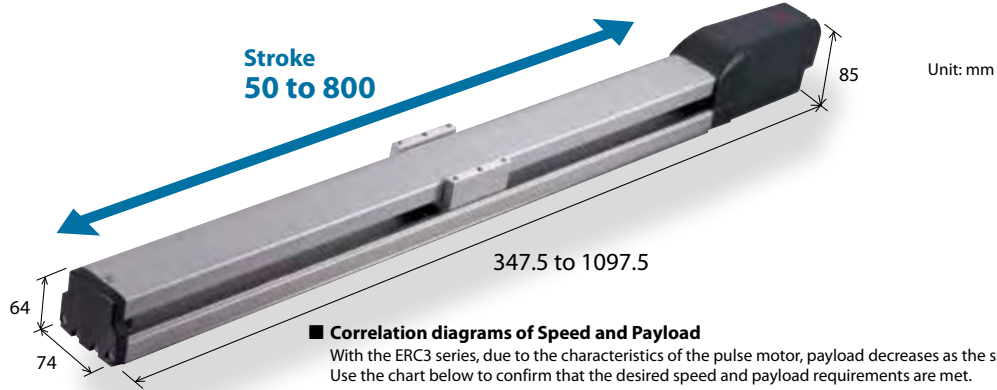


# ERC3-SA7C

● Slider type ● Actuator Width 74mm

Model Specification Items	<b>ERC3-SA7C</b>	<b>I</b>	<b>56P</b>							
	Series	Type	Encoder type	Motor type	Lead	Stroke	I/O type	Cable length	Controller type	Option
			I: Incremental Type	56P: Pulse motor, size 56□	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm 7 800: 800mm (Can be set in 50mm increments)	NP: PIO (NPN) type PN: PIO (PNP) type SE: SIO type PLN: Pulse-train (NPN) type PLP: Pulse-train (PNP) type	N: None P: 1m S: 3m M: 5m X□□: Specified length	CN: CON type MC: MEC type	B : Brake NM : Non-motor side specification ABU: Simple absolute specification

\*Refer to P. 14 for the description of items constituting the model number.

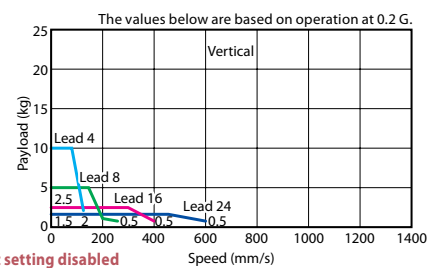
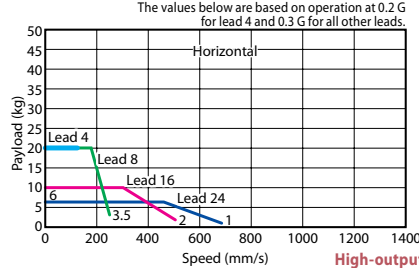
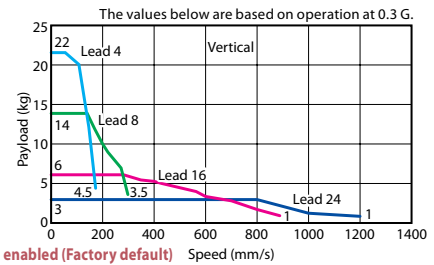
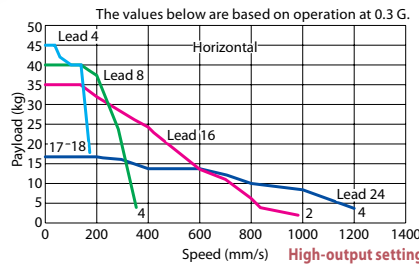


### Correlation diagrams of Speed and Payload

With the ERC3 series, due to the characteristics of the pulse motor, payload decreases as the speed increases. Use the chart below to confirm that the desired speed and payload requirements are met.

### POINT Notes on selection

If the high-output setting is enabled (factory default), the duty must be limited. (Refer to P. 16.) If the high-output setting is disabled, the payload and maximum speed become lower, but the actuator can be used at a duty of 100%. Refer to the operation manual for information on how to change the high-output setting. Refer to P. 26 for the payload at each speed/acceleration when the high-output setting is enabled. For other cautionary items, refer to "Explanations of/Cautionary Notes on Items Specified in Catalog (P. 15)."



### Actuator Specifications (High-output Setting Enabled)

**Leads and Payloads** (Note 1) Take caution that the maximum payload decreases as the speed increases.

Model number	Lead (mm)	Maximum payload (Note 1)		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
ERC3-SA7C-I-56P-24-①-②-③-④	24	17	3	50~800 (every 50 mm)
ERC3-SA7C-I-56P-16-①-②-③-④	16	35	6	
ERC3-SA7C-I-56P-8-①-②-③-④	8	40	14	
ERC3-SA7C-I-56P-4-①-②-③-④	4	45	22	

Legend ① Stroke ② I/O type ③ Cable length ④ Option

### Stroke and Maximum Speed

Stroke / Lead	50~550 (every 50mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
24	1200	1130	975	850	745	
16	980 <840>	880 <840>	750	645	565	495
8	490	440	375	320	280	245
4	210	185	160	140	120	

The values in < > apply when the actuator is used vertically. (Unit: mm/s)

### ① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	—	450	—
100	—	500	—
150	—	550	—
200	—	600	—
250	—	650	—
300	—	700	—
350	—	750	—
400	—	800	—

### ③ Cable length

Type	Cable symbol	Standard price	
		PIO type	SIO type
Standard type (Robot cable)	P (1m)	—	—
	S (3m)	—	—
	M (5m)	—	—
Special length	X06(6m)~X10(10m)	—	—

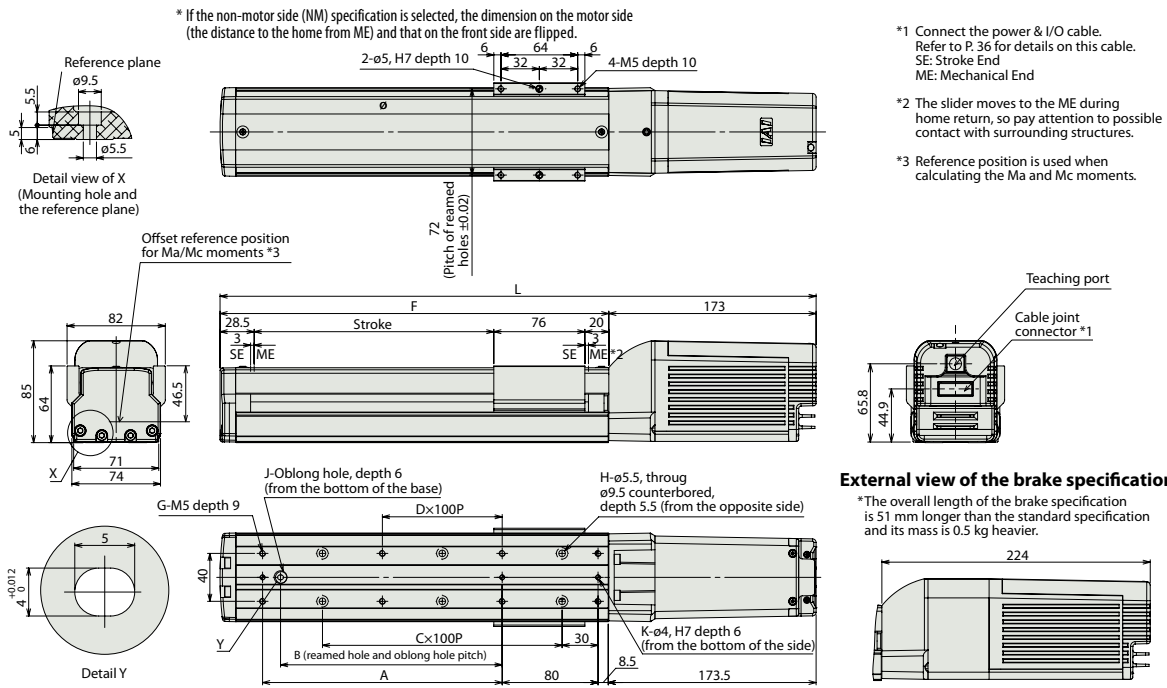
\*Refer to P. 36 for maintenance cables.

### ④ Options

Name	Option code	See page	Standard price
Brake	B	→P15	—
Non-motor side specification	NM	→P15	—
Simple absolute specification	ABU	→P15	— (*)

(\*) If the simple absolute specification is selected, the separately sold PIO converter of simple absolute specification (with battery) is required.

Dimensional Drawings



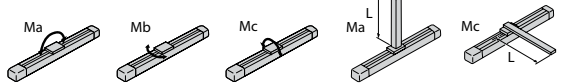
Actuator specification

Item	Description
Drive system	Ball screw ø12 mm, rolled C10
Positioning repeatability (*1)	± 0.02 mm [± 0.03 mm]
Lost motion	0.1 mm or less
Static allowable load moment	Ma: 70.0 N·m, Mb: 100.0 N·m, Mc: 159.5 N·m
Dynamic allowable load moment (*2)	Ma: 15.0 N·m, Mb: 21.4 N·m, Mc: 34.1 N·m
Overhang load lengths	150 mm or less in Ma directions, 150 mm or less in Mb and Mc directions
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(\*1) The specification in [ ] applies when the lead is 20 mm.

(\*2) Based on 5,000 km of traveling life

Allowable load moment directions



Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	347.5	397.5	447.5	497.5	547.5	597.5	647.5	697.5	747.5	797.5	847.5	897.5	947.5	997.5	1047.5	1097.5
A	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
B	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
C	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
D	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7
F	174.5	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
G	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
H	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
J	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
K	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mass (kg)	3.2	3.4	3.6	3.8	4.0	4.3	4.5	4.7	4.9	5.1	5.4	5.6	5.8	6.0	6.2	6.5

Controllers (Built into the Actuator)

I/O type

With the ERC3 series, one of the following five 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)		ERC3-SA7C-I-56P-□-□-NP-□-□	Simple control type accommodating up to 16 positioning points	16	DC24V	High-output setting enabled: 3.5A rated 4.2A max. High-output setting disabled: 2A	-	→P27
PIO type (PNP specification)		ERC3-SA7C-I-56P-□-□-PN-□-□	PNP I/O type	16				
SIO type		ERC3-SA7C-I-56P-□-□-SE-□-□	High-function type accommodating up to 512 positioning points (PIO converter is used)	512				
Pulse-train type (NPN specification)		ERC3-SA7C-I-56P-□-□-PLN-□-□	Pulse-train input type supporting the NPN specification	-				
Pulse-train type (PNP specification)		ERC3-SA7C-I-56P-□-□-PLP-□-□	Pulse-train input type supporting the PNP specification	-				