

Electromagnetic Brake Motors

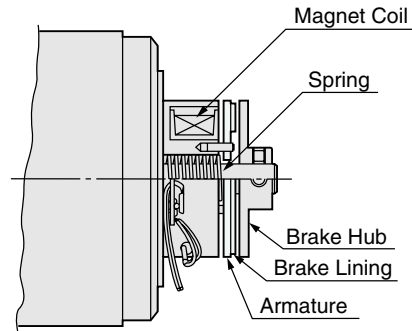
This power off, electromagnetic brake coupled to reversible motors and induction motors (three-phase type) provides output of 6W~90W (three-phase: 25W~90W). These motors are best suited for applications in which loads must be held.



■ Features

- These motors incorporate AC electromagnetic brakes which are activated when the power is shut off. When the power supply is turned off the motor stops and holds the load. Holding brake force is 4.2 oz-in (30 mN·m) ~ 69.4 oz-in (500 mN·m). These units are excellent as emergency safety brakes.

■ Structure



The figure above indicates an example of the structure of the electromagnetic brake motor.

The electromagnetic brake operates on the basis of a spring which presses the armature against the brake hub, stopping the motor and holding the load. When the electromagnetic brake is excited, it attracts the armature and the brake lining is pulled away from the brake hub. The motor is able to turn freely.



■ Safety Standards and CE Marking

● For -AWMU, -CWME, -SWM Type

Standards	Certification Body	Standards File No.	CE Marking
UL1004 UL519 (6W) UL547 (15W-90W) CAN/CSA-C22.2 No.100 CAN/CSA-C22.2 No.77	UL	E64199 (6W) E64197 (15W~90W)	Low Voltage Directive
EN60950		VDE 114919ÜG (6W) 6751ÜG (15W-90W) DEMKO 124234/DK99-00431 (Three-phase 90W)	
EN60034-1 EN60034-5 IEC60034-11	Conform to EN/IEC Standards (EN/IEC certifications are scheduled)		

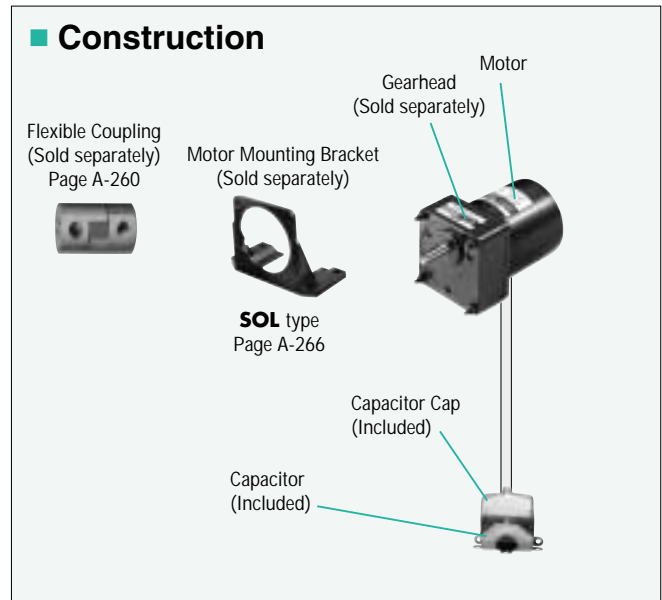
● Recognized name and certified name of each safety standards are motor model name.

● For -AMUL Type

Standards	Certification Body	Standards File No.	CE Marking
UL1004 UL519 (6W) UL547 (15W-90W) CAN/CSA-C22.2 No.100 CAN/CSA-C22.2 No.77	UL	E64199 (6W) E64197 (15W~90W)	Low Voltage Directive
EN60950	CSA	LR47296	
	VDE	5875ÜG (6W) 5872ÜG (15, 25W) 5873ÜG (40W) 5874ÜG (60, 90W)	

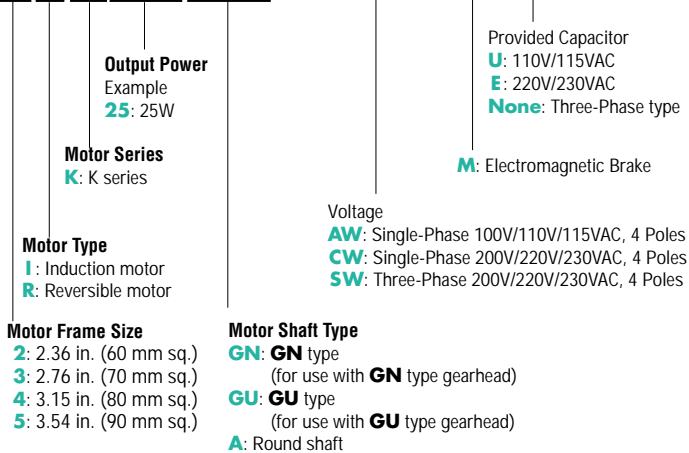
● For installation condition for EN/IEC standards, see page D-2.

■ Construction



■ Product Number Code

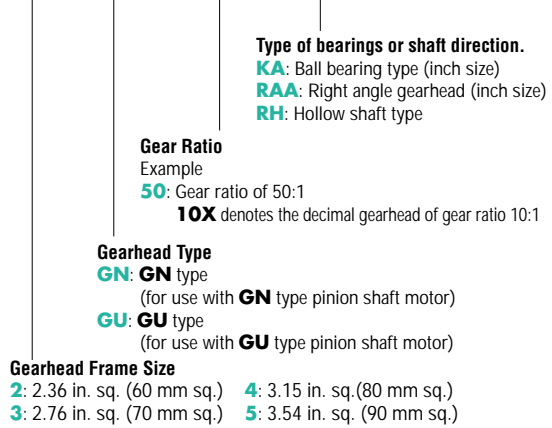
4RK25GN - AW M U



Note : The "U" and "E" at the end of the model number indicate that the unit includes a capacitor. These two letters are not listed on the motor nameplate.

● Gearhead

4 GN 50 KA

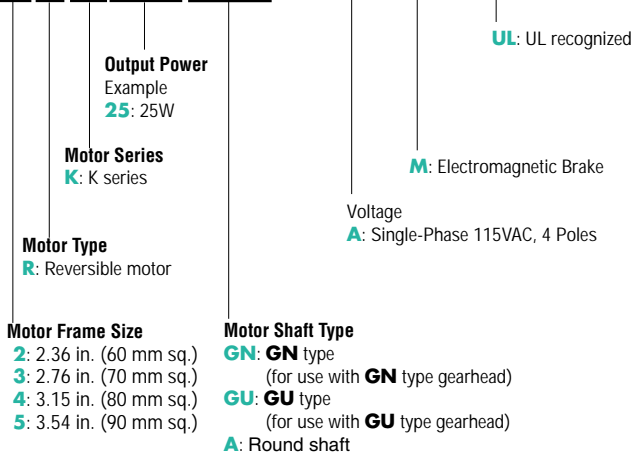


Note :

- The **GU** type includes two types of model number: box-shaped models with a "B" at the end of their model number and models with mounting flanges with nothing at the end of their model number. All other series consist of box-shaped models only and have nothing at the end of their model number.
- See page 56 for data regarding inch size gearheads shafts.

● For -AMUL Type

4RK25GN - A M UL



■ Motor Specifications 30 Minute Rating

Mode		Output Power		Voltage	Frequency	Current	Starting Torque		Rated Torque		Rated Speed	Capacitor	
Pinion Shaft Type	Round Shaft Type	HP	W	VAC	Hz	A	oz-in	mN-m	oz-in	mN-m	r/min	μF	
Ⓜ	2RK6GN-AWMU	2RK6A-AWMU	1/124	6	Single-Phase 110	60	0.25	6.2	45	5.7	41	1450	3.5
					Single-Phase 115	60	0.26						
Ⓜ	2RK6GN-CWME	2RK6A-CWME	1/124	6	Single-Phase 220	60	0.11	6.2	45	5.7	41	1450	0.8
					Single-Phase 230	50	0.12						
					Single-Phase 230	60	0.12						
Ⓜ	2RK6GN-AMUL	2RK6A-AMULA	1/124	6	Single-Phase 115	60	0.17	6.7	48	5.3	38	1550	2.3
Ⓜ	3RK15GN-AWMU	3RK15A-AWMU	1/50	15	Single-Phase 110	60	0.42	13.9	100	14.6	105	1450	6
					Single-Phase 115	60	0.41						
Ⓜ	3RK15GN-AMUL	3RK15A-AMULA	1/50	15	Single-Phase 115	60	0.34	11.1	80	13.2	95	1550	4.5
Ⓜ	4RK25GN-AWMU	4RK25A-AWMU	1/30	25	Single-Phase 110	60	0.54	19.4	140	23.6	170	1450	8
					Single-Phase 115	60							
					Single-Phase 220	60							
Ⓜ	4RK25GN-CWME	4RK25A-CWME	1/30	25	Single-Phase 230	50	0.26	22.2	160	28.5	205	1200	2
					Single-Phase 230	60	0.28						
					Three-Phase 200	50	0.23						
Ⓜ	4IK25GN-SWM	4IK25A-SWM	1/30	25	Three-Phase 200	60	0.21	22.2	160	22.2	160	1550	—
					Three-Phase 220	60	0.21						
					Three-Phase 230	60	0.22						
					Three-Phase 230	60	0.22						
Ⓜ	4RK25GN-AMUL	4RK25A-AMULA	1/30	25	Single-Phase 115	60	0.54	17.4	125	22.2	160	1550	7
Ⓜ	5RK40GN-AWMU	5RK40A-AWMU	1/18.5	40	Single-Phase 110	60	0.81	36.1	260	37.5	270	1450	12
					Single-Phase 115	60							
Ⓜ	5RK40GN-CWME	5RK40A-CWME	1/18.5	40	Single-Phase 220	60	0.46	36.1	260	36.1	260	1500	3.5
					Single-Phase 230	50	0.4						
					Single-Phase 230	60	0.46						
Ⓜ	5IK40GN-SWM	5IK40A-SWM	1/18.5	40	Three-Phase 200	50	0.32	55.5	400	41.7	300	1300	—
					Three-Phase 200	60	0.3						
					Three-Phase 220	60	0.3						
					Three-Phase 230	60	0.31						
Ⓜ	5RK40GN-AMUL	5RK40A-AMULA	1/18.5	40	Single-Phase 115	60	0.81	34.7	250	36.1	260	1550	12
Ⓜ	5RK60GU-AWMU	5RK60A-AWMU	1/12.5	60	Single-Phase 110	60	1.24	52.8	380	56.2	405	1450	20
					Single-Phase 115	60							
Ⓜ	5RK60GU-CWME	5RK60A-CWME	1/12.5	60	Single-Phase 220	60	0.67	52.8	380	56.2	405	1450	5
					Single-Phase 230	50	0.61						
					Single-Phase 230	60	0.67						
Ⓜ	5IK60GU-SWM	5IK60A-SWM	1/12.5	60	Three-Phase 200	60	0.5	83.3	600	62.5	450	1300	—
					Three-Phase 200	60	0.43						
					Three-Phase 220	60	0.45						
					Three-Phase 230	60	0.46						
Ⓜ	5RK60GU-AMUL	5RK60A-AMUL	1/12.5	60	Single-Phase 115	60	1.2	54.2	390	52.8	380	1550	20
Ⓜ	5RK90GU-AWMU	5RK90A-AWMU	1/8	90	Single-Phase 110	60	1.81	81.9	590	81.2	585	1500	30
					Single-Phase 115	60							
Ⓜ	5RK90GU-CWME	5RK90A-CWME	1/8	90	Single-Phase 220	60	0.96	81.9	590	84	605	1450	7
					Single-Phase 230	50	0.82						
					Single-Phase 230	60	0.96						
Ⓜ	5IK90GU-SWM	5IK90A-SWM	1/8	90	Three-Phase 200	50	0.64	118	850	94.4	680	1300	—
					Three-Phase 200	60	0.59						
					Three-Phase 220	60	0.6						
					Three-Phase 230	60	0.61						
Ⓜ	5RK90GU-AMUL	5RK90A-AMUL	1/8	90	Single-Phase 115	60	1.65	81.9	590	79.2	570	1550	25

Ⓜ: These motors are impedance protected.

Ⓜ: These motors contain 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.

• The "U" and "E" at the end of the model number indicate that the unit includes a capacitor. These two letters are not listed on the motor nameplate.

When the motor is approved under various safety standards, the nameplate is adopted.

• A colored background indicates gear shaft rotation in the same direction as the motor shaft; a white background indicates rotation in the opposite direction.

■ Motor General Specifications For -AWMU, -CWME, -SWM Type

Item	Specifications
Insulation Resistance	100M Ω or more when 500V DC is applied between the windings and the frame after rated motor operation under normal ambient temperature and humidity.
Dielectric Strength	Sufficient to withstand 1.5kV at 50 and 60 Hz applied between the windings and the frame after rated motor operation under normal ambient temperature and humidity.
Temperature Rise	144°F (80°C) or less measured by the resistance change method after the temperature of 30minute no load operation of motor with connecting a gearhead or equivalent heat radiation plate.*
Insulation Class	Class B 266°F (130°C)
Overheat Protection Device	2RK type is impedance protected. Built-in thermal protector (Automatic return type) Open: 266°F±9°F (130°C±5°C) Close: 179.6°F±27°F (82°C±15°C)
Ambient Temperature Range	14°F~104°F (-10°C~+40°C) Three-Phase 200V : 14°F~122°F (-10°C~+50°C)
Ambient Humidity	85% Maximum (noncondensing)
Degree of protection	2RK, 3RK, 4RK, 4IK, 5RK40, 5IK40 type : IP20 5RK60, 5IK60, 5RK90, 5IK90 type : IP40

■ Motor General Specifications For -AMUL Type

Item	Specification
Insulation Resistance	100M Ω or more when 500V DC is applied between the windings and the frame after rated motor operation under normal ambient temperature and humidity.
Dielectric Strength	Sufficient to withstand 1.5kV at 50Hz and 60Hz applied between the windings and the frame after rated motor operation under normal ambient temperature and humidity.
Temperature Rise	135°F (75°C) or less measured by the resistance change method after the temperature of the coil has stabilized under normal operation at the rated voltage and frequency.
Insulation Class	UL : CSA Standard Class A, EN60950 Standard Class E
Overheat Protection Device	2RK type is impedance protected. Built-in thermal protector (Automatic return type) Open: 248°F±9°F (120°C±5°C) Close: 170.6°F±27°F (77°C±15°C)
Ambient Temperature Range	14°F~104°F (-10°C~+40°C)
Ambient Humidity	85% Maximum (noncondensing)

● Equivalent heat radiation plate (material : Aluminum)

Type (output)	Size inch (mm)	Thickness inch (mm)
2RK Type (6W)	4.53×4.53 (115×115)	0.20 (5)
3RK Type (15W)	4.92×4.92 (125×125)	
4IK, 4RK Type (25W)	5.31×5.31 (135×135)	
5IK40, 5RK40 Type (40W)	6.50×6.50 (165×165)	
5IK60, 5RK60 Type (60W)	7.87×7.87 (200×200)	
5IK90, 5RK90 Type (90W)	7.87×7.87 (200×200)	

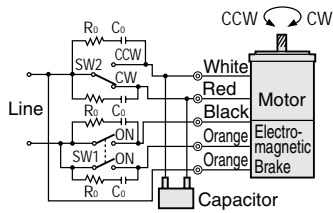
■ Electromagnetic Brake Specifications

Model	Voltage VAC	Frequency Hz	Current		Input Holding Brake Torque	
			A	W	oz-in	mN·m
2RK6GN-AWMU	Single-Phase 110	60	0.03	3	4.2	30
2RK6A-AWMU	Single-Phase 115	60	0.03	3	4.2	30
2RK6GN-CWME	Single-Phase 220	60	0.02	3	4.2	30
2RK6A-CWME	Single-Phase 230	50	0.02	3	4.2	30
	Single-Phase 230	60	0.02	3	4.2	30
2RK6GN-AMUL	Single-Phase 115	60	0.032	2.3	4.2	30
2RK6A-AMULA	Single-Phase 115	60	0.032	2.3	4.2	30
3RK15GN-AWMU	Single-Phase 110	60	0.06	4	11.1	80
3RK15A-AWMU	Single-Phase 115	60	0.06	4	11.1	80
3RK15GN-AMUL	Single-Phase 115	60	0.046	4.2	11.1	80
3RK15A-AMULA	Single-Phase 115	60	0.046	4.2	11.1	80
4RK25GN-AWMU	Single-Phase 110	60	0.08	5	13.9	100
4RK25A-AWMU	Single-Phase 115	60	0.08	6	13.9	100
4RK25GN-CWME	Single-Phase 220	60	0.04	6	13.9	100
4RK25A-CWME	Single-Phase 230	50	0.05	7	13.9	100
	Single-Phase 230	60	0.05	6	13.9	100
4IK25GN-SWM	Three-Phase 200	50	0.04	5	13.9	100
4IK25A-SWM	Three-Phase 200	60	0.04	5	13.9	100
	Three-Phase 220	60	0.04	6	13.9	100
	Three-Phase 230	60	0.04	6	13.9	100
4RK25GN-AMUL	Single-Phase 115	60	0.055	5.2	13.9	100
4RK25A-AMULA	Single-Phase 115	60	0.055	5.2	13.9	100
5RK40GN-AWMU	Single-Phase 110	60	0.08	6	27.8	200
5RK40A-AWMU	Single-Phase 115	60	0.09	7	27.8	200
5RK40GN-CWME	Single-Phase 220	60	0.04	6	27.8	200
5RK40A-CWME	Single-Phase 230	50	0.04	6	27.8	200
	Single-Phase 230	60	0.04	6	27.8	200

Model	Voltage VAC	Frequency Hz	Current		Input Holding Brake Torque	
			A	W	oz-in	mN·m
5IK40GN-SWM	Three-Phase 200	50	0.04	5	27.8	200
5IK40A-SWM	Three-Phase 200	60	0.04	5	27.8	200
	Three-Phase 220	60	0.04	6	27.8	200
	Three-Phase 230	60	0.04	6	27.8	200
5RK40GU-AMUL	Single-Phase 115	60	0.053	5.7	27.7	200
5RK40A-AMULA	Single-Phase 115	60	0.053	5.7	27.7	200
5RK60GU-AWMU	Single-Phase 110	60	0.12	9	69.4	500
5RK60A-AWMU	Single-Phase 115	60	0.12	9	69.4	500
5RK60GU-CWME	Single-Phase 220	60	0.06	8	69.4	500
5RK60A-CWME	Single-Phase 230	50	0.06	9	69.4	500
	Single-Phase 230	60	0.06	9	69.4	500
5IK60GU-SWM	Three-Phase 200	50	0.05	7	69.4	500
5IK60A-SWM	Three-Phase 200	60	0.05	7	69.4	500
	Three-Phase 220	60	0.06	8	69.4	500
	Three-Phase 230	60	0.06	9	69.4	500
5RK60GU-AMUL	Single-Phase 115	60	0.064	6.7	69.4	500
5RK60A-AMULA	Single-Phase 115	60	0.064	6.7	69.4	500
5RK90GU-AWMU	Single-Phase 110	60	0.12	9	69.4	500
5RK90A-AWMU	Single-Phase 115	60	0.12	9	69.4	500
5RK90GU-CWME	Single-Phase 220	60	0.06	8	69.4	500
5RK90A-CWME	Single-Phase 230	50	0.06	9	69.4	500
	Single-Phase 230	60	0.06	9	69.4	500
5IK90GU-SWM	Three-Phase 200	50	0.05	7	69.4	500
5IK90A-SWM	Three-Phase 200	60	0.05	7	69.4	500
	Three-Phase 220	60	0.06	8	69.4	500
	Three-Phase 230	60	0.06	9	69.4	500
5RK90GU-AMUL	Single-Phase 115	60	0.064	6.7	69.4	500
5RK90A-AMUL	Single-Phase 115	60	0.064	6.7	69.4	500

■ Wiring Diagrams

2RK6GN-AWMU
2RK6GN-CWME
3RK15GN-AWMU
4RK25GN-AWMU
4RK25GN-CWME
5RK40GN-AWMU
5RK40GN-CWME
5RK60GU-AWMU
5RK60GU-CWME
5RK90GU-AWMU
5RK90GU-CWME



SW No.	Specifications of Switches		Note
	Single-Phase 110VAC Single-Phase 115VAC	Single-Phase 220VAC Single-Phase 230VAC	
SW1	125VAC 3A Min	250VAC 1.5A Min	Single-pole-double-throw switch
SW2	Inductive	Inductive	
Ro. Co Surge absorber	Ro=5~200Ω Co=0.1~0.2μF 200WV		Accessories EPCR1201-2

Run/Stop: SW1 operates motor and electromagnetic brake action. Motor will rotate when SW1 is switched to ON (short circuit).

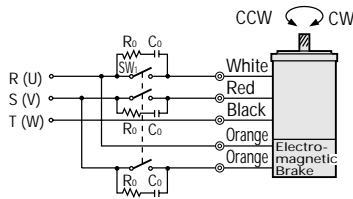
When SW1 is switched to OFF (open), the motor is stopped immediately by the electromagnetic brake and holds the load.

If you wish to release the brake while the motor is stopped, apply voltage between only two brake lead wires (orange). The electromagnetic brake is released and the motor shaft can be rotated easily by hand.

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

Direction of motor rotation are shown when the motor is viewed from the shaft end of the motor.

4IK25GN-SWM
5IK40GN-SWM
5IK60GU-SWM
5IK90GU-SWM



SW No.	Specifications of Switch	Note
SW1	250VAC 5A Min Inductive	Single-pole-double-throw switch
Ro. Co Surge absorber	Ro=5~200Ω Co=0.1~0.2μF 200WV	
		Accessories EPCR1201-2

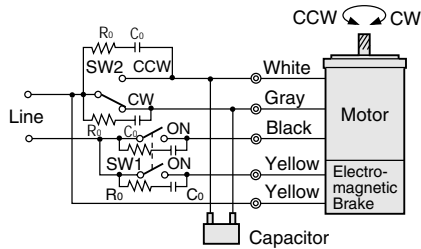
Run/Stop: SW1 operates motor and electromagnetic brake action. Motor will rotate when SW1 is switched to ON (short circuit).

When SW1 is switched to OFF (open), the motor is stopped immediately by the electromagnetic brake and holds the load.

If you wish to release the brake while the motor is stopped, apply voltage between only two brake lead wires (orange). The electromagnetic brake is released and the motor shaft can be rotated easily by hand.

Direction of Rotation: To change the rotation, change any two connections between U, V and W.

2RK6GN-AMUL
2RK6A-AMULA
3RK15GN-AMUL
3RK15A-AMULA
4RK25GN-AMUL
4RK25A-AMULA
5RK40GN-AMUL
5RK40A-AMULA



Run/Stop

SW1 operates motor and electromagnetic brake action. Motor will rotate when SW1 is switched to ON (short circuit).

When SW1 is switched to OFF (open), the motor is stopped immediately by the electromagnetic brake and holds the load.

If you wish to release the brake while the motor is stopped, apply voltage between only two brake lead wires (orange or yellow). The electromagnetic brake is released and the motor shaft can be rotated easily by hand.

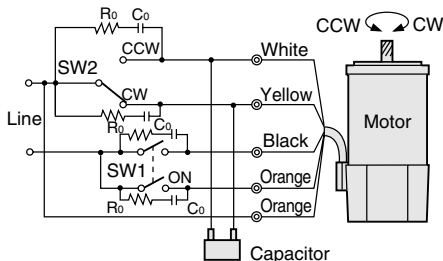
Direction of Rotation

To rotate the motor in a clockwise (CW) direction, switch SW2 to CW. To rotate it in a counterclockwise (CCW) direction, switch SW2 to CCW.

Directions of motor rotation are shown when the motor is viewed from the shaft end of the motor.

SW No.	Specifications of Switch	Note
SW1	125VAC 3A Min (6W~40W) 125VAC 5A Min (60W, 90W) Inductive	Single-pole-double-throw switch
Ro. Co Surge absorber	Ro=5~200Ω Co=0.1~0.2μF 200WV	
		Accessories EPCR1201-2

5RK60GU-AMUL
5RK60A-AMUL
5RK90GU-AMUL
5RK90A-AMUL



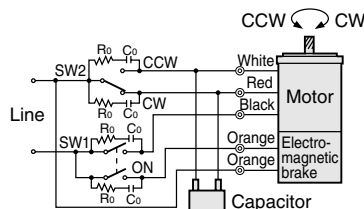
■ Variation in braking time according to connection

Connection can be simplified by using the wiring diagram shown in figure ②, rather than the normal wiring shown in figure ①.

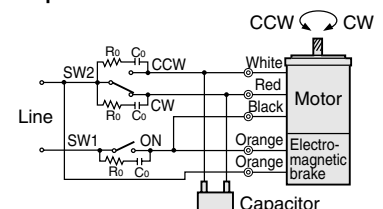
Using the connection shown in figure ②, however, results in a 50 msec. increase in braking time over that shown in figure ①, with a corresponding increase in overrun.

The reason for this is that the electromagnetic energy of the motor continues to have an effect on the coil of the electromagnetic brake, so that the electromagnet continues to operate for 50 msec. even though the excitation has been canceled. The brake therefore takes longer to engage.

① Normal Connection

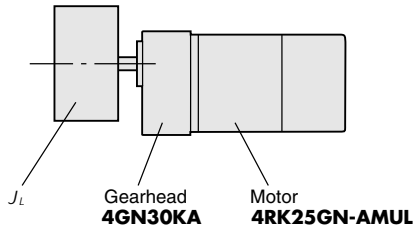


② Simplified Connection



Starting and Braking Characteristics

As an example, we have calculated the motor starting time, braking time and overrun when driving an inertial load ($J_L = 1375$ oz-in²) for the motor **4RK25GN-AMUL** when combined with the gearhead **4GN30KA**.



First, convert load inertia to its corresponding value at the motor shaft.

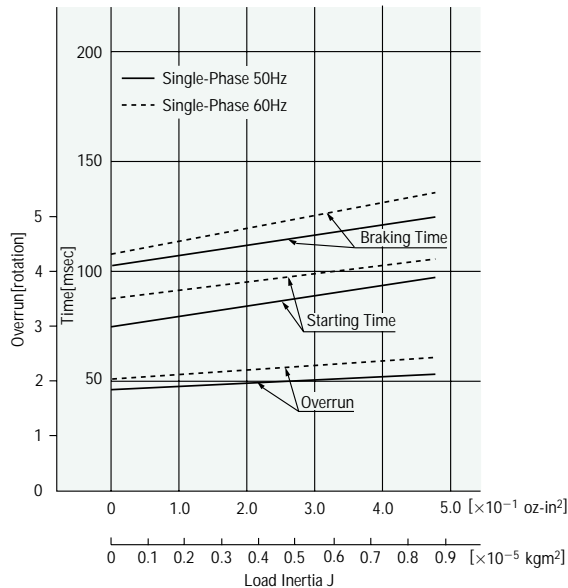
$$J_M = \frac{J_L}{i^2} = \frac{1375}{30^2} \doteq 1.5 \text{ [oz-in}^2\text{]}$$

J_L : Inertia of the load [oz-in²]

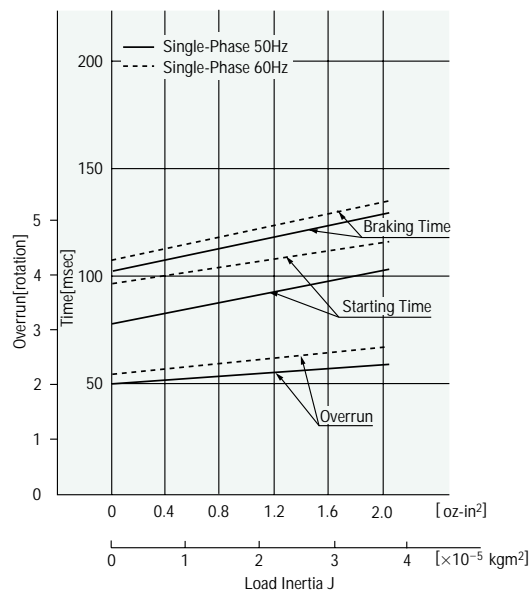
J_M : Inertia at motor shaft [oz-in²]

i : Gear ratio

2RK6GN-AWMU / 2RK6GN-CWME



4RK25GN-AWMU / 4RK25GN-CWME



Overrun

The overrun of the motor shaft based on the graph on the next page is:

$$N_M \doteq 2.6 \text{ revolutions}$$

Overrun of gearhead output shaft is:

$$N_G = \frac{N_M}{i} = \frac{2.6}{30} = 0.09 \text{ revolutions (32}^\circ\text{)}$$

Starting time and braking time

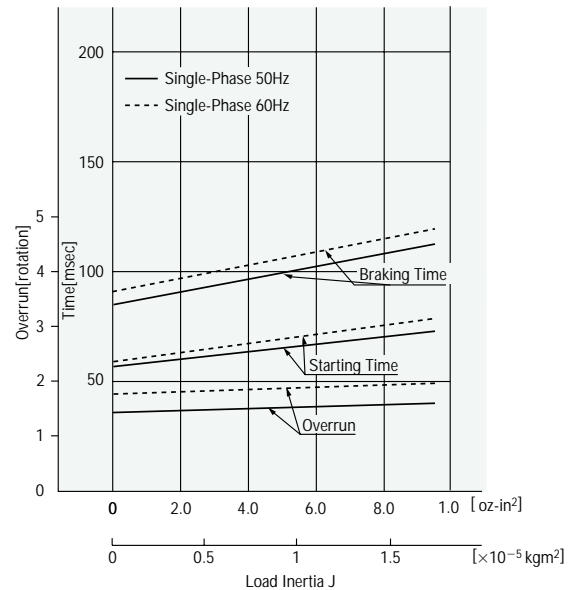
Using the graph again gives:

$$\text{Starting time } t_1 \doteq 110 \text{ msec}$$

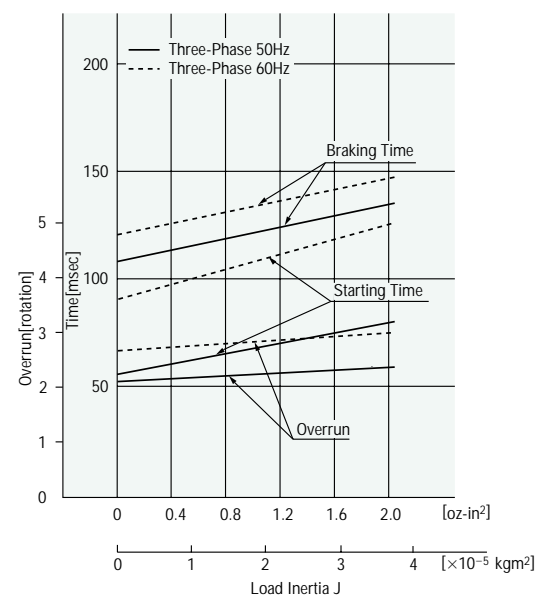
$$\text{Braking time } t_2 \doteq 130 \text{ msec}$$

The starting time of an electromagnetic brake motor is equal to the motor starting time plus the electromagnetic brake release time. If the electromagnetic brake is left released, the motor can be started much faster. Optimum time for release of the brake is at least 10 msec. before starting up the motor.

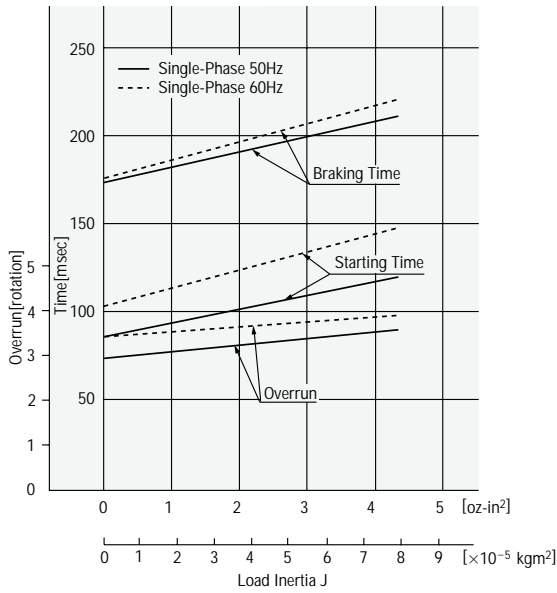
3RK15GN-AWMU / 3RK15GN-AMUL



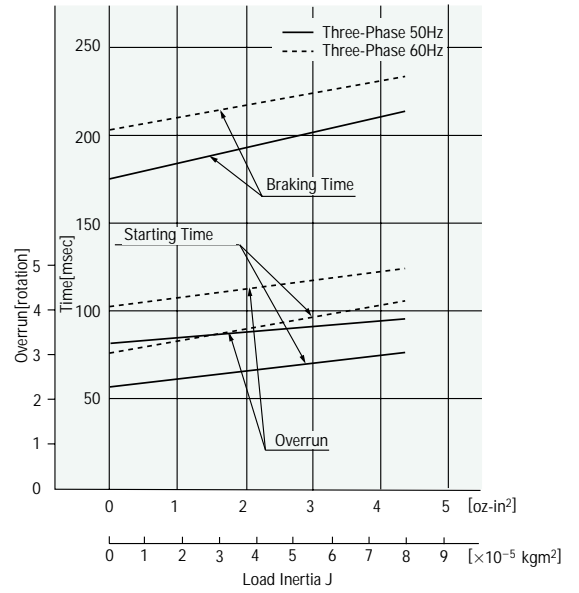
4IK25GN-SWM



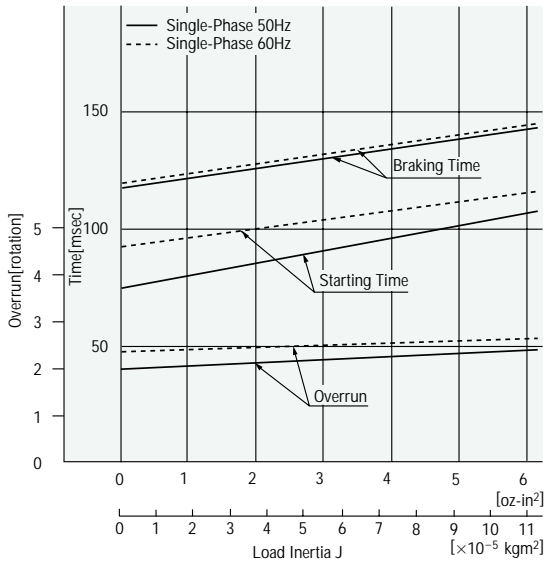
5RK40GN-AWMU / 5RK40GN-CWME
5RK40GN-AMUL



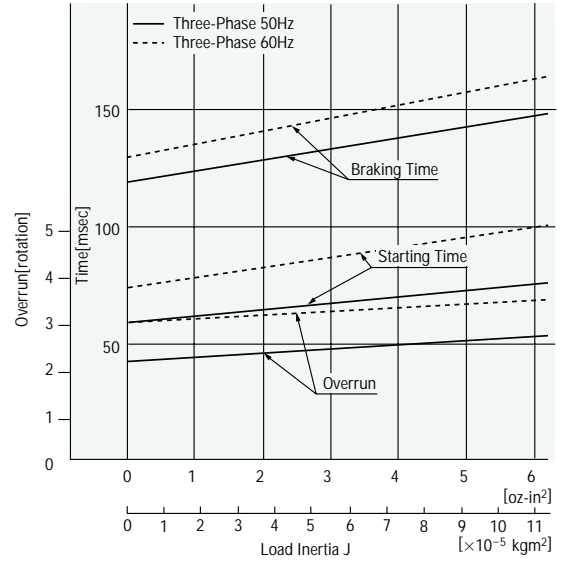
5IK40GN-SWM



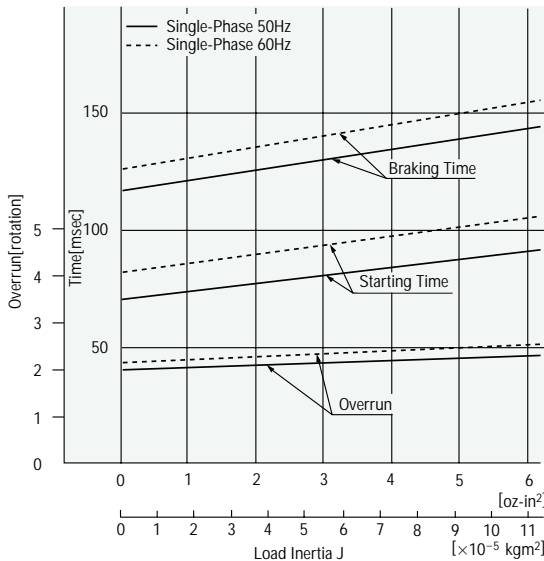
5RK60GU-AWMU / 5RK60GU-CWME
5RK60GU-AMUL



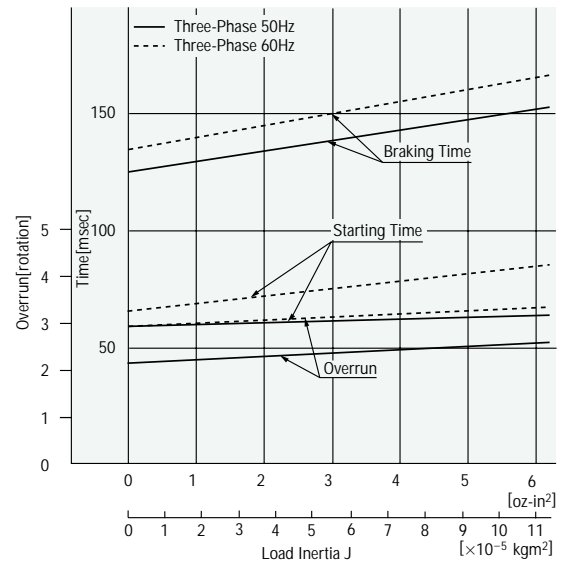
5IK60GU-SWM



5RK90GU-AWMU / 5RK90GU-CWME
5RK90GU-AMUL



5IK90GU-SWM



■ Dimensions Scale 1/4, Unit = inch (mm)

● Motor

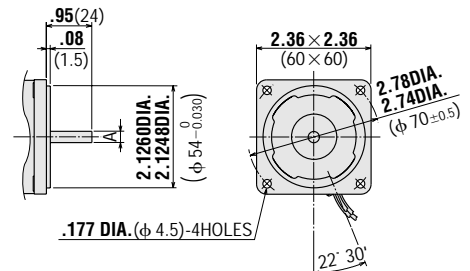
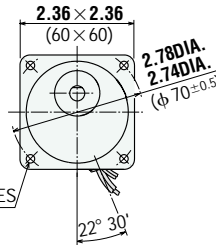
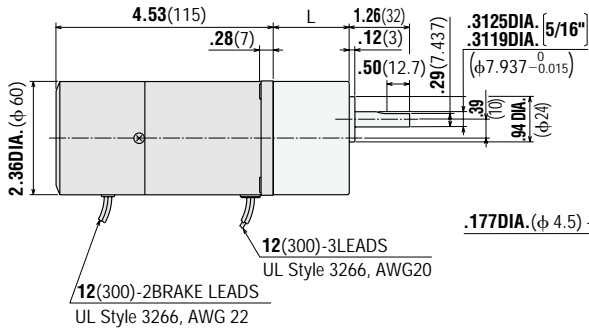
2RK6GN-AWMU Weight (Mass): 2.0 lb. (0.9 kg)
2RK6GN-CWME Weight (Mass): 2.0 lb. (0.9 kg)
2RK6GN-AMUL Weight (Mass): 2.0 lb. (0.9 kg)

Gearhead

2GN□KA
 Weight (Mass): 0.88 lb. (0.4 kg)

● Round Shaft Type

2RK6A-AWMU Weight (Mass): 2.0 lb. (0.9 kg)
2RK6A-CWME Weight (Mass): 2.0 lb. (0.9 kg)
2RK6A-AMULA Weight (Mass): 2.0 lb. (0.9 kg)



Unit = inch (mm)

Model	A
2RK6A-AWME	.2362DIA. (φ 6 ⁰ _{-0.012})
2RK6A-CWME	.2357DIA. (φ 6 ⁰ _{-0.012})
2RK6A-AMULA	.2500DIA. [1/4"] (φ 6.35 ⁰ _{-0.010})
	.2496DIA. [1/4"] (φ 6.35 ⁰ _{-0.010})

L = 1.18 (30) **2GN3KA~18KA**
 L = 1.57 (40) **2GN25KA~180KA**

● Motor

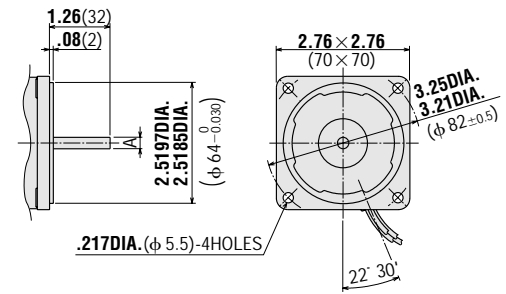
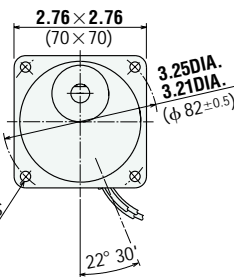
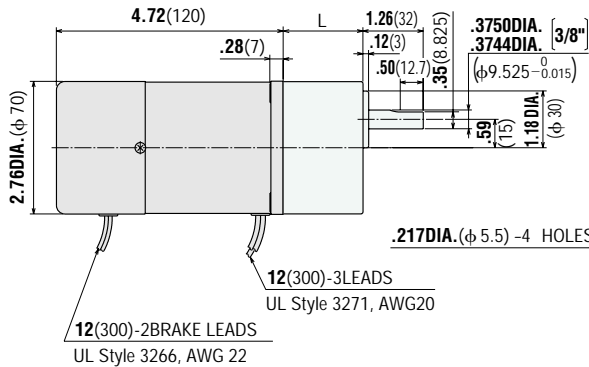
3RK15GN-AWMU Weight (Mass): 2.9 lb. (1.3 kg)
3RK15GN-AMUL Weight (Mass): 2.9 lb. (1.3 kg)

Gearhead

3GN□KA
 Weight (Mass): 1.21 lb. (0.55 kg)

● Round Shaft Type

3RK15A-AWMU Weight (Mass): 2.9 lb. (1.3 kg)
3RK15A-AMULA Weight (Mass): 2.9 lb. (1.3 kg)



Unit = inch (mm)

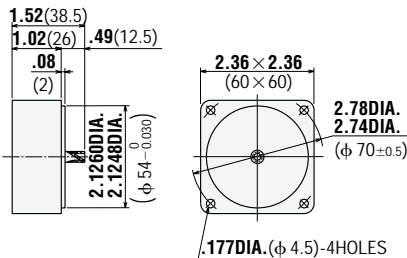
Model	A
3RK15A-AWMU	.2362DIA. (φ 6 ⁰ _{-0.012})
3RK15A-CWME	.2357DIA. (φ 6 ⁰ _{-0.012})
3RK15A-AMULA	.2500DIA. [1/4"] (φ 6.35 ⁰ _{-0.010})
	.2496DIA. [1/4"] (φ 6.35 ⁰ _{-0.010})

L = 1.26 (32) **3GN3KA~18KA**
 L = 1.65 (42) **3GN25KA~180KA**

● Decimal Gearheads

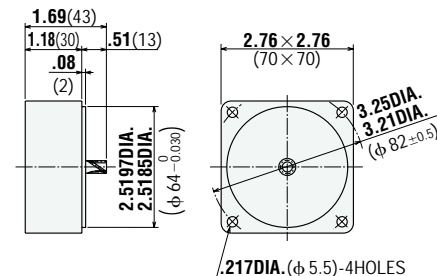
2GN10XK

Weight (Mass): 0.44 lb. (0.2 kg)



3GN10XK

Weight (Mass): 0.66 lb. (0.3 kg)

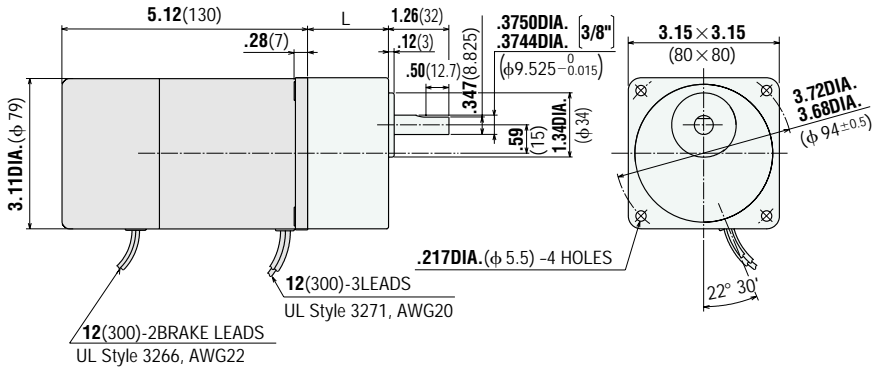


● Motor

- 4RK25GN-AWMU** Weight (Mass): 4.4 lb. (2.0 kg)
- 4RK25GN-CWME** Weight (Mass): 4.4 lb. (2.0 kg)
- 4IK25GN-SWM** Weight (Mass): 4.4 lb. (2.0 kg)
- 4RK25GN-AMUL** Weight (Mass): 4.2 lb. (1.9 kg)

Gearhead

- 4GN□KA** Weight (Mass): 1.43 lb. (0.65 kg)

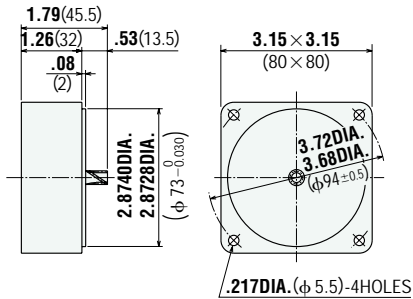


- L = 1.26 (32) **4GN3KA~18KA**
- L = 1.67 (42.5) **4GN25KA~180KA**

● Decimal Gearheads

4GN10XK

Weight (Mass): 0.88 lb. (0.4 kg)



● Round Shaft Type

4RK25A-AWMU

Weight (Mass): 4.4 lb. (2.0 kg)

4RK25A-CWME

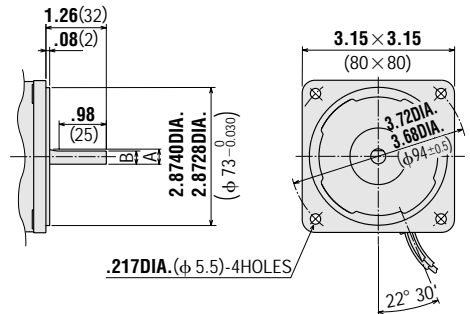
Weight (Mass): 4.4 lb. (2.0 kg)

4IK25A-SWM

Weight (Mass): 4.4 lb. (2.0 kg)

4RK25A-AMULA

Weight (Mass): 4.2 lb. (1.9 kg)



Unit = inch (mm)

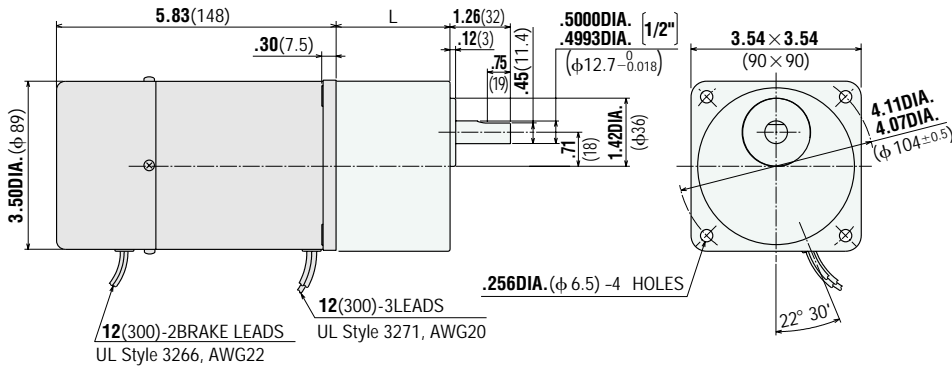
Model	A	B
4RK25A-AWME	.3150DIA. (φ 8 -0.015)	.28 (7)
4RK25A-CWME	.3144DIA. (φ 8 -0.015)	.28 (7)
4RK25A-SWM	.3150DIA. (φ 8 -0.015)	.28 (7)
4RK25A-AMULA	.3125DIA. [5/16"] (φ 7.937 -0.011)	.28 (7.037)
	.3120DIA. (φ 7.937 -0.011)	.28 (7.037)

● Motor

5RK40GN-AWMU Weight (Mass): 6.4 lb. (2.9 kg)
5RK40GN-CWME Weight (Mass): 6.4 lb. (2.9 kg)
5IK40GN-SWM Weight (Mass): 6.4 lb. (2.9 kg)
5RK40GN-AMUL Weight (Mass): 6.4 lb. (2.9 kg)

Gearhead

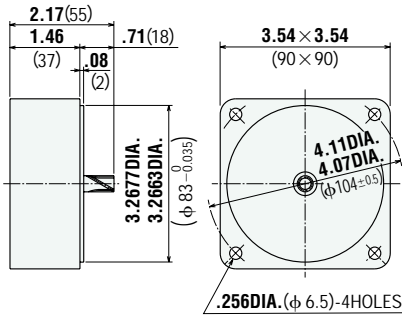
5GN□KA
 Weight (Mass): 3.3 lb. (1.5 kg)



L = 1.65 (42) **5GN3KA~18KA**
 L = 2.36 (60) **5GN25KA~180KA**

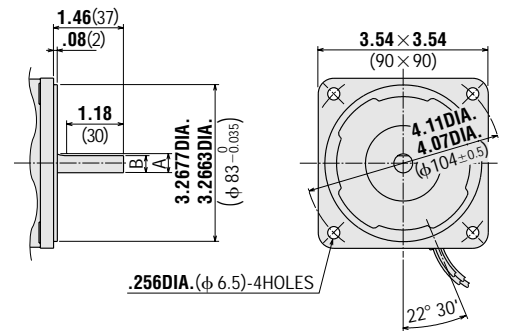
5GN10XK

Weight (Mass): 1.32 lb. (0.6 kg)



● Round Shaft Type

5RK40A-AWMU Weight (Mass): 6.4 lb. (2.9 kg)
5RK40A-CWME Weight (Mass): 6.4 lb. (2.9 kg)
5IK40A-SWM Weight (Mass): 6.4 lb. (2.9 kg)
5RK40A-AMULA Weight (Mass): 6.4 lb. (2.9 kg)



Unit = inch (mm)

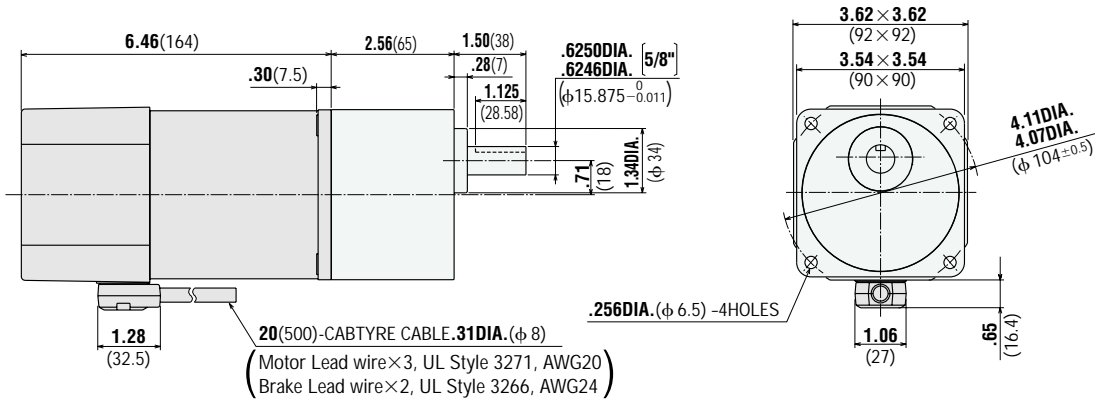
Model	A	B
5RK40A-AWME	.3937DIA. (φ 10 - 0.011)	
5RK40A-CWME	.3933DIA.	.35 (9)
5IK40A-SWM		
5RK40A-AMULA	.3750DIA. [6/16"] (φ 9.525 - 0.011)	.35 (8.825)
	.3746DIA.	

● Motor

5RK60GU-AWMU Weight (Mass): 7.5 lb. (3.4 kg)
5RK60GU-CWME Weight (Mass): 7.5 lb. (3.4 kg)
5IK60GU-SWM Weight (Mass): 7.5 lb. (3.4 kg)
5RK60GU-AMUL Weight (Mass): 7.5 lb. (3.4 kg)

Gearhead

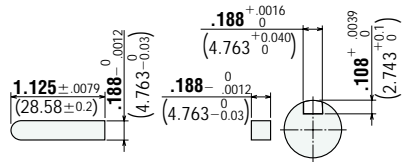
5GU□KA
 Weight (Mass): 3.3 lb. (1.5 kg)



Cable direction can be switched to the opposite direction.

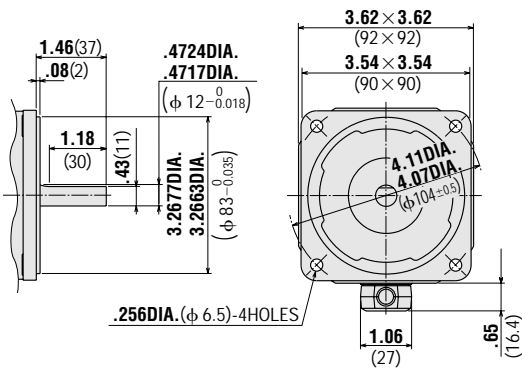
● Key and Key Slot

The key is provided with the gearhead.



● Round Shaft Type

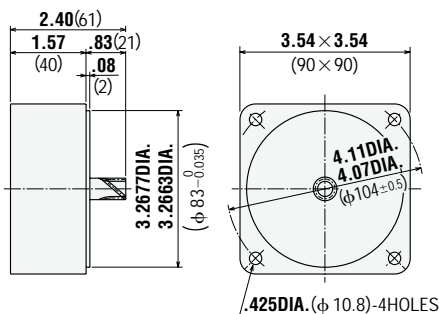
5RK60A-AWMU Weight (Mass): 7.5 lb. (3.4 kg)
5RK60A-CWME Weight (Mass): 7.5 lb. (3.4 kg)
5IK60A-SWM Weight (Mass): 7.5 lb. (3.4 kg)
5RK60A-AMUL Weight (Mass): 7.5 lb. (3.4 kg)



● Decimal Gearheads

5GU10XKB

Weight (Mass): 1.32 lb. (0.6 kg)

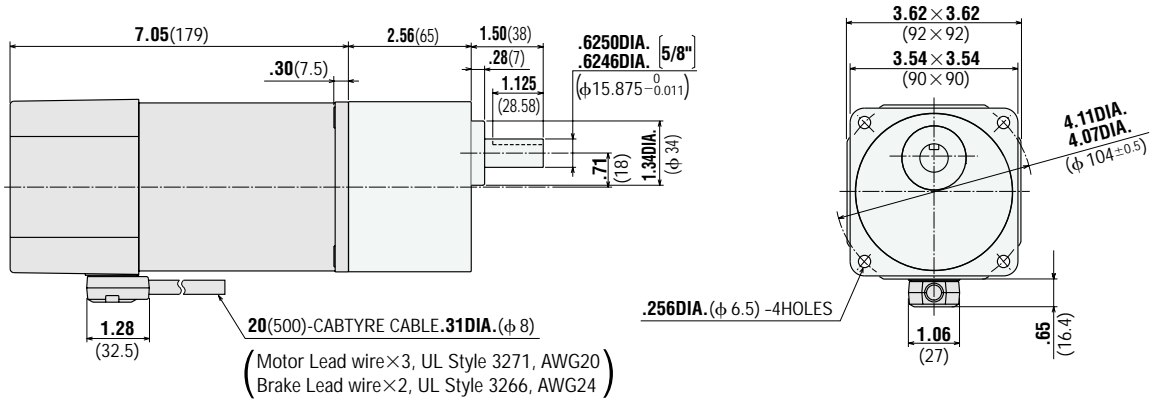


● Motor

- 5RK90GU-AWMU** Weight (Mass): 8.6 lb. (3.9 kg)
- 5RK90GU-CWME** Weight (Mass): 8.6 lb. (3.9 kg)
- 5IK90GU-SWM** Weight (Mass): 8.6 lb. (3.9 kg)
- 5RK90GU-AMUL** Weight (Mass): 8.6 lb. (3.9 kg)

Gearhead

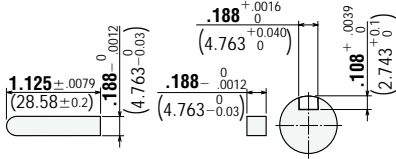
- 5GU□KA** Weight (Mass): 3.3 lb. (1.5 kg)



Cable direction can be switched to the opposite direction.

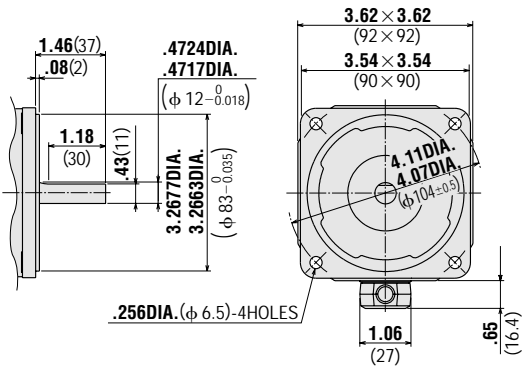
● Key and Key Slot

(provided with the gearhead.)



● Round Shaft Type

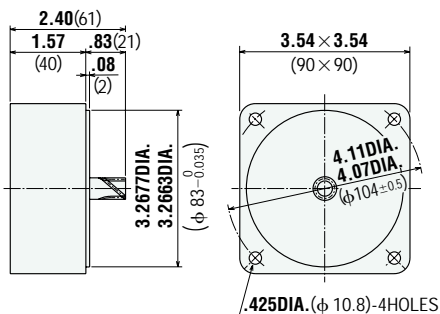
- 5RK90A-AWMU** Weight (Mass): 8.6 lb. (3.9 kg)
- 5RK90A-CWME** Weight (Mass): 8.6 lb. (3.9 kg)
- 5IK90A-SWM** Weight (Mass): 8.6 lb. (3.9 kg)
- 5RK90A-AMUL** Weight (Mass): 8.6 lb. (3.9 kg)



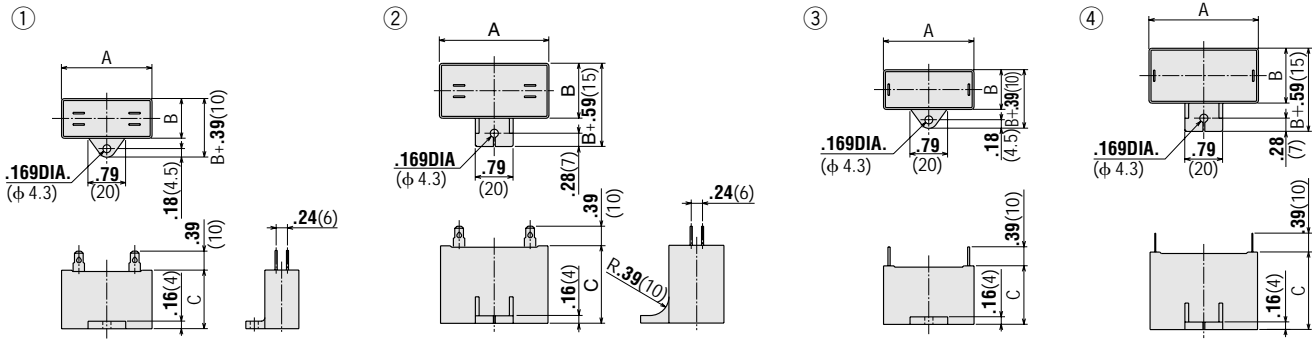
● Decimal Gearheads

5GU10XKB

Weight (Mass): 1.32 lb. (0.6 kg)



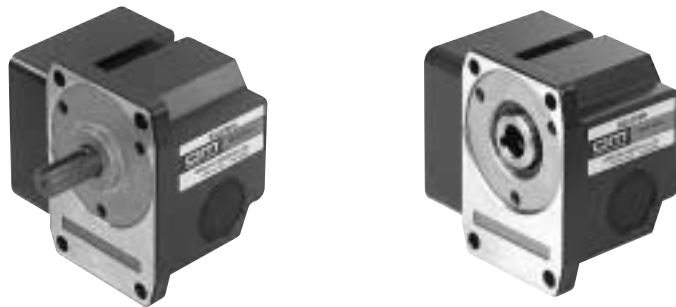
● **Capacitor** (included with the motor)



Motor Model		Capacitor	Dimensions inch (mm)			Weight		No.
Pinion Shaft Type	Round Shaft Type	Model	A	B	C	oz.	(g)	
2RK6GN-AWMU	2RK6A-AWMU	CH35FAUL	1.22 (31)	.67 (17)	1.06 (27)	0.88	25	①
2RK6GN-CWME	2RK6A-CWME	CH08BFAUL	1.22 (31)	.67 (17)	1.06 (27)	0.88	25	①
2RK6GN-AMUL	2RK6A-AMULA	CH23UL	1.22 (31)	.57 (14.5)	.93 (23.5)	0.63	18	③
3RK15GN-AWMU	3RK15A-AWMU	CH60CFAUL	1.50 (38)	.83 (21)	1.22 (31)	1.4	40	①
3RK15GN-AMUL	3RK15A-AMULA	CH45UL	1.46 (37)	.71 (18)	1.06 (27)	0.99	28	③
4RK25GN-AWMU	4RK25A-AWMU	CH80CFAUL	1.89 (48)	.75 (19)	1.14 (29)	1.4	40	①
4RK25GN-CWME	4RK25A-CWME	CH20BFAUL	1.89 (48)	.75 (19)	1.14 (29)	1	35	①
4RK25GN-AMUL	4RK25A-AMULA	CH70UL	1.50 (38)	.83 (21)	1.22 (31)	1.3	37	③
5RK40GN-AWMU	5RK40A-AWMU	CH120CFAUL	2.28 (58)	.83 (21)	1.22 (31)	1.8	50	①
5RK40GN-CWME	5RK40A-CWME	CH35BFAUL	2.28 (58)	.87 (22)	1.38 (35)	1.9	55	①
5RK40GN-AMUL	5RK40A-AMULA	CH120UL	1.89 (48)	.83 (21)	1.22 (31)	1.6	45	③
5RK60GU-AWMU	5RK60A-AWMU	CH200CFAUL	2.28 (58)	1.14 (29)	1.61 (41)	3.4	95	②
5RK60GU-CWME	5RK60A-CWME	CH50BFAUL	2.28 (58)	1.14 (29)	1.61 (41)	3.0	85	②
5RK60GU-AMUL	5RK60A-AMULA	CH200UL	2.28 (58)	.93 (23.5)	1.46 (37)	2.3	65	④
5RK90GU-AWMU	5RK90A-AWMU	CH300CFAUL	2.28 (58)	1.38 (35)	1.97 (50)	4.9	140	②
5RK90GU-CWME	5RK90A-CWME	CH70BFAUL	2.28 (58)	1.38 (35)	1.97 (50)	4.6	130	②
5RK90GU-AMUL	5RK90A-AMUL	CH250UL	2.28 (58)	1.14 (29)	1.61 (41)	3.2	90	④

■ **Right-Angle Gearheads (Sold Separately)**

The right-angle gearhead provides an output shaft that is at a right angle to the motor's output shaft. See page [A-216] for specifications and other information.



■ **Accessories (Sold Separately)**

● **Motor Mounting Brackets**

Optional die-cast aluminum mounting brackets are available. They can be used to install motors without gearheads. See page[A-266] for the dimensions.



● **Flexible Coupling**

Optional clamp-type couplings are available. See page[A-260] for dimensions.

