



Hybrid Power + Control solution

An innovative and compact solution allowing power and signal delivery in one connector.

High performance & secure solution

- Compatible with RS 485 (2 twisted pairs + braid)
- Terminating 120 Ohms resistor
- Current Breaking Capacity
- Finger touch proof

UL/IEC qualification time saving

- Safety standard oriented
- UL 1977 & IEC 61 984 qualified

Easy and robust interconnection

- Push and Press to release mating system
- Stainless Steel latch
- Key Hole design for blind mating
- High resistance to shocks and vibrations

High outdoor life expectancy

- F1 material per UL 746C
- IP68 / 68K sealing level
- Moisture proof

Qualification Time Saving

In today's fast paced environment we are all buying electronic devices with confidence. To achieve such a high level of trust, the legislator put in place a wide variety of safety standards. Some are dedicated to the equipment, some to the connection.

SOURIAU designed and qualified the UTL series according to the UL 1977 and IEC 61984 but we also took into account additional requirements.

UL 1977 & IEC 61 984 Qualified

Additional capabilities

- Impact resistance
- Stress relief
- Flame retardant
- Finger probe
- Aging
- Hot wire
- Bending
- Current breaking

In this way, the UTL series is also compliant with ALL equipment standards mentioned below.

Easy equipment qualification

Now, the qualification of your equipment is much easier.

UL201	Safety standard of industrial equipment
UL 1995	Heating and cooling equipment
UL 2238	Cable assemblies and fittings for industrial control and signal distribution
IEC 60601	Medical equipment
IEC 61010	Safety requirements for electrical equipment for measurement, control, and laboratory use
IEC 60598	Street lights
UL/IEC 60950	Information technology equipment



Description

- The UTL Series is a plastic connector range that meets industrial safety standards.
- The «Key hole» of the coupling system allows blind mating. In dark conditions the mechanical discriminations allow easy mating to avoid connector damage.
- The stainless steel latch coupling system is simple to use. With only 1 finger, connectors are mated with an audible click.
- The UTL Series is rated at IP68/69K even in dynamic conditions and remains sealed even when used continuously underwater or cleaned using a high pressure hose while the cable is moving.
- The UTL Series uses an outdoor rated material per Underwriters Laboratories.
- Cable assembly equipped with DMX + Power cables suitable for outdoor use (PUR or Neoprene outer jacket).

Technical Features

Materials

- **Housing:** Thermoplastic
- **Contacts:** 3x #16 + 5x #20
- **Latch:** Stainless steel

Electrical

- **UL:** 16A 600V V0
13A 277V for CBC use
- **CN:** 13A 600V
10A 277V for CBC use
- **IEC:** 16A 500V 6KV 4
13A 250V 4KV 4 for CBC use
- Connector specially designed to be engaged or disengaged in normal use when live or under load
- First Mate Last Break contact mating on ground line
- Signal lines: RS485 compliant
2.5A 10V
- Finger touch proof

- **In accordance with:**
 - UL 1977: UL file number ECBT2.E169916
 - IEC 61984: please consult us
 - C22.2 N°182.3: file number ECBT8.E169916
 - IEC60065, IEC60598, UL1598, IEC60320, UL498, UL94 , UL746 , IEC61076-2-103



Environmental

- **Operating temperature (according to IEC61984):**
From -40°C to +105°C for connector
From -25°C to +60°C for cable assemblies due to cable performances
- **Flammability rating:**
UL 94: V-0 for connector
UL94: 5VA for thermoplastic
UL746C: 5 inch (127mm) end-product flame test
- **Salt spray:**
≥1,000 hours
- **UV resistant:**
No mechanical degradation or important

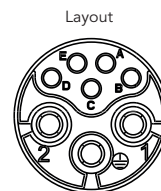
color variation due to environmental exposure (F1 material per the UL 746C)

- **Sealing:**
- IP68/69K mated with standard contacts
- **Fluid resistance:**
 - Gas and oil
 - Mineral oil
 - Acid bath
 - Basic bath
- **Halogen free**
- **RoHS compliant**



Mechanical

- **Durability:**
 - 250 mating in CBC (current breaking capacity) use (UL1977; IEC61984)
 - 500 mating in COC use (IEC61984)
 - 1,000 matings & unmatings tested
- **Coupling system:**
 - Sensitive and audible click
 - Blind mating
- **Touchproof:**
IP2X in unmated conditions (connector equipped with socket contacts)



Connector Part Number

Plugs and receptacles have to be equipped with both contact genders. Ground lines will never be equipped with the same contacts between the neutral and phase.

Contact type	Connector type	Part number	
		Male insert with female ground	Female insert with male ground
Crimp contacts supplied separately see page 7	Plug	UTL6122G1W5P	UTL6122G1W5S
	Jam nut receptacle	UTL7122G1W5P	UTL7122G1W5S
	In line receptacle	UTL1122G1W5P	UTL1122G1W5S
-	Terminating resistance plug - 120Ω	UTL6102G1W5PCDMX	UTL6102G1W5SCDMX
	Terminating resistance receptacle - 120Ω	UTL1102G1W5PCDMX	UTL1102G1W5SCDMX

Evaluation kit - For more informations see page 14

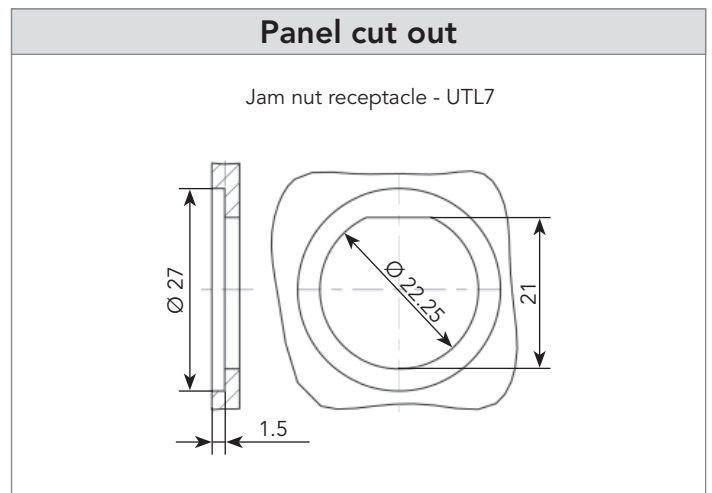
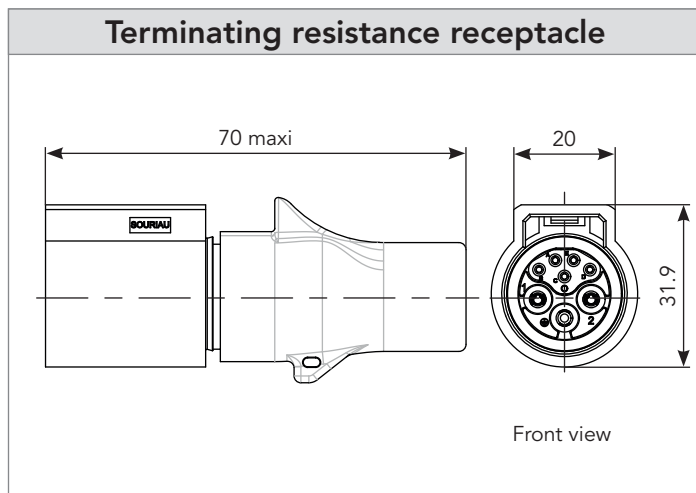
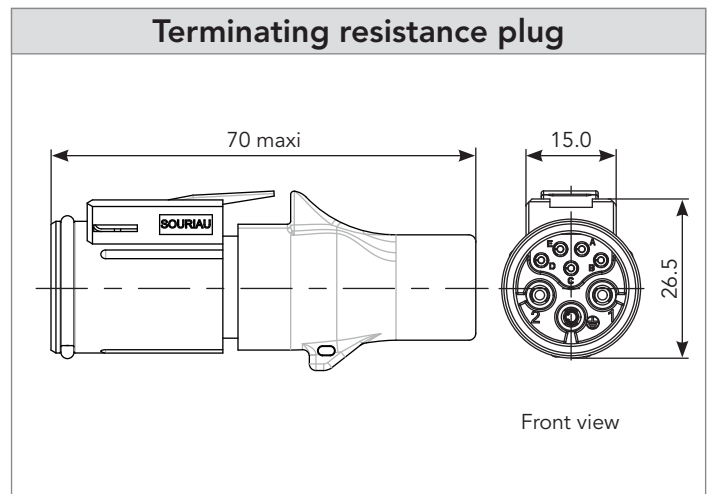
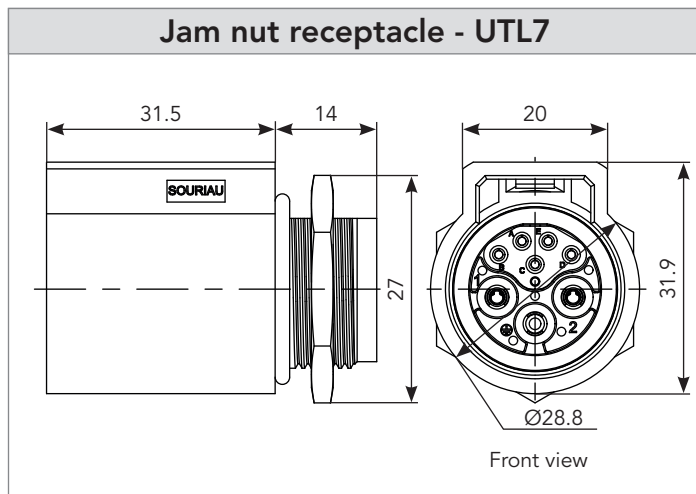
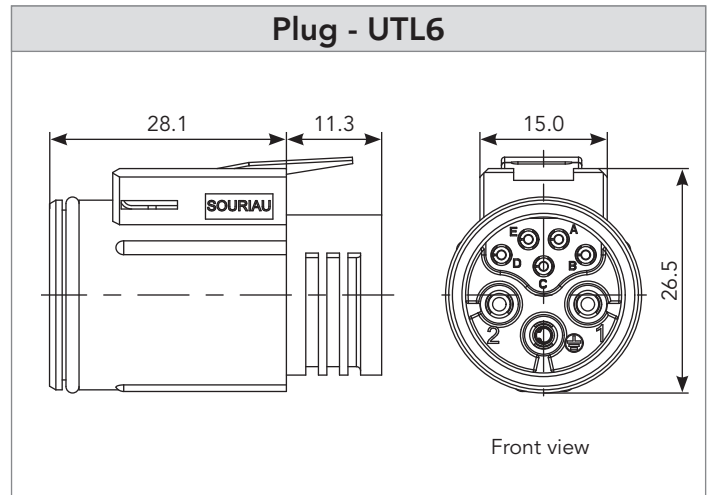
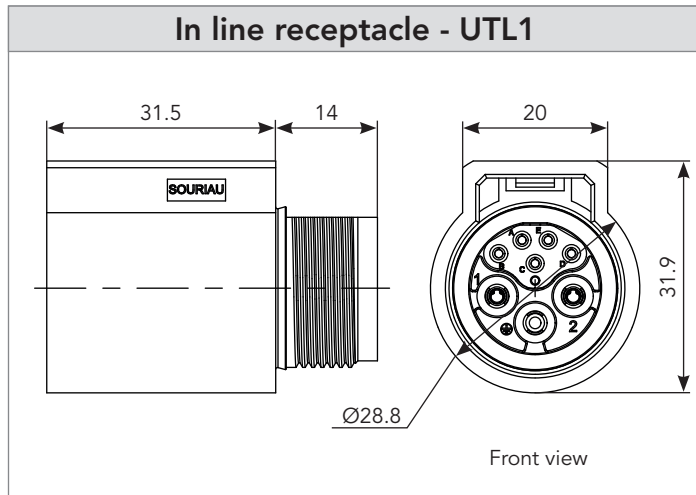
Contact type	Wire section		Connector Type	Accessories	Part number	
	Power	Signal			Male insert with female ground	Female insert with male ground
Crimped contacts Stamped & Formed	16AWG / 1.5mm ²	24AWG / 0.22mm ²	Plug	Shrink boot	UTL6122G1W5P16AWG	UTL6122G1W5S16AWG
	14AWG / 2.5mm ²	24AWG / 0.22mm ²			UTL6122G1W5P14AWG	UTL6122G1W5S14AWG
	16AWG / 1.5mm ²	24AWG / 0.22mm ²	In line receptacle		UTL1122G1W5P16AWG	UTL1122G1W5S16AWG
	14AWG / 2.5mm ²	24AWG / 0.22mm ²			UTL1122G1W5P14AWG	UTL1122G1W5S14AWG
	16AWG / 1.5mm ²	24AWG / 0.22mm ²	Jam nut receptacle	No accessory	UTL7122G1W5P16AWG	UTL7122G1W5S16AWG
	14AWG / 2.5mm ²	24AWG / 0.22mm ²			UTL7122G1W5P14AWG	UTL7122G1W5S14AWG

Overmoulded Cable Assembly Part Number

Layout	Description	Connector and Overmould type		Length*	
		Connector	Overmould type	1m	2m
122G1W5	In line	Male In line receptacle	Straight	HAUTL12G1W5PS1M	HAUTL12G1W5PS2M
		Female In line receptacle	Straight	HAUTL12G1W5SS1M	HAUTL12G1W5SS2M
	Plug	Male plug	Straight	HAUTL62G1W5PS1M	HAUTL62G1W5PS2M
		Female plug	Straight	HAUTL62G1W5SS1M	HAUTL62G1W5SS2M

* : For other lengths or specific design requirement consult us

Dimensions (For mated connector lengths see page 14)




Note: all dimensions are in mm and for information only

Accessories and Tooling

Dustcap for plug


IP67



Part number
UTL612DCG

Dustcap for receptacle

IP67




Part number
UTL12DCG

Handle (without head)



Part number
SHANGLES

Tool kit



Part number
TOOLKIT

Extraction Tool #16



Part number
RX2025GE1

Insertion Tool #20



Part number
RTM205

Head Crimp Tooling (without handle)

Contacts	Contact size	Part number of head	
RM/RC 24W3K ⁽¹⁾	Standard contacts #20 Ø 1mm	S20RCM*	
RM/RC 20W3K ⁽¹⁾		S20RCM*	
RM/RC 18W3K ⁽¹⁾		S20RCM*	
SM/SC 24WL3 ⁽¹⁾⁽²⁾		S20SCM20*	
SM/SC 20WL3 ⁽¹⁾⁽²⁾		S20SCM20*	
RM/RC 28M1K ⁽¹⁾	Standard contacts #16 Ø 1.6mm	S16RCM20*	
RM/RC 24M9K ⁽¹⁾		S16RCM20*	
RM/RC 20M13K ⁽¹⁾		S16RCM20*	
RM/RC 20M12K ⁽¹⁾		S16RCM20*	
RM/RC 16M23K ⁽¹⁾		S16RCM16*	
RM/RC 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*	
RMDXK10D28K		Coaxial contacts #16 Ø 1.6mm	M10S1J with die set & stop bushing
RCDXK1D28K			
RM/RC DX60xxD28K			
RM/RC DXK10D28 + york090			
RM/RC DX60xxD28			

(1): Example of plating, for other plating options see UTL catalog (2): loose contact
* Heads to be used with handle PN: SHANGLES



Contacts

#20	Contact type	AWG	Part number		Max wire Ø	Max insulator Ø
			Male	Female		
Crimp	Machined	26-24	RM24W3K ⁽¹⁾	RC24W3K ⁽¹⁾	0.80	1.60
		22-20	RM20W3K ⁽¹⁾	RC20W3K ⁽¹⁾	1.15	1.60
		20-18	RM18W3K ⁽¹⁾	RC18W3K ⁽¹⁾	1.30	2.10
	Stamped & Formed reeled contacts See note (2) for loose piece	26-24	SM24W3TK6 ⁽¹⁾⁽²⁾	SC24W3TK6 ⁽¹⁾⁽²⁾	-	0.90-1.60
		26-24	SM24W3S26 ⁽¹⁾⁽²⁾	SC24W3S25 ⁽¹⁾⁽²⁾	-	0.90-1.60
		22-20	SM20W3TK6 ⁽¹⁾⁽²⁾	SC20W3TK6 ⁽¹⁾⁽²⁾	-	1.20-2.10
		22-20	SM20W3S26 ⁽¹⁾⁽²⁾	SC20W3S25 ⁽¹⁾⁽²⁾	-	1.20-2.10
	#16					
Crimp	Machined	30-28	RM28M1K ⁽¹⁾	RC28M1K ⁽¹⁾	0.55	1.00
		26-24	RM24M9K ⁽¹⁾	RC24M9K ⁽¹⁾	0.80	1.60
		22-20	RM20M13K ⁽¹⁾	RC20M13K ⁽¹⁾	1.15	1.80
		22-20	RM20M12K ⁽¹⁾	RC20M12K ⁽¹⁾	1.15	2.20
		20-16	RM16M23K ⁽¹⁾	RC16M23K ⁽¹⁾	1.80	3.20
		16-14	RM14M30K ⁽¹⁾	RC14M30K ⁽¹⁾	2.30	3.20
	Stamped & Formed Reeled Contacts See note (2) for loose piece	26-24	SM24M1TK6 ⁽¹⁾⁽²⁾	SC24M1TK6 ⁽¹⁾⁽²⁾	-	0.90-1.60
		22-20	SM20M1TK6 ⁽¹⁾⁽²⁾	SC20M1TK6 ⁽¹⁾⁽²⁾	-	1.20-2.10
		18-16	SM16M1TK6 ⁽¹⁾⁽²⁾	SC16M1TK6 ⁽¹⁾⁽²⁾	-	3.20
		18-16	SM16M11TK6 ⁽¹⁾⁽²⁾	SC16M11TK6 ⁽¹⁾⁽²⁾	-	3.00
14	SM14M1TK6 ⁽¹⁾⁽²⁾	SC14M1TK6 ⁽¹⁾⁽²⁾	-	3.20		
Coaxial	Cable Multipiece	For jacket diameter from 1.78 to 3.05mm Inner conductor up to 2.44mm diameter	RMDXK10D28	RCDXK1D28	-	-
	Cable Monocrimp		RMDX60xxD28	RCDX60xxD28	-	-
	Twisted pair Multipiece	For jacket diameter from 0.64 to 1.45mm Inner conductor from AWG30 to AWG24	RMDXK10D28 + yorK090	RCDXK1D28 + yorK090	-	-
	Twisted pair Monocrimp		RMDX60xxD28	RCDX60xxD28	-	-

(1): Example of plating, for other plating options see UTL catalog

(2): For loose piece contact packaging, place "L" in part number. Example: SM20ML1TK6

Note: all dimensions are in mm

REMINDER

Plugs and receptacles have to be equipped with both contact genders.

EX: UTL6122G1W5P = 2 x SM16M1TK6 (power) + 1 x SC16M1TK6 (ground) + 5 x SM20W3TK6 (signal)

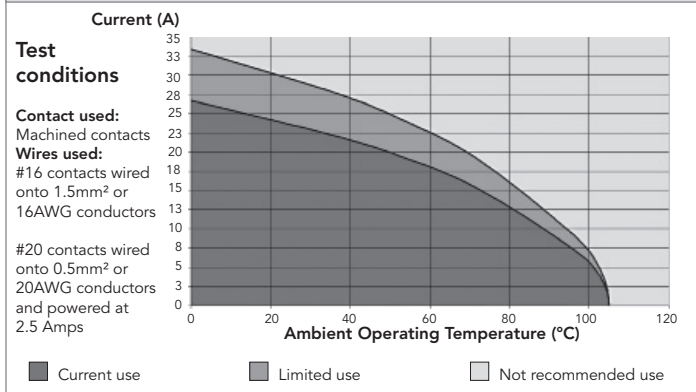
Electrical characteristics

UL
16A 600V V0
13A 277V for CBC use

CN
13A 600V
10A 277V for CBC use

IEC
16A 500V 6KV 4
13A 250V 4KV 4 for CBC use

UTL122G1W5 derating curves



Contacts (Continued)

Plating Selector Guide

Contacts Supplied Separately

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

Contact size	Available platings options (contacts supplied separately)	
#20	S25 Female contact	Active part: 0.75µ gold min over 2µ Ni Crimp area: Gold flash over Ni
	S26 Male contact	Active part: 0.75µ gold min over 2µ Ni Crimp area: Gold flash over Ni
#16	S31	Active part: Gold flash over Ni Crimp area: Nickel
	S18	Active part: 0.75µ gold min over 2µ Ni Crimp area: 1.3µ tin over Ni Other: Nickel
	J	Gold flash over 2µ Ni
	D70	Superseded by S31
	S6	Superseded by S18
#20 and #16	K	Min 0.4µ gold over 2µ Ni
	TK6	2-5µ Sn pre-plated
Other platings on request (contacts supplied separately)		
#16	T	2µm Ni min all over + 3 to 5µm Sn all over
	D28	0.75µ gold over Ni

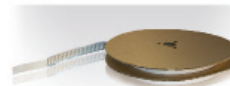
Packaging - Size contacts #20 & #16

Due to the wide variety of applications, contact packaging is offered for small series (bulk package) and high volume production (reeled contacts):

Stamped & Formed



- 25 pieces loose package



- 3 000 pieces reeled

Machined contacts



- 50 pieces bulk package



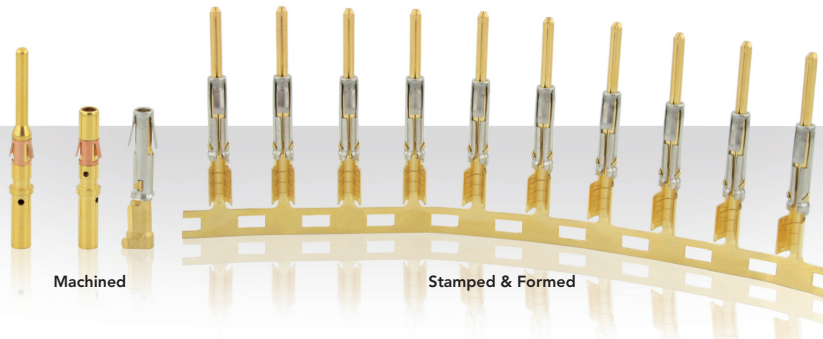
- 1 000 pieces bulk package



- 2 000 pieces reeled

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 beginning of the part number: e.g. KRC16M23K

Contact Selector Guide



Contact size	Type	Wire size		Part number		Max wire Ø	Max insulator Ø	Available plating see page 34
		AWG	mm ²	Male	Female			
#20 Ø1 mm	Machined	26-24	0.13-0.20	RM24W3K	RC24W3K	0.80	1.60 max	K
	Stamped & Formed	26-24	0.13-0.25	SM24W3 - (1)	SC24W3 - (1)	-	0.90-1.60	TK6 S25 (female) S26 (male)
				SM24WL3 - (2)	SC24WL3 - (2)	-		
	Machined	22-20	0.32-0.52	RM20W3K	RC20W3K	1.15	1.60 max	K
	Stamped & Formed	22-20	0.35-0.5	SM20W3 - (1)	SC20W3 - (1)	-	1.20-2.10	TK6 S25 (female) S26 (male)
SM20WL3 - (2)				SC20WL3 - (2)	-			
Machined	20-18	0.50-0.93	RM18W3K	RC18W3K	1.30	2.10 max	K	
#16 Ø1.6 mm	Machined	30-28	0.05-0.08	RM28M1-	RC28M1-	0.55	1.00	K, J
	Machined	26-24	0.13-0.2	RM24M9-	RC24M9-	0.80	1.60	K, J
	Stamped & Formed	26-24	0.13-0.25	SM24M1 - (1)	SC24M1 - (1)	0.89-1.28	Insulation grip	TK6, S31, S18
				SM24ML1 - (2)	SC24ML1 - (2)			
	Machined	22-20	0.32-0.52	RM20M13-	RC20M13-	1.15	1.80	K, J
				RM20M12-	RC20M12-		2.20	
	Stamped & Formed	22-20	0.35-0.5	SM20M1 - (1)	SC20M1 - (1)	1.17-2.08	Insulation grip	TK6, S31, S18
				SM20ML1 - (2)	SC20ML1 - (2)			
	Machined	20-16	0.52-1.5	RM16M23-	RC16M23-	1.80	3.20	K, J
	Machined Sealed contact	20-16	0.52-1.5	RM16M25K	RC16M25K	1.80	3.20	K
	Stamped & Formed	18-16	0.8-1.5	SM16M1 - (1)	SC16M1 - (1)	3.00	No insulation grip	TK6, S31, S18
				SM16ML1 - (2)	SC16ML1 - (2)			
	Stamped & Formed	18-16	0.8-1.5	SM16M11 - (1)	SC16M11 - (1)	2.00-3.00	Insulation grip	TK6, S31, S18
				SM16ML11 - (2)	SC16ML11 - (2)			
Machined	16-14	1.5-2.5	RM14M30-	RC14M30-	2.30	3.20	K, J	
Stamped & Formed	14	2.0-2.5	SM14M1 - (1)	SC14M1 - (1)	3.20	No insulation grip	TK6, S31, S18	
			SM14ML1 - (2)	SC14ML1 - (2)				
Machined Sealed contact	16-14	1.5-2.5	RM14M25K	RC14M25K	2.30	3.20	K	

(1) contact reeled (2) loose contact
 Exemple: RM16M3K - Size #16, Machined, AWG20 wire, gold plating.

REMINDER

Plugs and receptacles have to be equipped with both contact genders. Examples:
 UTL6122W3G1P = 2 x SM16M1TK6 (power) + 1 x SC16M1TK6 (ground) + 5 x SM20W3TK6 (signal)

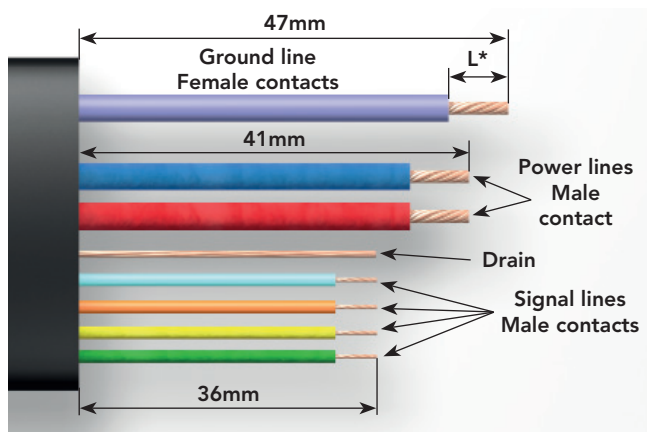
Assembly Instructions

Stripping

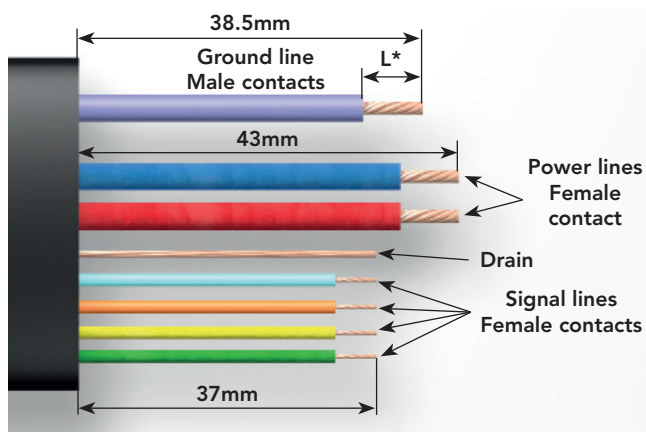
- Female insulator: Strip external cable sheath, adjust ground cable length
- Male insulator: Strip external cable sheath, adjust signal cable lengths
- Crimp contacts (see page 12)

8 pos.

UTL6122G1W5P - UTL7122G1W5P -
UTL1122G1W5P



UTL6122G1W5S - UTL7122G1W5S -
UTL1122G1W5S



Dimensions for information only, stripping dimensions could be adjusted according to the cable type.

Ground contact must be opposite gender than power contact.

Wire Stripping Length

	Part number		Stripping length L* (mm)
	Male	Female	
Machined contact	#20 - Ø 1mm		4.8
	RM24W3- /RM20W3- /RM18W3-	RC24W3- /RC20W3- /RC18W3-	
	#16 - Ø 1.6mm		4.8
	RM28M1- /RM24M9- /RM20M13- /RM20M12-	RC28M1- /RC24M9- /RC20M13- /RC20M12-	
	RM16M23- /RM14M30-	RC16M23- /RC14M30-	7.1
Stamped & formed with insulation support	#20 - Ø 1mm		4
	SM24W3- /SM24WL3- /SM20W3- /SM20WL3-	SC24W3- /SC24WL3- /SC20W3- /SC20WL3-	
	#16 - Ø 1.6mm		4
	SM24M1- /SM24ML1- /SM20M1- /SM20ML1-	SC24M1- /SC24ML1- /SC20M1- /SC20ML1-	
	SM16M11- /SM16ML11-	SC16M11- /SC16ML11-	4.65
Stamped & formed without insulation support	#16 - Ø 1.6mm		6.35
	SM16M1- /SM16ML1-	SC16M1- /SC16ML1-	
		SM14M1- /SM14ML1-	SC14M1- /SC14ML1-

Crimping with SOURIAU Tooling

1) Fully close then release the tool, keep it open. Open the 2 pins.



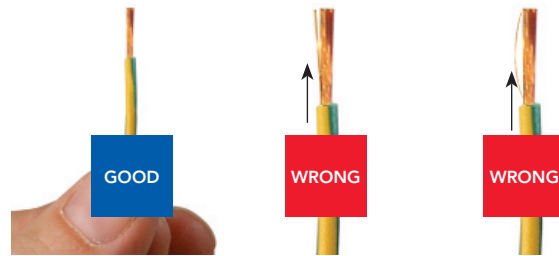
2) Choose the adapter head (sold separately), keep vertical and slide it into the handle until the mechanical end.



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



4) Strip the cable properly check the recommended size in the catalog on page 10.



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



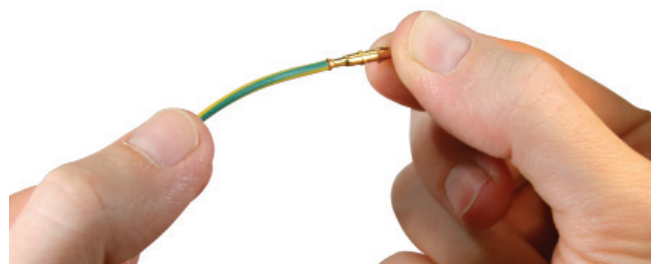
6) Position the contact in the bottom of the tool by checking its orientation. Maintain the wire in position.



7) Tighten sharply 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 next page).



Assembly Instructions (Continued)

Crimping Control

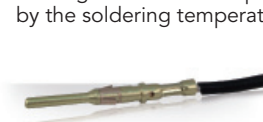
One of the key factors which affects the performance of a connector is the way contacts are terminated. Crimped connections are nowadays seen as the best solution to ensure quality throughout the lifetime of the product. Here are some reasons why we recommend this method of termination for UTL connectors:

Advantages (Extract from the IEC 60352-2):

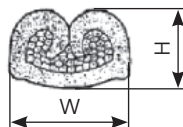
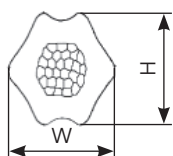
- Efficient processing of connections at each production level
- Processing by fully-automatic or semi-automatic crimping machines, or with hand operated tools
- No cold-soldered joints
- No degradation of the spring characteristic of female contacts by the soldering temperature

- No health risk from heavy metal and flux steam
- Preservation of conductor flexibility behind the crimped connection
- No burned, discolored and overheated wire insulation
- Good connections with reproducible electrical and mechanical performances
- Easy production control.

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



Machined contact



Stamped & Formed contact

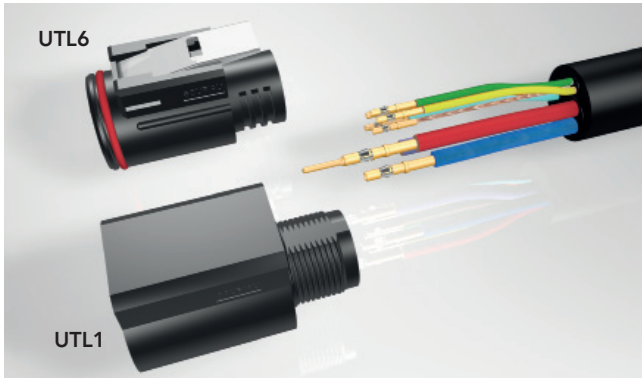


Active contact part	Contact type	Die location on heads	Wire section range	Section (mm ²)	Tensile straight test (mini)	Height (mm) H (±0.075)	Width (mm) W (±0.075)	Tooling head part number	
Machined contacts size #20 Ø 1 mm	RM24W3K RC24W3K	26/24	26 AWG	0.12 min	15 N	0.95	1.27	S20RCM	
			24 AWG	0.25 max	32 N				
	RM20W3K RC20W3K	22/20	22 AWG	0.32 min	40 N	1.26	1.78		
			20 AWG	0.50 max	60 N				
	RM18W3K RC18W3K	20/18	20 AWG	0.50 max	60 N	1.35	1.86		
			18 AWG	0.82 max	90 N				
S & F contacts size #20 Ø 1 mm	SM24WL3TK6* SC24WL3TK6*	26/24	26 AWG	0.12 min	15 N	0.80	1.49	S20SCM20	
			24 AWG	0.25 max	32 N				
	SM20WL3TK6* SC20WL3TK6*	22/20	22 AWG	0.32 min	40 N	1.01	1.53		
			20 AWG	0.50 max	60 N				
Machined contacts size #16 Ø 1.6 mm	RM28M1K* RC28M1K*	30/28	30 AWG	0.05 min	11 N	1.14	1.41	S16RCM20	
			28 AWG	0.08 max	11 N				
	RM24M9K* RC24M9K*	26/24	26 AWG	0.12 min	15 N	1.15	1.41		
			24 AWG	0.25 max	32 N				
	RM20M13K* RC20M13K*	22/20	22 AWG	0.32 min	40 N	1.26	1.76		
			20 AWG	0.50 max	60 N				
			22 AWG	0.32 min	40 N				
			20 AWG	0.50 max	60 N				
	RM16M23K* RC16M23K*	20	20	0.50 max	60 N	1.66	2.18		S16RCM16
			18	0.82 max	90 N	1.80	2.28		
16			1.50 max	150 N	1.96	2.43			
RM14M30K* RC14M30K*	16	16	1.50 min	150 N	2.10	2.68	S16RCM14		
		14	2.50 min	230 N	2.30	2.78			
S & F contacts size #16 Ø 1.6 mm	SM24ML1TK6* SC24ML1TK6*	26/24	26 AWG	0.12 min	15 N	0.84	1.50	S16SCM20	
			24 AWG	0.25 max	32 N				
	SM20ML1TK6* SC20ML1TK6*	22/20	22 AWG	0.32 min	40 N	1.02	1.54		
			20 AWG	0.50 max	60 N				
	SM16ML11TK6* SC16ML11TK6*	18	18	0.82 min	90 N	1.32	2.09	S16SCML11	
			16	1.50 max	150 N	1.36	2.10		
	SM16ML1TK6* SC16ML1TK6*	18	18	0.82 min	90 N	1.49	2.02	S16SCML1	
			16	1.50 max	150 N	1.7	2.05		
SM14ML1TK6* SC14ML1TK6*	14	14	2.50 max	230 N	1.79	2.58			

* example of plating, for other plating see page 34

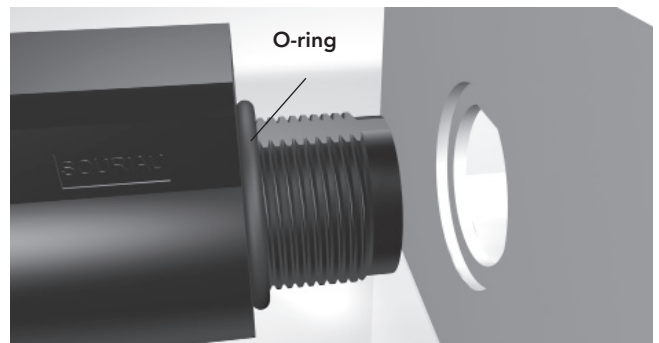
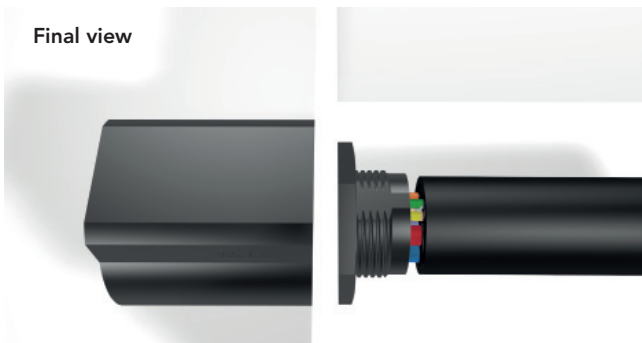
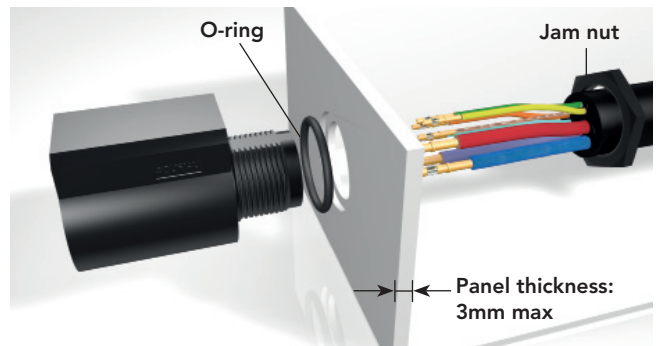
UTL6 or UTL1 Assembly

- Strip wires (see page 10)
- Crimp contacts (see page 11)
- Place all the contacts inside the corresponding cavities
- Manually push each contact, or use our tool (**RTM205** for #16 contacts), until audible click. Check each contact retention, with two finger retraction
- Do an overmolding on the wired set or use heat shrink boot



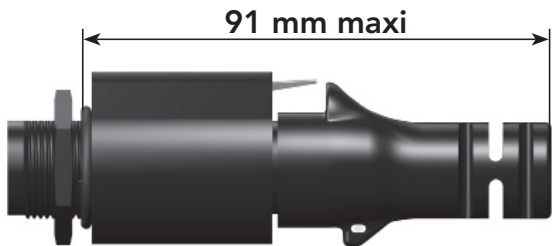
UTL7 Assembly (Mounting Suggestion)

- Slide nut over the wires
- Strip wires (see page 10)
- Crimp contacts (see page 11)
- Place all the contacts inside the corresponding cavities
- Manually push each contact, or use our tool (**RTM205** for #16 contacts), until audible click. Check each contact retention, with two finger retraction
- Seat o-ring, place receptacle in the panel cut-out (see dimension page 5)
- Tighten jam nut torque: 2.5 Nm maxi, tightening tool: 7/8"

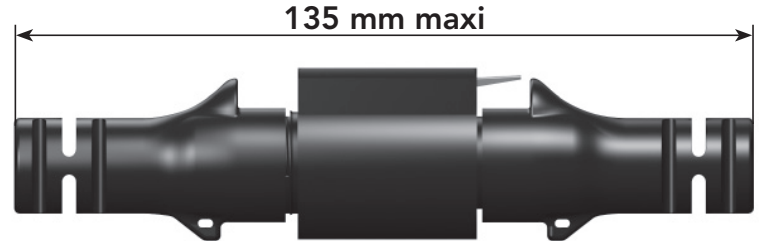


Mated Connector Length

UTL7 + UTL6



UTL1 + UTL6



Evaluation Kit 8 Contacts Part Number (122G1W5)

Part number	Connector type	Gender	Wire section		Kit contains														
			AWG	mm ²	UTL6122G1W5S	UTL1122G1W5S	UTL1122G1W5P	UTL1122G1W5S	UTL7122G1W5P	UTL7122G1W5S	Heat shrink boot	SM20WL3S26	SC20WL3S25	SM24WL3S26	SC24WL3S25	SM16ML1S31	SC16ML1S31	SM14ML1S31	SC14ML1S31
UTL6122G1W5P16AWG	Plug	Male power	16	1.5	1	-	-	-	-	-	1	2	-	5	-	3	2	-	-
UTL6122G1W5P14AWG	Plug	Male power	14	2.5	1	-	-	-	-	-	1	2	-	5	-	-	-	3	2
UTL6122G1W5S16AWG	Plug	Female power	16	1.5	-	1	-	-	-	-	1	-	2	-	5	2	3	-	-
UTL6122G1W5S14AWG	Plug	Female power	14	2.5	-	1	-	-	-	-	1	-	2	-	5	-	-	2	3
UTL1122G1W5P16AWG	Inline receptacle	Male power	16	1.5	-	-	1	-	-	-	1	2	-	5	-	3	2	-	-
UTL1122G1W5P14AWG	Inline receptacle	Male power	14	2.5	-	-	1	-	-	-	1	2	-	5	-	-	-	3	2
UTL1122G1W5S16AWG	Inline receptacle	Female power	16	1.5	-	-	-	1	-	-	1	-	2	-	5	2	3	-	-
UTL1122G1W5S14AWG	Inline receptacle	Female power	14	2.5	-	-	-	1	-	-	1	-	2	-	5	-	-	2	3
UTL7122G1W5P16AWG	Jam nut receptacle	Male power	16	1.5	-	-	-	-	1	-	-	2	-	5	-	3	2	-	-
UTL7122G1W5P14AWG	Jam nut receptacle	Male power	14	2.5	-	-	-	-	1	-	-	2	-	5	-	-	-	3	2
UTL7122G1W5S16AWG	Jam nut receptacle	Female power	16	1.5	-	-	-	-	-	1	-	-	2	-	5	2	3	-	-
UTL7122G1W5S14AWG	Jam nut receptacle	Female power	14	2.5	-	-	-	-	-	1	-	-	2	-	5	-	-	2	3

Note: all dimensions are in mm and for information only

Evaluation Kit – Assembly Instructions

The boot is semi-flexible and heat-shrinkable with a moldable adhesive inner lining.

- Place the heat shrink boot over the cable ❶
- Place the contacts in their cavities, checking the retention by slightly pulling the cable ❷
- Clean the connector surface and the cable jacket with isopropyl alcohol
(Note: It is advised to rub the jacket with sand paper and clean the jacket before shrinking the boot)
- Position the boot over the rear threads ❸
- Heat the boot with a heat gun: minimum shrink temp: 80°C - minimum full recovery temp: 110°C make sure to apply the heat evenly around the boot. Starting by applying the heat from the rear of the connector. ❹
Do not apply excessive heat, as it will damage the connector and/or boot.
- Let the boot cool down ❺
- Check for good retention and the boot glue grip ❻.

For stripping and crimping information, please see page 10



For further information contact us at contactindustry@souriau.com
or visit our web site www.souriau-industrial.com