

# VOLT101A

## DC VOLTAGE DATA LOGGER



### Features

- 10 Year Battery Life
- 4 Hz Reading Rate
- Multiple Start/Stop Function
- Ultra High Speed Download
- 1 Million Reading Storage Capacity
- Memory Wrap
- Battery Life Indicator
- Optional Password Protection
- Programmable High and Low Alarms
- NIST Traceable
- 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
- Research and Development
- General Purpose Voltage Recording



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.

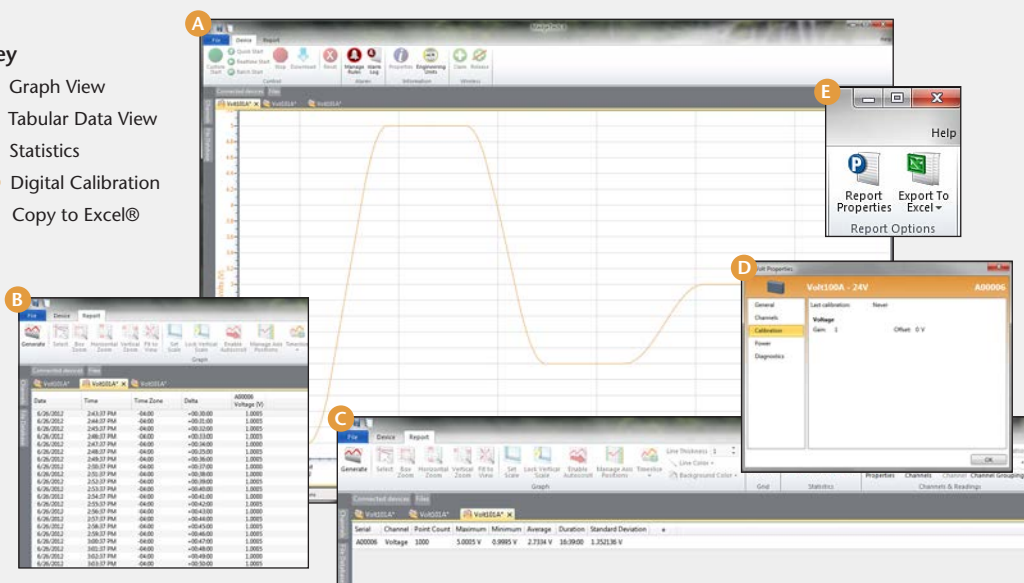
The Volt101A features a removable terminal block to allow for simple retrieval of the data logger for downloading while leaving the leads connected. With a ten year battery life and the ability to store up to one million time and date stamped readings, this device is ideal for long term deployment and 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 model, which can measure voltage between -160 and 160 mV.

## MADGETECH DATA LOGGER SOFTWARE

### Key

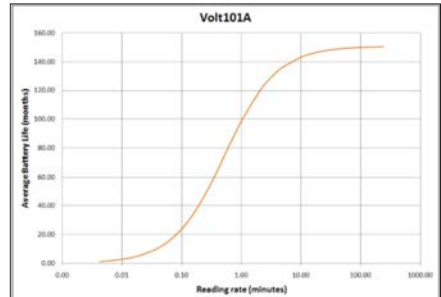
- A** Graph View
- B** Tabular Data View
- C** Statistics
- D** Digital Calibration
- E** Copy to Excel®



- ### Software Features:
- 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
  - Data table view
  - Automatic report generation
  - Summary view
  - Multilingual

# VOLT101A SPECIFICATIONS\*

<b>Input Connection:</b>	Removable screw terminal		
<b>Model:</b>	<b>2.5V</b>	<b>15V</b>	<b>30V</b>
<b>Voltage Range:</b>	-3 to +3V	-8 to +24V	-8 to +32V
<b>Voltage Resolution:</b>	0.1 mV	0.5 mV	1.0 mV
<b>Calibrated Accuracy:</b>	±0.05% FSR at 25°C		
<b>Input Impedance:</b>	125kΩ		
<b>Overload Protection:</b>	±50 V, indefinitely		
<b>Analog Conversion Time:</b>	150 ms		
<b>Frequency Rejection:</b>	50/60Hz		
<b>Reading Rate:</b>	4 readings every second up to 1 reading every 24 hours		
<b>Memory:</b>	<ul style="list-style-type: none"> <li>• 1,000,000 readings; software configurable memory wrap</li> <li>• 330,000 readings in multiple start/stop mode</li> </ul>		
<b>Wrap Around</b>	Yes		
<b>Start Modes:</b>	<ul style="list-style-type: none"> <li>• Immediate start</li> <li>• Delay start up to 18 months</li> <li>• Multiple pushbutton start/stop</li> </ul>		
<b>Stop Modes:</b>	<ul style="list-style-type: none"> <li>• Manual through software</li> <li>• Timed (specific date and time)</li> </ul>		
<b>Multiple Start/Stop Mode:</b>	Start and stop the device multiple times without having to download data or communicate with a PC		
<b>Multiple Start/Stop Mode Activation:</b>	<ul style="list-style-type: none"> <li>• To start the device: <i>Press and hold the pushbutton for 5 seconds, the green LED will flash during this time. The device has started logging.</i></li> <li>• To stop the device: <i>Press and hold the pushbutton for 5 seconds, the red LED will flash during this time. The device has stopped logging.</i></li> </ul>		
<b>Real Time Recording:</b>	The device may be used with PC to monitor and record data in real time		
<b>Alarm:</b>	User selectable high and low limits; blinking LED for alarm and low battery		
<b>LED Functionality:</b>	<ul style="list-style-type: none"> <li>• Green LED blinks: <i>10 seconds to indicate logging</i> <i>15 seconds to indicate delay or manual start mode - standby (waiting to start)</i></li> <li>• Red LED blinks: <i>10 seconds to indicate low battery and/or memory</i> <i>1 second to indicate an alarm condition</i></li> </ul>		

<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>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, CO2, flow rate and more.
<b>Calibration:</b>	Digital calibration through software
<b>Calibration Date:</b>	Automatically recorded within device
<b>Battery Type:</b>	3.6V lithium battery included; <b>user replaceable</b>
<b>Battery Life:</b>	10 years typical at a 15 minute reading rate  <p>Graph display of the device recording in a 25 °C environment.</p>
<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, stand alone logging)
<b>Computer Interface:</b>	USB (interface cable required); 115,200 baud
<b>Operating System:</b>	XP SP3/Vista/Windows 7/Windows 8 MadgeTech Software 2.03 or higher required
<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 16 mm)
<b>Weight:</b>	0.9 oz (24 g)
<b>Materials:</b>	ABS plastic
<b>Approvals:</b>	CE

**BATTERY WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT SHORT CIRCUIT, CHARGE, FORCE OVER DISCHARGE, DISASSEMBLE, CRUSH, PENETRATE OR INCINERATE. BATTERY MAY LEAK OR EXPLODE IF HEATED ABOVE 80 °C (176 °F).**

## ORDERING INFORMATION

MODEL	DESCRIPTION
VOLT101A-2.5V	2.5 V Voltage Data Logger
VOLT101A-15V	15 V Voltage Data Logger
VOLT101A-30V	30 V Voltage Data Logger
IFC200	Software, manual and USB interface cable
*NIST	NIST Calibration Certificate
LTC-7PN	Replacement battery for Volt101A

**ASK ABOUT OUR OTHER DATA LOGGERS**

- Temperature
- Humidity
- Pressure
- pH
- Level
- Shock
- LCD Display
- Pulse/Event/State
- Current
- Voltage
- Wireless
- Intrinsically Safe
- Spectral Vibration
- Motion