CKD

New Products

Electric actuator

EJSG Series

EJSG-G Series (dust-proof specifications)
EJSG-C Series (low dust specification)
EJSG-P4 Series (compatible with rechargeable battery manufacturing processes)
EJSG-FP1 Series (compatible with food manufacturing processes)

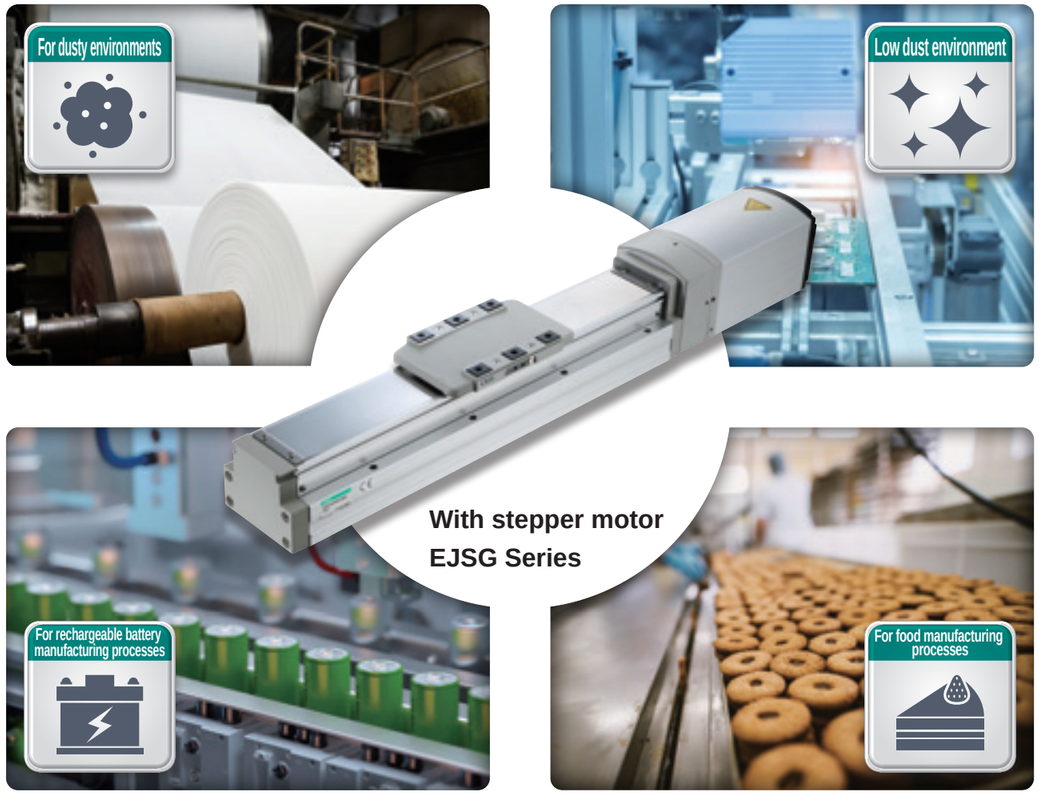
Electric actuators for usage in various environments

ROBODEX *Pulse*

CKD Corporation

CC-1569A 1

To be used safely in various environments and processes



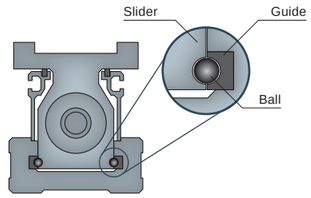
Five line-up products in pursuit of ease of use and high rigidity are available

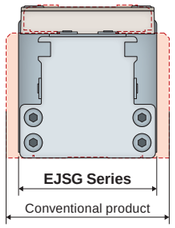
Line-up		Size 04	Size 05	Size 08	Catalog Page
Actuator	EJSG	●	●	●	1
	Dust-proof EJSG-G	●	●	●	37
	Low dust specification EJSG-C	●	●	●	55
	Compatible with rechargeable battery manufacturing processes EJSG-P4	●	●	●	73
	Supports food manufacturing processes EJSG-FP1	●	●	●	91
Applicable controller	ECG-A	●	●	●	117

Compact body with high rigidity

High rigidity · Space saving · Reduced design · Reduced parts · Reduced man-hours

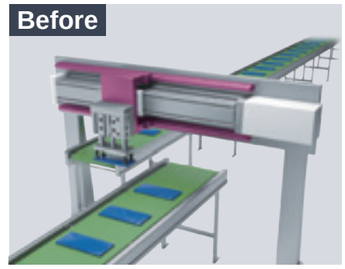
An outer rail is used for the guide which supports loads. The wide guide is integrated with the body to achieve both high rigidity and space saving.





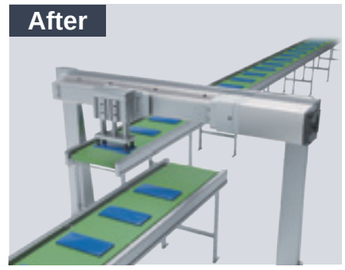
		Conventional product	EJSG-05
Body width		64 mm	54 mm
Static allowable moment	MP	25.7 N·m	103 N·m
	MY	25.7 N·m	103 N·m
	MR	58 N·m	144 N·m

Before



Uses an additional guide to reduce moment

After



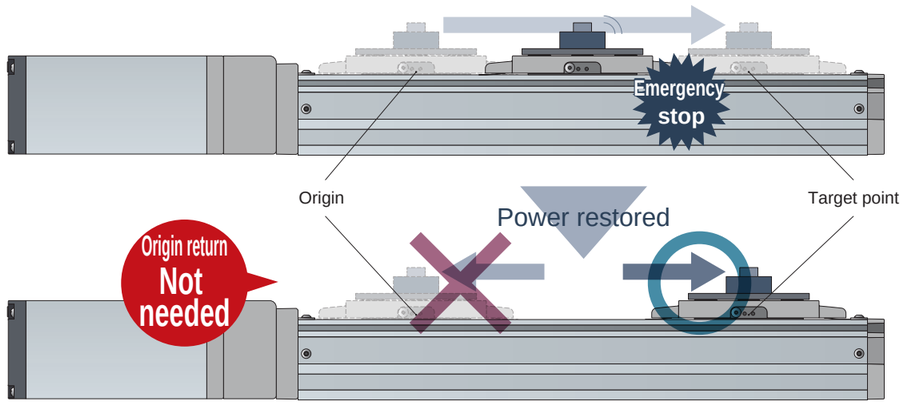
Highly rigid body supports the moment, eliminating the need for an additional guide

Battery-less absolute encoder

Easy maintenance · Reduced parts

Equipped with an absolute encoder that retains current position information. As it uses a battery-less specification, there is no need to replace the battery.

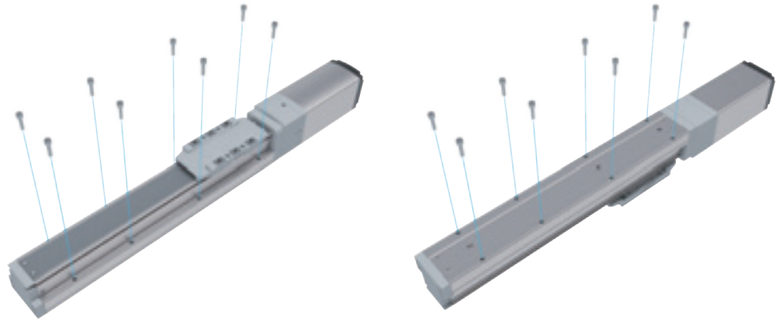
* All series with options



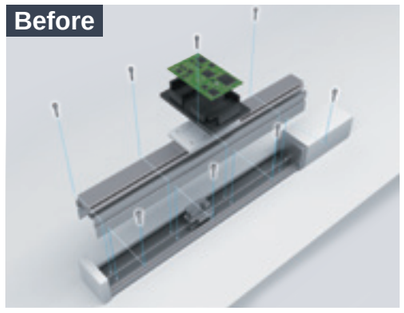
Mounting holes provided on top and bottom

Reduced man-hours

The product structure allows direct installation from the top or bottom, without disassembly.
This can save a significant amount of time, especially when installing from the top.

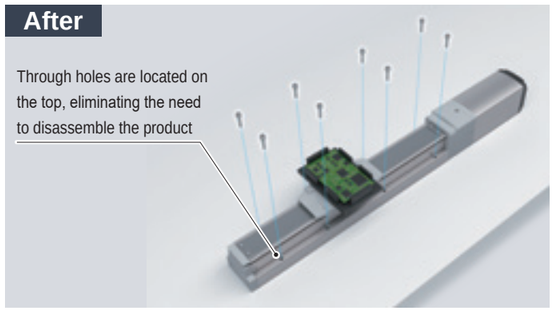


Before



Disassemble the body for top mounting

After



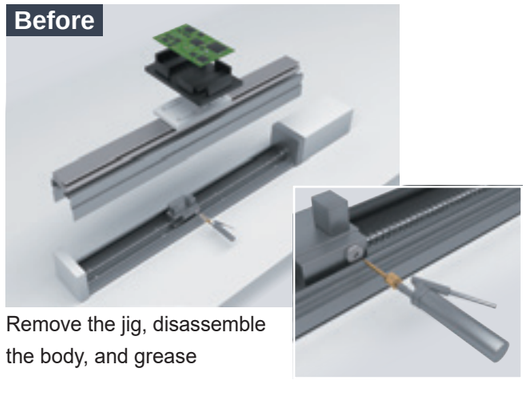
Top mounting without disassembly of body

Equipped with an external grease lubrication port

Easy maintenance
Reduced man-hours

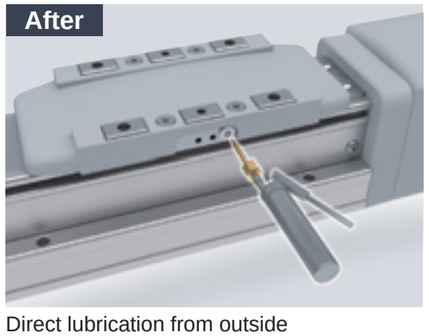
The product comes equipped with a lubrication port on both sides to allow direct lubrication from the exterior. Both the guide and ball screw can be maintained simply by lubricating from a single location, without disassembling the body.

Before



Remove the jig, disassemble the body, and grease

After

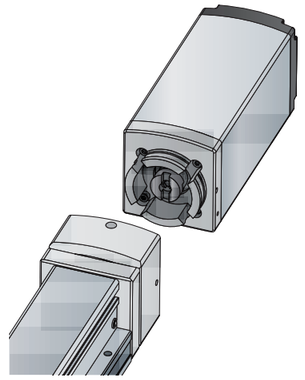


Direct lubrication from outside

Replaceable motor unit

Easy maintenance

Motor units can be replaced.
Maintenance is easy.

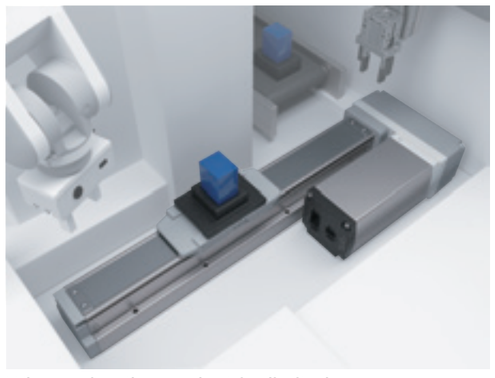


Available as made to order actuators

High versatility

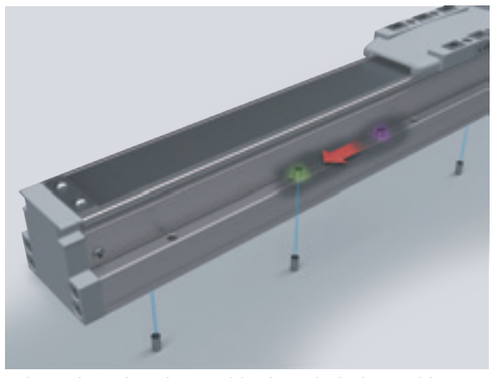
Consult with CKD if you have any problems with the actuator dimensions, etc.
*Made-to-order product.

Custom Stroke *10mm increments



When using the product for limited space

Changing a machining hole position



When changing the positioning pin hole position

Applicable controller

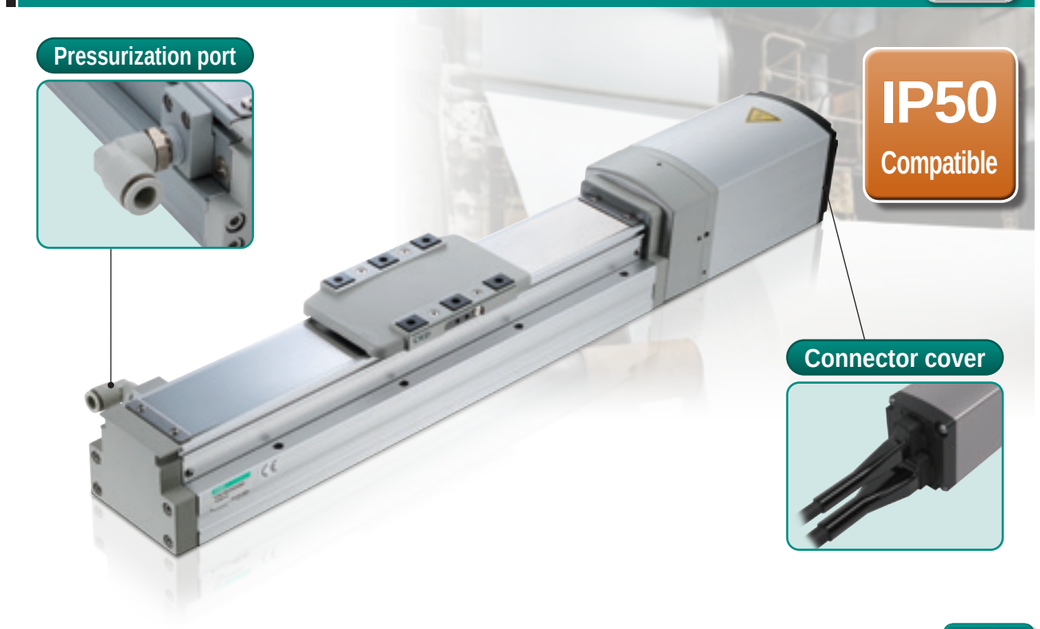
ECG-A

Single axis controller that can control slider and rod actuators.

Electric actuator with long service life in dusty

EJSG-G Series (dust-proof specifications)

For dusty environments



Improved durability in dusty environments

Long service life

Compatible with protection degree IP50. Durability in dusty environments has been greatly improved compared to standard products.

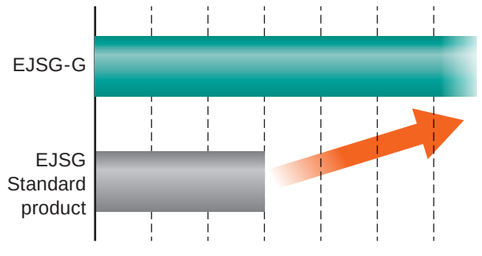
2x or more conventional

Running tests in dusty environments

[Test conditions]

Item		Description
test Sample	Model No.	EJSG-05E100600NBN-VCN00-G
	Speed	400 mm/s
	Acceleration/deceleration	0.6G
	Purge flow rate	40NL/min
Environment	Dust material	Kanto-rohm (seven types)
	Dust diameter	75 μm
	Dust float	2kg/m³

Travel distance



Electric actuator ideal for clean environments

EJSG-C Series (low dust specification)

Low dust environment

Electric actuator ideal for rechargeable battery

EJSG-P4 Series

For rechargeable battery manufacturing processes
Material restrictions
Dry environment
DEW POINT -70°C

The use above is limited in the sliding part configuration.
* Excluding motor, wiring, and connector parts.

Electric actuator ideal for food manufacturing processes

EJSG-FP1 Series

For food manufacturing processes

FP Food Process®

CKD

Electric actuator
Motor specification

EJSG

Slider

CONTENTS

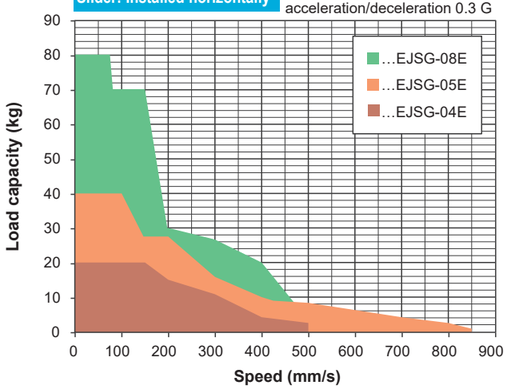
EJSG Series

Series variation

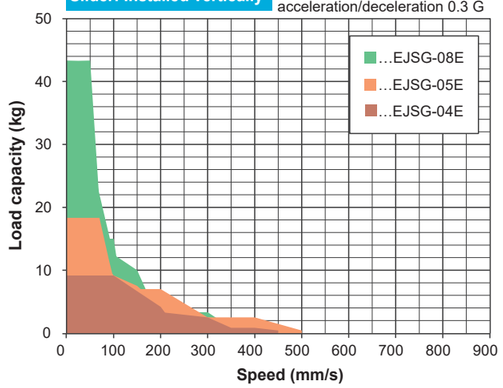
Controller	Actuator Model No.		Motor Size	Motor Mounting Direction	Body width (mm)	Screw lead (mm)	Max. load capacity (kg) Horizontal	Max. load capacity (kg) Vertical	Max. Pressing force (N)	Stroke (mm) and max. speed (mm/s)	Listed page
ECG Series		EJSG-04E06	□ 35	Straight	44	6	20.0	9.2	155	50 mm: 320 mm/s; 100: 290; 150: 250; 200: 220; 250: 190; 300: 170	6
		EJSG-04E12				12	15.0	3.3	77	50 mm: 500; 100: 440; 150: 390; 200: 340	
		EJSG-04R/D/L06		Left/Right/ Bottom		6	20.0	9.2	155	50 mm: 250; 100: 220; 150: 190; 200: 170	10
		EJSG-04R/D/L12				12	11.7	3.3	77	50 mm: 400; 100: 390; 150: 340	
		EJSG-05E05	□ 42	Straight	54	5	40.0	14.0	220	50 mm: 290; 100: 260; 150: 225; 200: 200; 250: 175; 300: 150	16
		EJSG-05E10				10	27.5	7.0	110	50 mm: 500; 100: 455; 150: 400; 200: 355; 250: 315	
		EJSG-05E20				20	18.3	2.5	55	50 mm: 850; 100: 800; 150: 710; 200: 630	
		EJSG-05R/D/L05		Left/Right/ Bottom		5	40.0	10.0	220	50 mm: 250; 100: 225; 150: 200; 200: 175; 250: 150	20
		EJSG-05R/D/L10				10	27.5	3.3	110	50 mm: 400; 100: 355; 150: 315	
		EJSG-05R/D/L20				20	18.3	0.8	55	50 mm: 700; 100: 630	
		EJSG-08E05	□ 56	Straight	82	5	80.0	43.3	965	50 mm: 150; 100: 145; 150: 130; 200: 120; 250: 110	26
		EJSG-08E10				10	70.0	28.3	482	50 mm: 250; 100: 240; 150: 220	
		EJSG-08E20				20	30.0	3.3	241	50 mm: 500; 100: 480; 150: 440	
		EJSG-08R/D/L05		Left/Right/ Bottom		5	80.0	33.3	965	50 mm: 125; 100: 120; 150: 110	30
		EJSG-08R/D/L10				10	70.0	18.3	482	50 mm: 250; 100: 240; 150: 220	
		EJSG-08R/D/L20				20	30.0	3.3	241	50 mm: 400	

* This data is obtained at a power supply voltage of 24 VDC and acceleration/deceleration of 0.3G.
* The load capacity when wall mounted is the same as for horizontal installation.

Slider: Installed horizontally Power supply voltage 24 VDC, acceleration/deceleration 0.3 G



Slider: Installed vertically Power supply voltage 24 VDC, acceleration/deceleration 0.3 G



Model No. configuration

Slider

EJSG - 05 E 10 0100 N B N - C S03
(1) (2) (3) (4) (5) (6) (7)

(1) Body size

04	Body width 44mm
05	Body width 54mm
08	Body width 82mm

Applicable controller: ECG Series

(2) Motor mounting direction

E	Straight mounting
R	Right mounting
D	Bottom mounting
L	Left mounting

(3) Screw lead

05	5 mm
06	6 mm
10	10 mm
12	12 mm
20	20 mm

(4) Stroke

0050 to 1100	50 mm (In 50 mm increments) 1100 mm

(5) Brake

N	None
B	Yes

(6) Encoder

B	Battery-less absolute Encoder
C	Incremental encoder

(7) Relay cable

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

Dust-proof specifications (G Series)

EJSG - 05 E 10 0100 N B N - V C S03 - G
(1) (2) (3) (4) (5) (6) (8) (7)

Applicable controller: ECG Series

(8) Fitting

V	Yes

G: Dust-proof

Low dust specification (C Series)

EJSG - 05 E 10 0100 N B N - V C S03 - C
(1) (2) (3) (4) (5) (6) (8) (7)

Applicable controller: ECG Series

(8) Fitting

V	Yes

C: Low dust specification

Compatible with rechargeable battery manufacturing processes (P4 Series)

EJSG - 05 E 10 0100 N B N - V C S03 - P4
(1) (2) (3) (4) (5) (6) (8) (7)

Applicable controller: ECG Series

(8) Fitting

Blank	None
V	Yes

P4: Compatible with rechargeable battery manufacturing processes

Compatible with food manufacturing processes (FP1 Series)

EJSG - 05 E 10 0100 N B N - C S03 - FP1
(1) (2) (3) (4) (5) (6) (7)

Applicable controller: ECG Series

FP1: Supports food manufacturing processes

Notes

Electric actuator Slider

EJSG-04E

Straight motor mounting

□35 stepper motor

How to order

EJSG - 04 E 06 0300 N B N - C S03

❶Body size

04	Body width 44mm

❷Motor mounting direction

E	Straight mounting

❸Screw lead

06	6 mm
12	12 mm

❹Stroke

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺Brake *2

N	None
B	Yes

❻Encoder *1

B	Battery-less absolute encoder
C	Incremental encoder

❼Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When using vertically, select "Yes".
*3 Refer to page 128 for relay cable dimensions.

EAR-compliant product (EAR99-embedded product)

Specifications

Supported controllers			ECG-A	
Motor			□35 Stepping motor	
Encoder type			Battery-less absolute encoder Incremental encoder	
Drive method			Ball screw ø10	
Stroke		mm	50 to 800	
Screw lead		mm	6	12
Max. workload kg *1		Horizontal	20.0	15.0
		Vertical	9.2	3.3
Operation speed range *2		mm/s	7 to 320	15 to 500
Max. acceleration/ deceleration G		Horizontal	0.7	0.7
		Vertical	0.3	0.3
Maximum pushing force		N	155	77
Pressing operation speed range		mm/s	5 to 20	5 to 20
Repeatability		mm	±0.01	
Lost motion		mm	0.1 or less	
Static allowable moment		N·m	MP:62 MY:62 MR:92	
Motor power supply voltage			24 VDC ±10%	
Motor section max. instantaneous current		A	2.4	
Brake	Model, power supply voltage		Non-excitation operation, 24 VDC ±10%	
	Power consumption	W	6.1	
	Holding force	N	140	70
Insulation resistance			10 MΩ, 500 VDC	
Withstand voltage			500 VAC for 1 minute	
Operating ambient temperature, humidity			10 to 40 °C (no freezing) 35 to 80% RH (no condensation)	
Storage ambient temperature, humidity			-10 to 50°C (no freezing) 35 to 80% RH (no condensation)	
Atmosphere			No corrosive gas, explosive gas, or dust	

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 7 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke					
	50 to 550	600	650	700	750	800
6	320	290	250	220	190	170
12	500	500	500	440	390	340

Speed and load capacity

[When installed horizontally]

(kg)

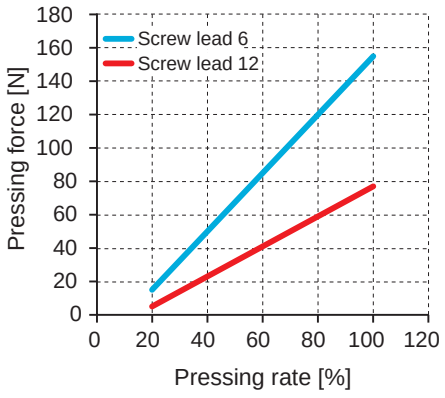
Speed (mm/s)	Acceleration/deceleration (G)			
	0.3		0.7	
	Screw lead (mm)			
	6	12	6	12
7	20.0		20.0	
15	20.0	15.0	20.0	15.0
50	20.0	15.0	20.0	15.0
100	20.0	15.0	20.0	15.0
150	20.0	15.0	12.5	10.8
200	15.0	15.0	12.5	10.8
250	11.7	10.8	11.7	8.3
300	7.5	10.8	7.5	8.3
320	7.5	4.2	7.5	4.2
400		4.2		4.2
500		2.5		2.5

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)	
	0.3	
	Screw lead (mm)	
	6	12
7	9.2	
15	9.2	3.3
50	9.2	3.3
100	9.2	3.3
150	6.7	3.3
200	4.2	3.3
225	1.7	2.5
250	1.7	2.5
275	0.4	2.5
300		2.5
350		0.8
400		0.8
450		0.4

Pressing force

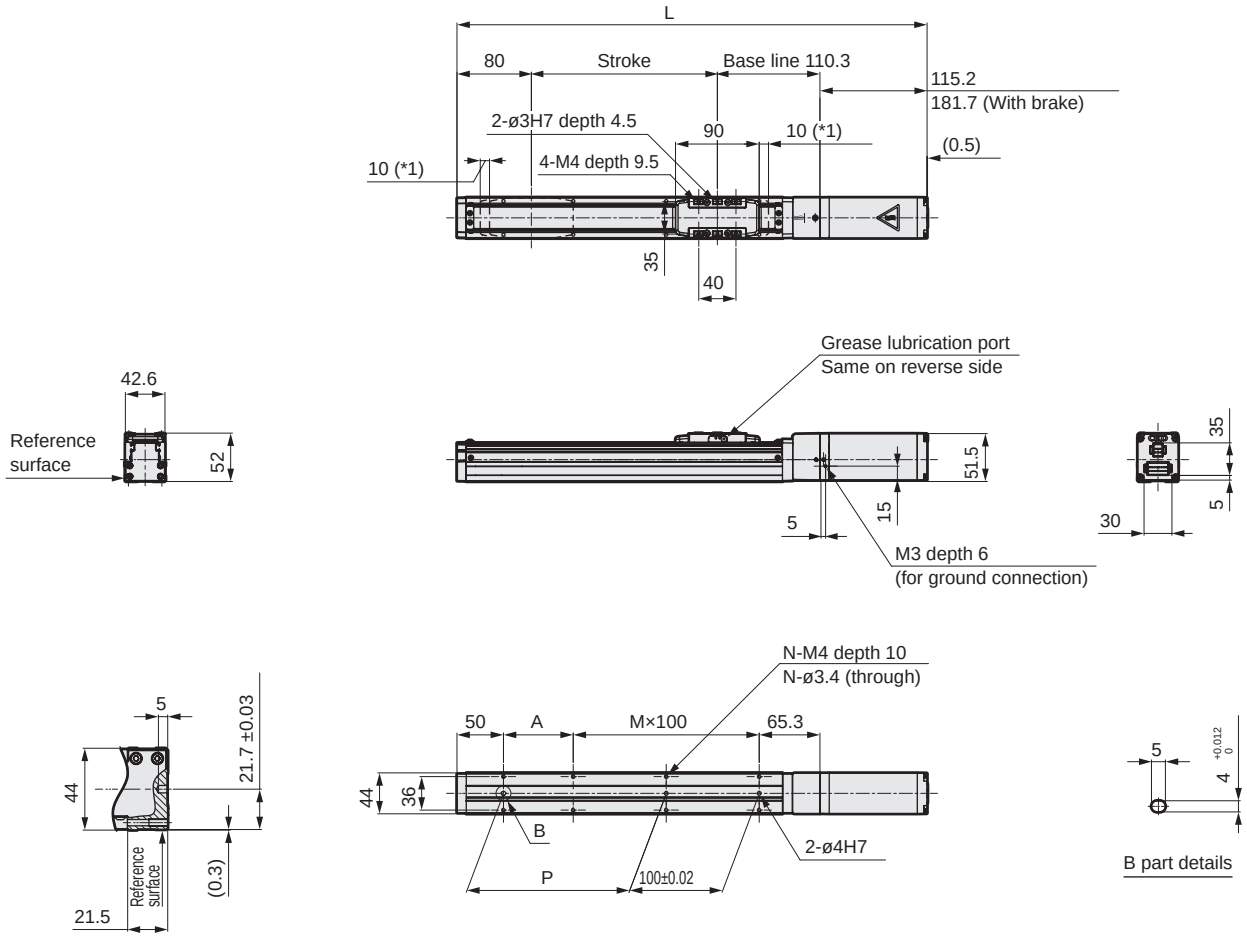


*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

EJSG-04E

Dimensions Straight motor mounting

● EJSG-04E



Note 1: Operating range to the mechanical stopper

Stroke code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	Without brake	355.5	405.5	455.5	505.5	555.5	605.5	655.5	705.5	755.5	805.5	855.5	905.5	955.5	1005.5	1055.5	1105.5
	With brake	422	472	522	572	622	672	722	772	822	872	922	972	1022	1072	1122	1172
A		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	Without brake	1.6	1.7	1.8	1.9	2.0	2.2	2.3	2.4	2.5	2.6	2.8	2.9	3.0	3.1	3.2	3.4
	With brake	2.0	2.1	2.2	2.3	2.5	2.6	2.7	2.8	2.9	3.1	3.2	3.3	3.4	3.5	3.7	3.8

Notes

Electric actuator Slider

EJSG-04*

Motor side mounting (left, right, bottom)

□35 Stepping motor

How to order

EJSG - 04 R 06 0300 N B N - C S03

❶Body size

04	Body width 44mm

❷Motor mounting direction*1

R	Right mounting
D	Bottom mounting
L	Left mounting

❸Screw lead

06	6 mm
12	12 mm

❹Stroke *2

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺Brake *3

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When selecting the motor mounting direction "D", the stroke is "0250 (250 mm)" to "0800(800mm)" is the selection.
*3 When using vertically, select "Yes".
*4 Refer to page 128 for relay cable dimensions.

EAR-compliant product (EAR99-embedded product)

Specifications

Supported controllers		ECG-A	
Motor		□35 Stepping motor	
Encoder type		Battery-less absolute encoder Incremental encoder	
Drive method		Ball screw ø10	
Stroke	mm	50 to 800	
Screw lead	mm	6	12
Max. workload kg *1	Horizontal	20.0	11.7
	Vertical	9.2	3.3
Operation speed range *2	mm/s	7 to 250	15 to 400
Max. acceleration/ deceleration G	Horizontal	0.7	0.7
	Vertical	0.3	0.3
Maximum pushing force	N	155	77
Pressing operation speed range	mm/s	5 to 20	5 to 20
Repeatability	mm	±0.01	
Lost motion	mm	0.1 or less	
Static allowable moment	N·m	MP:62 MY:62 MR:92	
Motor power supply voltage		24 VDC ±10%	
Motor section max. instantaneous current	A	2.4	
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%	
	Power consumption	W	6.1
	Holding force	N	140	70
Insulation resistance		10 MΩ, 500 VDC	
Withstand voltage		500 VAC for 1 minute	
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)	
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 11 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke			
	50 to 650	700	750	800
6	250	220	190	170
12	400	400	390	340

Speed and load capacity

[When installed horizontally]

(kg)

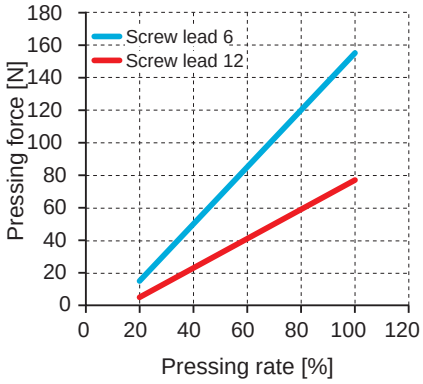
Speed (mm/s)	Acceleration/deceleration (G)			
	0.3		0.7	
	Screw lead (mm)			
	6	12	6	12
7	20.0		20.0	
15	20.0	11.7	20.0	10.0
50	20.0	11.7	20.0	10.0
100	20.0	11.7	20.0	10.0
150	13.3	11.7	11.7	10.0
200	13.3	11.7	10.0	10.0
250	10.0	8.3	8.3	8.3
300		8.3		8.3
400		3.3		3.3

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)	
	0.3	
	Screw lead (mm)	
	6	12
7	9.2	
15	9.2	3.3
50	9.2	3.3
100	6.7	3.3
150	3.3	3.3
200	2.5	3.3
225	0.8	1.7
300		1.7
350		0.8

Pressing force

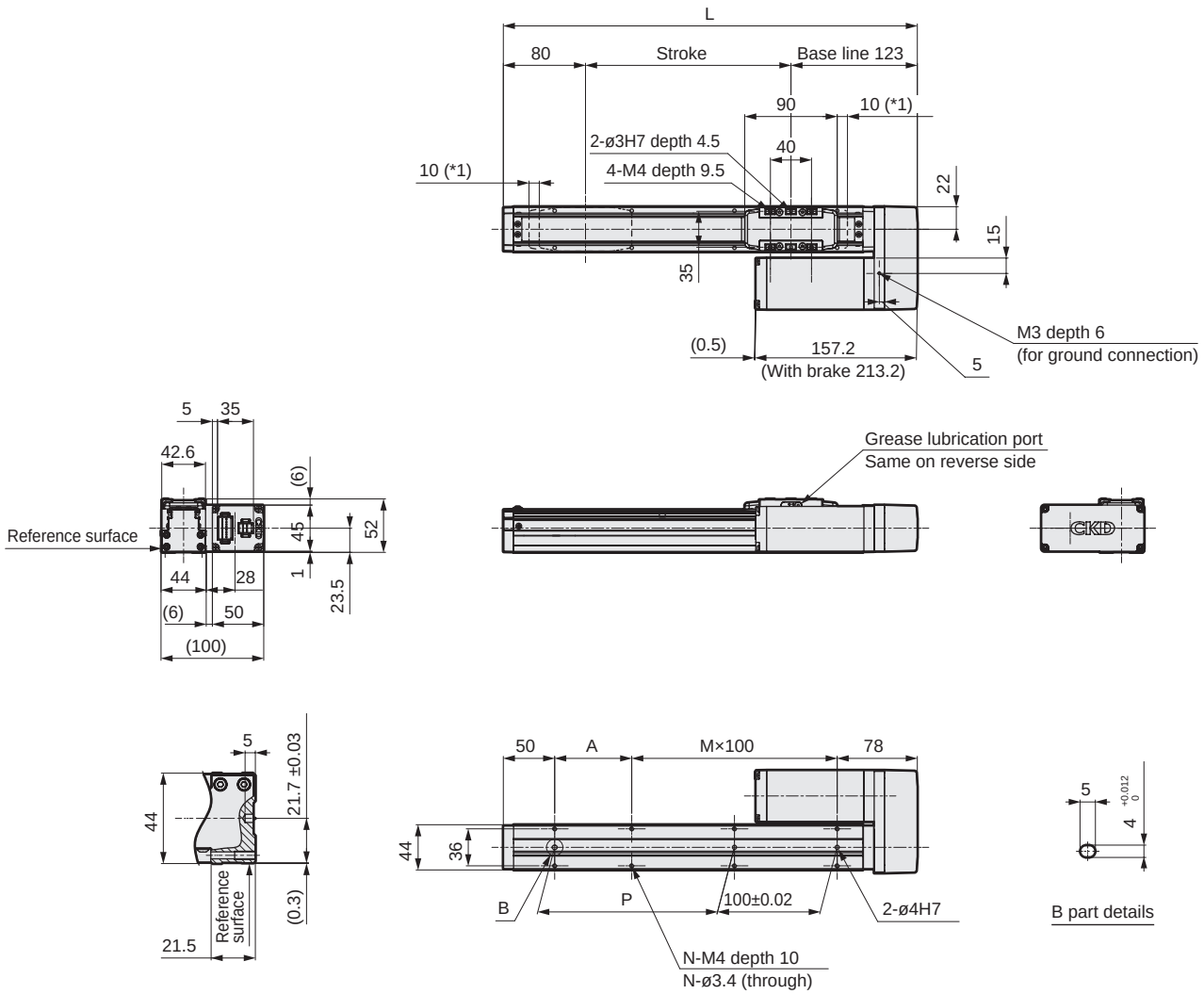


*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

EJSG-04*

Dimensions Right motor mounting

● EJSG-04R

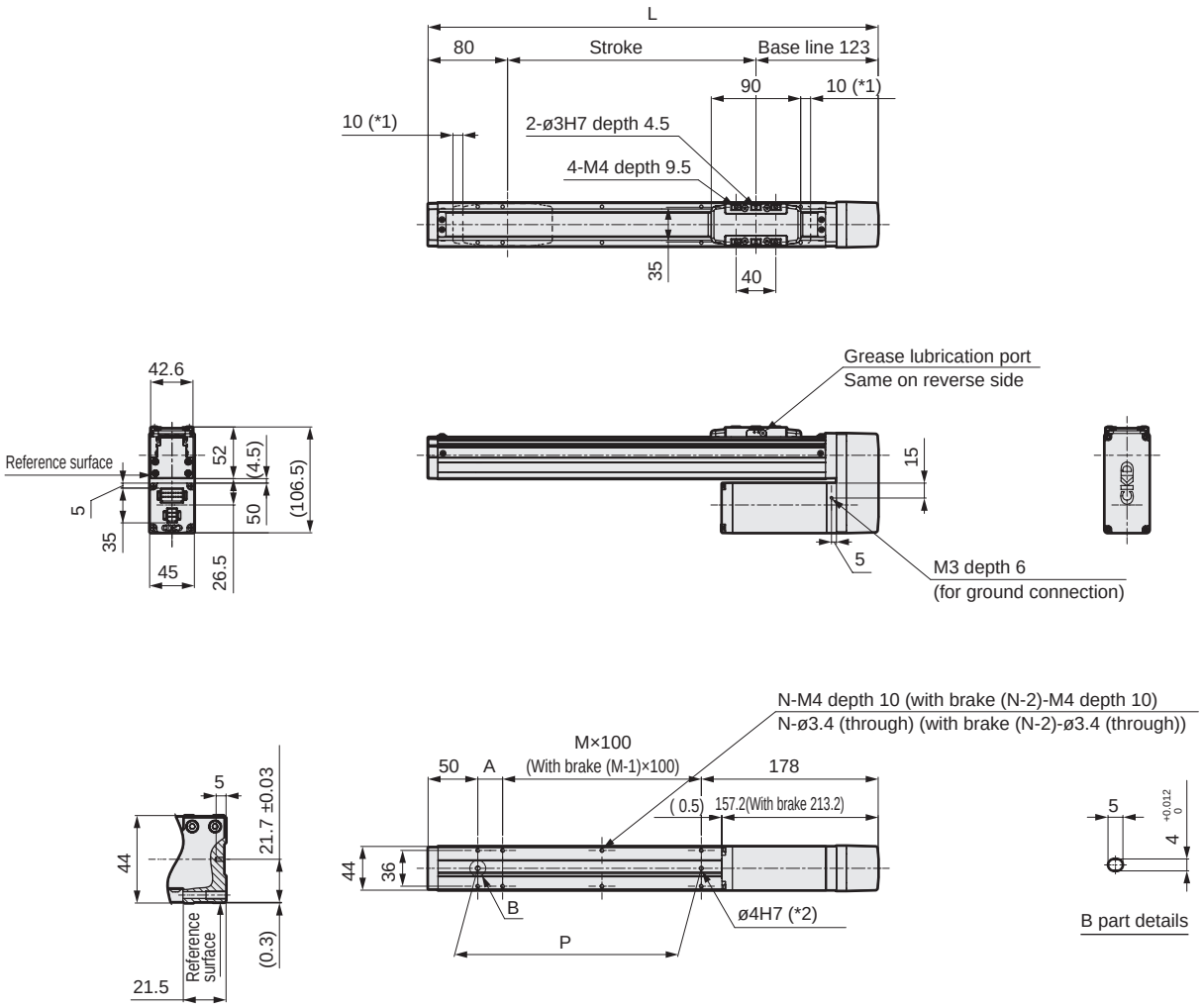


Note 1: Operating range to the mechanical stopper

Stroke code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L		253	303	353	403	453	503	553	603	653	703	753	803	853	903	953	1003
A		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	Without brake	1.7	1.8	1.9	2.0	2.2	2.3	2.4	2.5	2.6	2.8	2.9	3.0	3.1	3.2	3.4	3.5
	With brake	2.1	2.2	2.3	2.4	2.6	2.7	2.8	2.9	3.0	3.2	3.3	3.4	3.5	3.6	3.8	3.9

Dimensions Bottom motor mounting

● EJSG-04D



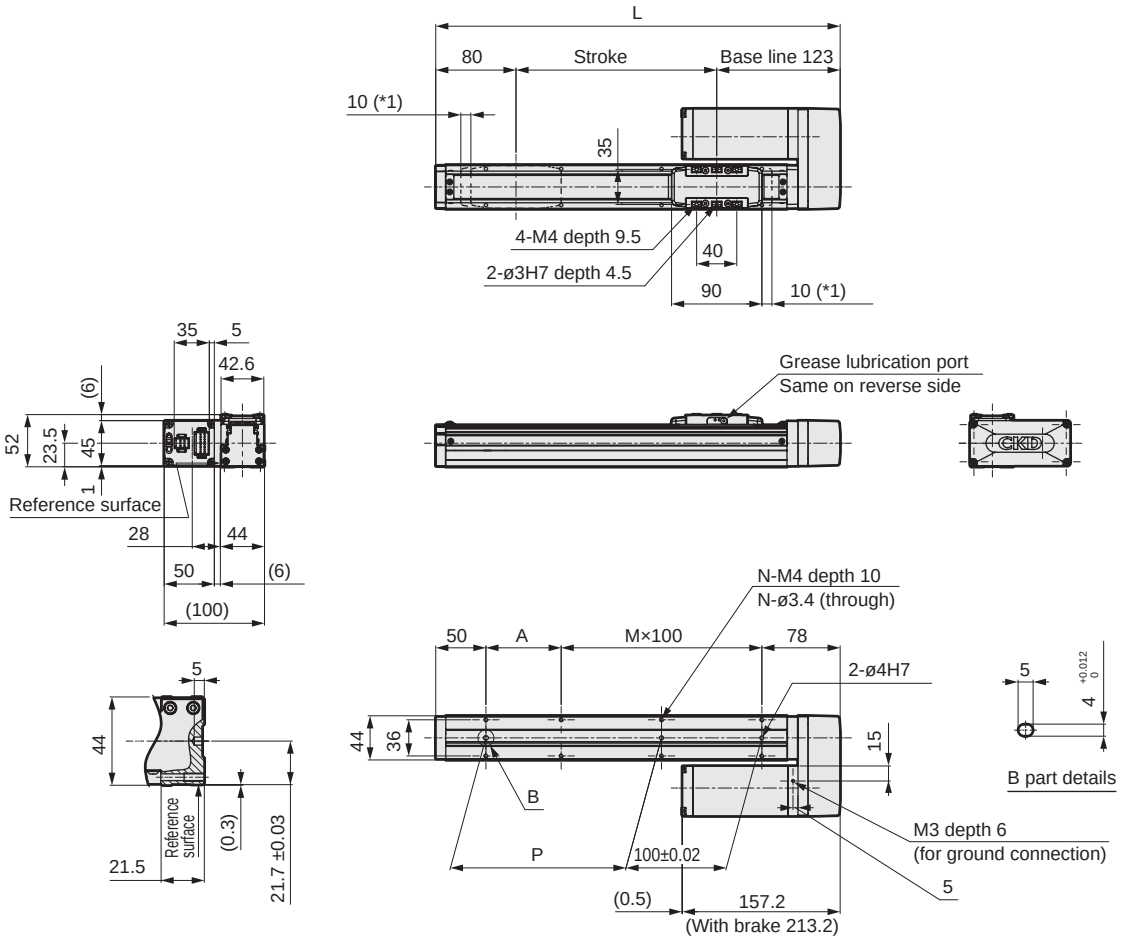
*1: Operating range to the mechanical stopper
*2: When the type with brake is selected, the ø4H7 cannot be used because it is hidden in the motor part.

Stroke code		0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		250	300	350	400	450	500	550	600	650	700	750	800
L		453	503	553	603	653	703	753	803	853	903	953	1003
A		25	75	25	75	25	75	25	75	25	75	25	75
M		2	2	3	3	4	4	6	6	7	7	8	8
N		8	8	10	10	12	12	16	16	18	18	20	20
P		225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	Without brake	2.2	2.3	2.4	2.5	2.6	2.8	2.9	3.0	3.1	3.2	3.4	3.5
	With brake	2.6	2.7	2.8	2.9	3.0	3.2	3.3	3.4	3.5	3.6	3.8	3.9

EJSG-04*

Dimensions Left motor mounting

● EJSG-04L



*1: Operating range to the mechanical stopper

Stroke code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L		253	303	353	403	453	503	553	603	653	703	753	803	853	903	953	1003
A		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	Without brake	1.7	1.8	1.9	2.0	2.2	2.3	2.4	2.5	2.6	2.8	2.9	3.0	3.1	3.2	3.4	3.5
	With brake	2.1	2.2	2.3	2.4	2.6	2.7	2.8	2.9	3.0	3.2	3.3	3.4	3.5	3.6	3.8	3.9

Notes

Electric actuator Slider

EJSG-05E

Straight motor mounting

□42 Stepper motor

How to order

EJSG - 05 E 05 0300 N B N - C S03

❶Body size

05	Body width 54mm

Motor mounting direction

E	Straight mounting

❸Screw lead

05	5 mm
10	10 mm
20	20 mm

❹Stroke

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺Brake *2

N	None
B	Yes

❻Encoder *1

B	Battery-less absolute encoder
C	Incremental encoder (For ECG)

❼Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When using vertically, select "Yes".
*3 Refer to page 128 for relay cable dimensions.

EAR-compliant product (EAR99-embedded product)

Specifications

Supported controllers		ECG-A		
Motor		□42 Stepper motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø12		
Stroke	mm	50 to 800		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	40.0	27.5	18.3
	Vertical	14.0	7.0	2.5
Operation speed range *2	mm/s	6 to 290	12 to 500	25 to 850
Max. acceleration/ deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	220	110	55
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:103 MY:103 MR:144		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	2.7		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	6.1		
	Holding force N	168	84	42
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 17 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke					
	50 to 550	600	650	700	750	800
5	290	260	225	200	175	150
10	500	500	455	400	355	315
20	850	850	850	800	710	630

Speed and load capacity

[When installed horizontally]

(kg)

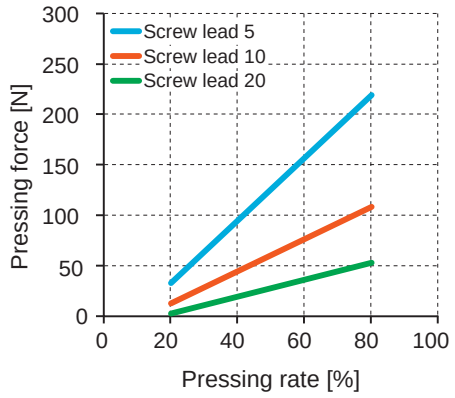
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	40.0			40.0		
12	40.0	27.5		40.0	27.5	
25	40.0	27.5	18.3	40.0	27.5	8.3
50	40.0	27.5	18.3	40.0	27.5	8.3
100	40.0	27.5	18.3	40.0	27.5	8.3
150	26.7	27.5	10.0	26.7	27.5	6.7
200	26.7	27.5	10.0	26.7	27.5	6.7
250	26.7	15.8	10.0	26.7	12.5	6.7
290	26.7	15.8	10.0	15.8	12.5	6.7
300		15.8	10.0		12.5	6.7
400		10.0	8.3		9.2	5.0
500		5.8	8.3		2.5	5.0
700			4.2			2.5
800			2.5			1.7
850			0.8			0.4

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	14.0		
12	14.0	7.0	
25	14.0	7.0	2.5
50	14.0	7.0	2.5
100	9.2	7.0	2.5
150	7.5	7.0	2.5
200	4.2	7.0	2.5
210	3.3	2.5	2.5
225	3.3	2.5	2.5
250	2.1	2.5	2.5
300		2.5	2.5
325		2.1	2.5
350		2.1	2.5
400		1.3	2.5
425		0.8	0.4
500			0.4

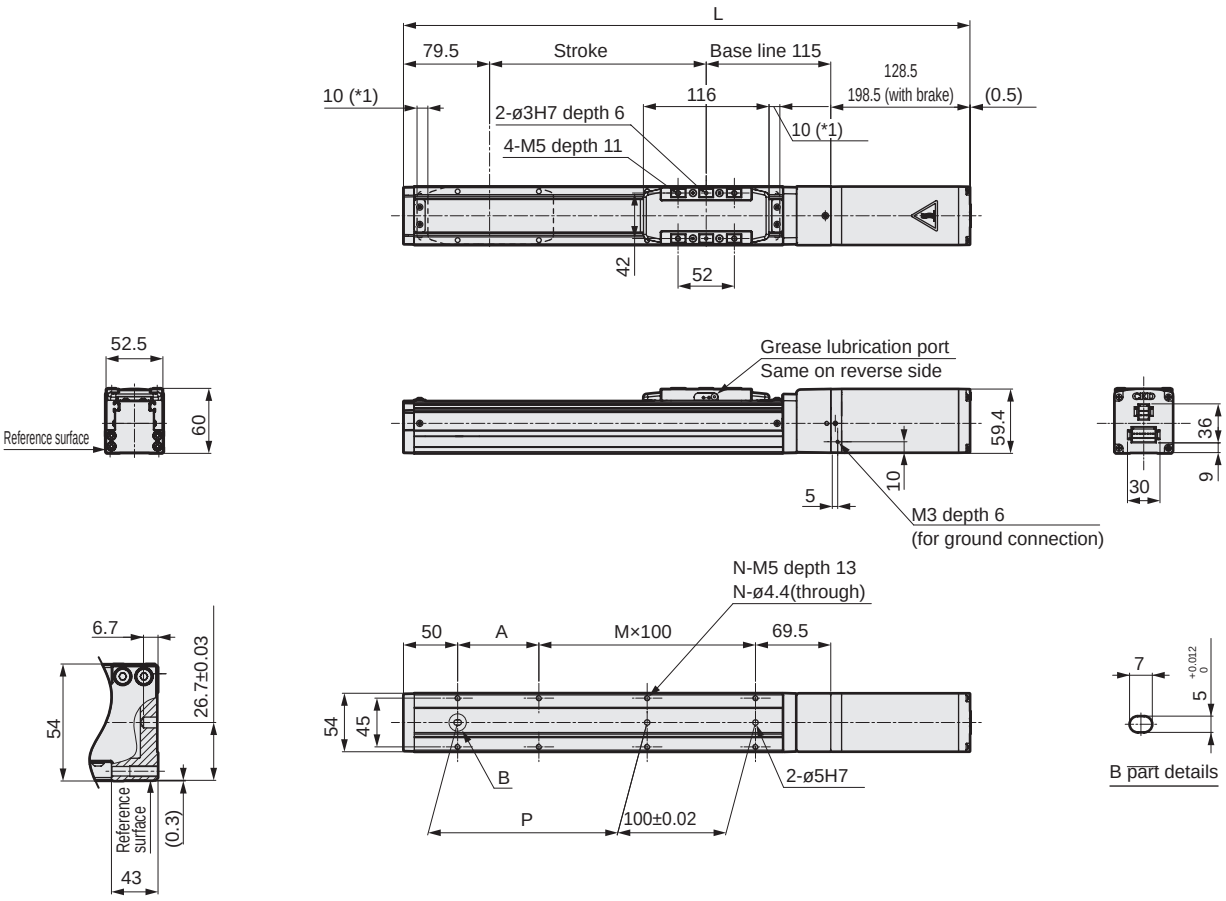
Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions Straight motor mounting

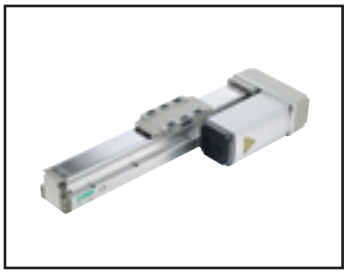
● EJSG-05E



*1: Operating range to the mechanical stopper

Stroke code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	Without brake	373	423	473	523	573	623	673	723	773	823	873	923	973	1023	1073	1123
	With brake	443	493	543	593	643	693	743	793	843	893	943	993	1043	1093	1143	1193
A		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	Without brake	2.4	2.6	2.7	2.8	3.0	3.1	3.3	3.4	3.5	3.7	3.8	4.0	4.1	4.2	4.4	4.5
	With brake	3.2	3.3	3.5	3.6	3.7	3.9	4.0	4.2	4.3	4.4	4.6	4.7	4.9	5.0	5.1	5.3

Notes



Electric actuator Slider

EJSG-05*

Motor side mounting (left, right, bottom)

□42 Stepper motor

How to order

EJSG - 05 R 05 0300 N B N - C S03

❶Body size

05	Body width 54mm

❷Motor mounting direction*2

R	Right mounting
D	Bottom mounting
L	Left mounting

❸Screw lead

05	5 mm
10	10 mm
20	20 mm

❹Stroke *2

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺Brake *3

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Relay cable *4

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When the motor mounting direction "D" is selected, the stroke is selected from "0250 (250 mm)" to "0800 (800 mm)".
*3 When using vertically, select "Yes".
*4 Refer to page 128 for relay cable dimensions.

EAR-compliant product (EAR99-embedded product)

Specifications

Supported controllers		ECG-A		
Motor		□42 Stepper motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø12		
Stroke	mm	50 to 800		
Screw lead	mm	5	10	20
Max. workload *1	Horizontal	40.0	27.5	18.3
kg	Vertical	10.0	3.3	0.8
Operation speed range *2	mm/s	6 to 250	12 to 400	25 to 700
Maximum acceleration/ deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	220	110	55
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:103 MY:103 MR:144		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	2.7		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	6.1		
	Holding force N	168	84	42
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 21 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Thread Lead	Stroke				
	50 to 600	650	700	750	800
5	250	225	200	175	150
10	400	400	400	355	315
20	700	700	700	700	630

Speed and load capacity

[When installed horizontally]

(kg)

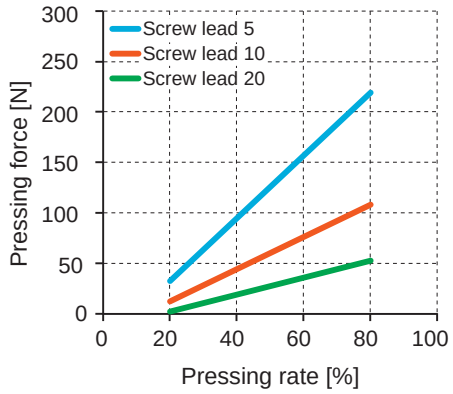
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	40.0			40.0		
12	40.0	27.5		40.0	27.5	
25	40.0	27.5	18.3	40.0	27.5	7.5
50	40.0	27.5	18.3	40.0	27.5	7.5
100	40.0	27.5	18.3	40.0	27.5	7.5
150	26.7	23.3	10.0	26.7	20.0	5.0
200	26.7	23.3	10.0	26.7	20.0	5.0
250	8.3	11.7	10.0	8.3	11.7	5.0
300		11.7	10.0		11.7	5.0
400		3.3	6.7		3.3	4.2
500			6.7			4.2
700			3.3			1.7

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	10.0		
12	10.0	3.3	
25	10.0	3.3	0.8
50	10.0	3.3	0.8
100	8.3	3.3	0.8
150	6.7	2.1	0.8
200	2.5	2.1	0.8
210	0.8	1.3	0.8
300		1.3	0.8
325		0.4	0.8
400			0.8
500			0.4

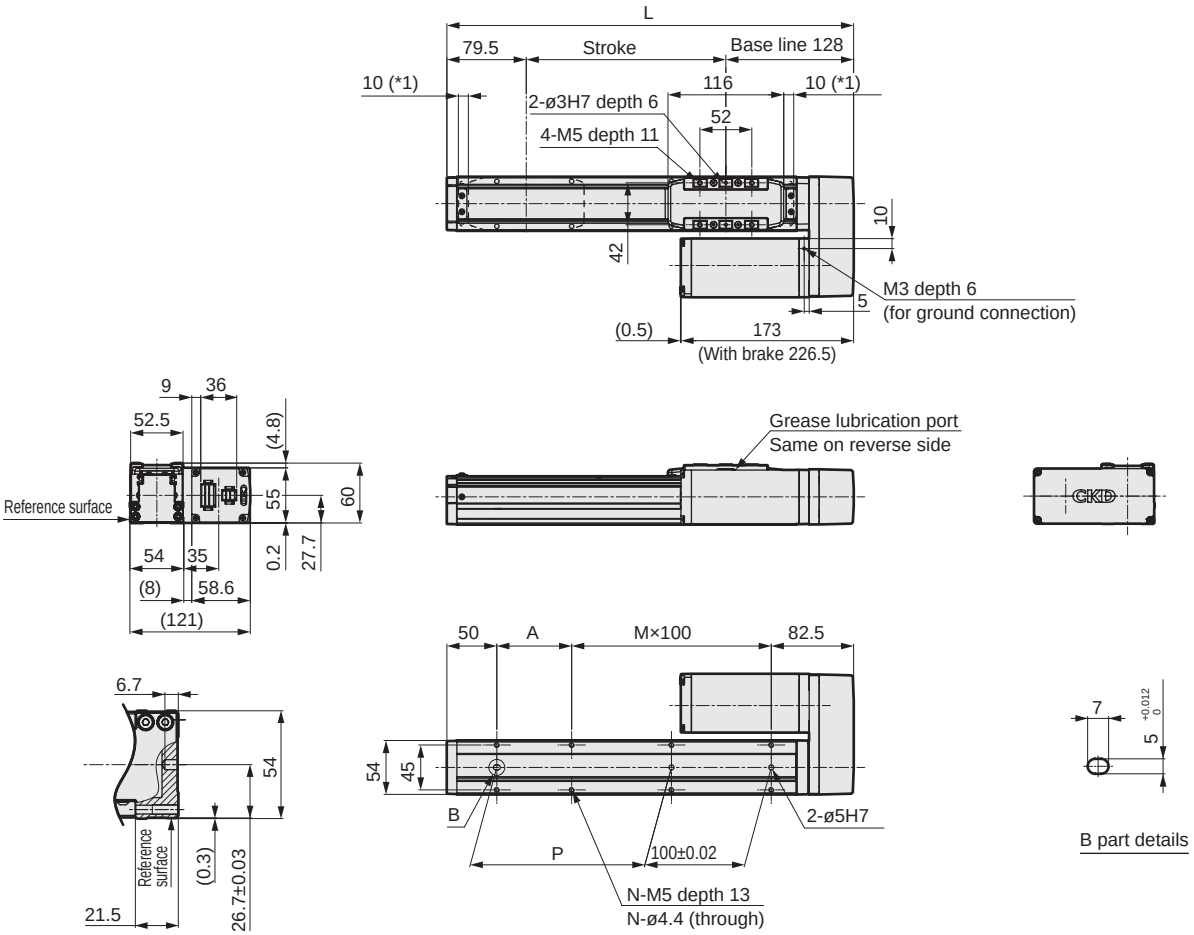
Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions Right motor mounting

● EJSG-05R

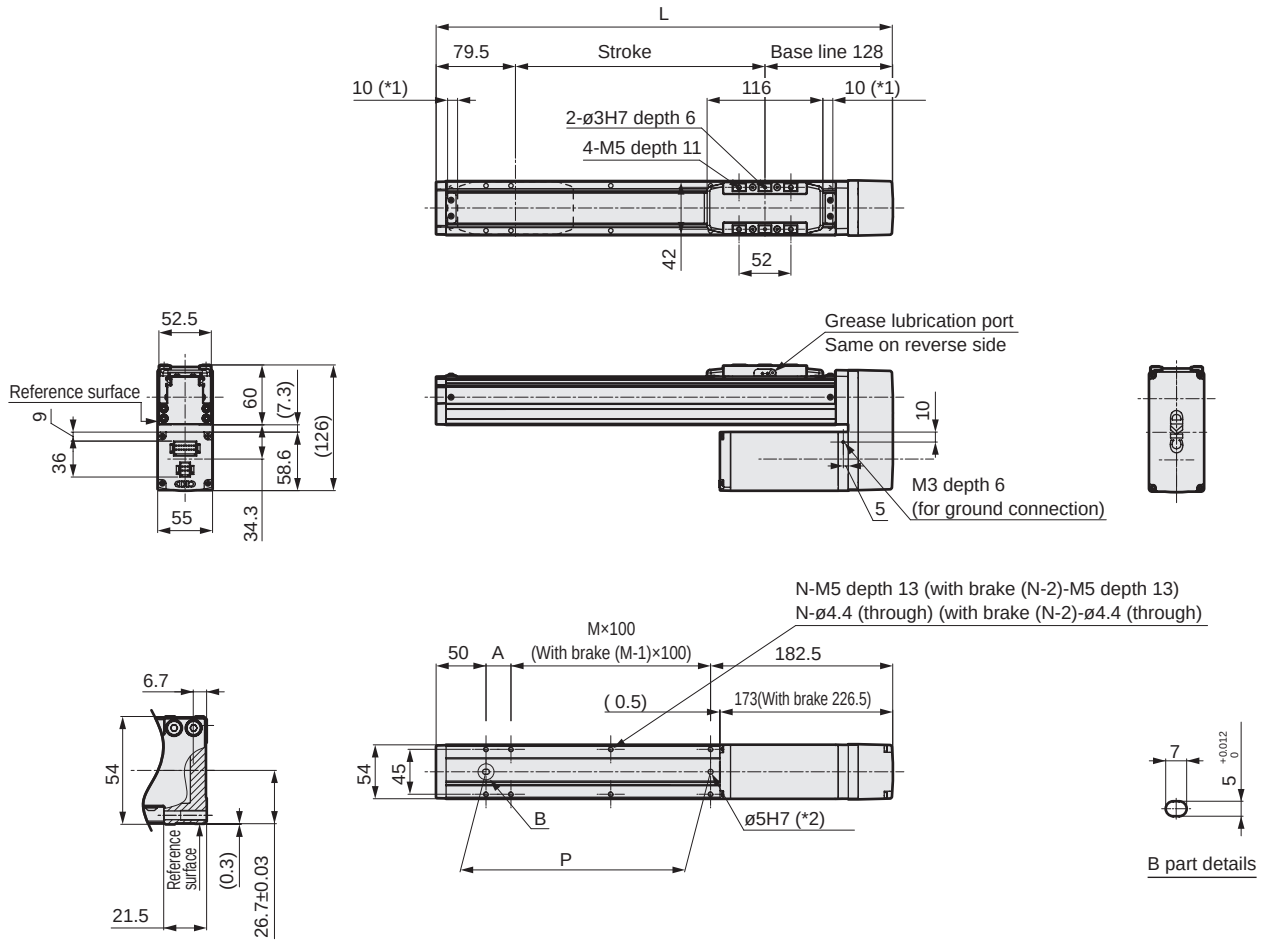


*1: Operating range to the mechanical stopper

Stroke code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L		257.5	307.5	357.5	407.5	457.5	507.5	557.5	607.5	657.5	707.5	757.5	807.5	857.5	907.5	957.5	1007.5
A		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	Without brake	2.6	2.7	2.8	3.0	3.1	3.3	3.4	3.5	3.7	3.8	3.9	4.1	4.2	4.4	4.5	4.6
	With brake	3.3	3.5	3.6	3.7	3.9	4.0	4.2	4.3	4.4	4.6	4.7	4.9	5.0	5.1	5.3	5.4

Dimensions Bottom motor mounting

● EJSG-05D



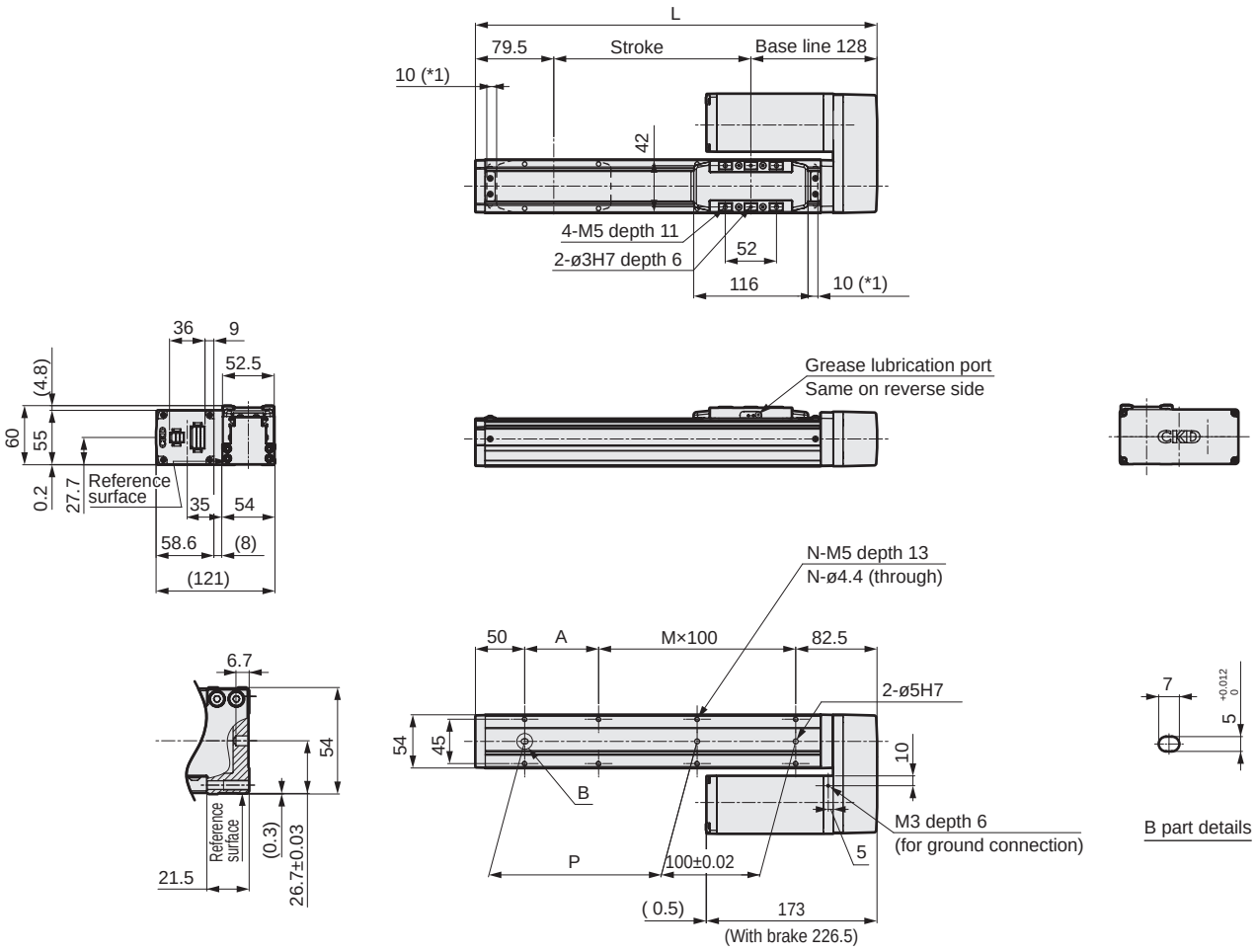
*1: Operating range to the mechanical stopper
*2: When the type with brake is selected, the ø5H7 cannot be used because it is hidden in the motor part.

Stroke code		0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		250	300	350	400	450	500	550	600	650	700	750	800
L		457.5	507.5	557.5	607.5	657.5	707.5	757.5	807.5	857.5	907.5	957.5	1007.5
A		25	75	25	75	25	75	25	75	25	75	25	75
M		2	2	3	3	4	4	5	5	6	6	7	7
N		8	8	10	10	12	12	14	14	16	16	18	18
P		225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	Without brake	3.1	3.3	3.4	3.5	3.7	3.8	3.9	4.1	4.2	4.4	4.5	4.6
	With brake	3.9	4.0	4.2	4.3	4.4	4.6	4.7	4.9	5.0	5.1	5.3	5.4

EJSG-05*

Dimensions Left motor mounting

● EJSG-05L



*1: Operating range to the mechanical stopper

Stroke code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L		257.5	307.5	357.5	407.5	457.5	507.5	557.5	607.5	657.5	707.5	757.5	807.5	857.5	907.5	957.5	1007.5
A		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	Without brake	2.6	2.7	2.8	3.0	3.1	3.3	3.4	3.5	3.7	3.8	3.9	4.1	4.2	4.4	4.5	4.6
	With brake	3.3	3.5	3.6	3.7	3.9	4.0	4.2	4.3	4.4	4.6	4.7	4.9	5.0	5.1	5.3	5.4

Notes

Electric actuator Slider

EJSG-08E

Straight motor mounting

□56 Stepping motor

How to order

EJSG - 08 E 05 0300 N B N - C S03

❶Body size

08	Body width 82mm

❷Motor mounting direction

E	Straight mounting

❸Screw lead

05	5 mm
10	10 mm
20	20 mm

❹Stroke

0050 to 1100	50 mm (In 50 mm increments) 1100 mm

❺Brake *2

N	None
B	Yes

❻Encoder *1

B	Battery-less absolute encoder
C	Incremental encoder

❼Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When using vertically, select "Yes".
*3 Refer to page 128 for relay cable dimensions.

EAR-compliant product (EAR99-embedded product)

Specifications

Supported controllers		ECG-A		
Motor		□56 Stepping motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø15		
Stroke	mm	50 to 1100		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	80.0	70.0	30.0
	Vertical	43.3	28.3	3.3
Operation speed range *2	mm/s	6 to 150	12 to 250	25 to 500
Max. acceleration/deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	965	482	241
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:203 MY:203 MR:336		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	4.0		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	7.2		
	Holding force N	768	384	192
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 27 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke				
	50 to 900	950	1000	1050	1100
5	150	145	130	120	110
10	250	250	250	240	220
20	500	500	500	480	440

Speed and load capacity

[When installed horizontally]

(kg)

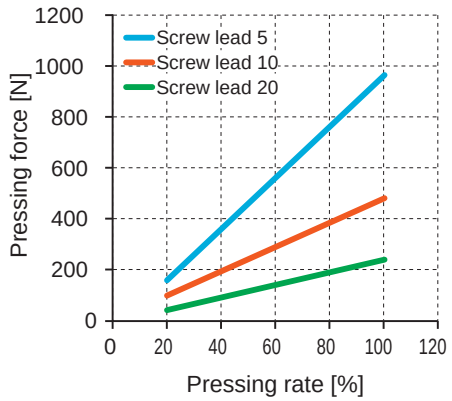
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	30.0	80.0	70.0	26.7
50	80.0	70.0	30.0	80.0	70.0	26.7
75	80.0	70.0	30.0	80.0	70.0	26.7
100	40.0	70.0	30.0	40.0	70.0	26.7
125	40.0	70.0	30.0	40.0	70.0	18.3
150	40.0	70.0	30.0	35.0	70.0	18.3
200		28.3	30.0		17.5	18.3
250		28.3	26.7		17.5	18.3
300			26.7			18.3
400			20.0			11.7
500			3.3			

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	43.3		
12	43.3	28.3	
25	43.3	28.3	3.3
50	43.3	28.3	3.3
75	15.0	12.5	3.3
100	15.0	12.5	3.3
125	2.9	10.0	3.3
150	2.9	10.0	3.3
200		1.7	3.3
250		1.7	3.3
300			3.3
350			0.8

Pressing force

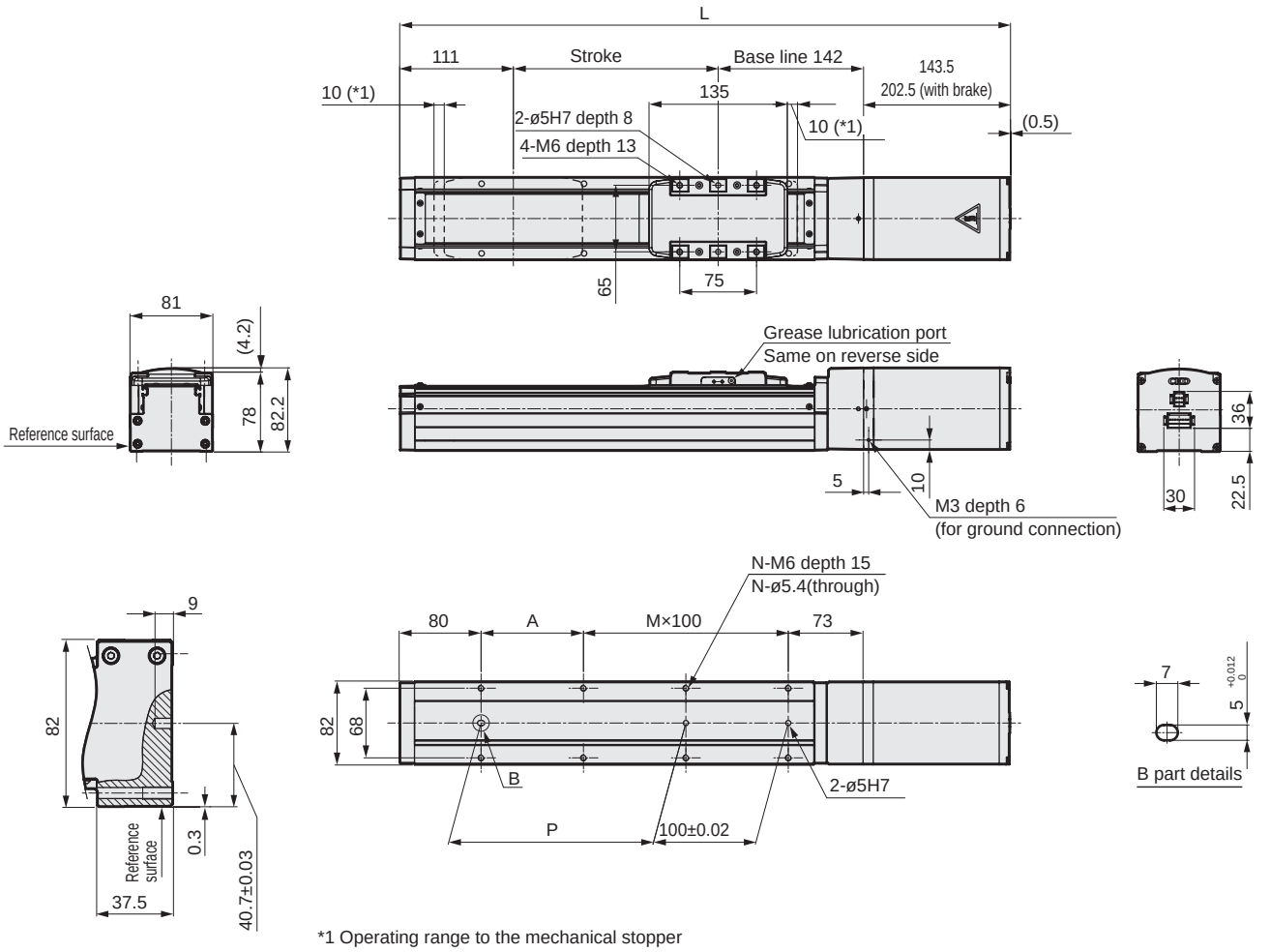


*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

EJSG-08E

Dimensions Straight motor mounting

● EJSG-08E



*1 Operating range to the mechanical stopper

Stroke code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	Without brake	446.5	496.5	546.5	596.5	646.5	696.5	746.5	796.5	846.5	896.5	946.5	996.5	1046.5	1096.5	1146.5	1196.5
	With brake	505.5	555.5	605.5	655.5	705.5	755.5	805.5	855.5	905.5	955.5	1005.5	1055.5	1105.5	1155.5	1205.5	1255.5
A		150	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M		0	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N		4	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Weight (kg)	Without brake	5.7	6.0	6.4	6.7	7.0	7.4	7.7	8.0	8.4	8.7	9.0	9.4	9.7	10.0	10.4	10.7
	With brake	6.7	7.1	7.4	7.7	8.1	8.4	8.7	9.1	9.4	9.7	10.1	10.4	10.7	11.1	11.4	11.8

Stroke code		0850	0900	0950	1000	1050	1100
Stroke (mm)		850	900	950	1000	1050	1100
L	Without brake	1246.5	1296.5	1346.5	1396.5	1446.5	1496.5
	With brake	1305.5	1355.5	1405.5	1455.5	1505.5	1555.5
A		50	100	50	100	50	100
M		9	9	10	10	11	11
N		22	22	24	24	26	26
P		850	900	950	1000	1050	1100
Weight (kg)	Without brake	11.0	11.4	11.7	12.1	12.4	12.7
	With brake	12.1	12.4	12.8	13.1	13.4	13.8

Notes

Electric actuator Slider

EJSG-08*

Motor side mounting (left, right, bottom)

□56 Stepping motor

How to order

EJSG - 08 R 05 0300 N B N - C S03

❶ ❷ ❸ ❹ ❺ ❻ ❼

❶Body size

08	Body width 82mm

❷Motor mounting direction*2

R	Right mounting
D	Bottom mounting
L	Left mounting

❸Screw lead

05	5 mm
10	10 mm
20	20 mm

❹Stroke *2

0050 to 1100	50 mm (In 50 mm increments) 1100 mm

❺Brake *3

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Relay cable *4

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When the motor mounting direction "D" is selected, the stroke is selected from "0250 (250 mm)" to "1100 (1100 mm)".
*3 When using vertically, select "Yes".
*4 Refer to page 128 for relay cable dimensions.

EAR-compliant product (EAR99-embedded product)

Specifications

Supported controllers		ECG-A		
Motor		□56 Stepping motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø15		
Stroke	mm	50 to 1100		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	80.0	70.0	30.0
	Vertical	33.3	18.3	3.3
Operation speed range *2	mm/s	6 to 125	12 to 250	25 to 400
Max. acceleration/deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	965	482	241
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:203 MY:203 MR:336		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	4.0		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	7.2		
	Holding force N	768	384	192
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 31 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke		
	50 to 1000	1050	1100
5	125	120	110
10	250	240	220
20	400	400	400

Speed and load capacity

[When installed horizontally]

(kg)

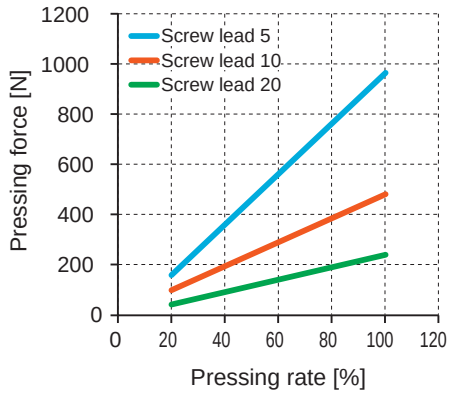
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	30.0	80.0	70.0	26.7
50	80.0	70.0	30.0	80.0	70.0	26.7
75	68.3	70.0	30.0	68.3	70.0	26.7
100	40.0	70.0	30.0	40.0	70.0	26.7
125	40.0	70.0	30.0	40.0	30.0	18.3
150		70.0	30.0		30.0	18.3
200		28.3	30.0		17.5	18.3
250		21.7	6.7		17.5	6.7
300			6.7			6.7
400			3.3			3.3

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	33.3		
12	33.3	18.3	
25	33.3	18.3	3.3
50	25.0	18.3	3.3
75	15.0	12.5	3.3
100	12.5	12.5	3.3
125	2.9	8.3	3.3
150		8.3	3.3
200		1.7	3.3
250			3.3
300			3.3
350			0.8

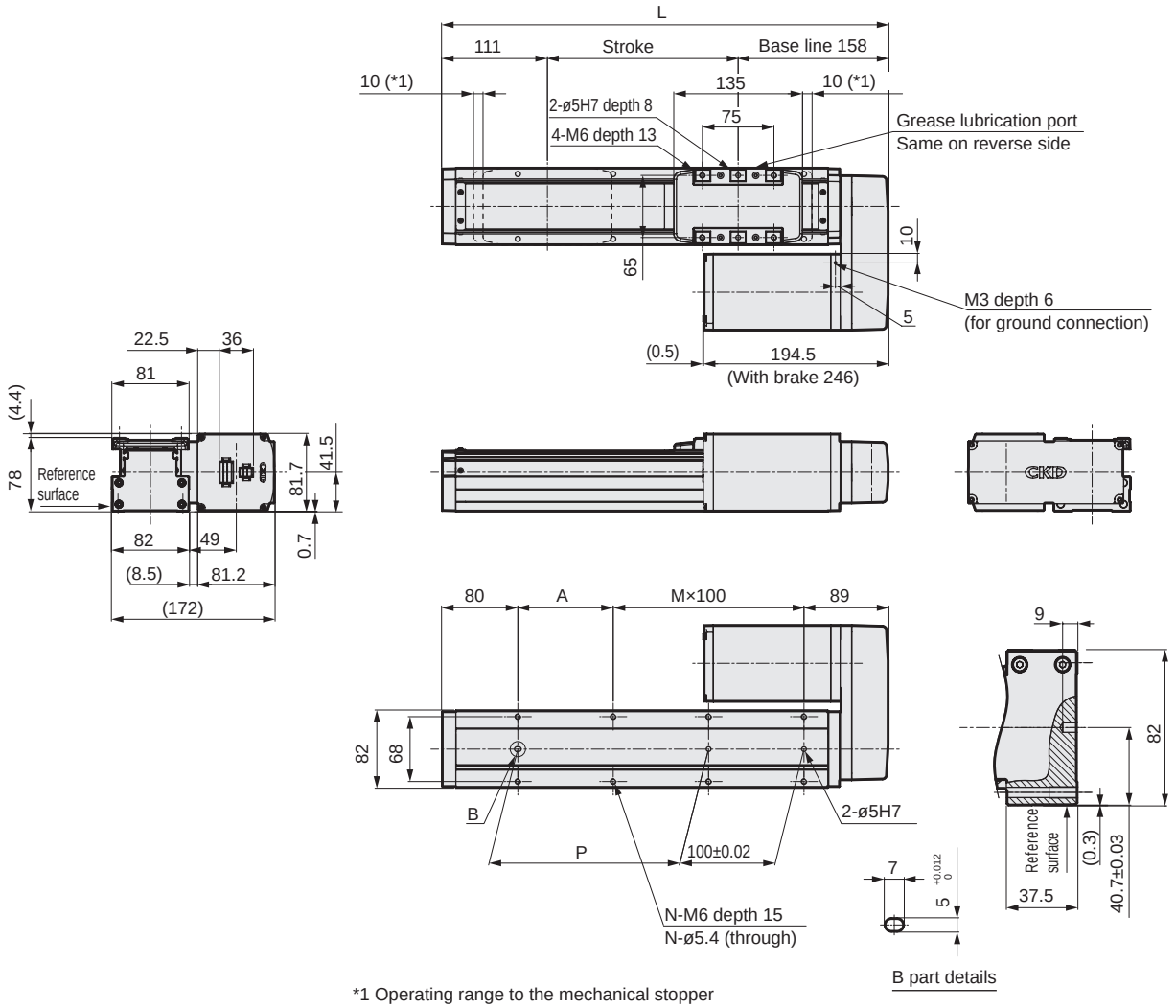
Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions Right motor mounting

● EJSG-08R



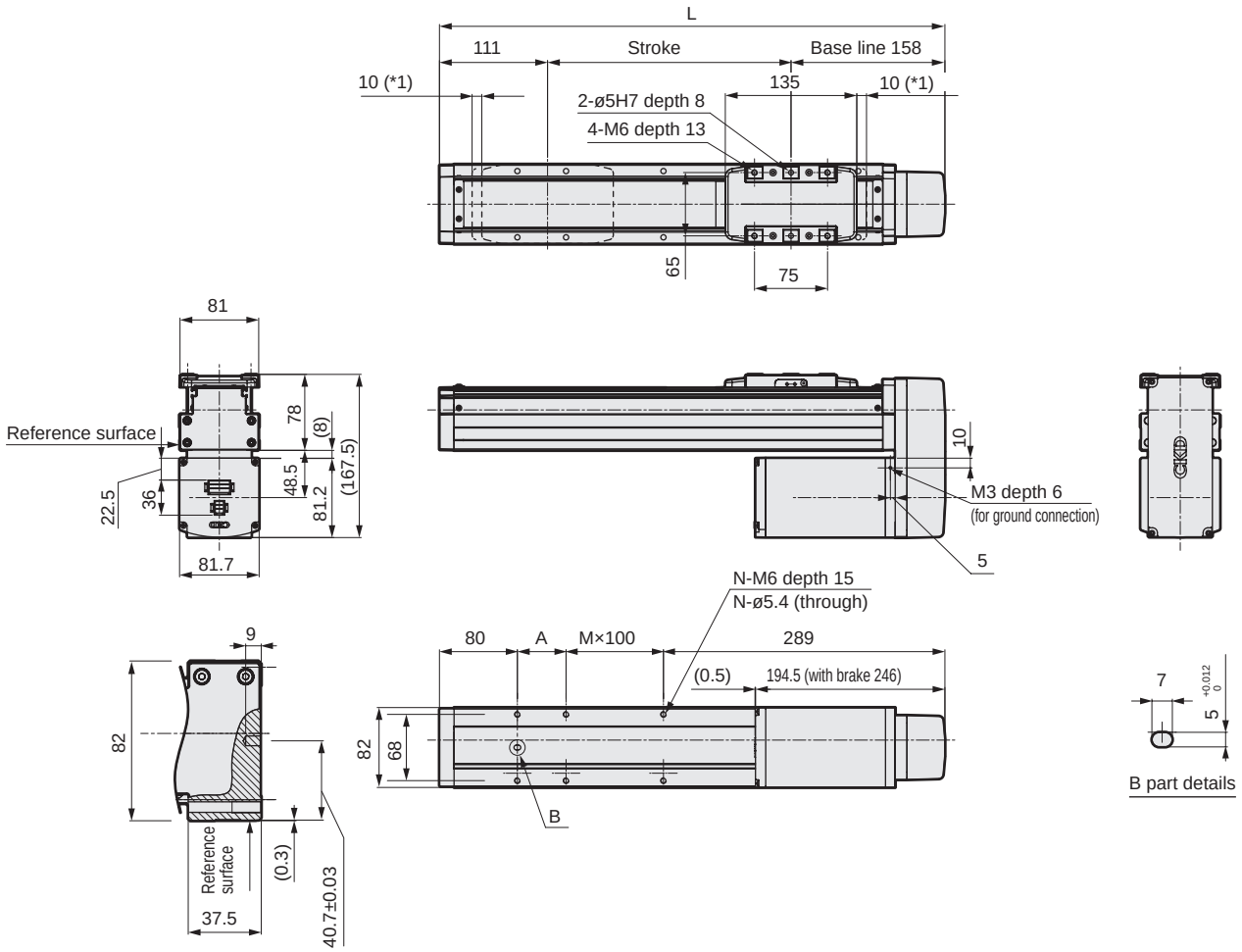
*1 Operating range to the mechanical stopper

Stroke code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L		319	369	419	469	519	569	619	669	719	769	819	869	919	969	1019	1069
A		150	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M		0	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N		4	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Weight (kg)	Without brake	5.9	6.2	6.6	6.9	7.2	7.6	7.9	8.2	8.6	8.9	9.2	9.6	9.9	10.2	10.6	10.9
	With brake	6.9	7.3	7.6	7.9	8.3	8.6	8.9	9.3	9.6	9.9	10.3	10.6	10.9	11.3	11.6	12.0

Stroke code		0850	0900	0950	1000	1050	1100
Stroke (mm)		850	900	950	1000	1050	1100
L		1119	1169	1219	1269	1319	1369
A		50	100	50	100	50	100
M		9	9	10	10	11	11
N		22	22	24	24	26	26
P		850	900	950	1000	1050	1100
Weight (kg)	Without brake	11.3	11.6	11.9	12.3	12.6	12.9
	With brake	12.3	12.6	13.0	13.3	13.6	14.0

Dimensions Bottom motor mounting

● EJSG-08D



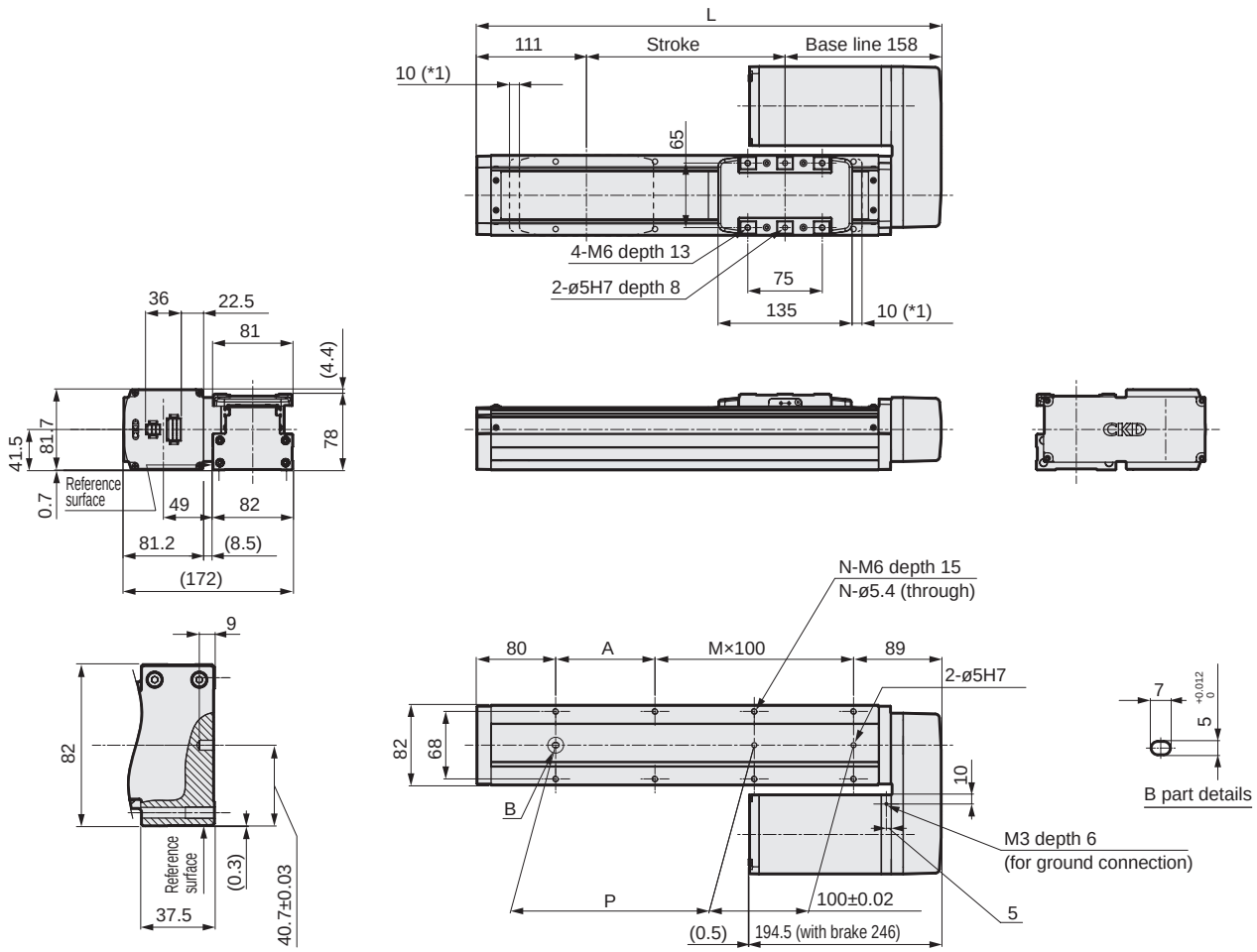
*1: Operating range to the mechanical stopper

Stroke code		0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1000
Stroke (mm)		250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L		519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269
A		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Weight (kg)	Without brake	7.2	7.6	7.9	8.2	8.6	8.9	9.2	9.6	9.9	10.2	10.6	10.9	11.3	11.6	11.9	12.3
	With brake	8.3	8.6	8.9	9.3	9.6	9.9	10.3	10.6	10.9	11.3	11.6	12.0	12.3	12.6	13.0	13.3

Stroke code		1050	1100
Stroke (mm)		1050	1100
L		1319	1369
A		50	100
M		9	9
N		22	22
Weight (kg)	Without brake	12.6	12.9
	With brake	13.6	14.0

Dimensions Left motor mounting

● EJSG-08L



*1: Operating range to the mechanical stopper

Stroke code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L		319	369	419	469	519	569	619	669	719	769	819	869	919	969	1019	1069
A		150	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M		0	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N		4	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Weight (kg)	Without brake	5.9	6.2	6.6	6.9	7.2	7.6	7.9	8.2	8.6	8.9	9.2	9.6	9.9	10.2	10.6	10.9
	With brake	6.9	7.3	7.6	7.9	8.3	8.6	8.9	9.3	9.6	9.9	10.3	10.6	10.9	11.3	11.6	12.0

Stroke code		0850	0900	0950	1000	1050	1100
Stroke (mm)		850	900	950	1000	1050	1100
L		1119	1169	1219	1269	1319	1369
A		50	100	50	100	50	100
M		9	9	10	10	11	11
N		22	22	24	24	26	26
P		850	900	950	1000	1050	1100
Weight (kg)	Without brake	11.3	11.6	11.9	12.3	12.6	12.9
	With brake	12.3	12.6	13.0	13.3	13.6	14.0

Notes

Electric actuator
Motor specification

EJSG-G

Slider dust-proof specifications

CONTENTS

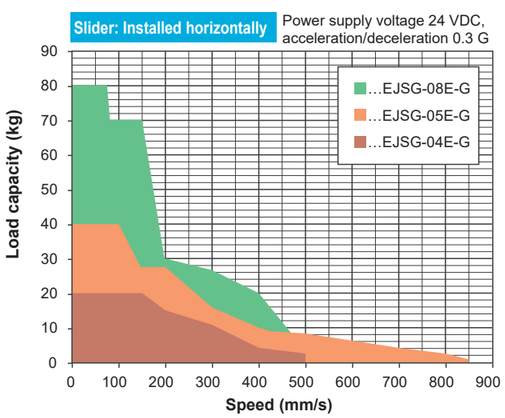
EJSG-G Series

Series variation

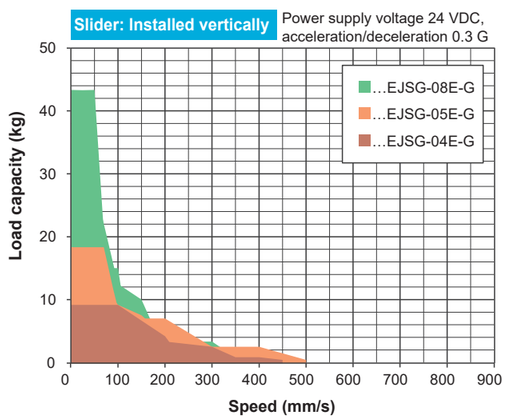
Controller	Actuator Model No.		Motor Size	Motor Mounting Direction	Body width (mm)	Screw lead (mm)	Max. load capacity (kg) Horizontal	Max. load capacity (kg) Vertical	Max. Pressing force (N)	Stroke (mm) and max. speed (mm/s)	Listed page
ECG Series		EJSG-04E06-G	□35	Straight	44	6	20.0	9.2	155	50 mm: 320 mm/s; 100: 290; 150: 250; 200: 220; 250: 190; 300: 170	40
		EJSG-04E12-G				12	15.0	3.3	77	50 mm: 500; 100: 440; 150: 390; 200: 340	
		EJSG-04R/D/L06-G		Left/Right/Bottom		6	20.0	9.2	155	50 mm: 250; 100: 220; 150: 190; 200: 170	42
		EJSG-04R/D/L12-G				12	11.7	3.3	77	50 mm: 400; 100: 390; 150: 340	
		EJSG-05E05-G	□42	Straight	54	5	40.0	14.0	220	50 mm: 290; 100: 260; 150: 225; 200: 200; 250: 175; 300: 150	44
		EJSG-05E10-G				10	27.5	7.0	110	50 mm: 500; 100: 455; 150: 400; 200: 355; 250: 315	
		EJSG-05E20-G				20	18.3	2.5	55	50 mm: 850; 100: 800; 150: 710; 200: 630	
		EJSG-05R/D/L05-G		Left/Right/Bottom		5	40.0	10.0	220	50 mm: 250; 100: 225; 150: 200; 200: 175; 250: 150	46
		EJSG-05R/D/L10-G				10	27.5	3.3	110	50 mm: 400; 100: 355; 150: 315	
		EJSG-05R/D/L20-G				20	18.3	0.8	55	50 mm: 700; 100: 630	
		EJSG-08E05-G	□56	Straight	82	5	80.0	43.3	965	50 mm: 150; 100: 145; 150: 130; 200: 120; 250: 110	48
		EJSG-08E10-G				10	70.0	28.3	482	50 mm: 250; 100: 240; 150: 220	
		EJSG-08E20-G				20	30.0	3.3	241	50 mm: 500; 100: 480; 150: 440	
		EJSG-08R/D/L05-G		Left/Right/Bottom		5	80.0	33.3	965	50 mm: 125; 100: 120; 150: 110	50
		EJSG-08R/D/L10-G				10	70.0	18.3	482	50 mm: 250; 100: 240; 150: 220	
		EJSG-08R/D/L20-G				20	30.0	3.3	241	50 mm: 400	

* This data is obtained at a power supply voltage of 24 VDC and acceleration/deceleration of 0.3G.
* The load capacity when wall mounted is the same as for horizontal installation.

Slider: Installed horizontally Power supply voltage 24 VDC, acceleration/deceleration 0.3 G



Slider: Installed vertically Power supply voltage 24 VDC, acceleration/deceleration 0.3 G



Electric actuator Slider Dust-proof

EJSG-04E-G

Straight motor mounting

□35 Stepping motor

How to order

EJSG - 04 E 06 0300 N B N - V C S03 - G

❶Body size

04	Body width 44mm

❷Motor mounting direction

E	Straight mounting

❸Screw lead

06	6 mm
12	12 mm

❹Stroke

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺Brake *2

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Fitting

V	Yes

❽Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When using vertically, select "Yes".
*3 Refer to page 128 for relay cable dimensions.
*4 When the product is shipped, the actuator body is attached with parts for connector protection.

Specifications

Supported controllers			ECG-A	
Motor			□35 Stepping motor	
Encoder type			Battery-less absolute encoder Incremental encoder	
Drive method			Ball screw ø10	
Stroke		mm	50 to 800	
Screw lead		mm	6	12
Max. workload kg *1		Horizontal	20.0	15.0
		Vertical	9.2	3.3
Operation speed range *2		mm/s	7 to 320	15 to 500
Max. acceleration/ deceleration G		Horizontal	0.7	0.7
		Vertical	0.3	0.3
Maximum pushing force		N	155	77
Pressing operation speed range		mm/s	5 to 20	5 to 20
Repeatability		mm	±0.01	
Lost motion		mm	0.1 or less	
Static allowable moment		N·m	MP:62 MY:62 MR:92	
Motor power supply voltage			24 VDC ±10%	
Motor section max. instantaneous current		A	2.4	
Brake	Model, power supply voltage		Non-excitation operation, 24 VDC ±10%	
	Power consumption	W	6.1	
	Holding force	N	140	70
Insulation resistance			10 MΩ, 500 VDC	
Withstand voltage			500 VAC for 1 minute	
Operating ambient temperature, humidity			10 to 40 °C (no freezing) 35 to 80% RH (no condensation)	
Storage ambient temperature, humidity			-10 to 50°C (no freezing) 35 to 80% RH (no condensation)	
Atmosphere			No corrosive gas or explosive gas	
Degree of protection			IP50	

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 41 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Thread Lead	Stroke					
	50 to 550	600	650	700	750	800
6	320	290	250	220	190	170
12	500	500	500	440	390	340

Speed and load capacity

[When installed horizontally]

(kg)

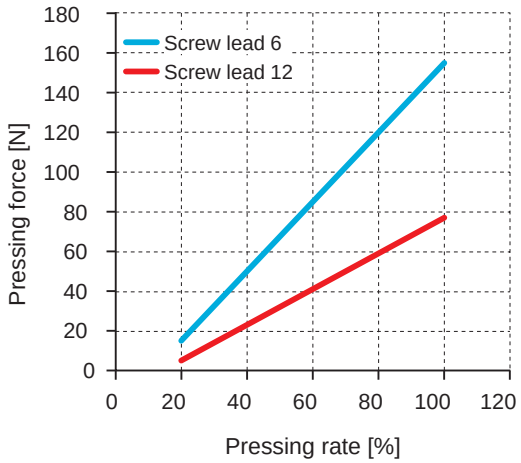
Speed (mm/s)	Acceleration/deceleration (G)			
	0.3		0.7	
	Screw lead (mm)			
	6	12	6	12
7	20.0		20.0	
15	20.0	15.0	20.0	15.0
50	20.0	15.0	20.0	15.0
100	20.0	15.0	20.0	15.0
150	20.0	15.0	12.5	10.8
200	15.0	15.0	12.5	10.8
250	11.7	10.8	11.7	8.3
300	7.5	10.8	7.5	8.3
320	7.5	4.2	7.5	4.2
400		4.2		4.2
500		2.5		2.5

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)	
	0.3	
	Screw lead (mm)	
	6	12
7	9.2	
15	9.2	3.3
50	9.2	3.3
100	9.2	3.3
150	6.7	3.3
200	4.2	3.3
225	1.7	2.5
250	1.7	2.5
275	0.4	2.5
300		2.5
350		0.8
400		0.8
450		0.4

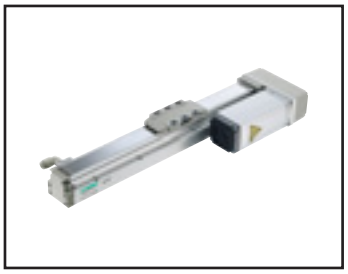
Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to page 8 for actuator dimensions.
Refer to page 52 for fitting dimensions.



Electric actuator Slider Dust-proof

EJSG-04*- G

Motor side mounting (left, right, bottom)

□35 Stepping motor

How to order

EJSG - 04 R 06 0300 N B N - V C S03 - G

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Body size

04	Body width 44mm

❷Motor mounting direction*2*3

R	Right mounting
D	Bottom mounting
L	Left mounting

❸Screw lead

06	6 mm
12	12 mm

❹Stroke *2*3

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺Brake *4

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Fitting *3

V	Yes

❽Relay cable *5

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When the motor mounting direction "D" is selected, the stroke is selected from "0250 (250 mm)" to "800 (800 mm)".
*3 For the motor mounting direction "L" and with fitting "V", stroke 0050 (50 mm) cannot be selected.
*4 When using vertically, select "Yes".
*5 Refer to page 128 for relay cable dimensions.
*6 When the product is shipped, the actuator body is attached with the protective parts for the connector.

Specifications

Supported controllers		ECG-A	
Motor		□35 Stepping motor	
Encoder type		Battery-less absolute encoder Incremental encoder	
Drive method		Ball screw ø10	
Stroke	mm	50 to 800	
Screw lead	mm	6	12
Max. workload kg *1	Horizontal	20.0	11.7
	Vertical	9.2	3.3
Operation speed range *2	mm/s	7 to 250	15 to 400
Max. acceleration/ deceleration G	Horizontal	0.7	0.7
	Vertical	0.3	0.3
Maximum pushing force	N	155	77
Pressing operation speed range	mm/s	5 to 20	5 to 20
Repeatability	mm	±0.01	
Lost motion	mm	0.1 or less	
Static allowable moment	N·m	MP:62 MY:62 MR:92	
Motor power supply voltage		24 VDC ±10%	
Motor section max. instantaneous current	A	2.4	
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%	
	Power consumption	W	6.1
	Holding force	N	140	70
Insulation resistance		10 MΩ, 500 VDC	
Withstand voltage		500 VAC for 1 minute	
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)	
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas or explosive gas	
Degree of protection		IP50	

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 43 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Thread Lead	Stroke			
	50 to 650	700	750	800
6	250	220	190	170
12	400	400	390	340

Speed and load capacity

[When installed horizontally]

(kg)

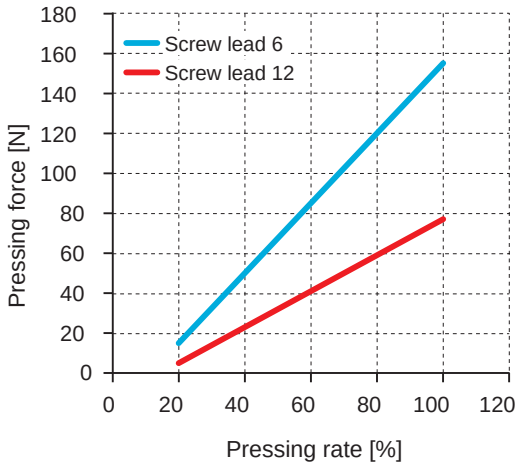
Speed (mm/s)	Acceleration/deceleration (G)			
	0.3		0.7	
	Screw lead (mm)			
	6	12	6	12
7	20.0		20.0	
15	20.0	11.7	20.0	10.0
50	20.0	11.7	20.0	10.0
100	20.0	11.7	20.0	10.0
150	13.3	11.7	11.7	10.0
200	13.3	11.7	10.0	10.0
250	10.0	8.3	8.3	8.3
300		8.3		8.3
400		3.3		3.3

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)	
	0.3	
	Screw lead (mm)	
	6	12
0	9.2	
15	9.2	3.3
50	9.2	3.3
100	6.7	3.3
150	3.3	3.3
200	2.5	3.3
225	0.8	1.7
300		1.7
350		0.8

Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to pages 12 to 14 for actuator dimensions.
Refer to page 52 for fitting dimensions.

Electric actuator Slider Dust-proof

EJSG-05E-G

Straight motor mounting

□42 Stepper motor

How to order

EJSG - 05 E 05 0300 N B N - V C S03 - G

❶ Body size

05	Body width 54mm

❷ Motor mounting direction

E	Straight mounting

❸ Screw lead

05	5 mm
10	10 mm
20	20 mm

❹ Stroke

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺ Brake *2

N	None
B	Yes

❻ Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼ Fitting

V	Yes

❽ Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When using vertically, select "Yes".
*3 Refer to page 128 for relay cable dimensions.
*4 When the product is shipped, the actuator body is attached with parts for connector protection.

Specifications

Supported controllers		ECG-A		
Motor		□42 Stepper motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø12		
Stroke	mm	50 to 800		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	40.0	27.5	18.3
	Vertical	14.0	7.0	2.5
Operation speed range *2	mm/s	6 to 290	12 to 500	25 to 850
Max. acceleration/deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	220	110	55
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:103 MY:103 MR:144		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	2.7		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption	W	6.1	
	Holding force	N	168	84	42
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas or explosive gas		
Degree of protection		IP50		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 45 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Thread Lead	Stroke					
	50 to 550	600	650	700	750	800
5	290	260	225	200	175	150
10	500	500	455	400	355	315
20	850	850	850	800	710	630

Speed and load capacity

[When installed horizontally]

(kg)

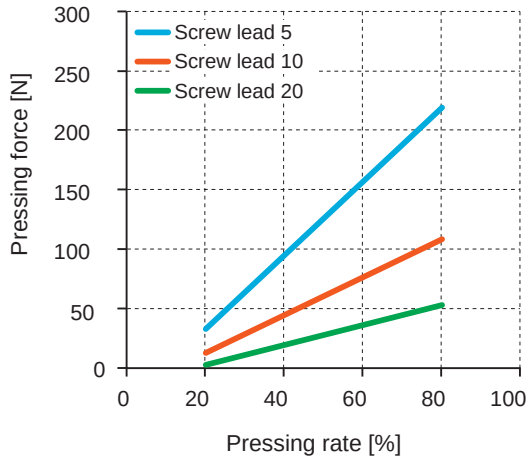
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	40.0			40.0		
12	40.0	27.5		40.0	27.5	
25	40.0	27.5	18.3	40.0	27.5	8.3
50	40.0	27.5	18.3	40.0	27.5	8.3
100	40.0	27.5	18.3	40.0	27.5	8.3
150	26.7	27.5	10.0	26.7	27.5	6.7
200	26.7	27.5	10.0	26.7	27.5	6.7
250	26.7	15.8	10.0	26.7	12.5	6.7
290	26.7	15.8	10.0	15.8	12.5	6.7
300		15.8	10.0		12.5	6.7
400		10.0	8.3		9.2	5.0
500		5.8	8.3		2.5	5.0
700			4.2			2.5
800			2.5			1.7
850			0.8			0.4

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	14.0		
12	14.0	7.0	
25	14.0	7.0	2.5
50	14.0	7.0	2.5
100	9.2	7.0	2.5
150	7.5	7.0	2.5
200	4.2	7.0	2.5
210	3.3	2.5	2.5
225	3.3	2.5	2.5
250	2.1	2.5	2.5
300		2.5	2.5
325		2.1	2.5
350		2.1	2.5
400		1.3	2.5
425		0.8	0.4
500			0.4

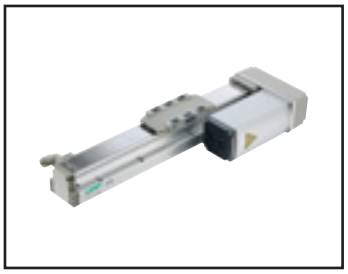
Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to page 18 for actuator dimensions.
Refer to page 52 for fitting dimensions.



Electric actuator Slider Dust-proof

EJSG-05*- G

Motor side mounting (left, right, bottom)

□42 Stepper motor

How to order

EJSG - 05 R 05 0300 N B N - V C S03 - G

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Body size

05	Body width 54mm

❷Motor mounting direction*2*3

R	Right mounting
D	Bottom mounting
L	Left mounting

❸Screw lead

05	5 mm
10	10 mm
20	20 mm

❹Stroke *2*3

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺Brake *4

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Fitting *3

V	Yes

❽Relay cable *5

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When the motor mounting direction "D" is selected, the stroke is selected from "0250 (250 mm)" to "0800 (800 mm)".
*3 For the motor mounting direction "L", 0050 (50 mm) stroke cannot be selected.
*4 When using vertically, select "Yes".
*5 Refer to page 128 for relay cable dimensions.
*6 When the product is shipped, the actuator body is attached with parts for connector protection.

Specifications

Supported controllers		ECG-A		
Motor		□42 Stepper motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø15		
Stroke	mm	50 to 800		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	40.0	27.5	18.3
	Vertical	10.0	3.3	0.8
Operation speed range *2	mm/s	6 to 250	12 to 400	25 to 700
Max. acceleration/ deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	220	110	55
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:103 MY:103 MR:144		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	2.7		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption	W	6.1	
	Holding force	N	168	84	42
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas or explosive gas		
Degree of protection		IP50		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 47 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Thread Lead	Stroke				
	50 to 600	650	700	750	800
5	250	225	200	175	150
10	400	400	400	355	315
20	700	700	700	700	630

Speed and load capacity

[When installed horizontally]

(kg)

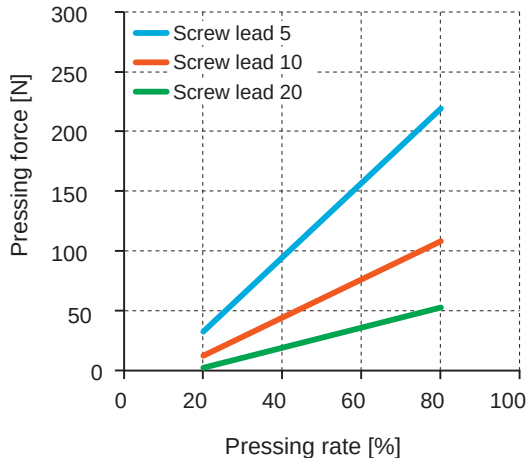
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	40.0			40.0		
12	40.0	27.5		40.0	27.5	
25	40.0	27.5	18.3	40.0	27.5	7.5
50	40.0	27.5	18.3	40.0	27.5	7.5
100	40.0	27.5	18.3	40.0	27.5	7.5
150	26.7	23.3	10.0	26.7	20.0	5.0
200	26.7	23.3	10.0	26.7	20.0	5.0
250	8.3	11.7	10.0	8.3	11.7	5.0
300		11.7	10.0		11.7	5.0
400		3.3	6.7		3.3	4.2
500			6.7			4.2
700			3.3			1.7

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	10.0		
12	10.0	3.3	
25	10.0	3.3	0.8
50	10.0	3.3	0.8
100	8.3	3.3	0.8
150	6.7	2.1	0.8
200	2.5	2.1	0.8
210	0.8	1.3	0.8
300		1.3	0.8
325		0.4	0.8
400			0.8
500			0.4

Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to pages 22 to 24 for actuator dimensions.
Refer to page 52 for fitting dimensions.

Electric actuator Slider Dust-proof

EJSG-08E-G

Straight motor mounting

□56 Stepping motor

How to order

EJSG - 08 (1) E (2) 05 (3) 0300 (4) N (5) B (6) N - V (7) C S03 (8) - G

(1) Body size

08	Body width 82mm

(2) Motor mounting direction

E	Straight mounting

(3) Screw lead

05	5 mm
10	10 mm
20	20 mm

(4) Stroke

0050 to 1100	50 mm (In 50 mm increments) 1100 mm

(5) Brake *2

N	None
B	Yes

(6) Encoder

B	Battery-less absolute encoder
C	Incremental encoder

(7) Fitting

V	Yes

(8) Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When using vertically, select "Yes".
*3 Refer to page 128 for relay cable dimensions.
*4 When the product is shipped, the actuator body is attached with the protective parts for the connector.

Specifications

Supported controllers		ECG-A		
Motor		□56 Stepping motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø15		
Stroke	mm	50 to 1100		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	80.0	70.0	30.0
	Vertical	43.3	28.3	3.3
Operation speed range *2	mm/s	6 to 150	12 to 250	25 to 500
Max. acceleration/ deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	965	482	241
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:203 MY:203 MR:336		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	4.0		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption	W	7.2	
	Holding force	N	768	384	192
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas or explosive gas		
Degree of protection		IP50		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 49 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Thread Lead	Stroke				
	50 to 900	950	1000	1050	1100
5	150	145	130	120	110
10	250	250	250	240	220
20	500	500	500	480	440

Speed and load capacity

[When installed horizontally]

(kg)

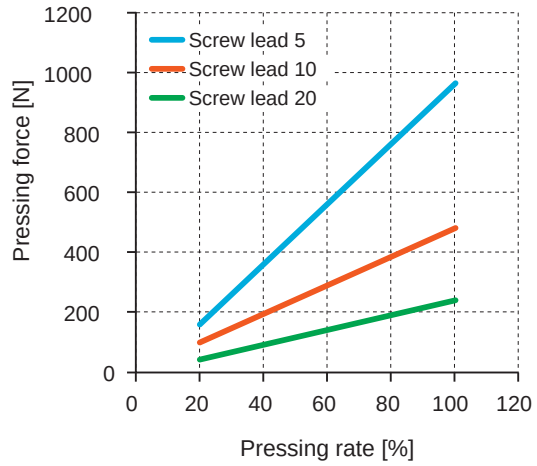
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	30.0	80.0	70.0	26.7
50	80.0	70.0	30.0	80.0	70.0	26.7
75	80.0	70.0	30.0	80.0	70.0	26.7
100	40.0	70.0	30.0	40.0	70.0	26.7
125	40.0	70.0	30.0	40.0	70.0	18.3
150	40.0	70.0	30.0	35.0	70.0	18.3
200		28.3	30.0		17.5	18.3
250		28.3	26.7		17.5	18.3
300			26.7			18.3
400			20.0			11.7
500			3.3			

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	43.3		
12	43.3	28.3	
25	43.3	28.3	3.3
50	43.3	28.3	3.3
75	15.0	12.5	3.3
100	15.0	12.5	3.3
125	2.9	10.0	3.3
150	2.9	10.0	3.3
200		1.7	3.3
250		1.7	3.3
300			3.3
350			0.8

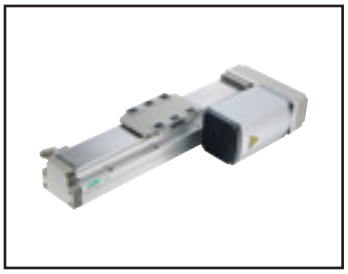
Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to page 28 for actuator dimensions.
Refer to page 52 for fitting dimensions.



Electric actuator Slider Dust-proof

EJSG-08*- G

Motor side mounting (left, right, bottom)

□56 Stepping motor

How to order

EJSG - 08 R 05 0300 N B N - V C S03 - G

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Body size

08	Body width 82mm

❷Motor mounting direction*2

R	Right mounting
D	Bottom mounting
L	Left mounting

❸Screw lead

05	5 mm
10	10 mm
20	20 mm

❹Stroke *2

0050 to 1100	50 mm (In 50 mm increments) 1100 mm

❺Brake *3

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Fitting

V	Yes

❽Relay cable *4

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 Motor mounting direction "D" If you select, the stroke is "0250 (250 mm)" to "1100(1100mm)" is the selection.
*3 When using vertically, select "Yes".
*4 Refer to page 128 for relay cable dimensions.
*5 When the product is shipped, the actuator body is supplied with protective parts for the connector.

Specifications

Supported controllers		ECG-A		
Motor		□56 Stepping motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø15		
Stroke	mm	50 to 1100		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	80.0	70.0	30.0
	Vertical	33.3	18.3	3.3
Operation speed range *2	mm/s	6 to 125	12 to 250	25 to 400
Max. acceleration/ deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	965	482	241
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:203 MY:203 MR:336		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	4.0		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption	W	7.2	
	Holding force	N	768	384	192
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas or explosive gas		
Degree of protection		IP50		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 51 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Thread Lead	Stroke		
	50 to 1000	1050	1100
5	125	120	110
10	250	240	220
20	400	400	400

Speed and load capacity

[When installed horizontally]

(kg)

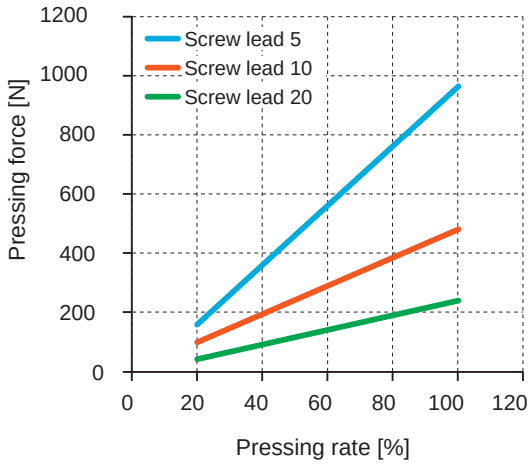
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	30.0	80.0	70.0	26.7
50	80.0	70.0	30.0	80.0	70.0	26.7
75	68.3	70.0	30.0	68.3	70.0	26.7
100	40.0	70.0	30.0	40.0	70.0	26.7
125	40.0	70.0	30.0	40.0	30.0	18.3
150		70.0	30.0		30.0	18.3
200		28.3	30.0		17.5	18.3
250		21.7	6.7		17.5	6.7
300			6.7			6.7
400			3.3			3.3

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	33.3		
12	33.3	18.3	
25	33.3	18.3	3.3
50	25.0	18.3	3.3
75	15.0	12.5	3.3
100	12.5	12.5	3.3
125	2.9	8.3	3.3
150		8.3	3.3
200		1.7	3.3
250			3.3
300			3.3
350			0.8

Pressing force



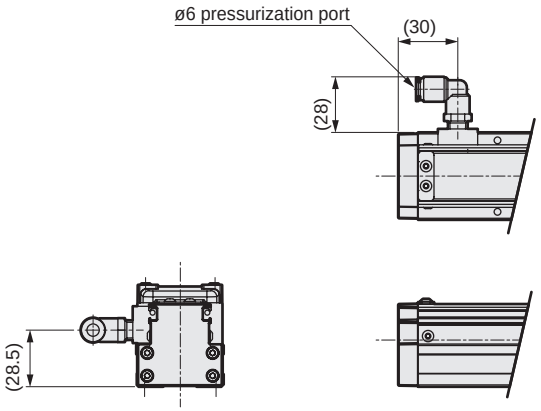
*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to pages 32 to 34 for actuator dimensions.
Refer to page 52 for fitting dimensions.

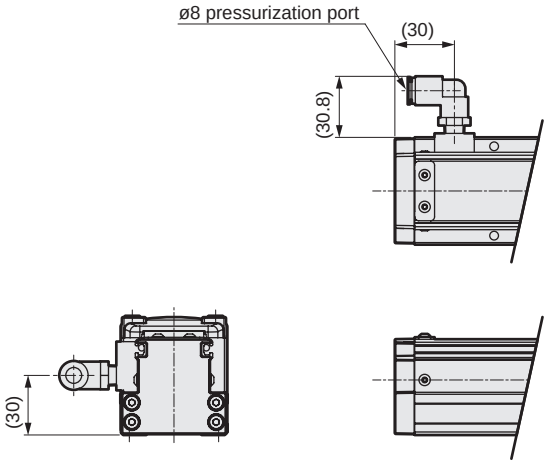
Dimensions

● EJSG-04-V-G (fitting)



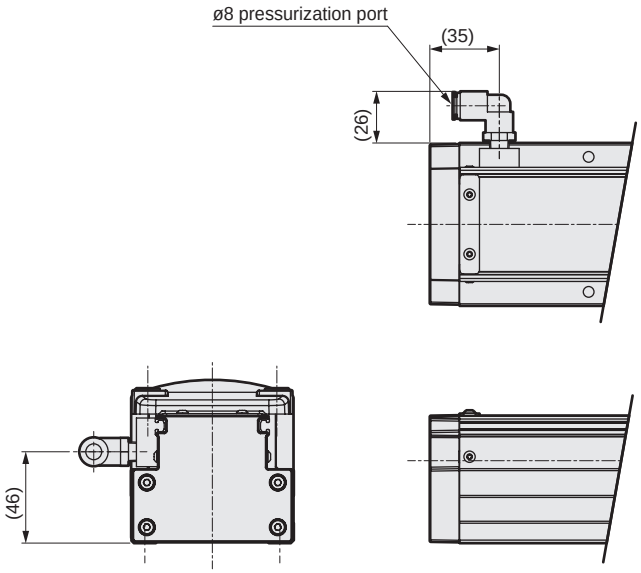
* Refer to pages 8, 12 to 14 for actuator dimensions.

● EJSG-05-V-G (fitting)



* Refer to pages 18, 22 to 24 for actuator dimensions.

● EJSG-08-V-G (fitting)



* Refer to pages 28, 32 to 34 for actuator dimensions.

Degree of protection

● Degree of protection
■ IEC (International Electrotechnical Commission) standards (IEC60529)
■ JIS C 0920 : 2003

IP - □ □

Protection characteristic codes (International Protection)

1st characteristic No. (degree of protection for foreign solid matter)

1st characteristic No.	Degree of protection	
0	No protection	
1	ø50 mm	Protection against inflow of solids 50 mm and over in diameter
2	ø12.5 mm	Protection against inflow of solids 12.5 mm and over in diameter
3	2.5 mm	Protection against inflow of solids 2.5 mm and over in diameter
4	1 mm	Protection against inflow of solids 1.0 mm and over in diameter
5	Dust-proof	No inflow of dust at levels adversely affecting normal device operation or safety
6	Dust resistant	No inflow of dust

2nd characteristic No. (degree of protection for water entry)

2nd characteristic No.	Degree of protection	
0	No protection	
1	Protection against water dripping	No harmful effects from water dripping vertically.
2	Protection against dripping water tilted at an angle of up to 15° (15°)	Water dripping vertically has no adverse effect when the product is tilted at an angle of up to 15° from its normal position.
3	Protection for watering	Water sprayed at up to 60° from the vertical has no adverse effect.
4	Protection against splashing water	Water splashing against the product from any direction has no adverse effect.
5	Protection against water jets	No harmful effects occur even when water is sprayed with nozzles from all directions.
6	Protection against powerful water jets	Water projected in powerful jets against the product from any direction has no adverse effect.
7	Protection against immersion	Water will not enter the product even when it is immersed in water under defined conditions.
8	Protection against immersion	The product can be used for continuous immersion in water.

Electric actuator
Motor specification

EJSG-C

Slider low dust specification

CONTENTS

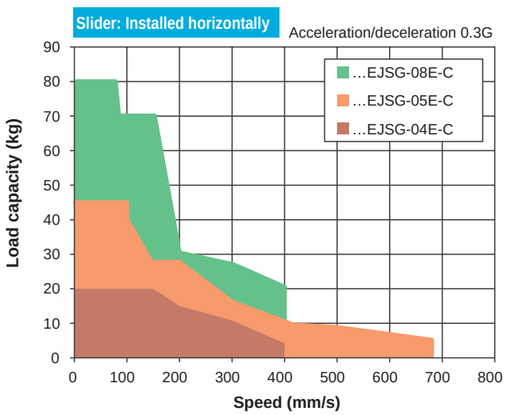
EJSG-C Series

Series variation

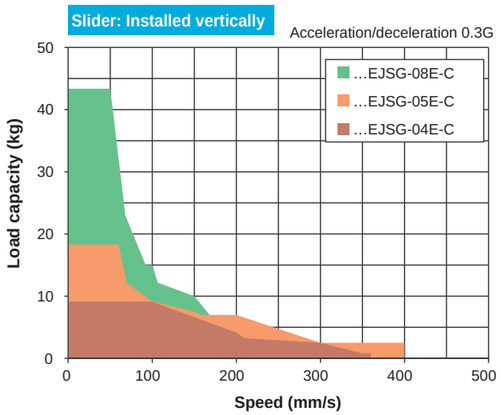
Controller	Actuator Model No.		Motor Size	Motor Mounting Direction	Body width (mm)	Screw lead (mm)	Max. load capacity (kg) Horizontal	Max. load capacity (kg) Vertical	Max. Pressing force (N)	Stroke (mm) and max. speed (mm/s) 50 mm	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	Listed page
ECG Series		EJSG-04E06-C	□35	Straight	44	6	20.0	9.2	155	260 mm/s												250	220	190	170							58
		EJSG-04E12-C				12	15.0	3.3	77	400														390	340							
		EJSG-04R/D/L06-C		Left/Right/ Bottom		6	20.0	9.2	155	200														190	170							60
		EJSG-04R/D/L12-C				12	11.7	3.3	77	320																					
		EJSG-05E05-C	□42	Straight	54	5	40.0	14.0	220	230												225	200	175	150							62
		EJSG-05E10-C				10	27.5	7.0	110	400														355	315							
		EJSG-05E20-C				20	18.3	2.5	55	680															630						
		EJSG-05R/D/L05-C		Left/Right/ Bottom		5	40.0	10.0	220	200														175	150							64
		EJSG-05R/D/L10-C				10	27.5	3.3	110	320															315						
		EJSG-05R/D/L20-C				20	18.3	0.8	55	560																					
		EJSG-08E05-C	□56	Straight	82	5	80.0	43.3	965	120																					110	66
		EJSG-08E10-C				10	70.0	28.3	482	200																						
		EJSG-08E20-C				20	30.0	3.3	241	400																						
		EJSG-08R/D/L05-C		Left/Right/ Bottom		5	80.0	33.3	965	100																						68
		EJSG-08R/D/L10-C				10	70.0	18.3	482	200																						
		EJSG-08R/D/L20-C				20	30.0	3.3	241	320																						

* This data is obtained at an acceleration/deceleration of 0.3G.
* The load capacity when wall mounted is the same as for horizontal installation.

Slider: Installed horizontally Acceleration/deceleration 0.3G



Slider: Installed vertically Acceleration/deceleration 0.3G



Electric actuator Slider Low dust specification

EJSG-04E-C

Straight motor mounting

□35 Stepping motor

How to order

EJSG - 04 E 06 0300 N B N - V C S03 - C

❶Body size

04	Body width 44mm

❷Motor mounting direction

E	Straight mounting

❸Screw lead

06	6 mm
12	12 mm

❹Stroke

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺Brake *2

N	None
B	Yes

❻Encoder *1

B	Battery-less absolute encoder
C	Incremental encoder

❼Fitting

V	Yes

❽Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When using vertically, select "Yes".
*3 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A	
Motor		□35 Stepping motor	
Encoder type		Battery-less absolute encoder Incremental encoder	
Drive method		Ball screw ø10	
Stroke	mm	50 to 800	
Screw lead	mm	6	12
Max. workload kg *1	Horizontal	20.0	15.0
	Vertical	9.2	3.3
Operation speed range *2	mm/s	7 to 260	15 to 400
Max. acceleration/deceleration G	Horizontal	0.7	0.7
	Vertical	0.3	0.3
Maximum pushing force	N	155	77
Pressing operation speed range	mm/s	5 to 20	5 to 20
Repeatability	mm	±0.01	
Lost motion	mm	0.1 or less	
Static allowable moment	N·m	MP:62 MY:62 MR:92	
Motor power supply voltage		24 VDC ±10%	
Motor section max. instantaneous current	A	2.4	
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%	
	Power consumption W	6.1	
	Holding force N	140	70
Insulation resistance		10 MΩ, 500 VDC	
Withstand voltage		500 VAC for 1 minute	
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)	
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 59 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke				
	50 to 600	650	700	750	800
6	260	250	220	190	170
12	400	400	400	390	340

Speed and load capacity

[When installed horizontally]

(kg)

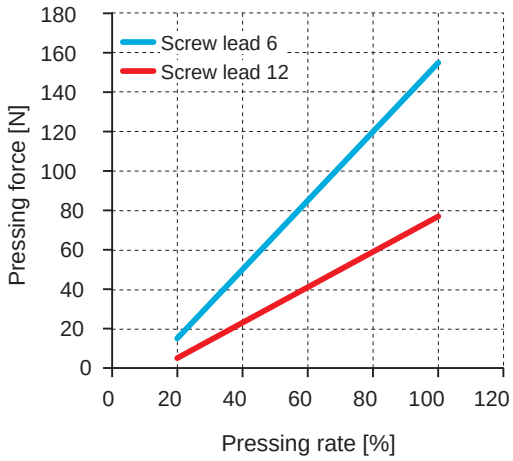
Speed (mm/s)	Acceleration/deceleration (G)			
	0.3		0.7	
	Screw lead (mm)			
	6	12	6	12
7	20.0		20.0	
15	20.0	15.0	20.0	11.0
50	20.0	15.0	20.0	11.0
100	20.0	15.0	20.0	11.0
150	20.0	15.0	12.5	10.8
200	15.0	15.0	12.5	10.8
250	11.7	10.8	11.7	8.3
260	10.9	10.8	10.9	8.3
300		10.8		8.3
320		9.5		7.5
400		4.2		4.2

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)	
	0.3	
	Screw lead (mm)	
	6	12
7	9.2	
15	9.2	3.3
50	9.2	3.3
100	9.2	3.3
150	6.7	3.3
180	5.2	3.3
200	4.2	3.3
220	2.2	2.7
280		2.7
300		2.5
350		0.8
360		0.8

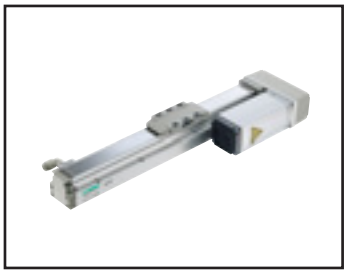
Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to page 8 for actuator dimensions.
Refer to page 70 for fitting dimensions.



Electric actuator Slider Low dust specification

EJSG-04*-C

Motor side mounting (left, right, bottom)

How to order

EJSG - 04 R 06 0300 N B N - V C S03 - C

❶Body size

04	Body width 44mm

❷Motor mounting direction*2*3

R	Right mounting
D	Bottom mounting
L	Left mounting

❸Screw lead

06	6 mm
12	12 mm

❹Stroke *2*3

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺Brake *4

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Fitting *3

V	Yes

❽Relay cable *5

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When selecting the motor mounting direction "D", the stroke is "0250 (250 mm)" to "0800(800mm)"is the selection.
*3 For the motor mounting direction "L", 0050 (50 mm) stroke cannot be selected.
*4 When using vertically, select "Yes".
*5 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A	
Motor		□35 stepper motor	
Encoder type		Battery-less absolute encoder Incremental encoder	
Drive method		Ball screw ø10	
Stroke	mm	50 to 800	
Screw lead	mm	6	12
Max. workload kg *1	Horizontal	20.0	11.7
	Vertical	9.2	3.3
Operation speed range *2	mm/s	7 to 200	15 to 320
Max. acceleration/ deceleration G	Horizontal	0.7	0.7
	Vertical	0.3	0.3
Maximum pushing force	N	155	77
Pressing operation speed range	mm/s	5 to 20	5 to 20
Repeatability	mm	±0.01	
Lost motion	mm	0.1 or less	
Static allowable moment	N·m	MP:62 MY:62 MR:92	
Motor power supply voltage		24 VDC ±10%	
Motor section max. instantaneous current	A	2.4	
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%	
	Power consumption W	6.1	
	Holding force N	140	70
Insulation resistance		10 MΩ, 500 VDC	
Withstand voltage		500 VAC for 1 minute	
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)	
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 61 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke		
	50 to 700	750	800
6	200	190	170
12	320	320	320

Speed and load capacity

[When installed horizontally]

(kg)

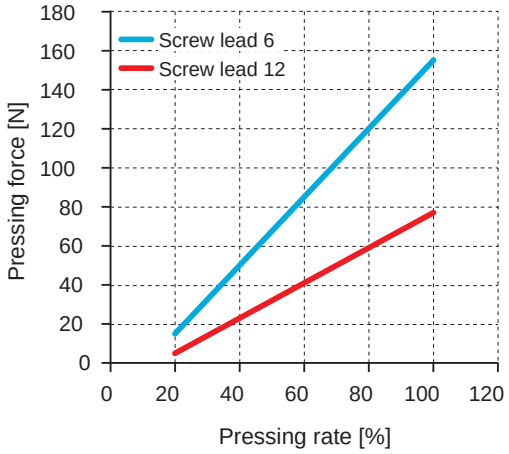
Speed (mm/s)	Acceleration/deceleration (G)			
	0.3		0.7	
	Screw lead (mm)			
	6	12	6	12
7	20.0		20.0	
15	20.0	11.7	20.0	10.0
50	20.0	11.7	20.0	10.0
100	20.0	11.7	20.0	10.0
150	13.3	11.7	11.7	10.0
200	13.3	11.7	10.0	10.0
300		8.3		8.3
320		7.3		7.3

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)	
	0.3	
	Screw lead (mm)	
	6	12
7	9.2	
15	9.2	3.3
50	9.2	3.3
100	6.7	3.3
150	3.3	3.3
180	2.8	3.3
200		3.3
280		2.0

Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to pages 12 to 14 for actuator dimensions.
Refer to page 70 for fitting dimensions.

Electric actuator Slider Low dust specification

EJSG-05E-C

Straight motor mounting

□42 Stepper motor

How to order

EJSG - 05 E 05 0300 N B N - V C S03 - C

❶Body size

05	Body width 54mm

❷Motor mounting direction

E	Straight mounting

❸Screw lead

05	5 mm
10	10 mm
20	20 mm

❹Stroke

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺Brake *2

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Fitting

V	Yes

❽Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When using vertically, select "Yes".
*3 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A		
Motor		□42 Stepper motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø12		
Stroke	mm	50 to 800		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	40.0	27.5	18.3
	Vertical	14.0	7.0	2.5
Operation speed range *2	mm/s	6 to 230	12 to 400	25 to 680
Maximum acceleration/deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	220	110	55
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:103 MY:103 MR:144		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	2.7		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	6.1		
	Holding force N	168	84	42
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature		10 to 40 °C (no freezing)		
Storage ambient temperature		-10 to 50°C (no freezing)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 63 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke				
	50 to 600	650	700	750	800
5	230	225	200	175	150
10	400	400	400	355	315
20	680	680	680	680	630

Speed and load capacity

[When installed horizontally]

(kg)

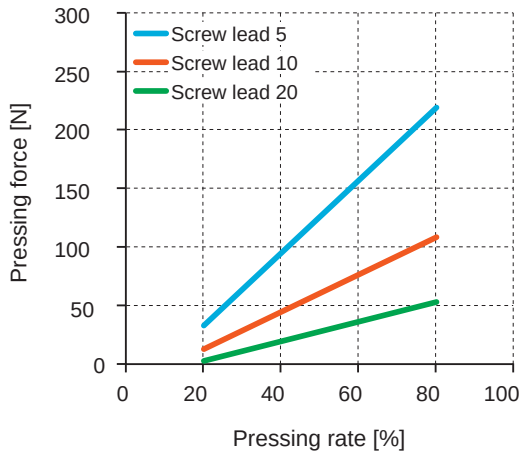
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	40.0			40.0		
12	40.0	27.5		40.0	27.5	
25	40.0	27.5	18.3	40.0	27.5	8.3
50	40.0	27.5	18.3	40.0	27.5	8.3
100	40.0	27.5	18.3	40.0	27.5	8.3
150	26.7	27.5	10.0	26.7	27.5	6.7
200	26.7	27.5	10.0	26.7	27.5	6.7
230	26.7	15.8	10.0	26.7	12.5	6.7
300		15.8	10.0		12.5	6.7
320		14.6	8.3		11.8	5.0
400		10.0	8.3		9.2	5.0
500			8.3			5.0
560			7.1			4.3
680			4.6			2.8

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	14.0		
12	14.0	7.0	
25	14.0	7.0	2.5
50	14.0	7.0	2.5
100	9.2	7.0	2.5
150	7.5	7.0	2.5
170	6.2	7.0	2.5
200	4.2	7.0	2.5
260		4.3	2.5
300		2.5	2.5
325		2.1	2.5
340		2.1	2.5
400			2.5

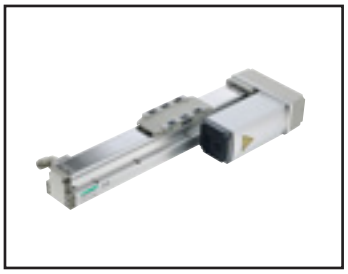
Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to page 18 for actuator dimensions.
Refer to page 70 for fitting dimensions.



Electric actuator Slider Low dust specification

EJSG-05*-C

Motor side mounting (left, right, bottom)

□42 Stepper motor

How to order

EJSG - 05 R 05 0300 N B N - V C S03 - C

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Body size

05	Body width 54mm

❷Motor mounting direction *2*3

R	Right mounting
D	Bottom mounting
L	Left mounting

❸Screw lead

05	5 mm
10	10 mm
20	20 mm

❹Stroke *2*3

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺Brake *4

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Fitting *3

V	Yes

❽Relay cable *5

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When the motor mounting direction "D" is selected, the stroke is selected from "0250 (250 mm)" to "0800 (800 mm)".
*3 For the motor mounting direction "L", 0050 (50 mm) stroke cannot be selected.
*4 When using vertically, select "Yes".
*5 Refer to page 128 for relay cable dimensions.

Supported controllers		ECG-A		
Motor		□42 Stepper motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø12		
Stroke	mm	50 to 800		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	40.0	27.5	18.3
	Vertical	10.0	3.3	0.8
Operation speed range *2	mm/s	6 to 200	12 to 320	25 to 560
Maximum acceleration/deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	220	110	55
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:103 MY:103 MR:144		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	2.7		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	6.1		
	Holding force N	168	84	42
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 65 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke		
	50 to 700	750	800
5	200	175	150
10	320	320	315
20	560	560	560

Speed and load capacity

[When installed horizontally]

(kg)

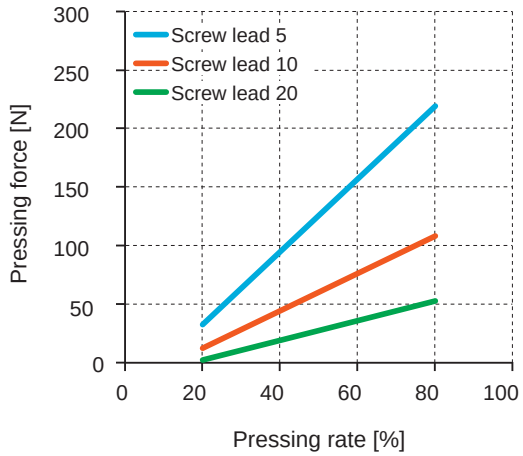
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6						
12						
25						
50						
100						
150						
200						
300						
320						
500						
560						

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	10.0		
12	10.0	3.3	
25	10.0	3.3	0.8
50	10.0	3.3	0.8
100	8.3	3.3	0.8
150	6.7	2.1	0.8
170	5.0	2.1	0.8
200		2.1	0.8
260		1.6	0.8
400			0.8

Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to pages 22 to 24 for actuator dimensions.
Refer to page 70 for fitting dimensions.

Electric actuator Slider Low dust specification

EJSG-08E-C

Straight motor mounting

□56 Stepping motor

How to order

EJSG - 08 E 05 0300 N B N - V C S03 - C

❶ Body size

08	Body width 82mm

❷ Motor mounting direction

E	Straight mounting

❸ Screw lead

05	5 mm
10	10 mm
20	20 mm

❹ Stroke

0050 to 1100	50 mm (In 50 mm increments) 1100 mm

❺ Brake *2

N	None
B	Yes

❻ Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼ Fitting

V	Yes

❽ Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When using vertically, select "Yes".
*3 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A		
Motor		□56 Stepping motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø15		
Stroke	mm	50 to 1100		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	80.0	70.0	30.0
	Vertical	43.3	28.3	3.3
Operation speed range *2	mm/s	6 to 120	12 to 200	25 to 400
Max. acceleration/ deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	965	482	241
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:203 MY:203 MR:336		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	4.0		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	7.2		
	Holding force N	768	384	192
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 67 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke	
	50 to 1050	1100
5	120	110
10	200	200
20	400	400

Speed and load capacity

[When installed horizontally]

(kg)

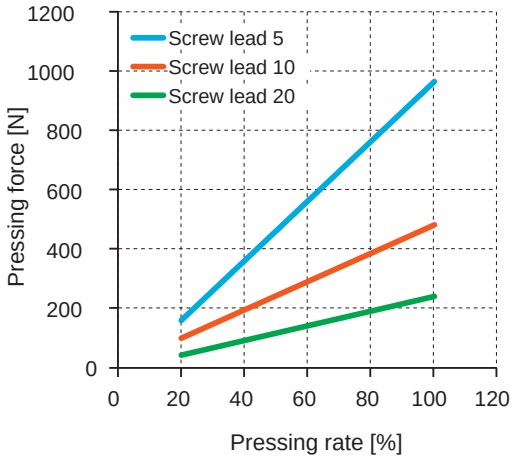
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	30.0	80.0	70.0	26.7
50	80.0	70.0	30.0	80.0	70.0	26.7
75	80.0	70.0	30.0	80.0	70.0	26.7
100	40.0	70.0	30.0	40.0	70.0	26.7
120	40.0	70.0	30.0	40.0	70.0	18.3
150		70.0	30.0		70.0	18.3
200		28.3	30.0		17.5	18.3
300			26.7			18.3
320			25.4			17.0
400			20.0			

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	43.3		
12	43.3	28.3	
25	43.3	28.3	3.3
50	43.3	28.3	3.3
75	15.0	12.5	3.3
100	15.0	12.5	3.3
120	5.3	10.0	3.3
150		10.0	3.3
160		8.3	3.3
200		1.7	3.3
280			3.3

Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to page 28 for actuator dimensions.
Refer to page 70 for fitting dimensions.

Electric actuator Slider Low dust specification

EJSG-08*-C

Motor side mounting (left, right, bottom)

□56 Stepping motor

How to order

EJSG - 08 R 05 0300 N B N - V C S03 - C

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Body size

08	Body width 82mm

❷Motor mounting direction*2

R	Right mounting
D	Bottom mounting
L	Left mounting

❸Screw lead

05	5 mm
10	10 mm
20	20 mm

❹Stroke *2

0050 to 1100	50 mm (In 50 mm increments) 1100 mm

❺Brake *3

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Fitting

V	Yes

❽Relay cable *4

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When the motor mounting direction "D" is selected, the stroke is selected from "0250 (250 mm)" to "1100 (1100 mm)".
*3 When using vertically, select "Yes".
*4 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A		
Motor		□56 Stepping motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø15		
Stroke	mm	50 to 1100		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	80.0	70.0	30.0
	Vertical	33.3	18.3	3.3
Operation speed range *2	mm/s	6 to 100	12 to 200	25 to 320
Max. acceleration/ deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	965	482	241
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:203 MY:203 MR:336		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	4.0		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	7.2		
	Holding force N	768	384	192
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 69 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke
	50 to 1100
5	100
10	200
20	320

Speed and load capacity

[When installed horizontally]

(kg)

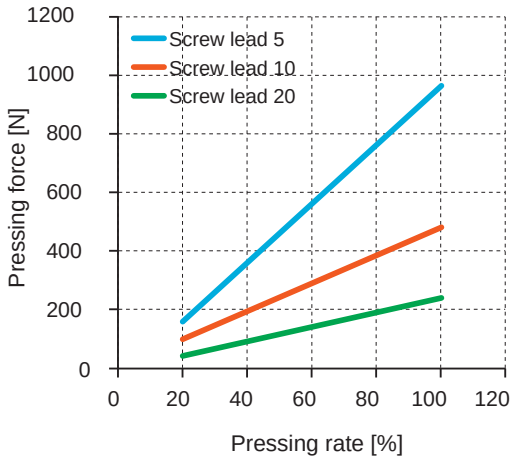
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	30.0	80.0	70.0	26.7
50	80.0	70.0	30.0	80.0	70.0	26.7
75	68.3	70.0	30.0	68.3	70.0	26.7
100	40.0	70.0	30.0	40.0	70.0	26.7
150		70.0	30.0		30.0	18.3
200		28.3	30.0		17.5	18.3
300			6.7			6.7
320			6.0			6.0

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	33.3		
12	33.3	18.3	
25	33.3	18.3	3.3
50	25.0	18.3	3.3
75	15.0	12.5	3.3
100	12.5	12.5	3.3
150		8.3	3.3
160		7.0	3.3
200			3.3
280			3.3

Pressing force



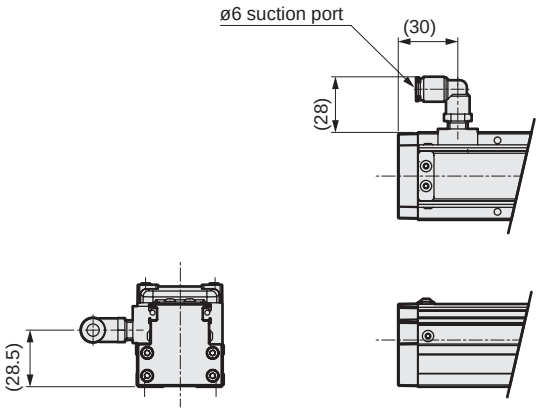
*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to pages 32 to 34 for actuator dimensions.
Refer to page 70 for fitting dimensions.

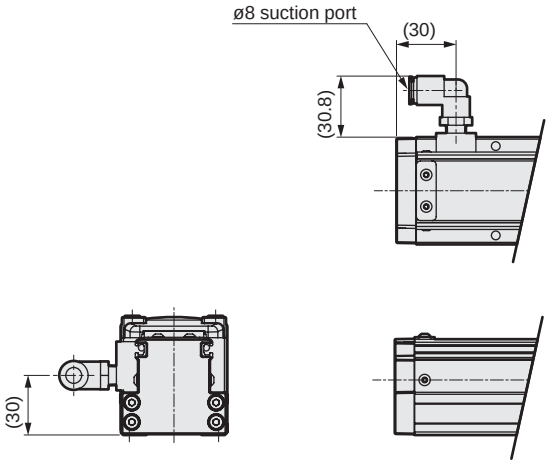
Dimensions

● EJSG-04-V-C (fitting)



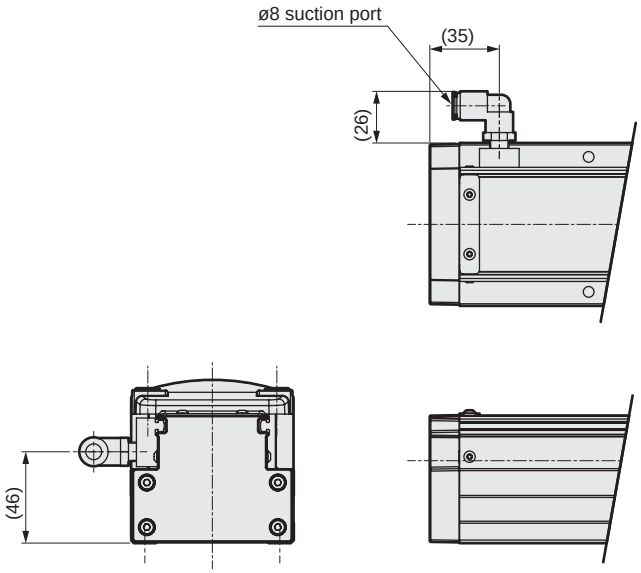
* Refer to pages 8, 12 to 14 for actuator dimensions.

● EJSG-05-V-C (fitting)



* Refer to pages 18, 22 to 24 for actuator dimensions.

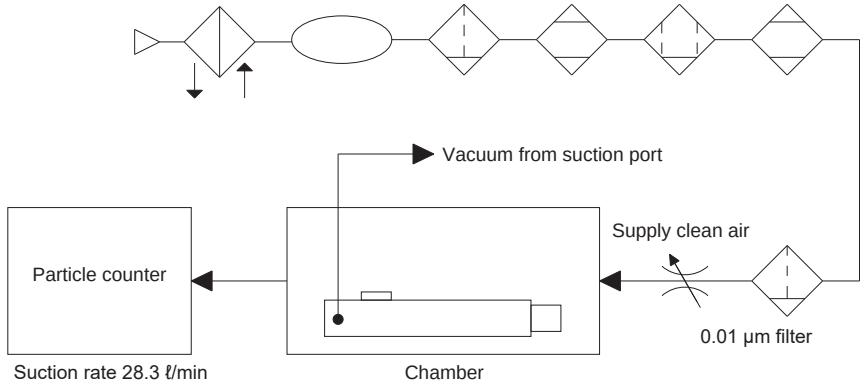
● EJSG-08-V-C (fitting)



* Refer to pages 28, 32 to 34 for actuator dimensions.

Dust generation characteristics Reference data

Test circuit



Measuring conditions

Item		Description
Test sample	Model No.	EJSG-04E120500*-*-C
		EJSG-05E200500*-*-C
		EJSG-08E200600*-*-C
	Operating speed	100mm/sec
	Acceleration/deceleration time	0.3G
	Suction flow rate	30.0ℓ/min
Particle Counter	Name	Laser dust monitor
	Min. measurable particle diameter	0.1 μm
	Intake	28.3ℓ/min
Measuring conditions	Measurement time	10min

Measuring method

(1) Set a test sample (EJSG-*-C) in the chamber.

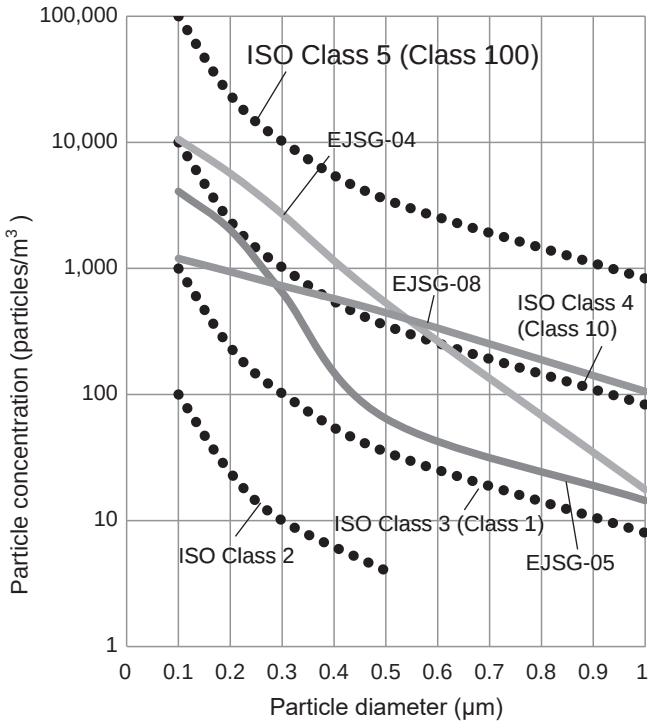
(2) Test is started from the suction port of the vacuum sample. Clean air supplied in the same quantity as the particle counter suction rate (28.3ℓ/min).

(3) Confirm that the background measurement value is 0.

(4) A test sample is operated to measure the change of particle concentration in a specified cycle.

Dust generation data

● Operation speed: 100mm/sec



Electric actuator
Motor specification

EJSG-P4

Compatible with slider type rechargeable battery manufacturing processes

CONTENTS

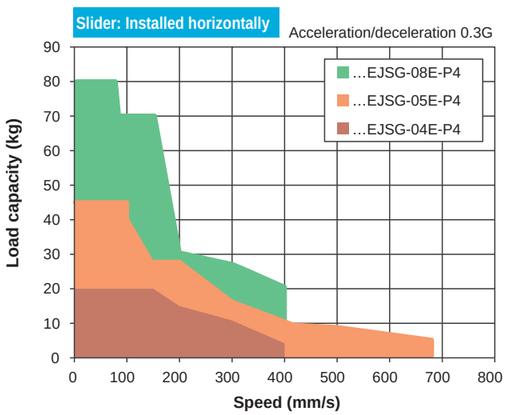
EJSG-P4 Series

Series variation

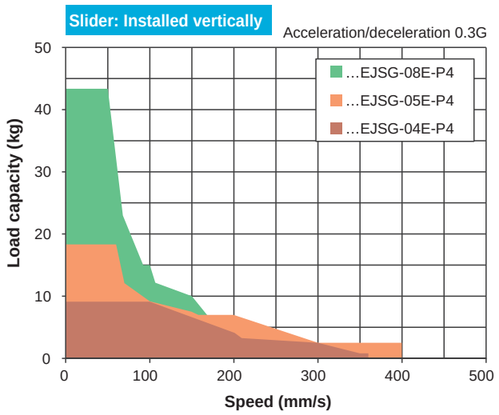
Controller	Actuator Model No.		Motor Size	Motor Mounting Direction	Body width (mm)	Screw lead (mm)	Max. load capacity (kg) Horizontal	Max. load capacity (kg) Vertical	Max. Pressing force (N)	Stroke (mm) and max. speed (mm/s)	Listed page
ECG Series		EJSG-04E06-P4	□35	Straight	44	6	20.0	9.2	155	260 mm/s; 250; 220; 190; 170	76
		EJSG-04E12-P4				12	15.0	3.3	77	400; 390; 340	
		EJSG-04R/D/L06-P4		Left/Right/Bottom		6	20.0	9.2	155	200; 190; 170	78
		EJSG-04R/D/L12-P4				12	11.7	3.3	77	320	
		EJSG-05E05-P4	□42	Straight	54	5	40.0	14.0	220	230; 225; 200; 175; 150	80
		EJSG-05E10-P4				10	27.5	7.0	110	400; 355; 315	
		EJSG-05E20-P4				20	18.3	2.5	55	680; 630	
		EJSG-05R/D/L05-P4		Left/Right/Bottom		5	40.0	10.0	220	200; 175; 150	82
		EJSG-05R/D/L10-P4				10	27.5	3.3	110	320; 315	
		EJSG-05R/D/L20-P4				20	18.3	0.8	55	560	
		EJSG-08E05-P4	□56	Straight	82	5	80.0	43.3	965	120; 110	84
		EJSG-08E10-P4				10	70.0	28.3	482	200	
		EJSG-08E20-P4				20	30.0	3.3	241	400	
		EJSG-08R/D/L05-P4		Left/Right/Bottom		5	80.0	33.3	965	100	86
		EJSG-08R/D/L10-P4				10	70.0	18.3	482	200	
		EJSG-08R/D/L20-P4				20	30.0	3.3	241	320	

* This data is obtained at an acceleration/deceleration of 0.3G.
* The load capacity when wall mounted is the same as for horizontal installation.

Slider: Installed horizontally Acceleration/deceleration 0.3G



Slider: Installed vertically Acceleration/deceleration 0.3G



Electric actuator Slider Compatible with rechargeable battery manufacturing processes

EJSG-04E-P4

Straight motor mounting

□35 Stepping motor

How to order

EJSG - 04 E 06 0300 N B N - V C S03 - P4

❶Body size

04	Body width 44mm

❷Motor mounting direction

E	Straight mounting

❸Screw lead

06	6 mm
12	12 mm

❹Stroke

0050 to 0500	50 mm (In 50 mm increments) 800 mm

❺Brake *2

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Fitting

Blank	None
V	Yes

❽Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When using vertically, select "Yes".
*3 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A	
Motor		□35 Stepping motor	
Encoder type		Battery-less absolute encoder Incremental encoder	
Drive method		Ball screw ø10	
Stroke	mm	50 to 800	
Screw lead	mm	6	12
Max. workload kg *1	Horizontal	20.0	15.0
	Vertical	9.2	3.3
Operation speed range *2	mm/s	7 to 260	15 to 400
Max. acceleration/deceleration G	Horizontal	0.7	0.7
	Vertical	0.3	0.3
Maximum pushing force	N	155	77
Pressing operation speed range	mm/s	5 to 20	5 to 20
Repeatability	mm	±0.01	
Lost motion	mm	0.1 or less	
Static allowable moment	N·m	MP:62 MY:62 MR:92	
Motor power supply voltage		24 VDC ±10%	
Motor section max. instantaneous current	A	2.4	
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%	
	Power consumption W	6.1	
	Holding force N	140	70
Insulation resistance		10 MΩ, 500 VDC	
Withstand voltage		500 VAC for 1 minute	
Operating ambient temperature		10 to 40 °C (no freezing)	
Storage ambient temperature		-10 to 50°C (no freezing)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 77 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke				
	50 to 600	650	700	750	800
6	260	250	220	190	170
12	400	400	400	390	340

Speed and load capacity

[When installed horizontally]

(kg)

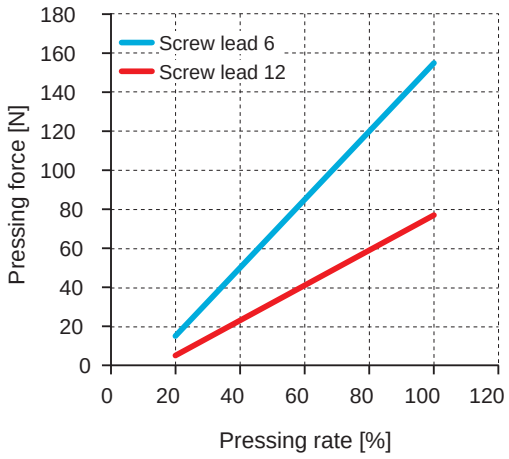
Speed (mm/s)	Acceleration/deceleration (G)			
	0.3		0.7	
	Screw lead (mm)			
	6	12	6	12
7	20.0		20.0	
15	20.0	15.0	20.0	11.0
50	20.0	15.0	20.0	11.0
100	20.0	15.0	20.0	11.0
150	20.0	15.0	12.5	10.8
200	15.0	15.0	12.5	10.8
250	11.7	10.8	11.7	8.3
260	10.9	10.8	10.9	8.3
300		10.8		8.3
320		9.5		7.5
400		4.2		4.2

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)	
	0.3	
	Screw lead (mm)	
	6	12
7	9.2	
15	9.2	3.3
50	9.2	3.3
100	9.2	3.3
150	6.7	3.3
180	5.2	3.3
200	4.2	3.3
220	2.2	2.7
280		2.7
300		2.5
350		0.8
360		0.8

Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to page 8 for actuator dimensions.
Refer to page 88 for dimensions with fittings.

Electric actuator Slider Compatible with rechargeable battery manufacturing processes

EJSG-04*-P4

Motor side mounting (left, right, bottom)

□35 Stepping motor

How to order

EJSG - 04 R 06 0300 N B N - V C S03 - P4

❶ Body size

04	Body width 44mm

❷ Motor mounting direction*2*3

R	Right mounting
D	Bottom mounting
L	Left mounting

❸ Screw lead

06	6 mm
12	12 mm

❹ Stroke *2*3

0050 to 0500	50 mm (In 50 mm increments) 800 mm

❺ Brake *4

N	None
B	Yes

❻ Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼ Fitting *3

Blank	None
V	Yes

❽ Relay cable *5

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 If the motor mounting direction "D" is selected, the stroke will be from "0250 (250 mm)" to "0800 (800 mm)".
*3 For the motor mounting direction "L" and with fitting "V", stroke 0050 (50 mm) cannot be selected.
*4 When using vertically, select "Yes".
*5 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A	
Motor		□35 stepper motor	
Encoder type		Battery-less absolute encoder Incremental encoder	
Drive method		Ball screw ø10	
Stroke	mm	50 to 800	
Screw lead	mm	6	12
Max. workload kg *1	Horizontal	20.0	11.7
	Vertical	9.2	3.3
Operation speed range *2	mm/s	7 to 200	15 to 320
Max. acceleration/deceleration G	Horizontal	0.7	0.7
	Vertical	0.3	0.3
Maximum pushing force	N	155	77
Pressing operation speed range	mm/s	5 to 20	5 to 20
Repeatability	mm	±0.01	
Lost motion	mm	0.1 or less	
Static allowable moment	N·m	MP:62 MY:62 MR:92	
Motor power supply voltage		24 VDC ±10%	
Motor section max. instantaneous current	A	2.4	
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%	
	Power consumption W	6.1	
	Holding force N	140	70
Insulation resistance		10 MΩ, 500 VDC	
Withstand voltage		500 VAC for 1 minute	
Operating ambient temperature		10 to 40 °C (no freezing)	
Storage ambient temperature		-10 to 50°C (no freezing)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 79 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke		
	50 to 700	750	800
6	200	190	170
12	320	320	320

Speed and load capacity

[When installed horizontally]

(kg)

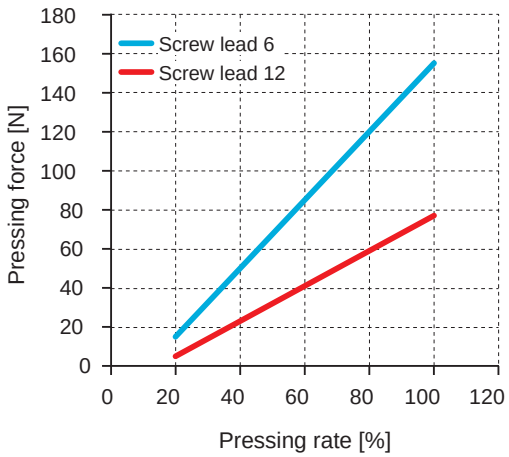
Speed (mm/s)	Acceleration/deceleration (G)			
	0.3		0.7	
	Screw lead (mm)			
	6	12	6	12
7	20.0		20.0	
15	20.0	11.7	20.0	10.0
50	20.0	11.7	20.0	10.0
100	20.0	11.7	20.0	10.0
150	13.3	11.7	11.7	10.0
200	13.3	11.7	10.0	10.0
300		8.3		8.3
320		7.3		7.3

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)	
	0.3	
	Screw lead (mm)	
	6	12
7	9.2	
15	9.2	3.3
50	9.2	3.3
100	6.7	3.3
150	3.3	3.3
180	2.8	3.3
200		3.3
280		2.0

Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to pages 12 to 14 for actuator dimensions.
Refer to page 88 for dimensions with fittings.

Electric actuator Slider Compatible with rechargeable battery manufacturing processes

EJSG-05E-P4

Straight motor mounting

□42 Stepper motor

How to order

EJSG - 05 (1) E (2) 05 (3) 0300 (4) N (5) B (6) N - V (7) C (8) S03 - P4

1 Body size

05	Body width 54mm

2 Motor mounting direction

E	Straight mounting

3 Screw lead

05	5 mm
10	10 mm
20	20 mm

4 Stroke

0050 to 0800	50 mm (In 50 mm increments) 800 mm

5 Brake *2

N	None
B	Yes

6 Encoder

B	Battery-less absolute encoder
C	Incremental encoder

7 Fitting

Blank	None
V	Yes

8 Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When using vertically, select "Yes".
*3 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A		
Motor		□42 Stepper motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø12		
Stroke	mm	50 to 800		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	40.0	27.5	18.3
	Vertical	14.0	7.0	2.5
Operation speed range *2	mm/s	6 to 230	12 to 400	25 to 680
Max. acceleration/ deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	220	110	55
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:103 MY:103 MR:144		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	2.7		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	6.1		
	Holding force N	168	84	42
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature		10 to 40 °C (no freezing)		
Storage ambient temperature		-10 to 50°C (no freezing)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 81 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke				
	50 to 600	650	700	750	800
5	230	225	200	175	150
10	400	400	400	355	315
20	680	680	680	680	630

Speed and load capacity

[When installed horizontally]

(kg)

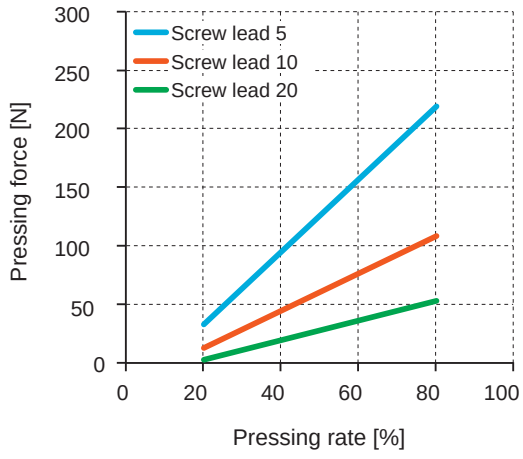
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	40.0			40.0		
12	40.0	27.5		40.0	27.5	
25	40.0	27.5	18.3	40.0	27.5	8.3
50	40.0	27.5	18.3	40.0	27.5	8.3
100	40.0	27.5	18.3	40.0	27.5	8.3
150	26.7	27.5	10.0	26.7	27.5	6.7
200	26.7	27.5	10.0	26.7	27.5	6.7
230	26.7	15.8	10.0	26.7	12.5	6.7
300		15.8	10.0		12.5	6.7
320		14.6	8.3		11.8	5.0
400		10.0	8.3		9.2	5.0
500			8.3			5.0
560			7.1			4.3
680			4.6			2.8

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	14.0		
12	14.0	7.0	
25	14.0	7.0	2.5
50	14.0	7.0	2.5
100	9.2	7.0	2.5
150	7.5	7.0	2.5
170	6.2	7.0	2.5
200	4.2	7.0	2.5
260		4.3	2.5
300		2.5	2.5
325		2.1	2.5
340		2.1	2.5
400			2.5

Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to page 18 for actuator dimensions.
Refer to page 88 for dimensions with fittings.

Electric actuator Slider Compatible with rechargeable battery manufacturing processes

EJSG-05*-P4

Motor side mounting (left, right, bottom)

□42 Stepper motor

How to order

EJSG - 05 R 05 0300 N B N - V C S03 - P4

❶Body size

05	Body width 54mm

❷Motor mounting direction*2*3

R	Right mounting
D	Bottom mounting
L	Left mounting

❸Screw lead

05	5 mm
10	10 mm
20	20 mm

❹Stroke *2*3

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺Brake *4

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Fitting *3

Blank	None
V	Yes

❽Relay cable *5

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When the motor mounting direction "D" is selected, the stroke is selected from "0250 (250 mm)" to "0800 (800 mm)".
*3 For the motor mounting direction "L" and with fitting "V", stroke 0050 (50 mm) cannot be selected.
*4 When using vertically, select "Yes".
*5 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A		
Motor		□42 Stepper motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø12		
Stroke	mm	50 to 800		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	40.0	27.5	18.3
	Vertical	10.0	3.3	0.8
Operation speed range *2	mm/s	6 to 200	12 to 320	25 to 560
Max. acceleration/ deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	220	110	55
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:103 MY:103 MR:144		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	2.7		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	6.1		
	Holding force N	168	84	42
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature		10 to 40 °C (no freezing)		
Storage ambient temperature		-10 to 50°C (no freezing)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 83 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke		
	50 to 700	750	800
5	200	175	150
10	320	320	315
20	560	560	560

Speed and load capacity

[When installed horizontally]

(kg)

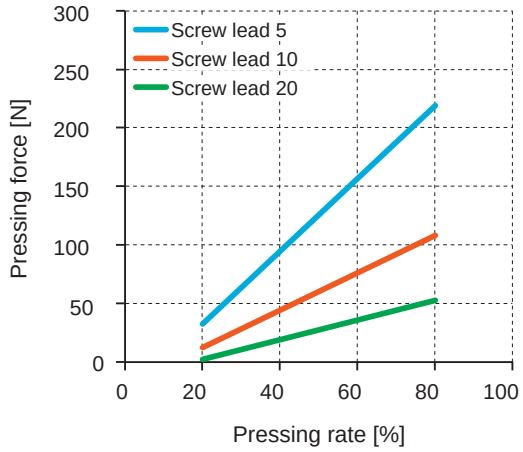
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	40.0			40.0		
12	40.0	27.5		40.0	27.5	
25	40.0	27.5	18.3	40.0	27.5	7.5
50	40.0	27.5	18.3	40.0	27.5	7.5
100	40.0	27.5	18.3	40.0	27.5	7.5
150	26.7	23.3	10.0	26.7	20.0	5.0
200	26.7	23.3	10.0	26.7	20.0	5.0
300		11.7	10.0		11.7	5.0
320		10.0	6.7		10.0	4.2
500			6.7			4.2
560			5.7			3.5

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	10.0		
12	10.0	3.3	
25	10.0	3.3	0.8
50	10.0	3.3	0.8
100	8.3	3.3	0.8
150	6.7	2.1	0.8
170	5.0	2.1	0.8
200		2.1	0.8
260		1.6	0.8
400			0.8

Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to pages 22 to 24 for actuator dimensions.
Refer to page 88 for dimensions with fittings.

Electric actuator Slider Compatible with rechargeable battery manufacturing processes

EJSG-08E-P4

Straight motor mounting

□56 Stepping motor

How to order

EJSG - 08 E 05 0300 N B N - V C S03 - P4

❶Body size

08	Body width 82mm

❷Motor mounting direction

E	Straight mounting

❸Screw lead

05	5 mm
10	10 mm
20	20 mm

❹Stroke

0050 to 1100	50 mm (In 50 mm increments) 1100 mm

❺Brake *2

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Fitting

Blank	None
V	Yes

❽Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When using vertically, select "Yes".
*3 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A		
Motor		□56 Stepper motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø15		
Stroke	mm	50 to 1100		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	80.0	70.0	30.0
	Vertical	43.3	28.3	3.3
Operation speed range *2	mm/s	6 to 120	12 to 200	25 to 400
Max. acceleration/ deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	965	482	241
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:203 MY:203 MR:336		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	4.0		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	7.2		
	Holding force N	768	384	192
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature		10 to 40 °C (no freezing)		
Storage ambient temperature		-10 to 50°C (no freezing)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 85 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke	
	50 to 1050	1100
5	120	110
10	200	200
20	400	400

Speed and load capacity

[When installed horizontally]

(kg)

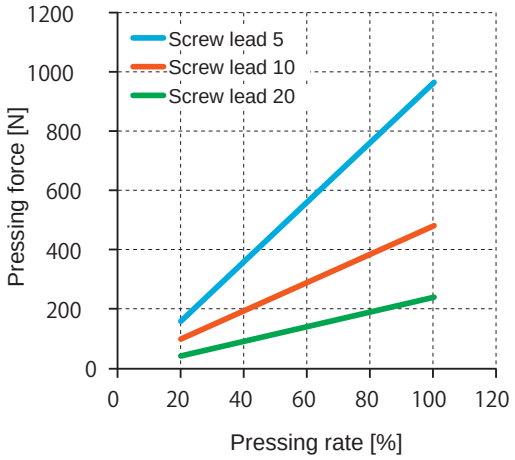
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	30.0	80.0	70.0	26.7
50	80.0	70.0	30.0	80.0	70.0	26.7
75	80.0	70.0	30.0	80.0	70.0	26.7
100	40.0	70.0	30.0	40.0	70.0	26.7
120	40.0	70.0	30.0	40.0	70.0	18.3
150		70.0	30.0		70.0	18.3
200		28.3	30.0		17.5	18.3
300			26.7			18.3
320			25.4			17.0
400			20.0			

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	43.3		
12	43.3	28.3	
25	43.3	28.3	3.3
50	43.3	28.3	3.3
75	15.0	12.5	3.3
100	15.0	12.5	3.3
120	5.3	10.0	3.3
150		10.0	3.3
160		8.3	3.3
200		1.7	3.3
280			3.3

Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to page 28 for actuator dimensions.
Refer to page 88 for dimensions with fittings.

Electric actuator Slider Compatible with rechargeable battery manufacturing processes

EJSG-08*-P4

Motor side mounting (left, right, bottom)

□56 Stepping motor

How to order

EJSG - 08 R 05 0300 N B N - V C S03 - P4

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Body size

08	Body width 82mm

❷Motor mounting direction *2

R	Right mounting
D	Bottom mounting
L	Left mounting

❸Screw lead

05	5 mm
10	10 mm
20	20 mm

❹Stroke *2

0050 to 1100	50 mm (In 50 mm increments) 1100 mm

❺Brake *3

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Fitting

Blank	None
V	Yes

❽Relay cable *4

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When the motor mounting direction "D" is selected, the stroke is selected from "0250 (250 mm)" to "1100 (1100 mm)".
*3 When using vertically, select "Yes".
*4 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A		
Motor		□56 Stepping motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø15		
Stroke	mm	50 to 1100		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	80.0	70.0	30.0
	Vertical	33.3	18.3	3.3
Operation speed range *2	mm/s	6 to 100	12 to 200	25 to 320
Max. acceleration/ deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	965	482	241
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:203 MY:203 MR:336		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	4.0		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	7.2		
	Holding force N	768	384	192
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature		10 to 40 °C (no freezing)		
Storage ambient temperature		-10 to 50°C (no freezing)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 87 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke
	50 to 1100
5	100
10	200
20	320

Speed and load capacity

[When installed horizontally]

(kg)

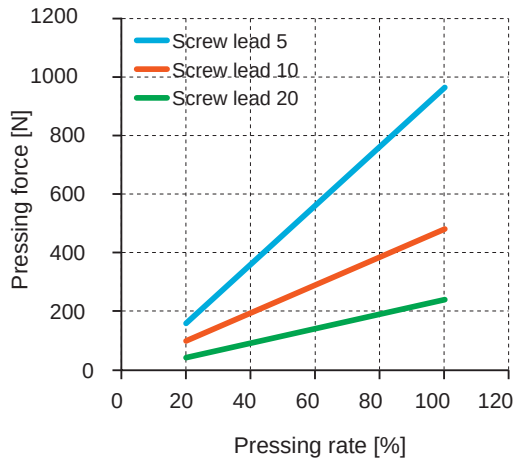
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	30.0	80.0	70.0	26.7
50	80.0	70.0	30.0	80.0	70.0	26.7
75	68.3	70.0	30.0	68.3	70.0	26.7
100	40.0	70.0	30.0	40.0	70.0	26.7
150		70.0	30.0		30.0	18.3
200		28.3	30.0		17.5	18.3
300			6.7			6.7
320			6.0			6.0

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	33.3		
12	33.3	18.3	
25	33.3	18.3	3.3
50	25.0	18.3	3.3
75	15.0	12.5	3.3
100	12.5	12.5	3.3
150		8.3	3.3
160		7.0	3.3
200			3.3
280			3.3

Pressing force



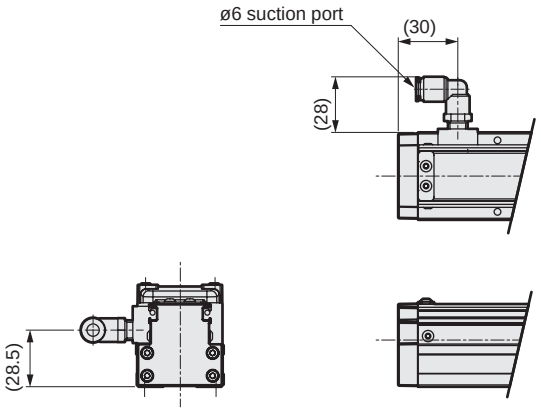
*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to pages 32 to 34 for actuator dimensions.
Refer to page 88 for dimensions with fittings.

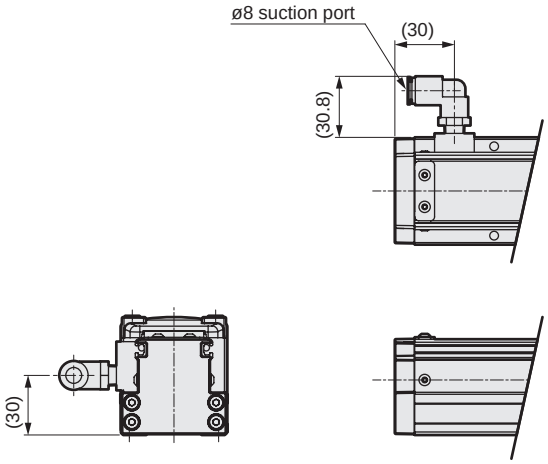
Dimensions

● EJSG-04-V-P4 (with fitting)



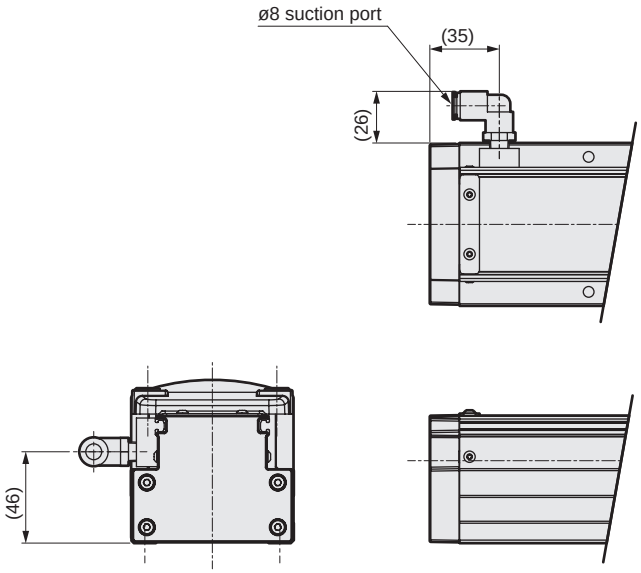
* Refer to pages 8, 12 to 14 for actuator dimensions.

● EJSG-05-V-P4 (with fitting)



* Refer to pages 18, 22 to 24 for actuator dimensions.

● EJSG-08-V-P4 (with fitting)



* Refer to pages 28, 32 to 34 for actuator dimensions.

MEMO

Electric actuator
Motor specification

EJSG-FP1

Slider type Supports food manufacturing processes

CONTENTS

EJSG-FP1 Series

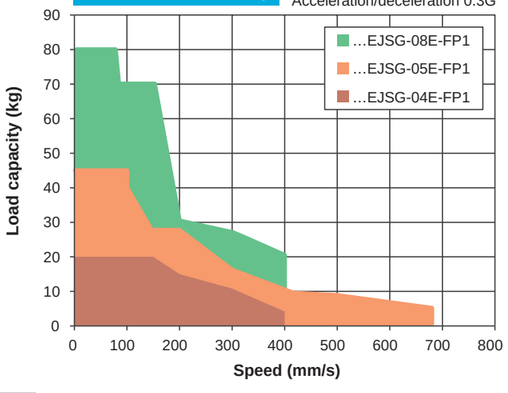
Series variation

Controller	Actuator Model No.		Motor Size	Motor Mounting Direction	Body width (mm)	Screw lead (mm)	Max. load capacity (kg) Horizontal	Max. load capacity (kg) Vertical	Max. Pressing force (N)	Stroke (mm) and max. speed (mm/s)	Listed page
ECG Series		EJSG-04E06-FP1	□ 35	Straight	44	6	20.0	9.2	155	260 mm/s (50 mm) / 250 (650) / 220 (700) / 190 (750) / 170 (800)	94
		EJSG-04E12-FP1				12	15.0	3.3	77	400 (50–600) / 390 (750) / 340 (800)	
		EJSG-04R/D/L06-FP1		Left/Right/ Bottom		6	20.0	9.2	155	200 (50–700) / 190 (750) / 170 (800)	96
		EJSG-04R/D/L12-FP1				12	11.7	3.3	77	320 (50–800)	
		EJSG-05E05-FP1	□ 42	Straight	54	5	40.0	14.0	220	230 (50–600) / 225 (650) / 200 (700) / 175 (750) / 150 (800)	98
		EJSG-05E10-FP1				10	27.5	7.0	110	400 (50–700) / 355 (750) / 315 (800)	
		EJSG-05E20-FP1				20	18.3	2.5	55	680 (50–750) / 630 (800)	
		EJSG-05R/D/L05-FP1		Left/Right/ Bottom		5	40.0	10.0	220	200 (50–700) / 175 (750) / 150 (800)	100
		EJSG-05R/D/L10-FP1				10	27.5	3.3	110	320 (50–750) / 315 (800)	
		EJSG-05R/D/L20-FP1				20	18.3	0.8	55	560 (50–800)	
		EJSG-08E05-FP1	□ 56	Straight	82	5	80.0	43.3	965	120 (50–1050) / 110 (1100)	102
		EJSG-08E10-FP1				10	70.0	28.3	482	200 (50–1100)	
		EJSG-08E20-FP1				20	30.0	3.3	241	400 (50–1100)	
		EJSG-08R/D/L05-FP1		Left/Right/ Bottom		5	80.0	33.3	965	100 (50–1050)	104
		EJSG-08R/D/L10-FP1				10	70.0	18.3	482	200 (50–1100)	
		EJSG-08R/D/L20-FP1				20	30.0	3.3	241	320 (50–1100)	

* This data is obtained at an acceleration/deceleration of 0.3G.
* The load capacity when wall mounted is the same as for horizontal installation.

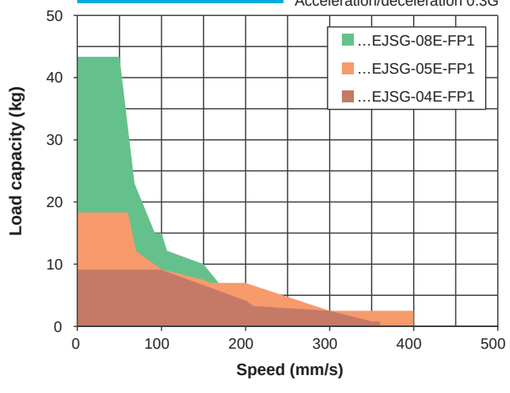
Slider: Installed horizontally

Acceleration/deceleration 0.3G



Slider: Installed vertically

Acceleration/deceleration 0.3G



Electric actuator Slider Supports food manufacturing processes

EJSG-04E-FP1

Straight motor mounting

□35 Stepping motor

How to order

EJSG - 04 E 06 0300 N B N - C S03 - FP1

❶Body size

04	Body width 44mm

❷Motor mounting direction

E	Straight mounting

❸Screw lead

06	6 mm
12	12 mm

❹Stroke

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺Brake *2

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When using vertically, select "Yes".
*3 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A	
Motor		□35 Stepping motor	
Encoder type		Battery-less absolute encoder Incremental encoder	
Drive method		Ball screw ø10	
Stroke	mm	50 to 800	
Screw lead	mm	6	12
Max. workload kg *1	Horizontal	20.0	15.0
	Vertical	9.2	3.3
Operation speed range *2	mm/s	7 to 260	15 to 400
Max. acceleration/deceleration G	Horizontal	0.7	0.7
	Vertical	0.3	0.3
Maximum pushing force	N	155	77
Pressing operation speed range	mm/s	5 to 20	5 to 20
Repeatability	mm	±0.01	
Lost motion	mm	0.1 or less	
Static allowable moment	N·m	MP:62 MY:62 MR:92	
Motor power supply voltage		24 VDC ±10%	
Motor section max. instantaneous current	A	2.4	
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%	
	Power consumption W	6.1	
	Holding force N	140	70
Insulation resistance		10 MΩ, 500 VDC	
Withstand voltage		500 VAC for 1 minute	
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)	
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 95 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke				
	50 to 600	650	700	750	800
6	260	250	220	190	170
12	400	400	400	390	340

Speed and load capacity

[When installed horizontally]

(kg)

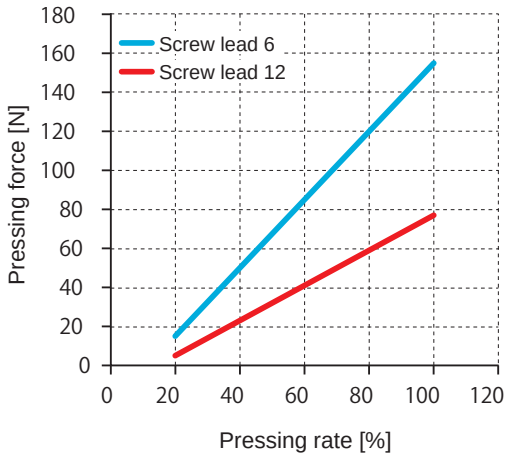
Speed (mm/s)	Acceleration/deceleration (G)			
	0.3		0.7	
	Screw lead (mm)			
	6	12	6	12
7	20.0		20.0	
15	20.0	15.0	20.0	11.0
50	20.0	15.0	20.0	11.0
100	20.0	15.0	20.0	11.0
150	20.0	15.0	12.5	10.8
200	15.0	15.0	12.5	10.8
250	11.7	10.8	11.7	8.3
260	10.9	10.8	10.9	8.3
300		10.8		8.3
320		9.5		7.5
400		4.2		4.2

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)	
	0.3	
	Screw lead (mm)	
	6	12
7	9.2	
15	9.2	3.3
50	9.2	3.3
100	9.2	3.3
150	6.7	3.3
180	5.2	3.3
200	4.2	3.3
220	2.2	2.7
280		2.7
300		2.5
350		0.8
360		0.8

Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to page 8.

Electric actuator Slider Supports food manufacturing processes

EJSG-04*-FP1

Motor side mounting (left, right, bottom)

□35 stepper motor

How to order

EJSG - 04 R 06 0300 N B N - C S03 - FP1

❶Body size

04	Body width 44mm

❷Motor mounting direction*2

R	Right mounting
D	Bottom mounting
L	Left mounting

❸Screw lead

06	6 mm
12	12 mm

❹Stroke *2

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺Brake *3

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Relay cable *4

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When the motor mounting direction "D" is selected, the stroke is selected from "0250 (250 mm)" to "0800 (800 mm)".
*3 When using vertically, select "Yes".
*4 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A	
Motor		□35 Stepping motor	
Encoder type		Battery-less absolute encoder Incremental encoder	
Drive method		Ball screw ø10	
Stroke	mm	50 to 800	
Screw lead	mm	6	12
Max. workload kg *1	Horizontal	20.0	11.7
	Vertical	9.2	3.3
Operation speed range *2	mm/s	7 to 200	15 to 320
Max. acceleration/deceleration G	Horizontal	0.7	0.7
	Vertical	0.3	0.3
Maximum pushing force	N	155	77
Pressing operation speed range	mm/s	5 to 20	5 to 20
Repeatability	mm	±0.01	
Lost motion	mm	0.1 or less	
Static allowable moment	N·m	MP:62 MY:62 MR:92	
Motor power supply voltage		24 VDC ±10%	
Motor section max. instantaneous current	A	2.4	
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%	
	Power consumption W	6.1	
	Holding force N	140	70
Insulation resistance		10 MΩ, 500 VDC	
Withstand voltage		500 VAC for 1 minute	
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)	
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 97 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke		
	50 to 700	750	800
6	200	190	170
12	320	320	320

Speed and load capacity

[When installed horizontally]

(kg)

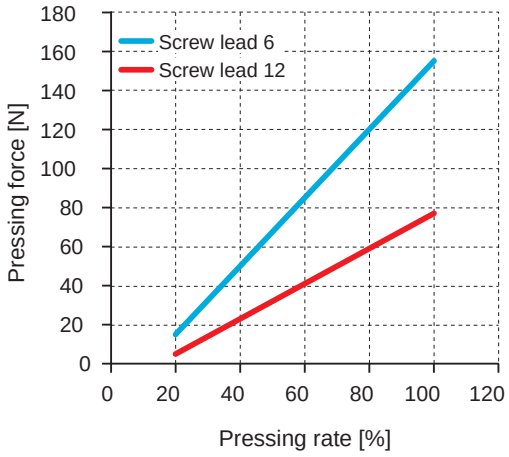
Speed (mm/s)	Acceleration/deceleration (G)			
	0.3		0.7	
	Screw lead (mm)			
	6	12	6	12
7	20.0		20.0	
15	20.0	11.7	20.0	10.0
50	20.0	11.7	20.0	10.0
100	20.0	11.7	20.0	10.0
150	13.3	11.7	11.7	10.0
200	13.3	11.7	10.0	10.0
300		8.3		8.3
320		7.3		7.3

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)	
	0.3	
	Screw lead (mm)	
	6	12
7	9.2	
15	9.2	3.3
50	9.2	3.3
100	6.7	3.3
150	3.3	3.3
180	2.8	3.3
200		3.3
280		2.0

Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to pages 12 to 14 .

Electric actuator Slider Supports food manufacturing processes

EJSG-05E-FP1

Straight motor mounting

□42 Stepper motor

How to order

EJSG - 05 E 05 0300 N B N - C S03 - FP1

❶ Body size

05	Body width 54mm

❷ Motor mounting direction

E	Straight mounting

❸ Screw lead

05	5 mm
10	10 mm
20	20 mm

❹ Stroke

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺ Brake *2

N	None
B	Yes

❻ Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼ Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When using vertically, select "Yes".
*3 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A		
Motor		□42 Stepper motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø12		
Stroke	mm	50 to 800		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	40.0	27.5	18.3
	Vertical	14.0	7.0	2.5
Operation speed range *2	mm/s	6 to 230	12 to 400	25 to 680
Max. acceleration/ deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	220	110	55
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:103 MY:103 MR:144		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	2.7		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	6.1		
	Holding force N	168	84	42
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 99 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke				
	50 to 600	650	700	750	800
5	230	225	200	175	150
10	400	400	400	355	315
20	680	680	680	680	630

Speed and load capacity

[When installed horizontally]

(kg)

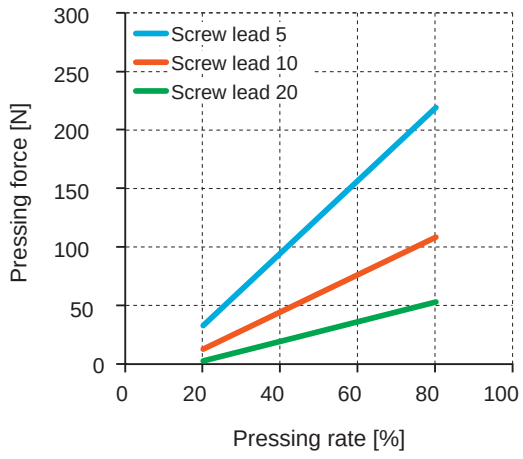
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	40.0			40.0		
12	40.0	27.5		40.0	27.5	
25	40.0	27.5	18.3	40.0	27.5	8.3
50	40.0	27.5	18.3	40.0	27.5	8.3
100	40.0	27.5	18.3	40.0	27.5	8.3
150	26.7	27.5	10.0	26.7	27.5	6.7
200	26.7	27.5	10.0	26.7	27.5	6.7
230	26.7	15.8	10.0	26.7	12.5	6.7
300		15.8	10.0		12.5	6.7
320		14.6	8.3		11.8	5.0
400		10.0	8.3		9.2	5.0
500			8.3			5.0
560			7.1			4.3
680			4.6			2.8

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	14.0		
12	14.0	7.0	
25	14.0	7.0	2.5
50	14.0	7.0	2.5
100	9.2	7.0	2.5
150	7.5	7.0	2.5
170	6.2	7.0	2.5
200	4.2	7.0	2.5
260		4.3	2.5
300		2.5	2.5
325		2.1	2.5
340		2.1	2.5
400			2.5

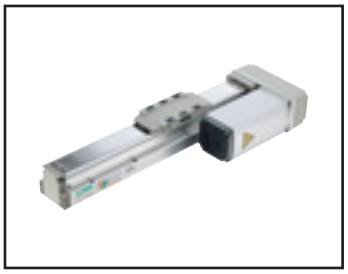
Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to page 18.



Electric actuator Slider Supports food manufacturing processes

EJSG-05*-FP1

Motor side mounting (left, right, bottom)

□42 Stepper motor

How to order

EJSG - 05 R 05 0300 N B N - C S03 - FP1

❶ ❷ ❸ ❹ ❺ ❻ ❼

❶Body size

05	Body width 54mm

❷Motor mounting direction*2

R	Right mounting
D	Bottom mounting
L	Left mounting

❸Screw lead

05	5 mm
10	10 mm
20	20 mm

❹Stroke *2

0050 to 0800	50 mm (In 50 mm increments) 800 mm

❺Brake *3

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Relay cable *4

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable1 m
R03	Movable cable3 m
R05	Movable cable5 m
R10	Movable cable10 m

*1 Select the controller from page 117.
*2 When the motor mounting direction "D" is selected, the stroke is selected from "0250 (250 mm)" to "0800 (800 mm)".
*3 When using vertically, select "Yes".
*4 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A		
Motor		□42 Stepper motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø12		
Stroke	mm	50 to 800		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	40.0	27.5	18.3
	Vertical	10.0	3.3	0.8
Operation speed range *2	mm/s	6 to 200	12 to 320	25 to 560
Max. acceleration/ deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	220	110	55
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:103 MY:103 MR:144		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	2.7		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	6.1		
	Holding force N	168	84	42
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 101 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke		
	50 to 700	750	800
5	200	175	150
10	320	320	315
20	560	560	560

Speed and load capacity

[When installed horizontally]

(kg)

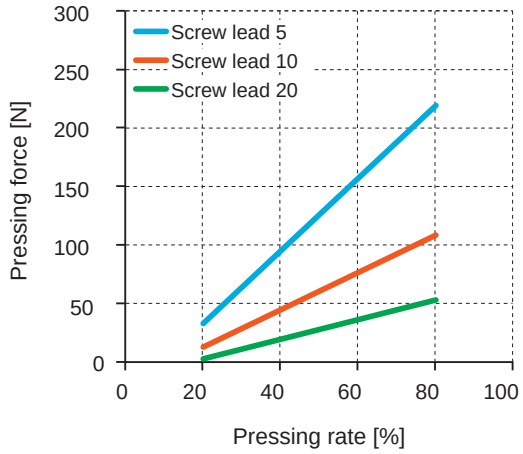
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	40.0			40.0		
12	40.0	27.5		40.0	27.5	
25	40.0	27.5	18.3	40.0	27.5	7.5
50	40.0	27.5	18.3	40.0	27.5	7.5
100	40.0	27.5	18.3	40.0	27.5	7.5
150	26.7	23.3	10.0	26.7	20.0	5.0
200	26.7	23.3	10.0	26.7	20.0	5.0
300		11.7	10.0		11.7	5.0
320		10.0	6.7		10.0	4.2
500			6.7			4.2
560			5.7			3.5

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	10.0		
12	10.0	3.3	
25	10.0	3.3	0.8
50	10.0	3.3	0.8
100	8.3	3.3	0.8
150	6.7	2.1	0.8
170	5.0	2.1	0.8
200		2.1	0.8
260		1.6	0.8
400			0.8

Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to pages 22 to 24.

Electric actuator Slider Supports food manufacturing processes

EJSG-08E-FP1

Straight motor mounting

□56 Stepping motor

How to order

EJSG - 08 E 05 0300 N B N - C S03 - FP1

❶Body size

08	Body width 82mm

❷Motor mounting direction

E	Straight mounting

❸Screw lead

05	5 mm
10	10 mm
20	20 mm

❹Stroke

0050 to 1100	50 mm (In 50 mm increments) 1100 mm

❺Brake *2

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Relay cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When using vertically, select "Yes".
*3 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A		
Motor		□56 Stepping motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø15		
Stroke	mm	50 to 1100		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	80.0	70.0	30.0
	Vertical	43.3	28.3	3.3
Operation speed range *2	mm/s	6 to 120	12 to 200	25 to 400
Max. acceleration/deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	965	482	241
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:203 MY:203 MR:336		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	4.0		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	7.2		
	Holding force N	768	384	192
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 103 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke	
	50 to 1050	1100
5	120	110
10	200	200
20	400	400

Speed and load capacity

[When installed horizontally]

(kg)

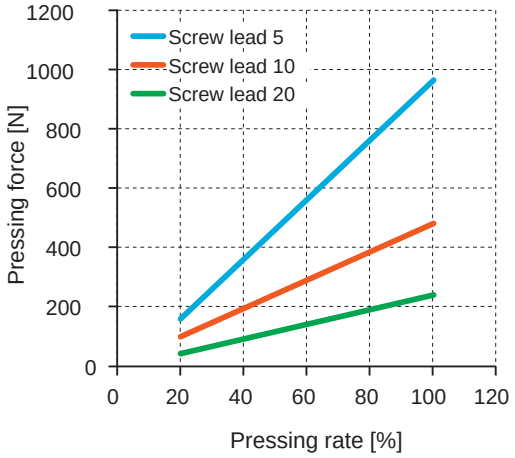
Speed (mm/s)	Acceleration/deceleration (G)					
	0.3			0.7		
	Screw lead (mm)					
	5	10	20	5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	30.0	80.0	70.0	26.7
50	80.0	70.0	30.0	80.0	70.0	26.7
75	80.0	70.0	30.0	80.0	70.0	26.7
100	40.0	70.0	30.0	40.0	70.0	26.7
120	40.0	70.0	30.0	40.0	70.0	18.3
150		70.0	30.0		70.0	18.3
200		28.3	30.0		17.5	18.3
300			26.7			18.3
320			25.4			17.0
400			20.0			

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G)		
	0.3		
	Screw lead (mm)		
	5	10	20
6	43.3		
12	43.3	28.3	
25	43.3	28.3	3.3
50	43.3	28.3	3.3
75	15.0	12.5	3.3
100	15.0	12.5	3.3
120	5.3	10.0	3.3
150		10.0	3.3
160		8.3	3.3
200		1.7	3.3
280			3.3

Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to page 28.

Electric actuator Slider Supports food manufacturing processes

EJSG-08*-FP1

Motor side mounting (left, right, bottom)

□56 Stepping motor

How to order

EJSG - 08 R 05 0300 N B N - C S03 - FP1

❶Body size

08	Body width 82mm

❷Motor mounting direction*2

R	Right mounting
D	Bottom mounting
L	Left mounting

❸Screw lead

05	5 mm
10	10 mm
20	20 mm

❹Stroke *2

0050 to 1100	50 mm (In 50 mm increments) 1100 mm

❺Brake *3

N	None
B	Yes

❻Encoder

B	Battery-less absolute encoder
C	Incremental encoder

❼Relay cable *4

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 117.
*2 When the motor mounting direction "D" is selected, the stroke is selected from "0250 (250 mm)" to "1100 (1100 mm)".
*3 When using vertically, select "Yes".
*4 Refer to page 128 for relay cable dimensions.

Specifications

Supported controllers		ECG-A		
Motor		□56 Stepping motor		
Encoder type		Battery-less absolute encoder Incremental encoder		
Drive method		Ball screw ø15		
Stroke	mm	50 to 1100		
Screw lead	mm	5	10	20
Max. workload kg *1	Horizontal	80.0	70.0	30.0
	Vertical	33.3	18.3	3.3
Operation speed range *2	mm/s	6 to 100	12 to 200	25 to 320
Max. acceleration/deceleration G	Horizontal	0.7	0.7	0.7
	Vertical	0.3	0.3	0.3
Maximum pushing force	N	965	482	241
Pressing operation speed range	mm/s	5 to 20	5 to 20	5 to 20
Repeatability	mm	±0.01		
Lost motion	mm	0.1 or less		
Static allowable moment	N·m	MP:203 MY:203 MR:336		
Motor power supply voltage		24 VDC ±10%		
Motor section max. instantaneous current	A	4.0		
Brake	Model, power supply voltage	Non-excitation operation, 24 VDC ±10%		
	Power consumption W	7.2		
	Holding force N	768	384	192
Insulation resistance		10 MΩ, 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature, humidity		10 to 40 °C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 105 for details.
*2 The maximum speed may decrease depending on the conditions.

Stroke and max. speed

(mm/s)

Screw lead	Stroke
	50 to 1100
5	100
10	200
20	320

Speed and load capacity

[When installed horizontally]

(kg)

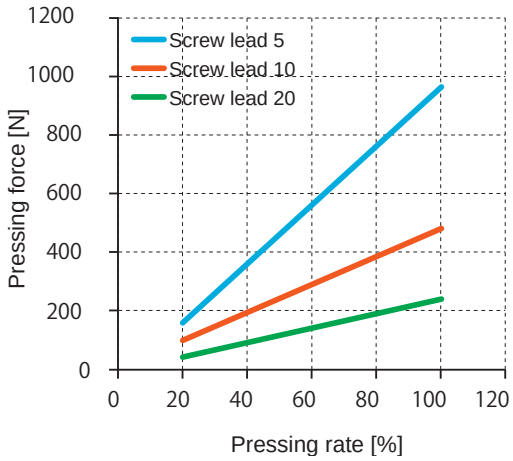
Speed (mm/s)	Acceleration/deceleration (G) 0.3 Screw lead (mm) 5	10	20	0.7 5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	30.0	80.0	70.0	26.7
50	80.0	70.0	30.0	80.0	70.0	26.7
75	68.3	70.0	30.0	68.3	70.0	26.7
100	40.0	70.0	30.0	40.0	70.0	26.7
150		70.0	30.0		30.0	18.3
200		28.3	30.0		17.5	18.3
300			6.7			6.7
320			6.0			6.0

[When installed vertically]

(kg)

Speed (mm/s)	Acceleration/deceleration (G) 0.3 Screw lead (mm) 5	10	20
6	33.3		
12	33.3	18.3	
25	33.3	18.3	3.3
50	25.0	18.3	3.3
75	15.0	12.5	3.3
100	12.5	12.5	3.3
150		8.3	3.3
160		7.0	3.3
200			3.3
280			3.3

Pressing force



*The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

Dimensions

Refer to pages 32 to 34.

Model selection/Technical data

CONTENTS

Model selection

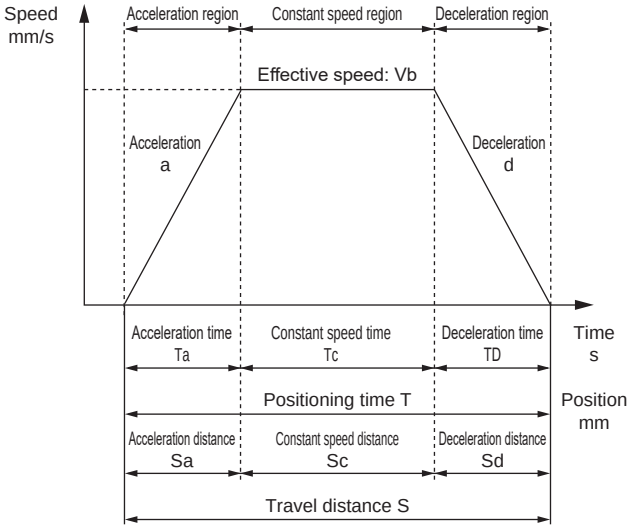
STEP 1 Confirming load capacity

Load capacity varies with mounting orientation, screw lead, transport speed and acceleration/deceleration. Refer to the Series Variation (pages 2, 38, 56, 74 and 92), the specification table for each model and the Table of Load Capacity by Speed and Acceleration/Deceleration to select the size and screw lead.

STEP 2 Confirming positioning time

Calculate the positioning time with the selected product according to the following example and confirm that the required tact is achievable.

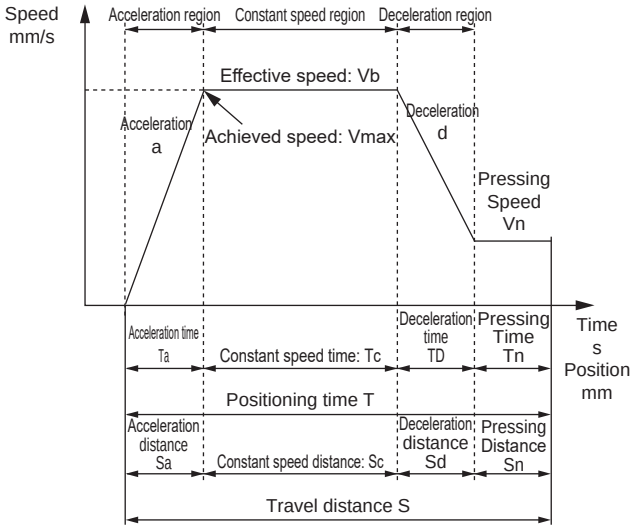
Positioning time for general transport operation



	Description	Code	Unit	Remarks
Set value	Set speed	V	mm/s	
	Set acceleration	a	mm/s^2	
	Set deceleration	d	mm/s^2	
	Travel distance	S	mm	
Calculated value	Achieved speed	Vmax	mm/s	$=[2\times a\times d\times S/(a+d)]^{1/2}$
	Effective speed	Vb	mm/s	Smaller of V and Vmax
	Acceleration time	Ta	s	=Vb/a
	Deceleration time	TD	s	=Vb/d
	Constant speed time	Tc	s	=Sc/Vb
	Acceleration distance	Sa	mm	$=(a\times Ta^2)/2$
	Deceleration distance	Sd	mm	$=(d\times Td^2)/2$
	Constant speed distance	Sc	mm	=S-(Sa+Sd)
	Positioning time	T	s	=Ta+Tc+Td

* Do not use at speeds that exceed the specifications.
* Depending on acceleration/deceleration and stroke, the trapezoid speed waveform may not be formed (the set speed may not be achieved). In this case, select the effective speed (Vb) from the set speed (V) and the achieved speed (Vmax), whichever is smaller.
* Acceleration/deceleration differs depending on the product and working conditions. Refer to the specification page of each model for details.
* Though the stabilization time depends on working conditions, it may take as long as 0.2s.
* 1G≈9.8m/s^2.

Positioning time for pressing operation



	Description	Code	Unit	Remarks
Set value	Set speed	V	mm/s	
	Set acceleration	a	mm/s^2	
	Set deceleration	d	mm/s^2	
	Travel distance	S	mm	
	Pressing speed	Vn	mm/s	
	Pressing distance	Sn	mm	
Calculated value	Achieved speed	Vmax	mm/s	$=[2\times a\times d\times(S-Sn+Vn^2/2/d)/(a+d)]^{1/2}$
	Effective speed	Vb	mm/s	The lesser value of V and Vmax
	Acceleration time	Ta	s	=Vb/a
	Deceleration time	TD	s	=(Vb-Vn)/d
	Constant speed time	Tc	s	=Sc/Vb
	Pressing time	Tn	s	=Sn/Vn
	Acceleration distance	Sa	mm	$=(a\times Ta^2)/2$
	Deceleration distance	Sd	mm	=((Vb+Vn)×Td)/2
	Constant speed distance	Sc	mm	=S-(Sa+Sd+Sn)
	Positioning time	T	s	=Ta+Tc+Td+Tn

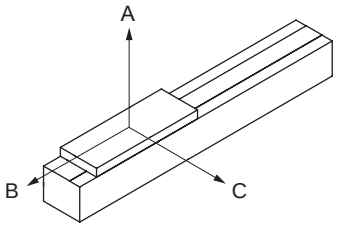
* Do not use at speeds that exceed the specifications.
* Pressing speed differs depending on the product.
* Depending on acceleration/deceleration and stroke, the trapezoid speed waveform may not be formed (the set speed may not be achieved). In this case, select the effective speed (Vb) from the set speed (V) and the achieved speed (Vmax), whichever is smaller.
* Acceleration/deceleration differs depending on the product and working conditions. Refer to the specification page of each model for details.
* Though the stabilization time depends on working conditions, it may take as long as 0.2s.
* 1G≈9.8m/s^2.

STEP 3 Checking allowable overhang length

Make sure that the load overhang length during operation is within the allowable range (pages 110 to 112).
Contact your CKD Sales representative for selection details.

Allowable overhang length (EJSG Series)

[When installed horizontally]



[Allowable overhang length]

●EJSG-04*

Motor mounted	Acceleration/ deceleration G	Screw lead	Load weight kg	Overhang mm A	B	C
Straight / side/ bottom	0.3	6	6	800	135	190
			11	595	70	95
			16	375	40	60
		12	4	800	190	255
			9	490	80	105
			13	320	50	65
	0.7	6	6	800	145	205
			11	415	75	105
			16	270	45	65
		12	4	800	200	270
			7	460	110	145
			11	275	65	85

●EJSG-05*

Motor mounted	Acceleration/ deceleration G	Screw lead	Load weight kg	Overhang mm A	B	C
Straight / side/ bottom	0.3	5	13	820	95	125
			27	350	40	50
			40	210	20	30
		10	12	765	100	130
			23	355	45	60
			35	210	25	35
		20	5	1000	235	285
			11	520	100	120
			16	330	65	75
	0.7	5	13	1000	120	170
			27	505	50	70
			40	320	30	45
		10	14	1000	110	155
			21	665	70	95
			31	430	45	60
		20	5	1000	260	330
			11	460	110	140
			16	295	70	90

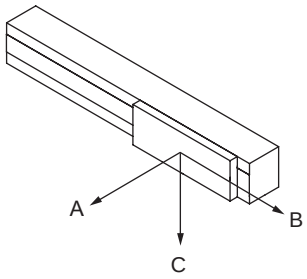
●EJSG-08*

Motor mounted	Acceleration/ deceleration G	Screw lead	Load weight kg	Overhang mm A	B	C
Straight / side/ bottom	0.3	5	25	1000	185	305
			50	1000	85	140
			80	740	45	75
		10	25	1000	165	260
			45	875	85	135
			70	525	50	75
		20	14	1000	305	490
			29	1000	140	220
			43	920	90	140
	0.7	5	25	1000	195	315
			50	850	90	145
			80	505	50	80
		10	25	1000	195	315
			45	955	100	165
			70	585	60	95
		20	10	1000	430	680
			20	1000	205	325
			30	760	135	210

* Values are when the actuator operating life is 5,000km.
* The overhang direction is for a single-direction load.
* Dimensions A, B, and C are measured from the center of the table top.
* Values are at maximum speed given stroke of 350 mm and maximum load capacity.
* Values may vary according to motor mounting direction and power supply voltage. Contact CKD for details.
* For acceleration/deceleration and load capacity, refer to the Load Capacity by Speed and Acceleration/Deceleration table (specification page for each model).

Allowable overhang length(EJSGSeries)

[When wall-mounted]



[Allowable overhang length]

●EJSG-04*

Motor mounted	Acceleration/ deceleration G	Screw lead	Load weight kg	Overhang mm A	B	C
Straight / side/ bottom	0.3	6	6	150	105	800
			11	60	40	490
			16	20	15	240
		12	4	220	165	800
			9	70	50	390
			13	30	25	210
	0.7	6	6	165	115	765
			11	65	45	365
			16	30	20	205
		12	4	235	175	800
			7	110	80	420
			11	50	40	225

●EJSG-05*

Motor mounted	Acceleration/ deceleration G	Screw lead	Load weight kg	Overhang mm A	B	C
Straight / side/ bottom	0.3	5	7	205	150	1000
			13	80	60	685
			20	30	20	335
		10	7	195	145	1000
			13	75	55	575
			20	25	20	265
		20	5	245	200	1000
			11	80	65	400
			16	35	25	200
	0.7	5	10	175	125	1000
			20	55	40	620
			30	15	10	305
		10	14	105	75	965
			21	50	35	580
			31	15	10	280
		20	5	290	225	1000
			11	95	75	405
			16	45	35	230

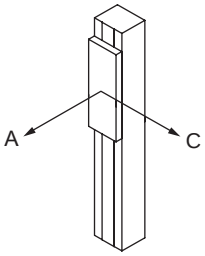
●EJSG-08*

Motor mounted	Acceleration/ deceleration G	Screw lead	Load weight kg	Overhang mm A	B	C
Straight / side/ bottom	0.3	5	25	250	155	1000
			50	85	50	1000
			70	40	20	680
		10	25	210	130	1000
			45	85	50	745
			70	25	15	345
		20	15	350	220	1000
			30	140	90	810
			43	90	55	790
	0.7	5	25	265	160	1000
			50	95	55	780
			80	30	20	390
		10	25	265	160	1000
			45	115	70	890
			70	45	25	490
		20	10	630	400	1000
			20	280	175	1000
			30	160	100	705

* Values are when the actuator operating life is 5,000km.
* The overhang direction is for a single-direction load.
* Dimensions A, B, and C are measured from the center of the table top.
* EJSG Series stroke: 350mm, max. speed under max. load capacity.
* Values may vary according to motor mounting direction and power supply voltage. Contact CKD for details.
* For acceleration/deceleration and load capacity, refer to the Load Capacity by Speed and Acceleration/Deceleration table (specification page for each model).

Allowable overhang length (EJSG Series)

[When installed vertically]



[Allowable overhang length]

●EJSG-04*

Motor mounted	Acceleration/ deceleration G	Screw lead	Load weight kg	Overhang mm	
				A	C
Straight / side/ bottom	0.3	6	3	315	315
			5	175	175
			8	90	90
		12	1	755	725
			2	355	340
			3	225	215

●EJSG-05*

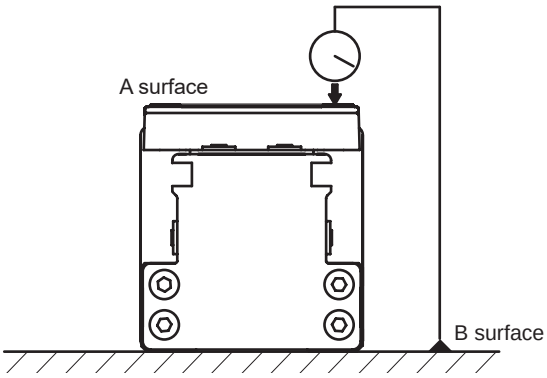
Motor mounted	Acceleration/ deceleration G	Screw lead	Load weight kg	Overhang mm	
				A	C
Straight / side/ bottom	0.3	5	6	265	265
			11	120	120
			16	70	70
		10	3	525	525
			5	295	295
			8	170	170
		20	2	815	810
			3	525	525
			4.5	340	340

●EJSG-08*

Motor mounted	Acceleration/ deceleration G	Screw lead	Load weight kg	Overhang mm	
				A	C
Straight / side/ bottom	0.3	5	15	325	325
			25	175	175
			40	90	90
		10	6	690	680
			12	315	315
			18	195	195
		20	3	1000	1000
			7	580	575
			10	390	390

* Values are when the actuator operating life is 5,000km.
* The overhang direction is for a single-direction load.
* Dimensions A and C are measured from the center of the table top.
* Values are at maximum speed given stroke of 350 mm and maximum load capacity.
* Values may vary according to motor mounting direction and power supply voltage. Contact CKD for details.
* For acceleration/deceleration and load capacity, refer to the Load Capacity by Speed and Acceleration/Deceleration table (specification page for each model).

Slider parallelism *Reference value

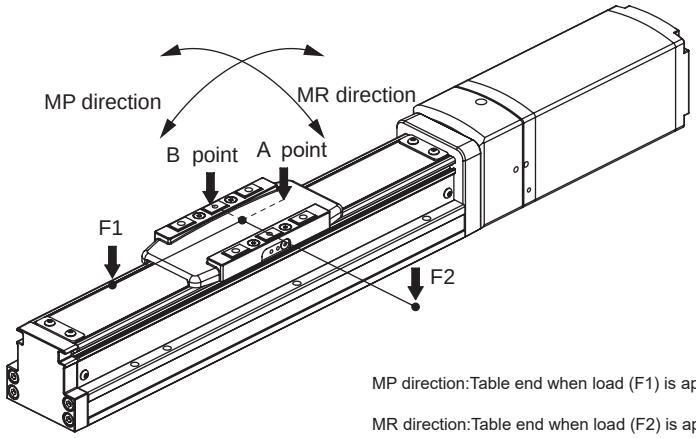


(mm)

	Parallelism
	A surface against B surface
EJSG-04 Series	0.03
EJSG-05 Series	
EJSG-08 Series	

*Parallelism with the product fixed to a surface plate.

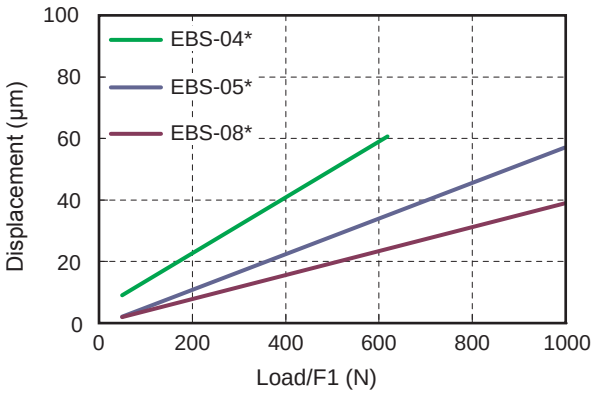
Table deflection *Reference value



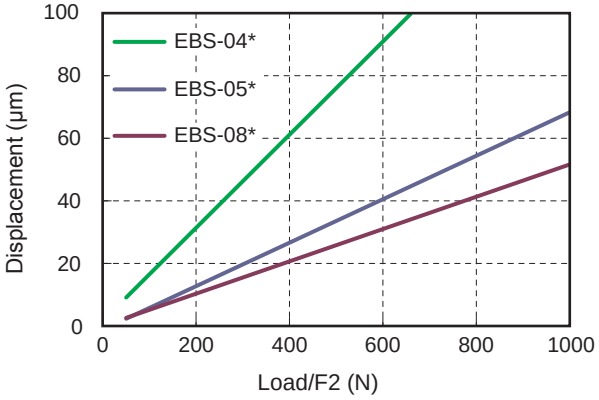
MP direction:Table end when load (F1) is applied to a position 100mm from the center of the table (Displacement at point A)

MR direction:Table end when load (F2) is applied to a position 100mm from the center of the table (Displacement at point B)

Displacement in MP direction



Displacement in MR direction

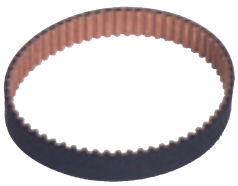


Maintenance parts

Maintenance parts (motor unit)

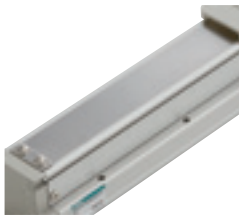
		Model No. 	Compatibility
Without brake	Absolute encoder	EJSG-04E-MOTORUNIT-NB	EJSG-04E
		EJSG-04R-MOTORUNIT-NB	EJSG-04R/D/L
		EJSG-05E-MOTORUNIT-NB	EJSG-05E
		EJSG-05R-MOTORUNIT-NB	EJSG-05R/D/L
		EJSG-08E-MOTORUNIT-NB	EJSG-08E
		EJSG-08R-MOTORUNIT-NB	EJSG-08R/D/L
	Incremental Encoder	EJSG-04E-MOTORUNIT-NC	EJSG-04E
		EJSG-04R-MOTORUNIT-NC	EJSG-04R/D/L
		EJSG-05E-MOTORUNIT-NC	EJSG-05E
		EJSG-05R-MOTORUNIT-NC	EJSG-05R/D/L
		EJSG-08E-MOTORUNIT-NC	EJSG-08E
		EJSG-08R-MOTORUNIT-NC	EJSG-08R/D/L
With brake	Absolute encoder	EJSG-04E-MOTORUNIT-BB	EJSG-04E
		EJSG-04R-MOTORUNIT-BB	EJSG-04R/D/L
		EJSG-05E-MOTORUNIT-BB	EJSG-05E
		EJSG-05R-MOTORUNIT-BB	EJSG-05R/D/L
		EJSG-08E-MOTORUNIT-BB	EJSG-08E
		EJSG-08R-MOTORUNIT-BB	EJSG-08R/D/L
	Incremental Encoder	EJSG-04E-MOTORUNIT-BC	EJSG-04E
		EJSG-04R-MOTORUNIT-BC	EJSG-04R/D/L
		EJSG-05E-MOTORUNIT-BC	EJSG-05E
		EJSG-05R-MOTORUNIT-BC	EJSG-05R/D/L
		EJSG-08E-MOTORUNIT-BC	EJSG-08E
		EJSG-08R-MOTORUNIT-BC	EJSG-08R/D/L

Maintenance parts / motor mounting direction: For right/left/downward mounting (timing belt)

Model No. 	Compatibility
EJSG-04R-BELT	EJSG-04R/D/L
EJSG-05R-BELT	EJSG-05R/D/L
EJSG-08R-BELT	EJSG-08R/D/L

Maintenance parts

Maintenance parts (steel belt)

Model No. 	Compatibility
EJSG-04-STEELBELT (stroke code 4-digit)	EJSG-04 (applicable stroke product)
EJSG-05-STEELBELT (stroke code 4-digit)	EJSG-05 (applicable stroke product)
EJSG-08-STEELBELT (stroke code 4-digit)	EJSG-08 (applicable stroke product)

ECG-A

Controller

CONTENTS

Controller

ECG-A Series

Controller for EJSG/EBR-G

How to order

ECG-ANNN30 - NP A 02

(A) (B) (C)

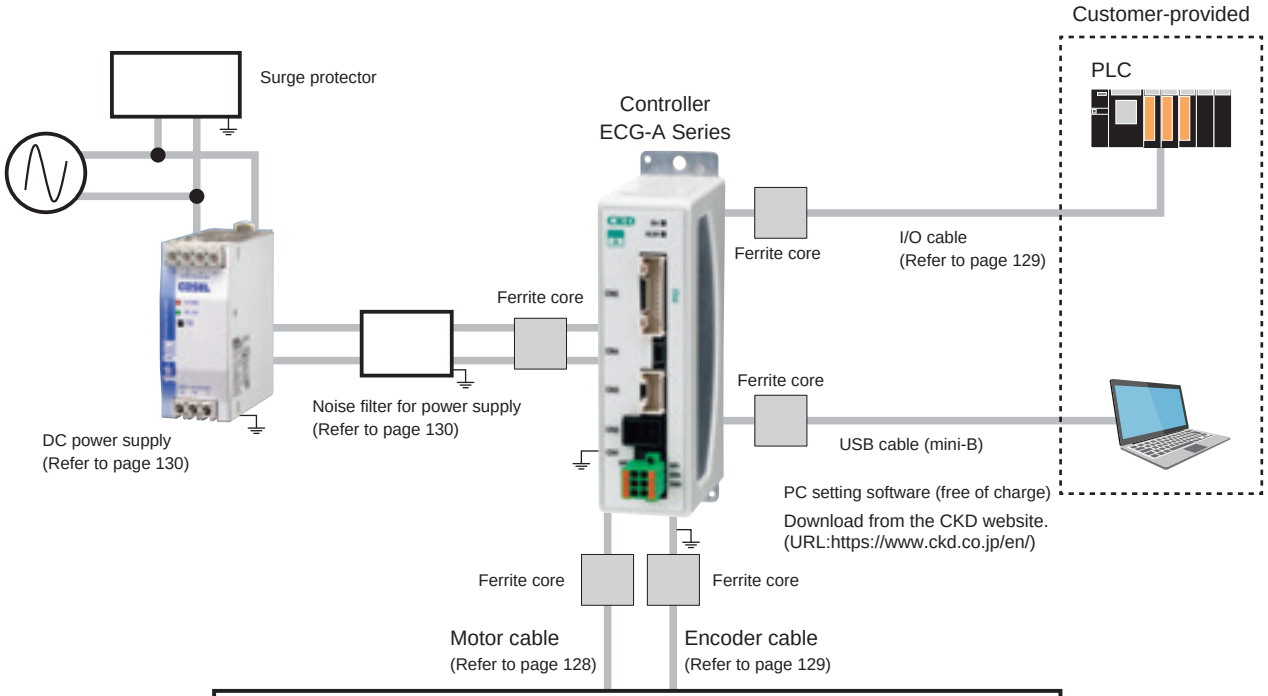
(A) Interface specification	
NP	Parallel I/O (NPN and PNP common)
LK	IO-Link
CL	CC-Link
EC	EtherCAT
EN	EtherNet/IP

(B) Mounting method	
A	Standard mount
D	DIN rail mount

(C) IO cable length *1	
00	None
02	2m
03	3m
05	5m
10	10m

*1 Select "None" unless the interface specification "parallel I/O" is selected.

System configuration



Connectable actuators

EJSG Series
(Page 1)

EBR-G Series
(Catalog No. CC-1422A)

* Refer to the Instruction Manual for details about installing and wiring the noise filter, surge protector, and ferrite core.

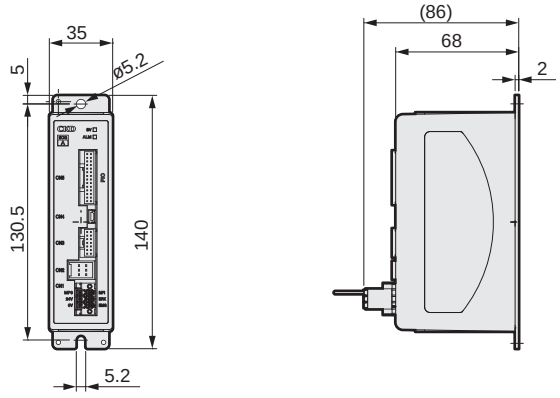
General specifications

Item		Description		
Applicable actuators		EJSG/EBR-G		
Applicable motor sizes		□35	□42	□56
Settings tool		PC setting software (S-Tools) Connection cable: USB cable (mini-B)		
External interface	Parallel I/O specification	DC24V±10%, input/output max. 13 points, cable length max. 10 m		
	Field network specification	IO-Link, CC-Link, EtherCAT, EtherNet/IP		
Indicator		SV lamp, alarm lamp Communication status check lamp (according to each interface specification)		
Power supply voltage	Control power	24 VDC ±10%		
	Power supply	24 VDC ±10%		
Current consumption	Control power	0.4A or less		
	Power supply	1.7A or less	1.9A or less	2.8A or less
Motor section max. instantaneous current		2.4A or less	2.7A or less	4.0A or less
Brake current consumption		0.4A or less		
Insulation resistance		10 MΩ and over at 500 VDC		
Withstand voltage		500 VAC for 1 minute		
Operating ambient temperature		0 to 40°C (no freezing)		
Operating ambient humidity		35 to 80% RH (no condensation)		
Storage ambient temperature		-10 to 50°C (no freezing)		
Storage ambient humidity		35 to 80% RH (no condensation)		
Working atmosphere		No corrosive gas, explosive gas, or dust		
Degree of protection		IP20		
Weight	Parallel I/O specification	Approx. 180g (standard mount), approx. 210g (DIN rail mount)		
	Field network specification	Approx. 310g (standard mount), approx. 340g (DIN rail mount)		

Dimensions

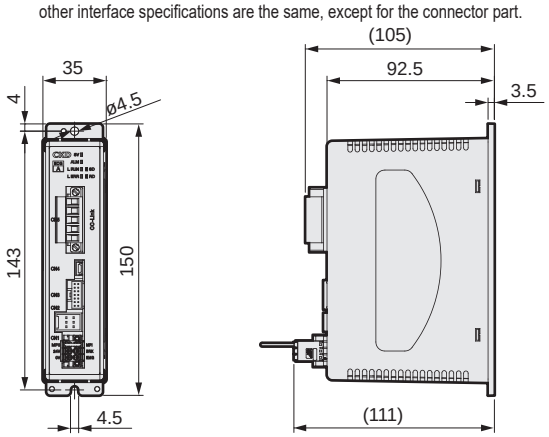
● Standard mount

ECG-ANNN30-NPA□□(Parallel I/O specification)



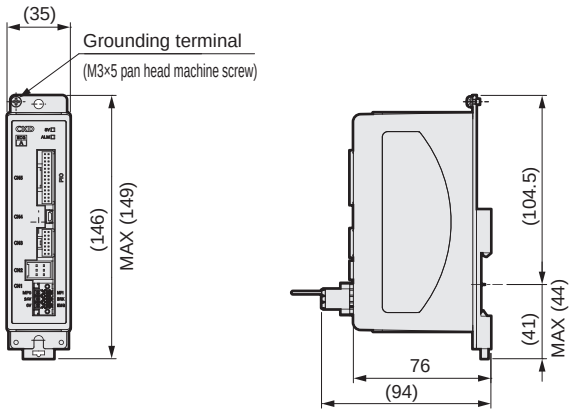
ECG-ANNN30-□□A□□(Others)

*This figure shows the dimensions for CC-Link specifications. The dimensions of other interface specifications are the same, except for the connector part.



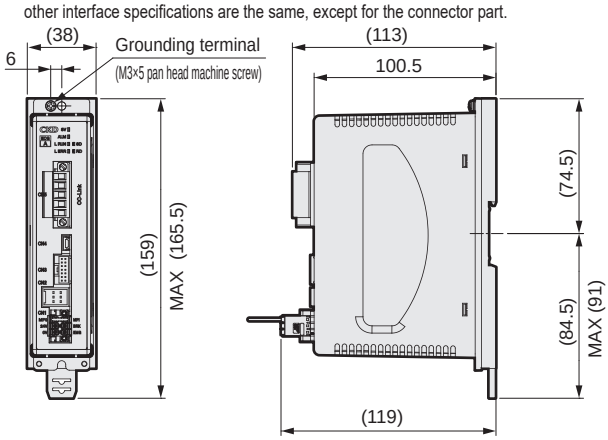
● DIN rail mount

ECG-ANNN30-NPD□□(Parallel I/O specification)



ECG-ANNN30-□□D□□(Others)

*This figure shows the dimensions for CC-Link specifications. The dimensions of other interface specifications are the same, except for the connector part.

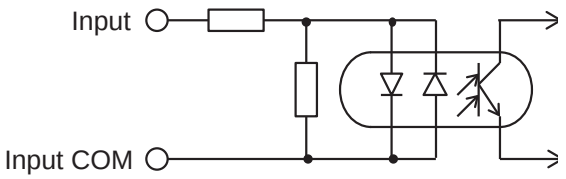


Parallel I/O (PIO) input/output circuit

Input specification

Item	ECG-ANNN30-NP□□
No. of inputs	13 points
Input voltage	24 VDC ±10%
Input current	4 mA/point
Input voltage when ON	19 V or higher
Input current when OFF	0.2 mA or less

Input circuit

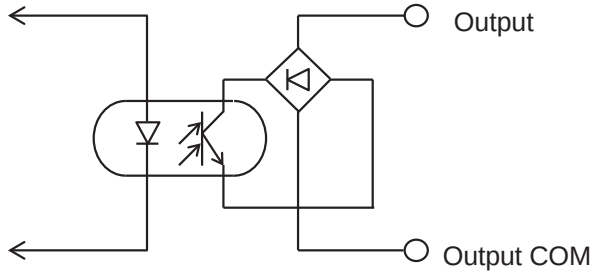


The input is not polarized.
(The input COM can be used with either + or -)

Output specifications

Item	ECG-ANNN30-NP□□
No. of output points	13 points
Load voltage	24 VDC ±10%
Load current	20 mA or less/point
Internal voltage drop when ON	3 V or less
Leakage current when OFF	0.1 mA or less
Output short-circuit protection circuit	Yes
Connecting load	PLC, etc.

Output circuit



The output is not polarized.
(The output COM can be used with either + or -)

Parallel I/O (PIO) operation mode

The controller offers five operation modes.

Use the PC setting software to set the appropriate operation mode. The initial setting is 64-point mode.

Operation mode	Positioning numbers	Overview
64-point mode	64 points	• JOG travel start input • Selectable output: 2 points (Point zone, zone 1, zone 2, travel, warning, soft limit over, soft limit over (-), soft limit over (+)
Simple 7-point mode	7 points	• JOG travel start input • Selectable output: 2 points (Point zone, zone 1, zone 2, travel, warning, soft limit over, soft limit over (-), soft limit over (+)
Solenoid valve mode double 2-position	2 points	• SW output: 2 points • Selectable output: 2 points (Point zone, zone 1, zone 2, travel, warning, soft limit over, soft limit over (-), soft limit over (+)
Solenoid valve mode double 3-position	2 points	• SW output: 2 points • Selectable output: 2 points (Point zone, zone 1, zone 2, travel, warning, soft limit over, soft limit over (-), soft limit over (+)
Solenoid valve mode single	2 points	• SW output: 2 points • Selectable output: 2 points (Point zone, zone 1, zone 2, travel, warning, soft limit over, soft limit over (-), soft limit over (+)

Parallel I/O (PIO) signal name list

Input signal

Abbreviation	Name	Abbreviation	Name
PST	Point travel start	JOGM	JOG (-) travel start
PSB*	Point number selection bit*	JOGP	JOG (+) travel start
OST	Origin return start	P*ST	Point number * travel start
SVON	Servo ON	V1ST	Solenoid valve travel instruction 1
ALMRST	Alarm reset	V2ST	Solenoid valve travel instruction 2
STOP	Stop	VST	Solenoid valve travel instruction

Output signal

Abbreviation	Name	Abbreviation	Name
PEND	Point travel complete	SONS	Servo ON state
PCB*	Point number confirmation bit *	ALM	Alarm
ACB*	Alarm confirmation bit *	WARN	Warning
PZONE	Point zone	READY	Operation preparation complete
MOVE	Moving	P*END	Point number * travel complete
ZONE1	Zone 1	SW1	Switch 1
ZONE2	Zone 2	SW2	Switch 2
OEND	Origin return complete	SLMT	Soft limit exceeded
SLMTM	Soft limit over (-)	SLMTP	Soft limit over (+)

Parallel I/O (PIO) operation mode and signal assignment

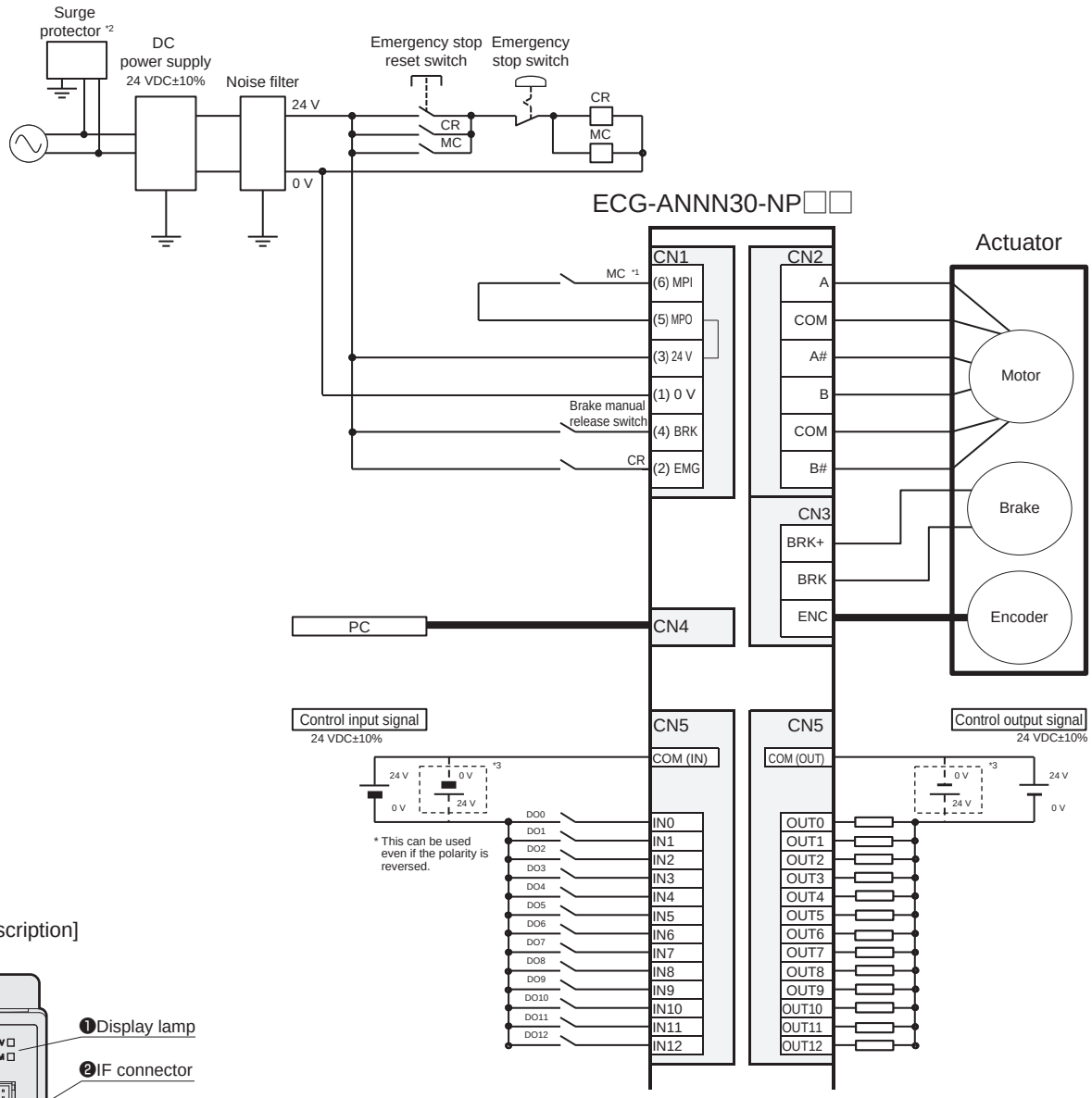
The following figure shows signal assignments in each operation mode.

Operation mode		64-point mode	Simple 7-point mode	Solenoid mode Double 2-position	Solenoid mode Double 3-position	Solenoid mode Single type
Positioning numbers		64	7	2	2	2
Input	IN0	PSB0	P1ST	V1ST	V1ST	-
	IN1	PSB1	P2ST	V2ST	V2ST	VST
	IN2	PSB2	P3ST	-	-	-
	IN3	PSB3	P4ST	-	-	-
	IN4	PSB4	P5ST	-	-	-
	IN5	PSB5	P6ST	-	-	-
	IN6	PST	P7ST	-	-	-
	IN7	JOGM	JOGM	-	-	-
	IN8	JOGP	JOGP	-	-	-
	IN9	OST	OST	OST	OST	OST
	IN10	SVON	SVON	SVON	SVON	SVON
	IN11	ALMRST	ALMRST	ALMRST	ALMRST	ALMRST
	IN12	STOP#	STOP#	-	-	-
Output	OUT0	PCB0/ ACB0	P1END	P1END	P1END	P1END
	OUT1	PCB1/ ACB1	P2END	P2END	P2END	P2END
	OUT2	PCB2/ ACB2	P3END	-	-	-
	OUT3	PCB3/ ACB3	P4END	-	-	-
	OUT4	PCB4	P5END	SW1	SW1	SW1
	OUT5	PCB5	P6END	SW2	SW2	SW2
	OUT6	PEND	P7END	-	-	-
	OUT7	PZONE/ ZONE1/ ZONE2/ MOVE/ WARN# SLMT/ SLMTM/ SLMTP	PZONE/ ZONE1/ ZONE2/ MOVE/ WARN# SLMT/ SLMTM/ SLMTP	PZONE/ ZONE1/ ZONE2/ MOVE/ WARN# SLMT/ SLMTM/ SLMTP	PZONE/ ZONE1/ ZONE2/ MOVE/ WARN# SLMT/ SLMTM/ SLMTP	PZONE/ ZONE1/ ZONE2/ MOVE/ WARN# SLMT/ SLMTM/ SLMTP
	OUT8	PZONE/ ZONE1/ ZONE2/ MOVE/ WARN# SLMT/ SLMTM/ SLMTP	PZONE/ ZONE1/ ZONE2/ MOVE/ WARN# SLMT/ SLMTM/ SLMTP	PZONE/ ZONE1/ ZONE2/ MOVE/ WARN# SLMT/ SLMTM/ SLMTP	PZONE/ ZONE1/ ZONE2/ MOVE/ WARN# SLMT/ SLMTM/ SLMTP	PZONE/ ZONE1/ ZONE2/ MOVE/ WARN# SLMT/ SLMTM/ SLMTP
	OUT9	OEND	OEND	OEND	OEND	OEND
	OUT10	SONS	SONS	SONS	SONS	SONS
	OUT11	ALM#	ALM#	ALM#	ALM#	ALM#
	OUT12	READY	READY	READY	READY	READY

*The pound sign (#) indicates a negative logic signal.

Parallel I/O connection diagram (ECG-ANNN30-NP**)

[PIO]

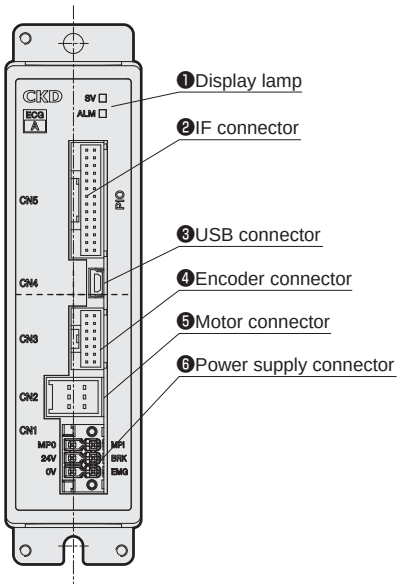


*1 If the motor drive source must be shut off for safety category compatibility, connect a contact such as an electromagnetic switch between the MPI and MPO terminals. (Connected with jumper wires at shipment.)

*2 A surge protector is required to comply with the CE marking.

*3 This can be used even if the polarity is reversed.

[Panel description]



● Accessories

Part name	Manufacturer model	Manufacturer
Power supply connector	DFMC1,5/3-STF-3,5	PHOENIX CONTACT

Description of field network operation modes

Operation mode	Overview
PIO mode (PIO)	Point operation can be used and signal assignment of inputs and outputs can be changed in the operation mode (PIO) in the same way as the parallel I/O specification. However, you cannot select a direct value operation that sets the operating conditions for operation directly from the PLC. In addition, parameters can be read and written, but the monitor function cannot be used. Refer to the table below for details.
Half simple direct value mode (HSDP)	This mode is selectable only with the CC-Link specification controller. Switching the direct travel selection signal enables a target position to be arbitrarily be set by the PLC or 64 point operation. The selected direct travel operation method can then be used. The monitoring function can be used with restrictions. However, reading and writing of parameters are not possible. Refer to the table below for details.
Simple direct value mode (SDP)	Switching the direct travel selection signal enables a target position to be arbitrarily be set by the PLC or 64 point operation. The selected direct travel operation method can then be used. Reading and writing of parameters are possible, and the monitoring function can be used. Refer to the table below for details.
Half direct value mode (HDP)	This mode is selectable only with the CC-Link specification controller. Switching the direct travel selection signal enables operating conditions to be arbitrarily be set by the PLC with restrictions or 64 point operations. The selected direct travel operation method can then be used. The monitoring function can also be used. However, reading and writing of parameters are not possible. Refer to the table below for details.
Full direct value mode (FDP)	Switching the direct travel selection signal enables operating conditions to be arbitrarily be set by the PLC or 64 point operation. The selected direct travel operation method can then be used. Reading and writing of parameters are possible, and the monitoring function can be used. Refer to the table below for details.

Operation mode		PIO	HSDP	SDP	HDP	FDP
Parameter reading/writing		Available	Not available	Available	Not available	Available
Direct value travel selection *1		Cannot be selected	1	1	1	1
Positioning numbers		64	No limit	No limit	No limit	No limit
Direct value travel Item *2	Target position	-	○	○	○	○
	Positioning width	-	-	-	○	○
	Speed	-	-	-	○	○
	Acceleration	-	-	-	●	○
	Deceleration	-	-	-	●	○
	Pressing rate	-	-	-	○	○
	Pressing distance	-	-	-	○	○
	Pressing speed	-	-	-	-	○
	Position designation method	-	-	-	○	○
	Operation mode	-	-	-	○	○
	Stop method	-	-	-	○	○
	Acceleration/deceleration method	-	-	-	○	○
Monitor Item *3	Position	-	○	○	○	○
	Speed	-	○	▲	○	○
	Current	-	○	▲	○	○
	Alarm	-	-	▲	○	○

*1: When direct value travel selection is 0, operation uses the value set in the point data. This enables up to 64 positioning points.
*2: "○" indicates Item operating with value set by PLC. "-" indicates operation with the value set by the point data.
"●" indicates Items operated with the value set by the PLC, but only the same values can be set.
*3: "○" indicates Items that can be monitored. "-" indicates Items that cannot be monitored. Only one selected Item can be monitored from "▲".
"▲" indicates which Items can be monitored when selected as monitor values (one at a time for CC-Link and IO-Link, three values at a time for the others).

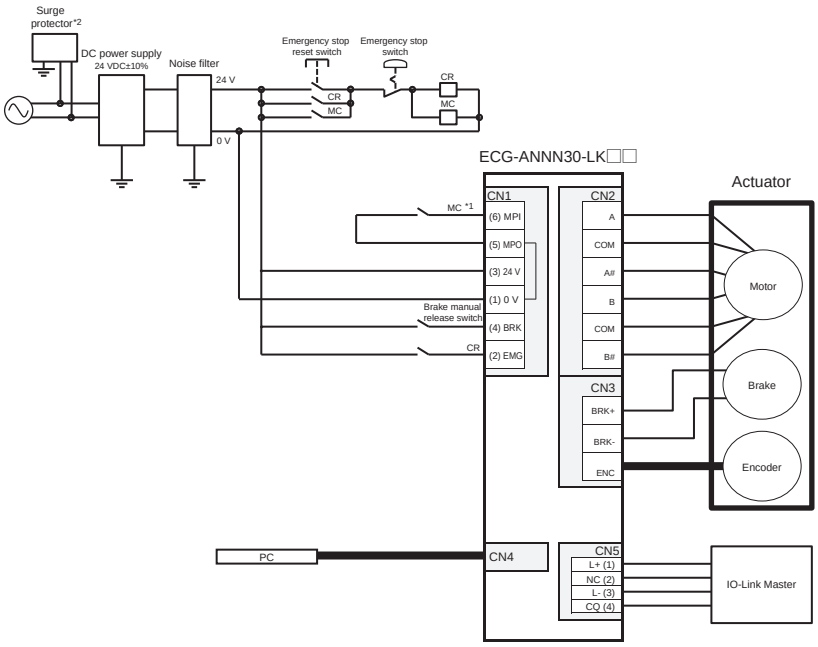
IO-Link specifications and connection diagram (ECG-ANNN30-LK**)

[Communication specifications]

Item	Specifications
Communication protocol version	V1.1
Transmission bit rate	COM3(230.4kbps)
Port	Class A
Process data length (input) PD (in) data length	PIO mode: 2 bytes
	Simple direct value mode: 9 bytes
	Full direct value mode: 12 bytes
Process data length (output) PD (out) data length	PIO mode: 2 bytes
	Simple direct value mode: 7 bytes
	Full direct value mode: 22 bytes
Minimum cycle time	PIO mode: 1 ms
	Simple direct value mode: 1.5 ms
	Full direct value mode: 2.5 ms
Monitor function	Position, speed, current, alarm

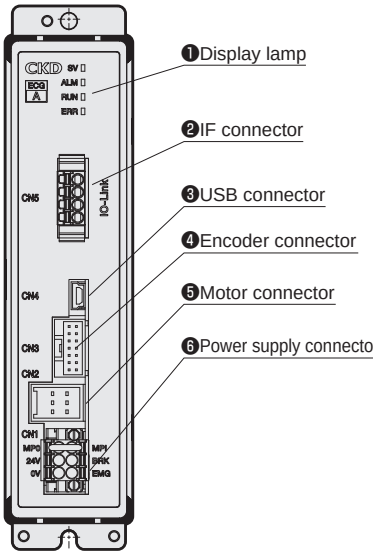
* The available monitoring Items depend on the operation mode.
Refer to page 123 for details.

[IO-Link]



*1 If the motor drive source must be shut off for safety category compatibility, connect a contact such as an electromagnetic switch between the MPI and MPO terminals. (Connected with jumper wires at shipment.)
*2 A surge protector is required to comply with the CE marking.

[Panel description]



Cyclic data from master

PD (out)	bit	Full direct value mode Signal name
0	7	Pause#
	6	Stop#
	5	Alarm reset
	4	Servo ON
	3	Origin return start
	2	Point travel start
	1	JOG/INCH (+) travel start
	0	JOG/INCH(-)Travel start
1	7	INCH selection
	6	-
	5 to 0	Point number selection bit 5 to 0
2	7 to 4	-
	3 to 1	Rotation direction (direct value travel)
	0	Direct value travel selection
3 to 6	7 to 0	Position (direct value travel)
7 to 8	7 to 0	Positioning width (direct value travel)
9 to 10	7 to 0	Speed (direct value travel)
11	7 to 0	Acceleration (direct value travel)
12	7 to 0	Deceleration (direct value travel)
13	7 to 0	Pressing rate(Direct value travel)
14	7 to 0	Pressing speed (direct value travel)
15 to 18	7 to 0	Pressing distance (direct value travel)
19 to 20	7 to 0	Gain magnification (direct value travel)
21	7	Position specification method (direct value travel)
	6 to 5	Operation method (direct value travel)
	4 to 3	Acceleration/deceleration method (direct value travel)
	2 to 0	Stop method (direct value travel)

Cyclic data from controller

PD (in)	bit	Full direct value mode Signal name
0	7	Operation preparation complete
	6	Warning#
	5	Alarm#
	4	Servo ON state
	3	Origin return complete
	2	Point travel complete
	1 to 0	-
1	7 to 6	-
	5 to 0	Point number confirmation bit 5 to 0
2	7	Soft limit over (+)
	6	Soft limit over (-)
	5	Soft limit exceeded
	4	Zone 2
	3	Zone 1
	2	Moving
	1	Point zone
	0	Direct travel status
3 to 6	7 to 0	Position (monitor value)
7 to 8	7 to 0	Speed (monitor value)
9	7 to 0	Current (monitor value)
10 to 11	7 to 0	Alarm (monitor value)

* Refer to the instruction manual for other operation modes.
* # indicates a negative logic signal.

Accessories

Part name	Manufacturer model	Manufacturer
Power supply connector	DFMC 1,5/3-STF-3,5	PHOENIX CONTACT
IO-Link connector	FMC1,5/4-ST-3,5-RF	PHOENIX CONTACT

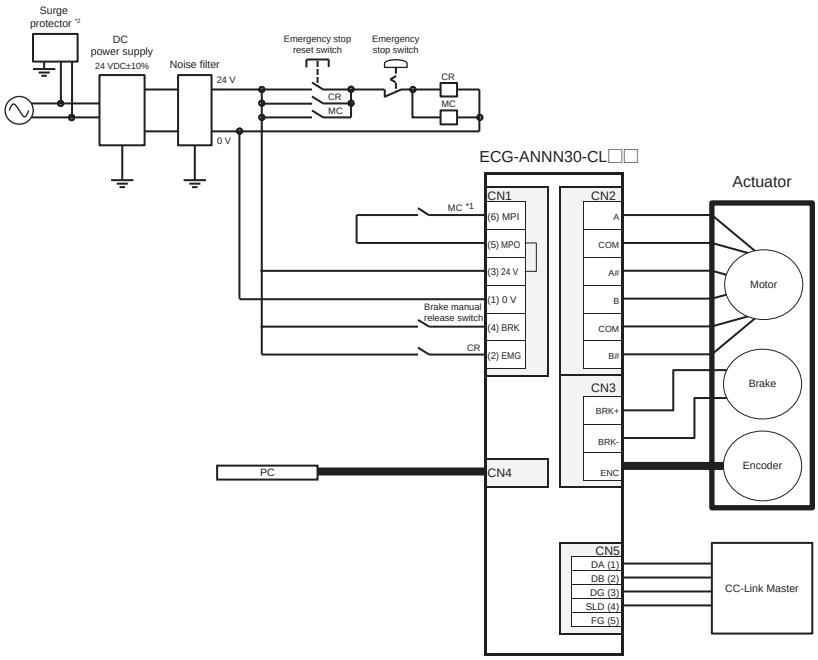
CC-Link specifications and connection diagram (ECG-ANNN30-CL**)

[Communication specifications]

Item	Specifications
CC-Link Version	Ver. 1.10
Station	Remote device station
Remote station No.	1 to 64 (set by parameter setting)
Operation mode and number of occupied stations	PIO mode (1 station occupied)
	Half simple direct value mode (1 station occupied)
	Simple direct value mode (2 stations occupied)
	Half direct value mode (2 stations occupied)
	Full direct value mode (4 stations occupied)
Remote input/ output points	32 points × occupied stations
Remote Register input/ output	4-word × occupied stations
Communication speed	10M/5M/2.5M/625k/156kbps (Selected by parameter setting)
Connection cable	CC-Link Ver. 1.10 compliant cable (3-conductor twisted pair cable with shield)
Number of connected units	42 max. when only remote device stations are connected
Monitor function	Position, speed, current, alarm

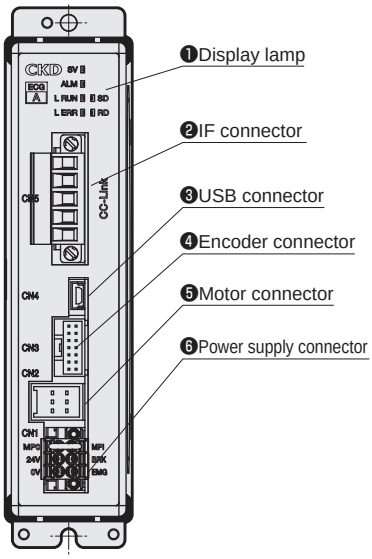
* The available monitoring Items depend on the operation mode. Refer to page 123 for details.

[CC-Link]



*1 If the motor drive source must be shut off for safety category compatibility, connect a contact such as an electromagnetic switch between the MPI and MPO terminals. (Connected with jumper wires at shipment.)
*2 A surge protector is required to comply with the CE marking.

[Panel description]



Cyclic data from master

Device No.	Half simple direct value mode Signal name
RYn0	Point number selection bit 0
RYn1	Point number selection bit 1
RYn2	Point number selection bit 2
RYn3	Point number selection bit 3
RYn4	Point number selection bit 4
RYn5	Point number selection bit 5
RYn6	Direct value travel selection
RYn7	JOG/INCH(-)Travel start
RYn8	JOG/INCH(+)Travel start
RYn9	INCH selection
RYnA	Point travel start
RYnB	Origin return start
RYnC	Servo ON
RYnD	Alarm reset
RYnE	Stop#
RYnF	Pause#
RY(n+1)0 to RY(n+1)F	Vacant

Cyclic data from controller

Device No.	Half simple direct value mode Signal name
RXn0	Point number confirmation bit 0
RXn1	Point number confirmation bit 1
RXn2	Point number confirmation bit 2
RXn3	Point number confirmation bit 3
RXn4	Point number confirmation bit 4
RXn5	Point number confirmation bit 5
RXn6	Direct value travel status
RXn7	Selectable output 1
RXn8	Selectable output 2
RXn9	-
RXnA	Point travel complete
RXnB	Origin return complete
RXnC	Servo ON state
RXnD	Alarm#
RXnE	Warning#
RXnF	Operation preparation complete
RX(n+1)0 to RX(n+1)F	Vacant

Device No.	Half simple direct value mode Signal name
RWw0	Position (direct value travel)
RWw1	
RWw2	-
RWw3	-

Device No.	Half simple direct value mode Signal name
RWr0	Position (monitor value)
RWr1	
RWr2	Speed (monitor value)
RWr3	Current (monitor value)

* Refer to the instruction manual for other operation modes.
* # indicates a negative logic signal.

● Accessories

Part name	Manufacturer model	Manufacturer
Power supply connector	DFMC1,5/3-STF-3,5	PHOENIX CONTACT
CC-Link connector	MSTB2,5/5-STF-5,08ABGYAU	PHOENIX CONTACT

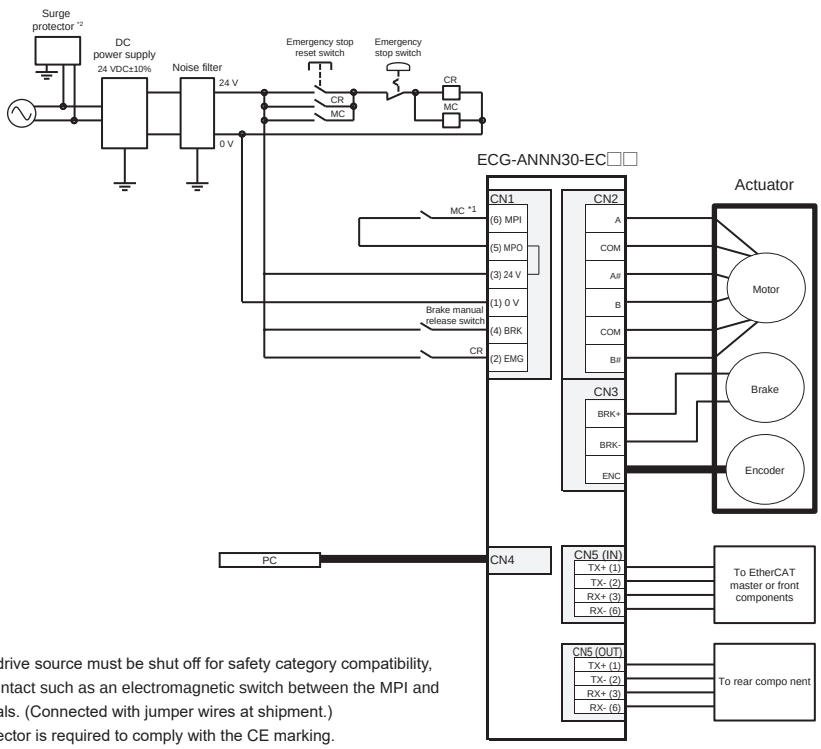
EtherCAT specifications and connection diagram (ECG-ANNN30-EC**)

[Communication specifications]

Item	Specifications
Communication speed	100Mbps (fast Ethernet, full duplex)
Process data	Variable PDO mapping
Max. PDO Data length	RxPDO:64 bytes/ TxPDO:64 bytes
Station Alias	0 - 65535 (Set by a parameter)
Connection cable	EtherCAT compliant cable (Twisted pair cable of CAT5e or higher (Double shield with aluminum tape and braid) is recommended.)
Node address	Automatic allocation by master
Monitor function	Position, speed, current, alarm

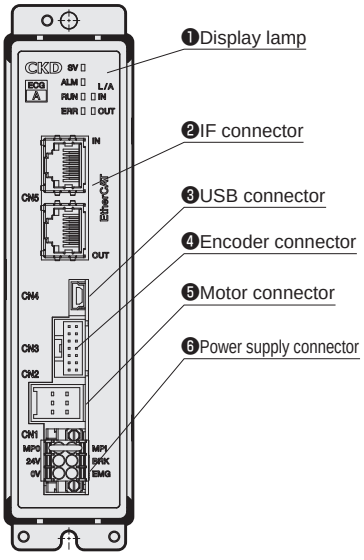
* The available monitoring Items depend on the operation mode. Refer to page 123 for details.

[EtherCAT]



*1 If the motor drive source must be shut off for safety category compatibility, connect a contact such as an electromagnetic switch between the MPI and MPO terminals. (Connected with jumper wires at shipment.)
*2 A surge protector is required to comply with the CE marking.

[Panel description]



Cyclic data from master

Index	Sub Index	bit	Full direct value mode Signal name
0 x 2001	0x 01	0 to 5	Point number selection bit 0 to 5
		6	-
		7	JOG/INCH (-) travel start
		8	JOG/INCH (+) travel start
		9	INCH selection
		10	Point travel start
		11	Origin return start
		12	Servo ON
		13	Alarm reset
		14	Stop#
		15	Pause#
		16 to 31	-
	0x 02	0 to 3	-
		4	Data request
		5	Data R/W selection
		6 to 11	-
		12	Monitor request
		13 to 14	-
		15	Direct value travel selection
		16 to 31	-
0 x 2003	0x 01	0 to 31	Position (direct value travel)
	0x 02	0 to 31	Positioning width (direct value travel)
	0x 03	0 to 31	Speed (direct value travel)
	0x 04	0 to 31	Acceleration (direct value travel)
	0x 05	0 to 31	Deceleration (direct value travel)
	0x 06	0 to 31	Pressing ratio (direct value travel)
	0x 07	0 to 31	Pressing speed (direct value travel)
	0x 08	0 to 31	Pressing distance (direct value travel)
	0x 09	0 to 31	Mode (direct value travel)
	0x0A	0 to 31	Gain magnification (direct value travel)
	0x0 B	0 to 31	Writing data
	0x0C	0 to 31	Data number
	0x0D	0 to 31	Monitor number 1
	0x0E	0 to 31	Monitor number 2

Cyclic data from controller

Index	Sub Index	bit	Full direct value mode Signal name
0 x 2005	0x 01	0 to 5	Point number confirmation bit 0 to 5
		6 to 9	-
		10	Point travel complete
		11	Origin return complete
		12	Servo ON state
		13	Alarm#
		14	Warning#
		15	Operation preparation complete
		16 to 31	-
	0x 02	0 to 3	Data response
		4	Data complete
		5	Data write status
		6 to 7	-
		8 to 11	Monitor response
		12	Monitor complete
		13 to 14	-
		15	Direct value travel status
		16	Point zone
		17	Moving
		18	Zone 1
		19	Zone 2
		20	Soft limit exceeded
		21	Soft limit over (-)
		22	Soft limit over (+)
		23 to 31	-
0x 2007	0x 01	0 to 31	Position (monitor value)
	0x 02	0 to 31	Speed (monitor value)
	0x 03	0 to 31	Current (monitor value)
	0x 04	0 to 31	-
	0x 05	0 to 31	Alarm (monitor value)
	0x 06to 0x0A	0 to 31	-
	0x0 B	0 to 31	Read data
	0x0C	0 to 31	Data (alarm)
	0x0D	0 to 31	Monitor value 1
	0x0E	0 to 31	Monitor value 2

* Refer to the instruction manual for other operation modes.
* # indicates a negative logic signal.

Accessories

Part name	Manufacturer model	Manufacturer
Power supply connector	DFMC 1,5/3-STF-3,5	PHOENIX CONTACT

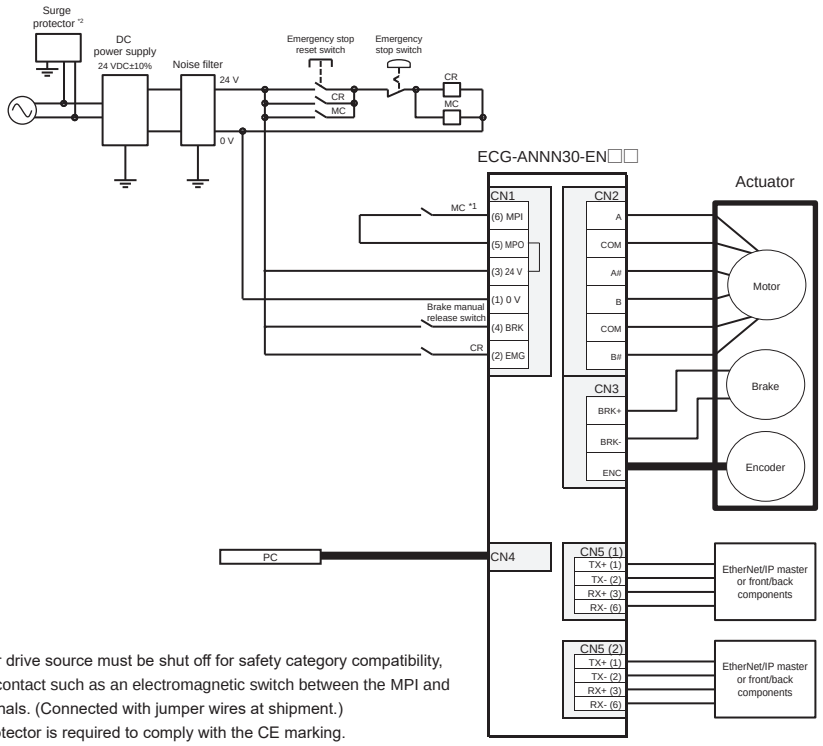
EtherNet/IP specifications and connection diagram (ECG-ANNN30-EN**)

[Communication specifications]

Item	Specifications
Communication protocol	EtherNet/IP
Communication speed	Automatic setting (100Mbps/10Mbps, full duplex/ half duplex)
Occupied bytes	Input: 64 bytes/Output: 64 bytes
IP address	Setting with parameters (0.0.0.0 to 255.255.255.255) Via DHCP server (arbitrary address)
RPI (Packet interval)	4ms to 10000ms
Connection cable	EtherNet/IP compliant cable (Twisted pair cable of CAT5e or higher (Double shield with aluminum tape and braid) is recommended.)
Monitor function	Position, speed, current, alarm

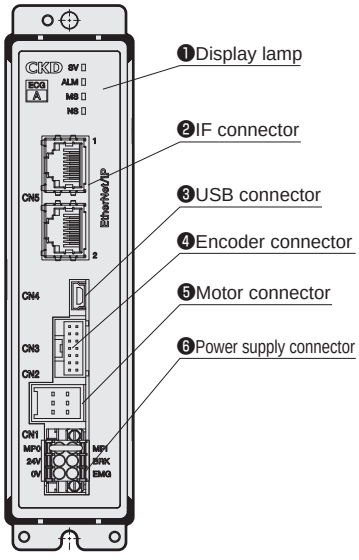
* The available monitoring Items depend on the operation mode.
Refer to page 123 for details.

[EtherNet/IP]



*1 If the motor drive source must be shut off for safety category compatibility, connect a contact such as an electromagnetic switch between the MPI and MPO terminals. (Connected with jumper wires at shipment.)
*2 A surge protector is required to comply with the CE marking.

[Panel description]



Cyclic data from master

Byte	bit	Full direct value mode Signal name
0	0 to 5	Point number selection bit 0 to 5
	6	-
	7	JOG/INCH (-) travel start
1	0	JOG/INCH (+) travel start
	1	INCH selection
	2	Point travel start
	3	Origin return start
	4	Servo ON
	5	Alarm reset
	6	Stop#
	7	Pause#
2 to 3	0 to 7	-
4	0 to 3	-
	4	Data request
	5	Data R/W selection
	6 to 7	-
5	0 to 3	-
	4	Monitor request
	5 to 6	-
	7	Direct value travel selection
6 to 7	0 to 7	-
8 to 11	0 to 7	Position (direct value travel)
12 to 15	0 to 7	Positioning width (direct value travel)
16 to 19	0 to 7	Speed (direct value travel)
20 to 23	0 to 7	Acceleration (direct value travel)
24 to 27	0 to 7	Deceleration (direct value travel)
28 to 31	0 to 7	Pressing ratio (direct value travel)
32 to 35	0 to 7	Pressing speed (direct value travel)
36 to 39	0 to 7	Pressing distance (direct value travel)
40 to 43	0 to 7	Mode (direct value travel)
44 to 47	0 to 7	Gain magnification (direct value travel)
48 to 51	0 to 7	Writing data
52 to 55	0 to 7	Data number
56 to 59	0 to 7	Monitor number 1
60 to 63	0 to 7	Monitor number 2

Cyclic data from controller

Byte	bit	Full direct value mode Signal name
0	0 to 5	Point number confirmation bit 0 to 5
	6 to 7	-
1	0 to 1	-
	2	Point travel complete
	3	Origin return complete
	4	Servo ON state
	5	Alarm#
	6	Warning#
	7	Operation preparation complete
2 to 3	0 to 7	-
4	0 to 3	Data response
	4	Data complete
	5	Data write status
	6 to 7	-
5	0 to 3	Monitor response
	4	Monitor complete
	5 to 6	-
	7	Direct value travel status
6	0	Point zone
	1	Moving
	2	Zone 1
	3	Zone 2
	4	Soft limit exceeded
	5	Soft limit over (-)
	6	Soft limit over (+)
	7	-
7	0 to 7	-
8 to 11	0 to 7	Position (monitor value)
12 to 15	0 to 7	Speed (monitor value)
16 to 19	0 to 7	Current (monitor value)
20 to 23	0 to 7	-
24 to 27	0 to 7	Alarm (monitor value)
28 to 47	0 to 7	-
48 to 51	0 to 7	Read data
52 to 55	0 to 7	Data (alarm)
56 to 59	0 to 7	Monitor value 1
60 to 63	0 to 7	Monitor value 2

* Refer to the instruction manual for other operation modes.
* # indicates a negative logic signal.

● Accessories

Part name	Manufacturer model	Manufacturer
Power supply connector	DFMC 1,5/3-STF-3,5	PHOENIX CONTACT

Relay cable

Motor cable model No. system (ECG-A Series)

EA-CBLM **4** - **S** **01**

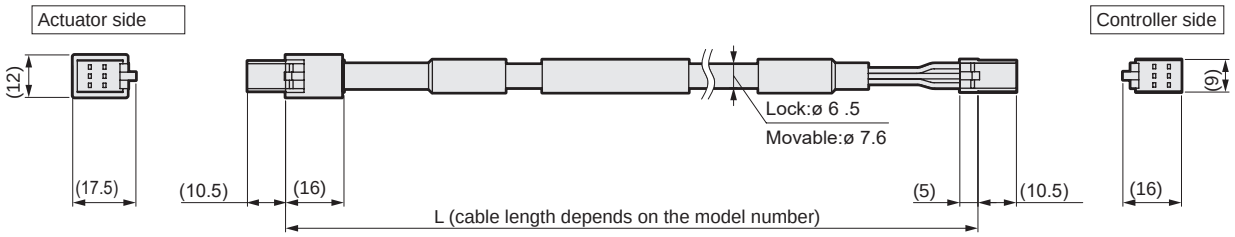
Cable specifications	
4	EJSG EJSG-FP1 EJSG-C
3	EJSG-P4
5	EJSG-G

Cable type	
S	Fixed cable
R	Movable cable

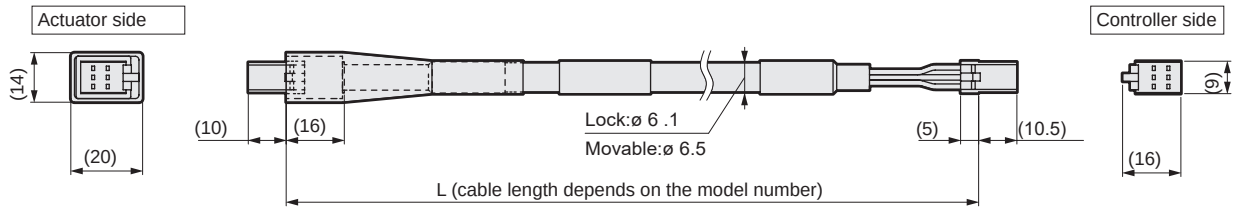
Cable length	
01	1m
03	3m
05	5m
10	10m

Motor cable Dimensions (ECG-A Series)

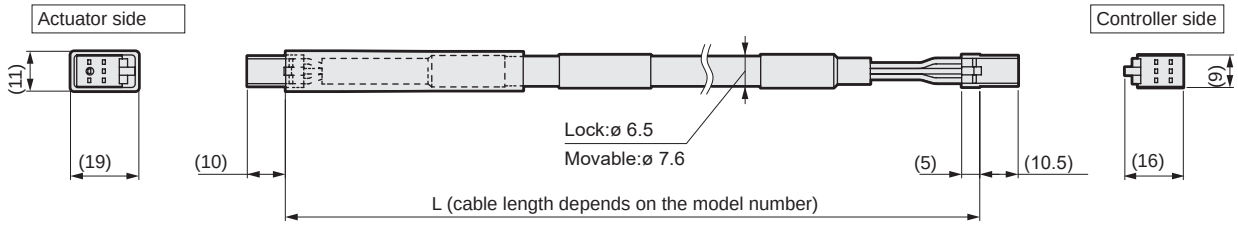
● EA-CBLM4 (for EJSG, EJSG-FP1, and EJSG-C)



● EA-CBLM3 (for EJSG-P4)



● EA-CBLM5 (for EJSG-G)



* Use with a total cable bending radius of 51mm or more.

Relay cable

Encoder cable model No. system (ECG-A Series)

EA-CBLE **4** - **S** **01**

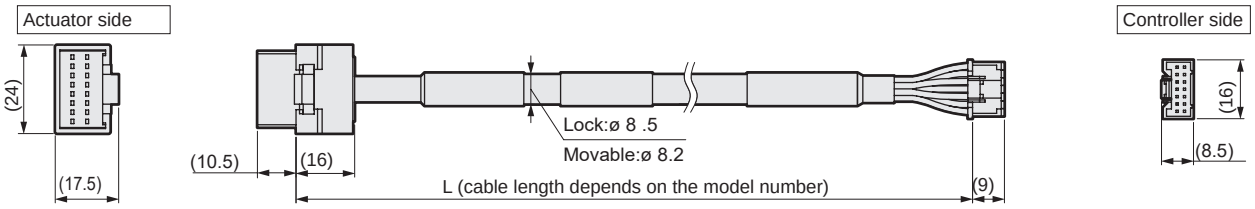
Cable specifications	
4	EJSG EJSG-FP1 EJSG-C
3	EJSG-P4
5	EJSG-G

Cable type	
S	Fixed cable
R	Movable cable

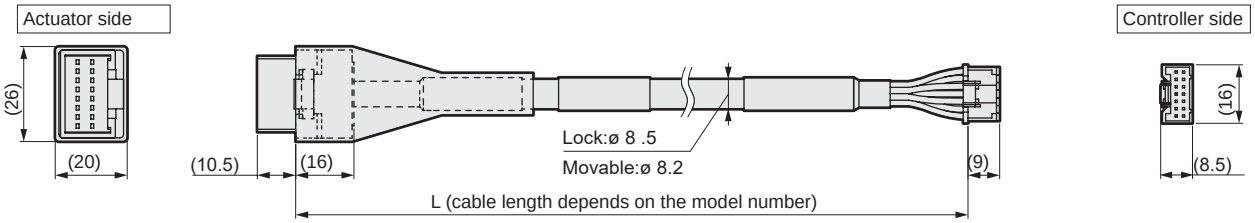
Cable length	
01	1m
03	3m
05	5m
10	10m

Encoder cable Dimensions (ECG-A Series)

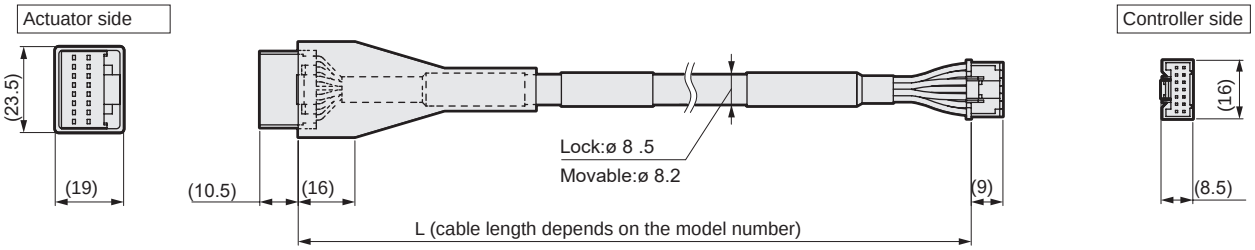
● EA-CBLE4 (for EJSG, EJSG-FP1, and EJSG-C)



● EA-CBLE3 (for EJSG-P4)



● EA-CBLE5 (for EJSG-G)



* Use with a total cable bending radius of 51mm or more.

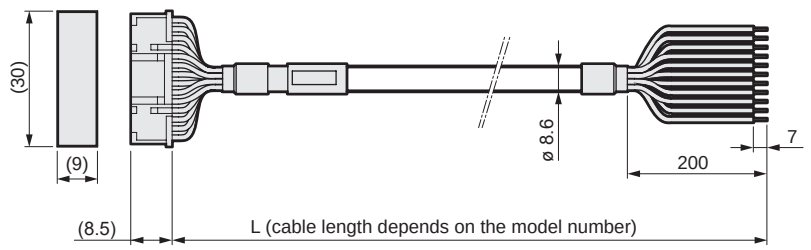
I/O cable

● I/O cable

* Parallel I/O specification controller also available

EA-CBLNP2 - **02**
Ⓐ

Ⓐ Cable length	
02	2m
03	3m
05	5m
10	10m



Related parts model No. table

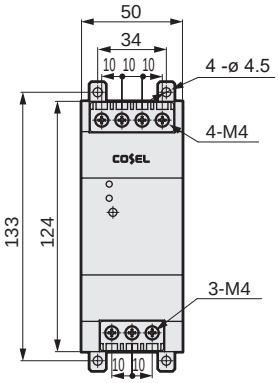
●DC power supply

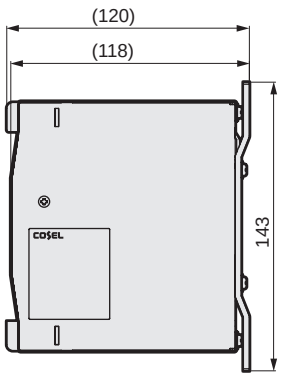
Item			Model No. EA-PWR-KHNA240F-24-N2 (screw mounted) EA-PWR-KHNA240F-24 (DIN rail mount)
Manufacturer			COSEL Co., Ltd.
Manufacturer model No.	Mounting screw		KHNA240F-24-N2
	DIN rail mount		KHNA240F-24
Input voltage			AC85 to 264V 1ø or DC88 to 370V
Output	Power		240 W
	Voltage/current		24V10A
	Variable voltage range		22.5 to 28.5V
Included functions	Overcurrent protection		Operating at 101% min of peak current
	Overvoltage protection		30.0 to 36.0V
	Remote control		Available
	Remote sensing		-
	Other		DC_OK display, ALARM display
Operating temperature/humidity			-25 to +70°C, 20 to 90% RH (no condensation), startup possible at -40°C*
Applicable standards	Safety standards	AC input	AC input: UL60950-1, C-UL (CSA60950-1), EN60950-1
			UL508, ANSI / ISA12.12.01, and ATEX; Electrical Appliances and Material Safety Act compliant*
		DC input	UL60950-1, C-UL(CSA60950-1), EN60950-1
	Noise terminal voltage		Compliant with FCC-B, VCCI-B, CISPR22-B, EN55011-B, EN55022-B
	Harmonic current		Compliant with IEC61000-3-2 (class A)*
Structure	Dimensions (W x H x D)		50×124×117mm
	Weight		900g max
	Cooling method		Natural air cooling

* Refer to the manufacturer's website for details.
* The CE marking and ROHS are obtained with the manufacturer model No.

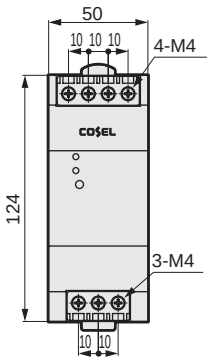
Part names and dimensions

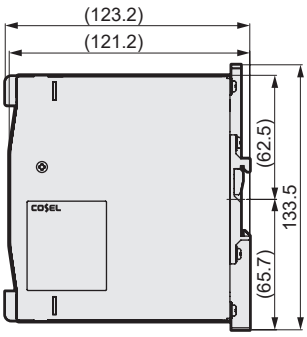
● EA-PWR-KHNA240F-24-N2 (24 V screw mounted)





● EA-PWR-KHNA240F-24 (24 V DIN rail mounted)





● Other components

Part name	Model No.
Noise filter for power supply (single phase, 15 A)	AX-NSF-NF2015A-OD

* Refer to the instruction manual for the ferrite core to be used.

MEMO

Safety Precautions

Always read this section before use.

When designing equipment using electric actuators, the manufacturer is obligated to ensure that the safety of the mechanism and the electrically controlled system are secured.
It is important to select, use, handle and maintain CKD products appropriately to ensure their safe usage.
Observe warnings and precautions to ensure device safety.
Check that device safety is ensured and a safe device is manufactured.

WARNING

1 This product is designed and manufactured as a general industrial machine part.
It must be handled by an operator having sufficient knowledge and experience in handling.

2 Use the product within specifications range.

This product must be used within its stated specifications. It must not be modified or machined additionally.
This product is intended for use as a device or part for general-purpose industrial machinery. It is not intended for use outdoors (except for outdoor type) or for use under the following conditions or environment.
(Note that this product can be used under the following conditions only when CKD is consulted prior to use and the customer consents to CKD product specifications. The customer must provide safety measures to avoid risks in the event of problems.)

❶ Use for special applications which require the safety, including nuclear energy, railways, aircrafts, marine vessels, vehicles, medicinal devices, devices or applications coming into contact with beverages or foodstuffs, amusement devices, emergency operations (cutoff circuits, opening etc.) circuits, press machines, brake circuits, or safety devices or applications.

❷ Use for applications where life or assets could be adversely affected and special safety measures are required.

3 Observe organization standards and regulations, etc. related to the safety of device design.

4 Never remove devices before confirming safety.

❶ Inspect and service on the machine and devices after confirming safety of the entire system related to this product.

❷ Note that there may be hot or charged sections even after operation is stopped.

❸ When inspecting or maintaining device, be sure to shut down the power supply of the equipment and the relevant power supply, using caution to avoid electric shock.

5 Observe instruction manual and precautions attached the product surely to prevent accidents.

❶ The product could operate unexpectedly during teaching operation or trial operation. Be especially careful not to touch the actuator. If operating the product from a position where the shaft body cannot be seen, be sure to first confirm that the safety is secured even if the actuator moves.

6 Observe precautions to prevent electric shock.

❶ Do not touch the heat sink, cement friction, or motor inside the controller.
These will heat up, and could cause burns. Wait an appropriate amount of time prior to performing inspections or other tasks.
A high voltage is applied until the electrical load stored in the internal capacitors is discharged after the power is turned OFF.
Do not touch for around three minutes after the power OFF.

❷ Make sure to turn the switch on the controller power supply source OFF, before maintenances and inspections.
There is a danger of high voltage electric shocks.

❸ Do not attach or remove connector, while the power is on. Otherwise, this may cause malfunction, failure, or electric shock.

7 Install an overcurrent protector.

The wiring to the driver should be in accordance with JIS B 9960-1:2019 (IEC 60204-1:2016) Safety of Machinery - Electrical Equipment of Machines - Part 1: General Requirements. Install an overcurrent protector (a circuit breaker or circuit protector for wiring) on the main power, control power, and I/O power.

(Reference: JIS B 9960-1 7.2.1 General description)
If there is a possibility the circuit current may exceed the rated value of the component or the allowable current of the conductor, an overcurrent protection must be provided. The details of the ratings or set values to be selected shall be provided in 7.2.10.

8 Observe precautions below to prevent accidents.

■ The precautions are ranked as "DANGER", "WARNING" and "CAUTION" in this section.

DANGER: When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries, and when there is a high degree of emergency to a warning.

WARNING: When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries.

CAUTION: When a dangerous situation may occur if handling is mistaken leading to minor injuries or physical damage.

Note that some items described as "CAUTION" may lead to serious results depending on the situation.
Every item provides important information and must be observed.

Warranty

1 Warranty period

The product specified herein is warranted for one (1) year from the date of delivery to the location specified by the customer.

2 Warranty coverage

If the product specified herein fails for reasons attributable to CKD within the warranty period specified above, CKD will promptly provide a replacement for the faulty product or a part thereof or repair the faulty product at one of CKD's facilities free of charge.

However, following failures are excluded from this warranty:

1) Failure caused by handling or use of the product under conditions and in environments not conforming to those stated in the catalog, the Specifications, or the Instruction Manual.
2) Failure caused by use of the product exceeding its durability (cycles, distance, time, etc.) or caused by consumable parts.
3) Failure not caused by the product.
4) Failure caused by use not intended for the product.
5) Failure caused by modifications/alterations or repairs not carried out by CKD.
6) Failure caused by reasons unforeseen at the level of technology available at the time of delivery.
7) Failure caused by acts of nature and disasters beyond control of CKD.

The warranty stated herein covers only the delivered product itself. Any loss or damage induced by failure of the delivered product is excluded from this warranty.

Note: For details on the durability and consumable parts, contact your nearest CKD sales office.

3 Compatibility confirmation

The customer is responsible for confirming the compatibility of CKD products with the customer's systems, machines and equipment.

4 Range of service

The delivered product price does not include engineer dispatch service fees. Separate fees will be charged in the following cases.

(1) Instruction of installation and adjustment, and presence on test operation
(2) Maintenance and inspection, adjustment, and repair
(3) Technical instructions and technical education (operation, program, wiring method, safety education, etc.)

Precautions for export

Products and related technologies in this catalog
Those of the products and related technologies in this catalog which are subject to US Export Administration Regulations
(EAR) are marked on the product page as "Product subject to the EAR (EAR99) or (EAR99 and 3A991)". For export or provision of products or related technologies subject to EAR regulations, we request that the US Export Administration Regulations (EAR) be observed appropriately.

Safety Precautions

Be sure to read this section before use.

Common precautions: Electric actuator EJSG Series/Controller ECG

Design/selection

1. Common

⚠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, combustion or explosion.
- Ensure that the product is free of water droplets and oil droplets.
  Failure to do so may cause fire or malfunction.
- When mounting the product, be sure to hold and fix it securely (including workpieces).
  If the product falls, is knocked over, or experiences malfunction, it may lead to injury. As a rule, fix the product using all mounting holes.
- Use a stabilized DC power supply (24 VDC±10%) for the input/output circuit power supply and the ECG Series motor and control power supplies.
  ACConnecting directly to the power supply may cause fire, explosion, damage, etc.
- With the ECG Series, use only an 24 VDC power supply.
  Using a 48 V power supply may breakdown the controller.

⚠WARNING

- Use the product in the range of conditions specified for the product.
- Provide a safety fence to prevent entry to the movable range of the electric actuator. In addition, install the emergency stop button switch as a device in a location which is easy to operate in an emergency situation. For the emergency stop button, use a structure and wiring that will prevent automatic restoration or inadvertent restoration by personnel.
- It may take several seconds to stop in an emergency depending on the travel speed and load.
- If the machine stops in the event of a system failure such as emergency stop or power outage, equipment damage or injury does not occur. Design a safety circuit or device.
- Install indoors with low humidity.
  There is a risk of electric leakage or fire accidents in places exposed to rainwater or where there is high humidity (humidity of 80% or more, condensation). Oil drops and oil mist are also strictly prohibited. Use in such an environment could lead to damage or operation failure.
- Make sure that the product is D type grounded (ground resistance of 100 Ω or less).
  If electrical leakage occurs, it may lead to electric shock or malfunction.
- When installing the actuator in a direction other than horizontal, select the type with brake.
  If the motor is not equipped with a brake, the movable parts may fall off at servo OFF (including emergency stops and alarms) or power OFF, which may result in injury or damage to the workpiece.
- The brakes are not sufficient to completely retain the actuator in all situations. Be sure to achieve a balanced state or install a mechanical lock mechanism where safety must be guaranteed, such as when performing maintenance in an application where the slider moves with an unbalanced load or when stopping the machine for a long period of time.
- When vertically installing the actuator, do everything possible to keep the motor on top.
  While normal operation with the motor on the bottom will not be problematic, if the motor is stopped for a long time, the grease may separate and flow into the motor, very occasionally leading to malfunctions.
- Use and store in accordance with the working/storage temperatures and where there is no condensation.
  (Storage temperature: -10°C to 50°C, storage humidity: 35% to 80%, operating ambient temperature: 0°C to 40°C (For EJSG, 10°C to 40°C) 35% to 80% of operating humidity) Product abnormal stop or service life may decrease. Ventilate if heat builds up.
- 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. Furthermore, chemical resistance has not been reviewed for this product.
  Failure to comply may lead to damage, explosion, or combustion.
- Use and store in locations free from strong electromagnetic waves, ultraviolet rays, or radiation.
  Otherwise, malfunction or damage may result.
- Consider the breakdown possibility of the power source.
  Take measures to prevent bodily injury or machine damage even in the event of a power failure.
- Consider the operation status when restarting after emergency or abnormal stops.
  Design the system so that bodily injury or equipment damage will not occur when restarting. In addition, the electric actuator must be reset to the start position, design a safe control device. Consider the possibility of power failure of the mounted motor. Take measures to prevent bodily injury or machine damage even in the event of a power 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.

⚠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 product's functionality may drop too low to maintain an appropriate safety level depending on usage conditions, working environment and maintenance status. With correct maintenance, the product functions can be used to the fullest.

■ The product is manufactured in conformity with the related standards. Do not disassemble or modify the product.

■ The customer is responsible for the compatibility of CKD products with the customer's systems, machines and equipmentfor details.

■ Set up the wiring so as not to apply inductive noise.
Avoid locations where large currents or strong magnetic fields are generated. Do not use the same wiring (with multi-conductor cables) as any large motor power lines other than that of this product. Do not use the same wiring as inverter power supplies used for robots, etc. Apply a frame ground for the power supply and insert the filter to the output part.

■ Do not use this product in an environment where strong magnetic fields are generated.
This could cause improper operation.

■ 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 flow into the output and cause damage. If a separate power supply cannot be used, connect the surge absorber directly to all inductive loads in parallel.

■ Power supply provides ample capacity for the number of installed productsthingfrom the following specifications. Malfunction may occur if there is no excess capacity.

(Control power supply 0.4A/unit
Power supply □35...2.4A/base, □42…2.7A/base
□56…4.0A/base)

■ For UL compliance, use a Class2 power supply unit conforming to UL1310 for the combination DC power supply.

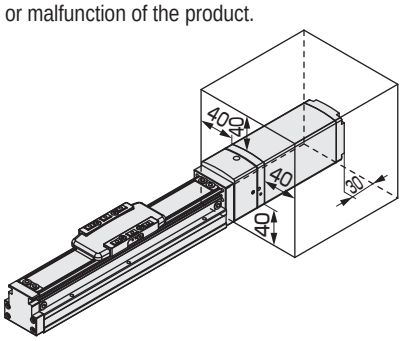
■ A fixed cable cannot be used in applications where it is repeatedly bent. Use a movable cable in places where it is repeatedly bent.

■ Fix the fixed cable so that it does not easily move. Use fixed cables with a bending radius of 51 mm or more and movable cables with a bending radius of 51 mm or more.
Because the bending radius does not apply to bending of the connector part, we recommend fixing near the connector.

■ The origin position is recognized when the power supply is turned ON. If an external stopper or holding mechanism (brake, etc.) is attached, an unintended position may be recognized as the origin position. Be careful with the layout of the external stopper, etc., so that the origin can be properly detected after the power supply is turned ON.

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

■ When using multiple EJSG Series units, separate the motors by at least the distance shown in the figure below.
Installing them close together may result in malfunction.



■ Check that there is no interference between the workpiece to be mounted on the slider and the motor part.
Some motors are larger than the slider mounting surface height. (EJSG-08E, EJSG-08R, EJSG-08L)

■ When using the EJSG-G Series, keep the purge flow rate from the pressurized port at 40NL/min or more.

2. Controller ECG

■ Check if the controller software version is compatible with the EJSG series.
If the software version on the controller is old, it may not be usable. Refer to the instruction manual for the relation between the software version and the applicable actuators.

Mounting, installation and adjustment

1. Common

⚠ DANGER

- Do not enter the operating range of the product while the product is operable.
  The product may suddenly move and may result in injuries.
- The wiring should be in accordance with JIS B 9960-1: 2019 Safety of Machinery - Electrical Equipment of Machines - Part 1: General Requirements. Install an overcurrent protector (a circuit protector or a shutoff mechanism for wiring) for the primary side of the power supply.
- Do not operate the unit with wet hands.
  It may lead to electric shock.
- Fingers and other extremities may be snagged between the motor and slider sections of the EJSG Series (slider) during origin return. Please be careful.
- When connecting a personal computer, do not ground its frame ground (FG).
  When using the controller with positive grounding, connecting the controller and peripheral equipment to the PC with a USB cable risks short-circuiting the DC power supply.

⚠ WARNING

- Precision parts are built in, so laying the product on its side or applying vibration or impact during transportation are strictly prohibited.
  This may cause damage to the parts.
- For preliminary installation, place horizontally.
- Do not step onto the packaging or place objects on it.
- Avoid condensation, freezing, etc., and maintain ambient temperatures of -10 to 50°C and ambient humidity of 35 to 80%RH during transportation and transportation.
  Failure to do so may cause damage to the product.
- Mount the product on incombustible materials. Direct attachment or mounting to or near flammable materials may cause fire.
  There is a risk of burns.
- Do not step onto the product or place objects on it.
  This may result in falling, knocking the product over, injury due to falling, product damage and/or malfunctions due therein, etc.
- Take measures to prevent bodily injury or machine damage even in the event of a power breakdown.
  There is a risk of unexpected accidents.
- If the product generates abnormal heat, smoke or odor, turn OFF the power immediately.
  Otherwise, product may result in damage or fire.
- Stop operation immediately when abnormal noise or major vibration occurs.
  Otherwise, product damage or abnormal operation may result.
- Wire the product securely while confirming with this catalog and the instruction manual and ensuring that there is no miswiring or loose connectors. Check wiring insulation.
  Due to contact with other circuits, ground faults and insulation failure between terminals, overcurrent may flow into the product and damage it. This could lead to malfunction or fire.
- Be sure to insulate unused wires.
  This may cause malfunction, failure, or electric shock.
- Do not damage the cable, snag it, apply excessive stress to it, or place heavy objects on it.
  Otherwise, poor conduction or electric shock may occur.
- Be sure to perform a safety check of the component's operating range before supplying power to the product. If the product LEDs do not light up when the power supply is turned ON, immediately turn the power OFF. Inadvertently supplying electricity
  Inadvertently supplying power can cause electric shock or injury.
- Before restarting a machine or device, check that measures are taken so that parts do not come off.
- Check that the servo is turned OFF when manually moving the movable parts of the product.
- The movable parts of the equipment may make unintended movements when the actuator servo is turned OFF. When turning the servo OFF, take steps to prevent danger and operate the equipment with full attention to safety.
- Before operating the actuator, check that it will operate safely.

⚠ CAUTION

- Regarding installing, setting up, and/or adjusting the actuator, read through the instruction manual and operate correctly.
- When installing the product, be sure to secure space for maintenance work.
  Otherwise, it may not be possible to conduct inspection and maintenance, leading to stoppage or damage of the device or injury during operation.
- Do not hold the product's movable parts or cables during transportation and installation.
  This may lead to injury or disconnection.
- When carrying the product, support it from the bottom.

■ When transporting and mounting the product, ensure operator safety by supporting the product with a lift or other supporting tools, or working in pairs or more.

■ Do not install in places where large vibration or impact is transmitted.
This may cause malfunction.

■ Do not operate the movable parts of the product with external force or sudden deceleration.
This may lead to malfunction or damage due to regenerative current.

■ When returning to origin, excluding pressing operation, do not hit the mechanical stopper, etc.
The feed screw could be damaged or malfunction.

■ Durability varies with transported load and environment. The transport load, etc., should be at a setting well within the margin.

■ Do not apply external force to the actuator during origin return. There is a possibility of misrecognition of the origin.

■ Make sure that no vibration/impact is applied to the movable parts.

■ Install such that no torsion or bending force is applied to the product.

■ When performing electric welding on the equipment to which the product is mounted, remove all F.G. (frame ground) wire connections to the product.
F.G.If electric welding is performed with the connection attached, the product may be damaged by welding current, excessively high voltage during welding, or surge voltage.

■ Do not disassemble or modify the product.
This may cause injury, accident, malfunction or failure.

■ Do not bend the fixing cable repeatedly.
If the cable needs to be repeatedly bent, use a movable cable.

■ Fix the fixed cable so that it does not easily move. Use fixed cables with a bending radius of 51 mm or more and movable cables with a bending radius of 51 mm or more.
Because the bending radius does not apply to bending of the connector part, we recommend fixing near the connector.

■ Avoid use in locations exposed to ultraviolet rays or with atmospheres of corrosive gas or salt.
Otherwise, degradation of performance, abnormal operation or deterioration in strength due to rust may result.

■ Make sure to use the dedicated cable for connecting between the actuator and controller.
Mistakenly connecting another component may cause malfunction or failure.

■ Before adjusting the gain, secure the actuator body to the machine and securely mount jigs and other components as well.

2.EJSG Series

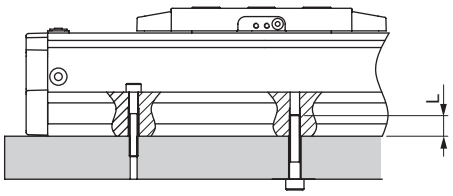
⚠CAUTION

■ Do not apply excessive moment to the slider when using the EJSG Series (slider).
This may cause damage or malfunction of the product.

■ Make the flatness of the installation surface 0.05mm/200mm or less.

■ For the EJSG Series (slider), ensure that the flatness of the workpiece side attached to the slider is 0.02mm or less, and do not apply torsion or bending force to the product.
This may cause damage or malfunction of the product.

■ Tighten the body mounting screws with the appropriate torque.



(A) (B)

Item	(A) Mounting from top		(B) Mounting from bottom		
	Usage Bolt	Tightening torque (N·m)	Usage Bolt	Tightening torque (N·m)	Min. screw insertion depth L (mm)
EJSG-04	M 3 x 0.5	0.63	M 4 x 0.7	1.5	6
EJSG-05	M 4 x 0.7	1.5	M 5 x 0.8	3	7.5
EJSG-08	M 5 x 0.8	3	M 6 x 1	5.2	9

■ When using an external guide, check that it operates smoothly in all positions of the product stroke before installation.

3. Controller ECG

⚠CAUTION

■ When wiring, do not apply excessive force to the connectors.

■ Do not push hard on the controller case.

■ Use a cable within 10 m to connect the IF connector.

Use/maintenance

1. Common

⚠DANGER

- Do not operate the unit with wet hands.
  It may lead to electric shock.

⚠WARNING

- Wiring work and inspection should be done by a specialized technician.
- When performing maintenance, inspection and repair, stop the power supply to this product.
  Caution people in the vicinity that a third party should not turn ON the power inadvertently.
- Do not attach or detach wiring or connectors with the power supply ON.
  Failure to do so may cause malfunction, failure, or electric shock.
- For wiring work and inspection, check the voltage with a tester after more than 5 minutes have elapsed since turning OFF the power.
  It may lead to electric shock.
- Mount the product before wiring.
  It may lead to electric shock.
- Make sure that the diameter of the electric wire used for the power cable can tolerate up to 4.0A of current.
  Otherwise, heat generation or damage during operation may be caused.
- Do not connect the product's communication connector to other Components.
  Doing so may cause failure or damage.
- Turn OFF the power supply in the event of a power failure. When the power is restored, the product may move unexpectedly and cause accidents.
- Perform a safety check of the component's operating range before supplying power to the product.
  Inadvertently supplying power can cause electric shock or injury.
- Do not enter the operating range while the product is operable.
  The product may move unexpectedly and cause injury.
- Do not touch the product with hands or body during operation or immediately after stopping.
  This may cause burns.
- Do not step onto the product or place objects on it.
  This may result in falling, knocking the product over, injury due to falling, product damage, malfunctions due thereto, etc.
- Take measures to prevent bodily injury or machine damage even in the event of a power Breakdown.
  There is a risk of unexpected accidents.
- Before operating from a position where the actuator cannot be seen, confirm that it can be safely operated.
- Check that the servo is turned OFF when manually moving the movable parts of the product.
- If there is a problem with the timing belt, stop operation immediately and replace the timing belt. Breakage of the timing belt in vertical use is particularly dangerous, so be sure to replace it in a timely manner.
  Check for wear and tear on the teeth or sides, vertically split teeth, cracked or softened reverse, partial disconnection or the like of the timing belt.
- If the product generates abnormal heat, smoke or odor, turn OFF the power immediately.
  Otherwise, product may result in damage or fire.
- Stop operation immediately when abnormal noise or major vibration occurs.
  Otherwise, product damage or abnormal operation may result.

⚠CAUTION

- Do not put fingers or objects into the opening of the product.
  This may cause product damage or injury.
- Do not dent or damage the movable parts.
  This may cause malfunctions.
- Do not turn OFF the servo with gravity or inertia applied.
  The product may continue to operate or fall at servo OFF. Be sure to turn OFF the servo in a balanced state without gravity or inertia applied, or confirm safety before proceeding.
- Do not issue a stop command while the product is accelerating or decelerating.
  Doing so may result in a dangerous change in speed (acceleration).
- When operation involves vibration, change the set speed so that vibration does not occur.
- Vibration may occur even within the operation speed range depending on the working conditions.
- Deflection or displacement of the steel belt is more likely to occur if slider products are mounted on the wall or ceiling. Continued use in this state may cause trouble, such as breakage of the steel belt. Be sure to conduct daily inspections and adjust the steel belt if there is deflection or displacement.
- Do not disassemble or modify the product.
  This may cause injury, accident, malfunction or failure.

■ Ensure proper operation through periodic inspections (2 to 3 times per year).
Refer to the instruction manual for details.

■ Routinely resupply the grease at intervals of about 100km.
However, situations may differ depending on working conditions, so determining a lubrication interval based on the initial inspection is recommended. Refer to the instruction manual for details.

■ Be sure to wear protective eyewear when lubricating.
If grease scatters and enters the eye, it may cause inflammation.

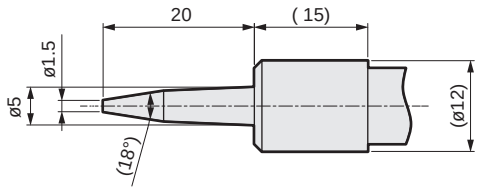
■ Grease lubrication

● Recommended grease

Target actuator	Recommended grease	
	Model No.	Manufacturer
EJSG-Standard Series EJSG-G Series	AC-D	Cooperative Oil and Fat Products Co., Ltd.
EJSG-FP1 Series	L700	THK
EJSG-C Series	AFF	THK

*Contact your CKD Sales representative for details on the EJSG-P4 Series grease.

● Refer to the figures below for the recommended nozzle shape for grease lubrication.



• Recommended nozzle

Model No.	Manufacturer
HSP-3	Yamada Corporation

● Grease nozzle for EBS/EBR Series cannot be used.

■ When disposing of the product, comply with laws pertaining to waste treatment and cleaning. Consign it to a specialized waste disposal company for processing.

■ The circuit board inside the product has capacitors connected in between the circuits and the metal body to prevent damage due to static electricity. Avoid withstand voltage and insulation resistance tests on equipment with this product installed. If tests are done, the product will be damaged. If it is necessary for the equipment, remove the product before doing the test.

■ When replacing the motor unit, follow the procedure and be sure to adjust the origin.
If the origin is not adjusted, the unit may move outside the stroke range and collide with the internal mechanical stopper, causing damage.

■ If removing the timing belt, follow the procedure and be sure to adjust the origin.
If the origin is not adjusted, the unit may move outside the stroke range and collide with the internal mechanical stopper, causing damage.

■ If the actuator and controller combination is changed, be sure to confirm the programs and parameters prior to operation.
Otherwise, there is a risk of unexpected accidents.

■ The actuator position is recognized after the power is turned ON. Do not operate the moving table for several seconds after the power is turned ON.
The position may not be appropriately confirmed, leading to unexpected operation.

2. Controller ECG

⚠CAUTION

■ Frequently turning the power ON/OFF can cause damage to the elements inside the controller.
Repeatedly energizing and shutting OFF the power can shorten the life of capacitors and other components. In addition, if there is no more than a one-second interval between the power being cut OFF and the power being turned ON again, the product may be damaged by the surge voltage.

■ Do not operate in excess of the maximum load capacity.
The elements inside the controller may overheat and be damaged.

■ When clamping during pressing operation, set the position about 5 mm greater than the target stop position.
Otherwise, clamping force may not be generated, depending on the stop position.

■ The relationships between pressing force and pressing rate described in this catalog are merely guidelines. Fluctuation in motor torque, etc., may cause errors even at the same set values.

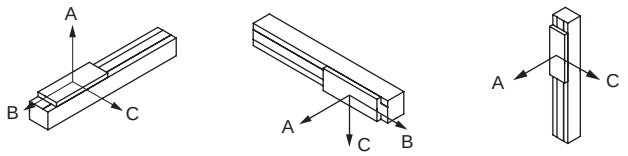
EJSG Model Selection Check Sheet → **CKD** (Contact)

Fill in the form and send to the nearest CKD Sales Office. We will respond with the model selection results.

Customer:

Company		Department	
Name		E-mail	
Tel.		Fax	

Selecting conditions:

Desired model	(EJSG)-
Basic specifications	Max. stroke: mm, ball screw lead: mm
Operating conditions	Travel stroke: mm, travel time: s
	Set speed: mm/s
	Set acceleration/deceleration: mm/s ^{2} (Set acceleration/deceleration time: s)
	Repeatability: ± mm
Load conditions	Slider
	Load weight: kg
	Mounting orientation: Horizontal/Wall mounted / vertical / ceiling mounted / other 
	Distance from slider center to load center of gravity
	Direction A: mm Direction B: mm Direction C: mm
	Pressing load: No / Yes (N) Operating / Stopped Direction of the force applied to slider center ( )
Working environment	Ambient temperature: °C, Ambient humidity: %
	Atmosphere:
Interface specification	Parallel I/O / IO-Link / CC-Link / EtherCAT / EtherNet/IP
Remarks	

MEMO

Related products

Electric actuator EBS-M/EBR-M Series

- Slider EBS-M Series
  High speed transport
- Rod with built-in guide EBR-M Series
  For press fitting and hoisting
- Controller ECR Series
  Connected to any actuator "One controller"
- Controller ECG Series
  New Controller with easy inventory management, easy design, and easy configuration

Catalog No. CC-1422A

Electric actuator FLSH/FLCR/FGRC Series

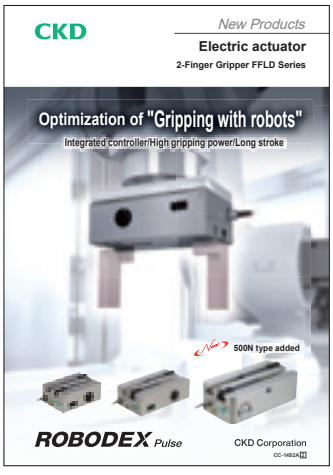
- 2-Finger Gripper FLSH Series
  For soft handling of various workpieces
- Table FLCR Series
  For short stroke workpiece transport and positioning
- Rotary FGRC Series
  For indexing operation and workpiece inversion
- Controller ECR Series
  One controller that connects to any actuator
- Controller ECG Series
  New Controller with easy inventory management, easy design, and easy configuration

Catalog No. CC-1444A

Electric actuator FFLD Series

- 2-Finger Gripper
- 3 sizes
- Built-in controller
- 1 cable
- Max. Stroke 80mm (one side)
- Max. gripping force 500N (one side)
- Interface IO-Link

Catalog No. CC-1492A



Related products

Electric actuator D Series, G Series

Catalog No. CC-1591

New electric actuator inheriting the DNA of air Components

- D Series (screw drive method)
  An actuator specialized for positioning between two points
- D Series (Spring drive method)
  Spring integrated actuator specialized for clamp/grip applications
- G Series(Screw drive method)
  64-point positioning actuator

Electric Actuator Motorless General Catalog

Catalog No. CB-055A

Wide-ranging lineup of motorless electric actuators

- Slider

For high speed transport	EBS-L Series
For high load transport	ETS/ECS Series
Long stroke transport	ETV/ECV Series
For fast tact transport	EKS-L Series

- Rod

For press fitting and hoisting	EBR-L Series

- ABSODEX
  AX1000/2000/4000TS, TH
  AX6000MU Series

  The Direct Drive Actuator is designed to be user-friendlyFrom palm-sized to large torques. Conveyance, positioning, and simple construction of various devices

- τ DISC Series
  The Direct Drive Servo Motor, which boasts high performance
  A diverse lineup to meet various requirements such as high precision, high speed and speed stability. Achieves one level higher performance.

NIKKI DENSO

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- BOSTON OFFICE

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