



MBLOGGER Nano Series

Compact and Powerful Dataloggers

Overview

The MBLogger Nano Series of Dataloggers are a Compact, Cost Effective, yet Powerful Range of Dataloggers suitable for Applications such as Meteorology, Renewable Plant Monitoring, Hydrology, Agriculture, and Research Applications.

The MBLogger Nano Series uses a Powerful 32-Bit Processor and a 24-Bit ADC 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✓ Compact in Size for Smaller Applications✓ Built-in Webserver with Libraries for easy and efficient Datalogger Configuration✓ Data Telemetry via MODBUS, MQTT, FTP✓ Built-In GPS for Time Synchronisation and Geo Location Tagging✓ Configurable Data Logging and Update Rates | <ul style="list-style-type: none">✓ Internal Lithium Battery for RTC✓ Broad Input Voltage Range of 9 – 32VDC✓ Provides Easy Sensor integration with RS-485, ETH Ports, 2 Configurable Ports✓ Calculates Sunrise & Sunset, Daily Sunshine Duration, Albedo Ratio, Daily Rainfall✓ Expansion Modules available for Greater Monitoring and Control |
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Highlights technical specifications

GENERAL SPECIFICATIONS

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

PORTS

Serial Ports	1 RS-485 Port
Configurable Baud Rate	9,600 and 19,200 bps
Optical Isolation	2.5KV RMS
Ethernet Port	1
Protocols Supported	1.MODBUS TCP/IP Master and Slave, SNTP Client, HTTP, FTP, MQTT, UDP, TCP, IPV4
Datalogger Configuration	via in-built web server

PORTS – NANO PRO ONLY

Analog Inputs	4-20mA (16 bits) mV (0-10,000mV – differential-16 bits) mV (0-1,000mV – differential-16 bits)
Sampling rate	10Hz
Accuracy	±0.1%
Digital Inputs	Avg, Min, Max, Std Deviation, Integration etc.
Max Input Frequency	<100Hz
Statistics	Totalisation, Wind Speed calculation etc.

PORTS – NANO K ONLY

RJ 11 Ports	2 x RJ11 Ports suitable for Davis Sensors
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DATA LOGGING

Datalogging Time Period	Site Configurable
Expandable Memory	SD card 16GB / 4GB eMMC
Data Transfer	FTP via modem and ETH ports

INBUILT MODEM / GPS (OPTIONAL)

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

ENVIRONMENTAL

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

PHYSICAL

Protection	IP42
Dimensions (W × H × L)	90 × 62 × 80 mm
Mounting	DIN Rail
Weight	350g (Approx.)
Housing Material	Polycarbonate

ELECTRICAL

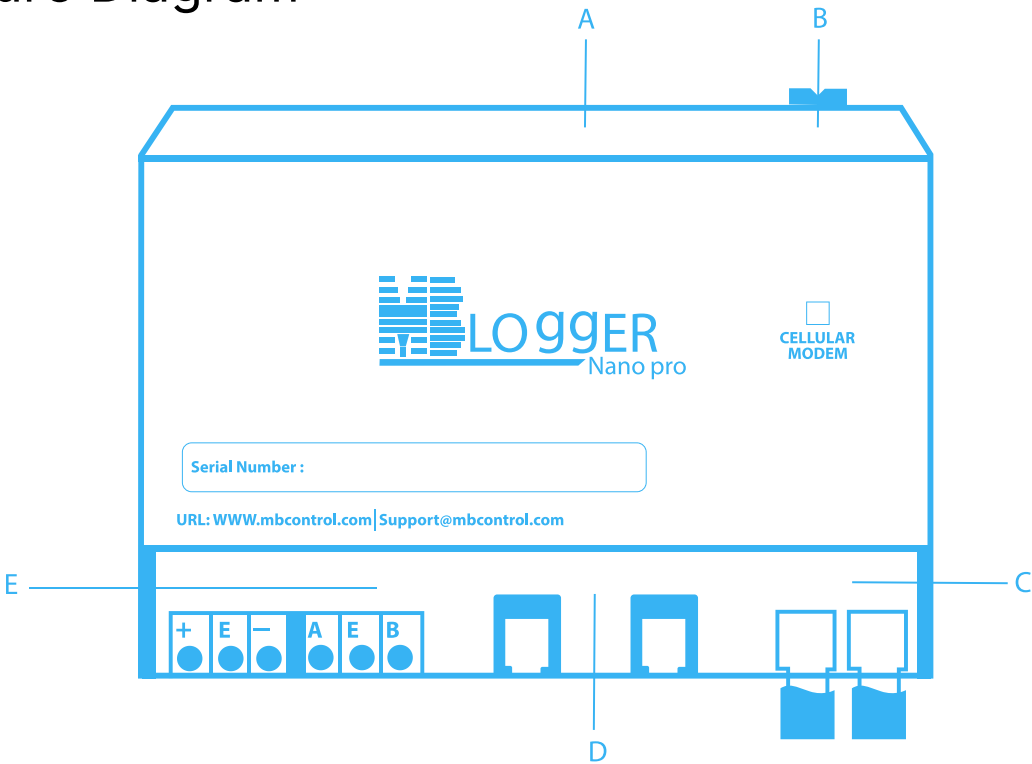
Voltage Input	9-32VDC
Power Consumption	With Cellular Modem : 2.80 Watt at 12VDC Without Cellular Modem : 1.35 Watt at 12VDC

SPECIAL FUNCTIONS (LICENSED SEPARATELY)

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

**Specifications are subject to change without notice.

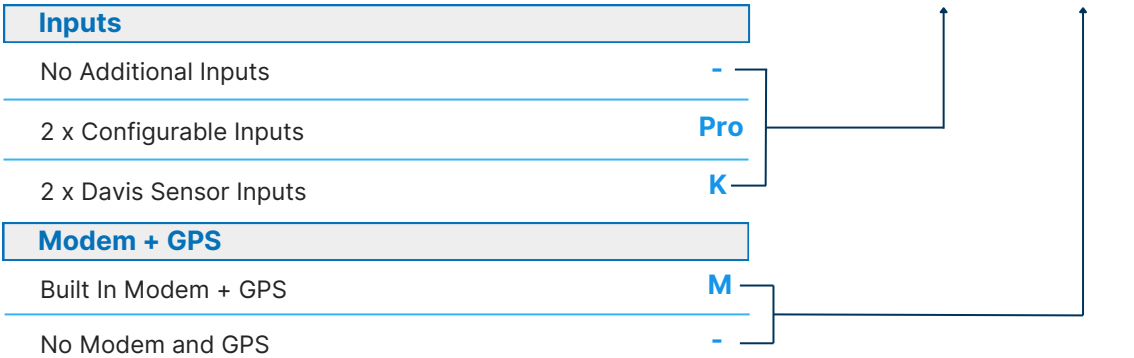
Feature Diagram



Item	Designation	Description
A	SIM + Micro SD Card Slot	4G / 3G SIM Card Slot suitable for Global Use. Micro SD Card Slot for Up to 16GB of Data Storage
B	LAN Port	LAN Port for Data Communication and Telemetry via various protocols, Datalogger Configuration via Webserver
C	GPS and Cellular Antenna	GPS for Geo Location Tagging and Time Synchronisation, Calculation of Sunrise & Sunset Timings
D	Configurable Inputs (Pro Model) / RJ11 Ports for Davis Sensors (K Model)	Nano Pro Model: 2 x Configurable Input Ports (Pulse, 4-20mA, mV) Nano-K Model: 2 x RJ11 Input Ports for Davis Sensors
E	RS-485 Port	RS-485 Port for Data Collection or Data Output

Ordering String

MBLogger Nano



Built-In Webserver



MBCompact and Powerful Dataloggers

Username: Maint Role: Maintenance Logout

MENU

My Parameters

My Page

My Page

	Parameter No.	Parameter Source	Parameter	Parameter Attribute	Parameter Value
MLogger Configuration	1	Digital Inputs	Wind Speed -Davis 6410	Value	0.000
MLogger 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
MLogger 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 Gbbal (W/m2)	Value	0.000
	26	Input Volts	Cloud Cover Sensor PCCD Octa	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

Secure Multiple User Access Depending on User Role

View Device Log and Error Log for easy Diagnostics

View Real Time Data of all connected Devices

Download Datalog Files in .csv Format

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)

