

RoHS

Power Off Activated Type Electromagnetic Brake Motors

6 W

Frame Size: □60 mm



(Gearhead sold separately)

Specifications

● Motor (RoHS)

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



Model		Rating	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									
Ⓜ 2RK6GN-AW2MJ	2RK6A-AW2MJ	30 minutes	6	Single-Phase 100	50	0.244	50	49	1150	4.5
					60	0.295	45	41	1400	
Ⓜ 2RK6GN-AW2MU	2RK6A-AW2MU	30 minutes	6	Single-Phase 110 Single-Phase 115	60	0.235	45	41	1450	3.5
						0.242				
Ⓜ 2RK6GN-CW2MJ	2RK6A-CW2MJ	30 minutes	6	Single-Phase 200	50	0.113	50	49	1150	1.0
					60	0.131	45	41	1400	
Ⓜ 2RK6GN-CW2ME	2RK6A-CW2ME	30 minutes	6	Single-Phase 220	50	0.107	50	49	1150	0.8
					60	0.109	45	41	1450	
				Single-Phase 230	50	0.112	50	49	1200	
					60	0.113	45	41	1450	
Ⓜ 2IK6GN-SW2M	2IK6A-SW2M	Continuous	6	Three-Phase 200	50	0.081	49	49	1200	—
					60	0.072	41	41	1400	
				Three-Phase 220 Three-Phase 230	60	0.076 0.079	41	41	1500	

● 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.

Ⓜ: Impedance protected

● Electromagnetic Brake (Power Off Activated Type)

Motor Model	Voltage VAC	Frequency Hz	Current A	Input W	Holding Brake Torque mN·m
2RK6GN-AW2MJ 2RK6A-AW2MJ	Single-Phase 100	50	0.03	3	30
		60			
2RK6GN-AW2MU 2RK6A-AW2MU	Single-Phase 110 Single-Phase 115	60	0.03	3	30
2RK6GN-CW2MJ 2RK6A-CW2MJ	Single-Phase 200	50	0.02	3	30
		60			
2RK6GN-CW2ME 2RK6A-CW2ME	Single-Phase 220	50	0.02	3	30
		60			
	Single-Phase 230	50			
		60			
2IK6GN-SW2M 2IK6A-SW2M	Single-Phase 200	50	0.02	3	30
		60			
	Single-Phase 220 Single-Phase 230	60			

Product Line

● Motor (RoHS)

Model	
Pinion Shaft Type	Round Shaft Type
2RK6GN-AW2MJ	2RK6A-AW2MJ
2RK6GN-AW2MU	2RK6A-AW2MU
2RK6GN-CW2MJ	2RK6A-CW2MJ
2RK6GN-CW2ME	2RK6A-CW2ME
2IK6GN-SW2M	2IK6A-SW2M

● Gearhead (Sold Separately) (RoHS)

Type	Gearhead Model	Gear Ratio
Long Life/Low Noise/ Parallel Shaft	2GN□S	3, 3.6, 5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180
	2GN10XS (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 3 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
2RK6GN-AW2MJ 2RK6GN-CW2MJ 2RK6GN-CW2ME 2IK6GN-SW2M	2GN□5	0.12	0.14	0.20	0.24	0.30	0.36	0.50	0.60	0.71	0.89	1.1	1.3	1.6	1.9	2.4	2.9	3	3	3	3

◇ 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
2RK6GN-AW2MJ 2RK6GN-AW2MU 2RK6GN-CW2MJ 2RK6GN-CW2ME 2IK6GN-SW2M	2GN□5	0.10	0.12	0.17	0.20	0.25	0.30	0.42	0.50	0.60	0.75	0.90	1.1	1.4	1.6	2.0	2.4	2.7	3	3	3

Permissible Overhung Load and Permissible Thrust Load

Motor (Round shaft type) → Page 107

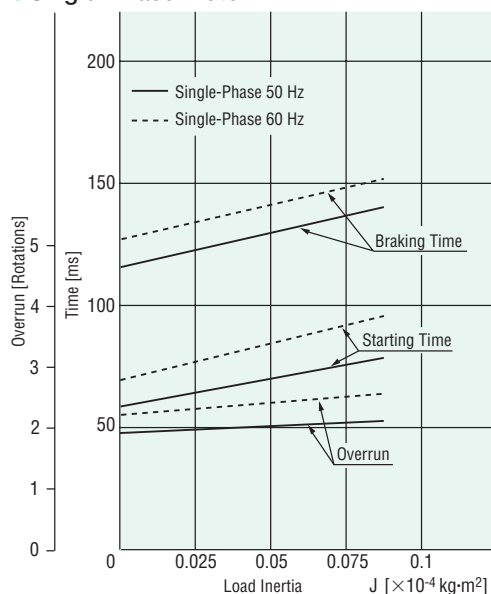
Gearhead → Page 107

Permissible Load Inertia J for Gearhead

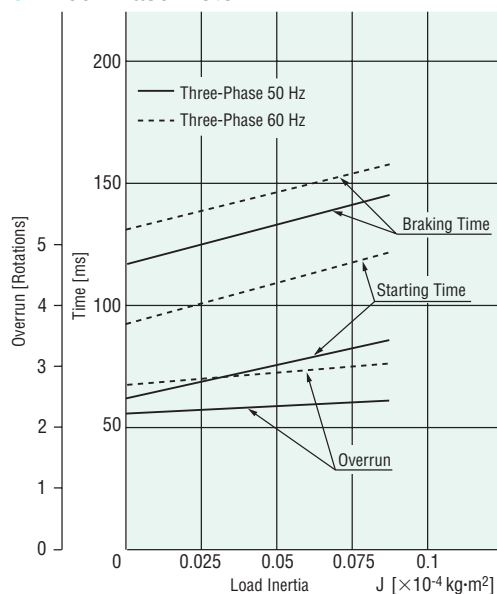
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Starting and Braking Characteristics (Reference Values)

● Single-Phase Motor



● Three-Phase Motor



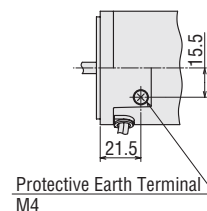
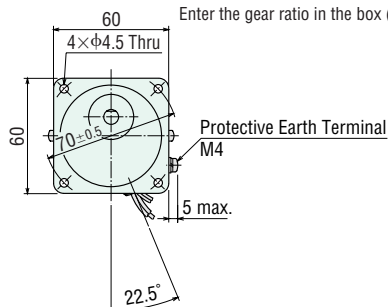
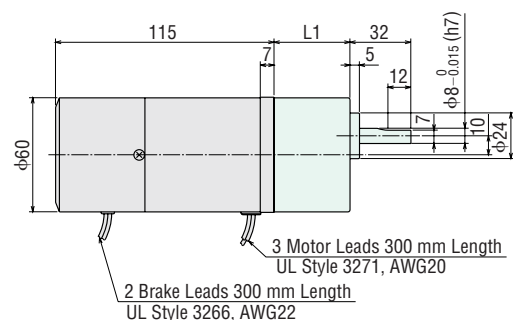
■ Dimensions (Unit = mm)

Mounting screws are included with gearheads.

◇ Motor/Gearhead

Mass: Motor 0.9 kg

Gearhead 0.4 kg



Detail Drawing of Protective Earth Terminal

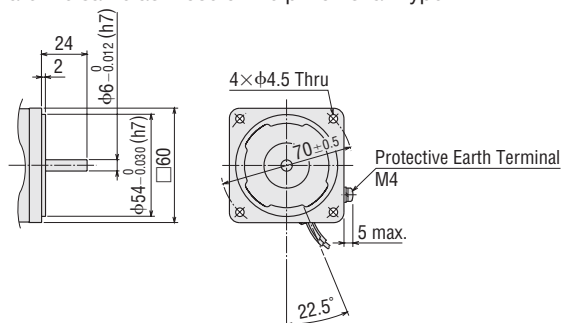
Motor Model	Gearhead Model	Gear Ratio	L1
2RK6GN-AW2M	2GN □ S	3~18	30
2RK6GN-CW2M		25~180	40
2IK6GN-SW2M			

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.

◇ 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.

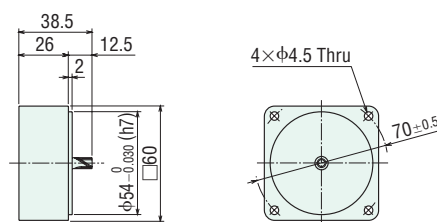


◇ Decimal Gearhead

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

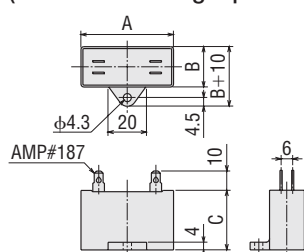
2GN10XS

Mass: 0.2 kg



◇ Capacitor

(Included with single-phase motors)

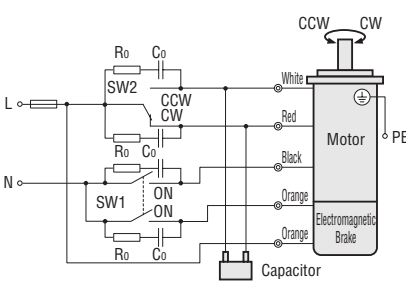
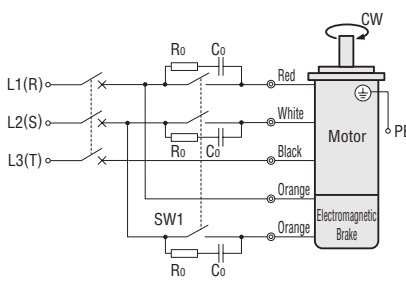
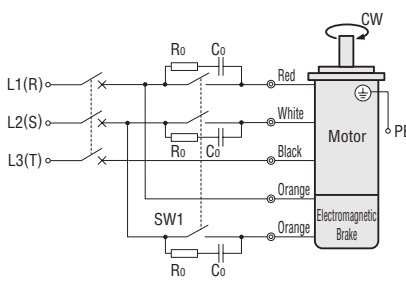
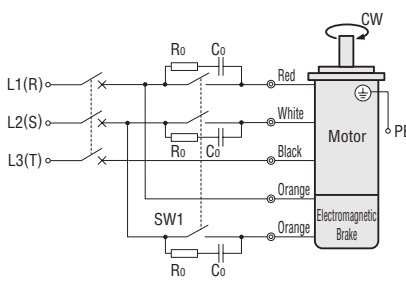


◇ Capacitor Dimensions (mm)

Model		Capacitor Model	A	B	C	Mass (g)	Capacitor Cap
Pinion Shaft Type	Round Shaft Type						
2RK6GN-AW2MJ	2RK6A-AW2MJ	CH45FAUL2	37	18	27	30	Included
2RK6GN-AW2MU	2RK6A-AW2MU	CH35FAUL2	31	17	27	25	
2RK6GN-CW2MJ	2RK6A-CW2MJ	CH10BFAUL	37	18	27	30	
2RK6GN-CW2ME	2RK6A-CW2ME	CH08BFAUL	31	17	27	20	

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	<div><div><div>2RK6GN-AW2M</div><div>2RK6GN-CW2M</div></div></div> <div></div> <div><p>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.</p><p>If you wish to release the brake while the motor is stopped, apply voltage between the two brake lead wires (orange).</p><p>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.</p><table><tr><th rowspan="2">Switch No.</th><th colspan="2">Specifications</th><th rowspan="2">Note</th></tr><tr><th>Single-Phase 100 VAC, 110/115 VAC Input</th><th>Single-Phase 200 VAC, 220/230 VAC Input</th></tr><tr><td>SW1</td><td>125 VAC 3 A minimum (Inductive Load)</td><td>250 VAC 1.5 A minimum (Inductive Load)</td><td>Switched Simultaneously</td></tr><tr><td>SW2</td><td></td><td></td><td>—</td></tr></table></div> <tr><td>Three-Phase Motor</td><td><div><div>2IK6GN-SW2M</div></div><div></div><div><p>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.</p><p>If you wish to release the brake while the motor is stopped, apply voltage between the two brake lead wires (orange).</p><p>Direction of Rotation To change the rotation direction, change any two connections between R, S and T.</p><table><tr><th>Switch No.</th><th>Specifications</th><th>Note</th></tr><tr><td>SW1</td><td>250 VAC 1.5 A minimum (Inductive Load)</td><td>Switched Simultaneously</td></tr></table></div></td></tr>	Switch No.	Specifications		Note	Single-Phase 100 VAC, 110/115 VAC Input	Single-Phase 200 VAC, 220/230 VAC Input	SW1	125 VAC 3 A minimum (Inductive Load)	250 VAC 1.5 A minimum (Inductive Load)	Switched Simultaneously	SW2			—	Three-Phase Motor	<div><div>2IK6GN-SW2M</div></div> <div></div> <div><p>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.</p><p>If you wish to release the brake while the motor is stopped, apply voltage between the two brake lead wires (orange).</p><p>Direction of Rotation To change the rotation direction, change any two connections between R, S and T.</p><table><tr><th>Switch No.</th><th>Specifications</th><th>Note</th></tr><tr><td>SW1</td><td>250 VAC 1.5 A minimum (Inductive Load)</td><td>Switched Simultaneously</td></tr></table></div>	Switch No.	Specifications	Note	SW1	250 VAC 1.5 A minimum (Inductive Load)	Switched Simultaneously
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PE: Protective Earth

● R_0 and C_0 indicate surge suppressor circuit. [$R_0=5\sim200\ \Omega$, $C_0=0.1\sim0.2\ \mu\text{F}$, 200 WV (400 WV)]

EPCR1201-2 is available as an optional surge suppressor. → Page 123