



TCT-12C

Transformer Capacity, Load and No-Load Tester



KEY FEATURES

- 30 to 31,500 kVA capacity range
- $\pm(0.2\% + 3 \text{ digits})$ on voltage and current
- Five automatic corrections applied
- Wiring check with three-phase vector display
- Panel printer, results on site
- 500 groups retained on power failure

Find the Capacity When the Nameplate Cannot Tell You.

A single instrument for the characteristic tests that establish what a distribution transformer actually is and whether it is still sound: capacity, no-load current and loss, short-circuit voltage and load loss, impedance voltage, and harmonic content on the supply feeding it.

Capacity is determined by measurement rather than read off a plate, which is the point of it. A transformer with a missing, painted-over or contested nameplate can be identified on site, and a declared rating can be checked against what the unit really is.

Five corrections are applied automatically to every result: waveform, temperature, non-rated voltage, non-rated current, and calibration. Those are the adjustments that otherwise get done by hand afterwards, or not at all, and they are most of the difference between a reading and a result.

On three-phase work the instrument checks its own wiring before it measures and puts up a vector diagram of the three voltages and currents, so a reversed clamp shows as a picture rather than as a wrong answer.

IDEAL FOR

- On-site capacity verification
- Commissioning and acceptance testing
- Routine and preventive maintenance
- Post-fault winding assessment
- Transformer manufacture and repair

MEASUREMENT RANGES

Range	Accuracy	Resolution	Notes
Capacity			
30 to 31,500 kVA	—	—	Single and three phase
Voltage and current · ranges switch automatically			
Line 0 to 750 V	$\pm(0.2\% + 3 \text{ digits})$	—	Phase 0 to 450 V
0 to 100 A	$\pm(0.2\% + 3 \text{ digits})$	—	External CT extends the range
40 to 65 Hz	Class 0.2	—	Harmonic content also measured
Load test capability, single instrument			
Up to 1600 kVA	—	—	At rated current
Up to 2500 kVA	—	—	At one third rated current, result converted

Voltage and current ranges switch automatically, so the operator is not selecting a range and risking an over-range on an unknown transformer. An external CT or PT extends the measuring range beyond the figures above, which is how units outside the single-instrument load test limit are handled.



WHAT'S IN THE BOX

- TCT-12C main unit
- Test clamps, yellow, green and red
- Voltage and current test leads
- Communication lead for the PC link
- Power lead
- Carry case, manual and calibration certificate

TEST CLAMPS · Colour coded yellow, green and red to the three phases, so the connection order is unambiguous and the instrument's own wiring check has something to verify against.

GENERAL SPECIFICATIONS

Code	Item	Part Number
TCT-12C	Transformer capacity, load and no-load tester, 30 to 31,500 kVA, single and three phase	988012

MEASURES

Capacity · no-load current and no-load loss · short-circuit voltage and load loss · impedance voltage and percentage short-circuit impedance · harmonic content of voltage and current

CORRECTIONS

Applied automatically to every result: waveform, temperature, non-rated voltage, non-rated current, and calibration

RANGE SWITCHING

Voltage and current ranges switch automatically · an external CT or PT extends the range for larger units

DISPLAY

320 × 240 LCD with brightness control for use across the seasons · English interface · menu prompts throughout

MEMORY

500 groups of results, held through a power failure, with the specimen settings and the measurement time recorded against each · electronic clock · transferable to a computer

SAFETY

IEC 61010-1 · CE marked

METHOD

Three-meter measurement · single-phase and three-phase transformers · capacity determined by measurement, not from the nameplate

WIRING CHECK

The instrument verifies its own connection before measuring and displays a vector diagram of the three phase voltages and currents

INSULATION

Above 100 MΩ · leakage current below 3.5 mA · the power connection on the chassis withstands 1500 V

PRINTER

Panel printer fitted, so results are on paper at the transformer rather than back at the office

POWER

AC 220 V $\pm 10\%$

WARRANTY

1 year, subject to product registration with GPS LTD · service and calibration available