

# AC&DC GEAR MOTOR CATALOGUE

003-180

## SIEGMA

### AC GEAR MOTOR



## SAFETY CAUTIONS

General	<p>Please don't use motor out of the range which is clarified in of nameplate of gear box and motor and the specification of product catalogue, avoiding getting an electric shock, hurting or damaging the device.</p> <p>Please do not put your fingers into the opening part of gear of motor, in order to prevent getting an electric shock, hurting catching a fire or damaging device etc.</p> <p>Please do not use the injured gear head or motor, in order to prevent hurting, catching a fire etc.</p> <p>Please do not put off the nameplate.</p> <p>If the products are reformed by the customers personally, it no belongs to the guarantee scope, and our company doesn't undertake any responsibility.</p>
Moving	When you move it, if it shed off or tit to one side, it is very dangerous, please pay more attention.
Assembly	<p>Please never put the flammable thing near and motor, for fear of a fire.</p> <p>Please do not put the things around motor, otherwise it can effect ventilation and cooling, even burning or catching a fire because of too hot.</p> <p>Please do not touch the gear, the motor shaft and the key slot of the gear with naked hand, or you may be hurt.</p> <p>The device may creating the smoke, such as food machine, please add an oil cup assembly part, to prevent leaking oil which may have a bad effect.</p>
Assemble to the main machine	<p>Please set a safe cover above the revolving part, to prevent being hurt.</p> <p>Before linking to the other machine, please confirm the revolving direction is not right, it may hurt the gear motor or destroy the device.</p>
Wiring	Please don't get in touch with terminal, when you measure insure insulated resistance, preventing danger of getting an electric shock.
Operation	<p>Please link with the electric source according to wire diagram and usage manual, in order to prevent getting an electric shock or catching a fire. (No terminal box, please strengthen the insulation of the connection part surely)</p> <p>Referring to the electrical source cable and the motor wire, please do not bend, stretch, and clip tightly excessively, in order to prevent getting an electric shock.</p> <p>The terminal box connecting to the ground must be firm, in order to prevent getting an electric shock. Please adopt the electrical source according to the nameplate, to avoid burning the motor and catching a fire.</p>
The daily check and maintain	<p>When operating, do not get close to or touch the revolving parts (shaft). If something or somebody engulfs or hurts, Please turn off the electrical power switch right and handle at once.</p> <p>Please turn off the electrical source switch when electricity stops, in order to prevent hurting the person and damaging the device.</p> <p>Please note, motor with the thermal protector, when temperature of the motor is unusual, it will turn off the electrical source automatically, when the temperature of the motor fall down to a fixed data, the motor can work automatically.</p> <p>(Note: when the motor is not burned-not, the motor can work automatically)</p>
	<p>In daily, you should keep the motor operating in the normal work environment. (Except the special model)</p> <p>While checking, please do not get close to or touch the revolving parts (shaft). Something or somebody may engulf of hurt.</p>
Receiving confirm	Please confirm if it is the right one with the order when receiving Choosing wrong probably leads to damage of motor or damage the device and etc.

# PRODUCT NUMBER CODE

## Motor

5 I K 40 R GN - C T  
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①	Motor frame size	0: 42mm 2: 60mm 3: 70mm 4: 80mm 5: 90mm 6: 104mm					
②	Motor type	I : Induction motor R : Reversible motor T : Torque motor					
③	Series	K : K series					
④	Output power (W)	(Example) 40 : 40W					
⑤	R : The affix "R" after the output power means speed adjustable motor.						
⑥	Motor shaft type						
	GN : GN type pinion shaft	GU : GU type pinion shat					
	A : Round shaft	A1 : Keyway					
⑦	Voltage-Poles						
	A : Single-phase 110V50/60Hz	4P	E : Single-phase 110V/120V60Hz	4P	S3 : Three-phase 380/400/415V50/60Hz	4P	
	B : Single-phase 110V50Hz	2P	H : Single-phase 220/230V60Hz	4P	T : Three-phase 200/220/230V50/60Hz	2P	
	C : Single-phase 220/230V50Hz		S : Three-phase 200/220/230V50/60Hz	4P	T3 : Three-phase 380/400/415V50/60Hz	2P	
	4P D : Single-phase 220V50Hz	2P					
⑧	T : Terminal box type						
	F : W/Fan	FF : W/Forced fan					
	M : Power off activated type electromagnetic brake motor						

## Description Of Reducer Model

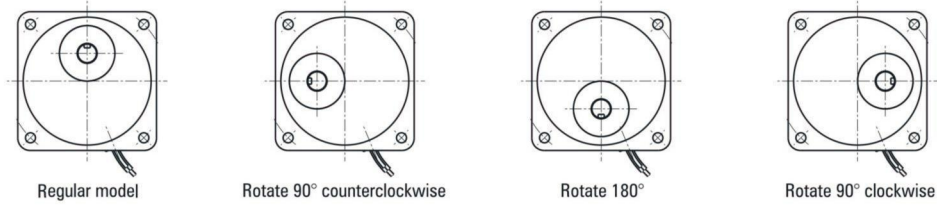
5 GN 50 K  
 ① ② ③ ④

①	Gearhead frame size	0: 42mm 2: 60mm 3: 70mm 4: 80mm 5: 90mm 6: 104mm					
②	Type of pinion	GN : GN type gear GU : GU type gear					
③	Gear ratio	(e.g) 50 : Gear ratio of 1 : 50 10x denotes the decimal gearhead of ratio 1 : 10					
④	Bearing type	K : Bearing (Make KB for type GU square case)					

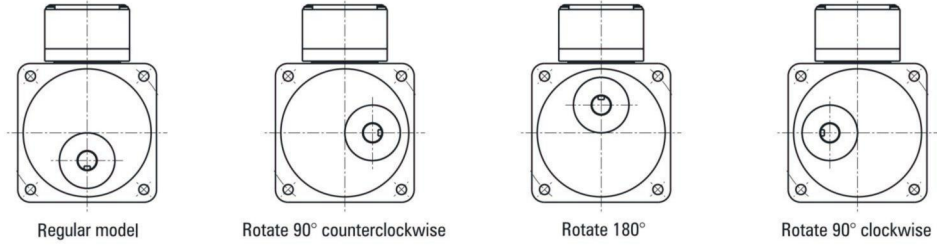
Note: If the motor assembly with parallel gear box pls cancel item no 5, if assembly with right angle gear box pls cancel item no 4.

## Parallel Shaft Series

### Lead Style



### Junction Box



## GENERAL SPECIFICATIONS OF MOTORS

### 6W~150W、2P・High Speed

Item	Specifications
Insulation Resistance	In the circumstance of normal temperature and humidity, the resistance can be up to 100MΩ, measured DC 500V insulation resistance measurer between the motor wiring and motor shell while the motor is working.
Insulation Voltage	In the circumstance of normal temperature and humidity, there will be no problem supplying the power of 1.5kV (three-phase 400V is 2kV) at 50Hz/60Hz between the metal wiring and motor shell for 1 minute while the motor is working.
Temperature Rise	The temperature rise of winding are 80°C or less measured by the resistance change method after rated motor operation under normal ambient temperature and humidity, with connecting a gearhead or equivalent heat radiation plate※.
Insulation Class	UL/CSA Standards: Class A (105°C)EN Standards: Class B (130°C)
Overheat Protection	Thermal protector inside (automatic return) Class B (opening: 120°C±5°C、75°C±15°C) Class F (opening: 145°C±5°C、100°C±15°C)
Ambient Temperature	Single-phase 100VAC、 Three-phase 200VAC: -10~+50°C (Non Freezing) Others: -10~+40°C (Non Freezing)
Ambient Humidity	≤85% (Non condensing)
Protection Class	Lead wire type: IP20 Terminal box type Single-phase 100V50/60HZ、 110/120V60HZ、 220/230V50HZ、 220/230V60HZ 25W-180W Type: IP54 (Excluding the installation surface of the round shaft type) Three-phase 200/220 /230V50/60HZ、 380/400/415V50/60HZ 25W-180W Type: IP54 (Excluding the installation surface of the round shaft type)

### Heat Radiation Plate (Material: Aluminum)

Motor Type	Size	Thickness (mm)
3W type	80X80	5
6W type	115X115	
15W type	125X125	
25W(2P-high-speed 4IK40 type, 4IK60 type)	135X135	
40W、60W type	165X165	
60W、90W、120W type (2P-High-speed 5IK150 type)	200X200	
120W、140W、200W type	230X230	

# MOTOR FEATURES

## Induction Motor Features

- 1、 Generally, micro Induction motor refers to the motor rotated by the induction. Induction motor relies on capacitor and electromagnetism when starting and rotating. Though its starting torque is not very high, it has a simple structure, high efficiency and can rotate continue.
- 2、 The single-phase motor have a reverse direction with the rotating's when operated. Pls change the direction of single-phase motor rotation only after bring the motor to a stop.
- 3、 Three-phase motor relies on three-phase supply. It has a high efficiency and can get a high starting torque.

## Reversible Motor Features

- 1、 Reversible motor has a friction brake at the back of the motor body, which is designed for applications where reversal of direction is frequently required. For the friction brake, pls check draw 1. The damp with spring impacts the rotating brake disk and supplies with continuous press. The functions of the friction brake are as following:

- ① With friction load, increasing the instant reversal.
- ② Shorten over-run.
- ③ Keep the torque in some way. (About 10% of the rated torque)

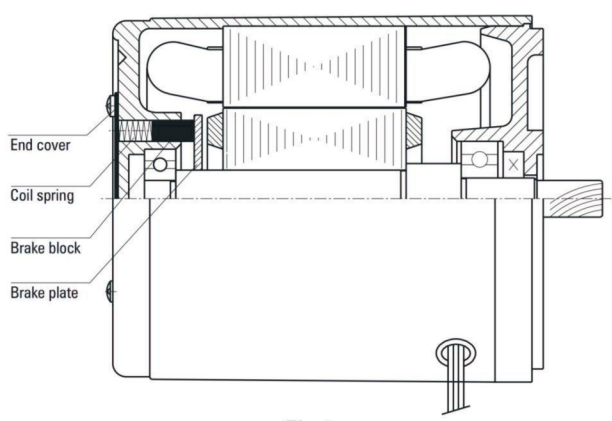


Fig.1

- 2、 The keeping torque or more of the friction brake and over-run are listed in the table 1. It is only for reference. As it will change according to the rotating period as well as the temperature. Pls also note that the torque may be a little lower than the one listed in the table when being operated initially.
- 3、 The reversible motor, like induction motor, is started by the capacitor and has a same torque characteristic with the induction motor. But the Reversible Motor is designed with a higher starting torque to increase the instant reversal features. Pls check drawing 2.

Table 1. Keep Torque And Over-run

Phase	Size mm	Output W	Motor Model	Keep Torque		Over-run Cycles
				N.cm	Kgf.cm	
Sing-phase	60	6	2RK6	0.5	0.05	4
	70	15	3RK15	1.3	0.13	5
	80	25	4RK25	1.5	0.14	5
	90	40	5RK40	4.0	0.40	6
		60	5RK60			
		90	5RK90			
120		5RK120				

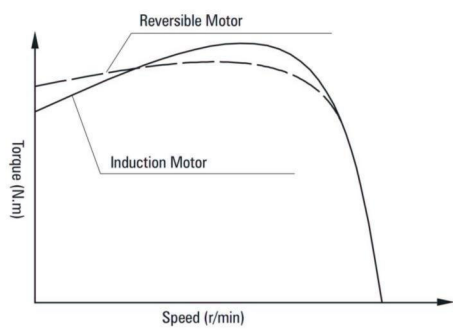


Fig.2

## Power Off Activated Type Electromagnetic Brake Motor Features

### 1、 Structure and operation principle

Table 3 is the structure for the electromagnetic brake motor. We produce the power off activated type. Exerting the voltage on the winding, it will magnetize the armature pressed by the spring. The motor will be in a stage of rotating, when there is a backlash between the armature and brake rim. Once the winding voltage is cut down, under the influence of spring, the armature press the brake rim, which will create a brake force. Then the motor gets to a stop.

### 2、 The characteristics of the electromagnetic brake

It is an AC power off activated type electromagnetic brake which is connected directly with the motor. It will get to a blink stop and keep load when the supply is power off. It will

keep the torque between 0.05~2.0Nm. It is especially suitable for the safety brake in the circumstance of unconsciously power off. The electromagnetic can change its direction

frequently. It can be stopped 6 times in a minute. But be sure that it lasts for 3 seconds or more.

After we set a commutating loop in the brake, it can share the power supply with the motor.

※The value is standard. It will be change in different condition. When actually used, be sure to make the surface temperature of the motor less than 90°C.

### 3、 The features for the starting time and brake time

The starting time means the time for the motor's starting time plus the electromagnetic brake release time. The brake time means the time from power cut off to the time of motor

completely stop. The over-run, starting time and brake time will be different according to the different applications.

## Electromagnetic Brake (Power Off Activated Type)

Phase	Size	Output	Voltage	Frequency	Current	Input	Keep Torque		Over-run
							N.cm	Kgf.cm	
1Phase	70	15	110 220 230	50/60	0.091	8.20	0.50	50	3.5
	80	25							
	90	40							
		60							
		90							
		120							
	100	120							
		140							
		200							
		0.111							
0.144	13.0	2.00	200						
3Phase	60	6	220~230	50/60	0.073	6.60	0.25	25	3.5
	70	15	380~415		0.037	6.60	0.25	25	
	80	25	200~230 380~415		0.091	8.20	0.50	50	
		40			0.046	8.20	0.50	50	
		60			0.111	10.0	1.00	100	
		90			0.056	10.0	1.00	100	
	100	120	200~230 380~415		0.144	13.0	2.00	200	
		120	0.144		13.0	2.00	200		
		140	200~230 380~415		0.144	13.0	2.00	200	
		200							
		200							
		200							

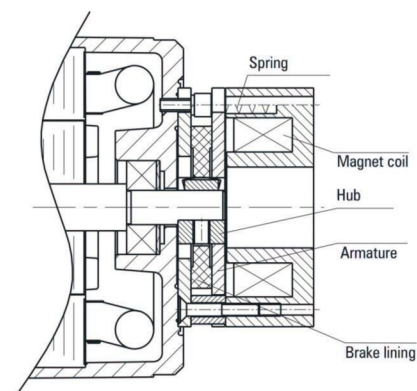


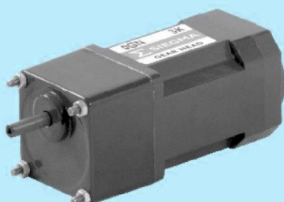
Fig.3

## The Features Of The Speed Control Motor

- 1、 It is a unit of the controller and motor. It only needs to connect one time. The speed can be easily adjusted by the potentiometer. The controller is fixed with speed-control loop, capacitor, speed enactment and etc. There is no function of instant stop in the unit.
- 2、 The controller can make the speed variable between 90-1400r/min at 50Hz and 90-1700r/min at 60Hz.
- 3、 Please don't run motor at low speed for long time avoiding overheat.

## INDUCTION MOTORS

■ 3W □ 42mm



### Specs Continuous Rating

Model · Type Lead Wire Type		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor $\mu$ F
Pinion Shaft	Round Shaft								
0IK3GN-B	0IK3A-B	3	1ph 110	50	0.120	5	11	2500	1.50
				60	0.130		10	3000	
0IK3GN-D	0IK3A-D	3	1ph 220	50	0.060	5	11	2500	0.35
				60	0.064		10	3000	

- When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

### Type

- Motor

Type	Model	
	Pinion Shaft	Round Shaft
Lead Wire Type	0IK3GN-B	0IK3A-B
	0IK3GN-D	0IK3A-D

- Parallel Shaft Gearhead (Sold Separately)

Gearhead Type	Gearhead Model	Gear Ratio
Long Life • Low Noise	0GN□K	3、3.6、5、6、7.5、9、10、 12.5、15、18、25、30、 36、50、60

- Enter the gear ratio in the box (□) within the model name

### ■ Gear Motor-Torque Table

- Gearhead are sold separately. Decimal gearheads are not available.
- Enter the gear ratio in the box (□) within the model name.
  
- The colored background  indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- The speed is calculated by dividing the motor's synchronous speed (2P Type 50Hz : 3000r/min、60Hz : 3600r/min) by the gear ratio. The actual speed is 2%~33% less than the displayed value, depending on the size of the load.

### ■ Allowance Torque Unit : Upside ( N.m ) / Belowside ( kgf.cm )

Type Motor/Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	25	30	36	50	60
	Speed r/min	50Hz	1000	833	600	500	400	333	300	240	200	166	120	100	83	60	50
0IK3GN-B 0IK3GN-D		0GN□K	50Hz	0.027	0.032	0.045	0.053	0.067	0.08	0.096	0.10	0.12	0.14	0.18	0.22	0.26	0.36
	0.28			0.33	0.46	0.54	0.68	0.82	0.96	1.02	1.22	1.43	1.84	2.24	2.65	3.67	4.49
	60Hz		0.024	0.029	0.041	0.049	0.061	0.073	0.076	0.091	0.10	0.13	0.17	0.20	0.24	0.33	0.40
			0.24	0.30	0.42	0.50	0.62	0.74	0.76	0.93	1.12	1.33	1.73	2.04	2.45	3.67	4.08

### ■ To Allow The Hoisting Of The Load Allow Axial Load

Motor (Round shaft) →P215

Gearhead→P215

### ■ J Permissible Load Inertia J For Gearhead

→P215

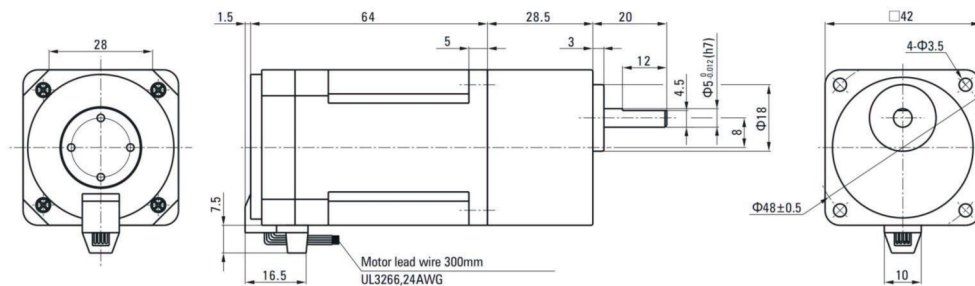
### ■ Dimensions (Unit mm)

Mounting screws are included with gearhead.

- Lead Wiring Type

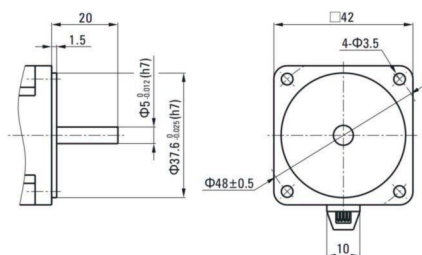
Weight : Motor : 0.3kg

Gearhead : 0.2kg



● Shaft Section Of Round Shaft Type

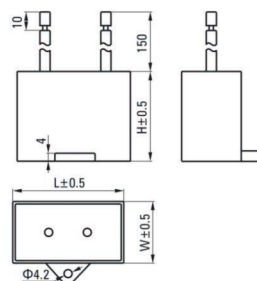
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



■ Formal Dimension Of Capacitor

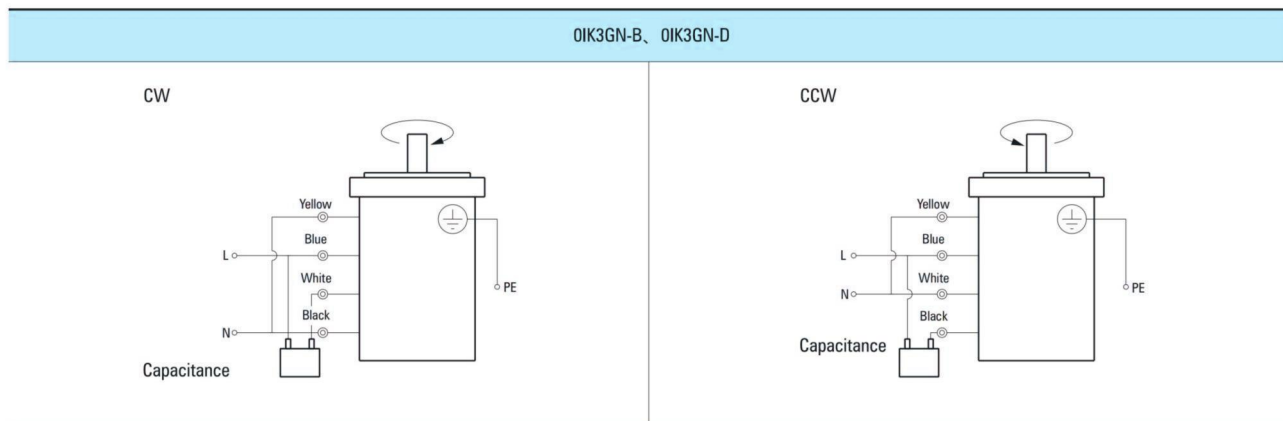
Model		Capacitor Model	L	W	H
Pinion Shaft	Round Shaft				
OIK3GN-B	OIK3A-B	ZD15CFAUL	36	12.5	24
OIK3GN-D	OIK3A-D	ZD035CFAUL	26	8.00	17

● Note: Conventional capacitor is a lead wire type. Inserted 187# is optional



■ Wiring Diagram

- The direction of motor rotation is as viewed from the shaft end of motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Name indicated in the list is pinion shaft type, also valid for the equivalent round shaft type.



Note:

Change the direction of single-phase motor rotation only after bring 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.

# INDUCTION MOTORS

6W  60mm



## Specs Continuous Rating

Model · Type Lead Wire Type		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Pinion Shaft	Round Shaft								
2IK6GN-A	2IK6A-A	6	1ph 100	50	0.240	55	48	1200	3.5
				60	0.250	50	40	1450	
2IK6GN-E	2IK6A-E	6	1ph 110	60	0.160	40	40	1450	2.0
					0.180				
2IK6GN-C	2IK6A-C	6	1ph 220	50	0.130	50	48	1200	0.8
					0.140		40	1450	
2IK6GN-H	2IK6A-H	6	1ph 220	60	0.130	55	40	1450	0.8
					0.140				
2IK6GN-S	2IK6A-S	6	3ph 220	50	0.076	85	48	1200	-
				60	0.065	70	40	1450	
2IK6GN-S3	2IK6A-S3	6	3ph 380	50	0.044	85	48	1200	-
				60	0.038	70	40	1450	

- When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.
- Note: "-A" it means the voltage 110V, the assembly capacitor value it is according to the label.

## Type

● Motor

Type	Model	
	Pinion Shaft	Round Shaft
Lead Wire Type	2IK6GN-A	2IK6A-A
	2IK6GN-E	2IK6A-E
	2IK6GN-C	2IK6A-C
	2IK6GN-H	2IK6A-H
	2IK6GN-S	2IK6A-S
	2IK6GN-S3	2IK6A-S3

● Parallel Shaft Gearhead (Sold Separately)

Gearhead Type	Gearhead Model	Gear Ratio
Long Life ● Low Noise	2GN□K	3, 3.6, 5, 6, 7.5, 9, 10, 12.5, 15, 18, 20, 25, 30, 36, 40, 50, 60, 75, 90, 100, 120, 150, 180, 200
	2GN10XK ( Decimal Gearhead )	

- Enter the gear ratio in the box (□) within the model name

## Gear Motor-Torque Table

- Gearhead and mid-gearbox can be sold separately.
- Enter the gear ratio in the box (□) within the model name.
- The colored background □ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- The speed is calculated by dividing the motor's synchronous speed (50Hz : 1500r/min, 60Hz : 1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 3N·m.

## Allowance Torque Unit : Upside ( N.m ) / Belowside ( kgf.cm )

ype/Motor/earhead	Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
	Speed r/min		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
2IK6GN-A 2IK6GN-E 2IK6GN-C 2IK6GN-H 2IK6GN-S 2IK6GN-S3	2GN□K	50Hz	0.12	0.14	0.19	0.23	0.29	0.35	0.39	0.49	0.58	0.70	0.75	0.88	1.10	1.30	1.39	1.60	1.90	2.40	2.90	3.00	3.00	3.00	3.00	3.00
		60Hz	1.22	1.43	1.94	2.35	2.96	3.57	3.98	5.00	5.92	7.14	7.65	8.98	11.2	13.3	14.2	16.3	19.4	24.5	29.6	30.0	30.0	30.0	30.0	30.0
		50Hz	0.10	0.12	0.16	0.19	0.24	0.29	0.32	0.41	0.49	0.58	0.62	0.73	0.88	1.10	1.15	1.30	1.60	2.00	2.40	2.60	3.00	3.00	3.00	3.00
		60Hz	1.02	1.22	1.63	1.94	2.45	2.96	3.26	4.18	5.00	5.92	6.32	7.45	8.98	11.2	11.7	13.3	16.3	20.4	24.5	26.5	30.0	30.0	30.0	30.0

## To Allow The Hoisting Of The Load Allow Axial Load

Motor (Round shaft) →P215

Gearhead→P215

## J Permissible Load Inertia J For Gearhead

→P215

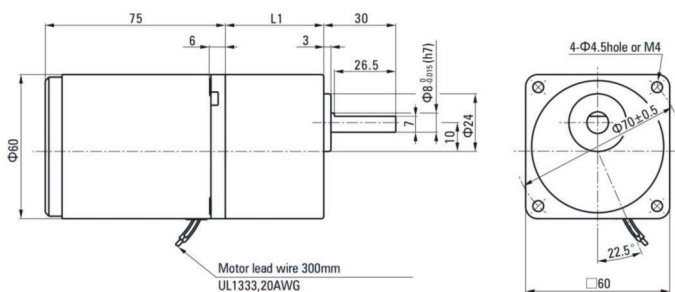
## Dimensions (Unit mm)

Mounting screws are included with gearhead.

### Lead Wiring Type

Weight : Motor : 0.75kg

Gearhead : 0.4kg

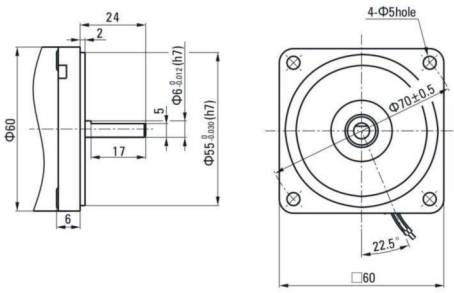


Motor Model	Gearhead Model	Gear Ratio	L1
2IK6GN-A 2IK6GN-E 2IK6GN-C 2IK6GN-H 2IK6GN-S 2IK6GN-S3	2GN□K	3~200	41.5

- Enter the gear ratio in the box (□) within the model name
- Gear ratio 3~18, short case is possible (L1=32)

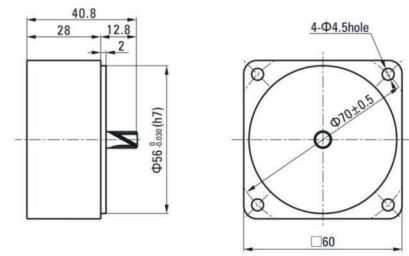
● Shaft Section Of Round Shaft Type

Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



● Decimal Gearhead

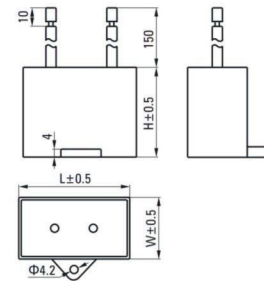
Can be connected to GN pinion shaft type  
2GN10XK  
Weight : 0.2kg



■ Formal Dimension Of Capacitor

Model		Capacitor Model	L	W	H
Pinion Shaft	Round Shaft				
2IK6GN-A	2IK6A-A	ZD35CFAUL	38	19.5	31
2IK6GN-E	2IK6A-E	ZD20CFAUL	36	15.0	25
2IK6GN-C	2IK6A-C	ZD08CFAUL	36	10.5	20

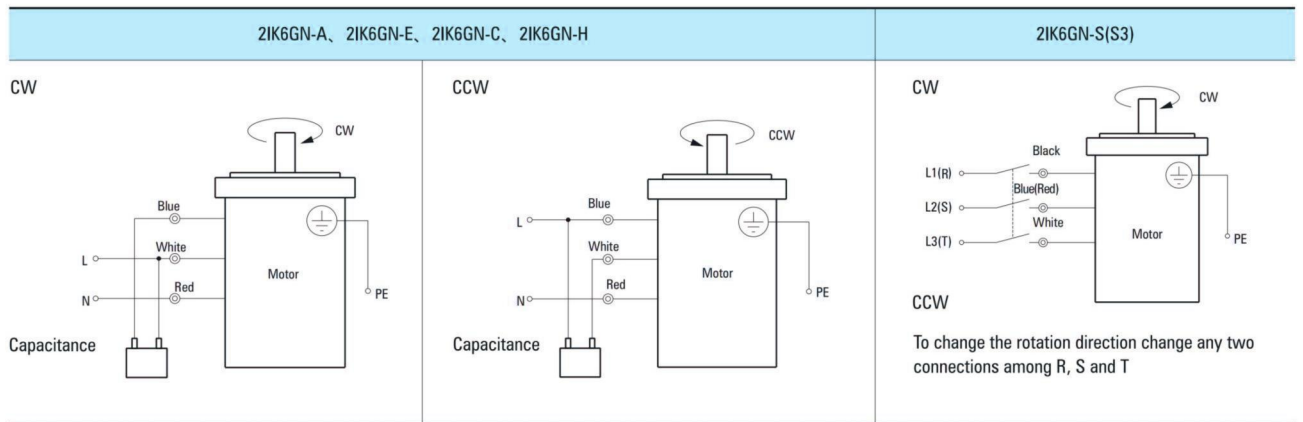
● Note: Conventional capacitor is a lead wire type. Inserted 187# is optional



■ Wiring Diagram

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

● Name indicated in the list is pinion shaft type, also valid for the equivalent round shaft type.



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.

# INDUCTION MOTORS

■ 15W □ 70mm



## Specs Continuous Rating

Model • Type Lead Wire Type		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Pinion Shaft	Round Shaft								
3IK15GN-A	3IK15A-A	15	1ph 100	50	0.35	90	125	1200	6.0
				60	0.33	85	105	1450	
3IK15GN-E	3IK15A-E	15	1ph 110	60	0.30	65	105	1450	5.0
			1ph 120		0.32				
3IK15GN-C	3IK15A-C	15	1ph 220	50	0.18	90	125	1200	1.2
			1ph 230		0.20				
3IK15GN-H	3IK15A-H	15	1ph 220	60	0.16	65	105	1450	1.2
			1ph 230		0.15	70			
3IK15GN-S	3IK15A-S	15	3ph 220	50	0.14	220	125	1200	-
				60	0.12	180	105	1450	
3IK15GN-S3	3IK15A-S3	15	3ph 380	50	0.08	220	125	1200	-
				60	0.07	180	105	1450	

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note: "-A" it means the voltage 110V, the assembly capacitor value it is according the label.

## Type

● Motor

Type	Model	
	Pinion Shaft	Round Shaft
Lead Wire Type	3IK15GN-A	3IK15A-A
	3IK15GN-E	3IK15A-E
	3IK15GN-C	3IK15A-C
	3IK15GN-H	3IK15A-H
	3IK15GN-S	3IK15A-S
	3IK15GN-S3	3IK15A-S3

● Parallel Shaft Gearhead (Sold Separately)

Gearhead Type	Gearhead Model	Gear Ratio
Long Life • Low Noise	3GN□K	3, 3.6, 5, 6, 7.5, 9, 10, 12.5, 15, 18, 20, 25, 30, 36, 40, 50, 60, 75, 90, 100, 120, 150, 180, 200
	3GN10XK( Decimal Gearhead )	

● Enter the gear ratio in the box (□) within the model name

### Gear Motor-Torque Table

- Gearhead and mid-gearbox can be sold separately.
- Enter the gear ratio in the box (□) within the model name.
- The colored background □ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- The speed is calculated by dividing the motor's synchronous speed (50Hz : 1500r/min、60Hz : 1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 5N·m.

### Allowance Torque Unit : Upside ( N.m ) / Belowside ( kgf.cm )

Type Motor/Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200		
	Speed r/min		50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	
3IK15GN-A 3IK15GN-E 3IK15GN-C 3IK15GN-H 3IK15GN-S 3IK15GN-S3	3GN□K	50Hz	0.30	0.36	0.51	0.61	0.76	0.91	0.97	1.30	1.50	1.80	1.94	2.30	2.70	3.30	3.48	4.10	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	
			3.06	3.67	5.20	6.22	7.75	9.28	9.90	13.2	15.3	18.3	19.8	23.4	27.5	33.7	35.5	41.8	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
		60Hz	0.26	0.31	0.43	0.51	0.64	0.77	0.80	1.10	1.30	1.50	1.64	1.90	2.30	2.80	2.88	3.50	4.20	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
			2.65	3.16	4.38	5.20	6.53	7.85	8.16	11.2	13.2	15.3	16.7	19.3	23.4	28.5	29.4	35.7	42.8	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0

### To Allow The Hoisting Of The Load Allow Axial Load

Motor (Round shaft) →P215

Gearhead→P215

### J Permissible Load Inertia J For Gearhead

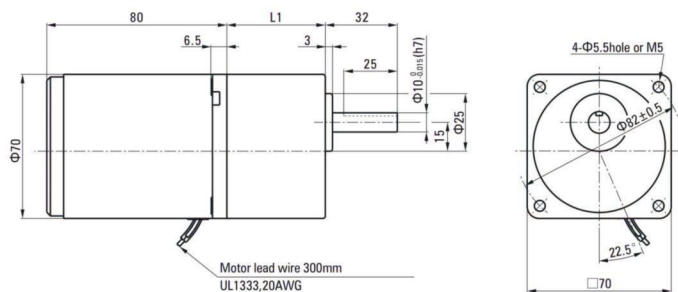
→P215

### Dimensions (Unit mm)

Mounting screws are included with gearhead.

#### ● Lead Wiring Type

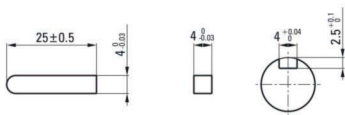
Weight : Motor : 1.1kg      Gearhead : 0.5kg



Motor Model	Gearhead Model	Gear Ratio	L1
3IK15GN-A 3IK15GN-E 3IK15GN-C 3IK15GN-H 3IK15GN-S 3IK15GN-S3	3GN□K	3~200	42

- Enter the gear ratio in the box (□) within the model name
- Gear ratio 3~18, short case is possible (L1=32)

● Key - Keyway (Accessory Of Gearhead)

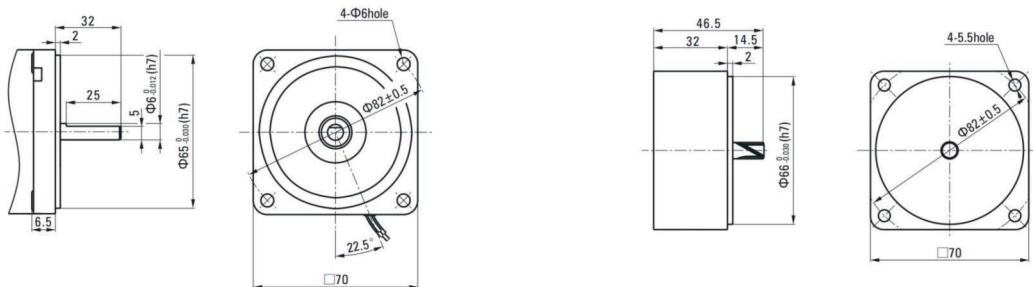


● Shaft Section Of Round Shaft Type

Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.

● Decimal Gearhead

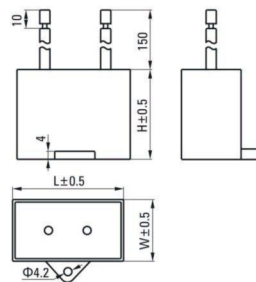
Can be connected to GN pinion shaft type  
3GN10XK  
Weight : 0.3kg



■ Formal Dimension Of Capacitor

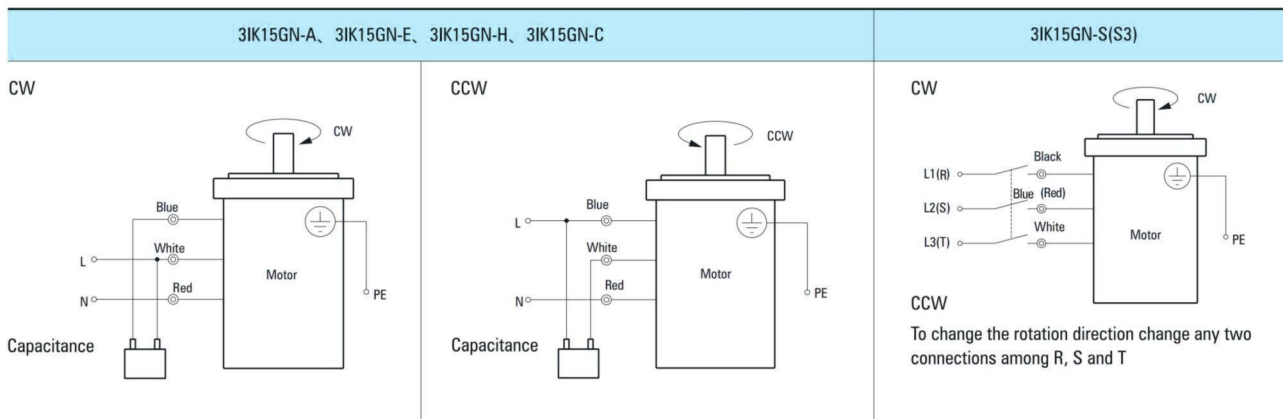
Model		Capacitor Model	L	W	H
Pinion Shaft	Round Shaft				
3IK15GN-A	3IK15A-A	ZD60CFAUL	48	23	32
3IK15GN-E	3IK15A-E	ZD50CFAUL	47	20	31
3IK15GN-C	3IK15A-C	ZD12BFAUL	36	12	22

● Note: Conventional capacitor is a lead wire type. Inserted 187# is optional



■ Wiring Diagram

- The direction of motor rotation is as viewed from the shaft end of motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Name indicated in the list is pinion shaft type, also valid for the equivalent round shaft type.



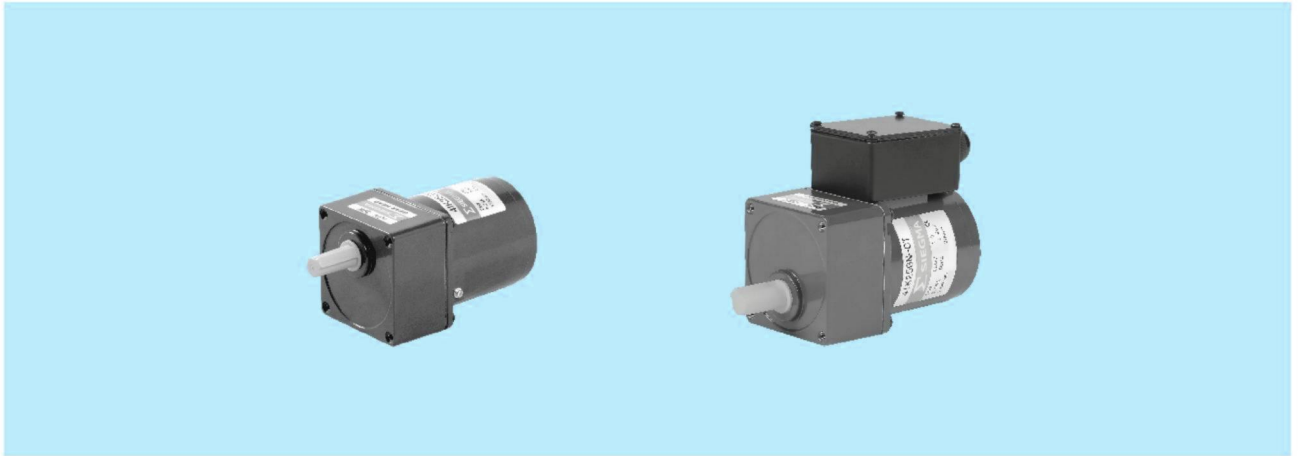
Note:

Change the direction of single-phase motor rotation only after bring 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.

# INDUCTION MOTORS

■ 25W □ 80mm



## Specs Continuous Rating

Model • Type Upper:Pinion Shaft() Below:Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
4IK25GN-A ( 4IK25A-A )	4IK25GN-AT ( 4IK25A-AT )	25	1ph 100	50	0.500	120	200	1250	8.0
				60	0.550		165	1550	
4IK25GN-E ( 4IK25A-E )	4IK25GN-ET ( 4IK25A-ET )	25	1ph 110	60	0.450	120	165	1550	7.0
			1ph 120		0.500				
4IK25GN-C ( 4IK25A-C )	4IK25GN-CT ( 4IK25A-CT )	25	1ph 220	50	0.250	120	200	1250	1.8
			1ph 230		0.230				
4IK25GN-H ( 4IK25A-H )	4IK25GN-HT ( 4IK25A-HT )	25	1ph 220	60	0.230	120	165	1550	1.8
			1ph 230						
4IK25GN-S ( 4IK25A-S )	4IK25GN-ST ( 4IK25A-ST )	25	3ph 220	50	0.185	350	200	1250	-
				60	0.170	250	165	1550	
4IK25GN-S3 ( 4IK25A-S3 )	4IK25GN-S3T ( 4IK25A-S3T )	25	3ph 380	50	0.106	350	200	1250	-
				60	0.098	250	165	1550	

- When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.
- Note: "-A" it means the voltage 110V, the assembly capacitor value it is according the label.

## Type

- Motor

Type	Model	
	Pinion Shaft	Round Shaft
Lead Wire Type	4IK25GN-A	4IK25A-A
	4IK25GN-E	4IK25A-E
	4IK25GN-C	4IK25A-C
	4IK25GN-H	4IK25A-H
	4IK25GN-S	4IK25A-S
	4IK25GN-S3	4IK25A-S3
Terminal Box Type	4IK25GN-AT	4IK25A-AT
	4IK25GN-ET	4IK25A-ET
	4IK25GN-CT	4IK25A-CT
	4IK25GN-HT	4IK25A-HT
	4IK25GN-ST	4IK25A-ST
	4IK25GN-S3T	4IK25A-S3T

- Parallel Shaft Gearhead (Sold Separately)

Gearhead Type	Gearhead Model	Gear Ratio
Long Life ● Low Noise	4GN□K	3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200
	4GN10XK ( Decimal Gearhead )	

- Enter the gear ratio in the box (□) within the model name

## ■ Gear Motor-Torque Table

- Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.
- Enter the gear ratio in the box (□) within the model name.
  
- The colored background □ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- The speed is calculated by dividing the motor's synchronous speed (50Hz : 1500r/min, 60Hz : 1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
  
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 8N·m.

## ■ Allowance Torque Unit : Upside ( N.m ) / Belowside ( kgf.cm )

Type Motor/Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
	Speed r/min		50Hz	500	417	300	250	200	166	150	120	100	83	75	60	50	41	37	30	25	20	16	15	12.5	10	8.3	7.5
4K25GN-A□ 4K25GN-E□ 4K25GN-C□ 4K25GN-H□ 4K25GN-S□ 4K25GN-S3□	4GN□K	50Hz	0.49	0.58	0.81	0.97	1.20	1.50	1.55	2.00	2.40	2.90	3.17	3.70	4.40	5.30	5.57	6.60	7.90	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
		60Hz	5.00	5.91	8.26	9.89	12.2	15.3	15.8	20.4	24.4	29.6	32.3	37.7	44.9	54.1	56.8	67.3	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
		50Hz	0.40	0.48	0.67	0.80	1.00	1.20	1.25	1.70	2.00	2.40	2.64	3.00	3.60	4.30	4.49	5.40	6.50	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
		60Hz	4.08	4.89	6.83	8.16	10.2	12.2	12.8	17.3	20.4	24.4	26.9	30.6	36.7	43.8	45.8	55.1	66.3	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0

## ■ To Allow The Hoisting Of The Load Allow Axial Load

Motor (Round shaft) →P215

Gearhead→P215

## ■ J Permissible Load Inertia J For Gearhead

→P215

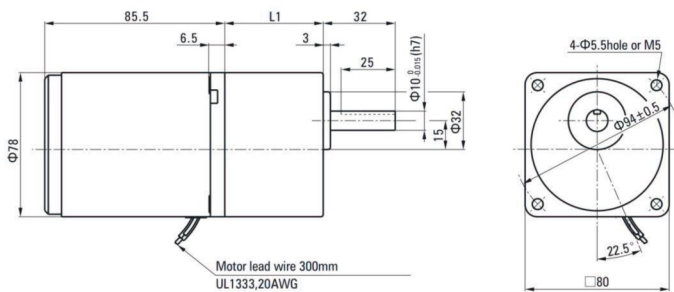
## ■ Dimensions (Unit mm)

Mounting screws are included with gearhead.

### ● Lead Wiring Type ①

Weight : Motor : 1.6kg

Gearhead : 0.80kg



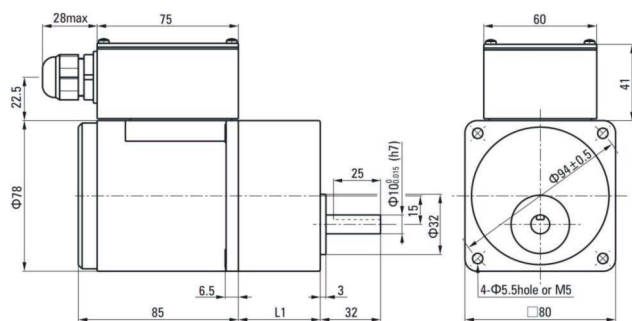
Motor Model	Gearhead Model	Gear Ratio	L1
4K25GN-A 4K25GN-E 4K25GN-C 4K25GN-H 4K25GN-S 4K25GN-S3	4GN□K	3~200	43.5

- Enter the gear ratio in the box (□) within the model name
- Gear ratio 3~18, short case is possible (L1=32)

● Terminal Box Type ②

Weight : Motor : 1.75kg

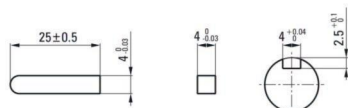
Gearhead : 0.8kg



Motor Model	Gearhead Model	Gear Ratio	L1
4IK25GN-AT	4GN□K	3~200	43.5
4IK25GN-ET			
4IK25GN-CT			
4IK25GN-HT			
4IK25GN-ST			
4IK25GN-S3T			

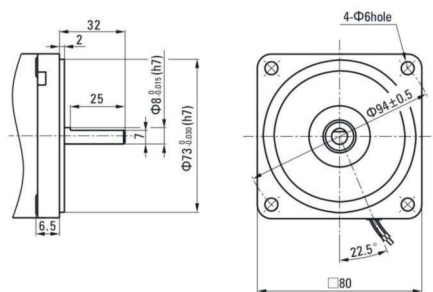
- Enter the gear ratio in the box (□) within the model name
- Gear ratio 3~18, short case is possible (L1=32)

● Key • Keyway (Accessory Of Gearhead)



● Shaft Section Of Round Shaft Type

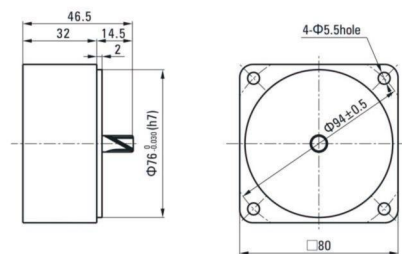
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



● Decimal Gearhead

Can be connected to GN pinion shaft type 4GN10XK

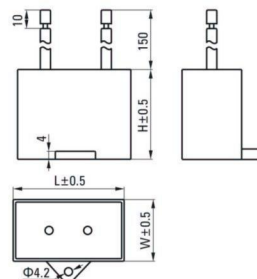
Weight : 0.41kg



■ Formal Dimension Of Capacitor

Model		Capacitor Model	L	W	H
Pinion Shaft	Round Shaft				
4IK25GN-A□	4IK25A-A□	ZD80CFAUL	48	26.5	38
4IK25GN-E□	4IK25A-E□	ZD70CFAUL	47	24.0	37
4IK25GN-C□	4IK25A-C□	ZD18BFAUL	36	13.5	24

- Note: Conventional capacitor is a lead wire type. Inserted 187# is optional
- Enter the code that represents the terminal box type "T" in the box (□) within the model name



## Wiring Diagram

- The direction of motor rotation is as viewed from the shaft end of motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Name indicated in the list is pinion shaft type, also valid for the equivalent round shaft type.

Lead Wire Type		
4IK25GN-A, 4IK25GN-E, 4IK25GN-H, 4IK25GN-C		4IK25GN-S(S3)
<p><b>CW</b></p> <p><b>CCW</b></p> <p>Capacitance</p>	<p><b>CW</b></p> <p><b>CCW</b></p> <p>To change the rotation direction change any two connections among R, S and T</p>	
Terminal Box Type		
4IK25GN-AT, 4IK25GN-ET, 4IK25GN-HT, 4IK25GN-CT		4IK25GN-ST(S3T)
<p><b>CW</b></p> <p><b>CCW</b></p> <p>Capacitance</p>	<p><b>CW</b></p> <p><b>CCW</b></p> <p>To change the rotation direction change any two connections among U, V and W</p>	

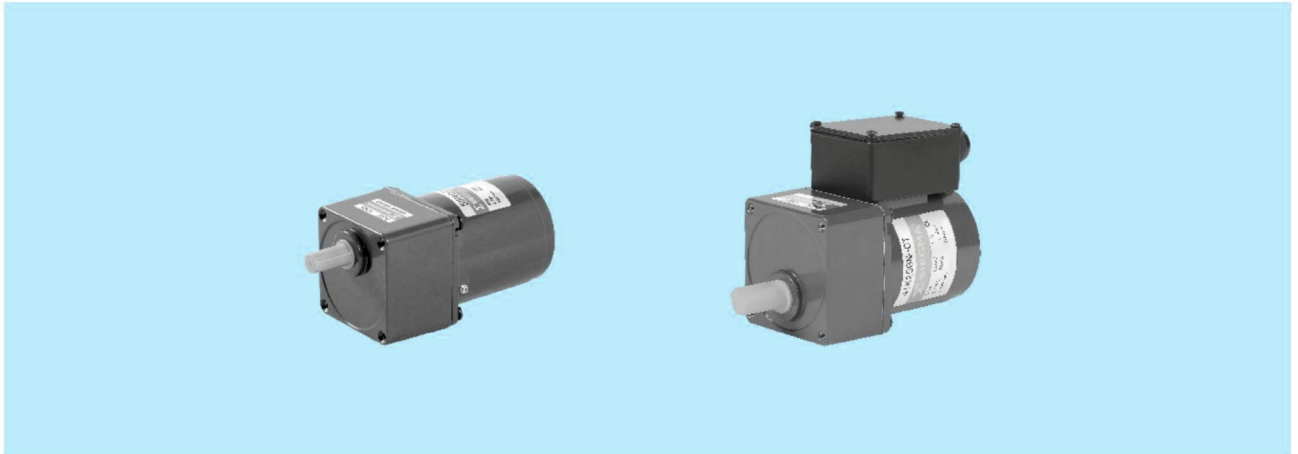
### Note:

Change the direction of single-phase motor rotation only after bring 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.

# INDUCTION MOTORS

■ 40W □ 90mm



## Specs Continuous Rating

Model • Type Upper:Pinion Shaft Below:Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
5IK40GN-A ( 5IK40A-A )	5IK40GN-AT ( 5IK40A-AT )	40	1ph 100	50	0.65	220	315	1250	12.0
				60	0.70		260	1550	
5IK40GN-E ( 5IK40A-E )	5IK40GN-ET ( 5IK40A-ET )	40	1ph 110	60	0.55	200	260	1550	8.0
			1ph 120		0.60				
5IK40GN-C ( 5IK40A-C )	5IK40GN-CT ( 5IK40A-CT )	40	1ph 220	50	0.35	220	315	1250	2.5
			1ph 230		0.40				
5IK40GN-H ( 5IK40A-H )	5IK40GN-HT ( 5IK40A-HT )	40	1ph 220	60	0.35	200	260	1550	2.5
			1ph 230		0.40				
5IK40GN-S ( 5IK40A-S )	5IK40GN-ST ( 5IK40A-ST )	40	3ph 220	50	0.30	800	315	1250	-
				60	0.25	660	250	1550	
5IK40GN-S3 ( 5IK40A-S3 )	5IK40GN-S3T ( 5IK40A-S3T )	40	3ph 380	50	0.17	800	315	1250	-
				60	0.14	660	250	1550	

●When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

●Note: 90-40W right angle gear motor all motor is (GU) strength type.

●Note: "-A" it means the voltage 110V, the assembly capacitor value it is according to the label.

## Type

● Motor

Type	Model	
	Pinion Shaft	Round Shaft
Lead Wire Type	5IK40GN-A	5IK40A-A
	5IK40GN-E	5IK40A-E
	5IK40GN-C	5IK40A-C
	5IK40GN-H	5IK40A-H
	5IK40GN-S	5IK40A-S
	5IK40GN-S3	5IK40A-S3
Terminal Box Type	5IK40GN-AT	5IK40A-AT
	5IK40GN-ET	5IK40A-ET
	5IK40GN-CT	5IK40A-CT
	5IK40GN-HT	5IK40A-HT
	5IK40GN-ST	5IK40A-ST
	5IK40GN-S3T	5IK40A-S3T

● Parallel Shaft Gearhead (Sold Separately)

Gearhead Type	Gearhead Model	Gear Ratio
Long Life ● Low Noise	5GN□K	3, 3.6, 5, 6, 7.5, 9, 10, 12.5, 15, 18, 20, 25, 30, 36, 40, 50, 60, 75, 90, 100, 120, 150, 180, 200
	5GN10XK ( Decimal Gearhead )	

●Enter the gear ratio in the box (□) within the model name

### ■ Gear Motor-Torque Table

- Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.
- Enter the gear ratio in the box (□) within the model name.
- The colored background □ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- The speed is calculated by dividing the motor's synchronous speed (50Hz : 1500r/min, 60Hz : 1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 10N·m.

### ■ Allowance Torque Unit : Upside ( N.m ) / Belowside ( kgf.cm )

Type Motor/Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
	Speed r/min	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
5IK40GN-A□	5GN□K	50Hz	0.77	0.92	1.30	1.50	1.90	2.30	2.38	3.20	3.80	4.60	4.88	5.70	6.90	8.30	8.57	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
5IK40GN-E□		60Hz	7.85	9.38	13.2	15.3	19.4	23.4	24.3	32.6	38.7	46.9	49.8	58.1	70.4	84.7	87.4	100	100	100	100	100	100	100	100	100	100
5IK40GN-C□		50Hz	0.63	0.76	1.10	1.30	1.60	1.90	2.00	2.60	3.20	3.80	4.07	4.70	5.70	6.80	7.19	8.60	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
5IK40GN-H□		60Hz	6.42	7.75	11.2	13.2	16.3	19.3	20.4	26.5	32.6	38.7	41.5	47.9	58.1	69.3	73.4	87.7	100	100	100	100	100	100	100	100	100
5IK40GN-S□		50Hz	0.77	0.92	1.30	1.50	1.90	2.30	2.38	3.20	3.80	4.60	4.88	5.70	6.90	8.30	8.57	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
5IK40GN-S3□		60Hz	7.85	9.38	13.2	15.3	19.4	23.4	24.3	32.6	38.7	46.9	49.8	58.1	70.4	84.7	87.4	100	100	100	100	100	100	100	100	100	100

### ■ To Allow The Hoisting Of The Load Allow Axial Load

Motor (Round shaft) →P215

Gearhead→P215

### ■ J Permissible Load Inertia J For Gearhead

→P215

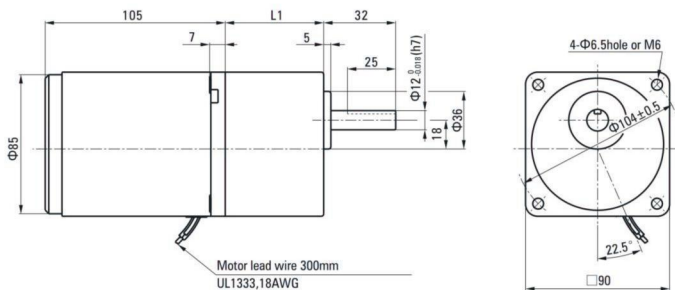
### ■ Dimensions (Unit mm)

Mounting screws are included with gearhead.

#### ● Lead Wiring Type ①

Weight : Motor : 2.4kg

Gearhead : 1.35kg



Motor Model	Gearhead Model	Gear Ratio	L1
5IK40GN-A	5GN□K	3~200	60
5IK40GN-E			
5IK40GN-C			
5IK40GN-H			
5IK40GN-S			
5IK40GN-S3			

- Enter the gear ratio in the box (□) within the model name
- Gear ratio 3~18, short case is possible (L1=42)



## Wiring Diagram

- The direction of motor rotation is as viewed from the shaft end of motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Name indicated in the list is pinion shaft type, also valid for the equivalent round shaft type.

Lead Wire Type		
5IK40GN-A, 5IK40GN-E, 5IK40GN-H, 5IK40GN-C		5IK40GN-S(S3)
<p><b>CW</b></p> <p><b>CCW</b></p> <p>Capacitance</p>	<p><b>CW</b></p> <p><b>CCW</b></p> <p>To change the rotation direction change any two connections among R, S and T</p>	
Terminal Box Type		
5IK40GN-AT, 5IK40GN-ET, 5IK40GN-HT, 5IK40GN-CT		5IK40GN-ST(S3T)
<p><b>CW</b></p> <p><b>CCW</b></p> <p>Capacitance</p>	<p><b>CW</b></p> <p><b>CCW</b></p> <p>To change the rotation direction change any two connections among U, V and W</p>	

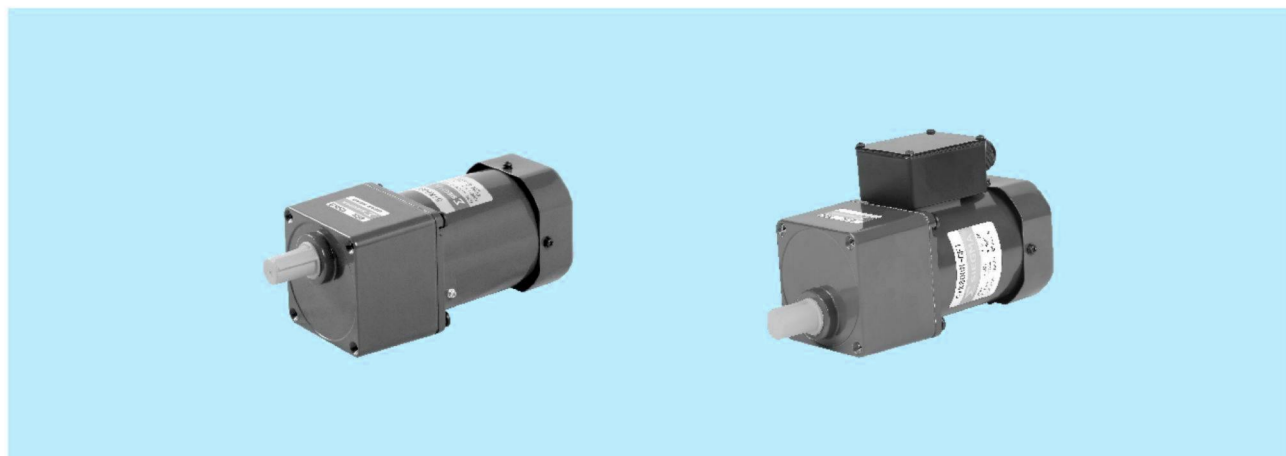
### Note:

Change the direction of single-phase motor rotation only after bring 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.

# INDUCTION MOTORS

■ 60W □ 90mm



## Specs Continuous Rating

Model · Type Upper: Pinion Shaft Below: Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
5IK60GN-AF ( 5IK60A-AF )	5IK60GN-AFT ( 5IK60A-AFT )	60	1ph 100	50	1.00	320	470	1250	20.0
				60	1.10		380	1550	
5IK60GN-EF ( 5IK40A-EF )	5IK60GN-EFT ( 5IK60A-EFT )	60	1ph 110	60	0.80	300	380	1550	12.0
			1ph 120		0.85				
5IK60GN-CF ( 5IK60A-CF )	5IK60GN-CFT ( 5IK60A-CFT )	60	1ph 220	50	0.50	340	470	1250	4.0
			1ph 230		0.55				
5IK60GN-HF ( 5IK60A-HF )	5IK60GN-HFT ( 5IK60A-HFT )	60	1ph 220	60	0.50	340	380	1550	4.0
			1ph 230		0.55				
5IK60GN-SF ( 5IK60A-SF )	5IK60GN-SFT ( 5IK60A-SFT )	60	3ph 220	50	0.45	1000	470	1250	-
				60	0.40	800	380	1550	
5IK60GN-S3F ( 5IK60A-S3F )	5IK60GN-S3FT ( 5IK60A-S3FT )	60	3ph 380	50	0.26	1000	470	1250	-
				60	0.23	800	380	1550	

- When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.
- Note: "-A" it means the voltage 110V, the assembly capacitor value it is according to the label.

## Type

- Motor

Type	Model	
	Pinion Shaft	Round Shaft
Lead Wire Type	5IK60GN-AF	5IK60A-AF
	5IK60GN-EF	5IK60A-EF
	5IK60GN-CF	5IK60A-CF
	5IK60GN-HF	5IK60A-HF
	5IK60GN-SF	5IK60A-SF
	5IK60GN-S3F	5IK60A-S3F
Terminal Box Type	5IK60GN-AFT	5IK60A-AFT
	5IK60GN-EFT	5IK60A-EFT
	5IK60GN-CFT	5IK60A-CFT
	5IK60GN-HFT	5IK60A-HFT
	5IK60GN-SFT	5IK60A-SFT
	5IK60GN-S3FT	5IK60A-S3FT

- Parallel Shaft Gearhead (Sold Separately)

Gearhead Type	Gearhead Model	Gear Ratio
Long Life ● Low Noise	5GN□K	3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200
	5GN10XK ( Decimal Gearhead )	

- Enter the gear ratio in the box (□) within the model name

### ■ Gear Motor-Torque Table

- Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.
- Enter the gear ratio in the box (□) within the model name.
  
- The colored background □ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- The speed is calculated by dividing the motor's synchronous speed (50Hz : 1500r/min, 60Hz : 1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
  
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 10N·m.

### ■ Allowance Torque Unit : Upside ( N.m ) / Belowside ( kgf.cm )

Type Motor/Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
	Speed r/min		50Hz	500	417	300	250	200	166	150	120	100	83	75	60	50	41	37	30	25	20	16	15	12.5	10	8.3	7.5
5IK60GN-AF□ 5IK60GN-EF□ 5IK60GN-CF□ 5IK60GN-HF□ 5IK60GN-SF□ 5IK60GN-S3F□	5GN□K	60Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	45	36	30	24	20	18	15	12	10	9	
		50Hz	1.10	1.40	1.90	2.30	2.90	3.40	3.57	4.80	5.70	6.80	7.03	8.60	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
			60Hz	0.92	1.10	1.50	1.80	2.30	2.80	2.99	3.80	4.60	5.50	5.70	6.90	8.30	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
				9.38	11.2	15.3	18.3	23.4	28.5	30.5	38.7	46.9	56.1	58.2	70.1	84.7	100	100	100	100	100	100	100	100	100	100	100

### ■ To Allow The Hoisting Of The Load Allow Axial Load

Motor (Round shaft) →P215

Gearhead→P215

### ■ J Permissible Load Inertia J For Gearhead

→P215

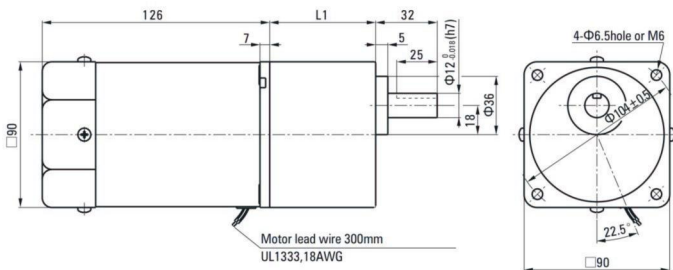
### ■ Dimensions (Unit mm)

Mounting screws are included with gearhead.

- Lead Wiring Type ①

Weight : Motor : 2.7kg

Gearhead : 1.35kg

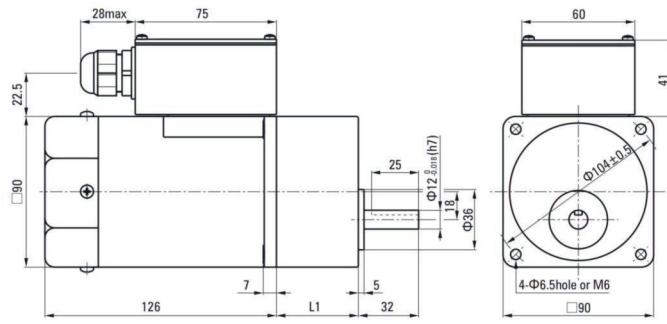


Motor Model	Gearhead Model	Gear Ratio	L1
5IK60GN-AF 5IK60GN-EF 5IK60GN-CF 5IK60GN-HF 5IK60GN-SF 5IK60GN-S3F	5GN□K	3~200	60

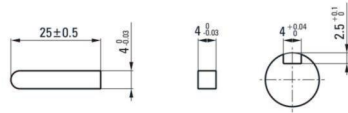
- Enter the gear ratio in the box (□) within the model name
- Gear ratio 3~18, short case is possible (L1=42)

● Terminal Box Type ②  
Weight : Motor : 2.85kg

Gearhead : 1.35kg

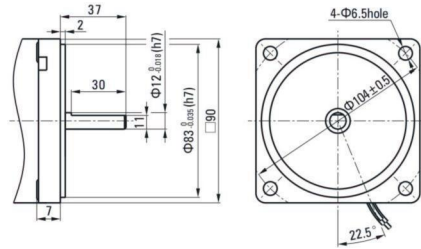


● Key · Keyway (Accessory Of Gearhead)



● Shaft Section Of Round Shaft Type

Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



Formal Dimension Of Capacitor

Model		Capacitor Model	L	W	H
Pinion Shaft	Round Shaft				
5IK60GN-AF□	5IK60A-AF□	ZD200CFAUL	47	23	35
5IK60GN-EF□	5IK60A-EF□	ZD120CFAUL	47	17	31
5IK60GN-CF□	5IK60A-CF□	ZD40BFAUL	47	17	31

- Note: Conventional capacitor is a lead wire type. Inserted 187# is optional
- Enter the code that represents the terminal box type (T) in the box (□) within the model name

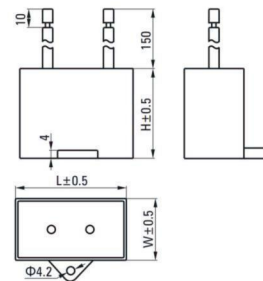
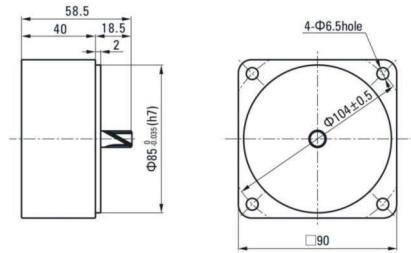
Motor Model	Gearhead Model	Gear Ratio	L1
5IK60GN-AFT	5GN□K	3~200	60
5IK60GN-EFT			
5IK60GN-CFT			
5IK60GN-HFT			
5IK60GN-SFT			
5IK60GN-S3FT			

- Enter the gear ratio in the box (□) within the model name
- Gear ratio 3~18, short case is possible (L1=32)

● Decimal Gearhead

Can be connected to GN pinion shaft type  
5GN10XK

Weight : 0.6kg



## Wiring Diagram

- The direction of motor rotation is as viewed from the shaft end of motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Name indicated in the list is pinion shaft type, also valid for the equivalent round shaft type.

Lead Wire Type		
5IK60GN-AF、5IK60GN-EF、5IK60GN-HF、5IK60GN-CF		5IK60GN-SF(S3F)
<p><b>CW</b></p> <p><b>Capacitance</b></p>	<p><b>CCW</b></p> <p><b>Capacitance</b></p>	<p><b>CW</b></p> <p><b>CCW</b> To change the rotation direction change any two connections among R, S and T</p>
Terminal Box Type		
5IK60GN-AFT、5IK60GN-EFT、5IK60GN-HFT、5IK60GN-CFT		5IK60GN-SFT(S3FT)
<p><b>CW</b></p> <p><b>Capacitance</b></p>	<p><b>CCW</b></p> <p><b>Capacitance</b></p>	<p><b>CW</b></p> <p><b>CCW</b> To change the rotation direction change any two connections among U, V and W</p>

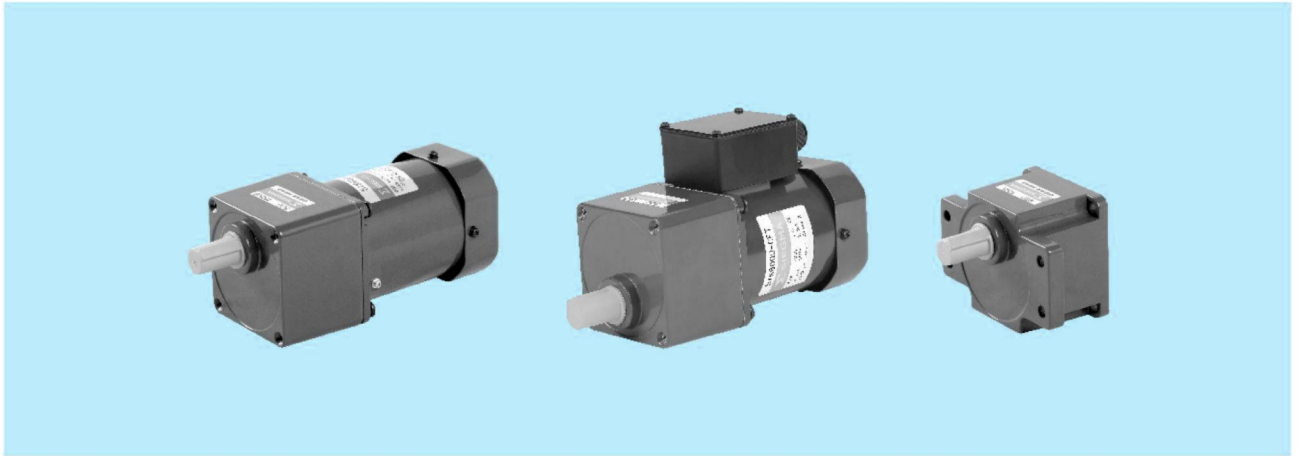
### Note:

Change the direction of single-phase motor rotation only after bring 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.

# INDUCTION MOTORS

60W □ 90mm



## Specs Continuous Rating

Model • Type Upper: Pinion Shaft Below: Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
5IK60GU-AF	5IK60GU-AFT	60	1ph 100	50	1.00	320	470	1250	20.0
				60	1.10		380	1550	
5IK60GU-EF	5IK60GU-EFT	60	1ph 110	60	0.80	300	380	1550	12.0
					1ph 120				
5IK60GU-CF	5IK60GU-CFT	60	1ph 220	50	0.50	340	470	1250	4.0
					1ph 230				
5IK60GU-HF	5IK60GU-HFT	60	1ph 220	60	0.50	340	380	1550	4.0
					1ph 230				
5IK60GU-SF	5IK60GU-SFT	60	3ph 220	50	0.45	1000	470	1250	-
				60	0.40	800	380	1550	
5IK60GU-S3F	5IK60GU-S3FT	60	3ph 380	50	0.26	1000	470	1250	-
				60	0.23	800	380	1550	

●When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

●Note: "-A" it means the voltage 110V, the assembly capacitor value it is according to the label.

## Type

● Motor

Type	Model
	Pinion Shaft
Lead Wire Type	5IK60GU-AF
	5IK60GU-EF
	5IK60GU-CF
	5IK60GU-HF
	5IK60GU-SF
	5IK60GU-S3F
Terminal Box Type	5IK60GU-AFT
	5IK60GU-EFT
	5IK60GU-CFT
	5IK60GU-HFT
	5IK60GU-SFT
	5IK60GU-S3FT

● Parallel Shaft Gearhead (Sold Separately)

Gearhead Type	Gearhead Model	Gear Ratio
Long Life ● Low Noise	5GU□KB	3, 3.6, 5, 6, 7.5, 9, 10, 12.5, 15, 18, 20, 25, 30, 36, 40, 50, 60, 75, 90, 100, 120, 150, 180, 200
	5GU10XK ( Decimal Gearhead )	

●Enter the gear ratio in the box (□) within the model name

## Gear Motor-Torque Table

- Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.
- Enter the gear ratio in the box (□) within the model name.
- The colored background □ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- The speed is calculated by dividing the motor's synchronous speed (50Hz : 1500r/min, 60Hz : 1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 20N·m.

## Allowance Torque Unit : Upside ( N.m ) / Belowside ( kgf.cm )

Type Motor/Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
	Speed r/min		50Hz	500	417	300	250	200	166	150	120	100	83	75	60	50	41	37	30	25	20	16	15	12.5	10	8.3	7.5
5IK60GU-AF□ 5IK60GU-EF□ 5IK60GU-CF□ 5IK60GU-HF□ 5IK60GU-SF□ 5IK60GU-S3F□	5GU□KB 5GU□K	50Hz	1.10	1.40	1.90	2.30	2.90	3.40	3.61	4.80	5.70	6.80	7.12	8.60	10.0	10.3	11.6	12.4	15.5	18.6	20.0	20.0	20.0	20.0	20.0	20.0	20.0
		60Hz	11.2	14.2	19.3	23.4	29.6	34.7	36.8	48.9	58.1	69.3	72.6	87.7	100	105	118	126	158	189	200	200	200	200	200	200	200
		50Hz	0.92	1.10	1.50	1.80	2.30	2.80	3.01	3.80	4.60	5.50	5.73	6.90	8.30	8.30	9.70	10.0	12.5	15.0	18.8	20.0	20.0	20.0	20.0	20.0	20.0
		60Hz	9.38	11.2	15.3	18.3	23.4	28.5	30.7	38.7	46.9	56.1	58.4	70.1	84.7	84.6	98.9	102	127	153	192	200	200	200	200	200	200

## To Allow The Hoisting Of The Load Allow Axial Load

Motor (Round shaft) →P215

Gearhead→P215

## J Permissible Load Inertia J For Gearhead

→P215

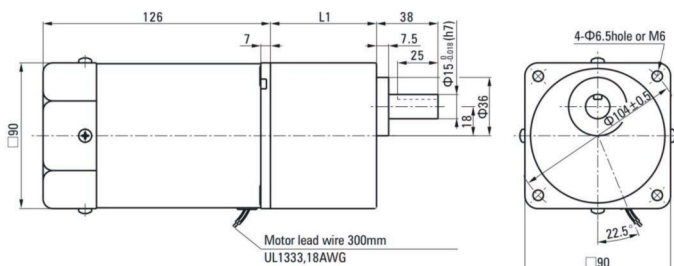
## Dimensions (Unit mm)

Mounting screws are included with gearhead.

### Lead Wiring Type ①

Weight : Motor : 2.7kg

Gearhead : 1.35kg

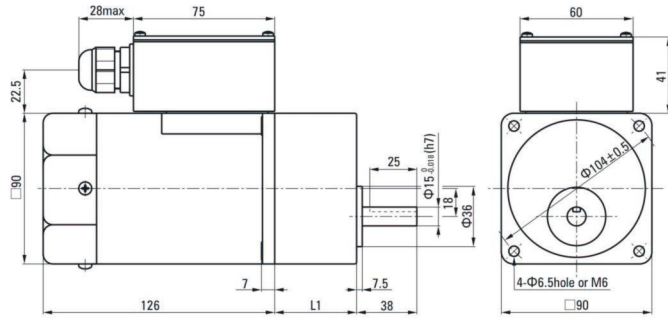


Motor Model	Gearhead Model	Gear Ratio	L1
5IK60GU-AF 5IK60GU-EF 5IK60GU-CF 5IK60GU-HF 5IK60GU-SF 5IK60GU-S3F	5GU□KB	3~200	65.5

- Enter the gear ratio in the box (□) within the model name

● Terminal Box Type ②  
Weight : Motor : 2.85kg

Gearhead : 1.5kg

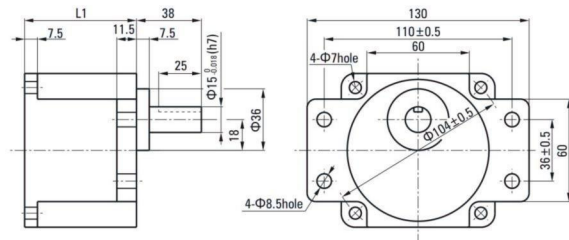


● Use cable with a diameter of  $\Phi 6 \sim \Phi 12$ mm

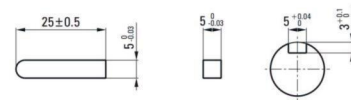
Motor Model	Gearhead Model	Gear Ratio	L1
5IK60GU-AFT	5GU□KB	3~200	65.5
5IK60GU-EFT			
5IK60GU-CFT			
5IK60GU-HFT			
5IK60GU-SFT			
5IK60GU-S3FT			

● Enter the gear ratio in the box (□) within the model name

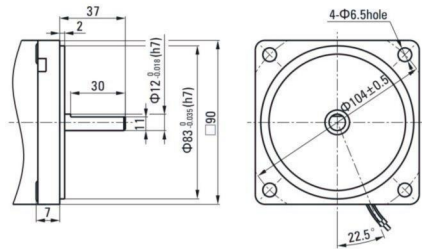
● Flange Mounting Reducer  
Can be mounted on GU type gear shaft  
5GU□K  
Weight:1.5kg



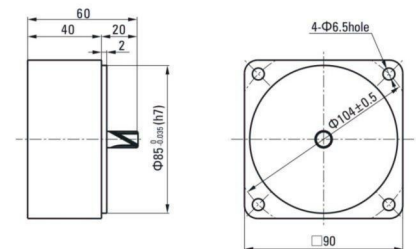
● Key · Keyway (Accessory Of Gearhead)



● Shaft Section Of Round Shaft Type  
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



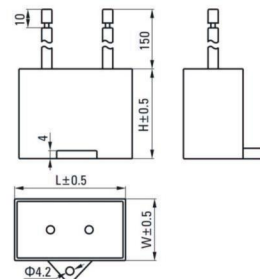
● Decimal Gearhead  
Can be connected to GU pinion shaft type  
5GU10XK  
Weight : 0.65kg



### Formal Dimension Of Capacitor

Model	Capacitor Model	L	W	H
5IK60GU-AF□	ZD200CFAUL	47	23	35
5IK60GU-EF□	ZD120CFAUL	47	17	31
5IK60GU-CF□	ZD40BFAUL	47	17	31

● Note: Conventional capacitor is a lead wire type. Inserted 187# is optional  
● Enter the code that represents the terminal box type (T) in the box (□) within the model name



## Wiring Diagram

- The direction of motor rotation is as viewed from the shaft end of motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Name indicated in the list is pinion shaft type, also valid for the equivalent round shaft type.

Lead Wire Type		
5IK60GU-AF、5IK60GU-EF、5IK60GU-HF、5IK60GU-CF		5IK60GU-SF(S3F)
<p><b>CW</b></p> <p><b>Capacitance</b></p>	<p><b>CCW</b></p> <p><b>Capacitance</b></p>	<p><b>CW</b></p> <p><b>CCW</b> To change the rotation direction change any two connections among R, S and T</p>
Terminal Box Type		
5IK60GU-AFT、5IK60GU-EFT、5IK60GU-HFT、5IK60GU-CFT		5IK60GU-SFT(S3FT)
<p><b>CW</b></p> <p><b>Capacitance</b></p>	<p><b>CCW</b></p> <p><b>Capacitance</b></p>	<p><b>CW</b></p> <p><b>CCW</b> To change the rotation direction change any two connections among U, V and W</p>

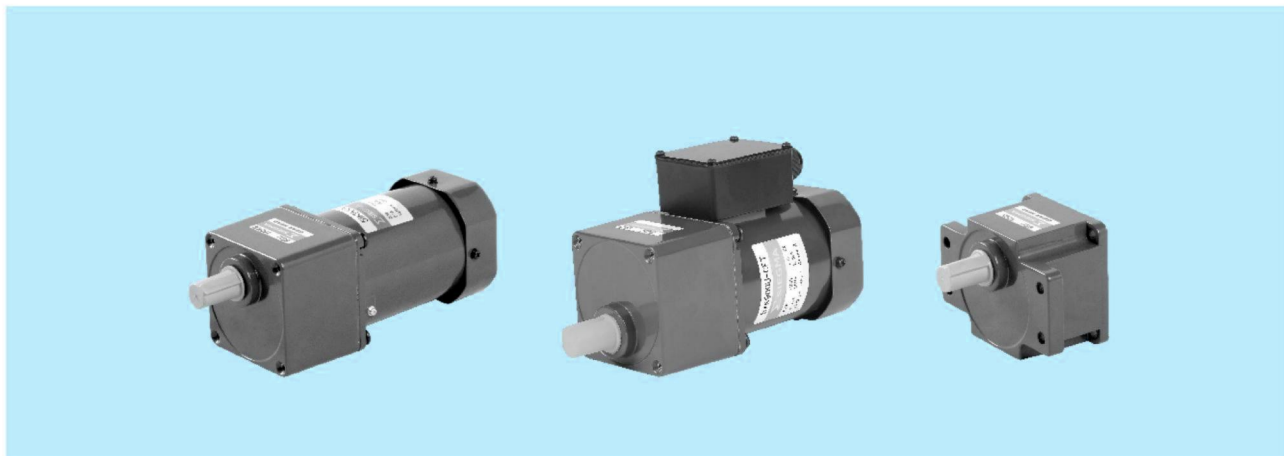
**Note:**

Change the direction of single-phase motor rotation only after bring 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.

# INDUCTION MOTORS

■ 90W □ 90mm



## Specs Continuous Rating

Model • Type Upper:Pinion Shaft Below:Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
5IK90GU-AF ( 5IK90A-AF )	5IK90GU-AFT ( 5IK90A-AFT )	90	1ph 100	50	1.55	450	700	1250	25.0
				60	1.85			1550	
5IK90GU-EF ( 5IK90A-EF )	5IK90GU-EFT ( 5IK90A-EFT )	90	1ph 110	60	1.40	500	570	1550	20.0
			1ph 120		1.45				
5IK90GU-CF ( 5IK90A-CF )	5IK90GU-CFT ( 5IK90A-CFT )	90	1ph 220	50	0.72	450	700	1250	5.0
			1ph 230		0.70				
5IK90GU-HF ( 5IK90A-HF )	5IK90GU-HFT ( 5IK90A-HFT )	90	1ph 220	60	0.71	450	570	1550	5.0
			1ph 230		0.75				
5IK90GU-SF ( 5IK90A-SF )	5IK90GU-SFT ( 5IK90A-SFT )	90	3ph 220	50	0.60	1350	700	1250	-
				60	0.55	1100	570	1550	
5IK90GU-SF ( 5IK90A-S3F )	5IK90GU-SFT ( 5IK90A-S3FT )	90	3ph 380	50	0.35	1350	700	1250	-
				60	0.32	1100	570	1550	

●When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

●Note: "-A" it means the voltage 110V, the assembly capacitor value it is according to the label.

## Type

● Motor

Type	Model	
	Pinion Shaft	Round Shaft
Lead Wire Type	5IK90GU-AF	5IK90A-AF
	5IK90GU-EF	5IK90A-EF
	5IK90GU-CF	5IK90A-CF
	5IK90GU-HF	5IK90A-HF
	5IK90GU-SF	5IK90A-SF
	5IK90GU-S3F	5IK90A-S3F
Terminal Box Type	5IK90GU-AFT	5IK90A-AFT
	5IK90GU-EFT	5IK90A-EFT
	5IK90GU-CFT	5IK90A-CFT
	5IK90GU-HFT	5IK90A-HFT
	5IK90GU-SFT	5IK90A-SFT
	5IK90GU-S3FT	5IK90A-S3FT

● Parallel Shaft Gearhead (Sold Separately)

Gearhead Type	Gearhead Model	Gear Ratio
Long Life ● Low Noise	5GU□KB	3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200
	5GU10XX ( Decimal Gearhead )	

●Enter the gear ratio in the box (□) within the model name

## Gear Motor-Torque Table

- Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.
- Enter the gear ratio in the box (□) within the model name.
  
- The colored background □ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- The speed is calculated by dividing the motor's synchronous speed (50Hz : 1500r/min, 60Hz : 1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
  
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 20N·m.

## Allowance Torque Unit : Upside ( N.m ) / Belowside ( kgf.cm )

Type Motor/Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200			
	Speed r/min		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
5IK90GU-AF□	5GU□KB 5GU□K	50Hz	1.10	2.00	2.80	3.40	4.30	5.10	5.31	6.40	7.70	9.20	9.55	11.6	13.6	16.6	18.1	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	
5IK90GU-EF□		60Hz	17.3	20.4	28.6	34.7	43.9	52.0	54.2	65.3	78.6	93.3	97.4	118	142	169	184	200	200	200	200	200	200	200	200	200	200	200	200
5IK90GU-CF□		50Hz	1.40	1.70	2.30	2.80	3.50	4.20	4.43	5.20	6.20	7.50	7.81	9.40	11.3	13.5	14.5	18.8	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
5IK90GU-HF□		60Hz	14.3	17.3	23.5	28.6	35.7	42.9	45.2	53.1	63.3	76.5	79.6	95.9	115	138	148	192	200	200	200	200	200	200	200	200	200	200	200
5IK90GU-SF□		50Hz	1.10	2.00	2.80	3.40	4.30	5.10	5.31	6.40	7.70	9.20	9.55	11.6	13.6	16.6	18.1	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
5IK90GU-SF□		60Hz	17.3	20.4	28.6	34.7	43.9	52.0	54.2	65.3	78.6	93.3	97.4	118	142	169	184	200	200	200	200	200	200	200	200	200	200	200	200

## To Allow The Hoisting Of The Load Allow Axial Load

Motor (Round shaft) →P215

Gearhead→P215

## J Permissible Load Inertia J For Gearhead

→P215

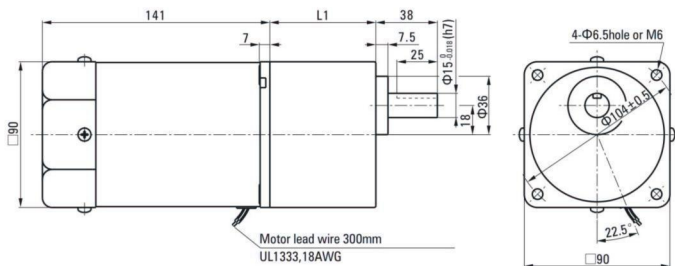
## Dimensions (Unit mm)

Mounting screws are included with gearhead.

● Lead Wiring Type ①

Weight : Motor : 3.2kg

Gearhead : 1.5kg



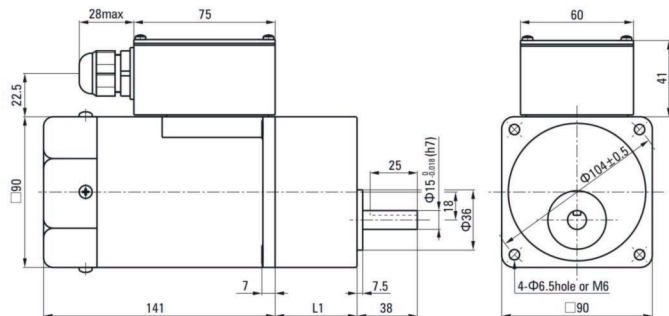
Motor Model	Gearhead Model	Gear Ratio	L1
5IK90GU-AF	5GU□KB	3~200	65.5
5IK90GU-EF			
5IK90GU-CF			
5IK90GU-HF			
5IK90GU-SF			
5IK90GU-S3F			

• Enter the gear ratio in the box (□) within the model name

● Terminal Box Type ②

Weight : Motor : 3.35kg

Gearhead : 1.5kg



● Use cable with a diameter of  $\Phi 6 \sim \Phi 12$ mm

Motor Model	Gearhead Model	Gear Ratio	L1
5IK90GU-AFT	5GU□KB	3~200	65.5
5IK90GU-EFT			
5IK90GU-CFT			
5IK90GU-HFT			
5IK90GU-SFT			
5IK90GU-S3FT			

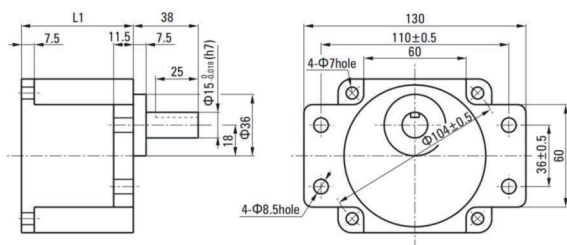
● Enter the gear ratio in the box (□) within the model name

● Flange Mounting Reducer

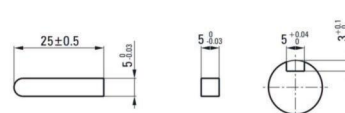
Can be mounted on GU type gear shaft

5GU□K

Weight:1.5kg

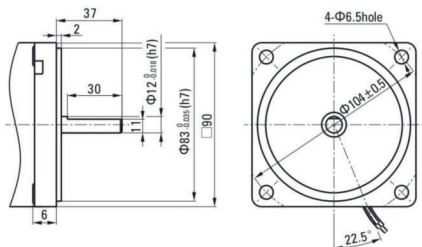


● Key · Keyway (Accessory Of Gearhead)



● Shaft Section Of Round Shaft Type

Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.

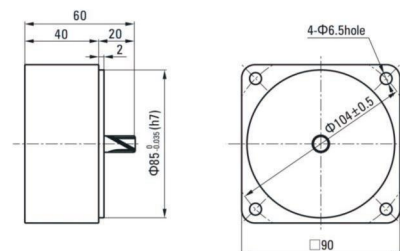


● Decimal Gearhead

Can be connected to GU pinion shaft type

5GU10XK

Weight : 0.65kg

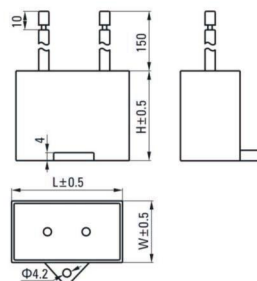


Formal Dimension Of Capacitor

Model		Capacitor Model	L	W	H
Pinion Shaft	Round Shaft				
5IK90GU-AF□	5IK90A-AF□	ZD250CFAUL	47	27	37
5IK90GU-EF□	5IK90A-EF□	ZD200CFAUL	47	23	35
5IK90GU-CF□	5IK90A-CF□	ZD50BFAUL	47	20	31

● Note: Conventional capacitor is a lead wire type. Inserted 187# is optional

● Enter the code that represents the terminal box type (T) in the box (□) within the model name



## Wiring Diagram

- The direction of motor rotation is as viewed from the shaft end of motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Name indicated in the list is pinion shaft type, also valid for the equivalent round shaft type.

Lead Wire Type		
5IK90GU-AF、5IK90GU-EF、5IK90GU-HF、5IK90GU-CF		5IK90GU-SF(S3F)
<p><b>CW</b></p> <p><b>CCW</b></p>	<p><b>CW</b></p> <p><b>CCW</b> To change the rotation direction change any two connections among R, S and T</p>	
Terminal Box Type		
5IK90GU-AFT、5IK90GU-EFT、5IK90GU-HFT、5IK90GU-CFT		5IK90GU-SFT(S3FT)
<p><b>CW</b></p> <p><b>CCW</b></p>	<p><b>CW</b></p> <p><b>CCW</b> To change the rotation direction change any two connections among U, V and W</p>	

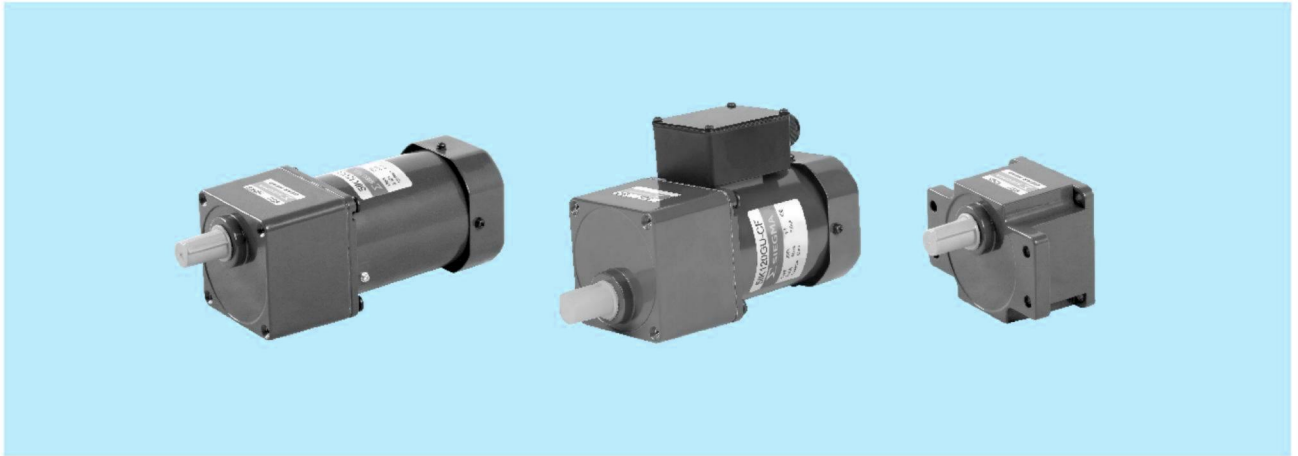
**Note:**

Change the direction of single-phase motor rotation only after bring 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.

# INDUCTION MOTORS

■ 120W □ 90mm



## Specs Continuous Rating

Model · Type Upper: Pinion Shaft Below: Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
5IK120GU-AF ( 5IK120A-AF )	5IK120GU-AFT ( 5IK120A-AFT )	120	1ph 100	50	2.10	600	930	1250	30.0
				60	2.50		750	1550	
5IK120GU-EF ( 5IK120A-EF )	5IK120GU-EFT ( 5IK120A-EFT )	120	1ph 110	60	1.65	600	750	1550	25.0
			1ph 120		1.80				
5IK120GU-CF ( 5IK120A-CF )	5IK120GU-CFT ( 5IK120A-CFT )	120	1ph 220	50	1.00	650	930	1250	7.0
			1ph 230		0.95				
5IK120GU-HF ( 5IK120A-HF )	5IK120GU-HFT ( 5IK120A-HFT )	120	1ph 220	60	1.00	600	750	1550	7.0
			1ph 230		0.95				
5IK120GU-SF ( 5IK120A-SF )	5IK120GU-SFT ( 5IK120A-SFT )	120	3ph 220	50	0.70	1850	930	1250	-
				60	0.60	1600	750	1550	
5IK120GU-S3F ( 5IK120A-S3F )	5IK120GU-S3FT ( 5IK120A-S3FT )	120	3ph 380	50	0.40	1850	930	1250	-
				60	0.35	1600	750	1550	

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note: "-A" it means the voltage 110V, the assembly capacitor value it is according to the label.

## Type

● Motor

Type	Model	
	Pinion Shaft	Round Shaft
Lead Wire Type	5IK120GU-AF	5IK120A-AF
	5IK120GU-EF	5IK120A-EF
	5IK120GU-CF	5IK120A-CF
	5IK120GU-HF	5IK120A-HF
	5IK120GU-SF	5IK120A-SF
	5IK120GU-S3F	5IK120A-S3F
Terminal Box Type	5IK120GU-AFT	5IK120A-AFT
	5IK120GU-EFT	5IK120A-EFT
	5IK120GU-CFT	5IK120A-CFT
	5IK120GU-HFT	5IK120A-HFT
	5IK120GU-SFT	5IK120A-SFT
	5IK120GU-S3FT	5IK120A-S3FT

● Parallel Shaft Gearhead (Sold Separately)

Gearhead Type	Gearhead Model	Gear Ratio
Long Life ● Low Noise	5GU□KB	3, 3.6, 5, 6, 7.5, 9, 10, 12.5, 15, 18, 20, 25, 30, 36, 40, 50, 60, 75, 90, 100, 120, 150, 180, 200
	5GU10XX ( Decimal Gearhead )	

● Enter the gear ratio in the box (□) within the model name

### Gear Motor-Torque Table

- Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.
- Enter the gear ratio in the box (□) within the model name.
- The colored background □ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- The speed is calculated by dividing the motor's synchronous speed (50Hz : 1500r/min, 60Hz : 1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 20N·m.

### Allowance Torque Unit : Upside ( N.m ) / Belowside ( kgf.cm )

Type Motor/Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200			
	Speed r/min		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
5IK120GU-AF□	5GU□KB 5GU□K	50Hz	2.30	2.70	3.80	4.50	5.60	6.80	7.01	8.50	10.2	12.2	12.5	15.3	18.4	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	
5IK120GU-EF□		60Hz	23.4	27.5	38.7	45.9	57.1	69.3	71.5	86.7	104	124	128	156	187	200	200	200	200	200	200	200	200	200	200	200	200	200	200
5IK120GU-CF□		50Hz	1.80	2.20	3.00	3.60	4.60	5.50	5.73	6.80	8.20	9.80	10.1	12.4	14.9	17.8	19.5	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
5IK120GU-HF□		60Hz	18.3	22.4	30.6	36.7	46.9	56.1	58.5	69.5	83.6	100	103	126	152	181	199	200	200	200	200	200	200	200	200	200	200	200	200
5IK120GU-SF□		50Hz	2.30	2.70	3.80	4.50	5.60	6.80	7.01	8.50	10.2	12.2	12.5	15.3	18.4	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
5IK120GU-SF□		60Hz	23.4	27.5	38.7	45.9	57.1	69.3	71.5	86.7	104	124	128	156	187	200	200	200	200	200	200	200	200	200	200	200	200	200	200

### To Allow The Hoisting Of The Load Allow Axial Load

Motor (Round shaft) →P215

Gearhead→P215

### J Permissible Load Inertia J For Gearhead

→P215

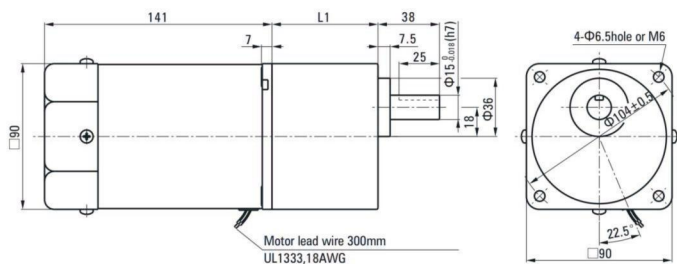
### Dimensions (Unit mm)

Mounting screws are included with gearhead.

● Lead Wiring Type ①

Weight : Motor : 3.4kg

Gearhead : 1.5kg

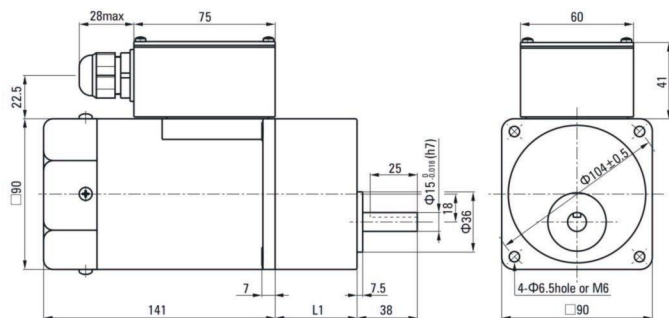


Motor Model	Gearhead Model	Gear Ratio	L1
5IK120GU-AF	5GU□KB	3~200	65.5
5IK120GU-EF			
5IK120GU-CF			
5IK120GU-HF			
5IK120GU-SF			
5IK120GU-S3F			

● Enter the gear ratio in the box (□) within the model name

● Terminal Box Type ②  
Weight : Motor : 3.55kg

Gearhead : 1.5kg

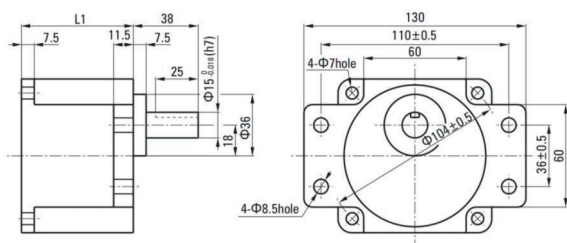


●Use cable with a diameter of  $\Phi 6 \sim \Phi 12$ mm

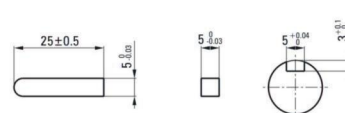
Motor Model	Gearhead Model	Gear Ratio	L1
5IK120GU-AFT	5GU□KB	3~200	65.5
5IK120GU-EFT			
5IK120GU-CFT			
5IK120GU-HFT			
5IK120GU-SFT			
5IK120GU-S3FT			

●Enter the gear ratio in the box (□) within the model name

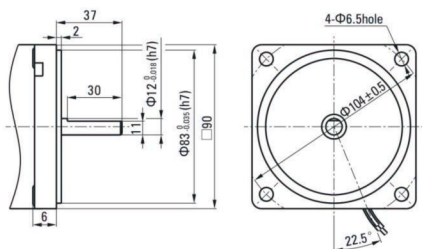
● Flange Mounting Reducer  
Can be mounted on GU type gear shaft  
5GU□K  
Weight:1.5kg



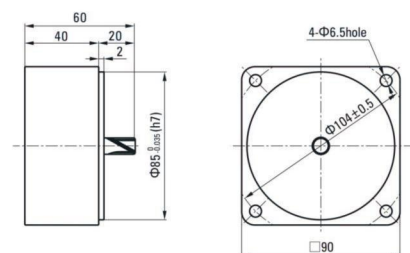
● Key · Keyway (Accessory Of Gearhead)



● Shaft Section Of Round Shaft Type  
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



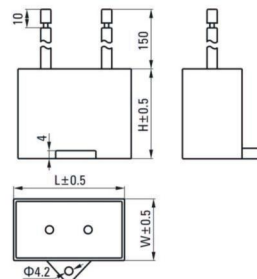
● Decimal Gearhead  
Can be connected to GU pinion shaft type  
5GU10XK  
Weight : 0.65kg



### Formal Dimension Of Capacitor

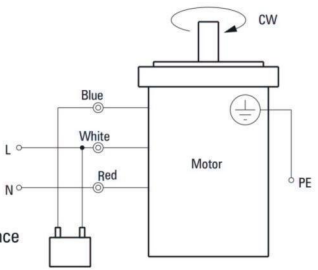
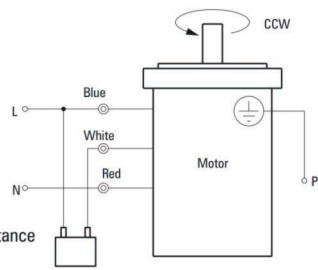
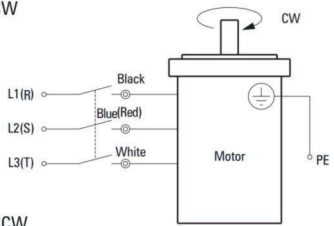
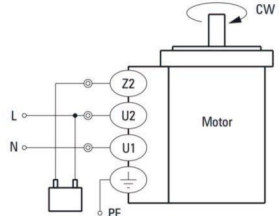
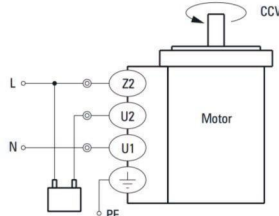
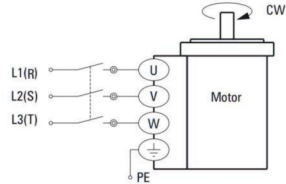
Model		Capacitor Model	L	W	H
Pinion Shaft	Round Shaft				
5IK120GU-AF□	5IK120A-AF□	ZD300CFAUL	58	26	38
5IK120GU-EF□	5IK120A-EF□	ZD250CFAUL	47	27	37
5IK120GU-CF□	5IK120A-CF□	ZD70BFAUL	47	24	37

● Note: Conventional capacitor is a lead wire type. Inserted 187# is optional  
● Enter the code that represents the terminal box type (T) in the box (□) within the model name



## Wiring Diagram

- The direction of motor rotation is as viewed from the shaft end of motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Name indicated in the list is pinion shaft type, also valid for the equivalent round shaft type.

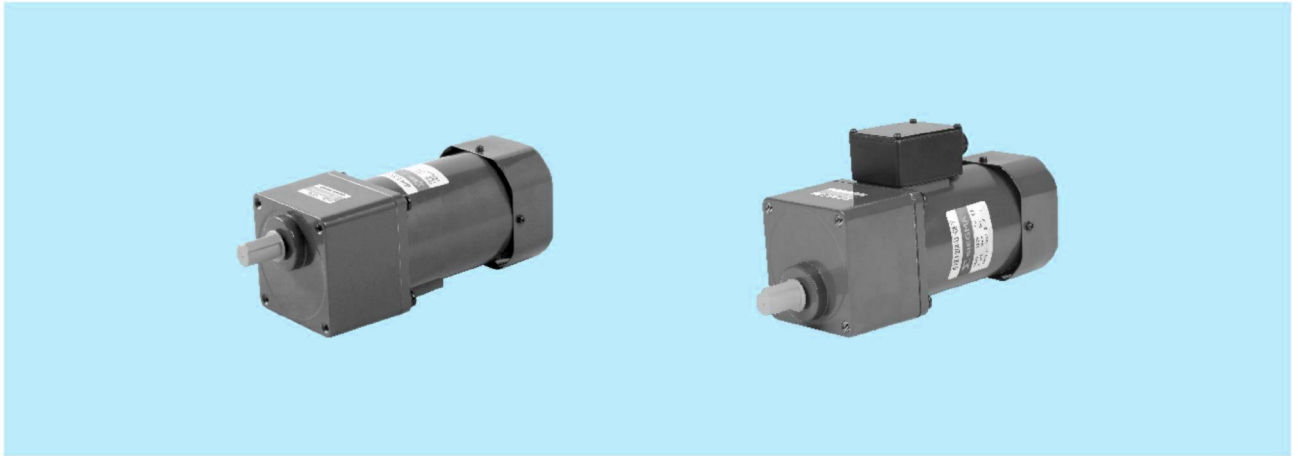
Lead Wire Type		
5IK120GU-AF, 5IK120GU-EF, 5IK120GU-HF, 5IK120GU-CF		5IK120GU-SF(S3F)
<p><b>CW</b></p>  <p>Capacitance</p>	<p><b>CCW</b></p>  <p>Capacitance</p>	<p><b>CW</b></p>  <p><b>CCW</b> To change the rotation direction change any two connections among R, S and T</p>
Terminal Box Type		
5IK120GU-AFT, 5IK120GU-EFT, 5IK120GU-HFT, 5IK120GU-CFT		5IK120GU-SFT(S3FT)
<p><b>CW</b></p>  <p>Capacitance</p>	<p><b>CCW</b></p>  <p>Capacitance</p>	<p><b>CW</b></p>  <p><b>CCW</b> To change the rotation direction change any two connections among U, V and W</p>

**Note:**

Change the direction of single-phase motor rotation only after bring 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.

# INDUCTION MOTORS

■ 120W □ 104mm



## Specs Continuous Rating

Model · Type Upper: Pinion Shaft Below: Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
6IK120GU-AF ( 6IK120A-AF )	6IK120GU-AFT ( 6IK120A-AFT )	120	1ph 100	50	2.10	600	930	1250	30.0
				60	2.50		750	1550	
6IK120GU-EF ( 6IK120A-EF )	6IK120GU-EFT ( 6IK120A-EFT )	120	1ph 110	60	1.70	600	750	1550	20.0
			1ph 120		1.80				
6IK120GU-CF ( 6IK120A-CF )	6IK120GU-CFT ( 6IK120A-CFT )	120	1ph 220	50	0.95	750	930	1250	8.0
			1ph 230						
6IK120GU-HF ( 6IK120A-HF )	6IK120GU-HFT ( 6IK120A-HFT )	120	1ph 220	60	0.95	700	750	1550	8.0
			1ph 230		1.00				
6IK120GU-SF ( 6IK120A-SF )	6IK120GU-SFT ( 6IK120A-SFT )	120	3ph 220	50	0.75	2200	890	1300	-
				60	0.70		730	1600	
6IK120GU-S3F ( 6IK120A-S3F )	6IK120GU-S3FT ( 6IK120A-S3FT )	120	3ph 380	50	0.43	2200	890	1300	-
				60	0.40		730	1600	

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note: "-A" it means the voltage 110V, the assembly capacitor value it is according to the label.

## Type

● Motor

Type	Model	
	Pinion Shaft	Round Shaft
Lead Wire Type	6IK120GU-AF	6IK120A-AF
	6IK120GU-EF	6IK120A-EF
	6IK120GU-CF	6IK120A-CF
	6IK120GU-HF	6IK120A-HF
	6IK120GU-SF	6IK120A-SF
	6IK120GU-S3F	6IK120A-S3F
Terminal Box Type	6IK120GU-AFT	6IK120A-AFT
	6IK120GU-EFT	6IK120A-EFT
	6IK120GU-CFT	6IK120A-CFT
	6IK120GU-HFT	6IK120A-HFT
	6IK120GU-SFT	6IK120A-SFT
	6IK120GU-S3FT	6IK120A-S3FT

● Parallel Shaft Gearhead (Sold Separately)

Gearhead Type	Gearhead Model	Gear Ratio
Long Life ● Low Noise	6GU□K	3, 3.6, 5, 6, 7.5, 9, 10, 12.5, 15, 18, 20, 25, 30, 36, 40, 50, 60, 75, 90, 100, 120, 150, 180, 200

● Enter the gear ratio in the box (□) within the model name

## ■ Gear Motor-Torque Table

- Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.
- Enter the gear ratio in the box (□) within the model name.

- The colored background □ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- The speed is calculated by dividing the motor's synchronous speed (50Hz : 1500r/min, 60Hz : 1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 20N·m.

## ■ Allowance Torque Unit : Upside ( N.m ) / Belowside ( kgf.cm )

Type Motor/Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
	Speed r/min	50Hz	500	417	300	250	200	166	150	120	100	83	75	60	50	41	37	30	25	20	16	15	12.5	10	8.3	7.5	
6IK120GU-AF□ 6IK120GU-CF□	6GU□K	50Hz	2.30	2.70	3.80	4.50	5.60	6.80	6.68	8.50	10.2	12.2	12.0	15.3	18.4	22.1	24.0	30.7	36.8	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
23.4			27.5	38.7	45.9	57.1	69.3	68.2	86.7	104	124	123	156	187	225	245	313	375	400	400	400	400	400	400	400	400	400
6IK120GU-SF□	6GU□K	50Hz	2.22	2.60	3.60	4.30	5.40	6.50	6.42	8.10	9.70	11.7	11.6	14.7	17.6	21.1	23.2	29.4	35.2	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
2.40			26.5	36.7	43.8	55.0	66.3	65.6	87.6	98.8	119	118	149	179	215	236	300	359	400	400	400	400	400	400	400	400	400

## ■ Allowance Torque Unit : Upside ( N.m ) / Belowside ( kgf.cm )

Type Motor/Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
	Speed r/min	60Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	45	36	30	24	20	18	15	12	10	9	
6IK120GU-AF□ 6IK120GU-EF□ 6IK120GU-HF□	6GU□K	60Hz	1.80	2.20	3.00	3.60	4.60	5.50	5.40	6.80	8.20	9.80	9.70	12.4	14.9	17.8	19.4	24.8	29.7	37.1	40.0	40.0	40.0	40.0	40.0	40.0	40.0
18.3			22.4	30.6	36.7	46.9	56.1	55.0	69.3	83.6	100	99.0	126	152	181	198	253	303	378	400	400	400	400	400	400	400	400
6IK120GU-SF□	6GU□K	60Hz	1.80	2.20	3.00	3.60	4.40	5.30	5.20	6.70	8.00	9.60	9.40	12.0	14.5	17.3	18.8	24.1	28.9	36.1	40.0	40.0	40.0	40.0	40.0	40.0	40.0
18.3			22.4	30.6	36.7	44.8	54.0	53.3	68.3	81.6	97.9	95.9	122	148	176	192	245	295	368	400	400	400	400	400	400	400	400

## ■ To Allow The Hoisting Of The Load Allow Axial Load

Motor (Round shaft) →P215

Gearhead→P215

## ■ J Permissible Load Inertia J For Gearhead

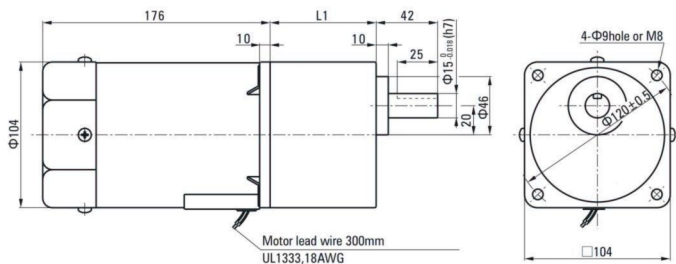
→P215

### Dimensions (Unit mm)

Mounting screws are included with gearhead.

● Lead wiring Type ①

Weight : Motor : 4.8kg      Gearhead : 2.1kg

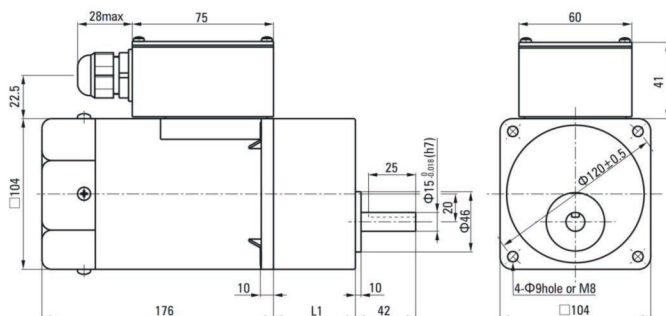


Motor Model	Gearhead Model	Gear Ratio	L1
6IK120GU-AF 6IK120GU-EF 6IK120GU-CF 6IK120GU-HF 6IK120GU-SF 6IK120GU-S3F	6GU□K	3~200	72

●Enter the gear ratio in the box (□) within the model name

● Terminal Box Type ②

Weight : Motor : 4.95kg      Gearhead : 2.1kg



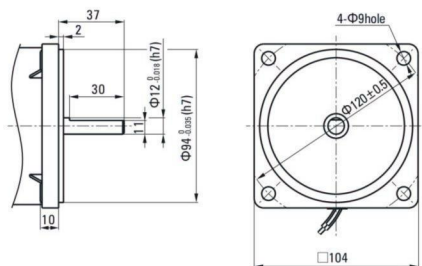
Motor Model	Gearhead Model	Gear Ratio	L1
6IK120GU-AFT 6IK120GU-EFT 6IK120GU-CFT 6IK120GU-HFT 6IK120GU-SFT 6IK120GU-S3FT	6GU□K	3~200	72

●Enter the gear ratio in the box (□) within the model name

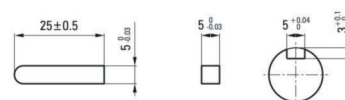
●Use cable with a diameter of Φ6~Φ12mm

● Shaft Section Of Round Shaft Type

Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



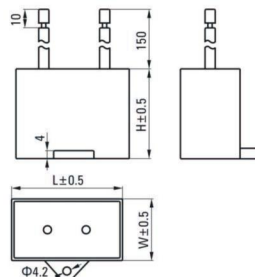
● Key · Keyway (Accessory Of Gearhead)



### Formal Dimension Of Capacitor

Model		Capacitor Model	L	W	H
Pinion Shaft	Round Shaft				
6IK120GU-AF	6IK120A-AF	ZD300CFAUL	58	26.0	38
6IK120GU-EF	6IK120A-EF	ZD200CFAUL	47	23.0	35
6IK120GU-CF	6IK120A-CF	ZD80BFAUL	48	26.5	38

● Note: Conventional capacitor is a lead wire type. Inserted 187# is optional  
 ● Enter the code that represents the terminal box type (T) in the box (□) within the model name



## Wiring Diagram

- The direction of motor rotation is as viewed from the shaft end of motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Name indicated in the list is pinion shaft type, also valid for the equivalent round shaft type.

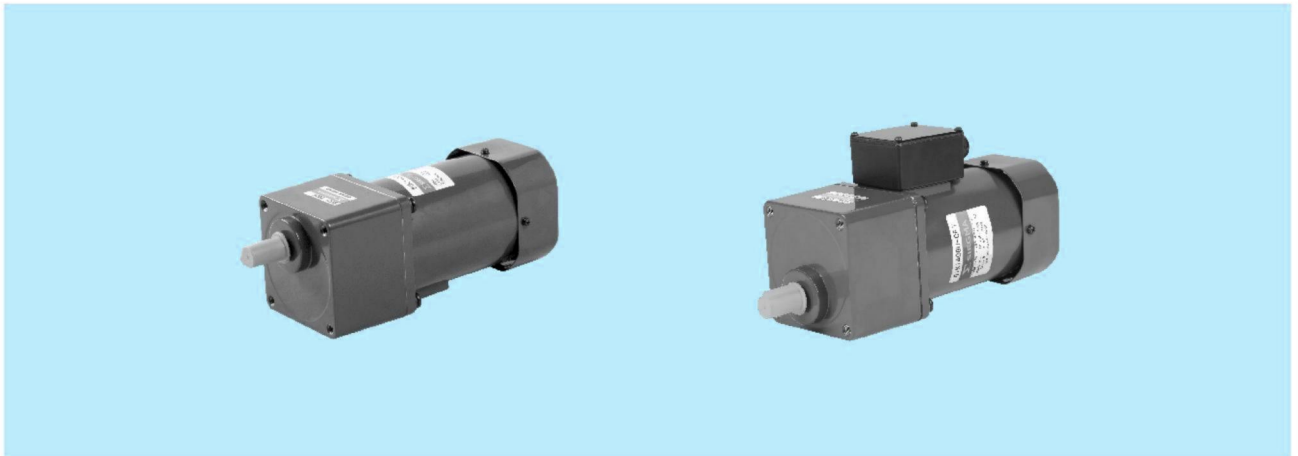
Lead Wire Type		
6IK120GU-AF, 6IK120GU-EF, 6IK120GU-HF, 6IK120GU-CF		6IK120GU-SF(S3F)
<p><b>CW</b></p> <p><b>CCW</b></p>	<p><b>CW</b></p> <p><b>CCW</b> To change the rotation direction change any two connections among R, S and T</p>	
Terminal Box Type		
6IK120GU-AFT, 6IK120GU-EFT, 6IK120GU-HFT, 6IK120GU-CFT		6IK120GU-SFT(S3FT)
<p><b>CW</b></p> <p><b>CCW</b></p>	<p><b>CW</b></p> <p><b>CCW</b> To change the rotation direction change any two connections among U, V and W</p>	

**Note:**

Change the direction of single-phase motor rotation only after bring 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.

# INDUCTION MOTORS

■ 140W □ 104mm



## Specs Continuous Rating

Model · Type Upper: Pinion Shaft Below: Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
6IK140GU-AF ( 6IK140A-AF )	6IK140GU-AFT ( 6IK140A-AFT )	140	1ph 100	50	2.70	700	1080	1250	35.0
				60	3.00		870	1550	
6IK140GU-EF ( 6IK140A-EF )	6IK140GU-EFT ( 6IK140A-EFT )	140	1ph 110	60	1.80	700	850	1600	25.0
			1ph 120		1.95				
6IK140GU-CF ( 6IK140A-CF )	6IK140GU-CFT ( 6IK140A-CFT )	140	1ph 220	50	1.05	850	1040	1350	10.0
			1ph 230		1.15				
6IK140GU-HF ( 6IK140A-HF )	6IK140GU-HFT ( 6IK140A-HFT )	140	1ph 220	60	1.05	750	850	1600	10.0
			1ph 230		1.15				
6IK140GU-SF ( 6IK140A-SF )	6IK140GU-SFT ( 6IK140A-SFT )	140	3ph 220	50	0.85	2700	1080	1250	-
				60	0.75	2200	870	1550	
6IK140GU-SF ( 6IK140A-S3F )	6IK140GU-SFT ( 6IK140A-S3FT )	140	3ph 380	50	0.49	2700	1080	1250	-
				60	0.43	2200	870	1550	

- When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.
- Note: "-A" it means the voltage 110V, the assembly capacitor value it is according to the label.

## Type

- Motor

Type	Model	
	Pinion Shaft	Round Shaft
Lead Wire Type	6IK140GU-AF	6IK140A-AF
	6IK140GU-EF	6IK140A-EF
	6IK140GU-CF	6IK140A-CF
	6IK140GU-HF	6IK140A-HF
	6IK140GU-SF	6IK140A-SF
	6IK140GU-S3F	6IK140A-S3F
Terminal Box Type	6IK140GU-AFT	6IK140A-AFT
	6IK140GU-EFT	6IK140A-EFT
	6IK140GU-CFT	6IK140A-CFT
	6IK140GU-HFT	6IK140A-HFT
	6IK140GU-SFT	6IK140A-SFT
	6IK140GU-S3FT	6IK140A-S3FT

- Parallel Shaft Gearhead (Sold Separately)

Gearhead Type	Gearhead Model	Gear Ratio
Long Life ● Low Noise	6GU□K	3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200

- Enter the gear ratio in the box (□) within the model name

## ■ Gear Motor-Torque Table

- Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.
- Enter the gear ratio in the box (□) within the model name.

- The colored background □ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- The speed is calculated by dividing the motor's synchronous speed (50Hz : 1500r/min, 60Hz : 1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 20N·m.

## ■ Allowance Torque Unit : Upside ( N.m ) / Belowside ( kgf.cm )

Type Motor/Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
	Speed r/min	50Hz	500	417	300	250	200	166	150	120	100	83	75	60	50	41	37	30	25	20	16	15	12.5	10	8.3	7.5	
6IK140GU-AF□ 6IK140GU-CF□	6GU□K	50Hz	2.60	3.10	4.40	5.20	6.60	7.90	7.80	9.90	11.8	14.2	14.0	17.8	21.4	25.7	28.0	35.6	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
26.5			31.6	44.8	53.0	67.3	80.6	79.6	101	120	144	143	181	218	262	286	363	400	400	400	400	400	400	400	400	400	400
6IK140GU-SF□	6GU□K	50Hz	2.50	3.00	4.20	5.10	6.30	7.60	7.20	9.50	11.4	13.7	13.0	17.2	20.6	24.7	26.0	34.3	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
25.5			30.6	42.8	52.0	63.2	77.5	73.6	96.9	116	139	133	175	210	252	265	349	400	400	400	400	400	400	400	400	400	400

## ■ Allowance Torque Unit : Upside ( N.m ) / Belowside ( kgf.cm )

Type Motor/Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
	Speed r/min	60Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	45	36	30	24	20	18	15	12	10	9	
6IK140GU-AF□ 6IK140GU-SF□ 6IK140GU-EF□	6GU□K	60Hz	2.10	2.50	3.50	4.20	5.30	6.30	6.30	7.90	9.50	11.4	11.3	14.4	17.2	20.7	22.6	28.7	34.5	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
21.4			25.5	35.7	42.8	54.0	64.2	64.2	80.6	96.9	116	115	147	175	211	231	292	352	400	400	400	400	400	400	400	400	400
2.10			2.50	3.40	4.10	5.20	6.20	6.10	7.80	9.30	11.2	11.0	12.0	16.8	20.2	22.0	28.0	33.7	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
6IK140GU-HF□	6GU□K	60Hz	21.4	25.5	34.6	41.8	53.0	63.2	62.2	79.5	94.8	114	112	122	171	206	224	285	343	400	400	400	400	400	400	400	400
21.4			25.5	34.6	41.8	53.0	63.2	62.2	79.5	94.8	114	112	122	171	206	224	285	343	400	400	400	400	400	400	400	400	400

## ■ To Allow The Hoisting Of The Load Allow Axial Load

Motor (Round shaft) →P215

Gearhead→P215

## ■ J Permissible Load Inertia J For Gearhead

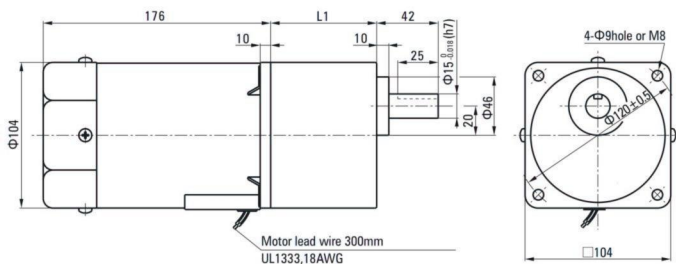
→P215

### Dimensions (Unit mm)

Mounting screws are included with gearhead.

#### ● Lead Wiring Type ①

Weight : Motor : 5.0kg      Gearhead : 2.1kg

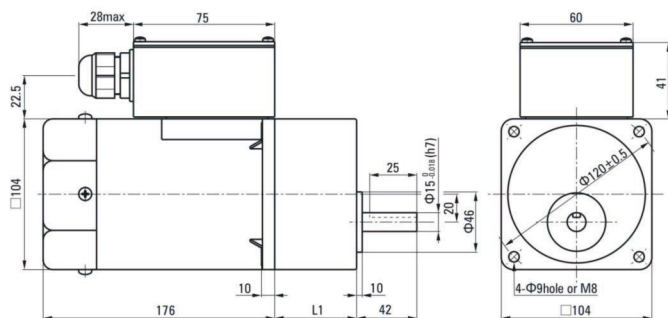


Motor Model	Gearhead Model	Gear Ratio	L1
6IK140GU-AF 6IK140GU-EF 6IK140GU-CF 6IK140GU-HF 6IK140GU-SF 6IK140GU-S3F	6GU□K	3~200	72

●Enter the gear ratio in the box (□) within the model name

#### ● Terminal Box Type ②

Weight : Motor : 5.15kg      Gearhead : 2.1kg



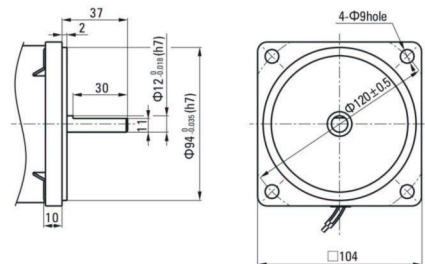
Motor Model	Gearhead Model	Gear Ratio	L1
6IK140GU-AFT 6IK140GU-EFT 6IK140GU-CFT 6IK140GU-HFT 6IK140GU-SFT 6IK140GU-S3FT	6GU□K	3~200	72

●Enter the gear ratio in the box (□) within the model name

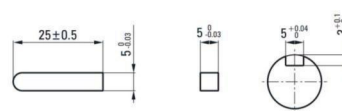
●Use cable with a diameter of Φ6~Φ12mm

#### ● Shaft Section Of Round Shaft Type

Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



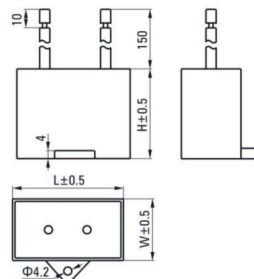
#### ● Key • Keyway (Accessory Of Gearhead)



### Formal Dimension Of Capacitor

Model		Capacitor Model	L	W	H
Pinion Shaft	Round Shaft				
6IK140GU-AF	6IK140A-AF	ZD350CFAUL	58	30	40
6IK140GU-EF	6IK140A-EF	ZD250CFAUL	47	27	37
6IK140GU-CF	6IK140A-CF	ZD100BFAUL	58	26	38

● Note: Conventional capacitor is a lead wire type. Inserted 187# is optional  
 ● Enter the code that represents the terminal box type (T) in the box (□) within the model name



## Wiring Diagram

- The direction of motor rotation is as viewed from the shaft end of motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Name indicated in the list is pinion shaft type, also valid for the equivalent round shaft type.

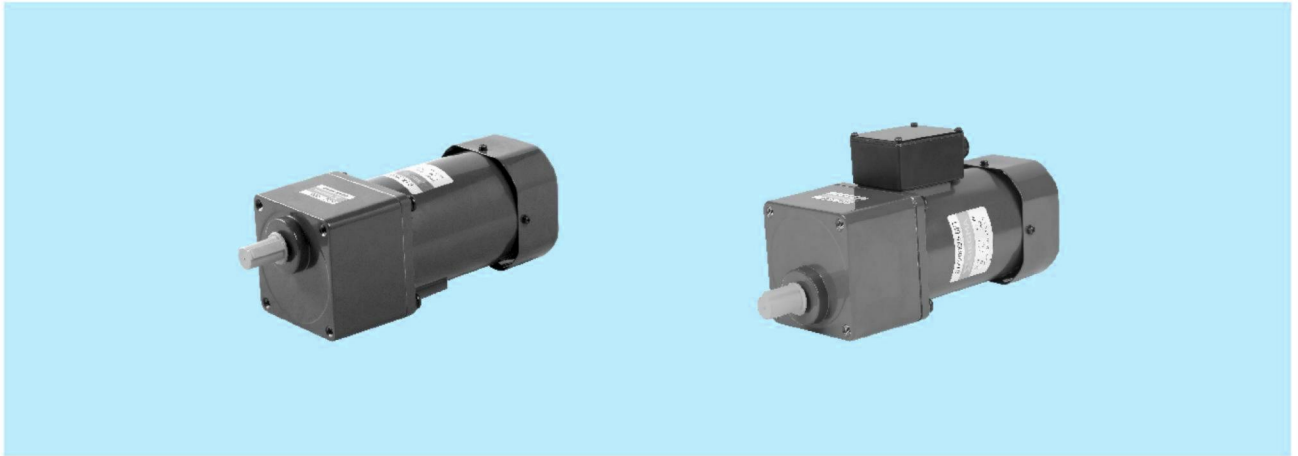
Lead Wire Type		
6IK140GU-AF, 6IK140GU-EF, 6IK140GU-HF, 6IK140GU-CF		6IK140GU-SF(S3F)
<p>CW</p> <p>Capacitance</p>	<p>CCW</p> <p>Capacitance</p>	<p>CW</p> <p>CCW To change the rotation direction change any two connections among R, S and T</p>
Terminal Box Type		
6IK140GU-AFT, 6IK140GU-EFT, 6IK140GU-HFT, 6IK140GU-CFT		6IK140GU-SFT(S3FT)
<p>CW</p> <p>Capacitance</p>	<p>CCW</p> <p>Capacitance</p>	<p>CW</p> <p>To change the rotation direction change any two connections among U, V and W</p>

**Note:**

Change the direction of single-phase motor rotation only after bring 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.

# INDUCTION MOTORS

■ 200W □ 104mm



## Specs Continuous Rating

Model · Type Upper: Pinion Shaft Below: Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
6IK200GU-AF ( 6IK200A-AF )	6IK200GU-AFT ( 6IK200A-AFT )	200	1ph 100	50	3.20	900	1520	1250	45.0
				60	3.50		1230	1550	
6IK200GU-EF ( 6IK200A-EF )	6IK200GU-EFT ( 6IK200A-EFT )	200	1ph 110	60	2.75	850	1230	1550	35.0
			1ph 120		2.65				
6IK200GU-CF ( 6IK200A-CF )	6IK200GU-CFT ( 6IK200A-CFT )	200	1ph 220	50	1.40	1000	1520	1250	10.0
			1ph 230						
6IK200GU-HF ( 6IK200A-HF )	6IK200GU-HFT ( 6IK200A-HFT )	200	1ph 220	60	1.40	900	1230	1550	10.0
			1ph 230						
6IK200GU-SF ( 6IK200A-SF )	6IK200GU-SFT ( 6IK200A-SFT )	200	3ph 220	50	1.20	3400	1520	1250	-
				60	1.00	2700	1230	1550	
6IK200GU-S3F ( 6IK200A-S3F )	6IK200GU-S3FT ( 6IK200A-S3FT )	200	3ph 380	50	0.69	3400	1520	1250	-
				60	0.58	2700	1230	1550	

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note: "-A" it means the voltage 110V, the assembly capacitor value it is according to the label.

## Type

● Motor

Type	Model	
	Pinion Shaft	Round Shaft
Lead Wire Type	6IK200GU-AF	6IK200A-AF
	6IK200GU-EF	6IK200A-EF
	6IK200GU-CF	6IK200A-CF
	6IK200GU-HF	6IK200A-HF
	6IK200GU-SF	6IK200A-SF
	6IK200GU-S3F	6IK200A-S3F
Terminal Box Type	6IK200GU-AFT	6IK200A-AFT
	6IK200GU-EFT	6IK200A-EFT
	6IK200GU-CFT	6IK200A-CFT
	6IK200GU-HFT	6IK200A-HFT
	6IK200GU-SFT	6IK200A-SFT
	6IK200GU-S3FT	6IK200A-S3FT

● Parallel Shaft Gearhead (Sold Separately)

Gearhead Type	Gearhead Model	Gear Ratio
Long Life ● Low Noise	6GU□K	3, 3.6, 5, 6, 7.5, 9, 10, 12.5, 15, 18, 20, 25, 30, 36, 40, 50, 60, 75, 90, 100, 120, 150, 180, 200

● Enter the gear ratio in the box (□) within the model name

## Gear Motor-Torque Table

- Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.
- Enter the gear ratio in the box (□) within the model name.
- The colored background □ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- The speed is calculated by dividing the motor's synchronous speed (50Hz : 1500r/min、60Hz : 1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 20N·m.

## Allowance Torque Unit : Upside ( N.m ) /Belowside ( kgf.cm )

Type Motor/Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
	Speed r/min		50Hz	417	300	250	200	166	150	120	100	83	75	60	50	42	37	30	25	20	16	15	12.5	10	8.3	7.5
6IK200GU-AF□ 6IK200GU-EF□ 6IK200GU-CF□ 6IK200GU-HF□ 6IK200GU-SF□	6GU□K	50Hz	3.71	4.46	6.19	7.43	9.28	11.1	11.9	13.9	16.7	20.1	20.8	25.2	30.3	36.3	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
		60Hz	37.9	45.5	63.1	75.8	94.7	114	121	142	171	205	212	257	309	370	400	400	400	400	400	400	400	400	400	400
		50Hz	2.99	3.59	4.99	5.99	7.49	8.98	9.70	11.2	13.5	16.2	17.2	20.3	24.4	29.3	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	
		60Hz	30.6	36.7	50.9	61.1	76.4	91.7	98.9	115	138	165	175	207	249	299	400	400	400	400	400	400	400	400	400	

## To Allow The Hoisting Of The Load Allow Axial Load

Motor (Round shaft) →P215

Gearhead→P215

## J Permissible Load Inertia J For Gearhead

→P215

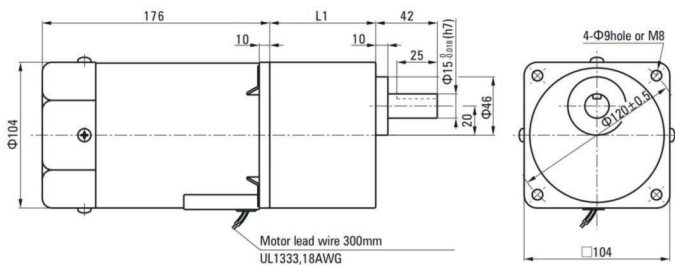
## Dimensions (Unit mm)

Mounting screws are included with gearhead.

● Lead Wiring Type ①

Weight : Motor : 5.0kg

Gearhead : 2.1kg



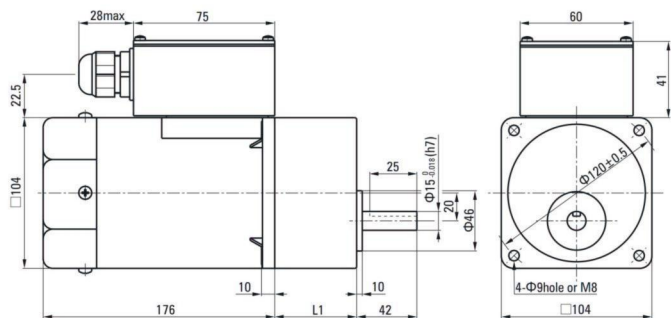
Motor Model	Gearhead Model	Gear Ratio	L1
6IK200GU-AF 6IK200GU-EF 6IK200GU-CF 6IK200GU-HF 6IK200GU-SF 6IK200GU-S3F	6GU□K	3~200	72

● Enter the gear ratio in the box (□) within the model name

● Terminal Box Type ②

Weight : Motor : 5.15kg

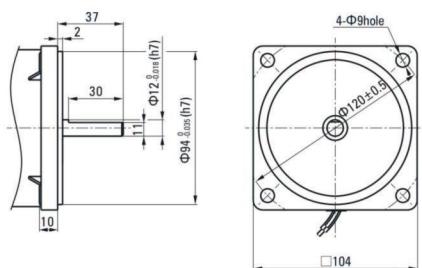
Gearhead : 2.1kg



●Use cable with a diameter of Φ6~Φ12mm

● Shaft Section Of Round Shaft Type

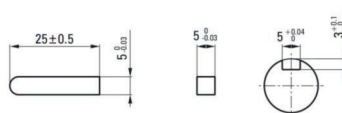
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



Motor Model	Gearhead Model	Gear Ratio	L1
6IK200GU-AFT	6GU□K	3~200	72
6IK200GU-EFT			
6IK200GU-CFT			
6IK200GU-HFT			
6IK200GU-SFT			
6IK200GU-S3FT			

●Enter the gear ratio in the box (□) within the model name

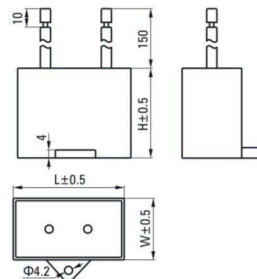
● Key · Keyway (Accessory Of Gearhead)



Formal Dimension Of Capacitor

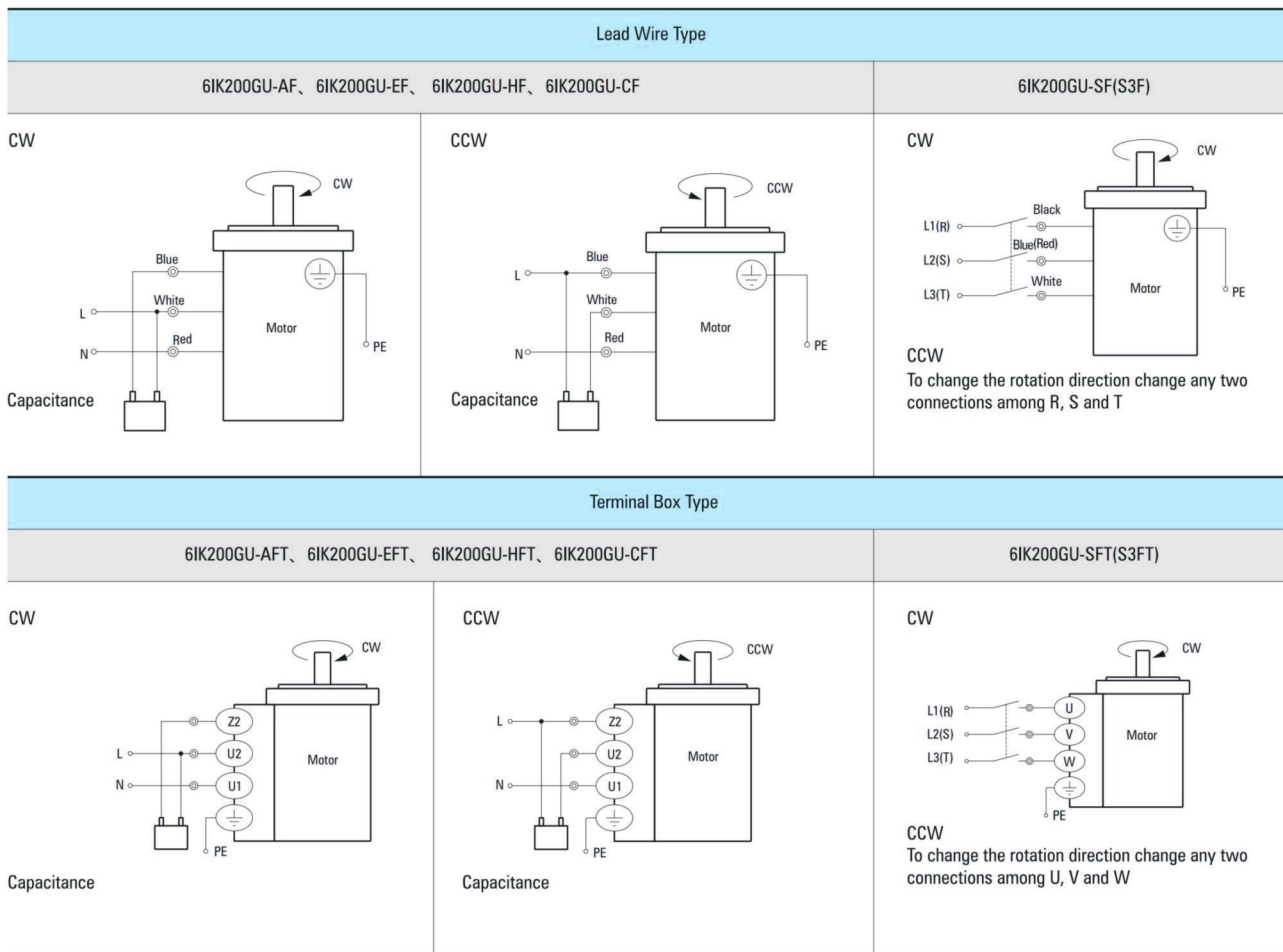
Model		Capacitor Model	L	W	H
Pinion Shaft	Round Shaft				
6IK200GU-AF	6IK200A-AF	ZD450CFAUL	70	38	52
6IK200GU-EF	6IK200A-EF	ZD350CFAUL	58	30	40
6IK200GU-CF	6IK200A-CF	ZD100BFAUL	58	26	38

- Note: Conventional capacitor is a lead wire type. Inserted 187# is optional
- Enter the code that represents the terminal box type (T) in the box (□) within the model name



## Wiring Diagram

- The direction of motor rotation is as viewed from the shaft end of motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Name indicated in the list is pinion shaft type, also valid for the equivalent round shaft type.



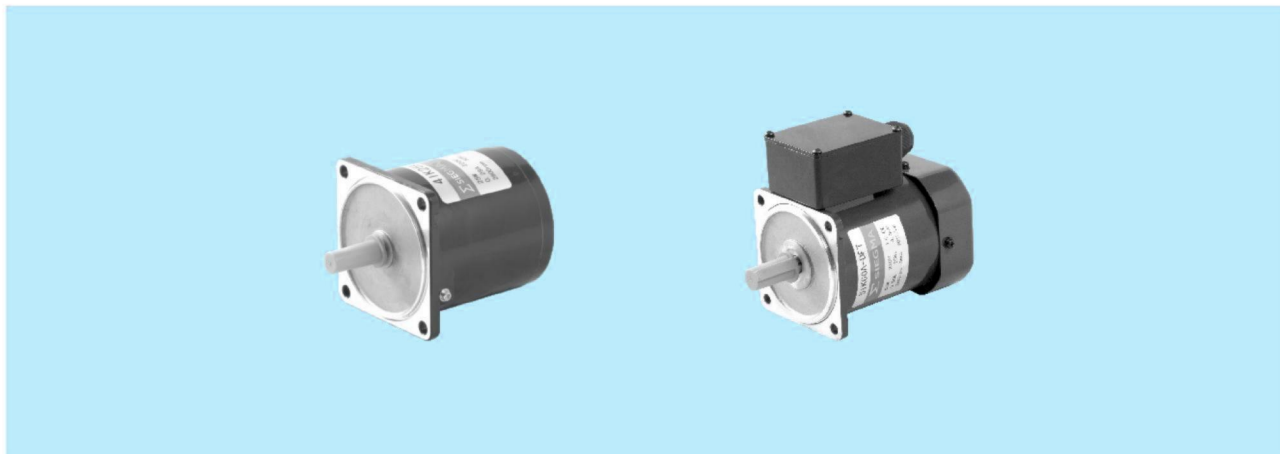
**Note:**

Change the direction of single-phase motor rotation only after bring 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.

# INDUCTION MOTOR 2-POLES·HIGH SPEED

■ 6W~150W    □ 60mm • □ 70mm • □ 80mm • □ 90mm



## ■ Specs Continuous Rating

Model · Type Round Shaft Type	Output power W	Voltage V	Frequency	Current	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor
			Hz	A				μF
2IK6A-B	6	1ph 110	50	0.18	35	22	2650	3
			60	0.20				
2IK6A-D	6	1ph 220	50	0.11	35	22	2650	0.8
			60	0.12				
3IK15A-B	15	1ph 110	50	0.38	65	54	2650	6
			60	0.40				
3IK15A-D	15	1ph 220	50	0.18	65	54	2650	1.5
			60	0.22				
4IK25A-B	25	1ph 110	50	0.55	90	90	2650	10
			60	0.65				
4IK25A-D	25	1ph 220	50	0.25	90	90	2650	2
			60	0.30				
4IK25A-T	25	3ph 220	50	0.20	220	88	2700	-
			60	0.15				
4IK25A-T3	25	3ph 380	50	0.11	220	88	2700	-
			60	0.08				
4IK40A-BF	40	1ph 110	50	0.80	120	147	2600	12
			60	0.85				
4IK40A-DF	40	1ph 220	50	0.40	120	147	2600	3
			60	0.45				
4IK40A-TF	40	3ph 220	50	0.27	350	147	2600	-
			60	0.22				
4IK40A-T3F	40	3ph 380	50	0.15	350	147	2600	-
			60	0.13				
5IK40A-B	40	1ph 110	50	0.75	140	147	2600	10
			60	0.90				
5IK40A-D	40	1ph 220	50	0.38	140	144	2650	3
			60	0.40				
5IK40A-T	40	3ph 220	50	0.26	350	147	2600	-
			60	0.21				
5IK40A-T3	40	3ph 380	50	0.15	350	147	2600	-
			60	0.12				
5IK60A-BF	60	1ph 110	50	1.05	170	215	2650	15
			60	1.0				
5IK60A-DF	60	1ph 220	50	0.52	180	215	2650	4
			60	0.55				

**Specs** Continuous Rating

Model • Type Round Shaft Type	Output power W	Voltage V	Frequency	Current	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor µF
			Hz	A				
5IK60A-TF	60	3ph 220	50	0.35	500	215	2650	-
			60	0.30	420	180	3200	
5IK60A-T3F	60	3ph 380	50	0.20	500	215	2650	-
			60	0.17	420	180	3200	
5IK90A-BF	90	1ph 110	50	1.50	250	325	2650	25
			60	1.80		270	3200	
5IK90A-DF	90	1ph 220	50	0.72	250	325	2650	6
			60	0.90		270	3200	
5IK90A-TF 5IK90A-TFT	90	3ph 220	50	0.50	800	325	2650	-
			60	0.42	670	270	3200	
5IK90A-T3F 5IK90A-T3FT	90	3ph 380	50	0.29	800	325	2650	-
			60	0.24	670	270	3200	
5IK120A-BF	120	1ph 110	50	1.85	330	450	2650	30
			60	2.25		360	3200	
5IK120A-DF	120	1ph 220	50	0.95	330	450	2650	8
			60	1.10		360	3200	
5IK120A-TF 5IK120A-TFT	120	3ph 220	50	0.65	1000	430	2650	-
			60	0.50	900	370	3100	
5IK120A-T3F 5IK120A-T3FT	120	3ph 380	50	0.37	1000	430	2650	-
			60	0.29	900	370	3100	
5IK150A-BF	150	1ph 110	50	2.50	400	540	2650	35
			60	2.85		450	3200	
5IK150A-DF	150	1ph 220	50	1.20	400	540	2650	10
			60	1.52		450	3200	
5IK150A-TF 5IK150A-TFT	150	3ph 220	50	0.85	1250	550	2600	-
			60	0.70	1100	460	3100	
5IK150A-T3F 5IK150A-T3FT	150	3ph 380	50	0.49	1250	550	2600	-
			60	0.40	1100	460	3100	

**Type**

● Motor

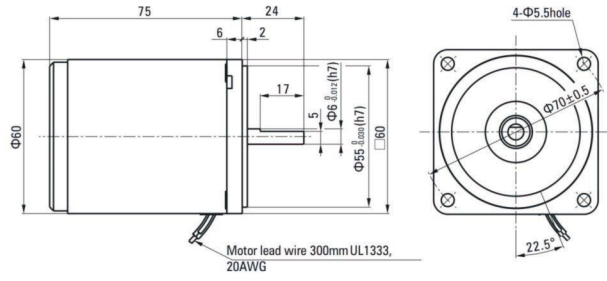
Output power	Voltage	Model
6W	1ph 110VAC	2IK6A-B
	1ph 220VAC	2IK6A-D
15W	1ph 110VAC	3IK15A-B
	1ph 220VAC	3IK15A-D
25W	1ph 110VAC	4IK25A-B
	1ph 220VAC	4IK25A-D
	3ph 220VAC	4IK25A-T
40W	3ph 380VAC	4IK25A-T3
	1ph 110VAC	4IK40A-BF
	1ph 220VAC	4IK40A-DF
40W	3ph 220VAC	4IK40A-TF
	3ph 380VAC	4IK40A-T3F
	1ph 110VAC	5IK40A-B
40W	1ph 220VAC	5IK40A-D
	3ph 220VAC	5IK40A-T
	3ph 380VAC	5IK40A-T3
60W	1ph 110VAC	5IK60A-BF
	1ph 220VAC	5IK60A-DF
	3ph 220VAC	5IK60A-TF
	3ph 220VAC	5IK60A-TFT
	3ph 380VAC	5IK60A-T3F
	3ph 380VAC	5IK60A-T3FT

Output power	Voltage	Model
90W	1ph 110VAC	5IK90A-BF
	1ph 220VAC	5IK90A-DF
	3ph 220VAC	5IK90A-TF
	3ph 220VAC	5IK90A-TFT
	3ph 380VAC	5IK90A-T3F
120W	3ph 380VAC	5IK90A-T3FT
	1ph 110VAC	5IK120A-BF
	1ph 220VAC	5IK120A-DF
	3ph 220VAC	5IK120A-TF
	3ph 220VAC	5IK120A-TFT
150W	3ph 380VAC	5IK120A-T3F
	3ph 380VAC	5IK120A-T3FT
	1ph 110VAC	5IK150A-BF
	1ph 220VAC	5IK150A-DF
	3ph 220VAC	5IK150A-TF
150W	3ph 220VAC	5IK150A-TFT
	3ph 380VAC	5IK150A-T3F
	3ph 380VAC	5IK150A-T3FT

■ Dimensions (Unit mm)

● 6W

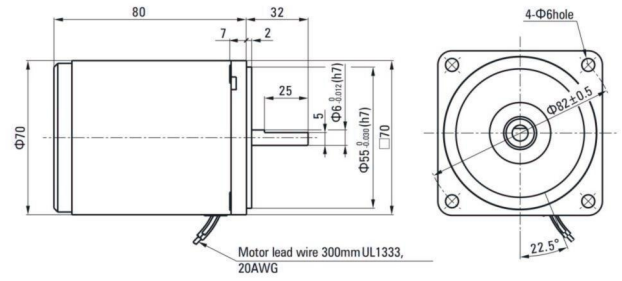
Motor  
2IK6A-B, 2IK6A-D  
Weight: 0.65kg



■ Dimensions (Unit mm)

● 15W

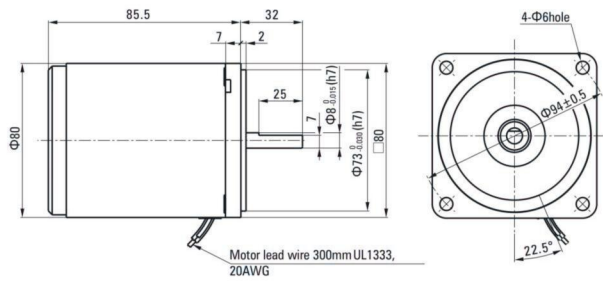
Motor  
3IK15A-B, 3IK15A-D  
Weight: 0.90kg



■ Dimensions (Unit mm)

● 25W

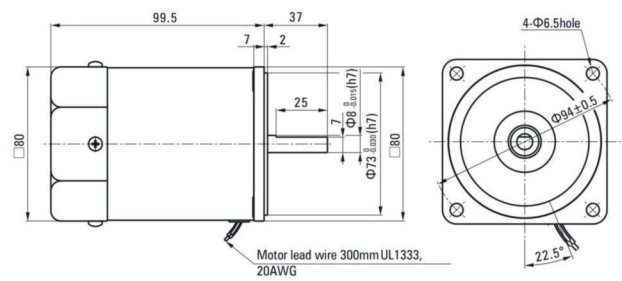
Motor  
4IK25A-B, 4IK25A-D, 4IK25A-T, 4IK25A-T3  
Weight: 1.4kg



■ Dimensions (Unit mm)

● 40W

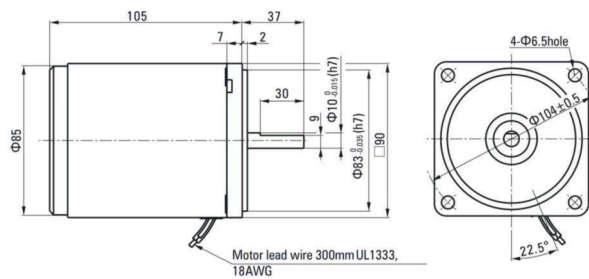
Motor  
4IK40A-BF, 4IK40A-DF, 4IK40A-TF, 4IK40A-T3F  
Weight: 1.6kg



■ Dimensions (Unit mm)

● 40W

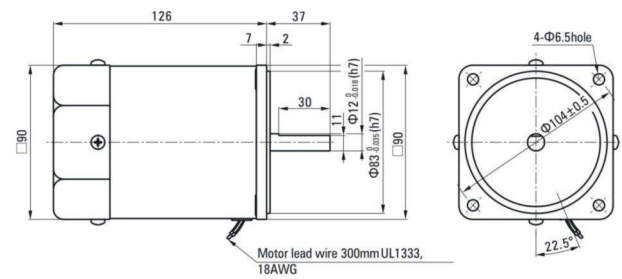
Motor  
5IK40A-B, 5IK40A-D, 5IK40A-T, 5IK40A-T3  
Weight: 2.0kg



■ Dimensions (Unit mm)

● 60W

Motor  
5IK60A-BF, 5IK60A-DF, 5IK60A-TF, 5IK60A-T3F  
Weight: 2.4kg



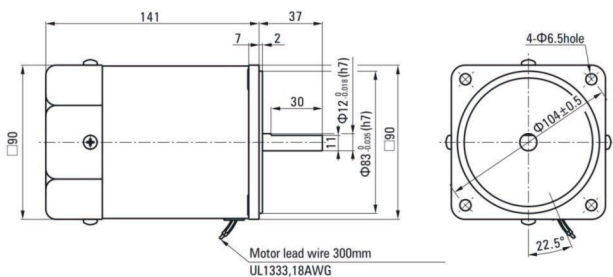
■ Dimensions (Unit mm)

● 90W

Motor

5IK90A-BF、5IK90A-DF、5IK90A-TF、5IK90A-T3F

Weight: 2.8kg



■ Dimensions (Unit mm)

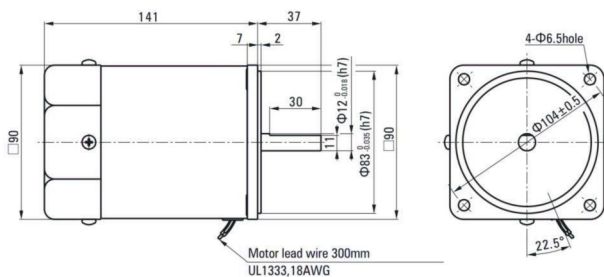
● 120W

Motor

5IK120A-BF、5IK120A-DF、5IK120A-TF、5IK120A-T3F

5IK150A-BF、5IK150A-DF、5IK150A-TF、5IK150A-T3F

Weight: 0.90kg



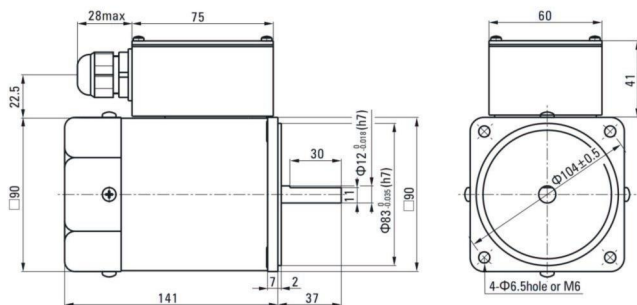
■ Dimensions (Unit mm)

● 90W、120W、150W

Motor

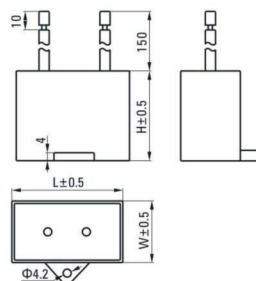
5IK90A-TFT、5IK120A-TFT、5IK150A-TFT、5IK90A-T3FT、5IK120A-T3FT、5IK150A-T3FT

Weight: 3.3kg



■ Formal Dimension of Capacitor

Model	Capacitor Model	L	W	H
2IK6A-B	ZD30CFAUL	38	18.5	29
2IK6A-D	ZD08BFAUL	36	10.5	20
3IK15A-B	ZD60CFAUL	48	23.0	32
3IK15A-D	ZD15BFAUL	36	12.5	24
4IK25A-B	ZD100CFAUL	38	19.5	31
4IK25A-D	ZD20BFAUL	36	15.0	25
4IK40A-BF	ZD120CFAUL	58	30.0	40
5IK40A-DF	ZD30BFAUL	38	18.5	29
5IK40A-B	ZD100CFAUL	58	26.0	38
5IK40A-D	ZD30BFAUL	38	18.5	29
5IK60A-BF	ZD150CFAUL	47	20.0	31
5IK60A-DF	ZD40BFAUL	47	17.0	31
5IK90A-BF	ZD250CFAUL	47	27.0	37
5IK90A-DF	ZD60BFAUL	48	23.0	32
5IK120A-BF	ZD300CFAUL	58	26.0	38
5IK120A-DF	ZD80BFAUL	40	26.5	38
5IK150A-BF	ZD350CFAUL	58	30.0	40
5IK150A-DF	ZD100BFAUL	58	26.0	38



## Wiring Diagram

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

