

Thermo Hygrometer PCE-313A



PCE-313A Thermo Hygrometer

Measures ambient temperature from -20 ... 60°C (-4 ... 140°F) and relative humidity from 0 ... 100% RH / Integrated data logger with adjustable sampling rate and SD card memory

PCE-313A is a thermo hygrometer used to measure the relative humidity (% RH) and temperature (°C / °F) of the air. Ideal for use in evaluating heating, ventilation and air conditioning (HVAC) system performance, this combination digital thermometer / digital hygrometer also has a port for connecting a type-K thermocouple. This allows the user to take surface temperature measurements using an optional external type-K temperature probe (not included - see accessories).

The thermo hygrometer features a built-in data logger capable of recording humidity and temperature measurement data at an adjustable sampling rate in direct mode or permanently in data logging mode. To use these functions, you must program the meter in advance using the keypad. For permanent or long-term recording applications, we recommend powering the meter using an optional AC power adapter (see accessories for details). The device also comes with an SD card memory of up to 16 GB to enable long-term data acquisition as well as quick and easy transfer of the stored data to a PC for analysis via Microsoft Excel (.xls files saved to SD card).

- ▶ Measures temperature, humidity, dew point and external temperature via the K type thermocouple connection
- ▶ Flexible real-time data memory by means of SD memory card (1 ... 16 GB)
- ▶ The data can be saved to the SD card directly as an Excel file
- ▶ The SD card can be formatted while it is inside the device
- ▶ Data hold function
- ▶ External sensor for easy and flexible measurement of the environmental conditions
- ▶ Low battery indication
- ▶ Large LC display
- ▶ Tripod connection
- ▶ Adjustable sampling rate of 1 ... 3600 seconds
- ▶ Easy to use
- ▶ Resilient case
- ▶ 2 GB SD card included in the delivery
- ▶ Optionally available software kit for online transfer to a PC or laptop (please note that no software is necessary to analyse the saved data)

Specifications

Ranges

- Relative humidity 5 ... 95% RH
- Temperature 0 ... 50°C / 32 ... 122°F
- Type K -50 ... 1300°C / -58 ... 2372°F
- Calculated dew point -25.3 ... 48.9°C / -13.5 ... 120°F
- Wet bulb temperature -21.6 ... 50°C / -6.9 ... 122°F

Resolution

- Relative humidity 0.1% RH
- Temperature 0.1°C / 0.18°F
- Type K 0.1°C / 0.18°F
- Calculated dew point 0.1°C / 0.18°F
- Wet bulb temperature 0.1°C / 0.18°F

Accuracy

- Temperature $\pm 0.8^{\circ}\text{C}$ / 1.4°F
- Relative humidity $\geq 70\% \text{ RH} \pm 3\%$ of the measurement value $\pm 1\% \text{ RH}$
 $< 70\% \text{ RH} \pm 3\% \text{ RH}$
- Type K $\pm (0.4\% + 0.5^{\circ}\text{C} / 32.9^{\circ}\text{F})$

Memory SD card (1 ... 16 GB)

Measurement rate Adjustable, 1 ... 3600 seconds

Display LCD 52 x 38 mm / 2 x 1.5 in, with backlight

Interface RS-232

Operating conditions 0 ... 50°C / 32 ... 122°F
< 85% RH

Power supply 6 x 1.5V batteries /
9V mains adapter (optional)

Dimensions 177 x 68 x 45 mm / 7 x 2.7 x 1.8 in

Weight Approx. 490 g / 1.1 lbs

Subject to change

