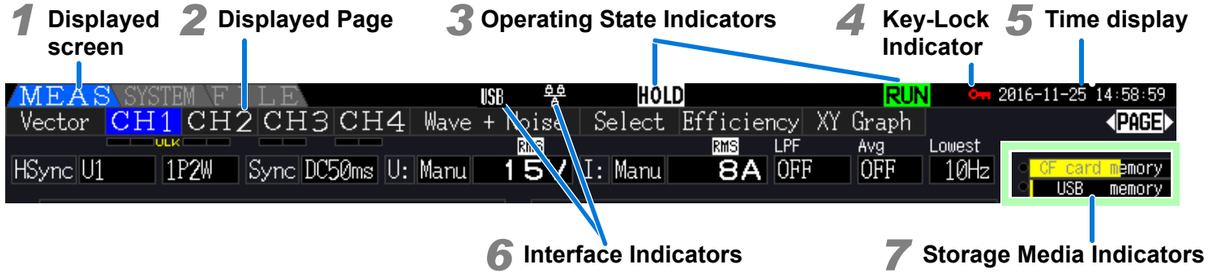
## Always-Displayed Items




### 1 Displayed screen

MEAS Measurement screen (Press MEAS to display)

SYSTEM System screen (Press SYSTEM to display)

FILE File Operations Screen (Press FILE to display)

### 2 Displayed Page

Each page shows different screen contents: select the appropriate page as needed. Switch the page with ◄ ►.

### 3 Operating State Indicators

WAIT Lights up while in the integration standby state.

RUN Indicates integration is in progress.

STOP Indicates integration is stopped.

HOLD Indicates Data Hold is active.

PEAK Indicates Peak Hold is active.

### 4 Key-Lock Indicator

Lights to indicate Key Lock is active (keys are locked, after holding ESC /Cm for three seconds).

Hold ESC /Cm again for three seconds to unlock.

### 5 Time display

Displays the current date and time.
(To set the clock: See Chap. 6 of the instruction manual.)

### 6 Interface Indicators

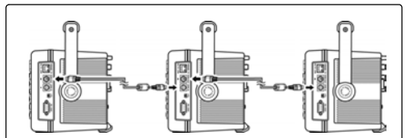
USB Lights when the instrument is connected to a computer by USB cable (and the computer is on).

LAN Lights when the instrument is connected to a LAN.

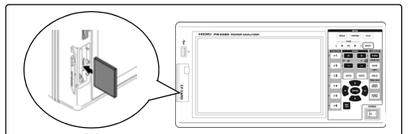
### 7 Storage Media Indicators

Level indicators for the CF card and USB memory stick. The used storage space is indicated in yellow, and it turns to red when the media is 95% full.
The round indicator to the left of the level meter will turn yellow-green while the media is being accessed.

## Additional Capabilities

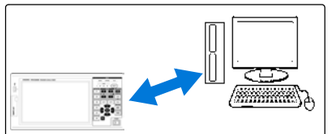


Connecting Multiple PW3390 (Synchronized Measurements)
See: Instruction manual Sec. 8.1



- Save measurement data and setting configurations.
- Reload setting configurations.

See: Instruction manual Chap. 7



Connect a computer for external control and data transfer.
See: Instruction manual Chap. 9

**See the instruction manual for details, including setting procedures for measurement and display, convenience features and more.**



# PW3390 POWER ANALYZER
## Measurement Guide

HIOKI

Read First

* 6 0 0 4 9 9 4 4 0 *
EN
Feb. 2017 Edition 1 Printed in Japan
PW3390A966-00 17-02H

Thank you for purchasing the HIOKI Model PW3390 Power Analyzer.
This guide introduces the Power Analyzer's basic measurement procedure to first-time users.
Before using the instrument, be sure to read the Instruction Manual carefully.

## 1. Connect the Cables and Sensors, and Power On

### Pre-connection inspection

- **Voltage measurement cables and power cord**
  Does any cable insulation appear damaged, or is bare metal exposed?
- **Current sensors**
  Is a jaws cracked or damaged?
- **PW3390**
  Is damage to the instrument evident?

**If damage is found.**

Contact your dealer or Hioki representative if you find any damage.

### Power-on confirmation

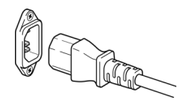
- Does the self-test (model and version) display?
- When the self-test finishes, does the [Wiring] page of the Setting or Measurement screen appear (according to when the instrument was last turned off)?

**If the self-test does not display, or if an error is displayed.**

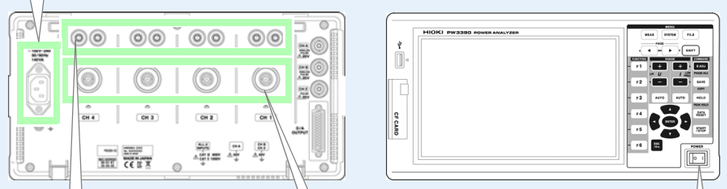
The power cord may be damaged, or the instrument may have internal damage. Please contact your dealer or Hioki representative.

### Power cord

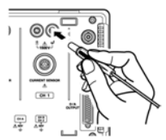
1



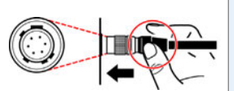
2 Plug the other end of the power cord into an outlet.



### 3 Voltage measurement cables



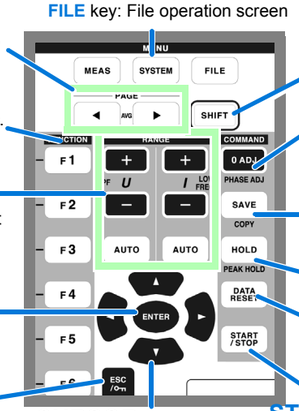
### 4 Current sensor cables



### 5 Power-on

For best precision, allow at least 30 minutes warm-up before executing zero adjustment and measuring.

## Operation keys




**MENU keys**
Select a screen
MEAS key: Measurement screen
SYSTEM key: System screen
FILE key: File operation screen

**PAGE keys**
Changes the screen page.

**FUNCTION keys (F keys)**
Select and change display contents and settings.

**RANGE keys**
- Change the voltage (U) and current (I) measurement ranges.
- Pressing the AUTO key activates auto-ranging.

**ENTER key**
Accepts selections and changes to settings.

**ESC (Escape) key**
- Cancels the last change to a setting, and returns it to its previous state.
- Hold for three seconds to toggle the key lock.

**CURSOR key**
Move the cursors.

**SHIFT key**
(Lit when running)
Activates alternate key functions.

**0 ADJ (Zero Adjustment) key**
Performs zero adjustment and current sensor degaussing.

**SAVE key**
- Saves data to the storage media.
- Press SAVE key after pressing the SHIFT key to capture a screen image to the storage media. (Screen capture)

**HOLD key**
Toggles the Hold and Peak Hold function.

**DATA RESET key**
Resets the integration values.

**START/STOP key**
Starts and stops integration and saving operations.

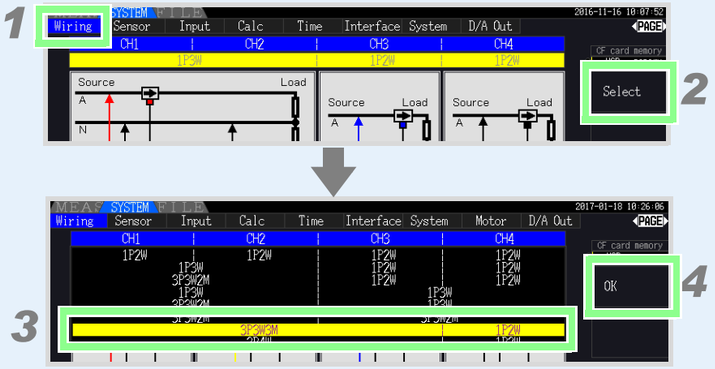
# 2. Select the Wiring Mode

**1** Press SYSTEM to display the System screen, and select the **[Wiring]** page with the ◄ ► keys.

**2** Press F1 **[Select]**.

**3** Use the keys to select the wiring mode (phase configuration) of the measurement system.

**4** Press F1 to accept the selection.
The wiring diagram(s) are displayed.




# 3. Select the Current Sensors

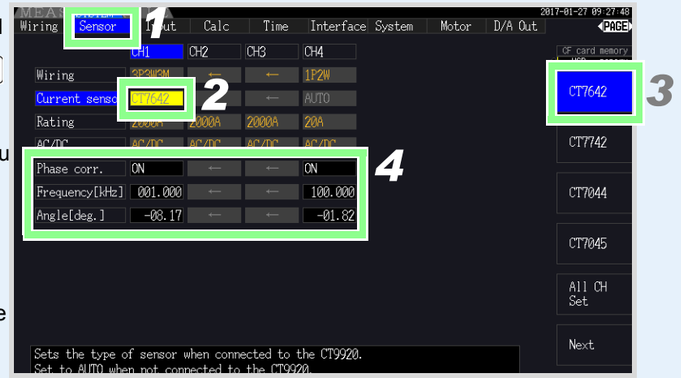
If using the CT9920 Conversion Cable, set the models of the current sensors.
If not using the CT9920, there is no need to set the models of the current sensors as that information will be automatically detected.

**1** Press SYSTEM to display the System screen, and select the **[Sensor]** page with the ◄ ► keys.

**2** Select the channel whose current sensor you wish to configure with .

**3** Select the sensor with the **F** key.

**4** To increase measurement precision, configure phase correction for the current sensors.
See: Instruction manual Sec. 3.10

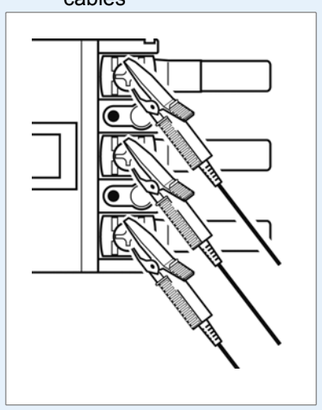



# 4. Attach voltage measurement cables and current sensors to the measurement lines according to the wiring diagram(s).

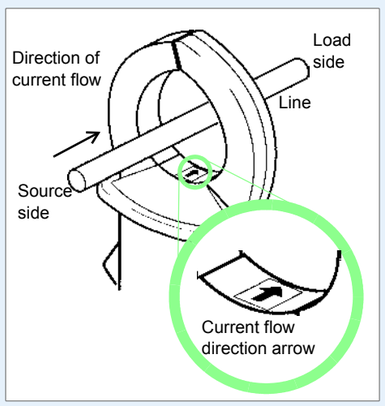
**1** <IMPORTANT> After 30 minutes warm-up, always perform zero adjustment before attaching to the lines.

1. Press MEAS to display the Measurement screen.
2. Press 0 ADJ.
   **[Execute Zero Adjust.]** is displayed.
3. Press ENTER.
   **[Executing Please wait...**
   **All keys are disabled now.]** is displayed for 30 seconds, until finished.

**2** Connect voltage measurement cables



**3** Attach current sensors





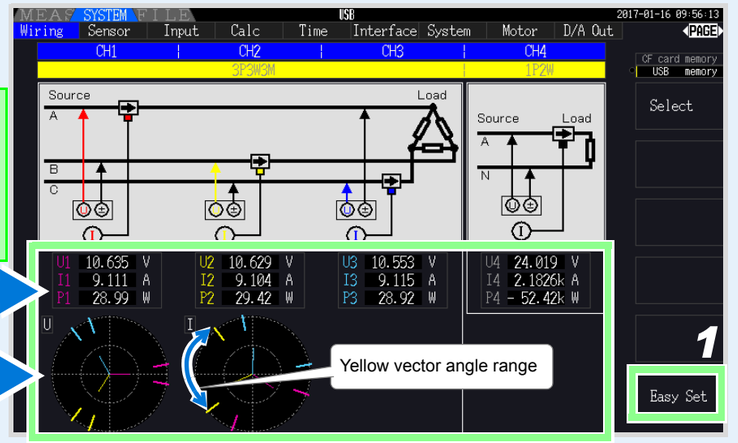

# 5. Execute quick setup, and verify correct wiring

**1** Press F6 **[Easy Set]**, and then ENTER to execute.

**When execute quick setup**
Executing quick setup automatically configures the following settings to the Hioki-recommended values for the selected wiring mode (phase system): voltage and current ranges, sync source, lower measurement frequency limit, integration mode, harmonic sync source and rectification method.

**2** Verify that appropriate measurement values are displayed.

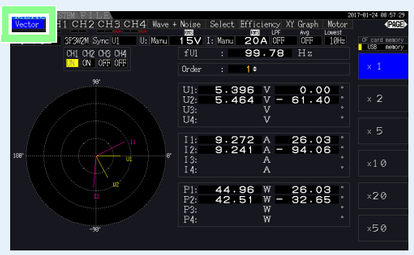
**3** Verify that the vectors are displayed with the appropriate range, and that vectors are not too short, or of unequal lengths.




# 6. View Measurement Values

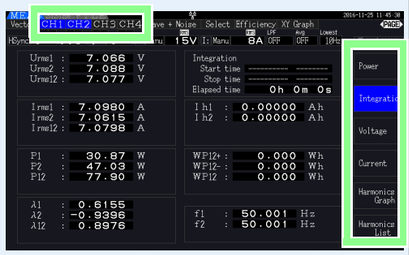
Press MEAS to display the Measurement screen, and press ◄ ► to switch screen pages.

## Vector



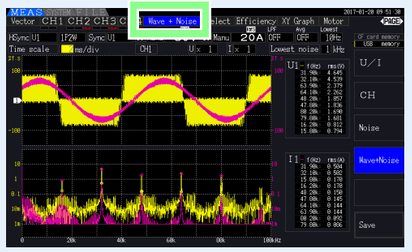
This page displays measured harmonic voltage, harmonic current, and harmonic power on channels 1 to 4 as numerical values and as vectors.

## CH1 to CH4



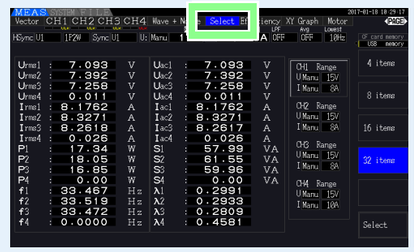
This page displays measured power, voltage and current values, integration values, and provides access to harmonic graphs and lists for each channel.

## Wave + Noise



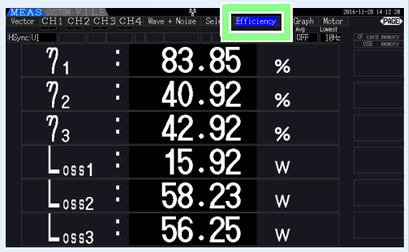
This page displays waveforms and noise of voltage and current. The waveforms can be saved.

## Select



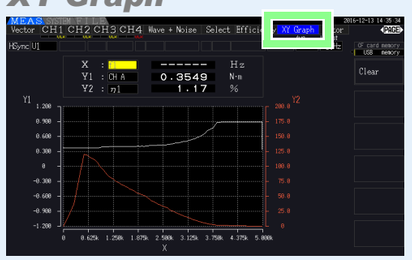
This page displays the parameters which you are selected.

## Efficiency



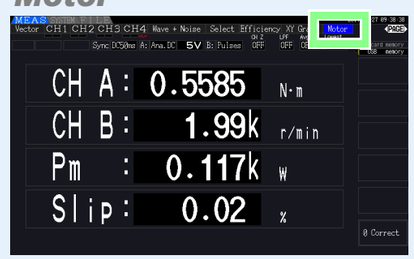

This page displays the numerical values of efficiency and loss determined by calculation formulas.

## XY Graph



This page displays an X-Y graph of measurement parameters selected for horizontal and vertical axes.

## Motor




This page displays measured values for the motor analysis function.

Displayed only on the PW3390-03 (model with motor analysis and D/A output).