3-PHASE POWER QUALITY ANALYZER

# 8335 PowerPad<sup>®</sup>



### **IMPORTANT WARRANTY NOTE:**

By registering online within 30 days from the date of purchase, your warranty will be extended to 3 years



**Quick Start Guide** 

# **Statement of Compliance**

Chauvin Arnoux<sup>®</sup>, Inc. d.b.a. AEMC<sup>®</sup> 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 #: \_\_\_\_

Model #: 8335

Please fill in the appropriate date as indicated:

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

Date Calibration Due:



Chauvin Arnoux<sup>®</sup>, Inc. d.b.a AEMC<sup>®</sup> Instruments www.aemc.com



USB DRIVE: DataView<sup>®</sup> software and complete user manual for the Model 8335 can be located on the USB drive supplied with the instrument.

# **Charging the Battery**

Fully charge the battery before the first use. The batteries automatically begin recharging when the instrument is connected to AC power. Only use the supplied AC power adapter to recharge the batteries.





To recharge the battery:

- Connect the supplied power cord to the instrument and AC power.
- The button lights and will go out when the power cord is disconnected.

BUTTON	DESCRIPTION	
(f	Return to the choice of measurement view.	
∋—c	Configure the PowerPad <sup>®</sup> (SET-UP).	
<b>6</b>	Take a snapshot of the current screen or access screens already stored in the memory. Record associated waveform and power measurement data.	
?	Get help on the current display functions, in the language chosen by the user.	
	<ul> <li>Transients or Inrush Current:</li> <li>Sets and views transient and inrush current waveforms associated with rapid changes in input</li> </ul>	
<b>l</b> u	<ul> <li>Harmonics Mode:</li> <li>Displays the harmonics in percent and value ratios for voltage, current and power for each harmonic through the 50th</li> <li>Determines harmonic current produced by non-linear loads</li> <li>Analyzes the problems caused by harmonics according to their order (heating of neutrals, conductors, motors, etc)</li> </ul>	
	<ul> <li>Waveforms Mode:</li> <li>Displays voltage and current waveforms or vector representation</li> <li>Identifies signal distortion signatures</li> <li>Displays of amplitude and phase unbalance for voltage and current</li> <li>Checks connections for correct phase order</li> </ul>	
$\bigtriangleup$	<ul> <li>Alarm Events:</li> <li>Provides a list of the alarms recorded according to the thresholds programmed during configuration</li> <li>Logs interruption with half-cycle resolution</li> <li>Determines energy consumption exceedances</li> <li>Stores value, duration, date, time and set point for up to 4096 events</li> </ul>	
1∠	<ul> <li>Trend Mode:</li> <li>Lists all recording trends and views them on the display (URMS, VRMS, ARMS, etc)</li> </ul>	
W	<ul> <li>Power / Energy:</li> <li>Displays power levels and the associated parameters (power factor, displacement and tangent)</li> <li>Energy monitoring</li> <li>Four quadrant measurement to discern produced/consumed active energies and inductive/capacitive reactive energies</li> </ul>	

# **Button Functions**

### **Control Features**



- 1. Over molded protective housing
- 2. LCD Display
- 3. Six function buttons (yellow)
- 4. Four function buttons (see chart, left)
- 5. ON/OFF button
- 6. Four current inputs and five voltage inputs

- 7. USB Port
- Input for external power supply and battery charger
- 9. Confirm/Enter button
- 10. Navigation buttons
- **11.** Six mode buttons (see chart, left)

### **Connection Terminals**



- Four (4) current inputs on the top of the instrument to enable the use of current sensors (MN, SR, AmpFlex<sup>®</sup>, MiniFlex<sup>®</sup>, and MR probes).
- 2. Five (5) voltage inputs.
- 3. Insertion locations for the current and voltage color-coded ID markers

# Instrument Configuration



**NOTE:** The instrument configuration can also be modified through the DataView<sup>®</sup> software. The instrument must be configured the first time it is used. The configuration is saved in memory when the instrument is turned OFF.

Press the Deg button to configure the unit. The following sub-menus appear:



- Set the display language by pressing the yellow button corresponding to the screen language icons.
- The parameter that is ready to be configured will be highlighted in yellow. To
  move to a different parameter, use the ▲ and ▼ buttons.
- Press the Enter 🔄 button to select a parameter.
- Use the ◀ and ► buttons to change a value or setting.
- When finished, return to the Configuration menu by pressing the 🗢 button.

PARAMETER	FUNCTION
Date / Time	Sets the date and time format
Display	Adjusts the contrast and brightness of the display; Defines the color of the voltage and current curves
Calculation Methods	<ul> <li>Determines if harmonics are used or not used in calculations of reactive quantities</li> <li>(power and energy)</li> <li>With harmonics: Harmonics are taken into account when calculating reactive parameters.</li> <li>Without harmonics: Only the fundamental part is used for the calculation of reactive parameters</li> </ul>
Electrical Connection	Determines the type of connection to the network <ul> <li>Single-Phase</li> <li>Split-Phase</li> <li>3-Phase 4-Wire</li> <li>3-Phase 5-Wire</li> </ul>
Sensors & Ratios	Defines the type of current probe to connect • MN93: 200 A • MN193: 100 A or 5A (with variable ratio) • SR193: 1000 A • SL261: 10 A and 100 A range • AmpFlex® Sensors: 3000 A (measures up to 6500 ARMS) • MiniFlex® Sensors: 1000 A • MR193: 1000 Aac/1200 Apc • 5 A three-phase adapter (3-channel only)
Transient Mode	Configures the voltage and current thresholds
Trend (Recording) Mode	Selects the parameters to record (up to 4 configurations)
Alarm Mode	Defines the parameters of an alarm
Erase Memory	Deletes configurations, alarm settings, snapshots and recordings
About	Displays the serial number, software and hardware version

# **Getting Started**



NOTE: Make sure the PowerPad<sup>®</sup> is fully charged before use.

Press the Deg button to configure the unit. The following sub-menus appear:

#### **Connecting:**

- Start the instrument by pressing the button.
- Configure the instrument to obtain the required results and type of network.
- Connect the current leads and sensors to the PowerPad®.
- Connect the ground and/or neutral lead to the network ground and/or neutral (when distributed), as well as the corresponding current sensor.
- Connect the L1 phase lead to the network L1 phase, as well as the corresponding current sensor.
- Repeat the procedure for phases L2, L3 and N.

### **Disconnecting:**

- Proceed in the reverse order to connecting, always finishing by disconnecting the ground and/or neutral (when distributed).
- Disconnect the leads and press the button to turn the instrument off.
- Recharge the battery, if necessary.

### Installation of the Leads and Current Sensors

Twelve sets of color-coded rings and inserts are supplied with the PowerPad<sup>®</sup>. Use these ID markers to identify the leads and input terminals.

- Detach the appropriate inserts from the color-coded marker and place them in the holes provided under the terminals (larger inserts for current terminals, smaller inserts for voltage terminals).
- Clip the rings of the same color to the ends of the lead you will be connecting to the terminal.



### Installing DataView®



# WARNING: DO NOT CONNECT THE INSTRUMENT TO THE PC BEFORE INSTALLING THE SOFTWARE AND DRIVERS.

Insert the USB drive into an available USB port (wait for driver to be installed).

- If Autorun is enabled, an AutoPlay window should appear. If Autorun is disabled, it will be necessary to open Windows Explorer, then locate and open the USB drive labeled **DataView** to view the files on the drive.
- 2. In the AutoPlay window, select **Open folder to view files**.
- Double-click on Setup.exe from the opened folder view to launch the Dataview<sup>®</sup> setup program.

**NOTE:** For more information on using DataView<sup>®</sup>, refer to the Model 8335 user manual that is supplied on the USB drive.

# **Updating Software & Firmware**

To provide our customers the best possible service in terms of performance and technical upgrades, AEMC<sup>®</sup> Instruments offers free software and firmware updates on our website.

- Visit us at: www.aemc.com
- Click on the Tech Info tab and choose the desired software or firmware download.

DataView<sup>®</sup> can also be updated by selecting **Update** from the Help menu within the software.



**WARNING:** Updating the firmware will erase all stored data in the instrument. It is recommended to download all stored data before performing any firmware updates.

# **Repair and Calibration**

To ensure that your instrument meets factory specifications, we recommend that it be scheduled 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#). 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<sup>®</sup>, Inc. d.b.a. AEMC<sup>®</sup> Instruments 15 Faraday Drive Dover, NH 03820 USA

 Phone:
 (800) 945-2362 (Ext. 360) (603) 749-6434 (Ext. 360)

 Fax:
 (603) 742-2346 or (603) 749-6309

 E-mail:
 repair@aemc.com

### (Or contact your authorized distributor)

Costs for repair, standard calibration, and calibration traceable to N.I.S.T. are available.



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

# **Technical and Sales Assistance**

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

Contact: Chauvin Arnoux<sup>®</sup>, Inc. d.b.a. AEMC<sup>®</sup> Instruments Phone: (800) 945-2362 (Ext. 351) (603) 749-6434 (Ext. 351) Fax: (603) 742-2246 E-mail: techsupport@aemc.com

# **Limited Warranty**

The PowerPad<sup>®</sup> Model 8335 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<sup>®</sup> 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<sup>®</sup> Instruments.

Full warranty coverage and product registration is available on our website at www.aemc.com/warranty.html.

### **IMPORTANT WARRANTY NOTE:**

By registering online within 30 days from the date of purchase, your warranty will be extended to 3 years

### 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<sup>®</sup> Instruments will, at its option, repair or replace the faulty material.

### **Warranty Repairs**

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

First, request a Customer Service Authorization Number (CSA#) by phone or by fax from our Service Department (see address below), 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:

Ship To: Chauvin Arnoux<sup>®</sup>, Inc. d.b.a. AEMC<sup>®</sup> Instruments 15 Faraday Drive Dover, NH 03820 USA Phone: (800) 945-2362 (Ext. 360) (603) 749-6434 (Ext. 360) Fax: (603) 742-2346 or (603) 749-6309 E-mail: repair@aemc.com

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



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





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