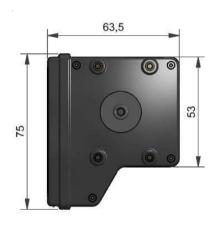


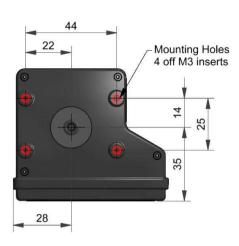
lphalphasense

Technical specifications Version 1.0

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







Dimensions are in millimetres (± 0.15 mm).

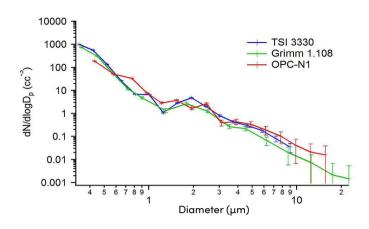


- PM  $_{1}$ , PM  $_{2.5}$  and PM  $_{10}$  (PM $_{4.25}$  as an option)
- · Measures up to 40 μm for pollen detection
- · Reduced power standby mode
- · Capability to measure up to 2,000 μg/m³
- · Onboard temperature and humidity sensor

•	SPI interface not included, order code 000-0SPI-00

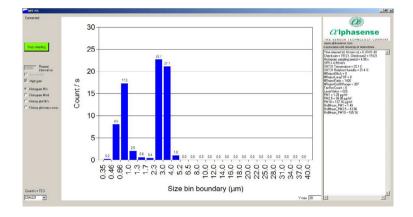
Measurement	Particle range*	μm spherical equivalent size (based on RI of 1.5	0.35 to 4
	Size categorisation	Number of software bins	:
	Sampling interval	Histogram period (seconds)	1 to 3
	Total flow rate (typical)	L/min	5
	Sample flow rate (typical)	mL/min	28
	Max particle count rate	Particles/second	10,00
	Max coincidence probability	%concentration at 10 <sup>6</sup> particles/L	0.8
		%concentration at 500 particles/L	0.3
ed on 100% detection efficiency at	0.35μm, 50% at 0.3μm		
Power	Measurement mode	mA (typical)	18
	Standyby mode	mA (typical)	<
	Voltage range	VDC	4.8 to 9
	Switch-on transient	mW for 1ms	< 500
Data	Digital interface/connections	SPI (real-time data and communications)	
Julu	g	Micro USB (firmware updates and standalone	mode)
	Data storage	micro-SD (.CSV format) (GB)	,
/ov specifications	Digital interface	SPI (Mode 1), USB	
Key specifications	Laser classification	as enclosed housing	Clas
	Temperature range	°C	-10 to
	Humidity range	-	0 to 95 (non-condensin
	Warranty	Months	0 10 95 (Horr-condensin
	Weight		< 1
	weigili	g	< 10

## Figure 1 Particle size derivative comparison



The OPC-N3 uses the same algorithms for 0.3 – 17 $\mu m$  as the OPC-N1.

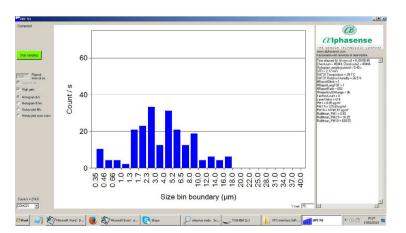
Figure 2 OPC-N3 response to 0.75 and 3 um PSL calibration standards, as displayed on the supplied software



Size speciation can support pollution source apportionment.

The expanded range to  $40\mu m$  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.

In the interest of continued product improvement, we reserve the right to change design features and specifications without prior notification. The data contained in this document is for guidance only. Alphasense Ltd accepts no liability for any consequential losses, injury or damage resulting from the use of this document or the information contained within.(©ALPHASENSE LTD) Doc. Ref. OPC-N3/SEP22