



Fieldbus Power Hub, Advanced Diagnostic Module with Relay Output HD2-DM-A.RO



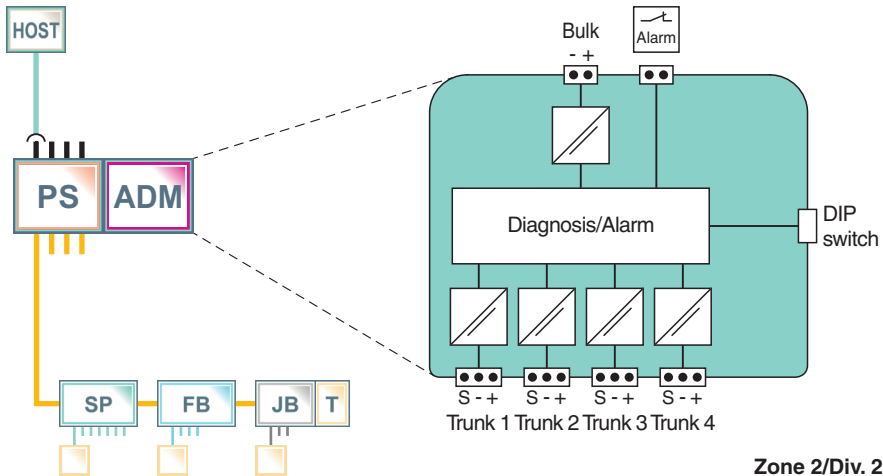
- Diagnostics for fieldbus physical layer and power supply
- Plug-in Module for the FieldConnex Power Hub
- Plug and play - no engineering required
- For online monitoring
- For FOUNDATION Fieldbus H1 and PROFIBUS PA
- Installation in Zone 2/Class I, Div. 2
- System state and fault indication via LEDs
- Alarm limits configurable via DIP switches
- Fault indication transmission by voltage free contact



Function

Designed as a plug-in module for the FieldConnex® Power Hub, the Advanced Diagnostic Module (ADM) with relay output is a monitoring tool for the physical layer of up to four fieldbus segments. Passive input circuits leave the physical layer untouched, avoiding alteration of the signal. The ADM indicates unwanted conditions via voltage-free contact. It provides physical layer diagnostics "plug-and-play", without additional engineering. If desired, the values for maintenance and out-of-specification limit ranges are configurable via DIP switches. LED signals indicate that a limit has been exceeded. For commissioning and troubleshooting, a comprehensive diagnostic module such as the FieldConnex(R) mobile ADM (see DM-AM-KIT) is recommended.

Connection



Technical Data

General specifications

Design / Mounting Motherboard based

Supply

Rated voltage	U_r	19.2 ... 35 V
Rated current	I_r	40 ... 25 mA
Power dissipation		max. 1 W

Fieldbus connection

Number of segments		4
Fieldbus type		FOUNDATION Fieldbus/PROFIBUS PA
Rated voltage	U_N	9 ... 32 V

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

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Technical Data

Indicators/operating means	
LED PRI PWR	green: on, primary bulk power supply connected
LED SEC PWR	green: on, secondary bulk power supply connected
LED Seg 1...4	yellow: bus activity; yellow 2 Hz flashing: Maintenance required; red 2 Hz flashing: specification limit violated; red: hardware error
Fault signal	VFC alarm 1 A, 50 V DC, normally closed
DIP switch	fieldbus type , redundant supply , Signal level , Noise level , Jitter
Galvanic isolation	
Fieldbus segment/Fieldbus segment	functional insulation acc. to IEC 62103, rated insulation voltage 50 V _{eff}
Directive conformity	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013
Standard conformity	
Electromagnetic compatibility	NE 21:2011
Degree of protection	IEC 60529
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	motherboard specific
Core cross section	motherboard specific
Housing material	Polycarbonate
Housing width	18 mm
Housing height	106 mm
Housing depth	128 mm
Degree of protection	IP20
Mass	approx. 100 g
Mounting	motherboard mounting
Data for application in connection with hazardous areas	
Certificate	TÜV 04 ATEX 2500 X
Marking	Ⓔ II 3 G Ex nA 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	
FM certificate	FM 19 US 0015 X and FM 19 CA 0011 X
FM marking	AEx/Ex ec IIC T4
IECEx approval	
IECEx certificate	IECEx TUN 13.0038X
IECEx marking	Ex nA IIC T4 Gc
Certificates and approvals	
Marine approval	DNV A-14038
Patents	This product may be covered by the following patent: US7,698,103
General information	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .

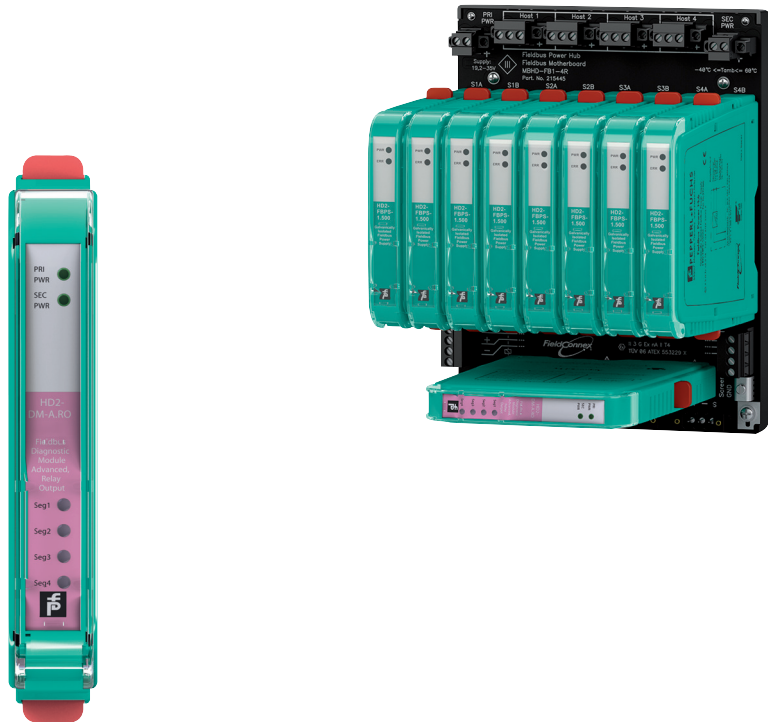
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Assembly



Matching System Components

	MBHC-FB-8R.IOM	Fieldbus Power Hub, Compact Motherboard, Common Interface
	FBTA-228-BPFB-R-8R	Compact Fieldbus Power Hub Motherboard for Invensys FBM 228
	MBHC-FB-4.HSC*	Compact Fieldbus Power Hub Motherboard with Host System Connectors
	MBHC-FB-4R.HSC*	Compact Fieldbus Power Hub Motherboard with Host System Connectors

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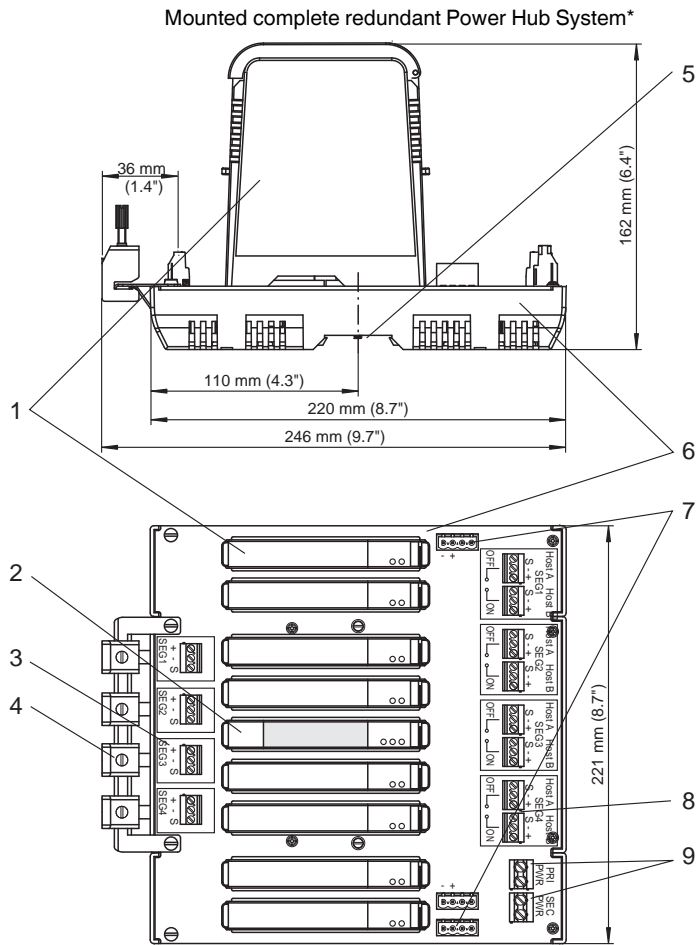
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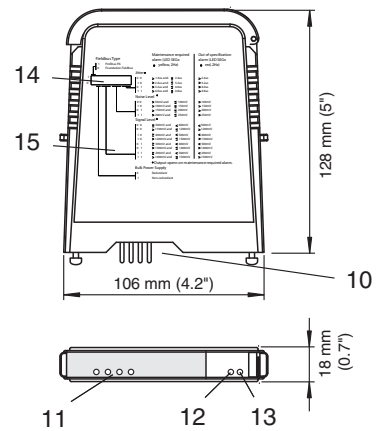
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Additional Information

Dimensions and Assembly



Advanced Diagnostic Module, Relay Output*



*all dimensions without tolerance

Description:

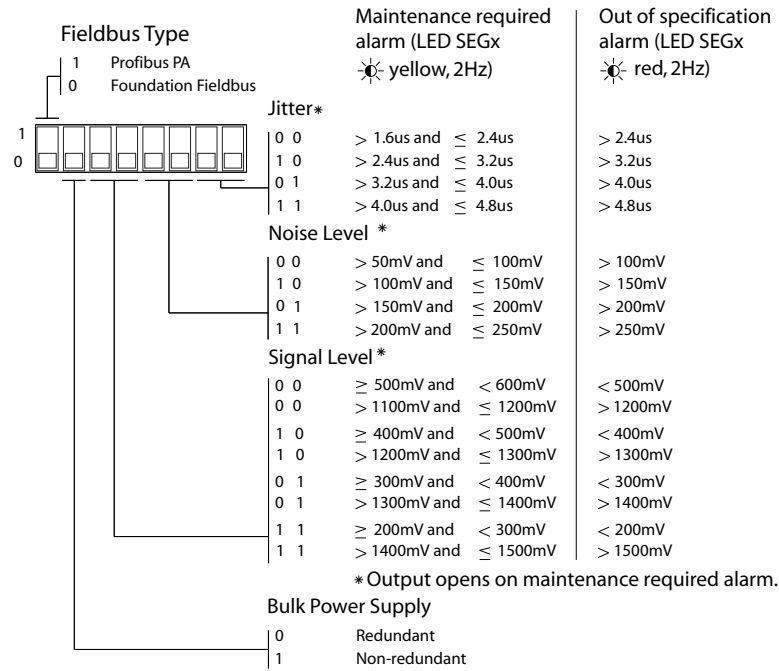
- 1 Power Supply Modules, see separate data sheets
- 2 Advanced Diagnostic Module, Relay Output
- 3 Connections for fieldbus trunk, terminator switch
- 4 Screening/earthing kit for trunk cables shield, optional accessory
- 5 Mounting slot for DIN rail
- 6 Motherboard, see separate data sheets
- 7 Connections for alarm, voltage free contact and diagnostic bus (not applicable for HD2-DM-A.RO)
- 8 Connections for redundant host
- 9 Connections for redundant bulk power supply
- 10 Plug connections to Motherboard
- 11 LED Seg 1 ... Seg 4
- 12 LED green SEC PWR
- 13 LED green PRI PWR
- 14 DIP switch array
- 15 DIP switch settings overview

Commissioning

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Parameterization



DIP switch settings overview

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