



MB LOGGER 1000 Pro

Industrial Grade Dataloggers specially Tailored for Meteorological Applications

Overview

The MBLogger 1000 Pro is the Flagship Datalogger of the MBMET Range of Meteorological Solutions. The Datalogger's reliability and performance makes it ideal for Critical applications such as Meteorology, Renewable Plant Monitoring, Hydrological Systems, Agriculture and Research, etc.

The MBLogger 1000 Pro uses a Powerful 32-Bit Processor and 2 x 24-Bit ADCs to Ensure accurate and reliable Data Capture from various sources. The Battery Backed up Real Time Clock (RTC) along with a Built-In GPS ensure accurate Time Stamping of Data. The Datalogger has a Built-In Webserver for Quick and Easy Configuration. The On-Board Cellular Modem ensures Stable Data Telemetry and Connectivity to the Cloud.

Highlights

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| <ul style="list-style-type: none">✓ Operational in Extreme environments of -40°C to +70°C✓ OLED Display for quick Troubleshooting.✓ Built-in Webserver with Libraries for easy and efficient Datalogger Configuration✓ Data Telemetry via MODBUS, FTP, MQTT✓ Built-In GPS for Time Synchronisation and Geo Location Tagging✓ Configurable Data Logging and Update Rates✓ Internal Lithium Battery for RTC | <ul style="list-style-type: none">✓ Broad Input Voltage Range of 9 – 32 VDC✓ Provides Easy Sensor integration with RS-232, RS-485 and ETH Ports✓ Measures and Captures Rapidly changing Data with up to 10Hz Sampling Rate for Analog Channels and 100Hz Input Frequency for Pulse Inputs✓ Calculates Sunrise & Sunset, Daily Sunshine Duration, Albedo Ratio, Daily Rainfall.✓ Expansion Modules available for Greater Monitoring and Control✓ Control of Pyranometer Ventilation Units. |
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Highlights technical specifications

GENERAL SPECIFICATIONS

Micro-Processor	32 bits ARM Processor
RTC	Temperature Compensated RTC
ADC	2 x 24-Bit

ELECTRICAL

Voltage Input	9-32VDC
Power Consumption	With Cellular Model : 4.10 Watt at 12VDC
	Without Cellular Model : 2.75 Watt at 12VDC

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
	PT100 / PT1000	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
Ethernet Port	1
Protocols Supported	MODBUS TCP/IP Master and Slave, SNTP Client, HTTP, FTP, MQTT, UDP, TCP, IPV4, TLS, SFTP, HTTPS
Datalogger Config./Diagnostics	via in-built web server

DATA LOGGING

Datalogging Time Period	Site Configurable
Expandable Memory	4GB EMMC or 16GB SD Card

INBUILT MODEM/GPS

Network	Quad-Band 4G Modem
Frequency Band	LTE CAT 4
	GSM : 900/1800

COLOR OLED DISPLAY AND KEYS

Display Parameters	IED, Sensors, Alarm Conditions, Display Parameters ETH Gateway status, File transfer status, Modem Signal Strength, Communication Status etc.
Display	Graphic Color 160 x 120 pixel resolution
Keypad	Four buttons capacitive keypad

ADD ON MODULE

Model	MBMET-404
Function	Digital Output Module
Number of Outputs	4

ENVIRONMENTAL

Operating Temperature	-40°C to +70°C
Storage Temperature	-50°C to +80°C
Humidity	95% max – noncondensing

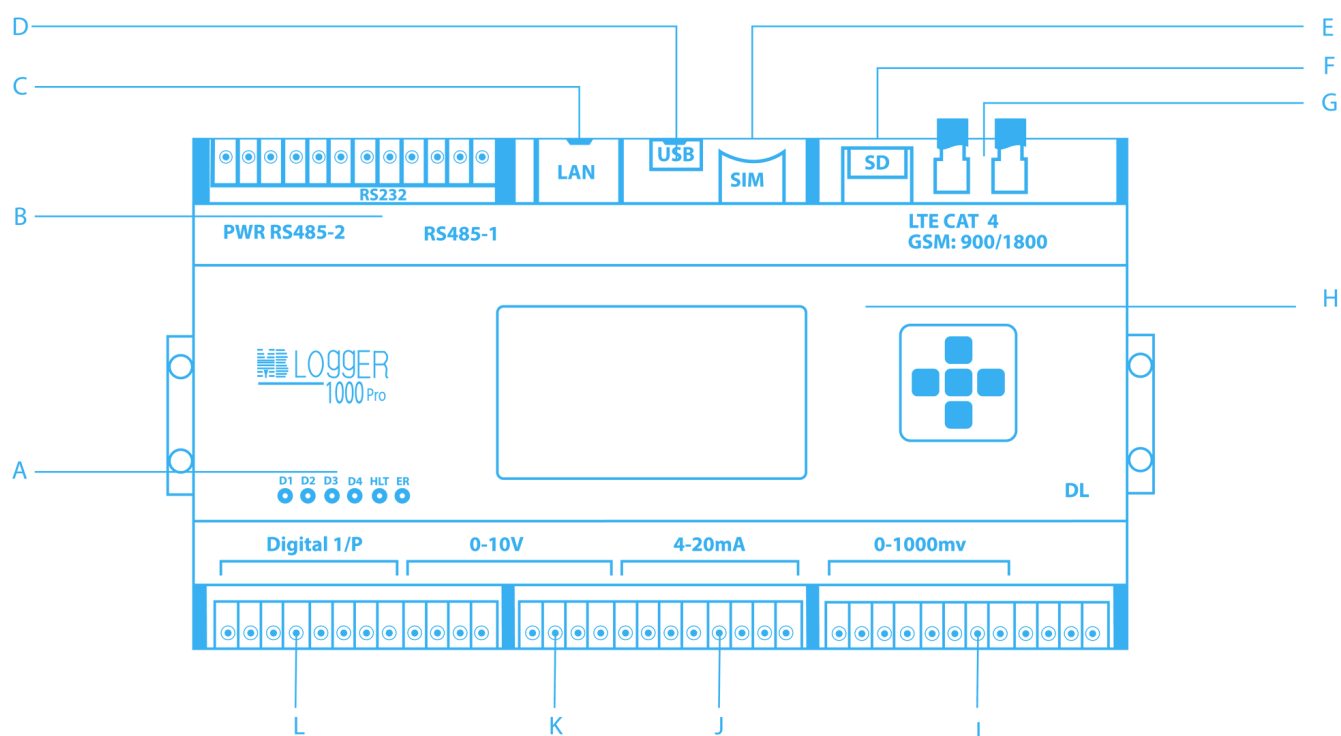
PHYSICAL

Protection	IP42
Dimensions (W x H x L)	90 x 62 x 162 mm
Mounting	DIN Rail
Weight	500g (Approx.)
Housing Material	Polycarbonate

SPECIAL FUNCTIONS (LICENSED SEPARATELY)

Day Sun Rise and Sunset time
Day Duration
Day Solar Energy
Day Sunshine duration
Albedometer Ratio
Day Rainfall

Feature Diagram



Item	32 bits ARM Processor	Description
A	Status LEDs	Status LEDs for easy Troubleshooting and Checking Power / Communication Status
C	LAN Port	LAN Port for Data Communication and Telemetry via various protocols, Datalogger Configuration via Webserver
D	Micro USB Port	Micro USB Port for Datalogger Firmware Upgradation
E	SIM Card Slot	4G / 3G SIM Card Slot suitable for Global Use.
F	Micro SD Card Slot	Micro SD Card Slot for Up to 16GB of Data Storage
G	GPS and Cellular Antenna	GPS for Geo Location Tagging and Time Synchronisation, Calculation of Sunrise & Sunset Timings
B	RS-232, RS-485 Ports	Micro SD Card Slot for Up to 16GB of Data Storage
L	Digital Inputs	4 x Digital / Pulse Inputs Available for connection of Sensors
K	0 – 10V Inputs	4 x 0 – 10 V 24-Bit Inputs for Devices having Voltage Output
J	4 – 20mA Inputs	4 x 4 – 20 mA 24-Bit Inputs for Devices having Mili Ampere Output
I	0 – 1000 mV Inputs	4 x 0 – 1000 mV 24-Bit Inputs for Devices having Milivolt Output
H	OLED Display and Keypads	Display Screen and Keypads for easy Diagnostics

Built-In Webserver



MBLog1000Pro - Primary(1310)

Username: Maint Role: Maintenance [Logout](#)

MENU

My Parameters

My Page

My Page

	Parameter No.	Parameter Source	Parameter	Parameter Attribute	Parameter Value
MBLogger Configuration	1	Digital Inputs	Wind Speed -Davis 6410	Value	0.000
MBLogger Diagnostics	2	Input Volts	Wind Direction Davis 6410	Value	237.471
MyPage	3	MBCS MBMET 901AB THP	Ambient Temperature C	Value	25.200
Plant Parameters	4	MBCS MBMET 901AB THP	Dew Point C	Value	15.500
DataLog Files	5	MBCS MBMET 901AB THP	Barometric Pressure hPa	Value	1009.290
Serial Port RS485_1	6	MBCS MBMET 901AB THP	Relative Humidity %	Value	55.100
Serial Port 2	7	MBCS MBMET 803	PVModule Temperature C-1	Value	24.500
ETH Network	8	MBCS MBMET 803	PVModule Temperature C-2	Value	24.500
Analog Inputs	9	MBCS MBMET 803	PVModule Temperature C-3	Value	25.500
Digital Inputs	10	GHIPYRANOMETER	GHlWMeters2	Value	-0.570
MBLogger Messages	11	GHIPYRANOMETER	GHlWMeters2	Int Val	0.000
DataLogger	12	Today Solar Energy	Today GHl Energy (WH/m2)	Value	3.100
Maintenance	13	GHIPYRANOMETER	GHlWMeters2	Value	-0.427
	14	GHIPYRANOMETER	GHlWMeters2	Int Val	0.000
	15	Today Solar Energy	Today GHl Energy (WH/m2)	Value	
	16	UP Albedo	UP Albedo WMeters2	Value	0.011
	17	Today Solar Energy	Today UP Albedo Energy (WH/m2)	Value	0.001
	18	Down Albedo	Down Albedo WMeters2	Value	-0.169
	19	Today Solar Energy	Today Down Albedo Energy (WH/m2)	Value	-0.923
	20	Albedo Meter	Albedo Meter	Value	-14.959
	21	Digital Inputs	Rain Gauge-Davis 6466 (Rain mm)	Int Val	1.400
	22	Plant Parameters	Today Rainfall (mm)	Value	0.000
	23	Kipp Zonnen Razon Plus	Irr Diffuse (W/m2)	Value	0.000
	24	Kipp Zonnen Razon Plus	Irr Direct (W/m2)	Value	0.000
	25	Kipp Zonnen Razon Plus	Irr Global (W/m2)	Value	0.000
	26	Input Volts	Cloud Cover Sensor PCCD 01a	Value	4.878
	27	Not Used	Not Used		
	28	Not Used	Not Used		
	29	Not Used	Not Used		

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- ☒ Built-in Webserver For Easy Datalogger Configuration

☒ View Real Time Data of all connected Devices
- ☒ Secure Multiple User Access Depending on User Role

☒ Download Datalog Files in .csv Format
- ☒ View Device Log and Error Log for easy Diagnostics

☒ Built-in Library of Sensors and Devices for easy One-Click configuration



IEC-61000-4-18
(Damped Oscillatory
Wave Immunity Test)

IEC-61000-4-8
(Power Frequency Magnetic
Field Immunity Test)

