

# **Airborne Particle Sensor**

## **Models. S1304/S1304-A2/S1203**



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# Remote Particle Sensor MODEL S1304

S1304 is designed for continuous monitoring. The S1304 monitors 0.3 $\mu$ m ~ 5.0 $\mu$ m(0.5 $\mu$ m ~ 10.0 $\mu$ m) particle sizes simultaneously with a flow-rate of 0.1 CFM (2.83 LPM). Using Modbus/RS485 communications, the sensor can be easily integrated into Monitoring System. Its compact size and light weight maximizes the flexibility of mounting locations. The S1304 complies with ISO 21501-4 and comes. The S1304 with Monitoring System is suitable from mini environment to large facility monitoring.



## Features and Benefits

- > 4 channels (0.3 $\mu$ m ~ 5.0 $\mu$ m)
- > 0.1 CFM (2.83 LPM)
- > Streamlined & Lightweight
- > Integrate Monitoring System
- > Modbus/RS485 Output
- > ISO 21501-4 and JIS B9921 Compliant
- > Stainless Steel Enclosure
- > Optional Temperature & Humidity Sensor

## Specifications

Channel Sizes	0.3 $\mu$ m,0.5 $\mu$ m,1.0 $\mu$ m, 5.0 $\mu$ m / 0.5 $\mu$ m ,1.0 $\mu$ m,5.0 $\mu$ m, 10.0 $\mu$ m
Flow Rate	0.1 CFM (2.83 LPM) $\pm$ 3% accuracy
Flow Control	Automatic flow control
Counting Efficiency	50 % at 0.3 $\mu$ m;100% for particles >0.45 $\mu$ m (per ISO 21501-4 and JIS)
Concentration Limits	2,000,000 particles / ft <sup>3</sup> at 5% coincidence loss
Light Source	Laser diode
Zero Count Level	<1 count / 5 minutes (per ISO 21501-4 and JIS)
Calibration	NIST traceable
Sampling Mode	User Setting or Count/Concentration
Vacuum Source	internal vacuum pump
Communication Modes	RS485/Modbus protocol(MODBUS-RTU)
Supporting Software	Monitoring System
Power Requirements	9 - 30VDC
Dimensions (L x W x H)	LxWxH=92x59x74mm (without isokinetic inlet)
Port Sizes	1/4" ID
Enclosure	Stainless Steel
LCD Display	1) Counts, 2) Flow failure, and 3) Laser diode failure 4) 4Ch Display
Standards	CE, JISB9921, ISO 21501-4
Environmental Sensors	T/H Sensor (Optional)
Operating Conditions	50°F to 104 F (10°C to 40°C) / 5% to 95% non-condensing
Storage Conditions	-4°F to 122 F (-20°C to 50°C) / 5% to 95% non-condensing
Included Accessories	Isokinetic Sampling Probe; Sampling Tube
Optional Accessories	Zero (Purge) Filter

**CAUTION** All specifications are subject to change without notice. For safe and trouble-free operations, please read the Operation Manual carefully before using the instruments.

# Remote Particle Sensor MODEL S1304-A2

S1304-A2 is designed for continuous monitoring. The S1304-A2 monitors  $0.3\mu\text{m} \sim 5.0\mu\text{m}$  (4~20mA for  $0.3\mu\text{m}$ ,  $0.5\mu\text{m}$ ) particle sizes simultaneously with a flow-rate of 0.1 CFM (2.83 LPM). Using Modbus™ RTU/RS485 communications, the sensor can be easily integrated into Monitoring System. Its compact size and light weight maximizes the flexibility of mounting locations. The S1304-A2 complies with ISO 21501-4. The S1304-A2 with Monitoring System is suitable from mini environment to large facility monitoring.



## Features and Benefits

- > 4 channels ( $0.3\mu\text{m}$ ,  $0.5\mu\text{m}$ ,  $1.0\mu\text{m}$ ,  $5.0\mu\text{m}$ ) (4~20mA for  $0.3\mu\text{m}$ ,  $0.5\mu\text{m}$ )
- > 0.1 CFM (2.83 LPM)
- > Integrate Monitoring System
- > RS485/Modbus™ RTU
- > ISO 21501-4 and JIS B9921 Compliant
- > Stainless Steel Enclosure
- > Optional Temperature & Humidity Sensor

## Specifications

Channel Sizes	$0.3\mu\text{m}$ , $0.5\mu\text{m}$ , $1.0\mu\text{m}$ , $5.0\mu\text{m}$ (4~20mA for $0.3\mu\text{m}$ , $0.5\mu\text{m}$ )
Flow Rate	0.1 CFM (2.83 LPM) $\pm 3\%$ accuracy
Flow Control	Automatic flow control
Counting Efficiency	50 % at $0.3\mu\text{m}$ ; 100% for particles $> 0.45\mu\text{m}$ (per ISO 21501-4 and JIS)
Concentration Limits	2,000,000 particles / ft <sup>3</sup> at 5% coincidence loss
Light Source	Long life laser diode
Zero Count Level	<1 count / 5 minutes (per JIS B9921)
Calibration	NIST traceable
Vacuum Source	internal vacuum pump
Output Signal	4-20mA (maximum Load impedance $250\Omega$ ) (for $0.3\mu\text{m}$ , $0.5\mu\text{m}$ )
Communication Modes	RS485/Modbus™ RTU
Supporting Software	Monitoring System
Power	12-36VDC
Power Consumption	<5.5W @12V
Dimensions (L x W x H)	LxWxH=92x59x74mm (without isokinetic inlet)
Weight	600g
Enclosure	Stainless Steel
Standards	ISB9921, ISO 21501-4
Operating Conditions	5 °C to 35 °C / 20% to 95% non-condensing
Storage Conditions	-20 °C to 50 °C / UP to 98% non-condensing
Included Accessories	Isokinetic inlet and its cap, Inlet cap, sample tube, 7-PIN connector plug and housing support
Optional Accessories	Zero (Purge) Filter

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# Remote Particle Sensor MODEL S1203

S1203 is designed for continuous monitoring. The S1203 monitors 0.3 $\mu$ m ,0.5 $\mu$ m particle sizes simultaneously with a flow-rate of 0.1 CFM (2.83 LPM).

Using Modbus/RS485 communications, the sensor can be easily integrated into Monitoring System. Its compact size and light weight maximizes the flexibility of mounting locations. The S1203 complies with ISO 21501-4. The S1203 with Monitoring System is suitable from mini environment to large facility monitoring.



## Features and Benefits

- > 2 channels (0.3 $\mu$ m , 0.5 $\mu$ m)
- > 0.1 CFM (2.83 LPM)
- > Streamlined & Lightweight
- > Integrate Monitoring System
- > Modbus/RS485 Output
- > ISO 21501-4 and JIS B9921 Compliant
- > Stainless Steel Enclosure

## Specifications

Channel Sizes	0.3 $\mu$ m, 0.5 $\mu$ m
Flow Rate	0.1 CFM (2.83 LPM) $\pm$ 3% accuracy
Flow Control	Critical Orifice
Counting Efficiency	50 % at 0.3 $\mu$ m;100% for particles >0.45 $\mu$ m (per ISO 21501-4 and JIS)
Concentration Limits	2,000,000 particles / ft <sup>3</sup> at 5% coincidence loss
Light Source	Laser diode
Zero Count Level	<1 count / 5 minutes (per ISO 21501-4 and JIS)
Calibration	NIST traceable
Vacuum Requirement	External vacuum ,>15"(38.1 cm) of Hg
Communication Modes	RS485/Modbus protocol
Power Requirements	9 - 30VDC
Dimensions (L x W x H)	45x93x38mm (without isokinetic inlet)
Port Sizes	1/4 ID
Enclosure	Stainless Steel
Weight	279 g
Standards	CE, JISB9921, ISO 21501-4
Operating Conditions	50°F to 104 F (10°C to 40°C) / 5% to 95% non-condensing
Storage Conditions	-4°F to 122 F (-20°C to 50°C) / 5% to 95% non-condensing
Included Accessories	Isokinetic Sampling Probe; Sampling Tube
Optional Accessories	Vacuum Tubing; Zero (Purge) Filter

**CAUTION** All specifications are subject to change without notice. For safe and trouble-free operations, please read the Operation Manual carefully before using the instruments.