



AQM5000 & AQM7000 Series

Air Quality Monitor

Features

- Measures 0.3 μm to 25 μm
- 0.1 CFM (2.83 LPM) flow rate
- Large color touch screen display
- Approximates mass concentration in $\mu\text{g}/\text{m}^3$ and indicates simultaneous PM values
- User-selectable, adjustable particle channel sizes
- Can measure CO_2 , $^{\circ}\text{C}/^{\circ}\text{F}$, TVOC and RH with user alarm set points.
- Stores up to 45,000 sample records
- Connect using Ethernet, USB or (optional) WiFi
- Static or dynamic IP address (DHCP) connection
- Modbus RTU, ASCII or TCP connectivity
- Included software permits remote operations, data management, diagnostics & more
- Internal audible alarm with user selectable thresholds
- Long battery operation and patented sleep mode (AQM7000)
- User-friendly field calibration
- 2 year limited warranty, extended warranties available

The Setra Systems AQM5000 and AQM7000 Series Air Quality Monitors measure 0.3 μm to 25 μm -sized particles with mass concentration and stores indoor air quality measurements of temperature, relative humidity, CO_2 , and TVOC in select configurations.

Indoor air quality

Setra's AQM Series monitors make it easy and affordable to monitor indoor air quality in a single device - perfect for monitoring indoor air quality in healthcare facilities, cleanrooms, office building lobbies and other public spaces.

6 user-selectable particle size channels

The AQMs reports and displays 6 user-selectable particle size channels, as well as carbon dioxide (CO_2), temperature, and relative humidity. Select configurations included a PID Sensor for TVOC. The instrument monitors PM 1, PM 2.5, PM 5, PM 10 & TPM (and any other PM size value the user specifies) with an easy-to-use Channel Management control panel. The instrument also monitors flow, sensor status, date of last calibration, serial number, laser on-time, and date of manufacture for easy maintenance and warranty management.

User-friendly interface

User-friendly field calibration for the integrated environmental sensors allows for single or dual point offsets, and ensures accuracy for air quality investigations. View data and generate environmental reports in real time on screen, via printer or USB key, or export to Setra Systems Instrument Management Software. Setra Systems instruments can be controlled and monitored remotely via web browser from any PC, tablet or smartphone supporting 20 concurrent user sessions.

Advanced data storage

The AQM5000 and AQM7000 can store up to 45,000 time stamped particle counts and environmental data records which provides data redundancy on every instrument. The instruments' mass concentration mode approximates density in $\mu\text{g}/\text{m}^3$ and allows for density and refractive index corrections to ensure accuracy. All Setra Systems particle counters and air quality monitors meet ISO 21501-4 and JIS B9921.

Power management & sleep modes

The AQM7000 series has advanced power management capabilities and the industry's first sleep mode, allowing for battery operation of periods that can exceed a month on a single charge. The AQM7000 Series can be used as a stand-alone battery operated instrument or it can be easily integrated into a building automation and facility monitoring system via Ethernet, USB or (optional) Wireless 802.11 b/g, RS485 or RS232 connection.



Specifications

General

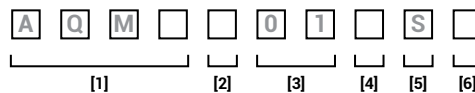
Size range	0.3 to 25 µm
Size channels	Factory calibrated at 0.3, 0.5, 1.0, 2.5, 5.0, 10.0 µm variable binning
Flow rate	0.1 CFM (2.83 LPM)
Concentration limit	>4,000,000 Particles/ft³ @ 5% coincidence loss
Light source	Long-life laser diode
Counting efficiency	50% @ 0.3 µm; 100% for particles >0.45 µm per JIS
Zero count	<1 count / 5 minutes (<2 particles / ft³) (per ISO 21501-4 & JIS)
Count modes	Automatic, manual, beep, cumulative/differential, mass concentration, count or concentration
Count alarms	1 to 9,999,999 counts
Calibration	NIST traceable (Recommended minimum once per year)
Display	4.3" (10.9 cm) WQVGA (480x272) color touch screen
Printer (Optional)	Optional external thermal printer available. Prints in all available languages.
Internal vacuum pump	Internal brushless pump with automatic flow control
Filtered exhaust	Internal HEPA filter
Number of channels	6
Custom size channels	Calibration for custom size channels available
Audible alarm	Adjustable built-in alarm
Communication modes	Ethernet, USB
Optional communication modes	Wireless 802.11 b/g, RS485 or RS232

Specifications subject to change without notice.

Ordering information

Example part number: AQM73012SW;

AQM7000 Series, 0.3 µm particle size, 0.1 CFM, with TVOC sensor, standard calibration, WiFi connectivity.



[1] Model	
AQM5	AQM5000 Series
AQM7	AQM7000 Series

[2] Particle size	
3	0.3 µm
5	0.5 µm

[3] Flow rate	
01	0.1 CFM

[4] TVOC	
1	No TVOC sensor
2	with TOVC sensor

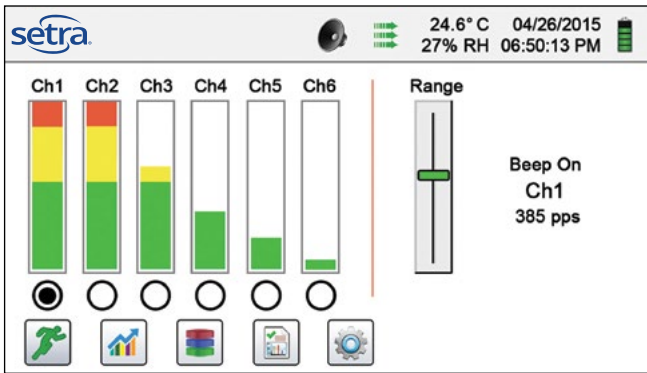
[5] Calibration	
S	Standard

[6] Connectivity	
S	Standard
M	Modbus
W	WiFi

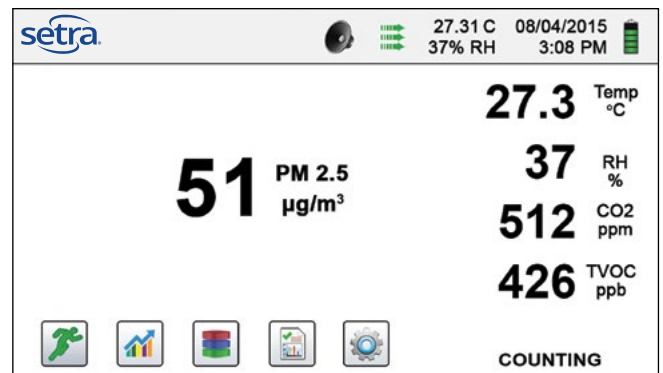
General (continued)

Environmental sensors	Includes NDIR CO ₂ (0-5000 ppm, resolution 1 ppm, accuracy ±1% FS, Response rate 20 seconds), temperature and relative humidity probe 32° to 122°F (0° to 50°C) ±1°F (0.5°C), 15-90% ±2% relative humidity
TVOC Option "1":	Includes all sensors in option "1" and TVOC PID (standard on the 5302-AQM), 0-50 ppm / min. detection level 5 ppb, accuracy ±1.5%, Response rate <3 seconds
TVOC Option "2":	Includes all sensors in option "1" and TVOC PID (standard on the 5302-AQM), 0-50 ppm / min. detection level 5 ppb, accuracy ±1.5%, Response rate <3 seconds
Alarm	Alarms on counts for all particle sizes, low battery, sensor failure, environmental sensors and flow
Standards	ISO 21501-4 and JIS B9921
External surface	Stainless steel
Dimensions (L x W x H)	5.2" x 4.15" x 8.25" (13.3 cm x 10.5 cm x 21 cm) includes barb fittings
Weight	4 lb (1.8 kg)
Accessories	Quick start guide, operating manual on USB flash drive, isokinetic probe, temperature relative humidity sensor, purge filter, battery, Instrument Management Software, USB cable, power supply & cable
Optional Accessories	RS232/RS485 Connector, Printed manual, spare battery, external printer, isokinetic probes, AQM Field Calibration Cap for gas sensor & analytical calibration gases
Buffer memory	45,000 sample records (rotating buffer) including particle count data, environmental data, locations and times
Sample time	1 second to 99 hours
Power	110 to 240 VAC 50/60 Hz universal in-line power supply
Operating conditions	41° to 104°F (5° to 40°C); 20% to 95% non-condensing
Storage conditions	32° to 122°F (0° to 50°C); Up to 98% non-condensing
Warranty	2 Year Limited Warranty 1-Year Limited Warranty for CO ₂ & TVOC Sensors

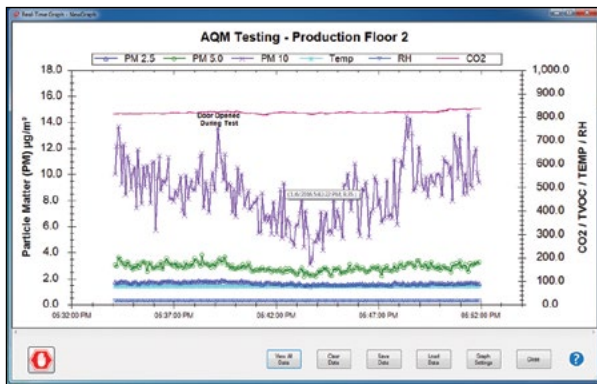
User experience



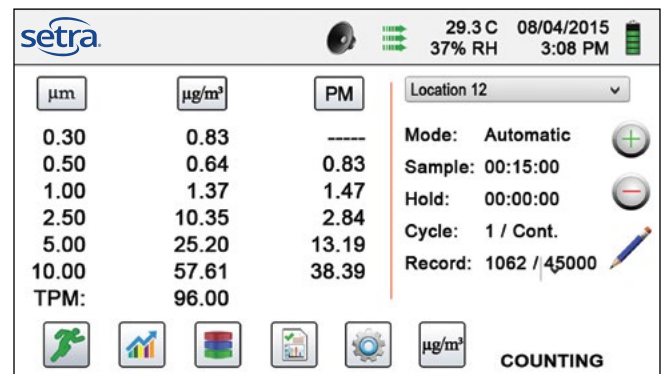
Real-Time Meter™ Pinpoints Particle



Configurable Environmental Sensor Display



Control, monitor & graph from a remote PC



Simultaneous display of multiple PM Sizes



2000 Series

Remote Particle Counter

Features

- Measures from 0.3 µm to 5.0 µm
- 0.1 and 1.0 CFM flow rate with on-board pressure loss alarm
- Long-life laser diode technology
- World's smallest 1 CFM remote particle counter
- Measures up to 4 channels of simultaneous data
- Modbus RTU or ASCII Outputs
- Connect using RS485 or RS232
- Concentration limit of 500,000 per ft³
- LED status indication
- Complies with ISO 21501-4 and JIS B9921 standards
- Seamless integration into a facility monitoring system
- Light weight stainless steel enclosure
- 2 year warranty. extended warranties available

Applications

- Cleanrooms
- Laboratories
- Pharmaceutical manufacturing

About

The Setra Systems 2000 Series Remote Particle Counter measures from 0.3 µm up to 5.0 µm with a flow rate of up to 1.0 CFM (28.3 LPM). Integration is easy into a real-time monitoring or building management system via Modbus™ RTU or ASCII. The 2000 Series is the smallest remote particle counter in the market and has easy mounting options. The Setra Systems 2000 Series Remote Particle Counter complies with ISO 21501-4 and includes a 2 year limited warranty.

Specifications

General

Channel sizes	0.3 µm, 0.5 µm, 1.0 µm, 5.0 µm
Counting efficiency	50% at 0.5 µm; 100% for particles > 0.75 µm (per JIS)
Concentration limits	500,000 particles/ft ³ at 5% coincidence loss
Light source	Long life laser diode
Zero count level	<1 count/5 minutes (per JIS B9921)
Flow rate	0.1 or 1.0 CFM (28.3 LPM)
Flow control	Critical orifice
Vacuum requirements	External vacuum >15" (38.1 cm) of Hg calibration; NIST traceable
Sample probe/tubing	Isokinetic sampling probe
Communication interface	Modbus RTU or ASCII outputs (specified upon order)
Power	9-30 VDC
Dimensions (L x W x H)¹	1.8" x 3.7" x 1.5" (4.5cm x 9.3cm x 3.8cm)
Weight	0.62 lb (0.28 kg)
Standards	ISO 21501-4 and JIS B9921
Warranty	2 year limited warranty
Operating conditions	5° to 35°C (41° to 95°F) 20% to 95% RH non-condensing
Storage conditions	-20° to 50°C (-4° to 122°F) up to 98% RH non-condensing
Optional accessories	Isokinetic sampling probe, purge filter, data cable, vacuum and sampling tubing

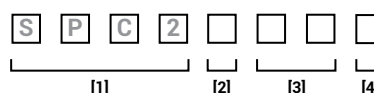
¹Does not include probe; body and mounting plate only.

Specifications subject to change without notice.

Ordering information

Example part number: SPC23014;

Series 2000, 0.3 µm minimum particle size, 1 CFM flow rate, 4 channels:



[1]		[2]		[3]		[4]	
Model		Min. particle size		Flow rate		Channels	
SPC2	2000 Series	3	0.3 µm	01	0.1 CFM	2	2 channels
		5	0.5 µm	10	1.0 CFM ¹	4	4 channels ²

¹Only available with particle size code "5"; not available with particle size code "3".
²Only available with flow rate code "01"; not available with flow rate code "10".





SPC5000 & SPC7000 Series

Remote Airborne Particle Counter

Features

- Can measure between 0.3 μm to 25 μm particle sizes
- 0.1 CFM (2.83 LPM) flow rate
- Measures 6 channels of simultaneous data
- Approximates mass concentration in $\mu\text{g}/\text{m}^3$
- Large easy-to-use icon driven color touch screen display
- Temperature and relative humidity probe can be added
- Stores up to 45,000 sample records, 1,000 sample locations and 50 recipes
- Connect using Ethernet, USB or (optional) Wireless 802.11 b/g, RS485 or RS232
- Static or dynamic IP address (DHCP)
- Displays and externally prints reports for ISO 14644-1, EU GMP Annex 1 and FS 209E
- Internal audible alarm
- User-definable reports
- User-selectable channel sizes
- Complies with ISO 21501-4 and JIS B9921 standards
- Easy to clean and wipe down with minimal particle traps
- Seamless integration into a facility monitoring system
- 2 year warranty. Extended warranties available.

The Setra Systems SPC5000 and SPC7000 Remote Particle Counters are the most feature advanced remote particle counters available. These instruments can measure between 0.3 μm to 25 μm sized particles with a flow rate of 0.1 CFM (2.83 LPM) and is the most versatile line of remote particle counters available. Each particle counter can be easily integrated into a building automation and cleanroom management system via Ethernet, USB or (optional) Wireless 802.11 b/g, RS485 or RS232. The SPC7000 series can be used as a stand-alone battery operated instrument.

6 user-selectable particle size channels

The SPC5000 and SPC7000 report and display up to 6 user-selectable particle size channels, as well as temperature and relative humidity, flow and sensor status, date of last calibration, serial number, laser on-time and date of manufacture for easy maintenance and warranty management.

User-friendly experience

View data and generate ISO 14644-1, EU GMP Annex 1 or FS 209E reports on screen or via printer, USB key, real time through its versatile output options or export to Setra Systems data-download software. Setra Systems counters can be controlled and monitored remotely via web browser.

Advanced data storage

The SPC5000 and SPC7000 Series particle counters each store up to 45,000 time stamped particle count and environmental data records which provides data redundancy on every instrument. Each particle counter also has a mass concentration mode that approximates density in $\mu\text{g}/\text{m}^3$.

All Setra Systems counters meet ISO 21501-4 and JIS B9921. Configuration "SPC7301" ensures compliance with an on-board pulse height analyzer.



Specifications

General

Size range	
Option code "3":	0.3 to 25 µm
Option code "5":	0.5 to 25 µm
Size channels	Factory calibrated at 0.3, 0.5, 1.0, 2.5, 5.0, 10.0 µm variable binning
Flow rate	0.1 CFM (2.83 LPM)
Battery run time¹	10 hours
Concentration limit	>4,000,000 Particles/ft ³ @ 5% coincidence loss
Light source	Long-life laser diode
Counting efficiency	50% @ 0.3 µm; 100% for particles >0.45 µm per JIS
Zero count	<1 count / 5 minutes (<2 particles / ft ³) (per ISO 21501-4 & JIS)
Count modes	Automatic, manual, real-time meter, cumulative/differential, mass concentration, count or concentration
Count alarms	1 to 9,999,999 counts
Calibration	NIST traceable (Recommended minimum once per year)
Display	4.3" (10.9 cm) WQVGA (480x272) color touch screen
Printer (Optional)	Optional external thermal printer available. Prints in all available languages.
Vacuum source	Internal pump with automatic flow control
Filtered exhaust	Internal HEPA filter
Number of channels	6
Custom size channels	Calibration for custom size channels available
Audible alarm	Adjustable built-in alarm
Communication modes	Ethernet, USB
Optional communication modes	Wireless 802.11 b/g, RS485 or RS232

¹Battery option code "7" only.

Specifications subject to change without notice.

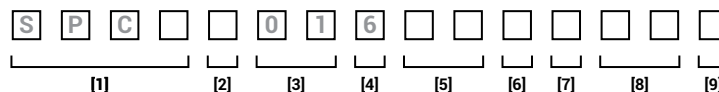
General (continued)

Environmental sensors	Includes temperature and relative humidity probe 32° to 122°F (0° to 50°C) ±1°F (0.5°C), 15-90% ±2% relative humidity
Alarm	Alarms on counts for all particle sizes, low battery, sensor failure, environmental sensors and flow
Standards	ISO 21501-4 and JIS B9921
External surface	Stainless steel
Dimensions (L x W x H)	5.2" x 4.15" x 8.25" (13.3 cm x 10.5 cm x 21 cm) includes barb fittings
Weight	4 lb (1.8 kg)
Accessories	Quick start guide, operating manual on USB flash drive, isokinetic probe, temperature relative humidity sensor, purge filter, battery, data download software, USB cable, power supply & cable
Optional Accessories	Printed manual, spare battery, external battery charger, external printer and isokinetic probes
Buffer memory	45,000 sample records (rotating buffer) including particle count data, environmental data, locations and times. Scrollable on screen or printout
Sample locations	Up to 1,000 locations 20 characters long
Sample time	1 second to 99 hours
Power	110 to 240 VAC 50/60 Hz universal in-line power supply
Operating conditions	41° to 104°F (5° to 40°C); 20% to 95% non-condensing
Storage conditions	32° to 122°F (0° to 50°C); Up to 98% non-condensing
Warranty	2 Year Limited Warranty Extended warranties available

Ordering information

Example part number: SPC73016WFPBHTP;

SPC7000 Series, 0.3 µm particle size, 0.1 CFM, 6 channels, Standard connectivity with WiFi, Internal pump, Benchtop form factor, On board RH & Temp sensors, Extended warranty with additional pump warranty:



[1]		[2]		[3]		[4]		[5]		[6]		[7]		[8]		[9]	
Series		Min. particle size		Flow rate		Channels		Connectivity		Pump		Form factor		On board sensor		Warranty	
SPC5	SPC5000	3	0.3 µm	01	0.1 CFM	6	6 channels	SD ¹	Standard	N ^{2,3}	No pump	W ²	Wall mount	NN ²	None	S	Standard
SPC7	SPC7000	5	0.5 µm					RS	Standard w/ RS232-485	P	Internal pump	B	Benchtop	HT	RH & Temp	E	Extended
								WF	Standard w/ WiFi							P	Extended w/ add't pump warranty

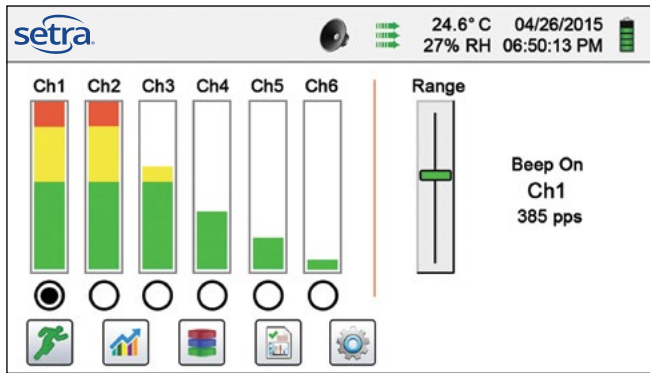
¹ Standard option includes USB client, USB Go, and Ethernet.

² Only available with Series code "SPC5".

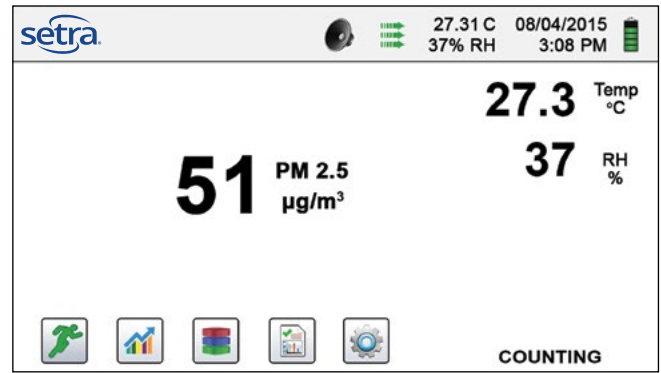
³ Must be ordered with mount type code "W".

Specifications subject to change without notice.

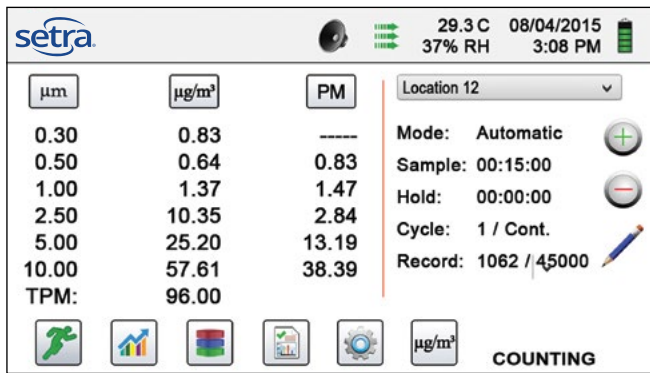
User experience



Real-Time Meter™ Pinpoints Particle



Configurable Environmental Sensor Display



Simultaneous display of multiple PM Sizes



SPC8000 Series

Handheld Airborne Particle Counter

Features

- Measures 0.3 μm to 25.0 μm
- 0.1 CFM (2.83 LPM) flow rate
- Long life laser diode technology
- Measures up to 6 channels of simultaneous data
- Approximates mass concentration in $\mu\text{g}/\text{m}^3$ with density and refractive index corrections
- Large easy-to-use icon driven color touch screen display
- Temperature and relative humidity probe can be added
- Stores up to 45,000 sample records, 1,000 sample locations and 50 recipes
- Real-Time Meter for detecting particle contamination sources
- Connect using Ethernet, USB or (optional) Wireless 802.11 b/g, RS 485 or RS232
- Displays and externally prints reports for ISO 14644-1, EU GMP Annex 1 and FS 209E
- Internal audible alarm
- User-definable reports
- User-selectable channel sizes
- Complies with ISO 21501-4 and JIS B9921 standards
- Seamless integration into a facility monitoring system
- Lightweight high-impact injection molded plastic enclosure
- 2 year warranty. Extended warranties available

The Setra Systems SPC8000 Handheld Airborne Particle Counter is the most feature-advanced handheld particle counter available. This instrument can measure between 0.3 μm to 25 μm sized particles with a flow rate of 0.1 CFM (2.83 LPM) and is the most versatile line of remote particle counters available.

6 user-selectable particle size channels

The SPC8000 reports and displays up to 6 user-selectable particle size channels, as well as temperature and relative humidity, flow and sensor status, date of last calibration, serial number, laser on-time and date of manufacture for easy maintenance and warranty management.

User-friendly experience

Easy to configure, this instrument displays up to 6 user-selectable size channels as well as temperature and relative humidity. View data and generate ISO 14644-1, EU GMP Annex 1 or FS 209E reports on screen or via printer, USB key, real time through its versatile output options or export to Setra Systems data-download software. Setra Systems counters can be controlled and monitored remotely via a web browser. The SCP8000 Series mass concentration mode approximates density in $\mu\text{g}/\text{m}^3$ and allows for density and refractive index corrections to ensure accuracy.

Advanced data storage

The SPC8000 Series particle counter stores up to 45,000 time stamped particle count and environmental data records which provides data redundancy on every instrument. This particle counter also has a mass concentration mode that approximates density in $\mu\text{g}/\text{m}^3$.

All Setra Systems counters meet ISO 21501-4 and JIS B9921. The SPC8000 series also ensures compliance with an on-board pulse height analyzer.



Specifications

General

Size range	0.3 to 25 µm
Size channels	Factory calibrated at 0.3, 0.5, 1.0, 2.5, 5.0, 10.0 µm variable binning
Flow rate	0.1 CFM (2.83 LPM)
Battery run time¹	10 hours
Concentration limit	>4,000,000 Particles/ft ³ @ 5% coincidence loss
Light source	Long-life laser diode
Counting efficiency	50% @ 0.3 µm; 100% for particles >0.45 µm per JIS
Zero count	<1 count / 5 minutes (<2 particles / ft ³) (per ISO 21501-4 & JIS)
Count modes	Automatic, manual, real-time meter, cumulative/differential, mass concentration, count or concentration
Count alarms	1 to 9,999,999 counts
Calibration	NIST traceable (Recommended minimum once per year)
Display	4.3" (10.9 cm) WQVGA (480x272) color touch screen
Printer (Optional)	External thermal printer
Vacuum source	Internal pump with automatic flow control
Filtered exhaust	Internal HEPA filter
Number of channels	6
Custom size channels	Calibration for custom size channels available
Audible alarm	Adjustable built-in alarm
Battery	Removeable Li-ion
Battery recharge time	4 hours within instrument (<2 hours with external battery charger)
Reports	ISO 14644-1, EU GMP Annex 1, FS 209E
Recipes	50 user-configurable recipes
Communication modes	Ethernet, USB
Optional communication modes	Wireless 802.11 b/g, RS485 or RS232

Specifications subject to change without notice.

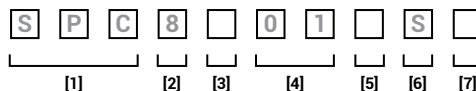
General (continued)

Reports	ISO 14644-1, EU GMP Annex 1, FS 209E
Recipes	50 user-configurable recipes
Communication modes	Ethernet, USB
Optional communication modes	Wireless 802.11 b/g, RS485 or RS232
Environmental sensors	Includes temperature and relative humidity probe 32° to 122°F (0° to 50°C) ±1°F (0.5°C), 15-90% ±2% relative humidity
Alarm	Alarms on counts for all particle sizes, low battery, sensor failure, environmental sensors and flow
Standards	ISO 21501-4 and JIS B9921
External surface	High impact injection molded plastic
Dimensions (L x W x H)	10" x 5" x 4.5" (25.4 cm x 12.9 cm x 11.4 cm) includes handle and does not include probes
Weight	2.2 lb (1.0 kg)
Accessories	Quick start guide, operating manual on USB flash drive, isokinetic probe, temperature relative humidity sensor, purge filter, battery, data download software, USB cable, power supply & cable
Optional Accessories	Printed manual, carrying case, spare battery, external battery charger, external printer and isokinetic probes
Buffer memory	45,000 sample records (rotating buffer) including particle count data, environmental data, locations and times. Scrollable on screen or printout
Sample locations	Up to 1,000 locations 20 characters long and 50 user defined recipes
Sample time	1 second to 99 hours
Power	110 to 240 VAC 50/60 Hz universal in-line power supply
Operating conditions	41° to 104°F (5° to 40°C); 20% to 95% non-condensing
Storage conditions	32° to 122°F (0° to 50°C); Up to 98% non-condensing
Warranty	2 Year Limited Warranty Extended warranties available

Ordering information

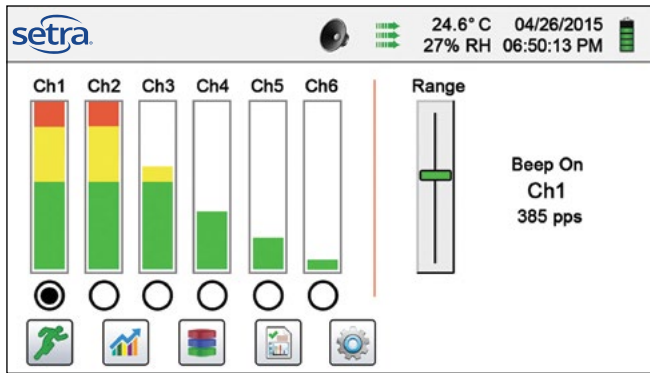
Example part number: SPC83016SW;

Particle counter, 8000 Series, 0.3 µm minimum particle size, 0.1 CFM, 6 channels, standard calibration, WiFi connectivity:

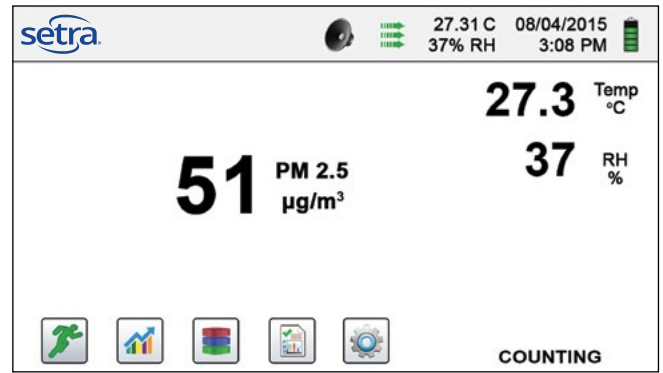


[1]	[2]	[3]	[4]	[5]	[6]	[7]
Model	Series	Min. particle size	Flow rate	Channels	Calibration	Connectivity
SPC Particle Counter	8 8000 Series	3 0.3 µm 5 0.5 µm	01 0.1 CFM	3 3 channels 6 6 channels	S Standard	S Standard M Modbus W WiFi

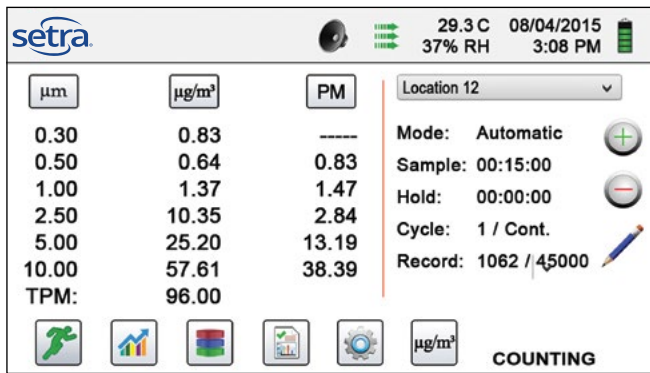
User experience



Real-Time Meter™ Pinpoints Particle



Configurable Environmental Sensor Display



Simultaneous display of multiple PM Sizes