RoHS

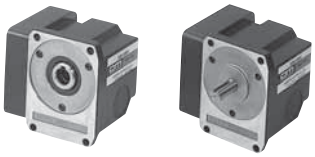
Power Off Activated Type Electromagnetic Brake Motors

40 W

Frame Size: □90 mm

(Gearhead sold separately)

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



Specifications

Motor RoHS

This type of motor does not contain a built-in simple brake mechanism.

Model		Rating	Output Power	Voltage	Frequency	Current	Starting Torque	Rated Torque	Rated Speed	Capacitor
Pinion Shaft Type	Round Shaft Type		W	VAC	Hz	A	mN·m	mN·m	r/min	μF
TP 5RK40GN-AW2MJ	5RK40A-AW2MJ	30 minutes	40	Single-Phase 100	50	0.85	300	315	1250	16
					60	1.04	260	270	1450	
TP 5RK40GN-AW2MU	5RK40A-AW2MU	30 minutes	40	Single-Phase 110	60	0.81	260	270	1450	12
				Single-Phase 115						
TP 5RK40GN-CW2MJ	5RK40A-CW2MJ	30 minutes	40	Single-Phase 200	50	0.40	270	315	1250	4.0
					60	0.51	260	260	1500	
				Single-Phase 220	50	0.40	270	315	1250	
TP 5RK40GN-CW2ME	5RK40A-CW2ME	30 minutes	40	Single-Phase 220	60	0.43	260	260	1500	3.5
				Single-Phase 230	50	0.38	270	315	1250	
					60	0.43	260	260	1500	
TP 5IK40GN-SW2M	5IK40A-SW2M	Continuous	40	Three-Phase 200	50	0.32	400	300	1300	–
					60	0.30	260	260	1550	
				Three-Phase 220	60	0.30	260	260	1600	
				Three-Phase 230		0.31				

● 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.

TP: Contains a built-in thermal protector. If a motor overheats for any reason, the thermal protector is opened and the motor stops.
(The power supply to the electromagnetic brake is kept and the brake is released.)
When the motor temperature drops, the thermal protector closes and the motor restarts. Be sure to turn the motor off before inspecting.

Electromagnetic Brake (Power Off Activated Type)

Motor Model	Voltage VAC	Frequency Hz	Current A	Input W	Holding Brake Torque mN·m
5RK40GN-AW2MJ 5RK40A-AW2MJ	Single-Phase 100	50	0.09	6	200
		60			
5RK40GN-AW2MU 5RK40A-AW2MU	Single-Phase 110	60	0.09	6	200
	Single-Phase 115				
5RK40GN-CW2MJ 5RK40A-CW2MJ	Single-Phase 200	50	0.05	7	200
		60			
	Single-Phase 220	50			
5RK40GN-CW2ME 5RK40A-CW2ME	Single-Phase 220	60	0.05	7	200
	Single-Phase 230	50			
		60			
5IK40GN-SW2M 5IK40A-SW2M	Single-Phase 200	50	0.05	7	200
		60			
	Single-Phase 220	60			
	Single-Phase 230				

Product Line

Motor RoHS

Model	
Pinion Shaft Type	Round Shaft Type
5RK40GN-AW2MJ	5RK40A-AW2MJ
5RK40GN-AW2MU	5RK40A-AW2MU
5RK40GN-CW2MJ	5RK40A-CW2MJ
5RK40GN-CW2ME	5RK40A-CW2ME
5IK40GN-SW2M	5IK40A-SW2M

Gearhead/Right-Angle Gearhead (Sold Separately) RoHS

Type	Gearhead Model	Gear Ratio
Long Life/Low Noise/ Parallel Shaft	5GN□S	3, 3.6, 5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180
	5GN10XS (Decimal gearhead)	
Right-Angle/ Hollow Shaft	5GN□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	5GN□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 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 10 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**
5RK40GN-AW2MJ 5RK40GN-CW2MJ 5RK40GN-CW2ME	**5GN□S**	0.77	0.92	1.3	1.5	1.9	2.3	3.2	3.8	4.6	5.7	6.9	8.3	10	10	10	10	10	10	10	10
5IK40GN-SW2M	**5GN□S**	0.73	0.87	1.2	1.5	1.8	2.2	3.0	3.6	4.4	5.5	6.6	7.9	9.9	10	10	10	10	10	10	10

◇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**
5RK40GN-AW2MJ 5RK40GN-AW2MU	**5GN□S**	0.66	0.79	1.1	1.3	1.6	2.0	2.7	3.3	3.9	4.9	5.9	7.1	8.9	10	10	10	10	10	10	10
5RK40GN-CW2MJ 5RK40GN-CW2ME 5IK40GN-SW2M	**5GN□S**	0.63	0.76	1.1	1.3	1.6	1.9	2.6	3.2	3.8	4.7	5.7	6.8	8.6	10	10	10	10	10	10	10

Permissible Overhung Load and Permissible Thrust Load

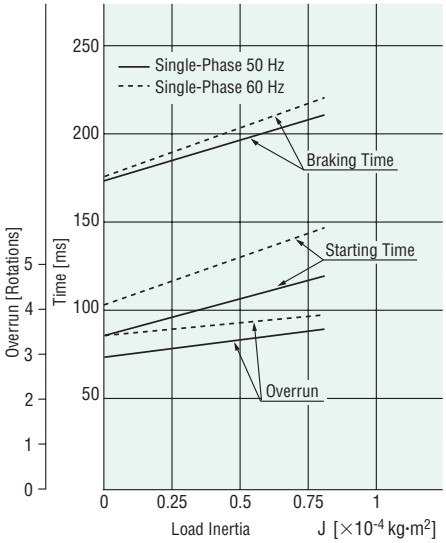
Motor (Round shaft type) ➜ Page 107
Gearhead ➜ Page 107

Permissible Load Inertia J for Gearhead

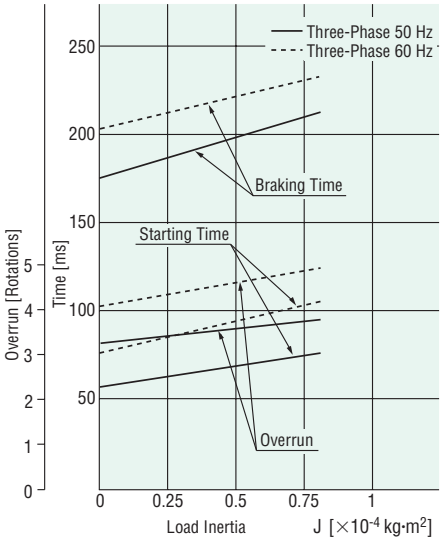
➜ Page 107

Starting and Braking Characteristics (Reference Values)

Single-Phase Motor



Three-Phase Motor



Dimensions (Unit = mm)

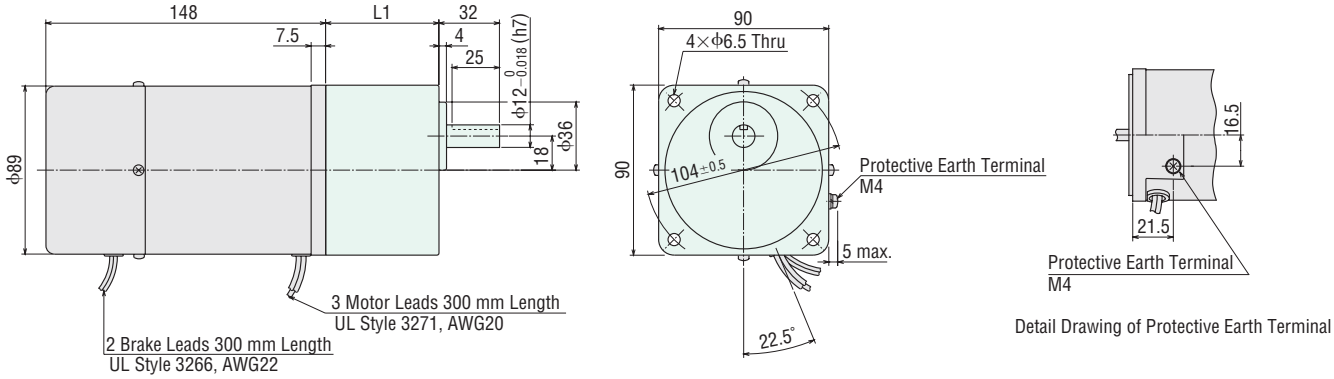
Mounting screws are included with gearheads.

◇Motor/Gearhead

Mass: Motor 2.8 kg
Gearhead 1.5 kg

Motor Model	Gearhead Model	Gear Ratio	L1
5RK40GN-AW2M□ **5RK40GN-CW2M□** **5IK40GN-SW2M**	**5GN□S**	**3～18**	42
		25～180	60

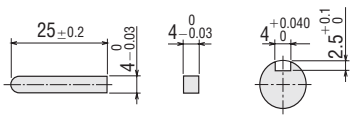
● Specify the type of the capacitor to be included by entering **J**, **U** or **E** in the box (□) within the model name.
Enter the gear ratio in the box (□) within the model name.



Detail Drawing of Protective Earth Terminal

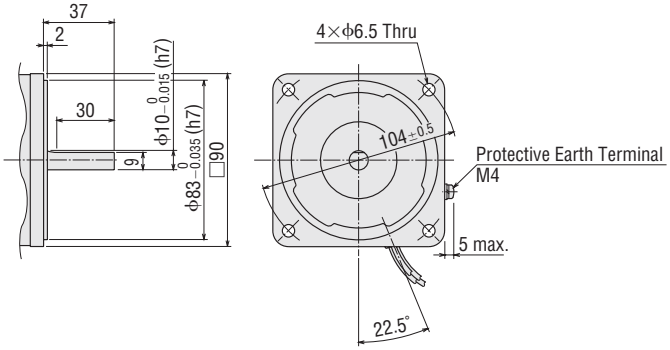
◇Key and Key Slot

(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.

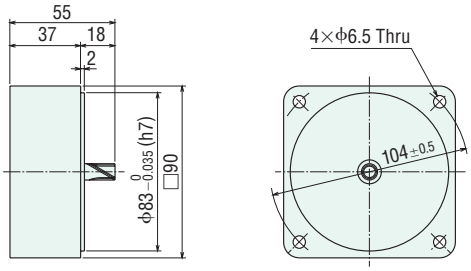


◇Decimal Gearhead

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

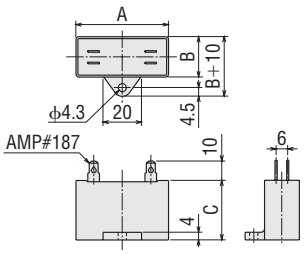
5GN10XS

Mass: 0.6 kg

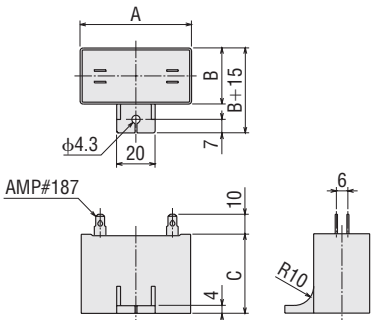


◇Capacitor (Included with single-phase motors)

Dimension No. ①



Dimension No. ②



◇Capacitor Dimensions (mm)

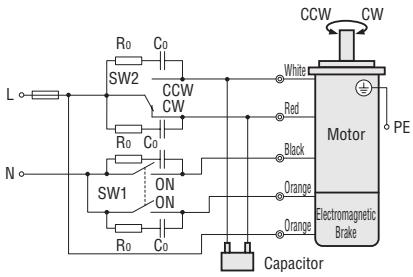
Model		Capacitor Model	A	B	C	Mass (g)	Dimension No.	Capacitor Cap
Pinion Shaft Type	Round Shaft Type							
5RK40GN-AW2MJ	**5RK40A-AW2MJ**	CH160CFAUL2	58	23.5	37	75	②	Included
5RK40GN-AW2MU	**5RK40A-AW2MU**	CH120CFAUL2	58	22	35	60	①	
5RK40GN-CW2MJ	**5RK40A-CW2MJ**	CH40BFAUL	58	23.5	37	70	②	
5RK40GN-CW2ME	**5RK40A-CW2ME**	CH35BFAUL	58	22	35	55	①	

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.

Single-Phase Motor

5RK40GN-AW2M□
5RK40GN-CW2M□



SW1 operates both motor and electromagnetic brake action.
The motor will rotate when SW1 is switched simultaneously to ON.
When SW1 is switched simultaneously to OFF, the motor stops immediately with the electromagnetic brake and holds the load.

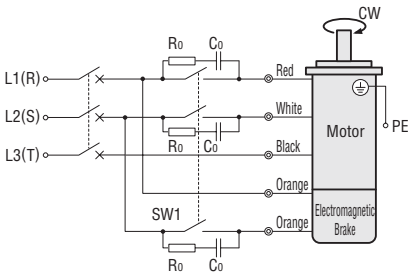
If you wish to release the brake while the motor is stopped, apply voltage between the two brake lead wires (orange).

Direction of Rotation
To rotate the motor in a clockwise (CW) direction, turn SW2 to CW.
To rotate the motor in a counterclockwise (CCW) direction, turn SW2 to CCW.

Switch No.	Specifications		Note
	Single-Phase 100 VAC, 110/115 VAC Input	Single-Phase 200 VAC, 220/230 VAC Input	
SW1	125 VAC 5 A minimum (Inductive Load)	250 VAC 5 A minimum (Inductive Load)	Switched Simultaneously
SW2			—

Three-Phase Motor

5IK40GN-SW2M



SW1 operates both motor and electromagnetic brake action.
The motor will rotate when SW1 is switched simultaneously to ON.
When SW1 is switched simultaneously to OFF, the motor stops immediately with the electromagnetic brake and holds the load.

If you wish to release the brake while the motor is stopped, apply voltage between the two brake lead wires (orange).

Direction of Rotation
To change the rotation direction, change any two connections between R, S and T.

Switch No.	Specifications	Note
SW1	250 VAC 5 A minimum (Inductive Load)	Switched Simultaneously

PE: Protective Earth

- R_0 and C_0 indicate surge suppressor circuit. [R_0=5～200 Ω, C_0=0.1～0.2 μF, 200 WV (400 WV)]
  EPCR1201-2 is available as an optional surge suppressor. ➜ Page 123