

CHANGSHA TAIHE ELECTRONIC EQUIPMENT CO.,LTD.

Pressure Sensor | Temperature Sensor | Liquid Level Sensor | Load Cell | Smart Instruments

Position sensor | Torque | Internet of Things



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Years of experience in sensor R&D,
manufacturing and production

Provide one-stop customization services
for various sensors

PPM-HLV-3

Oil Viscosity and Density Sensor

Product Introduction

The PPM-HLV-3 Sensor adopts MEMS piezoelectric resonance component, with the integration of high accuracy signal sampling and processing unit inside, it can measure density, viscosity and temperature automatically at the same time. Density at 20℃, kinematic viscosity, viscosity index, viscosity at 40℃, viscosity at 100℃, dielectric constant could be measured through its calculate program.

Measuring medium: Lubricating oil, hydraulic oil, gasoline, diesel oil, aviation fuel, kerosene, ethanol, printing ink, paint.

Features

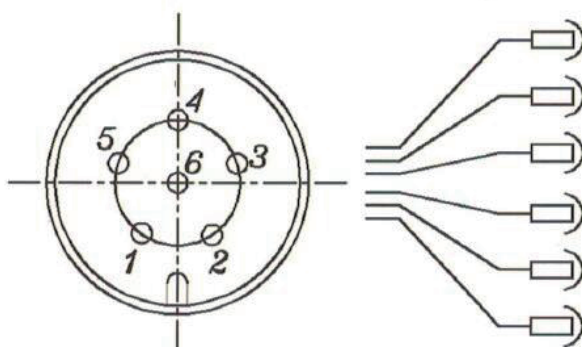
- ◆ Imported probe for real time monitoring online with high accuracy.
- ◆ All stainless steel material adopted, good corrosion resistance and vibration resistance.
- ◆ Quick response, data updating rate less than 1s.
- ◆ Long working life more than 10 years.
- ◆ Small size , easy to install, help to the integration.

Applications

- ◆ Food processing, Laboratory, Fuel storage and transportation.
- ◆ Oil field, wind power, thermal power;
- ◆ Drilling platform, engineering machinery, truck, Oil filtration system.
- ◆ Printing industry, Medical equipment.



Wiring Diagram



- 1) Red +24V DC
- 2) White RS485A
- 3) Black GND
- 4) Green RS485B
- 5) Yellow 4~20mA ch1
- 6) Pink 4~20mA ch2

Specification

Measuring Parameters	Density(kg/m ³), kinetic viscosity(mPa·s), temperature(°C),dielectric constant
Measuring Parameters(optional)	Kinematic viscosity, viscosity at 40°C, viscosity at 100°C, viscosity index, density at 20°C
Measuring Range	Density:0.6~1.3g/cm ³ or 600~1300 kg/m ³ ,Dielectric constant:1~6 Viscosity:25~400mPa·s(500mm ² /s),Temperature:-40~+120 °C
Accuracy(at 23°C)	Density:0.001g/cm ³ or 1 kg/m ³ ,Dielectric constant:±3% Viscosity:2% or 0.5mPa·s at most,Temperature:0.3°C
Resolution	Density:0.0001g/cm ³ or 0.1 kg/m ³ ,Dielectric constant:0.01 Viscosity:0.1mPa·s,Temperature:0.1°C
Response Time	< 30s(first time),data updating rate 1 time/second
Signal Output	Digital signal:RS485 MODBUS RTU or RS232 Analog signal:4~20mA,RL=500Ω (optional)
Alarm Points	2 points 250VAC/3A or 30VDC/3A (optional)
Power Supply	9~32VDC
Power Consumption	< 30mA at 24VDC (RS485)
Pressure Range	≤ 200 bar
Medium Temperature	-40~120°C
Ambient Temperature	-40~85°C
Storage Temperature	-40~80°C
Housing Material	S316 or 304, Hastelloy
Dimension	Φ34*90mm
Process Connection	NESSI, G1/2"
Weight	0.36kg
Ingress Protection	IP66
Sealing Material	FKM fluorine rubber
Cable	2m, M8, 6 core
Flow Rate	< 1m/s
Certification	CE, ASTM1657
Ex-proof class	EX ia II B T6 Ga (optional)

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