



User Manual for WADS - 205 / 206
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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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



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General Information

Please read this user manual in full and carefully observe the notes and instructions before and during installation, operation and maintenance. The manufacturer cannot be held liable for any damage which occurs as a result of non-observance or noncompliance with this user manual.

Should the device be tampered with in any manner other than a procedure which is described and specified in this manual, the warranty is cancelled and the manufacturer is exempt from liability. The device is designed exclusively for the described application.

This user manual should be read carefully by the technician / qualified personnel and the end user. Once you install, use or maintain this product, you accept that you have read, understood and complied with this manual. This manual should be kept with the Dew Point Sensor and made available to relevant personnel as needed. WiseAir Endeavours to make changes to the content of this Manual, and tries to ensure Correctness and well stated, but is not responsible for Omissions or errors and the consequences caused thereby.

● Compressed Air Safety

- Any contact with quickly escaping air or bursting parts of the compressed air system can lead to serious injuries or even death.
- Do not exceed the maximum permitted pressure
- Only use pressure tight installation material.
- Avoid getting hit by escaping air or bursting parts.
- The system must be pressure-less during maintenance work.

● Installing the Dew Point Sensor, Calibration & Maintenance

- The product must be installed properly and frequently calibrated, otherwise it may lead to the wrong measurement values, which can lead to wrong results.
- Always Observe the Direction of Flow When installing the Sensor. The
 - Direction is Indicated on the Housing.
 - Do Not Exceed the Maximum Operation Temperature at the Sensors Tip.
 - Avoid Condensation on the Sensor Element as this will affect the accuracy enormously.
 - Please observe national regulations before/during installation and operation.
 - Do not disassemble the product.
 - Always use a spanner to mount the product properly

● Electrical Safety

- Any contact with energized parts of the product, may lead to an electrical shock which can lead to serious injuries or even death. Consider all regulations for electrical installations.
- The system must be disconnected from any power supply during maintenance work.
- Any electrical work on the system is only allowed by authorised qualified personal.

● Using the Dew Point Sensor

- Do not use this product in explosive areas.
- Do not exceed the permitted operating parameters.
- Any operation exceeding these parameters can lead to malfunctions and may lead to damage on the instrument or the system.
- Do not exceed or go below the permitted storage and operation temperature and pressure.
- This product should be maintained and calibrated frequently, at least every years.

● Storage and Transportation

- Make sure that the transportation temperature of the sensor is between -10°C to 60 °C.
- Storage temperature of the sensor is between -10 °C to 50 °C and the humidity is <90%, no condensation.
- Avoid direct UV and solar radiation during storage.

About WADS 205 / 206 Dew Point Sensors

● Importance of Dew Point:

- When it comes to monitoring compressed air systems, nothing offers a better payback than a dew point sensor. Once you have moisture in your system, everything becomes a problem. If you have ever had this occur, you'll know the problem occurred days before you discovered it and it took even longer to dry out after the issue was fixed.
- Most people don't think of dew point sensors as providing efficiency, but wet compressed air will do irreparable damage to components, create reliability issues throughout your entire plant and allow bacteria, rust and corrosion to build up in your system. Moisture issues are extremely difficult to rectify and component failures will go on for years.
- If you have a system running a desiccant dryer or with a specified purity requirement, then you are already demonstrating your dew point is a critical component of your system and therefore should be monitored continuously.

● Indicators on Refrigerant Dryers don't Measure Dew Point

- The indicator on your refrigerant dryer is exactly that, an indicator, it is not measuring the dew point entering your plant. It is only measuring the temperature of the refrigerant gas. Any number of issues before and after your dryer can lead to the dew point deteriorating and they will not be shown on the dryer indicator.
- Compared to your compressed air system, dew point sensors are cheap, easy to install and have low maintenance requirements. They are the most cost effective sensor purchase you are ever likely to make.

● Benefits

- Reduces Operating and Energy Costs
- Improves Down Stream Filter Life and Performance
- Increase the life span of your compressed air system and it's 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.

● Multiple Gas Options

- All dew point sensors are suitable for compressed air and the following inert gases: Oxygen (O₂), Nitrogen (N), Hydrogen (H), Carbon Monoxide (CO), Carbon Dioxide (CO₂), Argon (Ar) and Helium (He).

● Calibration Requirements

- Dew point sensors require calibration every 2 years (provided the sensor is not exposed to relative humidity above 85%).

● Permanent and Temporary Solutions

- All dew point sensors are available for temporary or permanent installations.

● Key Features of Dew Point Sensors

- Based on polymer film sensor technology
- MEMS Based pressure sensor for simultaneous monitoring of Dew Point and Online Pressure (Absolute Pressure 1... 1Bar)
- Accurate to +/- 20Ctd with up to 9 Dew Point Calibration and Multi-point Temperature Compensation.
- Ultra-fast Response.
- Excellent Long-Term Stability.
- Innovative Anti-Condensation, Particle, Oil and Most Chemical Technology.
- High Resistance to Electrical Disturbance.

What's in the Box ?

- Each Dew Point Sensor Unit comes with :



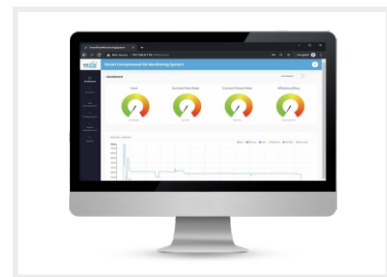
1. WADS 205/206 (Whatever Ordered)
2. User Guide
3. Calibration Certificate
4. Power Cable

- Optional Accessories**

- The following accessories are available for WADS Dew Point Sensor. Talk to your local dealer for pricing and other accessories.



Y-type M12 connector for connecting multiple sensors simultaneously via RS485



Smart Data Acquisition and Monitoring Software

Product Specification

	WADS 205	WADS 206
Measuring Range		
Dew Point	-60 ...+60° Ctd	-80 ...+20° Ctd
Temperature	-40...+100° C	
Pressure	0...17 bar (a)	
Dew Point Accuracy (Air & Nitrogen)		
	+20...-60°C	+/- 2° Ctd
	-60...-80°C	+/- 3° Ctd
Temperature Accuracy (Higher Accuracy Can be Provided on Request)		
	+ 0...+50°C	+/- 3°C (Standard)
	-40°C...+ 0°C & +50°C....+100°C	+/- 5°C (Standard)
Pressure Accuracy		
	@ 23° C (Standard)	+/- 3% Full Scale
	Pressure Temperature Dependence	+/- 0.01 bar / 10°C
Response Time Dew Point Sensor Reference : 63% (90%), 20° C, 1bar(gauge), 4L/min		
	-50 > + 20° Ctd	20 Secs - 40 Secs
	+20 > - 50° Ctd	1 Min - 3 Mins
	Pressure Sensor	< 1 Sec
Outputs		
Display	Red / Green Display Lights	
Alarm	Buzzer (Optional)	
Power		
Input	220V AC, 10W	
Working Environment		
Operating Temperature	-30....+70°C	
Storage Temperature	-40....+80°C	
Relative Humidity	0...95 % RH	
Sampling Gas Flow Rate	> 1 L/min	
Pressure Rating	0....17 bar (a)	
Others		
Process Connection	φ6mm Stainless Steel Quick Connector	
Sensor Protection	Stainless Steel Sinter Filter 30-45 Micron	
EMC	According to IEC 61326-1	

Communication Settings

Default Modbus Settings

All dew point sensors use the following default Modbus settings. Settings can be changed to suit system requirements on request

Modbus Register						
Holding Register Address	Address	Data Type	Byte Length	Description	Unit	Read / Write
1	0	Float	4	Temperature	°C, °F	Read
3	2	Float	4	Relative Humidity	%RH	Read
5	4	Float	4	Pressure Dew Point	°Ctd, °Ftd	Read

Default Modbus RTU (RS 485) Settings					
Address	Baud Rate	Frame / Parity / Stop Bit	Response Time	Response Delay	Frame Spacing
0	9600	8 / N / 1	1 Sec	0 ms	7 Character

Warranty

WiseAir Technologies provides a 12-month warranty for all Flow Meters. The warranty covers material and workmanship under the stated operating conditions from the date of delivery. Please report any issues immediately and within the warranty time.

If faults occur during the warranty period WiseAir Technologies will repair or replace the defective unit, without charge for repair labor and material costs but there is a charge for other services such as labor to remove or reinstall the instrument, transport and Warranty repairs do not extend the period warranty.

The following damage is excluded from this warranty:

- Improper use and non-adherence to the user manual.
- Use of unsuitable accessories. External influences (e.g. damage caused by vibration, damage during transportation, excess heat or moisture).

The warranty is cancelled when one of the following situations occurs:

- The user opens the measurement instrument without a direct request written in this manual. Repairs or modifications are undertaken by third parties or unauthorized persons. The serial number has been changed, damaged or removed.
- Other claims, especially damage occurring on the outside of the instrument (eg dents, marks), are not included unless responsibility is legally binding.

Calibration

The sensor is calibrated before delivery. The calibration date is printed on the certificate which is shipped with the sensor.

Flow meters require calibration to remain accurate. The frequency of calibration depends greatly on the level of contamination within your system. By using insertion style flow meters wherever possible, you can install and remove them without the need for shutting the system down, virtually eliminating any lost production time caused by periodic maintenance.

We recommend you calibrate the sensor every 2 years. The calibration is excluded from the product warranty. For more information, please contact **WiseAir Technologies**.

Need Help ?

Contact your local dealer. Alternatively, contact **WiseAir Technologies**

- **Call Us**
Asia : **+91 90477 78715**
Europe : **+45 36 99 04 22**
- **Email Us**
Asia : **info@wiseair.asia**
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Technical Support

Alarm Settings :

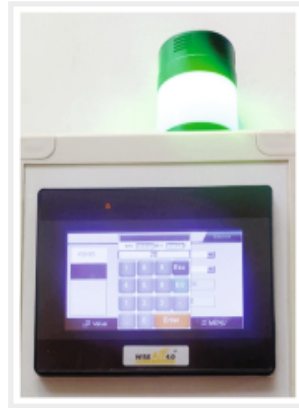
Step 1 :

Go to sensor setting, 2nd menu option from bottom of the screen



Step 2 : Set the threshold value

Type the values through keypad and press the enter button



Step 3 : Alarm rings

When values cross the threshold value light color changes as red.



My Sensor Isn't Reading Correctly

- **If your sensor is not reading the correct values, follow these steps.**
 - Make sure the sensor is suitable for your system. Refer to the section
 - Make sure the sensor is calibrated. Sensors should be calibrated every 2 years
 - Contact your local dealer or WiseAir Technologies for calibration
 - Make sure the sensor is installed correctly. Refer to the section
 - Make sure the sensor is wired correctly. Refer to the section
 - Check Modbus Settings. Refer to the section for more information
 - Check dryer is functioning correctly
 - Check condensate drains are functioning correctly
 - Is your associated equipment compatible with the dew point sensor?
- If you are still having problems, contact your local dealer or **WiseAir Technologies**.

Commissioning Report

About the Sensor

Part Number	WADS 205	WADS 206
Serial Number		
Installed by		Installed on (date)
Calibration (Valid till)		Warrenty (Valid till)

About the Compressed Air System

Dryer Type	Refrigerant	Desiccant	Membrane	Other
Dew Point Sensor Reading				

Installation

Step	Task	Yes	NA	No	Comments	Sign
1	Dew point sensor installed in correct location and orientation?					
2	Electrical Wiring checked					
3	Modbus setting checked					
4	Dryer and condensate drains working correctly?					

Initials of WISEAIR Representative

Initials of Customer

Understand Compressed Air System Dynamics with Our Advanced Measurement Solutions

Measure - Manage - Save - Sustain

Our Network



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