

SONALOK 7S

Transit Time Ultrasonic Flowmeter



- Ultrasonic flowmeter in IP 66 wall mounted enclosure
- Easy to install clamp-on sensors with no process interruption
- Non-invasive flow measurement of liquids, no pipeline disturbance, no pressure loss
- Suitable for all commonly used pipe materials with pipe diameters from 10 mm to 2.5 m (1/2" to 100")

➤ Description

The SONALOK 7S of non-invasive flowmeters utilises ultrasonic technology for the accurate flow measurement of liquids in full pipes.

The field mounted flow transmitter can be configured via the keypad without any additional programming devices and is available as single channel unit.

The measurement of flow is based on the principle that sound waves are influenced by a flowing medium.

Measurements are made by penetrating the pipe with ultrasound and subsequently time differences, frequency variations and phase shifts of the ultrasonic signals are evaluated. This measuring technique has no effect on the flowing liquid. There is no pressure loss in the pipe and no wear on components of the measuring device.

The ultrasonic sensors are clamped onto the outside of the pipe, thus eliminating the need to dismantle the pipework and interrupt the process. The SONALOK 7S can be applied to any type of standard pipe carrying clean or dirty liquid.

➤ Advantages

- Low installation effort and costs
- Measurement is independent of fluid conductivity and pressure
- No pressure loss, no possibility of leakage
- Retrospective installation for existing plants possible
- No cutting of pipes necessary, no interruption of process, no plant shut down
- No additional fittings for maintenance required
- Hygienic measurement, no risk of contamination, suitable for ultra clean liquids
- No contact with medium, no risk of corrosion when used with aggressive media
- Cost advantages when used with large diameter pipes, high pressure systems, etc.
- Low stocking costs, nearly all pipe sizes are covered with only 2 types of sensors

The standard EESIFLO® Sonalok 7S is sold and supplied as a complete kit ready for measurements on all types of metal or plastic pipes

Ordering Information/Kit Model Number

EESIFLO® Sonalok 7S Transit time Stationary Flowmeter Kit suitable for measurements on pipes between DN 15... DN 3000 mm (1/2"...118") from -30°C to 100°C (22°F to 212°F) with built in 4-20mA output, Binary outputs. 110/220 VAC Power Supply (optional 24VDC), 10 M sensor cable, pipe clamping fixtures, ultrasonic couplant bottle.



SPECIFICATIONS

Measurement Technology:	Ultrasonic time difference correlation principle
Flow velocity:	(0.01...25) m/s (0.003 to 82 ft/s)
Resolution:	0.025 cm/s (0.0008 ft/s)
Repeatability:	0.25% of reading \pm 0.02 m/s (0.06 ft/s)
Accuracy:	(for fully developed, rotationally symmetrical flow profile)
- Volume flow:	\pm 1% ..3% of reading \pm 0.02 m/s (0.06 ft/s) depending on application \pm 0.5% of reading \pm 0.02 m/s (0.06 ft/s) with process calibration
Measurable fluids:	all sonically conductive fluids with < 6% gaseous or solid content in volume
Recommended Pipe Measuring range:	Q Type Sensors DN15 to 250mm (1/2 inch to 10 inch) M Type Sensors DN50 to 3000mm (2 inch to 118 inch)

NOTE: Sensors are sold in pair and are potted with a 10 M cable to ensure they are watertight.

Electronics Enclosure

Enclosure	
- Weight:	2 kg
- Degree of protection:	Designed to IP66
- Material:	Aluminium
Measuring channels:	1
Power supply:	(100-240) VAC / 24VDC
Display:	2 x 16 characters, dot matrix, backlit
Electronics Operating temperature	-10°C...60°C (14°F to 140°F)
Sensor Operating Temperature	-30°C...100° up to 120°C for short periods
Power consumption:	< 10 W
Signal damping:	(0...100) s, adjustable
Measuring cycle:	(100...1000) Hz (1 channel)
Response time:	1 s (1 channel)

Measuring Functions

Quantities of measurement:	Volume and mass flow rate, flow and sound velocity
Totalizers:	Volume and mass
Operating languages:	English

