

# Ultrasonic measurement Time-of-Flight Prosonic FMU42

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



More information and current pricing:

[www.de.endress.com/FMU42](http://www.de.endress.com/FMU42)

## 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 absolute / max. overpressure limit** 0.7 bar ... 2.5 bar abs (10 psi ... 36 psi)
- **Max. measurement distance** Max. measurement distance
- **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

(up to 32 points) for conversion of the measured value into any unit of length, volume or flow rate.

## Features and specifications

### Continuous / Liquids

**Measuring principle**

Ultrasonic

**Characteristic / Application**

Compact ultrasonic transmitter

**Supply / Communication**

2/4-wire (HART), PROFIBUS PA, FOUNDATION  
Fieldbus

**Accuracy**

+/- 4 mm or +/- 0,2 % of set measuring range

**Ambient temperature**

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

**Process temperature**

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

**Process pressure absolute / 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)

---

**Application**Application

---

**Max. measurement distance**Max. measurement distance

---

**Communication**4 ... 20 mA HART  
PROFIBUS PA  
FOUNDATION Fieldbus

---

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

---

**Application limits**Application limits

---

**Continuous / Solids****Measuring principle**Ultrasonic

---

**Characteristic / Application**Compact ultrasonic transmitter

---

**Supply / Communication**2/4-wire (HART), PROFIBUS PA, FOUNDATION  
Fieldbus

---

**Accuracy**+/- 4 mm or +/- 0,2 % of set measuring range

---

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

---

---

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

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

---

**Process pressure absolute / 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

---

**Blocking distance**

0.4 m (1.3 ft)

---

**Max. measurement distance**

5 m (16 ft)

---

**Communication**

4 ... 20 mA HART  
PROFIBUS PA  
FOUNDATION Fieldbus

---

**Certificates / Approvals**

ATEX, FM, CSA, INMETRO, NEPSI

---

**Application limits**

Take notice of range diagram

---

More information [www.de.endress.com/FMU42](http://www.de.endress.com/FMU42)