



Single Axis Robots RSB1 - Belt Type



CE Compliant

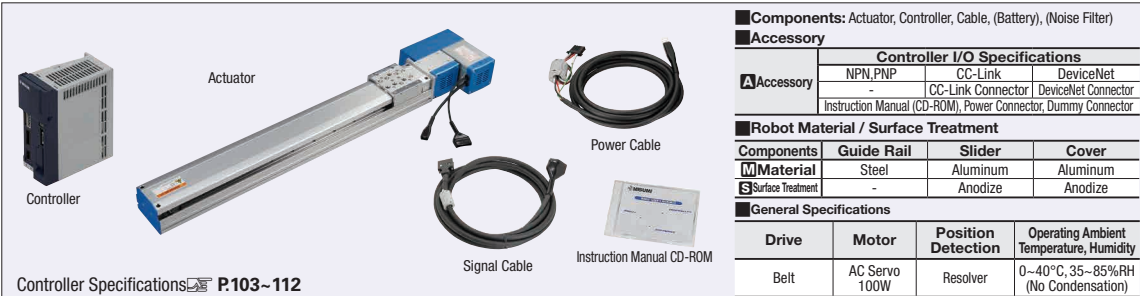
See notes on CE Marking. P.49

CAD Data Folder Name: 07_Actuator

When placing order, select part numbers and values by proceeding through Selection Steps ①~⑥.

Ordering Example: Part Number (Type) - ① Motor Mounting Direction - ② Controller - ③ I/O Module - ④ Noise Filter - ⑤ Cable Length - ⑥ Stroke

RSB1 - L - C21A - N - F1 - 5 - 2550



Components: Actuator, Controller, Cable, (Battery), (Noise Filter)

Accessory

Controller I/O Specifications			
Accessory	NPN_PNP	CC-Link	DeviceNet
	-	CC-Link Connector	DeviceNet Connector
		Instruction Manual (CD-ROM), Power Connector, Dummy Connector	

Robot Material / Surface Treatment

Components	Guide Rail	Slider	Cover
M Material	Steel	Aluminum	Aluminum
S Surface Treatment	-	Anodize	Anodize

General Specifications

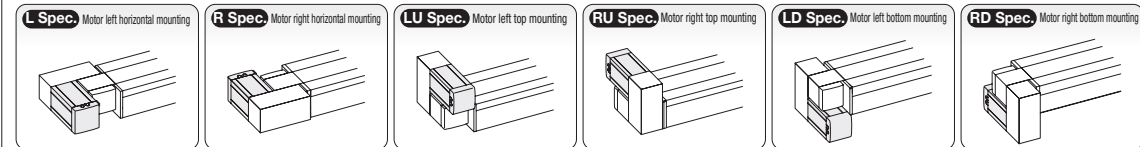
Drive	Motor	Position Detection	Operating Ambient Temperature, Humidity
Belt	AC Servo 100W	Resolver	0~40°C, 35~85%RH (No Condensation)

Controller Specifications P.103~112

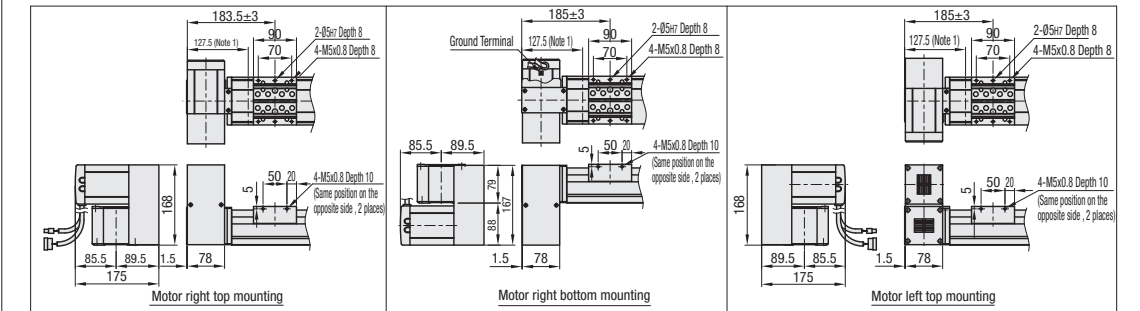
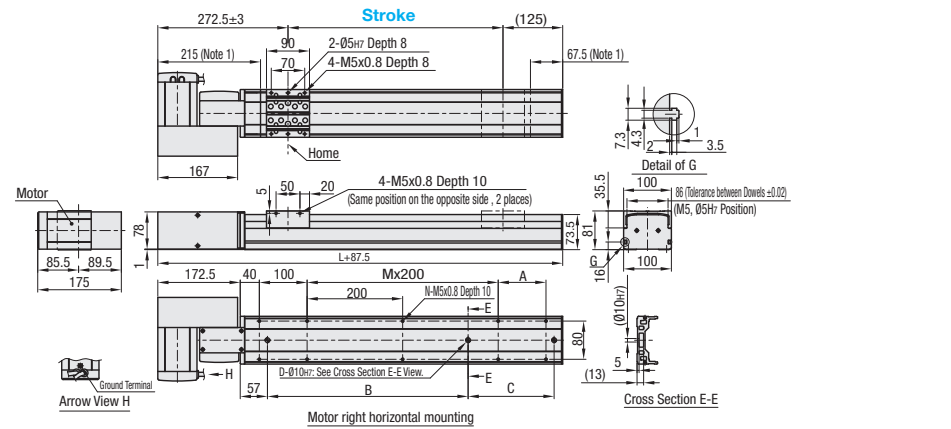
Standard Specifications FAQ P.110

Type	Belt (mm)	Positioning Repeatability (mm)	Max Load Capacity (kg) (Horizontal only)	Stroke (mm)	Rated Running Life (Note)	Input Power Supply	Maximum Positioning Point
RSB1	Lead 25 Equivalent	±0.04	10	150~2550 (50mm Pitch)	10,000km	AC100V~115V AC200~230V ±10%	255 points

Motor Mounting Direction Select motor mounting direction from the following six types:



(Note) Reference running life value with the max. overhang load on the guides.



Note 1. Mechanical stopper position from the ends.

Part Number		Selection						
Type	① Motor Mounting Direction	② Controller (①)		③ I/O Module	④ Noise Filter (②)	⑤ Cable	⑥ Stroke (mm)	
RSB1	Motor left horizontal: L	Specifications Power Supply AC100V~ AC200~230V	Absolute Encoders (w/ Data Storage Battery)	Incremental Type	NPN: N PNP: P CC-Link: C DeviceNet: D	Not Provided: F0 Provided: F1 Specifications P.115	Standard 3.5m: 3 5m: 5 10m: 10	Flexible 3.5m: R3 5m: R5 10m: R10
	Motor right horizontal: R							
	Motor left top: LU							
	Motor right top: RU							
	Motor left bottom: LD							
Motor right bottom: RD								

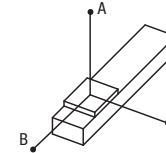
① Controllers are shipped with preset parameters for each type. Data storage batteries are outside the scope of RoHS Directive. ② A noise filter is required for this product. When the customer is purchasing the noise filter separately, please select "none". Be sure to install a surge absorber on the primary side of a noise filter. For details, please see the Instruction Manual.

Dimensions / Mass

TYPE	Dimensions / Mass	Stroke (mm)																								
		150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
RSB1	L (mm)	460	510	560	610	660	710	760	810	860	910	960	1010	1060	1110	1160	1210	1260	1310	1360	1410	1460	1510	1560	1610	1660
	A (mm)	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
	B (mm)	240																								
	C (mm)	420																								
	D (mm)	600																								
	M (mm)	780																								
	N (mm)	960																								
	Mass (kg)	7.4	7.8	8.2	8.6	9	9.4	9.8	10.1	10.5	10.9	11.3	11.7	12.1	12.5	12.9	13.3	13.7	14.1	14.5	14.9	15.3	15.7	16.1	16.5	16.9
	L (mm)	1710	1760	1810	1860	1910	1960	2010	2060	2110	2160	2210	2260	2310	2360	2410	2460	2510	2560	2610	2660	2710	2760	2810	2860	
	A (mm)	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	
B (mm)	1320																									
C (mm)	780																									
D (mm)	960																									
M (mm)	1140																									
N (mm)	1320																									
Mass (kg)	17.3	17.7	18	18.4	18.8	19.2	19.6	20	20.4	20.8	21.2	21.6	22	22.4	22.8	23.2	23.6	24	24.4	24.8	25.2	25.6	25.9	26.3		

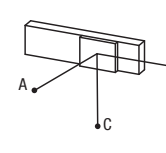
Allowable Overhang Load

Horizontal Use



mm	A	B	C
3kg	1800	1392	1084
5kg	1574	826	696
8kg	1221	509	474
10kg	1171	403	407

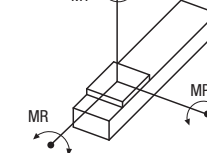
Wall Mounted Use



mm	A	B	C
3kg	1144	1005	1734
5kg	724	576	1199
8kg	493	333	918
10kg	414	254	869

Allowable Static Moment

Moment Diagram MY



(Unit: N·m)		
MY	MP	MR
188	188	165

Max. Velocity (mm/sec)

Part Number	Stroke (mm)	
	150~350	450~2250
RSB1	~1750	1875

Note

Power interruption circuit is not provided in this controller in order to provide maximum flexibility for customer specific safety scheme. An external main power shutoff circuit to form an emergency stop circuit must be provided.
Circuit Examples See P.109.

FAQ

- Q1. The actuator does not move.
A1. When activating an actuator using Support Software or Handset Terminal, invalidate Option Parameter (No. 80). (Option Valid = I/O Terminal Valid, Option Invalid = I/O Terminal Invalid). Then turn the servo status "ON" and operate the homing procedure. After the completion of homing, start the operation by turning on "Operation".
- Q2. LED light is on. Is there a controller defect?
A2. Blue: PWR (OFF: Control Power Shutoff, Blink: Servo OFF, ON: Servo ON), Red: ERR (OFF: Control Power Shutoff / No Error Alarm, Blink: Error Alarm On (External Factor), ON: Error Alarm On (Internal Factor))
- Q3. Teaching cannot be conducted by via I/O.
A3. To conduct teaching via I/O, the status needs to be ON for MANUAL input and OFF for Interlock input. Note that it does not function in the state of "Homing Incomplete".
- Q4. Is low-speed operation possible?
A4. Possible, however, 10 to 20% of max. velocity is the limit depending on the lead.

Days to Ship: 10 Days

Alterations: Part Number - Motor Mounting Direction - Controller Type - I/O Type - W/ or w/o Noise Filter - Cable Length - Stroke

RSB1 - L - C21A - N - F1 - 5 - 2550

Alterations	Grease Type Alteration	Change of Home Position	Handset Terminal Standard Specification	Handset Terminal w/ Deadman's Switch	Support Software w/ USB Communication Cable	Support Software w/ D-Sub Communication Cable	I/O Cable	Cable for daisy-chain connection	Instruction Manual
Code	G	E	H	D	S	R	T	C	ME5/KE3
Spec.	Grease is changed to low particle generation grease. (NSK LG2)	The home position is relocated to the opposite side of the motor.	Handset Terminal is included. Specifications P.109, 113	Handset Terminal w/ Deadman's Switch is included. Specifications P.109, 113	Support Software w/ USB Communication Cable is included. Specifications P.109, 113	Support Software w/ D-Sub Communication Cable is included. Specifications P.109, 113	I/O Cable is included. Required for NPN/PNP configurations. Up to 16 controllers can be connected. Specifications P.109, 113	A cable to connect multiple controllers. Up to 16 controllers can be connected. Specifications P.111, 113	Operation Manual is included.

For optional items, see P.113. It is more economical to order the optional items as alterations than purchasing them individually.

Entering point data requires the handy terminal or the support software.

An I/O Cable is required for Parallel Communication I/O Control.