

Non Intrusive full bore spool flow meter



SONALOK X

Non intrusive full bore spool flow meter

- Suitable for use in Zone 1 and Zone II atmospheres
- Flow Velocity Range - 0.01 to 25 m/s
- Sizes 4 inch to 42 inches
- Temperatures -30°C to 130°C
- Local display (metric/imperial)
- Output : 2 x analog , 2 x pulse

OVERVIEW

The EESIFLO Sonalok- X is a non intrusive full bore ATEX certified spool flow meter designed for crude oil and hydrocarbon flow measurement where conventional technology cannot provide stable and accurate flow measurement due to changing water cuts.

The Sonalok X is available in pipe sizes ranging from 4 to 42 inches and from 150 ANSI to 1500 ANSI . It can be installed in general industry applications and in also in hazardous environments (Zone 1) . Spool piece construction materials are available in Carbon steel, stainless steel and Duplex. The system employs either single or dual path permanently coupled non-intrusive ultrasonic sensors mounted to a spool. This configuration provides full flow and zero pressure drop.

The measurement technique used enables reliable flow data even during temperature fluctuation, a high turn-down ratio and ability to work at high temperatures. Advanced ultrasonic transducer technology combined with signal processing optimized for speed and robustness, provide enable operation in applications where conventional meters are unable to operate due to technology constraints over extended time periods.

The Sonalok X does not drift due to changing watercuts or changing temperature. It is an excellent device used in conjunction with BS&W measurement and can is also excellent for all non custody transfer applications where operators can simply purchase the spool piece meter according to pipe requirements, wire up and turn it on.



The Sonalok X is an alternative to wetted transducers which protrude into the pipe . The spool pieces are manufactured with smooth walls which increase signal attenuation and without the use of any form of grease or couplant between the sensor and pipe wall. This has great advantages in many applications where coupling compounds are not practical.

The positioning of the sensors allows for some degree of change in refractive index due to a change in the liquid make up or temperature so that the signal is not lost from process variations. This could include temperature changes or some liquid variations . The non-intrusive sensors and electronics are not affected by process conditions and do not experience sensor coating or fouling enabling the system to work for extremely long periods of time and are maintenance free.

The Sonalok X system is ideal for use wherever accurate, reliable and economical long-term flow measurement is critical to process and product quality. This includes applications such as hot /cold water mixtures of water/oil , produced water , fossil fuels and high temperature flow measurement. Measurement is non contaminating, obstructionless and causes no pressure drop

 **SPECIFICATIONS**

Suitable for use in :	Zone 1 and Zone II atmospheres
Voltage :	110/220 VAC or 24 VDC (special versions also available)
Measuring Principle :	Correlation Time of Flight and Doppler
Flow Velocity Range :	0.01 to 25 m/s
Accuracy :	1 to 2 % of actual flow and 0.5% with calibration (assuming axially symmetric profile)
Enclosure Rating :	IP 66 Stainless Steel Flameproof Enclosure
Sizes :	4 inch to 42 inches (ANSI 150, 300, 600, 900 , 1500
Temperatures :	-30°C to 130°C (up to 400°C and greater with special options)
Local display :	metric/imperial
Output :	2 x analog , 2 x pulse

Additional Information

ANSI B16.5 Raised Face	Stainless Steel	Carbon Steel
Class 150	275 psi (18.96 Bars)	285 psi (19.65 Bars)
Class 300	720 psi (49.64 Bars)	740 psi (51.02 Bars)
Class 600	1440 psi (99.29 Bars)	1480 psi (102.05 Bars)
Class 900	2160 psi (148.93 Bars)	2220 psi (153.07 Bars)
Class 1500	3000 psi (248.22 Bars)	3705 psi (255.46 Bars)

The EESIFLO Hybrid can be supplied and sized to be used with flow conditioners for enhanced performance in pipelines with insufficient straight lengths of pipe
For more information and technical offer, please contact EESIFLO International Pte Ltd.