RCS2-F5D

Robo Cylinder, Flat Type, Actuator Width 55mm, 200V Servo Motor, Built-In (Direct-Coupled) Motor

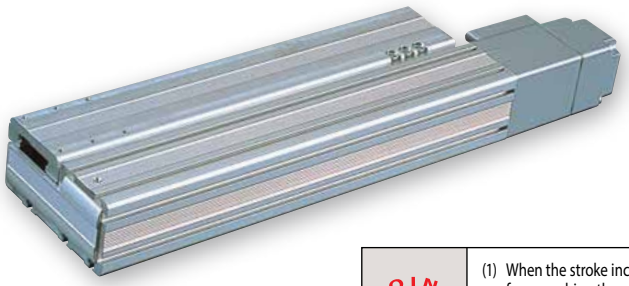
Model Specification Items: **RCS2** — **F5D** — □ — □ — □ — □ — □ — □ — □ — □

- Series: RCS2
- Type: F5D
- Encoder type: I: Incremental; A: Absolute
- Motor type: 60: 60W Servo motor; 100: 100W Servo motor
- Lead: 16: 16mm; 8: 8mm; 4: 4mm
- Stroke: 50: 50mm ~ 300: 300mm (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; R□□: Robot cable
- Options: See options below.

* 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 0.3G (0.2G for the 4mm-lead model). 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-F5D-①-60-16-②-③-④-⑤	60	16	See page A-120	2.0	63.8	50~300 (every 50mm)
RCS2-F5D-①-60-8-②-③-④-⑤		8		5.0	127.5	
RCS2-F5D-①-60-4-②-③-④-⑤		4		11.5	255.1	
RCS2-F5D-①-100-16-②-③-④-⑤	100	16		3.5	105.8	
RCS2-F5D-①-100-8-②-③-④-⑤		8		9.0	212.7	
RCS2-F5D-①-100-4-②-③-④-⑤		4		18.0	424.3	

Stroke and Maximum Speed

Lead \ Stroke	50~300 (every 50mm)
16	800
8	400
4	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, Motor Output (W) 60W	Incremental 100W	Absolute 60W	Absolute 100W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

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

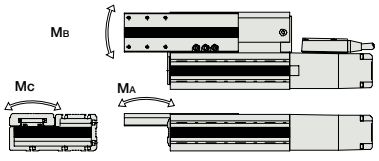
Name	Option code	See page	Standard price
Brake	**B**	→ A-42	—
CE compliance	**CE**	→ A-42	—
Non-motor end specification	**NM**	→ A-52	—

Actuator Specifications

Item	Description
Drive System	Ball screw, ø12mm, rolled C10
Positioning repeatability	±0.02mm
Lost Motion	0.05mm 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)

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

Directions of allowable load moments



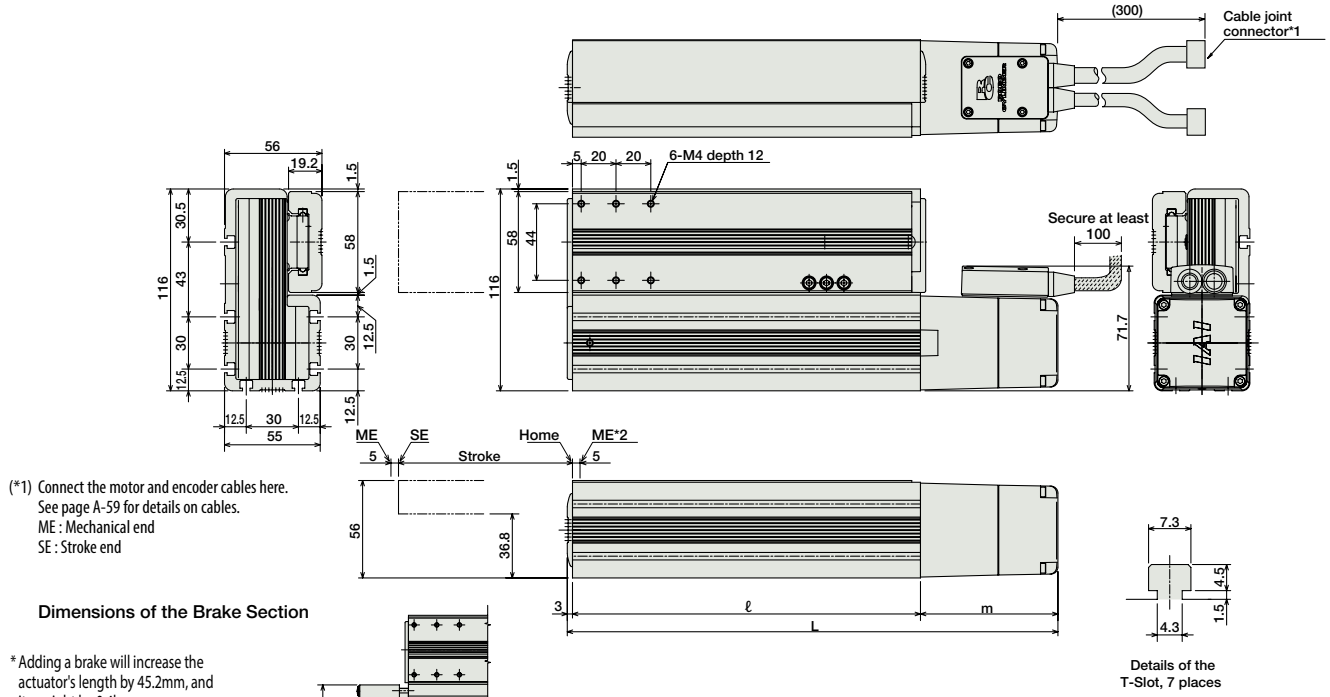
Dimensional Drawings

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

2D CAD 3D CAD

*To change the direction of the home position, arrangements must be made to send in the product. Please make a note of it.

For Special Orders Appendix P.15

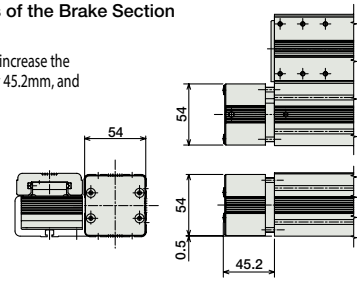


(*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
ME : Mechanical end
SE : Stroke end

Details of the T-Slot, 7 places

Dimensions of the Brake Section

*Adding a brake will increase the actuator's length by 45.2mm, and its weight by 0.4kg.



■ Dimensions and Weight by Stroke

Stroke		50	100	150	200	250	300
L	60W	232	282	332	382	432	482
	100W	250	300	350	400	450	500
ℓ		150	200	250	300	350	400
m	60W	79					
	100W	97					
Weight (kg)	60W	2.1	2.5	3	3.4	3.9	4.3
	100W	2.3	2.7	3.2	3.6	4.1	4.5

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-60Ⓘ-NP-2-Ⓘ SCON-CA-100Ⓘ-NP-2-Ⓘ	Up to 512 positioning points are supported.	512 points	Single-phase 100VAC Single-phase 200VAC 3-phase 200VAC (XSEL-P/Q/R/S ONLY)	314 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			Refer to P644	
Pulse-train input control type			Dedicated pulse-train input type	(–)			—	
Positioner multi-axis, network type		MSCON-C-1-60Ⓘ-Ⓥ-0-Ⓘ MSCON-C-1-100Ⓘ-Ⓥ-0-Ⓘ	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points			Refer to P656	→ P655
Program control type, 1 to 2 axes		SSEL-CS-1-60Ⓘ-NP-2-Ⓘ SSEL-CS-1-100Ⓘ-NP-2-Ⓘ	Program operation is supported. Up to 2 axes can be operated.	20000 points			—	→ P685
Program control type, 1 to 8 axes		XSEL-Ⓙ-1-60Ⓘ-N1-EEE-2-Ⓥ XSEL-Ⓙ-1-100Ⓘ-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).
* Ⓘ indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V).
* Ⓙ 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.