

**SAMPLE CH20M45 22/22 PCB****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

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

Future-proof solutions for industrial electronics for mounting in the control cabinet

Electronic housings are crucial for the integration of electronic assemblies in the control cabinet. They protect sensitive components and ensure reliable connections. Thanks to high-quality materials, they offer long-term solutions for industrial applications.

Your advantages:

Flexibility: Scalable solutions for different requirements

Safety: Robust design to protect your electronics

Efficiency: Simple installation and optimized connection technology

Housing solutions for every application:

Our portfolio includes modular housings (e.g. CH20M), small housings and profile housings designed for control, signal conversion and safety applications. These housings offer customizable designs, easy mounting and high connection capacity.

Customization:

In addition to standard solutions, we offer customization in design, color and printing. The Weidmüller Configurator enables individual design.

Our service:

We offer expert advice and technical support for your projects. In the download area you will find CAD data, data sheets and installation instructions for efficient integration.

**General ordering data**

Version	Electronics housing sample, OMNIMATE Housing - series CH20M black, Sample kit for developers, consisting of individual parts incl. female plug, unmounted, Enclosure set, Connection technology, Width: 45 mm
Order No.	<a href="#">1203350000</a>
Type	SAMPLE CH20M45 22/22 PCB
GTIN (EAN)	4032248985388
Qty.	1 items

## SAMPLE CH20M45 22/22 PCB

**Weidmüller Interface GmbH & Co. KG**  
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## Technical data

## Approvals

ROHS	Conform
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## Dimensions and weights

Depth	114 mm	Depth (inches)	4.4882 inch
Height	117.2 mm	Height (inches)	4.6142 inch
Width	45 mm	Width (inches)	1.7716 inch
Length	0 mm	Net weight	206.62 g

## Temperatures

Installation temperature	-25 °C...85 °C	Humidity	5 - 93% rel. humidity, Tu = 40°C, no condensation
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## Environmental Product Compliance

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

## Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, max. number of poles (Tu=20°C)	10 A
Rated current, max. 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		

## Material data

UL 94 flammability rating	V-0	Insulating material	PA 66 GF 30
Insulating material group	II	Surface finish	untreated
Basic material	Plastic, PA 66 GF 30	Comparative Tracking Index (CTI)	400 ≤ CTI <600

## General data

Colour	black	Protection degree	IP20 in installed state
Colour chart (similar)	RAL 9011	Encapsulation option	No

## Design - IN requirements

Tolerance for the PCB shape	±0.1 mm	PCB thickness	1.6 mm
Tolerance of circuit board thickness	±0.15 mm		

## Assembly properties

Number of connection levels	2	Number of PCBs, max.	2
Number of ventilation openings	1	Number of poles	32
Cross-connection	No	Type of contact to PCB	Solder connection, direct
Type of connection	Clamping yoke		

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## Housing properties

Flip cover mountable	Yes	Marker integrateable	Yes
Safety lock	sealable	Cut out as preparation for functional port	No
Color of clip-on foot	orange	Cross-connection	No
Number of connection levels	2	Number of poles	32

## Connectable conducteurs

Stripping length	8 mm	Blade size	0.6 x 3.5 mm
Tightening torque, min.	0.4 Nm	Tightening torque, max.	0.5 Nm
Clamping range, min.	0.13 mm <sup>2</sup>	Clamping range, max.	2.5 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 26	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	2.5 mm <sup>2</sup>
Stranded, max. H07V-R	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.		Max. clamping range	2.5 mm <sup>2</sup>

## Important note

Product information	Circuit board contour, restricted zones, and other information for the design in of the circuit board can be found in the category connection technology under the corresponding male headers in the downloads.
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## Classifications

ETIM 7.0	EC001031	ETIM 8.0	EC001031
ETIM 9.0	EC001031	ETIM 10.0	EC001031
ECLASS 11.0	27-18-27-02	ECLASS 12.0	27-18-27-02
ECLASS 13.0	27-19-03-01	ECLASS 14.0	27-19-03-01
ECLASS 15.0	27-19-03-01		

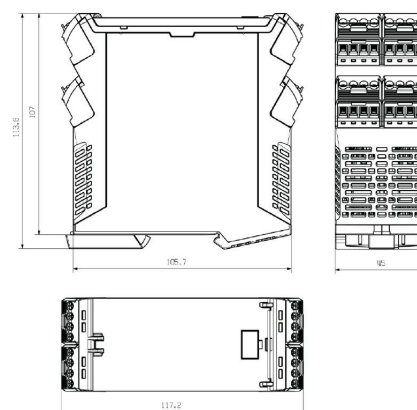
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**Drawings**

**Dimensioned drawing**



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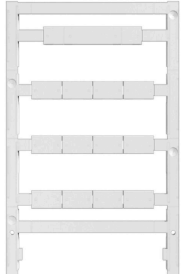
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## Accessories

## 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:

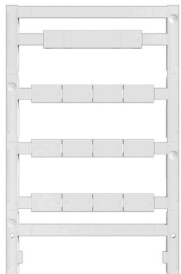
- Tags for universal usage, self-adhesive or clip-on tags, depending on type
- For aligned equipment, e.g. circuit breakers, we supply ESG markers for clipping onto tag rails
- Individual laser-quality printing according to specifications

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 8/13.5/43.3 SAI AU	Version
Order No.	<a href="#">1912130000</a>	ESG, Device markers x 13.5 mm, PA 66, Colour: Transparent,
GTIN (EAN)	4032248541164	pluggable
Qty.	5 ST	

## Custom printing



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## General ordering data

Type	ESG 8/13.5/43.3 SAI SDR	Version
Order No.	<a href="#">1038860000</a>	ESG, Device markers x 13.5 mm, PA 66, Colour: To customer
GTIN (EAN)	4032248768110	specification, pluggable
Qty.	1 ST	
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, pluggable
Qty.	40 ST	

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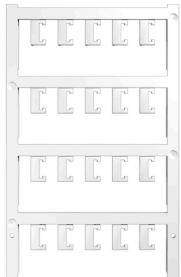
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## General ordering data

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, pluggable
GTIN (EAN)	4032248845439	
Qty.	200 ST	

## CH20M AD SHL 5.00/04 - Side element cover for CH20M22, CH20M45, CH20M67



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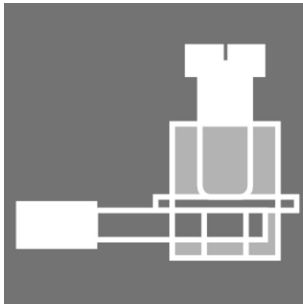
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## Accessories

## General ordering data

Type	CH20M AD SHL 5.00/04 AG...	Version
Order No.	<a href="#">1472830000</a>	Hood, OMNIMATE Housing - series CH20M Agate grey, Side element
GTIN (EAN)	4050118279429	cover, Width: 22.5 mm
Qty.	50 ST	
Type	CH20M AD SHL 5.00/04 BK...	Version
Order No.	<a href="#">1221310000</a>	Hood, OMNIMATE Housing - series CH20M black, Side element
GTIN (EAN)	4050118004830	cover, Width: 22.5 mm
Qty.	50 ST	
Type	CH20M AD SHL 5.00/04 GG...	Version
Order No.	<a href="#">1413740000</a>	Hood, OMNIMATE Housing - series CH20M Graphite grey, Side
GTIN (EAN)	4050118241648	element cover, Width: 22.5 mm
Qty.	50 ST	
Type	CH20M AD SHL 5.00/04 LG...	Version
Order No.	<a href="#">1432890000</a>	Hood, OMNIMATE Housing - series CH20M Light Grey, Side element
GTIN (EAN)	4050118237641	cover, Width: 22.5 mm
Qty.	50 ST	

## Female plugs - Clamping yoke screw connection



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

Type	BHZ 5.00/04/90LH BK/BK	Version
Order No.	<a href="#">1069350000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 4,
GTIN (EAN)	4032248825011	90°, Clamping yoke connection, cod. 02, Box
Qty.	78 ST	
Type	BHZ 5.00/04/90LH BK/BL	Version
Order No.	<a href="#">1069380000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 4,
GTIN (EAN)	4032248825028	90°, Clamping yoke connection, cod. 02, Box
Qty.	78 ST	
Type	BHZ 5.00/04/90LH BK/GGY	Version
Order No.	<a href="#">1421750000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 4,
GTIN (EAN)	4050118225518	90°, Clamping yoke connection, BHZ 5.00/04/90LH SN BK/GGY BX
Qty.	78 ST	cod. 02, Box
Type	BHZ 5.00/04/90LH BK/OR	Version
Order No.	<a href="#">1063280000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 4,
GTIN (EAN)	4032248814947	90°, Clamping yoke connection, cod. 02, Box
Qty.	78 ST	

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## Accessories

Type	BHZ 5.00/04/90LH GGY/BL	Version
Order No.	<a href="#">1372580000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 4,
GTIN (EAN)	4050118174625	90°, Clamping yoke connection, BHZ 5.00/04/90LH SN GGY/BL BX
Qty.	78 ST	cod. 02, Box
Type	BHZ 5.00/04/90LH GGY/GGY	Version
Order No.	<a href="#">1372520000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 4,
GTIN (EAN)	4050118174229	90°, Clamping yoke connection, BHZ 5.00/04/90LH SN GGY/GGY
Qty.	78 ST	BX cod. 02, Box

## Female plugs - PUSH IN spring connection



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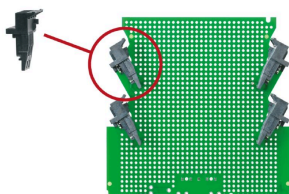
Thanks to automated production processes such as THT and THR soldering and reel packaging, we can guarantee high quality and precision. This enables fast and uncomplicated integration into your systems. In addition, we offer you a wide range of colors as well as various coding and printing options to customize your housings. This allows you to ensure that your products are not only functional, but also visually appealing.

## General ordering data

Type	BHF 5.00/04/180LH BK/BK	Version
Order No.	<a href="#">1497500000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 4,
GTIN (EAN)	4050118306828	180°, PUSH IN with actuator, Box
Qty.	78 ST	
Type	BHF 5.00/04/180LH BK/BL	Version
Order No.	<a href="#">1989090000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 4,
GTIN (EAN)	4050118533453	180°, PUSH IN with actuator, Box
Qty.	78 ST	
Type	BHF 5.00/04/180LH BK/OR	Version
Order No.	<a href="#">1989190000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 4,
GTIN (EAN)	4050118373820	180°, PUSH IN with actuator, Box
Qty.	78 ST	

## SHL-SMT 5.00/04GL - left connection side

for left side



High-temperature-resistant, straight, open pin header. Packed in box or tape. On tape and with 1.5 mm solder pin, optimised for automatic assembly. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded. HC = High Current.



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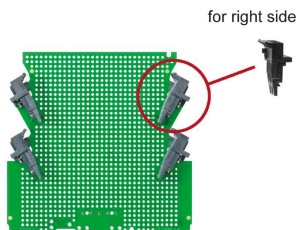
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## Accessories

## General ordering data

Type	SHL-SMT 5.00/04GL 1.5BX	Version
Order No.	<a href="#">1063220000</a>	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248814886	side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°,
Qty.	108 ST	Solder pin length (l): 1.5 mm, tinned, black, Box
Type	SHL-SMT 5.00/04GL 1.5RL	Version
Order No.	<a href="#">1063250000</a>	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248814916	side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°,
Qty.	130 ST	Solder pin length (l): 1.5 mm, tinned, black, Tape
Type	SHL-SMT 5.00/04GL 4.2BX	Version
Order No.	<a href="#">1069640000</a>	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248825080	side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°,
Qty.	108 ST	Solder pin length (l): 4.2 mm, tinned, black, Box
Type	SHL-SMT 5.00/04GL 4.2RL	Version
Order No.	<a href="#">1069670000</a>	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248825172	side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°,
Qty.	130 ST	Solder pin length (l): 4.2 mm, tinned, black, Tape

## SHL-SMT 5.00/04GR - right connection side



High-temperature-resistant, straight, open pin header.  
 Packed in box or tape. On tape and with 1.5 mm solder pin, optimised for automatic assembly. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded. HC = High Current.

## General ordering data

Type	SHL-SMT 5.00/04GR 1.5BX	Version
Order No.	<a href="#">1063150000</a>	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248876471	side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°,
Qty.	108 ST	Solder pin length (l): 1.5 mm, tinned, black, Box
Type	SHL-SMT 5.00/04GR 1.5RL	Version
Order No.	<a href="#">1063180000</a>	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248814855	side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°,
Qty.	130 ST	Solder pin length (l): 1.5 mm, tinned, black, Tape
Type	SHL-SMT 5.00/04GR 4.2BX	Version
Order No.	<a href="#">1069570000</a>	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248825165	side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°,
Qty.	108 ST	Solder pin length (l): 4.2 mm, tinned, black, Box
Type	SHL-SMT 5.00/04GR 4.2RL	Version
Order No.	<a href="#">1069610000</a>	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248825059	side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°,
Qty.	130 ST	Solder pin length (l): 4.2 mm, tinned, black, Tape
Type	SHL-SMT 5.00/04GR 5.9BX	Version
Order No.	<a href="#">1069710000</a>	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248825073	side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°,
Qty.	108 ST	Solder pin length (l): 5.9 mm, tinned, black, Box

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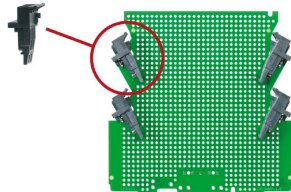
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## Accessories

Type	SHL-SMT 5.00/04GR 5.9RL	Version
Order No.	<a href="#">1069740000</a>	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248825066	side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°,
Qty.	130 ST	Solder pin length (l): 5.9 mm, tinned, black, Tape

## SHL-SMT 5.00/04GL - left connection side

for left side



Male connectors with solder pin length optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

## General ordering data

Type	SHL-SMT 5.00/04GL 5.9BX	Version
Order No.	<a href="#">1069770000</a>	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248825097	side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°,
Qty.	108 ST	Solder pin length (l): 5.9 mm, tinned, black, Box
Type	SHL-SMT 5.00/04GL 5.9RL	Version
Order No.	<a href="#">1069810000</a>	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248824694	side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°,
Qty.	130 ST	Solder pin length (l): 5.9 mm, tinned, black, Tape