

PRODUCT PURCHASING SPECIFICATION
TRANSFORMER ENGINEERING DEPARTMENT
BHEL BHOPAL

Specification No.
TRE-091C
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Rev 00 Date: 24.10.2005


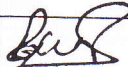
SPECIFICATION FOR TRANSFORMER TURN RATIO TEST SET.

1. GENERAL

This specification governs the supply of transformer turn ratio tester. The instrument shall be used for measurement of turns ratio of transformer windings without requiring any manual balance of decades and shall have vector group detection facility.

2. TECHNICAL REQUIREMENTS

- 2.1 Operation Voltage : 220 V, 50 Hz, single phase AC
- 2.2 Test Voltage : 220 V AC
- 2.3 Measuring principle : It should measures actual turns ratio of different Vector groups in three phase transformers without conversion.
- 2.4 Measuring Range : 0.75 to 10000
- 2.5 Accuracy : $\pm 0.1\%$ of FSD up to 2500:1
: $\pm 0.2\%$ of FSD up to 5000:1
: $\pm 0.3\%$ of FSD up to 10000:1
- 2.6 Design Ambient temperature : 0 to 50°C at humidity up to 90%.
- 2.7 Protection : It should have the full protection against over voltage and over current.
- 2.8 The instrument shall be supplied with 20 meters long test leads.
- 2.9 The kit should be tested successful operation in charged 400 kV switch yard and be tested for EMI & EMC.
- 2.10 A typical test certificate shall be furnished alongwith the offer indicating routine & type tests.

REV	DATE	ALT CKD	REV	DATE	ALT CKD	REV 00	NAME	SIGN	DATE
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						CKD	R.K.SINGH		24.10.05

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2.11 Two sets of descriptive leaflets, catalogues, principles of operation etc. shall also be sent alongwith the offer.

2.12 List of accessories to be supplied with the instrument shall be furnished alongwith the offer.

2.13 Spare items & optional accessories, if any, shall also be quoted separately.

3. **TEST REQUIREMENTS**

Supplier shall furnish all routine tests and calibration certificate alongwith supply.

4. **TESTING & DESPATCH**

4.1 Three sets of inspection, routine & acceptance and calibration test reports, descriptive leaflets, operation & maintenance manual shall be sent alongwith dispatch document. One set shall be supplied alongwith the equipment.

4.2 The supplier shall furnish a list of all fittings and components in the dispatch details giving description and quantity of each item (Quantity of each items shall be mentioned). All items shall be properly packed in wooden/gunny bags so as to avoid scratches/damage in transit.

5. **DEVIATION**

Any deviation from the above specification may be clearly indicated with proper justification.