

MOD.3080

Technical specifications

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

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

Nominal power:
0,2kW (Other power on request)

Nominal speed:
3000 rpm

$\cos \phi$
0,6

Dimensions: (LxDxH)
35x18x25cm

Weight:
10 kg



General

A reluctance motor (asynchronous motor synchronized) is a type of synchronous motor that induces non-permanent magnetic poles on the ferromagnetic rotor. Torque is generated through the phenomenon of magnetic reluctance. Reluctance motors can have very high power density at low-cost, making them ideal for many applications.

Disadvantages are high torque ripple when operated at low speed, and noise caused by torque ripple. Until recently, their use has been limited by the complexity inherent in both designing the motors and controlling them.

These challenges have been overcome by advances in the theory, by the use of sophisticated computer design tools, and by the use of low-cost embedded systems for motor control.

Didactical purpose

- 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
- No-load test of the motor
- Short-circuit test of the motor
- Direct test of the motor
- Measurement of the slip [s]

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.3080-4: 4 poles 3PH reluctance motor 1500 rpm)

Accessories

There are also available electromagnetic brakes, powder brakes, measuring instruments, connections cables and power supplies.



3PH motor speed regulator MOD.3240



Starting reverser switch MOD.3303



Direct starter MOD.3302



STAR / DELTA switch MOD.3308



- 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 experiments