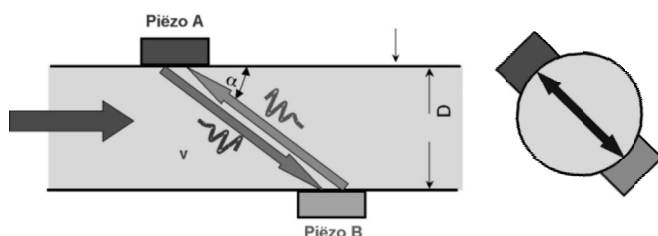


Ultrasonic Flow Meter Clamp-on Wall mounted PARASONIC 153 UCW

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

Parasonic 153 Wall mounted converter

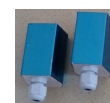


- 85-230VAC / 24V DC
- Accuracy - 1%
- 2 Line Backlight LCD
- Quick access with 4x4 keyboard
- Relay, pulse and analog output
- Temperature (P100) and Analog Input for heat flow and pressure measurement
- Data transfer to PC using RS232/485
- Compatible with insertion and clamp-on Sensors

Parasonic 153 Sensors



Small (S1)



Medium (M1)



Large (L1)

- Small (S1) For pipe sizes 15mm - 100mm
- Medium (M1) For pipe sizes 50mm - 700mm
- Large (L1) For pipe sizes 300mm - 6000mm

Optional Sensors

For high temperature up to 160 °C, contact H0

Area of Expertise

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

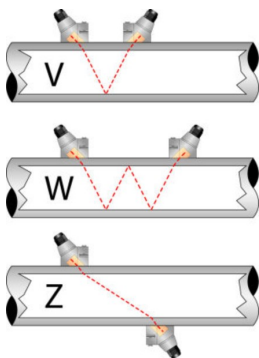
Specifications for Wall Mounted Converter

Power Supply	Std. - 85 - 230 VAC; Optional - 24 VDC
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 and insertion (For insertion type sensors, refer LF-153-0804)
Display	2 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
Outputs	4-20 mA/ 0-20 mA; Relay output; Open Collector Frequency/ Pulse output
Communication	RS 485/ RS 232 with MODBUS (ASCII or RTU)
Inputs	Up to 3 Analog input channels and Up to 2 channel 3 Wire compensated Pt 100
Data Logging	Built-in or optional PC based
Protection	IP 67 (Applicable for Converter & Clamp on Sensors both)

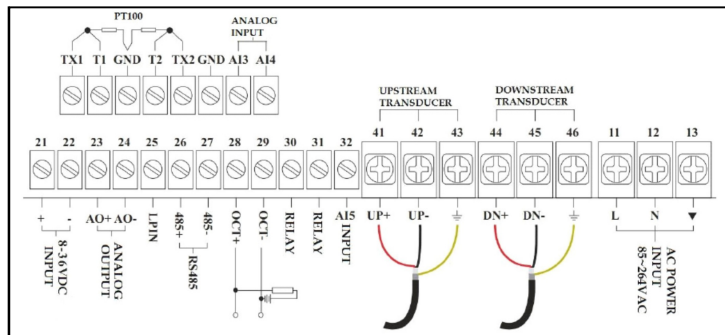
Sensors

Type	Standard Small (S1)	Standard Medium (M1)	Standard Large (L1)
Diameter (mm)	DN15 - DN100	DN50-DN700	DN300-DN6000
Materials	ABS	ABS	ABS
Frequency	1 MHz	1 MHz	1 MHz
Installation	V,W	V,Z	Z
Magnetic Coupling	Yes	Yes	No
Temperature	0 to 70 °C	0 to 70 °C	0 to 70 °C
Size (mm)	45 x 30 x 30	60 x 45 x 45	80 x 80 x 55
Cable (m)	5m standard	5m standard	5m standard

* Accuracy depends on installation, pipe materials, size and lining. Consult H0 for corroded or lined pipes.



Wiring diagram with standard RS 485 communication interface and one analog input channel



Ordering Code

PARASONIC 153 UCW -											
Power Supply		Sensors		Pt 100 Inputs		Analog inputs		Communication			
1 - Universal 85 - 264 VAC 2 - 24 VDC		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		0: None 1: 3 wire Pt-100 input - 2 channel		0 - None 1 - 1 channel 4-20 mA analog input 2 - 2 channels 4-20 mA analog input 3 - 3 channels 4-20 mA analog input		0 - Not Applicable 1 - RS 232 MODBUS 2 - RS 485 MODBUS 3 - HART		Standard Accessories: Couplant (100 gms)	
Output		Data Logging		Sensor Cable		Pt 100 Inputs		Analog inputs			
1 - Standard (4-20 mA + Relay + OCT)		0 - None 1 - Yes		05 - 5 m x 2 (standard) XX - As required (Max. 300 m)		0: None 1: 3 wire Pt-100 input - 2 channel		0 - None 1 - 1 channel 4-20 mA analog input 2 - 2 channels 4-20 mA analog input 3 - 3 channels 4-20 mA analog input			

Example of Model Code Selection for Wall mounted Ultrasonic Flow Meter:

Model Code: 153 UCW 1 S1 1 0 2 1 0 05

The above model code specifies that the Ultrasonic Flow Meter 153 UCW with wall mounted Indicator-converter operates on 85 to 264 VAC power supply, Sensors are standard clamp-on small type for line sizes 15 mm to 100 mm, with standard output of 4-20 mA, Relay and pulse output, without any communication interface, 2 channel analog inputs, 2 channels 3 wire Pt100 inputs, without data logger and with sensor cable of 5 m with each sensor/ transducer, with 100 grams couplant.

Accessories (To be ordered separately)

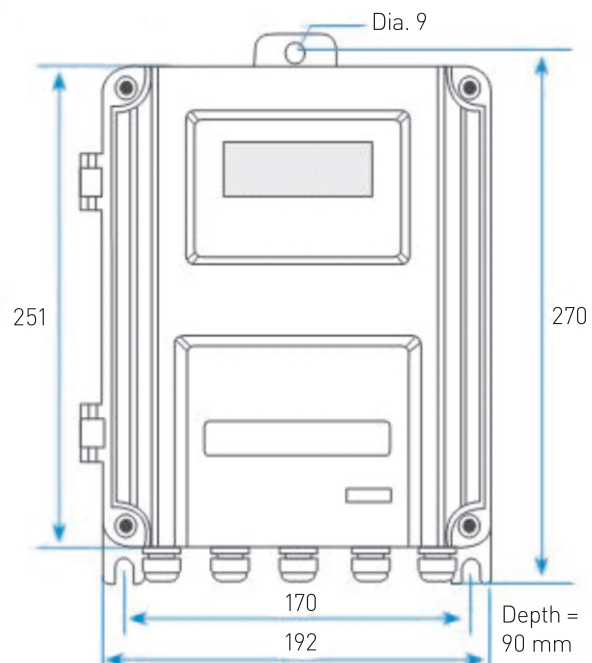
(1) Additional Sensors

- 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





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