

Ultrasonic measurement Time-of-Flight Prosonic FMU40

Cost effective device for sophisticated level measurement in liquids and bulk solids for up to 5m



More information and current pricing:

www.apsc.endress.com/FMU40

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 1)
- **Process temperature** -40 °C ... 80 °C (-40 °F ... 176 °F)
- **Process pressure absolute / max. overpressure limit** 0.7 bar ... 3 bar abs (10 psi ... 44 psi)
- **Max. measurement distance** 2 m (6 ft)
- **Main wetted parts** PVDF

Field of application: The Prosonic FMU40 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 / Solids

Measuring principle

Ultrasonic

Characteristic / Application

Compact ultrasonic transmitter

Supply / Communication

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

Accuracy

+/- 2 mm or +/- 0.2 % of set measuring range 1)

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 ... 3 bar abs
(10 psi ... 44 psi)

Main wetted parts

PVDF

Process connection

G / NPT 1 1/2"

Blocking distance

0.25 m (0.8 ft)

Continuous / Solids**Max. measurement distance**2 m (6 ft)

Communication4 ... 20 mA HART
PROFIBUS PA
FOUNDATION Fieldbus

Certificates / ApprovalsATEX, FM, CSA, TIIS, INMETRO, NEPSI

Application limitsTake notice of range diagram

Liquids**Measuring principle**Ultrasonic

Product headlineCompact ultrasonic measuring
instrument
Cost effective solution for open channel

Max. measurement errorLow accuracy

Measuring range0,25...5m [0.8...16ft]

Max. process pressureatm.

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

Degree of protectionIP68

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

Inputs2-wire 16-36V DC,
4-wire 16-36V DC,
90-253V AC 50/60Hz

Digital communicationPROFIBUS PA, FOUNDATION Fieldbus

Hazardous area approvalsATEX, FM, CSA

Point Level / Solids**Measuring principle**Ultrasonic Limit

Characteristic / ApplicationCompact ultrasonic transmitter

Supply / Communication2/4-wire (HART),
PROFIBUS PA,
FOUNDATION Fieldbus

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...3 bar abs
(10 psi...44 psi)

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Point Level / Liquids**Measuring principle**Ultrasonic Limit

Characteristic / ApplicationCompact ultrasonic transmitter

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PROFIBUS PA,

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(-40 °F...+176 °F)

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Application limits

Take notice of range diagram

Continuous / Liquids**Measuring principle**

Ultrasonic

Characteristic / Application

Compact ultrasonic transmitter

Continuous / Liquids**Supply / Communication**

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

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

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-40 °C ... 80 °C
(-40 °F ... 176 °F)

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Application

Max. measurement distance

Max. measurement distance

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Application limits

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