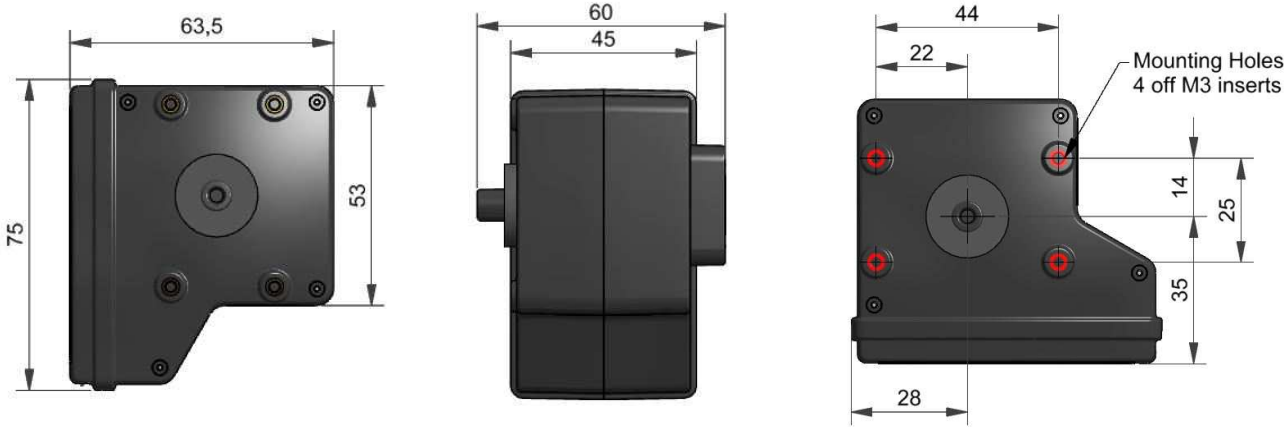




OPC-N3 particle monitor – for use in high pollution urban environments



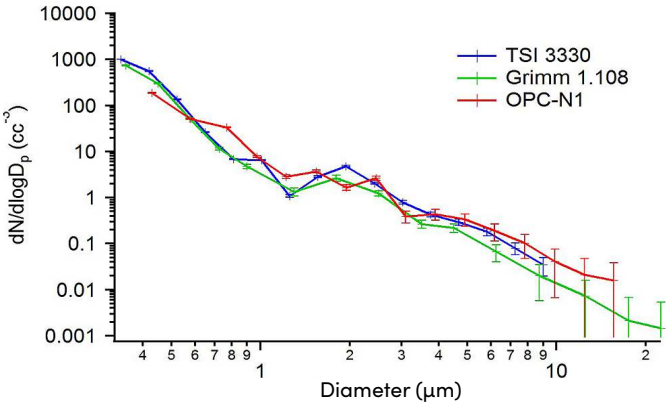
Dimensions are in millimetres (± 0.15 mm).



- $PM_{1\mu}$, $PM_{2.5}$ and PM_{10} ($PM_{4.25}$ as an option)
- Measures up to 40 μm for pollen detection
- Reduced power standby mode
- Capability to measure up to 2,000 $\mu g/m^3$
- Onboard temperature and humidity sensor
- SPI interface not included, order code 000-0SPI-00

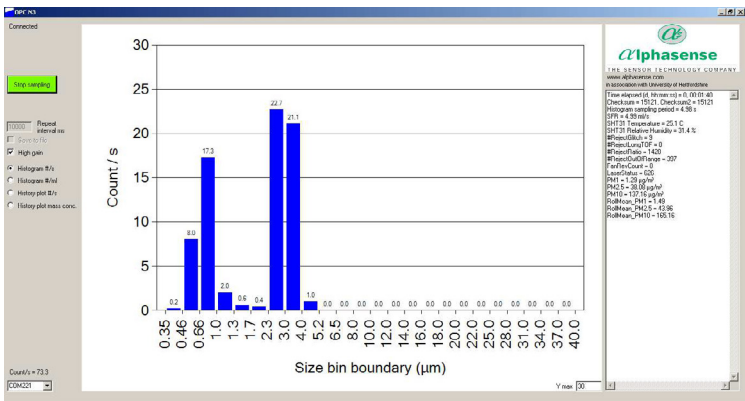
Measurement	Particle range*	µm spherical equivalent size (based on RI of 1.5)	0.35 to 40
	Size categorisation	Number of software bins	24
	Sampling interval	Histogram period (seconds)	1 to 30
	Total flow rate (typical)	L/min	5.5
	Sample flow rate (typical)	mL/min	280
	Max particle count rate	Particles/second	10,000
	Max coincidence probability	%concentration at 10 ⁶ particles/L	0.84
		%concentration at 500 particles/L	0.24
*Based on 100% detection efficiency at 0.35µm, 50% at 0.3µm			
Power	Measurement mode	mA (typical)	180
	Standby mode	mA (typical)	< 45
	Voltage range	VDC	4.8 to 5.2
	Switch-on transient	mW for 1ms	< 5000
Data	Digital interface/connections	SPI (real-time data and communications)	
		Micro USB (firmware updates and standalone mode)	
	Data storage	micro-SD (.CSV format) (GB)	16
Key specifications	Digital interface	SPI (Mode 1), USB	
	Laser classification	as enclosed housing	Class 1
	Temperature range	°C	-10 to 50
	Humidity range	% rh (continuous)	0 to 95 (non-condensing)
	Warranty	Months	24
	Weight	g	< 105

Figure 1 Particle size derivative comparison



The OPC-N3 uses the same algorithms for 0.3 - 17µm as the OPC-N1.

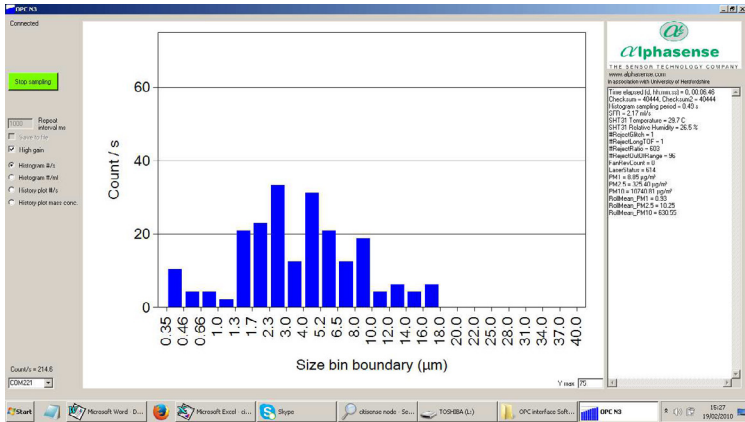
Figure 2 OPC-N3 response to 0.75 and 3 µm PSL calibration standards, as displayed on the supplied software



Size speciation can support pollution source apportionment.

The expanded range to 40µm helps to identify pollen types.

Figure 3 OPC-N3 response to a broad size range test dust



Combustion soot, inorganic or metal?

Size speciation adds more information to identify the polluting source.

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