Instruction Manual

Marking

Zener barrier
Z040, Z041, Z042

IEC Type Examination Certificate: BAS 01 ATEX 1005
II (1)G [Ex ia Ga] IIC
II (1)D [Ex ia Da] IIC
I (M1) [Ex ia Ma] I

Statement of conformity: TÜV 99 ATEX 1484 X
II 3G Ex nA IIC T4 Gc

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1 Target Group, Personnel

Responsibility for planning, assembly, commissioning, operation, maintenance, and dismounting lies with the plant operator. Only appropriately trained and qualified personnel may carry out mounting, installation, commissioning, operation, maintenance, and dismounting of the device. The personnel must have read and understood the instruction manual. Prior to using the product make yourself familiar with it. Read the instruction manual carefully.

2 Reference to Further Documentation

Observe laws, standards, and directives applicable to the intended use and the operating location.

For mining applications, observe laws, standards, and directives applicable to the operating location. The corresponding datasheets, declarations of conformity, EC-type-examination certificates, certificates and control drawings if applicable supplement this document. You can find this information under www.pepperl-fuchs.com.

3 Intended Use

The device is only approved for appropriate and intended use. Ignoring these instructions will void any warranty and absolve the manufacturer from any liability. The device is used in control and instrumentation technology (C&I technology) for transfer of signals such as 20 mA and 10 V standard signals. The device has intrinsically safe circuits that are used for operating intrinsically safe field devices in hazardous areas. The device must be installed and operated only in surrounding enclosures that

4 Improper Use

Protection of the personnel and the plant is not ensured if the device is not being used according to its intended use.

5 Mounting and Installation

Do not mount a damaged or polluted device. Mount the device in a way that the device is protected against mechanical hazard. Mount the device in a surrounding enclosure for example. Do not mount the device in the dust hazardous area. The device fulfills a degree of protection IP20 according to IEC/EN 60529. The device must be installed and operated only in an environment that ensures a pollution degree 2 (or better) according to IEC/EN 60664-1. If used in areas with higher pollution degree, the device needs to be protected accordingly. The device is used if one of the following

6 Requirements for Cables and Connection Lines

Observe the following points when installing cables and connection lines:

7 Requirements for Usage as Associated Apparatus

If circuits with type of protection Ex i are operated with non-intrinsically safe circuits, they must no longer be used as circuits with type of protection Ex i.

8 Requirements for Usage as Associated Apparatus

If no L̅ and C̅ values are specified for the simultaneous appearance of lumped inductances and capacitances, the following rule applies.

If the device is an electrical apparatus for hazardous areas of Zone 2.

Keep the separation distances between all non-intrinsically safe circuits and intrinsically safe circuits according to IEC/EN 60079-14.

Observe the compliance of the separation distances between two adjacent intrinsically safe circuits according to IEC/EN 60079-14. The respective peak values of the field device and the associated apparatus with regard to explosion protection should be considered when connecting intrinsically safe field devices with intrinsically safe circuits of associated apparatus (verification of intrinsic safety). Make sure to observe IEC/EN 60079-14 and IEC/EN 60079-25.

If no L̅ and C̅ values are specified for the simultaneous appearance of lumped inductances and capacitances, the following rule applies.

The specified value for L̅ and C̅ is used if one of the following conditions applies:

- The circuit has distributed inductances and capacitances only, e. g., in cables and connection lines.
- The total value of L̅ (excluding cable) of the circuit is < 1 % of the specified L̅ value.
- The total value of C̅ (excluding cable) of the circuit is < 1 % of the specified C̅ value.
- A maximum of 50 % of the specified value for L̅ and C̅ is used if the following condition applies:
- If more than one channel of one device are connected in parallel, observe the parallel connection.

Observe the operating location conditions (see datasheet) and the operating location.

For mining applications, observe laws, standards, and directives applicable to the operating location.

9 Operation, Maintenance, Repair

The device may be installed in gas groups IIC, IIB and IIA. The device is an associated apparatus according to IEC/EN 60079

Ensure that external ground connections exist, are in good condition, and are not damaged or corroded.

10 Requirements for Equipment Protection Level Gc

The device must be installed and operated only in surrounding enclosures that

11 Connection or disconnection of energized non-intrinsically safe circuits is only permitted in the absence of a potentially explosive atmosphere.

12 Delivery, Transport, Disposal

Check the packaging and contents for damage. Check if you have received every item and if the items received are the ones you ordered. Always store and transport the device in the original packaging.

Store the device in a clean and dry environment. The permitted ambient conditions (see datasheet) must be considered.

Disposing of device, packaging, and possibly contained batteries must be in compliance with the applicable laws and guidelines of the respective country.

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Table 1

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