

## Induction Motors

15 W

Frame Size: □70 mm



(Gearhead sold separately)

Specifications – Continuous Rating **RoHS**

Model Lead Wire Type		Output Power W	Voltage VAC	Frequency Hz	Current A	Starting Torque mN·m	Rated Torque mN·m	Rated Speed r/min	Capacitor μF	
Pinion Shaft Type	Round Shaft Type									
ⓉP	3IK15GN-AW2J	3IK15A-AW2J	15	Single-Phase 100	50	0.36	80	125	1200	5.5
					60	0.37	65	105		
ⓉP	3IK15GN-AW2U	3IK15A-AW2U	15	Single-Phase 110 Single-Phase 115	60	0.33	65	105	1450	4.5
						0.34				
ⓉP	3IK15GN-CW2J	3IK15A-CW2J	15	Single-Phase 200	50	0.18	80	125	1200	1.5
					60	0.19	65	105	1450	
ⓉP	3IK15GN-CW2E	3IK15A-CW2E	15	Single-Phase 220 Single-Phase 230	50	0.19	70	125	1200	1.0
					60	0.16	65	105	1450	
					50	0.19	75	125	1200	
					60	0.16	65	105	1450	

● The **J**, **U** and **E** at the end of the model name indicate that the unit includes a capacitor. These letters are not listed on the motor nameplate. When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

ⓉP: Contains a built-in thermal protector. If a motor overheats for any reason, the thermal protector is opened and the motor stops.

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

## Product Line

● Motor **RoHS**

Type	Model	
	Pinion Shaft Type	Round Shaft Type
Lead Wire	3IK15GN-AW2J	3IK15A-AW2J
	3IK15GN-AW2U	3IK15A-AW2U
	3IK15GN-CW2J	3IK15A-CW2J
	3IK15GN-CW2E	3IK15A-CW2E

● Gearhead (Sold Separately) **RoHS**

Type	Gearhead Model	Gear Ratio
Long Life/Low Noise/ Parallel Shaft	3GN□S	3, 3.6, 5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180
	3GN10XS	(Decimal gearhead)

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

## Gearmotor – Torque Table

- Gearheads and decimal gearheads are sold separately.
- Enter the gear ratio in the box (□) within the model name.
- A colored background  indicates gear shaft rotation in the same direction as the motor shaft, while the others rotate in the opposite direction.
- The speed is calculated by dividing the motor's synchronous speed (50 Hz: 1500 r/min, 60 Hz: 1800 r/min) by the gear ratio. The actual speed is 2 - 20% less than the displayed value, depending on the 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 the motor. In that case, the permissible torque is 5 N·m.

### ◇ 50 Hz

Unit = N·m

Model Motor/ Gearhead	Speed r/min	500	416	300	250	200	166	120	100	83	60	50	41	30	25	20	16	15	12.5	10	8.3
	Gear Ratio	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
<b>3IK15GN-AW2J</b> <b>3IK15GN-CW2J</b> <b>3IK15GN-CW2E</b>	<b>3GN□S</b>	0.30	0.36	0.51	0.61	0.76	0.91	1.3	1.5	1.8	2.3	2.7	3.3	4.1	5	5	5	5	5	5	5

### ◇ 60 Hz

Unit = N·m

Model Motor/ Gearhead	Speed r/min	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
	Gear Ratio	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
<b>3IK15GN-AW2J</b> <b>3IK15GN-AW2U</b> <b>3IK15GN-CW2J</b> <b>3IK15GN-CW2E</b>	<b>3GN□S</b>	0.26	0.31	0.43	0.51	0.64	0.77	1.1	1.3	1.5	1.9	2.3	2.8	3.5	4.2	5	5	5	5	5	5

## Permissible Overhung Load and Permissible Thrust Load

Motor (Round shaft type) → Page 107

Gearhead → Page 107

## Permissible Load Inertia J for Gearhead

→ Page 107

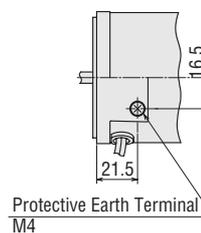
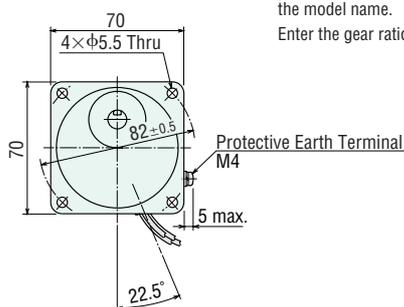
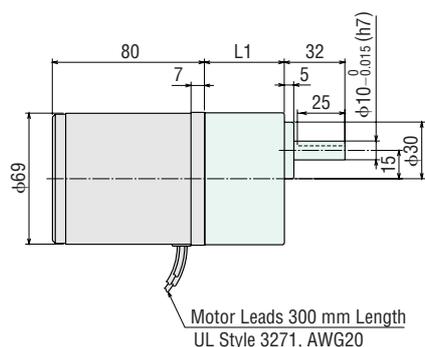
## Dimensions (Unit = mm)

Mounting screws are included with gearheads.

### ◇ Lead Wire Type

Mass: Motor 1.1 kg

Gearhead 0.55 kg



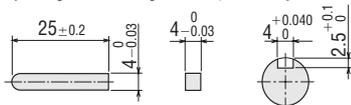
Detail Drawing of Protective Earth Terminal

Motor Model	Gearhead Model	Gear Ratio	L1
<b>3IK15GN-AW2</b> <span style="background-color: #e0f2f1; border: 1px solid #ccc; display: inline-block; width: 10px; height: 10px;"></span>	<b>3GN□S</b>	<b>3~18</b>	32
<b>3IK15GN-CW2</b> <span style="background-color: #e0f2f1; border: 1px solid #ccc; display: inline-block; width: 10px; height: 10px;"></span>		<b>25~180</b>	42

- Specify the type of the capacitor to be included by entering **J**, **U** or **E** in the box (□) within the model name.

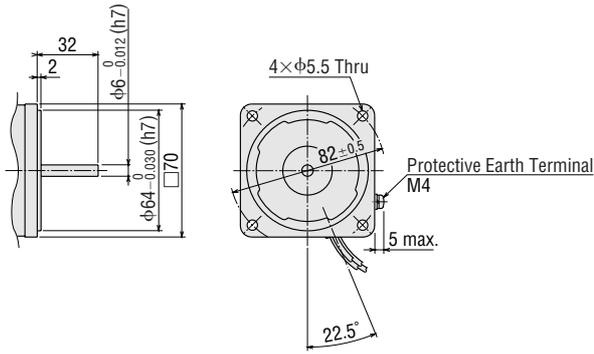
Enter the gear ratio in the box (□) within the model name.

### ◇ Key and Key Slot (The key is included with the gearhead)



### ◇ Shaft Section of Round Shaft Type

The mass and motor's dimensions (excluding the shaft section) are the same as those of the pinion shaft type.

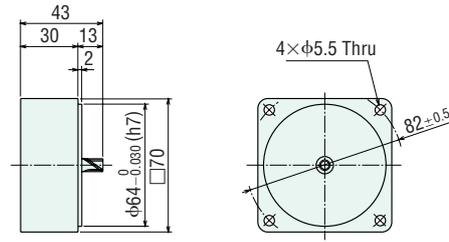


### ◇ Decimal Gearhead

Can be connected to **GN** pinion shaft type.

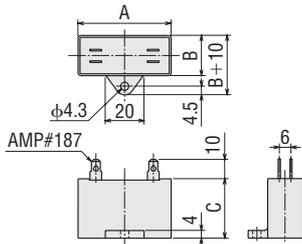
#### 3GN10XS

Mass: 0.3 kg



### ◇ Capacitor

(Included with single-phase motors)



### ◇ Capacitor Dimensions (mm)

Model		Capacitor Model	A	B	C	Mass (g)	Capacitor Cap
Pinion Shaft Type	Round Shaft Type						
<b>3IK15GN-AW2J</b>	<b>3IK15A-AW2J</b>	CH55FAUL2	38	21	31	40	Included
<b>3IK15GN-AW2U</b>	<b>3IK15A-AW2U</b>	CH45FAUL2	37	18	27	30	
<b>3IK15GN-CW2J</b>	<b>3IK15A-CW2J</b>	CH15BFAUL	38	21	31	35	
<b>3IK15GN-CW2E</b>	<b>3IK15A-CW2E</b>	CH10BFAUL	37	18	27	30	

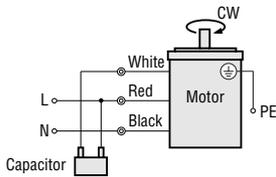
## ■ Connection Diagrams

- The direction of motor rotation is as viewed from the shaft end of the motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Connection diagrams are also valid for the equivalent round shaft type.
- Specify the type of the capacitor to be included by entering **J**, **U** or **E** in the box (□) within the model name.

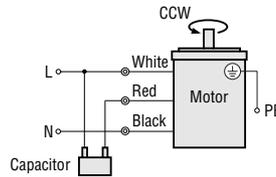
**3IK15GN-AW2**□

**3IK15GN-CW2**□

#### Clockwise



#### Counterclockwise



PE: Protective Earth

#### Note:

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

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.