



# HART Transmitter Power Supply, Input Isolator

## FB3305B2

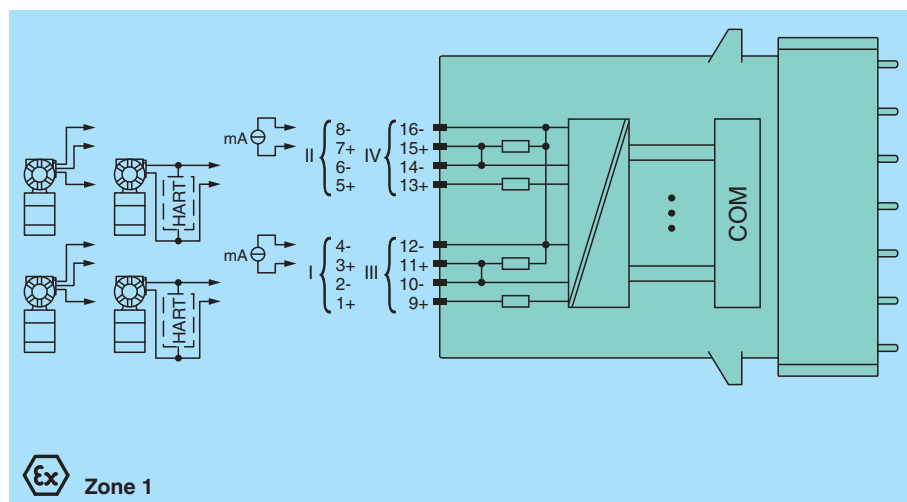
- 4-channel
- Inputs with plug-in Ex e terminals
- Installation in suitable enclosures in Zone 1
- Module can be exchanged under voltage (hot swap)
- Power supply for 2-wire transmitters with 4 mA ... 20 mA
- Supply circuit 15 V (20 mA)
- Input from active signals of 4-wire transmitters
- HART communication 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-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 device is supplied with plug-in Ex e terminals and protective cover.  
The input is galvanically isolated from the bus and the power supply.

## Connection



## Technical Data

<b>Slots</b>		
Occupied slots		2
<b>Supply</b>		
Connection		backplane bus
Rated voltage	U <sub>r</sub>	12 V DC , only in connection with the power supplies FB92**
Power dissipation		1.5 W
Power consumption		2.7 W
<b>Internal bus</b>		
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

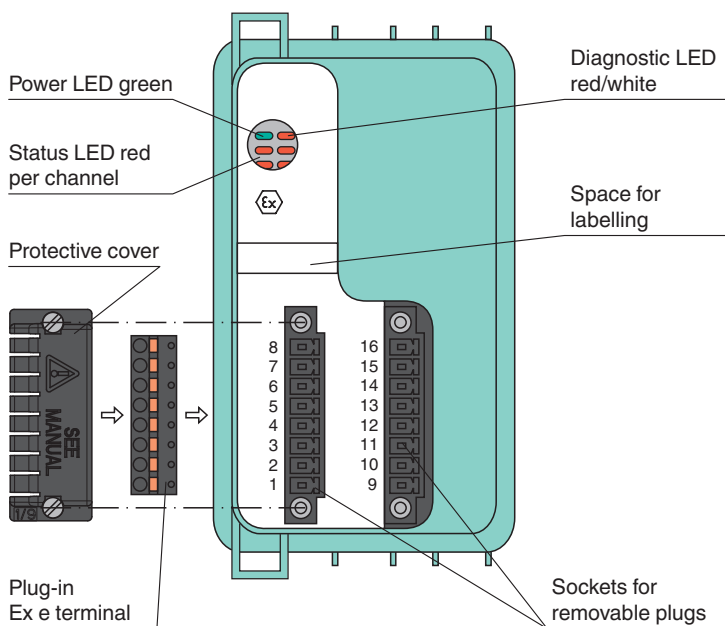
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## Technical Data

Vibration resistance	frequency range 10 ... 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration $\pm 0.075$ mm/1 g; 10 cycles frequency range 5 ... 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration $\pm 1$ 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
<b>Mechanical specifications</b>	
Degree of protection	IP20 (module) , a separate housing is required acc. to the system description
Connection	Ex e spring terminal with protective cover
Mass	approx. 750 g
Dimensions	57 x 107 x 132 mm (2.2 x 4.2 x 5.2 inch)
<b>Data for application in connection with hazardous areas</b>	
EU-type examination certificate	BVS 11 ATEX E 093 X
Marking	Ⓔ II 2 G Ex db eb IIC T4
Galvanic isolation	
Input/power supply, internal bus	safe electrical isolation acc. to EN 60079-11:2007 , voltage peak value 375 V
Directive conformity	
Directive 2014/34/EU	EN IEC 60079-0:2018+AC:2020 EN 60079-1:2014 EN 60079-7:2015+A1:2018
<b>International approvals</b>	
ATEX approval	BVS 11 ATEX E 093X
<b>General information</b>	
System information	The module has to be mounted in appropriate backplanes (FB92**) in Zone 1, 2, or outside hazardous areas. 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 <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

## Assembly

### Front view



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