



DESCRIPTION

Teaching trainer to simulate non-destructive faults in three-phase motors. Application of diagnostic and localisation techniques.

The front panel of the unit reproduces the electrical diagram of the motor, it has connections to make all necessary measurements.

It also has a power supply general switch with pilot lamps or signal lights, 6 fuses of 2A to protect the motor and an automatic thermal-magnetic and differential switch for security and for checking how it gets activated when some faults take place.

This unit is located between the supply electric line and a Dahlander three-phase motor that has a power between 0.3 and 0.5 CV, to enter the faults.

The faults are activated with a switch and the fault sequences are selected by means a 6-position selector.



ISO:9001-2000 Certificate
of Approval. Reg. No. E204034



European Union Certificate



Certificates ISO 14001: 2004 and
ECO-Management and Audit Scheme
(environmental management)



Worlddidac Quality Charter
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SPECIFICATIONS

Teaching trainer for the simulation of faults in three-phase motors.

Unit and motor are mounted in a painted steel structure.

Unit:

Steel box.

Diagram in the front panel with similar distribution to the elements in the real unit.

Electrical diagram of the motor on the front panel.

The motor can be connected in star or delta connection.

Connections for the measurements.

The resistance of the windings can be measured.

Pilot lamps.

6-position selector for the selection of the fault sequences.

Switch for faults activation.

Among others, the following faults can be caused and detected:

- Fault on a phase.
- Fault on the supply voltage.
- Coils with turns in short circuit (decrease of its resistance). The resistance of the windings can be measured.
- Open-ended coil.
- Short circuit between coils from different phases.
- Ground fault (motor casing). The insulation resistance between the windings and the motor case can be measured.

Faults are implemented by means a PLC and internal relays. This lets the motor can keep on working in different conditions when certain faults are caused.

6 fuses of 2A to protect the motor.

Automatic Magnetothermal Differential switch.

Dahlander three-phase motor (0.3 to 0.5 CV), including cable and connector.

Cables and Accessories, for normal operation.

Manuals:

This unit is **supplied with several manuals**: Required Services, Assembly and Installation, Starting-up, Safety, Maintenance & Practices Manuals.

EXERCISES AND PRACTICAL POSSIBILITIES

Some Practical Possibilities of the unit:

- 1.- Detection of fault on a phase.
- 2.- Detection of fault on the supply voltage.
- 3.- Coils with turns in short circuit.
- 4.- Measurement the resistance of the windings.
- 5.- Detection of open-ended coil.
- 6.- Detection of short circuit in coils from different phase.
- 7.- Measurement the resistance between coils from different phases.
- 8.- Detection of ground fault.
- 9.- Measurement of the insulation resistance between the winding and the motor case.
- 10.- Motor in star connection.
- 11.- Motor in deta connection.

REQUIRED SERVICES

- Electrical supply: three-phase, 380V. 50Hz

DIMENSIONS & WEIGHTS

-Dimensions: 800 x 400 x 400 mm. approx.

-Weight: 30 Kg approx.

* Specifications subject to change without previous notice, due to the convenience of improvements of the product.



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REPRESENTATIVE:

