

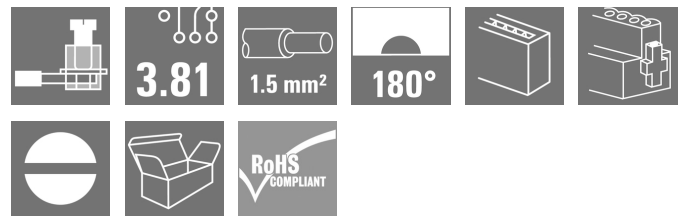
BCZ 3.81/03/180F SN BK BX PRT**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

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

Version	PCB plug-in connector, female plug, 3.81 mm, Number of poles: 3, 180°, Clamping yoke connection, Clamping range, max.: 1.5 mm², Box
Order No.	2599020000
Type	BCZ 3.81/03/180F SN BK BX PRT
GTIN (EAN)	4050118612837
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

Depth	16.1 mm	Depth (inches)	0.634 inch
Height	11.1 mm	Height (inches)	0.437 inch
Net weight	3.54 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 "		
Conductor outlet direction	180°		
Number of poles	3		
L1 in mm	7.62 mm		
L1 in inches	0.3 "		
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	IP20 plugged/ IP10 unplugged		
Protection degree	IP20		
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.	7 N		
Pulling force/pole, max.	5 N		
Tightening torque	Torque type	Wire connection	
	Usage information	Tightening torque	min. 0.2 Nm
			max. 0.25 Nm
	Torque type	Screw flange	
	Usage information	Tightening torque	min. 0.15 Nm
			max. 0.2 Nm

Material data

Insulating material	PA 66 GF 30	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 550	UL 94 flammability rating	V-0
Contact material	Cu-alloy	Contact surface	tinned
Layer structure of plug contact	0.5...1.5 µm Cu / 2...5 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 ²
Clamping range, max.	1.5 mm ²

Creation date May 11, 2025 9:38:42 PM CEST

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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 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, min.	0.2 mm ²			
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			
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.			

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)	17.5 A	Rated current, min. number of poles (Tu=40°C)	17 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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Technical data**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)	8 A	Rated current (Use group C / CSA)	8 A
Wire cross-section, AWG, min.	AWG 28	Wire cross-section, AWG, max.	AWG 16

Rated data acc. to UL 1059

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

Packing

Packaging	Box	VPE length	100 mm
VPE width	68 mm	VPE height	58 mm

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
	Evaluation	passed
Test: Misengagement (Non-interchangeability)	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
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 solid 0.08 mm ² conductor cross-section
		Type of conductor and stranded 0.08 mm ² conductor cross-section
		Type of conductor and solid 1.5 mm ² conductor cross-section
		Type of conductor and stranded 1.5 mm ² conductor cross-section
		Type of conductor and AWG 28/1 conductor cross-section
		Type of conductor and AWG 28/19 conductor cross-section
		Type of conductor and AWG 16/1 conductor cross-section
		Type of conductor and AWG 16/19 conductor cross-section
	Evaluation	passed

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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 stranded 0.25 mm ² conductor cross-section
		Type of conductor and AWG 28/1 conductor cross-section
		Type of conductor and AWG 28/19 conductor cross-section
	Evaluation	passed
	Requirement	0.3 kg
	Conductor type	Type of conductor and solid 0.5 mm ² conductor cross-section
	Evaluation	passed
	Requirement	0.4 kg
	Conductor type	Type of conductor and solid 1.5 mm ² conductor cross-section
		Type of conductor and stranded 1.5 mm ² conductor cross-section
		Type of conductor and AWG 16/1 conductor cross-section
		Type of conductor and AWG 16/19 conductor cross-section
	Evaluation	passed
Pull-out test	Standard	DIN EN 60999-1 section 9.5 / 12.00
	Requirement	≥10 N
	Conductor type	Type of conductor and stranded 0.25 mm ² conductor cross-section
		Type of conductor and AWG 28/1 conductor cross-section
		Type of conductor and AWG 28/19 conductor cross-section
	Evaluation	passed
	Requirement	≥20 N
	Conductor type	Type of conductor and H05V-U0.5 conductor cross-section
	Evaluation	passed
	Requirement	≥40 N
	Conductor type	Type of conductor and H07V-U1.5 conductor cross-section
		Type of conductor and H07V-K1.5 conductor cross-section
		Type of conductor and AWG 16/1 conductor cross-section
		Type of conductor and AWG 16/19 conductor cross-section
	Evaluation	passed

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Technical data**Classifications**

ETIM 6.0	EC002638	ETIM 7.0	EC002638
ETIM 8.0	EC002638	ETIM 9.0	EC002638
ETIM 10.0	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	ECLASS 12.0	27-46-02-02
ECLASS 13.0	27-46-02-02	ECLASS 14.0	27-46-02-02
ECLASS 15.0	27-46-02-02		

Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	6c
REACH SVHC	Lead 7439-92-1
SCIP	ea9dd4b8-c51f-409c-885a-41700372be61

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	• Additional variants 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. • In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load • Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months

Approvals

ROHS	Conform
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Downloads

Approval/Certificate/Document of Conformity	CB Certificate CB Testreport
Catalogues	Catalogues in PDF-format

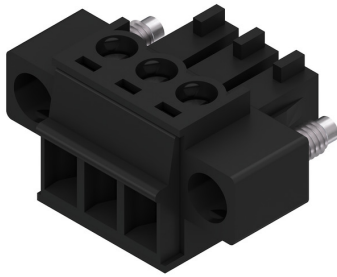
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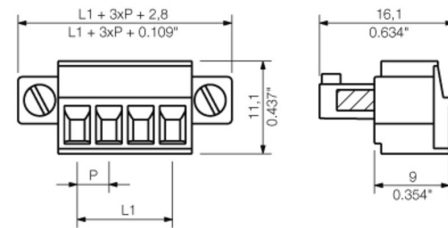
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Drawings

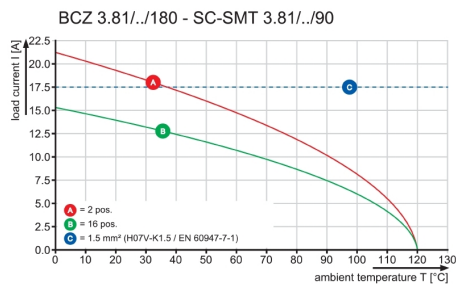
Product image



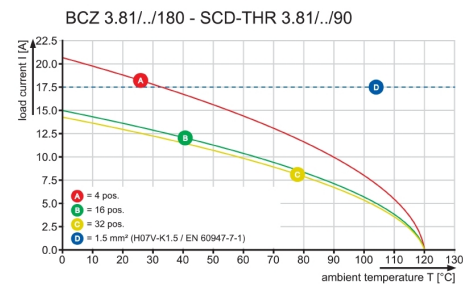
Dimensional drawing



Graph



Graph



Graph

