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Safety Instructions
Minicap FTC260

Ex ta/tb IIIC T_{200}105°C Da/Db

Endress+Hauser
People for Process Automation

Minicap FTC260

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About this document

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

Associated documentation

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

TI00287F/00, KA00093F/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

NEPSI Declaration of Conformity

Certificate number:
GYJ21.1253

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

- GB/T 3836.1-2021
- GB/T 3836.31-2021

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

FTC260	–	**********	+	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: Minicap

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

FTC260

Basic specifications

Position 1 (Approval)		
Selected option		**Description**
FTC260	2	NEPSI Ex ta/tb IIIC T_{200}105°C Da/Db

Position 3 (Switch Output)		
Selected option		**Description**
FTC260	2	3-wire PNP 10.8-45VDC
	4	Relay 20-253VAC/20-55VDC

Position 4 (Housing, Cable Entry)		
Selected option		**Description**
FTC260	H	F34 Alu IP66; thread NPT1/2, NEMA Type 4 Encl.
	I	F34 Alu IP66; thread G1/2, NEMA Type 4 Encl.
	J	F34 Alu IP66; gland M20, NEMA Type 4 Encl.

Position 5 (Additional Option)		
Selected option		**Description**
FTC260	1	Basic version
	3	Glass inspection window, aluminium

Optional specifications

No options specific to hazardous locations are available.

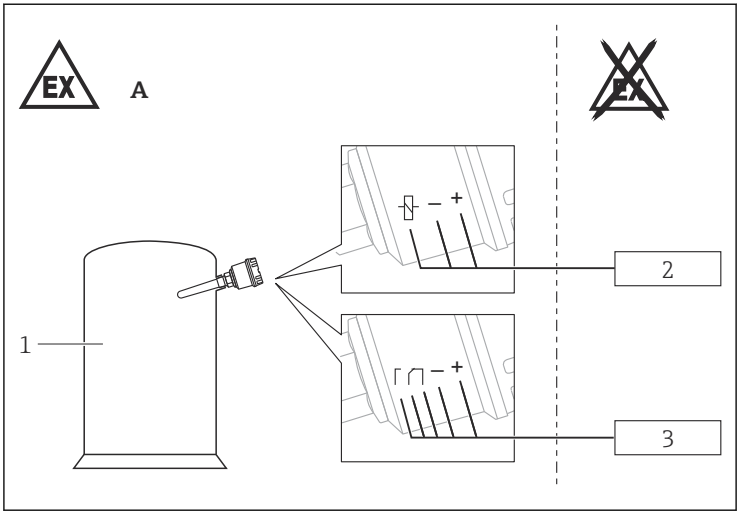
Safety instructions: General

- 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
- For installation, use and maintenance of the device, users must also observe the requirements stated in the Operating Instructions and the standards:
  - GB 50257-2014: "Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering".
  - GB/T 3836.13-2021: "Explosive atmospheres, Part 13: Equipment repair, overhaul, reclamation and modification".
  - GB/T 3836.15-2017: "Explosive atmospheres, Part 15: Electrical installations design, selection and erection".
  - GB/T 3836.16-2017: "Explosive atmospheres, Part 16: Electrical installations inspection and maintenance".
  - GB 15577-2018: "Safety regulations for dust explosive prevention and protection". (Only if installed in dust hazardous area.)
- 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.

Safety instructions: Installation



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A Zone 21
1 Tank; Hazardous area Zone 20
2 Power supply or switching unit: DC version or
3 Power supply or switching unit: Relay version

Temperature tables

Thermal performance limits		
Temperature of the sensor (Zone 20)	Permissible process temperature T_p	−40 to +80 °C
	Maximum surface temperature	
	at an ambient temperature of 40 °C	65 °C
	at an ambient temperature of 80 °C	105 °C
Temperature of the electronics enclosure (Zone 21)	Permissible ambient temperature T_a	−40 to +60 °C
	Maximum surface temperature	
	at an ambient temperature of 40 °C	70 °C
	at an ambient temperature of 60 °C	90 °C

Degree of ingress protection	
Sensor (Zone 20)	IP66
Electronics enclosure (Zone 21)	IP66

Connection data

Electrical performance limits		
Basic specification, Position 3 = 4 (AC/DC relay version)	Maximum operating voltage	20 to 253 V_{AC}, 50/60 Hz or 20 to 55 V_{DC}
	Current consumption	max. 2 W
	Relay circuit	253 V_{AC} / 4 A / 1000 VA or 253 V_{DC} / 0.2 A / 50 W or 30 V_{DC} / 4 A / 120 W
	Fuse	500 mA
Basic specification, Position 3 = 2 (DC PNP version)	Maximum operating voltage	10.8 to 45 V_{DC}
	Current consumption	max. 1.5 W
	Switch output (PNP)	
	Current	max. 200 mA
	Switching capacity	9 W

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