



3-Phase Synchronous Motor

Principle

- The stepping motor is transformed into a synchronous motor by replacing the wound-wire for the AC power specification.
- A synchronous motor rotates at a constant speed in proportion to the AC power frequency of which current is applied directly to the wound-wire, while a stepping motor rotates in accordance with the switched phase by the driving circuit.

Characteristics

- A constant rotation speed is maintained without slip within the load range to the motor torque.
- Enables ultra-low speed rotation and high torque.
- Enables cost saving as it operates on the commercial power supply and therefore the driving circuit is not required.

Range of Uses

- Widely used in various fields such as conveyer drives, printers, ultimate freezers, and general industrial devices.

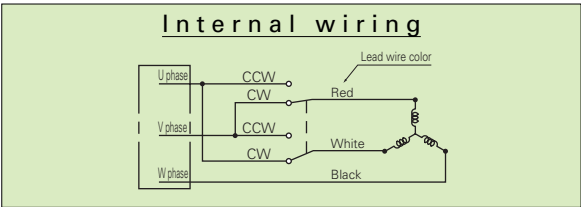
General specifications

	103H833□	103H8933□
Insulation class	B species(130°C)	
Insulation resistance	AC1000V MIN. when measured with a DC500V megohmmeter between the motor wiring and the frame at normal temperature and humidity.	
Withstand voltage	Not influenced when 50/60 Hz, AC1000V is applied between the motor wiring and the frame for one minute at normal temperature and humidity (leak current: 1 mA for 103H833□ and 10 ma for 103H8933□).	
Operating environment	Ambient temperature: -10 to +50°C	
	Ambient humidity: 20 to +90% (no condensation)	
Winding temperature rise	80 K MAX. (Conditions depend on Sanyo standard.)	
Axial play	0.075 mm (0.003inch) MAX. (load: 9N)(2lbs)	
Radial play (Note 1)	0.025 mm (0.001inch) MAX. (load: 4.4N)(1lbs)	
Shaft runout	0.025mm (0.001inch)	
Concentricity of mounting spigot relative to shaft	ø0.075mm(ø0.003inch)	ø0.075 mm(ø0.003inch)
Perpendicularity of mounting surface relative to shaft	0.075mm(0.003inch)	0.075 mm(0.003inch)
Allowable thrust load	60N(13.5lbs)	100N(22.5lbs)
Allowable radial load (Note 1)	220N(49.5lbs)	360N(80.9lbs)

(Note1) When load is applied at 1/3 length from output shaft edge.

Internal wiring and rotational direction

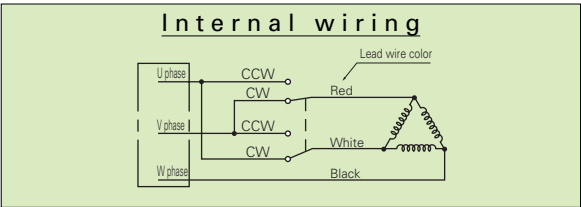
Applicable model: 103H833□



Direction of motor rotate

When the switch is set to CW with the wiring shown left, the rotational direction must be clockwise viewed from the output axis side.
When set to CCW, it must be counterclockwise.

Applicable model: 103H8933□



Direction of motor rotate

When the switch is set to CW with the wiring shown left, the rotational direction must be clockwise viewed from the output axis side.
When set to CCW, it must be counterclockwise.

