

Easidew Online

Universal Dew-Point Hygrometer

Easy to install and maintain, the Easidew Online Hygrometer measures and displays dew point and moisture content for use in a wide range of moisture applications. The Easidew Online display provides analog, digital, and dual relay alarm outputs.



Highlights

- Measurement range -100 to +20 °C (-148 to +68 °F) dew point
- Dew point or ppm_v moisture content output
- Accuracy ±2 °C (±3.6 °F) dew point
- 4 to 20 mA output
- Modbus RTU over RS485 output
- Dual configurable alarm outputs
- Choice of AC or DC Power Supply
- Sample block and cable included
- Traceable 13-point calibration certificate

Applications

- Membrane dryers
- Adsorption dryers
- Medical and surgical air
- Breathing air
- Additive manufacturing
- Glove boxes
- Plastic injection molding



Easidew Online

Easy-to-use Hygrometer

The Easidew Online has been developed as a universal, quick-to-install hygrometer system for the complete dew-point measurement range of -110 up to +20°C (-166 up to 68°F) dew point, which covers most moisture measurement applications.

This hygrometer incorporates the latest Michell ceramic metal-oxide technology, providing stable, reliable, and repeatable moisture measurements.

Ease of Installation

The Easidew Online is supplied complete with all the parts required to install the sensor in a gas stream and start measuring quickly and easily.

- Easidew 2-wire sensor
- Configurable display with 1/8 DIN mount format
- Stainless-steel sensor sample block with 1/8" NPT inlet and outlets
- Sensor cable – selectable length

The system is supplied with a 13-point calibration certificate from -100 to +20°C (-148 to +68°F) dew point, traceable to national standards.

Service Exchange/Recalibration Program

Michell offers 2 services for customers who want minimum downtime and sensor traceability, while maintaining the reliability of their online system:

- **Sensor Exchange** – Customers place an order for a guaranteed, reconditioned sensor, supplied with a 13-point traceable calibration. When this arrives, they exchange it for the installed sensor which is returned to Michell, resulting in zero process downtime.
- **Recalibration** – Customers return their installed sensor to Michell, where it is inspected, checked, and recalibrated before being returned. This provides on-going sensor traceability for the process.

Flexible Output Signals

The Easidew Online has 3 output signal variants, which can be reconfigured as required within the display menu system:

- 4–20 mA or 0–20 mA
- Modbus RTU over RS485
- 2 programmable relay alarms

Safety and Integrity

The mechanical design of the sensor considers the health and safety quality requirements of the end user, offering an ultra-high process pressure barrier, along with meticulous levels of product traceability and quality.

- High performance 450 bar (6527 psi) process media barrier
- Optional gas wetted parts BS EN 10204 3.1 material certified
- Optional cleaning for enriched oxygen service
- 13-point calibration certificate

Measurement Performance

The online system uses Michell's market-leading ceramic metal-oxide measurement technology coupled with the latest-generation, sophisticated microcontroller electronics to provide accurate and stable measurement across the transmitter's product life.

- Accuracy $\pm 2^{\circ}\text{C}$ ($\pm 3.6^{\circ}\text{F}$) dew point
- Fast response to moisture changes

Flexibility of Ownership

The Easidew sensor used within the online system has a RS485 communication system, which gives customers the opportunity to re-range and re-scale with a communication kit for a wide variety of moisture measurements.

- Re-ranging 4–20 mA within the -110 to +20°C (-166 to +68°F) dew-point range
- Moisture scaling – dew point, ppm_v

Speed of Supply

The online system is manufactured within Michell's world-leading high-volume moisture transmitter manufacturing center in the United Kingdom, which ensures reliability and repeatability of delivery and field supported by a network of Michell's global service centers.

- Manufacturing calibration system traceable to NPL and NIST
- ISO17025 UKAS accredited calibration available on request

Customization

If your application requires a customized online system, we have specialized design and manufacturing capability to cover your requirements.

Technical Specifications

Performance Specifications

Measurement Range	100 to 1000 ppm _v (Direct) or 0 to 1000 ppm _v (Dew Point); -100 to +20°C (-148 to 68°F) dew point; non-standard dew-point ranges and ppm _v ranges available on request
Accuracy	±2°C (±3.6°F) dew point*
Response Time	5 mins to T95 (dry to wet)
Repeatability	0.5°C (0.9°F) dew point
Sensor Calibration	Traceable 13-point calibration certificate

Electrical Specifications

Online Output Signals	4–20 mA or 0–20 mA; Modbus RTU over RS485; dual programmable relay alarms
Online Output	Dew point or moisture content
Maximum Analog Output Scaled Range	Dew point: -110 up to +20°C (-166 up to +68°F); Moisture content in gas: 0 up to 3000 ppm _v ;
Online Supply Voltage	AC: 85 to 264V; DC: 24V
Online Current Consumption	60 mA maximum
Electrical Safety	EN61010-1

Operating Specifications

Operating Temperature	Sensor: -40 to +60°C (-40 to +140°F); Monitor: 0 to +50°C (+32 to +122°F)
Compensated Temperature Range	Sensor: -20 to +50°C (-4 to +122°F); Monitor: not applicable
Storage Temperature	Sensor: -40 to +60°C (-40 to +140°F); Monitor: -10 to +60°C (+14 to +140°F)
Operating Pressure	45 MPa (450 barg / 6527 psig) maximum
Sensor Flow Rate	1 to 5 Nl/min mounted in standard sampling block; 0 to 10 m/sec direct insertion

Mechanical Specifications

Ingress Protection	Sensor: IP66 in accordance with standard BS EN 60529:1992+A2:2013; NEMA 4 protection in accordance with standard NEMA 250–2014 Monitor: IP65 (NEMA 4X) front panel only
Sensor Oxygen Service	Optional: Cleaned for enriched oxygen service
Sensor Housing Material	316 stainless steel
Dimensions	Sensor: L=132mm x ø45mm / L=5.2" x ø1.77" (with connector cable) Monitor: 1/8 DIN Case, 96 x 48 x 85mm / 3.78 x 1.89 x 3.35" (w x h x d)
Filter (Sensor Protection)	Standard: HDPE <10µm Optional: 316 stainless steel sintered guard <80µm
Sensor Process Connection	5/8" - 18 UNF
KF40 Flange Accessories	Flange for 5/8" 18 UNF process connections
Sensor Weight	150 g (5.29 oz)
Sensor Electrical Connections	MiniDIN 43650 form C
Online Sensor Cable	0.8, 2, 5, 10 meter (2.62, 6.5, 16.4, 32.81 ft) connector/cable available
Sensor Diagnostic Conditions (factory programmed)	Sensor fault: 23 mA Under-range dew point: 4 mA Over-range dew point: 20 mA

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Instrukart Holdings

India Toll Free : 1800-121-0506 | Ph : +91 (40)40262020

Mob +91 7331110506 | Email : info@instrukart.com

#18,Street-1A, Czech Colony, Sanath Nagar, Hyderabad -500018, INDIA.

