EXTECH ®

True RMS AC Voltage/Current Datalogger

Model DL150

Introduction

Congratulations on your purchase of this Voltage or Current datalogger. With this meter, you can monitor and log data 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, 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

⟳: Normal record mode is selected

∿: Capture record mode is selected. Records the sine wave when the measure value exceeds the Capture Detection set level.

⊘: Auto power off setting, the meter will automatically shut off after 5mins without any button presses.

PEAK: Average peak measure and record mode selected (about 195ms)

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 sign, when display completely the battery power is full. When there is only a frame icon displayed, the battery is exhausted and should be replaced with a new one.
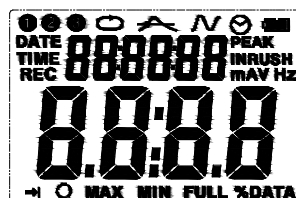
2. AC adaptor Jack

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 Jack: Insert the current or voltage sensor to this COM to measure and record the data.

6. PEAK HOLD: In the non-PEAK measurement mode, press the PEAK HOLD button to display the average Peak value of the present value. Press the button again to exit PEAK display. The meter will automatically exit in 10s if no button is pressed.

7. START/STOP: Press the START/STOP button for one time to pause data. Press again to resume. After setting the record mode, press this button for more than 4 seconds and then release it after REC is shown on the LCD. The meter will measure and record data according to the software setup.

8. USB Port

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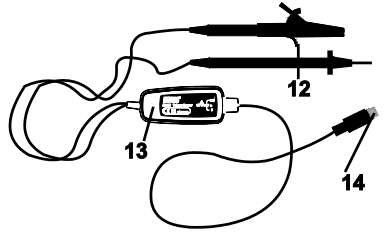
10. Jaw Opening Trigger

11. CH Plug
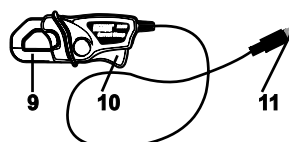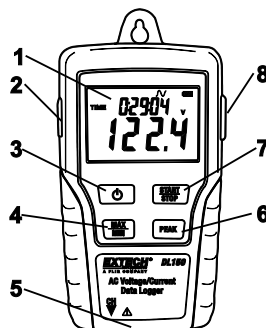
12. AC Voltage Probes or Alligator clips

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.
   See the Software Help Guide that comes with the software.
3. Connect either the voltage or current probe to the bottom of the meter.
4. Connect the voltage test leads or the current probes to the AC source to be measured.
5. 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.
6. Press and Hold the START/STOP button for four seconds to stop recording. The "REC" icon will disappear from the display.

   NOTE: if you STOP the recording you MUST reprogram the meter with the software before recording again.
7. Remove the probe from the test circuit, connect the datalogger to a PC and use the supplied software to download the data.

Voltage Test Leads
Single Phase: Connect one lead to one phase and the other lead to the Neutral line.

Multi phase: Connect one lead to one phase and the other lead to another phase.

Current clamp
Connect the clamp over one lead only and the clamp jaw must fully close in order to measure correctly.

Battery Replacement

Safety: Please dispose of batteries responsibly; never dispose of batteries in a fire, batteries may explode or leak. If the meter is not to be used for 60 days or more, remove the battery and store separately.

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

PC Interface and Software

Check the software download page of the website **www.extech.com/software/downloads** for the latest version of the PC software. Instructions for use and features are detailed in the supplied software HELP utility.

Specifications

Display	Multi-function LCD
Maximum data points	100,000
Channels	Single channel, TRMS AC Voltage or Current
Sample rate	1s to 24h selectable
Transient capture	>0.244mS
Data output	USB port
Open input indication	"LO" appears on the LCD
Low battery indication	Empty battery symbol appears on the LCD
Power supply	4 AAA Batteries
Battery life	5 days (approximately)
AC Adaptor	9V, 0.5A
Standards	CE CAT III 600V
Operating Temperature	32 to 122°F, 0 to 50°C
Operating Humidity	<70% RH
Current Clamp Jaw opening	0.5" (12.7mm)
Dimensions	4.5 x 2.5 x 1.3" (114 x 63 x 34mm)
Weight	8.7oz. (248g)

	Range	Accuracy
Voltage 40Hz to 1kHz	10VAC to 600.0VAC	±2.0%±1V
Current 50/60Hz	10A to 200.0A	±2.0%±1A
Peak Measurement	8.0 to 850.0V	±5.0%

Two-year Warranty

*FLIR Systems Inc.warrants this Extech brand instrument to be free of defects in parts and workmanship for **two years** from date of shipment (a six-month limited warranty applies to sensors and cables). To view the full warranty text please visit: http://www.extech.com/support/warranties.*

Calibration and Repair Services

FLIR Systems Inc.offers calibration and repair services for the Extech brand products we sell. We offer NIST traceable calibration for most of our products. Contact us for information on calibration and repair availability, refer to the contact information below. Annual calibrations should be performed to verify meter performance and accuracy. Product specifications are subject to change without notice. Please visit our website for the most up-to-date product information: www.extech.com.

Contact Customer Support

Customer Support Telephone List: https://support.flir.com/contact

Calibration, Repair, and Returns: repair@extech.com

Technical Support: https://support.flir.com