italtec
Technical Training Systems

Company with Quality Management System
Certified by DNV = ISO 9001/2008 =

SINGLE PHASE REPULSION MOTOR

MOD.3100

Technical specifications

Provided with silk screened front panel and with 4mm CE safety sockets.

Nominal voltage:
230Vac / 50Hz

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

Nominal speed:
3000 - 0 - 3000 rpm

Cos φ:
0,88

Dimensions (LxWxH):
35x18x25 cm

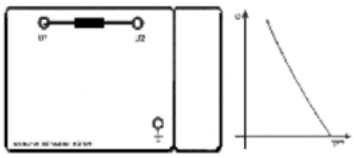
Weight:
9,5 kg

CE

General

Repulsion motor is a Motor with possibility to vary infinitely the speed in both directions.
The motor is realized with a collector rotor with brushes en short circuit.
An alternate voltage, applied on stator, dependant of brush position, induct one alternating tension into the rotor winding.
If brushes are in correspondence of neutral position no current flows and no torque will be produced.
If brushes are at 90° against the neutral position, the current will be at max value but no torque will be produced since stator and rotor fluxes are en phase.
If brushes are placed in an intermediary position a couple will be produced and torque will be max when the position is approx at 70°.
It is possible to find the optimal position during the experiments.
For an easy knowledge it is possible observe the internal part of this motor and in particular the brush rotation through a removable cover.

- *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*



Didactical purpose

- Motor connection
- Typical machine data eveluation
- 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, efficency and power facto ras 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 and with other power values.

Accessories

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

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