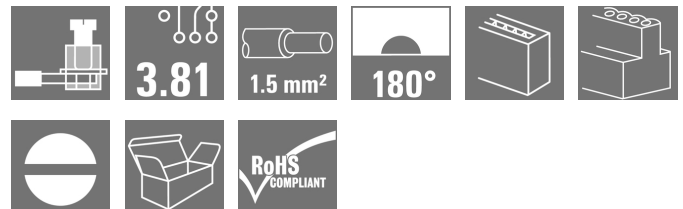


OMNIMATE Signal - series BC/SC 3.81 BCZ 3.81/13/180 SN OR BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Product image



Similar to illustration

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 3.81/13/180 SN OR BX
Order No.	1940840000
Version	PCB plug-in connector, female plug, 3.81 mm, No. of poles: 13, 180°, Screw connection, Clamping range, max. : 1.5 mm², Box
GTIN (EAN)	4032248655991
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

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Technical data

Dimensions and weights

Width	49.62 mm	Width (inches)	1.954 inch
Height	11.1 mm	Height (inches)	0.437 inch
Depth	16.1 mm	Depth (inches)	0.634 inch
Net weight	9.669 g		

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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system parameters

Product family	OMNIMATE Signal - series BC/SC 3.81	Type of connection	Field connection
Wire connection method	Screw connection	Pitch in mm (P)	3.81 mm
Pitch in inches (P)	0.15 inch	Conductor outlet direction	180°
No. of poles	13	L1 in mm	45.72 mm
L1 in inches	1.8 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	6.00 mΩ	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.	7 N
Pulling force/pole, max.	5 N		

Material data

Insulating material	PA 66 GF 30	Colour code	orange
Colour chart (similar)	RAL 2000	Insulating material group	II
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	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 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.	

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Technical data

w. wire end ferrule, DIN 46228 pt 1, min 0.2 mm²

w. wire end ferrule, DIN 46228 pt 1, 1.5 mm²
 max.

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	
	AEH	Stripping length	nominal	6 mm
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.75 mm ²	
	AEH	Stripping length	nominal	6 mm
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1 mm ²	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1.5 mm ²	
	AEH	Stripping length	nominal	6 mm
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1.5 mm ²	
	AEH	Stripping length	nominal	7 mm
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1.5 mm ²	

Max. clamping range 1.5 mm²

Rated data acc. to IEC

tested acc. to standard

IEC 60664-1, IEC 61984

Rated current, max. no. of poles
 (Tu=20°C)

17.5 A

Rated current, max. no. of poles
 (Tu=40°C)

15.2 A

Rated voltage for surge voltage class /
 pollution degree III/2

160 V

Rated impulse voltage for surge voltage
 class/ pollution degree II/2

2.5 kV

Rated impulse voltage for surge voltage
 class/ contamination degree III/3

2.5 kV

Rated current, min. no. of poles
 (Tu=20°C)

17.5 A

Rated current, min. no. of poles
 (Tu=40°C)

17 A

Rated voltage for surge voltage class /
 pollution degree II/2

320 V

Rated voltage for surge voltage class /
 pollution degree III/3

160 V

Rated impulse voltage for surge voltage
 class/ pollution degree III/2

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 current (Use group B / CSA)

8 A

Wire cross-section, AWG, min.

AWG 28

Reference to approval values

Specifications are
 maximum values, details -
 see approval certificate.

Rated voltage (Use group C / CSA)

50 V

Rated current (Use group C / CSA)

8 A

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 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

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Technical data

Packing

Packaging	Box	VPE length	118 mm
VPE width	100 mm	VPE height	61 mm

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

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

OMNIMATE Signal - series BC/SC 3.81 BCZ 3.81/13/180 SN OR BX

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Technical data

Downloads

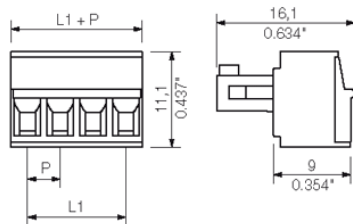
Approval/Certificate/Document of Conformity	CB Certificate CB Testreport Declaration of the Manufacturer
Brochure/Catalogue	FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE CAT 2 PORTFOLIOGUIDE EN FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FL INDUSTR.CONTROLS EN FL MACHINE SAFETY EN FL HEATING ELECTR 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	STEP

OMNIMATE Signal - series BC/SC 3.81 BCZ 3.81/13/180 SN OR BX

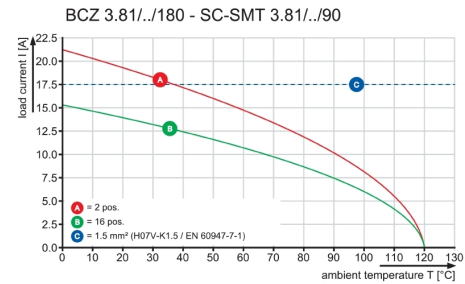
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Drawings

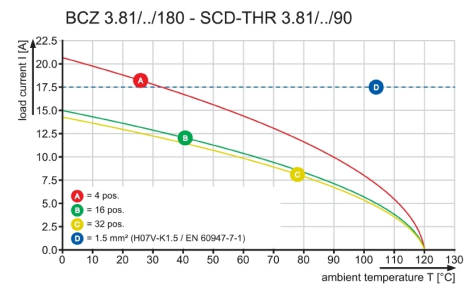
Dimensional drawing



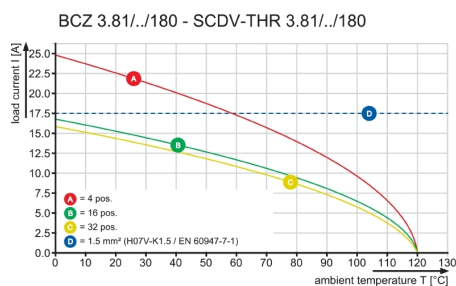
Graph



Graph

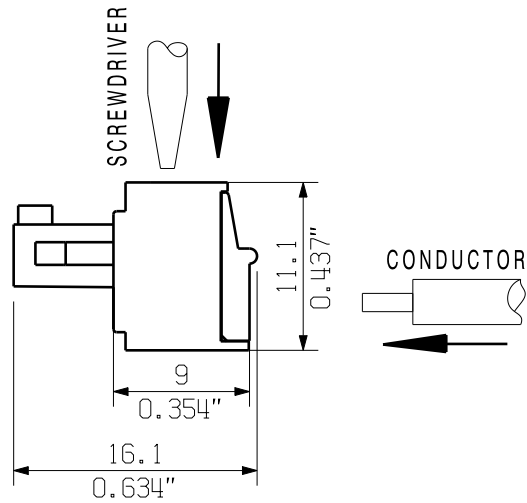
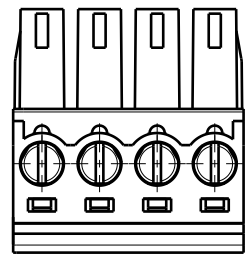
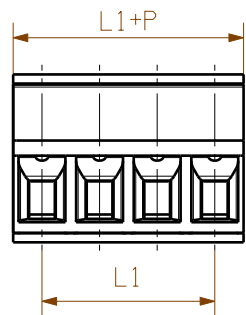


Graph

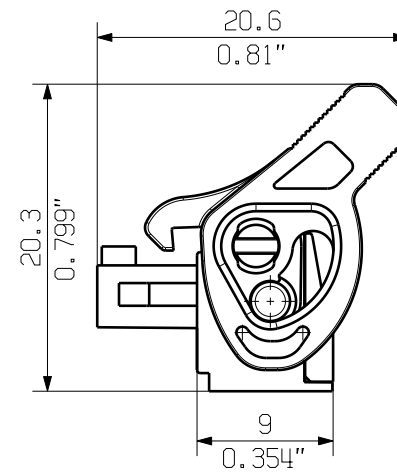
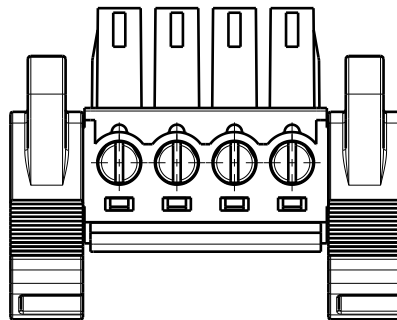
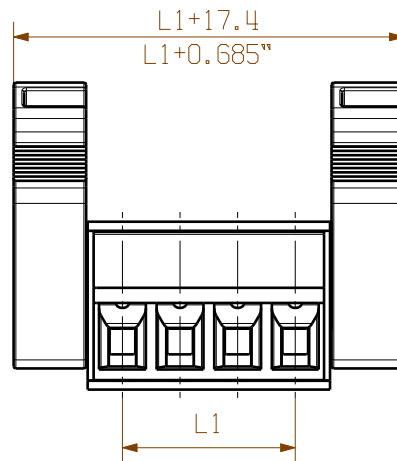


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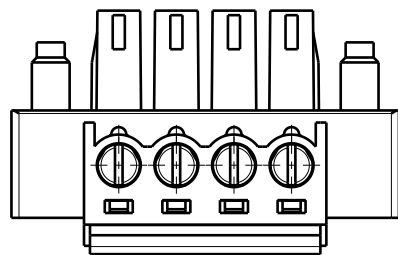
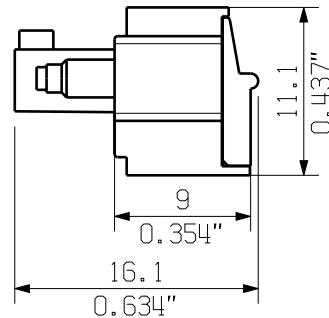
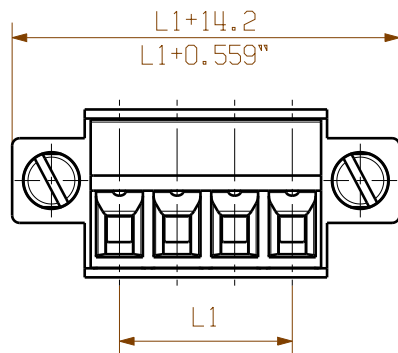
BCZ 3.81/.../180 ...



BCZ 3.81/.../180LR ...



BCZ 3.81/.../180F ...



KUNDENZEICHNUNG
CUSTOMER DRAWING

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

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

GENERAL TOLERANCE: DIN ISO 2768-m		98178/5 16.10.17 MA_J		01	Weidmüller		C 40383	
Max. nos.		Modification					Drawing no. Sheet 01 of 06 sheets	
		Drawn	21.02.2006	GU_D	BCZ 3.81/.../180 SN ... BUCHSENLEISTE SOCKET BLOCK			
		Responsible		MA_J				
Scale: 2/1	Checked	16.10.2017	ZHOU_N					
Supersedes: .	Approved		XU_S		7070			