DIGITAL DEW POINT METER INSTALLATION

ATLAS AIR & WATER DDM -76/+68 DIGITAL DEW POINT METER

Our Dew point Meter is a high performance, wide range dew point monitoring instrument for compressed air and other inert gases. It is designed for industrial applications where a rugged, reliable, maintenance-free instrument is required. Long term performance is assured due to the sensor's ability to get completely wet - particularly important in installations that occasionally experience process water spikes due to pipeline condensation, start-up or failure conditions. The sensor is also immune to particulate contamination, oil vapor and most chemicals.

- Our dew point meter has one of the longest calibration intervals available - typically two years.
- The DDM -76/+68 uses a patented auto-calibration procedure to detect measurement inaccuracies and automatically make corrections to the calibration curve. Auto calibration works while the process is running and usually the user will not even realize it has taken place.

SPECIFICATIONS

Sensor Type:	Thin-film Capacitive Polymer
Moisture	Probe
Pressure Rating:	300 PSIG standard (Higher pressures available - consult factory)
System Pressure Rating:	300 PSIG (Higher pressures available - consult factory)
Dew/Frost Point Range:	-60°C to +20°C (-76°F to +68°F)
Accuracy:	±3°C from -65°C to +20°C
Relay Outputs:	(2)* Form A SPST (0.5a max @ 24VDC/120VAC The standard model has the "HI set point" (AL1) output wired to the alarm light on the instrument. The "LO set point" (AL2) is wired to terminals in the panel or, if integrated with a dryer demand system, the LO set point is wired into the PLC of the dryer.
Analog Outputs:	(1) 4-20 ma (wired to terminals in the panel) The analog output is scaled to the range of the instrument.
Dimensions:	8"W x 12"H x 6"D

INSTALLATION NOTES (for stand-alone monitors)

1. The DDM -76/+68 Dew point Meter is a rugged system designed for industrial applications. While it can withstand getting wet in upset conditions, the moisture or condensate must still be relatively clean. Rust, scale and other metallic based contaminants will damage the electronics of the probe.
2. Whenever possible, make sure air sample lines are taken from the top of the pipeline or vessel, etc. to minimize carrying liquid over to the dew point sensor.
   - A small instrument filter may be installed ahead of the dew point monitor to prevent particulate damage to the sensor.
   - A filter ahead of the dew point monitor may actually cause false high readings if the element in the filter is wet. The system may need to be purged to dry out the lines and filter prior to taking readings.

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OPERATION

Important Note: Upon application of power, the transmitter will go through a start-up procedure for about 7 minutes. The instrument will appear to be reading dew point for a few moments, however, it will then appear that the instrument is "frozen". Do not be concerned about what is on the display during this time. **DO NOT** try to make adjustments or press any of the display buttons during this time.

A sample of dry air from the dryer outlet is passed through a sample cell in which the dew point sensor is installed. The sensor constantly monitors the dew point of the air as long as there is power to the system.

1. The dew point can be monitored at line pressure or at atmospheric pressure.
2. For line pressure: V1 (sample in) should be fully open (3 to 4 turns) and V2 (sample vent) should be just "cracked" open.
3. For atmospheric: V1 should be "cracked" open and V2 should be fully open (3 to 4 turns).
4. Both the sample in and the sample vent valves should be closed tight when the instrument is not being used.

SET POINT ADJUSTMENT

1. The set points (HI & LO) can be adjusted after the instrument has completed its initial start-up procedure.
   - The HI set point corresponds to the "AL1" indicator on the front face of the display. The HI output is energized when the measured value is higher than the high set point.
   - The LO set point corresponds to the "AL2" indicator on the front face of the display. The LO output is energized when the measured value is lower (dryer) than the low set point.
   - In normal dryer operation with dew point demand, "AL1" should be off; "AL2" should be ON.
2. Press the "E" and the "M" buttons at the same time; the display should read "cond".
3. Press the "right arrow" button; the display should read "coN".
4. Press the "M" button; the display should read "coN.t".
5. Press the "M" button once to enter the "S-Hi" mode (set high). Press the "M" button once more to view the current high setting.
   - Press the "right arrow" button once. The display will show all digits with a flashing decimal point.
   - Using the "right arrow" button, move the flashing decimal point just to the right of the digit you want to change. Using the "up arrow" button, adjust the value of that digit to the desired value.
   - Using the "right arrow" button again, move the flashing decimal to the right of the next digit to be changed. Use the "up arrow" button to change that value.
6. Just to the left of the display digits is a red LED "minus" indicator. To set a negative value OR change a negative value to a positive value, use the "right arrow" button to place the flashing decimal point just to the right of the first digit on the left. Use the "up arrow" button to increment from 0 to 9. When you increment from 9 to 0 again, the red LED minus indicator will light up or go out depending on its present status.
7. Press the "M" button to enter the new values. If the display changes back to "S-Hi" before entering the new changes, the new values will have to be entered again.
8. The display will show "S-Lo" and then immediately display the value of the low set point after pressing the "M" button. Change the low set point value in the same way as the high set point.
   - Note: The LO set point must be set at a lower (dryer) value than the HI set point.
   - Press the "M" button to enter the new values.
9. The display will read "H-Hi" and then display "1". Pressing "M" again will display "H-Lo" and then "1". These are the hysteresis settings for the set points and are factory set at 1. These should not be changed.
10. Pressing the "M" button repeatedly will cycle through "S-Hi", "S-Lo", "H-Hi,", and "H-Lo" to allow you to verify values. The "H-HI" and "H-Lo" modes are for hysteresis and are factory set at 1. These should not be changed.
11. Press "E" to return to reading dew point measurements.
12. HI set point output is energized when the actual dew point reading is above the set point value.
13. The LO set point output is energized when the actual dew point reading is below the set point value.

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