

Technical Data Logger PCE-WL 1

Data Logger PCE-WL 1

for long-term measurements of the wind speed / microSD card storage

battery operation up to 3 years / operating temperature: -15 ... +50 °C

internal temperature sensor / 2 digital inputs / 1 analogue input / 1 NTC input

The weather station PCE-WL 1 is an ideal tool to measure and store the wind speed over a long period of time. The battery operation enables you to use the weather station for mobile applications. Since a wind power station is an expensive investment, you usually want to know what profits it will generate in advance. The weather station PCE-WL1 helps you determine these profits. The measurement data is recorded on a microSD memory card. The user can select the desired measurement rate (1 min or 10 min) when setting up the device. The weather station creates a report file once a month which is saved in *.csv format. The *.csv files stored on the microSD memory card can be transmitted to a computer via the RS-232 interface and can be analyzed there by using Excel. This way, it is possible to determine the optimal location for a wind power station. The device comes with two digital inputs where you can connect sensors with isolated contacts, Hall effect devices, TTL signals and output SO-signals. The weather station has an analog input to record the wind direction, as well as a NTC input for an external temperature sensor. The weather station is configured via an RS-232 port. This option also allows real-time data transmission. The cup wind sensor of the weather station does not need to be aligned with the wind direction to measure the horizontal wind speed. The dynamic and supportive materials are made of plastic and ensure a safe and almost maintenance-free condition. The resolution of the wind speed measurement is 0.4 m / s. The L-bracket for mounting that is included in the delivery easily holds the wind sensor. The Wind sensor also comes with a built-in heater (needs an external power source), which warms up the device for an optimal performance at low temperatures in winter.

- Measuring range: 0.8 ... 40 m/s
- Accuracy: ± 0.5 m/s or 5% of measurement value
- battery life up to 3 years
- 512 MB microSD card incl.
- RS-232 interface
- internal real-time clock
- 2 digital inputs
- 1 analogue input
- 1 NTC input for ext. temperature sensors
- report files are saved in *.csv format
- average values, max/min values and standard deviations
- internal temperature sensor

Technical specifications

Storage unit

Inputs	2 x digital inputs 1 x analogue input 1 x NTC input for external temperature sensors
Interface	RS-232
Sampling interval	1 min or 10 min
Memory	microSD card (FAT32), max. 2 GB
Data format	CSV file, ASCII format
Recorded parameters	average values, min/max values and standard deviations (with date and time stamp)
Power supply	2 x 1.5 V type C batteries
Battery life	up to 1 year (with 1 min sampling interval); up to 3 years (with 10 min sampling interval)
Housing	robust plastic housing
Protection class	IP65
Dimensions	160 x 80 x 55 mm
Weight	450 g

Wind sensor

Output	0 ... 100 Hz at 40 m/s
Measuring range	0.8 ... 40 m/s
Accuracy	± 0.5 m/s or ± 5 % of measurement value
Max. load	max. 60 m/s (short-term)
Contact classification	10 VA, max. 42 V DC, max. 0.4 A
Mounting	with support bracket
Heating	max. 24 V DC/AC, max. 1 A
Environmental temperature	-25 ... +60 °C (ice-free)
Cable	3 m; LiYY 4 x 0.5 mm ²
Protection class	IP54
Dimensions	Ø134 x 160 mm
Weight	ca. 300 g

Delivery contents

1 x weather station PCE-WL 1, 1 x wind sensor, 1 x 512 MB microSD card, 1 x mounting bracket, 2 x 1.5 V typ C batteries, 1 x instruction manual