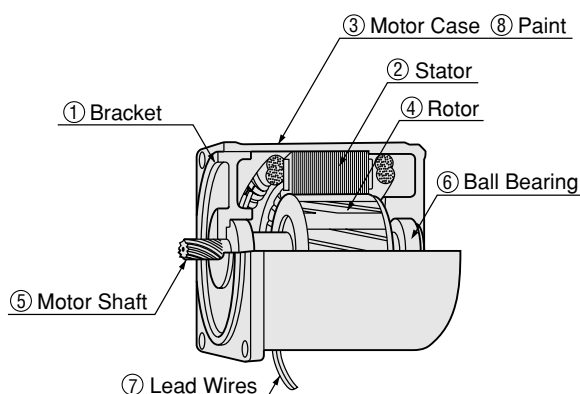


General Information

Construction and Material of AC Motors

The following figure shows the construction of a standard AC motor.



- ① **Bracket :** Die cast aluminum bracket with cut-finish. Press fitted into the motor case.
- ② **Stator :** Comprised of stator core made from laminated silicon steel plate, a polyester-coated copper coil and insulation film.
- ③ **Motor Case :** Die cast aluminum with cut-finish inside.
- ④ **Rotor :** Laminated silicon steel plate with die cast aluminum.
- ⑤ **Shaft :** Available in round shaft and pinion shaft type. The metal used in shaft is S45C(carbon steel). Round shafts receive a shaft flat (output power of 25W or more). Pinion shafts undergo precision gear finishing.
- ⑥ **Ball Bearing :** Sealed ball bearings with long-life grease.
- ⑦ **Lead Wire :** Lead wires with heat-resistant polyethylene coating.
- ⑧ **Painting :** Baked finish of acrylic resin or melamine resin.

Handling of AC Motors

1. Handling

When handling motor during test or installation, hold the body of the motor so that the output shaft points upward. Also, when the unit is removed from the package for installation and placed in shelves, it is safer to place the motor upright with the shaft pointing upwards so that it cannot strike other motors. The lead wires are insulated and securely fixed to the stator and the case mechanically. They can, therefore, withstand a certain degree of tension applied to them. However, lifting the unit by the lead wires may cause them to break, or may damage the insulation or result in some other potentially hazardous situation.

2. Storage

Temperature and humidity are important considerations if the motor is to be stored for an extended period of time. Storage in places where there are large temperature and humidity variations will reduce the stator's insulation performance. Moreover, leaving the motor for extended periods in places with high temperature and humidity is likely to lead to corrosion. When storing for long periods, it is therefore recommended to coat the output shaft with an anti-corrosion agent, seal the motor in a polyethylene bag and store in a place with normal temperature and humidity.

AWG (Lead Wire Gage)

“AWG” is an abbreviation for “American Wiring Gage.” The AWG standards stipulate the core construction and conductor cross-sectional area of lead wires as AWG numbers. The larger the AWG number, the smaller the cross-sectional area. When the lead wire is also UL listed, it is further distinguished by a number called the “UL Style”. The AWG number is shown on the motor's external appearance drawing.

AWG No.	Conductor Cross-Section (mm ²)
26	0.128
24	0.205
22	0.325
20	0.519