

Safety Instructions

Deltapilot S FMB70

4-20 mA HART, PROFIBUS PA,
FOUNDATION Fieldbus

II 3 G Ex ec IIC Gc



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About this document



This document has been translated into several languages. Legally determined is solely the English source text.

The document translated into EU languages is available:

- In the download area of the Endress+Hauser website:
www.endress.com -> Downloads -> Manuals and Datasheets -> Type: Ex Safety Instruction (XA) -> Text Search: ...
- In the Device Viewer: www.endress.com -> Product tools -> Access device specific information -> Check device features



If not yet available, the document can be ordered.

Associated documentation

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

HART

- BA00332P/00
- BA00274P/00

PROFIBUS PA

- BA00356P/00
- BA00296P/00

FOUNDATION Fieldbus

- BA00372P/00
- BA00303P/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 -> Brochures and Catalogs -> Text Search: CP00021Z
- On the CD for devices with CD-based documentation

Manufacturer's certificates

EU Declaration of Conformity

Declaration Number:

EU_00933

The EU Declaration of Conformity is available:

In the download area of the Endress+Hauser website:

www.endress.com -> Downloads -> Declaration -> Type: EU Declaration -> Product Code: ...

EU type-examination certificate

Certificate number:

EU 00933 X

List of applied standards: See EU Declaration of Conformity.

Manufacturer address

Endress+Hauser SE+Co. KG

Hauptstraße 1

79689 Maulburg, Germany

Phone: +49 7622 28-0

Address of the manufacturing plant: See nameplate.

Other standards

Among other things, the following standards shall be observed in their current version for proper installation:

- IEC/EN 60079-14: "Explosive atmospheres - Part 14: Electrical installations design, selection and erection"
- EN 1127-1: "Explosive atmospheres - Explosion prevention and protection - Part 1: Basic concepts and methodology"

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

| | | | | |
|----------------------|---|-------------------------------|---|----------------------------------|
| FMB70 | - | ***** | + | A*B*C*D*E*F*G*.. |
| <i>(Device type)</i> | | <i>(Basic specifications)</i> | | <i>(Optional specifications)</i> |

* = 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: Deltapilot S

Device type

FMB70

Basic specifications

| Position 1 (Approval) | | |
|------------------------------|---|-----------------------------|
| Selected option | | Description |
| FMB70 | 7 | ATEX II 3 G Ex ec IIC T6 Gc |

| Position 2 (Output, Operating) | | |
|---------------------------------------|---------|----------------------------------|
| Selected option | | Description |
| FMB70 | A, B, C | 4-20 mA HART |
| | D, E, F | 4-20 mA HART, L ₁ = 0 |
| | M, N, O | PROFIBUS PA |
| | P, Q, R | FOUNDATION Fieldbus |

Optional specifications

No options specific to hazardous locations are available.

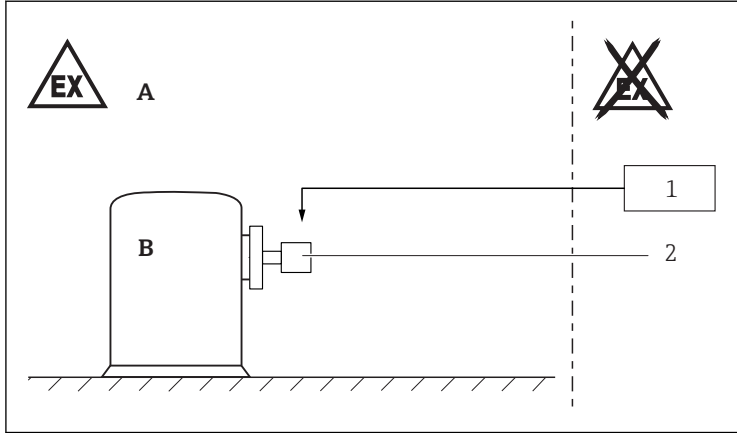
**Safety
instructions:
General**

- The device is intended to be used in explosive atmospheres as defined in the scope of EN IEC 60079-0 or equivalent national standards. If no potentially explosive atmospheres are present or if additional protective measures have been taken: The device may be operated according to the manufacturer's specifications.
- 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.
- Only use the device in media to which the wetted materials have sufficient durability.
- Avoid electrostatic charging:
 - Of plastic surfaces (e.g. enclosure, sensor element, special varnishing, attached additional plates, ..)
 - Of isolated capacities (e.g. isolated metallic plates)
- Tightening torque of the terminal screws: 2 Nm.

**Safety
instructions:
Special conditions**

- In the case of process connections made of polymeric material or with polymeric coatings, avoid electrostatic charging of the plastic surfaces.
- For light metal flanges or flange faces (e.g. titanium, zirconium), avoid sparks caused by impact and friction.
- In the event of additional or alternative special varnishing on the enclosure or other metal parts:
 - Observe the danger of electrostatic charging and discharge.
 - Do not rub surfaces with a dry cloth.
- In a condensing atmosphere: The device must not be serviced or installed.
- The device must be externally protected against transient overvoltage up to 140 % of the maximum voltage.

Safety instructions: Installation



A0041997

- A Zone 2, Electronic
 B Zone 2, Process
 1 Power supply
 2 FMB70

In potentially explosive atmospheres: Do not disconnect electrical connections when energized.

Temperature tables

| Type of protection | Ambient temperature T_a (ambient): enclosure |
|------------------------|--|
| II 3 G Ex ec IIC T6 Gc | $-40\text{ °C} \leq T_a \leq +60\text{ °C}$ |

Connection data

Basic specification, Position 2 = A, B, C, D, E, F

| Power supply |
|---------------------------|
| $U \leq 45\text{ V}_{DC}$ |

Basic specification, Position 2 = M, N, O, P, Q, R

| Power supply |
|---------------------------|
| $U \leq 32\text{ V}_{DC}$ |



71548382

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