Air Quality Sensor (AQS)

Air Quality sensor with monitoring for particle mass concentration, VOC index, and NOx to protect your critical facilities.

In data centers, air quality is an often-overlooked aspect of operational efficiency and uptime. The buildup of dust particles on equipment, heatsinks, and components leads to less efficient transfer of heat energy, which means cooling becomes less efficient, more costly, and there is potential for overheating servers.

Imagine this: your temperature sensor, such as the AKCP cabinet thermal map, is showing cold air entering your rack. There are no issues with your cooling system. But you have a server that overheats. How might this problem show up? A high ΔT on your rack, cold air is getting in, but it's not cooling efficiently.

Why is the cooling ineffective? Well, an air quality sensor may hold the missing piece of information. A high particulate count would indicate dust may be the culprit, coating your heat-generating components and insulating them from the cooling effects of the air supply.This is one of many issues that could result from poor air quality in your facility. A buildup of VOC or NOx in your environment, together with incorrect humidity, can create a perfect storm for corrosion of metal elements, for example.

Protect your data center or critical facilities' air quality with this sensor from AKCP.

AQS - Technical Specifications

Particulate Matter (PM)	
Measurement Parameters	PM1.0, PM2.5, M4.0, PM10
Mass Concentraton Range	0 to 1,000 µg/m³
Mass Concentration Precision	±10% or ±10 µg/m³ (whichever is larger)
Particle Size Range	3.0 µm to 10 µm
Lifetime	>10 yeras (dust resistant w/ Sheath Flow technology)
CO2 (Carbon Dioxide)	
Measurement	0 to 40,000 ppm
Accuracy	±(50 ppm + 2.5% of reading)
VOC & NOx	
VOC Index Range	1 to 500 Index points (Relatifve)
NOx Index Range	1 to 500 Index points (Relative)
Temperature	
Measurement Range	-10°C to +50°C (+14°F to + 122°F)
Accuracy	±0.45°C (typical)
Measurement Resolution	0.1°C increments (0.2°F increments)
Humidity	
Measurement Range	0% to 90% RH (non-condensing)
Accuracy	±4.5% RH (typical)
Measurement Resolution	1%RH increments
Hardware Specification	
Max Cable Length	10m (33ft)
Sensor Count	9

AQS - Technical Drawing