

Technical Data

Fieldbus connection		
Number of segments		8 redundant
Host-side		general purpose host
Terminating resistor		100 Ω integrated
Indicators/operating means		
Fault signal		VFC alarm 1 A, 50 V DC, normally closed
Galvanic isolation		
Fieldbus segment/Fieldbus segment		functional insulation acc. to IEC 62103, rated insulation voltage 50 V _{eff}
Fieldbus segment/Supply		functional insulation acc. to IEC 62103, rated insulation voltage 250 V _{eff}
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013
Standard conformity		
Electromagnetic compatibility		
Degree of protection		NE 21:2011
Fieldbus standard		IEC 61158-2
Shock resistance		EN 60068-2-27
Vibration resistance		EN 60068-2-6
Ambient conditions		
Ambient temperature		-40 ... 70 °C (-40 ... 158 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Relative humidity		< 95 % non-condensing
Shock resistance		15 g 11 ms
Vibration resistance		1 g , 10 ... 150 Hz
Pollution degree		max. 2, according to IEC 60664
Corrosion resistance		acc. to ISA-S71.04-1985, severity level G3
Mechanical specifications		
Connection type		plug-in terminals , spring terminal and screw terminal
Core cross section		2.5 mm ²
Housing material		Polycarbonate
Housing width		268 mm
Housing height		150 mm
Housing depth		69 mm
Degree of protection		IP20
Mass		approx. 1350 g
Mounting		DIN mounting rail
Data for application in connection with hazardous areas		
Certificate		TÜV 10 ATEX 555761X
Marking		Ⓔ II 3G Ex ec IIC T4 Gc
Directive conformity		
Directive 2014/34/EU		EN 60079-0:2012 , EN 60079-11:2012 , EN 60079-15:2010
International approvals		
FM approval		CoC 3024816, CoC 3024816C
Approved for		Class I, Division 2, Groups A, B, C, D, T4 / Class I, Zone 2, AEx/Ex nA IIC T4
IECEx approval		IECEx TUN 13.0037X
Approved for		Ex ec IIC T4 Gc
Certificates and approvals		
Marine approval		DNV A-14038
General information		
Supplementary information		Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .

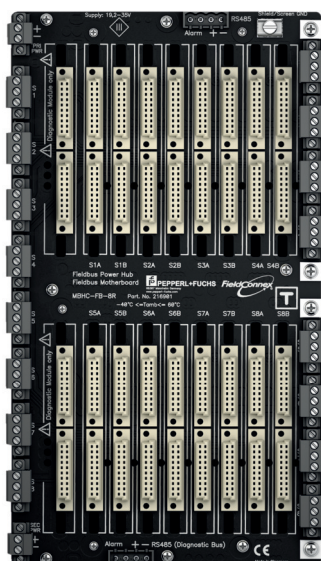
Release date: 2023-02-17 Date of issue: 2023-02-17 Filename: t171429_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group
www.pepperl-fuchs.comUSA: +1 330 486 0002
pa-info@us.pepperl-fuchs.comGermany: +49 621 776 2222
pa-info@de.pepperl-fuchs.comSingapore: +65 6779 9091
pa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS

Assembly

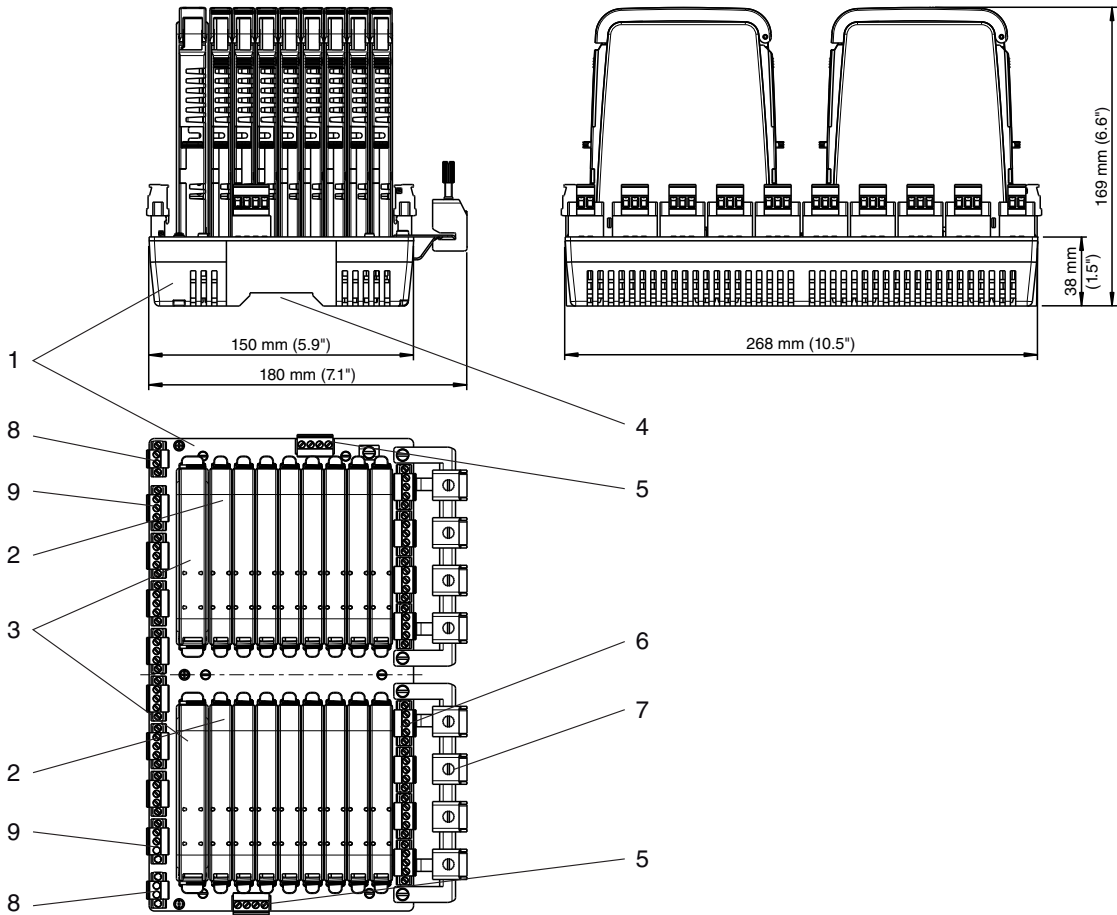


Accessories

ACC-MB-HSK	Grounding Rail including 4 Cable Clamps
ACC-MB-HDC	Diagnostic cordset for linking the diagnostic bus of 2 motherboards, length 6 cm
ACC-MB-CC	Cover for Power Supply Connector of Motherboards with Screw Terminals, Ex ic applications
ACC-MB-CC.1	Cover for Power Supply Connector of Motherboards with Spring Terminals, Ex ic applications
ACC-LBF-EB.8	8x Grounding Rail for Surge Protection, TPH-LBF* and MBHC-FB*
ACC-MB-SW	Separation Wall for MBHC, Ex ic Applications

Additional Information

Dimensions and Assembly



Description:

- 1 Motherboard MBHC-FB-8R*
- 2 Power supply modules
- 3 Diagnostic modules
- 4 Mounting slot for DIN mounting rail
- 5 Connections for alarm volt-free contact and diagnostic bus
- 6 Connections for fieldbus trunk
- 7 Screening/earthing kit for trunk cables shield, optional accessory
- 8 Connections for bulk power supply
- 9 Connections for host

Components

Compatible Power Supply Modules

		HCD2-FBPS-1.23.500	HCD2-FBPS-1.500	
Power Output				
Voltage (V)		21 ... 23	28 ... 29.5	
Current (mA)		500	500	
Limit U ₀ (V)		24	30	
Device in ...	Type of Protection			Required Installation Components
Zone 0/Div. 1	Intrinsically safe Ex ia		■	FieldBarrier
Zone 1/Div. 1	Intrinsically safe Ex ia		■	FieldBarrier
Zone 1/Div. 1	Flameproof Ex d		■	Segment Protector R-SP-E12 or any Segment Protector installed in Zone 2

Release date: 2023-02-17 Date of issue: 2023-02-17 Filename: t171429_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Zone 2	Intrinsically safe Ex ic (Entity)	■	■	Selected Segment Protectors
Div. 2	Non-incendive	■	■	Any Segment Protector; power module selection depends on voltage of field device
Safe Area	No specific type of protection		■	Segment Protector recommended

For more details on the power supply modules see respective data sheets.

Diagnostic Module Selection

The following diagnostic modules are compatible with this motherboard.

Type code	Description
HD2-DM-B	Diagnostic Module, basic version
HD2-DM-A	Diagnostic Module, advanced version
HD2-DM-A.RO	Diagnostic Module, advanced version, relay output

The stationary and mobile Advanced Diagnostic Module (ADM) and related components provide measurement tools for the fieldbus physical layer. The ADM monitors many quality indicating values of the fieldbus physical layer. An expert system, which is included, analyzes the values and issues easy to understand messages indicating cause and remedy. The ADM is recommended for:

- **Faster commissioning and plant start-up:** Installation issues are known and corrected before loop check commences
- **Reliable operation through online monitoring:** The quality of the physical layer and installation is monitored making fieldbus a manageable asset
- **Efficient troubleshooting:** An expert system guides the user through issues and faults in the fieldbus installation

Many other tools are included that enhance fieldbus installation and upkeep. Please see datasheet on HD2-DM-A.

Product Versions

Type code	Description
MBHC-FB-8R	Redundant motherboard with pluggable screw terminals
MBHC-FB-8R.1	Redundant motherboard with pluggable spring terminals