

Standard AC Motors

Low-Speed Synchronous Motors

Low-Speed Synchronous Motors

Overview

Three-Phase Induction Motors

Induction Motors

Reversible Motors

Electromagnetic Brake Motors

Clutch & Brake Motors

Low-Speed Synchronous Motors

Torque Motors

IP67 Watertight, Dust-Resistant Motors

Brake Pack

AC Speed Control Motors

AC input DSC

Low-Speed Synchronous Motors

SMK Series



For detailed information about regulations and standards, please see the Oriental Motor website.



(Gearhead sold separately)

- Synchronous motors are continuous rated motors in which quick bi-directional rotation is possible.
- The basic construction of these motors is the same as that of stepper motors, and with an AC power supply, they are easily driven.



See Full Product Details Online
www.orientalmotor.com

● Manual

● Specifications

● Dimensions

● CAD

● Characteristics

● Connection and Operation

Features

● Low-Speed / Synchronous Rotation

The motor rotates at a speed proportional to and accurately synchronized with the frequency of the power supply.

A fluctuation in load does not affect the rotation speed.

At 50 Hz 60 r/min (30 r/min)*

At 60 Hz 72 r/min (36 r/min)*

*For **SMK014MA-A**

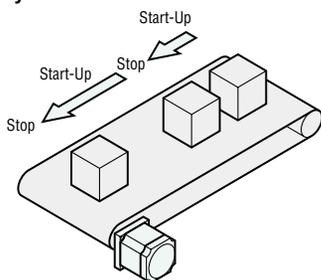
● Continuous Rated Capacitor-Run Motor

This is a capacitor-run motor that can be driven by a capacitor only (An external resistance is needed for **SMK5** type). This can be driven at a continuous rating even when bi-directional operation is required.

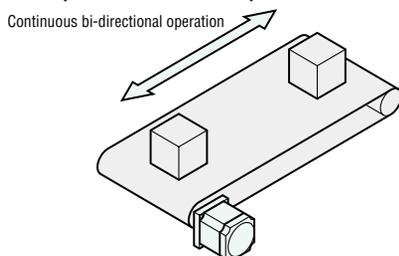
● Superb Starting, Stopping and Reversing Characteristics

If operated within the permissible inertia, the motor can start, stop and reverse within 1.5 cycles (0.03 sec at 50 Hz, 0.025 sec at 60 Hz) of power supply frequency.

◇ Suitable for equipment that starts and stops repeatedly such as conveyors.



◇ Bi-directional operation can be repeated continuously.

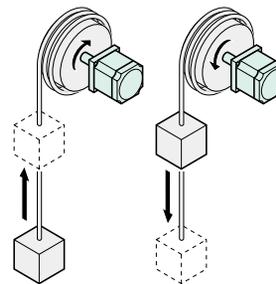


● Precise Positioning

The motor can be stopped instantly by turning off the power supply. The stopping accuracy within the motor's permissible inertia is $\pm 10^\circ$.

● Vertical Applications

Constant speed can be maintained even during gravitational operations. Low-speed synchronous motors are suitable for applications, such as an elevator system, whereby vertical operation at a constant speed is required.



● Holding Torque

Since a permanent-magnet, multi-poled rotor is used, the motor has holding torque even when the motor is not energized. When used with a gearhead, comparatively high holding torque can be utilized.

● When, at motor standstill, a DC power supply is used, a large holding torque almost equal to that of a stepper motor can be produced.

● Long Life, Low Noise **GN-S** Gearhead is Available

The "long life, low noise **GN-S** gearhead" achieves a long rated life of 10000 hours, twice the level of a conventional gearhead, by adopting innovative technologies and structure. The gearhead is also designed for low noise.

● **SMK0A-□A** indicates a geared motor consisting of a special gearhead and a motor. The gearhead cannot be replaced.

System Configuration

Gearhead (Sold separately)

Parallel Shaft Gearheads



SMK Series

Motor (Round shaft)



External Resistor (Included)*
*Only for SMK5 type



Capacitor (Included)



AC Power Supply
(Main power supply)

Accessories (Sold separately)



Mounting Brackets



Flexible Couplings



CR Circuit for Surge Suppression

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Product Number

Motor

SMK 0 14 M A - A

① ② ③ ④ ⑤ ⑥

①	Series	SMK: SMK Series
②	Motor Frame Size	0: 42 mm (1.65 in.) 2: 56.4 mm (2.22 in.) [GN Pinion Shaft Type 60 mm (2.36 in.)] 5: 85 mm (3.35 in.) [GN Pinion Shaft Type 90 mm (3.54 in.)]
③	Motor Torque	14: 0.14 N-m (19.8 oz-in) 16: 0.16 N-m (22 oz-in) 37: 0.37 N-m (52 oz-in) 50: 0.5 N-m (71 oz-in) 100: 1.0 N-m (142 oz-in) 160: 1.6 N-m (220 oz-in)
④	Speed	Blank: 60/72 r/min (50/60 Hz) M: 30/36 r/min (50/60 Hz)
⑤	Power Supply Voltage	A: Single-Phase 115 VAC
⑥	Motor Shaft Type	A, AA: Round Shaft GN: GN Type Pinion Shaft

Gearhead

5 GN 50 SA

① ② ③ ④

①	Gearhead Frame Size	2: 60 mm (2.36 in.) 5: 90 mm (3.54 in.)
②	Type of Pinion	GN: GN Type Pinion
③	Gear Ratio	(Example) 50: Gear Ratio of 50:1
④	SA: Long Life, Low Noise GN-S Gearhead	

Geared Motor

SMK 0 A - 120 A

① ② ③ ④ ⑤

①	Series	SMK: SMK Series
②	Motor Frame Size	0: 42 mm (1.65 in.)
③	Power Supply Voltage	A: Single-Phase 115 VAC
④	Gear Ratio	(Example) 120: Gear Ratio of 120:1
⑤	Motor Shaft Type	A: Single Shaft

Product Line

Motor

Motor Frame Size	Power Supply Voltage	Shaft Type	Product Name	List Price
42 mm (1.65 in.)	Single-Phase 115 VAC	Round Shaft	SMK014A-A	\$87.00
56.4 mm (2.22 in.)			SMK014MA-A	\$91.00
85 mm (3.35 in.)			SMK237A-A	\$104.00
60 mm (2.36 in.)			SMK5100A-AA	\$164.00
90 mm (3.54 in.)			SMK5160A-AA	\$239.00
		GN Type Pinion Shaft	SMK216A-GN	\$99.00
			SMK550A-GN	\$169.00

Geared Motor

Motor Frame Size	Power Supply Voltage	Product Name	Gear Ratio	List Price
42 mm (1.65 in.)	Single-Phase 115 VAC	SMK0A-□A	3, 3.6, 7.5, 9	\$153.00
			15, 18	\$159.00
			30, 36, 50, 60	\$165.00
			100, 120	\$174.00

The following items are included with each product.
 Motor, Capacitor, Capacitor Cap, External Resistor*, Operating Manual
 *Only for **SMK5** type

● **SMK0A-□A** indicates a geared motor consisting of a special gearhead and a motor.
 The gearhead cannot be replaced.

Parallel Shaft Gearhead (Sold separately)

Applicable Motor (Pinion shaft)	Product Name	Gear Ratio	List Price
Frame Size □60 mm (□2.36 in.)	2GN□SA	3, 3.6, 5, 6, 7.5, 9, 12.5, 15, 18	\$76.00
		25, 30, 36	\$83.00
		50, 60, 75, 90, 100, 120, 150, 180	\$91.00
Frame Size □90 mm (□3.54 in.)	5GN□SA	3, 3.6, 5, 6, 7.5, 9, 12.5, 15, 18	\$97.00
		25, 30, 36	\$107.00
		50, 60, 75, 90, 100, 120, 150, 180	\$118.00

The following items are included with each product.
 Gearhead, Installation Screws, Operating Manual

● A number indicating the gear ratio is entered where the box □ is located within the product name.

For details (specifications, characteristics, dimensions and more) on these products, please either refer to our website or contact technical support or your nearest Oriental Motor sales office.
www.orientalmotor.com