

VT1005

AC/DC HIGH VOLTAGE DIVIDER

HIOKI

Power Analyzer Setup Guide

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Introduction

Thank you for purchasing the Hioki VT1005 AC/DC High Voltage Divider.
This Setup Guide describes the settings of the Hioki Power Analyzer (PW8001, PW6001, PW3390) when they are used with the VT1005.
Refer to the Instruction Manual of the Power Analyzer for more information about how to use the Power Analyzer.

The latest edition of the Setup Guide

The contents of this Setup Guide are subject to change, for example as a result of product improvements or changes to specifications. The latest edition can be downloaded from Hioki's website.



<https://www.hioki.com/global/support/download/>

Features of Hioki Power Analyzer

PW8001

Measurable band:
DC, 0.1 Hz to 5 MHz
(when the U7005 is used)
Up to eight-channel power measurement with a single unit



PW6001

Measurable band:
DC, 0.1 Hz to 2 MHz
Up to six-channel power measurement with a single unit



PW3390

Measurable band:
DC, 0.5 Hz to 200 kHz
Up to four-channel power measurement with a single unit



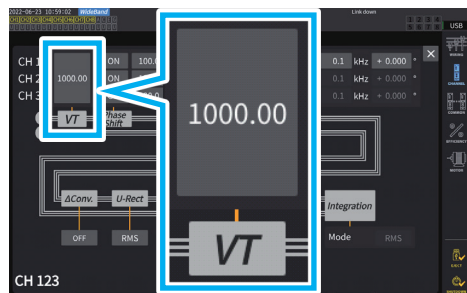
1. Setting the Scaling (VT Ratio/Rate)

Enter 1000 in the VT ratio/rate.

You can directly read values input from the VT1005 by setting the VT1005's dividing ratio/rate to the Power Analyzer.

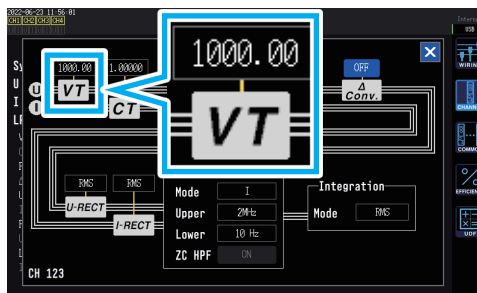
■ PW8001

Press the **INPUT** key. → Touch **[CHANNEL]**.
→ Touch the channel detail display area.



■ PW6001

Press the **INPUT** key. → Touch **[CHANNEL]**.
→ Touch the channel detail display area.



■ PW3390

Press the **SYSTEM** key. → Select **[Input]**.



2. Setting the Phase Correction/Compensation Value

Phase correction/compensation for the Voltage Divider can be performed by setting a phase correction/compensation value to the Power Analyzer to reduce power measurement errors in the high-frequency domain. The settings vary depend on the Power Analyzer being used.

IMPORTANT

Enter a phase correction/compensation value correctly. Incorrect settings may allow correction/compensation to increase measurement errors.

2-1. When the PW8001 (Version 1.30 or later) is used

2-2. When the PW6001 or PW3390 is used

Please turn over. →

2-1. When the PW8001 (Version 1.30 or later) is used

Enable the voltage phase correction/compensation, and then enter a correction/compensation value chosen from Table 1,

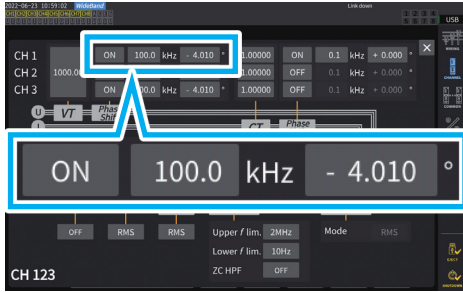


L9217 Connection Cord

The phase correction/compensation value varies depending on the length of the L9217 Connection Cord used with the VT1005.

Press the **INPUT** key. → Touch **[CHANNEL]**.

→ Touch the channel detail display area.



Example: When the L9217 Connection Cord (1.6 m) is used with the VT1005

Table 1. Phase correction/compensation value (typical)

Frequency (kHz)	Typical between-input-and-output phase difference value (degrees)		
	L9217 Connection Cord (1.6 m)	L9217-01 Connection Cord (3.0 m)	L9217-02 Connection Cord (10 m)
100.0	-4.01	-4.26	-5.52

2-2. When the PW6001 or PW3390 is used

Enable the current sensor phase correction/compensation, and then enter a correction/compensation value chosen from Table 2.

The phase correction/compensation for the VT1005 and the current sensor can be performed by using the phase correction/compensation function of the current sensor.

The phase correction/compensation value varies depending on the current sensor to be used and the length of the L9217 Connection Cord used with the VT1005.

■ PW6001

Press the **INPUT** key. → Touch **[CHANNEL]**.

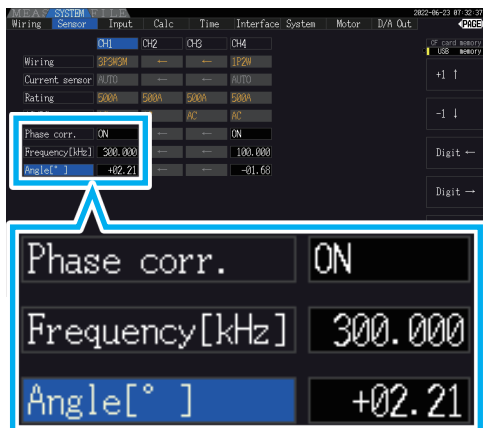
→ Touch the channel detail display area.



Example: The CT6904 AC/DC Current Sensor is used with the PW6001.
When the L9217 Connection Cord (1.6 m) is used with the VT1005

■ PW3390

Press the **SYSTEM** key. → Select **[Sensor]**.



Example: The CT6904 AC/DC Current Sensor is used with the PW3390.
When the L9217 Connection Cord (1.6 m) is used with the VT1005

Table 2. Phase correction/compensation value (typical)

Model	Frequency (kHz)	Typical between-input-and-output phase difference value (degrees)		
		L9217 Connection Cord (1.6 m)	L9217-01 Connection Cord (3.0 m)	L9217-02 Connection Cord (10 m)
CT6841-05	100.0	2.19	2.44	3.70
CT6841A	100.0	0.42	0.67	1.93
CT6843-05	100.0	2.33	2.58	3.84
CT6843A	100.0	0.05	0.30	1.56
CT6844-05	50.0	0.72	0.84	1.47
CT6844A	100.0	0.09	0.34	1.60
CT6845-05	20.0	0.18	0.23	0.48
CT6845A	10.0	-0.54	-0.51	-0.39
CT6846-05	20.0	-1.09	-1.04	-0.79
CT6846A	10.0	-0.65	-0.62	-0.50
CT6862-05	300.0	1.07	1.81	5.60
CT6863-05	100.0	-0.59	-0.34	0.92
CT6865-05	1.0	-1.17	-1.17	-1.15
CT6872	100.0	2.73	2.98	4.24
CT6872-01	100.0	1.38	1.63	2.89
CT6873	100.0	3.26	3.51	4.77
CT6873-01	100.0	1.91	2.16	3.42
CT6875, CT6875A	200.0	-2.43	-1.93	0.59
CT6875-01, CT6875A-1	200.0	-4.85	-4.35	-1.83
CT6876, CT6876A	200.0	-4.94	-4.44	-1.92
CT6876-01, CT6876A-1	200.0	-6.32	-5.82	-3.30
CT6877, CT6877A	100.0	1.38	1.63	2.89
CT6877-01, CT6877A-1	100.0	0.67	0.92	2.18
CT6904 series*1	300.0	2.21	2.95	6.74
9709	20.0	-0.31	-0.26	-0.01
PW9100 series*2	300.0	9.23	9.97	13.76

Assuming that the current sensor with the standard length cable is used, and the conductor under measurement is positioned at the center of the sensor aperture.

*1: CT6904, CT6904-01, CT6904-60, CT6904-61, CT6904A, CT6904A-1, CT6904A-2, CT6904A-3

*2: PW9100-03, PW9100-04, PW9100A-3, PW9100A-4