MADGETECH
WE BUILD DATA LOGGERS

Volt101A

DC Voltage Data Logger

MadgeTech's Volt101A data loggers are versatile data logging devices with many uses and applications. Connect negative and positive wire leads directly to the terminal port on the Volt101A to monitor and measure voltage levels. The Volt101A is commonly used to assess battery efficiencies or photovoltaic studies to identify how much energy is being created from solar cells.

The Volt101A features a removable terminal block to allow for simple retrieval of the data logger for downloading while leaving the leads connected. With a ten year battery life and the ability to store over 2 million time and date stamped readings, this device is ideal for long term deployment and voltage studies.

Four models of the Volt101A are available. The 2.5 V is capable of measuring -3V to 3 V, the 15 V capable of measuring -8 V to 24 V, and the 30 V which can measure from -8 V to 32 V. For lower voltage applications that require a higher resolution, MadgeTech also offers the Volt101A 160 mV differential model, which can measure voltage between -160 and 160 mV.

Features

- 10 Year Battery Life
- 4 Hz Reading Rate
- Multiple Start/Stop Function
- Ultra High Speed Download
- 2,095,104 Reading Storage Capacity
- Memory Wrap
- Battery Life Indicator
- Optional Password Protection
- Programmable High and Low Alarms
- NIST Traceable (160 mV model)
- Field Upgradeable

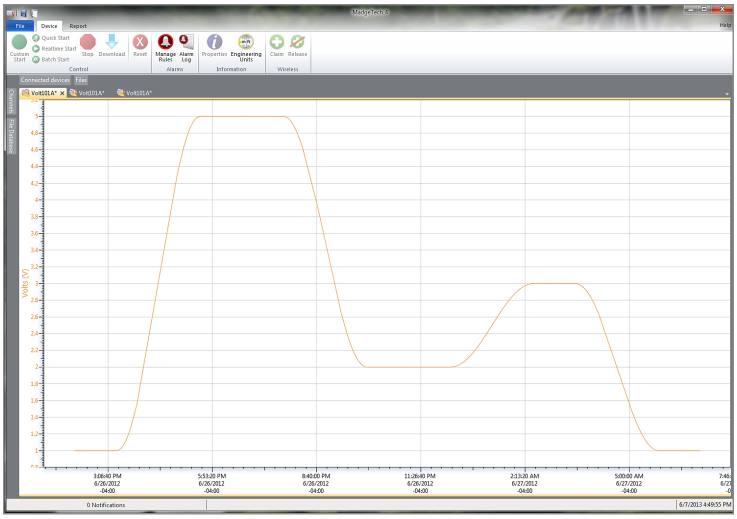
Benefits

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

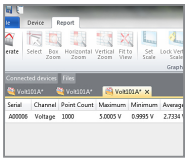
Applications

- Low Level Signal Monitoring
- Battery Studies
- Power Supply Monitoring
- Process Plants
- Photovoltaic Studies
- Current Shunts (160 mV model)
- Research and Development
- General Purpose Voltage Recording

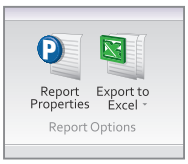
MadgeTech 4 Software Features



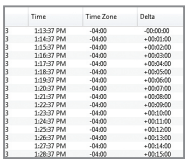
Graph View



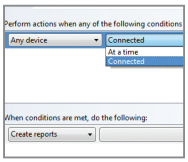
Statistics



Export to Excel



Tabular Data View



Automation

- 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

SPECIFICATIONS

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

MEASUREMENT				
Input Connection	Removable screw terminals			
Model	**2.5 V**	**15 V**	**30 V**	**160 mV**
Voltage Range	-3 V to +3 V	-8 V to +24 V	-8 V to +32 V	±160 mV
Voltage Resolution	0.1 mV	0.05 mV	1.0 mV	5 µV
Calibrated Accuracy	±0.05 % FSR at 25 °C			±0.01 %FSR
Input Impedance	125 kΩ			> 1 MΩ
Overload Protection	±50 V, indefinitely			±5.0 V for 10 seconds
Analog Conversion Time	150 ms			
Frequency Rejection	50/60 Hz			
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 temperature, CO_2, flow rate and more.			

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	2,095,104 readings; software configurable memory wrap 698,368 readings in multiple start/stop mode
Wrap Around	Yes
Alarm	User selectable high and low limits; blinking LED for alarm and low battery
LEDs	2 status LEDs
Reading Rate	4 readings every second up to 1 reading every 24 hours
Calibration	Digital calibration through software
Calibration Date	Automatically recorded within device
Battery Type	3.6 V lithium battery included; user replaceable
Battery Life	10 years typical at a 15 minute reading rate
Data Format	Date and time stamped V, mV, µV, 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 3.01.9 or later
Operating Environment	-40 °C to +80 °C 0 %RH to 95 %RH non-condensing
Dimensions	1.4 in x 2.1 in x 0.6 in (35 mm x 54 mm x 15 mm)
Material	Polycarbonate
Weight	0.8 oz (24 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

Volt101A-2.5V	PN 901850-00	2.5 V Voltage Data Logger
Volt101A-15V	PN 901840-00	5 V Voltage Data Logger
Volt101A-30V	PN 901854-00	30 V Voltage Data Logger
VOLT101A-160MV	PN 901846-00	±160 mV Differential Voltage Data Logger
IFC200	PN 900298-00	USB interface cable
LTC-7PN	PN 900352-00	Replacement battery for the Volt101A

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