



Zener Barrier

Z896

- 2-channel
- DC version, negative polarity
- Working voltage 24 V/18 V at 10 μ A
- Series resistance max. 340 Ω /437 Ω
- Fuse rating 50 mA
- DIN rail mounting
- Asymmetrical version

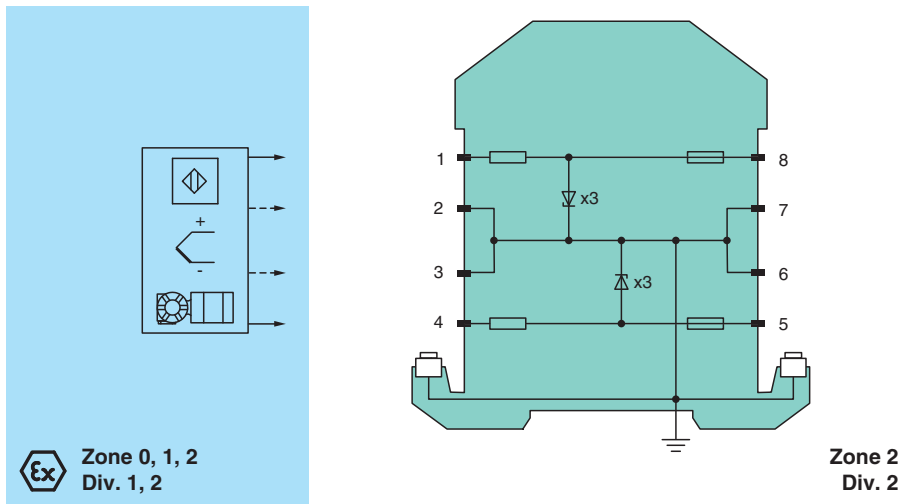


Function

The Zener Barrier prevents the transfer of unacceptably high energy from the safe area into the hazardous area. The zener diodes in the Zener Barrier are connected in the reverse direction. The breakdown voltage of the diodes is not exceeded in normal operation. If this voltage is exceeded, due to a fault in the safe area, the diodes start to conduct, causing the fuse to blow. The Zener Barrier has a negative polarity, i. e. the cathodes of the zener diodes are grounded.

Asymmetrical Zener Barriers are for optimization of applications which have different voltage levels regarding to ground potential. Depending on the application, increased or decreased intrinsic safety parameters apply for serial or parallel connection. For the detailed parameters refer to the Zener Barrier certificate. Application examples can be found in the system description of the Zener Barriers.

Connection



Technical Data

Search characteristics	
Additional functions	
Asymmetrical version	yes
General specifications	
Type	DC version, negative polarity
Electrical specifications	
Nominal resistance	terminals 1, 8: 320 Ω terminals 4, 5: 415 Ω
Series resistance	terminals 1, 8: max. 340 Ω terminals 4, 5: max. 437 Ω
Fuse rating	50 mA

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

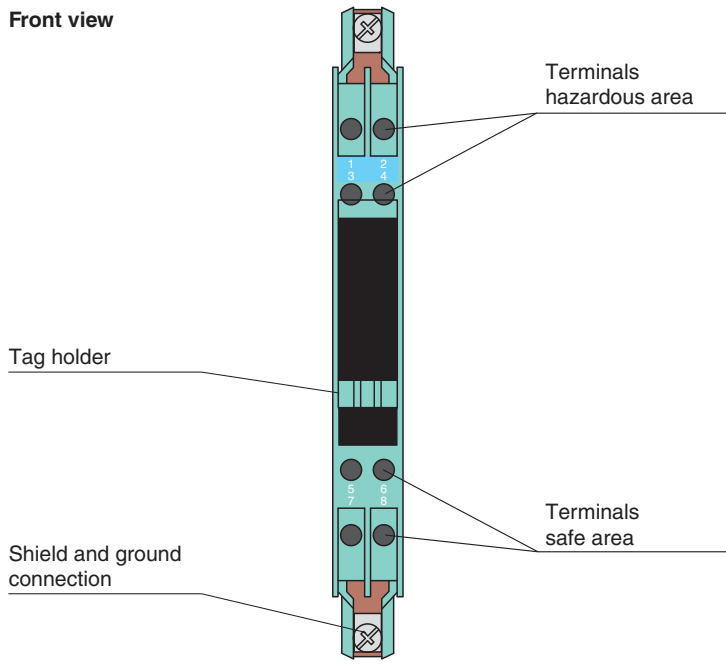
Technical Data

Hazardous area connection	
Connection	terminals 1, 2; 3, 4
Safe area connection	
Connection	terminals 5, 6; 7, 8
Working voltage	
Supply loop	terminals 7, 8: max. 24.6 V terminals 5, 6: max. 19 V
Measurement loop	terminals 7, 8: max. 24 V at 10 μ A terminals 5, 6: max. 18 V at 10 μ A
Conformity	
Degree of protection	IEC 60529
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Storage temperature	-25 ... 70 °C (-13 ... 158 °F)
Relative humidity	max. 75 % , without condensation
Mechanical specifications	
Degree of protection	IP20
Connection	screw terminals
Core cross-section	max. 2 x 2.5 ... mm ²
Mass	approx. 150 g
Dimensions	12.5 x 115 x 110 mm (0.5 x 4.5 x 4.3 inch)
Construction type	modular terminal housing , see system description
Mounting	on 35 mm DIN mounting rail acc. to EN 60715:2001
Data for application in connection with hazardous areas	
EU-type examination certificate	BAS 01 ATEX 7005
Marking	Ⓜ II (1)GD, I (M1) [Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I (-20 °C ≤ T _{amb} ≤ 60 °C) [circuit(s) in zone 0/1/2]
Voltage	U _o terminals 1, 2: 26.6 V; terminals 3, 4: 20.5 V
Current	I _o terminals 1, 2: 85 mA; terminals 3, 4: 50 mA
Power	P _o terminals 1, 2: 560 mW; terminals 3, 4: 260 mW
Supply	
Maximum safe voltage	U _m 250 V
Series resistance	terminals 1, 2: min. 314 Ω ; terminals 3, 4: min. 407 Ω
Certificate	TÜV 99 ATEX 1484 X
Marking	Ⓜ II 3G Ex nA IIC T4 Gc [device in zone 2]
Directive conformity	
Directive 2014/34/EU	EN 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010
International approvals	
FM approval	
Control drawing	116-0118
UL approval	
Control drawing	116-0139 (cULus)
IECEx approval	
	IECEx BAS 09.0142 IECEx BAS 17.0091X
Approved for	[Ex ia Ga] IIC , [Ex ia Da] IIIC , [Ex ia Ma] I Ex ec IIC T4 Gc
General information	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .

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Assembly

Front view



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