



# Brief Operating Instructions Minicap FTC260

Capacitance



These Brief Operating Instructions are not a substitute for the Operating Instructions pertaining to the device. Detailed information can be found in the Operating Instructions and the additional documentation.

Available for all device versions via:

- Internet: [www.endress.com/deviceviewer](http://www.endress.com/deviceviewer)
- Smartphone/tablet: Endress+Hauser Operations app

## Basic safety instructions

### Manufacturer's address

Manufacturer: Endress+Hauser SE+Co. KG, Hauptstraße 1, D-79689 Maulburg or [www.endress.com](http://www.endress.com).

Place of manufacture: See nameplate.

### Requirements for the personnel

The personnel must fulfill the following requirements to carry out their tasks, e. g. commissioning and maintenance:

- ▶ Trained specialists must have a qualification that is relevant to the specific function and task.
- ▶ Must be authorized by the plant owner/operator.
- ▶ Must be familiar with national regulations.
- ▶ Must have read and understood the instructions in the manual and supplementary documentation.
- ▶ Personnel must follow instructions and comply with general policies.

### Designated use

- The device may only be used as a limit switch for bulk solids

- The device may be dangerous if used incorrectly
- Only use insulated tools
- Only use original parts

### Workplace safety

When working on and with the device:

- ▶ Wear the required personal protective equipment as per national regulations.

### Operational safety

- ▶ Operate the device only if it is in proper technical condition, free from errors and faults.
- ▶ The operator is responsible for ensuring that the device is in good working order.

### Product safety

This product is designed in accordance with good engineering practice to meet state-of-the-art safety requirements and has been tested and left the factory in a condition in which it is safe to operate.

## Mounting

### Mounting requirements

Required tools:

Open-ended wrench or socket wrench 41 AF

- The stream of filling material must not be directed onto the probe.
- The device can be used in silos consisting of different materials.
- Pay attention to the expected slope angle of the material mounds and the outlet funnel when determining the mounting location.

### Ambient temperature range:

- -40 to +70 °C (-40 to +158 °F)
- For the dust Ex version: -40 to +60 °C (-40 to +140 °F)

### Process temperature:

- -40 to +120 °C (-40 to +248 °F)
- At temperatures < 80 °C (176 °F), observe the temperature derating; see Technical Information
- For the dust Ex version: -40 to +80 °C (-40 to +176 °F)

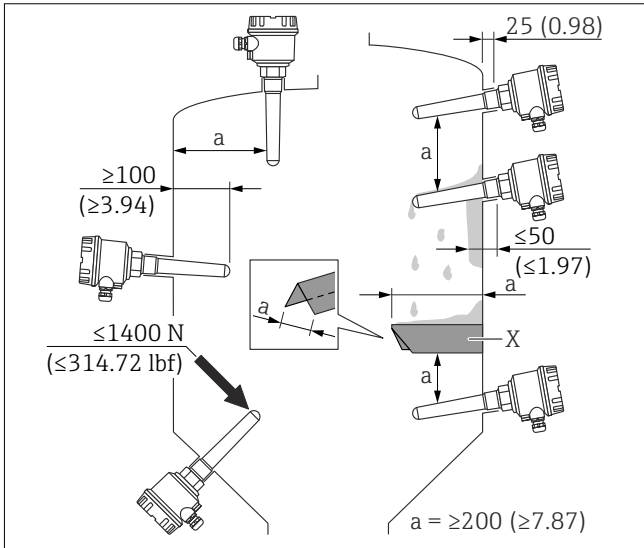
### Mounting position

**Minimum distances:** To prevent mutual interference, the minimum distance between two probe ends shown in the figure must be maintained.

**Installation location:** Probe end slightly inclined downward so that the process medium can slide off even more effectively. Use a protective cover to protect the

probe rod from collapsing mounds or severe strain on the probe rod for material discharge when the device is used for minimum detection.

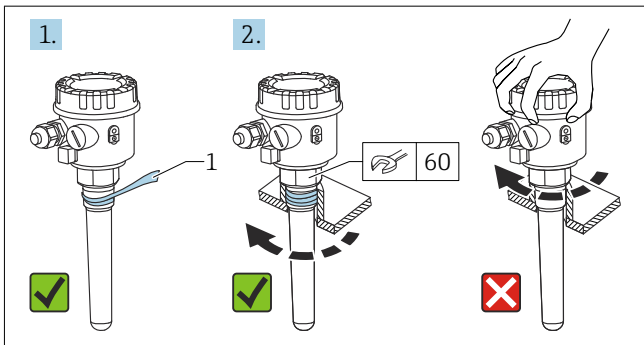
**Load-bearing capacity:** The maximum lateral load-bearing capacity of the probe rod must be taken into account when used for minimum detection. Minimum detection can therefore only be used when the process medium slides down effectively and is free-flowing.



1 Minimum distances during installation in a silo in mm (inch); x: Protective cover

**Mounting the device**

1. Wrap PTFE tape around the thread of the device.
2. Screw in the device. Tighten by the hexagonal nut only. Use an open-ended wrench.



2 Screwing in the device

**Electrical connection**

**WARNING**

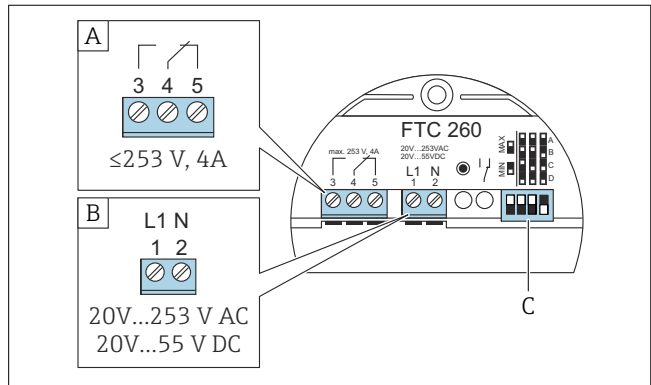
**Risk of explosion due to faulty connection.**

- ▶ Comply with applicable national standards.
- ▶ Comply with the specifications in the Safety Instructions (XA).
- ▶ Check to ensure that the power supply matches the information on the nameplate.
- ▶ Switch off the supply voltage before connecting.

- ▶ When using the device in a dust explosive atmosphere, connect potential compensation (PAL).

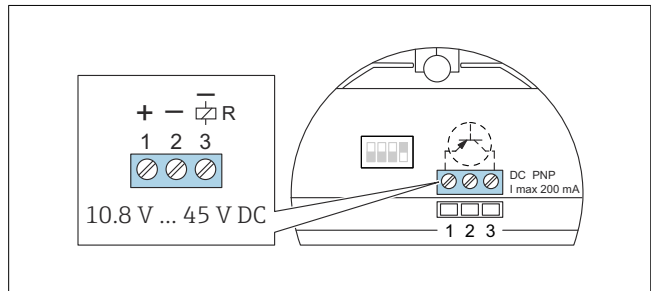
**i** To ensure that the device operates safely and without interference, it must be connected to the grounded silo with metal or reinforced concrete walls. For silos made of non-conductive material, the external ground connection of the device must be connected to conductive and grounded parts in the vicinity of the silo. The protective ground of the mains connection can be connected to the internal ground connection of the device. A commercially available installation cable can be used for the connections. For general information on EMC (test procedure, installation recommendations), see TI00241F/00/EN.

*Connecting the device*



3 Device with AC or DC connection and relay output

- A Relay connection
- B AC or DC connection
- C DIP switch (in factory setting)



4 Device with DC connection

The device is configured via the DIP switches, refer to the supplementary documentation.

**Ensuring the degree of protection**

Testing as per IEC 60529

- Plastic housing: IP66; Type 4 enclosure
- Aluminum housing: IP66; Type 4x enclosure