

ERC3-RA6C

Controller-Integrated, Rod Type, Actuator Width 64mm, Pulse Motor, Straight Type

Model Specification Items	ERC3	RA6C	I	56P						
	Series	Type	Encoder type	Motor type	Lead	Stroke	I/O type	Cable length	Controller Type	Options
			I: Incremental	56□: Pulse motor	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ? 300: 300mm (50mm pitch 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□□: Custom Length	CN: CON type MC: MEC type	B : Brake NM : Non-motor end ABU : Simple absolute specification FL : Flange FT : Foot bracket

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

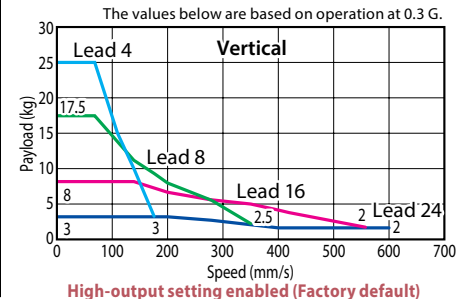
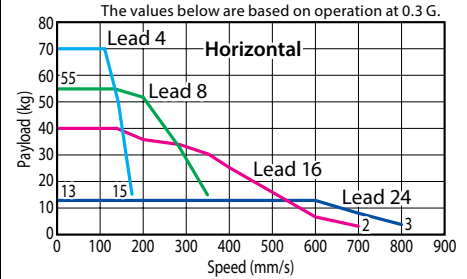


Technical References Appendix P.5

- POINT** Notes on Selection
- (1) If the high-output setting is enabled (factory default), the duty must be limited. (Refer to page A-95.) 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.
 - (2) Refer to page A-99 for the payload at each speed/acceleration when the high-output setting is enabled.
 - (3) The value for the horizontal load capacity is with an external guide.
 - (4) See page A-71 for details on push motion.

Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the ERC3 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)	Maximum payload (Note 1)		Maximum push force (N)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
ERC3-RA6C-I-56P-24-①-②-③-④	24	13	3	182	50 to 300 (every 50mm)
ERC3-RA6C-I-56P-16-①-②-③-④	16	40	8	273	
ERC3-RA6C-I-56P-8-①-②-③-④	8	55	17.5	547	
ERC3-RA6C-I-56P-4-①-②-③-④	4	70	25	1094	

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

Stroke and Maximum Speed

Stroke Lead	50~250 (every 50mm)		300 (mm)
	24	800 <600>	
16	700 <560>		
8	420	400	
4	210 <175>	200 <175>	

* The values enclosed in < > apply to vertical settings. (Unit: mm/s)
* The values of lead 8 and lead 4 apply when acceleration is at 0.1G.

① Stroke

Stroke (mm)	Standard price
50	—
100	—
150	—
200	—
250	—
300	—

④ Options

Name	Option code	Page	Standard Price
Brake	B	→ A-42	—
Simple absolute specification	ABU	→ A-42	— (*)
Flange	FL	→ A-45	—
Foot bracket	FT	→ A-48	—
Non-motor end	NM	→ A-52	—

(*) If the simple absolute specification is selected, SE (SIO type) I/O type and the separately sold PIO converter with simple absolute specification (with battery) are required.

③ Cable Length

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

* See page 586 for cables for maintenance.

Actuator Specifications

Item	Description
Drive method	Ball screw, ø10mm, rolled C10
Positioning repeatability (*)	±0.02mm [±0.03mm]
Lost motion (*)	0.1mm or less [0.2mm or less]
Rod diameter	ø25mm
Rod non-rotation precision	±1.5 deg
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)

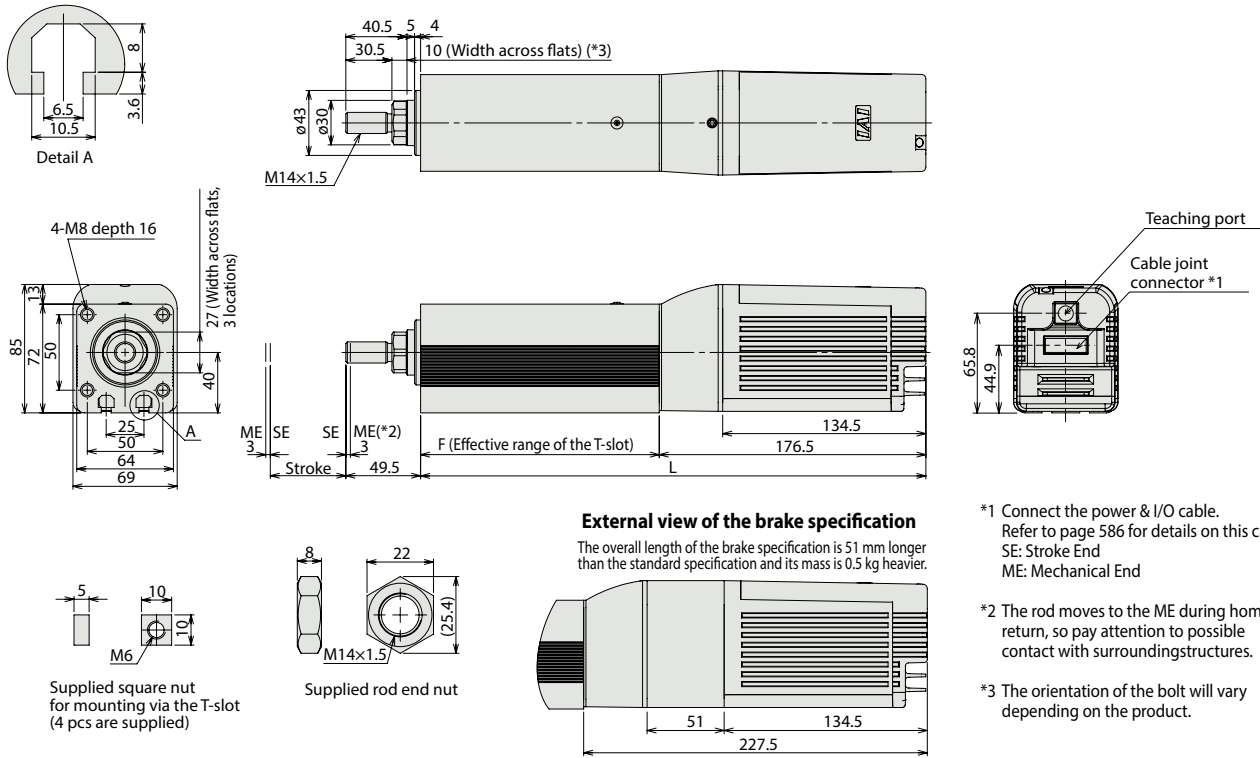
(*) The specification in [] applies when the lead is 20mm.

Dimensional Drawings

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



For Special Orders Appendix P.15



■ Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300
L	334.5	384.5	434.5	484.5	534.5	584.5
F	158	208	258	308	358	408
Weight (kg)	3.9	4.4	4.9	5.4	5.9	6.4

Controllers (Built into the Actuator)

② 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-RA6C-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: 2.2A	—	→ P577
PIO type (PNP specification)		ERC3-RA6C-I-56P-□-□-PN-□-□	I/O type supporting inputs/outputs of the PNP specification often used overseas	16				
SIO type		ERC3-RA6C-I-56P-□-□-SE-□-□	High-function type accommodating up to 512 positioning points (PIO converter is used)	512				
Pulse-train type (NPN specification)		ERC3-RA6C-I-56P-□-□-PLN-□-□	Pulse-train input type supporting the NPN specification	—				
Pulse-train type (PNP specification)		ERC3-RA6C-I-56P-□-□-PLP-□-□	Pulse-train input type supporting the PNP specification	—				