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

MICHELL Instruments

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 re-calibrated 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 ±2°C (±3.6°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.

MICHELL Instruments

Technical Specifications

Performance Specifications

Measurement Range	-110 to +20°C (-166 to +68°F) 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

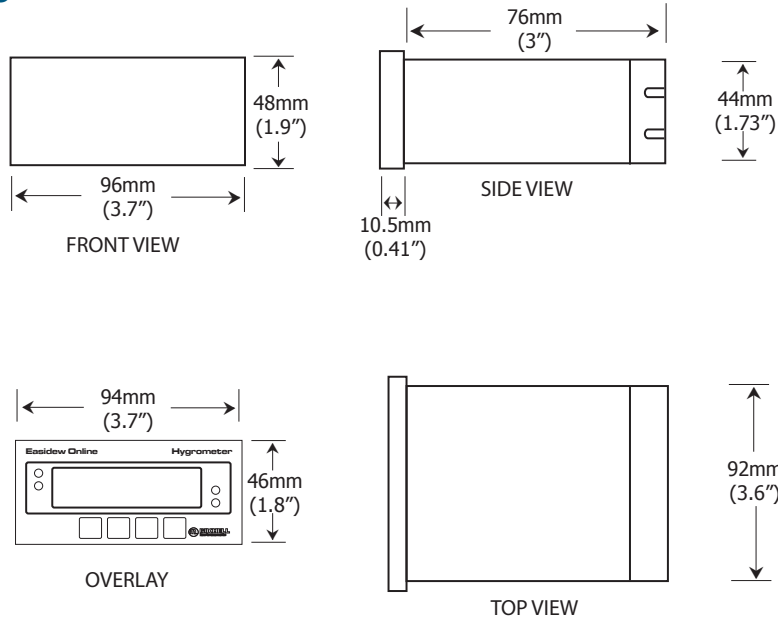|	
Operating Temperature	Sensor: -40 to +60°C (-40 to +140°F); Monitor: 0 to +50°C (+32 to +122°F)
Compensated Temperature Range	Sensor: -20 to +50°C (-4 to +122°F); Monitor: not applicable
Storage Temperature	Sensor: -40 to +60°C (-40 to +140°F); Monitor: -10 to +60°C (+14 to +140°F)
Operating Pressure	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

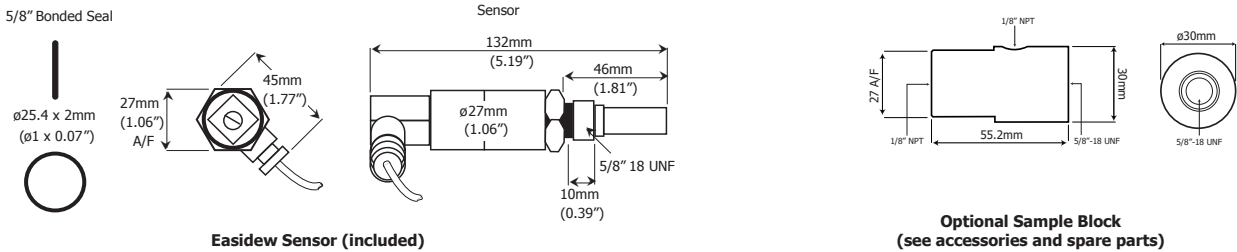|	
Ingress Protection	Sensor: IP66 in accordance with standard BS EN 60529:1992+A2:2013; NEMA 4 protection in accordance with standard NEMA 250–2014 Monitor: IP65 (NEMA 4X) front panel only
Sensor Oxygen Service	**Optional:** Cleaned for enriched oxygen service
Sensor Housing Material	316 stainless steel
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

NOTES * Over Compensated Temperature Range

MICHELL
Instruments

Easidew Online

Product Dimensions

48mm
(1.9")

96mm
(3.7")

FRONT VIEW

76mm
(3")

44mm
(1.73")

SIDE VIEW

10.5mm
(0.41")

94mm
(3.7")

Easidew Online   Hygrometer

46mm
(1.8")

OVERLAY

92mm
(3.6")

TOP VIEW

Easidew Online Monitor

5/8" Bonded Seal

ø25.4 x 2mm
(ø1 x 0.07")

27mm
(1.06")
A/F

45mm
(1.77")

Sensor

132mm
(5.19")

ø27mm
(1.06")

46mm
(1.81")

5/8" 18 UNF

10mm
(0.39")

Easidew Sensor (included)

1/8" NPT

27 A/F

1/8" NPT   55.2mm   5/8"-18 UNF

30mm

ø30mm

5/8"-18 UNF

**Optional Sample Block
(see accessories and spare parts)**

Related Process Products

SF82
Fast-Response Dew-Point
Transmitter

Optidew 501
Chilled Mirror Hygrometer

Easidew PRO X.P.
Explosion Proof Moisture
Transmitter

Senz-TX
Oxygen Transmitter

MDM50
Portable Hygrometer

MDM300 I.S.
Dew-Point Hygrometer

ES20
Compact Sampling System

YellowBox Portable
Portable Oxygen Analyzer

MICHELL
Instruments