



# HART Transmitter Power Supply, Input Isolator

## FB3202B2

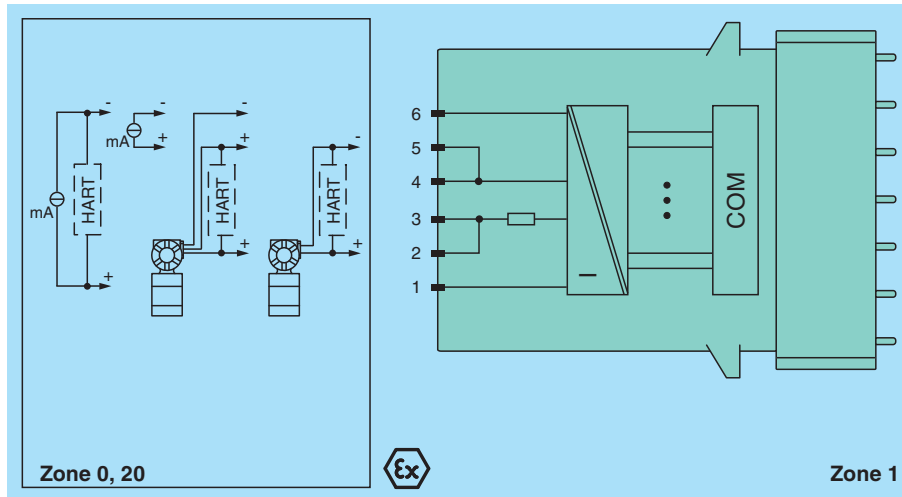
- 1-channel
- Input Ex ia
- Power supply for 2- or 3-wire transmitters with 4 mA ... 20 mA
- Module can be exchanged under voltage (hot swap)
- Installation in suitable enclosures in Zone 1
- Supply circuit 15 V (20 mA)
- Input from active signals of 4-wire transmitters
- HART communication via field bus or service bus
- HART communication also for separately powered devices
- Simulation mode for service operations (forcing)
- Line fault detection (LFD) and Live Zero monitoring
- 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-circuit, short-circuit, and Live Zero status are detected.  
The intrinsically safe input is galvanically isolated from the bus and the power supply.

## Connection



## Technical Data

### Slots

Occupied slots	1
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### Supply

Connection	backplane bus	
Rated voltage	U <sub>r</sub>	12 V DC , only in connection with the power supplies FB92**
Power dissipation	0.75 W	
Power consumption	1.1 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		1
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: 2/3+, 4/5- 3-wire transmitter (HART): supply circuit: 2/3+, 6- measuring circuit: 4/5+, 6- 4-wire transmitter (separately powered): measuring circuit: 4/5+, 6- HART measuring circuit: 1+, 6-
Transmitter supply voltage		min. 15 V at 20 mA ; 21.5 V at 4 mA
Input resistance		15 Ω (terminals 5, 6) <P></P> 236 Ω (terminals 1, 6) HART
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		yes
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) red: line fault (lead breakage or short circuit) Status LED (2) yellow: Live Zero monitoring
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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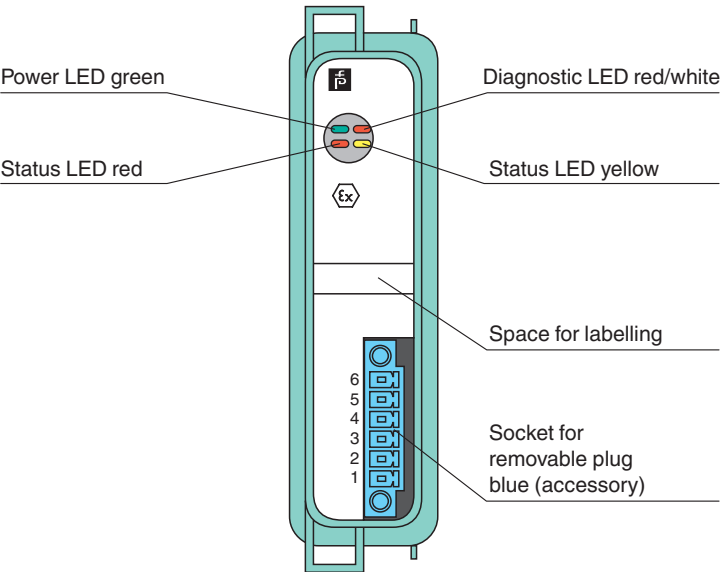
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## Technical Data

Vibration resistance		frequency range 10 ... 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration $\pm 0.075$ 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		removable front connector with screw flange (accessory) wiring connection via spring terminals (0.14 ... 1.5 mm <sup>2</sup> ) or screw terminals (0.08 ... 1.5 mm <sup>2</sup> )
Mass		approx. 350 g
Dimensions		28 x 107 x 132 mm (1.1 x 4.2 x 5.2 inch)
<b>Data for application in connection with hazardous areas</b>		
EU-type examination certificate		BVS 13 ATEX E 050 X
Marking		Ⓔ II 2(1) G Ex d [ia Ga] IIC T4 Gb Ⓔ II (1) D [Ex ia Da] IIIC
Supply		
Voltage	U <sub>o</sub>	27 V
Current	I <sub>o</sub>	92 mA
Power	P <sub>o</sub>	619 mW (linear characteristic)
Connection 1 to 6		
Voltage		8.9 V
Current		4 mA
Power		24 mW (trapezoid characteristic curve)
Input		
Voltage	U <sub>o</sub>	0.7 V
Current	I <sub>o</sub>	7 mA
Power	P <sub>o</sub>	5 mW (trapezoid characteristic curve)
Voltage	U <sub>i</sub>	30 V DC
Current	I <sub>i</sub>	100 mA
Power	P <sub>i</sub>	100 mW P <sub>i</sub> < 100 mW is fulfilled by I <sub>i</sub> < 100 mA, so a comparison of P <sub>o</sub> < P <sub>i</sub> is not necessary.
Internal capacitance	C <sub>i</sub>	242 nF
Internal inductance	L <sub>i</sub>	0 mH
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 60079-11:2012
<b>International approvals</b>		
ATEX approval		BVS 13 ATEX E 050 X
<b>General information</b>		
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 <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

Assembly

Front view



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