PROCESS101
Current Recorder

FEATURES

- Programmable engineering units
- Real-time operation
- Programmable start time
- CE compliant
- Reusable
- Miniature size
- User-friendly
- Low cost

APPLICATIONS

- 4 to 20 mA recording
- pH recording
- Low level signal monitoring
- Photovoltaic studies
- Battery studies
- Biological sensor monitoring
- Medical/Pharmaceutical
- Environmental studies
- Research and development
- Replace costly strip chart recorders

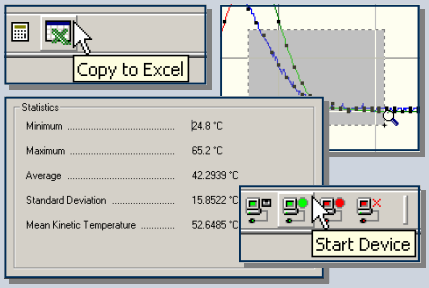
The Process101 is engineered for accuracy and flexibility unequaled in the 4-20mA loop sensor and control industry. It can be inserted almost anywhere because it adds very little resistance to the loop (10Ω typical). Since it operates with an internal battery (user replaceable), ground loop errors can be avoided.

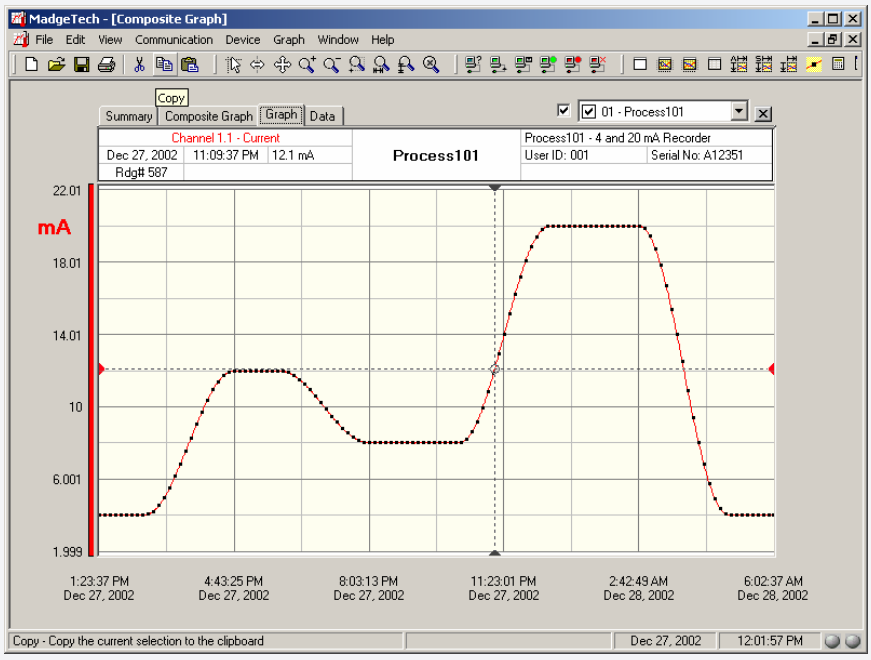
The Process101 can measure currents that are slightly negative, allowing for other uses. With 16 bits of resolution, it is ideal for accurately measuring battery currents, solar cell currents and other current sources. The device can measure and record up to 32,767 readings in non-volatile memory, retaining valuable data even if the battery should become discharged.

Additionally, customized engineering units can be defined to map the measured data to almost any unit imaginable. For example, a 4-20mA flow meter might exert 4mA current for 0 liters of water and 20mA current for 5 liters of water. Using the Engineering Units in the device, the logger can be set up to natively display the data in liters rather than milliamps — a useful feature for presentations!

SOFTWARE

MadgeTech's Data Recorder Software is an easy to use Windows-based software package that allows the user to effortlessly collect, display and analyze data. A variety of powerful tools allow you to examine, export, and print professional looking data with just a click of the mouse.





Demo our software at www.madgetech.com

PROCESS101 SPECIFICATIONS

Input Connection: Removable screw terminal
Measurement Range: -20 to +100 mA
Current Resolution: 10 µA
Calibrated Accuracy: ±0.10 %FSR
Input Impedance: 10 Ω
Analog Conversion Time: 133 ms nominal
Frequency Rejection: 60 Hz
Temperature Coefficient: < 100 ppm/ºC; < 50 ppm/ºC typical
Overload Protection: ±125 mA for 10 seconds
Specified Accuracy Range: Nominal range @ 25 ºC

Engineering Units: User may define units up to 10 characters in length. This value is stored within the device.

Scale Factor: User may program any desired scaling factor from ±1.000E-31 to ±9.999E+31. The scaling factor is stored within the device.

Start Time: Software programmable start time and date, up to six months in advance

Memory: 32,767 readings; software configurable memory wrap
Reading Interval: 1 reading every second to 1 every 12 hours
Real Time Recording: May be used with PC to monitor and record data in real time

Calibration: Digital calibration through software
Calibration Date: Automatically recorded within device
Power: 3.6V lithium battery included
User Replaceable Battery: 1 year typical at 25 ºC
Data Format: Date and time stamped A, mA, µA, engineering units specified through software

Time Accuracy: ±1 minute/month (at 20 ºC, RS232 cable not in use)
Computer Interface: PC serial or RS232C COM (Interface cable required); 2,400 baud
Software: Windows 95/98/ME/NT/2000/XP based software
Operating Environment: -40 to +80 ºC, 0 to 95 %RH non-condensing
Dimensions: 1.4" x 2.6" x 0.6" (36 mm x 66 mm x 16mm)
Weight: 0.9 oz (24 g)
Materials: ABS plastic

BATTERY WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT RECHARGE, DISASSEMBLE, HEAT ABOVE 212ºF, INCINERATE OR EXPOSE CONTENTS TO WATER.

SOFTWARE FEATURES

Multiple Graphs: Simultaneously analyze data from several units or deployments; easily switch to a single data series

Real-Time Recording: Collect and display data in real-time while continuing to log

Graphical Cursor: One click displays readings by time, value, parameter or sample number

Data Table: Instantly access tabular view for detailed dates, times, values, and annotations

Scaling Options: Autoscale function fits data to the screen, or allows user to manually enter their own values

Formatting Options: Change colors, line styles, plotting options, show or hide channels in an instant

Statistics: Calculate averages, min, max, standard deviation, and mean kinetic temperature with the touch of a button

Export Data: Export data in a variety of common formats, or switch to Excel with a single click

Calibration: Fully digital calibration function automatically stores parameters in device

Logger Configuration: Easy set up and launch of data loggers with immediate or delayed start, preferred sample rate, and device ID

Communications: Automatically sets up communications port, or lets user set configuration

Printing: Automatically print graphical or tabular data

*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
PROCESS101	Current Recorder
IFC110	Software, manual and 9-pin computer interface cable
NIST	N.I.S.T. Calibration Certificate

ASK ABOUT OUR OTHER DATA RECORDERS

Temperature	**pH**
Humidity	**Level**
Pressure	**Shock/Vibration**
Bridge/Strain	**Submersible**
Current	**Intrinsically Safe**
Pulse/Event	**RF Transmitters**
Voltage	**Multi-parameter**

MADGETECH
WE BUILD DATA LOGGERS

201 Route 103 West - PO Box 50 · Warner, NH 03278
Phone: (603) 456-2011 · Fax: (603) 456-2012
info@madgetech.com · www.madgetech.com