

# Portasonic®

## Technical Specification

**TYPE:** Portable Non-Invasive Ultrasonic Flow Meter

**FUNCTION:** for monitoring flow rates and identifying obstructions within pipes of water sprinkler systems and other clean fluids

**PART NUMBER:** COSNC ??

### INTRODUCING THE FEATURES:

- Accurate flow measurement from outside of a pipe with clamp-on sensor
- No pressure drop, no moving parts, no leaks and no contamination
- Simple set-up and ease of operation with digital processing
- Long term reliability and battery life, light weight, compact and reliable
- Suited for a wide range of industrial applications



We are proud to announce Coltraco now offers the **Portasonic®** to provide a new dimension to our range, especially catering for the sprinkler system maintenance in the fire industry amongst others. State-of-the-art technology provides an effective means to enhance the management of your systems. Accurate flow data provides the chance to make energy saving measures by fine tuning the systems. It does this through self-adapting proprietary signal quality tracking, allowing the system to automatically optimally adapt to the pipe material and flow profile in both directions. **Portasonic®** offers sustained operation across a wide range of industrial applications and environments due to the non-invasive external clamp, requiring no mechanical parts to be inserted into the pipe wall or in any other way to affect the operation of the system. The ultrasonic signal penetrates all common metal and plastic pipe materials containing clean, non-aerated fluids, most typically being water, water/glycol and oils.



### RECOMMENDED FOR:

- Potable Water
- River Water
- Cooling Water
- Demineralised Water
- Water/Glycol solutions
- Hydraulic oil
- Diesel & Fuel Oils
- Chemicals
- Petroleum Products

### APPLICATIONS:

- Fire Sprinkler Systems
- HVAC & Energy Measurement
- Pump verification, Boiler testing
- Leak Detection, Filter sizing
- Heavy fuel oil metering
- Ultrapure water measurement
- Hydraulic system testing
- Condensate Measurement
- Balancing Systems
- Marine operation & maintenance

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## How to Operate & After Sales Support

**HOW IT WORKS:** transit time flow meters utilise two transducers that both function as ultrasonic transmitters and receivers

1. The transducers are clamped to the outside of a vertical or horizontal pipe at a specific calculated distance.
2. The elapsed time between transmitted and received signals varies very slightly.
3. This depends on whether the signal is travelling upstream or downstream and by comparing these time differences an accurate calculation of the flow rate is possible and is displayed via the chosen connected device.

### METHODS / MODES:

- As the ultrasonic beam crosses the pipe, compensation for laminar or turbulent flow is automatic.
- Depending on the application and flow profile, the transducers can be mounted in the following ways:
  - i. V-method: the ultrasound transverses the pipe twice
  - ii. W-method: the ultrasounds transverse the pipe four times
  - iii. Z-method: transducers are mounted on opposite sides of the pipe and the ultrasound transverses only once
- The modes are automatically selected by the instrument and are also user selectable.
- Portasonic® can be used for spot checks (using an internal, rechargeable battery) or for extended continuous operation as a 4-20mA flow transmitter with AC power input.

**HOW TO USE THE PORTASONIC®:** program the unit by selecting the options displayed in the main menu

- i. Enter the pipe diameter, wall thickness, pipe material, liquid and temperature
- ii. The optimum mounting method and separation distance is automatically calculated
- iii. Apply gel between the transducers and pipe exterior to ensure a clean reading



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<b>TRANSMITTER</b>	<b>Power Supply</b>	2 AAA Ni-H built-in batteries. Charger 100V-240VAC
	<b>Battery Life</b>	12 hours of operation
	<b>Velocity</b>	0 ~ ±40ft/s (0 ~ ± 12 m/s), bi-directional
	<b>Display</b>	Backlit LCD 4 line x 16 character English menu: total flow, flow rate, velocity and meter running status etc. displayed
	<b>Units Rate Totalised</b>	User Configured (imperial and metric) Rate & Velocity Display (FWD, NET, REV or BATCH) gallons, ft <sup>3</sup> , barrels, lbs, litres, m <sup>3</sup> , kg
	<b>Output</b>	OCT Pulse, Relay, RS232C or RS484 Hart +(4~20mA), Modbus
	<b>Accuracy</b>	±1.0%-2.0% of reading at rates >0.5 m/s ±0.003 m/s of reading at rates <0.5 m/s
	<b>Sensitivity</b>	Flow Rate: 0.001 ft/s (0.0003 m/s)
	<b>Repeatability</b>	0.2% of reading
	<b>Security</b>	Keypad lockout, password enabled
	<b>Dims. &amp; Weight</b>	Enclosure: 100 x 204 x 35 mm and 0.6kg
<b>TRANSDUCER</b>	<b>Liquid Types</b>	Almost any liquid containing less than 2% total suspended solids or aeration
	<b>Liquid Temp.</b>	Std. Temp. Transducer: -40C ~ 121C (-40F ~ 250F) High Temp. Transducer: -40C ~ 250C (-40F ~ 484F)
	<b>Cable Length</b>	Std: 4m (12ft); option up to maximum 25m (75ft)
	<b>Pipe Size</b>	Small: 12-50mm; Medium transducer: 40-1000 mm; Large: 1000-4570mm
	<b>Dims. &amp; Weight</b>	Small: 42x25x25mm; Medium: 60x43x43 mm; Large: 80x53x53mm Small: <0.2kg; Medium: <0.2kg; Large: <0.2kg
<b>ACCESSORIES</b>	<b>Portable Case</b>	Dims: 445x290x130 mm; Weight: <3.5kg
	<b>Couplant</b>	Dow Corning 111 (112 for high temp.)
	<b>Transducer Hardware</b>	2 mounting straps supplied as standard according to transducer type selected
	<b>Battery Charger</b>	1 pcs
	<b>Data Logger &amp; Software</b>	Optional 512M to 8BG SD card Windows-based Software Utility, data logging, data report, data curve and analysis

## Portasonic®

### How to Operate & After Sales Support



3 Transducers types

Large display with user-friendly calibration menu

Measures, Totalises and Transmits Flow in both Directions.

**In The Box:** Portasonic® comes in a ready-to-go-package complete with all items required to carry out flow rate measurement: carrying case. transducer set. mounting hardware. cables and accessories. instruction manual.

#### Support & Customer Service

- 1 year warranty
- Guaranteed against defects in materials & workmanship
- Support for the life-time of the equipment
- With telephone/email technical or user advice
- See terms and conditions for details
- For your Technical Queries or Sales Enquiries and Quotations please email [sales@coltraco.co.uk](mailto:sales@coltraco.co.uk) or call +44 207 629 8475

#### Industries:

- Fire - Sprinkler Systems
- Water
- Building Services
- Energy Management
- Power Generation
- Chemical
- Pharmaceutical
- Petrochemical
- Food/Beverage

