WISE AIR 4.0®

MEASURE TO MANAGE

WADS - 201 / 202 / 203 / 204
Dew Point Sensor

Compressed Air Energy Saving Solutions

Smart Measurement Technology That You Can Trust

For More Info

SCAN HERE

About Us

At WiseAir Technologies, our mission is to empower industries with innovative and advanced measurement solutions for compressed air and gases. With over 20 years of expertise in the field of compressed air management, we have developed smart, reliable, and state-of-the-art products that are both accurate and easy to use. Our focus is on incorporating cutting-edge technologies like M2M communication and the Industrial Internet of Things (IIoT) to bring increased automation, improved communication, and self-monitoring to industrial processes.

Our WA range of smart IIoT sensors can be easily integrated into existing manufacturing and energy management software to enhance data collection, exchange, and analysis for improved productivity and efficiency.

Our Network

Our Smart Sensors are Developed with Design and Technology Support from Our Partners Across North America, Europe and Asia. With Our Strong Network of Partners, we offer Seamless and Best-in-Class Service to Our Customers.

Artificial Intelligence and Machine Learning Software
Our software are programmed to analysis and self Diagnose the Measured Datas

Smart IIOT Sensors
For measurement of Flow, Power, Dew Point and Pressure

Product Experts
Product Specialists with Decades of Experience in Compressed Air Measurement and Management

Simplify Your Compressed Air Management With Our Smart Technology

Compressed Air Systems are Dynamic and Highly In-Efficient. Hence they Require Continuous Monitoring for Sustained Benefits. With Our WiseAir 4.0 Smart Sensors and M2M / AI Softwares Your Compressed Air System is Measured, Analysed and Improved Over Time.

With Our Seamless and Detailed Analytical Reports You Can Keep Track Of Your Compressed Air Systems Efficiency with Minimal Human Intervention.

Our Services

We Offer Free Assessment Services to Identify the HotSpots For Improvements and Develop Road Maps for Sustainable Results. Our Product Specialists Can Also Offer You Customised Plans for Monitoring the Key Performance Factors Of Your Compressed Air System.

Connect with Our Expert Product Specialists to Learn How Your Factory Can Begin to Realize Energy and Cost Savings with Our Advanced Solutions.

Call Us
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Europe : **+45 36 99 04 22**

Email Us
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Europe : **info@wiseair.asia**

Understand The True Costs Of Compressed Air

In a Compressor's Life Cycle More than 80 % of its Operating Costs is Spent Towards its Energy. Hence Monitoring and Managing Compressors at their Peak Energy Efficiency will give Significant Energy Savings.

Our Smart Sensors Can Provide Vital Informations Like Flow, Power, Dew Point and Pressure. When Our Sensors are Networked with Our AI Software Programs, All the Measured Datas are Analysed and Reported To You With Suggested Action Plans in Real Time.

Manage Your Compressed Air System Efficiently and Effortlessly With Our WiseAir Smart Sensors and AI Softwares.

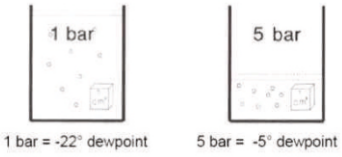
Energy Costs

Capital Costs

Maintenance Costs

Introduction to Dew Point and Why it is Important to be Monitored?

Dew Point is the Temperature to which Air can be cooled down with Condensation. Dew Point is Pressure Dependent and would change when Air is Compressed.



The term "pressure dew point" is encountered when measuring the dew point temperature of gases at pressures higher than atmospheric pressure. It refers to the dew point temperature of a gas under pressure. This is important because changing the pressure of a gas changes the dew point temperature of the gas.

Increasing the pressure of a gas increases the dew point temperature of the gas. Consider an example of air at atmospheric pressure of 1013.3 mbar with a dew point temperature of -10 °C (14 °F). The partial pressure of water vapour (designated by the symbol "0 in this case is 2.8 mbar. If this air is compressed and the total pressure is doubled to 2026.6 mbar, then according to Dalton's law, the partial pressure of water vapour, e, is also doubled to the value of 5.6 mbar. The dew point temperature corresponding to 5.6 mbar is approximately -1 °C (30 °F), so it is clear that increasing the pressure of the air has also increased the dew point temperature of the air.

Conversely, expanding a compressed gas to atmospheric pressure decreases the partial pressures of all of the component gases, including water vapour, and therefore decreases the dew point temperature of the gas. The relationship of total pressure to the partial pressure of water vapour, can be expressed as follows:

$$P1/P2 = e1/e2$$

By converting dew point temperature to the corresponding saturation vapour pressure, it is easy to calculate the effect of changing total pressure on the saturation vapour pressure. The new saturation vapour pressure value can then be converted back to the corresponding dew point temperature. These calculations can be done manually using tables, or performed by various kinds of software.

Moisture Content in Compressed Air System causes :

- Corrosion in the pipes
- Reduces lifespan of pneumatic parts
- Failures in actuators
- Contamination of compressed air system in general
- Unscheduled production stop
- Incalculable additional production costs

Benefits of Pressure Dew Point Monitoring

- Reduces Operating and Energy Costs
- Improves Down Stream Filter Life and Performance
- Increase the lifespan of your compressed air system and its components
- Reduces Maintenance and Makes the compressed air system more Reliable & Efficient
- Ensures stable quality of your products through less problems in operation of the system
- Enables fast responses to failures in compressed air drying through permanent monitoring of pressure dew point. Reduces Risk of Bacteria, Fungus and Yeast Build Up
- Alerts you to changes in Dryer Performance Before Moisture Appears in your Plant.

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Technical Specifications

	WADS 201	WADS 202	WADS 203	WADS 204
Technology	Polymer Capacitive	Polymer Capacitive	Polymer Capacitive	Quartz (AMC)
Casing	Aluminum	Stainless Steel	Stainless Steel	Stainless Steel
Dryer Types - Upto 40 bar (600psi)				
Dessicant Dryers	(above -40°C)	(above -50°C)	(above -60°C)	(below -20°C)
Membrane Dryers	✓	✓	✓	✓
Refrigerant Dryers	✓	✓	✗	✗
Measuring Ranges				
Dew Point Range (Variants)	A : -60°C to +20°C B : -60°C to +60°C	A : -60°C to +20°C B : -60°C to +60°C	A : -60°C to +20°C B : -60°C to +60°C C : -80°C to +20°C	A : -110°C to +0°C
Operating Pressure Range	0 to 40 bar	0 to 40 bar or 0 to 16 bar if using the integrated pressure sensor		
Gas Temperature Range	-40°C to +100°C			
Accuracy	Dew Point : ± 2 °C Temperature : ±0.5°C	Dew Point : ± 2 °C Temperature : ±0.5°C	Dew Point : ± 2 °C Temperature : ±0.5°C Pressure: ±0.3% full scale (at 23°C), ±0.01 bar/10°C	Dew Point : ± 2 °C Temperature : ±0.5°C Pressure: ±0.3% full scale (at 23°C), ±0.01 bar/10°C
Minimum Gas Flow Rate	> 1 L / min	> 1 L / min	> 1 L / min	> 1 L / min
Output Signals				
Pressure Dew Point (PDP)	✓	✓	✓	✓
Gas Temperature	✓	✓	✓	✓
Relative Humidity	✓	✓	✓	✓
Pressure Transducer	✗	Optional	Optional	Optional
Analogue Output (4..20 mA)	PDP Only	PDP Only	PDP Only	PDP Only
Digital Output (Modbus)	(PDP, Temp, RH, Pressure)	(PDP, Temp, RH, Pressure)	(PDP, Temp, RH, Pressure)	(PDP, Temp, RH, Pressure)
Others				
Connectors	5 Pin M8	5 Pin M12		

Ordering Codes

- **WADS 201 - B**
  -60^0 ctd to +60^0 ctd. Its proven polymer film technology provides strong contamination resistance. Suitable for refrigerant Dryers. (Compact Design)
- **WADS 202 - A**
  -60^0 ctd to +20^0 ctd. Its proven polymer film technology provides strong contamination resistance. Suitable for refrigerant Dryers.
- **WADS 203 - C**
  -80^{0}C to +20^{0}C. This new generation polymer dew point sensor has auto drift correction (ADC) technology which ensures industry leading accuracy and consistency of readings. Suitable for Desiccant Dryers.
- **WADS 204 - A**
  -110^{0}C to +0^{0}C. The most advanced quartz technology dew point sensor available. Newly developed moisture sensitive materials provide superior signal sensitivity under ultra-low humidity conditions.

Ordering Codes

- **WADS 201 - A**

  -60^0 ctd to +20^0 ctd. Its proven polymer film technology provides strong contamination resistance. Suitable for refrigerant Dryers. (Compact Design)

- **WADS 201 - B**

  -60^0 ctd to +60^0 ctd. Its proven polymer film technology provides strong contamination resistance. Suitable for refrigerant Dryers. (Compact Design)

- **WADS 202 - A**

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- **WADS 202 - B**

  -60^0 ctd to +60^0 ctd. Its proven polymer film technology provides strong contamination resistance. Suitable for refrigerant Dryers.

- **WADS 203 - A**

  -60^{0}C to +20^{0}C. This new generation polymer dew point sensor has auto drift correction (ADC) technology which ensures industry leading accuracy and consistency of readings.

- **WADS 203 - B**

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- **WADS 203 - C**

  -80^{0}C to +20^{0}C. This new generation polymer dew point sensor has auto drift correction (ADC) technology which ensures industry leading accuracy and consistency of readings.

- **WADS 204 - A**

  -110^{0}C to +0^{0}C. The most advanced quartz technology dew point sensor available. Newly developed moisture sensitive materials provide superior signal sensitivity under ultra-low humidity conditions.

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Understand Compressed Air System Dynamics with Our Advanced Measurement Solutions

Measure - Manage - Save - Sustain

Our Network

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