To Use This Product Safely

Be sure to read this before use.
For general information on Electric Actuators, please refer to Intro 15.

Common Precautions: Electric Actuator EKS-L Series

During Design and Selection

Danger

■ Do not use in places where dangerous goods such as ignitable substances, inflammable substances or explosives are present.
There is a possibility 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 failure.

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

Warning

■ Use within the product's specified operating range.

■ If there is a risk of danger to the human body, install a protective cover.
If the moving parts of the electric actuator pose a particular danger to the human body, design the structure so that people cannot enter the drive range of the electric actuator or directly touch that area.

■ Design a safety circuit or equipment so that damage to equipment, injury to persons, etc., does not occur when the machine stops in the event of a system failure such as emergency stop or power outage.

■ Install indoors with low humidity.
In places exposed to rain or high humidity (80% humidity or more, 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 and malfunction.

■ Make sure that the product is D type grounded (ground resistance of 100 Ω or less).
In case of electric leakage, there is a risk of electric shock or malfunction.

■ When installing the actuator in a direction other than horizontal, use a motor with brake.
Without a brake, when the servo is OFF (including emergency stop and alarms) or when the power is OFF, there is a risk of injury or workpiece damage due to the falling of the moving part.

■ When vertically installing the actuator, do everything possible to keep the motor on top.
If the motor is on the lower side, there is no problem in normal operation, but if stopped for a long period, grease may separate and flow into the motor, which may rarely cause a malfunction.

■ Do not use this product in a location where the ambient temperature could suddenly change and cause dew to condense.

■ Install in a location free from direct sunlight, dust, and corrosive gas/explosive gas/inflammable gas/combustibles, and away from heat sources. In addition, this product has not been considered for chemical resistance.
This can cause failure, explosion, or fire.

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

■ Take possibility of power source breakdown into consideration.
Take measures to prevent injury to people or damage to equipment even if the power source fails.

■ Take the operational status into consideration if the machine is reactivated after emergency or abnormal stops.
Design so that restarting does not cause harm to people or damage to the 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 prevent injury to personnel or damage to equipment in the event of a power source failure.

■ Avoid using this product where vibration and impact are present.

■ Do not apply a load to the product that is greater than or equal to the allowable load listed in the materials for selection.

■ Use and store in accordance with the working/storage temperatures and where there is no condensation.
(Storage temperature: 0°C to 40°C, storage humidity: 20% to 80%, Operating ambient temperature: 0°C to 40°C, Operating humidity: 20% to 80%)
This can cause abnormal product stoppage or reduced service life. If heat accumulates, ventilate.

Caution

■ Do not use in a range where the moving table could collide with the stroke end and break.

■ Indicate the maintenance conditions in the device's instruction manual.
The functionality of this product may be significantly reduced and safety may not be ensured depending on the usage conditions, environment, and maintenance. If maintenance is performed correctly, the product's functions can be fully utilized.

■ The product is manufactured in conformity with the related standards. Never disassemble or modify.

■ Refer to the instruction manual of the motor mounted to the product and control for your safety before wiring and designing.

■ The customer is responsible for confirming the compatibility of CKD products and motors with their systems, machines and equipment.

■ Set up the wiring so as not to apply inductive noise.
Avoid places where large currents or strong magnetic fields are generated.
Do not use the same conduit or wiring (with multi-core cables) as the power lines of large motors other than this product.
Do not use the same conduit/wiring as the inverter power supply or wiring section used for robots, etc., apply a frame ground to the power supply, and insert a filter at the output section.

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

■ Be sure to separate the power supply of the output of this product and the power supply of inductive loads that generate surges, such as solenoid valves and relays.
If the power supply is shared, surge current may enter the output section and cause damage.
If a separate power supply cannot be used, connect a surge-absorbing element in parallel directly to all inductive loads.

■ When installing an external stopper or retention mechanism (brake, etc.), place it so as not to affect origin position detection.
The home position is detected when the power is turned on. If the detection operation is obstructed by an external stopper or holding mechanism, there is a risk that an unintended position may be recognized as the home position.

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