



# HMN-001 Ground Insert Series

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## 1. INTRODUCTION

This specification contains the regulations for assembly of HMN-001-MP/ HMN-001-FP ground Insert series and the handling of these inserts.

## 2. SUPPORTING DOCUMENTS

### 2.1. Customer drawings

Please refer to the customer drawings of HMN-001-MP/ HMN-001-FP ground Insert series.

### 2.2. Product specification

The product specifications of the used articles are to be taken into account. The product specification describes the technical data as e.g. regulations, approvals, temperature range and wire range.

For further reference refer Product spec. 108-137570.

### 2.3. Application Specification

Connectors shall be assembled as below mentioned application specifications to ensure correct connector assembly.

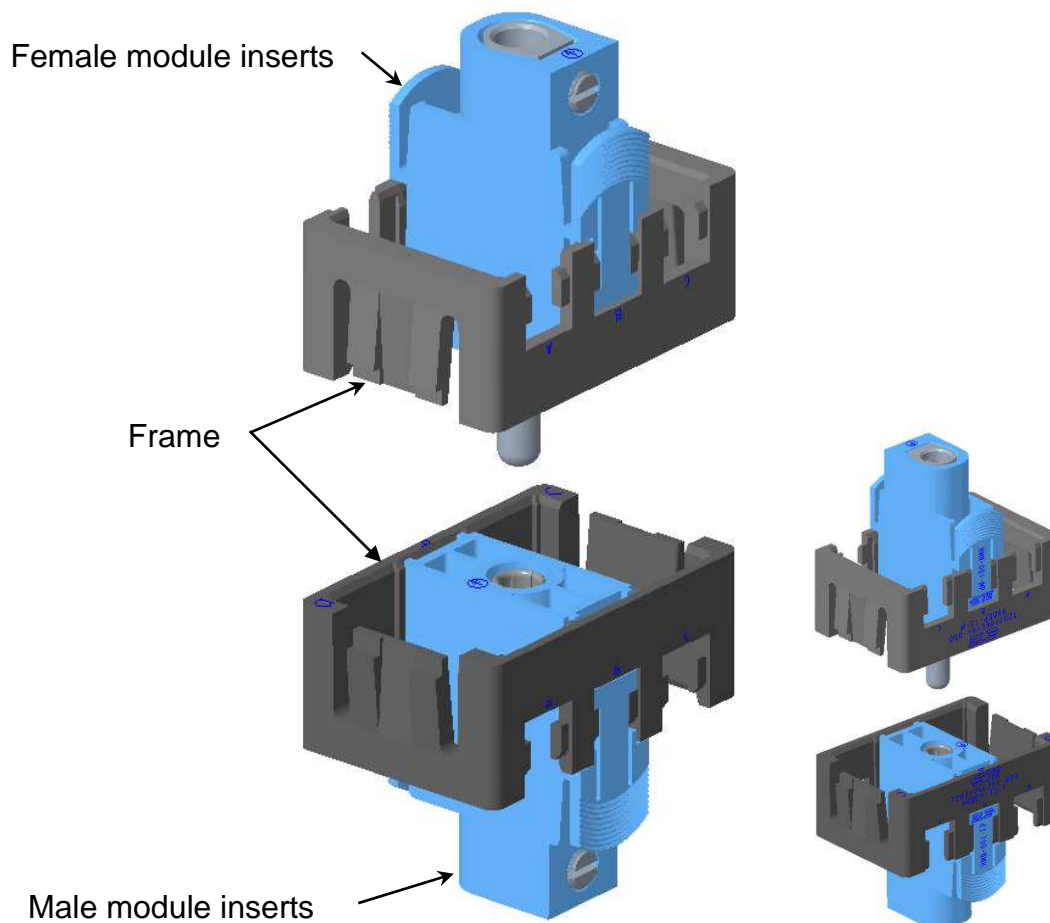
### 2.4. Standards

- EN 61984: Connectors - Safety requirements and tests
- IEC 60664-1: Insulation coordination for equipment within low-voltage systems (Part 1)
- EN 60529: Degrees of Protection Provided by Enclosures (IP Code)
- IEC 60999-1: Electrical copper conductors- Safety requirements for the clamping units for conductors
- EN 60068: Environmental testing

## 3. DESCRIPTION

This application specification describes the male module insert and the female module insert of the HMN-001-MP/ HMN-001-FP ground insert series.

The listed terms are used in the specification as shown HMN-001-MP/ HMN-001-FP ground insert series with H6BEP module frame as example in Figure 1.



**Figure: 1**

**Note:**

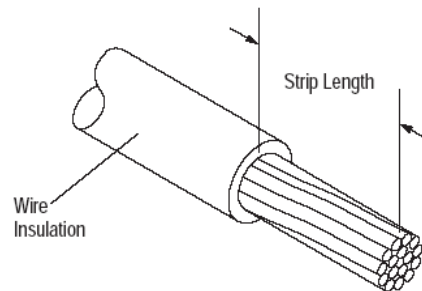
- HMN-001-MP/ HMN-001-FP ground insert series are module inserts. They have to be assembled with TE frame products (Plastic or metal) for a proper application.

## 4. ASSEMBLY

### 4.1. Wire selection and preparation

#### 4.1.1. Stripping length L

Use proper tooling to strip the wire.



**Figure: 2**



When stripping the wire, care must be taken to avoid scraping, nicking, or cutting the conductor. Care must also be used when handling the wire during stripping to prevent cracking or breaking the conductor and insulation.

Depending upon the cross section of the wire or cable, the stripping length has to be selected from the table below. See Table 1.

**Table: 1**

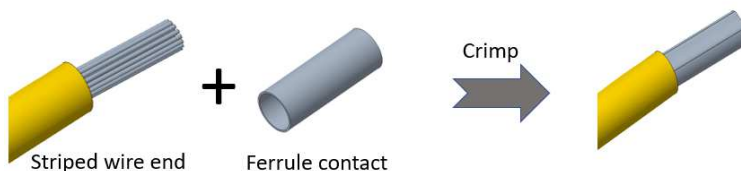
Contact Insert	Max. Wire cross section		Strip Length for Reference
	[mm <sup>2</sup> ]	AWG	L [mm]
HMN-001-MP HMN-001-FP	1.5 – 16.0 mm <sup>2</sup>	16 - 6	14.0+/-0.5

Note: For wire up to 25 mm<sup>2</sup> (AWG4), check the adaptability before finalizing your design.

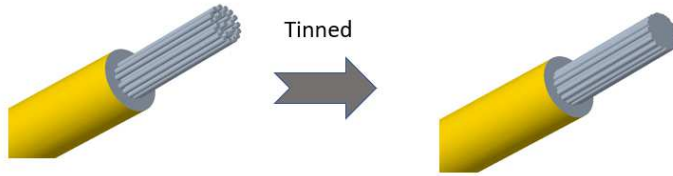
#### 4.1.2. Wire end preparation

[Note: Only for stranded wire cable, no necessary for solid cable].

Option 1: Crimp with ferrule contact

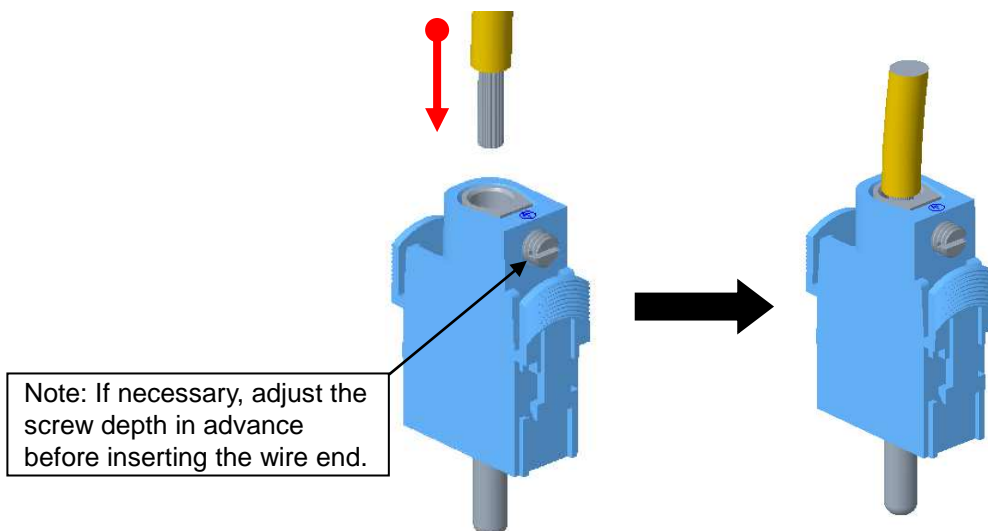


Option 2: Tinned the stripped wire end to solid wire



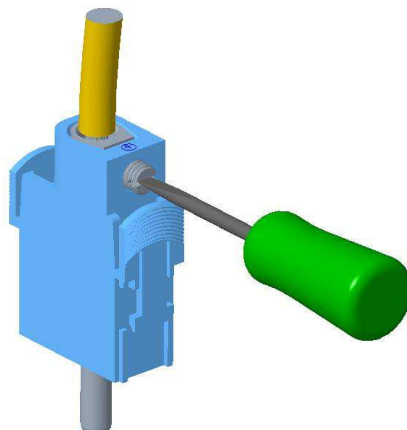
## 4.2. Assemble male module insert HMN-001-MP

Step1: Insert the prepared wire end into the male insert, till end position.



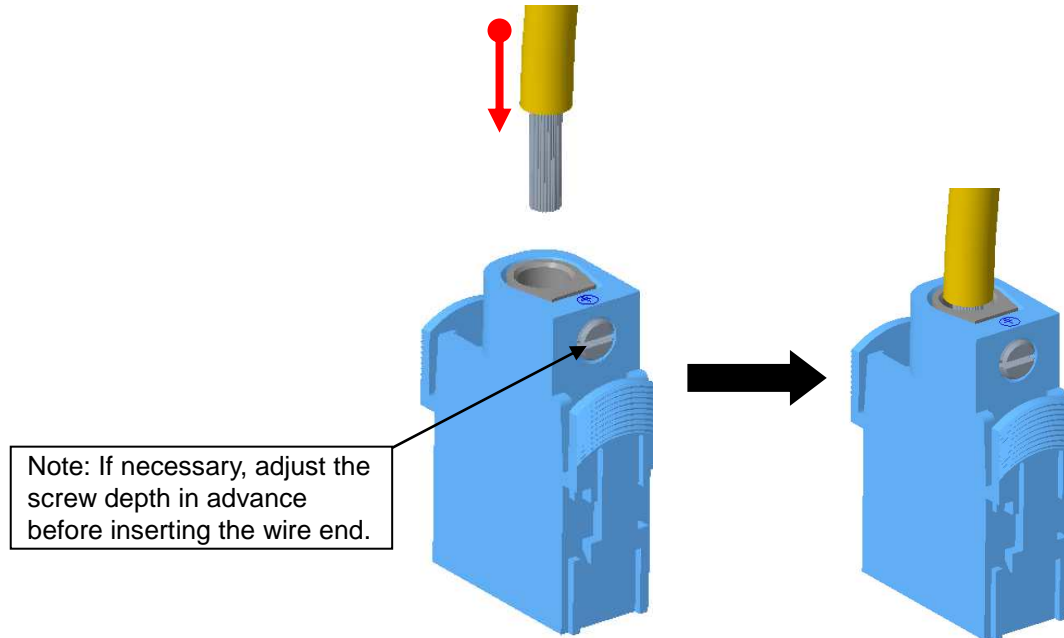
Step2: Lock the locking screw

Fix the wire end by locking the M6 screw via a straight screwdriver (Reference torque:1.2Nm).



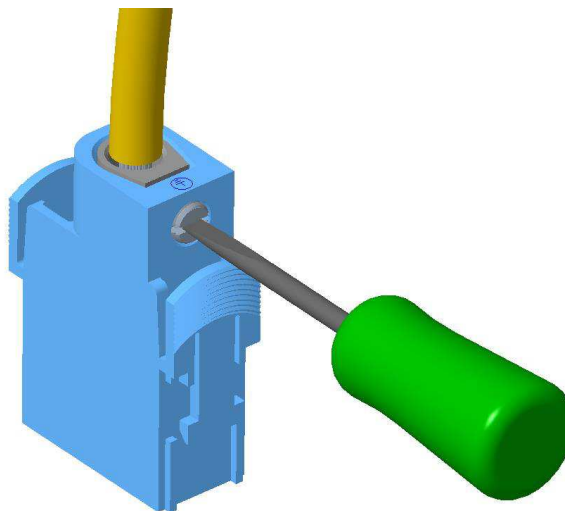
## 4.3. Assemble female module insert HMN-001-FP

Step1: Insert the prepared wire end into the female insert, till end position.



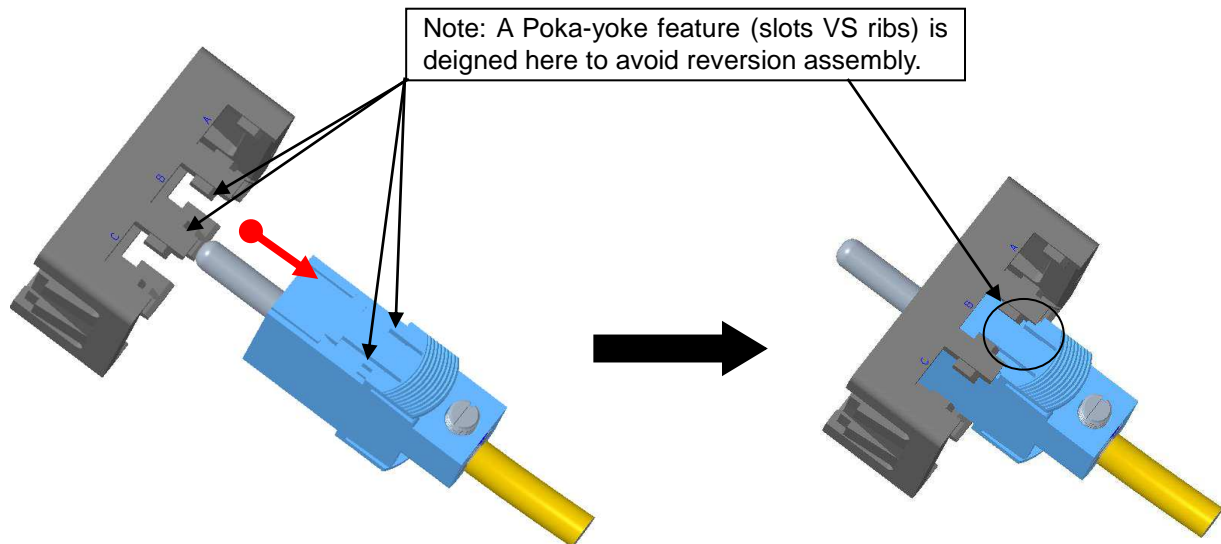
Step2: Lock the locking screw

Fix the wire end by locking the M6 screw via a straight screwdriver (Reference torque:1.2Nm).

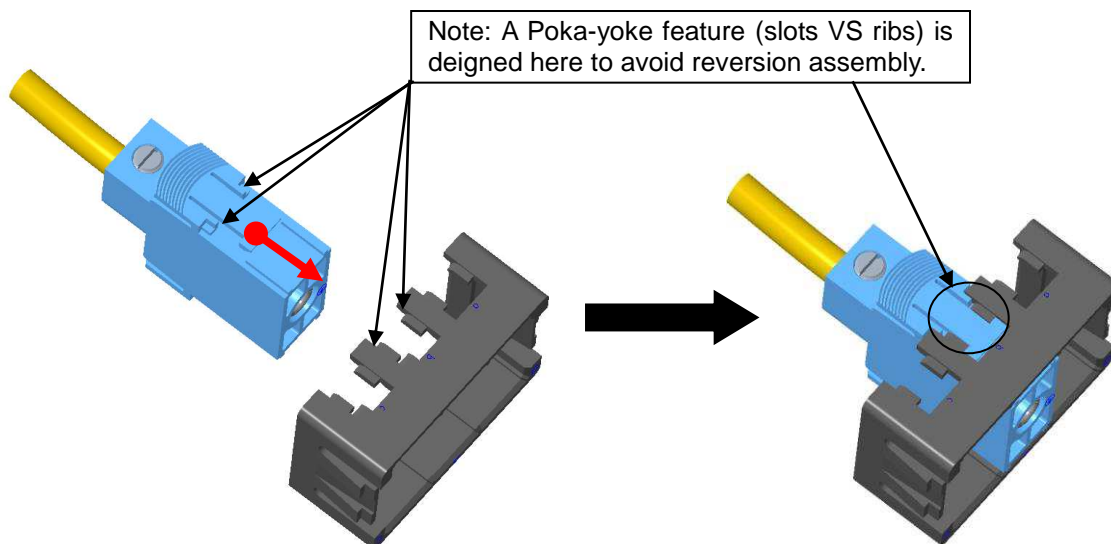


## 4.4. Assemble male module insert unit and female module insert unit to frame

Assemble male insert unit to frame.



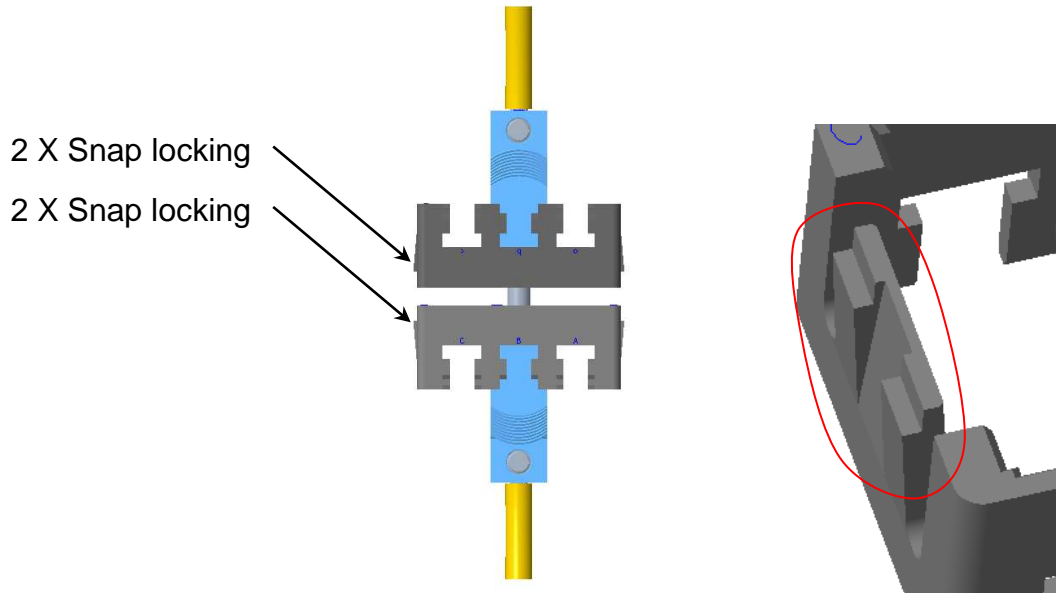
Assemble female insert unit to frame.



## 4.5. Assemble male and female module insert frame unit

### Option 1: Assemble with HBEP frame

The frame units are fixed to a corresponding hood or housing by 2X snap locking (refer to H6BEP housing & hood application specification).

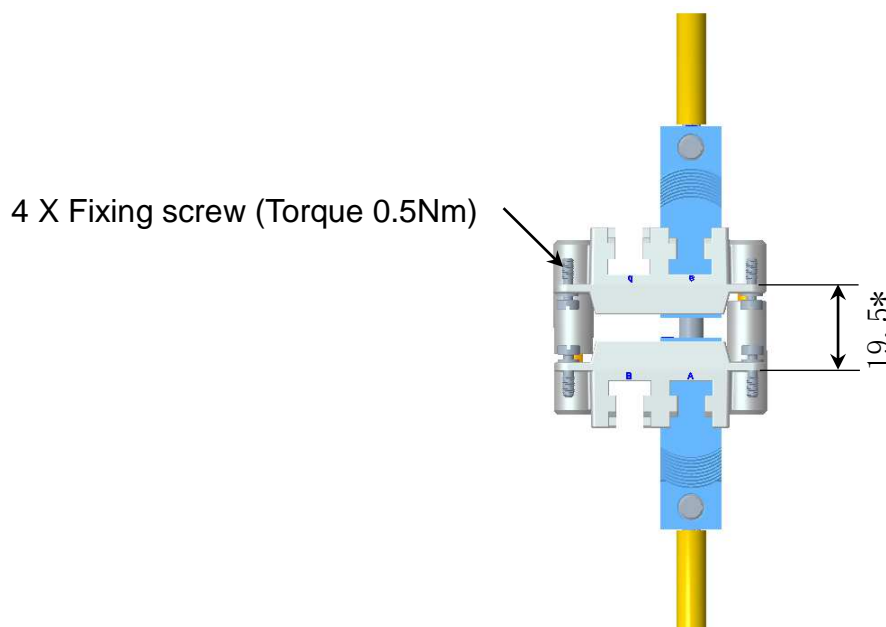


### Option 2: Assemble with HBN frame

The frame units are screwed into a corresponding hood or housing by 4X fixing screws M3. The torque is 0.5Nm for reference (Refer to related frame, housing & hood application specification).

[Note 1: 4.4 process is same]

[Note 2: \* The distance for safe contact of the contact inserts is max. 20.5mm]







## 5. STORAGE

### 5.1. Chemical exposure

Do not store the connectors near any chemical listed below as they may cause corrosion stress the connector contacts:

Alkalies, Ammonia, Citrates, Phosphates, Citrates, Sulfur, Amines, Carbonates, Nitrites, Sulfides, Nitrites, Tart rates.

### 5.2. Storage condition

The connectors should be stored in the air ventilation, no corrosive gas, no rain and no snow in the warehouse. Relative humidity: less than 85% RH (For connectors which include insert and contacts or contacts only, the preferred storage temperature is 10° C~27° C, Relative humidity: 25%~60%). The connectors should remain in the shipping containers until ready for use to prevent deformation to the contacts. The connectors should be used on a first in, first out basis to avoid storage contamination that could adversely affect electrical functions.



Any conflict is found between this file and customer drawings, customer drawings are preferential. And please contact TE Connectivity related engineer if necessary.

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