PROlog - Meteorological station

APPLICATIONS

- **professional meteorological networks**
- **solar power systems analyses and evaluation**
- **pollution monitoring**
- **enviromental protection**
- **flood early warning**
- **research, education**

PROlog datalogger is based on a combination of the latest technology - ultralow power microcontroller with high precision analog converters and real time multitasking operating system. This assures flexible and reliable continous operation.

Analog front end offers 8 inputs with 12 bit resolution (relative humidity, wind direction) and 12 inputs with 24 bit resolution for precision measurements (temperature, solar radiation, pressure). On the 12 digital inputs user can measure frequency (wind speed), period of time (sunshine duration) or select counter (raingauge).

All inputs are software configurable and offer basic statistics - average, min. and max. 16 user defined polynomes are used for calculation for engineering units.

Basic battery (12V Pb) management is provided on board. Overcharge and deep discharge is controlled. As a source of power charger, solar, or just any DC source in the range of 4 - 20 V can be used.

Internal memory of about 500 kB and SD memory card are used for datalogging. SD card up to 2 GB is supported (system will format up to 512 MB; direct readable text files on computer).

A real time clock with 3V lithium battery is used as backup. Time measurement precision is achieved by time synchronization daily over GPRS network with world wide time zones.

Daily remote data transfer is supported by software via email (using optional Modem75 - quad band modem for world wide operation).

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PARAMETERS

TECHNICAL SPECIFICATIONS	
Analog Inputs	Single Ended (12 bit) - 8
	Differential (24 bit) - 12
Input range	0...2,5 V to - 19...+19 mV
Accuracy	0,1 % to 0,05 %
Input noise	cca 2uVef
Digital inputs	12
Input range	0...2 kHz
MeasInterval	1...3600 s
LogInterval	1...3600 s
Statistics	Avg, Min, Max
Ratiometric measurements (for 4 wire PT100 precision connection)	
Excitation for PT100	2 x cca 0,5 mA
Internal memory	500 kB
Data storage medium	SD memory card up to 2 GB
Communication ports	RS232, RS485
Baud rate	300...115 kbps
Realtime clock	built in
Time synchronization	daily via GPRS connection
File system	FAT16, 512 MB
Backup battery	3V lithium
Indication	2 LEDs
Battery management	12V Pb Deep discharge protection, Overcharge protection
Charging inputs	POWER: 5...12Vdc, SOLAR: 12V system
Power consumption	Sleep 40 uA max, Measuring 7 mA typ
Remote data transfer	Full support for GPRS email data transfer using Modem75 (optional)
Temperature range	- 30 to + 60 °C
Protection	IP65
Customization	on request

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