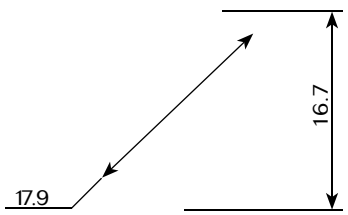


Panel cut out

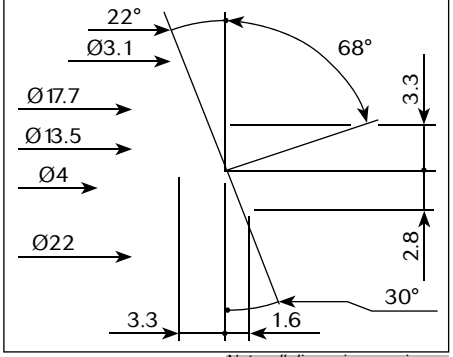
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



Drilling pattern



Note: all dimensions are in mm

Accessories

Jam nut sealing caps

Part number
UTS10DCG

Metal terminal

Part number
UTS10DCGR

Plug protective cap

Part number
UTS610DCG

Square flange sealing cap

Metal terminal

Part number
UTS10DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005586A	85005595

Gasket

Part numbers / neoprene
UTFD12B

Color coding rings

G for Green

Y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS710CCRR	UTS610CCRR
UTS710CCRY	UTS610CCRY
UTS710CCRG	UTS610CCRG

* Add G for Green, Y for Yellow, R for Red

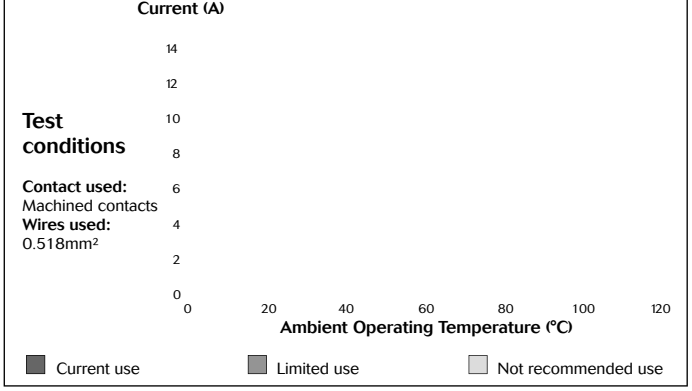
Electrical characteristics

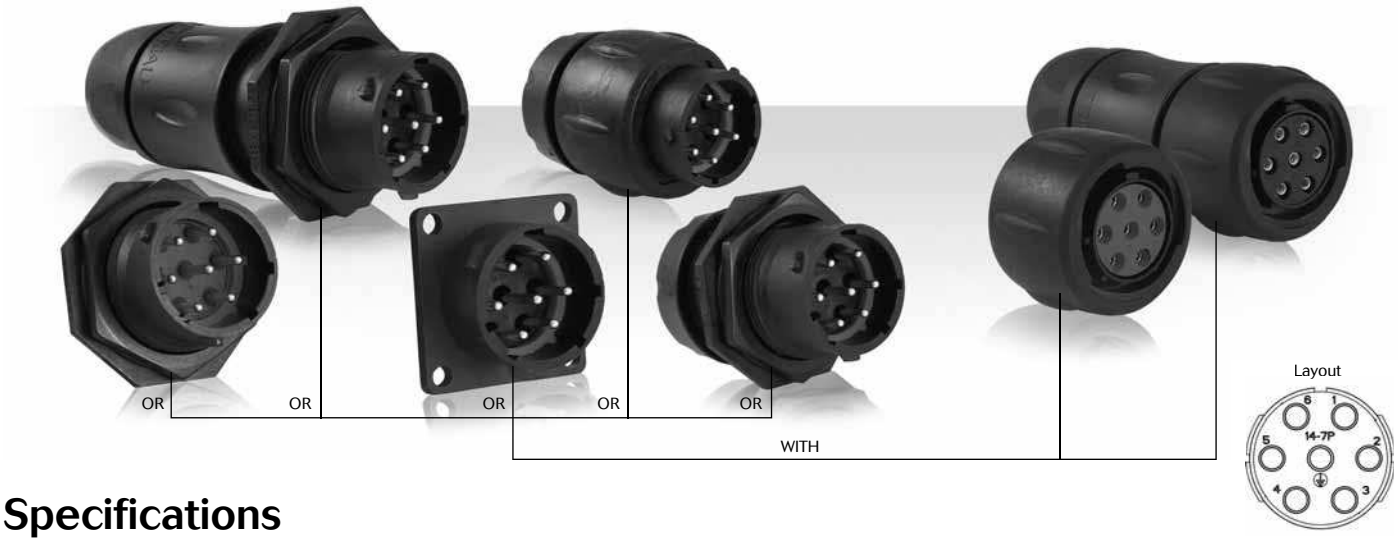
UL
6A 250V UL94 HB

CSA
6A 250V UL94 HB

IEC
7A 50V 1.5kV 3

UTS 10E98/10D98 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Crimp contacts supply separately see page 91	Square flange receptacle	Without (Fig.2)	**UTS0147P**	
	Free hanging receptacle	Cable gland and grommet (Fig.3)	**UTS1GJC147P**	
	Free hanging receptacle	Nut and grommet (Fig.4)	**UTS1GN147P**	
	Free hanging receptacle	Cable gland (Fig.3)	**UTS1JC147P**	**UTS1JC147S**
	Plug	Without (Fig.5)	**UTS6147P**	**UTS6147S**
	Plug	Cable gland and grommet (Fig.6)		**UTS6GJC147S**
	Plug	Nut and grommet (Fig.7)		**UTS6GN147S**
	Plug	Cable gland (Fig.6)	**UTS6JC147P**	**UTS6JC147S**
	Jam nut receptacle	Without (Fig.8)	**UTS7147P**	**UTS7147S**
	Jam nut receptacle	Cable gland and grommet (Fig.10)	**UTS7GJC147P**	
	Jam nut receptacle	Nut and grommet (Fig.9)	**UTS7GN147P**	
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.2)	**UTS014E7P**	**UTS014E7S**
	Plug	Cable gland (Fig.6)	**UTS6JC14E7P**	**UTS6JC14E7S**
	Jam nut receptacle	Without (Fig.11)	**UTS714E7P**	**UTS714E7S**
PCB contacts loaded	Square flange receptacle	Without (Fig.1)	**UTS014D7P**	**UTS014D7S**
	Jam nut receptacle with stand off and hold down clips	Without (Fig.11)	**UTS714D7P32**	**UTS714D7S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.11)	**UTS714D7P**	**UTS714D7S**
	Jam nut receptacle	With stand off and hold down clip (Fig.11)	**UTS7147PSEK9**	
Screw contacts loaded	Jam nut receptacle	Without (Fig.8)	**UTS7147PSCR**	**UTS7147SSCR**
	Free hanging receptacle	Cable gland (Fig.3)	**UTS1JC147PSCR**	
	Plug	Cable gland (Fig.6)	**UTS6JC147PSCR**	**UTS6JC147SSCR**

Sealed unmated

Dimensions

Square flange receptacle - UTS0

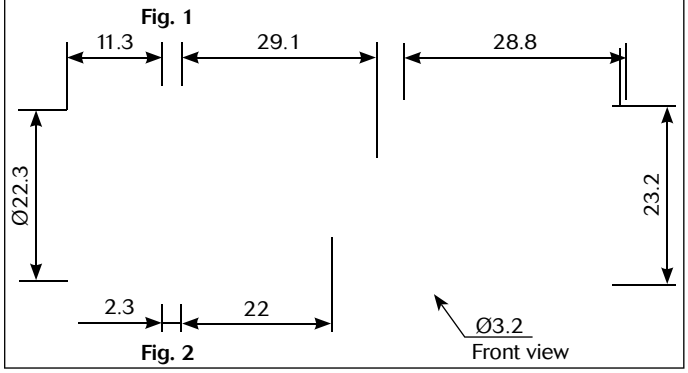


Fig. 1

Fig. 2

Free hanging - UTS1

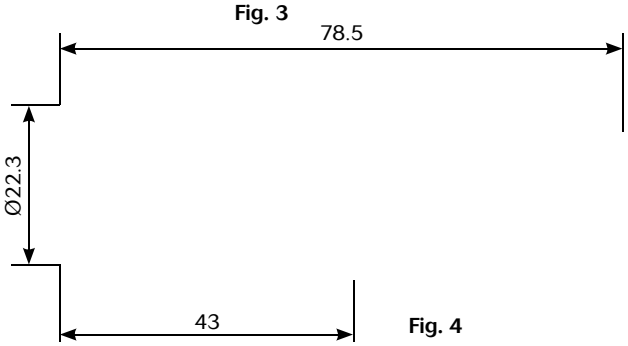


Fig. 3

Fig. 4

Plug - UTS6

Fig. 5

Fig. 6

Fig. 7

Jam nut receptacle - UTS7

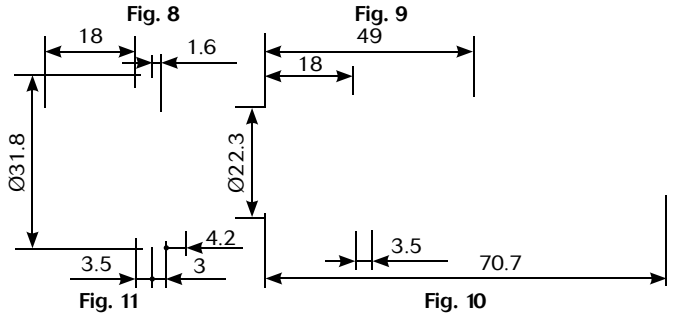


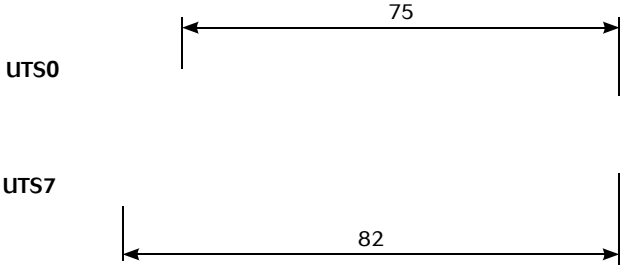
Fig. 8

Fig. 9

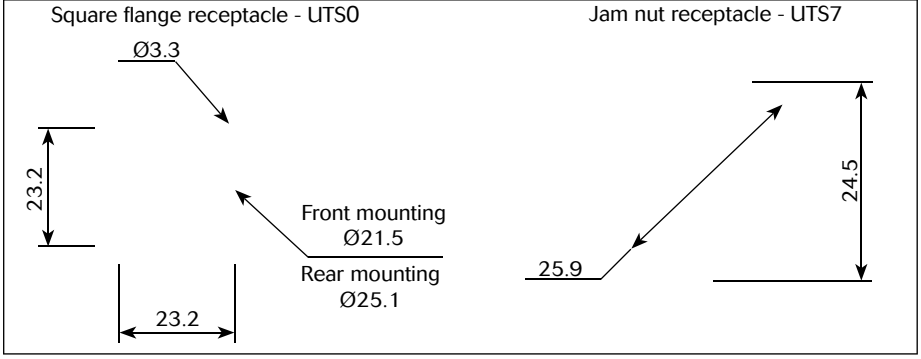
Fig. 11

Fig. 10

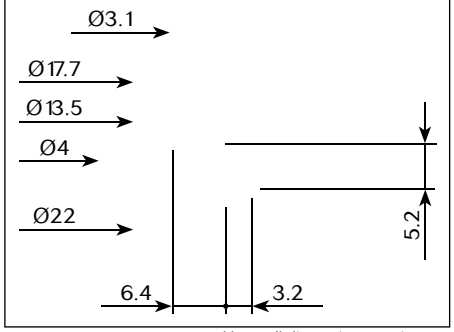
Mated connector length



Panel cut out



Drilling pattern



Note: all dimensions are in mm

Mechanics

Accessories and tooling

Jam nut sealing caps

Part number
UTS14DCG

Metal terminal

Part number
UTS14DCGR

Handle

Part number
SHANDLES

Tool kit

Part number
TOOLKIT

Plug sealing cap

Part number
UTS614DCG

Square flange sealing cap

Metal terminal

Part number
UTS14DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005588A	85005597

Gasket

Part numbers / neoprene
UTFD14B

Color coding rings

G for Green

y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS714CCRR	UTS614CCRR
UTS714CCRY	UTS614CCRY
UTS714CCRG	UTS614CCRG

* Add G for Green, y for Yellow, R for Red

Crimp tooling

Contacts	Contact size	Part number of head
RMRC 28M1K(1)	Standard contacts #16 Ø 1.6mm	S16RCM20
RMRC 24M9K(1)		S16RCM20
RMRC 20M13K(1)		S16RCM20
RMRC 20M12K(1)		S16RCM20
RMRC 16M23K(1)		S16RCM16
RMRC 14M50K(1)		S16RCM1450
RMRC 14M30K(1)		S16RCM14
SMSC 24ML1TK6(1)		S16SCM20
SMSC 20ML1TK6(1)		S16SCM20
SMSC 16ML1TK6(1)		S16SCM1
SMSC 14ML1TK6(1)		S16SCM1
SMSC 16ML11TK6(1)		S16SCM11
RMDXK10D28K	Coaxial contacts	M10S-1J
RCDXK1D28K		M10S-1J
RMRC DX60xxD28K		M10S-1J
RMRC DXK10D28 + yor k090		M10S-1J
RMRC DX60xxD28		M10S-1J

(1): example of plating, for other plating see UTS catalog page 143

Contacts

#16	Contact type	AWG	Part number		Max wire Ø	Max insulator Ø
			Male	Female		
Crimp	Machined	30-28	RM28MLK(1)	RC28MLK(1)	0.55	1.1
		26-24	RM24M9K(1)	RC24M9K(1)	0.8	1.6
		22-20	RM20ML3K(1)	RC20ML3K(1)	1.18	1.8
		22-20	RM20ML2K(1)	RC20ML2K(1)	1.18	2.2
		20-16	RML6M23K(1)	RC16M23K(1)	1.8	3.2
		16-14	RML4M50K(1)	RC14M50K(1)	2.05	3.2
		16-14	RML4M30K(1)	RC14M30K(1)	2.28	3.2
	Stamped & formed reeled contacts	26-24	SM24MLTK6(1)(2)	SC24MLTK6(1)(2)	0.89-1.28	-
		22-20	SM20MLTK6(1)(2)	SC20MLTK6(1)(2)	1.17-2.08	-
		18-16	SML6MLTK6(1)(2)	SC16MLTK6(1)(2)	3.0	-
		18-16	SML6ML1TK6(1)(2)	SC16ML1TK6(1)(2)	2.0-3.0	-
		14	SML4MLTK6(1)(2)	SC14MLTK6(1)(2)	3.2	-
PCB	Machined (3)	-	RM20ML2E8K(1)	RC20ML2E84K(1)	-	-
Coaxial	Cable Multipiece	-	RMDXK10D28	RCDXK1D28	-	-
	Cable Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
	Twisted pair Multipiece	-	RMDXK10D28 + yor k090	RCDXK1D28 + yor k090	-	-
	Twisted pair Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
Fiber optic	POF contacts Plastic optical fibre	-	RMPOF1000	RCPOF1000B	-	-

(1): Example of plating, for other plating see page 143
(2): Loose piece contact available if putting L. Example: **SM20ML1- TK6**
(3): For dimensions see page 148

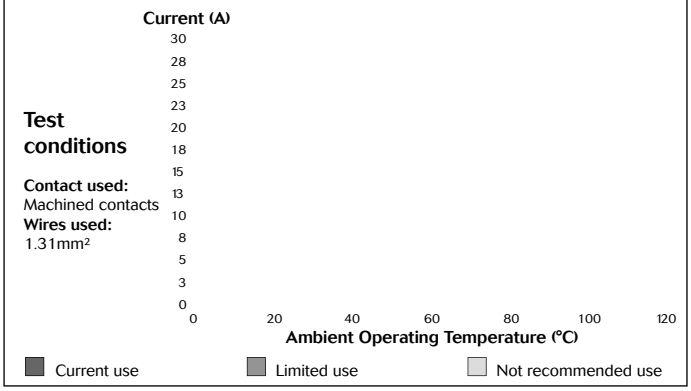
Electrical characteristics

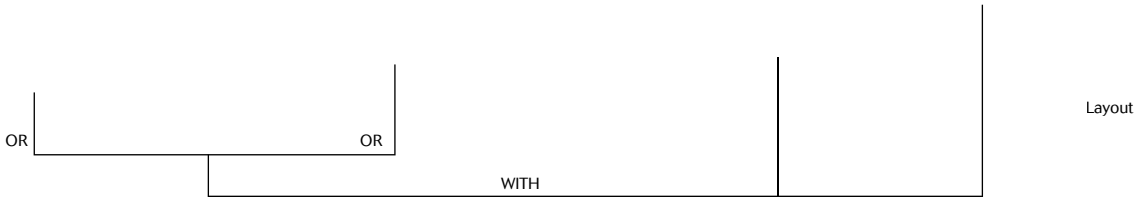
UL
10A 500V UL94 V-0

CSA
7A 500V UL94 V-0

IEC
16A 300V 4kV 3
Temperature elevation: 50°C

UTS 147 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.6)	**UTS010E7P**	**UTS010E7S**
	Plug	Without (Fig.1)	**UTS610E7P**	**UTS610E7S**
		Cable gland (Fig.2)	**UTS6JC10E7P**	**UTS6JC10E7S**
	Jam nut receptacle	Without (Fig.3)	**UTS710E7P**	**UTS710E7S**
PCB contacts loaded	Square flange receptacle	Without (Fig.7)	**UTS010D7P**	**UTS010D7S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.4)	**UTS710D7P32**	**UTS710D7S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.5)	**UTS710D7P**	**UTS710D7S**

Sealed unmated

Dimensions

Plug - UTS6

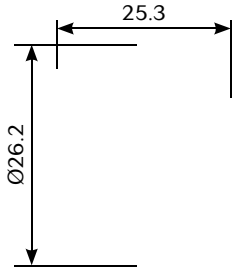


Fig. 1

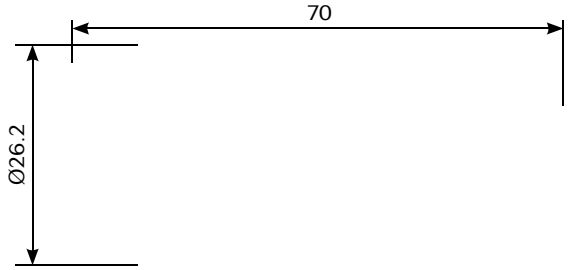


Fig. 2

Jam nut receptacle - UTS7

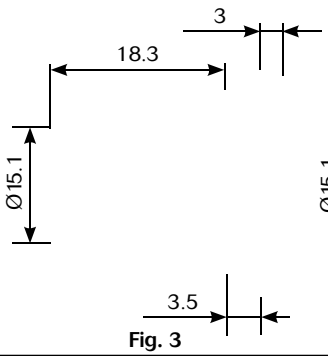


Fig. 3

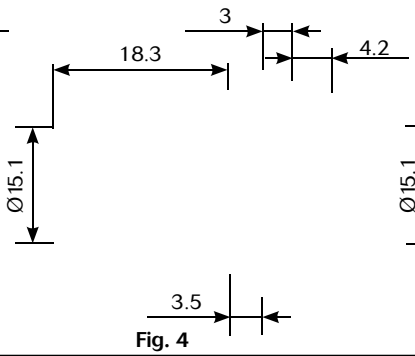


Fig. 4

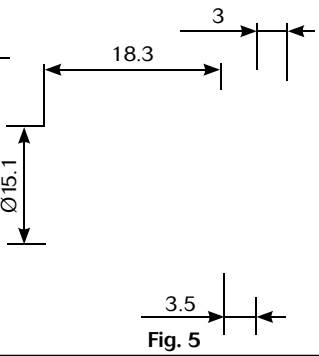
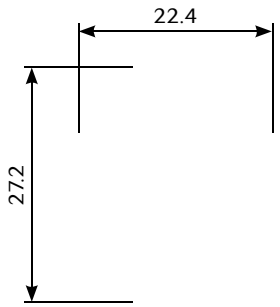


Fig. 5



Front view

Square flange receptacle - UTS0

Fig. 7

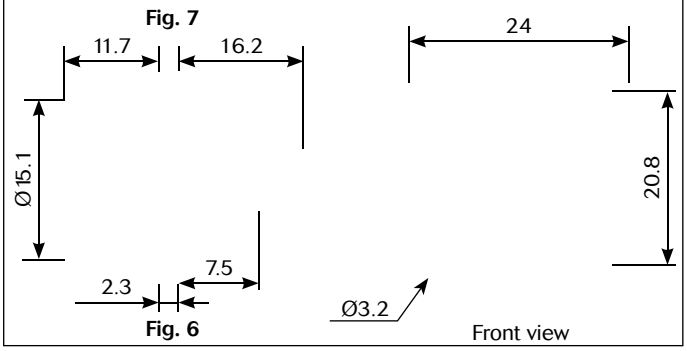
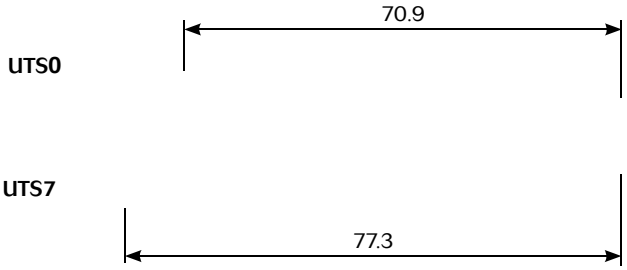


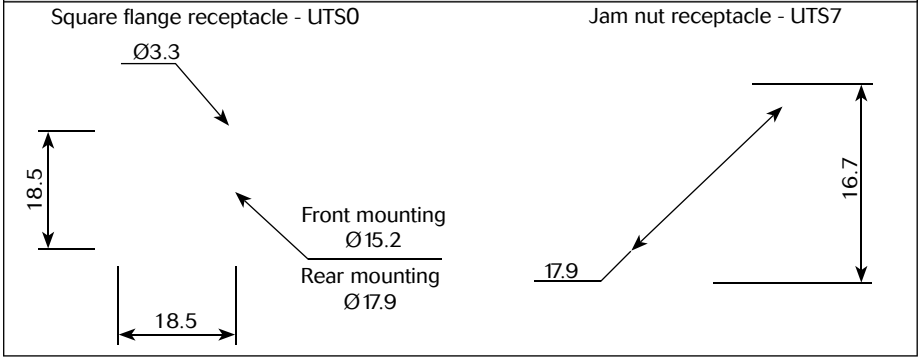
Fig. 6

Front view

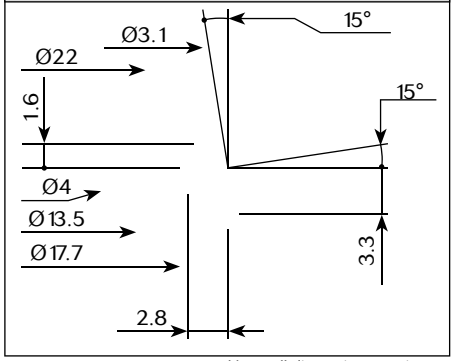
Mated connector length



Panel cut out



Drilling pattern



Note: all dimensions are in mm

Mechanics

Accessories

Jam nut sealing caps

Metal terminal

Part number
UTS10DCG

Part number
UTS10DCGR

Plug sealing cap

Part number
UTS610DCG

Square flange sealing cap

Metal terminal

Part number
UTS10DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005586A	85005595

Gasket

Part numbers / neoprene
UTFD12B

Color coding rings

G for Green

Y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS710CCRR	UTS610CCRR
UTS710CCRY	UTS610CCRY
UTS710CCRG	UTS610CCRG

* Add G for Green, Y for Yellow, R for Red

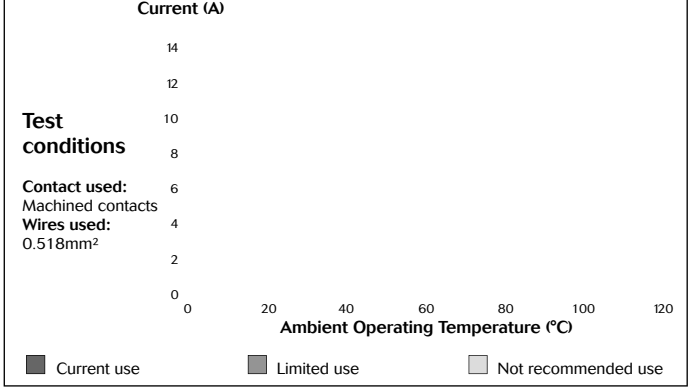
Electrical characteristics

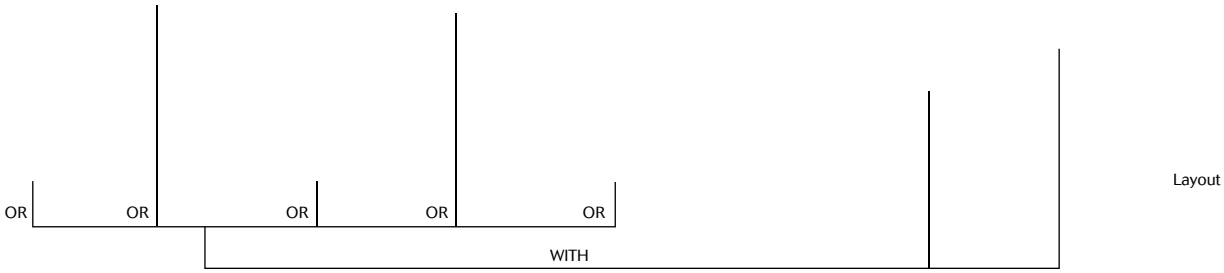
UL
6A 250V UL94 HB

CSA
6A 250V UL94 HB

IEC
7A 50V 1.5kV 3

UTS 10E7/10D7 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Crimp contacts supply separately see page 99	Square flange receptacle	Without (Fig.1)	**UTS0128P**	**UTS0128S**
	Free hanging receptacle	Cable gland and grommet (Fig.2)	**UTS1GJC128P**	
	Free hanging receptacle	Nut and grommet (Fig.3)	**UTS1GN128P**	
	Free hanging receptacle	Cable gland (Fig.2)	**UTS1JC128P**	**UTS1JC128S**
	Plug	Without (Fig.4)	**UTS6128P**	**UTS6128S**
	Plug	Cable gland and grommet (Fig.5)		**UTS6GJC128S**
	Plug	Nut and grommet (Fig.6)		**UTS6GN128S**
	Plug	Cable gland (Fig.5)	**UTS6JC128P**	**UTS6JC128S**
	Jam nut receptacle	Without (Fig.8)	**UTS7128P**	**UTS7128S**
	Jam nut receptacle	Cable gland and grommet (Fig.10)	**UTS7GJC128P**	
	Jam nut receptacle	Nut and grommet (Fig.9)	**UTS7GN128P**	
PCB contacts loaded	Jam nut receptacle	With stand off and hold down clip (Fig.11)	**UTS7128PSEK9**	

8 contacts
10A/80V
per IEC 61984

Dimensions

Square flange receptacle - UTS0

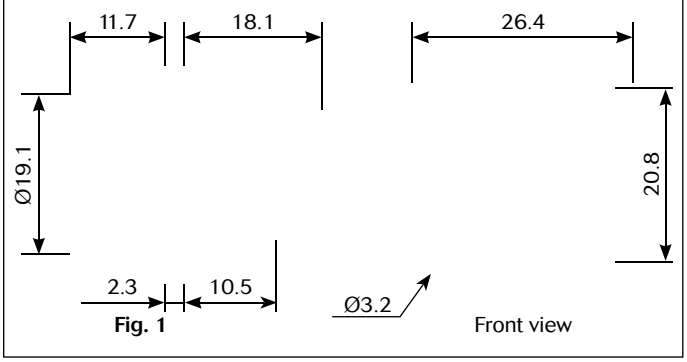


Fig. 1

Free hanging - UTS1

Fig. 2

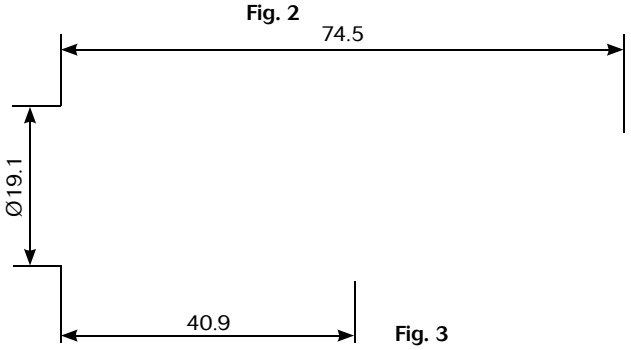


Fig. 3

Plug - UTS6

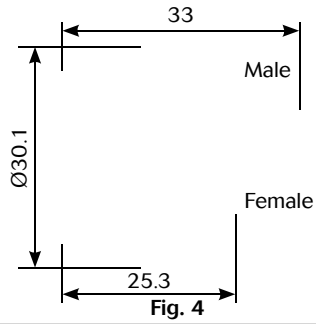


Fig. 4

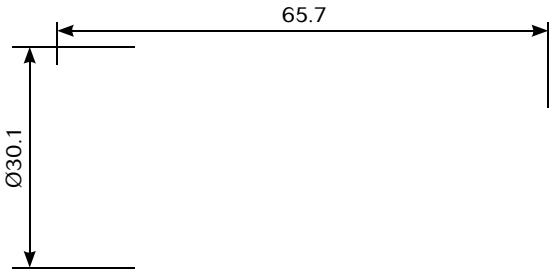


Fig. 5

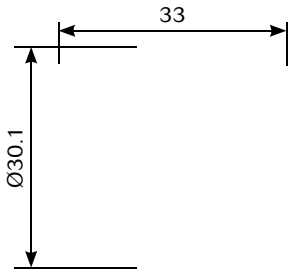


Fig. 6

Jam nut receptacle - UTS7

Fig. 8

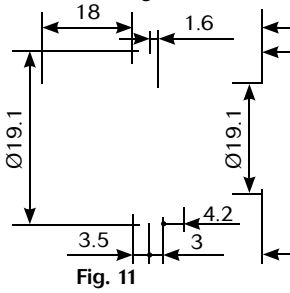


Fig. 11

Fig. 9

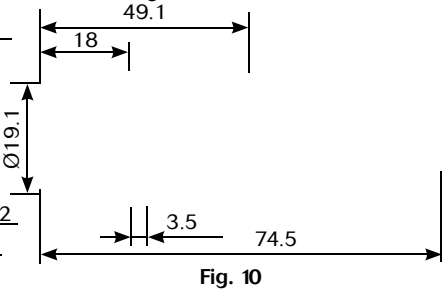
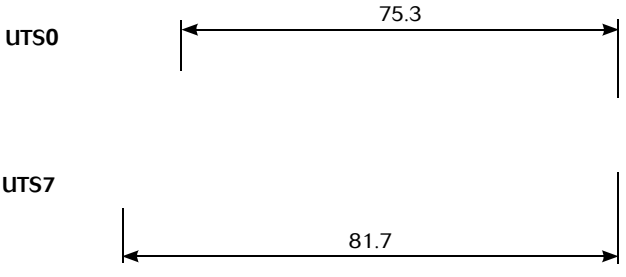
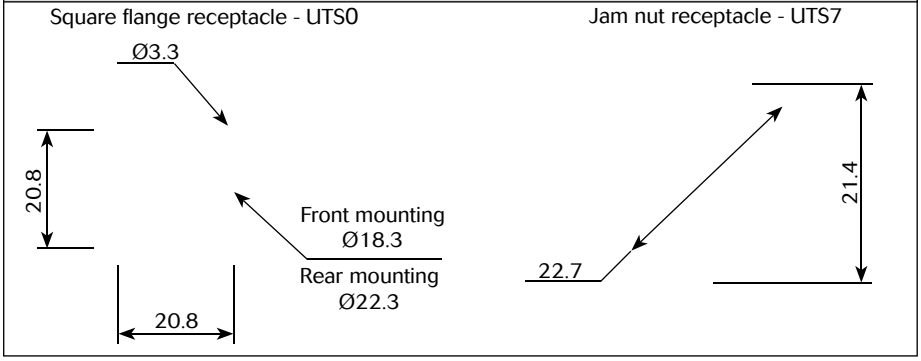


Fig. 10

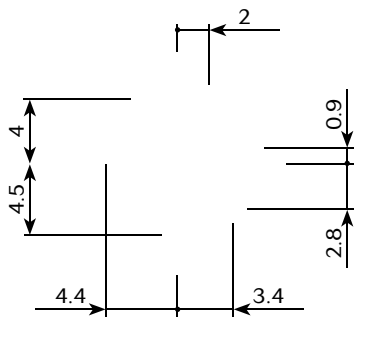
Mated connector length



Panel cut out



Drilling pattern



Note: all dimensions are in mm

Mechanics

Accessories and tooling

Jam nut sealing caps

Part number
UTS12DCG

Metal terminal

Part number
UTS12DCGR

Handle

Part number
SHANDLES

Tool kit

Part number
TOOLKIT

Plug sealing cap

Part number
UTS612DCG

Square flange sealing cap

Metal terminal

Part number
UTS12DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005587A	85005596

Gasket

Part numbers / neoprene
UTFD13B

Color coding rings

G for Green

y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS712CCRR	UTS612CCRR
UTS712CCRY	UTS612CCRY
UTS712CCRG	UTS612CCRG

* Add G for Green, y for Yellow, R for Red

Crimp tooling

Contacts	Contact size	Part number of head
RM RC 28M1K(1)	Standard contacts #16 Ø 1.6mm	S16RCM20
RM RC 24M9K(1)		S16RCM20
RM RC 20M13K(1)		S16RCM20
RM RC 20M12K(1)		S16RCM20
RM RC 16M23K(1)		S16RCM16
RM RC 14M50K(1)		S16RCM1450
RM RC 14M30K(1)		S16RCM14
SM SC 24M1TK6(1)		S16SCM20
SM SC 20M1TK6(1)		S16SCM20
SM SC 16M1TK6(1)		S16SCM1
SM SC 14M1TK6(1)		S16SCM1
SM SC 16M11TK6(1)		S16SCM11
RMDXK10D28K	Coaxial contacts	M10S-1J
RCDXK1D28K		M10S-1J
RM RC DX60xxD28K		M10S-1J
RM RC DXK10D28 + yor k090		M10S-1J
RM RC DX60xxD28		M10S-1J

(1): example of plating, for other plating see UTS catalog page 143

Contacts

#16	Contact type	AWG	Part number		Max wire Ø	Max insulator Ø
			Male	Female		
Crimp	Machined	30-28	RM28MLK(1)	RC28MLK(1)	0.55	1.1
		26-24	RM24M9K(1)	RC24M9K(1)	0.8	1.6
		22-20	RM20ML3K(1)	RC20ML3K(1)	1.18	1.8
		22-20	RM20ML2K(1)	RC20ML2K(1)	1.18	2.2
		20-16	RML6M23K(1)	RC16M23K(1)	1.8	3.2
		16-14	RML4M50K(1)	RC14M50K(1)	2.05	3.2
		16-14	RML4M30K(1)	RC14M30K(1)	2.28	3.2
	Stamped & formed reeled contacts	26-24	SM24MLTK6(1)(2)	SC24MLTK6(1)(2)	0.89-1.28	-
		22-20	SM20MLTK6(1)(2)	SC20MLTK6(1)(2)	1.17-2.08	-
		18-16	SML6MLTK6(1)(2)	SC16MLTK6(1)(2)	3.0	-
		18-16	SML6ML1TK6(1)(2)	SC16ML1TK6(1)(2)	2.0-3.0	-
		14	SML4MLTK6(1)(2)	SC14MLTK6(1)(2)	3.2	-
PCB	Machined (3)	-	RM20ML2E8K(1)	RC20ML2E84K(1)	-	-
Coaxial	Cable Multipiece	-	RMDXK10D28	RCDXK1D28	-	-
	Cable Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
	Twisted pair Multipiece	-	RMDXK10D28 + yor k090	RCDXK1D28 + yor k090	-	-
	Twisted pair Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
Fiber optic	POF contacts Plastic optical fibre	-	RMPOF1000	RCPOF1000B	-	-

(1): Example of plating, for other plating see page 143
(2): Loose piece contact available if putting L. Example: **SM20ML1- TK6**
(3): For dimensions see page 148

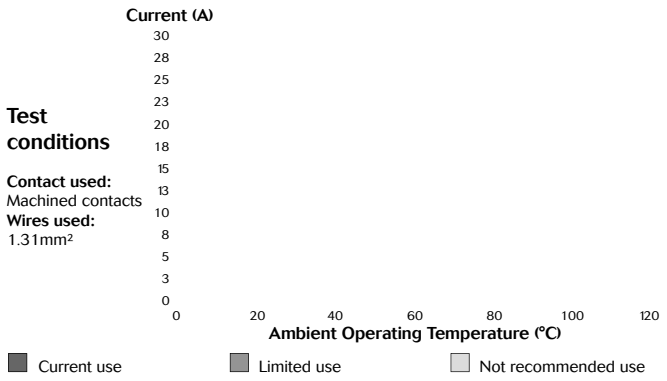
Electrical characteristics

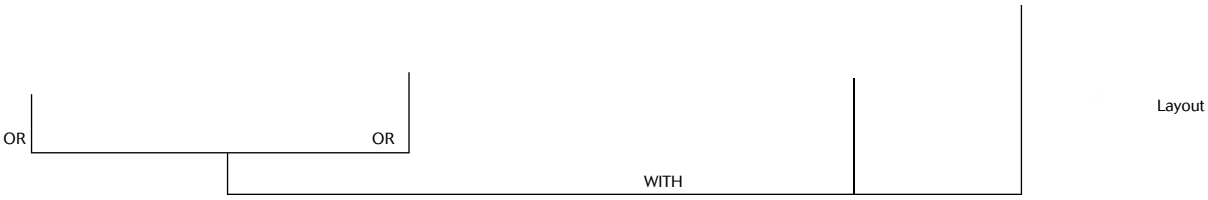
UL
10A 500V UL94 V-0

CSA
7A 500V UL94 V-0

IEC
10A 80V 1.5kV 3

UTS 128 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.6)	**UTS012E8P**	**UTS012E8S**
	Plug	Without (Fig.1)	**UTS612E8P**	**UTS612E8S**
		Cable gland (Fig.2)	**UTS6JC12E8P**	**UTS6JC12E8S**
	Jam nut receptacle	Without (Fig.3)	**UTS712E8P**	**UTS712E8S**
PCB contacts loaded	Square flange receptacle	Without (Fig.7)	**UTS012D8P**	**UTS012D8S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.4)	**UTS712D8P32**	**UTS712D8S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.5)	**UTS712D8P**	**UTS712D8S**

Sealed unmated

Dimensions

Plug - UTS6

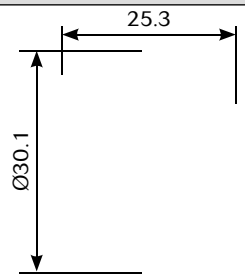


Fig. 1

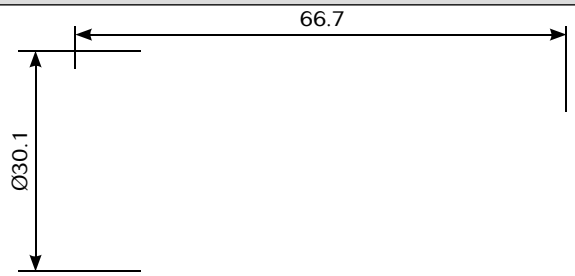


Fig. 2

Jam nut receptacle - UTS7

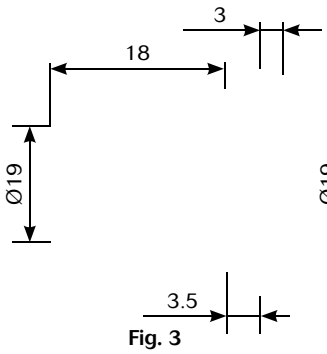


Fig. 3

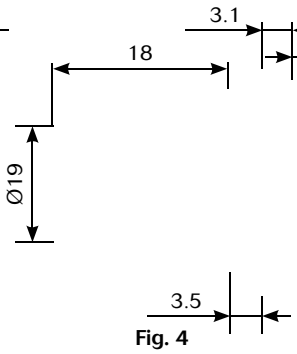


Fig. 4

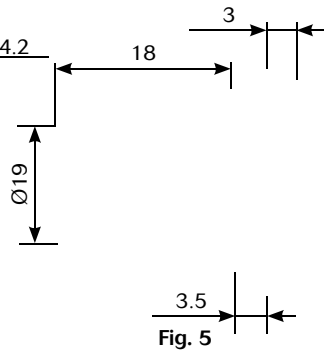
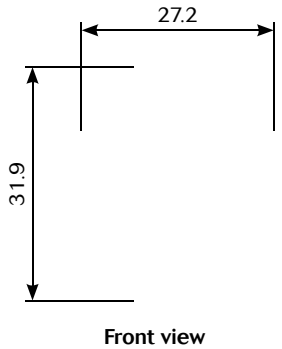


Fig. 5



Front view

Square flange receptacle - UTS0

Fig. 7

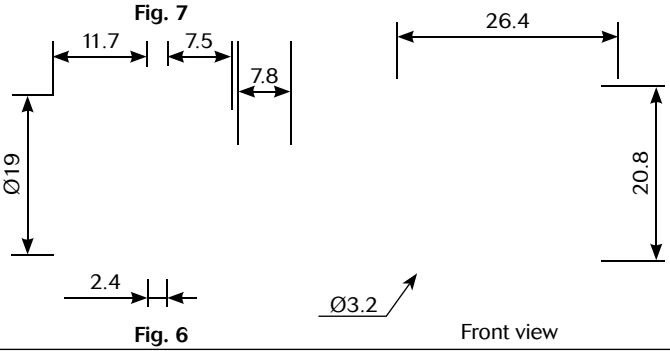
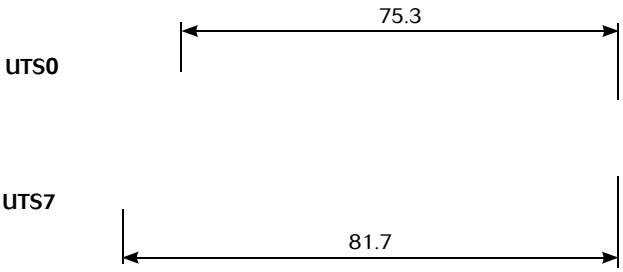


Fig. 6

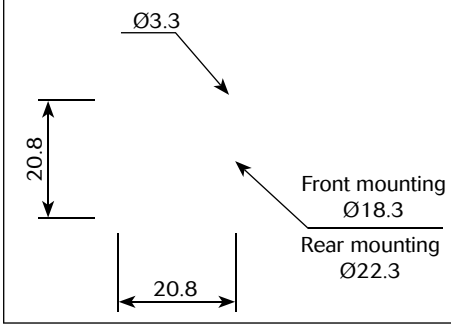
Front view

Mated connector length

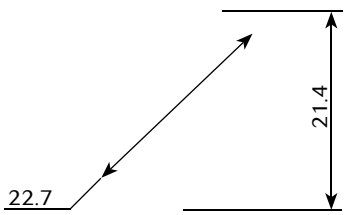


Panel cut out

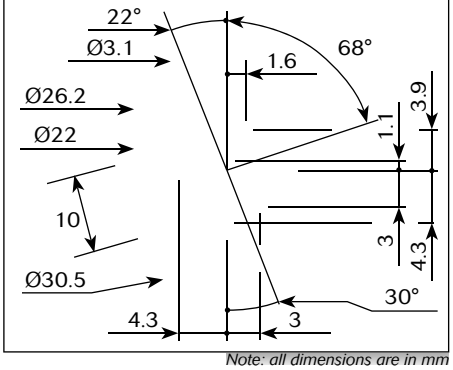
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



Drilling pattern



Note: all dimensions are in mm

Accessories

Jam nut sealing caps

Metal terminal

Part number
UTS12DCG

Part number
UTS12DCGR

Plug sealing cap

Part number
UTS612DCG

Square flange sealing cap

Metal terminal

Part number
UTS12DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005587A	85005596

Gasket

Part numbers / neoprene
UTFD13B

Color coding rings

G for Green

Y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS712CCRR	UTS612CCRR
UTS712CCRY	UTS612CCRY
UTS712CCRG	UTS612CCRG

* Add G for Green, Y for Yellow, R for Red

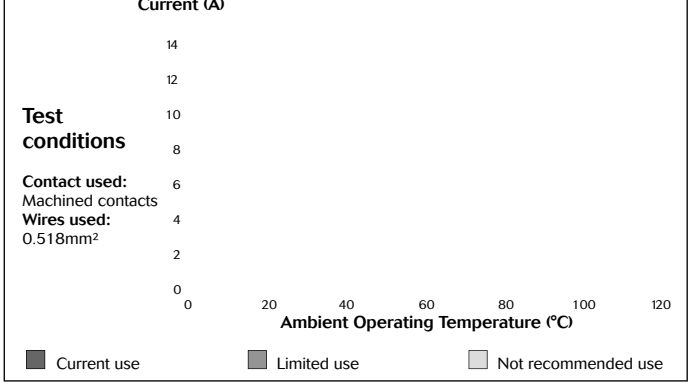
Electrical characteristics

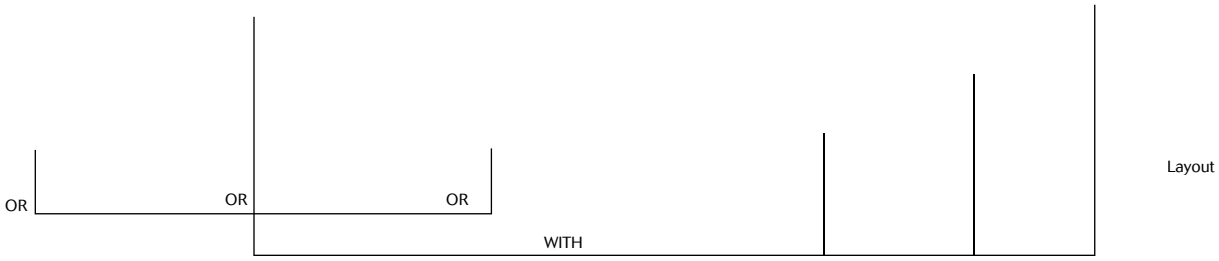
UL
4.5A 250V UL94 HB

CSA
4.5A 250V UL94 HB

IEC
6A 32V 1.5kV 3

UTS 12E8/12D8 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Crimp contacts supply separately see page107	Free hanging receptacle	Cable gland (Fig.1)	**UTS1JC1210P**	**UTS1JC1210S**
	Plug	Without (Fig.2)	**UTS61210P**	**UTS61210S**
	Plug	Cable gland (Fig.3)	**UTS6JC1210P**	**UTS6JC1210S**
	Jam nut receptacle	Without (Fig.4)	**UTS71210P**	**UTS71210S**
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.6)	**UTS012E10P**	**UTS012E10S**
	Plug	Without (Fig.2)	**UTS612E10P**	**UTS612E10S**
		Cable gland (Fig.3)	**UTS6JC12E10P**	**UTS6JC12E10S**
	Jam nut receptacle	Without (Fig.5)	**UTS712E10P**	**UTS712E10S**
PCB contacts loaded	Square flange receptacle	Without (Fig.7)	**UTS012D10P**	**UTS012D10S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.6)	**UTS712D10P32**	**UTS712D10S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.7)	**UTS712D10P**	**UTS712D10S**

Sealed unmated

Dimensions

Free hanging - UTS1

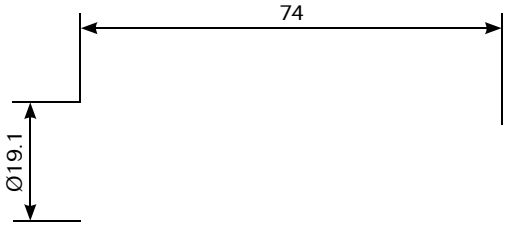


Fig. 1

Plug - UTS6

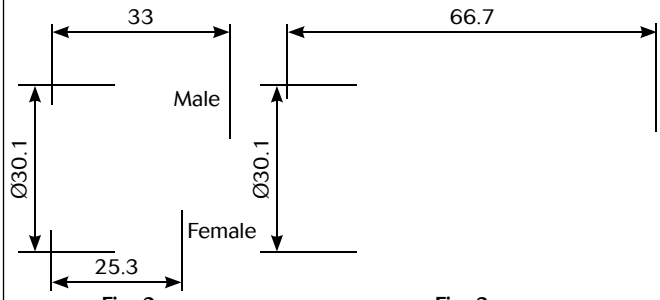


Fig. 2 Fig. 3

Jam nut receptacle - UTS7

Fig. 4

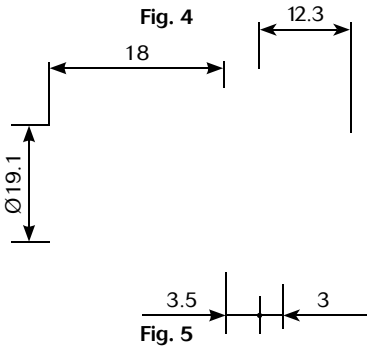


Fig. 5

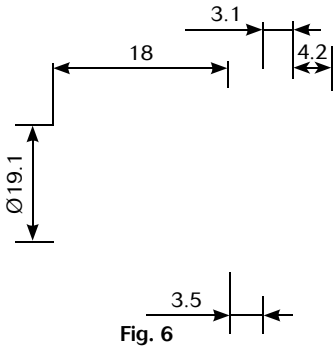


Fig. 6

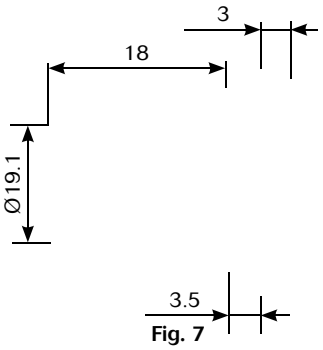
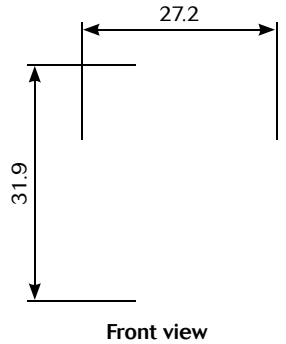


Fig. 7



Front view

Square flange receptacle - UTS0

Fig. 7

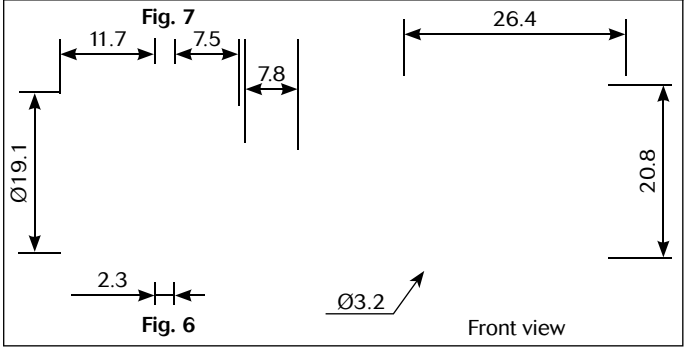
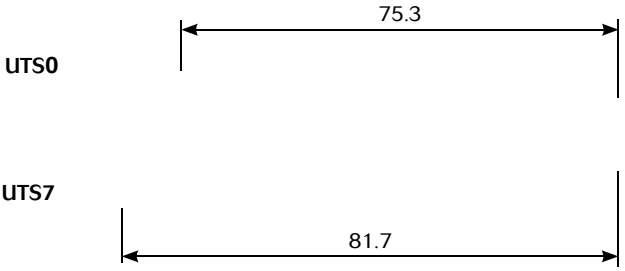
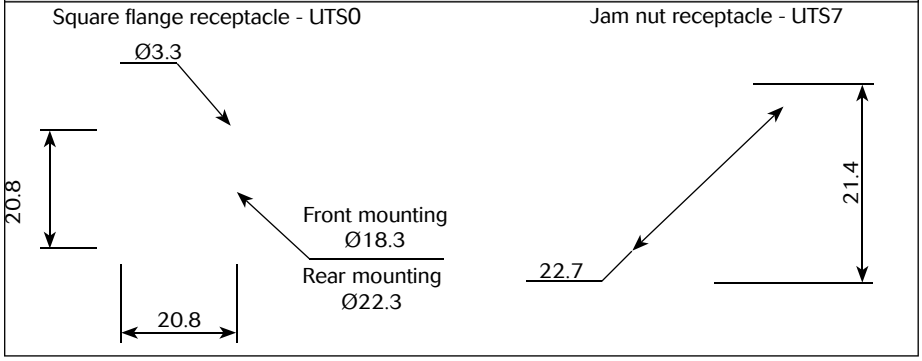


Fig. 6 Front view

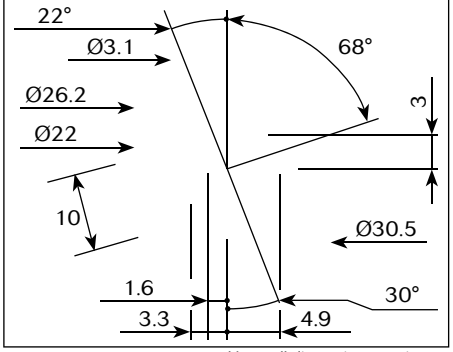
Mated connector length



Panel cut out



Drilling pattern



Note: all dimensions are in mm

Accessories and tooling

Jam nut sealing caps

Metal terminal

Part number	Part number
UTS12DCG	UTS12DCGR

Handle

Part number
SHANDLES

Tool kit

Part number
TOOLKIT

Plug sealing cap

Part number
UTS612DCG

Square flange sealing cap

Metal terminal

Part number
UTS12DCGE

Crimp tooling

Contacts	Contact size	Part number of head
RM RC 24WBK(1)	Standard contacts #20 Ø 1mm	S20RM
RM RC 20WBK(1)		S20RM
RM RC 18WBK(1)		S20RM
SM SC 24WBS(2)		S20SCM20
SM SC 24WL3S(3)		S20SCM20
SM SC 20WBS(2)		S20SCM20
SM SC 20WL3S(3)		S20SCM20

(1): example of plating, for other plating see UTS catalog page 143
(2): contact reeled
(3): loose contact

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005587A	85005596

Gasket

Part numbers / neoprene
UTFD13B

Color coding rings

G for Green

y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS712CCRR	UTS612CCRR
UTS712CCRY	UTS612CCRY
UTS712CCRG	UTS612CCRG

* Add G for Green, y for Yellow, R for Red

Contacts

#20	Contact type	AWG	Part number		Max wire Ø	Max insulator Ø
			Male	Female		
Crimp	Machined	26-24	RM24V03K(1)	RC24V03K(1)	-	1.58
		22-20	RM20V03K(1)	RC20V03K(1)	-	1.58
		20-18	RM18V03K(1)	RC18V03K(1)	-	2.1
	stamped & formed reeled contacts	26-24	SM24V03TK6(2)	SC24V03TK6(2)	-	0.89-1.58
		26-24	SM24V03TK6(2)	SC24V03TK6(2)	-	0.89-1.58
		22-20	SM20V03TK6(2)	SC20V03TK6(2)	-	1.17-2.08
		22-20	SM20V03TK6(2)	SC20V03TK6(2)	-	1.17-2.08
PCB	Machined (3)	-	RMV5016K	RCV5016K	-	-

(1): Example of plating, for other plating see page 143
(2): Loose piece contact available if putting L. Example: **SM20ML1-TK6**
(3): For dimensions see page 148

Electrical characteristics

UTS 1210
UL
5A 250V UL94 V-0

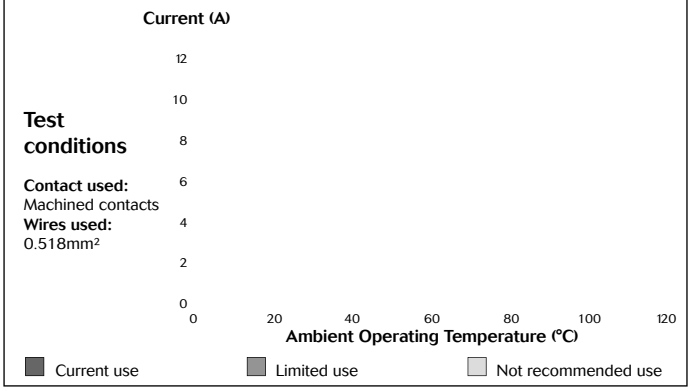
CSA
4A 250V UL94 V-0

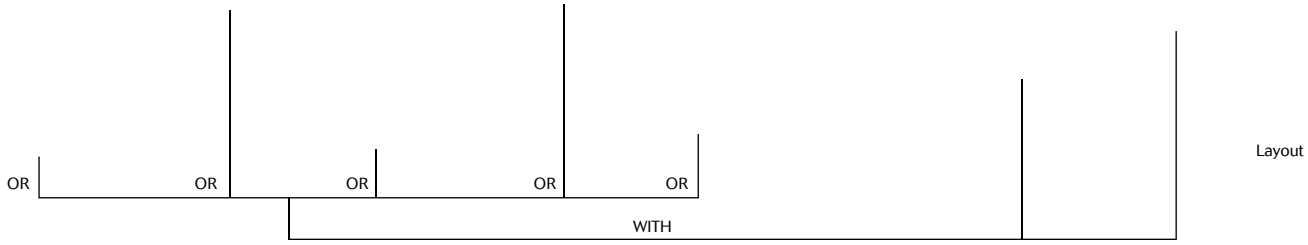
UTS 12E10/12D10
UL
4.5A 250V UL94 HB

CSA
4.5A 250V UL94 HB

IEC
6A 50V 1.5kV 3

UTS 1210 - 12E10/12D10 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Crimp contacts supply separately see page 111	Square flange receptacle	Without (Fig.1)	**UTS01412P**	**UTS01412S**
	Free hanging receptacle	Cable gland and grommet (Fig.2)	**UTS1GJC1412P**	
	Free hanging receptacle	Nut and grommet (Fig.3)	**UTS1GN1412P**	
	Free hanging receptacle	Cable gland (Fig.2)	**UTS1JC1412P**	**UTS1JC1412S**
	Plug	Without (Fig.4)	**UTS61412P**	**UTS61412S**
	Plug	Cable gland and grommet (Fig.5)		**UTS6GJC1412S**
	Plug	Nut and grommet (Fig.6)		**UTS6GN1412S**
	Plug	Cable gland (Fig.5)	**UTS6JC1412P**	**UTS6JC1412S**
	Jam nut receptacle	Without (Fig.7)	**UTS71412P**	**UTS71412S**
	Jam nut receptacle	Cable gland and grommet (Fig.9)	**UTS7GJC1412P**	
	Jam nut receptacle	Nut and grommet (Fig.8)	**UTS7GN1412P**	
PCB contacts supply separately see page 111	Square flange receptacle	Without (Fig.1)	**UTS01412P**	**UTS01412S**
	Jam nut receptacle	Without (Fig.7)	**UTS71412P**	**UTS71412S**

12 contacts
10A/63V
per IEC 61984

Dimensions

Square flange receptacle - UTS0

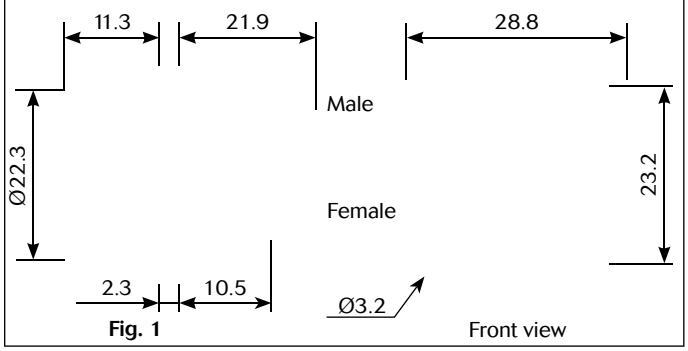


Fig. 1

Free hanging - UTS1

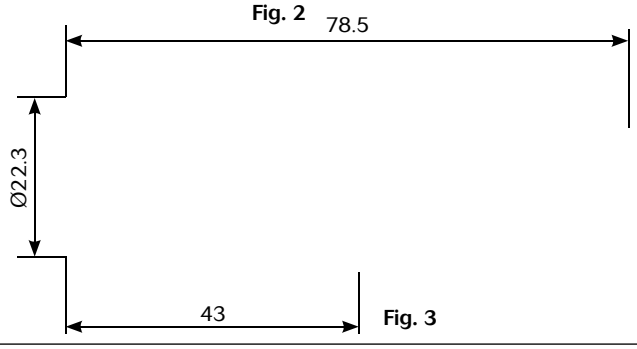


Fig. 2

Fig. 3

Plug - UTS6

Fig. 4

Fig. 5

Fig. 6

Jam nut receptacle - UTS7

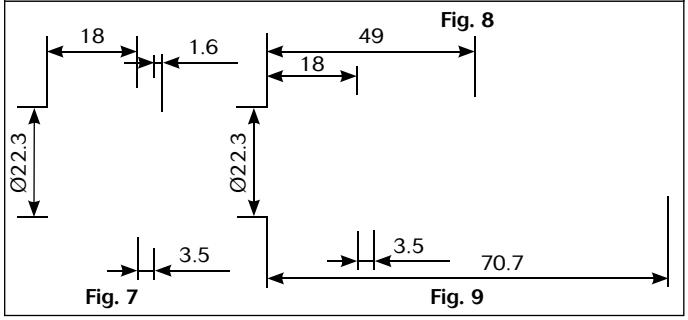
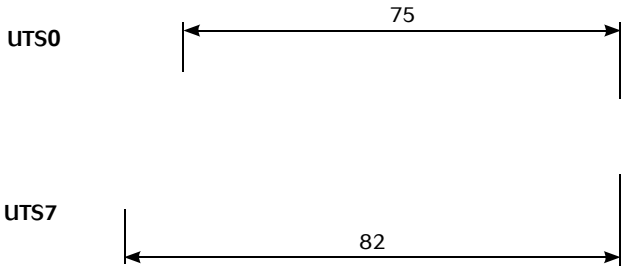


Fig. 8

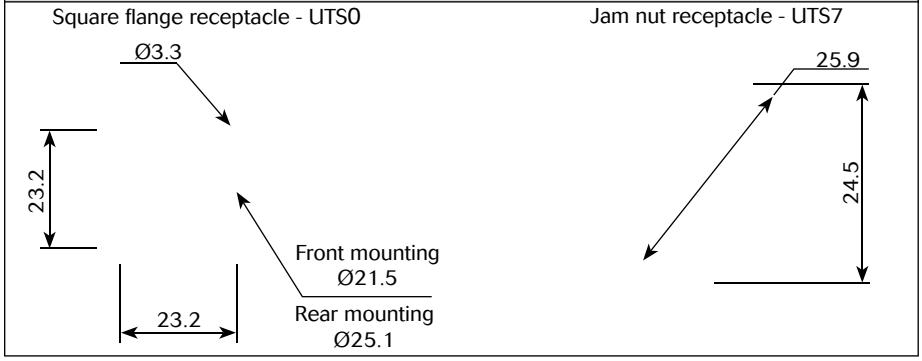
Fig. 7

Fig. 9

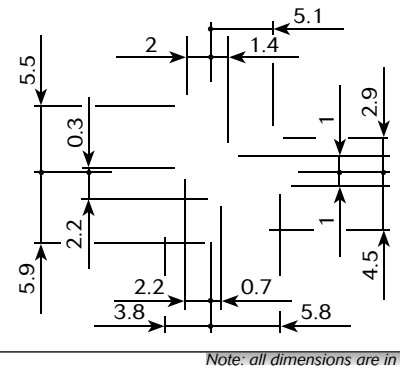
Mated connector length



Panel cut out



Drilling pattern



Note: all dimensions are in mm

Mechanics

Accessories and tooling

Jam nut sealing caps

Part number
UTS14DCG

Metal terminal

Part number
UTS14DCGR

Handle

Part number
SHANDLES

Tool kit

Part number
TOOLKIT

Plug sealing cap

Part number
UTS614DCG

Square flange sealing cap

Metal terminal

Part number
UTS14DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005588A	85005597

Gasket

Part numbers / neoprene
UTFD14B

Color coding rings

G for Green

Y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS714CCRR	UTS614CCRR
UTS714CCRY	UTS614CCRY
UTS714CCRG	UTS614CCRG

* Add G for Green, Y for Yellow, R for Red

Crimp tooling

Contacts	Contact size	Part number of head
RM RC 28M1K(1)	Standard contacts #16 Ø 1.6mm	S16RCM20
RM RC 24M9K(1)		S16RCM20
RM RC 20M13K(1)		S16RCM20
RM RC 20M12K(1)		S16RCM20
RM RC 16M23K(1)		S16RCM16
RM RC 14M50K(1)		S16RCM1450
RM RC 14M30K(1)		S16RCM14
SM SC 24M1TK6(1)		S16SCM20
SM SC 20M1TK6(1)		S16SCM20
SM SC 16M1TK6(1)		S16SCM1
SM SC 14M1TK6(1)		S16SCM1
SM SC 16M11TK6(1)		S16SCM11
RMDXK10D28K	Coaxial contacts	M10S-1J
RCDXK1D28K		M10S-1J
RM RC DX60xxD28K		M10S-1J
RM RC DXK10D28 + yor k090		M10S-1J
RM RC DX60xxD28		M10S-1J

(1): example of plating, for other plating see UTS catalog page 143

Contacts

#16	Contact type	AWG	Part number		Max wire Ø	Max insulator Ø
			Male	Female		
Crimp	Machined	30-28	RM28MLK(1)	RC28MLK(1)	0.55	1.1
		26-24	RM24M9K(1)	RC24M9K(1)	0.8	1.6
		22-20	RM20ML3K(1)	RC20ML3K(1)	1.18	1.8
		22-20	RM20ML2K(1)	RC20ML2K(1)	1.18	2.2
		20-16	RML6M23K(1)	RC16M23K(1)	1.8	3.2
		16-14	RML4M50K(1)	RC14M50K(1)	2.05	3.2
		16-14	RML4M30K(1)	RC14M30K(1)	2.28	3.2
	Stamped & formed reeled contacts	26-24	SM24MLTK6(1)(2)	SC24MLTK6(1)(2)	0.89-1.28	-
		22-20	SM20MLTK6(1)(2)	SC20MLTK6(1)(2)	1.17-2.08	-
		18-16	SML6MLTK6(1)(2)	SC16MLTK6(1)(2)	3.0	-
		18-16	SML6ML1TK6(1)(2)	SC16ML1TK6(1)(2)	2.0-3.0	-
		14	SML4MLTK6(1)(2)	SC14MLTK6(1)(2)	3.2	-
PCB	Machined (3)	-	RM20ML2E8K(1)	RC20ML2E84K(1)	-	-
Coaxial	Cable Multipiece	-	RMDXK10D28	RCDXK1D28	-	-
	Cable Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
	Twisted pair Multipiece	-	RMDXK10D28 + yor k090	RCDXK1D28 + yor k090	-	-
	Twisted pair Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
Fiber optic	POF contacts Plastic optical fibre	-	RMPOF1000	RCPOF1000B	-	-

(1): Example of plating, for other plating see page 143
(2): Loose piece contact available if putting L. Example: **SM20ML1- TK6**
(3): For dimensions see page 148

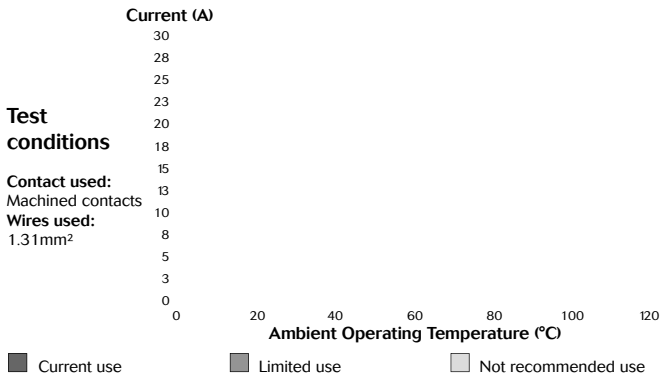
Electrical characteristics

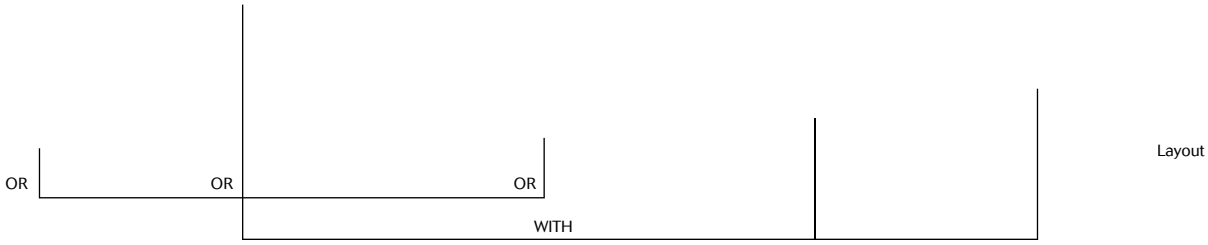
UL
10A 500V UL94 V-0

CSA
7A 500V UL94 V-0

IEC
10A 63V 1.5kV 3

UTS 1412 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.6)	**UTS014E12P**	**UTS014E12S**
	Plug	Without (Fig.1)	**UTS614E12P**	**UTS614E12S**
		Cable gland (Fig.2)	**UTS6JC14E12P**	**UTS6JC14E12S**
	Jam nut receptacle	Without (Fig.3)	**UTS714E12P**	**UTS714E12S**
PCB contacts loaded	Square flange receptacle	Without (Fig.6)	**UTS014D12P**	**UTS014D12S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.4)	**UTS714D12P32**	**UTS714D12S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.5)	**UTS714D12P**	**UTS714D12S**

Sealed unmated

Dimensions

Plug - UTS6

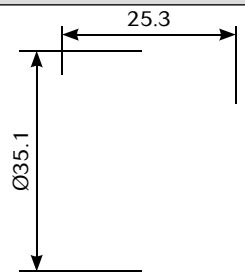


Fig. 1

Fig. 2

Jam nut receptacle - UTS7

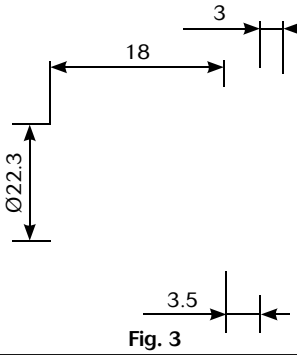


Fig. 3

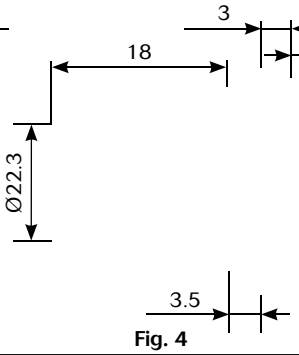


Fig. 4

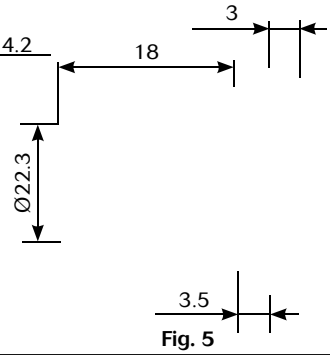
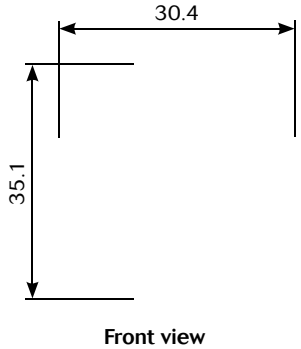


Fig. 5



Front view

Square flange receptacle - UTS0

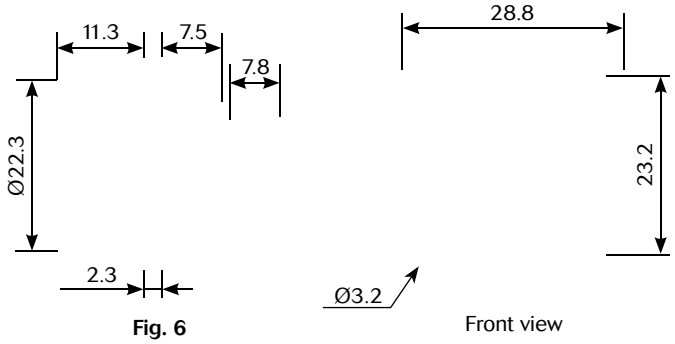
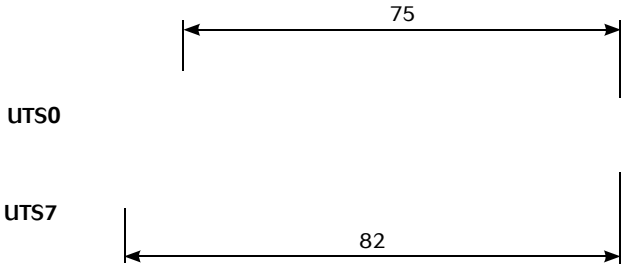


Fig. 6

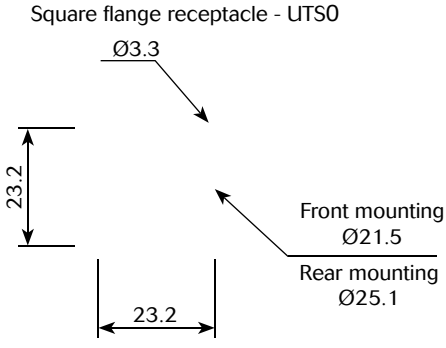
Front view

Mated connector length

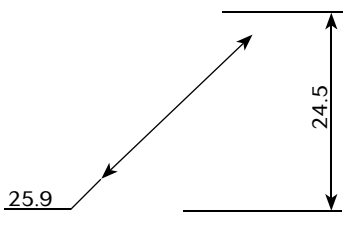


Panel cut out

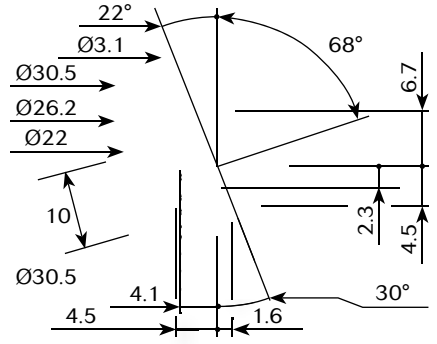
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



Drilling pattern



Note: all dimensions are in mm

Mechanics

Accessories

Jam nut sealing caps

Part number
UTS14DCG

Metal terminal

Part number
UTS14DCGR

Plug sealing cap

Part number
UTS614DCG

Square flange sealing cap

Metal terminal

Part number
UTS14DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005588A	85005597

Gasket

Part numbers / neoprene
UTFD14B

Color coding rings

G for Green

Y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS714CCRR	UTS614CCRR
UTS714CCRY	UTS614CCRY
UTS714CCRG	UTS614CCRG

* Add G for Green, Y for Yellow, R for Red

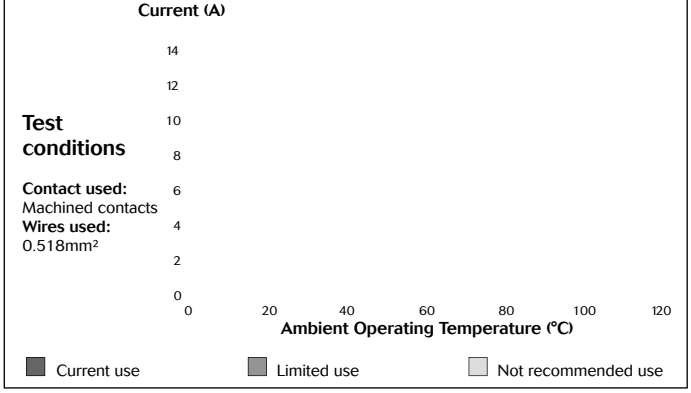
Electrical characteristics

UL
4.5A 250V UL94 HB

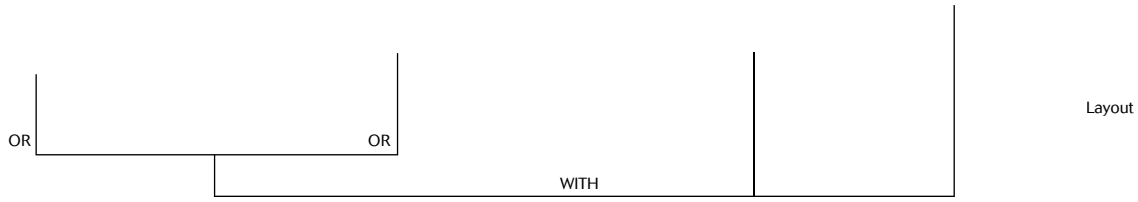
CSA
4.5A 250V UL94 HB

IEC
4A 50V 1.5kV 3

UTS 14E12/14D12 derating curves



UTS Series
14E 12/ 14D 12 (4x#16 + 8x#20)



Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.6)	**UTS012E14P**	**UTS012E14S**
	Plug	Without (Fig.1)	**UTS612E14P**	**UTS612E14S**
		Cable gland (Fig.2)	**UTS6JC12E14P**	**UTS6JC12E14S**
	Jam nut receptacle	Without (Fig.3)	**UTS712E14P**	**UTS712E14S**
PCB contacts loaded	Square flange receptacle	Without (Fig.7)	**UTS012D14P**	**UTS012D14S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.4)	**UTS712D14P32**	**UTS712D14S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.5)	**UTS712D14P**	**UTS712D14S**

Sealed unmated

Dimensions

Plug - UTS6

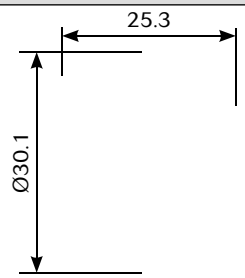


Fig. 1

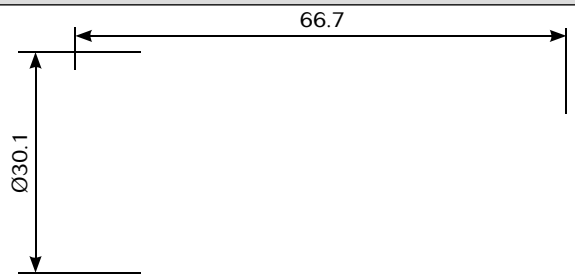


Fig. 2

Jam nut receptacle - UTS7

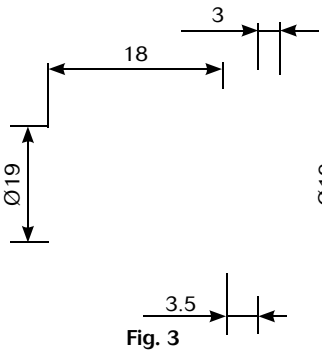


Fig. 3

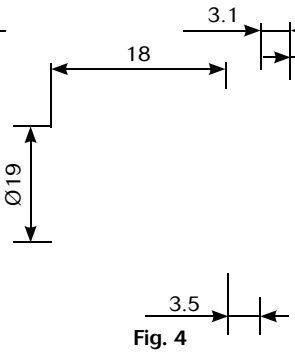


Fig. 4

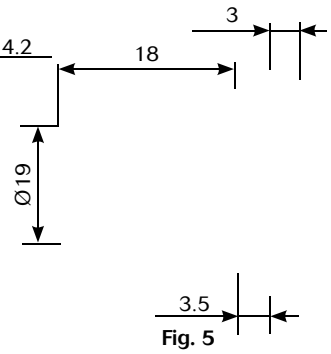
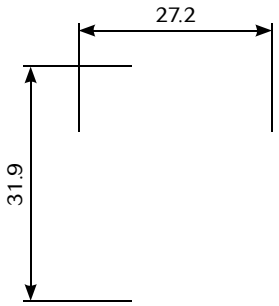


Fig. 5



Front view

Square flange receptacle - UTS0

Fig. 7

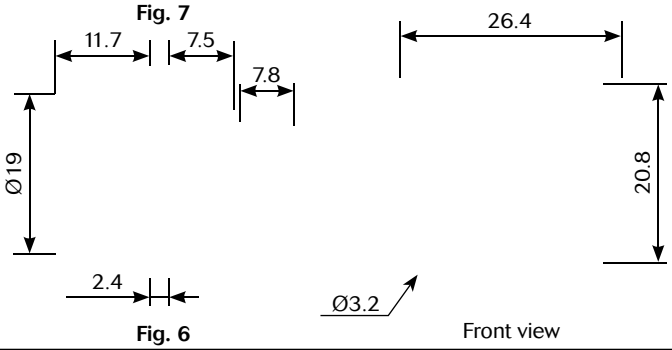
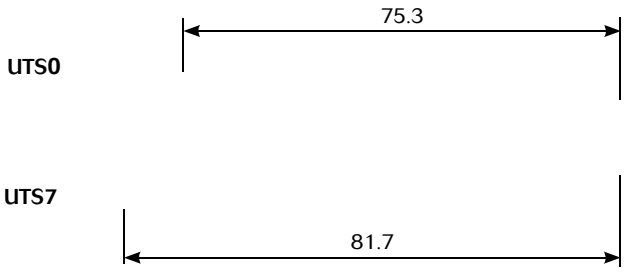


Fig. 6

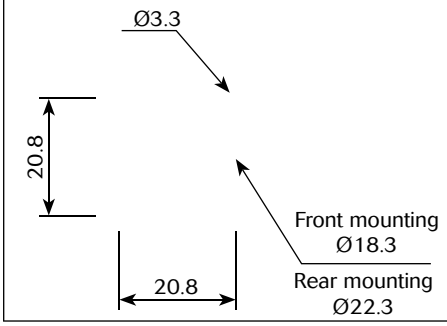
Front view

Mated connector length

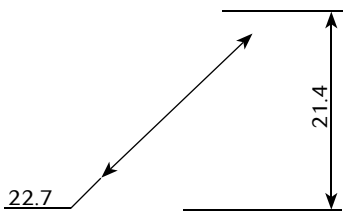


Panel cut out

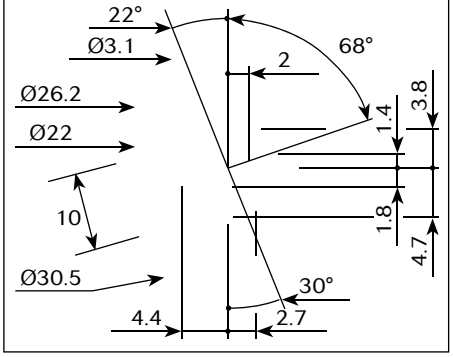
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



Drilling pattern



Note: all dimensions are in mm

Mechanics

Accessories

Jam nut sealing caps

Metal terminal

Part number
UTS12DCG

Part number
UTS12DCGR

Plug sealing cap

Part number
UTS612DCG

Square flange sealing cap

Metal terminal

Part number
UTS12DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005587A	85005596

Gasket

Part numbers / neoprene
UTFD13B

Color coding rings

G for Green

Y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS712CCRR	UTS612CCRR
UTS712CCRY	UTS612CCRY
UTS712CCRG	UTS612CCRG

* Add G for Green, Y for Yellow, R for Red

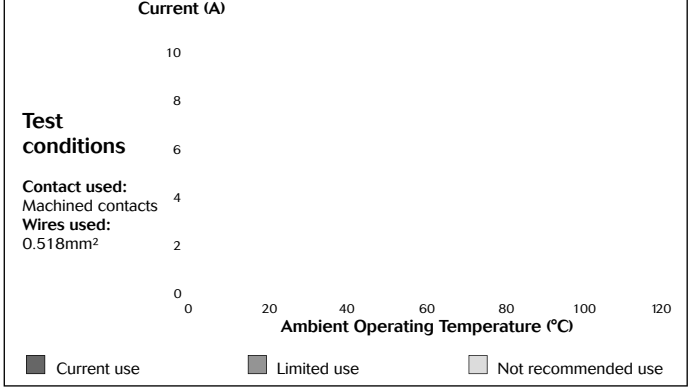
Electrical characteristics

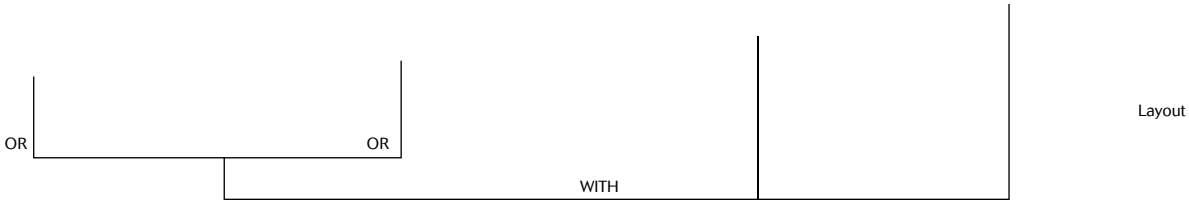
UL
4.5A 250V UL94 HB

CSA
4.5A 250V UL94 HB

IEC
5A 32V 1.5kV 3

UTS 12E14/12D14 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.6)	**UTS014E15P**	**UTS014E15S**
	Plug	Without (Fig.1)	**UTS614E15P**	**UTS614E15S**
		Cable gland (Fig.2)	**UTS6JC14E15P**	**UTS6JC14E15S**
	Jam nut receptacle	Without (Fig.3)	**UTS714E15P**	**UTS714E15S**
PCB contacts loaded	Square flange receptacle	Without (Fig.7)	**UTS014D15P**	**UTS014D15S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.4)	**UTS714D15P32**	**UTS714D15S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.5)	**UTS714D15P**	**UTS714D15S**

Sealed unmated

Dimensions

Plug - UTS6

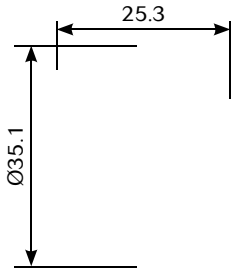


Fig. 1

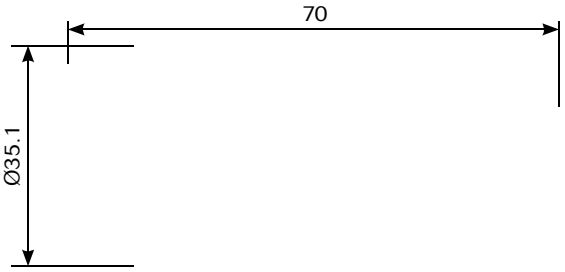


Fig. 2

Jam nut receptacle - UTS7

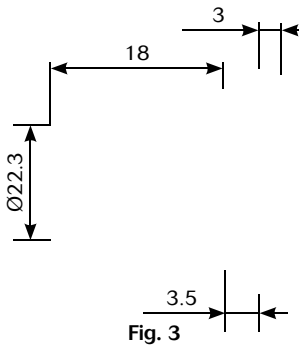


Fig. 3

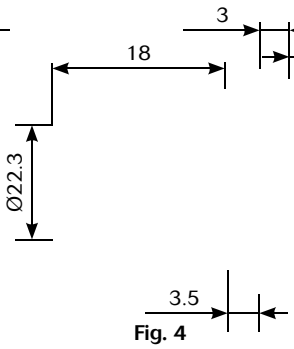


Fig. 4

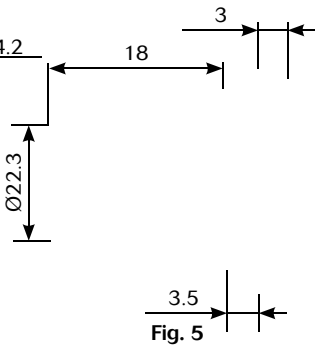
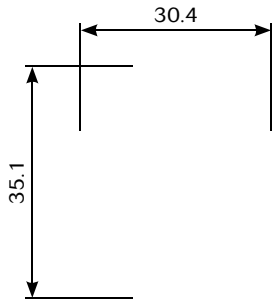


Fig. 5



Front view

Square flange receptacle - UTS0

Fig. 7

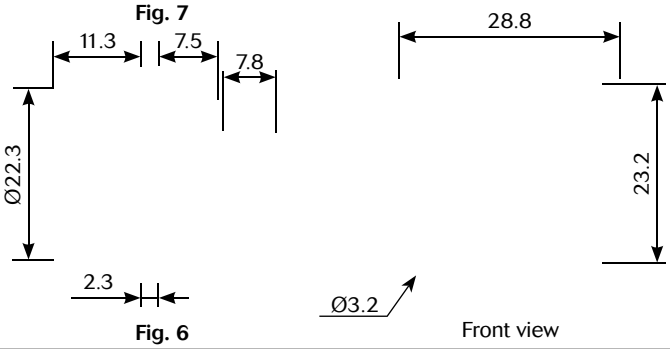
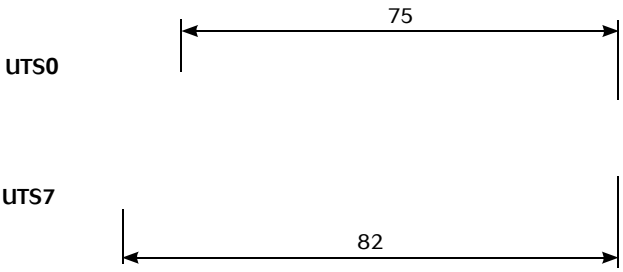


Fig. 6

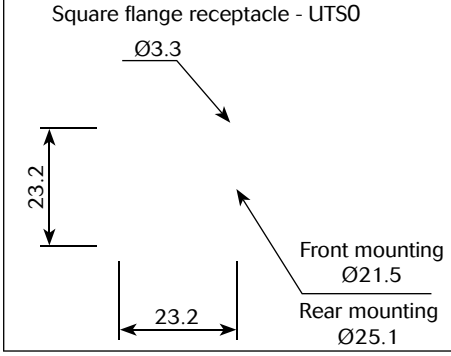
Front view

Mated connector length

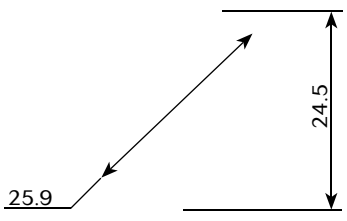


Panel cut out

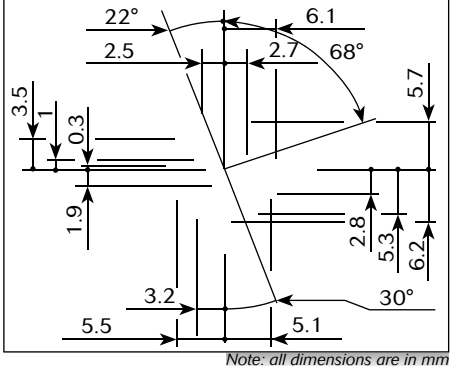
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



Drilling pattern



Note: all dimensions are in mm

Mechanics

Accessories

Jam nut sealing caps

Part number
UTS14DCG

Metal terminal

Part number
UTS14DCGR

Plug sealing cap

Part number
UTS614DCG

Square flange sealing cap

Metal terminal

Part number
UTS14DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005588A	85005597

Gasket

Part numbers / neoprene
UTFD14B

Color coding rings

G for Green

Y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS714CCRR	UTS614CCRR
UTS714CCRY	UTS614CCRY
UTS714CCRG	UTS614CCRG

* Add G for Green, Y for Yellow, R for Red

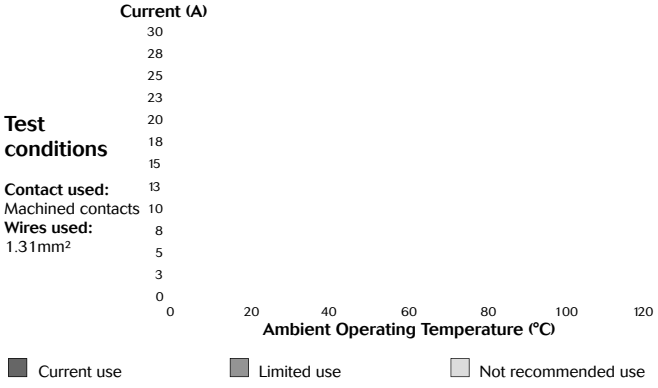
Electrical characteristics

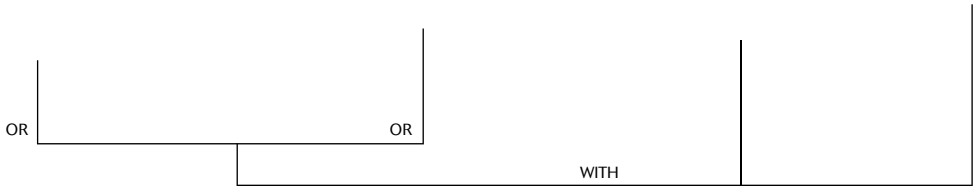
UL
12A 650V UL94 HB

CSA
12A 650V UL94 HB

IEC
4A 50V 1.5kV 3

UTS 14E15/14D15 derating curves





Layout

Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.6)	**UTS014E18P**	**UTS014E18S**
	Plug	Without (Fig.1)	**UTS614E18P**	**UTS614E18S**
		Cable gland (Fig.2)	**UTS6JC14E18P**	**UTS6JC14E18S**
	Jam nut receptacle	Without (Fig.3)	**UTS714E18P**	**UTS714E18S**
PCB contacts loaded	Square flange receptacle	Without (Fig.7)	**UTS014D18P**	**UTS014D18S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.4)	**UTS714D18P32**	**UTS714D18S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.5)	**UTS714D18P**	**UTS714D18S**

Sealed unmated

Dimensions

Plug - UTS6

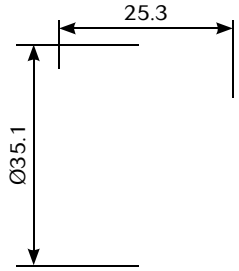


Fig. 1

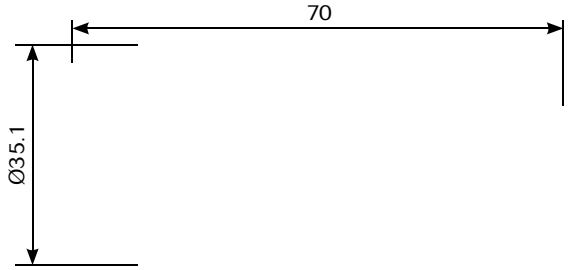


Fig. 2

Jam nut receptacle - UTS7

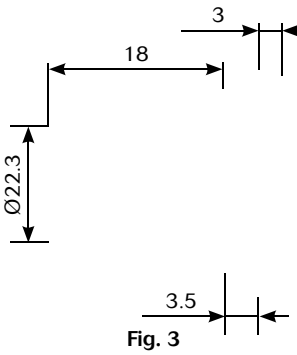


Fig. 3

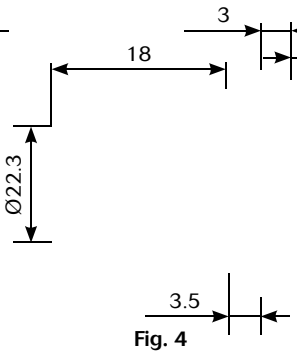


Fig. 4

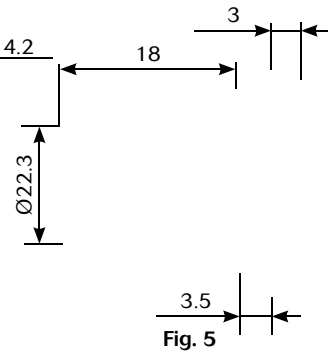
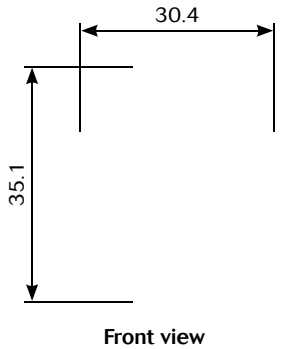


Fig. 5



Front view

Square flange receptacle - UTS0

Fig. 7

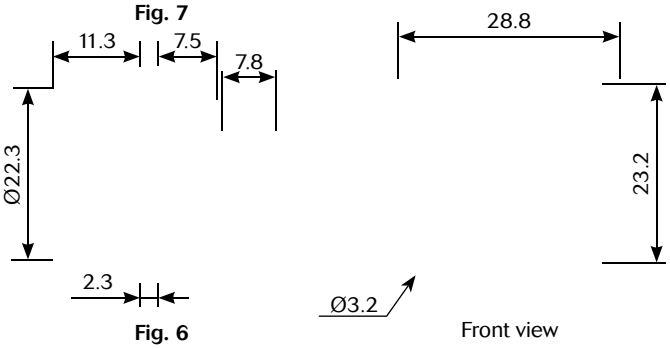
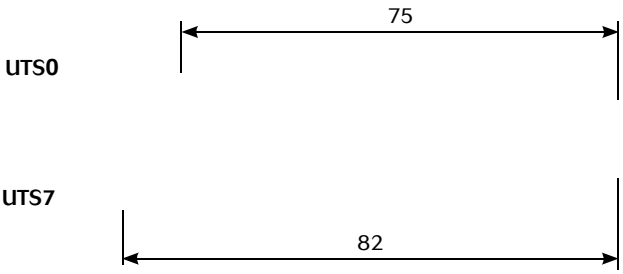


Fig. 6

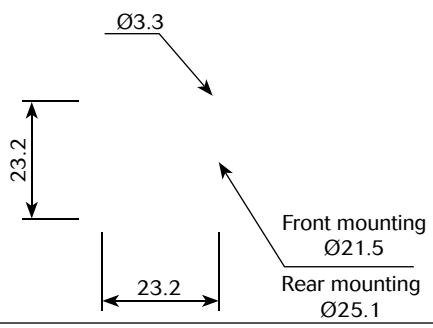
Front view

Mated connector length

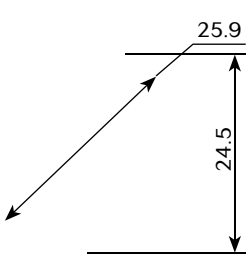


Panel cut out

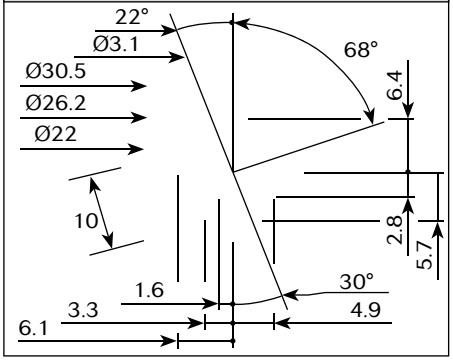
Square flange receptacle - UTS0



Jam nut receptacle - UTS7



Drilling pattern



Note: all dimensions are in mm

Mechanics

Accessories

Jam nut sealing caps

Part number
UTS14DCG

Metal terminal

Part number
UTS14DCGR

Plug sealing cap

Part number
UTS614DCG

Square flange sealing cap

Metal terminal

Part number
UTS14DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005588A	85005597

Gasket

Part numbers / neoprene
UTFD14B

Color coding rings

G for Green

Y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS714CCRR	UTS614CCRR
UTS714CCRY	UTS614CCRY
UTS714CCRG	UTS614CCRG

* Add G for Green, Y for Yellow, R for Red

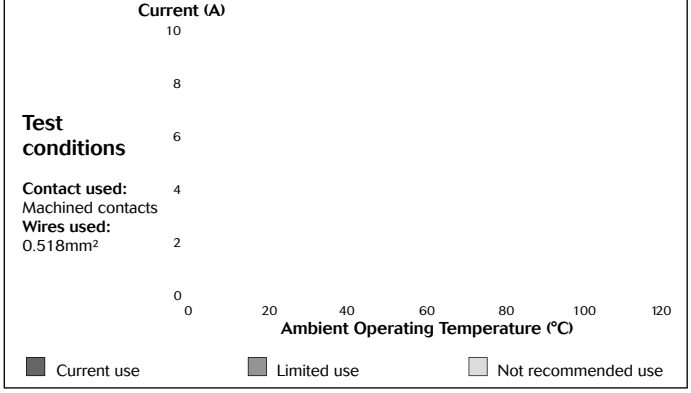
Electrical characteristics

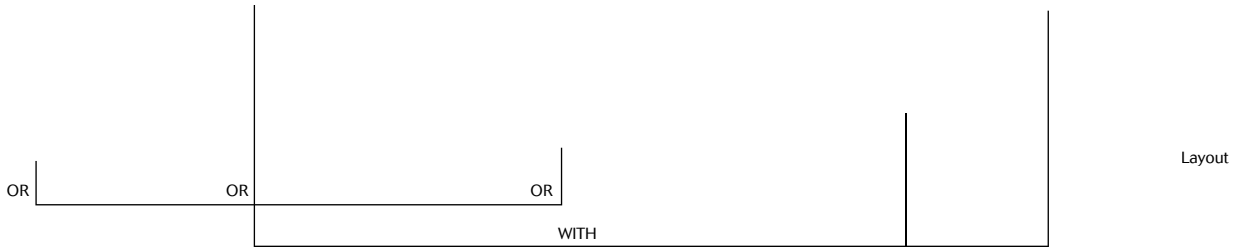
UL
4A 250V UL94 HB

CSA
4A 250V UL94 HB

IEC
5A 50V 1.5kV 3

UTS 14E18/14D18 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Crimp contacts supply separately see page 131	Free hanging receptacle	Cable gland (Fig.1)	**UTS1JC1419P**	**UTS1JC1419S**
	Plug	Without (Fig.2)	**UTS61419P**	**UTS61419S**
	Plug	Cable gland (Fig.3)	**UTS6JC1419P**	**UTS6JC1419S**
	Jam nut receptacle	Without (Fig.4)	**UTS71419P**	**UTS71419S**
PCB contacts supply separately see page 131	Jam nut receptacle	Without (Fig.4)	**UTS71419P**	**UTS71419S**
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig.8)	**UTS014E19P**	**UTS014E19S**
	Plug	Without (Fig.2)	**UTS614E19P**	**UTS614E19S**
		Cable gland (Fig.3)	**UTS6JC14E19P**	**UTS6JC14E19S**
	Jam nut receptacle	Without (Fig.5)	**UTS714E19P**	**UTS714E19S**
PCB contacts loaded	Square flange receptacle	Without (Fig.9)	**UTS014D19P**	**UTS014D19S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.6)	**UTS714D19P32**	**UTS714D19S32**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.7)	**UTS714D19P**	**UTS714D19S**

Sealed unmated

Square flange receptacle

Dimensions

Free hanging - UTS1

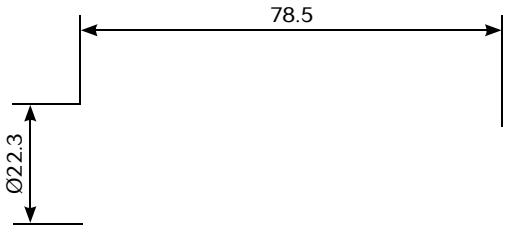


Fig. 1

Plug - UTS6

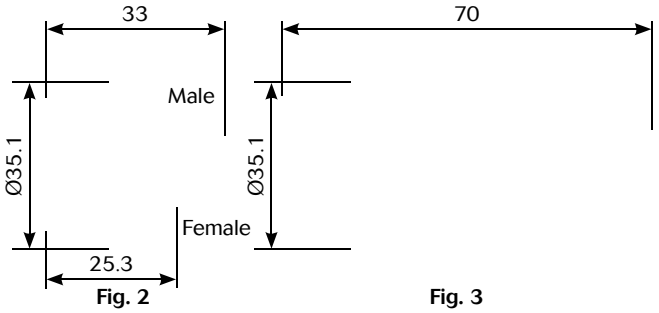


Fig. 2 Fig. 3

Jam nut receptacle - UTS7

Fig. 4

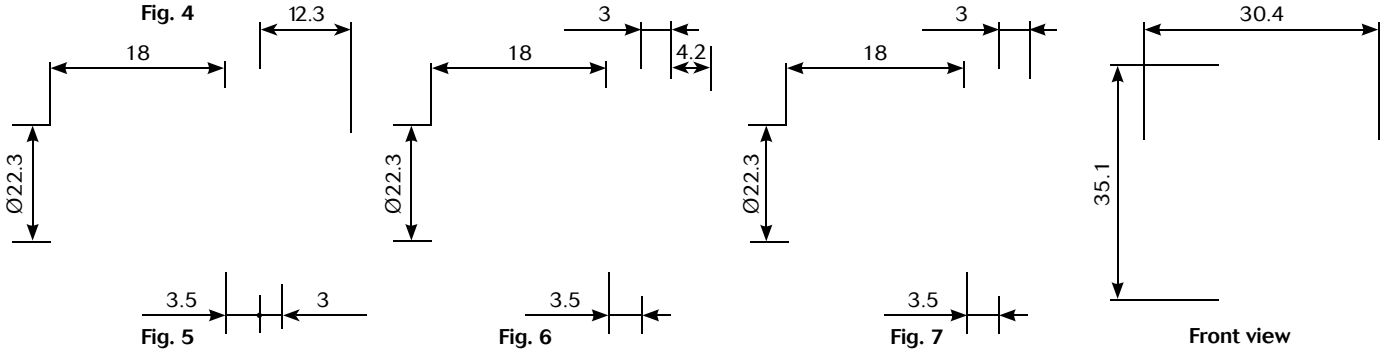


Fig. 5 Fig. 6 Fig. 7

Square flange receptacle - UTS0

Fig. 9

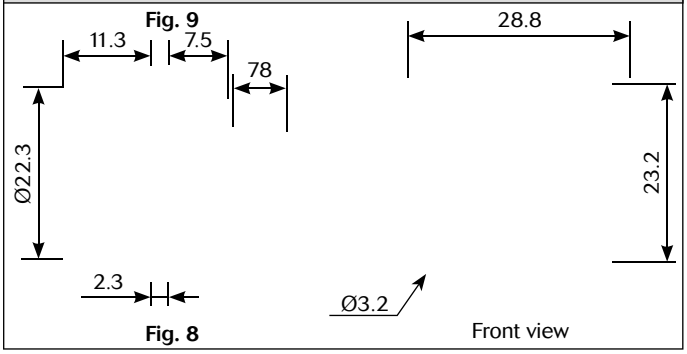
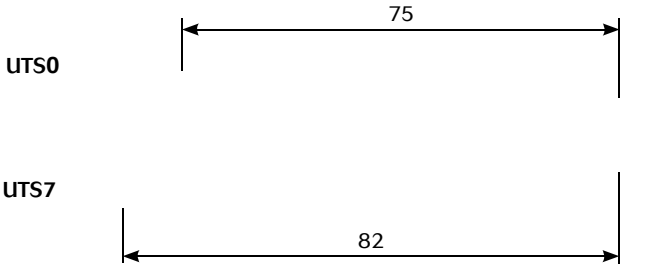
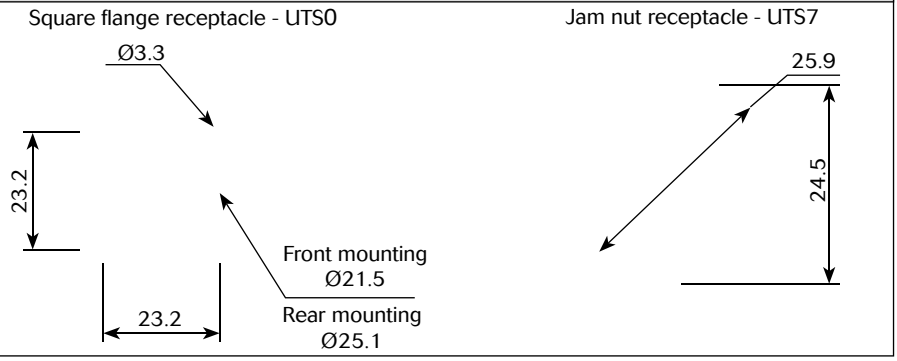


Fig. 8

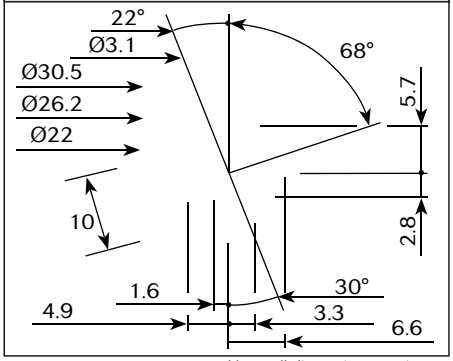
Mated connector length



Panel cut out



Drilling pattern



Note: all dimensions are in mm

Mechanics

Accessories and tooling

Jam nut sealing caps

Metal terminal

Part number	Part number
UTS14DCG	UTS14DCGR

Handle

Part number
SHANDLES

Tool kit

Part number
TOOLKIT

Plug sealing cap

Part number
UTS614DCG

Square flange sealing cap

Metal terminal

Part number
UTS14DCGE

Crimp tooling

Contacts	Contact size	Part number of head
RM RC 24WBK(1)	Standard contacts #20 Ø 1mm	S20RM
RM RC 20WBK(1)		S20RM
RM RC 18WBK(1)		S20RM
SM SC 24WBS(2)		S20SCM20
SM SC 24WL3S(3)		S20SCM20
SM SC 20WBS(2)		S20SCM20
SM SC 20WL3S(3)		S20SCM20

(1): example of plating, for other plating see UTS catalog page 143
(2): contact reeled
(3): loose contact

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
85005588A	85005597

Gasket

Part numbers / neoprene
UTFD14B

Color coding rings

G for Green

y for Yellow

R for Red

Part numbers	
Receptacles	Plugs
UTS714CCRR	UTS614CCRR
UTS714CCRY	UTS614CCRY
UTS714CCRG	UTS614CCRG

* Add G for Green, y for Yellow, R for Red

Contacts

#20	Contact type	AWG	Part number		Max wire Ø	Max insulator Ø
			Male	Female		
Crimp	Machined	26-24	RM24V38K(1)	RC24V38K(1)	-	1.58
		22-20	RM20V38K(1)	RC20V38K(1)	-	1.58
		20-18	RM18V38K(1)	RC18V38K(1)	-	2.1
	stamped & formed reeled contacts	26-24	SM24V38TK6(2)	SC24V38TK6(2)	-	0.89-1.58
		26-24	SM24V38TK6(2)	SC24V38TK6(2)	-	0.89-1.58
		22-20	SM20V38TK6(2)	SC20V38TK6(2)	-	1.17-2.08
		22-20	SM20V38TK6(2)	SC20V38TK6(2)	-	1.17-2.08
PCB	Machined (3)	-	RMV5016K	RCV5016K	-	-

(1): Example of plating, for other plating see page 143
(2): Loose piece contact available if putting L. Example: **SM20ML1-TK6**
(3): For dimensions see page 148

Electrical characteristics

UTS 1419
UL
5A 250V UL94 V-0

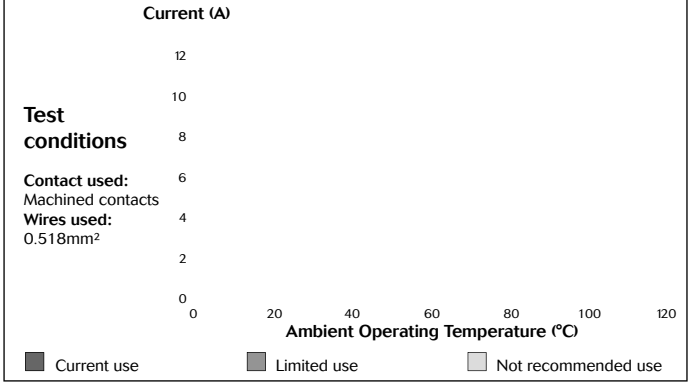
CSA
4A 250V UL94 V-0

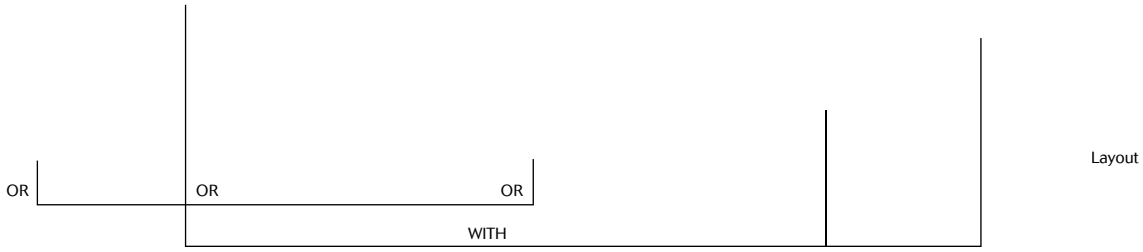
UTS 14E19/14D19
UL
4A 250V UL94 HB

CSA
4A 250V UL94 HB

IEC
5A 32V 1.5kV 3

UTS 1419 - 14E19/14D19 derating curves





Layout

Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Crimp contacts supply separately see page 135	Square flange receptacle	Without (Fig.1)	**UTS01823P**	**UTS01823S**
	Free hanging receptacle	Cable gland (Fig.2)	**UTS1JC1823P**	**UTS1JC1823S**
	Plug	Without (Fig.3)	**UTS61823P**	**UTS61823S**
	Plug	Cable gland (Fig.4)	**UTS6JC1823P**	**UTS6JC1823S**
	Jam nut receptacle	Without (Fig.5)	**UTS71823P**	**UTS71823S**
PCB contacts supply separately see page 135	Square flange receptacle	Without (Fig.1)	**UTS01823P**	**UTS01823S**
	Jam nut receptacle	Without (Fig.5)	**UTS71823P**	**UTS71823S**

Dimensions

Square flange receptacle - UTS0

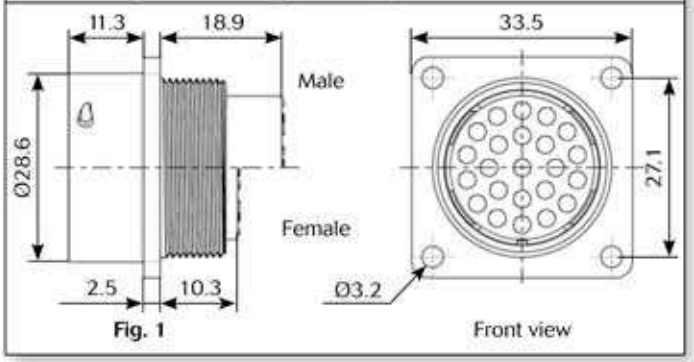


Fig. 1

Free hanging - UTS1

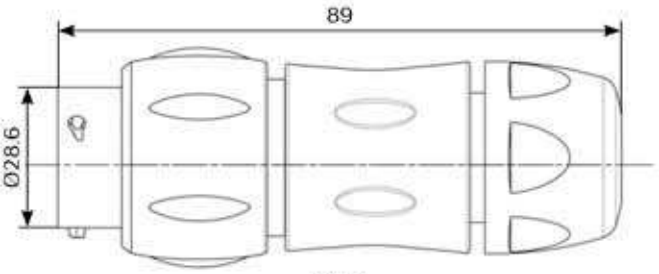


Fig. 2

Plug - UTS6

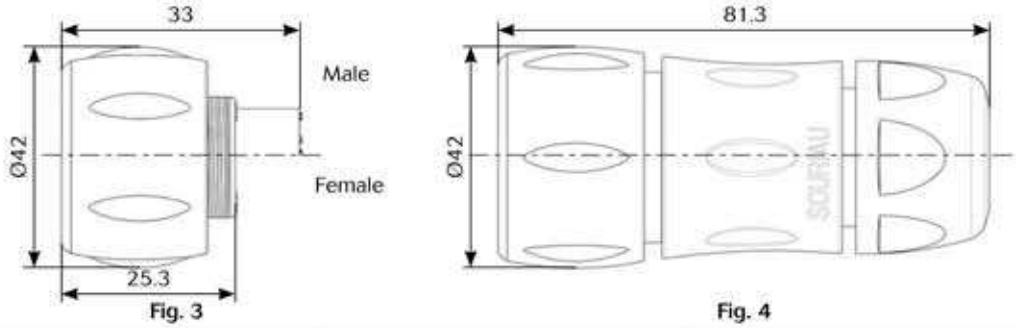


Fig. 3

Fig. 4

Jam nut receptacle - UTS7

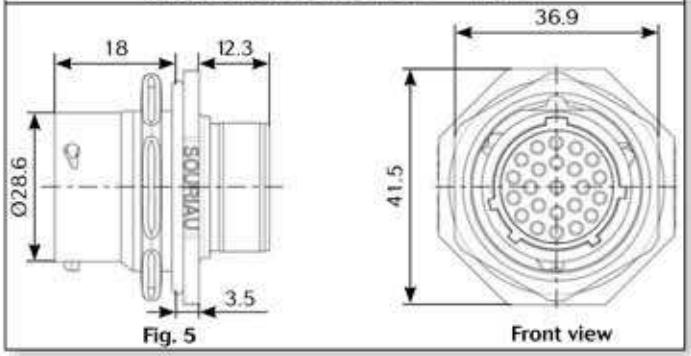
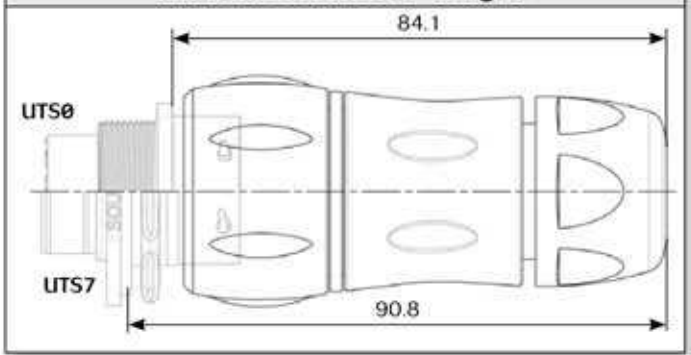
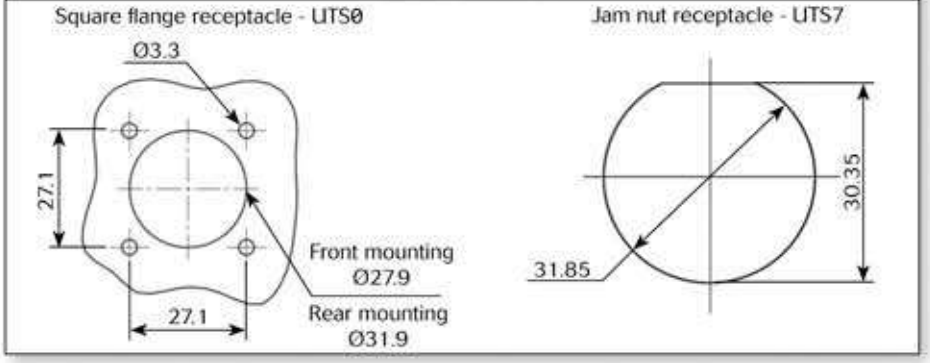


Fig. 5

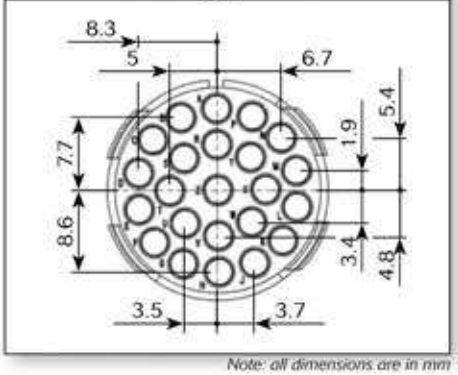
Mated connector length



Panel cut out



Drilling pattern



Note: all dimensions are in mm

Accessories and tooling

Jam nut sealing caps

Metal terminal

Part number
UTS18DCG

Part number
UTS18DCGR

Handle

Part number
SHANDLES

Tool kit

Part number
TOOLKIT

Plug sealing cap

Part number
UTS618DCG

Square flange sealing cap

Metal terminal

Part number
UTS18DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
8500-5590A	8500-5599

Gasket

Part numbers / neoprene
UTFD16B

Crimp tooling

Contacts	Contact size	Part number of head
RM RC 28M1K(1)	Standard contacts #16 Ø 1.6mm	S16RCM20
RM RC 24M9K(1)		S16RCM20
RM RC 20M13K(1)		S16RCM20
RM RC 20M12K(1)		S16RCM20
RM RC 16M23K(1)		S16RCM16
RM RC 14M50K(1)		S16RCM1450
RM RC 14M30K(1)		S16RCM14
SM SC 24M1TK6(1)		S16SCM20
SM SC 20M1TK6(1)		S16SCM20
SM SC 16M1TK6(1)		S16SCM1
SM SC 14M1TK6(1)		S16SCM1
SM SC 16M11TK6(1)		S16SCM11
RMDXK10D28K	Coaxial contacts	M10S-1J
RCDXK1D28K		M10S-1J
RM RC DX60xxD28K		M10S-1J
RM RC DXK10D28 + yor k090		M10S-1J
RM RC DX60xxD28		M10S-1J

(1): example of plating, for other plating see UTS catalog page 143

Contacts

#16	Contact type	AWG	Part number		Max wire Ø	Max insulator Ø
			Male	Female		
Crimp	Machined	30-28	RM28MLK(1)	RC28MLK(1)	0.55	1.1
		26-24	RM24M9K(1)	RC24M9K(1)	0.8	1.6
		22-20	RM20ML3K(1)	RC20ML3K(1)	1.18	1.8
		22-20	RM20ML2K(1)	RC20ML2K(1)	1.18	2.2
		20-16	RML6M23K(1)	RC16M23K(1)	1.8	3.2
		16-14	RML4M50K(1)	RC14M50K(1)	2.05	3.2
		16-14	RML4M30K(1)	RC14M30K(1)	2.28	3.2
	Stamped & formed reeled contacts	26-24	SM24MLTK6(1)(2)	SC24MLTK6(1)(2)	0.89-1.28	-
		22-20	SM20MLTK6(1)(2)	SC20MLTK6(1)(2)	1.17-2.08	-
		18-16	SML6MLTK6(1)(2)	SC16MLTK6(1)(2)	3.0	-
		18-16	SML6ML1TK6(1)(2)	SC16ML1TK6(1)(2)	2.0-3.0	-
		14	SML4MLTK6(1)(2)	SC14MLTK6(1)(2)	3.2	-
PCB	Machined (3)	-	RM20ML2E8K(1)	RC20ML2E84K(1)	-	-
Coaxial	Cable Multipiece	-	RMDXK10D28	RCDXK1D28	-	-
	Cable Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
	Twisted pair Multipiece	-	RMDXK10D28 + yor k090	RCDXK1D28 + yor k090	-	-
	Twisted pair Monocrimp	-	RMDX60xxD28	RCDX60xxD28	-	-
Fiber optic	POF contacts Plastic optical fibre	-	RMPOF1000	RCPOF1000B	-	-

(1): Example of plating, for other plating see page 143
(2): Loose piece contact available if putting L. Example: **SM20ML1- TK6**
(3): For dimensions see page 148

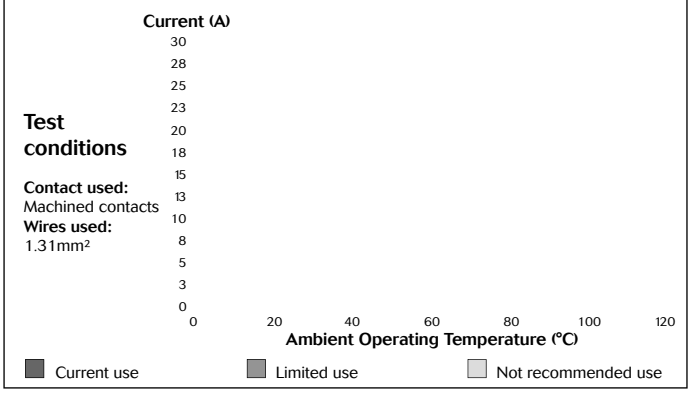
Electrical characteristics

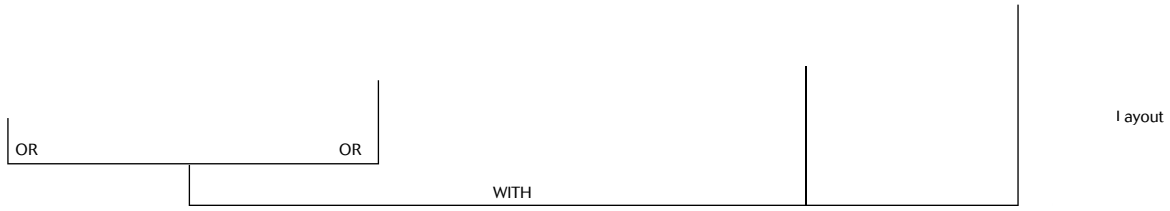
UL
10A 500V UL94 V-0

CSA
7A 500V UL94 V-0

IEC
9A 63V 1.5kV 3

UTS 1823 derating curves





Specifications

Contact type	Connector type	Backshell	Part number	
			Male insert	Female insert
Crimp contact supply separately see page 139	Free hanging receptacle	Cable gland (Fig.1)	**UTS1JC1832P**	**UTS1JC1832S**
	Plug	Without (Fig.2)	**UTS61832P**	**UTS61832S**
	Plug	Cable gland (Fig.3)	**UTS6JC1832P**	**UTS6JC1832S**
	Jam nut receptacle	Without (Fig.4)	**UTS71832P**	**UTS71832S**
PCB contacts supply separately see page 139	Jam nut receptacle	Without (Fig.4)	**UTS71832P**	**UTS71832S**

Dimensions

Free hanging - UTS1

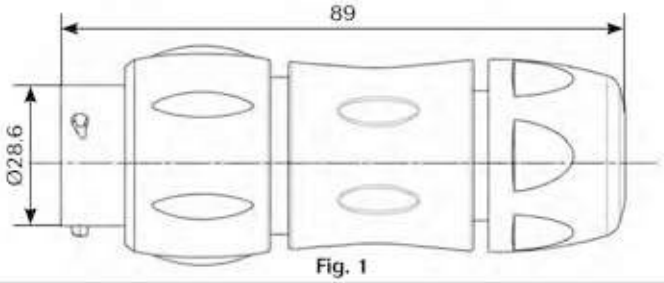


Fig. 1

Plug - UTS6

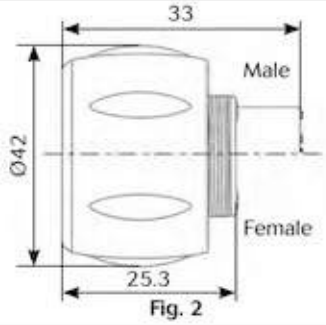


Fig. 2

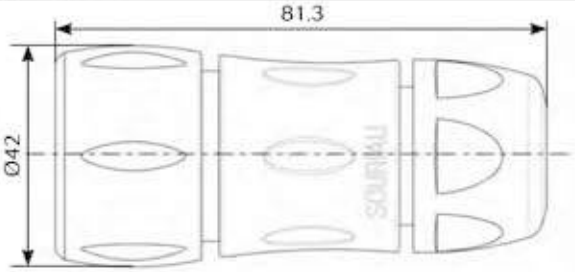


Fig. 3

Jam nut receptacle - UTS7

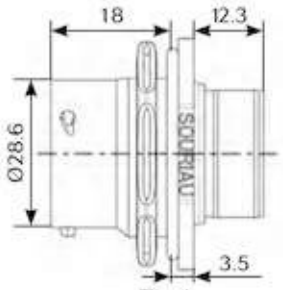
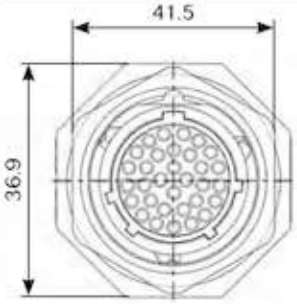
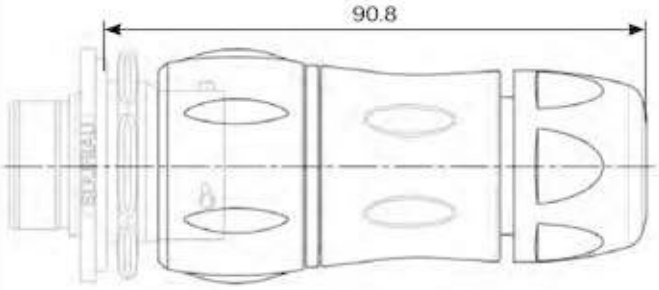


Fig. 4



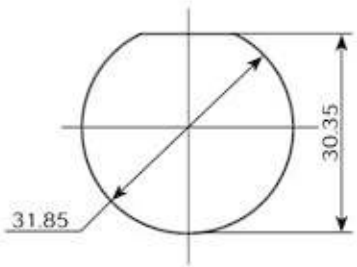
Front view

Mated connector length - UTS7

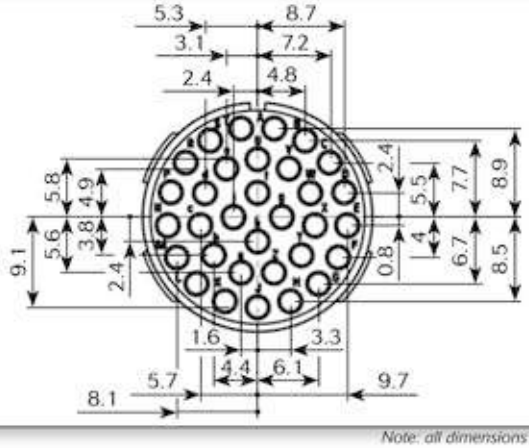


Panel cut out

Jam nut receptacle - UTS7



Drilling pattern



Note: all dimensions are in mm

Mechanics

Accessories and tooling

Jam nut sealing caps

Part number
UTS18DCG

Metal terminal

Part number
UTS18DCGR

Handle

Part number
SHANDLES

Tool kit

Part number
TOOLKIT

Plug sealing cap

Part number
UTS618DCG

Square flange sealing cap

Metal terminal

Part number
UTS18DCGE

Plastic protective cap

Part numbers	
Receptacle cap	Plug cap
8500-5590A	8500-5599

Gasket

Part numbers / neoprene
UTFD16B

Crimp tooling

Contacts	Contact size	Part number of head
RM RC 24WBK(1)	Standard contacts #20 Ø 1mm	S20RM
RM RC 20WBK(1)		S20RM
RM RC 18WBK(1)		S20RM
SM SC 24WBS(2)		S20SCM20
SM SC 24WL3S(3)		S20SCM20
SM SC 20WBS(2)		S20SCM20
SM SC 20WL3S(3)		S20SCM20

(1): example of plating, for other plating see UTS catalog page 143
(2): contact reeled
(3): loose contact

Contacts

#20	Contact type	AWG	Part number		Max wire Ø	Max insulator Ø
			Male	Female		
Crimp	Machined	26-24	RM24V13K(1)	RC24V13K(1)	-	1.58
		22-20	RM20V13K(1)	RC20V13K(1)	-	1.58
		20-18	RM18V13K(1)	RC18V13K(1)	-	2.1
	stamped & formed reeled contacts	26-24	SM24V13TK6(2)	SC24V13TK6(2)	-	0.89-1.58
		26-24	SM24V13TK6(2)	SC24V13TK6(2)	-	0.89-1.58
		22-20	SM20V13TK6(2)	SC20V13TK6(2)	-	1.17-2.08
		22-20	SM20V13TK6(2)	SC20V13TK6(2)	-	1.17-2.08
PCB	Machined (3)	-	RMV5016K	RCV5016K	-	-

(1): Example of plating, for other plating see page 143
(2): Loose piece contact available if putting L. Example: **SM20ML1-TK6**
(3): For dimensions see page 148

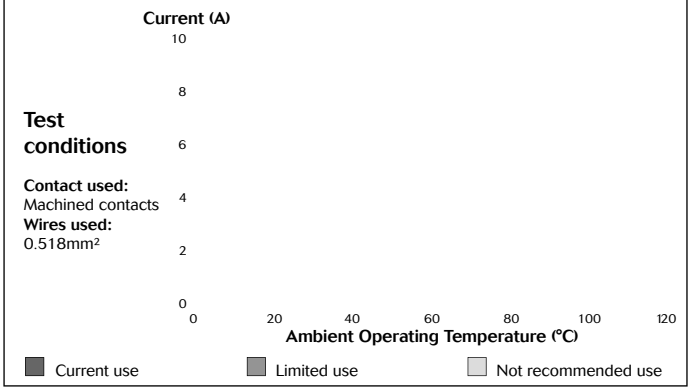
Electrical characteristics

UL
5A 250V UL94 V-0

CSA
4A 250V UL94 V-0

IEC
4A 32V 1.5kV 3

UTS 1832 derating curves



uTS Series

Contacts

Contacts

Description

The UTS series is delivered with (solder and PCB versions) or without contact (crimp version). When contacts are not loaded, this series offers the unique possibility to use the same contact in any layout as long as it receives the same active part size. Thus it is possible to buy only one contact reference and equip all connectors even if housings are different.

The main benefit is the standardisation which means reduction of inventory cost.

Bearing in mind that any additional tool or complicated assembly process should be avoided, our contacts are based on a snap-in principle which avoid the use of an insertion tool.

Crimp contacts are available in different versions:

- machined
- stamped & formed
- coaxial
- fiber optic

In addition, UTS series can obviously be equipped with solder contacts, PCB contacts, screw termination.

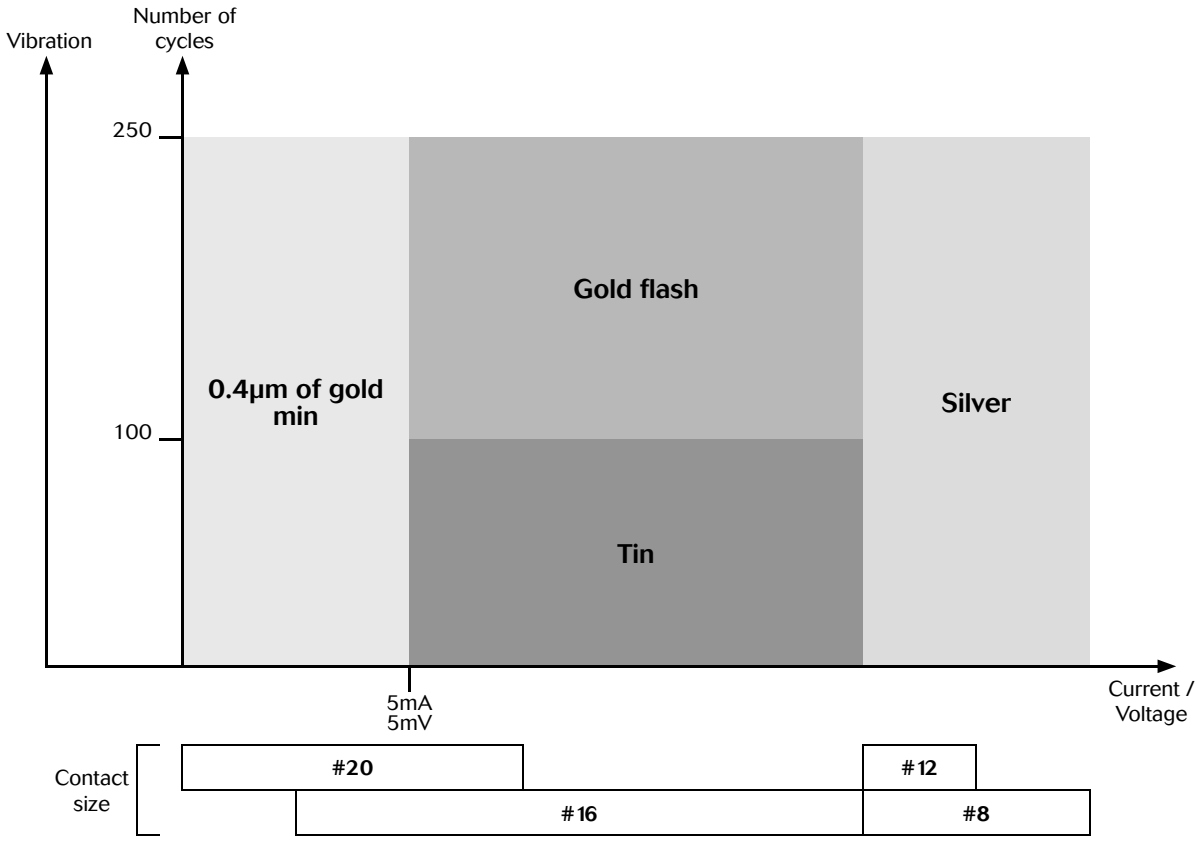
Contact plating selector guide

As soon as you know what contact size you need, you next have to decide on which type to use.
Souriau proposes mainly two different types of electrical contacts:

- Machined
- Stamped & formed

Machined contacts are generally chosen for low quantities purpose as well as a better solution for power applications.
Stamped & formed contacts offer the ability to be crimped automatically which makes them more suitable for high volume production applications.

Then comes the question: What plating should I choose ?
Hereunder is a graph with criteria to guide you:
NB: do not mix different plating (e.g. tin plated pin contact with gold plated socket contact).



Contact selector guide

Contact preloaded

Electrical characteristics: contact resistance		
#20 Ø1mm	Machined	< 4mΩ
#16 Ø1.6mm	Machined	< 3mΩ

Available platings (contact preloaded)
Min 0.4µ gold over 2µ Ni

Contact supply separately

Electrical characteristics: contact resistance		
#20 Ø1mm	Machined	< 6mΩ
	Stamped & formed	< 15mΩ
#16 Ø1.6mm	Machined	< 3mΩ
	Stamped & formed	< 6mΩ
#12 Ø2.4mm	Machined	< 5mΩ
#8 Ø3.6mm	Machined	< 5mΩ

Available platings (contact supply separately)	
A	2µ Ni + 2µ Ag
J	Gold flash over 2µ Ni
K	Min 0.4µ gold over 2µ Ni
S31	Active part: Gold flash over Ni Crimp area: Nickel
S18	Active part: 0.75µ gold min over 2µ Ni Crimp area: 1.3µ tin over Ni Other: Nickel
S25 S26	Active part: 0.75µ Au over Ni Crimp area: flash Au over Ni
T	T: 2µm Ni mini all over + 3 to 5 µm Sn all over
TK6	2-5µ Sn pre-plated

Packaging

Conscious of the wide variety of applications, contact packaging has been considered for small series (bulk packaging) and high volume production (reeled contacts):

Size contacts #20 & #16

- **25 pieces bulk packing (stamped & formed contacts)**
- **50 pieces bulk packing (machined contacts)**
- **1000 pieces bulk packing (machined contacts)**
- **3000 pieces reeled (stamped & formed contacts)**
- **5000 pieces reeled (machined contacts)**

Size contacts #12 & #8

- **100 pieces bulk packing (stamped & formed contacts)**

Crimp contacts

Standard version

Contact size	Type	Wire size		Part number		Max wire Ø	Max insulator Ø	Plating available
		AWG	mm²	Male	Female			
#20 Ø1 mm	Machined	26-24	0.13-0.20	**RM24W3K**	**RC24W3K**		1.58 max	K
	Stamped & Formed	26-24	0.13-0.25	**SM24W3-** (1)	**SC24W3-** (1)		0.89-1.58	TK6 S25 (female) S26 (male)
				SM24WL3- (2)	**SC24WL3-** (2)			
	Machined	22-20	0.32-0.52	**RM20W3K**	**RC20W3K**		1.58 max	K
	Stamped & Formed	22-20	0.35-0.5	**SM20W3-** (1)	**SC20W3-** (1)		1.17-2.08	TK6 S25 (female) S26 (male)
				SM20WL3- (2)	**SC20WL3-** (2)			
	Machined	20-18	0.50-0.93	**RM18W3K**	**RC18W3K**		2.10 max	K
#16 Ø1.6 mm	Machined	30-28	0.05-0.08	**RM28M1-**	**RC28M1-**	0.55	1.1	K, J, T
	Machined	26-24	0.13-0.2	**RM24M9-**	**RC24M9-**	0.8	1.6	K, J, T
	Stamped & Formed	26-24	0.13-0.25	**SM24M1-** (1) **SM24ML1-** (2)	**SC24M1-** (1) **SC24ML1-** (2)	0.89-1.28	Insulation grip	S31, S18, TK6
	Machined	22-20	0.32-0.52	**RM20M13-**	**RC20M13-**	1.18	1.8	K, J, T
				RM20M12-	**RC20M12-**		2.2	
	Stamped & Formed	22-20	0.35-0.5	**SM20M1-** (1) **SM20ML1-** (2)	**SC20M1-** (1) **SC20ML1-** (2)	1.17-2.08	Insulation grip	S31, S18, TK6
	Machined	20-16	0.52-1.5	**RM16M23-**	**RC16M23-**	1.8	3.2	K, J, T
	Stamped & Formed	18-16	0.8-1.5	**SM16M1-** (1) **SM16ML1-** (2)	**SC16M1-** (1) **SC16ML1-** (2)	3.0	No insulation grip	S31, S18, TK6
	Stamped & Formed	18-16	0.8-1.5	**SM16M11-** (1) **SM16ML11-** (2)	**SC16M11-** (1) **SC16ML11-** (2)	2.0-3.0	Insulation grip	S31, S18, TK6
	Machined	16-14	1.5-2.5	**RM14M50-**	**RC14M50-**	2.05	3.2	K, J, T
	Machined	16-14	1.5-2.5	**RM14M30-**	**RC14M30-**	2.28	3.2	K, J, T
	Stamped & Formed	14	2.0-2.5	**SM14M1-** (1) **SM14ML1-** (2)	**SC14M1-** (1) **SC14ML1-** (2)	3.2	No insulation grip	S31, S18, TK6
#12 Ø2.4 mm	Machined	22	0.13-0.4	**82911457NA**	**82911456A**	-	4.9	A, K
		20	0.5	**82911459NA**	**82911458A**			
		18	0.75-1.0	**82911461NA**	**82911460A**			
		16	1.5	**82911463NA**	**82911462A**			
		14	2.5	**82911465NA**	**82911464A**			
		12	4	**82911467NA**	**82911466A**			
#8 Ø3.6 mm	Machined	16	1.5	**82913601A**	**82913600A**	-	6.5	A
		14	2.5	**82913603A**	**82913602A**			
		12	4	**82913605A**	**82913604A**			
		10	6.0	**82913607A**	**82913606A**			
		8	10.0	**82913609A**	**82913608A**			

(1) contact reeled (2) loose contact
Exemple: **RM24W3K** - Size #20, Machined, AWG24 wire.

Crimp contacts

First Mate Last Break contacts

Contact size	Type	Wire size		Part number		Max wire Ø	Max insulator Ø	Color band		Plating available
		AWG	mm²	Male	Female			Front	Rear	
#16 Ø1.6 mm Longer male contact (+1mm)	Machined	30-28	0.05-0.08	RM28M1GE1□	-	0.55	1.1	-	Red	□ = K, J or T
		26-24	0.13-0.2	RM24M9GE1□		0.8	1.6	Red	Red	
		22-20	0.32-0.52	RM20M13GE1□		1.18	1.8	Black	Red	
				RM20M12GE1□			2.2	Blue	Red	
		20-16	0.52-1.5	RM16M23GE1□		1.8	3.2	-	Red	
		16-14	1.5-2.5	RM14M50GE1□		2.05	-	-	Red	
		16-14	1.5-2.5	RM14M80GE1□		2.28	-	-	Red	
#16 Ø1.6 mm Shorter female contact (-0.7mm)	Machined	30-28	0.05-0.08	-	RC28M1GE7□	0.55	1.1	-	Blue	□ = K, J or T
		26-24	0.13-0.2		RC24M9GE7□	0.8	1.6	Red	Blue	
		22-20	0.32-0.52		RC20M13GE7□	1.18	1.8	Black	Blue	
					RC20M12GE7□		2.2	Blue	Blue	
		20-16	0.52-1.5		RC16M23GE7□	1.8	3.2	-	Blue	
		16-14	1.5-2.5		RC14M50GE7□	2.05	-	-	Blue	
		16-14	1.5-2.5		RC14M80GE7□	2.28	-	-	Blue	

Exemple: RM16M8GE1K - Size #16, Machined, Longer male, AWG16 wire.

How to make FMLB / LMFB connection

Contact 1 / Contact 2	Standard male contact	Standard female contact	Longer male contact
Standard male contact		✓	
Standard female contact	✓		✓ FMLB
Shorter female contact	✓ LMFB		

First Mate Last Break contacts should be chosen only if the cavity is not marked with the earth symbol. For cavities marked with the earth symbol, standard contacts will fulfill the same role as a first mate, last break contact used in a standard cavity.

Ground symbol

#16 coaxial contacts

Coaxial contact range

We provide 2 types of coaxial contacts suitable for 50 or 75Ω, coaxial cable or twisted pair cable.

Monocrimp coaxial contact

• The monocrimp one-piece coaxial contacts offer high reliability plus the economic advantage of a 95% reduction in installation time over conventional assembly methods.

• This economy is achieved by simultaneously crimping both the inner conductor and outer braid or drain wire.

Multipiece crimp coaxial contact

• The inner conductor and outer braid is crimped individually.

• The thermoplastic insulating bushing in the outer body is designed to accept and permanently retain the inner contact.

• An outer ferrule is used to connect the braid to the outer contact and provide cable support to ensure against bending and vibration.

Suitable for Coaxial cable or Twisted cable

• For jacket diameter from 1.78 to 3.05mm
Inner conductor up to 2.44mm diameter

• For jacket diameter from 0.64 to 1.45mm
Inner conductor from AWG30 to AWG24

Contacts for coaxial cable summary

Contact type	Contact range		Contact part number with cable combination	Cabling notice
	Male contact	Female contact		
Multipiece	RMDXK10D28	RCDXK1D28	See page 176	See pages 180 & 181
Monocrimp	RMDX60xxD28	RCDX60xxD28		See page 182

Contacts for twisted pairs cable summary

Contact type	Contact range		Contact part number with cable combination	Cabling notice
	Male contact	Female contact		
Multipiece	RMDXK10D28 + YORK090	RCDXK1D28 + YORK090	See page 177	See page 178
Monocrimp	RMDX60xxD28	RCDX60xxD28		See page 179

PCB contacts

PCB contacts

PCB soldering

UTS range can be carried out with a wave soldering process, but not reflow soldering process.
All high temperature processes are prohibited.

Contact size	Type	Part number		Plating
		Male	Female	
#20 Ø1mm	Short version	RMW50A7K	RCW50A7K	K
	Long version	RMW5016K	RCW5016K	
#16 Ø1.6mm	Short version	RM20M12E8□	RC20M12E8□	□=K or T
	Long version	RM20M12E83□	RC20M12E83□	
			RC20M12E84□	

Exemple: **RM50A7K** - Size #20, Short version, male.

Nominal length (G)

Dimension of dipsolder contacts out of connector (contacts to be ordered separately).

UTS0

Connector size	Pin contact		Socket contact		
	RM20M12E8*□	RM20M12E83*□	RC20M12E8*□	RC20M12E83*□	RC20M12E84*□
10	4	9.1	3.3	8.5	12.1
12	4	9.1	3.3	8.5	12.1
14	4	9.1	3.3	8.5	12.1
16	4	9.1	3.3	8.5	12.1

UTS7

Connector size	Pin contact				Socket contact			
	RM20M 12E8*□	RM20M 12E83*□	RMW 50A7K	RMW 5016K	RC20M 12E8*□	RC20M 12E83*□	RCW 50A7K	RCW 5016K
10	4.1	9.2	9.51	10.41	4.65	8.5	2.4	3.04
12	4	9.2	9.51	10.41	3.3	8.5	2.4	3.04
14	4	9.2	9.51	10.41	3.3	8.5	2.4	3.04
16	4	9.2	9.51	10.41	3.3	8.5	2.4	3.04

* Plating indication: see plating table

Fibre optic contacts

Description

Size 16 Fibre optic contacts for TRIM TRIO® connectors

Size 16 Fibre optic contacts are optical contacts designed for the integration of optical links in all TRIM TRIO® cable connectors.

The Fibre optic contacts are designed to accommodate:

- Plastic Optical Fibre (POF)
  1 mm core and 2.2 mm jacket
- Plastic Clad Fibre (PCF)
  230µm core and 2.2 mm jacket

Typical features and benefits are:

- Socket contact is spring loaded to avoid any air gap between the two optical faces.
- Low insertion loss is provided by high precision pieces.
- Single jumpers, multiway harness and active device housings can be supplied regarding customer requirement.

Technical characteristics

Performance

- Fibre type: ..... POF

- Wave length: ..... 650 nm
- Optical insertion loss (typ.): ..... 2 dB max.
- Jacketed external diameter: 2.2mm
- Temperature range: ..... -25°C to +70°C
- Cable retention: 49N
- Mating cycles without cleaning: 50
- Max. mating cycles: 500

Construction

- Contact body: Copper alloy

Connector accommodation

Any TRIM TRIO® size 16 contact can be used in any contact position in any connector in the TRIM TRIO® size 16 interconnection system : UTP, UTS, UTG, UTO.

Fibre optic contacts

Ordering information

POF Contacts (Plastic Optical Fibre)
Male contact ..... RMPOF1000 **Female contact** RCPOF1000B

POF Contact (Plastic Optical Fibre)

STANDARD TOOLING KIT - P/N 80MS0004
The *standard tooling kit* is made of the part numbers below that can be ordered separately as well.

Part numbers	Descriptions
80WD0005	Stripping tool
80WD0025	Automatic stripping tool for Ø 0.5 mm, 0.6 mm, 0.7 mm & 3.8 mm
80WM0006	Ruler
80WP0005	Polishing plate
80WP0013	Non slip base (to hold the polishing plate)
80WP0014	Polishing disk (grain size 9µm)
80WP0018	Polishing tool
80WP0019	Polishing disk (grain size 30µm)
80WS0002	Crimping plier

SPECIFIC TOOLING LIST - can be ordered only separately

Part numbers	Descriptions
80WG0010	Needle
80WG0015	Capsule
80WG0016	Syringe
80WN0005	Dry air spray
80WN0006	Optical paper
80WN0012	Dropping bottle
80WN0008	Wiping solvent

uTS Series

UTS Series

Technical information

Tooling

Automatic crimping tools

Mecal is leader in manufacturing tooling for crimping terminals over a stripped wire.
Established in 1976, Mecal has become one of the world's leading companies dedicated to the design and manufacture of semi automatic production tools for strip fed, open barrel crimp terminals, serving the Automotive, Telecom and Datacomm industry.

The extreme environment interconnect specialist "from deep sea to deep space".
Souriau designs manufactures and markets high performance interconnect solutions for severe environments dedicated to the aerospace, defence, light and heavy industry markets.

Souriau has been working in partnership with Mecal for a good number of years. With sales offices located in all major industrial regions of the world, the combined strengths of both organisations has resulted in a truly global solution to all your production tooling needs.

Mini Applicator **Stripper** **Presses**

Mecal sales network:

www.mecal.net/eng/retevendita.php

Crimptooling table

Standard contacts

Contact size	Part number	Head	Handles
#20 1mm	RM RC 24W8 -	S20RCM	SHANDLES
	RM RC 20W8 -		
	RM RC 18W8 -		
	SM 24W8S- (1) SC 24W8S- (1)	S20SCM20	
	SM 24WL3S- (2) SC 24WL3S- (2)		
	SM SC 20W8S- (1) SM SC 20WL3S- (2)		
#16 1.6mm	RM RC 28M1-	S16RCM20	
	RM RC 24M9-		
	RM RC 20ML3-		
	RM RC 20ML2-		
	RM RC 16M23-	S16RCML6	
	RM RC 14M50-	S16RCML450	
	RM RC 14M80-	S16RCML4	
	SM SC 24M1- SM SC 24ML1-	S16SCM20	
	SM SC 20M1- SM SC 20ML1-		
	SM SC 16M1- SM SC 16ML1-	S16SCML1	
	SM SC 14M1- SM SC 14ML1-		
	SM SC 16ML11- SM SC 16ML11-	S16SCML11	

SHANDLES

51060210936

51060210924

(1) contact reeled (2) loose contact
Note: endurance of SHANDLES tool = 5 000 cycles.

Contact size	Part number	Tool with separate locator			Extraction tools
		Hand tool	Positioner + locator setting		
#12 2.4mm	8291 1457N- / 8291 1456-	M817	VGE10077A	1-2	5106020924
	8291 1459N- / 8291 1458-			2	
	8291 1461N- / 8291 1460-			2	
	8291 1463N- / 8291 1462-			3	
	8291 1465N- / 8291 1464-			3	
	8291 1467N- / 8291 1466-			4	
#8 3.6mm	8291 3601A / 8291 3600A	M817	VGE10078A	3	51060210936
	8291 3603A / 8291 3602A			3	
	8291 3605A / 8291 3604A			4	
	8291 3607A / 8291 3606A			5	
	8291 3609A / 8291 3608A			6/7	

Specific contacts

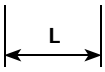
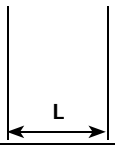
Contact size	Part number	Hand tools (SHANDLES) head	Tool with separate locator			Extraction tools
			Hand tool	Positioner + locator setting		
#16 Ø 1.6mm Longer RM contact	RM28M1GE1-	S16RCM20				RX2025GE1
	RM24M9GE1-					
	RM20ML3GE1-					
	RM16M23 GE1-	S16RCML6	M-HB60	M-HB6186	6/8	
	RM14M50 GE1-	S16RCML450	M817	UH25	3	
	RM14M80 GE1-	S16RCML4				
#16 Ø 1.6mm Shorter RC contact	RC28M1GE7-	S16RCM20	M-HB60	M-HB6164G	4/6	
	RC24M9GE7-				5/6	
	RC20ML3GE7- RC20ML2GE7-				5/7	
	RC16M23GE7-	S16RCML6			6/8	
	RC14M50GE7-	S16RCML450	M817	UH25	3	
	RC14M80GE7-	S16RCML4				

Coaxial contacts

See cabling notice chapter Appendices, pages 178 to 182.

Assembly instruction

Wire stripping crimp version

	Part number		Stripping length L (mm)
	Male	Female	
Machined contact	#16		
	RM28ML- / RM24M9- RM20ML3- / RM20ML2-	RC28ML- / RC24M9- RC20ML3- / RC20ML2-	4.8
	RM16M23- / RM14M50- RM14M30-	RC16M23- / RC14M50- RC14M30-	7.1
	#20		
	RM24W3- / RM20W3- RM18W3-	RC24W3- / RC20W3- RC18W3-	4.8
Stamped & formed	#16		
Without insulation support 	SM24ML- / SM24ML1- SM20ML- / SM20ML1	SC24ML- / SC24ML1- SC20ML- / SC20ML1-	4
	SM16ML1- / SM16ML11-	SC16ML1- / SC16ML11-	4.65
With insulation support 	SM16ML- / SM16ML1-	SC16ML- / SC16ML1-	6.35
	SM14ML- / SM14ML1-	SC16ML1- / SC16ML11-	6.35
Screw contacts	Power contacts #12		
	8291 1457- / 8291 1459- / 8291 1461- / 8291 1463- / 8291 1465- / 8291 1467-	8291 1456- / 8291 1458- / 8291 1460- / 8291 1462- / 8291 1464- / 8291 1466 -	7 to 8
	Power contacts #8		
	8291 3601- / 8291 3603- / 8291 3605- 8291 3607- / 8291 3609-	8291 3600- / 8291 3602- / 8291 3604- / 8291 3606- / 8291 3608-	6.5 to 7.5
	Contact delivered with connector		5.8

Wire stripping solder version

	Part number		Stripping length L (mm)
	Male	Female	
Machined contact	#16 & #20		5
			

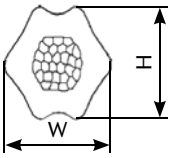
Crimping

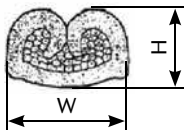
One of the key factors which affects the performance of a connector, is the way contacts are terminated. Crimped connections are nowadays seen as the best solution to ensure quality throughout the lifetime of the product. Here are some reasons why we recommend this method of termination for UTS connectors:

Advantages (Extract from the IEC 60352-2):
- Efficient processing of connections at each production level
- Processing by fully-automatic or semi- automatic crimping machines, or with hand operated tools
- No cold-soldered joints
- No degradation of the spring characteristic of female contacts by the soldering temperature
- No health risk from heavy metal and flux steam
- Preservation of conductor flexibility behind the crimped connection
- No burnt, discolored and overheated wire insulation
- Good connections with reproducible electrical and mechanical performances
- Easy production control.

To ensure that the crimp tooling is performing according tooriginal specifications, it is important to carry out regular checks. A common way to check the performance of tooling is with a simple pull test, ideally using a dedicated electric pull tester. Minimum recommended full forces are indicated in the tables below:

Machined contact





Stamped & Formed contact

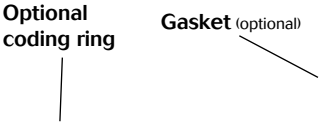
Active contact part	Contact type	Die location on heads	Wire section range	Section (mm^2)	Tensile straight test (mini)	Height (Mm) H (±0.075)	Width (Mm) W (±0.075)	Head's P/N
Machined contacts size 20	RM RC 24V8*	26/24	AWG 26	0.12 min	15 N	0.95	1.27	S20RCM
			AWG 24	0.25 max	32 N			
	RM RC 20V8*	22/20	AWG 22	0.32 min	40 N	1.26	1.78	
			AWG 20	0.50 max	60 N			
	RM RC 18V8*	20/18	AWG 20	0.50 max	60 N	1.35	1.86	
			AWG 18	0.82 max	90 N			
S & F contacts size 20	SM SC 24WL3TK6*	26/24	AWG 26	0.12 min	15 N	0.80	1.49	S20SCM20
			AWG 24	0.25 max	32 N			
	SM SC 20WL3TK6*	22/20	AWG 22	0.32 min	40 N	1.01	1.53	
			AWG 20	0.50 max	60 N			
Machined contacts size 16	RM RC 28MLK*	30/28	AWG 30	0.05 min	11 N	1.14	1.41	S16RCM20
			AWG 28	0.08 max	11 N			
	RM RC 24M9K*	26/24	AWG 26	0.12 min	15 N	1.15	1.41	
			AWG 24	0.25 max	32 N			
	RM RC 20ML3K*	22/20	AWG 22	0.32 min	40 N	1.26	1.76	
			AWG 20	0.50 max	60 N			
	RM RC 20ML2K*		AWG 22	0.32 min	40 N			
			AWG 20	0.50 max	60 N			
	RM RC 16M23K*	20	AWG 20	0.50 max	60 N	1.66	2.18	S16RCML6
		18	AWG 18	0.82 max	90 N	1.80	2.28	
		16	AWG 16	1.50 max	150 N	1.96	2.43	
	RM RC 14M80K*	16	AWG 16	1.50 min	150 N	2.10	2.68	S16RCML4
		14	AWG 14	2.50 min	230 N	2.30	2.78	
	RM RC 14M50K*	16	AWG 16	1.50 min	150 N	2.09	2.59	S16RCML450
		14	AWG 14	2.50 max	230 N	2.26	2.71	
S & F contacts size 16	SM SC 24ML1TK6*	26/24	AWG 26	0.12 min	15 N	0.84	1.50	S16SCM20
			AWG 24	0.25 max	32 N			
	SM SC 20ML1TK6*	22/20	AWG 22	0.32 min	40 N	1.02	1.54	
			AWG 20	0.50 max	60 N			
	SM SC 16ML11TK6*	18	AWG 18	0.82 min	90 N	1.32	2.09	S16SCML11
		16	AWG 16	1.50 max	150 N	1.36	2.10	
	SM SC 16ML1TK6*	18	AWG 18	0.82 min	90 N	1.49	2.02	S16SCML1
		16	AWG 16	1.50 max	150 N	1.7	2.05	
	SM SC14ML1TK6*	14	AWG 14	2.50 max	230 N	1.79	2.58	

(1): example of plating, for other plating see page 143

UTS 0 assembly (mounting suggestion)

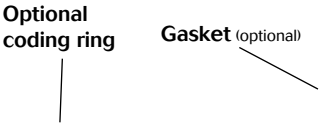
- Strip wires, crimp or solder contacts
- Insert contacts into connector cavities (insert manually or use tool RTM205 crimp contacts only)
- Place receptacle in the panel cut-out, with optional gasket
- Secure receptacle with screws (not supplied)

Front mounting : Crimp version

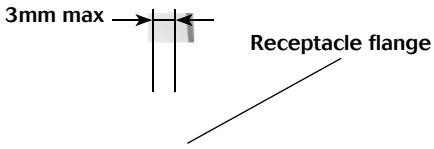


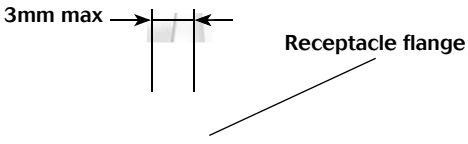
Rear mounting : Crimp version

Front mounting : Solder version



Rear mounting : Solder version





Panel

Panel thickness:
2.5mm max

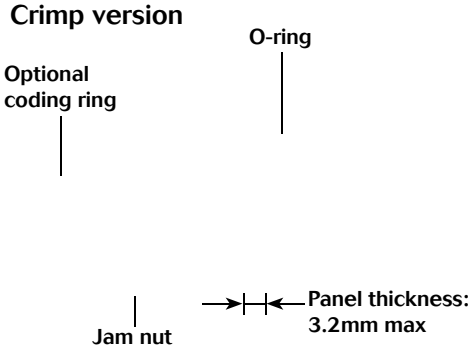
UTS 7 assembly (mounting suggestion)

- Strip wires, crimp or solder contacts
- Insert contacts into connector cavities (insert manually or use tool RTM205 crimp contacts only)
- Seat o-ring, place receptacle in the panel cut-out
- Tighten jam nut

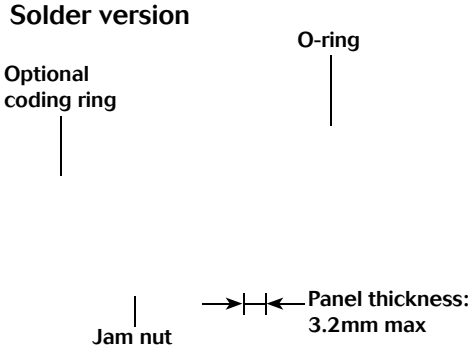
Shell size	Jam nut torque (Nm)	Tool tightening	Ø Wire	
			Standard version	Discrete wire sealing
8	1.5	19.05	3.2 mm max.	from 1.7 mm to 3.0 mm
10	3	22.25		
12	4	27.15		
14	5	30.19		
18	5	36.5		

Finally

Crimp version



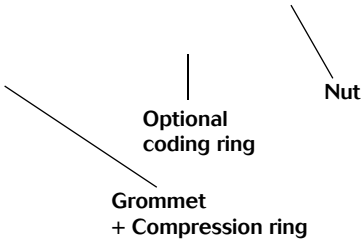
Solder version



UTS 6 GN / UTS 7 GN assembly

- Slide accessories on the cable (make sure to keep compression ring on the grommet)
- Strip wires and crimp contacts
- Insert first contact into the grommet (first contact in cavity A, use male contact to pierce the grommet, no tool is required), then insert the contact in the connector cavity A (insert manually or use tool RTM205)
- Place the grommet and compression ring on the insulator
- Insert the other contacts
- Tighten nut (recommended torque: see note)

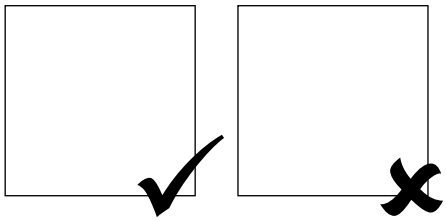
Shell size	Nut tightening torque (Nm)	Ø Wire
10	1	from 1.7 mm to 3.0 mm
12	1.5	
14	1.5	



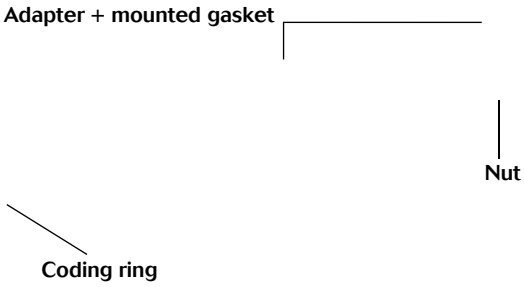
Assembly instruction

UTS 1 JC / UTS 6 JC assembly: Crimp version

• Slide accessories on the cable



Make sure the seal is positioned as shown.

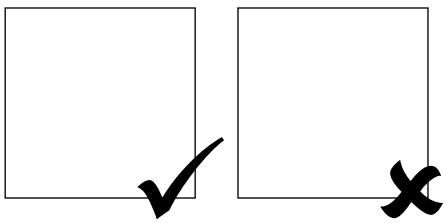


- Strip external cable jacket
- Strip wires and crimp contacts
- Insert contacts into connector cavities (insert manually or use tool RTM205)
- Tight adapter with plug, choose right seal (waste the other seal), tight nut with adapter (recommended torque values to be applied according to the table - right)
- Caution: only one of both delivered gasket should be used !

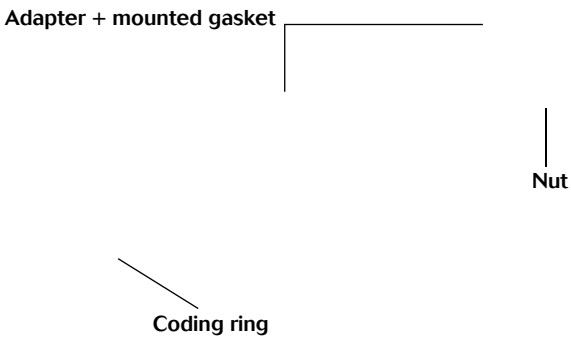
Shell size	Recommended jacket strip length (mm)		Adapter tightening torque (Nm)	Nut tightening torque (Nm)	Ø Cable range Standard seal	Ø Cable range Reducing seal	Ø Wire
	Male	Female					
10	21	29	1.5	2	2.5/8.0	1.5/5.0	3.2 mm max.
12	25	33	2	2.5	5.0/12.0	3.0/9.0	
14	29	36	3	2.5	7.0/14.0	5.0/12.0	
18	37	45	4	3.5	9.0/18.0	7.0/16.0	

UTS 6 JC assembly: Solder version

• Slide accessories on the cable



Make sure the seal is positioned as shown.

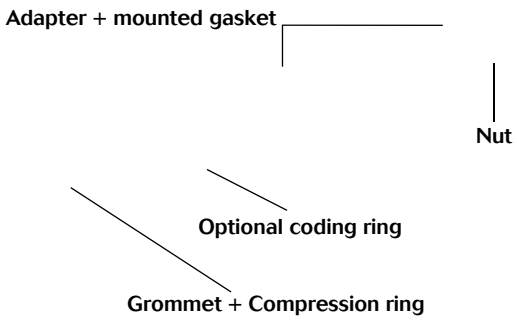


- Strip external cable jacket
- Strip wires and solder contacts
- Tight adapter with plug, choose right seal (waste the other seal), tight nut with adapter (recommended torque values to be applied according to the table - right)
- Caution: only one of both delivered gasket should be used !

Shell size	Recommended jacket strip length (mm)	Adapter tightening torque (Nm)	Nut tightening torque (Nm)	Ø Cable range Standard seal	Ø Cable range Reducing seal	Ø Wire
	Male					
8	17	1	0.75	2.5/6.5	1.5/5.0	3.2 mm max.
10	21	1.5	2	2.5/8.0	1.5/5.0	
12	25	2	2.5	5.0/12.0	3.0/9.0	
14	29	3	2.5	7.0/14.0	5.0/12.0	

UTS 1 GJC / UTS 6 GJC assembly

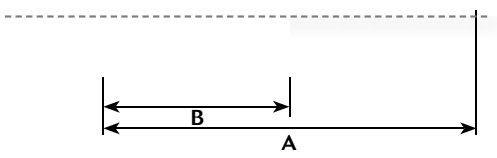
- Slide accessories on the cable (make sure to keep compression ring on the grommet)
- Strip external cable jacket
- Strip wires and crimp contacts
- Insert first contact into the grommet (first contact in cavity A, the contact pierces the grommet, no tool is required), then insert the contact in the connector cavity A (insert manually or use tool RTM205)
- Place the grommet and compression ring on the insulator
- Insert the other contacts
- Tight adapter with plug, choose right seal (waste the other seal), tight nut with adapter (recommended torque values to be applied according to the table - right).



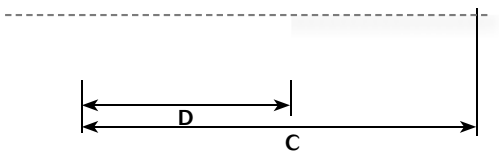
Shell size	Recommended jacket strip length (mm)		Adapter tightening torque (Nm)	Nut tightening torque (Nm)	Ø Cable range Standard seal	Ø Cable range Reducing seal	Ø Wire
	Male	Female					
10	21	29	1.5	2	2.5/8.0	1.5/5.0	from 1.7 mm to 3.0 mm
12	25	33	2	2.5	5.0/12.0	3.0/9.0	
14	29	36	3	2.5	7.0/14.0	5.0/12.0	

Mated connector length

UTS0 + UTS6



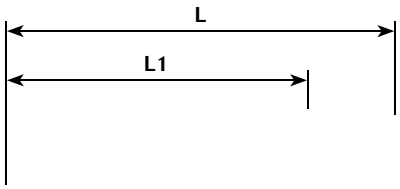
UTS7 + UTS6



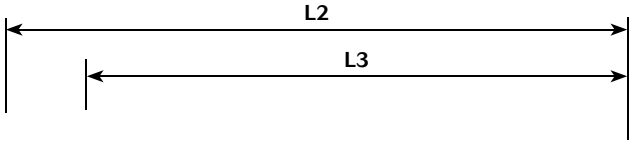
Shell size	UTS0 + UTS6 EN JC & CJC	UTS0 + UTS6 EN GN	UTS7 + UTS6 EN JC & CJC	UTS7 + UTS6 EN GN
	A max	B max	C max	D max
8	61.1	-	66.6	-
10	73.2	39.6	77.3	43.7
12	77.6	39.4	81.7	43.5
14	83.5	40	87.6	44.1
18	93.1	-	97.2	-

Note: all dimensions are in mm

Dimensions overmoulded harnesses



Shell size	UTS0				UTS7			
	L max	L1 max	L2 max	L3 max	L max	L1 max	L2 max	L3 max
8	42.8	36.8	80.7	57.2	46.8	36.8	85.8	57.2
10	55.8	50.3	98.6	92	60.5	50.3	102.7	92
12	57.1	51.4	99.3	93.7	61.4	51.4	106.4	93.7
14	62.5	56.3	100.3	94.6	67.6	56.3	104.8	94.6



Extraction tools

Contact size	Extractor
#20	RX20D44
#16	RX2025GE1
#12	51060210924
#8	51060210936

51060210936

51060210924

RX2025GE1

RX20D44

Extraction tools instruction for size 16

Special case with the tool RX2025GE1:

A - When setting up in the cell, keep firmly the tool by the hexagonal metallic part and insert tool in cavity.

B - Push the tool by the handle to extract the contact.

Extraction:

Place the tool into the cavity from front face of the connector, push on the handle, then remove the contact..

Rated current & working voltage

Current carrying capacity

The current carrying capacity of a connector is limited by the thermal properties of materials used in it's construction. The amount of current that can be handled depends on the size of cable used, the ambient temperature and the heat that is generated inside the connector. Part 3 of the IEC 60512 standard determines through a derating curve, the maximum current permissible, which varies from one layout to another (Fig.1 & Fig.2). Wire size plays an important role as well, since they help to dissipate heat and avoid overheating (Fig.1 & Fig.3).

Please note that the curve should be adjusted when dealing with potential hot spots, which can occur as a result of unequal loading of current across a number of contacts. As a general rule, it is best to avoid locating power handling contacts in the middle of the connector; try to locate them towards the edge where heat can be dissipated more effectively. Eventually you should find a level which represents the permissible operating range:

Fig.1: UTS 12-4 – 1.5mm² wires

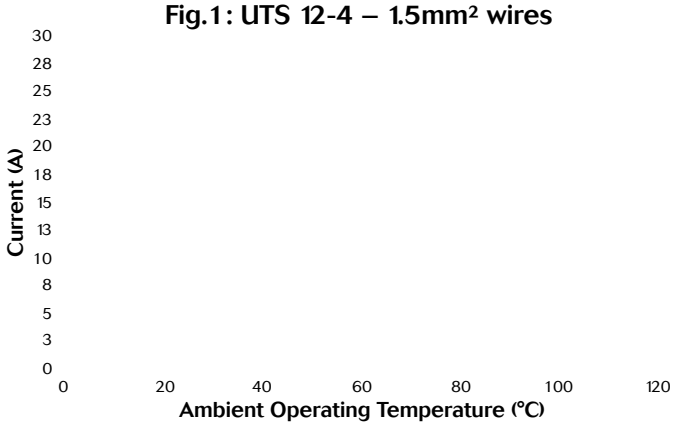


Fig.2: UTS 12-8 – 1.5mm² wires

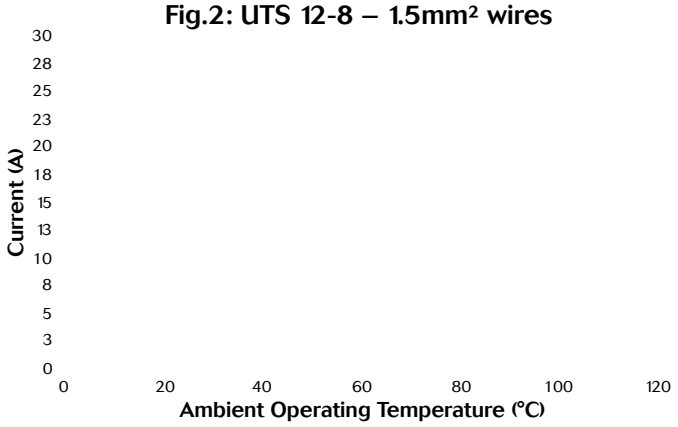
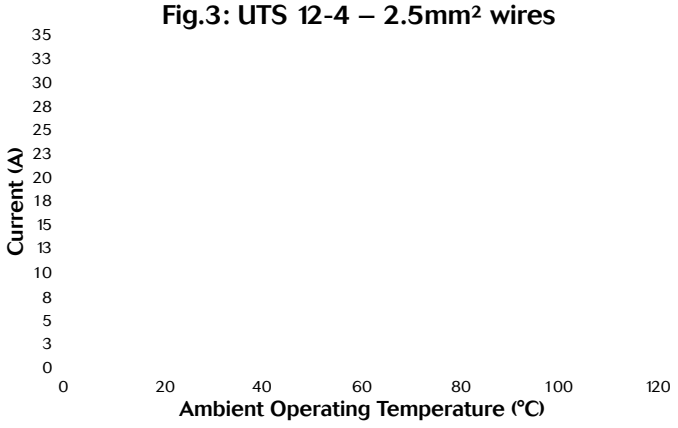
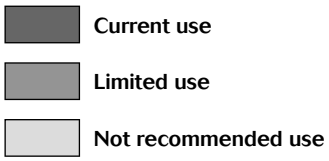


Fig.3: UTS 12-4 – 2.5mm² wires





The **rated current** is defined as uninterrupted continuous current that a connector can take when all contacts are energized simultaneously without exceeding the maximum limit of temperature. The earth contact is never loaded.

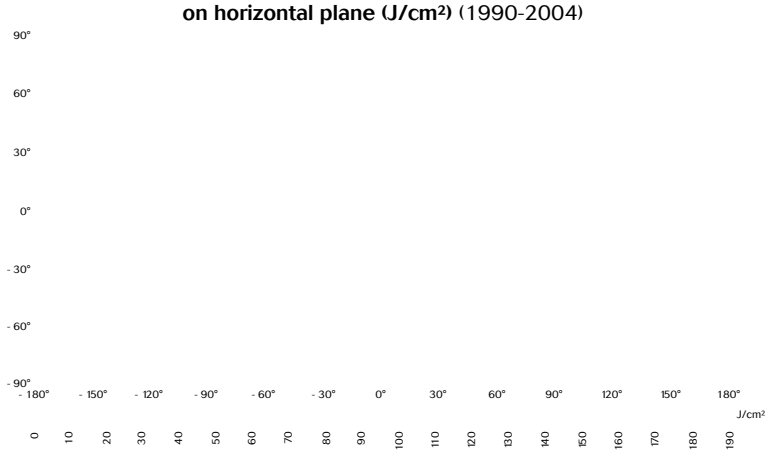
UV resistance

Solar radiation affects all materials, but plastics can be susceptible to extreme degradation over time.
The choice of materials for the UTS series was therefore a critical consideration.

All over the world we are not exposed to the same amount of energy given by the sun. The chart shown here clearly illustrates this.

So we performed test according to the ISO 4892-2 and simulated 5 years exposure to outdoor environments (temperature, humidity, etc...)
After this period there was no significant colour variation, no crazing, no cracking and no major variation of mechanical properties.

Yearly mean of daily irradiation in UV (280-400 nm) on horizontal plane (J/cm²) (1990-2004)



Underwriter Laboratories

There are two main standards for industrial connectors: UL94 & UL1977

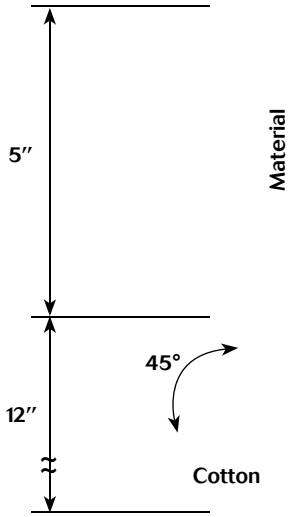
UL94

This standard is dedicated to plastics flammability. It characterises how the material burns in various orientation and thicknesses.

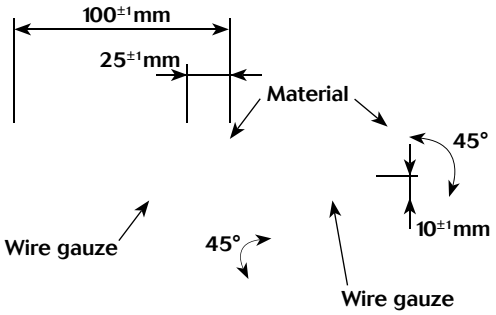
The UTS series has been rated at **V-0** & **HB**.

Procedure: A specimen is supported in a vertical or horizontal position and a flame is applied to the bottom of the specimen. The flame is applied for ten seconds and then removed until flaming stops, at which time the flame is reapplied for another ten seconds and then removed. Two sets of five specimens are tested. The two sets are conditioned under different conditions.

V-0 Vertical burning:
- Specimens must not burn with flaming combustion for more than 10 seconds after either test flame application.
- Total flaming combustion time must not exceed 50 seconds for each set of 5 specimens.
- Specimens must not burn with flaming or glowing combustion up to the specimen holding clamp.
- Specimens must not drip flaming particles that ignite the cotton.
- No specimen can have glowing combustion remain for longer than 30 seconds after removal of the test flame.



HB Horizontal burning:
- A material classed HB shall not have a burning rate exceeding 40 mm per minute over a 75 mm span for specimens having a thickness of 3.0 to 13 mm.
- A material classed HB shall not have a burning rate exceeding 75 mm per minute over a 75 mm span for specimens having a thickness less than 3.0 mm.
- A material classed HB shall cease to burn before the 100 mm reference mark.

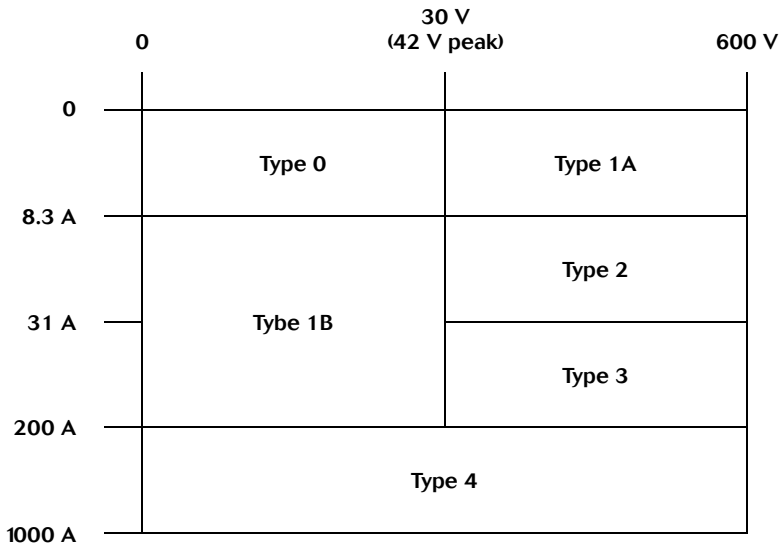


Underwriter Laboratories

UL1977

There are several standards which deal with plug and receptacle. Each of them is only for a small area of applications. It could be telecommunication, Etc. The UL 1977 covers single and multipole connectors intended for factory assembly.

Requirements apply to devices in taking into account intensity and voltage. There a categories as follows:



According to above table, the level of performance that has to be reached could be different. Most of them are explained in the following page.

Insulating materials:

Material uses for electrical insulation, as a minimum, have to comply with the characteristics shown below:

- **Minimum ratings for polymeric materials**

Type	Flame rating	Relative thermal index (RTI) Electrical/mechanical w/o impact */**
0	-	50/50
1A	HB	50/50
1B	HB	50/50
2	HB	50/50
3	HB	50/50
4	HB	50/50

* The RTI of the material shall not be lower than the temperature measured during the Temperature Test.
** For a thickness less than that for which a value has been established, the RTI of the minimum thickness with an established value shall be used.

Assembly:

Connector has to be keyed to prevent any mismating that can damage the machine or hurt the user. In the same way, plugs and sockets have to be equipped to protect persons against contact with live parts.
Finally the identified grounding contact shall be located so that the corresponding electrical continuity has to be completed before any other contact.

Underwriter Laboratories

UL1977

Spacing:

For a 250V max connector, distance through air or over material shall be 1.2mm whereas from 250V to 600V connector the spacing is 3.2 minimum. These distances have to be taken between uninsulated live parts as shown in the matrix below:

• **Applicability of spacing requirements**

Type	Uninsulated live part - uninsulated live part of opposite polarity	Uninsulated live part - uninsulated grounded metal part	Uninsulated live part - exposed dead metal part
0	No	No	No
1A	Yes	Yes	Yes
1B	Yes	Yes	No
2	Yes	Yes	Yes
3	Yes	Yes	Yes
4	Yes	Yes	Yes

An alternative way to determine voltage rating is with the Dielectric-Withstand test. If during one minute there is no arc-over or breakdown the rated voltage is given as given below:

a) 500 volts for a type 1B device
b) 1000 volts plus twice rated voltage for types 1A, 2, 3 and 4 devices.

Marking:

A device shall be legibly marked with the manufacturer's trade name, trade mark, or other descriptive marking by which the organisation responsible for the product may be identified. (Exception: If the device is too small, or where the legibility would be difficult to attain, the manufacturer's name, trademark, or other descriptive marking may appear on the smallest unit container or carton)

The following shall be marked on the device or on the smallest unit container or carton or on a stuffer sheet in the smallest unit container or carton:

a) The catalogue number or an equivalent designation
b) The electrical rating in both volts and amperes, if assigned
c) Whether ac or dc, if restricted
d) Flammability class, if identified

Example - Marking for the arrangement 10-3: **10A 500V UL94 V-0**

IEC 61984

The norm is dedicated to connectors with rated voltage above 50V and up to 1000V and rated currents up to 125A per contact. But depending of your application connectors should be compliant with another standard. This has to be double checked with the customer.

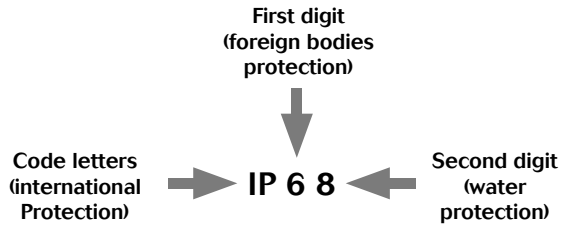
There are lot of constructional requirements and performances specified in that standard. Most of them are illustrated in greater details hereafter.

Provisions for earthing:

The UTS connector is intended to be used on Class II systems. Even if the purpose of our connector is not to interrupt current, we often see a need to add a protective earth contact. Then this one shall be a "First mate, last break" style. Critically, among all of the normal assumptions we make in designing a connector, this contact has to be considered as a live part and must be protected against electric shock by double or reinforced insulation.

IP Code:

IP is a coding system defined by the IEC 60529 to indicate the degrees of protection provided by an enclosure. The aim of this is to give information regarding the accessibility of live parts against ingress of water and other foreign bodies.



1st digit	Degree of protection
0	No protection against accidental contact. No protection against solid foreign bodies.
1	Protection against contacts with any large area by hand and against large solid foreign bodies with a diameter bigger than 50 mm.
2	Protection against contacts with the fingers. Protection against solid foreign bodies with a diameter bigger than 12 mm.
3	Protection against tools, wires or similar objects with a diameter bigger than 2.5 mm. Protection against small solid bodies with a diameter bigger than 2.5 mm.
4	As 3 however diameter is bigger than 1 mm.
5	Full protection against contacts. Protection against interior injurious dust deposits.
6	Total protection against contacts. Protection against penetration of dust.

2nd digit	Degree of protection
0	No protection against water.
1	Drip-proof. Protection against vertical water drips.
2	Drip-proof. Protection against water drips up to a 15° angle.
3	Spray-proof. Protection against diagonal water drips up to a 60° angle.
4	Splash-proof. Protection against splashed water from all directions.
5	Hose-proof. Protection against water (out of a nozzle) from all directions.
6	Protection against temporary flooding.
7	Protection against temporary immersions.
8	Protection against water pressure. Pressure to be specified by supplier.

UTS offers high sealing performance IP68 / 69K… Even in dynamic situations.

In addition to the IEC 60529 we conjointly use the DIN 40050 part 9 which are dedicated to road vehicles. The main differences are:

- **First digit:** 5 replaced by 5K, 6 by 6K. In the DIN the tested equipment is not depressurized as it is in the IEC.
- **Second digit:** 5K and 6K has been added and are equivalent respectively to 5 and 6 but with higher pressure. 9K which represents the High pressure cleaning.

9K	High pressure hose-proof. Protection against high pressure water (out of a nozzle) from all directions.

IEC 61984

Overvoltage

UTS connectors are qualified to be used on systems rated at Overvoltage category III

Per the IEC 60664-1 (formely VDE 0110) each category is linked to the end application and where the device will be implemented:

- **Category IV** (primary overcurrent protection equipment):
Origin of the installation

- **Category III** (Any fixed installation with a permanent connection)
Fixed installation and equipment and for cases where the reliability and the availability is subject to special requirements

- **Category II** (Domestic applicances):
Energy consuming equipment to be supplied from the fixed installation

- **Category I** (Protected electronic circuit):
For connection to circuit in which measures are taken to limit transient overvoltage.

Pollution degree

Per the IEC 60664-1 (formerly VDE 0110) the environment affects the performance of the insulation. Particles can build a bridge between two metal parts. As a rule dust mixed with water can be conductive and more generally speaking metal dust is conductive. Finally, the standard defines 4 levels of pollution:

- **Degree 1** (Air conditioned dry room):
No pollution or only dry, non conductive pollution occurs. The pollution has no influence.

- **Degree 2** (Personal computer in a residential area):
Only non conductive pollution occurs except that occasionally a temporary conductivity caused by condensation is to be expected.

- **Degree 3** (Machine tools):
Conductive pollution occurs or dry non-conductive pollution occurs which becomes conductive due to condensation which is to be expected.

- **Degree 4** (Equipments on roof, locomotives):
Continuous conductivity occurs due to conductive dust, rain or other wet conditions.

Finally, the harsher the environment is, the longer clearance and creepage distances should be. Nonetheless, according the IEC 61984, enclosure rated at IP54 or higher can be dimensioned for a lower pollution degree. This applies to mated connectors disengaged for test and maintenance.

Marking

The marking should give enough details to the user to know what the main characteristics are and without going deep in technical documentation. Below examples identify the suitability of the connector:

- **Example 1:**
Marking of a connector with rated current 16A, rated voltage 400V, rated impulse voltage 6kV and pollution degree 3, 2 and 1 for use in any system, preferably unearthed or delta-earthed systems:

16A 400V 6kV 3

- **Example 2:**
Marking of a connector with rated current 16A, rated insulation voltages line-to-earth 250V, line-to-line 400V, rated impulse voltage 4kV and pollution degree 3, 2 and 1 for use in earthed systems:

16A 250V 400V 4kV 3

What is NEMA rating ?

• NEMA ratings vs IP ratings

Whereas IP ratings only consider protection against ingress of foreign bodies - first digit - and ingress of water (second digit), NEMA ratings consider these but also verify protection from external ice, corrosive materials, oil immersion, etc.

The correlation between NEMA & IP being limited only to dust and water, we can state that a NEMA type is *equivalent to* an IP rating but it is not possible to say the contrary.

Below a list of some NEMA standards:

Enclosure rating	IP20	IP22	IP55	IP64	IP65	IP66	IP67
Type 1	•						
Type 3				•			
Type 3R		•					
Type 3S				•			
Type 4						•	
Type 4X						•	
Type 6							•
Type 12			•				
Type 13					•		

• indicates compliance

Type 6 rating can be either Type 6 or Type 6P - please see below:

6	IP67	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment, falling dirt, hose-directed water, the entry of water during occasional temporary submersion at a limited depth and damage from external ice formation.
6P	IP67	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment, falling dirt, hose-directed water, the entry of water during prolonged submersion at a limited depth and damage from external ice formation.

Ethernet for the layman

In order to explain basic Ethernet theory, we can use a functional comparison to a busy city with highways, buildings, and cars. To illustrate this, the table below provides correlation between the different components/pieces/links that encompass Ethernet network connectivity, and the larger scale infrastructure of a metropolitan city.

- **City:** The network itself
- **Buildings:** End equipment, PC, server, etc.
- **Roads:** Ethernet cabling
- **Cars:** Data packets, datagrams, bits, bytes, etc.
- **Tolls:** Firewalls
- **Bridges:** Connectors
- **Traffic laws:** Protocol/communication specifications

Ethernet Basics

Ethernet is a widely used communications protocol that is used to transmit data packets (datagrams) between network devices. Imagine a highway in a large metropolitan area six lanes wide at rush hour. The vehicles on the highway need rules to follow so that they get to their destination without crashing into each other. In an Ethernet network link, there could be 100 million bits of information transmitted in one second. In the Ethernet standard, there exist rules to govern packet structure, transmission requirements, error correction, communication with end equipment, etc.

Examining the differences between 100Mhz, 100 Base TX, Cat5e; what does it all mean?

When discussing connectors and Ethernet, there are a few key details to be aware of:

- 100Mhz is a measurement of Frequency for the signal
  - Comparable to the Speed Limit of a highway
- 100BaseTX (or Fast Ethernet) is an Ethernet link standard and identifies available link bandwidth The bandwidth is measured in units of MBits/S (megabits per second)
  - Comparable to the number of cars that pass a point in one second
- Cat5e is an EIA/TIA standard for performance and physical characteristics for cables and connectors
  - Comparable to performance specifications of the car and highway

In connectors and cables, Fast Ethernet uses 2 pairs, one for transmit, one for receive. This, way data traffic can flow in both directions simultaneously.

Ethernet for the layman

Souriau offering:

Standard solutions.

UTS Hi seal size 8, 4 contacts

1 (Pair 1)	A
2 (Pair 1)	C
3 (Pair 2)	B
4 (Pair 2)	D

8E4/8D4
4 Ø 1 (#20)

UTS size 10, 6 contacts

1 (Pair 1)	A
2 (Pair 1)	B
3 (Pair 2)	E
4 (Pair 2)	D

106/10E6/10D6
6 Ø 1 (#20)

Shielding continuity done in cavity C&F.
Note: Shielding can be replaced by DC power.

UTS size 12, 10 contacts

1 (Pair 1)	C
2 (Pair 1)	B
3 (Pair 2)	G
4 (Pair 2)	H

12 10/12E10/12D10
10 Ø 1 (#20)

What about using coax contacts ?

Ethernet twisted pairs carry a symmetrical (balanced) signal. Once terminated into a coax contact, the inner core will be protected by a shield - but not the outer contact. Because of EMI issues, the signal will no longer be balanced. Conclusion - it does not work and is not recommended.

What about using Quadrax contacts ?

The Quadrax contact is used in railway applications because of the use of quad cable. In this specific market, the standard Ethernet twisted pairs wires cannot be offered, they are too thin and often solid (not stranded).

In the rest of industry, UTP (Unshielded Twisted Pairs) cables are widely used. The Quadrax contact is not designed to terminate them. And thus, are not advised for industrial applications.

Conclusion

To carry 100Mb/s data signal, 100BaseTX or Fast Ethernet recommends the use of Cat5e connectors as well as Cat5e cable with the support of a 100MHz signal. Nevertheless, a 100Mb/s signal can be transmitted in certain conditions (short distance, only one connector, lower frequency but a different code) thru many other connection materials - not necessarily Cat5e rated.

uTS Series

UTS Series

Appendices

#16 coaxial contacts

Coaxial cable - Contact monocrimp and multipiece

Cable type	Impe-dance	Contact type	Ø over jacket		Ø over dielectric		Inner cond size	Ø outer braid		Male contact kit for coaxial cable	Female contact kit for coaxial cable
			inch	mm	inch	mm	Ext. Ø mm	inch	mm		
RG161/U	75	Multi piece	0.09	2.29	0.057	1.45				RMDXK10D28	RCDXK1D28
RG179A/U	75		0.105	2.67	0.063	1.6	0.3	0.084	2.13 max		
RG179B/U	75		0.105	2.67	0.063	1.6	0.3	0.084	2.13 max		
RG187/U	75		0.11	2.79 max	0.06	1.52	0.3				
RG188/U	50		0.11	2.79 max	0.06	1.52	0.51	0.078	1.98 max		
RG174/U	50		0.11	2.92	0.06	1.52	0.48	0.088	2.24 max		
AMPHENOL 21-598	50		0.105	2.67	0.06	1.52	0.48				
RG196/U	50		0.08	2.03 max	0.034	0.086	0.3				
RG178A/U	50		0.075	1.91	0.034	0.86	0.3	0.054	1.37 max		
RG/188A/U	50	Mono crimp	0.110	2.79	0.06	1.52	0.51	0.078	1.98 max	RMDX6036D28	RCDX6036D28
KX21TVT (europe) RG178 B/U	50		0.075	1.91	0.034	0.86	0.3	0.054	1.37 max	RMDX6034D28	RCDX6034D28
RG178 / BU	50		0.075	1.91	0.034	0.86	0.3	0.054	1.37 max	RMDX6050D28	RCDX6016D28
RG174/U	50		0.115	2.92	0.06	1.52	0.48	0.088	2.24 max	RMDX6032D28	RCDX6032D28
RG188A/U	50		0.11	2.79	0.06	1.52	0.51	0.078	1.98 max	RMDX6036D28	RCDX6036D28
RG316/U	50		0.107	2.72	0.6	1.52	0.51	0.078	2.05 max	RMDX6036D28	RCDX6036D28
raychem 5024A3111	50		0.12	3.05	0.083	2.11	0.64	0.097	2.46	RMDX6052D28	RCDX6052D28
raychem 5026e1614	50		0.083	2.11	0.05	1.27	0.48	0.067	1.7	RMDX6036D28	RCDX6036D28
surprenant pn 8134	-	Multi piece	0.1	2.54	0.058	1.47	0.3			RMDXK10D28	RCDXK1D28
PRD PN 247AS-C1123-001	-	Mono crimp	0.103	2.62	0.06	1.52	0.51	0.078	1.98	RMDX6018D28	RCDX6018D28
PRD PN 247AS-C1251	-		0.092	2.34	0.05	1.27	0.64	0.067	1.7	RMDX6018D28	RCDX6018D28
JUDD C15013010902	-		0.087	2.13	0.05	1.27	0.48	0.066	1.67	RMDX6036D28	RCDX6036D28
CDC PIN22939200	-		0.09	2.29	0.048	1.22	0.3	0.064	1.63	RMDX6046D28	RCDX6016D28
CDC PIN22939200	-		0.09	2.29	0.048	1.22	0.3	0.064	1.63	RMDX6050D28	RCDX6016D28
CDC PIN245670000	-		0.104	2.64	0.067	1.7	0.3	0.083	2.11	RMDX6050D28	RCDX6016D28
ampex	-		0.114	2.9	0.075	1.91	0.38	0.09	1.29	RMDX6032D28	RCDX6032D28
TI PN 920580	-		0.7	1.78	0.038	0.96	0.48	0.054	1.37	RMDX6024D28	RCDX6024D28
Honeywell PN 58000062	-		0.12	3.05	0.077	1.96	0.41 solid	0.096	2.44	RMDX6026D28	RCDX6026D28
-	-		0.104	2.64	0.067	1.7	0.3		2.11	RMDX6050D28	-
-	-		0.09	2.29	0.048	1.22	0.3		1.63	RMDX6050D28	-
-	-		0.114	2.9	0.075	1.91	0.38		1.29	RMDX6032D28	RCDX6032D28
-	-		0.07	1.78	0.038	0.96	0.48		1.37	RMDX6024D28	RCDX6024D28
-	-		0.12	3.05	0.077	1.96	0.41		2.44	RMDX6026D28	RCDX6026D28

Twisted cable - Contact monocrimp and multipiece

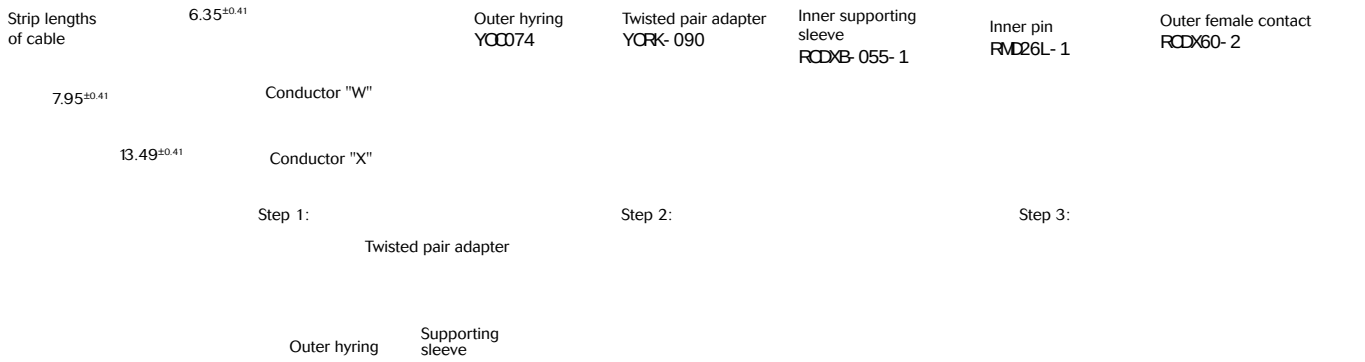
Cable type	Contact type	Inner AWG cond	Ø over jacket (single wire)		Inner cond size		Ø outer braid		Male contact kit for coaxial cable	Female contact kit for coaxial cable
			inch	mm	Stranded definition	Ext. Ø mm	inch	mm		
2#24 stranded mil w 16878 type B	Multi piece	24	0.049	1.24 max	7/.008		-	-	RMDXK10D28	RCDXK1D28
2 #24 solid mil-w-76 type LW		24	0.047	1.12 max	1/.0201		-	-	RMDXK10D28	RCDXK1D28
2 #26 stranded mil w 76 type LW or mil w16878 type b&e		26	0.043	1.09 max	7/.0063	0.16	-	-	RMDXK10D28	RCDXK1D28
2 #28 solid mil-w-81822/3		28	0.028	0.71 max			-	-	RMDXK10D28	RCDXK1D28
TWISTED PAIR 1/.201 SOLID MIL w 76 TYPE lw or MIL W 16878		26	0.044	1.12 max	1/.0201	0.511	-	-	RMDXK10D28	RCDXK1D28
twisted pair solid mil w 81822/3		28	0.028	0.71 max	1/.0126	0.32	-	-	RMDXK10D28	RCDXK1D28
#28 7/.0036 per Hitachi spec ec-711 (13-2820)	Mono crimp	-	0.046	1.17	7/.0036	-	-	-	RMDX6031D28 + YCRX090	RCDX6031D28 + YCRX090
20218201		-	0.028	0.71	-	-	-	-	RMDX6031D28 + YCRX090	RCDX6031D28 + YCRX090
#30 solid		-	0.025	0.64	-	-	-	-	RMDX6015D28 + YCRX090	RCDX6015D28 + YCRX090
#26 7/.0063		26	0.028	0.71	7/.063	0.16	-	-	RMDX6031D28 + YCRX090	RCDX6031D28 + YCRX090
#26 19/.004		26	0.049	1.24	19/.004	-	-	-	RMDX6019D28 + YCRX090	RCDX6019D28 + YCRX090
#24 7/.008		24	0.049	1.24	7/.008	-	-	-	RMDX6019D28 + YCRX090	RCDX6019D28 + YCRX090
#24 19/.005		24	0.057	1.45	19/.005	-	-	-	RMDX6019D28 + YCRX090	RCDX6019D28 + YCRX090
-		26	-	1.25	-	-	-	19x0.1	RMDX6019D28 + YCRX090	RCDX6019D28 + YCRX090
-		24	-	1.25	-	-	-	7x0.2	RMDX6019D28 + YCRX090	RCDX6019D28 + YCRX090
-		24	-	1.45	-	-	-	19x0.13	RMDX6019D28 + YCRX090	RCDX6019D28 + YCRX090
-		26	-	0.7	-	-	-	7x0.16	RMDX6031D28 + YCRX090	RCDX6031D28 + YCRX090

#16 coaxial contacts

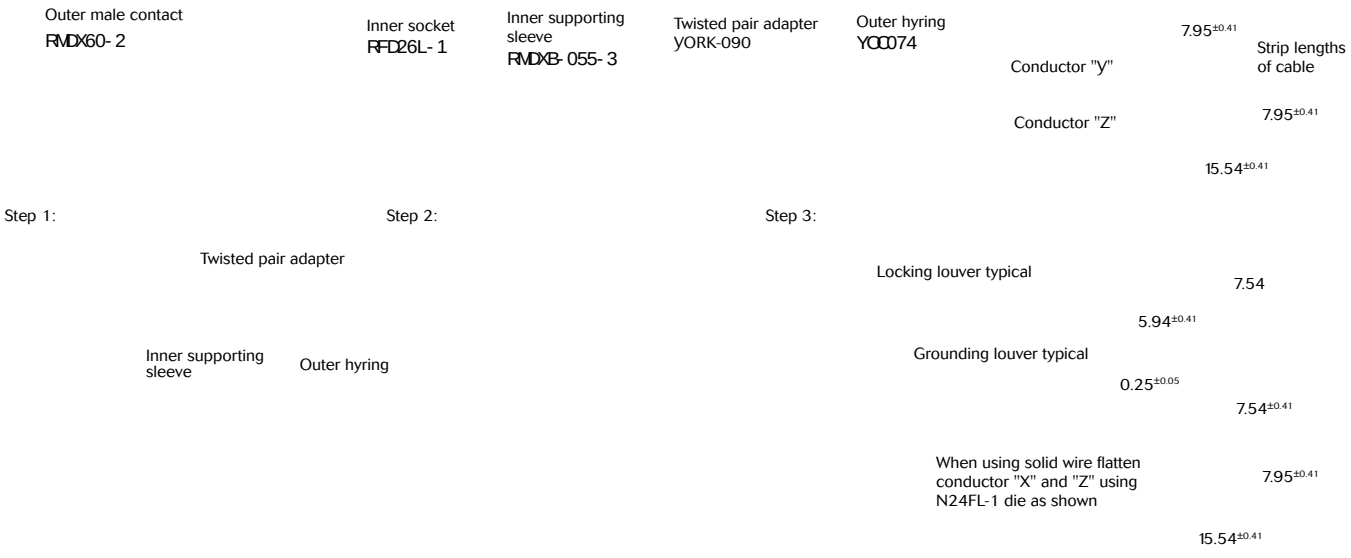
Twisted pair cable multipiece contact cabling

Cable reference	Contact type	Male contact	Female contact	Crimp tool	Die set	Stop bushing	Cable strip length			Inner conductor crimp		Braid crimp	
							A	B	C	g dim	t dim	g dim	t dim
2#24 stranded mil w 16878 type B 2 #24 solid mil-w-76 type LW 2 #26 stranded mil w 76 type LW or mil w16878 type B & E 2 #28 solid mil-w-81822/3 twisted pair 1/.201 solid mil w 76 type LW or mil w 16878 twisted pair solid mil w 81822/3	Multi piece	RMDXK10D28	RCDXK10D28	M10S1J	-	-	See assembly notice						

Female contact



Male contact



Note : all dimensions are in mm

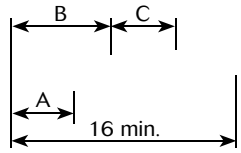
Twisted pair cable monocrimp contact cabling

Cable reference	Contact type	Male contact	Female contact	Crimp tool	Die set	Stop bushing	Cable strip length			Inner conductor crimp		Braid crimp	
							A	B	C	g dim	t dim	g dim	t dim
#28 7/.0036 per Hitachi spec ec-711 (13-2820)	Mono crimp	RMDX6031D28 + YORX090	RCDX6031D28 + YORX090	M10S1J	S80	SL105	4.7	6.1	4.32	1.30 to 1.12	1.4 to 1.22	2.97 to 2.84	3.07 to 2.9
20218204					S80	SL105	3.94	6.1	3.16	1.30 to 1.17	1.4 to 1.22	2.97 to 2.84	3.07 to 2.79
#30 solid					S83	SL105	4.7	6.1	4.06	1.22 to 1.12	1.35 to 1.22	2.97 to 2.84	3.12 to 2.95
#26 7/.0063					S80	SL105	4.7	6.1	4.06	1.30 to 1.17	1.4 to 1.22	2.97 to 2.84	3.07 to 2.9
#26 19/.004					M10SC8 ASSY TOOL DIE SET STOP BUSHING M10S1J TOOL		4.7	6.1	4.06	1.22 to 1.17	1.35 to 1.22	2.84 to 2.79	3.12 to 2.97
#24 7/.008							4.7	6.1	4.06	1.22 to 1.17	1.35 to 1.22	2.84 to 2.79	3.12 to 2.97
#24 19/.005							4.7	6.1	4.06	1.22 to 1.17	1.35 to 1.22	2.84 to 2.79	3.12 to 2.97
AWG26 (19x0.1)					M10SC8 crimping kit		4.7	6	4				
AWG24 (7x0.2)													
AWG24 (19x0.13)													
AWG26 (7x0.16)					S80	SL150							

- Select appropriate monocrimp coax twisted pair contact and cable combination.
- Select appropriate crimp tooling (hand tool, S-die set, stop bushing).
- Strip the twisted pair cable to the designated wire strip lengths.
- Insert the stripped cable into the contact. One cable is to be inserted into the inside diameter of hyring, and pushed forwaerd into the inner contact. The second cable is to be inserted between the outside diameter of hyring and the inside diameter of the outer contact body.
- Crimp the contact.

See cable strip lengths

Cable strip length



RMDX60
Male coax contact

RCDX60
Female coax contact

G

G

Braid crimp (G) to be measured with die set fully closed

Inner conductor crimp (G) to be measured with die set fully closed

Note : all dimensions are in mm

#16 coaxial contacts

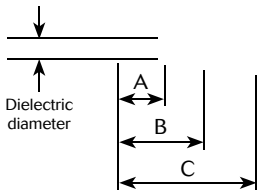
Multipiece male contact with coax cable

Cable reference	Contact	Hyring complementary compoments	Outer contact crimp tool		Inner contact crimp tool		Cable strip length		
			Crimp tool M10S1J		Crimp tool M10S1J				
			Die set	Stop bushing	Die set	Stop bushing	A	B	C
RG161U	Mal e: RMDXK10D28	YOC074	S221	SL471	S23D2	SL46D2	4.37	7.95	15.88
RG179							4.37	7.95	15.88
RG187U							4.37	7.95	15.88
RG188/ U					S26D2		4.37	7.95	15.88
RG174/ U							4.37	7.95	15.88
RG178A/ U		YOC074 + RMDXB0553			S23D2		7.54	9.12	17.53
RG196U							7.54	9.12	17.53
AMPHENOL 21-598		YOC074			-		4.37	7.95	15.88
surprenant pn 8134					-		4.37	7.95	15.88

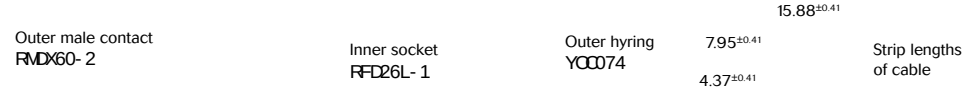
Multipiece kit details

RMDXK10D28 includes	RMDX602D28	Outer contact
	RFD26L1D28	Inner contact
	YOC074	Outer hyring
	RMDXB0553	Inner supporting sleeve

Cable stip length



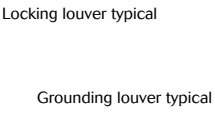
Contact assembly with dielectric diameter over 1.4mm - without inner supporting sleeve



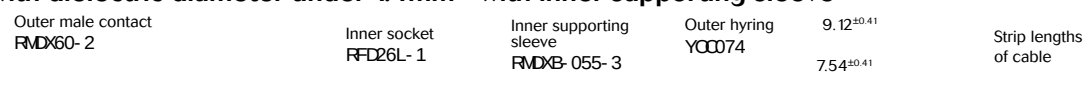
Step 1:
- Assemble outer hyring onto cable
- Assemble inner socket to inner conductor and crimp

Step 2:
- Insert the assembly into the outer male contact until the inner socket snaps into place
- The cable braid (shield) should now cover the barrel of the outer male contact as shown

Step 3:
- Slide outer hyring forward against spring and crimp in place as shown



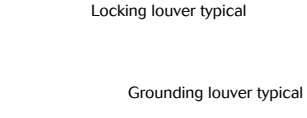
Contact assembly with dielectric diameter under 1.4mm - with inner supporting sleeve



Step 1:
- Assemble outer hyring onto cable
- Assemble supporting sleeve over dielectric and under braid
- Assemble inner socket to inner conductor, push back against sleeve and crimp

Step 2:
- Insert the assembly into the outer male contact until the inner socket snaps into place
- The cable braid (shield) should now cover the barrel of the outer male contact as shown

Step 3:
- Slide outer hyring forward against spring and crimp in place as shown



Note : all dimensions are in mm

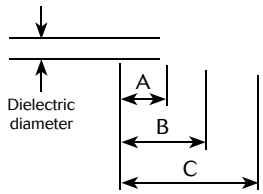
Multipiece female contact with coax cable

Cable reference	Contact	Hyring complementary compoments	Outer contact crimp tool		Inner contact crimp tool		Cable strip length		
			Crimp tool M10S1J		Crimp tool M10S1J				
			Die set	Stop bushing	Die set	Stop bushing	A	B	C
RG161U	Femal e: RCDXK1D28	YOC074	S221	SL471	S23D2	SL46D2	4. 37	-	11. 13
RG179							4. 37		11. 13
RG187U							4. 37		11. 13
RG188/ U					S26D2		4. 37		11. 13
RG174/ U							4. 37		11. 13
RG178A/ U		YOC074 + RMDXB0553			S23D2		6. 35		11. 13
RG196U							6. 35		11. 13
AMPHENOL 21- 598		YOC074			-		4. 37		11. 13
surprenant pn 8134					-		4. 37		11. 13

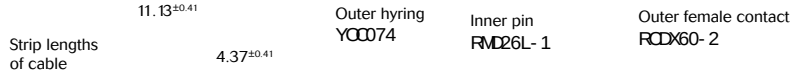
Multipiece kit details

RCDXK1D28 includes	RCDX602D28	Outer contact
	RMD26L1D28	Inner contact
	YOC074	Outer hyring
	RCDXB0553	Inner supporting sleeve

Cable stip length



Contact assembly with dielectric diameter over 1.4mm - without inner supporting sleeve



Step 1:
- Assemble outer hyring onto cable
- Assemble inner pin to inner conductor and crimp

Step 2:
- Insert the assembly into the outer female contact until the inner pin snaps into place
- The cable braid (shield) should now cover the barrel of the outer female contact as shown

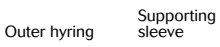
Step 3:
- Slide outer hyring forward against spring and crimp in place as shown

Contact assembly with dielectric diameter under 1.4mm - with inner supporting sleeve

Step 1:
- Assemble outer hyring onto cable
- Assemble supporting sleeve over dielectric and under braid
- Assemble inner pin to inner conductor, push back against sleeve and crimp

Step 2:
- Insert the assembly into the outer female contact until the inner pin snaps into place
- The cable braid (shield) should now cover the barrel of the outer female contact as shown

Step 3:
- Slide outer hyring forward against spring and crimp in place as shown



Note : all dimensions are in mm

#16 coaxial contacts

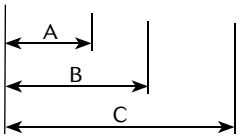
Coax cable with monocrimp contact cabling

Cable reference	Male contact	Female contact	Crimp tool	Die set	Stop bushing	Cable strip length			Inner conductor crimp		Braid crimp	
						A	B	C	g dim	t dim	g dim	t dim
CDC PIN22939200	RMDX6046D28	RCDX6016D28	M10S1J	S80	SL105	4.19	5.97	8.51	1.30/1.17	1.40/1.22	2.77/2.64	3.02/2.84
CDC PIN22939200	RMDX6046D28	RCDX6016D28		S87	SL105	5.08	6.35	8.89	1.30/1.17	1.40/1.22	2.77/2.64	3.02/2.84
CDC PIN245670000	RMDX6050D28	RCDX6016D28		S80	SL105	5.08	6.35	8.89	1.30/1.17	1.40/1.22	2.97/2.84	3.12/2.95
KX21TVT (europe) RG178 B/U	RMDX6034D28	RCDX6034D28		S82	SL105	5.08	6.35	8.89	1.30/1.17	1.32/1.17	2.84/2.74	3.07/2.9
RG178 / BU	RMDX6050D28	RCDX6016D28		S87	SL105	5.08	6.35	8.89	1.30/1.17	1.40/1.22	2.77/2.64	3.02/2.84
ampex	RMDX6032D28	RCDX6032D28		S80	SL105	5.08	6.35	11.68	1.30/1.17	1.40/1.22	2.97/2.84	3.12/2.95
TI PN 920580	RMDX6024D28	RCDX6024D28		S82	SL105	5.08	6.35	8.89	1.35/1.19	1.42/1.27	2.87/2.74	3.07/2.9
RG174/U	RMDX6032D28	RCDX6032D28		S80	SL105	5.08	6.35	11.68	1.30/1.17	1.40/1.22	2.97/2.84	3.12/2.95
Honeywell PN 58000062	RMDX6026D28	RCDX6026D28		S82	SL105	5.08	6.35	8.89	1.35/1.19	1.42/1.27	2.87/2.74	3.07/2.9
RG188A/U	RMDX6036D28	RCDX6036D28		S80	SL105	5.08	6.35	11.68	1.30/1.17	1.40/1.22	2.97/2.84	3.12/2.95
RG316/U	RMDX6036D28	RCDX6036D28		S80	SL105	5.08	6.35	11.68	1.30/1.17	1.40/1.22	2.97/2.84	3.12/2.95
PRD PN 247AS-C1123-001	RMDX6018D28	RCDX6018D28		M10SG8 ASSY TOOL DIE SET STOP BUSHING M10S1J TOOL		5.08	6.35	8.89	1.22/1.17	1.35/1.22	2.92/2.79	3.12/2.97
PRD PN 247AS-C1251	RMDX6018D28	RCDX6018D28				5.08	6.35	8.89	1.22/1.17	1.35/1.22	2.92/2.79	3.12/2.97
raychem 5024A3111	RMDX6052D28	RCDX6052D28		S88	SL105	5.08	6.35	11.68	1.37/1.27	1.45/1.32	2.92/2.79	
raychem 5026e1614	RMDX6036D28	RCDX6036D28		M10SG8 ASSY TOOL DIE SET STOP BUSHING M10S1J TOOL		5.08	6.35	8.89	1.22/1.17	1.35/1.22	2.92/2.79	3.12/2.97
JUDD C15013010902	RMDX6036D28	RCDX6036D28				5.08	6.35	8.89	1.22/1.17	1.35/1.22	2.92/2.79	3.12/2.97
inner cond. #30, braid diam 2.64	RMDX6050D28	-		S80	SL105	5.1	6.35	8.9	-	-	-	-
inner cond. #30, braid diam 2.29	RMDX6050D28	-		S87	SL105	4.2	6.35	8.5	-	-	-	-
inner cond. #28, braid diam 2.9	RMDX6032D28	RCDX6032D28		S80	SL105	5.1	6.35	11.7	-	-	-	-
inner cond. #26, braid diam 1.78	RMDX6024D28	RCDX6024D28		S82	SL105	5.1	6.35	8.9	-	-	-	-
inner cond. #26, braid diam 3.05	RMDX6026D28	RCDX6026D28		S82	SL105	5.1	6.35	8.9	-	-	-	-

- Select appropriate cable and contact combination.
- Select appropriate crimp tooling (hand tool, S-die set, stop bushing).
- Strip coax cable to the designated wire strip lengths.
- Insert the stripped coax into the rear of the contact.
- Crimp the contact.

See cable strip lengths

Cable strip length



RMDX60
Male coax contact

RCDX60
Female coax contact

Note : all dimensions are in mm

Glossary of terms

• Clearance
Per the IEC 60664-1 it is the shortest distance between two conductive parts even over the air.

• Creepage distance
Per the IEC 60664-1 it represents the shortest distance along the surface of the insulating material between two conductive parts.

Air gap
Creepage distance

• Working voltage
Per the IEC 60664-1 it is the highest r.m.s. value of A.C. or D.C. voltage across any particular insulation which can occur when the equipment is supplied at rated voltage.

• Rated impulse voltage
Impulse withstands voltage value assigned by the manufacturer to the equipment or to a part of it characterizing the specified withstand capability of its insulation against transient overvoltage.

• Working current
It is the maximum continuous and not interrupted current able to be carried by all contacts without exceeding the maximum temperature of the insulating material.

• Transient voltage
Extract from the IEC 60664-1: Short duration overvoltage of a few millisecond or less, oscillatory or non-oscillatory, usually highly damped.

• CTI (Comparative Tracking Index)
The CTI value is commonly used to characterize the electrical breakdown properties of an insulating material. It allows users to know the tendency to create creepage paths. This value represents the maximum voltage after 50 drops of ammonium chloride solution without any breakdown.

• RTI (Relative temperature Index):
Extract from ULs website:
"Maximum service temperature for a material, where a class of critical property will not be unacceptably compromised through chemical thermal degradation, over the reasonable life of an electrical product, relative to a reference material having a confirmed, acceptable corresponding performance defined RTI.

- **RTI Elec**: Electrical RTI, associated with critical electrical insulating properties.

- **RTI Mech Imp**: Mechanical Impact RTI, associated with critical impact resistance, resilience and flexibility properties.

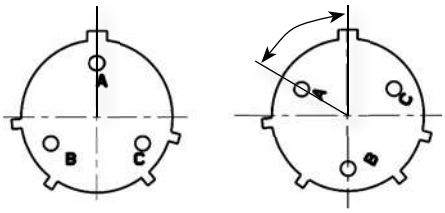
- **RTI Mech Str:** Mechanical Strength (Mechanical without Impact) RTI, associated with critical mechanical strength where impact resistance, resilience and flexibility are not essential"

Discrimination/Keying methods

In applications where similar connectors are used next to each other, mismatching can be a reason for disturbances, system failure or even danger to operating personnel.

To eliminate mismatching, all TRIM TRIO® connectors can be equipped with discrimination keys, which offer unlimited possibilities for an error avoiding interconnection system.

The other way around is to rotate the insert into the shell.



N (Normal) Other keys

Note: Insert rotated in body
(viewed from front face of male insert)

Connectors with rotated inserts can be ordered by adding the suffix W, X, Y or Z to the standard part number.

e.g. **UTS6JC104S** *(N key)* ➔ **UTS6JC104SW***(W key)*

Shell size	Layout	Discrimination keys degrees			
		W	X	Y	Z
8	8E2	58°	122°		
	8E3 8E3A	60°	210°		
	8E4	45°			
	8E33	90°			
10	102W2 103 104				
	106 10E6 10E7	90°			
	10E98	90°	180°	240°	270°
12	12E2				
	12E3			180°	
	124 128				
	12E8	90°	112°	203°	292°
	1210 12E10	60°	155°	270°	295°
	12E14	45°			
14	14E5	40°	92°	184°	273°
	142G1 147				
	1412	60°			
	14E12	43°	90°		
	14E15	17°	110°	155°	234°
	14E18	15°	90°	180°	270°
	1419	30°	165°	315°	
	14E19	30°	165°	315°	
18	18E11	62°	119°	241°	340°
	1823		158°		270°
	18E30	180°	193°	285°	350°
	1832 18E32	85°	138°	222°	265°

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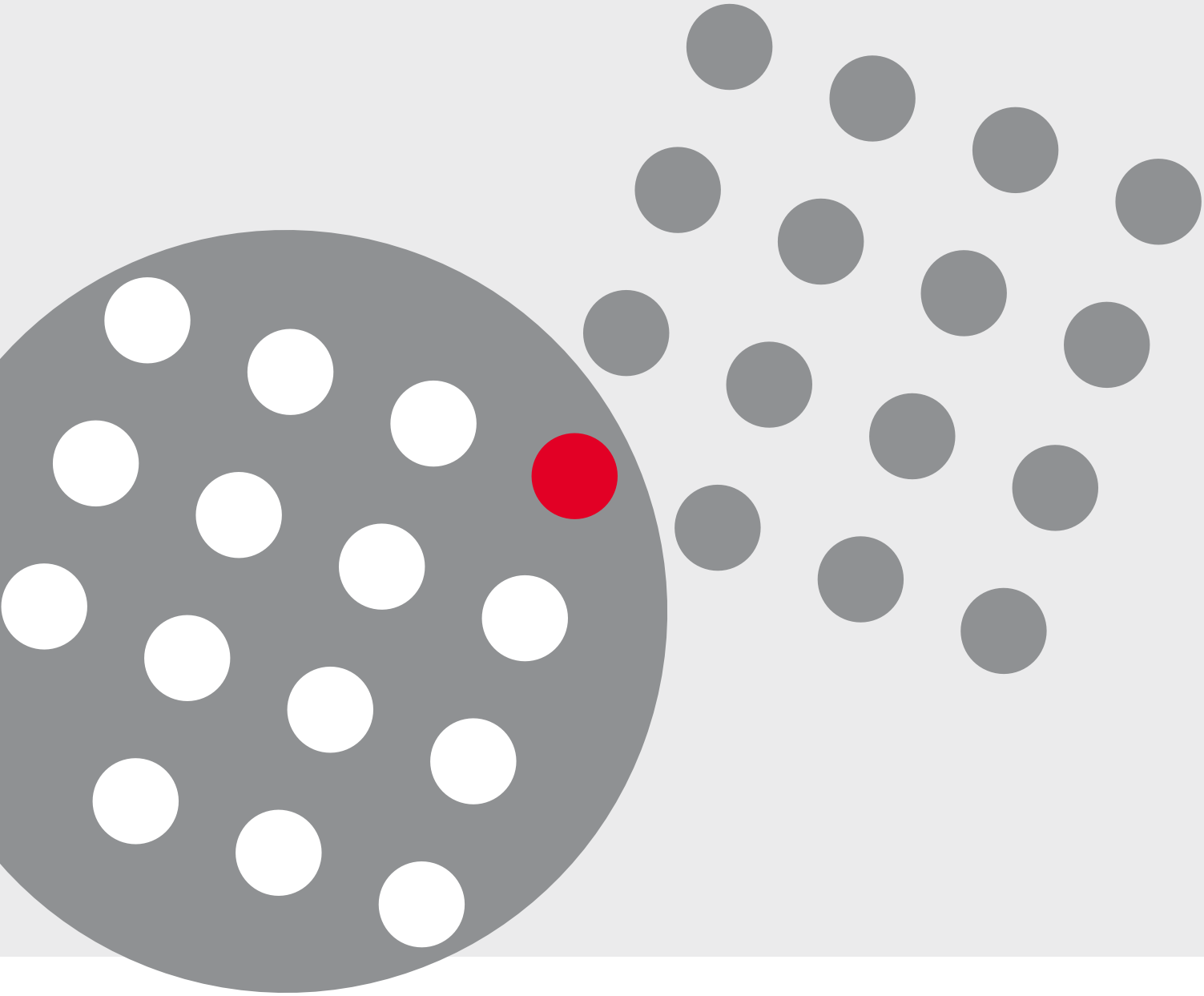

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