

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

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://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 detent foot area for BUS contact, Width: 12.5 mm
Order No.	<a href="#">1176980000</a>
Type	CH20M12 B BUS BK/OR 2010
GTIN (EAN)	4032248970469
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	34.57 g		

**Temperatures**

Operating temperature range	-40 °C...120 °C	Humidity	5 - 93% rel. humidity, Tu = 40°C, no condensation
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**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 <sup>2</sup>	
	Acceleration vertical	30 m/s <sup>2</sup>	
	Acceleration longitudinal	50 m/s <sup>2</sup>	
Vibration test	Test category	1B	
	Effective acceleration	7.9 m/s <sup>2</sup>	
	Test duration	5 hours per axle	

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**Technical data****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	BUS-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.
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**Approvals**

ROHS	Conform
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## Technical data

### Downloads

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

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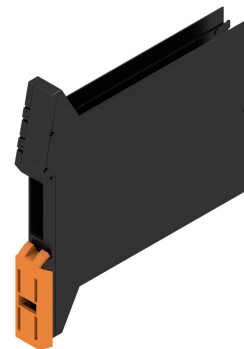
[www.weidmueller.com](http://www.weidmueller.com)

## Drawings

### Product image

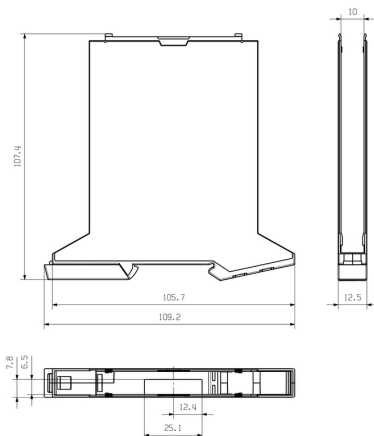


### Product benefits



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	Product data	Packaging
Order No.	<a href="#">1155900000</a>	PCB plug-in connector, Bus-contact block for CH20M12-67, Solder	IEC: 160 V	Tape
GTIN (EAN)	4032248942381	flange, THT/THR solder connection, Number of poles: 5, 180°, Solder	UL: 300 V / 5 A	
Qty.	300 pc(s).	pin length (l): 1.5 mm, Gold-plated, black		
Type	SR-SMD 4.50/05/90LF 1.5 ...	Version	Product data	Packaging
Order No.	<a href="#">1155890000</a>	PCB plug-in connector, Bus-contact block for CH20M12-67, Solder	UL: 300 V / 5 A	Box
GTIN (EAN)	4032248942527	flange, THT/THR solder connection, Number of poles: 5, 180°, Solder		
Qty.	78 pc(s).	pin length (l): 1.5 mm, Gold-plated, black		

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## Accessories

## Bus contact block - Middle solder flange



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### General ordering data

Type	SR-SMD 4.50/05/90LFM 3. ...	Version	Product data	Packaging
Order No.	<a href="#">1155880000</a>	PCB plug-in connector, Bus-contact block for CH20M12-67, Middle	IEC: 160 V	Tape
GTIN (EAN)	4032248942305	solder flange, THT/THR solder connection, Number of poles: 5, 180°	UL: 300 V / 5 A	
Qty.	300 pc(s).	Solder pin length (l): 3.2 mm, Gold-plated, black		
Type	SR-SMD 4.50/05/90LFM 3. ...	Version	Product data	Packaging
Order No.	<a href="#">1155870000</a>	PCB plug-in connector, Bus-contact block for CH20M12-67, Middle	UL: 300 V / 5 A	Box
GTIN (EAN)	4032248942510	solder flange, THT/THR solder connection, Number of poles: 5, 180°		
Qty.	78 pc(s).	Solder pin length (l): 3.2 mm, Gold-plated, black		