

Easidew PDP Dryer Portable

Compressed Gas Dew-Point Hygrometer

Moisture spot checking at the pressurized outlet of a gas dryer is crucial for ensuring the quality of compressed gas. The Easidew PDP Dryer Portable Hygrometer monitors and logs key parameters like dew point, pressure and temperature in real time. It is compliant with ISO 8573-1 and effectively controls moisture contamination.



Highlights

- Air-quality compliance to ISO 8573-1 Class 1–4
- Pressure dew-point monitoring to 20 barg
- Multi-parameter datalogging/downloading
- Touchscreen user-friendly interface
- Dew-point and pressure dryer outlet graphing
- Rugged construction for tough field conditions
- Designed for high electrical noise environments
- Integrated self-contained travel case
- Calculated Atmospheric (ATM) Dew point
- Stainless-steel gas-wetted parts compliant to -70 °C dew-point measurements
- Battery life of two working days

Applications

- Refrigeration and Desiccant Dryers
- Nitrogen Gas Generators
- Oxygen Gas Generators
- Railway Pneumatics
- Hydrogen Gas Generators
- Medical Gas Quality
- Inert Gas Blanketing
- Plastic Moulding Dryers
- Additive Manufacturing
- Benchtop Gas Generators

Easidew PDP Dryer Portable The Moisture-Quality Spot Checker

The Easidew compressed gas hygrometer has been developed as the key portable for compliance when making quality assurance measurements on the dryer outlet before gas custody transfer occurs.

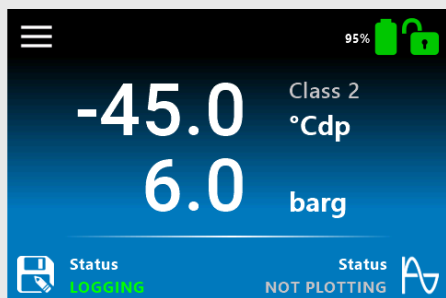
The rugged dryer portable incorporates the latest Michell ceramic metal oxide and polymer technologies, providing reliable and repeatable pressurized moisture measurements within ISO 8573-1 air-quality Classes.

Pressure Dew-Point and Atmospheric Dew-Point Datalogging and Graphing

Gas treatment dryers are technically specified at pressure dew points (PDP); this portable measures, stores and downloads key gas-quality measurands at pressures up to 20 barg.

- Dew points between -100 and +60 °C dp
- Line pressures up to 20 barg
- Ambient/process temperatures between -20 and +50 °C
- Real time and date reference

HMI Main Screen



A 2 GB integrated SD card provides data storage via a simple TXT file with a PC download, through a standard USB-C connection. This negates the need for special PC-based application

software, making the portable simple and easy to use.

The unit has a display diagnostic plot of dew point and pressure, which is a key feature when the maintenance engineer wants to view the dry-down curve of a desiccant dryer in a start-up condition.

Field Reliability and Ease of Use

Gas-treatment maintenance engineers who use this spot-checking tool normally work remotely in harsh physical and electrical conditions and need a reliable unit which does not fail on site. The Easidew PDP Portable has been designed to meet this need.

- Rugged drop-tested IP65 lifetime warranty case
- Heavy industrial RFI/EMC certified
- IP54 touchscreen display and front panel
- Battery life of two working days, with smart charge and accurate battery life indicator
- All stainless-steel sample block and gas tubing for -70 °C Class 1 measurements
- Field serviceable with fast delivery of replacement spares
- Integrated self-contained travel case

Desiccant and Refrigeration Dryer Work Schedule

The majority of moisture compliance testing in compressed air is undertaken on Class 1 to 4 dryers. The Easidew PDP Portable offers two sensor technologies which meet these needs:

- Easidew metal oxide -100...+20 °C dew-point range
- SF82 polymer ultra-fast response -60...+60 °C dew-point range

Measurement Performance

The portable system uses Michell's market-leading dew-point sensor technology, coupled with the latest-generation, sophisticated microcontroller electronics to provide accurate and stable measurement across the sensor life.

- Accuracy ± 2 °Cdp (± 3.6 °Fdp)
- Fast response to moisture changes

Service Exchange/Recalibration Program

Michell offers two services for customers who want minimum downtime and sensor traceability, while maintaining the reliability of their portable spot checker:

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

Company Quality and Environmental Accreditations

At Michell Instruments, we ensure that our products meet the highest quality standards. In addition, we take our environmental responsibilities very seriously and have key accreditations in place.

- ISO 9001:2015 – International quality standard
- ISO 14001:2015 – International standard for environmental management

Speed and Quality of Supply

The portable system is manufactured within Michell's world-leading high-volume operations center in the UK, which ensures reliability and repeatability of delivery and is 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 portable system, we have specialized design and manufacturing capability to cover your requirements.

Technical Specifications

| Product | EA-PDP-A | EA-PDP-B |
|---|---|--|
| Performance Specifications | | |
| Measurement Technology | Michell ceramic metal-oxide moisture sensor | Michell advanced thick-film fast-response dew-point sensor |
| Dew-Point Sensor Model | Easidew EA2-TX-M12 | SF82-TX-M12 |
| ISO 8573-1 Moisture Air Quality Class Compliant | Class 1 to Class 4 | Class 2 to Class 4 |
| Moisture Measurement Range | -100...+20 °C (-148...+68 °F) dew point | -60...+60 °C (-76...+140 °F) dew point |
| Accuracy | ±2 °C (±3.6 °F) dew point* | |
| Moisture Response Time | 5 mins to T95 (dry to wet) -70...+10 °C (-94...+50 °F) dew point | 3 mins to T95 (dry to wet) -40...+10 °C (-40...+50 °F) dew point |
| Moisture Repeatability | 0.5 °C (0.9 °F) dew point | |
| Moisture Calibration | Traceable 13-point calibration certificate | Traceable 9-point calibration certificate ** |
| Moisture Scales | Dew point and ppm _v | |
| Process Pressure Measurement | Internal pressure sensor | |
| Pressure Range | Up to 20 barg (290 psig) | |
| Data Logging Parameters | Dew point, pressure, temperature, time, date | |
| Electrical Specifications | | |
| Integral Battery Type & Compiancy | Rechargeable lithium-ion Battery compliant with Battery Regulation (EU) 2023/1542 | |
| Integral Battery Charge Connection | USB-C | |
| Battery Charge Cable | 1.5 meter USB-C to USB-C | |
| Battery Charger (optional) | Commercial 3A fast charge with 4 global universal power connection adaptors and USB-C 2-meter cable | |
| Battery Operating Life | Up to 2 working days when used in power save mode | |
| Safety Standard | EN 61010-1:2010+A1:2019 | |
| Operating Specifications | | |
| Operating Temperature Range | -20 °C...+50 °C (-4...122 °F) | |
| Storage Temperature Range | -40...+50 °C (-40...122 °F) | |
| Compensated Moisture Sensor Temperature Range | -20 °C...+50 °C (-4...122 °F) | |
| Moisture Sensor Flow Rate | Recommended: 1...5 NI/min Maximum: 15 NI/min | |
| Mechanical Specifications | | |
| Ingress Protection | IP65 Carry Case closed IP54 Carry Case open | |
| Carry Case | Lifetime warranty, injection moulded polypropylene with internal storage for sample tube, filters, USB charging cable, display stylus | |
| Carry Case Dimensions (Closed) | 275 mm x 125 mm x 250 mm (10.8"x 4.9" x 9.8") | |
| Weight | 3.6 kg (7.9 lb) | |
| Integral Sample Block | Stainless-steel, fully self-contained sample system with pressure sensor, fixed orifice ports for flow control and built-in filtration using a standard drop-in cartridge | |
| Gas Wetted Materials | 304 stainless sample block, 316 stainless tube | |
| Inlet Filtration on Sample Block | Removes 99.5 % of particles ≥0.1 µm supplied with cartridge installed. 10 x spare cartridges provided. | |
| Inlet Filter (Moisture Sensor Protection) | HDPE <10 µm | HMWPE <10 µm |
| Inlet/Outlet Gas Connections | 1/8" BSPP to 6 mm Legris push-fit pneumatic fittings and 2 m PTFE 6 mm tube Optional: 1/8" BSPP to 6 mm Swagelok fitting, 1/8" BSPP to 1/4" Swagelok fitting | |
| Outlet Pigtail Pipe Assembly (optional) | Coiled stainless tube for pressure safety and Class 1 -70 °C (-94 °F) dew-point moisture ingress protection | |
| Service Panel | Access to dew-point sensor, SD Card, sample block filter, lithium-ion battery | |
| Display/Data Logging & Graphing Specifications | | |
| Dew-point Measurement Scale | Displays in Pressure Dew Point (PDP) or calculates in Atmospheric Dew Point (ATM) | |
| Display Type | LCD 3.5" touchscreen graphics; 640 x 480 pixel with screen stylus | |
| Data Transfer Connection | USB-C to Laptop or PC | |
| Data Transfer File Type | TXT data file | |
| Integral SD Card Memory | 2 GB | |
| Graphing Function | Plots dew point and pressure response over time | |

NOTES * Over Compensated Temperature Range

** Calibrated in 10 °C (18 °F) DP steps, -60...+20 °C (-76...+68 °F) DP

Easidew PDP Dryer Portable

Product Dimensions



Related Products



Easidew
Industrial Dew-Point
Transmitter



SF82
Fast-Response Dew-Point
Transmitter



Optidew 501
Chilled Mirror Hygrometer



MDM300
Dew-Point Hygrometer



Easidew Advanced Online
Dew-Point Hygrometer



Senz-TX
Oxygen Transmitter



YellowBox Portable
Portable Oxygen Analyzer



S8000 -100
High-Precision Chilled Mirror
Hygrometer

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