

## CH20M45 B BUS BK/OR 2010

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

www.weidmueller.com

### Product image



The basic element of the modular CH20M housing offers a number of advantages that make it an excellent choice for your projects. With special cut-outs for bus and FE contacts, it is particularly flexible and adaptable.

Another plus point is the option of laser printing on the housing, which offers you high precision and individual design options. A wide range of colors is also available so that you can design the housing entirely according to your wishes.

The CH20M housing is also suitable for standard mounting rails, which makes installation and integration into existing systems easier.

### General ordering data

|            |  |
|------------|--|
| Version    | Modular housing, OMNIMATE Housing - series CH20M black, Base element, Recess in detent foot area for BUS contact, Width: 45 mm |
| Order No.  | <a href="#">1177020000</a>   |
| Type       | CH20M45 B BUS BK/OR 2010   |
| GTIN (EAN) | 4032248970483  |
| Qty.       | 6 items  |

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## Technical data

## Approvals

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

## Dimensions and weights

|            |          |                 |             |
|------------|----------|-----------------|-------------|
| Depth      | 108 mm   | Depth (inches)  | 4.252 inch  |
| Height     | 109.3 mm | Height (inches) | 4.3031 inch |
| Width      | 45 mm    | Width (inches)  | 1.7716 inch |
| Net weight | 49.5 g   |                 |             |

## Temperatures

|                     |   |                             |              |
|---------------------|---|-----------------------------|--------------|
| Ambient temperature | -25 °C...85 °C                                    | Operating temperature range | -40...120 °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%       |

## Material data

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

## General data

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

## Assembly properties

|  |              |  |         |
|--|--------------|--|---------|
| Number of slots for female connectors of 12 the mounted assembly, max. |              | Number of PCBs, max.                                   | 2       |
| Number of connection levels, max.                                      | 3            | Number of poles, max.                                  | 48      |
| Height of components on the PCB (usage of 1 PCB), max.                 | 38.6 mm      | Height of components on the PCB (usage of 2 PCB), max. | 34.7 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, 200g additional weight per PCB, two PCB mounted |  |
| 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   | 30.00 m/s <sup>2</sup>   |
|                       | Acceleration vertical   | 30.00 m/s <sup>2</sup>   |
|                       | Acceleration longitudinal   | 50.00 m/s <sup>2</sup>   |

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|                |                        |                      |
|----------------|------------------------|----------------------|
| Vibration test | Test category          | 1B                   |
|                | Test duration          | 5 hours per axle     |
|                | Effective acceleration | 7.9 m/s <sup>2</sup> |

### Thermal tests

|                         |                         |   |  |
|-------------------------|-------------------------|---|--|
| Thermal tests           | General test advices    | All thermal 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 conditions         | seven housings installed in a row - no spacing  |  |
|                         | Test axles              | horizontal  |  |
|                         | 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                  |   |  |

### Component properties

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

### Design - IN requirements

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

### Individualization options

|                                      |                 |                                 |                               |
|--------------------------------------|-----------------|---------------------------------|-------------------------------|
| Customer specific labelling possible | Yes             | Customer specific order process | See guideline under downloads |
| Alternative colours                  | More on request | Processing possibilities        | Laser processing              |

### 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 | 27-19-06-01 |
| ECLASS 15.0 | 27-19-06-01 |             |             |

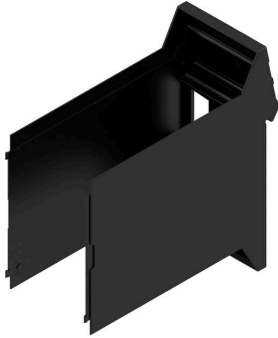
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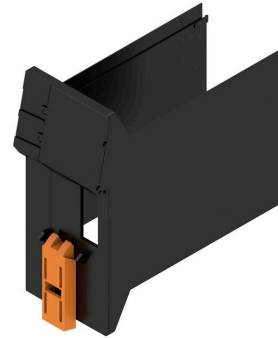
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**Drawings**

**Product image**

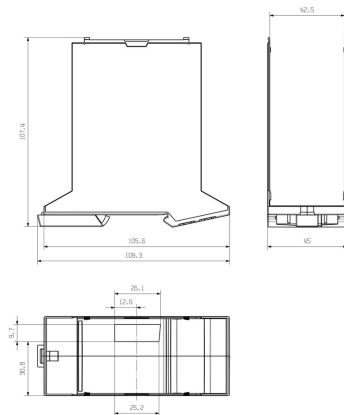


**Product benefits**



Base element including BUS cut-out

**Dimensioned drawing**



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## Accessories

### Bus contact block - Solder flange



The integrated rail bus for the modular electronics housing system

When supplying, connecting or distributing within modular applications, the rail bus can replace the tedious individual wiring process with a flexible and uninterrupted system-wide solution.

The system bus is securely integrated within the 35-mm standard mounting rail. The SMD-bus contact block can be reflow-soldered so that it can be completely automatically processed during the component assembly. The resistant, gold-plated contact surfaces ensure a permanent and reliable contact for all housing widths.

- **Unlimited scalability** The integrated connection solution covers all system widths: from the 6-mm slice to the 67-mm large-area housing.
- **Easy to service during installation** It's easy to replace a module, even in existing modules groups – without any influence on the neighbouring modules.
- **Universal integration** The uninterrupted system bus is securely integrated within the 35-mm standard mounting rail.
- **Maximum availability** Five fully-galvanized and partially gold-plated twin-arched contacts are used to establish a permanent contact to the rail bus. THR solder flanges ensure that the connection to the circuit board is stable.

### General ordering data

|            |                            |   |
|------------|----------------------------|---|
| Type       | SR-SMD 4.50/05/90LF 1.5... | Version   |
| Order No.  | <a href="#">1155900000</a> | PCB plug-in connector, Bus-contact block for CH20M12-67, Solder     |
| GTIN (EAN) | 4032248942381              | flange, THT/THR solder connection, Number of poles: 5, 180°, Solder |
| Qty.       | 300 ST                     | pin length (l): 1.5 mm, Gold-plated, black                          |
| Type       | SR-SMD 4.50/05/90LF 1.5... | Version   |
| Order No.  | <a href="#">1155890000</a> | PCB plug-in connector, Bus-contact block for CH20M12-67, Solder     |
| GTIN (EAN) | 4032248942527              | flange, THT/THR solder connection, Number of poles: 5, 180°, Solder |
| Qty.       | 78 ST                      | pin length (l): 1.5 mm, Gold-plated, black                          |

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## Bus contact block - Middle solder flange



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- **Unlimited scalability** The integrated connection solution covers all system widths: from the 6-mm slice to the 67-mm large-area housing.
- **Easy to service during installation** It's easy to replace a module, even in existing modules groups – without any influence on the neighbouring modules.
- **Universal integration** The uninterrupted system bus is securely integrated within the 35-mm standard mounting rail.
- **Maximum availability** Five fully-galvanized and partially gold-plated twin-arched contacts are used to establish a permanent contact to the rail bus. THR solder flanges ensure that the connection to the circuit board is stable.

## General ordering data

|            |                            |   |
|------------|----------------------------|---|
| Type       | SR-SMD 4.50/05/90LFM 3...  | Version   |
| Order No.  | <a href="#">1155880000</a> | PCB plug-in connector, Bus-contact block for CH20M12-67, Middle     |
| GTIN (EAN) | 4032248942305              | solder flange, THT/THR solder connection, Number of poles: 5, 180°, |
| Qty.       | 300 ST                     | Solder pin length (l): 3.2 mm, Gold-plated, black                   |
| Type       | SR-SMD 4.50/05/90LFM 3...  | Version   |
| Order No.  | <a href="#">1155870000</a> | PCB plug-in connector, Bus-contact block for CH20M12-67, Middle     |
| GTIN (EAN) | 4032248942510              | solder flange, THT/THR solder connection, Number of poles: 5, 180°, |
| Qty.       | 78 ST                      | Solder pin length (l): 3.2 mm, Gold-plated, black                   |