

Radar measurement Time-of-Flight Micropilot FMR52

For level measurement in aggressive liquids or applications with hygiene requirements



More information and current pricing:

www.at.endress.com/FMR52

Benefits:

- Hardware and software developed according to IEC 61508 up to SIL3 (in homogeneous redundancy)
- 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
- 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** +/- 2 mm (0.08 in)
- **Process temperature** -196...+200 °C (-321...+392 °F)
- **Process pressure absolute / max. overpressure limit**
Vacuum...25 bar (Vacuum...363 psi)
- **Max. measurement distance** Standard: 40 m (131 ft) With advanced dynamics: 60 m (197 ft)
- **Main wetted parts** PTFE

Field of application: For applications in aggressive liquids Micropilot FMR52 offers extraordinary advantages with its completely PTFE-filled and flush-mounted horn antenna. The FMR52 is also the sensor for

hygiene-sensitive applications in the food and life sciences industry - ASME BPE, USP Class VI, 3-A and EHEDG approvals. Micropilot 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

Premium device for continuous non-contact level measurement, in which aggressive media are used as well as for highest hygiene requirements (ASME BPE, USP Class VI);

Flush mounted, fully PTFE filled horn antenna

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

Continuous / Liquids**Supply / Communication**

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

4-wire (HART)

Bluetooth® wireless technology and App (optional)

Frequency

K-band (~26 GHz)

Accuracy

+/- 2 mm (0.08 in)

Ambient temperature

-50...+80 °C

(-58...+176 °F)

Process temperature

-196...+200 °C

(-321...+392 °F)

Process pressure absolute / max. overpressure limit

Vacuum...25 bar

(Vacuum...363 psi)

Main wetted parts

PTFE

Continuous / Liquids**Process connection**

Flange:

DN50...DN150

ASME 2"...6"

JIS 10K

Process connection hygienic

Tri-Clamp ISO2852

DIN11851

Max. measurement distance

Standard: 40 m (131 ft)

With advanced dynamics: 60 m (197 ft)

Communication

4...20 mA HART

PROFIBUS PA

FOUNDATION Fieldbus

Bluetooth® wireless technology

Certificates / Approvals

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

Safety approvals

Overfill protection WHG

SIL

Continuous / Liquids

Design approvals

EN 10204-3.1

ASME B31.3

AD2000

Hygienic approvals

3A, EHEDG

CoC ASME-BPE

Marine approval

GL/ ABS/ LR/ BV/ DNV

Options

Display,

Customized parameterization,

Remote operation via SmartBlue App using Bluetooth[®],

Gas-tight feed through,

PWIS free

Continuous / Liquids

Application limits

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

Ammoniacal gas phase:

FMR54 in stilling well

Strong build-up formation:

FMR54 with air purge

Custody transfer measurement:

FMR5xx

More information www.at.endress.com/FMR52