

Description	EGMS
Temperature Sensor	Internal semiconductor
Temperature Range	0 °C to +60 °C (+32 °F to +140 °F)
Temperature Resolution	0.1 °C
Temperature Accuracy	±0.5 °C
Humidity Sensor	Internal semiconductor
Humidity Range	0 %RH to 95 %RH
Humidity Resolution	0.5 %RH
Humidity Accuracy	±3.0 %RH
Memory	16,383/channel
Sample Rate	2 seconds up to 12 hours
RH Units	%RH, dew pt., water vapor concentration (mg/ml)
Required Interface Package	IFC102 or IFC202
Baud Rate	38,400
Typical Battery Life	1 year
Operating Environment	0 °C to +60 °C (+32 °F to +140 °F), 0 %RH to 95 %RH (non-condensing)
Submergible	With Temperature Cap: Yes With Humidity Cap: No
Material	Enclosure: HDPE Logger: Stainless Steel
Dimensions	2.25 in x 1.68 in dia. (57.15 mm x 42.67 mm)
Weight	2.02 oz (60 g)
Approvals	-

### Battery Warning

**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 60 °C (140 °F).**

*Specifications subject to change.*

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### EGMS

Egg Temperature and Humidity Monitoring System

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## Product Notes

The EGMS consists of a temperature and humidity data logger inside an egg shaped enclosure to simulate the humidity and temperature affects of a real egg. The EGMS is provided with two enclosure options. The vented enclosure is for use when measuring temperature and humidity, for example in an incubator. The solid enclosure is for temperature only measurements, and allows the device to be submerged. The solid enclosure is recommended for pasteurization applications.

### LEDs

Once started, the green LED will flash every two seconds to indicate that the device is running. The red LED will flash in two second intervals if there is an alarm condition.

### Alarm Settings

To change the settings for the temperature alarm:

- Select **Alarm Settings** from the **Device menu** in the MadgeTech software. A window will appear allowing the customer to set the high and low temperature alarms.
- Press **Change** to edit the values.
- Check **Enable Alarm Settings** to enable the feature. The values can be entered in the field manually or by using the scroll bars.
- Click **Save** to save the changes. To clear an active alarm, press **Clear Alarm**.

### O-Rings

O-ring maintenance is a key factor when properly caring for the EGMS. The o-rings ensure a tight seal and prevent liquid from entering the inside of the device.

Please refer to the application note "O-Rings 101: Protecting Your Data", found on the MadgeTech website, for information on how to prevent O-ring failure.

## Installation Guide

### Installing the Interface cable

- IFC202

Insert the device into a USB port. The drivers will install automatically.

- IFC102

Plug the serial cable into the port and verify it is secure.

- USB-1 or USB-101

Install the USB drivers from the USB provided in the kit, then plug the USB cable into the computer and the serial cable into the serial port.

### Installing the software

Insert the Software USB into an open USB port. If the autorun does not appear, locate the drive on the computer and double click on Autorun.exe. Follow the instructions provided in the Wizard.

### Connecting the data logger

- Once the software is installed and running, plug the interface cable into the data logger.
- Click the Communication Menu, then Auto Configure Port.
- After a moment, a box will appear stating that a device has been found.

- Click **OK**. The **Device Status** box will appear. Click **OK**.
- At this point, communications have been configured for your logger. These settings can be found under the **Communication Menu**.

*Note: For additional installation instructions refer to your "Data Logger & Software Operating Manual".*

## Device Operation

### Starting the data logger

- Click **Device Menu** then **Start Device**.
- Choose the desired start method.
- Choose the start parameters by selecting a **Reading Rate** suitable for your application.
- Enter in any other desired parameters and click **Start**.
- A box will appear stating the data logger has been started. Click **OK**.
- Disconnect the data logger from the interface cable and place it in the environment to measure.

*Note: The device will stop recording data when the end of memory is reached or the device is stopped. At this point the device cannot be restarted until it has been re-armed by the computer.*

### Downloading data from a data logger

- Connect the data logger to the interface cable.
- Click the **Device Menu** then **Read Device Data**. This will offload all recorded data onto the PC.

## Device Maintenance

### Battery Replacement

Materials: [Replacement Battery \(SR1154W\)](#)

- Remove the data logger from the egg enclosure
- Unscrew the knurled endcap on the data logger
- Tip the batteries (enclosed in a plastic sleeve) out of the enclosure tube.
- Use a small, dull, non-metallic tool (e.g. pen cap) to push the batteries out of the sleeve.
- Press the new batteries into the sleeve negative (-) end first.
- Place the sleeved batteries in the enclosure tube positive (+) end first.
- Screw the knurled cap back in place.

### Recalibration

The EGMS standard calibration is one point at 25 °C and two points at 25 %RH and 75 %RH.

#### Pricing:

Recalibration traceable to NIST	\$110.00
Recalibration	\$70.00

*Call for custom calibration options to accommodate specific application needs.*

*Prices and specifications subject to change. See MadgeTech's terms and conditions at [www.madgetech.com](http://www.madgetech.com)*

*To send devices to MadgeTech for calibration, service or repair, please use the MadgeTech RMA Process by visiting [www.madgetech.com](http://www.madgetech.com), then under the services tab, select RMA Process.*