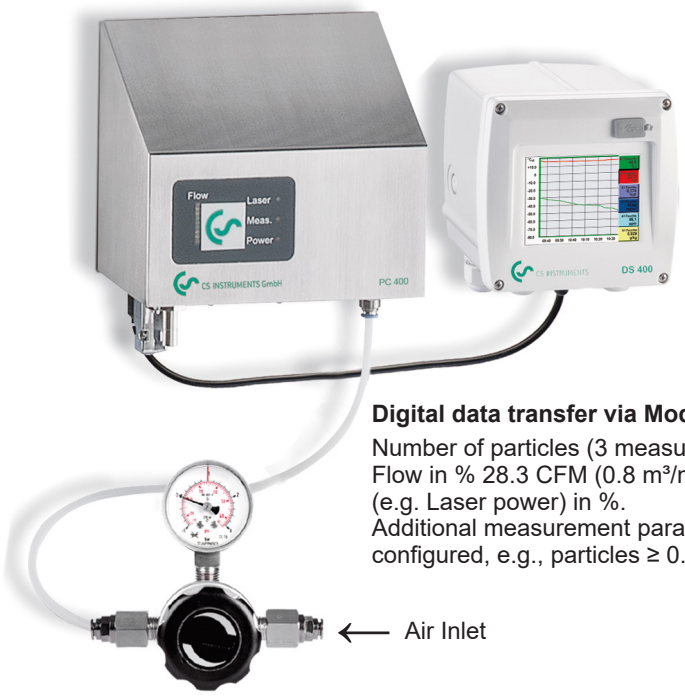
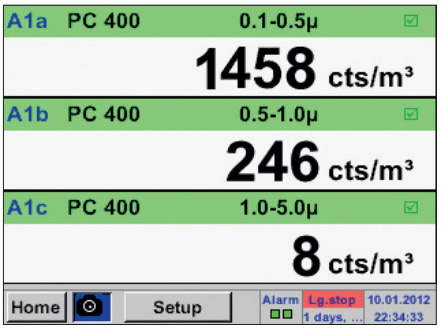
Particle counter PC 400 and DS 400



Digital data transfer via Modbus-RTU:
Number of particles (3 measuring channels)
Flow in % 28.3 CFM (0.8 m³/min)
(e.g. Laser power) in %.
Additional measurement parameters can be freely configured, e.g., particles ≥ 0.5–5.0 µm per m³ or f3

The DS 400 shows all 3 measuring channels according to ISO 8573-1

Particle size 0.1…0.5 µm: Number or particles per CF
Particle size 0.5…1.0 µm: Number or particles per CF
Particle size 1.0…5.0 µm: Number or particles per CF
ISO 14644-1:
≥ 0,1 - 0,2 - 0,3 - 0,5 - 1.0 - 5,0 µm per m3 or f3
EU GMP Annex 1:
≥ 0.5–5.0 µm per m³ or f³
Depending on the standard, the particles can be evaluated cumulatively or by size distribution



Advantages at a glance:

- Highly precise, optical laser particle counter for use in compressed air and technical gases
- Highly precise optics for detecting the smallest particles up to 0.1 µm and therefore suitable for monitoring the compressed air class 1 according to ISO 8573-1
- The flow rate of 1 CFM is 10 times higher than other particles counters generally available on the market. Advantage: Counts the smallest particles with high counting accuracy at the same time
- Due to the digital data transfer (Modbus-RTU) to the chart recorders DS 400 or DS 500, the measured values can be transferred at the same time (without any faults due to check sum)
- The class 1 filter which is included in the scope of delivery can be used for Zero count at any time. Contaminations on the optics can therefore be quickly detected or eliminated.

Advantages of the DS 400

- Data logger for long-term monitoring
- Display shows trend curves (online and history curves available)
- Zoom function directly on the touch screen
- Integrated Ethernet interface (Modbus/TCP) and RS 485 interface (Modbus-RTU) for data transfer to superordinate controls
- 2 alarm relays (changeover contact 230 VAC, 3A) – threshold values freely adjustable
- Easy operation via 3.5" touchscreen

TECHNICAL DATA PC 400

Measured medium:	Compressed air (free from aggressive, corrosive, acidic, toxic, flammable and oxidizing components) as well as gas types like N2, O2, CO2. Further gas types on request
Field of application:	In case of compressed air after filtration In case of gases / pure gases also without filtration
Parameter:	Number of particles per CF (relative to expanded air: 68°F, 1000 mBar)
	Size channels for the PC 400 0.1 µm: Particle size 0.1…0.5 µm: Number or particles per m³ Particle size 0.5…1.0 µm: Number or particles per m³ Particle size 1.0…5.0 µm: Number or particles per m³ ≥0,1 ≥0,2 ≥0,3 ≥0,5 ≥0,7 ≥1,0 ≥2,0 ≥5,0 µm
	Size channels for the PC 400 0.3 µm: Particle size 0.3…0.5 µm: Number or particles per m³ Particle size 0.5…1.0 µm: Number or particles per m³ Particle size 1.0…5.0 µm: Number or particles per m³ ≥0,3 ≥0,5 ≥0,7 ≥1,0 ≥1,5 ≥2,0 ≥3,0 ≥5,0 µm
Operating pressure:	Max. input pressure on the pressure reducer: 580 psi
Humidity of measured gas:	<= 90% rel. humidity, pressure dew point max. 50 °F, non-condensable humidity
Ambient temperature:	41...104 °F
Temperature of the measured medium:	0...104 °F
Compressed air connection:	6 mm PTFE-hose incl. quick coupling
Flow rate:	1 CFM
Interface:	RS 485 (Modbus-RTU)
Light source:	Laser diode
Power supply:	24 VDC, 300 mA
Dimensions:	5.9 x 7.8 x 11.8 Inches
Weight:	8.82 lbs
Housing:	Stainless steel

Stationary solution with particle counter PC 400 and DS 400

DESCRIPTION	ORDER NO.
PC 400 particle counter up to 0.1 µm for compressed air and gases, incl. pressure reducer and calibration certificate	0699 0040
Connection cable for probes 16 ft, M12 / open ends	0553 0104
DS 400 chart recorder with graphic display and touch screen operation	0500 4000 D
Option:	
Integrated data logger for 100 million measured values	Z500 4002
Integrated Ethernet and RS 485 interface	Z500 4004
CS Basic - data evaluation in graphic and table form - readout of the measured data via USB or Ethernet. Includes 2 user licenses.	0554 8040
As an alternative to PC 400 up to 0.1 µm: PC 400 particle counter up to 0.3 µm for compressed air and gases, incl. pressure reducer and calibration certificate	0699 0041

Mobile solution with particle counter PC 400 in a service case and DS 500 mobile

DESCRIPTION	ORDER NO.
PC 400 particle counter up to 0.1 µm for compressed air and gases incl. pressure reducer and calibration certificate in a service case	0699 0042
Connection cable to portable devices, ODU/ M12, 16 ft	0553 1503
Chart recorder DS 500 mobile, 4 sensor inputs	0500 5012
CS Basic - data evaluation in graphic and table form - readout of the measured data via USB or Ethernet. Includes 2 user licenses.	0554 8040
As an alternative to PC 400 up to 0.1 µm:	0699 0043
PC 400 particle counter up to 0.3 µm for compressed air and gases incl. pressure reducer and calibration certificate in a service case	

Re-calibration and accessories particle counter PC 400

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Werkskalibrierprotokoll Nr. CS_5860_05-2017

Gegenstand	OIL - CHECK Öldampf-Messgerät
Hersteller	[redacted]
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Ort der Kalibrierung	Neuss
Datum der Kalibrierung	12.05.2017
Anzahl der Seiten	5

Wir erklären hiermit, dass das oben genannte Produkt unter Beachtung und Einhaltung eines zertifizierten Qualitätssicherungssystems nach dem internationalen Qualitätsstandard DIN EN ISO 9001 : 2008 geprüft und kalibriert wurde.

Die für die Kalibrierung verwendeten Messeinrichtungen werden regelmäßig geprüft und kalibriert. Alle erforderlichen Messdaten sind auf den nachfolgenden Seiten dieses Kalibrier-Protokolls aufgeführt.

Für die Einhaltung einer angemessenen Frist zur Wiederholung der Kalibrierung ist der Anwender verantwortlich.

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Datum	Leiter Produktion	Bearbeiter
24.05.2017	[redacted]	[redacted]

DESCRIPTION	O RDER NO.
Re-calibration particle counter PC 400 incl. certificate	0699 3304
CS Service Software incl. PC connection set for PC 400	0554 2009
Certificate for “As found data” for Nist equivalent tracibility	9999 3304
Swap Program to eliminate downtime	on request
Loaner Program for time of calibration to eliminate downtime and allow serial number traceability	on request