Single-Phase Induction Motors

Standard AC Motors

Constant Speed Motors Single-Phase Induction Motors

|--|

Features and Types of Single-Phase Induction Motors…	C-114
General Specifications	C-119
KI Series [6 W~90 W (1/125 HP~1/8 HP)]	C-120
BH Series [200 W (1/4 HP)]	C-134
2-Pole, High-Speed Type [40 W~150 W (1/19 HP~1/5 HP)]	C-142

Electromagnetic Brake Motors Clutch & Brake Motors

Overview, Product Series

Speed Motors

Three-Phase Induction Motors

Single-Phase Induction Motors

Reversible Motors

Low-Speed

Synchronous Motors

Torque Motors

Watertight, Dust-Resistant Motors

Right-Angle Gearheads

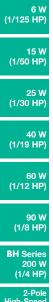
Linear Heads

Brake Pack

Accessories

Installation

Features and Types of Single-Phase Induction Motors



Features of Single-Phase Induction

Motors

• Optimal for Uni-Directional and Continuous Operation Induction motors are optimal for uni-directional and continuous operation such as a conveyor system.

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.

Extensive Product Line

The **KII** Series, World **K** Series and **BH** Series are available. We have products with an output power range of 6 W (1/125 HP) to 200 W (1/4 HP), so you can find a motor that meets your specific application.

Compatible with Various Gearheads

Combination with a gearhead allows the motor speed to be reduced to the required speed or generate higher torque.

Types of Single-Phase Induction Motors

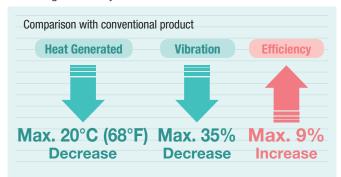
Series	Features, Product Line						
KII Series	New Global Standard	Product	Line				
	With a high performance gearhead built in, it is the new	Frame Size	□60 mm (□2.36 in.)~□90 mm (□3.54 in.)				
	global standard for standard AC motors. Features of the KII Series → Page C-115	Output Power	Terminal Box Type: 25 W~90 W (1/30 HP~1/8 HP) Lead Wire Type: 6 W~90 W (1/125 HP~1/8 HP)				
	Conforms to Standards	Туре	Terminal Box Type: Parallel shaft Lead Wire Type: Parallel shaft				
c AU us 🔍 C E		Voltage	Single-Phase 110/115 VAC, Single-Phase 220/230 VAC				
World K Series	Conforms to Standards	Product	Line				
2-Pole, High-Speed Type	All World K Series products have an overheat protection	Frame Size	□80 mm (□3.15 in.), □90 mm (□3.54 in.)				
	device built-in and conform to major safety standards.	Output Power	2-Pole, High-Speed Type: 40 W~150 W (1/19 HP~1/5 HP)				
	Applicable Standards UL/CSA Standards	Voltage	Single-Phase 110/115 VAC Single-Phase 220/230 VAC				
c¶us (CE	(CCC System) CE Marking (Low Voltage Directive) • Motor Overheat Protection Device Thermal Protector						
BH Series	 Smallest Frame Size among 200 W (1/4 HP) Motors These motors achieve a high output of 200 W (1/4 HP) with a frame size of 104 mm (4.09 in.). 	The gearhead connection w					
	Humaid Caar Dight Angle Type is Available	Product					
	Hypoid Gear Right Angle Type is Available.	Frame Size	□104 mm (□4.09 in.)				
	Combination Type" for Easy Installation	Output Power	200 W (1/4 HP)				
	 With each combination type, the motor and gearhead come pre-assembled for easy installation into your equipment. Conforms to Standards and Global Voltage Specifications 	Туре	Terminal Box Type: Right-Angle, Hollow Shaft Type, Right-Angle, Solid Shaft Type, Parallel Shaft Type, Round Shaft Type Cable Type: Right-Angle, Hollow Shaft Type, Right-Angle, Solid Shaft Type, Parallel Shaft Type, Round Shaft Type				
		Voltage	Single-Phase 110/115 VAC Single-Phase 220/230 VAC				

KII Series Features

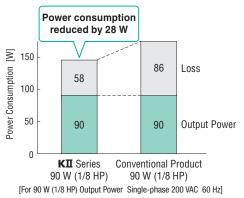
Excellent Motor Performance

The magnetic balance for each input voltage has been re-examined and the motors have been specially designed to optimize their characteristics.

Designing specifically for each voltage not only improves efficiency, but also contributes to equipment reliability by reducing heat and vibration generated by the motor.

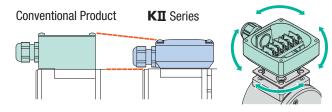


Energy Savings



Built-In Slim Body Terminal Box (Terminal box type)

A new shape of terminal box was designed to make wiring the terminal block easier. It is slimmer than conventional products, and the cable outlet can be rotated in 90° increments for 4 possible directions.



IP66 Compliant Drip-proof Specification

The seal structure for the motor, gearhead and terminal box components has been strengthened. The terminal box type is compliant with the IP66 degree of protection.

The IP indication that shows the watertight and dust-resistant performance are specified under IEC 60529 and IEC 60034-5.

www.orientalmotor.com

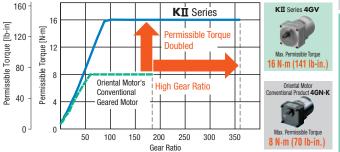
Main Specifications Material Case and terminal box: Aluminum Output shaft: S45C Screws: Stainless steel (externally facing screws only) Surface Treatment Case and terminal box: Painted (excluding installation surface)

CAD Data Manuals

Equipped with a High-Performance Gearhead

High Permissible Torque

The permissible torque is up to twice that of conventional products. • 25 W (1/30 HP) Gearhead Output Torque (Permissible)



Gear Ratio

◇Downsizing is Possible with the Same Output Torque Downsizing is possible by changing our company's conventional

products with the **KII** Series. If a smaller size motor can be selected, not only the power consumption but also the purchase cost can be reduced.



High Strength

The permissible radial load and the permissible axial load are up to twice that of conventional products.

Oriental Motor Conventional Product 4GN-K



KII Series 4GV

Permissible Axial Load ... 100 N (22 lb.)

Permissible Axial Load...50 N (11.2 lb.)

Long-Life

At 10,000 hours, the rated life is twice that of a conventional product.

Noise Reduction

The contact noise of the motor and gearhead is approximately 6 dB less compared to a conventional product.

Overview, Product Series

Constant Speed Motors

Three-Phase Induction Motors

Single-Phase Induction Motors

Reversible Motors

> Electromagnetic Brake Motors

Clutch & Brake Motors

Low-Speed Synchronous Motors

Torque Motors

Watertight, Dust-Resistant Motors

Right-Angle Gearheads

Linear Heads

Brake Pack

Accessories

Installation

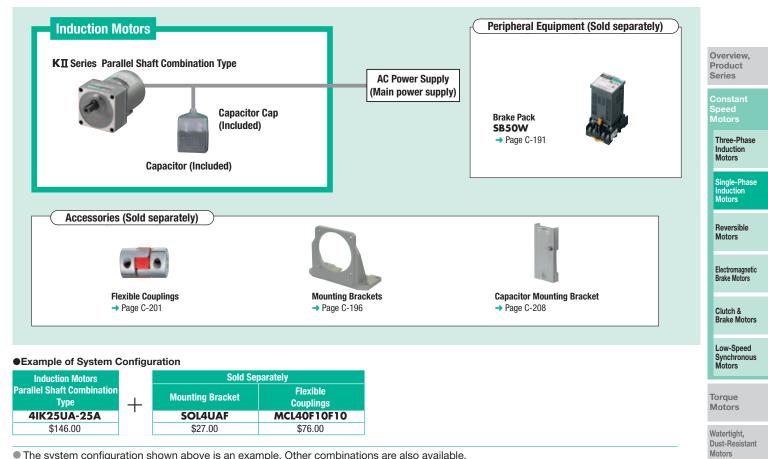
Technical Support

Product Line of Induction Motors

							M	lotor Frame Siz	e, Output Pow	er			
	Series	Voltage (VAC)) Type	□60 mm (□2.36 in.)	□70 mm (□2.76 in.)		□80 mm (□3.15 in.)			□90 (□3.5) mm 54 in.)		□104 mm (□4.09 in.)
6 W (1/125 HP)				6 W (1/125 HP)	15 W (1/50 HP)	25 W (1/30 HP)	40 W (1/19 HP)	60 W (1/12 HP)	40 W (1/19 HP)	60 W (1/12 HP)	90 W (1/8 HP)	150 W (1/5 HP)	200 W (1/4 HP)
(1112)111)		Single-Phase	Terminal Box										
	KII Series	110/115	Lead Wire		•				•				
15 W (1/50 HP)	KII Series	Single-Phase	Terminal Box			•			•	•	•		
(1/50 HP)			Lead Wire	•	٠	•			•	•	•		
25 W	World K Series 110/115	Single-Phase 110/115	Lead Wire				•	•		•	•	•	
(1/30 HP)	2-Pole, High-Speed Type	Single-Phase 220/230	Lead Wire				•	•		•	•	•	
40 W		Single-Phase	Terminal Box										•
(1/19 HP)	BLLOW	110/115	Cable										•
	BH Series	Single-Phase	Terminal Box										•
60 W		220/230	Cable										•
(1/12 HP)													

90 W (1/8 HP) BH Series 200 W (1/4 HP) 2-Pole High-Speed 40-150 W (1/19-1/5 HP)

System Configuration



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

Linear

Heads

Right-Angle Gearheads

Brake Pack

Accessories

Installation

	Product								
●K	I Series								
4	IK 2	25 I	JA	T2 ·	- 12	2.5	Α		
1	23	4	5	6		7	8		
1	Motor Frame	Size		2: 60 mm 5: 90 mm	· /		m (2.76 in.)	4 : 80 m	m (3.15 in.)
2	Motor Type			I: Induction	n Motor				
3	Series			K : KII Se	ries				
4	Output Powe	r (W)		(Example)					
5	Power Supply			Ū.		10/115 V	AC UC: Sir	ngle-Phase	e 220/230 VA
6	T2: Terminal	Box Type	Blank: L	ead Wire Typ					
0	Gear Ratio				oor Dotio	of Combin	ation Tuna		
-				Number: G	iear Ratio		lation type		
	A: Imperial tric output shafts			bsite for prod	uct names	and drawi			
• Me	A: Imperial	ries 2-	Pole/H	bsite for prod	uct names eed Ty	and drawi			
• Me • V 5	A: Imperial tric output shafts Vorld K Se 2 3	ries 2- 50 4	Pole/H	High-Spe BW	uct names eed Ty 2 7	and drawing pe	ngs.		
• Me • V 5 1	A: Imperial tric output shafts Vorld K Se I K (2) (2) (3) Motor Frame	ries 2- 50 4	Pole/H	high-Spe BW 6 4: 80 mm	uct names eed Ty 2 (3.15 in.)	and drawing pe)	
• Me • V 5 1 2	A: Imperial tric output shafts Vorld K Se 2 3 Motor Frame Motor Type	ries 2- 50 4	Pole/H	bsite for prod High-Spe BW 6 4: 80 mm I: Induction	uct names eed Ty 2 (3.15 in.) n Motor	and drawing pe	ngs.)	
• Me • V 5 1 2 3	A: Imperial tric output shafts Vorld K Se D K 6 (2) (3) Motor Frame Motor Type Series	ries 2- 60 4 (4) Size	Pole/H	bsite for prod ligh-Spe BW 6 4: 80 mm 1: Induction K: K Serie	uct names eed Ty 2 (3.15 in.) n Motor es	and drawi pe U 8 5: 90 r	ngs. nm (3.54 in.)	
 8 ● Me ● V 5 1 1 2 3 4 	A: Imperial tric output shafts Vorld K Se 2 3 Motor Frame Motor Type Series Output Powe	ries 2- 50 4 (4) (Size	Pole/H	4: 80 mm I: Induction K: K Serie (Example)	uct names eed Ty 2 (3.15 in.) n Motor es 60: 60 V	and drawi pe U 8 5: 90 r	ngs. nm (3.54 in.)	
 8 ● Me ● V 5 1 1 2 3 	A: Imperial tric output shafts Vorld K Se I K (2) (2) (3) Motor Frame Motor Type Series Output Powe Motor Shaft T	ries 2- 50 4 (4) (Size r (W) Type	Pole/H	4: 80 mm I: Induction K: K Serie (Example) A: Round	uct names eed Ty 2 (3.15 in.) n Motor es 60: 60 V Shaft	and drawi pe U 8 5: 90 r	ngs. 1m (3.54 in.)	
 8 ● Me ● V 5 1 1 2 3 4 	A: Imperial tric output shafts Vorld K Se 2 3 Motor Frame Motor Type Series Output Powe	ries 2- 50 4 (4) (Size r (W) y Voltage/	Pole/H	4: 80 mm I: Induction K: K Serie (Example)	uct names eed Ty 2 (3.15 in.) n Motor es 60: 60 V Shaft le-Phase	and drawi pe U 8 5: 90 r V (1/12 HF	ngs. nm (3.54 in. ?) AC 2-Pole)	
• Me • V 5 1 2 3 4 5	A: Imperial tric output shafts Vorld K Se 2 3 Motor Frame Motor Type Series Output Powe Motor Shaft 1 Power Supply	ries 2- 60 (4) Size r (W) Type y Voltage/ ples	Pole/H	4: 80 mm I: Induction K: K Serie (Example) A: Round BW: Sing	uct names eed Ty 2 (3.15 in.) n Motor es 60: 60 V Shaft le-Phase	and drawi pe U 8 5: 90 r V (1/12 HF	ngs. nm (3.54 in. ?) AC 2-Pole)	

The U and E at the end of the product name indicate that the unit includes a capacitor. These letters are not listed on the motor nameplate. When the motor is approved under various standards, the product name on the nameplate is the approved product name. (Example) Model: 5IK60A-BW2U → Motor nameplate and product approved under various standards: 5IK60A-BW2U

$\begin{array}{c|c} \bullet BH \text{ Series} \\ \hline BH & I & 6 \\ \hline 1 & 2 & 3 \\ \hline \end{array} \begin{array}{c} 2 & 3 \\ \hline \end{array} \begin{array}{c} 4 \\ \hline 5 \\ \hline \end{array} \begin{array}{c} 6 \\ \hline \end{array} \begin{array}{c} 7 \\ \hline \end{array} \begin{array}{c} 1 \\ \hline \end{array} \begin{array}{c} 0 \\ \hline \end{array} \begin{array}{c} RH \\ \hline \end{array} \end{array}$

1	Series	BH: BH Series
2	Motor Type	I: Induction Motor
3	Motor Frame Size	6 : 104 mm (4.09 in.)
4	Output Power (W)	(Example) 2: 200 W (1/4 HP)
5	Power Supply Voltage	F: Single-Phase 110/115 VAC E: Single-Phase 220/230 VAC
6	T: Terminal Box Type Blank: Cat	le Type
0	Gear Ratio, Motor Shaft Type	A: Round Shaft Type Number: Gear Ratio of Combination Type
8	Type of Gearhead (Combination type only)	RH: Right-Angle, Hollow Shaft Type RA: Right-Angle, Solid Shaft Type Blank: Parallel Shaft Type

General Specifications

•KI Series

Item	Specifications					
Insulation Resistance	100 MΩ or more when 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.	a .				
Dielectric Strength	Sufficient to withstand 1.5 kVAC at 60 Hz applied between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.	Overview, Product				
Temperature Rise	Temperature rise of windings are 80°C (144°F) or less measured by the resistance change method after rated operation under normal ambient temperature and humidity.	Series				
Thermal Class	130 (B)					
Overheat Protection	6 W (1/125 HP) type has impedance protection. Other Types Built-In thermal protector (automatic return type) Open: 130±5°C (266±9°F), Close: 85±20°C (185±36°F)	Constant Speed Motors				
Ambient Temperature	-10~+40°C (+14~+104°F) (non-freezing)	Motors				
Ambient Humidity	85% or less (non-condensing)	Three-Phase Induction				
Degree of Protection	Terminal Box Type: 25 W (1/30 HP), 40 W (1/19 HP) IP66* (excluding the installation surface of the round shaft type) : 60 W (1/12 HP), 90 W (1/8 HP) IP54 (excluding the installation surface of the round shaft type)					
	Lead Wire Type: IP20	Single-Phase				

*Refer to page C-115 for the materials and surface treatments.

• World K Series 2-Pole/High-Speed Type

Item	Specifications	Motors
Insulation Resistance	100 M Ω or more when 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.	
Dielectric Strength	Sufficient to withstand 1.5 kVAC at 50 Hz or 60 Hz applied between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.	Electromagnetic Brake Motors
Tomporatura Diao	Temperature rise of windings are 80°C (144°F) or less measured by the resistance change method after rated operation under normal ambient temperature and humidity	
Temperature Rise	with connecting a gearhead or equivalent heat radiation plate*.	
Thermal Class	130 (B)	Clutch & Brake Motors
Overheat Protection	Built-In thermal protector (automatic return type) Open: 130±5°C (266±9°F), Close: 82±15°C (179.6±27°F)	
Ambient Temperature	$-10 \sim +40^{\circ}C(+14 \sim +104^{\circ}F)$ (non-freezing)	Low-Speed
Ambient Humidity	85% or less (non-condensing)	Synchronous
Degree of Protection	IP20	Motors
*Heat radiation plate (Mat	erial: Aluminum)	

Motor Type	Size: mm (in.)	Thickness: mm (in.)
2-Pole, High-Speed 4IK40 Type, 4IK60 Type	135×135 (5.31×5.31)	
2-Pole, High-Speed 51K60 Type	165×165 (6.50×6.50)	5 (0.20)
2-Pole/High-Speed 51K90 Type, 51K150 Type	200×200 (7.87×7.87)	

•BH Series

Item	Specifications	Right-Angle Gearheads
Insulation Resistance	100 M Ω or more when 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.	Geameaus
Dielectric Strength	Sufficient to withstand 1.5 kVAC at 50 Hz or 60 Hz applied between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.	Linear
Temperature Rise	Temperature rise of windings are 70°C (126°F) or less measured by the resistance change method after rated operation under normal ambient temperature and humidity with connecting a gearhead or equivalent heat radiation plate*.	Heads
Thermal Class	130 (B)	Brake Pack
Overheat Protection	Built-in thermal protector (automatic return type) Open: 150±5°C, (302±9°F), Close: 96±15°C (204.8±27°F)	DIAKE FACK
Ambient Temperature	-10~+40°C (+14~+104°F) (non-freezing)	
Ambient Humidity	85% or less (non-condensing)	A
Degree of Protection	Terminal Box Type: IP54 (excluding the installation surface of the round shaft type) Cable Type: IP40	Accessories

*Heat radiation plate: 230×230 mm (9.06×9.06 in.), Thickness: 5 mm (0.20 in.) (Material: Aluminum)

Inductio Motors

Reversible

tic

Torque Motors

Watertight, Dust-Resistant Motors

Installation



KII Series 6 W (1/125 HP) Frame Size: 60 mm (2.36 in.)



6 W (1/125 HP)

15 W (1/50 HP)

Specifications – Continuous Rating

(1/30 112)				_						Overheat
	Product Name	Output Power	Voltage	Frequency	Current	Starting Torque	Rated Torque	Rated Speed	Capacitor	Protection
25 W (1/30 HP)	Lead Wire Type	W (HP)	VAC	Hz	А	mN·m (oz-in.)	mN·m (oz-in.)	r/min	μF	Device
(1/00 111)	2IK6UA-⊟A	6 (1/125)	Single-Phase 110	60	0.185	40 (5.6)	41 (5.8)	1450	2.5	
			Single-Phase 115		0.189	40 (5.6)	41 (5.8)	1450		7D
40 W (1/19 HP)	2IK6UC-⊡A	6 (1/125)	Single-Phase 220	60	0.093	40 (5.6)	41 (5.8)	1450	0.6	2P
(1/19 HP)			Single-Phase 230	00	0.096	40 (5.6)	41 (5.8)	1450	0.0	

The values in the table are characteristics for the motor only. ZP: These products are impedance protected.

60 W (1/12 HP)

90 W

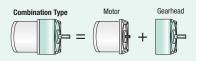
BH

High-Speed 40-150 W (1/19-1/5 HP)

Product Line

Combinat 200 W (1/4 HP)	(1/8 HP)	
	200 W	Combinati Type

Motor and gearhead are delivered pre-assembled. The combination of motors and gearheads can be changed and they are also available separately. ion In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.



Combination Type Price includes motor and gearhead.

Product Name	Gear Ratio	List Price
	5, 6, 7. 5, 9, 12.5, 15, 18	\$121.00
2IK6UA-□A	25, 30, 36	\$127.00
	50, 60, 75, 90, 100, 120, 150, 180	\$134.00
	250, 300, 360	\$180.00
	5, 6, 7. 5, 9, 12.5, 15, 18	\$124.00
2IK6UC-□A	25, 30, 36	\$130.00
	50, 60, 75, 90, 100, 120, 150, 180	\$137.00
	250, 300, 360	\$183.00

Motor, Gearhead, Capacitor, Capacitor Cap, Installation Screws, Parallel Key, Operating Manual

• A number indicating the gear ratio is entered where the box \Box is located within the product name.

Unit: Upper values: N·m/Lower values: Ib-in

Motors

Three-Phase Induction Motors

Gearheads

Linear

Heads

Brake Pack

Accessories

Installation

Permissible Torque

The speed is calculated by dividing the motor's synchronous speed (60 Hz: 1800 r/min) by the gear ratio.

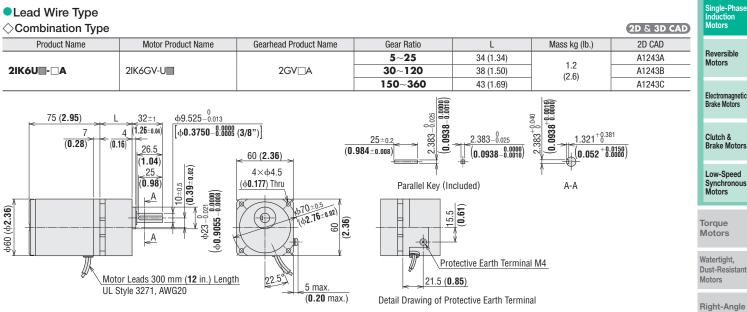
The actual speed is 2~20% less, depending on the load.

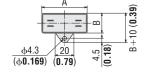
Draduat Nama	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	7.2	6	5	Overview, Product
Product Name	Gear Ratio	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	250	300	360	Series
2IK6U _ A		0.18 1.59	0.22 1.94	0.28 2.4	0.33 2.9	0.46 4.0	0.55 4.8	0.66 5.8	0.92 8.1	1.1 9.7	1.3 11.5	1.8 15.9	2.1 18.5	2.6 23	3.2 28	3.5 30	4.2 37	5.0 44	6 53	6 53	6 53	6 53	Constant
																							Speed

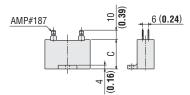
Dimensions Unit = mm (in.)

● Installation screws are included. Dimensions for installation screws → Page C-215

Lead Wire Type







				U	nit: mm (in.)
Product Name	Capacitor	•	В	С	Mass
Combination Type	Product Name	A	D	6	g (oz.)
2IK6UA-⊟A	CH25FAUL2	31	17	27	21
ZIKOUA-	CHZJFAULZ	(1.22)	(0.67)	(1.06)	(0.74)
2IK6UC-⊓A	CH06BFAUL	31	14.5	23.5	18
	CHUODIAUL	(1.22)	(0.57)	(0.93)	(0.64)

A capacitor cap is included.

• Either A or C indicating the power supply voltage is entered where the box 🔳 is located within the product name.

A number indicating the gear ratio is entered where the box \Box is located within the product name.





KII Series 15 W (1/50 HP) Frame Size: 70 mm (2.76 in.)



6 W (1/125 HP)

> 15 W (1/5

> > 90 W

(1/8 HP)

(1/19-1/5 HP)

Specifications – Continuous Rating

(1/50 HP)											
	Product Name	Output Power	Voltage	Frequency	Current	Starting Torque	Rated Torque	Rated Speed	Capacitor	Overheat Protection	
25 W (1/30 HP)	Lead Wire Type	W (HP)	VAC	Hz	А	mN·m (oz-in.)	mN·m (oz-in.)	r/min	μF	Device	
(1/30 HP)	3IK15UA-⊟A	15 (1/50)	Single-Phase 110	60	0.31	65 (9.2)	105 (14.9)	1450	4.0		
	SIR I JUA-	13 (1/30)	Single-Phase 115	00	0.31	65 (9.2)	105 (14.9)	1450	4.0	ТР	
40 W				60	0.154	65 (9.2)	105 (14.9)	1450	1.0	IF	
(1/19 HP)	3IK15UC-□A	15 (1/50)	Single-Phase 230	00	0.155	65 (9.2)	105 (14.9)	1450	1.0		

The values in the table are characteristics for the motor only.

60 W TP: This indicates that there is a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped. (1/12 HP)

When the motor temperature drops, the thermal protector closes and the motor restarts automatically. Be sure to turn the power supply off before inspecting.

Product Line

BH Series 200 W (1/4 HP) Combination Type 2-Pol High-Speed 40-150 W

Motor and gearhead are delivered pre-assembled. The combination of motors and gearheads can be changed and they are also available separately. In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.

Gearhead Combination Type Motor

• Combination Type Price includes motor and gearhead.

Product Name	Gear Ratio	List Price
	5, 6, 7. 5, 9, 12 . 5, 15, 18	\$132.00
3IK15UA-	25, 30, 36	\$138.00
JIN I JUA-LA	50, 60, 75, 90, 100, 120, 150, 180	\$145.00
	250, 300, 360	\$189.00
	5, 6, 7. 5, 9, 12.5, 15, 18	\$134.00
	25, 30, 36	\$140.00
3IK15UC-DA	50, 60, 75, 90, 100, 120, 150, 180	\$147.00
	250, 300, 360	\$191.00

Motor, Gearhead, Capacitor, Capacitor Cap, Installation Screws, Parallel Key, Operating Manual

• A number indicating the gear ratio is entered where the box \Box is located within the product name.

Unit: Upper values: N·m/Lower values: Ib-in

Permissible Torque

The speed is calculated by dividing the motor's synchronous speed (60 Hz: 1800 r/min) by the gear ratio.

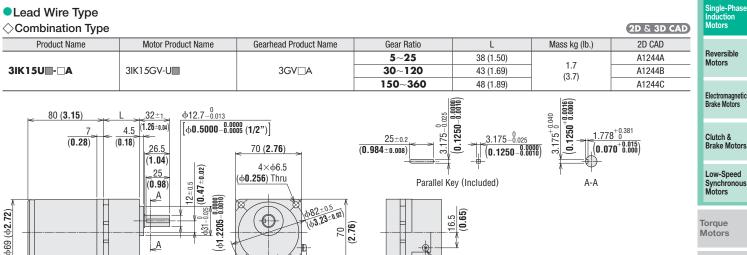
The actual speed is 2~20% less, depending on the load.

																	0	oppoi	raidoo.		ror raia		- ·
Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	7.2	6	5	Overview, Product
FIGUUGEName	Gear Ratio	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	250	300	360	Series
3IK15U □ -□A		0.47	0.57	0.71	0.85	1.2	1.4	1.7	2.4	2.7	3.3	4.5	5.4	6.8	8.1	9.0	10	10	10	10	10	10	
JIKI JUL-LA		4.1	5.0	6.2	7.5	10.6	12.3	15.0	21	23	29	39	47	60	71	79	88	88	88	88	88	88	Constant
																							Speed

Dimensions Unit = mm (in.)

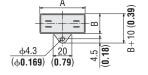
● Installation screws are included. Dimensions for installation screws → Page C-215

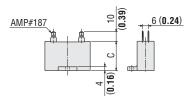
Lead Wire Type



Motor Leads 300 mm (12 in.) Length UL Style 3271, AWG20







				U	nit: mm (in.)
Product Name	Capacitor	Α	В	С	Mass
Combination Type	Product Name	A	D		g (oz.)
3IK15UA-⊟A	CH40FAUL2	37	18	27	26
JIK I JUA-	CH40FA0LZ	(1.46)	(0.71)	(1.06)	(0.92)
3IK15UC-⊟A	CH10BFAUL	37	18	27	27
JIK I JUC-	CHIOBRAOL	(1.46)	(0.71)	(1.06)	(0.95)

A capacitor cap is included

4 22.5°

5 max

• Either A or C indicating the power supply voltage is entered where the box 🔳 is located within the product name. A number indicating the gear ratio is entered where the box \Box is located within the product name.





Right-Angle Gearheads

Watertight, Dust-Resistant Motors

Motors

Three-Phase Induction Motors

Linear Heads

Brake Pack

Accessories

Installation

KII Series 25 W (1/30 HP) Frame Size: 80 mm (3.15 in.)



15 W (1/50 HP)

25 W (1/30 HP)

40 W

60 W

(1/19 HP)

(1/12 HP)

BH Series

200 W (1/4 HP)



Capacitor

μF

6.0

1.5

Terminal Box Type

Lead Wire Type

Specifications – Continuous Rating

)	Produc	t Name	Output Power	Voltage	Frequency	Current	Starting Torque	Rated Torque	Rated Speed
v	Terminal Box Type	Lead Wire Type	W (HP)	VAC	Hz	А	mN·m (oz-in.)	mN·m (oz-in.)	r/min
')	4IK25UAT2-□A	4IK25UA-⊟A	25 (1/30)	Single-Phase 110	60	0.44	120 (17.0)	170 (24)	1450
	4IK23UAI 2-0A	4IKZJUA-LA	23 (1/30)	Single-Phase 115	00	0.43	120 (17.0)	170 (24)	1450
v	4IK25UCT2-□A	4IK25UC-□A	25 (1/30)	Single-Phase 220	60	0.22	110 (15.6)	170 (24)	1450
")	41K25UC12-0A	4IKZJUC-LA	25 (1/30)	Single-Phase 230	00	0.22	120 (17.0)	170 (24)	1450

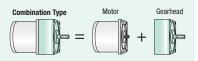
The values in the table are characteristics for the motor only.

90 w TP: This indicates that there is a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped.

(1/8 HP) When the motor temperature drops, the thermal protector closes and the motor restarts automatically. Be sure to turn the power supply off before inspecting.

Product Line

2-Pole High-Speed 40-150 W (1/19-1/5 HP) Type Motor and gearhead are delivered pre-assembled. The combination of motors and gearheads can be changed and they are also available separately. In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.



• Combination Type Price includes motor and gearhead.

\bigcirc Terminal Box Type

Product Name	Gear Ratio	List Price
	5, 6, 7. 5, 9, 12.5, 15, 18	\$162.00
4IK25UAT2-□A	25, 30, 36	\$168.00
	50, 60, 75, 90, 100, 120, 150, 180	\$175.00
	250, 300, 360	\$222.00
	5, 6, 7. 5, 9, 12.5, 15, 18	\$165.00
4IK25UCT2-□A	25, 30, 36	\$171.00
	50, 60, 75, 90, 100, 120, 150, 180	\$178.00
	250, 300, 360	\$225.00
- The following items are	included with each product.	
	niciadea with each product.	

Motor, Gearhead, Capacitor, Capacitor Cap, Installation Screws, Parallel Key, Operating Manual

♦ Lead Wire Type

Product Name	Gear Ratio	List Price
	5, 6, 7. 5, 9, 12.5, 15, 18	\$140.00
4IK25UA-⊟A	25, 30, 36	\$146.00
4IK23UA-⊟A	50, 60, 75, 90, 100, 120, 150, 180	\$153.00
	250, 300, 360	\$200.00
	5, 6, 7.5 , 9, 12.5, 15, 18	\$144.00
4IK25UC-□A	25, 30, 36	\$150.00
41K23UC-∐A	50, 60, 75, 90, 100, 120, 150, 180	\$157.00
	250, 300, 360	\$204.00

Permissible Torque

• The speed is calculated by dividing the motor's synchronous speed (60 Hz: 1800 r/min) by the gear ratio. The actual speed is 2~20% less, depending on the load.

Unit: Upper values: N·m/Lower values: Ib-in.

Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	7.2	6	5
FIGUUGENdille	Gear Ratio	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	250	300	360
4IK25U		0.77	0.92	1.1	1.4	1.9	2.3	2.8	3.8	4.4	5.3	7.3	8.8	11.0	13.2	14.6	16	16	16	16	16	16
4IK250		6.8	8.1	9.7	12.3	16.8	20	24	33	38	46	64	77	97	116	129	141	141	141	141	141	141

• Either A or C indicating the power supply voltage is entered where the box 🔲 is located within the product name.

• A code (T2) indicating the terminal box type is entered where the box 🗌 is located within the product name.

A number indicating the gear ratio is entered where the box \Box is located within the product name.



c**A**us @ CE

Overheat

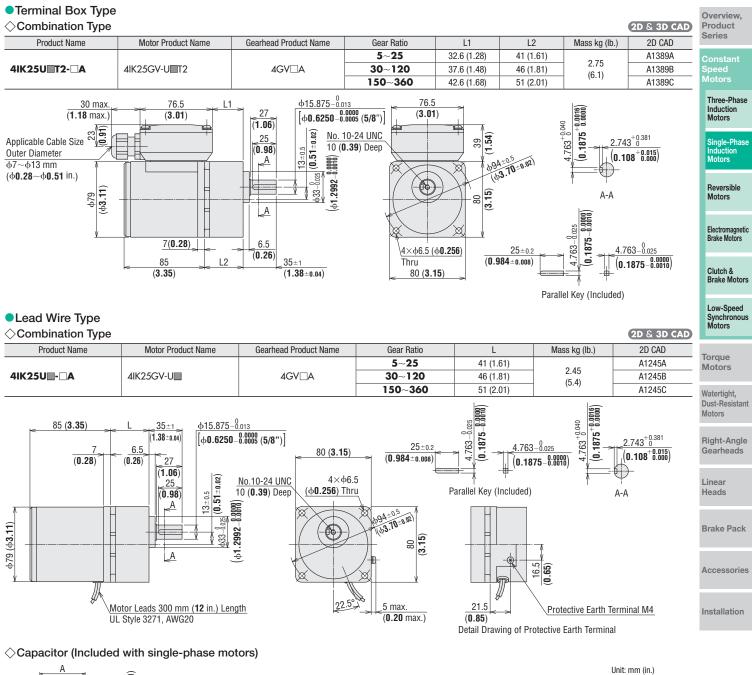
Protection Device

TP

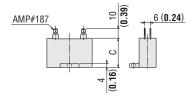
Dimensions Unit = mm (in.)

● Installation screws are included. Dimensions for installation screws → Page C-215

● The terminal box cable outlet can be rotated and affixed in 4 possible directions. Details about terminal boxes → Page C-214



	33
	0.3
	10
of 4.3 20 د 🕮	-* +
$(\phi 0.169)$ (0.79) (0.79) (0.79)	
(φ0.103) (0.73)	



Produc	t Name	Capacitor	Δ	В	С	Mass
Terminal Box Type	Lead Wire Type	Product Name	A	D		g (oz.)
4IK25UAT2-□A	4IK25UA-⊟A	CH60CFAUL2	38	21	31	35
4IKZJUAI Z-LA	4IKZJUA-LA	CHOUCFAULZ	(1.50)	(0.83)	(1.22)	(1.24)
4IK25UCT2-□A	4IK25UC-⊟A	CH15BFAUL	38	21	31	37
	4IK2JUC-	CHIJBFAUL	(1.50)	(0.83)	(1.22)	(1.31)

A capacitor cap is included.

• Either **A** or **C** indicating the power supply voltage is entered where the box is located within the product name. A number indicating the gear ratio is entered where the box is located within the product name.

KII Series 40 W (1/19 HP) Frame Size: 90 mm (3.54 in.)



15 W (1/50 HP)

25 W

(1/8 HP)

BH Series

200 W (1/4 HP)

Specifications – Continuous Rating

Product Name Output Power Voltage Frequency Current Starting forque Rated forque Rated Speed Capacitor P	Overheat
	Protection
	Device
(1/19 HP) 5IK40UAT2-□A 5IK40UAT-□A 4 0 (1/19) 5IK40UAT-□A 5IK40UAT-□A 5IK4	
Single-Phase 115 00 0.65 200 (28) 260 (36) 1500 9.0	TP
60 W 5IK40UCT2-□A 5IK40UC-□A 40 (1/19) Single-Phase 220 60 0.33 200 (28) 260 (36) 1500 2.0	IF
(1/12 HP) 5IK40UCT2-□A 5IK40UC-□A 40 (1/19) Single-Phase 230 60 0.32 200 (28) 260 (36) 1500	

The values in the table are characteristics for the motor only.

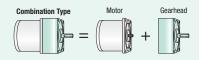
TP: This indicates that there is a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped. 90 W

When the motor temperature drops, the thermal protector closes and the motor restarts automatically. Be sure to turn the power supply off before inspecting.

Product Line

2-Pol High-Speed 40-150 W Combination (1/19-1/5 HP) Туре

Motor and gearhead are delivered pre-assembled. The combination of motors and gearheads can be changed and they are also available separately. In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.



Terminal Box Type

Lead Wire Type

• Combination Type Price includes motor and gearhead.

Product Name	Gear Ratio	List Price
	5, 6, 7. 5, 9, 12.5, 15, 18	\$191.00
5IK40UAT2-	25, 30, 36	\$198.00
	50, 60, 75, 90, 100, 120, 150, 180	\$205.00
250, 3	250, 300	\$283.00
	5, 6, 7. 5, 9, 12.5, 15, 18	\$194.00
	25, 30, 36	\$201.00
5IK40UCT2-□A	50, 60, 75, 90, 100, 120, 150, 180	\$208.00
	250, 300	\$286.00

♦ Lead Wire Type

Product Name	Gear Ratio	List Price
	5, 6, 7. 5, 9, 12.5, 15, 18	\$169.00
5IK40UA-□A	25, 30, 36	\$176.00
	50, 60, 75, 90, 100, 120, 150, 180	\$183.00
-	250, 300	\$261.00
	5, 6, 7. 5, 9, 12.5, 15, 18	\$173.00
5IK40UC-⊟A	25, 30, 36	\$180.00
	50, 60, 75, 90, 100, 120, 150, 180	\$187.00
	250, 300	\$265.00

Permissible Torque

The speed is calculated by dividing the motor's synchronous speed (60 Hz: 1800 r/min) by the gear ratio. The actual speed is $2\sim 20\%$ less, depending on the load.

Unit: Upper values: N·m/Lower values: Ib-in.

Product Name -	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	7.2	6
	Gear Ratio	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	250	300
5IK40U		1.2	1.4	1.8	2.1	2.9	3.5	4.2	5.6	6.7	8.0	11.2	13.4	16.8	20.1	22.4	25.3	30	30	30	30
		10.6	12.3	15.9	18.5	25	30	37	49	59	70	99	118	148	177	198	220	260	260	260	260

• Either A or C indicating the power supply voltage is entered where the box 🔲 is located within the product name.

Page

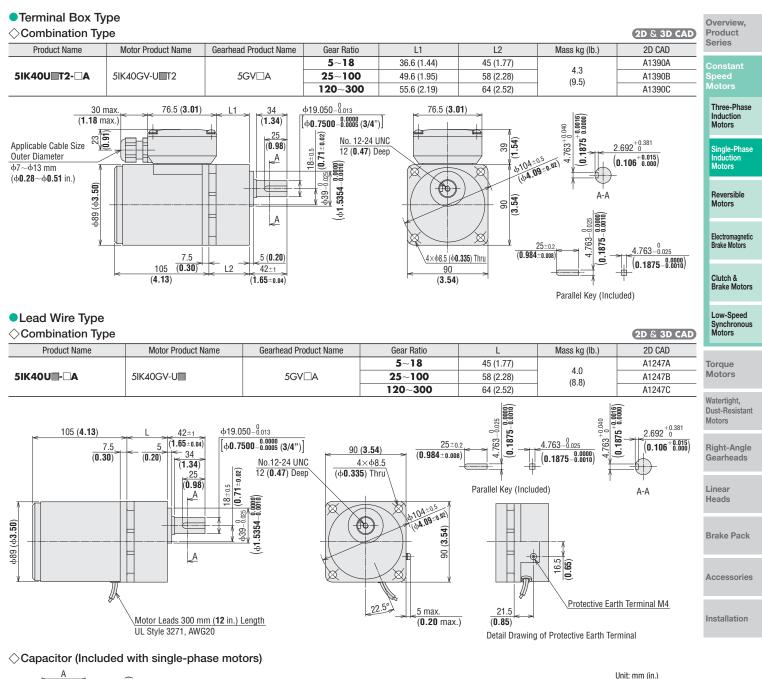
• A code (T2) indicating the terminal box type is entered where the box 🗌 is located within the product name.

A number indicating the gear ratio is entered where the box \Box is located within the product name.

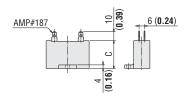
Dimensions Unit = mm (in.)

● Installation screws are included. Dimensions for installation screws → Page C-215

● The terminal box cable outlet can be rotated and affixed in 4 possible directions. Details about terminal boxes → Page C-214



 $\begin{array}{c} & \overset{A}{\longrightarrow} \\ & \overset{A}{\longrightarrow} \\ & \overset{A}{\longrightarrow} \\ & \overset{A}{\longrightarrow} \\ & \overset{B}{\longrightarrow} \\$



Produc	t Name	Capacitor	Α	В	С	Mass
Terminal Box Type	Lead Wire Type	Product Name	A	D		g (oz.)
5IK40UAT2-□A	5IK40UA-⊟A	CH90CFAUL2	48	22.5	31.5	45
JIK4UUAI 2-LA	SIK400A-LA	CHFUCIAULZ	(1.89)	(0.89)	(1.24)	(1.59)
5IK40UCT2-□A	5IK40UC-□A	CH20BFAUL	48	19	29	36
		CHZUBIAUL	(1.89)	(0.75)	(1.14)	(1.27)

A capacitor cap is included.

Either A or C indicating the power supply voltage is entered where the box is located within the product name. A number indicating the gear ratio is entered where the box is located within the product name.



KII Series 60 W (1/12 HP) Frame Size: 90 mm (3.54 in.)



15 W (1/50 HP)

25 W



Terminal Box Type

Lead Wire Type

Specifications – Continuous Rating

(1/30 HP)	Product Name Output		Output Power	Voltage	Frequency	Current Starting Torque		Rated Torque	Rated Speed	Capacitor	Overheat Protection
40 W	Terminal Box Type	Lead Wire Type	W (HP)	VAC	Hz	А	mN∙m (oz-in.)	mN∙m (oz-in.)	r/min	μF	Device
(1/19 HP)	5IK60UAT2-⊡A	5IK60UA-⊟A	60 (1/12)	Single-Phase 110	60	1.09	320 (45)	405 (57)	1450	16	
	JIKOUUAI 2-	JIKOUUA-		Single-Phase 115	00	1.09	320 (45)	405 (57)	1450	10	TP
60 W	5IK60UCT2-⊡A	5IK60UC-⊡A	60 (1/12)	Single-Phase 220	60	0.53	320 (45)	405 (57)	1450	4.0	IF
(1/12 HP)	SIKOUUCIZ-LA		00 (1/12)	Single-Phase 230	00	0.52	320 (45)	405 (57)	1450	4.0	

The values in the table are characteristics for the motor only.

TP: This indicates that there is a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped.

When the motor temperature drops, the thermal protector closes and the motor restarts automatically. Be sure to turn the power supply off before inspecting.

BH Series 200 W (1/4 HP)	Product
2-Pole ligh-Speed 40-150 W	Combination

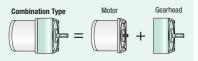
(1/19-1/5 HP)

90 W

(1/8 HP)

Product Line

Motor and gearhead are delivered pre-assembled. The combination of motors and gearheads can be changed and they are also available separately. In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.



Combination Type Price includes motor and gearhead.

Type

Product Name	Gear Ratio	List Price
	5, 6, 7. 5, 9, 12.5, 15, 18	\$245.00
5IK60UAT2-□A	25, 30, 36, 50, 60, 75, 90, 100	\$256.00
	120, 150, 180	\$266.00
	250, 300	\$300.00
	5, 6, 7. 5, 9, 12.5, 15, 18	\$250.00
5IK60UCT2-□A	25, 30, 36, 50, 60, 75, 90, 100	\$261.00
	120, 150, 180	\$271.00
	250, 300	\$305.00
- The following items are in	cluded with each product.	
The following items are in	ciudeu with each product.	

Motor, Gearhead, Capacitor, Capacitor Cap, Installation Screws, Parallel Key, Operating Manual

⇒Lead Wire Type

× ,,						
Product Name	Gear Ratio	List Price				
	5, 6, 7. 5, 9, 12.5, 15, 18	\$224.00				
	25, 30, 36, 50, 60, 75, 90, 100	\$235.00				
5IK60UA-□A	120, 150, 180	\$245.00				
	250, 300	\$279.00				
	5, 6, 7. 5, 9, 12.5, 15, 18	\$228.00				
	25, 30, 36, 50, 60, 75, 90, 100	\$239.00				
5IK60UC-□A	120, 150, 180	\$249.00				
	250, 300	\$283.00				

Permissible Torque

The speed is calculated by dividing the motor's synchronous speed (60 Hz: 1800 r/min) by the gear ratio. The actual speed is 2~20% less, depending on the load.

l Init•	IInner	values.	N·m/Lower	r values.	lh-in

Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	7.2	6
	Gear Ratio	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	250	300
5IK60U		1.8	2.2	2.7	3.3	4.6	5.5	6.6	8.7	10.4	12.5	17.4	20.9	26.1	30	30	30	30	30	30	30
		15.9	19.4	23	29	40	48	58	76	92	110	153	184	230	260	260	260	260	260	260	260

• Either A or C indicating the power supply voltage is entered where the box 🔲 is located within the product name.

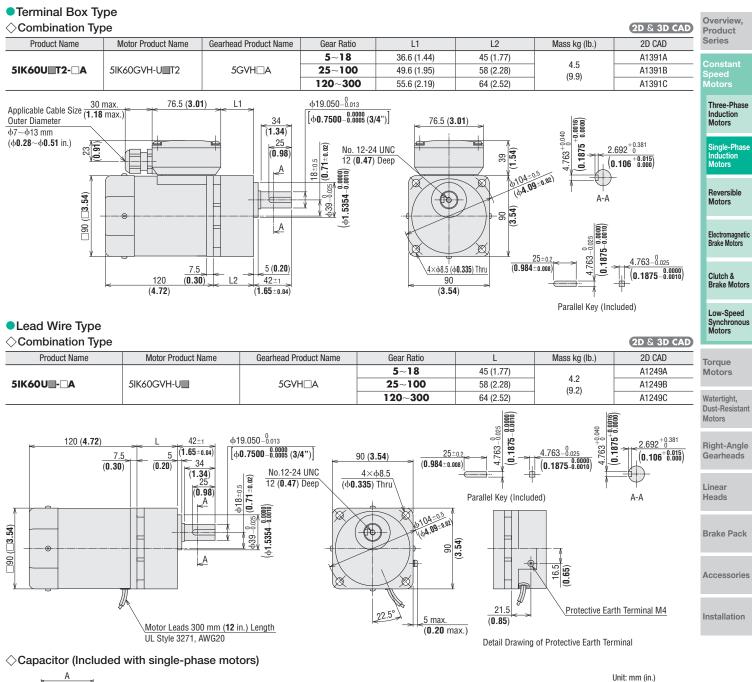
• A code (T2) indicating the terminal box type is entered where the box 🗌 is located within the product name.

A number indicating the gear ratio is entered where the box \Box is located within the product name.

Dimensions Unit = mm (in.)

● Installation screws are included. Dimensions for installation screws → Page C-215

The terminal box cable outlet can be rotated and affixed in 4 possible directions. Details about terminal boxes -> Page C-214



<u> </u>	7 B B	B+15 (0.59)	
AMP#187	(0.16) C 10 (0.39)	R10 9.39	6 (0.24)

						. ,
Produc	t Name	Capacitor	Α	В	С	Mass
Terminal Box Type	Lead Wire Type	Product Name	A	D	U	g (oz.)
5IK60UAT2-□A	5IK60UA-□A	CH160CFAUL2	58	23.5	37	71
SINOUUAI 2-LA	SIKOUUA-LA	CHIOUCFAULZ	(2.28)	(0.93)	(1.46)	(2.5)
5IK60UCT2-□A	5IK60UC-□A	CH40BFAUL	58	23.5	37	73
SIKOUUCI2-LA		CH40BFA0L	(2.28)	(0.93)	(1.46)	(2.6)

A capacitor cap is included.

KII Series 90 W (1/8 HP) Frame Size: 90 mm (3.54 in.)



15 W (1/50 HP)

25 W

90 W

(1/8 HP)

BH Series

200 W (1/4 HP)

2-Pol



Terminal Box Type

Lead Wire Type

Specifications – Continuous Rating

(4 (00 UD)	-			•							\smile
(1/30 HP)	Produc	Product Name		Voltage	Frequency	Current	Starting Torque	Rated Torque	Rated Speed	Capacitor	Overheat Protection
40 W	Terminal Box Type	Lead Wire Type	W (HP)	VAC	Hz	А	mN·m (oz-in.)	mN·m (oz-in.)	r/min	μF	Device
(1/19 HP)	5IK90UAT2-□A	5IK90UA-⊟A	90 (1/8)	Single-Phase 110	60	1.44	450 (63)	585 (83)	1500	20	
		51K700A-LA 50 (1/6)		Single-Phase 115	00	1.44	450 (63)	585 (83)	1500	20	ТР
60 W	5IK90UCT2-□A	5IK90UC-⊡A	90 (1/8)	Single-Phase 220	60	0.71	450 (63)	605 (85)	1450	5.0	IF
(1/12 HP) 5IK90UCT2			90 (1/6)	Single-Phase 230	00	0.71	450 (63)	605 (85)	1450	5.0	

The values in the table are characteristics for the motor only.

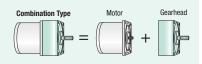
TP: This indicates that there is a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped.

When the motor temperature drops, the thermal protector closes and the motor restarts automatically. Be sure to turn the power supply off before inspecting.

Product Line

High-Speed 40-150 W Combination (1/19-1/5 HP) Туре

Motor and gearhead are delivered pre-assembled. The combination of motors and gearheads can be changed and they are also available separately. In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.



Combination Type Price includes motor and gearhead.

Product Name	Gear Ratio	List Price
	5, 6, 7. 5, 9, 12.5, 15, 18	\$265.00
5IK90UAT2-□A	25 , 30 , 36 , 50 , 60 ,	\$285.00
	75, 90, 100, 120, 150, 180	\$295.00
	5, 6, 7. 5, 9, 12.5, 15, 18	\$269.00
5IK90UCT2-□A	25 , 30 , 36 , 50 , 60 ,	\$289.00
	75, 90, 100, 120, 150, 180	\$299.00

	vire	ype
--	------	-----

Product Name	Gear Ratio	List Price
	5, 6, 7. 5, 9, 12.5, 15, 18	\$243.00
5IK90UA-□A	25, 30, 36, 50, 60 ,	\$263.00
	75, 90, 100, 120, 150, 180	\$273.00
	5, 6, 7. 5, 9, 12.5, 15, 18	\$248.00
5IK90UC-□A	25 , 30 , 36 , 50 , 60 ,	\$268.00
	75, 90, 100, 120, 150, 180	\$278.00

The following items are included with each product.

Motor, Gearhead, Capacitor, Capacitor Cap, Installation Screws, Parallel Key, Operating Manual

Permissible Torque

The speed is calculated by dividing the motor's synchronous speed (60 Hz: 1800 r/min) by the gear ratio.

The actual speed is $2\sim 20\%$ less, depending on the load.

Unit: Upper values: N·m/Lower values: Ib-in	Unit: Upper	values:	N·m/Lower	values:	lb-in.
---	-------------	---------	-----------	---------	--------

Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
FIDUULLINAIIIE	Gear Ratio	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
5IK90UA - A		2.6	3.2	3.9	4.7	6.6	7.9	9.1	12.6	15.1	18.1	25.2	30.2	35.5	40	40	40	40	40
		23	28	34	41	58	69	80	111	133	160	220	260	310	350	350	350	350	350
5IK90UC - A		2.7	3.3	4.1	4.9	6.8	8.2	9.4	13.0	15.6	18.7	26.0	31.2	36.8	40	40	40	40	40
		23	29	36	43	60	72	83	115	138	165	230	270	320	350	350	350	350	350

• A code (T2) indicating the terminal box type is entered where the box 🗌 is located within the product name.

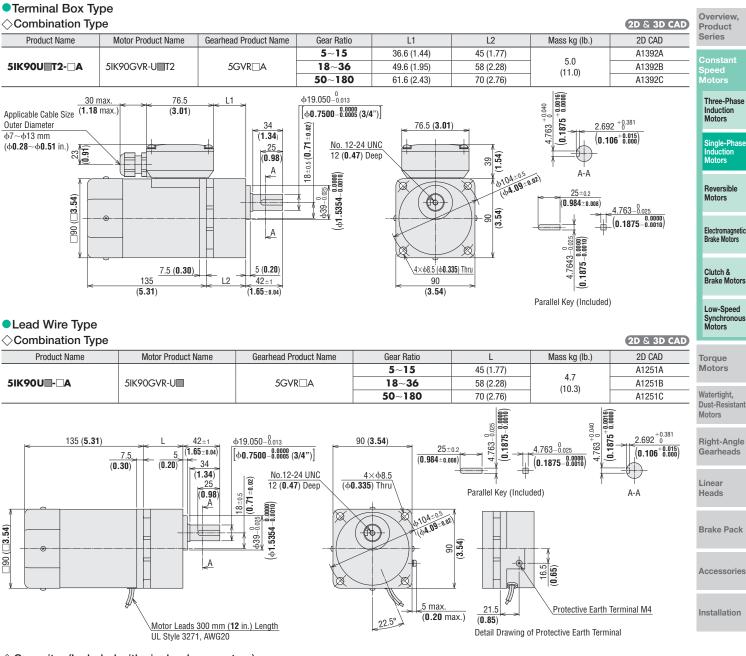
Page

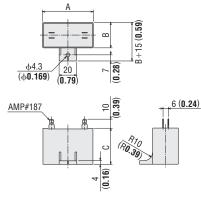
A number indicating the gear ratio is entered where the box \Box is located within the product name.

Dimensions Unit = mm (in.)

● Installation screws are included. Dimensions for installation screws → Page C-215

● The terminal box cable outlet can be rotated and affixed in 4 possible directions. Details about terminal boxes → Page C-214





Product Name Capacitor Mass А В С Terminal Box Type Lead Wire Type Product Name g (oz.) 58 29 41 91 5IK90UAT2-DA 5IK90UA-🗆 A CH200CFAUL2 (2.28) (1.61)(1.14)(3.2) 58 29 41 93 5IK90UCT2-5IK90UC-CH50BFAUL (2.28) (1.14)(1.61)(3.3)

A capacitor cap is included.

• Either **A** or **C** indicating the power supply voltage is entered where the box **I** is located within the product name. A number indicating the gear ratio is entered where the box **I** is located within the product name.



Unit: mm (in.)

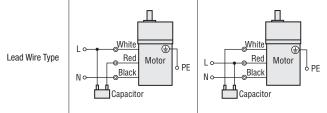
Connection Diagrams

Parallel Shaft Combination Type

		n	
	Output Power	Gear	Ratio
6 W (1/125 HP)	6 W (1/125 HP) 15 W (1/50 HP) 25 W (1/30 HP)	Gear Ratio: 5~25, 150~360	Gear Ratio: 30~120
15 W (1/50 HP)	40 W (1/19 HP) 60 W (1/12 HP)	Gear Ratio: 5~18 , 120~300	Gear Ratio: 25~100
25 W	90 W (1/8 HP)	Gear Ratio: 5~15, 75~180	Gear Ratio: 18~60
(1/30 HP)			×>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
40 W (1/19 HP)	Rotation Direction		G
60 W (1/12 HP)			CW CW
		Single-Phase Motor	
90 W (1/8 HP)			
BH Series 200 W (1/4 HP)	Terminal Box Type		
2-Pole High-Speed 40-150 W (1/19-1/5 HP)		Capacitor	
	Lead Wire Type	Lo <u>Red</u> No <u>Black</u> Capacitor	L O White Red N O Black Capacitor

Output Power	Gear	Ratio
6 W (1/125 HP) 15 W (1/50 HP) 25 W (1/30 HP)	Gear Ratio: 5~25, 150~360	Gear Ratio: 30~120
40 W (1/19 HP) 60 W (1/12 HP)	Gear Ratio: 5~18, 120~300	Gear Ratio: 25~100
90 W (1/8 HP)	Gear Ratio: 5~15 , 75~180	Gear Ratio: 18~60
Rotation Direction		CCW
	Single-Phase Motor	
Terminal Box Type	Lo No Capacitor	Lo U2 No U2 No D2 Notor Capacitor
	п	

♦CCW Rotation



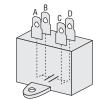
Note

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, the motor may ignore the reversing command or change its direction of rotation after some delay.

How to Connect a Capacitor

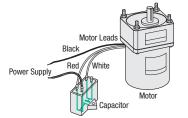
The capacitor has 4 terminals: terminal A is connected internally to terminal B, and terminal C is connected internally to terminal D, as shown in the illustration. Electrically, this creates 2 terminals.



Inner Wiring Diagram for 4-Terminal Capacitor

· Connecting method of capacitor and motor

(For induction motor/clockwise rotation)



List of Motor and Gearhead Combinations

Terminal Box Type

Туре	Product Name	Motor Product Name	Gearhead Product Name
	4IK25UAT2-□A	4IK25GV-UAT2	4GV⊟A
	4IK25UCT2-□A	4IK25GV-UCT2	4GVLA
	5IK40UAT2-🗆 A	5IK40GV-UAT2	5GV⊓A
Terminal Box Type	5IK40UCT2-□A	5IK40GV-UCT2	JUV
Terminal box Type	5IK60UAT2-🗆 A	5IK60GVH-UAT2	5GVH⊓A
	5IK60UCT2-□A	5IK60GVH-UCT2	JGVILA
	5IK90UAT2-🗆 A	5IK90GVR-UAT2	5GVR□A
	5IK90UCT2-	5IK90GVR-UCT2	JGVKLA

Lead Wire Type

Туре	Product Name	Motor Product Name	Gearhead Product Name				
	2IK6UA-□A	2IK6GV-UA		Overview, Product			
	2IK6UC-□A	2GV A					
	3IK15UA-🗆 A	3IK15GV-UA	3GV⊟A				
	3IK15UC-	3IK15GV-UC	3GV_A	Constant			
	4IK25UA-🗆 A			Speed Motors			
Lood Wine Truce	4IK25UC-	4IK25GV-UC	4GV⊟A	MOLOIS			
Lead Wire Type	5IK40UA-🗆 A	5IK40GV-UA		Three-Phase			
	5IK40UC-	5IK40GV-UC	5GV□A	Induction Motors			
	5IK60UA-🗆 A	5IK60GVH-UA		Motors			
	5IK60UC-	5IK60GVH-UC	5GVH⊡A	Single-Phase			
	5IK90UA-🗆 A	5IK90GVR-UA		Induction Motors			
	5IK90UC-	5IK90GVR-UC	5GVR□A	Motors			
-							

Reversible Motors

Electromagnetic Brake Motors

Clutch & Brake Motors

Low-Speed Synchronous Motors

Torque Motors

Watertight, Dust-Resistant Motors

Right-Angle Gearheads

Linear Heads

Brake Pack

Accessories

Installation

ullet A number indicating the gear ratio is entered where the box \Box is located within the product name.





.

High Power Induction Motors **BH** Series 200 W (1/4 HP) Frame Size: 104 mm (14.09 in.)

6 W (1/125 HP)

Features

25 W (1/30 HP)

15 W (1/50 HP)

Smallest frame size among 200 W (1/4 HP) motors

High Power 200 W (1/4 HP)

Hypoid Gear Right-Angle Gearheads

40 W (1/19 HP) Right-angle gearheads employ hypoid gears. Hollow shafts and solid shafts are available to enable space-saving.

Tapped Hole at the Shaft End

The gearhead shafts feature a tapped hole for convenient connection with loads.

"Combination Type" for Easy Installation

The combination type comes with the motor and gearhead pre-assembled. This enables easy installation in equipment.

60 W (1/12 HP)

Specifications – Continuous Rating

90 W Product Name Output (1/8 HP) Starting Torque Voltage Frequency Current Rated Torque Rated Speed Capacitor Overheat Combination Type Power Protection (): Round Shaft Type W N·m N·m BH Series Device HP VAC μF 200 W Terminal Box Type Hz A oz-in oz-in r/min Cable Type (1/4 HP) 0.88 BHI62FT- RH BHI62F- RH Single-Phase 110 BHI62FT- RA BHI62F-200 124 1.27 2-Pol 3 1500 40 TP 60 High-Speed 40-150 W BHI62FT-BHI62F-1/40.98 180 Single-Phase 115 (BHI62FT-A) (BHI62F-A) 139 (1/19-1/5 HP 1.52 50 1250 210 Single-Phase 220 1.27 BHI62ET- RH BHI62E- RH 60 1500 180 BHI62ET- RA BHI62ERA 200 0.98 TP 1.5 10 BHI62ET-BHI62E-1/4139 1 52 50 1250 (BHI62ET-A) (BHI62E-A) 210 Single-Phase 230 1.27 60 1500 180

A number indicating the gear ratio is entered where the box 🗌 is located within the product name. The values for each specification applies to the motor only.

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

TP: Contains a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped.

When the motor temperature drops, the thermal protector closes and the motor restarts. Be sure to turn the motor power off before inspecting.

Product Line

Combination Type Motor and gearhead are delivered pre-assembled.

The combination of motors and gearheads can be changed and they are also available separately. In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.

Combination Type

◇Right-Angle Shaft

Туре	Voltage	Product Name	Gear Ratio	List Price	
	Single-Phase 110/115 VAC		5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36	\$426.00	
Hollow Shaft	Single-Fildse 110/115 VAG	впю2гі-шкп	50, 60, 75, 90, 100, 120, 150, 180	\$446.00	
Terminal Box	Single-Phase 220/230 VAC		5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36	\$433.00	
	Sillyle-Fildse 220/230 VAG	впю2ет-шкп	50, 60, 75, 90, 100, 120, 150, 180	\$453.00	
	Single-Phase 110/115 VAC		5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36	\$396.00	
Hollow Shaft	Single-Filase 110/113 VAG		50, 60, 75, 90, 100, 120, 150, 180	\$416.00	
Cable	Single-Phase 220/230 VAC		5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36	\$403.00	
	Single-Fildse 220/230 VAG	впю2екп	50, 60, 75, 90, 100, 120, 150, 180	\$423.00	
	Single-Phase 110/115 VAC		5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36	\$420.00	
Solid Shaft	Single-Filase 110/113 VAG		50, 60, 75, 90, 100, 120, 150, 180	\$440.00	
Terminal Box	Single-Phase 220/230 VAC		5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36	\$427.00	
	Sillyle-Fildse 220/230 VAG		50, 60, 75, 90, 100, 120, 150, 180	\$447.00	
	Single-Phase 110/115 VAC		5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36	\$390.00	
Solid Shaft	Sillyle-Flidse 110/115 VAC		50, 60, 75, 90, 100, 120, 150, 180	\$410.00	The following items are included with each product.
Cable	Single-Phase 220/230 VAC		5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36	\$397.00	Motor, Gearhead, Capacitor, Capacitor Cap, Parallel Key, Operating
	Sillyle-Filase 220/230 VAG		50, 60, 75, 90, 100, 120, 150, 180	\$417.00	Manual

ullet A number indicating the gear ratio is entered where the box \Box is located within the product name.

Page



◇Parallel Shaft

Туре	Voltage	Product Name	Gear Ratio	List Price
			3, 3.6, 5, 6, 7.5, 9	\$364.00
	Single-Phase 110/115 VAC	BHI62FT-	12.5, 15, 18, 25, 30, 36	\$374.00
Parallel Shaft			50, 60, 75, 90, 100, 120, 150, 180	\$383.00
Terminal Box			3, 3.6, 5, 6, 7.5, 9	\$371.00
	Single-Phase 220/230 VAC	BHI62ET-	12.5, 15, 18, 25, 30, 36	\$381.00
			50, 60, 75, 90, 100, 120, 150, 180	\$391.00
			3, 3.6, 5, 6, 7.5, 9	\$334.00
	Single-Phase 110/115 VAC	BHI62F-	12.5, 15, 18, 25, 30, 36	\$344.00
Parallel Shaft			50, 60, 75, 90, 100, 120, 150, 180	\$354.00
Cable			3, 3.6, 5, 6, 7.5, 9	\$342.00
	Single-Phase 220/230 VAC	BHI62E-	12.5, 15, 18, 25, 30, 36	\$351.00
			50, 60, 75, 90, 100, 120, 150, 180	\$361.00

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

The following items are included with each product.

Motor, Gearhead, Capacitor, Capacitor Cap, Installation Screws, Parallel Key, Operating Manual

Round Shaft Type

Туре	Voltage	Product Name	List Price
Terminal Box	Single-Phase 110/115 VAC	BHI62FT-A	\$214.00
	Single-Phase 220/230 VAC	BHI62ET-A	\$221.00
Cable	Single-Phase 110/115 VAC	BHI62F-A	\$184.00
Caple	Single-Phase 220/230 VAC	BHI62E-A	\$191.00

The following items are included with each product.

Motor, Capacitor, Capacitor Cap, Operating Manual

Gearmotor – Torgue Table for Combination Type

• Enter the code that represents the terminal box type "**T**" in the box \Box within the product name.

 \bullet A number indicating the gear ratio is entered where the box \Box is located within the product name.

• The speed is calculated by dividing the motor's synchronous speed (50 Hz: 1500 r/min, 60 Hz: 1800 r/min) by the gear ratio.

The actual speed is 2~20% less than the displayed value, depending on the load.

• Decimal gearheads are not available for the **BH** series.

Right-Angle Shaft 50 Hz

0 0																				
Product Name	Speed r/min	300	250	200	167	120	100	83	60	50	42	30	25	20	17	15	12.5	10	8.3	Right-Ar Gearhea
	Gear Ratio	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	
BHI62E - RH, BHI62E - RA		5.5	6.7	8.3	10.0	13.9	16.6	20.0	27.7	33.3	36.0	40.0	43.0	47.0	51.5	54.5	60	60	60	Linear
	1	48	59	73	88	123	146	177	240	290	310	350	380	410	450	480	530	530	530	Heads

Right-Angle Shaft 60 Hz

Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	Brake Pack
	Gear Ratio	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	
BHI62F		4.6	5.6	7.0	8.3	11.6	13.9	16.7	23.2	27.8	33.4	40.0	43.0	47.0	51.5	54.5	60	60	60	Accessories
BHI62E 🛄 - 🗌 RH, BHI62E 🛄 - 🗌 RA		40	49	61	73	102	123	147	200	240	290	350	380	410	450	480	530	530	530	

Parallel Shaft 50 Hz

Product Name	Speed r/min	500	417	300	250	200	167	120	100	83	60	50	42	30	25	20	17	15	12.5	10	8.3	
	Gear Ratio	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	
BHI62E		4.1 36	4.9 43	6.8 60	8.2 72	10.3 91	12.3 108	16.3 144	19.6 173	23.5 200	32.7 280	39.2 340	40 350									

Parallel Shaft 60 Hz

Product Name	Speed r/min	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
	Gear Ratio	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
BHI62F 🔲 - 🗌 , BHI62I	E 🔲 - 🗌	3.4 30	4.1 36	5.7 50	6.9 61	8.6 76	10.3 91	13.7 121	16.4 145	19.7 174	27.3 240	32.8 290	39.3 340	40 350							

Permissible Radial Load and Permissible Axial

Combination Type → Page C-17 Round Shaft Type → Page C-17

Permissible Inertia J of Gearhead

→ Page C-18



Overview, Product Series

Speed Motors

Three-Phase Induction Motors

Single-Phase Induction Motors

Reversible Motors

Electromagnetic Brake Motors

Clutch & Brake Motors

Low-Speed Synchronous Motors

Torque Motors

Watertight, Dust-Resistant Motors

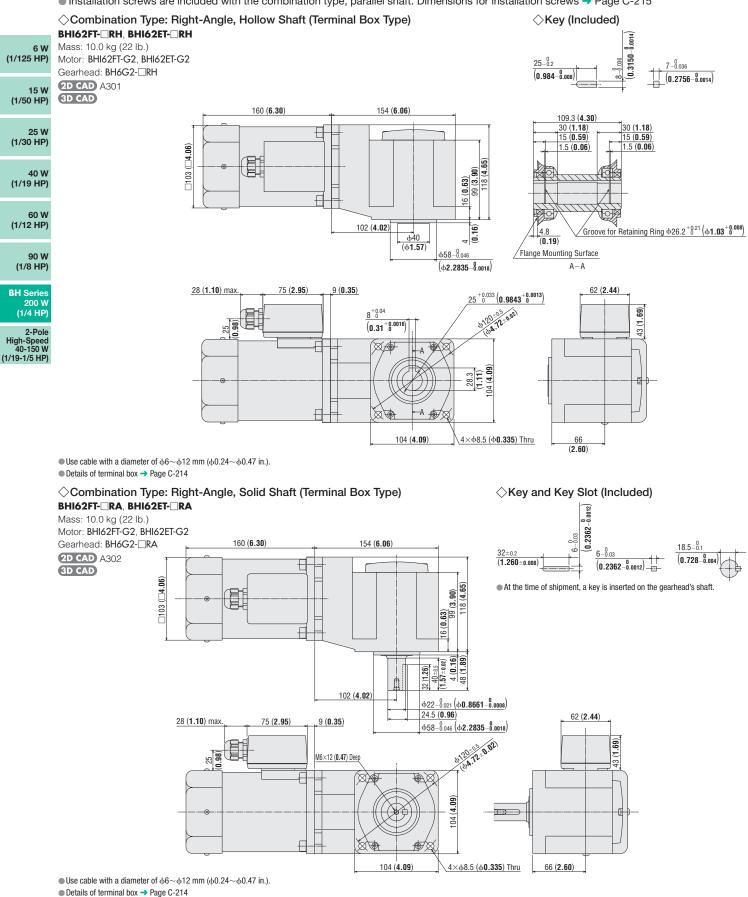
Right-Angle Gearheads
Linear

Installation

Unit: Upper values: N·m/Lower values: Ib-in

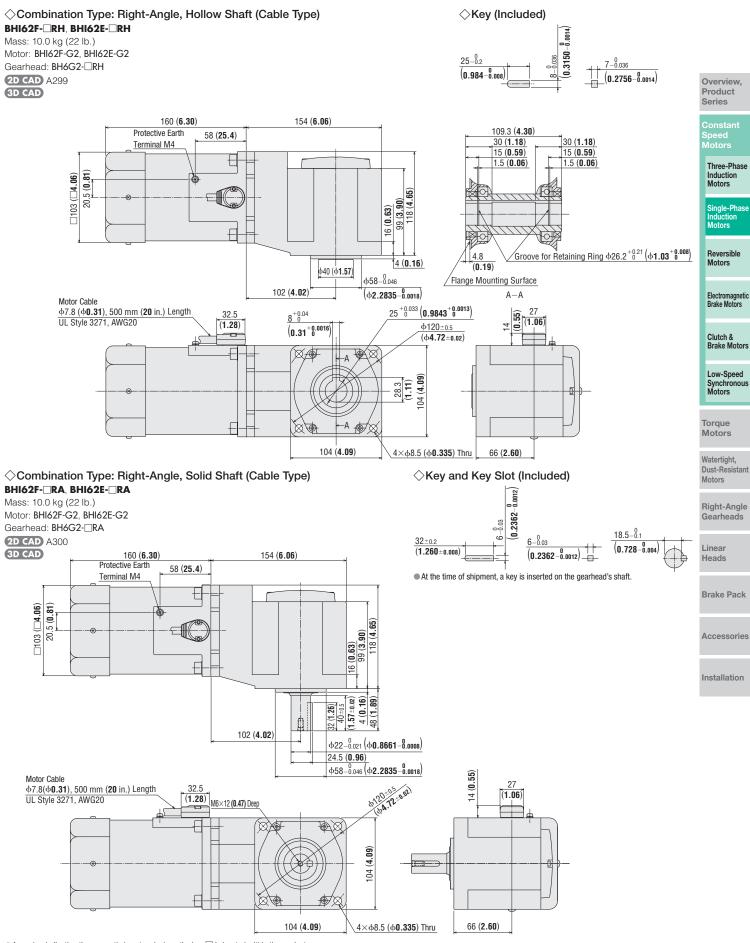
Dimensions Unit = mm (in.)

● Installation screws are included with the combination type, parallel shaft. Dimensions for installation screws → Page C-215



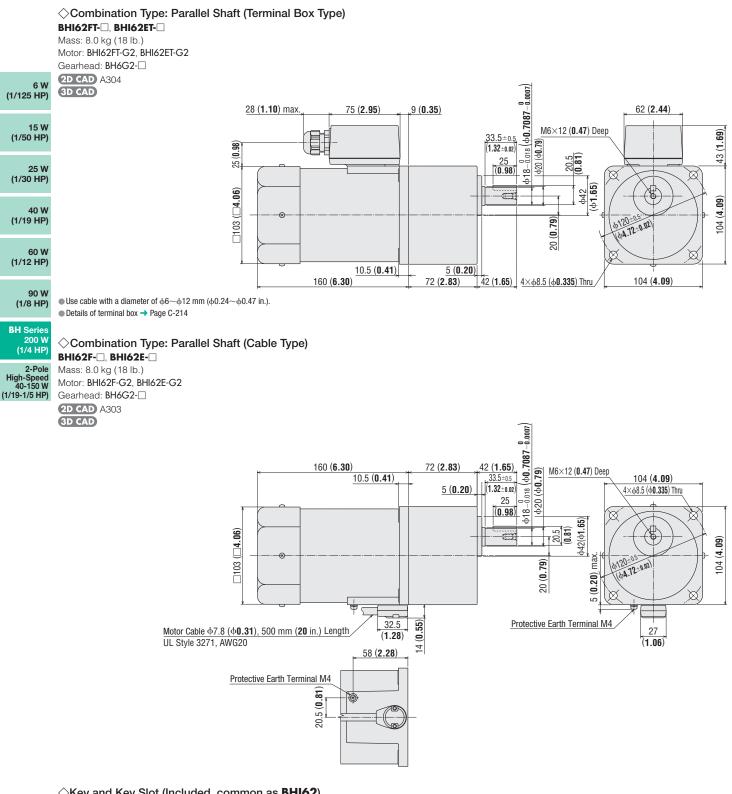
ullet A number indicating the gear ratio is entered where the box \Box is located within the product name.

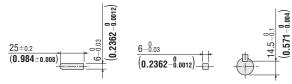
Page



ullet A number indicating the gear ratio is entered where the box \Box is located within the product name.

C-138 Single-Phase Induction Motors





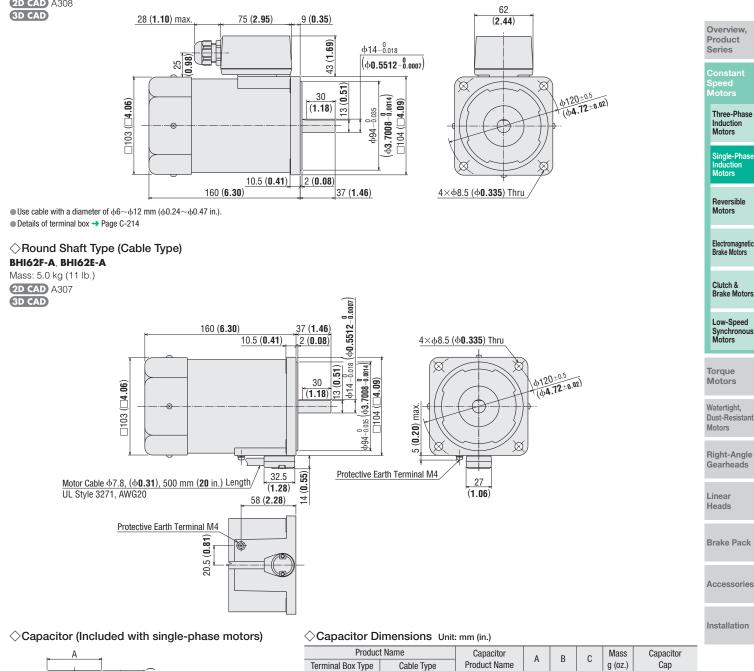
At the time of shipment, a key is inserted on the gearhead's shaft.

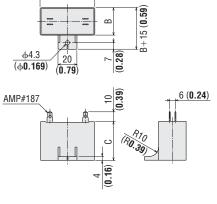
• A number indicating the gear ratio is entered where the box \Box is located within the product name.

Page

◇Round Shaft Type (Terminal Box Type) BHI62FT-A, BHI62ET-A

Mass: 5.0 kg (11 lb.) 2D CAD A308



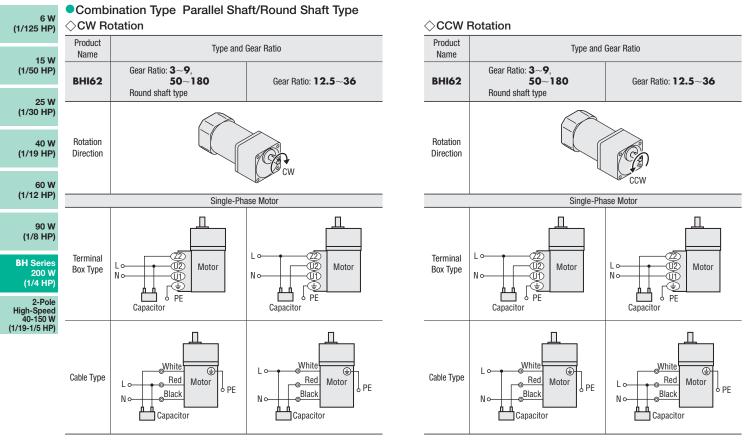


Torrinina box Typo	oubio iypo					3 ()	
BHI62FTRH BHI62FTRA BHI62FT BHI62FT-A	BHI62FRH BHI62FRA BHI62F BHI62F-A	CH400CFAUL2	58 (2.28)	41 (1.61)	58 (2.28)	175 (6.2)	Included
BHI62ET- RH BHI62ET- RA BHI62ET- BHI62ET- BHI62ET-A	BHI62E-□RH BHI62E-□RA BHI62E-□ BHI62E-A	CH100BFAUL	58 (2.28)	35 (1.38)	50 (1.97)	132 (4.7)	moluueu

ullet A number indicating the gear ratio is entered where the box \Box is located within the product name.

Connection Diagrams

• The rotation direction of the motor is indicated when viewed from the output shaft side of the motor. CW is used to indicate clockwise rotation and CCW is used for counterclockwise rotation.



Note

Change the direction of single-phase motor rotation only after bringing the motor to a stop.

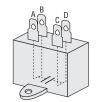
If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction of rotation after some delay. Connect a CR circuit to protect the contact of switches. Connection of CR circuit, contact capacity -> Page C-213

For added safety, provide a breaker or fuse on the power-supply input.

How to Connect a Capacitor

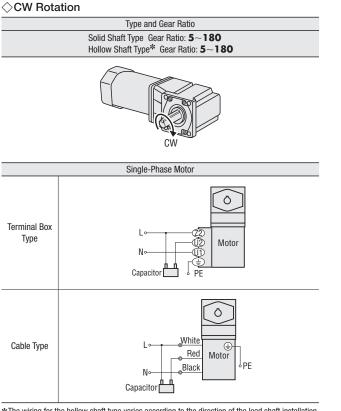
The capacitor has 4 terminals: terminal A is connected internally to terminal B, and terminal C is connected internally to terminal D, as shown in the illustration. Electrically, this creates 2 terminals.

Page



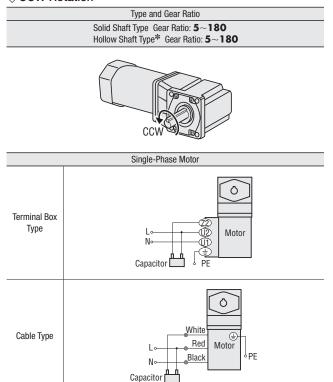
Inner Wiring Diagram for 4-Terminal Capacitor

Combination Type Right-Angle Shaft



Standard AC Motors C-141

◇CCW Rotation



*The wiring for the hollow shaft type varies according to the direction of the load shaft installation.
Note

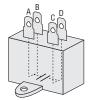
• Change the direction of single-phase motor rotation only after bringing the motor to a stop.

• If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction of rotation after some delay. • Connect a CR circuit to protect the contact of switches. Connection of CR circuit, contact capacity → Page C-213

For added safety, provide a breaker or fuse on the power-supply input.

How to Connect a Capacitor

The capacitor has 4 terminals: terminal A is connected internally to terminal B, and terminal C is connected internally to terminal D, as shown in the illustration. Electrically, this creates 2 terminals.



Inner Wiring Diagram for 4-Terminal Capacitor

List of Motor and Gearhead Combinations

Motor and gearhead combinations are shown below.

Product Name	Motor Product Name	Gearhead Product Name						
BHI62FT- RH	BHI62FT-G2	BH6G2-□RH						
BHI62FT- RA		BH6G2-□RA						
BHI62F- RH	BHI62F-G2	BH6G2-□RH						
BHI62F- RA	BHIOZI-GZ	BH6G2-□RA						
BHI62ET- RH	BHI62ET-G2	BH6G2-□RH						
BHI62ET- RA	BHIOZEI-GZ	BH6G2-□RA						
BHI62E- RH	BHI62E-G2	BH6G2-□RH						
BHI62E- RA	BHIOZE-OZ	BH6G2-□RA						

Combination Type: Parallel Shaft

Product Name	Motor Product Name	Gearhead Product Name			
BHI62FT-	BHI62FT-G2				
BHI62F-	BHI62F-G2	BH6G2-□			
BHI62ET-	BHI62ET-G2				
BHI62E-	BHI62E-G2				

Overview, Product Series

> Constant Speed Motors

Three-Phase Induction Motors

Single-Phase Induction Motors

Reversible Motors

Electromagnetic Brake Motors

Clutch & Brake Motors

Low-Speed Synchronous Motors

Torque Motors

Watertight, Dust-Resistant Motors

Right-Angle Gearheads

Linear Heads

Brake Pack

Accessories

Installation

lacksquare A number indicating the gear ratio is entered where the box \Box is located within the product name.





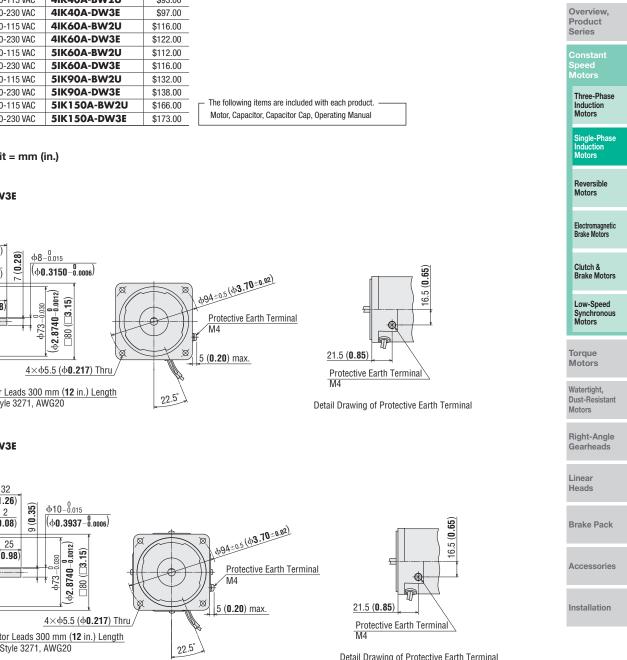
11/12 / 11/1 11/11 11/11		Induction 40 W (1/ Frame Siz	19	HF) , 60 W	/ (1/1	12 H	I P) ,	, 90) W	-		9), 150) W (1	/5 HP)
Instruction Served Served </th <th></th> <th>•••••</th> <th>••••</th> <th></th> <th>•••••</th> <th>•••••</th> <th>••••</th> <th>••••</th> <th>••••</th> <th>••••</th> <th>• • • •</th> <th>••••</th> <th></th> <th>• • • • • • •</th> <th>•••••</th>		•••••	••••		•••••	•••••	••••	••••	••••	••••	• • • •	••••		• • • • • • •	•••••
Monomia Algorithm								6	-						
Normal Sectors Product Name Output Power Voltage Frequency Current Starting Torque Rated Torque Rated Capacitor Overheat 90 4 MAC H2 A mN+m oz-in r/min µF Overheat Protection 90 4 MAC H2 A mN+m oz-in r/min µF Overheat Protection Device 90 4 MACA-BW2U 40 1/19 Single-Phase 110 60 0.68 90 12.7 135 19.1 2900 7.5 TP 41K40A-DW3E 40 1/19 Single-Phase 20 50 0.33 90 12.7 135 19.1 2900 1.8 TP 41K60A-BW2U 60 1/12 Single-Phase 110 60 0.98 160 22 190 26 3000 10 TP 41K60A-BW2U 60 1/12 Single-Phase 115 60 0.44 180								C							
So v (1/12.1H) Product Name Output Power Votage Prequency Current Staring Torque Rate Torque Speed Capacity Openand Protection Device 90 W (1/8 H) Rund Shatt Type W HP VAC Hz A mN-m oz-in r/min µ_µF Device 90 W (1/8 H) 41K40A-BW2U 40 1/19 Single-Phase 115 60 0.68 90 12.7 135 19.1 2000 7.5 TP 41K40A-BW3U 40 1/19 Single-Phase 110 60 0.33 60 0.32 100 12 12.0 2400 1.8 TP 41K60A-BW2U 60 1/12 Single-Phase 110 60 0.32 0.97 160 22 2400 1.8 25 100 12 130 19.1 28000 1.8 12.5 1.9 12.5 3000 1.9 1.9 2.5 3000 1.9 1.9 2.5 3000 1.9 1.9 1.9		Specifications – Continuous Rating													
Notice W HP VAC HZ A mNm oz.1 mNm oz.1 r/min µF Descent 90 W 4IK40A-BW2U 40 1/19 Single-Phase 110 Single-Phase 120 60 0.68 90 1.27 135 19.1 2900 7.5 TP BH Series 200W (1/4 H7 36 1/20 Single-Phase 20 60 0.31 90 1.27 135 19.1 2900 7.5 TP 4IK40A-BW3E 36 1/20 Single-Phase 20 60 0.31 90 1.27 135 19.1 2900 1.8 TP 4IK60A-BW2U 60 1/12 Single-Phase 20 50 0.32 160 22 190 28 3000 10 TP 4IK60A-BW2U 60 1/12 Single-Phase 20 50 0.47 160 22 300 2.5 TP 5IK60A-BW2U 60 1/12 Single-Phase 20 60 0.46 120		Product Name	Output	t Power	Voltage	Frequency	Current	Starting	g Torque	Rated	Torque		Capacitor	Protection	
90 w (1/8 HP) 41k 40.4 - BW2U 40 1/19 Single-Phase 115 Single-Phase 115 60 0.66 90 1/2/ 135 19.1 2900 7.5 1P BH Series 200 w (1/4 HP) 41k 40.4 - DW3E 36 1/20 Single-Phase 220 50 0.33 0 145 20 2400 1.8 TP 41k 60.4 - BW2U 60 1/19 Single-Phase 210 50 0.33 0 127 135 19.1 2900 1.8 TP 41k 60.4 - BW2U 60 1/12 Single-Phase 110 0.09 0.097 160 22 190 26 3000 10 TP 41k 60.4 - BW2U 60 1/12 Single-Phase 110 60 0.44 10.92 2500 10 TP 41k 60.4 - BW2U 60 1/12 Single-Phase 210 60 0.44 10 19.8 185 26 3000 2.5 TP 51k 60.4 - BW2U 60 1/12 Single-Phase 210 60	(1/12 HP)	Round Shaft Type	W	HP	VAC	Hz	А	mN⋅m	oz-in	mN∙m	oz-in	r/min	μF	Overheat Protection Device TP TP	
High Series 200W (1/4 H7) 41K40A-DW3E 36 1/20 Single-Phase 220 50 0.31 0 90 127 143 20 2900 1.8 TP High Series 00 (1/4 H7) 40 1/19 Single-Phase 230 50 0.33 90 12.7 120 17.0 2900 1.8 TP High Series 00 (1/4 H7) 41K60A-BW2U 60 1/12 Single-Phase 110 60 0.33 90 160 22 190 26 3000 10 TP 41K60A-BW2U 60 1/12 Single-Phase 20 60 0.61 100 22 3000 10 TP 41K60A-BW2U 60 1/12 Single-Phase 20 60 0.61 100 26 3000 2.5 TP 51K60A-BW2U 60 1/12 Single-Phase 20 60 0.46 120 17.0 185 26 3200 14 TP 51K60A-BW2U 90 1/8 Single-Phase 110 60 <t< th=""><th></th><th>4IK40A-BW2U</th><th>40</th><th>1/19</th><th>-</th><th>60</th><th></th><th>90</th><th>12.7</th><th>135</th><th>19.1</th><th>2900</th><th>7.5</th><th>TP</th><th></th></t<>		4IK40A-BW2U	40	1/19	-	60		90	12.7	135	19.1	2900	7.5	TP	
Bit Series 20 0 W (1/4 HP) 4/4 0 1/1 Single-Phase 230 60 0.31 60 90 12.7 120 17.0 2900 1.8 TP 4/0 1/19 Single-Phase 230 50 0.33 60 0.32 180 22 2400 180 22 2400 17.1 2900 1.8 TP 4/16 50/4 MP2U 60 1/12 Single-Phase 115 60 0.93 160 22 190 26 3000 10 TP 4/16 50/4 MP3E 55 1/14 Single-Phase 105 60 0.51 160 22 190 26 3000 10 TP 4/16 60A-DW3E 60 1/12 Single-Phase 105 60 0.52 110 26 3000 2.5 TP 5/160A-BW2U 60 1/12 Single-Phase 105 60 0.46 120 17.0 220 31 266 3200 5/160A-BW2U 90 1/8 Single-Phase 105 60<	(1/8 HP)			1 (00		50	0.30			145	20	2400			
$ \frac{200 \text{ M}}{(1/4 + P)} = \frac{40}{(1/4 + P)} = \frac{40}{11/9} \frac{1}{19} \frac{1}{1$	200 W	4IK40A-DW3E	36	1/20	Single-Phase 220	60	0.31	- - 90	12.7	120	17.0	2900	1.8	TP	
(1/4 HP) 1/1 1/1 Single Phase 110 Single Phase 110 Single Phase 110 0/0 0.98 0.97 160 22 190 26 3000 10 TP 41K60A-BW2U 60 1/12 Single Phase 220 60 0.44 160 22 190 26 3000 10 TP 41K60A-DW3E 55 1/14 Single Phase 220 60 0.47 160 230 32 2500 12 180 25 3000 10 TP 41K60A-DW3E 60 1/12 Single-Phase 110 60 0.47 160 220 31 2650 140 TP 51K60A-BW2U 60 1/12 Single-Phase 110 60 0.46 120 17.0 185 26 3200 3.0 TP 51K60A-BW2U 90 1/8 Single-Phase 115 60 1.61 120 17.0 185 26 3200 3.0 TP 51K90A-BW2U 90 1/8 Single-			40	1/10	Single-Phase 230	50	0.33			160	22	2400			
11/10 2-Pole (3):130-150 (1/12) 41K60A-BW2U 60 1/12 Single-Phase 110 (Single-Phase 115) 60 0.38 (0.97) 160 22 190 26 3000 10 TP 41K60A-DW3E 55 1/14 Single-Phase 220 50 0.44 0.97 180 25 3000 10 TP 41K60A-DW3E 50 1/12 Single-Phase 220 50 0.44 0.93 140 19.8 25 3000 2.5 TP 51K60A-BW2U 60 1/12 Single-Phase 230 50 0.47 0.93 140 19.8 185 26 3200 14 TP 51K60A-BW2U 60 1/12 Single-Phase 230 50 0.46 120 17.0 185 26 3200 14 TP 51K90A-BW2U 90 1/8 Single-Phase 230 50 0.46 120 17.0 185 26 3200 3.0 TP 51K90A-BW2U 90 1/8				1/19		60	0.32			135	19.1	2900			
4IK60A-DW3E 55 1/14 Single-Phase 220 60 0.51 160 22 180 25 3000 2.5 TP 5IK60A-BW2U 60 1/12 Single-Phase 110 60 0.94 140 19.8 185 26 3000 14 TP 5IK60A-BW2U 60 1/12 Single-Phase 115 60 0.94 140 19.8 185 26 3200 14 TP 5IK60A-DW3E 60 1/12 Single-Phase 220 50 0.46 120 17.0 185 26 3200 14 TP 5IK60A-BW2U 90 1/8 Single-Phase 220 50 0.46 120 17.0 185 26 3200 3.0 TP 5IK90A-BW2U 90 1/8 Single-Phase 220 50 0.70 185 26 3200 3.0 TP 5IK90A-BW2U 90 1/8 Single-Phase 220 50 0.70 330 46 2650 <th></th> <th>4IK60A-BW2U</th> <th>60</th> <th>1/12</th> <th>-</th> <th>60</th> <th></th> <th>160</th> <th>22</th> <th>190</th> <th>26</th> <th>3000</th> <th>10</th> <th>TP</th> <th></th>		4IK60A-BW2U	60	1/12	-	60		160	22	190	26	3000	10	TP	
4iK60A-DW3E - - 60 0.51 160 2.5 3000 2.5 TP 5iK60A-BW2U 60 1/12 Single-Phase 230 50 0.47 - - 230 32 2500 250 3000 2.5 TP 5iK60A-BW2U 60 1/12 Single-Phase 110 60 0.94 140 19.8 185 26 3200 14 TP 5iK60A-BW2U 60 1/12 Single-Phase 115 60 0.46 120 17.0 220 31 2650 3200 3.0 TP 5iK60A-BW2U 90 1/8 Single-Phase 230 50 0.46 120 17.0 220 31 2650 3.0 TP 5iK90A-BW2U 90 1/8 Single-Phase 230 50 0.46 140 19.8 280 39 3200 25 TP 5iK90A-BW2U 90 1/8 Single-Phase 230 50 0.070 240 3	40-150 W				<u> </u>	50	0.44	- 160	22	210	29	2500	- 2.5	TP	
60 1/12 Single-Phase 230 50 0.47 230 32 2500 51K60A-BW2U 60 1/12 Single-Phase 110 Single-Phase 115 60 0.94 140 19.8 185 26 3200 14 TP 51K60A-BW2U 60 1/12 Single-Phase 115 60 0.46 120 17.0 220 31 2650 32.00 14 TP 51K60A-DW3E 60 1/12 Single-Phase 220 50 0.46 120 17.0 220 31 2650 32.00 3.0 TP 51K90A-BW2U 90 1/8 Single-Phase 110 60 1.61 240 34 280 39 3200 25 TP 51K90A-DW3E 90 1/8 Single-Phase 115 60 1.57 240 34 280 39 3200 25 TP 51K90A-DW3E 90 1/8 Single-Phase 230 60 0.69 330 460 2650	(1/19-1/5 HP)					60	0.51			180	25	3000			
SIK60A-BW2U 60 1/12 Single-Phase 110 Single-Phase 115 60 0.94 0.93 140 19.8 185 26 3200 14 TP 5IK60A-DW3E 60 1/12 Single-Phase 115 60 0.46 120 17.0 185 26 3200 14 TP 5IK60A-DW3E 60 1/12 Single-Phase 220 50 0.46 120 17.0 185 26 3200 14 TP 5IK90A-BW2U 90 1/8 Single-Phase 110 60 1.61 240 34 280 39 3200 25 TP 5IK90A-DW3E 90 1/8 Single-Phase 110 60 1.61 240 34 280 39 3200 25 TP 5IK90A-DW3E 90 1/8 Single-Phase 220 50 0.70 240 34 280 39 3200 25 TP 5IK150A-BW2U 150 1/5 Single-Phase 110 60 0.84		410004-04036				50	0.47			230	32	2500			
Sikcova-Bw2U 60 1/12 Single-Phase 115 60 0.93 140 19.8 185 26 3200 14 1P Sikcova-Bw2U 60 1/12 Single-Phase 220 50 0.46 120 17.0 185 26 3200 14 1P Sikcova-Dw3E 60 1/12 Single-Phase 230 50 0.46 120 17.0 185 26 3200 3.0 TP Sikcova-Bw2U 90 1/18 Single-Phase 110 50 0.45 140 19.8 220 31 2650 3.0 TP Sikpoa-Bw2U 90 1/8 Single-Phase 110 60 1.61 1.57 240 34 280 39 3200 25 TP Sikpoa-Bw2U 90 1/8 Single-Phase 220 50 0.69 240 34 280 39 3200 6.0 6.0 16.0 17 Sikt 150A-Bw2U 150 1/8 Single-Phas						60	0.52			190	26	3000			
$ \frac{51 \text{K60A-DW3E}}{\text{51 \text{K60A-DW3E}}} = \begin{array}{ccccccccccccccccccccccccccccccccccc$		5IK60A-BW2U	60	1/12	-	60		140	19.8	185	26	3200	14	TP	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$					Cingle Dhose 000	50	0.46	100	17.0	220	31	2650			
$ \begin{array}{ c c c c c c c } \hline Single-Phase 230 & \hline 50 & 0.45 & 140 & 19.8 \\ \hline 3ingle-Phase 230 & \hline 60 & 0.45 & 140 & 19.8 \\ \hline 165 & 26 & 3200 \\ \hline 185 & 26 & 3200 \\ \hline 150 & 1/8 & \hline 198 & \hline 100 $		5IK60A-DW3E	60	1/12	Single-I hase 220	60	0.40	120	17.0	185	26	3200	3.0	TP	
$ \frac{1}{51K90A-BW2U} = 0 + 1/8 + 1/5 + 1/6$				1/12	Single-Phase 230	50	0.45	1/0	10.8	220	31	2650	0.0		
Sik90A-BW2U 90 1/8 Single-Phase 115 60 1.57 240 34 280 39 3200 25 1P Sik90A-DW3E 90 1/8 Single-Phase 115 60 0.70 240 34 280 39 3200 25 1P Sik90A-DW3E 90 1/8 Single-Phase 120 50 0.70 240 34 280 39 3200 25 1P Sik90A-DW3E 90 1/8 Single-Phase 230 50 0.69 240 34 280 39 3200 25 6.0 TP Sik150A-BW2U 150 1/5 Single-Phase 110 60 2.12 380 53 460 65 3200 30 TP Sik150A-DW3E 140 1/5 Single-Phase 230 50 0.98 380 53 460 65 3200 30 TP Sik150A-DW3E 140 1/5 Single-Phase 230 50 1.04 380 53 50 72 2650 500 79 2650					Single-I hase 200	60	0.45	140	15.0	185	26	3200			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		5IK90A-BW2U	90	1/8		60		240	34	280	39	3200	25	TP	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$					Cinela Dhasa 000	50	0.70			330	46	2650			
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		5IK90A-DW3E	90	1/0	Sillyle=Filase 220	60	0.84	240	24	280	39	3200	6.0	TP	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $				1/8	Single Dhose 220	50	0.69		34	330	46	2650			
Sik 1 50A-BW20 150 1/5 Go 2.09 380 53 460 65 3200 30 IP Single-Phase 115 Single-Phase 115 50 0.98 50 0.98 50 50 100 72 2650 Sik 1 50A-DW3E 140 1/5 Single-Phase 220 50 1.04 380 53 50 72 2650 500 1.04 50 1.04 50 79 2650 8.0 TP					Sillyle-rildse 230	60	0.84			280	39	3200			
5IK150A-DW3E 140 1/5 Single-Phase 220 50 0.98 50 50 1.07 2650 420 59 3200 8.0 TP		5IK150A-BW2U	150	1/5		60		380	53	460	65	3200	30	TP	
5IK150A-DW3E 50 1.07 380 53 420 59 3200 8.0 TP			4.40	4 /5	<u> </u>	50	0.98			510	72	2650			
5IK150A-DW3E		5IK150A-DW3E	140	1/5	Single-Phase 220			- 380	53	420	59			TP	
150 1/5 Single-Phase 230 60 1.13 460 65 3200			150	4.15		50				560	79	2650	8.0		
			150	1/5	Single-Phase 230	60	1.13	1		460	65	3200	1		

TP: Contains a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped. When the motor temperature drops, the thermal protector closes and the motor restarts. Be sure to turn the motor power off before inspecting.

Product Line

Motor

Output Power	Voltage	Product Name	List Price
40 W	Single-Phase 110-115 VAC	4IK40A-BW2U	\$93.00
(1/19 HP)	Single-Phase 220-230 VAC	4IK40A-DW3E	\$97.00
	Single-Phase 110-115 VAC	4IK60A-BW2U	\$116.00
60 W	Single-Phase 220-230 VAC	4IK60A-DW3E	\$122.00
(1/12 HP)	Single-Phase 110-115 VAC	5IK60A-BW2U	\$112.00
	Single-Phase 220-230 VAC	5IK60A-DW3E	\$116.00
90 W	Single-Phase 110-115 VAC	5IK90A-BW2U	\$132.00
(1/8 HP)	Single-Phase 220-230 VAC	5IK90A-DW3E	\$138.00
150 W	Single-Phase 110-115 VAC	5IK150A-BW2U	\$166.00
(1/5 HP)	Single-Phase 220-230 VAC	5IK150A-DW3E	\$173.00



Dimensions Unit = mm (in.)

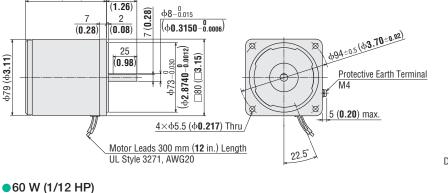
32

40 W (1/19 HP)

4IK40A-BW2U, 4IK40A-DW3E

85 (3.35)

Mass: 1.5 kg (3.3 lb.) 2D CAD A450

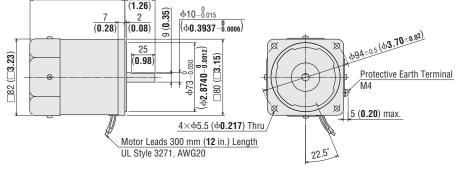


4IK60A-BW2U, 4IK60A-DW3E Mass: 1.8 kg (4.0 lb.)

φ79 (φ3.11)

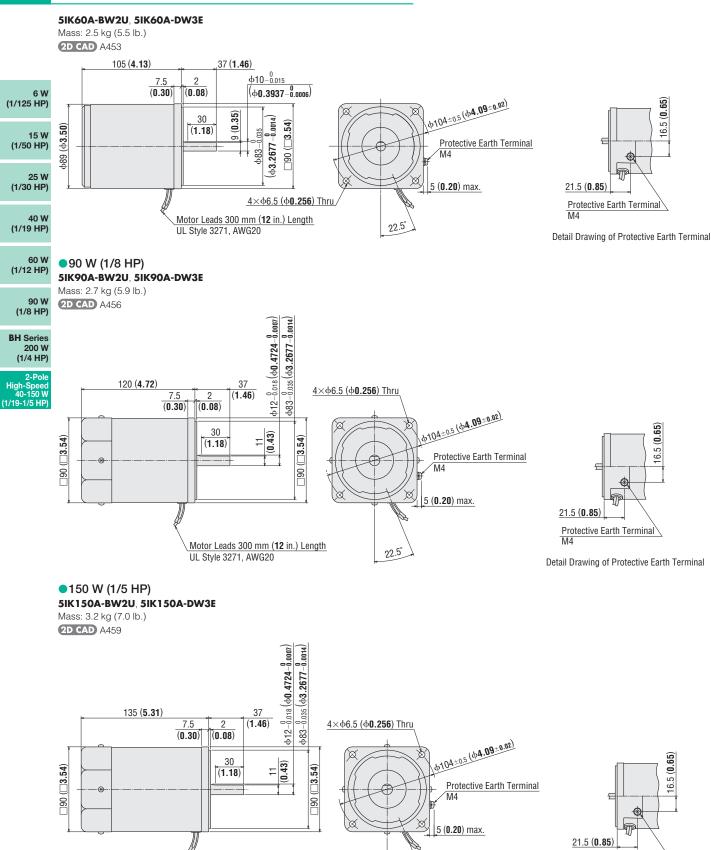
2D CAD A513

100 (3.94)



Detail Drawing of Protective Earth Terminal

C-144 Single-Phase Induction Motors



Detail Drawing of Protective Earth Terminal

Protective Earth Terminal

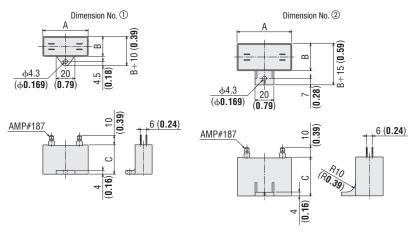
M4

Motor Leads 300 mm (12 in.) Length

UL Style 3271, AWG20

22.5°

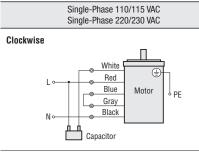
Capacitor (Included with single-phase motors)



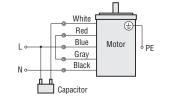
Capacitor Dimensions Unit: mm (in.)

Product Name	Capacitor Product Name	A	В	С	Mass g (oz.)	Dimension No.	Capacitor Cap
4IK40A-BW2U	CH75CFAUL2	48 (1.89)	21 (0.83)	31 (1.22)	41 (1.45)	1	
4IK40A-DW3E	CH18BFAUL	38 (1.50)	21 (0.83)	31 (1.22)	37 (1.31)	1	
4IK60A-BW2U	CH100CFAUL2	58 (2.28)	21 (0.83)	31 (1.22)	49 (1.73)	1	
4IK60A-DW3E	CH25BFAUL	48 (1.89)	21 (0.83)	31 (1.22)	42 (1.48)	1	
5IK60A-BW2U	CH140CFAUL2	58 (2.28)	22 (0.87)	35 (1.38)	61 (2.2)	1	Included
5IK60A-DW3E	CH30BFAUL	58 (2.28)	21 (0.83)	31 (1.22)	50 (1.77)	1	Included
5IK90A-BW2U	CH250CFAUL2	58 (2.28)	35 (1.38)	50 (1.97)	140 (4.9)	2	
5IK90A-DW3E	CH60BFAUL	58 (2.28)	29 (1.14)	41 (1.61)	92 (3.2)	2	
5IK150A-BW2U	CH300CFAUL2	58 (2.28)	35 (1.38)	50 (1.97)	140 (4.9)	2	
5IK150A-DW3E	CH80BFAUL	58 (2.28)	35 (1.38)	50 (1.97)	136 (4.6)	2	

Connection Diagrams



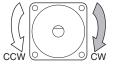
Counterclockwise



• Rotation Direction The rotation direction of the motor is

indicated when viewed from the output shaft side of the motor.

CW is used to indicate clockwise rotation and CCW is used for counterclockwise rotation.



The rotation direction when viewed from the output shaft side of the motor

Connection Method for Capacitor with 4 Terminals

The capacitor has 4 terminals: terminal A is connected internally to terminal B, and terminal C is connected internally to terminal D, as shown in the illustration. Electrically, this creates 2 terminals.



Inner Wiring Diagram for 4-Terminal Capacitor

nal Right-Angle Gearheads B.

> Linear Heads

Brake Pack

Accessories

Installation

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.

Overview, Product Series

Speed Motors

Three-Phase Induction Motors

Single-Phase Induction Motors

Reversible Motors

Electromagnetic Brake Motors

Clutch & Brake Motors

Low-Speed Synchronous Motors

Torque Motors

Watertight, Dust-Resistant

Motors