

DTR® 8511

**Portable digital ratio meter
for voltage, power and current transformers**



A powerful ratio tester that stores up to 9801 test results in internal memory

- Fully automatic operation.
No calibration, range selection, manual handling or balancing required
- Large display showing the transformation ratio, excitation current, winding polarity and percentage deviation from nominal values
- Up to 500 measurements
- Detection of cord reversal
- Sturdy construction site case
- Supplied with DataView® analysis software

USB-C

IP 53

DataView®

Measure up



POWERFUL RATIO TESTER



The **DTR® 8511** 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® accurately measures the primary-to-secondary turns ratio, while simultaneously displaying the polarity and excitation current.

The **DTR® 8511** is a second-generation instrument incorporating the latest technology, improving on its highly successful predecessor the DTR® 8500.

The **DTR®** is **fully automatic** and uses the IEEE C57.12.90 test method:

- *No user calibration*
- *No user range selectio*
- *No tedious balancing required*

At each measurement, the DTR® automatically checks for open windings, connections, circuit-breakers, short circuits (excess excitation current), incorrect test lead placement, and reverse polarity.

The DTR® is designed with operator safety in mind. Tests are performed at low voltage and, unlike on 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.**

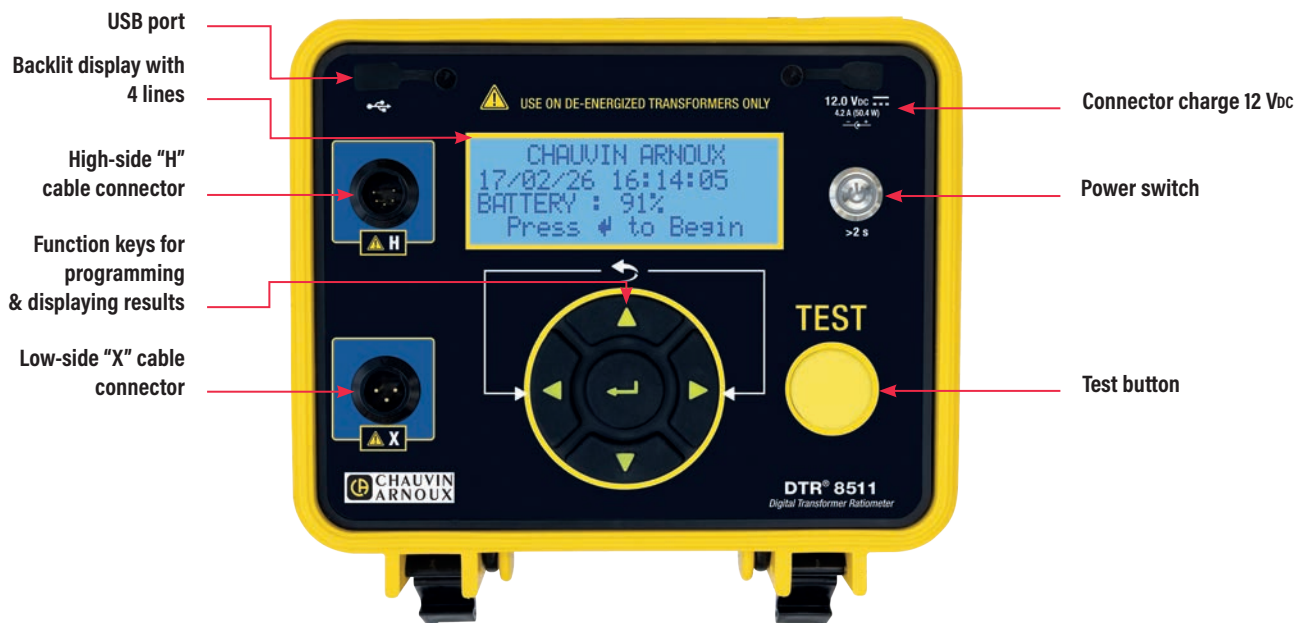
Up to 9801 tests can be stored in the **DTR® 8511**'s internal memory. A large, four line alphanumeric LCD with adjustable contrast and backlighting guarantees fast, accurate display and day/night readability. Both rugged and reliable, the **DTR® 8511** is equipped with an attractive, sealed structural polypropylene case designed to withstand the rigours of field use.

Power is supplied by a built-in NiMH battery charged by an external smart charger.

FEATURES

1. Measures power transformers, VT/PTs and current transformer turns ratios
2. Displays turns ratio, excitation current, winding polarity and % deviation from the nameplate values
3. Battery charger allowing use during charging
4. Up to 500 measurements on TP/TT transformers
5. Tests performed by exciting the primary and reading the secondary for greater operator safety
6. Alerts in case of incorrect connection, reverse polarity, open circuits, and short circuits
7. Easy connection and test setup; no calibration or balancing required
8. Excellent visibility thanks to the large backlit display with 4 lines of 20 characters
9. Low battery indicator
10. Capacity to store up to 9,801 measurement results in the internal memory, either automatically or after selection by the user
11. Filter selection affects the number of samples acquired during measurement.
12. USB port to simplify instrument configuration and downloading of test results
13. Includes DataView® analysis software for programming, downloading and storing test data with possibility of report generation

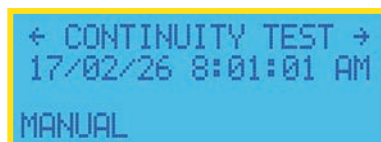
CONSTRUCTION



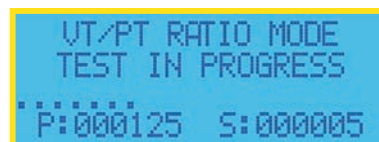
Simple, concise operation – clear informative data displays



Main display



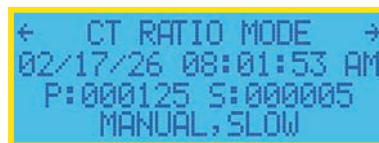
Selection of measurement mode



Test in progress



Storage of results in internal memory



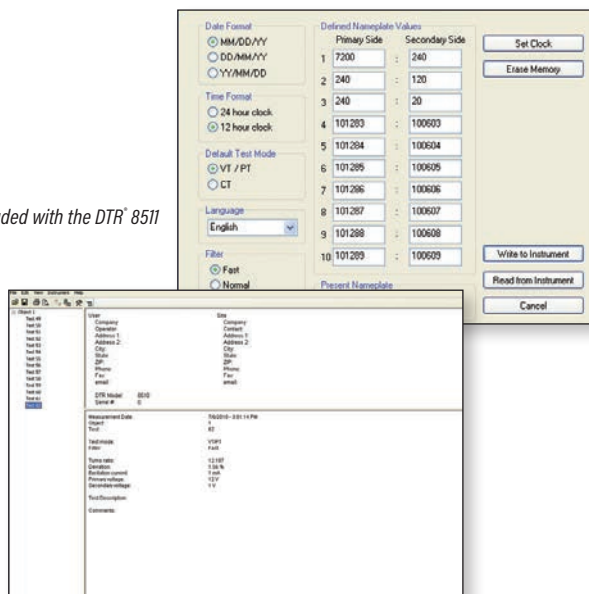
Programming and storage of 10 nameplate ratios

SOFTWARE

DataView®

Data Analysis and Reporting Software

DataView® is included with the DTR® 8511



Configure all functions of the DTR® 8511

Display and analyse data on your PC

Configure DTR® 8511 functions and parameters from your PC

Customize views, templates and reports for your specific needs

Create and store a complete library of configurations that can be uploaded to the DTR® 8511 as needed

Run tests directly from your PC

Print reports using standard or custom templates that you design



Measurement on a transformer in the workshop



Measurement of the ratio on a current transformer



Measurement on a 2,000 kVA three-phase transformer in the field

SPECIFICATIONS

Ratio Range (VT/PT)	Auto-Ranging : 0.8000 to 8000 :1	
Accuracy (VT/PT)	Ratio Range	Accuracy (% of Reading)
	0.8000 to 9.9999	± 0.2%
	10.000 to 999.99	± 0.1%
	1000.0 to 4999.9	± 0.2%
	5000.0 to 8000.0	± 0.25%
Ratio Range (CT)	Auto-Ranging : 0.8000 to 1000.0	
Accuracy (CT)	Ratio Range	Accuracy (% of Reading)
	0.8000 to 1000.0	± 0.5%
Excitation Signal	TT/TP 30 V Mode ; TC 2 A Mode	
Excitation Current Display	Range : 0 to 2000 mA; Accuracy : ± (2% of Reading + 2 mA)	
Excitation Frequency	64 Hz	
Display	Backlit LCD, 4 lines, 20 characters with contrast and backlight adjustment. Readable day and night.	
Languages Supported	English, Spanish, French, Italian, German, Portuguese	
Measurement Method	In accordance with IEEE Std C57.12.90	
Power Source	Two 12V, 1650mAh NiMH rechargeable battery packs	
Battery Life	Up to 10 hrs of continuous operation. Low battery indication.	
Battery Charger	Universal input (90 to 264Vrms input) smart recharger	
Charging Time	< 4 hrs to full charge	
Data Storage	9801 tests	
Date / Time	Battery-backed, Real-time clock	
Communication	USB-C, optically isolated, 115.2 KB	
Software	DataView analysis software included	

MECHANICAL

Dimensions	270 x 251 x 130 mm
Weight	3,4 kg
Connection	XLR connectors
Leads	15 ft (4.6m) H & X shielded with colour-coded crocodile clips
Enclosure	Heavy-duty Polypropylene case
Vibration	1,5 m at 55 Hz (IEC 60068-2-6)
Shock	IK08 (IEC 60068-2-32) (30 G)
Drop	1 m (IEC 60068-2-31)
Index of Protection	IP 40 (Instrument lid open) per EN 60529 : IP 53 (Instrument lid closed) per EN 60529

SAFETY

CE Marking	Yes
Double Insulation	Yes
Safety Ratings	EN 61010-1; Pollution Degree 2

TO ORDER

DTR® 8511 digital transformer ratio meter.....	P01157703
Replacement parts	
Set of 2 spare leads, length 15 ft (4.6 m) for DTR® 8511 and DTR® 8500.....	P01295143A

REFERENCES