

TR4

3-Phase Turns Ratio Measurements



Short Overview

The Raytech TR4 is the next-generation successor to the TR-Mark III transformer tester. It provides advanced diagnosing technique including FRSL (Frequency Response of Stray Losses) and SCimp (Short Circuit Impedance), fully integrated into one portable instrument. The TR4 supports testing of phase-shifting transformers. A one-time test setup is enabled by an internal multiplexer. All measurements are performed using an internally generated user adjustable test voltage of up to 250 VAC. The instrument can be powered from the mains or from an external power bank. Integrated tap control enables automated test sequences, making it suited for field and laboratory transformer diagnostics.

Features

- Turns Ratio
- Magnetic Balance
- Automatic Multiplexer
- 1 Built-in Temperature Channels
- Auto Vector Detection
- Excitation Current
- Automatic selection of suitable AC test voltage
- Controlling Tap Changer manually or automatically with the tap control interface
- User-friendly interface
- Color LCD with backlighting and capacitive touch screen
- Operating the instrument with a touch screen or by using the remote control
- Test object profile and template creation, import and export
- Data exchange via USB-Key, ethernet and USB cable
- Report generation in various formats

Ratio Measurement Parameters

Voltage	Measuring Range	Accuracy	Resolution
250 V @ 55Hz	0.8 ... 200	± 0.04 % Rdg	± 1 LSD
	200 ... 5'000	± 0.10 % Rdg	± 1 LSD
	5'000 ... 50'000	± 0.40 % Rdg	± 1 LSD
100 V @ 55Hz	0.8 ... 200	± 0.04 % Rdg	± 1 LSD
	200 ... 2'000	± 0.10 % Rdg	± 1 LSD
	2'000 ... 20'000	± 0.40 % Rdg	± 1 LSD
40 V @ 55Hz	0.8 ... 200	± 0.04 % Rdg	± 1 LSD
	200 ... 2'000	± 0.06 % Rdg	± 1 LSD
	2'000 ... 20'000	± 0.40 % Rdg	± 1 LSD
10 V @ 55Hz	0.8 ... 200	± 0.06 % Rdg	± 1 LSD
	200 ... 5'000	± 0.10 % Rdg	± 1 LSD

Parameter	Measuring Range	Accuracy	Resolution
Current	0..1A	± 1.00 % Rdg	± 0.01A
Phase Angle	±90° @ 55Hz	± 0.05°	± 1 LSD
Output Voltage	0-250VAC	± 1 %	± 1 LSD
Temperatur	0-70°C	± 0.2°C	± 1 LSD

Optional Features

- SCimp (Short Circuit Impedance)
- FRSL (Frequency Response of Stray Losses)

Accessories (included)

- Complete cable set (H and X lead cable 2 x 5 m, extension cables 2 x 10 m)
- Safety GND Cable 1 x 10m
- Cable Bag
- Power Cord
- Instruction manual
- USB Memory Stick

Optional Accessories

- External Temperature Probe
- Hand Switch for Tap Changer Test
- Warning Lamp
- Cable Adapter Hand Switch & Warning Lamp
- Tap Control Cable & Connection Set

Specifications

Model

TR4

Size

L: 470mm (18.5")

W: 357mm (14.1")

H 176 mm (6.9")

Weight

8.96kg (19.75lb)

Input Power

110 VAC / 60 Hz or 240 VAC / 50 Hz or Power Bank (USB-PD 20 V / 60 W)

Interface

2x USB-A

1x USB-C

1x Ethernet

Panel Display

7 Inch Color LCD Touch Display

Storage Range

-20°C .. +70°C

Operation Range

-10°C ... +55°C



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