

PARTICULATE MATTER SENSOR

SPS30

Thingstel offers the MCERTS-certified SPS30 particulate matter (PM) sensor which marks a new technological breakthrough in optical PM sensors. Its measurement principle is based on laser scattering and makes use of innovative contamination-resistance technology. This technology, together with high-quality and long-lasting components, enables precise measurements from the device's first operation and throughout its lifetime of more than ten years.

PM2.5 refers to particulate matter with particle diameter up to 2.5 microns and is among the most dangerous air pollutants. Due to their small size, PM2.5 particles can travel deep into the human lung and cause a variety of health issues; for instance, by triggering asthma attacks or contributing to cardiovascular disease. The SPS30 will enable the implementation of innovative air quality monitoring devices that prevent air pollution damage.

SPECIFICATIONS:

- Mass concentration precision -
 - $1 \pm 10 \mu\text{g}/\text{m}^3$ @ 0 to $100 \mu\text{g}/\text{m}^3$
 - $\pm 10 \%$ @ 100 to $1000 \mu\text{g}/\text{m}^3$
- Mass concentration range - 1 to $1000 \mu\text{g}/\text{m}^3$
- Mass concentration resolution - $1 \mu\text{g}/\text{m}^3$
- Particle detection size range - 2
 - Mass concentration: PM1.0, PM2.5, PM4 and PM10
 - Number concentration: PM0.5, PM1.0, PM2.5, PM4 and PM10
- Lower limit of detection - $0.3 \mu\text{m}$
- Minimum sampling interval - 1 sec (continuous mode)
- Lifetime - >10 years operating continuously 24h/day
- Dimensions - $40.6 \times 40.6 \times 12.2 \text{ mm}^3$
- Operating temperature range - -10 to $+60 \text{ }^\circ\text{C}$
- Storage temperature range - -40 to $+70 \text{ }^\circ\text{C}$

