

EC-S6□AH

High Rigidity

Simple dust-proof

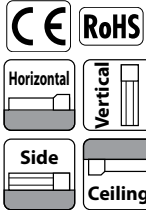
Coupled Motor

Body width 63 mm

24V Stepper motor

Model Specification Items

EC	—	S6	□	AH	—	□	—	□	—	□		
Series		Type		Lead		Specification		Stroke		Cable Length	Options	
				S 20mm H 12mm M 6mm L 3mm		AH High Rigidity		50 1 800	50mm 1 800mm (per 50mm)	0 1 10	With terminal block type connector 1m 10m	Refer to Options below.



- (1) The actuator specifications display the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to "Table of Payload by Speed/Acceleration" for more details.
- (2) When performing a push-motion operation, please refer to the "Correlation between push force and current limit value." Push force is only a guide. Please refer to P109 for details.
- (3) Depending on the ambient operating temperature, duty control is necessary. Please refer to P115 for details.
- (4) Special attention needs to be paid to the mounting orientation. Please refer to P33 for details.
- (5) Reference value of the overhang load length is under 300mm in the Ma, Mb and Mc directions. Please refer to the illustration on P35 for the overhang load length.
- (6) The center of gravity of the attached object should be less than 1/2 of the overhand distance. Even when the overhang distance and load moment are within the allowable range, the operating conditions should be moderated if some abnormal vibration or noise is observed.

Stroke			
Stroke (mm)	EC-S6□AH	Stroke (mm)	EC-S6□AH
50	○	450	○
100	○	500	○
150	○	550	○
200	○	600	○
250	○	650	○
300	○	700	○
350	○	750	○
400	○	800	○

Options			
Name	Option code	Reference page	
Brake	B	See P.101	
Non-motor end specification	NM	See P.108	
PNP specification	PN	See P.108	
Split motor and controller power supply specification	TMD2	See P.109	
Battery-less Absolute Encoder specification	WA	See P.109	
Wireless communication specification	WL	See P.109	
Wireless axis-operation specification	WL2	See P.109	

Cable Length	
Cable code	Cable length
0	No cable (with connector)
1 ~ 3	1 ~ 3m
4 ~ 5	4 ~ 5m
6 ~ 10	6 ~ 10m

(Note) Robot cables.

Main specifications						
Item		Description				
Lead	Ball screw lead (mm)	20	12	6	3	
	Payload	Max. payload (kg) (energy-saving disabled)	15	26	32	40
		Max. payload (kg) (energy-saving enabled)	8	14	20	25
Horizontal	Speed/acceleration/deceleration	Max. speed (mm/s)	1440	900	450	225
		Min. speed (mm/s)	25	15	8	4
		Rated acceleration/deceleration (G)	0.3	0.3	0.3	0.3
		Max. acceleration/deceleration (G)	1	1	1	1
		Max. thrust force (N)*	67	112	224	449
Vertical	Payload	Max. payload (kg) (energy-saving disabled)	1	2.5	6	16
		Max. payload (kg) (energy-saving enabled)	0.75	2	5	10
	Speed/acceleration/deceleration	Max. speed (mm/s)	1280	900	450	225
Min. speed (mm/s)		25	15	8	4	
Rated acceleration/deceleration (G)		0.3	0.3	0.3	0.3	
Push force	Pushing max. speed (mm/s)	20	20	20	20	
	Brake holding specification	Non-excitation actuating solenoid brake				
Brake	Brake holding force (kgf)	1	2.5	6	16	
	Min. stroke (mm)	50	50	50	50	
Stroke	Max. stroke (mm)	800	800	800	800	
	Stroke pitch (mm)	50	50	50	50	

Item		Description
Driving system	Ball screw φ10mm, Rolling C10	
Positioning repeatability	±0.05mm	
Lost motion	-	
Base	Dedicated aluminum extruded material (A6063S5-T6 Equivalent) Black alumite treatment	
Linear guide	Linear motion infinite circulating type	
Static allowable moment	Ma: 48N·m	
	Mb: 69N·m	
	Mc: 103N·m	
Dynamic allowable moment (Note 1)	Ma: 33N·m	
	Mb: 40N·m	
	Mc: 55N·m	
Ambient operation temperature/humidity	0~40°C, 85%RH or less (Non-condensing)	
Degree of protection	IP20	
Vibration & shock resistance	4.9m/s ² 100Hz or less	
Overseas standards	CE marking, RoHS (Restriction of Hazardous Substances)	
Motor type	Stepper motor	
Encoder type	Incremental / battery-less absolute	
Number of encoder pulses	800 pulse/rev	

(Note 1) Based on the standard rated operation life of 5,000 km. Operation life varies according to operating and mounting conditions. Confirm the operation life on P36.

Table of Payload by Speed/Acceleration

Unit for payload is kg. Operations on the blank locations are not possible.

Orientation	Horizontal					Vertical	
	Acceleration (G)						
Speed (mm/s)	0.3	0.5	0.7	1	0.3	0.5	
0	15	10	8	7	1	1	
160	15	10	8	7	1	1	
320	12	10	8	6	1	1	
480	12	9	8	6	1	1	
640	12	8	6	5	1	1	
800	10	6.5	4.5	3	1	1	
960	8	5	3.5	1.5	1	1	
1120	5	3	2	1	0.5	0.5	
1280	1	1	0.5			0.5	
1440	1	0.5					

Orientation	Horizontal					Vertical	
	Acceleration (G)						
Speed (mm/s)	0.3	0.5	0.7	1	0.3	0.5	
0	26	18	16	14	2.5	2.5	
80	26	18	16	14	2.5	2.5	
200	26	18	16	14	2.5	2.5	
320	26	18	14	12	2.5	2.5	
440	26	18	12	10	2.5	2.5	
560	20	12	8	7	2.5	2.5	
700	15	9	5	4	2	1	
800	9	5	2	1	1.5	1	
900	5	3	1	1	0.5	0.5	

Orientation	Horizontal					Vertical	
	Acceleration (G)						
Speed (mm/s)	0.3	0.5	0.7	1	0.3	0.5	
0	32	26	24	20	6	6	
40	32	26	24	20	6	6	
100	32	26	24	20	6	6	
160	32	26	24	20	6	6	
220	32	26	24	20	6	6	
280	32	26	24	15	6	5.5	
340	32	20	18	12	5	4.5	
400	22	12	11	8	3.5	3.5	
450	15	8	6	4	2	2	

Orientation	Horizontal					Vertical	
	Acceleration (G)						
Speed (mm/s)	0.3	0.5	0.7	1	0.3	0.5	
0	40	35	35	35	16	16	
50	40	35	35	35	16	16	
80	40	35	35	30	16	16	
110	40	35	35	30	16	16	
140	40	35	35	28	15	15	
170	40	32	32	24	12.5	12	
200	35	28	23	20	10	9	
225	28	20	16	12	6		

■ Setting for energy-saving enabled Unit for payload is kg.

Lead 20

Orientation	Horizontal			Vertical
	Acceleration (G)			
Speed (mm/s)	0.3	0.7	0.3	
0	8	5	0.75	
160	8	5	0.75	
320	8	5	0.75	
480	8	4	0.75	
640	6	3	0.75	
800	4	1.5	0.75	

Lead 12

Orientation	Horizontal			Vertical
	Acceleration (G)			
Speed (mm/s)	0.3	0.7	0.3	
0	14	10	2	
80	14	10	2	
200	14	10	2	
320	14	10	2	
440	11	7	1.5	
560	7	2.5	1	
680	4	1	0.5	

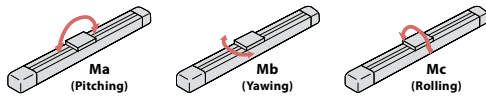
Lead 6

Orientation	Horizontal			Vertical
	Acceleration (G)			
Speed (mm/s)	0.3	0.7	0.3	
0	20	14	5	
40	20	14	5	
100	20	14	5	
160	20	14	5	
220	16	14	4	
280	13	7	2.5	
340	10	1	1	

Lead 3

Orientation	Horizontal			Vertical
	Acceleration (G)			
Speed (mm/s)	0.3	0.7	0.3	
0	25	22	10	
20	25	22	10	
50	25	22	10	
80	25	22	10	
110	20	14	8	
140	15	11	5	
170	11	9	2	

■ Direction of slider type moment

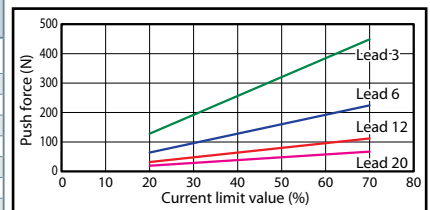


■ Stroke and maximum speed

Lead (mm)	Energy-saving mode	50-300 (per 50mm)														
		450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)							
20	Disabled	1440 <1280>														
	Enabled	800														
12	Disabled	900	845	705	585	515	445	390	345	305						
	Enabled	680		585	515	445	390	345	305							
6	Disabled	450	415	350	295	255	220	190	170	140						
	Enabled	340		295	255	220	190	170	140							
3	Disabled	225	205	170	145	125	110	95	85	70						
	Enabled	170		145	125	110	95	85	70							

(Note) Figures in < > represent vertical operations. (Unit is mm/s)

■ Correlation between push force and current limit value

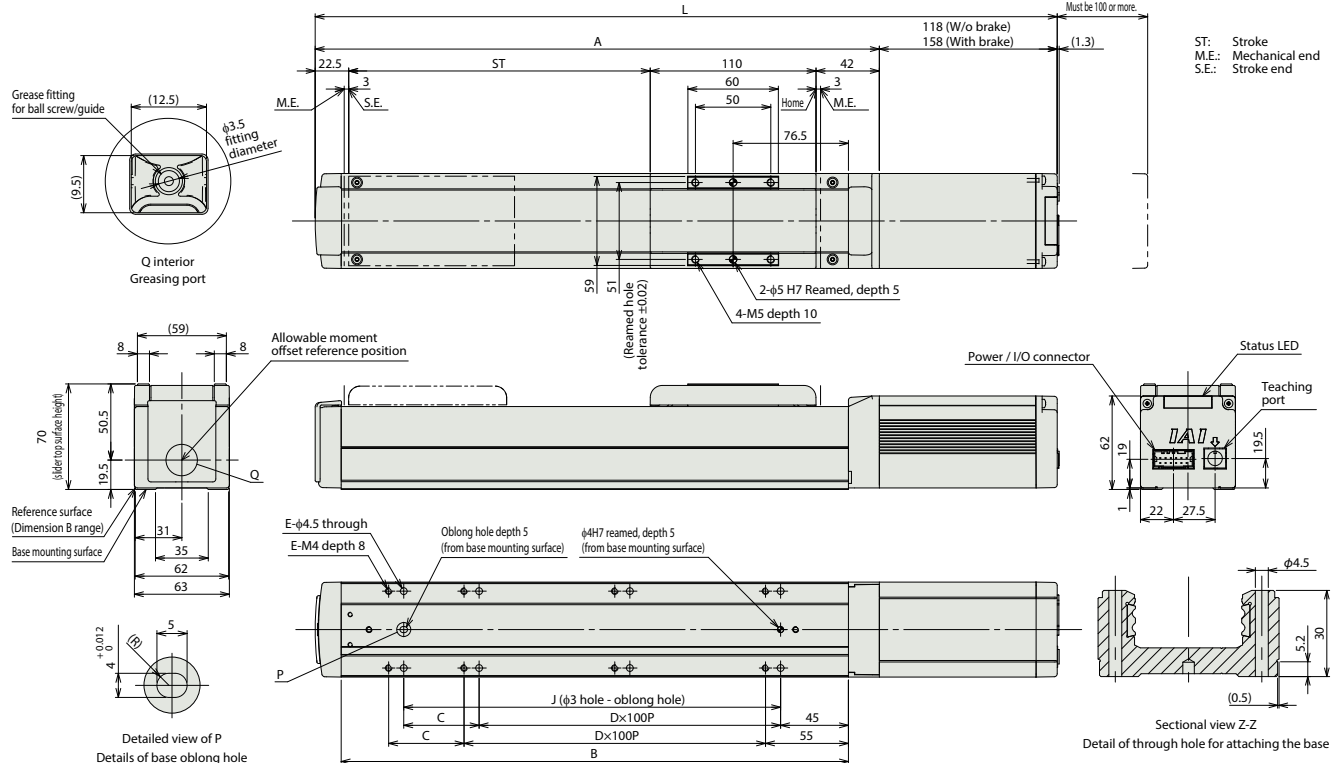


■ Dimensions

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.

CAD drawings can be downloaded from our website.

www.intelligentactuator.com



■ Dimensions by stroke

L	Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
		W/o Brake	342.5	392.5	442.5	492.5	542.5	592.5	642.5	692.5	742.5	792.5	842.5	892.5	942.5	992.5	1042.5
With Brake	382.5	432.5	482.5	532.5	582.5	632.5	682.5	732.5	782.5	832.5	882.5	932.5	982.5	1032.5	1082.5	1132.5	
A	224.5	274.5	324.5	374.5	424.5	474.5	524.5	574.5	624.5	674.5	724.5	774.5	824.5	874.5	924.5	974.5	
B	186.5	236.5	286.5	336.5	386.5	436.5	486.5	536.5	586.5	636.5	686.5	736.5	786.5	836.5	886.5	936.5	
C	0	50	0	50	0	50	0	50	0	50	0	50	0	50	0	50	
D	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	
E	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	
J	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	

■ Mass by stroke

Weight (kg)	Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
		W/o Brake	2	2.2	2.4	2.6	2.9	3.1	3.3	3.5	3.8	4	4.2	4.4	4.7	4.9	5.1
With Brake	2.3	2.5	2.7	2.9	3.2	3.4	3.6	3.8	4.1	4.3	4.5	4.7	5	5.2	5.4	5.6	

■ Applicable controller

(Note) The EC series is equipped with a built-in controller. Please refer to P116 for details.