User's Guide

EXTECH®
INSTRUMENTS
A F L I R C O M P A N Y

Dual Input True RMS AC Voltage/Current Datalogger

Model DL160 / DL162

Introduction

Congratulations on your purchase of this Dual Input Voltage / Current datalogger. With this meter, you can monitor and log data (Voltage/Voltage, Current/Current or Voltage/Current) over long periods of time and then easily transfer the data to a pc for viewing and evaluation. The LCD display provides real time data, Max/Min data and time information. This meter is shipped fully tested and calibrated and, with proper use, will provide years of reliable service.

Safety

⚠Warning!

- Do not attempt to make measurement in flammable gaseous areas!

- When testing a non-insulated cable, pay attention to avoid short circuits.

- Do not attempt to use the instrument when your hand is wet!

- Do not input over range during measurements.

- Never open the battery cover during measurements.

- Stop using the instrument when there is any structural defect or exposed metal parts.

- Do not install substitute parts or make modifications on the meter.

- Never replace the battery in moist areas.

- Ensure the meter is disconnected and switch off before opening the battery cover to replace the battery.

- Do not attempt to place the instrument in high vibration areas.

- Do not expose the meter to direct sunlight, high temperature and high moisture environment.

- Switch off the meter after use. Remove the AAA batteries when the meter will be stored for a period of time..

- When cleaning, do not use abrasives or solvents on the meter, use a damp cloth and mild detergent only.

Description and Button Functions

1. LCD Description

⊘ Auto power off (does not apply when recording), the meter will automatically shuts off after 5mins without any button presses.

REC: Recording status. After the record mode is set up by the software, press the START/STOP button for more than 4 seconds to begin recording. This icon will be displayed and indicates the meter is recording data. Press the same button again for more than 4 seconds to stop recording.

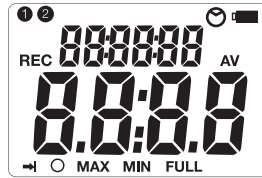➡| Record until full is selected. When the memory is full, the datalogger will stop recording.

◯ Continuous recording is selected. When the memory is full, the data will overwrite the oldest data.

FULL Memory full and recording has stopped.

🔋 Battery status, when completely filles in (black) the battery power is full. When there is only one section filled in, the battery is exhausted and should be replaced with a new one.
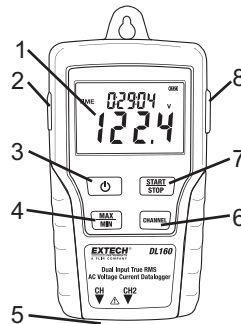
2. AC adaptor Jack

3. ON/OFF Button

4. MAX/MIN : Press the button one time to display the MAX (maximum) reading . Press again to display the MIN (minimum) reading. A third press will exit MAX/MIN mode. The meter will automatically exit MAX/MIN mode in 10 seconds if no button is pressed.

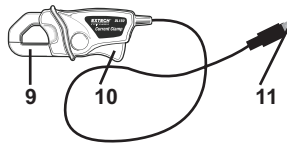**5. CH Input Jacks:** Insert the current or voltage sensor to these ports to measure and record the data.

6. CHANNEL: Select the channel for display on the LCD

7. START/STOP: After the datalogger is setup from the software, press the START/STOP button for 4 seconds to begin recording. Press the button again for 4 seconds to stop recording. Recording cannot be started again until the data is downloaded to the software.

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8. USB Port

9. AC Current Clamp Jaw: Clamp the jaws around a single conductor for AC current measurements to 200A
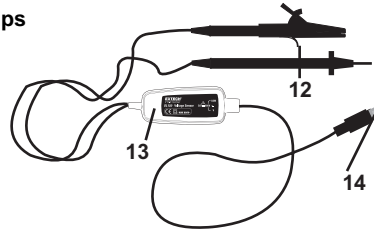
10. Jaw Opening Trigger:

11. CH Plug:

12. AC Voltage Probes or Alligator clips

13. Voltage module

14. CH Plug

Operation

1. Install 4 fresh AAA batteries or connect the AC adaptor.
2. Set-up the datalogger using the software provided.
3. Connect the voltage test leads or the current probes to the AC source to be measured.
4. Press and Hold the START/STOP button for four seconds to start recording. The "REC" icon will appear in the display indication that recording has begun.
5. Press and Hold the START/STOP button for four seconds to stop recording. The "REC" icon will disappear from the display.
6. Remove the probe, connect the datalogger to a PC and use the supplied software to download the data.

Note: If the clock does not set to the correct time, replace the 3V button battery.

Software Introduction

1. Place the CD in the drive and then follow the on-screen installation instruction.
2. After the software is installed, keep the CD in the drive and connect the datalogger to the PC by the USB cable.
3. A USB Driver installation window will pop-up. Follow the directions to install the driver.

System Required:
Windows 2000 or Windows XP or Vista

Minimum Hardware Required:
PC or NoteBook with Pentium 90MHz or higher 32 MB RAM ;
At least 7 MB byte hard disk space available to install Datalogger USB software.
Recommended display resolution 1024X768 with High Color(16 bit).

Software Operation
The Software operation is described in the HELP file located on the software disk.

Warranty

EXTECH INSTRUMENTS CORPORATION (A FLIR COMPANY) warrants this instrument to be free of defects in parts and workmanship for **one year** from date of shipment (a six month limited warranty applies to sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department at (781) 890-7440 ext. 210 for authorization or visit our website www.extech.com for contact information. A Return Authorization (RA) number must be issued before any product is returned to Extech. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. Extech specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. Extech's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.

Calibration and Repair Services

Extech offers repair and calibration services for the products we sell. Extech also provides NIST certification for most products. Call the Customer Care Department for information on calibration services available for this product. Extech recommends that annual calibrations be performed to verify meter performance and accuracy.

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Support line (781) 890-7440

Technical Support: Extension 200; E-mail: support@extech.com

Repair & Returns: Extension 210; E-mail: repair@extech.com

Product specifications subject to change without notice

For the latest version of this User Guide, Software updates, and other up-to-the-minute product information, visit our website: www.extech.com

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Specifications

Display	Multi-function LCD
Maximum data points	256,000 values
Channels	dual channel, TRMS AC Voltage or Current
Sample rate	1s to 24h selectable
Analysis software	2000/XP/ Vista
Data output	USB port
Current Clamp Jaw opening	0.5" (12.7mm)
Open input indication	"LO" appears on the LCD
Low battery indication	Empty battery symbol appears on the LCD
Power supply	4 AAA Batteries and 1 CR 3V memory button battery (CR2032 or equivalent)
Battery life	5 days (approximately)
AC Adaptor	9V, 0.5A
Standards	$C \epsilon$, CAT III 600V, for inside use, maximum height 2000 meters
Operating Temperature	-32 to 122°F, 0 to 50°C
Operating Humidity	<70% RH
Storage temperature:	-20°C to 60°C (-4°F to 140°F)
Storage Humidity	< 80% relative humidity.
Dimensions	4.5 x 2.5 x 1.3" (114 x 63 x 34mm)
Weight	8.7oz. (248g)

Function	Range	Accuracy
Voltage (40Hz to 1kHz)	10VAC to 600.0VAC	±2.0%±1V
Current (50/60Hz)	10A to 200.0A	±2.0%±1A