Dwyer

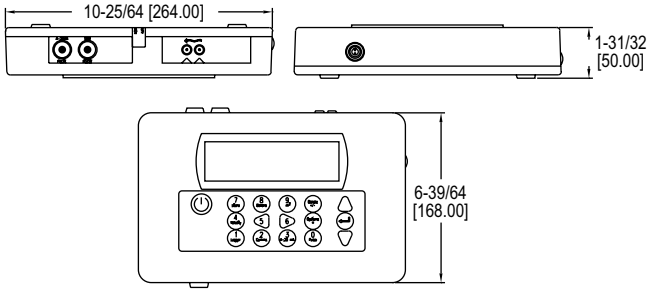
SERIES PUB & PUF

PORTABLE ULTRASONIC FLOWMETER KIT

Portable, Non-Invasive and Data Logging Option

PUB

PUF



The **SERIES PUB & PUF** Portable Ultrasonic Flowmeter Sets utilize the transit-time difference for measuring flow rates in pipes non-invasively. Units offer flow rate local display with analog and pulsed outputs. The Series UFC offers the same features plus data logging capability.

FEATURES/BENEFITS

- Non-invasive pipe measurement
- Compact and lightweight
- Incorporate the latest electronics and signal processing technologies realizing high performance and easy operation
- Ideal for on-the-go flow monitoring, capable of 20 hours continuous operation with built-in, rechargeable battery
- Easy to read graphic display with convenient backlight for visual comfort
- Efficient layout of the function keys for easy to use programming
- PUB features rugged carrying case with molded foam inserts
- PUF boasts an IP67 rated case to hold and protect all equipment conveniently

APPLICATIONS

- Water treatment
- Industrial systems
- Irrigation applications
- Treated water flow
- River water
- Sea water
- Potable water
- Demineralized water
- Glycol/water mix
- Hydraulic system
- Diesel oil
- Water use data logging

KIT INCLUDES

- Converter
- Set of transducers
- Transducer holders
- Set of transducer cables (6.56 ft (2 m))
- 4 to 20 mA communication cables
- 12 VDC power supply
- Ultrasonic coupling grease
- Set of chains
- Ruled guide rail
- Test block
- Carrying case

MODEL CHART - STANDARD VERSION	
Model	**Pipe Size Range in (mm)**
PUB-10	0.5 to 4.5 (13 to 115)
PUB-20	2 to 40 (50.7 to 1016)

MODEL CHART - DATA LOGGING VERSION	
Model	**Pipe Size Range in (mm)**
PUF-1001	0.5 to 78 (13 to 2000)
PUF-1002	0.5 to 4.5 (13 to 115)
PUF-1003	2 to 78 (50 to 2000)

SPECIFICATIONS

Service: Homogeneous liquids that do not contain air bubbles capable of ultrasonic wave propagation.
Inputs: Lemo connector cable from sensors.
Range: 0.33 to 65.62 ft/s (0.1 to 20 m/s).
Display: 240 x 64 pixel graphic display, high contrast black on white with backlight; Languages: English, French, German, Swedish, Italian, Spanish, Portuguese, Russian, Norwegian, and Dutch; 5.2″ W x 1.5″ H.
Accuracy: ±0.5 to 2% of flow reading for flow rate > 0.66 ft/s (0.2 m/s) and pipe ID > 2.95 in (75 mm); ±3% of flow reading for flow rate > 0.66 ft/s (0.2 m/s) and pipe ID in range 0.512 to 2.95″ (13 to 75 mm); ±6% of flow reading for flow rate < 0.66 ft/s (0.2 m/s).
Power Requirements: 9 to 24 VDC, (1) 5-Cell NiMH battery, internal, factory replaceable (continuous operation time: 20 hours with back-light and output off) (recharging time: 6.5 hours, power adapter used).
Power Consumption: 10.5 W.
Power Adapter: 110/240 VAC adapter. UK,US, European adapters included.
Temperature Limits: -4 to 275°F (-20 to 135°C).
Outputs: Analog: 1 opto-isolated output: 4 to 20 mA, 0 to 16 mA or 0 to 20 mA (selectable); Error current: 0 to 26 mA (selectable); Load resistance: 620 Ω max; Pulse: 1 opto-isolated MOSFET relay, 150 mA max, 500 pps max, 200 Hz max.
Serial Communications: USB; RS-232 (PUF only).
Enclosure Rating: Converter: IP54; Transducers: IP51.
Materials: Flame retardant injection molded ABS plastic.
Repeatability: ±0.5 % of measured value or ±0.066 ft/s (0.02 m/s).
Electrical Connections: Multi-pin Lemo plugs.
Turbidity: < 3% by volume of particulate content.
Permissible Air Content: < 3% by volume.
Response Time: < 500 ms.
Weight: Unit without accessories: 2.3 lb (1.06 kg); Unit with accessories in carrying case: 13.23 lb (6.0 kg).
Agency Approvals: CE.

ADDITIONAL SPECIFICATIONS

Applicable Pipe Material: Carbon steel, SS, copper, UPVC/PVDF, concrete, galvanized steel, mild steel, glass, brass.
Applicable Pipe Lining: Rubber, glass, concrete, epoxy, steel, other*.
Pipe Wall Thickness: 0.04 to 3″ (1 to 75 mm).
Pipe Lining Thickness: < 1″ (< 25 mm).

*Selectable option for special material with known propagation rate of lining material.

OPTIONS	
Use order code:	**Description**
NISTCAL-FU	NIST traceable calibration certificate

USA: California Proposition 65
⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov