

Guided radar measurement Time-of-Flight Levelflex FMP54

For high temperature and high pressure applications in the oil & gas, chemical and power industry



Benefits:

- Reliable measurement even for changing product and process conditions
- HistoROM data management concept for fast and easy commissioning, maintenance and diagnostics
- Highest reliability due to new Multi-Echo Tracking evaluation
- Hardware and software developed according to IEC 61508 up to SIL3
- 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 for SIL and WHG saves time and costs

More information and current pricing:

www.apsc.endress.com/FMP54

Specs at a glance

- **Accuracy** Rod probe: +/- 2 mm (0.08 in) Rope probe <= 15 m (49 ft): +/- 2 mm (0.08 in) Rope probe > 15 m (49 ft): +/- 10 mm (0.39 in) Coaxial probe: +/- 2 mm (0.08 in)
- **Process temperature** XT: -196...+280 °C (-321...+536 °F) HT: -196...+450 °C (-321...+842 °F)
- **Process pressure / max. overpressure limit** Vacuum...400 bar (Vacuum...5800 psi)
- **Max. measurement distance** Rod: 10 m (33 ft) Min DK>1.6
Rope: 25 m...30 m (82 ft...98 ft) Min DK>1.6; 30 m...45 m (98 ft...148 ft) Min DK >1,9 Coaxial probe: 6 m (20 ft) Min DK>1.4

Main wetted parts Rod probe: 304, 316L, Alloy C, Ceramic Rope probe: 304, 316, 316L, Alloy C, Ceramic Coaxial probe: 304, 316L, Alloy C, Ceramic

Field of application: Levelflex FMP54 for continuous level measurement in liquids under extreme conditions. The process connection with its ceramic-graphite seal safeguards high temperature and high pressure applications as they occur in steam boilers and toxic media like ammonia. The gas tight feedthrough guarantees additional safety. Only the gas phase compensation of the FMP54 gives reliable results in case of gas and steam phases. Reliable measurement in case of moving surface and foam or in changing medias.

Features and specifications

Continuous / Liquids

Measuring principle

Guided radar

Characteristic / Application

Premium device high pressure/ high temperature

Rod probe, Rope probe, Coaxial Probe

Integrated data memory, Factory precalibrated, Reliable measuring: in case of moved surface + foam, for changing medias

Interface measurement

Clean interfaces liquid/ liquid;

Simultaneous measurement of interface and overall level

Specialities

Heartbeat Technology,

Bluetooth® commissioning,

Operation and maintenance SmartBlue App,

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)

Accuracy

Rod probe: +/- 2 mm (0.08 in)

Rope probe <= 15 m (49 ft):

+/- 2 mm (0.08 in)

Rope probe > 15 m (49 ft):

+/- 10 mm (0.39 in)

Coaxial probe: +/- 2 mm (0.08 in)

Ambient temperature

-50...+80 °C

(-58...+176 °F)

Process temperature

XT: -196...+280 °C

(-321...+536 °F)

HT: -196...+450 °C

(-321...+842 °F)

Process pressure / max. overpressure limit

Vacuum...400 bar

(Vacuum...5800 psi)

Main wetted parts

Rod probe:

304, 316L, Alloy C, Ceramic

Rope probe:

304, 316, 316L, Alloy C, Ceramic

Coaxial probe:

304, 316L, Alloy C, Ceramic

Continuous / Liquids

Process connection

Thread:
G 1 1/2, MNPT 1 1/2
Flange:
ASME 2"...4",
DN50...DN100,
JIS 10K, 63K,
Fisher
Masoneilan

Sensor length

Rod probe: 10 m (33 ft)
Rope probe: 45 m (148 ft)
Coaxial probe: 6 m (20 ft)

Max. measurement distance

Rod:
10 m (33 ft) Min DK>1.6
Rope:
25 m...30 m (82 ft...98 ft) Min DK>1.6;
30 m...45 m (98 ft...148 ft) Min DK >1,9
Coaxial probe: 6 m (20 ft) Min DK>1.4

Communication

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

Certificates / Approvals

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

Safety approvals

Overfill protection WHG
SIL

Continuous / Liquids

Design approvals

EN 10204-3.1
NACE MR0175, MR0103
ASME B31.1, B31.3
AD2000
Steam boiler approval

Marine approval

GL/ DNV/ ABS/ LR/ BV

Options

Sensor remote with 3 m/ 9 ft cable,
Remote operation via SmartBlue App using Bluetooth®

Application limits

Application limits

More information www.apsc.endress.com/FMP54