# IFV-7 Series

## Multi-parameter oil sensor



IFV series multi-parameter oil sensor adopts patented multi-functional integrated detection technology. The viscosity and density indicators of this sensor adopt the industry's advanced precision resonance mechanism. The dynamic viscosity detection can reach 1500cP and the water content can reach 100%. It is the industry leader and is a representative product with a large range and multiple parameters in the industry. It can complete the detection of dynamic viscosity, density, oil quality, water content, temperature, saturation, and moisture content at one time. At the same time, it can be equipped with internal model data: real-time kinematic viscosity, 40℃ kinematic viscosity, 100℃ kinematic viscosity viscosity index, conductivity and other detection indicators, truly realizing a multi-functional, small-volume, large-integrated, comprehensive application-oriented multi-functional online monitoring oil sensor.

Ultra-high integrated monitoring • Super impact resistance • Oil health monitoring

## Product features

**Ultra-high integratio**

10+ Detection Indicators

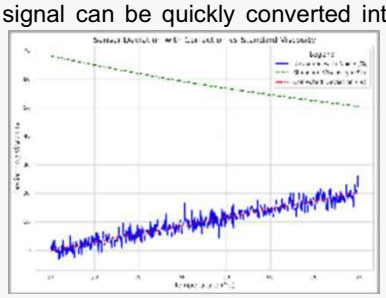
**Industry-leading products for oil monitoring**

Up to ten detection indicators can be integrated

Data responds quickly, refreshed once a second

**Viscosity linear regression denoising algorithm**

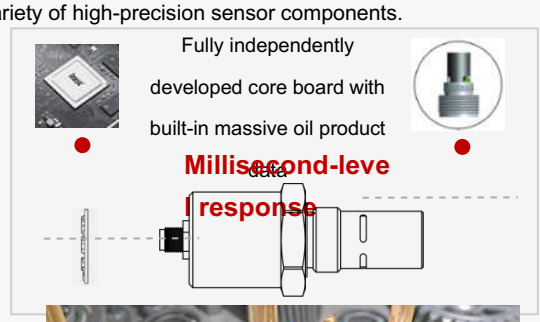
By establishing a linear relationship model (η = aX + b) between the sensor output signal (such as voltage, frequency) and the oil viscosity, and using the experimental data to fit the coefficients a and b, the sensor signal can be quickly converted into a viscosity value.



Technical schematic diagram

**Ingenious structural core**

The unique structural design cleverly integrates multiple monitoring probes together, and the small size can accommodate a variety of high-precision sensor components.






Multi-index monitoring

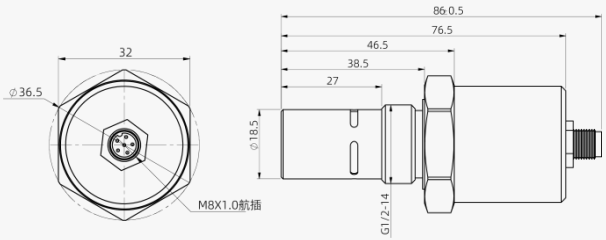


**Remote monitoring intelligent operation and maintenance diagnosis center**

Oil Cloud

www.youyeyun.com

**Product dimensions**




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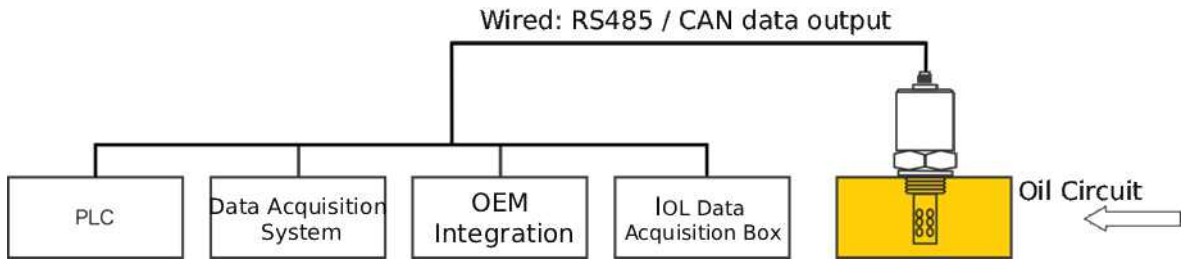
## Specification parameter

| Monitoring indicators | Range | Accuracy | Resolution |
|---|---|---|---|
| Dynamic viscosity | 10-1500cP | ±3% or 8cP | 0.01cP |
| Saturation | 0.04-1aw | ±0.04 aw | 0.001aw |
| Trace moisture | 1-10000ppm | ±10% or 50ppm | 1ppm |
| Water content | 0.03-100% (range optional) | ±0.3 | 0.01% |
| Oil quality | 1-100 | ±3% | 0.01 |
| Density | 600-1500kg/m3 | ±3% | 0.01kg/m3 |
| Temperature | -35-85℃ | 0.5℃ or ±3% | 0.1℃ |

## Electrical properties

| Communication interface | Data transmission | Power | Voltage | Weight | Shell material | Cable length | Protection level |
|---|---|---|---|---|---|---|---|
| 6-core aviation plug | Modbus/CAN/4-20mA | ≤2W | DC 9V-36V | 135g | 316L | 1.5m | IP65 |

## Installation Diagram

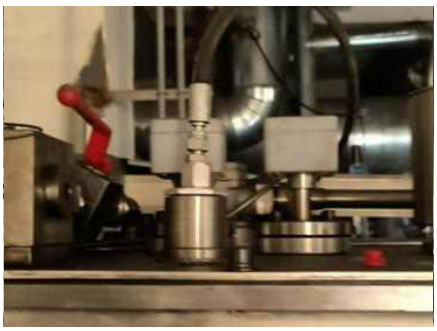


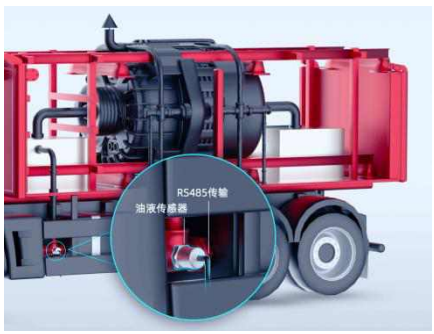

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## Industry application

Industry: Iron and steel metallurgy/petrochemical/energy and electricity/cement and building materials/large machinery/underground excavation, etc.

Oil products: gear oil/hydraulic oil/turbine oil/diesel oil/insulating oil, etc.






The above product parameters are obtained through the company's laboratory test. Due to different actual application conditions, these parameters are not used as the basis for final use.

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