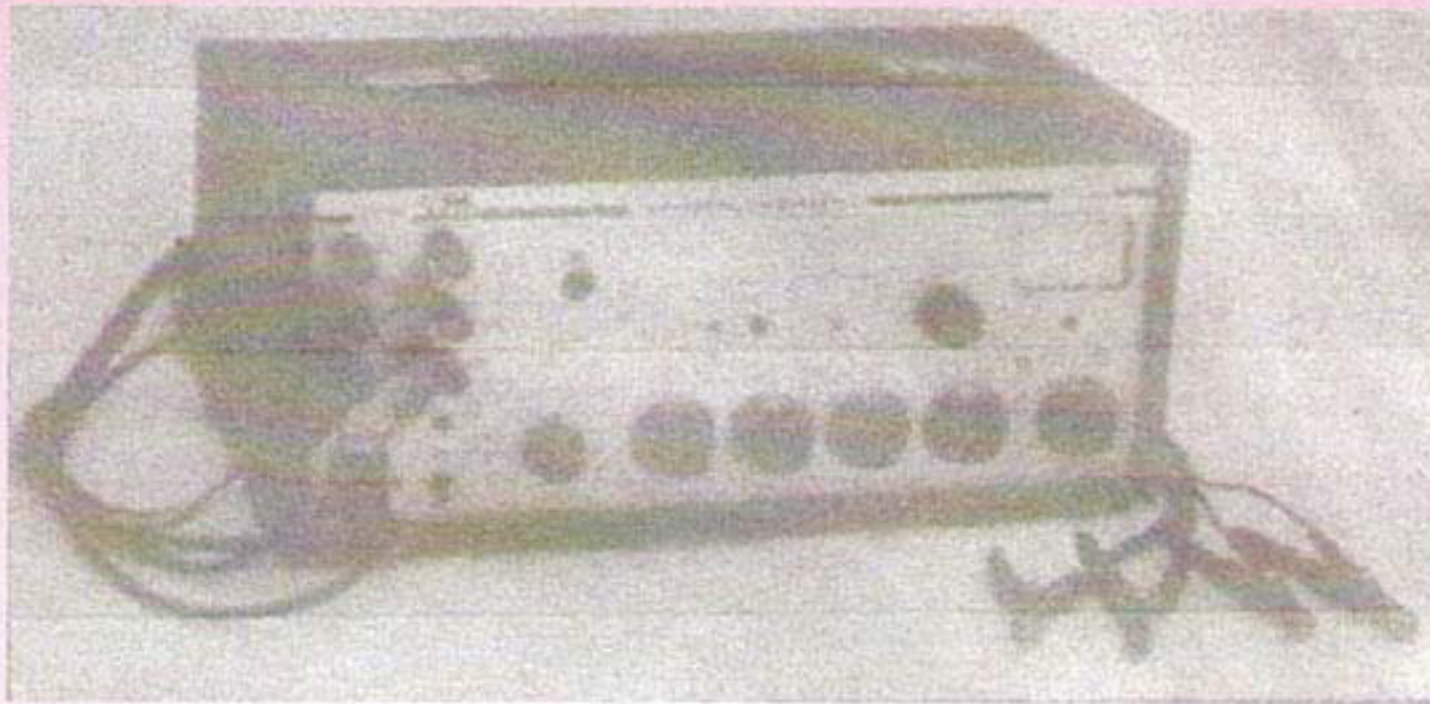


AS ELECTROTECH

Kolkata

TRANSFORMER TURNS RATIO METER



Isolated Test voltages, 120V/12V
True four terminal measurements
Phase sensitive synchronous null detector with gain control
Checks for correct polarity
Resettable, fast acting MCB and fuse for input protection
High accuracy

For Testing Turns ratio of:
Power Transformers
Distribution Transformers
Potential Transformers

DESCRIPTION

This compact and portable instrument measures the no-load transformer ratio, i.e., ratio of high voltage winding to low voltage winding of a transformer in a bridge circuit and at low flux density in a core. Besides ratio, the ratio meter is used to measure percentage deviation of ratio, phase angle deviation and excitation current. It can also be used as a transformer comparator. The instrument provides a selectable excitation voltage, either 120V A.C. or 12V A.C. which is isolated from the main supply. When balanced, the ratio of the transformer is read directly in numerical form from the dials on the front panel. The balancing procedure is sensitive to either the ratio or the phase angle adjustments.

The heart of the instrument is a special, precise multi-wound toroidal transformer, which is used as a standard transformer in the comparator circuit. Transformer ratios from 0.8:1 upto 2021:1; can be measured. Electronic circuitry in the detector makes ratio and phase deviation measurements precise.

A.S.Electrotech is always in a continuous effort to offer excellent products at a fair price & reserves the right to change models, specification and design to upgrade its own products.

A.S.Electrotech Test Equipments For Quality, Accuracy & Reliability

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FEATURES

PHASE ANGLE DEVIATION: The phase angle difference between primary and secondary voltage gives clues to whether the power transformer under test has shorted turns or whether the winding have an unequal number of turns connected in parallel. All these factors change the phase angle between primary & secondary voltage.

TEST VOLTAGES: There are isolated test voltages, 120V/12V, at 1A.

TRUE 4 TERMINAL MEASUREMENT: The leads that are supplied allow for a true four terminal measurement which eliminates errors caused by lead length and errors due to circulating currents.

PHASE SENSITIVE NULL DETECTOR: The electronic synchronous and phase sensitive null detector with a 100:1 gain control permits fast and precise balance with the capability of discerning 1 turn in 2000.

POLARITY CHECK: The polarity indicator comes 'ON' when the connections between the instrument and the transformer under test are not properly made or the phase angle difference between the primary and the secondary of the transformer is greater than 10 degrees. There is a polarity reversal switch marked "REV" with a LED indication provided. When the LED glows the switch position has to be changed before balancing.

FULLY PROTECTED: It frequently happens that the ratio meter is connected to a transformer incorrectly stepping up the test voltage instead of stepping down. The input terminals have high speed electronic protection which shorts out the input and causes the fast acting resettable MCB to trip and turn off the instrument.

REPLACEABLE PCB: All electronics is focused on to a single plug-in-type PCB which is easily field replaceable.

POWELINE FILTERS: This is provided at the power inputs to reduce effect of RF interference.

SPECIFICATIONS

Circuit:Transformer-arm Bridge

Power:230 \pm 10% 50Hz 20VA

Test Voltage:120V and 12V AC at 1A isolated

Ratio Range:0.8:1 to 2021:1

Ratio resolution:0.01%

Accuracy:Better than \pm 0.1% ratio at 120V test voltage

Deviation Dials:Ratio deviation \pm 0.55% of ratio with a resolution of 0.02 \pm 0.5%

Phase Angle Deviation:2 ranges of \pm 0.55 CR and \pm 5.5 CR

Dimensions:450 X 230 X 200mm (LXBXH)

Weight:15 Kgs. Approx

RECOMMENDED ACCESSORIES

Set of 10 meters cable (optional 15 meters cable & 25 meters cable)

Spare PCB

Range Extender 5:1

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