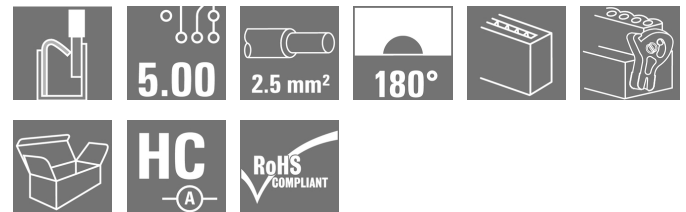


OMNIMATE Signal - series BL/SL 5.00 BLF 5.00HC/14/180LR SN BK BX

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/14/180LR SN BK BX |
| Order No. | 1016280000 |
| Version | PCB plug-in connector, female plug, 5.00 mm, Number of poles: 14, 180°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm², Box |
| GTIN (EAN) | 4032248725830 |
| 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 |

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Technical data**Dimensions and weights**

| | | | |
|------------|---------|-----------------|------------|
| Width | 79.8 mm | Width (inches) | 3.142 inch |
| Height | 15.1 mm | Height (inches) | 0.594 inch |
| Depth | 29.6 mm | Depth (inches) | 1.165 inch |
| Net weight | 25.86 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 | 14 | L1 in mm | 65 mm |
| L1 in inches | 2.561 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 | 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 | Illa |
| 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. | -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 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, 0.25 mm ² min. | |
| w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm ² max. | |
| w. wire end ferrule, DIN 46228 pt 1, 0.25 mm ² min. | |
| w. wire end ferrule, DIN 46228 pt 1, 2.5 mm ² max. | |

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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 | 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 | 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 | 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 | 1.5 mm ² | |
| wire end ferrule | wire end ferrule | Stripping length | nominal 10 mm |
| | | Recommended wire-end ferrule | H1.5/10 |
| | | Stripping length | 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 | 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 voltage (Use group D / CSA) | 300 V | | |
| Rated current (Use group B / CSA) | 10 A | Rated current (Use group D / CSA) | 10 A | | |
| Wire cross-section, AWG, min. | AWG 12 | Wire cross-section, AWG, max. | AWG 26 | | |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | | | |

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) | 18.5 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 | 35 mm |
| VPE width | 145 mm | VPE height | 340 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 |

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| | | | | |
|---|----------------|--|------------------------------|--|
| 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 ² | |
| | | Type of conductor and conductor cross-section | stranded 0.2 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 | | | |
| 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 | | |

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Technical data

| | | | | |
|---------------|----------------|---|-----------|--|
| 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 | | |

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 | <ul style="list-style-type: none"> • 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. • Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months |
|-------|---|

| | |
|----------------|--|
| 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 September 11, 2020 6:57:58 PM CEST

Data sheet**OMNIMATE Signal - series BL/SL 5.00
BLF 5.00HC/14/180LR SN BK BX****Weidmüller Interface GmbH & Co. KG**
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Approvals



ROHS

Conform

DownloadsApproval/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](#)
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[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

[STEP](#)

White paper PUSH IN wire connection

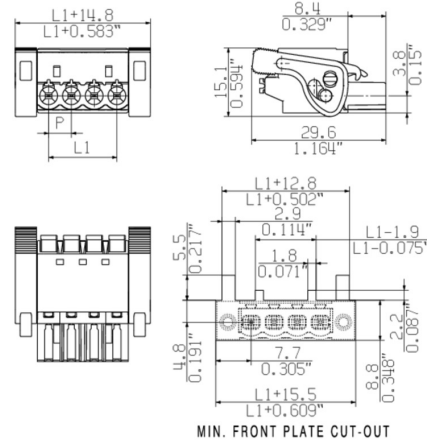
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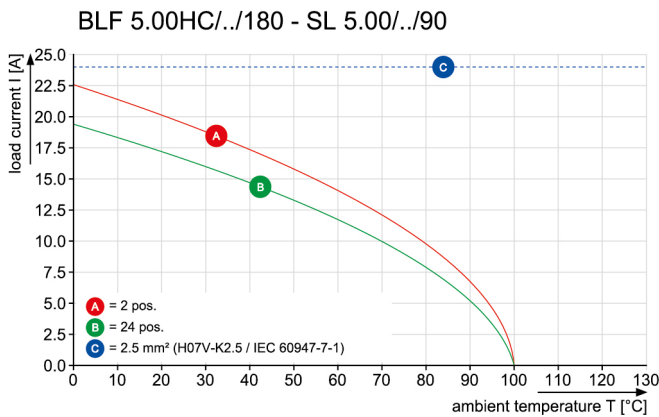
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Drawings

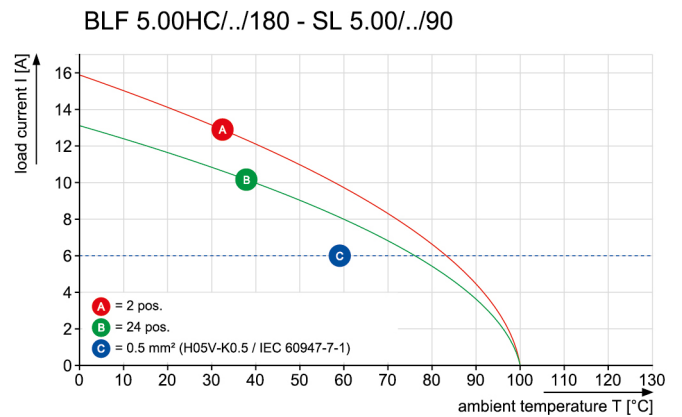
Dimensional drawing



Graph



Graph



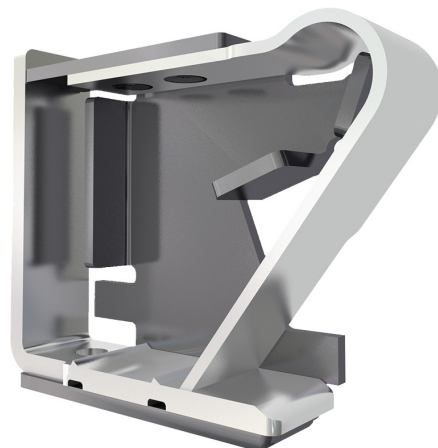
Uncompromising functionality
High vibration resistance

Product benefits



Uncompromising functionality
High vibration resistance

Product benefits



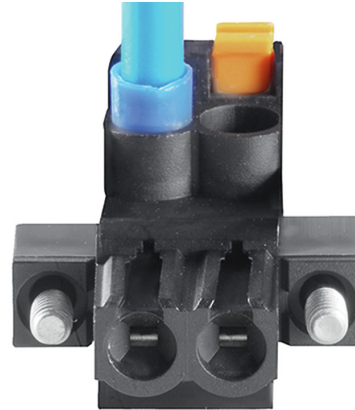
Solid PUSH IN contact
Safe and durable

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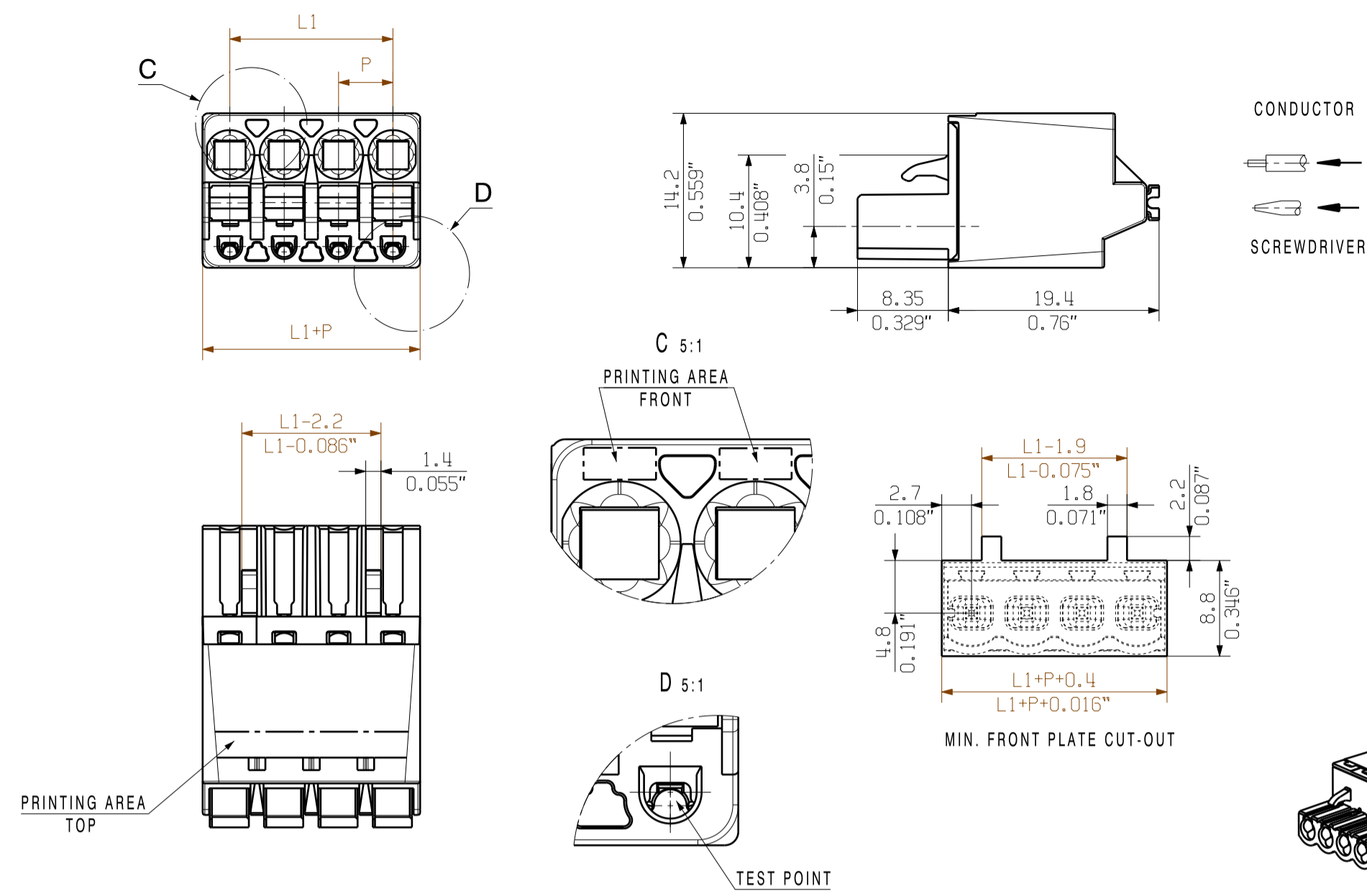
Product benefits

Cost-effective wiring
Quick and intuitive operation

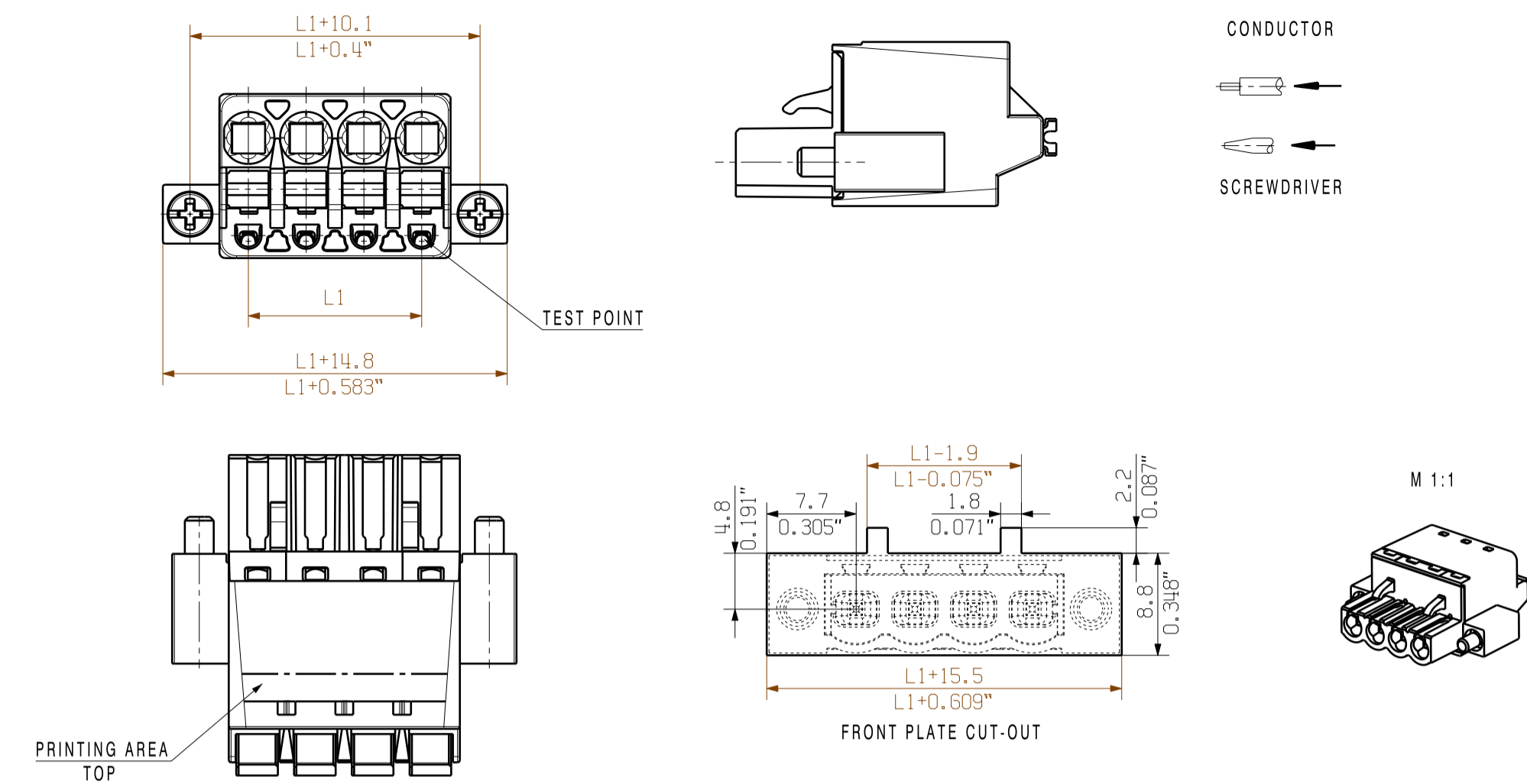
Product benefits

Wide clamping range
Tool-free wire connection

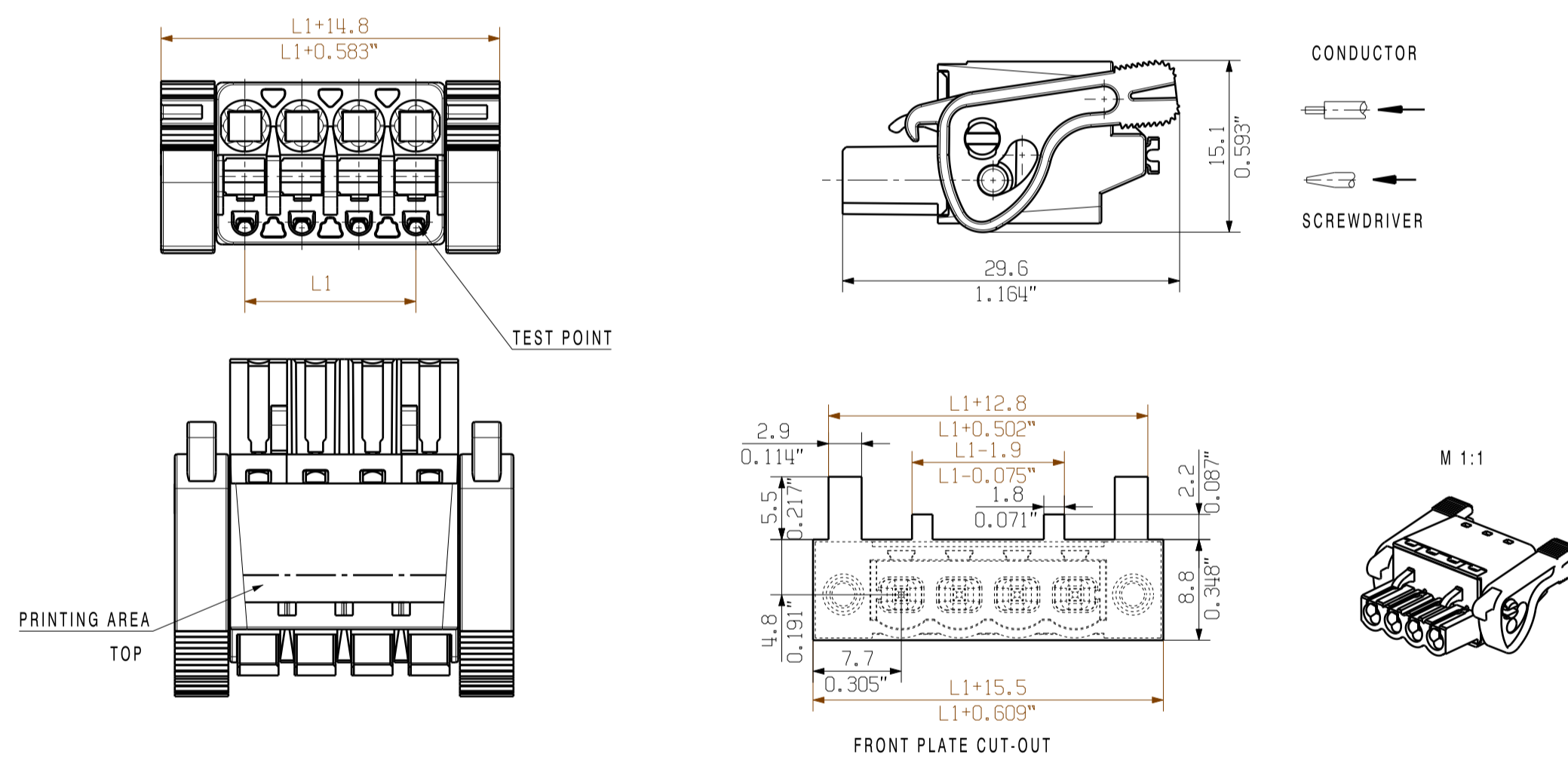
SHOWN: BLF 5.00HC/04/180



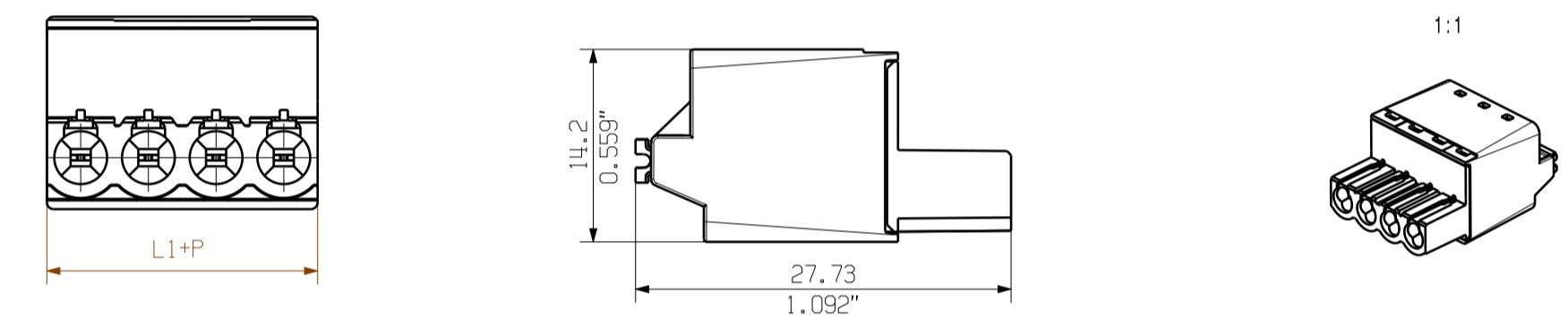
SHOWN: BLF 5.00HC/04/180F



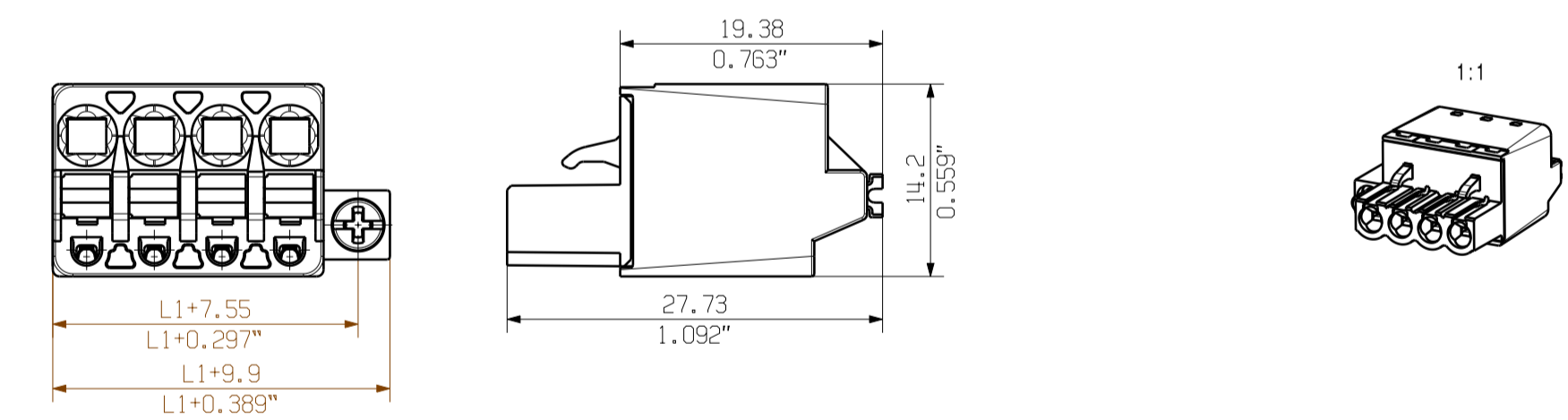
SHOWN: BLF 5.00HC/04/180LR



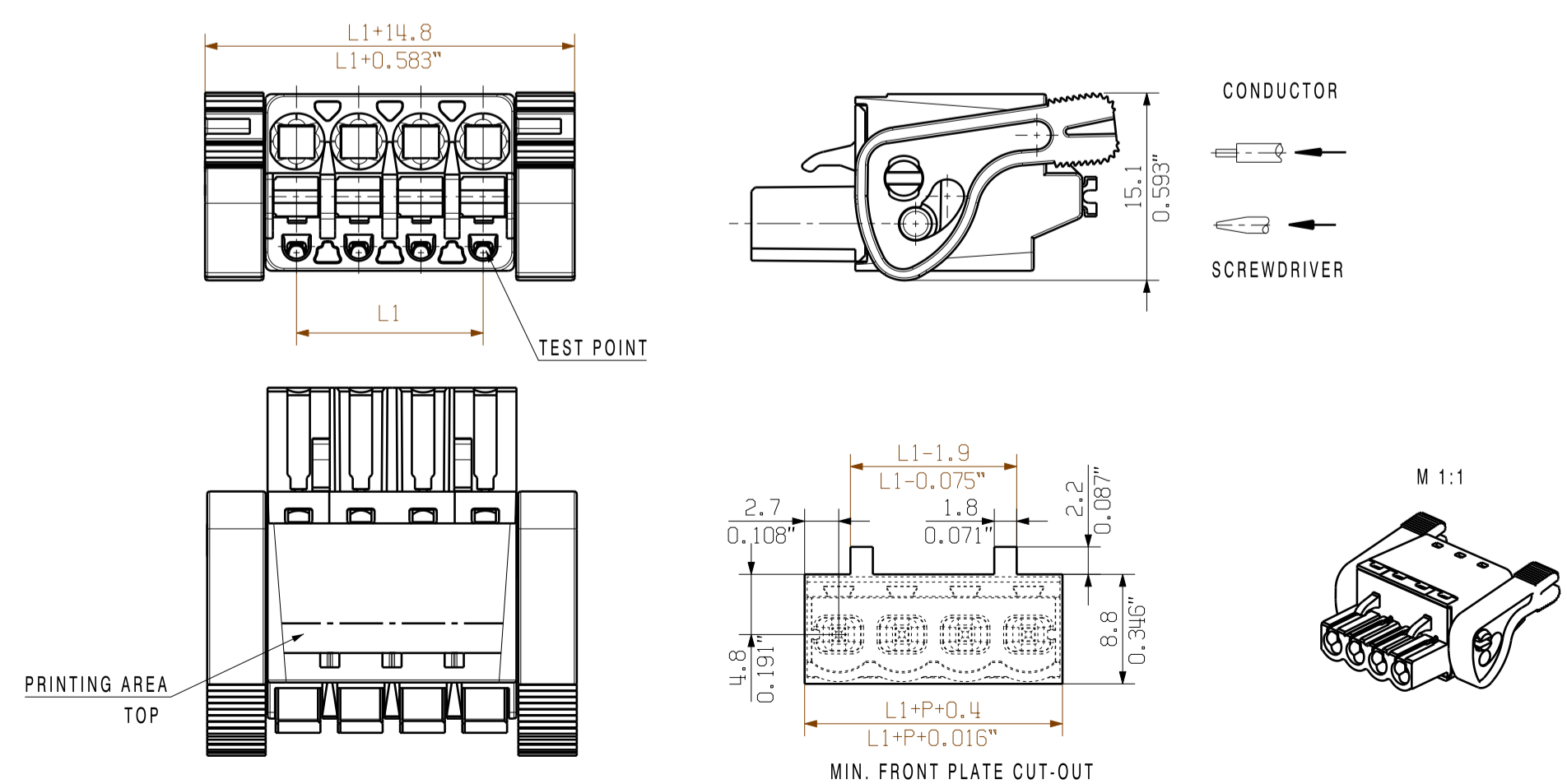
SONDERVARIANTE OHNE RASTHAKEN / SPECIAL VERSION WITHOUT SNAP LATCH



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



SHOWN: BLF 5.00HC/04/180LH



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

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

| | | | |
|---------------------------------------|----------------------|---|------|
| General tolerance: DIN ISO 2768-mK | | Cat. no.: | |
| 99286/0 | 14.02.18 HERTEL_S 01 | 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_MA | | |
| Approved | LANG_T | Product file: BLF 5.00 | 7379 |

| | | |
|----|------|--------|
| 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] |

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