

CH20M22 B BUS FE BK/BK 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, Recess in the detent foot area for FE contact, Width: 22.5 mm
Order No.	1384030000
Type	CH20M22 B BUS FE BK/BK 2010
GTIN (EAN)	4050118271829
Qty.	10 pc(s).

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Technical data

Dimensions and weights

Depth	108 mm	Depth (inches)	4.252 inch
Height	109.3 mm	Height (inches)	4.303 inch
Width	22.5 mm	Width (inches)	0.886 inch
Net weight	39.4 g		

Temperatures

Ambient temperature	-25 °C...85 °C	Operating temperature range	-40...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	Material	Plastic
Surface finish	untreated	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.	24
Height of components on the PCB, max.	16.1 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, 200g 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	
	Effective acceleration	7.9 m/s ²	
	Test duration	5 hours per axle	

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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	three housings installed in a row - no spacing
	Test axles	horizontal
	Ambient temperature	70 °C
	Power dissipation, max.	1.9 W
	Ambient temperature	60 °C
	Power dissipation, max.	2.35 W
	Ambient temperature	40 °C
	Power dissipation, max.	3.4 W
	Ambient temperature	20 °C
	Power dissipation, max.	4.5 W

Component properties

Color of clip-on foot	black	Cut out in clip-on foot area as preparation for	BUS-contact, 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

Alternative colours	More on request	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
ETIM 10.0	EC001031	ECLASS 11.0	27-18-27-92
ECLASS 12.0	27-18-27-92	ECLASS 13.0	27-19-06-01
ECLASS 14.0	27-19-06-01	ECLASS 15.0	27-19-06-01

Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption
REACH SVHC	No SVHC above 0.1 wt%

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	PCB Reference Layout
	CAD data – Pin_header_pin_length_CH20M_A_OV_PCB-SHL_70315
	CAD data – STEP
Technical Documentation	PCB_position_50881_LP-POSITION_22MM
User Documentation	Guideline customerspecific housings CH20M12-67
	Guideline kundenspezifische Gehäuse CH20M12-67
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

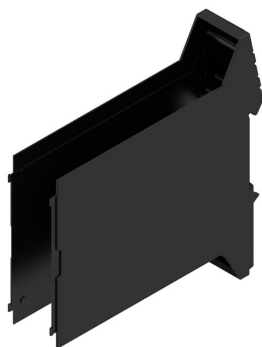
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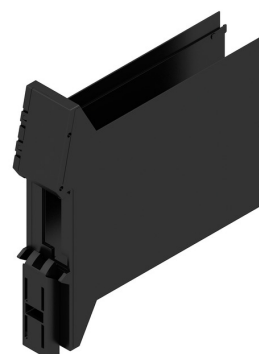
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Drawings

Product image

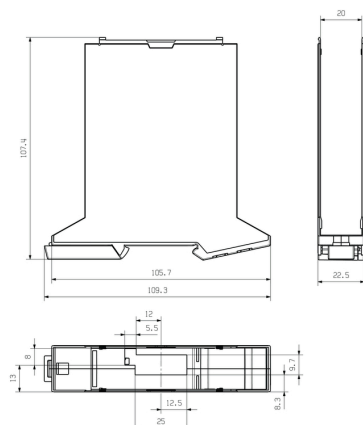


Product benefits



Base element including BUS and FE cut-out

Dimensioned drawing



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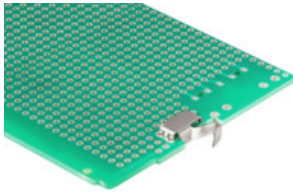
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Accessories

FE Contact - CH20M

**Functional safety - either fully integrated or simply mounted**

The optional "CH20M FE" connection provides optimum protection for your system with a mounting rail contact for functional earthing.

The pre-assembled functional earth contact in a 6 mm housing ensures a reliable connection of electronic shields to the mounting rail. A functional earth contact is available for housings from 12.5 to 67.5 mm, which can be processed using the reflow method.

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		

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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.	1155900000	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.	1155890000	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.	1155870000	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		
Type	SR-SMD 4.50/05/90LFM 3. ...	Version	Product data	Packaging
Order No.	1155880000	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		