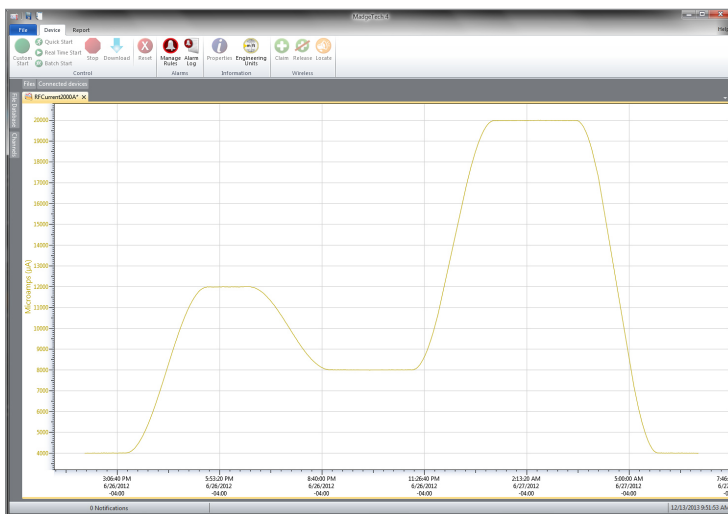![MadgeTech - WE BUILD DATA LOGGERS]

RFCurrent2000A
Wireless Current Data Logger

The RFCurrent2000A is a wireless data logger with a digital display, designed to measure and record DC current signals. This data logger can connect directly to low-level DC current sources which makes it ideal for battery usage studies, energy monitoring studies and other DC current monitoring applications. The RFCurrent2000A can also be interfaced with a wide range of current output sensors such as flow meters, pH transmitters and more. Through the software, the device can be programmed with engineering units, which convert the current readings into a different unit of measure such as flow rate. The engineering unit is available for display on the LCD screen as well as in the software. The RFCurrent2000A is available in 20mA, 160mA or a 3A measurement range.

The convenient digital display provides instant access to the current reading. Minimum, maximum and average statistics are also provided for a convenient snap shot of the logged data. Out of range notification, an audible buzzer as well as LED alarm indicator notifies users when the temperature is above or below the user specified alarm. Through the software, email and text message alarms can also be sent.

The RFCurrent2000A can be used as a single, wireless data logging system, or it can be expanded to a large scale system, which can include hundreds of data loggers measuring a number of areas (additional MadgeTech wireless data loggers and transceivers may be required). The RFCurrent2000A is compatible with the latest MadgeTech 4 Software.

Features

- Wireless Data Transmission
- Battery Life Indicator
- Digital Display
- Direct USB Interface
- AC Power Connection via USB
- Configurable Alarms
- Ability to Manually Reset Statistics
- 4 Year Battery Life at 15 Minute Reading Rate

Benefits

- Digital Display Provides Instant Access to Current Readings and Statistics
- Minimal Long-Term Maintenance
- Readings Displayed in Users Selected Measurement Unit
- Time and Money Saving with Battery Life Management
- Continuous Monitoring
- E-mail, Text Message and Audible Alerts Provides Assurance and Quality Control

Applications

- Battery Usage Studies
- Energy Monitoring Studies
- Photovoltaic Research (PV)
- Process Control Instrument Recording
- Data Logging From Sensors with Current Outputs (sensor not included):
  - Pressure Monitoring
  - Flow Rate
  - pH Transmitters

MadgeTech 4 Software Features

Graph View

Cooling Flags

Export to Excel

Tabular Data View

Automation
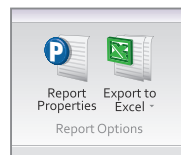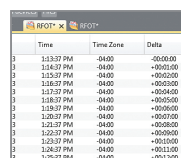
- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)

- Mean Kinetic Temperature
- Full time zone support
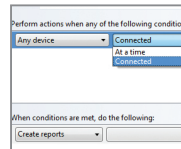- Data annotation
- Min./Max./Average lines
- Summary view

SPECIFICATIONS

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

MEASUREMENT

Sensor Type	Current Sensing Circuitry		
Nominal Range	20 mA	160 mA	3 A
Measurement Range	-2 mA to +30 mA	-160 mA to +160 mA	-3 A to +3 A
Maximum Voltage Between Inputs to Ground	2.5 V	2.5 V	2.5 V
Measurement Resolution	0.0005 mA for 20 mA	0.005 mA for 160 mA	0.0001 A for 3 A
Calibrated Accuracy	±0.0025 mA	±0.01 mA	±0.0001 A
Input Impedance	10 Ω	1 Ω	0.02 Ω
Absolute Maximum Current	±232 mA for 2 Seconds	±707 mA for 2 Seconds	±5 A for 2 Seconds
Input Connection	Terminal Ports: one positive, one negative and a ground terminal port		
Analog Conversion Time	150 mS		
Frequency Rejection	50+60 Hz		
Temperature Coefficient	< ±50 ppm/°C typical		
Response Time	0.15 Seconds at Sensor		

WIRELESS

RF Frequency	2.45 GHz IEEE 802.15.4 ultra-low power wireless transceiver with fully bi-directional communication
Band	ISM band 2.405-2.475 GHz
Maximum Output Power	+0 dBm typical
Receiver Sensitivity (RFC1000)	-95 dBm typical
Transmission Distance (to data loggers)	RFC1000, RFC1000-CE & RFC1000-IP69K 2,000 ft max. outdoors - line of sight unobstructed 500 ft max. indoors - typical urban environment
Transmission Distance (to other RFC1000's)	RFC1000 4,000 ft max. outdoors - line of sight unobstructed 1,000 ft max. indoors - typical urban environment RFC1000-CE 2,500 ft max. outdoors - line of sight unobstructed 700 ft max. indoors - typical urban environment RFC1000-IP69K 4,000 ft max. outdoors - line of sight unobstructed 1,000 ft max. indoors - typical urban environment

GENERAL

Reading Rate	1 reading every second up to 1 reading every 24 hours
Memory	32,256 readings
LED Functionality	Green LED blinks every 5 seconds to indicate unit is logging Blue LED blinks every 15 seconds to indicate unit is in wireless mode Red LED blinks every 1 second to indicate alarm condition
Wrap Around	Yes
Start Modes	Immediate and delay start
Calibration	Digital calibration through software
Calibration Date	Automatically recorded within device
Battery Type	9 V lithium or alkaline battery included; user replaceable with any 9 V battery
Battery Life	4 years typical at 15 minute reading rate
Data Format	uA, mA, A
Time Accuracy	± 1 minute/month
Computer Interface	USB to mini USB, 250,000 baud for standalone operation or RFC1000 required for wireless operation
Operating System Compatibility	Windows XP SP3 or later
Software Compatibility	Standard Software version 4.1.10.0 or later Secure Software version 4.1.9.0 or later
Operating Environment	-20 °C to +60 °C (-4 °F to +140 °F), 0 %RH to 95 %RH non-condensing
Dimensions	20 mA & 3 A: 3.19 in x 3.5 in x 0.95 in (80.9 mm x 88.9 mm x 24.1 mm) - Data logger only 160 mA: 3.17 in x 3.5 in x 0.95 in (80.5 mm x 88.9 mm x 24.1 mm) - Data logger only
Material	ABS Plastic
Weight	4.4 oz (125 g)
Approvals	US (FCC), CA (IC), CE, South Korea (KCC), China (CMIIT), Japan (LCIE)
Alarm	User configurable high and low audible, on-screen, email and text (SMS) alarms. Alarm Delay: A cumulative alarm delay may be set in which the device will activate the alarm (via LED) only when the device has recorded a user specified time duration of data.
Audible Alarm Functionality	1 Beep per second for reading alarm above/below threshold

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

RFCurrent2000A (20 mA)	PN 901397-00	Wireless Current 20 mA data logger
RFCurrent2000A (±160 mA)	PN 901394-00	Wireless Current ±160 mA data logger
RFCurrent2000A (±3 A)	PN 901401-00	Wireless Current ±3 A data logger
RFC1000	PN 901383-00	Wireless RF receiver/repeater. USB to mini USB adapter & power supply included
RFC1000-CE	PN 901338-00	Wireless RF transceiver/repeater, CE approved for Europe. USB to mini USB adapter & power supply included
RFC1000-IP69K	PN 901389-00	Wireless RF transceiver/repeater, splash proof with an IP69K rating. USB to mini USB adapter included
RFC1000 Cloud Relay	PN 901900-00	MadgeTech Cloud Services Data Logging Hub
RFC1000-CE Cloud Relay	PN 901901-00	MadgeTech Cloud Services Data Logging Hub, CE approved for Europe
Power Adapter	PN 901839-00	Replacement USB universal power adapter
U9VL-J	PN 901804-00	Replacement battery for RFCurrent2000A

Countries approved for use, purchase and distribution of the RFCurrent2000A: Australia, Austria, Belgium, Bulgaria, Canada, Chile, China, Colombia, Croatia, Cyprus, Czech Republic, Denmark, Ecuador, Estonia, Finland, France, Germany, Greece, Honduras, Hungary, Iceland, Ireland, Israel, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malaysia, Malta, Mexico, New Zealand, Norway, Peru, Poland, Portugal, Romania, Saudi Arabia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Thailand, The Netherlands, Turkey, United Kingdom, United States, Venezuela, Vietnam