OBSERV-MET

OBSERV - MET

Observ-Met is a specifically designed meteorological Equipment to cater all the present day requirements of Meteorological observations. Its low power operation makes it suitable for remote Data Acquisition applications. The in built graphical LCD display along with user friendly interaction menus makes the settings, configuration and viewing the stored data very easy for the user. User can continuously view and monitor all the readings or can view the stored data values on the graphical LCD display.

The Observ-Met can store 10 years of 1 minute sampled data into its internal flash memory. The stored data can be downloaded on a PC using a user – friendly customized PC software provided with the system. The stored data can be directly printed in numerical as well as graphical format on a stand alone 80 column Dot Matrix Printer interfaced directly to the Observ-Met.

The stored data can be backed up by connecting a USB stick to the USB port provided on the Observ-Met. The backed up data can be then downloaded and viewed on the PC by using the PC software provided with the system.

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Specifications for Data Logger

Processor:

      32 bit ultra low power peripheral rich RISC processor. The Data Logger works on powerful proprietary Real Time Operating System which ensures multi-tasking of the application and ensures operational accuracy.

Inputs:

Analog Inputs:	8 Analog Inputs
Serial Inputs:	2 Serial Inputs (RS232) for interfacing various sensors having serial output
	1 Serial Input (RS422) for interfacing various sensors on a single bus
Digital Inputs:	1 Digital Inputs for interfacing Tipping Bucket Rain Gauge Sensor

Display & keyboard:

      128 x 64 Dots LCD display as HMI and to indicate run time values of all the parameters. In-built 5 multi function keys for HMI. All the necessary settings and calibrations can be carried out using this keypad.

A to D Converter:

      More than 13 bit ADC, all channels sampled once a second

Data Storage:

- All measurements in Metric
- 1 minute average of all the parameters stored
- Vector average of Wind parameters stored
- Data stored with respect to real time along with time stamp along with station ID
- Data storage capacity for more than 10 years (2 GByte internal Flash memory)
- Data retaliation for more than 5 years even in the absence of power

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Real Time Clock:

Internal Real time Clock with battery backup with accuracy of +/- 1 minute per 6 months. Time keeping format is MM/DD/YY & HH:MM:SS

Watchdog timer:

The in-built watchdog timer resets the micro-controller in case of race conditions or brown-out conditions. The micro-controller restores all the previous settings & calibrations after power on or reset condition.

Outputs:

- One USB port provided to retrieve data on an External USB stick.
- One Full RS232 port with variable baud rate & flow control
- Two numbers of RS232 ports for interfacing various sensors or GPS, GPRS module and Wireless communication Equipment.
- One RS422 port to connect Sensors or slave displays at long distance.
- A parallel port along with driver for 80 Column Dot Matrix Printer provided for print output

PC Software:

Suitable PC software provided to download / Transfer and view logged data on PC. Software can export the data in MS Excel format. Also PC software can read data from the USB stick. Data can be transferred to PC using RS232 port also.

Power Supply:

System operates on 12 VDC SMF battery. Current drawn is less than 50mA with continuous scanning mode.

Operating Conditions:

Data logger module: -40°C to + 60°C with 0 – 99% non- condensing humidity