Data sheet

SAMPLE CH20M17 3/3 PCB

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

www.weidmueller.com

Future-proof solutions for industrial electronics for mounting in the control cabinet
Electronichousings 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: 17.5 mm
Order No.	1255820000
Type	SAMPLE CH20M17 3/3 PCB
GTIN (EAN)	4050118048629
Qty.	1 items

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Technical data

Approvals

ROHS	Conform

Dimensions and weights

Depth	114 mm	Depth (inches)	4.4882 inch
Height	117.2 mm	Height (inches)	4.6142 inch
Width	17.5 mm	Width (inches)	0.689 inch
Length	0 mm	Net weight	116.82 g

Temperatures

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

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	3	Number of PCBs, max.	1
Number of ventilation openings	0	Number of poles	18
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 preperation for functional port integrated	No
Color of clip-on foot	orange	Cross-connection	No
Number of connection levels	3	Number of poles	18

Connectable coducteurs

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 mm²	Clamping range, max.	2.5 mm²
Wire connection cross section AWG, min.	AWG 26	Wire connection cross section AWG, max.	AWG 14
Solid, min. H05(07) V-U	0.2 mm²	Solid, max. H05(07) V-U	2.5 mm²
Stranded, max. H07V-R	2.5 mm²	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.	2.5 mm²	Max. clamping range	2.5 mm²

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.

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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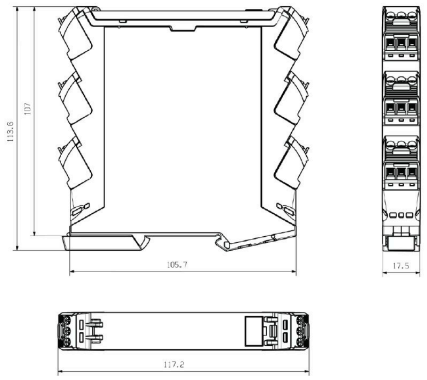
Drawings

Dimensioned drawing



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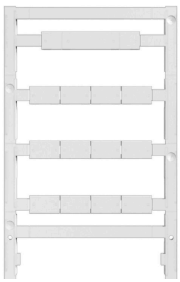
Accessories

Custom printing



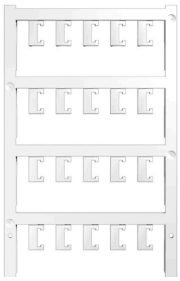
ESG is the tried-and-tested marker in MultiCard format for use on many well-known electrical devices. The result is high-quality device marking with a high-contrast appearance.
Various types are available for devices from manufacturers like Siemens, ABB, Beckhoff etc.
Advantages at a glance:
- Tags for 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 8/13.5/43.3 SAI SDR	Version
Order No.	1038860000	ESG, Device markers x 13.5 mm, PA 66, Colour: To customer
GTIN (EAN)	4032248768110	specification, pluggable
Qty.	1 ST	

Blank



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General ordering data

Type	ESG 6.6/15 BHZ 5.00/03	Version
Order No.	1082520000	ESG, Device markers x 15 mm, PA 66, Colour: white, pluggable
GTIN (EAN)	4032248845323	
Qty.	200 ST	

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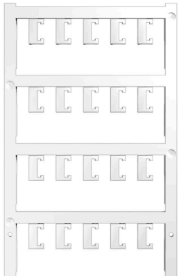
Custom printing



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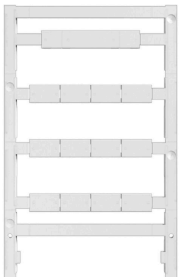
General ordering data

Type	ESG 6.6/15 BHZ 5.00 SDR	Version
Order No.	1346320000	ESG, Device markers x 15 mm, PA 66, Colour: To customer
GTIN (EAN)	4050118151183	specification, pluggable
Qty.	40 ST	

Blank



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General ordering data

Type	ESG 8/13.5/43.3 SAI AU	Version
Order No.	1912130000	ESG, Device markers x 13.5 mm, PA 66, Colour: Transparent,
GTIN (EAN)	4032248541164	pluggable
Qty.	5 ST	

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Accessories

CH20M AD SHL 5.00/03 - Side element cover for CH20M17

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General ordering data

Type	CH20M AD SHL 5.00/03 AG...	Version
Order No.	2554740000	Hood, OMNIMATE Housing - series CH20M Agate grey, Side element
GTIN (EAN)	4050118564792	cover, Width: 17.5 mm
Qty.	50 ST	
Type	CH20M AD SHL 5.00/03 BK...	Version
Order No.	1254110000	Hood, OMNIMATE Housing - series CH20M black, Side element
GTIN (EAN)	4050118046922	cover, Width: 17.5 mm
Qty.	50 ST	
Type	CH20M AD SHL 5.00/03 LG...	Version
Order No.	1529540000	Hood, OMNIMATE Housing - series CH20M Light Grey, Side element
GTIN (EAN)	4050118334418	cover, Width: 17.5 mm
Qty.	50 ST	

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Accessories

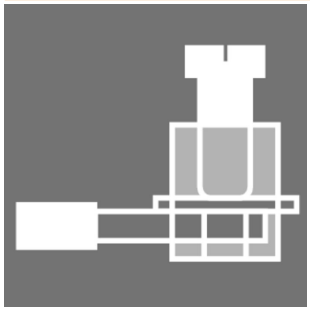
Female plugs - PUSH IN spring connection

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	BHF 5.00/03/180LH BK/BK	Version
Order No.	1497670000	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 3,
GTIN (EAN)	4050118306811	180°, PUSH IN with actuator, Box
Qty.	108 ST	
Type	BHF 5.00/03/180LH BK/BL	Version
Order No.	1989200000	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 3,
GTIN (EAN)	4050118373622	180°, PUSH IN with actuator, Box
Qty.	108 ST	
Type	BHF 5.00/03/180LH BK/OR	Version
Order No.	1989210000	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 3,
GTIN (EAN)	4050118373639	180°, PUSH IN with actuator, Box
Qty.	108 ST	

Female plugs - Clamping yoke screw connection



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General ordering data

Type	BHZ 5.00/03/90LH BK/OR	Version
Order No.	1063270000	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 3,
GTIN (EAN)	4032248814930	90°, Clamping yoke connection, BHZ 5.00/03/90LH SN BK/OR BX;
Qty.	108 ST	cod. 02, Box

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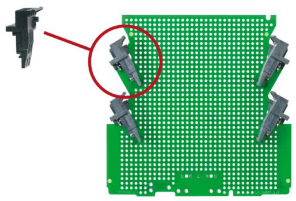
Accessories

Type	BHZ 5.00/03/90LH BK/BK	Version
Order No.	1069340000	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 3,
GTIN (EAN)	4032248824946	90°, Clamping yoke connection, BHZ 5.00/03/90LH SN BK/BK BX;
Qty.	108 ST	cod. 02, Box
Type	BHZ 5.00/03/90LH BK/BL	Version
Order No.	1069370000	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 3,
GTIN (EAN)	4032248824953	90°, Clamping yoke connection, BHZ 5.00/03/90LH SN BK/BL BX;
Qty.	108 ST	cod. 02, Box

SHL-SMT 5.00/03GL - left connection side

for left side



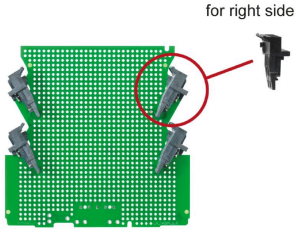
High-temperature-resistant, straight, open pin header. Packed in box or tape. On tape and with 1.5 mm solder pin, optimised for automatic assembly. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded. HC = High Current.

General ordering data

Type	SHL-SMT 5.00/03GL 1.5BX	Version
Order No.	1063210000	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248814879	side, THT/THR solder connection, 5.00 mm, Number of poles: 3, 90°,
Qty.	120 ST	Solder pin length (l): 1.5 mm, tinned, black, Box
Type	SHL-SMT 5.00/03GL 1.5RL	Version
Order No.	1063240000	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248814909	side, THT/THR solder connection, 5.00 mm, Number of poles: 3, 90°,
Qty.	175 ST	Solder pin length (l): 1.5 mm, tinned, black, Tape
Type	SHL-SMT 5.00/03GL 4.2BX	Version
Order No.	1069630000	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248824700	side, THT/THR solder connection, 5.00 mm, Number of poles: 3, 90°,
Qty.	120 ST	Solder pin length (l): 4.2 mm, tinned, black, Box
Type	SHL-SMT 5.00/03GL 4.2RL	Version
Order No.	1069660000	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248825226	side, THT/THR solder connection, 5.00 mm, Number of poles: 3, 90°,
Qty.	175 ST	Solder pin length (l): 4.2 mm, tinned, black, Tape

SHL-SMT 5.00/03GR - right connection side

for right 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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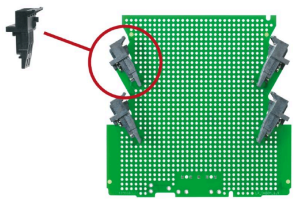
Accessories

General ordering data

Type	SHL-SMT 5.00/03GR 1.5BX	Version
Order No.	1063140000	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248814824	side, THT/THR solder connection, 5.00 mm, Number of poles: 3, 90°,
Qty.	120 ST	Solder pin length (l): 1.5 mm, tinned, black, Box
Type	SHL-SMT 5.00/03GR 1.5RL	Version
Order No.	1063170000	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248814848	side, THT/THR solder connection, 5.00 mm, Number of poles: 3, 90°,
Qty.	175 ST	Solder pin length (l): 1.5 mm, tinned, black, Tape
Type	SHL-SMT 5.00/03GR 4.2BX	Version
Order No.	1069560000	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248825127	side, THT/THR solder connection, 5.00 mm, Number of poles: 3, 90°,
Qty.	120 ST	Solder pin length (l): 4.2 mm, tinned, black, Box
Type	SHL-SMT 5.00/03GR 4.2RL	Version
Order No.	1069590000	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248824670	side, THT/THR solder connection, 5.00 mm, Number of poles: 3, 90°,
Qty.	175 ST	Solder pin length (l): 4.2 mm, tinned, black, Tape
Type	SHL-SMT 5.00/03GR 5.9BX	Version
Order No.	1069690000	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248825219	side, THT/THR solder connection, 5.00 mm, Number of poles: 3, 90°,
Qty.	120 ST	Solder pin length (l): 5.9 mm, tinned, black, Box
Type	SHL-SMT 5.00/03GR 5.9RL	Version
Order No.	1069730000	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248825240	side, THT/THR solder connection, 5.00 mm, Number of poles: 3, 90°,
Qty.	175 ST	Solder pin length (l): 5.9 mm, tinned, black, Tape

SHL-SMT 5.00/03GL - 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 5.00/03GL 5.9BX	Version
Order No.	1069760000	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248825196	side, THT/THR solder connection, 5.00 mm, Number of poles: 3, 90°,
Qty.	120 ST	Solder pin length (l): 5.9 mm, tinned, black, Box
Type	SHL-SMT 5.00/03GL 5.9RL	Version
Order No.	1069790000	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248825141	side, THT/THR solder connection, 5.00 mm, Number of poles: 3, 90°,
Qty.	175 ST	Solder pin length (l): 5.9 mm, tinned, black, Tape