![MadgeTech - WE BUILD DATA LOGGERS]

Description	Process101A
Current Range	*See Table Below
Current Resolution	
Calibrated Accuracy	
Input Impedance	
Memory	1,000,000 readings; software configurable memory wrap 333,000 readings in multiple start/stop mode
Reading Rate	4 Hz to 1 reading every 24 hours
LED Indicator	Red and green
Required Interface Package	IFC200
Baud Rate	115,200
Typical Battery Life	10 year battery life typical, at a 15 minute reading rate
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

*Current Series Range, Resolution and Calibrated Accuracy

Nominal Range	20 mA	$\pm$160 mA	$\pm$3 A
Measurement Range	-2 mA to +30 mA	$\pm$160 mA	$\pm$3 A
Maximum Voltage Between Inputs to Ground	0 V to 2.5 V		
Resolution	0.5 µA	5 µA	100 µA
Calibrated Accuracy @ 25 °C	$\pm$0.05 %FSR		$\pm$0.15 %FSR
Input Impedence	10 Ω, $\pm$1%	1 Ω, $\pm$1%	<0.05 Ω
Absolute Maximum Current	316 mA	1 A	6 A

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*
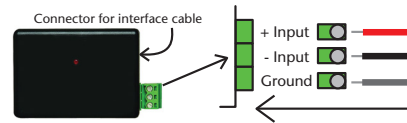
Process101A

Process101A 20mA, Process101A $\pm$160mA and Process101A $\pm$3A
Low Level Current Data Loggers with a 10 Year Battery Life

Wiring the Data Logger

Connector for interface cable

+ Input
- Input
Ground

Wiring Options

Three-position removable screw terminal connections; accepts 3-wire configurations.

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

Product Notes

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.

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 the device: Press and hold the pushbutton for 5 seconds, the red LED will flash during this time. The device has stopped logging.

Alarm Settings

Programmable high and low limits; alarm is activated when current reaches or exceeds set limits.

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. Also view the Engineering Units Video for step-by-step setup instructions.

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 & 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.

Recalibration

The Process101A standard calibration is at two points. The points are dependent on the range of the data logger.

Range	20 mA	±160 mA	±3 A
Calibration Points	0 mA and 25 mA	0 mA and 100 mA	0 A and 1 A

Pricing:
Recalibration traceable to NIST Recalibration