

# WT Series & PZ

Power Analyzer WT series & PZ



## **WT3000**

Basic Accuracy: 0.02%  
Frequency range: DC, 0.1 Hz to 1 MHz



## **WT500**

Basic Accuracy: 0.1%  
Frequency range: DC, 0.5 Hz to 100 kHz



## **WT1600**

Basic Accuracy: 0.1%  
Frequency range: DC, 0.5 Hz to 1 MHz



## **WT230**

Basic Accuracy: 0.1%  
Frequency range: DC, 0.5 Hz to 100 kHz



## **PZ4000**

Basic Accuracy: 0.1%  
Frequency range: DC, 0.1 Hz to 1 MHz

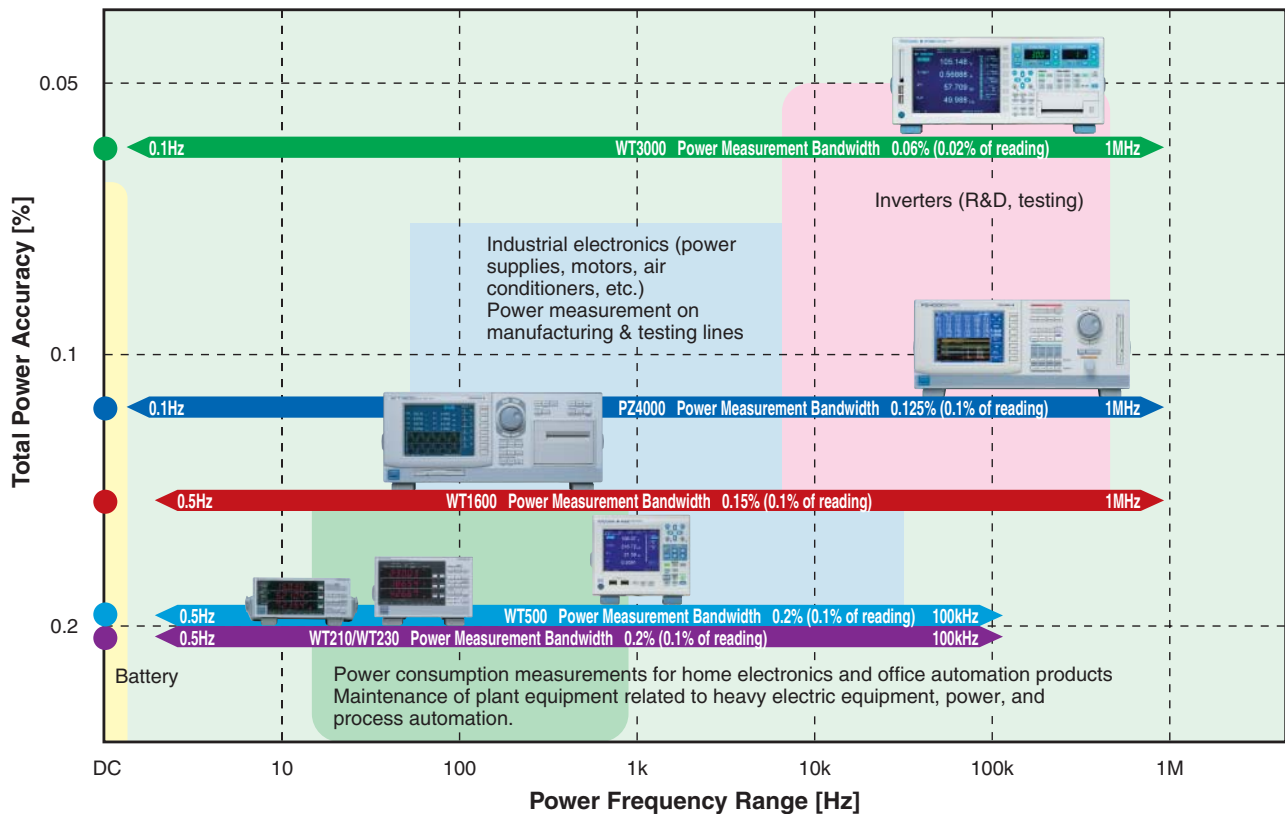


## **WT210**

Basic Accuracy: 0.1%  
Frequency range: DC, 0.5 Hz to 100 kHz

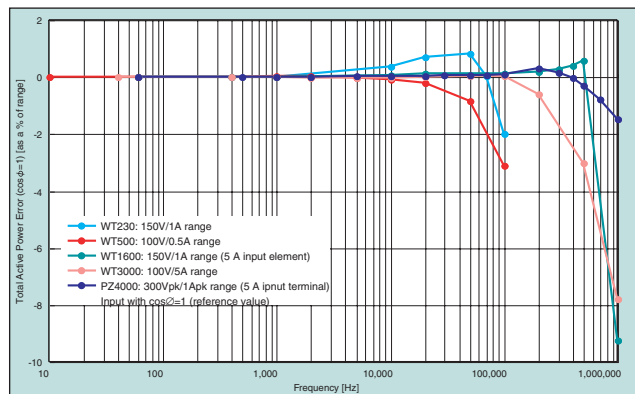


# Yokogawa's WT Series & PZ Power Analyzers: Advanced Technology and High Reliability for a Wide

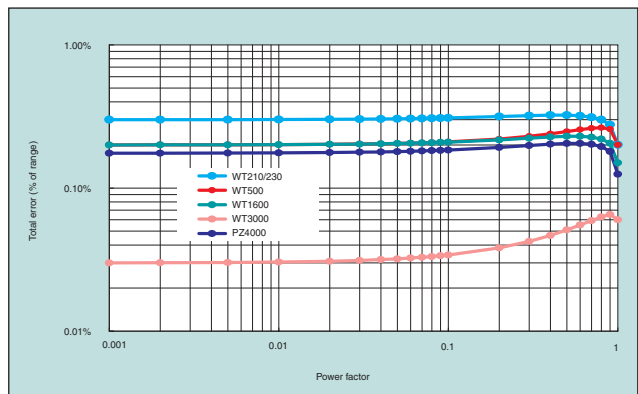


## Specification of WT Series and PZ4000

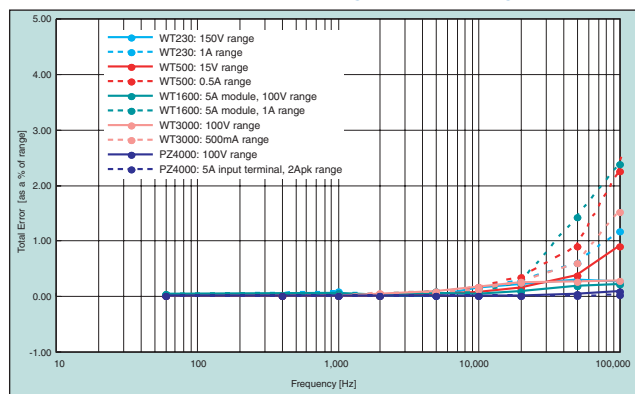
Frequency versus Power Accuracy at Unity Power Factor (example)



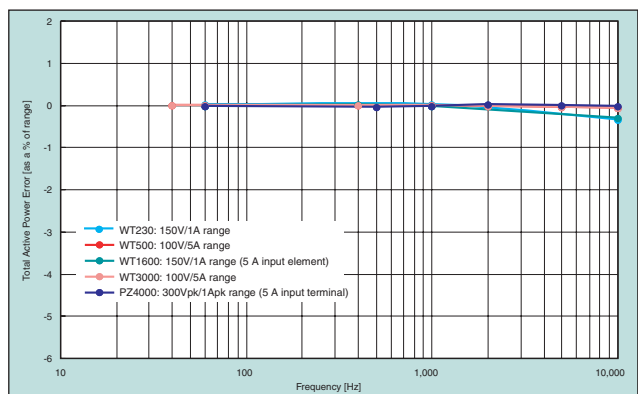
Total power error with rated range input for an arbitrary power factor (50/60Hz, 30A input element)



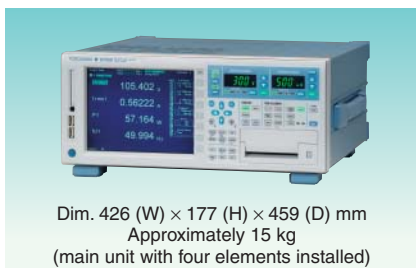
Effect of Common Mode Voltage on Readings



Frequency versus Power Accuracy at Zero Power Factor (example)



# Range of Power Measurement Solutions

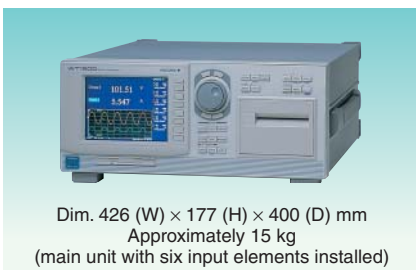


Dim. 426 (W) × 177 (H) × 459 (D) mm  
Approximately 15 kg  
(main unit with four elements installed)

## WT3000

**High end model with world-class accuracy and stability that also offers support for IEC/JIS standards testing**

- Power measurement frequency range: DC, 0.1 Hz to 1 MHz
- Basic power accuracy: 0.02%
- Harmonic analysis and voltage fluctuation/flicker measurement conforming to IEC61000-3-2, JIS C61000-3-2, IEC61000-3-3, IEC61000-3-11 and IEC61000-3-12 (optional)
- Select a current input element of 5 mA to 2 A or 0.5 A to 30 A.
- A variety of options available for FFT analysis, cycle-by-cycle measurement, and other functions.

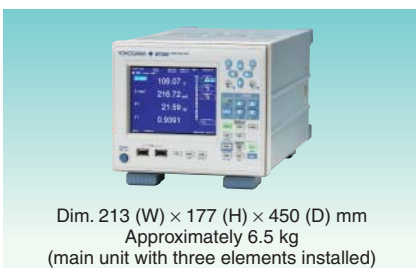


Dim. 426 (W) × 177 (H) × 400 (D) mm  
Approximately 15 kg  
(main unit with six input elements installed)

## WT1600

**Vivid waveform and vector display and a wide range of features for a variety of applications**

- Power measurement frequency range: DC and 0.5 Hz to 1 MHz
- Basic power accuracy: 0.1%
- High-voltage measurement (1.5 to 1000 Vrms)
- Wide current input range (10 mA to 5 A or 1 A to 50 A range)
- As many as six input elements can be installed to enable simultaneous three-phase power measurements on two separate systems.
- Motor evaluation function (torque, rotating speed inputs) enables computation of total motor efficiency. (optional)



Dim. 213 (W) × 177 (H) × 450 (D) mm  
Approximately 6.5 kg  
(main unit with three elements installed)

## WT500

**Middle class power analyzer with compact design and 1000V/40A input**

- Single-phase and three-phase power measurement model
- Power measurement frequency range: DC, 0.5 Hz to 100 kHz, Basic Power Accuracy: 0.1%
- Compact body enables maximum 1000 V and 40 A input performance
- Power logger saving measured data to USB memory in binary or CSV format up to 1 GB directly
- A variety of display formats like numeric, waveforms, trends and bar graph



Dim. 213 (W) × 132 (H) × 350 (D) mm  
Approximately 5 kg

## WT230

**Compact three-phase model with optional harmonic measurement function**

- Three-phase model (three-phase, three-wire: two input elements; three-phase, four-wire: three input elements)
- Power measurement frequency range: DC and 0.5 Hz to 100 kHz
- Basic power accuracy: 0.1%
- Four-channel DA output and four-channel comparator output enabling GO/NO-GO evaluations on production and testing lines (optional)
- A variety of other features, including line filter, maximum hold, and integration function with categorization of positive and negative polarity, and average active power function

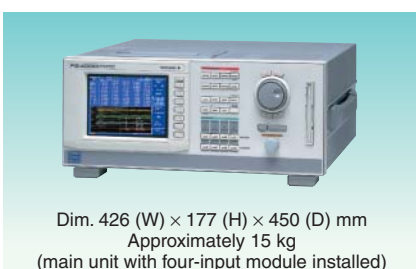


Dim. 213 (W) × 88 (H) × 350 (D) mm  
Approximately 3 kg

## WT210

**Low-priced model providing mobility for standalone measurement of standby consumed power and rated power**

- Single-phase model
- Power measurement frequency range: DC and 0.5 Hz to 100 kHz
- Basic power accuracy: 0.1%
- Wide current input range (5 mA to 20 A)
- A variety of other features, including line filter, maximum hold, and integration function with categorization of positive and negative polarity, and average active power function



Dim. 426 (W) × 177 (H) × 450 (D) mm  
Approximately 15 kg  
(main unit with four-input module installed)

## PZ4000 Power Analyzer

**Analyzer with wide frequency range and waveform analysis functions**

- Frequency characteristics: DC and 0.1 Hz to 1 MHz
- Basic power accuracy: 0.1%
- Wide variety of waveform analysis functions, including zoom, cursor measurement, and waveform computation
- Harmonic measurement function (up to 500 orders) and FFT Math function
- As many as four input elements can be installed to enable simultaneous three-phase power measurements on two separate systems.
- Motor evaluation function (torque, rotating speed inputs) enables computation of total motor efficiency.

There are limitations on some specifications and functions. See the individual product catalogs for details.

# Select the Best Model for Your Applications

## Specifications for WT Series and PZ

	WT3000	WT1600	WT500	WT210/WT230	PZ4000
Range	Basic power accuracy (50/60Hz) 0.02% of reading + 0.04% of range	0.1% of reading + 0.05% of range	0.1% of reading + 0.1% of range	0.1% of reading + 0.1% of range	0.1% of reading + 0.025% of range
Power frequency range	DC, 0.1 Hz to 1 MHz	DC, 0.5 Hz to 1 MHz	DC, 0.5 Hz to 100 kHz	DC, 0.5 Hz to 100 kHz	DC, 0.1 Hz to 1 MHz
Input elements	1, 2, 3, 4	1, 2, 3, 4, 5, 6	1, 2, 3	1 (WT210), 2 or 3 (WT230)	1, 2, 3, 4
Voltage range	15/30/60/100/150/300/600/1000[V]	1.5/3/6/10/15/30/60/100/150/300/600/1000[V]	15/30/60/100/150/300/600/1000[V]	15/30/60/100/150/300/600[V]	30/60/120/200/300/600/1200/2000[Vpk]
Current range (direct input)	5m/10m/20m/50m/100m/200m/500m/1/2[A] or, 0.5/1/2/5/10/20/30[A]	10m/20m/50m/100m/200m/500m/1/2/5[A] or, 1/2/5/10/20/50[A]	500m/1/2/5/10/20/40[A]	5m/10m/20m/50m/0.1/0.2/0.5/1/2/5/10/20[A](WT210) 0.5/1/2/5/10/20[A] (WT230)	5A module: 0.1/0.2/0.4/1/2/4/10[Apk] (5Arms) 20A module: 0.1/0.2/0.4/1/2/4/10[Apk] (5Arms) 1/2/4/10/20/40/100[Apk] (20Arms)
Current range (external sensor input)	50m/100m/200m/500/1/2/5/10[V]	50m/100m/250m/500/1/2.5/5/10[V]	50m/100m/200m/500m/1/2/5/10[V] (option)	50m/100m/200m[V] or 2.5/5/10[V] (option)	0.1/0.2/0.4/1[Vpk]
Guaranteed accuracy range for voltage and current	1% to 130%	1% to 110%	1% to 110%	1% to 130%	5% to 70% (peak range)
Main measurement parameters	Voltage, current, active power, reactive power, apparent power, power factor, phase angle, peak voltage, peak current, crest factor				
Peak hold (instantaneous maximum value hold)	✓	✓	✓	✓	
MAX hold	✓	✓	✓	✓	
Voltage RMS/MEAN simultaneous measurement	✓	✓	✓		✓
Mean active power	✓ (user-defined function)	✓ (user-defined function)	✓ (user-defined function)	✓	
Average Active power integration (WP)	✓	✓	✓	✓	
Apparent power integration (WS)	✓		✓		
Reactive power integration (WQ)	✓		✓		
Frequency	2ch (up to 8 channels with option /FQ)	3ch	2ch (up to 6 channels with option /FQ)	1ch	2ch / module
Efficiency	✓	✓	✓	✓	✓
Motor evaluation	Torque, rotating speed input (motor version)(opt.)	Torque and rotational velocity input (MTR)(opt.)			Torque and rotational velocity input (requires sensor input module 253771)(opt.)
FFT spectral analysis	(/G6)(opt.)				✓
User-defined functions	✓ (20 functions)	✓ (4 functions)	✓ (8 functions)		✓ (4 functions)
Display	8.4-inch TFT color LCD	6.4-inch TFT color LCD	5.7-inch TFT color LCD	7-segment display	6.4-inch TFT color LCD
Display format	Numerical values, waveforms, trends, bar graphs, vectors	Numerical values, waveforms, trends, bar graphs, vectors	Numerical values, waveforms, trends, bar graphs, vectors	Numerical values (3 values)	Numerical values, waveforms, trends, bar graphs, vectors, X-Y
Sampling frequency	Approximately 200 kS/s	Approximately 200 kS/s	Approximately 100 kS/s	Approximately 50 kS/s	Maximum 5 MS/s
Harmonic measurement	(/G6)(opt.)	✓	✓	(/HRM)(opt.)	✓
IEC standards-compliant harmonic measurement	(/G6)(opt.), 10cycle/50Hz, 12cycle/60Hz				
Flicker measurement	(/FL)(opt.)				
Cycle by cycle measurement	(/CC)(opt.)				
Delta calculation function	(/DT)(opt.)	✓ (diff are not supported)	✓ (/DT option)		✓
DA output	20 channels (/DA)(opt.)	30 channels (/DA)(opt.)		4 channels (/DA4)(opt.) (WT210) 12 channels (/DA12)(opt.) (WT230)	
Storage (internal memory for storing data)	Approximately 30MB	Approximately 11MB	Approximately 20MB (Internal memory) (saving directly to USB memory up to 1GB)	Maximum 600 samples (WT210) Maximum 300 samples (WT230)	None, but acquisition memory has 100 kW/channel (up to 4 MW/channel can be installed with /M3 option)
Interfaces	GP-IB, RS-232 (/C2)(opt.); USB (/C1); VGA output (/V1)(opt.); Ethernet (/C7)(opt.)	GP-IB or RS-232/SCSI (/C7)(opt.); Ethernet (/C10)(opt.); VGA output	USB, GP-IB(/C1) or Ethernet(/C7) or VGA output(/V1)	GP-IB(/C1) or RS-232(/C2)(opt.) (WT210) ✓GP-IB or RS-232 (WT230)	GP-IB; RS-232;Centronics; SCSI (/C7)(opt.)
Data updating interval	50m/100m/250m/500m/1/2/5/10/20[S]	50m/100m/200m/500m/1/2/5[S]	100m/200m/500m/1/2/5[S]	100m/250m/500m/1/2/5[S]	Depends on waveform acquisition length and calculations
Removable storage	PC card interface; USB (/C5)(opt.)	FDD	USB		FDD
Built-in printer	front side (/B5)(opt.)	front side (/B5)(opt.)			top side (/B5)(opt.)

There are limitations on some specifications and functions. See the individual product catalogs for details.

(opt.):Optional

## Application

### Power measurement for motors and inverters (with the WT3000, WT1600, and PZ4000). Select the model that fits your measurement application.

Input signal example

Output signal example

Inverter

Motor

Torque meter

Load

WT or PZ

Torque rotation speed trend display example (optional motor evaluation function required)

\*1 751574 can measure large current up to 600A peak

Current Transducer 751574 (DC to 100 kHz/600 Apk)

- Wide dynamic range: 0 to 600 A (DC)/600 Apeak (AC)
- Wide measurement frequency range: DC to 100 kHz (-3 dB)
- Highly precise basic accuracy:  $\pm(0.05\%$  of reading + 40  $\mu$ A)
- Requires DC  $\pm 15$  V power supply, connectors, and load resistors.

**WT3000**

**Top-Class, High Precision Measurement**

Offers high precision measurement with world-class basic power accuracy of  $\pm 0.02\%$ . High-end model with an array of optional advanced computation functions.

**WT1600**

**Wide Range Multichannel Measurement**

High-functionality model with up to 6 channels of multichannel capability and expandable to wide ranges of 1.5 V to 1000 V and 10 mA to 50 A.

**PZ4000**

**Waveform Analysis Measurement**

Model that can observe rapidly fluctuating power transients using waveform measurement and computation functions with high speed (5 MS/s) sampling rates.

## Power Data Acquisition for the Pursuit of Cost-Performance (WT500, WT210 and WT230)

**Select direct input or clamp input measurement**

**WT500**

Input range  
15V to 1000V  
0.5A to 40A  
(effective input level is more than 1% of input range)

**WT210**

Input range  
15V to 600V  
5mA to 20A

**WT230**

Input range  
15V to 600V  
0.5A to 20A

**External sensor input (Option)**

**Large-current Measurement Using Current Clamps External input for current sensor**

Select either 50/100/200 mV or 2.5/5/10 V for WT210/WT230 and 50 mV to 10 V for WT500. A current clamp lets you measure currents without needing to disconnect the power supply circuit wiring.

WTViewer software display for WT210/WT230

**WT500**

High-Speed data acquisition unit SL1000

**Recording to a Recorder**

This option of WT210/WT230 lets you output a variety of measurement data, such as voltage, current, and power measurements, with  $\pm 5$  V rating, for recording on a recorder. The recorder can then be used to check changes in data over time.

**WT210**

**GP-IB or RS232C (Option)**

Calculate voltage, current, reactive power, phase angle relative to fundamental frequency for up to 50 orders and total harmonic distortion (THD). This option is well-suited to power supply environment evaluations.

**WT230**

**USB, Ethernet (option) or GP-IB (option)**

**Application Software**

WTViewer is a software application that allows you to load numeric and waveform data measured with the WT210 or WT230 to a PC via GP-IB or serial (RS-232-C) communications. With the WT500 Power Analyzer, communication to the PC can be via USB, GP-IB or Ethernet.

**(Coming soon for WT500)**  
\*See page 6 of the specifications.

## IEC/JIS Standard Test (WT300)

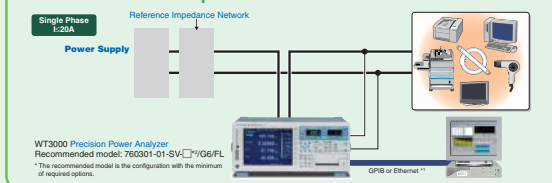
### Shorten evaluation time for Low frequency EMC Standards

The measurement procedures and settings for harmonic/flicker standards testing have been precisely defined. Engineers must also stay current with the specialized knowledge and up-to-date information required to periodically review the contents of the standards and perform the standards conformance tests. The model 761922 Harmonic/Flicker Measurement Software enables engineers without specialized knowledge to perform a range of operations using the WT3000 Precision Power Analyzer including judging standards compliance and outputting test reports.

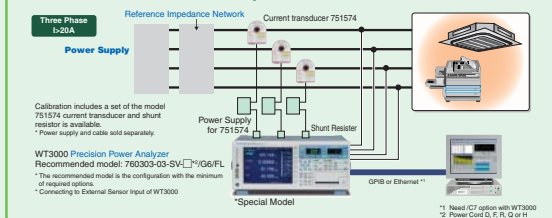
#### Supported Standards

- Harmonics**
  - EN61000-3-2 / IEC61000-3-2 Limits for harmonic current emissions (Equipment i rated current of 16 A per phase or less)
  - EN61000-3-12 / IEC61000-3-12 Limits for harmonic current emissions (Equipment rated current is of 75 A per phase or less, and more than 16 A per phase)
  - JIS C 61000-3-2 Limits for harmonic current emissions (Equipment rated current of 20 A per phase or less)
- Voltage fluctuation/flicker**
  - EN61000-3-3 / IEC61000-3-3 Limitation of voltage fluctuations and flicker (Equipment rated current of 16 A per phase or less, and not subject to conditional)
  - EN61000-3-11 / IEC61000-3-11 Limitation of voltage fluctuations and flicker supply systems (Equipment rated current of 75 A or less, and subject to conditional)

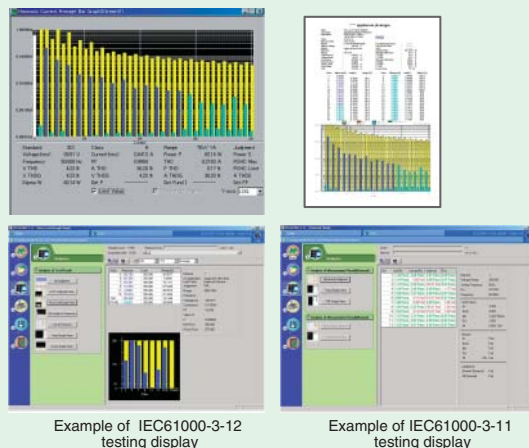
#### Below 20A: Direct input



#### 20A to 75A: Transducer input



#### Harmonic/Flicker Measurement Software 761922



## Wiring Types and Model Numbers

Wiring type	Required input modules	WT210/WT230	WT500
Single-phase 2-wire	1	760401	760201
Single-phase 3-wire	2	760502	760202
3-phase 3-wire (2 voltages, 2 currents) *	2	760502	760202
3-phase 3-wire (3 voltages, 3 currents) *	3	760503	760203
3-phase 4-wire	3	760503	760203

For WT3000, WT1600 and PZ4000, use the above table as a reference in determining the number of input modules.  
\*Measured using the 2 powermeter method

# Related Products for Power Measurement

## Current sensor Units Current Transducer Current Clamp-on Probes



**751521 and 751523**

DC to 100 kHz/600 Apk

\*751521/751523 do not conform to CE Marking.



**751574**

DC to 100 kHz/600 Apk



**751552**

AC 1000 Arms (1400 Apeak)

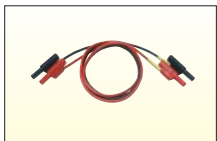


**751550**

AC 400 Arms (600 Apeak)

\*For detailed information, see Power Meter Accessory Catalog Bulletin 7515-52E.

## Connectors and Cables



**758917**

Test lead set



**758922**

Alligator clip adapters (small)



**758929**

Alligator clip adapters (large)



**758923** \*1

Safety terminal adapter set



**758931** \*1

Safety terminal adapter set



**758921**

Fork terminal adapter



**701959**

Safety mini-clip set (hook Type)



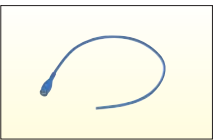
**758924**

Conversion adapter



**366924/25** \*2

BNC cable



**B9284LK** \*3

External Sensor Cable



Due to the nature of this product, it is possible to touch its metal parts. Therefore, there is a risk of electric shock, so the product must be used with caution.

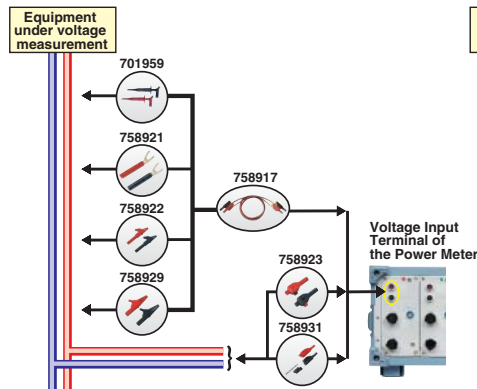
\*1: These accessories do not conform to CE Marking.

\*2: Use these products with low-voltage circuits (42 V or less).

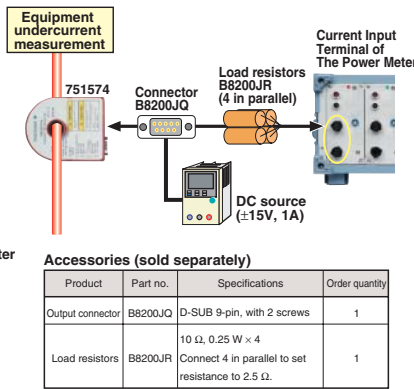
\*3: The coax cable is simply cut on the current sensor side. Preparation by the user is required.

## Connecting Diagram

### Connecting the Measurement Cables and Adapters



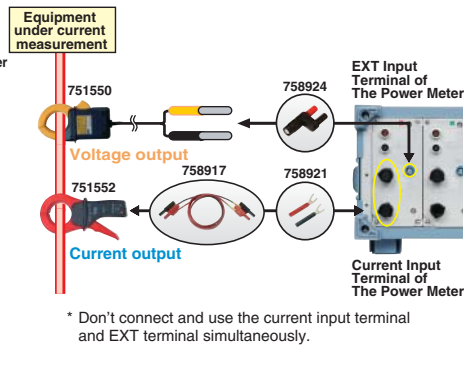
### Connecting Diagram for Current Transducer



#### Accessories (sold separately)

Product	Part no.	Specifications	Order quantity
Output connector	B8200JQ	D-SUB 9-pin, with 2 screws	1
Load resistors	B8200JR	10 Ω, 0.25 W × 4 Connect 4 in parallel to set resistance to 2.5 Ω.	1

### Connecting Diagram for Clamp-on Probe



\* Don't connect and use the current input terminal and EXT terminal simultaneously.

## Software

### WTViewer760122 (WT3000/WT1600/WT500) <sup>3</sup>

WTViewer is a software application that allows you to load numerical and waveform data measured by the WT3000 Precision Power Analyzer, WT1600 Digital Powermeter or WT500 Power Analyzer onto a PC via GP-IB, serial (RS-232, excluding WT500), Ethernet, or USB communications for waveform display and analysis/saving of the data.

#### Model Compatibility Chart for Communications with WTViewer

Product	GP-IB	RS-232	Ethernet	USB
WT3000	Standard	Option <sup>1</sup>	Option	Option <sup>1</sup>
WT1600	Standard <sup>2</sup>	Standard <sup>2</sup>	Option	×
WT500	Option	×	Option	Standard
WT210 <sup>3</sup>	Option <sup>2</sup>	Option <sup>2</sup>	×	×
WT230 <sup>3</sup>	Standard <sup>2</sup>	Standard <sup>2</sup>	×	×

Standard: Supported (WT communication comes standard)

Option: Supported (WT communication optional)

×: Not supported (not a function of the WT main unit)

<sup>1</sup>: An RS-232 and USB port (PC) cannot both be installed on a single WT main unit.

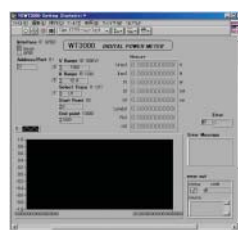
<sup>2</sup>: RS-232 and GP-IB cannot both be installed on a single WT main unit.

<sup>3</sup>: Free software available for those using only the WT210/WT230. Please check our Web site for details.

Note) When connecting the WT and WTViewer, simultaneous connections with multiple instances of communication, and simultaneous data acquisition with a mixed configuration of models are not possible.

(Coming soon for WT500)

### LabView Driver



Data acquisition possible using LabVIEW. LabVIEW drivers can be downloaded from our Web site.

• LabVIEW is a registered trademark of National Instruments Corporation.

Please check our Web site for details on the various software programs.

# Data Acquisition and Remote Control Using a PC

## Model and Suffix Codes

### WT200 Series

Model	Suffix Code	Description	
760401		WT210, 1-input element model	
Power cord	-D	UL/CSA standard	
	-F	VDE standard	
	-R	SAA standard	
	-Q	BS standard	
	-H	GB standard	
Options	/C1	GP-IB communications function	Select one.
	/C2	RS-232-C communications function	
	/EX1	External input 2.5/5/10 V	Select one.
	/EX2	External input 50/100/200 mV	
	/HRM	Harmonic analysis function	
	/DA4	4-channel D/A output	Select one.
	/CMP	Comparator & D/A, each of 4 channels	

Note: The WT210 communications feature cannot be modified or provided later after delivery of the product.

Model	Suffix Code	Description	
760502		WT230, 2-input element model	
760503		WT230, 3-input element model	
Interface	-C1	GP-IB communications function	Select one.
	-C2	RS-232-C communications function	
Power cord	-D	UL/CSA standard	
	-F	VDE standard	
	-R	SAA standard	
	-Q	BS standard	
	-H	GB standard	
Options	/EX1	External input 2.5/5/10 V	Select one.
	/EX2	External input 50/100/200 mV	
	/HRM	Harmonic analysis function	
	/DA12	12-channel D/A output	Select one.
	/CMP	Comparator & D/A, each of 4 channels	

### PZ4000

Model	Suffix Code	Description	
253710		PZ4000 Power Analyzer	
Power cord	-D	UL/CSA standard	
	-F	VDE standard	
	-R	SAA standard	
	-Q	BS standard	
	-H	GB standard	
Options	/M1	Memory extension to 1 M word/CH	Select one.
	/M3	Memory extension to 4 M word/CH	
	/B5	Built-in printer	
	/C7	SCSI interface	

Model	Suffix Code	Description
253751		Power measurement module Voltage: 1000 V Current: 5 A, current sensor: 500 mV
253752		Power measurement module Voltage: 1000 V Current: 5 A and 20 A, current sensor: 500 mV
253771		Sensor input module Torque / Rotating speed input
Module specifications	-E1	Plug-in unit

\* Sensor input module can be used element 4 slot only.

### Precision Power Analyzer WT3000

Model	Suffix Codes	Description	
760301		WT3000 1 input element model	
760302		WT3000 2 input elements model	
760303		WT3000 3 input elements model	
760304		WT3000 4 input elements model	
Element number	-01	30A input element	for 760301 model
	-02		for 760302 model
	-03		for 760303 model
	-04		for 760304 model
	-10	2A input element	for 760301 model
			for 760302 model
			for 760303 model
			for 760304 model
Version	-SV	Standard Version	
	-MV	Motor Version	
Power cord	-D	UL/CSA standard	
	-F	VDE standard	
	-R	SAA standard	
	-Q	BS standard	
	-H	GB standard	
Options	/G6	Advanced Computation (IEC standard testing*, harmonic, FFT, Waveform computation)	
	/B5	Built-in Printer	
	/DT	Delta Calculation	
	/FQ	Add-on Frequency Measurement	
	/DA	20ch D/A output	
	/V1	VGA Output	
	/C2	Serial (RS-232) Interface	
	/C12	USB port (PC)	
	/C5	USB port (Peripheral)	
	/C7	Ethernet function	
	/CC	Cycle by Cycle	
	/FL	Voltage Fluctuation, Flicker	

\* requires 761922 software

Note: Mixing of the 30 A and 2 A input elements is not supported, whether purchasing a new unit or reworking an existing one. Also, the unit cannot be modified to change the current range. Adding input modules after initial product delivery will require rework at the factory. Please choose your models and configurations carefully, and inquire with your sales representative if you have any questions.

### WT500

Model	Suffix Codes	Description
760201		WT500 1 input element model
760202		WT500 2 input elements model
760203		WT500 3 input elements model
Power cord	-D	UL/CSA standard
	-F	VDE standard
	-R	SAA standard
	-Q	BS standard
	-H	GB standard
Options	/C1	GP-IB interface
	/C7	Ethernet interface
	/EX1	External sensor input for 760201
	/EX2	External sensor input for 760202
	/EX3	External sensor input for 760203
	/G5	Harmonic Measurement
	/DT	Delta computation (760202/03 only)
	/FQ	Add-on Frequency Measurement (760202/03 only)
/V1	VGA Output	

Note: Adding input modules after initial product delivery will require rework at the factory. Please choose your models and configurations carefully, and inquire with your sales representative if you have any questions.

## WT1600

Model	Suffix Code	Description					
760101		WT1600 digital power meter main unit					
		Element Number					
		1	2	3	4	5	6
Element types and quantities  The numbers in the "Description" column have the following meanings. 50: 50 A input element 5: 5 A input element Blank: No element  Elements are inserted in the order shown starting on the left side on the back.	-01	50					
	-02	50	50				
	-03	50	50	50			
	-04	50	50	50	50		
	-05	50	50	50	50	50	
	-06	50	50	50	50	50	50
	-10	5					
	-11	5	50				
	-12	5	50	50			
	-13	5	50	50	50		
	-14	5	50	50	50	50	
	-15	5	50	50	50	50	50
	-20	5	5				
	-21	5	5	50			
	-22	5	5	50	50		
	-23	5	5	50	50	50	
	-24	5	5	50	50	50	50
-30	5	5	5				
-31	5	5	5	50			
-32	5	5	5	50	50		
-33	5	5	5	50	50	50	
-40	5	5	5	5			
-41	5	5	5	5	50		
-42	5	5	5	5	50	50	
-50	5	5	5	5	5		
-51	5	5	5	5	5	50	
-60	5	5	5	5	5	5	
Communication functions	-C1	GP-IB				Select one.	
	-C2	Serial (RS-232)					
Power cord	-D	UL/CSA Standard					
	-F	VDE Standard					
	-R	SAA Standard					
	-Q	BS Standard					
	-H	GB Standard					
Options	/B5	Internal printer				Select one.	
	/C7	SCSI interface					
	/C10	Ethernet, HDD, SCSI					
	/DA	30-channel DA output					
	/MTR	Motor evaluation function					

## Current Sensor Unit

Model	Suffix code	Description	
751521		Single-phase	DC to 100 kHz (-3 dB). -600 A to 0 A to +600 A (DC) Basic accuracy: ±(0.05% of rdg* + 40 mA) Superior noise withstanding ability and CMRR characteristic due to optimized casing design
751523	-10	Three-phase U, V	
	-20	Three-phase U, W	
Supply voltage	-30	Three-phase U, V, W	
	-1	100 V AC (50/60 Hz)	
	-3	115 V AC(50/60 Hz)	
Power card	-7	230 V AC(50/60 Hz)	
	-D	UL/CSA standard	
	-F	VDE standard	
	-R	SAA standard	
	-J	BS standard	
	-H	GB standard	

\* 751523-10 is designed for WT3000, PZ4000, WT1600 and WT500. 751523-20 is designed for the WT200 Series.

\* 751521/751523 do not conform to CE Marking.

## Clamp on Probe / Current transducer

Model	Product	Description
751552	Clamp-on probe	30 Hz to 5 kHz, 1400Apk (1000Arms)
751574	Current transducer	DC to 100 kHz (-3dB), 600Apk

\* For detailed information, see Power Meter Accessory Catalog Bulletin 7515-52E

## Application Software

Model	Product	Description	Order Qty
760122	WTViewer Software	Data acquisition software	1
761922	Harmonic/Voltage fluctuation/Flicker Measurement Software	Standard-compliant measurement	1

## Accessory (sold separately)

Model/parts	Product	Description	Order Qty
758917	Test read set	A set of 0.8m long, red and black test leads	1
758922	Small alligator-clip	Rated at 300V and used in a pair	1
758929	Large alligator-clip	Rated at 1000V and used in a pair	1
758923	Safety terminal adapter	(spring-hold type) Two adapters to a set.	1
758931	Safety terminal adapter	(screw-fastened type) Two adapters to a set. 1.5 mm hex Wrench is attached	1
758921	Fork terminal adapter	Banana-fork adapter. Two adapters to a set	1
701959	Safety mini-clip	Hook type. Two in a set	1
758924	Conversion adapter	BNC-banana-jack(female) adapter	1
366924	BNC-BNC cable	1m	1
366925	BNC-BNC cable	2m	1
B9284LK	External sensor cable	Current sensor input connector. Length 0.5m	1
B9316FX	Printer roll paper	Thermal paper, 10 meters (1 roll)	10

▲ Due to the nature of this product, it is possible to touch its metal parts. Therefore, there is a risk of electric shock, so the product must be used with caution.

\* Use these products with low-voltage circuits (42V or less).

### NOTICE

- Before operating the product, read the instruction manual thoroughly for proper and safe operation.
- If this product is for use with a system requiring safeguards that directly involve personnel safety, please contact the Yokogawa sales offices.

# YOKOGAWA

**YOKOGAWA ELECTRIC CORPORATION**

Communication & Measurement Business Headquarters /Phone: (81)-422-52-6768, Fax: (81)-422-52-6624

Network Solutions Business Div./Phone: (81)-422-52-7179, Fax: (81)-422-52-6619

E-mail: ns@cs.jp.yokogawa.com

**YOKOGAWA CORPORATION OF AMERICA**

**YOKOGAWA EUROPE B.V.**

**YOKOGAWA ENGINEERING ASIA PTE. LTD.**

Phone: 800-888-6400, Fax: (1)-770-251-6427

Phone: (31)-33-4641806, Fax: (31)-33-4641807

Phone: (65)-62419933, Fax: (65)-62412606

Subject to change without notice.

[Ed : 03/b] Copyright ©2008

Printed in Japan, 809(KP)

RMS-17E