Wind computer "WICOM-32"

Recording measurements - **Data interface** - **Power supply** - **Installation and maintenance**
- **Technical data**

Order no. P2500

- **Data logger for wind energy applications**
- **Detailed statistics and measurement dataset**
- **Weather-proof, minimal power consumption**
- **Serial port for fasr data transfer**

Recording measurements

The **WICOM-32** is a data logger specially developed for wind energy applications. It registers wind speeds at three heights and wind directions in two heights: essential for a location survey and energy predictions.

The wind computer collects the data at selected intervals. A variety of evaluation functions are available, and the memory capacity allows unsupervised automatic operation over a period of months or even years. Measurement datasets are available as text files so that standard programs can be used for the evaluation (such as MS Excel) as well as special wind energy software (e.g. WindPRO).

The wind computer is also able to calculate additional statistics in a form suitable for basic energy calculations. This speeds up the evaluation process, and energy estimates can be made using the "ALWIN" software program (available as freeware).

Data interface

The wind computer has a serial RS232 interface, and we supply "CALLaLOG" software (Windows 9x++) for the configuration of the logger and the data management. This makes it easy to program the WICOM-32, and data can also be transferred automatically.

The AMMONIT-Data logger can be fitted with a standard or GSM modem. The GSM-system offers the ideal solution if no telephone line is accessible, and the SMS function means it is easy to monitor the system by mobile phone.

Power supply

The data logger is powered by two Alkaline Battries (9V 6LR61 - PP3). They can be replaced by Lithium batteries. It can also be linked up to an external power source, and this may be necessary for some sensors. A small photovoltaic system is available as an accessory, which is sufficient to operate the entire measurement set-up including the sensors and GSM-system.

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Sensors

Low-energy, high-precision sensors are available for the system. There are many different types of anemometer, and we recommend comparing the technical specifications carefully before making a final choice. For energy predictions, you should have the chosen anemometer calibrated individually.

Installation and maintenance

All AMMONIT data loggers are designed for permanent automatic operation in exposed positions. If the system is provided with a remote monitoring facility and the small solar system as power supply then the only maintenance that is necessary is an occasional check that the sensors are working properly.

It is crucial that the system is installed with care. Even though the logger is weatherproof, it is advisable to install it in a metal cabinet with a lock and a good earth connection, as additional protection against freak weather conditions and also against theft and vandalism. Ammonit offers a variety of suitable cabinets. All accessories are also available separately for self-installation.

It is important to make sure that all sensor cables are attached securely to the mast. If the cables become damaged then moisture might find its way into the cabinet or into the logger itself.

Technical data

Type	**P2500 - WICOM-32**
Input channels	3 x wind speed 2 x wind direction
Housing - protection - dimensions - weight - connectors	 IP65, connectors IP67 (closed) 120 x 200 x 75 mm approx. 1.2 kg (incl. batteries) screwed miniature round-socket, Binder series 723
Power Supply - operation - external - current	 2 Alkaline-Batteries (9V E-Block - 6LR61 - PP3) can be replaced by Lithium batteries input 12 VDC 10...24 Volt (connector supplied) approx.: 0,5 mA (between the measurements), 45 mA (Meas. Operation)
Temperature - operation - Display readable	 - 40 ... + 85 °C - 10 ... + 50 °C
Memory	1000 kByte non-volatile-memory (EEPROM) recorded 500.000 values
Clock -backup-battery	Buffered real time clock, accuracy -30°C ... +60°C: < 25 ppm 3V Lithium Button Cells CR2032, approx. 180...230mAh
Digital out	Open-Drain, 12 ... 24VDC, ca. 20 mA - e.g.can switch on or off a sensor heating via relay (also via SMS)
Data output	Display, 2 x 16 character double spaced serial RS232, 38400baud, E71 ASCII
Series meas. - Scan interval - Log interval - Configuration - Functions	 1 ... 60 seconds 1 ... 9999 scan intervals shift register, subdivided in daily data blocks Average, maximum, minimum, standard deviation

Statistics - Scan interval - Log interval - Configuration - Evaluation	 1 minute Monthly according to real time calendar Shift register, subdivided in 4 statistic blocks 29 classes à 1 m/s wind speed distribution (2 heights) 36 sectors wind rose with unique distributions (anemometer 1)
SMR - Scan interval - Memory capacity - Configuration	 1 ... 60 Seconds 180 Measurement lines separatel non-volatile memory
Included in delivery	User's manual, Batteries, drying agent, PC-cable, 3-pol. Stecker (ext. supply), Software CALLaLOG02
Recommended sensors - Wind speed - Wind direction	 P6100(H), P6171,P6121, P6140, P6160 (needs adapter P9112) P6220, P6240, P6245
Fitting accessories - Steel cabinets / options - Own mounting	 P9105, P9100.05, P9110.xx, P9112 P9103, P8922B, P9260, P9121.xx, P9122.03, P8705.02, P6010

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