



Brief Operating Instructions Liquipoint FTW23

Point level switch for liquids
in the food and beverage industry

These Instructions are Brief Operating Instructions; they are not a substitute for the Operating Instructions pertaining to the device.

Detailed information about the device can be found in the Operating Instructions and the other documentation:

Available for all device versions via:

- Internet: www.endress.com/deviceviewer
- Smart phone/tablet: *Endress+Hauser Operations App*

Basic safety instructions

Requirements for the personnel

The personnel for installation, commissioning, diagnostics and maintenance must fulfill the following requirements:

- ▶ Trained, qualified specialists must have a relevant qualification for this specific function and task
- ▶ Are authorized by the plant owner/operator
- ▶ Are familiar with federal/national regulations
- ▶ Before starting work, read and understand the instructions in the manual and supplementary documentation as well as the certificates (depending on the application)
- ▶ Follow instructions and comply with basic conditions

The operating personnel must fulfill the following requirements:

- ▶ Must be suitably trained and authorized by the plant operator to meet the requirements of the task
- ▶ Follow the instructions in this manual

Intended use

The measuring device described in this manual may be used only as a point level switch for water-based liquids. Incorrect use may pose a hazard. To ensure that the measuring device remains in perfect condition during the operating time:

- Measuring devices must be used only for media to which the process-wetted materials have an adequate level of resistance.

- The relevant limit values must not be violated, see the Technical Information manual.

Incorrect use

The manufacturer is not liable for damage caused by improper or non-intended use.

Residual risks

Due to heat transfer from the process, the temperature of the electronics housing and the assemblies contained therein may rise to 80 °C (176 °F) during operation.

Danger of burns from contact with surfaces!

- ▶ In the event of elevated fluid temperatures, ensure protection against contact to prevent burns.

Operational safety

Risk of injury!

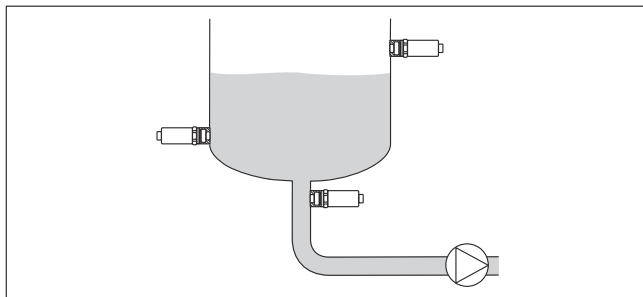
- ▶ Operate the device only if it is in proper technical condition, free from errors and faults.
- ▶ The operator is responsible for the interference-free operation of the device.

Mounting

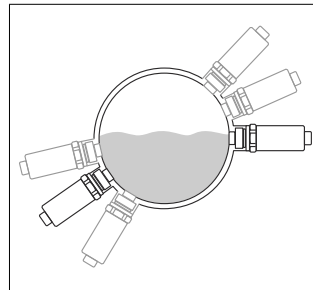
Mounting requirements

- Installation is possible in any position in a vessel, pipe or tank
- For measuring points that are difficult to access, use a socket wrench.

The socket wrench 32 AF can be ordered as an optional extra.



1 Installation examples: vessel



2 Installation examples: pipe



Vertical installation:

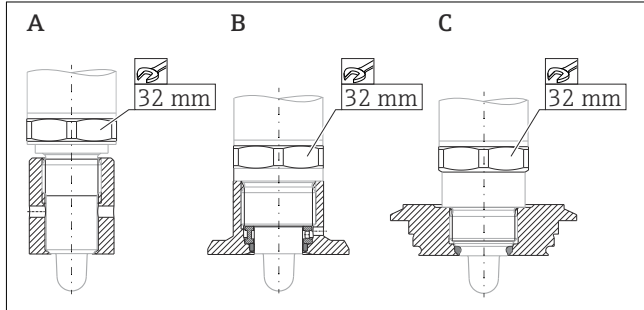
If the sensor is not completely covered by the medium or if there are air bubbles on the sensor, this may interfere with the measurement.

Mounting the device

Required tools:
Open-ended wrench or socket wrench 32 AF

Installation

- When screwing in, turn by the hex bolt only.
- Torque: 15 to 30 Nm (11 to 22 lbf ft)



A Thread G 1/2"
B Thread G 3/4"
C Thread M24x1.5

i Take account of metallic or non-metallic vessels or pipes in accordance with EMC guidelines, see the Technical Information manual.

Electrical connection

The measuring device has two modes of operation:

- Maximum point level detection (MAX): e.g. for overflow protection
The device keeps the electrical switch closed as long as the sensor is not yet covered by liquid.
- Minimum point level detection (MIN): e.g. to protect pumps from dry running

Choosing the MAX or MIN mode of operation ensures that the device switches in a safety-oriented manner even in an alarm condition, e.g. if the power supply line is disconnected. The electronic switch opens if the point level is reached, if a fault occurs or if the power fails (quiescent current principle).

- Supply voltage 10 to 30 V DC
- In accordance with IEC/EN61010 a suitable circuit breaker must be provided for the measuring device.
- Voltage source: Non-hazardous contact voltage or Class 2 circuit (North America).
- The device must be operated with a fine-wire fuse 500 mA (slow-blow).

- Depending on the analysis of the switch outputs, the measuring device works in the MAX or MIN modes.

Connecting the device with M12 plug

Operating mode	
MAX	MIN

Symbols	Description
※	Yellow LED lit
•	Yellow LED not lit
K	External load

LED indicator

1 LED is green: the device is operational
2 LED is yellow: tuning fork is covered by liquid
3 LED is red: warning/maintenance required (LED flashing) or fault/device failure (LED is lit)

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i On the metal housing cover (IP69), there is no external signaling via LEDs.