Souriau UTGX series



The next generation of bayonet connectors for harsh environments





Powering Business Worldwide

Souriau UTGX series

Typical applications



Off-road vehicles



Heavy equipment



Energy



Power



Metal work



Instrumentation



Measurement



Robotic



Building automation & control



Infrastructure



Machinery

Souriau UTGX series

A versatile, ruggedized solution for industrial applications

Waterproof, shock-proof and UV resistant, the UTGX series can withstand continuous underwater immersion, routine pressure washing, dirt and dust and other harsh conditions.

Ideal for both indoor and outdoor applications with a lifespan of up to 27 years in-application, the UL/IEC certified UTGX series connectors are **a safe and reliable solution.**

Improve efficiency with lightweight, versatile and quick mating connectors

The UTGX series can be used in a wide range of configurations and electrical layouts, allowing you **to save space on your equipment.**

While the bayonet locking mechanism ensures a quick and secure connection and disconnection, other updates to the lightweight design make the UTGX series connectors easier than ever for operators to handle quickly. Especially in high-mating cycle applications, **UTGX will save time and money for your business.**

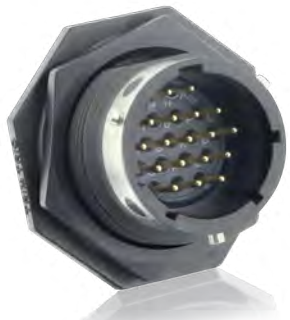
Upgrading has never been easier

The new Souriau UTGX Series uses Trim Trio® contacts. A single design for machined, stamped and formed and highspeed contacts, making **it quicker, easier and more cost effective to upgrade.** By using the same contacts, the switch from one connector series to another doesn't require tool or panel cut-out modifications.



Souriau UTGX series





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Overview

Range overview

UTGX Series



Cable sealed

UTGX Standard



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



Corrosion-proof
Plastic housing

Contacts supplied separately



Choice of crimp contacts
Machined / Stamped and Formed / Coaxial
PCB contacts
Fiber optic

UTGX backshells

Cable sealing



Plug



Contacts loaded
Handsolder

UTGX sealed unmated



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



Corrosion-proof
Plastic housing

Overmoulded cable assembly



For more information on our overmoulding solutions, please contact us.

UTGX Standard receptacle

Jam nut



Square flange



Contacts supplied separately



Choice of crimp contacts
Machined / Stamped and Formed / Coaxial
PCB contacts
Fiber optic

In-line



Square flange



Contacts supplied separately



Choice of crimp contacts
Machined / Stamped and Formed / Coaxial
PCB contacts
Fiber optic

UTGX backshells

Cable sealing



UTGX sealed unmated receptacle

Jam nut



Square flange



Contacts loaded
PCB
Handsolder

UTGX PCB contacts

Stand-offs to allow cleaning after soldering

Metal hold down clips lock the connector easily on the PCB and release stress on solder joints. They are also suitable for soldering the connector to the PCB through metal holes.



Pre-assembled PCB contacts
- machined or stamped versions available
- different solder tail lengths possible
- different plating options

Low profile housing to limit space between panel and PCB

Overview

UTGX technical specifications



Technical features

Materials

- Body connector and backshell: Thermoplastic
- Insert:
  - UTGX Standard, UTGX Single Wire Sealed, UTGX Screw Termination Contacts: Thermoplastic
  - UTGX Sealed Unmated Handsolder & UTGX Sealed Unmated with PC Tails Contacts: Elastomer
- Nut: Metal
- Contacts: See page 128
- Halogen free
- RoHS compliant & conforms to the Chinese standard SJ/T1166-2006 (Chinese RoHS equivalent)

Environmental

- Temperature class: **IEC61984** from -40°C to +105°C
- Flammability rating:
  - **UL94 V-0** for UTGX standard
  - **UL94 HB** for UTGX Hi-seal
  - R22 HL2 / R23 HL2 according to NF EN 45545 for UTGX standard only
- Salt spray: Per EIA-364-26: 500 hours
- UV resistant: Connector made with (f1) material according to **UL746C**
- Outdoor used following level 6/6P according to UL50/UL50E
- Aging validation: **ISO 21207 Method B, 5 cycles**. Corresponding to 27 years in an industrial environment
- Sealing:
  - UTGX Standard: **IP68/ IP69K** dynamic (mated)
  - UTGX Sealed Unmated version: **IP68/IP69K** dynamic (unmated)
  - UTGX Single Wire Sealed: **IP67/69K** (up to IP68 with double sealing backshell)
  - UTGX Screw Termination Contacts: IP68/IP69K dynamic (mated)

Note: IP68=10 m underwater during 1 week

- Fluid resistance:
  - Gas and oil
  - Mineral oil
  - Acid bath
  - Basic bath
  - Chlorine

Electrical

- In accordance with:
  - **UL 1977**: Category ECBT2 File number: E169916
  - **C22.2 n°182.3:** Category ECBT8 File number: E169916
  - **IEC61984**

Notes: Scan the QR code to download the certificate.

- Voltage and current information available on pages 13 to 15 and on each layout pages

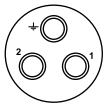
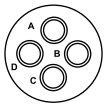
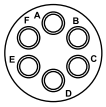
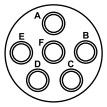
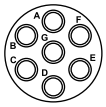
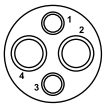
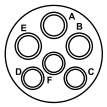
Mechanical

- Durability: 500 matings and unmatings according to **IEC 60512-9a**
- Vibration Sinus from 10 to 2000Hz ; 20grms according to **IEC60512-6-4**
- Thermal shock: According to **MIL-DTL-26482** and **EIA364 32**
- IK resistors: See table below for shock resistance

Connector type	Size 10	Size 12	Size 14
UTGX0 / UTGX6JC	IK05 (0.7J) according to IEC62262	IK06 (1J) according to IEC62262	IK06 (1J) according to IEC62262
UTGX7 / UTGX6JC	IK06 (1J) according to IEC62262	IK07 (2J) according to IEC62262	IK07 (2J) according to IEC62262
UTGX1JC / UTGX6JC	Impact test (6.8J) according to UL746C	Impact test (6.8J) according to UL746C	Impact test (6.8J) according to UL746C

Layouts face male contact

Electrical parameter according to IEC61984 for a pollution degree IV and overvoltage category III.
A higher voltage can be applied by selecting the appropriate connectors and contacts. Please consult us for more information.

Contacts	Description (Mating face view male connectors)		
Contact #16 (Ø 1.6 mm)	 103 16A/300V 2 + ground Page 20	 104 13A/150V 4 contacts Page 43	
Contact #20 (Ø 1.0 mm)	 106 – 10E6/10D6 7A/32V 6 contacts Page 58	 10E98/10D98 7A/50V 6 contacts Page 63	 10E7/10D7 7A/50V 7 contacts Page 72
Hybrid & others	 102W2 25A/150V 4 contact 2xØ 2.4 (#12) + 2xØ 1.0 (#20) Page 38	 103W3 5A/32V 6 contacts 3xØ 1.6 (#16) + 3xØ 1.0 (#20) Page 52	

Note: Layouts in blue text are UTGX sealed in unmated condition

Contacts #20:
from AWG 26 to 18
0.13 to 0.93 mm²

Contacts #16:
from AWG 30 to 14
0.05 to 2.5 mm²

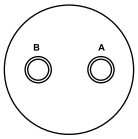
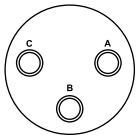
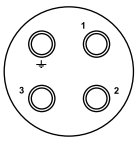
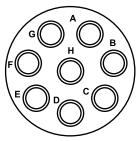
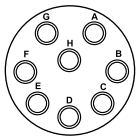
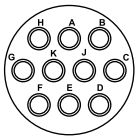
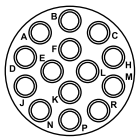
Contacts #12:
from AWG 20 to 12
0.13 to 4 mm²

Contacts #8:
from AWG 16 to 8
1.5 to 10 mm²

1

Layouts face male contact

Electrical parameter according to IEC61984 for a pollution degree IV and overvoltage category III.
A higher voltage can be applied by selecting the appropriate connectors and contacts. Please consult us for more information.

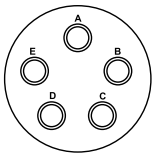
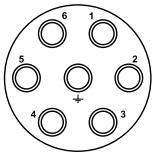
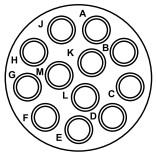
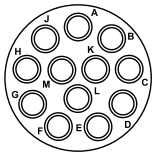
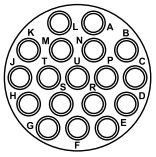
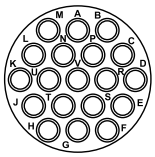
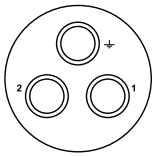
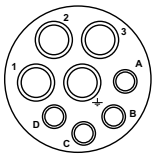
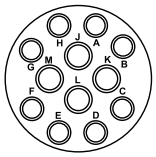
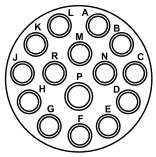
Contacts	Description (Mating face view male connectors)			
Contact #16 (Ø 1.6 mm)				
	12E2/12D2 16A/150V 2 contacts Page 16	12E3/12D3 16A/150V 3 contacts Page 28	124 – 12E4/12D4 16A/150V 3 + ground Page 33	128 10A/80V 8 contacts Page 76
Contact #20 (Ø 1.0 mm)				
	12E8/12D8 6A/32V 8 contacts Page 81	1210 – 12E10/12D10 6A/50V 10 contacts Page 91	12E14/12D14 5A/32V 14 contacts Page 110	

Note: Layouts in blue text are UTGX sealed in unmated condition

Contacts #20:	Contacts #16:	Contacts #12:	Contacts #8:
from AWG 26 to 18	from AWG 30 to 14	from AWG 20 to 12	from AWG 16 to 8
0.13 to 0.93 mm²	0.05 to 2.5 mm²	0.13 to 4 mm²	1.5 to 10 mm²

Layouts face male contact

Electrical parameter according to IEC61984 for a pollution degree IV and overvoltage category III.
A higher voltage can be applied by selecting the appropriate connectors and contacts. Please consult us for more information.

Contacts	Description (Mating face view male connectors)			
Contact #16 (Ø 1.6 mm)				
	14E5/14D5 16A/150V 5 contacts Page 48	147 – 14E7/14D7 7A/150V 6 + ground Page 67	1412 10A/63V 12 contacts Page 96	1492 10A/63V 12 contacts Page 105
Contact #20 (Ø 1.0 mm)				
	14E18/14D18 5A/50V 18 contacts Page 118	1419 – 14E19/14D19 5A/32V 19 contacts Page 122		
Contact #8 (Ø 3.6 mm)				
	142G1 40A/300V 2 + ground Page 25			
Mixed power				
	148 17A/230V 8 contacts 4xØ 1.6 (#16) + 3xØ 2.4 (#12) + ground Page 85	14E12/14D12 4A/50V 12 contacts 4xØ 1.6 (#16) + 8xØ 1.0 (#20) Page 101	14E15/14D15 4A/50V 15 contacts 1xØ 1.6 (#16) + 14xØ 1.0 (#20) Page 114	

Note: Layouts in blue text are UTGX sealed in unmated condition

Contacts #20:
from AWG 26 to 18
0.13 to 0.93 mm²

Contacts #16:
from AWG 30 to 14
0.05 to 2.5 mm²

Contacts #12:
from AWG 20 to 12
0.13 to 4 mm²

Contacts #8:
from AWG 16 to 8
1.5 to 10 mm²

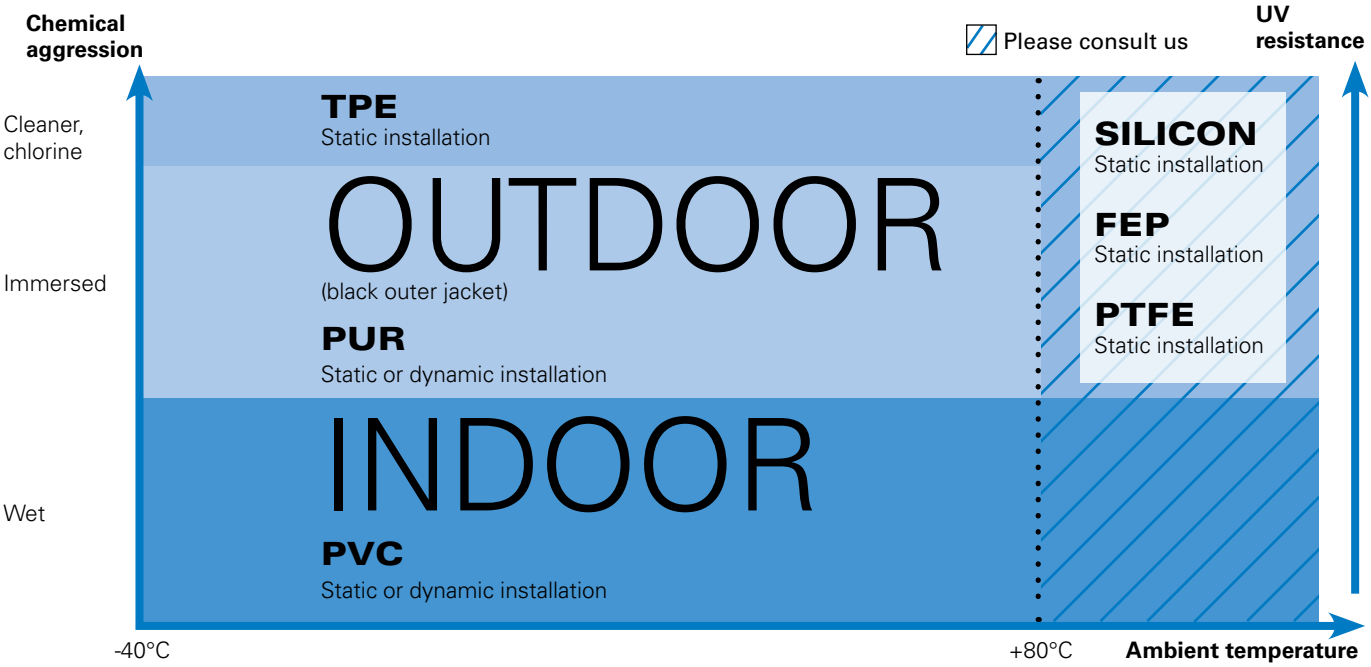
Connectors

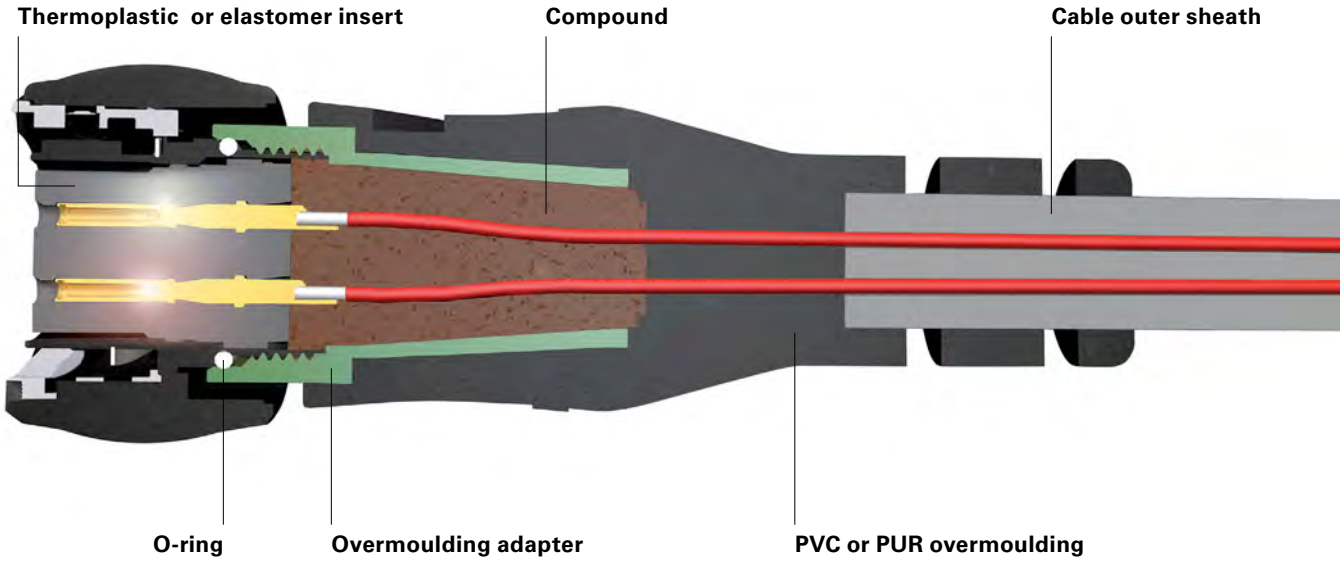
Overmoulded cable assembly

Overmoulding is a process that further enhances the sealing properties of the **UTGX** range, especially over many years of use. Overmoulding provides the opportunity to change the cable exit from straight to 90 degrees and avoid stress on the cable terminated to the connector. Also, as the wires are encapsulated inside the moulding, a barrier is created which prevents any liquid from entering the equipment through the connector if the cable jacket is breached.



How to choose the outer jacket material





Connector with cable gland backshell

GOOD



...water ingress unhampered, leading to damage.

Overmoulded connector

BEST



...prevents water ingress via capillary action.

Connectors

UTGX waterproof plastic overmould



HAUTGX standard offering

Cable

- PVC outer sheath (grey color)
- Wire section 1.5 mm² for #16 contact
- Wire section 0.5 mm² for #20 contact
- 300V
- Unshielded
- Flammability rating
- Operating temperature: -40°C +70°C

Overmoulding specifications

Plating	Salt spray	Temperature*	Waterproof*	Mechanical
No plating	500 H	-40°C up to + 105°C	IP68/IP69K dynamic (mated)	500 matings/unmatings

* With appropriate cable and overmoulding

Cable information

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

Example of customized cable assemblies



Overmoulding on curly cable



Overmoulding with double ends



Harness for PCB connection

Connectors

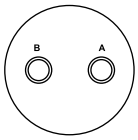
12E2/12D2 (Shell size 12, 2x#16)



Connector part number

UTGX 12E2/12D2

2 contacs + ground
13A/600V
per UL 1977
with AWG16 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Handsolder electrical contacts loaded see page 19	Square flange receptacle	Without (Fig. 1)	**UTGX012E2P**	**UTGX012E2S**
	Plug	Without (Fig. 5)	**UTGX612E2P**	**UTGX612E2S**
		Cable gland (Fig. 3)	**UTGX6JC12E2P**	**UTGX6JC12E2S**
	Jam nut receptacle	Without (Fig. 4)	**UTGX712E2P**	**UTGX712E2S**
PCB contacts loaded see page 19	Square flange receptacle	Without (Fig. 2)	**UTGX012D2P**	**UTGX012D2S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig. 5)	**UTGX712D2P**	**UTGX712D2S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig. 6)	**UTGX712D2P32**	**UTGX712D2S32**

For discrimination/keying methods see page 154

Sealed unmated

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm²)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	1.5	H05 VV - F 3x1.5	**HAUTGX12E2PST1M**	**HAUTGX12E2SST1M**
Right angle ending	Plug	1.5	H05 VV - F 3x1.5	**HAUTGX12E2PRA1M**	**HAUTGX12E2SRA1M**

(1) Other cable available on demand
* Other lengths available on demand
Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0

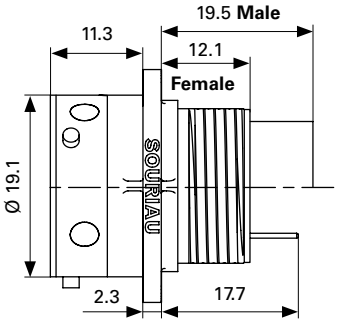
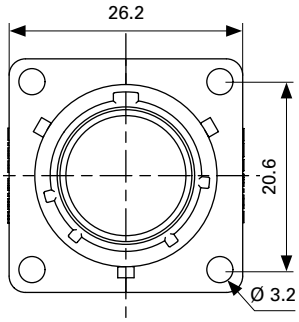


Fig. 1



Plug - UTGX6 & UTGX6JC

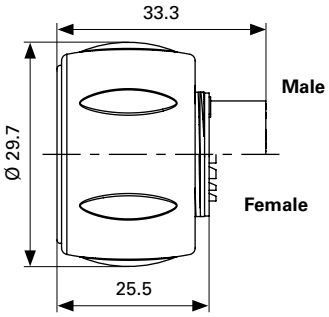


Fig. 2

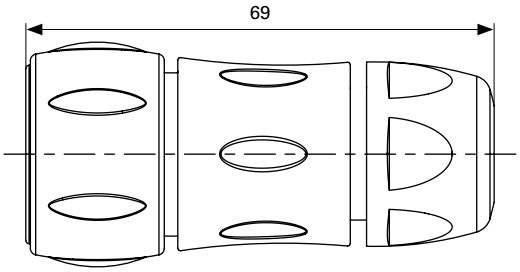


Fig. 3

Cable diameter acceptance: standard seal:
from 2.5 mm to 12 mm, reduced seal: from 3 mm to 9 mm

Jam nut receptacle UTGX7

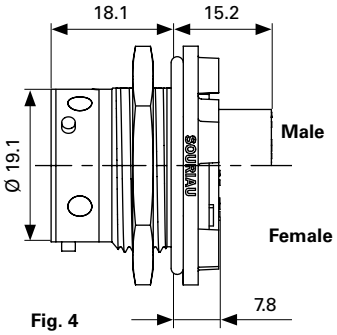


Fig. 4

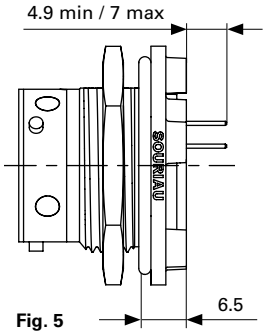


Fig. 5

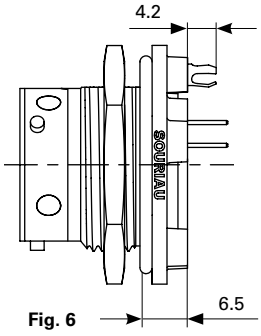
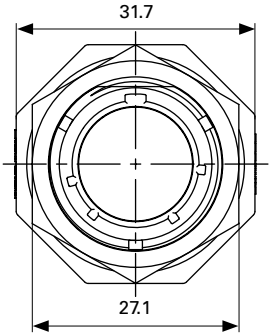
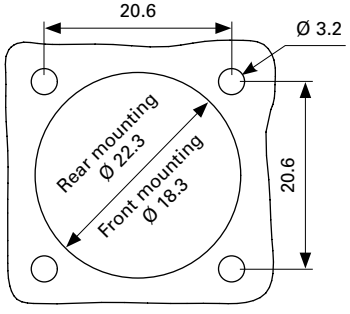


Fig. 6

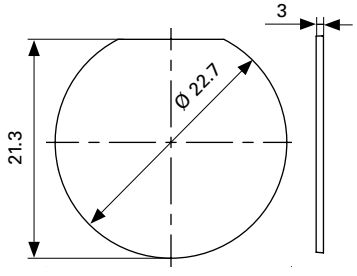


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Connectors

12E2/12D2 (Shell size 12, 2x#16)

Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX12DCG**
IP68/69K - Metal terminal	**UTGX12DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX12DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTGX612DCG**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005587A	**85005596**

Gasket



Part number
UTFD13B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX712CCRG**	**UTGX612CCRG**
Y for Yellow	**UTGX712CCRY**	**UTGX612CCRY**
R for Red	**UTGX712CCRR**	**UTGX612CCRR**

Contacts

Contact size	Contact type	Plating	Cable acceptance (AWG)	Cable acceptance (mm²)	Wire stripping length
#16	Handsolder Loaded in the connector	Min 0.4µ gold over 0.8µ Ni	18 - 14	0.80 - 2.48	5 mm
	PCB Machined (1)	Min 0.4µ gold over 0.8µ Ni	–	–	–

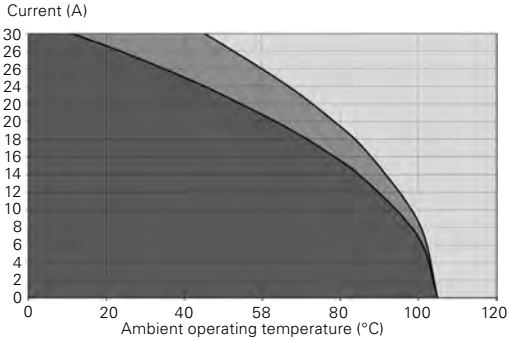
(1): For dimensions see pages 136 or 137

Electrical characteristics

UL	CSA	IEC
13A 600V with AWG16 wire	13A 600V with AWG16 wire	16A 150V 2.5kV 3

Electrical information according to the IEC 61984, with pollution degree IV and overvoltage category III.

UTGX 12E2/12D2 derating curves



Current use
Limited use
Not recommended use

Test conditions

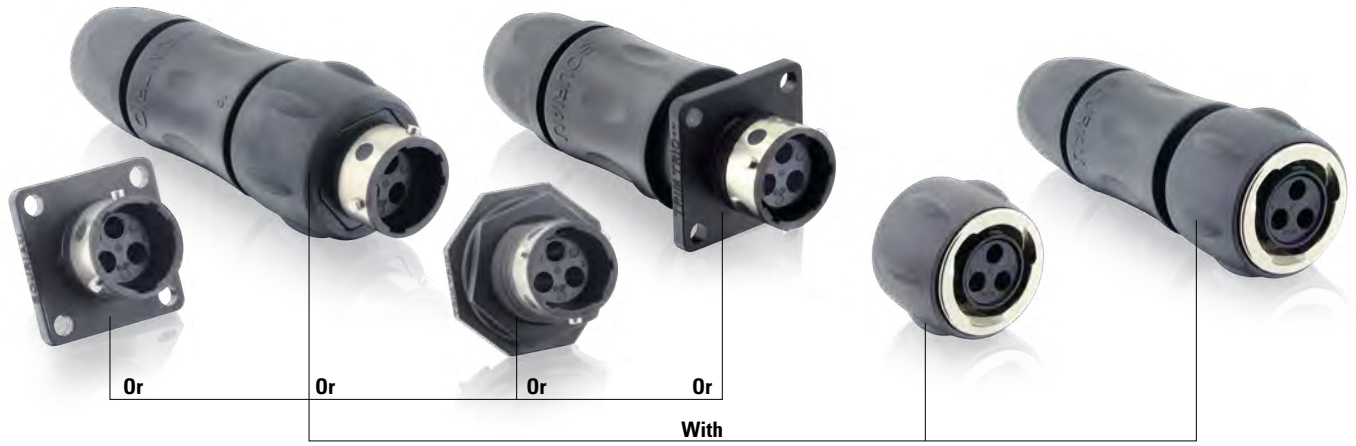
Contact used: machined contacts

Wires used: 1.31 mm²

Derating curves based on continuous current application.

Connectors

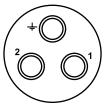
103 (Shell size 10, 2 + ground, 3x#16)



Connector part number

UTGX 103

2 contacts + ground
10A/500V
per UL 1977 with
AWG16 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Crimp contacts supplied separately see page 24	Square flange receptacle	Without (Fig. 1)	**UTGX0103P**	**UTGX0103S**
	Square flange receptacle	Cable gland (Fig. 2)	**UTGX0JC103P**	**UTGX0JC103S**
	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC103P**	**UTGX1JC103S**
	Plug	Without (Fig. 4)	**UTGX6103P**	**UTGX6103S**
		Cable gland (Fig. 5)	**UTGX6JC103P**	**UTGX6JC103S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX7103P**	**UTGX7103S**
PCB contacts supplied separately see page 24	Jam nut receptacle	Without (Fig. 7)	**UTGX7103P**	**UTGX7103S**

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm²)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	1.5	H05 VV - F 3x1.5	**HAUTGX103PST1M**	**HAUTGX103SST1M**
Right angle ending	Plug	1.5	H05 VV - F 3x1.5	**HAUTGX103PRA1M**	**HAUTGX103SRA1M**

(1) Other cable available on demand
* Other lengths available on demand
Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0 and UTGX0JC

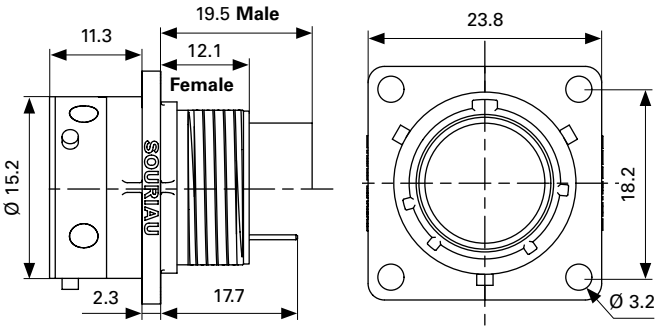


Fig. 1

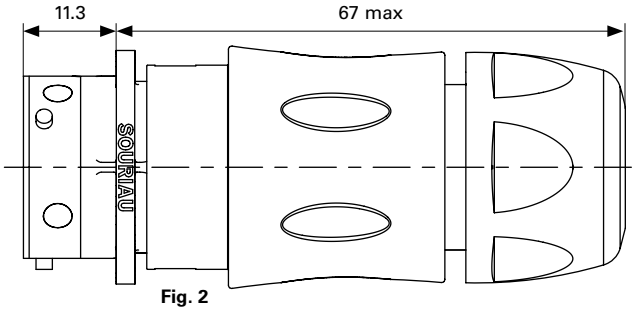


Fig. 2

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm, reduced seal: from 1.5 mm to 5 mm

Free hanging - UTGX1JC

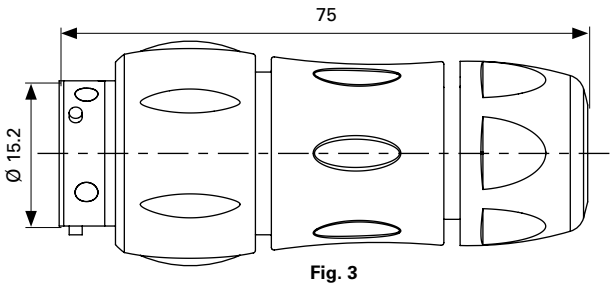


Fig. 3

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm, reduced seal: from 1.5 mm to 5 mm

Plug - UTGX6 & UTGX6JC

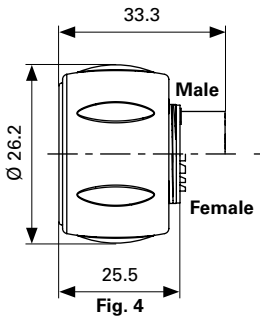


Fig. 4

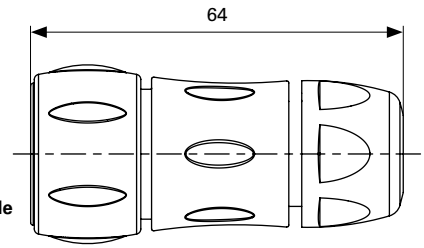


Fig. 5

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm,
reduced seal: from 1.5 mm to 5 mm

Jam nut receptacle UTGX7

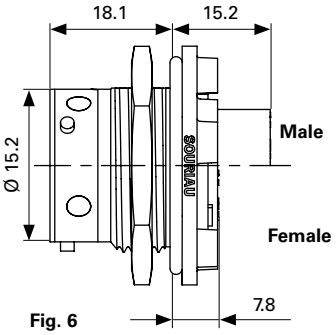


Fig. 6

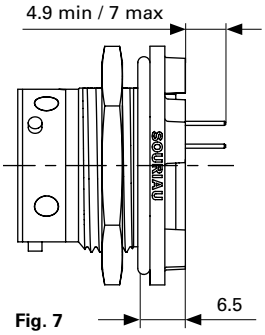
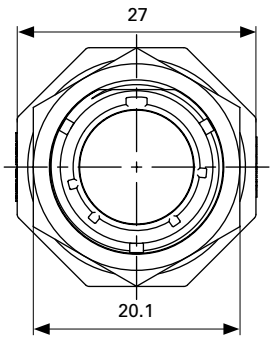
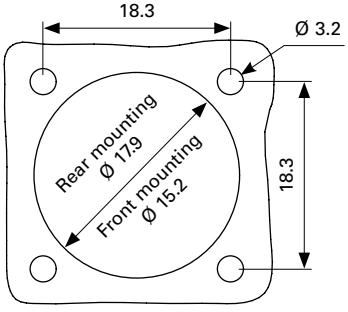


Fig. 7

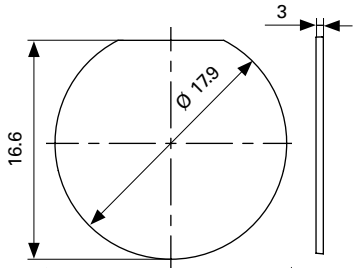


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Connectors

103 (Shell size 10, 2 + ground, 3x#16)

Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX10DCG**
IP68/69K - Metal terminal	**UTGX10DCGR**

Plug sealing cap



Description	Part number
IP68/69K	**UTGX610DCG**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005586A	**85005595**

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX710CCRG**	**UTGX610CCRG**
Y for Yellow	**UTGX710CCRY**	**UTGX610CCRY**
R for Red	**UTGX710CCRR**	**UTGX610CCRR**

Tooling

Tooling



Description	Part number
Handle (without head)	**Shandles**
Box containing handle and several crimp tooling	**Toolkit**

Crimp tooling
(without Shandles)





Contact size	Contacts	Part number of Head
Standard contacts #16 Ø 1.6 mm	**RM/RC 28M1K(1)**	**S16RCM20***
	RM/RC 24M9K(1)	**S16RCM20***
	RM/RC 20M13K(1)	**S16RCM20***
	RM/RC 20M12K(1)	**S16RCM20***
	RM/RC 16M23K(1)	**S16RCM16***
	RM/RC 14M30K(1)	**S16RCM14***
	SM/SC 24ML1TK6(1)	**S16SCM20***
	SM/SC 20ML1TK6(1)	**S16SCM20***
	SM/SC 16ML1TK6(1)	**S16SCML1***
	SM/SC 14ML1TK6(1)	**S16SCML1***
	SM/SC 16ML11TK6(1)	**S16SCML11***

(1): Example of plating, for other plating options see page 129

* Heads to be used with handle PN: SHANDLES

Extraction tool #16

Fig. 1



Fig. 2



Description	Part number
Fig. 1	**RX2025GE1**
Fig. 2 - Long endurance tool	**RX2031J**

103 (Shell size 10, 2 + ground, 3x#16)

Contacts #16

Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	30-26	0.48-0.08	**RM28M1K**(1)	**RC28M1K**(1)	0.55	1.00
		26-24	0.13-0.25	**RM24M9K**(1)	**RC24M9K**(1)	0.80	1.58
		20-20	0.32-0.52	**RM20M13K**(1)	**RC20M13K**(1)	1.15	1.80
		20-20	0.32-0.52	**RM20M12K**(1)	**RC20M12K**(1)	1.15	2.20
		20-16	0.52-1.48	**RM16M23K**(1)	**RC16M23K**(1)	1.80	3.20
		16-14	1.48-2.48	**RM14M30K**(1)	**RC14M30K**(1)	2.30	3.20
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24M1TK6**(1)(2)	**SC24M1TK6**(1)(2)	–	0.90-1.58
		20-20	0.32-0.52	**SM20M1TK6**(1)(2)	**SC20M1TK6**(1)(2)	–	1.20-2.10
		18-16	0.80-1.48	**SM16M1TK6**(1)(2)	**SC16M1TK6**(1)(2)	–	3.20
		18-16	0.80-1.48	**SM16M11TK6**(1)(2)	**SC16M11TK6**(1)(2)	–	3.00
		14	2.48	**SM14M1TK6**(1)(2)	**SC14M1TK6**(1)(2)	–	3.20
PCB	Machined (3)	–		**RM20M12E83K**(1)	**RC20M12E84K**(1)		–
Coaxial	Cable multipiece	see pages 133 to 134		**RMDXK10D28**	**RCDXK1D28**	–	–
	Cable monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
	Twisted pair multipiece			**RMDXK10D28 + yorx090**	**RCDXK1D28 + yorx090**	–	–
	Twisted pair monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
Fiber optic	POF contacts (Plastic Optical Fiber)	–		**RMPOF1000**	**RCPOF1000B**	–	–

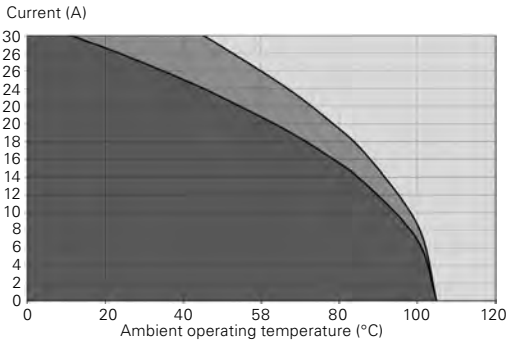
(1): Example of plating, for other plating see page 129
(2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20M1TK6 becomes SM20ML1TK6
(3): For dimensions see page 136

Electrical characteristics

UL	CSA	IEC
10A 500V with AWG16 wire	7A 500V with AWG16 wire	16A 300V 4kV 3 temperature elevation: 50°C

Electrical information according to the IEC 61984, with pollution degree IV and overvoltage category III.

UTGX 103 derating curves



Current use
Limited use
Not recommended use

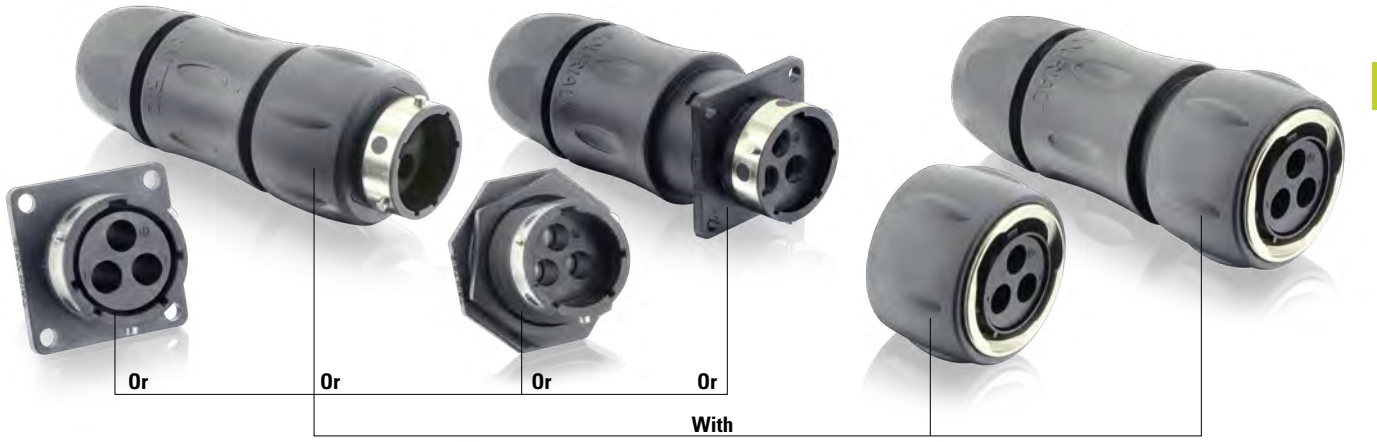
Test conditions

Contact used: machined contacts

Wires used: 1.31 mm²

Derating curves based on continuous current application.

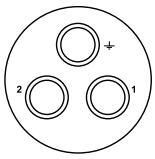
142G1 (Shell size 14, 2 + ground, 3x#8)



Connector part number

UTGX 142G1

2 contacts + ground
Up to 44A/600V
per UL 1977 with
AWG8 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Crimp contacts supplied separately see page 28	Square flange receptacle	Without (Fig. 1)	**UTGX0142G1P**	**UTGX0142G1S**
	Square flange receptacle	Cable gland (Fig. 2)	**UTGX0JC142G1P**	**UTGX0JC142G1S**
	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC142G1P**	**UTGX1JC142G1S**
	Plug	Without (Fig. 4)	**UTGX6142G1P**	**UTGX6142G1S**
		Cable gland (Fig. 5)	**UTGX6JC142G1P**	**UTGX6JC142G1S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX7142G1P**	**UTGX7142G1S**
PCB contacts supplied separately see page 28	Jam nut receptacle	Without (Fig. 7)	**UTGX7142G1P**	**UTGX7142G1S**

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm^2)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	0.5	H05 VV - F 3x0.5	**HAUTGX142G1PST1M**	**HAUTGX142G1SST1M**
Right angle ending	Plug	0.5	H05 VV - F 3x0.5	**HAUTGX142G1PRA1M**	**HAUTGX142G1SRA1M**

(1) Other cable available on demand
* Other lengths available on demand
Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0 and UTGX0JC

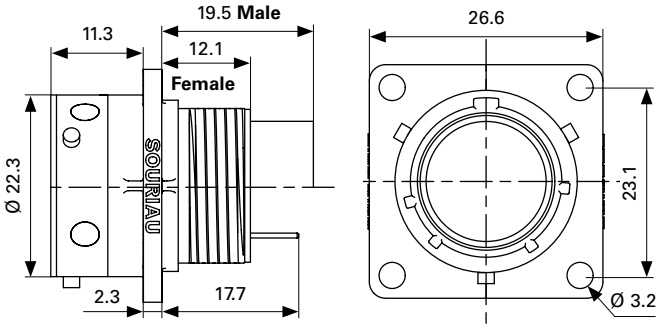


Fig. 1

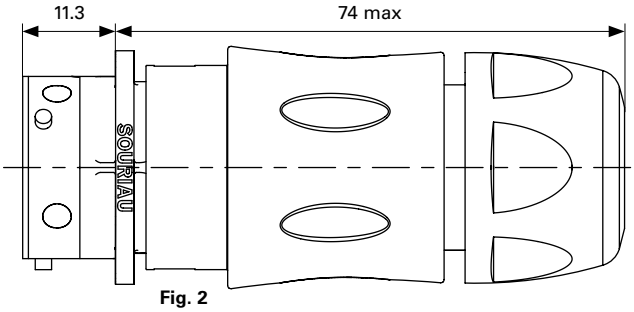


Fig. 2

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Free hanging - UTGX1JC

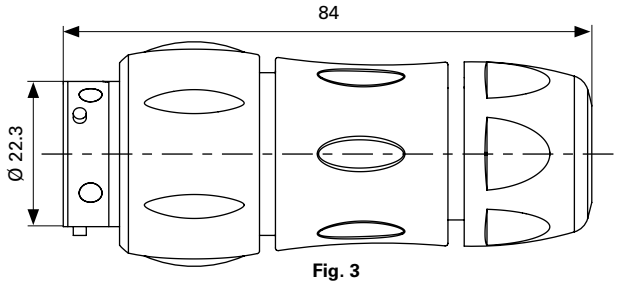


Fig. 3

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Plug - UTGX6 & UTGX6JC

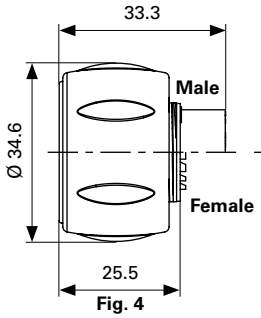


Fig. 4

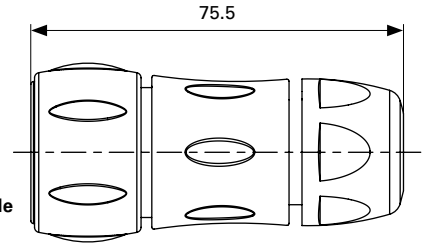


Fig. 5

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm,
reduced seal: from 5 mm to 12 mm

Jam nut receptacle UTGX7

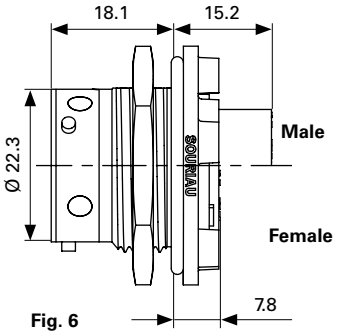


Fig. 6

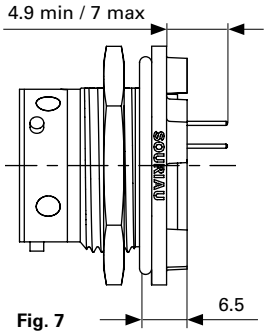
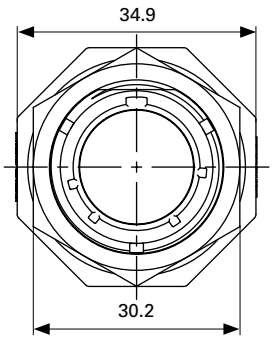
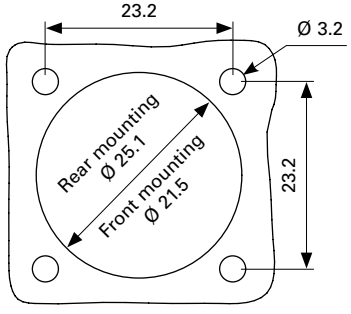


Fig. 7

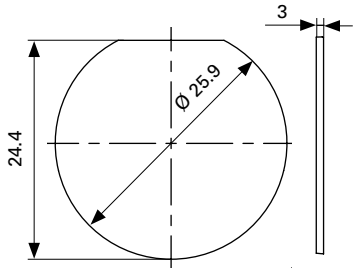


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX14DCG**
IP68/69K - Metal terminal	**UTGX14DCGR**

Plug sealing cap



Description	Part number
IP68/69K	**UTGX614DCG**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005588A	**85005597**

Gasket



Part number
UTFD14B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX714CCRG**	**UTGX614CCRG**
Y for Yellow	**UTGX714CCRY**	**UTGX614CCRY**
R for Red	**UTGX714CCRR**	**UTGX614CCRR**

Connectors

142G1 (Shell size 14, 2 + ground, 3x#8)

Tooling

Hand Tool



Description	Part number
Shandle only	**M317**

Positioner + Locator setting #8



Description	Part number
For crimp contacts #8 Ø 0.141"	**VGE10078A**

Extraction tool #8



Description	Part number
For crimp contacts #8	**51060210936**

Contacts #8

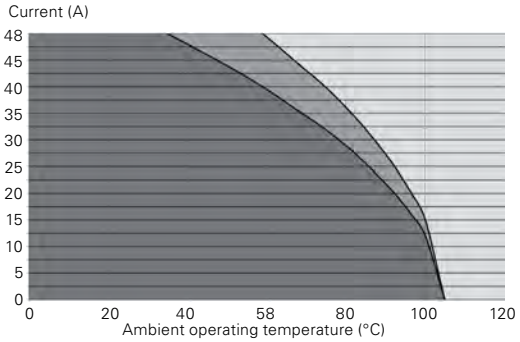
Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	16	1.48	**82913601A**(1)	**82913600A**(1)	1.72	6.5
		14	2.48	**82913603A**(1)	**82913602A**(1)	2.20	
		12	4.00	**82913605A**(1)	**82913604A**(1)	2.82	
		10	6.00	**82913607A**(1)	**82913606A**(1)	3.48	
		8	10.00	**82913609A**(1)	**82913608A**(1)	4.35	
PCB	Machined(2)	–	–	**82911685NPC**(1)	**82911684NPC**(1)	–	–

(1): Example of plating, for other plating see page 129 (2): for dimensions see pages 136 or 137

Electrical characteristics

UL	CSA	IEC
44A 600V with AWG8 wire	34A 600V with AWG8 wire	40A 300V 4kV 3

UTGX 142G1 derating curves



Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 8.37 mm²

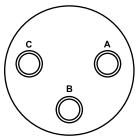
Derating curves based on continuous current application.



Connector part number

UTGX 12E3/12D3

2 contacts
13A/600V
per UL 1977
with AWG16 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Handsolder electrical contacts loaded see page 32	Square flange receptacle	Without (Fig. 1)	**UTGX012E3P**	**UTGX012E3S**
	Plug	Without (Fig. 2)	**UTGX612E3P**	**UTGX612E3S**
		Cable gland (Fig. 3)	**UTGX6JC12E3P**	**UTGX6JC12E3S**
	Jam nut receptacle	Without (Fig. 4)	**UTGX712E3P**	**UTGX712E3S**
PCB contacts loaded see page 32	Square flange receptacle	Without (Fig. 2)	**UTGX012D3P**	**UTGX012D3S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig. 5)	**UTGX712D3P**	**UTGX712D3S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig. 6)	**UTGX712D3P32**	**UTGX712D3S32**

For discrimination/keying methods see page 154

Sealed unmated

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm^2)	Harmonized cable part number [1]	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	1.5	H05 VV - F 3x1.5	**HAUTGX12E3PST1M**	**HAUTGX12E3SST1M**
Right angle ending	Plug	1.5	H05 VV - F 3x1.5	**HAUTGX12E3PRA1M**	**HAUTGX12E3SRA1M**

(1) Other cable available on demand
* Other lengths available on demand
Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0

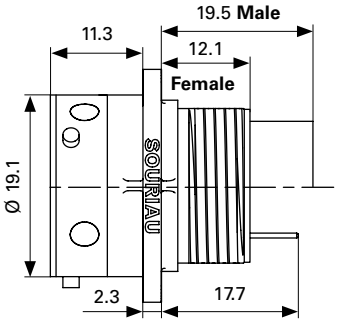
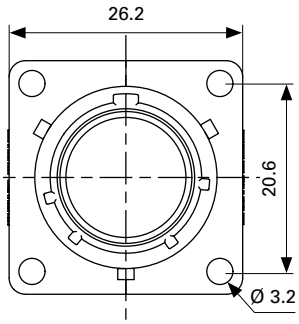


Fig. 1



Plug - UTGX6 & UTGX6JC

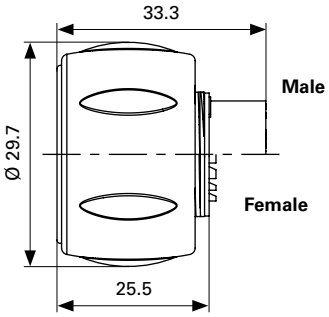


Fig. 2

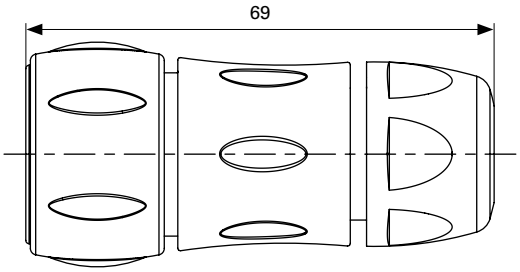


Fig. 3

Cable diameter acceptance: standard seal:
from 2.5 mm to 12 mm, reduced seal: from 3 mm to 9 mm

Jam nut receptacle UTGX7

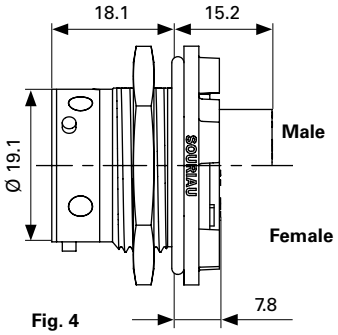


Fig. 4

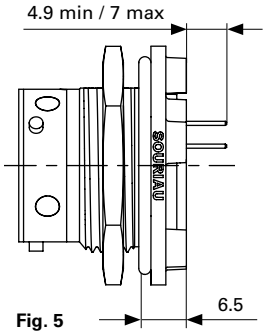


Fig. 5

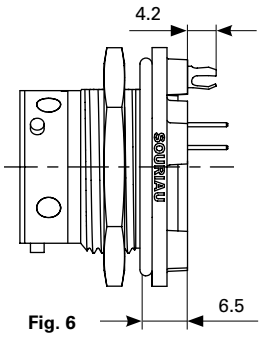
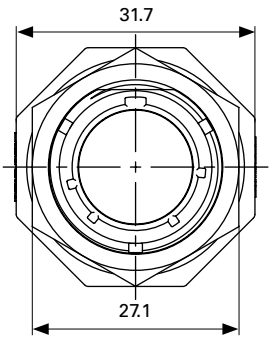
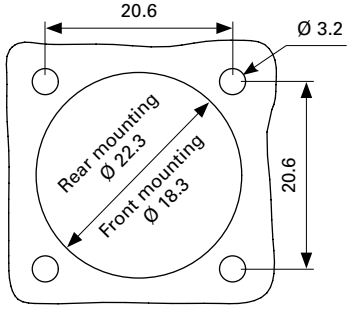


Fig. 6

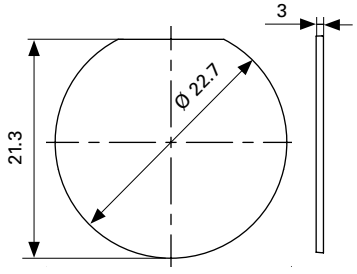


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX12DCG**
IP68/69K - Metal terminal	**UTGX12DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX12DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTGX612DCG**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005587A	**85005596**

Gasket



Part number
UTFD13B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX712CCRG**	**UTGX612CCRG**
Y for Yellow	**UTGX712CCRY**	**UTGX612CCRY**
R for Red	**UTGX712CCRR**	**UTGX612CCRR**

Contacts

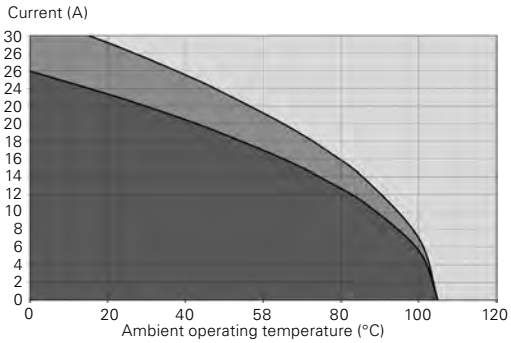
Contact size	Contact type	Plating	Cable acceptance (AWG)	Cable acceptance (mm²)	Wire stripping length
#16	Handsolder Loaded in the connector	Min 0.4µ gold over 0.8µ Ni	18 - 14	0.80 - 2.48	5 mm
	PCB Machined(1)	Min 0.4µ gold over 0.8µ Ni	–	–	–

(1): For dimensions see pages 136 or 137

Electrical characteristics

UL	CSA	IEC
13A 600V with AWG16 wire	13A 600V with AWG16 wire	16A 150V 2.5kV 3

UTGX 12E3/12D3 derating curves



Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 1.31 mm²

Derating curves based on continuous current application.

124 - 12E4/12D4 (Shell size 12, 3 + ground, 4x#16)



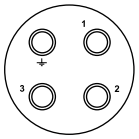
Connector part number

UTGX 124

3 contacts + ground
16A/500V
per UL 1977
with AWG14 wire

12E4/12D4

3 contacts + ground
13A/600V
per UL 1977
with AWG16 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Crimp contacts supplied separately see page 37	Square flange receptacle	Without (Fig. 1)	**UTGX0124P**	**UTGX0124S**
	Square flange receptacle	Cable gland (Fig. 2)	**UTGX0JC124P**	**UTGX0JC124S**
	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC124P**	**UTGX1JC124S**
	Plug	Without (Fig. 4)	**UTGX6124P**	**UTGX6124S**
		Cable gland (Fig. 5)	**UTGX6JC124P**	**UTGX6JC124S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX7124P**	**UTGX7124S**
Screw contacts loaded	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC124PSCR**	**UTGX1JC124SSCR**
	Plug	Cable gland (Fig. 5)	**UTGX6JC124PSCR**	**UTGX6JC124SSCR**
	Jam nut receptacle	Without (Fig. 9)	**UTGX7124PSCR**	**UTGX7124SSCR**
PCB contacts supplied separately see page 37	Square flange receptacle	Without (Fig. 1)	**UTGX0124P**	**UTGX0124S**
	Jam nut receptacle	Without (Fig. 7)	**UTGX7124P**	**UTGX7124S**
Handsolder electrical contacts loaded see page 37	Square flange receptacle	Without (Fig. 1)	**UTGX012E4P**	**UTGX012E4S**
	Plug	Without (Fig. 4)	**UTGX612E4P**	**UTGX612E4S**
		Cable gland (Fig. 5)	**UTGX6JC12E4P**	**UTGX6JC12E4S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX712E4P**	**UTGX712E4S**
PCB contacts loaded	Square flange receptacle	Without (Fig. 3)	**UTGX012D4P**	**UTGX012D4S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.7)	**UTGX712D4P**	**UTGX712D4S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig. 8)	**UTGX712D4P32**	**UTGX712D4S32**

Sealed unmated

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm²)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	1.5	H05 VV - F 4x1.5	**HAUTGX124PST1M**	**HAUTGX124SST1M**
				HAUTGX12E4PRA1M	**HAUTGX12E4SRA1M**
Right angle ending	Plug	1.5	H05 VV - F 4x1.5	**HAUTGX124PRA1M**	**HAUTGX124SRA1M**
				HAUTGX12E4PRA1M	**HAUTGX12E4SRA1M**

(1) Other cable available on demand

* Other lengths available on demand

Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0 and UTGX0JC

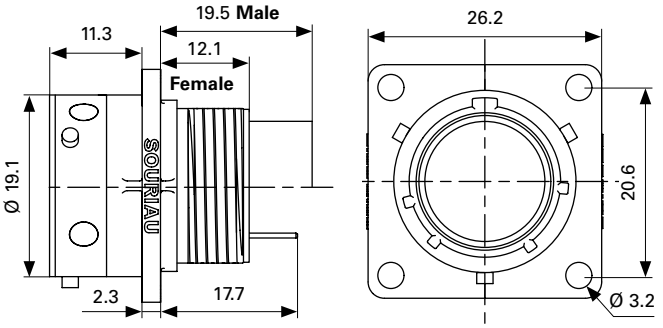


Fig. 1

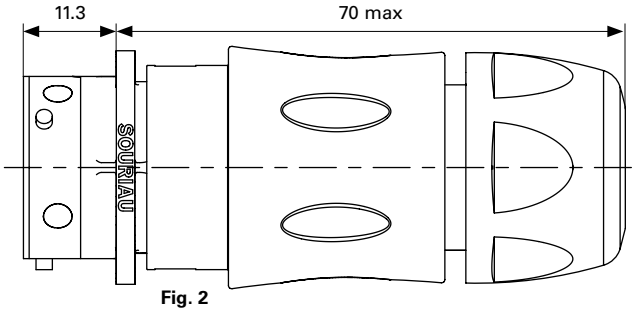


Fig. 2

Cable diameter acceptance: standard seal:
from 2.5 mm to 12 mm, reduced seal: from 3 mm to 9 mm

Free hanging - UTGX1JC

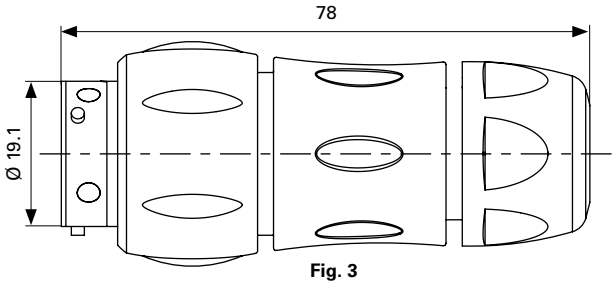


Fig. 3

Cable diameter acceptance: standard seal:
from 2.5 mm to 12 mm, reduced seal: from 3 mm to 9 mm

Plug - UTGX6 & UTGX6JC

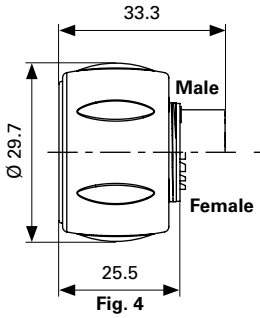


Fig. 4

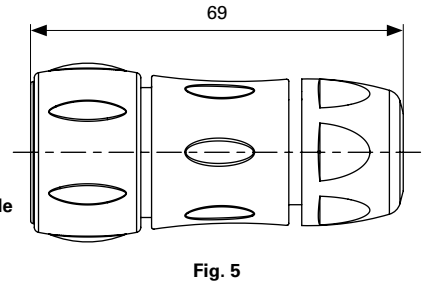


Fig. 5

Cable diameter acceptance: standard seal:
from 2.5 mm to 12 mm,
reduced seal: from 3 mm to 9 mm

Jam nut receptacle UTGX7

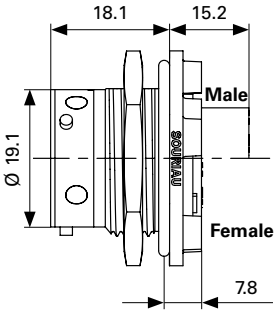


Fig. 6

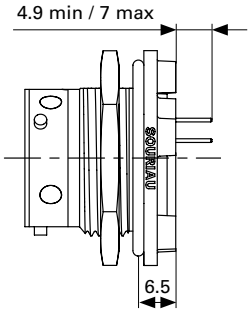


Fig. 7

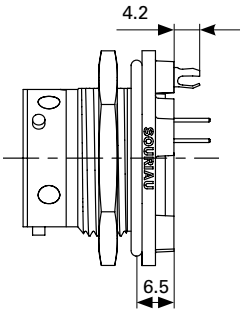


Fig. 8

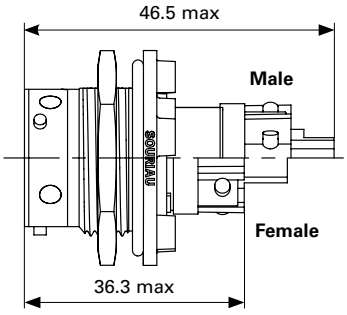
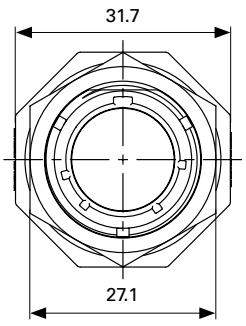
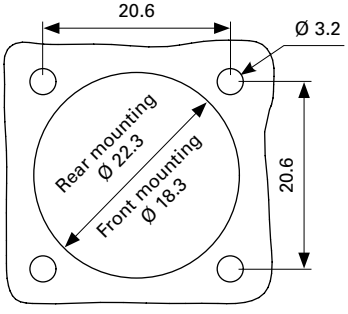


Fig. 9

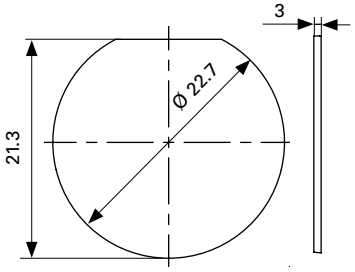


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX12DCG**
IP68/69K - Metal terminal	**UTGX12DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX12DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTGX612DCG**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005587A	**85005596**

Gasket



Part number
UTFD13B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX712CCRG**	**UTGX612CCRG**
Y for Yellow	**UTGX712CCRY**	**UTGX612CCRY**
R for Red	**UTGX712CCRR**	**UTGX612CCRR**

Tooling

Tooling



Description	Part number
Handle (without head)	**Shandles**
Box containing handle and several crimp tooling	**Toolkit**

Crimp tooling
(without Shandles)





Contact size	Contacts	Part number of Head
Standard contacts #16 Ø 1.6 mm	**RM/RC 28M1K(1)**	**S16RCM20***
	RM/RC 24M9K(1)	**S16RCM20***
	RM/RC 20M13K(1)	**S16RCM20***
	RM/RC 20M12K(1)	**S16RCM20***
	RM/RC 16M23K(1)	**S16RCM16***
	RM/RC 14M30K(1)	**S16RCM14***
	SM/SC 24ML1TK6(1)	**S16SCM20***
	SM/SC 20ML1TK6(1)	**S16SCM20***
	SM/SC 16ML1TK6(1)	**S16SCML1***
	SM/SC 14ML1TK6(1)	**S16SCML1***
	SM/SC 16ML11TK6(1)	**S16SCML11***

(1): Example of plating, for other plating options see page 129

* Heads to be used with handle PN: SHANDLES

Extraction tool #16

Fig. 1



Fig. 2



Description	Part number
Fig. 1	**RX2025GE1**
Fig. 2 - Long endurance tool	**RX2031J**

Contacts #16

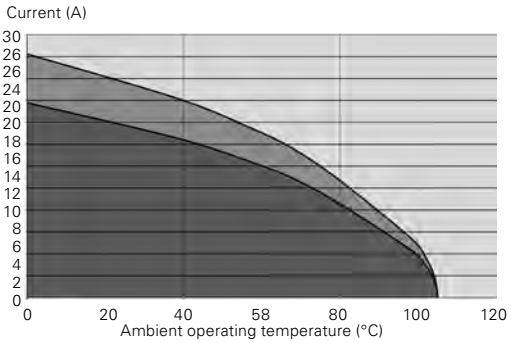
Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	30-26	0.48-0.08	**RM28M1K**(1)	**RC28M1K**(1)	0.55	1.00
		26-24	0.13-0.25	**RM24M9K**(1)	**RC24M9K**(1)	0.80	1.58
		20-20	0.32-0.52	**RM20M13K**(1)	**RC20M13K**(1)	1.15	1.80
		20-20	0.32-0.52	**RM20M12K**(1)	**RC20M12K**(1)	1.15	2.20
		20-16	0.52-1.48	**RM16M23K**(1)	**RC16M23K**(1)	1.80	3.20
		16-14	1.48-2.48	**RM14M30K**(1)	**RC14M30K**(1)	2.30	3.20
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24M1TK6**(1)(2)	**SC24M1TK6**(1)(2)	–	0.90-1.58
		20-20	0.32-0.52	**SM20M1TK6**(1)(2)	**SC20M1TK6**(1)(2)	–	1.20-2.10
		18-16	0.80-1.48	**SM16M1TK6**(1)(2)	**SC16M1TK6**(1)(2)	–	3.20
		18-16	0.80-1.48	**SM16M11TK6**(1)(2)	**SC16M11TK6**(1)(2)	–	3.00
		14	2.48	**SM14M1TK6**(1)(2)	**SC14M1TK6**(1)(2)	–	3.20
PCB	Machined(3)	–		**RM20M12E83K**(1)	**RC20M12E84K**(1)		–
Coaxial	Cable multipiece	see pages 133 to 134		**RMDXK10D28**	**RCDXK1D28**	–	–
	Cable monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
	Twisted pair multipiece			**RMDXK10D28 + yorx090**	**RCDXK1D28 + yorx090**	–	–
	Twisted pair monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
Fiber optic	POF contacts (Plastic Optical Fiber)	–		**RMPOF1000**	**RCPOF1000B**	–	–
Handsolder	Loaded in the connector	14-18	2.48-0.80	–	–	–	–

(1): Example of plating, for other plating see page 129
(2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20M1TK6 becomes SM20ML1TK6
(3): for dimensions see pages 136 or 137

Electrical characteristics

UL	CSA	IEC
UTGX 124		
16A 500V with AWG14 wire	16A 500V with AWG14 wire	16A 150V 2.5kV 3 temperature elevation: 50°C
UTGX 12E4/12D4		
13A 600V with AWG16 wire	13A 600V with AWG16 wire	16A 150V 2.5kV 3 temperature elevation: 50°C

UTGX 124 - 12E4/12D4 derating curves



Derating curves based on continuous current application.

Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 1.31 mm²

Connectors

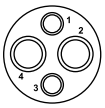
102W2 (Shell size 10, 2x#20, 2x12)



Connector part number

UTGX 102W2

4 contacts
26A/600V per UL1977 with AWG12 wire
7.5A/250V per UL1977 with AWG20 wire
(qualification pending)



Contact type	Connector type	Backshell	Part number Male insert	Part number Female insert
Crimp contacts supplied separately see page 42	Square flange receptacle	Without (Fig. 1)	**UTGX0102W2P**	**UTGX0102W2S**
	Square flange receptacle	Cable gland (Fig. 2)	**UTGX0JC102W2P**	**UTGX0JC102W2S**
	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC102W2P**	**UTGX1JC102W2S**
	Plug	Without (Fig. 4)	**UTGX6102W2P**	**UTGX6102W2S**
		Cable gland (Fig. 5)	**UTGX6JC102W2P**	**UTGX6JC102W2S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX7102W2P**	**UTGX7102W2S**

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0 and UTGX0JC

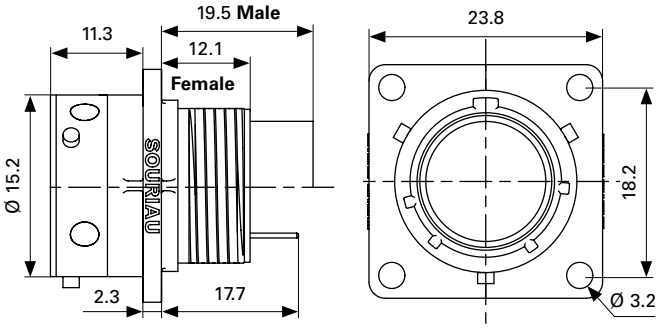


Fig. 1

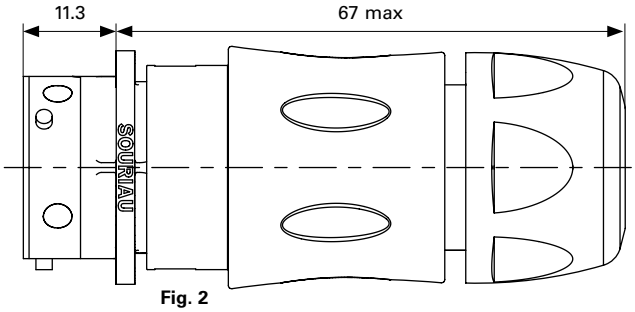


Fig. 2

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm, reduced seal: from 1.5 mm to 5 mm

Free hanging - UTGX1JC

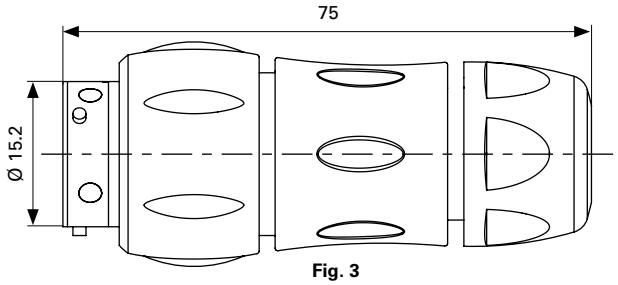


Fig. 3

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm, reduced seal: from 1.5 mm to 5 mm

Plug - UTGX6 & UTGX6JC

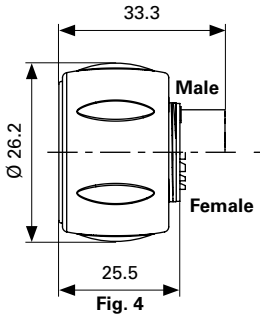


Fig. 4

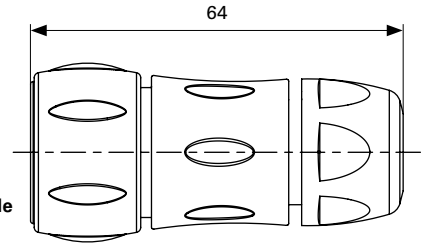


Fig. 5

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm,
reduced seal: from 1.5 mm to 5 mm

Jam nut receptacle UTGX7

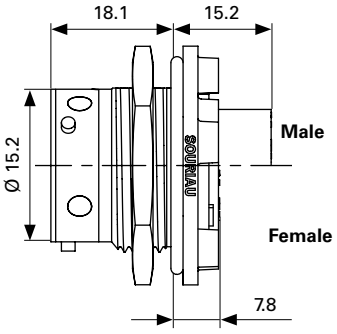
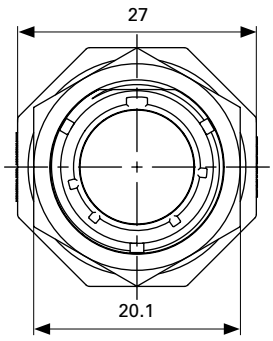
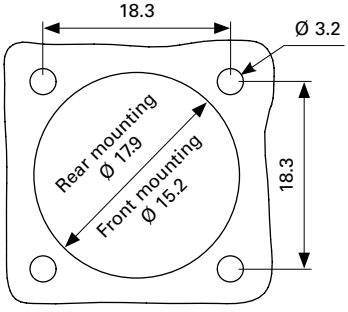


Fig. 6

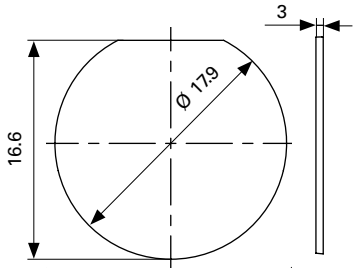


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Connectors

102W2 (Shell size 10, 2x#20, 2x12)

Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX10DCG**
IP68/69K - Metal terminal	**UTGX10DCGR**

Plug sealing cap



Description	Part number
IP68/69K	**UTGX610DCG**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005586A	**85005595**

Gasket



Part number
UTFD12B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX710CCRG**	**UTGX610CCRG**
Y for Yellow	**UTGX710CCRY**	**UTGX610CCRY**
R for Red	**UTGX710CCRR**	**UTGX610CCRR**

Tooling

Tooling





Description	Part number
Handle (without head)	**Shandles**
Box containing handle and several crimp tooling	**Toolkit**

Crimp tooling
(without Shandles)





Contact size	Contacts	Part number of Head
Standard contacts #20 Ø 1 mm	**RM/RC 24W3K**(1)	**S20RCM***
	RM/RC 20W3K(1)	**S20RCM***
	RM/RC 18W3K(1)	**S20RCM***
	SM/SC 24WL3(1)(2)	**S20SCM20***
	SM/SC 20WL3(1)(2)	**S20SCM20***

(1): Example of plating, for other plating options see page 129
(2): Loose contact
* Heads to be used with handle PN: SHANDLES

Crimp tooling #12



Contact size	Part number hand tool	Part number positioner + locator setting
Standard contacts #12 Ø 2.4 mm	**M317**	**VGE10077A**

Extraction tool

Fig. 1



Fig. 2



Description	Part number
Fig. 1 - Contacts #20	**RX20D44**
Fig. 2 - Contacts #12	**51060210924**

102W2 (Shell size 10, 2x#20, 2x12)

Contacts #20

Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	26-24	0.13-0.25	**RM24W3K**	**RC24W3K**	0.80	1.58
		20-20	0.32-0.52	**RM20W3K**	**RC20W3K**	1.15	1.80
		20-18	0.52-0.80	**RM18W3K**	**RC18W3K**	1.30	2.10
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24W3TK6(1)(2)**	**SC24W3TK6(1)(2)**	–	0.90-1.58
		26-24	0.13-0.25	**SM24W3S26(1)(2)**	**SC24W3S25(1)(2)**	–	0.90-1.58
		20-20	0.32-0.52	**SM20W3TK6(1)(2)**	**SC20W3TK6(1)(2)**	–	1.20-2.10
		20-20	0.32-0.52	**SM20W3S26(1)(2)**	**SC20W3S25(1)(2)**	–	1.20-2.10

(1): Example of plating, for other plating see page 129 (2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20W3TK6 becomes SM20WL3TK6

Contacts #12

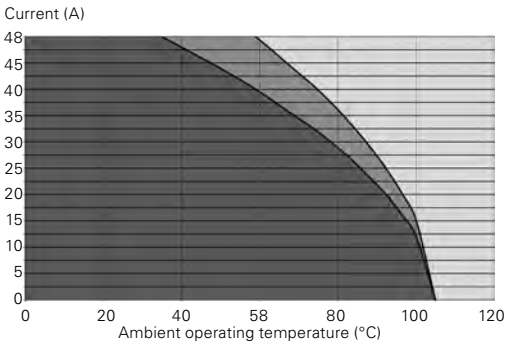
Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	20	0.52	**82911457NA**	**82911456A**	0.87	4.90
		20	0.52	**82911459NA**	**82911458A**	1.12	
		18	0.80	**82911461NA**	**82911460A**	1.42	
		16	1.48	**82911463NA**	**82911462A**	1.72	
		14	2.48	**82911465NA**	**82911464A**	2.20	
		12	4.00	**82911467NA**	**82911466A**	2.82	

Electrical characteristics

UL	CSA	IEC
26A 600V with AWG12* 7.5A 250V with AWG20*	20A 600V with AWG12* 2.5A 250V with AWG20*	25A 150V 2.5kV 3 temperature elevation: 50°C

* qualification pending

UTGX 102W2 derating curves



Derating curves based on continuous current application.

Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

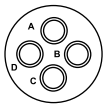
Wires used: 0.518 mm²



Connector part number

UTGX 104

4 contacts
10A/500V
per UL 1977 with
AWG16 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Crimp contacts supplied separately see page 47	Square flange receptacle	Without (Fig. 1)	**UTGX0104P**	**UTGX0104S**
	Square flange receptacle	Cable gland (Fig. 2)	**UTGX0JC104P**	**UTGX0JC104S**
	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC104P**	**UTGX1JC104S**
	Plug	Without (Fig. 4)	**UTGX6104P**	**UTGX6104S**
		Cable gland (Fig. 5)	**UTGX6JC104P**	**UTGX6JC104S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX7104P**	**UTGX7104S**
PCB contacts supplied separately see page 47	Jam nut receptacle	Without (Fig. 7)	**UTGX7104P**	**UTGX7104S**

For discrimination/keying methods see page 154

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm²)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	1.5	H05 VV - F 4x1.5	**HAUTGX104PST1M**	**HAUTGX104SST1M**
Right angle ending	Plug	1.5	H05 VV - F 4x1.5	**HAUTGX104PRA1M**	**HAUTGX104SRA1M**

(1) Other cable available on demand
* Other lengths available on demand
Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0 and UTGX0JC

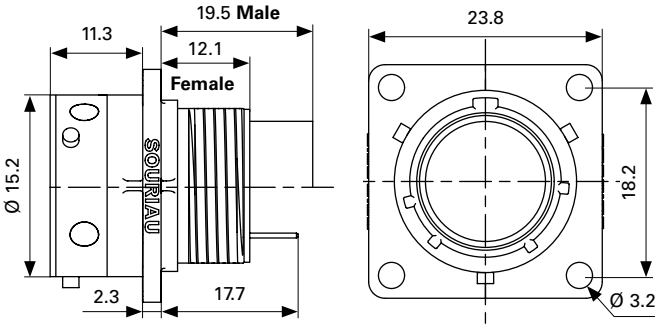


Fig. 1

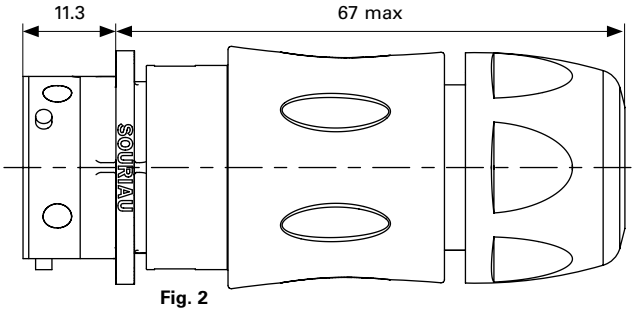


Fig. 2

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm, reduced seal: from 1.5 mm to 5 mm

Free hanging - UTGX1JC

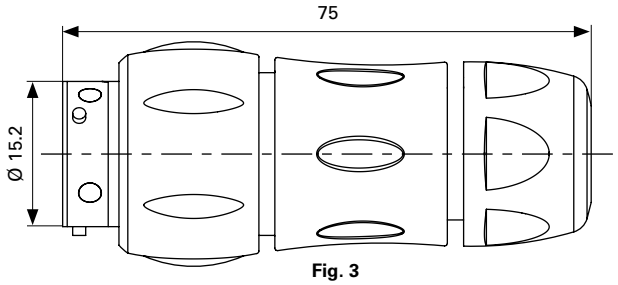


Fig. 3

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm, reduced seal: from 1.5 mm to 5 mm

Plug - UTGX6 & UTGX6JC

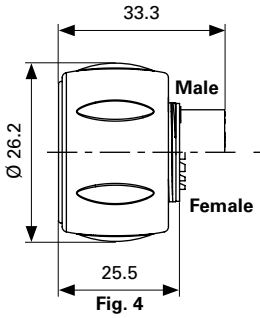


Fig. 4

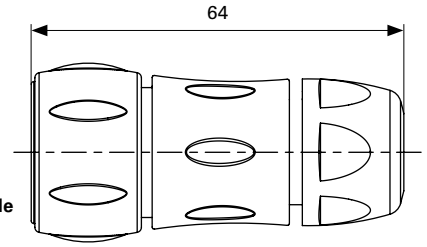


Fig. 5

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm,
reduced seal: from 1.5 mm to 5 mm

Jam nut receptacle UTGX7

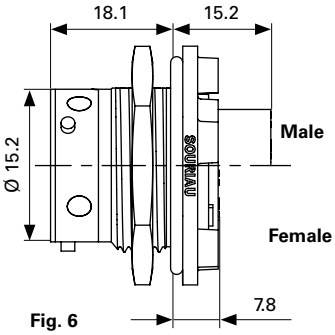


Fig. 6

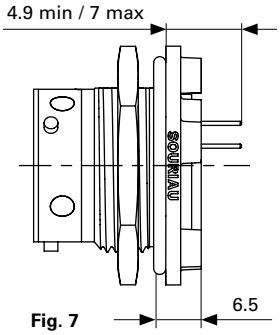
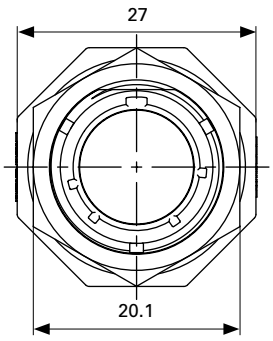
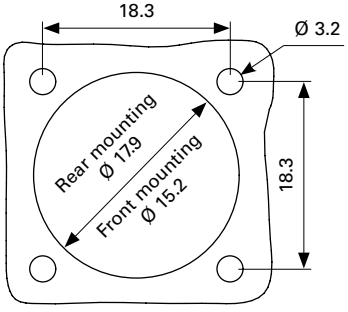


Fig. 7

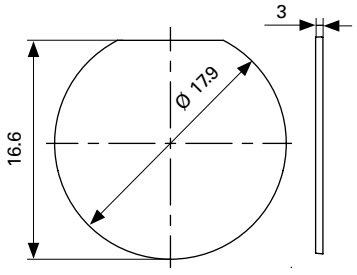


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX10DCG**
IP68/69K - Metal terminal	**UTGX10DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX10DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTGX610DCG**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005586A	**85005595**

Gasket



Part number
UTFD12B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX710CCRG**	**UTGX610CCRG**
Y for Yellow	**UTGX710CCRY**	**UTGX610CCRY**
R for Red	**UTGX710CCRR**	**UTGX610CCRR**

Tooling

Tooling



Description	Part number
Handle (without head)	**Shandles**
Box containing handle and several crimp tooling	**Toolkit**

Crimp tooling
(without Shandles)





Contact size	Contacts	Part number of Head
Standard contacts #16 Ø 1.6 mm	**RM/RC 28M1K(1)**	**S16RCM20***
	RM/RC 24M9K(1)	**S16RCM20***
	RM/RC 20M13K(1)	**S16RCM20***
	RM/RC 20M12K(1)	**S16RCM20***
	RM/RC 16M23K(1)	**S16RCM16***
	RM/RC 14M30K(1)	**S16RCM14***
	SM/SC 24ML1TK6(1)	**S16SCM20***
	SM/SC 20ML1TK6(1)	**S16SCM20***
	SM/SC 16ML1TK6(1)	**S16SCML1***
	SM/SC 14ML1TK6(1)	**S16SCML1***
	SM/SC 16ML11TK6(1)	**S16SCML11***

(1): Example of plating, for other plating options see page 129

* Heads to be used with handle PN: SHANDLES

Extraction tool #16

Fig. 1



Fig. 2



Description	Part number
Fig. 1	**RX2025GE1**
Fig. 2 - Long endurance tool	**RX2031J**

Contacts #16

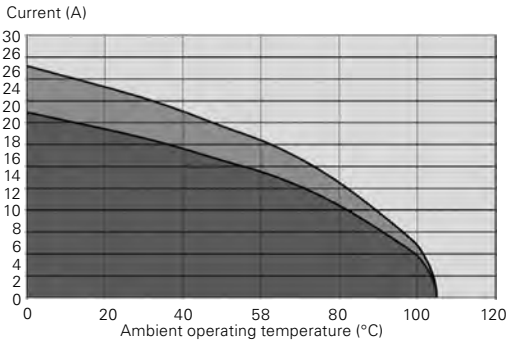
Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	30-26	0.48-0.08	**RM28M1K**(1)	**RC28M1K**(1)	0.55	1.00
		26-24	0.13-0.25	**RM24M9K**(1)	**RC24M9K**(1)	0.80	1.58
		20-20	0.32-0.52	**RM20M13K**(1)	**RC20M13K**(1)	1.15	1.80
		20-20	0.32-0.52	**RM20M12K**(1)	**RC20M12K**(1)	1.15	2.20
		20-16	0.52-1.48	**RM16M23K**(1)	**RC16M23K**(1)	1.80	3.20
		16-14	1.48-2.48	**RM14M30K**(1)	**RC14M30K**(1)	2.30	3.20
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24M1TK6**(1)(2)	**SC24M1TK6**(1)(2)	–	0.90-1.58
		20-20	0.32-0.52	**SM20M1TK6**(1)(2)	**SC20M1TK6**(1)(2)	–	1.20-2.10
		18-16	0.80-1.48	**SM16M1TK6**(1)(2)	**SC16M1TK6**(1)(2)	–	3.20
		18-16	0.80-1.48	**SM16M11TK6**(1)(2)	**SC16M11TK6**(1)(2)	–	3.00
		14	2.48	**SM14M1TK6**(1)(2)	**SC14M1TK6**(1)(2)	–	3.20
PCB	Machined (3)	–		**RM20M12E83K**(1)	**RC20M12E84K**(1)		–
Coaxial	Cable multipiece	see pages 133 to 134		**RMDXK10D28**	**RCDXK1D28**	–	–
	Cable monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
	Twisted pair multipiece			**RMDXK10D28 + yorx090**	**RCDXK1D28 + yorx090**	–	–
	Twisted pair monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
Fiber optic	POF contacts (Plastic Optical Fiber)	–		**RMPOF1000**	**RCPOF1000B**	–	–

(1): Example of plating, for other plating see page 129
(2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20M1TK6 becomes SM20ML1TK6
(3): for dimensions see pages 136 or 137

Electrical characteristics

UL	CSA	IEC
10A 500V with AWG16 wire	7A 500V with AWG16 wire	13A 150V 2.5kV 3

UTGX 104 derating curves



Derating curves based on continuous current application.

Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 1.31 mm²

Connectors

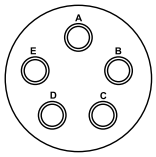
14E5/14D5 (Shell size 14, 5x#16)



Connector part number

UTGX 14E5/14D5

5 contacts
12A/600V
per UL 1977
with AWG16 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Handsolder electrical contacts loaded see page 51	Square flange receptacle	Without (Fig. 1)	**UTGX014E5P**	**UTGX014E5S**
	Plug	Without (Fig. 2)	**UTGX614E5P**	**UTGX614E5S**
		Cable gland (Fig. 3)	**UTGX6JC14E5P**	**UTGX6JC14E5S**
	Jam nut receptacle	Without (Fig. 4)	**UTGX714E5P**	**UTGX714E5S**
PCB contacts loaded see page 51	Square flange receptacle	Without (Fig. 2)	**UTGX014D5P**	**UTGX014D5S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig. 5)	**UTGX714D5P**	**UTGX714D5S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig. 6)	**UTGX714D5P32**	**UTGX714D5S32**

For discrimination/keying methods see page 154

Sealed unmated

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm^2)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	1.5	H05 VV - F 5x1.5	**HAUTGX14E5PST1M**	**HAUTGX14E5SST1M**
Right angle ending	Plug	1.5	H05 VV - F 5x1.5	**HAUTGX14E5PRA1M**	**HAUTGX14E5SRA1M**

(1) Other cable available on demand
* Other lengths available on demand
Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0

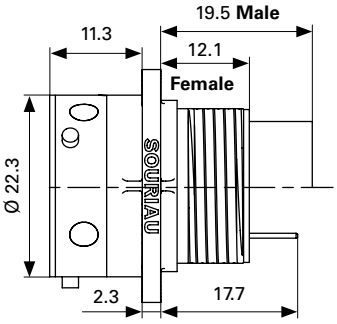
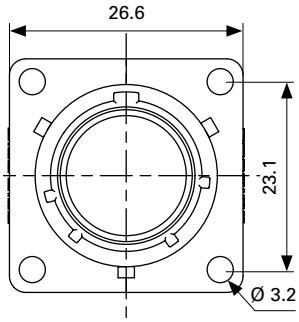


Fig. 1



Plug - UTGX6 & UTGX6JC

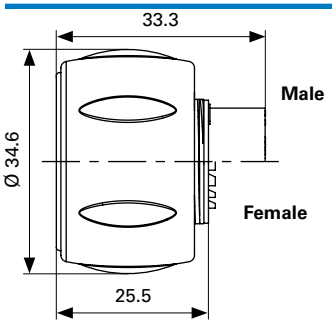


Fig. 2

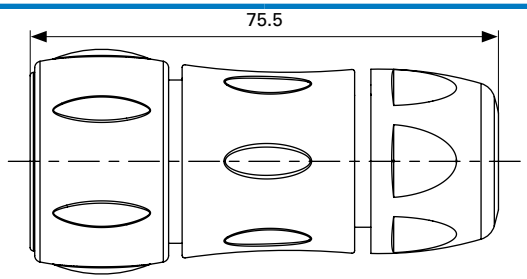


Fig. 3

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Jam nut receptacle UTGX7

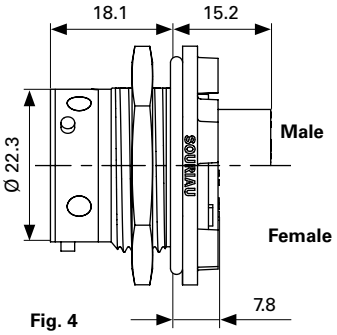


Fig. 4

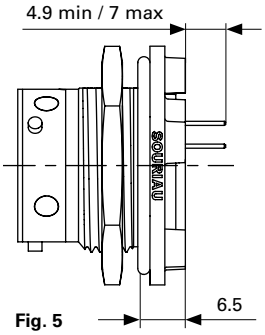


Fig. 5

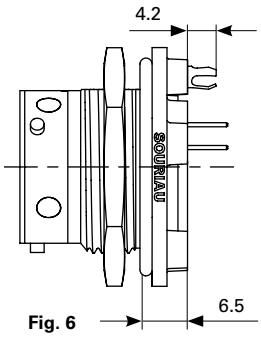
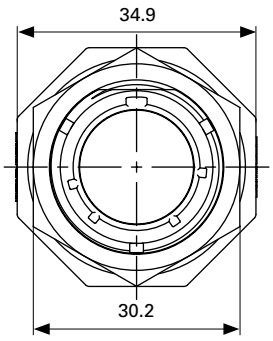
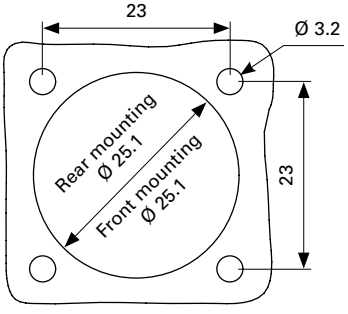


Fig. 6

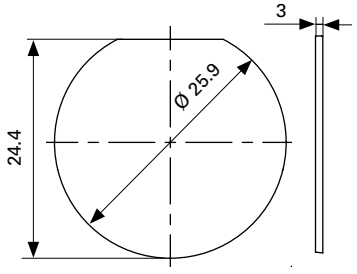


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Connectors

14E5/14D5 (Shell size 14, 5x#16)

Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX14DCG**
IP68/69K - Metal terminal	**UTGX14DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX14DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTS614DCG133**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005588A	**85005597**

Gasket



Part number
UTFD14B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX714CCRG**	**UTGX614CCRG**
Y for Yellow	**UTGX714CCRY**	**UTGX614CCRY**
R for Red	**UTGX714CCRR**	**UTGX614CCRR**

Contacts

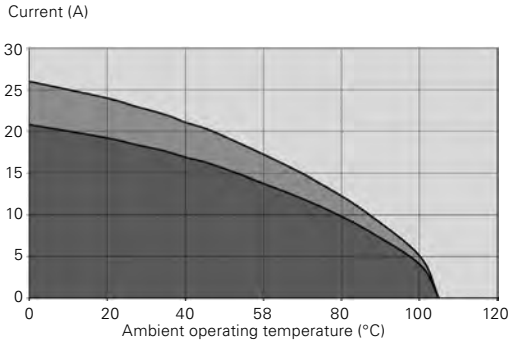
Contact size	Contact type	Plating	Cable acceptance (AWG)	Cable acceptance (mm²)	Wire stripping length
#16	Handsolder Loaded in the connector	Min 0.4µ gold over 0.8µ Ni	18 - 14	0.823 - 2.08	5 mm
	PCB Machined(1)	Min 0.4µ gold over 0.8µ Ni	–	–	–

(1): For dimensions see pages 136 or 137

Electrical characteristics

UL	CSA	IEC
12A 600V with AWG16 wire	12A 600V with AWG16 wire	16A 150V 2.5kV 3

UTGX 14E5/14D5 derating curves



Derating curves based on continuous current application.

Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 1.31 mm²

Connectors

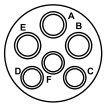
103W3 (Shell size 10, 3x#20, 3x16)



Connector part number

UTGX 103W3

6 contacts
13A/500V per UL1977 with AWG16 wire
7.5A/250V per UL1977 with AWG20 wire
(qualification pending)



			Part number	
Contact type	**Connector type**	**Backshell**	**Male insert**	**Female insert**
Crimp contacts supplied separately see page 56	Square flange receptacle	Without (Fig. 1)	**UTGX0103W3P**	**UTGX0103W3S**
	Square flange receptacle	Cable gland (Fig. 2)	**UTGX0JC103P**	**UTGX0JC103S**
	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC103W3P**	**UTGX1JC103W3S**
	Plug	Without (Fig. 4)	**UTGX6103W3P**	**UTGX6103W3S**
		Cable gland (Fig. 5)	**UTGX6JC103W3P**	**UTGX6JC103W3S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX7103W3P**	**UTGX7103W3S**
PCB contacts supplied separately see page 56	Jam nut receptacle with stand off and without hold down clip	Without (Fig. 7)	**UTGX7103W3P**	**UTGX7103W3S**

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0 and UTGX0JC

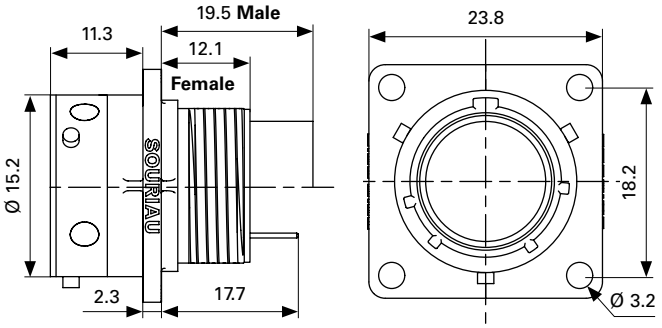


Fig. 1

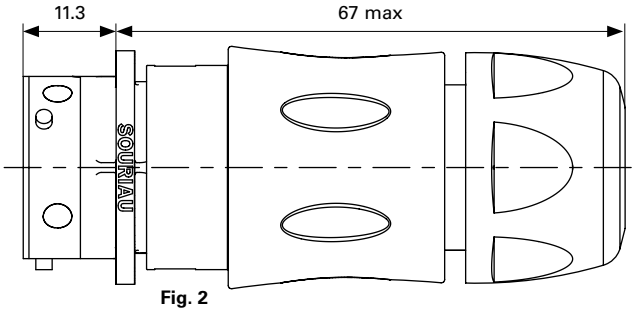


Fig. 2

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm, reduced seal: from 1.5 mm to 5 mm

Free hanging - UTGX1JC

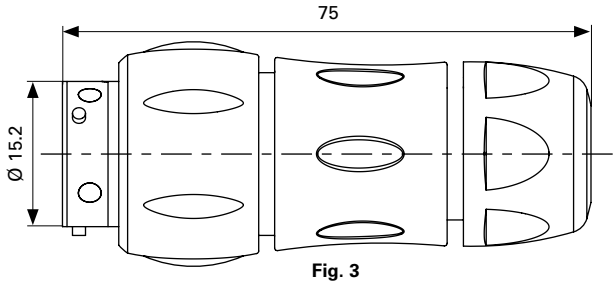


Fig. 3

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm, reduced seal: from 1.5 mm to 5 mm

Plug - UTGX6 & UTGX6JC

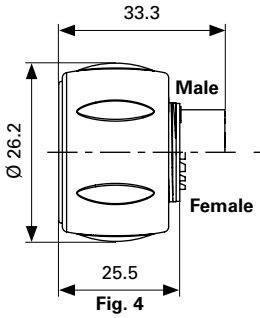


Fig. 4

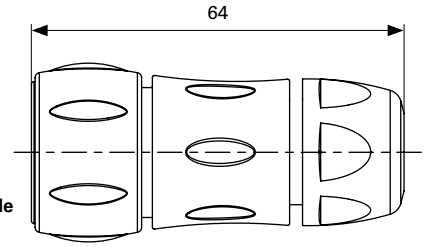


Fig. 5

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm,
reduced seal: from 1.5 mm to 5 mm

Jam nut receptacle UTGX7

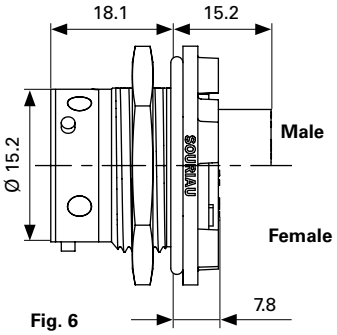


Fig. 6

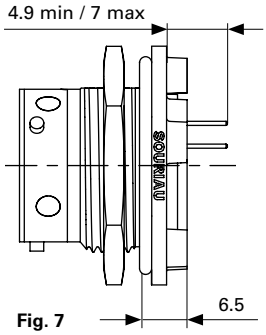
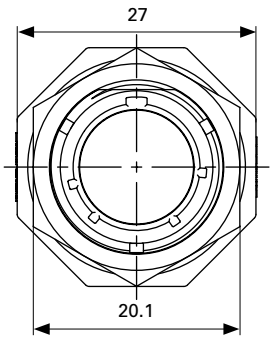
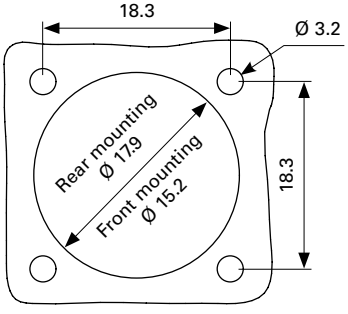


Fig. 7

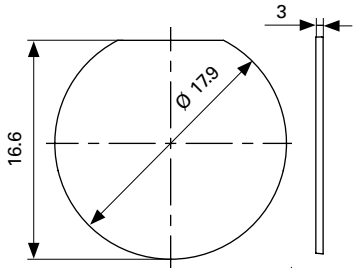


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Connectors

103W3 (Shell size 10, 3x#20, 3x16)

Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX10DCG**
IP68/69K - Metal terminal	**UTGX10DCGR**

Plug sealing cap



Description	Part number
IP68/69K	**UTGX610DCG**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005586A	**85005595**

Gasket



Part number
UTFD12B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX710CCRG**	**UTGX610CCRG**
Y for Yellow	**UTGX710CCRY**	**UTGX610CCRY**
R for Red	**UTGX710CCRR**	**UTGX610CCRR**

Tooling

Tooling





Description	Part number
Handle (without head)	**Shandles**
Box containing handle and several crimp tooling	**Toolkit**

Crimp tooling
(without Shandles)





Contact size	Contacts	Part number of Head
Standard contacts #16 Ø 1.6 mm	**RM/RC 28M1K**(1)	**S16RCM20***
	RM/RC 24M9K(1)	**S16RCM20***
	RM/RC 20M13K(1)	**S16RCM20***
	RM/RC 20M12K(1)	**S16RCM20***
	RM/RC 16M23K(1)	**S16RCM16***
	RM/RC 14M30K(1)	**S16RCM14***
	SM/SC 24ML1TK6(1)	**S16SCM20***
	SM/SC 20ML1TK6(1)	**S16SCM20***
	SM/SC 16ML1TK6(1)	**S16SCML1***
	SM/SC 14ML1TK6(1)	**S16SCML1***
	SM/SC 16ML11TK6(1)	**S16SCML11***
Standard contacts #20 Ø 1 mm	**RM/RC 24W3K**(1)	**S20RCM***
	RM/RC 20W3K(1)	**S20RCM***
	RM/RC 18W3K(1)	**S20RCM***
	SM/SC 24WL3(1)(2)	**S20SCM20***
	SM/SC 20WL3(1)(2)	**S20SCM20***

(1): Example of plating, for other plating options see page 129
(2): Loose contact
* Heads to be used with handle PN: SHANDLES

Extraction tool #16

Fig. 1



Fig. 2



Description	Part number
Fig. 1	**RX2025GE1**
Fig. 2 - Long endurance tool	**RX2031J**

103W3 (Shell size 10, 3x#20, 3x16)

Contacts #16

Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	30-26	0.48-0.08	**RM28M1K**(1)	**RC28M1K**(1)	0.55	1.00
		26-24	0.13-0.25	**RM24M9K**(1)	**RC24M9K**(1)	0.80	1.58
		20-20	0.32-0.52	**RM20M13K**(1)	**RC20M13K**(1)	1.15	1.80
		20-20	0.32-0.52	**RM20M12K**(1)	**RC20M12K**(1)	1.15	2.20
		20-16	0.52-1.48	**RM16M23K**(1)	**RC16M23K**(1)	1.80	3.20
		16-14	1.48-2.48	**RM14M30K**(1)	**RC14M30K**(1)	2.30	3.20
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24M1TK6**(1)(2)	**SC24M1TK6**(1)(2)	–	0.90-1.58
		20-20	0.32-0.52	**SM20M1TK6**(1)(2)	**SC20M1TK6**(1)(2)	–	1.20-2.10
		18-16	0.80-1.48	**SM16M1TK6**(1)(2)	**SC16M1TK6**(1)(2)	–	3.20
		18-16	0.80-1.48	**SM16M11TK6**(1)(2)	**SC16M11TK6**(1)(2)	–	3.00
		14	2.48	**SM14M1TK6**(1)(2)	**SC14M1TK6**(1)(2)	–	3.20
PCB	Machined(3)	–		**RM20M12E83K**(1)	**RC20M12E84K**(1)		–
Coaxial	Cable multipiece	see pages 133 to 134		**RMDXK10D28**	**RCDXK1D28**	–	–
	Cable monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
	Twisted pair multipiece			**RMDXK10D28 + yorx090**	**RCDXK1D28 + yorx090**	–	–
	Twisted pair monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
Fiber optic	POF contacts (Plastic Optical Fiber)	–		**RMPOF1000**	**RCPOF1000B**	–	–

(1): Example of plating, for other plating see page 129
(2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20M1TK6 becomes SM20ML1TK6
(3): for dimensions see pages 136 or 137

Contacts #20

Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	26-24	0.13-0.25	**RM24W3K**	**RC24W3K**	0.80	1.58
		20-20	0.32-0.52	**RM20W3K**	**RC20W3K**	1.15	1.80
		20-18	0.52-0.80	**RM18W3K**	**RC18W3K**	1.30	2.10
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24W3TK6**(1)(2)	**SC24W3TK6**(1)(2)	–	0.90-1.58
		26-24	0.13-0.25	**SM24W3S26**(1)(2)	**SC24W3S25**(1)(2)	–	0.90-1.58
		20-20	0.32-0.52	**SM20W3TK6**(1)(2)	**SC20W3TK6**(1)(2)	–	1.20-2.10
		20-20	0.32-0.52	**SM20W3S26**(1)(2)	**SC20W3S25**(1)(2)	–	1.20-2.10

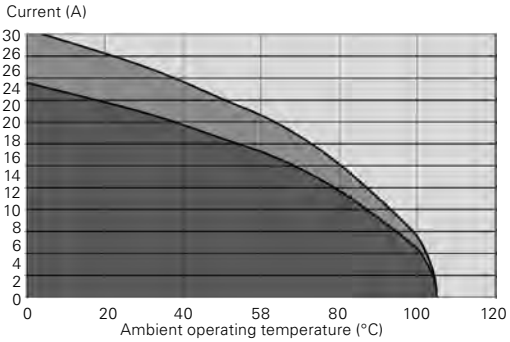
(1): Example of plating, for other plating see page 129
(2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20W3TK6 becomes SM20WL3TK6

Electrical characteristics

UL	CSA	IEC
13A 500V with AWG 16* 7.5A 250V with AWG20*	7A 500V with AWG 16* 2.5A 250V with AWG20*	5A 32V 1.5kV 3 temperture elevation: 50°C

*qualification pending

UTGX 103W3 derating curves



Derating curves based on continuous current application.

Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 1.31 mm²
Wires used: 0.518 mm²

Connectors

106 - 10E6/10D6 (Shell size 10, 6x#20)



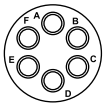
Connector part number

UTGX 106

6 contacts
4.5A/250V
per UL 1977 with
AWG20 wire

10E6/10D6

6 contacts
6A/250V
per UL 1977 with
AWG20 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Crimp contacts supplied separately see page 62	Square flange receptacle	Without (Fig. 1)	**UTGX0106P**	**UTGX0106S**
	Square flange receptacle	Cable gland (Fig. 2)	**UTGX0JC106P**	**UTGX0JC106S**
	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC106P**	**UTGX1JC106S**
	Plug	Without (Fig. 4)	**UTGX6106P**	**UTGX6106S**
		Cable gland (Fig. 5)	**UTGX6JC106P**	**UTGX6JC106S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX7106P**	**UTGX7106S**
PCB contacts supplied separately see page 62	Jam nut receptacle	Without (Fig. 7)	**UTGX7106P**	**UTGX7106S**
Handsolder electrical contacts loaded	Square flange receptacle	Without (Fig. 1)	**UTGX010E6P**	**UTGX010E6S**
	Plug	Without (Fig. 4)	**UTGX610E6P**	**UTGX610E6S**
		Cable gland (Fig. 5)	**UTGX6JC10E6P**	**UTGX6JC10E6S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX710E6P**	**UTGX710E6S**
PCB contacts supplied separately see page 62	Jam nut receptacle	Without (Fig.7)	**UTGX710E6P**	**UTGX710E6S**
PCB contacts loaded see page 62	Square flange receptacle	Without (Fig.1)	**UTGX010D6P**	**UTGX010D6S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.8)	**UTGX710D6P**	**UTGX710D6S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig.8)	**UTGX710D6P32**	**UTGX710D6S32**

For discrimination/keying methods see page 154

Sealed unmated

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm²)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	0.5	H05 VV - F 6x0.5	**HAUTGX106PST1M**	**HAUTGX106SST1M**
				HAUTGX10E6PRA1M	**HAUTGX10E6SRA1M**
Right angle ending	Plug	0.5	H05 VV - F 6x0.5	**HAUTGX106PRA1M**	**HAUTGX106SRA1M**
				HAUTGX106EPRA1M	**HAUTGX10E6SRA1M**

(1) Other cable available on demand

* Other lengths available on demand

Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0 and UTGX0JC

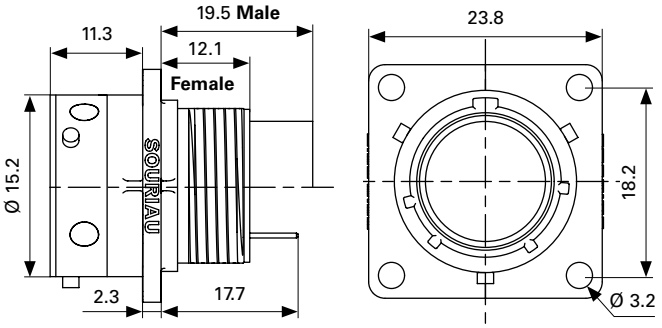


Fig. 1

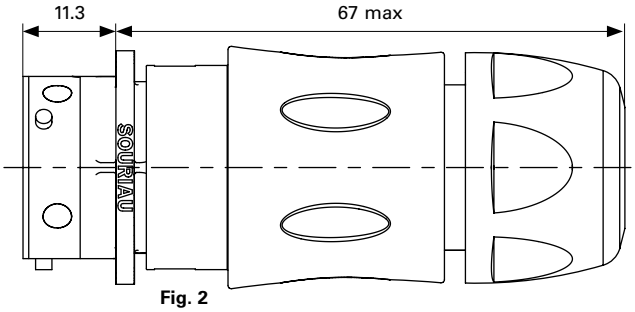


Fig. 2

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm, reduced seal: from 1.5 mm to 5 mm

Free hanging - UTGX1JC

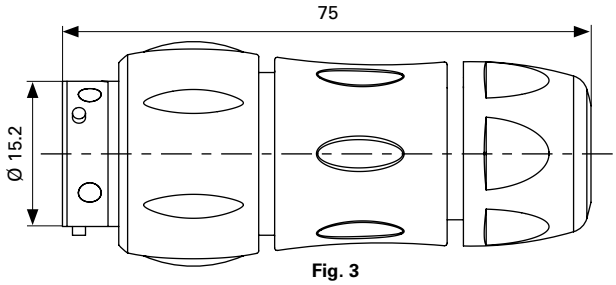


Fig. 3

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm, reduced seal: from 1.5 mm to 5 mm

Plug - UTGX6 & UTGX6JC

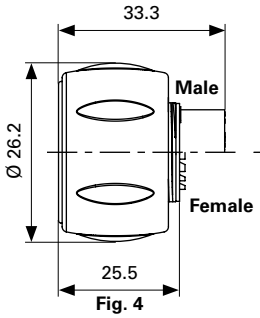


Fig. 4

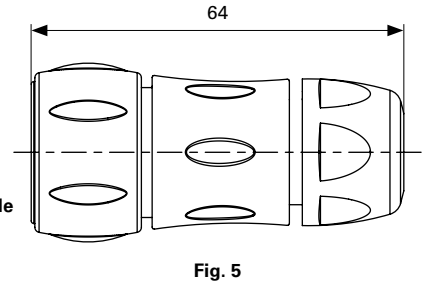


Fig. 5

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm,
reduced seal: from 1.5 mm to 5 mm

Jam nut receptacle UTGX7

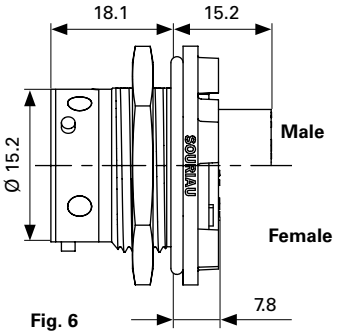


Fig. 6

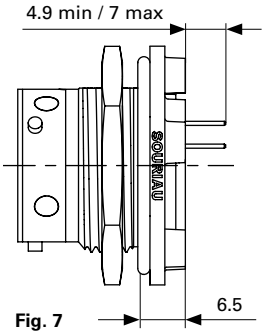


Fig. 7

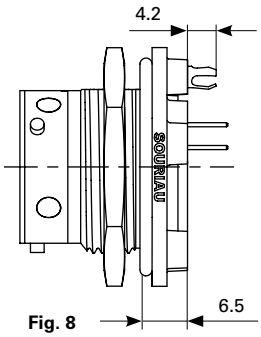
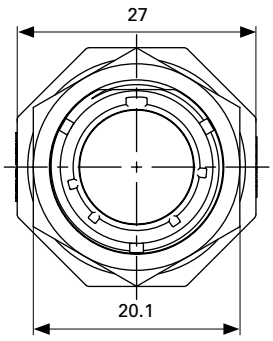
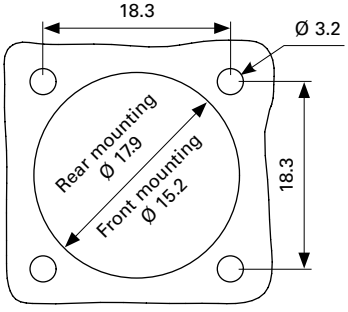


Fig. 8

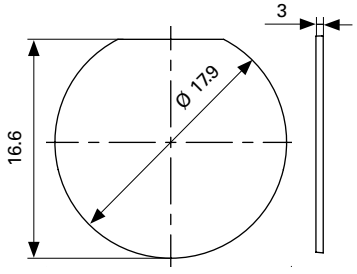


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Connectors

106 - 10E6/10D6 (Shell size 10, 6x#20)

Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX10DCG**
IP68/69K - Metal terminal	**UTGX10DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX10DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTGX610DCG**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005586A	**85005595**

Gasket



Part number
UTFD12B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX710CCRG**	**UTGX610CCRG**
Y for Yellow	**UTGX710CCRY**	**UTGX610CCRY**
R for Red	**UTGX710CCRR**	**UTGX610CCRR**

Tooling

Tooling



Description	Part number
Handle (without head)	**Shandles**
Box containing handle and several crimp tooling	**Toolkit**

Crimp tooling
(without Shandles)





Contact size	Contacts	Part number of Head
Standard contacts #20 Ø 1 mm	**RM/RC 24W3K**(1)	**S20RCM***
	RM/RC 20W3K(1)	**S20RCM***
	RM/RC 18W3K(1)	**S20RCM***
	SM/SC 24WL3(1)(2)	**S20SCM20***
	SM/SC 20WL3(1)(2)	**S20SCM20***

(1): Example of plating, for other plating options see page 129
(2): Loose contact
* Heads to be used with handle PN: SHANDLES

Extraction tool #20



Description	Part number
Contacts #20	**RX20D44**

Contacts #20

Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	26-24	0.13-0.25	**RM24W3K**	**RC24W3K**	0.80	1.58
		20-20	0.32-0.52	**RM20W3K**	**RC20W3K**	1.15	1.80
		20-18	0.52-0.80	**RM18W3K**	**RC18W3K**	1.30	2.10
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24W3TK6**(1)(2)	**SC24W3TK6**(1)(2)	–	0.90-1.58
		26-24	0.13-0.25	**SM24W3S26**(1)(2)	**SC24W3S25**(1)(2)	–	0.90-1.58
		20-20	0.32-0.52	**SM20W3TK6**(1)(2)	**SC20W3TK6**(1)(2)	–	1.20-2.10
		20-20	0.32-0.52	**SM20W3S26**(1)(2)	**SC20W3S25**(1)(2)	–	1.20-2.10

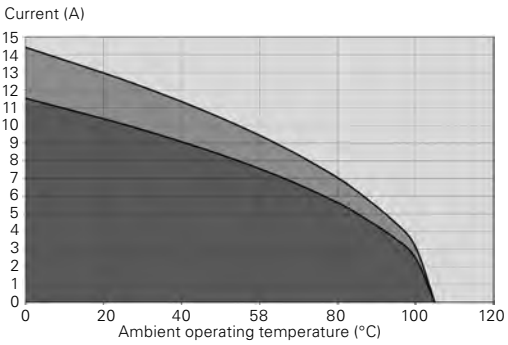
(1): Example of plating, for other plating see page 129 (2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20W3TK6 becomes SM20WL3TK6

Contact style	Contact type	Plating	Cable acceptance (AWG)	Wire stripping length (mm)
Handsolder	Loaded in the connector	Min 0.4µ gold over 0.8µ Ni	20 to 18	3.8

Electrical characteristics

UL	CSA	IEC
UTGX 106		
4.5A 250V with AWG20 wire	3A 250V with AWG20 wire	7A 32V 1.5kV 3
UTGX 10E6/10D6		
6A 250V with AWG20 wire	6A 250V with AWG20 wire	7A 32V 1.5kV 3

UTGX 106 - 10E6/10D6 derating curves



Derating curves based on continuous current application.

Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

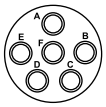
Wires used: 0.518 mm²



Connector part number

UTGX 10E98/10D98

6 contacs
6A/250V
per UL 1977
with AWG20 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Handsolder electrical contacts loaded see page 66	Square flange receptacle	Without (Fig. 1)	**UTGX010E98P**	**UTGX010E98S**
	Plug	Without (Fig. 5)	**UTGX610E98P**	**UTGX610E98S**
		Cable gland (Fig. 3)	**UTGX6JC10E98P**	**UTGX6JC10E98S**
	Jam nut receptacle	Without (Fig. 4)	**UTGX710E98P**	**UTGX710E98S**
PCB contacts loaded see page 66	Square flange receptacle	Without (Fig. 2)	**UTGX010D98P**	**UTGX010D98S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig. 5)	**UTGX710D98P**	**UTGX710D98S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig. 6)	**UTGX710D98P32**	**UTGX710D98S32**

For discrimination/keying methods see page 154

Sealed unmated

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm²)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	0.5	H05 VV - F 6x0.5	**HAUTGX10E98PST1M**	**HAUTGX10E98SST1M**
Right angle ending	Plug	0.5	H05 VV - F 6x0.5	**HAUTGX10E98PRA1M**	**HAUTGX10E98SRA1M**

(1) Other cable available on demand
* Other lengths available on demand
Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0

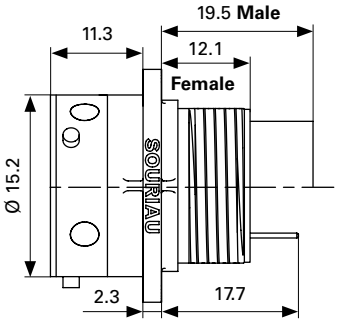
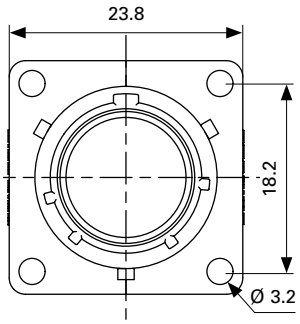


Fig. 1



Plug - UTGX6 & UTGX6JC

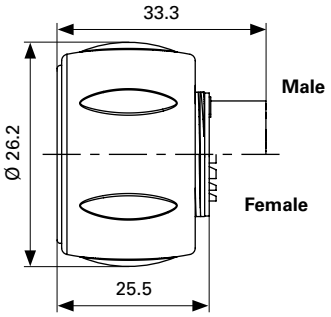


Fig. 2

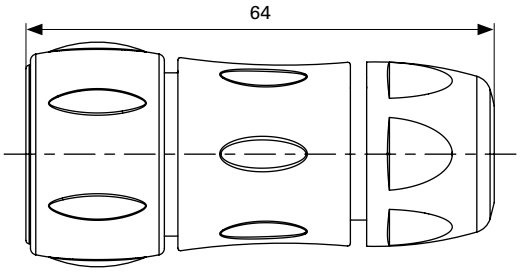


Fig. 3

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm, reduced seal: from 1.5 mm to 5 mm

Jam nut receptacle UTGX7

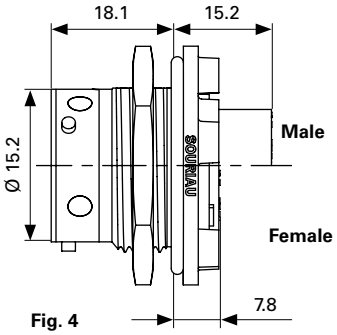


Fig. 4

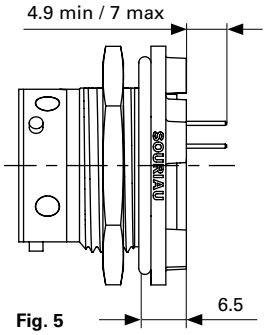


Fig. 5

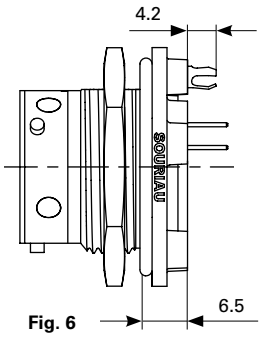
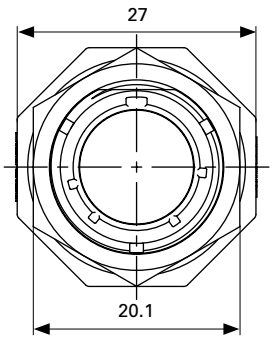
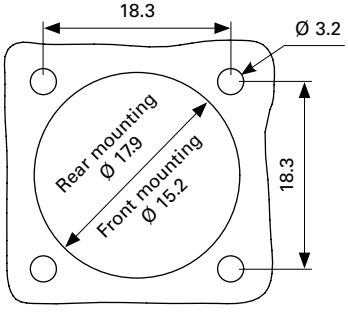


Fig. 6

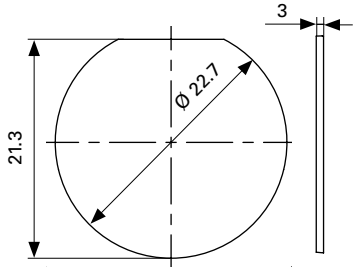


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX10DCG**
IP68/69K - Metal terminal	**UTGX10DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX10DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTGX610DCG**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005586A	**85005595**

Gasket



Part number
UTFD12B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX710CCRG**	**UTGX610CCRG**
Y for Yellow	**UTGX710CCRY**	**UTGX610CCRY**
R for Red	**UTGX710CCRR**	**UTGX610CCRR**

Contacts #20

Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	26-24	0.13-0.25	**RM24W3K**	**RC24W3K**	0.80	1.58
		20-20	0.32-0.52	**RM20W3K**	**RC20W3K**	1.15	1.80
		20-18	0.52-0.80	**RM18W3K**	**RC18W3K**	1.30	2.10
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24W3TK6**(1)(2)	**SC24W3TK6**(1)(2)	–	0.90-1.58
		26-24	0.13-0.25	**SM24W3S26**(1)(2)	**SC24W3S25**(1)(2)	–	0.90-1.58
		20-20	0.32-0.52	**SM20W3TK6**(1)(2)	**SC20W3TK6**(1)(2)	–	1.20-2.10
		20-20	0.32-0.52	**SM20W3S26**(1)(2)	**SC20W3S25**(1)(2)	–	1.20-2.10

(1): Example of plating, for other plating see page 129 (2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20W3TK6 becomes SM20WL3TK6

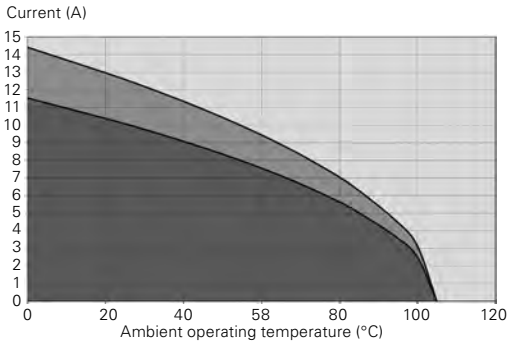
Contact style	Contact type	Plating	Cable acceptance (AWG)	Wire stripping length (mm)
Handsolder	Loaded in the connector	Min 0.4µ gold over 0.8µ Ni	20 to 18	3.8

Electrical characteristics

UL	CSA	IEC
6A 250V with AWG20 wire	6A 250V with AWG20 wire	7A 50V 1.5kV 3

Electrical information according to the IEC 61984, with pollution degree IV and overvoltage category III.

UTGX 10E98/10D98 derating curves



Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 0.518 mm²

Derating curves based on continuous current application.

147 - 14E7/14D7 (Shell size 14, 6 + ground, 7x#16)



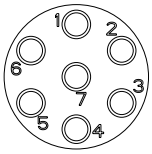
Connector part number

UTGX 147

6 contacts + ground
10A/500V
per UL 1977
with AWG16 wire

14E7/14D7

6 contacts + ground
12A/600V
per UL 1977
with AWG16 wire



Contact type	Connector type	Backshell	Part number Male insert	Part number Female insert
Crimp contacts supplied separately see page 71	Square flange receptacle	Without (Fig. 1)	**UTGX0147P**	**UTGX0147S**
	Square flange receptacle	Cable gland (Fig. 2)	**UTGX0JC147P**	**UTGX0JC147S**
	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC147P**	**UTGX1JC147S**
	Plug	Without (Fig. 4)	**UTGX6147P**	**UTGX6147S**
		Cable gland (Fig. 5)	**UTGX6JC147P**	**UTGX6JC147S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX7147P**	**UTGX7147S**
Screw contacts loaded	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC147PSCR**	**UTGX1JC147SSCR**
	Plug	Cable gland (Fig. 5)	**UTGX6JC147PSCR**	**UTGX6JC147SSCR**
	Jam nut receptacle	Without (Fig. 9)	**UTGX7147PSCR**	**UTGX7147SSCR**
PCB contacts supplied separately see page 71	Square flange receptacle	Without (Fig. 1)	**UTGX0147P**	**UTGX0147S**
Handsolder electrical contacts loaded see page 71	Square flange receptacle	Without (Fig. 1)	**UTGX014E7P**	**UTGX014E7S**
	Plug	Without (Fig. 4)	**UTGX614E7P**	**UTGX614E7S**
		Cable gland (Fig. 5)	**UTGX6JC14E7P**	**UTGX6JC14E7S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX714E7P**	**UTGX714E7S**
PCB contacts loaded	Square flange receptacle	Without (Fig. 3)	**UTGX014D7P**	**UTGX014D7S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.7)	**UTGX714D7P**	**UTGX714D7S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig. 8)	**UTGX714D7P32**	**UTGX714D7S32**

Sealed unmated

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm²)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Part number (length: 1 m.)* Female plug
Straight ending	Plug	1.5	H05 VV - F 7x1.5	**HAUTGX147PST1M**	**HAUTGX147SST1M**
				HAUTGX14E7PRA1M	**HAUTGX14E7SRA1M**
Right angle ending	Plug	1.5	H05 VV - F 7x1.5	**HAUTGX147PRA1M**	**HAUTGX147SRA1M**
				HAUTGX14E7PRA1M	**HAUTGX14E7SRA1M**

(1) Other cable available on demand

* Other lengths available on demand

Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0 and UTGX0JC

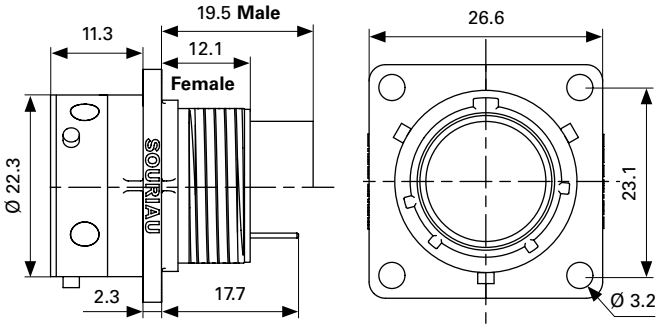


Fig. 1

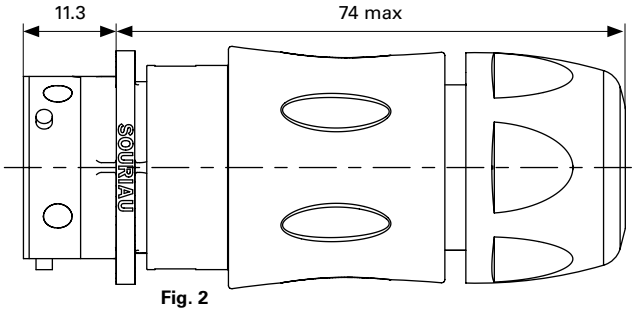


Fig. 2

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Free hanging - UTGX1JC

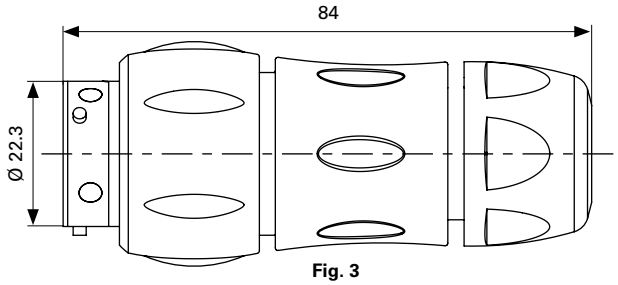


Fig. 3

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Plug - UTGX6 & UTGX6JC

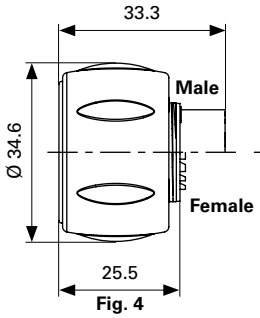


Fig. 4

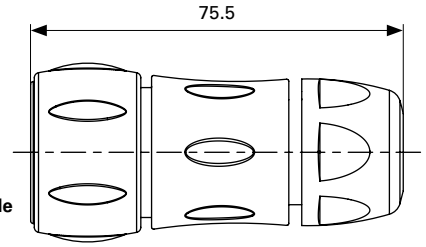


Fig. 5

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm,
reduced seal: from 5 mm to 12 mm

Jam nut receptacle UTGX7

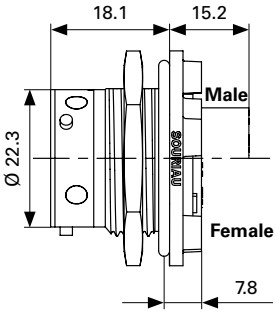


Fig. 6

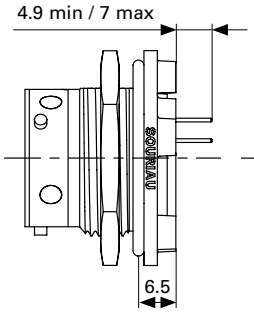


Fig. 7

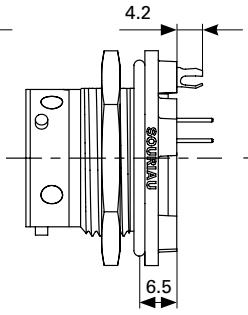


Fig. 8

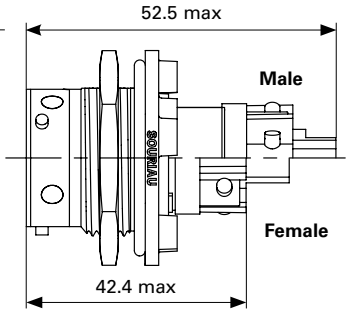
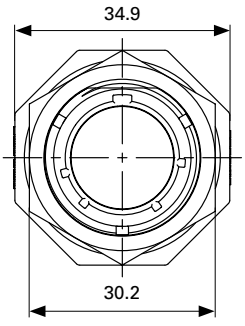
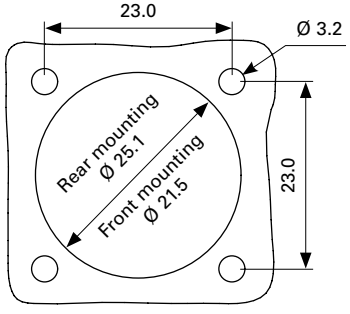


Fig. 9

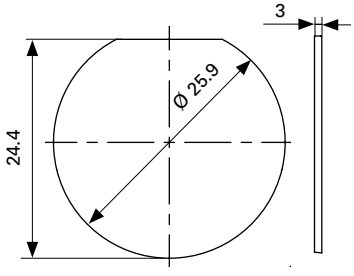


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX14DCG**
IP68/69K - Metal terminal	**UTGX14DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX14DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTS614DCG133**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005588A	**85005597**

Gasket



Part number
UTFD14B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX714CCRG**	**UTGX614CCRG**
Y for Yellow	**UTGX714CCRY**	**UTGX614CCRY**
R for Red	**UTGX714CCRR**	**UTGX614CCRR**

Connectors

147 - 14E7/14D7 (Shell size 14, 6 + ground, 7x#16)

Tooling

Tooling





Description	Part number
Handle (without head)	**Shandles**
Box containing handle and several crimp tooling	**Toolkit**

Crimp tooling
(without Shandles)





Contact size	Contacts	Part number of Head
Standard contacts #16 Ø 1.6 mm	**RM/RC 28M1K(1)**	**S16RCM20***
	RM/RC 24M9K(1)	**S16RCM20***
	RM/RC 20M13K(1)	**S16RCM20***
	RM/RC 20M12K(1)	**S16RCM20***
	RM/RC 16M23K(1)	**S16RCM16***
	RM/RC 14M30K(1)	**S16RCM14***
	SM/SC 24ML1TK6(1)	**S16SCM20***
	SM/SC 20ML1TK6(1)	**S16SCM20***
	SM/SC 16ML1TK6(1)	**S16SCML1***
	SM/SC 14ML1TK6(1)	**S16SCML1***
	SM/SC 16ML11TK6(1)	**S16SCML11***

(1): Example of plating, for other plating options see page 129

* Heads to be used with handle PN: SHANDLES

Extraction tool #16

Fig. 1



Fig. 2



Description	Part number
Fig. 1	**RX2025GE1**
Fig. 2 - Long endurance tool	**RX2031J**

Contacts #16

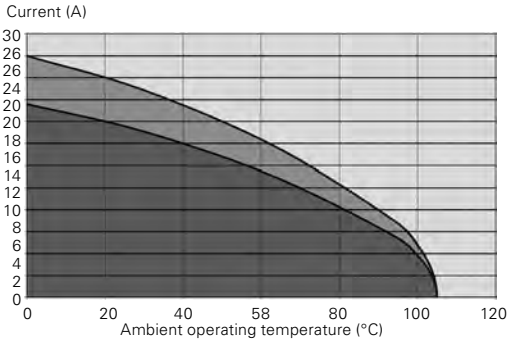
Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	30-26	0.48-0.08	**RM28M1K**(1)	**RC28M1K**(1)	0.55	1.00
		26-24	0.13-0.25	**RM24M9K**(1)	**RC24M9K**(1)	0.80	1.58
		20-20	0.32-0.52	**RM20M13K**(1)	**RC20M13K**(1)	1.15	1.80
		20-20	0.32-0.52	**RM20M12K**(1)	**RC20M12K**(1)	1.15	2.20
		20-16	0.52-1.48	**RM16M23K**(1)	**RC16M23K**(1)	1.80	3.20
		16-14	1.48-2.48	**RM14M30K**(1)	**RC14M30K**(1)	2.30	3.20
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24M1TK6**(1)(2)	**SC24M1TK6**(1)(2)	–	0.90-1.58
		20-20	0.32-0.52	**SM20M1TK6**(1)(2)	**SC20M1TK6**(1)(2)	–	1.20-2.10
		18-16	0.80-1.48	**SM16M1TK6**(1)(2)	**SC16M1TK6**(1)(2)	–	3.20
		18-16	0.80-1.48	**SM16M11TK6**(1)(2)	**SC16M11TK6**(1)(2)	–	3.00
		14	2.48	**SM14M1TK6**(1)(2)	**SC14M1TK6**(1)(2)	–	3.20
PCB	Machined(3)	–		**RM20M12E83K**(1)	**RC20M12E84K**(1)		–
Coaxial	Cable multipiece	see pages 133 to 134		**RMDXK10D28**	**RCDXK1D28**	–	–
	Cable monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
	Twisted pair multipiece			**RMDXK10D28 + yorx090**	**RCDXK1D28 + yorx090**	–	–
	Twisted pair monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
Fiber optic	POF contacts (Plastic Optical Fiber)	–		**RMPOF1000**	**RCPOF1000B**	–	–
Handsolder	Loaded in the connector	14-18	2.48-0.80	–	–	–	–

(1): Example of plating, for other plating see page 129
(2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20M1TK6 becomes SM20ML1TK6
(3): for dimensions see pages 136 or 137

Electrical characteristics

UL	CSA	IEC
UTGX 147		
10A 500V with AWG16 wire	7A 500V with AWG16 wire	7A 150V 1.5kV 3
UTGX 14E7/14D7		
12A 600V with AWG16 wire	12A 600V with AWG16 wire	7A 150V 1.5kV 3

UTGX 147 - 14E7/14D7 derating curves



Derating curves based on continuous current application.

Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 1.31 mm²

Connectors

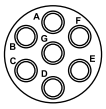
10E7/10D7 (Shell size 10, 7x#20)



Connector part number

UTGX 10E7/10D7

7 contacs
6A/250V
per UL 1977
with AWG20 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Handsolder electrical contacts loaded see page 75	Square flange receptacle	Without (Fig. 1)	**UTGX010E7P**	**UTGX010E7S**
	Plug	Without (Fig. 5)	**UTGX610E7P**	**UTGX610E7S**
		Cable gland (Fig. 3)	**UTGX6JC10E7P**	**UTGX6JC10E7S**
	Jam nut receptacle	Without (Fig. 4)	**UTGX710E7P**	**UTGX710E7S**
PCB contacts loaded see page 75	Square flange receptacle	Without (Fig. 2)	**UTGX010D7P**	**UTGX010D7S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig. 5)	**UTGX710D7P**	**UTGX710D7S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig. 6)	**UTGX710D7P32**	**UTGX710D7S32**

For discrimination/keying methods see page 154

Sealed unmated

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm²)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	0.5	H05 VV - F 7x0.5	**HAUTGX10E7PST1M**	**HAUTGX10E7SST1M**
Right angle ending	Plug	0.5	H05 VV - F 7x0.5	**HAUTGX10E7PRA1M**	**HAUTGX10E7SRA1M**

(1) Other cable available on demand
* Other lengths available on demand
Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0

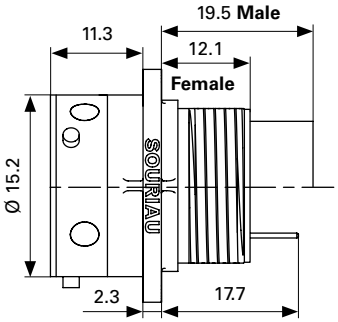
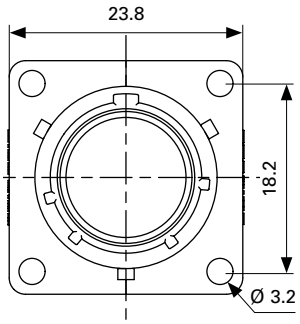


Fig. 1



Plug - UTGX6 & UTGX6JC

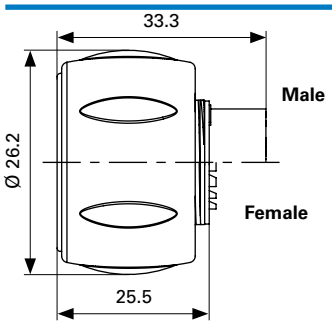


Fig. 2

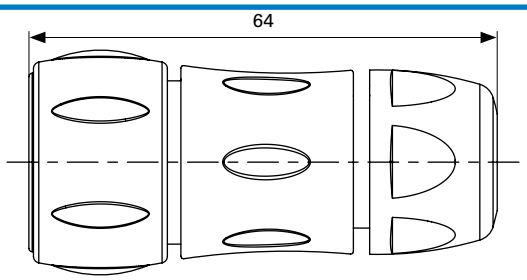


Fig. 3

Cable diameter acceptance: standard seal:
from 2.5 mm to 8 mm, reduced seal: from 1.5 mm to 5 mm

Jam nut receptacle UTGX7

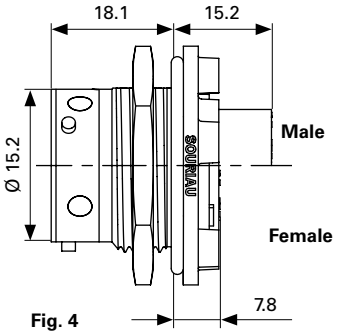


Fig. 4

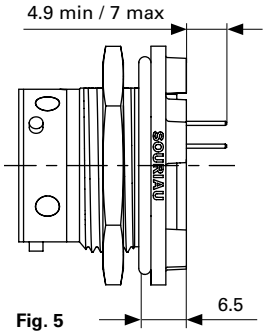


Fig. 5

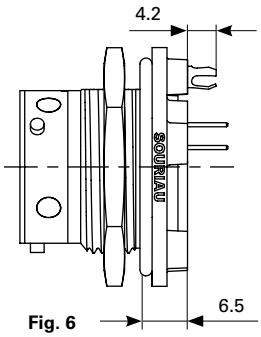
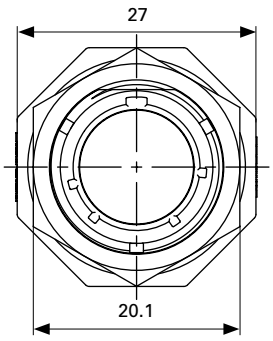
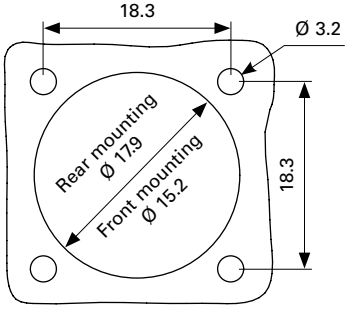


Fig. 6

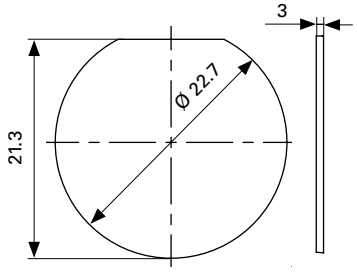


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Connectors

10E7/10D7 (Shell size 10, 7x#20)

Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX10DCG**
IP68/69K - Metal terminal	**UTGX10DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX10DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTGX610DCG**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005586A	**85005595**

Gasket



Part number
UTFD12B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX710CCRG**	**UTGX610CCRG**
Y for Yellow	**UTGX710CCRY**	**UTGX610CCRY**
R for Red	**UTGX710CCRR**	**UTGX610CCRR**

Contacts #20

Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	26-24	0.13-0.25	**RM24W3K**	**RC24W3K**	0.80	1.58
		20-20	0.32-0.52	**RM20W3K**	**RC20W3K**	1.15	1.80
		20-18	0.52-0.80	**RM18W3K**	**RC18W3K**	1.30	2.10
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24W3TK6**(1)(2)	**SC24W3TK6**(1)(2)	–	0.90-1.58
		26-24	0.13-0.25	**SM24W3S26**(1)(2)	**SC24W3S25**(1)(2)	–	0.90-1.58
		20-20	0.32-0.52	**SM20W3TK6**(1)(2)	**SC20W3TK6**(1)(2)	–	1.20-2.10
		20-20	0.32-0.52	**SM20W3S26**(1)(2)	**SC20W3S25**(1)(2)	–	1.20-2.10

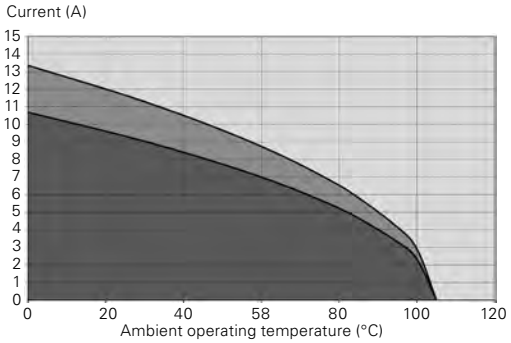
(1): Example of plating, for other plating see page 129 (2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20W3TK6 becomes SM20WL3TK6

Contact style	Contact type	Plating	Cable acceptance (AWG)	Wire stripping length (mm)
Handsolder	Loaded in the connector	Min 0.4µ gold over 0.8µ Ni	20 to 18	3.8

Electrical characteristics

UL	CSA	IEC
6A 250V with AWG20 wire	6A 250V with AWG20 wire	7A 50V 1.5kV 3

UTGX 10E7/10D7 derating curves



Derating curves based on continuous current application.

Current use
Limited use
Not recommended use

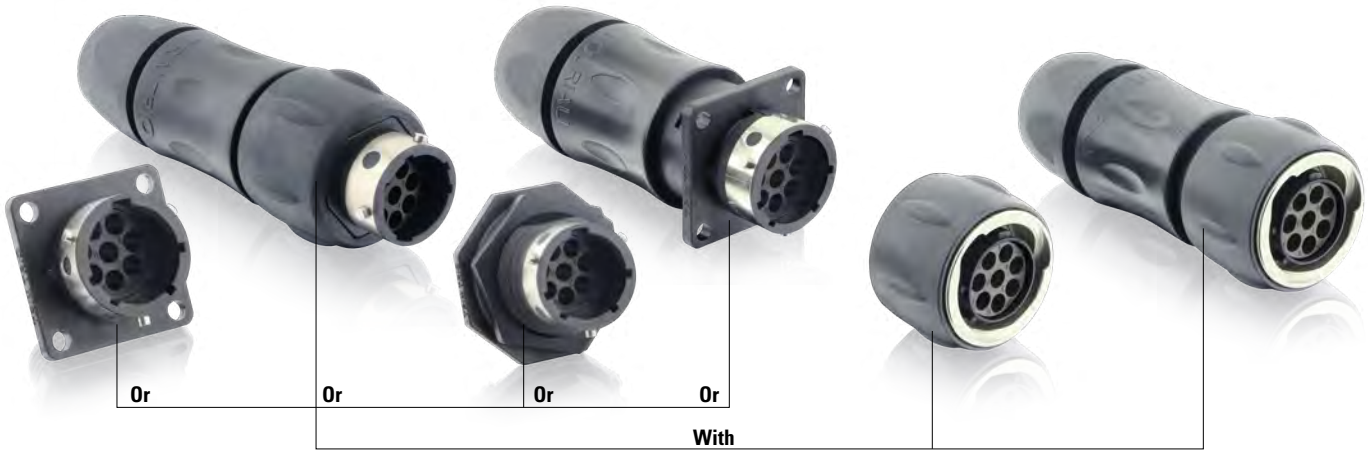
Test conditions

Contact used: machined contacts

Wires used: 0.518 mm²

Connectors

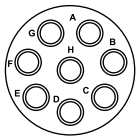
128 (Shell size 12, 8x16)



Connector part number

UTGX 128

8 contacts
10A/500V
per UL 1977 with
AWG16 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Crimp contacts supplied separately see page 80	Square flange receptacle	Without (Fig. 1)	**UTGX0128P**	**UTGX0128S**
	Square flange receptacle	Cable gland (Fig. 2)	**UTGX0JC128P**	**UTGX0JC128S**
	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC128P**	**UTGX1JC128S**
	Plug	Without (Fig. 4)	**UTGX6128P**	**UTGX6128S**
		Cable gland (Fig. 5)	**UTGX6JC128P**	**UTGX6JC128S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX7128P**	**UTGX7128S**
PCB contacts supplied separately see page 80	Jam nut receptacle with stand off and without hold down clip	Without (Fig. 7)	**UTGX7128P**	**UTGX7128S**

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm²)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	1.5	H05 VV - F 3x1.5	**HAUTGX128PST1M**	**HAUTGX128SST1M**
Right angle ending	Plug	1.5	H05 VV - F 3x1.5	**HAUTGX128PRA1M**	**HAUTGX128SRA1M**

(1) Other cable available on demand
* Other lengths available on demand
Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0 and UTGX0JC

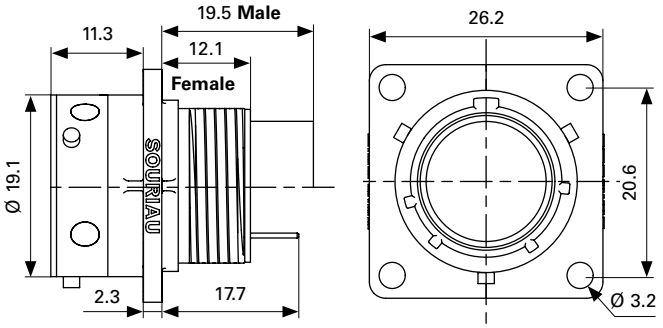


Fig. 1

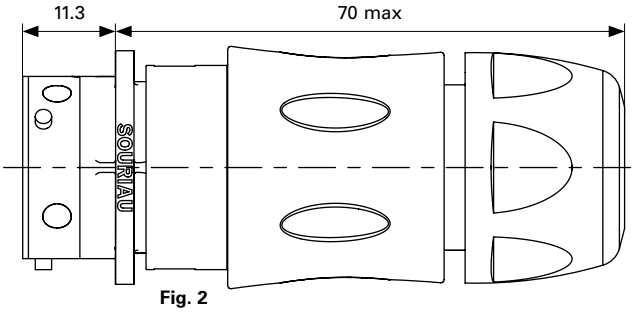


Fig. 2

Cable diameter acceptance: standard seal:
from 2.5 mm to 12 mm, reduced seal: from 3 mm to 9 mm

Free hanging - UTGX1JC

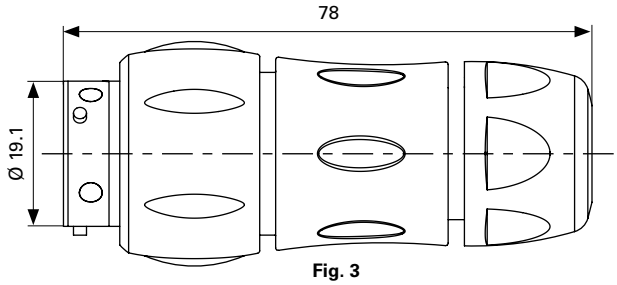


Fig. 3

Cable diameter acceptance: standard seal:
from 2.5 mm to 12 mm, reduced seal: from 3 mm to 9 mm

Plug - UTGX6 & UTGX6JC

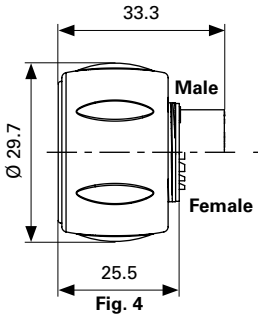


Fig. 4

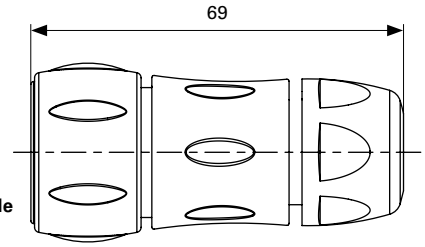


Fig. 5

Cable diameter acceptance: standard seal:
from 2.5 mm to 12 mm,
reduced seal: from 3 mm to 9 mm

Jam nut receptacle UTGX7

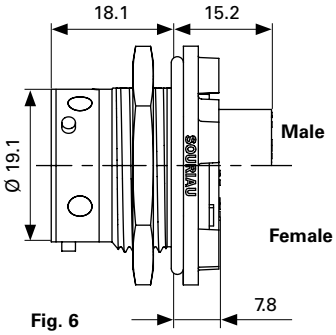


Fig. 6

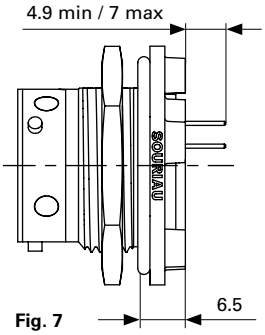
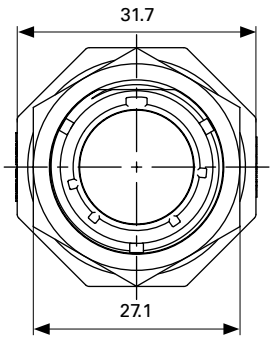
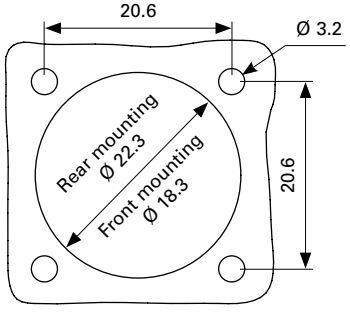


Fig. 7

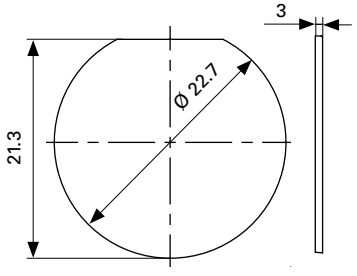


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX12DCG**
IP68/69K - Metal terminal	**UTGX12DCGR**

Plug sealing cap



Description	Part number
IP68/69K	**UTGX612DCG**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005587A	**85005596**

Gasket



Part number
UTFD13B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX712CCRG**	**UTGX612CCRG**
Y for Yellow	**UTGX712CCRY**	**UTGX612CCRY**
R for Red	**UTGX712CCRR**	**UTGX612CCRR**

Tooling

Tooling



Description	Part number
Handle (without head)	**Shandles**
Box containing handle and several crimp tooling	**Toolkit**

Crimp tooling
(without Shandles)



Contact size	Contacts	Part number of Head
Standard contacts #16 Ø 1.6 mm	**RM/RC 28M1K**(1)	**S16RCM20***
	RM/RC 24M9K(1)	**S16RCM20***
	RM/RC 20M13K(1)	**S16RCM20***
	RM/RC 20M12K(1)	**S16RCM20***
	RM/RC 16M23K(1)	**S16RCM16***
	RM/RC 14M30K(1)	**S16RCM14***
	SM/SC 24ML1TK6(1)	**S16SCM20***
	SM/SC 20ML1TK6(1)	**S16SCM20***
	SM/SC 16ML1TK6(1)	**S16SCML1***
	SM/SC 14ML1TK6(1)	**S16SCML1***
	SM/SC 16ML11TK6(1)	**S16SCML11***
Standard contacts #20 Ø 1 mm	**RM/RC 24W3K**(1)	**S20RCM***
	RM/RC 20W3K(1)	**S20RCM***
	RM/RC 18W3K(1)	**S20RCM***
	SM/SC 24WL3(1)(2)	**S20SCM20***
	SM/SC 20WL3(1)(2)	**S20SCM20***

(1): Example of plating, for other plating options see page 129
(2): Loose contact
* Heads to be used with handle PN: SHANDLES

Extraction tool #16

Fig. 1



Fig. 2



Description	Part number
Fig. 1	**RX2025GE1**
Fig. 2 - Long endurance tool	**RX2031J**

Contacts #16

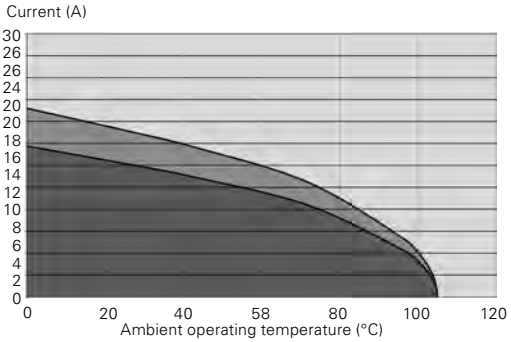
Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	30-26	0.48-0.08	**RM28M1K**(1)	**RC28M1K**(1)	0.55	1.00
		26-24	0.13-0.25	**RM24M9K**(1)	**RC24M9K**(1)	0.80	1.58
		20-20	0.32-0.52	**RM20M13K**(1)	**RC20M13K**(1)	1.15	1.80
		20-20	0.32-0.52	**RM20M12K**(1)	**RC20M12K**(1)	1.15	2.20
		20-16	0.52-1.48	**RM16M23K**(1)	**RC16M23K**(1)	1.80	3.20
		16-14	1.48-2.48	**RM14M30K**(1)	**RC14M30K**(1)	2.30	3.20
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24M1TK6**(1)(2)	**SC24M1TK6**(1)(2)	–	0.90-1.58
		20-20	0.32-0.52	**SM20M1TK6**(1)(2)	**SC20M1TK6**(1)(2)	–	1.20-2.10
		18-16	0.80-1.48	**SM16M1TK6**(1)(2)	**SC16M1TK6**(1)(2)	–	3.20
		18-16	0.80-1.48	**SM16M11TK6**(1)(2)	**SC16M11TK6**(1)(2)	–	3.00
		14	2.48	**SM14M1TK6**(1)(2)	**SC14M1TK6**(1)(2)	–	3.20
PCB	Machined(3)	–		**RM20M12E83K**(1)	**RC20M12E84K**(1)		–
Coaxial	Cable multipiece	see pages 133 to 134		**RMDXK10D28**	**RCDXK1D28**	–	–
	Cable monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
	Twisted pair multipiece			**RMDXK10D28 + yorx090**	**RCDXK1D28 + yorx090**	–	–
	Twisted pair monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
Fiber optic	POF contacts (Plastic Optical Fiber)	–		**RMPOF1000**	**RCPOF1000B**	–	–
Handsolder	Loaded in the connector	14-18	2.48-0.80	**–**	**–**	–	–

(1): Example of plating, for other plating see page 129
(2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20M1TK6 becomes SM20ML1TK6
(3): for dimensions see pages 136 or 137

Electrical characteristics

UL	CSA	IEC
10A 500V with AWG16 wire	7A 500V with AWG16 wire	10A 80V 1.5kV 3

UTGX 128 derating curves



Derating curves based on continuous current application.

Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

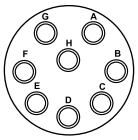
Wires used: 1.31 mm²



Connector part number

UTGX 12E8/12D8

8 contacts
4.5A/250V
per UL 1977 with
AWG20 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Handsolder electrical contacts loaded see page 84	Square flange receptacle	Without (Fig. 1)	**UTGX012E8P**	**UTGX012E8S**
	Plug	Without (Fig. 2)	**UTGX612E8P**	**UTGX612E8S**
		Cable gland (Fig. 3)	**UTGX6JC12E8P**	**UTGX6JC12E8S**
	Jam nut receptacle	Without (Fig. 4)	**UTGX712E8P**	**UTGX712E8S**
PCB contacts loaded see page 84	Square flange receptacle	Without (Fig. 1)	**UTGX012D8P**	**UTGX012D8S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig. 5)	**UTGX712D8P**	**UTGX712D8S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig. 6)	**UTGX712D8P32**	**UTGX712D8S32**

For discrimination/keying methods see page 154

Sealed unmated

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm²)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	1.5	H05 VV - F 3x1.5	**HAUTGX12E8PST1M**	**HAUTGX12E8SST1M**
Right angle ending	Plug	1.5	H05 VV - F 3x1.5	**HAUTGX12E8PRA1M**	**HAUTGX12E8SRA1M**

(1) Other cable available on demand
* Other lengths available on demand
Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0

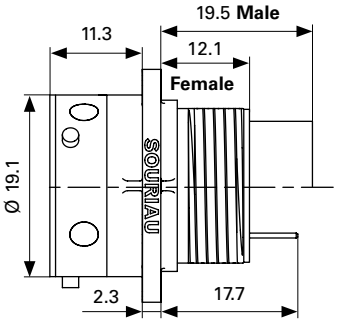
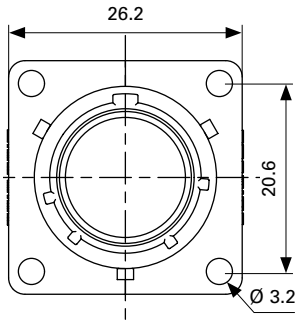


Fig. 1



Plug - UTGX6 & UTGX6JC

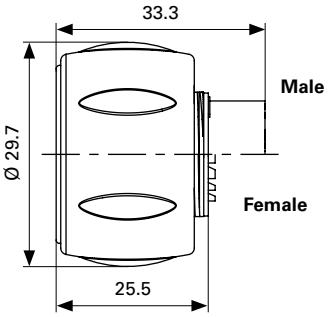


Fig. 2

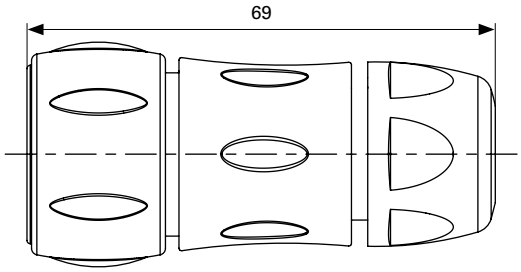


Fig. 3

Cable diameter acceptance: standard seal:
from 2.5 mm to 12 mm, reduced seal: from 3 mm to 9 mm

Jam nut receptacle UTGX7

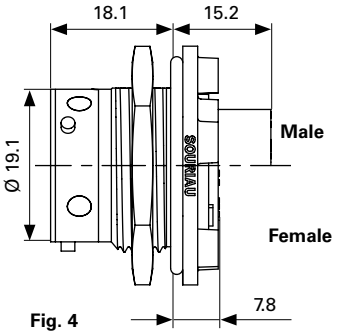


Fig. 4

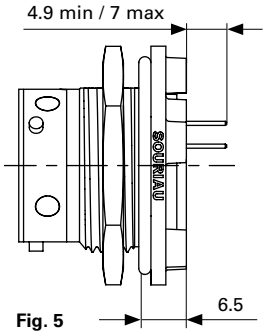


Fig. 5

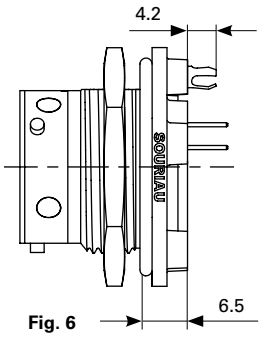
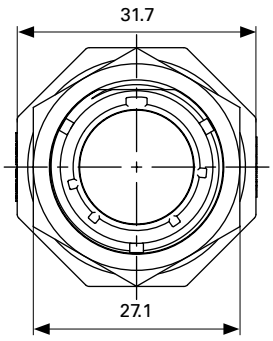
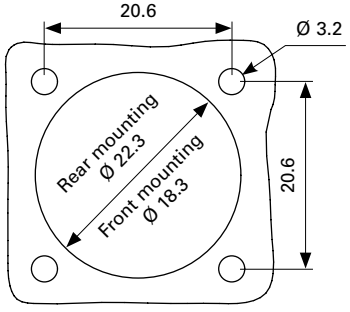


Fig. 6

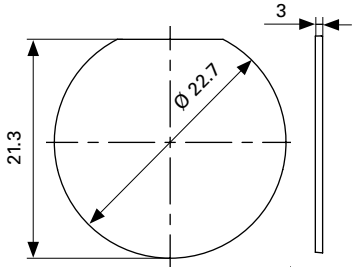


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX12DCG**
IP68/69K - Metal terminal	**UTGX12DCGR**

Plug sealing cap



Description	Part number
IP68/69K	**UTGX612DCG**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005587A	**85005596**

Gasket



Part number
UTFD13B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX712CCRG**	**UTGX612CCRG**
Y for Yellow	**UTGX712CCRY**	**UTGX612CCRY**
R for Red	**UTGX712CCRR**	**UTGX612CCRR**

Contacts #20

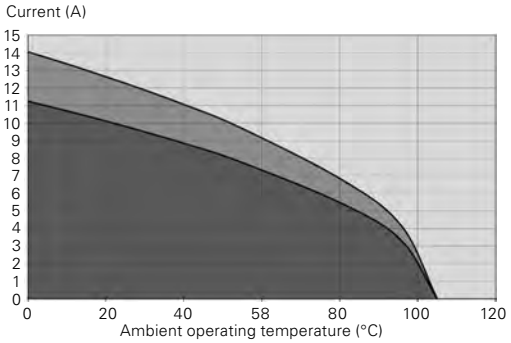
Contact style	Contact type	Plating	Cable acceptance (AWG)	Wire stripping length (mm)
Handsolder	Loaded in the connector	Min 0.4µ gold over 0.8µ Ni	20 to 18	3.8
PCB	Machined (1)	Min 0.4µ gold over 0.8µ Ni	–	–

(1): For dimensions see pages 136 or 137

Electrical characteristics

UL	CSA	IEC
4.5A 250V with AWG20 wire	4.5A 250V with AWG20 wire	6A 32V 1.5kV 3

UTGX 12E8/12D8 derating curves



Derating curves based on continuous current application.

Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

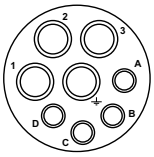
Wires used: 0.518 mm²



Connector part number

UTGX 148

8 contacts
25A 600V per UL1977 with AWG14 wire
5A 600V per UL1977 AWG20 wire
(qualification pending)



Contact type	Connector type	Backshell	Part number Male insert	Part number Female insert
Crimp contacts supplied separately see page 89	Square flange receptacle	Without (Fig. 1)	**UTGX0148P**	**UTGX0148S**
	Square flange receptacle	Cable gland (Fig. 2)	**UTGX0JC148P**	**UTGX0JC148S**
	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC148P**	**UTGX1JC148S**
	Plug	Without (Fig. 4)	**UTGX6148P**	**UTGX6148S**
		Cable gland (Fig. 5)	**UTGX6JC148P**	**UTGX6JC148S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX7148P**	**UTGX7148S**

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0 and UTGX0JC

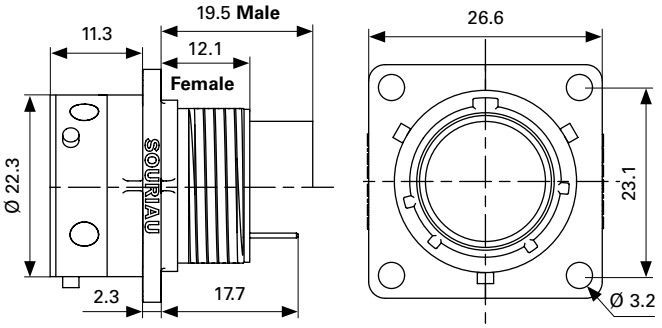


Fig. 1

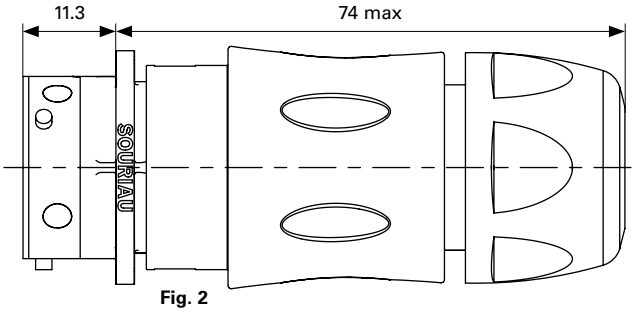


Fig. 2

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Free hanging - UTGX1JC

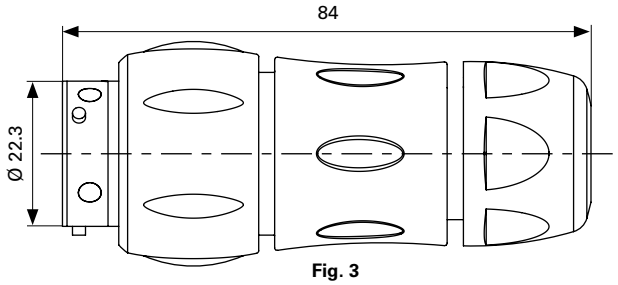


Fig. 3

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Plug - UTGX6 & UTGX6JC

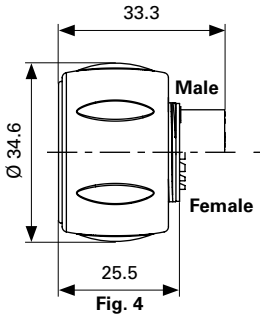


Fig. 4

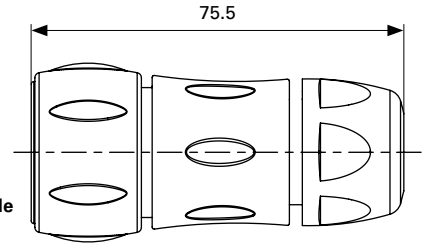


Fig. 5

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm,
reduced seal: from 5 mm to 12 mm

Jam nut receptacle UTGX7

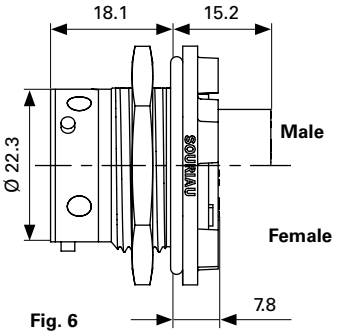
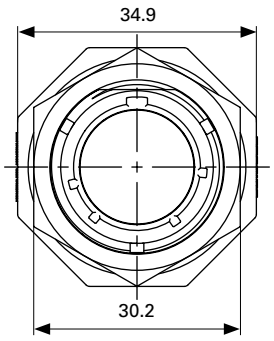
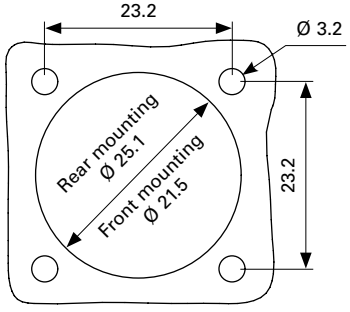


Fig. 6

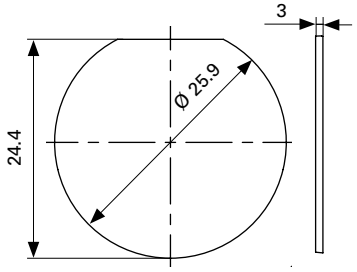


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX14DCG**
IP68/69K - Metal terminal	**UTGX14DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX14DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTS614DCG133**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005588A	**85005597**

Gasket



Part number
UTFD14B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX714CCRG**	**UTGX614CCRG**
Y for Yellow	**UTGX714CCRY**	**UTGX614CCRY**
R for Red	**UTGX714CCRR**	**UTGX614CCRR**

Tooling

Tooling



Description	Part number
Handle (without head)	**Shandles**
Box containing handle and several crimp tooling	**Toolkit**

Crimp tooling
(without Shandles)





Contact size	Contacts	Part number of Head
Standard contacts #16 Ø 1.6 mm	**RM/RC 28M1K**(1)	**S16RCM20***
	RM/RC 24M9K(1)	**S16RCM20***
	RM/RC 20M13K(1)	**S16RCM20***
	RM/RC 20M12K(1)	**S16RCM20***
	RM/RC 16M23K(1)	**S16RCM16***
	RM/RC 14M30K(1)	**S16RCM14***
	SM/SC 24ML1TK6(1)	**S16SCM20***
	SM/SC 20ML1TK6(1)	**S16SCM20***
	SM/SC 16ML1TK6(1)	**S16SCML1***
	SM/SC 14ML1TK6(1)	**S16SCML1***
	SM/SC 16ML11TK6(1)	**S16SCML11***

(1): Example of plating, for other plating options see page 129

* Heads to be used with handle PN: SHANDLES

Extraction tool #16

Fig. 1



Fig. 2



Description	Part number
Fig. 1	**RX2025GE1**
Fig. 2 - Long endurance tool	**RX2031J**

Crimp tooling #12



Contact size	Part number hand tool	Part number positioner + locator setting
Standard contacts #12 Ø 2.4 mm	**M317**	**VGE10077A**

Extraction tool #20



Description	Part number
Contacts #12	**51060210924**

Contacts #16

Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	30-26	0.48-0.08	**RM28M1K**(1)	**RC28M1K**(1)	0.55	1.00
		26-24	0.13-0.25	**RM24M9K**(1)	**RC24M9K**(1)	0.80	1.58
		20-20	0.32-0.52	**RM20M13K**(1)	**RC20M13K**(1)	1.15	1.80
		20-20	0.32-0.52	**RM20M12K**(1)	**RC20M12K**(1)	1.15	2.20
		20-16	0.52-1.48	**RM16M23K**(1)	**RC16M23K**(1)	1.80	3.20
		16-14	1.48-2.48	**RM14M30K**(1)	**RC14M30K**(1)	2.30	3.20
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24M1TK6**(1)(2)	**SC24M1TK6**(1)(2)	–	0.90-1.58
		20-20	0.32-0.52	**SM20M1TK6**(1)(2)	**SC20M1TK6**(1)(2)	–	1.20-2.10
		18-16	0.80-1.48	**SM16M1TK6**(1)(2)	**SC16M1TK6**(1)(2)	–	3.20
		18-16	0.80-1.48	**SM16M11TK6**(1)(2)	**SC16M11TK6**(1)(2)	–	3.00
		14	2.48	**SM14M1TK6**(1)(2)	**SC14M1TK6**(1)(2)	–	3.20
Coaxial	Cable multipiece	see pages 133 to 134		**RMDXK10D28**	**RCDXK1D28**	–	–
	Cable monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
	Twisted pair multipiece			**RMDXK10D28 + yorx090**	**RCDXK1D28 + yorx090**	–	–
	Twisted pair monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–

(1): Example of plating, for other plating see page 129

(2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20M1TK6 becomes SM20ML1TK6

Contacts #12

Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	20	–	**82911457NA**(1)	**82911456A**(1)	0.7	4.90
		20	–	**82911459NA**(1)	**82911458A**(1)	1.12	
		18	–	**82911461NA**(1)	**82911460A**(1)	1.42	
		16	–	**82911463NAv**	**82911462A**(1)	1.72	
		14	–	**82911465NA**(1)	**82911464A**(1)	2.20	
		12	–	**82911467NA**(1)	**82911466A**(1)	2.82	

(1): Example of plating, for other plating see page 129

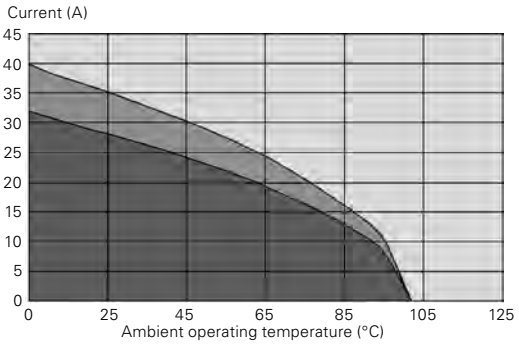
148 (Shell size 14, 4x#16, 4x#12)

Electrical characteristics

UL	CSA	IEC
25A 600V with AWG14* 5A 600V with AWG20*	17A 600V with AWG14* 5A 600V with AWG20*	17A 230V 1.5kV 3

* qualification pending

UTGX 148 derating curves



Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 1.31 mm²

Derating curves based on continuous current application.

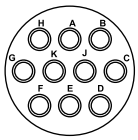
1210 - 12E10/12D10 (Shell size 12, 10x#20)



Connector part number

UTGX 1210 - 12E10/12D10

10 contacts
4.5A/250V
per UL 1977
with AWG20 wire



Contact type	Connector type	Backshell	Part number Male insert	Part number Female insert
Crimp contacts supplied separately see page 95	Square flange receptacle	Without (Fig. 1)	**UTGX01210P**	**UTGX01210S**
	Square flange receptacle	Cable gland (Fig. 2)	**UTGX0JC1210P**	**UTGX0JC1210S**
	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC1210P**	**UTGX1JC1210S**
	Plug	Without (Fig. 4)	**UTGX61210P**	**UTGX61210S**
		Cable gland (Fig. 5)	**UTGX6JC1210P**	**UTGX6JC1210S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX71210P**	**UTGX71210S**
Handsolder electrical contacts loaded see page 95	Square flange receptacle	Without (Fig. 1)	**UTGX012E10P**	**UTGX012E10S**
	Plug	Without (Fig. 4)	**UTGX612E10P**	**UTGX612E10S**
		Cable gland (Fig. 5)	**UTGX6JC12E10P**	**UTGX6JC12E10S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX712E10P**	**UTGX712E10S**
PCB contacts loaded	Square flange receptacle	Without (Fig. 3)	**UTGX012D10P**	**UTGX012D10S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.7)	**UTGX712D10P**	**UTGX712D10S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig. 8)	**UTGX712D10P32**	**UTGX712D10S32**

For discrimination/keying methods see page 154

Sealed unmated

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm²)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Part number (length: 1 m.)* Female plug
Straight ending	Plug	0.5	H05 VV - F 10x0.5	**HAUTGX1210PST1M**	**HAUTGX1210SST1M**
				HAUTGX12E10PRA1M	**HAUTGX12E10SRA1M**
Right angle ending	Plug	0.5	H05 VV - F 10x0.5	**HAUTGX1210PRA1M**	**HAUTGX1210SRA1M**
				HAUTGX12E10PRA1M	**HAUTGX12E10SRA1M**

(1) Other cable available on demand

* Other lengths available on demand

Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0 and UTGX0JC

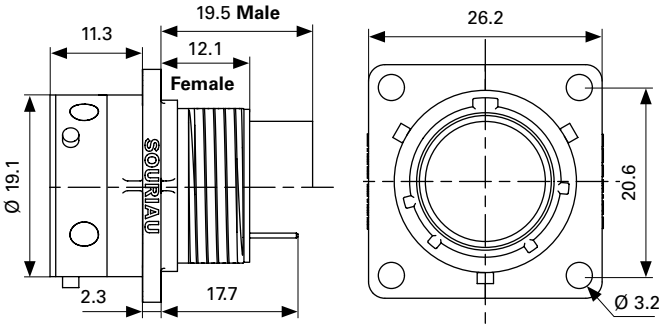


Fig. 1

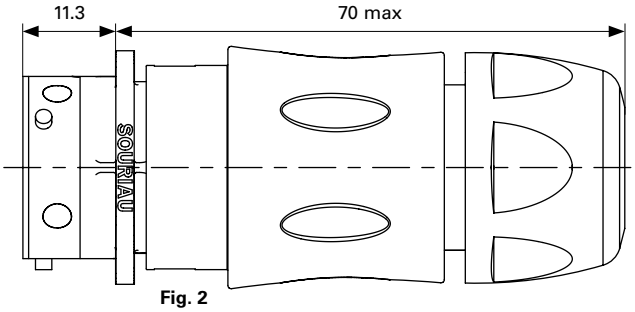


Fig. 2

Cable diameter acceptance: standard seal:
from 2.5 mm to 12 mm, reduced seal: from 3 mm to 9 mm

Free hanging - UTGX1JC

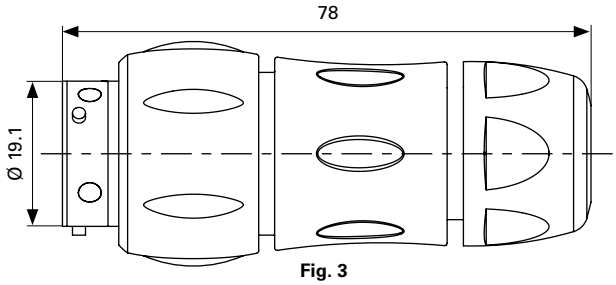


Fig. 3

Cable diameter acceptance: standard seal:
from 2.5 mm to 12 mm, reduced seal: from 3 mm to 9 mm

Plug - UTGX6 & UTGX6JC

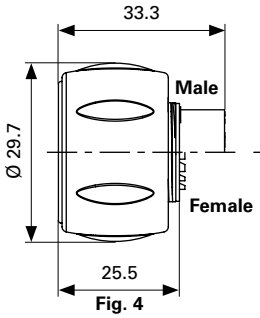


Fig. 4

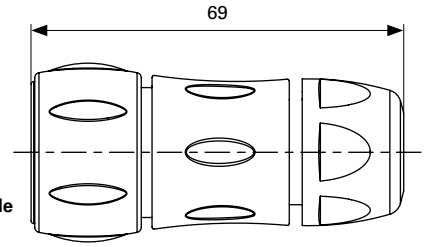


Fig. 5

Cable diameter acceptance: standard seal:
from 2.5 mm to 12 mm,
reduced seal: from 3 mm to 9 mm

Jam nut receptacle UTGX7

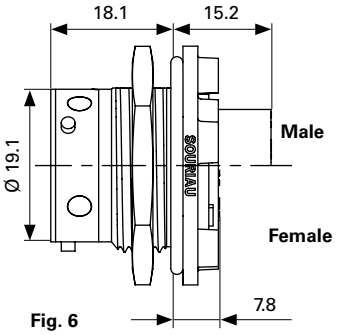


Fig. 6

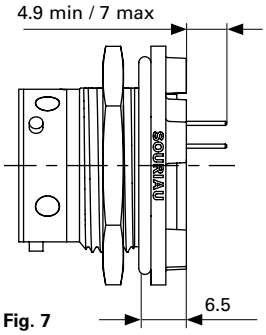


Fig. 7

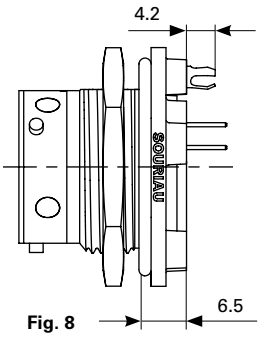
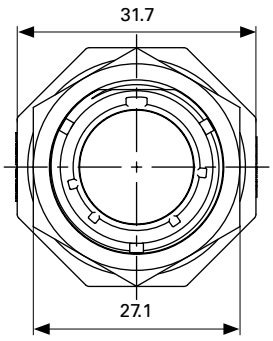
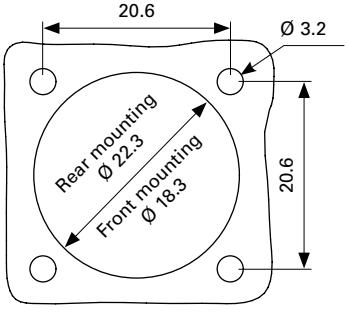


Fig. 8

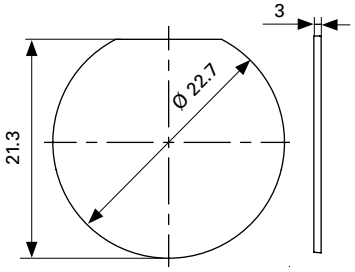


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX12DCG**
IP68/69K - Metal terminal	**UTGX12DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX12DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTGX612DCG**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005587A	**85005596**

Gasket



Part number
UTFD13B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX712CCRG**	**UTGX612CCRG**
Y for Yellow	**UTGX712CCRY**	**UTGX612CCRY**
R for Red	**UTGX712CCRR**	**UTGX612CCRR**

Connectors

1210 - 12E10/12D10 (Shell size 12, 10x#20)

Tooling

Tooling



Description	Part number
Handle (without head)	**Shandles**
Box containing handle and several crimp tooling	**Toolkit**

Crimp tooling
(without Shandles)





Contact size	Contacts	Part number of Head
Standard contacts #20 Ø 1 mm	**RM/RC 24W3K**(1)	**S20RCM***
	RM/RC 20W3K(1)	**S20RCM***
	RM/RC 18W3K(1)	**S20RCM***
	SM/SC 24WL3(1)(2)	**S20SCM20***
	SM/SC 20WL3(1)(2)	**S20SCM20***

(1): Example of plating, for other plating options see page 129
(2): Loose contact
* Heads to be used with handle PN: SHANDLES

Extraction tool #20



Description	Part number
Contacts #20	**RX20D44**

Contacts #20

Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	26-24	0.13-0.25	**RM24W3K**	**RC24W3K**	0.80	1.58
		20-20	0.32-0.52	**RM20W3K**	**RC20W3K**	1.15	1.80
		20-18	0.52-0.80	**RM18W3K**	**RC18W3K**	1.30	2.10
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24W3TK6(1)(2)**	**SC24W3TK6(1)(2)**	–	0.90-1.58
		26-24	0.13-0.25	**SM24W3S26(1)(2)**	**SC24W3S25(1)(2)**	–	0.90-1.58
		20-20	0.32-0.52	**SM20W3TK6(1)(2)**	**SC20W3TK6(1)(2)**	–	1.20-2.10
		20-20	0.32-0.52	**SM20W3S26(1)(2)**	**SC20W3S25(1)(2)**	–	1.20-2.10
PCB	Machined (3)	–		**RMW5016K**	**RCW5016K**	–	–

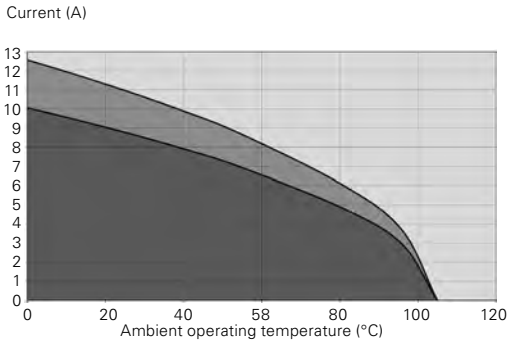
(1): Example of plating, for other plating see page 129 (2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20W3TK6 becomes SM20WL3TK6
(3): for dimensions see pages 136 or 137

Contact style	Contact type	Plating	Cable acceptance (AWG)	Wire stripping length (mm)
Handsolder	Loaded in the connector	Min 0.4µ gold over 0.8µ Ni	20 to 18	3.8

Electrical characteristics

UL	CSA	IEC
UTGX 1210		
4.5A 250V with AWG20 wire	3A 250V with AWG20 wire	6A 50V 1.5kV 3
UTGX 12E10/12D10		
4.5A 250V with AWG20 wire	4.5A 250V with AWG20 wire	6A 50V 1.5kV 3

UTGX 1210 - 12E10/12D10 derating curves



Test conditions

Contact used: machined contacts

Wires used: 0.518 mm²

Derating curves based on continuous current application.

Connectors

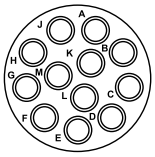
1412 (Shell size 14, 12x#16)



Connector part number

UTGX 1412

12 contacts
16A/500V
per UL 1977 with
AWG14 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Crimp contacts supplied separately See page 100	Square flange receptacle	Without (Fig. 1)	**UTGX01412P**	**UTGX01412S**
	Square flange receptacle	Cable gland (Fig. 2)	**UTGX0JC1412P**	**UTGX0JC1412S**
	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC1412P**	**UTGX1JC1412S**
	Plug	Without (Fig. 4)	**UTGX61412P**	**UTGX61412S**
		Cable gland (Fig. 5)	**UTGX6JC1412P**	**UTGX6JC1412S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX71412P**	**UTGX71412S**
PCB contacts supplied separately See page 100	Square flange receptacle	Without (Fig. 1)	**UTGX01412P**	**UTGX01412S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX71412P**	**UTGX71412S**

For discrimination/keying methods see page 154

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm²)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	1.5	H05 VV - F 12x1.5	**HAUTGX1412PST1M**	**HAUTGX1412SST1M**
Right angle ending	Plug	1.5	H05 VV - F 12x1.5	**HAUTGX1412PRA1M**	**HAUTGX1412SRA1M**

(1) Other cable available on demand
* Other lengths available on demand
Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0 and UTGX0JC

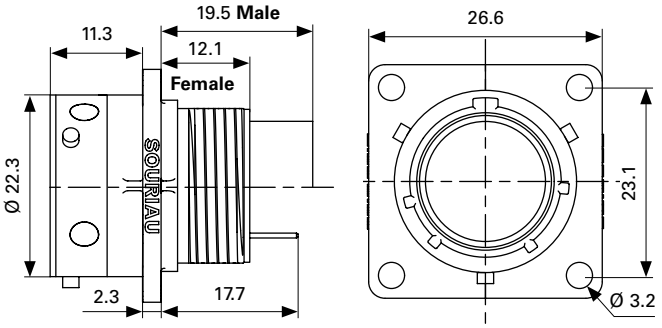


Fig. 1

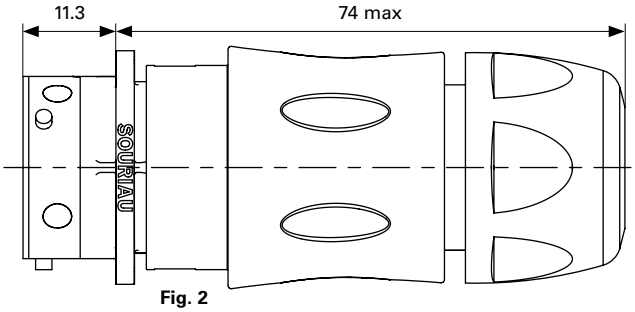


Fig. 2

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Free hanging - UTGX1JC

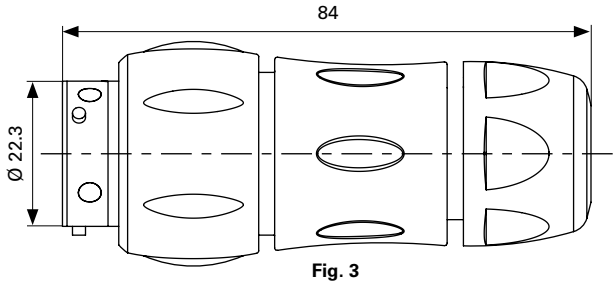


Fig. 3

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Plug - UTGX6 & UTGX6JC

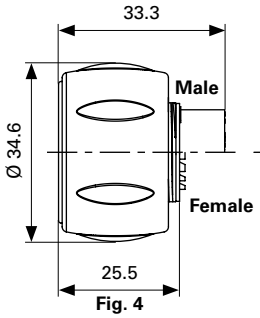


Fig. 4

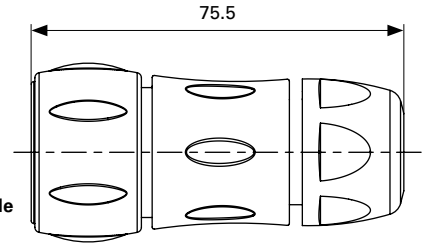


Fig. 5

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm,
reduced seal: from 5 mm to 12 mm

Jam nut receptacle UTGX7

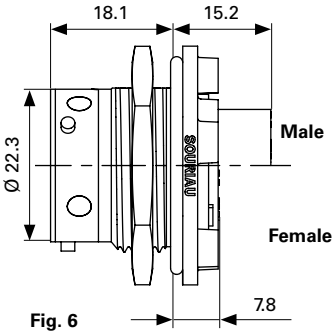
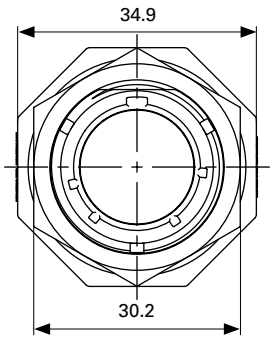
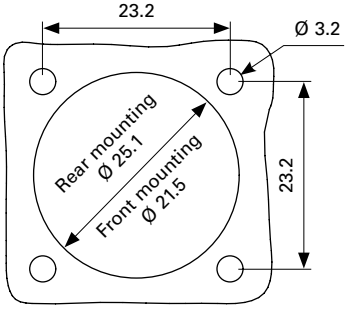


Fig. 6

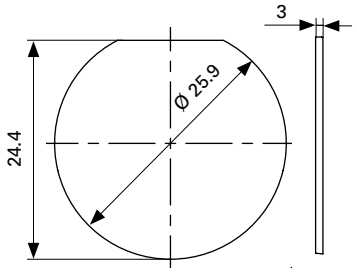


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Connectors

1412 (Shell size 14, 12x#16)

Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX14DCG**
IP68/69K - Metal terminal	**UTGX14DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX14DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTS614DCG133**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005588A	**85005597**

Gasket



Part number
UTFD14B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX714CCRG**	**UTGX614CCRG**
Y for Yellow	**UTGX714CCRY**	**UTGX614CCRY**
R for Red	**UTGX714CCRR**	**UTGX614CCRR**

Tooling

Tooling



Description	Part number
Handle (without head)	**Shandles**
Box containing handle and several crimp tooling	**Toolkit**

Crimp tooling
(without Shandles)



Contact size	Contacts	Part number of Head
Standard contacts #16 Ø 1.6 mm	**RM/RC 28M1K(1)**	**S16RCM20***
	RM/RC 24M9K(1)	**S16RCM20***
	RM/RC 20M13K(1)	**S16RCM20***
	RM/RC 20M12K(1)	**S16RCM20***
	RM/RC 16M23K(1)	**S16RCM16***
	RM/RC 14M30K(1)	**S16RCM14***
	SM/SC 24ML1TK6(1)	**S16SCM20***
	SM/SC 20ML1TK6(1)	**S16SCM20***
	SM/SC 16ML1TK6(1)	**S16SCML1***
	SM/SC 14ML1TK6(1)	**S16SCML1***
	SM/SC 16ML11TK6(1)	**S16SCML11***

(1): Example of plating, for other plating options see page 129

* Heads to be used with handle PN: SHANDLES

Extraction tool #16

Fig. 1



Fig. 2



Description	Part number
Fig. 1	**RX2025GE1**
Fig. 2 - Long endurance tool	**RX2031J**

Contacts #16

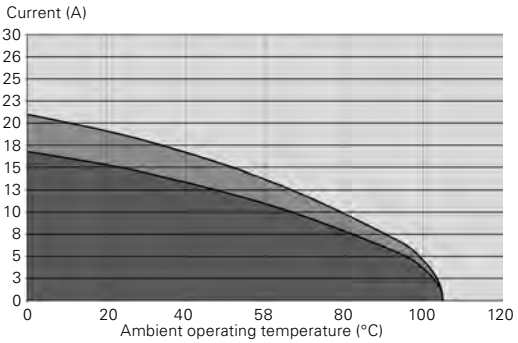
Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	30-26	0.48-0.08	**RM28M1K(1)**	**RC28M1K(1)**	0.55	1.00
		26-24	0.13-0.25	**RM24M9K(1)**	**RC24M9K(1)**	0.80	1.58
		20-20	0.32-0.52	**RM20M13K(1)**	**RC20M13K(1)**	1.15	1.80
		20-20	0.32-0.52	**RM20M12K(1)**	**RC20M12K(1)**	1.15	2.20
		20-16	0.52-1.48	**RM16M23K(1)**	**RC16M23K(1)**	1.80	3.20
		16-14	1.48-2.48	**RM14M30K(1)**	**RC14M30K(1)**	2.30	3.20
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24M1TK6(1)(2)**	**SC24M1TK6(1)(2)**	–	0.90-1.58
		20-20	0.32-0.52	**SM20M1TK6(1)(2)**	**SC20M1TK6(1)(2)**	–	1.20-2.10
		18-16	0.80-1.48	**SM16M1TK6(1)(2)**	**SC16M1TK6(1)(2)**	–	3.20
		18-16	0.80-1.48	**SM16M11TK6(1)(2)**	**SC16M11TK6(1)(2)**	–	3.00
		14	2.48	**SM14M1TK6(1)(2)**	**SC14M1TK6(1)(2)**	–	3.20
PCB	Machined (3)	–		**RM20M12E83K(1)**	**RC20M12E84K(1)**		–
Coaxial	Cable multipiece	see pages 133 to 134		**RMDXK10D28**	**RCDXK1D28**	–	–
	Cable monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
	Twisted pair multipiece			**RMDXK10D28 + yorx090**	**RCDXK1D28 + yorx090**	–	–
	Twisted pair monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
Fiber optic	POF contacts (Plastic Optical Fiber)	–		**RMPOF1000**	**RCPOF1000B**	–	–
Handsolder	Loaded in the connector	14-18	2.48-0.80	**–**	**–**	–	–

(1): Example of plating, for other plating see page 129
(2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20M1TK6 becomes SM20ML1TK6
(3): for dimensions see pages 136 or 137

Electrical characteristics

UL	CSA	IEC
16A 500V with AWG14 wire	16A 500V with AWG14 wire	10A 63V 1.5kV 3

UTGX 1412 derating curves



Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 1.31 mm²

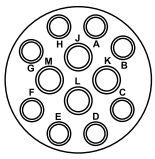
Derating curves based on continuous current application.



Connector part number

UTGX 14E12/14D12

12 contacts
5A 250V per UL1977 with AWG20 wire
10A 600V per UL1977 with AWG16 wire
(qualification pending)



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Handsolder electrical contacts loaded see page 104	Square flange receptacle	Without (Fig. 1)	**UTGX014E12P**	**UTGX014E12S**
	Plug	Without (Fig. 2)	**UTGX614E12P**	**UTGX614E12S**
		Cable gland (Fig. 3)	**UTGX6JC14E12P**	**UTGX6JC14E12S**
	Jam nut receptacle	Without (Fig. 4)	**UTGX714E12P**	**UTGX714E12S**
PCB contacts loaded see page 104	Square flange receptacle	Without (Fig. 2)	**UTGX014D12P**	**UTGX014D12S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig. 5)	**UTGX714D12P**	**UTGX714D12S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig. 6)	**UTGX714D12P32**	**UTGX714D12S32**

For discrimination/keying methods see page 154

Sealed unmated

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm^2)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	1.5	H05 VV - F 12x1.5	**HAUTGX14E12PST1M**	**HAUTGX14E12SST1M**
Right angle ending	Plug	1.5	H05 VV - F 12x1.5	**HAUTGX14E12PRA1M**	**HAUTGX14E12SRA1M**

(1) Other cable available on demand
* Other lengths available on demand
Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0

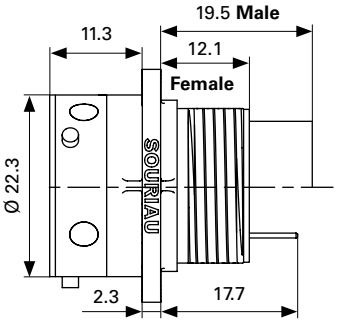
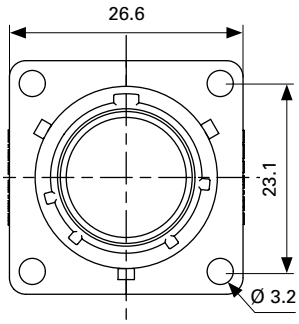


Fig. 1



Plug - UTGX6 & UTGX6JC

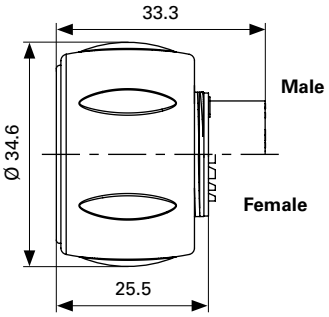


Fig. 2

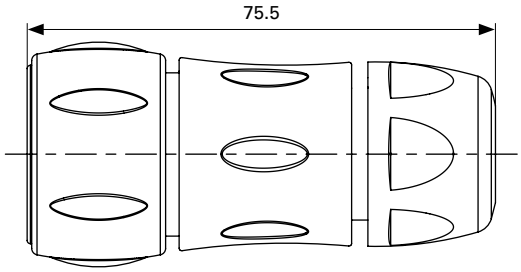


Fig. 3

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Jam nut receptacle UTGX7

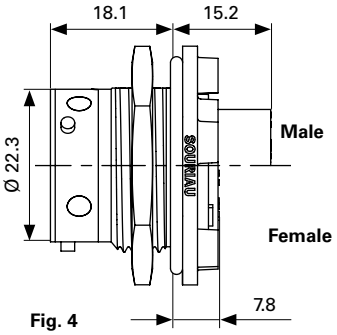


Fig. 4

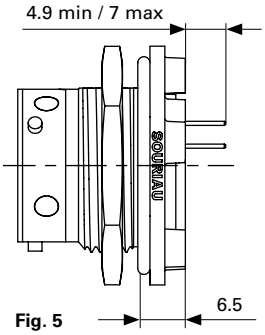


Fig. 5

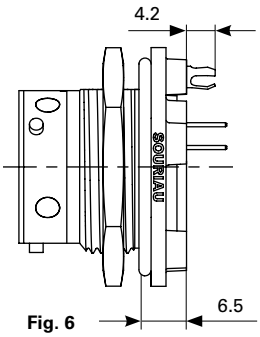
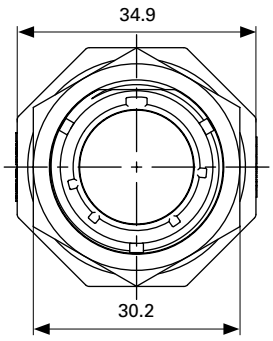
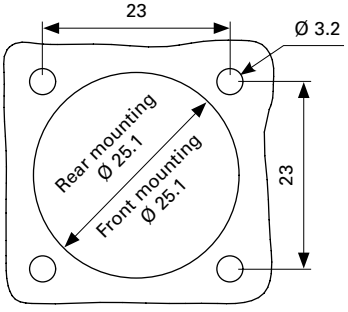


Fig. 6

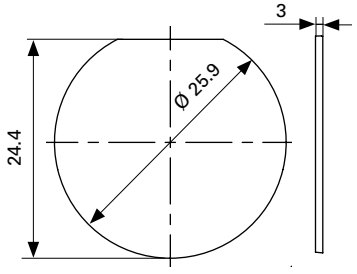


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX14DCG**
IP68/69K - Metal terminal	**UTGX14DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX14DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTS614DCG133**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005588A	**85005597**

Gasket



Part number
UTFD14B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX714CCRG**	**UTGX614CCRG**
Y for Yellow	**UTGX714CCRY**	**UTGX614CCRY**
R for Red	**UTGX714CCRR**	**UTGX614CCRR**

Connectors

14E12/14D12 (Shell size 14, 8x#20, 4#16)

Contacts

Contact size	Contact type	Plating	Cable acceptance (AWG)	Cable acceptance (mm²)	Wire stripping length (mm)
#16	Handsolder Loaded in the connector	Min 0.4µ gold over 0.8µ Ni	18 - 14	0.823 - 2.08	5
	PCB Machined (1)	Min 0.4µ gold over 0.8µ Ni	–	–	–
#20	Handsolder Loaded in the connector	Min 0.4µ gold over 0.8µ Ni	20 - 18	0.32 - 0.75	3.8
	PCB Machined (1)	Min 0.4µ gold over 0.8µ Ni	–	–	–

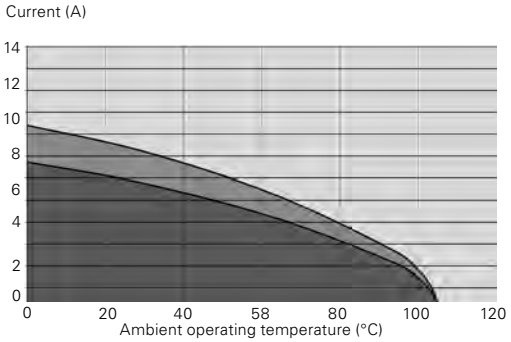
(1): For dimensions see pages 136 or 137

Electrical characteristics

UL	CSA	IEC
5A 250V with AWG20* 10A 600V with AWG16*	5A 250V with AWG20* 10A 600V with AWG16*	4A 50V 1.5kV 3

* qualification pending

UTGX 14E12/14D12 derating curves



Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 0.518 mm²

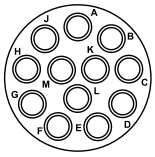
Derating curves based on continuous current application.



Connector part number

UTGX 1492

12 contacts
10A/500V
per UL 1977 with
AWG16 wire



			Part number	
Contact type	**Connector type**	**Backshell**	**Male insert**	**Female insert**
Crimp contacts supplied separately see page 109	Square flange receptacle	Without (Fig. 1)	**UTGX01492P**	**UTGX01492S**
	Square flange receptacle	Cable gland (Fig. 2)	**UTGX0JC1492P**	**UTGX0JC1492S**
	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC1492P**	**UTGX1JC1492S**
	Plug	Without (Fig. 4)	**UTGX61492P**	**UTGX61492S**
		Cable gland (Fig. 5)	**UTGX6JC1492P**	**UTGX6JC1492S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX71492P**	**UTGX71492S**
PCB contacts supplied separately see page 109	Square flange receptacle	Without (Fig. 1)	**UTGX01492P**	**UTGX01492S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX71492P**	**UTGX71492S**

For discrimination/keying methods see page 154

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0 and UTGX0JC

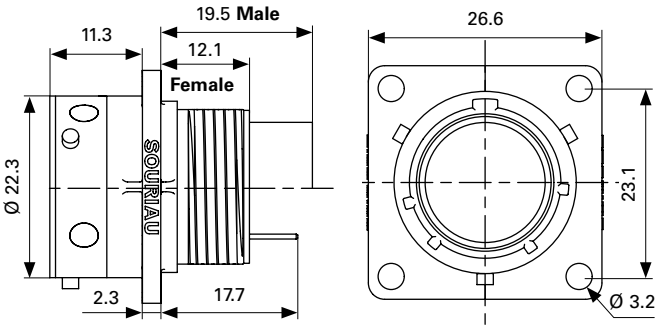


Fig. 1

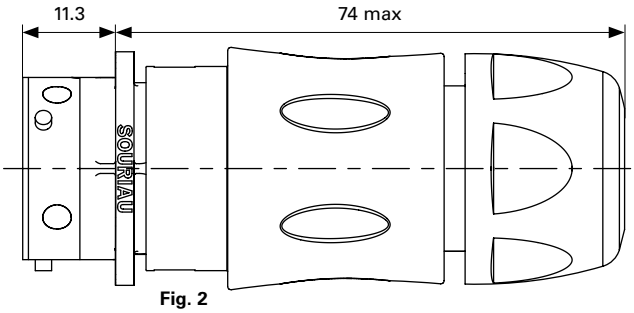


Fig. 2

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Free hanging - UTGX1JC

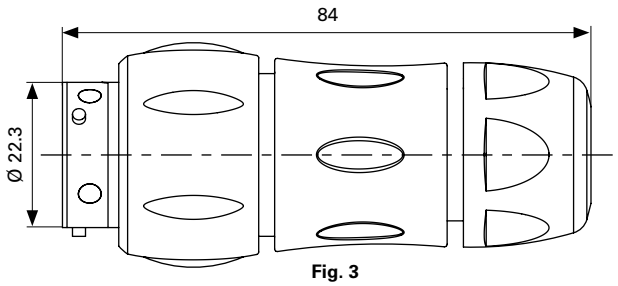


Fig. 3

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Plug - UTGX6 & UTGX6JC

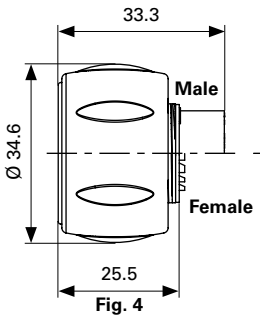


Fig. 4

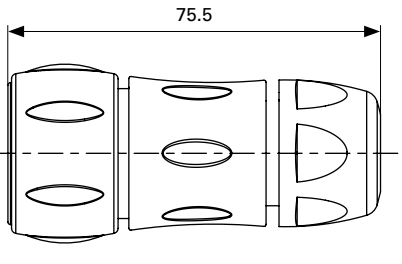


Fig. 5

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm,
reduced seal: from 5 mm to 12 mm

Jam nut receptacle UTGX7

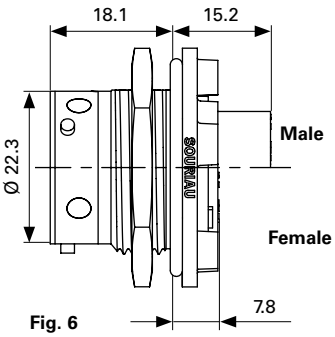


Fig. 6

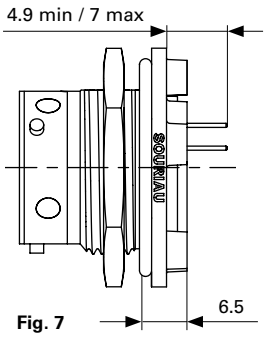
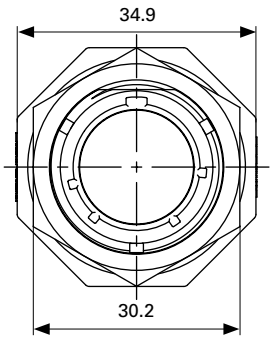
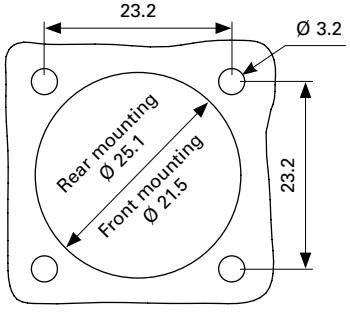


Fig. 7

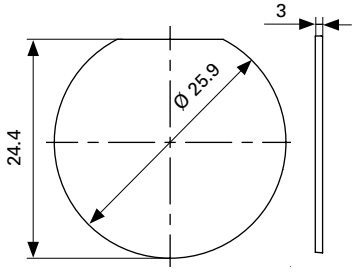


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX14DCG**
IP68/69K - Metal terminal	**UTGX14DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX14DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTS614DCG133**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005588A	**85005597**

Gasket



Part number
UTFD14B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX714CCRG**	**UTGX614CCRG**
Y for Yellow	**UTGX714CCRY**	**UTGX614CCRY**
R for Red	**UTGX714CCRR**	**UTGX614CCRR**

Connectors

1492 (Shell size 14, 12x#16)

Tooling

Tooling



Description	Part number
Handle (without head)	**Shandles**
Box containing handle and several crimp tooling	**Toolkit**

Crimp tooling
(without Shandles)



Contact size	Contacts	Part number of Head
Standard contacts #16 Ø 1.6 mm	**RM/RC 28M1K(1)**	**S16RCM20***
	RM/RC 24M9K(1)	**S16RCM20***
	RM/RC 20M13K(1)	**S16RCM20***
	RM/RC 20M12K(1)	**S16RCM20***
	RM/RC 16M23K(1)	**S16RCM16***
	RM/RC 14M30K(1)	**S16RCM14***
	SM/SC 24ML1TK6(1)	**S16SCM20***
	SM/SC 20ML1TK6(1)	**S16SCM20***
	SM/SC 16ML1TK6(1)	**S16SCML1***
	SM/SC 14ML1TK6(1)	**S16SCML1***
	SM/SC 16ML11TK6(1)	**S16SCML11***

(1): Example of plating, for other plating options see page 129

* Heads to be used with handle PN: SHANDLES

Extraction tool #16

Fig. 1



Fig. 2



Description	Part number
Fig. 1	**RX2025GE1**
Fig. 2 - Long endurance tool	**RX2031J**

Contacts #16

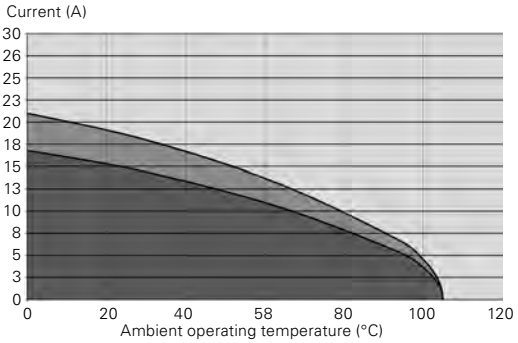
Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm^2)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	30-26	0.48-0.08	**RM28M1K**(1)	**RC28M1K**(1)	0.55	1.00
		26-24	0.13-0.25	**RM24M9K**(1)	**RC24M9K**(1)	0.80	1.58
		20-20	0.32-0.52	**RM20M13K**(1)	**RC20M13K**(1)	1.15	1.80
		20-20	0.32-0.52	**RM20M12K**(1)	**RC20M12K**(1)	1.15	2.20
		20-16	0.52-1.48	**RM16M23K**(1)	**RC16M23K**(1)	1.80	3.20
		16-14	1.48-2.48	**RM14M30K**(1)	**RC14M30K**(1)	2.30	3.20
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24M1TK6**(1)(2)	**SC24M1TK6**(1)(2)	–	0.90-1.58
		20-20	0.32-0.52	**SM20M1TK6**(1)(2)	**SC20M1TK6**(1)(2)	–	1.20-2.10
		18-16	0.80-1.48	**SM16M1TK6**(1)(2)	**SC16M1TK6**(1)(2)	–	3.20
		18-16	0.80-1.48	**SM16M11TK6**(1)(2)	**SC16M11TK6**(1)(2)	–	3.00
		14	2.48	**SM14M1TK6**(1)(2)	**SC14M1TK6**(1)(2)	–	3.20
PCB	Machined(3)	–		**RM20M12E83K**(1)	**RC20M12E84K**(1)		–
Coaxial	Cable multipiece	see pages 133 to 134		**RMDXK10D28**	**RCDXK1D28**	–	–
	Cable monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
	Twisted pair multipiece			**RMDXK10D28 + yorx090**	**RCDXK1D28 + yorx090**	–	–
	Twisted pair monocrimp			**RMDX60xxD28**	**RCDX60xxD28**	–	–
Fiber optic	POF contacts (Plastic Optical Fiber)	–		**RMPOF1000**	**RCPOF1000B**	–	–
Handsolder	Loaded in the connector	14-18	2.48-0.80	**–**	**–**	–	–

(1): Example of plating, for other plating see page 129
(2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20M1TK6 becomes SM20ML1TK6
(3): for dimensions see pages 136 or 137

Electrical characteristics

UL	CSA	IEC
10A 500V with AWG16 wire	7A 500V with AWG16 wire	10A 63V 1.5kV 3

UTGX 1412 derating curves



Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 1.31 mm^2

Derating curves based on continuous current application.

Connectors

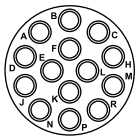
12E14/12D14 (Shell size 12, 14x20)



Connector part number

UTGX 12E14/12D14

14 contacts
4.5A/250V
per UL 1977 with
AWG20 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Handsolder electrical contacts loaded see page 113	Square flange receptacle	Without (Fig. 1)	**UTGX012E14P**	**UTGX012E14S**
	Plug	Without (Fig. 2)	**UTGX612E14P**	**UTGX612E14S**
		Cable gland (Fig. 3)	**UTGX6JC12E14P**	**UTGX6JC12E14S**
	Jam nut receptacle	Without (Fig. 4)	**UTGX712E14P**	**UTGX712E14S**
PCB contacts loaded see page 113	Square flange receptacle	Without (Fig. 1)	**UTGX012D14P**	**UTGX012D14S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig. 5)	**UTGX712D14P**	**UTGX712D14S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig. 6)	**UTGX712D14P32**	**UTGX712D14S32**

For discrimination/keying methods see page 154

Sealed unmated

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm²)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	0.5	H05 VV - F 14x0.5	**HAUTGX12E14PST1M**	**HAUTGX12E14SST1M**
Right angle ending	Plug	0.5	H05 VV - F 14x0.5	**HAUTGX12E14PRA1M**	**HAUTGX12E14SRA1M**

(1) Other cable available on demand
* Other lengths available on demand
Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0

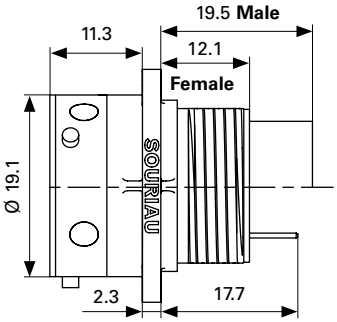
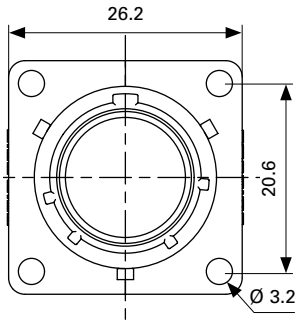


Fig. 1



Plug - UTGX6 & UTGX6JC

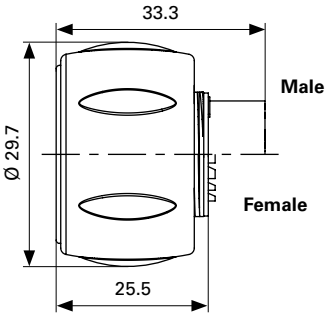


Fig. 2

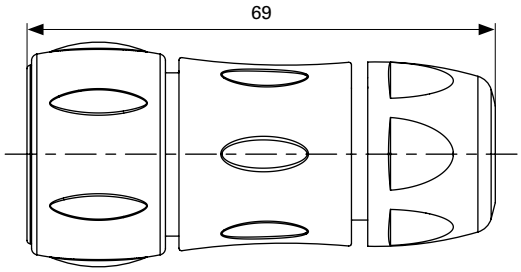


Fig. 3

Cable diameter acceptance: standard seal:
from 2.5 mm to 12 mm, reduced seal: from 3 mm to 9 mm

Jam nut receptacle UTGX7

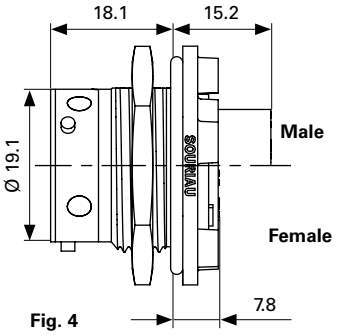


Fig. 4

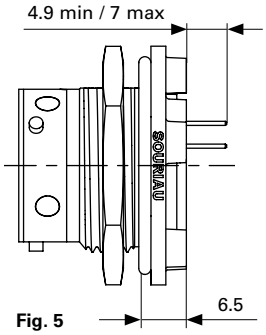


Fig. 5

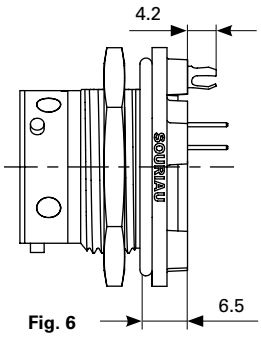
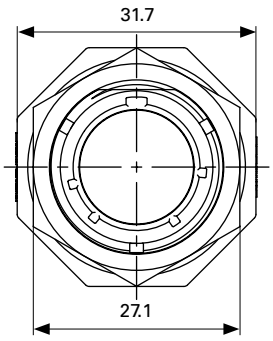
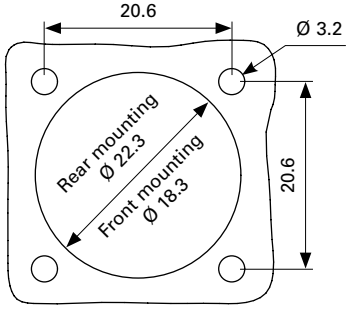


Fig. 6

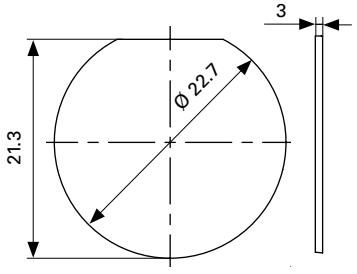


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Connectors

12E14/12D14 (Shell size 12, 14x20)

Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX12DCG**
IP68/69K - Metal terminal	**UTGX12DCGR**

Plug sealing cap



Description	Part number
IP68/69K	**UTGX612DCG**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005587A	**85005596**

Gasket



Part number
UTFD13B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX712CCRG**	**UTGX612CCRG**
Y for Yellow	**UTGX712CCRY**	**UTGX612CCRY**
R for Red	**UTGX712CCRR**	**UTGX612CCRR**

Contacts #20

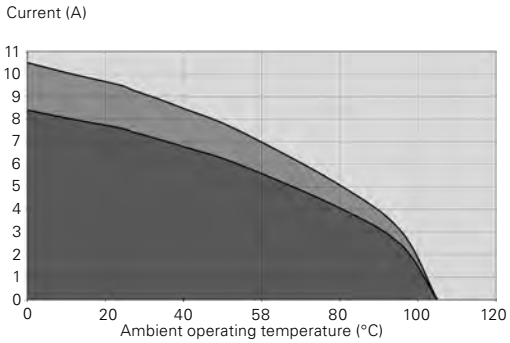
Contact style	Contact type	Plating	Cable acceptance (AWG)	Wire stripping length (mm)
Handsolder	Loaded in the connector	Min 0.4µ gold over 0.8µ Ni	20 to 18	3.8
PCB	Machined [1]	Min 0.4µ gold over 0.8µ Ni	–	–

(1): For dimensions see pages 136 or 137

Electrical characteristics

UL	CSA	IEC
4.5A 250V with AWG20 wire	4.5A 250V with AWG20 wire	5A 32V 1.5kV 3

UTGX 12E4/12D4 derating curves



Derating curves based on continuous current application.

Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 0.518 mm²

Connectors

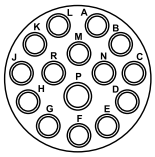
14E15/14D15 (Shell size 14, 14x#20, 1#16)



Connector part number

UTGX 14E15/14D15

15 contacts
12A 600V per UL1977 with AWG16 wire
5A 250V per UL1977 with AWG20 wire
(qualification pending)



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Handsolder electrical contacts loaded see page 117	Square flange receptacle	Without (Fig. 1)	**UTGX014E15P**	**UTGX014E15S**
	Plug	Without (Fig. 2)	**UTGX614E15P**	**UTGX614E15S**
		Cable gland (Fig. 3)	**UTGX6JC14E15P**	**UTGX6JC14E15S**
	Jam nut receptacle	Without (Fig. 4)	**UTGX714E15P**	**UTGX714E15S**
PCB contacts loaded see page 117	Square flange receptacle	Without (Fig. 2)	**UTGX014D15P**	**UTGX014D15S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig. 5)	**UTGX714D15P**	**UTGX714D15S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig. 6)	**UTGX714D15P32**	**UTGX714D15S32**

For discrimination/keying methods see page 154

Sealed unmated

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm²)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	1.5	H05 VV - F 15x1.5	**HAUTGX14E15PST1M**	**HAUTGX14E15SST1M**
Right angle ending	Plug	1.5	H05 VV - F 15x1.5	**HAUTGX14E15PRA1M**	**HAUTGX14E15SRA1M**

(1) Other cable available on demand
* Other lengths available on demand
Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0

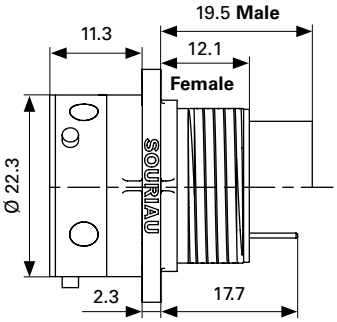
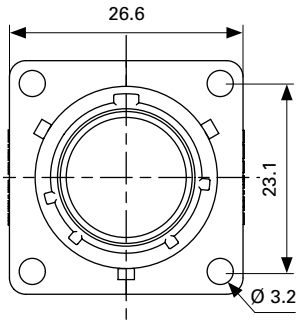


Fig. 1



Plug - UTGX6 & UTGX6JC

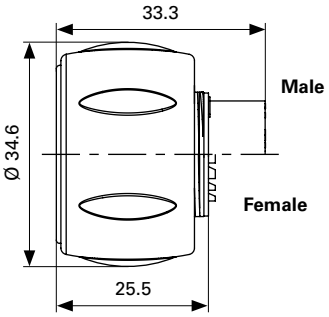


Fig. 2

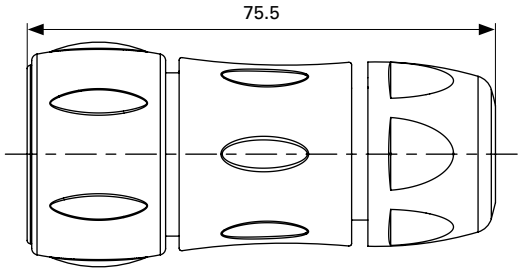


Fig. 3

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Jam nut receptacle UTGX7

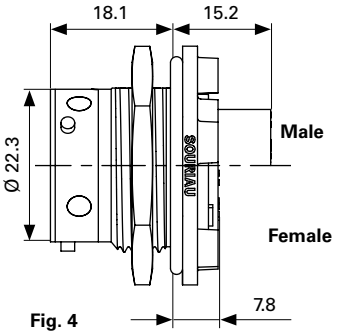


Fig. 4

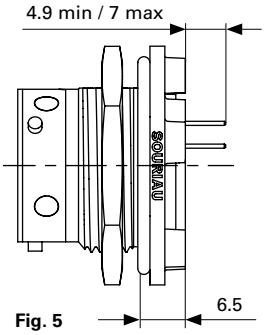


Fig. 5

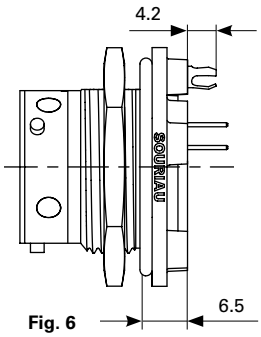
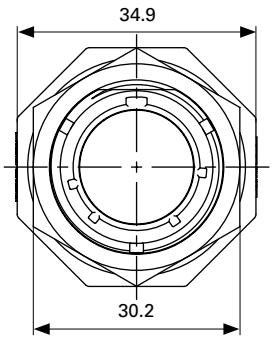
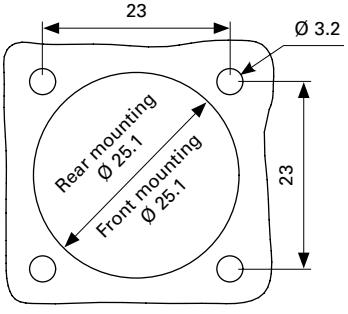


Fig. 6

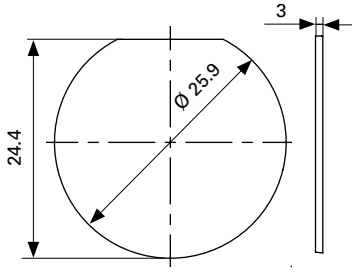


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Connectors

14E15/14D15 (Shell size 14, 14x#20, 1#16)

Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX14DCG**
IP68/69K - Metal terminal	**UTGX14DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX14DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTS614DCG133**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005588A	**85005597**

Gasket



Part number
UTFD14B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX714CCRG**	**UTGX614CCRG**
Y for Yellow	**UTGX714CCRY**	**UTGX614CCRY**
R for Red	**UTGX714CCRR**	**UTGX614CCRR**

Contacts

Contact size	Contact type	Plating	Cable acceptance (AWG)	Cable acceptance (mm²)	Wire stripping length (mm)
#16	Handsolder Loaded in the connector	Min 0.4µ gold over 0.8µ Ni	18 - 14	0.823 - 2.08	5
	PCB Machined (1)	Min 0.4µ gold over 0.8µ Ni	–	–	–
#20	Handsolder Loaded in the connector	Min 0.4µ gold over 0.8µ Ni	20 - 18	0.32 - 0.75	3.8
	PCB Machined (1)	Min 0.4µ gold over 0.8µ Ni	–	–	–

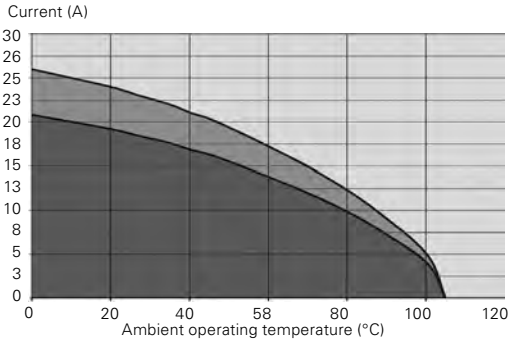
(1): For dimensions see pages 136 or 137

Electrical characteristics

UL	CSA	IEC
12A 600V with AWG16* 5A 250V with AWG20*	12A 600v with AWG16* 5A 250V with AWG20*	4A 50V 1.5kV 3

* qualification pending

UTGX 14E15/14D15 derating curves



Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 1.31 mm²

Derating curves based on continuous current application.

Connectors

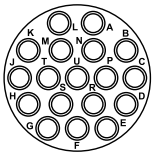
14E18/14D18 (Shell size 14, 18x#20)



Connector part number

UTGX 14E18/14D18

18 contacts
4A/250V
per UL 1977
with AWG20 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Handsolder electrical contacts loaded see page 121	Square flange receptacle	Without (Fig. 1)	**UTGX014E18P**	**UTGX014E18S**
	Plug	Without (Fig. 2)	**UTGX614E18P**	**UTGX614E18S**
		Cable gland (Fig. 3)	**UTGX6JC14E18P**	**UTGX6JC14E18S**
	Jam nut receptacle	Without (Fig. 4)	**UTGX714E18P**	**UTGX714E18S**
PCB contacts loaded see page 121	Square flange receptacle	Without (Fig. 2)	**UTGX014D18P**	**UTGX014D18S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig. 5)	**UTGX714D18P**	**UTGX714D18S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig. 6)	**UTGX714D18P32**	**UTGX714D18S32**

For discrimination/keying methods see page 154

Sealed unmated

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm^2)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	0.5	H05 VV - F 18x0.5	**HAUTGX14E18PST1M**	**HAUTGX14E18SST1M**
Right angle ending	Plug	0.5	H05 VV - F 18x0.5	**HAUTGX14E18PRA1M**	**HAUTGX14E18SRA1M**

(1) Other cable available on demand
* Other lengths available on demand
Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0

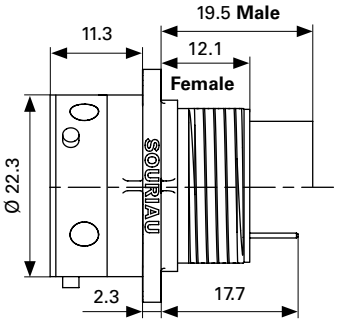
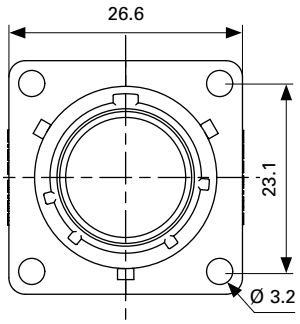


Fig. 1



Plug - UTGX6 & UTGX6JC

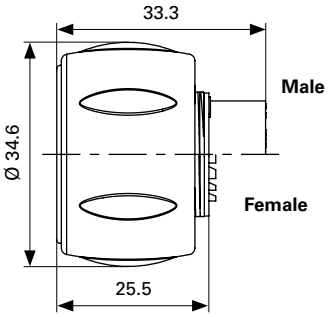


Fig. 2

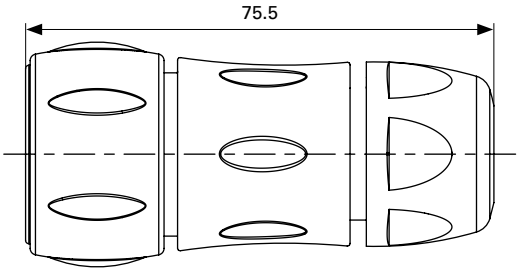


Fig. 3

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Jam nut receptacle UTGX7

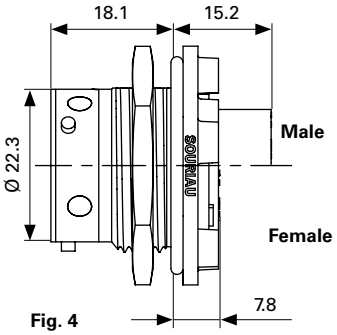


Fig. 4

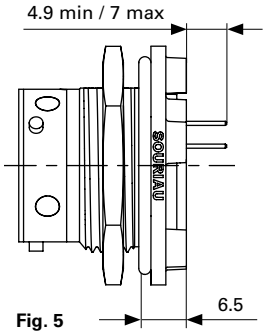


Fig. 5

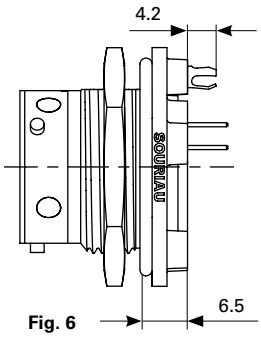
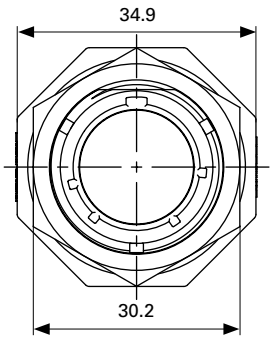
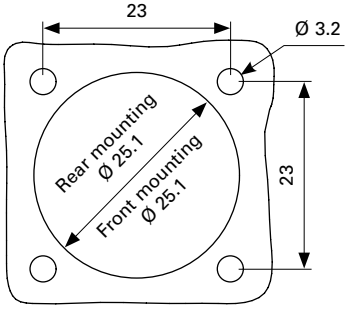


Fig. 6

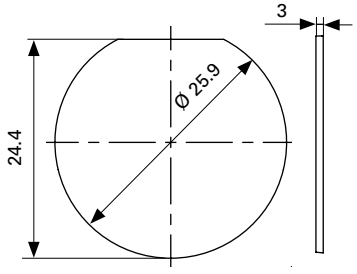


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Connectors

14E18/14D18 (Shell size 14, 18x#20)

Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX14DCG**
IP68/69K - Metal terminal	**UTGX14DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX14DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTS614DCG133**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005588A	**85005597**

Gasket



Part number
UTFD14B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX714CCRG**	**UTGX614CCRG**
Y for Yellow	**UTGX714CCRY**	**UTGX614CCRY**
R for Red	**UTGX714CCRR**	**UTGX614CCRR**

Contacts

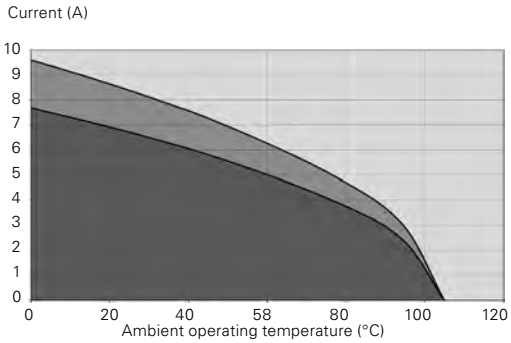
Contact size	Contact type	Plating	Cable acceptance (AWG)	Cable acceptance (mm²)	Wire stripping length (mm)
#20	Handsolder Loaded in the connector	Min 0.4µ gold over 0.8µ Ni	20 - 18	0.32 - 0.75	3.8
	PCB Machined (1)	Min 0.4µ gold over 0.8µ Ni	–	–	–

(1): For dimensions see pages 136 or 137

Electrical characteristics

UL	CSA	IEC
4A 250V with AWG20 wire	4A 250V with AWG20 wire	5A 50V 1.5kV 3

UTGX 14E18/14D18 derating curves



Derating curves based on continuous current application.

Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 0.518 mm²

Connectors

1419 - 14E19/14D19 (Shell size 14, 19x#20)



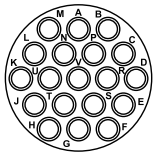
Connector part number

UTGX 1419

19 contacts + ground
4.5A/250V
per UL 1977
with AWG20 wire

14E19/14D19

19 contacts + ground
4A/250V
per UL 1977
with AWG20 wire



Contact type	Connector type	Backshell	Part number Male insert	Female insert
Crimp contacts supplied separately see page 126	Square flange receptacle	Without (Fig. 1)	**UTGX01419P**	**UTGX01419S**
	Square flange receptacle	Cable gland (Fig. 2)	**UTGX0JC1419P**	**UTGX0JC1419S**
	Free hanging receptacle	Cable gland (Fig. 3)	**UTGX1JC1419P**	**UTGX1JC1419S**
	Plug	Without (Fig. 4)	**UTGX61419P**	**UTGX61419S**
		Cable gland (Fig. 5)	**UTGX6JC1419P**	**UTGX6JC1419S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX71419P**	**UTGX71419S**
PCB contacts supplied separately see page 126	Square flange receptacle	Without (Fig. 1)	**UTGX01419P**	**UTGX01419S**
Handsolder electrical contacts loaded see page 126	Square flange receptacle	Without (Fig. 1)	**UTGX014E19P**	**UTGX014E19S**
	Plug	Without (Fig. 4)	**UTGX614E19P**	**UTGX614E19S**
		Cable gland (Fig. 5)	**UTGX6JC14E19P**	**UTGX6JC14E19S**
	Jam nut receptacle	Without (Fig. 6)	**UTGX714E19P**	**UTGX714E19S**
PCB contacts loaded	Square flange receptacle	Without (Fig. 3)	**UTGX014D19P**	**UTGX014D19S**
	Jam nut receptacle with stand off and without hold down clip	Without (Fig.7)	**UTGX714D19P**	**UTGX714D19S**
	Jam nut receptacle with stand off and with hold down clips	Without (Fig. 8)	**UTGX714D19P32**	**UTGX714D19S32**

For discrimination/keying methods see page 154

Sealed unmated

Overmoulded cable assembly part numbers

Overmoulding type	Connector type	Wire size (mm²)	Harmonized cable part number (1)	Part number (length: 1 m.)* Male plug	Female plug
Straight ending	Plug	1.5	H05 VV - F 7x1.5	**HAUTGX1419PST1M**	**HAUTGX1419SST1M**
				HAUTGX14E19PRA1M	**HAUTGX14E19SRA1M**
Right angle ending	Plug	1.5	H05 VV - F 7x1.5	**HAUTGX1419PRA1M**	**HAUTGX1419SRA1M**
				HAUTGX14E19PRA1M	**HAUTGX14E19SRA1M**

(1) Other cable available on demand

* Other lengths available on demand

Note: Overmoulded cable assembly dimensions available page 145

Dimensions in mm (For mated connector lengths see page 145)

Square flange receptacle - UTGX0 and UTGX0JC

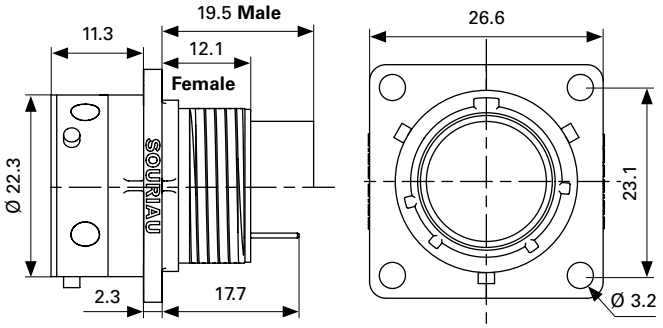


Fig. 1

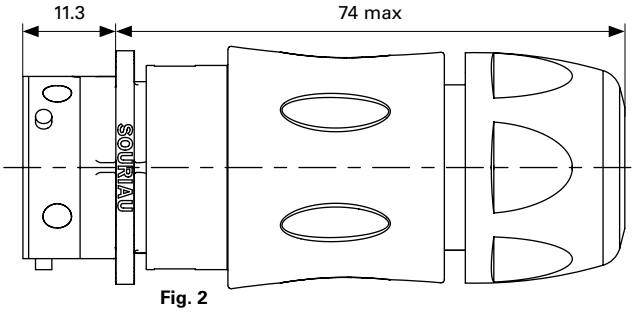


Fig. 2

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Free hanging - UTGX1JC

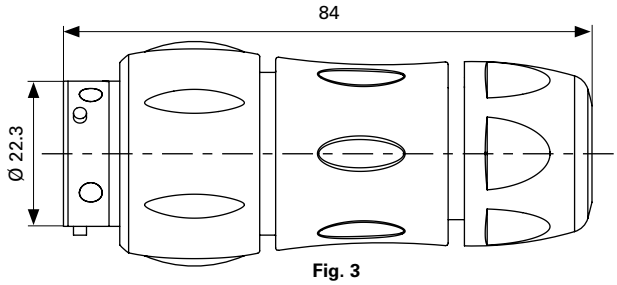


Fig. 3

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm, reduced seal: from 5 mm to 12 mm

Plug - UTGX6 & UTGX6JC

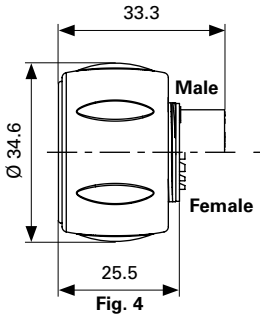


Fig. 4

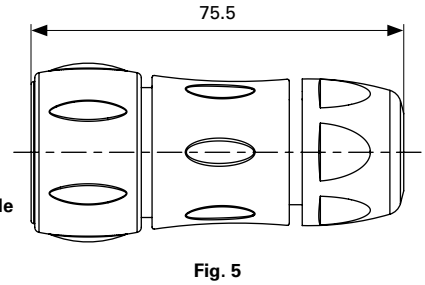


Fig. 5

Cable diameter acceptance: standard seal:
from 7 mm to 14 mm,
reduced seal: from 5 mm to 12 mm

Jam nut receptacle UTGX7

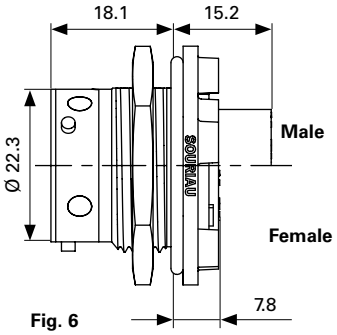


Fig. 6

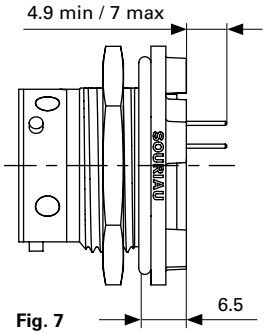


Fig. 7

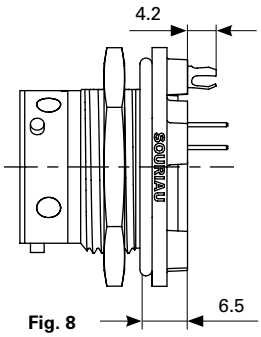
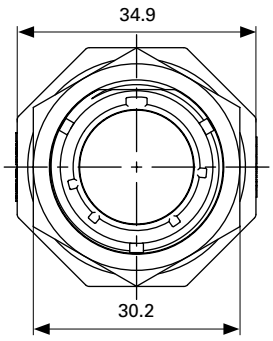
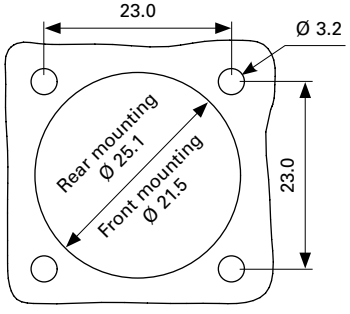


Fig. 8

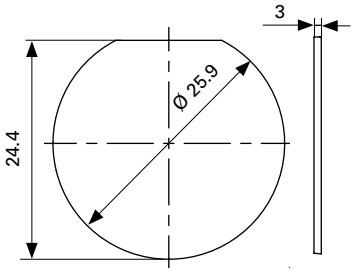


Panel cut out

Square flange receptacle - UTGX0



Jam nut receptacle - UTGX7



Connectors

1419 - 14E19/14D19 (Shell size 14, 19x#20)

Accessories

Jam nut & free hanging receptacle sealing caps



Description	Part number
IP68/69K	**UTGX14DCG**
IP68/69K - Metal terminal	**UTGX14DCGR**

Square flange sealing cap



Description	Part number
IP68/69K - Metal terminal	**UTGX14DCGE**

Plug sealing cap



Description	Part number
IP68/69K	**UTS614DCG133**

Plastic protective cap



Part number receptacle cap	Part number plug cap
85005588A	**85005597**

Gasket



Part number
UTFD14B

Color coding rings



Description	Part number receptacles	Part number plugs
G for Green	**UTGX714CCRG**	**UTGX614CCRG**
Y for Yellow	**UTGX714CCRY**	**UTGX614CCRY**
R for Red	**UTGX714CCRR**	**UTGX614CCRR**

Tooling

Tooling



Description	Part number
Handle (without head)	**Shandles**
Box containing handle and several crimp tooling	**Toolkit**

Crimp tooling
(without Shandles)





Contact size	Contacts	Part number of Head
Standard contacts #20 Ø 1 mm	**RM/RC 24W3K**(1)	**S20RCM***
	RM/RC 20W3K(1)	**S20RCM***
	RM/RC 18W3K(1)	**S20RCM***
	SM/SC 24WL3(1)(2)	**S20SCM20***
	SM/SC 20WL3(1)(2)	**S20SCM20***

(1): Example of plating, for other plating options see page 129
(2): Loose contact
* Heads to be used with handle PN: SHANDLES

Extraction tool #20



Description	Part number
Contacts #20	**RX20D44**

Contacts #20

Contact style	Contact type	Cable acceptance (AWG)	Cable acceptance (mm²)	Part number Male	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)
Crimp contacts	Machined	26-24	0.13-0.25	**RM24W3K**	**RC24W3K**	0.80	1.58
		20-20	0.32-0.52	**RM20W3K**	**RC20W3K**	1.15	1.80
		20-18	0.52-0.80	**RM18W3K**	**RC18W3K**	1.30	2.10
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	0.13-0.25	**SM24W3TK6**(1)(2)	**SC24W3TK6**(1)(2)	–	0.90-1.58
		26-24	0.13-0.25	**SM24W3S26**(1)(2)	**SC24W3S25**(1)(2)	–	0.90-1.58
		20-20	0.32-0.52	**SM20W3TK6**(1)(2)	**SC20W3TK6**(1)(2)	–	1.20-2.10
		20-20	0.32-0.52	**SM20W3S26**(1)(2)	**SC20W3S25**(1)(2)	–	1.20-2.10
PCB	Machined(3)	–	–	**RMW5016K**	**RCW5016K**	–	–

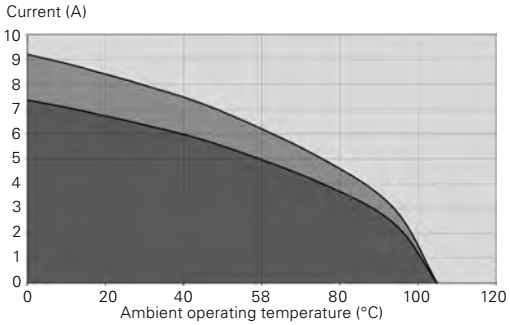
(1): Example of plating, for other plating see page 129
(2): Loose piece contact available by adding "L" after the "M" for the contact size and the plating. Example: SM20W3TK6 becomes SM20WL3TK6
(3): for dimensions see pages 136 or 137

Contact style	Contact type	Plating	Cable acceptance (AWG)	Wire stripping length (mm)
Handsolder	Loaded in the connector	Min 0.4µ gold over 0.8µ Ni	20 to 18	3.8

Electrical characteristics

UL	CSA	IEC
UTGX 1419		
4.5A 250V with AWG20 wire	3A 250V with AWG20 wire	5A 32V 1.5kV 3
UTGX 14E19/14D19		
4A 250V with AWG20 wire	4A 250V with AWG20 wire	5A 32V 1.5kV 3

UTGX 1419 - 14E19/14D19 derating curves



Derating curves based on continuous current application.

Current use
Limited use
Not recommended use

Test conditions

Contact used: machined contacts

Wires used: 0.518 mm²

Contacts

Description

Trim Trio® contacts offer the unique feature of using the same contact style in any layout, with the same active part size (i.e. #20, #16, #12, etc.). This provides an easy solution allowing you to use only one type of contact to equip all of your Souriau connectors designed for Trim Trio® contacts.

Please note that the **UTGX series** is delivered with solder or PCB contacts for Hi-seal versions and without contacts for standard crimp versions. The benefit of this standardization is to drastically reduce inventory costs. In addition, it eliminates the need for additional tooling and simplifies the assembly process. Souriau Trim Trio® contacts are designed for simple snap-in installation and further eliminate the need for an insertion tool.



Machined contacts



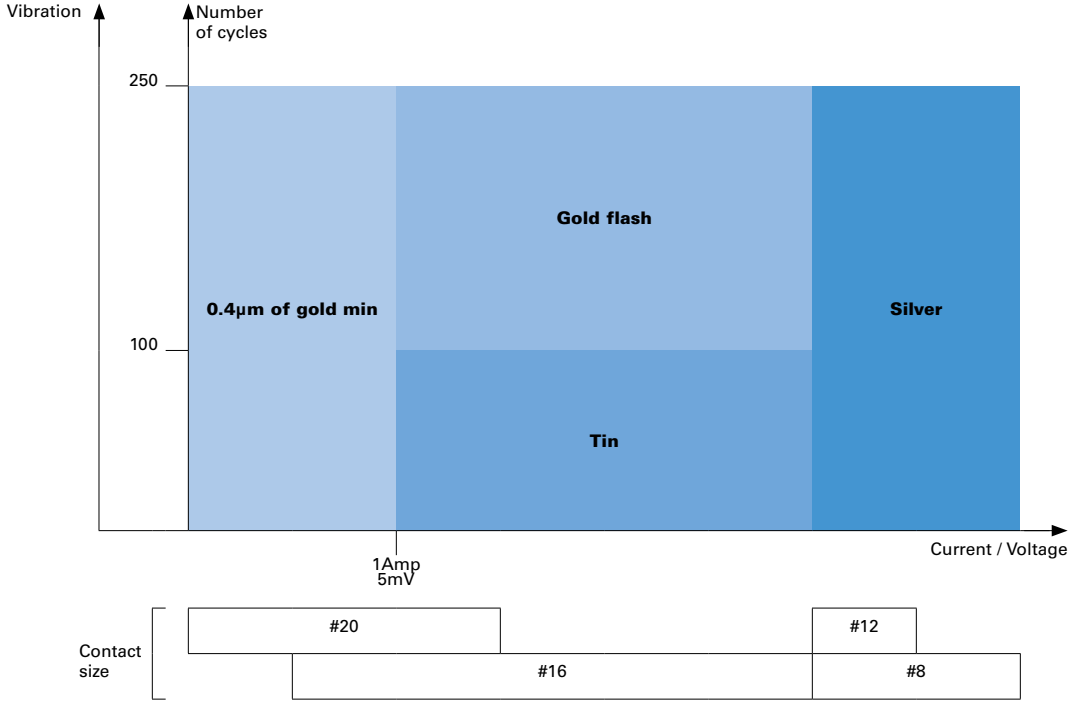
Stamped & Formed contacts

Contact plating selector guide









Once the contact size has been selected, the next step is to decide on which type to use. **Eaton** offers two main types of electrical contacts:

- Machined
- Stamped & Formed

Machined contacts are generally chosen as a better solution for power applications or when lower quantities are needed.

Stamped & Formed contacts offer the ability to be crimped automatically which makes them more suitable for high volume production applications.

The next decision to make is: What plating should I choose? The graph can help guide you to recommendations based on application, mating cycles and current/voltage needs.

Note: Do not mix different plating (i.e. tin plated pin contacts with gold plated socket contacts).

Machined contacts

Contact size	Contact type	Active area
#20 Ø 1 mm	K	0.4µm Gold over 2µm Nickel min
#16 Ø 1.6 mm	K	0.4µm Gold over 2µm Nickel min
	J	Gold flash over Nickel 2µm min
	T	Tin 3µm (-0/+2) over 1.3µm Nickel min
	D28 for Coax contacts only	0.75µm min Gold over 2µm Nickel min
#12 Ø 2.4 mm	A	2µm Nickel + 2µm Ag
	K	0.4µm Gold over 2µm Nickel min
#8 Ø 3.6 mm	A	2µm Nickel + 2µm Ag

Stamped & Formed contacts

		Plating description	
Contact size	**Plating code**	**Active area**	**Other area**
#20 Ø 1 mm	S25 (female)	0.75µm Gold min over Nickel	Gold flash over Nickel
	S26 (male)	0.75µm Gold min over Nickel	Gold flash over Nickel
	TK6	0.5µm - 2.5µm Sn pre-plated	-
#16 Ø 1.6 mm	S31	Gold flash over Nickel	Crimped area: 1.3µm Tin min over Nickel Other areas: 1.3µm Tin min
	S18	0.75µm Gold min over Nickel	
	D70	0.13µm Gold min over Nickel	Gold flash over Nickel
	TK6	0.5µm - 2.5µm Sn pre-plated	-

Contacts supplied separately

Contact size	Contact type	Resistance
Electrical characteristics: contact resistance		
#20 Ø 1 mm	Machined	< 6mΩ
	Stamped and Formed	< 6mΩ
#16 Ø 1.6 mm	Machined	< 3mΩ
	Stamped and Formed	< 6mΩ
#12 Ø 2.4 mm	Machined	< 5mΩ
#8 Ø 3.6 mm	Machined	< 5mΩ

Contacts

Packaging

Trim Trio® contacts are available in a wide variety of packaging, from very small quantities (small bulk packaging) to very large quantities (reeled parts).

Contacts size #20 (Ø 1 mm) & #16 (Ø 1.6 mm)

Stamped & Formed contacts



Description	Number
Loose package	**25 pieces**
Reeled	**3,000 pieces**

Machined contacts



Description	Number
Bulk package	**48 pieces**
Bulk package	**1,000 pieces**
Reeled size #16 only	**2,000 pieces**

Contacts machined size #12 (Ø 2.4 mm) & #8 (Ø 3.6 mm)

Machined contacts



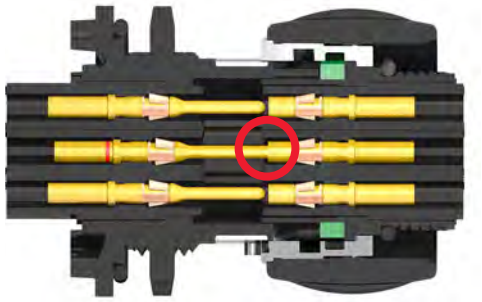
Description	Number
Bulk package	**100 pieces**

Note: 1,000 pieces bulk package available by adding 1000 at the end of the part number: e.g. RC16M23K1000
2,000 pieces reeled package available by adding K at the begining of the part number: e.g. KRC16M23K

Standard version

Contact size	Type	Wire size AWG	Wire size mm²	Part number Male	Part number Female	Max insulator Ø (mm)	Available plating see page 129
#20 Ø 1 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	20-20	0.32-0.52	**RM20W3K**	**RC20W3K**	1.58 max	K
	Stamped & Formed	20-20	0.35-0.5	**SM20W3-**(1)	**SC20W3-**(1)	1.17-2.08	TK6 S25 (female) S26 (male)
				SM20WL3-(2)	**SC20WL3-**(2)		
	Machined	20-18	0.48-0.93	**RM18W3K**	**RC18W3K**	2.10 max	K
#16 Ø 1.6 mm	Machined	30-26	0.05-0.08	**RM28M1-**	**RC28M1-**	1.1	K, J
	Machined	26-24	0.13-0.2	**RM24M9-**	**RC24M9-**	1.6	K, J
	Stamped & Formed	26-24	0.13-0.25	**SM24M1-**(1) **SM24ML1-**(2)	**SC24M1-**(1) **SC24ML1-**(2)	0.89-1.58	S31, S18, TK6
	Machined	20-20	0.32-0.52	**RM20M13-**	**RC20M13-**	1.8	K, J
				RM20M12-	**RC20M12-**	2.2	
	Stamped & Formed	20-20	0.35-0.5	**SM20M1-**(1) **SM20ML1-**(2)	**SC20M1-**(1) **SC20ML1-**(2)	1.17-2.08	S31, S18, TK6
	Machined	18-16	0.92-1.5	**RM16M23-**	**RC16M23-**	3.2	K, J
	Stamped & Formed	18-16	0.8-1.5	**SM16M1-**(1) **SM16ML1-**(2)	**SC16M1-**(1) **SC16ML1-**(2)	No insulation grip	S31, S18, TK6
	Stamped & Formed	18-16	0.8-1.5	**SM16M11-**(1) **SM16ML11-**(2)	**SC16M11-**(1) **SC16ML11-**(2)	2.08-3.0	S31, S18, TK6
	Machined	16-14	1.5-2.5	**RM14M30-**	**RC14M30-**	3.2	K, J
	Stamped & Formed	14	2.0-2.5	**SM14M1-**(1) **SM14ML1-**(2)	**SC14M1-**(1) **SC14ML1-**(2)	No insulation grip	S31, S18, TK6
#12 Ø 2.4 mm	Machined	20	0.13-0.4	**82911457N-**	**82911456-**	4.0	A, K
		20	0.5	**82911459N-**	**82911458-**		
		18	0.75-1.0	**82911461N-**	**82911460-**		
		16	1.5	**82911463N-**	**82911462-**		
		14	2.5	**82911465N-**	**82911464-**		
		12	4	**82911467N-**	**82911466-**		
#8 Ø 3.6 mm	Machined	16	1.5	**82913601A**	**82913600A**	6.3	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
Example: RM24W3K - Size #20, Machined, AWG24 wire.



First mate, last break male contacts

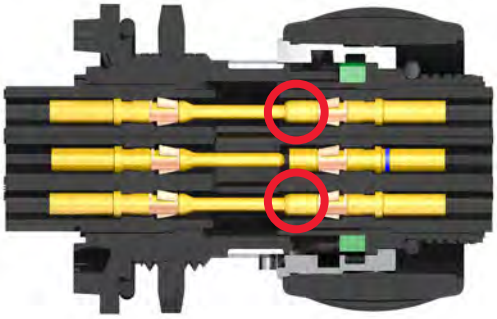
Description

The layouts UTGX103, UTGX124, UTGX12E4/12D4, UTGX142G1, UTGX147 and UTGX14E7/14D7 are already designed to have a first mate, last brake connection on the ground line. That's why, for cavities marked with the ground symbol, standard contacts will fulfill the same role as a first mate, last break contact used in a standard cavity.

For the other layouts (without ground marking) a specific contact is necessary to achieve ground connection.

Please choose your contact from the table below.

Contact size	Type	Wire size AWG	Wire size mm²	Part number Male	Max wire Ø (mm)	Max insulator Ø (mm)	Color band Front	Color band Rear	Available plating see p. 129
#16 Ø 1.6 mm	Machined	30-26	0.05-0.08	**RM28M1GE1K**	0.55	1.0	-	Red	K
		26-24	0.13-0.2	**RM24M9GE1K**	0.8	1.6	Red	Red	
Longer male contact (+1mm)		20-20	0.32-0.52	**RM20M12GE1K**	1.15	2.2	Blue	Red	
		18-16	0.92-1.5	**RM16M23GE1K**	1.8	3.2	–	Red	
		16-14	1.5-2.5	**RM14M30GE1K**	2.26	–	–	Red	



Last break, first mate female contacts

Description

In order to create a last break, first mate connection, a shorter female contact is necessary. On the other side, a standard male contact can be used.

A complete offer of contacts is available to realize this connection type according the wire section used for our contact #16. Please choose your contact from the table below.

Contact size	Type	Wire size AWG	Wire size mm²	Part number Female	Max wire Ø (mm)	Max insulator Ø (mm)	Color band Front	Color band Rear	Available plating see p. 129
#16 Ø 1.6 mm	Machined	30-26	0.05-0.08	**RC28M1GE7K**	0.55	1.0	-	Blue	K
		26-24	0.13-0.2	**RC24M9GE7K**	0.8	1.6	Red	Blue	
Shorter female contact (-0.7 mm)		20-20	0.32-0.52	**RC20M13GE7K**	1.15	1.8	Black	Blue	
		20-20	0.32-0.52	**RC20M12GE7K**	1.15	2.2	Blue	Blue	
		18-16	0.92-1.5	**RC16M23GE1K**	1.8	3.2	–	Blue	
		16-14	1.5-2.5	**RC14M30GE1K**	2.26	–	–	Blue	

Eaton provides two types of coaxial contacts suitable for 48 or 75Ω, coaxial cable or twisted pair cable.

Monocrimp coaxial contact



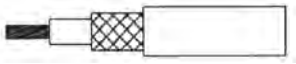
- The monocrimp one-piece coaxial contacts offer high reliability plus the economic advantage of a 95% reduction in installation time over conventional assembly methods. This is achieved by simultaneously crimping both the inner conductor and outer braid or drain wire.

Multipiece crimp coaxial contact

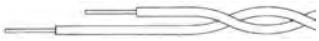


- The inner conductor and outer braid is crimped individually.
- The thermoplastic insulating bushing in the outer body is designed to accept and permanently retain the inner contact.
- An outer ferrule is used to connect the braid to the outer contact and provide cable support to ensure against bending and vibration.

Suitable for coaxial cable or twisted cable



- For jacket diameter from 1.78 to 3.05 mm. Inner conductor up to 2.42 mm diameter



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

Contacts for coaxial cable summary

	Contact range	
Contact type	**Male contact**	**Female contact**
Multipiece	**RMDXK10D28**	**RCDXK1D28**
Monocrimp	**RMDX60xxD28**	**RCDX60xxD28**

Contacts for twisted pairs cable summary

	Contact range	
Contact type	**Male contact**	**Female contact**
Multipiece	**RMDXK10D28 + Yorx090**	**RCDXK1D28 + Yorx090**
Monocrimp	**RMDX60xxD28**	**RCDX60xxD28**

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	48		0.11"	2.79 max	0.06"	1.52	0.51	0.078"	1.98 max		
RG174/U	48		0.11"	2.92	0.06"	1.52	0.48	0.088"	2.24 max		
AMPHENOL 21–598	48		0.105"	2.67	0.06"	1.52	0.48	–	–		
RG196/U	48		0.08"	2.03 max	0.034"	0.086	0.3	–	—		
RG152A/U	48		0.075"	1.91	0.034"	0.84	0.3	0.054"	1.37 max		
RG/188A/U	48	Mono crimp	0.110"	2.79	0.06"	1.52	0.51	0.078"	1.98 max	**RMDX6036D28**	**RCDX6036D28**
KX21TVT (europe) RG152 B/U	48		0.075"	1.91	0.034"	0.84	0.3	0.054"	1.37 max	**RMDX6034D28**	**RCDX6034D28**
RG152 / BU	48		0.075"	1.91	0.034"	0.84	0.3	0.054"	1.37 max	**RMDX6050D28**	**RCDX6016D28**
RG174/U	48		0.115"	2.92	0.06"	1.52	0.48	0.088"	2.24 max	**RMDX6032D28**	**RCDX6032D28**
RG188A/U	48		0.11"	2.79	0.06"	1.52	0.51	0.078"	1.98 max	**RMDX6036D28**	**RCDX6036D28**
RG316/U	48		0.107"	2.72	0.06"	1.52	0.51	0.078"	2.05 max	**RMDX6036D28**	**RCDX6036D28**
raychem 5024A3111	48		0.12"	3.05	0.083"	2.11	0.64	0.097"	2.46	**RMDX6052D28**	**RCDX6052D28**
raychem 5026e1614	48		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"	1.20	0.3	0.064"	1.63	**RMDX6046D28**	**RCDX6016D28**
CDC PIN22939200	–		0.09"	2.29	0.048"	1.20	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	0.36	0.09"	1.29	**RMDX6032D28**	**RCDX6032D28**
TI PN 920580	–		0.7"	1.78	0.038"	0.94	0.48	0.054"	1.37	**RMDX6024D28**	**RCDX6024D28**
Honeywell PN 58000062	–		0.12"	3.05	0.077"	1.94	0.41 solid	0.096"	2.42	**RMDX6026D28**	**RCDX6026D28**
–	–		0.104"	2.64	0.067"	1.7	0.3	–	2.11	**RMDX6050D28**	**–**
–	–		0.09"	2.29	0.048"	1.20	0.3	–	1.63	**RMDX6050D28**	**–**
–	–		0.114"	2.9	0.075"	1.91	0.36	–	1.29	**RMDX6032D28**	**RCDX6032D28**
–	–		0.07"	1.78	0.038"	0.94	0.48	–	1.37	**RMDX6024D28**	**RCDX6024D28**
–	–		0.12"	3.05	0.077"	1.94	0.41	–	2.42	**RMDX6026D28**	**RCDX6026D28**

Twisted cable - Contact monocrimp and multipiece

Cable type	Contact type	Inner AWG cond	Ø over jacket (single wire) inch	Ø over jacket (single wire) mm	Inner cond size Stranded definition	Ø outer braid Ext. Ø mm	Ø outer braid inch	Ø outer braid mm	Male contact kit for coaxial cable	Female contact kit for coaxial cable
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-74 type LW		24	0.047"	1.12 max	1/.0201	–	–	–	**RMDXK10D28**	**RCDXK1D28**
2 #26 stranded MIL-W-74 type LW or MIL-W-16878 type B&E		26	0.043"	1.09 max	7/.0063	0.16	–	–	**RMDXK10D28**	**RCDXK1D28**
2 #26 solid MIL-W-81822/3		26	0.028"	0.71 max	–	–	–	–	**RMDXK10D28**	**RCDXK1D28**
Twisted pair 1/.201 solid MIL-W-74 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		26	0.028"	0.71 max	1/.0126	0.32	–	–	**RMDXK10D28**	**RCDXK1D28**
#26 7/.0036 per Hitachi spec ec-711 (13-2820)	Mono crimp	–	0.046"	1.17	7/.0036	–	–	–	**RMDX6031D28 + YORX090**	**RCDX6031D28 + YORX090**
20218201		–	0.028"	0.71	–	–	–	–	**RMDX6031D28 + YORX090**	**RCDX6031D28 + YORX090**
#30 solid		–	0.025"	0.64	–	–	–	–	**RMDX6015D28 + YORX090**	**RCDX6015D28 + YORX090**
#26 7/.0063		26	0.028"	0.71	7/.063	0.16	–	–	**RMDX6031D28 + YORX090**	**RCDX6031D28 + YORX090**
#26 19/.004		26	0.049"	1.24	19/.004	–	–	–	**RMDX6019D28 + YORX090**	**RCDX6019D28 + YORX090**
#24 7/.008		24	0.049"	1.24	7/.008	–	–	–	**RMDX6019D28 + YORX090**	**RCDX6019D28 + YORX090**
#24 19/.005		24	0.057"	1.45	19/.005	–	–	–	**RMDX6019D28 + YORX090**	**RCDX6019D28 + YORX090**
–		26	–	1.25	–	–	–	19x0.1	**RMDX6019D28 + YORX090**	**RCDX6019D28 + YORX090**
–		24	–	1.25	–	–	–	7x0.2	**RMDX6019D28 + YORX090**	**RCDX6019D28 + YORX090**
–		24	–	1.45	–	–	–	19x0.13	**RMDX6019D28 + YORX090**	**RCDX6019D28 + YORX090**
–		26	–	0.7	–	–	–	7x0.16	**RMDX6031D28 + YORX090**	**RCDX6031D28 + YORX090**

PCB contacts supplied separately - UTGX standard series

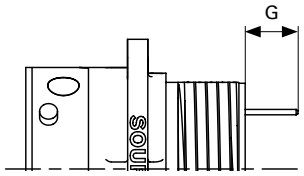
PCB soldering



The UTGX Series can be used in a wave soldering process but not reflow soldering process.
All high temperature processes are prohibited.

Contact size	Type	Part number Male	Part number Female	Plating see page 129
#20 Ø 1 mm	Short version	RMW50A7K	RCW50A7K	K
	Long version	RMW5016K	RCW5016K	
#16 Ø 1.6 mm	Short version	RM20M12E8K	RC20M12E8K	K
	Long version	RM20M12E83K	RC20M12E83K	
			RC20M12E84K	
#8 Ø 3.6 mm	–	82911685NPC	82911684NPC	2 µm Ni
		82911685NAPC	82911684NAPC	3 µm Ag

Minimal length G (mm)



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

UTGX0 with PCB contacts #16

Connector size	Pin contact RM20M 12E8K*	RM20M 12E83K*	RM20M 12E84K*	Socket contact RC20M 12E8K*	RC20M 12E83K*	RC20M 12E84K*	RC20M 12E87K*
10	4.2	9.4	12.9	4.2	9.4	12.9	6.5
12	3.6	8.8	12.3	4.2	9.4	12.9	6.5
14	3.3	8.5	12.0	2.6	7.8	11.3	4.9

UTGX7 with PCB contacts #20 and #16

Connector size	Pin contact RM20M 12E83K*	RM20M 12E84K*	RMW 50A7K*	Socket contact RMW 5016K*	RC20M 12E84K*	RCW 50A7K*	RCW 5016K*
10	7.3	10.8	8.4	9.3	3.6	8.4	9.3
12	7.3	10.8	8.4	9.3	3.9	8.4	9.3
14	7.3	10.8	8.4	9.3	3.6	–	–

* Plating indication see page 129

UTGX7 with PCB contacts #16 and #8

Connector size	Pin contact RM20M12E83K*	82911685NPC*	Socket contact RC20M12E87K*	82911684NPC*
UTGX7142G1P	–	6.4	–	–
UTGX7142G1S	–	–	–	8.2
UTGX7142G1SNPT	–	5.8	–	5.4
UTGX718X2M3	4.9	4.5	3.6	5.2
UTGX7183G1SNPT	–	–	–	4.17

* Plating indication see page 129

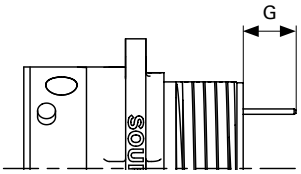
PCB contacts loaded - UTGX sealed unmated series

PCB soldering

The UTGX Series can be used in a wave soldering process, but not reflow soldering process.
All high temperature processes are prohibited.

Minimal length G (mm)

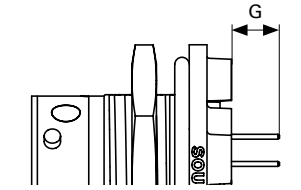
Dimension of dipsolder contacts out of connector (contacts to be ordered separately).



UTGX0

UTGX0

Connector size	Connector part Number	Pin contact		Socket contact	
		G min	G max	G min	G max
10	10D6 - 10D98 - 10D7	8.1	10.2	8.1	10.3
12	12D2 - 12D3 - 12D8 - 12D10	8.1	10.2	8.1	10.3
	12D4	8.2	10	8.1	10.3
	12D14	7.2	9	7.1	9.2
14	14D5 - 14D12 - 14D15 14D18 - 14D19	8.1	10.2	8.1	10.3
	14D7	8.2	10	8.1	10.3



UTGX7

UTGX7

Connector size	Connector part Number	Pin contact		Socket contact	
		G min	G max	G min	G max
10	10D6 - 10D98 - 10D7	4.7	7.3	4.7	7
12	12D2 - 12D3 - 12D8 - 12D10	4.7	7.3	4.8	7
	12D4	4.9	7.1	4.8	7
	12D14	3.9	6.2	3.8	6
14	14D5 - 14D12 - 14D15 14D18 - 14D19	4.8	7.3	4.9	7
	14D7	4.9	7.1	4.9	7

Size 16 fiber optic contacts for UTGX and other TRIM TRIO® connectors

POF



Description

Size 16 fiber optic contacts are designed for the integration of optical links in UTGX and other TRIM TRIO® cable connectors.

The fiber optic contacts are designed to accommodate:

- Plastic Optical Fiber (POF) 1 mm 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.
- High precision pieces provide low insertion loss.
- We can provide custom harness solutions for specific customer requirements including single jumpers, multiways harness and and active device housings.

Technical specifications

Performance

- Fiber 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: 48
- 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, UTGX, UTS, UTO, UTL.

Ordering information

Plastic Optical Fiber contact

Male contact	Female contact
RMPOF1000	–

Plastic Optical Fiber tools

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 number	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 only be ordered separately

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

Crimping tools for standard contacts

Contact size	Part number	Head*	Handles*	Extraction tools
#20 Ø 1 mm	RM/RC 24W3K	**S20RCM**	**SHANDLES**	**RX20D44**
	RM/RC 20W3K			
	RM/RC 18W3K			
	SM 24WL3S*(1) SC 24WL3S*(1)	**S20SCM20**		
	SM/SC 20WL3S*(1)			
#16 Ø 1.6 mm	RM/RC 28M1*	**S16RCM20**	**SHANDLES**	**RX2025GE1 or RX2031J long endurance tool**
	RM/RC 24M9*			
	RM/RC 20M13*			
	RM/RC 20M12*			
	RM/RC 16M23*	**S16RCM16**		
	RM/RC 14M30*	**S16RCM14**		
	SM/SC 24ML1*(1)	**S16SCM20**		
	SM/SC 20ML1*(1)			
	SM/SC 16ML1*(1)	**S16SCML1**		
	SM/SC 14ML1*(1)			
	SM/SC 16ML11*(1)	**S16SCML11**		

(1) loose contact * endurance of SHANDLES & Head tools = 48,000 cycles

		Tool with separate locator			
Contact size	**Part number**	**Hand tool**	**Positioner + locator setting**		**Extraction tools**
#12 Ø 2.4 mm	82911457N* / 82911456*	**M317**	**VGE10077A**	**1/2**	**51060210924**
	82911459N* / 82911458*			**2**	
	82911461N* / 82911460*			**2**	
	82911463N* / 82911462*			**3**	
	82911465N* / 82911464*			**3**	
	82911467N* / 82911466*			**4**	
#8 Ø 3.6 mm	82913601A / 82913600A	**M317**	**VGE10078A**	**3**	**51060210936**
	82913603A / 82913602A			**3**	
	82913605A / 82913604A			**4**	
	82913607A / 82913606A			**5**	
	82913609A / 82913608A			**6/7**	

* see page 129 for plating options and other contact details

Specific contacts (First mate, last break contacts)

			Tool with separate locator			
Contact size	**Part number***	**Hand tools (SHANDLES) Head**	**Hand tool**	**Positioner + locator setting**		**Extraction tools**
#16 Ø 1.6 mm Longer RM contact	RM28M1GE1K	**S16RCM20**	**MH860**	**MH86186**	4/6	**RX2025GE1 or RX2031J long endurance tool**
	RM24M9GE1K				5/6	
	RM16M23GE1K RM20M12GE1K	**S16RCM16**	**MH860**	**MH86186**	6/8	
	RM14M30GE1K	**S16RCM14**	**M317**	**UH25**	3	
#16 Ø 1.6 mm Shorter RC contact	RC28M1GE7K	**S16RCM20**	**MH860**	**MH86164G**	4/6	
	RC24M9GE7K				5/6	
	RC20M13GE7K RC20M12GE7K				5/7	
	RC16M23GE7K	**S16RCM16**			6/8	
	RC14M30GE7K	**S16RCM14**	**M317**	**UH25**	3	

* see page 132 for plating options and other contact details

Coaxial contacts

Please consult us.

Automatic crimping tools

Contact Mecal for semi-automatic production tools.

Mecal sales network:

www.mecal.net



Min Applicator



Stripper



Presses

Extraction tool



RX20D44



RX2025GE1



51060210924



51060210936



RX2031J

Contact size	Part number
#20	**RX20D44**
#16	**RX2025GE1**
#16 Long endurance tool	**RX2031J**
#12	**51060210924**
#8	**51060210936**

Contact extraction instruction



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

Wire stripping crimp version

Machined contact



Contact size	Part number Male	Part number Female	Stripping length L (mm)
#20 (Ø 1 mm)	RM24W3- / RM20W3- RM18W3-	RC24W3- / RC20W3- RC18W3-	4.8
#16 (Ø 1.6 mm)	RM28M1- / RM24M9- RM20M13- / RM20M12-	RC28M1- / RC24M9- RC20M13- / RC20M12-	4.8
	RM16M23- /RM14M30-	RC16M23- /RC14M30-	7.1
#8 (Ø 3.6 mm)	82913601- / 82913603- 82913605- / 82913607- 82913609-	82913600- / 82913602- 82913604- / 82913606- 82913608-	6.5 to 7.5

Stamped & Formed with insulation support



Contact size	Part number Male	Part number Female	Stripping length L (mm)
#20 (Ø 1 mm)	SM24W3- / SM24WL3- SM20W3- / SM20WL3-	SC24W3- / SC24WL3- SC20W3- / SC20WL3-	4
#16 (Ø 1.6 mm)	SM24M1- / SM24ML1- SM20M1- / SM20ML1-	SC24M1- / SC24ML1- SC20M1- / SC20ML1-	4
	SM16M11- / SM16ML11-	SC16M11- / SC16ML11-	4.65

Stamped & Formed without insulation support



Contact size	Part number Male	Part number Female	Stripping length L (mm)
#16 (Ø 1.6 mm)	SM16M1- / SM16ML1-	SC16M1- / SC16ML1-	6.35
	SM14M1- / SM14ML1-	SC14M1- / SC14ML1-	6.35

Power contacts



Contact size	Part number Male	Part number Female	Stripping length L (mm)
#12 (Ø 2.4 mm)	82911457- / 82911459- 82911461- / 82911463- 82911465- / 82911467-	82911456- / 82911458- 82911460- / 82911462- 82911464- / 82911466-	7 to 8
#8 (Ø 3.6 mm)	82913601- / 82913603- 82913605- / 82913607- 82913609-	82913600- / 82913602- 82913604- / 82913606- 82913608-	6.5 to 7.5

Note: See page 129 for plating options and other contact details

Wire stripping solder and screw versions

Solder contact delivered with connector



Contact size	Stripping length L (mm)
#16 (Ø 1.6 mm) & #20 (Ø 1 mm)	5

Screw contact delivered with connector



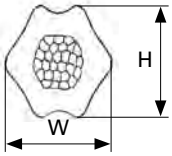
Contact size	Stripping length L (mm)
#16 (Ø 1.6 mm)	5.8

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.



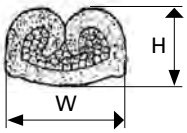
Machined contact







Stamped & Formed contact



Active contact part	Contact type	Die location on heads	Wire section range	Section (inch²)	Tensile straight test (min)	Height (inch) W (±0.002")	Width (inch) W (±0.002")	Tooling head part number
Machined contacts size #20 Ø 0.039"	**RM24W3K RC24W3K**	26/24	26 AWG	0.004" min	15 N	0.037"	0.05"	**S20RCM**
			24 AWG	0.009" max	32 N			
	RM20W3K RC20W3K	22/20	22 AWG	0.012" min	40 N	0.049"	0.070"	
			20 AWG	0.019" max	60 N			
	RM18W3K RC18W3K	20/18	20 AWG	0.019" max	60 N	0.053"	0.073"	
			18 AWG	0.032" max	90 N			
S & F contacts size #20 Ø 0.039"	**SM24WL3TK6* SC24WL3TK6***	26/24	26 AWG	0.004" min	15 N	0.031"	0.058"	**S20SCM20**
			24 AWG	0.009" max	32 N			
	SM20WL3TK6* SC20WL3TK6*	22/20	22 AWG	0.012" min	40 N	0.039"	0.060"	
			20 AWG	0.019" max	60 N			
Machined contacts size #16 Ø 0.062"	**RM28M1K* RC28M1K***	30/28	30 AWG	0.001" min	11 N	0.044"	0.055"	**S16RCM20**
			28 AWG	0.003" max	6 N			
	RM24M9K* RC24M9K*	26/24	26 AWG	0.004" min	15 N	0.045"	0.055"	
			24 AWG	0.009" max	32 N			
	RM20M13K* RC20M13K*	22/20	22 AWG	0.012" min	40 N	0.049"	0.069"	
			20 AWG	0.019" max	60 N			
	RM20M12K* RC20M12K*		22 AWG	0.012" min	40 N			
			20 AWG	0.019" max	60 N			
	RM16M23K* RC16M23K*	18	18 AWG	0.032" max	90 N	0.070"	0.089"	**S16RCM16**
		16	16 AWG	0.059" max	150 N	0.077"	0.095"	
	RM14M30K* RC14M30K*	16	16 AWG	0.059" min	150 N	0.082"	0.105"	**S16RCM14**
		14	14 AWG	0.098" min	230 N	0.090"	0.109"	
S & F contacts size #16 Ø 0.062"	**SM24ML1TK6* SC24ML1TK6***	26/24	26 AWG	0.004" min	15 N	0.033"	0.059"	**S16SCM20**
			24 AWG	0.009" max	32 N			
	SM20ML1TK6* SC20ML1TK6*	22/20	22 AWG	0.012" min	40 N	0.040"	0.060"	
			20 AWG	0.019" max	60 N			
	SM16ML11TK6* SC16ML11TK6*	18	18 AWG	0.032" min	90 N	0.051"	0.082"	**S16SCML11**
		16	16 AWG	0.059" max	150 N	0.053"	0.082"	
	SM16ML1TK6* SC16ML1TK6*	18	18 AWG	0.032" min	90 N	0.058"	0.079"	**S16SCML1**
		16	16 AWG	0.059" max	150 N	0.066"	0.080"	
	SM14ML1TK6* SC14ML1TK6*	14	14 AWG	0.098" max	230 N	0.070"	0.101"	

* example of plating, for other plating see page 129
Note: Assembly operations mentioned above shall not interfere with or be in contradiction with the IPC-WHMA-A-620B

Crimping with Souriau tooling



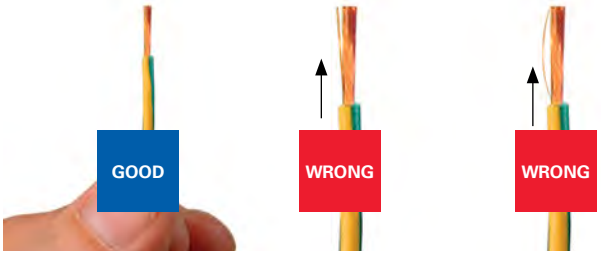
1) Fully close then release the tool, keep it open. Open the two pins.



2) Choose the adapter head (sold separately). Keep vertical and slide it into the handle until the mechanical stop.



3) Close the two pins simultaneously to maintain the head.



4) Strip the cable properly by checking the recommended size in the catalog on page 142.



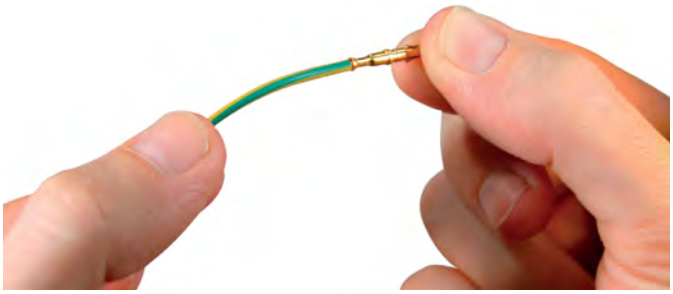
5) Place conductors, with no deterioration, in the contact bucket. All strands to be located in the crimp bucket.



6) Position the contact in the bottom of the tool by checking its orientation. Maintain the wire in position.



7) Tighten the handles to the end of the mechanism (max 175 N). After handles are opened, extract the contact.

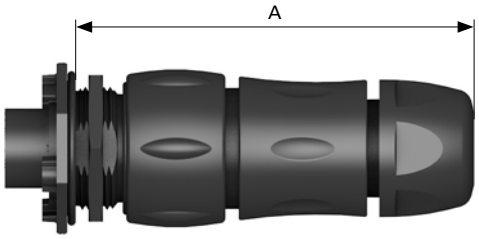


8) Control the quality of crimping (see page 143).

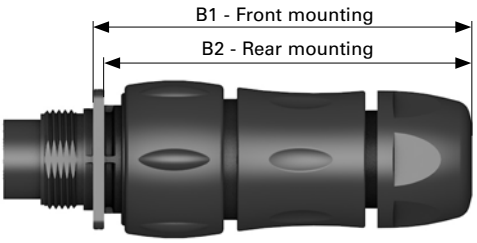
Note: Assembly operations mentioned above shall not interfere or to be in contradiction with the IPC-WHMA-A-620B

Mated connector lengths (mm)

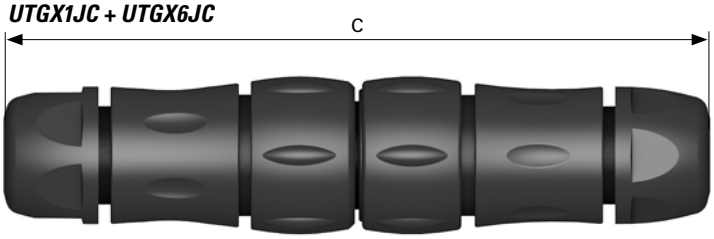
UTGX7 + UTGX6JC



UTGX0 + UTGX6JC



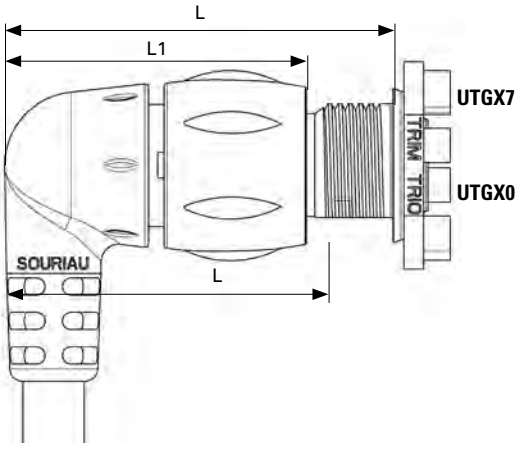
UTGX1JC + UTGX6JC

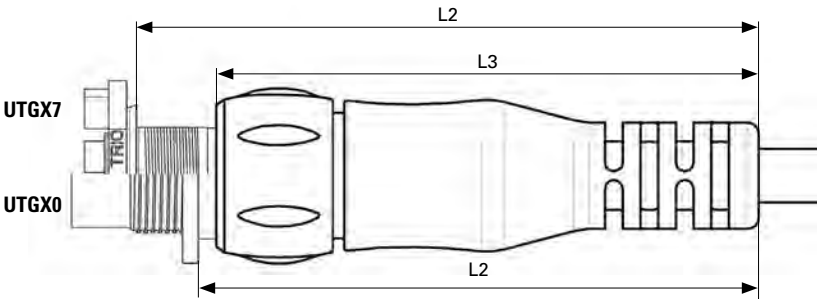


	UTGX7 + UTGX6JC	UTGX0 + UTGX6JC		UTGX1JC + UTGX6JC
Shell size	**A max**	**B1 max**	**B2 max**	**C max**
10	74	72	69.5	132
12	79	75	73	138
14	85.5	81.5	79	150.5

Overmoulded cable assembly dimensions (mm)

	UTGX0				UTGX7			
Shell size	**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	48.3	98.6	92	58.5	48.3	100.7	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

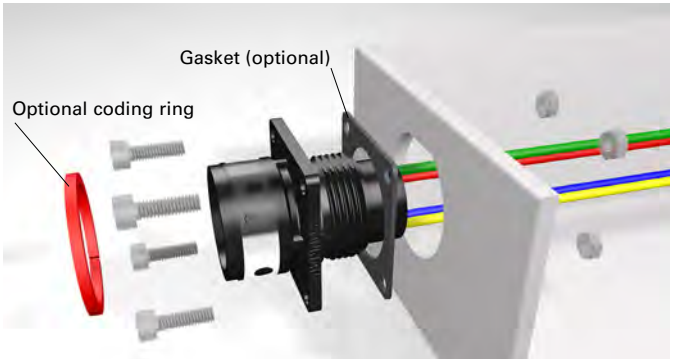


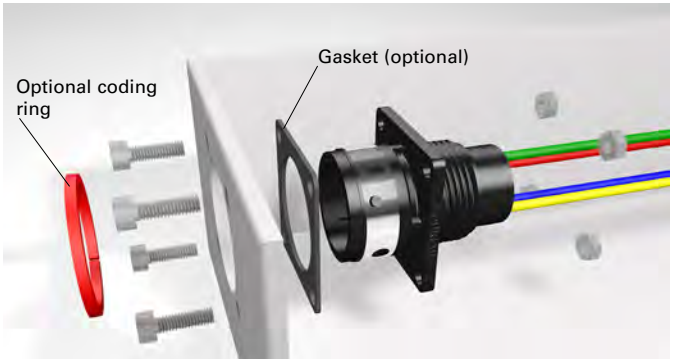


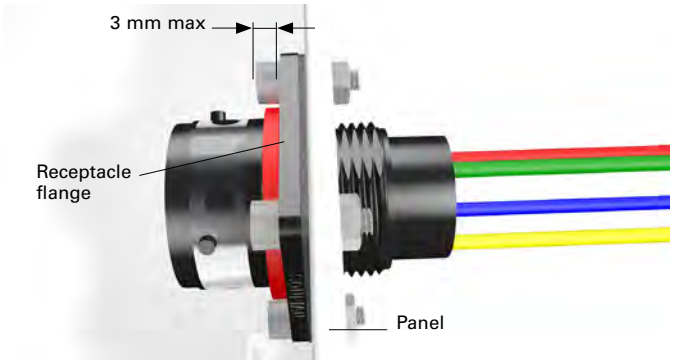
UTGX0 or UTGX0JC assembly (Mounting suggestion)

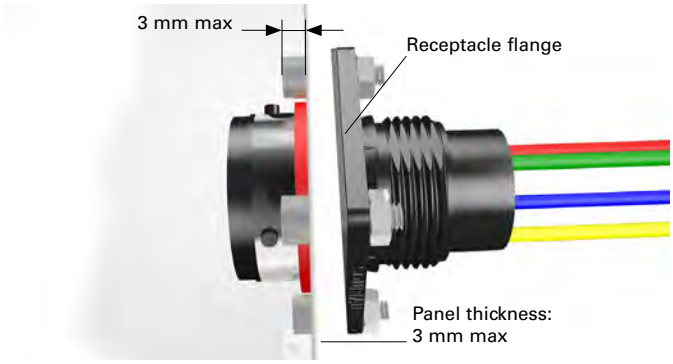
- Strip wires, crimp or solder contacts (see pages 142 & 143)
- Insert contacts into connector cavities (insert manually or use tool RTM205 crimp contacts)
- Place receptacle in the panel cut-out
- Secure receptacle with screws (not supplied)
  - Tighten screws: M2.5 (recommended torque: see table below)
  - Warning: to prevent any mating issue with the plug counterpart, take into account the following dimensions of screw heads and panel thickness
- For complete sealing of the system use optional gasket and sealed screw solution (not sold by Eaton).

Front mounting



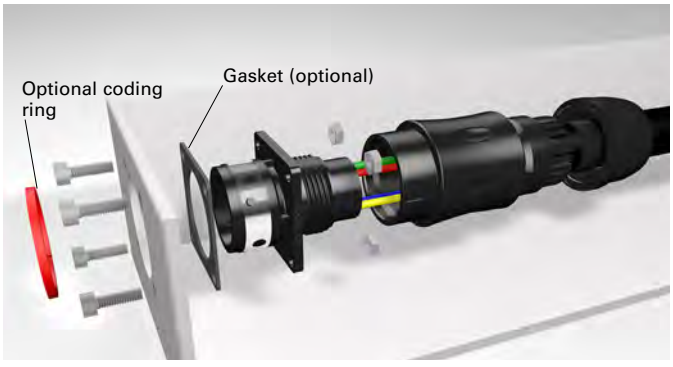


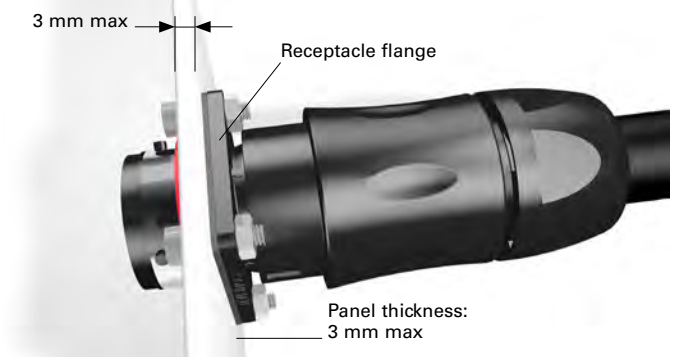




Shell size	Screw tightening torque (Nm)
10	0.30/0.40
12	0.30/0.40
14	0.30/0.40

UTGX0JC rear mounting

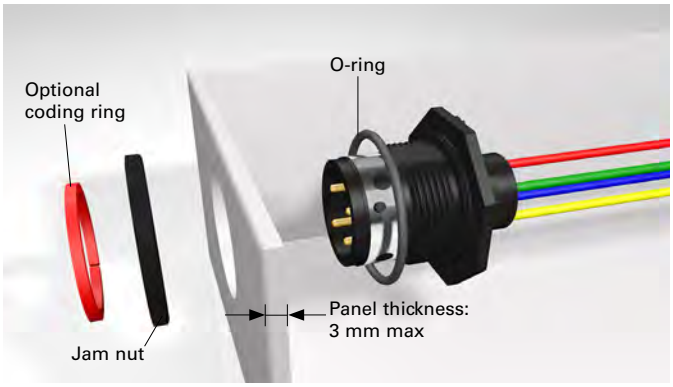




UTGX7 assembly (Mounting suggestion)

- Strip wires and crimp contacts (see pages 142 & 143)
- Insert contacts into connector cavities (insert manually or use tool RTM205 crimp contacts)
- Seat o-ring, place receptacle in the panel cut-out
- Tighten jam nut

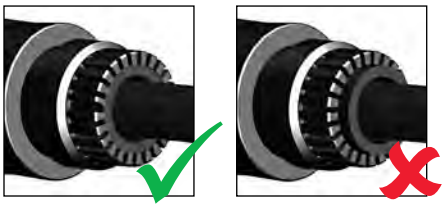
Crimp or solder version



Shell size	Jam nut torque (Nm) max	Exterior jam nut dim. (mm)	Ø Wire	
			Standard version	Discrete wire sealing
10	3	20.2	3.2 mm max.	From 1.7 mm to 3.0 mm
12	4	27.0		
14	5	30.1		

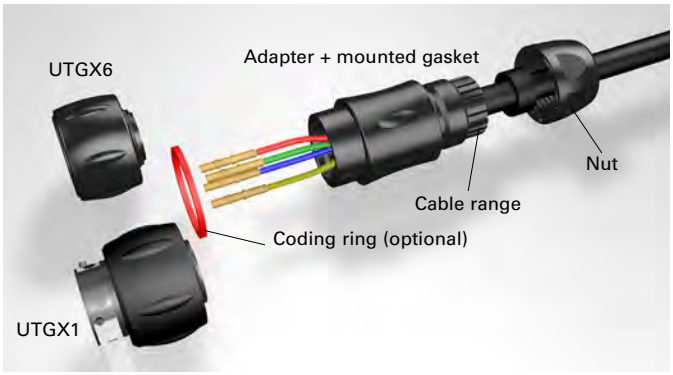
UTGX1JC or UTGX6JC assembly: Crimp version

- Slide accessories onto the cable

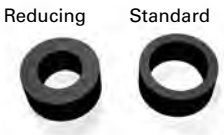


Make sure the seal is positioned as shown.

- Mate the plug with a corresponding counter part
- Strip external cable jacket
- Strip wires and crimp contacts (.)
- Insert contacts into connector cavities (insert manually or use tool RTM205)
- Tighten adapter with plug UTGX6 or receptacle UTGX1, choose right seal (waste the other seal)
- Tighten the nut to rear of either UTGX1 or UTGX6 (recommended torque values to be applied according to table below)
- Caution: only one of the two gaskets included should be used!



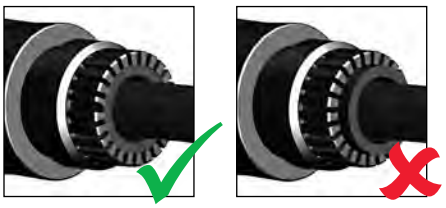
Cable ranges



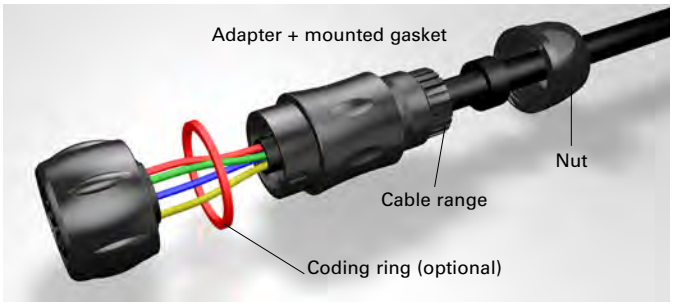
Shell size	Recommended jacket strip length (mm)		Adapter tightening torque (Nm)	Nut tightening torque (Nm)	Ø Cable range Standard seal (mm)	Ø Cable range Reducing seal (mm)	Ø Wire
	Male	Female					
10	21	29	1.5	1	2.5/8.0	1.5/5.0	From 1.7 mm to 3.0 mm
12	25	33	2.5	2	5.0/12.0	3.0/9.0	
14	29	36	3	2.5	7.0/14.0	5.0/12.0	

UTGX6JC assembly (Mounting suggestion)

- Slide accessories onto the cable



Make sure the seal is positioned as shown.



- Mate the plug with a corresponding receptacle
- Strip external cable jacket (see pages 142 & 143)
- Solder contacts
- Tighten adapter with plug, choose right seal (waste the other seal)
- Tighten the nut to rear of either UTGX6 (recommended torque values to be applied according table to the right)
- Caution: only one of the two gaskets included should be used!

Cable ranges

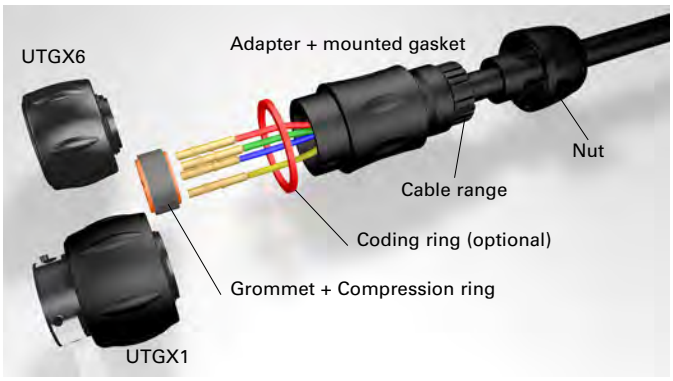
Reducing Standard



Shell size	Recommended jacket strip length (mm) Male	Adapter tightening torque (Nm)	Nut tightening torque (Nm)	Ø Cable range Standard seal (mm)	Ø Cable range Reducing seal (mm)	Ø Wire
10	21	1.5	1	2.5/8.0	1.5/5.0	From 1.7 mm to 3.0 mm
12	25	2.5	2	5.0/12.0	3.0/9.0	
14	29	3	2.5	7.0/14.0	5.0/12.0	

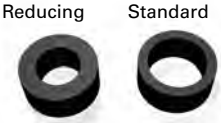
UTGX1GJC or UTGX6GJC assembly

- Slide accessories onto the cable (make sure to keep compression ring on the grommet)
- Strip external cable jacket
- Strip wires and crimp contacts (see pages 142 & 143)
- Insert first contact into the grommet (first contact in cavity A, 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 adapter with plug UTGX6 or receptacle UTGX1, choose correct seal
- Tighten the nut to rear of either UTGX1 or UTGX6 (recommended torque values to be applied according to the table right).



Cable ranges

Reducing Standard



Shell size	Recommended jacket strip length (mm) Male	Female	Adapter tightening torque (Nm)	Nut tightening torque (Nm)	Ø Cable range Standard seal (mm)	Ø Cable range Reducing seal (mm)	Ø Wire
10	21	29	1.5	1	2.5/8.0	1.5/5.0	From 1.7 mm to 3.0 mm
12	25	33	2.5	2	5.0/12.0	3.0/9.0	
14	29	36	3	2.5	7.0/14.0	5.0/12.0	

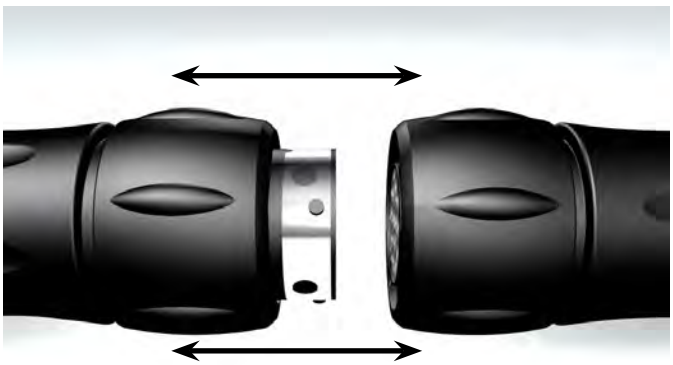
UTGX coupling procedure

The pictures below provides step by step instructions on how to mate a plug and receptacle connector in order to avoid damaging any of the contacts.

1 - Identify the primary key of each connector.



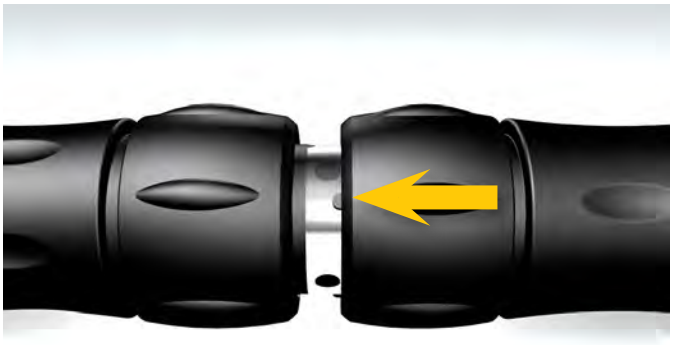
2 - Align the primary keys of the connectors.



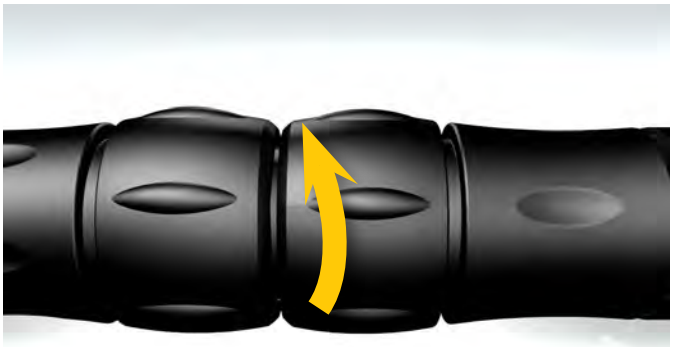
3 - Non correct positioning:



4 - Offer the plug to the receptacle.



5 - Turn coupling ring until you hear a 'click'



6 - Example of installation



Fastening of cable: In order to avoid any mechanical stress on the connection, cable should be clamp closed to the connector in such a way there is no bending or traction applying on the connector.

Current carrying capacity

The current carrying capacity of a connector is limited by the thermal properties of materials used in its 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 in dissipating heat and avoiding 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 placing 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: UTGX 12-4 – 1.5 mm² wires

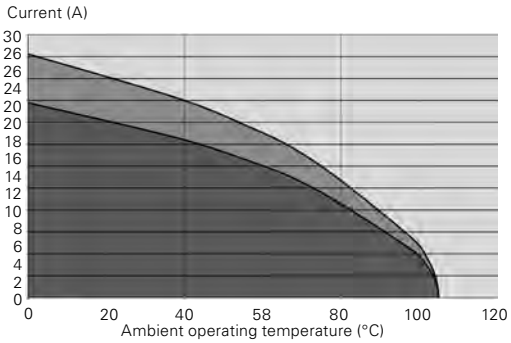


Fig.2: UTGX 12-8 – 1.5 mm² wires

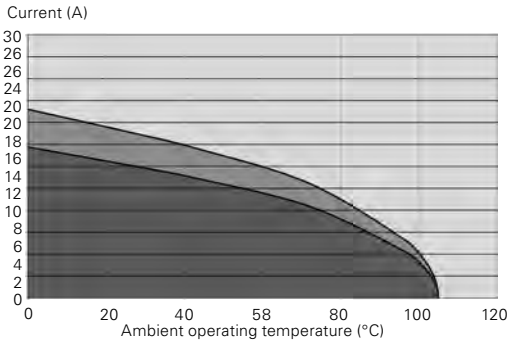
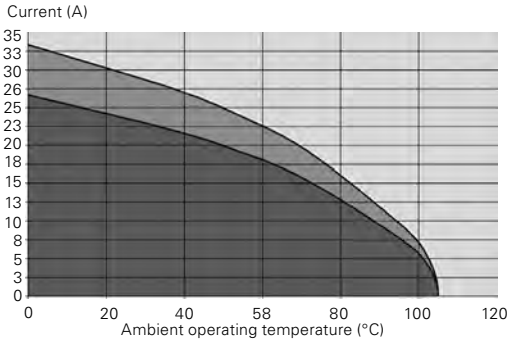
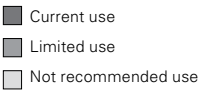


Fig.3: UTGX 12-4 – 2.5 mm² wires





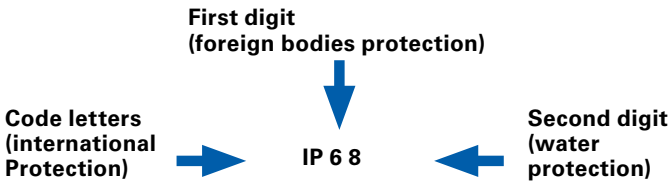
The rated current is defined as uninterrupted continuous current that a connector can take when all contacts are energized simultaneously without exceeding the maximum limit of temperature. The earth contact is never loaded.

UV resistance

Plastics can be susceptible to extreme degradation over time. The UTGX series is made with (f1) material according to UL746C. The UTGX material withstand a 1000h UV exposure according ISO4892 without significant color variation, cracking or variation of mechanical properties.

Protection provided by an enclosure

For safety reasons, electrical equipment needs to be protected against outside influences. The basis for the determination is the standard IEC 60529. IP is a coding system that provides information regarding the accessibility of live parts against ingress of water or other foreign bodies.



1st digit	Degree of protection
0	No protection against accidental contact. No protection against solid foreign bodies.
1	Protection against contact with any large area by hand and against large solid foreign bodies with a diameter bigger than 48 mm.
2	Protection against contact 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	Same as 3 however diameter is bigger than 1 mm.
5	Full protection against contact. Protection against interior injurious dust deposits.
6	Total protection against contact. 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 powerful water jets .
7	Protection against temporary immersions.
8	Protection against water pressure. Pressure and immersion time to be specified by supplier.

UTGX offers high sealing: IP68/69K even in dynamic situations.

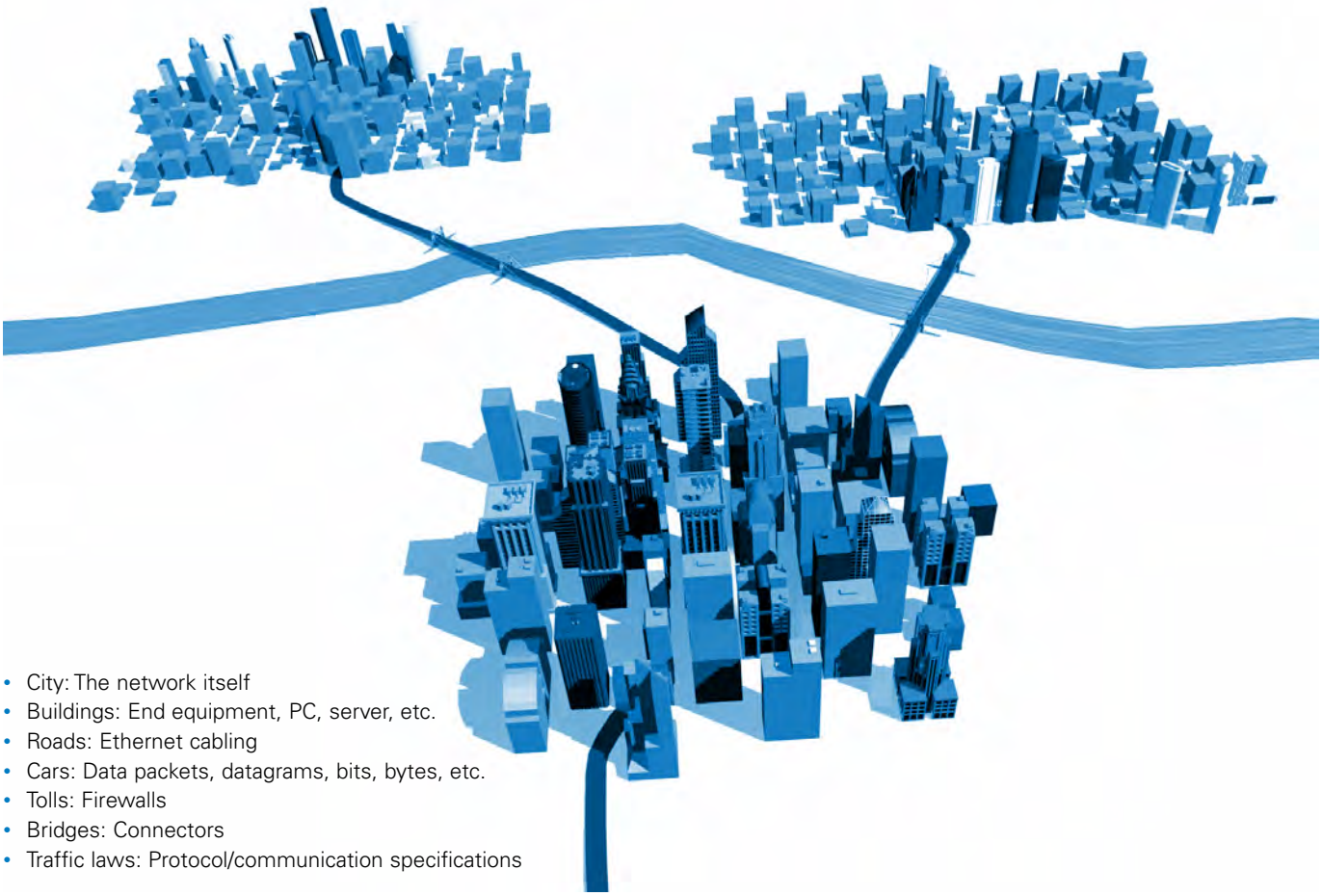
In addition to the IEC 60529 we conjointly use the ISO 20653 for the implementation of IPx9K testing:

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

4 Technical information

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/Cat6. What does it all mean?

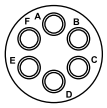
When discussing connectors and Ethernet, there are a few key details to be aware of

- 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/Cat6 are 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 two pairs. One for transmit and one for receive. This way data traffic can flow in both directions simultaneously.

Eaton offering

Standard solutions.



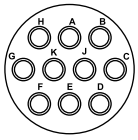
106* 10E6/10D6
4.5A 250V 6A 250V
6 contacts Ø 1 mm (#20)

UTGX size 10, 6 contacts

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

Shielding continuity done in cavity C&F.

Note: Shielding can be replaced by DC power.



1210 - 12E10/12D10
4.5A 250V
10 contacts Ø 1 mm (#20)

UTGX size 12, 10 contacts

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

What about using coax contacts?

Ethernet twisted pairs carry a symmetrical (balanced) signal. With coax contacts, the inner core will be shielded, but not the outer core, resulting in an unbalanced signal due to electromagnetic interferences. Therefore, coax contacts will not work correctly and are not recommended.

What about using Quadrax contacts?

Quadrax contacts are used in railway applications because of the use of quad cables. In this specific industry, the standard Ethernet twisted pair cables cannot be used as they are too thin and usually solid, not stranded.

In other industries, UTP (Unshielded Twisted Pair) cables are widely used. Quadrax contacts are not designed to terminate UTP cables and are not recommended.

Conclusion

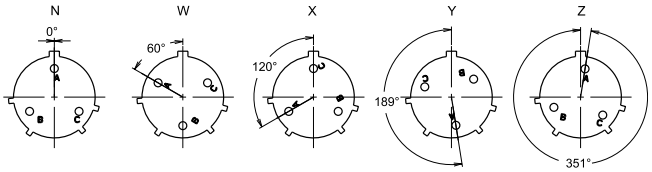
To carry 100Mb/s data signals, 100BaseTX or Fast Ethernet, it is recommended to use Cat5e connectors as well as Cat5e cables with the support of a 100MHz signal. However, a 100Mb/s signal can be transmitted in certain conditions: short distance, only one connector, lower frequency, and so does not necessarily need to be Cat5e rated.

Appendices

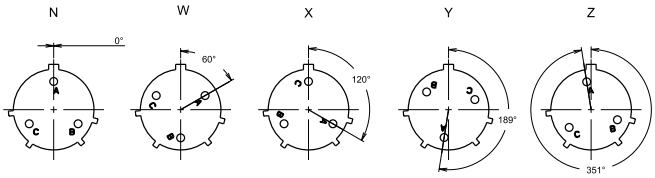
Discrimination/Keying methods

The UTGX has layouts with discrimination keys, which help avoid mismatching when operators mate the connectors.

This safety feature is particularly important when similar connectors are placed next to each other. Mismatching connectors can lead to serious problems including system failures and even physical injury.



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



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. **UTGX6JC104S** (N key) ➔ **UTGX6JC104SW** (W key)

Consult us for overmolded harnesses.

		Discrimination keys degrees			
Shell size	**Layout**	**W**	**X**	**Y**	**Z**
10	102W2/103	–	–	–	–
	104	45°	–	–	–
	103W3	–	–	–	–
	106 10E6/10D6	90°	–	–	–
	10E7/10D7	90°	–	–	–
	10E98/10D98	90°	180°	240°	270°
12	12E2/12D2	–	–	–	–
	12E3/12D3	–	–	180°	–
	124 12E4/12D4	–	–	–	–
	128	26°	–	–	–
	12E8/12D8	90°	112°	203°	292°
	1210 12E10/12D10	60°	155°	270°	295°
	12E14/12D14	45°	–	–	–
14	14E5/14D5	40°	92°	184°	273°
	142G1	–	–	–	–
	147 14E7/14D7	–	–	–	–
	148	–	–	–	–
	1412	60°	–	–	–
	1492	49°	71°	145°	–
	14E12/14D12	43°	90°	–	–
	14E15/14D15	17°	110°	155°	234°
	14E18/14D18	15°	90°	180°	270°
	1419	30°	165°	315°	–
	14E19/14D19	30°	165°	315°	–

SMSPKE0: discrimination pin for male UTGX connectors (#16 contacts only)

Another solution to eliminate mismatching is to use a SMSPKE0 dummy contact, which can be inserted into an empty #16 male contact cavity. The UTGX male connector will only mate with a female connector that has a vacant contact cavity at the corresponding position.



Connectors

Free hanging receptacle with cable gland

UTGX1JC102W2P . . . 38
UTGX1JC102W2S . . . 38
UTGX1JC103P . . . 20
UTGX1JC103S . . . 20
UTGX1JC103W3P . . . 52
UTGX1JC103W3S . . . 52
UTGX1JC104P . . . 43
UTGX1JC104S . . . 43
UTGX1JC106P . . . 58
UTGX1JC106S . . . 58
UTGX1JC1210P . . . 91
UTGX1JC1210S . . . 91
UTGX1JC124P . . . 33
UTGX1JC124PSCR . . . 33
UTGX1JC124S . . . 33
UTGX1JC124SSCR . . . 33
UTGX1JC128P . . . 76
UTGX1JC128S . . . 76
UTGX1JC1412P . . . 96
UTGX1JC1412S . . . 96
UTGX1JC1419P . . . 122
UTGX1JC1419S . . . 122
UTGX1JC142G1P . . . 25
UTGX1JC142G1S . . . 25
UTGX1JC147P . . . 67
UTGX1JC147PSCR . . . 67
UTGX1JC147S . . . 67
UTGX1JC147SSCR . . . 67
UTGX1JC148P . . . 85
UTGX1JC148S . . . 85
UTGX1JC1492P . . . 105
UTGX1JC1492S . . . 105

Jam nut receptacle only

UTGX7102W2P . . . 38
UTGX7102W2S . . . 38
UTGX7103P . . . 20
UTGX7103S . . . 20
UTGX7103W3P . . . 52
UTGX7103W3S . . . 52
UTGX7104P . . . 43
UTGX7104S . . . 43
UTGX7106P . . . 58
UTGX7106S . . . 58
UTGX710D6P . . . 58
UTGX710D6P32 . . . 58
UTGX710D6S . . . 58
UTGX710D6S32 . . . 58
UTGX710D7P . . . 72
UTGX710D7P32 . . . 72
UTGX710D7S . . . 72
UTGX710D7S32 . . . 72
UTGX710D98P . . . 63
UTGX710D98P32 . . . 63
UTGX710D98S . . . 63
UTGX710D98S32 . . . 63
UTGX710E6P . . . 58
UTGX710E6S . . . 58
UTGX710E7P . . . 72
UTGX710E7S . . . 72
UTGX710E98P . . . 63
UTGX710E98S . . . 63
UTGX71210P . . . 91
UTGX71210S . . . 91
UTGX7124P . . . 33
UTGX7124PSCR . . . 33
UTGX7124S . . . 33
UTGX7124SSCR . . . 33
UTGX7128P . . . 76
UTGX7128S . . . 76
UTGX712D10P . . . 91
UTGX712D10P32 . . . 91
UTGX712D10S . . . 91
UTGX712D10S32 . . . 91
UTGX712D14P . . . 110
UTGX712D14P32 . . . 110
UTGX712D14S . . . 110
UTGX712D14S32 . . . 110
UTGX712D2P . . . 16
UTGX712D2P32 . . . 16
UTGX712D2S . . . 16
UTGX712D2S32 . . . 16
UTGX712D3P . . . 28
UTGX712D3P32 . . . 28
UTGX712D3S . . . 28
UTGX712D3S32 . . . 28
UTGX712D4P . . . 33
UTGX712D4P32 . . . 33
UTGX712D4S . . . 33
UTGX712D4S32 . . . 33
UTGX712D8P . . . 81
UTGX712D8P32 . . . 81
UTGX712D8S . . . 81
UTGX712D8S32 . . . 81
UTGX712E10P . . . 91
UTGX712E10S . . . 91
UTGX712E14P . . . 110
UTGX712E14S . . . 110
UTGX712E2P . . . 16
UTGX712E2S . . . 16
UTGX712E3P . . . 28
UTGX712E3S . . . 28
UTGX712E4P . . . 33
UTGX712E4S . . . 33
UTGX712E8P . . . 81
UTGX712E8S . . . 81
UTGX71412P . . . 96
UTGX71412S . . . 96
UTGX71419P . . . 122
UTGX71419S . . . 122
UTGX7142G1P . . . 25
UTGX7142G1S . . . 25
UTGX7147P . . . 67
UTGX7147PSCR . . . 67
UTGX7147S . . . 67
UTGX7147SSCR . . . 67
UTGX7148P . . . 85
UTGX7148S . . . 85
UTGX71492P . . . 105
UTGX71492S . . . 105
UTGX714D12P . . . 101
UTGX714D12P32 . . . 101
UTGX714D12S . . . 101
UTGX714D12S32 . . . 101
UTGX714D15P . . . 114
UTGX714D15P32 . . . 114
UTGX714D15S . . . 114
UTGX714D15S32 . . . 114
UTGX714D18P . . . 118
UTGX714D18P32 . . . 118
UTGX714D18S . . . 118
UTGX714D18S32 . . . 118

UTGX714D19P . . . 122
UTGX714D19P32 . . . 122
UTGX714D19S . . . 122
UTGX714D19S32 . . . 122
UTGX714D5P . . . 48
UTGX714D5P32 . . . 48
UTGX714D5S . . . 48
UTGX714D5S32 . . . 48
UTGX714D7P . . . 67
UTGX714D7P32 . . . 67
UTGX714D7S . . . 67
UTGX714D7S32 . . . 67
UTGX714E12P . . . 101
UTGX714E12S . . . 101
UTGX714E15P . . . 114
UTGX714E15S . . . 114
UTGX714E18P . . . 118
UTGX714E18S . . . 118
UTGX714E19P . . . 122
UTGX714E19S . . . 122
UTGX714E5P . . . 48
UTGX714E5S . . . 48
UTGX714E7P . . . 67
UTGX714E7S . . . 67

Plug only

UTGX6100W2P . . . 38
UTGX6100W2S . . . 38
UTGX6103P . . . 20
UTGX6103S . . . 20
UTGX6103W3P . . . 52
UTGX6103W3S . . . 52
UTGX6104P . . . 43
UTGX6104S . . . 43
UTGX6106P . . . 58
UTGX6106S . . . 58
UTGX610E6P . . . 58
UTGX610E6S . . . 58
UTGX610E7P . . . 72
UTGX610E7S . . . 72
UTGX610E98P . . . 63
UTGX610E98S . . . 63
UTGX61210P . . . 91
UTGX61210S . . . 91
UTGX6124P . . . 33
UTGX6124S . . . 33
UTGX6128P . . . 84
UTGX6128S . . . 84
UTGX612E10P . . . 91
UTGX612E10S . . . 91
UTGX612E14P . . . 110
UTGX612E14S . . . 110
UTGX612E2P . . . 16
UTGX612E2S . . . 16
UTGX612E3P . . . 32
UTGX612E3S . . . 32
UTGX612E4P . . . 33
UTGX612E4S . . . 33
UTGX612E8P . . . 81
UTGX612E8S . . . 81
UTGX61412P . . . 85
UTGX61412S . . . 85
UTGX61419P . . . 122
UTGX61419S . . . 122
UTGX6142G1P . . . 26
UTGX6142G1S . . . 26
UTGX6147P . . . 67
UTGX6147S . . . 67
UTGX6148P . . . 85
UTGX6148S . . . 85
UTGX61492P . . . 105
UTGX61492S . . . 105
UTGX614E12P . . . 101
UTGX614E12S . . . 101
UTGX614E15P . . . 114
UTGX614E15S . . . 114
UTGX614E18P . . . 118
UTGX614E18S . . . 118
UTGX614E19P . . . 110
UTGX614E19S . . . 110
UTGX614E5P . . . 114
UTGX614E5S . . . 114
UTGX614E7P . . . 67
UTGX614E7S . . . 67

Plug with cable gland

UTGX6JC102W2P . . . 38
UTGX6JC102W2S . . . 38
UTGX6JC103P . . . 20
UTGX6JC103S . . . 20
UTGX6JC103W3P . . . 52
UTGX6JC103W3S . . . 52
UTGX6JC104P . . . 43
UTGX6JC104S . . . 43
UTGX6JC106P . . . 58
UTGX6JC106S . . . 58
UTGX6JC10E6P . . . 58
UTGX6JC10E6S . . . 58
UTGX6JC10E7P . . . 72
UTGX6JC10E7S . . . 72
UTGX6JC10E98P . . . 63
UTGX6JC10E98S . . . 63
UTGX6JC1210P . . . 91
UTGX6JC1210S . . . 91
UTGX6JC124P . . . 33
UTGX6JC124PSCR . . . 33
UTGX6JC124S . . . 33
UTGX6JC124SSCR . . . 33
UTGX6JC128P . . . 76
UTGX6JC128S . . . 76
UTGX6JC12E10P . . . 91
UTGX6JC12E10S . . . 91
UTGX6JC12E14P . . . 91
UTGX6JC12E14S . . . 91
UTGX6JC12E2P . . . 16
UTGX6JC12E2S . . . 16
UTGX6JC12E3P . . . 29
UTGX6JC12E3S . . . 29
UTGX6JC12E4P . . . 33
UTGX6JC12E4S . . . 33
UTGX6JC12E8P . . . 81
UTGX6JC12E8S . . . 81
UTGX6JC1412P . . . 85
UTGX6JC1412S . . . 85
UTGX6JC1419P . . . 110
UTGX6JC1419S . . . 110
UTGX6JC142G1P . . . 26
UTGX6JC142G1S . . . 26
UTGX6JC147P . . . 67
UTGX6JC147PSCR . . . 67
UTGX6JC147S . . . 67
UTGX6JC147SSCR . . . 67
UTGX6JC148P . . . 94
UTGX6JC148S . . . 94

UTGX6JC1492P . . . 105
UTGX6JC1492S . . . 105
UTGX6JC14E12P . . . 101
UTGX6JC14E12S . . . 101
UTGX6JC14E15P . . . 43
UTGX6JC14E15S . . . 43
UTGX6JC14E18P . . . 118
UTGX6JC14E18S . . . 118
UTGX6JC14E19P . . . 110
UTGX6JC14E19S . . . 110
UTGX6JC14E5P . . . 43
UTGX6JC14E5S . . . 43
UTGX6JC14E7P . . . 67
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Square flange receptacle only

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