

Radar measurement Time-of-Flight Micropilot FMR53

For simple level measurement applications in liquids



More information and current pricing:

www.be.endress.com/FMR53

Benefits:

- Reliable non-contact measurement even for changing product and process conditions
- HistoROM data management concept for fast and easy commissioning, maintenance and diagnostics
- Highest reliability even in the presence of obstructions in the vessel due to new Multi-Echo Tracking evaluation
- Hardware and software developed according to IEC 61508 up to SIL3 (in homogeneous redundancy)
- Heartbeat Technology for a cost-effective and safe plant operation during the entire life cycle
- Seamless integration into control or asset management systems and intuitive, menu-guided operation concept (on-site or via the control system)
- World's easiest proof test concept for SIL and WHG saves time and cost

Specs at a glance

- **Accuracy** +/- 6 mm (0.24 in)
- **Process temperature** -40...+150 °C (-40...+302 °F)
- **Process pressure absolute / max. overpressure limit**
Vacuum...40 bar (Vacuum...580 psi)
- **Max. measurement distance** Standard: 20 m (66 ft)
- **Main wetted parts** PTFE, PVDF

Field of application: Micropilot FMR53 for simple level measurement applications in liquids. With its slim rod antenna, FMR53 free space radar is particularly suited for small process connections. The PTFE coating of the rod antenna and flange plating guarantee resistance also in

aggressive media. The Micropilot FMR53 is used for continuous, non-contact level measurement of liquids, pastes and slurries. The measurement is not affected by changing media, temperature changes, gas blankets or vapors.

Features and specifications

Continuous / Liquids

Measuring principle

Level radar

Characteristic / Application

For common non-contact continuous level measurement in liquids, especially suited for small process connections and for chemically aggressive media;

Rod antenna with PTFE coating

Specialities

Heartbeat Technology,

SIL 2 according to IEC 61508,

Bluetooth® commissioning,

Operation and maintenance SmartBlue App,

Safety and reliability with Multi-Echo Tracking,

HistoROM,

RFID TAG for easy identification

Supply / Communication

2-wire (HART / PROFIBUS PA/ FOUNDATION Fieldbus)

4-wire (HART)

Bluetooth® wireless technology and App (optional)

Frequency

C-band (~6 GHz)

Accuracy

+/- 6 mm (0.24 in)

Continuous / Liquids

Ambient temperature

-40...+80 °C
(-40...+176 °F)

Process temperature

-40...+150 °C
(-40...+302 °F)

Process pressure absolute / max. overpressure limit

Vacuum...40 bar
(Vacuum...580 psi)

Main wetted parts

PTFE, PVDF

Process connection

Thread:
MNPT 1 1/2, R 1 1/2
Flange:
DN50...DN150,
ASME 2"...6",
JIS 10K

Max. measurement distance

Standard: 20 m (66 ft)

Communication

4...20 mA HART
PROFIBUS PA
FOUNDATION Fieldbus
Bluetooth® wireless technology

Certificates / Approvals

ATEX, FM, CSA C/US, IEC Ex, JPN Ex, INMETRO, NEPSI, KC, EAC, UK Ex

Safety approvals

Overfill protection WHG
SIL

Continuous / Liquids

Design approvals

EN 10204-3.1
ASME B31.3
AD2000

Options

Display,
Remote operation via SmartBlue App using Bluetooth®,
Customized parameterization,
Gas-tight feed through,
PWIS free

Application limits

Maximum measuring range is dependent on the tank form and/or application

Nozzle height >250 mm:

FMR51, FMR52, FMR54

Low DK:

FMR51, FMR52, FMR54

More information www.be.endress.com/FMR53