

KAHN

Hygrometers

Easidew Portable Hygrometer

A compact, easy to use portable hygrometer including integral sampling system for quick measurement of compressed air or process gas moisture content.

- -148°F to +68°F dewpoint range
- NIST traceable
- Fast and reliable
- Rugged NEMA 4 enclosure
- Line or atmospheric dewpoint measurement
- Integral sampling system

Simple And Affordable

The Easidew Portable hygrometer has been designed to make field checks of the dewpoint in air and other process gases as simple and quick as possible. The totally self-contained instrument arrives ready to use. Simply connect your sample gas to the Swagelok fittings, turn on the instrument and it will respond.

The Easidew Portable hygrometer is also economical to buy, install and operate. Volume manufacturing allows us to keep the price low. Installation costs are minimal because of its ruggedness and simplicity. And ongoing operating costs are low, because the Easidew Portable is reliable and durable. Only periodic re-certification is required to maintain your calibration traceability. We even offer a sensor exchange program so that your process is never out of operation.

Interchangeable Sensor Technology

The key to the Easidew portable's performance is its sensor technology. Kahn's advanced ceramic moisture sensor is coupled with our long-established microprocessor based measurement circuitry to produce a fully calibrated and interchangeable sensor module. All calibration data is stored within the sensor memory, so that even untrained personnel can accomplish calibration exchange or service in seconds. The Easidew Portable sensor is simply disconnected, removed from its sample block and replaced by a new, fully calibrated unit.



Fully Integrated Sampling System

The Easidew Portable hygrometer is unique among portable hygrometers. It incorporates a complete sampling system that allows easy measurement of the dewpoint of any air or gas line, clean or dirty, at up to 5000 PSIG pressure. A fixed orifice port configuration allows you to select measurement at atmospheric or line pressure. An integrated filter housing, accepting standard fiber filter cartridges, gives 99.5% protection against particles to 0.3 micron. All these features are standard with every Easidew Portable hygrometer.

Measurement In Your Control

The Easidew Portable hygrometer utilizes an extremely clear and bright red LED display so that you can quickly determine the dewpoint of your process even in the most dimly lit plant. The hygrometer is equipped with a 4-20 mA analog output for connection to a chart recorder, data-logger or computer system.

Practical Design

As its name suggests, Easidew Portable has been designed to be easily transported. It is small with an ergonomic handle, weighs less than 9 pounds and its bright yellow color means it will never be lost! On the functional side, Easidew Portable is protected to NEMA 4 when the lid is closed and its low power requirements allow uninterrupted battery operation for up to 16 hours.

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What is Dewpoint?

Dewpoint is defined as the temperature at which the water vapor pressure of a gas equals the saturated water vapor pressure. It is therefore the temperature at which condensation "just begins" to occur if a gas is cooled.

Dewpoint is a fundamental unit and directly equivalent to water vapor pressure or parts per million. It is a very convenient measure of actual water content of a gas because it is not a function of temperature in the same way relative humidity is.

Calibration

The Kahn Easidew Portable is factory calibrated to insure consistent, accurate readings. The calibration of all Kahn ceramic, aluminum oxide and chilled mirror hygrometers is traceable to the National Institute of Standards and Technology through master Kahn optical hygrometers which have been directly calibrated at the NIST and are periodically recalibrated. A certificate of traceability is available with any of these instruments. All sensors are fully interchangeable without the need for display recalibration. In addition all calibrations are guaranteed for one year.

Installation And Operation

The Kahn Easidew Portable hygrometer is battery operated to allow for field use. A battery charge indicator on the instrument front panel keeps you informed of battery status. The battery panel (four "C" type rechargeable cells) is easily removable from the front panel of the Easidew Portable hygrometer. In an emergency the rechargeable batteries can be replaced by standard "C" cells.

SPECIFICATIONS

Sensor Type:

Kahn Advanced Ceramic Moisture Sensor Easidew Transmitter

Calibration Range:

-148 to +68°F (-100 to +20°C) dewpoint

Accuracy:

±3.6°F (±2°C)

Operating Temp:

-4 to +122°F (-20 to +50°C)

Storage temperature:

-40 to +167°F (-40 to +75°C)

Operating Pressure:

Vacuum to 5000 PSIG

Display:

3.5 digit red LED display, flush mounted

Output:

4-20 mA signal via ¼" output jack.
Maximum load resistance 200Ω

Case:

Yellow polypropylene. Battery charger, sample tubing, and output jack stored in lid

Flow Rate:

5 to 25 SCFH (2 to 12 l/min)

Ingress protection:

NEMA 4 (IP68)

Power:

Four "C" type re-chargeable cells /
Battery charge indicator

Charger:

115 VAC

Run Time:

12-16 hours

Charge Time:

16 hours (maximum)

Sample Connections:

¼" Swagelok stainless steel compression fittings for gas in/out
Optional quick disconnect fittings

Sample Block:

Stainless steel, fully self-contained sample system with filter and fixed orifice ports for flow control and pressure or atmospheric measurement

Sample Tubing:

6-ft. ¼" OD PTFE supplied

Filter:

99.5% retention @ 0.3 micron with cartridge supplied; spare cartridges are available

Traceable Certification:

-100 to +68°F dewpoint traceable to NIST. For dewpoints < -100°F: direct reference to a fundamental optical hygrometer

Weight:

8.8 pounds (4.0 kg)

Dimensions:

10.8"L x 4.9"H x 9.9"D

NOTE:

The information included herein was correct at the time of publication and supersedes all previously published data. However, it is our policy to continually improve our products to ensure ever better performance. Consequently, current Kahn products may incorporate modifications not shown or described on these pages.

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