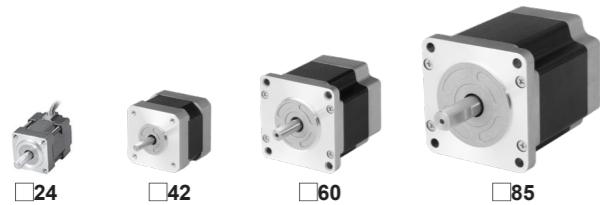


Autonics**SHAFT TYPE 5 PHASE
STEPPER MOTOR****INSTRUCTION MANUAL**

Thank you for choosing our Autonics product.
Please read the following safety considerations before use.

Safety Considerations

※ Please observe all safety considerations for safe and proper product operation to avoid hazards.

※ Δ symbol represents caution due to special circumstances in which hazards may occur.

Δ **Warning** Failure to follow these instructions may result in serious injury or death.

Δ **Caution** Failure to follow these instructions may result in personal injury or product damage.

Δ **Warning** Failure to follow this instruction may result in fire, personal injury, or economic loss.

1. **Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss. (e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime/disaster prevention devices, etc.)**
Failure to follow this instruction may result in fire, personal injury, or economic loss.

2. **Fix the unit on the metal plate.**
Failure to follow this instruction may result in personal injury, or product and ambient equipment damage.

3. **Do not connect, repair, or inspect the unit while connected to a power source.**
Failure to follow this instruction may result in fire.

4. **Install the unit after considering counter plan against power failure.**
Failure to follow this instruction may result in personal injury, or economic loss.

5. **Check 'Connections' before wiring.**
Failure to follow this instruction may result in fire.

6. **Do not disassemble or modify the unit.**
Failure to follow this instruction may result in electric shock or fire.

7. **Install the motor in the housing or ground it.**
Failure to follow this instruction may result in electronic shock, fire, or personal injury.

8. **Make sure to install covers on motor rotating components.**
Failure to follow this instruction may result in personal injury.

9. **Do not touch the unit during or after operation for a while.**
Failure to follow this instruction may result in burn due to high temperature of the surface.

10. **Turn OFF the power directly when error occurs.**
Failure to follow this instruction may result in electric shock, fire, or personal injury.

Δ **Caution**

1. **Use the unit within the rated specifications.**
Failure to follow this instruction may result in fire or product damage.

2. **Use dry cloth to clean the unit, and do not use water or organic solvent.**
Failure to follow this instruction may result in fire.

3. **Do not use the unit in the place where flammable/explosive/corrosive gas, humidity, direct sunlight, radiant heat, vibration, impact, or salinity may be present.**
Failure to follow this instruction may result in fire or explosion.

4. **The motor may overheat depending on the environment.**
Install the unit at the well-ventilated environment and forced cooling with a cooling fan.
Failure to follow this instruction may result in product damage and degradation.

Ordering Information

A	1K	-S	5	4	3	W	S	
Wire connection								
No mark							Pentagon	
S ^{※1}							Standard	
Shaft type								
No mark							Single shaft	
W							Dual shaft	
Motor length								
2	□24 (24×24mm)	3	30.5mm					
4		4	46.5mm					
Motor frame size (width×length)								
4	□42 (42×42mm)	3	33mm					
4		4	39mm					
5		5	47mm					
Motor phase								
6	□60 (60×60mm)	4	48.5mm					
6		6	59.5mm					
9	□85 (85×85mm)	9	89mm					
		13	128mm					
Rated current								
5	5 phase							
S	0.75 A/Phase							
M	1.4 A/Phase							
G	2.8 A/Phase							
Square	kgf-cm (Refer to motor specifications)							
Max. Holding torque								

※1: Standard wiring is optional. (Except □24 motor model, A4K-G564(W), A8K-G566(W).)
※The above specifications are subject to change and some models may be discontinued without notice.
※Be sure to follow cautions written in the instruction manual and the technical descriptions (catalog, homepage).

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Specifications

□24

Model	02K-S523(W)	04K-S525(W)
Max. Holding torque ^{※1}	0.18 kgf-cm (0.018 N·m)	0.28 kgf-cm (0.027 N·m)
Rotor moment of inertia	4.2 g·cm ² (4.2×10 ⁻⁷ kg·m ²)	8.2 g·cm ² (8.2×10 ⁻⁷ kg·m ²)
Rated current	0.75 A/Phase	
Standard step angle	0.72° / 0.36° (Full/Half step)	
Weight ^{※2}	Approx. 0.10kg (approx. 0.08kg)	Approx. 0.16kg (approx. 0.12kg)

□42

Model	A1K-S543(W)-□	A2K-S544(W)-□	A3K-S545(W)-□
Max. Holding torque ^{※1}	1.3 kgf-cm (0.13 N·m)	1.8 kgf-cm (0.18 N·m)	2.4 kgf-cm (0.24 N·m)
Rotor moment of inertia	35 g·cm ² (35×10 ⁻⁷ kg·m ²)	54 g·cm ² (54×10 ⁻⁷ kg·m ²)	68 g·cm ² (68×10 ⁻⁷ kg·m ²)
Rated current	0.75 A/Phase		
Standard step angle	0.72° / 0.36° (Full/Half step)		
Weight ^{※2}	Approx. 0.34kg (approx. 0.25kg)	Approx. 0.39kg (approx. 0.3kg)	Approx. 0.49kg (approx. 0.4kg)

□60

Model	A4K-S564(W)-□	A4K-G564(W)-□	A4K-G566(W)-□	A8K-S566(W)-□	A8K-M566(W)-□	A8K-G566(W)-□	A16K-M569(W)-□	A16K-G569(W)-□
Max. Holding torque ^{※1}	4.2 kgf-cm (0.41 N·m)			8.3 kgf-cm (0.81 N·m)			16.6 kgf-cm (1.63 N·m)	
Rotor moment of inertia	175 g·cm ² (175×10 ⁻⁷ kg·m ²)			280 g·cm ² (280×10 ⁻⁷ kg·m ²)			560 g·cm ² (560×10 ⁻⁷ kg·m ²)	
Rated current	0.75 A/Phase	1.4 A/Phase	2.8 A/Phase	0.75 A/Phase	1.4 A/Phase	2.8 A/Phase	1.4 A/Phase	2.8 A/Phase
Standard step angle	0.72° / 0.36° (Full/Half step)							
Weight ^{※2}	Approx. 0.85kg (approx. 0.6kg)			Approx. 1.05kg (approx. 0.8kg)			Approx. 1.55kg (approx. 1.3kg)	

□85

Model	A21K-M596(W)-□	A21K-G596(W)-□	A41K-M599(W)-□	A41K-G599(W)-□	A63K-M5913(W)-□	A63K-G5913(W)-□
Max. Holding torque ^{※1}	21 kgf-cm (2.1 N·m)		41 kgf-cm (4.0 N·m)		63 kgf-cm (6.2 N·m)	
Rotor moment of inertia	1400 g·cm ² (1400×10 ⁻⁷ kg·m ²)		2700 g·cm ² (2700×10 ⁻⁷ kg·m ²)		4000 g·cm ² (4000×10 ⁻⁷ kg·m ²)	
Rated current	1.4 A/Phase	2.8 A/Phase	1.4 A/Phase	2.8 A/Phase	1.4 A/Phase	2.8 A/Phase
Standard step angle	0.72° / 0.36° (Full/Half step)					
Weight ^{※2}	Approx. 2.15kg (approx. 1.7kg)		Approx. 3.25kg (approx. 2.8kg)		Approx. 4.25kg (approx. 3.8kg)	

※1: Max. Holding torque is a retaining torque when 5 phase excitation stopped after the rated current is flowed in motor.