

Single Phase AC Asynchronous Machines Trainer

EP
04003



AC Machines

Alternating current AC machines are motors that convert AC electric energy to mechanical energy, or generators that convert mechanical energy to AC electric energy. The two major classes of AC machines are synchronous and Asynchronous (induction machine).

The field current of synchronous machines (motors and generators) is supplied by a separate direct current DC power source or permanent magnets, while the field current of induction machines is supplied by magnetic induction (transformer action) into the field windings.

Overview

- This trainer allows the student to perform experiments on AC asynchronous machines driven by single phase voltage supply, determining of its ratings, operational characteristics, efficiency, starting methods, speed control, speed-torque, maintenance and etc.
- The trainer may be purchased in either modular or fixed form, where the modular form features a test stand on which various modules can be purchased in-

dividually and fitted to the main unit for experimenting, while the fixed form of the trainer features an educational unit equipped with all modules fixed to it.

Activities

- Connection and operation of 1-phase AC asynchronous machines
- Reversing direction of rotation
- Measurements of efficiency
- Characteristics of 1-phase AC asynchronous motors
- Load characteristics.
- Direct On-Line (DOL) starting

Ordering Information

- EP-04003-01 Fixed 1-Phase AC Asynchronous Machines Trainer
- EP-04003-02 1-Phase AC Asynchronous Machines Test Stand
- Modules
- EP-04003-03 Universal motor
- EP-04003-04 Capacitor motor
- EP-04003-05 Capacitor motor CS basic
- EP-04003-06 Repulsion motor
- EP-04003-07 Power circuit breaker
- EP-04003-08 Motor protection switch
- EP-04003-09 Analog/Digital Multi-meter
- EP-04003-10 Power factor meter
- EP-04003-11 Adjustable transformer
- EP-04003-12 Universal power supply for electrical machines

Supplied by Default

- - User manual in English or Arabic

Requirements

- Electric Supply
- 3-phase, 380 V, 50/60 Hz , or 1-phase, 220 V, 50/60 Hz
- Additional power requirements are attainable upon special request

Options

- E-content for Asynchronous Machines
- Touch screen computer
- Wall mountable holder for touch screen computer
- Unit mountable holder for touch screen computer
- Protective coverings and couplings set
- 4mm safety plugs
- 4mm safety connection cables