LUWATECH Series

DR-800 8-in-1 Oil Property Sensor

1. Product Description

The DR-800 oil property sensor is our original and patented product. It combines eight physical and chemical parameters such as kinetic viscosity, kinematic viscosity, density, dissolved moisture, water activity, dielectric constant, water content and temperature,The DR-800 is a patented product that combines eight physical and chemical parameters, including dynamic viscosity, kinematic viscosity, density, dissolved moisture, water activity, dielectric constant, water content and temperature.

The DR-800 is easy to use and requires no human involvement in the intelligent monitoring process. All tests are carried out automatically by the sensor. It is simply installed in the pipe The DR-800 is easy to use and intelligent, The sensor can be installed in the pipeline to measure viscosity, density, trace moisture, water activity and temperature in real time. The DR-800 is an off-line kit for laboratory analysis of oil.

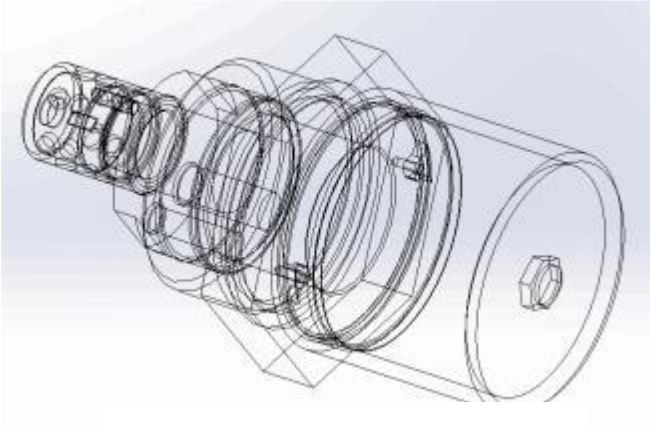
The DR-800 increases the return on investment for the user and provides a reliable basis for quality control during production.The DR-800 is a compact, intelligent, reliable and feature-rich online monitoring sensor that provides real-time monitoring data for the stable and reliable operation of your major equipment.It is a compact, intelligent, reliable and versatile online monitoring sensor.

2. Important features

- Imported probe, high precision measurement
- Eight oil physical and chemical parameters in one unit

ShangHai LUWATECH Industrial Co.,Ltd Address：2F, South Gate, Building 5, No. 333 Kangqiao East Road, Pudong New Area, Shanghai TEL（FAX）:021-58073569 TEL：13917337146（vx） E-mail：maorong.long@luowansy.com
http://www.luwatech.com Particle Counter Specialist Supplier

- Viscosity range 1...400cP (500cSt) with 5% accuracy
- Moisture content detection at ppm level to prevent the risk of water ingress in oil products
- Density accuracy of ±5 kg.m-3
- Wide range of permissible fluid temperatures from 0°C to 100°C
- Fast response, data refreshed every second

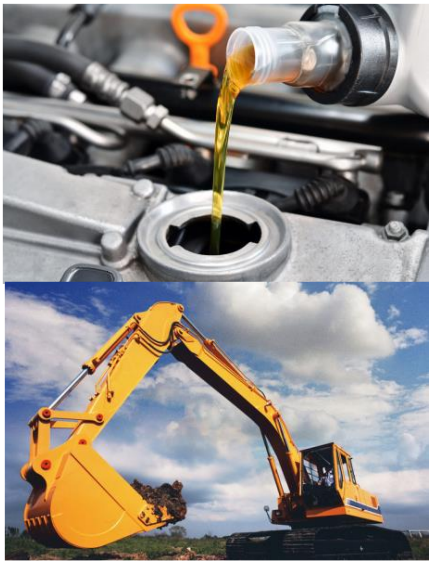


Intelligent, robust and precise

- Measurement unaffected by external vibrations
- All stainless steel for online monitoring robustness requirements
- Excellent chemical and pressure resistance
- No moving parts, no consumable parts, 10 year life
- Multiple certifications and test reports
- Compact design for easy system integration
- Integrated module for easy field calibration

3. Applicable samples

- Lubricants
- Hydraulic oils
- Gearbox oils
- Gasoline, diesel
- Aviation fuel
- Paraffin
- Biodiesel
- Ethanol
- Chemical reagents
- Paint and ink
- Food processing
- Laboratory Analysis



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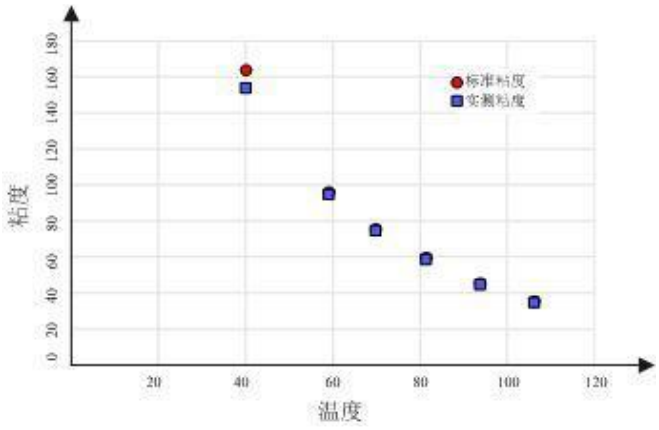
4. Application Areas

- Fuel storage and transportation segments
- Refining, oil industry
- Wind power
- Thermal power generation and other power generation industries
- Aviation, marine, railway and other transportation industries
- Drilling rigs and other marine engineering
- Large-scale engineering machinery and equipment
- Transportation vehicles
- Seawater treatment and testing equipment
- Oil treatment equipment
- Chemical laboratory analysis
- Process Quality Management
- Oil treatment and filtration systems
- Paint, ink and printing industry
- Medical equipment

5. Precise detection



The laboratory uses National Institute of Standards and Technology (NIST) (NIST) accredited standards for calibration and calibration Calibration work

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6. Precise detection

Measurements	kinetic viscosity (cP), kinematic viscosity (cSt), density (kg.m-3), trace moisture (ppm), water activity aw, dielectric constant number, water content (%), temperature (°C), 40 °C viscosity estimation (optional)	
Measurement range	Dynamic viscosity	1cP...400cP (1000cP optional)
	Kinematic viscosity	1cSt...500cSt (40°C kinematic viscosity)
	Density	600 kg.m-3...1250 kg.m-3
	Moisture	0-30,000ppm (calibrated to different oils)
	Water activity	0...1aw
	Dielectric constant	1...6
	Water content	0...10%
	Temperature	0°C...100°C
Accuracy @25°C typical	Viscosity	5% or 1cP (1cSt) whichever is greater
	Density	0.5% or 5kg.m-3 whichever is greater
	Moisture	10% or 10ppm whichever is greater
	Water activity	3%
	Dielectric constant	5%
	Water content	0.5%
	Temperature	0.5°C
Resolution	Viscosity	0.1 cP (0.1 cSt)
	Density	0.1 kg.m-3
	Moisture	1ppm
	Water activity	0.001aw
	Dielectric constant	0.01
	Water content	0.01%
	Temperature	0.1°C
Response time	Less than 30 seconds (first time), data refresh 1 time/sec	
Digital output	RS485 MODBUS RTU	
Power supply voltage	DC 9-32V	
Overall power consumption	< 20mA@24Vdc RS485	
Probe pressure	max 10bar (for larger range, please contact us)	
Fluid temperature	0°C... 100°C	

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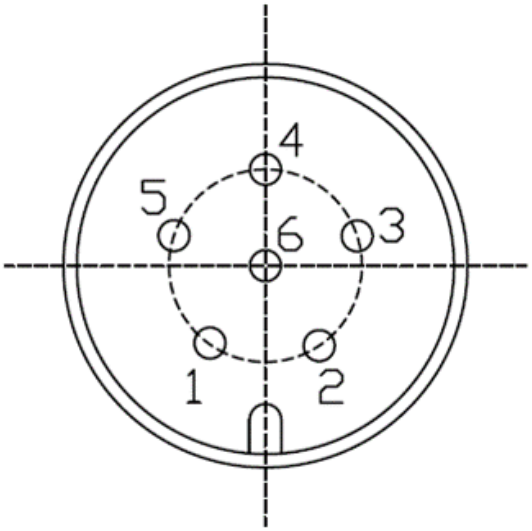
Ambient	-40°C... 85°C
Storage	-40°C... 120°C
Housing material	316/304 stainless steel Hastelloy
Mechanical	G 1/2"
Weight	280g
Protection class	IP65
Sealing material	FKM Fluoroelastomer
Connection cable	2 m M8 6-pole elbow straight optional
Max. flow speed	<0.1 m/s
Conformity with standards	CE, ASTM 1657, National Institute of Metrology and Testing reports
Explosion protection class	EXia IIB T6 Ga (optional)
Electromagnetic compatibility	EN 61326-1 EN 61326-2-3 ICES-003 Class B

7. Interface definition (M8 male)



1）red	DC 9-32V +
2）black	RS485+/A
3）white	GND
4）green	RS485-/B

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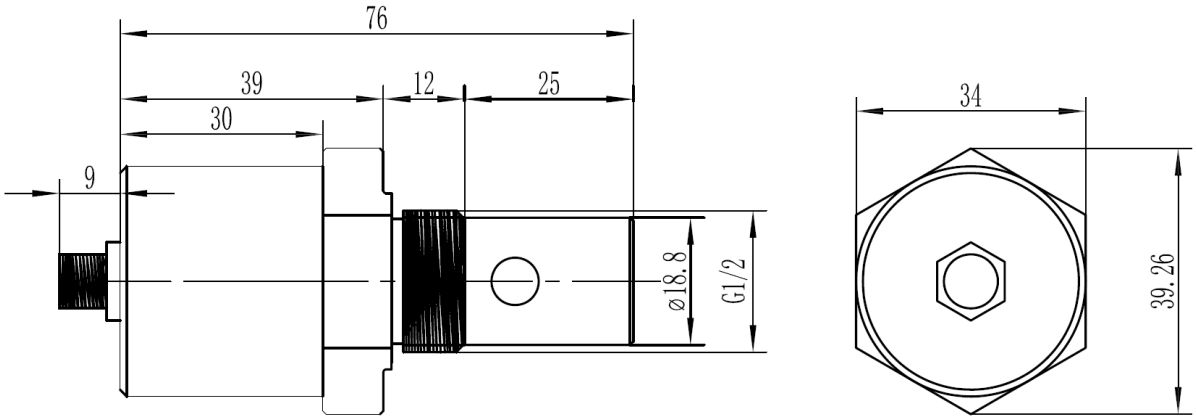
8. Structural dimensions (mm)



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