SKS82 Datasheet
Particulate Matter Sensor

Parameters	**Specifications**
Measured Particle	PM1, PM2.5, PM4.25 and PM10 (and optionally spectrum of 24 bins)
Operating Principle	Optical sensing by laser
Particle Range	0.35 to 40µm spherical equivalent size (based on RI of 1.5) size categorization in 24 software bins
Sampling interval	Configurable 1 to 30 seconds (Histogram period)
Volume flow rate	5.5 liter/minute
Max particle count	10,000 particles/second
Max coincidence probability	0.84% concentration at 10^6 particles/L 0.24% concentration at 500 particles/L
Operating Temperature Range	-10 - +50 °C
Supply Voltage	5 – 15 V_{DC}
Supply Current (Typical values)	At 5 V: 200 mA At 7 V: 140 mA At 12 V: 80 mA
Communication	Sparvio SSP
Size	75 x 64 x 60 mm without inlet hose
Weight	115 gram

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SKS8 can report PM1, PM2.5, PM4.25, PM10 as well as histogram of particle counts.

The maximum useful size measured depends on the air speed of the drone, as high speeds experienced by fixed-wing drones skews the measured distribution of heavy particles unless a special air inlet is employed.

The Sparvio interface module continuously monitors voltage and current to disable the sensor in case of depleted battery, short-circuit, etc.

Installation
The built-in fan needs to pull the correct amount of air through. Don't force air through and don't block the air path.

Sparvio background
The Sparvio system provides a modular, plug-and-play solution for measuring various quantities for UAVs, other environmental studies, lab experiments and education. The system is designed to start immediate measurements without any further integration.

Sparvio is designed and manufactured in Sweden by Sparv Embedded AB.