

Sensor SafyrOPC Datasheet

NEXT GENERATION OPTICAL PARTICLES COUNTER SENSOR

Version 1.1



Technical specifications

Designation	Values	Units
GENERAL		
Technology	Optical	-
Targeted pollutants	Particulate Matter	-
Outputs	Channel 1 : pcs >0.3 µm Channel 2 : pcs >0.5 µm Channel 3 : pcs >1.0 µm Channel 4 : pcs >2.5 µm Channel 5 : pcs >5.0 µm Temperature Relative Humidity	pcs / m ³ °C %
Airflow	2.83	L/min
Size (l * w * h)	detailed p.3	mm / Inches
Lifetime (MTTF)	10 000	hours
PERFORMANCE		
Size range	0.3 - 10	µm
Concentration Range ¹	0 to 3.3 . 10 ⁹ 0 to 9.3 . 10 ⁷	pcs / m ³ pcs / cfm
Lowest detectable concentration	350 10	pcs / m ³ pcs / cfm
Detection efficiency @ 0.3 µm ²	50 +/- 30	%
Detection efficiency @ 0.5 µm ²	100 +/- 20	%
False Count	< 3 over 15 minutes	Raw particles number
Repeatability error ³ Channel 1 : pcs >0.3 µm Channel 2 : pcs >0.5 µm Channel 3 : pcs >1.0 µm Channel 4 : pcs >2.5 µm Channel 5 : pcs >5.0 µm	< 3 < 3 < 5 < 10 < 15	%
Accuracy Temperature Relative humidity	1 5	°C %
Refresh rate	1 to 60	sec.
Warm-up time	10	sec.
ELECTRIC SPECIFICATIONS		
Power supply	5	VDC
Power consumption in operation	< 80	mA
Power consumption in Sleep Mode	< 20	mA

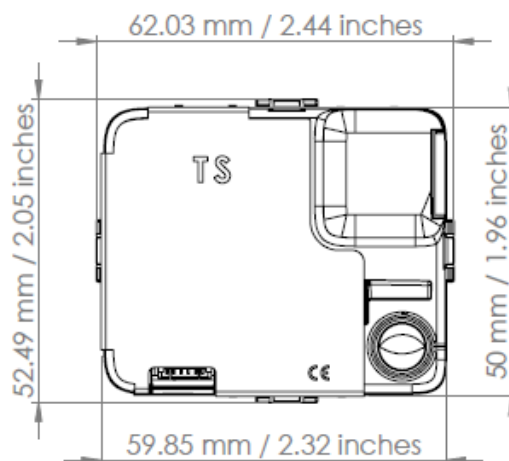
Designation	Values	Units
COMMUNICATION		
UART / Modbus (RS232 and RS485)	RS485 Available with a converting electrical board only	
OTHER		
Operating conditions	-20 à +70 253 to 343	°C K
	0 - 95 uncondensed	%
	500 to 1500	hPa
Storage conditions	-20 to +70 253 to 343	°C K
	0 - 95 uncondensed	%
	500 to 1500	hPa
Certifications	CE	
	RoHS compliant	
Dimensions and weight	L 62 mm x l 52 mm x H 23 mm 45 g L 2.4 / W 2.07 / H 0.9 inches 1.59 Oz	

¹ Loss of linearity over this threshold

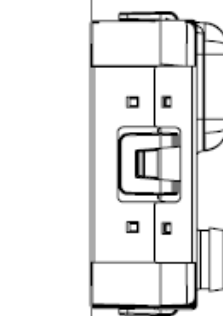
² According to ISO 21 501-4 Standards

³ Calculated with the fifteen minutes moving average output

Mechanical specifications

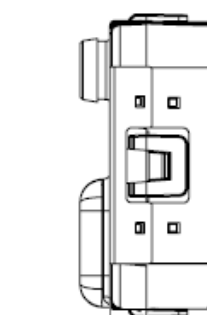
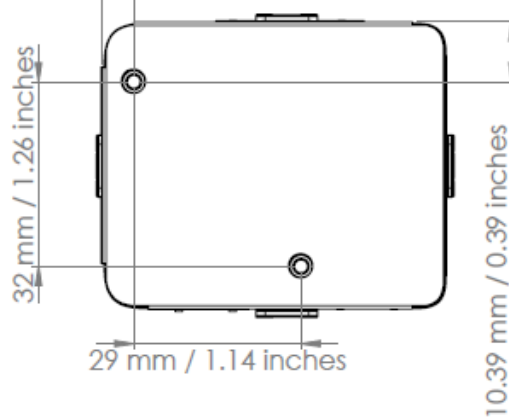


23.6 mm / 0.91 inches



23.6 mm / 0.91 inches

5.68 mm / 0.20 inches



18.4 mm / 0.71 inches