

Device Maintenance

Battery Replacement

Materials:

Small Phillips Head Screwdriver

Replacement Battery (LTC-7PN)

- Puncture the center of the back label with the screw driver and unscrew the enclosure.
- Remove the battery by pulling it perpendicular to the circuit board.
- Insert the new battery into the terminals and verify it is secure.
- Screw the enclosure back together securely.

Note: Be sure not to over tighten the screws or strip the threads.

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 80°C (176°F).

Recalibration

The Pulse101 and Pulse110 have a digital input signal and cannot be calibrated. A certificate of conformance can be provided.

To send the devices back, visit www.madgetech.com, select Services then RMA Process.

| Part Number | Pulse101 | Pulse110 |
|---|--|--|
| Maximum Pulse Rate | 100Hz | |
| Input Range | 0 to 12VDC continuous; (0 to 30VDC peak) | |
| Input Low | <0.4V | |
| Input High | >2.7V | |
| Internal Weak Pull-Up | <500µA | |
| Recommended Duty Cycle for Inputs Greater than 12VDC (Over 1 minute interval) | 18V: <50% 24V: <25% 30V: <10% | |
| Sample Rate | 1 second to 12 hours | |
| Minimum Time Resolution | 1 second | |
| Minimum Input Active (Low) Time | 1 millisecond | 4 millisecond |
| Memory | 16,383 events | |
| LED Indicator | Red | |
| Required Interface Package | IFC110 or IFC200 | |
| Baud Rate | 2,400 | 57,600 |
| Typical Battery Life | 1 year | 10 years |
| Operating Environment | -40 to +80°C, 0 to 95%RH (non-condensing) | |
| Material | ABS plastic | |
| Dimensions | 1.4" x 2.5" x 0.6" (36mm x 64mm x 16mm) | 1.7" x 2.7" x 0.8" (44mm x 69mm x 21mm) |
| Approvals | CE | |

*Specifications subject to change.
See MadgeTech's terms and conditions at www.madgetech.com*

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Pulse101 and Pulse110



Pulse101

Pulse Recorder

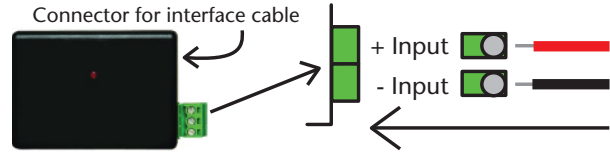
Pulse110

Pulse Recorder with 10 Year Battery Life

Wiring the Data Logger

Wiring Options

The Pulse101 and Pulse110 both have a two-position removable screw terminal connection. They accept 2-wire configurations.



Warning: Note the polarity instructions. Do not attach wires to the wrong terminals.

The Pulse101 and Pulse110 record the number of pulse inputs or contact closures on the input of the device. The input is continuously sampled at 1 kHz, therefore, the input pulse must be at least 1 ms in duration. The counter is reset at the beginning, and is recorded at the end of each sample interval. The counter is incremented when the input transitions high during the reading interval.

Note: An input voltage of greater than 30 volts on the input could cause loss of data or damage to data logger.

Product Notes

LEDs

Once started, the LED will flash at the selected reading rate to indicate that the device is running.

Engineering Units

Engineering units are used to convert one measurement reading to another. The MadgeTech software allows for software level Engineering Units (conversion applied to data after download). Certain devices have device level Engineering Units, which upon download automatically appear in the chosen unit of measure.

Please refer to the application note "Engineering Units", found on the MadgeTech website, for information on how to manage Engineering Units.

Installation Guide

Installing the Interface cable

- IFC200, IFC202 or IFC300
Refer to the "Quick Start Guide" included in the package.
- IFC110, IFC102 or IFC103
Plug the serial cable into the port and verify it is secure.

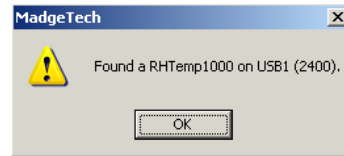
- USB-1 or USB-101
Install the USB drivers from the CD provided in the kit, then plug the USB cable into the computer and the serial cable into the serial port.

Installing the software

Insert the Software CD in the CD-ROM Drive. 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 similar to the following will appear;



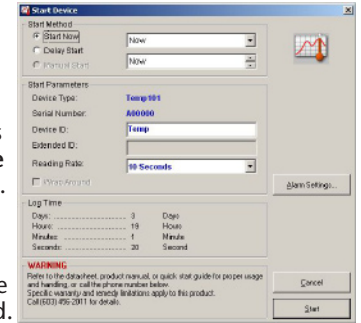
- Click **OK**. The **Device Status** box will appear. Click **OK**.
- At this point, communications have been configured for your logger. These settings can be found under the **Communication Menu**.

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.

Technical Support

Visit www.madgetech.com, or call (603) 456-2011. Technical support is also available by e-mailing support@madgetech.com

Additional product information is available by e-mailing info@madgetech.com.