

## SMT Connectors

## SMT Steckverbinder



### Advantages and Special Features

This SMT connector was specifically developed for use with fully automatic assembly and solder procedures. The following special criteria were taken into account:

- Loading with „Pick and Place“ procedure via a vacuum grabber
- Application with „Tape on Reel“ packaging
- Insulator in heat-resistant plastic
- RoHS compliant, 260°C/10s, for reflow soldering

### Vorteile und Merkmale im Überblick

Diese SMT-Steckverbinder wurden gezielt für den Einsatz mit vollautomatischen Montage- und Lötverfahren entwickelt. Folgende spezielle Kriterien wurden dabei berücksichtigt:

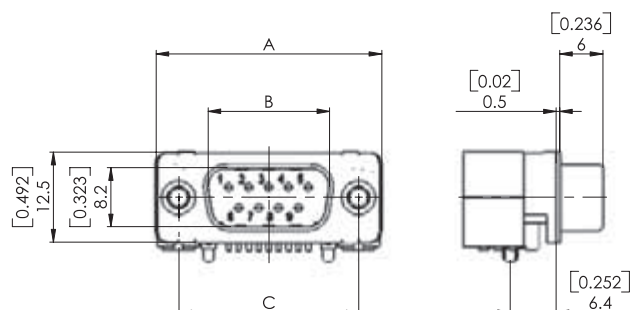
- Bestückung im „Pick and Place“-Verfahren durch Vakuum-Greifer
- Einsatz mit „Tape on Reel“-Verpackungen
- Isolierkörper aus Hochtemperatur-Kunststoff
- RoHS konform, 260°C/10s, zum Reflow-Löten geeignet

### Shell Dimensions

#### Gehäuseabmessungen

#### Pin Connector Shell

##### Stiftsteckverbindergehäuse

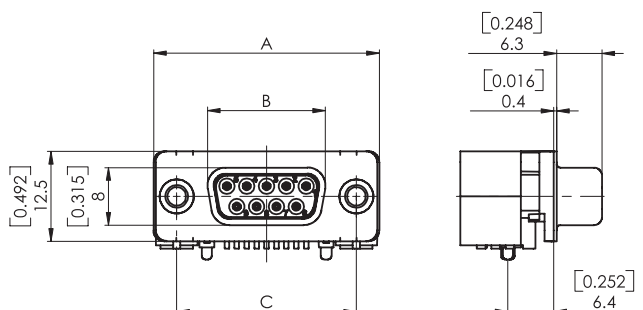


| Shell Size   | No. of Contacts | A                | B                | C                 |
|--------------|-----------------|------------------|------------------|-------------------|
| Gehäusegröße | Polzahl         | ±0,1<br>(±0.004) | ±0,4<br>(±0.016) | +0,2<br>(+0.008)  |
|              |                 |                  |                  | ±0,15<br>(±0.006) |
| 1            | 9               | 31,4<br>(1.236)  | 16,9<br>(0.665)  | 25,0<br>(0.984)   |
| 2            | 15              | 39,2<br>(1.543)  | 25,2<br>(0.992)  | 33,3<br>(1.311)   |
| 3            | 25              | 53,2<br>(2.094)  | 38,9<br>(1.531)  | 47,04<br>(1.852)  |

Dimensions in mm (inch) - Abmessungen in mm (inch)

#### Socket Connector Shell

##### Buchsensteckverbindergehäuse



| Shell Size   | No. of Contacts | A                | B                | C                  |
|--------------|-----------------|------------------|------------------|--------------------|
| Gehäusegröße | Polzahl         | ±0,1<br>(±0.004) | ±0,4<br>(±0.016) | - 0,2<br>(- 0.008) |
|              |                 |                  |                  | ±0,15<br>(±0.006)  |
| 1            | 9               | 31,4<br>(1.236)  | 16,4<br>(0.646)  | 25,0<br>(0.984)    |
| 2            | 15              | 39,2<br>(1.543)  | 24,7<br>(0.972)  | 33,3<br>(1.311)    |
| 3            | 25              | 53,2<br>(2.094)  | 38,5<br>(1.516)  | 47,04<br>(1.852)   |

Dimensions in mm (inch) - Abmessungen in mm (inch)



**Order Code**

**Bestellschlüssel**

|          |           |          |           |          |            |           |     |
|----------|-----------|----------|-----------|----------|------------|-----------|-----|
| <b>F</b> | <b>SL</b> | <b>T</b> | <b>09</b> | <b>P</b> | <b>101</b> | <b>G1</b> | ... |
|----------|-----------|----------|-----------|----------|------------|-----------|-----|

**Series Prefix / Serienbezeichnung**

**Insulator / Isolierkörper**

**SL** Surface Mounted (Can be soldered on PCB surface)  
Surface Mounted (Auf Leiterplattenoberfläche auflötbar)

**Mounting Type / Befestigungsarten**

**T** 4-40 UNC  
4-40 UNC

**Z** M3  
M3

**U** Spacer 4-40 UNC  
Abstandsbolzen 4-40 UNC

**M** Spacer M3  
Abstandsbolzen M3

**D** Through Hole  
Durchgangsloch

**No. of Contacts / Polzahl**      **09**      **15**      **25**

**Shell Size / Gehäusegröße**      **1**      **2**      **3**

**Contact Type / Kontaktart**

**P** Pin contact  
Stiftkontakt

**S** Socket contact  
Buchsenkontakt

**Contact Design, e.g. / Kontaktvarianten, z.B.**

**101** Overall Hight 3,7 mm (0.146")  
Bauhöhe 3,7mm

**107** Overall Hight 7,3 mm (0.287")  
Bauhöhe 7,3 mm

More contacts and layouts on request. Weitere Kontakte und Layuts auf Anfrage.

**Direction of Right Angled Contacts**  
**Richtung der abgewinkelten Kontakte**

-- Standard / Standard

**R** Revers\*  
Revers\*

**Performance Classes Available in Accordance with Din 41652**  
**Lieferbare Gütestufe nach DIN 41652**

**G1** = 500 Contact Cycles      = Performance Class 1  
= 500 Steckzyklen      = Gütestufe 1

**G2** = 200 Contact Cycles      = Performance Class 2\*  
= 200 Steckzyklen      = Gütestufe 2\*

**G3** = 50 Contact Cycles      = Performance Class 3\*  
= 50 Steckzyklen      = Gütestufe 3\*

**Modifications / Modifikationen**

\*On request / \*auf Anfrage

## Materials and Platings

### Materialien und Oberflächen

|                                                                                                                            |                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Shell<br><i>Gehäuse</i>                                                                                                    | Steel<br><i>Stahl</i>                                                                                  |
| Insulator<br><i>Isolierkörper</i>                                                                                          | Heat resistant, glass filled (UL94V-0)<br><i>hochtemperaturbeständig, glasfaserverstärkt (UL94V-0)</i> |
| Relative temperature index according to UL 746 B<br><i>rel. Temperaturindex nach UL 746 B</i>                              | ≥150 °C (≥302 °F)                                                                                      |
| Heat deflection temperature limit according to DIN 53461 HDT/A<br><i>Formbeständigkeitstemperatur nach DIN 53461 HDT/A</i> | ≥276 °C (≥529 °F)                                                                                      |
| Sub temperature limit<br><i>Untere Grenztemperatur</i>                                                                     | -55 °C (-67 °F)                                                                                        |
| Shell plating (standard)<br><i>Gehäuseoberfläche (Standard)</i>                                                            | Tin plated over nickel*<br><i>verzinkt über Nickel*</i>                                                |
| Shell (standard)<br><i>Gehäuse (Standard)</i>                                                                              | Pin connector shell with dimples<br><i>Stiftsteckverbindergehäuse mit Kontaktnoppen</i>                |
| Contact material<br><i>Kontaktmaterial</i>                                                                                 | Copper alloy<br><i>Kupfer-Legierung</i>                                                                |

\*On request nickel plated over copper / \*Auf Anfrage vernickelt über Kupfer

## Electrical Data

### Elektrische Daten

|                                                                                                                         |                         |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Current rating at room temperature<br><i>Maximale Stromstärke bei Raumtemperatur</i>                                    | 5 A                     |
| Test voltage between 2 contacts / shell and contact<br><i>Prüfspannung zwischen 2 Kontakten bzw. Kontakt u. Gehäuse</i> | 1200 V / 1 min.         |
| Insulation resistance between contacts<br><i>Isolationswiderstand Kontakt / Kontakt</i>                                 | ≥ 5000 MΩ               |
| Volume resistivity<br><i>Spezifischer Durchgangswiderstand</i>                                                          | ≤ 10 <sup>16</sup> Ω cm |

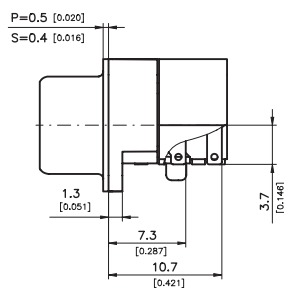


## Right Angled Signal Contacts (SMT)

### Abgewinkelte Signalkontakte (SMT)

Overall Height 3.7 mm (0.146")

*Bauhöhe 3,7 mm*

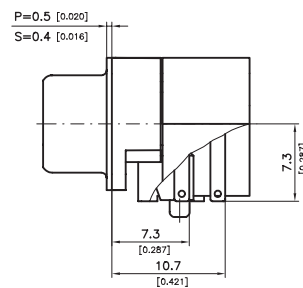


**Contact design**  
**Kontaktvariante**

**101**

Overall Height 7.3 mm (0.287")

*Bauhöhe 7,3 mm*



**Contact design**  
**Kontaktvariante**

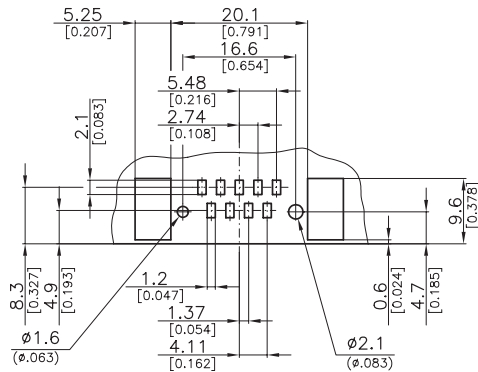
**107**

**PCB Layout**

**Leiterplattenlayout**

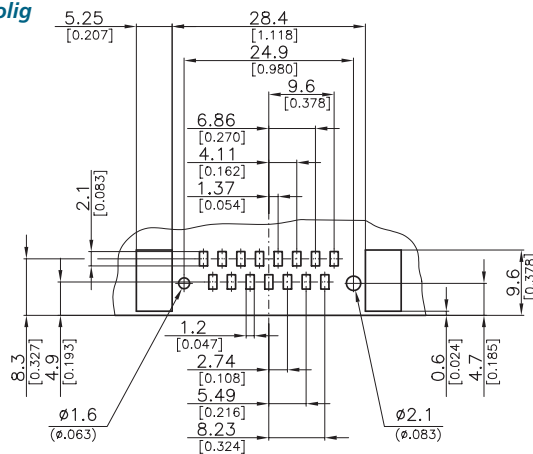
**9 Contacts**

**9-polig**



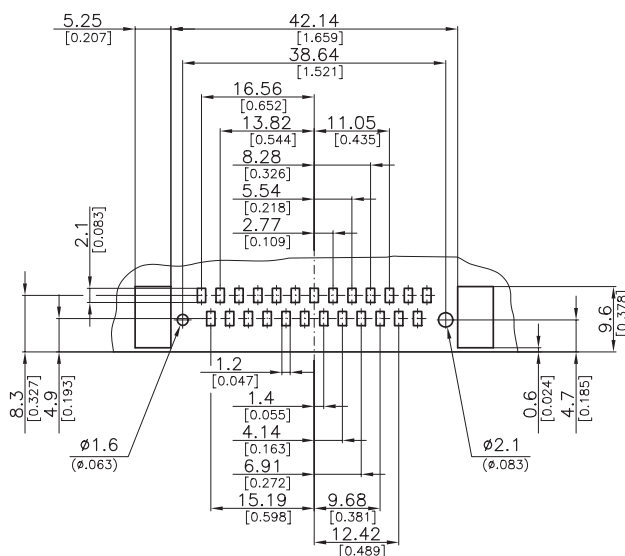
**15 Contacts**

**15-polig**



**25 Contacts**

**25-polig**



Summary of Connector Designs

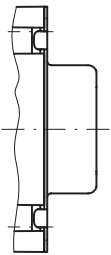
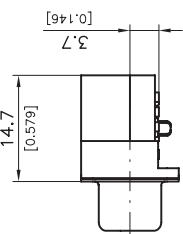
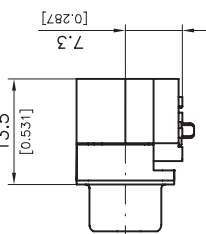
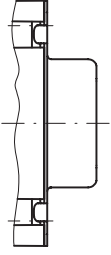
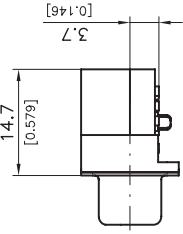
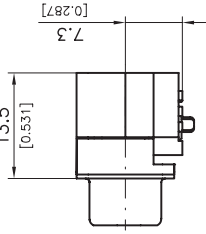
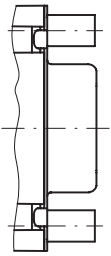
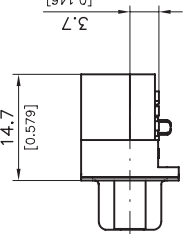
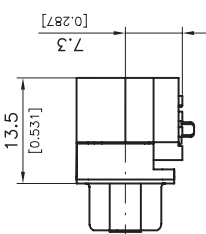
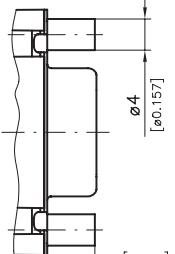
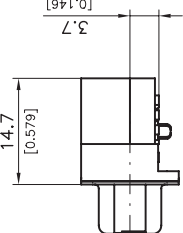
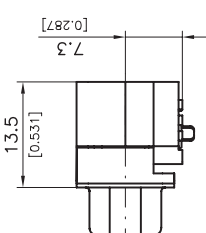
Übersicht Steckverbindervarianten

Other dimensions possible on request

Andere Abmaße auf Anfrage möglich

Please see order code on page 30.

Siehe auch Bestellschlüssel auf Seite 30.

| FSL... Connector Designs<br>FSL...Steckverbinder-varianten | No. of Contacts<br>Polzahl | Contact Design<br>Kontaktvariante | 101                                                                                 |                                                                                     | 107                                                                                  |          |
|------------------------------------------------------------|----------------------------|-----------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------|
|                                                            |                            |                                   | 09/15/25                                                                            | 09/15/25                                                                            | 09/15/25                                                                             | 09/15/25 |
| 4-40 UNC                                                   |                            | ...                               |  |  |  |          |
| M3                                                         |                            | ...                               |  |  |  |          |
| 4-40 UNC                                                   |                            | ...                               |    |    |    |          |
| M3                                                         |                            | ...                               |    |    |    |          |



### Packing Units

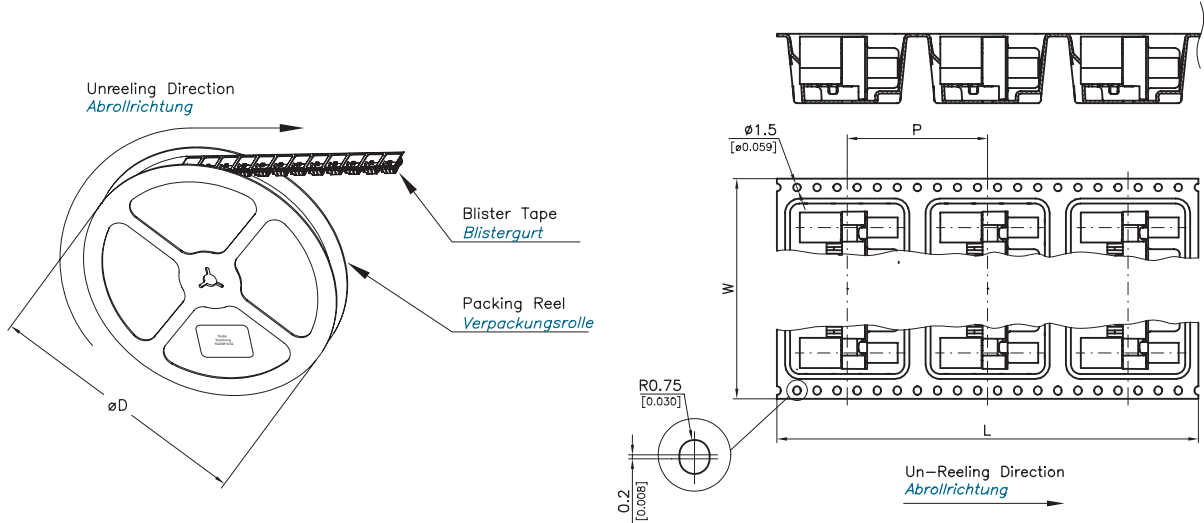
SMT connectors are located in the blister tape in the unreeling direction of the tape.

The connectors are not usually stamped, as they are normally delivered in blister tape on a reel (Tape on reel) and the labels can be found on the reel.

### Verpackungseinheiten

Lageorientierung der SMT-Steckverbinder im Blistergurt in Abrollrichtung des Blistergurtes.

Die Steckverbinder werden standardmäßig nicht bedruckt, da die Steckverbinder üblicherweise in einem Blistergurt auf Rollen (Tape on Reel) geliefert werden und sich das Etikett auf der Spule befindet.



| Connector<br>Steckverbinder | Connectors per Reel<br>Steckverbinder pro Rolle | D             | W               | P               | L                 |
|-----------------------------|-------------------------------------------------|---------------|-----------------|-----------------|-------------------|
| FSL...09P/S101              | 182                                             | 330,2<br>(13) | 44,0<br>(1.732) | 28,0<br>(1.102) | 5124<br>(201.732) |
| FSL...15P/S101              | 182                                             | 330,2<br>(13) | 56,0<br>(2.205) | 28,0<br>(1.102) | 6804<br>(267.874) |
| FSL...25P/S101              | 182                                             | 330,2<br>(13) | 72,0<br>(2.835) | 28,0<br>(1.102) | 6804<br>(267.874) |
| FSL...09P/S107              | 140                                             | 330,2<br>(13) | 44,0<br>(1.732) | 28,0<br>(1.102) | 3948<br>(155.433) |
| FSL...15P/S107              | 140                                             | 330,2<br>(13) | 56,0<br>(2.205) | 28,0<br>(1.102) | 5460<br>(214.961) |
| FSL...25P/S107              | 140                                             | 330,2<br>(13) | 72,0<br>(2.835) | 28,0<br>(1.102) | 5460<br>(214.961) |

Dimensions in mm (inch) - Abmessungen in mm (inch)

#### Further packing units on request.

Depending upon the automating medium used, please request the minimum order quantities (see page 445).

#### Weitere Verpackungseinheiten auf Anfrage.

Bitte erfragen Sie abhängig von dem verwendeten Automatisierungshilfsmittel (siehe Seite 445) die Mindestbestellmenge.