

SINGLE-PHASE ROUND ROTOR SYNCHRONOUS MACHINE

MOD.3072

Technical specifications

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

Nominal voltage:
230V AC / 50Hz

Nominal current:
0,38A

Excitation voltage:
220Vdc

Excitation current:
0,4A

Synchronous speed:
3000 rpm

Power:
250W (as generator)
200W (as motor)
(Other power on request)

Dimensions (LxWxH):
35x18x25 cm

Weight:
10 kg



General

For demonstration and studying of AC machines. The windings have independent terminals and are identified on the faceplate.

The rotor is a round rotor type with industrial high power synchronous machines properties.

It is possible to operate this machine as a single phase synchronous generator or motor.

Variable DC excitation is delivered via a slip rings and brushes.

- Manual explaining theory and practice for laboratory experiments included.



- 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.

Didactical purpose

- Measurement of the phase winding resistance
- Measurement of the excitation winding resistance
- No load test of a synchronous generator (alternator)
- Short circuit characteristic of a synchronous machine
- External characteristic of a synchronous machine
- Regulation characteristic of a synchronous machine

Options

Due to its definition, this machine needs a prime motor to be driven up to the synchronous speed.

Depending on the specific requirements of the application the machine can be provided with two shaft ends and can be designed with the appropriate number of poles in order to have the required nominal speed. (MOD.3072-4: 4 poles synchronous machine 1500 rpm).

Accessories

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



Resistive load
MOD.3020-R



Inductive load
MOD.3020-L



Capacitive load
MOD.3020-C