

# Power & Energy Logger Model PEL 52



**POWER & ENERGY LOGGERS**

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# Statement of Compliance

Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments certifies that this instrument has been calibrated using standards and instruments traceable to international standards.

We guarantee that at the time of shipping your instrument has met the instrument's published specifications.

**An NIST traceable certificate may be requested at the time of purchase, or obtained by returning the instrument to our repair and calibration facility, for a nominal charge.**

The recommended calibration interval for this instrument is 12 months and begins on the date of receipt by the customer. For recalibration, please use our calibration services. Refer to our repair and calibration section at [www.aemc.com/calibration](http://www.aemc.com/calibration).

**Serial #:** \_\_\_\_\_

**Catalog #:** 2137.69 / 2137.71

**Model #:** PEL 52

Please fill in the appropriate date as indicated:

Date Received: \_\_\_\_\_

Date Calibration Due: \_\_\_\_\_



Chauvin Arnoux®, Inc.  
d.b.a AEMC® Instruments

[www.aemc.com](http://www.aemc.com)

## PRODUCT PACKAGING (2137.69)



Power & Energy Logger  
PEL 52  
**Cat. #2137.69**



Soft Carrying Bag  
**Cat. #2126.71**



(2) MiniFlex® MA193-10-BK  
**Cat. #2140.48**



Adapter for Power Cord  
**Cat. #5100.14**



(1) USB SD Card Adapter  
**Cat. #5000.45**



(12) Color-coded  
ID Markers  
**Cat. #2140.45**



(1) 4 GB USB Drive  
with User Manual &  
Dataview® Software



(1) Power Cord,  
5 ft 115 V  
**Cat. #5000.14**



(3) Black Leads &  
Alligator Clips  
**Cat. #2140.44**

### Also Included:

- (1) Safety Sheet for the PEL
- (1) Safety Sheet for the MiniFlex® Sensors
- (1) Compliance Sheet
- (1) SD Card
- (1) Quick Start Guide
- (2) AAA Rechargeable Batteries
- (1) Battery Information Sheet

## PRODUCT PACKAGING (2137.71)



Power & Energy Logger  
PEL 52  
**Cat. #2137.71**



Soft Carrying Bag  
**Cat. #2126.71**



(12) Color-coded  
ID Markers  
**Cat. #2140.45**



Adapter for Power Cord  
**Cat. #5100.14**



(1) USB SD Card Adapter  
**Cat. #5000.45**



(3) Black Leads &  
Alligator Clips  
**Cat. #2140.44**



(1) Power Cord,  
5 ft 115 V  
**Cat. #5000.14**



(1) 4 GB USB Drive  
with User Manual &  
Dataview® Software













### Also Included:

- (1) Safety Sheet for the PEL
- (1) Compliance Sheet
- (1) SD Card
- (1) Quick Start Guide
- (2) AAA Rechargeable Batteries
- (1) Battery Information Sheet

Thank you for purchasing an AEMC® Instruments **Power & Energy Logger Model PEL 52**.

For the best results from your instrument and for your safety, you must read the enclosed operating instructions carefully and comply with the precautions for use. Only qualified and trained operators should use this product.

## Symbols & Definitions

	Signifies that the instrument is protected by double or reinforced insulation
	<b>CAUTION - Risk of Danger!</b> Indicates a <b>WARNING</b> . Whenever this symbol is present, the operator must refer to the user manual before operation.
	Indicates a risk of electric shock. The voltage at the parts marked with this symbol may be dangerous
	Indicates Important information to acknowledge
	This product complies with the Low Voltage & Electromagnetic Compatibility European directives (73/23/CEE & 89/336/CEE)
	The UKCA marking certifies that the product is compliant with the requirements that apply in the United Kingdom, specifically regarding Low-Voltage Safety, Electromagnetic Compatibility, and the Restriction of Hazardous Substances.
	The product has been declared recyclable
	Magnet
	SD Card
 	Chauvin Arnoux® and AEMC® Instruments have adopted an Eco-Design approach in order to design this instrument. Analysis of the complete lifecycle has enabled us to control and optimize the effects of the product on the environment. In particular this instrument exceeds regulation requirements with respect to recycling and reuse
	In the European Union, this product is subject to a separate collection system for recycling electrical and electronic components in accordance with directive WEEE 2002/96/EC

## Definition of Measurement Categories (CAT)

**CAT IV** corresponds to measurements performed at the primary electrical supply (< 1000 V).

*Example: primary overcurrent protection devices, ripple control units, and meters.*

**CAT III** corresponds to measurements performed in the building installation at the distribution level.

*Example: hardwired equipment in fixed installation and circuit breakers.*

**CAT II** corresponds to measurements performed on circuits directly connected to the electrical distribution system.

*Example: measurements on household appliances and portable tools.*

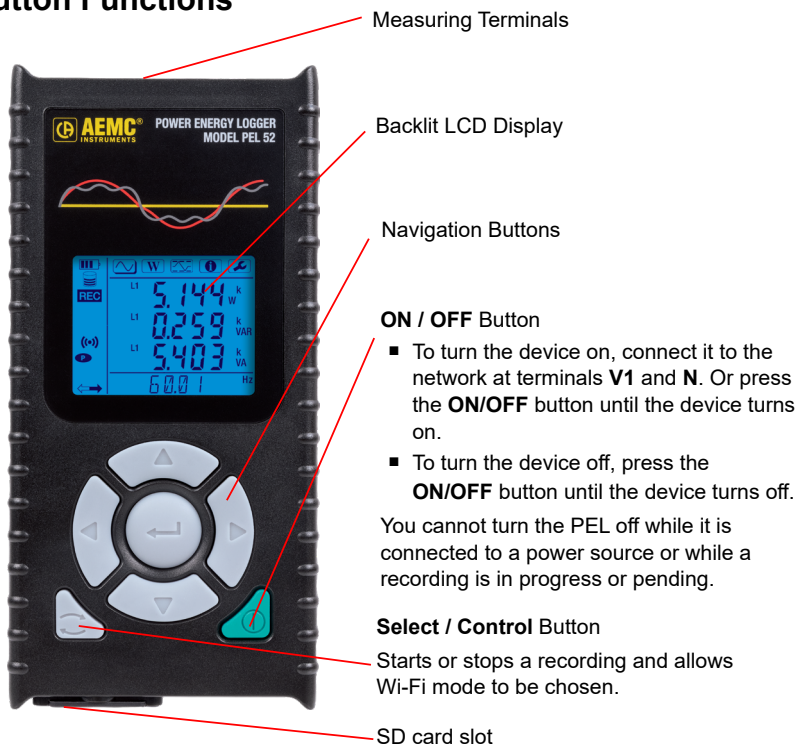
## Precautions Before Use

This device complies with safety standard IEC/EN 61010-2-30 or BS EN 61010-2-030. The leads comply with IEC/EN 61010-031 or BS EN 61010-031. The current sensors comply with IEC/EN 61010-2-032 or BS EN 61010-2-032 for voltages up to 600 V in CAT III.

Failure to observe the safety instructions may result in electric shock, fire, explosion, destruction of the device, or destruction of the installations.

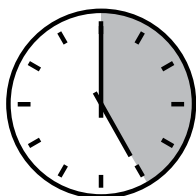
- The operator and responsible authority must read and understand all precautions needed before using the instrument. This instrument requires the user to have knowledge and awareness of electrical hazards.
- Observe the conditions of use, including temperature, relative humidity, altitude, pollution degree, and location of use.
- Do not use the instrument if it appears damaged, incomplete, or improperly closed.
- Before each use, check the condition of the insulation on the leads, housing, and accessories. Any items with a degree of deteriorated insulation must be set aside to repair or discard.
- All troubleshooting and calibration checks must be performed by competent, accredited personnel.

## Button Functions

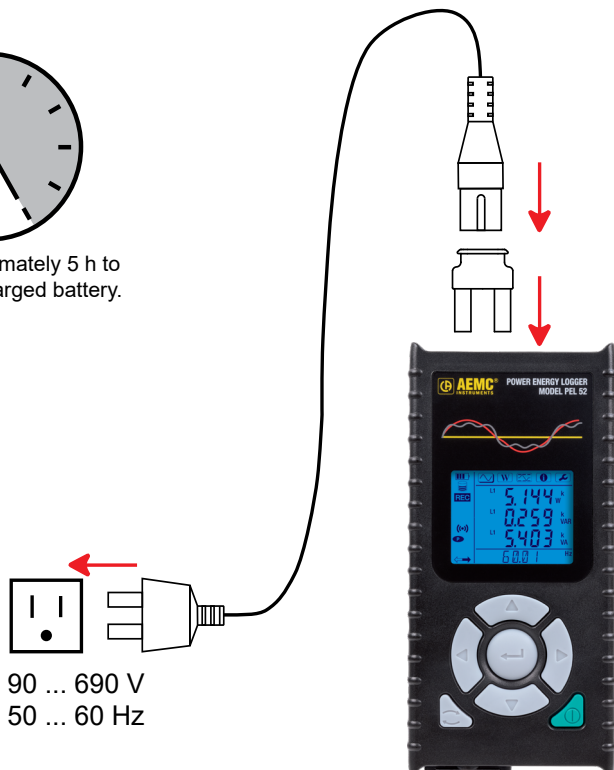


## Charging the Battery



Before using the device for the first time, fully charge the battery at a temperature between (32 and 104) °F (0 and 40) °C.



It takes approximately 5 h to charge a discharged battery.



- Connect the C8 / banana adapter between the **V1** and **N** terminals.
- Plug the power cord into the adapter and into the wall outlet.
- The device will turn on.

When charging, the  symbol will blink and slowly fill up. When the  symbol is full and steady, the battery is fully charged.



**NOTE:** The The battery will take approximately 5 h to fully charge.



## SD Card


The PEL accepts FAT32 formatted SD and SDHC cards up to 32 GB.

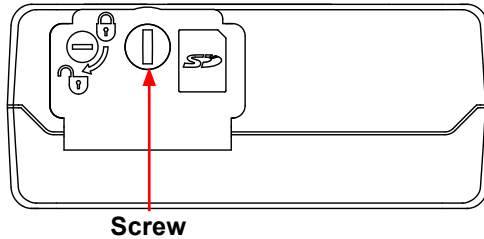


**NOTE:** The PEL must not be used when the SD card slot cover is open.

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The PEL is delivered with a formatted SD card. If you want to install a new SD card, follow the instructions below:

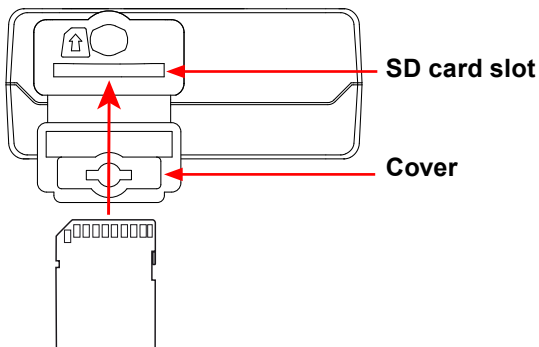
- Unlock the SD card slot cover marked  turning the screw a quarter turn.



**NOTE:** Do not remove the SD card if there is a recording in progress.

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- Open the cover to access the SD Card.
- Press the existing SD card further into the device until you feel a click, then release the SD card to remove it.
- Check that the new SD card is not locked.
- It is preferable to format the SD card in the device using the PEL Control Panel, otherwise, you can format it using a PC.
- Insert the new SD card, and press it into the device until you hear a click.
- Close the SD card slot protective cover.





## Installing PEL Control Panel

The latest PEL Control Panel is available on the USB stick provided with the instrument and can also be found online at [www.aemc.com](http://www.aemc.com).



- Connect the provided USB stick or download the PEL Control Panel.
- Launch setup.exe.
- Then, follow the installation instructions on the screen.



Refer to the user manual for full installation details.

## Connecting the Device to the PC

- Connect the PEL's voltage inputs to wall power. The device will turn on.
- Enable the Wi-Fi access point,  **WIFI AP**, of the device in the configuration menu .




**NOTE:** For the Wi-Fi to operate, the battery must be sufficiently charged (  or  ).

- Connect the PEL to your PC via Wi-Fi.
- Double-click the PEL icon  on the desktop to open the PEL Control Panel.
- Select the **Add device**  icon on the toolbar. Then, select **PEL 52** and **WiFi in access point**.
- When the connection with the device is established, its name should be displayed on the left side of the window in the **PEL Network** folder tree.

Refer to the User Manual operating instructions for a  **WIFI ST** connection.

## Device Configuration

To configure your PEL, select the device in the PEL network.

Open the **Configure Device** dialogue box by clicking the **Configure**  icon in the toolbar, **Device** menu, or **Status** area.


This dialogue box has several tabs:

- The **General** tab can be used to give the device a name, set the automatic turn off delay, choose the refreshing of maximum values, lock the device's **Select / Control** button, prevent battery charging on measurement, set a device configuration password, set date and time, format the SD card, and more.
- The **Communication** tab is used for options relating to the Wi-Fi connection.
- The **Measurement** tab can be used to select the distribution system.
- The **Current Sensors** tab can be used to select the transformation ratio of the current sensors and the number of turns, if necessary.
- The **Recording** tab can be used to select recording parameters.
- The **Meters** tab can be used to reset the energy meters to zero.



Click **OK** to load the new configuration into the device.

## Start a Recording

To start a recording, do one of the following:

- **In the PEL Control Panel**, Select the appropriate option in the **Recording** tab of the Configuration dialogue box.  
The device can be configured to trigger a recording either at a future date and time, or immediately after completing the device configuration.
- **On the device**, Press the **Select** key. The device will display **START**. Confirm with the  key. The **REC** symbol will blink.

To stop a recording, do one of the following:

- **In the PEL Control Panel**, select **Device > Stop recording** .
- **On the device**, press the **Select / Control** key. The device will display **STOP**. Confirm with the  key. The **REC** symbol will disappear.

## Viewing the Recording

Recorded data can be transferred to the PC in two ways for viewing and generating reports:

- The SD card can be removed from the device and connected to the PC using the supplied SD card reader.
  - Start the PEL Control Panel, select the **Open** command in the **File** menu, point to the ICP file with the desired session number on the SD card, and select **Open**.
- The recorded data can be transferred via a direct link between the PC and the PEL (Wi-Fi). Start the PEL Control Panel, open a connection to the device, select the device in the navigation tree (make sure Wi-Fi is enabled), and then select **Recorded Sessions**. Double-click the desired recording session. Once the download has finished, select the downloaded test, and click **Open** in the Download dialogue box.

In both cases, the session is added to **My Open Sessions** in the navigation tree. Then, the data can be displayed.

## User Manual

The user manual is included on the provided USB stick along with the DataView® software. It is also available on our website at [www.aemc.com](http://www.aemc.com).

## Repair and Calibration

To ensure that your instrument meets factory specifications, we recommend that it be sent back to our factory Service Center at one-year intervals for recalibration or as required by other standards or internal procedures.

### For instrument repair and calibration:

You must contact our Service Center for a Customer Service Authorization Number (CSA#). Send an email to [repair@aemc.com](mailto:repair@aemc.com) requesting a CSA#, you will be provided a CSA Form and other required paperwork along with the next steps to complete the request. Then return the instrument along with the signed CSA Form. This will ensure that when your instrument arrives, it will be tracked and processed promptly. Please write the CSA# on the outside of the shipping container. If the instrument is returned for calibration, we need to know if you want a standard calibration or a calibration traceable to N.I.S.T. (includes calibration certificate plus recorded calibration data).

**Ship To:** Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments  
15 Faraday Drive ▪ Dover, NH 03820 USA  
Phone: (800) 945-2362 (Ext. 360) / (603) 749-6434 (Ext. 360)  
Fax: (603) 742-2346  
E-mail: [repair@aemc.com](mailto:repair@aemc.com)

### (Or contact your authorized distributor.)

Contact us for the costs for repair, standard calibration, and calibration traceable to N.I.S.T.



**NOTE:** You must obtain a CSA# before returning any instrument.

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## Technical Assistance

If you are experiencing any technical problems or require any assistance with the proper operation or application of your instrument, please call, e-mail or fax our technical support team:

Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments  
Phone: (800) 343-1391 (Ext. 351)  
Fax: (603) 742-2346  
E-mail: [techsupport@aemc.com](mailto:techsupport@aemc.com)  
[www.aemc.com](http://www.aemc.com)

## Limited Warranty

The instrument is warranted to the owner for a period of two years from the date of original purchase against defects in manufacture. This limited warranty is given by AEMC® Instruments, not by the distributor from whom it was purchased. This warranty is void if the unit has been tampered with, abused, or if the defect is related to service not performed by AEMC® Instruments.

**Full warranty coverage and product registration is available on our website at [www.aemc.com/warranty.html](http://www.aemc.com/warranty.html).**

**Please print the online Warranty Coverage Information for your records.**

### **What AEMC® Instruments will do:**

If a malfunction occurs within the warranty period, you may return the instrument to us for repair, provided we have your warranty registration information on file or a proof of purchase. AEMC® Instruments will repair or replace the faulty material at our discretion.

**REGISTER ONLINE AT: [www.aemc.com/warranty.html](http://www.aemc.com/warranty.html)**

## Warranty Repairs

### **What you must do to return an Instrument for Warranty Repair:**

First, send an email to [repair@aemc.com](mailto:repair@aemc.com) requesting a Customer Service Authorization Number (CSA#) from our Service Department. You will be provided a CSA Form and other required paperwork along with the next steps to complete the request. Then return the instrument along with the signed CSA Form. Please write the CSA# on the outside of the shipping container. Return the instrument, postage or shipment pre-paid to:

Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments  
15 Faraday Drive, Dover, NH 03820 USA  
Phone: (800) 945-2362 (Ext. 360) / (603) 749-6434 (Ext. 360)  
Fax: (603) 742-2346  
E-mail: [repair@aemc.com](mailto:repair@aemc.com)

**Caution: To protect yourself against in-transit loss, we recommend that you insure your returned material.**



**NOTE:** You must obtain a CSA# before returning any instrument.

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**[www.aemc.com](http://www.aemc.com)**

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