To Use This Product Safely

Be sure to read this before use.
For general information on electric actuators, please see intro 17.

Individual Precautions: Electric Actuator EJSG Series

During Design and Selection

1. Common

Danger

■Do not use in places where hazardous materials such as flammable, ignitable, or explosive substances are present.
There is a risk of ignition, fire, or explosion.

■Do not allow water droplets, oil droplets, etc. to come into contact with the product.
This can cause fire or malfunction.

■When installing the product, be sure to hold and fix it securely (including the workpiece).
There is a risk of injury due to the product tipping over, falling, malfunctioning, etc. As a general rule, please fix the product using all mounting holes.

■Be sure to use a DC stabilized power supply (24 VDC ±10%) for the motive power supply and control power supply.
Direct connection to an AC power supply can cause fire, bursting, damage, etc.

■Please use only a 24 VDC power supply.
Using a 48 V power supply may cause the controller to malfunction.

Warning

■Use the product within its specific specification range.

■Install a safety fence to prevent entry into the movable range of the electric actuator. Also, in preparation for emergencies, install an emergency stop push button switch for the device in an easily accessible location. The emergency stop push button must have a structure and wiring that does not automatically reset and cannot be carelessly reset by a person.

■When an emergency stop is performed, it may take several seconds to stop depending on the speed during movement and the mounted load.

■In the event of a system abnormality such as an emergency stop or power failure, if the machine stops, design the safety circuit or device to prevent damage to the equipment, personal injury, etc.

■Install in a dry indoor location.
In places where it is exposed to rainwater or in humid places (humidity of 80% or more, places with condensation), there is a risk of electric leakage or fire. Oil drops and oil mist are also strictly prohibited. Use in such environments can cause damage or malfunction.

■The product must be subjected to Class D grounding work (grounding resistance of 100 Ω or less).
If an electric leakage occurs, there is a risk of electric shock or malfunction.

■If using the actuator in an installation other than horizontal or wall-mounted, select the one with a brake.
If it does not have a brake, when the servo is OFF (including emergency stop and alarm) or when the power is OFF, the movable part may fall, causing injury or damage to the workpiece.

■The brake cannot completely hold the actuator in all cases. When performing maintenance on applications that move the slider with an unbalanced load, or when stopping the machine for a long time, if safety needs to be ensured, be sure to bring it to a balanced state or provide a mechanical locking mechanism.

■When using the actuator in a vertical installation, position the motor as high as possible.
If the motor is on the lower side, there is no problem in normal operation, but if it is stopped for a long period of time, the grease may separate and flow into the motor, which may cause a malfunction in rare cases.

■Observe the operating and storage temperatures, and use and store in a condensation-free state.
Storage Temperature: -10°C to 50°C, Storage Humidity: 35% to 80%, Operating Temperature: 10 to 40°C, Operating Humidity: 35% to 80% (This may cause product malfunction or reduced service life.) Ventilate if heat builds up.

■Do not use in places where condensation occurs due to sudden changes in ambient temperature.

■Install in a location free from direct sunlight, dust, heat sources, corrosive gases, explosive gases, flammable gases, and combustible materials. In addition, this product has not been considered for chemical resistance.
This can cause malfunction, explosion, or fire.

■Use and store in a location free from strong electromagnetic waves, ultraviolet rays, and radiation.
This can cause malfunction or failure.

■Consider the possibility of power source failure.
Take measures to ensure that even if a failure occurs in the power source, it does not cause injury or damage to people or equipment.

■Consider the operating state when restarting after an emergency stop or abnormal stop.
Design it so that restarting does not cause harm to people or equipment. Also, if it is necessary to reset the electric actuator to the starting position, design a safe control device. Consider the possibility of failure of the installed motor. Take measures to ensure that even if a failure occurs in the power source, it does not cause harm to people or equipment.

■Do not use in places with impact or vibration.

■Do not apply a load to the product that exceeds the allowable value in the selection data.

■When pushing workpieces, etc., please use the pushing operation.

Caution

■Please use within a range where the moving table does not collide at the stroke end.

■Clearly state the maintenance conditions in the equipment's instruction manual.
Depending on the usage status, usage environment, and maintenance, the functions of this product may be significantly degraded, and safety may not be ensured. If maintenance is performed correctly, the product functions can be fully demonstrated.

■The product is manufactured in accordance with various standards. Never disassemble or modify.

■Please confirm the suitability of our products for the system, machine, and equipment you use at your own responsibility.

■Use wiring that does not induce induction noise.
Avoid places where large currents or strong magnetic fields are generated. Do not use the same wiring (with multi-core cables) as the power lines for large motors other than this product. Do not use the same wiring as the inverter power supply and wiring part used for robots, etc., apply a frame ground to the power supply, and insert a filter in the output part.

■Do not use in an environment where strong magnetic fields are generated.
This can cause malfunction.

■Separate the power supply for the output part of this product from the power supply for inductive loads that generate surges, such as solenoid valves and relays.
If the power supply is shared, surge current will flow into the output part, causing damage. If a separate power supply cannot be used, connect a surge absorbing element directly in parallel to all inductive loads.

■Select a power supply with sufficient capacity for the number of products installed. If there is not enough capacity, it may malfunction.
Control power supply 0.4 A/unit
Motive power supply
[ECMG]
□35...12.4 A/unit, □42...12.2 A/unit
□56...12.5 A/unit
[ECG]
□35...2.4 A/unit, □42...2.7 A/unit
□56...4.0 A/unit

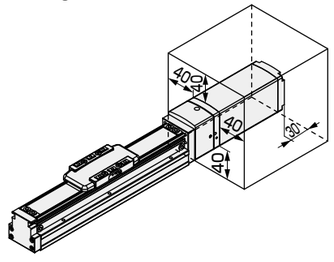
■Fixed cables cannot be used for applications involving repeated bending, so please fix them so that they do not move easily. For use in locations involving repeated bending, please use a flexible cable.

■Please use the fixed/flexible cable with a bending radius of 51 mm or more.
The bending radius cannot accommodate bending of the connector part, so it is recommended to fix it near the connector.

■When the power is turned on, to recognize the home position, if there is an external stopper or holding mechanism (brake, etc.), there is a possibility that an unintended position will be recognized as the home position. After turning on the power, please pay attention to the placement of external stoppers, etc., so that the home position can be reliably detected.

■When using the EJSG series, do not apply a magnetic field with a magnetic flux density of 0.7 mT or more to the product surface of the motor section.
This can cause damage to the product or malfunction.

■When using multiple EJSG series units, please install them with the motor parts separated by the distance shown in the figure below or more.
Installation at close intervals can cause malfunction.



■When transporting or installing the actuator, hold the main body and avoid applying excessive force to the motor part.

■Please confirm that there is no interference between the workpiece attached to the slider and the motor part.
Some types have a motor part dimension that is larger than the slider mounting surface height.
(EJSG-08E, EJSG-08R, EJSG-08L)

■When using the EJSG-G series, please use a purge flow rate from the pressurizing port of 40 NL/min or more.

For precautions regarding mounting, installation, adjustment, operation, and maintenance, please refer to the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → 'model No.' → Instruction Manual