Easidew Advanced Online
Versatile Dew-Point Hygrometer

Easy to install and configure, the versatile touch screen Easidew Advanced Online Hygrometer can measure and display dew point, moisture content and pressure. The hygrometer provides analog, digital and 4 programmable relay alarm outputs with front screen or software app display configuration.

### Highlights
- Measurement range -110...+20 °C (-166...+68 °F) dew point
- Dew point or moisture content output
- Accuracy ±1 °C (±1.8 °F) dew point
- Pressure indication and compensation
- Touch screen reconfiguration
- 3 x 4...20 mA outputs and 4 relay outputs
- Modbus RTU over RS485 output
- Choice of AC or DC Power Supply
- Sample block and cable included
- Traceable 13-point calibration certificate

### Applications
- Medical and surgical air
- Glove boxes
- Additive manufacturing
- Pharmaceutical
- Hydrogen refilling stations
- Welding gases
- Semiconductor manufacturing
- Membrane and adsorption dryers
The Easidew Advanced Online has been developed as a versatile, premium-performance hygrometer system for use across the moisture measurement range of -110...+20 °C (-166...+68 °F) dew point in a wide variety of applications. This hygrometer incorporates the latest Michell ceramic metal-oxide technology, providing stable, reliable and repeatable moisture measurement, combined with a new Process Monitor designed and manufactured by Michell.

Ease of Installation
The product is supplied complete with all the parts required to install the sensor in a gas stream and start measuring quickly and easily.
- Easidew M12 digital output sensor
- Touch screen display with 1/8 DIN mount format
- Stainless-steel sensor sample block with 1/8" NPT inlet and outlets
- Sensor cable – selectable length

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

Flexibility and Pressure Compensation
The Easidew Advanced Online can be used for most moisture measurement applications, displaying data in °C or °F dew point, ppm, lb/mmscf or g/m³, from -110 up to +20 °C (-166...+68 °F), at pressures up to 450 bar (6627 psi).

To calculate moisture content from dew point, it is necessary to know the system pressure. This hygrometer can either compensate for pressure change by using a live pressure sensor input, or accept a fixed pressure input value.

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 hygrometer to Michell, where it is inspected, checked and re-calibrated before being returned. This provides on-going system traceability for the process.

Flexible Output Signals
The Easidew Advanced Online has 3 electrical outputs, which can be reconfigured as required through the touch screen or software app:
- 3 x 4...20 mA
- Modbus RTU over RS485
- 4 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 process media barrier
- Optional gas wetted parts BS EN 10204 3.1 material certified

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 sensor life.
- Accuracy ±1 °Cdp (±1.8 °Fdp)
- Fast response to moisture changes

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
- ISO/IEC 17025 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**
-110...+20 °C (-166...+68 °F) dew point; -100...+20 °C (-148...+68 °F) dew point

**Accuracy** *
±1 °C from -60 to +20 °C dew point (+1.8 °F, -76...+68 °F dp)
±2 °C from -100 to -60 °C dew point (+3.6 °F, -148...-76 °F dp)

**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

**Auxiliary Pressure Input**
45 MPa (450 barg/6527 psig) maximum

**Pressure Compensation**
Live 4 ...20 mA pressure transmitter or fixed programmable value

**Moisture Content Scales**
Automatic compensation for ppm, lbs/MMscf, g/m³ units

**Relay Alarm Type/Rating**
2 x Form A; 2 x Form C 30 V DC 5A Namur compliant programmable relay outputs for process and fault conditions

Electrical Specifications

**Sensor Input Signal**
Modbus RTU over RS485

**Online Output Signals**
3 x 4...20 mA channels; Modbus RTU over RS485; 4 programmable relay alarms

**Online Outputs**
Dew point, Moisture Content, Pressure

**Maximum Analog Output Scaled Range**
Dew point: -110...+20 °C (-166...+68 °F); Moisture content in gas: 0...3000 ppm

**Online Supply Voltage**
85...265 V AC; 18...30 V DC

**Online Power Consumption**
AC Power: 7.5 VA
DC Current: 170 mA @24 V DC

**Electrical Safety**
BS/EN61010-1: 2010

Operating Specifications

**Operating Temperature**
Sensor: -40...+60 °C (-40...+140 °F); Process Monitor: 0...+50 °C (+32...+122 °F)

**Compensated Temperature Range**
Sensor: -20...+50 °C (-4...+122 °F); Process Monitor: not applicable

**Storage Temperature**
Sensor: -40...+60 °C (-40...+140 °F); Process Monitor: 0...+60 °C (+32...+140 °F)

**Operating Pressure**
45 MPa (450 barg/6527 psig) maximum

**Sensor Flow Rate**
1...5 Nl/min mounted in standard sampling block; 0...10 m/sec direct insertion

Mechanical Specifications

**Ingress Protection**
Process Monitor: IP54 & NEMA Type 2 & 12K front panel only

**System Materials**
Sensor & Sample Block: 316 stainless steel
Process Monitor: UL Rated ABS - EpsotechAB AN2 V0

**Dimensions**
Sensor: L=119 x ø27 mm / L=4.69” x ø1.06” (no connector cable)
Process Monitor: 1/8 DIN Case, 90 x 40 x 92 mm / 3.54 x 1.57 x 3.62” (w x h x d)
Sample Block: 55.2 x 30 mm / 2.17 x 1.18”

**Filter (Sensor Protection)**
Standard: HDPE <10µm
Optional: 316 stainless steel sintered guard <80µm

**Sensor/Sample Block Process Connections**
G1/2” BSP, 3/4” 16 UNF, 5/8” 18 UNF

**Sample Block Inlet/Outlet Connections**
1/8” NPT

**System Weights**
Sensor 150 g (5.29 oz); Sample Block 250 g (8.82 oz); Process Monitor 280 g (9.88 oz)

**Sensor Electrical Connections**
Easidew M12: M12 5 pin (A Coded)

**Online Sensor Cable**
2, 5, 10 meter (6.5, 16.4, 32.81 ft) connector/cable available

**Display Type**
LCD touch screen 320 x 240 pixel

NOTES * Over Compensated Temperature Range
Easidew Advanced Online Hygrometer

Product Dimensions

Easidew Online Process Monitor

M12 Sensor Cable (included)

Sample Block (included)

Related Process Products

SF82 Online
Fast-Response Hygrometer

Optidew 501
Chilled Mirror Hygrometer

Easidew PRO X.P.
Explosion Proof Moisture Transmitter

Senz-TX
Oxygen Transmitter

Easidew
Portable Hygrometer

MDM300 I.S.

ES20
Compact Sampling System

YellowBox Portable
Portable Oxygen Analyzer

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Michell Instruments adopts a continuous development programme which sometimes necessitates specification changes without notice.

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