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		AUTHORIZED BY SOUDY Aymeric	DATE 26/06/2020
CLASSIFICATION UNRESTRICTED			

1.0 OBJECTIVE

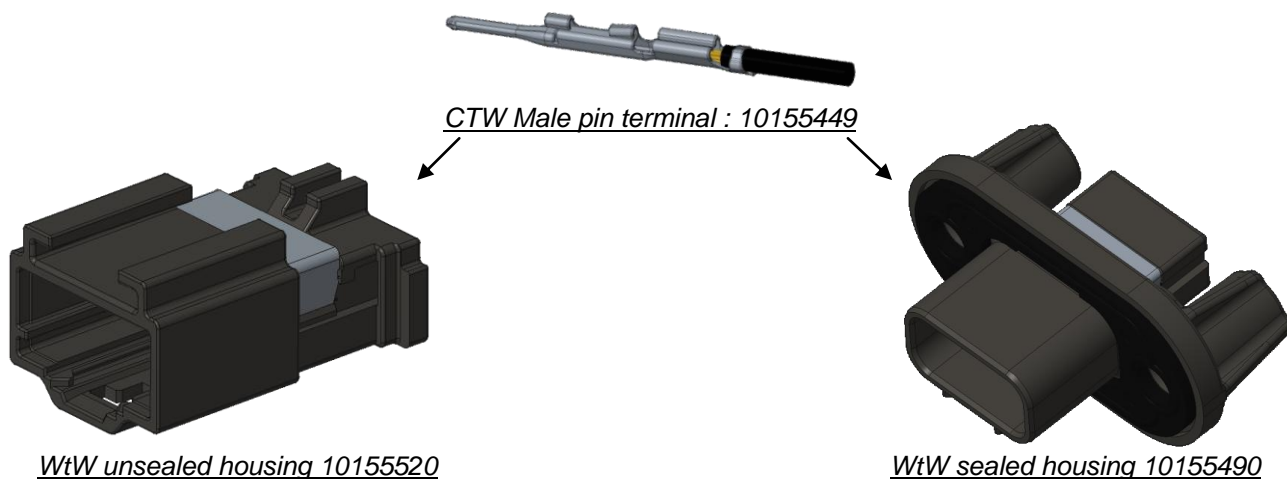
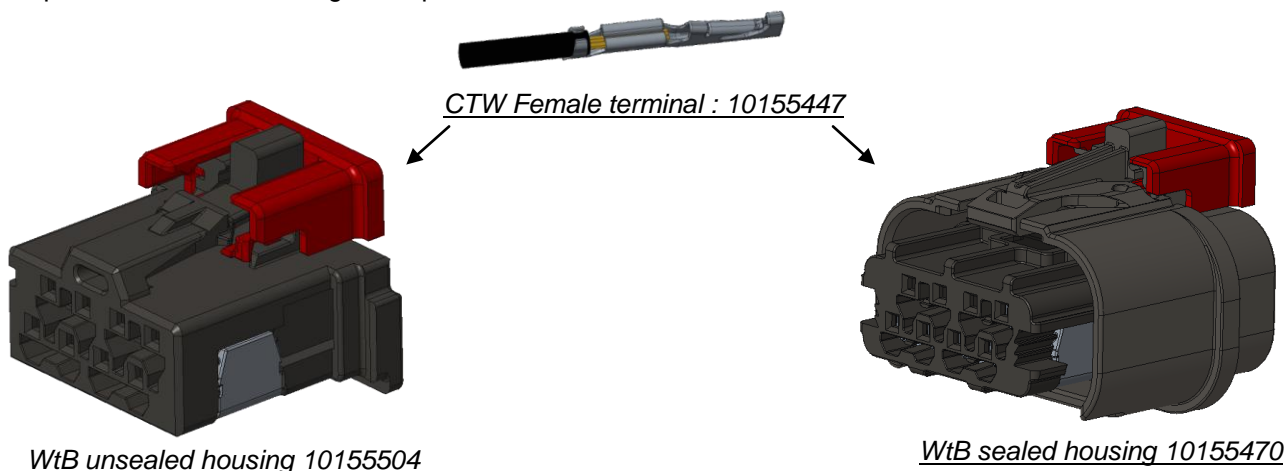
This specification provides information and requirements regarding customer application of Minitek MicroSpaceXS™ connectors. This specification is intended to provide general guidance for application process development. It is recognized that no single application process will work under all customer scenarios and that customers will develop their own application processes to meet their needs. However, if these application processes differ greatly from the one recommended, AFCl cannot guarantee results.


2.0 SCOPE

This specification provides information and requirements regarding customer application of Minitek MicroSpaceXS™ connector.

3.0 GENERAL

This document is meant to be an application guide. If there is a conflict between the product drawings and specifications, the drawings take precedence.



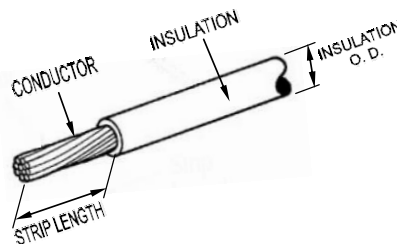
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4.0 DRAWINGS AND APPLICABLE DOCUMENTS

- AFCI PRODUCT SPECIFICATION GS-12-1634
- AFCI PRODUCT DRAWINGS
- APPLICATION MANUALS/INSTRUCTION SHEETS (IF NOT INCLUDED IN THIS DOCUMENT)

Product drawings and **AFCI's GS-12-1634** Product Specification are available at www.fci.com. In the event of a conflict between this application specification and the drawing, the drawing will take precedence. Customers are advised to refer to the latest revision level of AFCI product drawings for appropriate details.

5.0 APPLICATION REQUIREMENTS



The wires in Table (1) are qualified for use with Terminal 10155447 & 10155449 :

Table 1

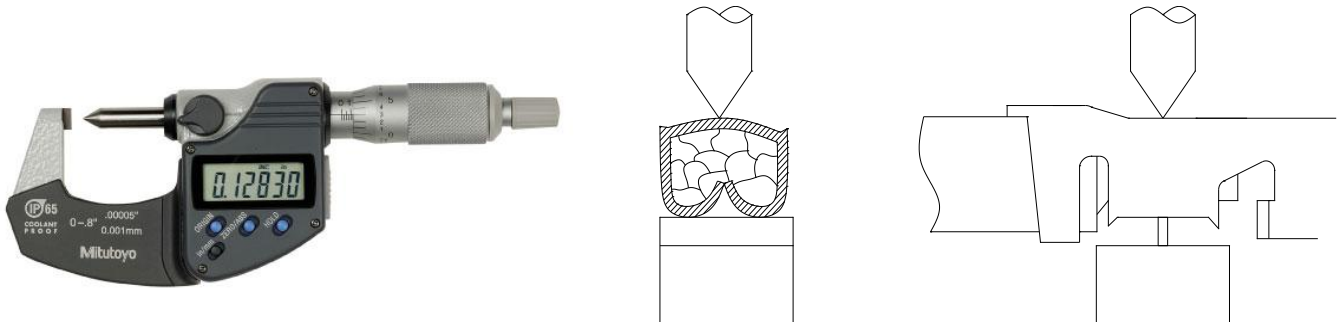
Wire Manufacturers PN	#of Conductors	AWG	Solid -or- Stranded	# of Strands Insulation	Insulation Material	Insulation Diameter	Strip Length
-	7	AWG22	Stranded	-	TPE-E	1.4mm max	4mm
-	7	AWG24	Stranded	-	TPE-E	1.4mm max	
-	7	AWG26	Stranded	-	TPE-E	1.1mm max	
-	7	AWG28	Stranded	-	TPE-E	0.9mm max	

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6.0 POST-APPLICATION INSPECTION PROCEDURES

6.1 Crimp height and width measurement :

6.1.1 Use Crimp Height Type Micrometers to measure crimping height.



6.2 Required crimping dimensions, crimp height and width for different wire AWG are defined in Table 2 & Table 3.

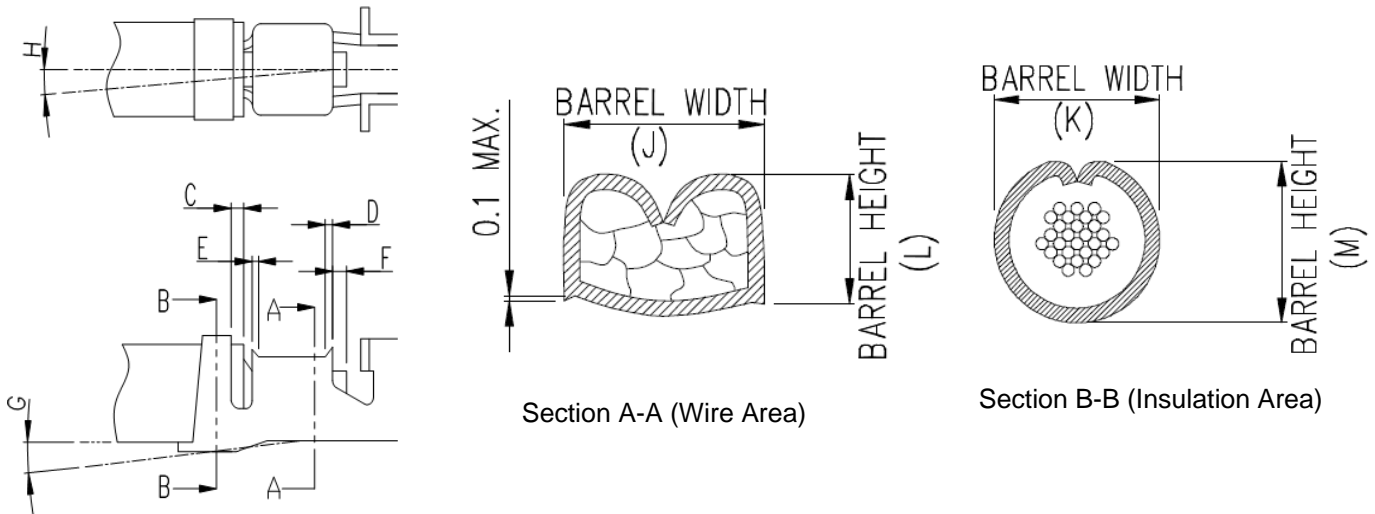


Table 2 (unit : mm)

Item	Requirement	Note	
Insulation position	C	0.5 mm	Insulation and wire should be both visual in this area
Front bell mouth	D	-	Not required
Rear bell mouth	E	0.2 - 0.5mm	
Extruded wire length	F	0.5mm max.	
Bend up / down	G	±3° max.	
Bend right / left	H	±3° max.	

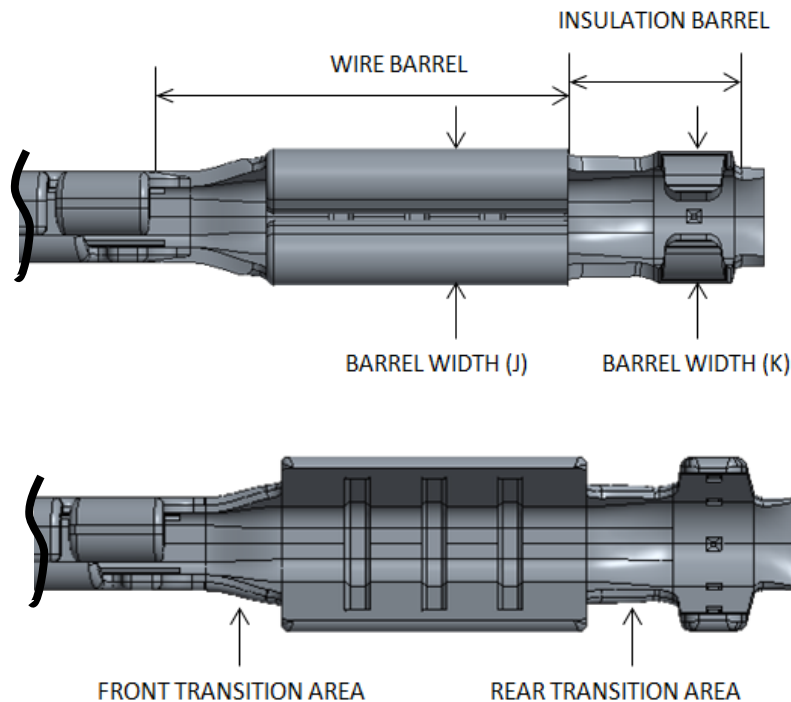
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Table 3 (unit : mm)

Crimping Width & Height (mm)		AWG 22	AWG 24	AWG 26	AWG 28
Crimping Width (Wire barrel)	J	1.1 ^{0/-0.05}	1.1 ^{0/-0.05}	0.9 ^{0/-0.05}	0.9 ^{0/-0.05}
Crimping Width (Insulation barrel)	K	1.35 ^{0/-0.1}	1.35 ^{0/-0.1}	1.05 ^{0/-0.1}	0.95 ^{0/-0.1}
Crimping Height (Wire barrel)	L	0.74 ^{+/-0.03}	0.62 ^{+/-0.03}	0.56 ^{+/-0.03}	0.54 ^{+/-0.03}
Crimping Height (Insulation barrel)	M	1.45 ^{0/-0.1}	1.35 ^{0/-0.1}	1.2 ^{0/-0.1}	1 ^{0/-0.1}

6.3 Required width dimensions :

- 6.3.1 Width dimensions should be applied to ensure the good insertion of the terminal into the housing.
- 6.3.2 During the crimp operation, the front transition area should be managed to respect the crimping widths (J) all along the wire barrel area
- 6.3.3 During the crimp operation, the rear transition area should be managed to respect the crimping widths (K) all along the insulation barrel area



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6.4 Pullout force measurement :

- 6.4.1 After crimping, pullout force measurement should be applied to ensure the performance.
- 6.4.2 Apply an axial pullout force on the wire at a rate of 25 ± 6 mm.
- 6.4.3 Pullout force should not be less the those listed in Table 4.


Table 4 (unit : N)

Wire AWG	AWG 22	AWG 24	AWG 26	AWG 28
Wire Pullout Force	50N min	35N min	25N min	15Nmin

6.5 Visual Inspection :

- 6.5.1 No damage, deformation on locking tabs, contact area or other portion of the terminals.
- 6.5.2 Insulation should not be crimped into wire barrel.




Wire should not be cut-off and insulation should not be broken after crimping process

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7.0 APPLICATION TOOLING

Application Tooling needed for installation of Housing Terminal 10155447 & 10155449 is defined in Table 5 :

Table 5 :

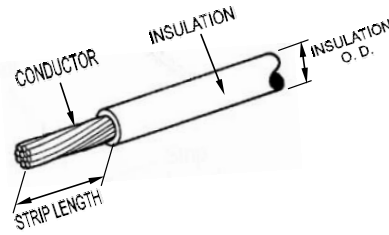
TOOL SUPPLIER	DESIGNATION	TERMINAL P/N	TOOL P/N	PHOTO FOR INFORMATION ONLY
AMPHENOL FILEC rfq@filec.fr	Mini applicator Minitex µSpace AWG22	10155447-Y11LF 10155449-Y11LF	T1011-22 T1032-22	
	Mini applicator Minitex µSpace AWG24	10155447-Y13LF 10155449-Y13LF	T1012-24 T1031-24	
	Mini applicator Minitex µSpace AWG26	10155447-Y12LF 10155449-Y12LF	T1013-26 T1033-26	
	Mini applicator Minitex µSpace AWG28	10155447-Y12LF 10155449-Y12LF	T1014-28 T1034-28	
	Spare parts for mini applicator Minitex µSpace AWG22	10155447-Y11LF 10155449-Y11LF	T2011-22 T2032-22	
	Spare parts for mini applicator Minitex µSpace AWG24	10155447-Y13LF 10155449-Y13LF	T2012-24 T2031-24	
	Spare parts for mini applicator Minitex µSpace AWG26	10155447-Y12LF 10155449-Y12LF	T2013-26 T2033-26	
	Spare parts for mini applicator Minitex µSpace AWG28	10155447-Y12LF 10155449-Y12LF	T2014-28 T2034-28	
	Crimping hand tool Minitex µSpace (without set for crimping)	10155447-XXLF 10155449-XXLF	T3001	
	Set for crimping hand tool Minitex µSpace AWG22	10155447-Y11LF 10155449-Y11LF	T3012-22 T3032-22	
	Set for crimping hand tool Minitex µSpace AWG24	10155447-Y13LF 10155449-Y13LF	T3013-24 T3033-24	
	Set for crimping hand tool Minitex µSpace AWG26	10155447-Y12LF 10155449-Y12LF	T3014-26 T3034-26	
	Set for crimping hand tool Minitex µSpace AWG28	10155447-Y12LF 10155449-Y12LF	T3015-28 T3035-28	

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8.0 APPLICATION PROCEDURE

8.1 CtW into Housing assembly :

1) Strip the wire (see Table 1)



2) Crimp the terminal on the wire (see Table 2, 3, 4)

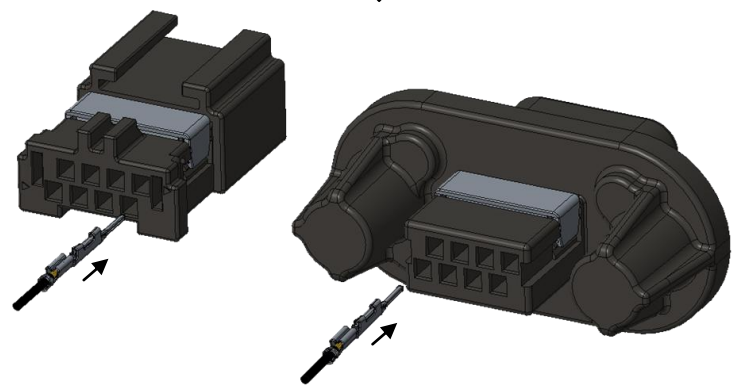
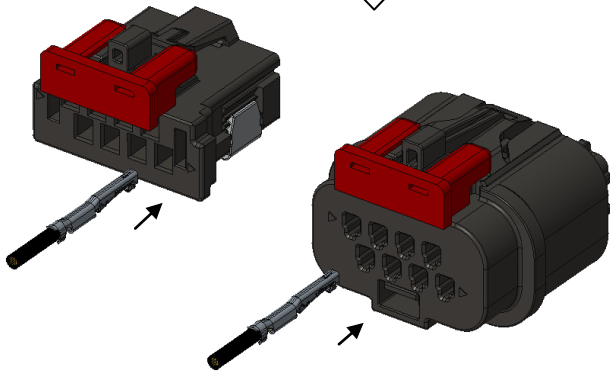


Female terminal pin 10155447



Male terminal pin 10155449

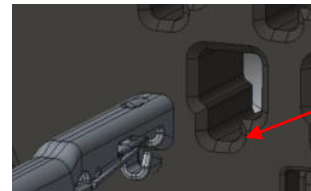
3) Insert terminals into the housing



-Make sure that terminals are well oriented during insertion into the housing



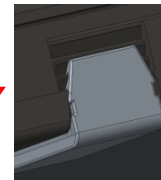
A stop into the unsealed housing avoid to insert male terminals in a wrong way




A poka yoke shape in the enter of the sealed housing avoid to insert the female terminal in a wrong way

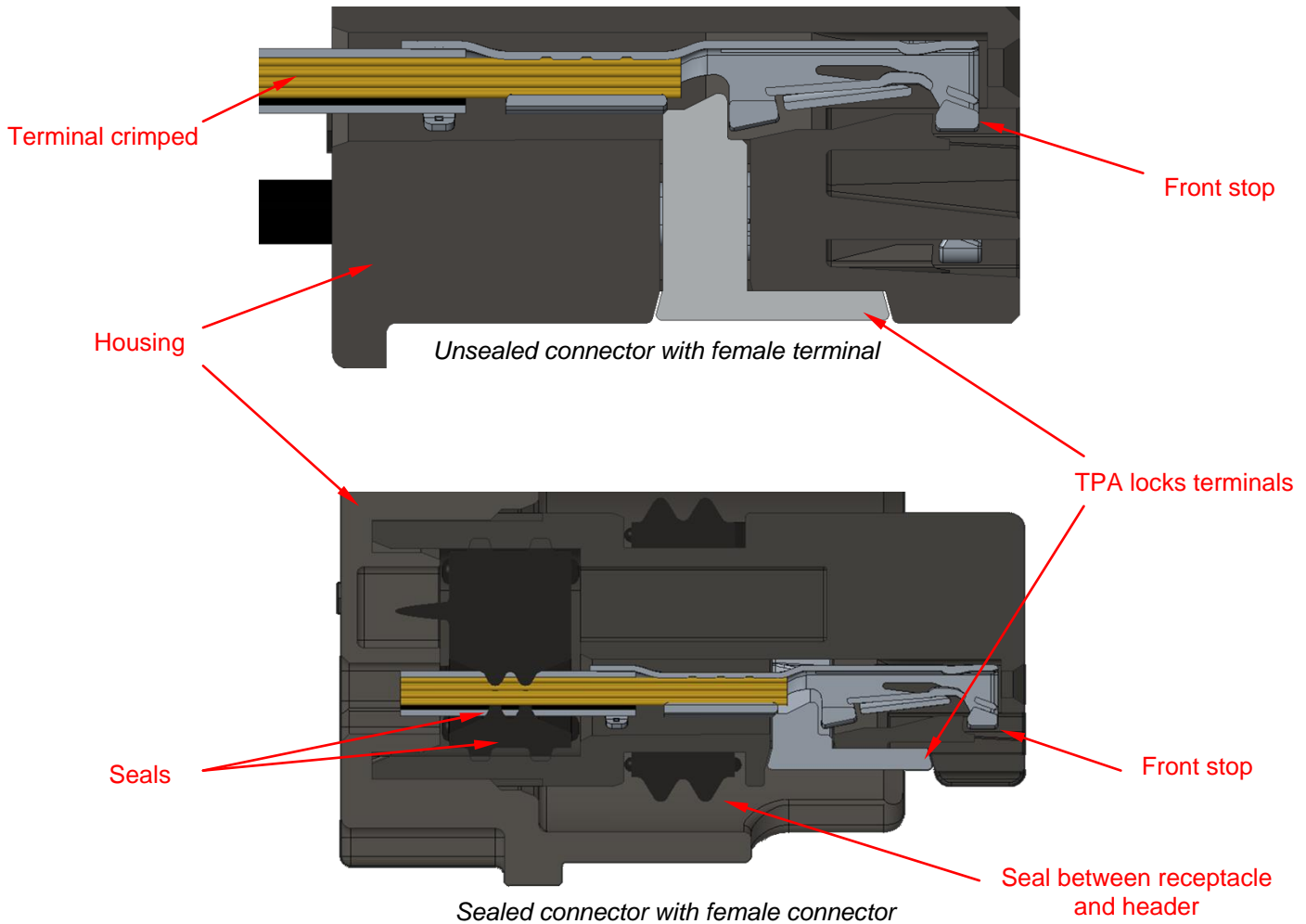


-Make sure that the TPA is in preload position before terminals insertion

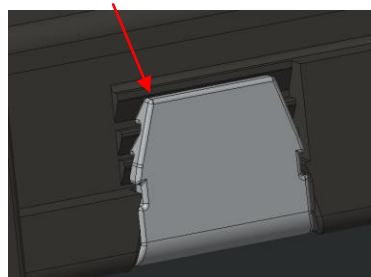


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Insert the terminal into HSG until the front is stopped by HSG. Then locking tab will be engaged the retention shoulder and prevent back out during mating. Pull back on the wire lightly and ensure the terminal is fully seated :



4) Close the TPA to block terminals

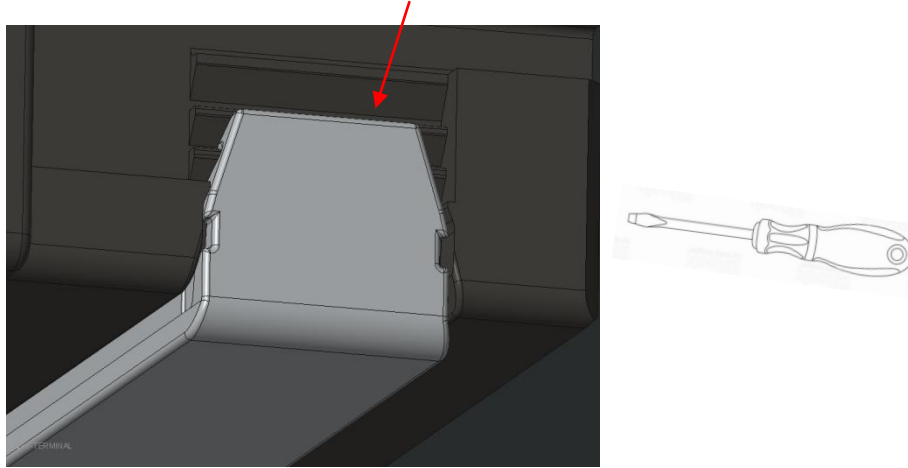


CPA in final position

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Terminals disassembly :

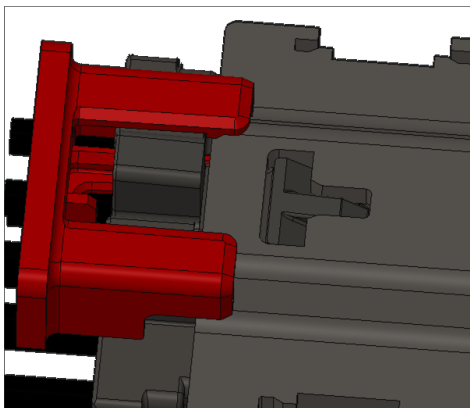
-Use a screw driver to put the TPA in preload position :



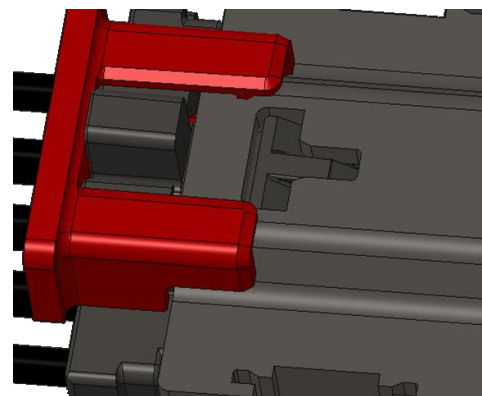
-Use a screw driver to push on clips below to deliver terminals :




8.2 CPA actuation :



Clip the header into the housing



Actuate the CPA

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REVISION RECORD

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