EC-S7□H

High Rigidity | Slider Type | Motor Unit Type | Coupled Motor | Body Width 75 mm | 24V Stepper Motor

■ Model Specification Items

EC — S7 — [Lead] — H — [Stroke] — [Cable Length] — ([Options])

Series	Type	Lead	High Rigidity	Stroke	Cable Length	Options
EC	S7	S : 24mm H : 16mm M : 8mm L : 4mm	H	50: 50mm ~ 500:500mm (Every 50mm)	0: With terminal block type connector 1: 1m ~ 10:10m	Refer to Options below.

* Please refer to P.16 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

Table of Payload by Speed/Acceleration

Lead 24

Orientation	Horizontal				Vertical	
Speed (mm/s)	Acceleration (G)					
	0.3	0.5	0.7	1	0.3	0.5
0	37	22	16	14	3	3
200	37	22	16	14	3	3
420	34	20	16	14	3	3
640	20	15	10	9	3	3
860	12	10	7	4	3	2.5

Lead 16

Orientation	Horizontal				Vertical	
Speed (mm/s)	Acceleration (G)					
	0.3	0.5	0.7	1	0.3	0.5
0	46	35	28	27	8	8
140	46	35	28	27	8	8
280	46	35	25	24	8	8
420	34	25	15	10	5	4.5
560	20	15	10	6	4	3
700	15	10	5	3	3	2

Lead 8

Orientation	Horizontal				Vertical	
Speed (mm/s)	Acceleration (G)					
	0.3	0.5	0.7	1	0.3	0.5
0	51	45	40	40	16	16
70	51	45	40	40	16	16
140	51	40	38	35	16	16
210	51	35	30	24	10	9.5
280	40	28	20	15	8	7
350	30	9	4		5	4
420	7				2	

Lead 4

Orientation	Horizontal				Vertical	
Speed (mm/s)	Acceleration (G)					
	0.3	0.5	0.7	1	0.3	0.5
0	51	45	40	40	19	19
35	51	45	40	40	19	19
70	51	45	40	40	19	19
105	51	45	40	35	19	19
140	45	35	30	25	14	12
175	30	18			9	7.5
210	6					

POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) 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" at right for more details.
(3) When performing push-motion operation, refer to P.65.
(4) Depending on the ambient operating temperature, duty control is necessary. Please refer to P.67 for more information.
(5) The power capacity can be reduced according to the setting. Please refer to P.63 for the relevant "Table of Payload by Speed/Acceleration."

Actuator Specifications

■ Lead and Payload

Model number	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Max. push force (N)*
EC-S7SH-①-②(-③)	24	37	3	112
EC-S7HH-①-②(-③)	16	46	8	168
EC-S7MH-①-②(-③)	8	51	16	336
EC-S7LH-①-②(-③)	4	51	19	673

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)	350 (mm)	400 (mm)	450 (mm)	500 (mm)
24	860		768	615	503
16	700	626	488	392	321
8	420	319	248	199	163
4	210<175>	161	125	100	82

<> represents vertical operation.
*Speed limitation applies to push motion. See the manual or contact IAI.

① Stroke

① Stroke (mm)	EC-S7□H	① Stroke (mm)	EC-S7□H
50	○	**300**	○
100	○	**350**	○
150	○	**400**	○
200	○	**450**	○
250	○	**500**	○

② Cable Length

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

③ Options

Name	Option code	Reference page
Brake	**B**	See P.59
Non-motor end specification	**NM**	See P.62
PNP specification	**PN**	See P.62
Battery-less Absolute Encoder specification	**WA**	See P.62
Wireless communication specification	**WL**	See P.62

Actuator Specifications

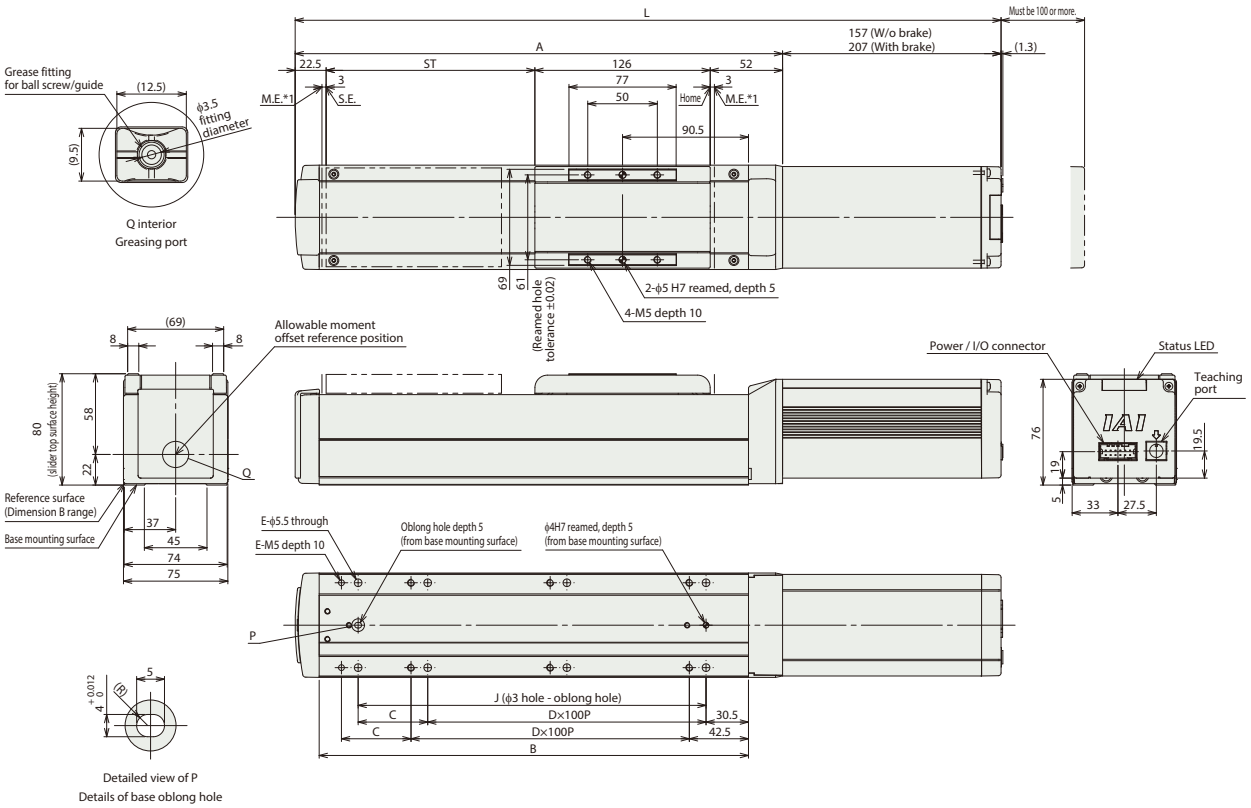
Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.05mm
Base	Material: Aluminum, black alumite treatment
Allowable static moment	Ma direction: 115N·m, Mb direction: 115N·m, Mc direction: 229N·m
Allowable dynamic moment (*)	Ma direction 75.5N·m, Mb direction 90N·m, Mc direction 134N·m
Ambient operating temperature/humidity	0 to 40°C, 85% RH or less (Non-condensing)

· Overhang load length guideline: 300mm or less
(*) For reference rated life of 5,000km. The service life differs according to operation conditions and mounting status.
Contact IAI to check the service life.
Contact IAI to check the allowable moment direction and overhang load length.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com

*1 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.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500
L	W/o Brake	407.5	457.5	507.5	557.5	607.5	657.5	707.5	757.5	807.5	857.5
	With Brake	457.5	507.5	557.5	607.5	657.5	707.5	757.5	807.5	857.5	907.5
A		250.5	300.5	350.5	400.5	450.5	500.5	550.5	600.5	650.5	700.5
B		208.5	258.5	308.5	358.5	408.5	458.5	508.5	558.5	608.5	658.5
C		50	0	50	0	50	0	50	0	50	0
D		1	2	2	3	3	4	4	5	5	6
E		6	6	8	8	10	10	12	12	14	14
J		150	200	250	300	350	400	450	500	550	600
Weight (kg)	W/o Brake	3.9	4.1	4.4	4.7	4.9	5.2	5.5	5.7	6	6.3
	With Brake	4.4	4.6	4.9	5.2	5.4	5.7	6.0	6.2	6.5	6.8

Controller side Options/Accessories

Name	Touch Panel Teaching Pendant	PC software	24VDC power supply
External view			
Model	☐ TB-02 (for wired connection only) ☐ TB-03 (for wired/wireless connection)	☐ RCM-101-MW (RS232 connection version) ☐ RCM-101-USB (USB connection version)	☐ PS-241 (100V input) ☐ PS-242 (200V input)
Overview	● TB-02 A teaching pendant equipped with functions such as start point, end point, and AVD input, trial operation, and monitoring. ● TB-03 A data setter that supports wireless connection. The start point, end point and AVD can be input with wireless connection.	Software for start point input, end point input and AVD input, trial operation, and monitoring using a PC. Both the RS232C version and USB version are available for PC connection.	A 24VDC power supply that can instantaneously output up to 17A. Input voltage 200VAC and 100VAC specifications are available.

* For system configurations using the above tools, refer to P.68.