Radar measurement
Time-of-Flight
Micropilot FMR54

For level measurement in liquids where strong steam or ammonia can occur

More information and current pricing:
www.ca.endress.com/FMR54

Benefits:

- Hardware and software developed according to IEC 61508 up to SIL3 (in homogeneous redundancy)
- 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
- Reliable measurement even for changing product and process conditions
- 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** -60...+400°C (-76...+752°F)
- **Process pressure absolute / max. overpressure limit** Vacuum...160 bar (Vacuum...2320 psi)
- **Max. measurement distance** Standard: 20 m (65 ft) Planar antenna in stilling well: 38 m (125 ft)
- **Main wetted parts** 316L

Field of application: Micropilot FMR54 is prepared for the use in high temperature and high pressure applications and with the specially designed planar antenna it is particularly suited for stilling well

applications. The FMR54 free space radar 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
Continuous non-contact level measurement for use in high-pressure and high-temperature applications,
Horn or planar 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

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)

Ambient temperature
-50...+80 °C
(-58...+176 °F)

Continuous / Liquids

Process temperature
-60...+400°C
(-76...+752°F)

Process pressure absolute / max. overpressure limit
Vacuum...160 bar
(Vacuum...2320 psi)

Main wetted parts
316L

Process connection
Flange:
DN80...DN300,
ASME 3"...12",
JIS 10K, 20K

Max. measurement distance
Standard: 20 m (65 ft)
Planar antenna in stilling well: 38 m (125 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

Design approvals
EN 10204-3.1
NACE MR0175, MR0103
ASME B31.3
AD2000

Continuous / Liquids

Marine approval

GL/ ABS/ LR/ BV/ DNV

Options

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

Application limits

Maximum measuring range is dependent on the tank form and/or application
Free space with nozzle:
FMR51, FMR52, FMR53
Stilling well with ball valve:
FMR51, FMR52
Hygiene requirements:
FMR52, FMR53
316L or Alloy C non-resistant:
FMR52, FMR53

More information **www.ca.endress.com/FMR54**

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