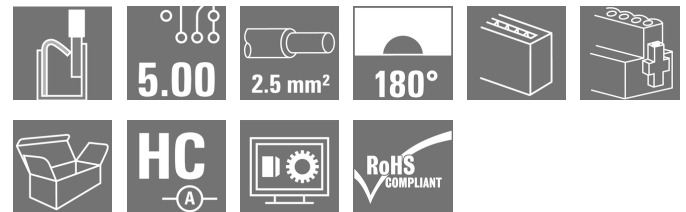


OMNIMATE Signal - series BL/SL 5.00 BLF 5.00HC/18/180F SN BK BX

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

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

Type	BLF 5.00HC/18/180F SN BK BX
Order No.	1017410000
Version	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 18, 180°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm², Box
GTIN (EAN)	4032248728114
Qty.	18 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 May 1, 2020 6:19:21 AM CEST

OMNIMATE Signal - series BL/SL 5.00
BLF 5.00HC/18/180F SN BK BX

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Technical data
Dimensions and weights

Width	95.1 mm	Width (inches)	3.744 inch
Height	14.2 mm	Height (inches)	0.559 inch
Depth	27.6 mm	Depth (inches)	1.087 inch
Net weight	33.22 g		

System Parameters

Product family	OMNIMATE Signal - series BL/SL 5.00	Type of connection	Field connection
Wire connection method	PUSH IN, Spring connection	Pitch in mm (P)	5 mm
Pitch in inches (P)	0.197 inch	Conductor outlet direction	180°
Number of poles	18	L1 in mm	85 mm
L1 in inches	3.349 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	Touch-safe protection acc. to DIN VDE 0470	IP 20
Volume resistance	≤ 5mΩ	Can be coded	Yes
Stripping length	10 mm	Tightening torque for screw flange, min.	0.15 Nm
Tightening torque for screw flange, max.	0.2 Nm	Screwdriver blade	0.6 x 3.5
Screwdriver blade standard	DIN 5264	Plugging cycles	25
Plugging force/pole, max.	10 N	Pulling force/pole, max.	12 N

Material data

Insulating material	PBT	Colour	black
Colour of operational elements	orange	Material of operational elements	PBT
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	Insulation strength	≥ 10 ⁸ Ω
UL 94 flammability rating	V-0	GWFI	960 °C
Contact material	CuSn	Contact surface	tinned
Layer structure of plug contact	4-8 μm Sn hot-dip tinned	Storage temperature, min.	-25 °C
Storage temperature, max.	50 °C	Max. relative humidity during storage	70 %
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 ²
Clamping range, max.	3.31 mm ²
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 ²
Solid, max. H05(07) V-U	2.5 mm ²
Flexible, min. H05(07) V-K	0.2 mm ²
Flexible, max. H05(07) V-K	2.5 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.25 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, max.	2.5 mm ²
w. wire end ferrule, DIN 46228 pt 1, min.	0.25 mm ²
w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm ²

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Technical data

Plug gauge in accordance with EN 60999 a x b; ø 2.8 mm x 2.0 mm

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
		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
		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
		nominal	10 mm
		Recommended wire-end ferrule	H1.0/10
Cross-section for conductor connection	Type	fine-wired	
	nominal	1.5 mm ²	
wire end ferrule	Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H1.5/10
		nominal	12 mm
		Recommended wire-end ferrule	H1.5/16 R
Cross-section for conductor connection	Type	fine-wired	
	nominal	2.5 mm ²	
wire end ferrule	Stripping length	nominal	10 mm
	Recommended wire-end ferrule	H2.5/10	

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 3.31 mm²

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

Rated data acc. to UL 1059

Institute (cURus)



Certificate No. (cURus)

E60693

Rated voltage (Use group B / UL 1059)	300 V
Rated current (Use group B / UL 1059)	18,5 A
Wire cross-section, AWG, min.	AWG 26
Reference to approval values	Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group D / UL 1059)	300 V
Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, max.	AWG 12

Packing

Packaging	Box	VPE length	350 mm
VPE width	135 mm	VPE height	30 mm

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
- 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.

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.

Creation date May 1, 2020 6:19:21 AM CEST

Catalogue status 17.04.2020 / We reserve the right to make technical changes.

4

Data sheet

OMNIMATE Signal - series BL/SL 5.00
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Technical data

Approvals

Approvals



ROHS

Conform

Downloads

Approval/Certificate/Document of
 Conformity

[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](#)
- [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](#)

Engineering Data

[EPLAN_WSCAD](#)

Engineering Data

[STEP](#)

White paper PUSH IN wire connection

[Download Whitepaper](#)

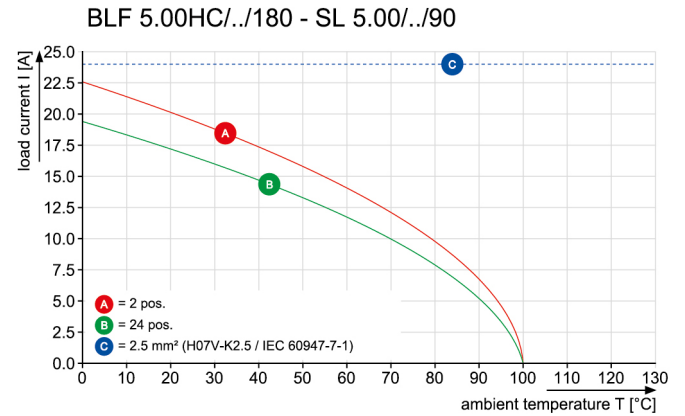
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Drawings

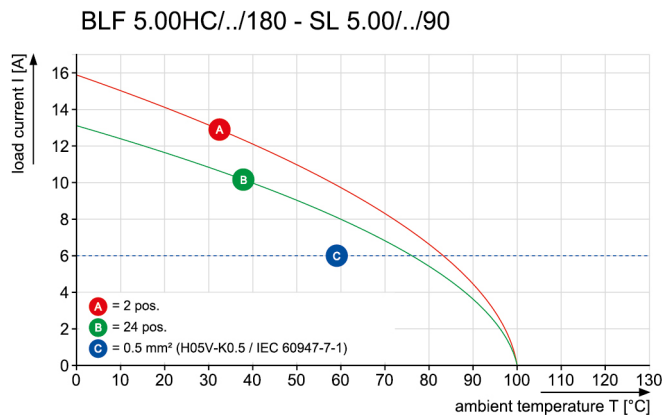
Dimensional drawing

Graph



Graph

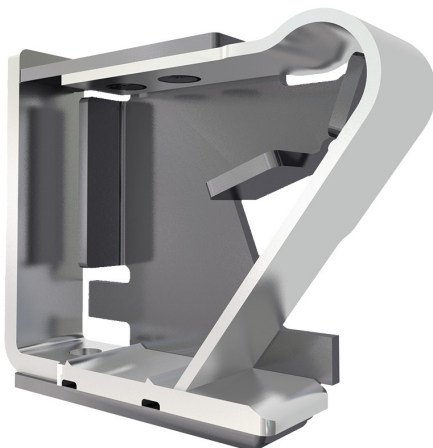
Product benefits



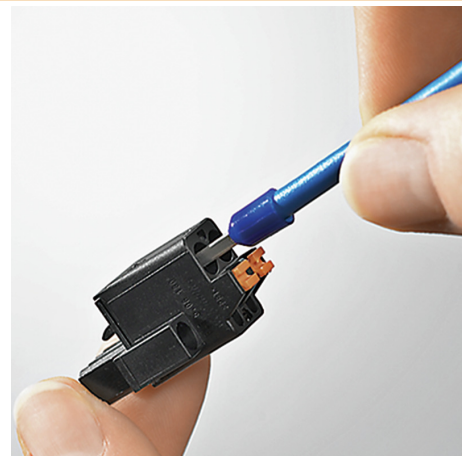
Uncompromising functionality
High vibration resistance

Product benefits

Product benefits



Solid PUSH IN contact
Safe and durable



Cost-effective wiring
Quick and intuitive operation

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Mating connector (fully pluggable)
SL-SMT 5.00HC/90LF Box


High-temperature-resistant pin header, packed in box or tape. On tape, with 1.5 mm solder pin, optimised for automatic assembly. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded. HC = High Current.

General ordering data

Type	SL-SMT 5.00HC/18/90LF 3 ...	Version	Product data	Packaging
Order No.	1840510000	PCB plug-in connector, male header, Solder flange, THT/THR solder connection, 5.00 mm, Number of poles: 18, 90°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 400 V / 27.5 A UL: 300 V / 18.5 A	Box
GTIN (EAN)	4032248351350			
Qty.	18 pc(s).			

SLDV-THR 5.00/180F


High-temperature resistant, double level, laterally offset, male connector with flange or solder flange. 1.5 mm solder pin is suitable for reflow soldering. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded.

General ordering data

Type	SLDV-THR 5.00/36/180F 1 ...	Version	Product data	Packaging
Order No.	1895390000	PCB plug-in connector, male header, Flange, THT/THR solder connection, 5.00 mm, Number of poles: 36, 180°, Solder pin length (l): 1.5 mm, tinned, black, Box	IEC: 400 V / 15 A UL: 300 V / 10 A	Box
GTIN (EAN)	4032248510139			
Qty.	10 pc(s).			
Type	SLDV-THR 5.00/36/180F 3 ...	Version	Product data	Packaging
Order No.	1881470000	PCB plug-in connector, male header, Flange, THT/THR solder connection, 5.00 mm, Number of poles: 36, 180°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 400 V / 15 A UL: 300 V / 10 A	Box
GTIN (EAN)	4032248482764			
Qty.	10 pc(s).			

**OMNIMATE Signal - series BL/SL 5.00
BLF 5.00HC/18/180F SN BK 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

Mating connector (fully pluggable)
SL-SMT 5.00HC/180LF Box


High-temperature-resistant pin header, packed in box or tape. On tape, with 1.5 mm solder pin, optimised for automatic assembly. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded. HC = High Current.

General ordering data

Type	SL-SMT 5.00HC/18/180LF ...	Version	Product data	Packaging
Order No.	1841550000	PCB plug-in connector, male header, Solder flange, THT/THR solder connection, 5.00 mm, Number of poles: 18, 180°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 400 V / 27.5 A UL: 300 V / 18.5 A	Box
GTIN (EAN)	4032248352456			
Qty.	18 pc(s).			

SLDV-THR 5.00/180FLF


High-temperature resistant, double level, laterally offset, closed ended male header, with solder flange option. 1.5 mm solder pin suitable for reflow soldering. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded.

General ordering data

Type	SLDV-THR 5.00/36/180FLF ...	Version	Product data	Packaging
Order No.	1895620000	PCB plug-in connector, male header, Flange / Solder flange, THT/THR solder connection, 5.00 mm, Number of poles: 36, 180°, Solder pin length (l): 1.5 mm, tinned, black, Box	IEC: 400 V / 15 A UL: 300 V / 10 A	Box
GTIN (EAN)	4032248510368			
Qty.	10 pc(s).			
Type	SLDV-THR 5.00/36/180FLF ...	Version	Product data	Packaging
Order No.	1883290000	PCB plug-in connector, male header, Flange / Solder flange, THT/THR solder connection, 5.00 mm, Number of poles: 36, 180°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 400 V / 15 A UL: 300 V / 10 A	Box
GTIN (EAN)	4032248487646			
Qty.	10 pc(s).			

OMNIMATE Signal - series BL/SL 5.00 BLF 5.00HC/18/180F SN BK BX

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Accessories

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).			

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 0.6X3.5X200	Version
Order No.	9010110000	Screwdriver, Blade width (B): 3.5 mm, Blade length: 200 mm, Blade thickness (A): 0.6 mm
GTIN (EAN)	4032248300754	
Qty.	1 pc(s).	
Type	SDS 0.6X3.5X100	Version
Order No.	9008330000	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm
GTIN (EAN)	4032248056286	
Qty.	1 pc(s).	

Data sheet**OMNIMATE Signal - series BL/SL 5.00
BLF 5.00HC/18/180F SN BK BX**

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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, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade
GTIN (EAN)	4032248056354	thickness (A): 0.6 mm
Qty.	1 pc(s).	

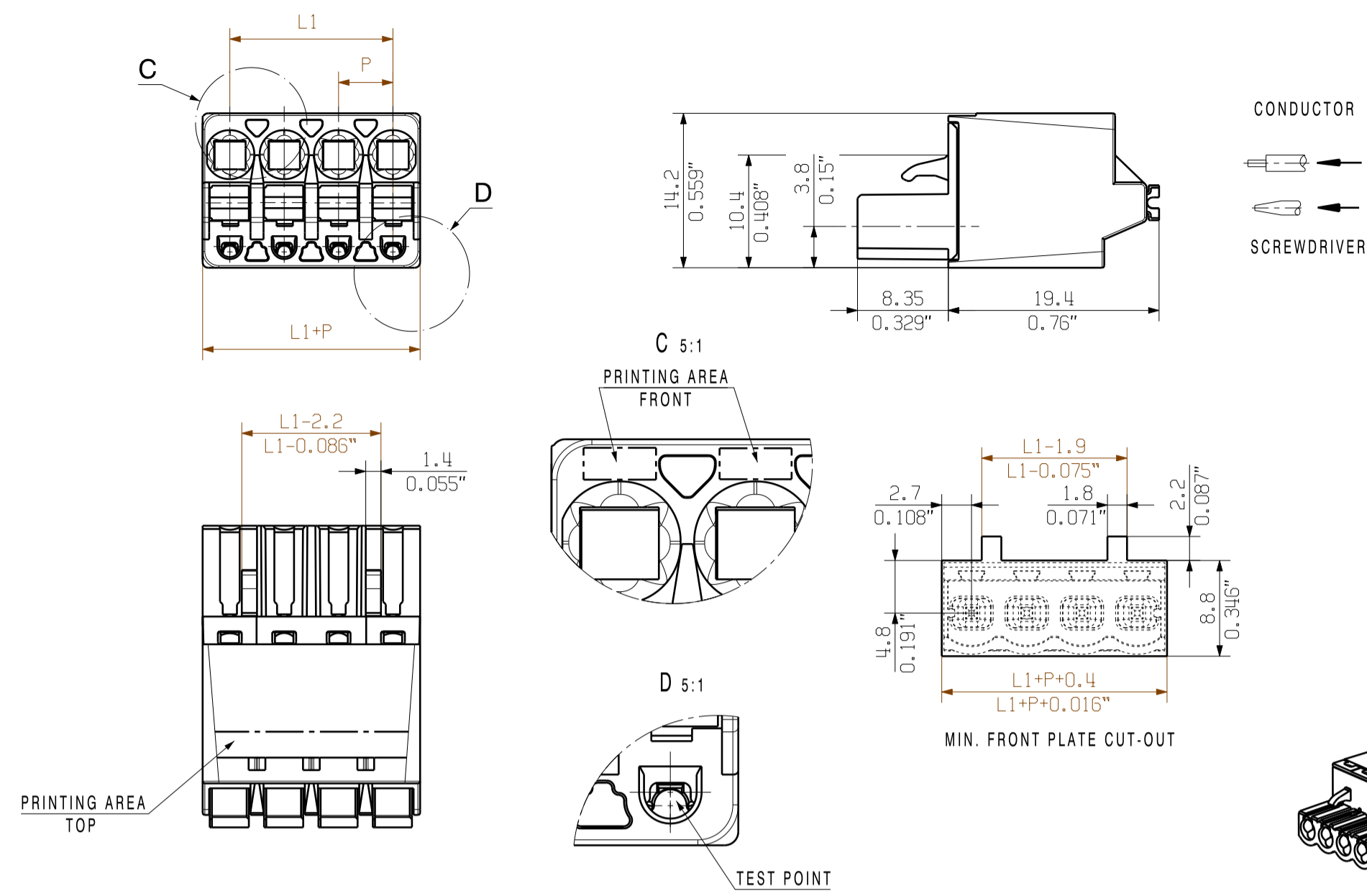
Data sheet**OMNIMATE Signal - series BL/SL 5.00
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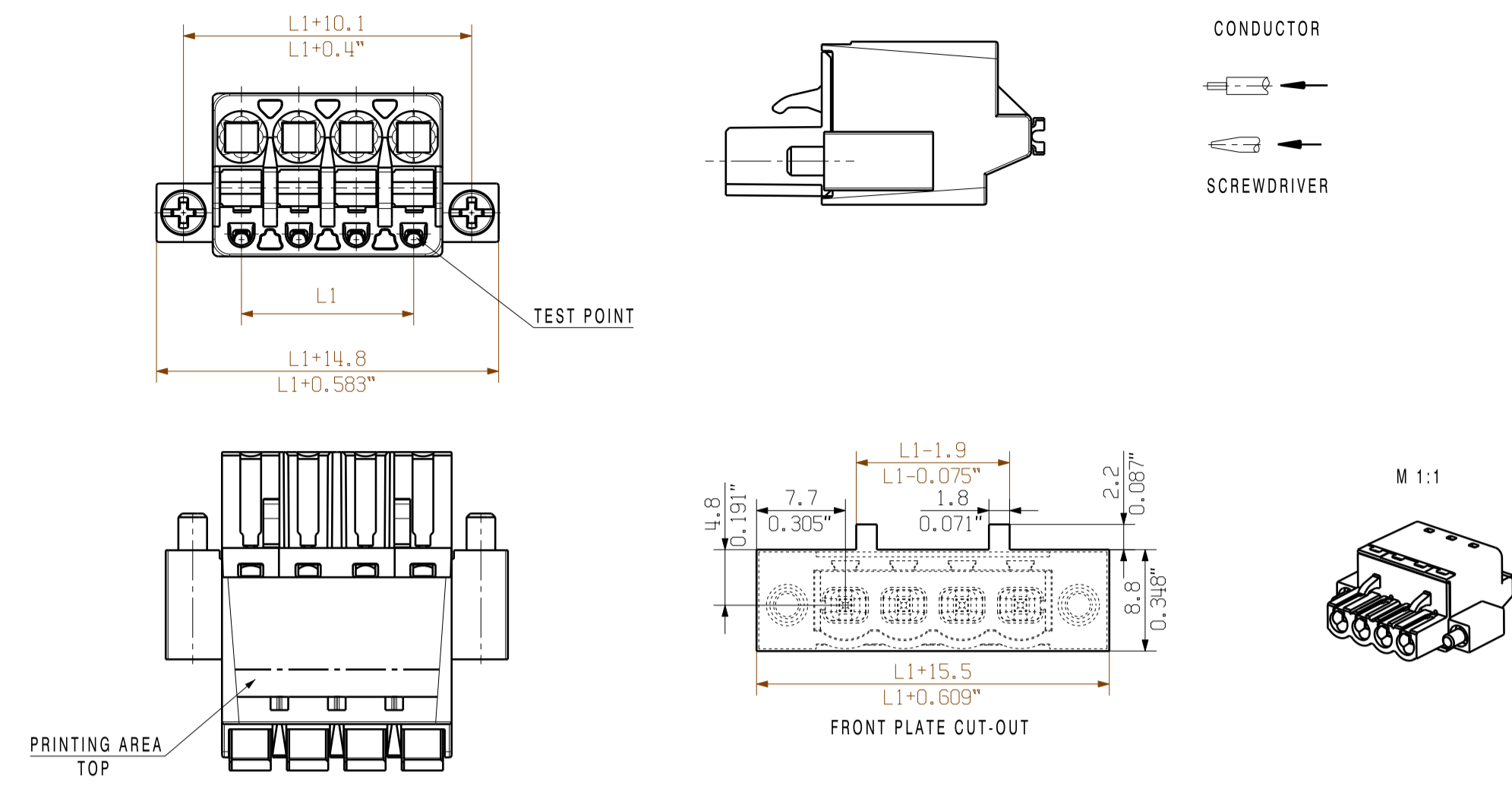
Drawings**Product benefits**

Wide clamping range
Tool-free wire connection

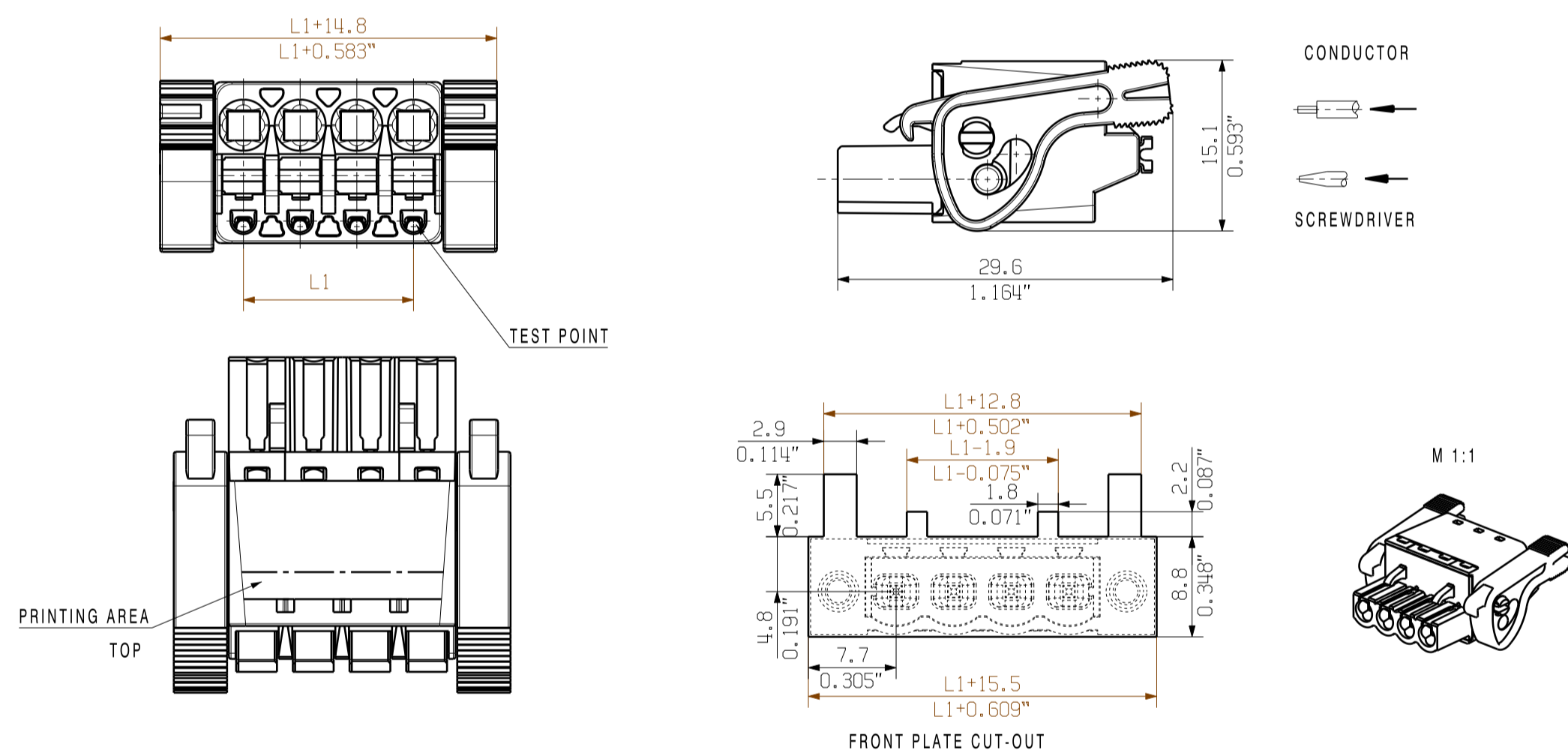
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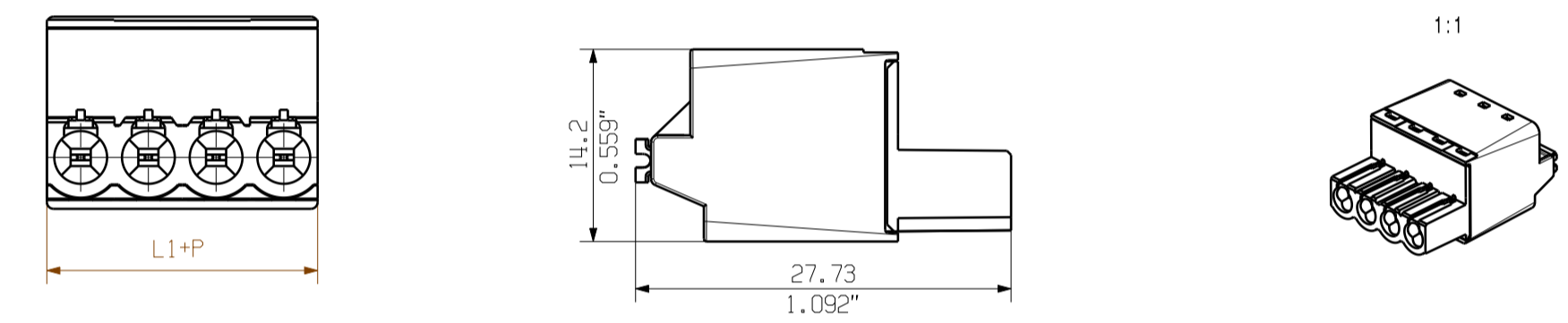
SHOWN: BLF 5.00HC/04/180F



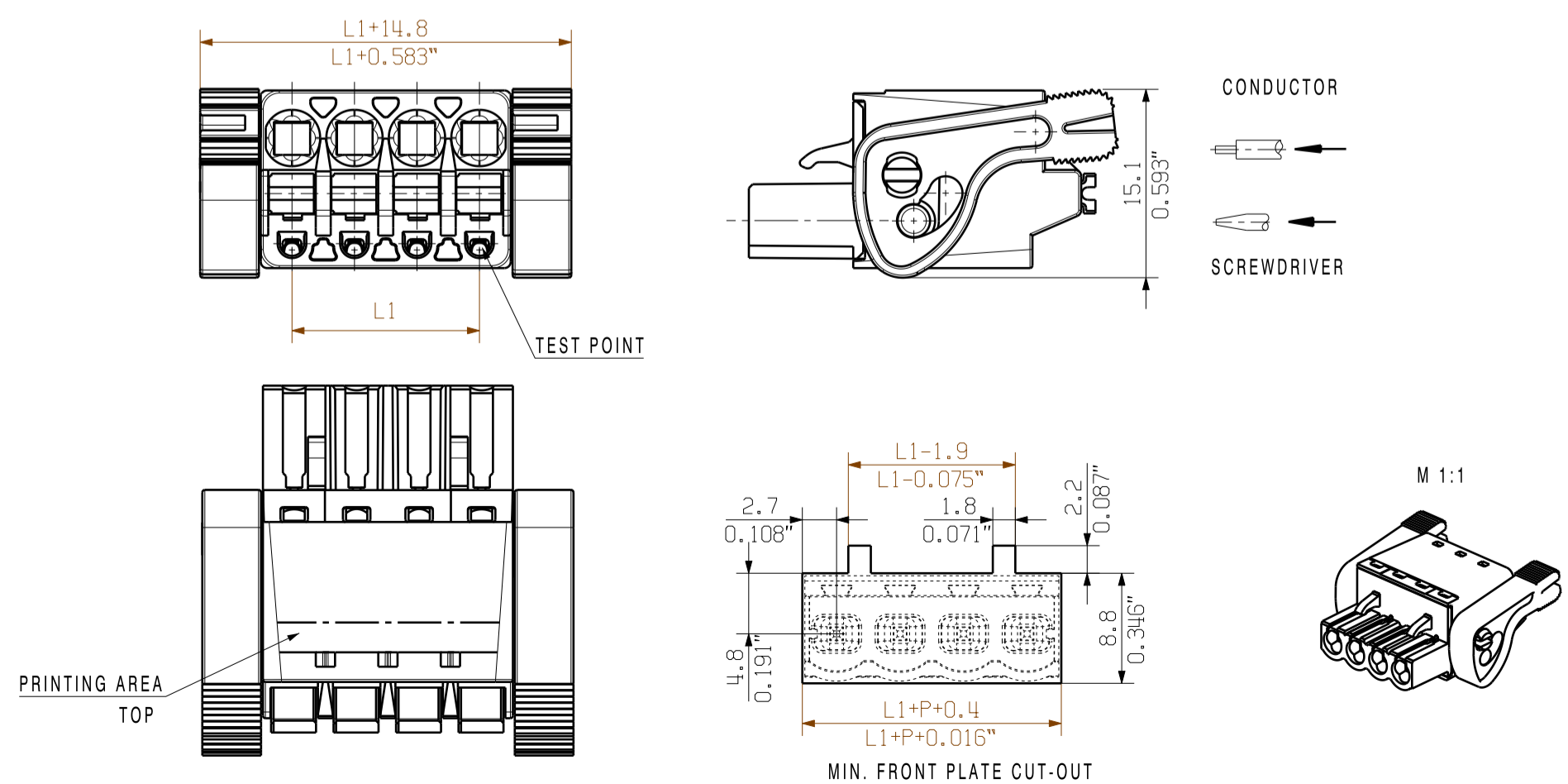
SHOWN: BLF 5.00HC/04/180LR



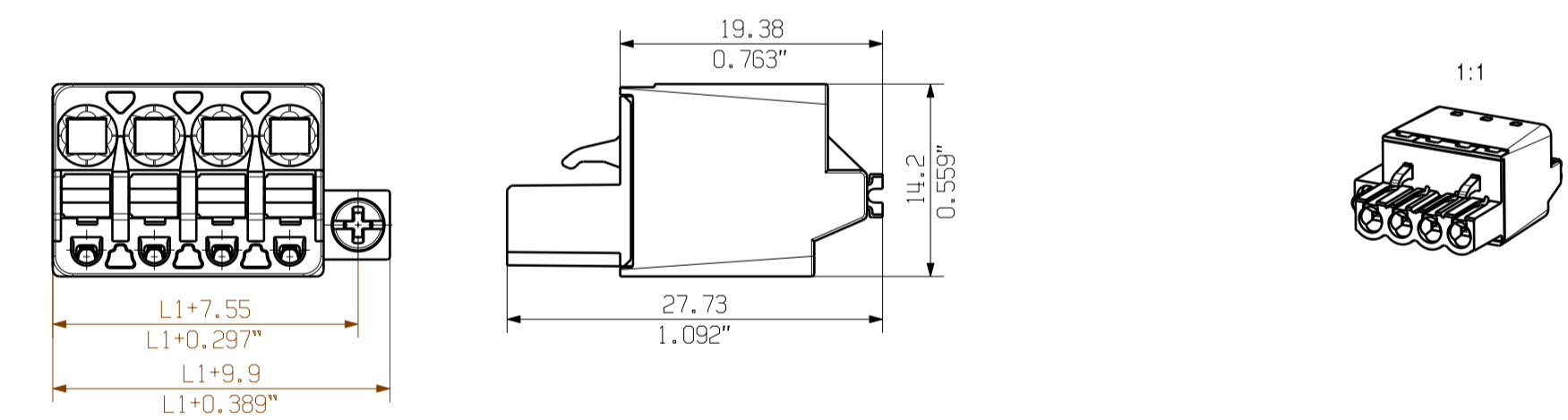
SONDERVARIANTE OHNE RASTHAKEN / SPECIAL VERSION WITHOUT SNAP LATCH



SHOWN: BLF 5.00HC/04/180LH



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



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

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]

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 electrical, mechanical, thermal and corrosive stress will be satisfied.

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	BLF 5.00HC/./180... BUCHSENSTECKER FEMALE PLUG	
Responsible	HERTEL_S		
Checked 28.02.2018	HELIUS_WA		
Approved	LANG_T	Product file: BLF 5.00	7379

Scale: 2/1

Supersedes:

7379

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