

## OMNIMATE Signal - series BC/SC 3.81 BCZ 3.81/02/90F SN OR BX

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 16

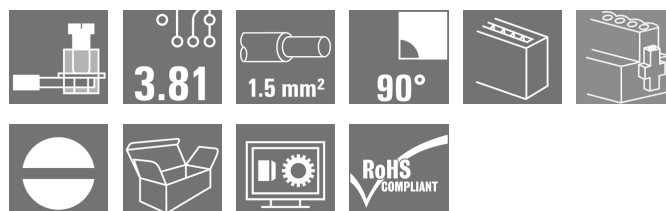
D-32758 Detmold

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Female socket connectors with clamping-yoke screw system for connecting wires.

Three wire-outlet directions are available and provide flexible connection-level design options:

- 180° wire parallel to plugging direction
- 90° wire perpendicular and above plugging direction
- 270° wire perpendicular and below plugging direction

There are three housing shapes, covering many different requirements, to choose from:

- Standard housing without flange
- Flange with screw (F)
- Flange featuring Weidmüller's patented release latch (LR) for lock-and-release latching with no strain and no tools needed.

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         | BCZ 3.81/02/90F SN OR BX                                                                                                        |
| Order No.    | <a href="#">1939980000</a>                                                                                                      |
| Version      | PCB plug-in connector, female plug, 3.81 mm, No. of poles: 2, 90°, Clamping yoke connection, Clamping range, max.: 1.5 mm², Box |
| GTIN (EAN)   | 4032248656844                                                                                                                   |
| 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                                                                                                                             |

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## Technical data

### Dimensions and weights

|            |       |
|------------|-------|
| Net weight | 2.7 g |
|------------|-------|

### 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                 | 90°               |
| No. of poles                                 | 2                                   | L1 in mm                                   | 3.81 mm           |
| L1 in inches                                 | 0.15 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                            | 6.00 mΩ                             | Can be coded                               | Yes               |
| Stripping length                             | 7 mm                                | Tightening torque for screw flange, min.   | 0.2 Nm            |
| Tightening torque for screw flange, max.     | 0.3 Nm                              | 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                                  | push-in force/pole                         | 0 N               |
| Packaging                                    | Box                                 |                                            |                   |

### Material data

|                                       |                           |                                       |                     |
|---------------------------------------|---------------------------|---------------------------------------|---------------------|
| Insulating material                   | PA GF                     | Colour                                | Orange              |
| Colour chart (similar)                | RAL 2000                  | Insulating material group             | II                  |
| CTI                                   | ≥ 550                     | Insulation resistance                 | ≥ 10 <sup>8</sup> Ω |
| UL 94 flammability rating             | V-0                       | Contact surface                       | tinned              |
| Layer structure of plug contact       | 0.5-1.5 μm Cu / 2-5 μm Sn | Storage temperature, min.             | -25 °C              |
| Storage temperature, max.             | 55 °C                     | Max. relative humidity during storage | 80 %                |
| 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, min. | 0.2 mm <sup>2</sup>      | w. plastic collar ferrule, DIN 46228 pt 4, max. | 1.5 mm <sup>2</sup> |
| 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 acc. to EN 60999 a x b; Ø            | 2.4 mm x 1.5 mm ; 2.4 mm |                                                 |                     |

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**Technical data**
**Rated data acc. to IEC**

|                                                                              |                        |                                                                          |                  |
|------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------|------------------|
| tested acc. to standard                                                      | IEC 60664-1, IEC 61984 | Rated current, min. no. of poles<br>(Tu=20°C)                            | 17.5 A           |
| Rated current, max. no. of poles<br>(Tu=20°C)                                | 15.9 A                 | Rated current, min. no. of poles<br>(Tu=40°C)                            | 17.5 A           |
| Rated current, max. no. of poles<br>(Tu=40°C)                                | 14.1 A                 | Rated voltage for surge voltage class /<br>pollution degree II/2         | 320 V            |
| Rated voltage for surge voltage class /<br>pollution degree III/2            | 160 V                  | Rated voltage for surge voltage class /<br>pollution degree III/3        | 160 V            |
| Rated impulse voltage for surge voltage<br>class/ pollution degree II/2      | 2.5 kV                 | Rated impulse voltage for surge voltage<br>class/ pollution degree III/2 | 2.5 kV           |
| Rated impulse voltage for surge voltage<br>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)   | 300 V                                                                             | Rated voltage (Use group C)   | 50 V           |
| Rated current (use group B)   | 8 A                                                                               | Rated current (use group C)   | 8 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.            |                               |                |

**Rated data acc. to UL 1059**

|                               |                                                                                     |                               |        |
|-------------------------------|-------------------------------------------------------------------------------------|-------------------------------|--------|
| Institute (cURus)             |  | Certificate No. (cURus)       | E60693 |
| Rated voltage (use group B)   | 300 V                                                                               | Rated voltage (use group D)   | 300 V  |
| Rated current (use group B)   | 10 A                                                                                | Rated current (use group D)   | 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.              |                               |        |

**Classifications**

|            |             |            |             |
|------------|-------------|------------|-------------|
| ETIM 4.0   | EC002637    | ETIM 5.0   | EC002637    |
| ETIM 6.0   | EC002637    | UNSPSC     | 30-21-18-10 |
| eClass 5.1 | 27-26-07-04 | eClass 6.2 | 27-26-07-04 |
| eClass 7.1 | 27-44-04-02 | eClass 8.1 | 27-44-04-02 |
| eClass 9.0 | 27-44-04-02 | eClass 9.1 | 27-44-04-02 |

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## Technical data

### Notes

#### Notes

- Additional colours on request
- Rated current related to rated cross-section & min. No. of poles.
- Wire end ferrule without plastic collar to DIN 46228/1
- 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

### 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](#)  
[FL INDUSTR.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

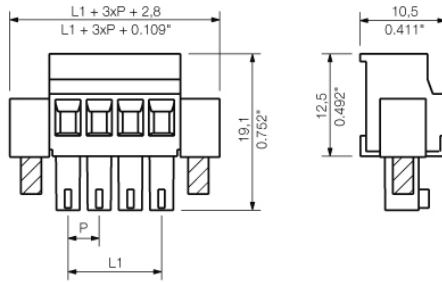
[EPLAN, WSCAD](#)

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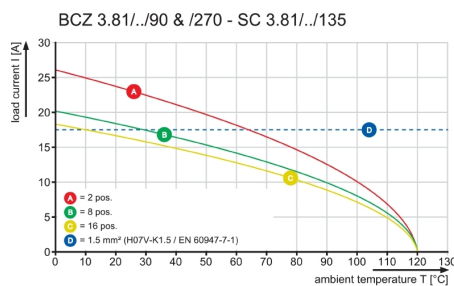
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## Drawings

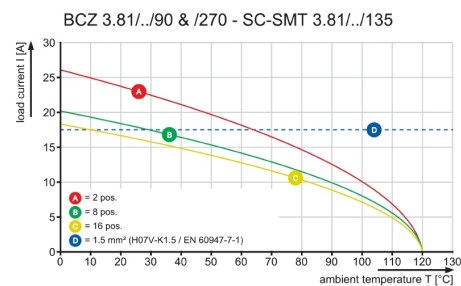
### Dimensional drawing



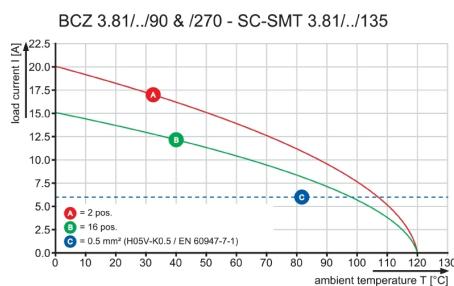
### Graph



### Graph



### Graph



### Graph

