![MadgeTech - WE BUILD DATA LOGGERS]

Bridge101A

Description	Bridge101A
Range	
Resolution	See Table Below*
Accuracy	
Memory	1,000,000 readings; software configurable memory wrap 330,000 readings in multiple start/stop
Wrap Around	Yes
Reading Rate	4Hz to 1 every 24 hours
LED Indicator	Red and Green
Units	V, mV, µV, Engineering Units specified through software
Required Interface	IFC200
Baud rate	115,200
*Battery Life	10 months typical at a 1 minute reading rate with a 350 Ω load 2 years typical at a 1 minute reading rate with a 1000 Ω load
Operating Environment	-40 °C to +80 °C (-40 °F to +176 °F), 0 %RH to 90 %RH non-condensing
Material	ABS plastic
Dimensions	1.4 in x 2.5 in x 0.6 in (36 mm x 64 mm x 16 mm)
Weight	0.8 oz (24 g)
Approvals	CE

MadgeTech recommends using 350 or 1000 Ω strain gages. 120 Ω strain gauges can be used with the Bridge101A but it is not recommended as it will reduce the battery life, potentially increase noise level and limit the low end temperature operation.

*Bridge101A Range, Resolution and Accuracy

Nominal Range	±30 mV	±150 mV	±1000 mV
Measurement Range	±30 mV	±160 mV	±1200 mV
Resolution	1 µV	5 µV	50 µV
Calibrated Accuracy	±0.01% FSR; ±3 Microvolts	±0.01% FSR; ±16 Microvolts	±0.01% FSR; ±120 Microvolts
Input Range	0 to 2.5V	0 to 2.5 V	0 to 2.5 V
Reference Voltage	2.5 V	2.5 V	2.5 V

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).

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

Bridge101A-30
30mV Bridge Data Logger
Bridge101A-150
150mV Bridge Data Logger
Bridge101A-1000
1000mV Bridge Data Logger

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To view the full MadgeTech product line,
visit our website at www.madgetech.com.

Product Notes

The Bridge101A Data Logger measures and records voltage, typically used in conjunction with strain gauges, load cells or other low-level DC voltage sources. This device is designed to accurately measure and record the output of the gauge to determine parameter levels such as stress, torque, strain, and pressure on a structure or item over a period of time.

Available in three different measurement ranges (±30 mV, ±160 mV or ±1200 mV), the Bridge101A offers a reading rate of up to 4 Hz with memory capacity of 1,000,000 readings (memory wrap optional). The device can be configured to start at a specified date and time up to 24 months in advance and the pushbutton start/stop feature allows the user to initiate or cease logging data in the field if desired.

MadgeTech recommends using 350 or 1000 Ω strain gages. 120 Ω strain gauges can be used with the Bridge101A but it is not recommended as it will reduce the battery life, potentially increase noise level and limit the low end temperature operation.

LEDs

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

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

- Connect the logger to the interface cable.
- 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 and 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.

Recalibration

Bridge101A standard calibration values:

Logger Voltage	30 mV	150 mV	1000 mV
Strain (V)	0 V and 22.5-25 mV	0 V and 90-100 mV	0 V and 900-1000 mV

Pricing:

Recalibration $40.00

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
To send devices to MadgeTech for calibration, service or repair, please use the MadgeTech RMA Process by visiting www.madgetech.com, then under the services tab, select RMA Process.