

MOD.3130E

Technical specifications

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

Modes :

AC motor

DC motor

Nominal voltage:

220V (AC 50Hz)

220V (DC)

Nominal power:

300W (AC)

200W (DC)

(Other power on request)

Speed:

3000 rpm

Dimension: (LxWxH)

35x18x25cm

Weight:

9,5 kg

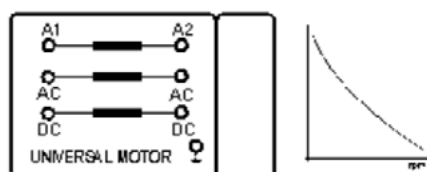


General

The universal motor is practically a special DC series motor and it can run with DC voltage and with AC voltage. The rms value of AC voltage must be equal to DC value. The output power and starting couple, using an AC voltage, are lower than the output power and starting couple that can be obtained by using DC voltage. This occurs for small motors. As you know, the DC motor supplies very good and higher performances than the other types of electrical motor. In fact the DC motor has a starting couple with a high intensity easy to graduate. It can be also easily graduated in speed within wide limits. This type of motor should be overloaded within some limits without problems. It is clear that we try to supply the motor directly from the power line. So, after right adaptations and changes the motors with single-phase commutator have been designed.

The motor series results from the DC motor series, which can be supplied with AC current.

- 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



In fact when there is a polarity inversion, the controlling couple doesn't change its direction because of the inversion of the armature flux and of the armature current. The controlling couple has a middle value very high. The DC motor series needs some particular building procedures to operate in a satisfactory way with AC voltage. At first time the whole magnetic circuit of the inductor has to be laminated, this because it is run by an alternative magnetic flux. Furthermore it is necessary to reduce at the maximum the reactance of the total electrical circuit (armature and inductor) to obtain an acceptable power factor.

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)

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.3130-4: 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.