

MOD.3050

Technical specifications

Industrial, complete with base plate, provided with silk screened terminal board and with 4mm safety sockets.

Nominal voltage:
220 / 380Vac 50Hz (delta / star)

Nominal current:
1,06 / 0,8A (delta / star)

Nominal power:
200W (Other power on request)

Power factor ($\cos\phi$):
0,82

Nominal speed:
2800 rpm

Dimensions: (LxDxH)
35x18x25cm

Weight:
9,5 kg



General

A wound rotor induction motor has a stator like the squirrel cage induction motor, but a rotor with insulated windings brought out via slip rings and brushes. However, no power is applied to the slip rings. Their sole purpose is to allow resistance to be placed in series with the rotor windings while starting. This resistance is shorted out once the motor is started to make the rotor look electrically like the squirrel cage counterpart. The slip ring motor is normally used for high power. In this motor type the rotor winding is open type, and is made up by several rings that must be connected to the starting rheostat in order to restrict the inching current. Carbon or graphite brushes on the rings

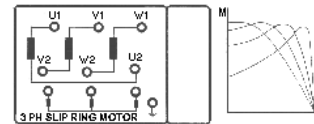
- Imprinted terminal boards with the synoptic.
- Base plate with four rubber feet.
- With coupling cog for easy engagement with other machines.
- Protection against thermal overload
- All connections on 4 mm safety sockets included thermal contact.
- Manual explaining theory and practice for laboratory experiment

Didactical purposes

- Motor connection
- Typical machine data evaluation
- Reversing the rotation direction
- Direct test for mechanical characteristic (torque as function of the speed)
- Direct test for electro-mechanical characteristic (torque, speed, input current, efficiency and power factor as function of the output power)
- Measure of the ohmic windings resistance.
- Measure of the transforming ratio
- No-load test of the motor
- Short-circuit test of the motor Direct test of the motor
- Conventional efficiency
- Measurement of the slip [s]

Wound rotor induction motor qualities.

- Excellent starting torque for high inertia loads.
- Low starting current compared to squirrel cage induction motor.
- Speed is resistance variable over 50% to 100% full speed.
- Higher maintenance of brushes and slip rings compared to squirrel cage motor.
- The generator version of the wound rotor machine is known as a *doubly-fed induction generator*, a variable speed machine.



Options

Depending on the specific requirements of the application the machine can be provided with two shaft ends, with other power values and can be designed with the appropriate number of poles in order to have the required nominal speed. (MOD.3050-4: 4 poles 3PH slip ring motor 1500 rpm)

Accessories:

A full range of accessories and options are available like electromagnetic brakes, powder brakes, measuring modules such as voltmeter, ammeter, power meter, connection cables and power supplies.



Three-phase motor speed regulator
MOD.3240



Starting rheostat
MOD.3011