

## BLF 5.08HC/19/90LR SN OR BX

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)

### Product image



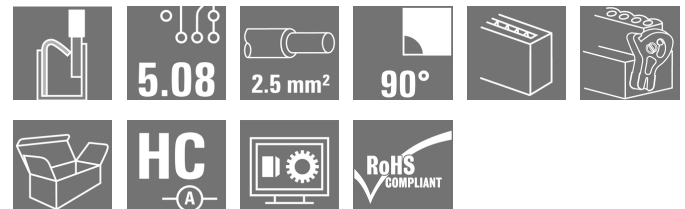
Similar to illustration

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

The BLF 5.08HC PUSH IN version of the BLZP 5.08HC female connector is not only different in terms of connection system; it also has 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 5.08HC offers just as much as the version which served as a model:

- 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
- Use the BLF 5.08HC and SL 5.08HC plug combination to reach the max. rated specifications



### General ordering data

|              |                                                                                                                                         |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Version      | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 19, 90°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm², Box |
| Order No.    | <a href="#">1002450000</a>                                                                                                              |
| Type         | BLF 5.08HC/19/90LR SN OR BX                                                                                                             |
| GTIN (EAN)   | 4032248694617                                                                                                                           |
| Qty.         | 12 pc(s).                                                                                                                               |
| Product data | IEC: 400 V / 24 A / 0.2 - 2.5 mm²<br>UL: 300 V / 18.5 A / AWG 26 - AWG 12                                                               |
| Packaging    | Box                                                                                                                                     |

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## Technical data

## Dimensions and weights

|                |            |                 |            |
|----------------|------------|-----------------|------------|
| Depth          | 29.6 mm    | Depth (inches)  | 1.165 inch |
| Height         | 20.6 mm    | Height (inches) | 0.811 inch |
| Net weight     | 37.65 g    | Width           | 106.34 mm  |
| Width (inches) | 4.187 inch |                 |            |

## System Parameters

|                                              |                                     |                                            |                     |
|----------------------------------------------|-------------------------------------|--------------------------------------------|---------------------|
| Product family                               | OMNIMATE Signal - series BL/SL 5.08 | Type of connection                         | Field connection    |
| Wire connection method                       | PUSH IN, Spring connection          | Pitch in mm (P)                            | 5.08 mm             |
| Pitch in inches (P)                          | 0.2 inch                            | Conductor outlet direction                 | 90°                 |
| Number of poles                              | 19                                  | L1 in mm                                   | 91.44 mm            |
| L1 in inches                                 | 3.6 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               |
| 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    | Insulation strength                   | ≥ 10 <sup>8</sup> 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. | -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, 0.25 mm <sup>2</sup> min. |                      |
| 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>      |
|                     |                                                                                                                                                                        | Stripping length             | nominal 13 mm                |
|                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H2.5/16DS BL</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)                         | 24 A              |
| Rated current, max. number of poles (Tu=20°C)                             | 19 A                   | Rated current, min. number of poles (Tu=40°C)                         | 21 A              |
| Rated current, max. number of poles (Tu=40°C)                             | 16.5 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 | 0 m |
| VPE width | 0 m | VPE height | 0 m |

**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 identification, pitch, 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 / 11.08            |
|                                              | Test       | 180° turned with coding elements                                                 |
|                                              | Evaluation | passed                                                                           |
|                                              | Test       | visual examination                                                               |
|                                              | Evaluation | passed                                                                           |

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|                                                           |                |                                                                                    |                              |
|-----------------------------------------------------------|----------------|------------------------------------------------------------------------------------|------------------------------|
| 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 / 04.08 |                              |
|                                                           | 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                                                                             |                              |
| 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 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                    |
|                                                           | Evaluation     | passed                                                                             |                              |
|                                                           | Requirement    | 0.9 kg                                                                             |                              |
|                                                           | Conductor type | Type of conductor and conductor cross-section                                      | AWG 12/1                     |
|                                                           |                | Type of conductor and conductor cross-section                                      | AWG 12/19                    |
|                                                           | 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 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 |
|               | Evaluation     | passed                                        |           |
|               | Requirement    | ≥60 N                                         |           |
|               | Conductor type | Type of conductor and conductor cross-section | AWG 12/1  |
|               |                | Type of conductor and conductor cross-section | AWG 12/19 |
|               | 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 | 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          | <ul style="list-style-type: none"> <li>• Additional colours on request</li> <li>• Gold-plated contact surfaces on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• Wire end ferrule without plastic collar to DIN 46228/1</li> <li>• Wire end ferrule with plastic collar to DIN 46228/4</li> <li>• P on drawing = pitch</li> <li>• Crimping shape "A" for wire end ferrules with PZ 6/5 crimping tool recommended.</li> <li>• The test point can only be used as potential-pickup point.</li> <li>• Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months</li> </ul> |

**Approvals**

Approvals



|                       |         |
|-----------------------|---------|
| ROHS                  | Conform |
| UL File Number Search | E60693  |

**Downloads**

|                                             |                                                 |
|---------------------------------------------|-------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of the Manufacturer</a> |
| Engineering Data                            | <a href="#">STEP</a>                            |
| Engineering Data                            | <a href="#">EPLAN, WSCAD</a>                    |

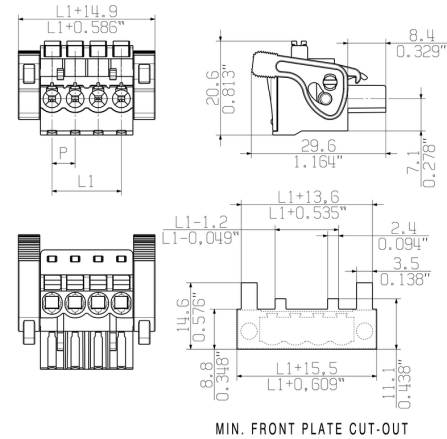
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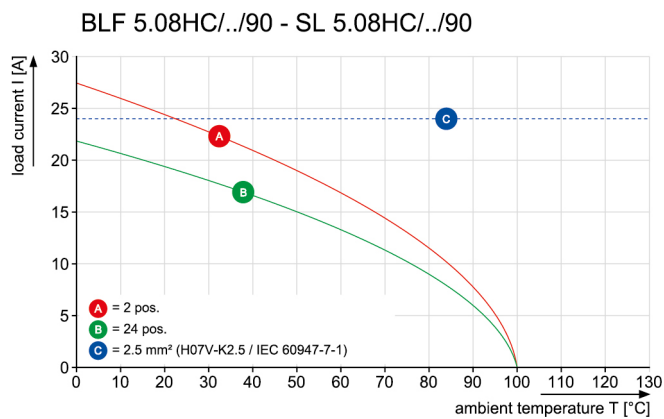
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# Drawings

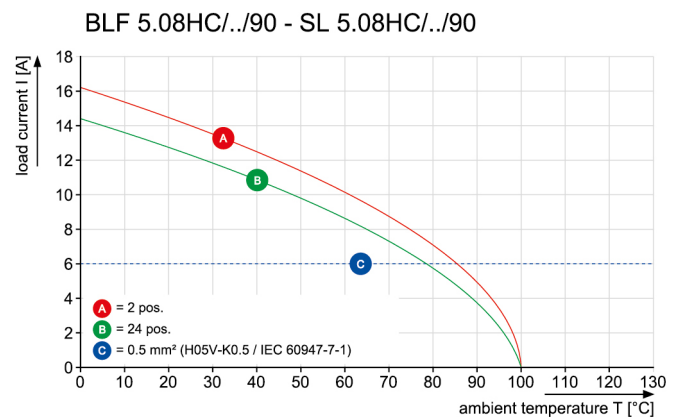
## Dimensional drawing



## Graph



## Graph



Uncompromising functionality  
High vibration resistance

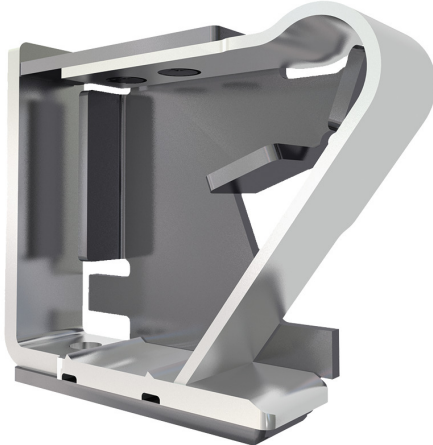
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**Drawings**

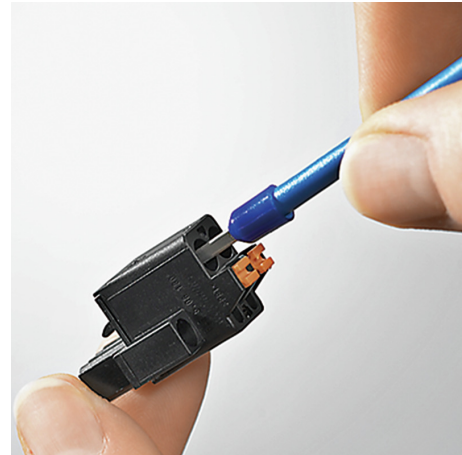
**Product benefits**



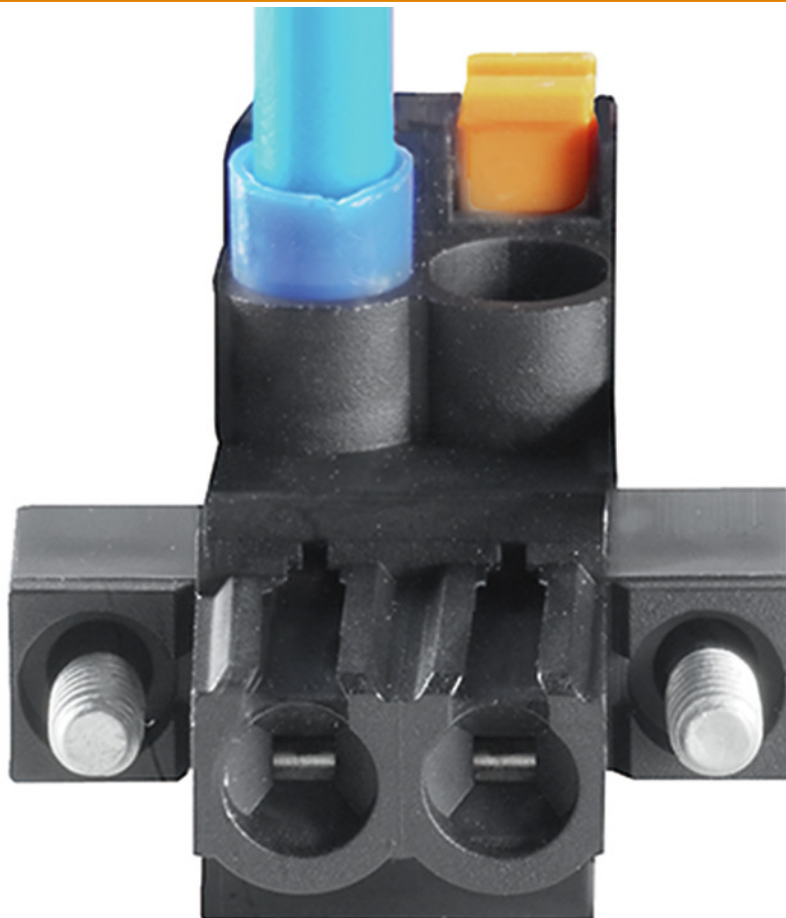
Solid PUSH IN contact  
Safe and durable

**Product benefits**

**Product benefits**



Cost-effective wiring  
Quick and intuitive operation



Wide clamping range  
Tool-free wire connection

Creation date March 22, 2021 12:34:37 PM CET

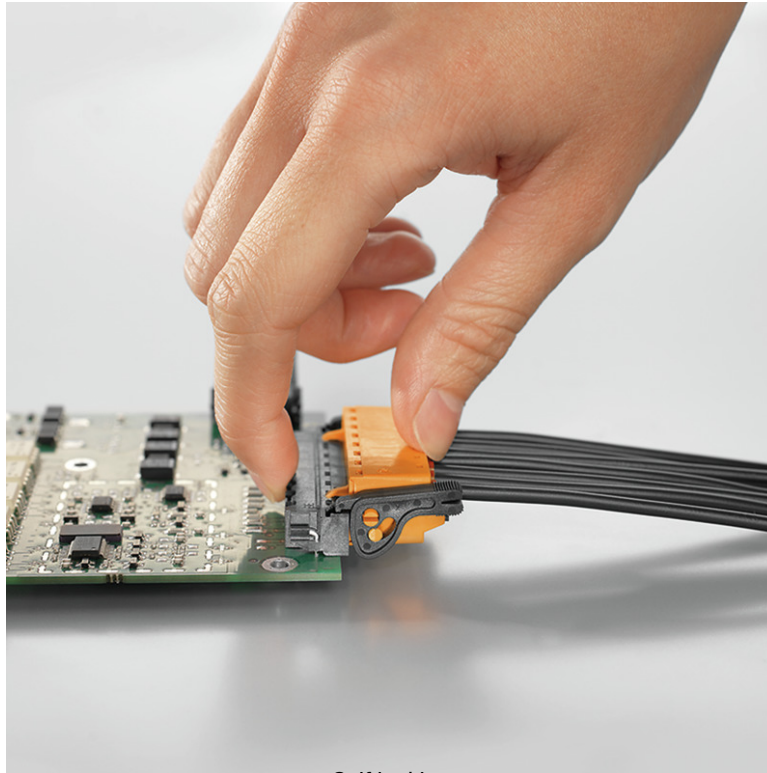
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**Drawings**

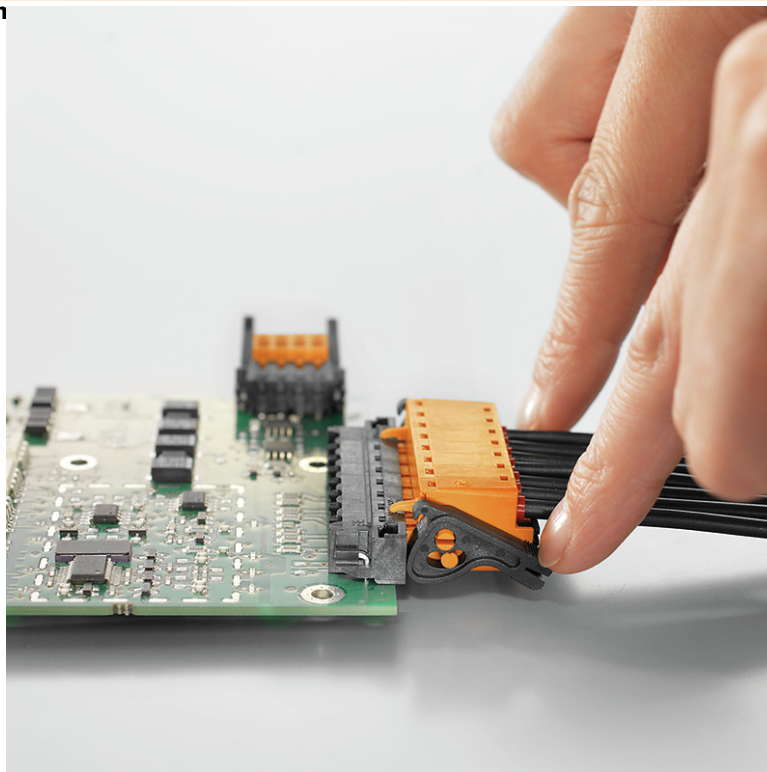
**Product benefits**



Self-locking  
Immediately on plugging in

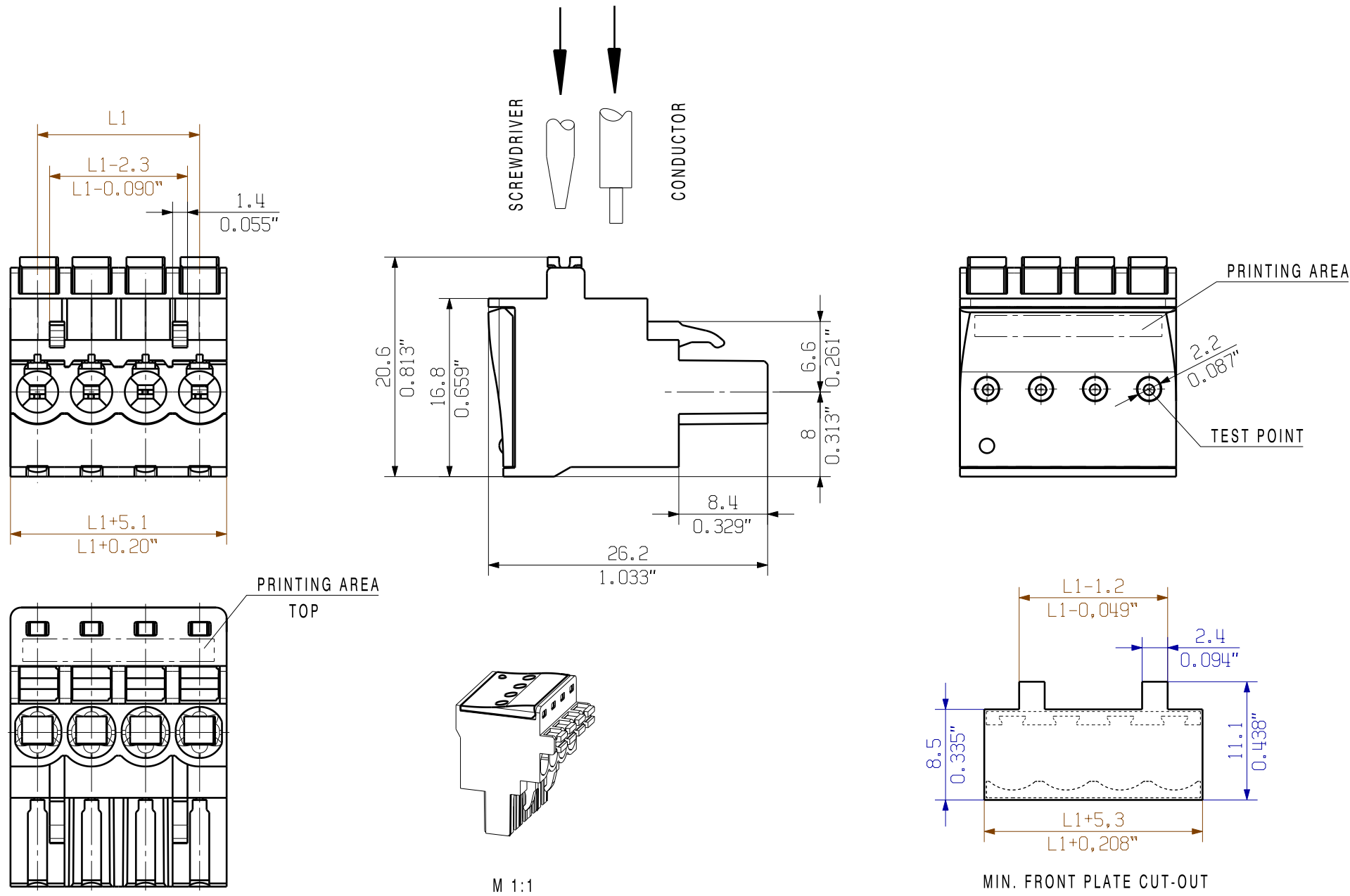
**Uncompromising functionality**

**High vibration resistance**



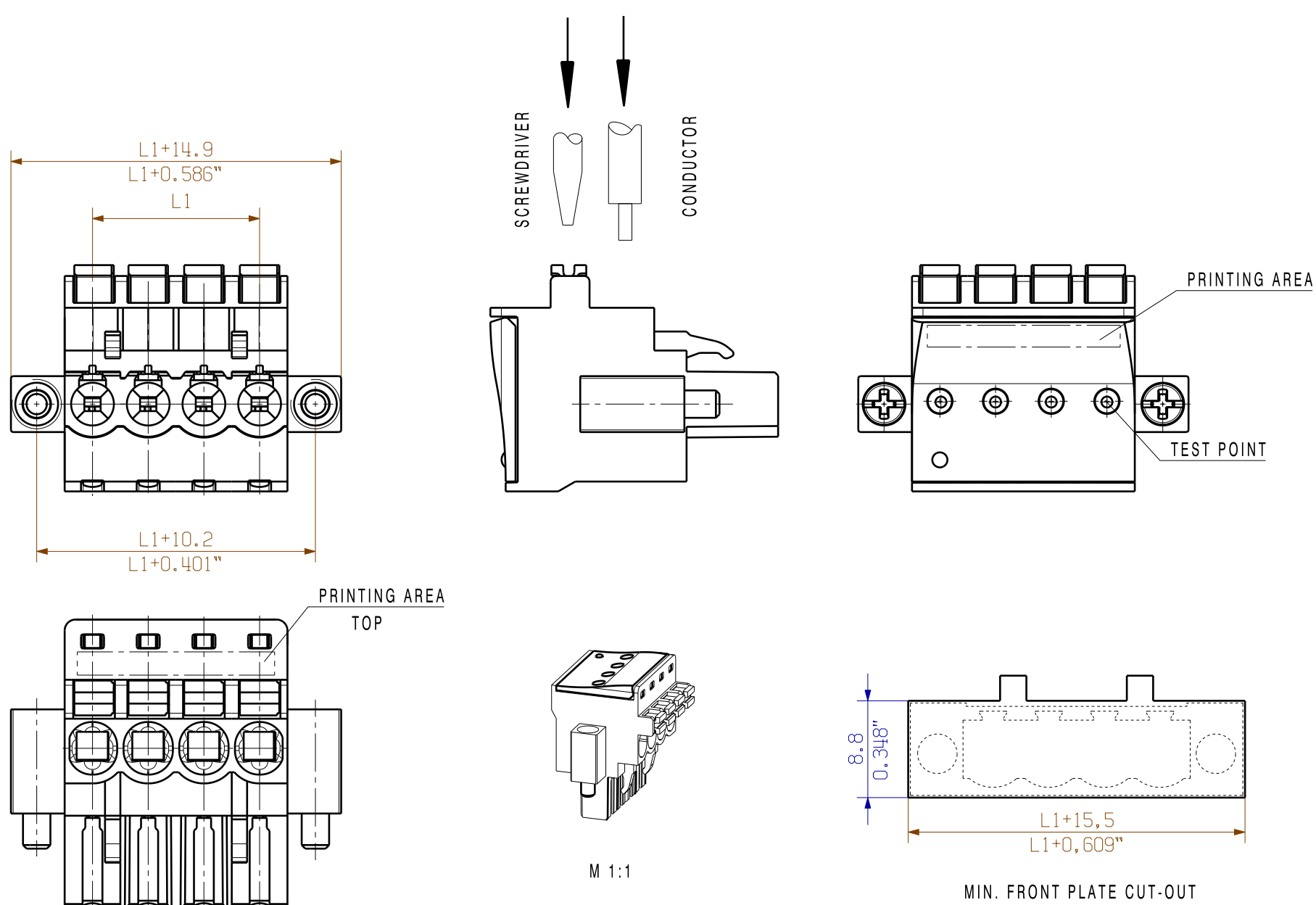
MASSE OHNE TOLERANZ SIND KEINE PRUEFMASSE  
DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

SHOWN: BLF 5.08HC/04/90G SN ...

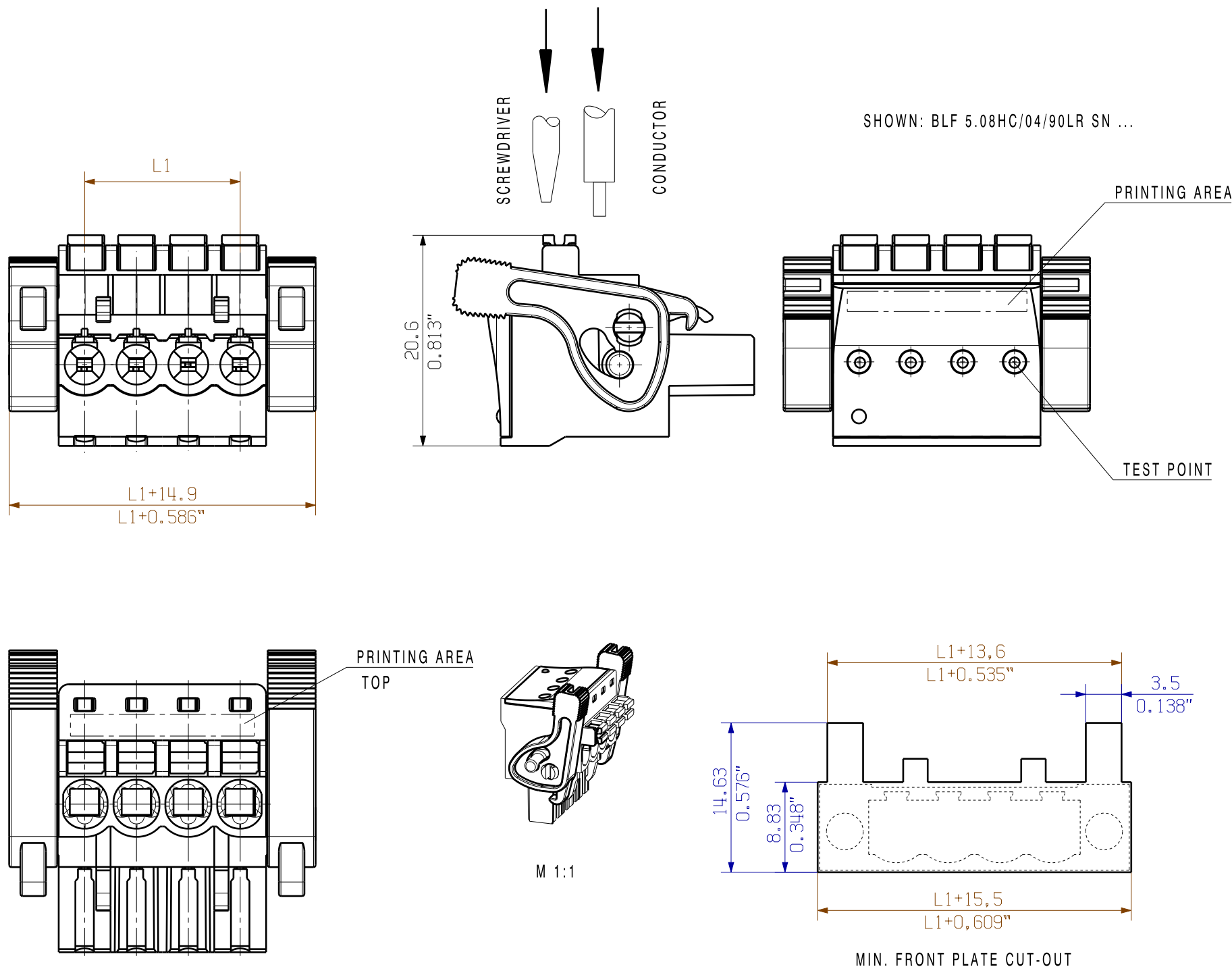


DIE DEUTSCHE VERSION IST VERBINDLICH  
THE GERMAN VERSION IS BINDING

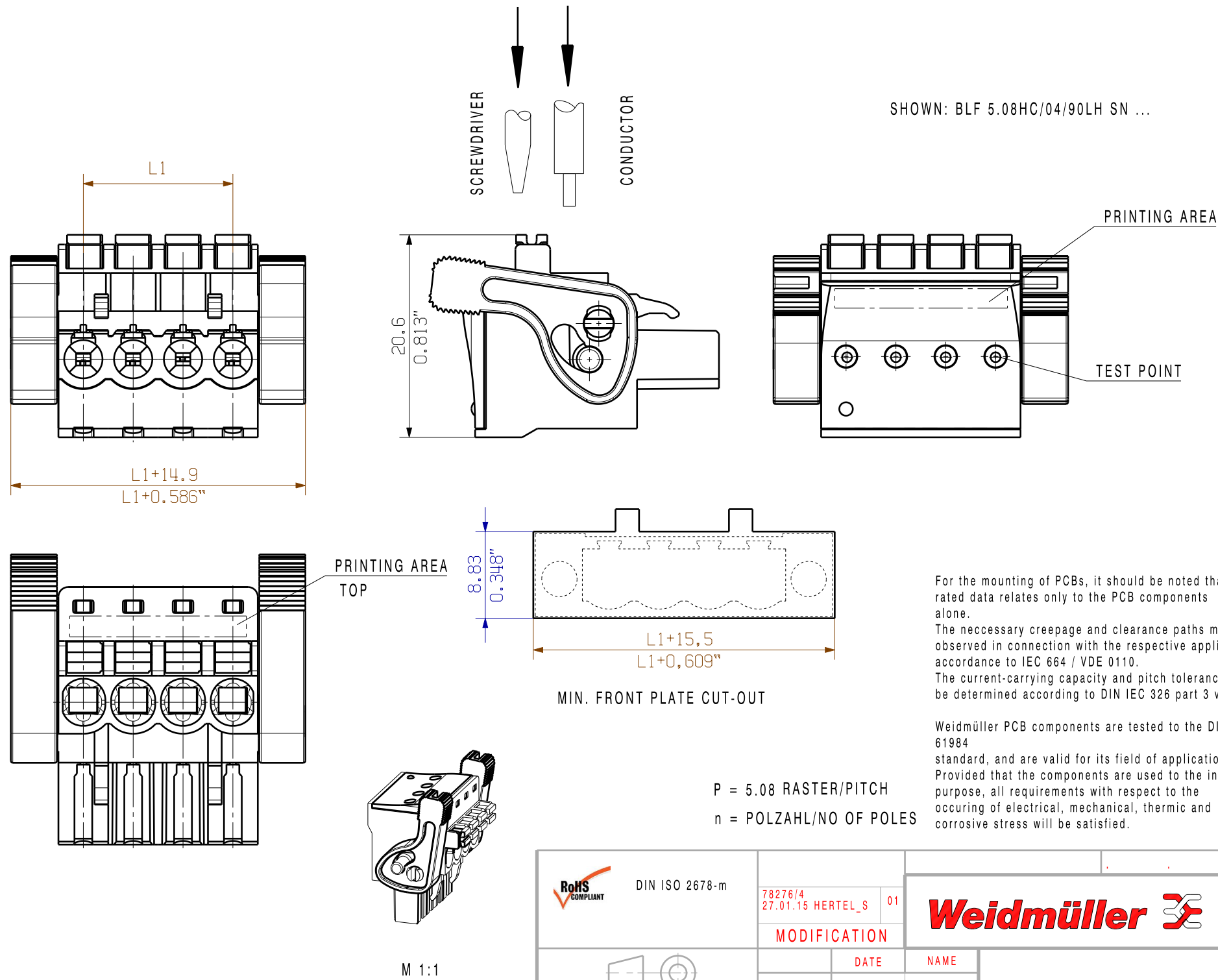
SHOWN: BLF 5.08HC/04/90F SN ...



SHOWN: BLF 5.08HC/04/90LR SN ...



SHOWN: BLF 5.08HC/04/90LH SN ...



For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 664 / VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN EN 61984 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.

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

|    |         |           |
|----|---------|-----------|
| 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 | 76.2    | 3.000     |
| 15 | 71.12   | 2.800     |
| 14 | 66.04   | 2.600     |
| 13 | 60.96   | 2.400     |
| 12 | 55.88   | 2.200     |
| 11 | 50.8    | 2.000     |
| 10 | 45.72   | 1.800     |
| 9  | 40.64   | 1.600     |
| 8  | 35.56   | 1.400     |
| 7  | 30.48   | 1.200     |
| 6  | 25.4    | 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] |

DIN ISO 2678-m

28276/4  
27.01.15 HERTEL\_S 01

MODIFICATION

SCALE: 2/1  
SUPERSEDES: .

DATE  
27.11.2008

NAME  
POCTA\_C

CHECKED  
27.01.2015

LANG\_T

BLF 5.08HC/.../90...SN...  
BUCHSENLEISTE  
SOCKET BLOCK

CAT.NO.: .

C 44256 05

DRAWING NO.  
SHEET 01

ISSUE NO.  
OF 01 SHEETS

PRODUCT FILE: BLF 5.08

7379

