Be smart. **Measure it.**

S601

Stationary Compressed Air Purity Monitor

ALL IN ONE
Dew point, particle and oil vapor

TOUCH SCREEN
5" large color LCD

INDUSTRIAL DESIGN
For outdoor applications

PRECISION
Accurate measurements

COMPACT DESIGN
Can be installed anywhere

Benefits

- All-in-one device measures particle concentration, dew point and oil vapor
- Measures additionally the temperature and pressure
- Software guided measurement makes it easy to generate reliable results
- Real time information can be retrieved from the S601 by SCADA systems via Modbus outputs
- Compact design and easy setup, just connect the unit to power and the compressed air supply

Constant Measurement — 24/7 Monitoring

The S601 combines three major quality measurements into a single wall mountable device. Optimized to be used as Plug & Play system, the S601 helps users to identify the air quality at a glance.

The robust cabinet makes is well suited for rough industrial applications.
A stainless steel cabinet is offered on request, which is suited for pharmaceutical and medical applications.

The S601 combines the latest sensor technology and a time-saving setup into a one of its kind multi-tool. Mount it, power it, connect it and measure. Trust us, it is that easy.

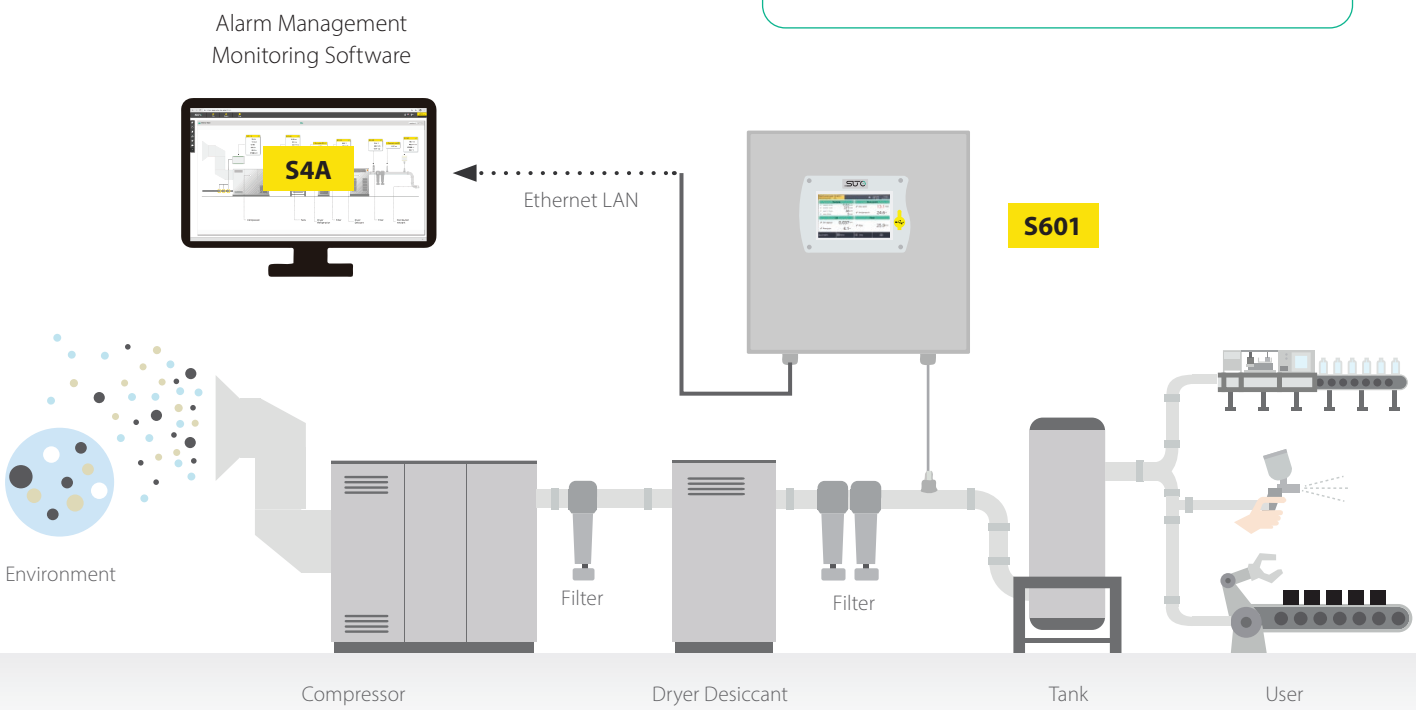
Monitoring of All Relevant Contaminants

Particle Concentration Measurement
0.1 < d ≤ 0.5 µm / 0.5 < d ≤ 1.0 µm /
1.0 < d ≤ 5.0 µm / 5.0 µm < d

Dew Point Measurement
-100 ... +20 °C Td

Oil Vapor Measurement
0.001... 5.000 mg/m³

ISO 8573-1 Classification



Various Applications

- Air quality measurements in medical, pharmaceutical, food and beverage applications
- Compressed air quality audits in regards to the ISO 8573-1
- Point-of-use measurements to ensure process safety and quality in all applications
- Monitoring of high tech applications with strict air purity requirements

5 in 1 Measuring Device

The S601 is the stationary multi-tool for compressed air purity measurements. It measures, records and validates quality parameters like particles, dew point, oil vapor contents, temperature and the pressure of compressed air systems. It offers different signal outputs to seamlessly integrate it into your system. The integrated logger stores the recorded values safely.

Particle Concentration Measurement

- Measurement methods according to ISO 8573 standards
- Latest laser detection technology
- Smallest particle size 30 ... 70 %, next bigger sizes 90 ... 110 % per ISO 21501-4

Oil Vapor Measurement

- Latest photoionisation detector (PID) with self-calibration
- Wide range of oil vapor concentrations
- High precision with 5 % of reading ± 0.003 mg/m^3 accuracy

Dew Point Measurement

- Large ranges thanks to the unique multiple sensor technology
- Long-term stable and well-proven measurement methods
- Outstanding precision with a high accuracy over the full range from -100 to +20 °C Td

Pressure Measurement

- State of the art sensor technology
- Additional quality data about the compressed air system

Integrated Data Logger

- Integrated data logger records all channels in parallel for later analysis
- 5" touchscreen allows you to interact with the device on site
- There in no need for a PC to manage the device

Modular Concept

The S601 is based on a modular concept which enables the client to decide which type of measurement needs to be performed.

This makes the S601 customizable and flexible to offer the end-user the best suited instrument to finish the desired measurement tasks.

ISO 8573-1 Compressed Air Classes

ISO 8573-1:2010 is the main publication of the ISO 8573 series of standards, because it contains the permissible amount of contaminants per cubic meter of compressed air is fixed.

Class	Particle Concentration			Pressure Dew Point	Oil Concentration
	cn/m³			°C (°F)	mg/m³
	0.1 < d ≤ 0.5 µm	0.5 < d ≤ 1.0 µm	1.0 < d ≤ 5.0 µm		
0	As specified by the equipment user or supplier and more stringent than class 1				
1	≤ 20,000	≤ 400	≤ 10	≤ -70 (94.0)	≤ 0.01
2	≤ 400,000	≤ 6,000	≤ 100	≤ -40 (-40.0)	≤ 0.1
3	not specified	≤ 90,000	≤ 1,000	≤ -20 (-4.0)	≤ 1
4	not specified	not specified	≤ 10,000	≤ +3 (+37.4)	≤ 5
5	not specified	not specified	≤ 100,000	≤ +7 (+45.6)	> 5
6	x	x	x	≤ +10 (+50.0)	x

Why should you focus on your ISO 8573-1 specifications?

Certain industries like the pharmaceutical and food industry requires high-quality compressed air. By meeting the ISO 8573-1 standard requirements you can:

- **Ensure Process and Product Safety:**

  Potential incidents, like contaminants meeting food via water and oil, can create safety concerns and unreliable processes.

- **Avoid Production Failures and Poor Quality Finishes:**

  Contaminants mixing with applications effect product results.

- **Prevent production downtime:**

  Processes and machines are stopped to find and eliminate the contamination issues.

Dimensions

Technical Data

Measurement

Particle concentration		
Accuracy	Counting Efficiency according ISO 21501-4	
	Option A1263:	Option A1260:
	30 ... 70 % of d > 0.1 µm	30 ... 70 % of d > 0.3 µm
	90 ... 110 % of d ≥ 0.3 µm	90 ... 110 % of d ≥ 0.45 µm
Selectable units	cn/m³, cn/ft³	
Measuring range	Option A1263:	Option A1260:
	0.1 < d ≤ 0.5 µm	0.3 < d ≤ 0.5 µm
	0.5 < d ≤ 1.0 µm	0.5 < d ≤ 1.0 µm
	1.0 < d ≤ 5.0 µm	1.0 < d ≤ 5.0 µm
	5.0 µm < d	5.0 µm < d
Sensor	Laser optical particle counter	
Sampling rate	1 min.	
Flow rate	2.83 l/min	
Pressure Dew Point		
Accuracy	± 1 °C Td (0 ... 20 °C Td)	
	± 2 °C Td (-70 ... 0 °C Td)	
	± 3 °C (-100 ... -70 °C Td)	
Selectable units	°C, °F	
Measuring range	-100 ... +20 °C Td	
Sensor	QCM + Polymer	
Response time (t90)	-20 °C Td -> -60 °C Td = < 240 sec	
	-60 °C Td -> -20 °C Td = < 30 sec @ 4 l/min	
Oil vapor		
Accuracy	5 % of value +/- 0.003 mg/m³	
Detection limit	0.001 mg/m³	
Resolution	0.001 mg/m³	
Selectable units	mg/m³	
Measuring range	0.001 ... 5.000 mg/m³	
Sensor	PID (Photoionisation detector)	
UV lamp lifetime	9000 working hours	
Sampling rate	1 sec.	
Pressure		
Accuracy	0.5 % FS	
Measuring range	0.1 ... 1.6 MPa(g)	
Sensor	Piezo resistive sensor	
Temperature		
Accuracy	± 0.3 °C	
Measuring range	0 ... + 50 °C	
Sensor	Pt100	
Reference conditions		
ISO1217	20 °C / 1000 hPa	

Signal / Interface & Supply

Fieldbus	
Protocol	Modbus/TCP, Modbus/RTU
Update rate	1 / sec.
Alarm output	
Relay	2 x Changeover Relay (freely programmable)
Rating	230 VAC, 3A
Power Supply	
Voltage supply	100 ... 240 VAC, 50/60 Hz
Current consumption	50 VA
Interface	
USB	USB Micro with OTG support

General data

Configuration	
Others	Device comes pre-configured Configuration can be done via on-screen touch
Display	
Integrated	Touchscreen, Size: 5", Resolution: 800 x 480 px
Data Logger	
Storage	Up to 3 million recorded data sets (10 channels each)
Material	
Process connection	Brass nickel-plated, FKM
Housing	Sheet steel, powder coated cabinet
Miscellaneous	
Electrical connection	AC Clamp Terminals, M12, RJ45
Protection class	IP55 (cover lid closed)
Approvals	CE
Process connection	Micro quick connector, full pass-through, male (1.5 m hose with coupling included)
Weight	15 kg
Operating conditions	
Medium	Compressed Air, Nitrogen N_2, Carbon dioxide CO_2 (software setting)
Medium quality	ISO 8573-1: 4.5.4 or better
Medium temperature	0 ... + 50 °C
Medium humidity	Medium humidity < 40 % rH, no condensation
Operating pressure	0.3 ... 1.5 MPa(g)
Ambient temperature	0 ... + 50 °C
Ambient humidity	0 ... 90 % rH
Storage temperature	-10 ... + 50 °C
Transport temperature	-10 ... + 50 °C

Ordering

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

S601 Stationary Compressed Air Purity Monitor

Order No.	Description
D500 0601	S601 Stationary Compressed Air Purity Monitor Touch screen interface, data logger , metal cabinet for wall mounting Supply voltage 100 ... 240 V AC, Inlet pressure 0.3 ... 1.5 MPa Including: • Dew point measurement rig -100 ... +20 °C Td • 2 m PTFE hose • 1.5 m PTFE hose with quick connector • Purge unit for measuring point cleaning • USB OTG memory stick • S4A Software for logger read out and analysis • 1 x PTFE hose adapter • Certificate of calibration
Particle counter	
A1260	Integrated particle counter rig, 0.3 < d ≤ 0.5 µm, 0.5 < d ≤ 1.0 µm, 1.0 < d ≤ 5.0 µm, 2.83 l/min
A1263	Integrated particle counter rig, 0.1 < d ≤ 0.5 µm, 0.5 < d ≤ 1.0 µm, 1.0 < d ≤ 5.0 µm, 2.83 l/min
Oil vapor measurement	
A1267	Integrated oil vapor sensor rig, 0.001 ... 5.000 mg/m³

Ordering Example

Example	S601 Stationary Compressed Air Purity Monitor, with Dew point measurement, Particle counter 0.1 < d ≤ 0.5 µm, 0.5 < d ≤ 1.0 µm, 1.0 < d ≤ 5.0 µm and oil vapor sensor
Order Code	D500 0601.A1263.A1267