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Единый адрес для всех регионов: fkun@nt-rt.ru || www.fluke.nt-rt.ru

Регистратор качества электроэнергии для трехфазной сети Fluke 1750



Record three-phase power quality and monitor for power quality disturbances with the new Fluke 1750 Power Recorder and the Fluke Power Analyze software. These power meters automatically record every power quality parameter and event, on every cycle – all the time.

Applications

Long-term analysis: Uncover hard-to-find or intermittent issues; monitor critical equipment, capturing power quality events to correlate with equipment malfunction

Power quality surveys: Quantify power quality throughout a facility, documenting results with professional reports

Quality of service compliance: Validate incoming power quality at the service entrance

Equipment Installation/Commissioning: Benchmark: power system prior to install to insure quality of service





- **Power quality that meets the standard:** All measurements comply with IEC61000-4-30 standards for correct evaluation of all measured values including voltage, current, power, harmonics, flicker etc.
- **Quick and reliable configuration:** ARCHOS 43 Internet Tablet provides a window into what the instrument is recording, enabling quick and reliable configuration even in awkward test locations
- **Threshold-free set up:** Apply thresholds after data is collected with Fluke Power Analyze Software – no need to worry about missed information due to incorrect setups
- **Captures everything:** Cross-channel and current triggering capture every measurement, on every channel, every time
- **Intuitive PC software:** Easily analyze data and generate reports with automated EN50160 reporting and compliance
- **Reporting has never been easier:** Auto Report creates either standard reports or customized reports with the minimum effort or hassle.
- **Plug and play:** Set up in minutes with self-identifying current probes and single-lead voltage connections
- **No need to reconnect wires:** Swap channels internally with the wireless PDA or PC when connections are not correct
- **Measure every parameter:** Voltage and current on three phases, neutral, and ground
- **5 MHz, 8000 Vpk waveform capture:** Get a detailed picture of even the shortest events
- **Быстрая передача данных:** с помощью карты памяти SD, входящей в комплект поставки, или через высокоскоростное соединение Ethernet 100BaseT. Данные загружаются на карту памяти SD автоматически, если прибор не подключен к другим соединениям.

Technical Specifications

Power quality measurement standards	Conformance	IEC 61999-1-4 Class 1, IEC 61000-4-30 Class A or B depending on measurement function, IEEE519, IEEE1159, IEEE1459 and EN50160
	Clock/calendar	Leap years, 2 4-hour clock
	Real-time clock accuracy	Not more than ± 1 s/day
	Internal memory capacity for data	At least 2 GB
	Maximum recording period	At least 31 days
	Measurement time control	Automatic
	Maximum number of events	Limited only by the size of the internal memory
	Power requirements	100 to 240 V rms ± 10 %, 47-63 Hz, 40 W
	Operating time during interruptions (internal UPS operation)	5 minutes per interruption, 60 minutes total operating time without recharging
	Dimensions	215 mm x 310 mm x 35 mm (8.5 in x 12.2 in x 3.5 in)
	Mass (weight)	6.3 kg (14 lb)
Input	Measurement	One Phase Plus Neutral, One Phase IT No Neutral,

	types One Phase Split Phase, Three Phase Wye, Three Phase Delta, Three Phase IT, Three Phase High Leg, Three Phase Open Leg, 2 Element Delta, 2 1/2 Element Wye Input channels Voltage: 4 channels, ac/dc Current: 5 channels Voltage channels Input resistance: 2 M Ω Input capacitance: < 20 pF Current input characteristics 2 V rms = full scale, 1 M Ω Input Impedance for ferro CTs, low impedance for Flexi-CTs Measuring method Simultaneous digital sampling of voltage and current. Digital PLL synchronized sampling, internal frequency reference used during voltage drops.
Synchronization and sampling	PLL-synchronization source The PLL synchronizes to the A-N voltage for wye power types, and to the A-B voltage for delta power types. All listed power types can be characterized as either wye or delta. PLL lock range 42.5 to 69 Hz Sampling frequency Voltage and current: 256 samples/cycle Inter-harmonics per IEC 61000-4-7: 2560 points/10 cycles (50 Hz), 3072 points/12 cycles (60 Hz) A/D resolution Transient Voltage: 5 MHz Voltage and current: 24 bits Transient voltage: 14 bits
Voltage and current measurements	Voltage measurement range AC voltage: 1000 V rms \pm 10 % over range DC voltage: \pm 1000 V + 10 % over range Voltage crest factor 3 or less Current measurement range Depends on current probe used Current crest factor 4 or less
RMS voltage	Measurement type True rms calculated continuously: every cycle, every 1/2 cycle, and every 10 or 12 cycles at 50 or 60 Hz respectively, as required by IEC 61000-4-30. Measurement uncertainty AC: \pm 0.2 % reading \pm 0.1 % full scale, above 50 V rms DC: \pm 0.5 % reading \pm 0.2 % full scale, above 50 V dc
RMS current	Measurement type True rms calculated continuously: every cycle, every 1/2 cycle, and every 10 or 12 cycles at 50 or 60 Hz respectively, as required by standards
Transient voltage (impulse)	Measurement type Waveshape sampling Full scale 8000 V pk Sample resolution 200 nS Measurement uncertainty \pm 5 % reading \pm 2.0 V (test parameters: 1000 V dc, 1000 V rms, 100 kHz)
Voltage swell (rms swell)	Measurement type True rms (one cycle calculation by overlapping each half cycle - voltage between lines is measured for 3P3W lines and phase voltage is measured for 3P4W lines) Displayed data Amplitude and duration of swell Measurement Same as rms voltage
Voltage dip (rms sag)	Measurement type True rms (one cycle calculation by overlapping each half cycle - voltage between lines is measured for 3P3W lines and phase voltage is measured for 3P4W lines) Displayed data Amplitude and duration of dip or interruption Measurement Same as rms voltage
Voltage dropout (interruption)	Measurement type Same as voltage dip
LAN interface	Connector RJ-45 Speed and type 10/100 Base-T, auto MDIX Communications protocol TCP/IP over Ethernet

Wireless controller interface	Connection wireless (2.4 GHz radio) Speed up to 700 kbit/second Communications protocol Bluetooth SPP
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Power Measurements		
Power, battery life	Measurement type	True rms calculated continuously: every cycle, and every 10 or 12 cycles at 50 or 60 Hz respectively, as required by standards
Frequency	Measurement range Measurement source Measurement accuracy	42.5 to 69 Hz Same as PLL synchronization source ± 10 mHz (10 to 110 % of range, with sine wave)
Power Factor	Measurement range Measurement accuracy	0.000 to 1.000 ± 1 digit from the calculation of each measured value (±3 digits for total)
Displacement power factor	Measurement method Measurement range Measurement accuracy	Calculated from the phase difference between voltage fundamental and current fundamental - 1.000 (leading) to + 1.000 (lagging) ± 0.5 % reading ± 2 % full scale ± 1 digit
Voltage unbalance and phase sequence	Measurement method	Positive sequence voltage divided by negative sequence voltage, per IEC 61000-4-30
Harmonic voltage and current	Analysis window Analysis order Measurement accuracy Measurement method	rectangular 1st to 50th order Voltage / Current: 1st to 20th orders: ± 0.5 % reading ± 0.2 % full scale, 21st to 50th orders: ± 1 % reading ± 0.3 % full scale (current sensor accuracy must be included for current and power) IEC 61000-4-7
Inter-harmonic voltage and current (intermediate harmonics)	Analysis window Analysis orders Measurement method	rectangular 1.5 to 49.5th order IEC 61000-4-7
Flicker	Measurement method Measuring range:	IEC 61000-4-15 Plt for 2 hours and PSt for 10 minutes 0,1 to 5 (25) depending on voltage level, modulation and frequency

Environmental Specifications		
Environmental	Operating environment Storage temperature and humidity Operating temperature and humidity	Indoors or in covered area outdoors, up to 2 000 m altitude -20 °C to 50 °C, 80 % RH max, non-condensing 0 °C to 40 °C, 80 % RH max, non-condensing
Maximum rated working voltage	Voltage terminals Voltage durability Enclosure	1100 V rms 5550 V rms ac for 1 minute, between voltage input terminals, voltage input terminals and current probes, and voltage input terminals and case (50/60 Hz, 1 mA sense current) IP30 (per EN 60529)

	protection
Standards:	EMC EN 61326-1:1997+A1:1998 Class A EN 61000-3-2:1995+A1:1998+A2:1998 EN 61000-3-3:1995 Safety EN 61010-1 2 nd Edition; 2 000 Voltage input unit: Contamination Level 2 , Overvoltage Category 1000 V CAT III, 600 V CAT IV (anticipated overvoltage: 8000 V)

Модель Название	Описание
Fluke 1750	Three-Phase Power Recorder Includes <ul style="list-style-type: none"> • 1750 acquisition unit • ARCHOS 43 Internet Tablet • 4 - 400A current probes (3140) • 5 Test leads and clips • SD memory card • Fluke Power View and Fluke Power Analyze software • Power cord with international plug set • Ethernet cable • Color localization set • Printed Getting Started manual • Product CD with software and user manual PDF • CS 1750/1760 Rugged transit softcase
Fluke 1750/B	Three-Phase Basic Power Recorder Includes all the items above with the exception of 4 x 400 A current probes (3140R)

Токовые клещи	
3210-PR-TF	1000A Flex Thin Flex Current Probe (24 inch/60cm)
i40s-PR Clamp-on Current Transformer	40A Clamp-on Current Transformer
3310-PR-TF	5000A Flex Thin Flex Current Probe (24 inch/60cm)
3312-PR-TF	5000A Flex Thin Flex Current Probe (48 inch/122cm)
i5s-PR Clamp-on Current Transformer	5A Clamp-on Current Transformer

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