

OMNIMATE Signal - series BC/SC 3.81 BCF 3.81/14/180FZE SN OR 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



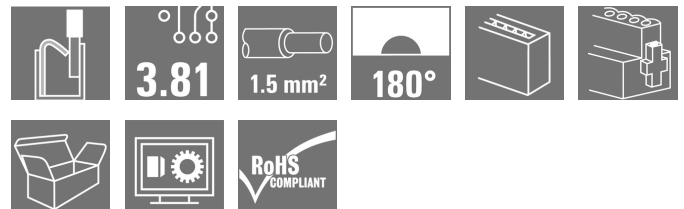
Similar to illustration

PUSH IN - Weidmüller's innovative connection system simplifies the wire connection process.

The benefits for users and applications:

- High packaging density due to very low component height. Simply insert the prepared wire - finished
- High component density with the compact SCDN / SCDN-THR two-tier pin header
- Simplified processing due to integrated push buttons for opening the clamping unit
- Intuitive handling – since the wire-entry area and handling area are clearly separated
- tool-free locking and releasing when using Weidmüller's patented release latch (LR)

The Weidmüller plug-in connectors, pitch 3.81 mm (0.15 inch), are compatible with the layout of customary plug-in connectors, can be coded and provide space for printing.



General ordering data

Type	BCF 3.81/14/180FZE SN OR BX
Order No.	1236070000
Version	PCB plug-in connector, female plug, 3.81 mm, Number of poles: 14, 180°, PUSH IN, Tension-clamp connection, Clamping range, max. : 1.5 mm², Box
GTIN (EAN)	4050118021158
Qty.	50 pc(s).
Product data	IEC: 320 V / 17.5 A / 0.14 - 1.5 mm² UL: 300 V / 10 A / AWG 26 - AWG 16
Packaging	Box

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Technical data**Dimensions and weights**

Width	63.73 mm	Width (inches)	2.509 inch
Height	9.3 mm	Height (inches)	0.366 inch
Depth	34.6 mm	Depth (inches)	1.362 inch
Net weight	11.9 g		

System Parameters

Product family	OMNIMATE Signal - series BC/SC 3.81	Type of connection	Field connection
Wire connection method	PUSH IN, Tension-clamp connection	Pitch in mm (P)	3.81 mm
Pitch in inches (P)	0.15 inch	Conductor outlet direction	180°
Number of poles	14	L1 in mm	49.53 mm
L1 in inches	1.95 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	9 mm	Tightening torque for screw flange, min.	0.2 Nm
Tightening torque for screw flange, max.	0.3 Nm	Actuating force actuating element, max.	40 N
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.	7 N		

Material data

Insulating material	PA 66 GF 30	Colour	orange
Colour of operational elements	white	Material of operational elements	PPA GF
Colour chart (similar)	RAL 2000	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 matt	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.	0.14 mm ²
Clamping range, max.	1.5 mm ²
Wire connection cross section AWG, min.	AWG 26
Wire connection cross section AWG, max.	AWG 16
Solid, min. H05(07) V-U	0.14 mm ²
Solid, max. H05(07) V-U	1.5 mm ²
Flexible, min. H05(07) V-K	0.14 mm ²
Flexible, max. H05(07) V-K	1.5 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.25 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, max.	1 mm ²
w. wire end ferrule, DIN 46228 pt 1, min.	0.25 mm ²

Creation date May 2, 2020 4:32:54 PM 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; 1.9mm			
Clampable conductor	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.5 mm ²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H0.5/16 OR	
		Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0.5/10	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.75 mm ²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H0.75/16 W	
		Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0.75/10	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1 mm ²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H1.0/16D R	
Stripping length		nominal	10 mm	
Recommended wire-end ferrule		H1.0/10		
Cross-section for conductor connection	Type	fine-wired		
	nominal	0.34 mm ²		
wire end ferrule	Stripping length	nominal	10 mm	
	Recommended wire-end ferrule	H0.34/12 TK		
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)	17.5 A	Rated current, min. number of poles (Tu=40°C)	17.5 A
Rated current, max. number of poles (Tu=40°C)	16.3 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

Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group C / CSA)	50 V
Rated voltage (Use group D / CSA)	300 V	Rated current (Use group B / CSA)	11 A
Rated current (Use group C / CSA)	11 A	Rated current (Use group D / CSA)	11 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 16

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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 26

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

VPE width 0

VPE height 0

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

Notes

Notes

- Additional colours on request
- Rated current related to rated cross-section & min. No. of poles.
- P on drawing = pitch
- Conductors suitable for connection: 1.5 mm² with wire-end ferrule with plastic collar, DIN 46 228/1, with a rated voltage of 125V/2.5 kV with III/3 or 250 V/2.5 kV with II/2
- Crimp shape A for wire-end ferrules with crimping tools PZ 1,5 (order no. 9005990000) or PZ 6/5 (order no. 9011460000) for larger wire cross-sections recommended.
- Wire end ferrule without plastic collar to DIN 46228/1
- Wire end ferrule with plastic collar to DIN 46228/4
- 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.
- The test point can only be used as potential-pickup point.

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

Creation date May 2, 2020 4:32:54 PM CEST

Data sheet

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Technical data

Downloads

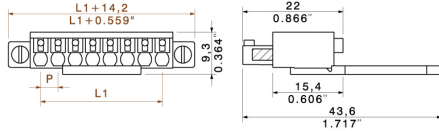
Approval/Certificate/Document of Conformity	CB Certificate CB Testreport Declaration of the Manufacturer
Brochure/Catalogue	FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE CAT 2 PORTFOLIOGUIDE EN FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FLIndustr.CONTROLS EN FL MACHINE SAFETY EN FL HEATING ELECTR 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	EPLAN, WSCAD
Engineering Data	STEP
User Documentation	BPZL_PUSH_IN_Connectors_BCF_3_81_EN
White paper PUSH IN wire connection	Download Whitepaper

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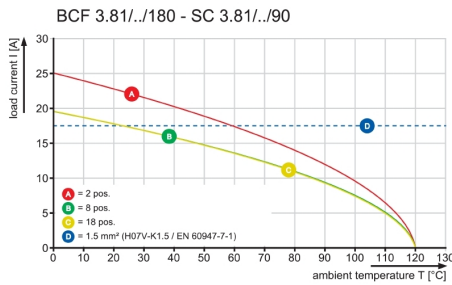
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Drawings

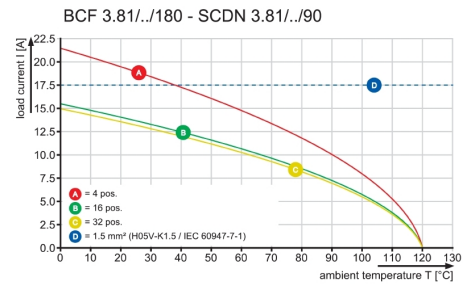
Dimensional drawing



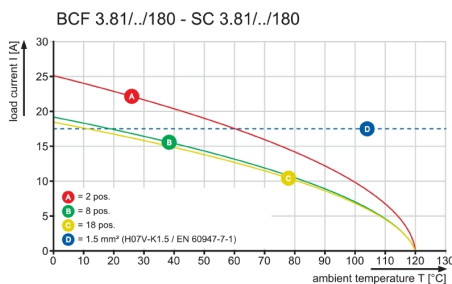
Graph



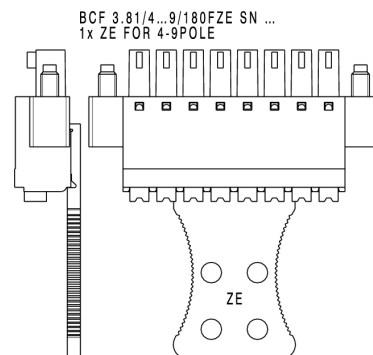
Graph



Graph

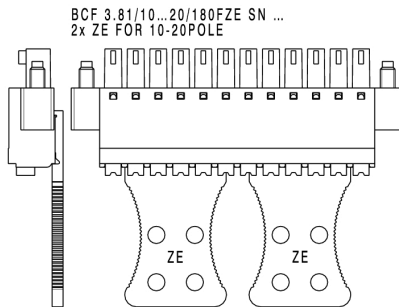


Example of use



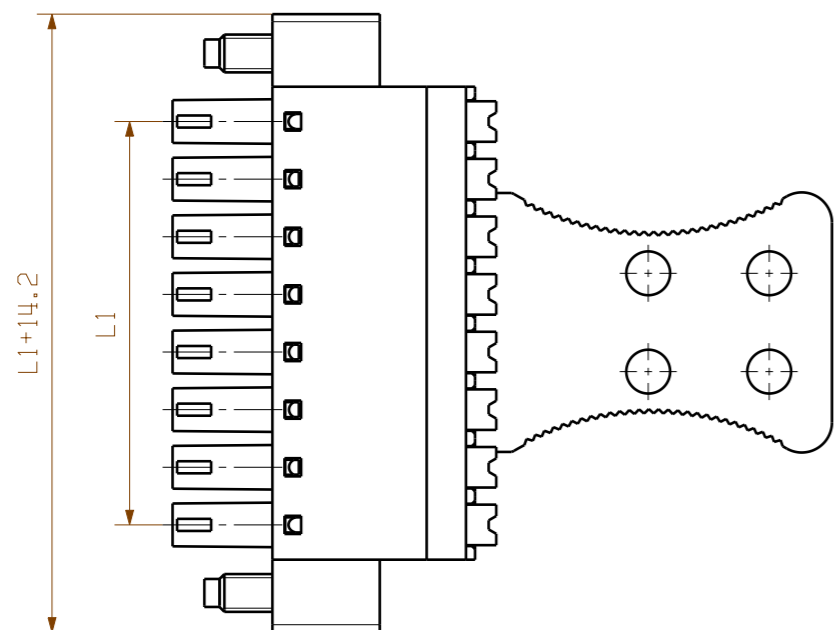
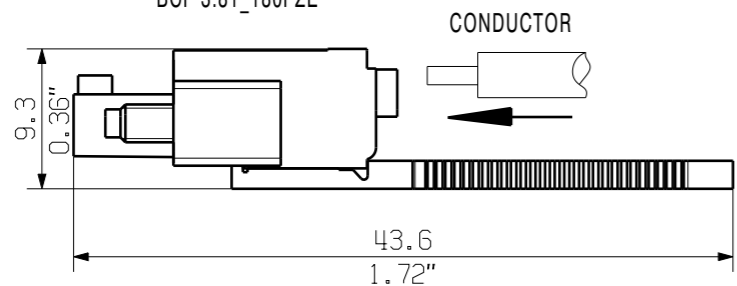
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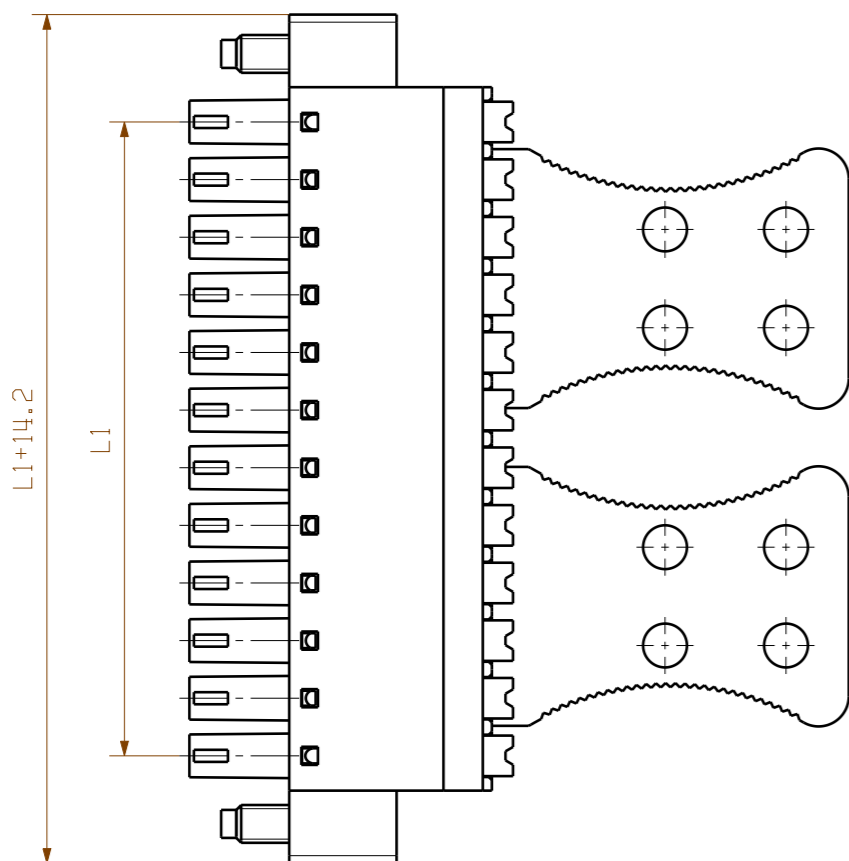
Drawings**Example of use**

MASSE OHNE TOLERANZ SIND KEINE PRUEFMASSE
 DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

BCF 3.81_180FZE



4- 9 POLE



10- 18 POLE

KUNDENZEICHUNG
 CUSTOMER DRAWING

18	64.77	2.550
17	60.96	2.400
16	57.15	2.250
15	53.34	2.100
14	49.53	1.950
13	45.72	1.800
12	41.91	1.650
11	38.10	1.500
10	34.29	1.350
9	30.48	1.200
8	26.67	1.050
7	22.86	0.900
6	19.05	0.750
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]

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.

MAX. NRN./NOS.		55304/5 18.05.11 GE_G 00		CAT.NO.:	
MODIFICATION				C 40414	
DRAWN 27.12.2006 XU_S		DATE NAME		DRAWING NO. SHEET 06 OF 08 SHEETS	
RESPONSIBLE GE_G		27.12.2006 XU_S		BCF 3.81/.../180FZE BUCHSENLEISTE SOCKET BLOCK	
CHECKED 03.06.2011 ZHOU_N		03.06.2011 ZHOU_N		PRODUCT FILE: BCF 3.81 7072	
APPROVED XU_S		APPROVED XU_S			
SCALE: 2/1					
SUPERSEDES:					

WEITERGABE SOWIE VERVIELFÄLTIGUNG DIESER DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINER INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATTET. ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER-, ODER GESCHMACKSMUSTEREINTRAGUNG VORBEHALTEN. THE REPRODUCTION, DISTRIBUTION AND UTILIZATION OF THIS DOCUMENT AS WELL AS THE COMMUNICATION OF ITS CONTENTS TO OTHERS WITHOUT EXPLICIT AUTHORIZATION IS PROHIBITED. OFFENDERS WILL BE HELD LIABLE FOR THE PAYMENT OF DAMAGES. WEIDMUELLER EXCLUSIVELY RESERVES THE RIGHT TO FILE FOR PATENTS, UTILITY MODELS OR DESIGNS.

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