

5-Phase Geared-Brake Stepping motor

M A N U A L



Thank you very much for selecting Autonics products.
For your safety, please read the following before using.

Caution for your safety

- ※ Please keep these instructions and review them before using this unit.
- ※ Please observe the cautions that follow;
- Warning** Serious injury may result if instructions are not followed.
- Caution** Product may be damaged, or injury may result if instructions are not followed.
- ※ The following is an explanation of the symbols used in the operation manual.
- Caution:** Injury or danger may occur under special conditions.

Warning

- 1. In case of using this unit with machineries(Nuclear power control, medical equipment, vehicle, train, airplane, combustion apparatus, entertainment or safety device etc), it requires installing fail-safe device, or contact us for information on type required.**
It may cause serious human injury or a fire, property.
- 2. Do not use this unit at place where there are flammable or explosive gas, corrosion and water exist.**
It may cause a fire or burn.
- 3. Installation, connection, operation, control, maintenance should be carried out by person who has been qualified.**
It may cause a fire or human injury, give electronic shock.
- 4. Please install it in power off.**
It may give electronic shock.
- 5. Please earth or install it with housing so that protecting a touch of human body.**
It may give electronic shock or human injury.
- 6. Do not disassemble or modify this unit.**
It may cause damage to this product or quality down.

Caution

- 1. Please keep the specification of this unit.**
It may cause damage to this product.
 - 2. Do not put obstacle object for well ventilation around this unit.**
It may cause a damage to this product or malfunction of peripheral equipment by motor heating.
 - 3. Please fix this unit on a metal plate tightly.**
It may cause human injury or damage of this product and peripheral device.
 - 4. Please stop this unit when mechanical trouble occurred.**
It may cause a fire or human injury.
 - 5. The surface temperature of the motor can be over 70°C in normal operating state. Please put a caution mark on outstanding place when somebody may approach to the operating motor.**
It may cause a burn.
 - 6. Do not carry the cable or rotating part of this unit.**
It may cause human injury.
 - 7. Please put a cover on the rotating part of this unit.**
It may cause human injury.
 - 8. Please separate as industrial scrapped material when disuse this unit.**
It may cause human injury.
- ※ The specifications on this manual are changeable without notice anytime.

Ordering information

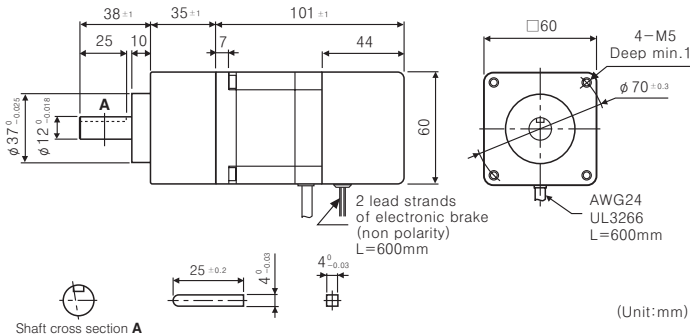
A □ K - M 5 6 6 - GB 7.2	
Motor type	Geared-Brake
Motor length(mm)	6
Motor frame size(mm×mm)	6 59.5
Motor phase	5
Rated current[A]/Phase	M 1.4
Max. allowable torque(kgf·cm)	35K 35
	40K 40
	50K 50
Series	

Specifications

Model	A35K-M566-GB5	A40K-M566-GB7.2	A50K-M566-GB10
Holding torque	35[kgf·cm] 3.5 [N·m]	40[kgf·cm] 4.0 [N·m]	50[kgf·cm] 5.0 [N·m]
Rotor inertia moment	280[g·cm ²] 280×10 ⁻⁷ [kg·m ²]		
Rated current	1.4[A]/Phase		
Basic step angle	0.144°/0.072° (Full/Half)	0.17°/0.05° (Full/Half)	0.072°/0.036° (Full/Half)
Gear ratio	1:5	1:7.2	1:10
Allowable torque	35[kgf·cm] 3.5 [N·m]	40[kgf·cm] 4.0 [N·m]	50[kgf·cm] 5.0 [N·m]
Backlash [min]	20 (0.33°)		
Allowable speed range	0~360[rpm]	0~250[rpm]	0~180[rpm]
Electro-Magnetic Brake	Rated excitation voltage:24VDC, Rated excitation current:0.33A, Rated brake power:4[kgf·cm], Rotation part inertia:2.5×10 ⁻⁶ [kg·m ²]		
Insulation class	CLASS B(130°C)		
Insulation resistance	Min. 100MΩ (at 500VDC) between motor coil and case		
Dielectric strength	1.0kVAC 50/60Hz for 1min. between motor coil and case		
Operation condition	Ambient temperature	0°C ~ +50°C (at non-freezing status)	
	Altitude	Max. 1,000m above the sea level	
	Humidity	35 ~ 85%RH	
Transportation condition	Ambient temperature	-25°C ~ +70°C	
	Altitude	Max. 3,000m above the sea level	
	Humidity	35 ~ 85%RH	
Storage condition	Ambient temperature	-25°C ~ +70°C	
	Altitude	Max. 3,000m above the sea level	
	Humidity	35 ~ 85%RH	
Standard	IEC34-5		
Protection	IP30		
Weight	Approx. 1.3kg		

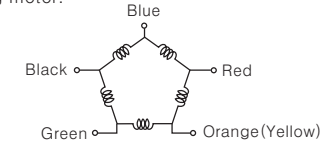
(※Note)For power on, brake is off, and a motor starts operating.

Dimensions



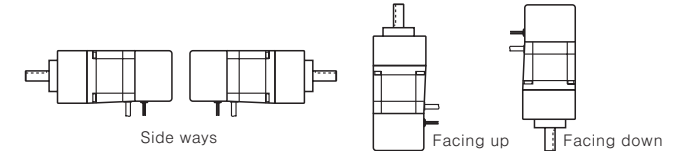
Connection diagram

Five lead wires come out as wiring each phase coil by pentagon connection in Geared type stepping motor.



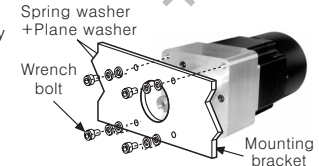
Motor mounting

Motor can be mounted freely in any direction of side ways, facing up or down as following. But please check overhung and thrust load on shaft.



And, don't bend, pull and insert a motor cable by inordinate force as a right figure since. It may cause for the snapping of motor cable. Please make sure it is used under safety protection if heavy pressure is added to the cable.

- Please mount the motor tightly against a metal surface with good thermal conductivity such as steel or aluminum.
- Please use it by fixing hexagonal socket screw, hexagonal nut, spring washer, plane washer on motor tightly when installing motor. Please use bolt "M5 size" for thicker than 5[mm] of the metal mounting plate.



Caution for using

1. Do not drop this product or put other impacts.
 2. Please do not pull the connecting cable of motor.
 3. Please avoid below place to use this product.
 - ① A place which can cause vibration or an impact to motor.
 - ② A place which has a lot of pollutant like dust etc.
 - ③ A place which can cause water or oil etc. to go into motor.
 - ④ A place where flammable or corrosive gas exists.
 - ⑤ A place where the ambient temperature is beyond 0°C ~ +50°C.
 4. Temperature rise
Please use it on the surface temperature under 100°C.
The surface temperature of motor can be significantly increased in case of driving the motor by constant current. In this case please consider using forced cooling methods like a fan etc.
 5. Usage in low temperature
The features of Maximum slewing and Maximum starting frequency may go down as the ambient temperature of ball bearing for the axis of motor falls down.
But use it operating motor slowly as the torque of motor is not damaged.
 6. Clack sound of electromagnetic brake
When turning on and off the power, this machine could make a clack sound.
Since it is caused by brake operation, please be relieved.
- ※ It may cause malfunction if above instructions are not followed.

Main products

- COUNTER
- TIMER
- TEMPERATURE CONTROLLER
- PANEL METER
- TACHO/LINE SPEED/PULSE METER
- DISPLAY UNIT
- PROXIMITY SENSOR
- PHOTOELECTRIC SENSOR
- FIBER OPTIC SENSOR
- PRESSURE SENSOR
- ROTARY ENCODER
- SENSOR CONTROLLER
- POWER CONTROLLER
- STEPPING MOTOR & DRIVER & CONTROLLER
- LASER MARKING SYSTEM(CO₂, Nd:YAG)

Autonics Corporation
<http://www.autonics.com>

Satisfiable Partner For Factory Automation

■ HEADQUARTERS :
41-5, Yongdang-ri, Ungsang-eup, Yangsan-si, Gyeongsang, 626-847, Korea

■ INTERNATIONAL SALES :
Bldg. 402 3rd Fl., Bucheon Techno Park, 193, Yakdae-dong, Wonnmi-gu, Bucheon-si, Gyeonggi-do, 420-734, Korea
TEL: 82-32-329-0722 / FAX: 82-32-329-0728
E-mail : service@autonics.net