

Test the transformation ratio of all your power, voltage & current transformers

DTR[®] 8500

Digital Transformer
Ratiometer



- Designed for Power Transformers, VTs, PTs and CTs
- Direct readings from 0.8000:1 to 1500.0:1
- Displays Turns Ratio, Polarity and Excitation Current simultaneously
- Dual line and battery power supply and operation
- Displays warnings of incorrect lead connections, reverse polarity, open and short circuits

 CHAUVIN
ARNOUX

- Designed for Power Transformers, Potential Transformers and Current Transformers
- Direct readings from 0.8000:1 to 1500.0:1
- Displays Turns Ratio, Polarity and Excitation Current simultaneously with high resolution
- Dual power supply and operation: integrated rechargeable NiCd battery and AC supply
- ANSI/IEEE compliant measurement method
- Microprocessor based for simple operation
- Easy connection and test set-up: no calibration or balancing required
- Display warnings of incorrect lead connections, reverse polarity, open and short circuits
- Large dual line display with adjustable contrast and backlight ensures clear day/night visibility
- No high voltages - employs low voltage test technique and integrated safety circuit
- Low battery indication
- Durable, impact-resistance sealed polypropylene case

The new Ratiometer DTR 8500 is a portable digital transformer ratiometer designed for on-site testing of power, potential and current transformers. When connected to a non-energized transformer, the DTR 8500 accurately measures primary to secondary turns ratio, while simultaneously displaying polarity and excitation current.

The DTR 8500 is fully automatic and uses an ANSI/IEEE compliant test method. No user calibration, range selection, hand cranking or tedious balancing is required. At each measurement, the DTR 8500 automatically self-calibrates and checks for open windings/connections/circuit breakers, short circuits (excess excitation current), incorrect test lead placement, and reverse polarity. Measurements are displayed quickly and accurately.

The DTR 8500 is designed with operator safety in mind. Tests are performed at low voltage and, unlike other ratiometers, step-down excitation is employed. This method, in conjunction with an integral H/X reverse protection circuit, guards against the generation of hazardous test voltages normally associated with transformer ratio measurement instruments.

A large, dual line alpha-numeric LCD display with adjustable contrast and backlight guarantees day/night readability. Power is supplied by integral NiCd battery (included) or by AC line. Batteries are charged automatically during AC operation.



Both rugged and reliable, the DTR 8500 is built into an attractive, sealed structural polypropylene case designed to withstand the rigors of utility and industrial field use.

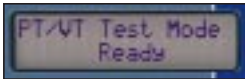
Constructed using only the highest quality electrical and mechanical components, the DTR 8500 sets the standard in advanced design, engineering and workmanship, and it will provide the user with years of accurate and reliable measurements.

CT Ratio Measurement

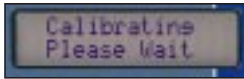


In the shop or in the field — easy to connect and operate as shown on this 37 kVA transformer (left) and this 3 phase 2000 kVA transformer.

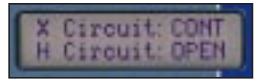
Simple concise operation - clear informative data displays



- Selected mode indication



- Automatically self-calibrates with every use



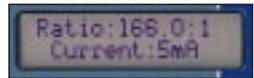
- Continuity test option selected



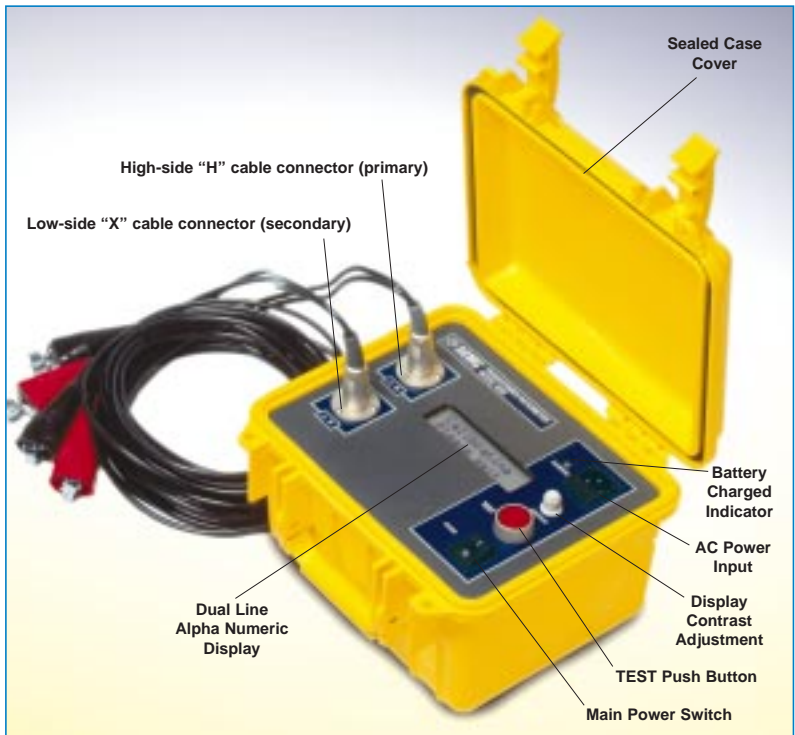
- Indicates possible shorts in windings



- Automatically detects and displays improper cable connections



- Displays ratio and excitation current



Specifications

ELECTRICAL SPECIFICATIONS

Ratio Range:

Autorangeing, 0.8000 to 1500.0:1

Accuracy*:

- Ratio \leq 1000 to 1 :
 \pm 0.1% of Reading
- Ratio $>$ 1000 to 1 :
 \pm 0.2% of Reading

Excitation Signal:

- PT/VT Mode:
44 Vrms maximum
- CT Mode:
0...1 A Auto Level, 0.1...5 Vrms

Excitation Current Display:

- Range: 0-1000 mA
- Accuracy: 2% R \pm 2 mA

Excitation Frequency: 70 Hz

Display:

LCD Character, 20 x 2, large format,
LED backlight, day/night visible

Measurement Method:

In accordance with
ANSI/IEEE C57.12.90

Power Supply:

Dual operation; rechargeable NiCd
battery and 115/230 V, 50/60 Hz
line supply. DTR 8500 may be
changed from 115/230 V
by internal switch at any time.

Batteries:

12 V, 5 x 2 NiCd packs, 1300 mAh,
Panasonic P-130SCR or equivalent

Battery Life:

Up to 10 hrs. continuous operation,
DTR 8500 may be used while
recharging

Charging Time:

14 hrs. typical, C/10 rate

Low Battery Indication:

LCD display

Line Fuse:

- 115 V: 1.0A, 5 x 20mm,
slow acting
- 230 V: 0.5A, 5 x 20mm,
slow acting

Displayed Measurements:

- Turns ratio
- RMS excitation current
- Polarity

Displayed Messages:

- Incorrect Lead Connections
- H/X Reversal
(accidental step-up misconnection)
- Short (excess excitation current)
- Open Circuits
- Circuit Continuity
- Low Battery

* 23° C \pm 5° C, 50-70% RH, full battery
charge, no external fields or noise.



Durable carrying case for the 15 ft test lead set

MECHANICAL SPECIFICATIONS

Connections: Cannon® XLR connectors and large color
coded industrial clips

Leads: 15 ft, H & X color coded, in carrying bag

Display: Dual line alpha-numeric 3.875 x .875" with
contrast adjustment and backlight

Operating Temperature: 0° to 50°C (32° to 122°F),
0 to 90% RH (without condensation)

Case: Heavy duty structural polypropylene (yellow)

Dimensions: 13 x 12 x 6" (330 x 305 x 152 mm)

Weight: 14 lb (6.4 kg)

To order

Digital Transformer Ratiometer DTR 8500P01.1577.01

factory preset 230 V, 50/60 Hz Input

includes user manual, power cord, test lead set (15 ft) in a carrying bag

Accessories

■ Test lead set (30 ft) in carrying bagP01.2951.44

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