Hygrometer PCE-THD 50

Hygrometer with connection for thermocouple type K / Measuring range -20 ... 60 °C /
Rechargeable battery / Micro USB data interface / PC software /
Data memory for 32,000 measuring points / Optionally with ISO calibration certificate

The hygrometer is the ideal measuring device to check the climatic conditions in, for example, warehouses, production halls or greenhouses. The hygrometer can measure the ambient temperature and humidity. Temperatures between -20 ... 60 °C (-4 ... 140 °F) can be measured reliably and quickly by the hygrometer. In addition, the dew point and wet bulb temperature is calculated and displayed by the hygrometer. In addition, any type K thermocouple can be connected to the hygrometer in a temperature range of -100 ... 1372 °C (-148 ... 2501 °F). As soon as the connected thermocouple has been recognized, the temperature display automatically switches from the hygrometer to the thermocouple.

Measured values can be recorded with the data logger function of the hygrometer. The large memory of 32,000 measuring points in the hygrometer allows recording of measured values over a long period of time. After data logging, all logged measuring points can be read out and analyzed via the micro-USB interface of the hygrometer and the free software. The data logged by the hygrometer can be exported in CSV file format for further processing.

A 3.7 V Li-ion battery is installed in the hygrometer to enable mobile use. This battery can be recharged via the micro-USB interface on the hygrometer.

▶ Measuring range -20 ... 60 °C / -4 ... 140 °F
▶ Temperature, humidity, dew point
▶ Backlit LC display
▶ Micro USB interface
▶ Rechargeable battery
▶ Data memory for 32,000 readings
▶ Wet bulb temperature
▶ Optionally with ISO calibration certificate

Specifications

Air temperature

Measuring range	-20 ... 60 °C (-4 ... 140 °F)
Resolution	0.01 °C/°F
Accuracy	±0.5 °C @ 0 ... 45 °C, ±1.0 °C
	in remaining range
	±1.0 °F @ 32 ... 113 °F, ±2.0 °F
	in remaining range
Measuring rate	3 Hz

Relative humidity

Measuring range	0 ... 100 % RH
Resolution	0.1 % RH
Accuracy	±2.2 % RH (10 ... 90 % RH)
	@ 23 °C (73.4 °F)
	±3.2 % RH (<10, >90 % RH)
	@23 °C (73.4 °F)
Response time	<10 s (90 % RH, 25 °C (77 °F), with no wind)

Thermoelement

Sensor type	Thermoelement Type K
Measuring range	-100 ... 1372 °C (-148 ... 2501 °F)
Resolution	0.01 °C/°F, 0.1 °C/°F, 1 °C/°F
Accuracy	±(1 % ±1 °C)

Calculated values

Wet bulb temperature	-20 ... 60 °C (-4 ... 140 °F)
Dew point temperature	-50 ... 60 °C (-58 ... 140 °F)

Further specifications

Internal memory	99 measuring points
	(redundant, only readable on the measuring device)
	32,000 measuring points
	(only readable on the PC)
Power supply	3.7 V Li-ion battery
Operating conditions	0 ... 40 °C (32 ... 104 °F) <80 % RH,
	non-condensing
Storage conditions	-10 ... 60 °C (14 ... 140 °F) <80 % RH,
	non-condensing
Dimensions	162 mm x 88 mm x 32 mm / 6.3 x 3.4 x 1.2"
Weight	248 g / 8.74 oz