

**BLF 7.62HP/03/180F SN BK BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Product image**

180° female header with PUSH-IN connection technology for field wiring in 2.5 mm<sup>2</sup> with a 7.62 pitch.

Meets the requirements as per UL1059 600 V class C and IEC 61800-5-1

Variants: without flange, external flange, release latch.

**General ordering data**

|              |  |
|--------------|--|
| Version      | PCB plug-in connector, female plug, 7.62 mm, Number of poles: 3, 180°, PUSH IN with actuator, Clamping range, max. : 2.5 mm <sup>2</sup> , Box |
| Order No.    | <a href="#">1043920000</a>   |
| Type         | BLF 7.62HP/03/180F SN BK BX  |
| GTIN (EAN)   | 4032248775460  |
| Qty.         | 54 pc(s).  |
| Product data | IEC: 1000 V / 29 A / 0.5 - 2.5 mm <sup>2</sup><br>UL: 600 V / 20 A / AWG 20 - AWG 12   |
| Packaging    | Box  |

Creation date July 3, 2024 10:28:56 AM CEST

Catalogue status 29.06.2024 / We reserve the right to make technical changes.

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

|            |          |                 |            |
|------------|----------|-----------------|------------|
| Depth      | 28.1 mm  | Depth (inches)  | 1.106 inch |
| Height     | 15.1 mm  | Height (inches) | 0.594 inch |
| Width      | 31.84 mm | Width (inches)  | 1.254 inch |
| Net weight | 9.44 g   |                 |            |

**System Parameters**

|  |                                      |  |                     |
|--|--------------------------------------|--|---------------------|
| Product family                               | OMNIMATE Power - series BL/SL 7.62HP | Type of connection                         | Field connection    |
| Wire connection method                       | PUSH IN with actuator                | Pitch in mm (P)                            | 7.62 mm             |
| Pitch in inches (P)                          | 0.3 "                                | Conductor outlet direction                 | 180°                |
| Number of poles                              | 3                                    | L1 in mm                                   | 15.24 mm            |
| L1 in inches                                 | 0.6 "                                | Number of rows                             | 1                   |
| Pin series quantity                          | 1                                    | Rated cross-section                        | 2.5 mm <sup>2</sup> |
| Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch               | Touch-safe protection acc. to DIN VDE 0470 | IP 20               |
| Protection degree                            | IP20                                 | Can be coded                               | Yes                 |
| Stripping length                             | 10 mm                                | Tightening torque for screw flange, min.   | 0.15 Nm             |
| Tightening torque for screw flange, max.     | 0.25 Nm                              | Screwdriver blade                          | 0.6 x 3.5           |
| Plugging cycles                              | 25                                   | Plugging force/pole, max.                  | 8.5 N               |
| Pulling force/pole, max.                     | 6 N                                  |  |                     |

**Material data**

|                                       |          |                                       |                            |
|---------------------------------------|----------|---------------------------------------|----------------------------|
| Insulating material                   | PBT      | Colour                                | black                      |
| Colour chart (similar)                | RAL 9011 | Insulating material group             | IIIa                       |
| Comparative Tracking Index (CTI)      | ≥ 200    | Insulation strength                   | ≥ 10 <sup>8</sup> Ω        |
| UL 94 flammability rating             | V-0      | Contact material                      | Cu-alloy                   |
| 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. | -25 °C   | Temperature range, installation, max. | 100 °C                     |

**Conductors suitable for connection**

|   |                      |
|---|----------------------|
| Clamping range, min.  | 0.08 mm <sup>2</sup> |
| Clamping range, max.  | 2.5 mm <sup>2</sup>  |
| Wire connection cross section AWG, min.                             | AWG 20               |
| Wire connection cross section AWG, max.                             | AWG 12               |
| Solid, min. H05(07) V-U   | 0.5 mm <sup>2</sup>  |
| Solid, max. H05(07) V-U   | 1.5 mm <sup>2</sup>  |
| Flexible, min. H05(07) V-K  | 0.5 mm <sup>2</sup>  |
| Flexible, max. H05(07) V-K  | 2.5 mm <sup>2</sup>  |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.5 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.                           | 0.5 mm <sup>2</sup>  |
| w. wire end ferrule, DIN 46228 pt 1, max.                           | 2.5 mm <sup>2</sup>  |
| Plug gauge in accordance with EN 60999 a x b; ø                     | 2.8 mm x 2.0 mm      |

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## Technical data

|                     |  |                              |                            |       |
|---------------------|--|------------------------------|----------------------------|-------|
| Clampable conductor | Cross-section for conductor connection   | Type                         | fine-wired                 |       |
|                     |  | nominal                      | 0.5 mm <sup>2</sup>        |       |
|                     | wire end ferrule   | Stripping length             | nominal                    | 12 mm |
|                     |  | Recommended wire-end ferrule | <a href="#">H0.5/16 OR</a> |       |
|                     |  | Stripping length             | nominal                    | 10 mm |
|                     |  | Recommended wire-end ferrule | <a href="#">H0.5/10</a>    |       |
|                     | Cross-section for conductor connection   | Type                         | fine-wired                 |       |
|                     |  | nominal                      | 0.75 mm <sup>2</sup>       |       |
|                     | wire end ferrule   | Stripping length             | nominal                    | 12 mm |
|                     |  | Recommended wire-end ferrule | <a href="#">H0.75/16 W</a> |       |
|                     |  | Stripping length             | nominal                    | 10 mm |
|                     |  | Recommended wire-end ferrule | <a href="#">H0.75/10</a>   |       |
|                     | Cross-section for conductor connection   | Type                         | fine-wired                 |       |
|                     |  | nominal                      | 1 mm <sup>2</sup>          |       |
|                     | wire end ferrule   | Stripping length             | nominal                    | 12 mm |
|                     |  | Recommended wire-end ferrule | <a href="#">H1.0/16D R</a> |       |
|                     |  | Stripping length             | nominal                    | 10 mm |
|                     |  | Recommended wire-end ferrule | <a href="#">H1.0/10</a>    |       |
|                     | Cross-section for conductor connection   | Type                         | fine-wired                 |       |
|                     |  | nominal                      | 1.5 mm <sup>2</sup>        |       |
|                     | wire end ferrule   | Stripping length             | nominal                    | 10 mm |
|                     |  | Recommended wire-end ferrule | <a href="#">H1.5/10</a>    |       |
|                     |  | Stripping length             | nominal                    | 12 mm |
|                     |  | Recommended wire-end ferrule | <a href="#">H1.5/16 R</a>  |       |
|                     | Cross-section for conductor connection   | Type                         | fine-wired                 |       |
|                     |  | nominal                      | 2.5 mm <sup>2</sup>        |       |
|                     | wire end ferrule   | Stripping length             | nominal                    | 10 mm |
|                     |  | Recommended wire-end ferrule | <a href="#">H2.5/10</a>    |       |
| Reference text      | The outside diameter of the plastic collar should not be larger than the pitch (P), Length of ferrules is to be chosen depending on the product and the rated voltage. |                              |                            |       |

## Rated data acc. to IEC

|   |                        |   |                   |
|---|------------------------|---|-------------------|
| tested acc. to standard   | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C)                         | 29 A              |
| Rated current, max. number of poles (Tu=20°C)                             | 24 A                   | Rated current, min. number of poles (Tu=40°C)                         | 23.8 A            |
| Rated current, max. number of poles (Tu=40°C)                             | 23 A                   | Rated voltage for surge voltage class / pollution degree II/2         | 1,000 V           |
| Rated voltage for surge voltage class / pollution degree III/2            | 1,000 V                | Rated voltage for surge voltage class / pollution degree III/3        | 630 V             |
| Rated impulse voltage for surge voltage class/ pollution degree II/2      | 6 kV                   | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 8 kV              |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 6 kV                   | Short-time withstand current resistance                               | 3 x 1s with 180 A |
| Clearance, min.   | 11.4 mm                | Creepage distance, min.   | 11.4 mm           |

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**Technical data****Rated data acc. to CSA**

Institute (CSA)



Certificate No. (CSA)

200039-1121690

|                                   |  |
|-----------------------------------|--|
| Rated voltage (Use group B / CSA) | 600 V  |
| Rated voltage (Use group D / CSA) | 600 V  |
| Rated current (Use group C / CSA) | 20 A   |
| Wire cross-section, AWG, min.     | AWG 20   |
| Reference to approval values      | Specifications are maximum values, details - see approval certificate. |

|                                   |        |
|-----------------------------------|--------|
| Rated voltage (Use group C / CSA) | 600 V  |
| Rated current (Use group B / CSA) | 20 A   |
| Rated current (Use group D / CSA) | 5 A    |
| Wire cross-section, AWG, max.     | AWG 12 |

**Rated data acc. to UL 1059**

Institute (cURus)



Certificate No. (cURus)

E60693

|                                       |  |
|---------------------------------------|--|
| Rated voltage (Use group B / UL 1059) | 600 V  |
| Rated voltage (Use group D / UL 1059) | 600 V  |
| Rated current (Use group C / UL 1059) | 20 A   |
| Wire cross-section, AWG, min.         | AWG 20   |
| Reference to approval values          | Specifications are maximum values, details - see approval certificate. |

|                                       |        |
|---------------------------------------|--------|
| Rated voltage (Use group C / UL 1059) | 600 V  |
| Rated current (Use group B / UL 1059) | 20 A   |
| Rated current (Use group D / UL 1059) | 5 A    |
| Wire cross-section, AWG, max.         | AWG 12 |

**Packing**

|           |        |            |        |
|-----------|--------|------------|--------|
| Packaging | Box    | VPE length | 352 mm |
| VPE width | 136 mm | VPE height | 36 mm  |

**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       | 180° turned without coding elements  |
|  | Evaluation | passed   |

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**Technical data**

|   |                |  |
|---|----------------|--|
| 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 solid 0.5 mm <sup>2</sup> conductor cross-section            |
|   |                | Type of conductor and stranded 0.5 mm <sup>2</sup> conductor cross-section         |
|   |                | Type of conductor and solid 2.5 mm <sup>2</sup> conductor cross-section            |
|   |                | Type of conductor and stranded 2.5 mm <sup>2</sup> conductor cross-section         |
|   |                | Type of conductor and AWG 20/1 conductor cross-section                             |
|   |                | Type of conductor and AWG 20/19 conductor cross-section                            |
|   |                | Type of conductor and AWG 14/1 conductor cross-section                             |
|   |                | Type of conductor and AWG 12/19 conductor cross-section                            |
|   | Evaluation     | passed   |
| Test for damage to and accidental loosening of conductors | Standard       | DIN EN 60999-1 section 9.4 / 12.00   |
|   | Requirement    | 0.3 kg   |
|   | Conductor type | Type of conductor and H05V-U0.5 conductor cross-section                            |
|   |                | Type of conductor and H05V-K0.5 conductor cross-section                            |
|   |                | Type of conductor and AWG 20/1 conductor cross-section                             |
|   |                | Type of conductor and AWG 20/19 conductor cross-section                            |
|   | Evaluation     | passed   |
|   | Requirement    | 0.7 kg   |
|   | Conductor type | Type of conductor and H07V-U2.5 conductor cross-section                            |
|   |                | Type of conductor and H07V-K2.5 conductor cross-section                            |
|   |                | Type of conductor and AWG 14/1 conductor cross-section                             |
|   | Evaluation     | passed   |
|   | Requirement    | 0.9 kg   |
|   | Conductor type | Type of conductor and AWG 12/19 conductor cross-section                            |
|   | Evaluation     | passed   |

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**Technical data**

|               |                |   |
|---------------|----------------|---|
| Pull-out test | Standard       | DIN EN 60999-1 section 9.5 / 12.00                      |
|               | Requirement    | ≥20 N   |
|               | Conductor type | Type of conductor and H05V-U0.5 conductor cross-section |
|               |                | Type of conductor and H05V-K0.5 conductor cross-section |
|               |                | Type of conductor and AWG 20/1 conductor cross-section  |
|               |                | Type of conductor and AWG 20/19 conductor cross-section |
|               | Evaluation     | passed  |
|               | Requirement    | ≥50 N   |
|               | Conductor type | Type of conductor and H07V-U2.5 conductor cross-section |
|               |                | Type of conductor and H07V-K2.5 conductor cross-section |
|               |                | Type of conductor and AWG 14/1 conductor cross-section  |
|               | Evaluation     | passed  |
|               | Requirement    | ≥60 N   |
|               | Conductor type | Type of conductor and AWG 12/19 conductor cross-section |
|               | Evaluation     | passed  |

**Classifications**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002638    | ETIM 7.0    | EC002638    |
| ETIM 8.0    | EC002638    | ETIM 9.0    | EC002638    |
| ECLASS 9.0  | 27-44-03-09 | ECLASS 9.1  | 27-44-03-09 |
| ECLASS 10.0 | 27-44-03-09 | ECLASS 11.0 | 27-46-02-02 |
| ECLASS 12.0 | 27-46-02-02 | ECLASS 13.0 | 27-46-02-02 |

**Environmental Product Compliance**

REACH SVHC

/

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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 variants 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>• Rated data refer only to the component itself. Clearance and creepage distances to other components are to be designed in accordance with the relevant application standards.</li> <li>• Crimping shape "A" for wire end ferrules with PZ 6/5 crimping tool recommended.</li> <li>• In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load</li> <li>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li> </ul> |

## Approvals

Approvals



|                         |            |
|-------------------------|------------|
| ROHS                    | Conform    |
| UL File Number Search   | UL Website |
| Certificate No. (cURus) | E60693     |

## Downloads

|   |   |
|---|---|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of the Manufacturer</a>   |
| Engineering Data                            | <a href="#">CAD data – STEP</a>   |
| User Documentation                          | <a href="#">Operating Instruction BLF</a><br><a href="#">QR-Code product handling video</a>   |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>  |
| Brochures                                   | <a href="#">FL DRIVES EN</a><br><a href="#">MB DEVICE MANUF. EN</a><br><a href="#">FL DRIVES DE</a><br><a href="#">FL HEATING ELECTR EN</a><br><a href="#">FL APPL. INVERTER EN</a><br><a href="#">FL BASE STATION EN</a><br><a href="#">FL ELEVATOR EN</a><br><a href="#">FL POWER SUPPLY EN</a><br><a href="#">FL 72H SAMPLE SER EN</a><br><a href="#">PO OMNIMATE EN</a><br><a href="#">PO OMNIMATE EN</a> |

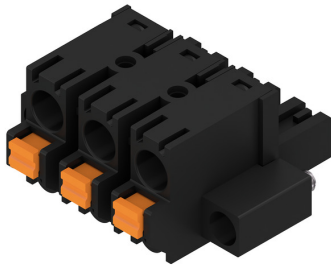
## BLF 7.62HP/03/180F SN BK BX

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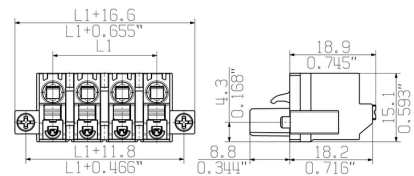
[www.weidmueller.com](http://www.weidmueller.com)

## Drawings

### Product image



### Dimensional drawing



### Graph



### Graph



### Product benefits



Vibration-proof connection



## BLF 7.62HP/03/180F 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.  | <a href="#">1545710000</a> | 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.  | <a href="#">1573010000</a> | 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 0.6X3.5X100            | Version                  |
|------------|----------------------------|--------------------------|
| Order No.  | <a href="#">9008330000</a> | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248056286              |                          |
| Qty.       | 1 pc(s).                   |                          |

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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****Crimping tools****Crimping tools for wire end ferrules, with and without plastic collars**

- Ratchet guarantees precise crimping
- Release option in the event of incorrect operation

**General ordering data**

|            |                            |  |
|------------|----------------------------|--|
| Type       | PZ 6/5                     | Version  |
| Order No.  | <a href="#">9011460000</a> | Pressing tool, Crimping tool for wire-end ferrules, 0.25mm <sup>2</sup> , 6mm <sup>2</sup> , |
| GTIN (EAN) | 4008190165352              | Trapezoidal indentation crimp  |
| Qty.       | 1 pc(s).                   |  |

**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.  | <a href="#">9008390000</a> | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248056354              |                          |
| Qty.       | 1 pc(s).                   |                          |

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Dimensions without tolerances are no check dimensions

The English version is binding

SHOWN: BLF7.62HP/04/ 180F

SHOWN: BLF7.62HP/04/ 180LR



M 1:1



M 1:1



SHOWN: BLF7.62HP/04/ 180



M 1:1



2-POL. VERSION NUR DIESER HAKEN  
2-POS. VERSION THIS HOOK ONLY

TEST POINT



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 DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN VDE 0627 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.

|    |         |           |
|----|---------|-----------|
| 12 | 83,82   | 3,300     |
| 11 | 76,20   | 3,000     |
| 10 | 68,58   | 2,700     |
| 9  | 60,96   | 2,400     |
| 8  | 53,34   | 2,100     |
| 7  | 45,72   | 1,800     |
| 6  | 38,10   | 1,500     |
| 5  | 30,48   | 1,200     |
| 4  | 22,86   | 0,900     |
| 3  | 15,24   | 0,600     |
| 2  | 7,62    | 0,300     |
| n  | L1 [mm] | L1 [Inch] |

GENERAL TOLERANCES  
DIN ISO 2768-m

97601/5  
20.09.17 HELIS\_MA  
00

Modification

Date

Name

Drawn

24.04.2017

HELIS\_MA

Responsible

20.09.2017

KRUG\_M

Checked

20.09.2017

HERTEL\_S

Approved

LANG\_T

Cat.no.:.

**3 46060** **07**

Drawing no. Issue no.

Sheet 01 of 02 sheets

**Weidmüller**

**BLF 7.62HP/./180**  
BUCHSENLEISTE  
SOCKET BLOCK

Product file: BLF/SLF 7.62

7381