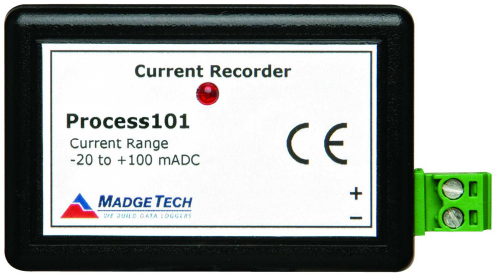
PROCESS101
CURRENT DATA LOGGER

Features

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

Applications

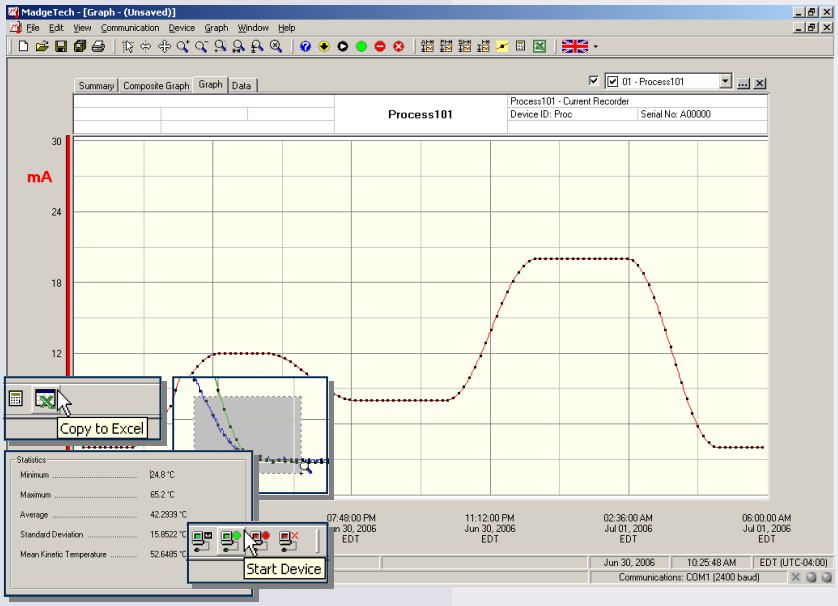
- 4 to 20 mA recording
- pH recording
- Low level signal monitoring
- Photovoltaic studies
- Battery studies
- Factory process control
- Biological sensor monitoring
- Medical and Pharmaceutical
- Environmental studies
- Research and development



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!



MadgeTech Data Recorder Software
displays current data in an easy to use graph.

The Windows®-based software package 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.

PROCESS101 SPECIFICATIONS*

Input Connection: Removable screw terminal
Measurement Range: -20 to +120mA
Current Resolution: 10µA
Calibrated Accuracy: ±0.1%FSR
Input Impedance: 10Ω
Analog Conversion Time: 133ms nominal
Frequency Rejection: 60Hz
Temperature Coefficient: < 100 ppm/°C; < 50 ppm/°C typical
Overload Protection: ±125mA for 10 seconds
Specified Accuracy Range: Nominal range @ 25°C

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 Modes: Software programmable immediate start or delay start up to six months in advance

Memory: 32,767 readings; software configurable memory wrap
Reading Rate: 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
Battery Type: 3.6V lithium battery included; **user replaceable**
Battery Life: 1 year typical at 25°C
Data Format: Date and time stamped A, mA, µA, engineering units specified through software

Time Accuracy: ±1 minute/month (at 20°C, RS232 cable not in use)
Computer Interface: PC serial or USB (interface cable required); 2,400 baud
Software: Windows 95/98/ME/NT/2000/XP/Vista based software
Operating Environment: -40 to +80°C, 0 to 95%RH non-condensing
Dimensions: 1.4" x 2.5" x 0.6" (36mm x 64mm x 16mm)
Weight: 0.9 oz (24 g)
Materials: ABS plastic
Approvals: CE

BATTERY WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT RECHARGE, DISASSEMBLE, HEAT ABOVE 212°F, 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 quickly

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: Automatically calculate and store calibration parameters

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 select configuration

Printing: Automatically print graphical or tabular data

*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY AND REMEDY LIMITATIONS APPLY.

ORDERING INFORMATION

Model	Description	_____
PROCESS101	Current Recorder	
IFC110	Software, manual and RS232 interface cable	
IFC200	Software, manual and USB interface cable	
NIST	N.I.S.T. Calibration Certificate	
LTC-7PN	Replacement battery for Process101	

ASK ABOUT OUR OTHER DATA RECORDERS

Temperature	Pulse/Event/State
Humidity	Low Level Current
Pressure	Low Level Voltage
pH	RF Transmitters
Level	Intrinsically Safe
Shock	Spectral Vibration
LCD Display	

MADGETECH
WE BUILD DATA LOGGERS