



# PM880 AC

## Panametrics portable hygrometer

The PM880 AC hygrometer is a complete portable system with options and accessories to meet all industrial moisture measurement needs.

This hygrometer is small, lightweight, and easy-to-use. The large LCD displays moisture readings in dew point ( $^{\circ}\text{C}$  or  $^{\circ}\text{F}$ ), ppmv, ppmw, lb/MMSCF (natural gas) and a variety of other unit options. Data can be viewed in alphanumeric or graphic formats. A 120 or 230 VAC power supply allows for continuous operation of the analyzer.

### Application

This rugged portable hygrometer measures moisture in gases and non-aqueous liquids. It is used in conjunction with Moisture Image<sup>®</sup> Series (MIS), TF and M Series moisture probes for applications including:

- Natural gas
- Chemical and petrochemical gases
- Non-aqueous liquid applications
- Air separation plants
- Tanker preparation and filling
- Industrial gases
- Gas cylinder preparation and filling
- Shipboard applications
- SF6 circuit breakers
- Furnace gases/heat treating
- General plant/facility maintenance

## Features

- Hand-held portable design
- IP67 rated
- Large graphic display
- Internal data logger
- IrDA® communication with PC
- Stores up to 60 log/site files
- Simple programming via graphic user interface
- Compatible with all Panametrics moisture probes
- Lightweight hand-held sample system
- Convenient carrying bag to store hygrometer and all accessories

The PM880 AC comes in a soft carrying case with zippered compartments, a handle and a shoulder strap. The case accommodates the PM880 AC, a sample system, flexible hosing, probes with protective covers, a Moisture Image Series probe electronics module, an operating manual, a VAC power supply and probe cables.

Training for the PM880 AC is available on-site, in the factory or virtually. Panametrics offers extended warranties and service agreements for the PM880 AC as well as a range of services including NIST-traceable calibration for the moisture probes and moisture surveys.

## PM880 AC accessories

1. Zippered soft carrying case
2. Flexible Stainless Steel Braided Hose
3. MISP2 moisture probe
4. TF moisture probe
5. M Series moisture probe with probe cable
6. Portable sample system
7. PC infrared adapter
8. PM880 AC power supply



The PM880 AC's large LCD displays moisture readings in dew point (°C or °F), ppmv, ppmw, lb/MMSCF (natural gas) and a variety of other unit options in graphic or alphanumeric

Overall	
Channels	Single channel
Dimensions	<ul style="list-style-type: none"> <li>• Size: 9.4 x 5.5 x 1.5 in. (238 x 138 x 38 mm)</li> <li>• Weight, electronics: 2.5 lb (1.13 kg)</li> <li>• Weight, sample system: 4 lb (1.8 kg)</li> </ul>
Enclosure	Type 4X, IP67
Electronics	
Memory	FLASH memory
Operating temperature	14 to 122°F (-10 to 50°C) <i>To ensure maximum battery life, Panametrics does not recommend storage at temperatures exceeding 95°F (35°C) for longer than one month.</i>
Keypad	25-key, rubberized, tactile membrane
Display	240 x 200 pixel, graphic backlit LCD display
Printer/terminal output	Infrared communication port
Cables	Cable type dependent on probe type: M Series, TF Series, or Moisture Image Series. LEMO®-to-bayonet connector
Cable length	<ul style="list-style-type: none"> <li>• Standard: 10 ft (3 m)</li> <li>• Optional: Consult Panametrics for other lengths</li> </ul>
Hazardous area classification	General purpose
European compliance	EMC Directive 2004/108/EC, EN61326-1:2013, Class A, Table 2, Industrial Environment
Operational	
Site parameter programming	Menu-driven, graphic, operator interface uses keypad and soft-function keys. Online help functions. Memory storage for saving site parameters.
Data logging	Memory capacity to log over 100,000 moisture data points. Programmable keypad for log units, update times, and start/stop times.
Display functions	Displays measurements and logged data in alphanumeric or graphic format.
Display units	<ul style="list-style-type: none"> <li>• Moisture: DP temperature, ppmv, ppmw, % RH, lb/MMSCF and others</li> <li>• Temperature: °F, °C and °K</li> <li>• Pressure: psig, bar, kPa (gauge), kg/cm<sup>2</sup> (gauge) and others</li> </ul>
Moisture measurement	
Compatibility	Compatible with all Panametrics aluminum oxide moisture probes: M Series, TF Series, and Moisture Image Series. Each probe type requires a different type of I/O cable.
Calibration	Panametrics moisture sensors are computer-calibrated to National Institute of Standards and Technology (NIST) traceable moisture concentrations.

Dew/frost point temperature	
Calibration ranges (dew/frost point)	Standard: 50 to -112°F (+10 to -80°C) with data from +68 to -166°F (+20 to -110°C)
Accuracy (dew/frost point)	<ul style="list-style-type: none"> <li>• ±3.6°F (±2°C) above -148°F (-100°C)</li> <li>• ±5.4°F (±3°C) below -148°F (-100°C)</li> </ul>
Repeatability (dew/frost point)	<ul style="list-style-type: none"> <li>• ±0.4°F (±0.2°C) above -148°F (-100°C)</li> <li>• ±0.9°F (±0.5°C) below -148°F (-100°C)</li> </ul>
Operating pressure	5 μ of Hg to 5000 psig (345 bar) limited by pressure sensor (see pressure measurement specifications)
Temperature measurement	
Optional thermistor available for all Panametrics moisture probes	
Range	-22 to 158°F (-30 to 70°C)
Accuracy	±0.9°F (±0.5°C) at -22°F (-30°C)
Pressure measurement	
Optional pressure sensor available for TF Series and Moisture Image Series moisture probes	
Ranges	<ul style="list-style-type: none"> <li>• 30 to 300 psig (3 to 21 bar)</li> <li>• 50 to 500 psig (4 to 35 bar)</li> <li>• 100 to 1000 psig (7 to 69 bar)</li> <li>• 300 to 3000 psig (21 to 207 bar)</li> <li>• 500 to 5000 psig (35 to 345 bar)</li> </ul>
Accuracy	±1% at full scale
Proof pressure	Three times span of available range up to maximum 7500 psig (518 bar)
Sample system	
The SS880A standard sample system comprises an inlet needle valve, a built-in coalescing filter and sample cell with a bypass needle valve and venting tube, a pressure gauge (various ranges), and an outlet needle valve with venting tube.	
Wetted parts	316 stainless steel
Operating pressure	Configurations available for 300, 500, 1000, 2000, or 3000 psig (21, 35, 69, 137, 207 bar), dependent on pressure gauge
Maximum pressure rating	<ul style="list-style-type: none"> <li>• Standard: 3000 psig (207 bar)</li> <li>• Optional: 5000 psig (345 bar)</li> </ul>
Other options	<ul style="list-style-type: none"> <li>• Inlet pressure regulator, 0 to 500 psig (1 to 345 bar) outlet</li> <li>• Armored flowmeter, 1.3 to 13 SCFH</li> <li>• 10-ft (3-m), flexible, polytetrafluoroethylene-lined, braided-stainless steel hose with 1/4-inch tube connections. Not recommended for dew point temperatures below -103°F (-75°C).</li> </ul>

Panametrics, a Baker Hughes Business, provides solutions in the toughest applications and environments for moisture, oxygen, liquid and gas flow measurement. Experts in flare management, Panametrics technology also reduces flare emissions and optimizes performance.

With a reach that extends across the globe, Panametrics' critical measurement solutions and flare emissions management are enabling customers to drive efficiency and achieve carbon reduction targets across critical industries including: Oil & Gas; Energy; Healthcare; Water and Wastewater; Chemical Processing; Food & Beverage and many others.

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