Inline Partikelmessung

IPP 70-S inline particle-measuring probe

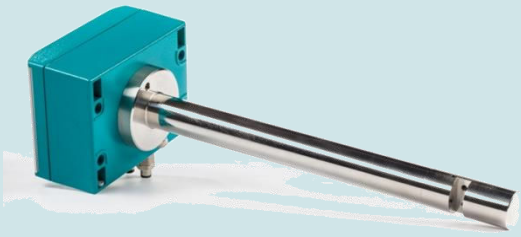
When used in combination with a measuring PC including measuring software, the IPP 70-S allows for the optical particle measurement and therefore the determination of the current particle-size distribution (e.g. Q0, Q3) and of the attributes of the distribution (x10, x50, x90, etc.) directly within the process.

It consists of a robust stainless steel-construction with sapphire windows to protect the optics from wear.

Compressed-air-driven accessories, such as dispersers, ensure that the measuring volume and windows are kept permanently free from contamination while also guaranteeing optimal adaptation to process and particle attributes. The probe is therefore also suitable for use in processes with damp and sticky particles. Using a disperser means that measurements can also be reliably taken in processes with irregular particle movement, such as in fluidised beds, or processes with high loads, such as high-shear processes.

LEDs in the electronics housing and signals to the process control unit provide the user with information regarding the reliable functioning and operating status of the probe.

The distributions calculated and displayed by the measuring PC can be provided to a higher-level control system via optional interfaces.



➢ Technical details

Particle size measurement range	50...6000 µm
Particle velocity measurement range	0.01…50 m/s
Particle volume concentration	For particles <1 mm, up to approx. 12 vol.%, for larger particles, up to approx. 30 vol.%
Measuring rate	up to 20,000 particles/s
Products	Powder, pellets, granulates, sprays...
Process temperature/pressure	–20°C to +100°C / <4 bar
Material, in contact with product	stainless steel (L316), sapphire, epoxy resin
Probe tube dimensions (length/diameter)	280 x 25 mm
Electronics-housing dimensions (width/height/depth)	120 x 90 x 60 mm
Electronics-housing temperature	–10°C to 60°C
Housing protection class	IP65
Light source	Laser (laser class 1)
Power consumption	2 W (typ.)
Interfaces	Particle distributions and attributes as an ASCII file (Excel compatible), Optional: 4...20 mA, TCP/IP, OPC

➢ Accessories (process interface)

D24 disperser	For high load/high fine content – particles up to <2000 µm, clearance 3.8 mm
D12 disperser	As for D24, but also for larger particles >2000 µm, clearance 7.5 mm
SZ11, SZ20-4 cleaning cells	With low load for cleaning the probe optics without diluting the flow of particles
Compressed-air unit	Compressed-air supply for the probe when using dispersers or cleaning cells
VS28 anti-wear guard	Tube sleeve with a reinforced hard-chrome coating with a hardness of 68–72 Rockwell

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