

Voltage Converter LB5106A

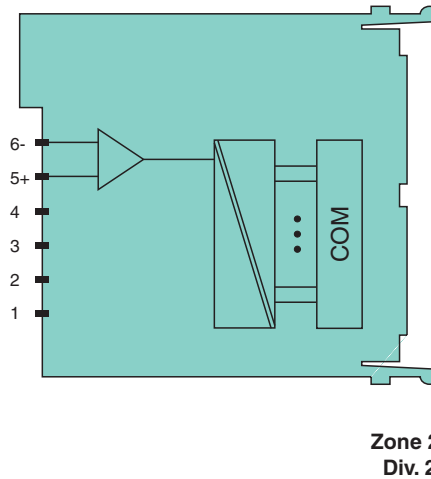
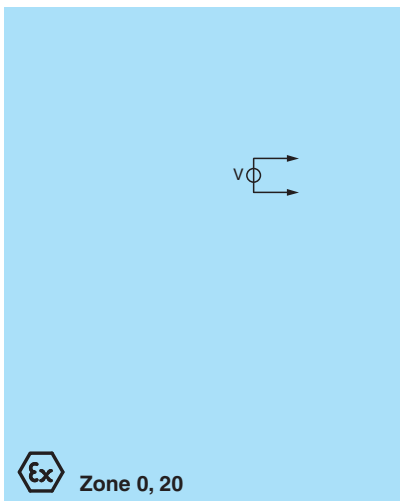
- 1-channel
- Input Ex ia
- Mounting in Zone 2, Class I/Div.2 or in the safe area
- Input 0 V ... 10 V
- Simulation mode for service operations (forcing)
- Permanently self-monitoring
- Module can be exchanged under voltage



Function

The voltage converter accepts signals from the hazardous area.
The intrinsically safe input is galvanically isolated from the bus and the power supply (EN 60079-11).

Wiring Diagram



Technical Data

Slots			
Occupied slots			1
Supply			
Connection			backplane bus
Rated voltage	U _r		12 V DC , only in connection with the power supplies LB9***
Power dissipation			0.4 W
Power consumption			0.4 W
Internal bus			
Connection			backplane bus
Interface			manufacturer-specific bus to standard com unit
Analog input			
Number of channels			1
Suitable field devices			

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Technical Data

Field device	voltage input		
Connection		voltage input: 5+, 6-	
Measuring range		0 ... 10 V	
Smallest span		500 mV	
Linearity error		0.1 %	
Input resistance		100 k Ω	
Conversion time		max. 100 ms	
Transfer characteristics			
Deviation			
Influence of ambient temperature		max. 0,1 %/10 K	
Indicators/settings			
LED indication		Power LED (P) green: supply Status LED (1) red: line fault	
Coding		optional mechanical coding via front socket	
Directive conformity			
Electromagnetic compatibility			
Directive 2014/30/EU		EN 61326-1:2013	
Conformity			
Electromagnetic compatibility		NE 21	
Degree of protection		IEC 60529	
Environmental test		EN 60068-2-14	
Shock resistance		EN 60068-2-27	
Vibration resistance		EN 60068-2-6	
Damaging gas		EN 60068-2-42	
Relative humidity		EN 60068-2-78	
Ambient conditions			
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)	
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)	
Relative humidity		95 % non-condensing	
Altitude		max. 2000 m	
Shock resistance		shock type I, shock duration 11 ms, shock amplitude 15 g, number of shocks 18	
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	
Mechanical specifications			
Degree of protection		IP20 when mounted on backplane	
Connection		removable front connector with screw flange (accessory) wiring connection via spring terminals (0.14 ... 1.5 mm ²) or screw terminals (0.08 ... 1.5 mm ²)	
Mass		approx. 90 g	
Dimensions		16 x 100 x 102 mm (0.63 x 3.9 x 4 inch)	
Data for application in connection with hazardous areas			
EU-type examination certificate		PTB 03 ATEX 2042 X	
Marking		Ⓢ II (1)G [Ex ia Ga] IIC Ⓢ II (1)D [Ex ia Da] IIIC Ⓢ I (M1) [Ex ia Ma] I	
Input			
Voltage	U_o	0.9 V	
Current	I_o	0.2 mA	
Power	P_o	0.2 mW (linear characteristic)	
Certificate		PF 08 CERT 1234 X	
Marking		Ⓢ II 3 G Ex nA IIC T4 Gc	
Galvanic isolation			

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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 60079-11:2012 EN 60079-15:2010
International approvals	
ATEX approval	PTB 03 ATEX 2042 X
UL approval	E106378
Control drawing	116-0322
IECEX approval	
IECEX certificate	IECEX BVS 09.0037X
IECEX marking	Ex nA [ia Ga] IIC T4 Gc [Ex ia Da] IIC [Ex ia Ma] I
General information	
System information	The module has to be mounted in appropriate backplanes (LB9***) in Zone 2 or outside hazardous areas. Here, observe the corresponding declaration of conformity. For use in hazardous areas (e. g. Zone 2, Zone 22 or Div. 2) the module must be installed in an appropriate enclosure.
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

