

# Safety Instructions

## **Deltapilot M FMB50, FMB51**

4-20 mA HART, PROFIBUS PA,  
FOUNDATION Fieldbus

II 3 G Ex ec IIC Gc





# Deltapilot M FMB50, FMB51

4-20 mA HART, PROFIBUS PA, FOUNDATION Fieldbus

## Table of contents

Associated documentation .....	4
Supplementary documentation .....	4
Manufacturer's certificates .....	4
Manufacturer address .....	4
Other standards .....	5
Extended order code .....	5
Safety instructions: General .....	6
Safety instructions: Special conditions .....	7
Safety instructions: Installation .....	8
Temperature tables .....	8
Connection data .....	8

**Associated documentation**

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

HART  
BA00382P/00

PROFIBUS PA  
BA00383P/00

FOUNDATION Fieldbus  
BA00384P/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](http://www.endress.com) -> Downloads -> Brochures and Catalogs -> Text Search: CP00021Z
- On the CD for devices with CD-based documentation

**Manufacturer's certificates****UK Declaration of Conformity**

Declaration Number:  
UK\_00437

The UK Declaration of Conformity is available:  
In the download area of the Endress+Hauser website:  
[www.endress.com](http://www.endress.com) -> Downloads -> Declaration -> Type: UKCA Declaration -> Product Code: ...

**UKCA type-examination certificate**

Certificate number:  
UK 00437 X

List of applied standards: See UK Declaration of Conformity.

**Manufacturer address**

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

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**

FMB5x	-	*****	+	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 M



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*

FMB50, FMB51

### *Basic specifications*

Position 1, 2 (Approval)		
Selected option		Description
FMB5x	UD	UK Ex II 3 G Ex ec IIC T6...T4 Gc

Position 3 (Output)		
Selected option		Description
FMB5x	2	4-20 mA HART
	3	PROFIBUS PA
	4	FOUNDATION Fieldbus

### *Optional specifications*

No options specific to hazardous locations are available.

## Safety instructions: General

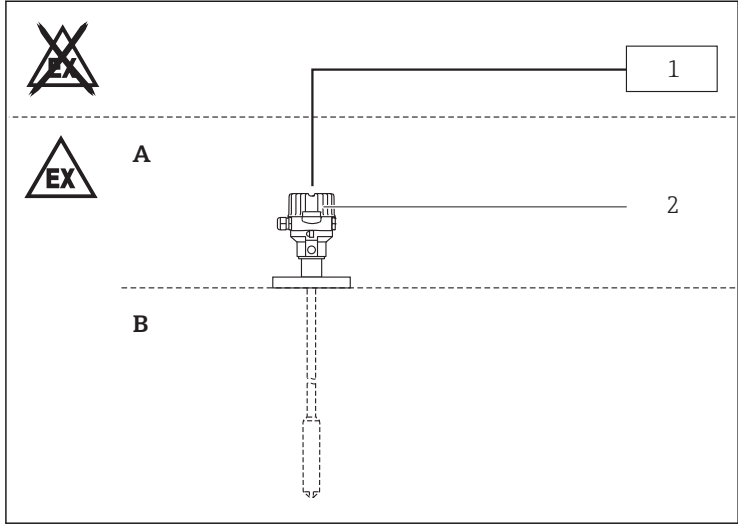
- The device is intended to be used in explosive atmospheres as defined in the scope of EN IEC 60079-0 or equivalent national standards. If no potentially explosive atmospheres are present or if additional protective measures have been taken: The device may be operated according to the manufacturer's specifications.
- 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
- Comply with the installation and safety instructions in the Operating Instructions.

- 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)

**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**



A0027574

- A Electronic; Zone 2
- B Process; Zone 2
- 1 Power supply
- 2 FMB50, FMB51

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

Device type FMB51

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

**Temperature tables**

Type of protection	Temperature class	Ambient temperature $T_a$ (ambient): enclosure
II 3 G Ex ec IIC T6...T4 Gc	T6	$-40\text{ °C} \leq T_a \leq +40\text{ °C}$
	T4	$-40\text{ °C} \leq T_a \leq +70\text{ °C}$

**Connection data**

Basic specification, Position 3 = 2

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



*Basic specification, Position 3 = 3, 4*

<b>Power supply</b>
$U \leq 32 V_{DC}$







71548470

[www.addresses.endress.com](http://www.addresses.endress.com)

---