

## BLF 5.00HC/21/180 SN OR BX

**Weidmüller Interface GmbH & Co. KG**

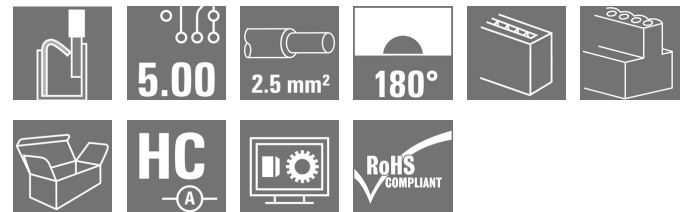
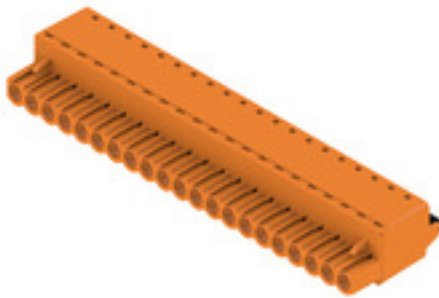
Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

### Product image



Just as reliable as the millionfold proven original and featuring innovative details:

The BLF 5.00HC PUSH IN version of the BLZ 5.00HC female connector features a new connection system and a more compact design. Weidmüller's innovative PUSH IN spring connection system stands for the future of easy and tool-free wire connection. HC = High Current. In terms of versatility, the BLF 5.00HC offers just as much as the older versions:

- 3 tested-and-proven wire outlet directions provide the usual flexibility for application-specific design
- 4 flange variations and the patented release latch allow the locking concept to be based on the requirements of the user

### General ordering data

Version	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 21, 180°, PUSH IN with actuator, Tension-clamp connection, Clamping range, max. : 3.31 mm², Box
Order No.	<a href="#">1211780000</a>
Type	BLF 5.00HC/21/180 SN OR BX
GTIN (EAN)	4032248993239
Qty.	12 pc(s).
Product data	IEC: 400 V / 23 A / 0.2 - 2.5 mm² UL: 300 V / 18.5 A / AWG 26 - AWG 12
Packaging	Box

Creation date September 16, 2022 1:57:27 AM CEST

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**Technical data****Dimensions and weights**

Depth	27.6 mm	Depth (inches)	1.087 inch
Height	14.2 mm	Height (inches)	0.559 inch
Width	105 mm	Width (inches)	4.134 inch
Net weight	37.17 g		

**System Parameters**

Product family	OMNIMATE Signal - series BL/SL 5.00	Type of connection	Field connection
Wire connection method	PUSH IN with actuator, Tension-clamp connection	Pitch in mm (P)	5 mm
Pitch in inches (P)	0.197 inch	Conductor outlet direction	180°
Number of poles	21	L1 in mm	100 mm
L1 in inches	3.94 inch	Number of rows	1
Pin series quantity	1	Rated cross-section	2.5 mm <sup>2</sup>
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch	Touch-safe protection acc. to DIN VDE 0470	IP 20
Protection degree	IP20	Volume resistance	≤5 mΩ
Can be coded	Yes	Stripping length	10 mm
Screwdriver blade	0.6 x 3.5	Screwdriver blade standard	DIN 5264
Plugging cycles	25	Plugging force/pole, max.	7 N
Pulling force/pole, max.	5.5 N		

**Material data**

Insulating material	PBT	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	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.	-30 °C
Temperature range, installation, max.	100 °C		

**Conductors suitable for connection**

Clamping range, min.	0.13 mm <sup>2</sup>
Clamping range, max.	3.31 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 26
Wire connection cross section AWG, max.	AWG 12
Solid, min. H05(07) V-U	0.2 mm <sup>2</sup>
Solid, max. H05(07) V-U	2.5 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.2 mm <sup>2</sup>
Flexible, max. H05(07) V-K	2.5 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm <sup>2</sup> max.	
w. wire end ferrule, DIN 46228 pt 1, min.	0.25 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm <sup>2</sup>
Plug gauge in accordance with EN 60999 a x b; ø	2.8 mm x 2.0 mm

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## Technical data

Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.5 mm <sup>2</sup>
wire end ferrule		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H0.5/16 OR</a>
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	<a href="#">H0.5/10</a>
Cross-section for conductor connection	Type	fine-wired	
	nominal	0.75 mm <sup>2</sup>	
wire end ferrule		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H0.75/16 W</a>
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	<a href="#">H0.75/10</a>
Cross-section for conductor connection	Type	fine-wired	
	nominal	1 mm <sup>2</sup>	
wire end ferrule		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H1.0/16D R</a>
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	<a href="#">H1.0/10</a>
Cross-section for conductor connection	Type	fine-wired	
	nominal	1.5 mm <sup>2</sup>	
wire end ferrule		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	<a href="#">H1.5/10</a>
		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H1.5/16 R</a>
Cross-section for conductor connection	Type	fine-wired	
	nominal	2.5 mm <sup>2</sup>	
wire end ferrule		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	<a href="#">H2.5/10</a>

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 current (Use group B / CSA)	10 A
Wire cross-section, AWG, min.	AWG 12
Reference to approval values	Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group D / CSA)	300 V
Rated current (Use group D / CSA)	10 A
Wire cross-section, AWG, max.	AWG 26

## Packing

Packaging	Box	VPE length	338 mm
VPE width	130 mm	VPE height	33 mm

## Type tests

Test: Durability of markings	Standard	IEC 61984 section 6.2 and 7.3.2 / 10.08 taking pattern from IEC 60068-2-70 / 12.95		
	Test	mark of origin, type identification, pitch, type of material, date clock		
	Evaluation	available		
	Test	durability		
	Evaluation	passed		
Test: Misengagement (Non-interchangeability)	Standard	IEC 61984 section 6.3 and 6.9.1 / 10.08, IEC 60512-13-5 / 02.06		
	Test	180° turned with coding elements		
	Evaluation	passed		
	Test	visual examination		
	Evaluation	passed		
Test: Clampable cross section	Standard	IEC 60999-1 section 7 and 9.1 / 11.99, IEC 60947-1 section 8.2.4.5.1 / 06.07		
	Conductor type	Type of conductor and conductor cross-section	solid 0.2 mm <sup>2</sup>	
		Type of conductor and conductor cross-section	stranded 0.2 mm <sup>2</sup>	
		Type of conductor and conductor cross-section	solid 2.5 mm <sup>2</sup>	
		Type of conductor and conductor cross-section	stranded 2.5 mm <sup>2</sup>	
		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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**Technical data**

Test for damage to and accidental loosening of conductors	Standard	IEC 60999-1 section 9.4 / 11.99		
	Requirement	0.2 kg		
	Conductor type	Type of conductor and conductor cross-section	AWG 26/1	
		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	H05V-U0.5	
		Type of conductor and conductor cross-section	H05V-K0.5	
	Evaluation	passed		
	Requirement	0.7 kg		
	Conductor type	Type of conductor and conductor cross-section	H07V-U2.5	
		Type of conductor and conductor cross-section	H07V-K2.5	
Type of conductor and conductor cross-section		AWG 14/1		
Type of conductor and conductor cross-section		AWG 14/19		
Evaluation	passed			
Pull-out test	Standard	IEC 60999-1 section 9.5 / 11.99		
	Requirement	≥10 N		
	Conductor type	Type of conductor and conductor cross-section	AWG 26/1	
		Type of conductor and conductor cross-section	AWG 26/19	
	Evaluation	passed		
	Requirement	≥20 N		
	Conductor type	Type of conductor and conductor cross-section	H05V-U0.5	
		Type of conductor and conductor cross-section	H05V-K0.5	
	Evaluation	passed		
	Requirement	≥50 N		
	Conductor type	Type of conductor and conductor cross-section	H07V-U2.5	
		Type of conductor and conductor cross-section	H07V-K2.5	
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****Classifications**

ETIM 6.0	EC002638	ETIM 7.0	EC002638
ETIM 8.0	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

**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
  - 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
  - Crimping shape "A" for wire end ferrules with PZ 6/5 crimping tool recommended.
  - The test point can only be used as potential-pickup point.
  - 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	UL Website
Certificate No. (cURus)	E60693

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# Technical data

## Downloads

Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Engineering Data	<a href="#">CAD data – STEP</a>
Engineering Data	<a href="#">EPLAN, WSCAD</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>
Brochures	<a href="#">FL DRIVES EN</a> <a href="#">MB DEVICE MANUF. EN</a> <a href="#">FL DRIVES DE</a> <a href="#">FL BUILDING SAFETY EN</a> <a href="#">FL APPL LED LIGHTING EN</a> <a href="#">FL INDUSTR.CONTROLS EN</a> <a href="#">FL MACHINE SAFETY EN</a> <a href="#">FL HEATING ELECTR EN</a> <a href="#">FL APPL INVERTER EN</a> <a href="#">FL_BASE_STATION_EN</a> <a href="#">FL ELEVATOR EN</a> <a href="#">FL POWER SUPPLY EN</a> <a href="#">FL 72H SAMPLE SER EN</a> <a href="#">PO OMNIMATE EN</a>

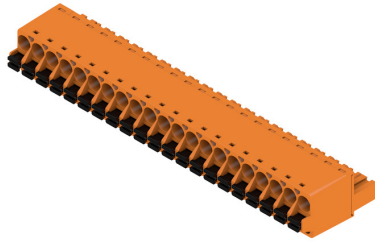
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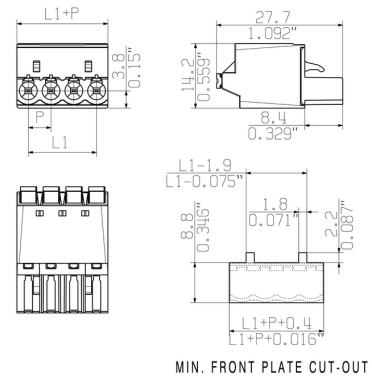
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**Drawings**

**Product image**



**Dimensional drawing**



**Graph**



**Graph**



Uncompromising functionality  
 High vibration resistance

**Product benefits**



Uncompromising functionality  
 High vibration resistance

**Product benefits**



Solid PUSH IN contact  
 Safe and durable



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Drawings

Product benefits



Cost-effective wiring  
Quick and intuitive operation

Product benefits



Wide clamping range  
Tool-free wire connection

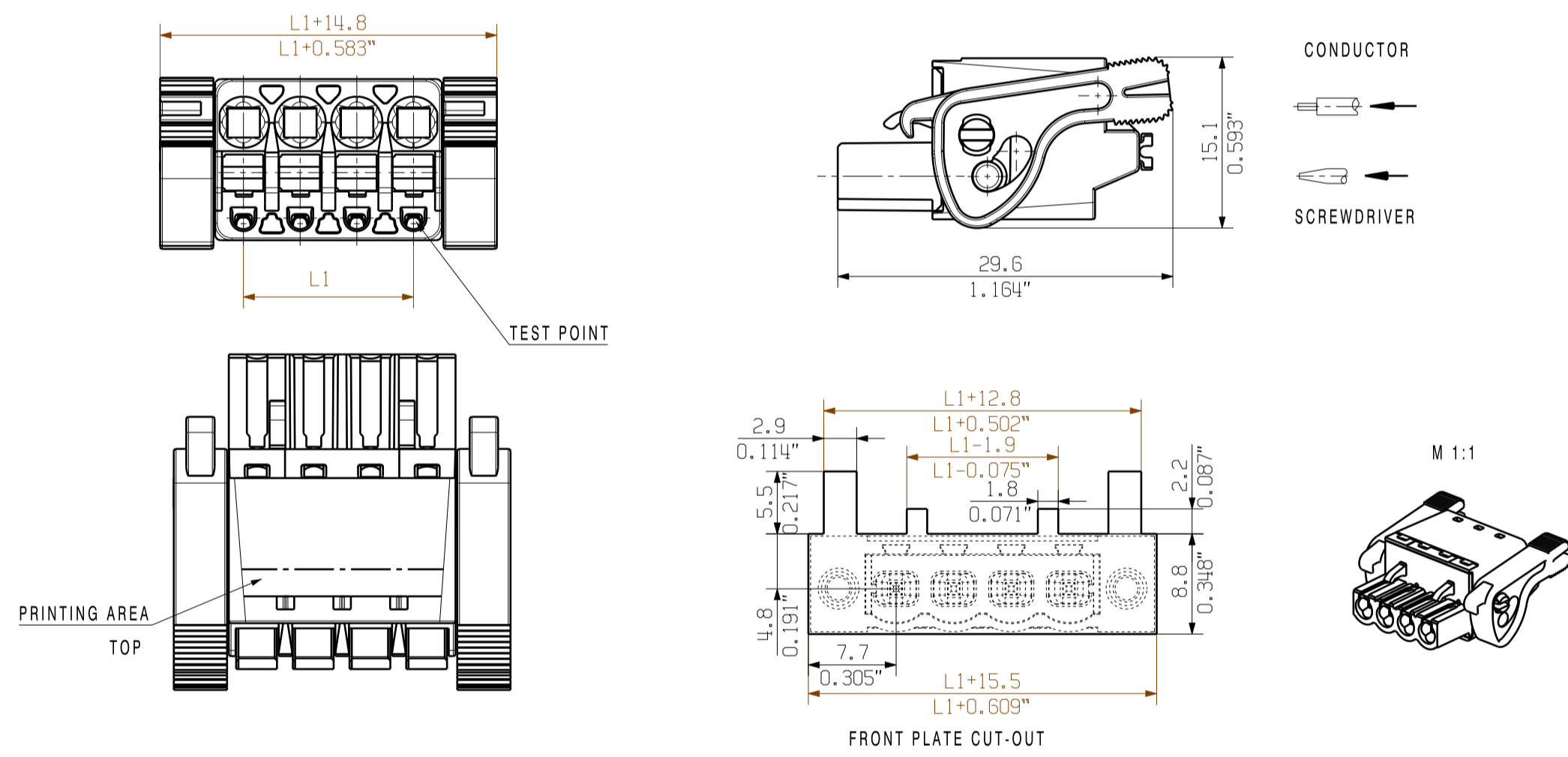
SHOWN: BLF 5.00HC/04/180



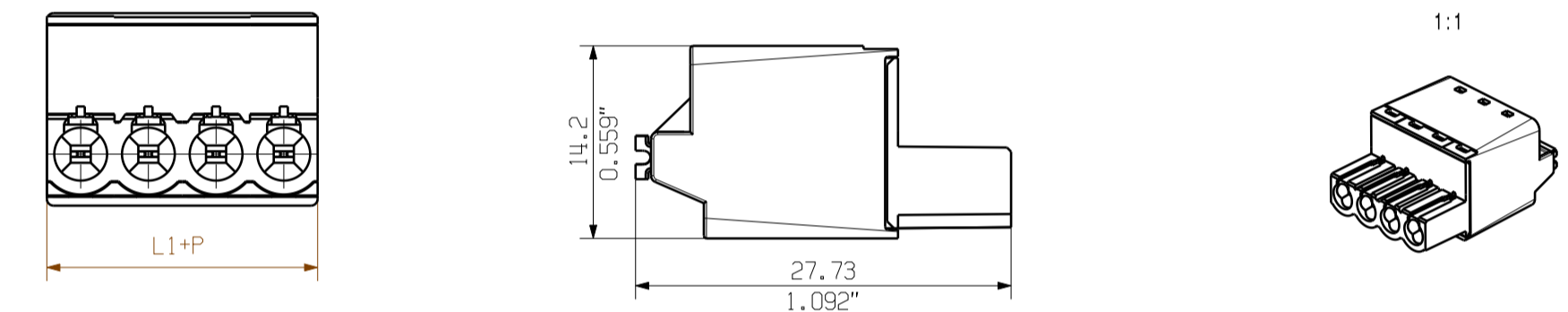
SHOWN: BLF 5.00HC/04/180F



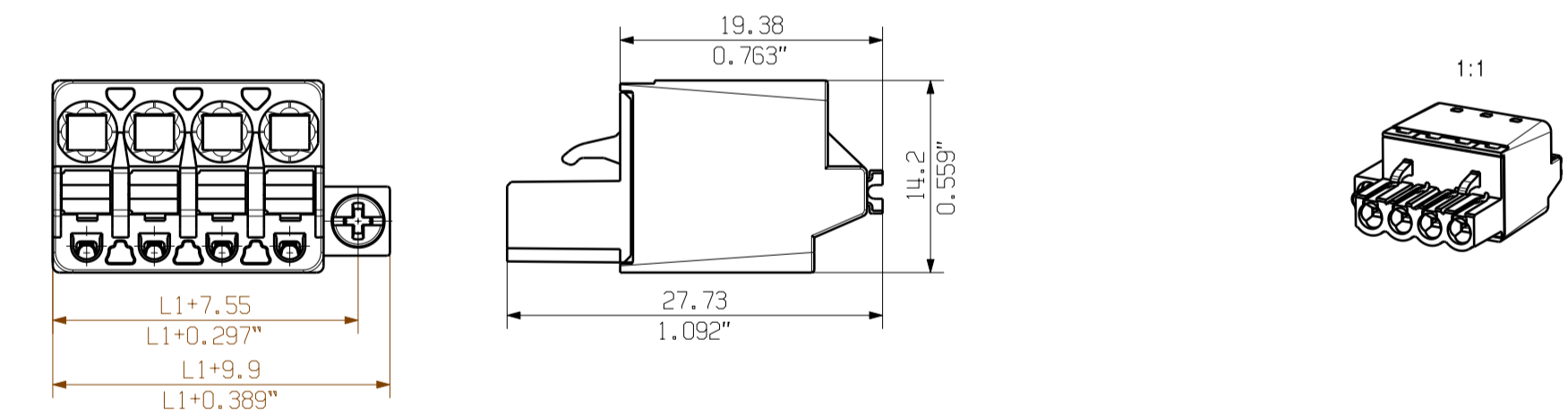
SHOWN: BLF 5.00HC/04/180LR



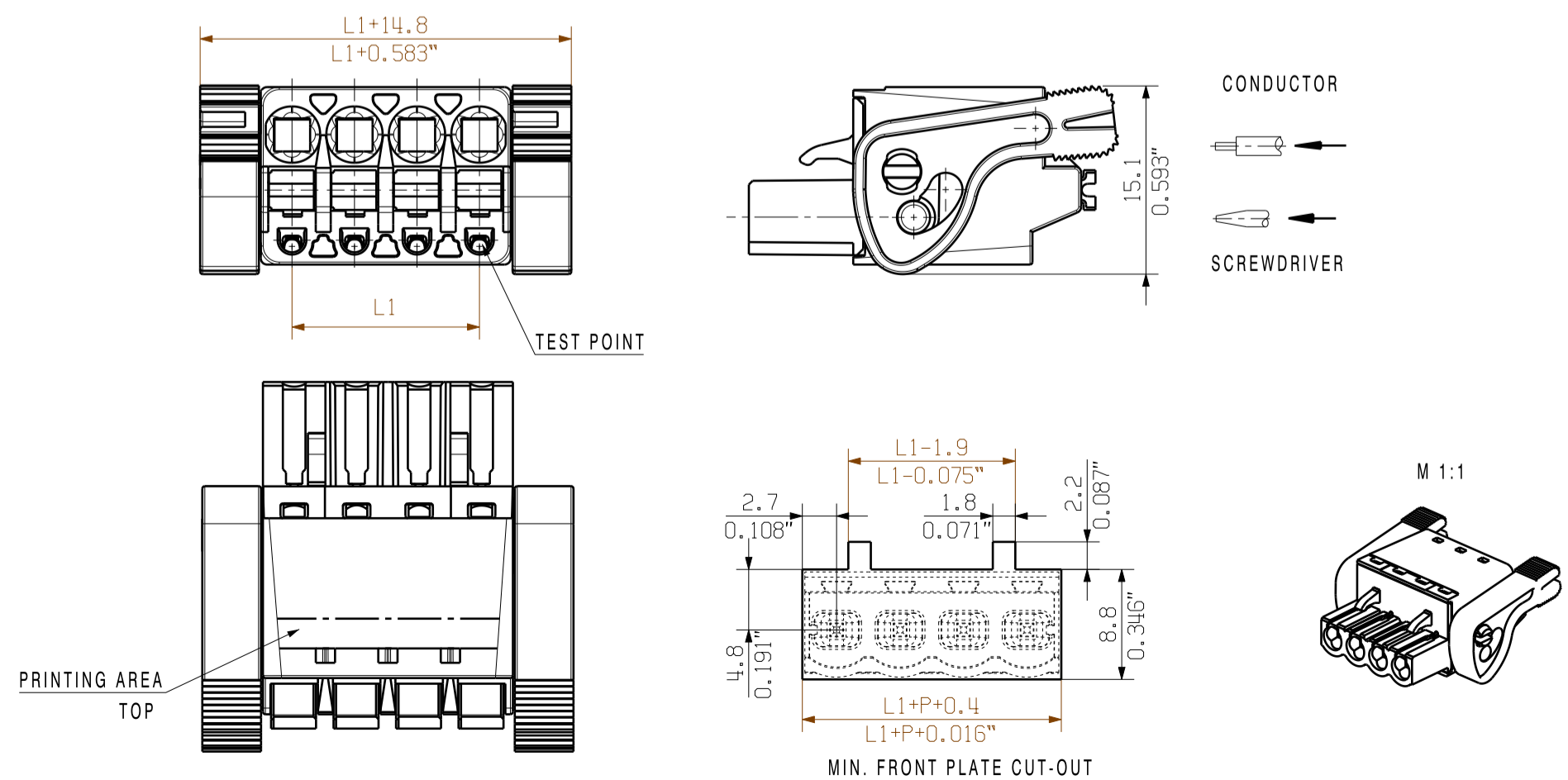
SONDERVARIANTE OHNE RASTHAKEN / SPECIAL VERSION WITHOUT SNAP LATCH



BLF 5.00HC/04/180F SO  
SONDERVARIANTE / EINSEITIGER FLANSCH  
SPECIAL VERSION ONESIDED FLANSCH



SHOWN: BLF 5.00HC/04/180LH



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

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 IEC 60326 part 3 very fine. Weidmüller connectors are tested to the DIN VDE 0827 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, thermal and corrosive stress will be satisfied.

24	115	4.527
23	110	4.330
22	105	4.130
21	100	3.930
20	95	3.740
19	90	3.543
18	85	3.349
17	80	3.152
16	75	2.955
15	70	2.758
14	65	2.561
13	60	2.364
12	55	2.167
11	50	1.970
10	45	1.773
9	40	1.576
8	35	1.379
7	30	1.182
6	25	0.985
5	20	0.788
4	15	0.591
3	10	0.394
2	5	0.197
n	L1	L1
	[mm]	[Inch]

General tolerance: DIN ISO 2768-mK		Cat. no.:	
99286/0	14.02.18 HERTEL_S	1 43920 07	
Modification:		Drawing no. Issue no.	
Date	Name	Sheet 01 of 01 sheets	
Drawn 28.04.2009	HECKERT_M	<b>BLF 5.00HC/./180...</b> BUCHSENSTECKER FEMALE PLUG Scale: 2/1 Product file: BLF 5.00	
Responsible	HERTEL_S		
Checked 28.02.2018	HELIUS_WA		
Approved	LANG_T	7379	

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