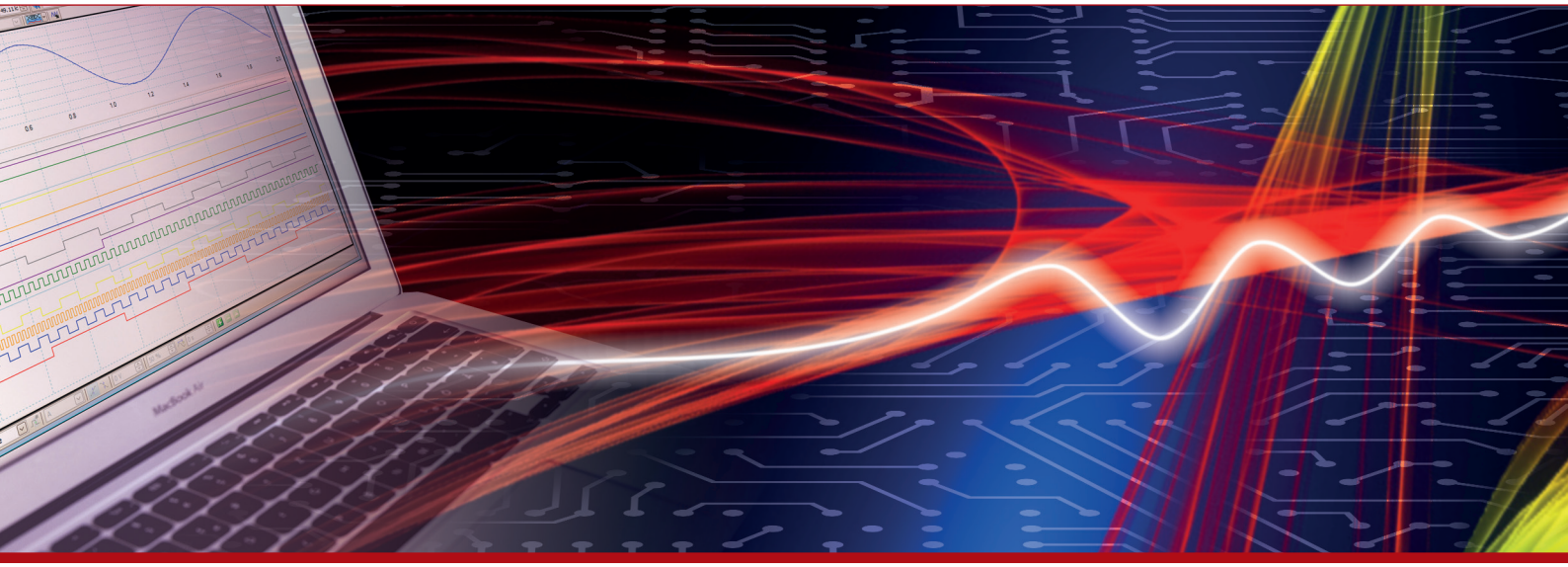
Product Datasheet - Technical Specifications



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Microedge Instruments Inc.

Site-Log LFM-1/ LFMB-1 Data Logger

Product Specifications

OVERVIEW

The Site-Log LFM-1/LFMB-1 series data loggers are 8-channel, battery powered, stand alone voltage and current data loggers. The logger records up to 4 mega-byte of data and stores it in non-volatile flash memory for later retrieval. Input signals can be from sensors, transducers, transmitters or any other common voltage/current sources.

Featuring an aluminum enclosure and conformal coating PCB, the Site-Log data logger has excellent performance in the harshest industrial environment.

Powered by a16-bit ADC, the Site-Log data loggers are well suited to science and laboratory applications where precise and accurate measurement is critical.

FEATURES

High Data Resolution:

The 16-bit analog-to digital converter meets most high-resolution requirements.

Large Memory Size:

The 4-Mega-Byte Memory stores years of measurements.

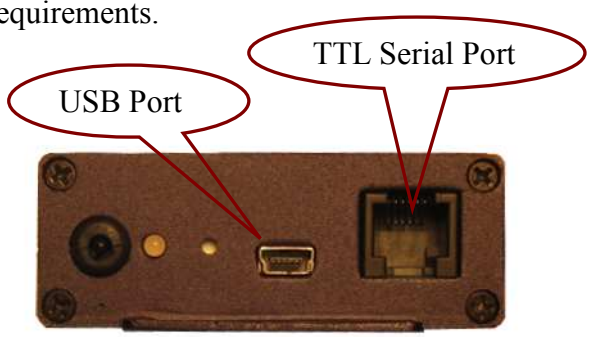
Programmable Input Ranges:

One on-board thermistor channel monitors ambient temperature. Seven range-programmable voltage external input channels cover wide measurement requirements.

Multiple Communication Interfaces:

The Site-Log data loggers can be accessed via USB, MODEM, or Ethernet connections with auto baud rate of up to 115 kbps.

Its on-board TTL serial port and USB interfaces meet most communication requirements.



10-Year Battery Life:

The internal lithium battery provides over 10 years of instantaneous logging operation when sampling at an interval of one minute.

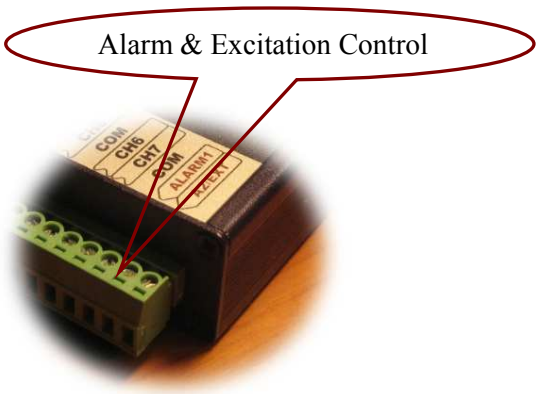
Fast Sampling Mode:

The Site-Log data loggers can log data with the sampling interval as fast as 20 milliseconds, replacing data acquisition devices.

Alarm and Excitation Output:

The Site-Log data logger notifies the alarm condition over alarm terminal strips or communication lines. (USB, Serial Port, MODEM)

Excitation control turns on the power of external transmitter/transducer only when the logger is sampling.



Rugged Physical Design:

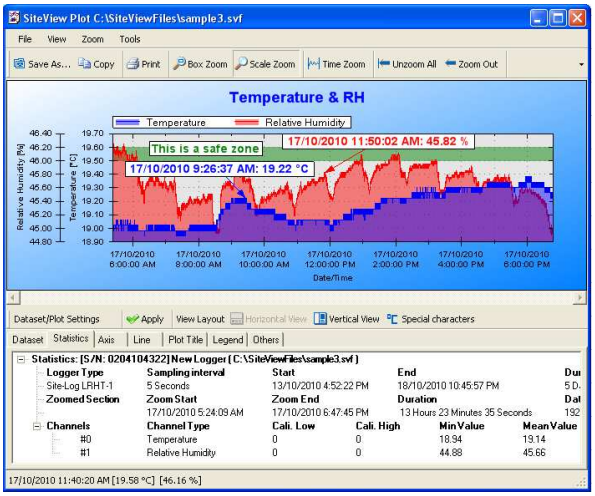
The rugged aluminum enclosure and coated PCB makes the Site-Log data loggers perfect in the harshest industrial environment.

Powerful Software:

SiteView is a Windows-based application which works with the Site-Log Series data loggers for downloading, configuration, data analyzing and plotting.

Its user-friendly graphic interface plus powerful functionalities fit both novice and advanced users.

The versatility of custom equation and custom-line equation handle complicated measurement requirements.



SPECIFICATIONS

Product Identification	
Product Name	Site-Log
Model	LFM-1 / LFMB-1 (high accuracy)
Inputs	
Connections	Pluggable terminal block for seven external channels, excitation controls and alarm outputs.
Channels	One on-board thermistor temperature (-40°C ~ 70°C, -40°F ~ 158°F). CH1: 20 VDC, CH2: 10 VDC, CH3: 5 VDC, CH4: 2 VDC, CH5: 4-20 mA, CH6: 4-20mA, CH7: 4-20 mA.
Resolution	0.0018%
Accuracy	Thermistor channel: +/- 0.2°C(0°C ~ 70°C, 32°F ~ 158°F) LFM voltage channel: +/- 0.15% @ 25°C from 0.1V and up +/- 0.5% @ 25°C from 0 – 0.1V LFMB voltage channel: +/- 0.05% FSR @ 25°C for 20V, 10V 5V channels +/- 0.1% FSR @ 25°C for 2V channel LFM 4 – 20mA current channels: +/- 0.15% FSR @ 25°C LFM 50mA channel: +/- 0.15% 2.5 – 50 mA @ 25°C, +/- 0.5% 0 – 2.5 mA @ 25°C LFMB current channel: +/- 0.1% FSR @ 25°C
Input Impedance:	Voltage channel: > 1 MOhms
Load Resistor:	Current channel: 12 Ohms
Protection	Voltage channel: For LFM-1: up to – 3 VDC and + 40 VDC For LFMB-1: +/- 40 VDC Current channel: +/-100 mA
Alarms	
Channel Alarms	Two editable alarm thresholds per channel.
Alarm Outputs	ALARM1 & A2/EXT terminal strips can be configured as alarm outputs. Alarm-On: MOSFET(N-Channel) switch on. Alarm-Off: MOSFET(N-Channel) switch off. Max Power: 200mA @ 24VDC. With purchase of SiteView software, the Site-Log can report alarm status to host PC via USB, Modem or Ethernet Device Server.
Alarm-On Delay:	Programmable 0 - 10 minutes delay with 1-minute increments.
Alarm Indicator	On-board LED lights in red when in alarm condition.
On-board Memory	
Capacity	4 Mega bytes (2 Mega measurements).
Data Retention	Over 20 years.
Sampling & Logging	
Sampling Interval	20 milliseconds [1] to 12 hours user selectable.
Logging Mode	Stop recording or FIFO when memory is full.
Logging Activation	Programmable instant, start delay or field push-button activation.
Communications	
Interface	USB(USB cable included). AUX(RJ11) for direct TTL level communications. With purchase of DeviceServer Kit, the Site-Log logger can be connected to Ethernet for remote access.

Baud Rate	Auto-detect baud rate from 2400 to 115200 bps on both USB and AUX ports.
Battery	
Power	Built-in 3.6V Lithium Battery.
Life Cycle	10 years based on 1 minute sampling interval.
Software	
SiteView [2]	Configuration, downloading, plotting, real-time view, custom calibration and custom equation.
Software Requirements	Computer with 1.0 GHz or faster processor 256 MB Memory or higher 1.0 GB of available hard-drive space or higher Windows XP with SP2 or later, Vista, Window 7 At least one USB port or one COM port
Physical	
Material	Aluminum enclosure.
PCB Treatment	Conformal coating.
Dimension	88 X 64.2 X 24 mm (3.46 X 2.53 X 0.95 inches)
Weight	200g.
Mounting	Probe/Wall-mount holes for hanging/mounting.
Others	
LED Indicator	Tri-Color LED: (can be disabled for power saving) Normal Sampling: green when sampling Alarm: red when sampling Low Battery: amber when sampling.
Excitation Control	A2/EXT terminal strip can be configured as excitation control output for driving the power of connected devices. Warm-up delay Interval settings: 10 to 240 seconds with 10-second increments.
Operating Environment	-40 ~ +70°C (-40°F ~ 158°F), 0~95%RH non-condensing.
Clock Accuracy	+/- 1 minute per month.
Approvals	CE, FCC

[1]: Maximum enabled channel: 1 for 20ms interval, 2 for 30ms, 8 for 40ms or bigger interval.
[2]: Sold separately.

LOGGING CAPACITY TABLE

Sampling Interval	Enabled Channel	Logging Capacity	Sampling Interval	Enabled Channel	Logging Capacity
1 minute	1	3.98 years	1 second	1	24 days
1 minute	2	727 days	1 second	2	12 days
1 minute	8	181 days	1 second	8	3 days
10 seconds	1	242 days	100 ms	1	58 hours
10 seconds	2	121 days	100 ms	2	29 hours
10 seconds	8	30 days	100 ms	8	7.2 hours