

# Fieldbus Power Hub, Gateway Motherboard

## MB-FB-GTR1\*

- For 2 gateway modules
- For PROFIBUS PA
- Redundant configuration
- Installation in Zone 2/Class I, Div. 2
- Spring terminals or screw terminals selectable



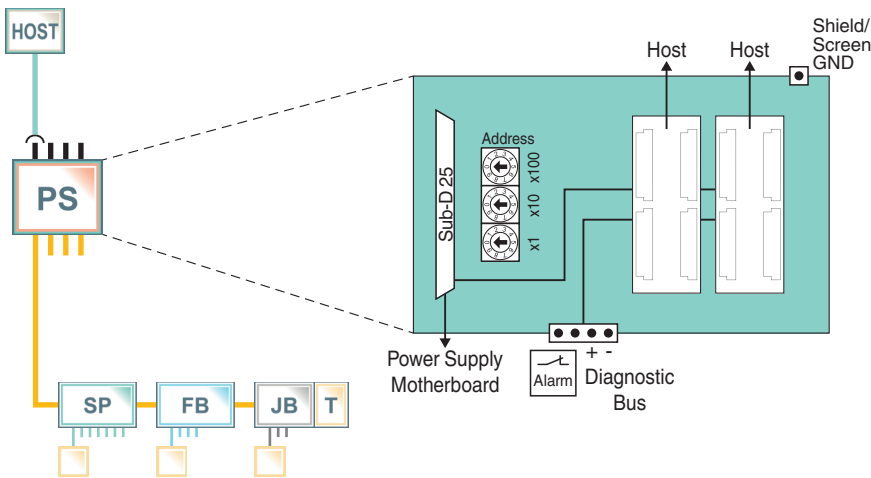
### Function

This motherboard is a system component of the FieldConnex® Power Hub. It is the mounting base and wiring interface for 2 communication gateways. In connection with power supply modules and the respective motherboard it forms a complete unit for power supply of segments with data conversion.

Sockets for all modules enable simple installation and replacement without tools. Wire connections can be selected as spring terminals or screw terminals.

The motherboard supports a choice of gateways for different host protocols. A PROFIBUS PA master for each segment enables short bus cycle times. The DCS can access the advanced diagnostic module directly via the gateway without additional wiring or configuration.

### Connection



### Technical Data

General specifications	
Design / Mounting	Motherboard based
<b>Supply</b>	
Rated voltage	$U_r$ 19.2 ... 35 V SELV/PELV
Rated current	$I_r$ 2 ... 3 A
<b>Indicators/operating means</b>	
Fault signal	VFC alarm output via connectors
Rotary switch	bus addressing, gateway-specific
<b>Directive conformity</b>	
Electromagnetic compatibility	

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

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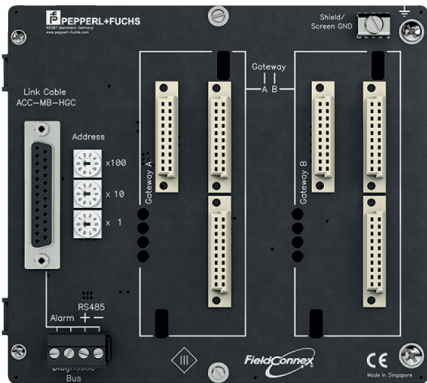
**Technical Data**

Directive 2014/30/EU	EN 61326-1:2013
<b>Standard conformity</b>	
Electromagnetic compatibility	NE 21:2011
Degree of protection	IEC 60529
Fieldbus standard	IEC 61158-2
Shock resistance	EN 60068-2-27
Vibration resistance	EN 60068-2-6
<b>Ambient conditions</b>	
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
<b>Mechanical specifications</b>	
Housing material	Polycarbonate
Degree of protection	IP20
Mass	approx. 300 g
Mounting	DIN mounting rail
<b>Data for application in connection with hazardous areas</b>	
Certificate	TÜV 15 ATEX 7735 X
Marking	Ⓜ II 3 G Ex ec IIC T4 Gc
Directive conformity	
Directive 2014/34/EU	EN IEC 60079-0:2018+AC:2020 , EN 60079-7:2015+A1:2018
<b>International approvals</b>	
IECEX approval	IECEX TUR 16.0007X
Approved for	Ex ec IIC T4 Gc
<b>Certificates and approvals</b>	
Marine approval	pending
<b>General information</b>	
Supplementary information	Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

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Assembly



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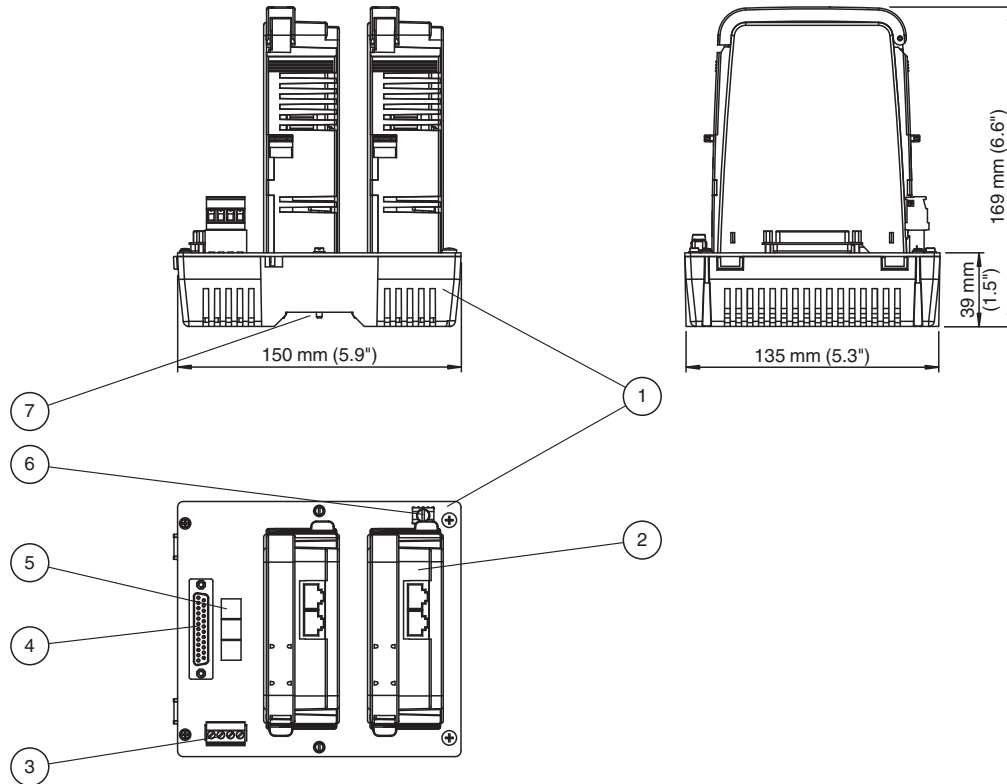
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**Additional Information**

**Dimensions and Assembly**



Description:

- 1 Motherboard MB-FB-GTR1\*
- 2 Gateway HD2-GTR-4\*, see separate datasheet
- 3 Connections: Volt-free contact alarm and diagnostic bus.  
Diagnostic link cable ACC-MB-HDC, optional accessory
- 4 SUB-D interface for the connection of Power Hub motherboards
- 5 Rotary switches for gateway addressing, x1, x10, x100
- 6 Earth connection
- 7 Mounting slot for DIN mounting rail

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**Available PROFIBUS and PROFINET Power Hub System Components**

The following list describes all available PROFIBUS and PROFINET Power Hub system components as an overview and quick reference beyond the component described in this datasheet.

Type Code	Description
HD2-GTR-4PA	PROFIBUS DP to PROFIBUS PA gateway module, 4 PROFIBUS PA segments.
HD2-GTR-4PA.PN	PROFINET to PROFIBUS PA gateway module, 4 PROFIBUS PA segments.
HCD2-FBPS-1.500	Power supply module 30 V/500 mA.
HCD2-FBPS-1.23.500	Power supply module 23 V/500 mA.
HD2-DM-A*	Advanced physical layer diagnostic module.
HD2-DM-B	Basic diagnostic module.
MB-FB-GTR1	Motherboard for gateway redundancy, slots for 2 gateway modules.
MBHC-FB-4.GT*	Compact Power Hub motherboard for 4 segments, slots for 4 power supply modules, 1 diagnostic module, and 1 gateway module. Connector options: Removable screw terminals or spring terminals.
MBHC-FB-4.HSC*	Compact Power Hub motherboard for 4 segments, slots for 4 power supply modules and 1 diagnostic module. Connector options: Removable screw terminals or spring terminals.
MBHC-FB-4R.HSC*	Compact Power Hub motherboard for 4 redundant segments, slots for 8 power supply modules and 1 diagnostic module. Connector options: Removable screw terminals or spring terminals.
KT-MB-FB-D-4R.GEN	DART high-density Power Hub with generic interface for 4 redundant segments, slots for 8 power supply modules with 1 diagnostic module.

**Applicable Combinations of Gateway Motherboards, System Modules with Motherboards**

		GW MBs	GW Modules		Power Supplies		Diagnostic Modules	
		MB-FB-GTR1	HD2-GTR-4PA	HD2-GTR-4PA.PN	HCD2-FBPS-1.23.500	HCD2-FBPS-1.500	HD2-DM-A*	HD2-DM-B
MBs or Power Hub Kits	MBHC-FB-4.HSC*	x			x	x	x	x
	MBHC-FB-4R.HSC*	x			x	x	x	x
	KT-MB-FB-D-4R.GEN	x					x	x
GW MBs	MB-FB-GTR1		x	x				
	MBHC-FB-4.GT		x	x	x	x	x	x

For more details on the components see respective datasheets.

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**Example: Power Hub with Redundancy for 4 Segments**

No.	Product Component	Model Type/Order Number
1	Motherboard	MBHC-FB-4R.HSC
8	Power supply modules	HCD2-FBPS-1.500
4	Surge protectors	TPH-LBF-IA1.36.DE*
1	Earth bar for surge protectors	ACC-LBF-EB.4
1	Advanced diagnostic module	HD2-DM-A
1	Gateway motherboard	MB-FB-GTR1
2	PROFIBUS gateway module	HD2-GTR-4PA
1	or PROFINET gateway module	HD2-GTR-4PA.PN

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