Energy meter tester and power network parameter meter

Caltest 10 is a single phase portable device designed for electricity meter testing on site. It contains:

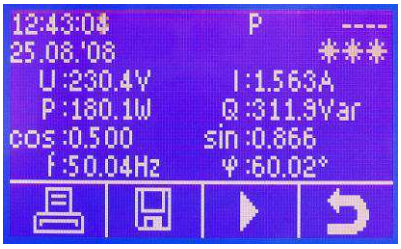
- versatility – verification of network connection, power network parameters measuring, energy meter testing with load changing possibility,
- wide range of currents 0.01…3000A with clamps, without necessity of measured circuit opening,
- multi-variant data tracing – digital and graphic display, internal memory, local printing, transmission by the interface and analysis on PC computer.

Powering from measuring circuit makes device independent from necessity of using additional supply and phantom load changing function makes independent of meter testing from site load.

Local printing on miniature printer makes possible reporting of measuring results in customer's presence.

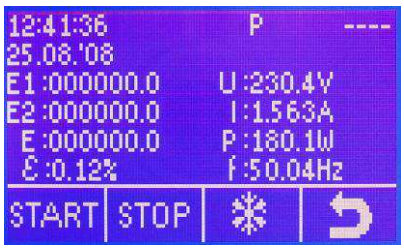
Caltest 10

Caltest 10 **Portable energy meter tester**
• Energy meter testing
• Measuring of power network parameters
• Range 0.01..(10)(100)(1000)(30/300/3000)A and 85…265V
• Powering from measuring circuit
• Phantom load changing function
• Printing results on the site
• Hand-held miniature case



Verification of power network connection with measuring of voltage, current, active and reactive power, phase shift, power factor and frequency.

Energy meter testing on site – functions of computing meter error directly in percentages with method of setting time of measurements or number of impulses. S0 standard is used for testing energy meters with impulse output. Miniature photo head CF101 is used for automatic counting of meter rotor turns for testing Ferrari meters. Photo head CF100 is used for automatic testing of meters with LED indicator and manual counting of rotor turns with using "start/stop" button.



Energy meter counters testing – functions of energy measuring in defined period of time and counter's error calculating, directly in percent.

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TECHNICAL PARAMETERS

Function / Parameter	Range	Limits of Error [1)2)]	
		class 0.2	class 0.5
Voltage	85...265V	±0.5%	±1.0%
Current with clamps 10A	0.1...10A 0.01…0.1A	±0.5% ±0.5%*	±0.5% ±0.5%*
Current with clamps 100A	1…100A 0.1…1A	±0.2% ±0.2%*	±0.5% ±0.5%*
Current with clamps 1000A	10...1000A 1…10A	±0.5% ±0.5%*	±0.5% ±0.5%*
Current with flexible clamps	0...30A/300A/3000A	±1%*	±1%*
Power and Energy with clamps 10A	0.1…10A 0.01…0.1A	±0.5% ±0.5%*	±0.5% ±0.5%*
Power and Energy with clamps 100A	1…100A 0.1…1A	±0.2% ±0.2%*	±0.5% ±0.5%*
Power and Energy with clamps 1000A	10…1000A 1…10A	±0.5% ±0.5%*	±0.5% ±0.5%*
Power and Energy with flexible clamps	0...30A/300A/3000A	±1%*	±1%*
Resolution of error measurement "ε"		0.001%	0.001%
Phase shift	0.0...±360.0°	±1°	±2°
Power factor cosφ and sinφ	0.00…±1.00	±0.01	±0.01
Frequency	45…50…65Hz	±0.1Hz	±0.1Hz
Ambient temperature	–10...+50°C operating, –25...+60°C transportation		
Power supply	85..230..300V / 45..65Hz / 8VA (with printer: 12VA DR100, 30VA DR200)		
Dimensions and weight of tester	125 / 240 / 40 mm / 0.6 kg		

1) % - related to the measuring value, %* - related to the measuring range final value
2) power and energy errors with respect to apparent power

Caltest 10 TESTER'S EQUIPMENT

The set is placed in the case. Caltest 10 set consists of:

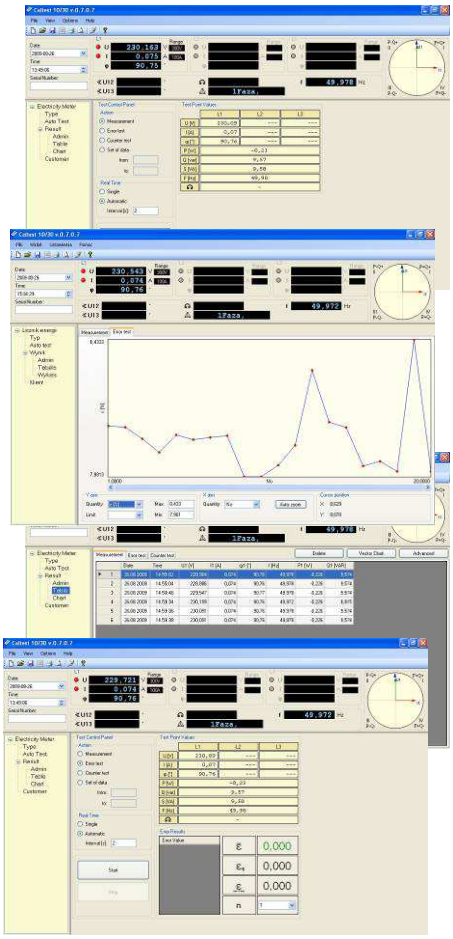
- Caltest 10 tester class 0.2 or 0.5,
- safety voltage measurement cables (2pcs) with replaceable handlers and terminal (6pcs),
- CT100A miniature electronically compensated clamp up to 100A,
- RS232 cable and USB-RS232 adapter,
- Calsoft 10 PC software,
- CF100 scanning head for sensing impulses LED from electricity meters with UCF100 holder,
- AD10 adapter for Load or Printer supply connection,
- transportation bag,
- User's Manual,
- guarantee,
- Manufacturer Certificate of Calibration.

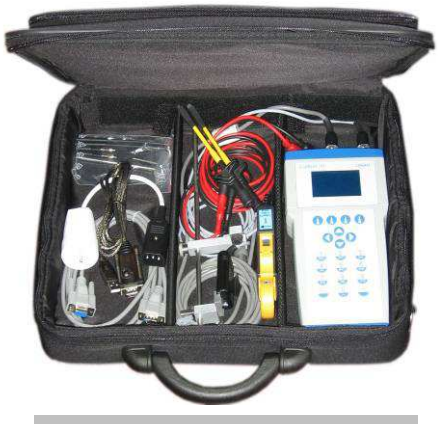
Optionally Caltest 10 set may be equipped in:

- CT10A miniature electronically compensated clamps up to 10A,
- CT1000A electronically compensated clamps up to 1000A,
- FCT3000A electronically compensated flexible clamps in ranges 30/300/3000A,
- DR100 or DR200 miniature thermal printer,
- CF101 scanning head for counting rotation of electricity meter's rotor (Ferrari meter) with UCF100 holder,
- UCF100 holder for CF100 and CF101 photo heads,
- CC11 Current source (phantom load).

SOFTWARE CALSOFT 10

- reading actual measured values from the Caltest 10 via interface and their visualisation on PC screen. The readings can be done automatically by user's defined period of time,
- reading data, earlier stored in the meter's memory and their visualisation on PC screen,
- export of measured data to Microsoft Excel, which enables later their processing according to the user's requirements,
- printing data and charts on the printer,
- saving and reading data to and from files for making archives of measurements.





View of Caltest 10 set