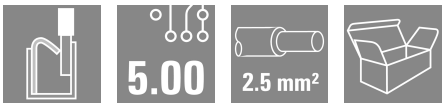
Data sheet

# BHF 5.00/04/180LH BK/OR

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

## Product image




The optimum framework for function and innovation:
The connection technology for the modular CH20M housing offers you numerous advantages that can make your projects more efficient. With our PCB terminal blocks and connectors, you benefit from flexible and reliable connection technology.
Thanks to automated production processes such as THT and THR soldering and reel packaging, we can guarantee high quality and precision. This enables fast and uncomplicated integration into your systems.
In addition, we offer you a wide range of colors as well as various coding and printing options to customize your housings. This allows you to ensure that your products are not only functional, but also visually appealing.

### General ordering data

| | |
|---|---|
| Version | PCB plug-in connector, female plug, 5.00 mm, Number of poles: 4, 180°, PUSH IN with actuator, Box |
| Order No. | 1989190000 |
| Type | BHF 5.00/04/180LH BK/OR |
| GTIN (EAN) | 4050118373820 |
| Qty. | 78 items |
| Product data | IEC: 400 V / 10 A / 0.2 - 2.5 mm²<br>UL: 300 V / 10 A / AWG 26 - AWG 14 |
| Packaging | Box |

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# Technical data

### Approvals

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

### Dimensions and weights

| | | | |
|---|---|---|---|
| Depth | 32.4 mm | Depth (inches) | 1.2756 inch |
| Height | 16.4 mm | Height (inches) | 0.6457 inch |
| Width | 22.5 mm | Width (inches) | 0.8858 inch |
| Length | 0 mm | Net weight | 9.14 g |

### Environmental Product Compliance

| | |
|---|---|
| RoHS Compliance Status | Compliant without exemption |
| REACH SVHC | No SVHC above 0.1 wt% |

### System Parameters

| | | | |
|---|---|---|---|
| Product family | OMNIMATE Housing - series CH20M | Type of connection | Field connection |
| Wire connection method | PUSH IN with actuator | Pitch in mm (P) | 5.00 mm |
| Pitch in inches (P) | 0.197 " | Conductor outlet direction | 180° |
| Number of poles | 4 | L1 in mm | 15.00 mm |
| L1 in inches | 0.591 " | Number of rows | 1 |
| Pin series quantity | 1 | Rated cross-section | 2.5 mm² |
| Touch-safe protection acc. to DIN VDE 57 106 | Safe from back-of-hand touch | Protection degree | IP20 |
| Volume resistance | ≤5 mΩ | Can be coded | Yes |
| Stripping length | 10 mm | Screwdriver blade | 0.6 x 3.5 |
| Plugging cycles | 25 | | |

### Material data

| | | | |
|---|---|---|---|
| Insulating material | PA 66 GF 30 | Colour | orange |
| Colour chart (similar) | RAL 2000 | Insulating material group | I |
| Comparative Tracking Index (CTI) | 600 ≤ CTI | Moisture Level (MSL) | |
| UL 94 flammability rating | V-0 | Contact material | Copper alloy |
| Contact surface | tinned | Storage temperature, min. | -40 °C |
| Storage temperature, max. | 70 °C | Operating temperature, min. | -40 °C |
| Operating temperature, max. | 120 °C | Temperature range, installation, min. | -25 °C |
| Temperature range, installation, max. | 120 °C | | |

### Conductors suitable for connection

| | | | |
|---|---|---|---|
| Wire connection cross section AWG, min. | AWG 24 | Wire connection cross section AWG, max. | AWG 14 |
| Solid, min. H05(07) V-U | 0.2 mm² | Solid, max. H05(07) V-U | 1.5 mm² |
| Stranded, min. H07V-R | 0.2 mm² | Stranded, max. H07V-R | 2.5 mm² |
| Flexible, min. H05(07) V-K | 0.2 mm² | Flexible, max. H05(07) V-K | 2.5 mm² |

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| | | | |
|---|---|---|---|
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.25 mm² | w. plastic collar ferrule, DIN 46228 pt 4, max. | 2.5 mm² |
| w. wire end ferrule, DIN 46228 pt 1, min. | 0.25 mm² | w. wire end ferrule, DIN 46228 pt 1, max. | 2.3 mm² |
| Plug gauge in accordance with EN 60999 a x b; ø | 2.8 mm x 2.4 mm; 3.0 mm | 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) | 10 A |
| Rated current, min. number of poles (Tu=40°C) | 9 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 | Creepage distance, min. | 3.2 mm |
| Clearance, min. | 3 mm | | |

### Rated data acc. to CSA

| | | | |
|---|---|---|---|
| Institute (CSA) | CSA | Certificate No. (CSA) | 200039-70153051 |
| Rated voltage (Use group B / CSA) | 300 V | Rated voltage (Use group C / CSA) | 50 V |
| Rated voltage (Use group D / CSA) | 300 V | Rated current (Use group B / CSA) | 10 A |
| Rated current (Use group C / CSA) | 10 A | Rated current (Use group D / CSA) | 10 A |
| Wire cross-section, AWG, min. | AWG 26 | Wire cross-section, AWG, max. | AWG 14 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

### Rated data acc. to UL 1059

| | | | |
|---|---|---|---|
| Institute (cURus) | CURUS | Certificate No. (cURus) | E60693 |
| Rated voltage (Use group B / UL 1059) | 300 V | Rated voltage (Use group C / UL 1059) | 50 V |
| Rated voltage (Use group D / UL 1059) | 300 V | Rated current (Use group B / UL 1059) | 10 A |
| Rated current (Use group C / UL 1059) | 10 A | Rated current (Use group D / UL 1059) | 10 A |
| Wire cross-section, AWG, min. | AWG 26 | Wire cross-section, AWG, max. | AWG 14 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

### Material data

| | | | |
|---|---|---|---|
| UL 94 flammability rating | V-0 | Insulating material | PA 66 GF 30 |
| Insulating material group | I | Comparative Tracking Index (CTI) | 600 ≤ CTI |

### General data

| | | | |
|---|---|---|---|
| Colour | orange | Protection degree | IP20 |
| Colour chart (similar) | RAL 2000 | | |

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### 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. |

### Classifications

| | | | |
|---|---|---|---|
| ETIM 8.0 | EC002638 | ETIM 9.0 | EC002638 |
| ETIM 10.0 | EC002638 | ECLASS 14.0 | 27-46-02-02 |
| ECLASS 15.0 | 27-46-02-02 | | |

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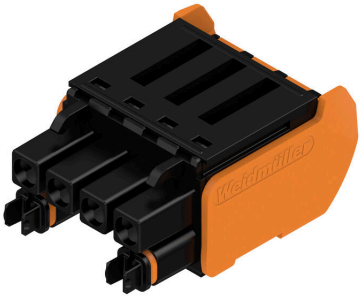
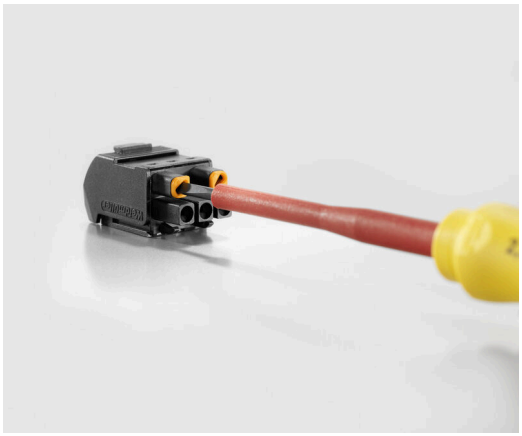
## Drawings

### Product image

### Product image

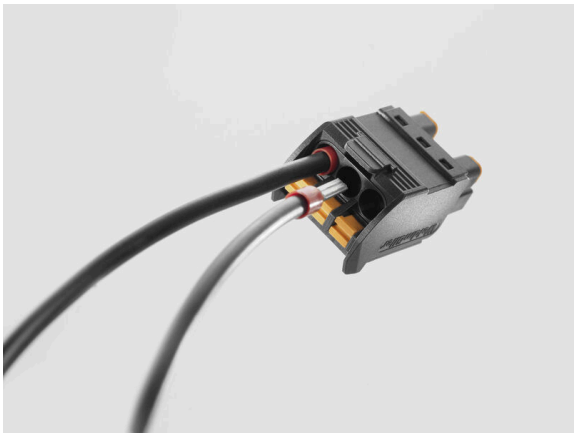


### Product benefits, Similar to illustration



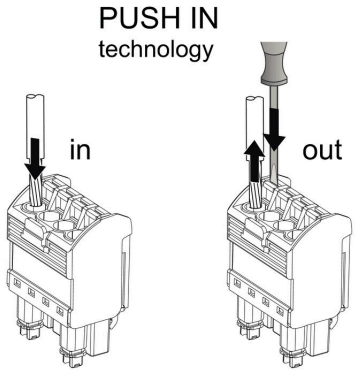
coding

### Wiring example



coding

### Example of use



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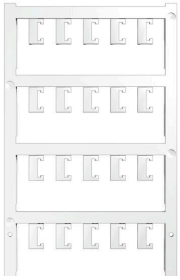
## Accessories

### Custom printing



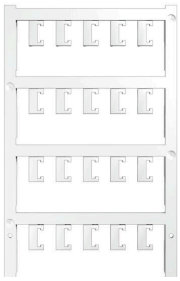
ESG is the tried-and-tested marker in MultiCard format for use on many well-known electrical devices. The result is high-quality device marking with a high-contrast appearance.
Various types are available for devices from manufacturers like Siemens, ABB, Beckhoff etc.
Advantages at a glance:
- Tags for universal usage, self-adhesive or clip-on tags, depending on type
- For aligned equipment, e.g. circuit breakers, we supply ESG markers for clipping onto tag rails
- Individual laser-quality printing according to specifications

For custom printing: Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

#### General ordering data

| | | |
|---|---|---|
| Type | ESG 6.6/20 BHZ 5.00 SDR | Version |
| Order No. | 1221520000 | ESG, Device markers x 20 mm, PA 66, Colour: To customer |
| GTIN (EAN) | 4050118005066 | specification, pluggable |
| Qty. | 40 ST | |

### Blank



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#### General ordering data

| | | |
|---|---|---|
| Type | ESG 6.6/20 BHZ 5.00/04 | Version |
| Order No. | 1082540000 | ESG, Device markers x 20 mm, PA 66, Colour: white, pluggable |
| GTIN (EAN) | 4032248845439 | |
| Qty. | 200 ST | |