S120

Oil Vapor Monitor

SUTO
Be smart. **Measure it.**

Opt. 1	Without Display
Opt. 2	With Display

PID **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.

Applications

Oil free compressed air is not an easy task to be achieved. Monitoring is a must in many industries and applications to avoid contamination in products and risks for health of humans.
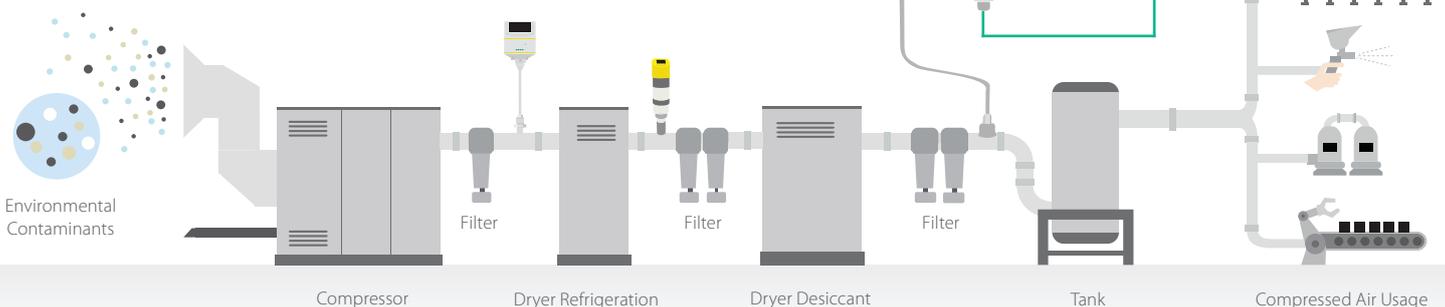
- Medical air
- Pharmaceuticals
- Breathable air for rescue workers and divers
- Food and beverage
- Semiconductor fabs
- Conveyance of hygroscopic food
- High tech processes

Output Signals

- 4 ... 20 mA analog output
- Modbus/RTU and Modbus/TCP (TCP only with Display version)
- Alarm Relay

S120

Portable and stationary Solution

| Environmental Contaminants | Compressor | Filter · Dryer Refrigeration | Filter · Dryer Desiccant | Filter | Tank | Compressed Air Usage |

Technical Data

Measurement

Oil Vapor

Measuring range	0.001 ... 5.000 mg/m^3 (Based on 1000 hPa(a), 20 °C, 0 % relative humidity)
Accuracy	5 % of reading ± 0.003 mg/m^3
Resolution	0.001 mg/m^3
Selectable units	mg/m^3 / 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 (optional)

Measuring range	-100 ... +20 °C Td
Accuracy	±1 °C Td (0 ... 20 °C Td)
	±2 °C Td (-70 ... 0 °C Td)
	±3 °C Td (-100 ... -70 °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 VDC ± 5 %, 10 W

🟡 Power
🔴 Alarm
🟢 Service Sensor
🟢 Service Filter

LEDs indicate if pre-set alarms are reached, or if filters and sensors need to be serviced. The service indications start blinking 4 weeks before expiring 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	-20 ... +50 °C
Transport temperature	-30 ... +70 °C
Operating pressure	3 ... 15 bar(g)
	0.5 ... 2 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

170 mm
271 mm
91 mm

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, Alarm output, supply 24 VDC, incl. power supply, low pressure version 0.5 ... 2 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 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

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