

BLZP 5.08HC/20/180 SN BK BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Product image**

Female plug with clamping-yoke screw system for connecting wires with straight (180°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. They also provide an integrated plus/minus screw, protection against faulty insertion of the wire, and they are delivered with open clamping yokes. HC = High Current.

General ordering data

Version	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 20, 180°, Clamping yoke connection, Clamping range, max. : 4 mm², Box
Order No.	1943990000
Type	BLZP 5.08HC/20/180 SN BK BX
GTIN (EAN)	4032248618163
Qty.	18 pc(s).
Product data	IEC: 400 V / 23 A / 0.2 - 4 mm² UL: 300 V / 20 A / AWG 26 - AWG 12
Packaging	Box

Creation date November 7, 2024 7:42:50 AM CET

Catalogue status 26.10.2024 / We reserve the right to make technical changes.

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Technical data**Dimensions and weights**

Depth	20.1 mm	Depth (inches)	0.791 inch
Height	16 mm	Height (inches)	0.63 inch
Width	101.6 mm	Width (inches)	4 inch
Net weight	33.89 g		

System Parameters

Product family	OMNIMATE Signal - series BL/SL 5.08		
Type of connection	Field connection		
Wire connection method	Clamping yoke connection		
Pitch in mm (P)	5.08 mm		
Pitch in inches (P)	0.2 "		
Conductor outlet direction	180°		
Number of poles	20		
L1 in mm	96.52 mm		
L1 in inches	3.8 "		
Number of rows	1		
Pin series quantity	1		
Rated cross-section	4 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 2.5		
Screwdriver blade	0.6 x 3.5, PH 1, PZ 1		
Screwdriver blade standard	DIN 5264, ISO 8764/2-PH, ISO 8764/2-PZ		
Plugging cycles	25		
Plugging force/pole, max.	10 N		
Pulling force/pole, max.	9 N		
Tightening torque	Torque type	Wire connection	
	Usage information	Tightening torque	min. 0.4 Nm max. 0.5 Nm

Material data

Insulating material	PBT	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	UL 94 flammability rating	V-0
Contact material	Cu-alloy	Contact surface	tinned
Layer structure of plug contact	4...8 µm Sn hot-dip tinned	Storage temperature, min.	-40 °C
Storage temperature, max.	70 °C	Operating temperature, min.	-50 °C
Operating temperature, max.	100 °C	Temperature range, installation, min.	-25 °C
Temperature range, installation, max.	100 °C		

Conductors suitable for connection

Clamping range, min.	0.13 mm ²
Clamping range, max.	4 mm ²
Wire connection cross section AWG, min.	AWG 30

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Wire connection cross section AWG, max.	AWG 12				
Solid, min. H05(07) V-U	0.2 mm ²				
Solid, max. H05(07) V-U	4 mm ²				
Flexible, min. H05(07) V-K	0.2 mm ²				
Flexible, max. H05(07) V-K	4 mm ²				
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.2 mm ²				
w. plastic collar ferrule, DIN 46228 pt 4, max.	2.5 mm ²				
w. wire end ferrule, DIN 46228 pt 1, min.	0.2 mm ²				
w. wire end ferrule, DIN 46228 pt 1, max.	4 mm ²				
Plug gauge in accordance with EN 60999 a x b; ø	2.8 mm x 2.4 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		
		Stripping length	nominal	8 mm	
		Recommended wire-end ferrule	H0.5/12 OR		
	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		
	Cross-section for conductor connection	Type	fine-wired		
		nominal	2.5 mm ²		
	wire end ferrule	Stripping length	nominal	7 mm	
		Recommended wire-end ferrule	H2.5/7		
		Stripping length	nominal	10 mm	
		Recommended wire-end ferrule	H2.5/15D BL		
	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)	23 A
Rated current, max. number of poles (Tu=20°C)	18 A	Rated current, min. number of poles (Tu=40°C)	21 A
Rated current, max. number of poles (Tu=40°C)	16 A	Rated voltage for surge voltage class / pollution degree II/2	400 V
Rated voltage for surge voltage class / pollution degree III/2	320 V	Rated voltage for surge voltage class / pollution degree III/3	250 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	4 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	4 kV	Short-time withstand current resistance	3 x 1s with 120 A

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Technical data**Rated data acc. to CSA**

Institute (CSA)



Certificate No. (CSA)

200039-1121690

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) 20 A

Rated current (Use group D / CSA) 20 A

Wire cross-section, AWG, min. AWG 30

Wire cross-section, AWG, max.

Reference to approval values

Specifications are maximum values, details - see approval certificate.

AWG 12

Rated data acc. to UL 1059

Institute (UR)



Certificate No. (UR)

E60693

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) 20 A

Rated current (Use group D / UL 1059) 10 A

Wire cross-section, AWG, min. AWG 26

Wire cross-section, AWG, max. AWG 12

Reference to approval values

Specifications are maximum values, details - see approval certificate.

Packing

Packaging

Box

VPE length

338 mm

VPE width

130 mm

VPE height

27 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, rated voltage, rated cross-section, type of material

Evaluation

available

Test

durability

Evaluation

passed

Test: Misengagement (Non-interchangeability)

Standard

DIN EN 60512-13-5 / 11.06, IEC 60512-13-5 / 02.06

Test

180° turned with coding elements

Evaluation

passed

Test

visual examination

Evaluation

passed

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Technical data

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 0.2 mm ² conductor cross-section	
		Type of conductor and stranded 0.2 mm ² conductor cross-section	
		Type of conductor and solid 2.5 mm ² conductor cross-section	
		Type of conductor and stranded 2.5 mm ² conductor cross-section	
		Type of conductor and AWG 26/1 conductor cross-section	
		Type of conductor and AWG 26/19 conductor cross-section	
	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 AWG 26/1 conductor cross-section	
		Type of conductor and AWG 26/19 conductor cross-section	
	Evaluation	passed	
	Requirement	0.3 kg	
	Conductor type	Type of conductor and solid 0.5 mm ² conductor cross-section	
		Type of conductor and stranded 0.5 mm ² conductor cross-section	
	Evaluation	passed	
	Requirement	0.9 kg	
	Conductor type	Type of conductor and AWG 12/1 conductor cross-section	
		Type of conductor and AWG 12/19 conductor cross-section	
	Evaluation	passed	

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Technical data

Pull-out test	Standard	DIN EN 60999-1 section 9.5 / 12.00
	Requirement	≥10 N
	Conductor type	Type of conductor and AWG 26/1 conductor cross-section
		Type of conductor and AWG 26/19 conductor cross-section
	Evaluation	passed
	Requirement	≥20 N
	Conductor type	Type of conductor and H05V-U0.5 conductor cross-section
		Type of conductor and H05V-K0.5 conductor cross-section
	Evaluation	passed
	Requirement	≥60 N
	Conductor type	Type of conductor and H07V-U4.0 conductor cross-section
		Type of conductor and H07V-K4.0 conductor cross-section
		Type of conductor and AWG 12/1 conductor cross-section
		Type of conductor and AWG 12/19 conductor cross-section
	Evaluation	passed

Classifications

ETIM 6.0	EC002638	ETIM 7.0	EC002638
ETIM 8.0	EC002638	ETIM 9.0	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		

Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption
REACH SVHC	No SVHC above 0.1 wt%

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Technical data**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"> • Additional variants on request • Gold-plated contact surfaces 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

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate No. (UR)	E60693
Certificate No. (cURus)	E60693

Downloads

Approval/Certificate/Document of Conformity	CB Certificate CB Testreport Declaration of the Manufacturer
Engineering Data	CAD data – STEP
Catalogues	Catalogues in PDF-format
Brochures	FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE 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 PO OMNIMATE EN

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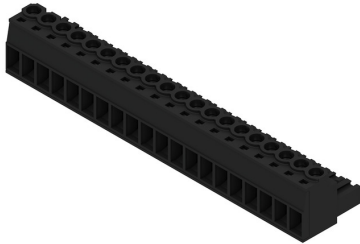
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Drawings

Product image



Dimensional drawing



Graph



Graph



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www.weidmueller.com**Accessories****Crosshead screwdriver Pozidriv**

Crosshead screwdriver, Pozidriv, SDK PZ DIN 5262, ISO 8764/2-PZ, output to ISO 8764/1-PZ, ChromTop tip, SoftFinish grip

General ordering data

Type	SDK PZ1	Version
Order No.	9008530000	Screwdriver, Screwdriver
GTIN (EAN)	4032248056521	
Qty.	1 pc(s).	

Slotted screwdriver

Slotted screwdriver with rounded blade SD DIN 5265, ISO 2380/2, output to DIN 5264, ISO 2380/1. ChromTop tip, SoftFinish grip

General ordering data

Type	SDS 0.6X3.5X100	Version
Order No.	9008330000	Screwdriver, Screwdriver
GTIN (EAN)	4032248056286	
Qty.	1 pc(s).	

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Accessories

Slotted screwdriver



VDE insulated slot-head screwdriver, SDI DIN 7437, ISO 2380/2, drive output acc. to DIN 5264, ISO 2380/1. SoftFinish grip

General ordering data

Type	SDIS 0.6X3.5X100	Version
Order No.	9008390000	Screwdriver, Screwdriver
GTIN (EAN)	4032248056354	
Qty.	1 pc(s).	

Coding elements

**Only connects what is supposed to be connected: the right connection at the right place.**

Coding elements and locking devices clearly assign connecting elements during the manufacturing process and operation

The coding elements and locking devices are inserted prior to assembly or during the cable assembly phase. The Weidmüller alternative: configure online using the variant configurator to precode prior to delivery.

Incorrect assembly on the circuit board and incorrect plugging of connecting elements is no longer possible. The advantage: no troubleshooting during manufacture and no operational errors by the user.

General ordering data

Type	BLZ/SL KO BK BX	Version	Product data	Packaging
Order No.	1545710000	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4008190087142	of poles: 1		
Qty.	50 pc(s).			
Type	BLZ/SL KO OR BX	Version	Product data	Packaging
Order No.	1573010000	PCB plug-in connector, Accessories, Coding element, orange, Number		Box
GTIN (EAN)	4008190048396	of poles: 1		
Qty.	100 pc(s).			

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Accessories

Crosshead screwdriver Phillips



Crosshead screwdriver, Phillips, SDK PH DIN 5262, ISO 8764/2-PH, output to ISO 8764-PH, ChromTop tip, SoftFinish grip

General ordering data

Type	SDK PH1	Version
Order No.	9008480000	Screwdriver, Screwdriver
GTIN (EAN)	4032248056477	
Qty.	1 pc(s).	

Strain reliefs


For frequent load changes: the "trailer coupling" for plug-in connectors.

The strain relief can do more than just relieve the strain on conductors:

Simply clip onto the plug and

- bundle conductors
- guide cables
- use as a connection and disconnection aid

No damage to the connecting points, clear, tidy wiring and easy to handle.

User advantages: permanent heavy-duty connections for harsh industrial environments and convenient operation ensure improved system availability.

General ordering data

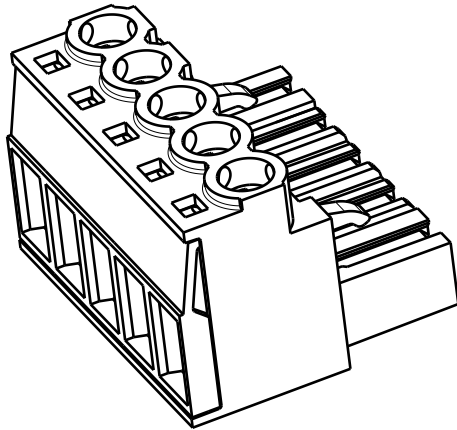
Type	BLZ 5.08 ZE08 BK BX	Version	Product data	Packaging
Order No.	1652070000	PCB plug-in connector, Accessories, Strain relief, black, Number of		Box
GTIN (EAN)	4008190401740	poles: 8		
Qty.	50 pc(s).			
Type	BLZ 5.08 ZE08 OR BX	Version	Product data	Packaging
Order No.	1652050000	PCB plug-in connector, Accessories, Strain relief, orange, Number of		Box
GTIN (EAN)	4008190401726	poles: 8		
Qty.	50 pc(s).			
Type	BLZ 5.08 ZE04 BK BX	Version	Product data	Packaging
Order No.	1652130000	PCB plug-in connector, Accessories, Strain relief, black, Number of		Box
GTIN (EAN)	4008190401801	poles: 4		
Qty.	50 pc(s).			
Type	BLZ 5.08 ZE04 OR BX	Version	Product data	Packaging
Order No.	1652110000	PCB plug-in connector, Accessories, Strain relief, orange, Number of		Box
GTIN (EAN)	4008190401788	poles: 4		
Qty.	50 pc(s).			

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

DIE DEUTSCHE VERSION IST VERBINDLICH
THE GERMAN VERSION IS BINDING






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.

SHOWN: BLZP 5.08HC/05/180

P = 5.08 RASTER/PITCH
n = POLZAHL/NO OF POLES

24	116,84	4,600
23	111,76	4,400
22	106,68	4,200
21	101,60	4,000
20	96,52	3,800
19	91,44	3,600
18	86,36	3,400
17	81,28	3,200
16	76,20	3,000
15	71,12	2,800
14	66,04	2,600
13	60,96	2,400
12	55,88	2,200
11	50,80	2,000
10	45,72	1,800
9	40,64	1,600
8	35,56	1,400
7	30,48	1,200
6	25,40	1,000
5	20,32	0,800
4	15,24	0,600
3	10,16	0,400
2	5,08	0,200
n	L1 [mm]	L1 [Inch]

	78302/4 08.04.15 HERTEL_S		01	CAT.NO.: .	
	MODIFICATION			Weidmüller 	
	DRAWN	05.09.2005	KRUG_M	BLZP 5.08HC/.../180... BUCHSENLEISTE SOCKET BLOCK	
	RESPONSIBLE		KRUG_M		
	CHECKED	27.04.2015	HERTEL_S		
SCALE: 2/1	CHECKED	27.04.2015	HERTEL_S	PRODUCT FILE: BLZP 5.0X WG 180	
SUPERSEDES: .	APPROVED		LANG_T	7157	

DRAWING NO.
SHEET 01

CAT.NO.: .
OF 04 SHEETS

ISSUE NO.
09