YOKOGAWA

Current Sensors & Accessories

CT1000/CT200/CT60/751574/751552

AC/DC Current Sensors & Accessories

High Accuracy and Wide-range AC/DC Current Measurement

Wide Variety of Current Sensors

Flat Frequency Characteristic

Excellent Phase Characteristic

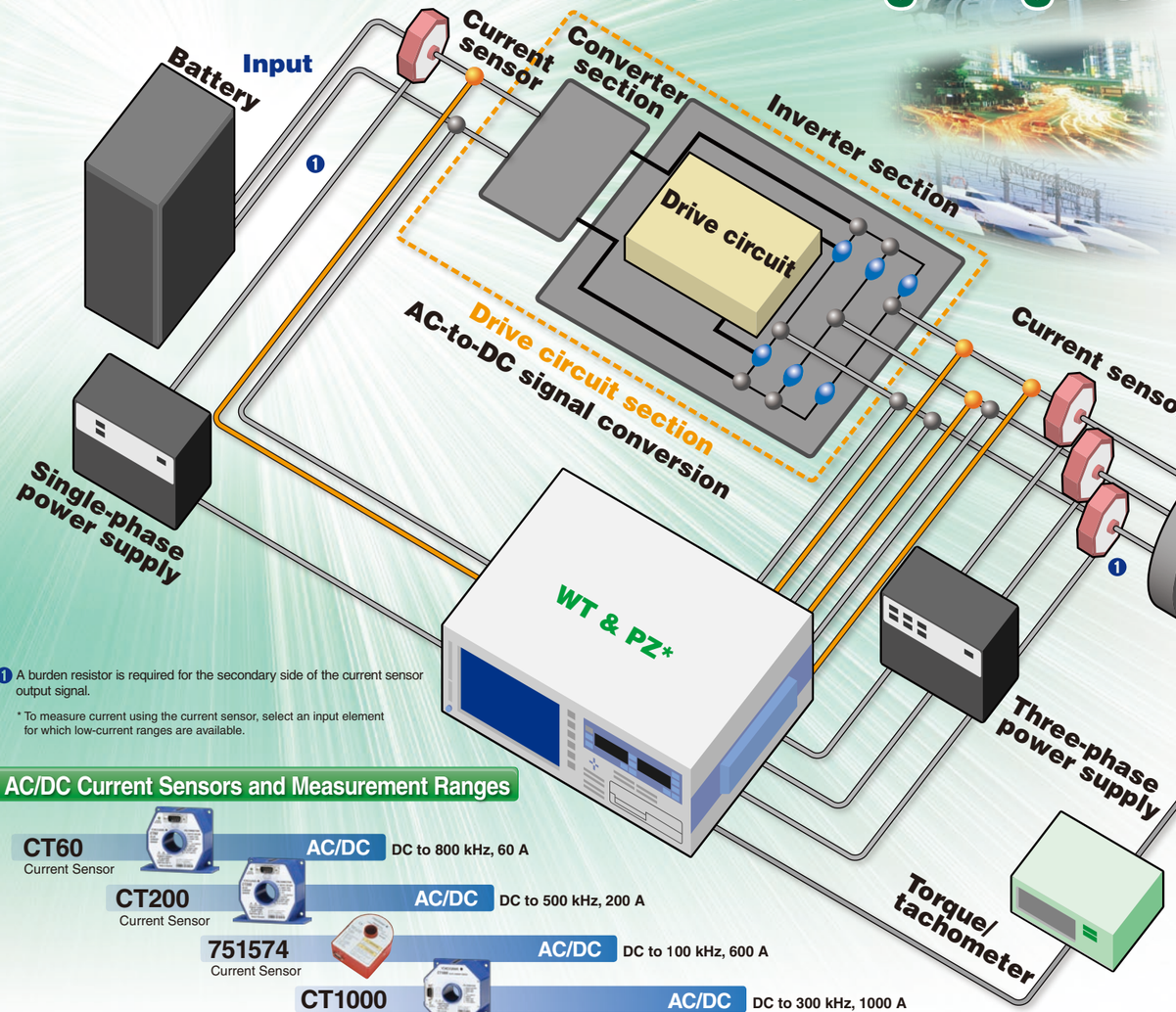
7-Year Warranty

Bulletin CT1000-00E

Visit our website to sign up for email updates. www.tmi.yokogawa.com/

High Accuracy and Wide-range AC/DC Current Sensors for Power Measurements Covering Large Current!

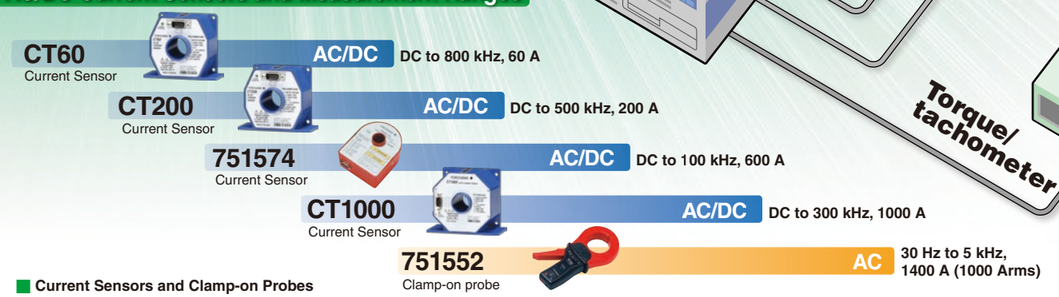
The AC/DC current sensors allow you to take measurements of large DC and AC currents. The current output mode makes it possible to connect the AC/DC current sensors to the direct current input terminals of the WT Series Power Analyzers and PZ Power Analyzer for measurements. With a single power meter, you can measure very small currents by direct input and large currents of up to 1000 A using the current sensor (and of up to 1400 A using the 751552 clamp probe). The AC/DC current sensors can be used for large current and power measurements in a wide range of application areas, such as hybrid electric and pure electric vehicles, batteries, inverter motors, energy, railway, and industrial motors.



1 A burden resistor is required for the secondary side of the current sensor output signal.

* To measure current using the current sensor, select an input element for which low-current ranges are available.

AC/DC Current Sensors and Measurement Ranges



Current Sensors and Clamp-on Probes

Product	Model	Current	Basic Accuracy	Measurement Range
AC/DC current sensor	CT1000	1000 Apk	±(0.05% of rdg + 30 µA)	DC to 300 kHz
AC/DC current sensor	751574	600 Apk	±(0.05% of rdg + 40 µA)	DC to 100 kHz
AC/DC current sensor	CT200	200 Apk	±(0.05% of rdg + 30 µA)	DC to 500 kHz
AC/DC current sensor	CT60	60 Apk	±(0.05% of rdg + 30 µA)	DC to 800 kHz
AC current clamp-on probe	751552	1400 Apk	±0.3% of rdg	30 Hz to 5 kHz

Power Analyzers' Connection Systems, Required Number of AC/DC Current Sensors, and Availability by Power Analyzer

Connection System or Measurement Example	Required Number of Current Sensors	WT1600	WT3000
Single-phase 2-wire system	1	○	○
Single-phase 3-wire system	2	○	○
Three-phase 3-wire system (2V2A)	2	○	○
Three-phase 3-wire system (3V3A)	3	○	○
Three-phase 4-wire system	3 (excl. neutral wire measurement)	○	○
Inverter efficiency: Single-phase + three-phase 3-wire system (2V2A)	3	○	○
Inverter efficiency: Single-phase + three-phase 3-wire system (3V3A)	4	○	○
Inverter efficiency: Three-phase 3-wire system (3V3A) + three-phase 3-wire system (3V3A)	6	○	○*1
2-inverter efficiency: [Single-phase + three-phase 3-wire system (2V2A)] x 2 sets	6	○	○*1

*1: Synchronized measurement of two Power Analyzers. Efficiency calculations can be performed using WTViewer (760121).
* 2V2A: Two-voltage and two-current measurement, 3V3A: Three-voltage and three-current measurement
* The two-power measurement method is used to measure power using the three-phase 3-wire connection system.

Yokogawa Meters & Instruments AC/DC Current Sensor Series Main Features

- The high noise resistant current output mode minimizes the influence of the external noise even in a noisy location where an inverter is used
- Connection to the WT Series Power Meters and PZ Power Analyzer makes it possible to measure a wide range of current and power levels using powerful and sophisticated functions
- Excellent linearity ensures accurate measurements of even devices for which the current varies from low to high levels
- Low output noise minimizes the influence on the current readings, thus enabling accurate current and power measurements

Current Sensor Unit

The current sensor unit allows you to measure large-current power that is difficult to measure directly. Taking advantage of the features of high accuracy and wide measurement range from DC to 100 kHz, the current sensor unit can be used in a wide range of applications such as power measurements of electric vehicles and inverter motors. Model 751521 is available for a single-phase system, and Model 751523 for a three-phase system.


Model 751521 for a single-phase system


Model 751523 for a three-phase system

* 751521/751523 do not conform to CE marking

Features

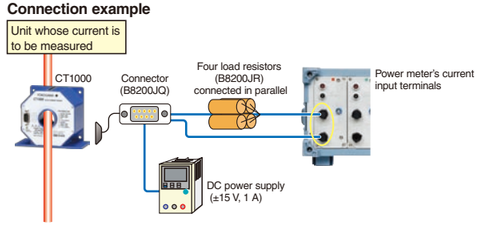
- Wide dynamic range: -600 A to 0 A to +600 A (DC)/600 Apeak (AC)
- Wide measurement range: DC to 100 kHz (up to 3 dB)
- High precision/basic accuracy: ±(0.05% of rdg* + 40 µA)
- High noise resistance and good CMRR characteristic achieved by optimizing the design of the housing
- Calibration can be performed in combination with the power meter

* rdg: reading

Typical Voltage/Current Connections

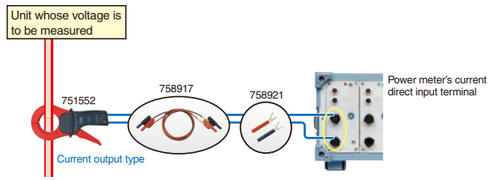
Measurement using current sensor

Connection example

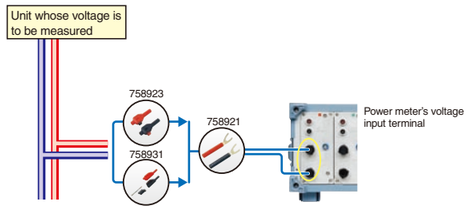


* Install the load resistor for the 751574. The load resistor is required for the CT1000, CT200, CT60, and 751574.

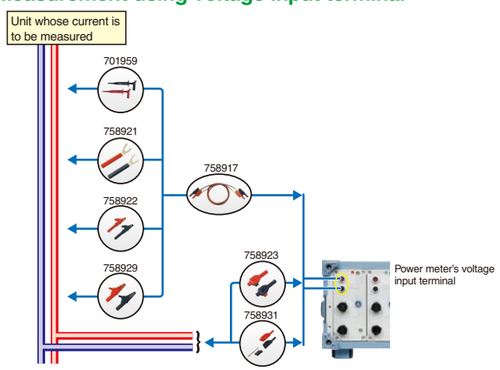
Measurement using clamp-on probe



Current measurement using direct input terminal



Measurement using voltage input terminal

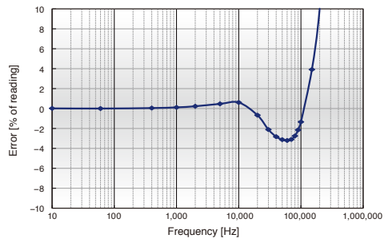


Models and Specifications

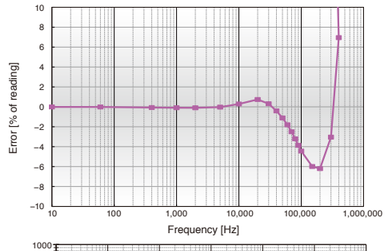
CT1000 1000A

Rated current	DC: 0 to 1000 A AC: 1000 Apeak
Output current	666.6 mA at 1000 A rated primary current
Current transformation ratio	1500:1
Current direction	Arrow direction displayed on the unit
Accuracy	DC ±(0.05% of rdg + 30 μA) 50/60 Hz ±(0.05% of rdg + 30 μA) Sine wave Basic conditions 23 ±5°C Common mode voltage: 0 V Conductor: Use a linear conductor with Ø 25 mm and 300 mm or more in length
Guarantee accuracy period	12-month
Effect of conductor position	±0.01% of reading
Measurement range	DC to 300 kHz (- 3 dB)
Temperature coefficient	0.01%/°C or less in the ranges from 10 to 18°C and 28 to 50°C
Maximum allowable continuous input	1000 Apeak
Maximum allowable instantaneous input	4500 Apeak 0.1 sec or less (reference value)
Load resistance	2.5 to 5 Ω
Operating temperature range	10 to 50°C
Operating humidity range	20 to 80% RH (no condensation)
Storage temperature range	-20 to 60°C
Storage humidity range	20 to 80% RH (no condensation)
Dimensions	Approx. 128 (W) x 160 (H) x 60 (D) mm (excluding connector, conductor guide, and projections)
Primary current hole diameter	Ø 30 mm
Secondary connector	D-Sub-9pin
Weight	Approx. 0.8 kg
Power voltage	±(15 V ±5%)
Maximum rated voltage	30 VA
Power consumption (at each power voltage)	Approx. (150 mA + output current)
Recommended fixing screw and tightening torque	M5 stainless steel screw x4, 3.7 Nm M6 stainless steel screw x 2, 4.4 Nm
Standard accessories	Instruction manual x1
Optional accessories	• D-Sub 9-pin connector (1 plug and 2 screws, part number B8200JQ) x1 • Load resistor (2.5 Ω, part number B8200JR, resistance accuracy ±0.1%, temperature coefficient 25 ppm/°C) x1 (10 Ω x4; 4 resistors shall be connected in parallel resulting in a resistance of 2.5 Ω)

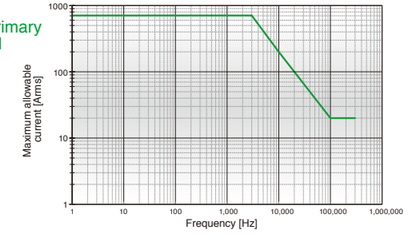
CT1000 frequency characteristic (example)*



CT1000 phase characteristic (example)*



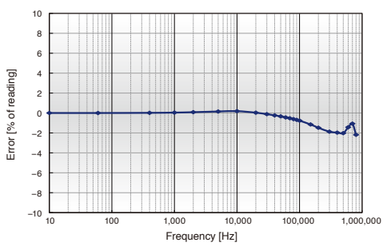
CT1000 Derating of primary current based on frequency



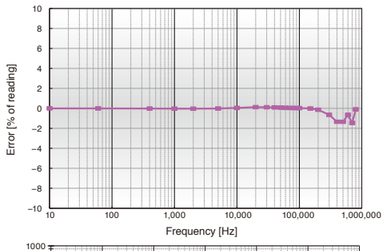
CT200 200A

Rated DC current	0 to 200 A 200 Apeak
Output current	200 mA at 200 A rated primary current
Current transformation ratio	1000:1
Current direction	Arrow direction displayed on the unit
Accuracy	DC ±(0.05% of rdg + 30 μA) 50/60 Hz ±(0.05% of rdg + 30 μA) Sine wave Basic conditions 23 ±5°C Common mode voltage: 0 V Conductor: Use a linear conductor with Ø 25 mm and 300 mm or more in length
Guarantee accuracy period	12-month
Effect of conductor position	±0.01% of reading
Measurement range	DC to 500 kHz (- 3 dB)
Temperature coefficient	0.01%/°C or less in the ranges from 10 to 18°C and 28 to 50°C
Maximum allowable continuous input	200 Apeak
Maximum allowable instantaneous input	1000 Apeak 0.1 sec or less (reference value)
Load resistance	0 to 30 Ω
Operating temperature range	10 to 50°C
Operating humidity range	20 to 80% RH (no condensation)
Storage temperature range	-20 to 60°C
Storage humidity range	20 to 80% RH (no condensation)
Dimensions	Approx. 93 (W) x 77 (H) x 38 (D) mm (excluding connector, conductor guide, and projections)
Primary current hole diameter	Ø 26 mm
Secondary connector	D-Sub-9pin
Weight	Approx. 0.3 kg
Power voltage	±(15 V ±5%)
Maximum rated voltage	11 VA
Power consumption (at each power voltage)	Approx. (80 mA + output current)
Recommended fixing screw and tightening torque	M4 stainless steel screw x4, 2.8 Nm M5 stainless steel screw x2, 3.7 Nm
Standard accessories	Instruction manual x1
Optional accessories	• D-Sub 9-pin connector (1 plug and 2 screws, part number B8200JQ) x1 • Load resistor (2.5 Ω part number B8200JR, resistance accuracy ±0.1%, temperature coefficient 25 ppm/°C) x1 (10 Ω x4; 4 resistors shall be connected in parallel resulting in a resistance of 2.5 Ω)

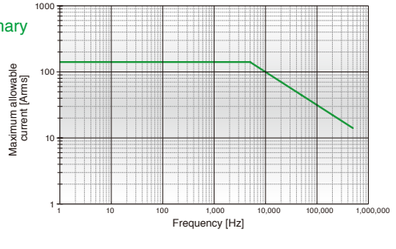
CT200 frequency characteristic (example)*



CT200 phase (characteristic (example)*



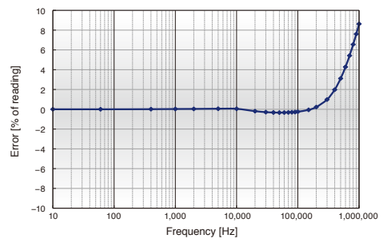
CT200 Derating of primary current based on frequency



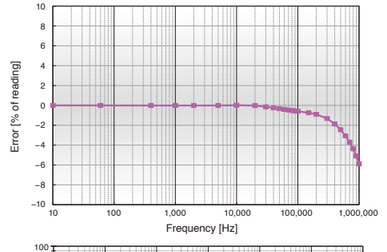
CT60 60A

Rated DC current	0 to 60 A 60 Apeak
Output current	100 mA at 60 A rated primary current
Current transformation ratio	600:1
Current direction	Arrow direction displayed on the unit
Accuracy	DC ±(0.05% of rdg + 30 μA) 50/60 Hz ±(0.05% of rdg + 30 μA) Sine wave Basic conditions 23 ±5°C Common mode voltage: 0 V Conductor: Use a linear conductor with Ø 25 mm and 300 mm or more in length
Guarantee accuracy period	12-month
Effect of conductor position	±0.01% of reading
Measurement range	DC to 800 kHz (- 3 dB)
Temperature coefficient	0.01%/°C or less in the ranges from 10 to 18°C and 28 to 50°C
Maximum allowable continuous input	60 Apeak
Maximum allowable instantaneous input	300 Apeak 0.1 sec or less (reference value)
Load resistance	0 to 20 Ω
Operating temperature range	10 to 50°C
Operating humidity range	20 to 80% RH (no condensation)
Storage temperature range	-20 to 60°C
Storage humidity range	20 to 80% RH (no condensation)
Dimensions	Approx. 93 (W) x 77 (H) x 38 (D) mm (excluding connector, conductor guide, and projections)
Primary current hole diameter	Ø 26 mm
Secondary connector	D-Sub-9pin
Weight	Approx. 0.3 kg
Power voltage	±(15 V ±5%)
Maximum rated voltage	7 VA
Power consumption (at each power voltage)	Approx. (80 mA + output current)
Recommended fixing screw and tightening torque	M4 stainless steel screw x4, 2.8 Nm M5 stainless steel screw x2, 3.7 Nm
Standard accessories	Instruction manual x1
Optional accessories	• D-Sub 9-pin connector (1 plug and 2 screws, part number B8200JQ) x1 • Load resistor (2.5 Ω, part number B8200JR, resistance accuracy ±0.1%, temperature coefficient 25 ppm/°C) x1 (10 Ω x4; 4 resistors shall be connected in parallel resulting in a resistance of 2.5 Ω)

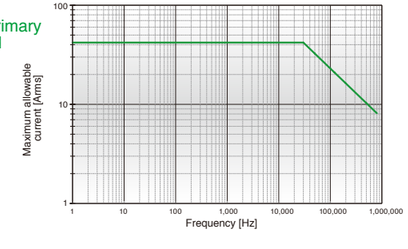
CT60 frequency characteristic (example)*



CT60 phase characteristic (example)*



CT60 Derating of primary current based on frequency

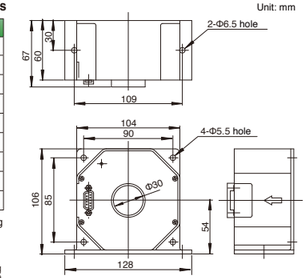


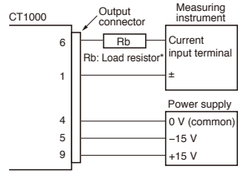
CT1000 1000A

Secondary connector signal assignments

Pin No	Signal Name
1	Output return
2	- (Do not connect)
3	- (Do not connect)
4	Power 0 V input
5	Power -15 V input
6	Signal output
7	- (Do not connect)
8	- (Do not connect)
9	Power +15 V input

*1: Use an insulated conductor or cable for wiring on the primary side.





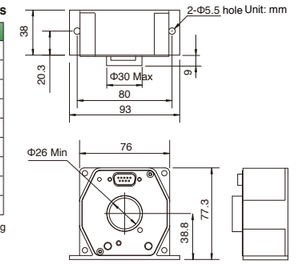
* The total sum of the measuring instrument's internal resistance and secondary load resistance (Rb) shall be 2.5 to 5 Ω.

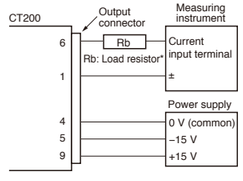
CT200 200A

Secondary connector signal assignments

Pin No	Signal Name
1	Output return
2	- (Do not connect)
3	- (Do not connect)
4	Power 0 V input
5	Power -15 V input
6	Signal output
7	- (Do not connect)
8	- (Do not connect)
9	Power +15 V input

*1: Use an insulated conductor or cable for wiring on the primary side.





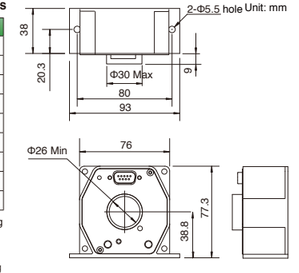
* The total sum of the measuring instrument's internal resistance and secondary load resistance (Rb) shall be 2.5 to 30 Ω.

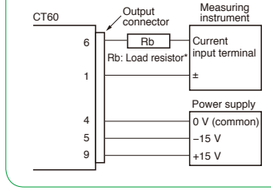
CT60 60A

Secondary connector signal assignments

Pin No	Signal Name
1	Output return
2	- (Do not connect)
3	- (Do not connect)
4	Power 0 V input
5	Power -15 V input
6	Signal output
7	- (Do not connect)
8	- (Do not connect)
9	Power +15 V input

*1: Use an insulated conductor or cable for wiring on the primary side.





* The total sum of the measuring instrument's internal resistance and secondary load resistance (Rb) shall be 0 to 20 Ω.

* The characteristic is just a typical example but not a guaranteed one.

Models and Specifications

751574 600A

Input type	Floating input using CT
Rated currents	DC: -600 A to 0 A to + 600 A AC: 600 A peak
Output current	400 mA (with primary rated current of 600 A)
Current transformation ratio	1500:1
Current direction	Direction of arrow on unit
Amplitude accuracy	±(0.05% of rdg + 40 μA) DC
(within three months of calibration	±(0.05% of rdg + 40 μA) 50/60 Hz
Reference conditions	23±5°C, 30 to 70% RH, AC input as sinewave Primary current: 2 to 600 A In-phase voltage: 0 V Supply voltage: DC ±(15 V ±0.75 V) Conductor: Use a straight conductor (Ø25 mm, 300 mm or longer), positioned at the center of the primary current hole.
Accuracy 12 months after calibration	Add (reading error × 0.5) to the above accuracy values.
Conductor position effect	Add ±0.05% of rdg
Temperature coefficient	0.01%/°C (10 to 18°C, 28 to 50°C)
Measurement range	DC to 100 kHz (-3 dB)
Continuous maximum allowable input	600 A peak For 400 Hz and higher, see the diagram titled 'Derating of primary current based on frequency' on next page.
Instantaneous maximum allowable input	3000 A peak for 0.1 second or less (reference value)
Secondary load resistance	2.5 Ω or higher, 92.5 Ω or less See the diagram titled 'Derating of input current based on load resistance' below.
Operating temperature and humidity ranges	10 to 50°C, 20 to 80% RH (no condensation)
Storage temperature range	0 to 60°C (no condensation)
External dimensions	Approximately 122 × 98 × 57 mm (WHD) Note: The dimensions shown exclude connectors, conductor guides, and projections.
Primary current hole diameter	Ø26 mm
Secondary conductor	D-Sub 9-pin
Weight	Approximately 1 kg
Supply voltage	±15 V ±5%
Consumed power	Approximately 5 VA (when secondary output current is zero)
Consumed current	Approximately (330 mA + output current)
Emissions	Standard EN61326.
Immunity	Standard EN61326.

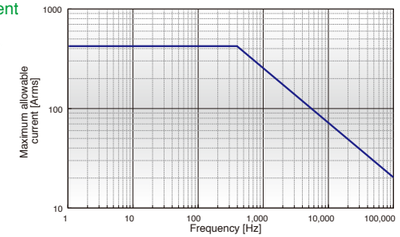
751521/ 751523

Input type	Floating input using CT(s)
Rated currents	DC: -600 A to 0 A to + 600 A AC: 600 A peak
Output current	400 mA (with primary rated current of 600 A)
Input/output ratio	1500:1
Amplitude accuracy	±(0.05% of rdg + 40 μA) DC
(within three months of calibration)	±(0.1% of rdg + 40 μA) (30 Hz ≤ f < 45 Hz) ±(0.05% of rdg + 40 μA) (45 Hz ≤ f ≤ 66 Hz) ±(0.1% of rdg + 40 μA) (66 Hz < f ≤ 1 kHz) ±((0.05% + 0.08 × f)% of rdg + 40 μA) (1 kHz < f ≤ 40 kHz) ±((0.2% × f)% of rdg + 40 μA) (40 kHz < f ≤ 100 kHz) Accuracy values at frequencies over 1 kHz are provided as reference values. (Unit of f: kHz)
Reference conditions	23±5°C, 30 to 70% RH, AC input as sinewave Primary current: 2 to 600 A In-phase voltage: 0 V Supply voltage: 95-105 V AC, 110-120 V AC, or 225-240 V AC
Accuracy 12 months after calibration	Add (reading error × 0.5) to the above accuracy values.
Temperature coefficient	0.01%/°C (10 to 18°C, 28 to 40°C)
Frequency range	DC to 100 kHz (-3 dB)
Continuous maximum allowable input	600 A peak For 400 Hz and higher, see the diagram titled 'Derating of primary current based on frequency' on next page.
Instantaneous maximum allowable input	3000 A peak for 0.1 second or less (reference value)
Continuous maximum in-phase voltage	600 V rms
Insulating resistance	Across individual input terminals and case, across individual input terminals and power plug, across individual input terminals and individual output terminals, across case and power plug, across individual output terminals and power plug, correlations of individual input terminals, correlations of individual output terminals: 50 MΩ or higher at 500 V DC
Withstand voltage	Across individual input terminals and case, across individual input terminals and individual output terminals, correlations of individual input terminals, across individual input terminals and power plug: 2200 V AC for one minute at 50/60 Hz Across case and plug, across individual output terminals and power plug: 1500 V AC for one minute at 50/60 Hz
Input terminal type	M12 nuts and bolts
Output terminal type	Screw terminal
Output load resistance	0.5 Ω or higher, 90 Ω or less See the diagram titled Derating of input current 'based on load resistance" on next page.
Warmup time	Approximately 30 minutes
Operating temperature and humidity ranges	10 to 40°C, 20 to 80% RH (no condensation)
Storage temperature range	0 to 60°C (no condensation)
Maximum usage elevation	2000 meters
Rated supply voltage and allowable range of supply voltage fluctuation	100 V AC/90 to 110 V, 115 V AC/105 to 125 V AC, or 230 V AC/220 to 250 V
Rated supply frequency and allowable range of supply frequency fluctuation	50/60 Hz/48-63 Hz
External dimensions	751521: Approximately 426 × 221 × 429.5 mm (WHD) 751523: Approximately 426 × 354.8 × 429.5 mm (WHD) Note: The dimensions shown exclude projections such as input terminals and base feet.
Weight	751521: Approximately 14 kg 751523: Approximately 24 kg
Consumed power	751521: Approximately 25 VA 751523: Approximately 75 VA

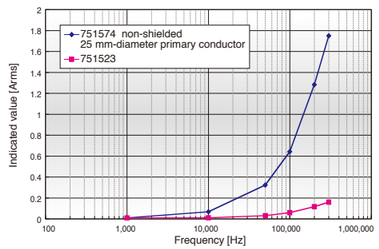
751552

Rated current	AC 0.001 to 1200 Arms (1400 A peak) When inputting 1000 Arms to 1200 Arms (1 kHz), a 20 minute rest is required after 40 minutes of electrical continuity.
Output current	1000 mA (with 1000 A primary current)
Current transformation ratio	1000:1
Current direction	Direction of arrow on unit
Amplitude accuracy	Input current (I) accuracy with respect to output current 1 mA ≤ I < 100 mA: ±(3% of rdg + 5 μA), phase error: no spec 100 mA ≤ I < 1 A: ±(2% of rdg + 3 μA), phase error: no spec 1 A ≤ I < 10 A: ±1% of rdg, phase error: 2 deg 10 A ≤ I < 100 A: ±0.5% of rdg, phase error: 1 deg 100 A ≤ I ≤ 1200 A: ±0.3% of rdg, phase error: 0.7 deg
Reference conditions	23±3°C, 20 to 75% RH, 48 to 65 Hz sinewave input Input current: 0.001 to 1200 A, common mode voltage: 0 V Conductor: Clamp center Primary input: No DC current component, no AC magnetic field, external magnetic field below 40 A/m, secondary load resistance 1 Ω or less, no effects from current flowing through adjacent external conductors
Measurement range	30 Hz ≤ f ≤ 5 kHz 30 Hz ≤ f < 48 Hz: Under ±0.5% of output signal 65 Hz < f ≤ 1 kHz: Under ±1% of output signal 1 kHz < f ≤ 5 kHz: Under ±2% of output signal
Conductor position effect	Add ±0.1% of rdg (400 Hz or less)
DC current effect	1% of output current at superimposition of 15 Adc
Temperature effect	0.02%/°C or less of the output signal
Maximum output voltage:	30 V peak or less
Continuous maximum allowable input	For a continuous frequency f of 1 kHz or less I ≤ 1000 A For an input signal of 1000 A < I ≤ 1200 A at 1 kHz, the probe can be used continuously for a maximum of 40 minutes. Do not perform measurement 20 minutes thereafter.
Working voltage	Maximum 600 Vrms
Secondary load resistance	1 Ω or less
Secondary load resistance effect	1 to 5 Ω: 0.1% of rdg, add 0.2° phase error
Operating temperature and humidity ranges	-10 to 50°C, 0 to 90% RH (no condensation)
Storage temperature range	-40 to 70°C (no condensation)
External dimensions	111 × 216 × 45 mm (WHD)
Measurable conductor diameter	Maximum Ø52 mm
Output current connector	Plug-in terminal (safety terminal)
Weight	Approximately 620 g
Emissions	Standard EN61326 Class B.
Immunity	Standard EN61326 Annex A (for industrial environments).
Safety standards	Standard EN61010-1. Standard EN61010-2-032. 600 V overvoltage category III pollution level 2 300 V overvoltage category IV pollution level 2

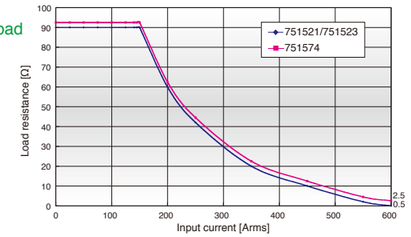
Primary current derating by frequency



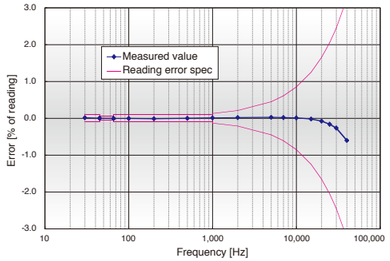
751574 and 751523 CMRR characteristic comparison (example)



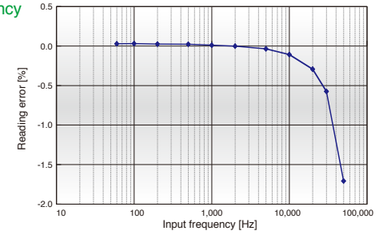
Input current derating by load resistance



751523 frequency characteristic (example)



751552 frequency characteristic (example)

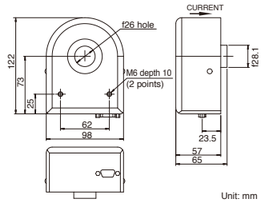


751574 600A

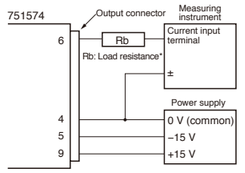
Secondary connector signal assignments

Pin No	Signal Name
1-3	- (Do not connect)
4	Power supply 0 V input
5	Power supply -15 V input
6	Secondary signal output
7, 8	- (Do not connect)
9	Power supply +15 V input

*1: Use an insulated conductor or cable for wiring on the primary side.

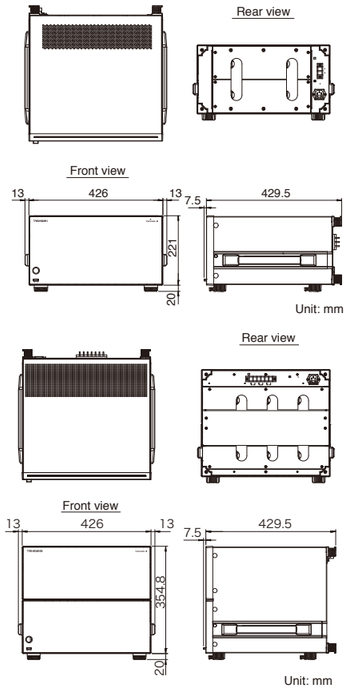


Unit: mm

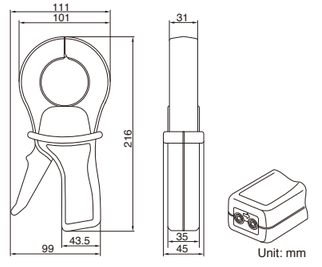


* The total sum of the internal resistance of the measuring instrument and the secondary load resistance (Rb) shall be 2.5 Ω or more.

751521/751523



751552



Models and Suffix Codes

AC/DC Current Sensors and Clamp-on Probes

Model	Product Name	Specifications
CT1000	AC/DC Current sensor	Measurement range: DC to 300 kHz, basic accuracy: ±(0.05% of rdg + 30 µA), 1000 Apk
751574	AC/DC Current sensor	Measurement range: DC to 100 kHz, basic accuracy: ±(0.05% of rdg + 40 µA), 600 Apk
CT200	AC/DC Current sensor	Measurement range: DC to 500 kHz, basic accuracy: ±(0.05% of rdg + 30 µA), 200 Apk
CT60	AC/DC Current sensor	Measurement range: DC to 800 kHz, basic accuracy: ±(0.05% of rdg + 30 µA), 60 Apk
751552	Clamp-on probe	Measurement range: 30 Hz to 5 kHz, basic accuracy: ±0.3% of rdg, 1400 Apk (1000 Arms)

Current Sensor Unit

Model	Suffix Code	Product Name	Specifications
751521		Current sensor unit (for single-phase)	Measurement range: DC to 100 kHz Basic accuracy: ±(0.05% of rdg + 40 µA)
751523	-10	Current sensor unit (for three-phase U and V)	
	-20	Current sensor unit (for three-phase U and W)	
	-30	Current sensor unit (for three-phase U, V, and W)	
	-1	Power voltage	100 V AC (50/60 Hz)
	-M	Power cable	UL/CSA standard 3 pin to 2 pin adapter

* 751523-10 is available for the WT3000/PZ4000, and 7515423-20 is available for the WT230.

Separately Sold Accessories

Model	Product Name	Specifications	Sales Unit
758917	Measurement lead set	75-cm long cable, 2 pieces (red and black) in set	1
758922⚠	Small alligator-clip adapter set	Safety terminal-to-alligator-clip adapter, 2 pieces (black and red) in set. Rated 300 V	1
758929⚠	Large alligator-clip adapter set	Safety terminal-to-alligator-clip adapter, 2 pieces (black and red) in set. Rated 1000 V	1
758923	Safety terminal adapter set	Spring-hold type, 2 pieces (black and red) in set	1
758931	Safety terminal adapter set	Spring-fastened type, 2 pieces (black and red) in set	1
758921⚠	Fork terminal adapter set	4-mm banana plug-to-fork terminal, 2 pieces (black and red) in set	1
701959	Safety mini-clip	Hook type, 2 pieces (black and red) in set	1
758924	Conversion adapter	BNC-to-binding post adapter	1
366924	Conversion adapter	1-meter long BNC-to-BNC cable	1
366925	Conversion adapter	2-meter long BNC-to-BNC cable	1
B8200JQ	Output connector	D-Sub 9-pin connector with 2 screws (female on connector side)	1
B8200JR	Load resistor	10 Ω/0.25 W (x4)	1

⚠: Be careful not to touch the metal parts that are easily accessible. Doing so may cause an electric shock.

WT3000

Dim. 426 (W) × 177 (H) × 491 (D) mm
Approximately 15 kg (main unit with four elements installed)

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.

WT230

Dim. 213 (W) × 132 (H) × 379 (D) mm
Approximately 5 kg

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

WT1600

Dim. 426 (W) × 177 (H) × 428 (D) mm
Approximately 15 kg (main unit with six input elements installed)

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)

WT210

Dim. 213 (W) × 88 (H) × 379 (D) mm
Approximately 3 kg

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

WT500

Dim. 213 (W) × 177 (H) × 491 (D) mm
Approximately 6.5 kg (main unit with three elements installed)

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

PZ4000

Dim. 426 (W) × 177 (H) × 512 (D) mm
Approximately 15 kg (main unit with four-input module installed)

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 restrictions to some general specifications and functions. For details, see the respective product catalog.

- Error for when used in conjunction with the power meter
  Add the error of the power meter and that of the current sensor unit or AC/DC current sensor.
- Notes on wiring
  - Make sure the primary and secondary lines do not interfere with each other. Small currents flow through the secondary line, so it may be affected by the primary current. Make the secondary line as short as possible, allow enough space from the primary line, and make sure the secondary line is not parallel to the primary line.
  - AGW 24 or larger wire is recommended for the secondary line. A twisted-pair wire is sometimes recommended rather than a shielded wire, for example, for testing inverters.

Cautions

1. Use the current probe in a circuit at a voltage less than the maximum circuit voltage in order to prevent a short circuit, physical injury, etc.
2. Do not use the current probe for a bare conductor as doing so may result in a short circuit, physical injury, etc. due to exposing the tip of the clamp core.
3. Carefully read the instruction manuals to ensure correct and safe use of the products.

YOKOGAWA

YOKOGAWA METERS & INSTRUMENTS CORPORATION
Global Sales Dept. /Phone: +81-42-534-1413 Facsimile: +81-42-534-1426
E-mail: tm@cs.jp.yokogawa.com
YOKOGAWA CORPORATION OF AMERICA Phone: (1)-770-253-7000, Fax: (1)-770-254-0928
YOKOGAWA EUROPE B.V. Phone: (31)-88-4641000, Fax: (31)-88-4641111
YOKOGAWA ENGINEERING ASIA PTE. LTD. Phone: (65)-62419933, Fax: (65)-62412606