

## Multi-parameter oil property sensor



### Features

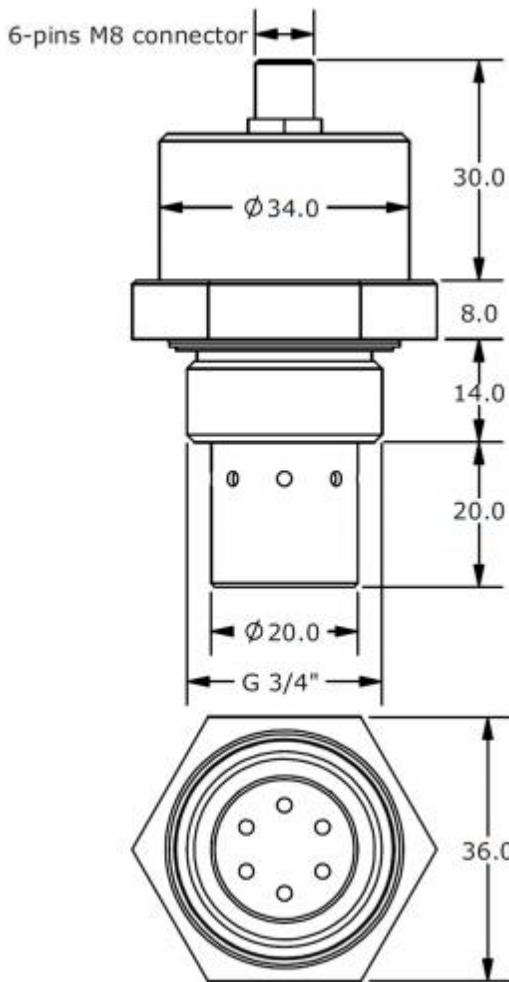
- High precision measurement
- Wide operation temperature
- Quick data response
- External vibration isolation
- Robust stainless steel package
- Corrosion resistant
- Compact structure

### Application

- Fuel storage and transportation
- Petroleum refining
- Wind power and heat-engine generation
- Aviation, navigation, train monitoring
- Drilling platforms and marine engineering
- Construction machinery, off-road vehicles
- Seawater treatment equipment
- Chemical experimental analysis
- Process control management
- Oil treatment equipment
- Filtration system
- Coatings, inks and printing industries
- Medical equipment

### Description

DVDSen300 multi-parameter oil property sensor (oil quality sensor) is the unique product for measuring viscosity, density, dielectric constant and temperature at the same time for hydraulic fluid or lubricant oil. DVDSen300 is designed for plug and play application, comparing to the off-line fluid property analysis, the sensor can monitor the oil quality continuously while technician participation is unnecessary. All signals be automatically calculated by embedded microcontroller and easy for further data acquisition. The users can easily install it on the pipeline to realize the measurement of viscosity, density, dielectric constant and temperature in process control. DVDSen300 can also work for laboratory analysis through the off-line analysis kit. DVDSen300 is a small, intelligent, reliable and functional online monitoring sensor widely for applications of HVAC, off-road vehicles, windmill machines, compressors and high-speed trains.



## Specification

Typical at +24°C (+75°F), 24Vdc, unless otherwise stated.

Measurement Parameters	Density(kg.m-3), Viscosity(cP), Dielectric Constant, Temperature(°C)	
Range	Density	600 to 1250 kg.m-3 *
	Viscosity	1 to 400 cP(500cSt)
	Dielectric	1 to 6
	Temperature	0 to 100°C *
Accuracy @25°C	Density	0.5% or 5kg.m-3 (Take the higher value)
	Viscosity	5% or 1cP (Take the higher value)
	Dielectric	3%
	Temperature	0.5°C
Resolution	Density	0.1 kg.m-3
	Viscosity	0.1cP
	Dielectric	0.001
	Temperature	0.1°C
Response time	< 30 seconds(Warm up), Data refresh per 1 second.	
Digital Output	RS485 MODBUS RTU, CANBUS SAE J1939	
Power Supply	DC 9V-32V@RS485, DC20V-32V@4-20mA, DC 9V-32V@CANBUS	
Power Consumption	< 20mA@24Vdc RS485	
Pressure Limit	Max. 10bar (Contact factory for higher customization)	
Fluid Temperature	0°C—100°C	
Environment Temperature	-40°C—85°C	
Storage Temperature	-40°C—80°C	
Housing Material	316L/304L Stainless steel	
Mechanical Interface	M26*1.5	
Weight	380g	
Protection	IP65	
Sealing Material	FKM Fluorine rubber	
Mating Cable	M8 connector 2 meters cable, 6 pins	
Max. Flow Speed	<0.3 m/s	
Compliance Standards	CE, ASTM1657, CNAS, NIST	
Anti-hazard Classification	EXia IIB T6 Ga (Optional)	
EMC	EN 61326-1 EN 61326-2-3 ICES-003 B class	

## Accessories

Calibration certificate included.

Part Number	Description	Availability
23-2	6 sockets M8 connector with 2 meters cable	Included
IN-3001	LPA(fluid property analysis) indicating instrument	Optional
IN-3062	8 channels data acquisition system	Optional

## Measurement configuration

Sensor	Mating cable	Indicating instrument	Data acquisition	Computer

### 23-L Mating Cable:



## Ordering information

DVDSen	300
Model	Series
Viscosity/Density/Dielectric +Temperature measurement	300



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