

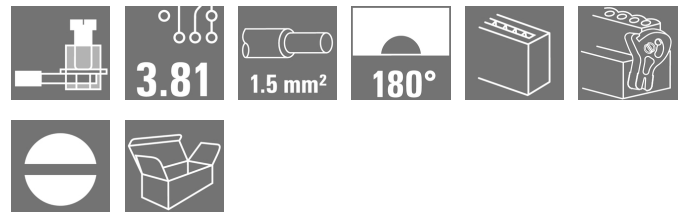
**SCZ 3.81/09/180LR SN OR BX**
**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

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**

|              |                                                                                                                                   |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Version      | PCB plug-in connector, male plug, 3.81 mm, Number of poles: 9, 180°, Clamping yoke connection, Clamping range, max.: 1.5 mm², Box |
| Order No.    | <a href="#">2444140000</a>                                                                                                        |
| Type         | SCZ 3.81/09/180LR SN OR BX                                                                                                        |
| GTIN (EAN)   | 4050118542769                                                                                                                     |
| 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 March 27, 2021 12:20:15 AM CET

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## Technical data

## Dimensions and weights

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Depth      | 21.9 mm | Depth (inches)  | 0.862 inch |
| Height     | 15.2 mm | Height (inches) | 0.598 inch |
| Net weight | 11.35 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                              | 9                                   |                   |                             |
| L1 in mm                                     | 30.48 mm                            |                   |                             |
| L1 in inches                                 | 1.2 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                            | ≤5 mΩ                               |                   |                             |
| Can be coded                                 | Yes                                 |                   |                             |
| Stripping length                             | 7 mm                                |                   |                             |
| 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                                 |                   |                             |
| Tightening torque                            | Torque type                         | Wire connection   |                             |
|                                              | Usage information                   | Tightening torque | min. 0.2 Nm<br>max. 0.25 Nm |

## 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         | Contact material                      | Copper alloy        |
| Contact surface                       | tinned      | Layer structure of plug contact       | 4...8 μm Sn         |
| Storage temperature, min.             | -40 °C      | Storage temperature, max.             | 70 °C               |
| 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>  |

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|                                                                     |                                                                                                                                                                        |                              |                         |      |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------|------|
| 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, min.                           | 0.2 mm <sup>2</sup>                                                                                                                                                    |                              |                         |      |
| 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. |                              |                         |      |

## 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 |

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## Rated data acc. to CSA

|                                   |        |                                   |        |
|-----------------------------------|--------|-----------------------------------|--------|
| 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 |

## 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 | 0 m |
| VPE width | 0 m | VPE height | 0 m |

## Type tests

|                                              |            |                                                                                                                                             |
|----------------------------------------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Test: Durability of markings                 | Standard   | DIN EN 61984 section 7.3.2 / 09.02 taking pattern from DIN EN 60068-2-70 / 07.96                                                            |
|                                              | Test       | mark of origin, type identification, rated voltage, rated cross-section, pitch, type of material, approval marking UL, approval marking CSA |
|                                              | Evaluation | available                                                                                                                                   |
|                                              | Test       | durability                                                                                                                                  |
| Test: Misengagement (Non-interchangeability) | Evaluation | passed                                                                                                                                      |
|                                              | Standard   | DIN EN 61984 section 6.3 and 6.9.1 / 09.02, DIN EN 60512-13-5 / 11.06                                                                       |
|                                              | Test       | 180° turned without coding elements                                                                                                         |
|                                              | Evaluation | passed                                                                                                                                      |
|                                              | Test       | visual examination                                                                                                                          |
|                                              | Evaluation | passed                                                                                                                                      |

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|                                                           |                |                                                                                    |                               |
|-----------------------------------------------------------|----------------|------------------------------------------------------------------------------------|-------------------------------|
| Test: Clampable cross section                             | Standard       | DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 8.2.4.5.1 / 12.02 |                               |
|                                                           | Conductor type | Type of conductor and conductor cross-section                                      | solid 0.08 mm <sup>2</sup>    |
|                                                           |                | Type of conductor and conductor cross-section                                      | stranded 0.08 mm <sup>2</sup> |
|                                                           |                | Type of conductor and conductor cross-section                                      | solid 1.5 mm <sup>2</sup>     |
|                                                           |                | Type of conductor and conductor cross-section                                      | stranded 1.5 mm <sup>2</sup>  |
|                                                           |                | Type of conductor and conductor cross-section                                      | AWG 28/1                      |
|                                                           |                | Type of conductor and conductor cross-section                                      | AWG 28/19                     |
|                                                           |                | Type of conductor and conductor cross-section                                      | AWG 16/1                      |
|                                                           |                | Type of conductor and conductor cross-section                                      | AWG 16/19                     |
|                                                           | Evaluation     | passed                                                                             |                               |
| Test for damage to and accidental loosening of conductors | Standard       | DIN EN 60999-1 section 9.4 / 12.00                                                 |                               |
|                                                           | Requirement    | 0.2 kg                                                                             |                               |
|                                                           | Conductor type | Type of conductor and conductor cross-section                                      | stranded 0.25 mm <sup>2</sup> |
|                                                           |                | Type of conductor and conductor cross-section                                      | AWG 28/1                      |
|                                                           |                | Type of conductor and conductor cross-section                                      | AWG 28/19                     |
|                                                           | Evaluation     | passed                                                                             |                               |
|                                                           | Requirement    | 0.3 kg                                                                             |                               |
|                                                           | Conductor type | Type of conductor and conductor cross-section                                      | solid 0.5 mm <sup>2</sup>     |
|                                                           |                |                                                                                    |                               |
|                                                           | Evaluation     | passed                                                                             |                               |
|                                                           | Requirement    | 0.4 kg                                                                             |                               |
|                                                           | Conductor type | Type of conductor and conductor cross-section                                      | solid 1.5 mm <sup>2</sup>     |
|                                                           |                | Type of conductor and conductor cross-section                                      | stranded 1.5 mm <sup>2</sup>  |
|                                                           |                | Type of conductor and conductor cross-section                                      | AWG 16/1                      |
|                                                           |                | Type of conductor and conductor cross-section                                      | AWG 16/19                     |
|                                                           | Evaluation     | passed                                                                             |                               |

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|---------------|----------------|-----------------------------------------------|-------------------------------|
| Pull-out test | Standard       | DIN EN 60999-1 section 9.5 / 12.00            |                               |
|               | Requirement    | ≥10 N                                         |                               |
|               | Conductor type | Type of conductor and conductor cross-section | stranded 0.25 mm <sup>2</sup> |
|               |                | Type of conductor and conductor cross-section | AWG 28/1                      |
|               |                | Type of conductor and conductor cross-section | AWG 28/19                     |
|               | Evaluation     | passed                                        |                               |
|               | Requirement    | ≥20 N                                         |                               |
|               | Conductor type | Type of conductor and conductor cross-section | H05V-U0.5                     |
|               |                | passed                                        |                               |
|               |                | ≥40 N                                         |                               |
|               | Conductor type | Type of conductor and conductor cross-section | H07V-U1.5                     |
|               |                | Type of conductor and conductor cross-section | H07V-K1.5                     |
|               |                | Type of conductor and conductor cross-section | AWG 16/1                      |
|               |                | Type of conductor and conductor cross-section | AWG 16/19                     |
|               | Evaluation     | passed                                        |                               |

## 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 | ECLASS 11.0 | 27-46-02-02 |

## Important note

|                |                                                                                                                                                                                                                                                                                                                            |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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. |
| Notes          | <ul style="list-style-type: none"> <li>Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months</li> </ul>                                                                                                                                                                   |

## Approvals

Approvals



UL File Number Search E60693

## Downloads

|                             |                                                                 |
|-----------------------------|-----------------------------------------------------------------|
| Engineering Data            | <a href="#">STEP</a>                                            |
| Product Change Notification | <a href="#">PCN_2017_190_PL30X_BL_381_Lock_Release_lever_EN</a> |

Creation date March 27, 2021 12:20:15 AM CET

Catalogue status 12.03.2021 / We reserve the right to make technical changes.

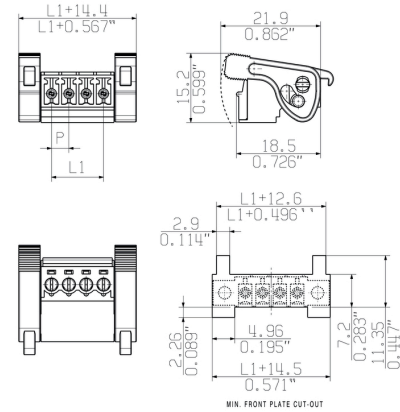
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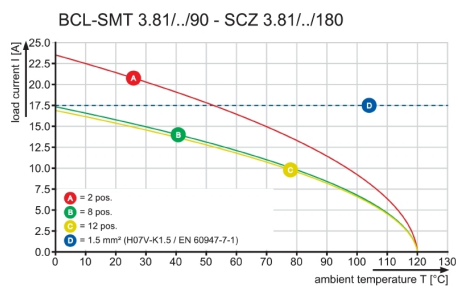
[www.weidmueller.com](http://www.weidmueller.com)

## Drawings

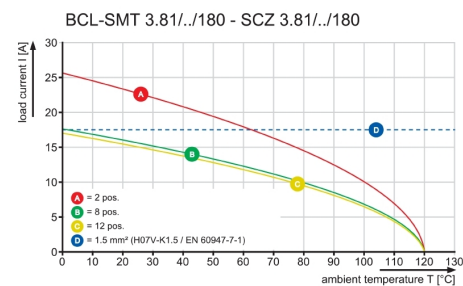
## Dimensional drawing



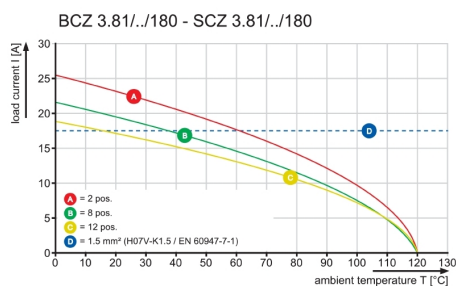
## Graph



### Graph



## Graph

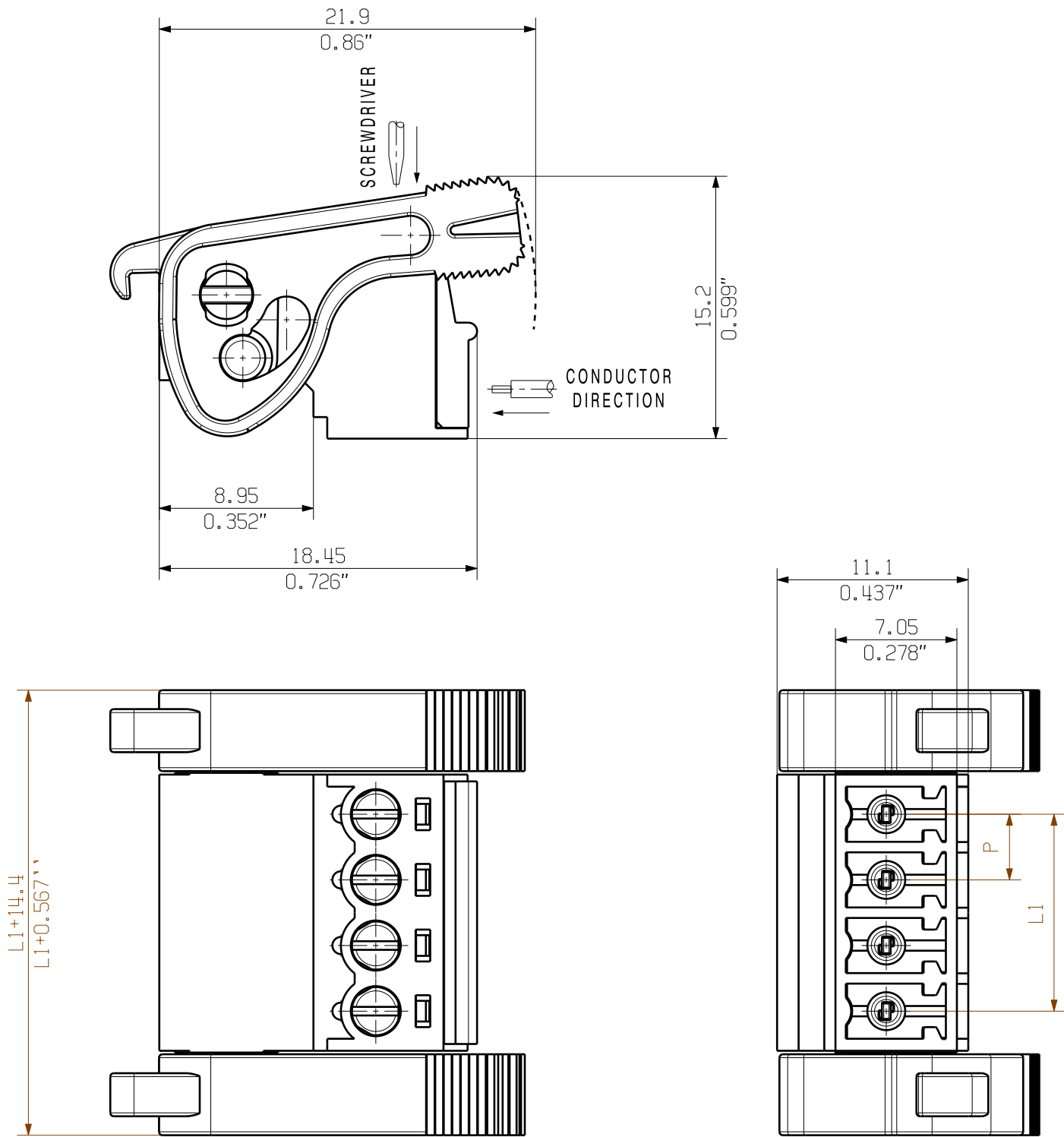


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Dimensions without tolerances are no check dimensions

The English version is binding



P = 3.81 RASTER  
0.15" PITCH

|    |         |           |
|----|---------|-----------|
| 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] |

KUNDENZEICHUNG  
CUSTOMER DRAWING

GENERAL TOLERANCE:  
DIN ISO 2768-m

RoHS

COMPLIANT

Max. nos.

Scale: 3/1

Supersedes: .

86251/0  
26.05.16 XIANG\_K

00

Modification

Date

17.02.2016

Name

XIANG\_K

Responsible

XIANG\_K

Checked

26.05.2016

ZHOU\_N

Approved

XU\_S

**Weidmüller**

SCZ 3.81...180LR...

ZUGBUEGELANSCHLUSS STIFTSLEISTE

CLAMPING YOKE CONNECTION PIN HEADER

Product file: SCZ 3.81

Cat.no.: .

C 63184

00

Drawing no.

Issue no.

Sheet 00

of 00

sheets

7078



