

Micropilot FMR43 – radar sensor for hygienic processes

High performance sensor, especially compact and the perfect fit for fast changing level applications



More information and current pricing:

www.ca.endress.com/FMR43

Benefits:

- Outstanding ease of use due to easy setup and operation with guided wizards
- Improved process and product safety through configuration integrity - a checksum algorithm (CRC) ensures that safety relevant parameters remain unchanged
- Increased productivity thanks to traceable and documented on-demand verification including the radar's accuracy without process interruption with Heartbeat Technology
- Documented compliance through certified hygienic design as well as proven material conformity and traceability
- Flexibility in scale - installation in tight space conditions thanks to compact sensor design and small process connections as well as use in large tanks and silos

Specs at a glance

- **Accuracy** +/-1 mm (0.04 in)
- **Process temperature** -40 to +150 °C (-40 to +302 °F)
- **Process pressure / max. overpressure limit** -1 to +20 bar (-14.5 to +290 psi)
- **Max. measurement distance** 15 m (49 ft)
- **Main wetted parts** PEEK PTFE 316L (for threaded connections)

Field of application: The Micropilot FMR43 is a free space radar sensor for continuous non-contact level measurement and part of the Compact Line. The product line is especially developed for hygienic applications and combines a compact design with full performance. The device ensures reliable measurement even under rapidly changing or turbulent

process conditions. In addition to the proven 80 GHz technology, a 180 GHz frequency option ensures the use even in particularly small process tanks.

Features and specifications

Continuous / Liquids

Measuring principle

Level radar

Characteristic / Application

Compact device for continuous non-contact level measurement with hygienic requirements (3A, EHEDG, ASME BPE, USP Class VI);
For small containers with many internals

Specialities

Heartbeat Technology
Bluetooth® commissioning
Operation and maintenance with SmartBlue app
180 GHz for very small process connections and narrow beam angles

Supply / Communication

2-wire HART
IO-Link
Bluetooth® wireless technology

Frequency

80 GHz
180 GHz

Accuracy

+/-1 mm (0.04 in)

Ambient temperature

-40 °C ... +80 °C
(-40 °F ... +176 °F)

Continuous / Liquids**Process temperature**

-40 to +150 °C
(-40 to +302 °F)

Process pressure / max. overpressure limit

-1 to +20 bar
(-14.5 to +290 psi)

Main wetted parts

PEEK
PTFE
316L (for threaded connections)

Process connection

Thread ASME B1.20.1, NPT
Thread ISO228, G

Process connection hygienic

NEUMO BioControl
Clamp/Tri-Clamp
Thread metric (DIN13)

Max. measurement distance

15 m (49 ft)

Communication

HART
IO-Link
Bluetooth® wireless
technology and app (optional)

Certificates / Approvals

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

Safety approvals

Overfill protection WHG

Continuous / Liquids

Design approvals

Acceptance test certificate 3.1, EN10204;
Declaration of Conformity ASME B31.3;
Conformity to cGMP;
CRN approval;
Surface roughness test ISO4287/Ra;
Delta-Ferrite test

Hygienic approvals

3-A;
EHEDG;
CoC-ASME BPE;
EU Food Contact Material (EC) 1935/2004;
US Food Contact Material FDA CFR 21;
CN Food Contact Materials GB 4806

Drinking water approvals

KTW
NSF/ANSI 61

Options

Display,
Customized settings,
App 'SmartBlue' for commissioning and operation via Bluetooth

More information www.ca.endress.com/FMR43