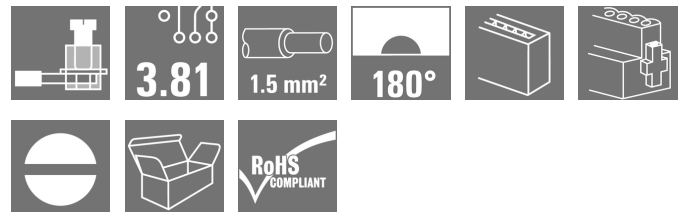


**OMNIMATE Signal - series BC/SC 3.81
SCZ 3.81/04/180FI SN BK BX**

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 3.81/04/180FI SN BK BX |
| Order No. | 1970720000 |
| Version | PCB plug-in connector, male plug, 3.81 mm, Number of poles: 4, 180°, Clamping yoke connection, Clamping range, max. : 1.5 mm², Box |
| GTIN (EAN) | 4032248680405 |
| Qty. | 50 pc(s). |
| Product data | IEC: 320 V / 17.5 A / 0.2 - 1.5 mm² UL: 300 V / 10 A / AWG 28 - AWG 16 |
| Packaging | Box |

Creation date May 3, 2020 5:00:41 AM CEST

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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 | 4.88 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 | 4 | L1 in mm | 11.43 mm |
| L1 in inches | 0.45 inch | Number of rows | 1 |
| Pin series quantity | 1 | Rated cross-section | 1 mm ² |
| 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 | black |
| Colour chart (similar) | RAL 9011 | Insulating material group | II |
| Comparative Tracking Index (CTI) | ≥ 550 | Insulation strength | ≥ 10 ⁸ 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 ² |
| Clamping range, max. | 1.5 mm ² |
| 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 ² |
| Solid, max. H05(07) V-U | 1.5 mm ² |
| Flexible, min. H05(07) V-K | 0.2 mm ² |
| Flexible, max. H05(07) V-K | 1.5 mm ² |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.2 mm ² min. | |
| w. plastic collar ferrule, DIN 46228 pt 4, 1.5 mm ² max. | |
| w. wire end ferrule, DIN 46228 pt 1, 0.2 mm ² min. | |

Creation date May 3, 2020 5:00:41 AM CEST

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Technical data

| | | | | |
|---|--|--|-------------------------|--|
| w. wire end ferrule, DIN 46228 pt 1, max. | 1.5 mm ² | | | |
| 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 ² | |
| | wire end ferrule | Stripping length | nominal 6 mm | |
| | | Recommended wire-end ferrule | H0.5/6 | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 0.75 mm ² | |
| | wire end ferrule | Stripping length | nominal 6 mm | |
| | | Recommended wire-end ferrule | H0,75/6 | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 1 mm ² | |
| | wire end ferrule | Stripping length | nominal 6 mm | |
| | | Recommended wire-end ferrule | H1.0/6 | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 1.5 mm ² | |
| | wire end ferrule | Stripping length | nominal 7 mm | |
| | | Recommended wire-end ferrule | H1.5/7 | |
| | 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 ² | | |

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 3.81/04/180FI SN BK BX**

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Technical data

Rated data acc. to UL 1059

Institute (cURus)



Certificate No. (cURus)

E60693

| | | | |
|---------------------------------------|--|---------------------------------------|--------|
| 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 28 | Wire cross-section, AWG, max. | AWG 16 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

Packing

| | | | |
|-----------|--------|------------|--------|
| Packaging | Box | VPE length | 20 mm |
| VPE width | 115 mm | VPE height | 140 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 3.81/04/180FI SN BK BX**

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Technical data**Downloads**

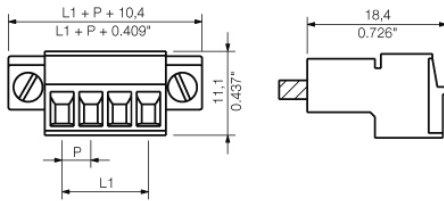
| | |
|---|--|
| Approval/Certificate/Document of Conformity | Declaration of the Manufacturer |
| Brochure/Catalogue | FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE CAT 2 PORTFOLIOGUIDE EN FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FLIndustr.CONTROLS EN FL MACHINE SAFETY EN FL HEATING ELECTR EN FL APPL INVERTER EN FL BASE STATION EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN |
| Engineering Data | STEP |

**OMNIMATE Signal - series BC/SC 3.81
SCZ 3.81/04/180FI SN BK BX**

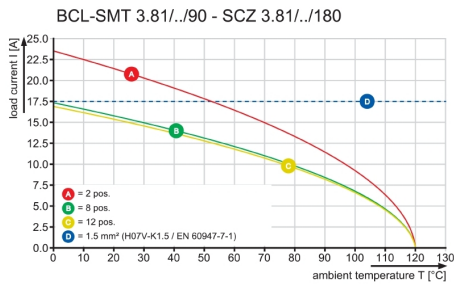
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Drawings

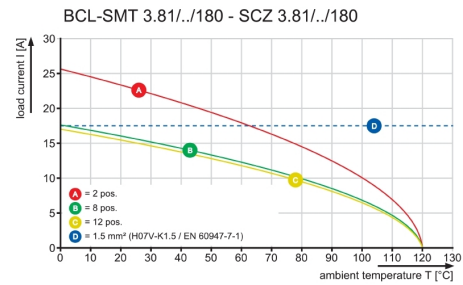
Dimensional drawing



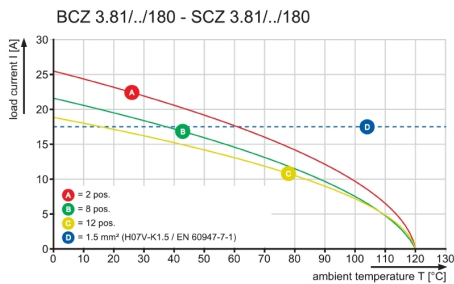
Graph



Graph



Graph



OMNIMATE Signal - series BC/SC 3.81 SCZ 3.81/04/180FI SN BK BX

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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.

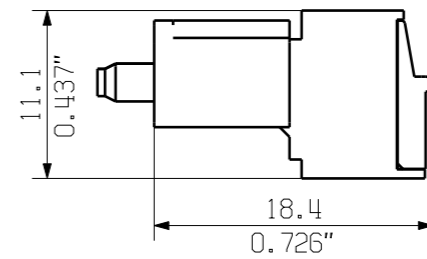
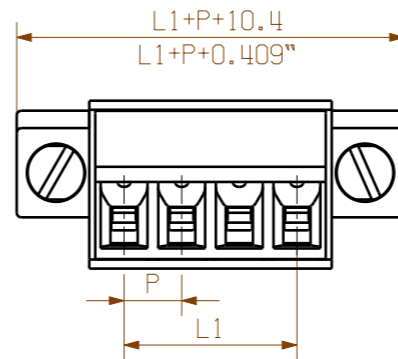
General ordering data

| Type | BCZ 3.81 AH04 BK BX | Version | Product data | Packaging |
|------------|----------------------------|---|--------------|-----------|
| Order No. | 1005290000 | PCB plug-in connector, Accessories, Hood, black, Number of poles: 4 | | Box |
| GTIN (EAN) | 4032248752515 | | | |
| Qty. | 10 pc(s). | | | |

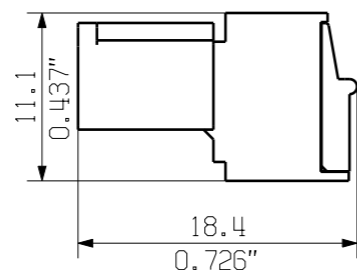
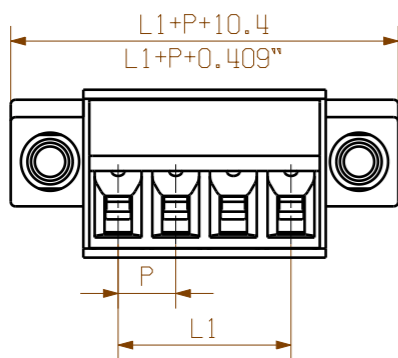
SCZ 3.81/.../180G ...



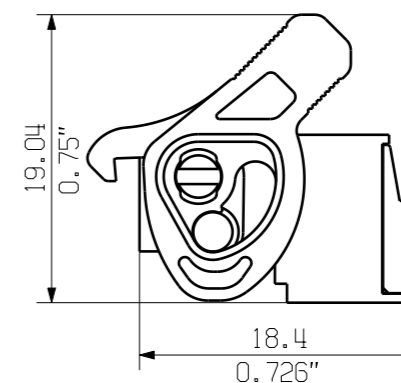
SCZ 3.81/.../180FI ...



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

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