RoHS

Induction Motors

25 W

Frame Size: □80 mm

Lead Wire Type

Terminal Box Type

(Gearhead sold separately)

Right-angle gearheads (hollow shaft or solid shaft) can be combined.
Right-Angle Gearheads ➜ Page 108

■Specifications – Continuous Rating RoHS

c UL us CE

Model Upper Model Name: Pinion Shaft Type Lower Model Name ( ): Round Shaft Type		Output Power	Voltage	Frequency	Current	Starting Torque	Rated Torque	Rated Speed	Capacitor
Lead Wire Type Dimension ①	Terminal Box Type Dimension ②	W	VAC	Hz	A	mN·m	mN·m	r/min	μF
TP 4IK25GN-AW2J (4IK25A-AW2J)	4IK25GN-AW2TJ (4IK25A-AW2TJ)	25	Single-Phase 100	50	0.51	130	205	1200	8.0
				60	0.52	120	170	1450	
TP 4IK25GN-AW2U (4IK25A-AW2U)	4IK25GN-AW2TU (4IK25A-AW2TU)	25	Single-Phase 110	60	0.46	120	170	1450	6.5
			Single-Phase 115						
TP 4IK25GN-CW2J (4IK25A-CW2J)	4IK25GN-CW2TJ (4IK25A-CW2TJ)	25	Single-Phase 200	50	0.26	120	205	1200	2.0
				60			170	1450	
TP 4IK25GN-CW2E (4IK25A-CW2E)	4IK25GN-CW2TE (4IK25A-CW2TE)	25	Single-Phase 220	50	0.27	110	205	1200	1.5
				60	0.23		170	1450	
			Single-Phase 230	50	0.27	120	205	1200	
				60	0.23		170	1450	
TP 4IK25GN-SW2 (4IK25A-SW2)	4IK25GN-SW2T (4IK25A-SW2T)	25	Three-Phase 200	50	0.23	240	190	1300	–
				60	0.21	160	160	1550	
			Three-Phase 220	60	0.21	160	160	1600	
			Three-Phase 230	60	0.22	160	160	1600	
TP –	4IK25GN-UT4* (4IK25A-UT4*)	25	Three-Phase 400	50	0.12	240	190	1300	–

● 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.

✻ Conforms to EN/IEC standards only. Bears the CE Marking.

Note:

A three-phase 400 VAC motor cannot be used with an inverter. Using them together may lead to deterioration of the motor wiring insulation and damage the products.

TP: 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	4IK25GN-AW2J	4IK25A-AW2J
	4IK25GN-AW2U	4IK25A-AW2U
	4IK25GN-CW2J	4IK25A-CW2J
	4IK25GN-CW2E	4IK25A-CW2E
	4IK25GN-SW2	4IK25A-SW2
Terminal Box	4IK25GN-AW2TJ	4IK25A-AW2TJ
	4IK25GN-AW2TU	4IK25A-AW2TU
	4IK25GN-CW2TJ	4IK25A-CW2TJ
	4IK25GN-CW2TE	4IK25A-CW2TE
	4IK25GN-SW2T	4IK25A-SW2T
	4IK25GN-UT4	4IK25A-UT4

●Gearhead/Right-Angle Gearhead (Sold Separately) RoHS

Type	Gearhead Model	Gear Ratio
Long Life/Low Noise/ Parallel Shaft	4GN□S	3, 3.6, 5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180
	4GN10XS (Decimal gearhead)	
Right-Angle/ Hollow Shaft	4GN□RH	3, 3.6, 5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180
Right-Angle/ Solid Shaft	4GN□RA	3, 3.6, 5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180

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

Gearmotor – Torque Table

- Gearheads and decimal gearheads are 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.
- 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 8 N·m. When a gearhead of 1/25～1/36 is connected, the value for permissible torque is 6 N·m.

◇50 Hz

Unit = N·m

Model	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
Motor/ Gearhead	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**
4IK25GN-AW2■J **4IK25GN-CW2■J** **4IK25GN-CW2■E**	**4GN□S**	0.50	0.60	0.83	1.0	1.2	1.5	2.1	2.5	3.0	3.7	4.5	5.4	6.8	8	8	8	8	8	8	8
4IK25GN-SW2■ **4IK25GN-UT4**	**4GN□S**	0.46	0.55	0.77	0.92	1.2	1.4	1.9	2.3	2.8	3.5	4.2	5.0	6.3	7.5	8	8	8	8	8	8

◇60 Hz

Unit = N·m

Model	Speed r/min	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
Motor/ Gearhead	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**
4IK25GN-AW2■J **4IK25GN-AW2■U** **4IK25GN-CW2■J** **4IK25GN-CW2■E**	**4GN□S**	0.41	0.50	0.69	0.83	1.0	1.2	1.7	2.1	2.5	3.1	3.7	4.5	5.6	6.7	8	8	8	8	8	8
4IK25GN-SW2■	**4GN□S**	0.39	0.47	0.65	0.78	0.97	1.2	1.6	1.9	2.3	2.9	3.5	4.2	5.3	6.3	7.9	8	8	8	8	8

Permissible Overhung Load and Permissible Thrust Load

Motor (Round shaft type) ➜ Page 107
Gearhead ➜ Page 107

Permissible Load Inertia J for Gearhead

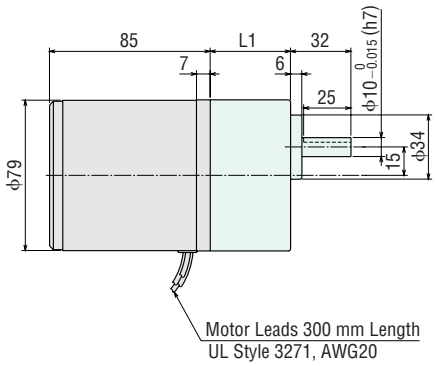
➜ Page 107

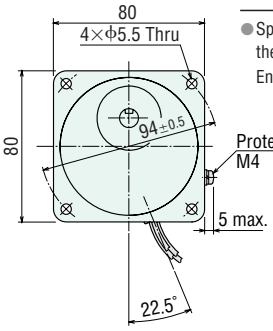
Dimensions (Unit = mm)

Mounting screws are included with gearheads.

◇Lead Wire Type ①

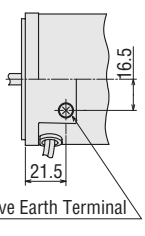
Mass: Motor 1.5 kg
Gearhead 0.65 kg





Motor Model	Gearhead Model	Gear Ratio	L1
4IK25GN-AW2■ **4IK25GN-CW2■** **4IK25GN-SW2**	**4GN□S**	**3～18**	32
		25～180	42.5

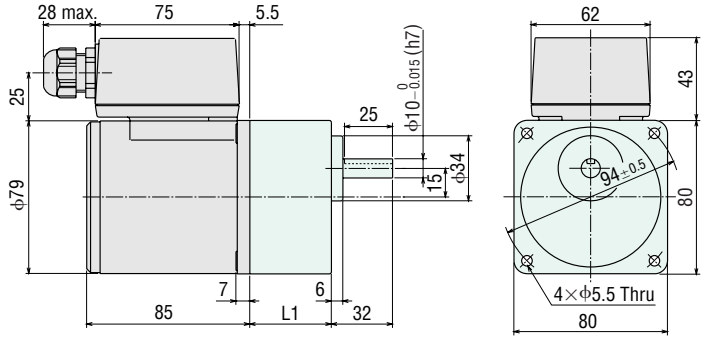
- Specify the type of the capacitor to be included by entering **J**, **U** or **E** in the box (■) within the model name.
  Enter the gear ratio in the box (□) within the model name.



Detail Drawing of Protective Earth Terminal

◇Terminal Box Type ②

Mass: Motor 1.7 kg
Gearhead 0.65 kg



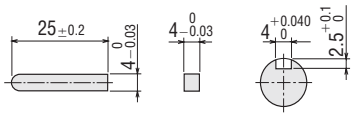
● Use cable with a diameter of φ6 ~ φ12 mm.

Motor Model	Gearhead Model	Gear Ratio	L1
4IK25GN-AW2T□ **4IK25GN-CW2T□** **4IK25GN-SW2T** **4IK25GN-UT4**	**4GN□S**	**3~18**	32
		25~180	42.5

● 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.

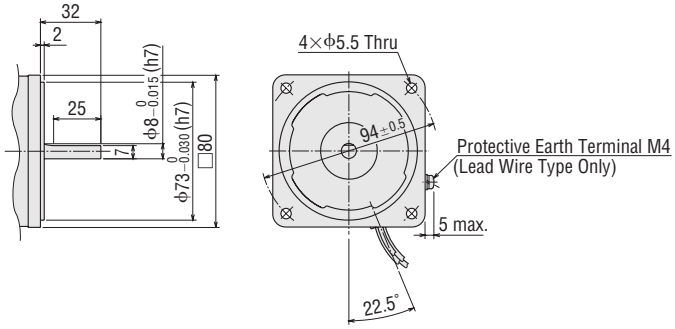
◇Key and Key Slot

(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.

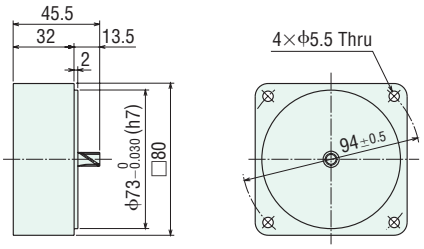


◇Decimal Gearhead

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

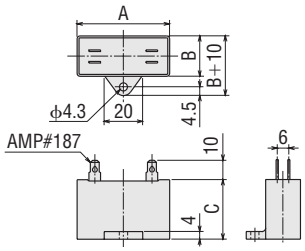
4GN10XS

Mass: 0.4 kg



◇Capacitor

(Included with single-phase motors)



◇Capacitor Dimensions (mm)

Model Upper Model Name: Pinion Shaft Type Lower Model Name ( ): Round Shaft Type		Capacitor Model	A	B	C	Mass (g)	Capacitor Cap
Lead Wire Type	Terminal Box Type						
4IK25GN-AW2J (4IK25A-AW2J)	**4IK25GN-AW2TJ (4IK25A-AW2TJ)**	CH80CFAUL2	48	21	31	45	Included
4IK25GN-AW2U (4IK25A-AW2U)	**4IK25GN-AW2TU (4IK25A-AW2TU)**	CH65CFAUL2	48	19	29	40	
4IK25GN-CW2J (4IK25A-CW2J)	**4IK25GN-CW2TJ (4IK25A-CW2TJ)**	CH20BFAUL	48	19	29	35	
4IK25GN-CW2E (4IK25A-CW2E)	**4IK25GN-CW2TE (4IK25A-CW2TE)**	CH15BFAUL	38	21	31	35	

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.

<table>
<tr><th colspan="2">Lead Wire Type</th><th colspan="2">Terminal Box Type</th></tr>
<tr><th>4IK25GN-AW2□
4IK25GN-CW2□</th><th>4IK25GN-SW2</th><th>4IK25GN-AW2T□
4IK25GN-CW2T□</th><th>4IK25GN-SW2T
4IK25GN-UT4</th></tr>
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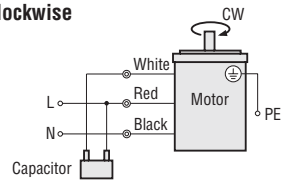
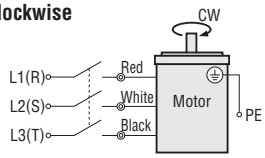
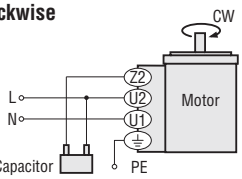
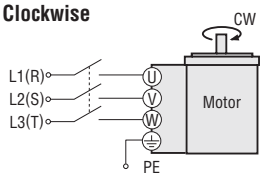
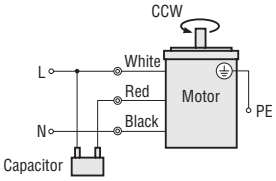
 
</td><td rowspan="2">Clockwise
 

Counterclockwise
To change the rotation direction, change any two connections between R, S and T.</td><td>Clockwise
 
</td><td rowspan="2">Clockwise
 

Counterclockwise
To change the rotation direction, change any two connections between U, V and W.</td></tr>
<tr><td>Counterclockwise
 
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 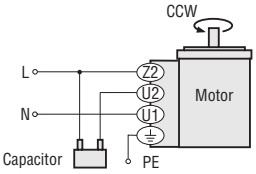
</td></tr>
</table>

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.