RCP3 ROBO Cylinder

Slider Type
Mini
Standard
Controllers Integrated
Rod Type
Mini
Standard
Controllers Integrated
Table/Arm /Flat Type
Mini
Standard
Gripper/ Rotary Type
Linear Servo Type
Cleanroom Type
Splash-Proof
Controllers
PMEC /AMEC
PSEP /ASEP
ROBO NET
ERC2
PCON
ACON
SCON
PSEL
ASEL
SSEL
XSEL
Pulse Motor
Servo Motor (24V)
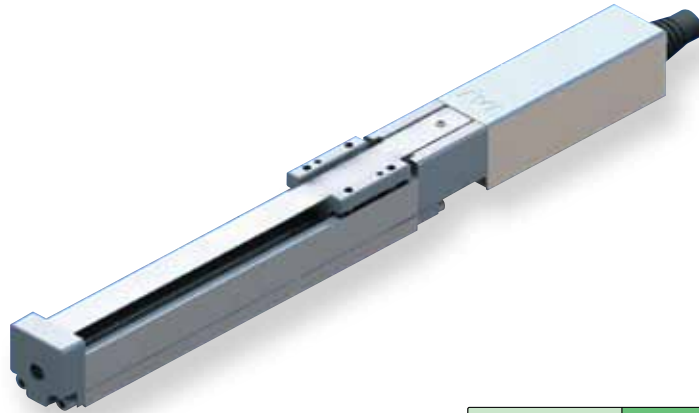Servo Motor (200V)
Linear Servo Motor

RCP3-SA2BC

ROBO Cylinder　Mini Slider Type　Coupled Motor　28mm Width　Pulse Motor Lead Screw

■ Configuration:
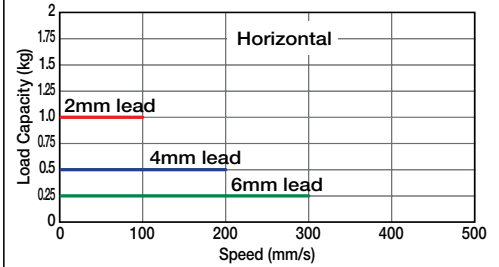
RCP3 — **SA2BC** — **I** — **20P** — [ ] — [ ] — [ ] — [ ] — [ ]

Series	Type	Encoder	Motor	Lead	Stroke	Compatible Controllers	Cable Length	Option
		I: Incremental * The Simple absolute encoder is also considered type "I".	20P: Pulse motor 20☐ size	6S : 6mm lead screw 4S : 4mm lead screw 2S : 2mm lead screw	25 : 25mm ～ 150: 150mm (25mm pitch increments)	P1: PCON RPCON PSEL P3: PMEC PSEP	N : None P : 1m S : 3m M : 5m X☐☐ : Custom Length	NM : Reversed-home

* See page Pre-35 for explanation of each code that make up the configuration name.

■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

Technical References ☞ A-**5**

POINT Notes on Selection

(1) The load capacity is based on operation at an acceleration of 0.2G. This the upper limit for the acceleration.

(2) The actuator cannot be used on its side or in a vertical orientation.

(3) If used in a dusty environment, the service life will decrease significantly.

(4) This model uses a lead screw, therefore please ensure that your usage is appropriate for its characteristics. (See page Pre-42.)

■ Actuator Specifications

■ Lead and Load Capacity

Model	Feed Screw	Lead (mm)	Max. Load Capacity Horizontal (kg)	Max. Load Capacity Vertical (kg)	Positioning Repeatability (mm)	Stroke (mm)
RCP3-SA2BC-I-20P-6S-①-②-③-④	Lead screw	6	0.25	–	±0.05	25～150 (25 increments)
RCP3-SA2BC-I-20P-4S-①-②-③-④		4	0.5	–		
RCP3-SA2BC-I-20P-2S-①-②-③-④		2	1	–		

Legend ① Stroke　② Compatible Controller　③ Cable Length　④ Options

■ Stroke and Maximum Speed

Lead / Stroke	25 (mm)	50 (mm)	75～150 (mm)
6 (Lead screw)	180	280	300
4	180	200	
2	100		

(Unit: mm/s)

① Stroke List

Stroke (mm)	Standard Price
25	-
50	-
75	-
100	-
125	-
150	-

③ Cable List

Type	Cable Symbol	Standard Price
Standard (Robot Cables)	**P** (1m)	–
	S (3m)	–
	M (5m)	–
Special Lengths	**X06** (6m) ～ **X10** (10m)	–
	X11 (11m) ～ **X15** (15m)	–
	X16 (16m) ～ **X20** (20m)	–

* The standard cable for the RCP3 is the robot cable.
* See page A-39 for cables for maintenance.

④ Option List

Name	Option Code	See Page	Standard Price
Reversed-home	NM	→ A-33	-

■ Actuator Specifications

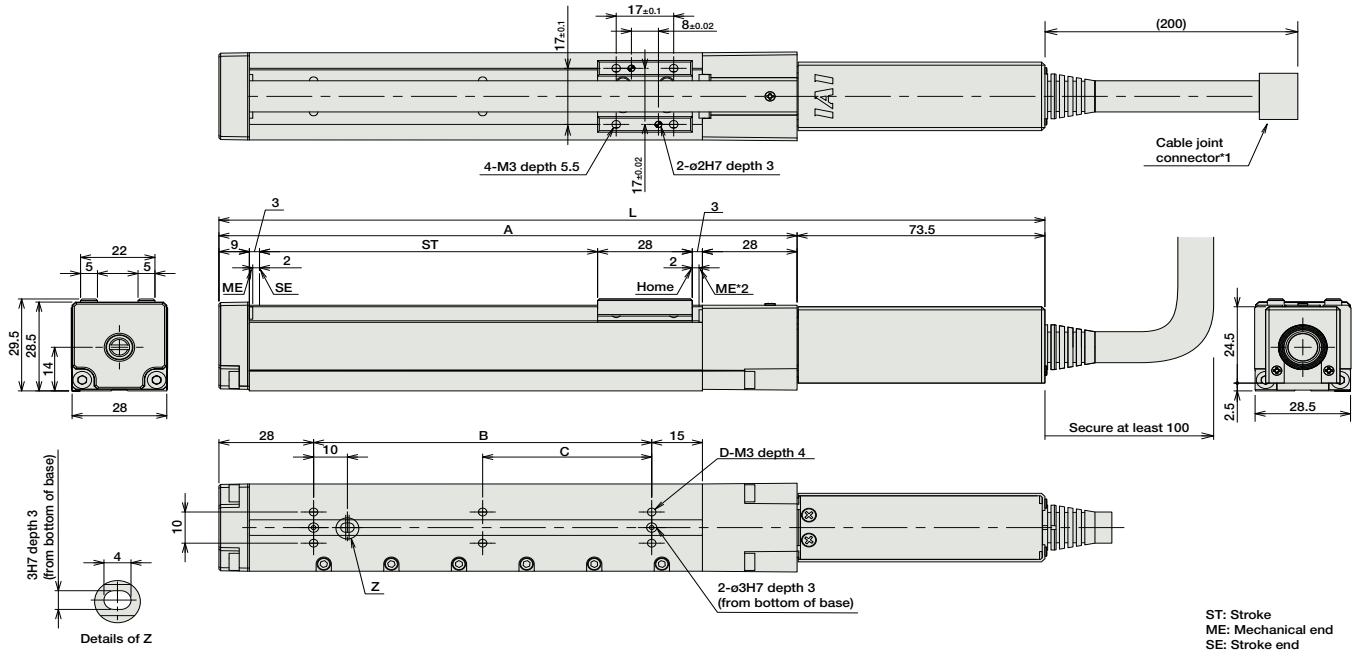| Item	Description
Drive System	Lead screw　Ø6mm　C10 grade
Lost Motion	0.3mm or less (initial value)
Base	Material: Aluminum (white alumite treated)
Guide	Slide guide
Ambient Operating Temp./Humidity	0～40°C, 85% RH or less (non-condensing)
Service Life	10 million cycles

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ROBO NET
ERC2
PCON
ACON
SCON
PSEL
ASEL
SSEL
XSEL
Pulse Motor
Servo Motor (24V)
Servo Motor (200V)
Linear Servo Motor

Dimensions

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

For Special Orders A-9

*1: A motor-encoder cable is connected here. See page A-39 for details on cables.
*2: During the homing operation, the slider moves to actuator's mechanical end, and then reverses. Therefore, watch for any interference with its surroundings.

ST: Stroke
ME: Mechanical end
SE: Stroke end

■ Dimensions/Weight by Stroke

Stroke	25	50	75	100	125	150
L	169.5	194.5	219.5	244.5	269.5	294.5
A	96	121	146	171	196	221
B	25	50	75	100	125	150
C	0	0	0	50	62.5	75
D	4	4	4	6	6	6
Weight (kg)	0.3	0.32	0.35	0.37	0.4	0.42

② Compatible Controllers

The RCP3 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page
Solenoid Valve Type		PMEC-C-20PI-NP-2-①	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	See P481	–	→ P477
		PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.		DC24V	2A Max.	–	→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-20PI-NP-2-0					–	
Positioner Type		PCON-C-20PI-NP-2-0	Positioning is possible for up to 512 points	512 points			–	→ P525
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0					–	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	(–)			–	
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support				–	
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points			–	
Field Network Type		RPCON-20P	Dedicated to field network	768 points			–	→ P503
Program Control Type		PSEL-C-1-20PI-NP-2-0	Programmed operation is possible. Can operate up to 2 axes	1500 points			–	→ P557

* This is for the single-axis PSEL.
* ① is a placeholder for the power supply voltage (1: 100V / 2: 100～240V).