

**1,5mm Sensor Flattype Receptacle (SFK 1,5)  
1,5mm Sensor Flattype Receptacle II (SFK II 1,5)**

**TABLE OF CONTENT**

**1. SCOPE..... 2**

**2. REFERENCED DOCUMENTS..... 2**

2.1 Customer drawings ..... 2

2.2 Product specification ..... 2

2.3 Application specification ..... 2

2.4 Customer manual / Instruction sheet ..... 2

2.5 Standards ..... 2

**3. DESCRIPTION..... 3**

3.1 1,5mm Sensor Flattype Receptacle ..... 3

3.2 1,5mm Sensor Flattype Receptacle II ..... 4

**4. REQUIREMENTS ..... 5**

4.1 Wire ..... 5

4.2 Feature of crimp ..... 5

4.3 Crimpingdata for automatic application for SFK 1,5 ..... 6

4.4 Crimpingdata for application with ERGOCRIMP handcrimptool for SFK 1,5 ..... 6

4.5 Feature of crimp for SFK II 1,5 ..... 7

4.6 Crimpingdata for automatic application for SFK II 1,5 ..... 7

4.7 Crimpingdata for application with ERGOCRIMP handcrimptool for SFK II 1,5 ..... 8

4.8 Preparation of wire ..... 9

4.9 Cutoff and burr ..... 9

4.10 Wirecrimp ..... 9

4.11 Insulationcrimp ..... 9

4.12 Contactbody with spring ..... 9

4.13 Geometrical Tolerances of the crimped contact ..... 10

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## 1. SCOPE

This specification contains the guidelines for the application of 1,5mm Sensor Flattype Receptacle and 1,5mm Sensor Flattype Receptacle II. It denotes primarily the fully- or semi-automatic application of the contact and additionally the handcrimptool of Points 4.3 and 4.4 of TE. Exceptions only by special customer documents.

## 2. REFERENCED DOCUMENTS

### 2.1 Customer drawings

Dimensions and materials of the contact are shown in the TE Customer Drawings. In the events of conflicts between this specification and the customer drawing, the customer drawing shall take precedence.

### 2.2 Product specification

Product Specification 108-18617 describes the characteristics of these contacts and the electrical and mechanical requirements.

### 2.3 Application specification

Crimp quality requirements are described generally in the Application Specification 114-18022, which can be ordered separately. For application of 1,5mm Sensor Flattype Receptacle and 1,5mm Sensor Flattype Receptacle II this Application Specification is valid.

### 2.4 Customer manual / Instruction sheet

CM 412-18103-1	describes handling with MQC-HD Applicator.
CM 412-18258	describes handling with a Crimping machine for MQC Applicator.
IS 408-7424	explains how to measure the crimp height. (For details see 4.2).
IS 411-18079	describes the ERGOCRIMP Handtool PN 539724. (For details see 4.4).

### 2.5 Standards

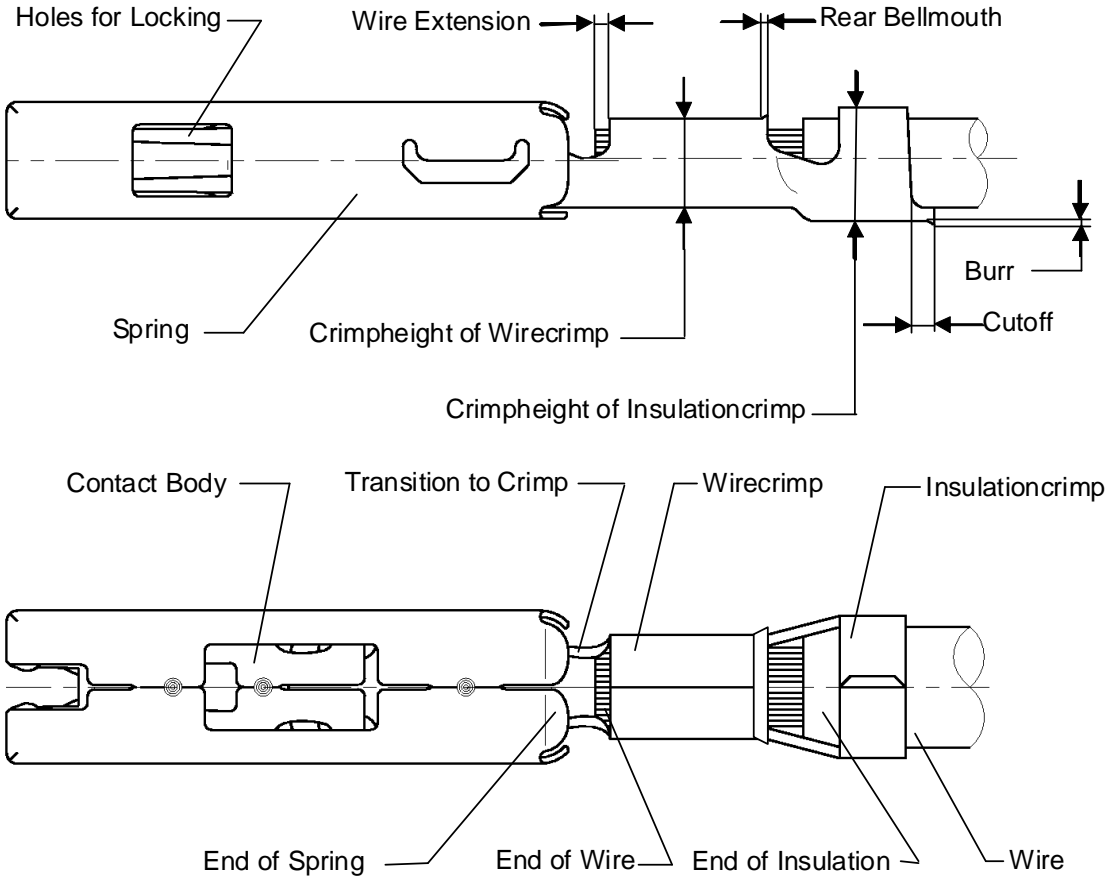
For testing the crimp quality refer to DIN EN 60352-2.

**3. DESCRIPTION**

The following terms are used in this specification.

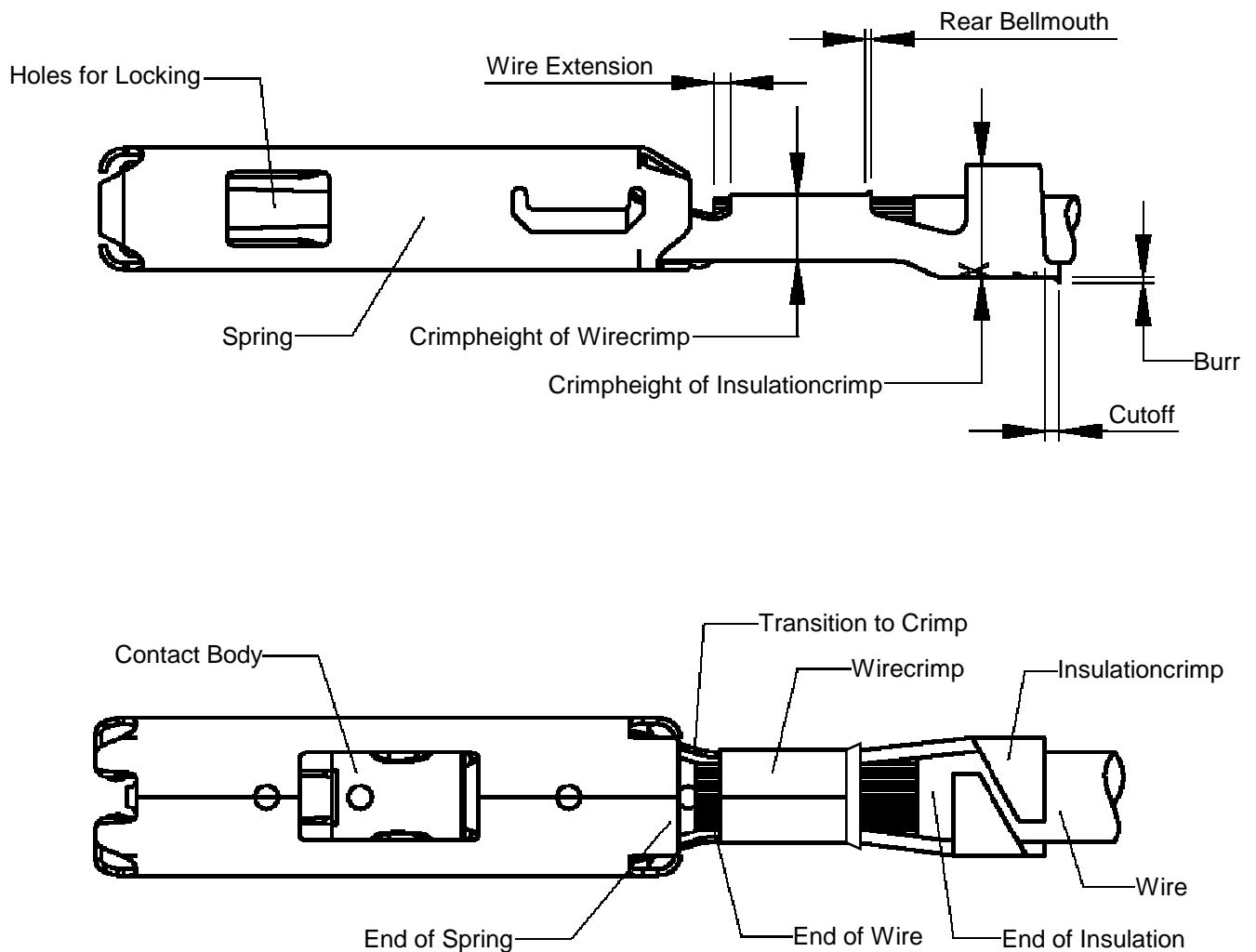
**3.1 1,5mm Sensor Flattype Receptacle**

**Figure 1**  
**1,5mm Sensor Flattype Receptacle**



**3.2 1,5mm Sensor Flattype Receptacle II**

**1,5mm Sensor Flattype Receptacle II**



Applied parts can be delivered in two versions:

1,5mm Sensor Flattype Receptacle is provided to insert it through mounted family-seals into appropriated cavities and to pull out again from there with as less damage as possible.

Contact is locked by two adjacent holes in which the locking elements of the housing snap in. For pulling-out of the contact, Extraction Tool PN 7-1579007-0 can be used.

The second version, referred to as 1,5mm Sensor Flattype Receptacle II, has a modified spring and special additional design features for an optimized mating performance by family seal.

Details are shown on the TE Customer Drawings mentioned in 2.1.

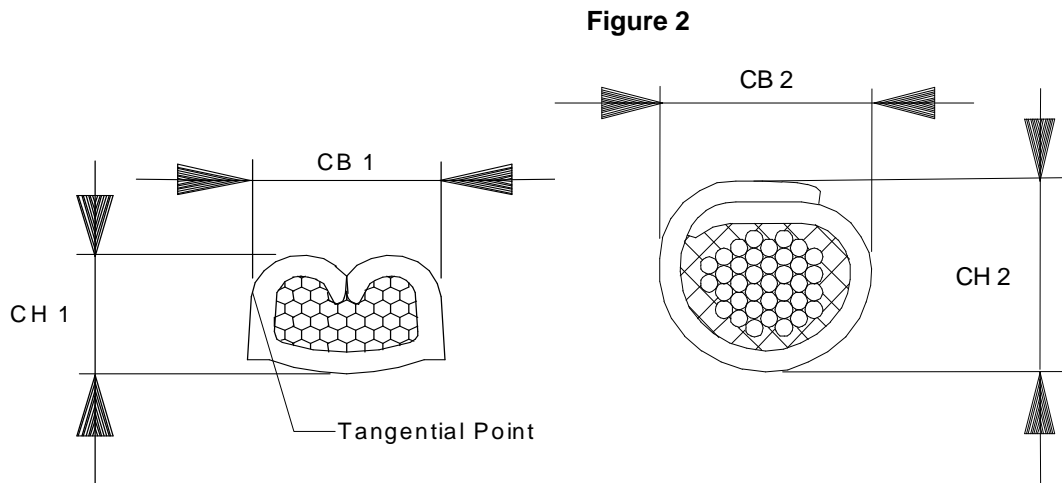
#### 4. REQUIREMENTS

##### 4.1 Wire

In general wires in accordance with DIN ISO 6722 Part 3 are used, depending on the appropriate 1,5mm Sensor Flattype Receptacle.

Only single termination per wire is permitted.

##### 4.2 Feature of crimp



#### 4.3 Crimpingdata for automatic application for SFK 1,5

**Table 1**

Strip form	Length of Stripping	Wire-size	Wire crimp			Insulation crimp			Automatic Crimptool
			Height	Width	Type	Height	Width	Type	MQC-HD Applicator
Drawing-Number	(mm) +/-0,4	(mm <sup>2</sup> )	CH 1 (mm) +/-0,05	CB 1 (mm/ inch) 1)		CH 2 (mm)	CB 2 (mm/ inch) 1)		Partnumber
929027	4	0,5	1,09	2,03/ .080	F	2,2	2,54/ .100	OVL 2)	2-541555-2
		0,6	1,13						
		0,75 1	1,18 1,29			2,4			
929025	4,5	1,4	1,56	2,29/ .090	F	max. 2,7	3,05/ .120	OVL 2)	2-541554-2
		1,5	1,59						
		1,8	1,71						
		2	1,75						

1) Tool related dimension without specified tolerance

2) Overlapping Crimp

#### 4.4 Crimpingdata for application with ERGOCRIMP handcrimptool for SFK 1,5

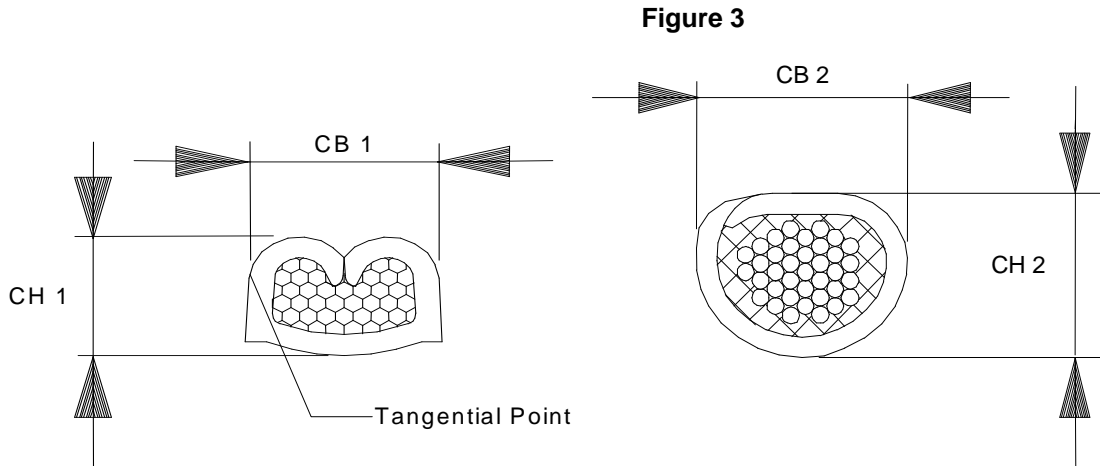
**Table 2**

Loose piece	Length of Stripping	Wire-size	Wire crimp			Insulation crimp			ERGOCRIMP Handcrimptool
			Height	Width	Type	Height	Width	Type	
Drawing-Number	(mm) +/-0,4	(mm <sup>2</sup> )	CH 1 (mm) +/-0,05	CB 1 (mm)		CH 2 (mm)	CB 2 (mm/ inch) 1)		Partnumber
929028	4	0,5	1,1	2,03	F	2,2	2,54/ .100	OVL 2)	539724-2
		0,6							
		0,75 1	1,25			2,4			
929026	4,5	1,4	1,56	max. 2,3	F	max. 2,7	3,05/ .120	OVL 2)	
		1,5							
		1,8	1,72						
		2							

1) Tool-related dimension without specified tolerance

2) Overlapping Crimp

**4.5 Feature of crimp for SFK II 1,5**



**4.6 Crimpingdata for automatic application for SFK II 1,5**

**Table 3**

Strip	Length of Stripping	Wire-Size	Wire crimp			Insulation crimp			Automatic Crimptool MQC-HD Applicator
			Height	Width	Type	Height	Width	Type	
Drawing-Number	(mm) +/-0,4	(mm <sup>2</sup> )	CH 1 (mm) +/-0,05	CB 1 (mm/ inch) <sup>1)</sup>		CH 2 (mm)	CB 2 (mm/ inch) <sup>1)</sup>		Partnumber
1670326	4	0,6	1,13	2,03/ .080	F	2,4	2,54/ .100	Wrap <sup>2)</sup>	1528785
		0,75	1,18						
		1	1,29						
1670328	4,5	1,4	1,56	2,29/ .090	F	2,5	3,05/ .120	Wrap <sup>2)</sup>	1528786
		1,5	1,59						
		1,8	1,71			max. 2,8			
		2	1,75						
1564724	4,2	0,35	1,02	1,57/ .062	F	1,7	2,29/ .090	Wrap <sup>2)</sup>	
		0,5	1,09			2,0			

1) Tool-related dimension without specified tolerance

2) Wrap Crimp

4.7 Crimpingdata for application with ERGOCRIMP handcrimptool for SFK II 1,5

Table 4

Loose piece	Length of Stripping	Wire-size	Wire crimp			Insulation crimp			ERGOCRIMP Handcrimptool
			Height	Width	Type	Height	Width	Type	
Drawing-Number	(mm) +/-0,4	(mm <sup>2</sup> )	CH 1 (mm) +/-0,05	CB 1 (mm)		CH 2 (mm)	CB 2 (mm/ /inch) 1)		xxx
1670327	4	0,6 0,75 1	1,1 1,25	2,03	F	2,4 2,6	2,54/ .100	Wrap 2)	xxx
1670329	4,5	1,4 1,5 1,8 2	1,56 1,72	max. 2,3	F	2,5 max. 2,8	3,05/ .120	Wrap 2)	xxx
1564725	4,2	0,35 0,5	1,02 1,09	1,57 .062	F	1,7 2,0	2,29 .090	Wrap 2)	

1) Tool-related dimension without specified tolerance

2) Wrap Crimp



#### **4.8 Preparation of wire**

The wire must be stripped to the length specified in Table 2 to 5, taking care that individual strands are neither splitted, damaged or cut off. The remaining insulation jacket shall not be damaged or deformed.

#### **4.9 Cutoff and burr**

Cutoff must be visible after crimping. Its length should not exceed 0,5mm. The burr at the cutoff point should not exceed 0,08mm (see Figure 1).

The cutoff point has to be in the area of intended coining at 1,5mm Sensor Flattype Receptacle II, to optimize the performance against the family seal.

#### **4.10 Wirecrimp**

Crimptype, crimpheight and crimpwidhts assigned to wiresizes and depending on kind of application shown in Table 2 to 5.

Note: Measuring of crimpheight in accordance to instruction Sheet IS 408-7424 with Crimpheightmicrometer (with LCD display) TE Partnumber 547203-1.

The crimpwidth is a tool-related dimension and is defined as distance between the two tangential points of the rolling radii and the flanks of the crimper. It is not possible to measure the crimp width for production monitoring purposes.

After crimping, the end of wire must extend 0,1 to 0,5mm beyond the front edge of the wire crimp. In no case the end of the insulation shall be clamped under the wire crimp (see Figure 1).

A rear bellmouth has to be seen (see Figure 1). Front bellmouth is allowed in maximal same size as rear bellmouth, but not necessary. Burrs at bottom of crimp are permitted with 0,15mm maximum.

Crimp tensile strength must comply with DIN EN 60352-2.

#### **4.11 Insulationcrimp**

Crimptype, crimpheight and crimpwidhts assigned to wiresizes and depending on kind of application shown in Table 2 to 5.

Crimpheight may not exceed 2,8mm. Insulation grip effectiveness according to DIN EN 60352-2 has to be performed.

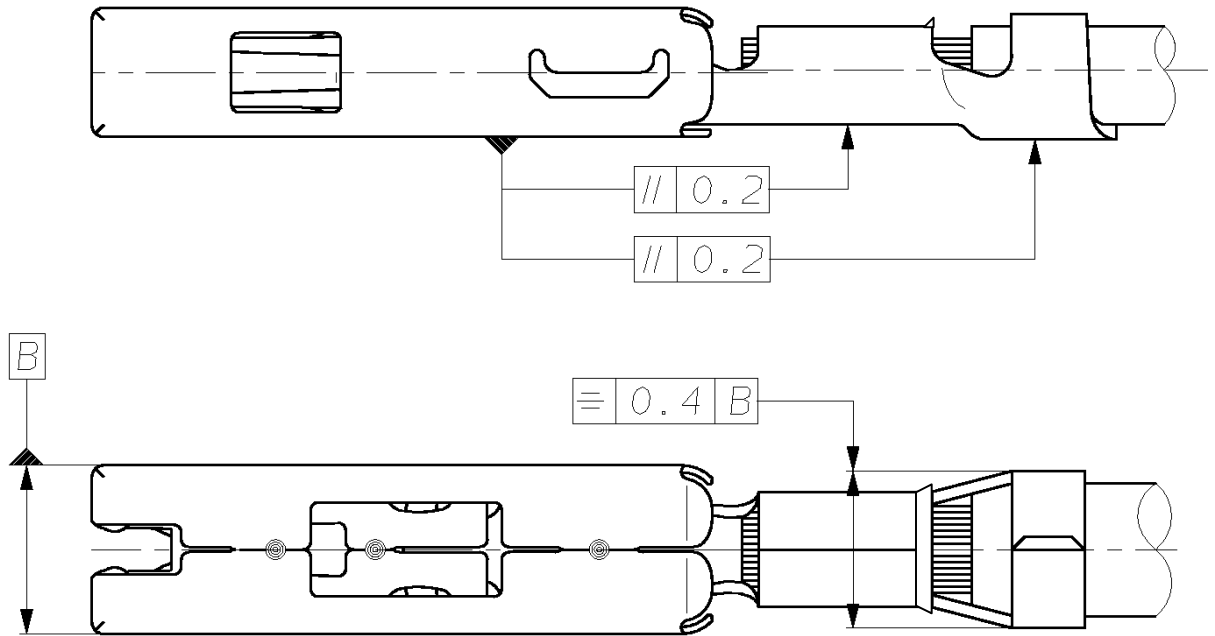
The end of the insulation must be visible in the transition between the wire crimp and the insulation crimp (see Figure 1). The end of the insulation shall not be clamped under the wirecrimp in any case. In the opposite the insulation must end at least at the front edge of the insulation crimp.

#### **4.12 Contactbody with spring**

After crimping, neither the contactbody or the spring may be damaged or deformed.

4.13 Geometrical Tolerances of the crimped contact

**Figure 4**  
**1,5mm Sensor Flattype Receptacle**



**1,5mm Sensor Flattype Receptacle II**

