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Safety Instructions
Gammapilot FMG50

4-20 mA HART

Ex db IIC T6...T1 Gb

Document: XA02016F-A
Safety instructions for electrical apparatus for explosion-hazardous areas → 3

Endress+Hauser
People for Process Automation

Gammapilot FMG50

4-20 mA HART

Table of contents

Associated documentation

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

BA01966F/00

Supplementary documentation

Explosion-protection brochure: CP00021Z/11

The Explosion-protection brochure is available:
- In the download area of the Endress+Hauser website: www.endress.com -> Downloads -> Media Type: Documentation -> Documentation Type: Brochures and catalogs -> Text Search: CP00021Z
- On the CD for devices with CD-based documentation

Manufacturer's certificates

Certificate of Conformity

Certificate number:
CML 20JPN1125X

Affixing the certificate number certifies conformity with the following standards (depending on the device version):

- JNIOSH-TR-46-1:2015
- JNIOSH-TR-46-2:2018

Manufacturer address

Endress+Hauser SE+Co. KG
Hauptstraße 1
79689 Maulburg, Germany

Address of the manufacturing plant: See nameplate.

Extended order code

The extended order code is indicated on the nameplate, which is affixed to the device in such a way that it is clearly visible. Additional information about the nameplate is provided in the associated Operating Instructions.

Structure of the extended order code

FMG50	–	**********	+	A*B*C*D*E*F*G*..
(Device type)		*(Basic specifications)*		*(Optional specifications)*

* = Placeholder
At this position, an option (number or letter) selected from the specification is displayed instead of the placeholders.

Basic specifications

The features that are absolutely essential for the device (mandatory features) are specified in the basic specifications. The number of positions depends on the number of features available.
The selected option of a feature can consist of several positions.

Optional specifications

The optional specifications describe additional features for the device (optional features). The number of positions depends on the number of features available. The features have a 2-digit structure to aid identification (e.g. JA). The first digit (ID) stands for the feature group and consists of a number or a letter (e.g. J = Test, Certificate). The second digit constitutes the value that stands for the feature within the group (e.g. A = 3.1 material (wetted parts), inspection certificate).

More detailed information about the device is provided in the following tables. These tables describe the individual positions and IDs in the extended order code which are relevant to hazardous locations.

Extended order code: Gammapilot

The following specifications reproduce an extract from the product structure and are used to assign:
- This documentation to the device (using the extended order code on the nameplate).
- The device options cited in the document.

Device type

FMG50

Basic specifications

Position 1, 2 (Approval)		
Selected option		**Description**
FMG50	JQ	JPN Ex db IIC T6...T1 Gb

Position 7 (Electrical Connection)		
Selected option		**Description**
FMG50	F	Thread M20
	H	Thread NPT1/2

Position 8 (Application)		
Selected option		**Description**
FMG50	A	Ambient temperature -40...60°C/ -40...140°F (PVT)
	B	Ambient temperature -20...80°C/ -4...176°F (PVT HT)
	C	Ambient temperature -40...80°C/ -40...176°F (NaI)

Position 9 (Sensor Length, Material)		
Selected option		**Description**
FMG50	A, B, C	..... mm; NaI crystal
	G, H, I, J, K, L, M, N	..... mm; PVT

Optional specifications

No options specific to hazardous locations are available.

Safety instructions: General

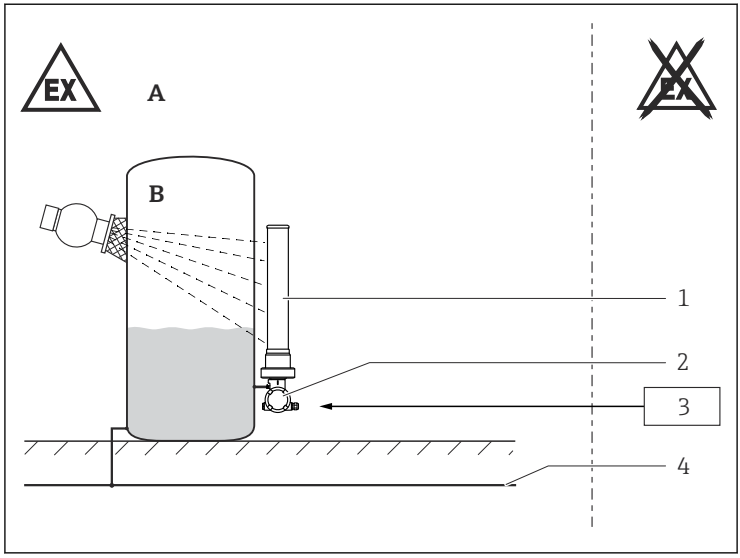
- Comply with the installation and safety instructions in the Operating Instructions.
- Staff must meet the following conditions for mounting, electrical installation, commissioning and maintenance of the device:
  - Be suitably qualified for their role and the tasks they perform
  - Be trained in explosion protection
  - Be familiar with national regulations
- Install the device according to the manufacturer's instructions and national regulations.
- Avoid electrostatic charging:
  - Of plastic surfaces (e.g. housing, sensor element, special varnishing, attached additional plates, ..)
  - Of isolated capacities (e.g. isolated metallic plates)

Safety instructions: Special conditions

In the event of additional or alternative special varnishing on the housing or other metal parts:

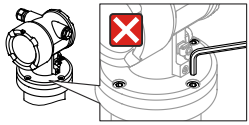
- Observe the danger of electrostatic charging and discharge.
- Do not rub surfaces with a dry cloth.
- Do not install in the vicinity of processes generating strong electrostatic charges.

Safety instructions: Installation



A Zone 1, Zone 2
B Zone 0, Zone 1, Zone 2
1 Detector pipe
2 Housing
3 Power supply
4 Local potential equalization

- After aligning (rotating) the housing, retighten the fixing screw.
- The safety screws at the pipe housing must not be loosened:



- In potentially explosive atmospheres: Do not open the connection compartment cover and the electronics compartment cover when energized.
- Before operation:
  - Screw in the cover all the way.
  - Tighten the securing clamp on the cover.
- Connect the device:
  - Using suitable cable and wire entries of protection type "Flameproof Enclosure (Ex d)".
  - Using piping systems of protection type "Flameproof Enclosure (Ex d)".

- When connecting through a conduit entry approved for this purpose, mount the associated sealing unit directly at the housing.
- Continuous service temperature of the connecting cable: ≥ T_a+20 K.
- Seal unused entry glands with approved sealing plugs that correspond to the type of protection. The plastic transport sealing plug does not meet this requirement and must therefore be replaced during installation.
- Only use certified cable entries or sealing plugs. The metal sealing plugs supplied meet this requirement.
- Only use genuine spare parts from Endress+Hauser which are specified for the device.

Potential equalization

Integrate the device into the local potential equalization.

Safety instructions: Ex d joints

- If required or if in doubt: ask manufacturer for specifications.
- Flameproof joints are not intended to be repaired.

Temperature tables

Basic specification, Position 8 (Application) = A

Temperature class	Ambient temperature T_a (ambient)
T6...T1	−40 °C ≤ T_a ≤ +60 °C

Basic specification, Position 8 (Application) = B

Temperature class	Ambient temperature T_a (ambient)
T6	−20 °C ≤ T_a ≤ +70 °C
T5...T1	−20 °C ≤ T_a ≤ +75 °C

Basic specification, Position 8 (Application) = C

Temperature class	Ambient temperature T_a (ambient)
T6	−40 °C ≤ T_a ≤ +70 °C
T5...T1	−40 °C ≤ T_a ≤ +75 °C

Connection data

Power supply
U ≤ 35 V_{DC} P ≤ 1 W

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