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Data Sheet

August 13, 2026

YOKOGAWA

Yokogawa WT1805E Precision Power Analyzer

Yokogawa WT1805E Precision Power Analyzer The Yokogawa WT1805E is the five-input-element model of the WT1800E high-performance power analyzer family. It provides simultaneous voltage, current, and power on five elements with basic power accuracy $\pm(0.05\%$ of reading $+ 0.05\%$ of range), DC and 0.1 Hz to 1 MHz bandwidth, and 2 MS/s 16-bit sampling for inverter, motor-drive, and multi-phase efficiency tests that need more than four elements. Three-phase inverter input plus DC bus and motor output on one chassis; five-element efficiency and loss mapping; harmonic and dual-harmonic evaluation to the 500th order of 50/60 Hz; battery charge/discharge integration at 2 MS/s; optional motor torque/speed evaluation; automated test via USB, GP-IB, and Ethernet. The Yokogawa WT1805E is the five-input-element model of the WT1800E high-performance power analyzer family. It provides simultaneous voltage, current, and power on five elements with basic power accuracy $\pm(0.05\%$ of reading $+ 0.05\%$ of range), DC and 0.1 Hz to 1 MHz bandwidth, and 2 MS/s 16-bit sampling for inverter, motor-drive, and multi-phase efficiency tests that need more than four elements. Three-phase inverter input plus DC bus and motor output on one chassis; five-element efficiency and loss mapping; harmonic and dual-harmonic evaluation to the 500th order of 50/60 Hz; battery charge/discharge integration at 2 MS/s; optional



MODEL

**Yokogawa
WT1805E**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

WT1805E

LISTING

<https://aumictechlabs.com/products/wt1805e-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Yokogawa WT1805E Precision Power Analyzer delivers $\pm 0.05\%$ basic power accuracy across demanding electrical characterization tasks in R&D, manufacturing, and energy efficiency assessment. This six-channel instrument simultaneously measures power, voltage, and current with 2 MS/s sampling at 16-bit resolution, enabling precise analysis of complex electrical systems from DC to 1 MHz bandwidth (5 MHz typical at -3 dB).

Technical Specifications

Measurement Accuracy Basic Power Accuracy: $\pm 0.05\%$ of reading + $\pm 0.05\%$ of range (1% to 110% of selected range) Voltage/Current Accuracy: $\pm 0.1\%$ Power Factor Error: 0.1% of apparent power Crest Factor: Up to 280% of range while maintaining specification Sampling: 2 MS/s, 16-bit resolution Input Ranges Voltage: 1.5 V to 1000 V (12 ranges), DC to 1 MHz Current (direct): 10 mA to 5 A (9 ranges) or 1 A to 50 A (6 ranges) Input Channels: Up to 6 simultaneous Frequency Bandwidth: DC, 0.1 Hz to 1 MHz (voltage/current); 5 MHz typical at -3 dB Harmonic Analysis Harmonic Order: Up to 500th order on 50/60 Hz fundamental Dual Simultaneous Harmonic Measurement: Independent analysis of two sources Total Harmonic Distortion (THD): Full computation and display Low-Frequency Capability: 0.1 Hz minimum for low motor speeds Filtering & Conditioning Digital Filter: 100 Hz to 100 kHz configurable Analog Filters: 1 MHz and 300 kHz options Offset Correction: Individual null function per input channel Power Supply Input: 100 V or 200 V, 48 Hz to 63 Hz Maximum Consumption: 150 VA (standard), 450 VA (with /PD or /PD2 option and printer)

Key Features Voltage Fluctuation/Flicker Measurement per IEC 61000-3-2, JIS C61000-3-2, IEC 61000-3-3, IEC 61000-3-11, and IEC 61000-3-12 (optional) Optional mechanical parameter measurement: rotational speed, direction, torque, slip, electrical angle, and mechanical power Individual offset correction for each input channel

Typical Applications Power supply testing and characterization Motor drive and inverter analysis Harmonic distortion assessment Energy efficiency evaluation Power quality compliance verification

Compatibility & Integration Direct voltage input supports 1.5 V to 1000 V. Current input accepts 10 mA to 50 A depending on range selection. Operates on standard 100 V or 200 V single-phase power, 48 Hz to 63 Hz.

Features & description

From manufacturer datasheet

Features

- Five mixable 5 A and/or 50 A input elements in one WT1800E mainframe
- Harmonics to the 500th order even at 50 ms update; optional dual harmonics (/G6)
- Independent analog (1 MHz/300 kHz) and digital (100 Hz to 100 kHz) line filters per element
- 8.4-inch XGA color TFT with numeric, waveform, vector, trend, and bar-graph pages
- Optional /MTR motor evaluation (analog/pulse torque and speed)
- USB, GP-IB, and Gigabit-class Ethernet with Modbus/TCP and web server

WT1805E Characteristics / Specifications

PARAMETER	VALUE
Model	WT1805E
Manufacturer	Yokogawa
Instrument Type	Precision Power Analyzer
Series	WT1800E
Input Elements	5 elements (mix 5 A and 50 A types)
Basic Power Accuracy	+/- (0.05% of reading + 0.05% of range) at 45 to 66 Hz, CF3
Frequency Range	DC, 0.1 Hz to 1 MHz (approx. 5 MHz -3 dB typical)
Effective Accuracy Span	1% to 110% of selected voltage and current range
Low Power Factor Error	+/-0.07% of apparent powerSat cos phi = 0, 45 to 66 Hz
Voltage Ranges CF	1.5 V, 3 V, 6 V, 10 V, 15 V, 30 V, 60 V, 100 V, 150 V, 300 V, 600 V, 1000 V
Current Ranges 5 A Element CF	10 mA, 20 mA, 50 mA, 100 mA, 200 mA, 500 mA, 1 A, 2 A, 5 A
Current Ranges 50 A Element CF	1 A, 2 A, 5 A, 10 A, 20 A, 50 A
External Sensor Ranges CF	50 mV, 100 mV, 200 mV, 500 mV, 1 V, 2 V, 5 V, 10 V
Crest Factor	3 (6 or 6A on reduced ranges); up to 300 relative to minimum valid input
Sampling Rate	approx. 2 MS/s (16 bit, approx. 500 ns conversion)
Harmonic Order	up to 500th of 50/60 Hz fundamental
Data Update Rate	50 ms, 100 ms, 200 ms, 500 ms, 1 s, 2 s, 5 s, 10 s, 20 s, Auto
Voltage Input Impedance	approx. 2 MOhm, 10 pF
Current Shunt 5 A Element	approx. 100 mOhm + 0.07 uH
Current Shunt 50 A Element	approx. 2 mOhm + 0.07 uH
Common Mode Voltage	1000 Vrms continuous (50/60 Hz) on voltage terminals
Display	8.4-inch color TFT LCD (XGA class)
Interfaces	USB; GP-IB; Ethernet 1000BASE-T/100BASE-TX (Modbus/TCP, VXI-11, FTP)
Motor Evaluation	optional analog/pulse torque and speed inputs (/MTR)

PARAMETER	VALUE
Power Supply	100 to 240 VAC, 50/60 Hz; max 150 VA with printer (450 VA with /PD sensor power)
Dimensions	approx. 426 W x 177 H x 459 D mm (printer stored)
Mass	approx. 15 kg class (OEM figure is for six elements plus options without /PD)
Warm Up Time	approx. 30 minutes
Operating Temperature	5 to 40 degCStorage Temperature: -25 to 60 degCAlias: WT1805E Notes Specs from Yokogawa WT1800E datasheet (WT1805E five-element configuration). Confirm installed 5 A versus 50 A element mix, /G5 or /G6 harmonics, /MTR, /EX, and /PD on the unit and calibration certificate.
Storage temperature	25 to 60 degCAlias: WT1805E

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	25 to 60 degCAlias: WT1805E
Operating temperature	5 to 40 degCStorage Temperature: -25 to 60 degCAlias: WT1805E
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Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

performance power analyzer family. It provides simultaneous voltage, current, and power on five elements with basic power accuracy +/- (0.05% of reading + 0.05% of range), DC and 0.1 Hz to 1 MHz bandwidth, and 2 MS/s 16-bit sampling for inverter, motor-drive, and multi-phase efficiency tests that need more than four elements.

Applications

Three-phase inverter input plus DC bus and motor output on one chassis; five-element efficiency and loss mapping; harmonic and dual-harmonic evaluation to the 500th order of 50/60 Hz; battery charge/discharge integration at 2 MS/s; optional motor torque/speed evaluation; automated test via USB, GP-IB, and Ethernet.

Key Features

- Five mixable 5 A and/or 50 A input elements in one WT1800E mainframe
- Harmonics to the 500th order even at 50 ms update; optional dual harmonics (/G6)
- Independent analog (1 MHz/300 kHz) and digital (100 Hz to 100 kHz) line filters per element
- 8.4-inch XGA color TFT with numeric, waveform, vector, trend, and bar-graph pages
- Optional /MTR motor evaluation (analog/pulse torque and speed)
- USB, GP-IB, and Gigabit-class Ethernet with Modbus/TCP and web server

Technical Specifications

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Low Power Factor Error	+/-0.07% of apparent power S at cos phi = 0, 45 to 66 Hz
Voltage Ranges CF3	1.5 V, 3 V, 6 V, 10 V, 15 V, 30 V, 60 V, 100 V, 150 V, 300 V, 600 V, 1000 V
Voltage Ranges CF6	0.75 V, 1.5 V, 3 V, 5 V, 7.5 V, 15 V, 30 V, 50 V, 75 V, 150 V, 300 V, 500 V
Current Ranges 5 A Element CF3	10 mA, 20 mA, 50 mA, 100 mA, 200 mA, 500 mA, 1 A, 2 A, 5 A
Current Ranges 50 A Element CF3	1 A, 2 A, 5 A, 10 A, 20 A, 50 A
External Sensor Ranges CF3	50 mV, 100 mV, 200 mV, 500 mV, 1 V, 2 V, 5 V, 10 V
Crest Factor	3 (6 or 6A on reduced ranges); up to 300 relative to minimum valid input
Sampling Rate	approx. 2 MS/s (16 bit, approx. 500 ns conversion)
Harmonic Order	up to 500th of 50/60 Hz fundamental

PARAMETER	VALUE
Data Update Rate	50 ms, 100 ms, 200 ms, 500 ms, 1 s, 2 s, 5 s, 10 s, 20 s, Auto
Voltage Input Impedance	approx. 2 MOhm, 10 pF
Current Shunt 5 A Element	approx. 100 mOhm + 0.07 uH
Current Shunt 50 A Element	approx. 2 mOhm + 0.07 uH
Common Mode Voltage	1000 Vrms continuous (50/60 Hz) on voltage terminals
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Interfaces	USB; GP-IB; Ethernet 1000BASE-T/100BASE-TX (Modbus/TCP, VXI-11, FTP)
Motor Evaluation	optional analog/pulse torque and speed inputs (/MTR)
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Alias	WT1805E

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Voltage Ranges CF3	1.5 V, 3 V, 6 V, 10 V, 15 V, 30 V, 60 V, 100 V, 150 V, 300 V, 600 V, 1000 V
Voltage Ranges CF6	0.75 V, 1.5 V, 3 V, 5 V, 7.5 V, 15 V, 30 V, 50 V, 75 V, 150 V, 300 V, 500 V
Current Ranges 5 A Element CF3	10 mA, 20 mA, 50 mA, 100 mA, 200 mA, 500 mA, 1 A, 2 A, 5 A
Current Ranges 50 A Element CF3	1 A, 2 A, 5 A, 10 A, 20 A, 50 A

PARAMETER	VALUE
External Sensor Ranges CF3	50 mV, 100 mV, 200 mV, 500 mV, 1 V, 2 V, 5 V, 10 V
Crest Factor	3 (6 or 6A on reduced ranges); up to 300 relative to minimum valid input
Sampling Rate	approx. 2 MS/s (16 bit, approx. 500 ns conversion)
Harmonic Order	up to 500th of 50/60 Hz fundamental
Data Update Rate	50 ms, 100 ms, 200 ms, 500 ms, 1 s, 2 s, 5 s, 10 s, 20 s, Auto
Voltage Input Impedance	approx. 2 MOhm, 10 pF
Current Shunt 5 A Element	approx. 100 mOhm + 0.07 uH
Current Shunt 50 A Element	approx. 2 mOhm + 0.07 uH
Common Mode Voltage	1000 Vrms continuous (50/60 Hz) on voltage terminals
Display	8.4-inch color TFT LCD (XGA class)
Interfaces	USB; GP-IB; Ethernet 1000BASE-T/100BASE-TX (Modbus/TCP, VXI-11, FTP)
Motor Evaluation	optional analog/pulse torque and speed inputs (/MTR)
Power Supply	100 to 240 VAC, 50/60 Hz; max 150 VA with printer (450 VA with /PD sensor power)
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Mass	approx. 15 kg class (OEM figure is for six elements plus options without /PD)
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Operating Temperature	5 to 40 degCStorage Temperature: -25 to 60 degC Alias: WT1805E

Notes

Specs from Yokogawa WT1800E datasheet (WT1805E five-element configuration). Confirm installed 5 A versus 50 A element mix, /G5 or /G6 harmonics, /MTR, /EX, and /PD on the unit and calibration certificate.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.