MEB Class 2 (4pos) unshielded

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

HISTORY OF CHANGES

Rev.	Description	Originator	Date
A	New document	Amith Manjunath	13.06.2022

- **This connector is intended for use in high-voltage applications. Special care must be applied to ensure that the connector functions as intended.**
- **If you suspect that the connector has been modified, damaged, contaminated or otherwise compromised, please discontinue it use immediately.**
- **This connector should only be serviced by a trained and qualified technician.**

1 SCOPE

1.1 Content

This specification covers the requirements for assembly of the unshielded connector acc. class 2 (4pos).

1.2 Processing notes

The processor is responsible for ensuring the quality of the manufacturing process and the proper function of the system. The warranty and liability is excluded, if quality deficiency or damages occurs by failing compliance to this specification or using not specified, not released tools and not released connector components.

2 APPLICABLE DOCUMENTS

The following mentioned documents are part of this specification. If there is a conflict between the information contained in the documents and this specification or with any other technical documentation supplied, the last valid customer drawings take preference.

2.1 TE Connectivity Documents

This Application Specification based on the latest valid customer drawings.

2.1.1 Customer drawings

Table 1: Customer drawings

4pos Receptacle housing	
2396290	4POS, AMP MCP 6.3/4.8K, REC HSG KIT
Single Components	
2386925	4POS, AMP MCP 6.3/4.8K, REC HSG ASSY, SLD
2329735	CABLE CLIP (Presented on drawing 2396290)

3 SPECIFICATIONS

Table 2: TE-Specifications

114-18388	APPLICATION SPECIFICATION AMP MCP 6.3/4.8K

3.1 General Documentation

3.1.1 Cable Specification

The connector is designed to meet cables in accordance with specification LV216-1. Connector has been validated with cable suppliers listed in appendix.

Table 3: Cable Specification

APTIV, M7848 FHLR2X-B	FHLR2X-B/ T150 / 600V AC / 1000V DC, Wire size : 4mm^2 & 6mm^2

4 REQUIRMENTS

4.1 Safety

Do not stack contact packages so high that the shipping containers buckle or deform.

4.2 Shelf Life

Conditions which comply with the environmental conditions of DIN EN 60721-3-1, standard classification IE11, should preferably be observed in the storage area. This applies particularly (though not exclusively) to the climatic conditions described therein (1K2).
Furthermore, the products must be protected from rain and intensively corrosive atmospheres. The necessary temperature control of the storage location must be ensured using a suitable temperature control without compulsory humidity control. During transport to the storage location, as well as during the period of storage itself, loads on the packages/stored products (e.g., from throwing/allowing the packaged products to fall, improper stacking height, etc.) are not permitted, to prevent damage to the goods.

4.2.1 Contacts

Silver surfaces are provided with a protective layer ex works. This protective layer loses its protective effect after 6 months to 2 years, depending on the respective ambient conditions. This leads to oxidation of the silver and the colour changes from brown to black. This oxide layer is composed of silver sulphide and is permeated during insertion upon final assembly of the contact system, so that the electrical properties generally continue to be comparable with those of a new part.

4.2.2 Seals and plastic parts

The average shelf life of plastic housings is 15 years. In the case of insulators with sealing elements, special attention must be paid to the contamination of the sealing surfaces after extended storage, since excessive contamination can negatively impact the function of the sealing surfaces.
Seals are made from long-term stable components and can generally be stored for 15 years if stored properly in their original packaging.

5 ASSEMBLY PROCEDURES

This specification covers the requirements for assembly. The following procedures show the details of the cable assembly and insertion instructions into the plug subassembly.

The processing is only valid for the specified cable at appendix and only these combinations have been validated by TE. Alternative cables may be used after ensuring performance through validation testing.

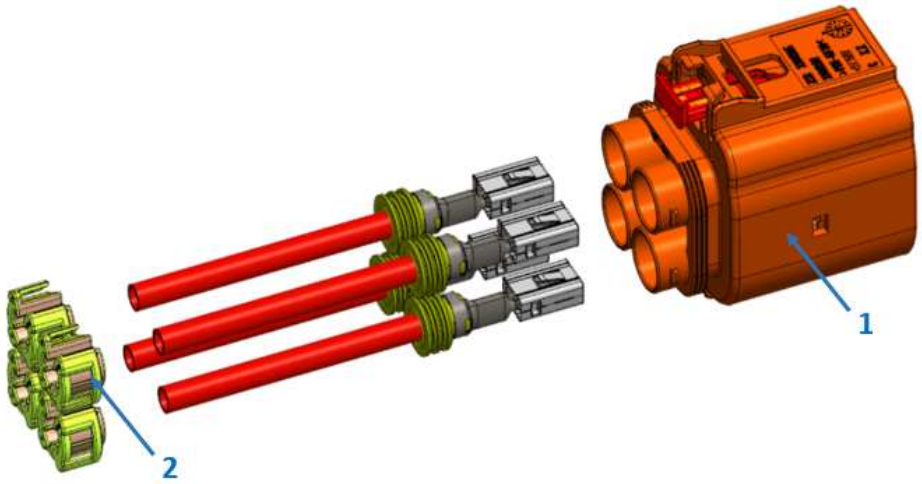

Figure 1: Exploded view of class 2, 4pos connector

Table 4: Bill of material

(ID)	TE-PN *TE-PN*	Description *Beschreibung*
1	2386925	4POS, AMP MCP 6.3/4.8K, REC HSG ASSY, SLD
2	2329735	CABLE CLIP

5.1 Assembly Instruction of Receptacle Housing

Step 1: Insert crimped contact into receptacle housing as shown in fig 2. Locking lance sound ensures contact is fully assembled into chamber.

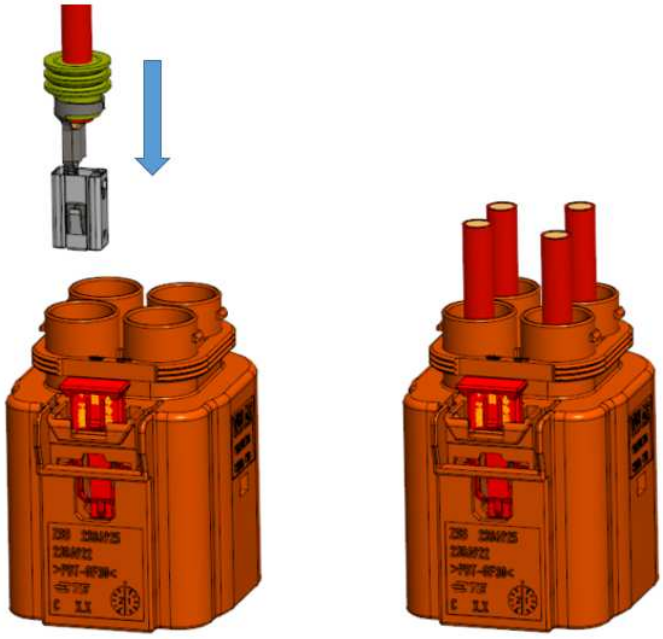

Figure 2: Contact insertion into receptacle housing

Step 2: Insert cable clip on to cable and slide along cable to lock at receptacle housing as shown in fig 3.

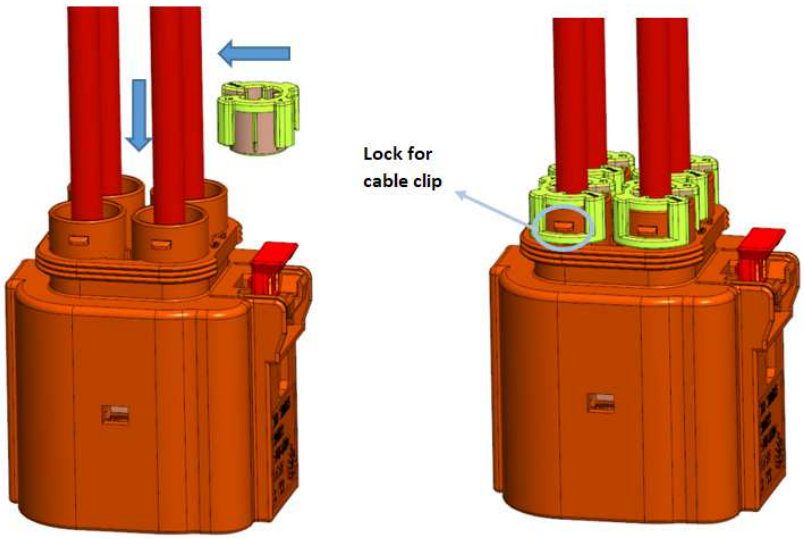

Figure 3: Assemble of Cable clip

6 CONNECTOR MATING AND UNMATING

6.1 Connector Mating

Step 1: Align receptacle housing and header. Assemble connector on the header till locking noise is heard.

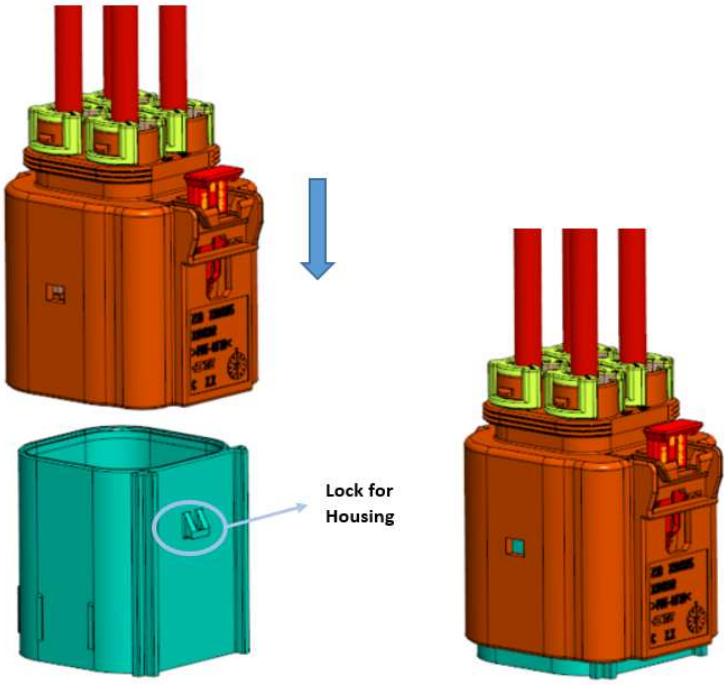

Figure 4: Housing assembly on header

Step 2: Move CPA from Pre lock to End lock position as shown in Fig 5.

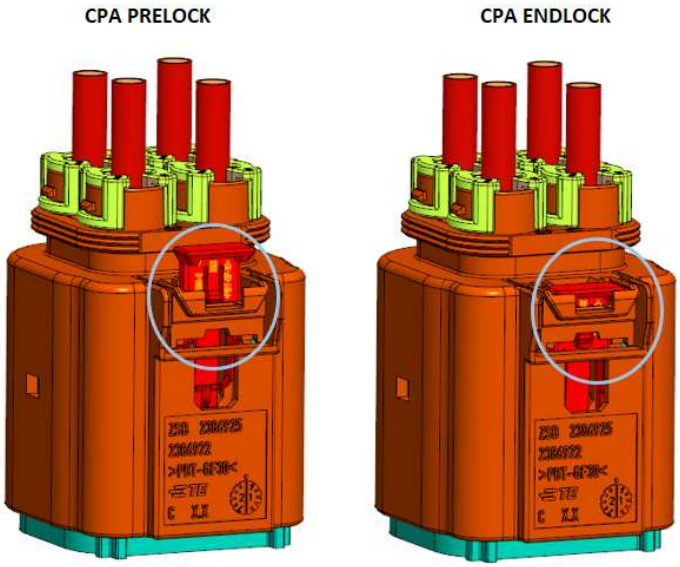

Figure 5: Move CPA to End lock

6.2 Connector Un-mating

Step 1: With help of screwdriver move CPA from End lock to Pre lock position.

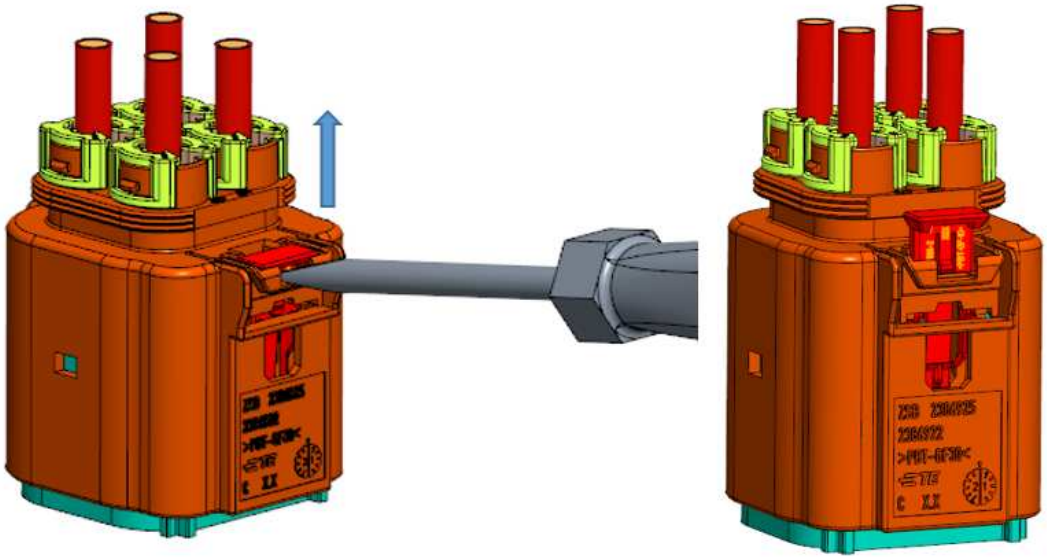

Figure 6: Move CPA to Pre lock

Step 2: Press latch to disassemble connector from the header and move housing in opposite direction.

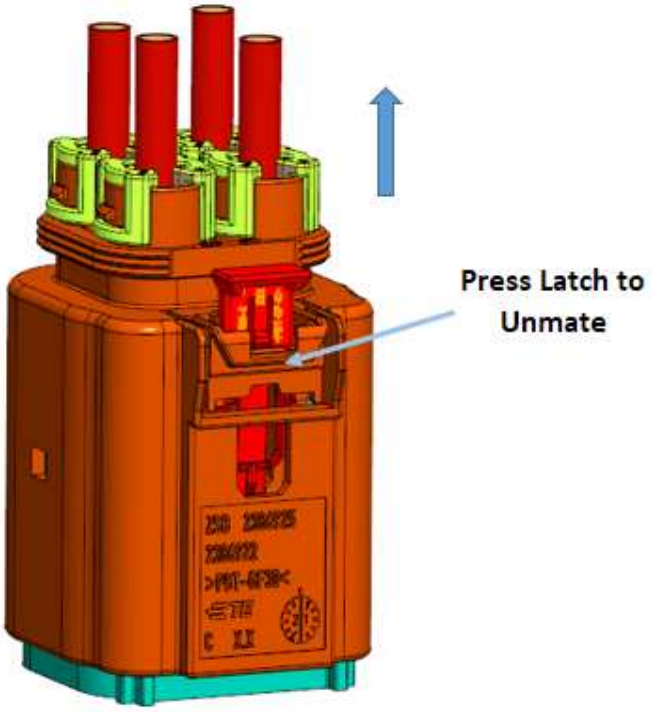

Figure 7: Connector un-mating

7 FINAL EXAMINATION

7.1 Visual Examination

After processing the connector assembly must be checked of completeness, correctness acc. customer drawings and free of damage. All parts must be fully locked.

7.2 Electrical Tests

Electrical characteristic values according product specification TE-108- 94841 and VW80303. The test parameter should be not exceeding the rated impulse withstand voltage from VW80303.

8 APPENDIX

8.1 Data sheets

8.1.1 APTIV M7848 FHLR2X-B

SIGNAL AND POWER SOLUTIONS

·APTIV·

M7848 FHLR2X-B -40°C ÷ 150°C

AUTOMOTIVE CABLE, HIGH VOLTAGE,
COPPER CONDUCTOR, XPE INSULATED,
THIN WALL

FAHRZEUGLEITUNG, HOCHVOLT LEITUNGEN,
Cu-LEITER, XPE ISOLIERUNG,
MIT REDUZIERTE WANDDICKE

Cable technical data / Leitung technische Daten

Voltage / Nennspannung:	600V AC / 1000V DC
Temp. class / Temperaturbereich:	-40°C ÷ 150°C / 3000 h
Test voltage / Prüfspannung:	eff. 8,0 kV (spark test)
Bending radius / Biegeradius:	2xD (static)
Packaging / Verpackung :	Plastic spool Ø800 mm
Marking / Herstellerkennung :	APTIV PL FHLR2X-B/T150 xx mm2 ⚡ATTENTION HIGH VOLTAGE MAX 600V AC / 1000V DC⚡
Standards / Norm:	VW 75210-1 ~~N 108 561_2.5mm²~~, N 108 562_4.0mm², N 108 563_6.0mm²

Data sheet No.	Revision	Revision date	Created by	Approved by
M78482003	C	2020.07.27	J. Stoklosa	A. Gorzelak