



HART Transmitter Power Supply, Input Isolator

FB3305B2

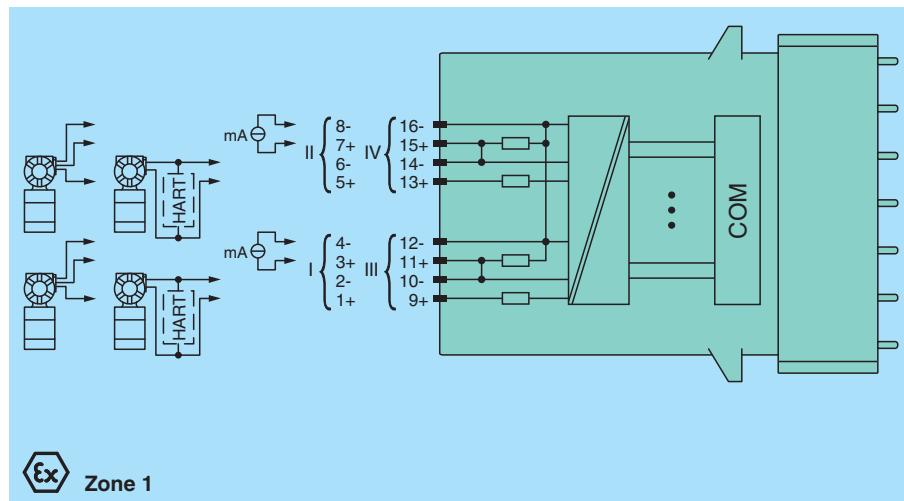
- 4-channel
- Inputs with plug-in Ex e terminals
- Installation in suitable enclosures in Zone 1
- Module can be exchanged under voltage (hot swap)
- Power supply for 2-wire transmitters with 4 mA ... 20 mA
- Supply circuit 15 V (20 mA)
- Input from active signals of 4-wire transmitters
- HART communication 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

Slots		
Occupied slots		2
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

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	

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	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)
Data for application in connection with hazardous areas	
EU-type examination certificate	BVS 11 ATEX E 093 X
Marking	Ex 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
International approvals	
ATEX approval	BVS 11 ATEX E 093X
General information	
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 www.pepperl-fuchs.com .

Assembly

Front view

