



HS100 Series AC Synchronous Motor:

This is a small single phase permanent magnetic synchronous motor with a built-in gearbox that has a round-shape and a simple structure with a compact body. The rotation speed is directly proportional to the supply frequency, and inversely proportional to the pole-number of the winding. The synchronous motor can be used either directly on 50Hz or 60Hz or supplied from a converter, and is used to get a rotary movement at a slow constant speed positioned at the shaft. Extensively, the application of the product needs a constant running and slower driving speed. Moreover, our small AC PM synchronous motor is with competitive cost, low power consumption, quiet operation, reliable, and with UL & CUL quality approval.

Typical Applications:

The synchronous motor is usually used in home electrical devices, commercial products, and so on.

| | | |
|---------------------------|-------------------------------|--------------------------|
| POP Display | Microwave Oven | Time Switch |
| Small Cooling/Heating Fan | Rotating Christmas Tree Stand | Auto Control Machine |
| Timing Devices | Air Conditioner Louver | Small Laminating Machine |
| Humidity Control, | Auto Vending Machine | Recording Meter |
| Electric Clocks | Electric Valve | Dish Washer |
| Stage Lighting | Game Machine | Recorder player |
| Tape Driver | CD player | Electric Toy |

The Specifications:

| | |
|--------------------------|---|
| Rated Voltage (VAC): | 12V, 24V, 48V, 100-120V, 220-240V |
| Frequency Supply (Hz): | 50Hz/60Hz |
| Operating Voltage Range: | 85-110% rated value |
| Power Consumption (W): | Approx. 3.5 Watt +/- 0.5 |
| Direction of Rotation: | Single CW/CCW, or free direction |
| Output Shaft Configure: | Optical for H-type, D-type, Internal Threaded-type |
| Withstand Voltage: | 1500VAC/ 1 Minute |
| Insulation Resistance: | Over 100MΩ at 500VDC |
| Insulation Class: | A class (105°C) standard, B (130 °C) or customized |
| Rotor Speed: | 500rpm/600rpm at 50Hz/60Hz |
| Output Speed: | 0.013 to 216 rpm at 60Hz; 0.016 to 180 rpm at 50Hz |
| Start Torque at 1rpm: | Approx. 38 kg.cm at 50Hz; Approx. 40 kg.cm at 60Hz |
| Number of Pole: | 12 poles |
| Power Lead Wire: | As UL standard, specific length or connector is available |
| Radial Play of Shaft: | Less than 0.3mm |
| Operating Temperature: | Approx. -10°C to 65°C |
| Temperature Rise: | 65°C Max (measured by internal resistance method) |
| Mechanical Noise: | Less than 40 dB |
| Expectant Life: | Approx. 10,000 hrs under load torque and normal operation |

Net Weight:

Approx. 150 grams

Output Speed & Running Torque:

| Frequency | Output Speed (RPM) | | | | | | | | | | | | | | | |
|-------------------------|--------------------|-----|-----|-----|-----|-----|-----|---|-----|-----|-----|------|----|-----|-----|-----|
| 60Hz | 0.03 | 0.5 | 1 | 2 | 2.5 | 4 | 4.8 | 6 | 10 | 12 | 16 | 20 | 36 | 50 | 100 | 216 |
| 50Hz | 0.02 | 0.4 | 0.8 | 1.7 | 2 | 3.3 | 4 | 5 | 8.3 | 10 | 14 | 16.6 | 30 | 42 | 83 | 180 |
| Running Torque (kgf.cm) | 8 | 8 | 7 | 6 | 6 | 5 | 4.5 | 4 | 2 | 1.7 | 1.5 | 1.2 | 1 | 0.5 | 0.1 | 0.1 |

Dimensions of HS100 Series (units in mm):

