

**CH20M45 B FE BK/OR****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**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, customised design, innovative functionality and cost efficiency. You need a choice which offers the maximum performance with the minimum overhead.

The CH20M45 modular electronics housings come in an integrated extra-large assortment. It is suited for those electronics applications that require more space, such as compact controllers and power supplies.

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, Width: 45 mm |
| Order No.  | <a href="#">1177030000</a>                                           |
| Type       | CH20M45 B FE BK/OR                                                   |
| GTIN (EAN) | 4032248970377                                                        |
| Qty.       | 6 pc(s).                                                             |

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## Technical data

## Dimensions and weights

|                |            |                 |            |
|----------------|------------|-----------------|------------|
| Height         | 109.3 mm   | Height (inches) | 4.303 inch |
| Length         | 107.4 mm   | Length (inches) | 4.228 inch |
| Net weight     | 49.83 g    | Width           | 45 mm      |
| Width (inches) | 1.772 inch |                 |            |

## Temperatures

|                             |                                                   |                          |                |
|-----------------------------|---------------------------------------------------|--------------------------|----------------|
| Operating temperature range | -40 °C...120 °C                                   | Installation temperature | -25 °C...85 °C |
| Humidity                    | 5 - 93% rel. humidity, Tu = 40°C, no condensation |                          |                |

## Component Properties

|                       |        |                                                 |                                   |
|-----------------------|--------|-------------------------------------------------|-----------------------------------|
| Color of clip-on foot | orange | Cut out in clip-on foot area as preparation for | FE contact, contact not included! |
|-----------------------|--------|-------------------------------------------------|-----------------------------------|

## Mechanical tests

|                       |                                                                                   |                                      |  |
|-----------------------|-----------------------------------------------------------------------------------|--------------------------------------|--|
| According to Standard | DIN EN 61373:1999 (shock and vibration)                                           |                                      |  |
| Test conditions       | five housings installed in a row, 200g additional weight per PCB, two PCB mounted |                                      |  |
| Proved axles          | X, Y, Z                                                                           |                                      |  |
| Shock test            | Test category                                                                     | 1                                    |  |
|                       | Number of shocks per axle                                                         | 3 in positive and negative direction |  |
|                       | Shock duration                                                                    | 30 ms                                |  |
|                       | Acceleration horizontal                                                           | 30 m/s <sup>2</sup>                  |  |
|                       | Acceleration vertical                                                             | 30 m/s <sup>2</sup>                  |  |
|                       | Acceleration longitudinal                                                         | 50 m/s <sup>2</sup>                  |  |
| Vibration test        | Test duration                                                                     | 5 hours per axle                     |  |
|                       | Effective acceleration                                                            | 7.9 m/s <sup>2</sup>                 |  |
|                       | Test category                                                                     | 1B                                   |  |

## Thermal tests

|               |                         |                                                                                                     |  |
|---------------|-------------------------|-----------------------------------------------------------------------------------------------------|--|
| Thermal tests | Test conditions         | seven housings installed in a row - no spacing, two connection level - eight connectors per housing |  |
|               | Test axles              | horizontal, More on request                                                                         |  |
|               | Ambient temperature     | 55 °C                                                                                               |  |
|               | Power dissipation, max. | 4.2 W                                                                                               |  |
|               | Ambient temperature     | 50 °C                                                                                               |  |
|               | Power dissipation, max. | 4.8 W                                                                                               |  |
|               | Ambient temperature     | 40 °C                                                                                               |  |
|               | Power dissipation, max. | 5.9 W                                                                                               |  |
|               | Ambient temperature     | 20 °C                                                                                               |  |
|               | Power dissipation, max. | 8.25 W                                                                                              |  |

## Assembly properties

|                            |    |                             |        |
|----------------------------|----|-----------------------------|--------|
| Number of PCB boards, max. | 2  | Number of connection levels | 3 max. |
| Number of poles, max.      | 48 |                             |        |

## Design - IN requirements

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

Creation date March 23, 2021 7:45:00 AM CET

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**Technical data****Individualization options**

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

**General data**

|                      |       |                        |          |
|----------------------|-------|------------------------|----------|
| Colour               | black | Colour chart (similar) | RAL 9011 |
| Encapsulation option | No    |                        |          |

**Material data**

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

**Classifications**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC001031    | ETIM 7.0    | EC001031    |
| ECLASS 9.0  | 27-18-27-90 | ECLASS 10.0 | 27-18-27-92 |
| ECLASS 11.0 | 27-18-27-92 |             |             |

**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 |
|------|---------|

**Downloads**

|                    |                                                                                                                                               |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Engineering Data   | <a href="#">STEP</a><br><a href="#">PCB_position_50882_LP-POSITION_45MM</a><br><a href="#">Pin_header_pin_length_CH20M_A_OV_PCB-SHL_70315</a> |
| Engineering Data   | <a href="#">EPLAN</a>                                                                                                                         |
| User Documentation | <a href="#">Guideline customerspecific housings</a><br><a href="#">Guideline kundenspezifische Gehäuse</a>                                    |

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## Drawings

### Product image

### Product benefits

Base element including FE cut-out