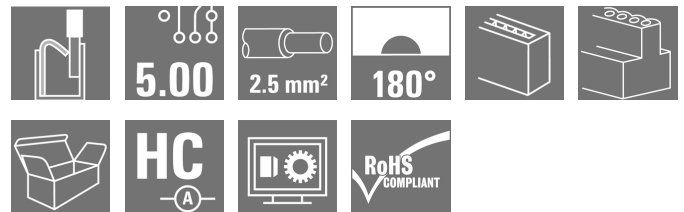


## OMNIMATE Signal - series BL/SL 5.00 BLF 5.00HC/04/180 SN BK BX

**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/04/180 SN BK BX  |
| Order No.    | <a href="#">1017690000</a>  |
| Version      | PCB plug-in connector, female plug, 5.00 mm, Number of poles: 4, 180°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm², Box |
| GTIN (EAN)   | 4032248728824   |
| Qty.         | 90 pc(s).   |
| Product data | IEC: 400 V / 23 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**

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Width      | 20 mm   | Width (inches)  | 0.787 inch |
| Height     | 14.2 mm | Height (inches) | 0.559 inch |
| Depth      | 27.6 mm | Depth (inches)  | 1.087 inch |
| Net weight | 7.889 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                              | 4                                   | L1 in mm                                   | 15 mm               |
| L1 in inches                                 | 0.591 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                            | ≤ 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 <sup>8</sup> 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 <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, 0.25 mm <sup>2</sup> min.       |                      |
| w. wire end ferrule, DIN 46228 pt 1, 2.5 mm <sup>2</sup> 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 <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. |                              |                            |       |
| Max. clamping range                             | 3.31 mm <sup>2</sup>   |                              |                            |       |


**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 | 135 mm | VPE height | 350 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          | <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> </ul> |
| 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.  |

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**Data sheet**

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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](#)
- [FLIndustr.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

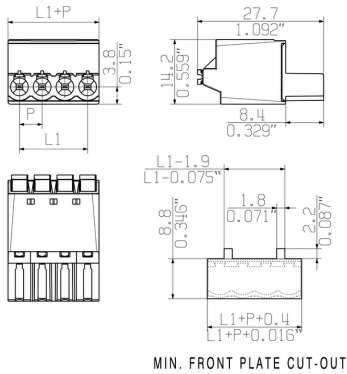
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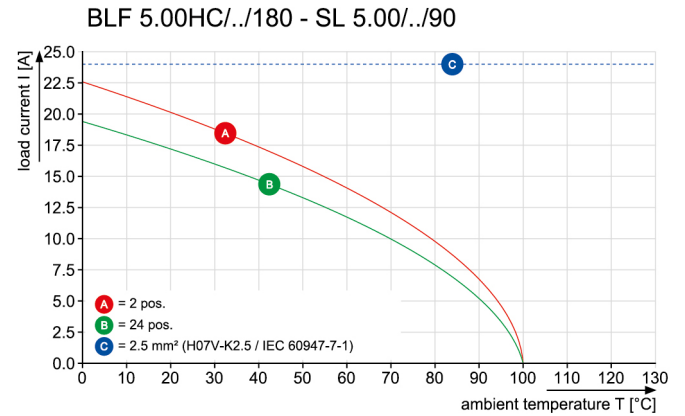
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**Drawings**

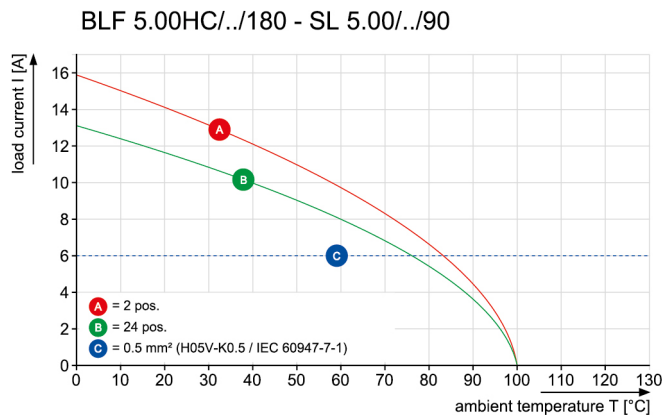
**Dimensional drawing**



**Graph**



**Graph**



**Product benefits**



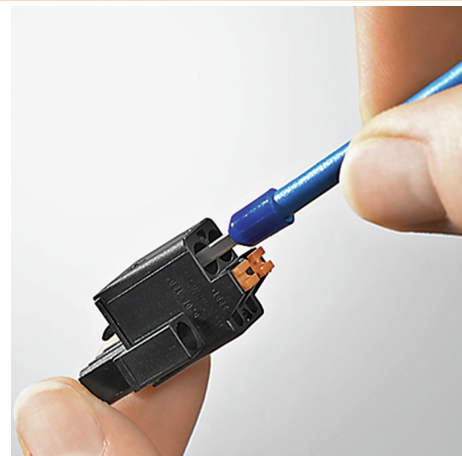
Uncompromising functionality  
High vibration resistance

**Product benefits**



Solid PUSH IN contact  
Safe and durable

**Product benefits**



Cost-effective wiring  
Quick and intuitive operation

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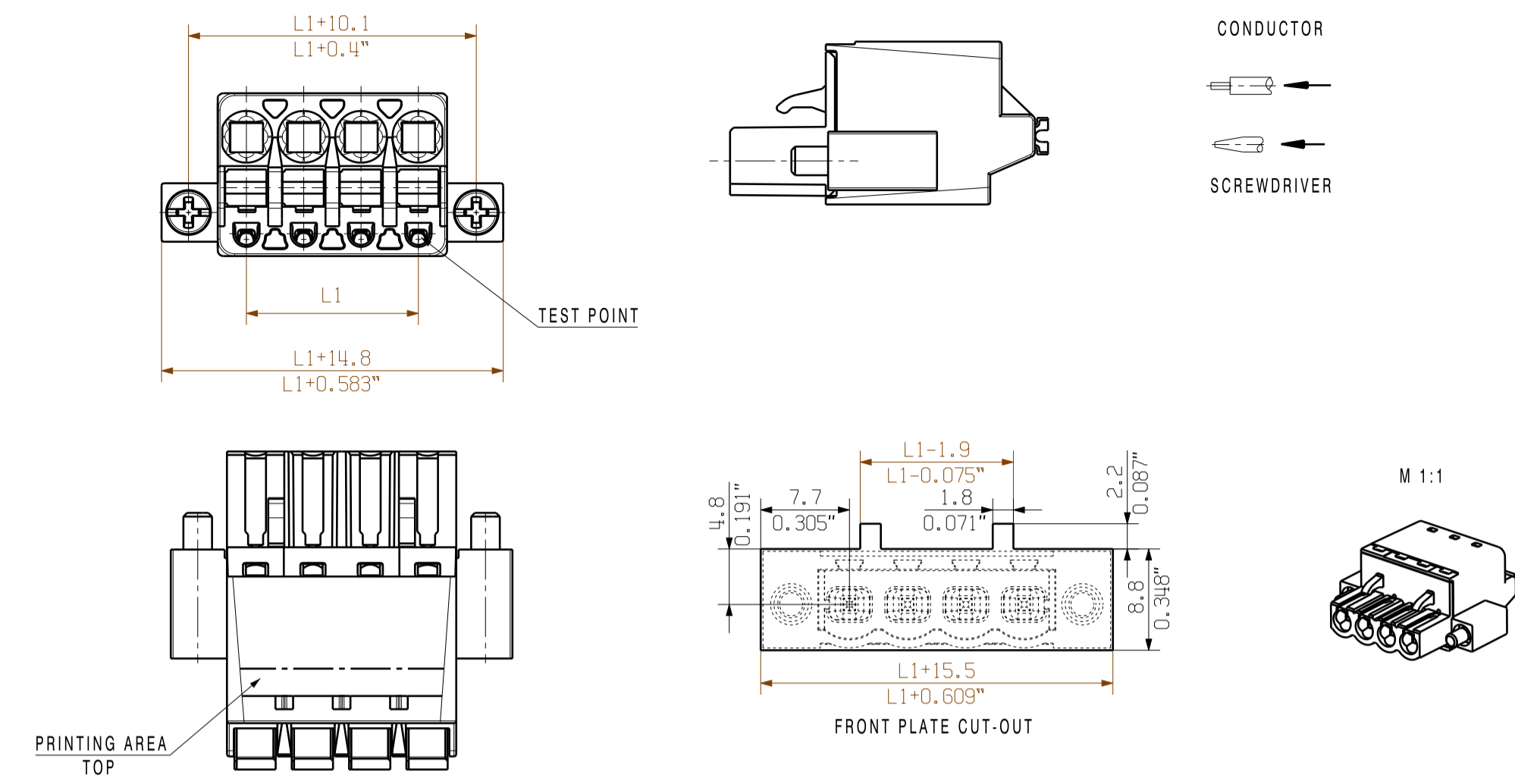
**Drawings****Product benefits**

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

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

|                                       |                      |   |  |
|---------------------------------------|----------------------|---|--|
| General tolerance:<br>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><br>BUCHSENSTECKER<br>FEMALE PLUG<br>Product file: BLF 5.00 |  |
| Responsible                           | HERTEL_S             |   |  |
| Checked                               | 28.02.2018 HELIUS_WA |   |  |
| Approved                              | LAKG_T               | 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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