

SPECIFICATIONS

Specifications are subject to change without notice. Specific warranty remedy limitations apply. Call (603) 456-2011 or go to madgetech.com for details.

CARBON DIOXIDE (CO ₂)	
Measurement Range	0 ppm to 200,000 ppm
Resolution	10 ppm
Calibrated Accuracy	±70 ppm ± 5% of the reading
Sensor Warm Up Time	30 seconds

TEMPERATURE	
Measurement Range	0 °C to +55 °C (+32 °F to +131 °F)
Resolution	0.08 °C (0.144 °F)
Calibrated Accuracy	±1.0 °C at +20 °C to +50 °C (±1.8 °F at 68 °F to 122 °F)

HUMIDITY	
Measurement Range	0 %RH to 95 %RH
Resolution	0.08 %RH
Calibrated Accuracy	±3 %RH
Specified Accuracy Range	25 %RH to 75 %RH +20 °C to +40 °C Hysteresis Error 1 % typical, 3 % Maximum

GENERAL	
Reading Rate	1 reading every second up to 1 reading every 24 hours
Memory	10,752 readings per channel
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	Approximately 16 months typical at a 10 minute reading rate
Data Format	Temperature: °C, °F, °R, K Humidity: %RH, mg/mL, Dew Point CO ₂ : ppm, %

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

Element CO ₂	PN 901391-A7	Wireless CO ₂ , Humidity & Temperature data logger
RFC1000	PN 901383-00	Wireless RF receiver/repeater. USB to mini USB adapter & power supply included
RFC1000-CE	PN 901388-00	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
U9VL-J	PN 901804-00	Replacement battery for Element CO ₂

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

Countries approved for use, purchase and distribution of the Element CO₂: 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

Time Accuracy	± 1 minute/month @ 25 °C
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 4.2.1.0 or later Secure Software version 4.2.0.0 or later
Operating Environment	0 °C to +55 °C (+32 °F to +131 °F) 0 %RH to 95 %RH non-condensing; 13.77 PSIA to 100 PSIA
Dimensions	Data logger: 3.0 in x 3.5 in x 0.95 in (76.2 mm x 88.9 mm x 24.1 mm) Sensor: 1.98 in x 1.98 in x 1.15 in (50.3 mm x 50.3 mm x 29.2 mm) Cable Length: 16 ft (192 in)
Material	ABS Plastic
Weight	4.9 oz (140 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

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