

PMSA003 is a digital universal particle concentration sensor based on the principle of laser scattering. It can continuously collect and calculate the number of suspended particles of different sizes in the air per unit volume, that is, the particle concentration distribution, and then convert it into mass concentration, and output it in the form of a universal digital interface. This sensor can be embedded in various instruments or environmental improvement devices related to the concentration of suspended particulate matter in the air, providing timely and accurate concentration data.



PIN1 VCC power supply positive (+5V)

PIN2 VCC power supply positive (+5V)

PIN3 GND power supply negative

PIN4 GND power supply negative

PIN5 RESET module reset signal/TTL level @ 3.3V, low reset

PIN6 NC

PIN7 RX serial port receiving pin/TTL level @ 3.3V

PIN8 NC

PIN9 TX serial port transmission pin/TTL level @ 3.3V

PIN10 SET setting pin/TTL level @ 3.3V, high level or floating is normal working state, low level is sleep state

Particle measurement range: 0.3~1.0; 1.0~2.5; 2.5~10 μm

Particle counting efficiency: 50% @ 0.3 μm ; 98% @ $\geq 0.5\mu\text{m}$

Effective range of particulate matter mass concentration (PM2.5 standard value): 0~500 $\mu\text{g}/\text{m}^3$

Maximum range of particulate matter mass concentration (PM2.5 standard value) $\geq 1000 \mu\text{g}/\text{m}^3$

Weigh the volume to 0.1 liters (L)

Single response time < 1 (s)

Comprehensive response time ≤ 10 (s)

Working current ≤ 100 (mA)

Standby current ≤ 200 (μA)

Working temperature range -10~+60

