

## Dewpoint Meter



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Corrosion Test Chambers

Testing climate resistance **to the limit**

## Dewpoint Meter

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



The steel surface temperature generally should be at least 3°C above the dew point when paints are applied. Below this temperature the Dewpoint Meter will sound an alarm and the display colour will change to warn you that the surface conditions are not suitable to paint.

Measurements of relative humidity, dew point, air temperature, Surface temperature and surface temperature proximity to dew point (delta T) are shown.

Built in infrared thermometer for surface temperature measurements.

Interchangeable Sensor allows replacing damaged or out-of-calibration-date Sensor.

### Specification

Accuracy Humidity Sensor: 10–90%  $\pm 2\%$ rh. 0–10/90–100%  $\pm 3\%$ rh.

Resolution Humidity Sensor: 0.1%rh.

Resolution Temp: 0.1°C (0.2°F).

Accuracy infrared Thermometer:  $\pm 2\%$ .

Range infrared Thermometer: -20°C to 80°C. (-4°F to 176°F)

### Compliance

ISO 8502-4.

## Supply

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

The Calibration Certificates with traceability to UKAS are an optional extra.

IR Based – With 12:1 (D:S) Ratio Range -4°F to 176°F (-20°C to 80°C) Accuracy  $\pm 3.6^\circ\text{F}$  ( $\pm 2^\circ\text{C}$ )



## Ordering

T01-20310 Dewpoint Meter 1–100%rh/-10 to 70°C (14–160°F). Inc Humidity Sensor T01-20311

Spare Humidity Sensor 0–100%rh/-10 to 70°C (14 to 160°F)



## Instructions

### Information

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



### Switch On/Off

Switch the Dewpoint Meter on by pressing the On button. To switch off, press and hold the button until the display shows DEVICE IS SWITCHING OFF. Alternatively, the instrument will switch itself off after a period that the Auto Off is set to under the Setting Menu Functions.

### Pause Readings

Measurements on the display can be paused by pressing the right arrow button.

### Replacing Battery

When the battery requires replacement, low battery indicator will show one bar and flash

With the instrument switched off remove the screw then the cover located on the rear of the Instrument, replace with an alkaline PP3 battery, ensuring correct polarity.

## Instructions

### Surface Temperature

When the Dewpoint Meter is used in conjunction with the built in infra red thermometer you can ensure that there is no moisture on the blast-cleaned steel before painting.



Remove the rubber cap from the infra red sensor and point at the substrate. Press the infra red temperature button (IRT) and the measurements will show on the display.

If you press the infra red temperature button (IRT) twice the laser sight will activate.

The display will show the Surface Temperature Difference (difference between surface temperature and dewpoint), Surface Temperature and Air Dewpoint.

The Surface Temperature Difference measurement must be over 3°C to ensure that there is no moisture on the steel before painting. If the Surface Temperature Difference measurement is under 3°C the green background will change to amber, flash and sound an alarm as a warning not

to paint. If the Surface Temperature Difference measurement falls below 0°C the amber background will change to red.

The Surface Temperature Difference is also referred to as a delta T reading in some specifications.

## Instructions

### Menu

All functions are accessed through a menu-driven display by pressing the left button. To scroll through the menus use the up and down arrow buttons and enter by briefly pressing the on button.



To exit from the menu, press the left Menu button again and the Dewpoint Meter will revert back to normal measurement mode.

## Instructions

### Hygrometer

The Hygrometer Menu Function shows the Relative Humidity and Air Temperature on the display.



# Instructions

## Pyschometrics



### Dew Point

Dew Point, Relative Humidity and Air Temperature are shown on the display.

### Grams Per Kilogram

Grams Per Kilogram, Relative Humidity and Air Temperature are shown on the display.

### Enthalpy

Enthalpy, Relative Humidity and Air Temperature are shown on the display.

### Vapour Pressure

Vapour Pressure, Relative Humidity and Air Temperature are shown on the display.

### Custom

This Menu Function will allow you to display the customised measurements.



## Instructions

### Settings



### Language

Language options of English, Norwegian, French, German, Swedish, Spanish, Italian and Dutch can be selected by using the up and down arrows. When selected press the On button to save.

### Units

Metric or imperial measurements can be selected by using the up and down arrows. When selected press the On button to save.

### Custom

Customise the display with up to four different measurement types by using the up and down arrows. When selected press the On button to save. When Custom is selected under the

Psychometrics Menu Function the display will show the selected measurement types.

### Date and Time

Set the Date and Time so when readings are stored for download to a PC the downloaded readings will show the date and time.

Select the Date by using the up and down arrows to change numbers and the side arrows to move through the numbers, then press the On button and the display will allow you to set the Time using the same arrow buttons. When selected press the On button to save.

## Auto Off

Select the number of minutes for the instrument to automatically switch off by using the up and down arrows. When selected press the On button to save.

## Brightness

Select the display brightness by using the up and down Arrows. When selected press the On button to save.

## Buzzer

Select the buzzer to be on or off. When selected press the On button to save.

## Calibration

This function is for supplier use only.

## Logging

The logging will allow you to set a logging period and a job number so that measurements can be stored for PC download.

Select the Start and Stop by using the up and down arrows to change numbers and the side arrows to move through the numbers, then press the On button and the display will allow you to set the Log Interval and Job Number using the same arrow buttons. When selected press the On button to save.

The memory can be cleared from all measurements by selecting Clear Data using the up and down arrows. When selected press the On button to clear.

## USB Connection

Measurements can be stored in the memory by pressing the right arrow button for one second until RECORD SAVED appears.

Select File Viewer by using the up and down arrows. When selected press the On button to save. All stored measurements can be downloaded to a computer directly into Excel.

Connection is made using the optional USB PC Download Cable to the download socket on the Dewpoint Meter and the USB port on the computer. Ensure the Dewpoint Meter is switched off when connecting the cable.

Switch the Dewpoint Meter on and USB Connected will show on the display. Locate the HygroMaster storage device on the computer and view the files.

When stored readings are in Excel using the Surface Temperature Probe Function the results are shown as follows:

Measurement 1: Surface Temperature  
Measurement 2: Air Dewpoint  
Measurement 3: Surface Temperature Difference

The memory can be cleared from all measurements by selecting Clear Data under the Logging Menu Feature.