antrumX™
Airflow that Makes Sense

FORMALDEHYDE SENSING

DESCRIPTION

The Sensor Pack monitors multiple air quality parameters across 16 zones, independently reporting on each. Each sensor pack contains sensors for air velocity, temperature, humidity, and pressure. With a reference to clean air, it cancels sensor drift, ensuring more accurate and consistent data compared to standard wall-mounted solutions. All required sensors for a specific application are pre-installed in one sensor pack, making calibration effortless through a tool-free replacement process.

WHY

Monitoring formaldehyde to optimize ventilation is crucial for maintaining a safe and healthy working environment. Proper ventilation helps to control and reduce exposure to formaldehyde vapors, which is essential due to the potential health risks associated with this chemical compound. Regularly monitoring air quality through real-time measurement of formaldehyde is critical for effective management of both indoor environments and human health.

Health Protection: Formaldehyde is a known irritant to the eyes, nose, and throat, and prolonged exposure can lead to more severe health issues. Monitoring its levels helps ensure that ventilation systems are effectively removing formaldehyde vapors from the air, reducing the risk of exposure and related health problems for building occupants.

Regulatory Compliance: Various occupational health and safety regulations set limits on acceptable levels of formaldehyde in work environments. Monitoring helps comply with these regulations and guidelines, ensuring that ventilation systems are adequate to maintain formaldehyde levels below the permissible limits.

Optimizing Ventilation: Monitoring formaldehyde levels aids in assessing the effectiveness of ventilation systems in removing this chemical from indoor spaces. It ensures that adequate ventilation is provided to dilute and remove formaldehyde, maintaining a healthier indoor environment.

Early Detection of Problems: Continuous monitoring provides real-time data. Sudden spikes in formaldehyde levels can indicate a leak, spill, or malfunction in equipment that needs immediate attention. Identifying these issues early helps in taking corrective measures promptly, preventing prolonged exposure to hazardous levels.

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HOW IT WORKS

Using a micro fuel cell, once CH_2O arrives at the working electrode (anode) it is oxidized instantaneously to generate an electrical signal. The electrical signal is then acquired and processed by the microprocessor into a PPM value that is used to characterize the gas concentration.

SPECIFICATIONS

Parameter	Value	Units
Technology	ElectroChemical	
Range	0.03–2	ppm
Humidity Range	10–90	%
Resolution	0.001	ppm
Accuracy	± 10	%
Response[1]	40	s
Recovery[1]	60	s
Overload	10	ppm
Calibration	1	Year(s)

1. T90