Features

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

Function

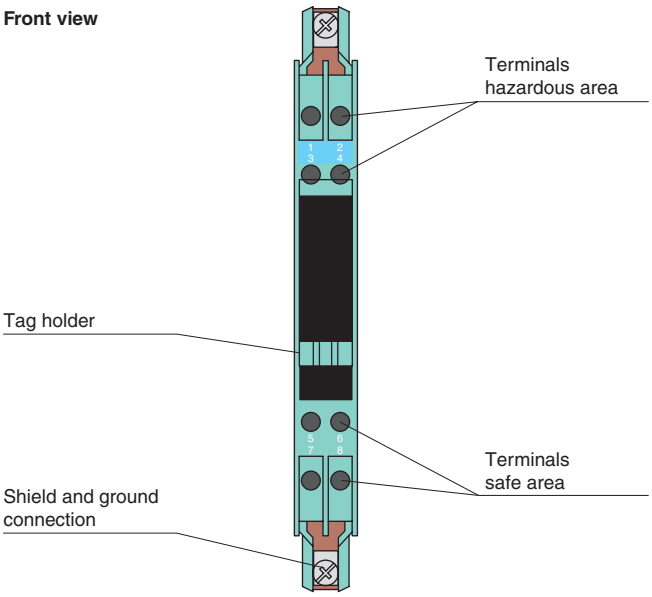
The Zener Barrier prevents the transfer of unacceptably high energy from the safe area into the hazardous area.

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.

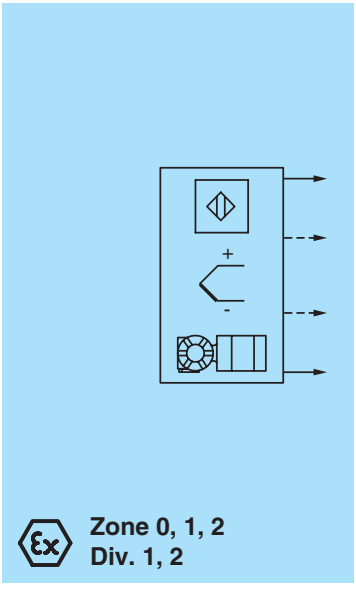
Asymmetrical Zener Barriers are for optimization of applications which have different voltage levels regarding to ground potential.

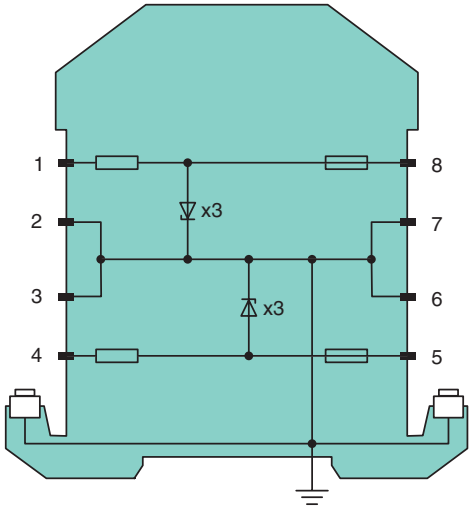
Depending on the application, increased or decreased intrinsic safety parameters apply for serial or parallel connection. For the detailed parameters refer to the Zener Barrier certificate. Application examples can be found in the system description of the Zener Barriers.

Assembly



Connection





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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
Hazardous area connection		
Connection		terminals 1, 2; 3, 4
Safe area connection		
Connection		terminals 5, 6; 7, 8
Working voltage		terminals 7, 8: max. 24.6 V; 24 V at 10 µA terminals 5, 6: max. 19 V; 18 V at 10 µA
Conformity		
Protection degree		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 moisture condensation
Mechanical specifications		
Protection degree		IP20
Connection		self-opening connection terminals, max. core cross-section 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 in)
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 Ex-areas		
EC-Type Examination Certificate		BAS 01 ATEX 7005 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection		⟨Ex⟩ 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
Statement of conformity		TÜV 99 ATEX 1484 X , observe statement of conformity
Group, category, type of protection, temperature class		⟨Ex⟩ II 3G Ex nA IIC T4 Gc [device in zone 2]
Directive conformity		
Directive 94/9/EC		EN 60079-0:2009, EN 60079-11:2007, EN 61241-11:2006 , EN 60079-15:2010
International approvals		
FM approval		
Control drawing		116-0118
UL approval		
Control drawing		116-0139
CSA approval		
Control drawing		116-0119
IECEx approval		IECEx BAS 09.0142
Approved for		[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I
General information		
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.

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