

Trim Trio Series Tooling



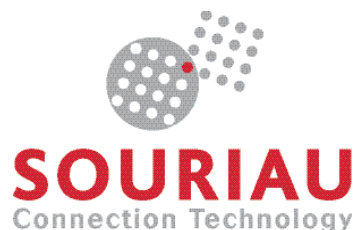
Tooling

Automatic crimping tools



Mecal is leader in manufacturing tooling for crimping terminals over a stripped wire.

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



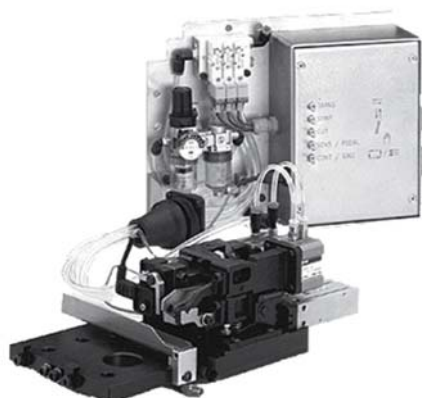
The extreme environment interconnect specialist "from deep sea to deep space".

Souriau designs manufactures and markets high performance interconnect solutions for severe environments dedicated to the aerospace, defence, light and heavy industry markets.

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



Mini Applicator



Stripper



Presses

Mecal sales network:

www.mecal.net/eng/retevendita.php

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Crimptooling table

Standard contacts

Contact size	Part number	Head	Handles	
#20 1mm	RM/RC 24W3 -	S20RCM	SHANGLES	
	RM/RC 20W3 -			
	RM/RC 18W3 -			
	SM 24W3S - ⁽¹⁾ SC 24W3S - ⁽¹⁾	S20SCM20		
	SM 24WL3S - ⁽²⁾ SC 24WL3S - ⁽²⁾			
	SM/SC 20W3S - ⁽³⁾ SM/SC 20WL3S - ⁽²⁾			
	#16 1.6mm			RM/RC 28M1 -
RM/RC 24M9 -				
RM/RC 20M13 -				
RM/RC 20M12 -				
RM/RC 16M23 -		S16RCM16		
RM/RC 14M50 -		S16RCM1450		
RM/RC 14M30 -		S16RCM14		
SM/SC 24M1 - SM/SC 24ML1 -		S16SCM20		
SM/SC 20M1 - SM/SC 20ML1 -				
SM/SC 16M1 - SM/SC 16ML1 -			S16SCML1	
SM/SC 14M1 - SM/SC 14ML1 -				
SM/SC 16M11 - SM/SC 16ML11 -		S16SCML11		



(1) contact reeled (2) loose contact

Note: endurance of SHANGLES tool = 5 000 cycles.

Contact size	Part number	Tool with separate locator			Extraction tools
		Hand tool	Positioner + locator setting		
#12 2.4mm	8291 1457N- / 8291 1456-	M317	VGE10077A	1-2	5106020924
	8291 1459N- / 8291 1458-			2	
	8291 1461N- / 8291 1460-			2	
	8291 1463N- / 8291 1462-			3	
	8291 1465N- / 8291 1464-			3	
	8291 1467N- / 8291 1466-			4	
#8 3.6mm	8291 3601A / 8291 3600A	M317	VGE10078A	3	51060210936
	8291 3603A / 8291 3602A			3	
	8291 3605A / 8291 3604A			4	
	8291 3607A / 8291 3606A			5	
	8291 3609A / 8291 3608A			6/7	

Specific contacts

Contact size	Part number	Hand tools (SHANGLES) head	Tool with separate locator			Extraction tools
			Hand tool	Positioner + locator setting		
#16 Ø 1.6mm Longer RM contact	RM28M1GE1-	S16RCM20				RX2025GE1
	RM24M9GE1-					
	RM20M13GE1-					
	RM16M23 GE1-	S16RCM16	MH860	MH86186	6/8	
	RM14M50 GE1-	S16RCM1450	M317	UH25	3	
	RM14M30 GE1-	S16RCM14				
#16 Ø 1.6mm Shorter RC contact	RC28M1GE7-	S16RCM20	MH860	MH86164G	4/6	
	RC24M9GE7-				5/6	
	RC20M13GE7- RC20M12GE7-				5/7	
	RC16M23GE7-				6/8	
	RC14M50GE7-	S16RCM1450	M317	UH25	3	
	RC14M30GE7-	S16RCM14				

Coaxial contacts

See UTS catalog, cabling notice chapter Appendices, pages 178 to 182.

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Extraction tools

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



RX2025GE1



RX20D44

Extraction tools instruction for size 16

Special case with the tool RX2025GE1:

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

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



Extraction:

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

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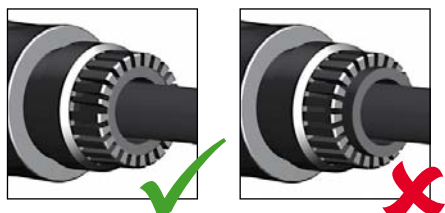
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Assembly instruction

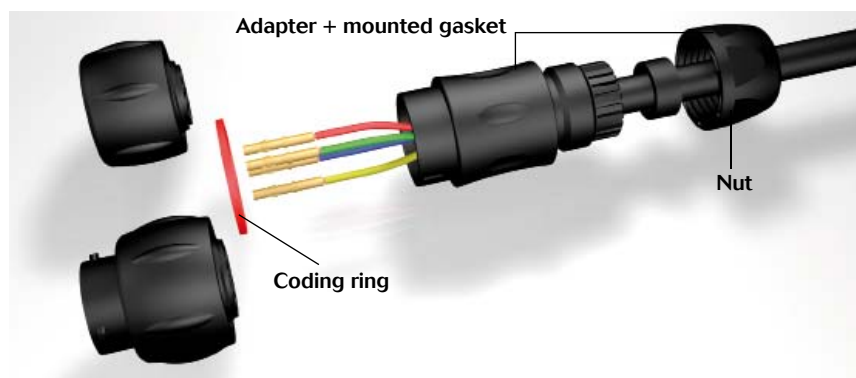
UTS 1 JC / UTS 6 JC assembly: Crimp version

- Slide accessories on the cable



Make sure the seal is positioned as shown.

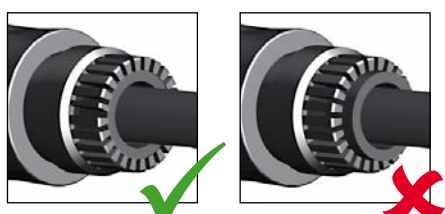
- Strip external cable jacket
- Strip wires and crimp contacts
- Insert contacts into connector cavities (insert manually or use tool RTM205)
- Tight adapter with plug, choose right seal (waste the other seal), tight nut with adapter (recommended torque values to be applied according to the table - right)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



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

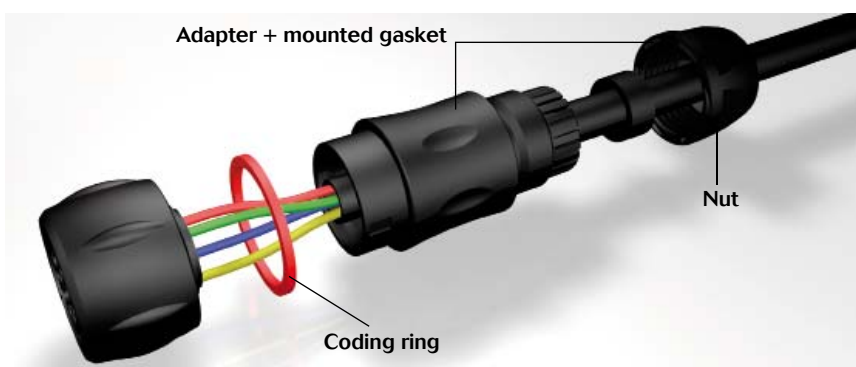
UTS 6 JC assembly: Solder version

- Slide accessories on the cable



Make sure the seal is positioned as shown.

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



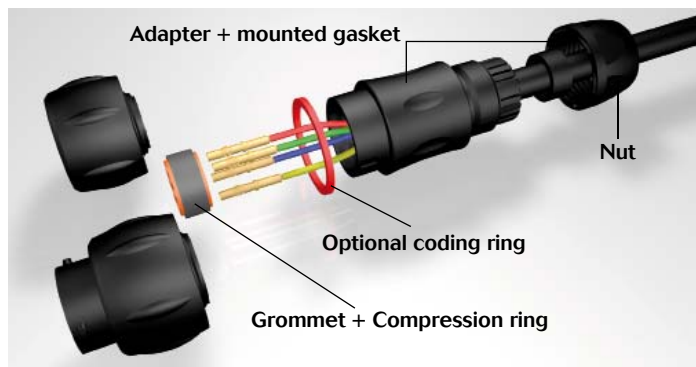
Shell size	Recommended jacket strip length (mm)	Adapter tightening torque (Nm)	Nut tightening torque (Nm)	Ø Cable range Standard seal	Ø Cable range Reducing seal	Ø Wire
	Male					
8	17	1	0.75	2.5/6.5	1.5/5.0	3.2 mm max.
10	21	1.5	2	2.5/8.0	1.5/5.0	
12	25	2	2.5	5.0/12.0	3.0/9.0	
14	29	3	2.5	7.0/14.0	5.0/12.0	

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UTS 1 GJC / UTS 6 GJC assembly

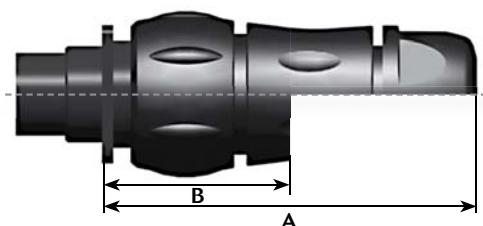
- Slide accessories on the cable (make sure to keep compression ring on the grommet)
- Strip external cable jacket
- Strip wires and crimp contacts
- Insert first contact into the grommet (first contact in cavity A, the contact pierces the grommet, no tool is required), then insert the contact in the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



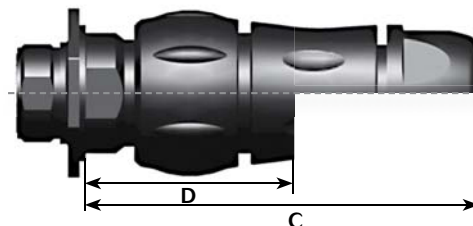
Shell size	Recommended jacket strip length (mm)		Adapter tightening torque (Nm)	Nut tightening torque (Nm)	Ø Cable range Standard seal	Ø Cable range Reducing seal	Ø Wire
	Male	Female					
10	21	29	1.5	2	2.5/8.0	1.5/5.0	from 1.7 mm to 3.0 mm
12	25	33	2	2.5	5.0/12.0	3.0/9.0	
14	29	36	3	2.5	7.0/14.0	5.0/12.0	

Mated connector length

UTS0 + UTS6



UTS7 + UTS6



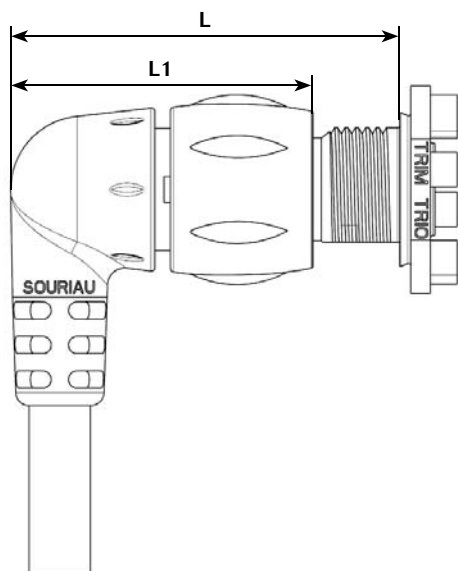
Shell size	UTS0 + UTS6 EN JC & CJC	UTS0 + UTS6 EN GN	UTS7 + UTS6 EN JC & CJC	UTS7 + UTS6 EN GN
	A max	B max	C max	D max
8	61.1	-	66.6	-
10	73.2	39.6	77.3	43.7
12	77.6	39.4	81.7	43.5
14	83.5	40	87.6	44.1
18	93.1	-	97.2	-

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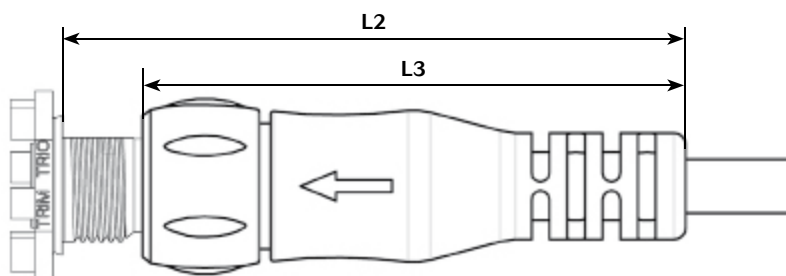
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Dimensions overmoulded harnesses



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





Rated current & working voltage

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 as well, since they help to dissipate heat and avoid overheating (Fig.1 & Fig.3).

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

Fig.1: UTS 12-4 – 1.5mm² wires

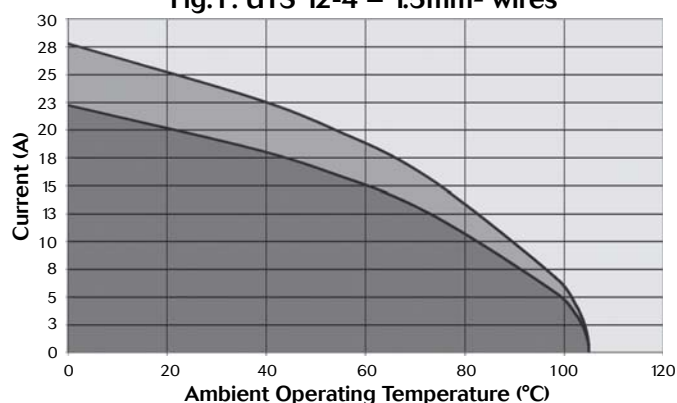


Fig.2: UTS 12-8 – 1.5mm² wires

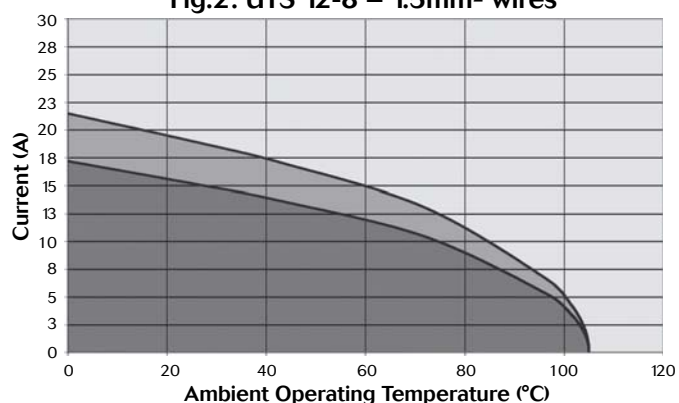
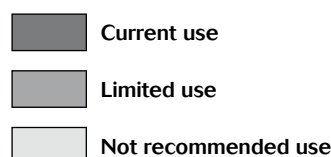
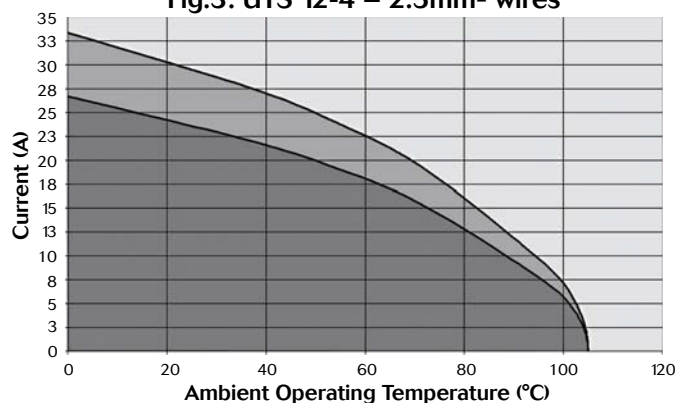


Fig.3: UTS 12-4 – 2.5mm² wires



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