

S120

Oil Vapor Monitor



Opt. 1

Without Display

Opt. 2

With Display





ACCURATE RESULTS Latest PID sensor technology



TOUCH SCREEN For easy operation



EASY INSTALLATION Plug and Play Solution



COMPACT DESIGN Fits into your application



DATA LOGGER Integrated as option



DEW POINT SENSOR Option: -100 ... +20 °C Td



Benefits

- Plug & Play setup with quick connections.
 Can be used in portable and stationary applications.
- Oil vapor measurement in a range of 0.001 to 5.000 mg/m³
- Various output signals to connect the unit to building management systems
- PID sensor technology for fast response time and online monitoring
- Optional with integrated 5" touch screen display with data logger function
- Optional with integrated dew point measurement
- LED indications for status and alarms

Simple Installation – Outstanding Performance

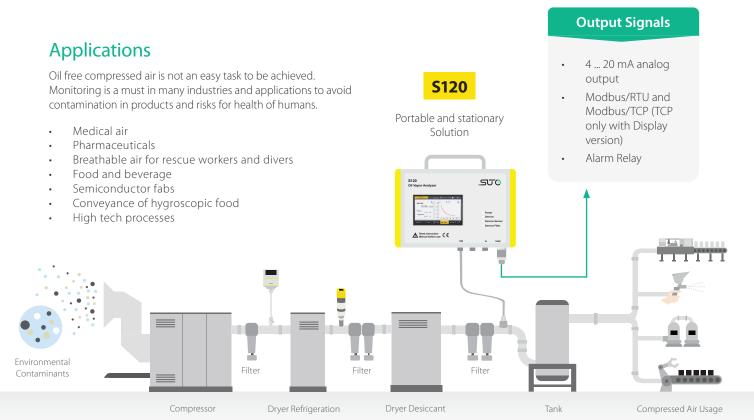
The S120 is designed to offer users an efficient way of measuring residual oil contents in a compressed air system.

The integrated automatic calibration compensates temperature and humidity drifts in the supplied air, resulting in most accurate, reliable and long term stable measurement results.

The simple plug & play installation, as well as its outstanding performance, makes the S120 the ideal choice when oil vapor needs to be measured and monitored.

Optional Integrated Dew Point Sensor

To ensure compressed air quality and purity, dew point measurement is an essential key parameter. Therefore, we offer an optional integrated Dew Point Sensor, -100 ... +20 °C Td, to measure both parameters in one compact device with an excellent price performance ratio.



Use Case in the Cosmetic Production Industry

A cosmetic skincare manufacturer faced challenges meeting new air quality standards due to oil vapor contamination from their aging compressor system.

Using the SUTO S120 Oil Vapor Monitor, an air quality audit revealed the issue, leading to filtration upgrades. Further monitoring identified persistent contamination in the piping, prompting the installation of additional point-of-use filters.

These measures successfully reduced oil vapor levels, ensuring compliance with regulations and maintaining product quality



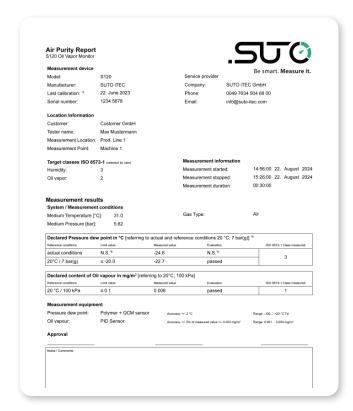
Compressed Air Purity Reports

The S120 Oil Vapor Monitor includes a Guided Measurement feature that simplifies the process of monitoring and reporting oil vapor levels in compressed air systems.

This intuitive feature guides users step-by-step through the measurement process, allowing them to generate and export detailed compressed air purity reports, available as a PDF file, without the need for external software.

The reports comply with ISO 8573-1 reporting guidelines, the international standard for air quality classification, ensuring that your compressed air system meets the required purity levels for your applications.

With the S120, maintaining air quality standards is efficient, accurate and straightforward.





Oil Vapor Measurement

The oil vapor monitoring system is equipped with the latest photoionization detector (PID) with automatic zero point calibration and offers a measuring range in accordance with ISO 8573-1 Class 1 to Class 4 with high precision and an accuracy of 5% of the reading ± 0.003 mg/m³.



Dew Point Measurement (Optional)

Advanced multiple sensor technology enables large measurement ranges, ensuring long-term stability with well-proven methods, and delivers high precision with an accuracy of +2°C Td.



Pressure Measurement

The pressure measurement system utilizes state-of-the-art sensor technology to provide additional quality data about the compressed air system.



Data Logger and Guided Measurement

The integrated data logger records all channels in parallel for later analysis, enabling guided measurements and comprehensive data assessment.

S120 Oil Vapor Monitor

Technical Data

Measurement	
Oil Vapor	
Measuring range	0.001 5.000 mg/m³ (Based on 1000 hPa(a), 20 °C, 0 % relative humidity)
Accuracy	5 % of reading \pm 0.003 mg/m ³
Resolution	0.001 mg/m³
Selectable units	mg/m³ / ppm
Sensor principle	Photo ionization detector
Pressure	
Measuring range	0 16 bar(g)
Accuracy	0.5 % FS
Resolution	0.01 bar(g) / 0.001 MPa / 0.1 psi
Selectable units	bar(g) (default), MPa and psi (on request)
Sensor principle	Piezo resistive pressure sensor
Dew Point (optiona	I)
Measuring range	-100 +20 °C Td
Accuracy	±1 °C Td (0 20 °C Td)
	±2 °C Td (-70 0 °C Td)
	±3 °C Td (-10070 °C Td)
Resolution	0.1 °C Td
Selectable units	°C Td / °F Td
Sensor principle	QCM + Polymer
Temperature	
Measuring range	0 50 °C
Accuracy	0.5 °C
Resolution	0.1 °C
Selectable units	°C / °F
Sensor principle	NTC

Signal / Interface & Supply		
Outputs / Interface		
Analog output	4 20 mA, isolated	
Alarm output	Relay, NO, 40 VDC,0.2A	
Digital interface	Modbus/RTU (RS485)	
	Modbus/TCP (Ethernet) & USB (only available for display version)	
Display (optional)	5" color touch screen with a data logger of 30 million measurement values	
Supply		
Power supply	$24 \text{ VDC} \pm 5 \%$, 10 W	

	Power	LEDs indicate if pre-set alarms are
	Alarm	reached, or if filters and sensors need
_	Service Sensor	to be serviced. The service indications
	Jeivice Jeiisoi	start blinking 4 weeks before expiring
	Service Filter	and turn on permanently when a service
		is immediately required.

General Data	
Measuring medium	Compressed air, N ₂ , CO ₂ (for other gases please contact us)
Sample flow rate	< 2 l/min, measuring gas is released to ambient
Sample rate	1/sec
Gas / Operating temperature	0 + 50 °C
Transport temperature	-10 + 50 °C
Operating pressure	3 15 bar(g)
	0.5 3 bar(g) (optional)
	0.60 1.07 bar(a) (ambient version only)
Gas humidity	< 40 % rel. humidity, no condensation
Gas connection	6 mm quick connect
UV lamp lifetime	6,000 working hours or 1 year, whichever comes first
Electrical connection	M12, USB, RJ45
Settings	Various sensor settings can be performed through SUTO display units or through the related service software
Housing material	PC, Al alloy
Protection class	IP65
Dimensions	271 x 231 x 91 mm
Weight	2.4 kg
Approval	CE

Dimesions



Ordering

Please use the following table to assist in placing your order with our sales staff.

S120 Oil Vapor Monitor	
Order No.	Description
S604 1201	S120, Oil Vapor Monitor, 0.001 5.000 mg/m³, 4 20 mA output, RS-485, alarm output, supply 24 VDC, incl. power supply
S604 1202	S120-P, Portable Oil Vapor Monitor, 0.001 5.000 mg/m³, 4 20 mA output, RS-485, alarm output, connectable to S551, transport case, incl. power supply
S604 1203	S120, Oil Vapor Monitor, 5" touch screen, 0.001 5.000 mg/m³, 4 20 mA output, RS-485, alarm output, supply 24 VDC, incl. power supply
S604 1204	S120, Oil Vapor Monitor, 5" Touchscreen, 0.001 5.000 mg/m³, 4 20 mA output, RS-485, Alarm output, supply 24 VDC, incl. power supply, low pressure version 0.5 3 bar(g)
P604 1205	S120-P, Portable Oil Vapor Monitor, 5" touch screen, 0.001 5.000 mg/m³, 4 20 mA output, RS-485, alarm output, 24 VDC supply, incl. transport case, power supply
P604 1215	S120-Ambient Portable Oil Vapor Monitor for ambient air, 5" touch screen with data logger, 0.001 5.000 mg/m³, 4 20 mA, RS-485 (Modbus/RTU), Ethernet (Modbus/TCP), alarm output, integrated pump, supply voltage 24V DC, incl. power supply and transport case.
A1250	Option: Integrated dew point sensor, -100 +20 °C Td (only for S604 1203, S604 1204 and P604 1205)

S120 Accessories	
Order No.	Description
A554 1203	Oil vapor zero filter, 1.5 MPa max, with quick connectors at both ends
A554 1207	Replacement kit for zero filter oil vapor analyzer
A554 0120	Option,Transport case S120/130

S120 Calibration

Order No.	Description
R200 0120	S120 General service and re-calibration (for all models without Dew Point Sensor option A1250): - General inspection of the unit - Replacement of tubes and fittings - Cleaning of lamp and sensor - Assembly and test of unit - Calibration of oil sensor - Calibration Certificate
R200 0121	S120 General service and re-calibration with dew point sensor option (for S604 1203 and P604 1205 with Dew Point Sensor Option A1250): - General inspection of the unit - Replacement of tubes and fittings - Cleaning of lamp and sensor - Assembly and test of unit - Calibration of oil sensor Accessories- Calibration Certificate

