

71657028 2024-04-15

# Brief Operating Instructions

Conductive point level measurement

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.

Workplace safety

**Operational safety** 

and faults.

Product safety

When working on and with the device:

condition in which it is safe to operate.

Wear the required personal protective equipment as per national regulations.

Operate the device only if it is in proper technical condition, free from errors

The operator is responsible for trouble-free operation of the device.

For WHG applications, see the associated WHG documents.

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

Available for all device versions via:

- Internet: 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

Place of manufacture: See nameplate.

#### Requirements for the personnel

The operating personnel must fulfill the following requirements:

- Trained, qualified specialists: must have a relevant qualification for this ► specific function and task
- Are authorized by the plant operator
- Are familiar with national regulations
- They must have read and understood the instructions in the manual, supplementary documentation and certificates (depending on the application) prior to starting work
- They must follow instructions and comply with basic conditions

#### Intended use

The device may only be used as a point level switch in conductive liquids, e.g. for overfill prevention, leakage monitoring, dry running protection, two-point control of pumps or multiple point detection.

# Mounting

Required tools:

Open-ended wrench or socket wrench 55 AF

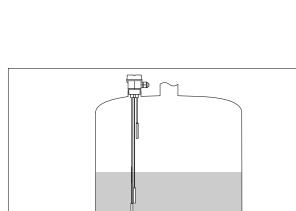


The ropes can be shortened depending on the installation conditions, see additional documentation.

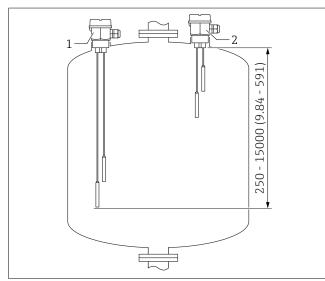
## Mounting requirements

#### Rope probes

- Devices with two- to five-rope probes can be installed in vessels or tanks, see diagram.
- Use a socket wrench for measuring points that are difficult to access







Positions of rope probes in the tank

1 Vertical installation, MIN detection; probe length adapted to the point level; neither the rods nor ropes may touch the container!

2 Vertical installation, MAX detection; probe length adapted to the point level

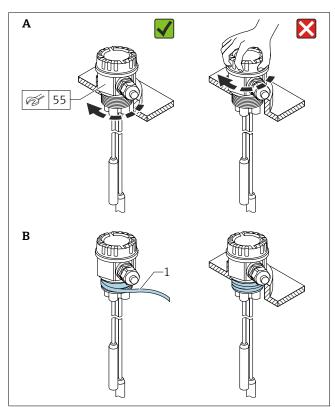
#### Vertical installation:

If the sensor is not completely covered by the medium or if there are air bubbles on the sensor, this may interfere with the measurement.

#### Mounting the device

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- Tighten by the hexagonal nut only
- Torque for G 1½ thread: 80 to 100 Nm (59 to 73 lbf ft)
- Torque for NPT  $1\frac{1}{2}$  thread: 40 to 80 Nm (30 to 59 lbf ft)



- 2 Tightening the device
- 1 PTFE tape A G 1½ version
- A G 1½ version B NPT 1½ version

## **Electrical connection**

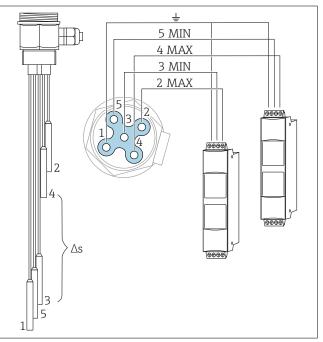
An easily accessible power switch must be provided in the proximity of the device in the building installation. The power switch must be marked as a disconnector for the device.

Comply with national standards and regulations!

The device can be connected to an evaluation unit either directly or via an electronic insert. Connection via electronic insert, see additional documentation.

#### Direct connection

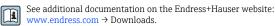
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- 3 Sample connection of a five-rope probe to two evaluation units
- $\Delta s$  Two-point control/point level detection

See supplementary documentation for further connection options.

Connection via an electronic insert



## Ensuring the degree of protection

Testing according to IEC 60529 and NEMA 250 IP66 NEMA4X