EC-RP4

Mini | Side-mounted Motor | Body width 34 mm | 24v Stepper motor

■ Model Specification Items

EC — RP4 — [ ] — [ ] — [ ] — [ ]

Series	Type	Lead	Stroke	Cable Length	Options
EC	RP4	H: 6mm M: 4mm L: 2mm	30: 30mm 50: 50mm	0: With terminal block type connector 1 ~ 10: 1m ~ 10m	Refer to Options below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

POINT Selection Notes

(1) Please use a rotation stop apparatus such as a guide at the tip of the feed screw because it has no rotation stop. (If there is no rotation stop, the feed screw rotates and cannot move back and forth). Do not use floating joints or anything similar when connecting the rotation stop apparatus and the rod. Please refer to P27-32 for mounting method and conditions.

(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" for more details.

(3) The value of the horizontal payload assumes the use of an external guide. Please do not apply any external force other than the rod thrust direction.

(4) 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 P115 for cautions.

(5) Special attention needs to be paid to the mounting orientation. Please refer to P33 for details.

Stroke

Stroke (mm)	EC-RP4
30	○
50	○

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.

Options

Name	Option code	Reference page
Brake	**B**	See P.101
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
Non-motor end specification	**WL2**	See P.109

Main specifications

Item			Description		
Lead		Ball screw lead (mm)	6	4	2
Horizontal	Payload	Max. payload (kg)	2.5	4	8
	Speed/ acceleration/ deceleration	Max. speed (mm/s)	300	200	100
		Min. speed (mm/s)	7.5	5	2.5
		Rated acceleration/deceleration (G)	0.3	0.3	0.3
		Max. accleration/deceleration (G)	0.5	0.5	0.3
Vertical	Payload	Max. payload (kg)	1	1.5	2.5
	Speed/ acceleration/ deceleration	Max. speed (mm/s)	300	200	100
		Min. speed (mm/s)	7.5	5	2.5
		Rated acceleration/deceleration (G)	0.3	0.3	0.3
		Max. accleration/deceleration (G)	0.5	0.5	0.3
Push force		Pushing max. thrust force (N)*	30	45	90
		Pushing max. speed (mm/s)	20	20	20
Brake		Brake holding specification	Non-excitation actuating solenoid brake		
		Brake holding force (kgf)	1	1.5	2.5
Stroke		Min. stroke (mm)	30	30	30
		Max. stroke (mm)	50	50	50
		Stroke pitch (mm)	20	20	20

Item	Description
Driving system	Ball screw φ6mm, Rolling C10
Positioning repeatability	±0.05mm
Lost motion	-
Rod non-rotation accuracy	-
Operational service life	5,000km or 50 million reciprocating motions
Ambient operation temperature/humidity	0~40°C, 85%RH or less (Non-condensing)
Degree of protection	IP20
Vibration & shock resistance	4.9m/s² 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

* Speed limitation applies to push motion. See the manual or contact IAI.

Table of Payload by Speed/Acceleration

Unit for payload is kg.

Lead 6

Orientation	Horizontal		Vertical	
Speed (mm/s)	Acceleration (G)			
	0.3	0.5	0.3	0.5
0	2.5	2.5	1	1
300	2.5	2.5	1	1

Lead 4

Orientation	Horizontal		Vertical	
Speed (mm/s)	Acceleration (G)			
	0.3	0.5	0.3	0.5
0	4	4	1.5	1.5
200	4	4	1.5	1.5

Lead 2

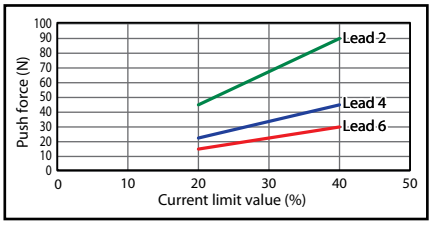
Orientation	Horizontal	Vertical
Speed (mm/s)	Acceleration (G)	
	0.3	0.3
0	8	2.5
100	8	2.5

Stroke and maximum speed

Lead (mm)	30 (mm)	50 (mm)
6	300	
4	200	
2	100	

(Unit is mm/s)

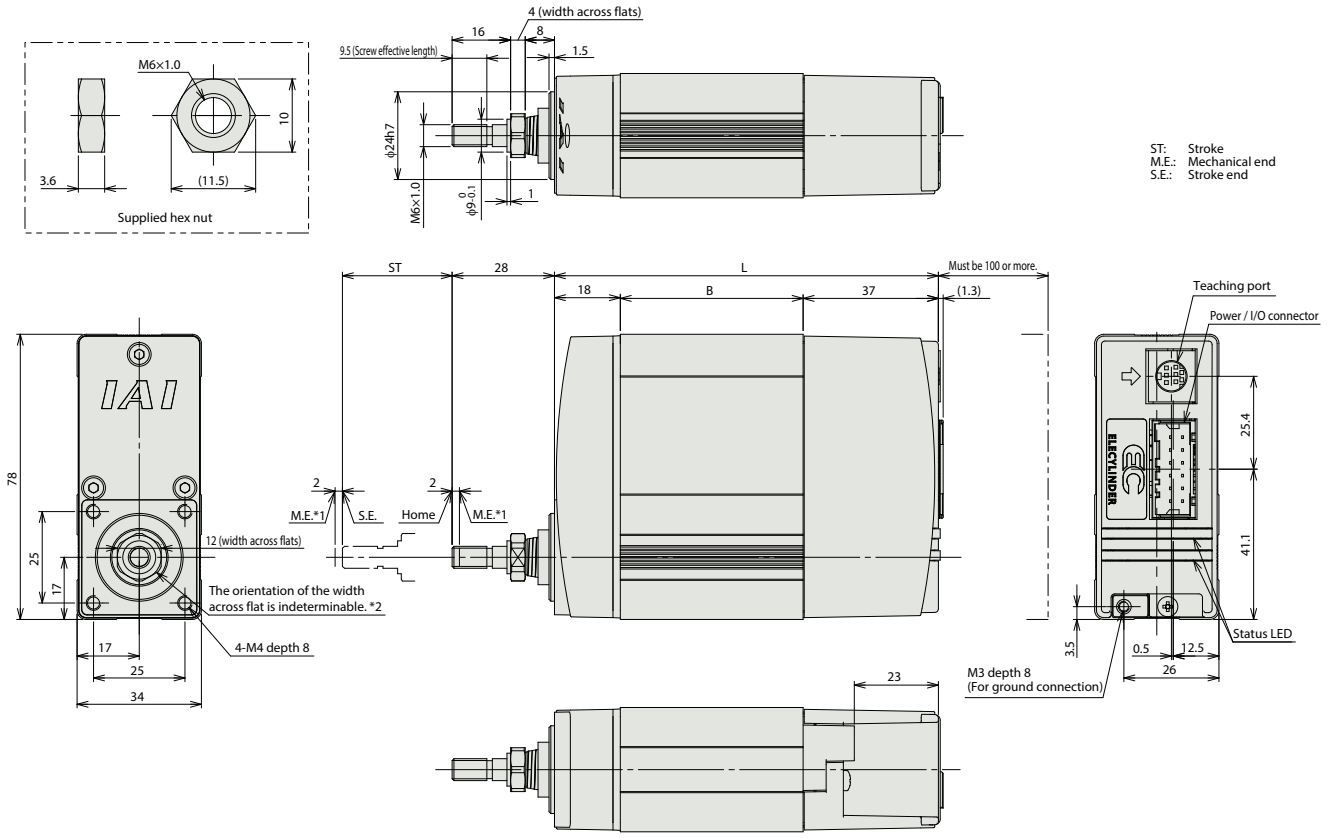
Correlation between push force and current limit value



Dimensions

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
*2 The direction of width across flats varies depending on the product. Those flats cannot be used for reference plane.

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



■ Dimensions by stroke

Encoder type		Incremental		Battery-less absolute	
Stroke		30	50	30	50
L	W/o Brake	105	125	125	125
	With Brake	135	135	155	155
B	W/o Brake	50	70	70	70
	With Brake	80	80	100	100

■ Mass by stroke

Encoder type		Incremental		Battery-less absolute	
Stroke		30	50	30	50
Weight (kg)	W/o Brake	0.5	0.6	0.6	0.6
	With Brake	0.7	0.7	0.7	0.7

Applicable controller

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