



® Knowledge Beyond Measure.

BlueSky™ Air Quality Monitor

Model 8143



TSI® has expanded its environmental offerings with the BlueSky™ Air Quality Monitor (Model 8143).

Each lightweight, 6-channel particle counter is designed to simultaneously measure PM1, PM2.5, PM4 and PM10 mass concentrations, as well as temperature and relative humidity all in real-time! As an Internet of Things (IoT) solution, these hyperlocal, cloud-based monitors offer data interfacing using WiFi and comes standard with an SD memory card for duplicate data storage. While specifically designed for outdoor environmental monitoring, BlueSky™ air quality monitors can also be utilized inside buildings, homes and manufacturing facilities to measure indoor air quality.

Features and Benefits

- Precision data – TSI factory-calibrated PM sensor with the option to program a custom calibration factor
- Real-time map of live data – ability to stream and display real-time data from the cloud using WiFi, without additional software or an app
- Unique laser-based light scattering particle sensors – simultaneously outputs PM1, PM2.5, PM4, PM10, temperature and humidity
- Self diagnostics – notify user of poor sensor performance while maintaining data integrity
- Designed for outdoor use – performs consistently in a wide range of humidity and temperatures, and protected from rain, bugs and direct sunlight
- Two ways to download data – from the cloud (.csv file) and removable SD card
- Data buffering – internally logs data (up to 1 week at 15 min interval via on board memory) for data redundancy
- Easy and quick installation
- Low power consumption – powered using an IP67 rated AC adaptor with a 120V power cord
- ROHS compliant with CE Mark

Applications

- Fenceline/Perimeter Monitoring
- Municipalities & Smart Cities
- Community Monitoring Programs
- Hot Spot Detection
- Indicative Comparisons to Federal Reference Air Quality Data



Specifications

BlueSky™ Air Quality Monitor

Model 8143

PM Sensor

Sensor Type	Light-scattering single particle counter
Aerosol Concentration Range	0 to 1000 µg/m ³
Measurements	PM1, PM2.5, PM4 and PM10
Measurement Resolution	1 µg/m ³
Counting Efficiency	50% @ 0.3 µm and 98% at 0.5 µm
Accuracy (measured against TS® DustTrak DRX)	±10 % @ 100 to 1000 µg/m ³ ±10 µg @ 0 to 100 µg/m ³
Zero Stability	±1 µg/m ³
Sample Flow Rate	~ 0.3 LPM
Operational Temperature	-10°C to 60°C
Storage Temperature	-40°C to 70°C
Operational Humidity	0 to 95% RH (non-condensing)
Response Time	1 second
Start-up Time	< 8 seconds
Acoustic Emissions Level	25 dBA @ 0.2 m
Calibration	Factory pre-calibrated sensor
Dimensions	15 cm x 14 cm x 11.4 cm
Weight	159 g

Temperature Sensor

Range	-40°C to 50°C
Accuracy	±0.5°C
Response Time	5 to 30 sec
Resolution	0.04°C (12 BIT A/D)

Humidity Sensor

Range	0 to 100% RH
Accuracy	±1.8% RH
Response Time	8 seconds
Resolution	0.04% RH (12 BIT A/D)

Power Requirements

Input Voltage to Power Supply	100-240 VAC*
Output Voltage	5 VDC
Power Consumption	<5W (5 VDC @ 1 Amp)

Accessories/Replacement Parts

814309	Power Supply (India style plug)
814304	Replacement PM Sensor
814305	Replacement PM Sensor 5pk
814306	Replacement Mounting Bracket
814307	Maintenance Kit
814308	32 GB Micro SD Card

*Always use the power supply provided with the BlueSky™ monitor, as it is designed for outdoor use. Please see the manual for more details.

Specifications are subject to change without notice.

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Knowledge Beyond Measure.

TSI Incorporated - Visit our website www.tsi.com for more information.

USA	Tel: +1 800 874 2811	India	Tel: +91 80 67877200
UK	Tel: +44 149 4 459200	China	Tel: +86 10 8219 7688
France	Tel: +33 1 41 19 21 99	Singapore	Tel: +65 6595 6388
Germany	Tel: +49 241 523030		