REED
INSTRUMENTS

AC Voltage/Current Datalogger

WARRANTY
1 YEAR
WARRANTY

Instruction Manual

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Introduction

Thank you for purchasing your REED R5003 AC Voltage/Current Datalogger. Please read the following instructions carefully before using your instrument. By following the steps outlined in this manual your meter will provide years of reliable service.

Product Quality

This product has been manufactured in an ISO9001 facility and has been calibrated during the manufacturing process to meet stated product specifications. If a certificate of calibration is required please contact the nearest authorized REED distributor or authorized Service Center. Please note an additional fee for this service will apply.

Safety

- Never attempt to repair or modify your instrument. Dismantling your product, other than for the purpose of replacing batteries, may cause damage that will not be covered under the manufacturer's warranty. Servicing should only be provided by an authorized service center.
- Do not operate around explosive gas, vapour, or dust.
- Do not operate with any of the parts removed.
- Do not use if the unit looks damaged.
- Pay attention to avoid short circuits when testing a non-insulated cable.
- Never open the battery cover during measurements.
- Do not install substitute parts or make modifications on the meter.
- Never replace the battery in moist areas.
- Ensure the meter is disconnected and switched off before opening the battery cover to replace the battery.
- Do not place the instrument in high vibrating areas.
- Do not expose the meter to direct sunlight, high temperatures or high moisture environments.
- Switch off the meter after each use.
- Remove the AAA batteries if the meter will be stored for long periods of time.

Features

- Datalog up to 256,000 AC voltage and current measurements
- Dual input measures 2 voltage/current measurements or 1 of each
- LCD simultaneously displays time/date, current readings and Max/Min readings
- User adjustable sample rate from 1 second to 24 hours
- High and low alarms
- Download measurements via USB interface and analyze results with included software
- Magnetic back allows instrument and sensors to be secured firmly in a variety of locations
- Low battery indicator and auto shut off

Included

- 2 x AC Current Clamp Sensors
- 2 x Voltage Sensors
- 4 x Large Alligator Clips
- 4 x Basic Test Probes
- USB Cable
- Software
- AC Adapter
- Batteries

Specifications

AC Voltage

Range:	10 to 600V
Accuracy:	±(2.0% rdg + 1V)
Resolution:	0.1V

AC Current

Range:	10 to 200A
Accuracy:	±(2.0% rdg + 1A)
Resolution:	0.1A

General Specifications

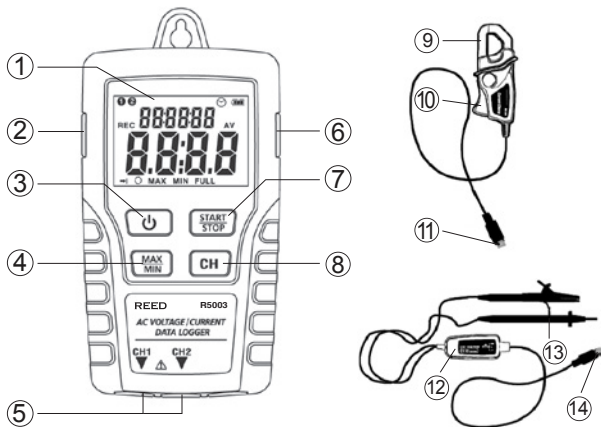|	
Channels:	Dual channel, TRMS AC Voltage or Current
Display:	Dual LCD
Min/Max:	Yes
Datalogging Capabilities:	Yes
Real-Time Clock and Date Stamp:	Yes
Selectable Sampling Rate:	1 second to 24 hours
Max Datapoints:	256,000
Auto Shut-off:	Yes (after 5 minutes of inactivity)
Low Battery Indicator:	Yes
Clamp Jaw Opening:	0.5" (12.7mm)
Power Supply:	4 AAA Batteries or AC Adapter
Battery Life:	Sampling Time Dependent
Overvoltage Category:	CAT. III 600V
Product Certifications:	CE
Operating Temperature:	0 to 122°F (0 to 50°C)
Storage Temperature:	-4 to 140°F (-20 to 60°C)
Operating Humidity Range:	10 to 75%
Dimensions:	4.5 x 2.5 x 1.3" (114 x 63 x 34mm)
Weight:	8.7oz (248g)

Instrument Description

LCD Description

1. Recording Status Indicator
2. Recording until memory full indicator
3. Continuous Recording
4. Maximum and Minimum Indicator
5. Memory Full Indicator
6. Battery Indicator
7. Auto Power Off Indicator
8. Normal Record Mode is selected Indicator (Default)
9. Selected Channel Indicator

Meter Description

1. LCD Display
2. AC Adaptor Jack
3. POWER Button
4. MAX/MIN Button
5. Channel Input Jacks
6. USB Port
7. START/STOP Button
8. Channel Selection Button

9. AC Current Clamp Jaw
10. Jaw Opening Trigger
11. Current Sensor Plug
12. Voltage Module
13. AC Voltage Probes/
    Alligator Clips
14. Voltage Sensor Plug

Supplemental Display Notes

- "-LO-" appears on the display when indicating an open circuit (i.e. probes are not in contact with source.)
- "-CH-" appears on the display when no sensor is connected to a specific channel.

Software Installation

Note: The data logger is still running off its internal batteries when plugged into the computer. Be sure there is sufficient battery power before plugging the data logger into a computer or data may be lost or corrupted.

Install the included software by placing the supplied program disc in the PC's CD-ROM drive. If the installation program does not automatically start, open and browse the CD-ROM drive from your computer. Double click on the CV2 Datalogger file and follow the on-screen prompts to install the software.

If your computer does not have a CD drive please visit www.reedinstruments.com/software to download the latest R5003 software.

Note: The Windows Installer package should be used to properly install the software as it automatically installs the required drivers. It is recommended to restart your computer after installation before using the software for the first time.

Full specifications and Operating System compatibility can be found on the product page at www.reedinstruments.com.

If you have specific questions related to your application and/or questions related to software setup and functionality please contact the nearest authorized distributor or Customer Service at info@reedinstruments.com or 1-877-849-2127.

Software Operation

The software operating guide can be found on the R5003 product page under the resources tab at www.reedinstruments.com

Operating Instructions

Power ON/OFF

Press the POWER button to turn the meter on or off.

Setup Mode

1. Once the software has been installed, connect the R5003 to an available USB port on your PC with the included USB cable and power on the meter.
2. Double click the SOFTWARE icon on your desktop and the program will load.
3. Set up the data logger for a new session (see *Software Operating Guide* for details).
4. When setup is complete, the R5003 should be removed from the USB port in order to preserve battery life.
5. Connect the voltage test leads or the current probes to the AC source, or clamp the jaws around a single conductor for AC current measurements from 10 to 200A.
6. Press and hold the **START/STOP** button for four seconds to start recording. The REC icon will appear in the display indicating that recording has begun.
7. Press and hold the **START/STOP** button for four seconds to stop recording. The REC icon will disappear from the display.

Note: Recording cannot be paused or restarted until the previous data is downloaded to the software and a new session is set up. Furthermore, recording will automatically stop when the memory is full. When continuous recording is selected (via the software), newer data will overwrite the oldest data when the memory is full.

8. When testing is complete, remove the sensors or probes, connect the data logger to a PC and use the supplied software to download the data.

MAX/MIN

Press the **MAX/MIN** button to display the Maximum and Minimum AC current or Voltage values recorded during the measurement process.

1. Press the **MAX/MIN** button once to display the maximum value.

2. Press the button again to display the minimum value.
3. Press the button a third time to resume normal operation.

Note: The meter will automatically exit MAX/MIN mode if no key is pressed within 10 seconds.

Auto Power Off

To preserve battery life, the meter is programmed to turn itself off after 5 minutes of inactivity. The auto power off function does not apply when the meter is datalogging.

Battery Replacement

When the low battery indicator appears on the LCD, the batteries must be replaced.

1. Using a Phillips head screwdriver, remove the screw on the back of the meter.
2. Remove the battery cover.
3. Replace the 4 x AAA batteries.
4. Secure the battery cover in place and tighten the screw.

Accessories and Replacement Parts

- **R1110** Test Probe Set
- **R1210** Alligator Clip Set
- **R8888** Medium Hard Carrying Case

Don't see your part listed here? For a complete list of all accessories and replacement parts visit your product page on www.reedinstruments.com.

Product Care

To keep your instrument in good working order we recommend the following:

- Store your product in a clean, dry place.
- Change the battery as needed.
- If your instrument isn't being used for a period of one month or longer please remove the battery.
- Clean your product and accessories with biodegradable cleaner. Do not spray the cleaner directly on the instrument. Use on external parts only.

Product Warranty

REED Instruments guarantees this instrument to be free of defects in material or workmanship for a period of one (1) year from date of shipment. During the warranty period, REED Instruments will repair or replace, at no charge, products or parts of a product that proves to be defective because of improper material or workmanship, under normal use and maintenance. REED Instruments total liability is limited to repair or replacement of the product. REED Instruments shall not be liable for damages to goods, property, or persons due to improper use or through attempts to utilize the instrument under conditions which exceed the designed capabilities. In order to begin the warranty service process, please contact us by phone at 1-877-849-2127 or by email at info@reedinstruments.com to discuss the claim and determine the appropriate steps to process the warranty.

Product Disposal and Recycling

Please follow local laws and regulations when disposing or recycling your instrument. Your product contains electronic components and must be disposed of separately from standard waste products.

Product Support

If you have any questions on your product, please contact your authorized REED distributor or REED Instruments Customer Service by phone at 1-877-849-2127 or by email at info@reedinstruments.com.

Please visit **www.REEDINSTRUMENTS.com** for the most up-to-date manuals, datasheets, product guides and software.

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