

Features

- 2-channel
- DC version, positive polarity
- Working voltage 26.5 V at 10 μ A
- Series resistance max. 250 Ω
- Fuse rating 80 mA
- DIN rail mounting
- High power version
- With diode return

Function

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

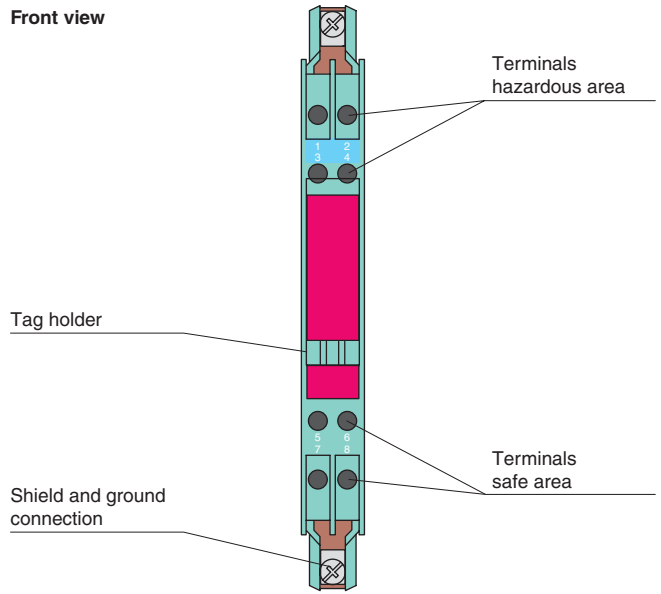
The zener diodes in the Zener Barrier are connected in the reverse direction. The breakdown voltage of the diodes is not exceeded in normal operation. If this voltage is exceeded, due to a fault in the safe area, the diodes start to conduct, causing the fuse to blow. The Zener Barrier has a positive polarity, i. e. the anodes of the zener diodes are grounded.

This high power version has a smaller serial resistance and therefore provides higher voltage to the field device.

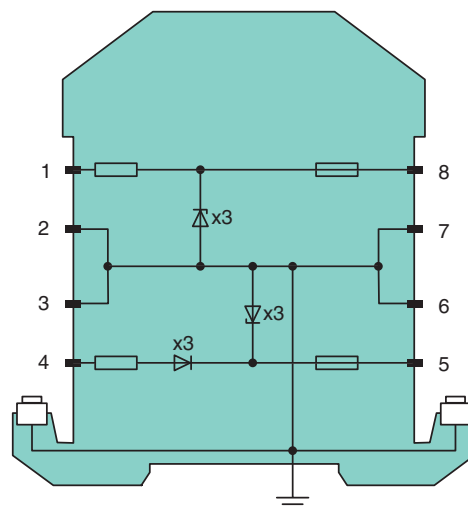
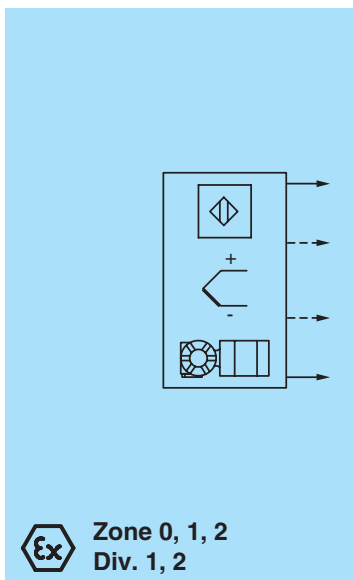
The Zener Barrier is for evaluation of signals from the hazardous area. The diodes of diode return prevent a current into the hazardous area, therefore the current assumption for intrinsic safety calculations is zero.

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



Zone 2
Div. 2

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General specifications		
Type	DC version, positive polarity	
Electrical specifications		
Nominal resistance	240 Ω	
Series resistance	max. 250 Ω	
Fuse rating	80 mA	
Hazardous area connection		
Connection	terminals 1, 2; 3, 4	
Safe area connection		
Connection	terminals 5, 6; 7, 8	
Rated voltage	28 V	
Supply voltage	max. 28 V	
Working voltage	26.5 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 DIN EN 60715	
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	⊕ 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	28 V
Current	I _o	120 mA
Power	P _o	830 mW
Supply		
Maximum safe voltage	U _m	250 V
Series resistance	min. 235 Ω	
Statement of conformity	TÜV 99 ATEX 1484 X , observe statement of conformity	
Group, category, type of protection, temperature class	⊕ 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 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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