Ultrasonic measurement
Time-of-Flight
Prosonic FMU41

Cost effective device for sophisticated level measurement in liquids and bulk solids for up to 8m

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** +/- 2 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 ... 3 bar abs (10 psi ... 44 psi)
- **Max. measurement distance** Liquids: 8 m (26 ft), Solids: 3.5 m (11 ft)
- **Main wetted parts** PVDF

Field of application: The Prosonic FMU41 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/FMU41](http://www.us.endress.com/FMU41)
(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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### Continuous / Liquids

**Max. measurement distance**
- Liquids: 8 m (26 ft),
- Solids: 3.5 m (11 ft)

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

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

**Application limits**
- For higher resistance: FMU42/FDU9x
- Foam / high turbulence possible: FMU42/FDU91
- Fast filling and discharging rate: FMU90 + FDU9x
- Level limit detection: FMU90 + FDU9x

### Continuous / Solids

**Measuring principle**
- Ultrasonic

**Characteristic / Application**
- Compact ultrasonic transmitter

**Supply / Communication**
- 2-wire HART

**Accuracy**
- +/- 2 mm or +/- 0.2 % of set measuring range

**Ambient temperature**
- -40 °C ... 80 °C
- (-40 °F ... 176 °F)
### Continuous / Solids

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### Liquids

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Liquids

**Max. measurement error**
Low accuracy

**Measuring range**
Measuring distance 0,4...8m [1.3...26ft]

**Max. process pressure**
atm.

**Medium temperature range**
-40°C...80°C
(-40°F...176°F)

**Degree of protection**
IP68

**Outputs**
4...20mA(Hart), PA, FF

**Inputs**
2-wire 16-36V DC
4-wire 16-36V DC
90-253V AC 50/60Hz

**Digital communication**
PROFIBUS PA, FOUNDATION Fieldbus

**Hazardous area approvals**
ATEX, FM, CSA

More information [www.us.endress.com/FMU41](http://www.us.endress.com/FMU41)