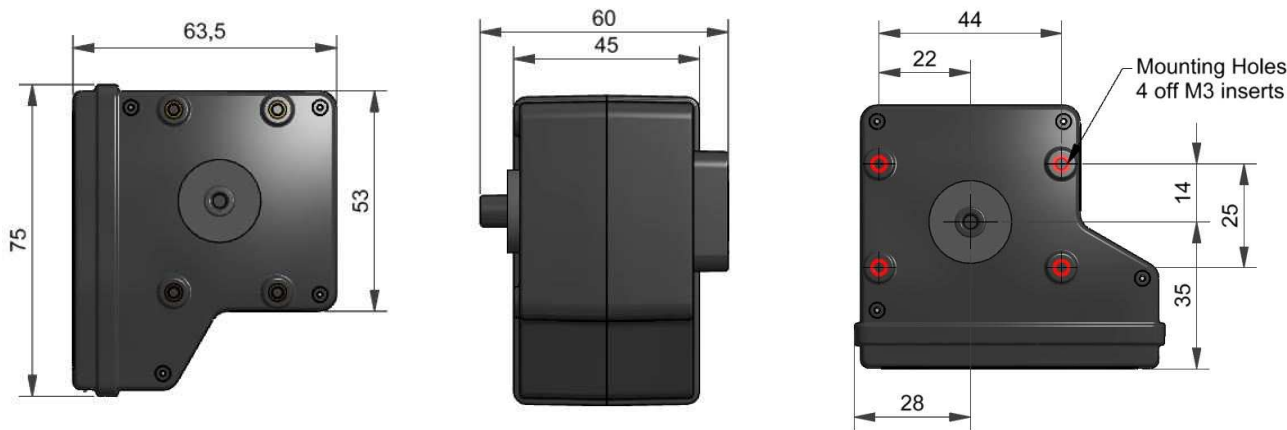


OPC-N3 particle monitor – for use in high pollution urban environments



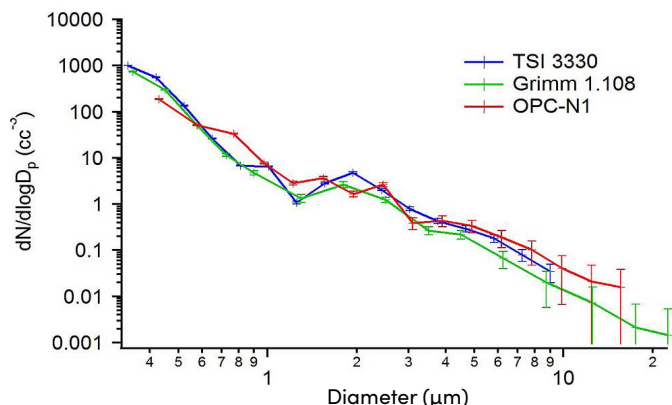
Dimensions are in millimetres (± 0.15 mm).



- PM_{10} , $PM_{2.5}$ 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-OSPI-00

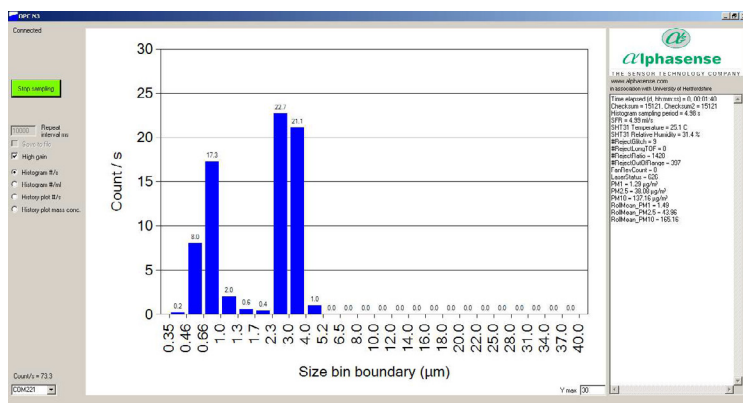
Measurement	Particle range*	µm spherical equivalent size (based on RI of 1.5)	0.35 to 40
	Size categorisation	Number of software bins	24
	Sampling interval	Histogram period (seconds)	1 to 30
	Total flow rate (typical)	L/min	5.5
	Sample flow rate (typical)	mL/min	280
	Max particle count rate	Particles/second	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.

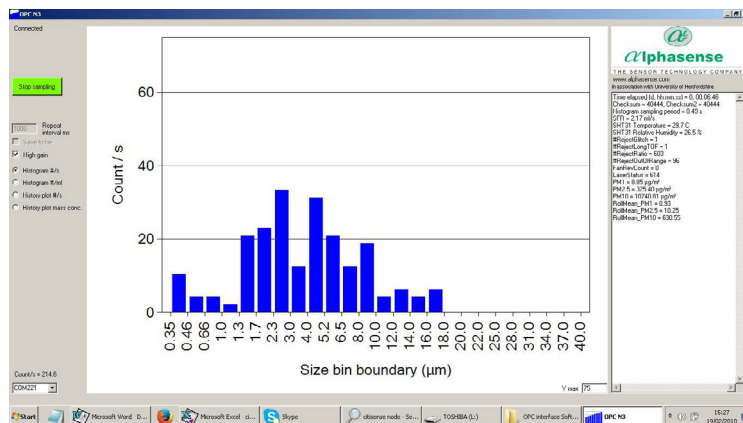
Figure 2 OPC-N3 response to 0.75 and 3 μm PSL calibration standards, as displayed on the supplied software



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.

At the end of the product's life, do not dispose of any electronic sensor, component or instrument in the domestic waste, but contact the instrument manufacturer, Alphasense or its distributor for disposal instructions. NOTE: As applications of use are outside our control, the information provided is given without legal responsibility. Customers should test under their own conditions, to ensure that the unit is suitable for their own requirements.

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