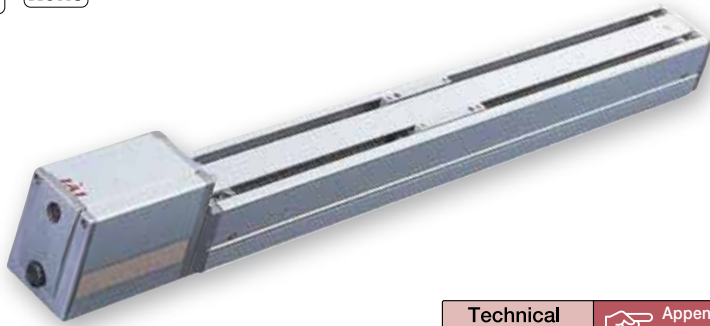


# ERC2-SA7C

Controller-Integrated, Slider Type, Actuator Width 68mm, Pulse Motor, Straight Type

Model Specification Items	<b>ERC2</b> — <b>SA7C</b> — <b>I</b> — <b>PM</b> — <input type="checkbox"/> — <input type="checkbox"/> — <input type="checkbox"/> — <input type="checkbox"/> — <input type="checkbox"/>	Series	Type	Encoder type	Motor type	Lead	Stroke	I/O Type	Cable length	Options
	I: Incremental	PM: Pulse motor	16: 16mm 8: 8mm 4: 4mm	50: 50mm 600: 600mm (50mm pitch increments)	NP: P:IO (NPN) Type PN: P:IO (PNP) Type SE: S:IO Type	N: None S: 3m M: 5m X: Custom length W: Cable with connectors on both ends R: Robot cable RW: Robot cable with connectors on both ends	B: Brake NM: Non-motor end			

\* See page Pre-47 for details on the model descriptions.



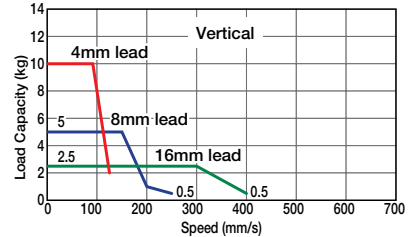
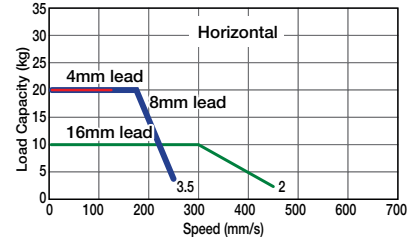
Technical References Appendix P.5



- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- Since the ERC2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- The load capacity is based on operation at an acceleration of 0.3G (0.2G for 4mm-lead model and when used vertically). These values are the upper limits for the acceleration.
- See page A-71 for details on push motion.

### Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the ERC2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



### Actuator Specifications

#### Leads and Payloads

(Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model number	Lead (mm)	Max. Load Capacity (Note 1)		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
ERC2-SA7C-I-PM-16-①-②-③-④	16	~10	~2.5	50~600 (every 50mm)
ERC2-SA7C-I-PM-8-①-②-③-④	8	~20	~5	
ERC2-SA7C-I-PM-4-①-②-③-④	4	20	~10	

#### Stroke and Maximum Speed

(Unit: mm/s)

Lead	Stroke	
	50~600 (every 50mm)	
16	450	<400>
8	250	
4	125	

Code explanation ① Stroke ② I/O type ③ Cable length ④ Options \*See page A-71 for details on push motion.

\* The values enclosed in < > apply to vertical settings.

#### ① Stroke

① Stroke (mm)	Standard price
50	—
100	—
150	—
200	—
250	—
300	—
350	—
400	—
450	—
500	—
550	—
600	—

#### ④ Options

Name	Option code	See page	Standard price
Brake	<b>B</b>	→ A-42	—
Non-motor end specification	<b>NM</b>	→ A-52	—

#### ③ Cable Length

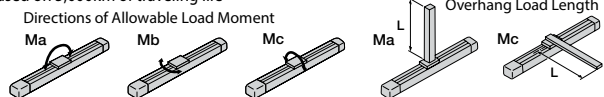
Type	Cable symbol	Standard Price
Standard	<b>P</b> (1m)	—
	<b>S</b> (3m)	—
	<b>M</b> (5m)	—
Special Lengths	<b>X06</b> (6m) ~ <b>X10</b> (10m)	—
Connectors on Both Ends	<b>W01</b> (1m) ~ <b>W03</b> (3m)	—
	<b>W04</b> (4m) ~ <b>W05</b> (5m)	—
	<b>W06</b> (6m) ~ <b>W10</b> (10m)	—
Robot Cable	<b>R01</b> (1m) ~ <b>R03</b> (3m)	—
	<b>R04</b> (4m) ~ <b>R05</b> (5m)	—
	<b>R06</b> (6m) ~ <b>R10</b> (10m)	—
Connectors on Both Ends Robot Cable	<b>RW01</b> (1m) ~ <b>RW03</b> (3m)	—
	<b>RW04</b> (4m) ~ <b>RW05</b> (5m)	—
	<b>RW06</b> (6m) ~ <b>RW10</b> (10m)	—

\* < > values are applicable to the SE type. \* See page 606 for cables for maintenance.

### Actuator Specifications

Item	Description
Drive System	Ball screw, ø12mm, rolled C10
Positioning repeatability	±0.02mm
Lost Motion	0.1mm or less
Allowable static moment	Ma: 63.0 N·m, Mb: 90.0 N·m, Mc: 132.5 N·m
Allowable dynamic moment (*)	Ma: 13.8 N·m, Mb: 19.7 N·m, Mc: 29.0 N·m
Allowable overhang	150mm or less in Ma, Mb and Mc directions
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(\*) Based on 5,000km of traveling life



Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

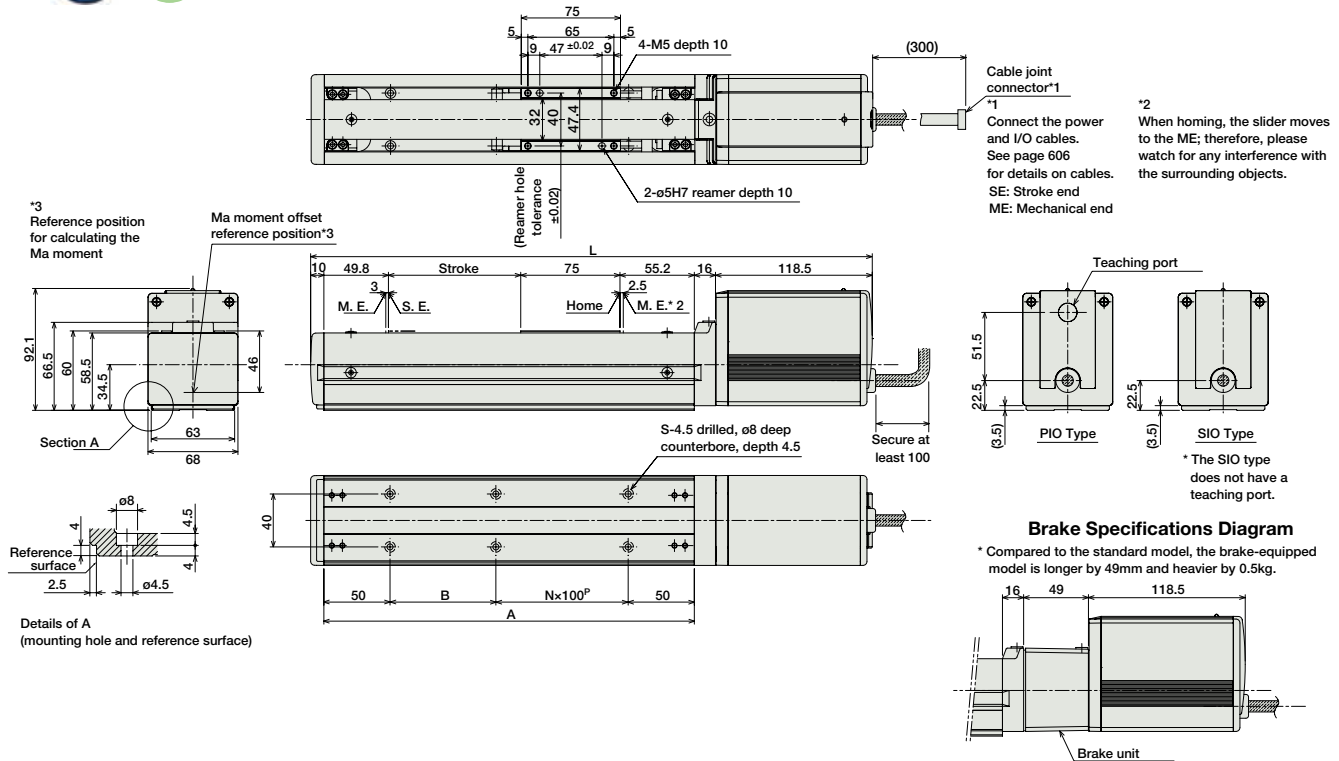


\* For the Non-motor end model, the dimensions (distance from ME to home) on the motor-side and that on the opposite side are flipped.

For Special Orders



Appendix P.15



Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	374.5	424.5	474.5	524.5	574.5	624.5	674.5	724.5	774.5	824.5	874.5	924.5
A	230	280	330	380	430	480	530	580	630	680	730	780
B	30	80	30	80	30	80	30	80	30	80	30	80
N	1	1	2	2	3	3	4	4	5	5	6	6
S	6	6	8	8	10	10	12	12	14	14	16	16
Weight (kg)	3.1	3.2	3.4	3.6	3.7	3.9	4.0	4.2	4.3	4.5	4.6	4.8

I/O type (Controller built into the Actuator)

I/O type

With the ERC2 series, one of the following three types of built-in controllers can be selected depending on the external input/output (I/O) type. Select the type that meets your purpose.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
PIO Type (NPN Specification)		ERC2-SA7C-I-PM-□-□-NP-□-□	Simple control type with up to 16-point positioning	16	DC24V	2A max.	—	→ P597
PIO Type (PNP Specification)		ERC2-SA7C-I-PM-□-□-PN-□-□	Supports the PNP I/O commonly used overseas.	16				
SIO Type		ERC2-SA7C-I-PM-□-□-SE-□-□	Field Network Connection Serial (Gateway unit used)	64				