

BLT 5.08HC/20/180LR SN OR BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

Similar to illustration

Female plugs with TOP screw connection system for connecting wires with straight wire outlet and release latch mechanism. The female connectors provide space for labelling and can be coded. HC = High Current.

General ordering data

Version	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 20, 180°, TOP connection, Clamping range, max. : 2.5 mm², Box
Order No.	1890400000
Type	BLT 5.08HC/20/180LR SN OR BX
GTIN (EAN)	4032248498888
Qty.	12 pc(s).
Product data	IEC: 400 V / 27 A / 0.2 - 2.5 mm² UL: 300 V / 17 A / AWG 26 - AWG 14
Packaging	Box

Creation date March 26, 2021 5:19:32 AM CET

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Technical data

Dimensions and weights

Depth	31.8 mm	Depth (inches)	1.252 inch
Height	15.1 mm	Height (inches)	0.594 inch
Net weight	65.083 g	Width	111.42 mm
Width (inches)	4.387 inch		

System Parameters

Product family	OMNIMATE Signal - series BL/SL 5.08		
Type of connection	Field connection		
Wire connection method	TOP connection		
Pitch in mm (P)	5.08 mm		
Pitch in inches (P)	0.2 inch		
Conductor outlet direction	180°		
Number of poles	20		
L1 in mm	96.52 mm		
L1 in inches	3.8 inch		
Number of rows	1		
Pin series quantity	1		
Rated cross-section	2.5 mm ²		
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch		
Volume resistance	≤5 mΩ		
Can be coded	Yes		
Stripping length	13 mm		
Clamping screw	M 2.5		
Screwdriver blade	0.6 x 3.5		
Screwdriver blade standard	DIN 5264		
Plugging cycles	25		
Plugging force/pole, max.	8 N		
Pulling force/pole, max.	7 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	orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	Insulation strength	≥ 10 ⁸ Ω
UL 94 flammability rating	V-0	Contact material	CuSn
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.	2.5 mm ²
Wire connection cross section AWG, min.	AWG 28
Wire connection cross section AWG, max.	AWG 14
Solid, min. H05(07) V-U	0.2 mm ²
Solid, max. H05(07) V-U	2.5 mm ²

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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 ; 2.4 mm		
Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.5 mm ²
	wire end ferrule	Stripping length	nominal 14 mm
		Recommended wire-end ferrule	H0.5/18 OR
	Cross-section for conductor connection	Type	fine-wired
		nominal	1 mm ²
	wire end ferrule	Stripping length	nominal 15 mm
		Recommended wire-end ferrule	H1.0/18 GE
	Cross-section for conductor connection	Type	fine-wired
		nominal	1.5 mm ²
	wire end ferrule	Stripping length	nominal 15 mm
		Recommended wire-end ferrule	H1.5/18D SW
Stripping length		nominal 12 mm	
Recommended wire-end ferrule		H1.5/12	
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)	27 A
Rated current, max. number of poles (Tu=20°C)	19 A	Rated current, min. number of poles (Tu=40°C)	24 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 100 A

Rated data acc. to CSA

Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V
Rated current (Use group B / CSA)	15 A	Rated current (Use group D / CSA)	15 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 14

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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) 17 A

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

Wire cross-section, AWG, min. AWG 26

Wire cross-section, AWG, max. AWG 14

Reference to approval values
Specifications are maximum values, details - see approval certificate.

Packing

Packaging	Box	VPE length	35 mm
VPE width	135 mm	VPE height	350 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 of material, date clock	
	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 with 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 conductor cross-section	solid 0.08 mm ²
		Type of conductor and conductor cross-section	stranded 0.08 mm ²
		Type of conductor and conductor cross-section	solid 2.5 mm ²
		Type of conductor and conductor cross-section	stranded 2.5 mm ²
		Type of conductor and conductor cross-section	AWG 26/1
		Type of conductor and conductor cross-section	AWG 26/19
		Type of conductor and conductor cross-section	AWG 14/1
		Type of conductor and conductor cross-section	AWG 14/19
	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 conductor cross-section	AWG 28/1
	Type of conductor and conductor cross-section	AWG 26/19
Evaluation	passed	
Requirement	0.3 kg	
Conductor type	Type of conductor and conductor cross-section	solid 0.5 mm ²
	Type of conductor and conductor cross-section	stranded 0.5 mm ²
Evaluation	passed	
Requirement	0.7 kg	
Conductor type	Type of conductor and conductor cross-section	solid 2.5 mm ²
	Type of conductor and conductor cross-section	stranded 2.5 mm ²
	Type of conductor and conductor cross-section	AWG 14/1
	Type of conductor and conductor cross-section	AWG 14/19
Evaluation	passed	

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Technical data

Pull-out test	Standard	DIN EN 60999-1 section 9.5 / 12.00	
	Requirement	≥5 N	
	Conductor type	Type of conductor and conductor cross-section	AWG 28/1
	Evaluation	passed	
	Requirement	≥10 N	
	Conductor type	Type of conductor and conductor cross-section	AWG 26/19
	Evaluation	passed	
	Requirement	≥20 N	
	Conductor type	Type of conductor and conductor cross-section	solid 0.5 mm ²
		Type of conductor and conductor cross-section	stranded 0.5 mm ²
	Evaluation	passed	
	Requirement	≥40 N	
	Conductor type	Type of conductor and conductor cross-section	AWG 14/1
		Type of conductor and conductor cross-section	AWG 14/19
	Evaluation	passed	
	Requirement	≥50 N	
	Conductor type	Type of conductor and conductor cross-section	solid 2.5 mm ²
		Type of conductor and conductor cross-section	stranded 2.5 mm ²
	Evaluation	passed	

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	ECLASS 11.0	27-46-02-02

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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	• Additional colours 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 • Crimp form A for wire end ferrules with PZ 6/5 crimping tool are recommended for the largest cable sizes. • 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. • Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

Approvals

Approvals



ROHS Conform

UL File Number Search E60693

Downloads

Approval/Certificate/Document of Conformity	CB Certificate CB Testreport Declaration of the Manufacturer
Engineering Data	STEP
Engineering Data	WSCAD

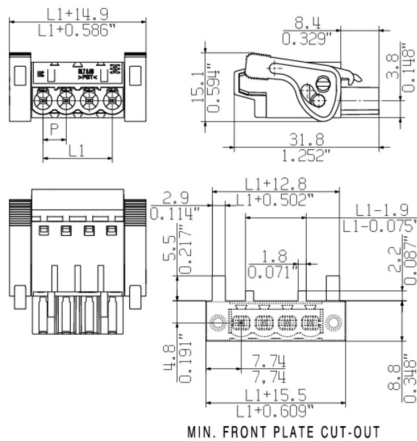
BLT 5.08HC/20/180LR SN OR BX

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Drawings

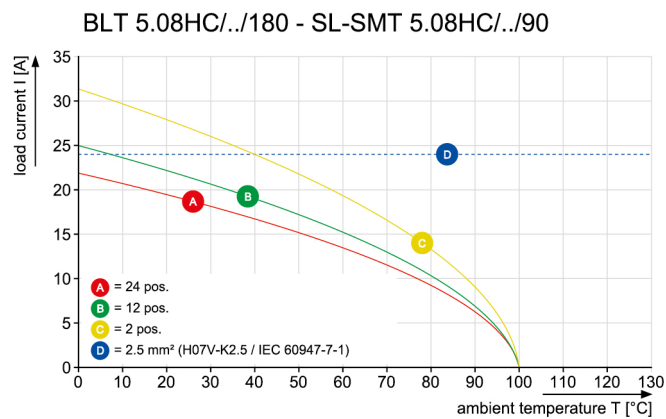
Dimensional drawing



Dimensional drawing



Graph



Product benefits



Self-locking
Immediately on plugging in

Product benefits



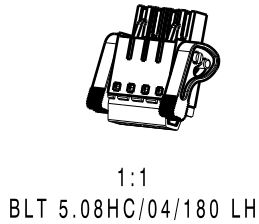
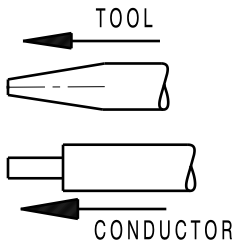
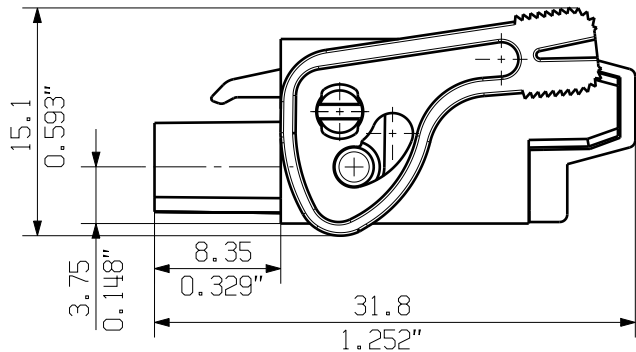
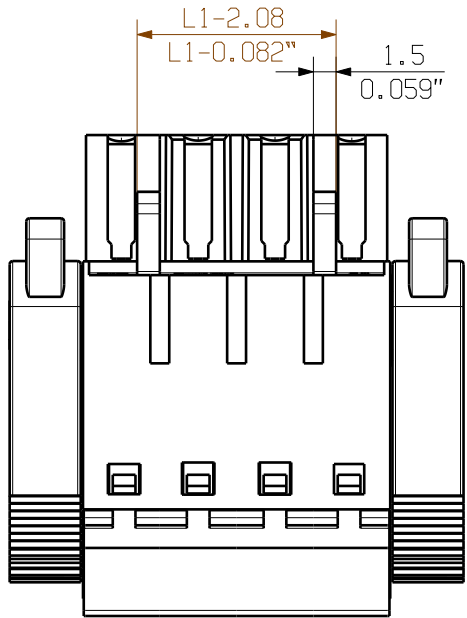
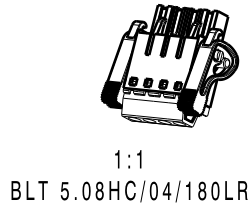
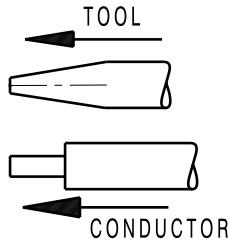
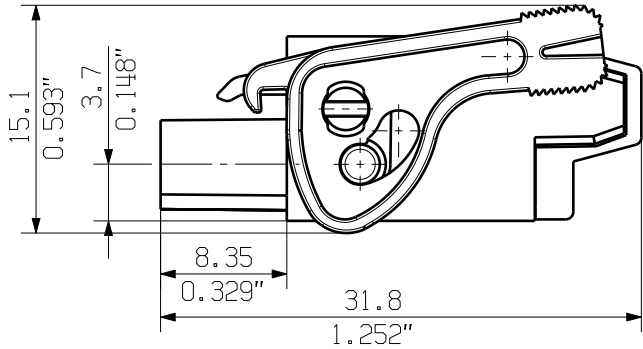
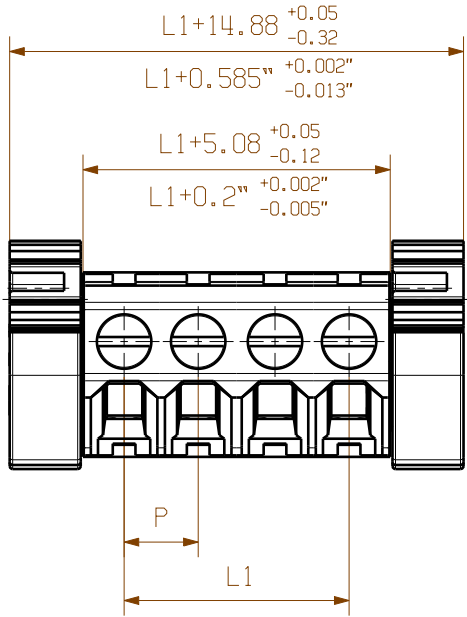
Gentle unlocking
Low mechanical stress

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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



24	106.84	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

P=PITCH

P = 5.08 RASTER/PITCH

SHOWN: BLT 5.08HC/04/180LR AND BLT 5.08HC/04/180LH

n = POLZAHL/NO OF POLES

n	POLZAHL POLES	L1 [mm]	L1 [inch]
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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 components are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

	78309/4 01.04.15 HERTEL_S 01		CAT.NO.: .	
	GENERAL TOLERANCE: DIN ISO 2768-m		MODIFICATION	
	DRAWN	10.07.2003	KNOTH_G	BLT 5.08HC/.. /180... BUCHSENLEISTE SOCKET BLOCK
	RESPONSIBLE		HERTEL_S	
SCALE: 2/1	CHECKED	01.04.2015	HELIS_MA	
SUPERSEDES: .	APPROVED		LANG_T	PRODUCT FILE: BLT 5.08

CAT.NO.: .

C 36024 14

DRAWING NO. SHEET 02 OF 02 SHEETS

ISSUE NO.

7143

