Electric Actuator EBS-L Series

Slider Type (Ball Screw Driven)

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(Ball Screw Driven, Low Dust Generation Specification)

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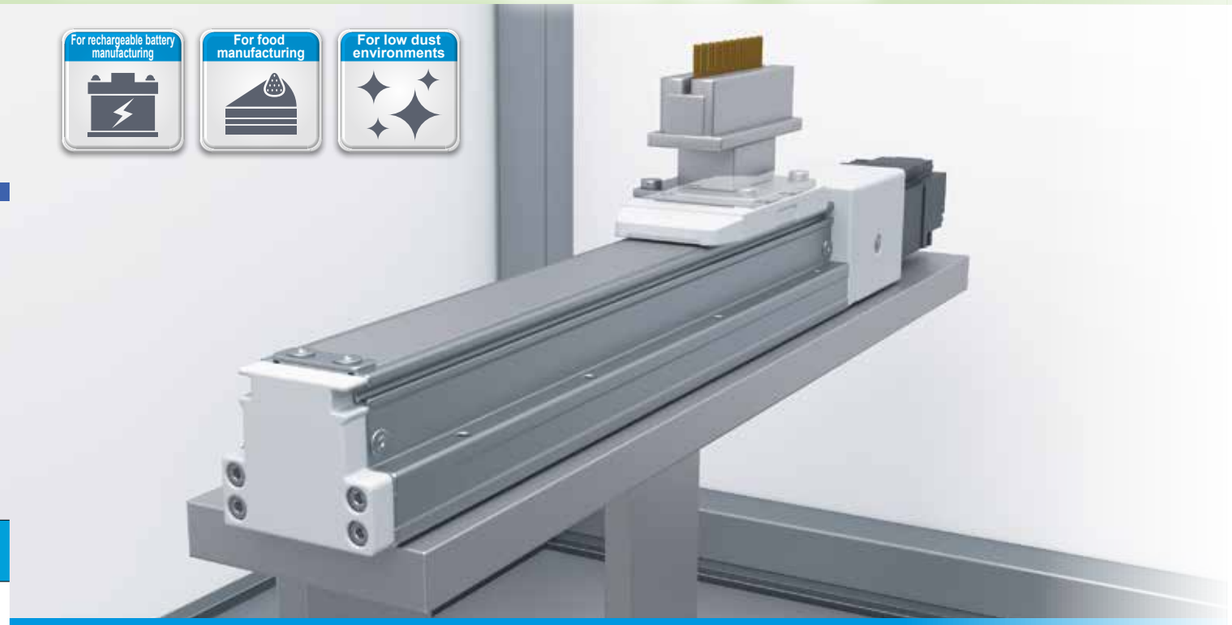
EBS-L Series

For rechargeable battery manufacturing | For food manufacturing | For low dust environments



Compact & High rigidity

Line-up	Body Size / Motor capacity	04 / 50 W	05 / 100 W	08 / 200 W	12 / 400 W	Catalog page
EBS-L		●	●	●	●	9
Metal stopper specifications EBS-L-X		●	●	●		9
Low dust specification EBS-L-C		●	●	●		39
Supports food manufacturing processes EBS-L-P4		●	●	●		CC-1226AA
Supports food manufacturing processes EBS-L-FP1		●	●	●		CC-1271AA

List of supported motor manufacturers * Refer to each model page compatible model and capacity

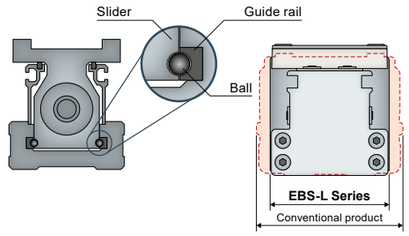
Servo Motor

Mitsubishi Electric Corporation | Delta Electronics Co., Ltd. | Sanyo Denki Co., Ltd. | Mitsubishi Electric Corporation | Keyence Corporation | Panasonic Corporation | OMRON Corporation | Fuji Electric Corporation | FANUC CORPORATION | Bosch Rexroth AG | Rockwell Automation, Inc. | SIEMENS AG

Compact, high-rigidity body

High rigidity | Space saving | Reduced design hours | Reduced number of parts | Reduced man-hours

The guide that supports the load uses an outer rail system. The wide guide integrated with the body achieves both high rigidity and space saving.



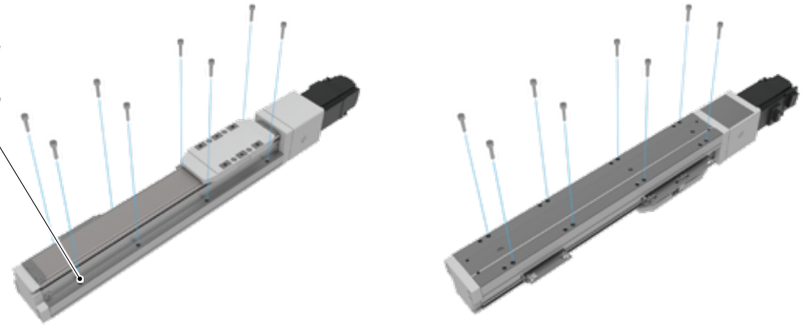
	Body Width	Static Allowable Moment MP	MY	MR
Conventional Product	65 mm	80 N·m	70 N·m	75 N·m
EBS-05L	54 mm	103 N·m	103 N·m	144 N·m
	↓ 11 mm DOWN	↓ 28% UP	↓ 47% UP	↓ 92% UP

Mounting holes provided on top and bottom surfaces

Easy maintenance | Reduced man-hours

The product structure allows installation from the top or bottom, without disassembly. Especially when installing from the top surface, work time can be significantly reduced.

Through holes are located from the top, eliminating the need to disassemble the product

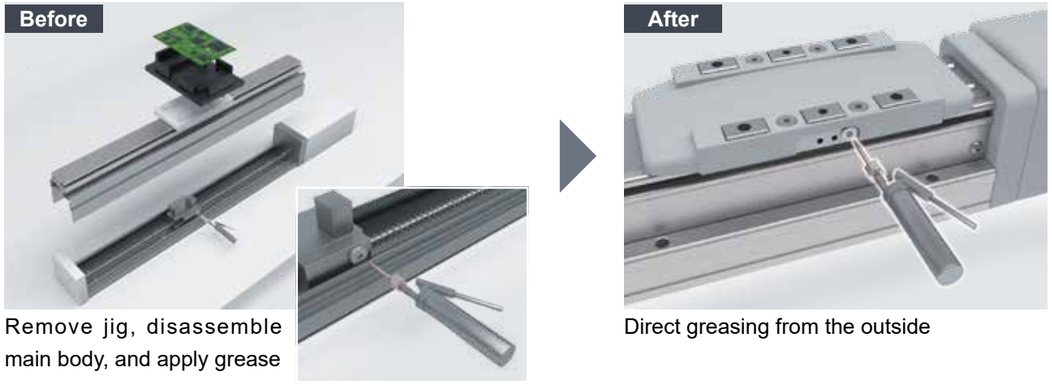


Top mounting without disassembling main body

Equipped with external grease fitting port

Easy maintenance | Reduced man-hours

The product comes equipped with a lubrication port on both sides to allow direct lubrication from the exterior. Maintenance of the guide and ball screw is possible by greasing from one location without disassembling the main body.



Remove jig, disassemble main body, and apply grease

Direct greasing from the outside

Optimal electric actuator for clean environments

EBS-L-C Series (low dust specification)

For low dust environments

Cleanliness of class 2.5 or equivalent (ISO 14644-1 standard) is realized. Contributes to low dust generation by supporting vacuum treatment from the suction port.

Electric actuators ideal for more accurate origin positioning

EBS-L-X Series (metal stopper specifications)

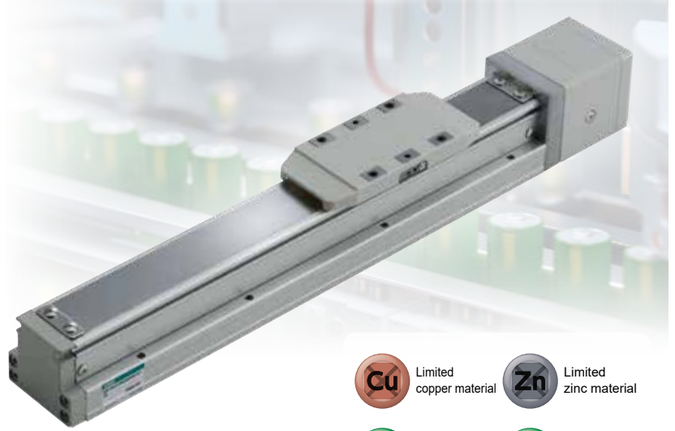
By establishing an accurate zero point in the mechanical standards, it is possible to press it against the mechanical end and position the origin accurately.

Optimal electric actuator for rechargeable battery production processes

EBS-L-P4 Series

For rechargeable battery manufacturing
Material restrictions
Dry environment
DEW POINT -80°C

The use of copper, zinc, nickel-based materials and electrolytic nickel plating is restricted. Grease compatible with ultra-low dew point environments is used, and lubrication of the sliding parts is maintained for long periods, even in dry environments.



Cu Limited copper material
Zn Limited zinc material
Ni Limited nickel-based material
ENi Limited electrolytic nickel plating

Optimal electric actuator for food production processes

EBS-L-FP1 Series

For food manufacturing

Food-grade (NSF H1) lubricants can be used safely and securely. Contributes to low dust generation by supporting vacuum treatment from the suction port.

FP Food Process™

Food Grade (NSF H1) Lubricant Used

EBS-L

Slider Type (Ball Screw Driven)

Electric Actuator
Servo Motor Compatible
Motorless specifications

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System Table

Type	Model No.		Application Motor (W)	Body Width (mm)	Screw Lead (mm)	Max. Payload (kg) Horizontal *1	Max. Payload (kg) Vertical	Stroke (mm) and max. speed (mm/s) *2	Page
Slider Type		EBS-04L□-06	50	44	6	20	5	50 mm: 300 mm/s (⏱ 1.03 secs.) / 100, 150, 200, 250 mm: 300 mm/s (⏱ 1.70 secs.)	14
		EBS-04L□-12			12	12	2	50 mm: 600 (⏱ 0.56 secs.) / 100, 150, 200, 250 mm: 600 (⏱ 0.89 secs.)	
		EBS-05L□-02	100	54	2	30	10	50 mm: 100 (⏱ 3.01 secs.) / 100, 150, 200, 250 mm: 90, 80, 70, 60 (⏱ 6.01 secs. / 13.34 secs.)	20
		EBS-05L□-05			5	30	10	50 mm: 250 (⏱ 1.23 secs.) / 100, 150, 200, 250 mm: 225, 200, 175, 150 (⏱ 2.43 secs. / 5.35 secs.)	
		EBS-05L□-10			10	15	5	50 mm: 500 (⏱ 0.65 secs.) / 100, 150, 200, 250 mm: 450, 400, 350, 300 (⏱ 1.25 secs. / 2.70 secs.)	
		EBS-05L□-20			20	10	2.5	50 mm: 1,000 (⏱ 0.40 secs.) / 100, 150, 200, 250 mm: 900, 800, 700, 600 (⏱ 0.70 secs. / 1.39 secs.)	
		EBS-08L□-05	200	82	5	50	15	50 mm: 250 (⏱ 1.23 secs.) / 100, 150, 200, 250 mm: 225, 200, 175, 150, 125, 100, 75, 50 (⏱ 2.43 secs. / 6.02 secs. / 22.01 secs.)	26
		EBS-08L□-10			10	30	8	50 mm: 500 (⏱ 0.65 secs.) / 100, 150, 200, 250 mm: 450, 400, 350, 300, 250, 200, 150, 100 (⏱ 1.25 secs. / 3.03 secs. / 11.01 secs.)	
		EBS-08L□-20			20	12	2.5	50 mm: 1,000 (⏱ 0.40 secs.) / 100, 150, 200, 250 mm: 900, 800, 700, 600, 500, 400, 300, 200 (⏱ 0.70 secs. / 1.56 secs. / 5.52 secs.)	
		EBS-12L□-05	400	120	5	110	33	50 mm: 250 (⏱ 1.23 secs.) / 100, 150, 200, 250 mm: 225, 200, 175, 150, 140, 130, 120, 110, 100, 90, 80 (⏱ 2.43 secs. / 6.02 secs. / 15.63 secs.)	32
		EBS-12L□-10			10	88	22	50 mm: 500 (⏱ 0.65 secs.) / 100, 150, 200, 250 mm: 450, 400, 350, 325, 300, 275, 250, 225, 200, 175, 150 (⏱ 1.25 secs. / 2.80 secs. / 8.35 secs.)	
		EBS-12L□-20			20	40	10	50 mm: 1,000 (⏱ 0.40 secs.) / 100, 150, 200, 250 mm: 900, 800, 700, 650, 600, 550, 500, 450, 400, 350, 300 (⏱ 0.70 secs. / 1.45 secs. / 4.20 secs.)	
		EBS-12L□-32			32	30	8	50 mm: 1600 (⏱ 0.35 secs.) / 100, 150, 200, 250 mm: 1450, 1300, 1150, 1050, 950, 850, 750, 650, 550, 450, 350 (⏱ 0.54 secs. / 0.96 secs. / 3.61 secs.)	

*1 The payload when wall mounted is the same as for horizontal installation.
*2 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.
*3 ⏱ shows the Positioning time. When a specified stroke is installed horizontally and operated at maximum speed and maximum acceleration/deceleration. Note that this is not the value at maximum payload.

Model No. Configuration

Slider Type

EBS - 05 L E - 02 0300 NNN - M 1 N N - X

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶ Body Size

04	Body width 44 mm
05	Body width 54 mm
08	Body width 82 mm
12	Body width 120 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount
R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left-Side Reverse Parallel Mount

❹ Screw Lead

02	2 mm
05	5 mm
06	6 mm
10	10 mm
12	12 mm
20	20 mm
32	32 mm

❺ Stroke

0050 to 1250	50 mm (every 50 mm) 1250 mm

❻ Mounting Motor Specifications

M, Y, P, F	Refer to the list on the page at right

❼ Motor Capacity

H	50 W
1	100 W
2	200 W
4	400 W

❽ Origin sensor

N	None
C	Yes

❾ Limit sensor

N	None
B	Yes

❿ Metal stopper specifications (EBS-X) *1

	Standard
X	Adopted

* This product is available only for the actuator (and motor mounting part) and does not include a motor. The user must prepare, mount, and adjust the motor and driver.

*1 ❶Body size "12" cannot be selected.

Screw lead/stroke Compatibility table by body size

❶ Body Size	❹ Screw Lead	❺ Stroke
04	06	0050 to 0500 (50 mm to 500 mm)
	12	
05	02	0050 to 0800 (50 mm to 800 mm)
	05	
	10	
	20	
08	05	0050 to 1100 (50 mm to 1100 mm)
	10	
	20	
12	05	0050 to 1250 (50 mm to 1250 mm)
	10	
	20	
	32	

List of servo motors recommended for mounting

Code	Manufacturer	Series	50 W	100 W
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR053	HG-KR13
		MELSERVO J5	HK-KT053W	HK-KT13W
	Delta Electronics Co., Ltd.	ECMA-C	ECMA-C1040F	ECMA-C10401
	Sanyo Denki Co., Ltd.	SANMOTION R	R2□, A04005	R2□, A04010
Y	Mitsubishi Electric Corporation	Σ-7	SGM7J-A5	SGM7J-01
		Σ-X	SGMXJ-A5	SGMXJ-01
	Keyence Corporation	SV	SV-□005	SV-□010
		SV2	SV2-□005	SV2-□010
P	Panasonic Corporation	MINAS A5	MSMD5A	MSMD01
		MINAS A6	MSMF5A	MSMF01
M	OMRON Corporation	G5	R88M-K05030	R88M-K10030
		1S	R88M-1M05030	R88M-1M10030
	Fuji Electric Corporation	ALPHA7 GYS	GYS500D7-□B2□	GYS101D7-□B2□
		ALPHA7 GYB	-	-
F	FANUC CORPORATION	βiS-B	A06B-0111-B1	A06B-0112-B1
P	Bosch Rexroth AG	MSM	MSM019A	MSM019B
M	Rockwell Automation, Inc.	TLP	TLP-A046-005-DKA□2	TLP-A046-010-DKA□2
	SIEMENS AG	1FK2 *1	1FK2102-0AG0	1FK2102-1AG0

Code	Manufacturer	Series	200 W	400 W
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR23	HG-KR43
		MELSERVO J5	HK-KT23W	HK-KT43W
	Delta Electronics Co., Ltd.	ECMA-C	ECMA-C10602	ECMA-C10604
	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A06020	R2□A06040
Y	Mitsubishi Electric Corporation	Σ-7	SGM7J-02	SGM7J-04
		Σ-X	SGMXJ-02	SGMXJ-04
	Keyence Corporation	SV	SV-□020	SV-□040
		SV2	SV2-□020	SV2-□040
P	Panasonic Corporation	MINAS A5	MSMD02	MSMD04
		MINAS A6	MSMF02	MSMF04
	OMRON Corporation	G5	R88M-K20030	R88M-K40030
		1S	R88M-1M20030	R88M-1M40030
M	Fuji Electric Corporation	ALPHA7 GYS	GYS201D7-□B2□	GYS401D7-□B2□
		ALPHA7 GYB	GYB201D7-□B2□	GYB401D7-□B2□
F	FANUC CORPORATION	βiS-B	A06B-2115-B1	-
P	Bosch Rexroth AG	MSM	MSM031B	MSM031C
M	Rockwell Automation, Inc.	TLP	TLP-A070-020-DKA□2	TLP-A070-040-DKA□2
	SIEMENS AG	1FK2 *1	1FK2203-2AG0	1FK2203-4AG0

* Contact CKD for information on mounting motors other than the above and products of other motor manufacturers.

*1 The servo motor is a regulated item under Paragraph 7(8) of Appended Table 1 of the Export Trade Control Order, and its specifications also meet the applicable criteria. (as of January 2021)

Electric Actuator with Motor Specification Slider Type

EBS-04LE

Inline Motor Mount Type

● Servo Motor Capacity: 50 W

RoHS

Model No. Notation Method

EBS - 04 L E - 06 0300 NNN - M H N N - X

❶ Body Size

04	Body width 44 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount

❹ Screw Lead

06	6 mm
12	12 mm

❺ Stroke

0050 to 0500	50 mm (every 50 mm) 500 mm

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	
F	

❽ Motor Capacity

H	50 W

Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X)

	Standard
X	Adopted

Manufacturer	50 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

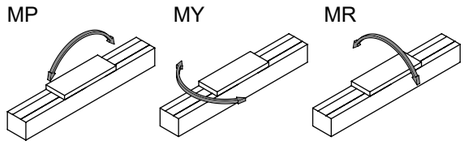
Specifications

Applicable Motor Capacity		50 W servo motor	
Drive Method		Ball screw ø10	
Stroke	mm	50 to 500	
Screw lead	mm	6	12
Max. Payload *1	kg Horizontal	20	12
	kg Vertical	5	2
Max. Speed	mm/s	300	600
Rated thrust *1	N	141	71
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Allowable load	N	1030	
Static Allowable Moment	N·m	MP: 62 MY: 62 MR: 92	
Operating Ambient Temperature, Humidity		0 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 Rated thrust and maximum load capacity are guideline values, assuming that the motor mounted will output the rated torque.

Moment direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	50 to 500
6	300
12	600

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

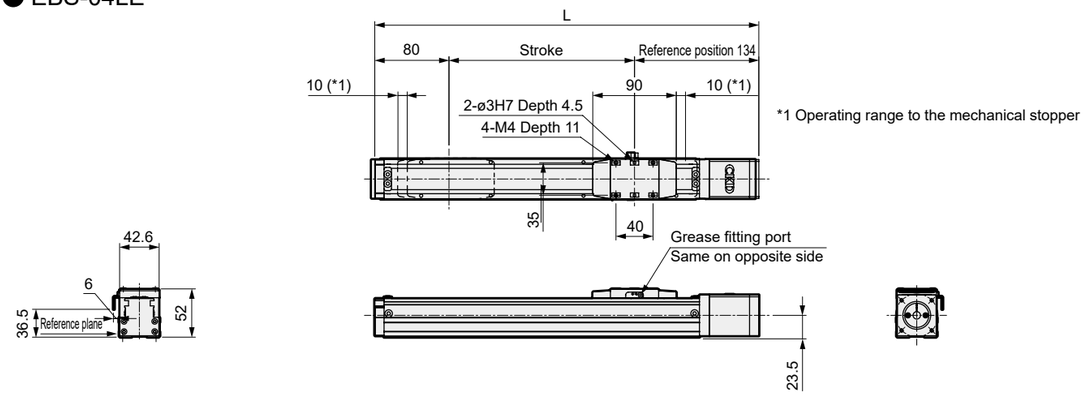
Allowable Overhang Length

* Refer to P. 56 for details.

CKD

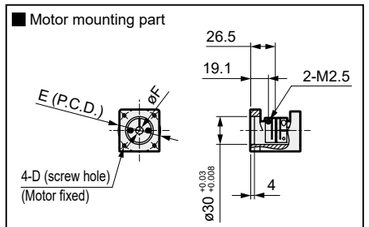
Outline Dimensions, Inline Motor Mount

● EBS-04LE



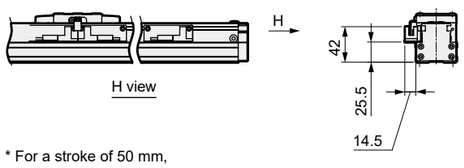
*1 Operating range to the mechanical stopper

■ Motor mounting part



Mounting Motor Specifications	D	E	F	For motor mounting Bolt
M 50 W	M4	ø46	ø8	4-M4 x L12
Y 50 W	M4	ø46	ø8	4-M4 x L12
P 50 W	M3	ø45	ø8	4-M3 x L12
F 50 W	M4	ø46	ø8	4-M4 x L12

■ When origin/limit sensors are mounted



* For a stroke of 50 mm,
a sensor must be mounted to both sides.
Also, sensor dogs can be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500
Stroke (mm)	50	100	150	200	250	300	350	400	450	500
L	264	314	364	414	464	514	564	614	664	714
A	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5
N	6	6	8	8	10	10	12	12	14	14
P	25	75	125	175	225	275	325	375	425	475
Weight (kg)	1.0	1.1	1.3	1.5	1.7	1.8	2.0	2.2	2.4	2.6

List of Accessories

[Motor mounting parts]

Mounting Motor Specifications	Coupling	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

Electric Actuator with Motor Specification Slider Type

EBS-04L□

Reverse Parallel Motor Mount Type

● Servo Motor Capacity : 50 W

RoHS

Model No. Notation Method

EBS - 04 L R - 06 0300 NNN - M H N N - X

❶ Body Size

04	Body width 44 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left-Side Reverse Parallel Mount

❹ Screw Lead

06	6 mm
12	12 mm

❺ Stroke

0050 to 0500	50 mm (every 50 mm) 500 mm

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	
F	

❽ Motor Capacity

H	50 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X)

	Standard
X	Adopted

*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

Manufacturer	50 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

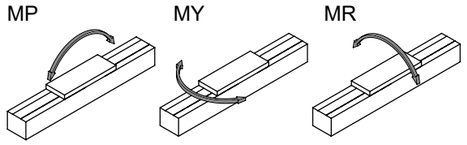
Specifications

Applicable Motor Capacity		50 W servo motor	
Drive Method		Ball screw ø10	
Stroke	mm	50 to 500	
Screw lead	mm	6	12
Max. Payload *1	kg Horizontal	20	12
	kg Vertical	5	2
Max. Speed	mm/s	300	600
Rated thrust *1	N	141	71
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Allowable load	N	1030	
Static Allowable Moment	N·m	MP: 62 MY: 62 MR: 92	
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)	
Storage Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Rated thrust and maximum load capacity are guideline values, assuming that the motor mounted will output the rated torque.

Moment direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	50 to 600
6	300
12	600

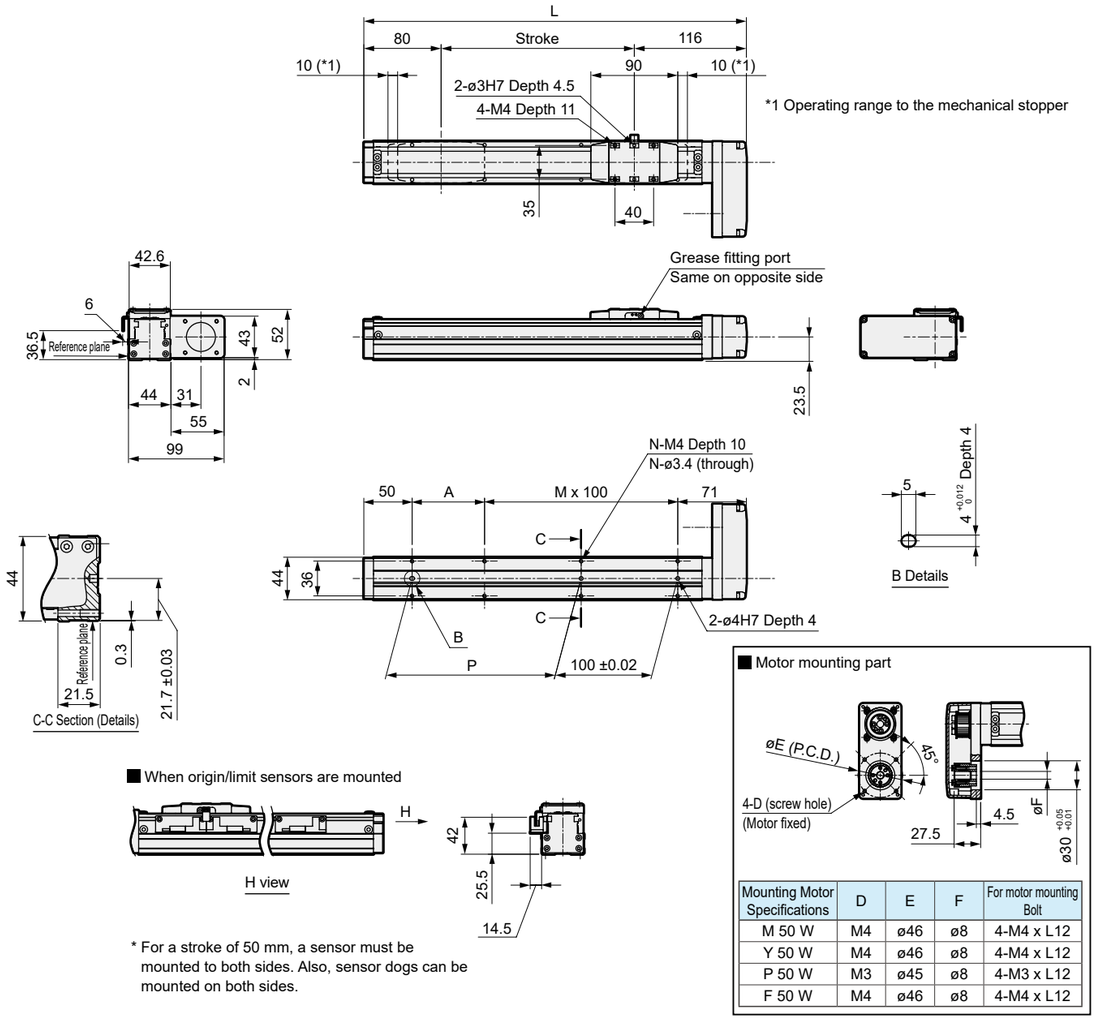
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

External Dimension Drawing Motor Right Side Return Mount

● EBS-04LR



When origin/limit sensors are mounted

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Mounting Motor Specifications	D	E	F	For motor mounting Bolt
M 50 W	M4	ø46	ø8	4-M4 x L12
Y 50 W	M4	ø46	ø8	4-M4 x L12
P 50 W	M3	ø45	ø8	4-M3 x L12
F 50 W	M4	ø46	ø8	4-M4 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500
Stroke (mm)	50	100	150	200	250	300	350	400	450	500
L	246	296	346	396	446	496	546	596	646	696
A	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5
N	6	6	8	8	10	10	12	12	14	14
P	25	75	125	175	225	275	325	375	425	475
Weight (kg)	1.0	1.2	1.4	1.7	1.8	1.9	2.1	2.3	2.5	2.7

List of Accessories

[Motor mounting parts]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

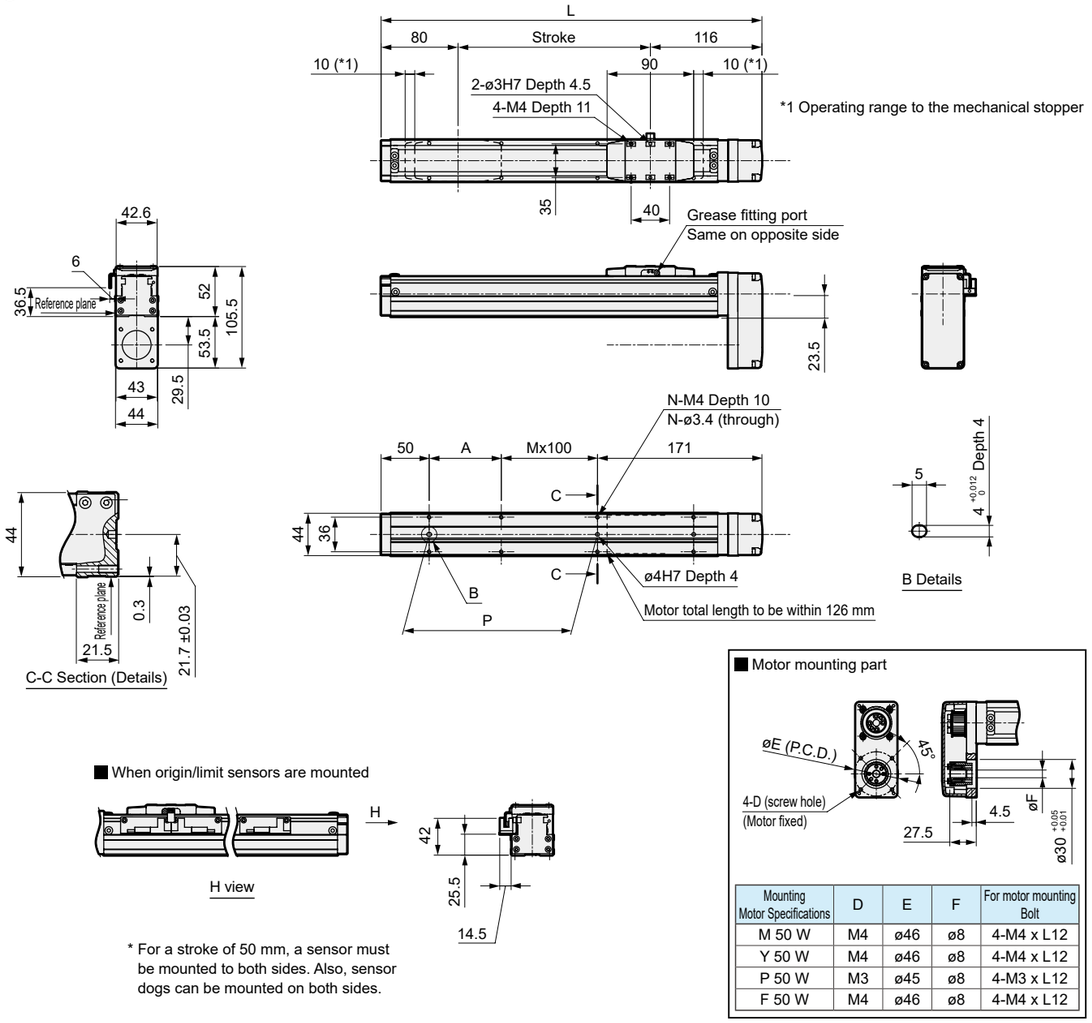
[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

External Dimension Drawing Motor Bottom Side Return Mount

● EBS-04LD



■ When origin/limit sensors are mounted

H view

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

■ Motor mounting part

Mounting Motor Specifications	D	E	F	For motor mounting Bolt
M 50 W	M4	ø46	ø8	4-M4 x L12
Y 50 W	M4	ø46	ø8	4-M4 x L12
P 50 W	M3	ø45	ø8	4-M3 x L12
F 50 W	M4	ø46	ø8	4-M4 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500
Stroke (mm)	50	100	150	200	250	300	350	400	450	500
L	246	296	346	396	446	496	546	596	646	696
A	25	75	25	75	25	75	25	75	25	75
M	0	0	1	1	2	2	3	3	4	4
N	4	4	6	6	8	8	10	10	12	12
P	25	75	125	175	225	275	325	375	425	475
Weight (kg)	1.0	1.2	1.4	1.7	1.8	1.9	2.1	2.3	2.5	2.7

List of Accessories

[Motor mounting parts]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

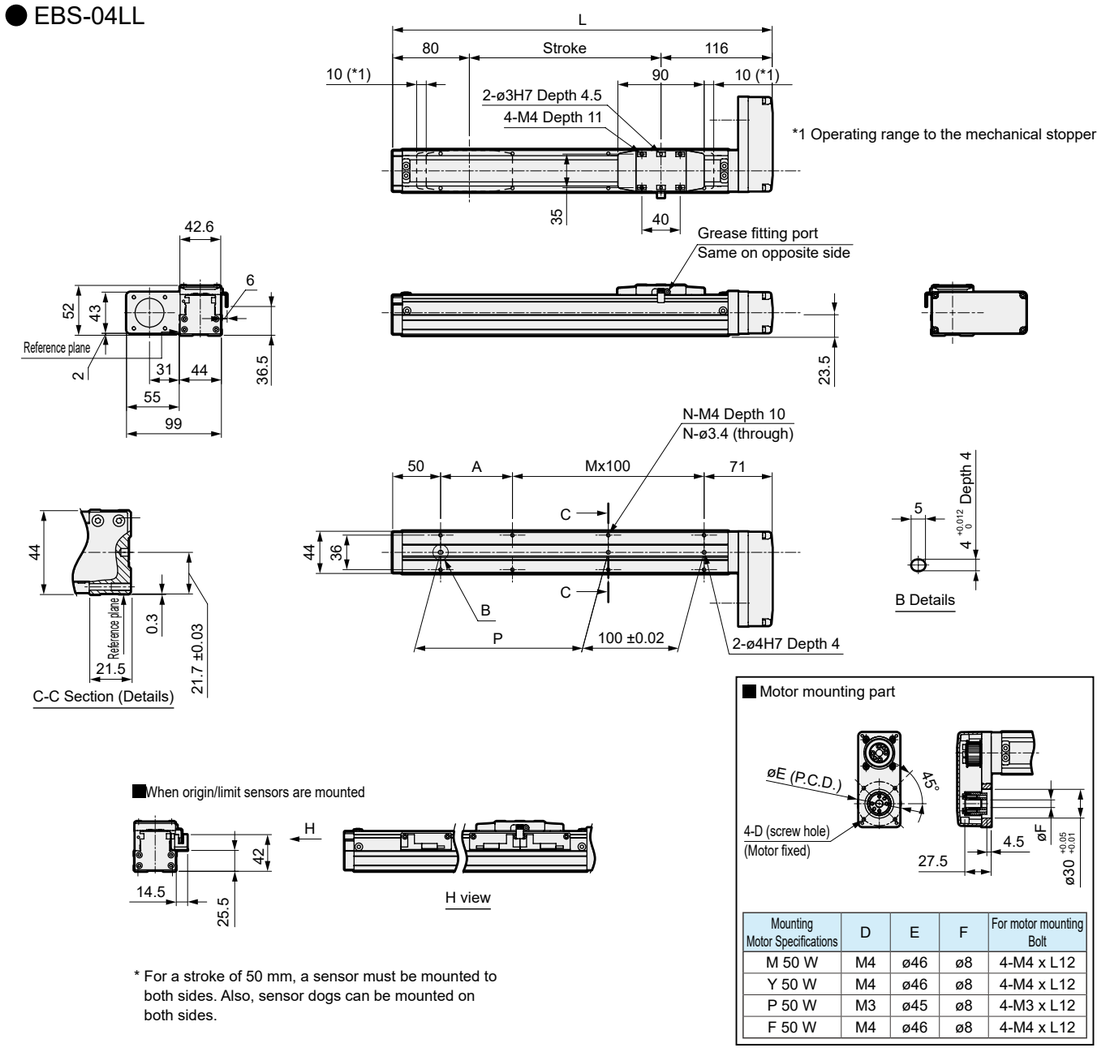
[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

External Dimension Drawing Motor Left Side Return Mount

● EBS-04LL



■ When origin/limit sensors are mounted

H view

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

■ Motor mounting part

Mounting Motor Specifications	D	E	F	For motor mounting Bolt
M 50 W	M4	ø46	ø8	4-M4 x L12
Y 50 W	M4	ø46	ø8	4-M4 x L12
P 50 W	M3	ø45	ø8	4-M3 x L12
F 50 W	M4	ø46	ø8	4-M4 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500
Stroke (mm)	50	100	150	200	250	300	350	400	450	500
L	246	296	346	396	446	496	546	596	646	696
A	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5
N	6	6	8	8	10	10	12	12	14	14
P	25	75	125	175	225	275	325	375	425	475
Weight (kg)	1.0	1.2	1.4	1.7	1.8	1.9	2.1	2.3	2.5	2.7

List of Accessories

[Motor mounting parts]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

Electric Actuator with Motor Specification Slider Type

EBS-05LE

Inline Motor Mount Type

● Servo Motor Capacity: 100 W

RoHS

Model No. Notation Method

EBS - 05 L E - 02 0300 NNN - M 1 N N - X

❶ Body Size

05	Body width 54 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount

❹ Screw Lead

02	2 mm
05	5 mm
10	10 mm
20	20 mm

❺ Stroke

0050 to 0800	50 mm (every 50 mm) 800 mm

❻ Mounting Motor Specifications

M Y P F	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity

1	100 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X)

	Standard
X	Adopted

Manufacturer	100 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

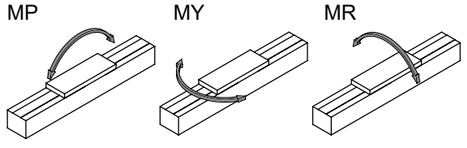
Specifications

Applicable Motor Capacity		100 W Servo Motor			
Drive Method		Ball screw ø12			
Stroke	mm	50 to 800			
Screw lead	mm	2	5	10	20
Max. Payload *1	kg Horizontal	30	30	15	10
	kg Vertical	10	10	5	2.5
Max. Speed	mm/s	100	250	500	1,000
Rated thrust *1	N	854	341	170	85
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Allowable load	N	1168			
Static Allowable Moment	N·m	MP: 103 MY: 103 MR: 144			
Operating Ambient Temperature, Humidity		0 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 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	50 to 600	650	700	750	800
2	100	90	80	70	60
5	250	225	200	175	150
10	500	450	400	350	300
20	1,000	900	800	700	600

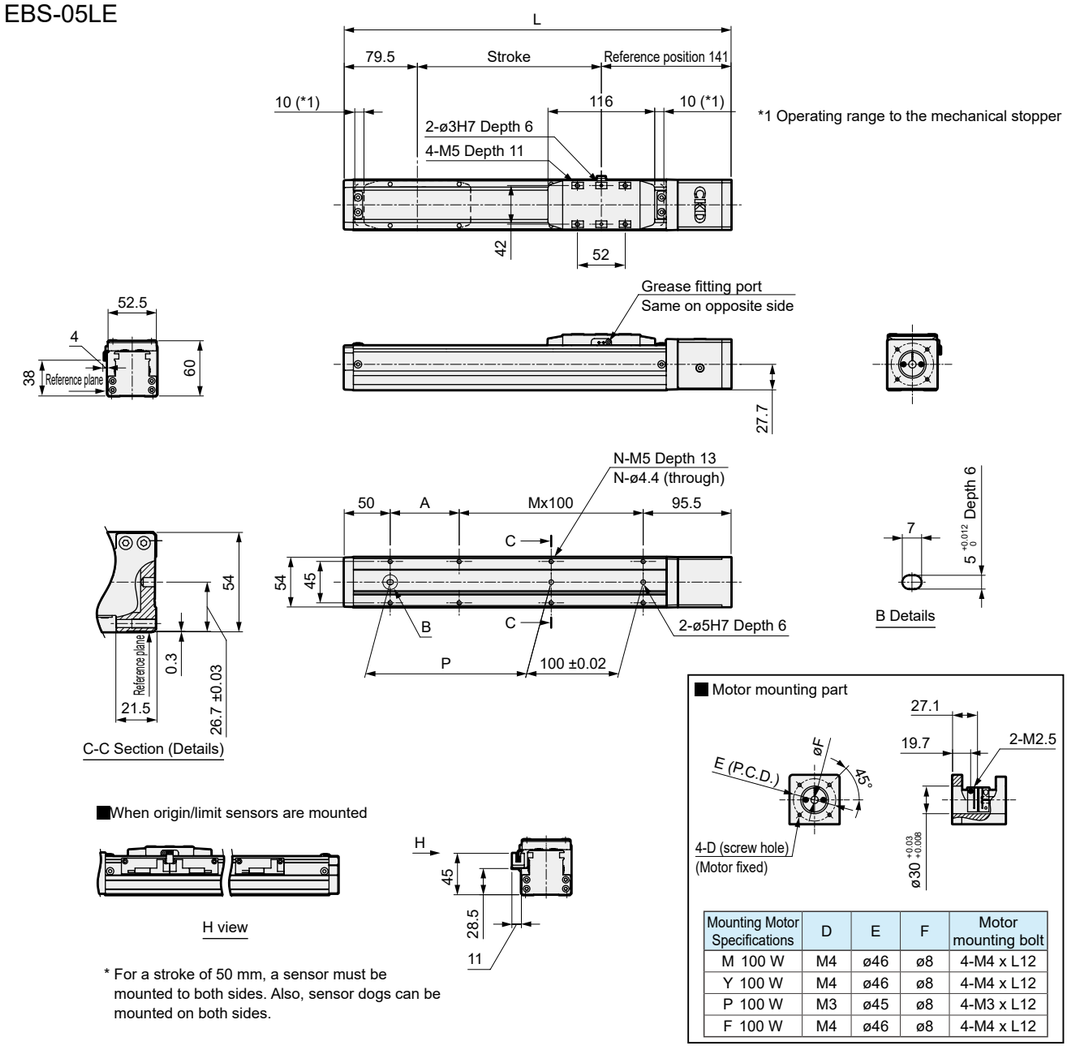
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

Outline Dimensions, Inline Motor Mount

● EBS-05LE



■When origin/limit sensors are mounted

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Mounting Motor Specifications	D	E	F	Motor mounting bolt
M 100 W	M4	ø46	ø8	4-M4 x L12
Y 100 W	M4	ø46	ø8	4-M4 x L12
P 100 W	M3	ø45	ø8	4-M3 x L12
F 100 W	M4	ø46	ø8	4-M4 x L12

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	270.5	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5
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)	1.8	1.9	2.1	2.2	2.4	2.5	2.7	2.8	3.0	3.1	3.2	3.4	3.5	3.7	3.8	4.0

List of Accessories

[Motor mounting parts]

Mounting Motor Specifications	Coupling	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[Origin sensor, limit sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

Electric Actuator with Motor Specification Slider Type

EBS-05L□

Reverse Parallel Motor Mount Type

● Servo Motor Capacity: 100 W

RoHS

Model No. Notation Method

EBS - 05 L R - 02 0300 NNN - M 1 N N - X

❶ Body Size

05	Body width 54 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left-Side Reverse Parallel Mount

❹ Screw Lead

02	2 mm
05	5 mm
10	10 mm
20	20 mm

❺ Stroke

0050 to 0800	50 mm (every 50 mm) 800 mm

❻ Mounting Motor Specifications

M, Y, P, F	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity

1	100 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X) *1

	Standard
X	Adopted

Manufacturer	100 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

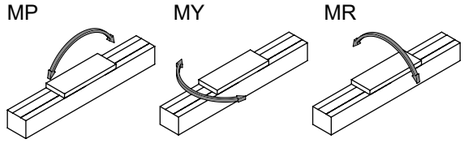
*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

Specifications

Applicable Motor Capacity		100 W Servo Motor			
Drive Method		Ball screw ø12			
Stroke	mm	50 to 800			
Screw Lead		2	5	10	20
Max. Payload	kg Horizontal	30	30	15	10
	kg Vertical	10	10	5	2.5
Max. Speed	mm/s	100	250	500	1,000
Rated thrust *1	N	854	341	170	85
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Allowable load	N	1168			
Static Allowable Moment	N·m	MP: 103 MY: 103 MR: 144			
Operating Ambient Temperature, Humidity		0 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 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment direction



Stroke and Max. Speed

(mm/s)

Lead \ Stroke	50 to 600	650	700	750	800
2	100	90	80	70	60
5	250	225	200	175	150
10	500	450	400	350	300
20	1,000	900	800	700	600

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

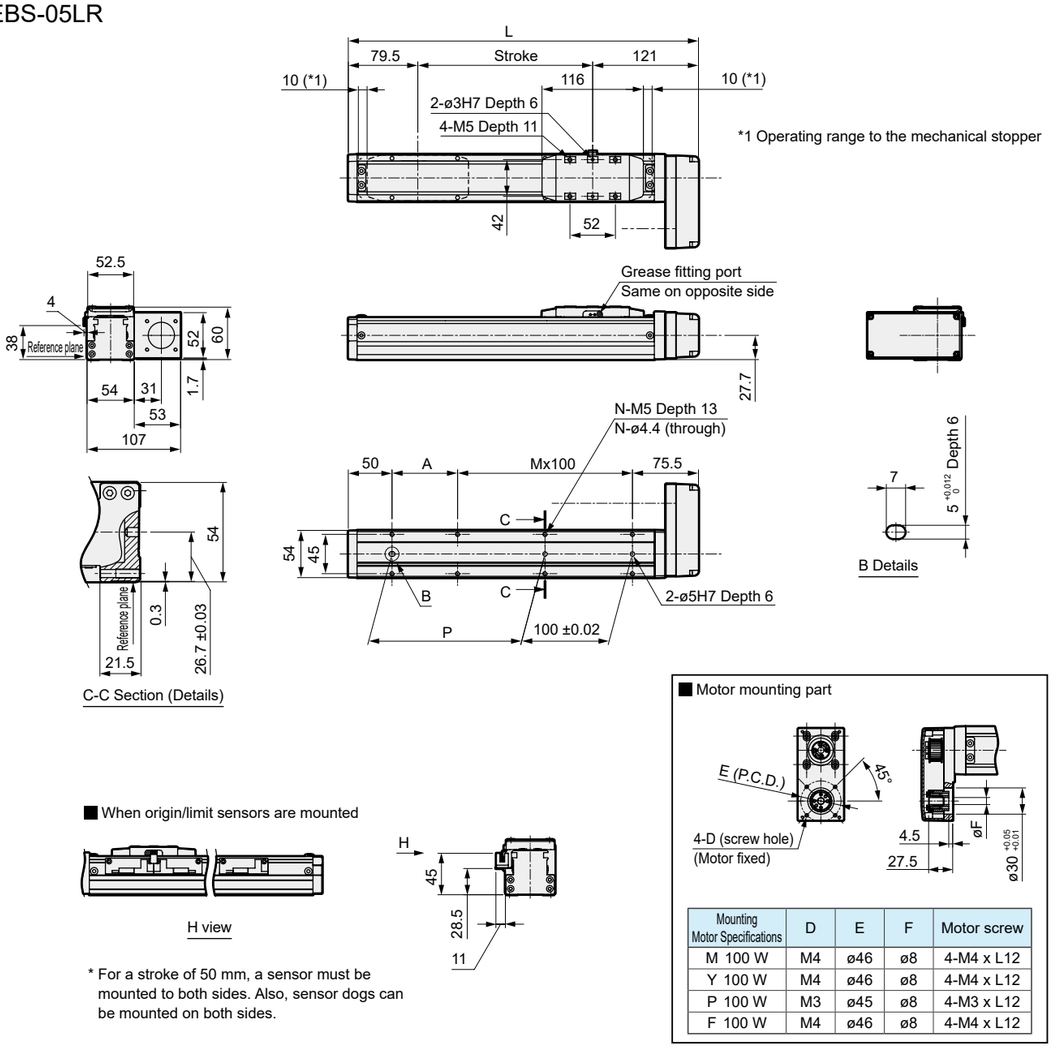
Allowable Overhang Length

* For details, see P. 56.

CKD

External Dimension Drawing Motor Right Side Return Mount

● EBS-05LR



■ When origin/limit sensors are mounted

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

■ Motor mounting part

Mounting Motor Specifications	D	E	F	Motor screw
M 100 W	M4	ø46	ø8	4-M4 x L12
Y 100 W	M4	ø46	ø8	4-M4 x L12
P 100 W	M3	ø45	ø8	4-M3 x L12
F 100 W	M4	ø46	ø8	4-M4 x L12

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	250.5	300.5	350.5	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5
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)	1.8	2.0	2.1	2.2	2.4	2.5	2.7	2.8	3.0	3.1	3.3	3.4	3.5	3.7	3.8	4.0

List of Accessories

[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[Origin sensor, limit sensor]

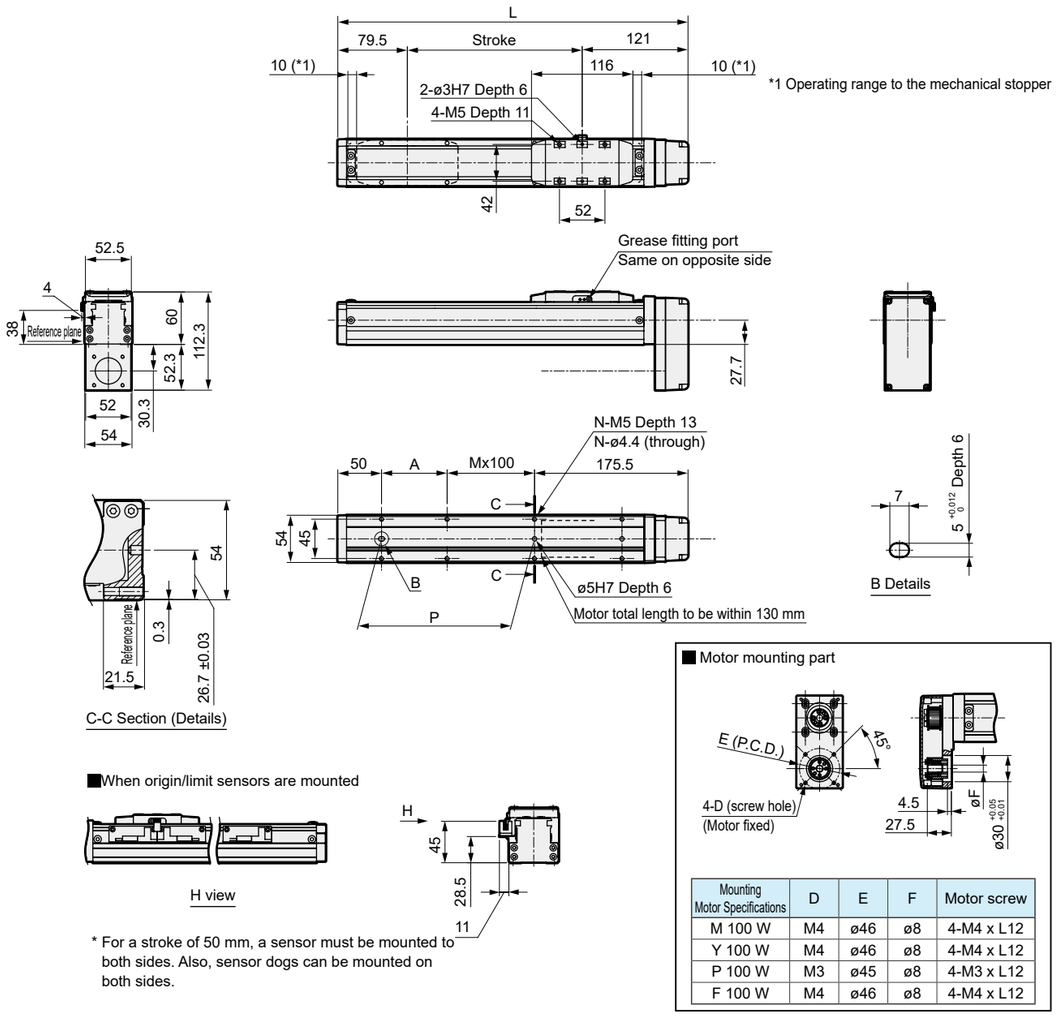
Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

CKD

External Dimension Drawing Motor Bottom Side Return Mount

● EBS-05LD



* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Mounting Motor Specifications	D	E	F	Motor screw
M 100 W	M4	ø46	ø8	4-M4 x L12
Y 100 W	M4	ø46	ø8	4-M4 x L12
P 100 W	M3	ø45	ø8	4-M3 x L12
F 100 W	M4	ø46	ø8	4-M4 x L12

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	250.5	300.5	350.5	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	1.8	2.0	2.1	2.2	2.4	2.5	2.7	2.8	3.0	3.1	3.3	3.4	3.5	3.7	3.8	4.0

List of Accessories

[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

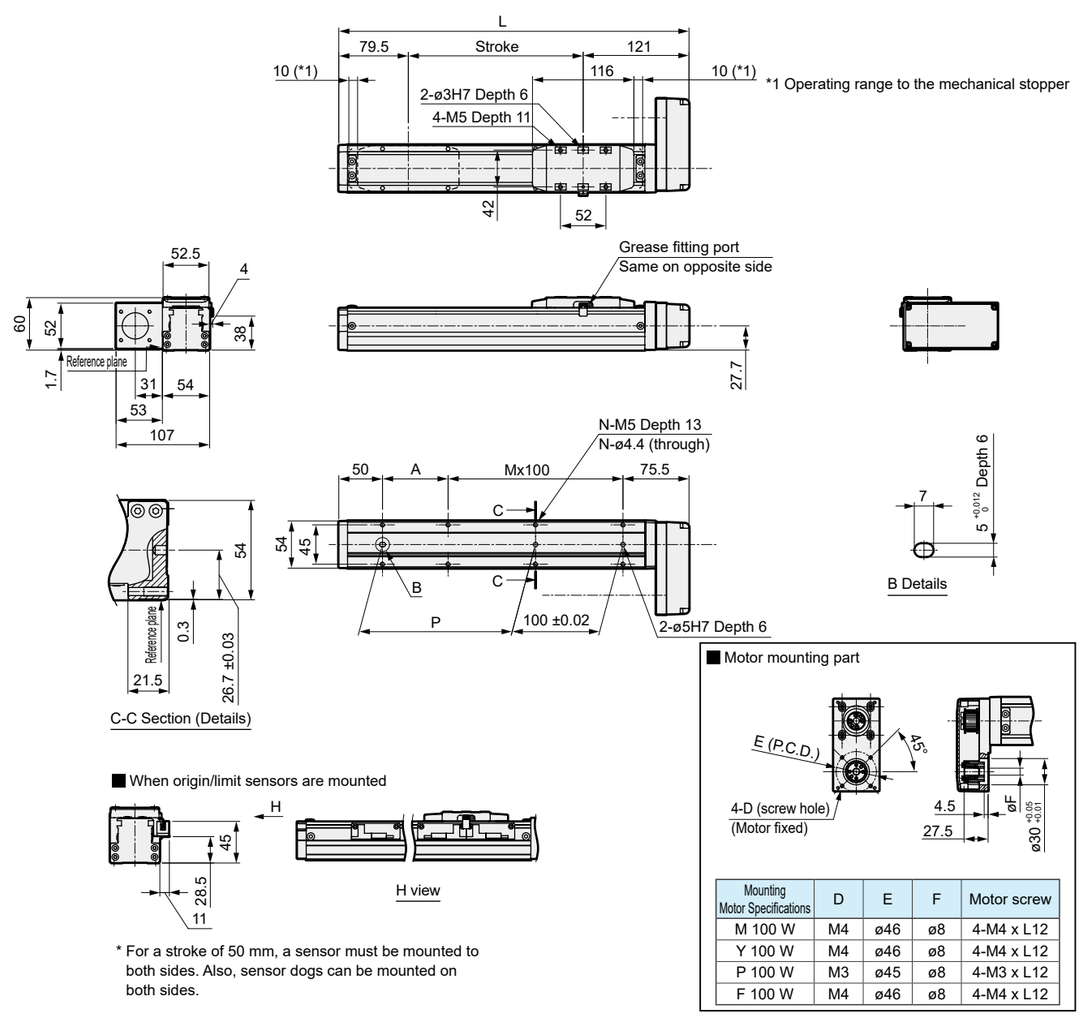
[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

External Dimension Drawing Motor Left Side Return Mount

● EBS-05LL



* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Mounting Motor Specifications	D	E	F	Motor screw
M 100 W	M4	ø46	ø8	4-M4 x L12
Y 100 W	M4	ø46	ø8	4-M4 x L12
P 100 W	M3	ø45	ø8	4-M3 x L12
F 100 W	M4	ø46	ø8	4-M4 x L12

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	250.5	300.5	350.5	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5
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)	1.8	2.0	2.1	2.2	2.4	2.5	2.7	2.8	3.0	3.1	3.3	3.4	3.5	3.7	3.8	4.0

List of Accessories

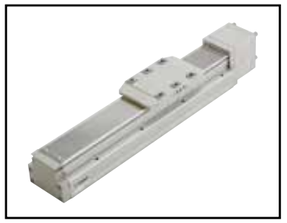
[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.



Electric Actuator with Motor Specification Slider Type

EBS-08LE

Inline Motor Mount Type

● Servo Motor Capacity: 200 W

RoHS

Model No. Notation Method

EBS - 08 L E - 05 0300 NNN - M 2 N N - X

❶ Body Size

08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺ Stroke

0050 ↔ 1100	50 mm (every 50 mm) 1100 mm

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	
F	

❼ Motor Capacity

2	200 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X)

	Standard
X	Adopted

*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

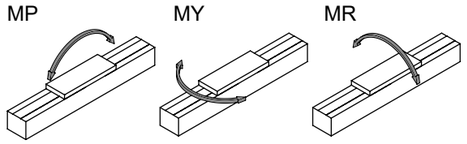
Specifications

Applicable Motor Capacity		200 W Servo Motor		
Drive Method		Ball screw ø16		
Stroke	mm	50 to 1100		
Screw lead	mm	5	10	20
Max. Payload *1	kg Horizontal	50	30	12
	kg Vertical	15	8	2.5
Max. Speed	mm/s	250	500	1,000
Rated thrust *1	N	683	341	174
Repeatability	mm	±0.01		
Lost Motion	mm	0.1 or less		
Allowable load	N	2781		
Static Allowable Moment	N·m	MP: 203 MY: 203 MR: 336		
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)		
Storage Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	50 to 700	750	800	850	900	950	1,000	1050	1100
5	250	225	200	175	150	125	100	75	50
10	500	450	400	350	300	250	200	150	100
20	1,000	900	800	700	600	500	400	300	200

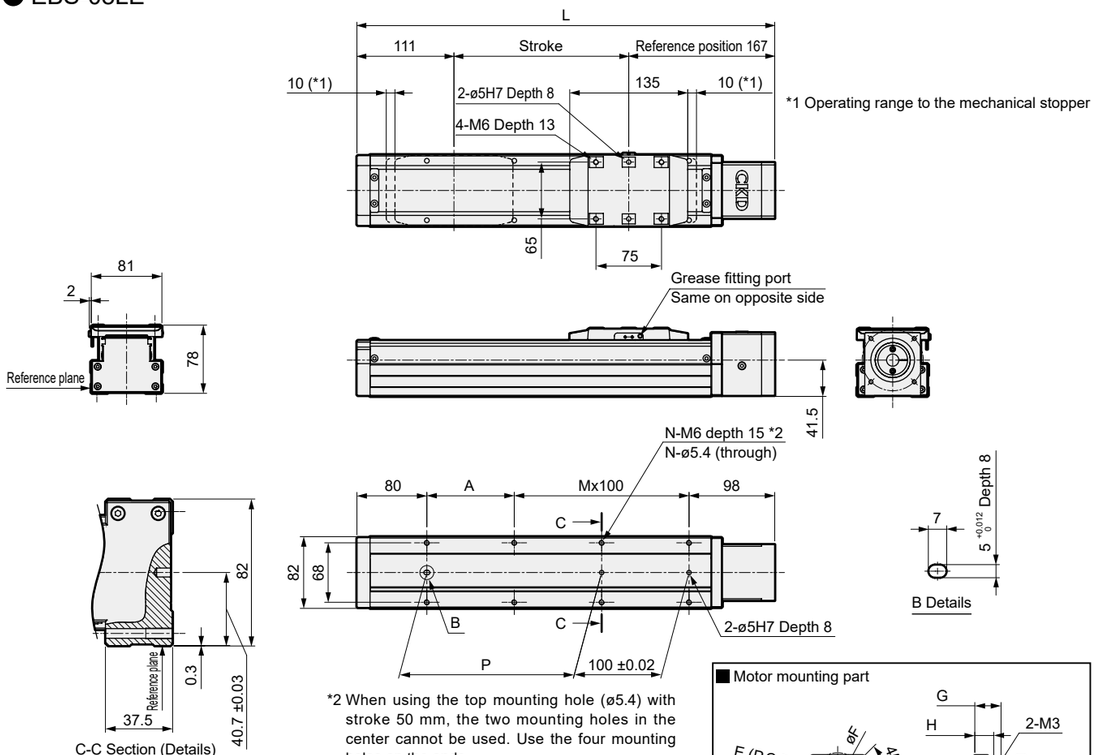
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

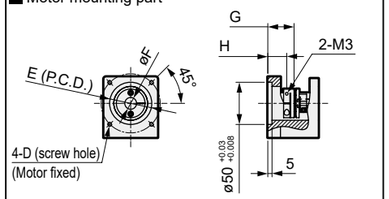
Outline Dimensions, Inline Motor Mount

● EBS-08LE



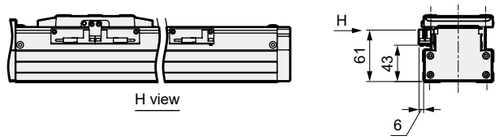
*2 When using the top mounting hole (ø5.4) with stroke 50 mm, the two mounting holes in the center cannot be used. Use the four mounting holes on the ends.

■ Motor mounting part



Mounting Motor Specifications	D	E	F	G	H	Motor mounting bolt
M 200 W	M5	ø70	ø14	31.1	22.5	4-M5 x L18
Y 200 W	M5	ø70	ø14	31.1	22.5	4-M5 x L18
P 200 W	M4	ø70	ø11	31.1	22.5	4-M4 x L18
F 200 W	M5	ø70	ø9	29.1	20.5	4-M5 x L16

■ When origin / limit sensors are mounted



* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
L	328	378	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178	1228	1278	1328	1378
A	50	100	50	100	50	100	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	9	9	10	10	11	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
Weight (kg)	4.3	4.6	4.9	5.2	5.6	5.9	6.2	6.6	6.9	7.2	7.5	7.9	8.2	8.5	8.8	9.2	9.5	9.8	10.2	10.5	10.8	11.1

List of Accessories

[Motor mounting parts]

Mounting Motor Specifications	Coupling	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4
F		M5	4

[Origin sensor, limit sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

Electric Actuator with Motor Specification Slider Type

EBS-08L□

Reverse Parallel Motor Mount Type

● Servo Motor Capacity: 200 W

RoHS

Model No. Notation Method

EBS - 08 L E - 05 0300 NNN - M 2 N N - X

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶ Body Size

08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left-Side Reverse Parallel Mount

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺ Stroke

0050 to 1100	50 mm (every 50 mm) 1100 mm

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	
F	

❼ Motor Capacity

2	200 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X)

	Standard
X	Adopted

*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

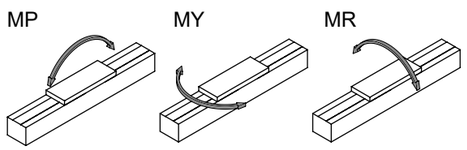
Specifications

Applicable Motor Capacity		200 W Servo Motor		
Drive Method		Ball screw ø16		
Stroke	mm	50 to 1100		
Screw Lead		5	10	20
Max. Payload	kg Horizontal	50	30	12
	kg Vertical	15	8	2.5
Max. Speed	mm/s	250	500	1,000
Rated thrust	N	683	341	174
Repeatability	mm	±0.01		
Lost Motion	mm	0.1 or less		
Allowable load	N	2781		
Static Allowable Moment	N·m	MP: 203 MY: 203 MR: 336		
Operating Ambient Temperature, Humidity		0 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 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Lead \ Stroke	50 to 700	750	800	850	900	950	1,000	1050	1100
5	250	225	200	175	150	125	100	75	50
10	500	450	400	350	300	250	200	150	100
20	1,000	900	800	700	600	500	400	300	200

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

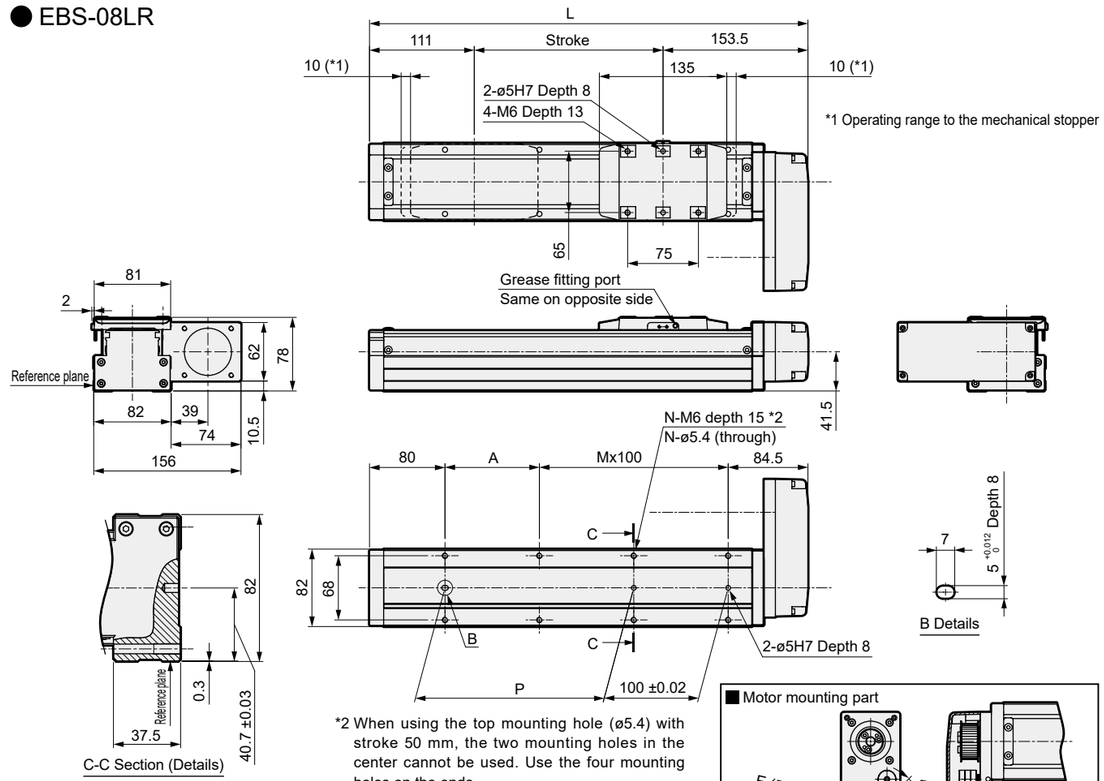
Allowable Overhang Length

* For details, see P. 56.

CKD

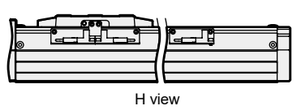
External Dimension Drawing Motor Right Side Return Mount

● EBS-08LR

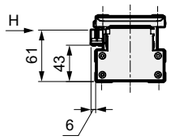


*2 When using the top mounting hole (ø5.4) with stroke 50 mm, the two mounting holes in the center cannot be used. Use the four mounting holes on the ends.

■ When origin/limit sensors are mounted

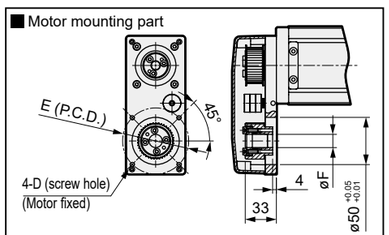


H view



* For a 50 mm stroke, sensors must be mounted on both sides. Also, sensor dogs can be mounted on both sides.

■ Motor mounting part



Mounting Motor Specifications	D	E	F	Motor screw
M 200 W	M5	ø70	ø14	4-M5 x L18
Y 200 W	M5	ø70	ø14	4-M5 x L18
P 200 W	M4	ø70	ø11	4-M4 x L18
F 200 W	M5	ø70	ø9	4-M5 x L16

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
L	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5
A	50	100	50	100	50	100	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	9	9	10	10	11	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
Weight (kg)	4.5	4.8	5.1	5.4	5.8	6.1	6.4	6.8	7.1	7.4	7.7	8.1	8.4	8.7	9.0	9.4	9.7	10.0	10.4	10.7	11.0	11.3

List of Accessories

[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4
F		M5	4

[Origin sensor, limit sensor]

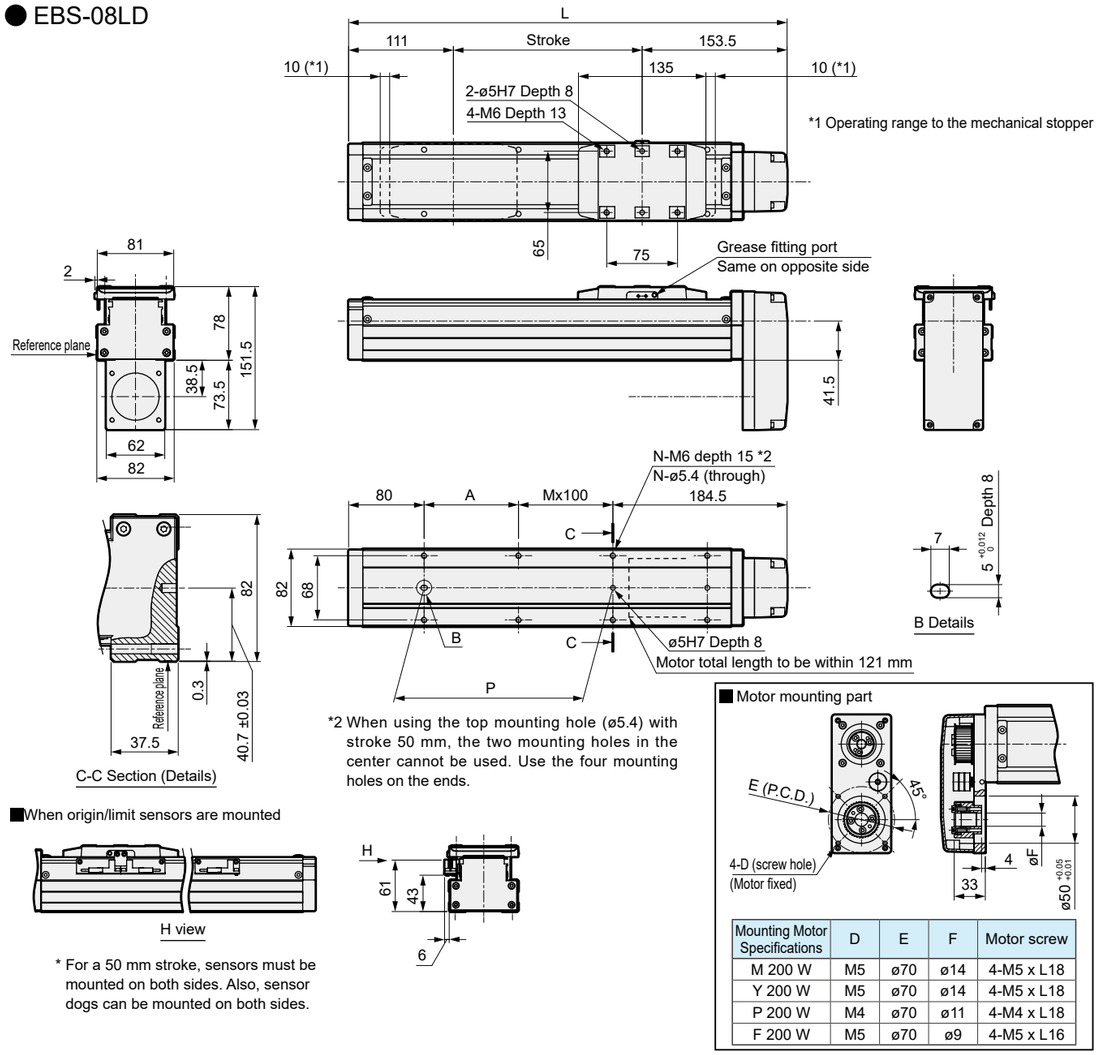
Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

CKD

External Dimension Drawing Motor Bottom Side Return Mount

● EBS-08LD



■When origin/limit sensors are mounted

* For a 50 mm stroke, sensors must be mounted on both sides. Also, sensor dogs can be mounted on both sides.

Mounting Motor Specifications	D	E	F	Motor screw
M 200 W	M5	ø70	ø14	4-M5 x L18
Y 200 W	M5	ø70	ø14	4-M5 x L18
P 200 W	M4	ø70	ø11	4-M4 x L18
F 200 W	M5	ø70	ø9	4-M5 x L16

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
L	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
Weight (kg)	4.5	4.8	5.1	5.4	5.8	6.1	6.4	6.8	7.1	7.4	7.7	8.1	8.4	8.7	9.0	9.4	9.7	10.0	10.4	10.7	11.0	11.3

List of Accessories

[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4
F		M5	4

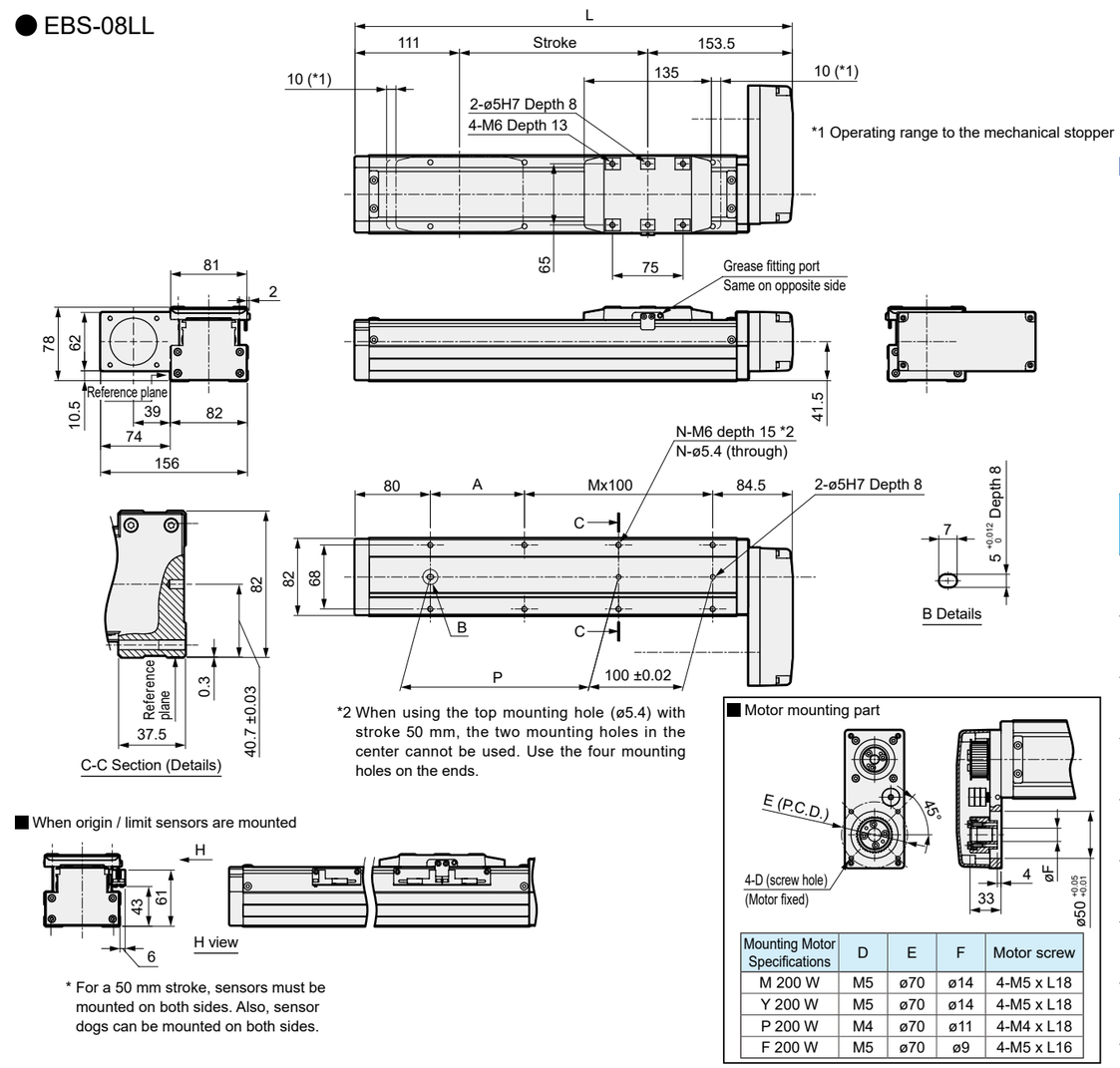
[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

External Dimension Drawing Motor Left Side Return Mount

● EBS-08LL



■When origin / limit sensors are mounted

* For a 50 mm stroke, sensors must be mounted on both sides. Also, sensor dogs can be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
L	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5
A	50	100	50	100	50	100	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	9	9	10	10	11	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
Weight (kg)	4.5	4.8	5.1	5.4	5.8	6.1	6.4	6.8	7.1	7.4	7.7	8.1	8.4	8.7	9.0	9.4	9.7	10.0	10.4	10.7	11.0	11.3

List of Accessories

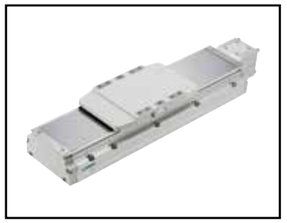
[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4
F		M5	4

[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.



Electric Actuator with Motor Specification Slider Type

EBS-12LE

Inline Motor Mount Type

● Servo Motor Capacity: 400 W

RoHS

Model No. Notation Method

EBS - 12 L E - 05 0300 NNN - M 4 N N

❶ Body Size
12	Body width 120 mm

❷ Motor
L	None

❸ Motor Mounting Direction
E	Inline Mount

❹ Screw Lead
05	5 mm
10	10 mm
20	20 mm
32	32 mm

❺ Stroke
0050 to 1250	50 mm (every 50 mm) 1250 mm

❻ Mounting Motor Specifications
M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	

❼ Motor Capacity
4	400 W

❽ Origin sensor *1
N	None
C	Yes

❾ Limit sensor *1
N	None
B	Yes

*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Corporation	M
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

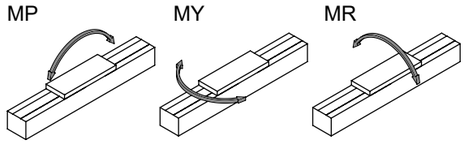
Specifications

Applicable Motor Capacity		400 W Servo Motor			
Drive Method		Ball screw ø16			
Stroke	mm	50 to 1250			
Screw lead	mm	5	10	20	32
Max. Payload *1	kg Horizontal	110	88	40	30
	kg Vertical	33	22	10	8
Max. Speed	mm/s	250	500	1,000	1600
Rated thrust *1	N	1388	694	347	218
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Allowable load	N	8310			
Static Allowable Moment	N·m	MP: 606 MY: 606 MR: 1168			
Operating Ambient Temperature, Humidity		0 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 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	50 to 700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250
5	250	225	200	175	150	140	130	120	110	100	90	80
10	500	450	400	350	325	300	275	250	225	200	175	150
20	1,000	1,000	900	800	700	650	600	550	500	450	400	350
32	1600	1450	1300	1150	1050	950	850	750	650	550	450	350

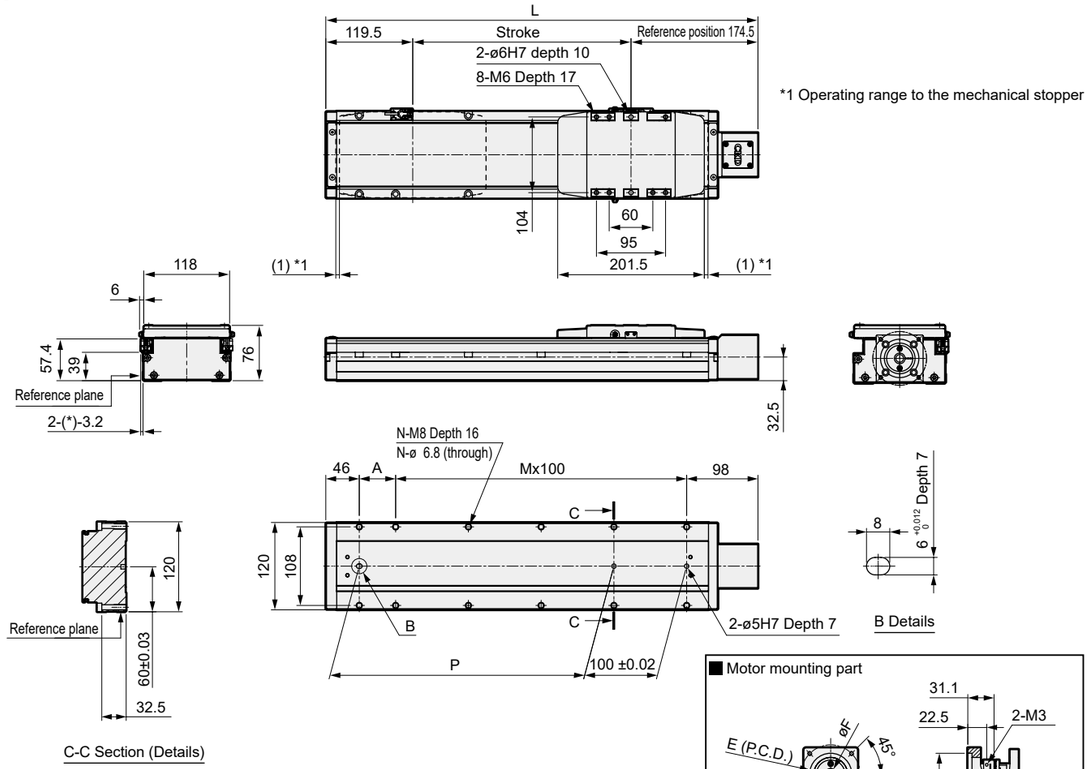
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

Outline Dimensions, Inline Motor Mount

● EBS-12LE



* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Mounting Motor Specifications	D	E	F	Motor mounting bolt
M 400 W	M5	ø70	ø14	4-M5 x L18
Y 400 W	M5	ø70	ø14	4-M5 x L18
P 400 W	M4	ø70	ø14	4-M4 x L18

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100	1150	1200	1250
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250
L	344	394	444	494	544	594	644	694	744	794	844	894	944	994	1044	1094	1144	1194	1244	1294	1344	1394	1444	1494	1544
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250	1300
Weight (kg)	5.1	5.4	5.8	6.1	6.5	6.8	7.2	7.5	7.9	8.2	8.6	8.9	9.3	9.6	10.0	10.3	10.7	11.0	11.4	11.7	12.1	12.4	12.8	13.1	13.5

List of Accessories

[Motor mounting parts]

Mounting Motor Specifications	Coupling	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4

[Origin sensor, limit sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, refer to P. 64.

Electric Actuator with Motor Specification Slider Type

EBS-12L□

Reverse Parallel Motor Mount Type

● Servo Motor Capacity : 400 W

RoHS

Model No. Notation Method

EBS - 12 L R - 05 0300 NNN - M 4 N N

❶ Body Size

12	Body width 120 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left-Side Reverse Parallel Mount

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm
32	32 mm

❺ Stroke

0050 to 1250	50 mm (every 50 mm) 1250 mm

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	

❼ Motor Capacity

4	400 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Corporation	M
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

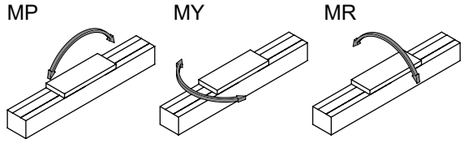
* Refer to P. 13 for motor model No.

Specifications

Applicable Motor Capacity		400 W Servo Motor			
Drive Method		Ball screw ø16			
Stroke	mm	50 to 1250			
Screw lead	mm	5	10	20	32
Max. Payload *1	kg Horizontal	110	88	40	30
	kg Vertical	33	22	10	8
Max. Speed	mm/s	250	500	1,000	1600
Rated thrust *1	N	1388	694	347	218
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Allowable load	N	8310			
Static Allowable Moment	N·m	MP: 606 MY: 606 MR: 1168			
Operating Ambient Temperature, Humidity		0 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 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment direction



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	50 to 700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250
5	250	225	200	175	150	140	130	120	110	100	90	80
10	500	450	400	350	325	300	275	250	225	200	175	150
20	1,000	1,000	900	800	700	650	600	550	500	450	400	350
32	1600	1450	1300	1150	1050	950	850	750	650	550	450	350

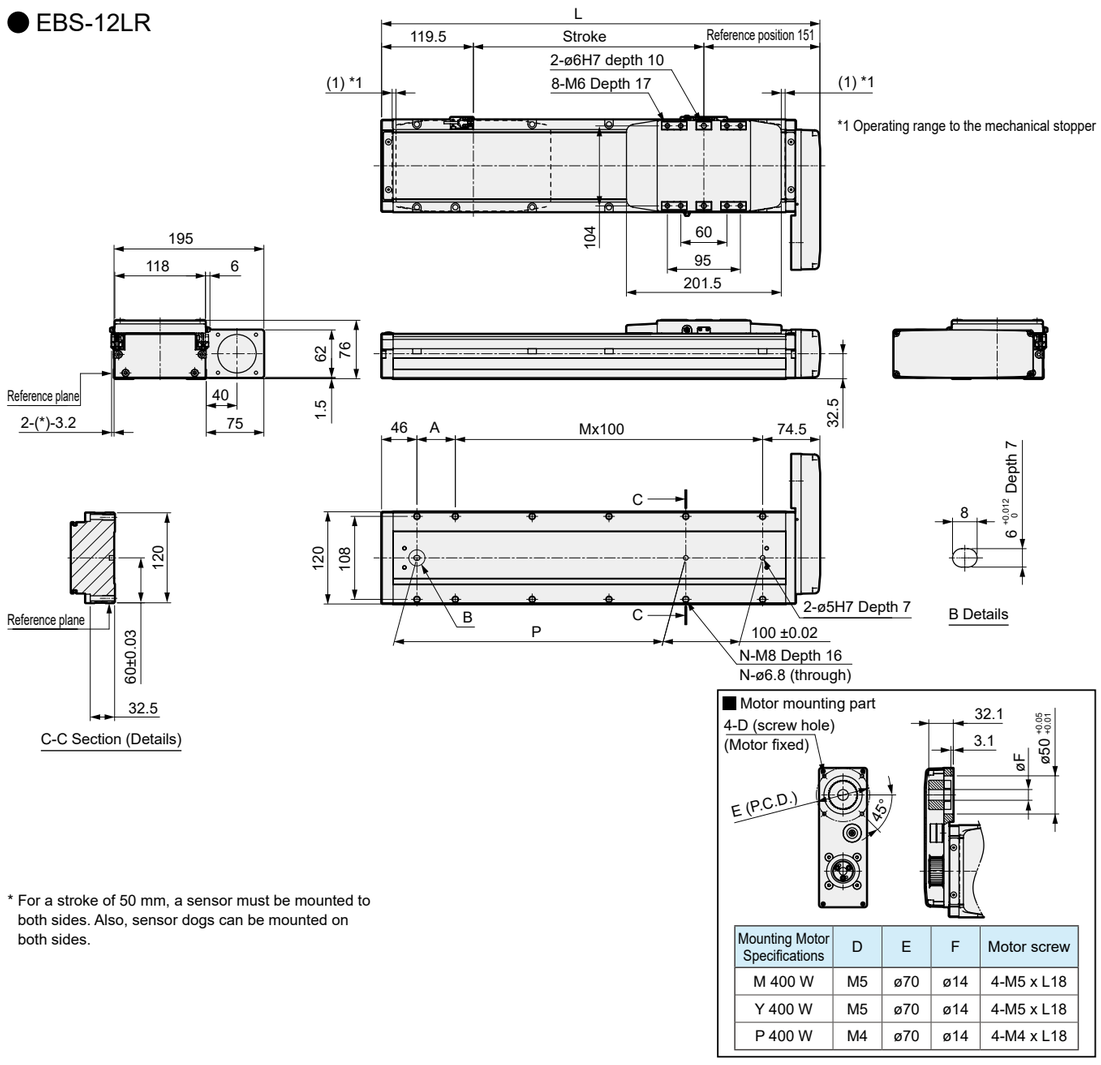
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

External Dimension Drawing Motor Right Side Return Mount

● EBS-12LR



C-C Section (Details)

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Mounting Motor Specifications	D	E	F	Motor screw
M 400 W	M5	ø70	ø14	4-M5 x L18
Y 400 W	M5	ø70	ø14	4-M5 x L18
P 400 W	M4	ø70	ø14	4-M4 x L18

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100	1150	1200	1250
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250
L	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5	1120.5	1170.5	1220.5	1270.5	1320.5	1370.5	1420.5	1470.5	1520.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250	1300
Weight (kg)	5.3	5.6	6.0	6.3	6.7	7.0	7.4	7.7	8.1	8.4	8.8	9.1	9.5	9.8	10.2	10.9	11.2	11.6	11.9	12.3	12.6	12.6	13.0	13.3	13.7

List of Accessories

[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4

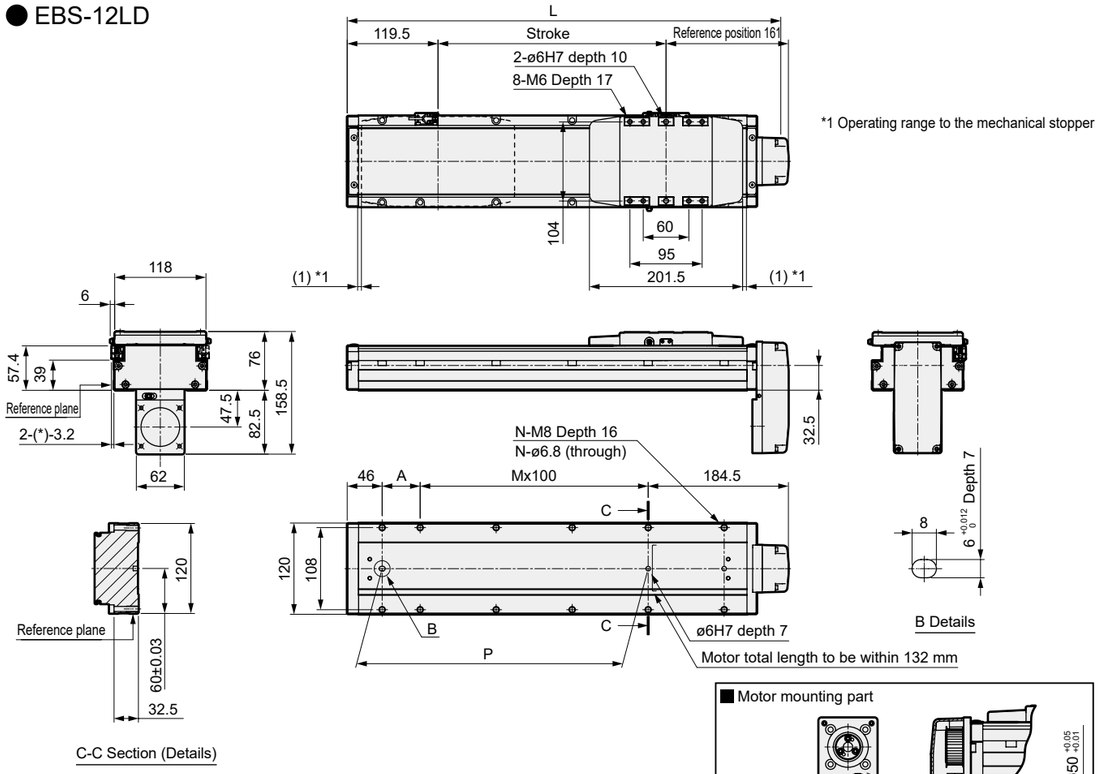
[Origin sensor, limit sensor]

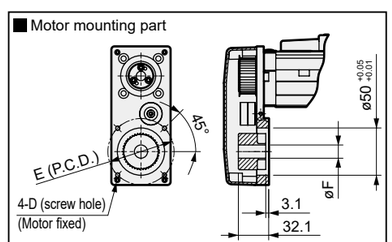
Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

External Dimension Drawing Motor Bottom Side Return Mount

● EBS-12LD





Mounting Motor Specifications	D	E	F	Motor screw
M 400 W	M5	ø70	ø14	4-M5 x L18
Y 400 W	M5	ø70	ø14	4-M5 x L18
P 400 W	M4	ø70	ø14	4-M4 x L18

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100	1150	1200	1250
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250
L	330.5	380.5	430.5	480.5	530.5	580.5	630.5	680.5	730.5	780.5	830.5	880.5	930.5	980.5	1030.5	1080.5	1130.5	1180.5	1230.5	1280.5	1330.5	1380.5	1430.5	1480.5	1530.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12
N	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250	1300
Weight (kg)	5.3	5.6	6.0	6.3	6.7	7.0	7.4	7.7	8.1	8.4	8.8	9.1	9.5	9.8	10.2	10.5	10.9	11.2	11.6	11.9	12.3	12.6	13.0	13.3	13.7

List of Accessories

[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4

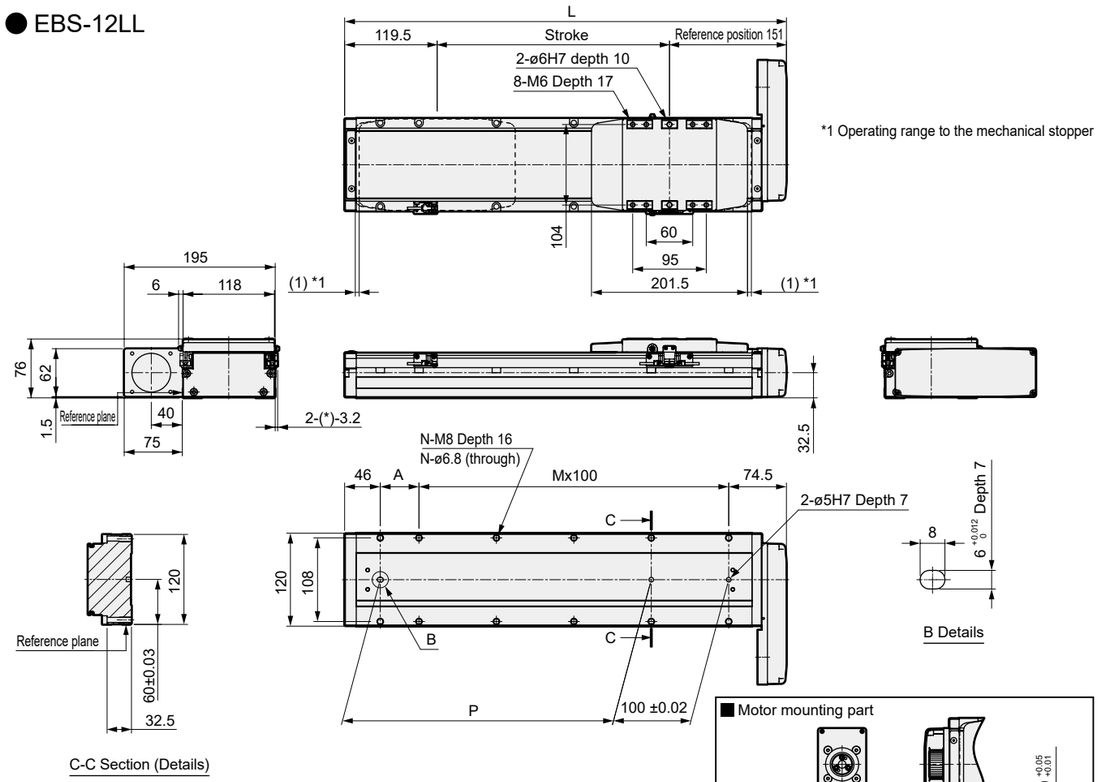
[Origin sensor, limit sensor]

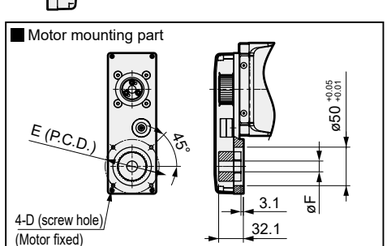
Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

External Dimension Drawing Motor Left Side Return Mount

● EBS-12LL





Mounting Motor Specifications	D	E	F	Motor screw
M 400 W	M5	ø70	ø14	4-M5 x L18
Y 400 W	M5	ø70	ø14	4-M5 x L18
P 400 W	M4	ø70	ø14	4-M4 x L18

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100	1150	1200	1250
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250
L	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5	1120.5	1170.5	1220.5	1270.5	1320.5	1370.5	1420.5	1470.5	1520.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250	1300
Weight (kg)	5.3	5.6	6.0	6.3	6.7	7.0	7.4	7.7	8.1	8.4	8.8	9.1	9.5	9.8	10.2	10.9	11.2	11.6	11.9	12.3	12.6	12.6	13.0	13.3	13.7

List of Accessories

[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4

[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

Electric Actuator Servo Motor Compatible
Motorless specifications

EBS-L-C

Slider Type Low Dust Emission Specification

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System Table

Type	Model No.		Application Motor (W)	Body Width (mm)	Screw Lead (mm)	Max. Payload (kg) Horizontal *1	Max. Payload (kg) Vertical	Stroke (mm) and max. speed (mm/s) *2	Listed Page
Slider Type		EBS-04L□-06-C	50	44	6	20	5	50 mm: 300 mm/s (⏱ 1.03 secs.); 100: 300 mm/s; 150: 300 mm/s; 200: 300 mm/s; 250: 300 mm/s (⏱ 1.70 secs.)	44
		EBS-04L□-12-C			12	12	2	50 mm: 600 (⏱ 0.56 secs.); 100: 600; 150: 600; 200: 600; 250: 600 (⏱ 0.89 secs.)	
		EBS-05L□-02-C	100	54	2	30	10	50 mm: 100 (⏱ 3.01 secs.); 100: 100; 150: 100; 200: 100; 250: 100 (⏱ 6.01 secs.); 300: 90; 350: 80; 400: 70; 450: 60 (⏱ 13.34 secs.)	46
		EBS-05L□-05-C			5	30	10	50 mm: 250 (⏱ 1.23 secs.); 100: 250; 150: 250; 200: 250; 250: 250 (⏱ 2.43 secs.); 300: 225; 350: 200; 400: 175; 450: 150 (⏱ 5.35 secs.)	
		EBS-05L□-10-C			10	15	5	50 mm: 500 (⏱ 0.65 secs.); 100: 500; 150: 500; 200: 500; 250: 500 (⏱ 1.25 secs.); 300: 450; 350: 400; 400: 350; 450: 300 (⏱ 2.70 secs.)	
		EBS-05L□-20-C			20	10	2.5	50 mm: 1,000 (⏱ 0.40 secs.); 100: 1,000; 150: 1,000; 200: 1,000; 250: 1,000 (⏱ 0.70 secs.); 300: 900; 350: 800; 400: 700; 450: 600 (⏱ 1.39 secs.)	
		EBS-08L□-05-C	200	82	5	50	15	50 mm: 250 (⏱ 1.23 secs.); 100: 250; 150: 250; 200: 250; 250: 250 (⏱ 2.43 secs.); 300: 225; 350: 200; 400: 175; 450: 150 (⏱ 6.02 secs.); 500: 125; 550: 100; 600: 75; 650: 50 (⏱ 22.01 secs.)	48
		EBS-08L□-10-C			10	30	8	50 mm: 500 (⏱ 0.65 secs.); 100: 500; 150: 500; 200: 500; 250: 500 (⏱ 1.25 secs.); 300: 450; 350: 400; 400: 350; 450: 300; 500: 250; 550: 200; 600: 150; 650: 100 (⏱ 3.03 secs.); 700: 100 (⏱ 11.01 secs.)	
		EBS-08L□-20-C			20	12	2.5	50 mm: 1,000 (⏱ 0.40 secs.); 100: 1,000; 150: 1,000; 200: 1,000; 250: 1,000 (⏱ 0.70 secs.); 300: 900; 350: 800; 400: 700; 450: 600; 500: 500; 550: 400; 600: 300; 650: 200 (⏱ 1.56 secs.); 700: 200 (⏱ 5.52 secs.)	

*1 The payload when wall mounted is the same as for horizontal installation.
*2 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.
*3 ⏱ shows the Positioning time. When a specified stroke is installed horizontally and operated at maximum speed and maximum acceleration/deceleration. Note that this is not the value at maximum payload.

Model No. Configuration

Slider Type　Low Dust Emission Specification

EBS - 05 L E - 02 0300 NNN - M 1 N N - C

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

❾ Low Dust Emission Specification

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

❷ Motor	
L	None

❸ Motor Mounting Direction	
E	Inline Mount
R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left-Side Reverse Parallel Mount

❹ Screw Lead	
02	2 mm
05	5 mm
06	6 mm
10	10 mm
12	12 mm
20	20 mm

❺ Stroke	
0050	50 mm
to	(every 50 mm)
1100	1100 mm

❻ Mounting Motor Specifications	
M	Refer to the list on the page at right
Y	
P	
F	

❼ Motor Capacity	
H	50 W
1	100 W
2	200 W

❽ Origin sensor	
N	None
C	Yes

❾ Limit sensor	
N	None
B	Yes

* This product is available only for the actuator (and motor mounting part) and does not include a motor. The user must prepare, mount, and adjust the motor and driver.

Screw lead/stroke　Compatibility table by body size

❶ Body Size	❹ Screw Lead	❺ Stroke
04	06	0050 to 0500 (50 mm to 500 mm)
	12	
05	02	0050 to 0800 (50 mm to 800 mm)
	05	
	10	
	20	
08	05	0050 to 1100 (50 mm to 1100 mm)
	10	
	20	

List of servo motors recommended for mounting

Code	Manufacturer	Series	50 W	100 W
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR053	HG-KR13
		MELSERVO J5	HK-KT053W	HK-KT13W
	Delta Electronics Co., Ltd.	ECMA-C	ECMA-C1040F	ECMA-C10401
	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A04005	R2□A04010
Y	Mitsubishi Electric Corporation	Σ-7	SGM7J-A5	SGM7J-01
		Σ-X	SGMXJ-A5	SGMXJ-01
	Keyence Corporation	SV	SV-□005	SV-□010
		SV2	SV2-□005	SV2-□010
P	Panasonic Corporation	MINAS A5	MSMD5A	MSMD01
		MINAS A6	MSMF5A	MSMF01
M	OMRON Corporation	G5	R88M-K05030	R88M-K10030
		1S	R88M-1M05030	R88M-1M10030
	Fuji Electric Corporation	ALPHA7 GYS	GYS500D7-□B2□	GYS101D7-□B2□
		ALPHA7 GYB	-	-
F	FANUC CORPORATION	βiS-B	A06B-0111-B1	A06B-0112-B1
P	Bosch Rexroth AG	MSM	MSM019A	MSM019B
M	Rockwell Automation, Inc.	TLP	TLP-A046-005-DKA□2	TLP-A046-010-DKA□2
	SIEMENS AG	1FK2 *1	1FK2102-0AG0	1FK2102-1AG0

Code	Manufacturer	Series	200 W
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR23
		MELSERVO J5	HK-KT23W
	Delta Electronics Co., Ltd.	ECMA-C	ECMA-C10602
	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A06020
Y	Mitsubishi Electric Corporation	Σ-7	SGM7J-02
		Σ-X	SGMXJ-02
	Keyence Corporation	SV	SV-□020
		SV2	SV2-□020
P	Panasonic Corporation	MINAS A5	MSMD02
		MINAS A6	MSMF02
	OMRON Corporation	G5	R88M-K20030
		1S	R88M-1M20030
M	Fuji Electric Corporation	ALPHA7 GYS	GYS201D7-□B2□
		ALPHA7 GYB	GYB201D7-□B2□
F	FANUC CORPORATION	βiS-B	A06B-2115-B1
P	Bosch Rexroth AG	MSM	MSM031B
M	Rockwell Automation, Inc.	TLP	TLP-A070-020-DKA□2
	SIEMENS AG	1FK2 *1	1FK2203-2AG0

* Contact CKD for information on mounting motors other than the above and products of other motor manufacturers.

*1 The servo motor is a regulated item under Paragraph 7(8) of Appended Table 1 of the Export Trade Control Order, and its specifications also meet the applicable criteria. (as of January 2021)

Electric actuator (motorless specifications) Slider Low dust specifications

EBS-04LE-C

Inline Motor Mount Type

● Servo Motor Capacity : 50 W

RoHS

Model No. Notation Method

EBS - 04 L E - 06 0300 NNN - M H N N - C

Low Dust Emission Specification

❶ Body Size

04	Body width 44 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount

❹ Screw Lead

06	6 mm
12	12 mm

❺ Stroke

0050 to 0500	50 mm (every 50 mm) 500 mm

❻ Mounting Motor Specifications

M Y P F	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity

H	50 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

Manufacturer	50 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

Specifications

Applicable Motor Capacity		50 W servo motor	
Drive Method		Ball screw ø10	
Stroke	mm	50 to 500	
Screw lead	mm	6	12
Max. Payload *1	kg Horizontal	20	12
	kg Vertical	5	2
Max. Speed	mm/s	300	600
Rated thrust *1	N	141	71
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Allowable load	N	1030	
Static Allowable Moment	N·m	MP: 62 MY: 62 MR: 92	
Operating Ambient Temperature, Humidity		0 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 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

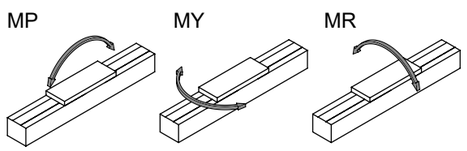
Screw Lead \ Stroke	50 to 500
6	300
12	600

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* Refer to P. 56 for details.

Moment direction



External Dimension Drawing

For actuator dimensions, please refer to P. 15.
For the dimensions of the fitting, please refer to P. 50.

Electric actuator (motorless specifications) Slider Low dust specifications

EBS-04L□-C

Reverse Parallel Motor Mount Type

● Servo Motor Capacity : 50 W

RoHS

Model No. Notation Method

EBS - 04 L R - 06 0300 NNN - M H N N - C

Low Dust Emission Specification

❶ Body Size

04	Body width 44 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left-Side Reverse Parallel Mount

❹ Screw Lead

06	6 mm
12	12 mm

❺ Stroke

0050 to 0500	50 mm (every 50 mm) 500 mm

❻ Mounting Motor Specifications

M Y P F	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity

H	50 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

Manufacturer	50 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

Specifications

Applicable Motor Capacity		50 W servo motor	
Drive Method		Ball screw ø10	
Stroke	mm	50 to 500	
Screw lead	mm	6	12
Max. Payload *1	kg Horizontal	20	12
	kg Vertical	5	2
Max. Speed	mm/s	300	600
Rated thrust *1	N	141	71
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Allowable load	N	1030	
Static Allowable Moment	N·m	MP : 62 MY : 62 MR : 92	
Operating Ambient Temperature, Humidity		0 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 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

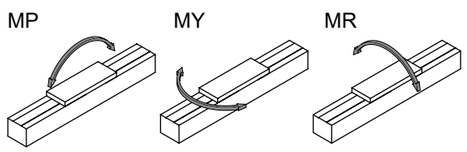
Screw Lead \ Stroke	50 to 600
6	300
12	600

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

Moment direction



External Dimension Drawing

Refer to P. 17 to 19 for actuator dimensions.
For the dimensions of the fitting, please refer to P. 50.

Electric actuator (motorless specifications) Slider Type Low dust specifications

EBS-05LE-C

Inline Motor Mount Type

● Servo Motor Capacity : 100 W

RoHS

Model No. Notation Method

EBS - 05 L E - 02 0300 NNN - M 1 N N - C

Low Dust Emission Specification

❶ Body Size

05	Body width 54 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount

❹ Screw Lead

02	2 mm
05	5 mm
10	10 mm
20	20 mm

❺ Stroke

0050 to 0800	50 mm (every 50 mm) 800 mm

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	
F	

❼ Motor Capacity

1	100 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

Manufacturer	100 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

Specifications

Applicable Motor Capacity		100 W Servo Motor			
Drive Method		Ball screw ø12			
Stroke	mm	50 to 800			
Screw lead	mm	2	5	10	20
Max. Payload *1	kg Horizontal	30	30	15	10
	kg Vertical	10	10	5	2.5
Max. Speed	mm/s	100	250	500	1,000
Rated thrust *1	N	854	341	170	85
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Allowable load	N	1168			
Static Allowable Moment	N·m	MP : 103 MY : 103 MR : 144			
Operating Ambient Temperature, Humidity		0 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 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

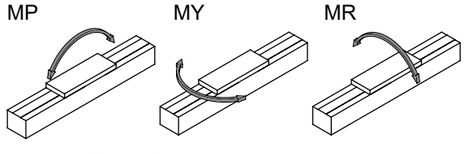
Screw Lead \ Stroke	50 to 600	650	700	750	800
2	100	90	80	70	60
5	250	225	200	175	150
10	500	450	400	350	300
20	1,000	900	800	700	600

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

Moment direction



External Dimension Drawing

For actuator dimensions, please refer to P. 21.
For the dimensions of the fitting, please refer to P. 50.

Electric actuator (motorless specifications) Slider Type Low dust specifications

EBS-05L□-C

Reverse Parallel Motor Mount Type

● Servo Motor Capacity : 100 W

RoHS

Model No. Notation Method

EBS - 05 L R - 02 0300 NNN - M 1 N N - C

Low Dust Emission Specification

❶ Body Size

05	Body width 54 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left-Side Reverse Parallel Mount

❹ Screw Lead

02	2 mm
05	5 mm
10	10 mm
20	20 mm

❺ Stroke

0050 to 0800	50 mm (every 50 mm) 800 mm

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	
F	

❼ Motor Capacity

1	100 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

Manufacturer	100 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

Specifications

Applicable Motor Capacity		100 W Servo Motor			
Drive Method		Ball screw ø12			
Stroke	mm	50 to 800			
Screw Lead		2	5	10	20
Max. Payload	kg Horizontal	30	30	15	10
	kg Vertical	10	10	5	2.5
Max. Speed	mm/s	100	250	500	1,000
Rated thrust *1	N	854	341	170	85
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Allowable load	N	1168			
Static Allowable Moment	N·m	MP : 103 MY : 103 MR : 144			
Operating Ambient Temperature, Humidity		0 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 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

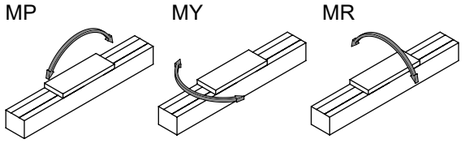
Lead \ Stroke	50 to 600	650	700	750	800
2	100	90	80	70	60
5	250	225	200	175	150
10	500	450	400	350	300
20	1,000	900	800	700	600

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

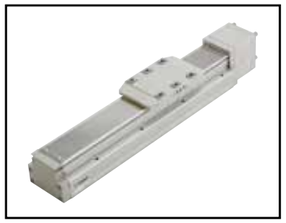
* For details, see P. 56.

Moment direction



External Dimension Drawing

Refer to P. 23 to 25 for actuator dimensions.
For the dimensions of the fitting, please refer to P. 50.



Electric actuator (motorless specifications) Slider Type Low dust specifications

EBS-08LE-C

Inline Motor Mount Type

● Servo Motor Capacity : 200 W

RoHS

Model No. Notation Method

EBS - 08 L E - 05 0300 NNN - M 2 N N - C

Low Dust Emission Specification

❶ Body Size

08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺ Stroke

0050 to 1100	50 mm (every 50 mm) 1100 mm

❻ Mounting Motor Specifications

M Y P F	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity

2	200 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

* Refer to P. 13 for motor model No.

Specifications

Applicable Motor Capacity		200 W Servo Motor		
Drive Method		Ball screw ø16		
Stroke	mm	50 to 1100		
Screw lead	mm	5	10	20
Max. Payload *1	kg Horizontal	50	30	12
	kg Vertical	15	8	2.5
Max. Speed	mm/s	250	500	1,000
Rated thrust *1	N	683	341	174
Repeatability	mm	±0.01		
Lost Motion	mm	0.1 or less		
Allowable load	N	2781		
Static Allowable Moment	N·m	MP : 203 MY : 203 MR : 336		
Operating Ambient Temperature, Humidity		0 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 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

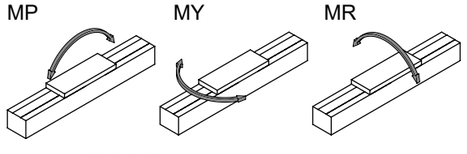
Screw Lead \ Stroke	50 to 700	750	800	850	900	950	1,000	1050	1100
5	250	225	200	175	150	125	100	75	50
10	500	450	400	350	300	250	200	150	100
20	1,000	900	800	700	600	500	400	300	200

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

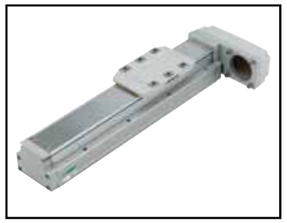
* For details, see P. 56.

Moment direction



External Dimension Drawing

For actuator dimensions, please refer to P. 27.
For the dimensions of the fitting, please refer to P. 50.



Electric actuator (motorless specifications) Slider Type Low dust specifications

EBS-08L□-C

Reverse Parallel Motor Mount Type

● Servo Motor Capacity : 200 W

RoHS

Model No. Notation Method

EBS - 08 L E - 05 0300 NNN - M 2 N N - C

Low Dust Emission Specification

❶ Body Size

08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left-Side Reverse Parallel Mount

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺ Stroke

0050 to 1100	50 mm (every 50 mm) 1100 mm

❻ Mounting Motor Specifications

M Y P F	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity

2	200 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

* Refer to P. 13 for motor model No.

Specifications

Applicable Motor Capacity		200 W Servo Motor		
Drive Method		Ball screw ø16		
Stroke	mm	50 to 1100		
Screw Lead		5	10	20
Max. Payload	kg Horizontal	50	30	12
	kg Vertical	15	8	2.5
Max. Speed	mm/s	250	500	1,000
Rated thrust	N	683	341	174
Repeatability	mm	±0.01		
Lost Motion	mm	0.1 or less		
Allowable load	N	2781		
Static Allowable Moment	N·m	MP: 203 MY: 203 MR: 336		
Operating Ambient Temperature, Humidity		0 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 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

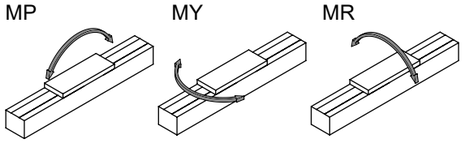
Lead \ Stroke	50 to 700	750	800	850	900	950	1,000	1050	1100
5	250	225	200	175	150	125	100	75	50
10	500	450	400	350	300	250	200	150	100
20	1,000	900	800	700	600	500	400	300	200

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

Moment direction

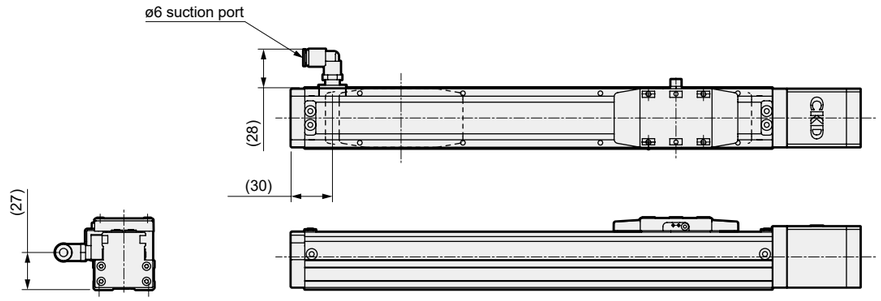


External Dimension Drawing

Refer to P. 29 to 31 for actuator dimensions.
For the dimensions of the fitting, please refer to P. 50.

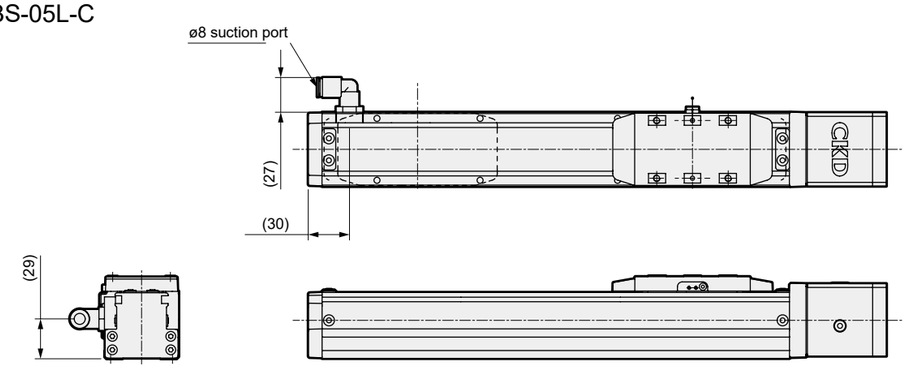
External Dimension Drawing

● EBS-04L-C



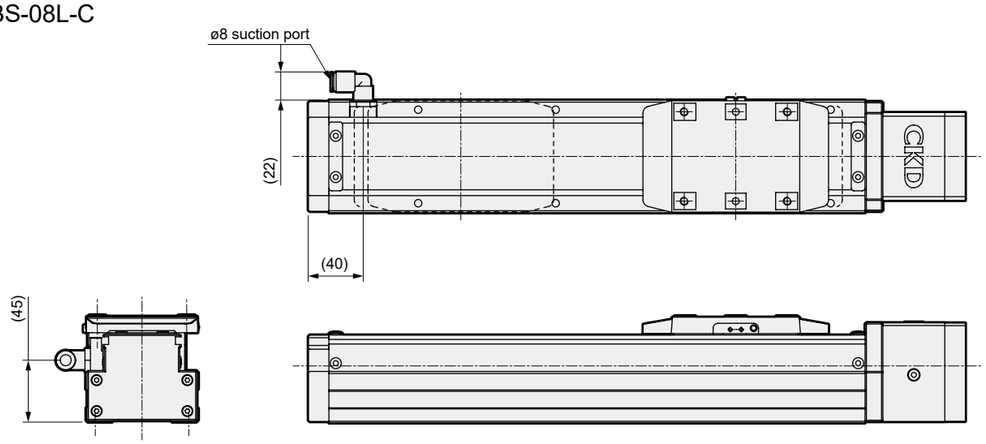
* Refer to P. 15, 17, 19 for actuator dimensions.
* The fitting is included.

● EBS-05L-C



* Refer to P. 21, 23, 25 for actuator dimensions.
* The fitting is included.

● EBS-08L-C

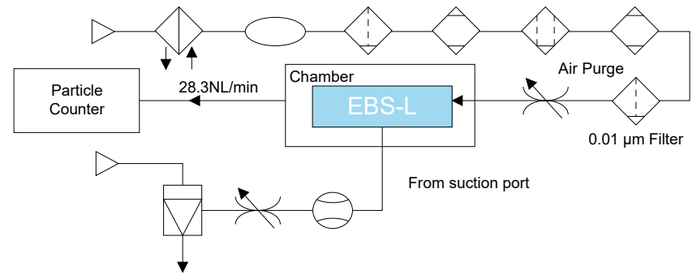


* Refer to P. 27, 29, 31 for actuator dimensions.
* The fitting is included.

* Regardless of the motor mounting direction, the suction port fitting is mounted in the same position.
* Use with a load factor of 30.0 NL/min or less.

Dust Generation Characteristics Reference Data

Test Circuit



Measurement Conditions

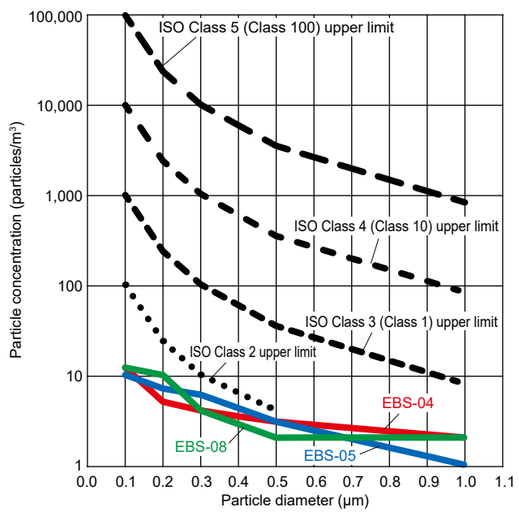
Item		Content
Test Sample	Model No.	Operating speed 100/50 0 mm/sec for EBS-04L□-120400
		Operating speed 100/50 0 mm/sec for EBS-05L□-200400
		Operating speed 100/50 0 mm/sec for EBS-08L□-200400
	Acceleration/deceleration time	0.4 sec
	Air intake volume	30. 0 N L/min for EBS-04L□-120400
		30. 0 N L/min for EBS-05L□-200400
		30. 0 N L/min for EBS-08L-200400
Chamber	Internal Volume	28.3 NL
Particle Counter	Name	Laser dust monitor
	Minimum measurable particle size	0.1 µm
	Suction Flow Rate	28.3 NL/min
Setting conditions	Sampling	10 min
	Interval	40 min
	Measurement time	50 min

Measurement Method

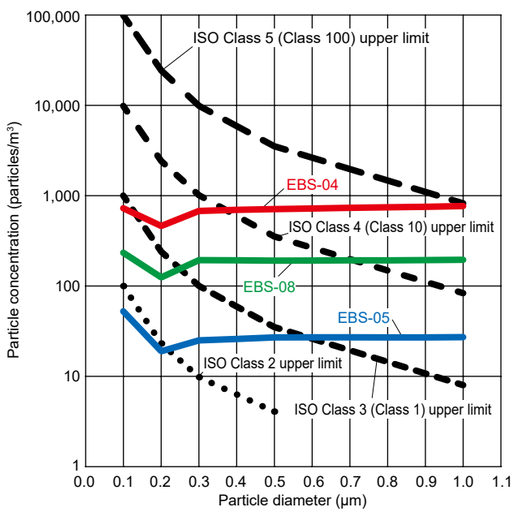
① Set a test sample in the acrylic resin chamber.
② Supply clean air at the same flow rate as the particle counter intake rate (28.3 NL/min).
③ Place the chamber in an ISO class 4 (class 10) clean bench.
④ Activate the test sample and measure changes in particle concentration over time during the specified measurement time.
⑤ Refer to the left for the operation speed of the test sample.

Dust Generation Data

● Operating speed : 100 mm/sec



● operating speed : 500 mm/sec



Model Selection/Technical Data

CONTENTS

Model Selection 54
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Origin sensor, limit sensor 64
Maintenance Parts 65

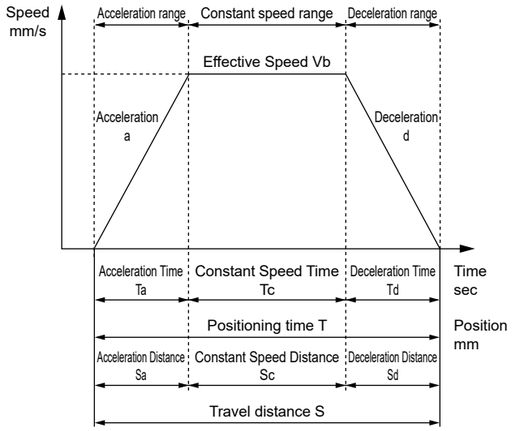
Model Selection

STEP1 Confirmation of Payload

Load capacity varies with mounting orientation and screw lead. Refer to System Table (P.10, P.11, P.40, P.41), the specification table for each model and the thrust table by speed setting to select the size and screw lead.

STEP2 Confirmation of Positioning Time

Calculate the positioning time for the selected product according to the example below and check if it meets the required tact time.
Select the speed and acceleration/deceleration from the specification table for each model and the motor selected by the customer.



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s²	
	Set Deceleration	d	mm/s²	
	Travel Distance	S	mm	
Calculated Value	Reached Speed	Vmax	mm/s	$= \{2 \times a \times d \times S / (a + d)\}^{1/2}$
	Effective Speed	Vb	mm/s	The 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 exceeding the specifications.
* Depending on the acceleration/deceleration and stroke, a trapezoidal velocity waveform may not be formed (the set speed may not be reached).
  In that case, select the smaller of the set speed (V) and the reached speed (Vmax) as the effective speed (Vb).
* Use at acceleration and deceleration of 1 G or less for horizontal use and 0.5 G or less for vertical use.
* Settling time varies depending on the usage conditions, but it may take about 0.2 s.
* 1 G ≈ 9.8 m/s².

STEP3 Confirmation of Allowable Overhang Length

Make sure that the load overhang length during operation is within the allowable range (P. 56 to 61).

For selection details, refer to the "Model Selection System" on the CKD website or contact your CKD Sales representative.

Introduction to the Model Selection System on our website

[For confirmation via PC]

(https://www.ckd.co.jp/kiki/en/selection_system/)

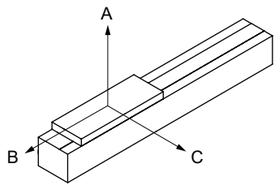
[For confirmation via iPad or smartphone]

* May not display correctly depending on the smartphone's usage environment.

MEMO

Allowable Overhang Length (EBS Series)

[Horizontal Installation]



[Allowable Overhang Length]

● EBS-04

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	6	5	800	160	225
			10	570	70	100
			20	250	30	40
		12	4	800	180	210
			8	380	80	100
			12	230	50	60
	0.5	6	5	800	160	220
			10	400	70	100
			15	240	40	60
		12	4	580	180	200
			8	260	80	90
			12	150	50	50
	1	6	5	520	160	210
			10	240	70	90
			15	140	40	50
		12	4	350	180	180
			8	150	80	80
			12	80	50	40

* The value when the actuator's running life is 5,000 km.
  (Screw lead : 2 mm is the value when the operating life is 1,000 km.)
* The overhang direction is a load in a single direction only.
* Dimensions A, B, and C are from the center of the table top surface.
* Stroke: 350 mm, Motor rotation speed : The value at 3,000 rpm.
  However, for EBS-12, the value is at 1,800 rpm for 0.3 G acceleration/ deceleration, and 2,400 rpm for 0.5 G.

● EBS-05

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	2	10	1,000	160	225
			20	1,000	75	105
			30	815	45	65
		5	10	1,000	125	170
			20	500	55	75
			30	305	35	45
		10	5	1,000	235	285
			10	580	110	135
			15	360	70	80
		20	2.5	1,000	400	385
			5	615	195	180
			10	265	90	75
	0.5	2	10	1,000	160	225
			20	890	75	105
			30	570	45	65
		5	10	765	125	165
			20	345	55	75
			30	205	35	45
		10	5	875	235	280
			10	405	110	125
			15	245	70	75
		20	2.5	925	400	365
			5	425	195	165
			10	180	90	70
	1	2	10	1,000	160	220
			20	545	75	100
			30	340	45	60
		5	10	465	125	160
			20	200	55	70
			30	115	35	40
		10	5	535	235	255
			10	240	110	115
			15	140	70	65
		20	2.5	565	400	315
			5	250	190	140
			10	95	85	55

Allowable Overhang Length (EBS Series)

● EBS-08

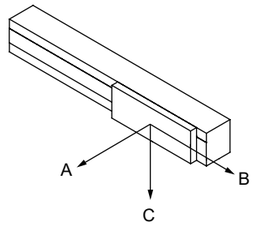
Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	5	10	1,000	400	620
			25	1,000	150	235
			50	560	65	105
		10	10	1,000	360	480
			20	840	170	230
			30	530	110	140
		20	2.5	1,000	1,000	1,000
			5	1,000	610	670
			10	950	295	315
	0.5	5	10	1,000	400	620
			25	920	150	235
			50	420	65	105
		10	10	1,000	360	480
			20	625	170	225
			30	390	110	140
		20	2.5	1,000	1,000	1,000
			5	1,000	610	620
			10	670	295	290
	1	5	10	1,000	400	600
			25	565	150	220
			50	250	65	95
		10	10	820	360	435
			20	380	170	200
			30	230	110	120
		20	2.5	1,000	1,000	1,000
			5	870	610	520
			10	400	295	240

● EBS-12

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	5	30	1800	445	730
			60	1800	215	350
			100	1050	120	200
		10	30	1800	400	580
			50	1200	230	335
			80	730	140	195
		20	10	1800	1,000	1150
			20	1600	505	560
			40	775	240	260
		32	10	1800	950	1100
			20	1600	480	540
			30	1,000	315	355
	0.5	5	30	1800	445	720
			60	1300	215	345
			100	755	120	195
		10	30	1450	400	555
			50	865	230	320
			80	510	140	185
		20	10	1800	1,000	1050
			20	1150	505	520
			40	540	240	240
		32	10	1550	800	750
			20	760	400	355
			30	480	260	220
	1	5	30	1650	445	690
			60	800	215	330
			100	460	120	185
		10	30	930	400	500
			50	530	230	285
			80	305	140	160
		20	10	1500	1,000	915
			20	715	500	435
			40	325	240	195
		32	10	725	700	455
			20	325	335	205
			30	195	215	120

Allowable Overhang Length (EBS Series)

[When Wall-Mounted]



[Allowable Overhang Length]

● EBS-04

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	6	5	180	130	800
			10	65	40	470
			15	25	20	240
		12	4	180	150	730
			8	60	50	280
			12	25	20	130
	0.5	6	5	180	130	800
			10	60	40	330
			15	25	20	170
		12	4	170	140	520
			8	60	50	200
			12	25	20	90
	1	6	5	170	130	490
			10	60	40	200
			15	25	20	100
		12	4	150	140	320
			8	50	50	120
			12	20	20	50

* The value when the actuator's running life is 5,000 km.
(Screw Lead: 2 mm is the value for a travel life of 1,000 km.)
* The overhang direction is a load in a single direction only.
* Dimensions A, B, and C are from the center of the table top surface.
* Stroke: 350 mm, Motor rotation speed: The value at 3,000 rpm.
However, for EBS-12, the value is at 1,800 rpm for 0.3 G acceleration/ deceleration, and 2,400 rpm for 0.5 G.

● EBS-05

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	2	10	175	125	1,000
			20	55	40	1,000
			30	15	10	540
		5	5	310	230	1,000
			10	125	90	965
			20	30	20	335
		10	5	245	200	1,000
			10	90	75	460
			15	40	30	230
		20	2.5	350	355	1,000
			5	145	145	500
			10	45	45	150
	0.5	2	10	175	125	1,000
			20	55	40	775
			30	15	10	385
		5	5	310	230	1,000
			10	120	90	685
			20	30	20	240
		10	5	240	200	805
			10	90	75	330
			15	40	30	160
		20	2.5	330	355	855
			5	135	145	355
			10	40	40	105
	1	2	10	175	125	1,000
			20	55	40	480
			30	15	10	235
		5	5	300	230	955
			10	120	90	425
			20	30	20	145
		10	5	220	200	500
			10	80	75	200
			15	35	30	95
		20	2.5	290	355	530
			5	115	145	220
			10	30	40	60

Allowable Overhang Length (EBS Series)

● EBS-08

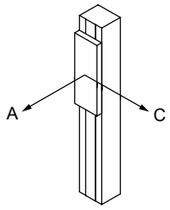
Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	5	10	580	370	1,000
			25	185	120	1,000
			50	55	35	465
		10	10	450	325	1,000
			20	190	135	795
			30	100	75	455
		20	2.5	1,000	1,000	1,000
			5	630	565	1,000
			10	280	250	850
	0.5	5	10	580	370	1,000
			25	185	120	855
			50	55	35	330
		10	10	445	325	1,000
			20	185	135	565
			30	100	75	325
		20	2.5	1,000	1,000	1,000
			5	585	565	1,000
			10	260	250	605
	1	5	10	555	370	1,000
			25	180	120	530
			50	50	35	200
		10	10	405	325	800
			20	165	135	350
			30	90	70	195
		20	2.5	1,000	1,000	1,000
			5	500	560	845
			10	220	250	370

● EBS-12

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	5	30	685	415	1800
			60	300	185	1750
			100	150	90	960
		10	30	540	365	1800
			50	290	200	1100
			80	155	105	625
		20	10	1100	980	1800
			20	525	460	1500
			40	225	200	670
		32	10	1085	925	1800
			20	530	425	1455
			30	325	275	950
	0.5	5	30	675	415	1800
			60	300	185	1250
			100	145	90	685
		10	30	515	365	1400
			50	280	200	805
			80	145	105	445
		20	10	1,000	980	1800
			20	490	460	1100
			40	210	195	480
		32	10	700	740	1520
			20	325	350	690
			30	190	210	415
	1	5	30	645	415	1600
			60	285	185	780
			100	140	90	425
		10	30	465	365	900
			50	250	200	500
			80	130	105	270
		20	10	895	980	1450
			20	415	460	685
			40	175	195	295
		32	10	435	630	695
			20	185	270	295
			30	100	150	165

Allowable Overhang Length (EBS Series)

[Vertical Installation]



[Allowable Overhang Length]

● EBS-04

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.3	6	1	800	780
			3	240	230
			5	120	120
		12	1	690	630
			1.5	440	410
			2	320	300
	0.5	6	1	800	780
			3	240	230
			5	120	120
		12	1	680	620
			1.5	400	440
			2	320	290

* The value when the actuator's running life is 5,000 km.
  (Screw Lead: 2 mm is the value for a travel life of 1,000 km.)
* The overhang direction is a load in a single direction only.
* Dimensions A, B, and C are from the center of the table top surface.
* Stroke: 350 mm, Motor rotation speed: The value at 3,000 rpm. However, for EBS-12, the value is at 1,800 rpm for 0.3 G acceleration/deceleration, and 2,400 rpm for 0.5 G.

● EBS-05

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.3	2	2.5	640	640
			5	295	295
			10	120	120
		5	2.5	500	490
			5	225	225
			10	85	85
		10	1	1,000	1,000
			2.5	435	410
			5	195	180
		20	0.5	1,000	1,000
			1	910	760
			2.5	335	280
	0.5	2	2.5	640	640
			5	295	295
			10	120	120
		5	2.5	500	500
			5	225	225
			10	85	85
		10	1	1,000	1,000
			2.5	430	410
			5	190	180
		20	0.5	1,000	1,000
			1	870	740
			2.5	315	275

Allowable Overhang Length (EBS Series)

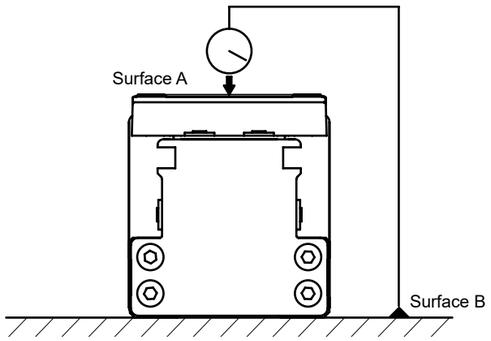
● EBS-08

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.3	5	5	775	760
			10	360	350
			15	220	220
		10	3	1,000	1,000
			5	680	630
			8	405	375
		20	0.5	1,000	1,000
			1	1,000	1,000
			2.5	1,000	930
	0.5	5	5	775	760
			10	360	350
			15	220	220
		10	3	1,000	1,000
			5	670	630
			8	400	375
		20	0.5	1,000	1,000
			1	1,000	1,000
			2.5	1,000	890

● EBS-12

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.3	5	10	1300	1300
			20	635	625
			30	405	400
		10	10	1150	1100
			15	765	715
			20	560	525
		20	5	1800	1500
			7	1300	1100
			10	910	765
		32	3	1800	1750
			5	1750	1515
			8	1115	950
	0.5	5	10	1300	1250
			20	635	625
			30	405	400
		10	10	1150	1050
			15	750	710
			20	550	520
		20	5	1750	1500
			7	1200	1050
			10	870	740
		32	3	1800	1775
			5	1350	1075
			8	805	680
	1	5	10	1300	1250
			20	630	615
			30	400	395
		10	10	1100	1,000
			15	725	685
			20	530	500
		20	5	1600	1352
			7	1100	995
			10	790	685
		32	3	1550	1250
			5	920	750
			8	555	460

Slider Parallelism (EBS Series) *Reference Value

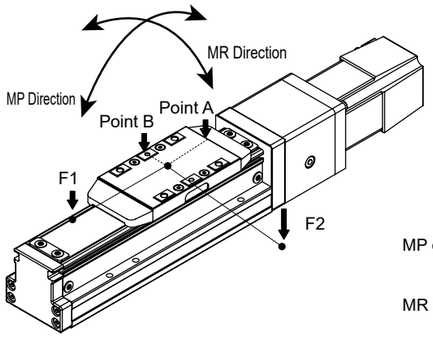


(mm)

	Parallelism
	Surface A with respect to Surface B
EBS-04 Series	0.03
EBS-05 Series	
EBS-08 Series	
EBS-12 Series	

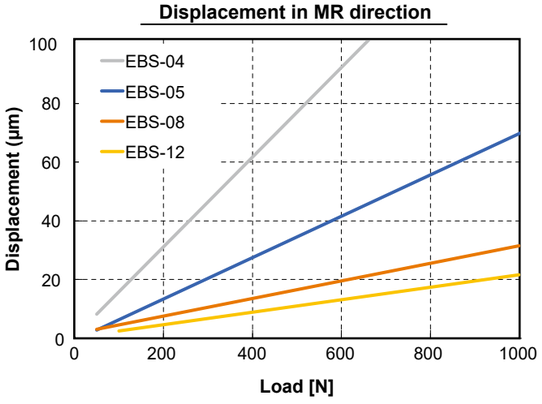
* This is the parallelism when the product is fixed to a surface plate.

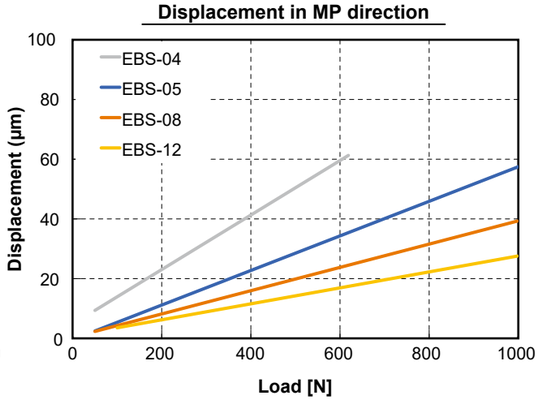
Table Displacement (EBS Series) *Reference Value



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

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





List of Accessories

Motor Mounting Bolts (Common for all motor mounting directions)

Model Number	Mounting Motor Specification	Motor Capacity	Size	Quantity
EBS-04	M	50 W	M4	4
	Y		M4	4
	P		M3	4
	F		M4	4
EBS-05	M	100 W	M4	4
	Y		M4	4
	P		M3	4
	F		M4	4
EBS-08	M	200 W	M5	4
	Y		M5	4
	P		M4	4
	F		M5	4
EBS-12	M	400 W	M5	4
	Y		M5	4
	P		M4	4

Coupling

Model Number	Part Name	Quantity
LE (Motor mounting direction: straight)	Coupling (Shipped Included)	1 pc

Timing belt, pulley (motor side)

Model Number	Shipment Form	Quantity
L☐ (Motor fold-back mounting)	Shipped included *1	1 pc each

*1 The pulley on the main body side is pre-assembled.

Sensor mounting plate

Model Number	Shipment Form	Quantity
When sensor "Yes" is selected	Shipped included *1	3 pcs

*1 Screws for the mounting plate are also attached.
The sensor dog is assembled on all products.

Home Sensor, Limit Sensor

Model Number	Shipment Form	Quantity
When sensor "Yes" is selected	Shipped included *2	3 pcs. *3

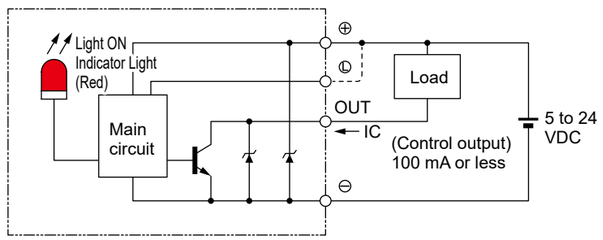
*2 Screws for sensor mounting are also attached.
*3 If "None" is selected for either the home sensor or the limit sensor, the other will also be "None."

Home Sensor, Limit Sensor

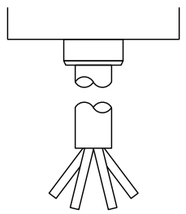
[Specifications]

Item		Specifications
Manufacturer	Manufacturer name	OMRON
	Model	EE-SX674
Hysteresis		0.025 mm or less
Light source (peak emission wavelength)		GaAs infrared emitting diode (940 nm)
Indicator Light		Lights up when light is received (red)
Power Supply Voltage		5 to 24 VDC ±10% Ripple (p-p) 10% or less
Current Consumption		12 mA or less (when L terminal is open)
Control output	Type	NPN type (NPN open collector)
	Output	5 to 24 VDC 100 mA or less
	Off-state current	0.5 mA or less
	Residual voltage	0.8 V or less (at 100 mA load current)
		0.4 V or less (at 40 mA load current)
Ambient illuminance		Illuminance at Light-Receiving Surface: Fluorescent Lamp: 1,000 lx or less
Ambient Temperature Range	Operating	-25 to +55°C, however, no freezing or condensation
	Storage	-30 to +80°C, however, no freezing or condensation
Ambient humidity range	Operating	5 to 85%RH, however, no freezing or condensation
	Storage	5 to 95%RH, however, no freezing or condensation
Enclosure		IP50 IEC60529 standard
Cord length		2 m (Connector with cord (EE-1006 2 M))

Output circuit



Wiring Diagram



Terminal arrangement

Brown	5 to 24 VDC
Pink	L
Blue	0 V
Black	OUTPUT

Maintenance Parts

Maintenance parts (coupling)

Model Number	Applicable Models	Bore Diameter
EBS-05-COUPLING	EBS-04, EBS-05	ø8
EBS-08-COUPLING-M	EBS-08 (Mounting motor specification: M, Y, F)	ø14
EBS-08-COUPLING-P	EBS-08 (Mounting motor specification: P)	ø11
EBS-12-COUPLING	EBS-12 (Mounting motor specification: M, Y, P)	ø14

Maintenance parts (timing belt, pulley)

Model Number	Applicable Models	Part
EBS-04-BELT-KIT	EBS-04 LR/LD/LL	Timing belt, pulley (motor side) (1 each)
EBS-05-BELT-KIT	EBS-05 LR/LD/LL	
EBS-08-BELT-KIT-M	EBS-08 LR/LD/LL (Mounting motor specification: M, Y, F)	
EBS-08-BELT-KIT-P	EBS-08 LR/LD/LL (Mounting motor specification: P)	
EBS-12-BELT-KIT-LR	EBS-12 LR/LL	
EBS-12-BELT-KIT-LD	EBS-12 LD	

Maintenance parts (origin sensor, limit sensor)

Model Number	Applicable Models	Part
EBS-04-SENSOR-N-KIT	EBS-04	Body, cable, mounting plate (1 piece each) *1
EBS-08-SENSOR-N-KIT	EBS-05, EBS-08	Body, cable, mounting plate (1 piece each) *1
EBS-12-SENSOR-N-KIT	EBS-12	Body, cable, mounting plate (1 piece each) *1

*1 Screws for mounting plate and sensor are also attached.

Maintenance parts (grease nozzle)

Model Number	Applicable Models
EBS-NOZZLE	EBS-04, EBS-05, EBS-08

Maintenance parts (steel belt)

Model Number	Applicable Models
EBS-04-STEELBELT (4-digit stroke code)	EBS-04 (corresponding stroke product)
EBS-05-STEELBELT (4-digit stroke code)	EBS-05 (corresponding stroke product)
EBS-08-STEELBELT (4-digit stroke code)	EBS-08 (corresponding stroke product)
EBS-12-STEELBELT (4-digit stroke code)	EBS-12 (corresponding stroke product)

To Use This Product Safely

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

Common Precautions: Electric Actuator EBS-LE Series

During Design and Selection

Danger

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

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

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

Warning

■ Use within the product's specified operating range.

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

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

■ Install indoors with low humidity.
In places exposed to rain or high humidity (80% humidity or more, with condensation), there is a risk of electric leakage or fire. Oil drops and oil mist are also strictly prohibited.
Use in such environments can cause damage and malfunction.

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

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

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

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

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

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

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

■ Take the operational status into consideration if the machine is reactivated after emergency or abnormal stops.
Design so that restarting does not cause harm to people or damage to the equipment.
Also, if it is necessary to reset the electric actuator to the starting position, design a safe control device.
Consider the possibility of failure of the installed motor.
Take measures to prevent injury to personnel or damage to equipment in the event of a power source failure.

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

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

■ Use and store in accordance with the working/storage temperatures and where there is no condensation.
(Storage temperature: -10 °C to 50 °C, Storage humidity : 35 % to 80 %, Operating temperature: 0 °C to 40 °C, Operating humidity : 35 % to 80 %) This can cause abnormal product stoppage or reduced service life. If heat accumulates, ventilate.

Caution

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

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

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

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

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

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

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

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

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

For notes on mounting, installation, adjustment, use, and maintenance,
CKD Components Product Site (https://www.ckd.co.jp/kiki/en/) → "Model No." → Instruction Manual.

EBS Model Selection Checklist → **CKD** (Contact)

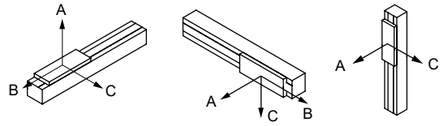
Please fill out this form and send it to your nearest sales office. We will respond with the model selection results.

MEMO

Customer :

Company		Department	
Name		E-mail	
TEL		FAX	

Selection Conditions :

Desired Model	EBS-	
Basic Specifications	Max. Stroke :	mm, Ball screw lead : mm
Operating Conditions	Moving stroke :	mm, travel time : s
	Set Speed :	mm/s
	Set acceleration/deceleration :	mm/s² (set acceleration/deceleration time : s)
	Repeatability : ±	mm
Load Conditions	Slider Type	
	Load weight: kg	
	Mounting Orientation: Horizontal / Wall-mounted / Vertical / Ceiling-mounted / Other 	
	Distance from slider center to load's center of gravity	
	Direction A : mm Direction B : mm Direction C : mm	
	Pressing load : None / Yes (N) During operation / When stopped Direction of force on slider center ( )	
Operating Environment	Ambient Temperature : °C, Ambient Humidity : %	
	Atmosphere :	
Motor Used	Manufacturer : , Model No. :	
	Motor capacity, size :	
Special Notes		

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending