QUICK START GUIDE OF THE PEL 102/103 (GB)

PEL 102

Control Features



PEL 103

CONTROL BUTTON:

Starts/stops the recording session and enables/disables Bluetooth.

The function is obtained by a 2 s press on the **CON-TROL** button, which causes the lighting of the REC LED for 3s followed by the Bluetooth LED, one after another.

REC LED (START/STOP)

- A release while lit starts recording (if stopped)
- A release while lit stops recording (if started)

BLUETOOTH LED (ON/OFF)

- A release while lit enables Bluetooth (if disabled)
- A release while lit disables Bluetooth (if enabled)

PEL 102

Same features as the PEL 103 without the LCD display, Enter or Navigation buttons.

ENTER BUTTON

(PEL103 Only): Displays partial energies (long push).

NAVIGATION BUTTON

(PEL103 Only): Enables browsing and the selection of data view.

ON/OFF BUTTON:

- To turn ON: Connect the power cord into an AC outlet.
- To turn OFF: Disconnect the power cord from the AC outlet, then press the ON/OFF button for >2s.

NOTE: The instrument cannot be turned OFF while connected to an AC outlet or if a recording is in progress.

TOP VIEW: Lead Inputs



Voltage Inputs

Current Inputs

- Location for Color-coded ID Markers (see page 4 for input connection diagram)

BOTTOM VIEW: Connections



LED Status

LED	STATUS
1	Green LED: Recording Status LED blinks once per second every 5 s: Logger in standby (not recording) LED blinks twice per second every 5 s: Logger in recording mode
2	Blue LED: Bluetooth - LED OFF: Bluetooth OFF (disabled) - LED ON: Bluetooth ON (enabled - not transmitting) - LED blinks twice per second: Bluetooth ON (enabled - transmitting)
3	Red LED: Phase Order - OFF: Phase rotation order correct - LED blinks once per second: Phase rotation order incorrect
4	Red LED: Overload - OFF: No overload on inputs - LED blinks once per second: At least one input is in overloaded - LED ON: Indicates a current probe is either mismatched or missing
5	Red/Green LED: SD-Card Status - Green LED ON: SD-Card is OK - Red LED blinks five times every 5 s: SD-Card is full - Red LED blinks four times every 5 s: less than 1 week capacity remaining - Red LED blinks three times every 5 s: less than 2 weeks capacity remaining - Red LED blinks twice every 5 s: less than 3 weeks capacity remaining - Red LED blinks once every 5 s: less than 4 weeks capacity remaining - Red LED blinks once every 5 s: less than 4 weeks capacity remaining - Red LED blinks once every 5 s: less than 4 weeks capacity remaining - Red LED blinks once every 5 s: less than 4 weeks capacity remaining - Red LED blinks once every 5 s: less than 4 weeks capacity remaining - Red LED blinks once every 5 s: less than 4 weeks capacity remaining - Red LED blinks once every 5 s: less than 4 weeks capacity remaining - Red LED blinks once every 5 s: less than 4 weeks capacity remaining - Red LED blinks once every 5 s: less than 4 weeks capacity remaining - Red LED blinks once every 5 s: less than 4 weeks capacity remaining
6	Yellow/Red LED: Battery Status When the AC power cord is connected, the battery charges until it is full. - LED OFF: Battery full (with or without power supply) - Yellow LED ON: Battery is charging - Yellow LED blinks once per second: Battery is recovering from a full discharge - Red LED blinks twice per second: Low battery (and no power supply)
(7) under ON/OFF button	Green LED: ON/OFF - LED ON: External power supply present - LED OFF: No external power supply
8 embedded in the connector	Green LED: Ethernet - LED OFF: No activity - LED ON blinking: Activity
(9) embedded in the connector	Yellow LED: Ethernet - LED OFF: The stack failed to initialize or the Ethernet controller failed to initialize - Blink Slow, toggle every second: The stack initialized properly - Blink Fast, toggle 10 times per second: The Ethernet controller initialized properly - Blink Twice, toggle 2 times, then pause: DHCP Error - LED ON: Network initialized and ready for use

Installing PEL Transfer®

Do not connect the instrument to the PC before installing the software and drivers.

- Insert the CD into your CD-ROM drive.
 If auto-run is enabled, the program will start automatically into your browser. If auto-run is not enabled, select Start.
 html in D:\SETUP (if your CD-ROM drive is drive D. If this is not the case, substitute the appropriate drive letter).
- 2. Select your language and click **ENTER**. Give authorization to your browser to open the file.
- 3. Select the Software column.
- 4. Select PEL Transfer Software.
- 5. Download the file, run it and follow the instructions.

Note: For complete installation instructions, refer to the manual that is supplied on the CD-ROM.

SD-Card

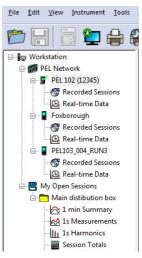
SD-Cards (up to 2 GB) and SDHC-Cards (4 GB up to 32 GB) are supported.

Insert the supplied SD-Card into the PEL and format it.

- 2GB card supports a 4 week recording if harmonics are not recorded.
- When the SD-card is inserted in the instrument, formatting is possible with some restrictions when connected to PEL Transfer.
- Formatting is possible without restriction when inserted into a PC using the supplied SD-card reader.
- Hot extraction is possible when not recording.

Opening the PEL Transfer

- Connect the power cord to an AC outlet. The instrument will power on.
- Connect the supplied USB cable to the PEL and the PC. Wait for the drivers to finish installing before proceeding.
- Double-click the PEL icon located on your desktop to open the PEL Transfer.
- Select the Add an Instrument icon from the toolbar or the main Instrument menu.
- Follow the instructions from the Add an Instrument wizard. If the PEL Transfer cannot locate the instrument in the dropdown list, click on the Refresh button, or disconnect and reconnect the USB cable.
- When a connection to the instrument has been established, the instrument's name should appear along the left side of the PEL Transfer within the PEL Network Branch.



Example of the PEL Network Branch

Configuring the Instrument

To configure your PEL, select the instrument in the PEL Network branch.

Open the Configure Instrument dialog box from the **Configure** icon $|\aleph|$ on the toolbar, the **Instrument** menu, or the **Status** frame.

This dialog box consists of five tabs:

OK



- General: Provides instrument labeling fields, auto power off control, LCD control, operation button control, set clock and format SD card options.
- Communication: Options for Bluetooth and LAN connections.
- **Measurement:** Distribution system selection, voltage ratio, frequency selection and setting for current sensors.
- Recording: Options for selecting recording parameters.
- Meters: Resets meters and options for partial energy reset periods.

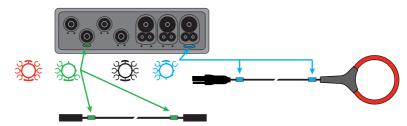
Click on the

button to transfer the new configuration to the instrument.

Installation of the leads and current sensors

Twelve sets of color-coded rings and inserts are supplied with your PEL instrument. 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.



Connect the measuring leads to your PEL as follows:

- Current measurement: I1, I2, I3 4-point connectors
- Voltage measurement: V1, V2, V3 and N terminals

The measuring leads must be connected to the circuit to be monitored according to the selected hook-up diagram. Do not forget to define the transformation ratio when necessary.

Mounting

The PEL is equipped with integrated magnets for mounting to a magnetic surface or it can also

Setting a Recording (Start/Stop)

To start a recording, perform one of the following:

- In the PEL Transfer: Select the option from the Recording tab of the Configuration dialog box. The instrument
 can be configured to start a recording either at a future date/time or immediately upon writing the configuration
 to the instrument.
- On the Instrument: Press and hold the CONTROL button 🕒 until the Green LED lights, then release the control button. This starts the instrument recording using the previous configuration settings.

To stop a recording, perform one of the following:

- In the PEL Transfer: From the menu, select Instrument > Stop Recording.
- On the Instrument: Press and hold the CONTROL button until the Green LED lights, then release the control button.

Viewing the Recording

Recorded data can be transferred to the PC for viewing and report generation in one of two ways:

- The SD card can be removed from the instrument and connected to the PC via the supplied SD-card reader. Start the PEL Transfer, select the **Open** command from the **File** menu, point to the icp file with the desired session number on the SD card and select **Open**.
- Direct connection between the PC and the PEL (USB, Network or Bluetooth). Start the PEL Transfer, open a
 connection to the instrument, select the instrument (be sure the instrument is connected) in the tree view and
 select Recorded Sessions. Double-click on the desired recording session.

When downloading is complete, select the downloaded test and click the **Open** button in the Download dialog box.

In both cases, the session is added to My Open Sessions in the tree view. Data can now be viewed.



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