Level Pressure Flow Temperature Liquid Analysis Registration Systems Components Services Solutions

Safety Instructions

Cerabar S
PMC71, PMP71, PMP75
4-20 mA HART, PROFIBUS PA, FOUNDATION Fieldbus

Ex ia IIC T6 Ga/Gb

IECEx KEM06.0011

XA00696P-D

Safety instructions for electrical apparatus for explosion-hazardous areas according to IEC standards

XA00696P-D/00/EN/01.12
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Associated Documentation

This document is an integral part of the following Operating Instructions:
HART: BA271P/00, BA274P/00
PROFIBUS PA: BA295P/00, BA296P/00
FOUNDATION Fieldbus: BA302P/00, BA303P/00

The Operating Instructions which are supplied and correspond to the device type apply.

Supplementary Documentation

Explosion-protection brochure:
CP021Z/00

Designation

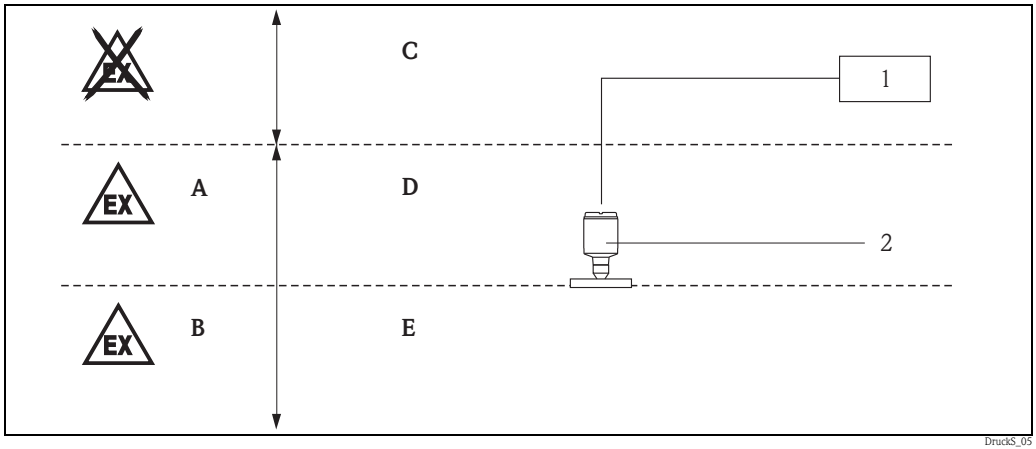
Explanation of the labelling and type of protection can be found in the explosion protection brochure.

Designation according to IECEx	
Equipment protection level (EPL)	**Ga/Gb**
Designation of explosion protection	**Ex ia IIC T6 Ga/Gb** **Ex ia IIC T4...T3 Ga/Gb**

Applied standards

IEC 60079-0 :2011
IEC 60079-11 :2011
IEC 60079-26 :2006

Safety instructions: Installation



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A *Zone 1*
B *Zone 0*
C *Power supply*
D *Electronic*
E *Process*

1 *Certified associated apparatus*
2 *PMC71, PMP71, PMP75*
Option: Separate housing

- Comply with the installation and safety instructions in the Operating Instructions.
- Install the device according to the manufacturer's instructions and any other valid standards and regulations (e.g. IEC 60079-14).
- Only install the devices in media for which the wetted materials have sufficient durability.
- Avoid electrostatic charging of the plastic surfaces, for plastic process connections or plastic coatings.
- The type of protection changes as follows when the devices are connected to certified intrinsically safe circuits of Category ib: Ex ib IIC T6 or Ex ib IIB T4.
  When connecting an intrinsically safe ib circuit, do not operate the sensor at Zone 0.
- The intrinsically safe input power circuit of the device is isolated from ground potential and has a dielectric strength of at least 500 V_{rms} with respect to it. For devices with integrated overvoltage protection (optional), the dielectric strength is min. 290 V_{rms} to earth.
- After aligning (rotating) the housing, retighten the fixing screw

Safety instructions: Zone 0

- Only operate devices in potentially explosive vapour/air mixtures under atmospheric conditions:
  $-20°C \leq T \leq +60°C$
  $0.8 \text{ bar} \leq p \leq 1.1 \text{ bar}$
- If no potentially explosive mixtures are present, or if additional protective measures have been taken, e.g. according to IEC 60079-14 or EN 1127-1, the transmitters may be operated under other than atmospheric conditions in accordance with the manufacturer's specifications.
- Associated apparatus with galvanic isolation between the intrinsically safe and non-intrinsically safe circuits are preferred.

For PMC71, the following also applies:
- On installations requiring overvoltage protection to comply with national regulations or standards (e.g. IEC 60079-14), this device shall be installed using an overvoltage protector.

Temperature tables

Type of protection/ level of protection	Type	Temperature class	Process temperature	Ambient temperature (Housing)
Ex ia IIC T6 Ga/Gb	All	T6	≤ 80 °C	–40 °C ≤ Ta ≤ +40 °C
Ex ia IIC T4...T3 Ga/Gb	PMC71, PMP71	T4	≤ 120 °C	–40 °C ≤ Ta ≤ +70 °C
	PMC71 High temperature	T3	≤ 150 °C	

The process temperatures refer to the temperature at the separation membrane of PMC71 and PMP71.
For PMP75, higher temperatures are permitted depending on the type of diaphragm seal (do not exceed the max. ambient temperature at the housing).

Connection data

Electronic insert: 4-20 mA HART

Ui ≤ 30 V DC
Ii ≤ 300 mA
Pi ≤ 1 W
Ci ≤ 11.8 nF
Li ≤ 225 µH (Order code, Position 2 "Output; Operation": A, B, C)
or
Li = 0 (Order code, Position 2 "Output; Operation": D, E, F)

Electronic insert: PROFIBUS PA, FOUNDATION Fieldbus

Ui ≤ 17.5 V DC
Ii ≤ 500 mA
Pi ≤ 5.5 W
or
Ui ≤ 24 V DC
Ii ≤ 250 mA
Pi ≤ 1.2 W
Ci ≤ 5 nF
Li ≤ 10 µH
(suitable for connection to a fieldbus system according to the FISCO model)

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