

MONITA F SERIES

Flow Measurement

For Monitoring and Recording Fluid Velocities in Domestic, Commercial & Fire Systems

The Monatec **Monita F Series** is a patented solid state solution sensor, for the detection, measurement and logging of fluid velocities in domestic, commercial and fire water supply systems. The **Monita** has a velocity detection range of 0.005 to 3.0 m/s, with detection accuracy dependent on installation configuration. The Monita F Series has been specifically designed for the harshest of environments and is I.P. 67 (Nema 25) rated and is fully submersible to 1 metre in water.

OPERATION

The **Monita** can be installed on supply systems that are too expensive to meter and provides current flow rate and a calculated approximate volume. Alternately the **Monita** can be used as a flow recorder for system analysis. The flow history data can then be downloaded locally via the Infra Red cable or sent via the optional GSM/GPRS integrated module for a full time and date history of measured flows. The **Monita** will log flows at preset intervals from 1 to 99 minutes.

FEATURES

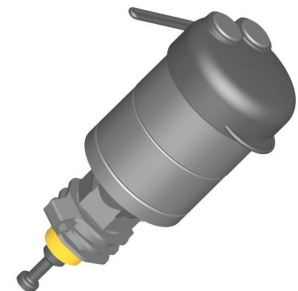
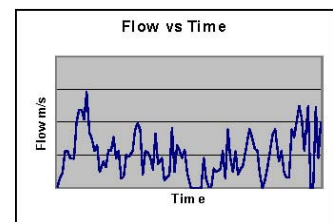
- IP67 enclosure
- Solid State (no moving parts)
- 2 x 8 line LCD
- Detects flows from 0.005 to 3.0 m/s
- Housed in a rugged sealed casing
- Rolling memory of upto 1,000,000 flows
- Records date/ time and velocity
- Simple installation
- Infra Red download of data
- Screws into standard tapping band
- Fully user programmable
- Optional pulse input logging (meter Input)
- Non Directional
- Optional GSM/GPS communications – SMS or Email.
- Alarm Set points
- Field Replaceable Battery

APPLICATIONS

- Detection of illegal usage in Fire services
- Irrigation Systems
- Reticulation analysis of flows

INSTALLATION

The **Monita** is designed to screw into a standard 25mm tapping band and is suitable for pipe diameters from 50mm to 200mm. The **Monita** can be installed in any water supply pipe, using a tapping band with a 25 mm BSP connection. A 20 mm hole is required in the pipe to allow insertion of the fixed length flow head. The Monita can be "hot tapped" using a custom hot tapping device available from your supplier. Two versions are available, a direct mount or a remote mount. With the remote mount the controlling electronics can be mounted up to 2 metres from the sensor head.



SPECIFICATIONS

Monita F Series - Flow Detection & logging			
Temperature	Min	2° C	
	Max	50° C	
Flow Range	Min	0.005 m/s	
	Max	3.0 m/s. Will withstand up to 10m/s but maximum recorded shown as 3.0 m/s	
Pressure	Max	2500 kPa	
Accuracy		± 5% of Full Scale	
Display		LCD 2 x 8 Display.	
Logging Features	Memory	2 Million Records	
	Frequency	1 to 65,536 seconds	
	Device ID	Up to 20 Alphanumeric characters & Factory set 10 digit numeric value	
	Optional meter Inputs	Up to 4 inputs in Fast Pulse Mode (Software Selectable) Fast switching Mode Lower noise immunity Max cable input cable length 2 meters.	
		Switch Type	Voltage Free switch with Normally Open (NO) contacts with minimal debounce
		Min pulse width (N/O)	250us
	Min Pulse Separation	2mS	
	Input impedance	>10MOhms	
	Max Input Frequency	100Hz	
	Edge Detection	Open to C	
	Positive Duty Cycle	>5%	
	Negative Duty Cycle	<=85% @ 100Hz <=90% @ 70 Hz <= 95% @ 25 Hz	
	Up to 4 Inputs in Slow Pulse Mode (Software selectable) Slow switching Mode Higher noise immunity Max cable length 20 meters.		
	Switch Type	Voltage Free switch with Normally Open (NO) contacts with minimal debounce	
	Min pulse width (N/O)	2.5ms	
	Min Pulse Separation	20mS	
	Input impedance	>10MOhms	
	Max Input Frequency	10Hz	
	Edge Detection	Open to Closed or Closed to Open	
	Positive Duty Cycle	>5%	
	Negative Duty Cycle	<=85% @ 10Hz <=90% @ 7 Hz <= 95% @ 2.5 Hz	
	Clock	On board 24 hour real time clock with date facility	

Physical	Dimensions (C or D battery pack)	Control Box Remote	88 mm Ø x 177 mm or 88mm Ø x 220 mm	
		Remote Sensor	130mm x max 27mm Ø	
	Construction	Base & Sides	U.V. Stabilized 20% Glass Filled Nylon	
		Top	U.V. Stabilized Polycarbonate	
		Cap	U.V. Stabilized Polyurethane (Santoprene)	
		Sensor	Acetyl & Titanium	
		Mounting Nipple	Brass	
		O- Rings		
	Weight	Control Box	470 gms	
		Remote Sensor	85 gms	
		Direct Mount	650 gms	
	Operating Temperature	-20 °C to +75°C for all logger functions		
Environmental Protection	I.P 68 Submersible to 1 metre			
Internal Power	Lithium –Ion cell operational for up to 5 years @ 5 minute sampling and logging. Low battery alarm in data packet at download.			

NOTES ON ACCURACY

The accuracy of flow measurement for all flow measuring devices is highly dependent on the proper location of the sensor in the pipe. The Monita records the instantaneous velocity at the sensor head. If the recorded velocity is assumed to be the average velocity in the pipe at the time of recording, inaccuracies will be caused by valves, fittings, pipe bends, etc. A sensor located in the pipe where it can be affected by air bubbles, floating debris, or sediment may not achieve full accuracy and could be damaged. The Monita is designed to operate reliably under adverse conditions, but the following recommendations should be followed to ensure maximum system accuracy:

- Choose a location along the pipe where 10 pipe diameters upstream and 5 pipe diameters downstream of the sensor provide no flow disturbance. Pipe bends, valves, other fittings, pipe enlargements and reductions should not be present in this length of pipe.
- The preferred location around the circumference of a horizontal pipe is on top, however the sensor can be used in all other locations around the pipe including. Contact your supplier for details.
- The sensor has been calibrated to work in pipe sizes from 50mm to 200mm