

# Volt101A

## DC Voltage Data Logger

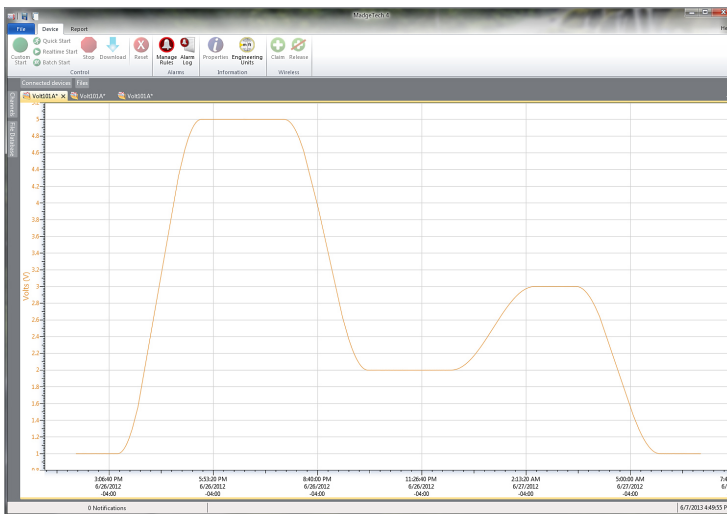


MadgeTech's Volt101A data loggers are versatile data logging devices with many uses and applications. Connect negative and positive wire leads directly to the terminal port on the Volt101A to monitor and measure voltage levels. The Volt101A is commonly used to assess battery efficiencies or photovoltaic 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 3V, 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.

## 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

Serial	Channel	Point Count	Maximum	Minimum	Average
40006	Voltage	1000	3.8000 V	0.9989 V	2.7334

Statistics

Report Properties | Export to Excel | Report Options

Export to Excel

Time	Time Zone	Delta
1:13:37 PM	-0400	-00:00:00
1:14:37 PM	-0400	-00:01:00
1:15:37 PM	-0400	-00:02:00
1:16:37 PM	-0400	-00:03:00
1:17:37 PM	-0400	-00:04:00
1:18:37 PM	-0400	-00:05:00
1:19:37 PM	-0400	-00:06:00
1:20:37 PM	-0400	-00:07:00
1:21:37 PM	-0400	-00:08:00
1:22:37 PM	-0400	-00:09:00
1:23:37 PM	-0400	-00:10:00
1:24:37 PM	-0400	-00:11:00
1:25:37 PM	-0400	-00:12:00
1:26:37 PM	-0400	-00:13:00
1:27:37 PM	-0400	-00:14:00
1:28:37 PM	-0400	-00:15:00

Tabular Data View

Perform actions when any of the following conditions:

- Any device:  Connected
- At a time:  Connected

When conditions are met, do the following:

- Create reports

Automation

## 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

## SPECIFICATIONS

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

MEASUREMENT				
<b>Input Connection</b>	Removable screw terminals			
<b>Model</b>	<b>2.5 V</b>	<b>15 V</b>	<b>30 V</b>	<b>160 mV</b>
<b>Voltage Range</b>	-3 V to +3 V	-8 V to +24 V	-8 V to +32 V	±160 mV
<b>Voltage Resolution</b>	0.1 mV	0.05 mV	1.0 mV	5 µV
<b>Calibrated Accuracy</b>	±0.05 % FSR at 25 °C			±0.01 %FSR
<b>Input Impedance</b>	125 kΩ			> 1 MΩ
<b>Overload Protection</b>	±50 V, indefinitely			±5.0 V for 10 seconds
<b>Analog Conversion Time</b>	150 ms			
<b>Frequency Rejection</b>	50/60 Hz			
<b>Engineering Units</b>	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 <sub>2</sub> , flow rate and more.			

GENERAL	
<b>Start Modes</b>	Immediate start Delay start up to 18 months Multiple pushbutton start/stop
<b>Stop Modes</b>	Manual through software Timed (specific date and time)
<b>Multiple Start/Stop Mode</b>	Start and stop the device multiple times without having to download data or communicate with a PC
<b>Real Time Recording</b>	May be used with PC to monitor and record data in real time
<b>Password Protection</b>	An optional password may be programmed into the device to restrict access to configuration options. Data may be read out without the password.

<b>Memory</b>	2,095,104 readings; software configurable memory wrap 698,368 readings in multiple start/stop mode
<b>Wrap Around</b>	Yes
<b>Alarm</b>	User selectable high and low limits; blinking LED for alarm and low battery
<b>LEDs</b>	2 status LEDs
<b>Reading Rate</b>	4 readings every second up to 1 reading every 24 hours
<b>Calibration</b>	Digital calibration through software
<b>Calibration Date</b>	Automatically recorded within device
<b>Battery Type</b>	3.6 V lithium battery included; user replaceable
<b>Battery Life</b>	10 years typical at a 15 minute reading rate
<b>Data Format</b>	Date and time stamped V, mV, µV, engineering units specified through software
<b>Time Accuracy</b>	±1 minute/month at 25 °C (77 °F) (Stand alone mode)
<b>Computer Interface</b>	USB (interface cable required); 115,200 baud
<b>Operating System Compatibility</b>	Windows XP SP3 or later
<b>Software Compatibility</b>	Standard Software version 2.03.06 or later Secure Software version 3.01.9 or later
<b>Operating Environment</b>	-40 °C to +80 °C 0 %RH to 95 %RH non-condensing
<b>Dimensions</b>	1.4 in x 2.1 in x 0.6 in (35 mm x 54 mm x 15 mm)
<b>Material</b>	Polycarbonate
<b>Weight</b>	0.8 oz (24 g)
<b>Approvals</b>	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

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