FluidIX Lub-VDT In-Line Oil condition sensor

Sensor for permanent monitoring of mechanical properties of liquids

- ✓ Inline monitoring of viscosity, 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

ModbusRTU

4…20 mA

Technical data

Properties	
Operating voltage	9...32 V DC
Housing material	Stainless steel
Protection class	IP 67
Dimensions	30x90 mm
Process connection	G 3/8“
Electrical connection	M12-8 A-Coding
Weight	150g
Operating conditions	
Media temperature	-40...+125°C
Environmental conditions	-40...+100°C
Maximum oil pressure	50 bar
Max. Particle size	250 μm
Measured variables	
Resonator frequency	20...25 kHz
Viscosity	1-400 cSt (mm²/s)
Density	0.5-1.5 g/cm³
Temperature	-40...+125 °C
Sampling rate	1/s
Interfaces	
signal 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.

Fields of application

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

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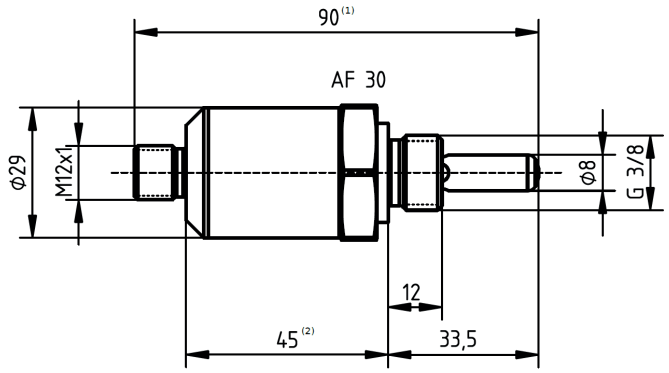
Fluid.iO SENSING FLUID EXCELLENCE

FluidIX Lub-VDT In-Line Oil condition sensor

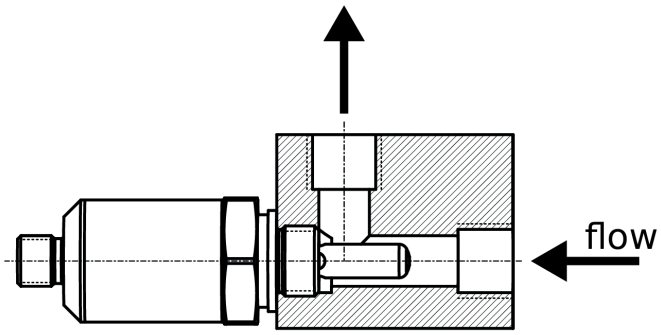
Dimensions and connections

Dimensional drawing

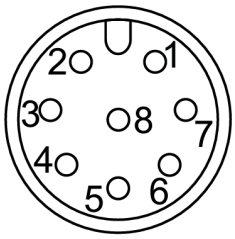


Dimensions in mm

Recommended installation position

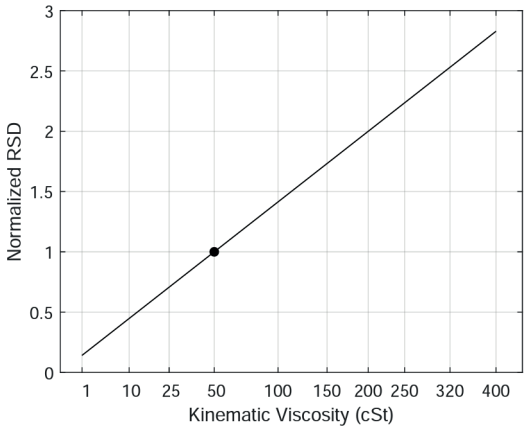


Pin assignment

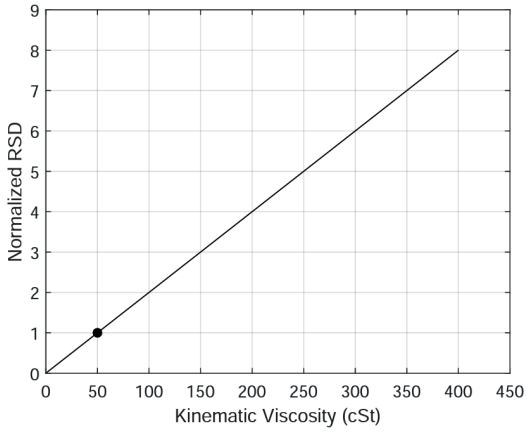


PIN	Signal	Notes
1	OUT 1	4-20mA output
2	CFG reset	Connect to Ground
3	RS-485 A	Modbus RTU
4	Terminator	Connect to pin 3 for termination
5	RS-485 B	Modbus RTU
6	OUT 2	4-20mA output
7	+24V	Supply
8	0 V	Ground

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 information

Scope of delivery

Fluidix Lub-VDT
Mounting and operating instructions
OPTIONAL: USB Evaluation Kit with connection cable
OPTIONAL: Evaluation Kit Software Download

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