

PosiTector[®] DPM

Dew Point Meter

Quick Guide v. 3.1



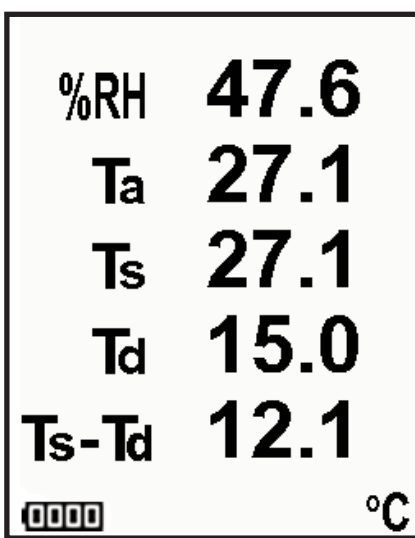
DeFelsko[®]

Introduction


The **PosiTector Dew Point Meter (DPM)** is a hand-held, electronic instrument that measures, calculates and records climatic conditions, quickly and accurately. It consists of a body (Standard or Advanced) and probe (Built-In or Separate).

This Quick Guide summarizes the basic functions of the instrument. Download the full instruction manual at: www.defelsko.com/manuals.

A typical instrument screen is shown below, consisting of RH, Ta, Ts, Td, and Ts-Td readings. This group of readings is referred to as a dataset.



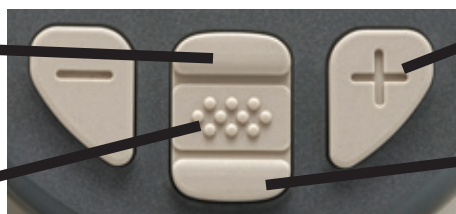
RH - Relative Humidity (measured)
Ta - Air Temperature (measured)
Ts - Surface Temperature (measured)
Td - Dew Point (calculated)
Ts-Td - Surface *minus* Dew Point Temperature (calculated)
Tw - Wet Bulb Temperature (calculated)
(*Advanced Models Only*)

The **PosiTector DPM** powers-up when the center navigation button  is pressed. Readings are updated automatically each second. To preserve battery life, the instrument powers down after approximately 5 minutes of no activity. All settings are retained.

Button Functions- Normal Operation

Scroll through Trend Charts
(*Advanced only*)

Access the Menu



Pause / Resume

Restore brightness after dimming
(*Advanced only*)

The Pause/Resume (+) button stops values from automatically updating to allow for closer examination of the relationship between the values or to allow time to manually record the entire dataset. Press (+) again to resume.


To disconnect a probe from a body, power-down the instrument and pull the plastic probe connector horizontally (in the direction of the arrow) away from the body. Reverse these steps to attach a new probe.



When powered-up the **PosiTector** automatically determines what type of probe is attached and does a self-check.

Alarm Mode

Alarm

The **PosiTector DPM** can automatically alert the user when current climatic conditions exceed pre-set values. When selected, the Alarm icon  is displayed at the top of the screen.

Standard models will alert the user when the surface temperature is less than 3°C (5°F) above the dew point temperature. Enable by selecting the tick box.

Advanced models allow the user to set up custom alarm conditions for each reading in a dataset.

Setup Menu

Setup

Reset

Reset (soft reset) restores factory settings and returns the instrument to a known condition. The following occurs:



- All batches, stored datasets, images and batch names are erased.
- Menu settings are returned to the following:

Memory = OFF

Bluetooth = OFF

Auto Log = OFF

Trend Chart = None

Perform a more thorough **Hard Reset** by powering down the instrument, waiting several seconds, then simultaneously holding both the center  and **(+)** buttons until the **Reset** symbol  appears. This returns the instrument to a known, “out-of-the-box” condition. It performs the same function as a menu **Reset** with the addition of:

- Bluetooth Pairing info is cleared.
- Alarm values are set to default.
- Menu settings are returned to the following:

Units = Celsius Flip Display = Normal Auto Sync = OFF Alarms = OFF Alarm Sound = OFF Wet Bulb = OFF White on Black = OFF	Language = English Battery Type = Alkaline Backlight = Normal Auto Log Interval = 5 min Bluetooth Streaming = OFF USB Drive = ON
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NOTE: - Date and Time are not affected by either **Reset**.

Wet Bulb *(Advanced models only)*

When selected, the wet bulb temperature (Tw) is displayed on the main screen. It is calculated from Ta and RH using an air pressure of 1.0 atmospheres (1013 mbar). Variations of Tw at other pressures could be greater than $\pm 1^{\circ}\text{C}$ ($\pm 2^{\circ}\text{F}$).

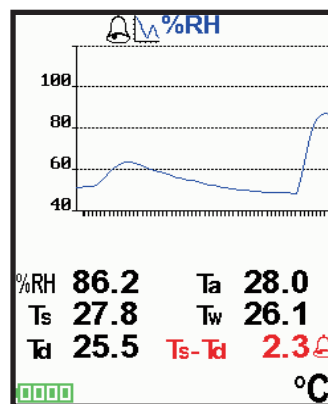
NOTE: This menu item only appears when all memory functions are turned off. Wet Bulb readings cannot be stored in memory.

Trend Chart *(Advanced models only)*

Displays a real-time graph of the readings over the last three minutes. Use Trend Charts to monitor short-term environmental changes and spot trends.

Shortcut: Press the **Up** button to scroll through the trend charts

NOTE: Trend charts can only be displayed when memory is off.



Battery Type

Selects the type of batteries used in the instrument from a choice of “Alkaline”, “Lithium” or “NiMH” (Nickel-metal hydride rechargeable). If NiMH is selected, the instrument will trickle charge the batteries while connected via USB to a PC or optional AC charger. The battery state indicator icon is calibrated for the

selected battery type. No damage will occur if the wrong battery type is selected.

NOTE: DeFelsko recommends the use of *eneloop* (NiMH) rechargeable batteries. It may take as long as 12 hours to charge dead batteries.

Memory Management

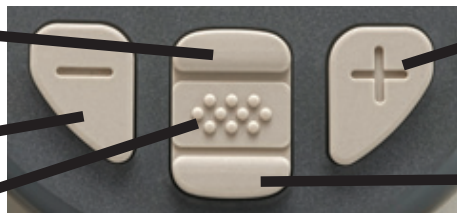
Memory

The **PosiTector DPM** can record datasets in memory for printing to the optional Bluetooth wireless printer, transferring to a computer or synchronizing with *PosiTector.net*. Readings are time-stamped as they are taken. Datasets can be stored manually (using the **(+)** button), or automatically using the Auto Log mode (pg. 5).

Scroll through display modes
(*Advanced only*)

Delete last dataset


Access the Menu



Store a dataset in memory

Restore brightness after dimming
(*Advanced only*)


Standard models store up to 2,500 datasets in one batch.

Advanced models store 100,000 datasets in up to 1,000 batches (groups). “New Batch” closes any open batch and creates a new batch name using the lowest available number. The  icon appears. New batch names are date stamped when they are created.

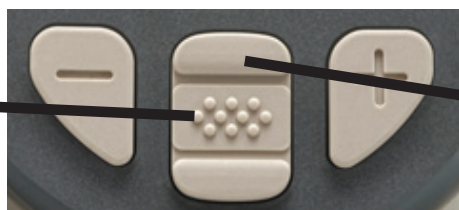
Shortcut: Remove the last reading from the current open batch by pressing **(-)**.

Auto Log Mode

Auto Log

The **PosiTector DPM** can automatically display and record datasets at user selected time intervals. When selected, the Auto Log icon  will appear on the display, with a countdown timer until the next dataset is stored. Connect the instrument to a USB power source for long-term use.

Turn on instrument/
Cancel Auto Log
mode



Scroll through display modes
(Advanced only)

Standard models remain powered-up while in auto log mode. The instrument will take readings for 40-50 hours on a set of fresh alkaline batteries, depending on the frequency of measurements.

Advanced models power down between readings to conserve batteries. At each interval, the instrument will wake up, take a reading, sync to *PosiTector.net* (if configured) and power down. The instrument can record approximately 8,000 datasets while in this mode using fresh alkaline batteries, or approximately one reading every hour for eight months.

NOTES:

- Auto Log continues recording until memory is full, the instrument loses power, or the user turns off Auto Log mode. Stored datasets will remain in memory.
- To conserve battery life, readings update only at the Log Interval. The last recorded readings will remain “frozen” on the display until the next dataset has been stored.
- It is recommended that fresh alkaline batteries, or newly recharged batteries be installed prior to an extended Auto Log.

Outputting Stored Datasets

The **PosiTector DPM** can record datasets in memory for printing, transfer to a computer or synchronizing with *PosiTector.net*.

USB mass storage - connect your PosiTector to a PC/Mac using the supplied USB cable to access and print stored readings and graphs. No software or internet connection required.

PosiTector.net - a free web-based application offering secure centralized storage of datasets. Access your readings from any web connected device. See: www.PosiTector.net

Connect Menu

Connect

Sync Now

Immediately initiates synchronization with *PosiTector.net* when connected (USB or Bluetooth) to an internet connected PC running *PosiTector Desktop Manager (PDM)*.

Auto SYNC



Allows the instrument to automatically synchronize with *PosiTector.net* when initially connected (USB or Bluetooth) to an internet connected PC running *PosiTector Desktop Manager*.

Additional measurements added to memory while connected are synchronized only when the USB cable is disconnected, then reconnected or when **Connect>Sync Now** is selected.

USB Drive



The **PosiTector** uses a USB mass storage device class which provides a simple interface to retrieve data in a manner similar to USB flash drives, cameras or digital audio players.

NOTE: When connected, power is supplied through the USB cable. The batteries are not used and the body will not automatically power down. If rechargeable (NiMH) batteries are installed, the instrument will trickle charge the batteries.

Bluetooth

(Advanced models only)



Allows the **PosiTector** to communicate wirelessly with the *PosiTector Desktop Manager (PDM)* or with the optional Bluetooth wireless printer.

Updates

Determines if a software update is available for your instrument (must be connected to an internet connected PC with *PosiTector Desktop Manager*). See: www.defelsko.com/update

Returning for Service

Before returning the instrument for service...

1. Install new batteries in the proper alignment as shown within battery compartment.
2. Examine the surface temperature probe tip for dirt or damage.
3. Ensure the holes in the white humidity/air temperature sensor are clear.
4. Perform a **Reset** (Page 4)

If you must return the instrument for service, please fill out and include the service form located at www.defelsko.com/support with the instrument.

CAUTION: To ensure optimal performance of your **PosiTector DPM**, do not obstruct the airflow near the air temperature and humidity sensors. Keep fingers away from the sensor, as body heat can cause incorrect readings. Allow time for the instrument to acclimate and for the readings to stabilize when moving the instrument between different environments.

When using the surface temperature probe, do not use excessive downward force, and do not drag it sideways. When the instrument is not in use, place the rubber cap over the surface temperature sensor to prevent damage.

Technical Data

Conforms to: ISO 8502-4, BS7079-B, ASTM D3276, US Navy
NSI 009-32, IMO PSPC, SSPC-PA 7 and others.

	Range	Accuracy	Resolution
Surface Temperature	-40° to 80° C	±0.5° C	0.1° C
	80° to 190° C	±1.5° C	0.1° C
	-40° to 175° F	±1° F	0.1° F
	175° to 375° F	±3° F	0.1° F
Air Temperature	-40° to 80° C	±0.5° C	0.1° C
	-40° to 175° F	±1° F	0.1° F
Humidity	0 to 100%	±3 %	0.1 %
Operating Range	-40° C to +80° C -40° F to +175° F		

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DeFelsko's sole warranty, remedy, and liability are the express limited warranty, remedy, and limited liability that are set forth on its website: www.defelsko.com/terms



The Measure of Quality

www.defelsko.com

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