

# Safety Instructions

## Minicap FTC260

Ex ta/tb IIIC T<sub>200</sub> 105 °C Da/Db



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# Minicap FTC260

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**About this document**

The document number of these Safety Instructions (XA) must match the information on the nameplate.

**Associated documentation**

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

TI00287F, KA00093F

**Supplementary documentation**

Explosion protection brochure: CP00021Z

The explosion protection brochure is available on the Internet:  
[www.endress.com/Downloads](http://www.endress.com/Downloads)

**Certificates and declarations****NEPSI Declaration of Conformity**

Certificate number:  
GYJ26.1148X

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<br>type) |   | (Basic<br>specifications) |   | (Optional<br>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 <sub>200</sub> 105 °C Da/Db |

| Position 3 (Switch Output) |   |                                                           |
|----------------------------|---|-----------------------------------------------------------|
| Selected option            |   | Description                                               |
| FTC260                     | 2 | 3-wire PNP 10.8 to 45 V <sub>DC</sub>                     |
|                            | 4 | Relay 20 to 253 V <sub>AC</sub> /20 to 55 V <sub>DC</sub> |

| 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.

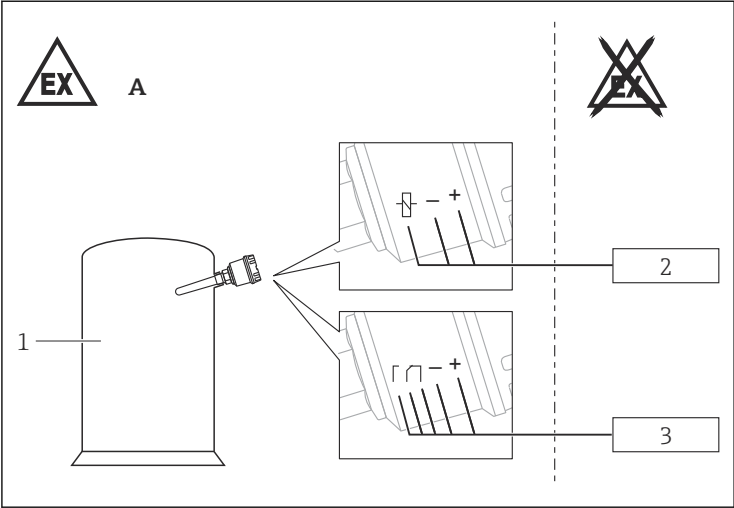
**Safety  
instructions:  
General**

- 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 3836.15-2024: "Explosive atmospheres, Part 15: Specification of electrical installations design, selection and erection".
  - GB 3836.16-2024: "Explosive atmospheres, Part 16: Specification of 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:  
Specific  
conditions of use**

- 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 ( $\leq 0.5$  m) generating strong electrostatic charges.

Safety instructions:  
Installation



A0027419



- 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<br>(Zone 20)                | Permissible process temperature $T_p$ -40 to +80 °C                                   |
|                                                       | Maximum surface temperature                                                           |
|                                                       | at an ambient temperature of 40 °C 65 °C<br>at an ambient temperature of 80 °C 105 °C |
| Temperature of the electronics<br>enclosure (Zone 21) | Permissible ambient temperature $T_a$ -40 to +60 °C                                   |
|                                                       | Maximum surface temperature                                                           |
|                                                       | at an ambient temperature of 40 °C 70 °C<br>at an ambient temperature of 60 °C 90 °C  |

| Degree of ingress protection       |      |
|------------------------------------|------|
| Sensor<br>(Zone 20)                | IP66 |
| Electronics enclosure<br>(Zone 21) | IP66 |

Connection data

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

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