

## Three-phase Slip ring Asynchronous Induction Motor

### MOD.7050-4

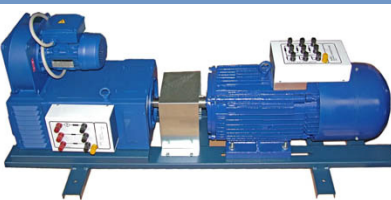
#### Technical specifications

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

Nominal voltage:  
220 / 380/400Vac 50Hz (delta / star)

Nominal power:  
5kW  
(Other power on request: up to 9kW)

Nominal speed:  
1440 rpm



#### 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. The slip rings allow to place a resistance in series with the rotor windings to improve the starting torque. and to lower the inching current to the graphite brushes on the rings.

Motor can be powered from an inverter to change speed from 0 to 200% and even reversed. Stator winding can be divided into three coils, than the rotating field makes a complete turn for each period and the motor is called "2 pole type". If either the winding is divided in three contiguous triplets along the stator periphery, the magnetic field makes half of a turn for each period, and the motor is called "4 pole type". We have also 6, 8, 10 or 12 poles motors.

- Imprinted terminal boards with the synoptic.
- Base plate.
- With coupling cog for easy engagement with other machines.
- Protection against thermal overload
- 4 mm safety sockets for all connections and 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]

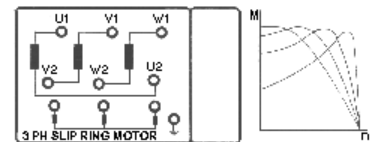
#### Options and accessories


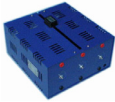
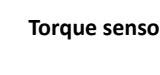


Depending on the specific requirements of the application the machine can be provided with two shaft ends, with other power values and can be designed with the appropriate number of poles in order to have the required nominal speed. (MOD.7050: 2 poles 3PH slip ring motor 2880 rpm)

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.

#### Wound rotor induction motor qualities.

- Excellent starting torque for high inertia loads.
- Low starting current compared to squirrel cage induction motor.
- Speed is variable over 50% to 100% without inverter.
- 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.



	Three-phase motor speed regulator <b>MOD.7240</b>		Starting rheostat for 3phase motor <b>MOD.7011</b>
	Torque sensor		Speed Encoder
			Field regulator rheostat for dc & ac motor <b>MOD.7012</b>