Instructional Manual
ENGLISH

AEMC® INSTRUMENTS
CHAUVIN ARNOUX GROUP

DataView® PEL Control Panel Event Log Messages

Models PEL 102, 103, 105, 52, 112, 113 & 115

PEL 102

PEL 103

PEL 112

PEL 113

PEL 52

PEL 105

PEL 115

POWER & ENERGY LOGGERS

Measure Up
WITH AEMC INSTRUMENTS®

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Chauvin Arnoux®, Inc. d.b.a AEMC® Instruments
15 Faraday Drive • Dover, NH 03820 USA
Phone: (603) 749-6434 or (800) 343-1391

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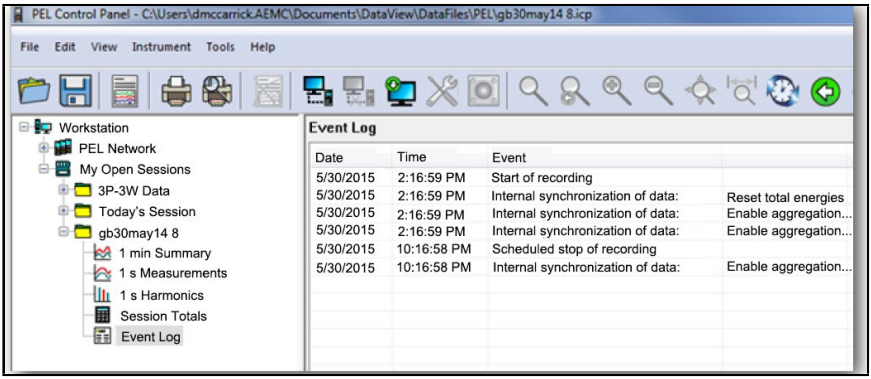
INTRODUCTION



AEMC® Instruments Model PEL 52 & PEL 100 series data loggers store a wide variety of measurement data.

When data from a recording session is downloaded to a computer using the DataView® PEL Control Panel, it is stored in an .icp file. Each .icp file includes a folder called Event Log, which you can view by opening the file in the PEL Control Panel and clicking **Event Log** in the navigation frame. All events that occurred during the recording session are then listed in the data frame.

Some of these, such as the **start of the recording**, are relatively routine. Others may indicate an error condition or other issue that may require contacting AEMC® Technical Support.

Each event message contains up to four fields:

- **Date** indicates the date the event occurred.
- **Time** indicates the local time the event occurred.
- **Event** defines the type of event.
- For some messages, a fourth column appears to the right of Event. This provides additional explanatory information.

When viewing event messages, note the following:

- **DSP** (Digital Signal Processor) is a specialized processor within the PEL instrument that handles the acquisition of measurement data and measurement calculations.
- **Ride through** is the period of time a data recording session will continue when external power is lost. This is defined through the option **Auto power off (ride through)** in the General tab of the Configure dialog box in the PEL Control Panel. If this option is disabled, the instrument will continue recording until the battery power runs out and the instrument turns OFF.

Events are grouped into the six categories: Recording, Power Supply, SD-Card, Sensor, DSP and Other.

RECORDING EVENT MESSAGES

- **Start of recording** indicates when the recording session began.
- **Scheduled stop of recording** indicates the recording reached its scheduled stop time/date.
- **The recording resumed** indicates that a recording that was interrupted before completion was re-started.
- **The user stopped (canceled) the recording before the scheduled time** indicates that a scheduled recording was stopped manually by the user before the scheduled end date/time was reached

POWER SUPPLY EVENT MESSAGES

- **The power supply has been lost, instrument on battery** indicates that the instrument was running on external power (either through a voltage terminal adapter or through auxiliary AC power) but the external power was interrupted, causing the instrument to switch to battery power.
- **The recording was suspended after the loss of the power supply** indicates that the instrument's external power supply was lost, causing the instrument to run on battery power until it either:
  - (1) reached the end of the **Auto power off (ride through)** period, or
  - (2) the battery power ran too low to continue operation.

  In the first case, this message is followed by the message **Instrument turned off due to expiration of ride through**. In the second case, this message is followed by the message **Instrument turned off due to low battery**. Both messages are described below.
- **Instrument turned off due to low battery** indicates that the instrument did not have sufficient battery power to continue operation.
- **Instrument turned off due to expiration of ride through** indicates the instrument automatically turned OFF because it reached the end of the period defined by **Auto power off (ride through)**. When enabled, this option causes the instrument to turn OFF after a user-selectable period of time (3, 10, or 15 minutes) when it is running on battery power (either by user choice or due to an interruption in the external power supply).
- **Instrument turned on, power supply restored** indicates that power has been restored to the instrument after a shutdown due to low battery power.
- **Instrument turned on, power supply not restored, running on battery** indicates that when the instrument was turned ON, there was no external power available so it operated on battery power. This is usually the result of a user pressing the Power button when the instrument is unplugged; for example: (1) the instrument was recording, (2) power was lost, (3) the instrument turned OFF after the ride through period expired,then (4) the instrument was turned back ON by the user.

SD-CARD EVENT MESSAGES

- **The recording was suspended when the SD-Card memory became full** indicates:
  - (1) the instrument's SD-Card reached its maximum data storage capacity during the recording session, or
  - (2) the 1 s harmonics or 1 s trend data reached 4 GB in size.

  When either happens, the instrument stops recording data. If the SD-Card is full, you will need to erase the SD-Card's memory to start another recording. If you schedule long recording sessions and see this message repeatedly, consider replacing the SD-Card with an SD-Card with more storage capacity. Excluding 1 s harmonics and trend measurements from the recording may also help avoid this situation.
- **The recording was suspended when the SD-Card was extracted** indicates the SD-Card was removed from the instrument during the recording session. If this was not done intentionally, check the instrument to ensure the SD-Card has not been accidentally dislodged. When the card is reinserted, the recording session will resume.
- **The recording resumed when the SD-Card was inserted** indicates the SD-Card was re-inserted into the instrument after being extracted. The recording session resumes when the card is re-inserted into the instrument.
- **SD-Card interface reset** indicates the instrument cannot communicate with its SD-Card. Replace the SD-Card; if this condition still persists and/or occurs frequently, contact AEMC® Technical Support.

The following two messages are associated with the rate at which data is recorded to the SD-Card:

- **The SD-Card began to saturate. Recording of 1 s harmonics terminated to preserve integrity of recorded data**.
- **The SD-Card began to saturate. Recording of 1 s trend terminated to preserve integrity of recorded data**.

As the size of a data recording increases, the time required to access the SD-Card lengthens. When the write time for harmonic data reaches a threshold, the PEL Control Program stops recording 1 s harmonics data. This prevents loss of 1 s trend or aggregate data. This threshold is dependent on the PEL model and firmware revision.

For example, for version 1.17 of the PEL 102/103 logger firmware, the threshold is 54 seconds in a 64 second interval. The PEL 102/103 has a 64 second buffer for 1 s trend data and 1 s harmonics. When it requires 54 seconds to store 64 sample sets, there is the potential of a buffer over-run; in which case the instrument stops recording 1 s harmonics.

If this condition occurs again, the instrument stops recording 1 s trend data. The first message shown above indicates the recording of 1 s harmonics data has been terminated; the second indicates 1 s trend data has been terminated.

SENSOR EVENT MESSAGES

- **Current sensor has been removed** indicates a sensor was disconnected from the instrument during the recording session. The terminal to which the sensor was connected is listed in the message. If you see this message but the sensor is still connected to the instrument, it may indicate a problem with the sensor or the input terminal to which the sensor is connected.
- **Current sensors changed** indicates one or more sensors were disconnected from the instrument during the recording session and replaced with different sensors. The terminal(s) to which the sensor(s) were connected are listed in the message.

DSP EVENT MESSAGES

- **The acquisition of measurements has been interrupted in the instrument** indicates the instrument stopped communicating with the DSP. If this condition persists and/or occurs frequently, contact AEMC® Technical Support.
- **The acquisition of measurements by the instrument has resumed** indicates that after an unscheduled interruption, the instrument resumed receiving and recording measurement data.
- **Internal synchronization of data** indicates the instrument has reset an internal data setting. The message includes the type of synchronization operation performed.
- **Enable DSP MAX** is written to the DSP when the aggregation MAX detection mode is set to **Aggregated MAX values updated while recording only**. When the recording ends, the DSP will be instructed to disable aggregation MAX detection.
- **Set nominal frequency** indicates **Auto** was selected for the nominal frequency and the instrument reset it during the recording. In general, this message rarely if ever appears since the nominal frequency should be set before the recording starts.
- **Reset partial energies**. If the **Reset partial energy meters at the start of each new session** option in the Meters tab of the Configure dialog box is checked, this command is sent to the DSP to reset the partial energy meters when a recording starts.
- **Reset total energies**. If the **Reset total and partial energy meters at the start of each new session** option in the Meters tab of the Configure dialog box is checked, this command is sent to the DSP to reset the total energy meters when a recording starts.
- **Reset DSP aggregation MAX registers**. If the instrument is configured to only detect aggregated MAX data when recording, this message indicates that the DSP aggregation MAX registers have been reset.
- **DSP write failure** indicates the DSP did not respond to a write request. The write request will be retried and should succeed if the failure was caused by a random condition. If the failure is due to a problem with the DSP, this condition will persist and prevent normal instrument operation. In this case, contact AEMC® Technical Support.

OTHER

Event Code: x indicates an event occurred for which no description is available. The event code number is included in the message. If you see this message, please record the event code number and contact AEMC® Technical Support.

CONTACTING AEMC® INSTRUMENTS

For Instrument Repair and Calibration:

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

For Technical Assistance:

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

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AEMC® Instruments
15 Faraday Drive • Dover, NH 03820 USA
Phone: +1 (603) 749-6434 • +1 (800) 343-1391
www.aemc.com

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