

CALMET Caltest 10 Single Phase Portable Working Standard 1



www.calmet.com.pl



Testing the single phase energy measurement system!

- 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

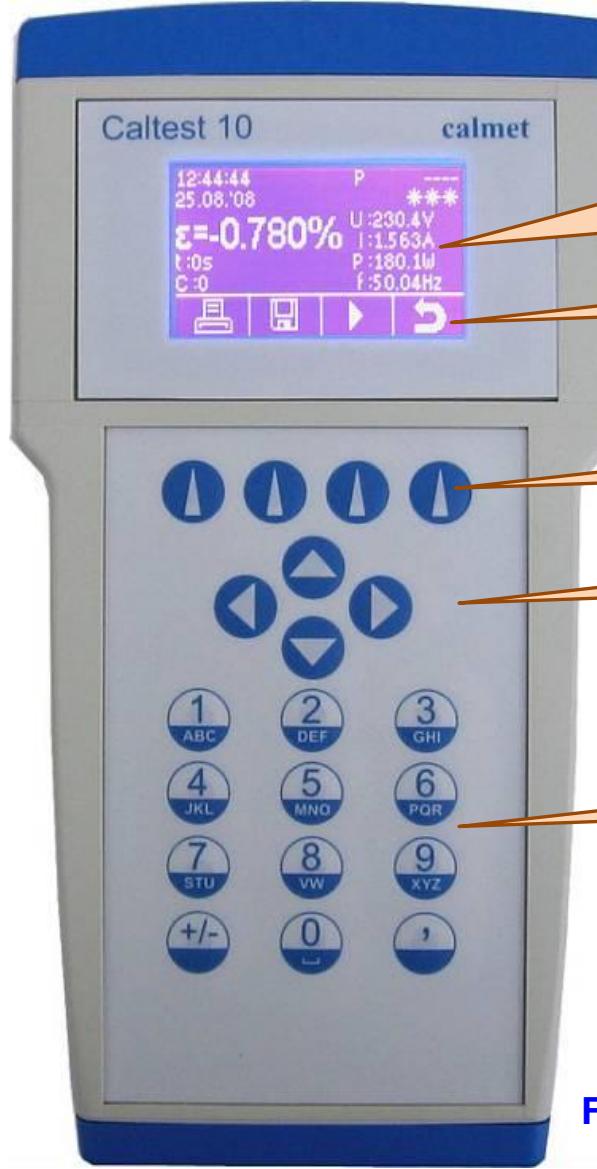


Electromechanical (Ferraris) Energy Meter



Electronic (static) Energy Meter

Caltest10



Graphic 128 x 64 pixels display:
voltage, current, power, frequency,
error, date & time

Symbols of functional keys

Functional keys

Navigation keys

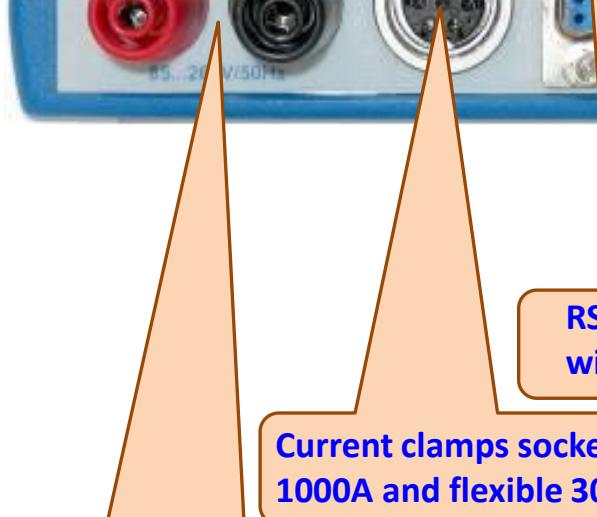
Alphanumeric keyboard

Front panel

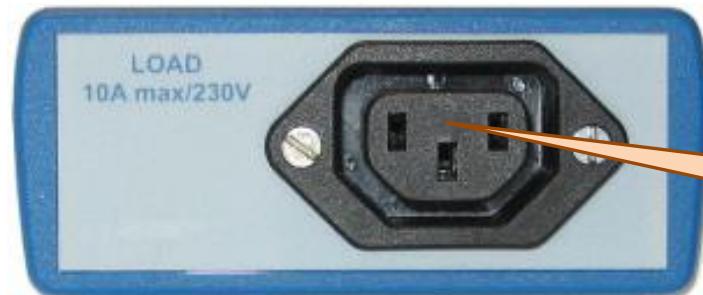
Top panel



Caltest 10 connections & current probes



Voltage input terminals and power supply 85...265V/50/60Hz



Bottom panel

Socket for additional load connection

Current clamps socket 10A, 100A, 1000A and flexible 30/300/3000A

RS-232C serial interface socket with RS-232C/ USB converter

Photo scanning head for mechanical rotor mark & LED



0.3..30A/3..300A/30..3000A, length=2m
max Ø cable 150mm,



3mA...12A, max Ø cable 20mm length=2m



300mA...1200A, length=2m
max Ø cable 52mm



10mA...120A, length=2m
max Ø cable 15mm

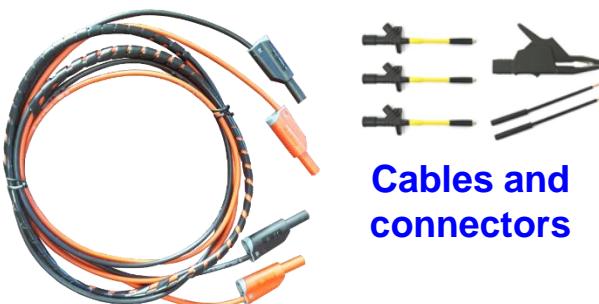
Caltest 10 accessories



Photo scanning head



Caltest 10 ready
for operation



Cables and
connectors

Transportation
bag



Phantom load
0...5A



Portable printer

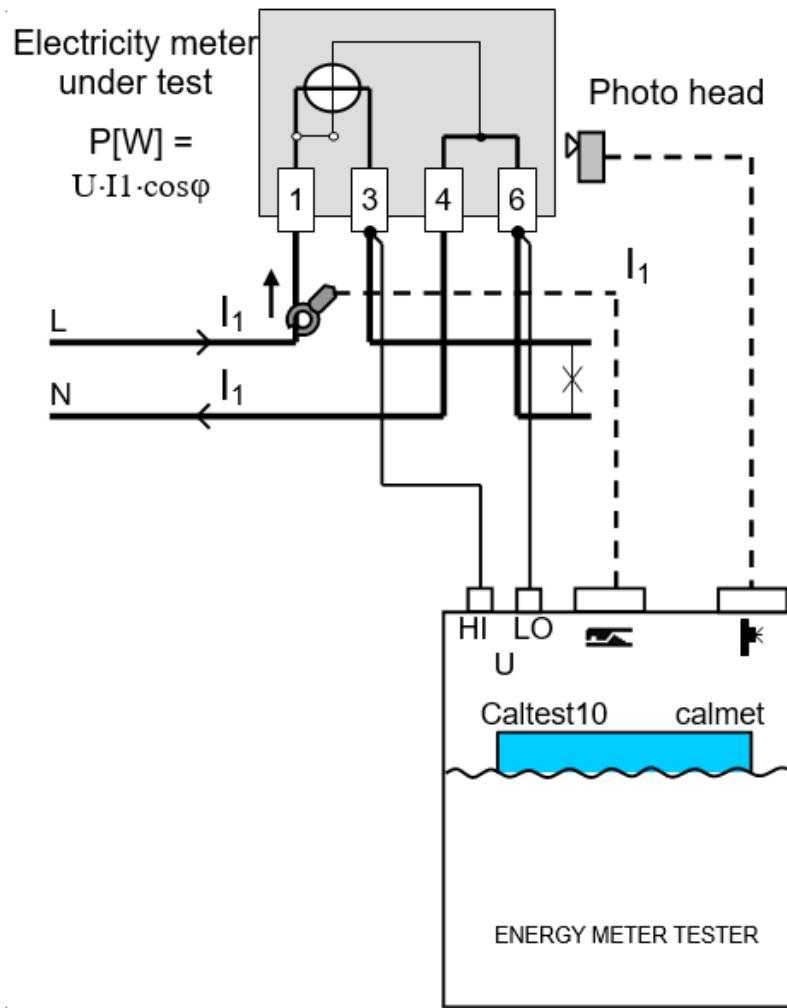


Complete set of
Caltest 10 and
accessories

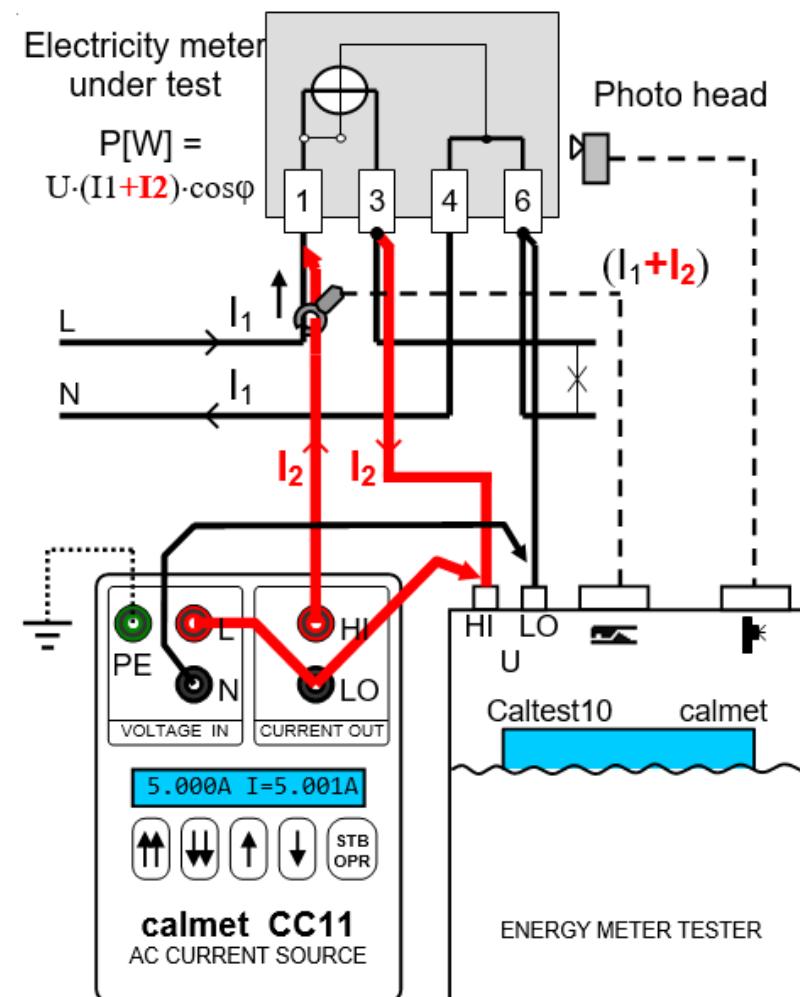
Caltest 10 basic technical parameters

| 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 connection diagram

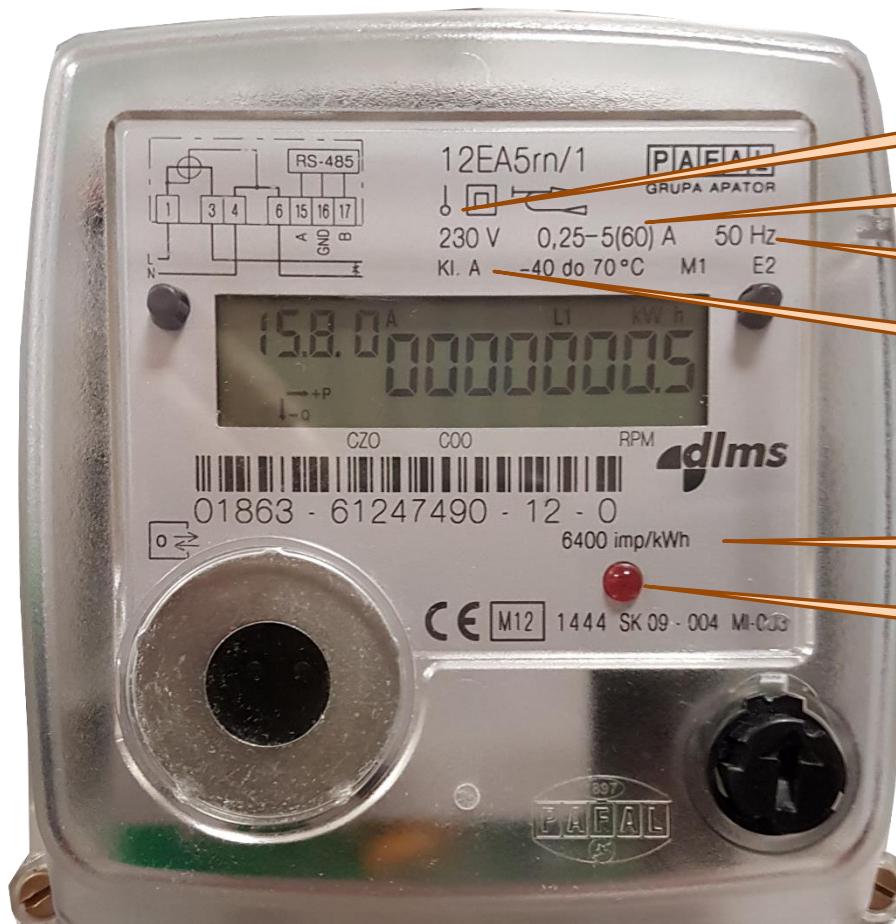


Connection of Caltest 10 to electricity meter under test



Connection of Caltest 10 to electricity meter under test with Phantom Load

Caltest 10 testing Energy Meter – device under test



Nominal voltage: 230V

Nominal current: 0.25 - 5(60)A

Nominal frequency: 50Hz

Accuracy class: A (2%)

Meter constant: 6400 imp/kWh

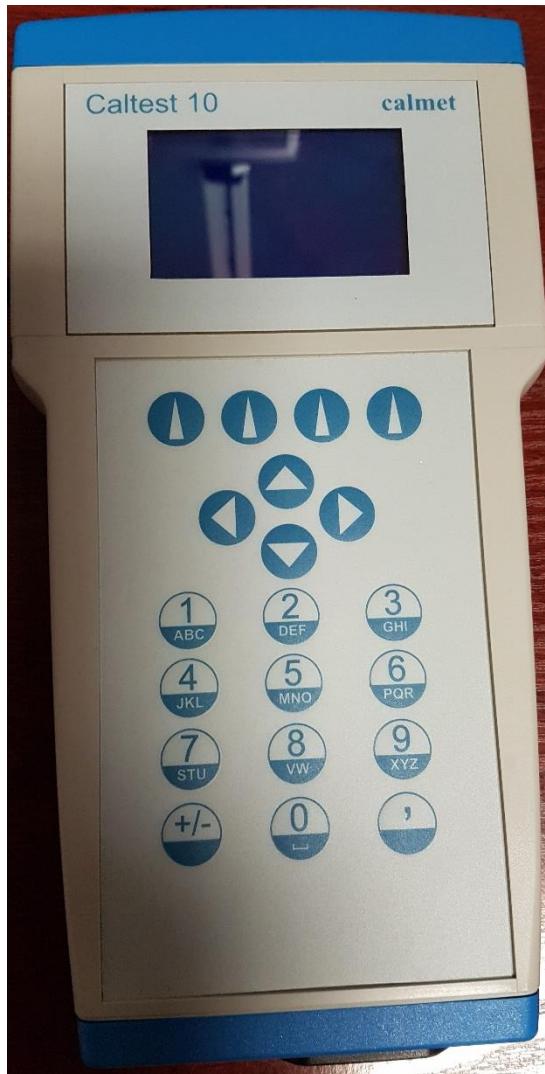
Pulse LED

Accuracy requirements for single phase meter depending on the load



| Value of current for direct connected or transformer operated meters | Power factor | Percentage error limits for meters of class index | | |
|--|-----------------------|--|-----------|-----------|
| | | A | B | C |
| $I_{\min} \leq I < I_{tr}$ | 1 | $\pm 2,5$ | $\pm 1,5$ | $\pm 1,0$ |
| $I_{tr} \leq I \leq I_{\max}$ | 0,5 ind...1...cap 0,8 | $\pm 2,0$ | $\pm 1,0$ | $\pm 0,5$ |

Caltest 10 testing Energy Meter – testing equipment



Voltage cables with
magnetic adaptors for easy
connection



100A current clamps



Photo scanning head

Caltest 10 testing Energy Meter – connections

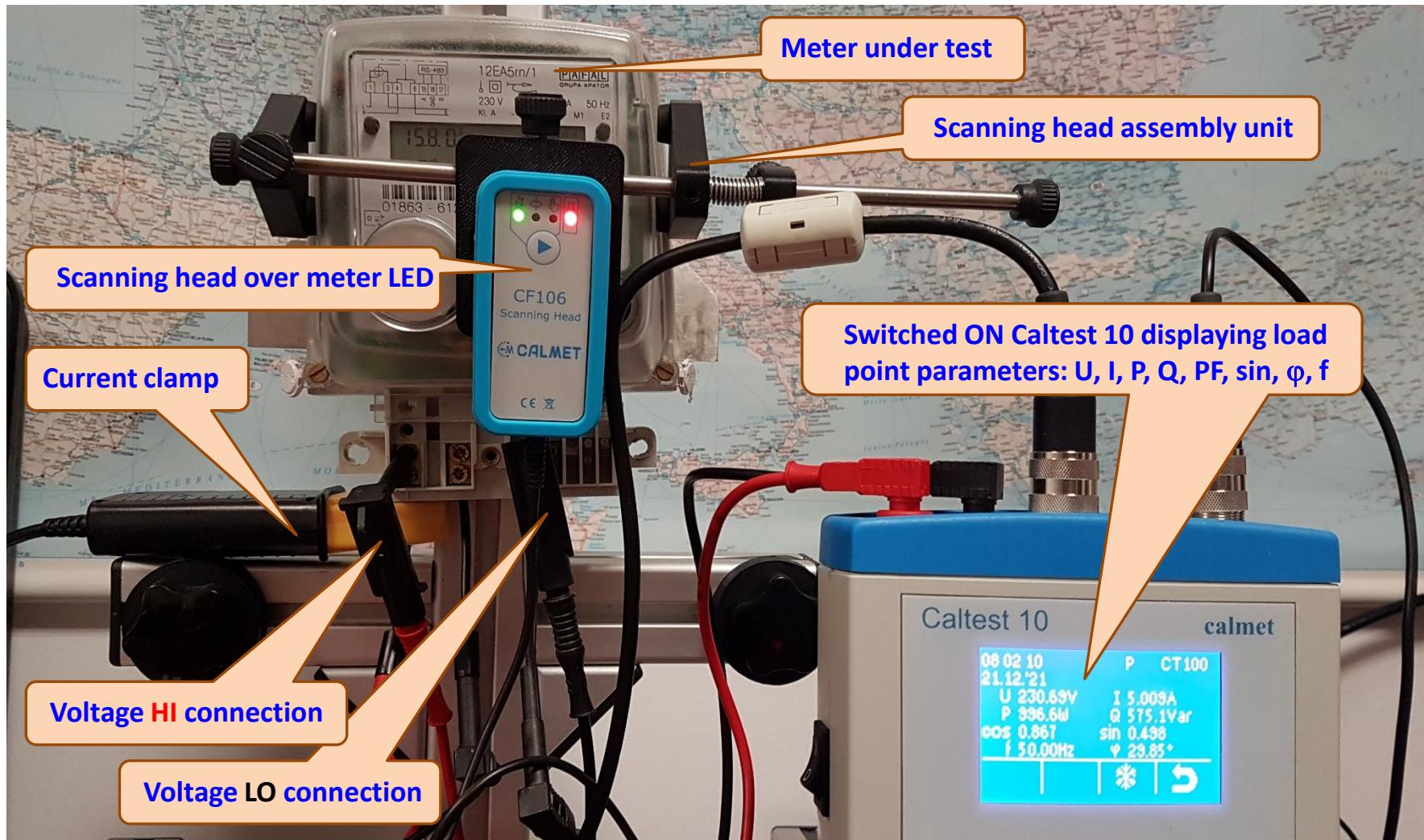


Voltage High and Low (Neutral)
cables

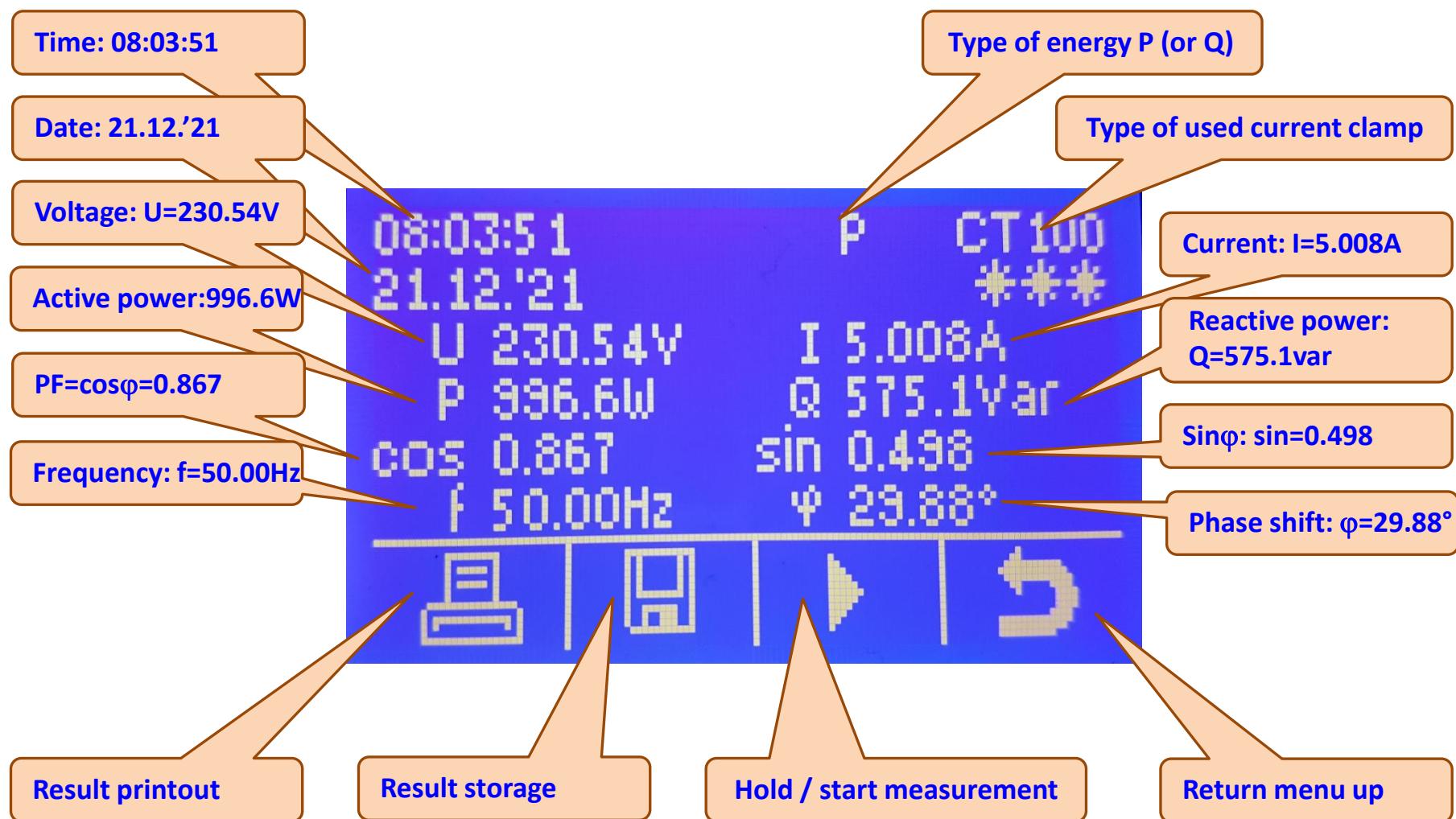
Current clamps

Photo scanning head

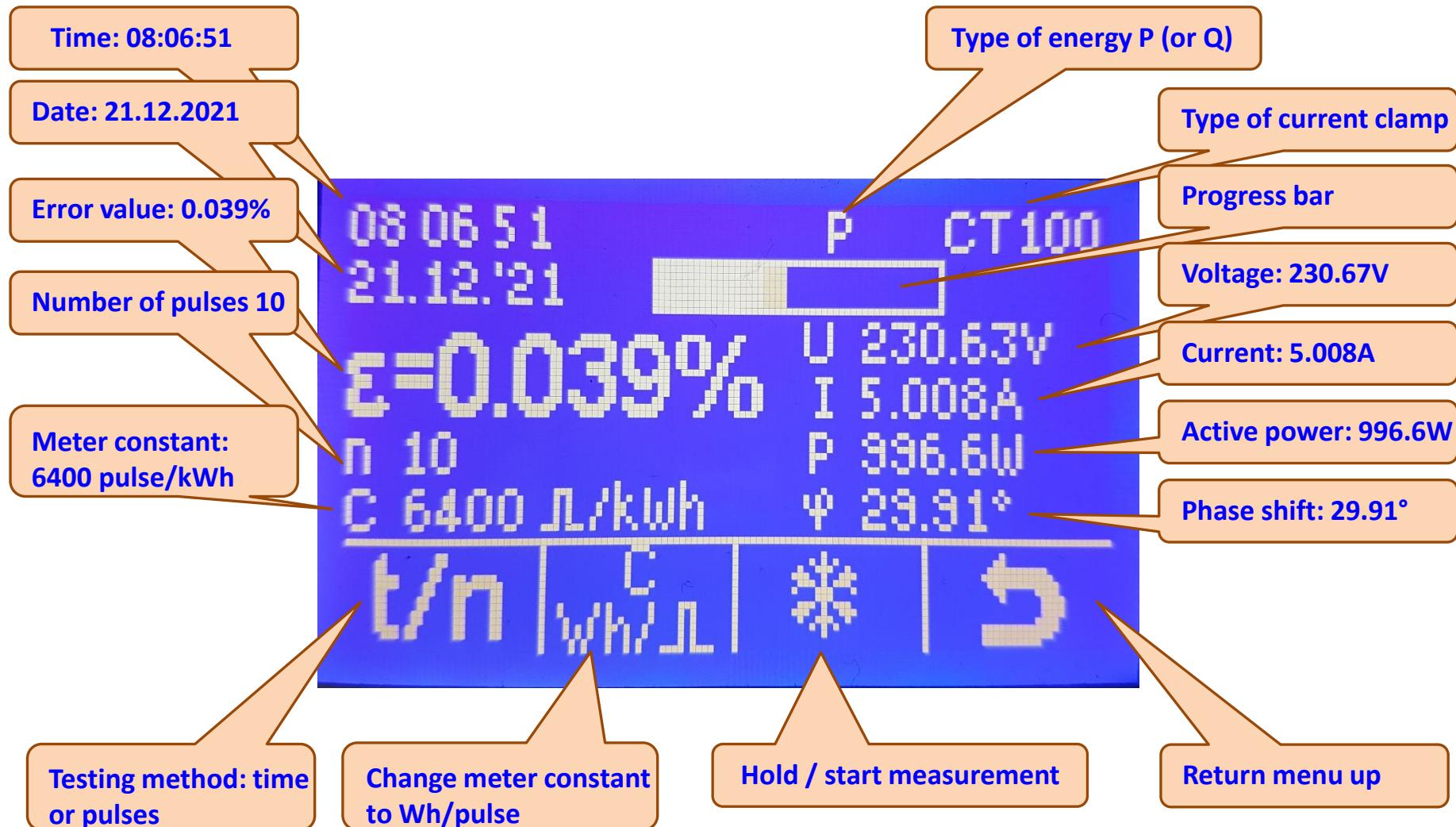
Caltest 10 testing Energy Meter – set ready for testing



Caltest 10 testing Energy Meter – load point parameters



Caltest 10 testing Energy Meter – error (ε) test



Caltest 10 testing Energy Meter – saving result

Time: 08:11:43 & Date: 21.12.2021

Customer name

Customer address, telephone, e-mail

08 11 43 P CT100

21.12.'21

👤 :calmet

🏡 :poland



Comment to the test

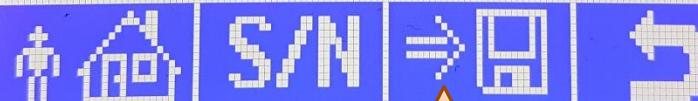
Serial numer of meter under test

08:11:55 P CT100

21.12.'21

👤 :CALTEST10

Ser.No.:2031



Switching between customer and meter data

Save into memory

To see more devices and information visit our Web site: www.calmet.com.pl





CALMET
Smart Calibration Devices

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TOP PRODUCTS

- TS33 - Three phase Fully Automatic Test System
- C300B - Power Calibrator
- TE30 - Working Standard

PRODUCTS BY CATEGORY

- Power calibrators and power quality calibrators
- Multipunction calibrators
- Resistance calibrators
- Electricity meters testers and reference standards**
- Instrument transformers testers
- Protection relays testers
- Network quality analysers
- Meter test stations

Electricity meters testers and reference standards



TS33 - Three-phase Fully Automatic Test System with Reference Standard and Integrated Current and Voltage Source

The Calmet TS33 portable test system consists of a three-phase reference meter of accuracy class 0.04% (or 0.1%) and an integrated three-phase current and voltage source up to 3x120A/600V

 [Data sheet](#)

 [Read more ...](#)

TE30 - Portable Three-Phase Working Standard and Power Quality Analyzer

Electricity meters tester class 0.05 and 0.1. Three phase tester of current transformers and analyser of power network quality. It makes possible electricity meters testing on the site or in the laboratory

 [Data sheet](#)

 [Read more ...](#)

Caltest 10 - Electricity meters tester

Single phase portable electricity meters tester class 0.5 powered from tested circuit with load force possibility apart from tested object. There is no need to disconnect the users during measurement

or contact by e-mail: mail@calmet.com.pl