

Paint Test Equipment

Dewpoint Meter Data Sheet



Dewpoint Meter

ISO 8502-4: Guidance on the estimation of the probability of condensation prior to paint application

The Dewpoint Meter enables testing for the estimation of the probability of condensation on a surface to be painted and establishing whether conditions at the job site are suitable for painting or not.

Relative humidity of the air and the steel surface temperature are the basis for the estimation of the probability of condensation.

The steel surface temperature generally should be at least 3°C above the dew point when paints are applied.

Measurements of relative humidity, dew point and ambient temperature are shown on a split display at the touch of a button. Surface temperature and surface temperature proximity to dew point are shown when using the surface temperature sensor.

Interchangeable Humidity Sensor and Surface Temperature Probe allows the user to replace damaged or out-of-calibration-date sensor and probe.

The filter on the sensor provides sensor protection against dust and high air velocity.

Calibration Certificates with traceability to UKAS and NIST are an optional extra. The Certificates are supplied as hard copy and are available online through the Calibration Portal (under Browse Categories) on our website. The Calibration Portal lists all your equipment calibrated by Paint Test Equipment, showing the renewal dates and allowing Calibration Certificates to be viewed at any time.

Supplied in an industrial foam-filled Carrying Case with a Humidity Sensor and Surface Temperature Probe.

International Standard ISO 8502-4

Dewpoint Meter Specifications

Part No	Range rh%	Range Temperature	Resolution rh%	Resolution Temp	Accuracy rh%/Temp	Accuracy Temp	Humidity Sensor Cal Cert Part No	Surface Temp Probe Cert Part No
H3001	1–100%	Air -10–70°C (14–160°F) Surface -20–80°C (-4–176°F)	0.1%	0.1°C 0.2°F	10–90% ±2% 0–10/90–100% ±3%	±1%	NH101	NH102
HS301	Spare Humidity Sensor 0–100%rh/-10 to 70°C (14 to 160°F)						NH101	
HS302	Spare Surface Temperature Probe -20 to 80°C (-4 to 176°F)							NH102

Operation

Functions

The following picture shows the display symbols and button functions on the Dewpoint Meter.



On Button

Switch the Dewpoint Meter on by pressing the On button briefly. To switch off, press and hold the button until the display shows OFF. Alternatively, the instrument will switch itself off after two minutes from the last button press.

To hold the reading, quickly press and release the On button—the Pause Symbol indicator will be shown on the display. To remove the hold reading, quickly press and release the On button again—the Pause Symbol indicator will then disappear.

Single Arrow ►

Press the single arrow ► successively to display relative humidity (%rh), dew point (TD), or mixing ratio/absolute humidity (ppmw/gpp) on the top display.

Double Arrow ►►

Press the double arrow ►► successively to display air temperature (TA), surface temperature (TS), surface to dew point difference (ΔT), probe serial number and time and date.

(Probe serial number and time and date are functions for Paint Test Equipment use only.)

TS and ΔT will only be displayed if the auxiliary surface temperature sensor is connected to the socket on the right side of the instrument and is set to ON. Otherwise the display will show OFF changing to - - - after three seconds.

To set the surface temperature sensor to ON press the on button and the double arrow ►► button simultaneously and the lower display will show ON and the surface temperature symbol indicator will disappear from the display. The surface temperature function reverts back to the default OFF mode when the instrument is switched off.

Engineers Arrow ◀

This will allow you to scroll through engineers mode to set the instrument to read in °F.

To enter engineers mode press the On button and the single arrow ► button simultaneously for two seconds—the engineers symbol indicator will be shown on the display. You then scroll through the menu using the engineers arrow ◀ to find the deg°C function. Use the single arrow ► to select F and then carry on scrolling through the menu until the display shows normal measurement mode with no engineers symbol indicator.

Practical Advice

When using the Dewpoint Meter it is good practice to monitor the display for temperature stability. The probe should be given sufficient time to equilibrate with the environment to be measured. The larger the initial temperature difference between the probe and the environment to be measured, the more time temperature equilibration requires to provide a valid measurement.

Replacing Battery

The battery status will be shown for three seconds each time the instrument settings are changed. Change the batteries immediately when one bar is shown.

To replace, remove the cover located on the rear of the instrument. Replace with two alkaline AA batteries, ensuring correct polarity.

About us

Paint Test Equipment are manufacturers of a comprehensive range of specialist instruments for the Industrial Coatings and Finishings Industries and have been supplying instruments to customers worldwide for over 25 years.

During this time Paint Test Equipment have established a reputation for manufacturing quality instruments to the highest specification, to meet the demanding requirements of the Industrial Painting Industry.

Recalibration

Paint Test Equipment can service and recalibrate all applicable products that we supply.

We recommend that the equipment is returned on a 12-monthly basis to Paint Test Equipment for service and recalibration.

Calibration Certificates will have traceability to UKAS or BAM. The Certificate is supplied in a paper format and is available online through the Calibration Portal (under Browse Categories) on our website. The Calibration Portal will list all your equipment that is calibrated by Paint Test Equipment, showing the renewal dates and allowing Calibration Certificates to be viewed at any time.

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