

GBX370

Intrinsically safe galvanic isolator for hazardous area protection (P&F KFD0-SD2-Ex1.1045)

General

The GBX370 is an isolated barrier used for intrinsic safety applications. It provides control and signal transfer between equipment in hazardous and safe areas.

Installation

The GBX370 is a 2-wire device that does not require an external power supply. It obtains power from the safe area connection. Current drawn from this connection is less than 2 mA when loaded as specified.

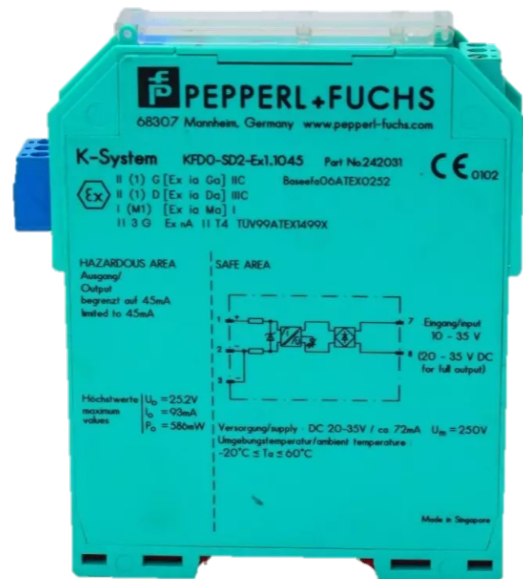
This GBX370 a single channel barrier recommended for any application in which a earth connection is not acceptable. It may also be used in conjunction with digital protocol translators.

The housing is a rail-mounted type for ease of installation in electrical cabinets or dedicated DIN housings.

Application and operation

The GBX370 functions like a data converter with current limiting. It forms a connection between SMART compatible devices when a digital data exchange is required. The input and output are galvanically isolated from each other for complete isolation between hazardous and non hazardous areas.

The power source for the detection or notification devices is installed in the safe area. The GBX370 transfers the power and data to the hazardous area. A response from the detection or notification devices in the hazardous area is similarly transferred back to the safe area.



Details

- 1-channel fully isolated barrier
- 24 VDC supply (loop powered)
- SMART fire alarm input
- No earthing required
- DIN-Rail mount for easy installation
- Device installation permissible in zone 2

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Technical specifications

General

Compatibility	Addressable I.S. and Conventional I.S. notification devices
Addressing method	No addressing required
System support	Aritech 900 Series and compatible conventional supervised notification outputs

Electrical

Power supply type	Loop powered
Power consumption	< 0.2 W for $U_{in} = 24\text{ V}$, $I_{out} = 20\text{ mA}$
Operating voltage	0 to 24 VDC
Current consumption	$\leq 65\text{ mA}$
Number of connection terminals	4

Isolation

Loop current	$\leq 35\text{ mA}$
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Physical

Physical dimensions	20 x 107 x 115 mm (0.8 x 4.2 x 4.5") (W x H x D)
Net weight	$\pm 100\text{ g}$
Colour	Green
Mounting type	DIN-rail
Mounting position	Wall
Texture	Textured

Environmental

Vandal proof	No
Operating temperature	-20 to 60°C (-4 to 140°F)
Environment	Exd, Indoor, IS
Hazardous environment rating	II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I
IP rating	IP20

Regulatory

Compliance	CE, REACH, RoHS 3, WEEE
Certification	CENELEC/ATEX, FM, UL/ULC
Standards	Up to SIL3 acc. to IEC 61508
Environmental	EMC acc. to NAMUR NE 21

Input (not intrinsically safe)

Signal type	Analogue input
Safety Integrity Level (SIL)	SIL 3
Voltage	4 to 26 VDC / 0 to 6 Vss AC
Current	1 to 20 mA
Power loss	0.2 W

Output (intrinsically safe)

Voltage (U_o)	28 V
Current (I_o)	93 mA
Power (P_o)	653 mW
Voltage	0 to 26 V
Short-circuit current	$\geq 65\text{ mA}$
Transfer current	0 to 20 mA

Protection [EEx ia] ratings

Explosion group (IIA)	2.14 μF / 35 mH
Explosion group (IIB)	0.64 μF / 17 mH
Explosion group (IIC)	0.077 μF / 4.3 mH



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