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Brief Operating Instructions
Micropilot FWR30 for dynamic water level monitoring

Free-space radar

These are Brief Operating Instructions; they do not replace the Operating Instructions included in the scope of supply.
Detailed information can be found in the Operating Instructions and the additional documentation.

Available for all device versions via:
- Internet: www.endress.com/deviceviewer
- Smartphone/tablet: Endress+Hauser Operations app

Basic safety instructions

Requirements for the personnel

Personnel must meet the following requirements to perform their tasks:
- ▶ 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.
- ▶ They must follow instructions and comply with general policies.

Intended use

The system described in the instructions is intended for measuring water levels.

The Micropilot FWR30 for dynamic water level monitoring is a battery-powered water level sensor with cellular radio transmission.

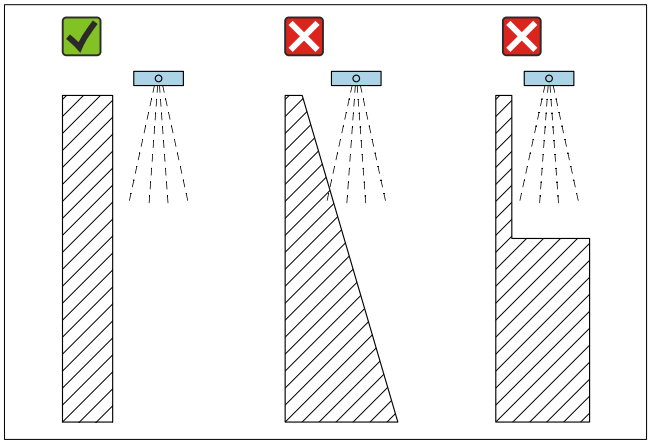
Application:
Self-sufficient radar sensor for remote monitoring of water levels in water applications.

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 trouble-free operation of the device.

Installation

- Install the measuring instrument horizontally and parallel to the water surface.
  Otherwise, undesired reflections from the surroundings can cause interference signals
- The radar antenna should never be covered by metal objects
- When installing on bridges/walls, ensure that no edges, slopes or other obstacles obstruct the measurement (see the following diagram)
- In general, no interfering objects may be located in the radiation range of the sensor (see the following table).
- Protect the measuring instrument against vandalism as much as possible; use tamper protection.



1 Maintain sufficient distance from objects

Measuring distance [mm]	Radiation width [1] [mm]	Minimum distance to wall [mm]
500	70	25
1000	140	70
2000	280	140

Endress+Hauser
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Measuring distance [mm]	Radiation width [1] [mm]	Minimum distance to wall [mm]
5000	699	350
10000	1399	700

1) The beam angle is 8°.

For additional types of mounting, see the Operating Instructions.

Electrical connection

Replaceable battery, standard size, lithium (D), 3.6 V, 19 Ah (included in the delivery)
Designation as per IEC: ER34615 (primary battery lithium thionyl chloride); product recommendation : Tadiran SL-2880 (Europe) , Tadiran TL-4930 (outside of Europe)

The measuring instrument determines the battery charge state automatically. If the battery status is low or critical, the LED flashes red at intervals of 10 seconds.

Battery status is indicated as full, medium, low, critical.

In addition to the recommended battery types Tadiran SL-2880 (Europe), Tadiran TL-4930 (outside Europe), it is also possible to use the battery type Tadiran SL-2870 (Europe) or Tadiran TL-5930 (outside Europe). The indicated battery lives can differ in this case, however.

⚠ CAUTION

Risk of fire or burns if the device battery is handled incorrectly!

- Do not charge or open the battery, expose it to fire or heat it above 100 °C (212 °F).
- Only replace the battery with a ER34615 battery (lithium-thionyl chloride primary battery, size D). The use of any other battery can present a fire or explosion hazard.
- Dispose of the used battery immediately as per national regulations.
- Keep used batteries out of the reach of children. Do not open used batteries or expose them to fire.

Replacement battery

For use in North America: The replacement battery must have CSA/UL approval.