ELECTRICAL MACHINES

SINGLE-PHASE TRANSFORMER TRAINER
DL 10103TG

Introduction

The trainer provides an experimental approach to the analysis of the behavior and characteristics of the single-phase transformer. It is composed of a supply, measurement and load unit and of two transformers.

Learning experience

Together with this transformer trainer is provided a complete manual with theoretical and practical part to allow the student to have complete knowledge of what is a transformer and how to use it.

Technical characteristics

This trainer is composed by:

− Two single phase transformer with the following characteristics:

Transformer 1
Primary voltage: 24-42-48 V
Secondary voltage: 2 x 12 V
Rated power: 50 VA

Transformer 2
Primary voltage: 24-42-48 V
Secondary voltage: 2 x 12 V
Rated power: 100 VA

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List of experiments:

1. Voltage transformation ratio
2. Current transformation ratio
3. Polarity of the windings
4. Measuring the winding resistances
5. No-load test
6. Short-circuit test
7. Test under resistive or capacitive load
8. Measuring the efficiency with the direct method
9. Heating test
10. The magnetic field

Displaying the hysteresis cycle

− Module allowing to obtain a low-voltage variable supply, to perform current, voltage and power measurements and to realize resistive and capacitive loads.

Technical features:

2 ac outputs: 0÷48V, 5A / 0÷10V, 10A
2 dc outputs: 0÷40V, 5A / 0÷5V, 10A
2 ac/dc ammeters: 1-5-10A
2 ac/dc voltmeters: 10-50-100V
1 wattmeter: 1-5-10A, 10-50-100V
Resistive, capacitive and inductive loads
Power supply: 220 V, 50/60 Hz