Environmental

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Why Measure Environmental Parameters?

Environmental conditions can greatly affect coating performance

Humidity/ Dew Point	Surface Temperature	Wind Speed
• Most coatings will not dry properly at low temperatures and high RH • Surface moisture (condensation) is often invisible, but causes corrosion and premature failure when trapped beneath the coating	• Application temperatures are often specified by paint manufacturers, and coatings may not cure properly if the temperature is too warm or cold	• Excessive wind speed can cause solvents to evaporate too quickly, causing coatings to not cure properly • Job site safety can be jeopardized in high wind conditions

PosiTector DPM

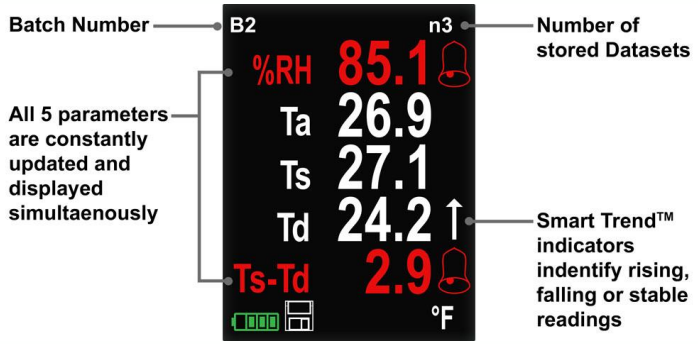
Dew Point Meter

Principles of Operation

The PosiTector DPM measures and records climactic parameters including

- Air Temperature
- Surface Temperature
- Relative Humidity
- Dew Point Temperature
- Surface Temperature minus Dew Point Temperature
- Wet Bulb Temperature
- Airspeed (DPM-A models only)

Example of Memory Mode Display



The Old Method

The PosiTector DPM replaces four different devices

	Dry (° F)	Wet (° F)	RH (%)	
	74.5	73.5	95.4	
A ½ degree difference…	75.0	73.0	90.9	…results in a calculated difference of 8.8 percentage points.
	75.5	72.5	86.6	

- Surface Temperature thermometer
- Sling psychrometer (wet & dry bulb temperatures)
  - ✓ Operator dependent, and not very accurate. Small errors in temperature measurement can lead to large errors!
- Psychrometric tables
  - ✓ Difficult to understand and read. A common source of mistakes and errors
- Barometer
  - ✓ Required to select the proper Psychrometric table. Often skipped, adding error!

Models

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Five DPM Probes are available, featuring full PosiTector interchangeability :

DPM
Standard model with built-in surface temperature sensor

DPMIR
Integral probe with infrared surface temperature sensor

DPM-S
Standard model with universal K-type thermocouple connector, ideal for auto-logging

DPM-A
Standard model wind spec

Liquid temperature accessory for DPM-S: easily measure paint temperature

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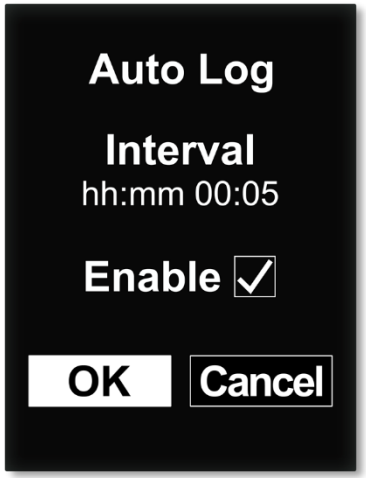
Key Feature: Auto-Logging

When attached to an advanced body, all DPM probes can automatically record readings at user selected time intervals.

- Monitor conditions over an entire shift, or overnight

Instrument powers off between readings, for extended battery life



When connected to WiFi, each reading is uploaded to PosiSoft.net- monitor site conditions remotely!

Suggested configuration: DPM-S with included magnetic surface temperature probe (pictured above)

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Technical Note: Acclimation

Sensors in **any** handheld environmental instrument need time to acclimate when moved between climate extremes

- Typical case: Moving from an air conditioned car or office, to a hot, humid job site
- Under these conditions, any instrument may require 15-20 minutes to stabilize
- Gauge **does not** need to be powered on to stabilize

If left in a dry environment for an extended period or time (weeks), the stabilization process may take longer

- To restore the original response time, wrap the sensor in a damp cloth overnight

Competitive Advantages

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- Simpler, faster, and more accurate than sling psychrometers
- Auto-log mode for overnight or shift monitoring
- Storage and reporting functionality- keep records of job site conditions

PosiTector platform	Included Certificate of Calibration Traceable to NIST	Full two year warranty on body and probe	DeFelsko service- quick shipping, recalibration, and repair
• Fully interchangeable probes • Often, competitive 'interchangeable' probes require specific body models • Free software, and USB, WiFi, and Bluetooth	• More than a 'Certificate of Accuracy'- contains measurements from the probe on traceable standards • An extra charge (and delay) from most competitors	• Many competitors offer a much shorter warranty on the probe- the most important part	

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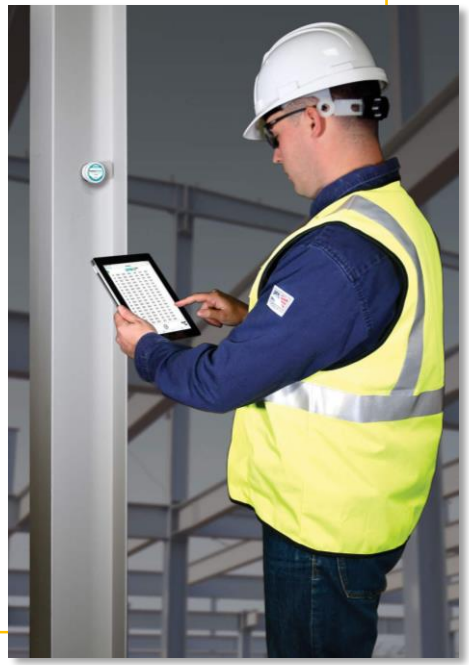
PosiTector DPM L

Dew Point Meter Logger

Features

Magnetic probe attaches to steel structures for monitoring climatic conditions

- World's only wireless datalogger conforming to ISO 8502-4, ASTM D3276, SSPC-PA7, and others
- Measures same climactic parameters as the PosiTector *DPM* – T_s, T_a, T_d, RH, and Δ
- Weatherproof – meets or exceeds IP65
- Storage for up to 10,000 readings
- Up to 200 days of battery life
- Anti-theft Kensington security slot



Typical Use Case

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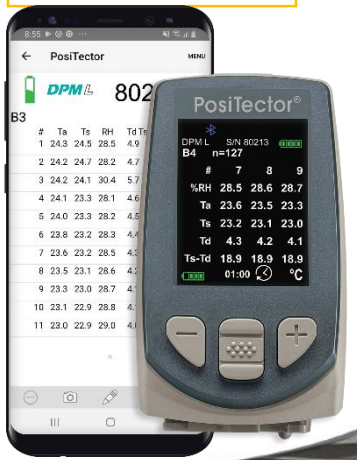
1. Turn on

2. Attach

3. Connect, start logging

4. Log Autonomously

5. Download Readings



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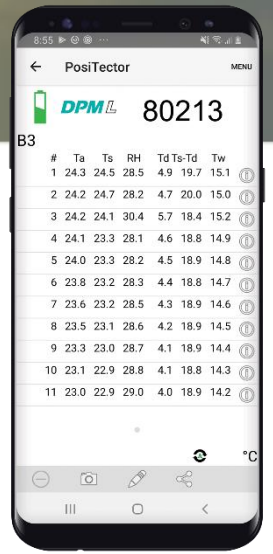
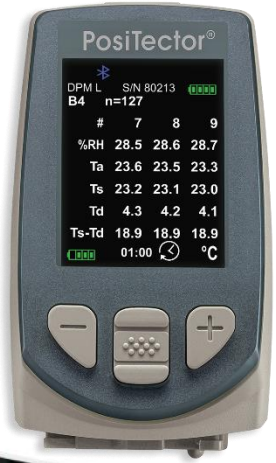
2 Ways to Use



1 PosiTector App

- Use your existing smart device
- Easily generate user-formatted reports and share via email, text, cloud storage, etc.



2 PosiTector Advanced

- No smartphone required – use your existing gage body
- Download readings to PosiSoft Desktop for advanced data management and reporting

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Key Feature: Kensington Security Slot

Optional Kensington Lock keeps the PosiTector DPM L safe and secure.

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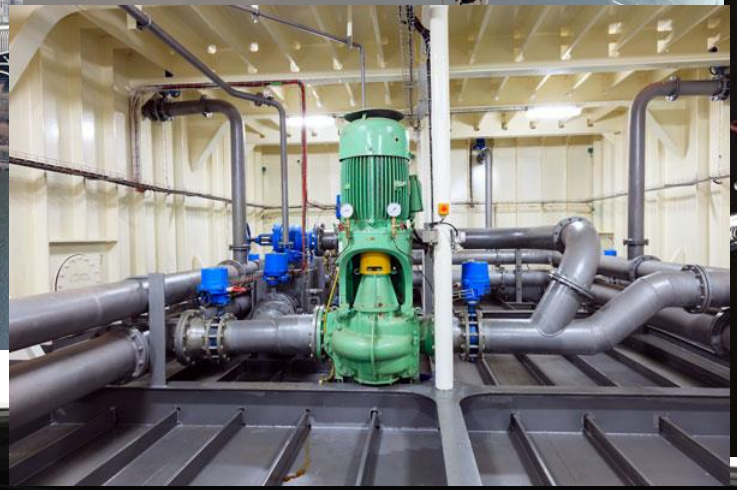
Sample Use Cases



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PosiTector IRT

Infrared Thermometer

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Features

Non-Contact Infrared Thermometer with Laser Pointer

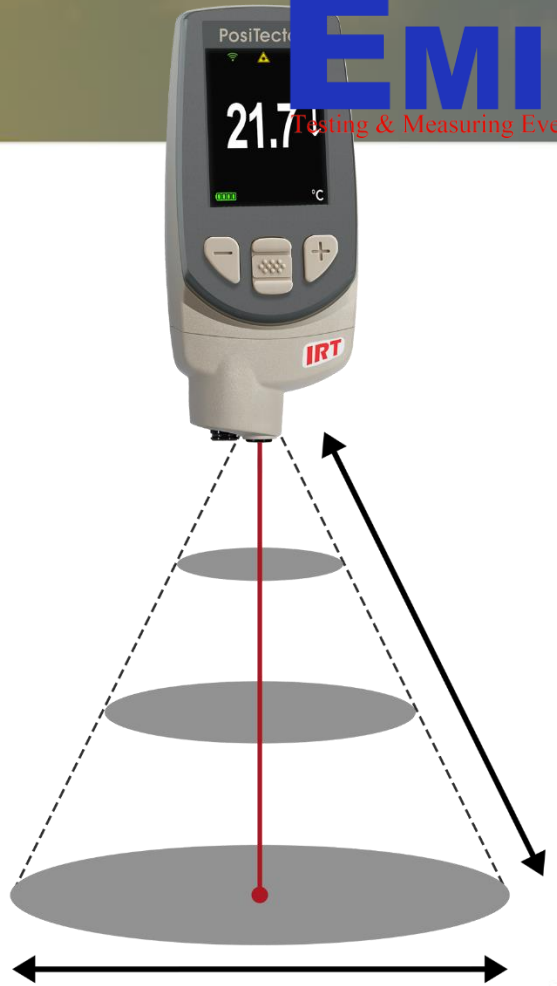
- Selectable emissivity values – choose from 7 preset material options, set a custom emissivity value, or adjust to a known temperature
- Statistics Scan mode – continually displays/updates average, standard deviation, min/max surface temperature and number of readings while measuring one reading per second
- Smart Trend indicators identify rising, falling or stable readings

Specifications

Specifications	Range	Accuracy	Resolution
Temperature Range	−70˚ to 380˚ C	± 1˚C + 1%*	0.1˚ C
	−94˚ to 716˚ F		0.1˚ F

*At 23˚ C ambient

Laser Pointer	Class 2 < 1mW
Distance to Spot Ratio (D:S)	5.7:1
Emissivity	Adjustable
Response Time	<500 µs (95% response)
Spectral Response	2 - 14 µm



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