

CH20M22 B BUS BK/OR

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

The CH20M22 modular electronics housing is the standard format from amongst the different housing widths. It has the optimal width for most typical 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 ESD-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: 22.5 mm
Order No.	1177000000
Type	CH20M22 B BUS BK/OR
GTIN (EAN)	4032248970360
Qty.	10 pc(s).

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Technical data

Dimensions and weights

Height	109.3 mm	Height (inches)	4.303 inch
Width	22.5 mm	Width (inches)	0.886 inch
Net weight	39 g		

Temperatures

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

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

Thermal tests

Thermal tests	Test conditions	three housings installed in a row - no spacing, three connection level - six connectors per housing	
	Test axles	horizontal, More on request	
	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	

Assembly properties

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		

Design - IN requirements

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

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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	Protection degree	IP20
Rail	TS 35		

Material data

Comparative Tracking Index (CTI)	600 ≤ CTI	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
ETIM 8.0	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.
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Approvals

ROHS	Conform
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Downloads

Engineering Data	STEP PCB_position_50881_LP-POSITION_22MM Pin_header_pin_length_CH20M_A_OV_PCB-SHL_70315
Engineering Data	EPLAN
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

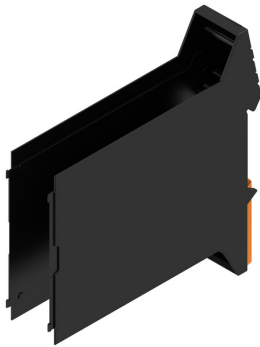
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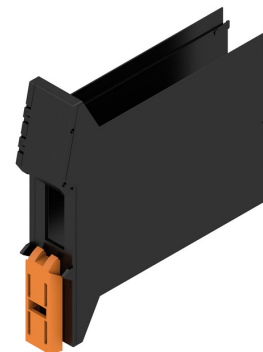
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Drawings

Product image

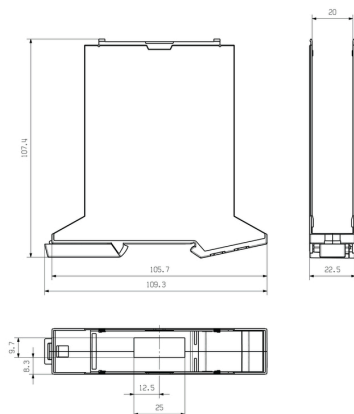


Product benefits



Base element including BUS cut-out

Dimensioned drawing



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Accessories

Bus contact block - Middle 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 4.50/05/90LFM 3. ...	Version	Product data	Packaging
Order No.	1155880000	PCB plug-in connector, Bus-contact block for CH20M12-67, Middle	UL:	Tape
GTIN (EAN)	4032248942305	solder flange, THT/THR solder connection, Number of poles: 5, 180°,		
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.	1155870000	PCB plug-in connector, Bus-contact block for CH20M12-67, Middle	UL:	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		

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Accessories

Bus contact block - Solder flange

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General ordering data

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:	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		
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	UL:	Tape
GTIN (EAN)	4032248942381	flange, THT/THR solder connection, Number of poles: 5, 180°, Solder		
Qty.	300 pc(s).	pin length (l): 1.5 mm, Gold-plated, black		

Mouser Electronics

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