

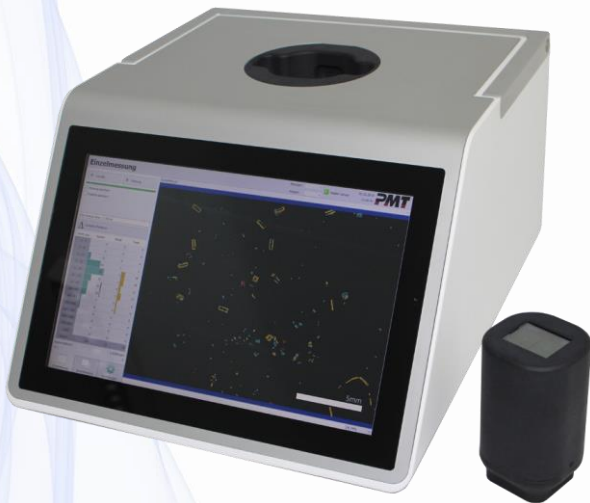
Surface Particle Counter

PartSens® is a portable surface particle counter that directly sizes and counts particles, dust and other contamination on surfaces such as stainless steel, silicon, and plastic. It uses Glancing Light Technology, a method described in ISO 14644-9 as highly accurate and reproducible for counting particles on surfaces that does not require solvent rinses or other complex extraction procedures.

The cleanliness of critical surfaces is one of the most important factors for high quality products. Easy and instantaneous detection of surface contamination is essential to ensure a high-quality product is produced with little re-work.

PartSens® is ISO 16232 and VDA 19 Parts 1 and 2 compliant and can be used to perform Percent Area Covered (PAC) calculations in accordance with ISO 14644-9.

The unique technology and ease of use as well as the portable design make the PartSens® system the perfect solution for companies concerned with surface contamination on the product and within the production environment.



Features

- Portable and compact design, wireless measuring head
- Single and series-based measurements
- Direct Non-Destructive measurement on surfaces
- Standard particle size channels configured to ISO 16232 / VDA 19.2 and ISO 14644-9
- Optional customer-defined size channels available
- Differentiates between metal particles $\geq 25 \mu\text{m}$ and fibers $\geq 50 \mu\text{m}$
- Measurement time $< 10 \text{ sec}$
- On board buffer capacity: 3,000 measurements

The PartSens measurement system is a fully equipped instrument for the measurement of particles, including differentiating those that are metal, fibers, and dust on technical surfaces in the production area.

Particle and Dust Detection

Viewing the surface in real-time, the image processing software automatically counts and sizes particles between 5 and 3,000 μm .

For particles $\geq 25 \mu\text{m}$, and fibers $\geq 50 \mu\text{m}$, the PartSens+ 4.0 differentiates between metallic and non-metallic particles, and fibers.

The particle size and count result, and the accompanying high-resolution image, is immediately displayed. A complete record of all detected particles, including location information, are included in the data set.

For rough or curved surfaces that cannot be measured directly, tape lift pads and particle trap strips provide a means to extract particles from any dry surface Consult PartSens Accessories Brochure for more details.

Using lift pads and trap strips eliminates influence of surface characteristics like roughness or scratches, and the removable protective cover ensures a true-zero count background prior to sampling.

SPECIFICATIONS

Particle Size Range – Total	<5 µm to >3000 µm
Particle Size Range – Metallic	>25 µm to >3000 µm
Particle Size Range – Fibers	>50 µm to >3000 µm
Particle Resolution	± 1 pixel (5 µm)
Camera Resolution	3872 x 2764 pixels (10 megapixel)
Measuring Area	2.68 cm ² / 19.36 mm x 13.82 mm
Zero Count	0 Particles
Measurement Types	Single Measurement, Serial Measurement
Sample Memory	~16 GB (3,000 single measurements)
Relevant Standards	DIN ISO 14644-9; DIN ISO 16232; VDA 19 Part 2
Data & Output Connections	USB Type A, TCP/IP Network (service port only), HDMI
Languages	German, English, French, Japanese
Printer	External Bluetooth Thermal (Optional)
Power Supply AC Input / DC Output	100-240V AC 1.4A 50/60 Hz / 24 VDC @ 5.0 A
Batteries	Replaceable & Rechargeable Li-Ion, <6 Hour Operation
Base Station	
– Dimensions	386 D x 330 W x 210 H mm (15.2 x 13 x 8.3 inches)
– Weight	7.7 kg (17 lbs)w/ batteries, 6.7 kg (14.7 lbs) w/o
– Housing Material	Polyurethane, Synthene PR700
– Screen	307 mm (12.1”) TFT Touchscreen
Measuring Head	
– Communications	WLAN 2.4 GHz (10 meter / 33 feet Range)
– Dimensions	65 W x 65 D x 110 H mm (2.6 x 2.6 x 4.3 inches)
– Weight	28 g (9.4 oz)
– Housing Material	Polyurethane, Synthene PR700
– Screen	45 mm (1.77”) Touchscreen
– Contact Area	48 mm x 48 mm (1.9” x 1.9”)
Operating Conditions	5°C to 30°C; 20% to 95% RH, non-condensing
Storage Conditions	0°C to 50°C; <98% RH, non-condensing
Warranty	12 months
Accessories (Included)	Quick Start Guide, USB stick incl. operating instructions, power cable, 24V power supply, 2 lithium-ion batteries, measuring device for Ø 36 mm tape lift pads, sample Ø 36 mm tape lift pads, Calibration Certificate
Accessories (Optional)	Bluetooth thermal printer, paper rolls, particle traps/particle strip pads, measuring device for particle traps/particle strip pads, 2-slot battery recharger, carrying case

This specification sheet is subject to change without notice.



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