a new standard of reliability in moisture measurement
A Choice of Technologies

Kahn manufactures a full line of precision hygrometers using the most advanced, proven technologies:

- Ceramic sensors yield the fastest response time and greatest corrosion resistance
- Extremely accurate chilled mirror optical systems provide a fundamental method of dewpoint measurement

In addition, you get the flexibility of local, remotely installed or portable hygrometers rugged enough for any industrial environment. Kahn also offers the latest in dewpoint transmitters with both analog and digital outputs to your computer or PLC.

Kahn features intrinsically safe designs for hazardous locations. All Kahn hygrometers offer traceability to national and international standards.

Kahn offers a wide variety of sampling systems for use with many gases, including natural gas, and at pressures from vacuum to 6500 PSIG.

Our off-the-shelf and custom-designed calibration equipment will allow you to easily verify sensor performance or even outfit an entire metrology laboratory.

We invite you to compare our technical advantages. You will find that, feature for feature, Kahn Instruments sets the standard in moisture measurement.

NOTE: The information included herein was correct at the time of publication and supersedes all previous data. It is our policy to continually improve our products to insure even better performance. Consequently current Kahn products may incorporate modifications not shown on these pages.
**KAHN:** A full range of hygrometers for spot check or continuous monitoring

### CHILLED MIRROR OPTICAL SYSTEMS

**Fundamental Dewpoint Measurement**

Kahn offers several optical (chilled mirror) hygrometer products, Optidew, Optisure and Series 4000, to meet the requirements of a broad range of dewpoint measurement applications. Each product is available in a variety of models to suit the user’s specific needs. Kahn’s 40 years of experience in chilled mirror technology has produced extremely sensitive (parts per billion), accurate and drift-free instrumentation for measurement of gas dewpoint. All Kahn hygrometers offer measurement traceability to national and international standards.

The Optidew Dewpoint and RH Hygrometer is a compact, sturdy and economical instrument that provides continuous dewpoint measurement, display and output.

Key features include:

- **Optidew**
  - -40°C to +120°C dewpoint measurement range
  - Dewpoint accuracy of ±0.15°C
  - Dewpoint temperature and %RH display and output
  - 1-stage or 2-stage thermoelectric heat pump
  - Automatic contamination compensation
  - Data logging SD card
  - Analog and digital outputs
  - Transmitter or digital display models
  - High temperature sensor available

The Optisure and S4000TRS Hygrometer family feature the most accurate and versatile optical hygrometers available in the marketplace today.

Key features include:

- **Optisure and S4000 Series**
  - Dewpoint measurements from -80°C to +120°C
  - Dewpoint accuracy and resolution ±0.1°C
  - 3-Stage thermoelectric heat pump
  - Automatic contamination compensation
  - Current, voltage and RS232 digital outputs
  - Dual optics detection system
  - Precision platinum resistance thermometer
  - Microscope to monitor condensation on mirror
  - Optional pressure compensation
  - Built-in data hold function

The calibrations of Kahn hygrometers are traceable to the National Institute of Standards and Technology. Sensors are calibrated through a master optical hygrometer which has been calibrated at the NIST and is periodically re-calibrated. A certificate of traceability is provided with all of these instruments.

### Some Satisfied Customers

- Air Products
- Amgen
- Cargill
- DowDuPont
- Duke Energy
- ExxonMobil
- General Motors
- Harvard University
- Hewlett Packard
- Honeywell
- IBM
- Intel
- Lockheed Martin
- Merck
- NASA
- National Weather Service
- Pratt & Whitney Aircraft
- Spectra Energy
- Tennessee Valley Authority
- Texas Instruments
- U.S. Navy

### Count on Kahn Experience

Kahn, a leader in pneumatic, hydraulic and electronic technology for over 70 years, provides innovative solutions to practical measurement problems. Since Kahn’s first moisture measurement designs were introduced 60 years ago, we have manufactured high quality, durable hygrometers for many specialized applications, often under demanding conditions. Our long-standing success in customer satisfaction and our expanding product line ensure that Kahn can provide you with hygrometers to suit all your needs.

Kahn provides technical support and maintenance for all of its equipment, from the earliest models to the latest innovations. Our hygrometers are also backed by the finest warranty in the industry: One full year on calibration and workmanship for both the instrument and sensor.

### OEM Dryers

80% of all desiccant dryer manufacturers use Kahn hygrometers to measure and control dewpoint.

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“The S4000TRS also features our unique “speed pipe” technology that improves the response speed at trace moisture levels. The “speed pipe” concentrates the formation of ice crystals on the mirror surface and can reduce response time at trace moisture levels by a factor of four times.”
## HYGROMETER SPECIFICATIONS

### PORTABLE

<table>
<thead>
<tr>
<th>MODEL</th>
<th>EASIDEW PLUS</th>
<th>HYGROPORT</th>
<th>EASIDEW PRO IS PRO XP</th>
<th>PURA</th>
<th>EASIDEW CERMET II</th>
<th>OPTIDEW</th>
<th>OPTISURE INTEGRALE</th>
<th>REMOTE RS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RANGE &amp; ACCURACY</td>
<td>-50°C to +20°C ±2°C</td>
<td>-100°C to +30°C ±1°C</td>
<td>-100°C to +20°C (0-3000 PPMv) ±2°C</td>
<td>-100°C to +20°C (0-3000 PPMv)</td>
<td>-100°C to +20°C (Single Stage)</td>
<td>-25°C to +90°C (Single Stage)</td>
<td>-60°C to +40°C (INT)</td>
<td>-60°C to +40°C (INT)</td>
</tr>
<tr>
<td>SENSOR</td>
<td>Polymer Capacitive</td>
<td>Thin film Ceramic Interchangeable</td>
<td>Thin film Ceramic Interchangeable</td>
<td>Thin film Ceramic Interchangeable</td>
<td>Thin film Ceramic Interchangeable</td>
<td>1 or 2 Stage Optical (Chilled Mirror)</td>
<td>Built-In (INT, RS)</td>
<td>Remote (REM)</td>
</tr>
<tr>
<td>SENSOR LOCATION</td>
<td>Built-In</td>
<td>Remote (optional)</td>
<td>Remote</td>
<td>Remote</td>
<td>Remote</td>
<td>Bench mount, remote, probe or bench type</td>
<td>Bench or 19” rack</td>
<td></td>
</tr>
<tr>
<td>OPERATING PRESSURE</td>
<td>Vacuum to 4350 PSIG</td>
<td>Vacuum to 5000 PSIG</td>
<td>Vacuum to 6500 PSIG</td>
<td>Vacuum to 6500 PSIG</td>
<td>0 to 360 PSIG</td>
<td>Sensor: -40°C to +90°C; Electronics: -20°C to +50°C; HT sensors to +120°C</td>
<td>Sensor: -20°C to +30°C; (REM) HT sensor to +120°C</td>
<td></td>
</tr>
<tr>
<td>SENSOR TEMPERATURE</td>
<td>-20°C to +50°C</td>
<td>-20°C to +50°C</td>
<td>-40°C to +60°C</td>
<td>-40°C to +60°C (IS)</td>
<td>-40°C to +60°C</td>
<td>Digital, °C, °F, %RH, g/m³, PPMV, PPMW</td>
<td>°C, °F, %RH, g/m³, g/kg, Kpa, °C, °F, temperature PSA, %RH, g/m³, g/kg, Kpa</td>
<td></td>
</tr>
<tr>
<td>DISPLAY UNITS</td>
<td>Digital, °C, °F, PPMV, PPMW, %RH, g/m³, g/kg, #/MMSCF</td>
<td>Digital, °C, °F, PPMV, PPMW, %RH, g/m³, g/kg, #/MMSCF</td>
<td>Digital, °C, °F, PPMV, PPMW, %RH, g/m³, g/kg, #/MMSCF</td>
<td>Digital, °C, °F, PPMV, PPMW, %RH, g/m³, g/kg, #/MMSCF</td>
<td>Digital, °C, °F, PPMV, PPMW, %RH, g/m³, g/kg, Kpa, °C, °F, temperature PSA, %RH, g/m³, g/kg, Kpa</td>
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<tr>
<td>OUTPUT</td>
<td>4-20mA</td>
<td>Bluetooth 8 Mb storage</td>
<td>4-20mA or RS485</td>
<td>4-20mA</td>
<td>4-20mA</td>
<td>4-20mA, 0-20 mA, RS485, USB, Ethernet</td>
<td>4-20mA, 0-1 VDC USB, Ethernet, RS232, RS485, SD Card</td>
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<tr>
<td>ALARM RELAY</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Two 5A 250 V or 3A at 250 V (Easidew) 10A 240 V or 8A at 24 V</td>
<td>One process relay, One alarm relay, Both Form C, 1 A, 30 VAC</td>
<td>One process relay, One alarm relay, Both Form C, 1 A, 30 VAC</td>
<td></td>
</tr>
<tr>
<td>OPTIONS</td>
<td>None</td>
<td>Carrying case External sensor Sampling system</td>
<td>Digital display Power supply Sampling system</td>
<td>Digital display Power supply Sampling system</td>
<td>NEMA enclosures Second process input RS232/RS485 Sampling system</td>
<td>Sample block Air cooled heat sink Sensor guard Transport Case</td>
<td>Microscope Transportation Case Built in pressure transducer Built in sample pump assembly</td>
<td></td>
</tr>
<tr>
<td>WEIGHT</td>
<td>8.8 lbs.</td>
<td>2.9 lb 3.3 lb (IS)</td>
<td>0.3 lb 2.9 lb (IS) 3.5 lb (XP)</td>
<td>1.0 lb 0.4 lb (Sensor version) 3.1 lb (IS)</td>
<td>0.3 lb (Easidew, Cermet II Sensors) 2.9 lb (IS Sensor) 0.95 lb (Display)</td>
<td>Control unit: 3.3 lb Sensor: 0.44 lb</td>
<td>24.3 lb (INT) Control Unit: 9.26 lb (REM) Sensor: 0.44 lb (REM) 49.38 lb (RS)</td>
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<tr>
<td>POWER</td>
<td>NIHM Battery or 115 VAC</td>
<td>Battery or 110-240 VAC 43-64 Hz</td>
<td>12-28 VDC</td>
<td>12-28 VDC</td>
<td>85-265 VAC (Optional) 24 VDC (Easidew) 18-36 VAC (Cermet II, IS) 9-60 VDC (Cermet II)</td>
<td>100-240 VAC 50/60 Hz</td>
<td>85-264 VAC 50/60 Hz</td>
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<tr>
<td>DIMENSIONS</td>
<td>10.8” x 4.9” x 9.9”</td>
<td>3.9” x 7.9” x 9.8”</td>
<td>5.2” x 1.23” x 1.06” 5.9” x 3.18” x 2.24” (IS) 7.6” x 5” x 4.2” (XP)</td>
<td>4.72” x 1.38” x 5.97” 6.06” x 3.38” x 7.0” (IS) 5.24” x 1.23” dia (Sensor version)</td>
<td>1.9” x 3.8” x 3.4” (Easidew Display) 1.9” x 3.8” x 5.7” (Cermet II, IS Displays) 5.4” x 1.3” (Easidew, Cermet II Sensors) 5.9” x 2.24” (IS Sensor)</td>
<td>Wall Mount: 7.1”W x 10.2”H x 2.7”D Bench top: 6.8”W x 8.7”H x 4.7”D Sensor: 5”L x 1.8”D</td>
<td>Wall Mount: 7.4”H x 12.3”W x 13.5”D (rem) 7.4”H x 10.1”W x 8.4”D (REM) 7.5”H x 17.5”W x 21.7”D (IS)</td>
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<tr>
<td>STANDARDS AND CUSTOM CALIBRATION EQUIPMENT ALSO AVAILABLE</td>
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* INTRINSICALLY SAFE VERSIONS AVAILABLE; SPECIFICATIONS MAY DIFFER