

LF101A

Leaf Wetness Data Logger



The LF101A is a complete data logging system that accurately measures and records leaf wetness. Not only does it record the presence of water but also logs the amount of water on the sensor. The sensor responds to environments the same way a real leaf does and can also detect when ice is present. This low cost system comes complete with a data logger, weatherproof enclosure and leaf wetness sensor.

The LF101A is ideal for plant disease forecasting, irrigation studies and monitoring frost cycles. It features a multiple start/stop function, ultra-high speed download capability, 1 million reading storage capacity, optional memory wrap, battery life indicator, optional password protection, programmable alarms and more.

An IFC200 interface cable and software is required for use with the LF101A. The device can be started and stopped directly from a computer using the MadgeTech Software.

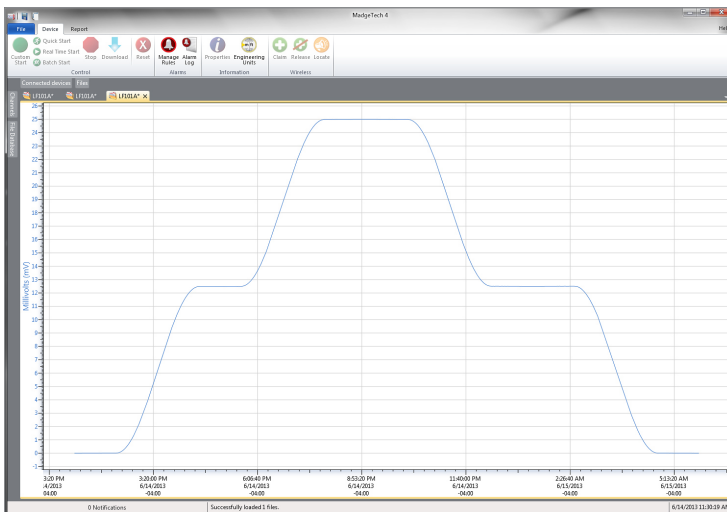
Features

- Durable Weather Resistant Housing for Logger
- Precision Leaf Wetness Sensor
- Multiple Start/Stop Function
- Ultra High Speed Download
- 1 Million Reading Storage Capacity
- Battery Life Indicator
- Optional Password Protection
- Programmable Alarm
- Field Upgradeable

Benefits

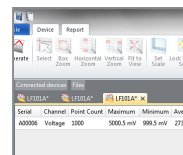
- Simple Setup and Installation
- Minimal Long-Term Maintenance
- Long-Term Field Deployment

MadgeTech 4 Software Features

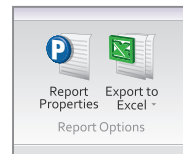


Graph View

- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
- Min./Max./Average lines
- Summary view



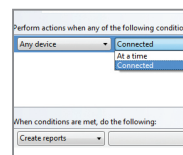
Statistics



Export to Excel

Time	Time Zone	Delta
1:13:37 PM	-0400	-00:00:00
1:14:37 PM	-0400	-00:00:00
1:15:37 PM	-0400	-00:00:00
1:16:37 PM	-0400	-00:00:00
1:17:37 PM	-0400	-00:00:00
1:18:37 PM	-0400	-00:00:00
1:19:37 PM	-0400	-00:00:00
1:20:37 PM	-0400	-00:00:00
1:21:37 PM	-0400	-00:00:00
1:22:37 PM	-0400	-00:00:00
1:23:37 PM	-0400	-00:00:00
1:24:37 PM	-0400	-00:00:00
1:25:37 PM	-0400	-00:00:00
1:26:37 PM	-0400	-00:00:00
1:27:37 PM	-0400	-00:00:00
1:28:37 PM	-0400	-00:00:00

Tabular Data View



Automation

Applications

- Environmental Studies
- Agricultural Research
- Plant Disease Forecasting
- Plant Watering
- Monitoring Frost Cycles
- Rainfall Onset Studies
- Irrigation Studies

SPECIFICATIONS

Specifications are subject to change without notice. Specific warranty remedy limitations apply.

MEASUREMENT	
Measurement Range	Dry: 266 mV typical 100% Saturated: 833 mV typical
Resolution	50 μ V
Accuracy	± 0.1 mV
Specified Accuracy	Nominal range @ 25 °C
Input Connection	6-position removable screw terminal
Reference Output	2.5 VDC, 2.5 mA (1 k Ω) maximum load
Temperature Effect on Span	< 25 μ V over -40 °C to +80 °C
Temperature Effect on Offset	< 25 μ V over -40 °C to +80 °C
Probe Measurement Time	10 ms
Probe Power	2.5 VDC @2 mA to 5 VDC @ 7 mA

GENERAL	
Start Modes	Immediate start Delay start up to 18 months Multiple pushbutton start/stop
Stop Modes	Manual through software Timed (specific date and time)
Multiple Start/Stop Mode	Start and stop the device multiple times without having to download data or communicate with a PC
Real Time Recording	May be used with PC to monitor and record data in real time
Password Protection	An optional password may be programmed into the device to restrict access to configuration options. Data may be read out without the password.
Memory	1,000,000 readings; software configurable memory wrap 330,000 readings in multiple start/stop mode
Wrap Around	Yes
Alarm	User selectable high and low limits; blinking LED for alarm and low battery

Engineering Units	Native measurement units can be scaled to display measurement units of another type. This is useful when monitoring voltage outputs from different types of sensors such as strain gauges and load cells.
LEDs	2 status LEDs
Reading Rate	4Hz to 1 every 24 hours
Calibration	Digital calibration through software
Calibration Date	Automatically recorded within device
Battery Type	3.6V lithium battery included; user replaceable
Battery Life	10 months typical at a 1 minute reading rate with a 350 Ω load 2 years typical at a 1 minute reading rate with a 1000 Ω load
Data Format	Date and time stamped V, mV, μ V, engineering units specified through software
Time Accuracy	± 1 minute/month at 25 °C (77 °F) (Stand alone mode)
Computer Interface	USB (interface cable required); 115,200 baud
Operating System Compatibility	Windows XP SP3 or later
Software Compatibility	Standard Software version 2.03.06 or later Secure Software version 4.1.3.0 or later
Operating Environment	-10 °C to +60 °C (14 °F to +140 °F), 0 %RH to 100 %RH
IP Rating	IP65
Dimensions	2.9 in x 5.8 in x 1.5 in (74 mm x 148 mm x 39 mm)
Probe Dimensions	4.4 in x 2.3 in x 0.03 in (111 mm x 58 mm x 0.76 mm)
Cable Length	196 in (5 m)
Material	ABS plastic
Weight	8 oz (226 g)
Approvals	CE

BATTERY WARNING: FIRE, EXPLOSION AND SEVERE BURN HAZARD. DO NOT RECHARGE, DISASSEMBLE, HEAT ABOVE 100 °C (212 °F), INCINERATE, CRUSH, OR EXPOSE CONTENTS TO WATER.

Ordering Information

LF101A	PN 900347-00	Leaf Wetness Data Logger
IFC200	PN 900298-00	USB interface cable
LTC-7PN	PN 900352-00	Replacement battery for the LF101A