

1. Sample Program Instruction for PW4001 driver

1.1 Startup / Stop

The application shown like below pops up when the following VI starts

HIOKI PW4001 Demo Measure.vi

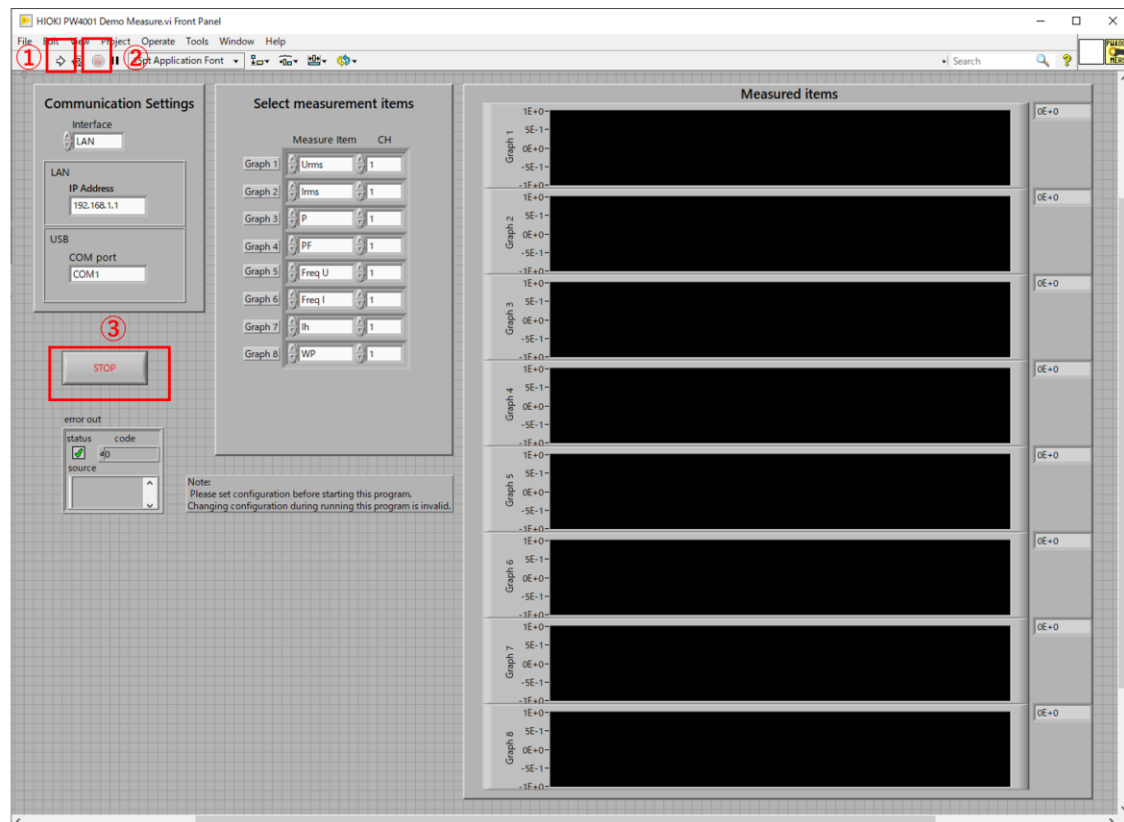
HIOKI PW4001 Demo Measure Harmonic.vi

“(1) VI Start button” runs the application.

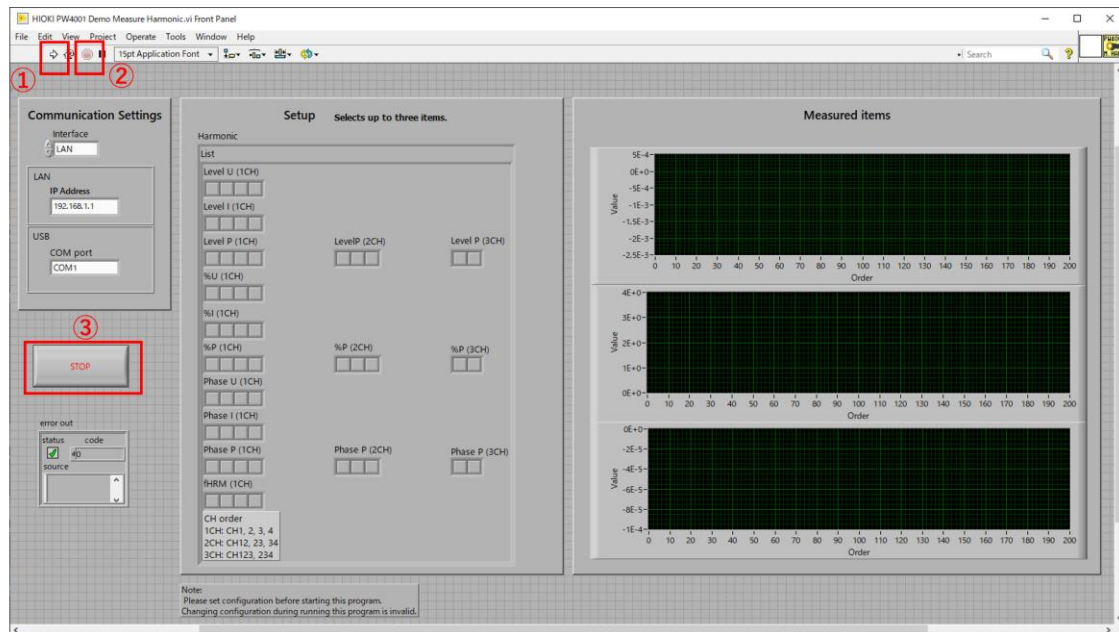
“(2) VI abort button” terminates the application in the case that (3) seems not clickable.

“(3) Stop button on GUI” just stop the application. It is better to use this.

HIOKI PW4001 Demo Measure.vi



HIOKI PW4001 Demo Measure Harmonic.vi

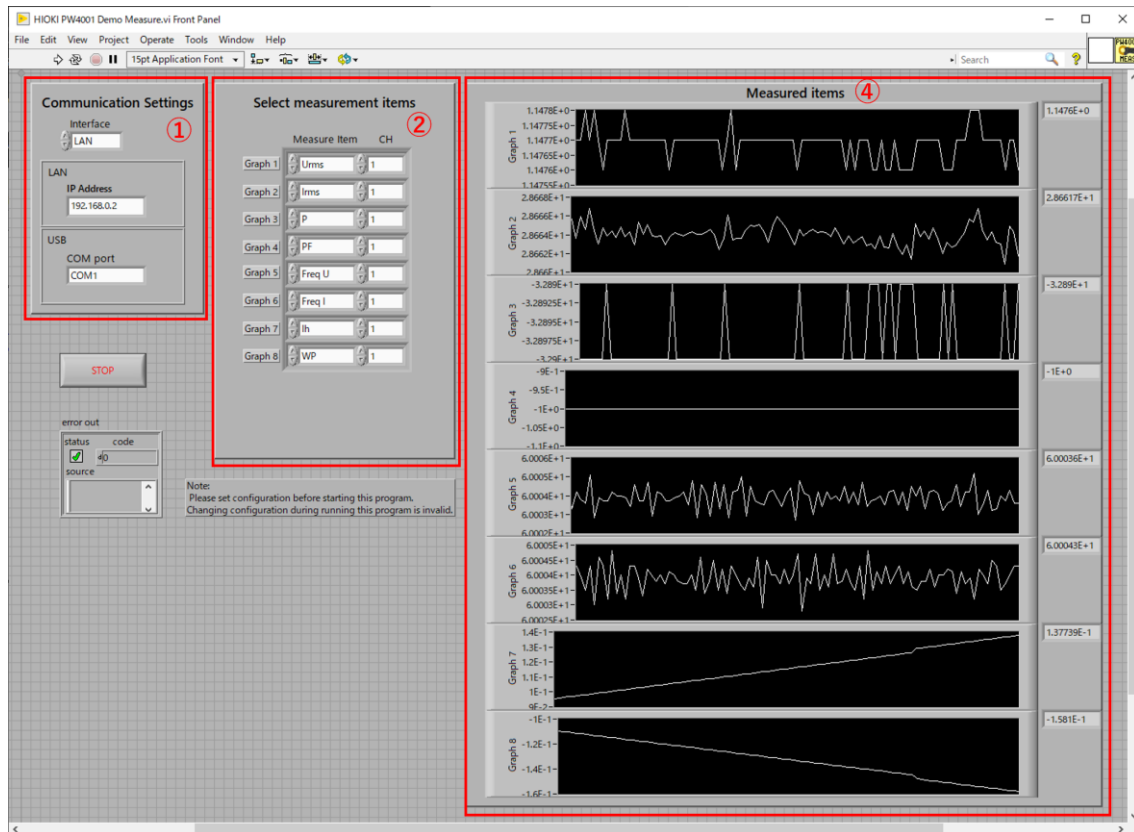


1.2 HIOKI PW4001 Demo Measure.vi

1.2.1 Front Panel

Voltage / Current / Active power / Apparent power etc. are displayed in a graph with data refresh rate.

- ①: Set communication interface.
- ②: Select the items to measure. ("Item")
- ③: Start the program.
- ④: The measured value selected in "Item" is displayed in the graph.
- ⑤: Press the "STOP" button to stop the program.

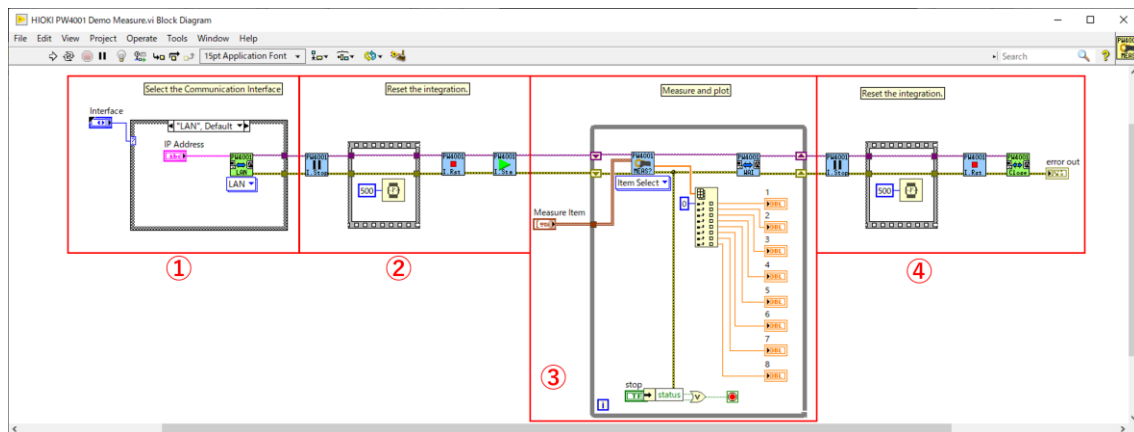


*All settings except the graph must be done prior to starting the program.

Any changes of the setting during the operation may not result in what you expect.

1.2.2 Block Diagram (vi source code)

- ①: Connect to PW4001 in chosen communication interface.
- ②: The following steps are taken.
Stop integration -> (500ms wait) -> reset integration -> start integration
- ③: Measure the specified item. Graph updates in the data refresh rate of PW4001.
- ④: Terminate the communication of PW4001 after following steps.
Stop integration -> (500ms wait) -> reset integration

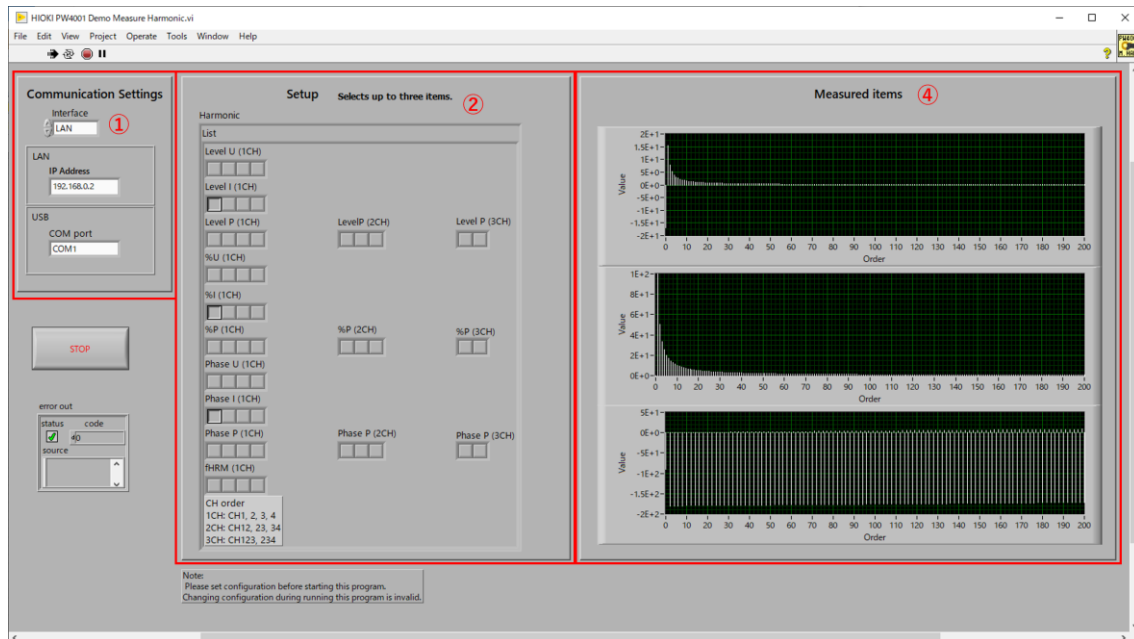


1.3 HIOKI PW4001 Demo Measure Harmonic.vi

1.3.1 Front Panel

Harmonic data (U / I / P) is displayed in bar graph.

- ①: Set communication interface.
- ②: Select up to three items to measure. ("Item")
- ③: Start the program.
- ④: The measured value selected in "Item" is displayed in the graph.
- ⑤: Press the "STOP" button to stop the program.



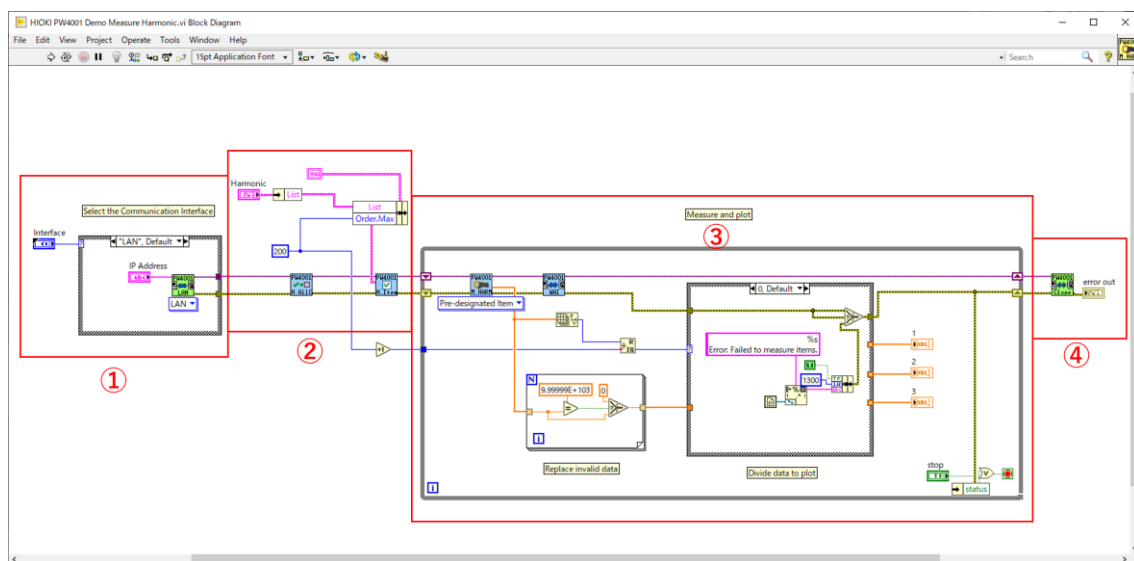
*All settings except the graph must be done prior to starting the program.

Any changes of the setting during the operation may not result in what you expect.

*If you select more than three, the data plotted in the graph will be invalid.

1.3.2 Block Diagram (vi source code)

- ①: Connect to PW4001 in chosen communication interface.
- ②: Setup the harmonic data output.
- ③: Measure the specified harmonic data. Graph updates in the data refresh rate of PW4001.
- ④: Terminate the communication of PW4001.



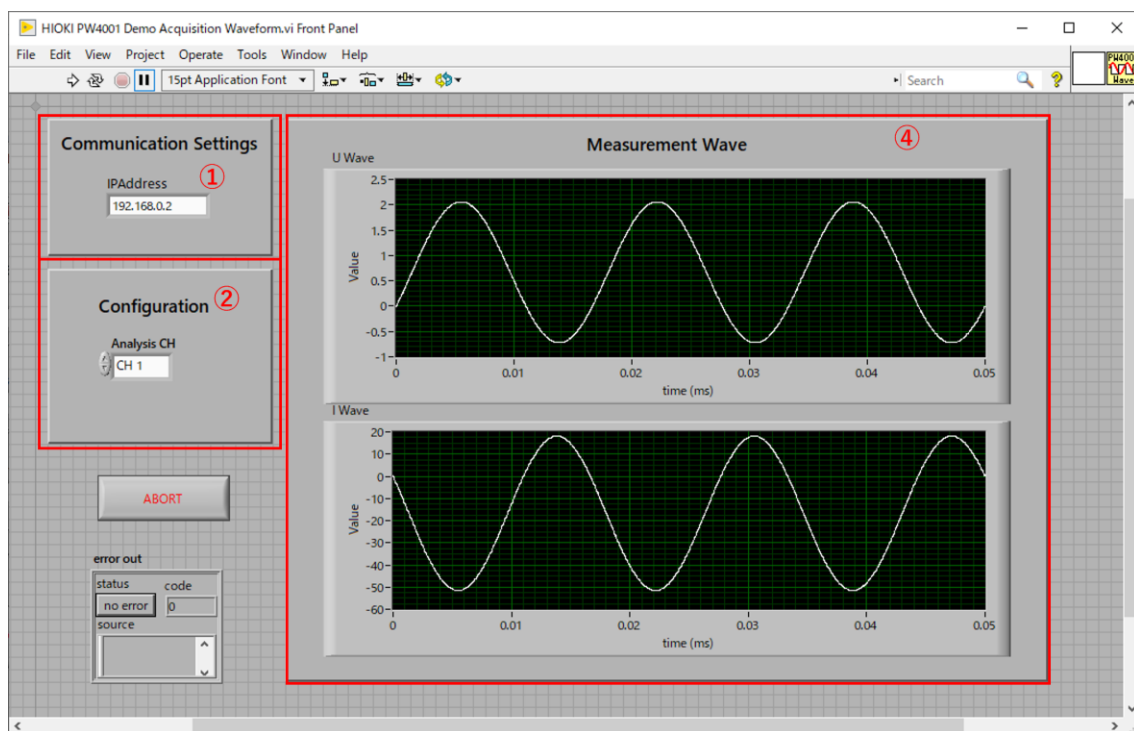
1.4 HIOKI PW4001 Demo Acquisition Waveform.vi

1.4.1 Front Panel

The waveform is stored once, then acquired and displayed in the graph.

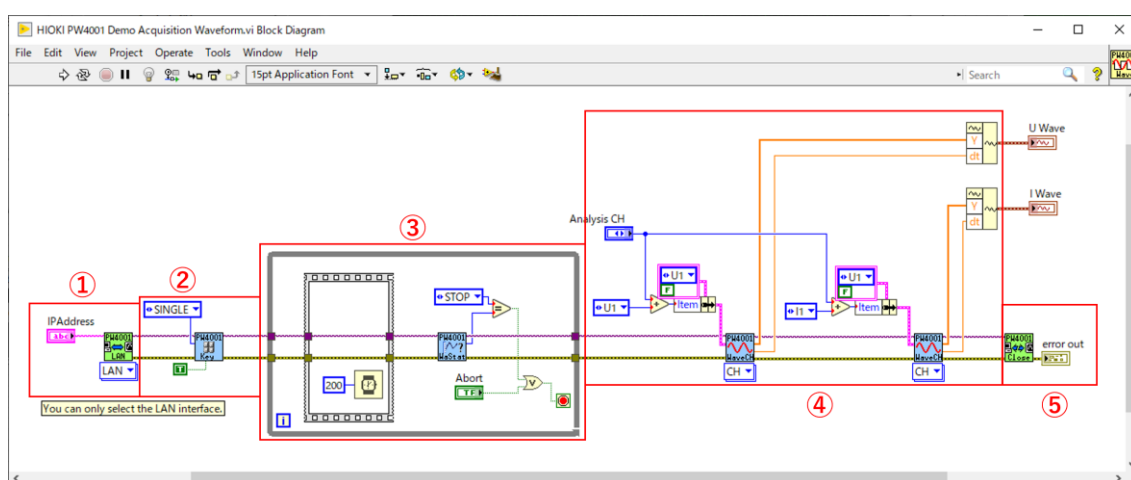
This VI is valid only when connected to LAN.

- ①: Set IP address.
- ②: Select CH to acquire waveform.
- ③: Start the program.
- ④: Display the waveform of the specified CH. The upper graph displays the voltage waveform and the lower graph displays the current waveform.



1.4.2 Block Diagram (vi source code)

- ①: Connect to PW4001 in LAN.
- ②: Storage the waveform.
- ③: Wait until storage is completed.
- ④: Acquire and display the waveform of the specified CH.
- ⑤: Terminate the communication of PW4001.

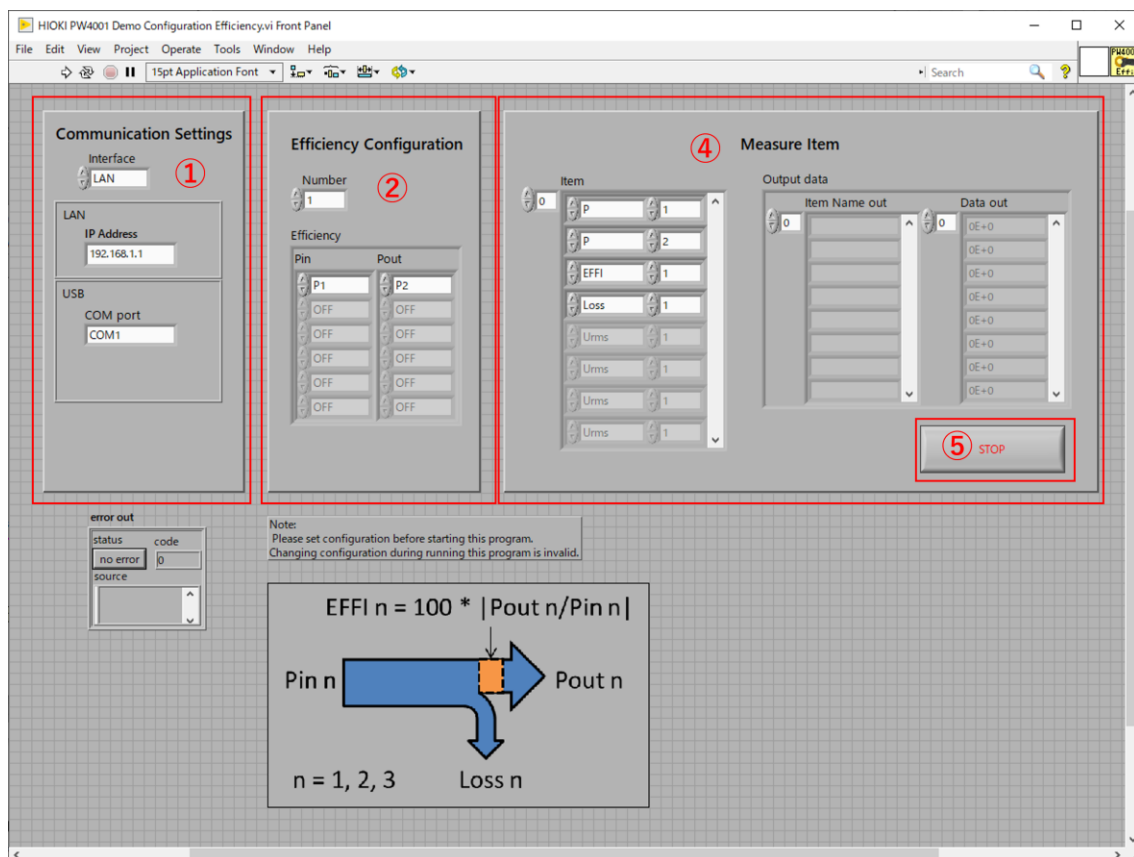


1.5 HIOKI PW4001 Demo Configuration Efficiency.vi

1.5.1 Front Panel

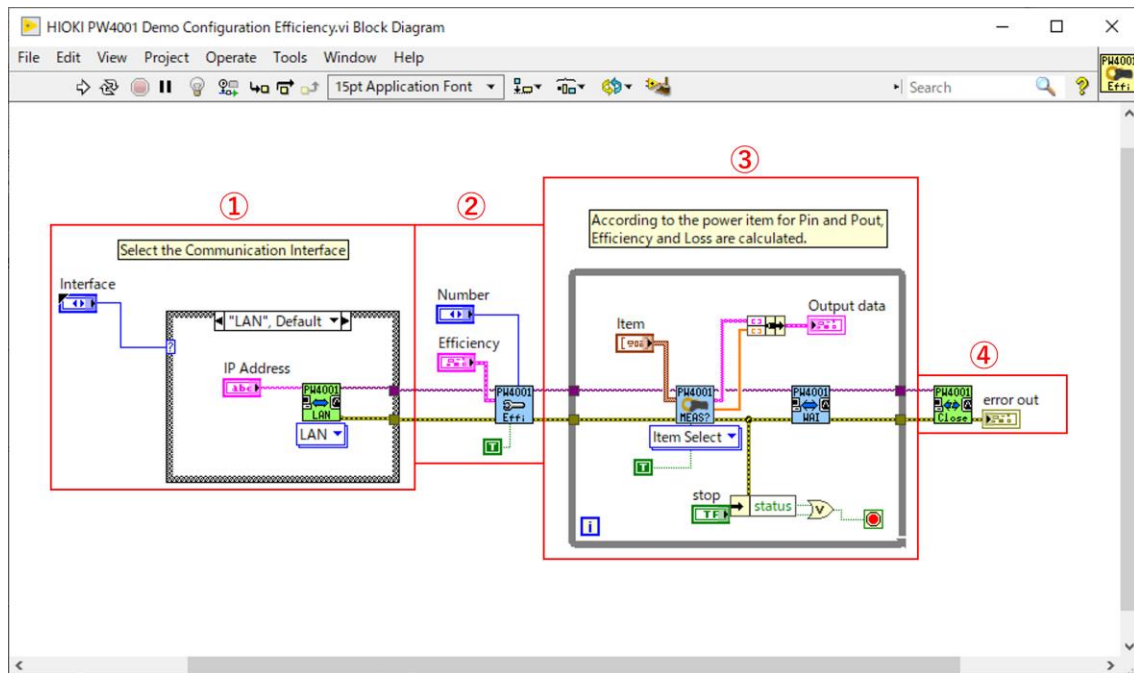
After setting the efficiency and loss configuration (Pin and Pout), display the measurement data.

- ①: Set communication interface.
- ②: Set efficiency configuration.
- ③: Start the program.
- ④: The measured value selected in “Item” is displayed and updated every data refresh rate of PW4001.
- ⑤: Press the “STOP” button to stop the program.



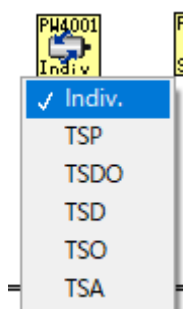
1.5.2 Block Diagram (vi source code)

- ①: Connect to PW4001 in chosen communication interface.
- ②: Setup the efficiency and loss configuration.
- ③: Measure the specified item data. The measurement data are updated in the data refresh rate of PW4001.
- ④: Terminate the communication of PW4001.



1.6 HIOKI PW4001 Demo Configuration Motor.vi

This sample program is polymorphic VI. Select the sample program according to the motor wiring.

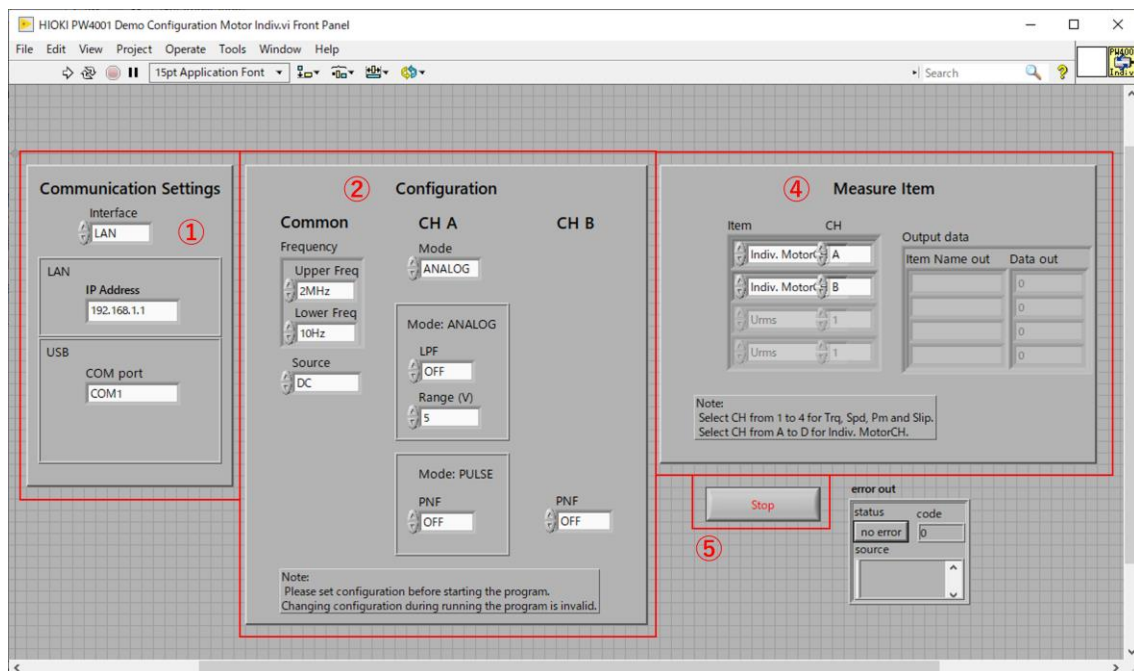


Motor wiring	Selector name
Individual Input	Indiv.
Torque Speed(Pulse)	TSP
Torque Speed Direction Origin	TSDO
Torque Speed Direction	TSD
Torque Speed Origin	TSO
Torque Speed(Analog)	TSA

1.6.1 Front Panel

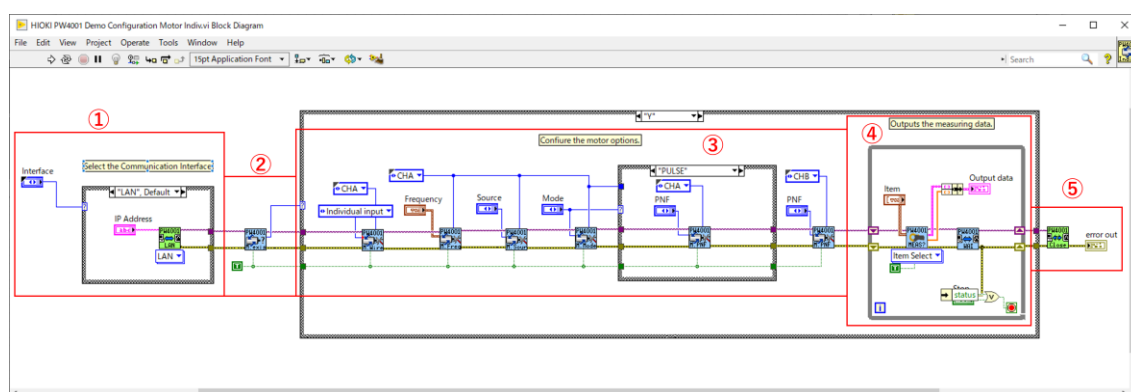
As a representative, show the sample program for the individual input motor wiring.

- ①: Set communication interface.
- ②: Set motor configuration for the individual input wiring.
- ③: Start the program.
- ④: The measured value selected in "Item" is displayed and updated every data refresh rate of PW4001.
- ⑤: Press the "STOP" button to stop the program.



1.6.2 Block Diagram (vi source code)

- ①: Connect to PW4001 in chosen communication interface.
- ②: Check if the motor analysis option exists. If the motor analysis option is not implemented, an error is displayed.
- ③: Setup the motor configuration for the individual input wiring.
- ④: Measure the specified item data. The measurement data are updated in the data refresh rate of PW4001.
- ⑤: Terminate the communication of PW4001.

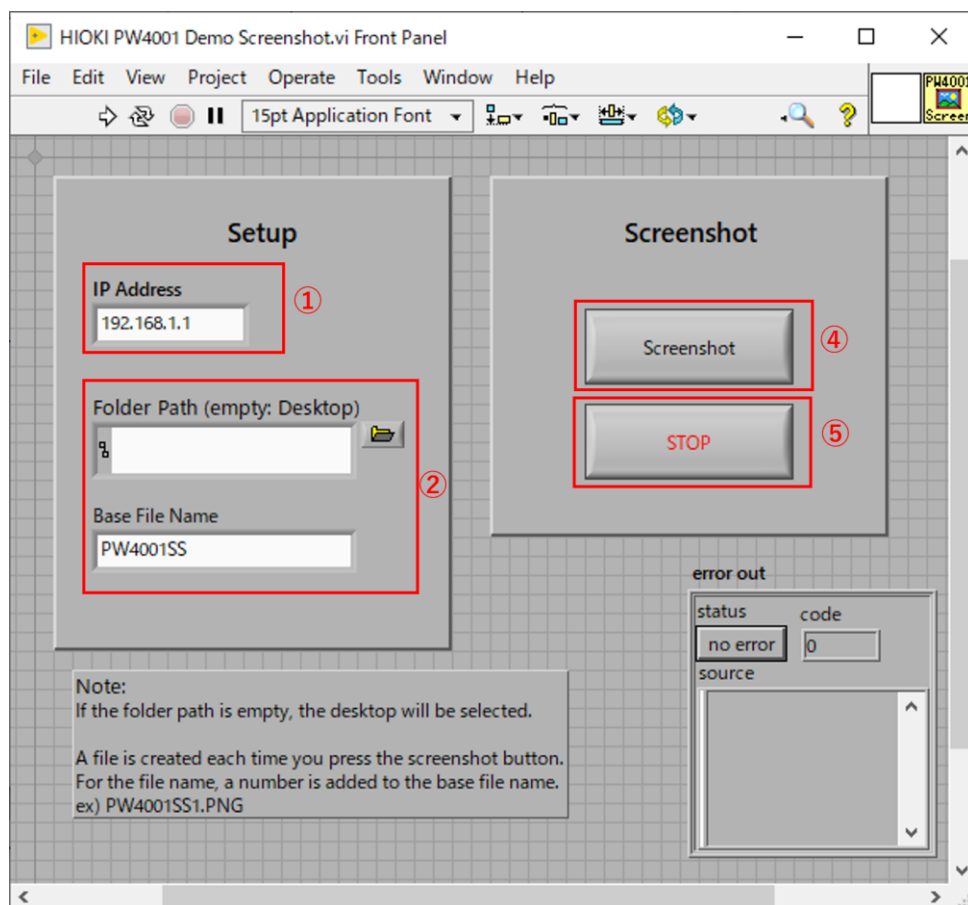


1.7 HIOKI PW4001 Demo Screenshot.vi

1.7.1 Front Panel

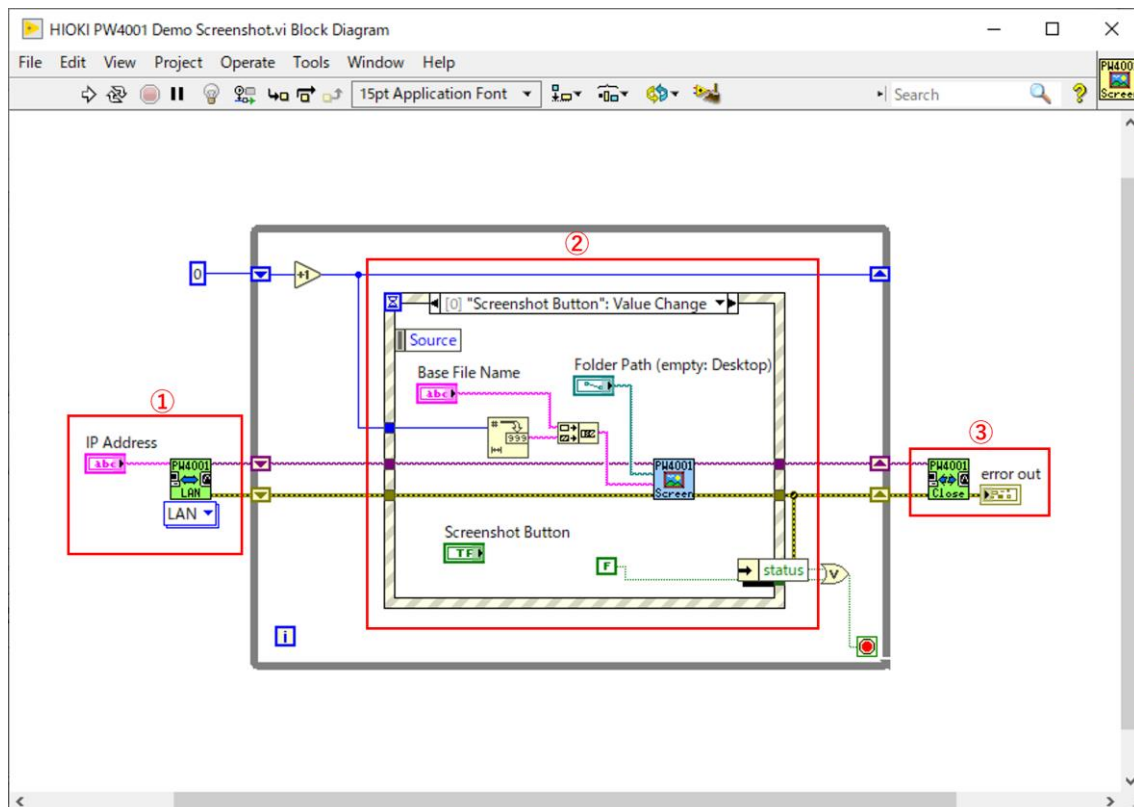
Each time pressing the "Screenshot" button, a screenshot of the PW4001 screen will be created and stored in the specified folder.

- ①: Set IP address.
- ②: Input the folder path to store the screenshot and the base file name for screenshot.
- ③: Start the program.
- ④: Press "Screenshot" button, and screenshot file is created and stored in the specified folder.
- ⑤: Press the "STOP" button to stop the program.



1.7.2 Block Diagram (vi source code)

- ①: Connect to PW4001 in LAN.
- ②: When the "screenshot" button is pressed, a screenshot file path is created and create screenshot file.
- ③: Terminate the communication of PW4001.



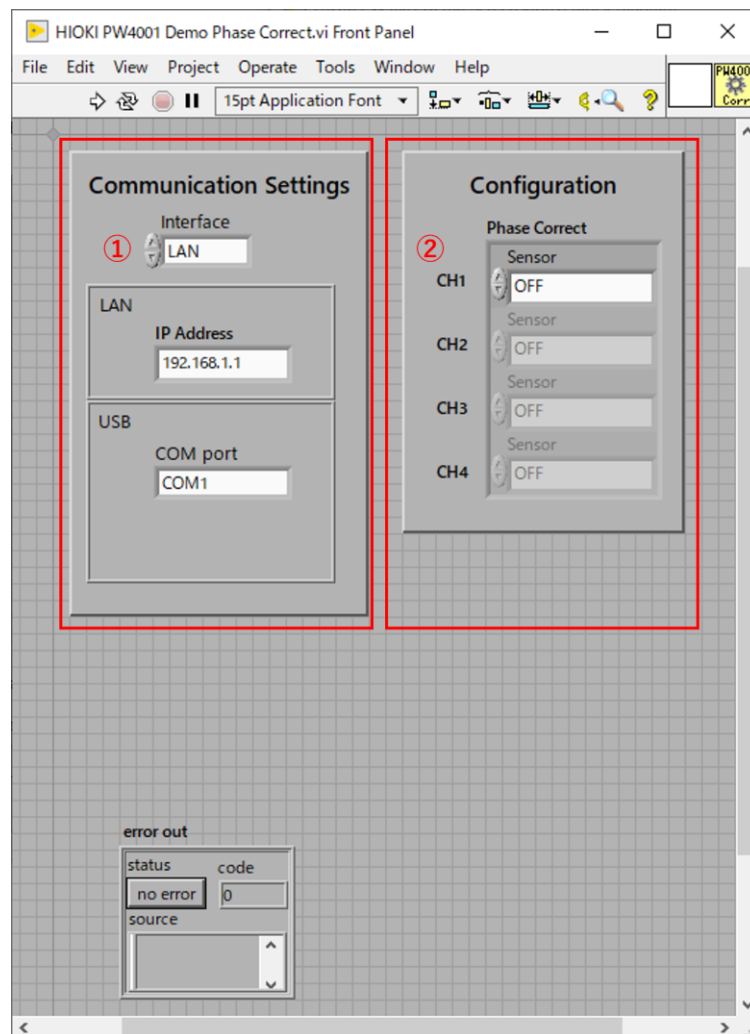
1.8 HIOKI PW4001 Demo Phase Correct.vi

1.8.1 Front Panel

Set the phase correction according to the current sensor.

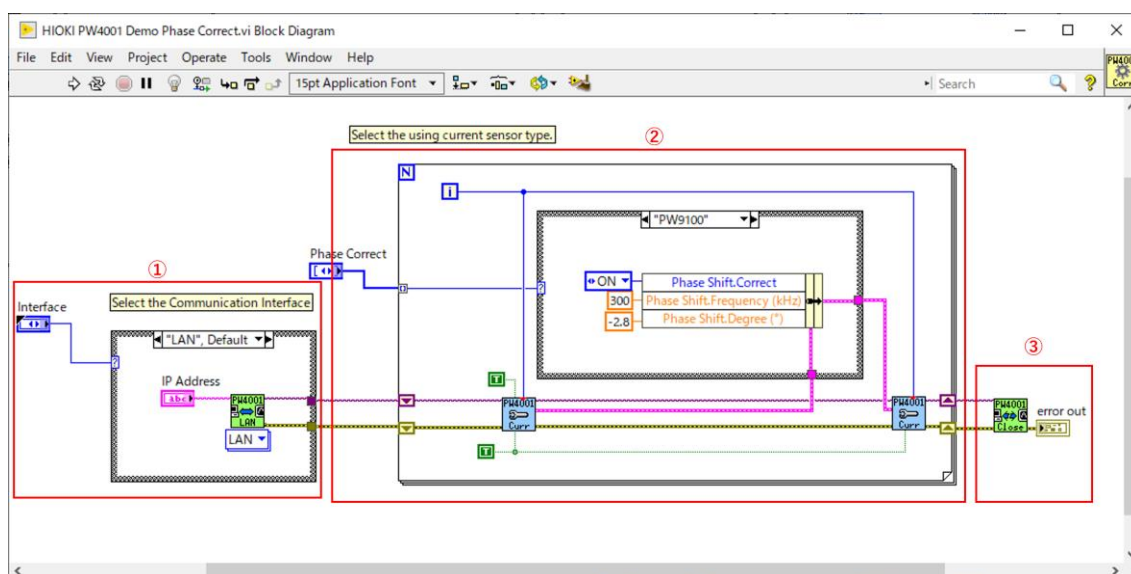
When using a current sensor with auto recognition function, select "AUTO".

- ①: Set communication interface.
- ②: Select using current sensor name. When using a current sensor with auto recognition function, select "AUTO".
- ③: Start the program.



1.8.2 Block Diagram (vi source code)

- ①: Connect to PW4001 in chosen communication interface.
- ②: Set the phase correction parameter according to the specified current sensor.
- ③: Terminate the communication of PW4001.



Revision History

Edition	Contents	Reviser	Date
1.00	First Edition	HIOKI	2025/09/30