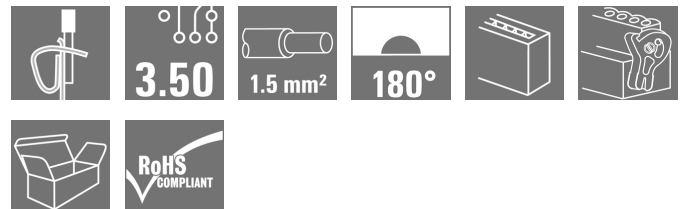


## OMNIMATE Signal - series BL/SL 3.50 BLZF 3.50/09/180LR SN OR BX

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
www.weidmueller.com

### Product image



Similar to illustration

Female connectors with tension clamp system for connecting cables in 3.50 pitch. They provide space for labelling and can be coded.

### General ordering data

|              |  |
|--------------|--|
| Type         | BLZF 3.50/09/180LR SN OR BX  |
| Order No.    | <a href="#">1531310000</a>   |
| Version      | PCB plug-in connector, female plug, 3.50 mm, Number of poles: 9, 180°, Tension-clamp connection, Clamping range, max. : 1.5 mm², Box |
| GTIN (EAN)   | 4050118336382  |
| Qty.         | 50 pc(s).  |
| Product data | IEC: 320 V / 14.5 A / 0.2 - 1.5 mm²<br>UL: 300 V / 10 A / AWG 26 - AWG 14  |
| Packaging    | Box  |

Creation date May 4, 2020 1:29:45 AM CEST

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**Technical data****Dimensions and weights**

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Width      | 37.9 mm | Width (inches)  | 1.492 inch |
| Height     | 14.5 mm | Height (inches) | 0.571 inch |
| Depth      | 29.5 mm | Depth (inches)  | 1.161 inch |
| Net weight | 8.733 g |                 |            |

**System Parameters**

|  |                                     |  |                     |
|--|-------------------------------------|--|---------------------|
| Product family                               | OMNIMATE Signal - series BL/SL 3.50 | Type of connection                         | Field connection    |
| Wire connection method                       | Tension-clamp connection            | Pitch in mm (P)                            | 3.5 mm              |
| Pitch in inches (P)                          | 0.138 inch                          | Conductor outlet direction                 | 180°                |
| Number of poles                              | 9                                   | L1 in mm                                   | 28 mm               |
| L1 in inches                                 | 1.102 inch                          | Number of rows                             | 1                   |
| Pin series quantity                          | 1                                   | Rated cross-section                        | 1.5 mm <sup>2</sup> |
| Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch              | Touch-safe protection acc. to DIN VDE 0470 | IP 20               |
| Volume resistance                            | ≤ 5mΩ                               | Can be coded                               | Yes                 |
| Stripping length                             | 10 mm                               | Screwdriver blade                          | 0.4 x 2.5           |
| Screwdriver blade standard                   | DIN 5264-A                          | Plugging cycles                            | 25                  |
| Plugging force/pole, max.                    | 7 N                                 | Pulling force/pole, max.                   | 5 N                 |

**Material data**

|                                       |                          |                                       |                     |
|---------------------------------------|--------------------------|---------------------------------------|---------------------|
| Insulating material                   | PBT                      | Colour                                | orange              |
| Colour chart (similar)                | RAL 2000                 | Insulating material group             | IIIa                |
| Comparative Tracking Index (CTI)      | ≥ 200                    | Insulation strength                   | ≥ 10 <sup>8</sup> Ω |
| UL 94 flammability rating             | V-0                      | GWFI                                  | 960 °C              |
| Contact material                      | Copper alloy             | Contact surface                       | tinned              |
| Layer structure of plug contact       | 4-8 μm Sn hot-dip tinned | Storage temperature, min.             | -25 °C              |
| Storage temperature, max.             | 50 °C                    | Max. relative humidity during storage | 80 %                |
| Operating temperature, min.           | -50 °C                   | Operating temperature, max.           | 100 °C              |
| Temperature range, installation, min. | -30 °C                   | Temperature range, installation, max. | 100 °C              |

**Conductors suitable for connection**

|   |                      |
|---|----------------------|
| Clamping range, min.  | 0.13 mm <sup>2</sup> |
| Clamping range, max.  | 1.5 mm <sup>2</sup>  |
| Wire connection cross section AWG, min.                             | AWG 28               |
| Wire connection cross section AWG, max.                             | AWG 16               |
| Solid, min. H05(07) V-U   | 0.2 mm <sup>2</sup>  |
| Solid, max. H05(07) V-U   | 1.5 mm <sup>2</sup>  |
| Flexible, min. H05(07) V-K  | 0.2 mm <sup>2</sup>  |
| Flexible, max. H05(07) V-K  | 1.5 mm <sup>2</sup>  |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.2 mm <sup>2</sup> min. |                      |
| w. plastic collar ferrule, DIN 46228 pt 4, 1 mm <sup>2</sup> max.   |                      |
| w. wire end ferrule, DIN 46228 pt 1, min.                           | 0.2 mm <sup>2</sup>  |
| w. wire end ferrule, DIN 46228 pt 1, max.                           | 1.5 mm <sup>2</sup>  |
| Outer diameter of insulation, max.                                  | 2.9 mm               |
| Plug gauge in accordance with EN 60999 a x b; ø                     | 2.4 mm x 1.5 mm      |

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**Technical data**

|  |  |                              |                            |       |
|--|--|------------------------------|----------------------------|-------|
| Clampable conductor                    | Cross-section for conductor connection   | Type                         | fine-wired                 |       |
|  |  | nominal                      | 0.5 mm <sup>2</sup>        |       |
|  | wire end ferrule   | Stripping length             | nominal                    | 12 mm |
|  |  | Recommended wire-end ferrule | <a href="#">H0.5/16 OR</a> |       |
|  |  | Stripping length             | nominal                    | 10 mm |
|  |  | Recommended wire-end ferrule | <a href="#">H0.5/10</a>    |       |
|  | Cross-section for conductor connection   | Type                         | fine-wired                 |       |
|  |  | nominal                      | 0.75 mm <sup>2</sup>       |       |
|  | wire end ferrule   | Stripping length             | nominal                    | 12 mm |
|  |  | Recommended wire-end ferrule | <a href="#">H0.75/16 W</a> |       |
|  |  | Stripping length             | nominal                    | 10 mm |
|  |  | Recommended wire-end ferrule | <a href="#">H0.75/10</a>   |       |
|  | Cross-section for conductor connection   | Type                         | fine-wired                 |       |
|  |  | nominal                      | 1 mm <sup>2</sup>          |       |
|  | wire end ferrule   | Stripping length             | nominal                    | 12 mm |
|  |  | Recommended wire-end ferrule | <a href="#">H1.0/16D R</a> |       |
| Stripping length                       |  | nominal                      | 10 mm                      |       |
| Recommended wire-end ferrule           |  | <a href="#">H1.0/10</a>      |                            |       |
| Cross-section for conductor connection | Type   | fine-wired                   |                            |       |
|  | nominal  | 1.5 mm <sup>2</sup>          |                            |       |
| wire end ferrule                       | Stripping length   | nominal                      | 10 mm                      |       |
|  | Recommended wire-end ferrule   | <a href="#">H1.5/10</a>      |                            |       |
| Reference text                         | The outside diameter of the plastic collar should not be larger than the pitch (P), Length of ferrules is to be chosen depending on the product and the rated voltage. |                              |                            |       |
| Max. clamping range                    | 1.5 mm <sup>2</sup>  |                              |                            |       |

**Rated data acc. to IEC**

|   |                        |   |                   |
|---|------------------------|---|-------------------|
| tested acc. to standard   | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C)                         | 14.5 A            |
| Rated current, max. number of poles (Tu=20°C)                             | 10 A                   | Rated current, min. number of poles (Tu=40°C)                         | 12 A              |
| Rated current, max. number of poles (Tu=40°C)                             | 8 A                    | Rated voltage for surge voltage class / pollution degree II/2         | 320 V             |
| Rated voltage for surge voltage class / pollution degree III/2            | 160 V                  | Rated voltage for surge voltage class / pollution degree III/3        | 160 V             |
| Rated impulse voltage for surge voltage class/ pollution degree II/2      | 2.5 kV                 | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 2.5 kV            |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 2.5 kV                 | Short-time withstand current resistance                               | 3 x 1s with 100 A |

**Rated data acc. to CSA**

|                                   |        |                                   |        |
|-----------------------------------|--------|-----------------------------------|--------|
| Rated voltage (Use group B / CSA) | 300 V  | Rated voltage (Use group D / CSA) | 300 V  |
| Rated current (Use group B / CSA) | 10 A   | Rated current (Use group D / CSA) | 10 A   |
| Wire cross-section, AWG, min.     | AWG 26 | Wire cross-section, AWG, max.     | AWG 14 |

**Rated data acc. to UL 1059**

|                                       |        |                                       |        |
|---------------------------------------|--------|---------------------------------------|--------|
| Rated voltage (Use group B / UL 1059) | 300 V  | Rated voltage (Use group D / UL 1059) | 300 V  |
| Rated current (Use group B / UL 1059) | 10 A   | Rated current (Use group D / UL 1059) | 10 A   |
| Wire cross-section, AWG, min.         | AWG 26 | Wire cross-section, AWG, max.         | AWG 14 |

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**Data sheet**

**OMNIMATE Signal - series BL/SL 3.50  
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**Technical data**

**Packing**

|           |       |            |        |
|-----------|-------|------------|--------|
| Packaging | Box   | VPE length | 85 mm  |
| VPE width | 95 mm | VPE height | 160 mm |

**Classifications**

|             |             |            |             |
|-------------|-------------|------------|-------------|
| ETIM 6.0    | EC002638    | ETIM 7.0   | EC002638    |
| eClass 9.0  | 27-44-03-09 | eClass 9.1 | 27-44-03-09 |
| eClass 10.0 | 27-44-03-09 |            |             |

**Notes**

- Notes
- Additional colours on request
  - Gold-plated contact surfaces on request
  - Rated current related to rated cross-section & min. No. of poles.
  - Max. outer diameter of the conductor: 2.9 mm
  - Wire end ferrule without plastic collar to DIN 46228/1
  - Wire end ferrule with plastic collar to DIN 46228/4
  - Crimp shape A for wire-end ferrules with crimping tools PZ 1,5 (order no. 9005990000) or PZ 6/5 (order no. 9011460000) for larger wire cross-sections recommended.
  - P on drawing = pitch
  - Rated data refer only to the component itself. Clearance and creepage distances to other components are to be designed in accordance with the relevant application standards.

IPC conformity      Conformity: The products are developed, manufactured and delivered according international recognized standards and norms and comply with the assured properties in the data sheet resp. fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request.

**Approvals**

Approvals



ROHS      Conform

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**Technical data****Downloads**

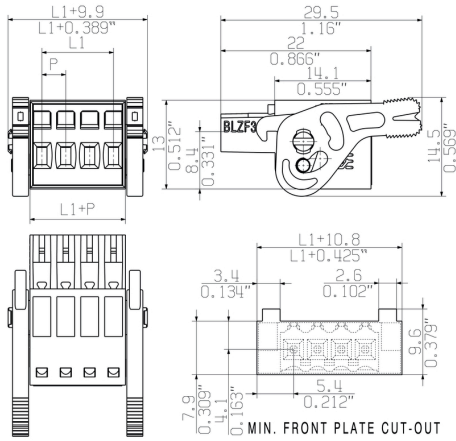
|   |   |
|---|---|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of the Manufacturer</a>   |
| Brochure/Catalogue                          | <a href="#">FL DRIVES EN</a><br><a href="#">MB DEVICE MANUF. EN</a><br><a href="#">FL DRIVES DE</a><br><a href="#">FL BUILDING SAFETY EN</a><br><a href="#">FL APPL LED LIGHTING EN</a><br><a href="#">FLIndustr.CONTROLS EN</a><br><a href="#">FL MACHINE SAFETY EN</a><br><a href="#">FL HEATING ELECTR EN</a><br><a href="#">FL APPL INVERTER EN</a><br><a href="#">FL_BASE_STATION_EN</a><br><a href="#">FL ELEVATOR EN</a><br><a href="#">FL POWER SUPPLY EN</a><br><a href="#">FL 72H SAMPLE SER EN</a><br><a href="#">PO OMNIMATE EN</a> |
| Engineering Data                            | <a href="#">STEP</a>  |
| Product Change Notification                 | <a href="#">Change of Material LR 3.50 - DE</a><br><a href="#">Change of Material LR 3.50 - EN</a>  |

**OMNIMATE Signal - series BL/SL 3.50  
BLZF 3.50/09/180LR SN OR BX**

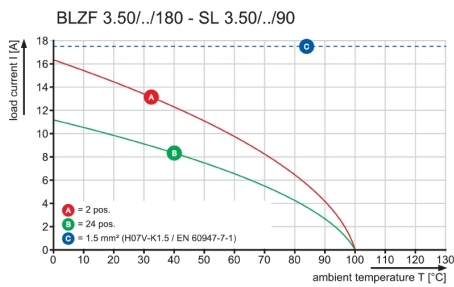
**Weidmüller Interface GmbH & Co. KG**  
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**Drawings**

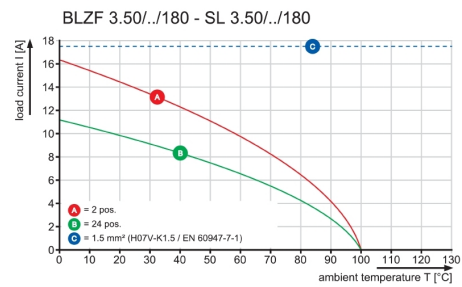
**Dimensional drawing**



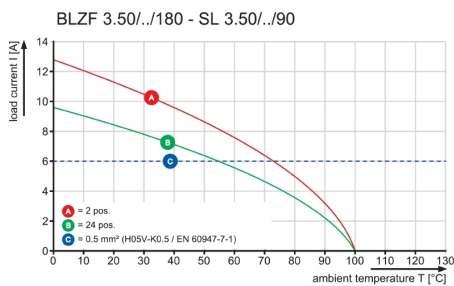
**Graph**



**Graph**



**Graph**



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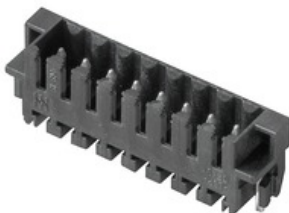
**Mating connector (fully pluggable)**
**SL-SMT 3.5/90RF**


**High-temperature-resistant male header, 3.50 mm pitch.**

- **Plugging direction parallel (90°), straight 180° or angled (135°) to PCB**
- **Housing variants: closed side (G), screw flange (F), solder flange (LF) or snap-on solder flange (RF)**
- **Optimised for the SMT process**
- **Pin length 3.2 mm universal for all soldering methods**
- **Pin length 1.5 mm optimised for reflow soldering methods**
- **Packed either in a box (BX) or tape-on-reel (RL)**
- **Male header can be coded**

**General ordering data**

| Type       | SL-SMT 3.50/09/90RF 1.5 ... | Version  | Product data                          | Packaging |
|------------|-----------------------------|--|---------------------------------------|-----------|
| Order No.  | <a href="#">1000650000</a>  | PCB plug-in connector, male header, Clip-on flange, THT/THR solder connection, 3.50 mm, Number of poles: 9, 90°, Solder pin length (l): 1.5 mm, tinned, black, Box | IEC: 320 V / 15 A<br>UL: 300 V / 10 A | Box       |
| GTIN (EAN) | 4032248822317               |  |                                       |           |
| Qty.       | 50 pc(s).                   |  |                                       |           |

**SL-SMT 3.5/180RF**


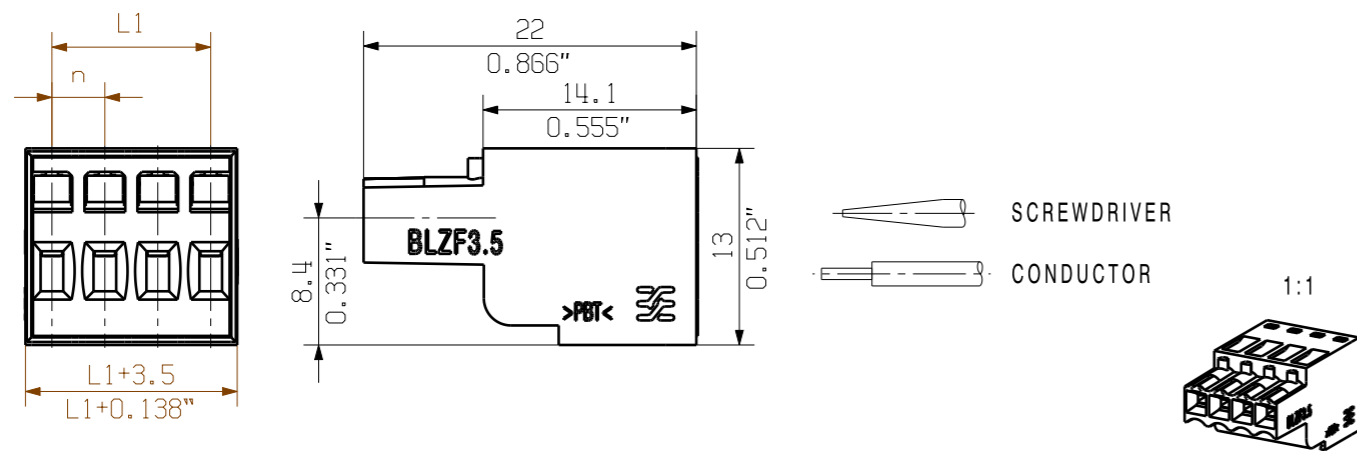
**High-temperature-resistant male header, 3.50 mm pitch.**

- **Plugging direction parallel (90°), straight 180° or angled (135°) to PCB**
- **Housing variants: closed side (G), screw flange (F), solder flange (LF) or snap-on solder flange (RF)**
- **Optimised for the SMT process**
- **Pin length 3.2 mm universal for all soldering methods**
- **Pin length 1.5 mm optimised for reflow soldering methods**
- **Packed either in a box (BX) or tape-on-reel (RL)**
- **Male header can be coded**

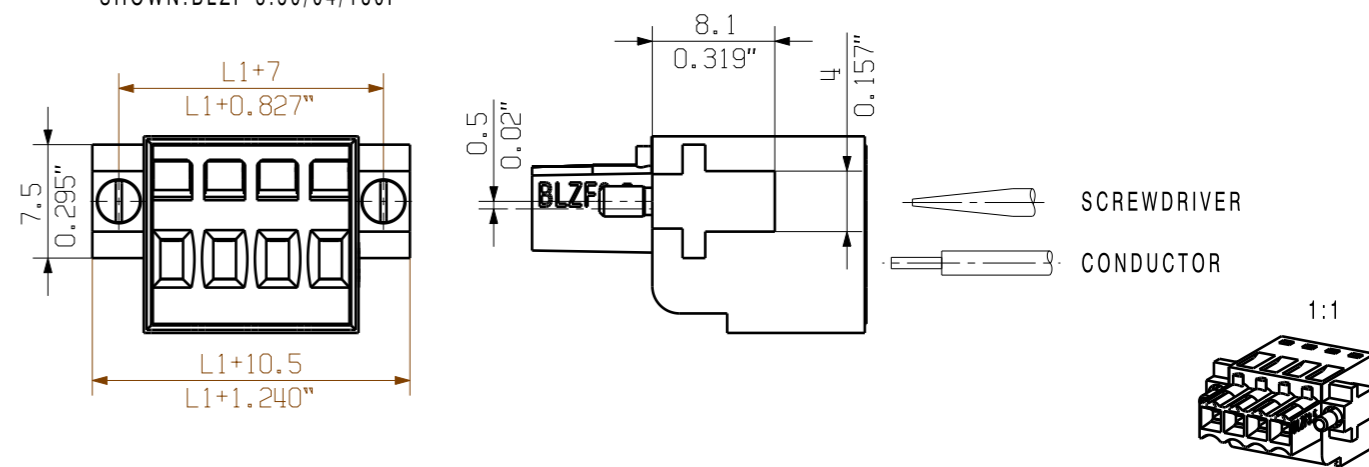
**General ordering data**

| Type       | SL-SMT 3.50/09/180RF 1.5 ... | Version   | Product data                          | Packaging |
|------------|------------------------------|---|---------------------------------------|-----------|
| Order No.  | <a href="#">1291380000</a>   | PCB plug-in connector, male header, Clip-on flange, THT/THR solder connection, 3.50 mm, Number of poles: 9, 180°, Solder pin length (l): 1.5 mm, tinned, black, Box | IEC: 320 V / 15 A<br>UL: 300 V / 10 A | Box       |
| GTIN (EAN) | 4050118085372                |   |                                       |           |
| Qty.       | 50 pc(s).                    |   |                                       |           |

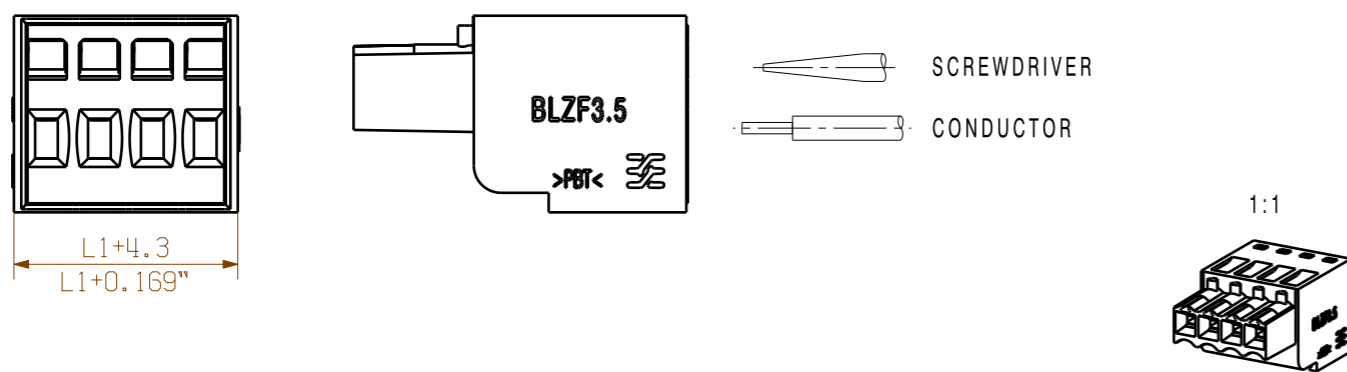
SHOWN:BLZF 3.50/04/180



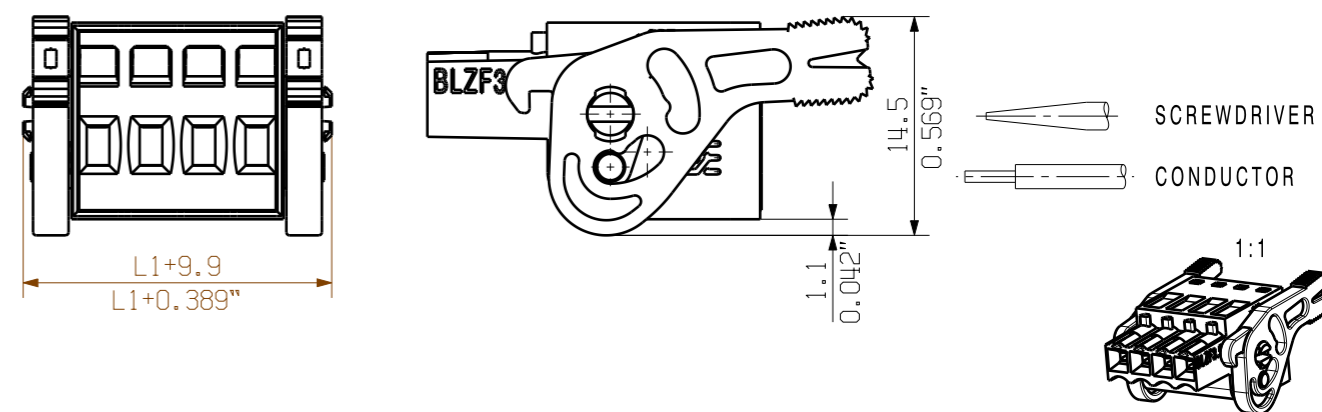
SHOWN:BLZF 3.50/04/180F



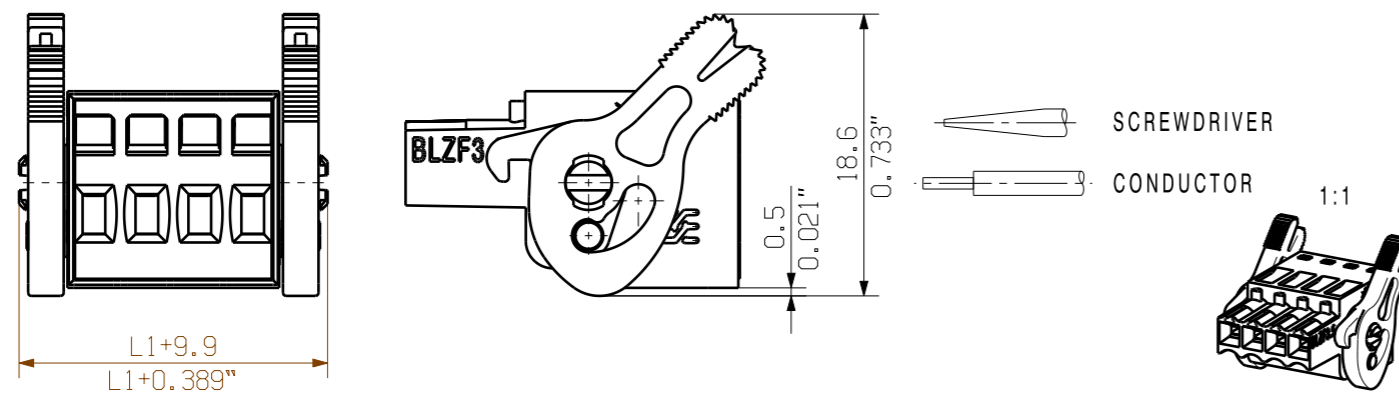
SHOWN:BLZF 3.50/04/180/SO



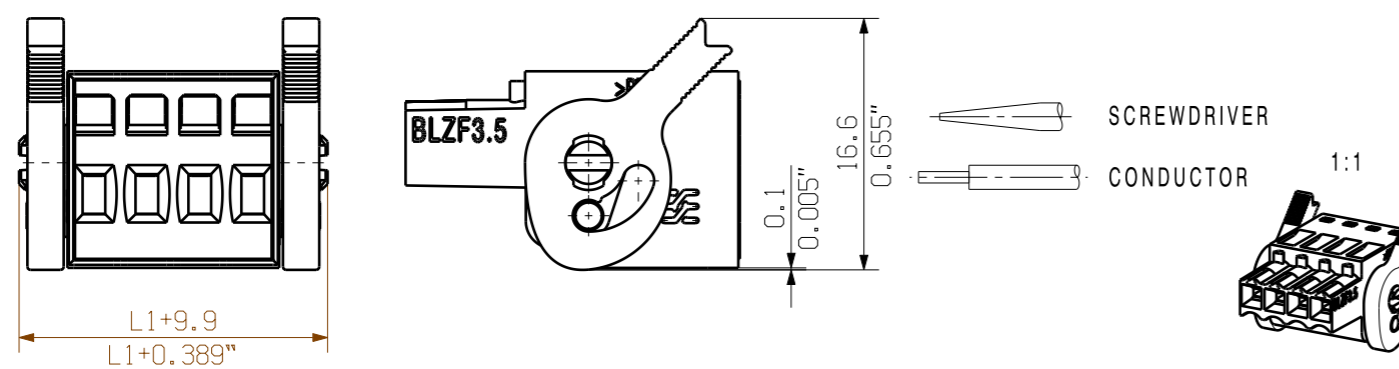
SHOWN:BLZF 3.50/04/180LR REDESIGN



SHOWN:BLZF 3.50/04/180LR



SHOWN:BLZF 3.50/04/180LH



ALLGEMEINGUELTIGE KUNDENZEICHNUNG, AKTUELLER STAND NUR AUF ANFRAGE  
GENERAL CUSTOMER DRAWING, TOPICAL VERSION ONLY IF REQUIRED

For the mounting of PCBs, it should be noted that the rated data given in the catalogue relates only to the connection elements. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance with VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller connectors are tested to the DIN VDE 0627 standard, and are valid for its field of application. Provided that the connectors are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

| POLZAHL<br>POLES | L1<br>(mm) | L1<br>(inch) |
|------------------|------------|--------------|
| 24               | 80.5       | 3.169        |
| 23               | 77.0       | 3.032        |
| 22               | 73.5       | 2.894        |
| 21               | 70.0       | 2.756        |
| 20               | 66.5       | 2.618        |
| 19               | 63.0       | 2.480        |
| 18               | 59.5       | 2.343        |
| 17               | 56.0       | 2.205        |
| 16               | 52.5       | 2.067        |
| 15               | 49.0       | 1.929        |
| 14               | 45.5       | 1.791        |
| 13               | 42.0       | 1.654        |
| 12               | 38.5       | 1.516        |
| 11               | 35.0       | 1.378        |
| 10               | 31.5       | 1.240        |
| 9                | 28.0       | 1.102        |
| 8                | 24.5       | 0.965        |
| 7                | 21.0       | 0.827        |
| 6                | 17.5       | 0.689        |
| 5                | 14.0       | 0.551        |
| 4                | 10.5       | 0.413        |
| 3                | 7.0        | 0.276        |
| 2                | 3.5        | 0.138        |

|               |                                 |   |                         |
|---------------|---------------------------------|---|-------------------------|
|               | DIN ISO 2768-m                  | Cat.no.: .  |                         |
|               | 93783/5<br>24.11.17 HELIS_MA 02 | <b>3 23142</b> <b>20</b><br>Drawing no. Issue no. |                         |
| Modification  |                                 | Sheet 01 of 01 sheets                             |                         |
|               | Drawn                           | Date  | Name                    |
|               | Responsible                     | 10.12.2007  | HELIS_MA                |
|               | Checked                         | 08.01.2018  | HELIS_MA                |
| Supersedes: . | Approved                        | LANG_T  | Product file: BLZF 3.50 |

**Weidmüller**

**BLZF 3.50/././180..**  
 BUCHSENSTECKER  
 FEMALE PLUG

7357