

RCS3-SS8C

ROBO Cylinder, Slider Type, Actuator Width 80mm, 200-V Servo Motor, Iron Base, Coupled

RCS3P-SS8C

ROBO Cylinder, Slider Type, Actuator Width 80mm, 200-V Servo Motor, Iron Base, Coupled

High-precision specification

Model Specification Items	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
	RCS3: Standard specification RCS3P: High-precision specification	SS8C	I: Incremental A: Absolute	100: Servo motor, 100W 150: Servo motor, 150W	30: 30mm 20: 20mm 10: 10mm 5: 5mm	50: 50mm ? 1000: 1000mm (50mm pitch increments)	T1: XSEL-J/K T2: SCON MSCON SSEL XSEL-P/Q XSEL-R/S	N: None P: 1m S: 3m M: 5m X□□: Custom length R□□: Robot cable	See Options below. *Be sure to specify a code indicating your desired cable exit direction.

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



*CE compliance is optional.



Technical References Appendix P.5

- POINT**
Notes on selection
- (1) When the stroke is increased, the maximum speed will drop to prevent reaching dangerous speeds of ball screws. Confirm the maximum speed at the desired stroke by referring to the table of strokes and maximum speeds below.
 - (2) The payload represents a value when the actuator is operated at a horizontal acceleration of 0.3 G (lead 5: 0.2 G) and vertical acceleration of 0.2 G.
 - (3) The payload drops when the acceleration is raised. For details, refer to the list of payloads by acceleration provided on page A-108.
 - (4) See page A-71 for details on push motion.

Actuator Specifications

Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS3[RCS3P]-SS8C-①-100-30-②-③-④-⑤	100	30	8	2	56.6	50 to 1000 (every 50mm)
RCS3[RCS3P]-SS8C-①-100-20-②-③-④-⑤		20	20	4	84.9	
RCS3[RCS3P]-SS8C-①-100-10-②-③-④-⑤		10	40	8	169.8	
RCS3[RCS3P]-SS8C-①-100-5-②-③-④-⑤		5	80	16	339.7	
RCS3[RCS3P]-SS8C-①-150-30-②-③-④-⑤	150	30	12	3	85.1	
RCS3[RCS3P]-SS8C-①-150-20-②-③-④-⑤		20	30	6	127.6	
RCS3[RCS3P]-SS8C-①-150-10-②-③-④-⑤		10	60	12	255.3	

Code explanation ① Encoder type ② Stroke ③ Applicable Controller ④ Cable length ⑤ Options *See page A-71 for details on push motion. (Unit: mm/s)

Stroke and Maximum Speed

Stroke Lead	50 to 650 (every 50mm)									
	50	60	70	75	80	85	90	95	100	
30	1800	1660	1460	1296	1155	1035	935	8530	775	
20	1200	1105	970	860	770	690	625	565	515	
10	600	550	485	430	385	345	310	280	255	
5	300	275	240	215	190	170	150	140	125	

① Encoder Type / ② Stroke

② Stroke (mm)	Standard Prices							
	RCS3-SS8C				RCS3P-SS8C			
	① Encoder Type		① Encoder Type		① Encoder Type		① Encoder Type	
	Incremental	Absolute	Incremental	Absolute	Incremental	Absolute	Incremental	Absolute
Motor wattage	Motor wattage	Motor wattage	Motor wattage	Motor wattage	Motor wattage	Motor wattage	Motor wattage	
100W	150W	100W	150W	100W	150W	100W	150W	
50/100	—	—	—	—	—	—	—	
150/200	—	—	—	—	—	—	—	
250/300	—	—	—	—	—	—	—	
350/400	—	—	—	—	—	—	—	
450/500	—	—	—	—	—	—	—	
550/600	—	—	—	—	—	—	—	
650/700	—	—	—	—	—	—	—	
750/800	—	—	—	—	—	—	—	
850/900	—	—	—	—	—	—	—	
950/1000	—	—	—	—	—	—	—	

④ Cable Length

Type	Cable symbol	Standard price
Standard type	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.

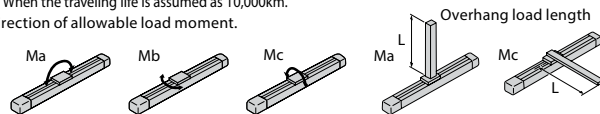
⑤ Options

Name	Option code	Page	Standard Price
Cables exit from back left	A1E	→ A-41	—
Cables exit from left side	A1S	→ A-41	—
Cables exit from back right	A3E	→ A-41	—
Cables exit from right side	A3S	→ A-41	—
Brake	B	→ A-42	—
CE compliance	CE	→ A-42	—
Non-motor end specification	NM	→ A-52	—
Slider roller specification	SR	→ A-55	—

Actuator Specifications RCS3P specifications are shown in []. (Other items are the same.)

Item	Description
Drive method	Ball screw, ø16mm, rolled C10 [rolled C5]
Positioning repeatability	±0.02mm [±0.01mm]
Lost motion	0.1mm [0.05mm] or less
Base	Material: Dedicated alloy steel
Allowable static moment	Ma: 198.9 N·m, Mb: 198.9 N·m, Mc: 416.7 N·m
Allowable dynamic moment (*)	Ma: 36.3 N·m, Mb: 36.3 N·m, Mc: 77.4 N·m
Overhang load length	450mm max. in Ma direction, 450mm max. in Mb/Mc directions
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)

(*) When the traveling life is assumed as 10,000km. Direction of allowable load moment.



Dimensional Drawings

CAD drawings can be downloaded from the website.

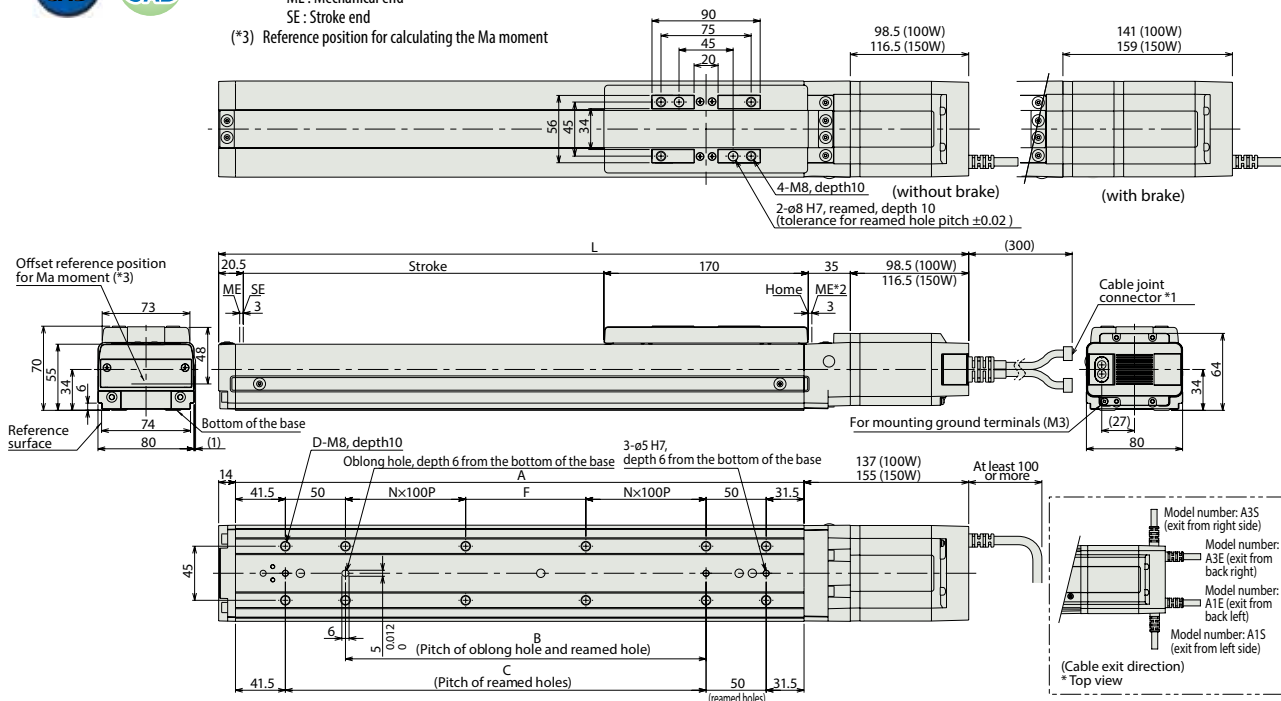
www.intelligentactuator.com

For Special Orders

Appendix P.15



- (*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
- (*3) Reference position for calculating the Ma moment



Dimensions and Weights by Stroke

L	Stroke	Stroke Length (mm)																			
		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
100W	without brake	374	424	474	524	574	624	674	724	774	824	874	924	974	1024	1074	1124	1174	1224	1274	1324
	with brake	416.5	466.5	516.5	566.5	616.5	666.5	716.5	766.5	816.5	866.5	916.5	966.5	1016.5	1066.5	1116.5	1166.5	1216.5	1266.5	1316.5	1366.5
150W	without brake	392	442	492	542	592	642	692	742	792	842	892	942	992	1042	1092	1142	1192	1242	1292	1342
	with brake	434.5	484.5	534.5	584.5	634.5	684.5	734.5	784.5	834.5	884.5	934.5	984.5	1034.5	1084.5	1134.5	1184.5	1234.5	1284.5	1334.5	1384.5
A		223	273	323	373	423	473	523	573	623	673	723	773	823	873	923	973	1023	1073	1123	1173
B		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
D		8	8	8	10	12	12	12	14	16	16	18	20	20	20	22	24	24	24	24	26
F		50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
N		0	0	0	1	1	1	1	2	2	2	3	3	3	3	4	4	4	4	4	5
Weight (kg)	100W	5.1	5.6	6.2	6.7	7.3	7.8	8.4	8.9	9.5	10.0	10.6	11.1	11.7	12.2	12.8	13.3	13.9	14.4	15.0	15.5
	150W	5.1	5.7	6.2	6.8	7.3	7.9	8.4	9.0	9.5	10.1	10.6	11.2	11.7	12.3	12.8	13.4	13.9	14.5	15.0	15.6

Applicable Controllers

RCS3-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-100①-NP-2-①② SCON-CA-150①-NP-2-①②	Up to 512 positioning points are supported.	512 points	Single-phase 100VAC Single-phase 200VAC 3-phase 200VAC (XSEL-P/Q/R/S ONLY)	388 VA max. * 1-axis specification operated at 150W	—	→ 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-1-100①-④-V-0-①② MSCON-C-1-150①-④-V-0-①②	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points	3-phase 200VAC (XSEL-P/Q/R/S ONLY)	388 VA max. * 1-axis specification operated at 150W	—	→ P655		
Program control type, 1 to 2 axes		SSEL-CS-1-100①-NP-2-①② SSEL-CS-1-150①-NP-2-①②	Program operation is supported. Up to 2 axes can be operated.	20,000 points					—	→ P685
Program control type, 1 to 8 axes		XSEL-①②-1-100①-N1-EEE-2-④⑤ XSEL-①②-1-150①-N1-EEE-2-④⑤	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected						

* This is for the single-axis MSCON, SSEL, and XSEL.
 * ① indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V).
 * ② indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V / 3: Three-phase 200V).
 * ④ indicates the encoder type (I: Incremental / A: Absolute).
 * ⑤ indicates the XSEL type (J / K / P / Q / R / S).
 * ④ indicates field network specification symbol.

Slider Type

Mini

Standard

Controllers Integrated

Rod Type

Mini

Standard

Controllers Integrated

Table/ Arm/ Flat Type

Mini

Standard

Gripper/ Rotary Type

Linear Servo Type

Clean-room Type

Splash-Proof Type

Pulse Motor

Servo Motor (24V)

Servo Motor (200V)

Linear Servo Motor