

# PROCESS101A

## DC CURRENT DATA LOGGER



The Process101A is one of MadgeTech's newest data loggers. It is part of a new series of low cost, state-of-the-art data logging devices. MadgeTech has taken the lead in offering the most advanced, low cost, battery powered data loggers in the world today.

### Features

- 10 Year Battery Life
- 1 Second Reading Rate
- Multiple Start/Stop Function
- Ultra High Speed Download
- 1 Million Reading Storage Capacity
- Memory Wrap
- Battery Life Indicator
- Optional Password Protection
- Programmable High and Low Alarms
- N.I.S.T. Traceable
- Field Upgradeable

### Benefits

- Simple Setup and Installation
- Minimal Long-Term Maintenance
- Long-Term Field Deployment

### Applications

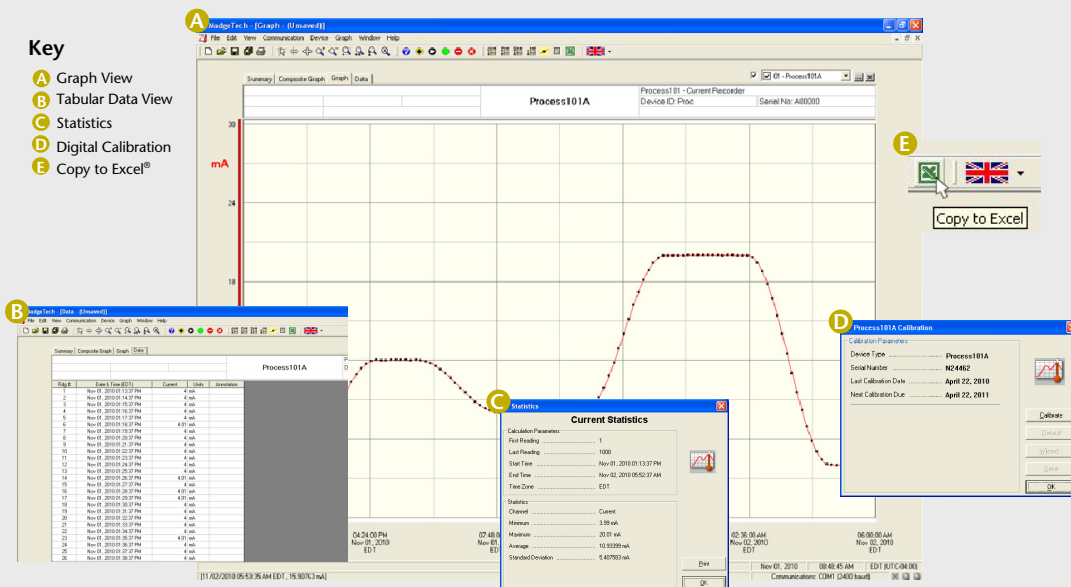
- 4 to 20 mA Recording
- pH Recording
- Low Level DC Current Monitoring
- Photovoltaic Studies
- Battery Studies
- General Purpose Current Recording

The Process101A is available in two ranges, 20mA and  $\pm 160$ mA. Both offer a 10 year battery life, a 1 second reading rate, a multiple start/stop function, ultra-high speed download capability, 1 million reading storage capacity, optional memory wrap, battery life indicator, optional password protection, programmable high-low alarms and more. The Process101A is priced at \$179 each and can be delivered from stock now. Our research has shown that the Process101A is second to no other data logger when it comes to price and performance.

Using the MadgeTech Software, starting, stopping and downloading from the Process101A is simple and easy. Graphical, tabular and summary data is provided for analysis and data can be viewed in A, mA or  $\mu$ A. The data can also be automatically exported to Excel<sup>®</sup> for further calculations.

As the leader in low power data logger technology, MadgeTech continuously improves its products and develops solutions to meet ever-changing challenges. The Process101A was designed with our customers in mind. MadgeTech offers free firmware upgrades for the life of the product so that data loggers already deployed in the field can grow with new technological developments. Units do not need to be returned to the factory for upgrades. The user can do this automatically from any PC.

## MADGETECH DATA LOGGER SOFTWARE



- Software Features:**
- Multiple graph overlay
  - Statistics
  - Digital calibration
  - Zoom in/ zoom out
  - Full time zone support
  - Data annotation
  - Min./Max./Average lines
  - Data table view
  - Automatic report generation
  - Summary view
  - Multilingual

# PROCESS101A SPECIFICATIONS\*

|                          |             |         |
|--------------------------|-------------|---------|
| Nominal Range:           | 20mA        | ±160mA  |
| Measurement Range:       | -2 to +30mA | ±160mA  |
| +/- Input Voltage Range: | 0 to 2.5V   |         |
| Resolution:              | 0.5µA       | 5µA     |
| Calibrated Accuracy:     | ±0.05%FSR   |         |
| Input Impedance:         | 10Ω, ±1%    | 1Ω, ±1% |
| Overload Protection:     | ±316mA      | 1A      |

**Input Connection:** Removable screw terminal

**Analog Conversion Time:** 133ms nominal

**Frequency Rejection:** 50-60Hz

**Temperature Coefficient:** < +/- 50ppm/°C typical

**Reading Rate:** 4Hz to 1 reading every 24 hours

**Memory:** 1,000,000 readings; software configurable memory wrap  
333,000 readings in multiple start/stop mode

**Wrap Around:** Yes

**Start Modes:**

- Immediate start
- Delay start up to 18 months
- Multiple pushbutton start/stop

**Stop Modes:**

- Manual through software
- Timed (specific date and time)

**Multiple Start/Stop Mode:** Start and stop the device multiple times without having to download data or communicate with a PC

**Multiple Start/Stop Mode** To start the device:

**Activation:** Press and hold the pushbutton for 5 seconds. The device has started logging.

To stop the device:

Press and hold the pushbutton for 5 seconds, the red LED will flash for three seconds and then the green LED will flash for two seconds. The device has stopped logging.

**Real Time Recording:** The device may be used with PC to monitor and record data in real-time

**Alarm:** Programmable high and low limits; alarm is activated when current reaches or exceeds set limits

**LED Functionality:** Green LED blinks:  
10 second rate to indicate logging  
15 second rate to indicate delay start mode

Red LED blinks:  
10 second rate to indicate low battery and/or full memory

**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.

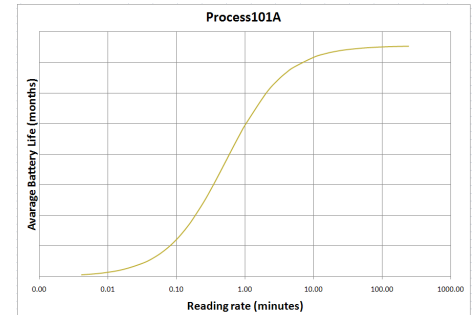
**Engineering Units:** Native measurement units can be scaled to display measurement units of another type. This is useful when monitoring voltage outputs from different types of sensors such as temperature, CO2, flow rate and more

**Calibration:** Digital calibration through software

**Calibration Date:** Automatically recorded within device

**Battery Type:** 3.6V lithium battery included; user replaceable

**Battery Life:** 10 year battery life typical, at a 15 minute reading rate



Graph display of the device recording in a 25°C environment.

**Data Format:** Date and time stamped current, engineering units specified through software

**Time Accuracy:** ±1 minute/month (stand alone data logging)

**Computer Interface:** USB (interface cable required); 115,200 baud

**Software:** XP SP3/Vista/Windows 7

**Operating Environment:** -40°C to +80°C, 0 to 95%RH non-condensing

**Dimensions:** 1.4" x 2.2" x 0.6" (36mm x 56mm x 16mm)

**Weight:** 0.9 oz (24 g)

**Materials:** ABS plastic

**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).

\*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY AND REMEDY LIMITATIONS APPLY. CALL 1-603-456-2011 OR GO TO WWW.MADGETECH.COM FOR DETAILS.

## ORDERING INFORMATION

| MODEL             | DESCRIPTION                              | PRICE (U.S.) |
|-------------------|--|--------------|
| PROCESS101A-20mA  | ±20mA, Low Level Current Data Logger     | \$179.00     |
| PROCESS101A-160mA | ±160mA, Low Level Current Data Logger    | \$179.00     |
| IFC200            | Software, manual and USB interface cable | \$119.00     |
| *NIST             | N.I.S.T. Calibration Certificate         | \$60.00      |
| LTC-7PN           | Replacement battery for Process101A      | \$10.00      |

\*To order the product with the N.I.S.T. certificate add -CERT to the end of the part number and add \$60.00 to the price.

For Quantity Discounts call 603-456-2011 or email [sales@madgetech.com](mailto:sales@madgetech.com)

ASK ABOUT  
OUR OTHER  
DATA  
LOGGERS

Temperature  
Humidity  
Pressure  
pH  
Level  
Shock  
LCD Display  
Pulse/Event/State  
Current  
Voltage  
Wireless  
Intrinsically Safe  
Spectral Vibration  
Motion