STUDY OF A SINGLE-PHASE TRANSFORMER 230V-140VA

EDUCATIONAL OBJECTIVES

- **Study a single-phase transformer with no load, in short-circuit and loaded.**
- **Measurement of the different electrical values at the primary and secondary windings.**
- **Calculation of the powers, efficiency, transformation ratio, and losses of the transformer.**

TEACHING RESOURCES STUDENT & TEACHER

Proposed Practical Works

- Creation of the wiring diagram with measuring devices.
- Study of the use of the compensation winding at the primary.
- Readings of the electrical values of the transformer with no-load.
- Readings of the electrical values of the transformer with load.
- Calculations of the electrical characteristics, power and the transformation ratio.
- Plots of the curves of electrical power and efficiency.

Comprises

- 1 Variable autotransformer module 0-250V AC - 2.5A
- 1 Single-phase transformer module 140VA.
  Primary winding 230V, 1 secondary winding 15V/3.6A
  and 2 fuse-protected separate secondary windings 12V/3.6A.
- 3 Voltage digital display modules.
- 3 Current digital display modules.
- 3 Power digital display modules.
- 1 Variable rheostats module 0-22 ohms.
- 1 Variable rheostats module 0-3.3 ohms.
- 1 set of safety leads for carrying out the different practical works.
- 1 frame with wheels (H x W x D): 1610 x 940 x 500mm equipped with rack for cords (30 fingers)
- 1 single-phase power console:
- 1 thermal magnetic circuit breaker (16A)
- 1 Emergency stop push button with key
- 1 Push button + LED indicator
- 1 230V single-phase output on 4mm safety terminals
- 2 230Vac sockets (2P + E) + 12 230Vac sockets (2P + E), at the back
Mains power supply 230V - 50/60Hz. 3-metre lead with plug 2P+E.

QUICK-G is a set of modules (H-250mm) for studying a compensated single-phase transformer 230V with three secondary windings.

ref. QUICK-GPLUS	
ref. QUICK-G	**without frame and console**

Sockets on the back of the console for connecting the modules