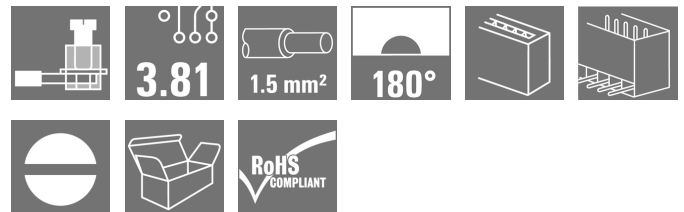
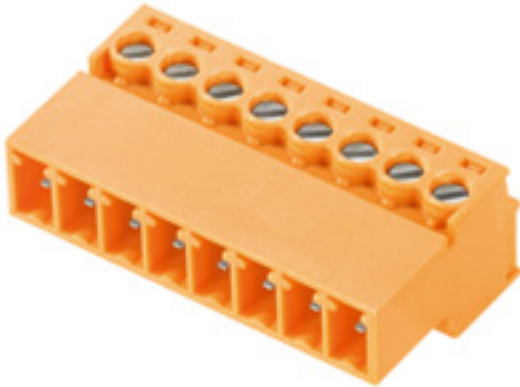


## OMNIMATE Signal - series BC/SC 3.81 SCZ 3.81/07/180G SN OR BX

**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

The inverted SCZ pin plug with clamping-yoke screw connection is designed for straight wire connections in 3.81-mm pitch. It can be used in two ways:

- for wire-to-wire connections together with the BCZ
- as a mating plug for the touch-safe BCL socket block on the PCB.

The SCZ is available in four different versions:

- Without flange ("G", closed)
- With standard flange ("F", with socket nut)
- With inverted flange ("FI", with screw)
- and with Weidmüller's patented release latch for a tool-free, no-strain disconnect

The SCZ provides space for labelling and can be coded.

### General ordering data

|              |                                                                                                                                    |
|--------------|------------------------------------------------------------------------------------------------------------------------------------|
| Type         | SCZ 3.81/07/180G SN OR BX                                                                                                          |
| Order No.    | <a href="#">1969590000</a>                                                                                                         |
| Version      | PCB plug-in connector, male plug, 3.81 mm, Number of poles: 7, 180°, Clamping yoke connection, Clamping range, max. : 1.5 mm², Box |
| GTIN (EAN)   | 4032248679188                                                                                                                      |
| Qty.         | 50 pc(s).                                                                                                                          |
| Product data | IEC: 320 V / 17.5 A / 0.2 - 1.5 mm²<br>UL: 300 V / 10 A / AWG 28 - AWG 16                                                          |
| Packaging    | Box                                                                                                                                |

Creation date May 3, 2020 5:18:05 AM CEST

**OMNIMATE Signal - series BC/SC 3.81  
SCZ 3.81/07/180G 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

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

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Height     | 11.1 mm | Height (inches) | 0.437 inch |
| Depth      | 18.4 mm | Depth (inches)  | 0.724 inch |
| Net weight | 6.3 g   |                 |            |

**Environmental Product Compliance**

REACH SVHC Lead 7439-92-1

**System Parameters**

|                                              |                                     |                                            |                   |
|----------------------------------------------|-------------------------------------|--------------------------------------------|-------------------|
| Product family                               | OMNIMATE Signal - series BC/SC 3.81 | Type of connection                         | Field connection  |
| Wire connection method                       | Clamping yoke connection            | Pitch in mm (P)                            | 3.81 mm           |
| Pitch in inches (P)                          | 0.15 inch                           | Conductor outlet direction                 | 180°              |
| Number of poles                              | 7                                   | L1 in mm                                   | 22.86 mm          |
| L1 in inches                                 | 0.9 inch                            | Number of rows                             | 1                 |
| Pin series quantity                          | 1                                   | Rated cross-section                        | 1 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                             | 7 mm                                | Tightening torque, min.                    | 0.2 Nm            |
| Tightening torque, max.                      | 0.25 Nm                             | Clamping screw                             | M 2               |
| Screwdriver blade                            | 0.4 x 2.5                           | Screwdriver blade standard                 | DIN 5264          |
| Plugging cycles                              | 25                                  | Plugging force/pole, max.                  | 8 N               |
| Pulling force/pole, max.                     | 5 N                                 |                                            |                   |

**Material data**

|                                       |              |                                       |                     |
|---------------------------------------|--------------|---------------------------------------|---------------------|
| Insulating material                   | PA 66 GF 30  | Colour                                | orange              |
| Colour chart (similar)                | RAL 2000     | Insulating material group             | II                  |
| Comparative Tracking Index (CTI)      | ≥ 550        | 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    | Storage temperature, min.             | -25 °C              |
| Storage temperature, max.             | 50 °C        | Max. relative humidity during storage | 70 %                |
| Operating temperature, min.           | -50 °C       | Operating temperature, max.           | 120 °C              |
| Temperature range, installation, min. | -25 °C       | Temperature range, installation, max. | 120 °C              |

**Conductors suitable for connection**

|                                                                     |                      |
|---------------------------------------------------------------------|----------------------|
| Clamping range, min.                                                | 0.08 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, 1.5 mm <sup>2</sup> max. |                      |
| w. wire end ferrule, DIN 46228 pt 1, 0.2 mm <sup>2</sup> min.       |                      |

Creation date May 3, 2020 5:18:05 AM CEST

**OMNIMATE Signal - series BC/SC 3.81  
SCZ 3.81/07/180G 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


**Technical data**

|                                                 |                                        |                                                                                                                                                                        |                         |  |
|-------------------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--|
| w. wire end ferrule, DIN 46228 pt 1, max.       | 1.5 mm <sup>2</sup>                    |                                                                                                                                                                        |                         |  |
| Plug gauge in accordance with EN 60999 a x b; ø | 2.4 mm x 1.5 mm ; 2.4 mm               |                                                                                                                                                                        |                         |  |
| Clampable conductor                             | Cross-section for conductor connection | Type                                                                                                                                                                   | fine-wired              |  |
|                                                 |                                        | nominal                                                                                                                                                                | 0.5 mm <sup>2</sup>     |  |
|                                                 | wire end ferrule                       | Stripping length                                                                                                                                                       | nominal 6 mm            |  |
|                                                 |                                        | Recommended wire-end ferrule                                                                                                                                           | <a href="#">H0.5/6</a>  |  |
|                                                 | Cross-section for conductor connection | Type                                                                                                                                                                   | fine-wired              |  |
|                                                 |                                        | nominal                                                                                                                                                                | 0.75 mm <sup>2</sup>    |  |
|                                                 | wire end ferrule                       | Stripping length                                                                                                                                                       | nominal 6 mm            |  |
|                                                 |                                        | Recommended wire-end ferrule                                                                                                                                           | <a href="#">H0,75/6</a> |  |
|                                                 | Cross-section for conductor connection | Type                                                                                                                                                                   | fine-wired              |  |
|                                                 |                                        | nominal                                                                                                                                                                | 1 mm <sup>2</sup>       |  |
|                                                 | wire end ferrule                       | Stripping length                                                                                                                                                       | nominal 6 mm            |  |
|                                                 |                                        | Recommended wire-end ferrule                                                                                                                                           | <a href="#">H1.0/6</a>  |  |
|                                                 | Cross-section for conductor connection | Type                                                                                                                                                                   | fine-wired              |  |
|                                                 |                                        | nominal                                                                                                                                                                | 1.5 mm <sup>2</sup>     |  |
|                                                 | wire end ferrule                       | Stripping length                                                                                                                                                       | nominal 7 mm            |  |
|                                                 |                                        | Recommended wire-end ferrule                                                                                                                                           | <a href="#">H1.5/7</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)                         | 17.5 A           |
| Rated current, max. number of poles (Tu=20°C)                             | 17.1 A                 | Rated current, min. number of poles (Tu=40°C)                         | 17.5 A           |
| Rated current, max. number of poles (Tu=40°C)                             | 15.2 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 76 A |

**Rated data acc. to CSA**

|                                   |                                                                                     |                                   |                |
|-----------------------------------|-------------------------------------------------------------------------------------|-----------------------------------|----------------|
| Institute (CSA)                   |  | Certificate No. (CSA)             | 200039-1121690 |
| Rated voltage (Use group B / CSA) | 300 V                                                                               | Rated voltage (Use group C / CSA) | 50 V           |
| Rated current (Use group B / CSA) | 11 A                                                                                | Rated current (Use group C / CSA) | 11 A           |
| Wire cross-section, AWG, min.     | AWG 28                                                                              | Wire cross-section, AWG, max.     | AWG 16         |
| Reference to approval values      | Specifications are maximum values, details - see approval certificate.              |                                   |                |

**Data sheet**

**OMNIMATE Signal - series BC/SC 3.81  
SCZ 3.81/07/180G 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

**Technical data**

**Rated data acc. to UL 1059**

Institute (cURus)



Certificate No. (cURus)

E60693

|                                       |                                                                        |
|---------------------------------------|------------------------------------------------------------------------|
| Rated voltage (Use group B / UL 1059) | 300 V                                                                  |
| Rated current (Use group B / UL 1059) | 10 A                                                                   |
| Wire cross-section, AWG, min.         | AWG 28                                                                 |
| Reference to approval values          | Specifications are maximum values, details - see approval certificate. |

|                                       |        |
|---------------------------------------|--------|
| Rated voltage (Use group D / UL 1059) | 300 V  |
| Rated current (Use group D / UL 1059) | 10 A   |
| Wire cross-section, AWG, max.         | AWG 16 |

**Packing**

|           |        |            |        |
|-----------|--------|------------|--------|
| Packaging | Box    | VPE length | 20 mm  |
| VPE width | 120 mm | VPE height | 150 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 | UNSPSC     | 30-21-18-01 |

**Notes**

Notes

- Additional colours on request
- Rated current related to rated cross-section & min. No. of poles.
- Wire end ferrule with plastic collar to DIN 46228/4
- 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

**Data sheet****OMNIMATE Signal - series BC/SC 3.81  
SCZ 3.81/07/180G 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

**Technical data****Downloads**

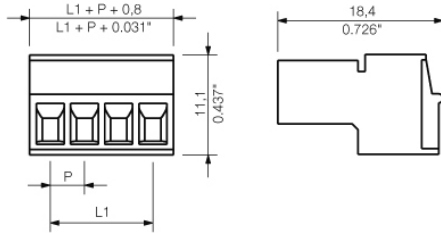
|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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="#">CAT 2 PORTFOLIOGUIDE EN</a><br><a href="#">FL BUILDING SAFETY EN</a><br><a href="#">FL APPL LED LIGHTING EN</a><br><a href="#">FL INDUSTR.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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

**OMNIMATE Signal - series BC/SC 3.81  
SCZ 3.81/07/180G SN OR BX**

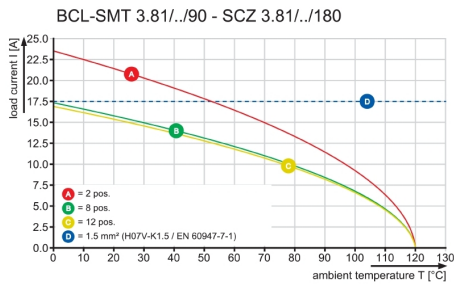
**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
www.weidmueller.com

**Drawings**

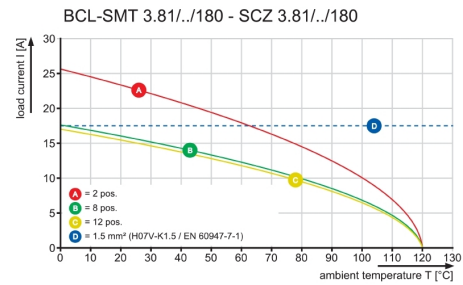
**Dimensional drawing**



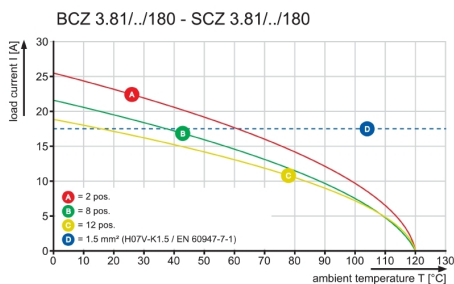
**Graph**



**Graph**



**Graph**



**OMNIMATE Signal - series BC/SC 3.81  
SCZ 3.81/07/180G 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

**Mating connector (fully pluggable)**
**BCL-SMT 3.81/180**


The inverted BCL-SMT socket block for the PCB offers three significant advantages:

- The BCL-SMT offers touch-safe security on the PCB which makes it ideal for live, current-carrying outputs.
- The BCL-SMT widens the range of applications with board-to-board connections between component assemblies.
- The BCL-SMT is reflow-compatible and can be seamlessly integrated into the automatic assembly and soldering process.

Two outlet directions give you a choice of position and thus more design flexibility.

- 180° standing
- 90° recumbent

Two housing variants are available for the BCL-SMT:

- Without flange
- With inverted solder flange ("LFI", with nut)
  - Fastened to PCB without additional screw
  - Fastened with screw to the SCZ FI

Weidmüller's 3.81-mm-pitch (0.15 inch) plug-in connectors are compatible with the layouts of customary connectors and offer space for labelling and coding.

**General ordering data**

| Type       | BCL-SMT 3.81/07/180 1.5 ... | Version                                                                                                                                                            | Product data                            | Packaging |
|------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------|
| Order No.  | <a href="#">1976570000</a>  | PCB plug-in connector, female header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 7, 180°, Solder pin length (l): 1.5 mm, tinned, black, Box | IEC: 320 V / 17.5 A<br>UL: 300 V / 10 A | Box       |
| GTIN (EAN) | 4032248679034               |                                                                                                                                                                    |                                         |           |
| Qty.       | 50 pc(s).                   |                                                                                                                                                                    |                                         |           |

**OMNIMATE Signal - series BC/SC 3.81  
SCZ 3.81/07/180G 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

**Accessories**

**Cover hoods**



**Effective protection, optimised ergonomics and closed design:**

From the strain relief on the connected conductors and the visual/contact protection and the disconnection aid: the optional retrofit hoods perform mechanical, visual and haptic functions.

The two half shells clip together securely, enclose the plug completely and offer the following functions:

- Cable ties or integrated cable clips provide strain relief.
- Marked with dekafix labels or adhesive strips
- Mounting side by side without losing poles or displacing the pitch
- Compatible: suitable for plugs with or without a flange or mounting bracket
- Flexible: 1-3 cable outlets leading in different directions available depending on the size

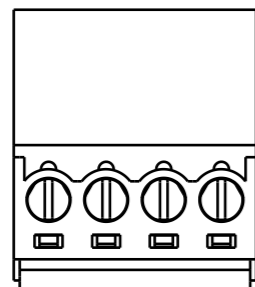
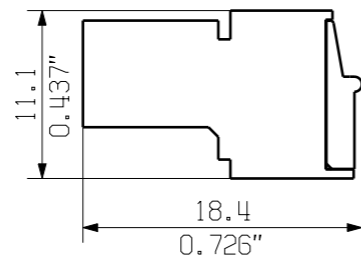
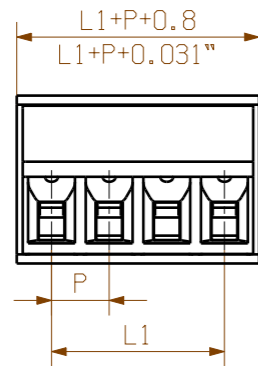
Weidmüller hoods offer added stability, better identification, complete compatibility and versatility. The result: maximum reliability and user-friendliness in any application.

**General ordering data**

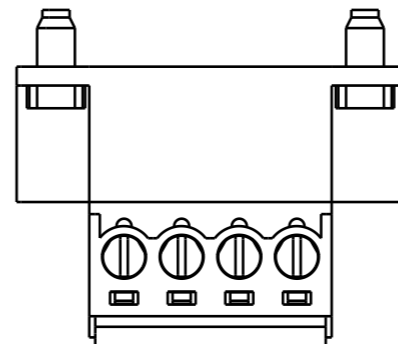
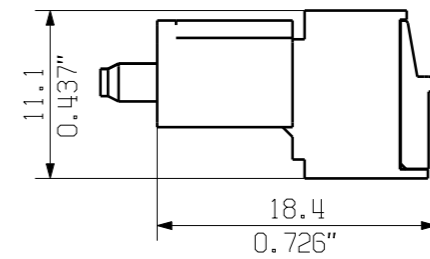
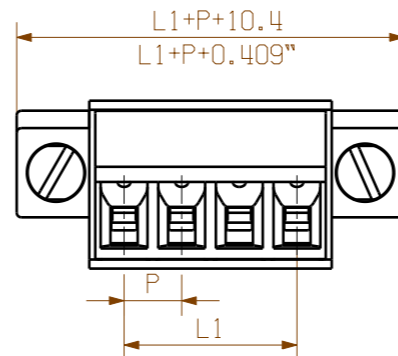
| Type       | BCZ 3.81 AH07 BK BX        | Version                                                             | Product data | Packaging |
|------------|----------------------------|---------------------------------------------------------------------|--------------|-----------|
| Order No.  | <a href="#">1005320000</a> | PCB plug-in connector, Accessories, Hood, black, Number of poles: 7 |              | Box       |
| GTIN (EAN) | 4032248752546              |                                                                     |              |           |
| Qty.       | 10 pc(s).                  |                                                                     |              |           |



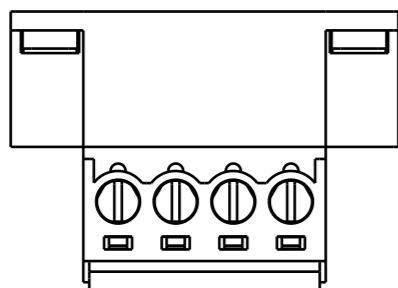
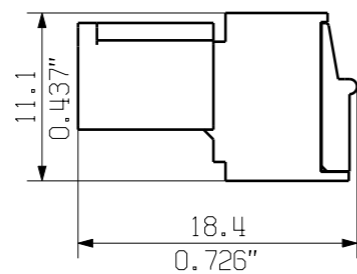
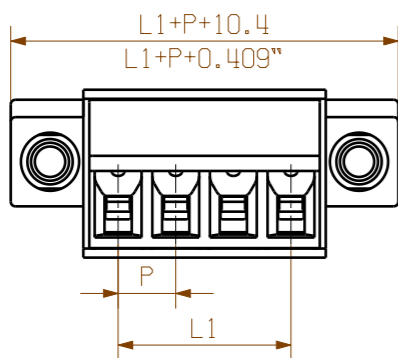
SCZ 3.81/.../180G ...



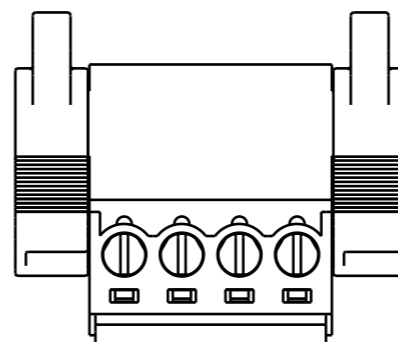
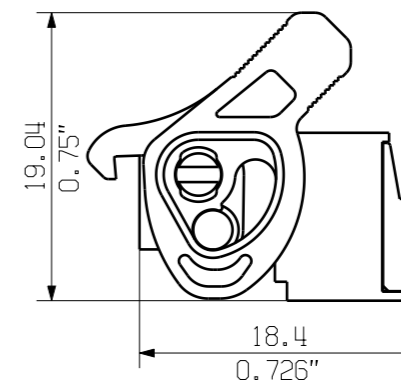
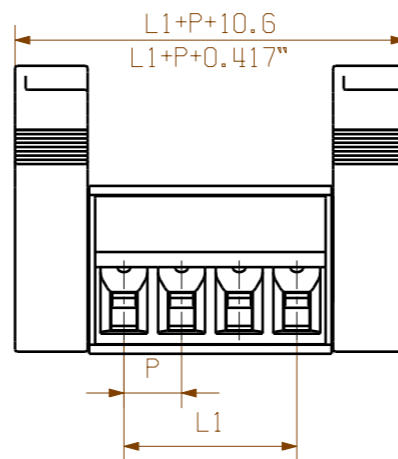
SCZ 3.81/.../180FI ...



SCZ 3.81/.../180F ...



SCZ 3.81/.../180LR ...



KUNDENZEICHNUNG  
CUSTOMER DRAWING

For the mounting of PCBs, it should be noted that the rated data stated here relates only to the PCB components alone.  
The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 664 / VDE 0110.  
The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN EN 61984 standard, and are valid for its field of application. Provided that the components are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

|    |         |           |
|----|---------|-----------|
| 12 | 41.91   | 1.651     |
| 11 | 38.10   | 1.501     |
| 10 | 34.29   | 1.351     |
| 9  | 30.48   | 1.201     |
| 8  | 26.67   | 1.051     |
| 7  | 22.86   | 0.901     |
| 6  | 19.05   | 0.751     |
| 5  | 15.24   | 0.600     |
| 4  | 11.43   | 0.450     |
| 3  | 7.62    | 0.300     |
| 2  | 3.81    | 0.150     |
| N  | L1 [mm] | L1 [inch] |

|                                                |  |                                                                                                     |  |
|------------------------------------------------|--|-----------------------------------------------------------------------------------------------------|--|
| 55304/5<br>03.06.11 GE_G 00                    |  | CAT.NO.: . . . . .                                                                                  |  |
| MODIFICATION                                   |  | <b>Weidmüller</b>                                                                                   |  |
| DRAWN 09.10.2008 SHI_S                         |  | DRAWING NO. <b>2 40408</b> ISSUE NO. <b>05</b>                                                      |  |
| RESPONSIBLE XU_S                               |  | SHEET . . . OF . . . SHEETS                                                                         |  |
| SUPERSEDES: . . . CHECKED 03.06.2011 RICHTER_G |  | <b>SCZ 3.81/.../180...</b><br>ZUGBUEGELANSCHLUSS STIFBLEISTE<br>CLAMPING YOKE CONNECTION PIN HEADER |  |
| SUPERSEDED BY: . . . APPROVED XU_S             |  |                                                                                                     |  |
| SCALE: 2/1                                     |  | PRODUCT FILE: SCZ 3.81 7078                                                                         |  |

WEITERGABE SOWIE Vervielfältigung dieses Dokuments, Verwertung und Mitteilung seines Inhalts sind verboten, soweit nicht ausdrücklich gestattet.  
 ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENSERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTERREINTRAGUNG VORBEHALTEN.  
 THE REPRODUCTION, DISTRIBUTION AND UTILIZATION OF THIS DOCUMENT AS WELL AS THE COMMUNICATION OF ITS CONTENTS TO OTHERS WITHOUT EXPLICIT AUTHORIZATION IS PROHIBITED.  
 OFFENDERS WILL BE HELD LIABLE FOR THE PAYMENT OF DAMAGES. ALL RIGHTS RESERVED IN THE EVENT OF THE GRANT OF A PATENT, UTILITY MODEL OR DESIGN.