MADGETECH
WE BUILD DATA LOGGERS

Product Information Card

State101A

Description	State101A
Input Range	0 V to 30 V
Input Low	<0.4 V
Input High	>2.8 V
Internal Weak Pull-Up	<60 µA
Minimum Input Active (Low) Time	10 Microseconds
Resolution	4 Hz (reading rate selectable in software)
Channels	1
Memory	406,323 readings; software configurable memory wrap
Reading Rate	4Hz up to 1 reading every 24 hours
LED Indicator	Red and Green
Required Interface Package	IFC200
Baud Rate	115,200
Battery Life	10 years typical, dependent upon frequency and duty cycle
Operating Environment	-40 °C to +80 °C (-40 °F to +176 °F), 0 %RH to 95 %RH (non–condensing)
Material	ABS plastic
Dimensions	1.4 in x 2.2 in x 0.6 in (36 mm x 56 mm x 16 mm)
Weight	0.9 oz (24 g)
Approvals	CE

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).

State101A
State Data Logger with 10 Year Battery Life

Specifications subject to change.
See MadgeTech's terms and conditions

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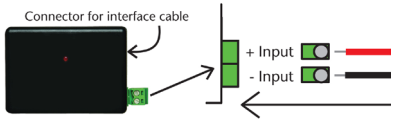
Wiring the Data Logger

Wiring Options

The State101A has a two-position removable screw terminal connection. It accepts 2-wire configurations.



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

Product Notes

The State101A data logger monitors and records the occurrence, duration and status of predetermined events by measuring changes in voltage. Typically connected to a relay or switch, this data logger features a removable screw terminal block to easily disconnect and retrieve the logger for data download without disrupting wiring connectivity.

The State101A is a great solution for a variety of industries and applications including HVAC studies to monitor heating and cooling systems for efficiency or the monitoring of gas, water or electric pumps. This device replaces costly strip chart recorders and is also used in TTL high/low monitoring, general status recording and security systems as well.

LEDs

- Green LED blinks: 10 seconds to indicate logging and 15 seconds to indicate delay start mode.
- Red LED blinks: 10 seconds to indicate low battery and/or memory and 1 second to indicate an alarm condition.

Engineering Units

Engineering units are used to convert one measurement unit 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**" and Technical Support Videos, found on the MadgeTech website, for information on how to manage Engineering Units. Also view the Engineering Units Video for step-by-step setup instructions.

Password Protection

An optional password may be programmed into the device to restrict access to configuration options. Data may be read out without the password.

Multiple Start/Stop Mode Activation

- To start device: Press and hold the pushbutton for 5 seconds, the green LED will flash during this time. The device has started logging.
- To stop device: Press and hold the pushbutton for 5 seconds, the red LED will flash during this time. The device has stopped logging.

Installation Guide

Installing the Interface cable

- IFC200: Insert the device into a USB port. The drivers will install automatically.

Installing the software

Insert the Software USB Stick in 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.

Device Operation

Connecting and Starting the data logger

- Once the software is installed and running, plug the interface cable into the data logger.
- Connect the USB end of the interface cable into an open USB port on the computer.
- The device will appear in the Connected Devices list, highlight the desired data logger.
- For most applications, select "**Custom Start**" from the menu bar and choose the desired start method, reading rate and other parameters appropriate for the data logging application and click "**Start**". (*"**Quick Start**" applies the most recent custom start options, "**Batch Start**" is used for managing multiple loggers at once, "**Real Time Start**" stores the dataset as it records while connected to the logger.*)
- The status of the device will change to "**Running**", "**Waiting to Start**" or "**Waiting to Manual Start**", depending upon your start method.
- 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

- Highlight the data logger in the Connected Devices list. Click "**Stop**" on the menu bar.
- Once the data logger is stopped, with the logger highlighted, click "**Download**". You will be prompted to name your report.
- Downloading will offload and save all the recorded data to the PC.

Device Maintenance

Battery Replacement

Materials: Small Phillips Head Screwdriver abd a 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.

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