



Zener Barrier

Z961.F

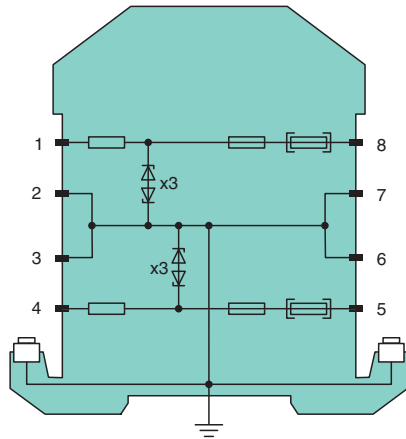
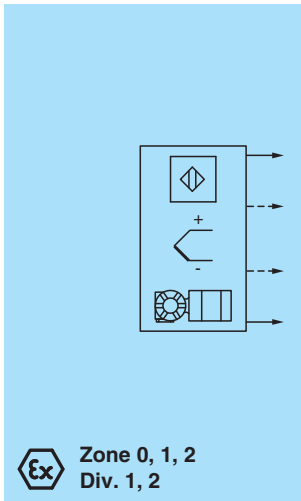
- 2-channel
- AC version
- Working voltage 6.5 V at 10 μ A
- Series resistance max. 115 Ω
- Fuse rating 100 mA
- DIN rail mountable
- Replaceable back-up fuse



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 alternating polarities, i. e. interconnected zener diodes are employed and one side is grounded. The Zener Barrier can be used for both alternating voltage signals and direct voltage signals. Additionally this Zener Barrier is equipped with a replaceable fuse. 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



Zone 2
Div. 2

Technical Data

General specifications	
Type	AC version
Electrical specifications	
Nominal resistance	100 Ω
Series resistance	max. 115 Ω
Fuse rating	100 mA
Hazardous area connection	
Connection	terminals 1, 2; 3, 4
Safe area connection	
Connection	terminals 5, 6; 7, 8

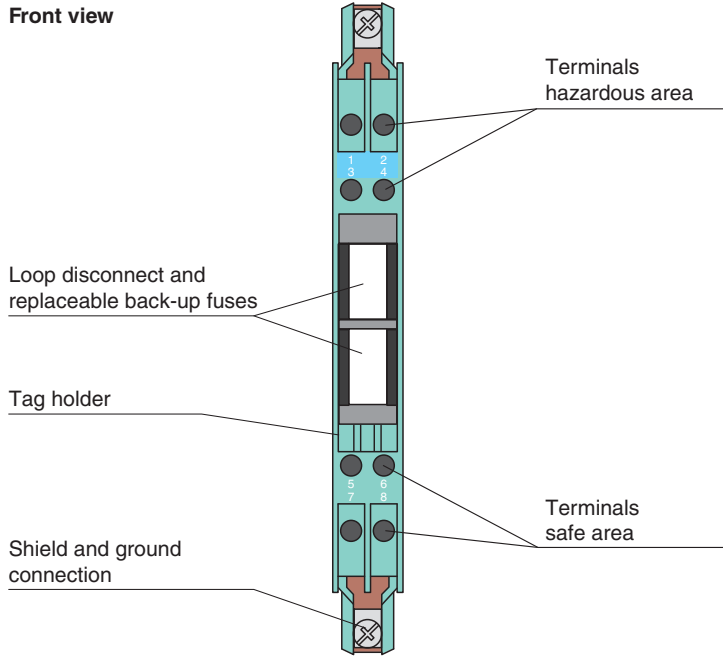
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Technical Data

Working voltage			
Supply loop			max. 7.7 V
Measurement loop			max. 6.5 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 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)G [Ex ia Ga] IIC , ⊕ II (1)D [Ex ia Da] IIIC , ⊕ I (M1) [Ex ia Ma] I
Voltage	U _o		8.7 V
Current	I _o		89 mA
Power	P _o		192 mW
Supply			
Maximum safe voltage	U _m		250 V
Series resistance			min. 98 Ω
Certificate			TÜV 99 ATEX 1484 X
Marking			⊕ II 3G Ex nA IIC T4 Gc
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 for equipotential bonding

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