

STUDY OF AN ASYNCHRONOUS MOTOR 1500W WITH POWDER BRAKE



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Sets of modules (H-250mm) and rotating machinery for studying an asynchronous motor 1500W coupled with a powder brake with torque sensor and tachometer generator.

ref. QUICK-FPLUS (single-phase)

Requires connection to a mains single-phase electricity supply 230V AC

ref. QUICK-F

without frame and console

ref. QUICK-FTPLUS (3-phase)

Requires connection to a mains 3-phase electricity supply 3 x 400V AC + Neutral

ref. QUICK-FT

without frame and console

The set can be supplied without the motor set, please ask for details.

Comprises

- 1 Power supply module with RC circuit-breaker and emergency stop button.
- 1 Speed controller module 1500W (single-phase or 3-phase according to version) with SoMove programming software.
- 1 Module with thermal-magnetic circuit-breaker for motor support.
- 1 Wattmeter switch module.
- 1 Power supply module 0-20V DC for powder brake supply.
- 1 Voltage digital display module.
- 1 Current digital display module.
- 1 Motor torque digital display module.
- 1 Rotation speed digital display module.
- 1 Analogue wattmeter RMS AC+DC.
- 1 Complete motor set on wheeled cart equipped with three-phase asynchronous motor 230/400V - 1500W, powder brake, rotary torque sensor, and tachometer generator.
- 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)

Single-phase version

- 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

3-phase Version

- 1 three-phase power console:
 - 1 4-poles thermal magnetic circuit breaker (16A)
 - 1 Emergency stop push button with key
 - 1 Push button + LED indicator
 - 1 3-phase output 3x 400V+N+E on 4mm safety terminals
 - 2 230Vac sockets (2P + E)
 - 12 230Vac sockets (2P + E) with ON indicator (back side)

EDUCATIONAL OBJECTIVES

- Study the wiring diagram between a speed controller and an asynchronous motor.
- Study the configuration of a speed controller using SoMove software.
- Study the no-load behaviour of a three-phase asynchronous motor 1500W.
- Study the with-load behaviour of a three-phase asynchronous motor 1500W.
- Read and plot the electrical and mechanical characteristics of an asynchronous motor.

TEACHING RESOURCES STUDENT & TEACHER

Proposed Practical Works

- Creation of the wiring diagram of a speed controller and an asynchronous motor.
- Creation of the configuration of a speed controller using SoMove software.
- Creation of the no-load and with-load tests of the asynchronous motor.
- Calculations & plots of the electrical and mechanical characteristics of the motor bench.



Sockets on the back of the console for connecting the modules