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## UTS IP67 IP68 and IP69K Waterproof Electrical Connectors - Assembly Instruction

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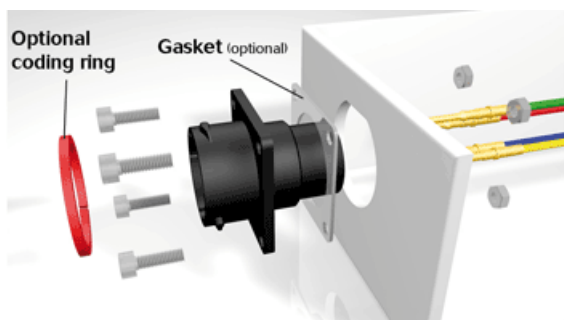
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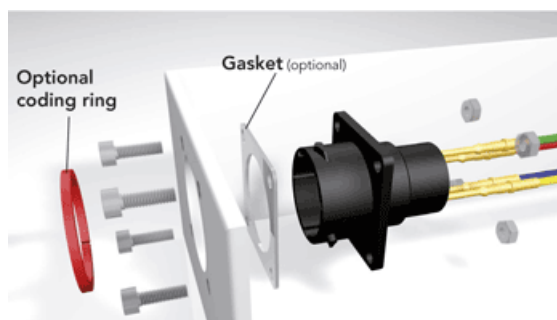
### 1. UTS0 Assembly

1. Strip wires and crimp contacts (see UTS catalog pages 156 & 157)
2. Insert contacts into connector cavities (insert manually or use tool RTM205 crimp contacts)
3. Place receptacle in the panel cut-out
4. Secure receptacle with screws (not supplied)  
Tighten screws: M2.5 (recommended torque: see table below)
5. For complete sealing of the system use optional gasket and sealed screw solution (not sold by SOURIAU).

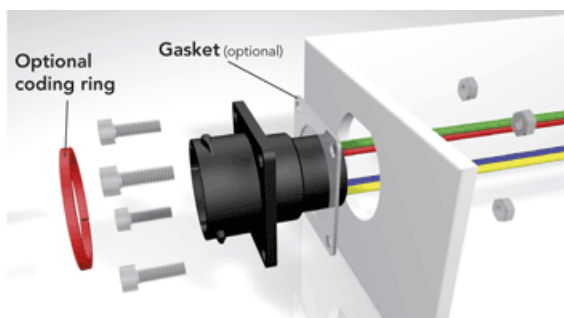
Front mounting : Crimp version



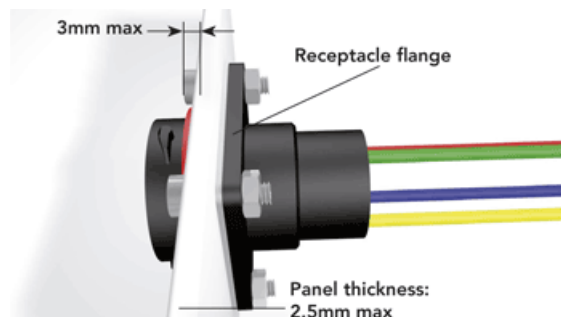
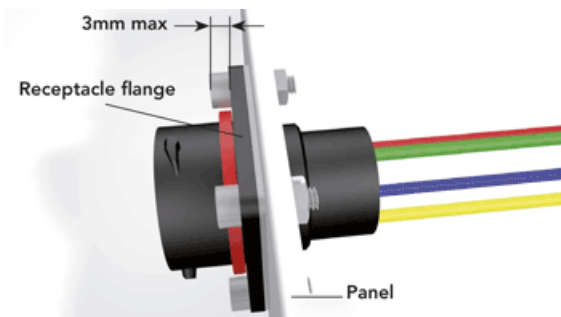
Rear mounting : Crimp version



Front mounting: Solder version



Rear mounting: Solder version

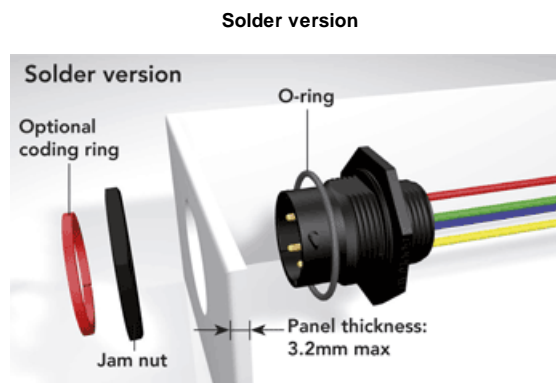


Shell size

	10	12	14	16	18
Screws tightening torque (Nm)	0.30/0.40	0.30/0.40	0.30/0.40	0.30/0.40	0.35/0.45

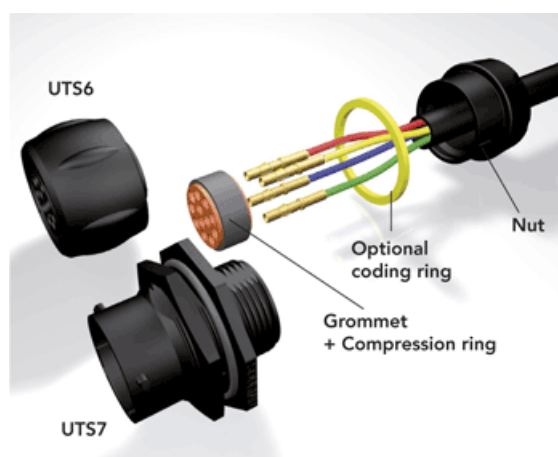
## 2. UTS7 Assembly

1. Strip wires and crimp contacts (see UTS catalog pages 156 & 157)
2. Insert contacts into connector cavities (insert manually or use tool RTM205 crimp contacts )
3. Seat o-ring, place receptacle in the panel cut-out
4. Tighten jam nut



Shell size	Jam nut torque (Nm)	Exterior jam nut dim. (mm)	Wire diameter max (mm) Standard version	Wire diameter max (mm) Discrete wire sealing
8	1.5	19.0	3.2	From 1.7 mm to 3.0 mm
10	3	22.2	3.2	
12	4	27.0	3.2	
14	5	30.1	3.2	
16	5	36.5	3.2	

## 3. UTS6 or UTS7 with GN Backshell Assembly

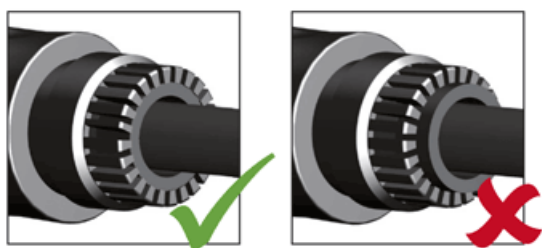


1. Strip wires and crimp contacts (see UTS catalog pages 156 & 157)
2. Insert first contact into the grommet (first contact in cavity A, no tool is required). Then insert the contact in the connector cavity A (insert manually or use tool RTM205)
3. Insert the other contacts
4. Tighten the nut to rear of either UTS6 or UTS7 (recommended torque values to be applied according to the table below).

Shell size	Layout	Nut tightening torque (Nm)	Wire diameter
10	4	1	From 1.7 mm to 3.0 mm
12	8	1.5	
14	7	1.5	
16	12	1.5	

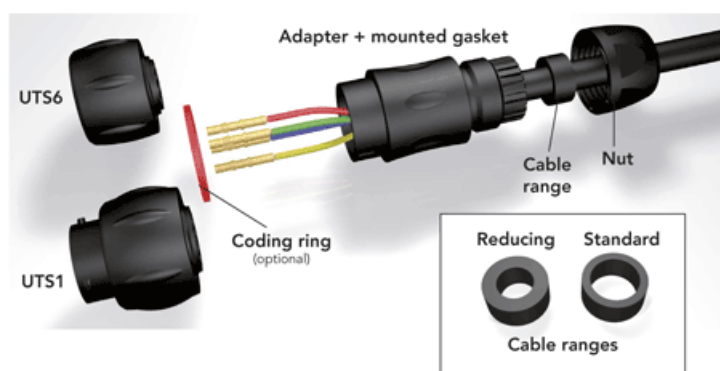
#### 4. UTS1JC or UTS6JC Assembly: Crimp Version

Slide accessories onto the cable



Make sure the seal is positioned as shown.

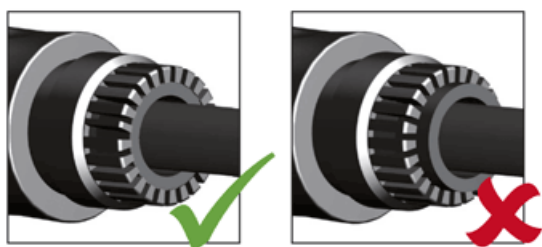
1. Mate the plug with a corresponding receptacle
2. Strip external cable jacket
3. Strip wires and crimp contacts (see UTS catalog pages 156 & 157)
4. Insert contacts into connector cavities (insert manually or use tool RTM205)
5. Tighten adapter with plug, choose right seal (waste the other seal)
6. Tighten the nut to rear of either UTS1 or UTS6 (recommended torque values to be applied according table below)
7. 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)	Cable range diameter Standard seal	Cable range diameter Reducing seal	Wire diameter
	Male	Female					
8	21	29	1.5	1	2.5/8.0	1.5/5.0	
10	25	33	2	2.5	5.0/12.0	3.0/9.0	
12	29	36	3	2.5	7.0/14.0	5.0/12.0	
14	37	45	4	3.5	9.0/18.0	7.0/16.0	

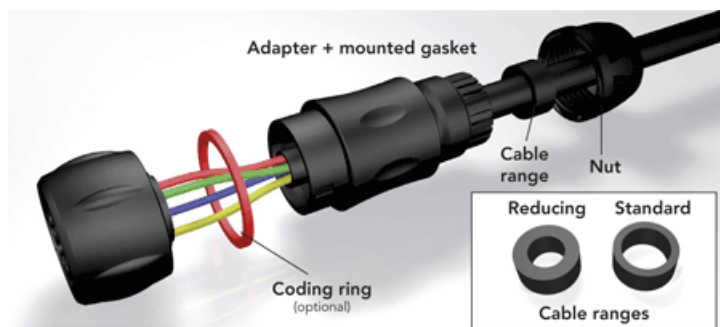
#### 5. UTS6JC Assembly: Solder Version

Slide accessories onto the cable



Make sure the seal is positioned as shown.

1. Mate the plug with a corresponding receptacle
2. Strip external cable jacket
3. Strip wires and crimp contacts (see UTS catalog pages 156 & 157)
4. Insert contacts into connector cavities (insert manually or use tool RTM205)
5. Tighten adapter with plug, choose right seal (waste the other seal)
6. Tighten the nut to rear of either UTS6 (recommended torque values to be applied according table below)
7. Caution: only one of both delivered gasket should be used !



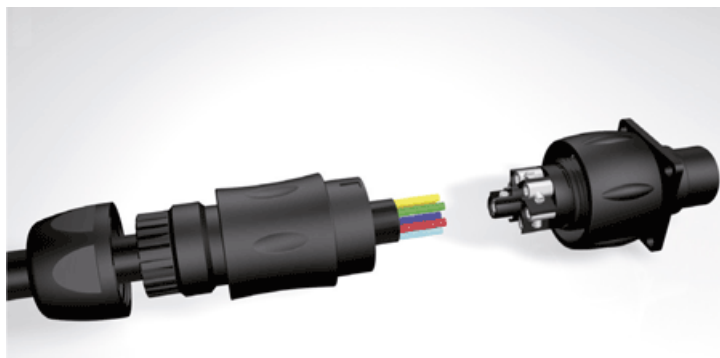
Shell size	Recommended jacket strip length (mm)	Adapter tightening torque (Nm)	Nut tightening torque (Nm)	Cable range diameter Standard seal	Cable range diameter Reducing seal	Wire diameter
	Male					
8	17	1	0.75	2.5/6.5	1.5/5.0	From 1.7 mm to 3.0 mm
10	21	1.5	1	2.5/8.0	1.5/5.0	
12	25	2	2.5	5.0/12.0	3.0/9.0	
14	29	3	2.5	7.0/14.0	5.0/12.0	

## 6. UTS6JC Screw Termination Assembly

1. Mate the plug with a corresponding receptacle equipped with its contacts
2. Choose and place right seal depending on cable diameter (see table below)



3. Slide accessories on the cable
4. Strip external jacket (see table below)



5. Strip the wires (strip length 5.8 mm)



6. Place the conductors in the contact barrel. Make sure all conductor strands are inside the barrel
7. Tight the contact screws, advised torque 20 Ncm



8. Check the mechanical cable retention, by gently pull the cable with 2 fingers
9. Tighten adaptater with the plug (recommended torque: see table)

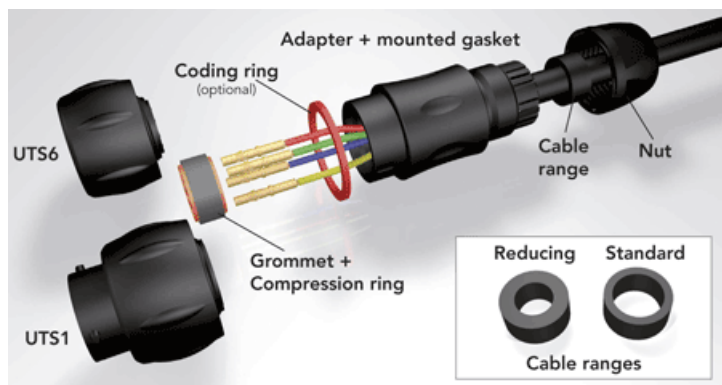


10. Tighten backshell nut with adapter (recommended torque: see table below), cables should not turn into the backshell during this operation.



Shell size	Recommended jacket strip length (mm)		Adapter tightening torque (Nm)	Nut tightening torque (Nm)	Cable range diameter Standard seal	Cable range diameter Reducing seal	Wire diameter
	Male	Female					
12	22.8 max	15.1 max	2	2.5	5.0/12.0	3.0/9.0	From 1.7 mm to 3.0 mm
14	26.7 max	18.9 max	3	2.5	7.0/14.0	5.0/12.0	

## 7. UTS1GJC or UTS6GJC Assembly



1. Slide accessories onto the cable (make sure to keep compression ring on the grommet)
2. Strip external cable jacket
3. Strip wires and crimp contacts (see UTS catalog pages 156 & 157)

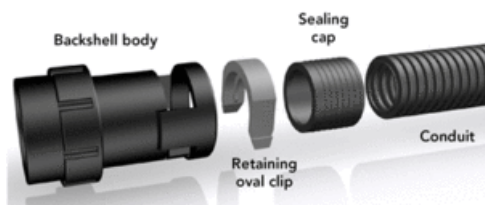


4. Insert first contact into the grommet (first contact in cavity A , no tool is required).  
Then insert the contact in the connector cavity A (insert manually or use tool RTM205)
5. Place the grommet and compression ring on the insulator
6. Insert the other contacts
7. Tighten adapter with plug, choose right seal (waste the other seal)
8. Tighten the nut to rear of either UTS1 or UTS6 (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)	Cable range diameter Standard seal	Cable range diameter Reducing seal	Wire diameter
	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	425	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	

## 8. Flexible Conduit Adapters for UTS

### 1. Overview of components



### 2. Contacts insertion



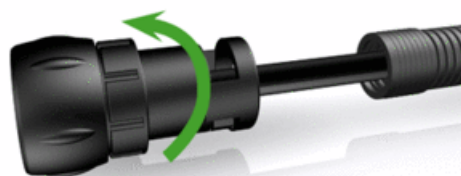
Crimp the contacts and locate them in their cavities. Check the retention by slightly pulling the cable.

### 3. Preparation of backshell mounting



To achieve optimum sealing, push the sealing cap completely over the conduit. Conduit adapter not provided by SOURIAU.

### 4. Backshell mounting



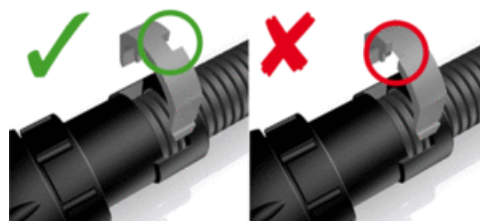
Screw the fitting onto the plug thread. Use a product such as Loctite to ensure adequate sealing between the plug and the fitting.

### 5. Flexible conduit insertion



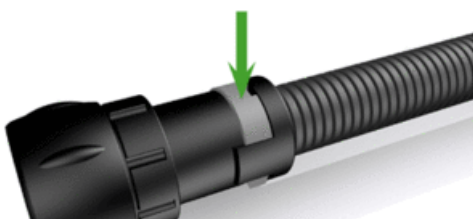
Push conduit with sealing cap into the fitting until sealing cap is no longer visible in the locking element window.

### 6. Orientation of oval retaining clip



Orientate the oval retaining clip as illustrated and locate it in the slot as shown.

### 7. Oval retaining clip mounting



Push the retaining clip into backshell body.

### 8. Oval retaining clip extraction



To release the locking mechanism, use a screwdriver.

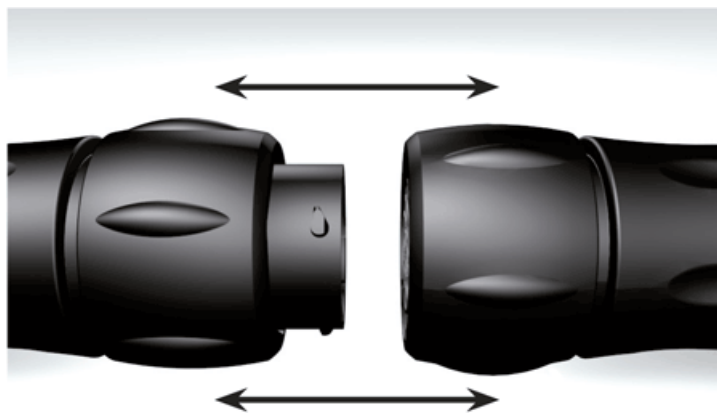
## 9. UTS Coupling Procedure

The pictures below provide 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

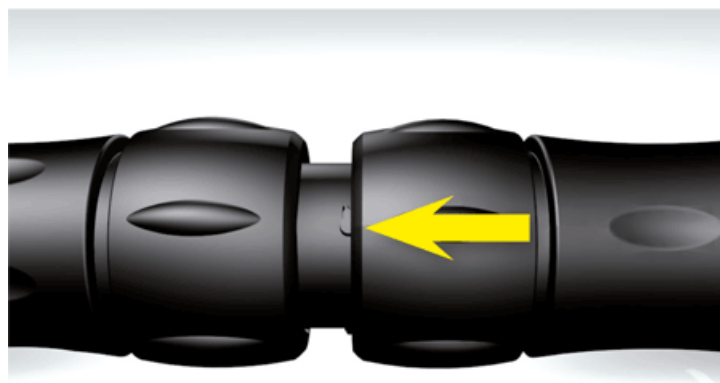


3. Non correct positioning

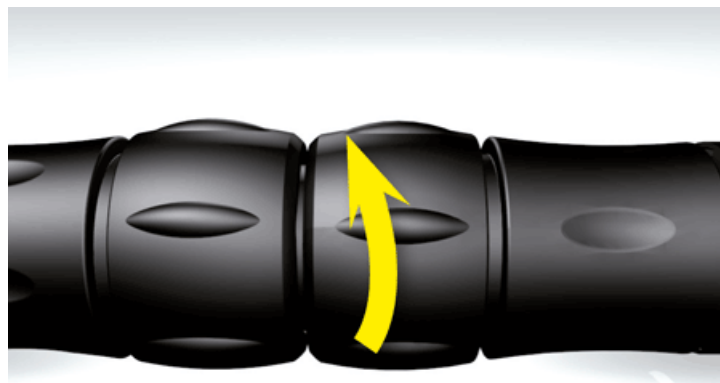


4. Offer the plug to the receptacle

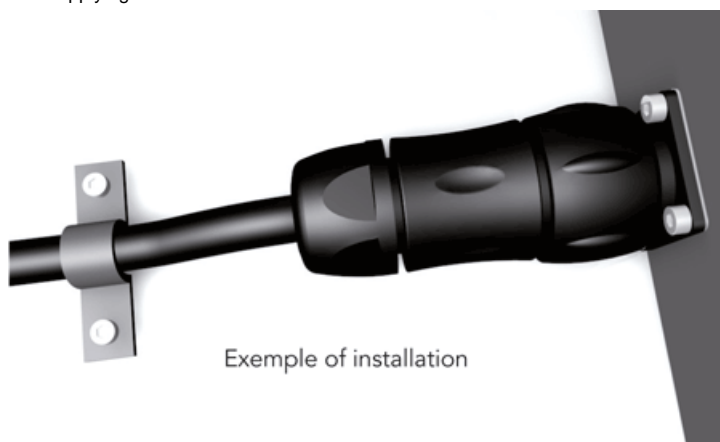




5. Turn coupling ring until you hear a 'click'



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



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