



# Zener Barrier Z887.F

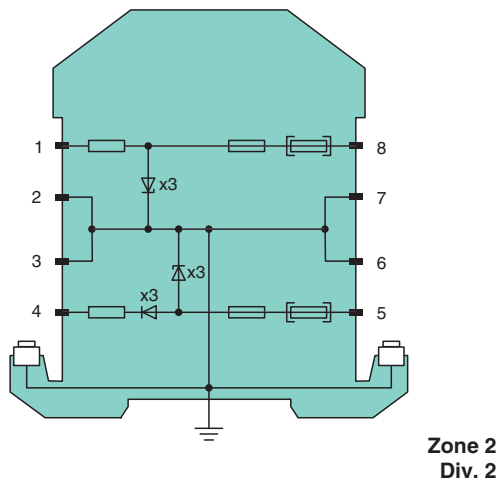
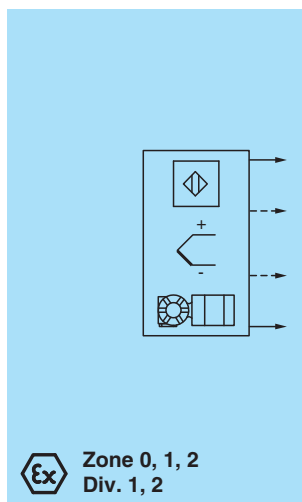
- 2-channel
- DC version, negative polarity
- Working voltage 26.5 V at 10 µA
- Series resistance max. 341 Ω
- Fuse rating 50 mA
- DIN rail mounting
- Replaceable back-up fuse
- With diode return



## 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 negative polarity, i. e. the cathodes of the zener diodes are grounded. Additionally this Zener Barrier is equipped with a replaceable fuse. 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

<b>General specifications</b>	
Type	DC version, negative polarity
<b>Electrical specifications</b>	
Nominal resistance	300 Ω
Series resistance	max. 341 Ω
Fuse rating	50 mA
<b>Hazardous area connection</b>	
Connection	terminals 1, 2, 3, 4

## 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 µA

### Conformity

Degree of protection	IEC 60529
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### 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 <sup>2</sup>
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 ≤ T <sub>amb</sub> ≤ 60 °C) [circuit(s) in zone 0/1/2]
Voltage	U <sub>o</sub> 28 V
Current	I <sub>o</sub> 93 mA
Power	P <sub>o</sub> 650 mW
Series resistance	min. 301 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

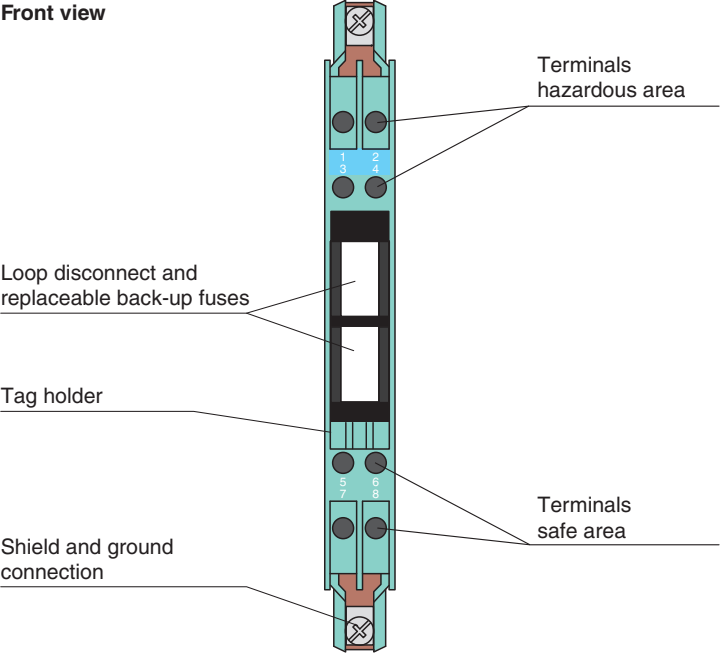
### International approvals

FM approval	
Control drawing	116-0118
UL approval	
Control drawing	116-0355 (cULus)
IECEEx approval	
IECEEx certificate	IECEEx BAS 18.0033
IECEEx 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 <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .
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Assembly



Matching System Components

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

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