Data sheet

CH20M12 SET 2/3 BK/OR

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

www.weidmueller.com

Scalability, individual design and cost efficiency
The CH20M12 modular electronics housing offers a first-class solution for compact electronics applications that place the highest demands on flexibility, safety and functionality. With a width of just 12 mm, it enables PCB integration and combines maximum performance with minimum space requirements.
Automated THT and THR soldering processes, coding options and CAD data ensure efficient production. Various connection technologies, including screw and tension clamp connections, enable application-specific design. The sophisticated synergy of design, connection technology and functionality ensures a safe, user-friendly and market-driven solution.
As a premium housing, the modular CH20M12 housing offers a durable and robust design.
Perfect for anyone who values quality, safety and a scalable housing concept.

General ordering data

Version	Electronics housing sample, OMNIMATE Housing - series CH20M black, Sample kit for developers, consisting of individual parts incl. female plug, Complete enclosure, Connection technology, Width: 12.5 mm
Order No.	1519270000
Type	CH20M12 SET 2/3 BK/OR
GTIN (EAN)	4050118326888
Qty.	1 items

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Technical data

Approvals

ROHS	Conform

Dimensions and weights

Depth	113.6 mm	Depth (inches)	4.4724 inch
Height	117.2 mm	Height (inches)	4.6142 inch
Width	12.5 mm	Width (inches)	0.4921 inch
Length	0 mm	Net weight	92 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

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

Material data

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

General data

Colour	black	Protection degree	IP20 in installed state
Mounting rail	TS 35	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 ventilation openings	1
Number of poles	2	Cross-connection	No
Type of contact to PCB	Solder connection, direct	Type of connection	pluggable

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Housing properties

Flip cover mountable	Yes	Marker integrateable	Yes
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	2		

Connectable coducteurs

Wire connection method	Clamping yoke connection	Stripping length	8 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	Flexible, min. H05(07) V-K	0.2 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		

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	27-19-05-01	ECLASS 14.0	27-19-01-01
ECLASS 15.0	27-19-01-01		

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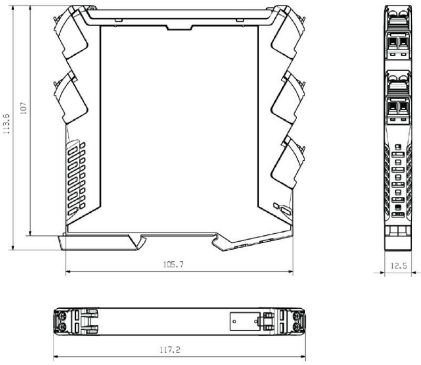
Drawings



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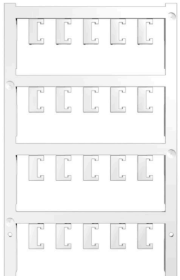
Accessories

Blank



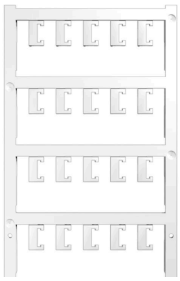
ESG is the tried-and-tested marker in MultiCard format for use on many well-known electrical devices. The result is high-quality device marking with a high-contrast appearance.
Various types are available for devices from manufacturers like Siemens, ABB, Beckhoff etc.
Advantages at a glance:
- Tags for 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.	1082490000	ESG, Device markers x 11 mm, PA 66, Colour: white, pluggable
GTIN (EAN)	4032248845330	
Qty.	200 ST	

Custom printing



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General ordering data

Type	ESG 6.6/11 BHZ 5.00 SDR	Version
Order No.	1346330000	ESG, Device markers x 11 mm, PA 66, Colour: To customer
GTIN (EAN)	4050118151206	specification, pluggable
Qty.	40 ST	
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	

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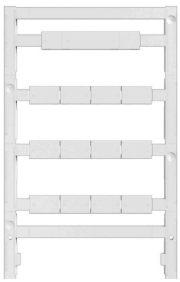
Accessories

Blank



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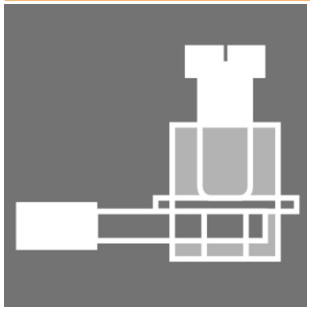
General ordering data

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	

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 5.00/02/90LH BK/BK	Version
Order No.	1069330000	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 2,
GTIN (EAN)	4032248824939	90°, Clamping yoke connection, cod. 02, Box
Qty.	150 ST	
Type	BHZ 5.00/02/90LH BK/BL	Version
Order No.	1069360000	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 2,
GTIN (EAN)	4032248824625	90°, Clamping yoke connection, cod. 02, Box
Qty.	150 ST	
Type	BHZ 5.00/02/90LH BK/OR	Version
Order No.	1063260000	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 2,
GTIN (EAN)	4032248814923	90°, Clamping yoke connection, cod. 02, Box
Qty.	150 ST	

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Accessories

Female plugs - PUSH IN spring connection

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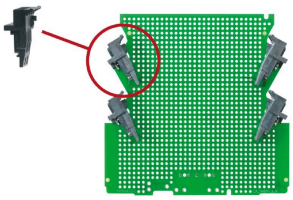
General ordering data

Type	BHF 5.00/02/180LH BK/BK	Version
Order No.	1497740000	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 2,
GTIN (EAN)	4050118306835	180°, PUSH IN with actuator, Box
Qty.	150 ST	
Type	BHF 5.00/02/180LH BK/BL	Version
Order No.	1989220000	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 2,
GTIN (EAN)	4050118373721	180°, PUSH IN with actuator, Box
Qty.	150 ST	
Type	BHF 5.00/02/180LH BK/OR	Version
Order No.	1988380000	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 2,
GTIN (EAN)	4050118534955	180°, PUSH IN with actuator, Box
Qty.	150 ST	

SHL-SMT 5.00/02GL - 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 5.00/02GL 5.9BX	Version
Order No.	1069750000	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248825189	side, THT/THR solder connection, 5.00 mm, Number of poles: 2, 90°,
Qty.	150 ST	Solder pin length (l): 3.2 mm, tinned, black, Box
Type	SHL-SMT 5.00/02GL 5.9RL	Version
Order No.	1069780000	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248825233	side, THT/THR solder connection, 5.00 mm, Number of poles: 2, 90°,
Qty.	260 ST	Solder pin length (l): 3.2 mm, tinned, black, Tape

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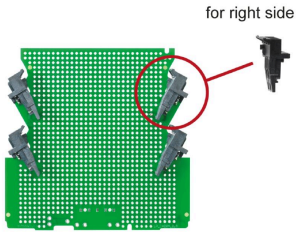
SHL-SMT 5.00/02GR - right connection side

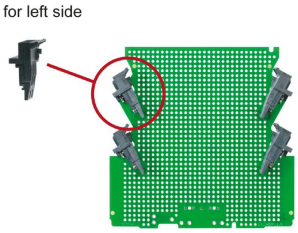


Male connectors with solder pin length optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

General ordering data

Type	SHL-SMT 5.00/02GR 5.9BX	Version
Order No.	1069680000	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248825257	side, THT/THR solder connection, 5.00 mm, Number of poles: 2, 90°,
Qty.	150 ST	Solder pin length (l): 3.2 mm, tinned, black, Box
Type	SHL-SMT 5.00/02GR 5.9RL	Version
Order No.	1069720000	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248825134	side, THT/THR solder connection, 5.00 mm, Number of poles: 2, 90°,
Qty.	260 ST	Solder pin length (l): 3.2 mm, tinned, black, Tape

SHL-SMT 5.00/02GL - left 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 5.00/02GL 4.2BX	Version
Order No.	1069620000	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248825158	side, THT/THR solder connection, 5.00 mm, Number of poles: 2, 90°,
Qty.	150 ST	Solder pin length (l): 1.5 mm, tinned, black, Box
Type	SHL-SMT 5.00/02GL 4.2RL	Version
Order No.	1069650000	PCB plug-in connector, Connection element, left, male header, open
GTIN (EAN)	4032248825103	side, THT/THR solder connection, 5.00 mm, Number of poles: 2, 90°,
Qty.	260 ST	Solder pin length (l): 1.5 mm, tinned, black, Tape

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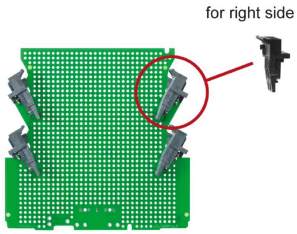
SHL-SMT 5.00/02GR - right connection side



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General ordering data

Type	SHL-SMT 5.00/02GR 4.2BX	Version
Order No.	1069550000	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248825110	side, THT/THR solder connection, 5.00 mm, Number of poles: 2, 90°,
Qty.	150 ST	Solder pin length (l): 1.5 mm, tinned, black, Box
Type	SHL-SMT 5.00/02GR 4.2RL	Version
Order No.	1069580000	PCB plug-in connector, Connection element, right, male header, open
GTIN (EAN)	4032248824687	side, THT/THR solder connection, 5.00 mm, Number of poles: 2, 90°,
Qty.	260 ST	Solder pin length (l): 1.5 mm, tinned, black, Tape