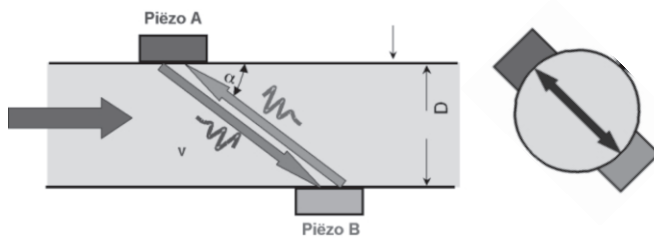


Ultrasonic Flow Meter Clamp-on Portable PARASONIC 153 UCH

Introduction

SBEMs PARASONIC series of ultrasonic flow meters use the transmit time differential method as the measurement principle to measure the flow of liquid in closed pipes. The transit-time technique uses a pair of transducers with each transducer sending and receiving coded ultrasonic signals through the fluid. At zero flow, both transducers receive the transmitted ultrasonic signals at the same time, i.e. without transit time delay. When the fluid is flowing, signal transit-time in the downstream direction is shorter than in the upstream direction; the difference between these transit times is proportional to the flow velocity.



SBEMs PARASONIC series uses a flexible design concept to provide easy handling and optimum utilization.

Benefits/ Highlights

Flexible design Concept

Modular design offers better flexibility and ease of operation with high degrees of efficiency

Accurate, Cost-Effective Measurement

Advanced digital signal processing and superior sensor design offer economical and reliable flow measurement

No Process Interruption

PARASONIC clamp-on sensors are capable of quick retro-fit at any point in the process allowing easy flow measurement and troubleshooting

Wide Application Range

PARASONIC series is suitable for a wide range of pipe sizes and materials including lined pipes for both conductive and non-conductive liquids

Installation



Parasonic 153 Handheld Unit

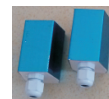


- 12 hours battery operation
- Accuracy - 1%
- 4 Line graphical backlight LCD
- Built in Data logger with PC software
- Data transfer to PC using RS 232 interface
- Quick access with 4x4 keyboard
- Light weight-Only 500 gms
- Compact carrying case

Parasonic 153 Sensors



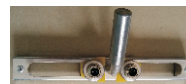
Small (S1) & High Temp. Small (TS)



Medium (M1)



Large (L1)



Small Frame (HS)



Medium Frame (HM)



High Temp. Medium (TM) & Large (TL)

Small (S1,HS,TS) For pipe sizes 15mm - 100mm
Medium (M1,HM,TM) For pipe sizes 50mm - 700mm
Large (L1, TL) For pipe sizes 300mm - 6000mm

Area of Expertise

- Potable Water
- Deionized / demineralized water
- Cooling and heating water
- Broad range of hydrocarbons
- Purified Water
- Waste Water
- Sewage
- Discharge Water

Specifications for Wall Mounted Converter

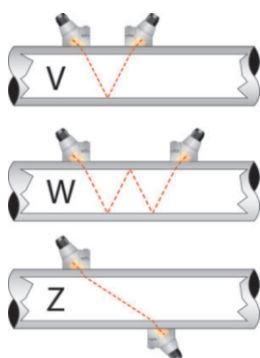
Power Supply	AAA Ni-MH rechargeable built-in batteries with 12 hour operation with 90 - 230 VAC charger
Measured Values	Volumetric Flow, Flow Velocity, Flow Direction, Speed of Sound, Quality of measured signal
Flow Velocity	0 - 32 m/s bi-directional
Accuracy	±1%* for dia ≥50 mm and v > 0.5 m/s
Repeatability	0.3%
Sensors	Clamp-on
Display	4 Line backlight LCD
Keyboard	4 X 4 Numeric Keyboard membrane
Pipe Materials	Mild Steel/ Carbon Steel, Stainless Steel, Cast Iron, Ductile Iron, PVC, Plastic*
Lining	Mortar, Tar Epoxy, Rubber
Communication	RS 232 with MODBUS (ASCII or RTU)
Data Logging	Built-in or optional PC based
Protection	IP 65

Sensors

Type	Standard Small (S1)	Frame Small (HS)	Standard Medium (M1)	Frame Medium (HM)	Standard Large (L1)	High Temp. Small (TS)	High Temp. Medium (TM)	High Temp. Medium (TL)
Diameter (mm)	DN 15-DN 100	DN 15-DN 100	DN 50-DN 700	DN 50-DN 700	DN 300-DN 6000	DN15 - DN100	DN50 - DN700	DN300 - DN6000
Materials	ABS	Aluminium Alloy	ABS	Aluminium Alloy	ABS	High Temperature Resistant ABS		
Frequency	1 MHz	1 MHz	1 MHz	1 MHz	1 MHz	1 MHz	1 MHz	1 MHz
Installation	V,W	V,W	V,Z	V,Z	Z	V,W	V,Z	Z
Magnetic	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Temperature	0 to 70 °C	0 to 70 °C	0 to 70 °C	0 to 70 °C	0 to 70 °C	0 to 160 °C	0 to 160 °C	0 to 160 °C
Size (mm)	45 x 30 x 30	200 x 25 x 25	60 x 45 x 45	280 x 40 x 40	80 x 80 x 55	45 x 30 x 30	71 x 37 x 40	91 x 52 x 44
Cable (m)	5m standard	5m standard	5m standard	5m standard	5m standard	5m standard	5m standard	5m standard

* Accuracy depends on installation, pipe materials, size and lining. Consult HO for corroded or lined pipes.

Installation types



The package includes

- 1 No. Carrying Case
- 1 No. Handheld Portable Unit
- 2 Nos. Clamping fixtures
- 1 pair of Clamp-on sensors with cable
- 1 No. Battery charger
- 1 RS 232 / charging cable
- Couplant (100 gms)



Ordering Code

PARASONIC 153 UCH -									
3			0	1	0	0			
Power Supply 3 - Rechargeable battery powered with 230 VAC charger				Sensor Cable 05 - 5 m x 2 (standard) 10 - 10 m x 2 (For Sensor cable > 10 m, refer Head Office)					
Sensors S1 - Clamp-on Standard Sensor - Small (15 mm-100mm); Temperature 0 to 70 °C M1 - Clamp-on Standard Sensor - Medium (50 mm-700mm); Temperature 0 to 70 °C L1 - Clamp-on Standard Sensor - Large (300mm - 6000mm); Temperature 0 to 70 °C HS - Clamp-on Frame Sensor Small (15mm-100mm); Temperature 0 to 70 °C HM - Clamp-on Frame Sensor - Medium (50mm-700mm); Temperature 0 to 70 °C TS - Clamp-on High Temperature Sensor - Small (15 mm-100mm); Temperature 0 to 160 °C TM - Clamp-on High Temperature Sensor - Medium (50 mm-700mm); Temperature 0 to 160 °C TL - Clamp-on High Temperature Sensor - Large (300 mm-6000mm); Temperature 0 to 160 °C				Data Logging 0 - None 1 - Yes					
				Pt 100 Inputs 0: None					
				Analog inputs 0 - None					
				Communication 1 - RS 232 MODBUS					
				Output 0 - None					
Standard Accessories: Couplant (100 gms)									

Example of Model Code Selection for Portable Hand held Ultrasonic Flow Meter;
Model Code: 153 UCH 3 S1 0 1 0 0 0 05

The above model code specifies that the Ultrasonic Flow Meter 153 UCH with hand held Indicator-converter operates on battery , Sensors are standard clamp-on small type for line sizes 15 mm to 100 mm, with RS 232 communication interface, without data logger and with sensor cable of 5 m with each sensor/transducer, with 100 grams couplant.

Accessories (To be ordered separately)

(1) Additional Sensors

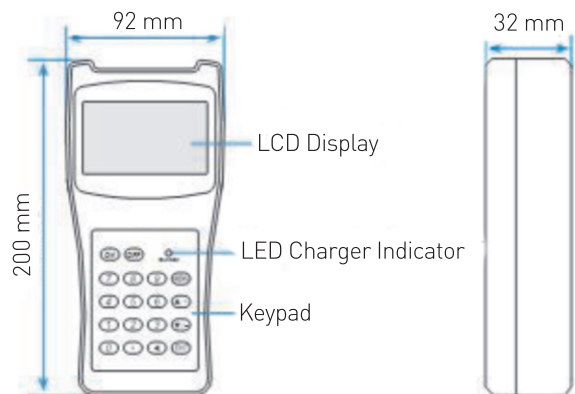
- 153 UFS S1 - Small Standard (15 mm-100mm)
- 153 UFS HS - Frame Sensor Small (15mm-100mm)
- 153 UFS M1 - Medium Standard (50 mm-700mm)
- 153 UFS HM - Frame Sensor Medium (50mm-700mm)
- 153 UFS L1 - Large Standard (300mm - 6000mm)
- 153 UFS TS - Small High Temperature (15 mm-100mm)
- 153 UFS TM - Medium High Temperature (50 mm-700mm)
- 153 UFS TL - Large High Temperature (300mm - 6000mm)

(2) Ultrasonic Thickness Gauge

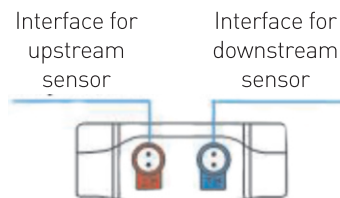


Mechanical Dimensions

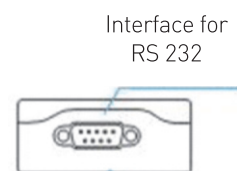
Front View



Top View



Bottom View





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