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Manufacturer & Exporter · Ambala, Haryana, India

PRODUCT DATA SHEET
Catalogue reference for product evaluation

Phone: +91 7015865225 **Email:** info@scienticoindia.com **Web:** scienticoindia.com **Address:** #71, Industrial Area, Ambala Cantt, Haryana, India

Three-Phase Transformer Training Kit | SC-TPT 2000

Category: TVET Equipments · **Order Code:** TPT 2000 · **Country of Origin:** India

Product Overview

The Three-Phase Transformer Training Kit – SC-TPT 2000 is a 2 kVA three-phase transformer built from three identical single-phase transformers. Each phase has primary windings at 230/400 V with star or delta connection options and two isolated secondary windings at 2:1 and 1:1 ratios. All terminals are 4 mm safety sockets, phase-labelled in an overhead connection box. Primary protection includes a 6 A MCB; secondary protection includes per-winding fuses and a thermal cut-out. The transformer complies with IEC/EN 61558 and IEC 61010-1 standards. English manuals with star/delta, vector-group, and OC/SC test diagrams and a maintenance schedule are included. It is ideal for three-phase transformer configuration, vector-group experiments, and power transformer testing.

View this product online: https://scienticoindia.com/product/three-phase-transformer-training-kit-sc-tpt-2000/



Request a model-specific quotation
Include quantity and delivery country.

Technical Specifications

Three-Phase Transformer Training Kit – SC-TPT 2000: Technical Specifications

Category	Specification
Power Rating	2 kVA total; approximately 0.67 kVA per phase
Frequency	50–60 Hz
Primary Voltage	3 x 230/400 V; separate windings per phase
Primary Connection	Star or delta configurable per phase
Secondary per Phase	Two secondaries with ratios 2:1 and 1:1; isolated
Terminals	4 mm safety sockets in overhead box; phase-labelled; chassis earth socket
Primary Protection	MCB 6 A
Secondary Protection	Fuses per winding; thermal cut-out
Insulation Class	F
Enclosure	IP20
Safety Standard	IEC/EN 61558; IEC 61010-1; CE marked
Nameplate	IEC/EN 61558 compliant

Key Features

Key Features

- **Three Identical Phases:** each built as separate single-phase transformer
- **Flexible Configuration:** star or delta connection options per phase
- **Dual Secondary Ratios:** 2:1 and 1:1 per phase for different voltage experiments
- **Isolated Secondaries:** independent secondary windings prevent coupling
- **Phase-Labelled Terminals:** 4 mm safety sockets for easy identification
- **Primary Protection:** 6 A MCB circuit breaker
- **Secondary Protection:** individual fuses per winding and thermal cut-out
- **Vector-Group Testing:** separate windings enable phase-shift experiments
- **Class F Insulation:** thermal protection up to 155°C
- **Compliance:** IEC/EN 61558, IEC 61010-1, CE standards

Experiments

- Star and delta primary connection and voltage relationships
- Three-phase transformer vector-group determination and phase relationships
- Secondary voltage measurement at 2:1 and 1:1 ratios
- Star-delta transformation and voltage conversion
- No-load and load testing of each phase independently
- Transformer impedance measurement and calculation
- Open-circuit (OC) and short-circuit (SC) test procedures
- Thermal characteristics and overload protection operation
- Phase angle measurement between primary and secondary
- Harmonic analysis and distortion measurement on secondary side

Construction and Design

The Three-Phase Transformer Training Kit – SC-TPT 2000 consists of three identical single-phase transformers. Each has a primary winding rated 230/400 V with separate phase connections and secondary windings with 2:1 and 1:1 ratios, both isolated. The primary windings can be configured in star or delta connection. All terminals are 4 mm safety sockets in an overhead connection box, clearly phase-labelled. A chassis earth socket provides grounding. A 6 A MCB protects the primary supply. Secondary fuses protect each winding. A thermal cut-out prevents damage from overtemperature. The enclosure is Class F insulation, IP20 rating.

Scope of Delivery

- Three-phase transformer kit
- English manual with star/delta, vector-group, OC/SC test diagrams and maintenance schedule

Ordering & Delivery

- Send the product name, quantity, delivery country and destination with your enquiry.
- Production schedule, freight, payment terms and export documents are confirmed in the written quotation.

Frequently Asked Questions

Q: Can I test each phase independently?
A: Yes. Each of the three phases is built as a separate single-phase transformer with independent primary and secondary windings. You can test, configure, and measure each phase separately or in combination.

Q: What are the secondary voltage ratios?
A: Each phase has two isolated secondary windings: one with a 2:1 ratio and one with a 1:1 ratio. This allows experiments at different secondary voltage levels.

Q: Can I configure star and delta connections?
A: Yes. The separate primary windings per phase allow you to configure star or delta connections. This enables experiments on three-phase transformer vector groups and phase relationships.

Q: Is the transformer protected against overload?
A: Yes. The primary has a 6 A MCB. Each secondary winding has a fuse. A thermal cut-out provides protection against overtemperature conditions.

Q: What standards does this transformer comply with?
A: The Three-Phase Transformer Training Kit – SC-TPT 2000 complies with IEC/EN 61558, IEC 61010-1, and CE standards, with a nameplate to IEC/EN 61558.

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