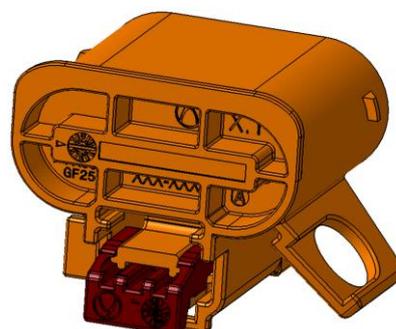
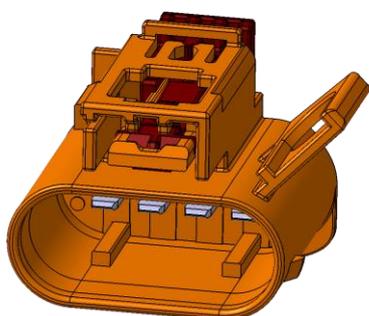
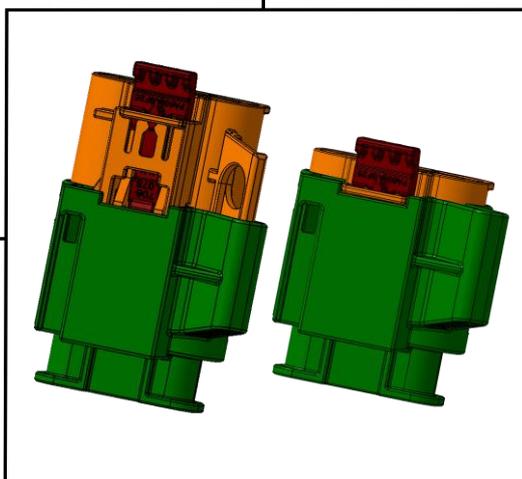
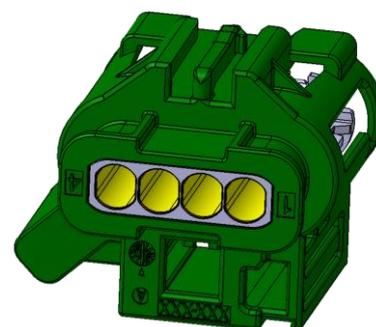
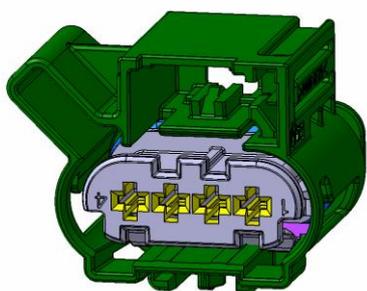




HIRSCHMANN  
AUTOMOTIVE

# Processing Specification

## HV-Device



**EVS-100104-00**  
**Edition May 2024**



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## **2. General Information**

### **2.1. Introduction**

This product specification is valid for the Socket housing and the corresponding Plug housing listed in item 2.2 and describes the product structure, delivery condition and the assembly of the housing and contacts.

The processor of the products mentioned in this specification is responsible for the processing quality and the specified execution.

In the event of improper processing deviating from this specification and resulting quality problems, there shall be no right of recourse.

### **2.2. Applying relevant Information/Documentation**

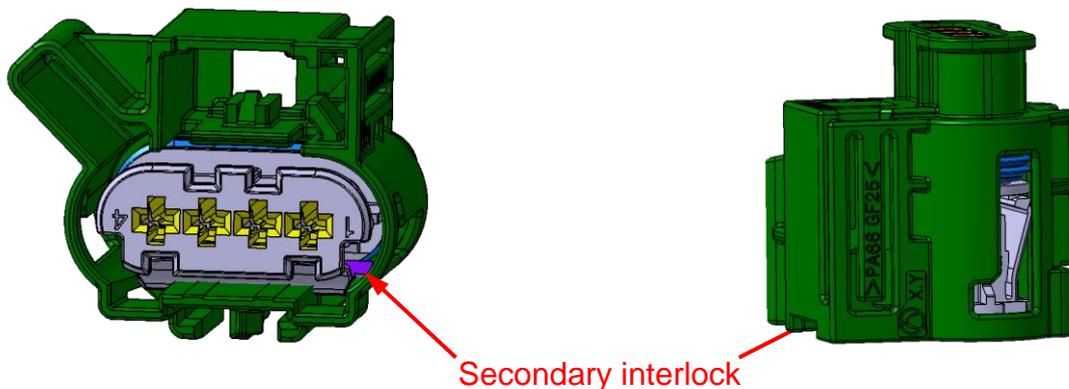
a)	Product Specification	EPS-100104-00
b)	Processing Specification Tyco 114-18148-0	AMP MCP 2.8 Version 07/2013 Rev. D
c)	„Deutsche Norm“ DIN EN 60352-2	Solder free electrical connection Part 2: crimp connection
d)	Customer Drawing 809-322-...00 809-321-...00 809-323-...00	4-Pol 2.8 Socket housing 4-Pol 2.8 Plug housing ZB Stecker HV- Abschaltvorrichtung

### 3. Delivery Condition / Product Components of the Socket housing

#### 3.1. Delivery Condition

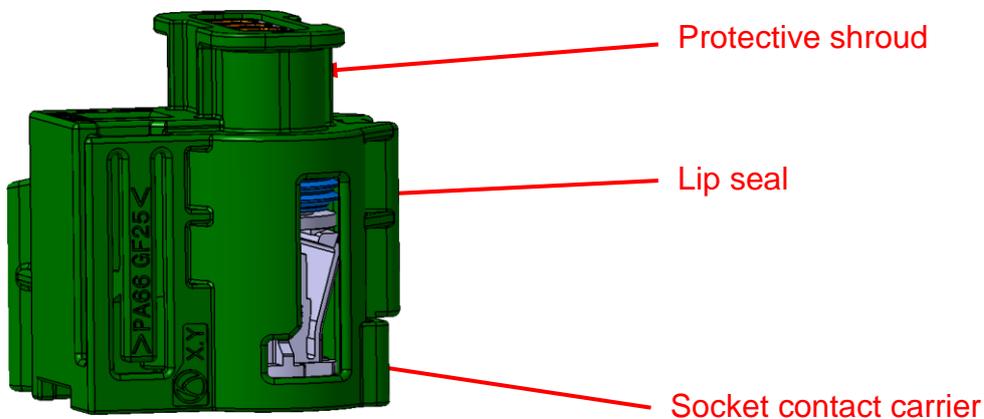
The socket housing of the HV-Device is delivered in the shown condition with open secondary interlock.

In case of a closed secondary interlock, depending on a wrong handling, you can bring the secondary interlock back in open preposition as described in point 6.2



#### 3.2. Product Components

The socket housing of the HV-Device consists of the socket contact carrier, lip seal and protective shroud.

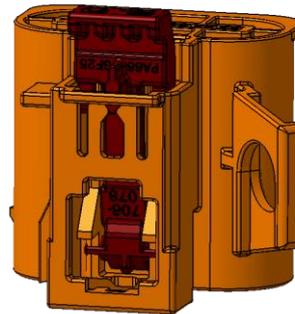
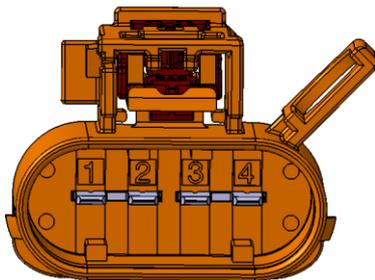




## 4. Delivery Condition / Product Components of the Plug housing

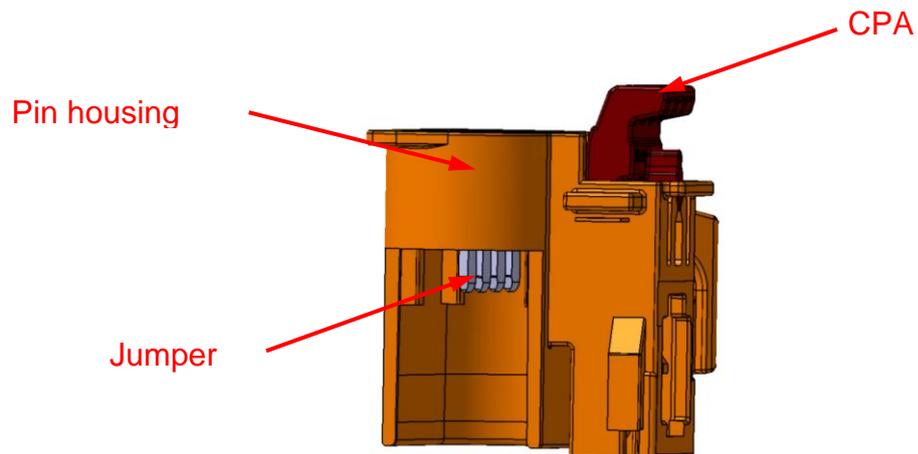
### 4.1. Delivery Condition

The Plug housing from the HV-Device is delivered with CPA in preposition.



### 4.2. Product Components

The Plug housing from the HV-Device consists of the pin housing, 2 jumpers and the CPA.





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## **5. Usable contacts**

### **5.1. Usable contacts with seal**

Contact: see customer drawing  
Chamber-Ø: 5.18mm

Associated processing tools such as crimping tools, hand crimp pliers and removal tools see Tyco processing specification.

To ensure the tightness of the overall system, all contacts must be fitted with seal. In the case of reduced contact equipment, the remaining contact chambers must be fitted with a single wire dummy plug.



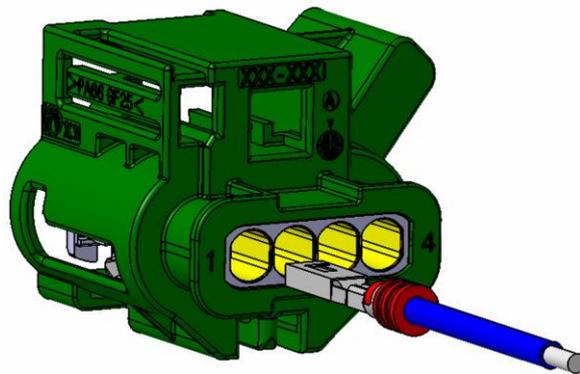
## **6. Assembling / Tailoring of the socket housing**

### **6.1. Assembling of contacts**

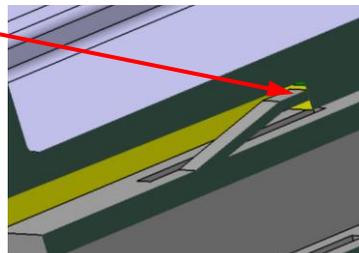
#### **6.1.1. Primary locking mechanism**

The MCP contact can be mounted on both sides.

When the contact has reached his end position, a “click” noise of the contact primary locking can be heard. The contacts are not coded and can also be inserted turned 180°.



**Active primary  
locking mechanism**

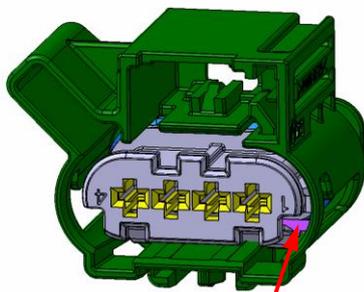




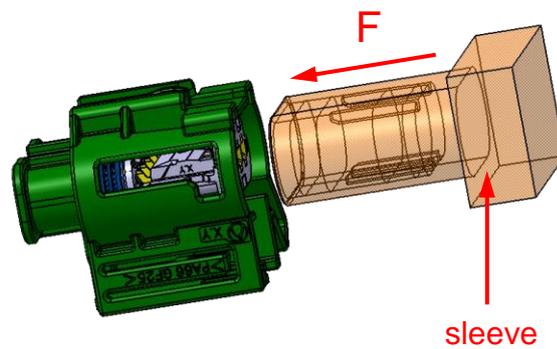
6.1.2. Secondary locking mechanism

After the primary locking of the 2.8 contact is locked in the housing, the secondary locking must be actuated. This is brought into the end locking position using a sleeve with extended coding bars (variant 1) or using a locking tool with pin (variant 2)

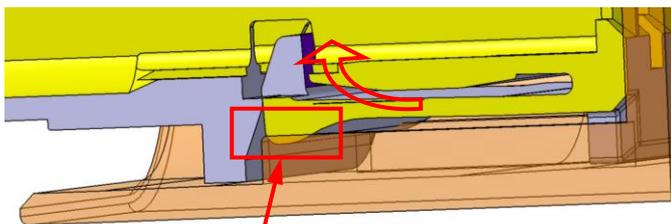
**Variant 1** Sleeve with extended coding bars = locking bars



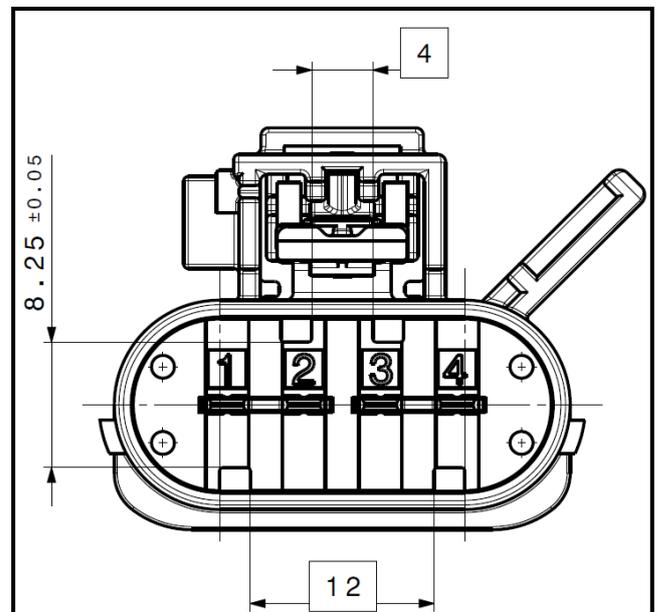
Open Secondary locking interlock



Specification locking sleeve



Locking bar locked the Secondary locking

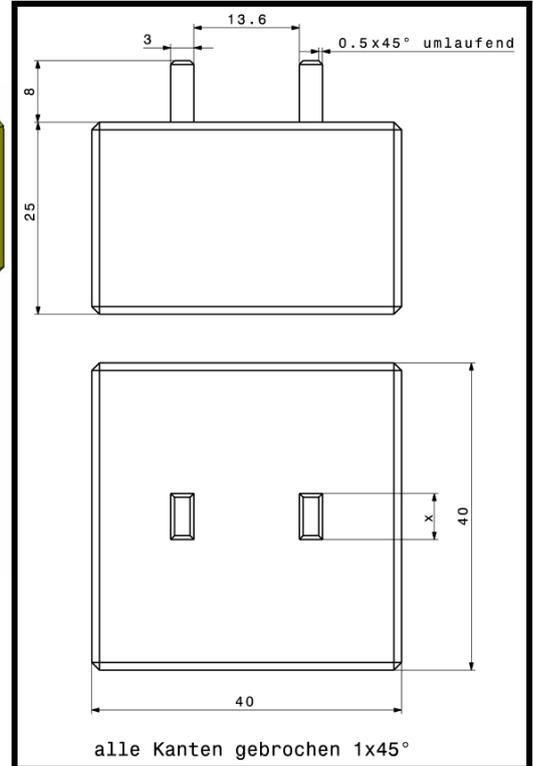
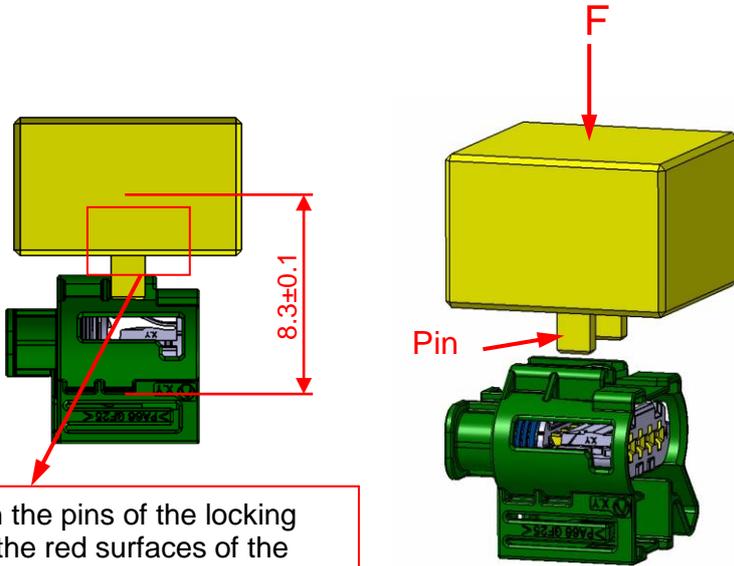


Picture of Plug Housing Cod. A, acc. 809-321-...00

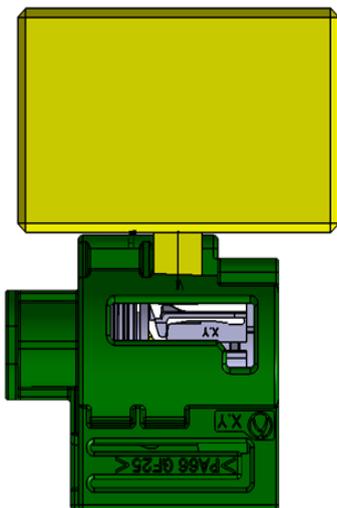


**Variant 2** Locking tool with pin

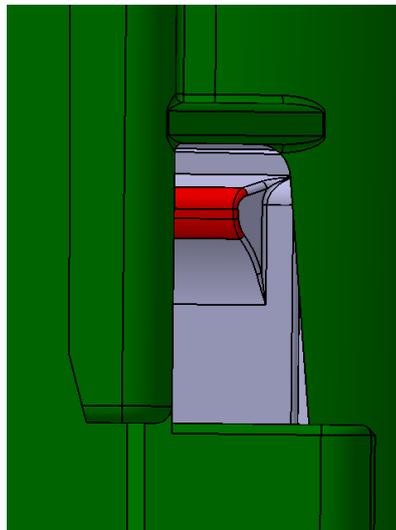
Specification locking tool



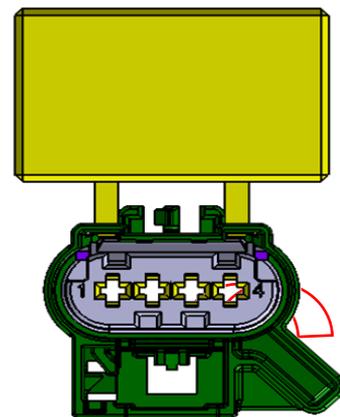
Position the pins of the locking tool on the red surfaces of the secondary locking. The pin length x must be selected so that the pins fit into the windows with the dimension  $8.3 \pm 0.1$ mm



Front View



Side view



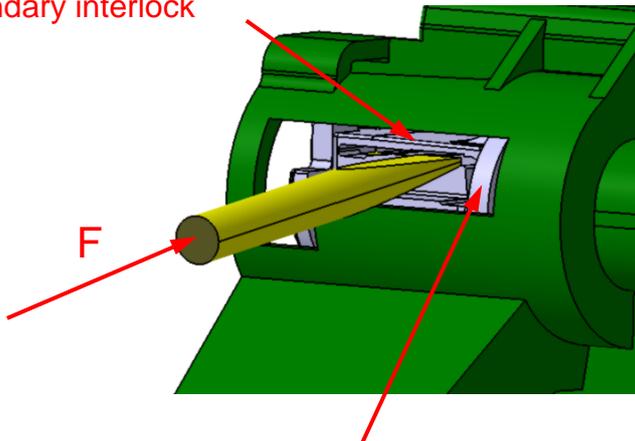
Press the locking tool until you hear a locking noise.



## 6.2. Demounting of the contacts

In the event of incorrect assembly of the contacts, disassembly must be carried out as described: The secondary interlock can be opened with a suitable screwdriver, which must be pushed between the socket carrier and the secondary interlock and then pushed out.

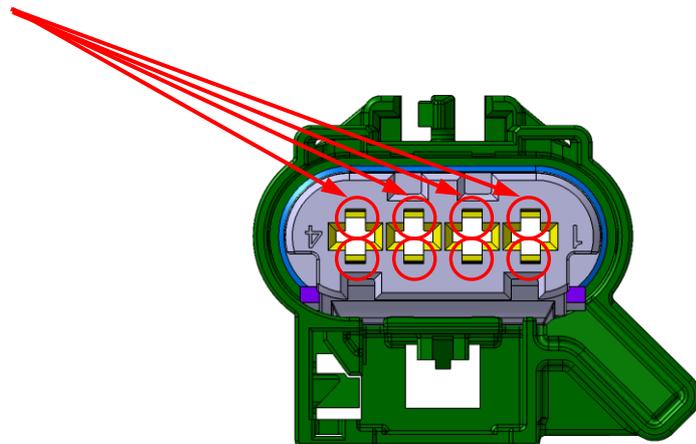
Secondary interlock



Contact carrier

Then deactivate the primary locking mechanism of the contact.  
See Tyco contact processing specification.

Unlocking opening



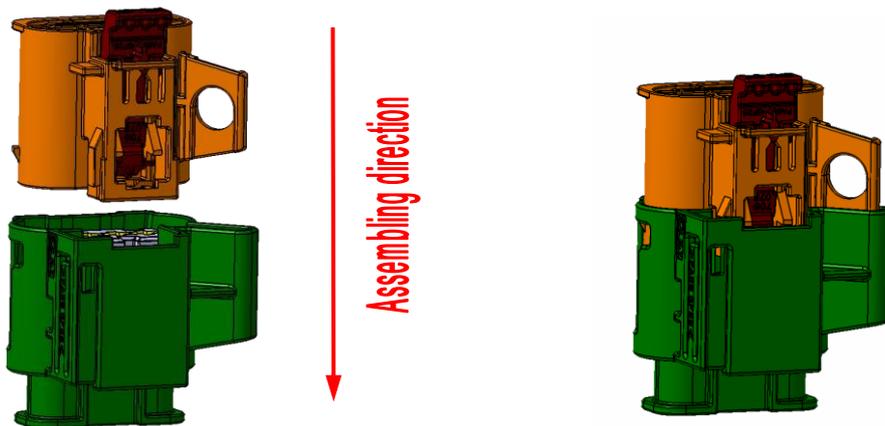


## 7. Assembling and Disassembling from the HV-Device

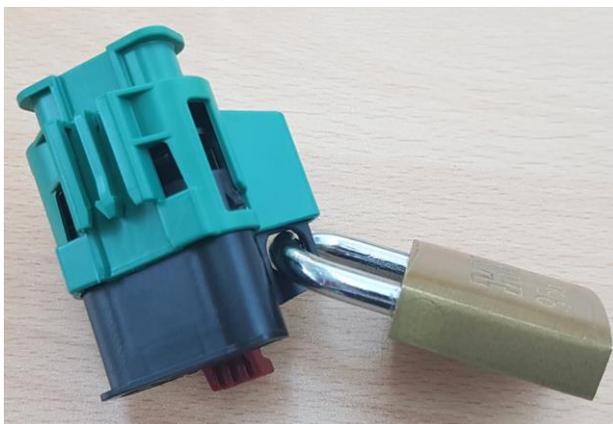
### 7.1. Assembling HV-Device

After the Socket housing is completely populated with contacts, the HV-Device can be completed through the assembling of the Plug housing into the Socket housing. Therefore the Plug housing must be plugged in vertical to the Socket housing. The lateral lock noses of the pin housing must be locked into the Socket housing. Now the HV-Device is in the "OFF" position, preposition. In this position there is no current transmission between pin 1 and pin 2 or pin 3 and pin 4.

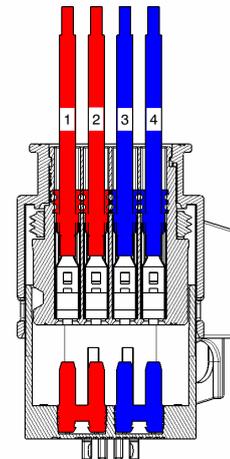
**For maintenance purposes on the vehicle, a padlock, Ø4.5 to Ø6mm, must be fitted in the "OFF" position.**



„OFF“ - position with padlock



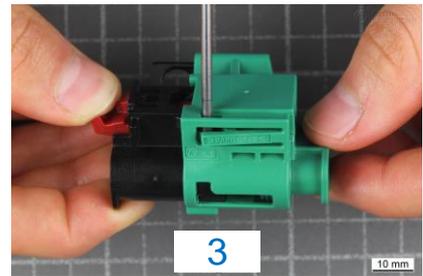
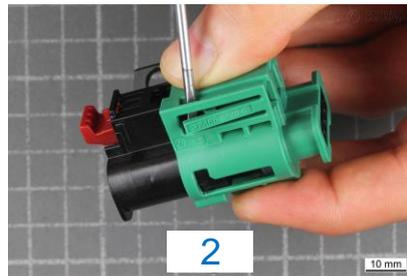
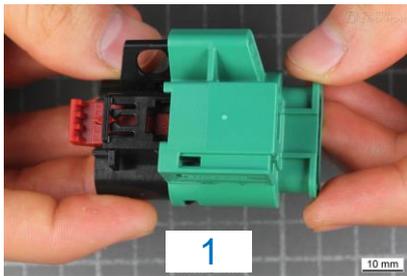
Symbol image



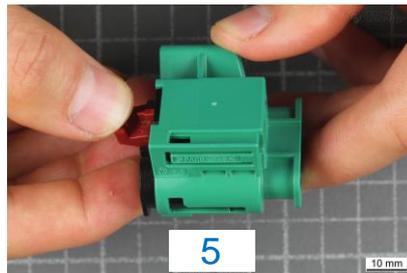
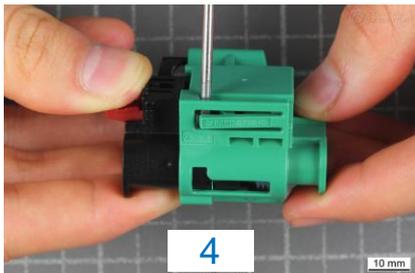


## 7.2. Closure of the HV-Device

When you need current flow in the system, you have to remove the padlock and move the Plug housing in end position to the Socket housing see process. In this position there will be power transmission from pin 1 to pin 2 and from pin 3 to pin 4.



- 1) The HV-Device in „OFF“ position. (Preposition)
- 2) Deactivated the safety lock with a matching phasing tester or screw driver, see customer drawing: 809-323-...00, and keep it in Position.
- 3) Additionally you have to actuate the snap arm.



- 4) Move the Plug housing from pre-in end position to the Socket housing.
- 5) Remove the phasing tester or screw driver and release the snap arm. After this, move the CPA from pre-in end position.
- 6) The HV-Device is closed. (Endposition)

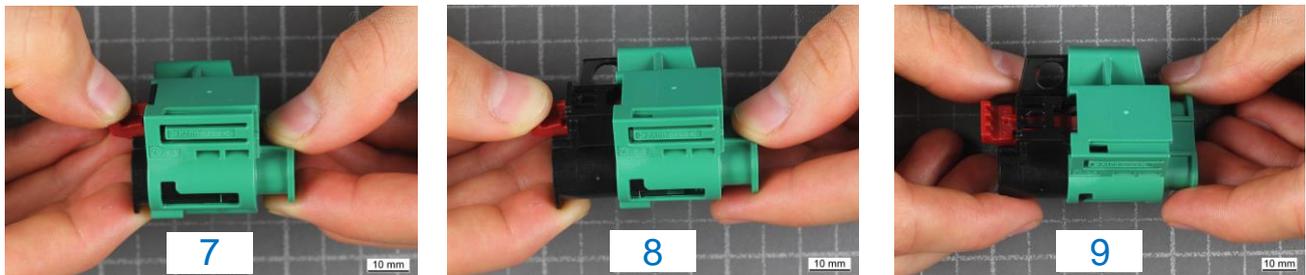


### 7.3. Open the HV-Device

For the interruption of the power transmission, you have to move the Plug housing in „OFF“ position, preposition, to the Socket housing, see process. In this position the connection from pin 1 to pin 2 and from pin 3 to pin 4 is interrupted.

**In “OFF” position you must use a padlock, Ø4.5 till Ø6mm, for car service.**

It is not allowed to bring the Plug housing in „OFF“ position, preposition, through pulling on the wire harness!

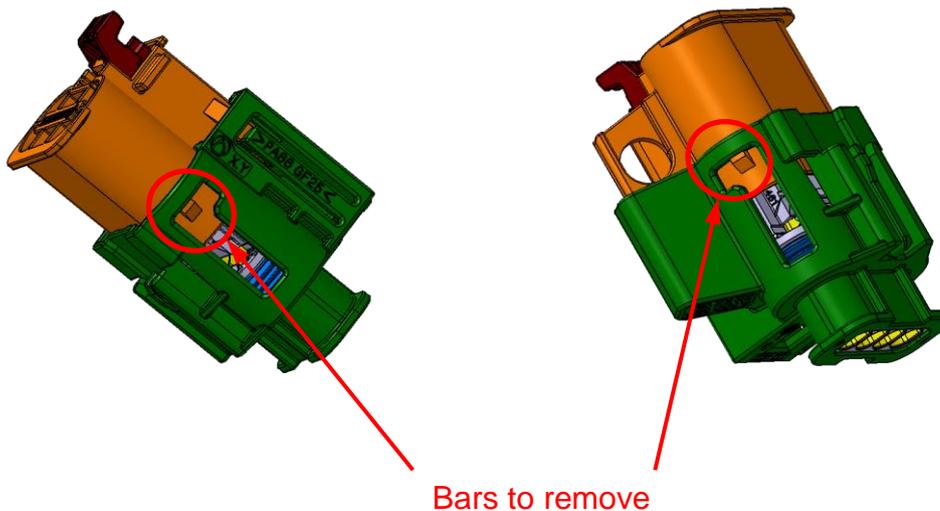


- 7) Actuate the snap arm. (CPA)
- 8) Hold the snap arm in position and move the Plug housing from end-in preposition „OFF“ position, till locating the surface.
- 9) The HV-Device is in „OFF“ position. (Preposition)



## 7.4. Disassembling of the HV-Device

It is necessary to demolish the Socket housing to remove it from the Plug housing.  
To do this, remove the side bars of the protective shroud with a cutter or a similar tool.



Depending of the high risk to demolish the snap geometry of the Plug housing, it is necessary to exchange the complete HV-Device.

## 8. Comments:

It's not possible to deliver the HV-Device assembled in preposition. In this condition it's not possible to populate the contacts into the Socket housing.

## 9. Index change table

<b>Edition</b>	<b>Index</b>	<b>Editing</b>
May 2024	Fist edition	Walser