

RMS Clamp-on Logger Model OM-SL-CL600

USER MANUAL

M-3443/0899



WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA Warranty adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit should malfunction, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of being damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, including but not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by it will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/ DISCLAIMER language, and additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/ INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. P.O. number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY REPAIRS**, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. P.O. number to cover the COST of the repair,
2. Model and serial number of product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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Warning

These safety warnings are provided to ensure the safety of personnel and proper operation of the instrument.

- Read the instruction manual completely and follow all the safety information before attempting to use or service this instrument.
- Use caution on any circuit: Potentially high voltages and currents may be present and may pose a shock hazard.
- Read the Safety Specifications section prior to using the current probe. Never exceed the maximum voltage ratings given.
- Safety is the responsibility of the operator.
- For maintenance, use only original replacement parts.
- NEVER open the back of the instrument while connected to any circuit or input.
- Replace any defective parts immediately.
- NEVER use the Model OM-SL-CL600 on electrical conductors rated above 600 V in overvoltage category III (CAT III).

International Electrical Symbols



This symbol signifies that the Loggers are protected by double or reinforced insulation. Use only specified replacement parts when servicing the instrument.



This symbol signifies CAUTION! and requests that the user refer to the user manual before using the instrument.



For more information about the Logger, refer to disk 2: MAIN MANUAL

Receiving Your Shipment

Upon receiving your shipment, make sure that the contents are consistent with the packing list. Notify OMEGA of any missing items. If the equipment appears to be damaged, file a claim immediately with the carrier and notify OMEGA at once, giving a detailed description of any damage.

Packaging

The Model OM-SL-CL600 includes the following:

- User manual
- One 9 V battery
- Two 3½" disks containing the window-based download and graphic software and a generic user manual
- Six ft. long RS232 cable

Specifications

ELECTRICAL

Number of Channels: 1

Measurement Range: 0 to 600 Arms

Input Connection: Split jaw

***Accuracy:** 2% of readings + resolution (0-400A)
5% of readings + resolution (400-600A)

Resolution : 8 Bit (0.5 Arms)

Scale Range	Maximum Input	Resolution
100%	600 Arms	4 Arms
50%	500 Arms	2 Arms
25%	250 Arms	1 Arms
12.5%	125 Arms	0.5 Arms

Sample Rate:

4096/hr max; decreases by 50% each time memory is full

Data Storage: 8192 readings

Data Storage Technique: TXR™ Time Extension Recording™

Power: 9V Alkaline NEDA 1604, 6LF22, 6LR61

Battery Life Recording:

Up to 1 year continuous recording @ 25°C

Output: RS-232 via DB9 connector

*Reference condition: 23°C ± 3K, 20 to 70% RH, Frequency 50/60Hz, No AC external magnetic Field, DC magnetic field ≤ 40A/m, centered conductor, battery voltage 9 V ± 10%.

INDICATORS

Operation Mode Indicator: One Red LED

- Single Blink in stand-by mode
- Double Blink in logging mode
- Continuously on: Overload condition
- No Blinks in OFF mode

CONTROLS:

One button used to start and stop recording sessions and to turn the data logger ON and OFF.

ENVIRONMENTAL

Operating Temperature: -4 to + 158°F (-20 to +70°C)

Storage Temperature: -4 to + 174°F (-20 to +80°C)

Relative Humidity: 5 to 95% non-condensing

Temperature Influence: 5 cts.

MECHANICAL

Size: 9-1/4" x 4" x 1-5/8" (235 x 102 x 41mm)

Weight (with battery): 17.1 oz.

Maximum Conductor Size: 1 conductor 1.65" (42mm)
2 conductors 1" (25.4mm) each

Case Material: Polycarbonate UL V0

SAFETY



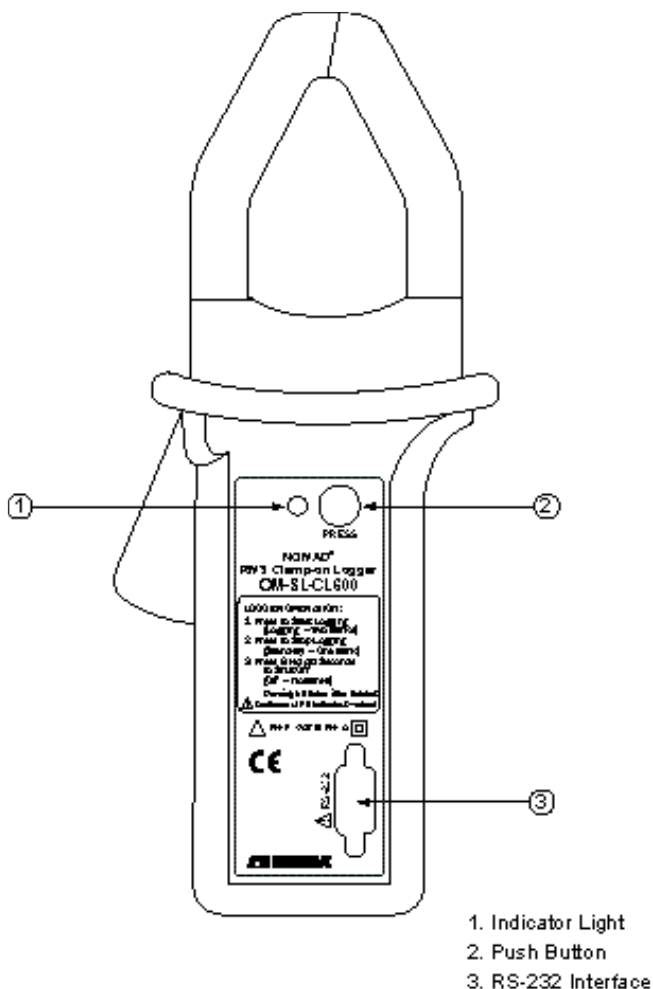
Working Voltage: IEC 1010-1, 600V, Cat III

ORDERING INFORMATION

RMS Clamp-On Logger Model OM-SL-CL600

Features

Models OM-SL-CL600:



Indicators and Buttons

The data logger has one start/stop button and one indicator.

The button is used to start and stop recordings and to turn the data logger on and off. The red LED indicates the status of the data logger; OFF, STANDBY or RECORDING.

Inputs and Outputs

Input to the logger is via a split jaw CT. The bottom of the data logger has a female 9 pin "D" shell serial connector used for data transmission from the data logger to your computer.

Battery Installation

Under normal conditions, the battery will last up to a year of continuous recording unless the logger is re-started very frequently.

In the OFF mode, the logger puts almost no load on the battery. Use the OFF mode when the logger is not in use. Replace the battery once a year in normal use.

If the logger will be used at temperatures below 32°F (0°C) or is frequently turned on and off, replace the battery every six to nine months.

1. Make sure your logger is turned off (no light blinking) and all inputs are disconnected.
2. Turn the data logger upside down. Unscrew the battery compartment.
3. Locate the two wire (red/black) battery connector and attach the 9 V battery to it. Make sure that you observe polarity by lining up the battery posts to the proper terminals on the connector.
4. Once the connector is plugged onto the battery, insert the battery into the battery compartment.
5. Close the battery compartment.

Your data logger is now recording (LED blinking). Press the test button for 5 seconds to stop the instrument

Note: For long term storage, remove the battery to prevent discharge effects.

Operation

Position the Model CL600 around the conductor to be measured. Be sure that the positioning of the CL600 allows the jaws to firmly close before beginning the recording session.

Next, press the start/stop button on the front of the unit to begin the recording session. The indicator light will double blink to indicate that the recording session has started. When the recording session has been completed, press the start/stop button to end the recording. The indicator light will single blink to indicate that the recording session has ended and the unit is in stand-by. Remove the logger from the conductor and transport it to the computer for data downloading. See section 2 page 19 of the main manual for downloading.



Note: If the LED is continuously lit. You are measuring a current above 600A. Unclamp the probe immediately.

Software

MINIMUM COMPUTER REQUIREMENTS

Processor: 386 or higher

RAM Storage: 4 MB minimum

Hard Drive Space:

100K for application, approximately 200K for each stored file

Environment: Windows 3.1 or Windows 95

Port Access: 1 available 9 pin serial port
1 parallel port for printer support

INSTALLATION

Your data logger software is supplied on a single 3½" floppy disk. To install the program on your Windows based computer, proceed as follows: The software is Multilanguage. A prompt will ask you to select the language at the end of the installation process.

Windows 3.1 Systems

1. Insert the floppy disk containing the data logger software in your computer's floppy drive (usually Drive A).
2. From the Program Manager select "File" on the command line.
3. Select "Run" from the pull-down menu and type **a:setup** in the dialog box then click on "OK".

4. The set up program will temporarily load onto your computer.
5. Next the setup program will offer C:\DATALOG as location where the software will be installed. Click on "Next" to use this directory or type in a new name, then click on "Next".
6. A bar graph will appear showing the progress of installation. When installation is complete a message screen will appear stating that the program has been installed. Click on "OK". You are now ready to use the data logger software.

Windows 95 Systems

1. Insert the floppy disk containing the data logger software in your computer's floppy drive (usually Drive A).
2. Click on the "Start" button on the bottom left side of the screen.
3. Select "Run" from the menu and type a:setup in the dialog box then click on "OK".
4. The setup program will temporarily load onto your computer.
5. Next the setup program will offer C:\DATALOG as location where the software will be installed. Click on "Next" to use this directory or type in a new name, then click on "Next".
6. A bar graph will appear showing the progress of installation. When installation is complete a message screen will appear stating that the program has been installed. Click on "OK". You are now ready to use the data logger software.

USING THE SOFTWARE

Launch the software and connect the RS232 cable from your computer from the logger.

Select "FILE", "Baud rate" and "1200", then select "PORT", Com1, Com2, Com3 or Com4 (see your computer manual). The logger must now communicate with your computer (ID number of the logger and number of points recorded displayed).

Select download to display the graph. (Download takes about 90 seconds)

Cleaning

The body of the clamp should be cleaned with a cloth moistened with soapy water. Rinse with a cloth moistened with clean water. Do not use solvent.



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It is the policy of OMEGA to comply with all worldwide safety and EMC/EMI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the CE mark to every appropriate device upon certification.

The information contained in this document is believed to be correct but OMEGA Engineering, Inc. accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

WARNING: These products are not designed for use in, and should not be used for, patient connected applications.

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- Ω Wire: Thermocouple, RTD & Thermistor
- Ω Calibrators & Ice Point References
- Ω Recorders, Controllers & Process Monitors
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3 pH, Conductivity & Dissolved Oxygen Instruments