WISE AIR 4.0®
MEASURE TO MANAGE

2026 · PRODUCT BROCHURE

Dew Point Sensors

WADS-201

In-line Dew Point Sensor

WADS-201 · 202 · 203 · 204 · IN-LINE TYPE

Continuous pressure dew point after any dryer — from −110 °C td to +60 °C td, in a compact sensor with two outputs.

Dew point | Temperature | Humidity | Pressure



−110 °C td
lowest range (WADS-204)

±2 °C td
dew point accuracy

40 bar
max. operating pressure

2 outputs
Modbus RTU + 4–20 mA

OVERVIEW

Know the moisture in your air — before it reaches the plant.

The WADS-201 series measures the pressure dew point (PDP) of compressed air and technical gases continuously, right after the dryer. Four models cover every dryer: WADS-201 and 202 for refrigerant, desiccant and membrane dryers, WADS-203 for desiccant dryers down to −80 °C td, and the quartz WADS-204 for ultra-dry air down to −110 °C td. The supplied measurement chamber and quick-release coupler make fitting a matter of minutes. PDP goes out on 4–20 mA; PDP, temperature, humidity and optional line pressure on RS485 Modbus RTU.



MEASURES

- Dew point
- Temperature
- Humidity
- Pressure

Every dryer type

Four models from −60 … +60 °C td down to −110 °C td for refrigerant, desiccant and membrane dryers.

Drift-compensated sensing

Polymer, aluminium oxide or quartz sensing element compensates for temperature, contamination and ageing for stable long-term readings.

Optional pressure sensor

WADS-202, 203 and 204 can add an integrated pressure sensor, read over Modbus with the dew point.

Fits in minutes

Measurement chamber and quick-release coupler included; connect to any G ¼" point, permanently or temporarily.

Two outputs as standard

RS485 Modbus RTU and 4–20 mA on one 5-pin connector — ready for PLC, data logger or WASM-604.

Built for the plant

IP65 housing, stainless-steel sinter filter and 0 … 40 bar operating pressure.

APPLICATIONS

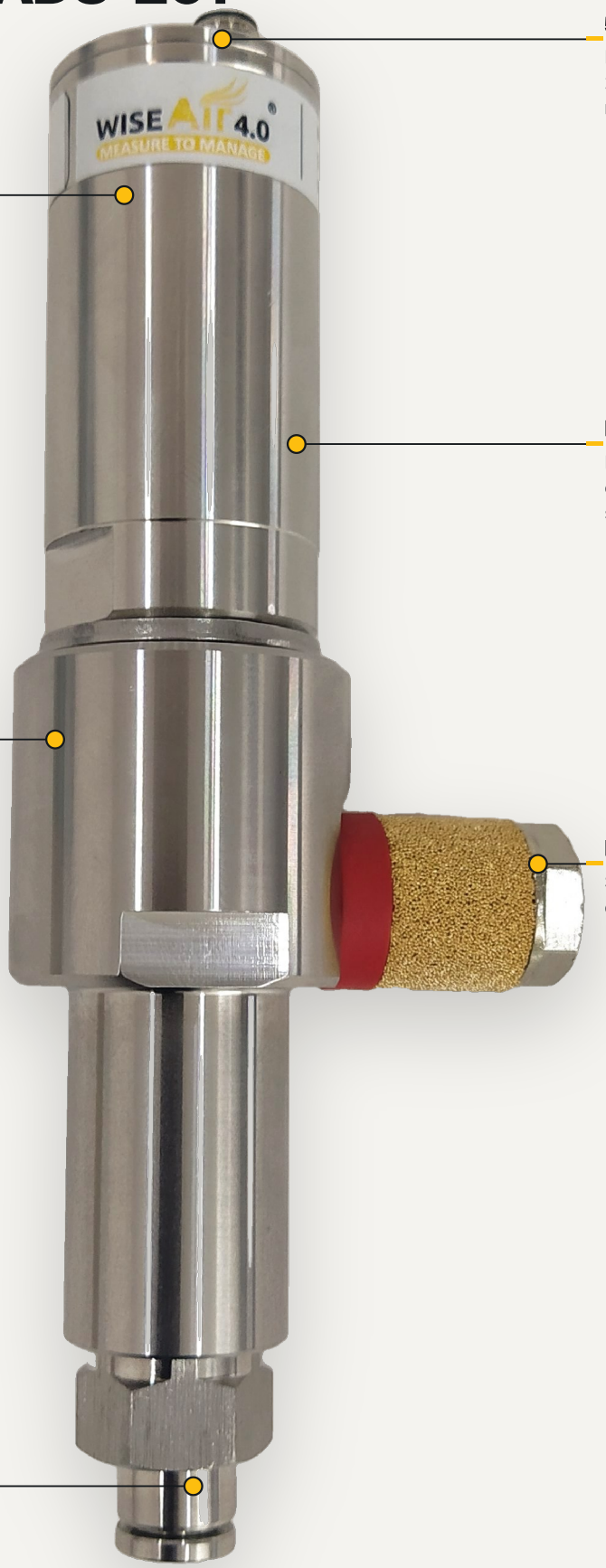
- Dryer performance monitoring
- Early warning of dryer and drain faults
- Checking ISO 8573-1 moisture class targets
- Dew-point-dependent desiccant purge control
- Dry air for food, pharma and paint lines
- Nitrogen and other technical gases

CALIBRATION

Every sensor is calibrated before dispatch. Recalibrate every 2 years — earlier if the sensor has seen liquid water, oil or RH above 85 %.

PRODUCT ANATOMY

Inside the WADS-201



5-pin connector
M8 on WADS-201, M12 on WADS-202 to 204: power, RS485 and 4–20 mA.

IP65 sensor housing
Aluminium on WADS-201, stainless steel on WADS-202 to 204 (shown).

Drift-compensated sensor
Polymer, aluminium oxide or quartz element behind a stainless-steel sinter filter.

Measurement chamber
Holds the sensor tip in a steady flow of sample gas. Included.

Bleed screw with silencer
Sets the pilot flow (> 1 L/min). Or fit a 6 mm zero-loss loop.

Quick-release coupler
Connects to a G ¼" valve or socket; fit and remove in seconds.

TECHNICAL DATA

Specifications

SENSOR

Technology	201, 202: polymer capacitive · 203: aluminium oxide with auto drift correction (ADC) · 204: quartz
Housing	201: aluminium · 202–204: stainless steel

DEW POINT RANGE

Variant A	−60 … +20 °C td (201, 202, 203)
Variant B	−60 … +60 °C td (201, 202, 203)
Variant C	−80 … +20 °C td (203)
WADS-204-A	−110 … 0 °C td

ACCURACY

Dew point	±2 °C td
Temperature	±0.5 °C
Pressure (option)	±0.3 % FS at 23 °C; ±0.01 bar / 10 °C

PROCESS

Operating pressure	0 … 40 bar; 0 … 16 bar with pressure sensor
Gas temperature	−40 … +100 °C
Pilot gas flow	> 1 L/min
Process connection	G ¼" via measurement chamber and quick-release coupler

MEDIA

Gases	Compressed air, N_2, O_2, CO_2, Ar, He
Flammable gases	H_2, CO: consult WiseAir (not for hazardous areas)

OUTPUTS

Analogue	4–20 mA, pressure dew point
Digital	RS485 Modbus RTU: PDP, temperature, RH; pressure (202–204, option)

ELECTRICAL AND ENVIRONMENT

Supply	12 … 30 VDC
Connector	5-pin M8 (201) · 5-pin M12 (202–204)
Protection	IP65
Storage	−10 … +50 °C, < 90 % RH

DEW POINT
±2 °C td
all models

TEMPERATURE
±0.5 °C

PRESSURE
±0.3 %
of full scale, optional sensor

Calibration Every sensor is calibrated before dispatch and ships with a calibration certificate. Recommended recalibration every 2 years.

MODEL SELECTION AND INSTALLATION

Match the sensor to the dryer. Fit it right.

Choose your model

CODE	HOUSING	SENSOR	RANGE °C TD	PRESSURE
201-A	Aluminium	Polymer	**−60 … +20**	–
201-B	Aluminium	Polymer	**−60 … +60**	–
202-A	Stainless	Polymer	**−60 … +20**	Option
202-B	Stainless	Polymer	**−60 … +60**	Option
203-A	Stainless	Al_2O_3 (ADC)	**−60 … +20**	Option
203-B	Stainless	Al_2O_3 (ADC)	**−60 … +60**	Option
203-C	Stainless	Al_2O_3 (ADC)	**−80 … +20**	Option
204-A	Stainless	Quartz	**−110 … 0**	Option

All models ±2 °C td. Connector: M8 (201), M12 (202–204). ADC = auto drift correction.

PRESSURE DEW POINT VS ATMOSPHERIC DEW POINT

Dew point rises with pressure. Air with an atmospheric dew point of −10 °C td, compressed to 2 bar absolute, has a dew point of about −1 °C td. Always compare like with like: the WADS series reads the dew point at line pressure (PDP).

Which model for which dryer

	201	202	203	204
Refrigerant	✓	✓	–	–
Desiccant	> −40	> −50	**> −60**	< −20
Membrane	✓	✓	✓	✓
Lowest range	−60	−60	**−80**	−110

Desiccant: PDP limits in °C td. For a local display choose WADS-207/208; for a wall monitor with alarm, WADS-205/206.

ISO 8573-1 moisture classes

CLASS	PDP ≤	MODELS
1	−70 °C td	203-C, 204
2	−40 °C td	202, 203, 204
3	−20 °C td	201 … 204
4	+3 °C td	201, 202, 203
5	+7 °C td	201, 202, 203
6	+10 °C td	201, 202, 203

Water vapour classes of ISO 8573-1:2010. Typical: refrigerant dryer class 4–6, desiccant dryer class 1–3.

1

Choose the point

Horizontal pipe downstream of the dryer, in dry air. Mount the sensor upright on top of the pipe, never upside down or sideways.

2

Prepare the connection

A G ¼" female ball valve, socket or weld nipple with a bore of at least 13 mm. A valve lets you remove the sensor without depressurising.

3

Fit and set the flow

Screw the sensor into the chamber, couple it to the valve, open slowly and set the bleed screw to a pilot flow above 1 L/min.

4

Connect and wait

Plug in the 5-pin cable (12 … 30 VDC). Let the sensor dry down to the process dew point before you record the reading.

ORDERING INFORMATION

WADS-201-A	Compact, aluminium, M8 · −60 … +20 °C td
WADS-201-B	Compact, aluminium, M8 · −60 … +60 °C td
WADS-202-A	Precision, stainless, M12 · −60 … +20 °C td
WADS-202-B	Precision, stainless, M12 · −60 … +60 °C td
WADS-203-A	Aluminium oxide sensor, stainless, M12 · −60 … +20 °C td
WADS-203-B	Aluminium oxide sensor, stainless, M12 · −60 … +60 °C td
WADS-203-C	Aluminium oxide sensor, stainless, M12 · −80 … +20 °C td
WADS-204-A	Quartz, stainless, M12 · −110 … 0 °C td

OPTIONS AND ACCESSORIES

Pressure sensor	WADS-202/203/204, state when ordering
Y-type M12 splitter	Several sensors on one RS485 bus
WADL-301 data logger	Records values, sends to WASM-604
WASM-604 Smart Monitoring	Dashboards, alarms and reports

IN THE BOX

- Dew point sensor, as ordered
- Connection cable, M8 or M12, 2 m
- Measurement chamber
- Quick-release coupler
- Calibration certificate
- User manual

CONNECT TO WISEAIR 4.0

WADS-201 … 204
dew point · temperature · RH

↓ RS485 Modbus RTU · 4–20 mA

WADL-301 or PLC
data logger / plant control

↓ Ethernet · 4G

WASM-604
dashboards, alarms, reports

WISE Air 4.0 MEASURE TO MANAGE

Dry air you can prove.

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