

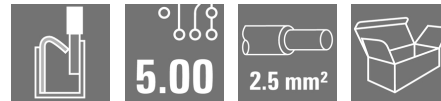
**BHF 5.00/04/180LH BK/OR****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image****Naturally, the CH20M system also shows its perfection in the peripheral interface.**

When considering design options, processing, usability, reliability and security, the PCB terminals or pin headers and connectors are just as important in the practice as the entire system.

In every sector, the connection technology is at the top of its class.

- **100% non-interchangeable** Together with the captive, unique "Auto-Set" encoding, the uniquely detectable markers on the plug connection and in the front ensure misconnection-proof assignment of the connections. Both markers can be printed as cards in a PrintJet and then permanently snapped on.
- **100% intuitive** Quick and easy operation by means of an integrated colour-coded release lever with grip tab and including a screwdriver pocket.
- **100% safe** Touch protection for the male and female header on both sides
- **100% efficient** All PCB connection elements are re-flow compatible
- **100% time and cost savings** During the installation: the quick all-purpose "Multi-Tool" screw head ensures a secure contact, user-friendly operation and less complexity. Additional features, such as the "Wire ready" technology, enable you to minimize wiring costs and increase customer satisfaction.

Simple, component-friendly unplugging of the female plug using the integrated release lever.

**General ordering data**

Version	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 4, 180°, PUSH IN with actuator, Tension-clamp connection, Box
Order No.	<a href="#">1989190000</a>
Type	BHF 5.00/04/180LH BK/OR
GTIN (EAN)	4050118373820
Qty.	78 pc(s).
Product data	IEC: 400 V / 10 A / 0.2 - 2.5 mm <sup>2</sup> UL: 300 V / 10 A / AWG 26 - AWG 14
Packaging	Box

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

Depth	30.82 mm	Depth (inches)	1.213 inch
Width	22.15 mm	Width (inches)	0.872 inch
Length	14.6 mm	Length (inches)	0.575 inch
Net weight	9.14 g		

**System Parameters**

Product family	OMNIMATE Housing - series CH20M	Type of connection	Field connection
Wire connection method	PUSH IN with actuator, Tension-clamp connection	Pitch in mm (P)	5 mm
Pitch in inches (P)	0.197 "	Conductor outlet direction	180°
Number of poles	4	L1 in mm	15 mm
L1 in inches	0.591 "	Number of rows	1
Pin series quantity	1	Rated cross-section	2.5 mm <sup>2</sup>
Protection degree	IP20	Volume resistance	≤5 mΩ
Can be coded	Yes	Stripping length	10 mm
Plugging cycles	25		

**Material data**

Insulating material	PA 66 GF 30	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	I
Comparative Tracking Index (CTI)	600 ≤ CTI	UL 94 flammability rating	V-0
Contact material	Cu-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		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.
	2.8 mm x 2.4 mm; 3.0 mm		

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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

black

Colour chart (similar)

RAL 9011

Protection degree

IP20

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## Technical data

## 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 /

## 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



UL File Number Search UL Website

Certificate No. (cURus) E60693

## Downloads

Approval/Certificate/Document of Conformity

[CSA Certificate of Compliance](#)

Engineering Data

[CAD data – STEP](#)

Catalogues

[Catalogues in PDF-format](#)

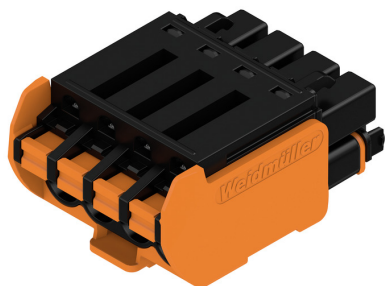
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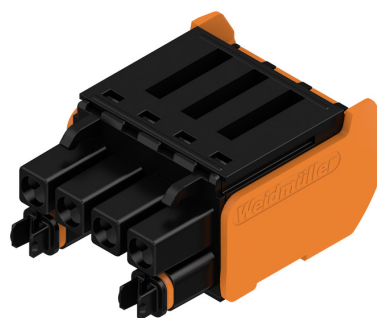
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# Drawings

## Product image



## Product image



## Product benefits, Similar to illustration



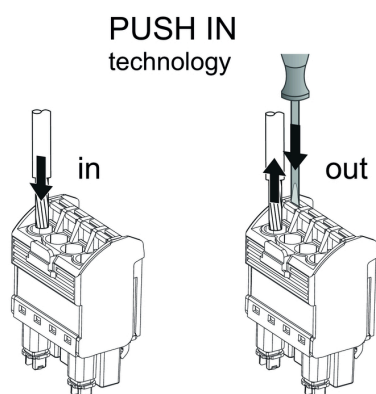
coding

## Wiring example



coding

## Example of use



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[www.weidmueller.com](http://www.weidmueller.com)**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.	<a href="#">1221520000</a>	ESG, Device markers x 20 mm, PA 66, Colour: To customer
GTIN (EAN)	4050118005066	specification
Qty.	40 pc(s).	

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[www.weidmueller.com](http://www.weidmueller.com)**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 6.6/20 BHZ 5.00/04	Version
Order No.	<a href="#">1082540000</a>	ESG, Device markers x 20 mm, PA 66, Colour: white
GTIN (EAN)	4032248845439	
Qty.	200 pc(s).	