

EC-S7

Slider Type Motor Unit Type Coupled Motor Body Width 73 mm 24v Stepper Motor

Model Specification Items

EC Series — S7 Type

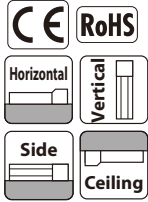
Lead: S : 24mm, H : 16mm, M : 8mm, L : 4mm

Stroke: 50: 50mm, 500: 500mm (Every 50mm)

Cable Length: 0: With terminal block type connector, 1: 1m, 10: 10m

Options: Refer to Options below.

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



* 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.

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 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."

Table of Payload by Speed/Acceleration

Lead 24						Lead 16							
Orientation	Horizontal			Vertical			Orientation	Horizontal			Vertical		
	Acceleration (G)							Acceleration (G)					
Speed (mm/s)	0.3	0.5	0.7	1	0.3	0.5	Speed (mm/s)	0.3	0.5	0.7	1	0.3	0.5
0	37	22	16	14	3	3	0	46	35	28	27	8	8
200	37	22	16	14	3	3	140	46	35	28	27	8	8
420	34	20	16	14	3	3	280	46	35	25	24	8	8
640	20	15	10	9	3	3	420	34	25	15	10	5	4.5
860	12	10	7	4	3	2.5	560	20	15	10	6	4	3
							700	15	10	5	3	3	2

Lead 8						Lead 4							
Orientation	Horizontal			Vertical			Orientation	Horizontal			Vertical		
	Acceleration (G)							Acceleration (G)					
Speed (mm/s)	0.3	0.5	0.7	1	0.3	0.5	Speed (mm/s)	0.3	0.5	0.7	1	0.3	0.5
0	51	45	40	40	16	16	0	51	45	40	40	19	19
70	51	45	40	40	16	16	35	51	45	40	40	19	19
140	51	40	38	35	16	16	70	51	45	40	40	19	19
210	51	35	30	24	10	9.5	105	51	45	40	35	19	19
280	40	28	20	15	8	7	140	45	35	30	25	14	12
350	30	9	4		5	4	175	30	18			9	7.5
420	7				2		210	6					

Actuator Specifications

Lead and Payload

Model	Lead (mm)	Max. payload		Max. push force (N)*
		Horizontal (kg)	Vertical (kg)	
EC-S7S-①-②(-③)	24	37	3	112
EC-S7H-①-②(-③)	16	46	8	168
EC-S7M-①-②(-③)	8	51	16	336
EC-S7L-①-②(-③)	4	51	19	673

Stroke and Max. Speed (Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)	350 (mm)	400 (mm)	450 (mm)	500 (mm)
24	860		774	619	506
16	700	631	492	395	323
8	420	322	251	200	164
4	210 <175>	163	126	101	83

Legend: ① Stroke ② Cable Length ③ Option <> represents vertical operation. *Speed limitation applies to push motion. See the manual or contact IAI.

① Stroke

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

② Cable Length

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

③ Options

Type	Option code	Reference page
Brake	B	See P.59
Foot bracket	FT	See P.60
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 ø12mm, rolled C10
Positioning repeatability	±0.05mm
Base	Material: Aluminum, black alumite treatment
Static allowable moment	Ma direction: 79.7N·m, Mb direction: 114N·m, Mc direction: 157N·m
Dynamic allowable moment (*)	Ma direction: 17.7N·m, Mb direction: 25.3N·m, Mc direction: 34.9N·m
Ambient operating temperature/humidity	0 to 40°C, 85% RH or less (Non-condensing)

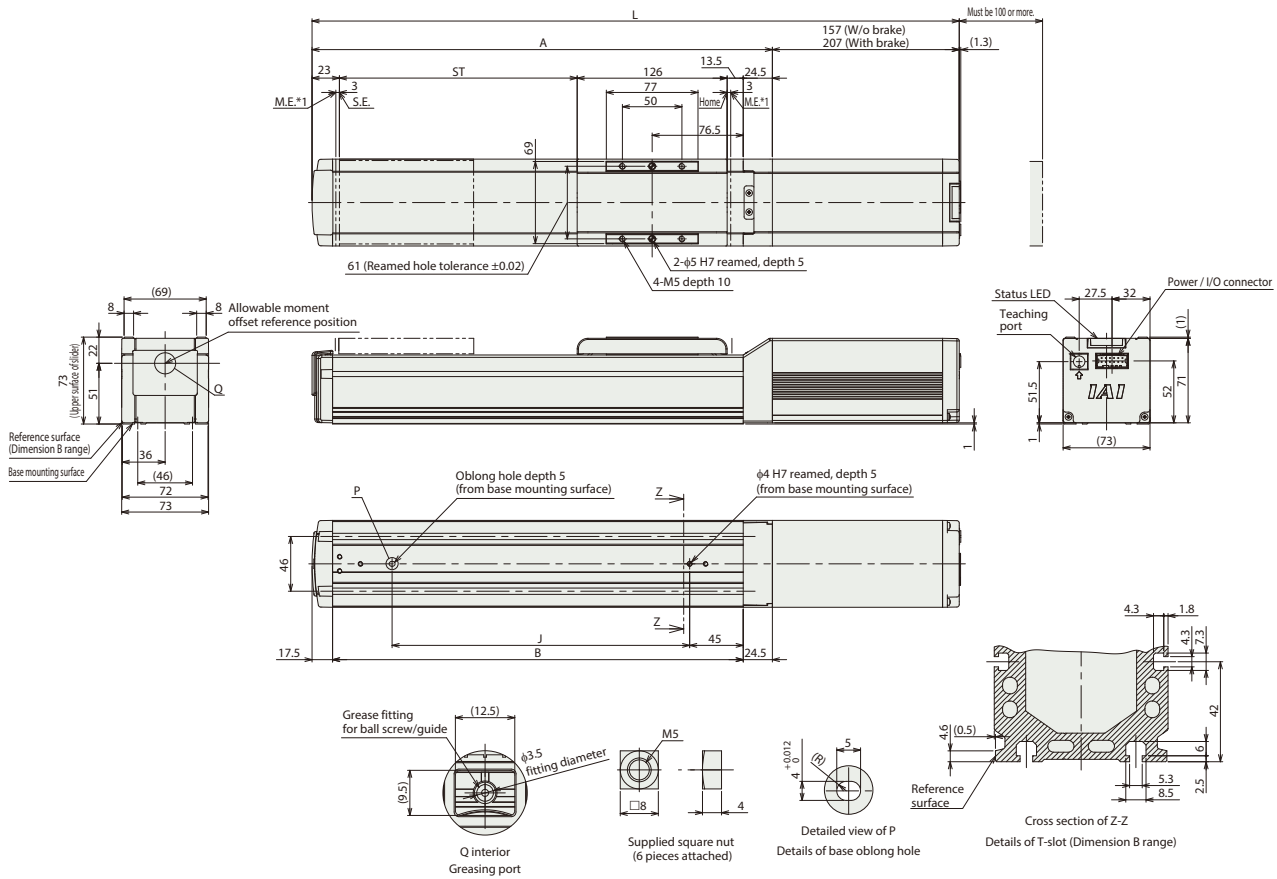
* Overhang load length guideline: 280mm or less
 (*) For reference rated life of 5000km. The service life will vary depending on operation and installation conditions. Please contact IAI for more details.

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	394	444	494	544	594	644	694	744	794	844
	With Brake	444	494	544	594	644	694	744	794	844	894
A	237	287	337	387	437	487	537	587	637	687	
B	195	245	295	345	395	445	495	545	595	645	
J	100	150	200	250	300	350	400	450	500	550	
Weight (kg)	W/o Brake	3.4	3.6	3.9	4.2	4.4	4.7	5.0	5.2	5.5	5.8
	With Brake	3.8	4.1	4.4	4.6	4.9	5.2	5.4	5.7	6.0	6.2

Controller side Options/Accessories

Name	Touch Panel Teaching Pendant	PC software	24VDC power supply
External view			
Model	<input type="checkbox"/> TB-02 (for wired connection only) <input type="checkbox"/> TB-03 (for wired/wireless connection)	<input type="checkbox"/> RCM-101-MW (RS232 connection version) <input type="checkbox"/> RCM-101-USB (USB connection version)	<input type="checkbox"/> PS-241 (100V input) <input type="checkbox"/> PS-242 (200V input)
Overview	<ul style="list-style-type: none"> ● 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.