



Advanced Diagnostic Module

FieldConnex® Fieldbus

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

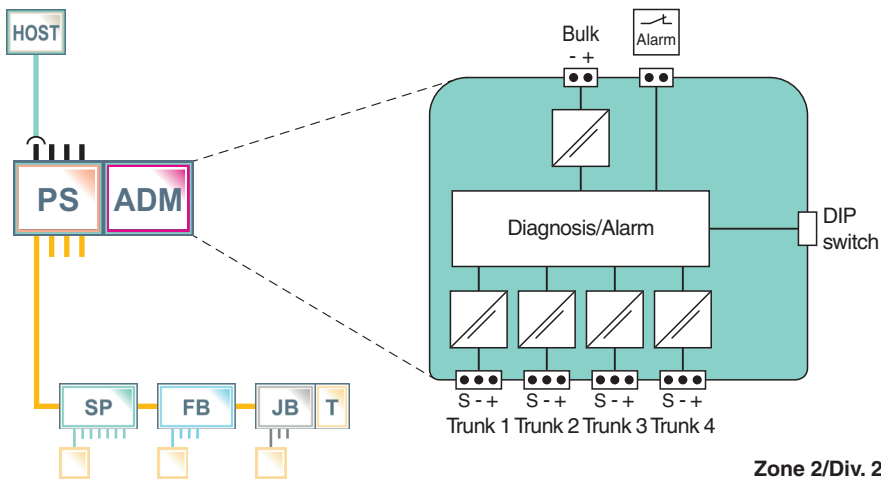
Advanced diagnostic module with relay output for fieldbus power hub physical layer diagnostics



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	
Installation in hazardous area	Zone 2 / Div. 2	
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	

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Technical Data

Fieldbus type		FOUNDATION Fieldbus/PROFIBUS PA
Rated voltage	U_N	9 ... 32 V
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 , redundand 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		
Core cross section		motherboard specific
Housing material		Polycarbonate
Degree of protection		IP20
Mass		approx. 100 g
Dimensions		
Height		106 mm
Width		18 mm
Depth		128 mm
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 IEC 60079-0:2018+AC:2020 , 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		Class I, Division 2, Groups A, B, C, D, T4 / Class I, Zone 2, AEx/Ex ec IIC T4
IECEx approval		
IECEx certificate		IECEx TUN 13.0038X
IECEx marking		Ex nA IIC T4 Gc
Certificates and approvals		
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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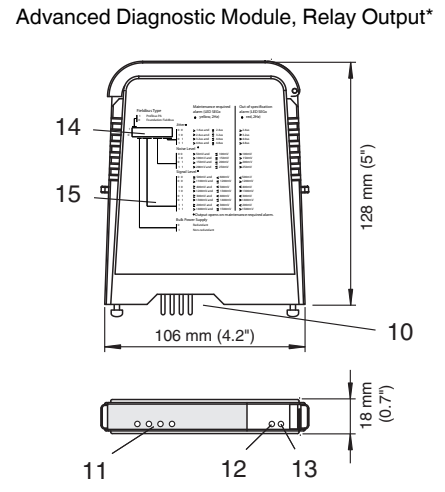
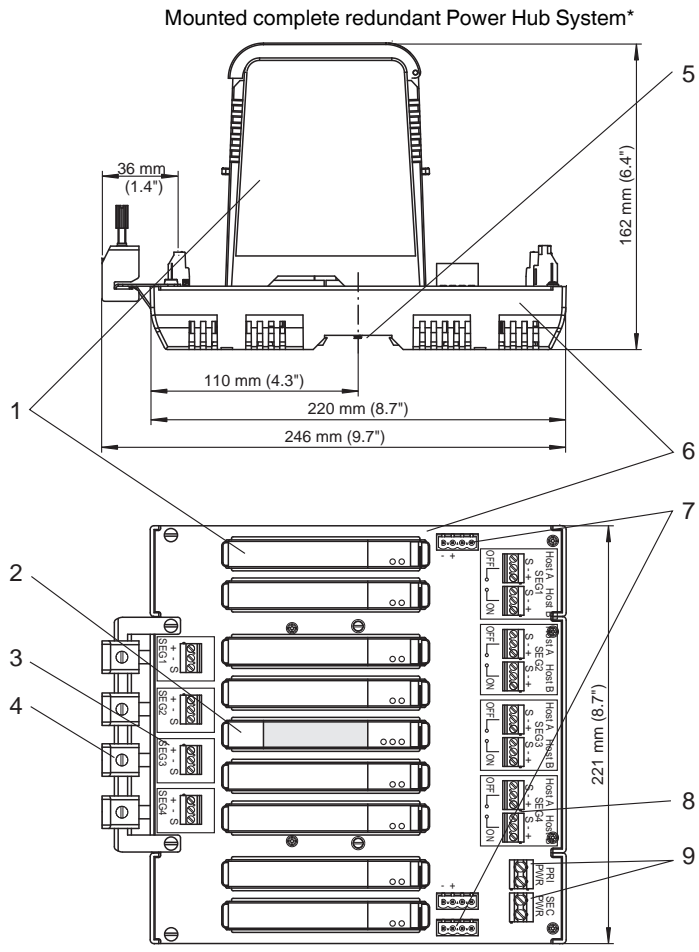
Assembly



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Additional Information

Dimensions and Assembly



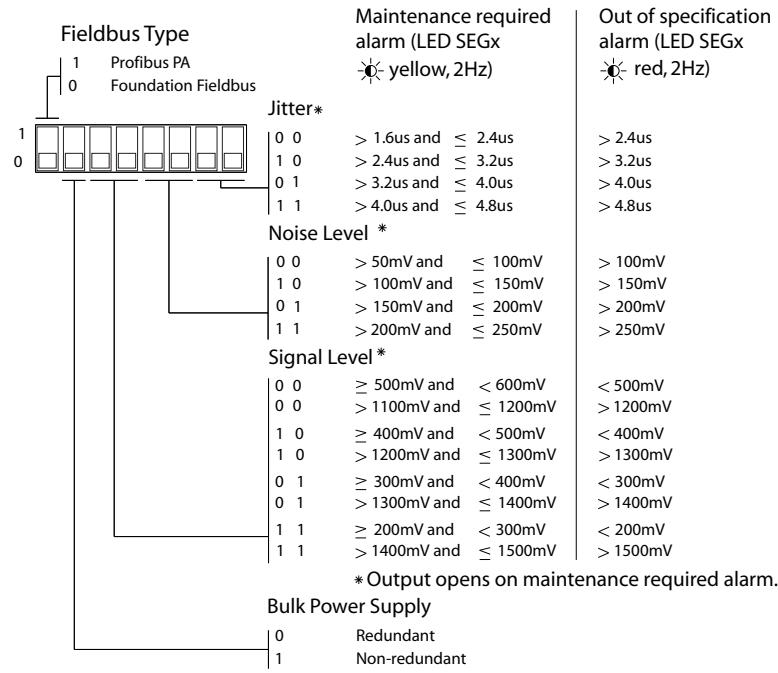
*all dimensions without tolerance

- 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