Standard AC Motors

Constant Speed Motors

Reversible Motors

Features and Types of Reversible Motors

Features of Reversible Motors

Ideal for Bi-Directional Operation

Reversible motors have a 30 minutes rating to permit instantaneous switching rotational direction. A friction brake is equipped at the back of the motor, which makes reversible motors an ideal choice for applications where the rotational direction changes.

- 30 minutes rating: The motors may be operated continuously for 30 minutes, but depending on operating conditions (intermittent operation, etc.), they can be operated for more than 30 minutes.

Easy Operation

All you need is to connect a capacitor and plug the motor into an AC power supply, and the motor can be easily operated.

Extensive Lineup

We have models with an output power range of 1 W (1/750 HP) to 90 W (1/8 HP), so that you can find one that meets your specific application.

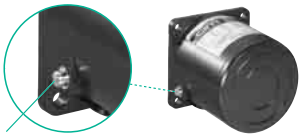
Compatible with Gearheads or Linear Heads

Combination with a gearhead allows the motor to reduce to a required speed or generate higher torque.
Combination with a linear head allows the motor to convert rotation to linear motion with great ease.

RoHS-Compliant

The World **K** Series conforms to the RoHS Directive that prohibits the use of six chemical substances including lead and cadmium.

Types of Reversible Motors

Series	Features, Lineup
World **K** Series	**Conforms to Safety Standards** All World **K** Series models have a built-in overheat protection device and conform to major safety standards. • **Applicable Standards** UL/CSA Standards Certified under the China Compulsory Certification System (CCC System) CE Marking (Low Voltage Directive) • **Motor Overheat Protection Device** Thermal protector, Impedance protected **Global Voltage Specifications** The World **K** Series supports the power supply voltages used in major countries. Motors meeting the local voltage standard are readily available in major countries in Europe, Asia and North America. **The Motor Bearing Life is Twice as Long as a Conventional Type** A motor's life is determined by its bearing. We adopted high-performance bearing grease to lubricate this important component. As a result, the bearings of World **K** Series motors last twice as long as conventional bearings. [Excluding 1 W (1/750 HP) type.] **Protective Earth Terminal on the Motor**  Protective Earth Terminal **Lineup** Frame Size: □42 mm (□1.65 in.)～□90 mm (□3.54 in.) Output Power: Lead Wire Type: 1 W～90 W (1/750 HP～1/8 HP); Terminal Box Type: 25 W～90 W (1/30 HP～1/8 HP) Voltage: Single-Phase 110/115 VAC; Single-Phase 220/230 VAC

Features of Gearheads and Linear Heads

Gearheads: Easy Speed Reduction and Torque Increase

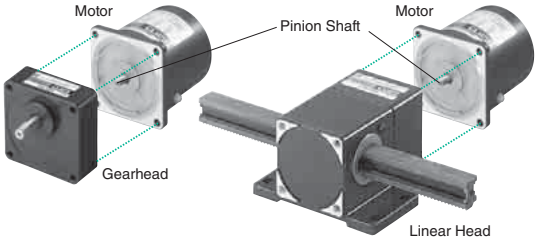
Combination with a gearhead allows the motor to reduce to a required speed or generate higher torque. Gearheads come in various types including the long life, low noise gearhead and right-angle gearhead.

Linear Heads: Convert Motor Rotation to Linear Motion

Combination with a linear head allows the motor to convert rotation to linear motion with great ease. Linear heads are available with a square sectioned rack.

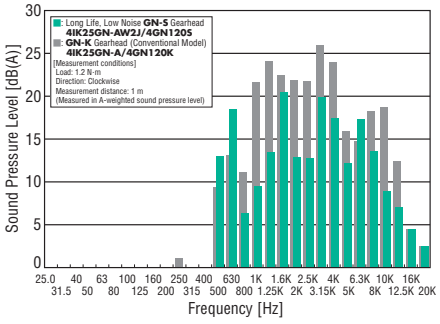
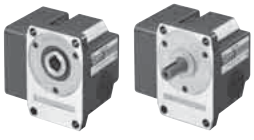
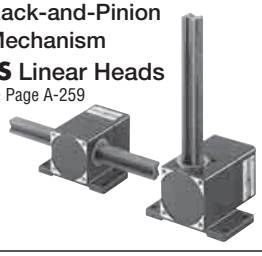
RoHS RoHS-Compliant

Gearheads and linear heads conform to the RoHS Directive that prohibits the use of six chemical substances including lead and cadmium.



- Combine gearheads and linear heads with a pinion shaft type motor.
- Gearheads and linear heads are sold separately.

Types of Gearheads and Linear Heads

Types	Features
Long Life, Low Noise **GN-S Gearhead** 	**Long Rated Life of 10000 Hours** The **GN-S** gearhead achieves a long rated life of 10000 hours, twice the level of a conventional gearhead, by adopting a large, specially designed bearing and reinforced gears. **Low Noise Design** The **GN-S** gearhead generates less noise thanks to gears with a special shape and surface machining assembled with the use of advanced technology. **Applicable Products** 6 W (1/125 HP), 15 W (1/50 HP), 25 W (1/30 HP) or 40 W (1/19 HP) **GN** pinion motor  
Long Life **GE-S Gearhead** 	**Long Rated Life of 10000 Hours** The **GE-S** gearhead achieves a long rated life of 10000 hours, twice the level of a conventional gearhead, by adopting a large, specially designed bearing and reinforced gears. - The **GE-S** gearhead comes with a tapped hole at the tip of the shaft. **Applicable Products** 60 W (1/12 HP) or 90 W (1/8 HP) **GE** pinion motor
Right-Angle Gearhead → Page A-239 	**Ideal Space-Saving Solution** The gear shaft is positioned at right angles with the motor shaft, enabling space-saving. **Applicable Products** 25 W (1/30 HP), 40 W (1/19 HP), 60 W (1/12 HP) or 90 W (1/8 HP) pinion motor **Hollow Shaft and Solid Shaft Types are Available** Select an appropriate type that suits your specific application. - Solid shaft type of **GE** pinion gearhead comes with a tapped hole at the tip of the shaft.
Rack-and-Pinion Mechanism **LS Linear Heads** → Page A-259 	**Easy to Achieve Linear Motion** A rack-and-pinion mechanism is combined with a reduction mechanism, which allows the motor to convert rotation to linear motion with great ease.

Product Line of Reversible Motors RoHS

Series	Voltage (VAC)	Type	Motor Frame Size, Output Power						
			□42 mm (□1.65 in.)	□60 mm (□2.36 in.)	□70 mm (□2.76 in.)	□80 mm (□3.15 in.)	□90 mm (□3.54 in.)		
			1 W (1/750 HP)	6 W (1/125 HP)	15 W (1/50 HP)	25 W (1/30 HP)	40 W (1/19 HP)	60 W (1/12 HP)	90 W (1/8 HP)
World **K** Series	Single-Phase 110/115	Lead Wire	●	●	●	●	●	●	●
		Terminal Box				●	●	●	●
	Single-Phase 220/230	Lead Wire		●	●	●	●	●	●
		Terminal Box				●	●	●	●

Product Line of Gearheads and Linear Heads RoHS

●Gearheads

Gearhead			Applicable Motor			Rated Life (hours)	Low Noise
Type of Gearhead		Type of Pinion	Series	Output Power	Type of Pinion		
Parallel Shaft	Long Life, Low Noise **GN-S** Gearhead	**GN** Type Pinion Shaft	World **K** Series	6 W～40 W (1/125 HP～1/19 HP)	**GN** Type Pinion Shaft	10000	●
	GN-K Gearhead	**GN** Type Pinion Shaft	World **K** Series	1 W～40 W (1/750 HP～1/19 HP)	**GN** Type Pinion Shaft	5000	
	Long Life **GE-S** Gearhead	**GE** Type Pinion Shaft	World **K** Series	60 W, 90 W (1/12 HP, 1/8 HP)	**GE** Type Pinion Shaft	10000	
Right-Angle Shaft	Hollow Shaft Gearhead	**GN** Type Pinion Shaft	World **K** Series	25 W, 40 W (1/30 HP, 1/19 HP)	**GN** Type Pinion Shaft	5000	
		GE Type Pinion Shaft	World **K** Series	60 W, 90 W (1/12 HP, 1/8 HP)	**GE** Type Pinion Shaft	5000	
	Solid Shaft Gearhead	**GN** Type Pinion Shaft	World **K** Series	25 W, 40 W (1/30 HP, 1/19 HP)	**GN** Type Pinion Shaft	5000	
		GE Type Pinion Shaft	World **K** Series	60 W, 90 W (1/12 HP, 1/8 HP)	**GE** Type Pinion Shaft	5000	

●Linear Heads

Type of Linear Head		Applicable Motor		
		Series	Output Power	Type of Pinion
Square Sectioned Rack	**LS** Linear Head	World **K** Series	6 W, 25 W (1/125 HP, 1/30 HP)	**GN** Type Pinion Shaft

System Configuration

Gearheads and Linear Heads (Sold separately)

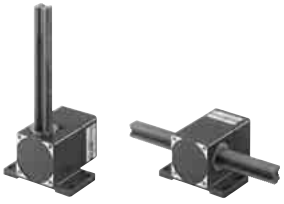
Parallel Shaft Gearheads (➜ Page A-79)

Right-Angle Gearheads (➜ Page A-239)

Hollow Shaft Type

Solid Shaft Type

Linear Heads (➜ Page A-259)



Reversible Motors

Motor
(Pinion Shaft)

Capacitor Cap
(Included)

Capacitor (Included)

AC Power Supply
(Main power supply)

Peripheral Equipment (Sold separately)

①Brake Pack
SB50W
(➜ Page A-277)

Accessories (Sold separately)

②Mounting Brackets
(➜ Page A-288)

③Flexible Couplings
(➜ Page A-292)

④CR Circuit for
Surge Suppression
(➜ Page A-302)

No.	Product Name	Overview	Page
①	Brake Pack	Use this brake pack to stop the motor instantaneously, perform bi-directional operation, and more.	A-277
②	Mounting Brackets	Dedicated mounting bracket for the motor and gearhead.	A-288
③	Flexible Couplings	Clamp type coupling that connects the motor or gearhead shaft to the driven shaft.	A-292
④	CR Circuit for Surge Suppression	Used to protect relay and switch contacts (**EPCR1201-2**).	A-302

●Example of System Configuration

(Sold separately)			(Sold separately)	
Reversible Motor (Pinion shaft)	Long Life, Low Noise Gearhead	+	Mounting Bracket	Flexible Coupling
4RK25GN-AW2U	4GN25SA		SOL4U10	MCL30F06F06

●Both of gearheads and linear heads cannot be combined with round shaft type motors.

● The system configuration shown above is an example. Other combinations are available.

Product Number Code

World K Series

5 R K 40 GN - AW 2 T U

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

①	Motor Frame Size	**0**: 42 mm (1.65 in.) **2**: 60 mm (2.36 in.) **3**: 70 mm (2.76 in.) **4**: 80 mm (3.15 in.) **5**: 90 mm (3.54 in.)
②	Motor Type	**R**: Reversible Motor
③	Series	**K**: **K** Series
④	Output Power (W)	(Example) **40**: 40 W (1/19 HP)
⑤	Motor Shaft Type, Type of Pinion	**A**: Round Shaft **GN**: **GN** Type Pinion Shaft **GE**: **GE** Type Pinion Shaft
⑥	Power Supply Voltage	**AW**: Single-Phase 110/115 VAC **CW**: Single-Phase 220/230 VAC
⑦	**2**, **3**: RoHS-Compliant	
⑧	**T**: Terminal Box Type	
⑨	Included Capacitor	**U**: For Single-Phase 110/115 VAC **E**: For Single-Phase 220/230 VAC

● The **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. ➜ Page G-11
(Example) Model: **5RK40GN-AW2U** ➜ Motor nameplate and product approved under various safety standards: **5RK40GN-AW2**

Gearhead

5 GN 50 SA

① ② ③ ④

①	Gearhead Frame Size	**0**: 42 mm (1.65 in.) **2**: 60 mm (2.36 in.) **3**: 70 mm (2.76 in.) **4**: 80 mm (3.15 in.) **5**: 90 mm (3.54 in.)
②	Type of Pinion	**GN**: **GN** Type Pinion **GE**: **GE** Type Pinion
③	Gear Ratio	(Example) **50**: Gear Ratio of 50:1 **10X** denotes the decimal gearhead of gear ratio 10:1
④	**GN** Type Pinion	**SA**: Long Life, Low Noise **GN-S** Gearhead, RoHS-Compliant **KA**: **GN-K** Gearhead, RoHS-Compliant **RH**: Right-Angle, Hollow Shaft Gearhead, RoHS-Compliant **RAA**: Right-Angle, Solid Shaft Gearhead, RoHS-Compliant
	GE Type Pinion	**SA**: Long Life **GE-S** Gearhead, RoHS-Compliant **RH**: Right-Angle, Hollow Shaft Gearhead, RoHS-Compliant **RAA**: Right-Angle, Solid Shaft Gearhead, RoHS-Compliant

General Specifications

◇1 W (1/750 HP) Type

Item	Specifications
Insulation Resistance	100 MΩ or more when 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.
Dielectric Strength	Sufficient to withstand 1.5 kVAC at 50 Hz or 60 Hz applied between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.
Temperature Rise	Temperature rise of windings are 75°C (135°F) or less measured by the resistance change method after rated operation under normal ambient temperature and humidity with connecting a gearhead or equivalent heat radiation plate*.
Insulation Class	UL/CSA standards: Class A [105°C (221°F)], EN standards: Class E [120°C (248°F)]
Overheat Protection	Impedance protected
Ambient Temperature	−10～+40°C (+14～+104°F) (non-freezing)
Ambient Humidity	85% or less (non-condensing)
Degree of Protection	IP20

◇6 W (1/125 HP)～90 W (1/8 HP) Type

Item	Specifications
Insulation Resistance	100 MΩ or more when 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.
Dielectric Strength	Sufficient to withstand 1.5 kVAC at 50 Hz or 60 Hz applied between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.
Temperature Rise	Temperature rise of windings are 80°C (144°F) or less measured by the resistance change method after rated operation under normal ambient temperature and humidity with connecting a gearhead or equivalent heat radiation plate*. For the 90 W (1/8 HP) type, a heat radiation plate that is 200×200 mm (7.87×7.87 in.) with a thickness of 5 mm (0.20 in.) is necessary even when the gearhead is connected.
Insulation Class	Class B [130°C (266°F)]
Overheat Protection	6 W (1/125 HP) type has impedance protection. All others have built-in thermal protector (automatic return type) Open: 130±5°C (266±9°F), Close: 82±15°C (179.6±27°F)
Ambient Temperature	−10～+40°C (+14～+104°F) (non-freezing)
Ambient Humidity	85% or less (non-condensing)
Degree of Protection	Lead Wire Type: IP20 Terminal Box Type: IP40

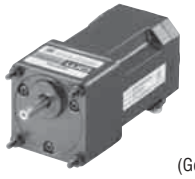
*Heat radiation plate (Material: Aluminum)

Motor Type	Size: mm (in.)	Thickness: mm (in.)
1 W (1/750 HP) Type	80×80 (3.15×3.15)	5 (0.20)
6 W (1/125 HP) Type	115×115 (4.53×4.53)	
15 W (1/50 HP) Type	125×125 (4.92×4.92)	
25 W (1/30 HP) Type	135×135 (5.31×5.31)	
40 W (1/19 HP) Type	165×165 (6.50×6.50)	
60 W (1/12 HP) Type	200×200 (7.87×7.87)	
90 W (1/8 HP) Type	200×200 (7.87×7.87)	10 (0.39)

Reversible Motors

1 W (1/750 HP)

Frame Size: □42 mm (□1.65 in.)



(Gearhead sold separately)

Specifications – 30 Minute Rating RoHS

Model Lead Wire Type		Output Power	Voltage	Frequency	Current	Starting Torque	Rated Torque	Rated Speed	Capacitor
Pinion Shaft Type	Round Shaft Type	W HP	VAC	Hz	A	mN·m oz-in	mN·m oz-in	r/min	μF
ZP **0RK1GN-AW3U**	**0RK1A-AW3U**	1 1/750	Single-Phase 110 Single-Phase 115	60	0.090 0.095	8 1.13	8 1.13	1200	1.2

- Values shown for rated torque and starting torque are measured for operation without the friction brake installed.
- The **U** at the end of the model name indicates that the unit includes a capacitor. This letter is 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. ➜ Page G-11
- Details of safety standards ➜ Page G-2
- Details of RoHS Directive ➜ Page G-38

ZP: Impedance protected

Product Line

Motor RoHS

Type	Model	
	Pinion Shaft Type	Round Shaft Type
Lead Wire	**0RK1GN-AW3U**	**0RK1A-AW3U**

The following items are included in each product.
Motor, Capacitor, Capacitor Cap, Operating Manual

Parallel Shaft Gearhead (Sold separately) RoHS

Gearhead Type		Gearhead Model	Gear Ratio
Parallel Shaft	**GN-K** Gearhead	**0GN□KA**	**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.

The following items are included in each product.
Gearhead, Mounting Screws, Operating Manual

Gearmotor – Torque Table

- Gearheads are sold separately. Decimal gearheads are not available.
- Enter the gear ratio in the box (□) within the gearhead 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 (60 Hz: 1800 r/min) by the gear ratio.
  The actual speed is 2~33% less than the displayed value, depending on the load.

Unit = Upper values: N·m/Lower values: lb-in

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**
0RK1GN-AW3U	**0GN□KA**	0.019 0.168	0.023 0.20	0.032 0.28	0.039 0.34	0.049 0.43	0.058 0.51	0.073 0.64	0.088 0.77	0.11 0.97	0.13 1.15	0.16 1.41	0.19 1.68	0.26 2.3	0.32 2.8	0.35 3.0	0.42 3.7	0.47 4.1	0.57 5.0	0.71 6.2	0.85 7.5

Permissible Overhung Load and Permissible Thrust Load

Motor (Round shaft type) ➜ Page A-16
Gearhead ➜ Page A-16

Permissible Load Inertia J of Gearhead

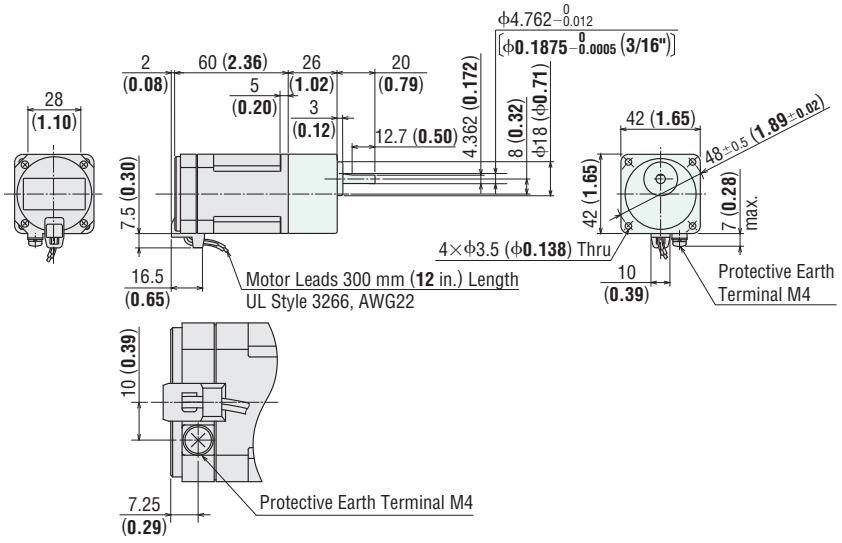
➜ Page A-17

Dimensions Unit = mm (in.)

Mounting screws are included with gearheads. Dimensions for mounting screws ➜ Page A-310

◇Lead Wire Type

Mass: Motor 0.3 kg (0.66 lb.)
Gearhead 0.2 kg (0.44 lb.)
DXF A441U

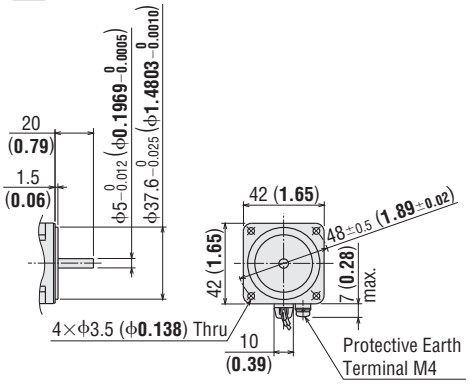


Detail Drawing of Protective Earth Terminal

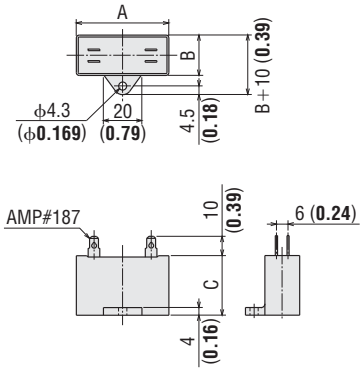
◇Shaft Section of Round Shaft Type

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

Mass: 0.3 kg (0.66 lb.)
DXF A442



◇Capacitor (Included)

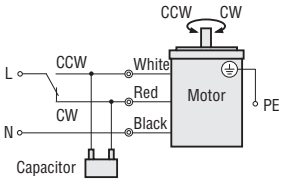


◇Capacitor Dimensions Unit = mm (in.)

Model		Capacitor Model	A	B	C	Mass g (oz.)	Capacitor Cap
Pinion Shaft Type	Round Shaft Type						
0RK1GN-AW3U	**0RK1A-AW3U**	CH12FAUL	31 (1.22)	14.5 (0.57)	23.5 (0.93)	18 (0.64)	Included

Connection Diagram

- 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.

0RK1GN-AW3U	 **Clockwise:** To rotate the motor in a clockwise (CW) direction, turn the switch to CW. **Counterclockwise:** To rotate the motor in a counterclockwise (CCW) direction, turn the switch to CCW.

PE: Protective Earth

Note:

- Connect a CR circuit for surge suppression to the forward/reverse select switch to protect the contact. Connecting CR circuit for surge suppression, contact capacity ➜ Page A-315
  EPCR1201-2 (CR circuit) is available as an accessory. ➜ Page A-302

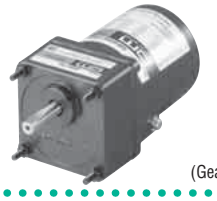
- How to connect a capacitor ➜ Page A-313

Accessories and Peripheral Equipment

Instantaneous Stop Brake Pack
➜Page A-277

Accessories
➜Page A-287

Reversible Motors
6 W (1/125 HP)
Frame Size: □60 mm (□2.36 in.)



(Gearhead sold separately)

Specifications – 30 Minute Rating RoHS

Model Lead Wire Type		Output Power	Voltage	Frequency	Current	Starting Torque	Rated Torque	Rated Speed	Capacitor
Pinion Shaft Type	Round Shaft Type	W HP	VAC	Hz	A	mN·m oz-in	mN·m oz-in	r/min	μF
ZP 2RK6GN-AW2U	2RK6A-AW2U	6 1/125	Single-Phase 110	60	0.251	45 6.3	41 5.8	1450	3.5
			Single-Phase 115		0.256				
ZP 2RK6GN-CW2E	2RK6A-CW2E	6 1/125	Single-Phase 220	50	0.113	45 6.3	49 6.9	1150	0.8
				60	0.117		41 5.8	1450	
			Single-Phase 230	50	0.117	50 7.1	49 6.9	1200	
				60	0.120	45 6.3	41 5.8	1450	

- Values shown for rated torque and starting torque are measured for operation without the friction brake installed.
- The **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. ➜ Page G-11
- Details of safety standards ➜ Page G-2
- Details of RoHS Directive ➜ Page G-38

ZP: Impedance protected

Product Line

Motor RoHS

Type	Model	
	Pinion Shaft Type	Round Shaft Type
Lead Wire	2RK6GN-AW2U	2RK6A-AW2U
	2RK6GN-CW2E	2RK6A-CW2E

The following items are included in each product.
Motor, Capacitor, Capacitor Cap, Operating Manual

Parallel Shaft Gearhead (Sold separately) RoHS

Gearhead Type		Gearhead Model	Gear Ratio
Parallel Shaft	Long Life, Low Noise **GN-S** Gearhead	**2GN□SA**	**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.

The following items are included in each product.
Gearhead, Mounting Screws, Operating Manual

- Following gearheads are also available. For details, please refer to website (http://www.orientalmotor.com/) or contact the nearest Oriental Motor sales office.

Gearhead Type		Gearhead Model	Gear Ratio
Parallel Shaft	RoHS **GN-K** Gearhead	**2GN□KA**	**3**~**180**
		2GN10XK (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 gearhead 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 load.
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio 10:1) between the gearhead and the motor. In that case, the permissible torque is 3 N·m (26 lb-in).

◇50 Hz

Unit = Upper values: N·m/Lower values: lb-in

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-CW2E	**2GN□SA**	0.12 1.06	0.14 1.23	0.20 1.77	0.24 2.1	0.30 2.6	0.36 3.1	0.50 4.4	0.60 5.3	0.71 6.2	0.89 7.8	1.1 9.7	1.3 11.5	1.6 14.1	1.9 16.8	2.4 21	2.9 25	3 26	3 26	3 26	3 26

◇60 Hz

Unit = Upper values: N·m/Lower values: lb-in

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-AW2U **2RK6GN-CW2E**	**2GN□SA**	0.10 0.88	0.12 1.06	0.17 1.50	0.20 1.77	0.25 2.2	0.30 2.6	0.42 3.7	0.50 4.4	0.60 5.3	0.75 6.6	0.90 7.9	1.1 9.7	1.4 12.3	1.6 14.1	2.0 17.7	2.4 21	2.7 23	3 26	3 26	3 26

Permissible Overhung Load and Permissible Thrust Load

Motor (Round shaft type) ➜ Page A-16
Gearhead ➜ Page A-16

Permissible Load Inertia J of Gearhead

➜ Page A-17

Dimensions Unit = mm (in.)

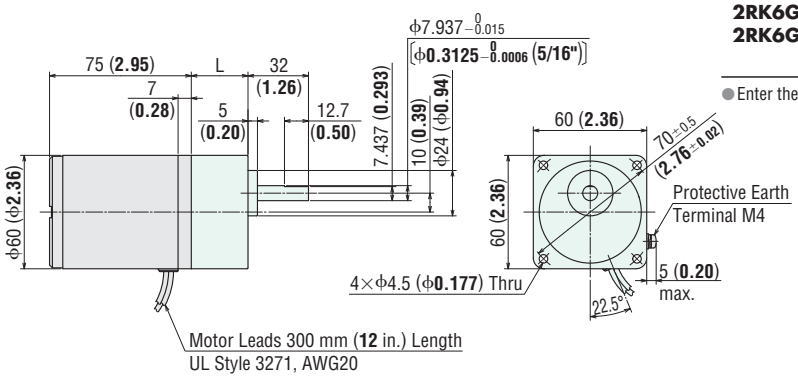
Mounting screws are included with gearheads. Dimensions for mounting screws ➜ Page A-310

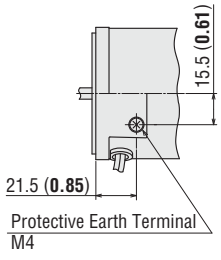
◇Lead Wire Type

Mass: Motor 0.7 kg (1.54 lb.)
Gearhead 0.4 kg (0.88 lb.)

Motor Model	Gearhead Model	Gear Ratio	L	DXF
2RK6GN-AW2U **2RK6GN-CW2E**	**2GN□SA**	**3**~**18**	30 (1.18)	A443AU
		25~**180**	40 (1.57)	A443BU

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





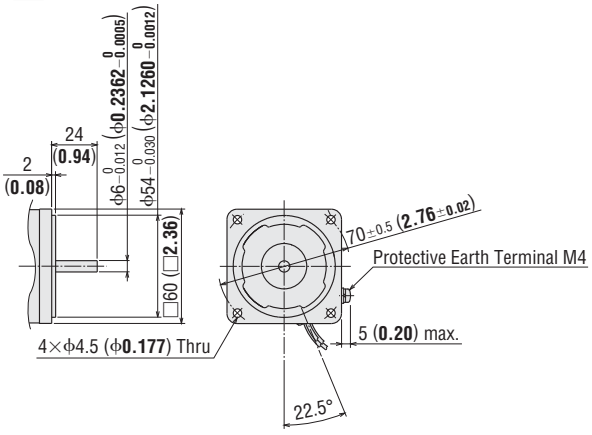
Detail Drawing of Protective Earth Terminal

◇Shaft Section of Round Shaft Type

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

Mass: 0.7 kg (1.54 lb.)

DXF A444



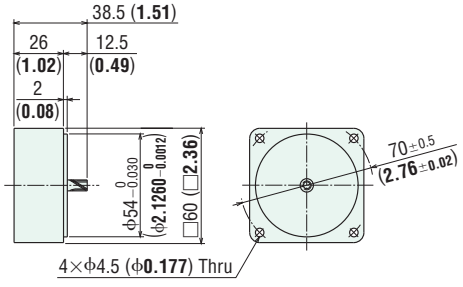
◇Decimal Gearhead

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

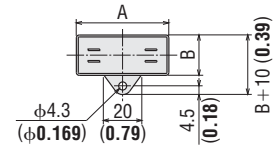
2GN10XS

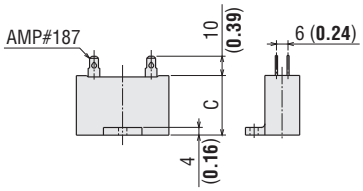
Mass: 0.2 kg (0.44 lb.)

DXF A003



◇Capacitor (Included)





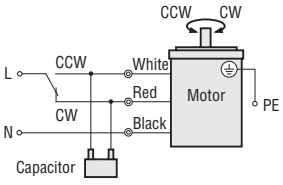
◇Capacitor Dimensions Unit = mm (in.)

Model		Capacitor Model	A	B	C	Mass g (oz.)	Capacitor Cap
Pinion Shaft Type	Round Shaft Type						
2RK6GN-AW2U	**2RK6A-AW2U**	CH35FAUL2	31 (1.22)	17 (0.67)	27 (1.06)	22 (0.78)	Included
2RK6GN-CW2E	**2RK6A-CW2E**	CH08BFAUL	31 (1.22)	17 (0.67)	27 (1.06)	23 (0.81)	

Connection Diagram

- 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.

2RK6GN-AW2U
2RK6GN-CW2E



Clockwise
To rotate the motor in a clockwise (CW) direction, turn the switch to CW.
Counterclockwise
To rotate the motor in a counterclockwise (CCW) direction, turn the switch to CCW.

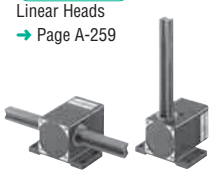
PE: Protective Earth

Note:

- Connect a CR circuit for surge suppression to the forward/reverse select switch to protect the contact. Connecting CR circuit for surge suppression, contact capacity ➜ Page A-315
  EPCR1201-2 (CR circuit) is available as an accessory. ➜ Page A-302
- How to connect a capacitor ➜ Page A-313

Linear Head, Accessories and Peripheral Equipment

Linear Motion
Linear Heads
➜ Page A-259



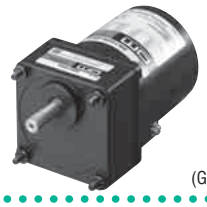
Instantaneous Stop
Brake Pack
➜ Page A-277

Accessories
➜ Page A-287

Reversible Motors

15 W (1/50 HP)

Frame Size: □70 mm (□2.76 in.)



(Gearhead sold separately)

Specifications – 30 Minute Rating RoHS

Model Lead Wire Type		Output Power	Voltage	Frequency	Current	Starting Torque	Rated Torque	Rated Speed	Capacitor
Pinion Shaft Type	Round Shaft Type	W HP	VAC	Hz	A	mN·m oz-in	mN·m oz-in	r/min	μF
(TP) 3RK15GN-AW2U	3RK15A-AW2U	15 1/50	Single-Phase 110	60	0.41	100 14.2	105 14.9	1450	6.0
			Single-Phase 115		0.41				
(TP) 3RK15GN-CW2E	3RK15A-CW2E	15 1/50	Single-Phase 220	50	0.20	100 14.2	125 17.7	1200	1.5
				60	0.21		105 14.9	1450	
			Single-Phase 230	50	0.20		125 17.7	1200	
				60	0.21		105 14.9	1450	

- Values shown for rated torque and starting torque are measured for operation without the friction brake installed.
- The **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. ➜ Page G-11
- Details of safety standards ➜ Page G-2
- Details of RoHS Directive ➜ Page G-38

(TP): Contains a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped. When the motor temperature drops, the thermal protector closes and the motor restarts. Be sure to turn the motor power off before inspecting.

Product Line

Motor RoHS

Type	Model	
	Pinion Shaft Type	Round Shaft Type
Lead Wire	3RK15GN-AW2U	3RK15A-AW2U
	3RK15GN-CW2E	3RK15A-CW2E

The following items are included in each product.
Motor, Capacitor, Capacitor Cap, Operating Manual

Parallel Shaft Gearhead (Sold separately) RoHS

Gearhead Type		Gearhead Model	Gear Ratio
Parallel Shaft	Long Life, Low Noise **GN-S** Gearhead	**3GN□SA**	**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.

The following items are included in each product.
Gearhead, Mounting Screws, Operating Manual

- Following gearheads are also available. For details, please refer to website (http://www.orientalmotor.com/) or contact the nearest Oriental Motor sales office.

Gearhead Type		Gearhead Model	Gear Ratio
Parallel Shaft	RoHS **GN-K** Gearhead	**3GN□KA**	**3**~**180**
		3GN10XK (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 gearhead 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 load.
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio 10:1) between the gearhead and the motor. In that case, the permissible torque is 5 N·m (44 lb-in).

◇50 Hz

Unit = Upper values: N·m/Lower values: lb-in

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**
3RK15GN-CW2E / **3GN□SA**		0.30 2.6	0.36 3.1	0.51 4.5	0.61 5.3	0.76 6.7	0.91 8.0	1.3 11.5	1.5 13.2	1.8 15.9	2.3 20	2.7 23	3.3 29	4.1 36	5 44	5 44	5 44	5 44	5 44	5 44	5 44

◇60 Hz

Unit = Upper values: N·m/Lower values: lb-in

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**
3RK15GN-AW2U **3RK15GN-CW2E**	**3GN□SA**	0.26 2.3	0.31 2.7	0.43 3.8	0.51 4.5	0.64 5.6	0.77 6.8	1.1 9.7	1.3 11.5	1.5 13.2	1.9 16.8	2.3 20	2.8 24	3.5 30	4.2 37	5 44	5 44	5 44	5 44	5 44	5 44

Permissible Overhung Load and Permissible Thrust Load

Motor (Round shaft type) ➜ Page A-16
Gearhead ➜ Page A-16

Permissible Load Inertia J of Gearhead

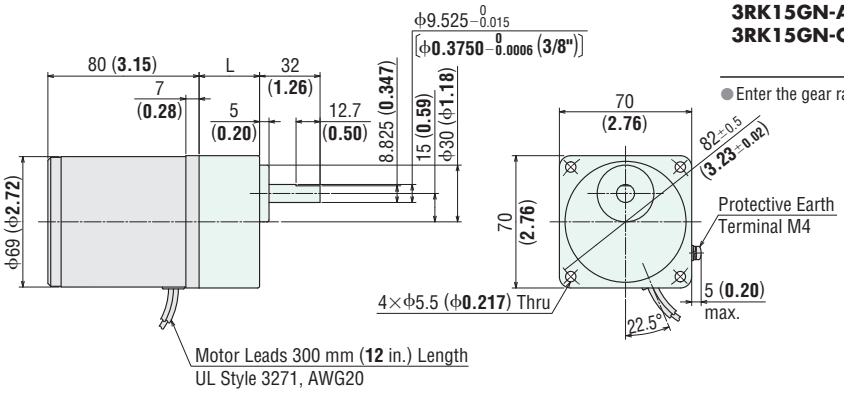
➜ Page A-17

Dimensions Unit = mm (in.)

Mounting screws are included with gearheads. Dimensions for mounting screws ➜ Page A-310

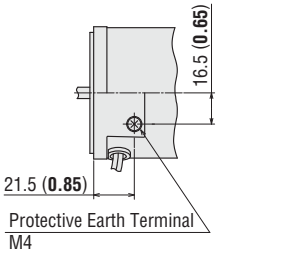
◇Lead Wire Type

Mass: Motor 1.1 kg (2.4 lb.)
Gearhead 0.55 kg (1.21 lb.)



Motor Model	Gearhead Model	Gear Ratio	L	DXF
3RK15GN-AW2U **3RK15GN-CW2E**	**3GN□SA**	**3~18**	32 (1.26)	A447AU
		25~180	42 (1.65)	A447BU

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



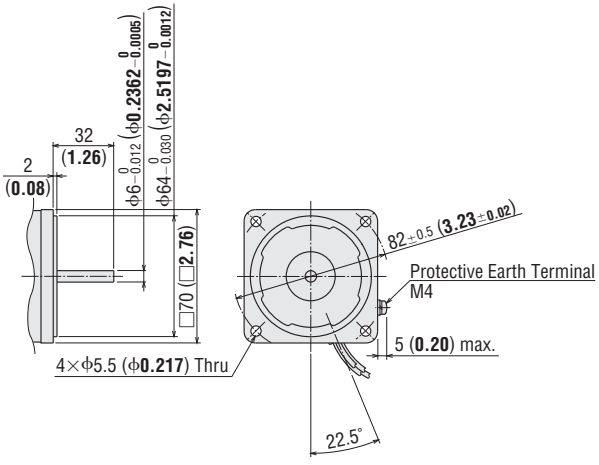
Detail Drawing of Protective Earth Terminal

◇Shaft Section of Round Shaft Type

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

Mass: 1.1 kg (2.4 lb.)

DXF A448



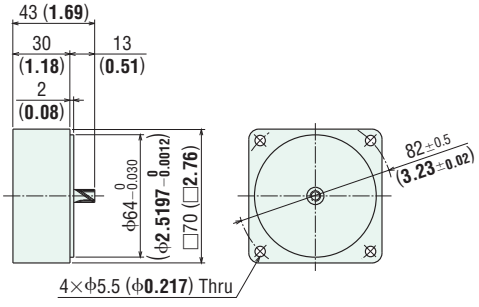
◇Decimal Gearhead

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

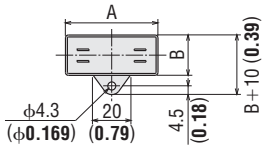
3GN10XS

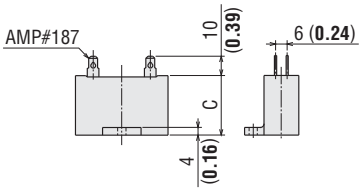
Mass: 0.3 kg (0.66 lb.)

DXF A009



◇Capacitor (Included)





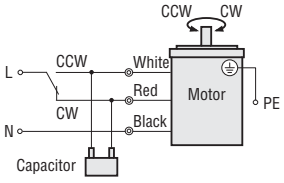
◇Capacitor Dimensions Unit = mm (in.)

Model		Capacitor Model	A	B	C	Mass g (oz.)	Capacitor Cap
Pinion Shaft Type	Round Shaft Type						
3RK15GN-AW2U	**3RK15A-AW2U**	CH60CFAUL2	38 (1.50)	21 (0.83)	31 (1.22)	35 (1.24)	Included
3RK15GN-CW2E	**3RK15A-CW2E**	CH15BFAUL	38 (1.50)	21 (0.83)	31 (1.22)	37 (1.31)	

Connection Diagram

- 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.

3RK15GN-AW2U
3RK15GN-CW2E



Clockwise:
To rotate the motor in a clockwise (CW) direction, turn the switch to CW.
Counterclockwise:
To rotate the motor in a counterclockwise (CCW) direction, turn the switch to CCW.

PE: Protective Earth

Note:

- Connect a CR circuit for surge suppression to the forward/reverse select switch to protect the contact. Connecting CR circuit for surge suppression, contact capacity ➜ Page A-315
  EPCR1201-2 (CR circuit) is available as an accessory. ➜ Page A-302
- How to connect a capacitor ➜ Page A-313

Accessories and Peripheral Equipment

Instantaneous Stop Brake Pack
➜Page A-277

Accessories
➜Page A-287

Reversible Motors
25 W (1/30 HP)
Frame Size: □80 mm (□3.15 in.)


Lead Wire Type


Terminal Box Type

(Gearhead sold separately)

Specifications – 30 Minute Rating RoHS

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 HP	VAC	Hz	A	mN·m oz-in	mN·m oz-in	r/min	μF
TP **4RK25GN-AW2U** (**4RK25A-AW2U**)	**4RK25GN-AW2TU** (**4RK25A-AW2TU**)	25 1/30	Single-Phase 110 Single-Phase 115	60	0.56	140 19.8	170 24	1450	8.0
TP **4RK25GN-CW2E** (**4RK25A-CW2E**)	**4RK25GN-CW2TE** (**4RK25A-CW2TE**)	25 1/30	Single-Phase 220	50	0.29	140 19.8	205 29	1200	2.5
				60	0.35		170 24	1450	
			Single-Phase 230	50	0.30	160 22	205 29	1200	
				60	0.35	140 19.8	170 24	1450	

- Values shown for rated torque and starting torque are measured for operation without the friction brake installed.
- The **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. ➜ Page G-11
- Details of safety standards ➜ Page G-2
- Details of RoHS Directive ➜ Page G-38

TP: Contains a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped. When the motor temperature drops, the thermal protector closes and the motor restarts. Be sure to turn the motor power off before inspecting.

Product Line

Motor RoHS

Type	Model	
	Pinion Shaft Type	Round Shaft Type
Lead Wire	**4RK25GN-AW2U**	**4RK25A-AW2U**
	4RK25GN-CW2E	**4RK25A-CW2E**
Terminal Box	**4RK25GN-AW2TU**	**4RK25A-AW2TU**
	4RK25GN-CW2TE	**4RK25A-CW2TE**

The following items are included in each product.
Motor, Capacitor, Capacitor Cap, Operating Manual

Parallel Shaft Gearhead/Right-Angle Gearhead (Sold separately) RoHS

Gearhead Type		Gearhead Model	Gear Ratio
Parallel Shaft	Long Life, Low Noise **GN-S** Gearhead	**4GN□SA**	**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 Shaft	Hollow Shaft	**4GN□RH**	
	Solid Shaft	**4GN□RAA**	
Parallel Shaft	Long Life, Low Noise **GN-S** Gearhead	**4GN10XS** (Decimal Gearhead)	

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

The following items are included in each product.
- Parallel Shaft Gearhead
  Gearhead, Mounting Screws, Operating Manual
- Hollow Shaft Gearhead
  Gearhead, Mounting Screws, Parallel Key, Safety Cover (with screws), Gasket, Operating Manual
- Solid Shaft Gearhead
  Gearhead, Mounting Screws, Gasket, Operating Manual

- Following gearheads are also available. For details, please refer to website (http://www.orientalmotor.com/) or contact the nearest Oriental Motor sales office.

Gearhead Type		Gearhead Model	Gear Ratio
Parallel Shaft	RoHS **GN-K** Gearhead	**4GN□KA**	**3**~**180**
		4GN10XK (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 code that represents the terminal box type "**T**" in the box (□) within the motor model name.
- Enter the gear ratio in the box (□) within the gearhead 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 load.
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio 10:1) between the gearhead and the motor. In that case, the permissible torque is 8 N·m (70 lb-in). When a gearhead of 25:1~36:1 is connected, the value for permissible torque is 6 N·m (53 lb-in).

◇50 Hz

Unit = Upper values: N·m/Lower values: lb-in

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**
4RK25GN-CW2□E	**4GN□SA**	0.50 4.4	0.60 5.3	0.83 7.3	1.0 8.8	1.2 10.6	1.5 13.2	2.1 18.5	2.5 22	3.0 26	3.7 32	4.5 39	5.4 47	6.8 60	8 70	8 70	8 70	8 70	8 70	8 70	8 70

◇60 Hz

Unit = Upper values: N·m/Lower values: lb-in

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**
4RK25GN-AW2□U **4RK25GN-CW2□E**	**4GN□SA**	0.41 3.6	0.50 4.4	0.69 6.1	0.83 7.3	1.0 8.8	1.2 10.6	1.7 15.0	2.1 18.5	2.5 22	3.1 27	3.7 32	4.5 39	5.6 49	6.7 59	8 70	8 70	8 70	8 70	8 70	8 70

Gearmotor – Torque Table When Right-Angle Gearhead is Attached

➜ Page A-249

Permissible Overhung Load and Permissible Thrust Load

Motor (Round shaft type) ➜ Page A-16
Gearhead ➜ Page A-16

Permissible Load Inertia J of Gearhead

➜ Page A-17

Dimensions Unit = mm (in.)

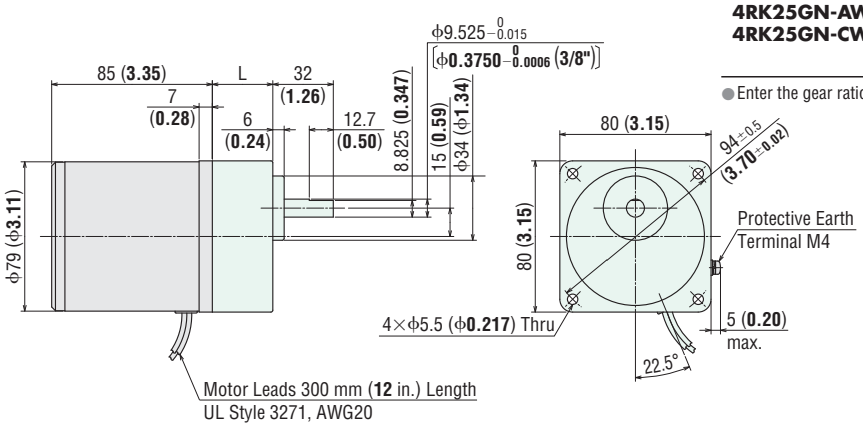
Mounting screws are included with gearheads. Dimensions for mounting screws ➜ Page A-310

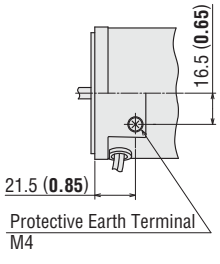
◇Lead Wire Type ①

Mass: Motor 1.5 kg (3.3 lb.)
Gearhead 0.65 kg (1.43 lb.)

Motor Model	Gearhead Model	Gear Ratio	L	DXF
4RK25GN-AW2U **4RK25GN-CW2E**	**4GN□SA**	**3~18**	32 (1.26)	A449AU
		25~180	42.5 (1.67)	A449BU

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





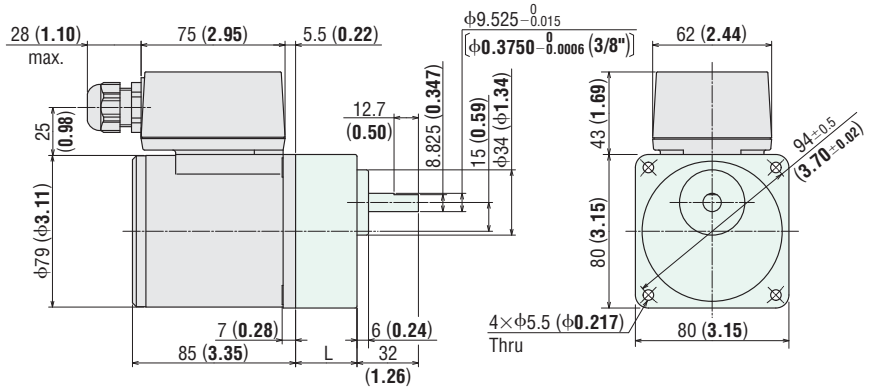
Detail Drawing of Protective Earth Terminal

◇Terminal Box Type ②

Mass: Motor 1.7 kg (3.7 lb.)
Gearhead 0.65 kg (1.43 lb.)

Motor Model	Gearhead Model	Gear Ratio	L	DXF
4RK25GN-AW2TU **4RK25GN-CW2TE**	**4GN□SA**	**3**～**18**	32 (1.26)	A451AU
		25～**180**	42.5 (1.67)	A451BU

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



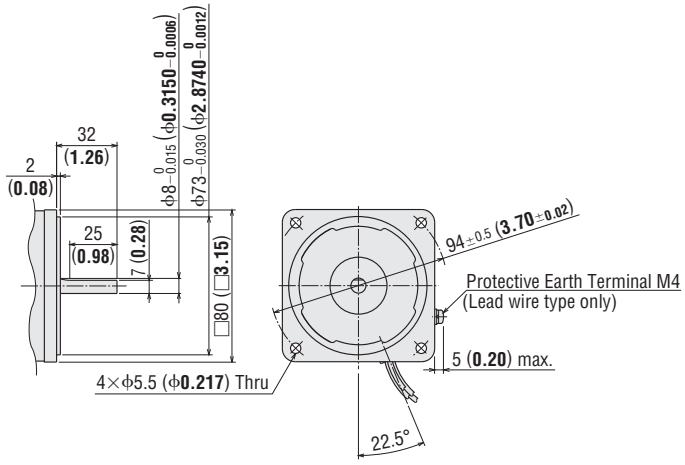
● Use cable with a diameter of ϕ6 ～ ϕ12 mm (ϕ0.24 ～ ϕ0.47 in.).
● Details of terminal box ➜ Page A-314

◇Shaft Section of Round Shaft Type

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

Mass: 1.5 kg (3.3 lb.) (Lead Wire Type)
1.7 kg (3.7 lb.) (Terminal Box Type)

DXF A450 (Lead Wire Type)
A328 (Terminal Box Type)



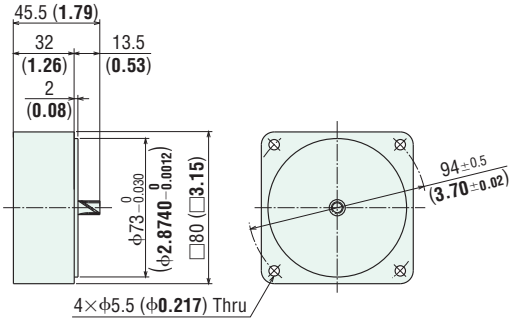
◇Decimal Gearhead

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

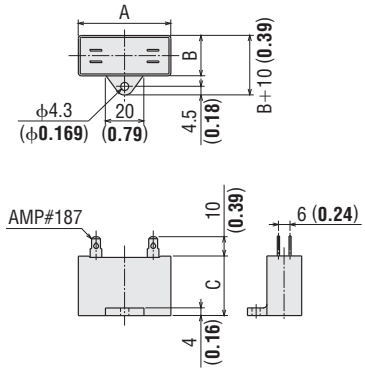
4GN10XS

Mass: 0.4 kg (0.88 lb.)

DXF A013



◇Capacitor (Included)

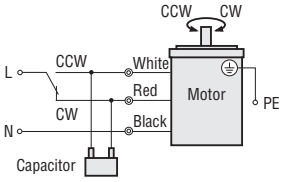
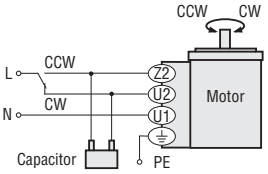


◇Capacitor Dimensions Unit = mm (in.)

Model Upper Model Name: Pinion Shaft Type Lower Model Name ( ): Round Shaft Type		Capacitor Model	A	B	C	Mass g (oz.)	Capacitor Cap
Lead Wire Type	Terminal Box Type						
4RK25GN-AW2U (**4RK25A-AW2U**)	**4RK25GN-AW2TU** (**4RK25A-AW2TU**)	CH80CFAUL2	48 (1.89)	21 (0.83)	31 (1.22)	41 (1.45)	Included
4RK25GN-CW2E (**4RK25A-CW2E**)	**4RK25GN-CW2TE** (**4RK25A-CW2TE**)	CH25BFAUL	48 (1.89)	21 (0.83)	31 (1.22)	42 (1.48)	

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.

Lead Wire Type	Terminal Box Type
4RK25GN-AW2U **4RK25GN-CW2E**	**4RK25GN-AW2TU** **4RK25GN-CW2TE**
	
Clockwise To rotate the motor in a clockwise (CW) direction, turn the switch to CW. **Counterclockwise** To rotate the motor in a counterclockwise (CCW) direction, turn the switch to CCW.	**Clockwise** To rotate the motor in a clockwise (CW) direction, turn the switch to CW. **Counterclockwise** To rotate the motor in a counterclockwise (CCW) direction, turn the switch to CCW.

PE: Protective Earth

Note:

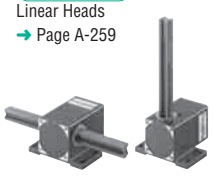
- Connect a CR circuit for surge suppression to the forward/reverse select switch to protect the contact. Connecting CR circuit for surge suppression, contact capacity ➜ Page A-315
  EPCR1201-2 (CR circuit) is available as an accessory. ➜ Page A-302

- How to connect a capacitor ➜ Page A-313

Gearhead, Linear Head, Accessories and Peripheral Equipment

Space-Saving
Right-Angle Gearheads
➜ Page A-239

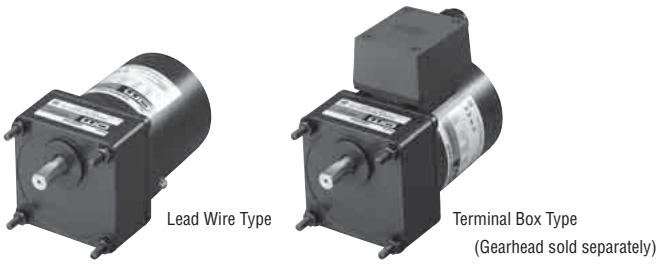
Linear Motion
Linear Heads
➜ Page A-259



Instantaneous Stop
Brake Pack
➜ Page A-277

Accessories
➜ Page A-287

Reversible Motors
40 W (1/19 HP)
Frame Size: □90 mm (□3.54 in.)


Lead Wire Type

Terminal Box Type
(Gearhead sold separately)

Specifications – 30 Minute Rating RoHS

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 HP	VAC	Hz	A	mN·m oz-in	mN·m oz-in	r/min	μF
TP **5RK40GN-AW2U** (**5RK40A-AW2U**)	**5RK40GN-AW2TU** (**5RK40A-AW2TU**)	40 1/19	Single-Phase 110	60	0.88	260 36	270 38	1450	12
			Single-Phase 115		0.87				
TP **5RK40GN-CW2E** (**5RK40A-CW2E**)	**5RK40GN-CW2TE** (**5RK40A-CW2TE**)	40 1/19	Single-Phase 220	50	0.43	270 38	315 44	1250	3.5
				60	0.48	260 36	260 36	1500	
			Single-Phase 230	50	0.43	270 38	315 44	1250	
				60	0.48	260 36	260 36	1500	

- Values shown for rated torque and starting torque are measured for operation without the friction brake installed.
- The **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. ➜ Page G-11
- Details of safety standards ➜ Page G-2
- Details of RoHS Directive ➜ Page G-38

TP: Contains a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped. When the motor temperature drops, the thermal protector closes and the motor restarts. Be sure to turn the motor power off before inspecting.

Product Line

Motor RoHS

Type	Model	
	Pinion Shaft Type	Round Shaft Type
Lead Wire	**5RK40GN-AW2U**	**5RK40A-AW2U**
	5RK40GN-CW2E	**5RK40A-CW2E**
Terminal Box	**5RK40GN-AW2TU**	**5RK40A-AW2TU**
	5RK40GN-CW2TE	**5RK40A-CW2TE**

The following items are included in each product.
Motor, Capacitor, Capacitor Cap, Operating Manual

Parallel Shaft Gearhead/Right-Angle Gearhead (Sold separately) RoHS

Gearhead Type		Gearhead Model	Gear Ratio
Parallel Shaft	Long Life, Low Noise **GN-S** Gearhead	**5GN□SA**	**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 Shaft	Hollow Shaft	**5GN□RH**	
	Solid Shaft	**5GN□RAA**	
Parallel Shaft	Long Life, Low Noise **GN-S** Gearhead	**5GN10XS** (Decimal Gearhead)	

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

The following items are included in each product.
- Parallel Shaft Gearhead
  Gearhead, Mounting Screws, Operating Manual
- Hollow Shaft Gearhead
  Gearhead, Mounting Screws, Parallel Key, Safety Cover (with screws), Gasket, Operating Manual
- Solid Shaft Gearhead
  Gearhead, Mounting Screws, Gasket, Operating Manual

- Following gearheads are also available. For details, please refer to website (http://www.orientalmotor.com/) or contact the nearest Oriental Motor sales office.

Gearhead Type		Gearhead Model	Gear Ratio
Parallel Shaft	RoHS **GN-K** Gearhead	**5GN□KA**	**3**~**180**
		5GN10XK (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 code that represents the terminal box type "**T**" in the box (□) within the motor model name.
- Enter the gear ratio in the box (□) within the gearhead 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 load.
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio 10:1) between the gearhead and the motor. In that case, the permissible torque is 10 N·m (88 lb-in).

◇50 Hz

Unit = Upper values: N·m/Lower values: lb-in

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-CW2□E	**5GN□SA**	0.77 6.8	0.92 8.1	1.3 11.5	1.5 13.2	1.9 16.8	2.3 20	3.2 28	3.8 33	4.6 40	5.7 50	6.9 61	8.3 73	10 88	10 88	10 88	10 88	10 88	10 88	10 88	10 88

◇60 Hz

Unit = Upper values: N·m/Lower values: lb-in

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-AW2□U	**5GN□SA**	0.66 5.8	0.79 6.9	1.1 9.7	1.3 11.5	1.6 14.1	2.0 17.7	2.7 23	3.3 29	3.9 34	4.9 43	5.9 52	7.1 62	8.9 78	10 88	10 88	10 88	10 88	10 88	10 88	10 88
5RK40GN-CW2□E	**5GN□SA**	0.63 5.5	0.76 6.7	1.1 9.7	1.3 11.5	1.6 14.1	1.9 16.8	2.6 23	3.2 28	3.8 33	4.7 41	5.7 50	6.8 60	8.6 76	10 88	10 88	10 88	10 88	10 88	10 88	10 88

Gearmotor – Torque Table When Right-Angle Gearhead is Attached

➜ Page A-249

Permissible Overhung Load and Permissible Thrust Load

Motor (Round shaft type) ➜ Page A-16
Gearhead ➜ Page A-16

Permissible Load Inertia J of Gearhead

➜ Page A-17

Dimensions Unit = mm (in.)

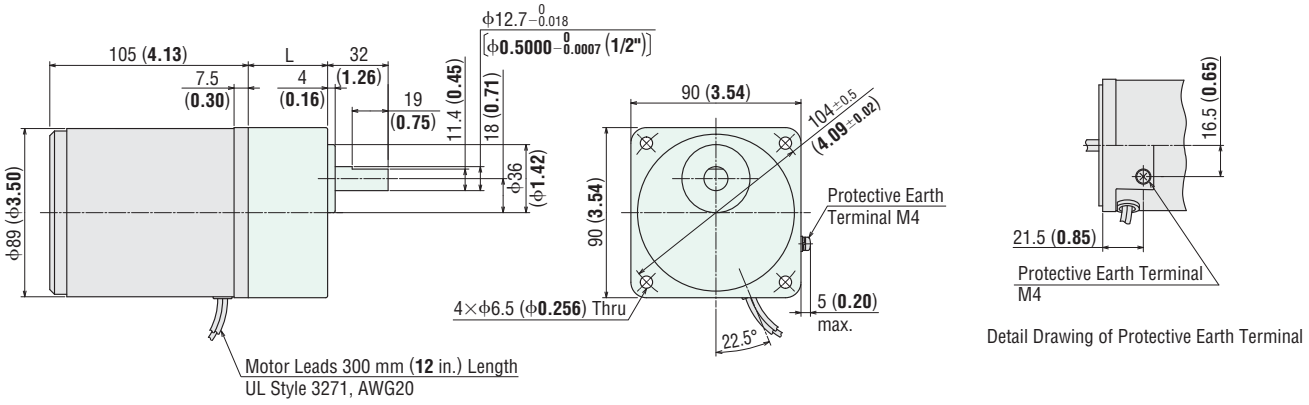
Mounting screws are included with gearheads. Dimensions for mounting screws ➜ Page A-310

◇Lead Wire Type ①

Mass: Motor 2.5 kg (5.5 lb.)
Gearhead 1.5 kg (3.3 lb.)

Motor Model	Gearhead Model	Gear Ratio	L	DXF
5RK40GN-AW2U **5RK40GN-CW2E**	**5GN□SA**	**3~18**	42 (1.65)	A452AU
		25~180	60 (2.36)	A452BU

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



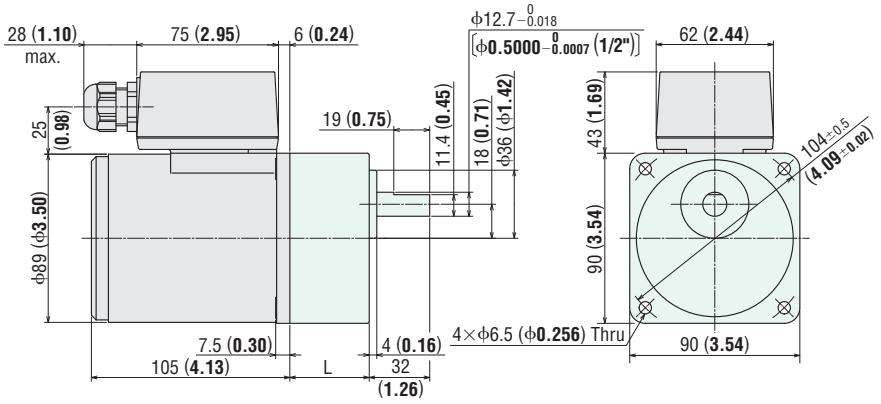
Detail Drawing of Protective Earth Terminal

◇Terminal Box Type ②

Mass: Motor 2.6 kg (5.7 lb.)
Gearhead 1.5 kg (3.3 lb.)

Motor Model	Gearhead Model	Gear Ratio	L	DXF
5RK40GN-AW2TU **5RK40GN-CW2TE**	**5GN□SA**	**3～18**	42 (1.65)	A454AU
		25～180	60 (2.36)	A454BU

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



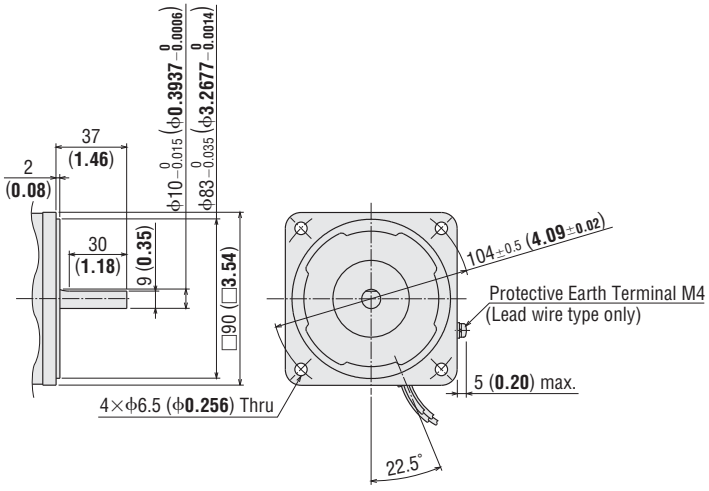
● Use cable with a diameter of ϕ6 ～ ϕ12 mm (ϕ0.24 ～ ϕ0.47 in.).
● Details of terminal box ➜ Page A-314

◇Shaft Section of Round Shaft Type

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

Mass: 2.5 kg (5.5 lb.) (Lead Wire Type)
2.6 kg (5.7 lb.) (Terminal Box Type)

DXF A453 (Lead Wire Type)
A330 (Terminal Box Type)



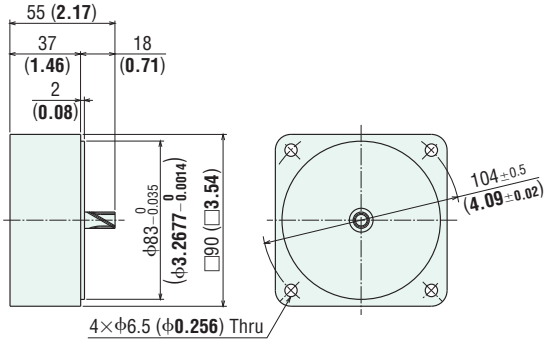
◇Decimal Gearhead

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

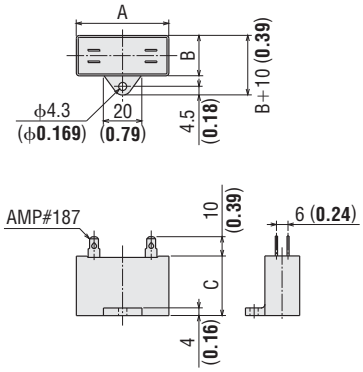
5GN10XS

Mass: 0.6 kg (1.32 lb.)

DXF A022



◇Capacitor (Included)



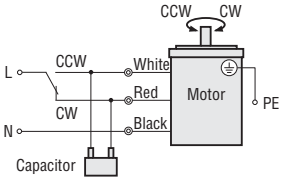
◇Capacitor Dimensions Unit = mm (in.)

Model Upper Model Name: Pinion Shaft Type Lower Model Name ( ): Round Shaft Type		Capacitor Model	A	B	C	Mass g (oz.)	Capacitor Cap
Lead Wire Type	Terminal Box Type						
5RK40GN-AW2U (**5RK40A-AW2U**)	**5RK40GN-AW2TU** (**5RK40A-AW2TU**)	CH120CFAUL2	58 (2.28)	22 (0.87)	35 (1.38)	60 (2.1)	Included
5RK40GN-CW2E (**5RK40A-CW2E**)	**5RK40GN-CW2TE** (**5RK40A-CW2TE**)	CH35BFAUL	58 (2.28)	22 (0.87)	35 (1.38)	59 (2.1)	

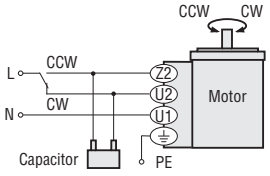
Connection Diagrams

- 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.

Lead Wire Type	Terminal Box Type
5RK40GN-AW2U **5RK40GN-CW2E**	**5RK40GN-AW2TU** **5RK40GN-CW2TE**



Clockwise
To rotate the motor in a clockwise (CW) direction, turn the switch to CW.
Counterclockwise
To rotate the motor in a counterclockwise (CCW) direction, turn the switch to CCW.



Clockwise
To rotate the motor in a clockwise (CW) direction, turn the switch to CW.
Counterclockwise
To rotate the motor in a counterclockwise (CCW) direction, turn the switch to CCW.

PE: Protective Earth

Note:

- Connect a CR circuit for surge suppression to the forward/reverse select switch to protect the contact. Connecting CR circuit for surge suppression, contact capacity ➜ Page A-315
  EPCR1201-2 (CR circuit) is available as an accessory. ➜ Page A-302

- How to connect a capacitor ➜ Page A-313

Gearhead, Accessories and Peripheral Equipment

Space-Saving
Right-Angle Gearheads
➜ Page A-239

Instantaneous Stop
Brake Pack
➜ Page A-277

Accessories
➜ Page A-287

Reversible Motors

60 W (1/12 HP)

Frame Size: □90 mm (□3.54 in.)


Lead Wire Type


Terminal Box Type
(Gearhead sold separately)

Specifications – 30 Minute Rating RoHS

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 HP	VAC	Hz	A	mN·m oz-in	mN·m oz-in	r/min	μF
(TP) **5RK60GE-AW2U** (**5RK60A-AW2U**)	**5RK60GE-AW2TU** (**5RK60A-AW2TU**)	60 1/12	Single-Phase 110 Single-Phase 115	60	1.27	380 53	405 57	1450	20
(TP) **5RK60GE-CW2E** (**5RK60A-CW2E**)	**5RK60GE-CW2TE** (**5RK60A-CW2TE**)	60 1/12	Single-Phase 220	50	0.61	420 59	490 69	1200	5.0
				60	0.67	380 53	405 57	1450	
			Single-Phase 230	50	0.63	470 66	490 69	1200	
				60	0.66	380 53	405 57	1450	

- Values shown for rated torque and starting torque are measured for operation without the friction brake installed.
- The **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. ➜ Page G-11
- Details of safety standards ➜ Page G-2
- Details of RoHS Directive ➜ Page G-38

(TP): Contains a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped. When the motor temperature drops, the thermal protector closes and the motor restarts. Be sure to turn the motor power off before inspecting.

Product Line

Motor RoHS

Type	Model	
	Pinion Shaft Type	Round Shaft Type
Lead Wire	**5RK60GE-AW2U**	**5RK60A-AW2U**
	5RK60GE-CW2E	**5RK60A-CW2E**
Terminal Box	**5RK60GE-AW2TU**	**5RK60A-AW2TU**
	5RK60GE-CW2TE	**5RK60A-CW2TE**

The following items are included in each product.
Motor, Capacitor, Capacitor Cap, Operating Manual

Parallel Shaft Gearhead/Right-Angle Gearhead (Sold separately) RoHS

Gearhead Type		Gearhead Model	Gear Ratio
Parallel Shaft	Long Life **GE-S** Gearhead	**5GE□SA**	**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 Shaft	Hollow Shaft	**5GE□RH**	
	Solid Shaft	**5GE□RAA**	
Parallel Shaft	Long Life **GE-S** Gearhead	**5GE10XS** (Decimal Gearhead)	

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

The following items are included in each product.
- Parallel Shaft Gearhead
  Gearhead, Mounting Screws, Parallel Key, Operating Manual
- Hollow Shaft Gearhead
  Gearhead, Mounting Screws, Parallel Key, Safety Cover (with screws), Gasket, Operating Manual
- Solid Shaft Gearhead
  Gearhead, Mounting Screws, Parallel Key, Gasket, Operating Manual

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 motor model name.
- Enter the gear ratio in the box (□) within the gearhead 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 load.
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio 10:1) between the gearhead and the motor. In that case, the permissible torque is 20 N·m (177 lb-in).

◇50 Hz

Unit = Upper values: N·m/Lower values: lb-in

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**
5RK60GE-CW2□E	**5GE□SA**	1.2 10.6	1.4 12.3	2.0 17.7	2.4 21	3.0 26	3.6 31	4.5 39	5.4 47	6.4 56	8.1 71	9.7 85	11.6 102	16.2 143	19.4 171	20 177	20 177	20 177	20 177	20 177	20 177

◇60 Hz

Unit = Upper values: N·m/Lower values: lb-in

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**
5RK60GE-AW2□U **5RK60GE-CW2□E**	**5GE□SA**	0.98 8.6	1.2 10.6	1.6 14.1	2.0 17.7	2.5 22	3.0 26	3.7 32	4.4 38	5.3 46	6.7 59	8.0 70	9.6 84	13.4 118	16.0 141	17.9 158	20 177	20 177	20 177	20 177	20 177

Gearmotor – Torque Table When Right-Angle Gearhead is Attached

➜ Page A-249

Permissible Overhung Load and Permissible Thrust Load

Motor (Round shaft type) ➜ Page A-16
Gearhead ➜ Page A-16

Permissible Load Inertia J of Gearhead

➜ Page A-17

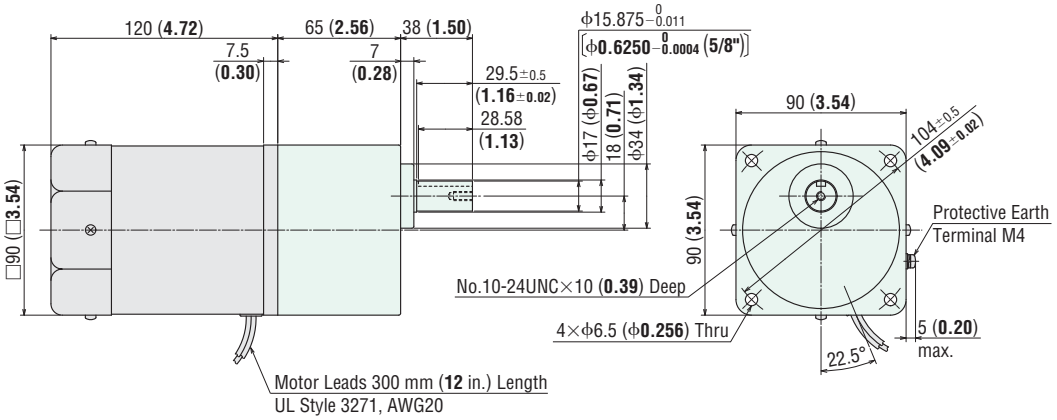
Dimensions Unit = mm (in.)

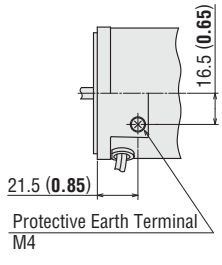
Mounting screws are included with gearheads. Dimensions for mounting screws ➜ Page A-310

◇Lead Wire Type ①

Mass: Motor 2.7 kg (5.9 lb.)
Gearhead 1.5 kg (3.3 lb.)

DXF A455U



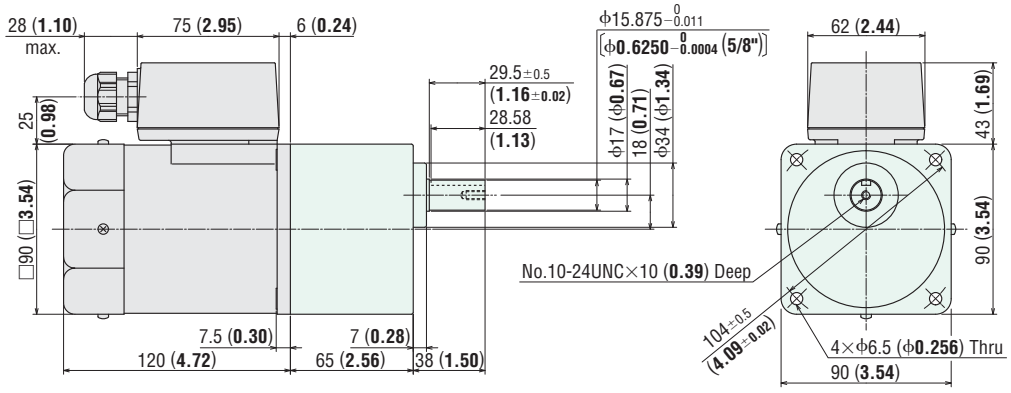


Detail Drawing of Protective Earth Terminal

◇Terminal Box Type ②

Mass: Motor 2.8 kg (6.2 lb.)
Gearhead 1.5 kg (3.3 lb.)

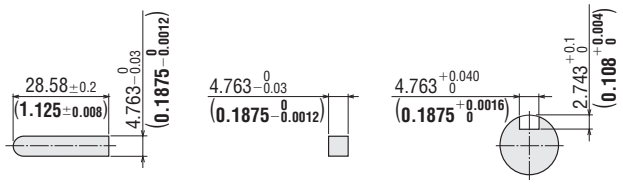
DXF A457U



- Use cable with a diameter of Φ6 ~ Φ12 mm (Φ0.24 ~ Φ0.47 in.).
- Details of terminal box ➜ Page A-314

◇Key and Key Slot

(The key is included with the gearhead)

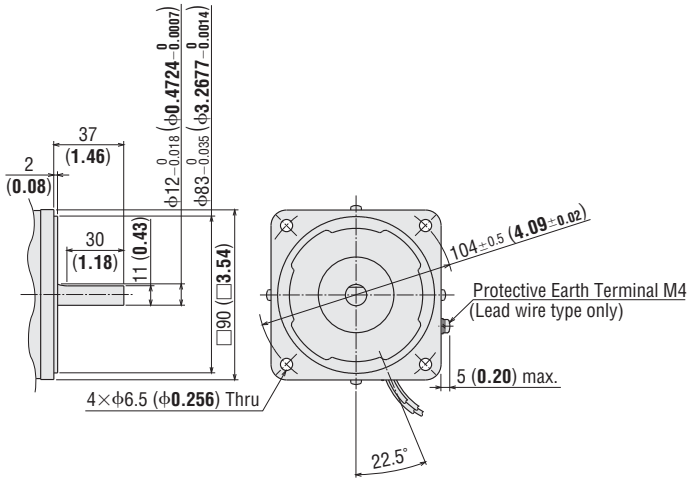


◇Shaft Section of Round Shaft Type

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

Mass: 2.7 kg (5.9 lb.) (Lead Wire Type)
2.8 kg (6.2 lb.) (Terminal Box Type)

DXF A456 (Lead Wire Type)
A332 (Terminal Box Type)



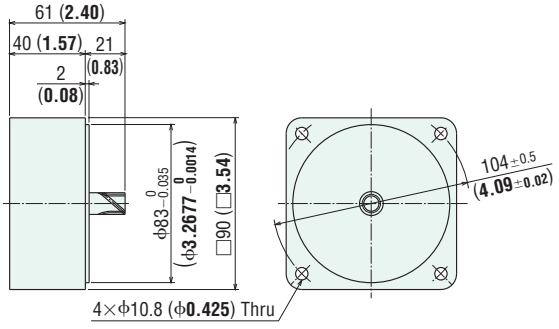
◇Decimal Gearhead

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

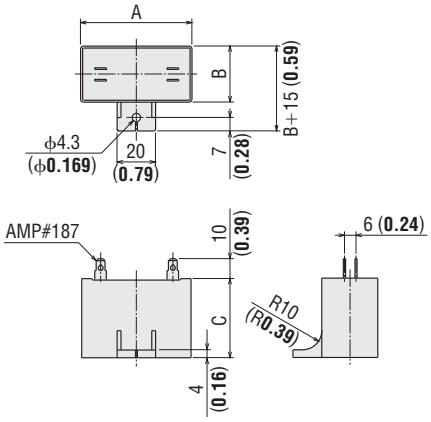
5GE10XS

Mass: 0.6 kg (1.32 lb.)

DXF A029



◇Capacitor (Included)



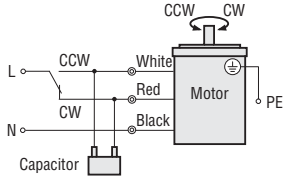
◇Capacitor Dimensions Unit = mm (in.)

Model Upper Model Name: Pinion Shaft Type Lower Model Name ( ): Round Shaft Type		Capacitor Model	A	B	C	Mass g (oz.)	Capacitor Cap
Lead Wire Type	Terminal Box Type						
5RK60GE-AW2U (**5RK60A-AW2U**)	**5RK60GE-AW2TU** (**5RK60A-AW2TU**)	CH200CFAUL2	58 (2.28)	29 (1.14)	41 (1.61)	91 (3.2)	Included
5RK60GE-CW2E (**5RK60A-CW2E**)	**5RK60GE-CW2TE** (**5RK60A-CW2TE**)	CH50BFAUL	58 (2.28)	29 (1.14)	41 (1.61)	93 (3.3)	

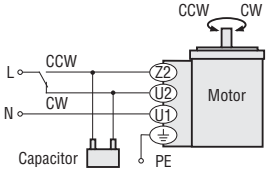
Connection Diagrams

- 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.

Lead Wire Type	Terminal Box Type
5RK60GE-AW2U **5RK60GE-CW2E**	**5RK60GE-AW2TU** **5RK60GE-CW2TE**



Clockwise
To rotate the motor in a clockwise (CW) direction, turn the switch to CW.
Counterclockwise
To rotate the motor in a counterclockwise (CCW) direction, turn the switch to CCW.



Clockwise
To rotate the motor in a clockwise (CW) direction, turn the switch to CW.
Counterclockwise
To rotate the motor in a counterclockwise (CCW) direction, turn the switch to CCW.

PE: Protective Earth

Note:

- Connect a CR circuit for surge suppression to the forward/reverse select switch to protect the contact. Connecting CR circuit for surge suppression, contact capacity ➜ Page A-315
  EPCR1201-2 (CR circuit) is available as an accessory. ➜ Page A-302
- How to connect a capacitor ➜ Page A-313

Gearhead, Accessories and Peripheral Equipment

Space-Saving
Right-Angle Gearheads
➜ Page A-239

Instantaneous Stop
Brake Pack
➜ Page A-277

Accessories
➜ Page A-287

Reversible Motors
90 W (1/8 HP)
Frame Size: □90 mm (□3.54 in.)


Lead Wire Type


Terminal Box Type

(Gearhead sold separately)

Specifications – 30 Minute Rating RoHS

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 HP	VAC	Hz	A	mN·m oz-in	mN·m oz-in	r/min	μF
(TP) **5RK90GE-AW2U** (**5RK90A-AW2U**)	**5RK90GE-AW2TU** (**5RK90A-AW2TU**)	90 1/8	Single-Phase 110	60	1.87	590 83	585 83	1500	30
			Single-Phase 115		1.86				
(TP) **5RK90GE-CW3E** (**5RK90A-CW3E**)	**5RK90GE-CW3TE** (**5RK90A-CW3TE**)	90 1/8	Single-Phase 220	50	0.83	600 85	730 103	1200	7.0
				60	0.96	590 83	605 85	1450	
			Single-Phase 230	50	0.83	600 85	730 103	1200	
				60	0.95	590 83	605 85	1450	

- Values shown for rated torque and starting torque are measured for operation without the friction brake installed.
- The **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. ➜ Page G-11
- Details of safety standards ➜ Page G-2
- Details of RoHS Directive ➜ Page G-38

(TP): Contains a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped. When the motor temperature drops, the thermal protector closes and the motor restarts. Be sure to turn the motor power off before inspecting.

Product Line

Motor RoHS

Type	Model	
	Pinion Shaft Type	Round Shaft Type
Lead Wire	**5RK90GE-AW2U**	**5RK90A-AW2U**
	5RK90GE-CW3E	**5RK90A-CW3E**
Terminal Box	**5RK90GE-AW2TU**	**5RK90A-AW2TU**
	5RK90GE-CW3TE	**5RK90A-CW3TE**

The following items are included in each product.
Motor, Capacitor, Capacitor Cap, Operating Manual

Parallel Shaft Gearhead/Right-Angle Gearhead (Sold separately) RoHS

Gearhead Type		Gearhead Model	Gear Ratio
Parallel Shaft	Long Life **GE-S** Gearhead	**5GE□SA**	**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 Shaft	Hollow Shaft	**5GE□RH**	
	Solid Shaft	**5GE□RAA**	
Parallel Shaft	Long Life **GE-S** Gearhead	**5GE10XS** (Decimal Gearhead)	

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

The following items are included in each product.
- Parallel Shaft Gearhead
  Gearhead, Mounting Screws, Parallel Key, Operating Manual
- Hollow Shaft Gearhead
  Gearhead, Mounting Screws, Parallel Key, Safety Cover (with screws), Gasket, Operating Manual
- Solid Shaft Gearhead
  Gearhead, Mounting Screws, Parallel Key, Gasket, Operating Manual

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 motor model name.
- Enter the gear ratio in the box (□) within the gearhead 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 load.
- To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio 10:1) between the gearhead and the motor. In that case, the permissible torque is 20 N·m (177 lb-in).

◇50 Hz

Unit = Upper values: N·m/Lower values: lb-in

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**
5RK90GE-CW3□E	**5GE□SA**	1.8 15.9	2.1 18.5	3.0 26	3.5 30	4.4 38	5.3 46	6.7 59	8.0 70	9.6 84	12.0 106	14.5 128	17.3 153	20 177	20 177	20 177	20 177	20 177	20 177	20 177	20 177

◇60 Hz

Unit = Upper values: N·m/Lower values: lb-in

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**
5RK90GE-AW2□U	**5GE□SA**	1.4 12.3	1.7 15.0	2.4 21	2.8 24	3.6 31	4.3 38	5.3 46	6.4 56	7.7 68	9.7 85	11.6 102	13.9 123	19.3 170	20 177	20 177	20 177	20 177	20 177	20 177	20 177
5RK90GE-CW3□E	**5GE□SA**	1.5 13.2	1.8 15.9	2.5 22	2.9 25	3.7 32	4.4 38	5.5 48	6.6 58	7.9 69	10.0 88	12.0 106	14.4 127	20 177	20 177	20 177	20 177	20 177	20 177	20 177	20 177

Gearmotor – Torque Table When Right-Angle Gearhead is Attached

➜ Page A-249

Permissible Overhung Load and Permissible Thrust Load

Motor (Round shaft type) ➜ Page A-16
Gearhead ➜ Page A-16

Permissible Load Inertia J of Gearhead

➜ Page A-17

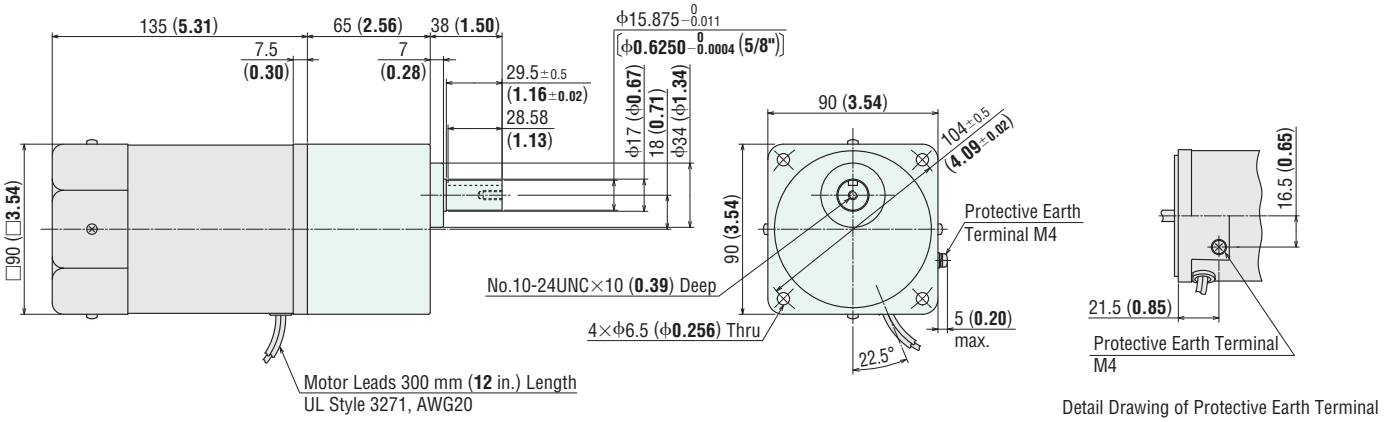
Dimensions Unit = mm (in.)

Mounting screws are included with gearheads. Dimensions for mounting screws ➜ Page A-310

◇Lead Wire Type ①

Mass: Motor 3.2 kg (7.0 lb.)
Gearhead 1.5 kg (3.3 lb.)

DXF A458U

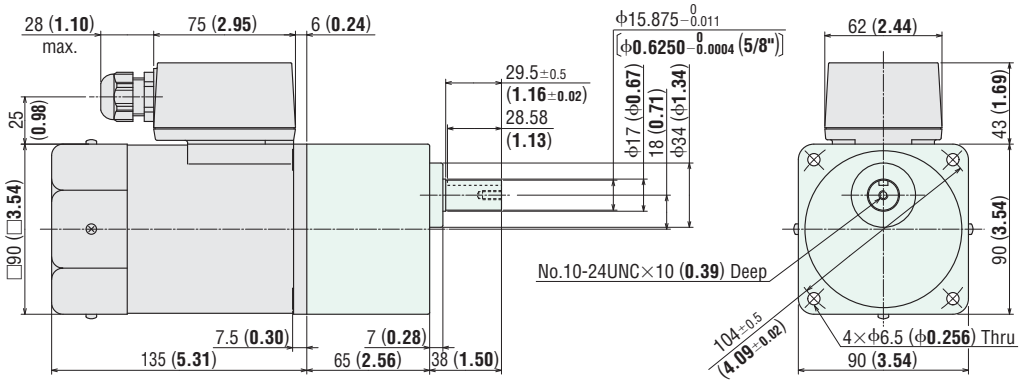


Detail Drawing of Protective Earth Terminal

◇Terminal Box Type ②

Mass: Motor 3.3 kg (7.3 lb.)
Gearhead 1.5 kg (3.3 lb.)

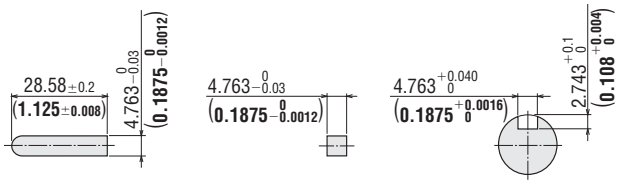
DXF A460U



- Use cable with a diameter of Φ6 ~ Φ12 mm (Φ0.24 ~ Φ0.47 in.).
- Details of terminal box ➜ Page A-314

◇Key and Key Slot

(The key is included with the gearhead)

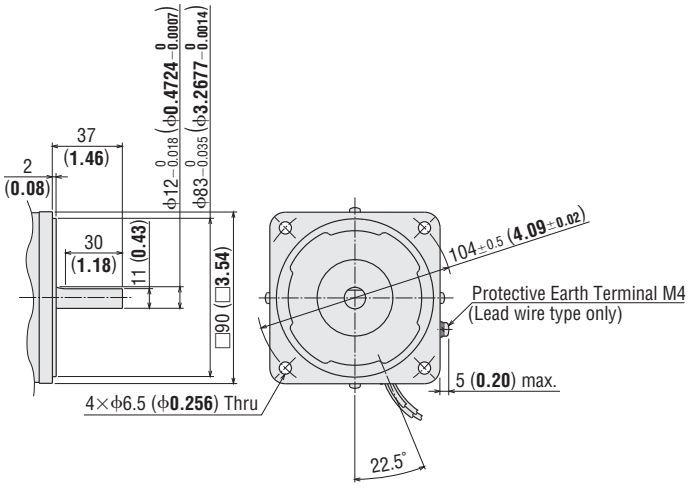


◇Shaft Section of Round Shaft Type

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

Mass: 3.2 kg (7.0 lb.) (Lead Wire Type)
3.3 kg (7.3 lb.) (Terminal Box Type)

DXF A459 (Lead Wire Type)
A334 (Terminal Box Type)



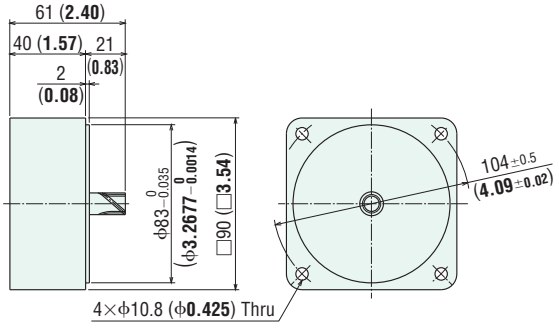
◇Decimal Gearhead

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

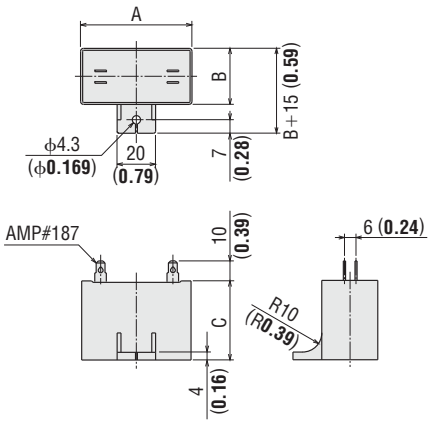
5GE10XS

Mass: 0.6 kg (1.32 lb.)

DXF A029



◇Capacitor (Included)

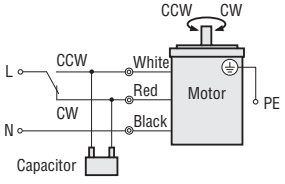
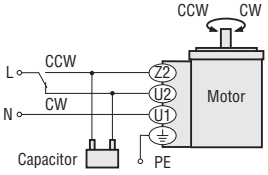


◇Capacitor Dimensions Unit = mm (in.)

Model Upper Model Name: Pinion Shaft Type Lower Model Name ( ): Round Shaft Type		Capacitor Model	A	B	C	Mass g (oz.)	Capacitor Cap
Lead Wire Type	Terminal Box Type						
5RK90GE-AW2U (**5RK90A-AW2U**)	**5RK90GE-AW2TU** (**5RK90A-AW2TU**)	CH300CFAUL2	58 (2.28)	35 (1.38)	50 (1.97)	140 (4.9)	Included
5RK90GE-CW3E (**5RK90A-CW3E**)	**5RK90GE-CW3TE** (**5RK90A-CW3TE**)	CH70BFAUL	58 (2.28)	35 (1.38)	50 (1.97)	138 (4.9)	

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.

Lead Wire Type	Terminal Box Type
5RK90GE-AW2U **5RK90GE-CW3E**	**5RK90GE-AW2TU** **5RK90GE-CW3TE**
	
Clockwise To rotate the motor in a clockwise (CW) direction, turn the switch to CW. **Counterclockwise** To rotate the motor in a counterclockwise (CCW) direction, turn the switch to CCW.	**Clockwise** To rotate the motor in a clockwise (CW) direction, turn the switch to CW. **Counterclockwise** To rotate the motor in a counterclockwise (CCW) direction, turn the switch to CCW.

PE: Protective Earth

Note:

- Connect a CR circuit for surge suppression to the forward/reverse select switch to protect the contact. Connecting CR circuit for surge suppression, contact capacity ➜ Page A-315
  EPCR1201-2 (CR circuit) is available as an accessory. ➜ Page A-302
- How to connect a capacitor ➜ Page A-313

Gearhead, Accessories and Peripheral Equipment

Space-Saving
Right-Angle Gearheads
➜ Page A-239

Instantaneous Stop
Brake Pack
➜ Page A-277

Accessories
➜ Page A-287