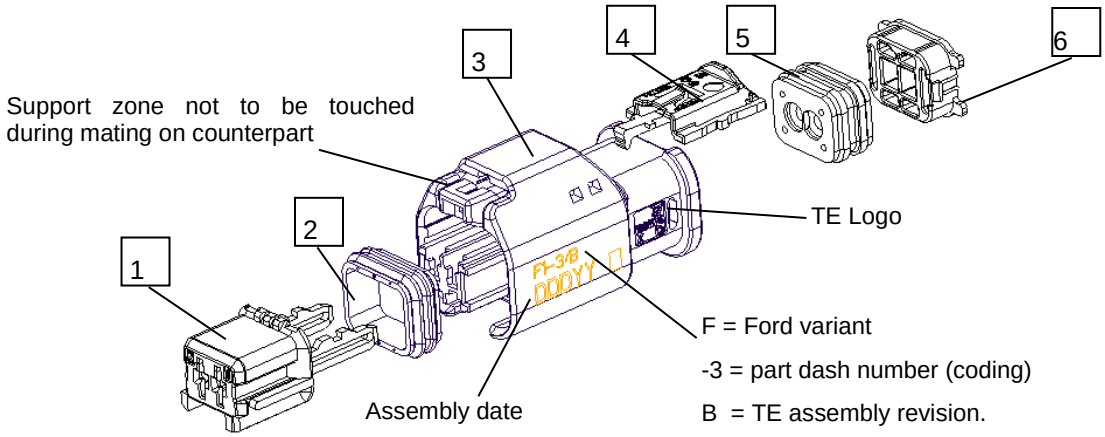
2 WAY & 3 WAY, HP & HPSL, RECEPTACLE HOUSING, ASSEMBLY

DESCRIPTION OF THE CONNECTOR

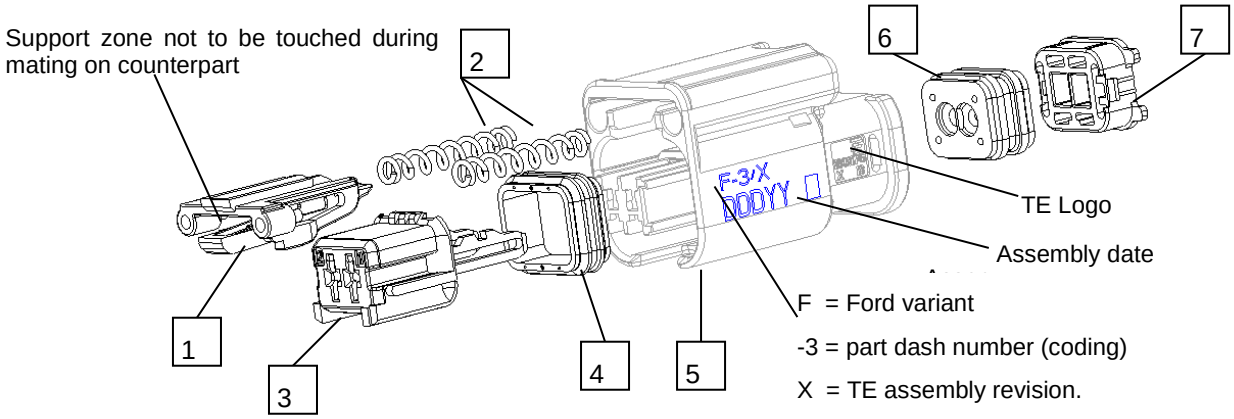
1.1. -2 WAYS HP "POSITIVE MATE" RECEPTACLE HOUSING : PN 1823174-X



2 WAYS RECPTACLE HOUSING HP POSITIVE MATE « Go-NoGo »

NUMBER	NAME	MATERIAL
1	Rec.Hsg Secondary Locking Device (with keying)	Glass fiber-reinforced PBT
2	Interface Seal	Silicone
3	HP Receptacle housing	Glass fiber-reinforced PBT
4	Connector Position Assurance (CPA)	Glass fiber-reinforced PBT
5	Grommet Seal	Silicone
6	Rear Grid	Glass fiber-reinforced PBT

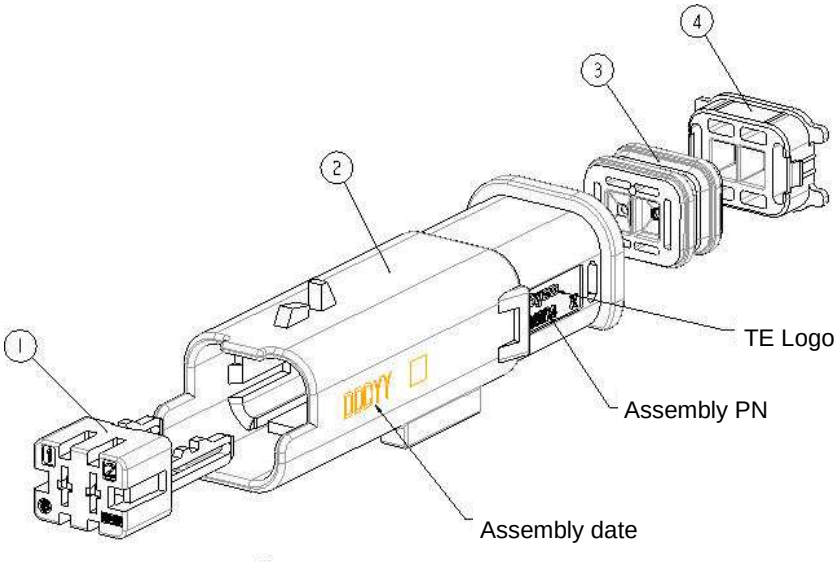
1.2. -2 WAYS SPRING-LOCK RECEPTACLE HOUSING : PN 2141502-X



2 WAYS HPSL RECEPTACLE HOUSING « SPRING-LOCK »

Number	Name	Material
1	Slide « Spring-Lock »	Glass fiber-reinforced PA66
2	Spring (x2)	Stainless steel
3	Rec.Hsg Secondary Locking Device (with keying)	Glass fiber-reinforced PBT
4	Interface Seal	Silicone
5	HPSL Receptacle Housing « Spring-Lock »	Glass fiber-reinforced PBT
6	Grommet Seal	Silicone
7	Rear Grid	Glass fiber-reinforced PBT

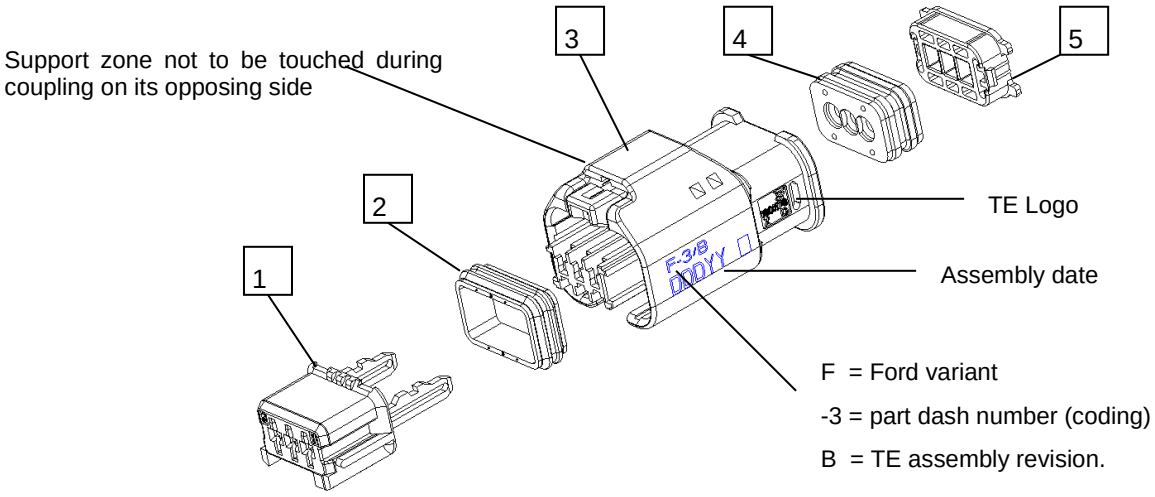
1.3. -2 WAYS TAB HOUSING : PN 2236602-X



2 WAYS TAB HOUSING

NUMBER	NAME	MATERIAL
1	Tab hsg Secondary Locking Device	Glass fiber-reinforced PBT
2	Tab Housing (with keying)	Glass fiber-reinforced PBT
3	Grommet Seal	Silicone
4	Rear Grid	Glass fiber-reinforced PBT

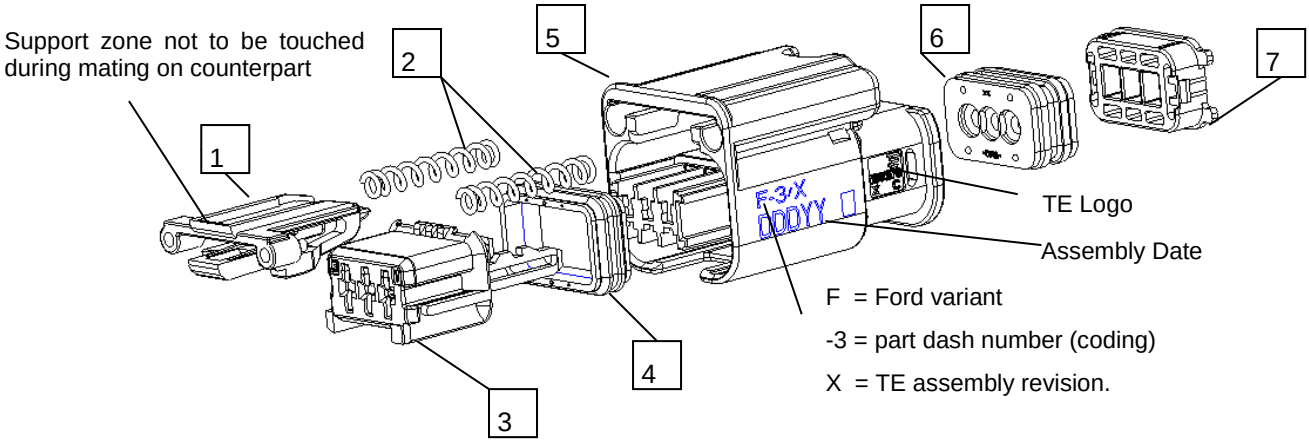
1.4. -3 WAYS HP “POSITIVE MATE” RECEPTACLE HOUSING : PN 1823177-X



3 WAYS RECPTACLE HOUSING HP POSITIVE MATE « Go-NoGo »

NUMBER	NAME	MATERIAL
1	Rec.Hsg Secondary Locking Device (with keying)	Glass fiber-reinforced PBT
2	Interface Seal	Silicone
3	HP Receptacle housing	Glass fiber-reinforced PBT
4	Grommet Seal	Silicone
5	Rear Grid	Glass fiber-reinforced PBT

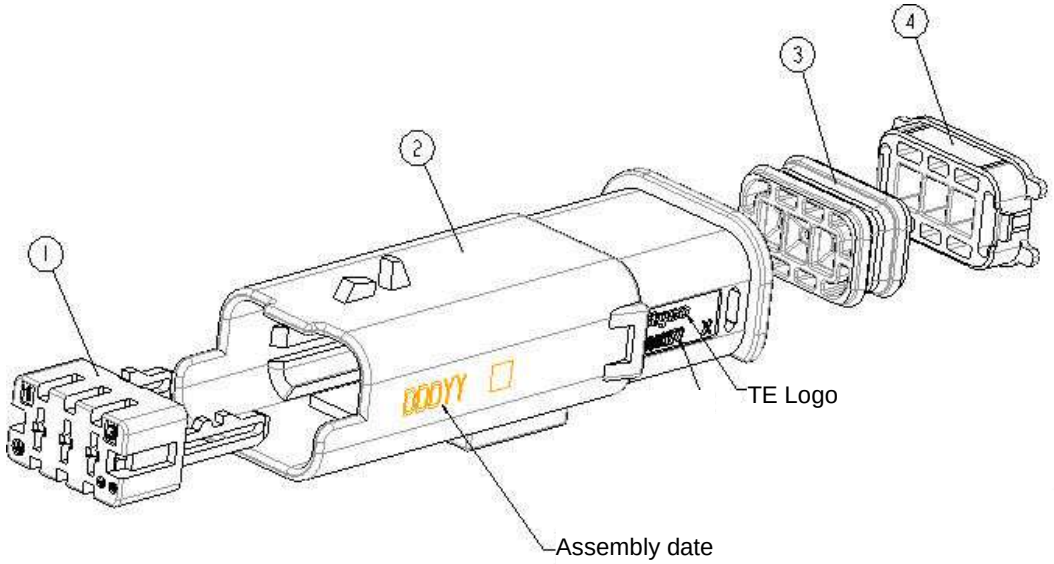
1.5. 3 WAYS SPRING-LOCK RECEPTACLE HOUSING : PN 2141501-X



3 WAYS HPSL RECEPTACLE HOUSING « SPRING-LOCK »

NUMBER	NAME	MATERIAL
1	Slide « Spring-Lock »	Glass fiber-reinforced PA66
2	Spring (x2)	Stainless steel
3	Rec.Hsg Secondary Locking Device (with keying)	Glass fiber-reinforced PBT
4	Interface Seal	Silicone
5	HPSL Receptacle Housing « Spring-Lock »	Glass fiber-reinforced PBT
6	Grommet Seal	Silicone
7	Rear Grid	Glass fiber-reinforced PBT

1.6. - 3 WAYS TAB HOUSING : PN 2208787-X



3 WAYS TAB HOUSING

NUMBER	NAME	MATERIAL
1	Tab hsg Secondary Locking Device	Glass fiber-reinforced PBT
2	Tab Housing (with keying)	Glass fiber-reinforced PBT
3	Grommet Seal	Silicone
4	Rear Grid	Glass fiber-reinforced PBT

2.- NOMENCLATURE – PART NUMBERS

2.1. - 2 WAY CONNECTORS

HOUSINGS			
NAME	**COLOUR/ CODING**	**TE PN**	**Ford REFERENCE**
2 WAYS HP "POSITIVE MATE" RECEPTACLE HOUSING **Without CPA**	BLACK/CODING 1	1823174-1	AU5T-14A464-BBA
	BLUE/CODING 2	1823174-2	AU5T-14A464-CBA
	GRAY/CODING 3	1823174-3	AU5T-14A464-DBA
	YELLOW/CODING 4	1823174-4	AU5T-14A464-EBA
	GREEN/CODING 5	1823174-5	AU5T-14A464-FBA
	BROWN/CODING 6	1823174-6	AU5T-14A464-GBA
	WHITE/CODING 7	1823174-7	AU5T-14A464-HBA
	RED/CODING 8	1823174-8	AU5T-14A464-JBA
	ORANGE/ WITHOUT CODING	1823174-9	AU5T-14A464-KBA
2 WAYS HP "POSITIVE MATE" RECEPTACLE HOUSING **With CPA**	BLACK/CODING 1	1-1823174-1	HU5T-14A464-TA
	BLUE/CODING 2	1-1823174-2	
	GRAY/CODING 3	1-1823174-3	
	YELLOW/CODING 4	1-1823174-4	
	GREEN/CODING 5	1-1823174-5	
	BROWN/CODING 6	1-1823174-6	HU5T-14A464-ADA
	WHITE/CODING 7	1-1823174-7	
	RED/CODING 8	1-1823174-8	
	ORANGE/ WITHOUT CODING	1-1823174-9	
2 WAYS SPRING-LOCK RECEPTACLE HOUSING	BLACK/CODING 1	2141502-1	AU5T-14A464-LBB
	BLUE/CODING 2	2141502-2	AU5T-14A464-MBB
	GRAY/CODING 3	2141502-3	AU5T-14A464-NBB
	YELLOW/CODING 4	2141502-4	AU5T-14A464-PBB
	GREEN/CODING 5	2141502-5	AU5T-14A464-RBB
	BROWN/CODING 6	2141502-6	AU5T-14A464-SBB
	WHITE/CODING 7	2141502-7	AU5T-14A464-TBB
	RED/CODING 8	2141502-8	AU5T-14A464-UBB
	ORANGE/WITHOUT CODING	2141502-9	AU5T-14A464-VBB
2 WAYS TAB HOUSING	BLACK/CODING 1	2236602-1	
	BLUE/CODING 2	2236602-2	
	GRAY/CODING 3	2236602-3	
	YELLOW/CODING 4	2236602-4	FU5T-14A624-HBA
	GREEN/CODING 5	2236602-5	DU5T-14A624-TA
	BROWN/CODING 6	2236602-6	
	WHITE/CODING 7	2236602-7	

ASSOCIATED COMPONENTS			
NAME	**COLOUR/CODING**	**TE PN**	**REFERENCE**
1.5 SENSOR II REC.	Sec. 0,35 - 0,5mm² GOLD PLATED Sec. 0,75 - 1mm² GOLD PLATED Sec. 1,4 - 2mm² GOLD PLATED	1564724-1 1670326-1 1670328-1	
OTHER REC. 1.5 x 0.8mm	-	-	
TAB 1.5 x0.8mm	SEE PTA 9647548699		
2 WAYS COVER	FIXED IN LINE (for Corrugated Tube Ø6mm) FIXED IN LINE (for Corrugated Tube Ø4,5mm) LEFT/RIGHT EXIT (for Corrugated Tube Ø6mm) LEFT/RIGHT EXIT (for Corrugated Tube Ø4,5mm) UP/DOWN EXIT (for Corrugated Tube Ø6mm) UP/DOWN EXIT (for Corrugated Tube Ø4,5mm) ROTAIVE COVER (for Corrugated Tube Ø6mm) ROTAIVE COVER (for Corrugated Tube Ø4,5mm)	1801155-5 1-1801155-5 1801466-1 1-1801466-1 1801466-2 1-1801466-2 1801356-1 1-1801356-1	 **Not use for 2141502** **Not use for 2141502**
SEALING PLUG	sealing plug / Green		
WIRES	Useable at 150℃ environment (see Ford drawing)		

2.2. - 3 WAYS CONNECTOR

HOUSINGS			
NAME	**COLOUR/CODING**	**TE PN**	**Ford REFERENCE**
3 WAYS HP "POSITIVE MATE" RECEPTACLE HOUSING **Without CPA**	BLACK/CODING 1	1823177-1	AU5T-14A464-XBA
	BLUE/CODING 2	1823177-2	AU5T-14A464-YBA
	GRAY/CODING 3	1823177-3	AU5T-14A464-ZBA
	YELLOW/CODING 4	1823177-4	AU5T-14A464-ACA
	GREEN/CODING 5	1823177-5	AU5T-14A464-BCA
	BROWN/CODING 6	1823177-6	AU5T-14A464-CCA
	WHITE/CODING 7	1823177-7	AU5T-14A464-DCA
	RED/CODING 8	1823177-8	AU5T-14A464-ECA
	ORANGE/CODING 9	1823177-9	AU5T-14A464-FCA
3 WAYS HP "POSITIVE MATE" RECEPTACLE HOUSING **With CPA**	BLACK/CODING 1	1-1823177-1	JU5T-14A464-BXA
	BLUE/CODING 2	1-1823177-2	
	GRAY/CODING 3	1-1823177-3	HU5T-14A464-UA
	YELLOW/CODING 4	1-1823177-4	
	GREEN/CODING 5	1-1823177-5	HU5T-14A464-AAA
	BROWN/CODING 6	1-1823177-6	
	WHITE/CODING 7	1-1823177-7	
	RED/CODING 8	1-1823177-8	
	ORANGE/CODING 9	1-1823177-9	
3 WAYS SPRING-LOCK RECEPTACLE HOUSING	BLACK/CODING 1	2141501-1	AU5T-14A464-GCB
	BLUE/CODING 2	2141501-2	AU5T-14A464-HCB
	GRAY/CODING 3	2141501-3	AU5T-14A464-JCB
	YELLOW/CODING 4	2141501-4	AU5T-14A464-KCB
	GREEN/CODING 5	2141501-5	AU5T-14A464-LCB
	BROWN/CODING 6	2141501-6	AU5T-14A464-MCB
	WHITE/CODING 7	2141501-7	AU5T-14A464-NCB
	RED/CODING 8	2141501-8	AU5T-14A464-PCB
	ORANGE/CODING 9	2141501-9	AU5T-14A464-RCB
3 WAYS TAB HOUSING	BLACK/CODING 1	2208787-1	
	BLUE/CODING 2	2208787-2	
	GRAY/CODING 3	2208787-3	
	YELLOW/CODING 4	2208787-4	
	GREEN/CODING 5	2208787-5	
	BROWN/CODING 6	2208787-6	

ASSOCIATED COMPONENTS			
NAME	**COLOUR/CODING**	**TE PN**	**REFERENCE**
1.5 SENSOR II REC.	Sec. 0,35 - 0,5mm² GOLD PLATED Sec. 0,75 - 1mm² GOLD PLATED Sec. 1,4 à-2mm² GOLD PLATED	1564724-1 1670326-1 1670328-1	
OTHER REC. 1.5 x 0.8mm	-	-	
TAB 1.5 x0.8mm	SEE PTA 9647548699		
3 WAYS COVER	FIXED IN LINE (for Corrugated Tube Ø6mm) FIXED IN LINE (for Corrugated Tube Ø4,5mm) LEFT/RIGHT EXIT (for Corrugated Tube Ø6mm) LEFT/RIGHT EXIT (for Corrugated Tube Ø4,5mm) UP/DOWN EXIT (for Corrugated Tube Ø6mm) UP/DOWN EXIT (for Corrugated Tube Ø4,5mm) ROTAIVE COVER (for Corrugated Tube Ø6mm) * ROTAIVE COVER (for Corrugated Tube Ø4,5mm) * ADAPTER * (*): ***FOR ROTATIVE COVER TAKE: ADAPTER + COVER***	1801168-5 1-1801168-5 1801467-1 1-1801467-1 1801467-2 1-1801467-2 1801468-1 1-1801468-1 1801359-1	
SEALING PLUG	sealing plug / Green		
WIRES	Useable at 150℃ environment (see Ford drawing)		

3.1 - RECOMMENDATIONS FOR STORAGE, HANDLING AND REPAKAGING

-Store in a well ventilated environment with the following relative temperature and humidity range: 5°to 50℃ ; 30% to 75% HR.

-Store above the ground, on a pallet or platform, a clean dry surface until the packages are retrieved for production.

-Store packages away from water and direct UV rays.

-Store packages away from heat and areas with high temperature variations.

-Keep away from high temperature or hygrometry variations to avoid condensation inside the packages.

-Store packages away from dust to keep the components clean.

-Keep packages as they are delivered, without undoing the adhesive ribbon until use.

-Wrap up packages after partial sampling.

-Do not walk or place heavy objects on packages.

-Packages received should be treated on the basis of first-in, first out (FIFO).

-Where packages are stored in racks, place the heavier cartons below and the lighter ones above not to damage the parts.

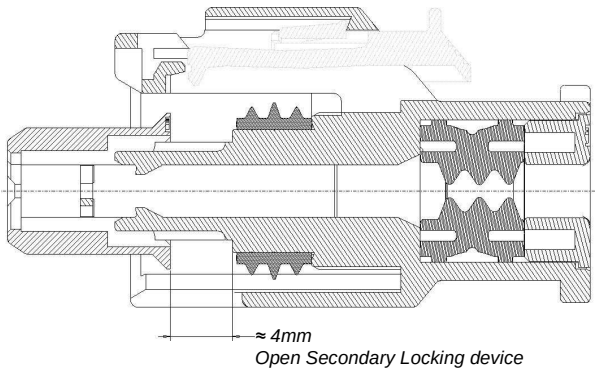
-A 24 hour thermal balancing period is needed before wiring connectors.

4. PRODUCT

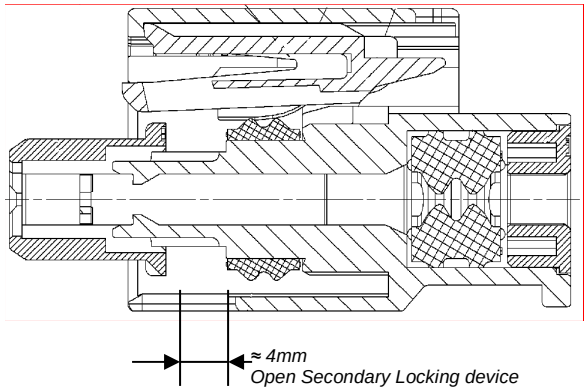
4.1. TERMINAL + HOUSING

4.1.1. 2 AND 3 WAYS RECEPTACLE HOUSINGS

NB: Before inserting a contact, ensure on the one hand that it is not damaged and completely complies with the requirements of its application specification and on the other that the Secondary Locking Device is open.

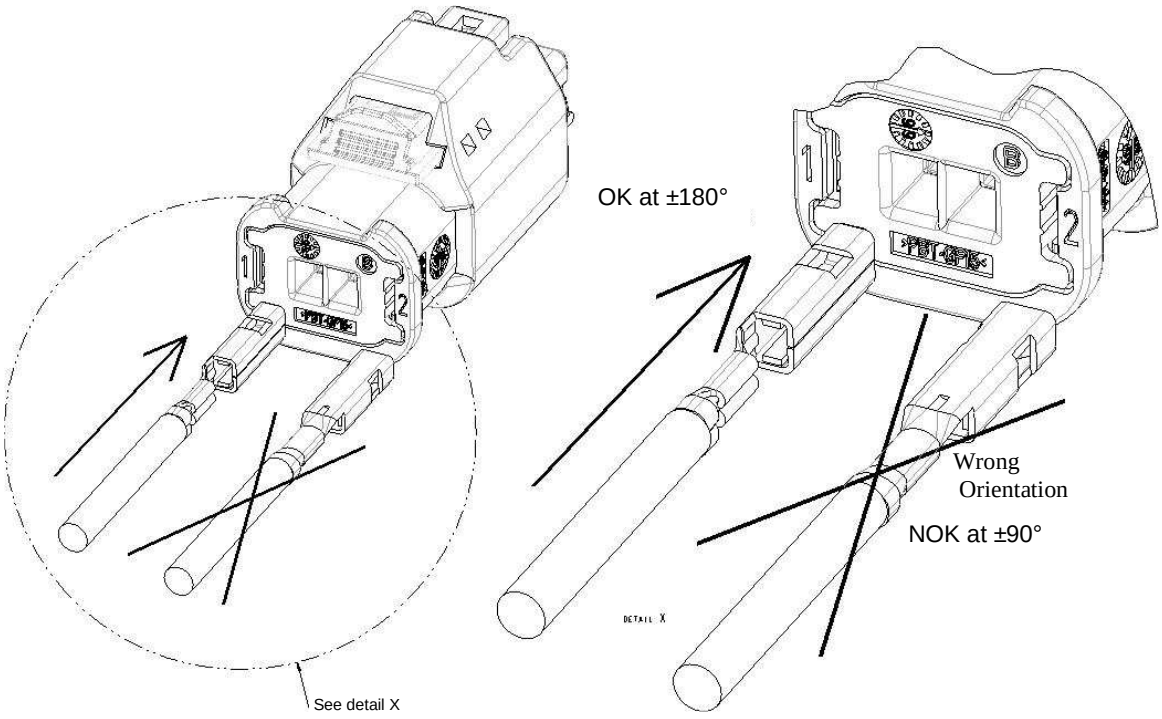


HP Rec. Hsg with open Secondary Locking Device



HPSL Rec. Hsg with open Secondary Locking Device

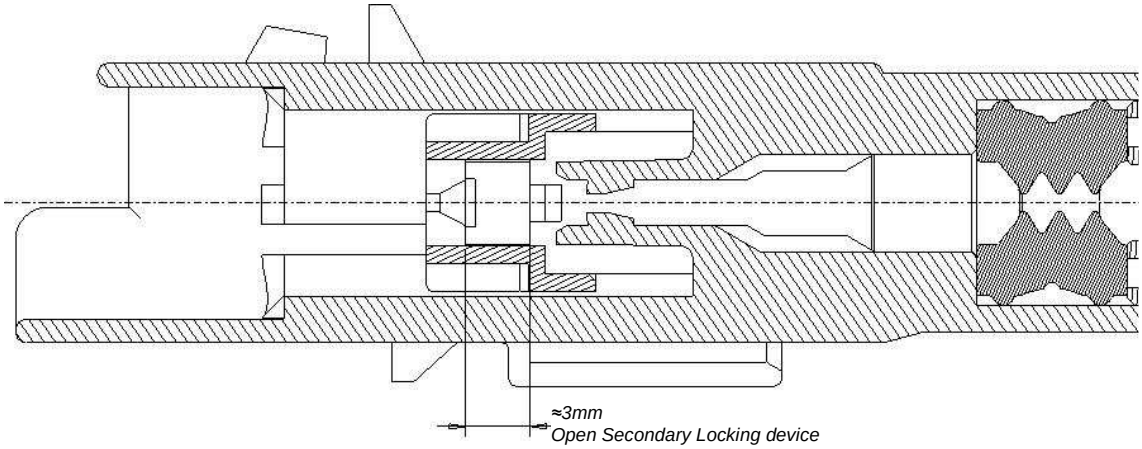
The terminal is polarized; it should therefore be correctly oriented before inserting into the case.
Hold the wire with approximately 2cm back of the contact (not to force the advance of the contact during the insertion).
If the contact is not well oriented, it will be impossible to insert with force of less than 50N.



Orientating and inserting the terminal inside the housing

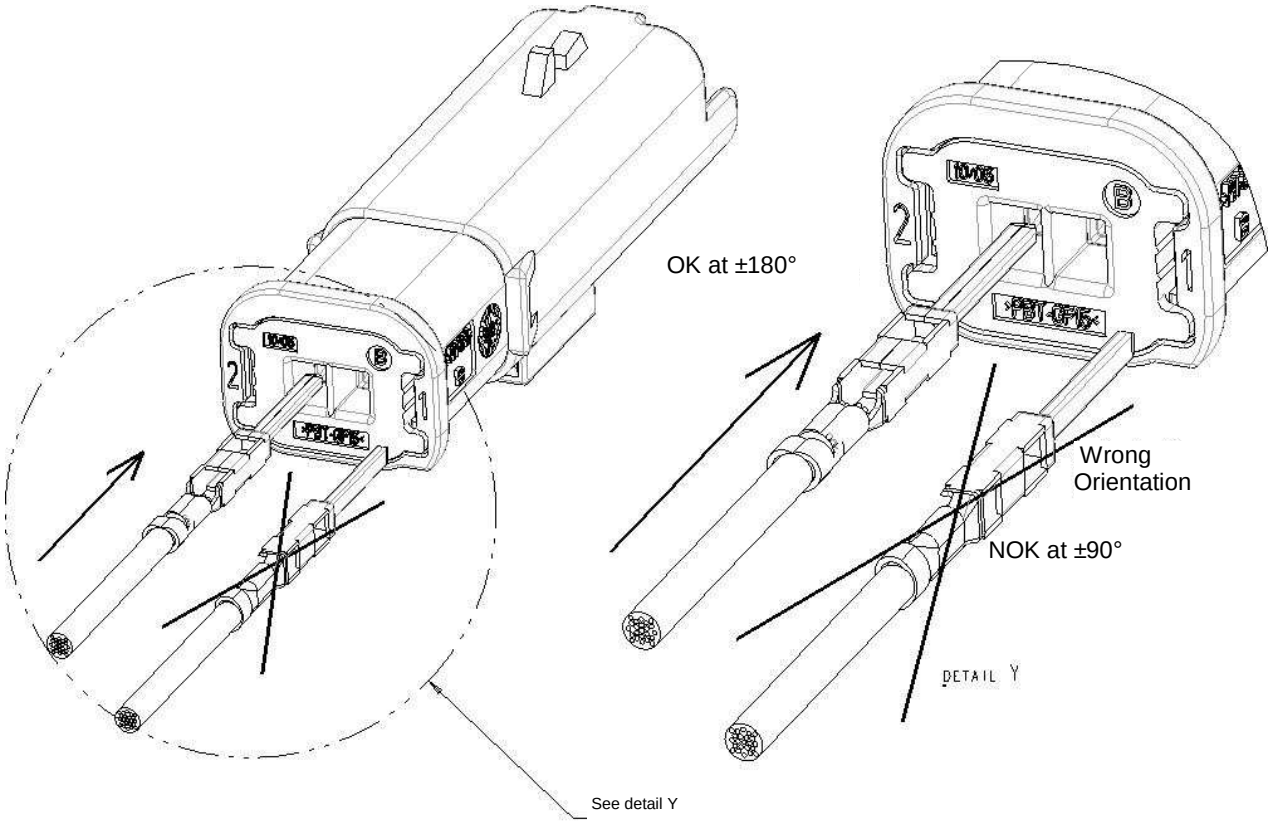
4.1.2. 2 AND 3 WAYS TAB HOUSINGS

NB: Before inserting a tab, ensure on the one hand that it is not damaged and completely complies with the requirements of its application specification and on the other that the Secondary Locking Device is open.



HP Tab Housing with open Secondary Locking Device

The tab is polarized; it should therefore be correctly oriented before inserting into the case.
Hold the wire with approximately 2cm back of the contact (not to force the advance of the contact during the insertion).
If the tab is not well oriented, it will be impossible to insert with force of less than 50N.



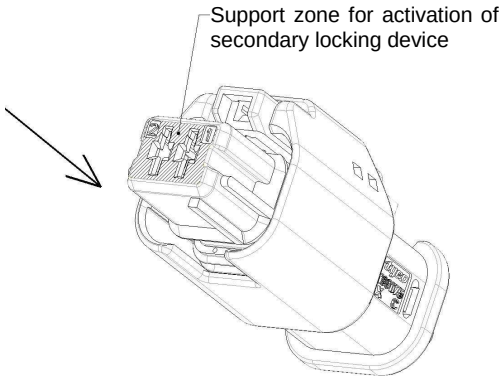
Orientating and inserting the tab into the housing

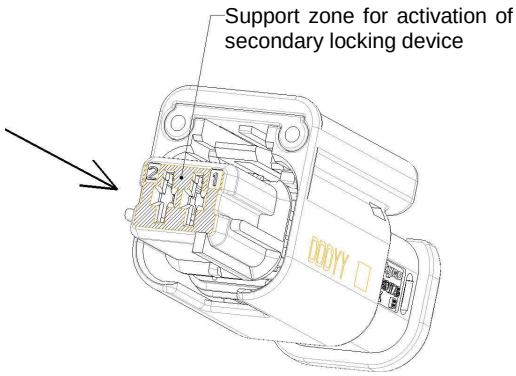
4.3. SECONDARY LOCKING DEVICE

4.3.1. -2 AND 3 WAYS RECEPTACLE HOUSING

The secondary locking device for the receptacle housing has a stroke of ≈ 4mm. If one or more contacts are wrongly inserted, closing the secondary locking device will be impossible with stress of less than 40N. Ensure that all contacts are locked correctly (put the contact(s) back in place). To activate the secondary locking device, press the front side of the secondary locking device (hachured area below)

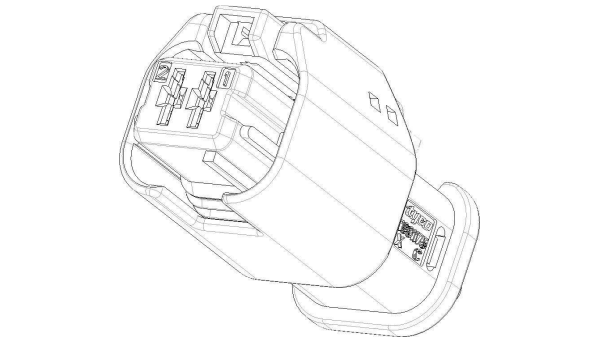
Reminder: The stress used to close the secondary locking device should range between 20 and 40N with all contacts well inserted (secondary locking device activation may be automatic during the final check).

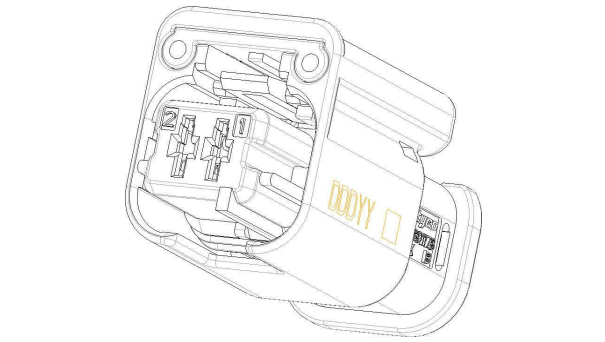




HP receptacle housing **HPSL receptacle housing**

Receptacle housing with open secondary locking device (stroke ≈ 4mm)





HP receptacle housing **HPSL receptacle housing**

Receptacle housing with activated secondary locking device (closed)

4.3. ACCEPTABLE WIRES (Receptacle and Tab) (mini/MAXI)

The section of cables used should range between 0.5 and 1.5mm^2
(Ø wire minimum = 1,4 mm ; Ø wire maximum = 2,4 mm)
Nota: The use of a cable of section 0,5mm ² requires an Insulator Increased to obtain a mini diameter of the wire equal to or higher than 1,4 mm. Wires should be useable for environmental temperature of 150℃. Useable wire specification, s ee valid Ford specification and contact specification.

4.4. COVER

The cover allows the wiring outlet to be oriented. See diagrams below for the indication of likely orientations of wiring outlets:

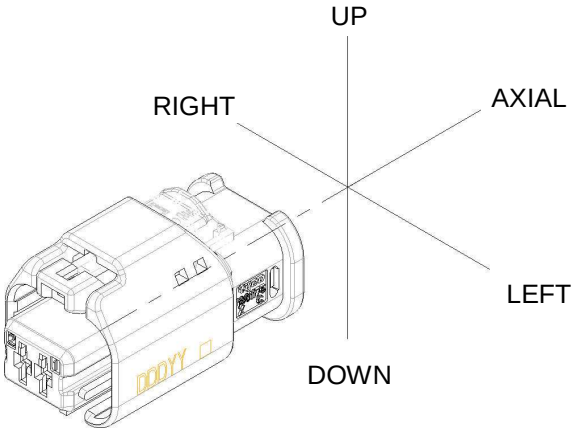


Diagram of wiring outlet of HP and HPSL 2 and 3 ways rec. hsg

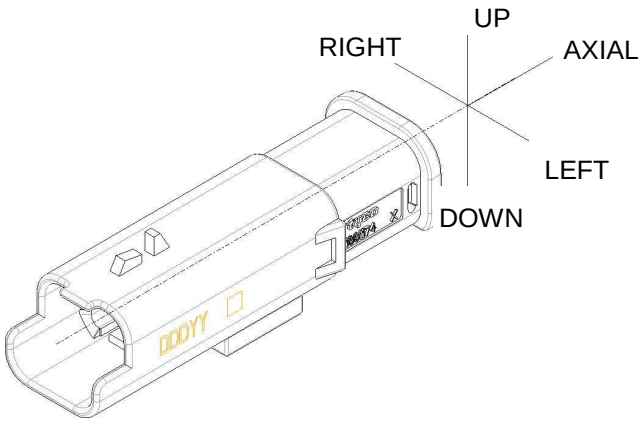


Diagram of wiring outlet of HP 2 and 3 ways tab housing

4 types of covers are available:

- Exit in line
- Right/Left Exit
- Up/Down Exit
- Free Exit (rotation around the connector axis)

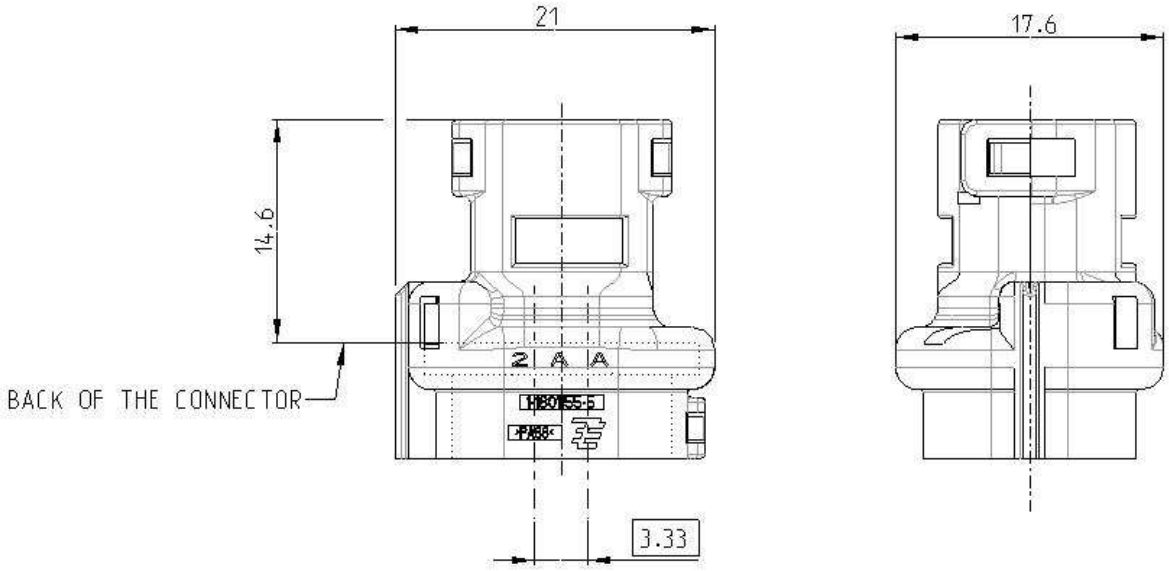
All covers are compatible with receptacle housing and tab housing
All covers are reversible
Each cover, can equally take a connector wire or a corrugated tube (Ø4,5mm or Ø6mm according to the reference of the Cover [See reference table]).
The stress used in placing the cover must be less than 70N

Nota: If use a cover without corrugated tube, it is mandatory to take a cover for corrugated tube Ø6mm.

4.4.1. COVER, AXIAL EXIT

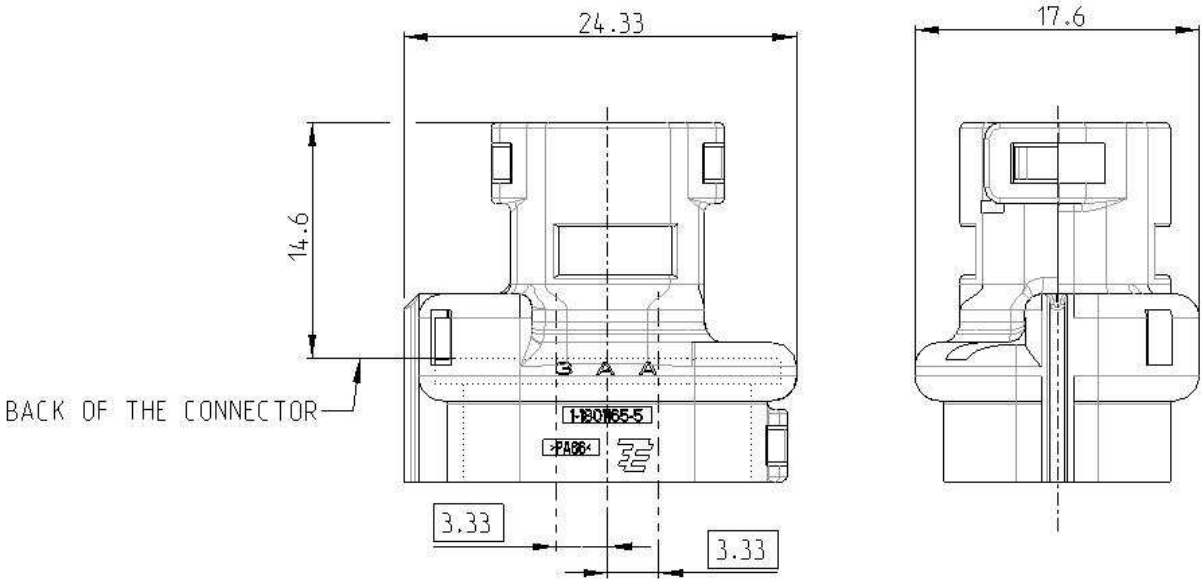
Cover PN (Axial exit) :

- 1801155-5 : Cover for 2 ways Connector (Corrugated Tube admitted Ø6mm).
- 1-1801155-5 : Cover for 2 ways Connector (Corrugated Tube Ø4,5 has to be used)



Outline of 2 ways Axial exit Cover

- 1801168-5 : Cover for 3 ways Connector (Corrugated Tube admitted Ø6mm).
- 1-1801168-5 : Cover for 3 ways Connector (Corrugated Tube Ø4,5 has to be used)

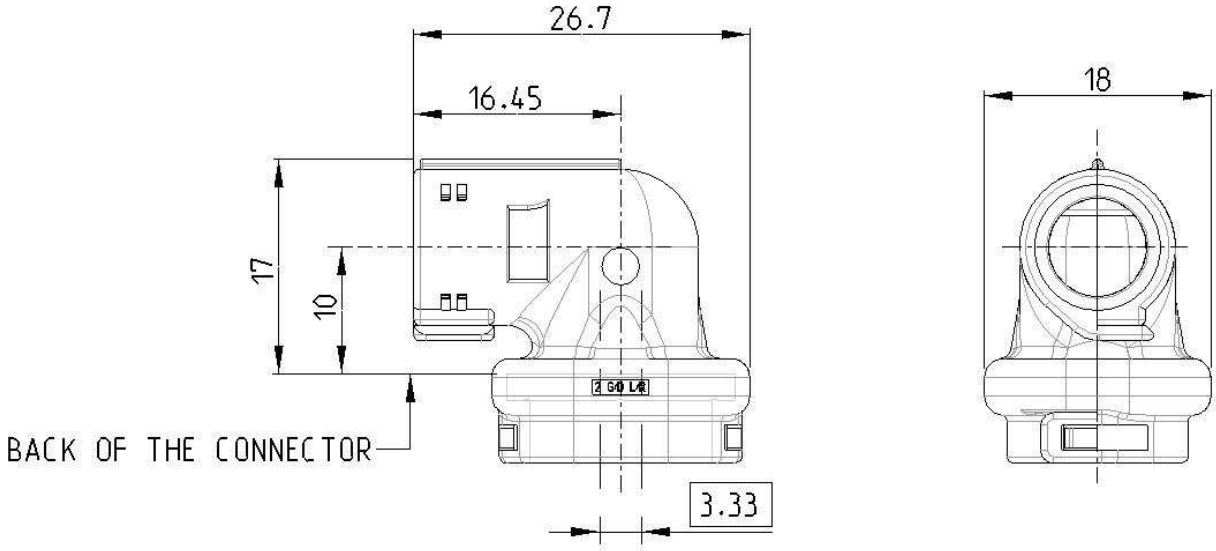


Outline of 3 ways Axial exit Cover

4.4.2. COVER, RIGHT/LEFT EXIT

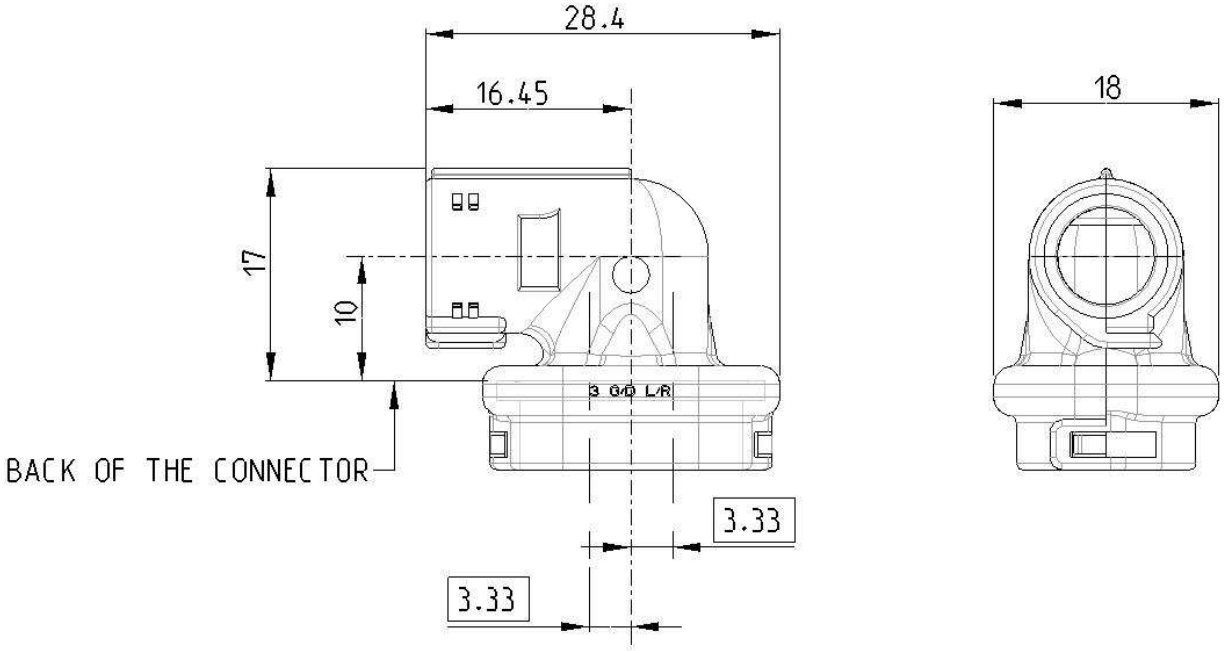
Cover PN (Right/Left exit) :

- 1801466-1 : Cover for 2 ways Connector (Corrugated Tube admitted Ø6mm).
- 1-1801466-1 : Cover for 2 ways Connector (Corrugated Tube Ø4,5 has to be used)



Outline of 2 ways Right/Left exit Cover

- 1801467-1 : Cover for 3 ways Connector (Corrugated Tube admitted Ø6mm).
- 1-1801467-1 : Cover for 3 ways Connector (Corrugated Tube Ø4,5 has to be used)

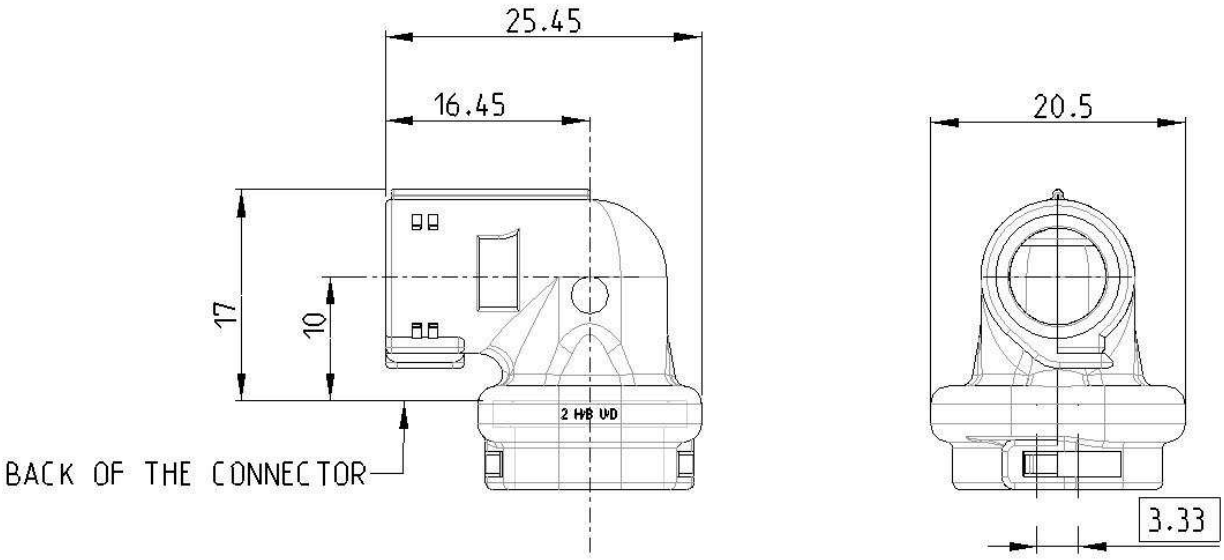


Outline of 3 ways Right/Left exit Cover

4.4.3. COVER, UP/DOWN EXIT

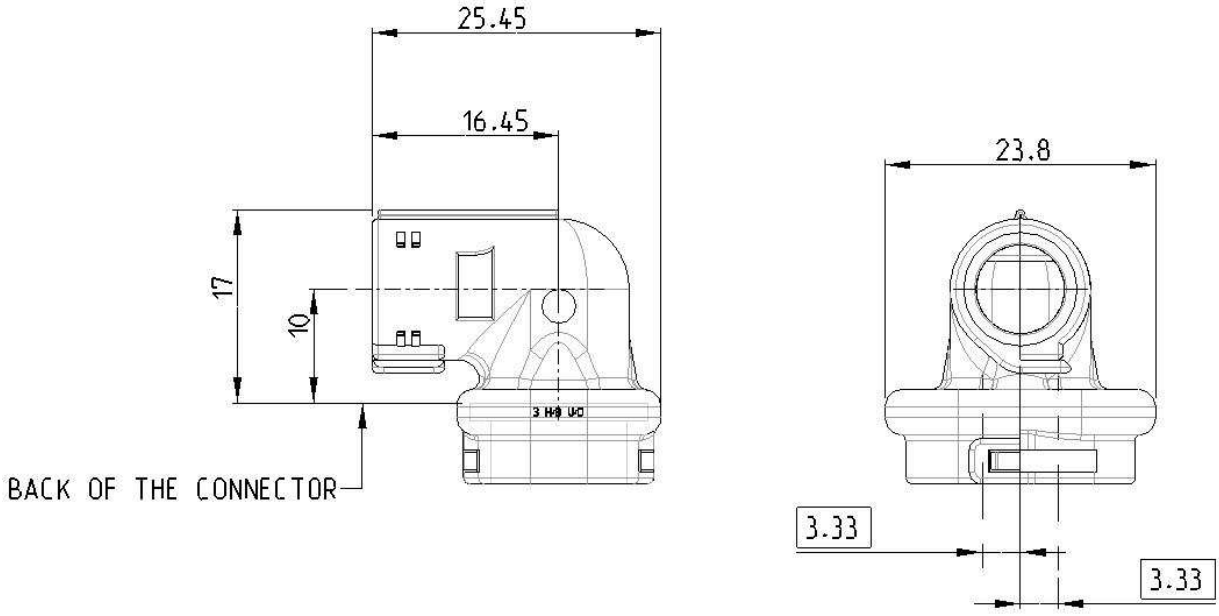
Cover PN (Up/Down exit) :

- 1801466-2 : Cover for 2 ways Connector (Corrugated Tube admitted Ø6mm).
- 1-1801466-2 : Cover for 2 ways Connector (Corrugated Tube Ø4,5 has to be used)



Outline of 2 ways Up/Down exit Cover

- 1801467-2 : Cover for 3 ways Connector (Corrugated Tube admitted Ø6mm).
- 1-1801467-2 : Cover for 3 ways Connector (Corrugated Tube Ø4,5 has to be used)

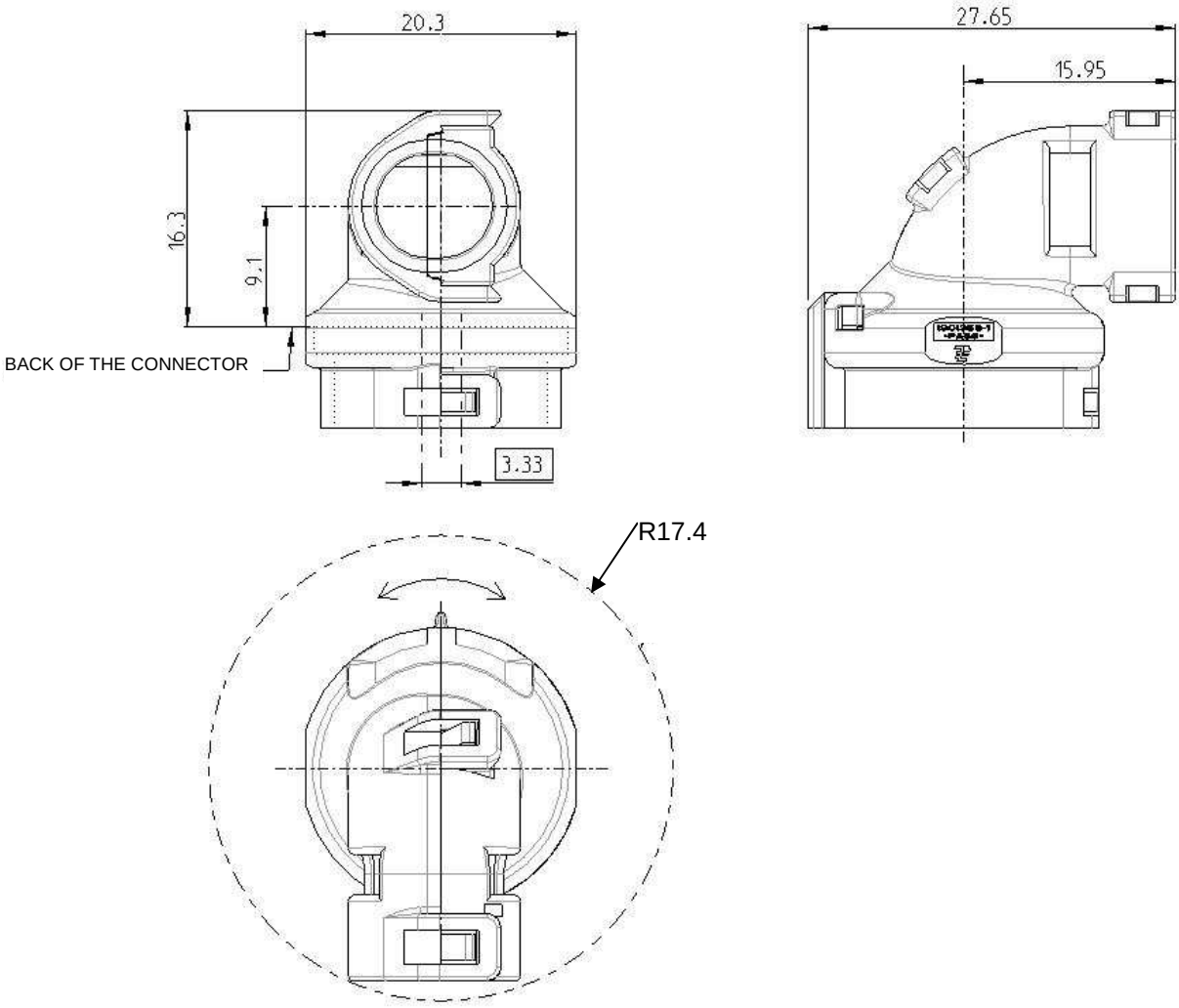


Outline of 3 ways Up/Down exit Cover

4.4.4. ROTATIVE COVER

Cover PN (Rotating exit) : **Not use for 2141502**

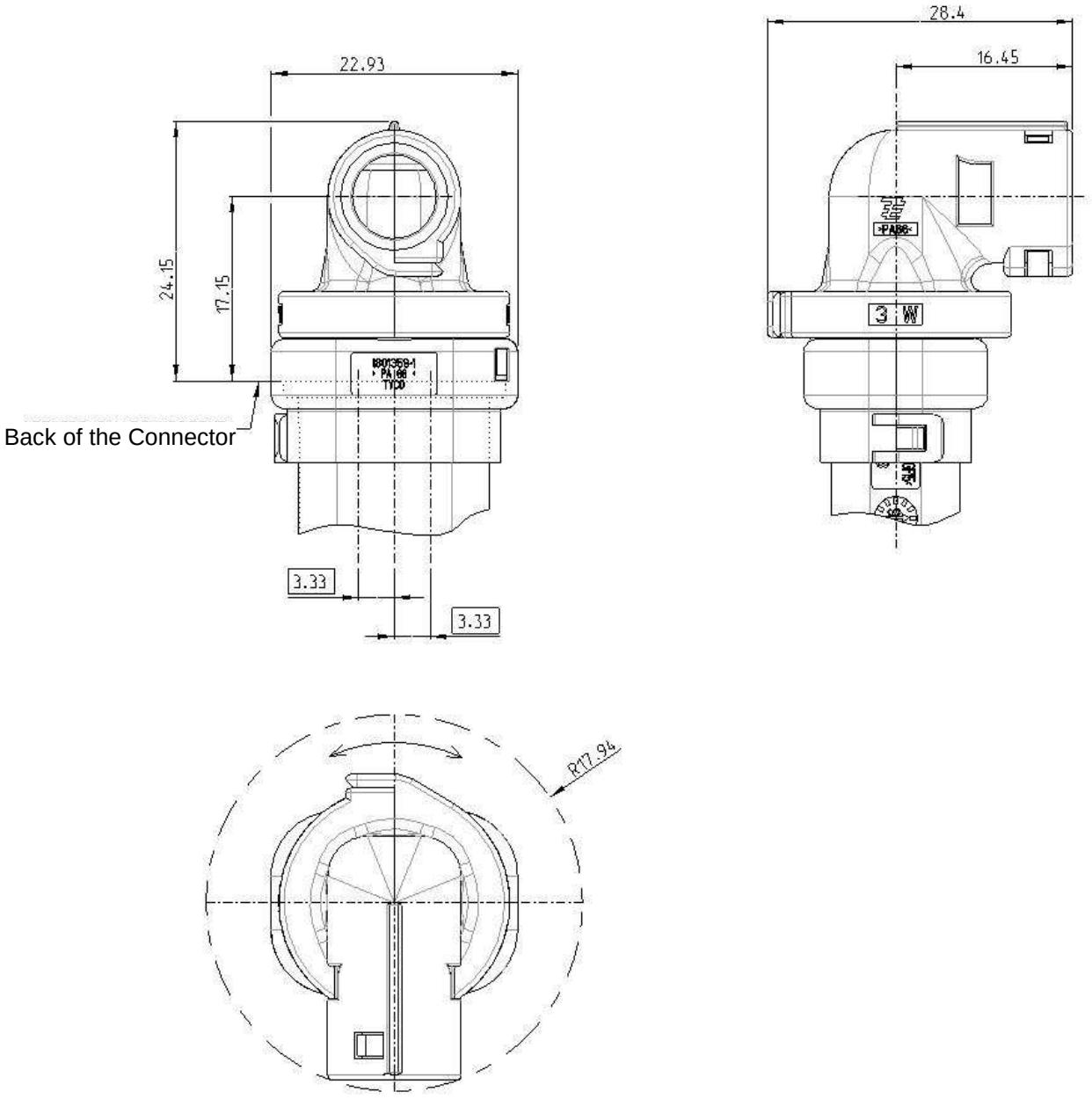
- 1801356-1 : Cover for 2 ways Connector (Corrugated Tube admitted Ø6mm).
- 1-1801356-1 : Cover for 2 ways Connector (Corrugated Tube Ø4,5 has to be used)



Outline of 2 ways rotating exit Cover

Attention, the rotating cover for 3 ways (rec. hsg or tab housing) Connectors is composed of 2 elements:

- 1) 1801359-1 : 3 ways Rotating Cover Adapter (Lower part)
- 2) 3 ways Rotating Cover (Upper part)
  - 1801468-1 : Corrugated Tube admitted Ø6mm.
  - 1-1801468-1 : Corrugated Tube Ø4,5 has to be used.



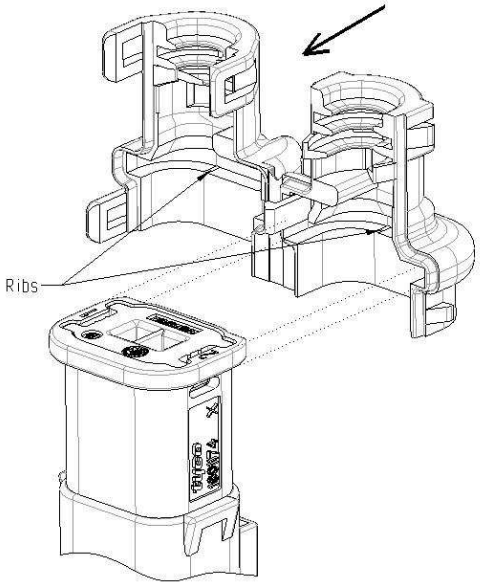
Outline of 3 ways Rotating exit Cover

4.4.5. MISE FITTING THE COVERS

4.4.5.1. COVER WITH FIXED EXIT (Axial ; Right/Left ; Up/Down) 2 or 3 ways

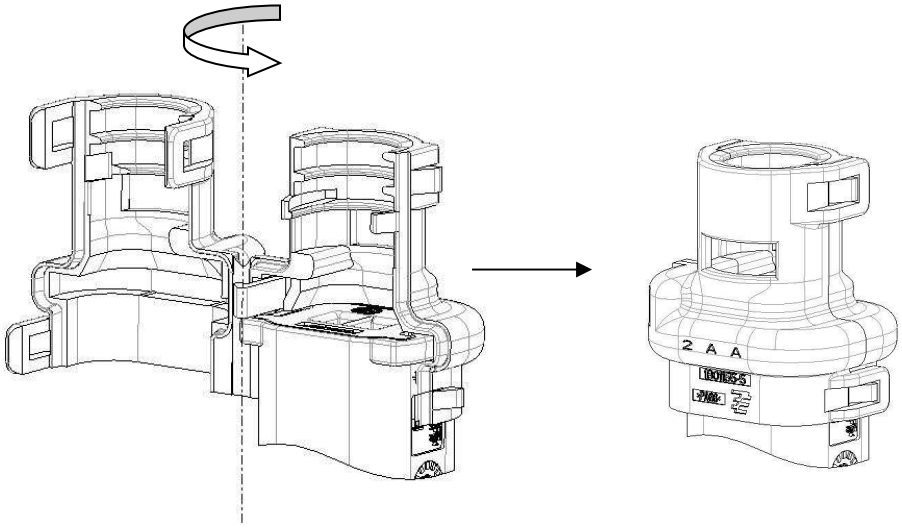
For references, see §4.4.1; §4.4.2 ; §4.4.3

- o Orientate the wire outlet to the desired direction.
- o Fix the ½ cover shell at the back of the connector paying attention to the orientation of the cover.
  - Mechanical keying prevents the fixing of a 3 ways cover on a 2 ways connector (and vice versa)
  - Small ribs on the cover keep the ½ shell in place on the connector during the fitting phase.



Fitting the Cover. Stage 1

- o Turn the second ½ shell, till the Cover is completely closed. Ensure that you do not pinch the wire between the 2 half-shells.



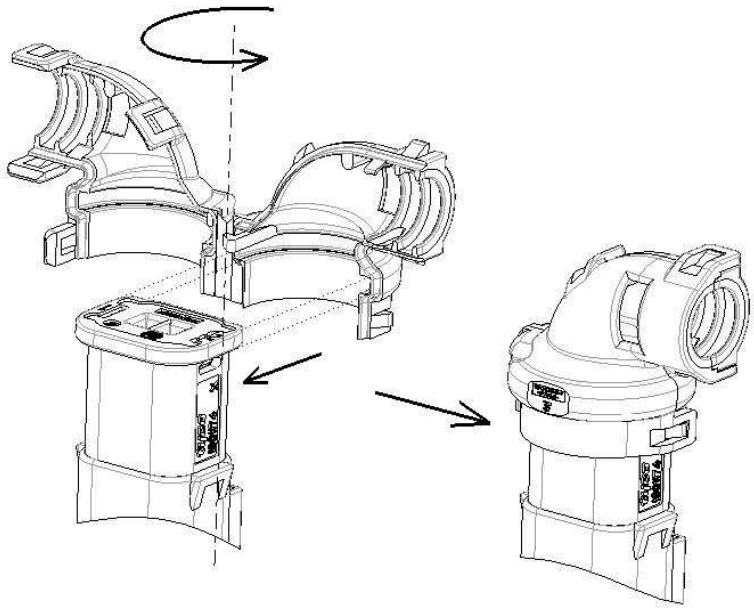
Fitting the Cover. Stage 2

4.4.5.2. ROTATING COVER (TYPE 4)

For references, see §4.4.4

4.4.5.2.1. 2 ways Cover

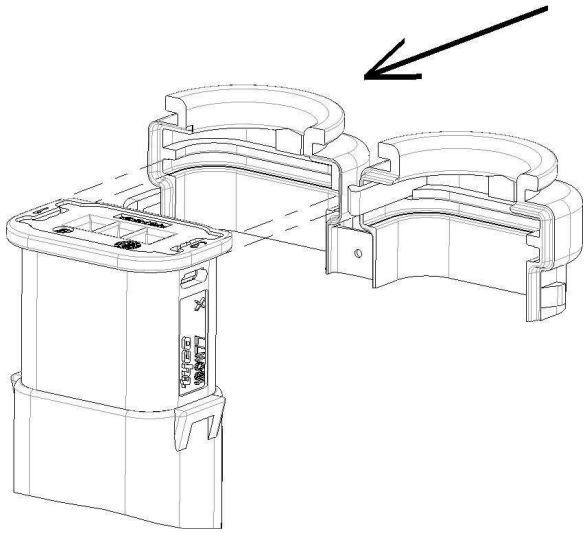
o Fix the ½ cover shell at the back of the connector. Then turn the second shell until the Cover is completely closed. Ensure not to pinch the wire between the 2 half-shells.
NB : The cover should be closed in a single operation (it is not possible to maintain the ½ shell on the connector, during the operation)



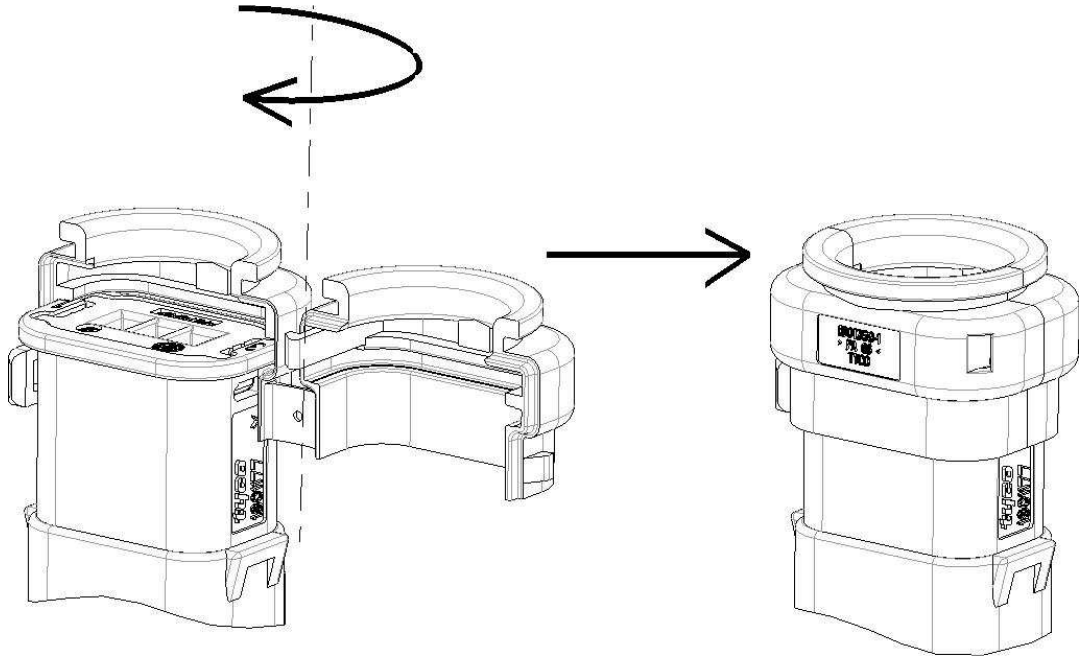
Fitting the 2 ways Rotating Cover

4.4.5.2.2. 3 ways Cover

o Take the rotating cover support ref. 1801359-1 and fix one of the ½ shells at the back of the connector.
- Small ribs on the cover keep the ½ shell in place on the connector.

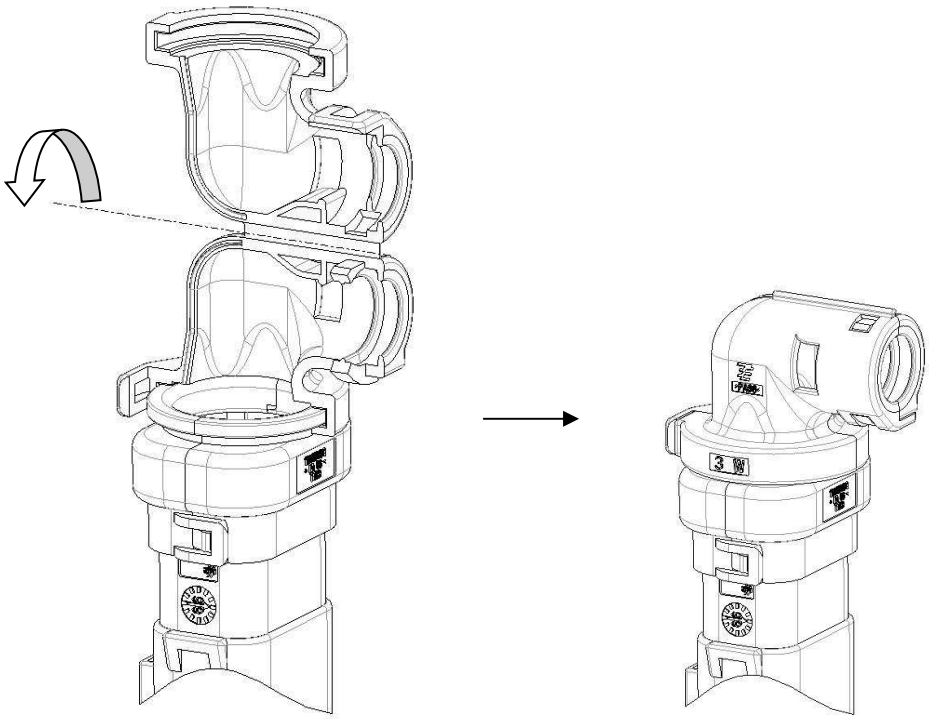


Turn the second ½ shell, until the Rotating Support Cover is completely closed



Fitting the Cover Support. Stage 2

- Then take the Rotating Cover and place one of the ½ cover shell at the back of the Rotating Cover support.
- Then turn the second ½ shell, until the Cover is completely closed. Ensure not to pinch the wire between the two half-shells.
  NB: The cover should be closed in a single operation (it is not possible to maintain the ½ shell on the connector, during the operation)



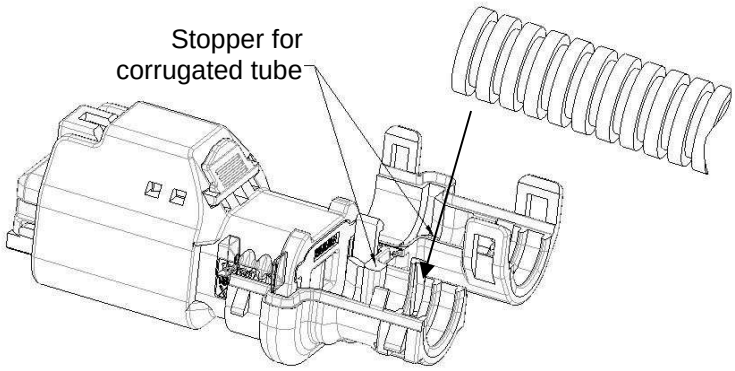
Fitting the 3 ways Rotating Cover

4.5. WIRE CLAMPING

Wires can only be clamped to connectors with a cover.

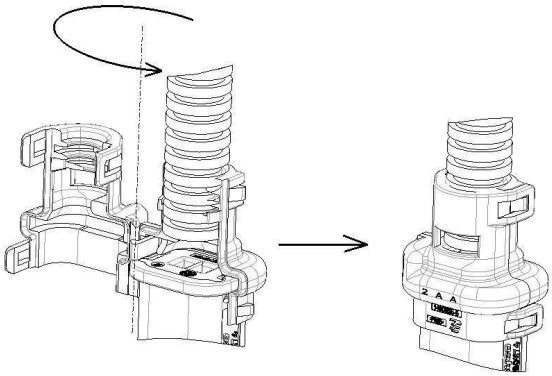
4.5.1. By corrugated tube

2 diameters of corrugated tube (Ø4,5mm or Ø6mm) accepted according to the cover references.
Uncutted tube (Ø4,5mm or Ø6mm) and cutted tube (Ø4,5mm or Ø6mm) can be used.
After fixing the ½ cover shell at the back of the connector, support the corrugated tube on the bearing zone of the shell set aside for this.



Fitting the corrugated tube

Close the second shell of the cover



Closing the cover after fitting the corrugated tube

After this operation, check that the corrugated tube is well locked by pulling on top. The tube should not get loose when stress of less than 20N is applied.

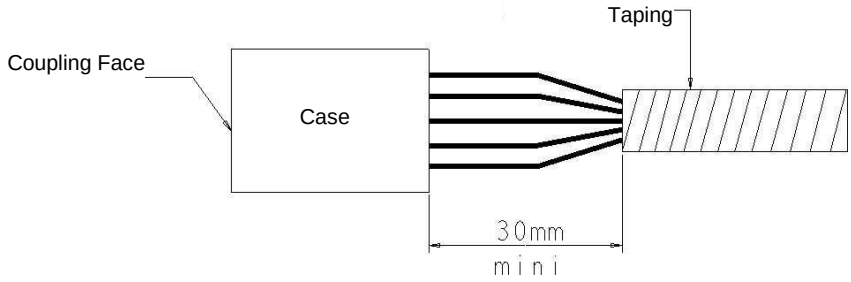
For more intense applications (applications on engines), one of the two clamping solutions is mandatory.

4.6. FASTENING DEVICE ON TAB HOUSING

The tab housing can be fixed on the vehicle with a fastener. Fasteners used should be of PSA standard (in compliance with STE 9615326199 rev.F) and should carry the 9610412380, 9614181580 and 9627457080 references. Or FORD 709152.
NB: If the Tab housing is equipped with a fastener and a cover, the fastener should be set before the cover is fixed.
Place the Tab housing opposite the fastener, then insert until locking is complete. (a « click » will alert the operator of good locking).
Reminder: The maximum stress required for fixing the hook is 50N

4.7. TAPING

The harnesses should be tapped in order to avoid vibration and friction disturbances which can cause the wiring and short-circuits to malfunction or cause interruptions in electrical continuity.
During this operation, do not stop tapping just above the case. Leave a minimum of 30mm free wire to ensure contact within the case and guarantee easy extraction if necessary.



Taping of harness

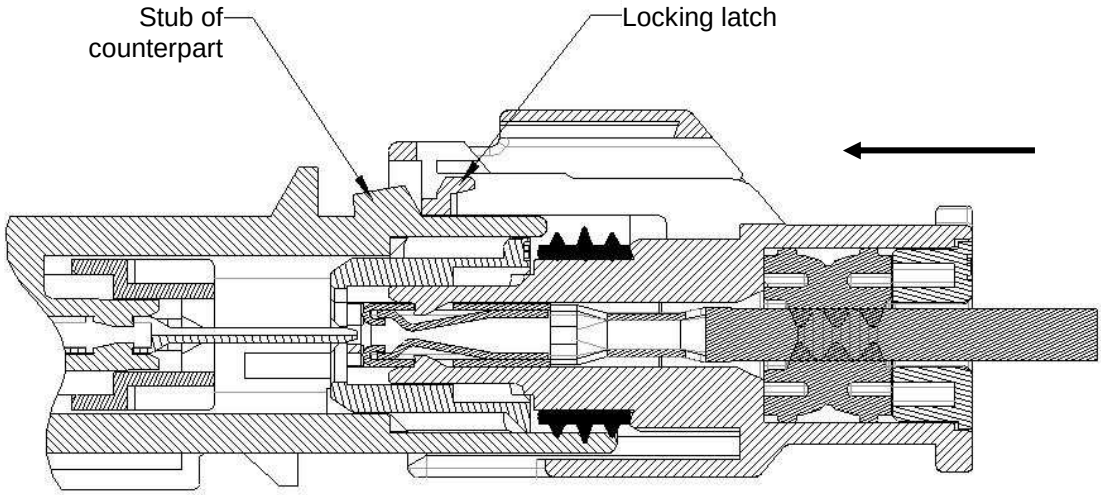
5. MATING (ASSEMBLY LINE PROCESS)

To mate the receptacle housing on its counterpart (Tab housing or aggregate), it should be :

- Verified that the components should have the same keying (colour and/mechanical) and that the secondary locking device should be activated.

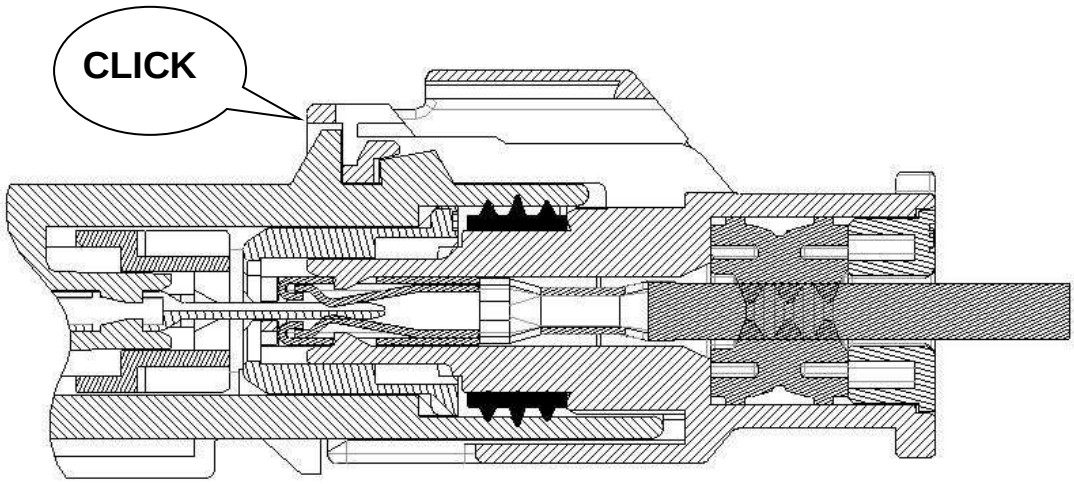
5.1 SEQUENCE / STEP OF MATING HP RECEPTACLE HOUSING WITHOUT CPA ON ITS COUNTERPART

- Insert the receptacle housing right up to the hard spot (when the locking latch is supported on the stub of the counterpart)
- Ensure not to touch the locking latch (hachured area on the diagram paragraph 1.1 and 1.4)



Accosting the locking latch of HP Receptacle Housing on the stub of the counterpart

- **Push the receptacle housing until it is properly locked. A «click» sound inform the operator.**



Mating the HP Receptacle Housing

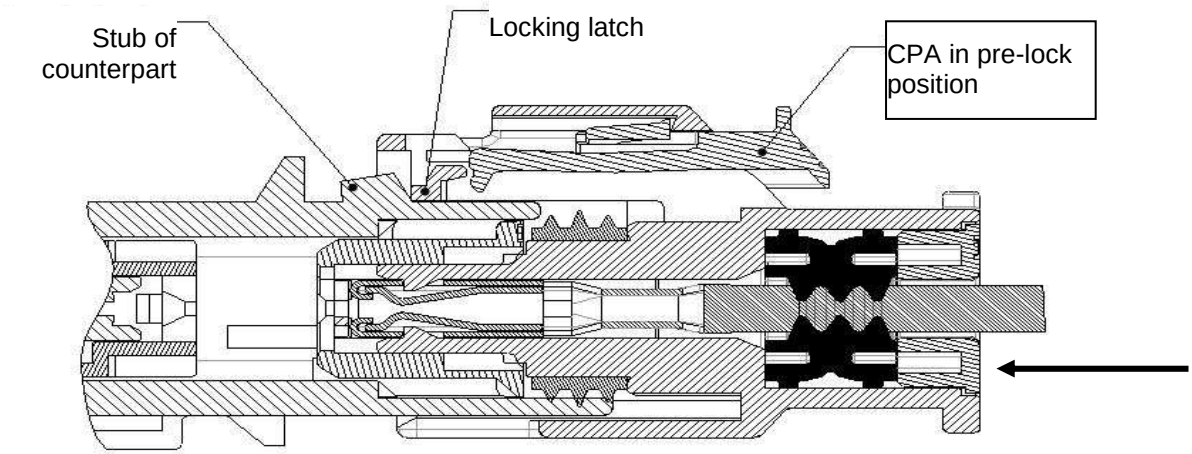
6. MATING RECAPTACLE HOUSING WITH CPA (ASSEMBLY LINE PROCESS)

To mate the receptacle housing on its counterpart (Tab housing or aggregate), it should be :

- Verified that the components should have the same keying (colour and/mechanical) and that the secondary locking device should be activated and the CPA is in pre-lock position.

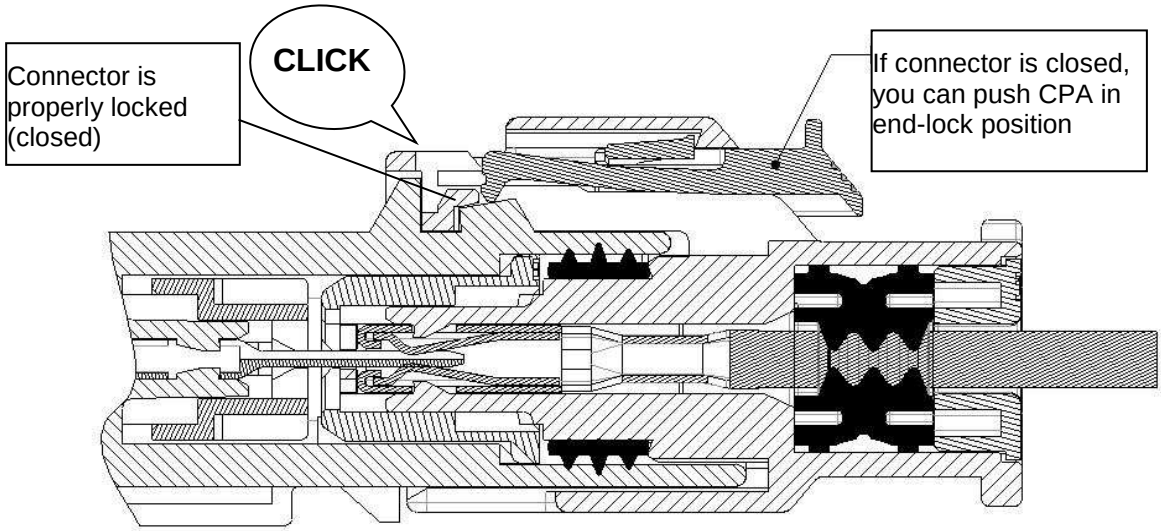
5.2 SEQUENCE / STEP OF MATING HP RECEPTACLE HOUSING WITH CPA ON ITS COUNTERPART

- Insert the receptacle housing right up to the hard spot (when the locking latch is supported on the stub of the counterpart)
- Ensure not to touch the locking latch (hachured area on the diagram paragraph 1.1 and 1.4)



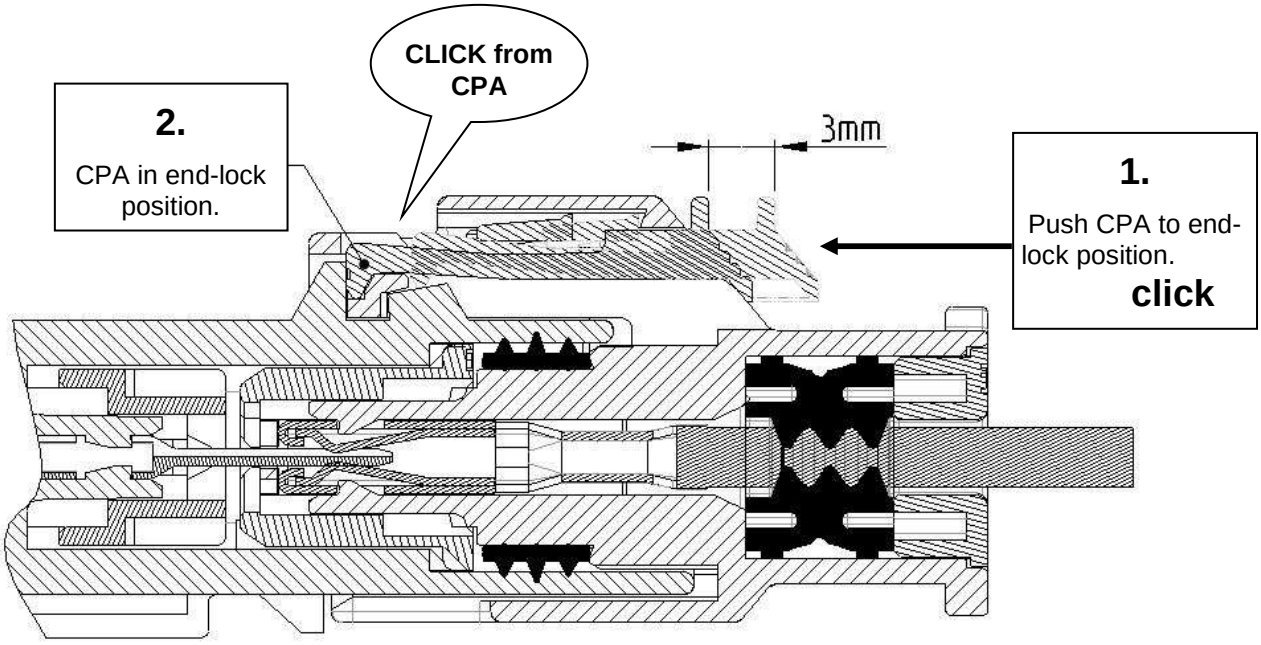
- Accosting the locking latch of HP Receptacle Housing on the stub of the counterpart

Push the receptacle housing until it is properly locked a «click» sound inform the operator



Mating the HP Receptacle Housing with CPA

- If the connector is closed, push CPA in end-lock position.

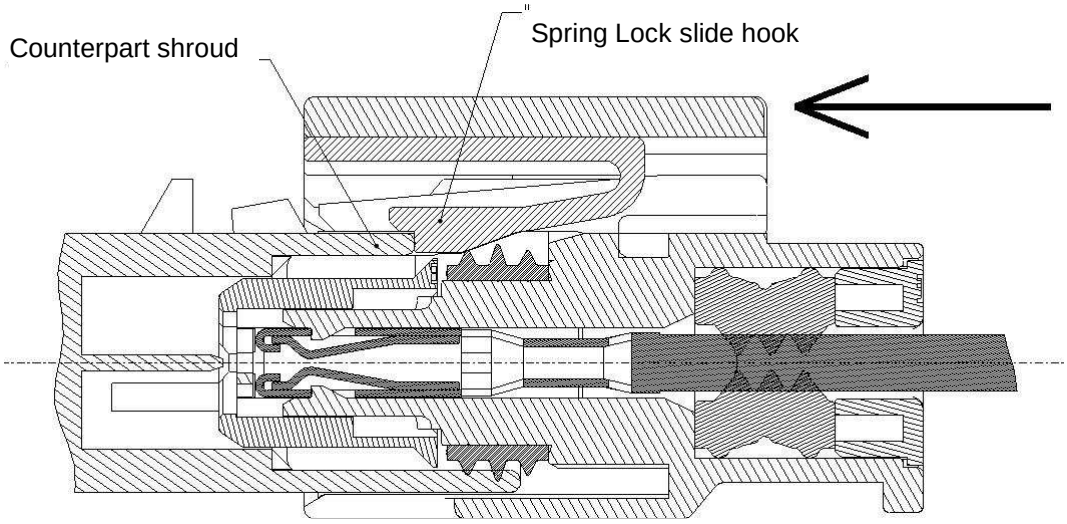


- If the CPA cannot push in end-lock position the connector is not fully mated.
- Then check if both connector halves are fully locked.

Mating the HP Receptacle Housing and close CPA

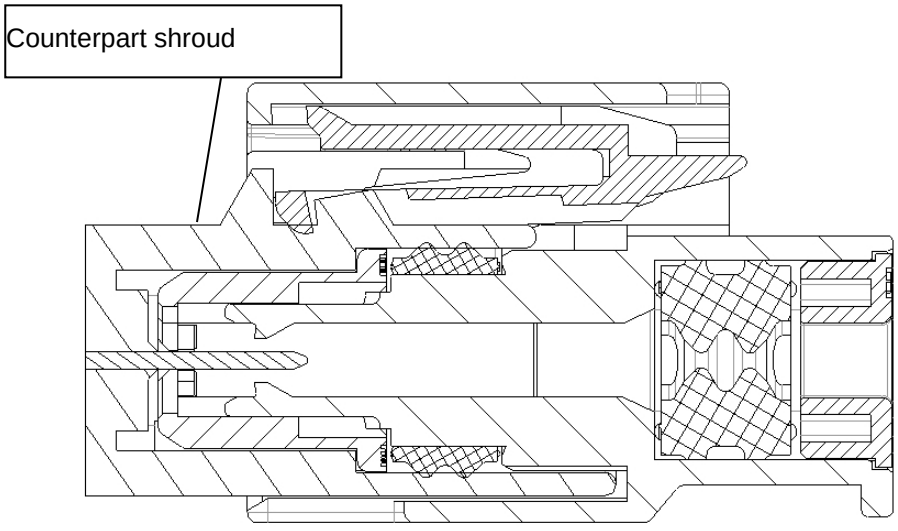
5.3 SEQUENCE / STEP OF MATING HPSL RECEPTACLE HOUSING « SPRING-LOCK » ON ITS 5.4 COUNTERPART

- Insert the receptacle housing until it fits into the hooks of the Spring-Lock slide on the shroud of the counterpart (non contact electric security is guaranteed)



View n°1 : Accosting the Spring-Lock slide hook on the shroud of the counterpart

- Push the housing until it is properly locked.



View n°2 : HPSL receptacle housing « Spring-Lock » mated on its counterpart

NB :
- During complete locking, a « click » sound warns the operator
- If the operator releases the housing before it is properly locked on the counterpart, the housing will be ejected from its resting position (see view 1: « Accosting the Spring-Lock slide hook … ») described above (no possible electrical contact).
- Once the HPSL housing has been locked on its counterpart, the « Spring-Lock » slide does not completely return to its initial position (slide retracted by 2mm from its initial uncoupled position).

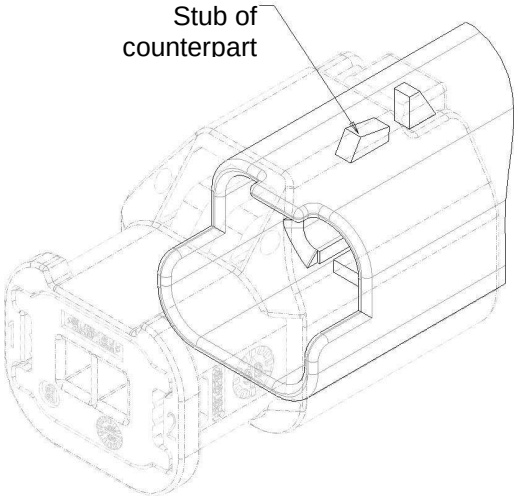
5.4 CHECKING THE GOOD MATING OF THE RECEPTACLE HOUSING ON ITS COUNTERPART

5.4.1 HP RECEPTACLE HOUSING WITH AND WITHOUT CPA

5.4.1.1 If the mating area is not visible :
« Push »,« Pull »(Pull max 30N)

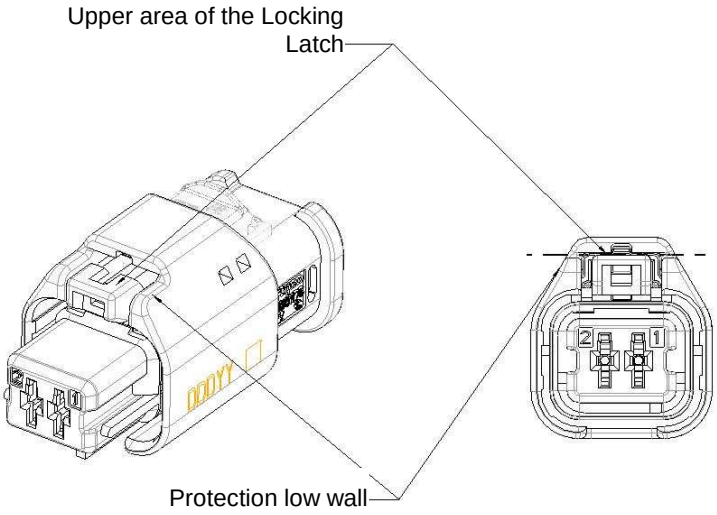
5.4.1.2 If the mating area is visible :

a) The stub of counterpart (Header or Tab Housing) doesn't have to be visible (Masked by the locking latch of the HP Receptacle Housing).



Counterpart (Header or Tab Housing)

b) The upper area of the locking latch of the HP Receptacle Housing must be inline with the protection low wall of the locking latch.



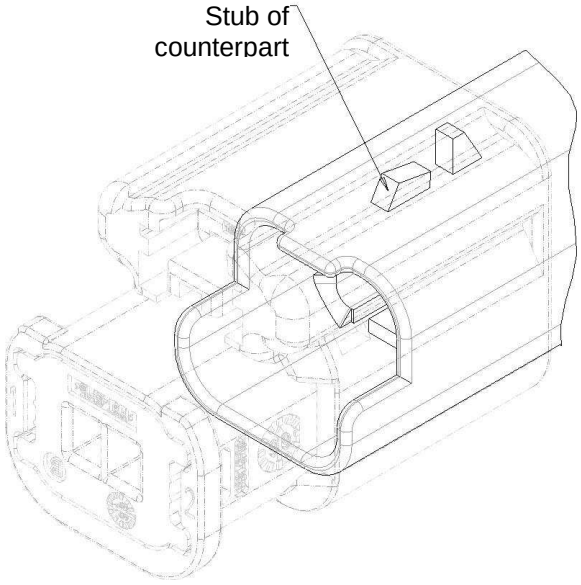
HP Receptacle Housing

5.4.2 HPSL RECEPTACLE HOUSING « SPRING-LOCK »

5.4.2.1 If the mating area is not visible :
, then « Push » until « Clic » sound than« Pull »

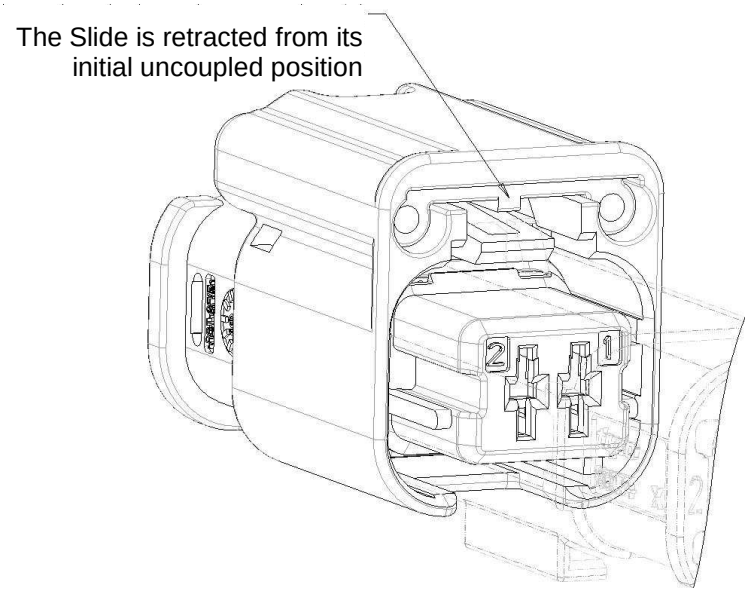
5.4.2.2 If the mating area is visible :

a) The stub of counterpart (Header or Tab Housing) doesn't have to be visible (Masked by the locking latch of the HPSL Receptacle Housing).



Counterpart (Header or Tab Housing)

b) Once mating, the « Spring-Lock » slide does not completely return to its initial position (slide retracted by 1,6 mm from its initial uncoupled position).



HPSL Receptacle Housing « Spring-Lock »

6 UNMATING (REWORK OPERATION ALONG THE ASSEMBLY LINE)

6.1 UNMATING

6.1.1 UNMATING THE HP HOUSING WITHOUT CPA

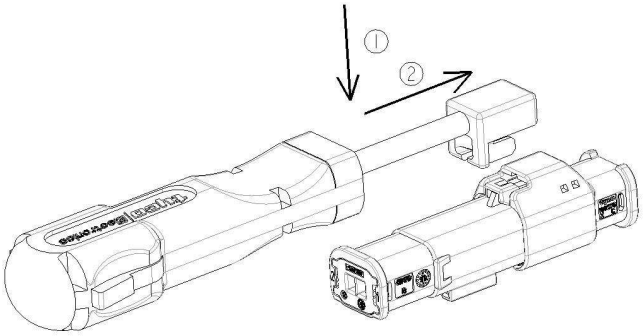
Connectors should be unmated by:

6.1.1.1 Unmating from the front :

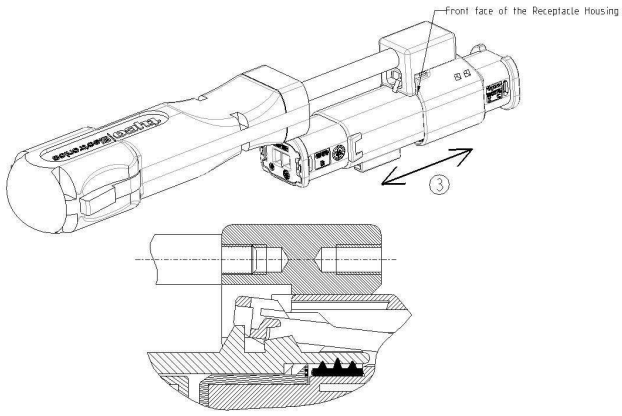
A specific tool is needed.

See paragraph 7.6, to find all dimensions to manufacture the tool.

1) Present the tool for frontal dismantling on the top of the Receptacle Housing, the strips on both sides of the locking lance, and push the tool until the front face of the receptacle housing (so, the locking lance is retracted).
2) Pull the receptacle housing until the connector is completely unlocked.



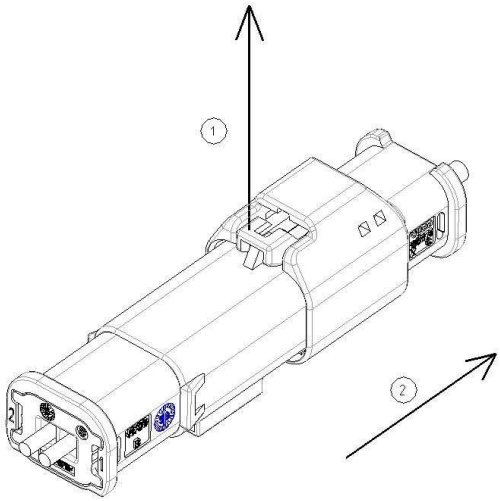
Unmating for the front (Step 1)



Unmating for the front (Step 2)

If it is not possible to use the specific tool, the unmating can be done like below:

1) Lift the locking latch (see figure) without any tool, without forcing on the deflection of this one.
2) Pull the housing until the connector is completely unlocked

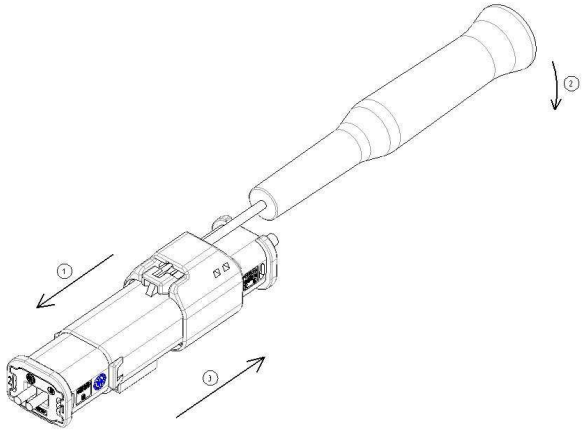


Unmating connectors

6.1.1.2 Unmating from the back:

Where accessibility from the front is not possible (environment…), unmating may be from the back by:

1) Inserting a non-specific tool (Ø 2,5mm flat type screw driver) between the latch and its protection bridge, right to the bearing (see figure)
2) Slightly pressing with the screw driver (see figure) and maintaining that position
3) Pulling the housing until the connector is completely unlocked.



Unmating connectors

6.1.2 UNMATING THE HP HOUSING WITH CPA

Connectors should be unmated by:

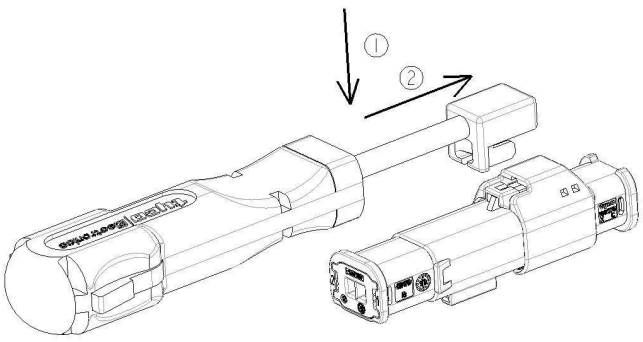
6.1.2.1 Un-lock from the front:

A specific tool is needed.

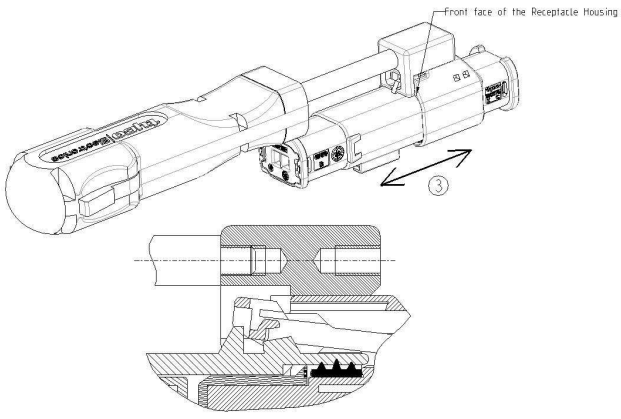
See paragraph 7.6, to find all dimensions to manufacture the tool.

Make sure that the CPA is set to the pre-lock position (see page 23).

3) Present the tool for frontal dismantling on the top of the Receptacle Housing, the strips on both sides of the locking lance, and push the tool until the front face of the receptacle housing (so, the locking lance is retracted).
4) Pull the receptacle housing until the connector is completely unlocked.



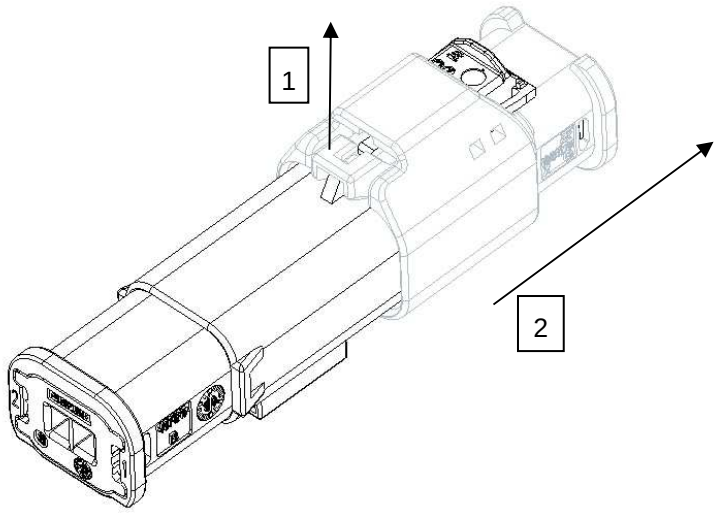
Unmating for the front (Step 1)



Unmating for the front (Step 2)

If it is not possible to use the specific tool, the unlock can be done like below:
Make sure that the CPA is set to the pre-lock position (see page 23).

3) Lift the locking latch (see figure) without any tool, without forcing on the deflection of this one.
4) Pull the housing until the connector is completely unlocked

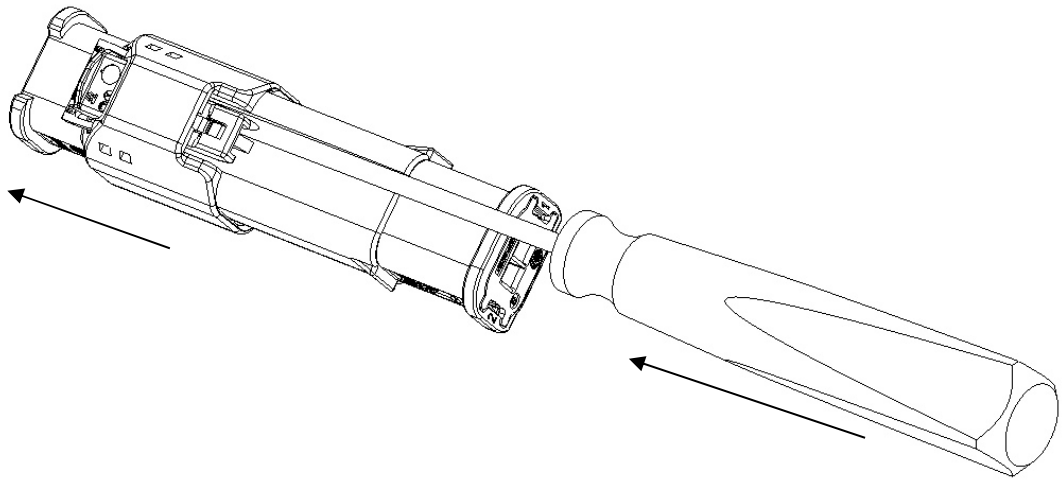


Unmating connectors

6.1.2.2 Un-lock from the front:
Screwdriver needed only.

It is not possible to un-lock connector with CPA from the back:

4) Make sure that the CPA is set to the pre-lock position (see page 23).
5) Inserting a screwdriver (Ø 2,5 – 3,0 mm flat type screw driver) between the latch and Tab housing (see figure).
6) Slightly pushing the screw driver (see figure) until the latch is released.
7) Pulling the housing until the connector is completely unlocked.

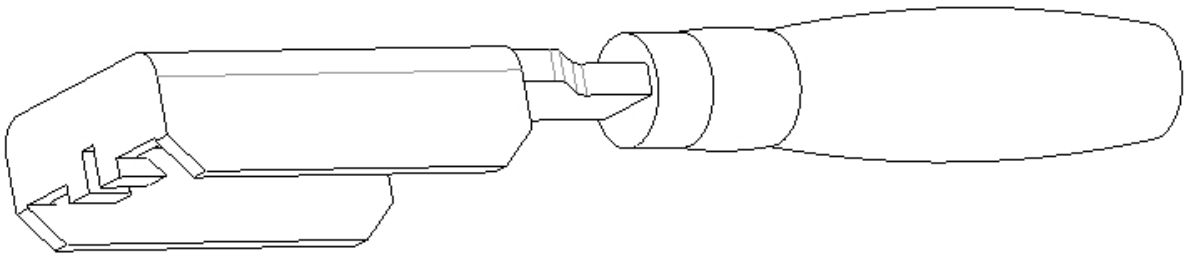


Unmating connectors

6.1.3 UNMATING THE HPSL HOUSING «SPRING-LOCK»

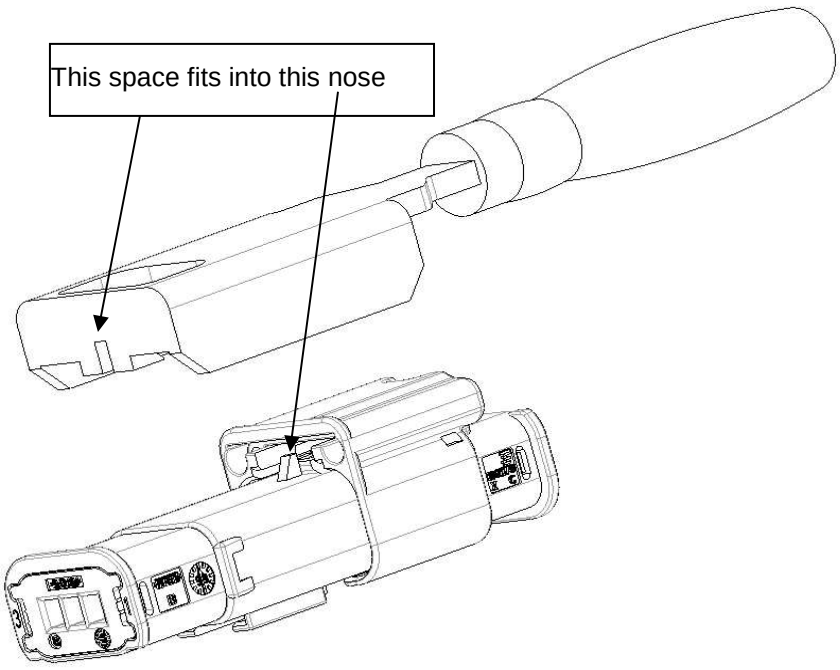
Connectors can be unmated by a specific tool:

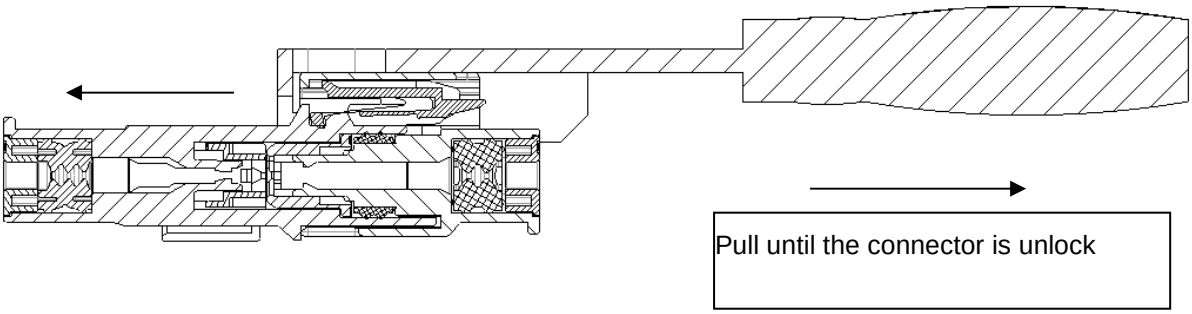
1) Specific tool to unmate the HPSL connector. 114-94124



Deactivating the locking latch (Stage 1)

2) Pull the housing until the connector is completely unlocked.



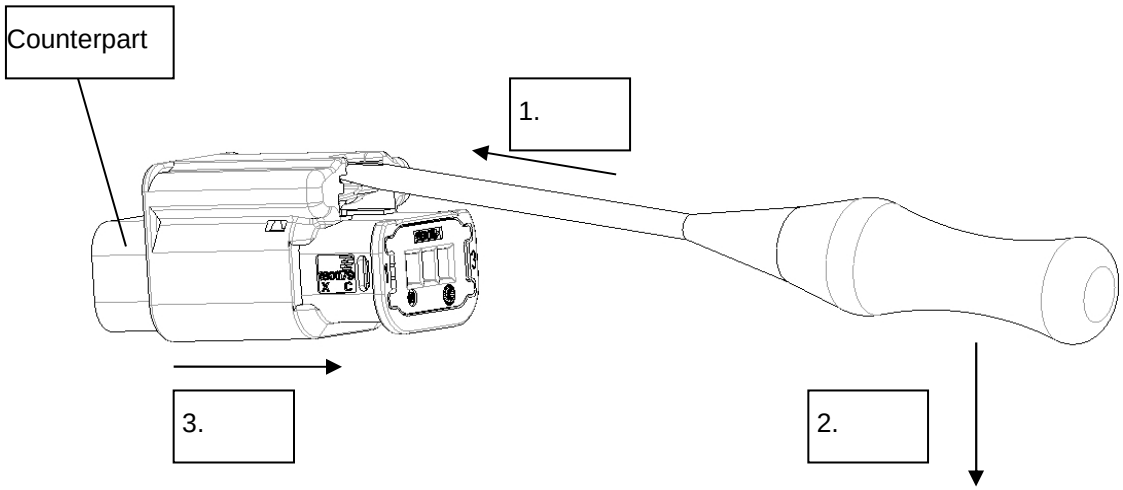


Unmating connectors

6.1.4 Unmating connector by screw driver :

If it's not possible to open the connector with the specific tool you can use a flat type screw driver Ø 3,0 – 4,0 mm.

1) At first insert the tool between housing and yellow slider.
2) Then push the screw driver to direction of the wires until you can pull off the connector from the counterpart.



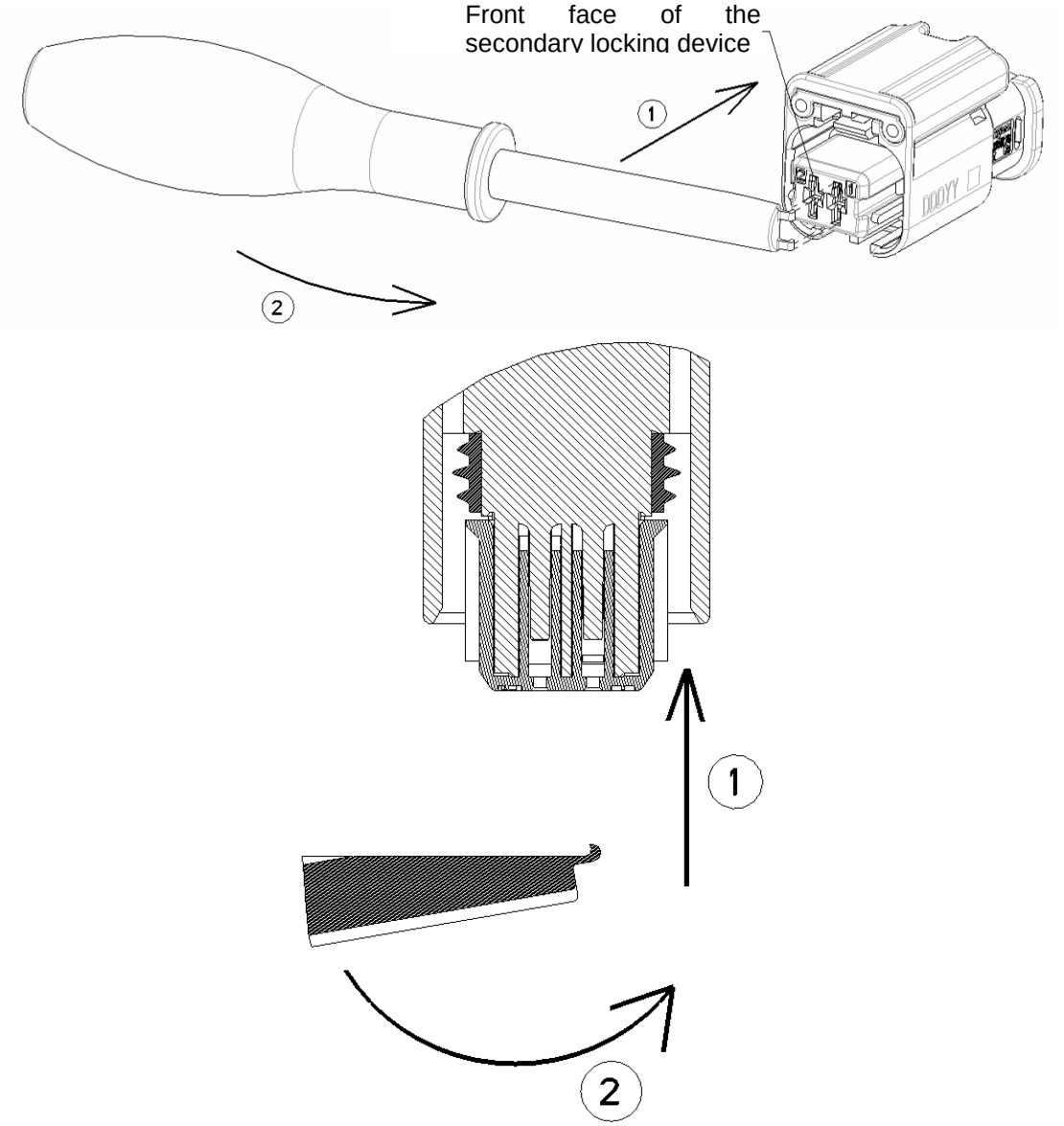
6.2 OPENING THE SECONDARY LOCKING DEVICE

6.2.1 RECEPTACLE HOUSING

A specific tool is needed to the open secondary locking device of the receptacle housing.

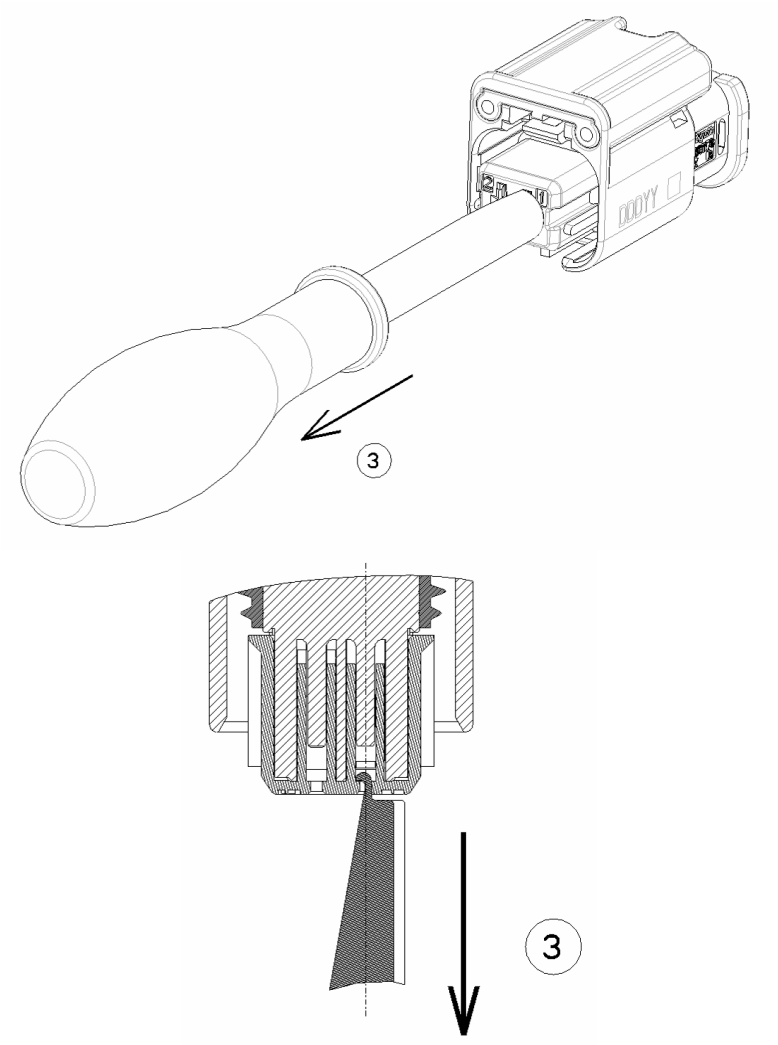
See Paragraph 10.2, to determine the tool used in deactivating the secondary locking device

1) Insert the extraction tool ref. 1-1579008-0 in the socket, just like in the diagram below
   NB: In one of the 2 sockets for 2 ways housing.
   In the central socket for 3 ways housing.
   The two tool fittings must be absolutely put into the same cavity hole.
2) Once it has a bearing on the front side of the secondary locking device, rotate the extraction tool (such that the handle of the tool should be at the axis of the housing).



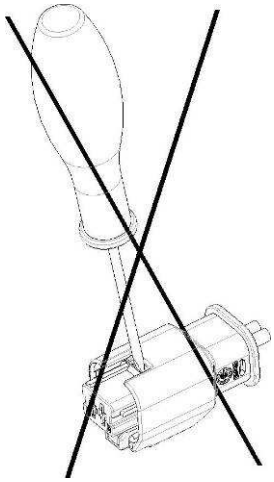
Opening of receptacle housing secondary locking device (Stage 1)

3) Pull the extraction tool (stress should be between 10 and 30N), to bring back the secondary locking device in an inactive position (stroke ≈ 4mm)



Opening of receptacle housing secondary locking device (Stage 2)

NB: it is forbidden to use a screw driver, since the interface seal can be damaged



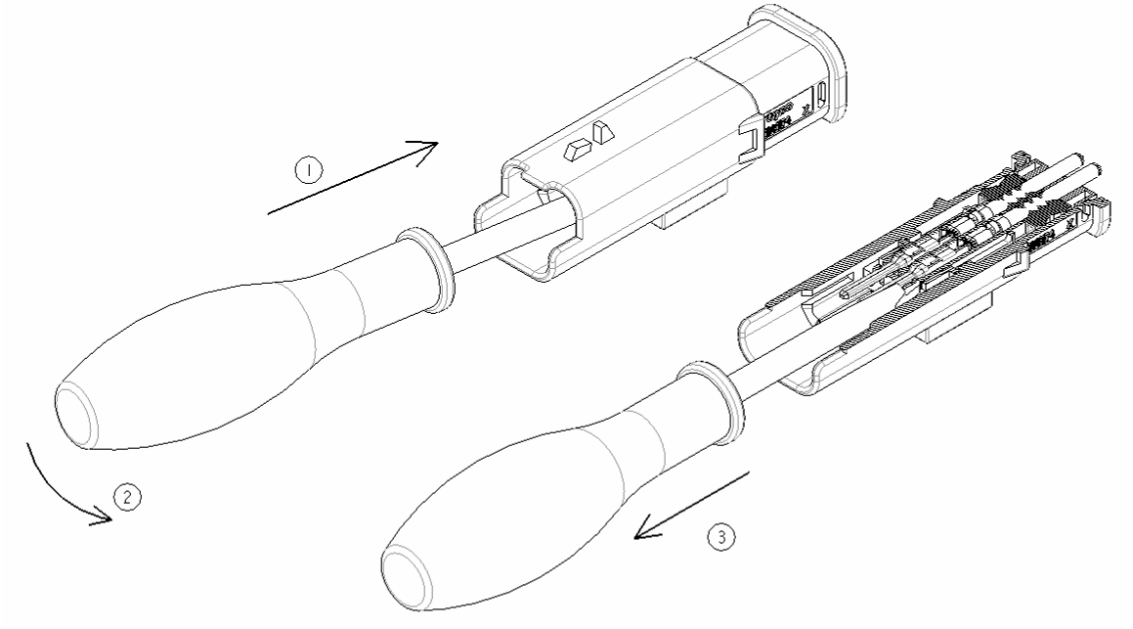
6.2.2 TAB HOUSING

A specific tool is needed to open the tab housing double locking system
1) Insert the extraction tool ref. 1-1579008-1 in one of the 2 secondary locking device openings
2) Turn the tool until it has a bearing on the internal wall of the tab housing
3) Then pull, on the extractor to open the secondary locking device

The stress should be between 10 and 30N

- **o** The tab housing secondary locking device has a stroke of ≈ 3mm

See Paragraph 10.3, for determining the tool for opening the secondary locking device



Opening of the tab housing secondary locking device

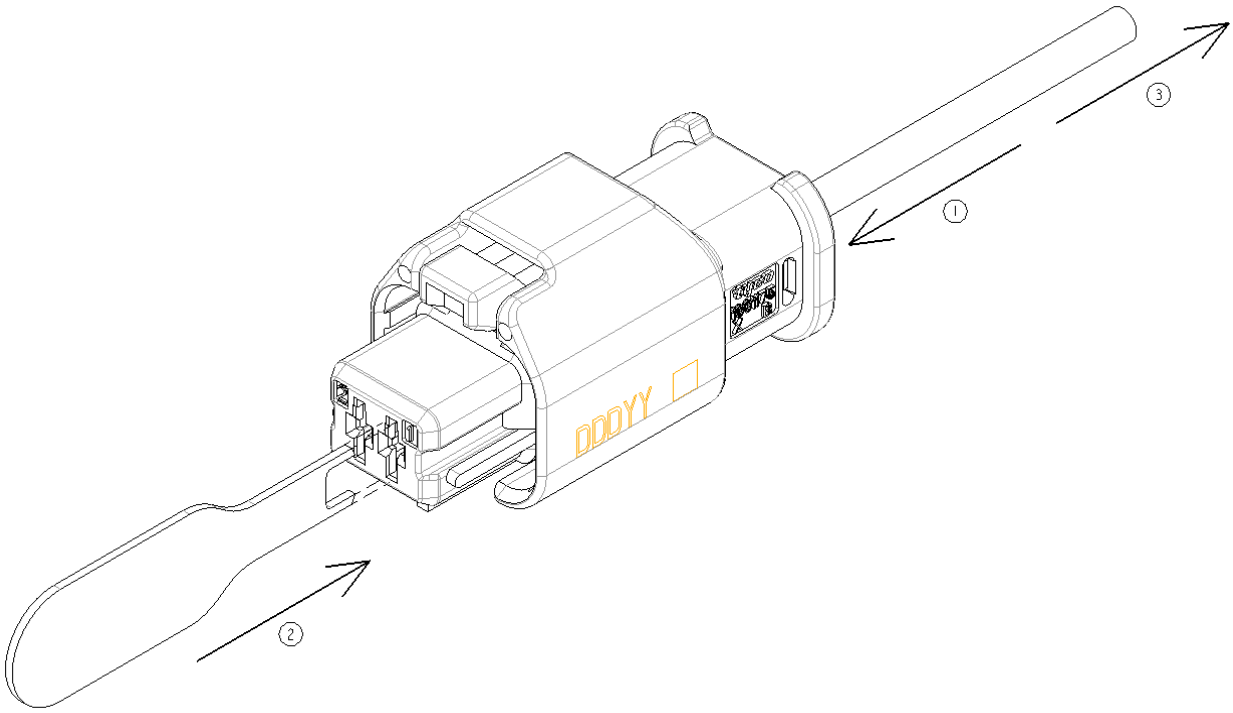
6.3 REMOVAL OF TERMINALS

Firstly, if the cover is assembled at the back, it should be removed and the secondary locking device should be opened.

6.3.1 RECEPTACLE HOUSING

Clips should be extracted by:

1) Pushing the terminal right into the socket.
2) Inserting the specific tool ref. 1-1579008-2 through the secondary locking device until it has bearing, in order to push back the locking lance of the terminals (s*ee paragraph 10.4 to determine the extraction tool for receptacles)*.
   The operator should ensure that he does insert the tool in the passage zone of the tab
3) Maintaining the tool in place and pulling the wire until the terminal is completely unlocked.

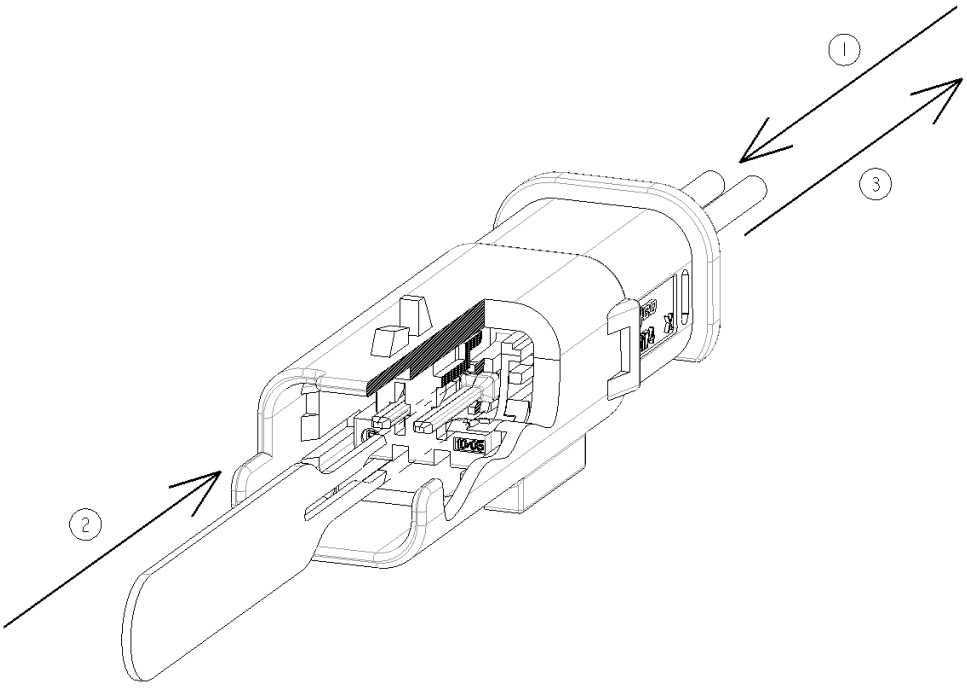


Extracting the receptacle

Note:
During the extraction of the terminal, it should go without force; furthermore it is mandatory to pull in the axis of the terminal cavity.

6.4.1 TAB HOUSING

The tab should be extracted by:
1) Pushing the contact right into the socket.
2) Inserting the specific tool ref. 1-1579008-2 through the secondary locking device until it has a bearing, in order to push back the locking lance of the terminals (see p*aragraph 10.5 to determine the extraction tool for tabs)*.
   The operator must take care not to damage the active part of the contact
3) Maintain the tool in place and pull the wire until the tab is completely unlocked.



Extracting the tab

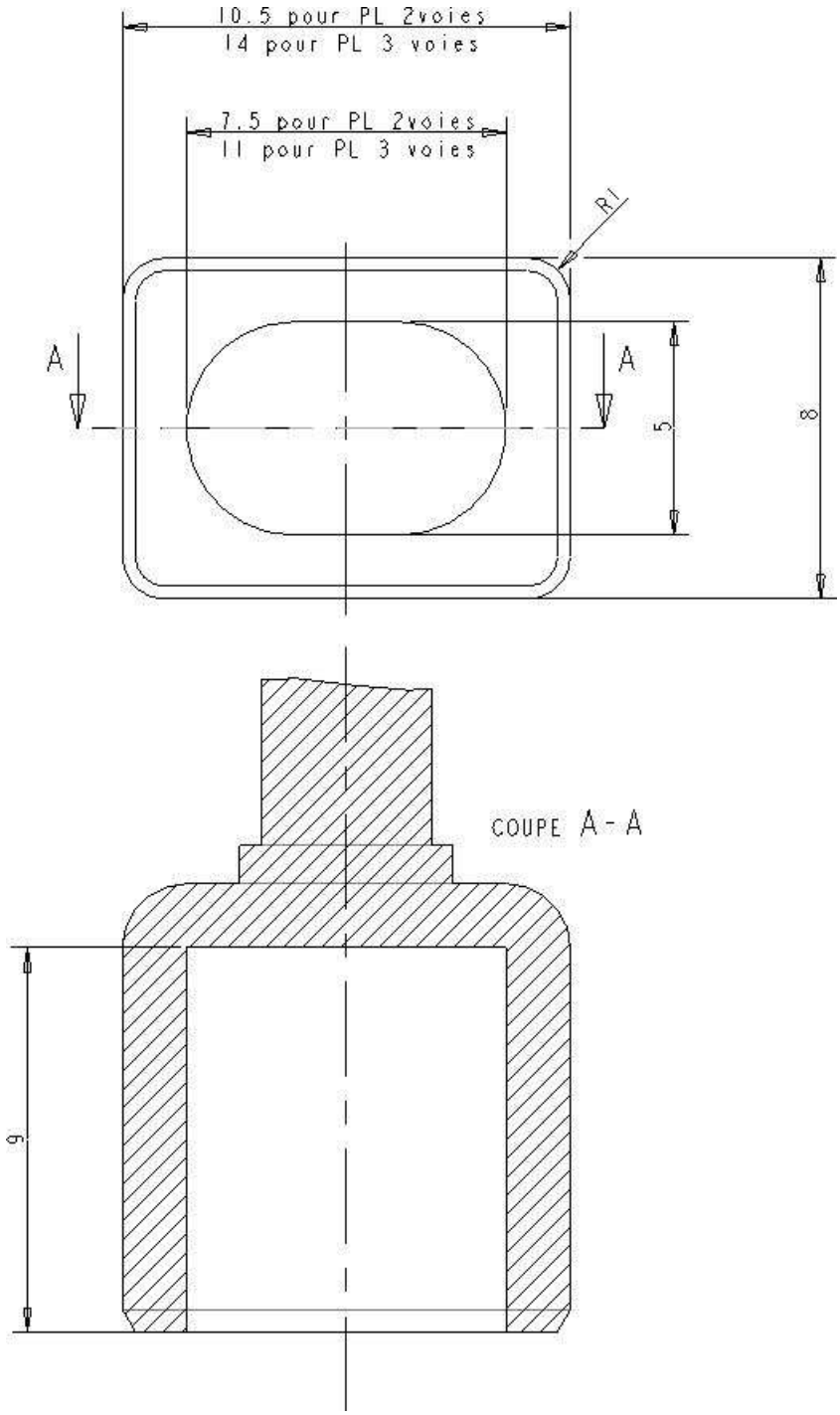
Note:
During the extraction of the terminal, it should go without force; furthermore it is mandatory to pull in the axis of the terminal cavity.

7 LIST OF TOOLS

7.1 TOOLS TO CLOSE THE TAB HOUSING SECONDARY LOCKING DEVICE

PN :

- 1-1579008-4: Secondary locking device activation tool for 2 ways tab housing.
- 1-1579008-5: Secondary locking device activation tool for 3 ways tab housing.

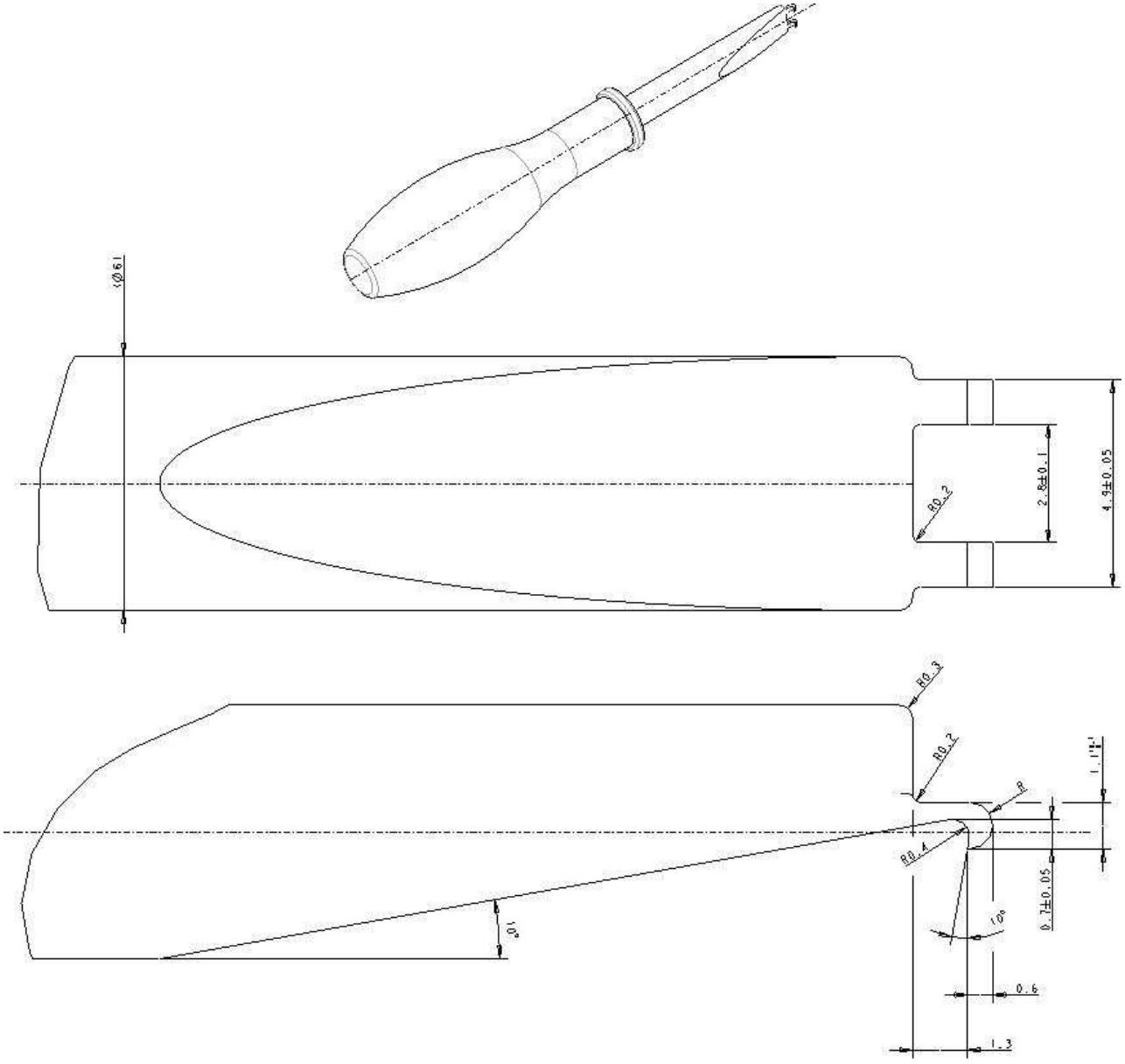


Tool for closing tab housing secondary locking device

7.2 TOOL TO OPEN THE RECEPTACLE HOUSING SECONDARY LOCKING DEVICE

PN:

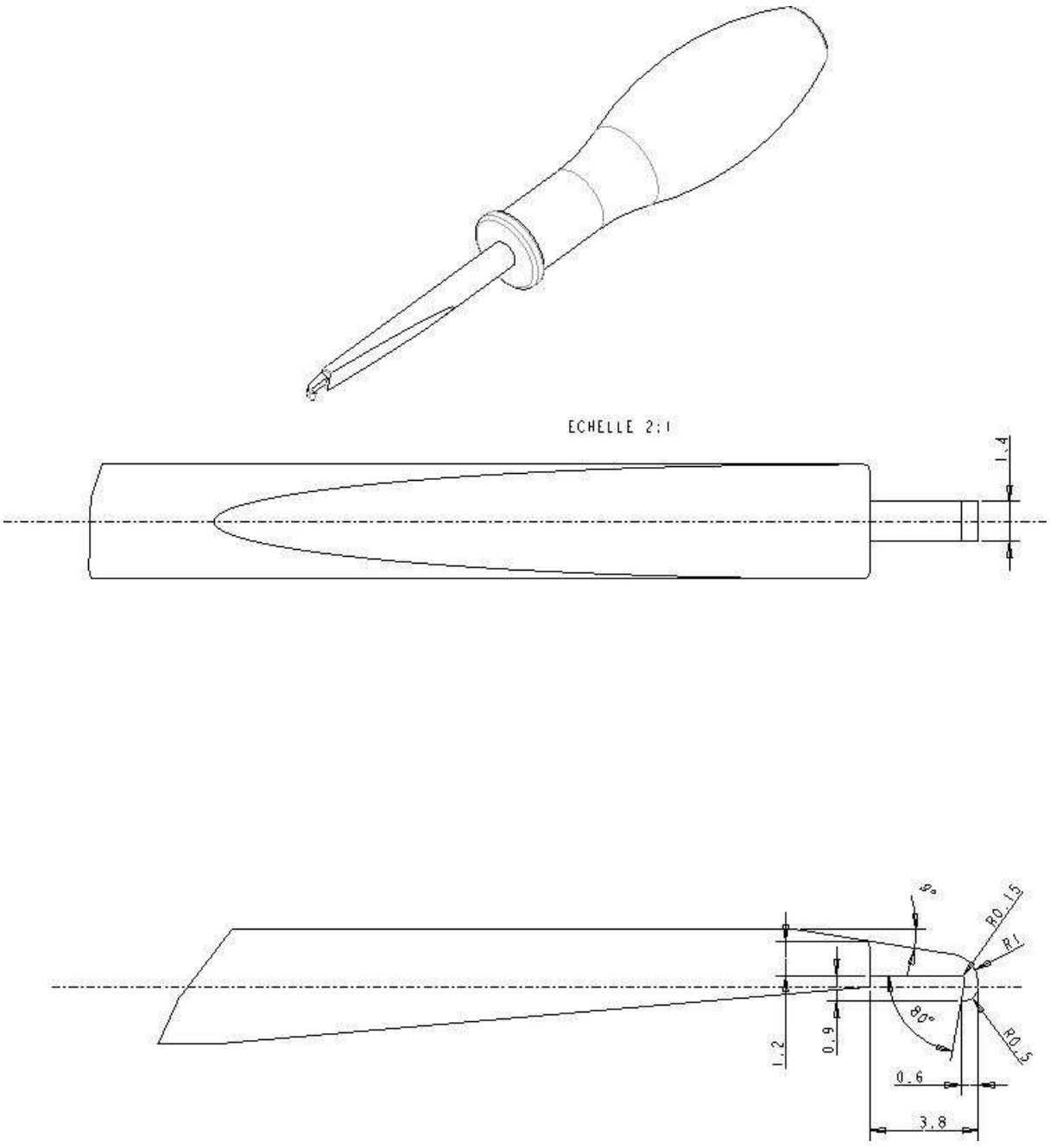
- 1-1579008-0



Tool for opening receptacle housing secondary locking device

7.3 TOOL TO OPEN THE TAB HOUSING SECONDARY LOCKING DEVICE

PN: 1-1579008-1

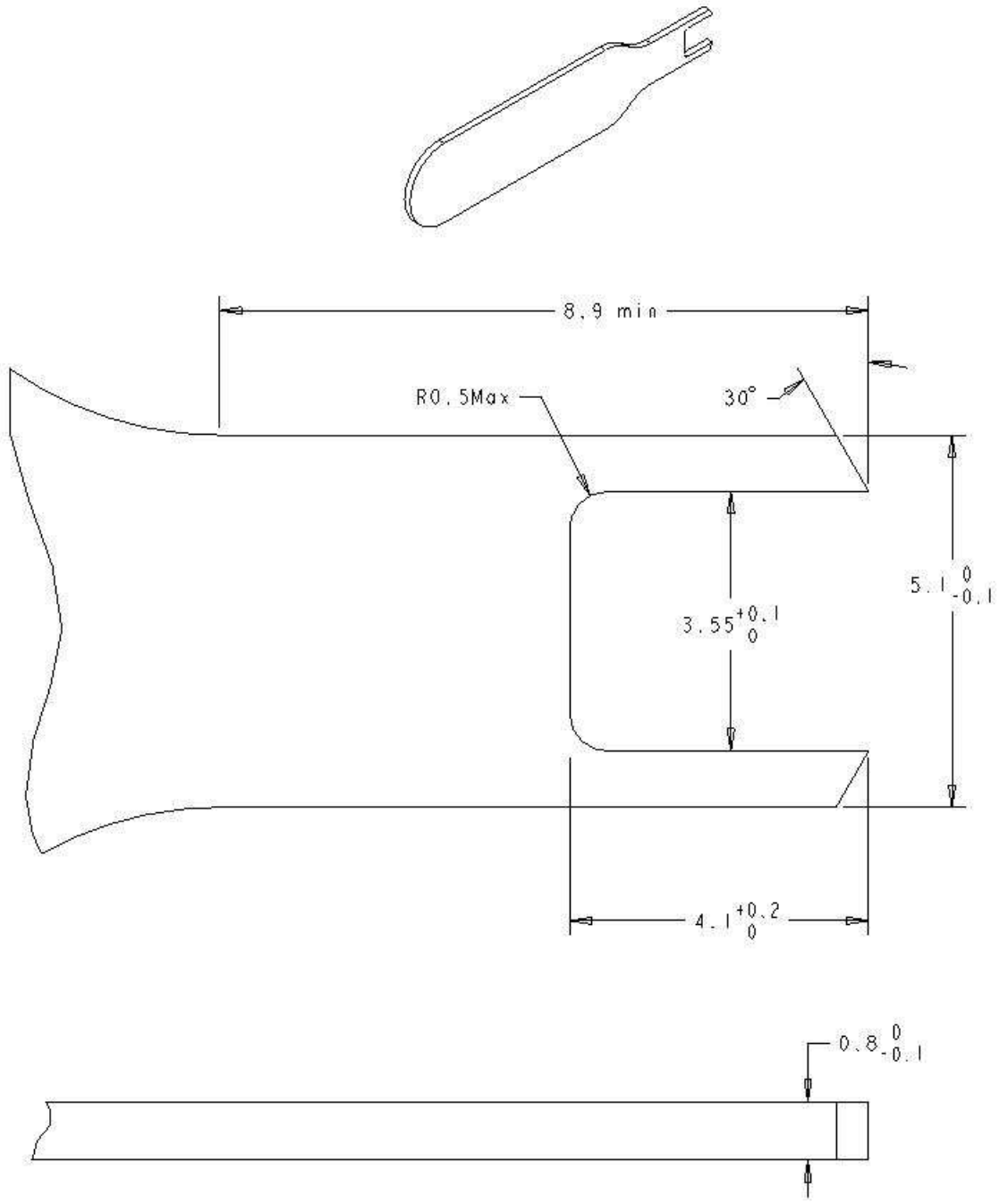


Tool for opening tab housing secondary locking device

7.4 TOOL TO REMOVE RECEPTACLE CONTACTS

PN:

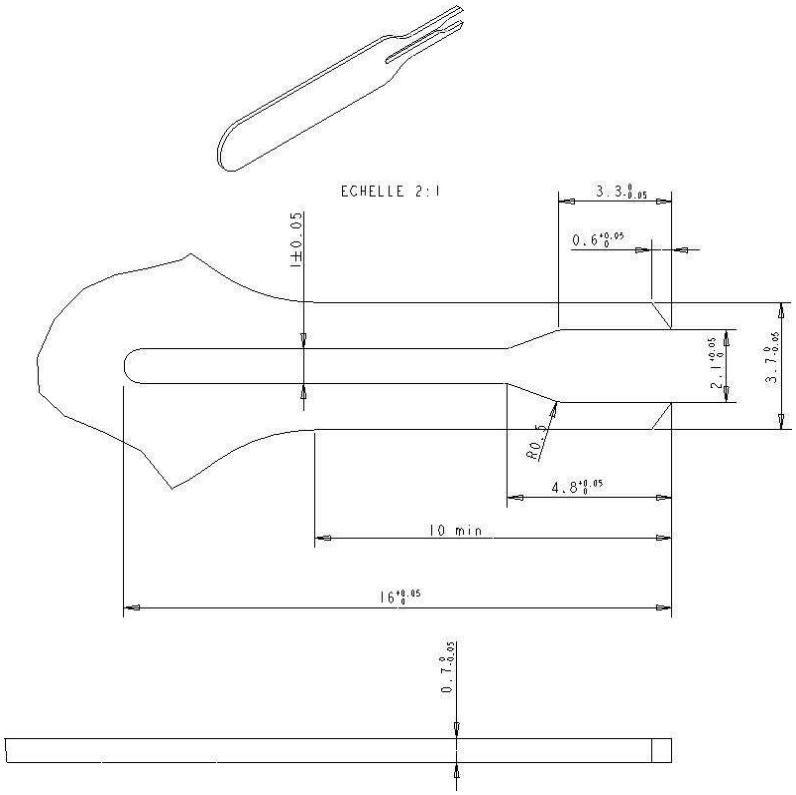
- 1-1579008-2



Tool for extracting Clips

7.5 TOOL TO REMOVE TAB CONTACTS

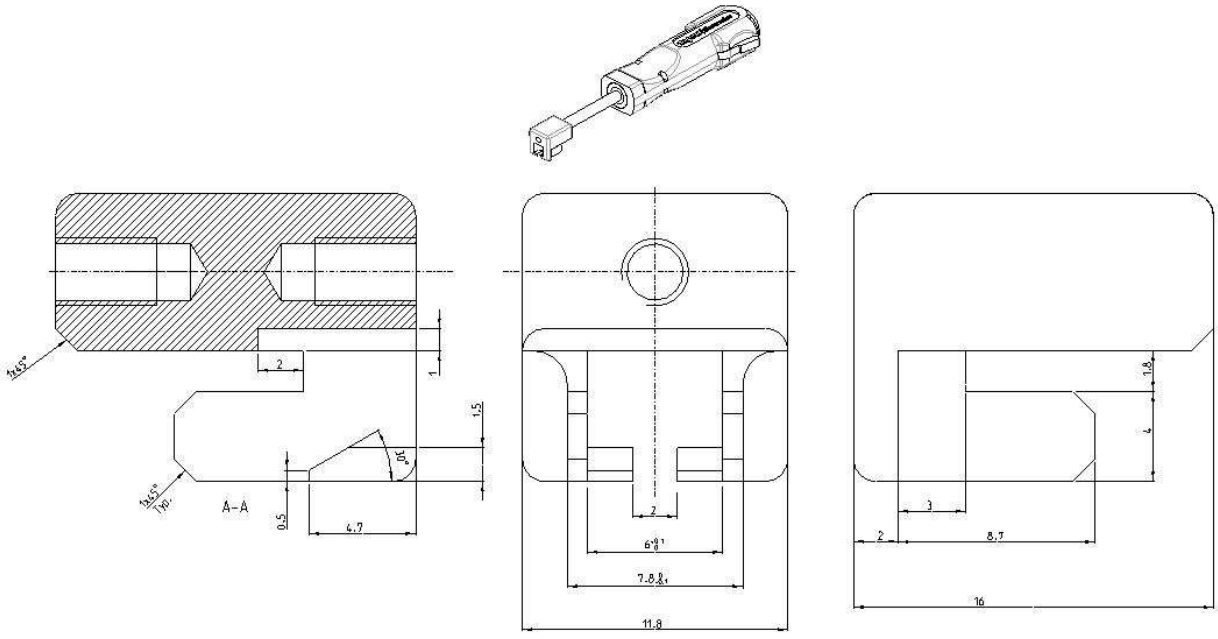
PN: 1-1579008-3



Tool for extracting Tabs

7.6 TOOL FOR UNMATING THE RECEPTACLE HOUSING HP (with or without CPA)

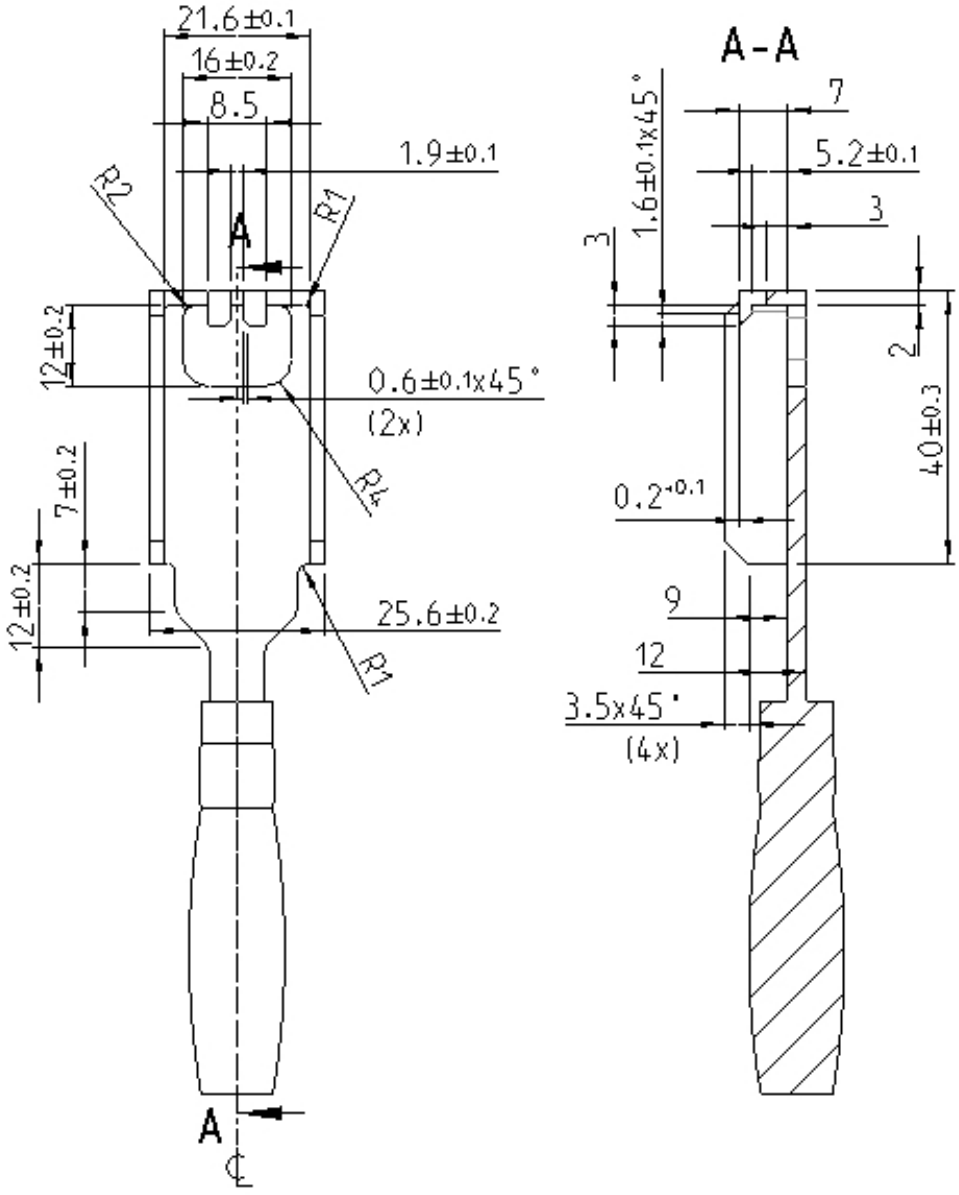
PN: Not yet define; please contact the TE connectivity representative.



Tool for frontal unmating

7.7 TOOL FOR UNMATING THE RECEPTACLE HOUSING HPSL

See: 114-94124



7.7.1 TOOL FOR UNMATING THE RECEPTACLE HOUSING HPSL

See: 114-94124