

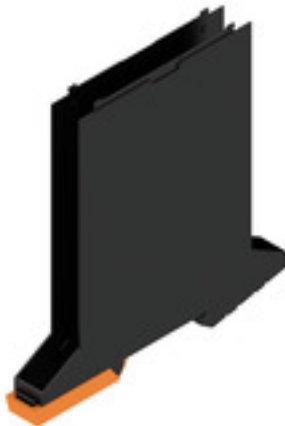
CH20M12 B FE BK/OR 2010**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image**Superior efficiency, flexibility and design - the "standard tailor-made fit"**

When selecting a housing design, flexibility is a key factor. Other important criteria are: scalability, customized design, innovative functionality and cost efficiency. You need a choice which offers the maximum performance with the minimum overhead.

The CH20M12 modular electronics housing is the "small" option amongst the "large" housing solutions for compact electronics applications.

The entire system is characterized by excellence: outstanding scalability and flexibility, a high security level, innovative application functionality and a variety of practical details.

- **Quicker installation** with features such as "Wire ready" the universal multi-tool screw head
- **User-friendly operations:** with clear and permanent labelling and extra marking possibilities, integrated release clip or transparent cover
- **Maximum interference immunity** with EMC-compliant construction featuring deeply overlapping module joint edges made from high-performance plastic
- **High operational reliability** with the unique Auto-Set coding system and featuring double-sided touch protection on the pin header and socket blocks

CH20M - a compact name for the most flexible system available on the market. It doesn't just stand for "Component Housing IP20 Modular".

CH20M also stands for efficiency and innovation throughout design, production and use.

General ordering data

| | |
|------------|---|
| Version | Modular housing, OMNIMATE Housing - series CH20M black, Base element, Recess in the detent foot area for FE contact, Width: 12.5 mm |
| Order No. | 1176990000 |
| Type | CH20M12 B FE BK/OR 2010 |
| GTIN (EAN) | 4032248970476 |
| Qty. | 14 pc(s). |

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Technical data

Dimensions and weights

| | | | |
|------------|----------|-----------------|------------|
| Depth | 107.4 mm | Depth (inches) | 4.228 inch |
| Height | 109.2 mm | Height (inches) | 4.299 inch |
| Width | 12.5 mm | Width (inches) | 0.492 inch |
| Net weight | 7.786 g | | |

Temperatures

| | | | |
|-----------------------------|-----------------|----------|---|
| Operating temperature range | -40 °C...120 °C | Humidity | 5 - 93% rel. humidity, Tu = 40°C, no condensation |
|-----------------------------|-----------------|----------|---|

Material data

| | | | |
|----------------------------------|-----------|---------------------------|-------------|
| Comparative Tracking Index (CTI) | 600 ≤ CTI | Insulating material | PA 66 GF 30 |
| Insulating material group | I | UL 94 flammability rating | V-0 |

General data

| | | | |
|----------------------|-------|------------------------|-------------------------|
| Colour | black | Colour chart (similar) | RAL 9011 |
| Encapsulation option | No | Protection degree | IP20 in installed state |
| Rail | TS 35 | | |

Assembly properties

| | | | |
|---|--------|-----------------------------|--------------|
| Number of slots for female connectors of the mounted assembly, max. | 6 | Number of PCBs, max. | 1 |
| Number of connection levels, max. | 3 | Number of poles, max. | 12 |
| Height of components on the PCB, max. | 6.1 mm | Type of assembly of the PCB | double-sided |

Mechanical tests

| | | | |
|-----------------------|---|--|--|
| According to Standard | DIN EN 61373:1999 (shock and vibration) | | |
| Test conditions | five housings installed in a row, 100g additional weight on the PCB | | |
| Proved axles | X, Y, Z | | |
| Shock test | General test advices | All mechanical tests were tested on exemplary setup, or in view of depending regulation. The specified results do not replace approval relevant tests. They are just orientation values. | |
| | Test category | 1 | |
| | Number of shocks per axle | 3 in positive and negative direction | |
| | Shock duration | 30 ms | |
| | Acceleration horizontal | 30 m/s ² | |
| | Acceleration vertical | 30 m/s ² | |
| | Acceleration longitudinal | 50 m/s ² | |
| Vibration test | Test category | 1B | |
| | Test duration | 5 hours per axle | |
| | Effective acceleration | 7.9 m/s ² | |

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Thermal tests

| | | |
|---------------|-------------------------|--|
| Thermal tests | General test advices | All thermal tests were tested on exemplary set-up, or in view of depending regulation. The specified results do not replace approval relevant tests. They are just orientation values. |
| | Test conditions | seven housings installed in a row - no spacing |
| | Test axles | horizontal |
| | Ambient temperature | 80 °C |
| | Power dissipation, max. | 0.8 W |
| | Ambient temperature | 60 °C |
| | Power dissipation, max. | 1.35 W |
| | Ambient temperature | 40 °C |
| | Power dissipation, max. | 1.9 W |
| | Ambient temperature | 20 °C |
| | Power dissipation, max. | 2.65 W |

Component properties

| | | | |
|-----------------------------------|--------|---|-----------------------------------|
| Color of clip-on foot | orange | Cut out in clip-on foot area as preparation for | FE contact, contact not included! |
| Number of connection levels, max. | 3 | | |

Design - IN requirements

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

Individualization options

| | | | |
|--------------------------------------|------------------|---------------------------------|-------------------------------|
| Customer specific labelling possible | Yes | Customer specific order process | See guideline under downloads |
| Processing possibilities | Laser processing | | |

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 8.0 | EC001031 | ETIM 9.0 | EC001031 |
| ECLASS 11.0 | 27-18-27-92 | ECLASS 12.0 | 27-18-27-92 |
| ECLASS 13.0 | 27-19-06-01 | | |

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. |
|---------------------|---|

Approvals

| | |
|------|---------|
| ROHS | Conform |
|------|---------|

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Technical data

Downloads

| | |
|--------------------|---|
| Engineering Data | CAD data – STEP |
| | CAD data – PCB_position_50880_LP-POSITION_12MM |
| | CAD data – Pin_header_pin_length_CH20M_A_OV_PCB-SHL_70315 |
| User Documentation | Guideline customerspecific housings |
| | Guideline kundenspezifische Gehäuse |
| Catalogues | Catalogues in PDF-format |
| Brochures | FL ANALO.SIGN.CONV. EN |
| | MB DEVICE MANUF. EN |
| | FL MACHINE SAFETY EN |
| | FL 72H SAMPLE SER EN |
| | PO OMNIMATE EN |
| | PO OMNIMATE EN |

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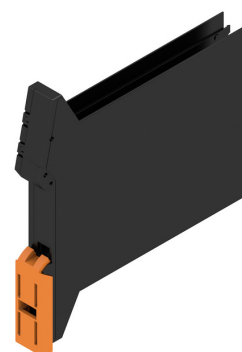
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Drawings

Product image

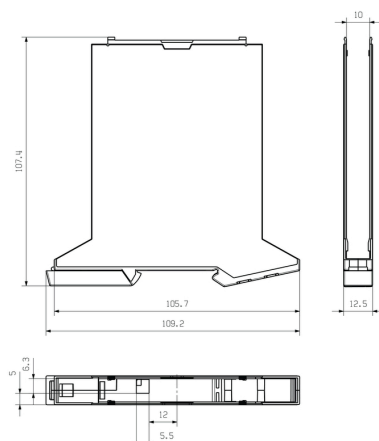


Product benefits



Base element including FE cut-out

Dimensioned drawing



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Accessories

FE Contact - CH20M



FE contact

Functional reliability - either fully integrated or simply mounted

The optional "CH20M FE" connection optimally protects your system with a mounting rail contact for the functional earth.

- The functional earth contact pre-assembled in the 6 mm housing enables permanent and reliable connection of electronic shields for the electronic circuit to the mounting rail (e.g. "CH20M6 BP 4P-4P FE BK", 1164650000)
- A functional earth contact, which can be processed fully automatically using the reflow method together with the male connectors and an optional bus contact, is available for housings from 12.5 to 67.5 mm. The position of the PCB in the housing specifies the pin length of 1.5 mm / 3.2 mm

General ordering data

| Type | CH20M FE 12-67 1.5SN RL | Version | Product data | Packaging |
|------------|----------------------------|---|--------------|-----------|
| Order No. | 1189370000 | Electronics housings, Accessories, THT/THR solder connection, 5.00 | UL: | Tape |
| GTIN (EAN) | 4032248972715 | mm, Number of poles: 1, Solder pin length (l): 1.5 mm, tinned, Silver | | |
| Qty. | 750 pc(s). | grey, Tape | | |
| Type | CH20M FE 12-67 3.2SN RL | Version | Product data | Packaging |
| Order No. | 1264240000 | Electronics housings, Accessories, THT/THR solder connection, 5.00 | UL: | Tape |
| GTIN (EAN) | 4050118073997 | mm, Number of poles: 1, Solder pin length (l): 3.2 mm, tinned, Silver | | |
| Qty. | 750 pc(s). | grey, Tape | | |