

TURN RATIO TESTER DAC-RT-6

DAC-RT-6 is designed to measure winding turns ratio between primary and secondary winding of a power transformer and an instrument transformer, precisely.

Built-in amplifier power source realizes stable measurement without interference by harmonic current in power-line.

Further, a preliminary measurement (for 2 sec.) is given before the main measurement to secure safety. In case of detecting wrong connection between primary and secondary windings, or any miss setup of turn ratio etc, the tester stops measurement with alarm sound.

Moreover, to pursue usability for users, max 10 sample (Turns ratio: 5 points for every sample) can be registered in an internal memory.

DAC-RT-6 is an ideal tester for safe, accurate, and efficient measurement of winding turns ratio.

Specimens

Power Transformers, Instrument Transformers

Features

- Preliminary measurement function to secure safety.
(Stop measurement with alarm sound at any abnormal condition)
- Built-in amplifier power source prevents interference from harmonic current in Power-line.
- Max 10 types of turns ratio can be registered, and 5 different ratio settings are available for every type. (totally 50 settings)
- Durable, compact, and light weight.
- Simple operation with LCD screen.



Specification

Measuring Voltage AC100V (20VA)
Turns Ratio Range 0.8:1 to 1:1500

Ratio Error Rate Range and Accuracy

Range	Display	Accuracy
+/- 2%	0 - +/-2.00%	+/-0.05%+/- 2 digits
+/- 20%	0 - +/-20.0%	+/-0.1%+/- 2 digits

Setting Range HV(N1): 0.001 – 99999
LV(N2): 0.1 – 9999

Input Power AC100V-240V, 50/60Hz
Interface RS232C
Size and Weight W270xH180xD260mm Approx. 5kg
Accessory Measuring Cable (H.V/L.V) (5M)
AC Cord (1.5M),
Grounding Cable (3M)

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Principal

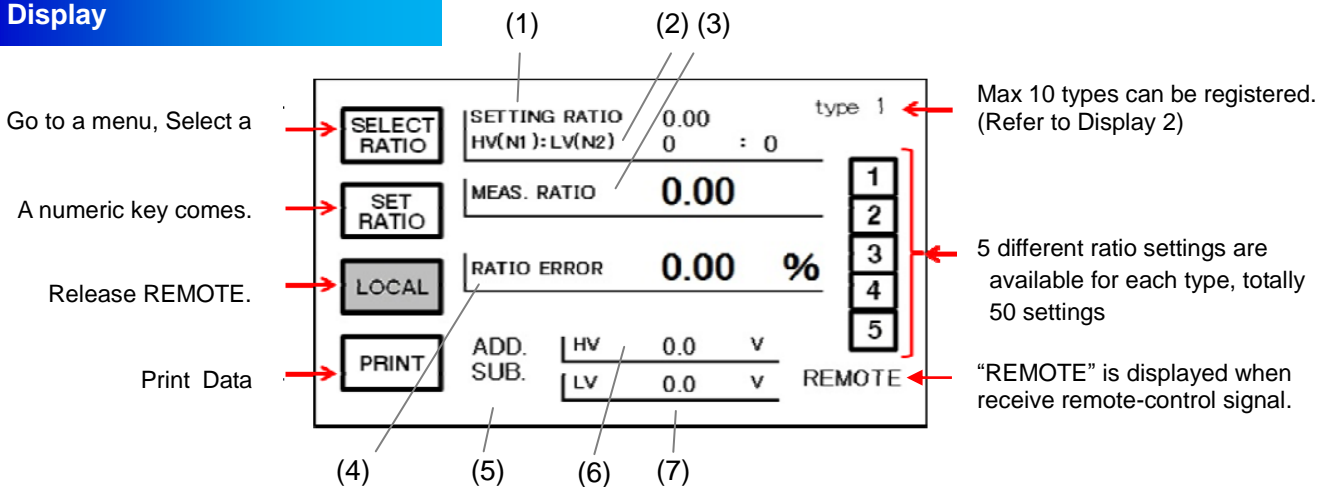
The tester applies voltage (100V) to HV side of a transformer under test. Then, it detects generated voltage at LV side, and measures turns ratio error by comparing with nominal turns ratio value. Polarity (ADD or SUB) is discerned from phase differences between HV side and LV side. Also, true turns ratio value is calculated from the measured ratio error, and displayed.

Winding turns ratio error means how much real turns ratio (TRn) is different from nominal turns ratio (TR), and is calculated by using the following formula.

$$\epsilon = (TR - TR_n) / TR_n \times 100 \%$$

Turns Ratio : TR
Nominal Turns Ratio : TR_n
Turns-Ratio Error : ϵ

Display



Display 1 (image)

- (1) SETTING RATIO : Turns ratio value calculated from HV(N1) and LV(N2).
- (2) HV(N1):LV(N2) : Set-up or Inputted HV(N1) and LV(N2)
- (3) MEAS. RATIO : Measured turns ratio
- (4) RATIO ERROR : Measured turns ratio error
- (5) POLARITY : Discerned polarity (ADD or SUB)
- (6) HV : Voltage applied to N1 H.V
- (7) LV : Voltage generate to N2 L.V

TYPE	HV(N1) : LV(N2)
1	6750 : 105
2	6600 : 105
3	6550 : 105
4	6300 : 105
5	6150 : 105

Navigation buttons: PRESET, NEXT, TYPE SELECT, ENT, ESC

Display 2 (image)

Max 10 transformer types can be registered and numbered from 1 to 10, and Max 5 ratios can be registered for every type. Each of 5 ratios is displayed on a screen and can be selected by touching the number from 1 to 5. (Ref. display 2)

