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 μg/m³

• 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, or (optional) BACnet IP and BACnet MS/TP

• Static or dynamic IP address (DHCP)

• Displays and externally prints reports for ISO 14644-1, EU GMP Annex 1and 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 μg/m³.

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 time[1]	10 hours
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, 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, BACnet[2]
Optional communication modes	Wireless 802.11 b/g, RS485 or RS232

General (continued)

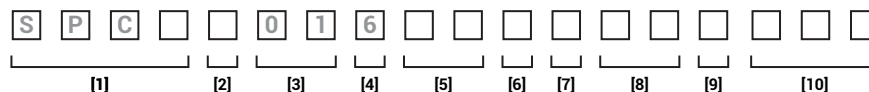|	
Environmental sensors	Includes temperature and relative humidity probe 32º to 122ºF (0º to 50ºC) ±1ºF (0.5ºC), 15-90% ±2% relative humidity
Alarm	Alarms on counts for all particle sizes, low battery, sensor failure, environmental sensors and flow
Standards	ISO 21501-4 and JIS B9921
External surface	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, BACnet Gateway
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	41º to 104ºF (5º to 40ºC); 20% to 95% non-condensing
Storage conditions	32º to 122ºF (0º to 50ºC); Up to 98% non-condensing
Warranty	2 Year Limited Warranty Extended warranties available

[1]Battery option code "7" only.
[2]BACnet Communication via Modbus to BACnet Gateway. Must order via "-BAC" in part number. Network configuration files included for both BACnet IP and BACnet MS/TP.

Specifications subject to change without notice.

Ordering information

Example part number: SPC73016WFPBHTE ;
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

S P C ☐ ☐ 0 1 6 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

[1]   [2]   [3]   [4]   [5]   [6]   [7]   [8]   [9]   [10]

[1] Series		[2] Min. particle size		[3] Flow rate		[4] Channels		[5] Connectivity		[6] Pump		[7] Form factor		[8] On board sensor		[9] Warranty		[10] BACnet Gateway	
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	**BAC**	Included[4]
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										

[1] Standard option includes USB client, USB Go, and Ethernet.
[2] Only available with Series code "SPC5".
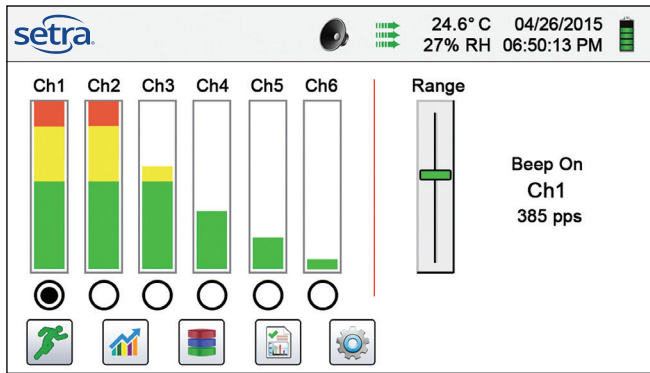[3] Must be ordered with mount type code "W".
[4] Select if BACnet Protocol Communication is needed, otherwise leave blank

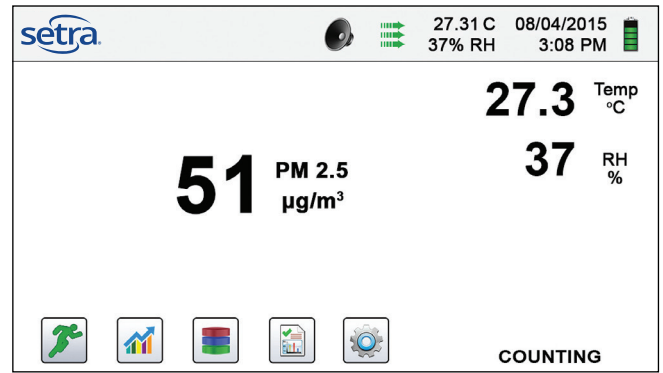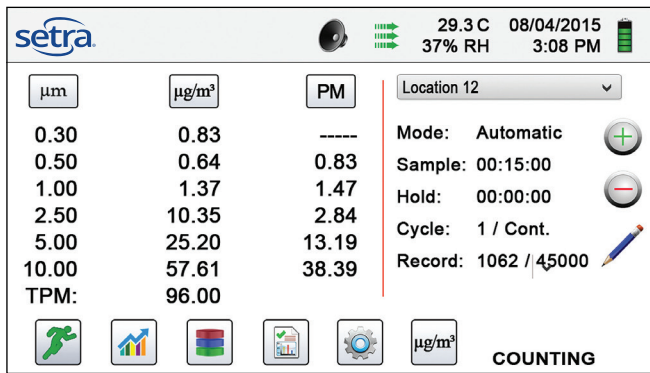Specifications subject to change without notice.

User experience

Real-Time Meter™ Pinpoints Particle

Configurable Environmental Sensor Display

Simultaneous display of multiple PM Sizes