

Safety Instructions

Remote display FHX50B

ATEX, IECEx: Ex db IIC T6 Gb



Remote display FHX50B

Table of contents

Associated documentation	4
Supplementary documentation	4
Certificates and declarations	4
Certificate holder	4
Other standards	5
Extended order code	5
Safety instructions: General	6
Safety instructions: Special conditions	7
Safety instructions: Installation	8
Safety instructions: Ex d joints	9
Temperature tables	9
Connection data	10

Associated documentation

All documentation is available on the Internet:
www.endress.com/Deviceviewer
(enter the serial number from the nameplate).



If not yet available, a translation into EU languages can be ordered.

To commission the device, please observe the Operating Instructions pertaining to the device:

SD02991F

Supplementary documentation

Explosion protection brochure: CP00021Z

The explosion protection brochure is available on the Internet:
www.endress.com/Downloads

Certificates and declarations**EU Declaration of Conformity**

Declaration Number:
EU_01109

The EU Declaration of Conformity is available on the Internet:
www.endress.com/Downloads

EU type-examination certificate

Certificate number:
SEV 23 ATEX 0666 X

List of applied standards: See EU Declaration of Conformity.

IEC Declaration of Conformity

Certificate number:
IECEX SEV 23.0002X

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

- IEC 60079-0 : 2017
- IEC 60079-1 : 2014

Certificate holder

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

FHX50B	–	*****	+	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: Remote display



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

FHX50B

Basic specifications

Position 1, 2 (Approval)		
Selected option		Description
FHX50B	BC	ATEX II 2 G Ex db IIC T6...T1 Gb IECEx Ex db IIC T6...T1 Gb

Position 4 (Housing, Material)		
Selected option		Description
FHX50B	B	Single compartment; Alu, coated

Position 5 (Electrical Connection, Cable)		
Selected option		Description
FHX50B	5	Thread M20; w/o
	6	Thread G1/2; w/o
	7	Thread NPT1/2; w/o

Optional specifications

ID Jx, Kx (Test, Certificate, Declaration)		
Selected option		Description
FHX50B	JL	Ambient temperature -50°C/-58°F

Safety instructions: General



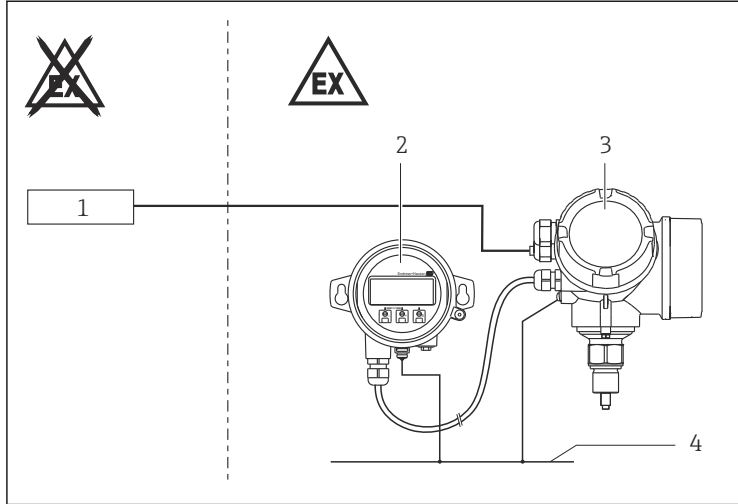
The FHX50B remote display can only be operated with compatible Endress+Hauser measuring devices.

- The device is intended to be used in explosive atmospheres as defined in the scope of 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.
- 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)
- Alterations to the device can affect the explosion protection and must be carried out by staff authorized to perform such work by Endress+Hauser.

**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.
- In the case of process connections made of polymeric material or with polymeric coatings, avoid electrostatic charging of the plastic surfaces.

Safety instructions: Installation



A0032629

- 1 Power supply or certified associated apparatus (dependent on Endress+Hauser measuring device)
- 2 FHX50B in Zone 1
- 3 Endress+Hauser measuring device
- 4 Local potential equalization

- After aligning (rotating) the enclosure, retighten the fixing screw.
- Continuous service temperature of the connecting cable: $-40\text{ }^{\circ}\text{C}$ to $\geq +85\text{ }^{\circ}\text{C}$.
- 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 screw on the cover.
- Connect the device:
 - Using suitable cable and wire entries of protection type "Flameproof Enclosure (Ex db)".
 - Using piping systems of protection type "Flameproof Enclosure (Ex db)".
- When connecting through a conduit entry approved for this purpose, mount the associated sealing unit directly at the enclosure.

- 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.

Basic specification, Position 5 = 6

Flameproof equipment with G threaded holes is not intended for new installations, but only for replacing equipment in existing installations. Use of this equipment shall comply with the local installation requirements.

Basic specification, Position 5 = 7

Observe the requirements according to IEC/EN 60079-14 for conduit systems and the wiring- and installation instructions of the suitable Safety Instructions (XA). In addition, observe national regulations and standards for conduit systems.

Optional specification, ID Jx, Kx = JL

Continuous service temperature of the connecting cable:
 -50 °C to $\geq +85\text{ °C}$; in accordance with the range of service temperature taking into account additional influences of the process conditions ($T_{a,\min}$), ($T_{a,\max} + 20\text{ K}$).

Potential equalization

Integrate the device into the local potential equalization.

Safety instructions: Ex d joints

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

Temperature tables



- The specified ambient temperature ranges exclusively refer to the explosion protection and must not be exceeded. Operationally permitted ambient temperature ranges can be restricted depending on the version: See Operating Instructions.
- Do not exceed the max. ambient temperature at the enclosure.



Optional specification, ID Jx, Kx = JL

Lower limit of the ambient temperature for explosion protection changes to -50 °C .

Temperature class	Ambient temperature range
T6...T1	$-40\text{ °C} \leq T_a \leq +70\text{ °C}$

Connection data**Power supply**

$$U \leq 6 V_{DC}$$



71602242

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