

S130/S132

Contador de Partículas Láser

ECO ($0.3 < d \leq 5.0 \mu\text{m}$)

S130



S132

PRO ($0.1 < d \leq 5.0 \mu\text{m}$)



MEDICIÓN DE PARTÍCULAS
Acorde al
Estándar ISO-8573



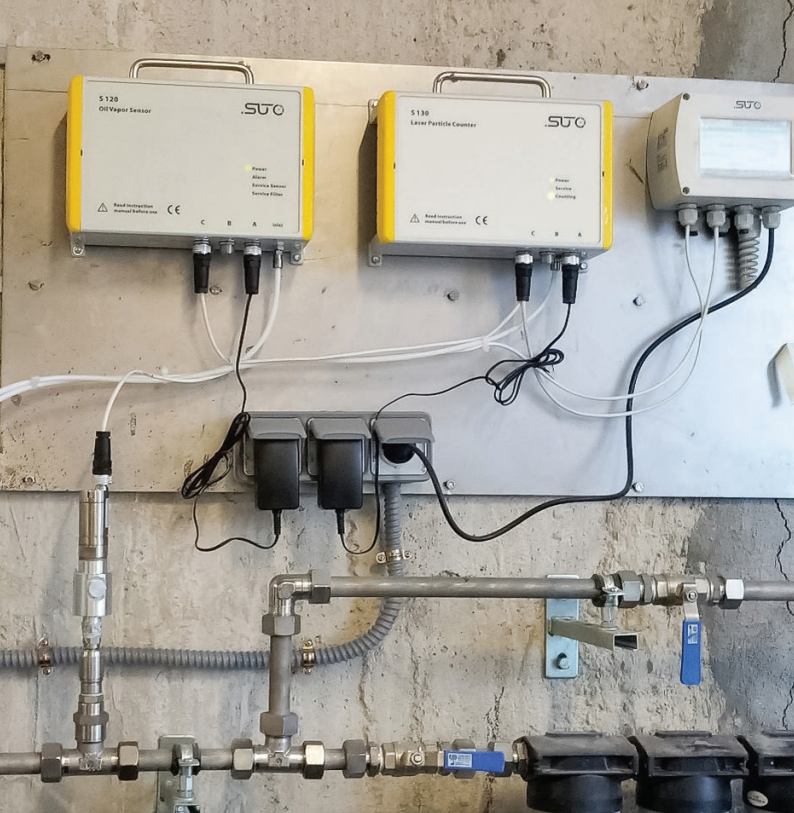
INSTALACIÓN SENCILLA
Plug and Play



PRO VERSION S132
Canal mas pequeño
 $0.1 < d \leq 0.5 \mu\text{m}$



VERSIÓN ECO S130
Canal mas pequeño
 $0.3 < d \leq 0.5 \mu\text{m}$



Ventajas

- ✓ Mediciones y supervisión precisas de la calidad del aire comprimido con rangos de tamaño de partículas: $0,1 < d \leq 0,5 \mu\text{m}$ / $0,5 < d \leq 1,0 \mu\text{m}$ / $1,0 < d \leq 5,0 \mu\text{m}$ / $d > 5,0 \mu\text{m}$
- ✓ Clasificación conforme a la norma ISO 8573-1 y conforme a la norma ISO 8573-4
- ✓ Fácil conexión al sistema de aire comprimido mediante una manguera de 6 mm con conectores rápidos
- ✓ Difusor de presión integrado adecuado para rangos de presión de entrada de 3 ... 15 bar(g)
- ✓ Pantalla táctil opcional de 5" integrada para lecturas de datos en directo y funciones de registro de datos
- ✓ Diseñado para ser utilizado como solución estacionaria, así como en las mediciones de auditoría portátiles

Recuento fiable de partículas en sistemas de aire comprimido

Los contadores láser de partículas SUTO S130 / S132 están optimizados para la monitorización de la calidad del aire comprimido las 24 horas del día, los 7 días de la semana. A diferencia de sus competidores, los contadores de partículas láser SUTO vienen con difusores de presión integrados miden las partículas en la presión de trabajo. Los usuarios pueden utilizar los contadores de partículas láser directamente en el sistema de aire comprimido, sin necesidad de instalar reductores de presión, cumpliendo así la norma ISO 8573-4.

Los valores de medición se muestran en recuentos por volumen (cn/m³), pero también pueden mostrar unidades de volumen alternativas como pies cúbicos o litros. La pantalla integrada ofrece lecturas en directo para todos los canales, ajustes de salida de señal, así como un registrador de datos integrado, para almacenar los datos de medición en el dispositivo.

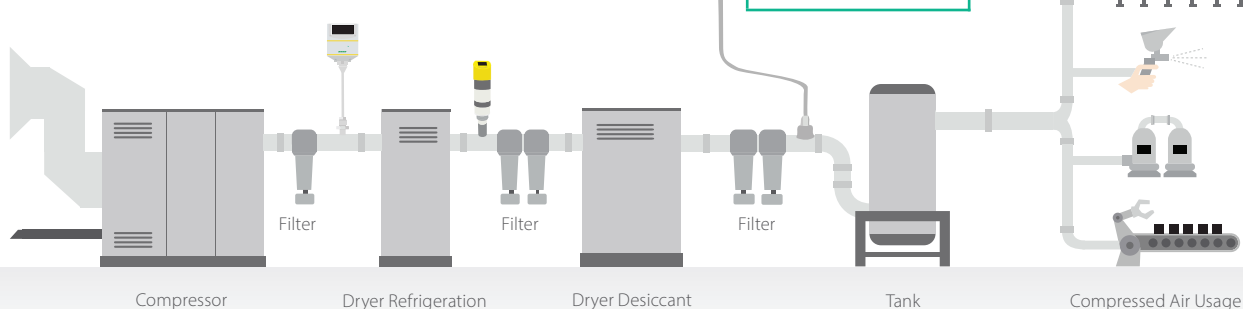
Aplicaciones

El aire comprimido libre de partículas no es una tarea fácil de conseguir. El control es imprescindible en muchas industrias y aplicaciones para evitar la contaminación de los productos y los riesgos para la salud de las personas

- Aire medicinal
- Productos farmacéuticos
- Aire respirable para socorristas y submarinistas
- Alimentación y bebidas
- Fábricas de semiconductores
- Transporte de alimentos higroscópicos
- Procesos de alta tecnología



Environmental Contaminants



S130/S132

Portable and stationary Solution

Señales de Salida

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



Particulates in Paint Shops

In a modern paint shop, the painting quality highly depends on the quality of the compressed air. Modern paint systems inject the paint into the paint gun, where compressed air is driving the paint through the nozzle. When exiting the nozzle, the paint atomizes into a fine and uniform mist. These tiny paint particles repel each other as they are leaving the nozzle and stick to the object being painted.

Excess impurities in the compressed air will cause the paint particles to "clump", resulting in uneven coverage and an inconsistent finish.

The only way to secure this high-quality painting process is by monitoring the particle concentration of the compressed air supply.

Air Quality Monitoring according to the ISO 8573-1

The ISO 8573-1 defines the compressed air purity classes for particulates in a compressed air system by providing the limit values for each channel.

The S132 Laser Particle Counter measures the channels as defined by the ISO 8573-1:

- $0.1 < d \leq 0.5 \mu\text{m}$
- $0.5 < d \leq 1.0 \mu\text{m}$
- $1.0 < d \leq 5.0 \mu\text{m}$

For these 3 channels, the limit values are defined and divided into classes.

But furthermore, as stated in the ISO 8573, the fourth channel must be measured as well:

- $d > 5.0 \mu\text{m}$

This channel value must be 0 for the classes 0 ... 5, as otherwise the classification falls into class 6 or worse, where a mass concentration is defined as limit values.

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:

Contaminants mixing with applications effect product results and can create safety concerns.

✓ Prevent production downtime:

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

Compressed Air Purity Reports

The S130/132 Particle Counter features an innovative Guided Measurement tool that simplifies the process of testing compressed air quality. This intelligent feature guides the user through each step of the measurement process, making it easy to use even for inexperienced users. The instrument produces detailed compressed air purity reports showing particle concentration, ISO particle class and whether the current air quality meets the required standard.

These reports are generated as PDF files and are fully compliant with ISO 8573-1, the global standard for air quality classification. This ensures that your compressed air system meets the required cleanliness levels for your specific needs. With its user-friendly Guided Measurement and commitment to ISO compliance, the S130/132 is an essential tool for ensuring high quality compressed air.

Air Purity Report

S130 Laser Particle Counter



Be smart. Measure it.

Measurement device

Model: S130
Manufacturer: SUTO ITEC
Last calibration: 2024
Calibration due: 2025
Serial number: 1234 5678

Service provider

Company: SUTO ITEC GmbH
Phone: 0049 7634 504 88 00
Email: info@suto-itec.com

Location Information

Customer: LI
Tester name: Prod. Line 1
Measurement Location: Machine 1

Company name

LI
Prod. Line 1
Machine 1

Target classes ISO 8573-1

Particles: custom

Measurement information

Measurement started: 09:27:00 23 September 2024
Measurement stopped: 09:29:00 23 September 2024
Measurement duration: 00:02:00

Measurement results

System / Measurement conditions
Particle counter flow rate: 2.83 l/min +/- 0.05 l/min

Channel	Limit value	Measured value	Evaluation
0.3 $\mu\text{m} < d \leq 0.5 \mu\text{m}$	≤ 10000	14137	failed
0.5 $\mu\text{m} < d \leq 1.0 \mu\text{m}$	≤ 5000	10861	failed
1.0 $\mu\text{m} < d \leq 5.0 \mu\text{m}$	≤ 3000	159	passed
$d > 5.0 \mu\text{m}$	≤ 0	5	failed

Declared Particle concentration in cn/m^3 (d = Particle size) [referring to 20°C; 100 kPa]

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$d > 5.0 \mu\text{m}$	≤ 0	5	failed

Measurement equipment

Particle concentration: Laser optical particle counter
Accuracy: 30 ... 70% of $d < 0.3 \mu\text{m}$... 110% of $d = 0.45 \mu\text{m}$ Range: $0.3 < d \leq 5.0 \mu\text{m}$ + $d > 5.0 \mu\text{m}$

Approval:

Notes / Comments:

Technical Data

Measurement

Particle

Measuring range	S130: $0.3 < d \leq 5.0 \mu\text{m}$ S132: $0.1 < d \leq 5.0 \mu\text{m}$
Measuring channels	S130: CH1: $0.3 < d \leq 0.5 \mu\text{m}$ CH2: $0.5 < d \leq 1.0 \mu\text{m}$ CH3: $1.0 < d \leq 5.0 \mu\text{m}$ CH4: $5.0 \mu\text{m} < d$ (configurable) S132: CH1: $0.1 < d \leq 0.5 \mu\text{m}$ CH2: $0.5 < d \leq 1.0 \mu\text{m}$ CH3: $1.0 < d \leq 5.0 \mu\text{m}$ CH4: $5.0 \mu\text{m} < d$ (configurable)

Counting Efficiency according ISO 21501-4	S130 30 ... 70 % of $d > 0.3 \mu\text{m}$ 90 ... 110 % of $d \geq 0.45 \mu\text{m}$ S132 30 ... 70 % of $d > 0.1 \mu\text{m}$ 90 ... 110 % of $d \geq 0.3 \mu\text{m}$
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Principle of measurement Laser detection

Sensor LED-laser

Consumption

Selectable units cn/m^3 , cn/ft^3 , mg/m^3

Signal / Interface & Supply

Analog output

Signal	4 ... 20 mA (2-wire)
Alarm	Switch output, normally open, max. 40 VDC, 200 mA

Fieldbus

Protocol	Modbus/RTU, Modbus/TCP (with Display version)
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Supply

Voltage supply	24 VDC / 10 W (without Display) 24 VDC / 20 W (with Display)
Current consumption	420 mA (without Display) 840 mA (with Display)

Data 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 5" color touch screen

Data Logger

Storage 30 million measurement values (optional)

Miscellaneous

Electrical connection	3X M12
Protection class	IP65
Process connection	6 mm quick connect (pressurized version), barb connection (ambient version)
Material	PC, Al alloy
Weight	S130: 1.9 kg S132: 3.2 kg
Dimensions	S130: 271 x 205 x 91 mm S132: 300 x 240 x 120 mm

Operating conditions

Medium	Compressed air and gases free of corrosive, aggressive, caustic and flammable constituents
Flow rate	2.83 l/min
Sample rate	One sample per minute
Medium quality	ISO 8573-4
Medium temperature	0 ... + 50 °C
Medium humidity	< 90 %, no condensation
Operating pressure	0.3 ... 1.5 MPa
Ambient temperature	0 ... + 50 °C
Ambient humidity	0 ... 90 % rH
Storage temperature	-10 ... + 50 °C
Storage humidity	< 90 % with no condensation
Transport temperature	-10 ... + 50 °C

S130



S132



Ordering

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

S130 / S132 Particle Counter for Compressed Air: P = 0.3 ... 1.5 Mpa

Order No.	Description
S604 1303	S130, Particle Counter for Compressed Air, size range d: $0.3 < d \leq 5.0 \mu\text{m}$, 2.83 l/min
S604 1305	S130, Particle Counter for Compressed Air, size range d: $0.3 < d \leq 5.0 \mu\text{m}$, 2.83 l/min, display, logger
S604 1308	S132, Particle Counter for Compressed Air, size range d: $0.1 < d \leq 5.0 \mu\text{m}$, 2.83 l/min
S604 1309	S132, Particle Counter for Compressed Air, size range d: $0.1 < d \leq 5.0 \mu\text{m}$, 2.83 l/min, display, logger

S130 / S132 Accessories

Order No.	Description
A554 0120	Transport case S120 / S130
A554 0116	Transport case S132
A554 1204	Zero count filter
R200 0130	Calibration particle counter S130
R200 0131	Calibration particle counter S132



www.suto-itec.com



sales@suto-itec.com