



0.001 ... 5.000 mg/m³
Ultra-wide
measurement range



Oil vapor/Dewpoint/
Pressure Three-in-one
measurement



Auto-calibration/
Auto-cleaning
Good repeatability,
stable performance



Ultra-wide viewing angle
LCD Curve display



F501A Series Portable Oil Vapor Monitor



OIL VAPOR ANALYZER

Product Overview

The F501A is a high-precision, wide-range portable instrument. It measures oil vapor concentrations from 0.001 ... 5.000 mg/m³ and simultaneously monitors pressure dewpoint, pressure, and temperature, delivering excellent cost-performance.

Refer to the ISO 8573-1, the F501A features oil vapor and dewpoint class evaluation functions for compressed air, making it an ideal choice for on-site inspections.

A 7" touchscreen provides real-time curve display, data recording, and USB export. With 25 GB of onboard storage, users can easily perform professional data analysis directly in the field.

Automatic background calibration and self-cleaning at shutdown ensure reliable accuracy and extend sensor lifetime. Multi-color LED indicators, combined with on-screen alarms, clearly display the status of power, measurement environment, sensor, and filter, providing users with full visibility into system operation.

Product Advantages



Three-in-one

Oil vapor/Dewpoint/Pressure
Three-in-one measurement



Ultra-wide Measurement Range

ppb level accuracy with an
extremely low detection limit



Auto-calibration/ Auto cleaning

Ensure measurement accuracy &
stability, extend sensor lifetime



Ultra-wide viewing angle LCD

Large-screen data and dynamic
curve displays are clear, with
smooth operation

- ppb level accuracy with an extremely low detection limit, wide range 0.001 ... 5.000 mg/m³
- Automatic background calibration and self-cleaning at shutdown, ensuring accuracy and extending the lifetime
- FixInst newly developed ultra-fast aluminum oxide sensor technology, measuring dewpoint from -110 ... +20 °Ctd
- Integrated temperature and pressure sensors for online temperature and pressure monitoring
- Two isolated Modbus RTU (RS485) interfaces
- (Optional) 4G and Wi-SUN wireless modules, support uploading data to the cloud wirelessly and device networking
- Portable instrument, connects via Ø6 mm PTFE quick-connect fittings, easy to install and move between sites
- Large-screen dynamic curve displays for real-time monitoring of gas concentration changes
- The capacitive touch 7" IPS LCD with an ultra-wide viewing angle, offering smooth and intuitive user interaction

UI Design

The capacitive touch 7" IPS LCD with an ultra-wide viewing angle, offering clear full-screen data display and an intuitive, user-friendly interface

01 Large-Screen Data Trend Graph

Full-screen dynamic display. Switch between multiple curves at will for effortless data comparison and analysis

02 Oil Vapor/Dewpoint Class

Refer to the ISO 8573-1, with oil vapor and dewpoint class evaluation functions for compressed air

03

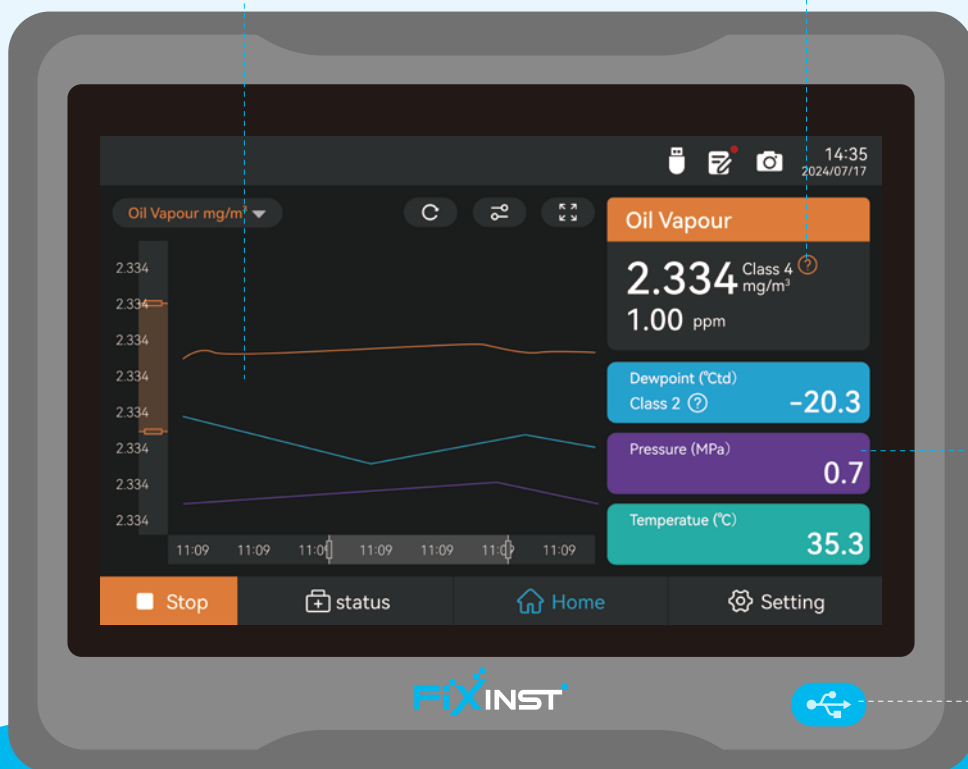
Multi-Parameter

Simultaneously monitors key parameters such as pressure, dewpoint, oil vapor and temperature, delivering excellent cost performance

3 billion recorded points, ultra-large storage capacity, supports USB data export

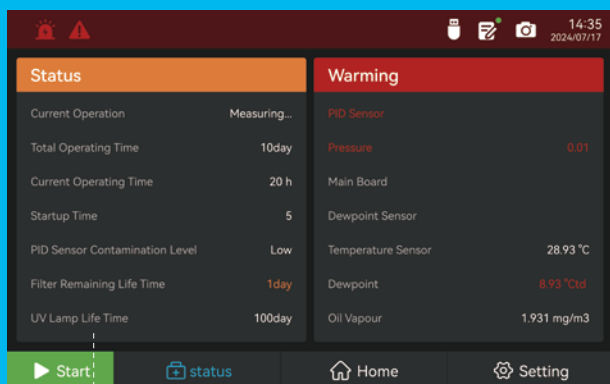
25GB Large Storage Capacity

04



© Home

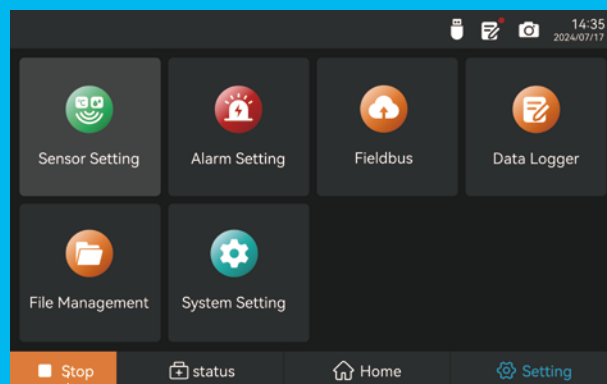
© Status



05

Monitor sensor operational status in real time and efficiently manage device

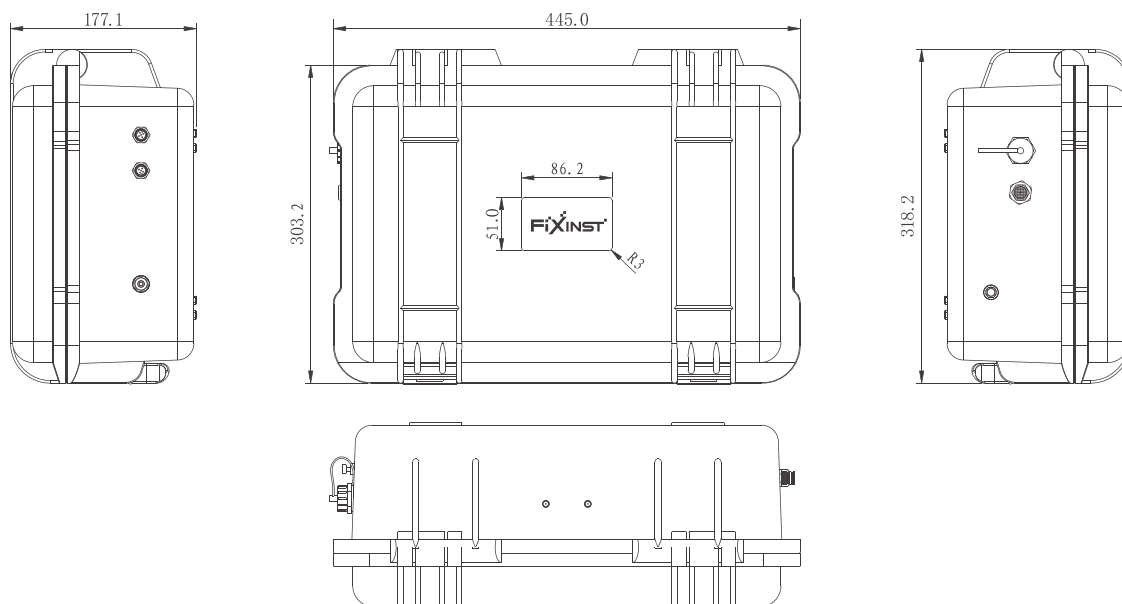
© Setting



06

Background auto-calibration and self-cleaning during shutdown improve measurement accuracy and stability while extending device life time

Product Dimensions



Technical Data

Oil Vapor		Display	
Measuring Range	0.001 ... 5.000 mg/m ³	Display	7" IPS touch LCD
Accuracy	±(1.5%RD + 0.3%FS)	Resolution	1280 × 800 px
Resolution	0.001		
Dewpoint		Signal Output	
Measuring Range	-110 ... +20 °Ctd	Analog Signal	4 ... 20 mA
Accuracy	±2 °Ctd (-60 ... +20 °Ctd) ±3 °Ctd (-110 ... -60 °Ctd)	Digital Signal	Modbus RTU (RS485) Modbus TCP (Ethernet)
		Alarm Signal	2 × Relay alarm channel (Oil Vapor, Dewpoint)
		Wireless Signal	Wi-SUN (Optional) IoT-4G (Optional)
Pressure		Operating Environment	
Measuring Range	0 ... 1.7 Mpa(a)	Measuring Medium	Compressed air and non-corrosive, non-explosive gases
Accuracy	±0.3 %FS @23°C	Medium Temperature	0 ... +50 °C
Resolution	0.01	Medium Pressure	0.3 ... 1.7 Mpa(a)
		Relative Humidity	0 ... 40 %RH (Non-condensing) @20°C, 100KPa
		Sample Gas Flow Rate	0.5 ... 2 NI/min
		Environment Temperature	-20 ... +45 °C
		Storage Temperature	-20 ... +45 °C
Temperature		Other	
Measuring Range	0 ... 50 °C	Zero Filter Life Time	2 Year @ 2 ppm
Accuracy	±0.3 °C	UV Lamp Life Time	8000 h
Resolution	0.01	Case Material	PP
		Dimension	445 × 319 × 177 mm (L×W×H)
Data Logging			
Storage	25 G, 3,000,000,000 values		
Data Export	USB Type-C		
Power			
Supply Voltage & Power	18 ... 30 VDC Max 50 W @ 24 VDC		

Order Information

Model	4G Comm.	Wi-SUN Comm.	Power Cable	Description
F501A				Portable Oil Vapor Monitor, 0.001...5.000mg/m ³ , 7" IPS capacitive touch screen, with data logging function, Pressure Dewpoint -110...+20°Ctd, 0...16 bar, 0...50 °C
	V0013 0001			None (Default)
	S1701 0010			Built-in 4G-IoT module
		V0013 0001		None (Default)
		S1701 0017		Built-in Wi-SUN Sub-module, 915 frequency band (mainly suitable for Asia, America and Australia)
		S1701 0018		Built-in Wi-SUN Sub-module, 868 frequency band (mainly suitable for Europe and the Middle East)
			V0013 0001	None (Default)
			S1701 0046	Power module with M12 connector, US standard plug, 24 VDC 1.04 A / 50 W output, 100 ... 240 VAC input
			S1701 0047	Power module with M12 connector, EU standard plug, 24 VDC 1.04 A / 50 W output, 100 ... 240 VAC input
			S1701 0048	Power module with M12 connector, UK standard plug, 24 VDC 1.04 A / 50 W output, 100 ... 240 VAC input
			S1701 0049	Power module with M12 connector, CN standard plug, 24 VDC 1.04 A / 50 W output, 100 ... 240 VAC input

* There are difference in regulations and standards between countries and regions.
Please select according to the local Wi-SUN frequency band

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