

# Radar measurement Time-of-Flight Micropilot FMR56

## Economically efficient basis model for level measurement in solids



More information and current pricing:

[www.de.endress.com/FMR56](http://www.de.endress.com/FMR56)

### Benefits:

- Reliable 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** +/- 3 mm (0.12 in)
- **Process temperature** -40 °C...+80 °C (-40 °F...+176 °F)
- **Process pressure absolute / max. overpressure limit** Vacuum...3 bar (Vacuum...43.5 psi)
- **Max. measurement distance** 30 m (98 ft)
- **Main wetted parts** PP, UP

**Field of application:** Micropilot FMR56 is particularly designed for light-duty process conditions as they occur in silos or bins for solids. Micropilot free space radar is used for continuous, non-contact level measurement

in powdery to granular bulk solids. Dust, filling noises, temperature layers and gas layers do not affect the measurement.

## Features and specifications

### Continuous / Solids

#### Measuring principle

Level radar solid

#### Characteristic / Application

For simple applications:

Reliable non-contact level measurements in silos or storage tanks for bulk solids

#### Specialities

Heartbeat Technology,  
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

K-band (~26 GHz)

#### Antenna

Horn DN80/3", PP plated  
Horn DN100/4", PP plated

#### Accuracy

+/- 3 mm (0.12 in)

#### Ambient temperature

-40 °C...+80 °C  
(-40 °F...+176 °F)

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**Continuous / Solids****Process temperature**

-40 °C...+80 °C  
(-40 °F...+176 °F)

**Process pressure absolute / max. overpressure limit**

Vacuum...3 bar  
(Vacuum...43.5 psi)

**Main wetted parts**

PP, UP

**Process connection**

Flange:  
UNI DN80...DN150  
(3"...6")  
Mounting bracket

**Max. measurement distance**

30 m (98 ft)

**Communication**

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

**Certificates / Approvals**

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

**Safety approvals**

SIL

**Options**

Display,  
Customized parameterization  
Remote operation via SmartBlue App using Bluetooth®

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## Continuous / Solids

### Application limits

DK < 1.6

Reduction of the max. possible measuring range through:

Media with poor reflection properties

Angle of repose

Extremely loose surfaces of bulk solids, e.g. bulk solids with low bulk weight for pneumatic filling

Build-up, above all of moist products

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