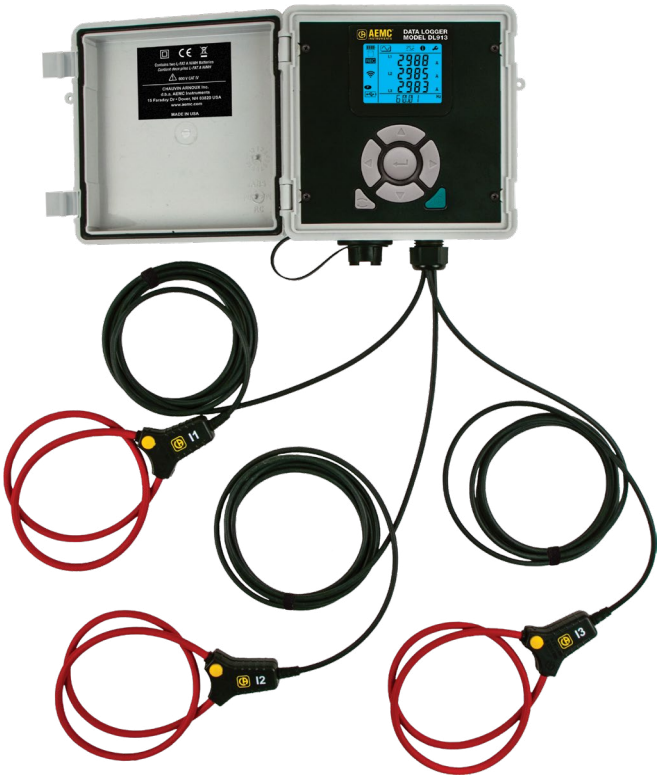
User Manual
ENGLISH

AEMC® INSTRUMENTS
CHAUVIN ARNOUX GROUP

Data Logger
Models
DL913 & DL914



DATA LOGGERS

Measure Up
WITH AEMC INSTRUMENTS®

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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.

Serial #: _____

Catalog #: **2153.61 / 2153.62**

Model #: **DL913 / DL914**

Please fill in the appropriate date as indicated:

Date Received: _____

Date Calibration Due: _____

AEMC® INSTRUMENTS
CHAUVIN ARNOUX GROUP

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1. INTRODUCTION

Thank you for purchasing an AEMC® Instruments **Data Logger Model DL913** or **DL914**.

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.

1.1 INTERNATIONAL ELECTRICAL SYMBOLS

	Signifies that the instrument is protected by double or reinforced insulation.
	**CAUTION - Risk of Danger!** Indicates a **WARNING**. 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.
	Refers to a type B current sensor. Application or withdrawal not authorized on conductors carrying dangerous voltages. Type B current sensor as per IEC 61010-2-032.
	Indicates Important information to acknowledge.
	USB Port
	This product complies with the Low Voltage & Electromagnetic Compatibility European directives.
	In the European Union, this product is subject to a separate collection system for recycling electrical and electronic components in accordance with directive WEEE 2012/19/EU.

1.2 DEFINITION OF MEASUREMENT CATEGORIES (CAT)

CAT IV: Corresponds to measurements performed at 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.

1.3 PRECAUTIONS FOR USE ⚠

For personal safety and for the safety of the environment of use, you must read and comply with the precautions for use. If you do not comply with these safety instructions, there is a risk of electric shock, explosion, or fire. If you use the instrument in an unspecified manner or do not observe elementary safety rules, the protection that they provide could be compromised and endanger you.

These instruments comply with safety standard IEC 61010-2-032 for voltages and categories of installation at an altitude below 6500 ft (2000 m).

- Do not use in an explosive atmosphere or in the presence of flammable gases or fumes.
- Do not use on voltage networks greater than specified on the instrument label.
- Do not use the instrument if it appears to be damaged, incomplete, or improperly closed.
- Before each use, check the condition of the insulation for the cables, case, and accessories—anything that appears damaged (even partially) must be reported for repair or scrapping.
- Observe the environmental conditions of use (§ 6.3).
- Do not modify the instrument and use only original replacement parts. Repairs or adjustments must be performed by authorized personnel.
- ⚠ Use protective equipment when required.
- Do not apply or remove the sensors from hazardous live parts or systems.
- If hazardous voltages are present at the location of measurement, use suitable personal protective equipment.

1.4 RECEIVING YOUR SHIPMENT

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

1.5 ORDERING INFORMATION

Data Logger Model DL913..... **Cat. #2153.61**
(3-Channel)

Includes small classic tool bag, 10 ft USB Type A to Type B cable, (4) stainless steel mounting brackets with (4) Phillips M4-0.7 x 8 mm stainless steel machine screws, USB power adapter, quick start guide, and USB thumb drive with DataView® software and user manual.

Data Logger Model DL914..... **Cat. #2153.62**
(4-Channel)

Includes small classic tool bag, 10 ft USB Type A to Type B cable, (4) stainless steel mounting brackets with (4) Phillips M4-0.7 x 8 mm stainless steel machine screws, USB power adapter, quick start guide, and USB thumb drive with DataView® software and user manual.

1.5.1 Accessories and Replacement Parts

Bag - Small Classic Tool Bag ..... **Cat. #2133.72**

Cable - 10 ft USB Type A to Type B ..... **Cat. #2136.80**

Cable - 6 ft USB Type A to Type B (Waterproof)
for Models DL913 and DL914 ..... **Cat. #2153.79**

Battery - Rechargeable Battery Pack, 4.2 A·h NiMH
for Models DL913 and DL914 ..... **Cat. #2153.80**

Replacement 5 V, 2 A USB power adapters are commercially available.

Order Accessories and Replacement Parts Directly Online
Check our storefront at www.aemc.com/store for availability.

2. PRODUCT FEATURES

2.1 DESCRIPTION

The Models DL913 and DL914 are easy-to-use, rugged data loggers that can be used both indoors and outdoors. Recorded data is stored in the instrument's internal memory. This data can then be downloaded to a computer using a Wi-Fi or USB connection. Then, the data can be analyzed using the Data Logger Control Panel.

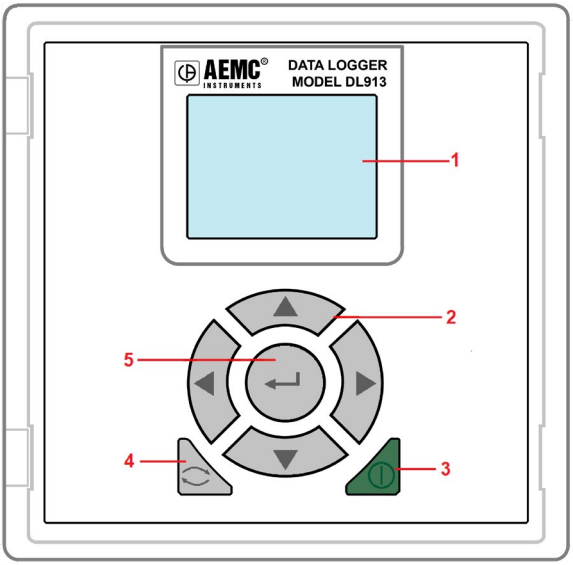
Features include:

- Three (DL913) or four (DL914) 24 inch integral MiniFlex® probes
- Waterproof (IP 67)
- USB for communication and battery charging
- Wi-Fi wireless communication
- 1000 V CAT III, 600 V CAT IV

The DL913 and DL914 are powered by two rechargeable NiMH batteries and can also be externally powered through a USB connection. AEMC® Instruments recommends using the supplied adapter or a 3.0 USB port for battery charging.

2.2 CONTROL FEATURES

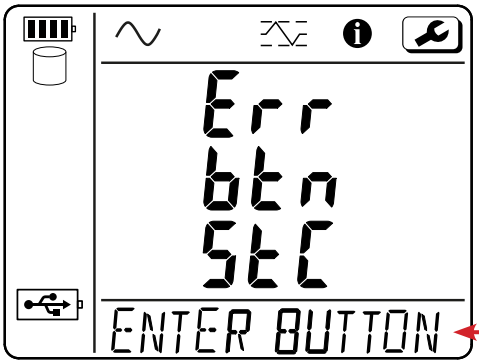
2.2.1 Front Panel Interface



1. **LCD display** is the instrument interface for displaying measurement data, configuring the instrument, changing modes, and viewing parameters, such as memory, power, and communication status (see § 3.2.2).
2. **Navigation buttons** (Up ▲, Down ▼, Left ◄, Right ►) navigate the configuration options and measurement screens.
3. **Power button** turns the instrument ON and OFF with a long press (≥ 3 s) when the instrument is disconnected from external power and not actively recording. A short press (≤ 3 s) turns the LCD backlight on.
4. **Control button** starts and stops recordings (see § 4.3) and selects and enables the Wi-Fi communication type (see § 3.2.2).
5. **Enter button** cycles through the displayed data and options.

2.2.1.1 Button Stuck Error Screen

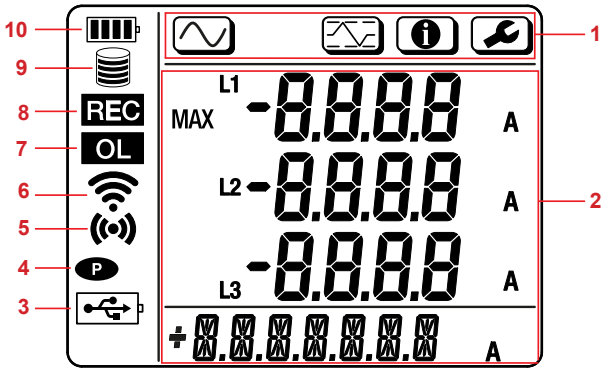
The Model DL913 and DL914 will notify the user with this error screen if the ENTER, CONTROL, LEFT, RIGHT, UP or DOWN button has been held in the **pressed** state for ≥ 4 seconds. If the ENTER button is stuck, for example, the scrolling message would read: **ENTER BUTTON STUCK. PLEASE UNPRESS.**



2.2.2 LCD Display

The LCD is the primary interface for the user to interact with the instrument.

The LCD turns ON when is pressed for (≥ 3 s) or the USB is plugged into a USB port with enough power to charge the instrument. To conserve power, the LCD backlight will turn OFF after 5 minutes of no button activity. Pressing any button turns the backlight ON again. The LCD and the control buttons (§ 2.2.1) provide the features and functionality for the instrument to operate as a standalone device.



1. **Mode indicators**
   - Configuration mode (§ 3.2)
   - Measurement mode (§ 4.1)
   - MAX mode (§ 4.1.1)
   - Information mode (§ 4.2)

2. **Display for data and messages**
3. **Power**

   ON: Instrument is running on external USB power.

   Blinking: Instrument is running on external USB power and communicating via USB.

   OFF: Instrument is running on internal (battery) power.
4. **Permanent mode P**

   ON: Permanent mode is enabled, so the instrument will not automatically power down.

   OFF: Permanent mode is disabled, so the instrument will automatically power down after a period of inactivity as defined by the Data Logger Control Panel.
5. **Wi-Fi Direct**

   ON (steady): Wi-Fi Direct is enabled and not transmitting.

   Blinking: Wi-Fi Direct is actively transmitting.

   OFF: Wi-Fi Direct is disabled.
6. **Wi-Fi (router connection)**

   ON (steady): Wi-Fi connection is enabled and not transmitting.

   Blinking: Wi-Fi is actively transmitting.

   OFF: Normal Wi-Fi connection is disabled.
7. **Overload OL**

   ON: At least one input is out of range and cannot be displayed.

   OFF: All inputs are within range.
8. **Recording REC**

   ON (steady): A recording is in progress.

   Blinking: A recording is pending.

   Blinking (slowly): A recording is in progress in extended recording mode.

   OFF: A recording is neither scheduled nor in progress.
9. **Memory**

   Empty : Instrument memory is empty.

   Partially filled : Instrument memory is partially full.

   Filled : Instrument memory is full. No recordings can be stored while the memory is full. Please reference § 3.3 for instructions to erase memory through the Control Panel.
10. **Battery**

    Empty : The battery must be charged.

    Partially filled : The battery is partially charged.

    Filled : The battery is fully charged.

    Blinking: The battery is charging.

3. SETUP

3.1 BATTERY CHARGING

The instrument is powered via external USB connection or internal rechargeable batteries. To ensure that recordings continue to completion when external power is interrupted, we recommend fully charging the batteries before operating the instrument as explained below.

1. With the instrument disconnected from USB power, press to turn the instrument ON.

   If it does not turn ON, the batteries are depleted and must be charged.

   Use the provided USB cable to connect the instrument to an external power source. The instrument will immediately turn ON.

   If the batteries are depleted, skip step 2 below and continue with step 3.

2. Check the battery indicator.

   If the indicator is full ( ), the battery is fully charged. You can skip the remainder of this procedure.

   If the indicator is partially full ( ), connect the instrument to an external power source via the USB.

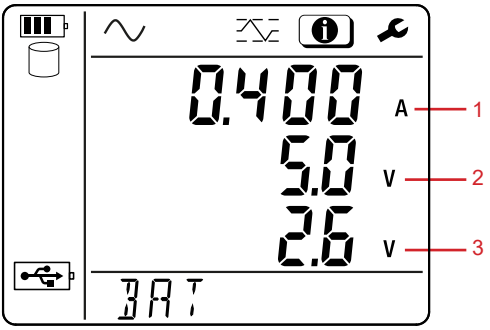
3. While the instrument is running on external power, the battery will charge.

   The battery indicator will blink to indicate that the battery is charging. If depleted, the battery will fully charge in approximately 10 hours without Wi-Fi enabled. If WiFi is enabled then charge time will be doubled to 20 hours.

4. To check the battery charging status, use the Left ◄ or Right ► button to select Information mode .

5. Use the Up ▲ or Down ▼ button to display the Battery Status (BAT) screen.

   This screen displays the following parameters:



   1. Charging current
   2. Charging voltage
   3. Battery voltage

6. When the battery is fully charged, the battery indicator will stop blinking and appear completely filled.

3.2 CONFIGURATION MODE

The Data Logger Control Panel is the primary interface for setting up and operating the Models DL913 and DL914.

Setup tasks include the following:

- Connecting the instrument to the computer
- Setting the instrument date and time
- Selecting parameters, like the aggregation period and communication options
- Scheduling, starting, and stopping recordings
- Transferring recorded data from the instrument to the computer
- Erasing the instrument's memory

All configuration tasks are described in the help system that comes with the Data Logger Control Panel software. See § 5 for instructions on installing the Data Logger Control Panel.

In addition, a limited number of settings can be configured via the instrument's front panel interface. These include the following:

- Enabling Wi-Fi (via direct connection or router)
- Selecting the nominal current and the number of sensor wraps (turns)
- Selecting the aggregation period
- Selecting the recording mode
- Erasing instrument memory

To enter Configuration mode, press either ◄ or ► until the Configuration icon is highlighted. There are two situations that prevent you from making changes in Configuration mode:

- The instrument is being configured by the Data Logger Control Panel
- A recording session is in progress or scheduled

If either situation applies, you will not be able to enter Configuration mode and **LOCKED** will appear on the LCD display when you select the icon.

3.2.1 Time/Date Setting

Before recording data, the instrument's time and date must be accurate. The time and date can be set via the DataView® Data Logger Control Panel (consult the Control Panel Help for instructions). To check the instrument date and time, use the following instructions:

1. In Information mode, use the Up ▲ or Down ▼ button to display the Date and Time screens.
2. If the correct date or time is not displayed, connect the instrument to a computer running the Data Logger Control Panel (see § 5.3).
3. In the Data Logger Control Panel, click **Instrument** in the menu bar at the top of the screen.
4. In the drop-down menu, click **Set Clock** to display the Date/Time screen.
5. Set the date and time.

If you need assistance, press F1 to open the Data Logger Control Panel Help.

3.2.2 Enabling/Disabling The Wi-Fi

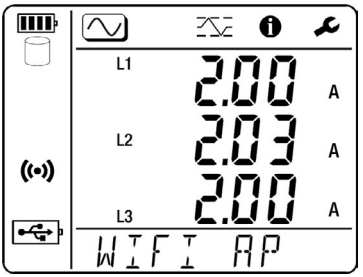
The instrument can connect to a computer either through the provided USB or via Wi-Fi. The Wi-Fi connection can be either through a router or directly to a Wi-Fi-enabled computer.

1. Select the Wi-Fi connection type by pressing twice.

   The message **WIFI AP** or **WIFI ST** will appear at the bottom of the LCD.

   Selecting **WIFI AP** (Wi-Fi access point) enables Wi-Fi Direct.

   Selecting **WIFI ST** (Wi-Fi Station) enables Wi-Fi via router.



2. Press ↵ to switch between the two Wi-Fi modes. A third press will turn Wi-Fi off.

   The icon will appear on the screen for Wi-Fi Direct.

   The symbol will appear for connection to a router.

   When you select a Wi-Fi type, it is automatically enabled on the instrument.

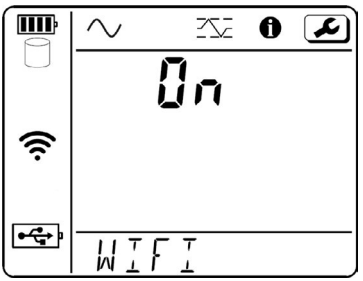
3. To save battery life disable Wi-Fi, highlight the icon to enter Configuration mode or use the control button.

   The Wi-Fi screen is the first one displayed in Configuration mode.

   Wi-Fi requires a considerable amount of power, so it should be disabled when the instrument is running on batteries for an extended time.

4. To change the Wi-Fi status, press ↵.

   The (Wi-Fi via router) or (Wi-Fi Direct) icon is displayed when Wi-Fi is enabled; neither is displayed when Wi-Fi is disabled.



When the WIFI status is ON, you can connect the instrument to a computer via router connection (see § 5.2.2) or Wi-Fi Direct connection (see § 5.2.3).

3.2.3 Configuration

In addition to enabling and disabling Wi-Fi, Configuration mode lets you set three parameters (current range, aggregation period, and reset to default) that affect how the instrument measures and displays data. If you cannot get the configured router connection then you can reset to default which will reset the Wi-Fi parameters. Then you can communicate using the default SSID in AP mode with open authentication.

3.2.3.1 Current Range

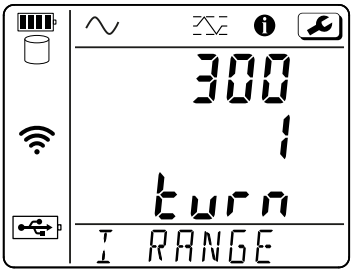
The instrument provides two measurement ranges: 300 A and 3000 A.

The 300 A range provides better resolution but lower measurable current. You can select the measurement range in Configuration mode.

1. In Configuration mode, use the Up ▲ or Down ▼ button to display the Current Range (I RANGE) configuration screen.

   This screen will also show 1, 2, or 3 turns to indicate the instrument's configuration for the number of sensor turns (wraps).

   You can configure the instrument for the number of turns in the software only.

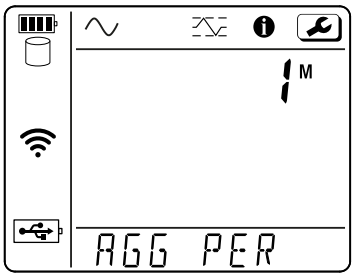


2. Press ↵ to toggle between 300 A and 3000 A.

3.2.3.2 Aggregation Period

When recording data in normal recording mode (see § 4.3), the instrument performs measurement aggregation. The instrument samples data at a fixed rate of once per 200 ms and aggregates the samples every second to represent trend data. In normal recording mode, these 1 s values are aggregated based on a user-defined period that is set in Configuration mode. In extended recording mode, the selected period determines the storage interval for the 1 s values.

1. In Configuration mode, use the Up ▲ or Down ▼ button to display the Aggregation Period (AGG PER) configuration screen.



2. Press ↵ to cycle through the available options.

   The options are 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, and 60 min.

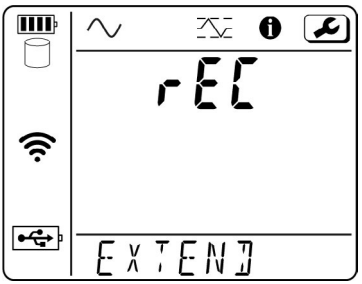
The aggregation period affects the timing of recorded measurements.

For example, if a recording begins at 12:00 and ends at 1:00 with a 10-minute aggregation period, the recording will have 6 aggregated measurements. Each 10 minute aggregated measurement reflects the average of the instrument's measurements during that period.

Aggregation will only begin and end at clock times evenly divisible by the aggregation period. For instance, if an hour recording begins at 12:06 and ends at 1:06 with a 10 minute aggregation period, the first aggregation will begin at 12:10 and end at 12:20. Aggregation will be performed every 10 minutes with the final aggregation ending at 1:00. Although the recording will continue until 1:06, no aggregation will be performed for the final 6 minutes.

3.2.3.3 Recording Mode

The Recording mode screen determines whether a recording will run in normal recording mode or extended recording mode.



In both recording modes, the instrument samples the inputs at a fixed rate every 200 ms and aggregates the samples every second. The data is stored and displayed as 1 s values that represent trends.

Normal recording mode: The instrument stores a sample every second.

Extended recording mode: The instrument enters a sampling mode where the selected aggregation period determines the storage interval.

Extended recording mode increases the length of recordings when the instrument is running on battery power. The instrument stores a sample 4 times per the selected aggregation period, goes to sleep after recording the sample, and wakes up 5 seconds before the next sample. This recording mode utilizes single line cycle storage, so the inputs are ignored between measurement intervals.

For example, if the aggregation period was set to 1 minute, samples would be stored every 15 seconds. The instrument would be powered down for 10 seconds for a two-thirds reduction in power. However, the decreased storage interval reduces the measurement resolution.

1. In Configuration mode, use the Up ▲ or Down ▼ button to display the Recording Mode (rEC) configuration screen.
2. Press ↵ to toggle between normal and extended recording mode.

The following table demonstrates the relationship between recording modes, aggregation period, storage interval, and battery life.

	Aggregation Period	Storage Interval	Battery Life (Wi-Fi Disabled*)
Normal Recording Mode	Any	1 s	4 days
Extended Recording Mode	1 min	15 s	7 days
	2 min	30 s	14 days
	3 min	45 s	21 days
	4 min	1 min	30 days

**Enabling Wi-Fi drastically decreases battery life, so the user should only enable Wi-Fi when the device is externally powered.*

3.3 ERASING MEMORY

When the memory indicator indicates the memory is full (), you will need to delete one or more recordings from memory to create room for the new recording. You can only erase the memory through the Control Panel.

To delete memory, the instrument must be connected to a computer (§ 5.3).

1. In the Data Logger Control Panel, click **Instrument** in the toolbar.
2. Select **Erase Memory** in the drop-down menu.
3. From the list of stored recording sessions, select the recordings to delete.
4. Then, click **OK**.

4. OPERATION

The Model DL913 and Model DL914 front panel interface enables you to:

- View measurements in real time
- View instrument information and settings, including time/date, IP address, battery status, and others
- Start and stop recording sessions and enable or disable Wi-Fi

4.1 REAL-TIME MEASUREMENTS

To view real-time measurements on the instrument:

1. Connect the instrument's three (DL913) or four (DL914) captive current sensors to the distribution system under test.

   Each sensor is labeled (L1, L2, and L3 for the DL913; L1, L2, L3, and N for the DL914).

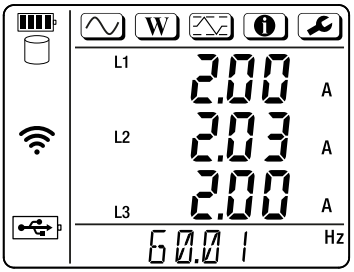
2. Connect each sensor to its corresponding phase.

   For the DL914, you have the option to connect the L4 sensor to the distribution system's neutral.

3. Press (≥ 3 s) or connect to an external power source to turn the instrument ON.
4. The Measurement screen is the first screen to appear.

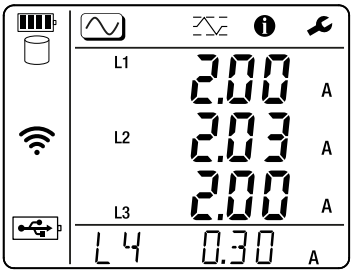
The information shown depends on instrument model:

The DL913 shows the L1, L2, and L3 current measurements and the frequency.



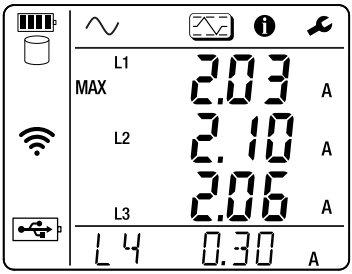
The DL914 shows the L1, L2, L3, and N (L4) current measurements.

- Press the Up ▲ or Down ▼ arrow to show the frequency measurement on the display's bottom line.



4.1.1 MAX Mode

Selecting the MAX icon displays the MAX mode screen. An example of the DL914 MAX mode screen is below:



This screen displays maximum aggregated averages over a period of time. For aggregation, certain measured values are averaged over a user-defined period. The MAX mode screen lists the highest aggregated average for a period for each probe.

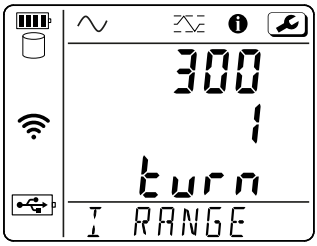
Using the Data Logger Control Panel, you can determine whether the maximum aggregation is updated continuously or only when the instrument is actively recording. If it is set to update when actively recording only, the instrument will retain the current MAX value in its memory when the instrument is not recording but will not update it even if a higher aggregated value is encountered.

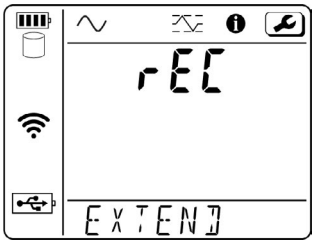
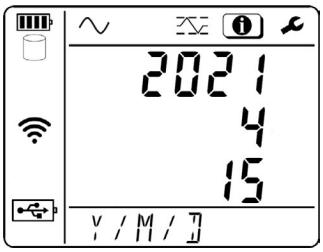
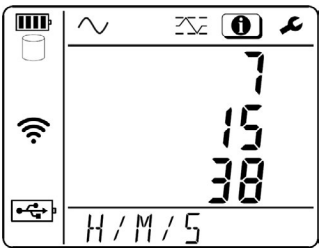
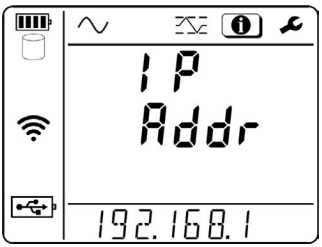
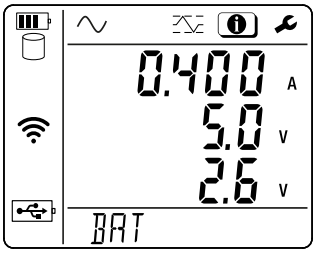
4.2 INSTRUMENT SETTINGS (INFORMATION MODE)

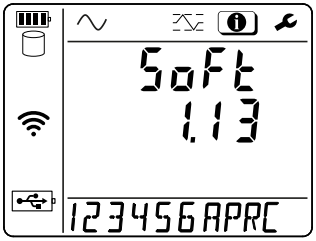
Selecting the Information icon displays the Information mode screen that lists a number of instrument settings.

■ Press the ▼ button to cycle through the settings.

The screens appear in the following order:

Screens	Description	See
	**Current Measurement Range:** Displays the current range (I RANGE) and number of sensor wraps (# TURN). Can be changed to either 300 or 3000 A via the Front Panel or the Data Logger Control Panel. Number of sensor wraps is only adjustable in the Data Logger Panel.	§ 3.2.3.1

Screens	Description	See
	**Recording Mode:** Displays recording setup of Normal or Extended recording modes. (NORMAL or EXTEND) Can be changed from the Front Panel or from the Data Logger Control Panel.	§ 3.2.3.3
	**Date:** for viewing only Can be changed using the Data Logger Control Panel software	§ 3.2.1
	**Time:** for viewing only Can be changed using the DataView® Data Logger Control Panel software	§ 3.2.1
	**IP address** is the address used by the computer when connecting to the instrument through Wi-Fi. The full address scrolls right to left at the bottom of the screen, followed by the port number and communication protocol (UDP or TCP)	§ 5.3
	**Battery Status** lists the charging current, charging voltage, and remaining voltage of the battery	§ 3.1

Screens	Description	See
	**Firmware Revision** lists the latest firmware revision running on the instrument. The instrument's serial number will scroll across the bottom of the screen.	N/A

4.3 RECORDING DATA

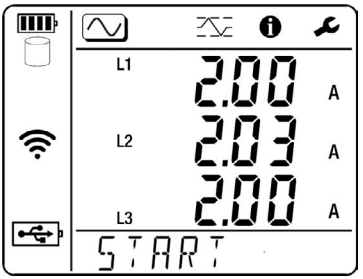
The instrument interface allows you to manually start and stop recordings. The stored data can be uploaded to a computer with DataView® for analysis and report generation.

NOTE: To set up and run scheduled recordings on the instrument, consult the Data Logger Control Panel Help.

NOTE: To successfully complete a 30-day recording on battery power only, the instrument must be configured for Extended recording mode. If upon receipt of the instrument the user starts a recording by pressing prior to the instrument being configured for Extended recording mode, the recording configuration defaults to a 30-day recording with 1-minute aggregations and Normal recording mode. Maximum full battery life for Normal recording mode is approximately 4-days. External power would be required to successfully complete the 30-day recording.

1. Connect the instrument's three (DL913) or four (DL914) captive current probes to the distribution system under test.
2. Press (≥ 3 s) or connect to a external power source to turn the instrument ON.
3. Check the memory indicator. If it appears full ( ), you will need to delete recordings from memory to create room for the new recording (see § 3.3).

4. To start a recording, press once to display the Start screen. The message **PUSH ENTER TO START REC** will scroll across the bottom line of the display.



5. Press ↵ to start the recording. The Record symbol REC will indicate that a recording is in progress. If the device is configured to run with extended recording mode, the measurements are limited to 4 times per the aggregation period to save battery. Otherwise, in normal recording mode, measurements are stored once per second. In either mode, the recording will continue until:
   - **Memory is full**: The internal memory can store around 2000 days of data. As the memory fills, the memory indicator will show how much storage space remains. Keeping the number of recording sessions to a minimum will make the connection to the control panel faster.
   - **Battery power fails**: With Wi-Fi disabled, the instrument can record on battery power for up to 4 days in normal recording mode and up to 30 days in extended recording mode (with 4 minute aggregation period).
   - **Recording is stopped manually** (see below).
6. To stop the recording while it is in process, press once. The message **PUSH ENTER TO STOP REC** will scroll across the bottom line of the display. Press ↵ to end the recording.

To view a recording, the instrument must be connected to a computer running the Data Logger Control Panel. For instructions about installing DataView® and connecting the instrument to a computer, see § 5.

5. DATAVIEW®

When you purchase a DataView® supported instrument from AEMC® Instruments, the software is included as a part of the product package and stored on the USB drive supplied with the instrument.

The DataView® software includes core features for all instruments and Control Panels for different types of instruments. The core features are used to create, view, edit, and store reports from instrument data. Meanwhile, the Control Panels are used to connect, configure, download, and view data from instruments.

For users who interact with a single type of instrument, we recommend primarily using the instrument's Control Panel; however, the core program may be convenient for certain situations, like viewing different archived reports from different types of instruments.

5.1 INSTALLING DATAVIEW®

1. Insert the USB drive into an available port on your computer.

   If AutoPlay is enabled, an AutoPlay window will appear. Click **Open folder to view files** to display the DataView folder.

   If AutoPlay is not enabled or allowed, you will need to use Windows Explorer to locate and open the USB drive labeled DataView.

2. When the folder is open, double-click **Setup.exe** located in the root directory to open the Setup screen.

3. In the upper left corner of the screen, select your desired language for the installation process.

   All setup screens and dialogs will appear in the selected language.

4. Select DataView from the Options list, and click **Install.**

5. Select the language version that you want to install (English, French, or Spanish), and click **Next**.

   By default, the language selected in step 3 will be highlighted.

6. Select the software you want installed.

   By default, all available Control Panels are selected. Unless you have other products from AEMC® Instruments, we recommend that you select only the DataView® Core and the Data Logger Control Panel to save space on your computer.

   If you plan to create DataView® reports, you must also check the option **DataView® Core**.

7. After selecting the software to install, click **Next**.

8. If you want to review or change any of your previous selections before installation, click **Previous**. Otherwise, click **Install**.

   If your computer does not have any previous versions of the software installed, the software will be installed without requesting confirmation.

If your computer has an earlier version of the software installed, the InstallShield program will:

- Ask you to confirm the installation of the software (click **Next** to confirm)
- Display a status bar to indicate the installation's progress
- Inform you when the program is installed

9. Click **Finish** to install the next selected program.

   A message will appear and inform you when the programs are installed.

10. Click **Finish** to return to the Setup screen.
11. Select any additional installation options located in the lower left corner.

    Adobe Reader: sends you to the Adobe website to download Adobe Acrobat Reader, which is necessary for PDF documents.

    Firmware Upgrades: sends you to your instrument's firmware download page on AEMC® Instruments website after you select the instrument type.

    User Manuals: shows you a list of user manuals available on the USB.

12. When finished, click **Exit**.

The DataView folder will appear on your desktop and contain icons for the installed Control Panels.

After the Control Panel is installed, you can connect your instrument to the computer to configure the instrument, configure recording parameters, schedule recording sessions, start recording sessions, and download the recorded data to the computer for analysis and report generation.

5.2 TYPES OF CONNECTIONS

The instrument provides three connection options:

- USB
- Wi-Fi via router
- Wi-Fi Direct

5.2.1 USB Connection

- Connect the instrument to the computer using the provided USB.

If the instrument is being connected for the first time:

1. In the Data Logger Control Panel, select **Instrument** in the menu bar.
2. Click **Add an Instrument**.
3. Go through the screens for the Add an Instrument wizard.

   Use the **Help** button if you need further instructions.

4. When prompted to select the connection type, choose **USB**.
5. After completing all screens, press **Finish** to exit the Add an Instrument wizard.

The connected instrument will appear on the left side of the screen in the Data Logger Network frame.

A green check mark next to the instrument's name indicates that it is connected.

If the instrument has been connected previously:

1. In the Data Logger Network, locate the instrument's name.

   If a green check mark is next to the name, the instrument is connected. No additional steps are needed.

   If a red X is next to the name, the instrument is not connected, and you will need to proceed with the following steps.
2. Select the instrument in the Data Logger Network.
3. Click **Instrument** in the menu bar.
4. Click **Reconnect Instrument** from the drop-down list.

5.2.2 Wi-Fi via Router

The Wi-Fi via router option requires the computer to be connected to a router and depends on the computer's operating system.

- Ensure that the Wi-Fi via router indicator is displayed on the instrument. If not, enable Wi-Fi via router as instructed in § 3.2.2

If the instrument is being connected for the first time:

1. Click **Instrument** in the menu bar.
2. Select **Configure** to display the Configuration dialog box.
3. Click the **Communication** tab.
4. Fill in the fields in the **Wi-Fi router settings** section according to your desired connection.

   Enable DHCP instructs the instrument to obtain an IP address from the DHCP server on the currently connected network. This option requires a DHCP server to be available on the network.

   - When **Enable DHCP** is checked, the **IP address**, **Gateway address**, and **Subnet mask** fields are automatically filled and read-only.
   - When **Enable DHCP** is unchecked, you must to enter the fields manually

   SSID is the SSID of the router that the instrument will connect to. This name can be up to 32 alphanumeric characters long.

   Password is the password needed to connect to the router.

   Consult your network administrator for help about obtaining this information.
5. Click **OK** to write the Wi-Fi router settings to the instrument.
6. On the instrument, ensure that the router's IP address and port number appear at the bottom of the screen in the IP address field (see § 4.2) in the **Information** settings .

   You can also locate this information in the **Wi-Fi IP address** field in the Control Panel's status frame.
7. Click the **Modify connection settings** button at the top of the Status frame. The Add an Instrument wizard will appear.
8. Select **Ethernet (Wi-Fi)** in the Connection Type field, and click **Next**.

9. When prompted for the IP address, enter the IP address that appears in the instrument's **Information** settings [i] and the **Wi-Fi IP address** field in the status frame.
10. Press **Finish** to exit the Add an Instrument wizard.

The connected instrument will appear on the left side of the screen in the Data Logger Network frame.

A green check mark next to the instrument's name indicates that it is connected.

If the instrument has been connected previously:

1. In the Data Logger Network, locate the instrument's name.

   If a green check mark is next to the name, the instrument is connected, and no additional steps are needed.

   If a red X is next to the name, the instrument is not connected, and you will need to proceed with the following steps.
2. Select the instrument in the Data Logger Network.
3. Click **Instrument** in the menu bar.
4. Click **Reconnect Instrument** from the drop-down list.

5.2.3 Wi-Fi Direct

The Wi-Fi Direct option requires the computer to be equipped with a Wi-Fi radio and depends on the computer's model and operating system. The computer will connect to the instrument directly, without a router.

1. Ensure that the Wi-Fi Direct ((•)) indicator is displayed on the instrument.

   If not, enable Wi-Fi Direct as instructed in § 3.2.2.
2. On the computer, create a direct Wi-Fi connection to the instrument as specified by your operating system.

If the instrument is being connected for the first time:

1. In the Control Panel, select **Instrument** in the menu bar.
2. Click **Add an Instrument**.
3. Go through the screens for the Add an Instrument wizard.

   Use the **Help** button if you need further instructions.
4. When prompted to select the connection type, choose **Wi-Fi Direct**.
5. When prompted for the IP address, enter the IP address that appears in the instrument's **Information** [i] settings (see § 4.2).
6. Press **Finish** to exit the Add an Instrument wizard.

The connected instrument will appear on the screen's left side in the Data Logger Network frame.

If connected, green check mark will be next to the instrument's name.

If the instrument has been connected previously:

1. In the Data Logger Network, locate the instrument's name.

   If a green check mark is next to the name, the instrument is connected, so no additional steps are needed.

   If a red X is next to the name, the instrument is not connected, and you will need to continue with the following steps.
2. Select the instrument in the Data Logger Network.
3. Click **Instrument** in the menu bar.
4. Click **Reconnect Instrument** from the drop-down list.

NOTE: For more information about DataView® and the Control Panel, consult the Help system that comes with the product.

5.3 REMOTE USER INTERFACE

The remote user interface is available via PC, tablet, or Android phone and allows you to view information about the device.

1. Enable Wi-Fi on the device.

   The remote user interface can work with an access point Wi-Fi link or a router Wi-Fi link .

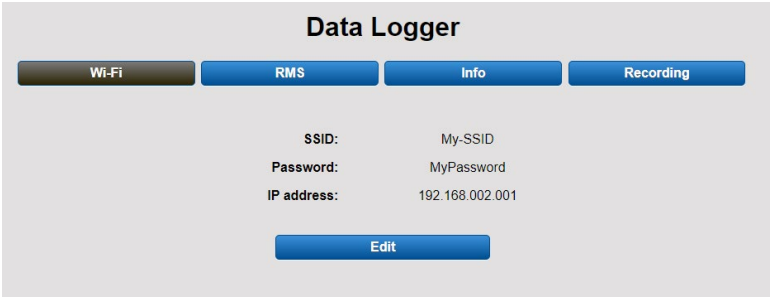
   The remote user interface does not work with an IRD server link.
2. On a PC, connect as indicated in § 5.2.3 Wi-Fi Direct.

   On a tablet or smartphone, share a Wi-Fi connection.
3. In a web browser, enter http://IP_address_instrument.

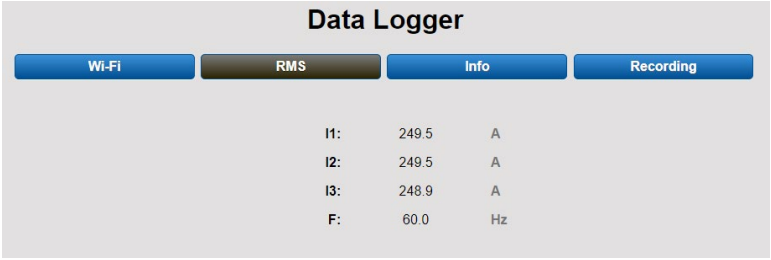
   For a Wi-Fi access point connection, enter http://192.168.2.1

   For a Wi-Fi router connection, enter the address indicated in the information menu (see § 4.2).

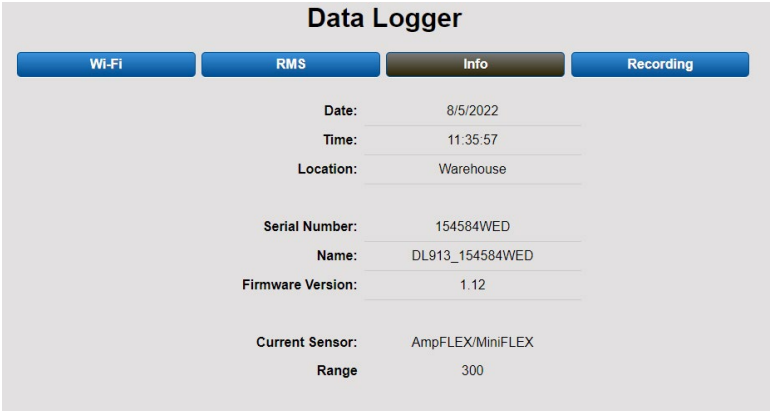
In the Wi-Fi tab, you can view and edit the instrument's SSID, Password, and IP address.



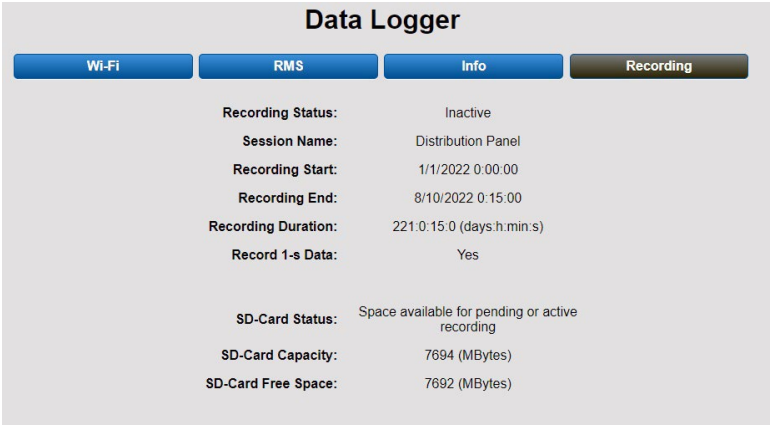
In the RMS tab, you can view the real-time measurements on each sensor and the network frequency.



In the Info tab, you can view the device's date, time, location, identifying information, firmare version, and current sensor information.



In the Recording tab, you can view information about the in-progress recording or the most recent recording.



6. SPECIFICATIONS

Reference Conditions: 23 °C ± 3 °C, (45to 75) % RH, no DC component, distribution system frequency 50 Hz ± 0.1 Hz and 60 Hz ± 0.1 Hz, harmonics < 0.1 %, no external magnetic or electric fields, instrument powered by battery, enclosure, and sensors at earth/ground potential.

6.1 ELECTRICAL

<table>
<tr><td>Channels</td><td colspan="5">3 (DL913)
4 (DL914)</td></tr>
<tr><td>Inputs</td><td colspan="5">Integral MiniFlex®</td></tr>
<tr><td>Ranges</td><td colspan="5">300 Aac/ 3000 Aac</td></tr>
<tr><td rowspan="3">Accuracy</td><td colspan="2">300 A range</td><td colspan="3">3000 A range</td></tr>
<tr><td>0.50 A to 99.99 A
±(1 %r + 10 D)</td><td>90.0 A to 360.0 A
±(1 %r + 4 D)</td><td>4.00 A to 99.99 A
±(1 %r + 10 D)</td><td>90.0 A to 999.9 A
±(1 %r + 5 D)</td><td>0.900 kA to 3.600 kA
±(1 %r + 4 D)</td></tr>
<tr><td>Resolution</td><td>0.01 A</td><td>0.1 A</td><td>0.01 A</td><td>0.1 A</td><td>1 A</td></tr>
<tr><td>Frequency</td><td colspan="5">45 Hz to 65 Hz ± 0.1 Hz</td></tr>
<tr><td>Storage Rate</td><td colspan="5">Normal recording mode: Once per second
Extended recording mode: Four per aggregation period</td></tr>
<tr><td>Recording Length</td><td colspan="5">Battery Power: 4 days with no missing samples (normal recording mode)
7 days to 30 days depending on the selected aggregation period (extended recording mode)
External Power: 365 days</td></tr>
<tr><td>Memory</td><td colspan="5">Internal: 8 GB</td></tr>
<tr><td>Communication Options</td><td colspan="5">USB
Wi-Fi via router (Ethernet)
Wi-Fi Direct</td></tr>
<tr><td>Wall Charger</td><td colspan="5">AC wall to USB 10 W class VI</td></tr>
<tr><td>Battery Charge Time</td><td colspan="5">10 h (maximum)</td></tr>
<tr><td>Power Sources</td><td colspan="5">Internal: 4.2 A·h NiMH rechargeable battery pack
External: USB connection</td></tr>
<tr><td>Battery Life (Wi-Fi Disabled)</td><td colspan="5">Normal recording mode: 4 days
Extended recording mode: 7 days to 30 days*
(*Depending on the selected aggregation period)
Reference the table in § 3.2.3.3 for more in-depth information regarding the battery life, aggregation period, storage interval, and recording modes.</td></tr>
</table>

6.2 MECHANICAL

Dimensions	(5.9 x 5.9 x 3.57) in (150 x 150 x 91) mm w/o sensors
Weight	DL913: 2.2 lb (1 kg) DL914: 2.42 lb (1.1 kg)
Sensor/Cable Length	3 (DL913) or 4 (DL914) integral 24 in (610 mm) MiniFlex® probes with 6.5 ft (2 m) leads
Maximum Conductor	7.64 in (190 mm)
Cover/Case	UL94-V0
Vibration	IEC 68-2-6 1.5 mm, (10 to 55) Hz
Shock	IEC 68-2-27 (30 G)
Drop	IEC 68-2-32 (3.3 ft [1 m] in the most severe position without permanent mechanical damage or functional deterioration)

6.3 ENVIRONMENTAL

Operating Temperature	(14 to 122) °F (-10 to 50) °C
Storage Temperature (Without Batteries)	(-40 to 158) °F (-40 to 70) °C
Relative Humidity	Operation: up to 85 % RH (non-condensing) Storage: up to 95 % RH
Altitude	Operation: sea level to 6500 ft (2000 m) Storage: sea level to 32,000 ft (10,000 m)
Hazardous Substance	RoHS3 Compliant

6.4 SAFETY & ELECTROMAGNETIC COMPATIBILITY

Safety Rating	600 V CAT IV 1000 V CAT III Complies with IEC 61010-2-032
Protection Degree	IP 67 with USB cap ON and cover closed
Electro-Magnetic Compatibility	IEC 61326-1 and IEC 61326-2-2
CE Approved	Yes
Pollution Degree	2

7. MAINTENANCE

The device does not contain any parts that can be replaced by untrained or unaccredited personnel. Any unauthorized work or part replacement with equivalents may seriously compromise safety.

7.1 CLEANING

WARNING: Before cleaning, disconnect all inputs to prevent possible electric shock.

The instrument should be cleaned periodically to keep the LCD clear and prevent the buildup of dirt and grease around the instrument's buttons.

- Clean the body of the instrument with a damp and soapy cloth
- Do not submerge the instrument in water
- Do not use solvents

7.2 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 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)
E-mail: 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.

7.3 TECHNICAL SUPPORT

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

Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments
Phone: (800) 343-1391 (Ext. 351)
E-mail: techsupport@aemc.com
www.aemc.com

7.4 LIMITED WARRANTY

The instrument is warrantied 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

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

7.4.1 Warranty Repairs

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

First, send an email to 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)
E-mail: 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.

NOTES:

CHAUVIN ARNOUX GROUP

AEMC® INSTRUMENTS
CHAUVIN ARNOUX GROUP

02/26
99-MAN 100550 v04

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www.aemc.com

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