



HART Transmitter Power Supply, Input Isolator

FB3205B2

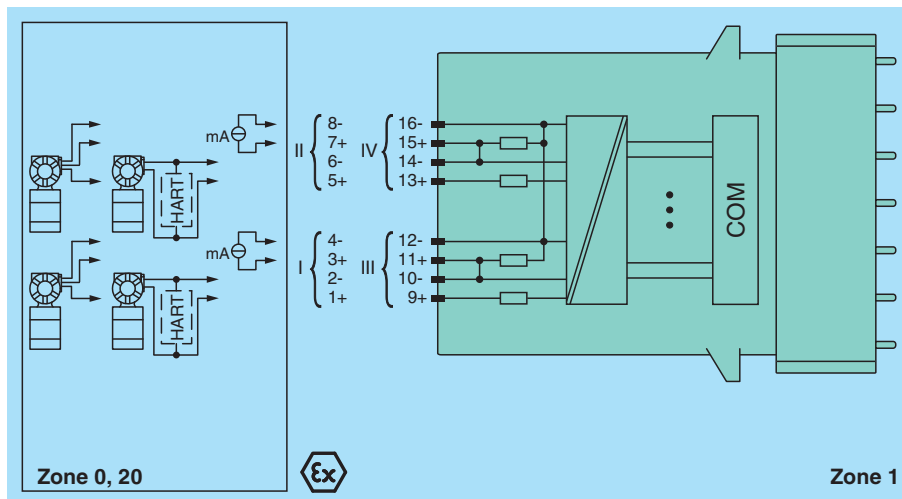
- 4-channel
- Inputs Ex ia
- Installation in suitable enclosures in Zone 1
- Module can be exchanged under voltage (hot swap)
- Power supply for 2-wire transmitters with 4 mA ... 20 mA
- Supply circuit 15 V (20 mA)
- Input from active signals of 4-wire transmitters
- HART communication via field bus or service bus
- Simulation mode for service operations (forcing)
- Line fault detection (LFD)
- Permanently self-monitoring



Function

The transmitter power supply feeds 2- and 3-wire transmitters.
Active signals from separately powered field devices and 4-wire transmitters can be connected.
Open and short-circuit line faults are detected.
The intrinsically safe inputs are galvanically isolated from the bus and the power supply.

Connection



Technical Data

Slots

Occupied slots	2
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Supply

Connection	backplane bus
Rated voltage	U_r 12 V DC , only in connection with the power supplies FB92**
Power dissipation	1.5 W
Power consumption	2.7 W

Internal bus

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

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Technical Data

Interface		manufacturer-specific bus to standard com unit	
Analog input			
Number of channels		4	
Suitable field devices			
Field device		pressure converter	
Field device [2]		flow converter	
Field device [3]		level converter	
Field device [4]		Temperature Converter	
Field device interface			
Connection		2-wire transmitter	
Connection [2]		3-wire transmitter	
Connection [3]		4-wire transmitter	
Connection		2-wire transmitter (HART):Supply circuit: channel I 1+, 2-, channel II 5+, 6-, channel III 9+, 10-, channel IV 13+, 14-3-wire transmitter:Supply circuit: channel I 1+, 4-, channel II 5+, 8-, channel III 9+, 12-, channel IV 13+, 16-Measurement loop: channel I 3+, 4-, channel II 7+, 8-, channel III 11+, 12-, channel IV 15+, 16-4-wire transmitter (powered externally):Measurement loop: channel I 3+, 4-, channel II 7+, 8-, channel III 11+, 12-, channel IV 15+, 16-	
Transmitter supply voltage		min. 15 V at 20 mA ; 21.5 V at 4 mA	
Input resistance		15 Ω	
Conversion time		max. 100 ms	
Line fault detection		can be switched on/off for each channel via configuration tool , configurable via configuration tool	
Short-circuit		factory setting: > 22 mA configurable between 0 ... 26 mA	
Open-circuit		factory setting: < 1 mA configurable between 0 ... 26 mA	
HART communication		yes	
HART secondary variable		no	
Transfer characteristics			
Deviation			
After calibration		0.1 % of the signal range at 20 °C (68 °F)	
Influence of ambient temperature		0.1 %/10 K of the signal range	
Resolution		12 Bit (0 ... 26 mA)	
Refresh time		100 ms	
Indicators/settings			
LED indication		Power LED (P) green: supply Diagnostic LED (I) red: module fault , red flashing: communication error , white: fixed parameter set (parameters from com unit are ignored) , white flashing: requests parameters from com unit Status LED (1-4) red: line fault (lead breakage or short circuit)	
Coding		optional mechanical coding via front socket	
Directive conformity			
Electromagnetic compatibility			
Directive 2014/30/EU		EN 61326-1:2013	
Conformity			
Electromagnetic compatibility		NE 21:2007	
Degree of protection		IEC 60529:2000	
Environmental test		EN 60068-2-14:2009	
Shock resistance		EN 60068-2-27:2009	
Vibration resistance		EN 60068-2-6:2008	
Damaging gas		EN 60068-2-42:2003	
Relative humidity		EN 60068-2-78:2001	
Ambient conditions			
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)	
Storage temperature		-25 ... 85 °C (-13 ... 185 °F)	
Relative humidity		95 % non-condensing	
Shock resistance		shock type I, shock duration 11 ms, shock amplitude 15 g, number of shocks 18	

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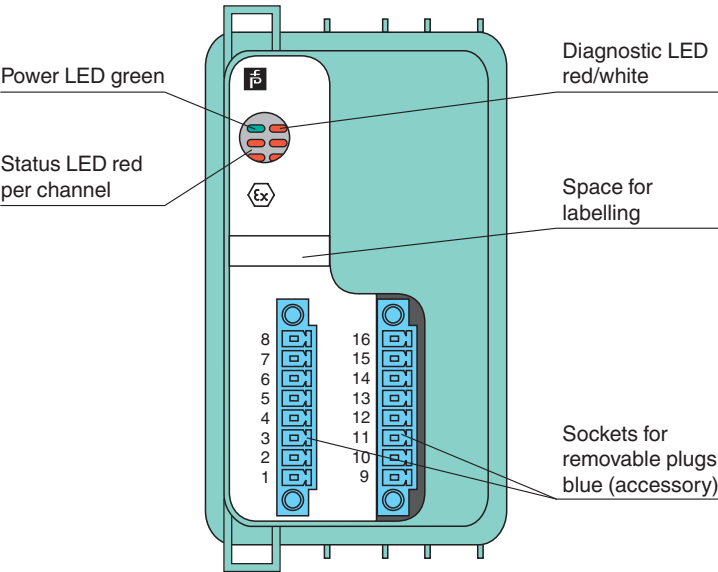
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Technical Data

Vibration resistance		frequency range 10 ... 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency range 5 ... 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 1 mm/0.7 g; 90 minutes at each resonance
Damaging gas		designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity level G3
Mechanical specifications		
Degree of protection		IP20 (module) , a separate housing is required acc. to the system description
Connection		removable front connector with screw flange (accessory) wiring connection via spring terminals (0.14 ... 1.5 mm²) or screw terminals (0.08 ... 1.5 mm²)
Mass		approx. 750 g
Dimensions		57 x 107 x 132 mm (2.2 x 4.2 x 5.2 inch)
Data for application in connection with hazardous areas		
EU-type examination certificate		BVS 12 ATEX E 101 X
Marking		Ⓢ II 2(1) G Ex d [ia Ga] IIC T4 Gb Ⓢ II (1) D [Ex ia Da] IIIC
Supply		
Voltage	U _o	27 V
Current	I _o	90 mA
Power	P _o	588 mW (linear characteristic)
Input		
Voltage	U _o	0.7 V
Current	I _o	2.78 mA
Power	P _o	2 mW (trapezoid characteristic curve)
Internal capacitance	C _i	242 nF
Internal inductance	L _i	0 mH
Galvanic isolation		
Input/power supply, internal bus		safe electrical isolation acc. to EN 60079-11, voltage peak value 375 V
Directive conformity		
Directive 2014/34/EU		EN IEC 60079-0:2018+AC:2020 EN 60079-1:2014 EN 60079-11:2012
International approvals		
ATEX approval		BVS 12 ATEX E 101 X
General information		
System information		The module has to be mounted in appropriate backplanes and housings (FB92**) in Zone 1, 2, 21, 22 or outside hazardous areas (gas or dust). Here, observe the corresponding EC-type examination certificate.
Supplementary information		EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .

Assembly

Front view



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