

Flow by Sound Knowledge



SUMPI FM

ULTRASONIC OPEN CHANNEL FLOW MEASUREMENT



WEIRS



FLUMES



Principle of Operation

The SUMPI FM is an Ultrasonic Open Channel Flowmeter capable of measuring flow rates in all types of Open Channel Flow applications up to a range of 10m. The Transmitter has standard outputs of 4-20mA and 2 relays, which can be configured as a High, Low or Totaliser output. A KAB10 transducer is normally used in conjunction with the SUMPI FM. The transducer is mounted perpendicularly above the flow that is to be measured. The microprocessor in the Transmitter fires an electronic pulse, which the Transducer converts to an acoustic pulse. This pulse travels towards the flow and is reflected back from the flow. The Transducer then converts this energy back into a signal and stops a counter in the microprocessor which then, knowing the speed of sound through air, can accurately determine the distance and furthermore the flow from the flume or weir settings which must be programmed into the Transmitter by the user. The powerful software removes false echoes and the electronic filter removes ambient noises.

Display

2 LINE 16 CHARACTER ALPHA-NUMERIC DISPLAY

The SUMPI FM comes with a 2 line alpha-numeric display which allows the user to set up the instrument with ease.

Picture 1 shows the display in the normal run mode. The display shows the Flow Rate, which can be in various engineering units, and the Total Flow.

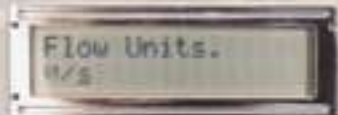
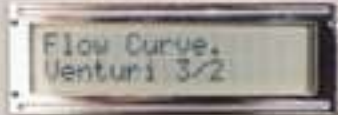
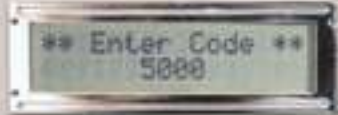
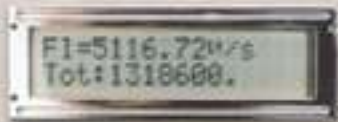
Picture 2 shows the prompt for the security code. The user must enter this code correctly before any further changes can be made.

Picture 3 shows the selection of a flow curve. This selection could be a Venturi or Parshall Flume, V-Notch Weir or the 21 Point Lineariser for Customer Specific Flumes.

Picture 4 shows the selection of Flow units. This selection includes Lt, m3, Gal and Qty. There are also various time periods that can be selected e.g. seconds, minutes, hours and days.

Picture 5 shows an example of the diagnostic feature being displayed. By pressing ENTER while in running mode the user can view the Head Height as well as the Gain & Power levels of the instrument.

THIS MAKES THE INSTRUMENT "EASI" "EASI" "EASI"



KAB 10 Covered with sludge measuring agitated surface



With its state of the art Electronic transmitters the SUMPI FM is able to measure flow in any Flume, Channel or Weir

Simple flow measurement



The high powered transducers enable the face of the transducer to remain clean. The high energy pulse enables accurate measurement of agitated surfaces.

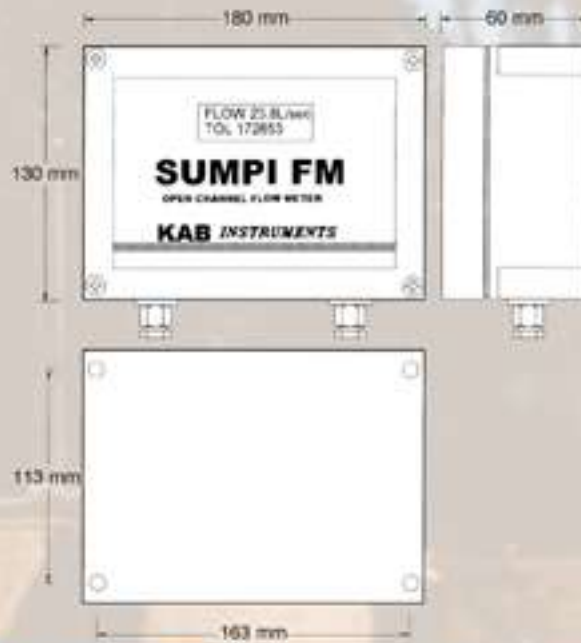




Specifications

- Enclosure
Polycarbonate with smoked lid IP65
- Power Supply
110Vac or 220Vac +/-15% 50/60 Hz 5VA or
24Vdc 5 Watts
- Dimensions
180 mm x 130 mm x 60mm
- Weight
1 kilogram
- Temperature range
-30 to 65°C
- Output Analogue
4-20mA Isolated
Maximum Impedance 750 Ohms
16 Bit resolution
- Relay Output
2 x SPDT relays with 8 Amps 230 VAC
contacts. Fully configurable.
- Range
Up to 10m.
- Accuracy
0.25% with temperature sensor.
- Local Indication
2 x 16 alpha-numerical display
- Fail-safe
2mA, 4mA, 20mA, 22mA or last reading
- Configuration
5 touch button keys
- Blanking distance
0.3m
- Rate of change
0.1 to 10 m/min
- Approvals
CE compliant to EN 50081, EN 50082

Dimensions



Applications



V-notch

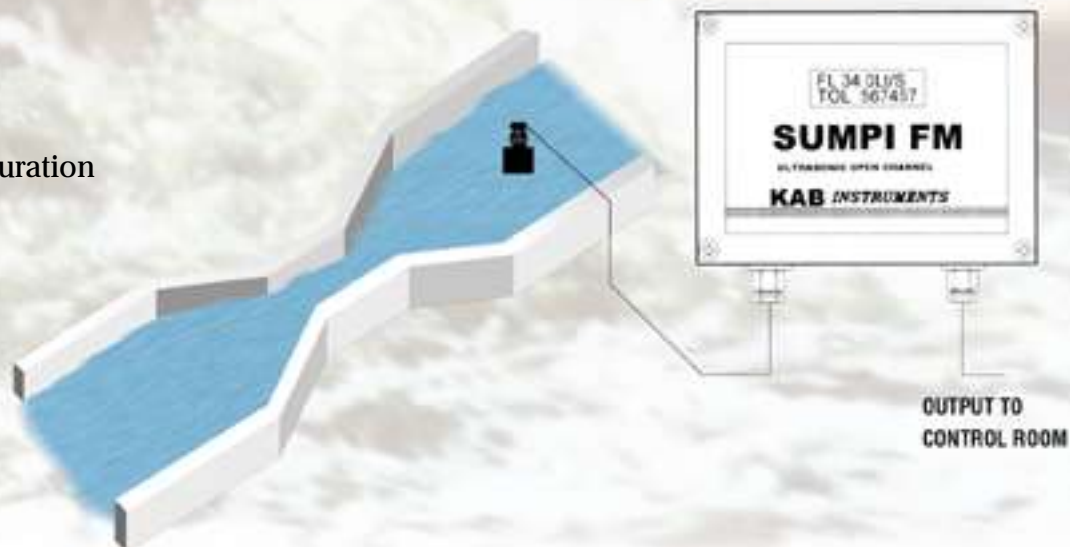
Features

- V-notch, Flume or Weir
- 21 point lineariser
- Plug in terminals
- Ease of Installation and Configuration
- Password protection

Options

- 24Vdc
- Temp compensation

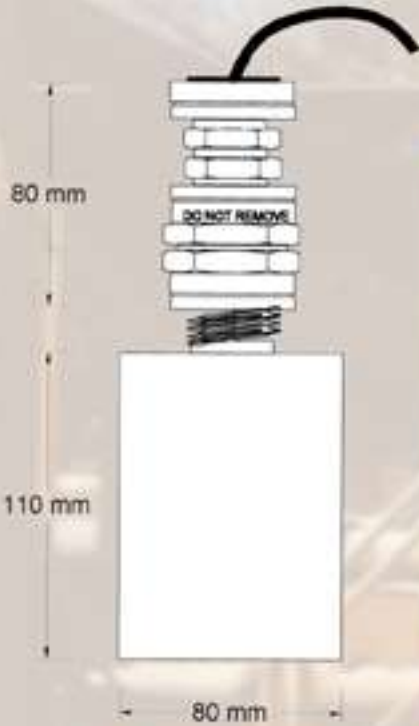
Parshall





KAB 10 Transducer

KAB's range of transducers are available with or without Temperature Compensation.



Specifications

- Beam Angle - 10 Degrees
- Face Material - Polyurethane
- Body Material - PVC
- Temp Range - -20 to 80°C
- Protection - IP68
- Mounting - 1" BSP

Ordering Code

Choose between AC or DC power

SUMPI FM AC

AC Powered ————|

DC Powered ————|

Transducer Ranges

- | | |
|-------------|-------------------|
| KAB 10 | KAB 10 C |
| Liquids 10m | Liquids 10m |
| | Temperature Comp. |

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