

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 the dew point is vital for ensuring comfortable and healthy indoor settings. HVAC systems utilize dew point data to regulate humidity, preventing mold growth and discomfort from overly dry or excessively humid air. Proficiency in managing dew point aids in optimizing energy use in heating and cooling systems. Efficiently handling humidity levels not only conserves energy but also guarantees sustained comfort. Incorporating dew point monitoring into an overarching ventilation strategy enables the creation of healthier, more comfortable, and energy-efficient indoor environments. This approach tailors ventilation systems to respond to humidity levels, thereby promoting optimal air quality and comfort.

Humidity Control: Dew point monitoring helps maintain optimal humidity levels indoors. High humidity can lead to discomfort, mold growth, and even structural damage, while low humidity can cause dryness and discomfort. By monitoring the dew point, ventilation systems can be adjusted to maintain an ideal humidity range.

Optimizing Ventilation: Ventilation systems optimized based on dew point readings can operate more efficiently. By precisely controlling the amount of outside air brought in and adjusting ventilation rates according to humidity levels, energy consumption can be optimized while ensuring good indoor air quality.

Comfort and Productivity: Maintaining the right dew point through proper ventilation contributes to a comfortable indoor environment. This, in turn, can enhance productivity and well-being among occupants.

Health Benefits: Controlling indoor humidity levels via optimized ventilation can also have health benefits by reducing the likelihood of respiratory issues and allergies associated with mold and mildew growth in damp environments.

Preservation of Materials: In environments such as museums, archives, or storage facilities, where maintaining specific humidity levels is crucial for preserving artifacts or sensitive materials, dew point monitoring plays a critical role in ensuring the longevity of these items.

HOW IT WORKS

The dew point is the temperature at which the air becomes saturated with moisture, regardless of changes in temperature or humidity. When the air reaches the dew point temperature, it can no longer hold all the water vapor it contains, leading to condensation. However, if the temperature and humidity change proportionally, which is what happens when the air sample travels from the monitored zones to the monitoring panel, the dew point remains constant because the relationship between temperature, humidity, and dew point is interconnected. Therefore the dewpoint of the room is derived from the temperature and relative humidity of the air sample measured in the sensor pack.

SPECIFICATIONS

Temperature

Parameter	Value	Units
Technology	CMOS	
Range	0–60	°C
Resolution	0.01	°C
Accuracy	± 0.1	°C
Response ¹	10	s
Recovery ¹	10	s
Calibration	5	Year(s)

1. T90

Relative Humidity

Parameter	Value	Units
Technology	CMOS	
Range	0–100	%
Resolution	0.01	%
Accuracy	± 1.0 typ, ± 2.0 max	%
Response ¹	10	s
Recovery ¹	10	s
Calibration	5	Year(s)

1. T90

Dew Point

Parameter	Value	Units
Technology	CMOS	
Range	-50–60	°C
Resolution	0.01	°C
Accuracy	± 1.5	°C
Response ¹	10	s
Recovery ¹	10	s
Calibration	SEE TEMP. & RH SPECS	

1. T90