

NEW Economy Series

THK's tough electric gripper for grasping workpieces



Economy Series **EG**

Electric Gripper

Equipped with an LM guide for open/close operations



Electric control provides an abundant range of open/close

functions.

- · Positioning repeatability
- · Multi-point positioning
- · Specified open/close speed
- · Grip force settings

Feature **1** Positioning Repeatability

The low-lead feed screw drive element and built-in LM Guide element contribute to high positioning accuracy and stable repeat operation.



Feature 2 Multi-Point Positioning, Grip Force Settings (Open/Close Speed Also Adjustable)

With electric positioning control, 3 or more positioning points can be easily set without requiring stoppers. Various grip types are possible with the configurable grip force. (Grip force can be sustained even when the power is shut off during retention.)



Multi-point positioning



Grip force settings

Feature **3** Multi-Surface Mounting

The body can be mounted on 4 surfaces, with reference holes that enable easy repeat positioning when attaching/removing.



EG Structure Exhibits High Performance



Light, smoothly moving structure that withstands repeated open/close operations.

The LM Guide enables high rigidity in addition to smooth operation.

The low-lead slip screw and reduction gear enable high positioning accuracy and grip force with low motor drive force.

Z Grip force is maintained even at power shutoff.

The open/close position maintenance mechanism allows continuous grip force. * Open/close can be manually released.





Choose between motor or no motor specifications.

Motor specifications include both stepper motors and servo motors, allowing you to choose based on the application.



Ex. TSC specifications for standalone use, servo motor specifications for multi-axis use, etc.

Applications

Basic Uses

Grasping	Gripping	ID Gripping

Example Product Uses



Multi-axis robot tip

Orthogonal multi-axis end effector

Product Lineup

	EG28V	EG35V	EG42V
	Stroke:	Stroke:	Stroke:
	Max. 7 [mm] (single side)	Max. 11 [mm] (single side)	Max. 15 [mm] (single side)
TSC Specifications	81 81 99 99 90 90 90 90 90 90 90 90		

		EG28V	EG35V	EG42V
		Stroke:	Stroke:	Stroke:
		Max. 7 [mm] (single side)	Max. 11 [mm] (single side)	Max. 15 [mm] (single side)
t motor	Stepper motor specification			
Withou	Servo motor specification			

MEMO

Model Configuration



EG (TSC Specifications) When combining with a dedicated driver controller



System Configuration



Model Configuration



EG (type without motor)

When purchasing only the main unit of the actuator, or when a customer-specified motor will be installed



List of Supported Motors

With motor bracket B selected: Stepper motor

Model	Manufacturer	Motor
EG28V		PK523A, PK523HPA(B)
		PK523HPMA(B)
	Oriental Motor Co. Ltd.	PK523PA, PK523HPA-R2GL
		PK525A
		CRK52□, AR2□
	Sanyo Denki Co., Ltd.	PBM282, PBDM282

Model	Manufacturer	Motor
	Oriental Mater Co. 1 td	PK233PA(B), PK235PA(B)
EG35V	Oriental Motor Co. Ltd.	CMK23□

Model	Manufacturer	Motor
EG42V Oriental Motor Co. Ltd.		PK543-A(B), PK544-A(B)
	PK545-A(B)	
		CRK54□, CMK24□

With motor bracket B selected: Servo motor

Model	Manufacturer	Motor
50001/	Yaskawa Electric Corporation	SGMMV-A1, SGMMV-A2 SGMMV-A3
EG20V	Mitsubishi Electric Corporation	HG-AK0136, HG-AK0236 HG-AK0336

M	odel	Manufacturer	Motor
EG35V —		Yaskawa Electric Corporation	SGMMV-A1, SGMMV-A2 SGMMV-A3
		Mitsubishi Electric Corporation	HG-AK0136, HG-AK0236 HG-AK0336

Model	Manufacturer	Motor
	Yaskawa Electric Corporation	SGM7J-A5, SGM7A-A5 SGM7J-01, SGM7A-01 SGM7J-C2
	Mitsubishi Electric Corporation	HG-MR053, HG-KR053
EG42V	Tamagawa Seiki Co., Ltd.	TSM3102, TSM3104
	Panasonic Corporation	MHMF5A, MHMF01
	Sanyo Denki Co., Ltd.	R2□A04005, R2EA04008
	Omron Corporation	R88M-K05030, R88M-K10030

Economy Series

EG28V TSC Specifications Without motor

Model Configuration

					(6) to (8) must be specified when selectin	g "TS" for "With/without	
Model	Feed screw lead	Stroke	Control device/ With/without motor	Motor bracket	Motor size	Home position	Cable type and length
EG28V	02	- 014 -	TS	- A /	28P	D00	S3
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
EG28V	02: 2 mm	014: 14 mm	TS: Stepper	No symbol: None	28P: Stepper motor	D00: Opening side	No symbol: None
			driver	A	□28	R00: Closing side	S3: For secured 3 m
			TSC	В			S5: For secured 5 m
			0: Without motor				SA: For secured 10 m
			1: With motor (Prepared by THK)				

Basic Specifications

Moto	□28	
Stroke (sing	14(7)	
Grip fo	20	
Grip force mainte	enance factor [%]	95
Acceleration/dec	eleration rate [G]	0.1
Moving speed (s	ingle side) [mm/s]	80(40)
Gripping speed (s	single side) [mm/s]	6(3)
Screw le	2	
Reduction ratio (n	9.25/14	
Positioning rep	±0.01	
Backlas	0.2	
Starting to	orque [N·m]	0.006
Running life (grip count) [times]		10,000,000
Permissible inp	0.07	
	For stepper motor*	0.33
Weight [kg]	For servo motor*	0.38
	When combined with TSC	0.54

* Motor is not included.

Basic dynamic loa	2,050	
Basic static load	2,690	
Static permissible	M _A direction	7.33
moment	M _B direction	7.33
[N·m]	M _c direction	12.5

Static Permissible Moment







Motor Selection

EG motor selection	information	(stepper)
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Screw lead [mm]	Screw length [mm]	Weight of moving element [kg]	Reduction ratio	Overall efficiency	Shaft converted inertia [kg·m ²]
2	38	0.066	9.25/14	0.36	1.21 × 10⁻ ⁶

EG motor selection information (servo)

Screw lead	Screw length	Weight of moving	Reduction	Overall	Shaft converted inertia	Recommend	led Coupling
[mm]	[mm]	element [kg]	ratio	efficiency	[kg·m²]	Coupling model	Coupling inertia [kg·m ²]
2	52.4	0.066	9.25/14	0.36	1.32 × 10⁻ ⁶	SFC-010SA2-5B-*B	0.58 × 10⁻ ⁶



Dimensions



EG28V

Dimensions

Without motor (stepper motor specifications)







(Symmetrical position on opposite side)

18

15

₽

Dimensions

Without motor (servo motor specifications)





Economy Series

EG35V TSC Specifications Without motor

Model Configuration

					(6) to (8) must be specified when selectin	g "TS" for "With/withou	motor" and "Control device type."
Model	Feed screw lead	Stroke	Control device/ With/without motor	Motor bracket	Motor size	Home position	Cable type and length
EG35V	- 02	- 022 -	- TS	- A /	35P	D00	S 3
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
EG35V	02: 2 mm	022: 22 mm	TS: Stepper	No symbol: None	35P: Stepper motor	D00: Opening side	No symbol: None
			driver	A	□35	R00: Closing side	S3: For secured 3 m
			TSC	В			S5: For secured 5 m
			0: Without motor				SA: For secured 10 m
			1: With motor (Prepared by THK)				

Basic Specifications

Moto	□35			
Stroke (sing	22(11)			
Grip fo	orce [N]	57		
Grip force mainte	enance factor [%]	95		
Acceleration/dec	eleration rate [G]	0.3		
Moving speed (s	ingle side) [mm/s]	100(50)		
Gripping speed (s	Gripping speed (single side) [mm/s]			
Screw le	2			
Reduction ratio (n	12.8/19			
Positioning rep	peatability [mm]	±0.01		
Backlas	sh [mm]	0.3		
Starting to	orque [N·m]	0.008		
Running life (grip count) [times]		10,000,000		
Permissible inp	0.157			
	For stepper motor*	0.55		
Weight [kg]	For servo motor*	0.59		
	When combined with TSC	0.83		

* Motor is not included.

Basic dynamic loa	2,960	
Basic static load	3,680	
Static permissible	M _A direction	11.2
moment	M _B direction	11.2
[N·m]	M _c direction	21.1

Static Permissible Moment







Motor Selection

EG motor selection	information	(stepper)
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Screw lead [mm]	Screw length [mm]	Weight of moving element [kg]	Reduction ratio	Overall efficiency	Shaft converted inertia [kg·m ²]
2	45.8	0.088	12.8/19	0.36	2.76 × 10 ⁻⁶

EG motor selection information (servo)

Screw lead	Screw length	Weight of moving	Reduction	Overall	Shaft converted inertia	Recommend	led Coupling
[mm]	[mm]	element [kg]	ratio	efficiency	[kg·m²]	Coupling model	Coupling inertia [kg·m ²]
2	59	0.088	12.8/19	0.36	2.87 × 10⁻ ⁶	SFC-010SA2-5B-*B	0.58 × 10⁻ ⁶



Dimensions

TSC specifications







EG35V

Dimensions

Without motor (stepper motor specifications)



Section B (detail)

Slot (detail)

Section A (detail)

EG35V

Dimensions

Without motor (servo motor specifications)



Economy Series

EG42V TSC Specifications Without motor

Model Configuration

					(6) to (8) must be specified when selecting	g "TS" for <mark>"With/withou</mark>	t motor" and "Control device type."
Model	Feed screw lead	Stroke	Control device/ With/without motor	Motor bracket	Motor size	Home position	Cable type and length
EG42V	02	- 030 -	TS	- A /	42P	D00	S3
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
EG42V	02: 2 mm	<mark>030:</mark> 30 mm	TS: Stepper	No symbol: None	42P: Stepper motor	D00: Opening side	No symbol: None
			controller	A	□42	R00: Closing side	S3: For secured 3 m
			TSC	В			S5: For secured 5 m
			0: Without motor				SA: For secured 10 m
			1: With motor (Prepared by THK)				

Basic Specifications

Moto	Motor size			
Stroke (sing	30(15)			
Grip fo	orce [N]	102		
Grip force mainte	enance factor [%]	95		
Acceleration/dec	eleration rate [G]	0.3		
Moving speed (s	ingle side) [mm/s]	140(70)		
Gripping speed (s	Gripping speed (single side) [mm/s]			
Screw le	2			
Reduction ratio (n	14.2/20			
Positioning rep	eatability [mm]	±0.01		
Backlas	sh [mm]	0.3		
Starting to	rque [N⋅m]	0.01		
Running life (gr	10,000,000			
Permissible inp	0.311			
	For stepper motor*	0.79		
Weight [kg]	For servo motor*	0.87		
	When combined with TSC	1.22		

* Motor is not included.

Basic dynamic loa	4,440	
Basic static load	5,080	
Static permissible	M _A direction	17.4
moment	M _B direction	17.4
[N·m]	M _c direction	36

Static Permissible Moment







Motor Selection

EG motor selection	information	(stepper)
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Screw lead [mm]	Screw length [mm]	Weight of moving element [kg]	Reduction ratio	Overall efficiency	Shaft converted inertia [kg·m ²]
2	51.6	0.112	14.2/20	0.36	6.11 × 10 ⁻⁶

EG motor selection information (servo)

Screw lead	Screw length	Weight of moving	Reduction	Overall	Shaft converted inertia	Recommend	led Coupling
[mm]	[mm]	element [kg]	ratio	efficiency	[kg·m²]	Coupling model	Coupling inertia [kg·m ²]
2	63.6	0.112	14.2/20	0.36	6.20 × 10 ⁻⁶	SFC-020SA2-6B-*B	2.39 × 10 ⁻⁶



Dimensions

TSC specifications





EG42V

Dimensions

Without motor (stepper motor specifications)







Dimensions

Without motor (servo motor specifications)





Features

Simple to set up and ready to use.

Simple Operation

Use the D-STEP PC setup tool for easy access to a wide range of functions.

Functions

Selectable function modes

(64-position, external unit input teaching, 256-position, solenoid mode 1, solenoid mode 2)

· Step data count: Up to 256 (depending on function mode)

Cables provided with product.

- · Alarm log: Up to 50 alarms (including power ON log)
- · Switching between Auto/Manual, brake release switch
- · Selectable control methods (positioning or pressing)



System Configuration

Design Applicable Current Feed screw Model Туре Stroke Brake symbol value actuator lead position TSC MOD 014 015 В EG28V 02 D (1) (2)(3)(4) (6)(8) (9) (5) (7)MOD: Mode TSC 015: 1.5 A В EG28V 02: 2 mm 014: 14 mm D: Opening side No symbol: None switching EG35V 022: 22 mm R: Closing side type EG42V 030: 30 mm Strokes you can select differ depending on the model. EG28V: 014 EG35V: 022 Specifications EG42V: 030 Basic specifications 24 VDC ± 10% (up to 2.5 A) Input power supply Number of control axes 1 axis Stepper motor (28 mm, 35 mm, 42 mm) Motor type Control Feedback control (Semi-closed loop) Control method Position detection method Incremental Acceleration/deceleration method Trapezoidal acceleration/deceleration Function mode 64-position External unit input teaching type 256-position Solenoid mode 1 Solenoid mode 2 Program Step data count 64 points 64 points 256 points 7 points 3 points D-STEP PC setup tool Data input method Input point count 16 points (Start, Return to home position, Pause, Reset, Servo ON, Specify step number, etc.) Dedicated input/output Output point count Input/output 16 points (Return to home position completed, In position, Servo ready, Alarm, Emergency stop, etc.) External power supply for input/output 24 VDC \pm 10% (To be provided by customer.) Connected device D-STEP PC setup tool RS-485 Communication Serial communication Communication method Port count Mini DIN × 1 Operating/storage temperature 0 to 40°C (No freezing)/-20 to 85°C (No freezing) Operating Operating humidity/Storage humidity 90% RH or below (No condensation) conditions Ambient conditions Interior (avoid direct sunlight), free from corrosive gas, inflammable gas, oil mist, and dust. Protective function Overload, overvoltage, position deviation error, software limit over error, etc. Power connector x 1 Accessories I/O connector x 1 General I/O cable 3 m, 5 m, 7 m, 10 m specifications Options (sold separately) PC communication cable (mini DIN \Leftrightarrow USB) External dimensions 32 mm (W) × 192.2 mm (H) × (D)

300 g or less

Model Configuration

TSC Function Mode

Weight

For TSC, five modes are provided to support various requirements and purposes.

	Function mode	Overview	Step data count	Grip control
ng type	0: 64-position	Multi-point positioning operation with 64 points With area output, with P area output	64	0
oint positioni	1: External unit input teaching type	Multi-point positioning operation with 64 points I/O-based external unit teaching mode Without area output, with P area output	64	-
Multi-po	2: 256-position	Multi-point positioning operation with 256 points Without area output, with P area output	256	0
lve type	4: Solenoid mode 1 type	Multi-point positioning operation with 7 points Direct motion command input With area output, with P area output	7	0
Solenoid va	5: Solenoid mode 2 type	Multi-point positioning operation with 3 points Direct motion command input Position detection auto-switch output With area output, with P area output	3	-

	CN1	Signal name				
I/O	Pin	Function mode "0"	Function mode "1"	Function mode "2"	Function mode "4"	Function mode "5"
	Number	64-position	External unit input teaching type	256-position	Solenoid mode 1	Solenoid mode 2
	3	PI 0	PI 0	PI 0	ST 0	ST 0
	4	PI 1	PI 1	PI 1	ST 1	ST 1
	5	PI 2	PI 2	PI 2	ST 2	ST 2
	6	PI 3	PI 3	PI 3	ST 3	-
	7	PI 4	PI 4	PI 4	ST 4	-
	8	PI 5	PI 5	PI 5	ST 5	-
	9	-	MODE	PI 6	ST 6	-
Input	10	-	JOG/INCHING	PI 7	-	-
input	11	-	JOG P	-	-	-
	12	(BKRL)	JOG N	(BKRL)	(BKRL)	(BKRL)
	13	STRT	STRT/PWRT	STRT	-	-
	14	MANU	MANU	MANU	MANU	MANU
	15	HOME	HOME	HOME	HOME	HOME
	16	PAUSE	PAUSE	PAUSE	PAUSE	PAUSE
	17	REST	REST	REST	REST	REST
	18	SV-ON	SV-ON	SV-ON	SV-ON	SV-ON
	19	PO 0	PO 0	PO 0	PE 0	LS 0
	20	PO 1	PO 1	PO 1	PE 1	LS 1
	21	PO 2	PO 2	PO 2	PE 2	LS 2
	22	PO 3	PO 3	PO 3	PE 3	-
	23	PO 4	PO 4	PO 4	PE 4	-
	24	PO 5	PO 5	PO 5	PE 5	-
	25	MOVE	MOVE	PO 6	PE 6	-
Output	26	AREA	MODES	PO 7	AREA	AREA
Output	27	P AREA	P AREA	P AREA	P AREA	P AREA
	28	MANU S	MANU S	MANU S	MANU S	MANU S
	29	HEND	HEND	HEND	HEND	HEND
	30	INPS	INPS	INPS	INPS	-
	31	LOAD/TRQS	WEND	LOAD/TRQS	LOAD/TRQS	-
	32	SVRDY	SVRDY	SVRDY	SVRDY	SVRDY
	33	EMGS	EMGS	EMGS	EMGS	EMGS
	34	ALM	ALM	ALM	ALM	ALM
					() indicate non-compatibility.

TSC Pin Assignment by Function Mode

Detailed Specifications of Input Signal Functions

	Input		
Signal name	Description	Remarks	
MANU	Operation mode	Switches AUTO/MANUAL from I/O. MANUAL when signal is on, AUTO when off.	
STRT	Start	Start signal of program step. Program starts when signal is on.	
PI0 to PI7	Command position number	Input for specifying position numbers. Specifies programs at each signal level. Selects a program step and starts a program with "STRT" signal.	
PAUSE	Pause	Temporarily interrupts the operation. PAUSE input status when signal is off (N.C. connection specification)	
HOME	Return to home position	Starts the return to home position operation. Returning to home position is started when signal is on. Stops when it is off.	
SV-ON	Servo on	Turns the servo ON and OFF. Servo ON when signal is on, and servo OFF when signal is off.	
REST	Alarm reset	Resets alarm. Resets remaining travel distance during pause. Resets when it is on.	
BKRL	Brake release	Forcibly releases brake. Releases brake when it is on.	
MODE	External unit input teaching mode	Enters teaching mode when signal is turned on. In teaching mode when signal is on.	
PWRT	Current position write with external unit input teaching	In teaching mode, writes position when writing position is specified and this signal is on for 20 ms or more.	
JOG/INCHING	Manual operation switch with external unit input teaching	Switches manual operation while in teaching mode. Selects inching operation when it is on, and jog operation when it is off.	
JOG P	Moving direction + with external unit input teaching	Operating direction and operation start signal in teaching mode. Moves in + direction to the soft limit when signal is on. Decelerates and stops when turned off while moving.	
JOG N	Moving direction - with external unit input teaching	Operating direction and operation start signal in teaching mode. Moves in - direction to the soft limit when signal is on. Decelerates and stops when turned off while moving.	
ST0~ST6	Cylinder type START	Program start signal for position numbers from "ST0" to "ST6." Can select either Level or Edge for signal using parameter 13 "move" command. Note that when more than two positions are on at the same time, the lowest-number signal takes precedence.	

Detailed Specifications of Output Signal Functions

	Output		
Signal name	Description	Remarks	
MANU S	Operation mode	Operation mode status outputs (AUTO/MANUAL). MANUAL when signal is on, AUTO when off.	
PO0~PO7	Completion position number	Outputs the position number arrived at after positioning is completed (binary outputs).	
MOVE	Moving	Outputs signal during motor operation.	
INPS	Positioning completed	Outputs when motor comes within the positioning completed range.	
SVRDY	Operation preparations completed	Outputs signal when servo is on.	
ALM	Alarm	Alarm output signal.	
MODES	Operation mode status	Outputs teaching mode/regular operation mode judgment signal. Teaching mode when signal is on. Regular operation mode when it is off.	
WEND	Writing completed	Signal is off after switching to the regular mode, and it is on for 30 ms when writing of the PWRT signal is completed.	
HEND	Return to home position completed	Outputs signal when returning to home position is completed.	
AREA	Upper/lower area limit	On when the current position of actuator is within a range specified by the parameter.	
P AREA	Position area	On when the current position of actuator is within a range specified by the program step.	
EMGS	Emergency stop status	Outputs judgment for input of emergency stop. On during normal operation, and off when emergency stop circuit is shut off.	
LOAD	Load output judgment status	OFF when command torque is within the threshold over a certain period within a judgment range.	
TRQS	Torque level status	On when the load threshold is reached while moving. Off while the load remains under the threshold.	
PE0~PE6	Cylinder type arrival completed output	Signal generated after operation for position number is completed.	
LS0~LS2	Cylinder type position detection output	Outputs when the current position comes within the positioning range. For each of the three points.	
HEND AREA P AREA EMGS LOAD TRQS PE0-PE6 LS0-LS2	Return to home position completed Upper/lower area limit Position area Emergency stop status Load output judgment status Torque level status Cylinder type arrival completed output Cylinder type position detection output	Outputs signal when returning to home position is completed. On when the current position of actuator is within a range specified by the parameter. On when the current position of actuator is within a range specified by the program step. Outputs judgment for input of emergency stop. On during normal operation, and off when emergency stop circuit is shut off. OFF when command torque is within the threshold over a certain period within a judgment range. On when the load threshold is reached while moving. Off while the load remains under the threshold. Signal generated after operation for position number is completed. Outputs when the current position comes within the positioning range. For each of the three points.	



* Customer provides 24 VDC power supply for input/output circuitry.

Input/Output Circuitry for TSC (CN1)

Input circuit



Output circuit



I/O Connector Pin Numbers



* Controller connector port view

Dimensional Drawing of Controller



Actuator Cable

TSC actuator cable: CBL-TSC-AC-* *-B (Standard) ** indicates cable length: 03 (3 m), 05 (5 m), or 10 (10 m)



* To use a 10 m actuator cable, please insert a noise filter into the TSC power supply. The recommended noise filter is "RSAN-2003 (TDK-Lambda Corporation)."

Cable

I/O cable: CBL-CON-IO-** (** indicates cable length: 03 (3 m), 05 (5 m), or 10 (10 m)) (sold separately) Can be used with the dedicated driver controller TSC.

* Cables are shipped with the discrete wire side terminals unprocessed.



PC communications cable: CBL-COM-03 (sold separately)



D-STEP PC setup tool



Features

Supports multifunctional TSC/TLC/THC with a user-friendly interface.

Simple Operation

TSC operations and settings can be performed from a PC. Equipped with functions useful for maintenance, such as backing up data or logging operating states.

Functions

- · Checking, editing, backing up, or offline editing of step data
- \cdot Checking, editing, backing up, or offline editing of parameters
- · Actuator operations (Return to home position, Jog operation, Inching operation, Program execution, Servo ON/OFF)
- Monitoring (I/O, Current position, Position command, Current command) · Logging (Speed and current waveform display)
 Alarms (Log display, Clear log, Alarm reset) · Display language (Japanese/English/Simplified Chinese)
- Supported OS: Windows XP/Windows Vista/Windows 7 D-STEP can be downloaded for free from the THK technical support website. (tech.thk.com)
- \ast TSC for EG is supported with Version 1.31 or later.

Precautions on Use

Operation

- Do not unnecessarily disassemble the actuator or control devices. Doing so may allow foreign objects to enter or reduce functionality.
- Do not drop or strike the actuator or control devices. Doing so may cause injury or damage the unit. If the product is dropped or struck, functionality may be reduced even if there is no surface damage.
- If the product will be used in a location exposed to vibrations or in a special environment such as in a vacuum or clean room, or in high or low temperatures, contact THK.
- \cdot When the product is mounted on the wall, be sure that the pulley side is not at the bottom.

Environment

An environment with poor conditions may cause the actuator and controller to malfunction. Please use them in the following types of locations:

- Actuator: A place with an ambient temperature from 0 to 40°C and humidity of 80% RH or lower that will not expose the product to freezing or condensation.
- Controller: A place with an ambient temperature from 0 to 40°C and humidity of no more than 90% RH that will not expose the product to freezing or condensation.
- $\cdot\,$ A place free from corrosive gas and flammable gas.
- A place free from electrically conductive powder (such as iron powder), dust, oil mist, moisture, salt, and organic solvent.
- $\cdot\,$ A place free from direct sunlight and radiant heat.
- $\cdot\,$ A place free from strong electric and magnetic fields.
- $\cdot\,$ A place where vibrations or impacts are not transmitted to the unit.
- $\cdot\,$ A place that is easily accessible for service and cleaning purposes.

Safety Precautions

- $\cdot\,$ When the actuator is moving or ready to move, do not touch any moving parts. Do not enter the actuator's range of motion.
- Before installing, adjusting, checking, or performing maintenance on the actuator and the connected peripherals, ensure that all power is disconnected. In addition, take countermeasures to prevent anyone other than the operator from turning on the power.
- If two or more people are involved in the operation, confirm the procedures, signs, and methods to deal with abnormalities that will be used in advance, and appoint another person for monitoring the operation.
- Before operation, please thoroughly read and follow "Manipulating industrial robots Safety" (JIS B8433) and "Ordinance on Industrial Safety and Health" (Ministry of Health, Labour and Welfare).
- Operation of the actuator over the torque limit value leads to damage of parts or injury. Please keep the parameter torque limit settings within the allowable torque.
- Although a stopper is installed inside the product, it is intended to limit the stroke and therefore may be damaged in case of a hard collision.

Lubrication

- · Thoroughly wipe-off the anti-rust oil before using the product.
- In order to effectively use the EG, lubrication is required. Insufficient lubrication may cause moving parts to wear more and shorten service life.
- · Do not use a mix of lubricants with different physical properties.
- · Please contact THK if using special lubricants.
- · When using an oil lubrication method, contact THK.
- The greasing interval may vary depending on the usage conditions, so THK recommends determining a greasing interval during the initial inspection.
- Storage
- When storing the actuator, enclose it in a package designated by THK and store it in a horizontal position away from high or low temperatures and high humidity.
- · When storing the controller, avoid high or low temperatures and high humidity.



THK ACTUATORS ECONOMY Series EG

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