

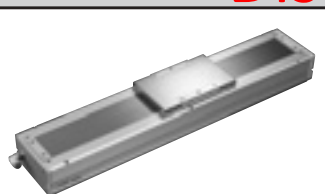
Discontinued some variations

Electric actuator Servo motor compatible motorless specifications
Slider (ball screw drive low dust specifications)

ECS Series

● Applicable motor size: 100W/200W/400W/750W servo motor

Sales of ECS-05 to ECS-12 will be terminated.



Electric Actuator Motorless General Catalog
Catalog No. CB-055A

Specifications

Item		ECS-05-E/R/D/L				ECS-06-E/R/D/L			
Applicable motor sizes		100 W servo motor							
Drive method		Ball screw ø12							
Ball screw accuracy grade		C7							
Stroke *1		50 to 800							
Screw lead		2	5	10		2	5	10	
Max.workload *2	Horizontal	10	10	5		30	30	15	
	Vertical	7	3	1.5		15	10	5	
Max. speed		100	250	500		100	250	500	
Rated thrust *2		825	330	165		854	341	170	
Repeatability		±0.01							
Lost motion		0.1 or less							
Dynamic allowable load		551				1209			
Static allowable moment		MP:20 MY:16 MR:19				MP:80 MY:70 MR:75			
Dynamic allowable moment		MP:2.8 MY:2.8 MR:6.8				MP:8.9 MY:8.9 MR:24.8			
Item		ECS-10-E/B/R/D/L				ECS-12-E/B/R/D/L			
Applicable motor sizes		100 W servo motor							
Drive method		Ball screw ø16							
Ball screw accuracy grade		C7							
Stroke *1		50 to 1050							
Screw lead		5	10	16	20	5	10	16	20
Max.workload *2	Horizontal	50	30	22	18	50	30	22	18
	Vertical	12	8	5	3	12	8	5	3
Max. speed		250	500	800	1000	250	500	800	1000
Rated thrust *2		341	170	106	85	341	170	106	85
Repeatability		±0.01							
Lost motion		0.1 or less							
Dynamic allowable load		2651				1660			
Static allowable moment		MP:110 MY:110 MR:120				MP:150 MY:150 MR:130			
Dynamic allowable moment		MP:24.1 MY:24.1 MR:24.8				MP:42.3 MY:42.3 MR:53.1			
Item		ECS-14-E/B/R/D/L				ECS-17-E/B/R/D/L			
Applicable motor sizes		200 W/400W servo motor				400 W/750W servo motor			
Drive method		Ball screw ø16				Ball screw ø20			
Ball screw accuracy grade		C7							
Stroke *1		50 to 1050				50 to 1250			
Screw lead		5	10	16	20	5	10	20	40
Max.workload *2	Horizontal	200 W	95	75	44	35	-	-	-
		400 W	110	88	48	40	120	110	75
		750 W	-	-	-	-	120	120	83
	Vertical	200 W	27	18	7	6	-	-	-
		400 W	33	22	10	8	40	30	14
		750 W	-	-	-	-	50	40	25
Max. speed		250	500	800	1000	250	500	1000	2000
Rated thrust *2	N	200 W	683	341	213	174	-	-	-
		400 W	1388	694	433	347	1388	694	347
		750 W	-	-	-	-	2100	1050	525
Repeatability		±0.01							
Lost motion		0.1 or less							
Dynamic allowable load		6567				10102			
Static allowable moment		MP:552 MY:551 MR:485				MP:1034 MY:1032 MR:908			
Dynamic allowable moment		MP:262.7 MY:262.7 MR:261.0				MP:424.3 MY:424.3 MR:520.3			
Item		ECS-22-E/B/R/D/L							
Applicable motor sizes		750 W servo motor							
Drive method		Ball screw ø25		ø20					
Ball screw accuracy grade		C7							
Stroke *1		50 to 1500							
Screw lead		5	10	25	40				
Max.workload *2	Horizontal	150	150	120	60				
	Vertical	55	45	20	10				
Max. speed		250	500	1250	2000				
Rated thrust *2		2100	1050	420	260				
Repeatability		±0.01							
Lost motion		0.1 or less							
Dynamic allowable load		14174							
Static allowable moment		MP:2052 MY:2052 MR:1810							
Dynamic allowable moment		MP:1098.5 MY:1098.5 MR:999.3							

Compatibility table by variation

	ECS
P4	●

●: Applicable models ○: Semi-applicable models
▲: Contact CKD for details. □: Not applicable

*1 Stroke is 50 pitch.
*2 Rated thrust and maximum load capacity are guideline values assuming that the motor mounted will output the rated torque.
*3 When wall-mounted, the load capacity is the same as when installed horizontally.

Compatibility table by variation

	ECS
P4	●

●: Applicable models ○: Semi-applicable models
▲: Contact CKD for details. □: Not applicable

*1 Stroke is 50 pitch.

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

*3 When wall-mounted, the load capacity is the same as when installed horizontally.

Discontinued some variations

Sales of ECS-05 to ECS-12 will be terminated.

ECS Series

How to order

How to order

ECS-06-05040-EM1NCBNP-M-U-P4

Model No.

A Body size

B Screw lead

C Stroke

D Motor mounting direction

E Mounted motor specification

F Motor size

G Brake

H Origin sensor

I Limit sensor

J Grease nipple

K Positioning pin hole

L Magnet slider method

M Anti-rust treatment

[Example of model No.]

ECS-06-05040-EM1NCBNP-M-U-P4

A Body size: body width 65mm

B Screw lead: 5 mm

C Stroke: 100 mm

D Motor mounting direction: Straight

E Mounted motor specification: Mitsubishi Electric Corporation

F Motor size: 100 W

G Brake: None

H Origin sensor: Outside motor side

I Limit sensor: Outside

J Grease nipple: None (Body mounting direction: Standard)

K Positioning pin hole: Yes

L Magnet slider method: Yes

M Anti-rust treatment: with

*1 Select "Yes" only when the motor mounting direction is "built-in mounting". For other mounting directions, select "None".

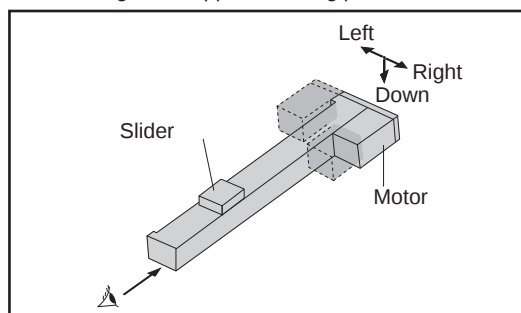
*2 Origin sensor and limit sensor are a set. As it is both-or-nothing, when either is "None", select "None" for both. The sensor dog is assembled at shipment regardless of the presence of the sensor.

*3 Select "Adopted" for ECS-05/06. Other sizes use the standard.

E Mounted motor specification

Manufacturer	100 W	200 W	400 W	750 W
Mitsubishi Electric Corporation	M	M	M	M
Delta Electronics Co., Ltd.	M	M	M	M
Sanyo Denki Co., Ltd.	M	M	M	-
YASKAWA Electric Corporation	Y	Y	Y	Y
Keyence Corporation	Y	Y	Y	Y
Panasonic Corporation	P	P	P	P
OMRON Corporation	M	P	P	P
Fuji Electric Co., Ltd.	M	M	M	M
FANUC CORPORATION	F	F	F	F
Bosch Rexroth Corporation	P	P	P	P
Rockwell Automation, Inc.	M	M	M	M
SIEMENS AG	M	M	M	M

Motor and grease nipple mounting position



Refer to ECS Series servo motor compatibility in "Electric Actuator Motorless (CB-055A)" for the motor list, dimensions, and model selection recommended for mounting.

Code	Description
A Body size	
05	Body width 51mm
06	Body width 65mm
10	Body width 102mm
12	Body width 102mm
14	Body width 135mm
17	Body width 170mm
22	Body width 220mm

B Screw lead	
02	2 mm
05	5 mm
10	10 mm
16	16 mm
20	20 mm
25	25 mm
40	40 mm

C Stroke	
005 to 150	50 mm (In 50 mm increments) 1500 mm

D Motor mounting direction	
E	Straight mounting
B	Built-in mounting
R	Right mounting
D	Bottom mounting
L	Left mounting

E Mounted motor specification	
M	Select the mounted motor specification from the table below.
Y	
P	
F	

F Motor size	
1	100 W (body size: 05, 06, 10, 12)
2	200 W (body size: 14)
4	400 W (body size: 14, 17)
8	750 W (body size: 17, 22)

G Brake *1	
N	None
B	Yes

H Origin sensor (1 pc) *2	
N	None
A	Inside motor side
B	Inside opposite motor side
C	Outside motor side (Included at shipment)
D	Outside motor opposite side (Included at shipment)

I Limit sensor (2 pcs) *2	
N	None
A	Inside
B	Outside (Included at shipment)

J Grease nipple	
N	None (Body mounting direction: Standard)
R	Right
L	Counterclockwise

K Positioning pin hole	
N	None
P	Yes

L Magnet slider method *3	
Blank	Standard
M	Adopted

M Anti-rust treatment	
N	None
U	Yes

P4
Series

Pneumatic actuator
Pneumatic cylinders
Hand/Chuck
Related products
Cylinder Switch

Vacuum components
Pneumatic valves
Clean air components
Speed controller

Pneumatic auxiliary components
Fitting
Auxiliary valve
Silencer
Tube

Gas generator
Fluid control components
Electric actuator
Motor specification

Motorless specifications

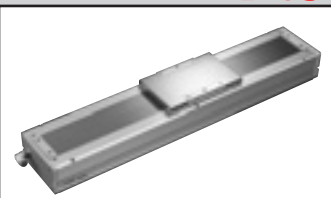
Discontinued some variations

Electric actuator Stepper motor compatible motorless specifications
Slider (ball screw drive low dust specifications)

ECS Series

● Applicable motor sizes: □42, □56, □60 Stepping motor

Sales of ECS-05 to ECS-12 will be terminated. **RoHS**



Electric Actuator Motorless General Catalog
Catalog No. CB-055A

Specifications

Item		ECS-05-E/R/D/L				ECS-06-E/R/D/L			
Applicable motor sizes		□42. Stepper motor							
Drive method		Ball screw ø12							
Ball screw accuracy grade		C7							
Stroke *1 mm		50 to 800							
Screw lead mm		2	5	10	2	5	10		
Max.workload *2	Horizontal kg	10	10	5	30	30	15		
	Verticalkg	7	3	1.5	15	10	5		
Max. speed *3 mm/s		100	250	500	100	250	500		
Rated thrust *2 N		825	330	165	854	341	170		
Repeatability mm		±0.01							
Lost motion mm		0.1 or less							
Dynamic allowable load N		551				1209			
Static allowable momentN·m		MP:20 MY:16 MR:19				MP:80 MY:70 MR:75			
Dynamic allowable moment N·m		MP:2.8 MY:2.8 MR:6.8				MP:8.9 MY:8.9 MR:24.8			
Item		ECS-10-E/R/D/L				ECS-12-E/R/D/L			
Applicable motor sizes		□56, □60 Stepping motor							
Drive method		Ball screw ø16							
Ball screw accuracy grade		C7							
Stroke *1 mm		50 to 1050							
Screw lead mm		5	10	16	20	5	10	16	20
Max.workload *2	Horizontal kg	50	30	22	18	50	30	22	18
	Verticalkg	12	8	5	3	12	8	5	3
Max. speed *3 mm/s		250	500	800	1000	250	500	800	1000
Rated thrust *2 N		683	341	213	174	683	341	213	174
Repeatability mm		±0.01							
Lost motion mm		0.1 or less							
Dynamic allowable load N		2651				1660			
Static allowable momentN·m		MP:110 MY:110 MR:120				MP:150 MY:150 MR:130			
Dynamic allowable moment N·m		MP:24.1 MY:24.1 MR:24.8				MP:42.3 MY:42.3 MR:53.1			

Item		ECS-14-E/R/D/L			
Applicable motor sizes		□56, □60 Stepping motor			
Drive method		Ball screw ø16			
Ball screw accuracy grade		C7			
Stroke *1		50 to 1050			
Screw lead		5	10	16	20
Max. workload *2	Horizontal kg	110	88	48	40
	Vertical kg	33	22	10	8
Max. speed *3		250	500	800	1000
Rated thrust *2		1388	694	433	347
Repeatability		±0.01			
Lost motion		0.1 or less			
Dynamic allowable load N		6567			
Static allowable moment N·m		MP:552 MY:551 MR:485			
Dynamic allowable moment N·m		MP:262.7 MY:262.7 MR:261.0			

Compatibility table by variation

P4	ECS
	●

●: Applicable models ○: Semi-applicable models
▲: Contact CKD for details. □: Not applicable

*1 Stroke is 50 pitch.

*2 The rated thrust and maximum load capacity are the allowable values of the actuator body. The actual thrust and load capacity may be limited by the motor used.

*3 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000rpm.

*4 When wall-mounted, the load capacity is the same as when installed horizontally.

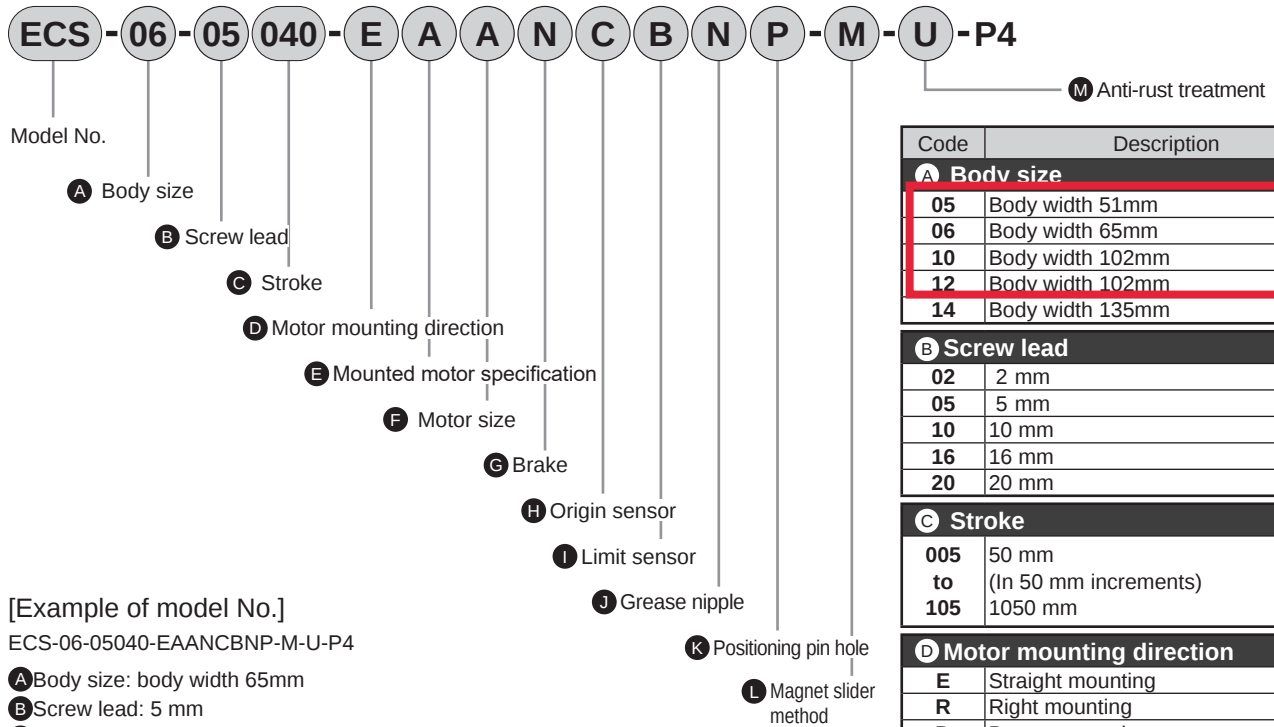
Discontinued some variations

Sales of ECS-05 to ECS-12 will be terminated.

ECS Series

How to order

How to order



[Example of model No.]

ECS-06-05040-EAANCBNP-M-U-P4

- A** Body size: body width 65mm
- B** Screw lead: 5 mm
- C** Stroke: 100 mm
- D** Motor mounting direction: Straight
- E** Mounted motor specification: Oriental Motor Co., Ltd.
- F** Motor size: □42
- G** Brake: None
- H** Origin sensor: Outside motor side
- I** Limit sensor: Outside
- J** Grease nipple: None (Body mounting direction: Standard)
- K** Positioning pin hole: Yes
- L** Magnet slider method: Yes
- M** Anti-rust treatment: with

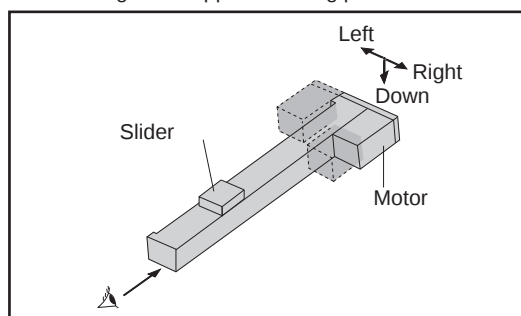
*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, when either is "None", select "None" for both. The sensor dog is assembled at shipment regardless of the presence of the sensor.

*2 Select "Adopted" for ECS-05/06. Other sizes use the standard.

E Mounted motor specification

Manufacturer	□42	□56	□60
Oriental Motor Co., Ltd.	A	-	A
MinebeaMitsumi Incorporated	B	B	-
Dyadic Systems Co., Ltd.	B	C	-

Motor and grease nipple mounting position



Code	Description
A Body size	
05	Body width 51mm
06	Body width 65mm
10	Body width 102mm
12	Body width 102mm
14	Body width 135mm
B Screw lead	
02	2 mm
05	5 mm
10	10 mm
16	16 mm
20	20 mm
C Stroke	
005 to 105	50 mm (In 50 mm increments)
D Motor mounting direction	
E	Straight mounting
R	Right mounting
D	Bottom mounting
L	Left mounting
E Mounted motor specification	
A	Select the mounted motor
B	specification from the table below.
C	
F Motor size	
A	□42 (body size: 05, 06)
B	□56 (body size: 10, 12, 14)
C	□60 (body size: 10, 12, 14)
G Brake	
N	None
B	Yes
H Origin sensor (1 pc) *1	
N	None
A	Inside motor side
B	Inside opposite motor side
C	Outside motor side (Included at shipment)
D	Outside motor opposite side (Included at shipment)
I Limit sensor (2 pcs) *1	
N	None
A	Inside
B	Outside (Included at shipment)
J Grease nipple	
N	None (Body mounting direction: Standard)
R	Right
L	Counterclockwise
K Positioning pin hole	
N	None
P	Yes
L Magnet slider method *2	
Blank	Standard
M	Adopted
M Anti-rust treatment	
N	None
U	Yes

For the motor list, dimensions and model selection recommended for mounting, refer to ECS Series stepping motor compatibility in "Electric Actuator Motorless (CB-055A)".