MADGETECH Pulse101A Pulse Data Logger Instruction Manual

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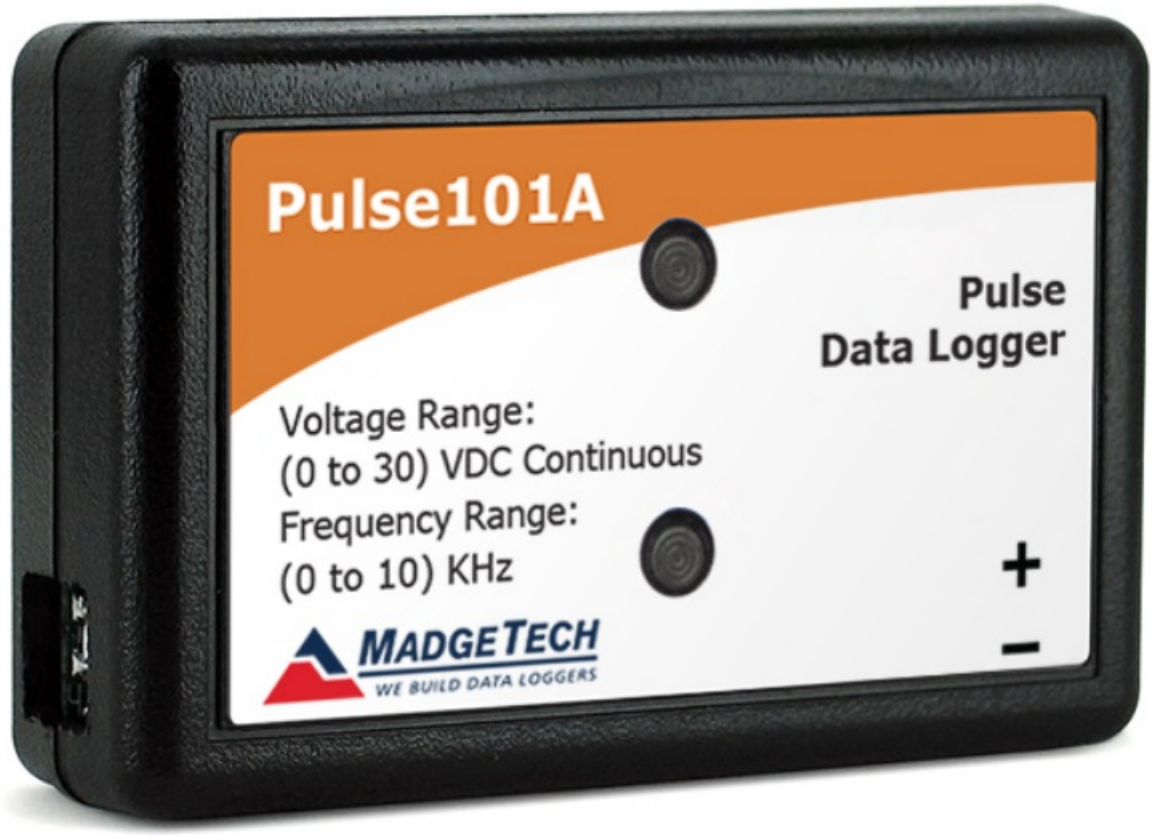
MADGETECH
WE BUILD DATA LOGGERS

MADGETECH Pulse101A Pulse Data Logger



Product Information

Pulse101A Pulse Data Logger

The Pulse101A is a data logger designed to measure and record pulse rates. It features removable screw terminals for easy input connection and has a maximum pulse rate of 10 KHz. The input range is from 0 to 30 VDC, with an input low of < 0.4 V and an input high of > 2.8 V. The device has an internal weak pull-up and an input impedance of > 60 k. It can detect pulse widths or contact closure durations as short as 10 microseconds. The Pulse101A allows for native measurement units to be scaled to display measurement units of another type, making it versatile for monitoring outputs from different types of sensors such as flow rate and wind speed.

MadgeTech 4 Software Features

- **Statistics:** Provides statistical analysis of recorded data.
- **Export to Excel:** Allows data to be exported to Microsoft Excel for further analysis.
- **Graph View:** Displays recorded data in graphical form for easy visualization.
- **Tabular Data View:** Displays recorded data in a table format for easy reference.
- **Automation:** Enables automated processes for data logging and analysis.

IFC200 USB Data Logger Interface

The IFC200 is an interface cable used to communicate between stand-alone data loggers and the MadgeTech software. It allows for starting, stopping, and downloading of data from the loggers. The IFC200 has been redesigned for plug-and-play functionality, eliminating the need for driver installation. It can be directly connected to a computer without any additional setup.

The improved IFC200 can operate at up to 500 Volts RMS relative to the computer’s earth ground when attached. It features communication LEDs that provide visual indication of device status. The blue light illuminates when the

device is successfully recognized by Windows, the red light flashes when data is sent, and the green light flashes when data is received.

Product Usage Instructions

Pulse101A Data Logging

1. Connect the desired input to the removable screw terminal of the Pulse101A.
2. Ensure that the input falls within the specified input range of 0 to 30 VDC.
3. Set the desired start mode by selecting immediate start, delay start, or multiple pushbutton start/stop.
4. If using delay start, specify the desired delay duration (up to 18 months).
5. Select the stop mode: manual through software or timed (specific date and time).
6. If using timed stop mode, set the desired stop date and time.
7. Configure any additional settings such as alarm limits and password protection as needed.
8. Start the data logger according to the chosen start mode.
9. Allow the Pulse101A to record data based on the configured reading rate.
10. Stop the data logger manually through the software or allow it to stop automatically according to the chosen stop mode.
11. Connect the Pulse101A to a PC using the IFC200 USB interface cable.
12. Download the recorded data using the MadgeTech software for further analysis.

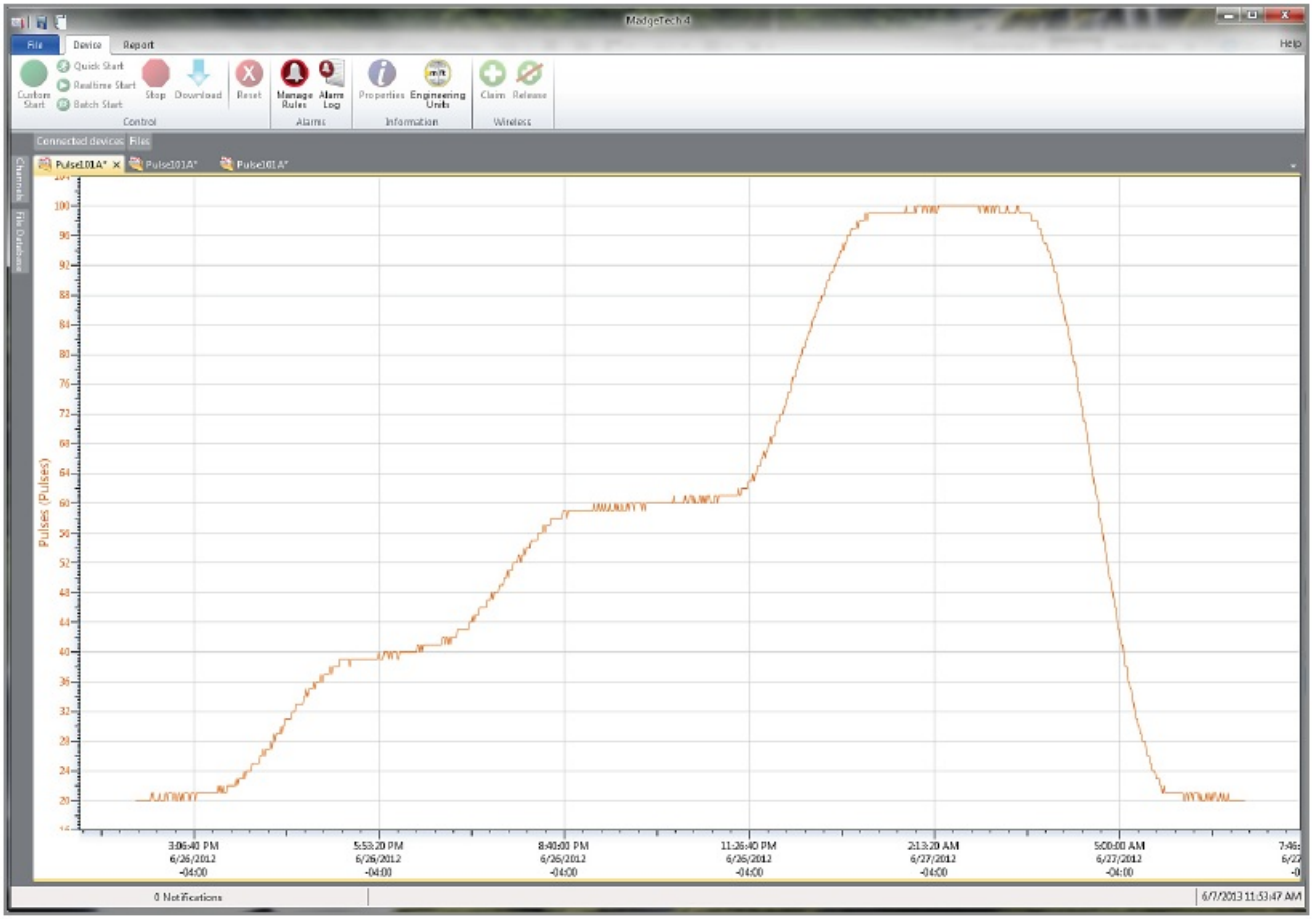
IFC200 Interface Cable Usage

1. Ensure that the IFC200 is properly connected to the Pulse101A data logger and the computer.
2. Check that the blue LED on the IFC200 illuminates, indicating successful recognition by Windows.
3. Use the MadgeTech software to start, stop, or download data from the connected data logger.
4. Monitor the red and green LEDs on the IFC200 to determine data transmission status.
5. Ensure that the IFC200 is operated within the specified voltage limits for safe usage.

The Pulse101A is a compact data logger compatible with many switches, meters and transducers. This multipurpose pulse recording device is designed to accurately monitor and record events occurring within a specified time frame. The Pulse101A can be used for flow rate, gas and water metering, or can also be used in conjunction with an anemometer to track air speed. This versatile low cost device is compatible with dry contact closures and has many general purpose uses such as frequency monitoring and traffic studies.

The Pulse101A has a maximum pulse rate of 10 KHz to capture rapid events for a wide range of applications. With a ten year battery life and the ability to store over 1,000,000 readings, the Pulse101A can be deployed for long term assignments and configured to start and stop logging as specified by the user.

MadgeTech 4 Software Features


MadgeTech 4
File
Device
Report
Help
Quick Start
Realtime Start
Batch Start
Custom Start
Stop
Download
Reset
Control
Manage Rules
Alarm Log
Alarms
Properties
Engineering Units
Information
Claim
Release
Wireless
Connected devices
Files
Channels
File Database
Pulse101A*
Pulse101A*
Pulse101A*
Pulses (Pulses)
100
96
92
88
84
80
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72
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56
52
48
44
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32
28
24
20
3:06:40 PM
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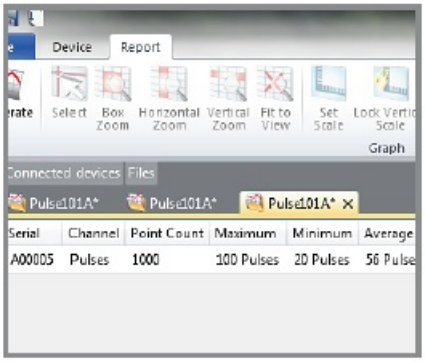
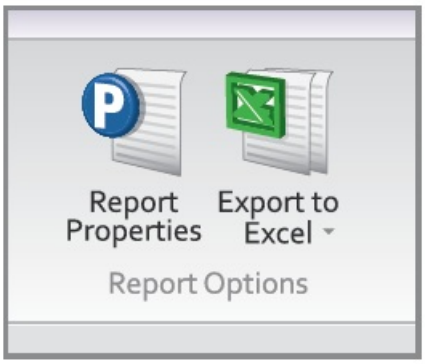
-04:00
5:53:20 PM
6/26/2012
-04:00
8:40:00 PM
6/26/2012
-04:00
11:26:40 PM
6/26/2012
-04:00
2:13:20 AM
6/27/2012
-04:00
5:00:00 AM
6/27/2012
-04:00
0 Notifications
6/7/2013 11:53:47 AM

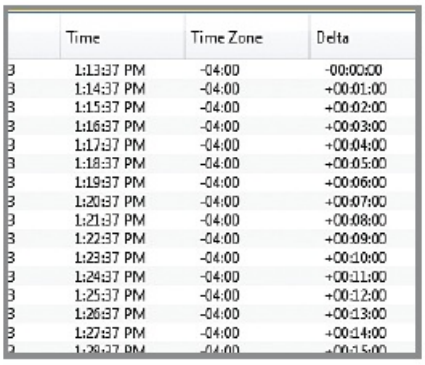
Graph View



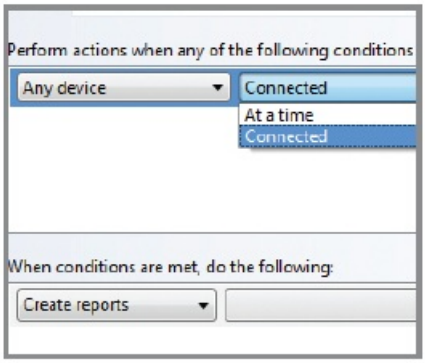
Statistics



Export to Excel



Tabular Data View



Automation

- 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

General Information

Features

- 10 Year Battery Life
- 1 Second Reading Rate
- Multiple Start/Stop Function
- Ultra High Speed Download
- 1,047,552 Reading Storage Capacity
- Memory Wrap
- Battery Life Indicator
- Optional Password Protection
- Field Upgradeable

Benefits

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

Applications

- Compatible with Dry Contact Closures
- Flow Rate Recording
- Gas and Water Metering
- Traffic Studies
- Frequency Recording
- Air Speed Indicators
- General Purpose Pulse Recording

SPECIFICATIONS

Specifications are subject to change without notice. Specific warranty remedy limitations apply. Call (603) 456-2011 or go to **madgetech.com** for details.

MEASUREMENT

MEASUREMENT	
Input Connection	Removable screw terminal
Maximum Pulse Rate	10 KHz
Input Range	0 to 30 VDC continuous
Input Low	< 0.4 V
Input High	> 2.8 V
Internal Weak Pull-Up	< 60 µA
Input Impedance	> 60 kΩ
Minimum Pulse Width/ Contact Closure Duration	≥ 10 microseconds
Engineering Units	Native measurement units can be scaled to display measurement units of another type. This is useful when monitoring outputs from different types of sensors such as flow rate, wind speed and more

GENERAL

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 co mmunicate 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	1,047,552 readings; software configurable memory wrap 523,776 readings in multiple start/stop mode
Wrap Around	Yes
Reading Rate	1 reading every second up to 1 reading every 24 hours

Alarm	Programmable high and low limits; alarm is activated when recording environment 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, dependent upon frequency and duty cycle
Data Format	Date and time stamped uA, mA, A
Time Accuracy	±1 minute/month at 25 ºC (77 ºF) – 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 ºC to +80 ºC (-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

Ordering Information

Pulse101A	PN 901312-00	Pulse Data Logger
IFC200	PN 900298-00	USB interface cable
LTC-7PN	PN 900352-00	Replacement battery for the Pulse101A

For Quantity Discounts call (603) 456-2011 or email **sales@madgetech.com**

Contact

- 6 Warner Road, Warner, NH 03278
- (603) 456-2011
- madgetech.com
- sales@madgetech.com

Documents / Resources

	MADGETECH Pulse101A Pulse Data Logger [pdf] Instruction Manual Pulse101A Pulse Data Logger, Pulse101A, Pulse Data Logger, Data Logger, Logger

References

- MadgeTech Data Loggers | Solutions for Critical Applications
- MadgeTech Data Loggers | Solutions for Critical Applications