



Zener Barrier

Z787.H.F

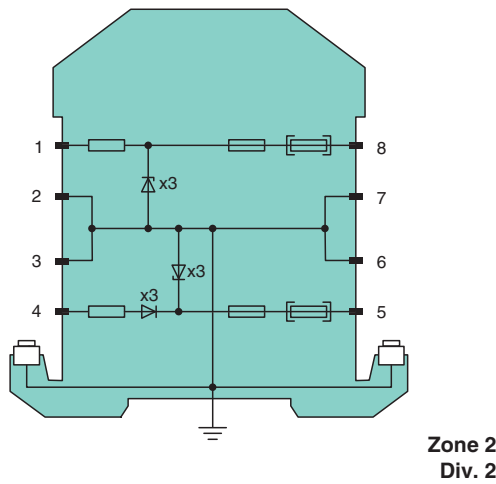
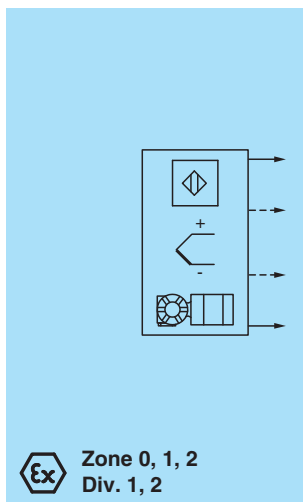
- 2-channel
- DC version, positive polarity
- Working voltage 26.5 V at 10 μ A
- Series resistance max. 273 Ω
- Fuse rating 50 mA
- DIN rail mounting
- High power version
- Replaceable back-up fuse
- With diode return



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.

Connection



Technical Data

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

Release date: 2022-01-05 Date of issue: 2022-01-05 Filename: 072179_eng.pdf

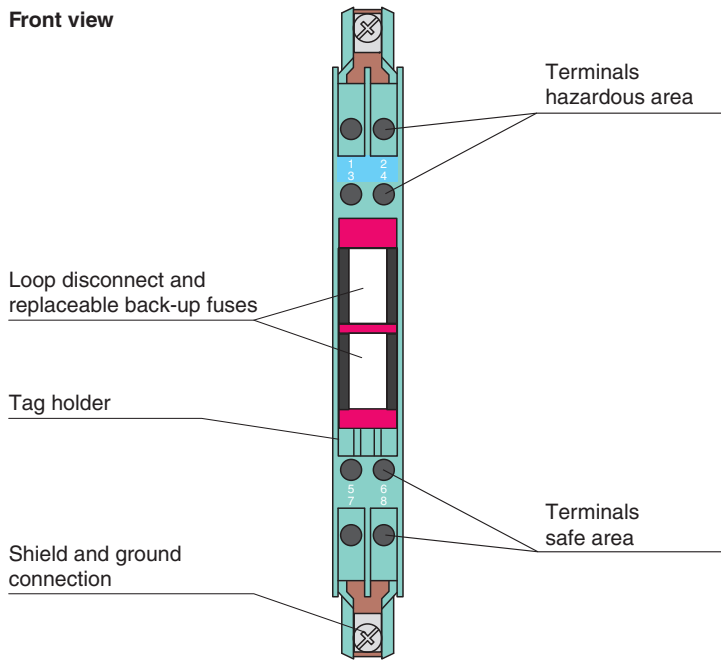
Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Technical Data

Safe area connection			
Connection		terminals 5, 6; 7, 8	
Working voltage			
Supply loop		max. 27 V	
Measurement loop		max. 26.5 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 116 mm (0.5 x 4.5 x 4.6 inch) (W x H x D)	
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 \leq T _{amb} \leq 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	
Certificate		TÜV 99 ATEX 1484 X	
Marking		Ⓔ II 3G Ex nA II T4 [device in zone 2]	
Directive conformity			
Directive 2014/34/EU		EN IEC 60079-0:2018+AC:2020 , EN 60079-11:2012 , EN 60079-15:2010	
International approvals			
FM approval			
Control drawing		116-0118	
UL approval			
Control drawing		116-0355 (cULus)	
IECEx approval			
IECEx certificate		IECEx BAS 18.0033	
IECEx marking		[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 www.pepperl-fuchs.com .	

Assembly

Front view



Matching System Components

ZH-ES/LB	Insertion Strip
ZH-Z.AB/NS	Mounting block for DIN mounting rail
ZH-Z.AB/SS	Mounting block for grounding rail
ZH-Z.AK16	Connection terminal for grounding rail
ZH-Z.AR.125	Spacing Roller
ZH-Z.BT	Label Carrier
ZH-Z.ES	Single Socket
ZH-Z.LL	Ground Rail Feed
ZH-Z.NLS-Cu3/10	Grounding Rail
USLKG5	Terminal Block