Ultrasonic measurement
Time-of-Flight
Prosonic FMU42

Cost effective device for sophisticated level measurement in liquids and bulk solids for up to 10m

Benefits:
- Reliable non-contact measurement
- Quick and simple commissioning via menu-guided on-site operation with four-line plain text display, 7 languages selectable
- Envelope curves on the on-site display for simple diagnosis
- Hermetically sealed and potted sensor
- Chemically resistant sensor out of PVDF
- Calibration without filling or discharging
- Integrated temperature sensor for automatic correction of the temperature dependent sound velocity

Specs at a glance
- Accuracy +/- 4 mm or +/- 0.2 % of set measuring range
- Process temperature -40 °C ... 80 °C (-40 °F ... 176 °F)
- Process pressure / max. overpressure limit 0.7 bar ... 2.5 bar abs (10 psi ... 36 psi)
- Max. measurement distance Liquids: 10 m (33 ft), Solids: 5 m (16 ft)
- Main wetted parts PVDF

Field of application: The Prosonic FMU42 sensor is suited for non-contact level measurement in fluids, pastes, coarse bulk material and flow measurement in open channels or at weirs. The two-wire or four-wire compact transmitter can be used in applications with storage tanks, agitators, on stockpiles and conveyor belts. The envelope curve can be shown on the on-site display for simple diagnosis. Linearization function

More information and current pricing: [www.us.endress.com/FMU42](http://www.us.endress.com/FMU42)
(up to 32 points) for conversion of the measured value into any unit of length, volume or flow rate.

## Features and specifications

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(-40 °F ... 176 °F) |
| **Process temperature** | -40 °C ... 80 °C  
(-40 °F ... 176 °F) |
| **Process pressure / max. overpressure limit** | 0.7 bar ... 2.5 bar abs  
(10 psi ... 36 psi) |
| **Main wetted parts** | PVDF |
| **Process connection** | Flange  
DN80, ASME 3", JIS 10K 80  
DN100, ASME 4", JIS 10K 100  
Mounting bracket |
**Continuous / Liquids**

**Blocking distance**
0.4 m (1.3 ft)

**Max. measurement distance**
Liquids: 10 m (33 ft),
Solids: 5 m (16 ft)

**Communication**
4...20 mA HART

**Certificates / Approvals**
ATEX, FM, CSA, INMETRO, NEPSI

**Application limits**
Foam / high turbulence possible:
FMU44/FDU92
Fast filling and discharging rate:
FMU90 + FDU9x
Level limit detection
FMU90 + FDU9x

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**Continuous / Solids**

**Measuring principle**
Ultrasonic

**Characteristic / Application**
Compact ultrasonic transmitter

**Supply / Communication**
2-wire HART

**Accuracy**
+/~ 4 mm or +/- 0.2 % of set measuring range
Continuous / Solids

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