Level Pressure Flow Temperature Liquid Analysis Registration Systems Components Services Solutions

Safety Instructions

Deltapilot M
FMB50, FMB51, FMB52
4-20 mA HART

Ex ia IIC T6...T4 Ga/Gb
INMETRO IEE 11.0075

Segurança
INMETRO OCP 0011

XA01037P-A

Safety instructions for electrical apparatus for explosion-hazardous areas according to ABNT NBR IEC 60079-0

XA01037P-A/00/EN/01.12
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Deltapilot M
FMB50, FMB51, FMB52

english

4-20 mA HART

Associated Documentation

This document is an integral part of the following Operating Instructions:
BA00382P/00

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

Supplementary Documentation

Explosion-protection brochure:
CP021Z/00

Designation

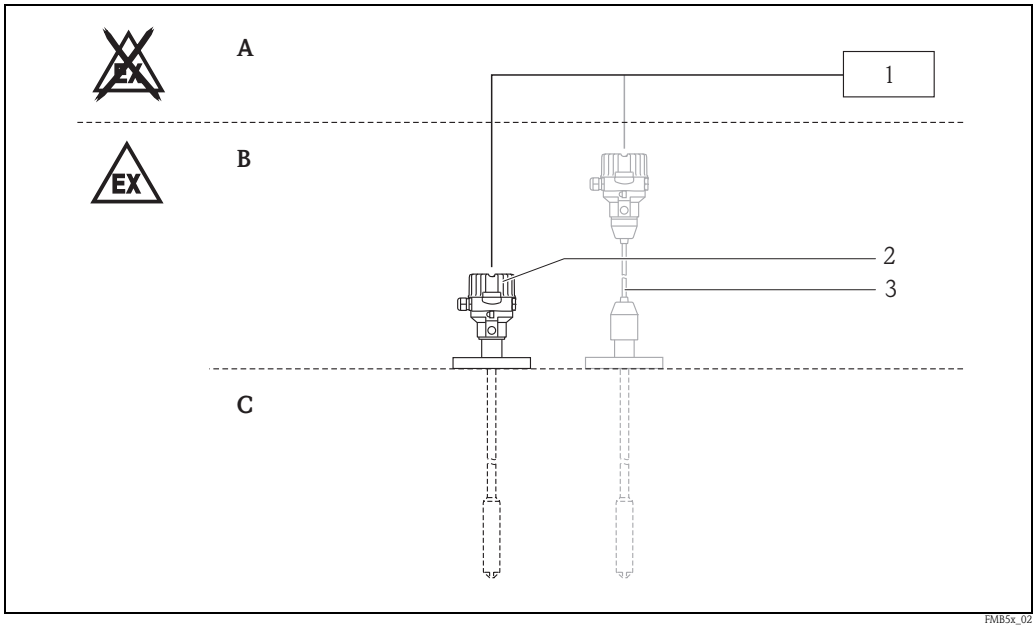
Explanation of the labelling and type of protection can be found in the explosion protection brochure.

Designation of type of protection/ level of protection	**Ex ia IIC T6...T4 Ga/Gb**

Applied standards

ABNT NBR IEC 60079-0 :2008
ABNT NBR IEC 60079-11 :2009
ABNT NBR IEC 60079-26 :2008

Safety instructions:
Installation



1

A *Power supply*
B *Zone 1, Electronic*
C *Zone 0, Process*

1 *Certified associated apparatus*
2 *FMB50, FMB51, FMB52*
3 *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.
- Only install the devices in media for which the wetted materials have sufficient durability.
- Execute inspection and maintenance of equipment according to requirements of ABNT NBR IEC 60079-17.
- Execute repair, overhaul and recovery of equipment according to requirements of ABNT NBR IEC 60079-19.
- Staff must meet the following conditions for mounting, electrical installation, commissioning and maintenance of the device:
  – Be suitably qualified for their role and the tasks they perform
  – Be trained in explosion protection
  – Be familiar with national regulations (e.g. ABNT NBR IEC 60079-14)
- Avoid electrostatic charging of the plastic surfaces, for plastic process connections or plastic coatings.
- When the device is connected to an intrinsically safe circuit Ex ib, the level of protection changes to Ex ib. Do not operate intrinsically safe circuits Ex ib in zone 0.
  When the device is connected to an intrinsically safe circuit Ex ic, the level of protection changes to Ex ic. Do not operate intrinsically safe circuits Ex ic in zone 0 or zone 1.
- 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.
- Avoid impact or friction sparks for light metal flanges or flange faces (e.g. titanium, zirconium).
- In case of additional or alternative special varnishing of the enclosure or other metallic parts the danger of an electrostatic charging must be observed. Do not rub surfaces with dry cloth.

FMB51
- Mechanically fix rod probes which are more than 3 m (e.g. using guy ropes).

FMB52
- Avoid electrostatic charging of the cable.
- Secure probes against swinging.

Safety instructions: Zone 0

- Only operate devices in potentially explosive vapour/air mixtures under atmospheric conditions:
  –20 °C ≤ T ≤ +60 °C
  0.8 bar ≤ p ≤ 1.1 bar
- If no potentially explosive mixtures are present, or if additional protective measures have been taken, the transmitters may be operated under other 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.

Temperature tables

Type	Type of protection/ level of protection	Temperature class	Process temperature	Ambient temperature (Housing)
FMB50	Ex ia IIC T6...T4 Ga/Gb	T6	≤ 80 °C	–40 °C ≤ Ta ≤ +40 °C
		T4	≤ 100 °C	–40 °C ≤ Ta ≤ +70 °C

The process temperatures refer to the temperature at the separation membrane
(do not exceed the max. ambient temperature at the housing).

Type	Type of protection/ level of protection	Temperature class	Process temperature	Ambient temperature (Housing)
FMB51	Ex ia IIC T6...T4 Ga/Gb	T6	≤ 80 °C	–40 °C ≤ Ta ≤ +40 °C
		T4	≤ 85 °C	–40 °C ≤ Ta ≤ +70 °C

The process temperatures refer to the temperature at the rod
(do not exceed the max. ambient temperature at the housing).

Type	Type of protection/ level of protection	Temperature class	Process temperature	Ambient temperature (Housing)
FMB52	Ex ia IIC T6...T4 Ga/Gb	T6	≤ 80 °C	–40 °C ≤ Ta ≤ +40 °C
		T4	≤ 80 °C	–40 °C ≤ Ta ≤ +70 °C

The process temperatures refer to the temperature at the cable
(do not exceed the max. ambient temperature at the housing).

Connection data

Type	Electrical Data
FMB5x	Ui ≤ 30 V DC Ii ≤ 300 mA Pi ≤ 1 W Ci ≤ 10 nF Li = 0

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