DATASHEET

VoltX12-160mV

MadgeTech

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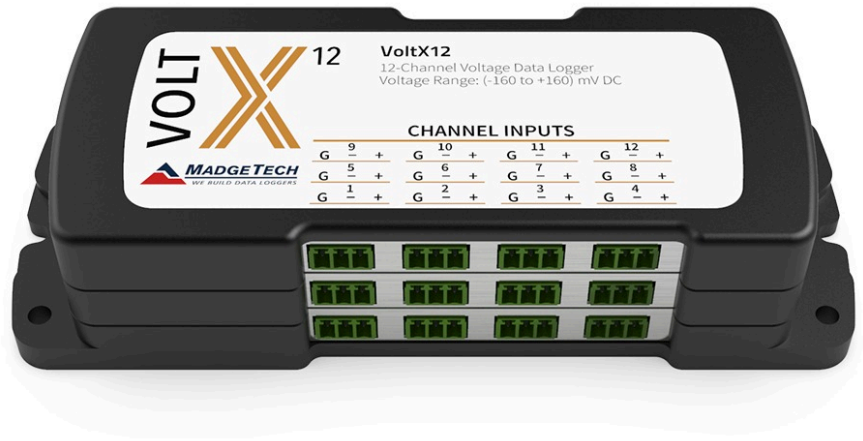
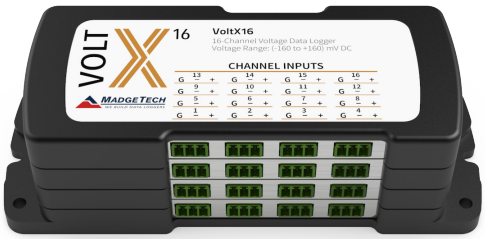


MADGETECH
WE BUILD DATA LOGGERS

VoltX Series

4, 8, 12 and 16-Channel Voltage Data Loggers



The new VoltX Series consists of 4, 8, 12 and 16-channel, battery powered, DC voltage data logger with a reading rate of up to 4 Hz. Improvements include the elimination of an interface cable (uses standard USB-A to Micro USB), increased memory for more readings and increased download speed.

This easy-to-use device features an 18 month typical battery life, user replaceable battery and programmable engineering units. The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged. To maximize memory capacity, users can enable or disable channels. For easy identification, each channel can be named with up to a ten digit title.

Using the MadgeTech Software, starting, stopping and downloading from the VoltX Series data loggers are simple and easy. Graphical, tabular and statistical data is provided for analysis and data can be viewed in multiple units, using the Engineering Units function. The data can also be automatically exported to Excel® for further calculations.

Features

- Real-time Operation
- Programmable Engineering Units
- 24-bit Readings Provide High Resolution
- Up to 4 Hz Reading Rate
- Compact
- External Power or User Replaceable Battery
- Pushbutton or Programmable Start Time
- Title Channels
- Calibration Certificate included

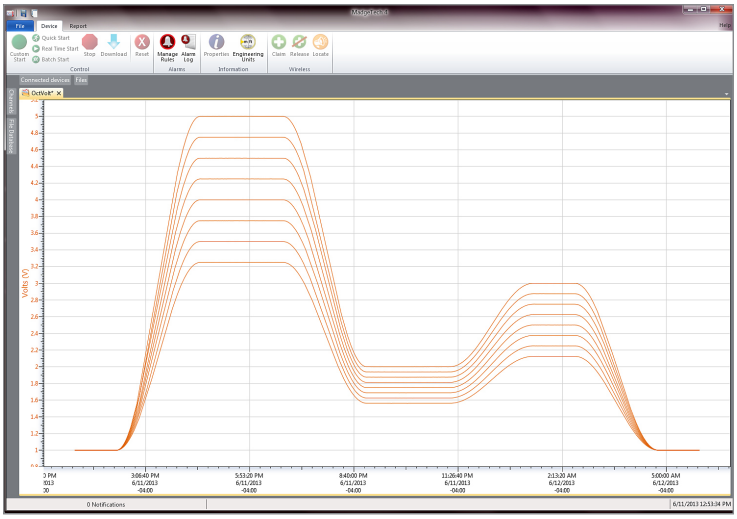
Benefits

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

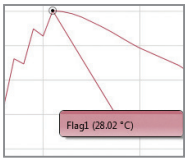
Applications

- Low Level Signal Monitoring
- Medical/Pharmaceutical
- Battery Studies
- Power Supply Monitoring
- Process Plants
- Environmental Studies
- Research and Development
- Replace Costly Strip Chart Recorders

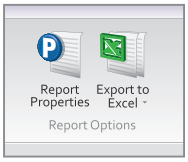
MadgeTech 4 Software Features



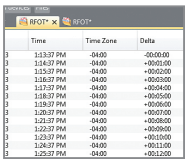
Graph View



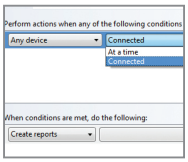
Cooling Flags



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. Call (603) 456-2011 or go to **madgetech.com** for details.

MEASUREMENT			
Input Connection	Removable screw terminals		
Model	160 mV	3.2 V	32 V
Voltage Range	±160 mV	±3.2 V	-8 V to +32 V
Voltage Resolution	0.02 µV	0.0004 mV	0.004 mV
Calibrated Accuracy	±0.032 mV	±0.0032 V	±0.02 V
Input Impedance	1 MΩ	125 kΩ	125 kΩ
Maximum Voltage between Inputs and Ground	+3 V	+50 V	+50 V
Analog Conversion Time	150 ms		
Frequency Rejection	60+50 Hz		
Temperature Coefficient	25 ppm/°C		
Specified Accuracy Range	Nominal range @ 25 °C		
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	Software programmable immediate start or delay start up to six months in advance
Real Time Recording	May be used with PC to monitor and record data in real time
Memory	**4-channel:** 698,709 readings **8-channel:** 349,354 readings **12-channel:** 232,903 readings **16-channel:** 174,677 readings
LEDs	1 per channel and 2 status LEDs
Reading Rate	4 Hz up to 1 reading every 24 hours
Calibration	Digital calibration through software
Calibration Date	Automatically recorded within device
Battery Type	9 V lithium battery included, **user replaceable**
Battery Life	18 months typical
Data Format	Date and time stamped V, mV, µV, engineering units specified through software
Time Accuracy	±1 minute/month
Computer Interface	USB-A to micro USB cable (included); 460,800 baud
Operating System Compatibility	Windows XP SP3 or later
Software Compatibility	Standard Software version 4.2.19.0 or later Secure Software version 4.2.18.0 or later
Operating Environment	-20 °C to +60 °C (-4 °F to +140 °F), 0 %RH to 95 %RH non-condensing
Dimensions	**4-channel:** 2.70 in x 7.25 in x 1.22 in (65.6 mm x 184.2 mm x 31.0 mm) **8-channel:** 2.70 in x 7.25 in x 1.22 in (65.6 mm x 184.2 mm x 31.0 mm) **12-channel:** 2.70 in x 7.25 in x 1.68 in (65.6 mm x 184.2 mm x 42.7 mm) **16-channel:** 2.70 in x 7.25 in x 2.14 in (65.6 mm x 184.2 mm x 54.4 mm)
Material	Black anodized aluminum
Weight	**4-channel:** 13 oz (368 g) **8-channel:** 13 oz (368 g) **12-channel:** 20 oz (580 g) **16-channel:** 28 oz (800 g)
Approvals	CE

BATTERY WARNING: BATTERY MAY LEAK, FLAME OR EXPLODE IF DISASSEMBLED, SHORTED, CHARGED, CONNECTED TOGETHER, MIXED WITH USED OR OTHER BATTERIES, EXPOSED TO FIRE OR HIGH TEMPERATURE. DISCARD USED BATTERY PROMPTLY. KEEP OUT OF REACH OF CHILDREN.

Ordering Information

VoltX4-160mV	PN 902179-00	4-Channel ±160 mV Voltage Data Logger, USB-A to micro USB cable, universal power adapter
VoltX4-3.2V	PN 902183-00	4-Channel ±3.2 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter
VoltX4-32V	PN 902187-00	4-Channel -8 V to +32 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter
VoltX8-160mV	PN 902180-00	8-Channel ±160 mV Voltage Data Logger, USB-A to micro USB cable, universal power adapter
VoltX8-3.2V	PN 902184-00	8-Channel ±3.2 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter
VoltX8-32V	PN 902188-00	8-Channel -8 V to +32 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter
VoltX12-160mV	PN 902181-00	12-Channel ±160 mV Voltage Data Logger, USB-A to micro USB cable, universal power adapter
VoltX12-3.2V	PN 902185-00	12-Channel ±3.2 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter
VoltX12-32V	PN 902189-00	12-Channel -8 V to +32 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter
VoltX16-160mV	PN 902182-00	16-Channel ±160 mV Voltage Data Logger, USB-A to micro USB cable, universal power adapter
VoltX16-3.2V	PN 902186-00	16-Channel ±3.2 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter
VoltX16-32V	PN 902190-00	16-Channel -8 V to +32 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter
U9VL-J	PN 901804-00	Replacement battery for VoltX Series

For Quantity Discounts call (603) 456-2011 or email **sales@madgetech.com**

AKIBIS www.akibis.info contact@akibis.info