FluidIX Lub-VDT Inline Condition Monitoring Sensor

Sensor for permanent monitoring of mechanical properties of liquids

- ☑ Inline monitoring of viscosity, mass density & temperature
- ☑ High sensitivity and low drift
- ☑ Compact dimensions
- ☑ robust construction
- ☑ flexible Installationspositionen
- ☑ Modbus RTU interface
- ☑ Two programmable 4 - 20mA outputs
- ☑ High pressure option available

Technical data

Properties

Operating voltage	9...35 V DC
Housing material	Stainless steel
Protection class	IP 68
Dimensions	30x93,4 mm
Process connection	G 3/8"
Electricalconnection	M12-8 A-Coding
Weight	150g

Operating conditions

Media temperature	-40...+125°C
Environmental conditions	-40...+105°C
Maximum oil pressure	50 bar
Max. Particle size	250 µm

Measured variables

Resonator frequency	20...25 kHz
Viscosity	1-400 cSt (mm^2/s)
Density	0.5-1.5 g/cm^3
Temperature	-40...+125°C
Sampling rate	1/s

Interfaces

Measured value output	2x 4...20mA
Bus protocol	ModbusRTU

Product description

The FluidIX Lub-VDT enables inline monitoring of mechanical fluid properties.

The compact sensor detects the viscosity and mass density of the surrounding medium on the basis of a low-frequency resonance sensor element. The high measuring accuracy and sensitivity is achieved by a robust and reliable quartz crystal tuning fork resonator.

The sensor is long-term stable and is therefore particularly suitable for predictive maintenance and servicing strategies, such as oil condition monitoring.

Even with changing process conditions (pressure, temperature, flow), excellent data quality is achieved due to the high measuring rate.

The sensor can be easily and cost-effectively integrated into existing machines and systems via digital and configurable analogue interfaces.

Inline Condition Sensor

Subject to technical changes

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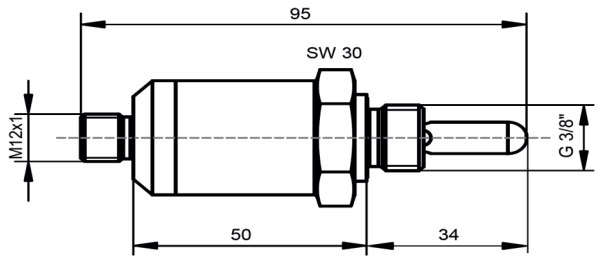
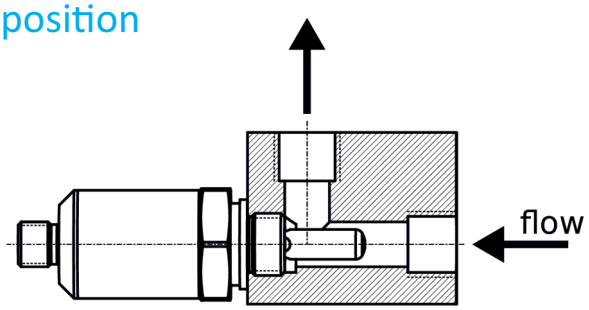
FluidIX Lub-VDT Inline Condition Monitoring Sensor

Dimensions and connections

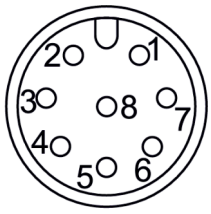


Recommended installation position



Pin assignment

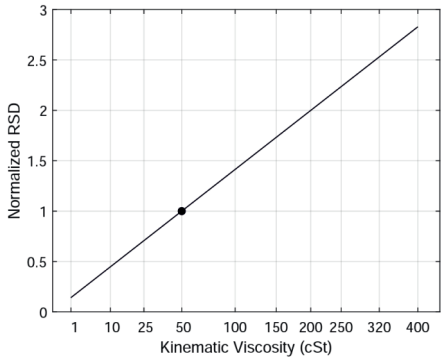
PIN	Signal	Description
1	OUT 1	4...20 mA output
2	CFG RESET	Connect to Ground
3	TERMINATOR	Connect to pin 4 for termination
4	RS485 A	Modbus RTU
5	RS485 B	Modbus RTU
6	OUT 2	4...20 mA output
7	+24 V	Supply
8	OV	Ground



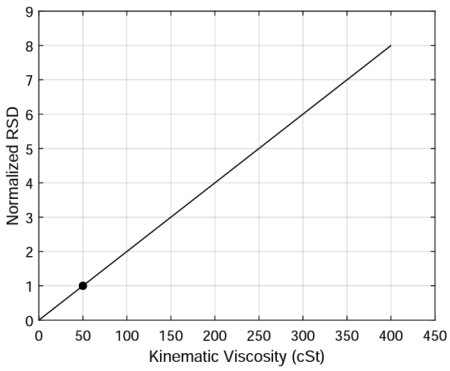
Applications

- ✓ Condition monitoring of liquids
- ✓ Inline oil analysis
- ✓ Industrial automation
- ✓ Retrofitting
- ✓ Mobile machines

Measurement accuracy



Normalised relative standard deviation (RSD) of viscosity as a function of viscosity



Normalised relative standard deviation (RSD) of density as a function of viscosity

Ordering and availability information

Scope of delivery

Fluidix Lub-VDT
Mounting and operating instructions

Subject to technical changes

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