Features

- 2-channel
- DC version, negative polarity
- Working voltage 26.5 V at 10 µA
- Series resistance max. 36 Ω + 0.9 V
- Fuse rating 50 mA
- DIN rail mounting
- With diode return

Function

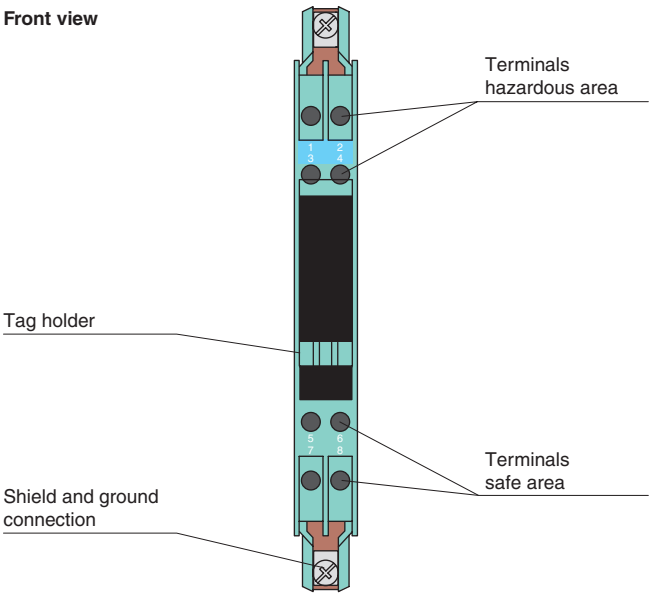
The Zener Barrier prevents the transfer of unacceptably high energy from the safe area into the hazardous area.

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 negative polarity, i. e. the cathodes of the zener diodes are grounded.

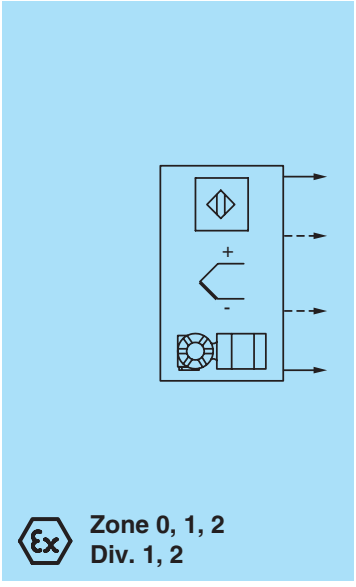
The Zener Barrier is for evaluation of signals from the hazardous area. The diodes of diode return prevent a current into the hazardous area, therefore the current assumption for intrinsic safety calculations is zero.

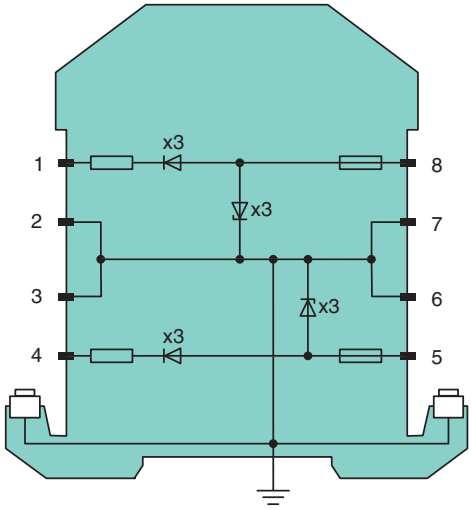
Depending on the application, increased or decreased intrinsic safety parameters apply for serial or parallel connection. For the detailed parameters refer to the Zener Barrier certificate. Application examples can be found in the system description of the Zener Barriers.

Assembly



Connection





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General specifications	
Type	DC version, negative polarity
Electrical specifications	
Nominal resistance	diode
Series resistance	max. 36 Ω + 0.9 V
Voltage drop	1.2 V + (36 Ω x signal current)
Fuse rating	50 mA
Hazardous area connection	
Connection	terminals 1, 2; 3, 4
Safe area connection	
Connection	terminals 5, 6; 7, 8
Working voltage	max. 27 V , 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 moisture condensation
Mechanical specifications	
Degree of protection	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	28 V
Supply	
Maximum safe voltage U_m	250 V
Series resistance	diode
Permissible connection values [EEx ia]	
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 60079-0:2012, EN 60079-11:2012 , 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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