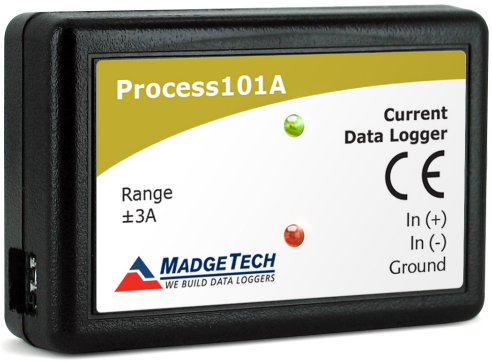
Process101A

DC Current Data Logger



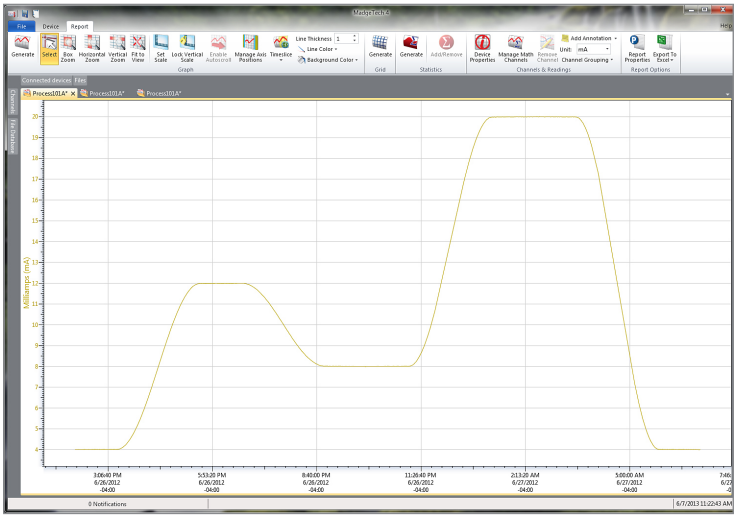
The Process101A Data Logger measures and records low level DC current and is available in three different measurement ranges, 20 mA, ±160 mA and ±3 A. This device is ideal for many process driven, general purpose current recording applications including battery or photovoltaic studies.

All of the ranges offer a 10 year battery life, 4 Hz reading rate, programmable or pushbutton start/stop and a 1 million reading storage capacity with optional memory wrap. These features allow for long term active logging deployment and low maintenance. As with many of MadgeTech's 101A series of data loggers, the screw terminal block is designed to easily connect and disconnect to the logger body to simplify retrieval of the device for downloading data by keeping the wiring to the terminal block in place.

Other features of the Process101A include a battery life indicator, optional password protection, programmable high-low alarms and more.

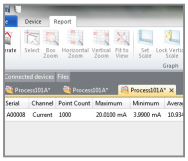
Using the MadgeTech Software makes configuring the data logger and downloading data simple and user friendly. Graphical, tabular and summary data format options are provided for analysis and data can be viewed in A, mA or µA. The data can also be exported to Excel® for further customized reporting or calculations.

MadgeTech 4 Software Features

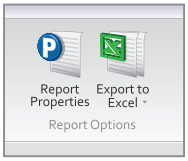


Graph View

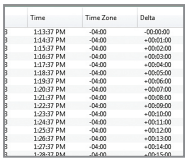
- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
- Min./Max./Average lines
- Summary view



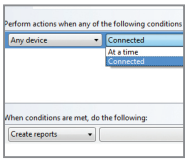
Statistics



Export to Excel



Tabular Data View



Automation

Features

- 10 Year Battery Life
- 4 Hz Reading Rate
- Multiple Start/Stop Function
- Ultra High Speed Download
- 2,095,104 Reading Storage Capacity
- Memory Wrap
- Battery Life Indicator
- Optional Password Protection
- Programmable High and Low Alarms
- Field Upgradeable

Benefits

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

Applications

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

SPECIFICATIONS

Specifications are subject to change without notice. Specific warranty remedy limitations apply.

MEASUREMENT			
Nominal Range	**20 mA**	**±160 mA**	**±3 A**
Measurement Range	-2 mA to +30 mA	±160 mA	±3 A
Maximum Voltage Between Inputs to Ground	0 V to 2.5 V		
Resolution	0.5 µA	5 µA	100 µA
Calibrated Accuracy	±0.05 %FSR	±0.05 %FSR	±0.15 %FSR
Input Impedance	10 Ω, ±1%	1 Ω, ±1%	< 0.05 Ω
Absolute Maximum Current	316 mA	1 A	6 A
Input Connection	Removable screw terminal		
Analog Conversion Time	133 ms nominal		
Frequency Rejection	50-60 Hz		
Temperature Coefficient	< +/- 50ppm / °C typical		
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, CO_2, flow rate and more		

GENERAL	
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
Real Time Recording	May be used with PC to monitor and record data in real time*
Password Protection	An optional password may be programmed into the device to restrict access to configuration options. Data may be read without the password.
Memory	2,095,104 readings; software configurable memory wrap 698,368 readings in multiple start/stop mode
Wrap Around	Yes
Reading Rate	4 Hz to 1 reading every 24 hours
Alarm	Programmable high and low limits; alarm is activated when current reaches or exceeds set limits
LEDs	2 status LEDs
Calibration	Digital calibration through software
Calibration Date	Automatically recorded within device
Battery Type	3.6 V lithium battery included; user replaceable
Battery Life	10 years typical at a 15 minute reading rate
Data Format	Date and time stamped current, engineering units specified through software
Time Accuracy	±1 minute/month at 25 °C (77 °F) – Stand alone data logging
Computer Interface	USB (interface cable required); 115,200 baud
Operating System Compatibility	Windows XP SP3 or later
Software Compatibility	Standard Software version 2.03.06 or later Secure Software version 4.1.3.0 or later
Operating Environment	-40 °C to +80 °C (-40 °F to +176 °F) 0 %RH to 95 %RH non-condensing
Dimensions	1.4 in x 2.1 in x 0.6 in (35 mm x 54 mm x 15 mm)
Weight	0.8 oz (24 g)
Material	Polycarbonate
Approvals	CE

*The Process101A-3A may only be used with the IFC200 “USB drive” model.

BATTERY WARNING: FIRE, EXPLOSION AND SEVERE BURN HAZARD. DO NOT RECHARGE, DISASSEMBLE, HEAT ABOVE 100 °C (212 °F), INCINERATE, CRUSH, OR EXPOSE CONTENTS TO WATER.

Ordering Information

Process101A-20mA	PN 901063-00	±20 mA, Low Level Current Data Logger
Process101A-160mA	PN 901059-00	±160 mA, Low Level Current Data Logger
Process101A-3A	PN 901067-00	±3 A, Low Level Current Data Logger
IFC200	PN 900298-00	USB interface cable
LTC-7PN	PN 900352-00	Replacement battery for the Process101A