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Safety Instructions
Waterpilot FMX21

II 3 G Ex ec IIC Gc

Endress+Hauser
People for Process Automation

Waterpilot FMX21

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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:

BA00380P/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_00960

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 00960 X

List of applied standards: See EU Declaration of Conformity.

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

FMX21	–	**********	+	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: Waterpilot

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

FMX21

Basic specifications

Position 1, 2 (Approval)		
Selected option		**Description**
FMX21	BD	ATEX II 3 G Ex ec IIC T6/T5 Gc

Position 4 (Probe Tube)		
Selected option		**Description**
FMX21	1	316L, d=22mm/0.87in
	2	316L, d=42mm/1.66in, flush mount
	5	PPS/Polyolefin>316L, d=29mm/1.15in, application salt-water

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

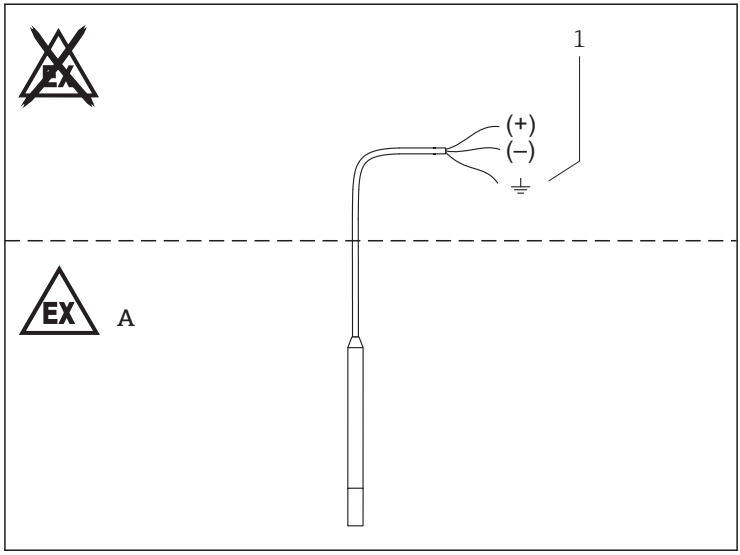
- Install the device according to the manufacturer's instructions and national regulations.
- Do not operate the device outside the specified electrical, thermal and mechanical parameters.
- Avoid electrostatic charging:
  - Of plastic surfaces (e.g. enclosure, sensor element, special varnishing, attached additional plates, ..)
  - Of isolated capacities (e.g. isolated metallic plates)

Safety instructions: Special conditions

- To avoid electrostatic charging: Do not rub surfaces with a dry cloth.
- In the event of additional or alternative special varnishing on the enclosure or other metal parts or for adhesive plates:
  - Observe the danger of electrostatic charging and discharge.
  - Do not install in the vicinity of processes (≤ 0.5 m) generating strong electrostatic charges.
- Avoid sparks caused by impact and friction.
- Anchor equipment if necessary/secure against swinging.
- Do not use in media or environments which may generate electrostatic charges on the plastic surfaces.
- In potentially explosive atmospheres: Do not disconnect electrical connections when energized.
- The device corresponds to the "low" strain level. It must be mounted in a protected position, if mechanical stress is to be expected.

Basic specification, Position 4 = 5
The sensor enclosure must be protected from UV radiation.

Safety instructions: Installation



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A Zone 2
1 Only for Basic specification, Position 4 = 1, 2

- Connect cable screen to earth ground of the installation.
- The circuit of the device is isolated from ground. The dielectric strength is at least 500 V_{rms}.
- When shortening the length of the cable: Ensure that the dielectric strength is maintained for connection wires and earth grounded screen.

Temperature tables

Ambient temperature range	Ingress protection
−10 °C ≤ T_a ≤ +70 °C	IP68

Max. ambient temperature	Temperature class
+70 °C	T5
+60 °C	T6

Maximum tensile load at the sensor	Cable material
≤ 100 N	PUR, PE, FEP

Connection data

Electrical data
$U \leq 30\ V_{DC}$

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