

# S 120 OIL VAPOR SENSOR



The new oil vapor sensor S 120 monitors oil contents of compressed air and gases permanently or for spot checks when used as portable unit in conjunction with S 551. The simple installation and the outstanding performance makes S 120 the ideal choice when oil vapor contents needs to be measured and monitored.

Oil free compressed air is not an easy task to be achieved. Monitoring is a must in many industries and applications to avoid contaminations in products and risks for health of humans. S 120 makes this monitoring task affordable and reliable.

For best accuracy and long term stability, the sensor applies an automatic calibration. Sensor contaminations and sensor life time are monitored and will be indicated to the user. An over range detection will remove the sampling air from the sensor to protect it against contamination.



## Limits of oil vapor

Compressed air class 1 (EN ISO 8573-1):	0.01 mg/m <sup>3</sup>
Medical applications (EAB 407/1238):	0.1 mg/m <sup>3</sup>
Breathing apparatus (EN 12021):	0.5 mg/m <sup>3</sup>

## Features

- Measures oil vapor contents in compressed air and other gases
- Can be used for permanent or in portable applications
- Measures down to 0.003 mg/m<sup>3</sup>
- Easy connection through sampling hose and quick connect
- Output signals: - 4 ... 20 mA  
- RS-485, Modbus/RTU  
- Relay switch (NO)
- PID sensor for highest accuracy
- Service and Alarm indication through LED
- Connectable to SUTO displays and data loggers as well as third parties displays and control units
- Integrated 5" touch screen and data logger (option)

## Technical data S 120

Measuring medium	Compressed air and gases free of corrosive, aggressive, caustic and flammable constituents
Measuring range	0.003 ... 10.00 mg/m <sup>3</sup> (based on 1000 hPa (a), 20 °C, 0% relative humidity)
Sensor type	PID (photoionization detector)
Detection limit	0.003 mg/m <sup>3</sup>
Accuracy	5% of reading +/- 0.003 mg/m <sup>3</sup>
Operating pressure	3 ... 15 barg (higher pressure on request)
Gas humidity	< 40% rel. humidity, no condensation
Sample flow rate	< 2 l/min, measuring gas is released to ambient
Gas connection	6 mm quick connect
Electrical connection	M12 connector
Sensor life time	6000 operating hours. Will be indicated. Sensor exchange by service
Gas temperature	-20 °C ... +50 °C (at inlet)
Ambient conditions	-20 °C ... +50 °C
Transport temperature	-30 °C ... +70 °C
Output signal	4...20 mA (0 ... 10 mg/m <sup>3</sup> ) RS-485, Modbus/RTU Relay: NO, 32 VDC / 500 mA
Power supply	24 VDC ± 5%, 8 W
Display & data logger	5" touch screen, 100 million values (option)
Application	Downstream of activated carbon filters Downstream of oil-free compressors Wherever upstream drying and filtration is applied
Casing/dimensions	PC, Al alloy, 271 X 205 X 91 mm
Classification	IP65
EMC	According to IEC 61326-1
Settings	Various sensor settings can be performed through SUTO display units or through the related service software
Weight	2400 g
Sample rate	1 s

## Applications

- Medical air
- Pharmaceuticals
- Breathable air
- Marine air
- Food and beverage
- Medical engineering
- High speed trains
- Semiconductor fabs
- Conveyance of hygroscopic food
- High tech processes
- Electronics industry



S 120 mounted at the wall for permanent oil vapor monitoring



Portable S 120-P with accessories connectable to S 551

- **Power**
- **Alarm**
- **Service Sensor**
- **Service Filter**

LED indicate if pre-set alarms are reached, or if filter and sensor needs to be serviced. The service indications start blinking 4 weeks before expiring and are turned on permanently when service is immediately required.

Order no.	Description
S604 1201	S 120, oil vapor sensor, 0.003 ... 10 mg/m <sup>3</sup> , 4...20 mA output, RS-485, alarm output, 24 VDC supply, incl. power supply
S604 1202	S 120-P, oil vapor sensor, 0.003 ... 10 mg/m <sup>3</sup> , 4...20 mA output, RS-485, alarm output, connectable to S 551, transport case, incl. power supply
S604 1203	S 120, oil vapor sensor, 5" touch screen, 0.003 ... 10 mg/m <sup>3</sup> , 4...20 mA output, RS-485, alarm output, 24 VDC supply, incl. power supply
R200 0120	General service and re-calibration: - General inspection of the unit - Replacement of tubes and fittings - Cleaning of lamp and sensor - Assembly and test of unit - Calibration of oil sensor S 120
A554 1203	Zero test filter for S 120, 15 barg, with quick connection at both ends.