RCS2-A5R

Robo Cylinder, Arm Type, Actuator Width 52mm, 200V Servo Motor, Side-mounted Motor

Model Specification Items: **RCS2** — **A5R** — □ — **20** — □ — □ — □ — □ — □ — □

- **RCS2** Series
- **A5R** Type
- □ Encoder type — I : Incremental, A: Absolute
- **20** Motor type — 20: 20W Servo motor
- □ Lead — 12 : 12mm, 6 : 6mm
- □ Stroke — 50: 50mm ~ 200: 200mm (50mm pitch increments)
- □ Applicable controller — T1: XSEL-J/K, T2: SCON, MSCON, SSEL, XSEL-P/Q, XSEL-R/S
- □ Cable length — N: None, P: 1m, S: 3m, M: 5m, X□□:Custom length, R□□: Robot cable
- □ Options — See options below. * Be sure to specify which side the motor is to be mounted (MB/MR/ML)

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

CE RoHS

*CE compliance is optional.

Technical References → Appendix P.5

POINT — Notes on selection

(1) 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.

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

(3) See page A-71 for details on push motion.

Actuator Specifications

Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Max. Load Capacity Horizontal (kg)	Max. Load Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS2-A5R-①-20-12-②-③-④-B-⑤	20	12	—	2	33.3	50~200 (every 50mm)
RCS2-A5R-①-20-6-②-③-④-B-⑤		6	—	4	65.7	

Stroke and Maximum Speed

Lead \ Stroke	50~200 (every 50mm)
12	400
6	200

(Unit: mm/s)

Code explanation ① Encoder ② Stroke ③ Applicable Controller ④ Cable Length ⑤ Options *See page A-71 for details on push motion.

①Encoder Type/②Stroke

②Stroke (mm)	Standard price ①Encoder Type Incremental I	Standard price ①Encoder Type Absolute A
50	—	—
100	—	—
150	—	—
200	—	—

④Cable Length

Type	Cable symbol	Standard Price
Standard	**P** (1m)	—
	S (3m)	—
	M (5m)	—
Special length	**X06** (6m) ~ **X10** (10m)	—
	X11 (11m) ~ **X15** (15m)	—
	X16 (16m) ~ **X20** (20m)	—
Robot Cable	**R01** (1m) ~ **R03** (3m)	—
	R04 (4m) ~ **R05** (5m)	—
	R06 (6m) ~ **R10** (10m)	—
	R11 (11m) ~ **R15** (15m)	—
	R16 (16m) ~ **R20** (20m)	—

* See page A-59 for cables for maintenance.

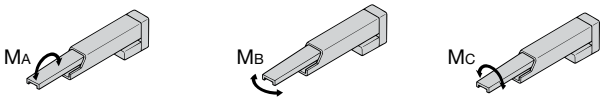
⑤Options

Name	Option code	See page	Standard price
Brake	**B**	→ A-42	—
CE compliance	**CE**	→ A-42	—
Bottom-mounted motor	**MB**	→ A-52	—
Right-mounted motor	**MR**	→ A-52	—
Left-mounted motor	**ML**	→ A-52	—
Non-motor end specification	**NM**	→ A-52	—

Actuator Specifications

Item	Description
Drive System	Ball screw, ø10mm, rolled C10 (ball screw speed reduced by 1/2 by timing belt)
Positioning repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Allowable dynamic moment	Ma: 4.5 N·m, Mb: 5.4 N·m, Mc: 4.1 N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

Directions of allowable load moments



Dimensional Drawings

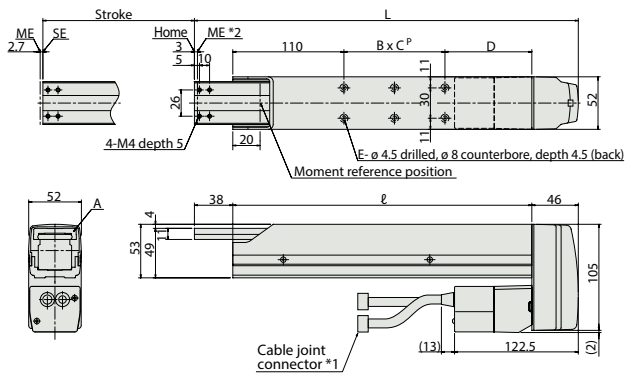
CAD drawings can be downloaded from the website. www.intelligentactuator.com

For Special Orders Appendix P.15

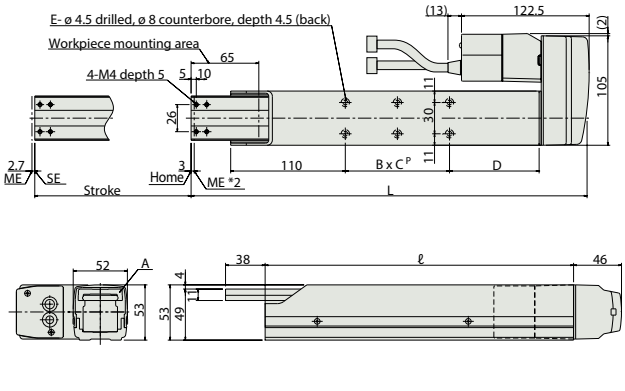
2D CAD 3D CAD

(*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
(*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.
ME : Mechanical end SE : Stroke end

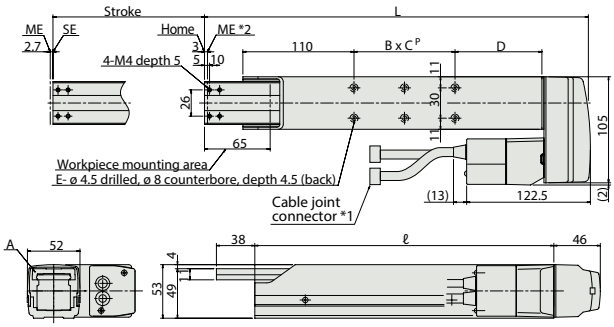
Bottom-mounted motor (option code: MB)

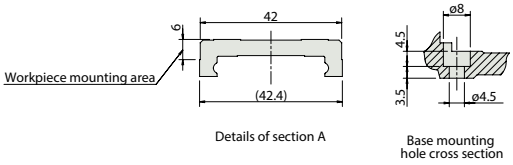


Right-mounted motor (option code: MR)



Left-mounted motor (option code: ML)





■ Dimensions and Weight by Stroke

Stroke	50	100	150	200
L	280	330	380	430
ℓ	196	246	296	346
B x C^P	1×30	1×50	2×50	2×50
D	56	86	86	136
E	4	4	6	6
Weight (kg)	2.2	2.4	2.6	2.8

Note: The 50mm stroke model is only available with a right- or left-mounted motor. Please note that there is no 50mm stroke configuration for the standard model.

③Applicable Controllers

RCS2-series actuators can be operated with the following controllers. Select an appropriate controller type according to your application.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner mode		SCON-CA-20Ⓘ-NP-2-Ⓘⅈ	Up to 512 positioning points are supported.	512 points	Single-phase 100VAC Single-phase 200VAC 3-phase 200VAC (XSEL-P/Q/R/S ONLY)	106 VA max. *Power supply capacity will vary depending on the controller, so please refer to the instruction manual for details.	—	→ P643
Solenoid valve mode			Actuators can be operated through the same control used for solenoid valves.	7 points				
Field network type			Movement by numerical specification is supported.	768 points			—	
Pulse-train input control type			Dedicated pulse-train input type	(–)			—	
Positioner multi-axis, network type		MSCON-C-1-20Ⓘ-Ⓥ-0-Ⓘⅈ	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points			—	→ P655
Program control type, 1 to 2 axes		SSEL-CS-1-20Ⓘ-NP-2-Ⓘⅈ	Program operation is supported. Up to 2 axes can be operated.	20000 points			—	→ P685
Program control type, 1 to 8 axes		XSEL-Ⓘⅈ-1-20Ⓘ-N1-EEE-2-Ⓥ	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axis connected			—	→ P695

* This is for the single-axis MSCON, SSEL, and XSEL.
* Ⓘ indicates the encoder type (I: Incremental / A: Absolute).
* Ⓘⅈ indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V).
* Ⓘⅈ indicates the XSEL type (J / K / P / Q /R / S).
* Ⓥ indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).
* Ⓥ indicates field network specification symbol.