DewPatrol PhyMetrix Compressed Air Moisture Analyzer

Leading edge Nanosensor Technology

Direct on-the-pipe mounting

Swiveling Quick Connect

Optional Pressure Sensor with automatic dewpoint correction

Rechargeable battery with weatherproof connector

Integral demister with 360˚ view of contaminants and drain valve

Built-in flow control valve and flow meter

Unique State-of-the-art Features
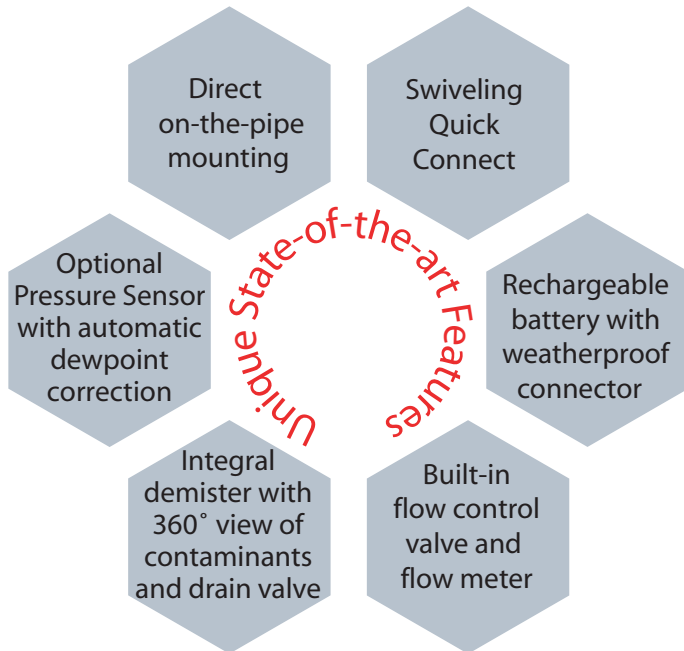
more FEATURES

- -110˚C to +20˚C dewpoint Sensor
- Fast, Accurate and Repeatable
- Built-in temperature compensation
- State-of-the-art electronics & software
- Advanced User-friendly Graphical Interface
- Small & Lightweight
- Programmable data logging
- On-screen histogram and trend graph
- Battery backed clock calendar
- NIST calibrations
- Units of measure ˚C & ˚F dewpoint, ppmV, ppmW, μB H_2O vapor pressure, grams of H_2O / m^3, Lbs H_2O /10^6 std. cubic ft.
- Impact resistant IP65/NEMA4X ABS enclosure
- Optional Audio Visual Alarm

APPLICATIONS

- Petrochemical
- Industrial Gases
- Natural Gas
- Power Generation
- Furnace Gas / Heat Treating
- Air Dryers
- Pharmaceutical
- Aerospace
- Medical

PhyMetrix, Inc.
Moisture Measurement
Innovation at work

◆ Test
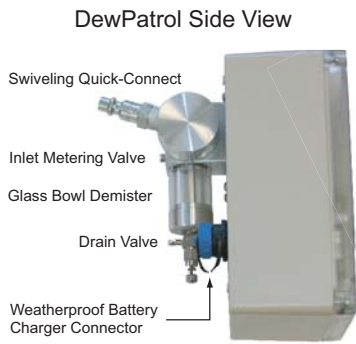◆ Measure
◆ Calibrate
◆ Quick
◆ Reproducible
◆ NIST Traceable

Proudly Designed, Developed and Manufactured in the USA

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DewPatrol PhyMetrix Compressed Air Moisture Analyzer

PhyMetrix®

Physical Layout

DewPatrol Side View

Swiveling Quick-Connect

Inlet Metering Valve

Glass Bowl Demister

Drain Valve

Weatherproof Battery Charger Connector

DewPatrol with optional Audio Visual Alarm

Mounted directly on quick connect outlet

DewPatrol Technical Specifications

Moisture Sensor	Range: -110˚C to +20˚C dewpoint (-166˚F to +68˚F dewpoint) Accuracy: ±2˚C (3.6˚F) temperature corrected — Repeatability: 0.8˚C (1.5˚F) Response time: 95% of step change in 3 min. — Sample flow: >1 LPM
Temperature Sensors	Range: -40˚C to +70˚C (-40˚F +158˚F) Accuracy: ±2˚C (3.6˚F)
Pressure Sensor	2 to 300 PSIA ±1%, 316L stainless steel wetted parts (the Pressure Sensor is **OPTIONAL**)
Flow meter	Body: Styrene Acrylonitrile, Max Pressure: 50 psi (3.4 bar) [this pressure limitation is for the exhaust]
Inlet Metering Valve	Max pressure: 300 psi (20 bar) [this pressure limitation is for the inlet, and can be utilized only if outlet is unrestricted]
Ergonomics	• Easy to carry or use on desktop, lightweight 2 Lbs • Easy to read graphic LCD display with user controlled backlight brightness (LCD is readable without the backlight) • Snap dome tactile membrane switches with dynamically assigned legends • Audible feedback upon button press as well as for warnings and alarms • Auto scaling graph / histogram on moisture measurement display for stability verification • Easy to use with verbose built-in context sensitive Help screens • Battery Saver, with user selectable Auto-power-down times, can also be disabled • Built-in pressure measurement and pressure corrected moisture readings, simultaneously displayed with the uncorrected reading for greater ease of understanding • Verbose Status bar with indications, warnings and audible errors • User selectable locking with or without a password. • Built-in battery backed clock calendar
Electrical	External AC Universal Power adapter (100-240VAC 50-60Hz) with USB connector Rechargeable Li-Ion battery, recharges through the USB connector from the PC or from the supplied universal power adapter Sampling system and sensor are isolated from electrical interface and supply grounds Measurement resolution of moisture sensor: 1pF resulting in less than 0.01˚C External power and I/O: USB mini B female connector - IP67 / IP68 with Sealing Cap Alarm Relay Option - 3A, 250VAC contacts

Mechanical	1/4" NPT Female Swivel inlet, allowing connection with standard quick connect
	Aluminum and Viton wetted parts, small surface area sampling chamber for fast response time.
	Enclosure
	  ABS (UL94-HB), with EDPM gasket to meet IP65, NEMA-4X
	  Dimensions- H: 5.71" (145mm) W: 4.13" (105mm) D: 2.56" (65mm)
	Weight Total: 2 Lbs (~1 Kg)
	Pressure: Inlet 300 psi (20 bar) Outlet 50 psi (3.4 bar)

Temperature Range	DewPatrol Analyzer: -20˚C to +60˚C — Electronics: -40˚C to +85˚C Moisture Sensor: -20˚C to +60˚C — Pressure Sensor: -20˚C to +85˚C LCD operating: -20˚C to +70˚C storage: -30˚C to +80˚C
Miscellaneous Features	NIST traceable calibrations Built-in metering valve and flow meter, no need for external pressure regulator etc. Built-in demister for liquid knock-out, to separate liquid vapor mixtures such that they do not compromise sensitive analyzer components Units of measure: ˚C & ˚F dewpoint, ppmV, ppmW, µB H_2O vapor pressure, grams of H_2O / m^3 and Lbs H_2O /10^6 standard cubic feet in Natural Gas. (All units autoscaled) Digital & Analog I/O: USB, and optional 4/20mA with HART® Data logging - single point, multipoint, time stamping, each sample records: dewpoint, temperature and pressure, (memory > 4,000 samples) Virtual Analyzer PC software for training and evaluation, allows the user to experience the exact interface on own PC with voice explanations

ORDERING INFORMATION	Part Number
PhyMetrix DewPatrol Moisture Analyzer Model: **PDPa** Included Accessories: USB cable (mini B male to A male) AC universal power adapter with USB connector	**PDPa**
Pressure sensor option 0-300 psia w/automatic pressure correction	suffix **-P**
Analog Output 4/20 mA with HART® option	suffix **-A**
AC powered option (comes with AC power cord instead of USB)	suffix **-W**
Alarm Relay option (only with AC powered option)	suffix **-R**
Audio-Visual Alarm option (only with AC powered option)	suffix **-L**

Represented by:

Ordering example: part number for the Analyzer with a Pressure Sensor and 4/20mA would be: **PDPa-PA**

Doc. Revision 1