

Features

- 2-channel
- DC version, positive polarity
- Working voltage 26.5 V at 10 μ A
- Series resistance max. 273 Ω
- Fuse rating 50 mA
- DIN rail mounting
- High power version
- Replaceable back-up fuse
- With diode return

Function

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

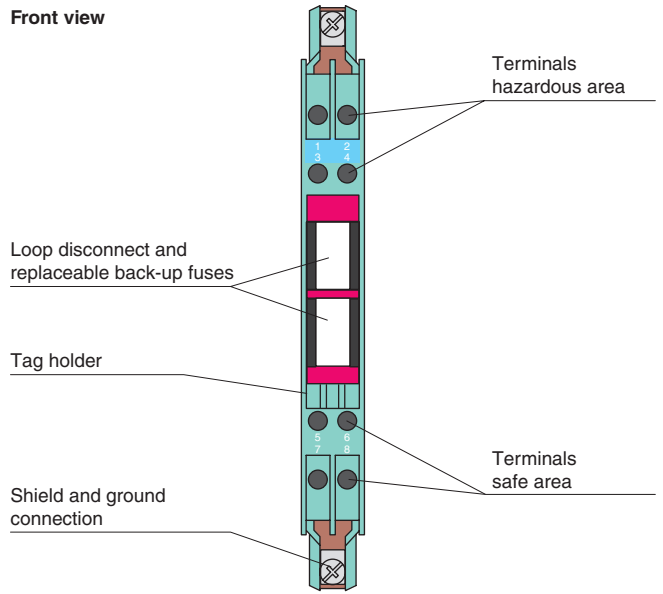
The zener diodes in the Zener Barrier are connected in the reverse direction. The breakdown voltage of the diodes is not exceeded in normal operation. If this voltage is exceeded, due to a fault in the safe area, the diodes start to conduct, causing the fuse to blow. The Zener Barrier has a positive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

Additionally this Zener Barrier is equipped with a replaceable fuse. This high power version has a smaller serial resistance and therefore provides higher voltage to the field device.

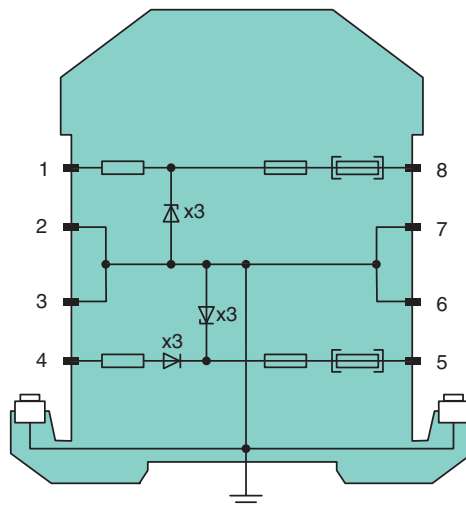
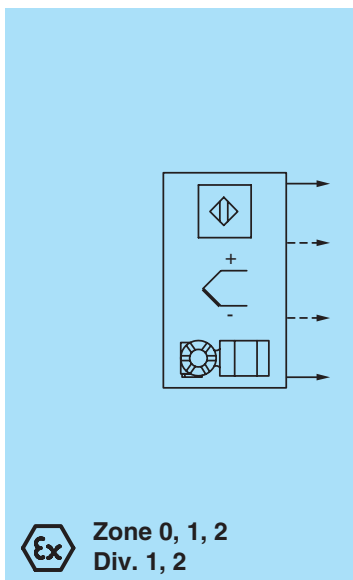
The Zener Barrier is for evaluation of signals from the hazardous area. The diodes of diode return prevent a current into the hazardous area, therefore the current assumption for intrinsic safety calculations is zero.

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



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General specifications		
Type	DC version, positive polarity	
Electrical specifications		
Nominal resistance	240 Ω	
Series resistance	max. 273 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		
Supply loop	≤ 27 V	
Measurement loop	≤ 26.5 V at 10 μA	
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 00 ATEX 7096	
Marking	⊕ II (1)GD, [Ex ia Ga] IIC, [Ex ia Da] IIIC, (-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. 235.2 Ω	
Permissible connection values [EEx ia]		
Certificate	TÜV 99 ATEX 1484 X	
Marking	⊕ II 3G Ex nA II T4 [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	116-0355 (cULus)	
CSA approval		
Control drawing	116-0119	
IECEX approval		
Approved for	IECEX BAS 18.0033 [Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I	
General information		
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see	

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