

**BHF 5.00/02/180LH BK/OR****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://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: 2, 180°, PUSH IN with actuator, Box |
| Order No.    | <a href="#">1988380000</a>                                                                        |
| Type         | BHF 5.00/02/180LH BK/OR                                                                           |
| GTIN (EAN)   | 4050118534955                                                                                     |
| Qty.         | 150 pc(s).                                                                                        |
| Product data | IEC: 400 V / 10 A / 0.2 - 2.5 mm <sup>2</sup><br>UL: 300 V / 10 A / AWG 26 - AWG 14               |
| Packaging    | Box                                                                                               |

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

|        |         |                 |            |
|--------|---------|-----------------|------------|
| Depth  | 32.4 mm | Depth (inches)  | 1.276 inch |
| Height | 16.4 mm | Height (inches) | 0.646 inch |
| Width  | 12.5 mm | Width (inches)  | 0.492 inch |
| Length | 0 mm    | Net weight      | 5.01 g     |

**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 mm                |
| Pitch in inches (P)                          | 0.197 "                         | Conductor outlet direction | 180°                |
| Number of poles                              | 2                               | L1 in mm                   | 5 mm                |
| L1 in inches                                 | 0.197 "                         | 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 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    | 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 mm <sup>2</sup>     | Solid, max. H05(07) V-U                         | 1.5 mm <sup>2</sup>                                                                                                                                                    |
| Stranded, min. H07V-R                           | 0.2 mm <sup>2</sup>     | Stranded, max. H07V-R                           | 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, min. | 0.25 mm <sup>2</sup>    | w. plastic collar ferrule, DIN 46228 pt 4, max. | 2.5 mm <sup>2</sup>                                                                                                                                                    |
| w. wire end ferrule, DIN 46228 pt 1, min.       | 0.25 mm <sup>2</sup>    | w. wire end ferrule, DIN 46228 pt 1, max.       | 2.3 mm <sup>2</sup>                                                                                                                                                    |
| 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. |

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## Technical data

## Rated data acc. to IEC

tested acc. to standard

IEC 60664-1, IEC 61984

Rated current, min. number of poles  
( $T_u=40^{\circ}\text{C}$ )

9 A

Rated voltage for surge voltage class /  
pollution degree III/2

320 V

Rated impulse voltage for surge voltage  
class/ pollution degree II/2

4 kV

Rated impulse voltage for surge voltage  
class/ contamination degree III/3

4 kV

Creepage distance, min.

3.2 mm

Rated current, min. number of poles  
( $T_u=20^{\circ}\text{C}$ )

10 A

Rated voltage for surge voltage class /  
pollution degree II/2

400 V

Rated voltage for surge voltage class /  
pollution degree III/3

250 V

Rated impulse voltage for surge voltage  
class/ pollution degree III/2

4 kV

Clearance, min.

3 mm

## Rated data acc. to CSA

Institute (CSA)



Certificate No. (CSA)

200039-70153051

Rated voltage (Use group B / CSA)

300 V

Rated voltage (Use group D / CSA)

300 V

Rated current (Use group C / CSA)

10 A

Wire cross-section, AWG, min.

AWG 26

Reference to approval values

Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group C / CSA)

50 V

Rated current (Use group B / CSA)

10 A

Rated current (Use group D / CSA)

10 A

Wire cross-section, AWG, max.

AWG 14

## 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 C / UL 1059)

10 A

Wire cross-section, AWG, min.

AWG 26

Reference to approval values

Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group C / UL 1059)

50 V

Rated current (Use group B / UL 1059)

10 A

Rated current (Use group D / UL 1059)

10 A

Wire cross-section, AWG, max.

AWG 14

## Material data

Comparative Tracking Index (CTI)

 $600 \leq \text{CTI}$ 

Insulating material group

I

Insulating material

PA 66 GF 30

UL 94 flammability rating

V-0

## General data

Colour

orange

Colour chart (similar)

RAL 2000

Protection degree

IP20

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|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002638    | ETIM 7.0    | EC002638    |
| ETIM 8.0    | EC002638    | ETIM 9.0    | EC002638    |
| ETIM 10.0   | 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 | ECLASS 14.0 | 27-46-02-02 |
| ECLASS 15.0 | 27-46-02-02 |             |             |

**Environmental Product Compliance**

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

**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. |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Approvals**

Approvals



|                         |                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approvals MAMID         | <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319226/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319226/-T1z1mm-S800/</a> <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319230/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319230/-T1z1mm-S800/</a> |
| ROHS                    | Conform                                                                                                                                                                                                                                                                                                                                                 |
| UL File Number Search   | UL Website                                                                                                                                                                                                                                                                                                                                              |
| Certificate No. (cURus) | E60693                                                                                                                                                                                                                                                                                                                                                  |

**Downloads**

|                                             |                                               |
|---------------------------------------------|-----------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">CSA Certificate of Compliance</a> |
| Engineering Data                            | <a href="#">CAD data – STEP</a>               |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>      |

## BHF 5.00/02/180LH BK/OR

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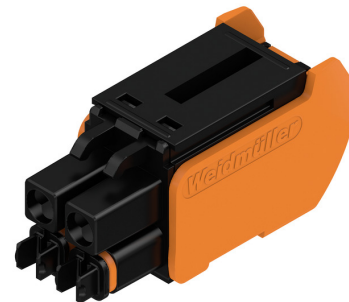
[www.weidmueller.com](http://www.weidmueller.com)

## Drawings

### Product image



### Product image



### Product benefits, Similar to illustration



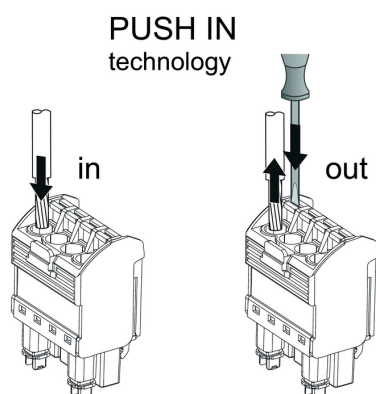
coding

### Wiring example



coding

### Example of use



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**Accessories****Blank**

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 6.6/11 BHZ 5.00/02     | Version                                           |
| Order No.  | <a href="#">1082490000</a> | ESG, Device markers x 11 mm, PA 66, Colour: white |
| GTIN (EAN) | 4032248845330              |                                                   |
| Qty.       | 200 pc(s).                 |                                                   |

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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****Custom printing**

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- Individual laser-quality printing according to specifications

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**General ordering data**

|            |                            |                                                         |
|------------|----------------------------|---------------------------------------------------------|
| Type       | ESG 6.6/11 BHZ 5.00 SDR    | Version                                                 |
| Order No.  | <a href="#">1346330000</a> | ESG, Device markers x 11 mm, PA 66, Colour: To customer |
| GTIN (EAN) | 4050118151206              | specification                                           |
| Qty.       | 200 pc(s).                 |                                                         |