

SAMPLE CH20M67 222/222 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

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: 67.5 mm |
| Order No. | 1275810000 |
| Type | SAMPLE CH20M67 222/222 PCB |
| GTIN (EAN) | 4050118065633 |
| 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 | 67.5 mm | Width (inches) | 2.6575 inch |
| Length | 0 mm | Net weight | 368.15 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 | PA 66 GF 30, Plastic | 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. | 3 |
| Number of ventilation openings | 1 | Number of poles | 72 |
| 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 | No | Marker integrateable | Yes |
| Cut out as preparation for functional portNo integrated | | Color of clip-on foot | orange |
| Cross-connection | No | Number of connection levels | 2 |
| Number of poles | 72 | | |

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 ² | Clamping range, max. | 2.5 mm ² |
| 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 ² | Solid, max. H05(07) V-U | 2.5 mm ² |
| Stranded, max. H07V-R | 2.5 mm ² | w. plastic collar ferrule, DIN 46228 pt 4, 0.25 mm ² min. | |
| w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm ² max. | | w. wire end ferrule, DIN 46228 pt 1, 0.25 mm ² min. | |
| w. wire end ferrule, DIN 46228 pt 1, 2.5 mm ² max. | | Max. clamping range | 2.5 mm ² |

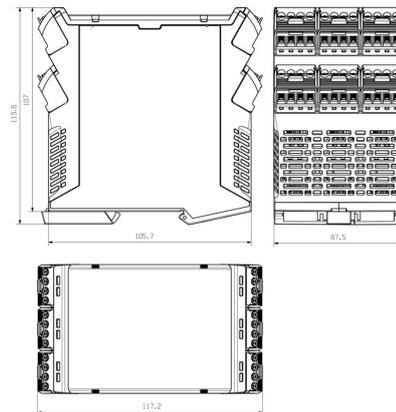
Important note

| | |
|---------------------|---|
| 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 8.0 | EC001031 | ETIM 9.0 | EC001031 |
| ETIM 10.0 | EC001031 | ECLASS 14.0 | 27-19-03-01 |
| ECLASS 15.0 | 27-19-03-01 | | |

Dimensioned drawing



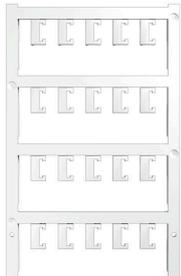
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Accessories

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:

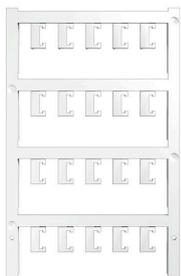
- Tags for universal usage, self-adhesive or clip-on tags, depending on type
- For aligned equipment, e.g. circuit breakers, we supply ESG markers for clipping onto tag rails
- Individual laser-quality printing according to specifications

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 6.6/20 BHZ 5.00 SDR | Version |
| Order No. | 1221520000 | ESG, Device markers x 20 mm, PA 66, Colour: To customer specification, pluggable |
| GTIN (EAN) | 4050118005066 | |
| Qty. | 40 ST | |

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.

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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

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General ordering data

| | | |
|------------|----------------------------|--|
| Type | ESG 6.6/20 BHZ 5.00/04 | Version |
| Order No. | 1082540000 | ESG, Device markers x 20 mm, PA 66, Colour: white, pluggable |
| GTIN (EAN) | 4032248845439 | |
| Qty. | 200 ST | |

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Accessories

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



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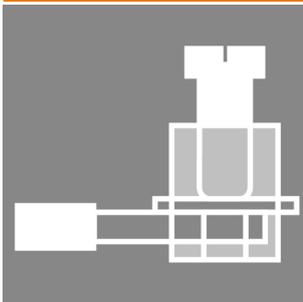
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General ordering data

| | | |
|------------|----------------------------|--|
| Type | CH20M AD SHL 5.00/04 AG... | Version |
| Order No. | 1472830000 | 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. | 1221310000 | Hood, OMNIMATE Housing - series CH20M black, Side element |
| GTIN (EAN) | 4050118004830 | 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.

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Accessories

General ordering data

| | | |
|------------|----------------------------|--|
| Type | BHZ 5.00/04/90LH BK/BK | Version |
| Order No. | 1069350000 | 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. | 1069380000 | 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. | 1421750000 | 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. | 1063280000 | 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 | |
| Type | BHZ 5.00/04/90LH GGY/BL | Version |
| Order No. | 1372580000 | 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. | 1372520000 | 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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General ordering data

| | | |
|------------|----------------------------|--|
| Type | BHF 5.00/04/180LH BK/BK | Version |
| Order No. | 1497500000 | 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. | 1989090000 | 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 | |

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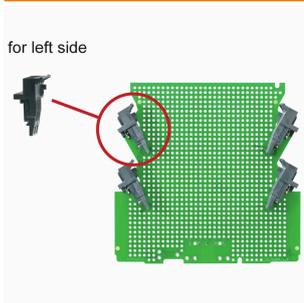
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Accessories

| | | |
|------------|----------------------------|--|
| Type | BHF 5.00/04/180LH BK/OR | Version |
| Order No. | 1989190000 | 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 | |
| Type | BHF 5.00/04/180LH BK/RD | Version |
| Order No. | 2555620000 | PCB plug-in connector, female plug, 5.00 mm, Number of poles: 4, |
| GTIN (EAN) | 4050118565683 | 180°, PUSH IN with actuator, Box |
| Qty. | 78 ST | |

SHL-SMT 5.00/04GL - left connection side

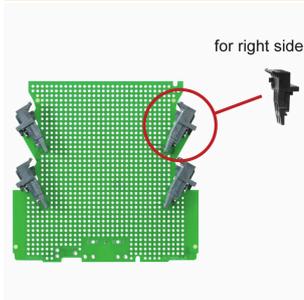


High-temperature-resistant, straight, open pin header. Packed in box or tape. On tape and with 1.5 mm solder pin, optimised for automatic assembly. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded. HC = High Current.

General ordering data

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

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.

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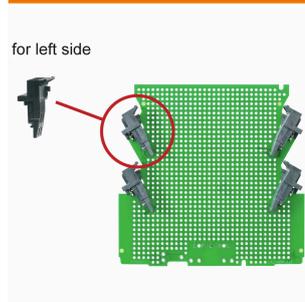
Accessories

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General ordering data

| | | |
|------------|----------------------------|---|
| Type | SHL-SMT 5.00/04GR 1.5BX | Version |
| Order No. | 1063150000 | PCB plug-in connector, Connection element, right, male header, open side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°, Solder pin length (l): 1.5 mm, tinned, black, Box |
| GTIN (EAN) | 4032248876471 | |
| Qty. | 108 ST | |
| Type | SHL-SMT 5.00/04GR 1.5RL | Version |
| Order No. | 1063180000 | PCB plug-in connector, Connection element, right, male header, open side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°, Solder pin length (l): 1.5 mm, tinned, black, Tape |
| GTIN (EAN) | 4032248814855 | |
| Qty. | 130 ST | |
| Type | SHL-SMT 5.00/04GR 4.2BX | Version |
| Order No. | 1069570000 | PCB plug-in connector, Connection element, right, male header, open side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°, Solder pin length (l): 4.2 mm, tinned, black, Box |
| GTIN (EAN) | 4032248825165 | |
| Qty. | 108 ST | |
| Type | SHL-SMT 5.00/04GR 4.2RL | Version |
| Order No. | 1069610000 | PCB plug-in connector, Connection element, right, male header, open side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°, Solder pin length (l): 4.2 mm, tinned, black, Tape |
| GTIN (EAN) | 4032248825059 | |
| Qty. | 130 ST | |
| Type | SHL-SMT 5.00/04GR 5.9BX | Version |
| Order No. | 1069710000 | PCB plug-in connector, Connection element, right, male header, open side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°, Solder pin length (l): 5.9 mm, tinned, black, Box |
| GTIN (EAN) | 4032248825073 | |
| Qty. | 108 ST | |
| Type | SHL-SMT 5.00/04GR 5.9RL | Version |
| Order No. | 1069740000 | PCB plug-in connector, Connection element, right, male header, open side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 90°, Solder pin length (l): 5.9 mm, tinned, black, Tape |
| GTIN (EAN) | 4032248825066 | |
| Qty. | 130 ST | |

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