DATASHEET

CurrentX4-30mA

MadgeTech

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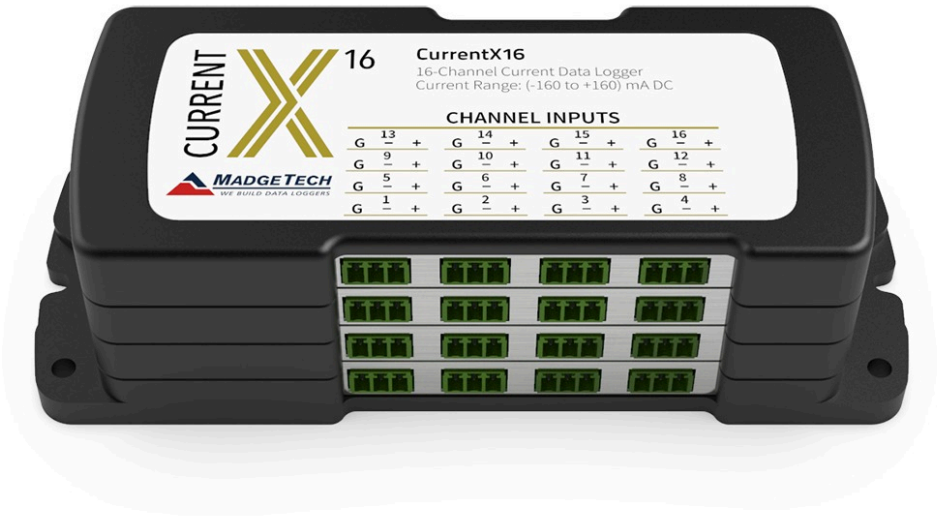
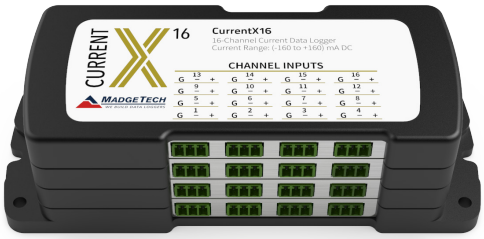


MADGETECH
WE BUILD DATA LOGGERS

X SERIES

CurrentX Series

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



The new CurrentX Series consists of 4, 8, 12 and 16-channel, battery powered, low level DC current data loggers 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.

These easy-to-use devices feature 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 CurrentX Series data loggers is 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

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

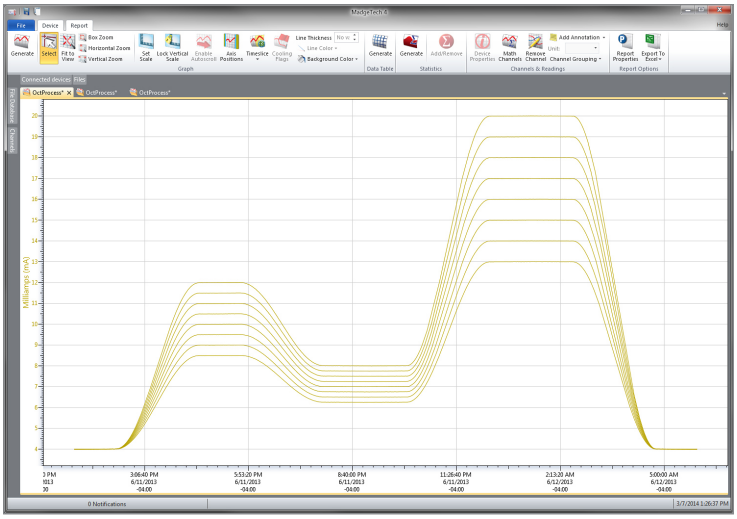
Benefits

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

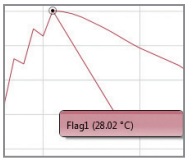
Applications

- 4 mA to 20 mA Current Loops
- pH Recording
- Low Level Signal Monitoring
- Photovoltaic Studies
- Battery Studies
- Biological Sensor Monitoring
- Factory Process Control
- Research and Development
- Medical and Pharmaceutical
- Environmental Studies

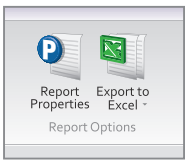
MadgeTech 4 Software Features



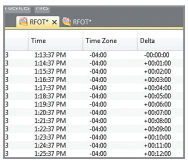
Graph View



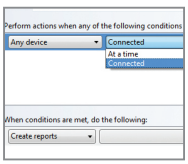
Cooling Flags



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	3-input removable screw terminals		
Model	30 mA	160 mA	3 A
Current Range	-2 mA to +30 mA	±160 mA	±3 A
Current Resolution	0.0005 mA	0.005 mA	0.001 A
Calibrated Accuracy	±0.016 mA	±0.16 mA	±0.009 A
Input Impedance	10 Ω	1 Ω	0.1 Ω
Overload Protection (-0.3 V to +3.5 V)	±316 mA	±1000 mA	±6 A
Maximum Voltage Between Inputs to Ground	3 V (Common mode voltage must be less than 3 volts. All inputs must be within 3 volts of all other inputs.)		
Analog Conversion Time	150 ms		
Temperature Coefficient	< 50 ppm / °C typical		
Engineering Units	Native Measurement units can be scaled to display measurement units of another type. This is useful when monitoring current 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, programmable in software
Real Time Recording	May be used with PC to monitor and record data in real time
Memory	**4-channel:** 1,048,064 readings **8-channel:** 524,032 readings **12-channel:** 349,354 readings **16-channel:** 262,016 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 A, mA, µA, 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

CurrentX4-30mA	PN 902191-00	4-Channel 30 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
CurrentX4-160mA	PN 902195-00	4-Channel 160 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
CurrentX4-3A	PN 902199-00	4-Channel 3 A Current Data Logger, USB-A to micro USB cable, universal power adapter
CurrentX8-30mA	PN 902192-00	8-Channel 30 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
CurrentX8-160mA	PN 902196-00	8-Channel 160 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
CurrentX8-3A	PN 902200-00	8-Channel 3 A Current Data Logger, USB-A to micro USB cable, universal power adapter
CurrentX12-30mA	PN 902193-00	12-Channel 30 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
CurrentX12-160mA	PN 902197-00	12-Channel 160 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
CurrentX12-3A	PN 902201-00	12-Channel 3 A Current Data Logger, USB-A to micro USB cable, universal power adapter
CurrentX16-30mA	PN 902194-00	16-Channel 30 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
CurrentX16-160mA	PN 902198-00	16-Channel 160 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
CurrentX16-3A	PN 902202-00	16-Channel 3 A Current Data Logger, USB-A to micro USB cable, universal power adapter
U9VL-J	PN 901804-00	Replacement battery for CurrentX Series

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

AKIBIS www.akibis.info contact@akibis.info