Weather Station P414

Data Collection - data interface - supply - installation and maintenance - Technical Data

Order. P3414

- Meteorological data logger
- Collection of detailed measurements
- Direct connection of Pyranometern
- Weatherproof, low power consumption
- Serial port for PC / laptop, phone, GSM

Data Collection

The **weather station** is a **P414** for meteorological data acquisition developed data loggers. It covers all relevant data for a detailed weather observation: wind speed (in 3 heights), wind direction, air temperature / humidity and pressure, and rainfall. Four specific inputs allow connection of Pyranometern or PT100 temperature without pre-amplifier, and two more analog channels may provide additional voltage signals can be connected.

The logger collects the data in configurable intervals, with several evaluation available. The storage capacity enables automatic, unattended operation over months and years. All measurement data will be issued as text files, so that commercial programs (such as Excel) analysis can be used.

In addition to the series calculates the meteorological station also statistics, as for simple energy calculations. This facilitates a rapid evaluation and assessment of individual energy wind power plants with the free "ALWIN" program.

Data interface

The weather station has an RS-232 serial interface. The delivery is the "CALLaLOG" program (Windows 9x + +). This software allows easy programming of the device and an automatic transfer of data.

Each logger can be equipped with a fixed or GSM modem. The GSM system is the perfect solution if no telephone connection is available, and the SMS functions allow easy control of the system via mobile phone.

Supply

The data logger with lithium batteries. The connection of an external supply is possible and necessary for some sensors. An available as an accessory small solar system is sufficient, the whole measuring system, including sensors and GSM system.

Sensors

As measured value donors are energy efficient and accurate sensors. The anemometers, there are different types and we recommend that the technical data to accurately compare and wind energy forecasts used to calibrate individual donors.

Installation and maintenance

All data loggers are the permanent and automatic external use. When installing a remote monitoring and the supply of a small solar system is limited to maintaining the necessary control of the connected sensors.

Key to the trouble-free operation is the careful assembly. The logger should - even though weather - in a locked and well-grounded metal cabinet in order to better weather against vandalism but also to be protected. Ammonite offers such cabinets with different options. For the self-assembly, all the accessories also available as individual parts.

It is also important that all sensor cable is firmly affixed on the mast and not damaged which, of the moisture from the cable to the cabinet or in the logger can penetrate.

Technical Data

Technical Data

Type	**P 3414 - Weather Station P414**
Le Eingangskan ä	3 x wind speed 1 x wind direction 1 x air temperature 1 x humidity 1 x Barometer 1 x rainfall 4 x solar radiation / PT100 2 x 0 - 1.2 V voltage analog
Go ä Use -- Protection -- Dimensions -- Weight -- Connectors	 IP65, connectors IP67 H120 x B200 mm x T90 about 1.2 kg (including batteries) Circular connectors bolted, Binder Series 723
Supply -- Operating battery -- Backup battery -- External -- Power Consumption	 2 x lithium battery Li-SOC12 / 3.6 V Type D, ca.16, 5 Ah 1 x lithium battery Li-SOC12. / 3.6 V design C, about 7.2 Ah Connects to 12 VDC (9 .. max. 18 V), is plug <1 mA (standby), 20 mA (measurement), 45 mA (RS232 active)
Temperature -- Operation -- Storage -- Display function	 -- 30 ... + 70 ° C -- 40 ... + 70 ° C -- 10 ... + 50 ° C
Memory	Buffered RAM, 1 Mbyte
Clock	Buffered real-time clock, precision -10 .. +50 ° C: <100 ppm
Switched	Massebezogener Open Collector, 12 VDC, 20 mA

Series	
-- Measuring interval	1 ... 60 seconds
-- Storage interval	1 ... 9999 measurement intervals
-- Organization	in daily blocks unterteilter storage ring
-- Features	Central, maximum, minimum, standard deviation
Statistics	
-- Measuring interval	1 or 10 minutes
-- Storage interval	1 .. 99 days, according to a monthly calendar
-- Organization	Statistics blocks unterteilter storage ring
-- Evaluations	30 classes of 1 m / s wind speed distributions (2 heights) 36-sectors with individual wind rose Distributions (anemometer 1) 24-hour daily course 2 slowdown analysis with configurable limits
Delivery	Manual, batteries, desiccant, PC cable, display magnet, 3-POL. Male (ext. supply), software CALLaLOG98 ".
Recommended sensors	
-- Wind speed	P6121, P6140, P6171, P6160 (with adapter P9112)
-- Wind direction	P6240, P6245, P6220
-- Temperature	P6471, P6470
-- Temperature / humidity	P6831, P6830
-- Barometer	P6520, P6542
-- Precipitation	P6720, P6721
-- Solar radiation	P6302, P6303, P6304
Matching accessories	
-- Cabinets / Options	P9101, P9100.06, P9110.xx, P9112
-- Own Assembly	P8922, P9260, P9121, P9122, P9103, P8707 (8) .02, P6010