

Standard AC Motors

Constant Speed Motors

Induction Motors

Induction Motors

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Introduction

Induction Motors

Reversible Motors

Electromagnetic Brake Motors

V Series

TM Series Torque Motors

Torque Motors

Watertight, Dust-Resistant Motors

Right-Angle Gearheads

Brake Pack

Accessories

Installation

Features and Types of Induction Motors

Features of Induction Motors

● Optimal for Uni-Directional and Continuous Operation

These products are ideal for uni-directional continuous applications such as driving a conveyor.

● Easy Operation

All you need is to connect a capacitor and plug the motor into an AC power supply, and the motor can be easily operated. (No capacitor is needed for a three-phase motor.)


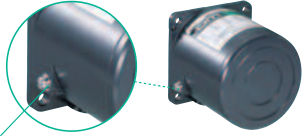
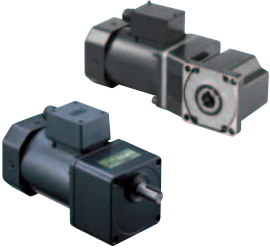

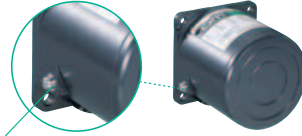




● Wide Variety of Products

The product lineup includes the World **K** Series and **BH** Series. We have models with motor outputs ranging from 6 W to 200 W, so you can surely find one that meets your specific application. In addition, products that conform to various safety standards as well as the RoHS Directive are also available.

● Available to Combine with Various Gearheads

Combination with a gearhead allows the motor to slow down to a required speed or generate higher torque.

Types of Induction Motors

Series Name	Features, Lineup									
<p>World K Series</p>  <p>    </p>	<ul style="list-style-type: none"> ● Conforms to Major Safety Standards All World K Series models have a built-in overheat protection device and conform to various safety standards. ● Applicable Standards UL/CSA Standards Certified under the China Compulsory Certification System (CCC System) CE Marking (Low Voltage Directive) ● Motor Overheat Protection Device Thermal protector, Impedance protected ● Conforms to Global Power Supply Voltages Our products support the power supply voltages used in many countries around the world, and they are readily available across the globe. ● IP65 Terminal Box Type Introducing new motors with terminal box conforming to IP65 rating for degree of protection. The terminal box provided at the back of the motor has an easy-to-wire construction. 	<ul style="list-style-type: none"> ● Twice the Motor Bearing Life (Compared with a conventional model) A motor's life is determined by its bearing. We adopted high-performance bearing grease to lubricate this important component. Life is twice as long as a conventional model ● Protective Earth Terminal on Motor  <p>Protective Earth Terminal</p> <ul style="list-style-type: none"> ● Lineup <table border="1" data-bbox="975 1131 1449 1319"> <tr> <td>Frame Size</td> <td>□60 mm~□90 mm</td> </tr> <tr> <td>Output Power</td> <td>Lead Wire Type: 6 W~90 W Terminal Box Type: 6 W~90 W IP65 Terminal Box Type: 6 W~40 W 2-Pole, High-Speed Type: 40 W~150 W</td> </tr> <tr> <td>Voltage</td> <td>Single-Phase 220/230 VAC, Three-Phase 200/220/230 VAC, Three-Phase 380/400/415 VAC</td> </tr> </table>	Frame Size	□60 mm~□90 mm	Output Power	Lead Wire Type: 6 W~90 W Terminal Box Type: 6 W~90 W IP65 Terminal Box Type: 6 W~40 W 2-Pole, High-Speed Type: 40 W~150 W	Voltage	Single-Phase 220/230 VAC, Three-Phase 200/220/230 VAC, Three-Phase 380/400/415 VAC		
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Output Power	Lead Wire Type: 6 W~90 W Terminal Box Type: 6 W~90 W IP65 Terminal Box Type: 6 W~40 W 2-Pole, High-Speed Type: 40 W~150 W									
Voltage	Single-Phase 220/230 VAC, Three-Phase 200/220/230 VAC, Three-Phase 380/400/415 VAC									
<p>BH Series</p>  <p>    </p>	<ul style="list-style-type: none"> ● Smallest Frame Size among 200 W Output Power Achieves a high-output power of 200 W with a frame size of 104 mm. ● Right-Angle Shaft Type Employing Hypoid Gear is Available ● "Combination Type" for Easy Mounting The combination type is available with the motor and its gearhead pre-mounted. This enables easy mounting in equipment. ● Conforms to the Safety Standards and Supports the Power Supply Voltages Used in Many Countries Around the World 	<ul style="list-style-type: none"> ● Tapped Hole at the Shaft End The gearhead shaft features a tapped hole for convenient connection with loads. ● Lineup <table border="1" data-bbox="975 1487 1449 1675"> <tr> <td>Frame Size</td> <td>□104 mm</td> </tr> <tr> <td>Output Power</td> <td>200 W</td> </tr> <tr> <td>Type</td> <td>Right-Angle Shaft, Hollow Shaft; Right-Angle Shaft, Solid Shaft; Parallel Shaft, Round Shaft</td> </tr> <tr> <td>Voltage</td> <td>Single-Phase 220/230 VAC, Three-Phase 200/220/230 VAC, Three-Phase 380/400/415 VAC</td> </tr> </table>	Frame Size	□104 mm	Output Power	200 W	Type	Right-Angle Shaft, Hollow Shaft; Right-Angle Shaft, Solid Shaft; Parallel Shaft, Round Shaft	Voltage	Single-Phase 220/230 VAC, Three-Phase 200/220/230 VAC, Three-Phase 380/400/415 VAC
Frame Size	□104 mm									
Output Power	200 W									
Type	Right-Angle Shaft, Hollow Shaft; Right-Angle Shaft, Solid Shaft; Parallel Shaft, Round Shaft									
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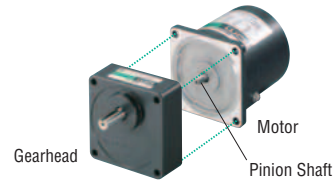
Features of Gearheads

Easy Speed Reduction and Torque Increase

Combination with a gearhead allows the motor to slow down to a required speed or generate higher torque.


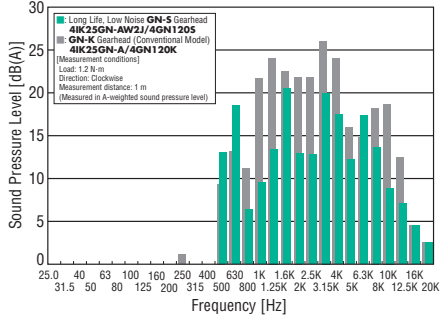

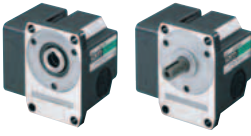
Wide Variety of Products

Gearheads come in various types including the long life, low noise gearhead and right-angle gearhead. Most gearheads are available with 20 different gear ratios from 1:3 to 1:180.



- Gearheads can be used with pinion shaft type motors.
- World **K** Series gearheads are sold separately.
- The **BH** Series is a combination type that comes with the gearhead pre-assembled.

Gearhead Types

Types	Features
<p>Long Life, Low Noise GN-S Gearhead</p> 	<ul style="list-style-type: none"> ● Long Rated Life of 10000 Hours* The GN-S gearhead achieves a long rated life of 10000 hours, twice the level of a conventional gearhead, by adopting a large, specially designed bearing and reinforced gears. *For the rated life time definition, refer to "Service Life of Gearheads" on page G-35. ● Low Noise Design The GN-S gearhead generates less noise thanks to gears with a special shape and surface machining assembled with the use of advanced technology. ● Applicable Products 6 W, 15 W, 25 W or 40 W GN pinion motor 
<p>Long Life GE-S Gearhead</p> 	<ul style="list-style-type: none"> ● Long Rated Life of 10000 Hours* The GE-S gearhead achieves a long rated life of 10000 hours, twice the level of a conventional gearhead, by adopting a large, specially designed bearing and reinforced gears. *For the rated life time definition, refer to "Service Life of Gearheads" on page G-35. ● The GE-S gearhead comes with a tapped hole at the tip of the shaft. ● Applicable Products 60 W or 90 W GE pinion motor
<p>Right-Angle Gearheads → Page C-213</p> 	<ul style="list-style-type: none"> ● Ideal for Space Saving The output shaft of the gearhead is perpendicular to the motor shaft, enabling space saving. ● Hollow Shaft Type and Solid Shaft Type are Available Select the type that best suits your specific application. ● The GE pinion solid shaft type comes with a tapped hole at the shaft end. ● Applicable Products World K Series 25 W, 40 W, 60 W or 90 W Pinion Motor

High Strength, Long Life, Low Noise V Series

Highest Maximum Permissible torque, 10,000 hours* of life and quiet operation. For more details on **V** Series see page C-149.

*For the rated life time definition, refer to "Service Life of Gearheads" on page G-35.



Types of Induction Motors

Series	Frame Size (mm), Output Power		□60		□70		□80			□90			□104
	Voltage (VAC)	Type	6 W	15 W	25 W	40 W	60 W	40 W	60 W	90 W	150 W	200 W	
World K Series	Single-Phase 220/230	Lead Wire	●	●	●				●	●	●		
		Terminal Box	●	●	●				●	●	●		
	Three-Phase 200/220/230	Lead Wire	●	●	●				●	●	●		
		Terminal Box	●	●	●				●	●	●		
	Three-Phase 380/400/415	Lead Wire			●				●	●	●		
		Terminal Box			●				●	●	●		
2-Pole, High-Speed Type	Single-Phase 220/230	Lead Wire				●	●		●	●	●		
	IP65 Terminal Box Type	Single-Phase 220/230	Terminal Box	●	●	●			●				
		Three-Phase 200/220/230	Terminal Box	●	●	●			●				
	BH Series	Single-Phase 220/230	Terminal Box										●
Three-Phase 200/220/230		Terminal Box										●	
Three-Phase 380/400/415		Terminal Box										●	

Types of Gearheads


Gearheads			Applicable Motor			Rated Life* (hours)	Low Noise
Type of Gearhead	Type of Pinion	Series Name	Output Power	Type of Pinion			
Parallel Shaft	Long Life, Low Noise GN-S Gearhead	GN Type Pinion Shaft	World K Series	6 W~40 W	GN Type Pinion Shaft	10000	●
	Long Life GE-S Gearhead	GE Type Pinion Shaft	World K Series	60 W, 90 W	GE Type Pinion Shaft	10000	
Right-Angle Shaft	Hollow Shaft Gearhead	GN Type Pinion Shaft	World K Series	25 W, 40 W	GN Type Pinion Shaft	5000	
		GE Type Pinion Shaft	World K Series	60 W, 90 W	GE Type Pinion Shaft	5000	
	Solid Shaft Gearhead	GN Type Pinion Shaft	World K Series	25 W, 40 W	GN Type Pinion Shaft	5000	
		GE Type Pinion Shaft	World K Series	60 W, 90 W	GE Type Pinion Shaft	5000	

*For the rated life time definition, refer to "Service Life of Gearheads" on page G-35.

System Configuration

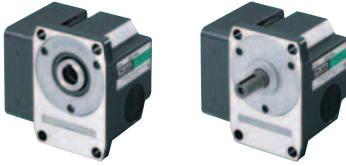
Gearheads (Sold separately)

Parallel Shaft Gearheads (→ Page C-21)




Right-Angle Gearheads (→ Page C-213)

Hollow Shaft Type Solid Shaft Type



Induction Motors

Motor (Pinion shaft)




AC Power Supply (Main power supply)

Capacitor (Included)


Capacitor Cap (Included)

Peripheral Equipment (Sold separately)


① Brake Pack **SB50W**
(→ Page C-229)




② Inverters **FE100/FE200**
(→ Page D-136)



Accessories (Sold separately)



③ Mounting Brackets
(→ Page C-240)



④ Flexible Couplings
(→ Page C-245)

Number	Name	Overview
①	Brake Pack	Use the brake pack to stop the motor instantaneously, perform bi-directional operation, and for other applications.
②	Inverters	Combine this inverter with a three-phase motor for easy speed control. It comes equipped with a digital display.
③	Mounting Brackets	Dedicated mounting bracket for the motor and gearhead.
④	Flexible Couplings	Clamp type coupling for connecting the motor/gearhead shaft with the driven shaft.

System Configuration Example



● Gearheads cannot be combined with round shaft type motors.

● The system configuration shown above is an example. Other combinations are available.

Product Number Code

World K Series

5 I K 40 GN - CW 2 T E

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

①	Motor Frame Size	2: 60 mm 3: 70 mm 4: 80 mm 5: 90 mm
②	Motor Type	I: Induction Motor
③	Series Name	K: K Series
④	Output Power (W)	(Example) 40: 40 W
⑤	Motor Shaft Type, Type of Pinion	A: Round Shaft GN: GN Type Pinion GE: GE Type Pinion
⑥	Power Supply Voltage and Number of Poles	AW: Single-Phase 100 VAC, 110/115 VAC 4 Poles BW: Single-Phase 100 VAC, 110/115 VAC 2 Poles CW: Single-Phase 200 VAC, 220/230 VAC 4 Poles DW: Single-Phase 200 VAC 220/230 VAC 2 Poles SW: Three-Phase 200/220/230 VAC 4 Poles TW: Three-Phase 200/220/230 VAC 2 Poles UW: Three-Phase 380/400/415 VAC 4 Poles
⑦	2, 3: RoHS Directive-Compliant	
⑧	T, T2, B: Terminal Box Type	
⑨	Included Capacitor	J: Capacitor for Single-Phase 100 VAC and 200 VAC U: Capacitor for Single-Phase 110/115 VAC E: Capacitor for Single-Phase 220/230 VAC Blank: Three-Phase

● The product name listed on the motor nameplate does not include the code (**J**, **U** and **E**) that indicates the type of capacitor. Certification regarding various safety standards is acquired for the product name on the motor nameplate, please visit www.orientalmotor.eu. (Example) Product Name: **5IK40GN-CW2E** → Motor nameplate and product approved under various safety standards: **5IK40GN-CW2**

Gearheads

5 GN 50 S

① ② ③ ④

①	Gearhead Frame Size	2: 60 mm 3: 70 mm 4: 80 mm 5: 90 mm
②	Type of Pinion	GN: GN Type Pinion GE: GE Type Pinion
③	Gear Ratio	(Example) 50: Gear Ratio of 1:50 10X denotes the decimal gearhead of gear ratio 1:10
④	GN Type Pinion	S: Long Life, Low Noise GN-S Gearhead RH: Right-Angle Shaft, Hollow Shaft Gearhead RA: Right-Angle Shaft, Solid Shaft Gearhead
	GE Type Pinion	S: Long Life GE-S Gearhead RH: Right-Angle Shaft, Hollow Shaft Gearhead RA: Right-Angle Shaft, Solid Shaft Gearhead

World K Series IP65 Terminal Box Type

4 I K 25 E B - 18 S S

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

①	Motor Frame Size	2: 60 mm 3: 70 mm 4: 80 mm 5: 90 mm
②	Motor Type	I: Induction Motor
③	Series Name	K: K Series
④	Output Power (W)	(Example) 25: 25 W
⑤	Power Supply Voltage	A: Single-Phase 100 VAC F: Single-Phase 110/115 VAC C: Single-Phase 200 VAC E: Single-Phase 220/230 VAC S: Three-Phase 200/220/230 VAC
⑥	B: Terminal Box Type	
⑦	Gear Ratio	Number: Gear Ratio of Combination Type
⑧	Gearhead Type (Combination type only)	S: Parallel Shaft
⑨	Thermal Protector Specifications	Blank: Automatic Return Type S: Signal Type

BH Series

BH I 6 2 E T - 100 RH

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①	Series Name	BH: BH Series
②	Motor Type	I: Induction Motor
③	Motor Frame Size	6: 104 mm
④	Output Power (W)	2: 200 W
⑤	Power Supply Voltage	A: Single-Phase 100 VAC F: Single-Phase 110/115 VAC C: Single-Phase 200 VAC E: Single-Phase 220/230 VAC S: Three-Phase 200/220/230 VAC U: Three-Phase 380/400/415 VAC
⑥	Blank: Cable Type T, T2: Terminal Box Type	
⑦	Gear Ratio, Motor Shaft Type	A: Round Shaft Number: Gear Ratio of Combination Type
⑧	Gearhead Type (Combination type only)	RH: Right-Angle Shaft, Hollow Shaft Type RA: Right-Angle Shaft, Solid Shaft Type Blank: Parallel Shaft

Variation of Induction Motors

World K Series

For the single-phase 100 VAC, the single-phase 110/115 VAC and the single-phase 200 VAC models, please contact the nearest Oriental Motor sales office.

◇ 1 W, 3 W

Power Supply Voltage	Type	Lead Wire Type (1 W)		Lead Wire Type (3 W)	
		Pinion Shaft Type	Round Shaft Type	Pinion Shaft Type	Round Shaft Type
Single-Phase 100 VAC		0IK1GN-AW2J	0IK1A-AW2J	0IK3GN-BW2J	0IK3A-BW2J
Single-Phase 110/115 VAC		0IK1GN-AW3U	0IK1A-AW3U	0IK3GN-BW3U	0IK3A-BW3U
Single-Phase 200 VAC		0IK1GN-CW2J	0IK1A-CW2J	0IK3GN-DW2J	0IK3A-DW2J

◇ 6 W

Power Supply Voltage	Type	Lead Wire Type		Terminal Box Type	
		Pinion Shaft Type	Round Shaft Type	Pinion Shaft Type	Round Shaft Type
Single-Phase 100 VAC		2IK6GN-AW2J	2IK6A-AW2J	2IK6GN-AW2BJ	2IK6A-AW2BJ
Single-Phase 110/115 VAC		2IK6GN-AW2U	2IK6A-AW2U	2IK6GN-AW2BU	2IK6A-AW2BU
Single-Phase 200 VAC		2IK6GN-CW2J	2IK6A-CW2J	2IK6GN-CW2BJ	2IK6A-CW2BJ
Single-Phase 220/230 VAC		2IK6GN-CW2E	2IK6A-CW2E	2IK6GN-CW2BE	2IK6A-CW2BE
Three-Phase 200/220/230 VAC		2IK6GN-SW2	2IK6A-SW2	2IK6GN-SW2B	2IK6A-SW2B

◇ 15 W

Power Supply Voltage	Type	Lead Wire Type		Terminal Box Type	
		Pinion Shaft Type	Round Shaft Type	Pinion Shaft Type	Round Shaft Type
Single-Phase 100 VAC		3IK15GN-AW2J	3IK15A-AW2J	3IK15GN-AW2BJ	3IK15A-AW2BJ
Single-Phase 110/115 VAC		3IK15GN-AW2U	3IK15A-AW2U	3IK15GN-AW2BU	3IK15A-AW2BU
Single-Phase 200 VAC		3IK15GN-CW2J	3IK15A-CW2J	3IK15GN-CW2BJ	3IK15A-CW2BJ
Single-Phase 220/230 VAC		3IK15GN-CW2E	3IK15A-CW2E	3IK15GN-CW2BE	3IK15A-CW2BE
Three-Phase 200/220/230 VAC		3IK15GN-SW2	3IK15A-SW2	3IK15GN-SW2B	3IK15A-SW2B

◇ 25 W

Power Supply Voltage	Type	Lead Wire Type		Terminal Box Type	
		Pinion Shaft Type	Round Shaft Type	Pinion Shaft Type	Round Shaft Type
Single-Phase 100 VAC		4IK25GN-AW2J	4IK25A-AW2J	4IK25GN-AW2TJ	4IK25A-AW2TJ
Single-Phase 110/115 VAC		4IK25GN-AW2U	4IK25A-AW2U	4IK25GN-AW2TU	4IK25A-AW2TU
Single-Phase 200 VAC		4IK25GN-CW2J	4IK25A-CW2J	4IK25GN-CW2TJ	4IK25A-CW2TJ
Single-Phase 220/230 VAC		4IK25GN-CW2E	4IK25A-CW2E	4IK25GN-CW2TE	4IK25A-CW2TE
Three-Phase 200/220/230 VAC		4IK25GN-SW2	4IK25A-SW2	4IK25GN-SW2T	4IK25A-SW2T
Three-Phase 380/400/415 VAC		4IK25GN-UW2	4IK25A-UW2	4IK25GN-UW2T2	4IK25A-UW2T2

◇ 40 W

Power Supply Voltage	Type	Lead Wire Type		Terminal Box Type	
		Pinion Shaft Type	Round Shaft Type	Pinion Shaft Type	Round Shaft Type
Single-Phase 100 VAC		5IK40GN-AW2J	5IK40A-AW2J	5IK40GN-AW2TJ	5IK40A-AW2TJ
Single-Phase 110/115 VAC		5IK40GN-AW2U	5IK40A-AW2U	5IK40GN-AW2TU	5IK40A-AW2TU
Single-Phase 200 VAC		5IK40GN-CW2J	5IK40A-CW2J	5IK40GN-CW2TJ	5IK40A-CW2TJ
Single-Phase 220/230 VAC		5IK40GN-CW2E	5IK40A-CW2E	5IK40GN-CW2TE	5IK40A-CW2TE
Three-Phase 200/220/230 VAC		5IK40GN-SW2	5IK40A-SW2	5IK40GN-SW2T	5IK40A-SW2T
Three-Phase 380/400/415 VAC		5IK40GN-UW2	5IK40A-UW2	5IK40GN-UW2T2	5IK40A-UW2T2

◇ 60 W

Power Supply Voltage	Type	Lead Wire Type		Terminal Box Type	
		Pinion Shaft Type	Round Shaft Type	Pinion Shaft Type	Round Shaft Type
Single-Phase 100 VAC		5IK60GE-AW2J	5IK60A-AW2J	5IK60GE-AW2TJ	5IK60A-AW2TJ
Single-Phase 110/115 VAC		5IK60GE-AW2U	5IK60A-AW2U	5IK60GE-AW2TU	5IK60A-AW2TU
Single-Phase 200 VAC		5IK60GE-CW2J	5IK60A-CW2J	5IK60GE-CW2TJ	5IK60A-CW2TJ
Single-Phase 220/230 VAC		5IK60GE-CW2E	5IK60A-CW2E	5IK60GE-CW2TE	5IK60A-CW2TE
Three-Phase 200/220/230 VAC		5IK60GE-SW2	5IK60A-SW2	5IK60GE-SW2T	5IK60A-SW2T
Three-Phase 380/400/415 VAC		5IK60GE-UW2	5IK60A-UW2	5IK60GE-UW2T2	5IK60A-UW2T2

◇ 90 W

Power Supply Voltage	Type	Lead Wire Type		Terminal Box Type	
		Pinion Shaft Type	Round Shaft Type	Pinion Shaft Type	Round Shaft Type
Single-Phase 100 VAC		5IK90GE-AW2J	5IK90A-AW2J	5IK90GE-AW2TJ	5IK90A-AW2TJ
Single-Phase 110/115 VAC		5IK90GE-AW2U	5IK90A-AW2U	5IK90GE-AW2TU	5IK90A-AW2TU
Single-Phase 200 VAC		5IK90GE-CW2J	5IK90A-CW2J	5IK90GE-CW2TJ	5IK90A-CW2TJ
Single-Phase 220/230 VAC		5IK90GE-CW2E	5IK90A-CW2E	5IK90GE-CW2TE	5IK90A-CW2TE
Three-Phase 200/220/230 VAC		5IK90GE-SW2	5IK90A-SW2	5IK90GE-SW2T	5IK90A-SW2T
Three-Phase 380/400/415 VAC		5IK90GE-UW2	5IK90A-UW2	5IK90GE-UW2T2	5IK90A-UW2T2

● World K Series IP65 Terminal Box Type

For the single-phase 100 VAC, the single-phase 110/115 VAC and the single-phase 200 VAC models, please contact the nearest Oriental Motor sales office.

◇ 6 W

Type	Combination Type	Round Shaft Type
Power Supply Voltage		
Single-Phase 100 VAC	2IK6AB-□S	2IK6A-AW2BJ
Single-Phase 110/115 VAC	2IK6FB-□S	2IK6A-AW2BU
Single-Phase 200 VAC	2IK6CB-□S	2IK6A-CW2BJ
Single-Phase 220/230 VAC	2IK6EB-□S	2IK6A-CW2BE
Three-Phase 200/220/230 VAC	2IK6SB-□S	2IK6A-SW2B

◇ 15 W

Type	Thermal Protector for Automatic Return Type		Thermal Protector for Signal Type	
	Combination Type	Round Shaft Type	Combination Type	Round Shaft Type
Power Supply Voltage				
Single-Phase 100 VAC	3IK15AB-□S	3IK15A-AW2BJ	3IK15AB-□SS	3IK15A-AW2BSJ
Single-Phase 110/115 VAC	3IK15FB-□S	3IK15A-AW2BU	3IK15FB-□SS	3IK15A-AW2BSU
Single-Phase 200 VAC	3IK15CB-□S	3IK15A-CW2BJ	3IK15CB-□SS	3IK15A-CW2BSJ
Single-Phase 220/230 VAC	3IK15EB-□S	3IK15A-CW2BE	3IK15EB-□SS	3IK15A-CW2BSE
Three-Phase 200/220/230 VAC	3IK15SB-□S	3IK15A-SW2B	3IK15SB-□SS	3IK15A-SW2BS

◇ 25 W

Type	Thermal Protector for Automatic Return Type		Thermal Protector for Signal Type	
	Combination Type	Round Shaft Type	Combination Type	Round Shaft Type
Power Supply Voltage				
Single-Phase 100 VAC	4IK25AB-□S	4IK25A-AW2BJ	4IK25AB-□SS	4IK25A-AW2BSJ
Single-Phase 110/115 VAC	4IK25FB-□S	4IK25A-AW2BU	4IK25FB-□SS	4IK25A-AW2BSU
Single-Phase 200 VAC	4IK25CB-□S	4IK25A-CW2BJ	4IK25CB-□SS	4IK25A-CW2BSJ
Single-Phase 220/230 VAC	4IK25EB-□S	4IK25A-CW2BE	4IK25EB-□SS	4IK25A-CW2BSE
Three-Phase 200/220/230 VAC	4IK25SB-□S	4IK25A-SW2B	4IK25SB-□SS	4IK25A-SW2BS

◇ 40 W

Type	Thermal Protector for Automatic Return Type		Thermal Protector for Signal Type	
	Combination Type	Round Shaft Type	Combination Type	Round Shaft Type
Power Supply Voltage				
Single-Phase 100 VAC	5IK40AB-□S	5IK40A-AW2BJ	5IK40AB-□SS	5IK40A-AW2BSJ
Single-Phase 110/115 VAC	5IK40FB-□S	5IK40A-AW2BU	5IK40FB-□SS	5IK40A-AW2BSU
Single-Phase 200 VAC	5IK40CB-□S	5IK40A-CW2BJ	5IK40CB-□SS	5IK40A-CW2BSJ
Single-Phase 220/230 VAC	5IK40EB-□S	5IK40A-CW2BE	5IK40EB-□SS	5IK40A-CW2BSE
Three-Phase 200/220/230 VAC	5IK40SB-□S	5IK40A-SW2B	5IK40SB-□SS	5IK40A-SW2BS

● BH Series

For the single-phase 100 VAC, the single-phase 110/115 VAC and the single-phase 200 VAC models, please contact the nearest Oriental Motor sales office.

◇ Combination Type

Type	Terminal Box Type, Right-Angle Gearhead		Terminal Box Type, Parallel Shaft Type
	Hollow Shaft Type	Solid Shaft Type	
Power Supply Voltage			
Single-Phase 100 VAC	BHI62AT-□RH	BHI62AT-□RA	BHI62AT-□
Single-Phase 110/115 VAC	BHI62FT-□RH	BHI62FT-□RA	BHI62FT-□
Single-Phase 200 VAC	BHI62CT-□RH	BHI62CT-□RA	BHI62CT-□
Single-Phase 220/230 VAC	BHI62ET-□RH	BHI62ET-□RA	BHI62ET-□
Three-Phase 200/220/230 VAC	BHI62ST-□RH	BHI62ST-□RA	BHI62ST-□
Three-Phase 380/400/415 VAC	BHI62UT2-□RH	BHI62UT2-□RA	BHI62UT2-□

◇ Round Shaft Type

Type	Terminal Box Type
Power Supply Voltage	
Single-Phase 100 VAC	BHI62AT-A
Single-Phase 110/115 VAC	BHI62FT-A
Single-Phase 200 VAC	BHI62CT-A
Single-Phase 220/230 VAC	BHI62ET-A
Three-Phase 200/220/230 VAC	BHI62ST-A
Three-Phase 380/400/415 VAC	BHI62UT2-A

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

● World K Series 2-Pole, High-Speed Type

For the single-phase 100 VAC, the single-phase 110/115 VAC, the single-phase 200 VAC and the three-phase 200/220/230 VAC models, please contact the nearest Oriental Motor sales office.

◇ 40 W

Power Supply Voltage	Type	Lead Wire Type (Round Shaft Type)
Single-Phase 100 VAC		4IK40A-BW2J
Single-Phase 110/115 VAC		4IK40A-BW2U
Single-Phase 200 VAC		4IK40A-DW2J
Single-Phase 220/230 VAC		4IK40A-DW3E

◇ 60 W

Power Supply Voltage	Type	Lead Wire Type (Round Shaft Type)	
Single-Phase 100 VAC		4IK60A-BW2J	5IK60A-BW2J
Single-Phase 110/115 VAC		4IK60A-BW2U	5IK60A-BW2U
Single-Phase 200 VAC		4IK60A-DW2J	5IK60A-DW2J
Single-Phase 220/230 VAC		4IK60A-DW3E	5IK60A-DW3E
Three-Phase 200/220/230 VAC		—	5IK60A-TW2

◇ 90 W

Power Supply Voltage	Type	Lead Wire Type (Round Shaft Type)
Single-Phase 100 VAC		5IK90A-BW2J
Single-Phase 110/115 VAC		5IK90A-BW2U
Single-Phase 200 VAC		5IK90A-DW2J
Single-Phase 220/230 VAC		5IK90A-DW3E
Three-Phase 200/220/230 VAC		5IK90A-TW2

◇ 150 W

Power Supply Voltage	Type	Lead Wire Type (Round Shaft Type)	Terminal Box Type (Round Shaft Type)
Single-Phase 100 VAC		5IK150A-BW2J	—
Single-Phase 110/115 VAC		5IK150A-BW2U	—
Single-Phase 200 VAC		5IK150A-DW2J	—
Single-Phase 220/230 VAC		5IK150A-DW3E	—
Three-Phase 200/220/230 VAC		5IK150A-TW2	5IK150A-TW2T

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

General Specifications

World K Series - 6 W to 90 W

Item	Specifications
Insulation Resistance	The measured value is 100 MΩ or more when a 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.
Dielectric Strength	No abnormality is judged even with application of 1.5 kVAC (2 kVAC for three-phase 380/400/415 VAC) at 50 Hz or 60 Hz between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.
Temperature Rise	A gearhead or equivalent heat radiation plate* is connected and the winding temperature rise is measured at 80°C or less (70°C or less for three-phase type) using the resistance change method after rated operation under normal ambient temperature and humidity.
Thermal Class	130 (B)
Overheat Protection	6 W Type Impedance Protected Other Types Built-In Thermal Protector (Automatic return type) Open: 130±5°C, Close: 82±15°C Three-Phase 15 W Type, IP65 Terminal Box Type Open: 130±5°C, Close: 90±15°C (40 W Type: 82±15°C) Three-Phase 380/400/415 VAC Type Open: 130±5°C, Close: 83±15°C
Operating Ambient Temperature	-10~+40°C (Three-Phase 200 VAC: -10~+50°C) (non-freezing)
Operating Ambient Humidity	85% or less (non-condensing)
Degree of Protection	Lead Wire Type: IP20 Terminal Box Type (25 W, 40 W, 60 W, 90 W): IP54 (Except for the installation surface) IP65 Terminal Box Type (6 W, 15 W, 25 W, 40 W): IP65 (Except for the installation surface)

*Heat radiation plate size (Material: Aluminum)

Motor Type	Size (mm)	Thickness (mm)
6 W Type	115×115	5
15 W Type	125×125	
25 W Type	135×135	
40 W Type	165×165	
60 W, 90 W Type	200×200	

BH Series

Item	Specifications
Insulation Resistance	The measured value is 100 MΩ or more when a 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.
Dielectric Strength	No abnormality is judged even with application of 1.5 kVAC (2 kVAC for three-phase 380/400/415 VAC) at 50 Hz or 60 Hz between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.
Temperature Rise	A gearhead or equivalent heat radiation plate* is connected and the winding temperature rise is measured at 70°C or less using the resistance change method after rated operation under normal ambient temperature and humidity.
Thermal Class	130 (B)
Overheat Protection	Built-In Thermal Protector (Automatic return type) Open: 150±5°C, Close: 96±15°C Three-Phase 380/400/415 VAC Type Open: 130±5°C, Close: 83±15°C
Operating Ambient Temperature	-10~+40°C (Three-Phase 200 VAC: -10~+50°C) (non-freezing)
Operating Ambient Humidity	85% or less (non-condensing)
Degree of Protection	Lead Wire Type: IP40 Terminal Box Type: IP54 (Excluding the installation surface of the round shaft type)

*Heat Radiation Plate Size: 230×230 mm, Thickness: 5 mm (Material: Aluminum)

6 W

15 W

25 W

40 W

60 W

90 W

IP65 Terminal Box Types 6 W to 40 W

200 W BH Series

2-pole 40 W to 150 W

Connection Diagrams

- The direction of motor rotation is as viewed from the shaft end of the motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction.

Lead Wire Type		Terminal Box Type	
Single-Phase 220/230 VAC	Three-Phase 200/220/230 VAC Three-Phase 380/400/415 VAC	Single-Phase 220/230 VAC	Three-Phase 200/220/230 VAC Three-Phase 380/400/415 VAC
<p>Clockwise</p> <p>Counterclockwise</p>	<p>Clockwise</p> <p>Counterclockwise To change the rotation direction, change any two connections between L1(R), L2(S) and L3(T).</p>	<p>Clockwise</p> <p>Counterclockwise</p>	<p>Clockwise</p> <p>Counterclockwise To change the rotation direction, change any two connections between L1(R), L2(S) and L3(T).</p>

PE: Protective Earth

Note

- Change the direction of single-phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.
- How to connect a capacitor → Page C-255

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Reversible Motors

Constant Speed Motors

Electromagnetic Brake Motors

V Series

TM Series Torque Motors

Torque Motors

Water-tight, Dust-Resistant Motors

Right-Angle Gearheads

Brake Pack

Accessories

Installation