



FIRST CLASS SYSTEMS WITH HIGH RESOLUTION AND ACCURACY

WIND MONITORING SYSTEMS

using SD memory cards (128 MB up to 2 GB) with optional wireless GPRS/3G INTERNET connection

INTRODUCTION

Our [wind monitoring](#) systems are used for highly professional applications for MegaWatt wind farm development and are ideal for measurements and monitoring of wind energy systems, meteorology (e.g. wind measurements). Two datalogger options are available : [EKO21N](#) module (RS232/USB with GPRS option) and [iBOX](#) module (Ethernet with wireless GPRS/3G option and built-in webserver, FTP-Cloud Option)

High performance, accuracy and flexibility for low budgets!

Powerful options are e.g.: automatic data transfer (via GPRS) to server via internet by FTP, local outputs for control and alarms (via SMS or e-mail). The basic unit accepts up to 8 versatile input boards (e.g. anemometers, wind vanes with lightning protection) and 8 additional in/outputs are possible (e.g. for temperature, pressure, power, analog signals 0/5/10 VDC, 0/4..20 mA etc) and is expandable up to 40 inputs!

A very compact design and ultra low power, suited for battery operation.

The SD card is easy to read with laptop computer or with optional SD card reader for desktop PC (via USB).

MOST SIGNIFICANT FEATURES OF FIRST CLASS Wind monitoring/Meteo LOGGER

- * **ACCURACY:** meets IEC standard 61400 –121-CD. The required accuracy for professional wind resource measurements is 0,1-0,2 m/s, refer to the article "The truth about windspeed and wind power measurements" An individual calibration certificate can be supplied with European MEASNET (ISO 3966) procedure (or with USA standards), however standard calibration appears to be very good (0.2 m/s) Also First Class anemometers can be connected. And note that ACCURACY is limited by the RESOLUTION!!
- * **HIGH RESOLUTION:** the resolution of sample values and recorded values **of wind speed is 0,01 m/s** by using an unique **professional running average technique** for taking sample values and with up to 16 bits signal processing for calculating the turbulence intensity (standard deviation/average wind speed)! A counter input for measuring wind speed (used by many other suppliers) result in inferior sample resolution of appr 0.4-0.5 m/s (at 2 sec sample interval for eg 6410 or MAX40/NRG40 anemometers).
- * **COMMUNICATION:** data transfer to PC, via Ethernet or via wireless internet, also to free FTP Cloud
 - > **Datafiles automatically transferred to any FTP server** (when connected to internet, wired or wireless.
 - > **Optional Historical graphs** at your website (also wireless via GPRS)
- * **RELIABILITY:** built in waterproof cabinet, lightning protected (up to 20.000 A), very reliable and many years experience in wind monitoring (since 1983) in over 90 countries: proven 100 % availability in many projects
- * **ULTRA LOW POWER :** only a battery pack is required for years of operation: no solar power required, no solar power supply required, only a safe and dry battery inside the waterproof cabinet: vandalism resistant.
- * **FLEXIBLE: Customized configurations possible and a lot of inputs and sensors are possible (also first class anemometers),** flexible and easy data processing, highly flexible: record and sample interval are free selectable quick configuration of logger parameters (no of active channels: type of channels, function of channels: average, maximum, minimum and standard deviation (turbulence intensity for wind measurements), adjustable slope and offset for sensors like anemometers.
- * **COMPLETE READY-FOR-USE CUSTOMIZED SYSTEMS** can be supplied, no engineering or programming required: "tailor made" systems are available to meet your specific requirements.
- * **MEMORY: SD card (size 128MB-2 GB): a compact and reliable non-volatile memory for very long logging periods:** no weeks or months, but years ! For iBOX-2S a micro SD Card is used (2GB)
- * **OPTIONAL MASTS and BOOMS** are according to IEC standard.
Mast systems available (via partners) up to 120 meter
- * **FOOL PROOF:** no buttons, very easy to operate diagnostics are indicated by LEDs and additional information is available via the RS 232/USB interface (EKO21N) or via the [embedded webserver](#) (iBOX)
- * **VANDALISM RESISTANT:** using rugged waterproof (IP66/67) cabinets with clamps for mounting cabinet to pole.
- * **USER-FRIENDLY:** no training required, ready for use systems, data processing utilities are available and easy to service and to replace : can be mounted at DIN rail or wall mounted inside waterproof cabinet
- * **LOW COST** especially when the new small iBOX-2S unit is used

FOR MORE INFORMATION PLEASE VISIT: WWW.EKOPOWER.NL V2-2014