

DATA LOGGER



MB **LOGGER**
SERIES

MBLogger Series

MBLogger series designed under MBMet series of Clean Energy Solutions to offer dataloggers with the ability to acquire reliable measurements from multiple industrial devices such as PLCs, Weather Sensors, Inverters, Energy Meters, and other measuring devices over RS485 Modbus, ETH, Analog, and Digital interfaces.

The device supports Modbus (Master/Slave), FTP and SNTP communication protocols. With in-built non-volatile memory of 32MB and expandable SD card memory up-to 16GB, MBLogger series are ideal for datalogging applications. These have been designed to meet application requirements at the lowest cost operations. All variants offer in-built 3G/4G modem to transfer data to multiple file servers simultaneously.

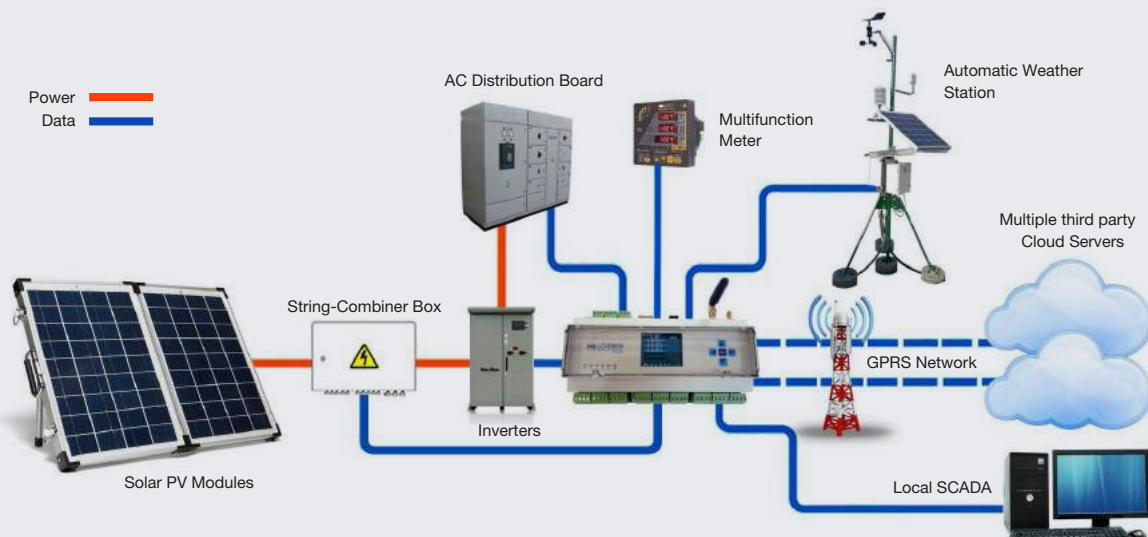
HIGHLIGHTS

- ▶ Compact DIN rail mounting
- ▶ OLED Display with keypads
- ▶ In-built Web UI server for configuration, diagnostic and parameter monitoring
- ▶ Client configurable devices for serial RS-485, serial RS-232, ETH and DI from any manufacturer
- ▶ Selectable Logging and Update Rates
- ▶ Data Transfer via FTP
- ▶ Low Power Consumption
- ▶ Internal Lithium Battery for RTC and critical Data
- ▶ In-built library of popular make MFMs, Weather Sensors, Inverters etc., making configuration extremely simple and with few clicks.
- ▶ User selectable average time of 1 to 15 minutes, independently for each channel
- ▶ Data encryption at servers and multimedia side
- ▶ Special functions- Sunrise and sunset time, sunshine duration time, day solar energy and day rain calculations.

APPLICATIONS

- | | | | |
|---|--|---|--|
|  Industrial Energy Monitoring |  Meteorology |  Renewable Plant Monitoring |  Asset and Condition Monitoring |
|  Automatic Water Level Monitoring |  Electrical Substation Monitoring |  Agriculture and Agricultural Research |  Manufacturing Monitoring |

BLOCK DIAGRAM OF A SOLAR PLANT DATA LOGGING SYSTEM



TECHNICAL SPECIFICATIONS **

GENERAL SPECIFICATIONS		
Micro-Processor	32 bits ARM Processor	
RTC	Temperature compensated RTC	
INPUTS		
Analog Inputs	13	
	4-20mA (24 bits)	4
	mV (0-10,000mV – differential – 24 bits)	4
	mV (0-1,000mV – differential – 24 bits)	4
	Battery voltage (24VDC)	1
Sampling rate	10Hz	
Accuracy	±0.1%	
Statistics	Avg, Min, Max, Std Deviation, Integration etc.	
Digital Inputs	4 (Optically Isolated)	
Max Input Frequency	<100Hz	
Statistics	Totalisation, Wind Speed calculation etc.	
PORTS		
Serial Ports	1 RS-485 Port	
	1 RS-485 and RS-232 Port (software configurable)	
Configurable Baud Rate	9,600 and 19,200 bps	
Optical Isolation	2.5KV RMS	
Protocols Supported	MODBUS RTU Master or MODBUS RTU Slave, ASCII master	
Ethernet Port	1	
Protocols Supported	MODBUS TCP Master, MODBUS TCP Slave, SNTp Client and FTP	
Datalogger Configuration	via in-built web server	
COLOR OLED DISPLAY AND KEYS		
Display Parameters	IED, Sensors, Alarm Conditions, ETH Gateway status, File transfer status, Modem Signal Strength, Communication Status etc.	
Display	Graphic Color 160 × 120 pixel resolution	
Keypad	Four buttons capacitive keypad	

DATA LOGGING	
Datalogging Time Period	Site Configurable
Expandable Memory	via SD card (FAT32) up to 16GB
Data Transfer	FTP via modem and ETH ports
INBUILT MODEM	
Network	Quad-Band 4G Modem
Frequency Band	TDD LTE : B40/B41
	GSM : 900/1800
ELECTRICAL	
Voltage Input	9-32VDC
Power Consumption	With Cellular Model : 10 Watt at 12VDC
	Without Cellular Model : 4 Watt at 12VDC
ENVIRONMENTAL	
Operating Temperature	-5°C to +70°C
Storage Temperature	-20°C to +80°C
Humidity	95% max – noncondensing
PHYSICAL	
Protection	IP42
Dimensions (W × H × L)	90 × 62 × 162 mm
Mounting	DIN Rail
Weight	500g (Approx.)
Housing Material	Polycarbonate
ADD ON MODULE	
Model	MBLOGGER1000-12P
Pulse Counter Inputs	12 (Optically Isolated)
Sensor Power Supply Output	12VDC/150mA
SPECIAL FUNCTIONS (Licensed Separately)	
Day Sun Rise and Sunset time	Requires access to internet via modem or LAN
Day Solar Energy	Requires pyranometer to be connected to the datalogger
Day Sunshine duration	
Day Rainfall	Requires rain gauge to be connected to the datalogger

VARIANTS

Sl. No.	Features	900 Lite	900 Adv	1000 Lite	1000 Adv	1000 Pro
1	Serial Port -1 RS-485 (MODBUS RTU Master, MODBUS RTU Slave)	✓	✓	✓	✓	✓
2	Serial Port-2 RS-485 and RS232 (Can be used as RS485 or RS232) (MODBUS RTU Master, MODBUS RTU Slave, ASCII Master)	×	×	×	✓	✓
3	ETH Port (MODBUS TCP Master, MODBUS TCP Slave, Web Server)	✓	✓	✓	✓	✓
4	Cellular Modem	×	✓	×	✓	✓
5	OLED Display	×	×	×	✓	✓
6	6 MMC SD Card (16GB)	✓	✓	✓	✓	✓
7	Maximum number of IED's per port	10	10	10	10	10
8	Maximum number of MODBUS TCP Slave clients	2	2	2	4	4
9	SNTP Client	1	1	1	1	1
10	File Transfer Clients	1	1	2	2	2
11	RTC (battery back up)	✓	✓	✓	✓	✓
12	Number of Digital Inputs (optically isolated)	4	4	4	4	4
13	Number of mA inputs (4-20mA) (24 bits)	×	4	4	4	4
14	Number of mV inputs (0-1,000mV) (24 bits)	×	×	4	4	4
15	Number of mV inputs (0-10,000mV) (24 bits)	×	×	×	×	4
16	Battery Voltage Input	×	×	×	1	1
17	Add on Expansion Modules	×	×	×	✓	✓
18	Special Functions (separate license)	×	×	×	✓	✓

SEE ALSO

- MBMet 500 Series Solar Irradiance Sensors
- MBMet 800 Series PV Module Temperature Sensors
- MBMet 901 Series Air Temperature, Humidity & Pressure Sensor
- PM130 Series Multifunction meters
- PM180 Series Power Quality meters
- SATEC Pro Series AC/DC meters

****Specifications are subject to change without notice.**

