Single Axis Robots RSB2 - Belt Type

NEW

RS SINGLE AXIS ROBOT

CE Compliant

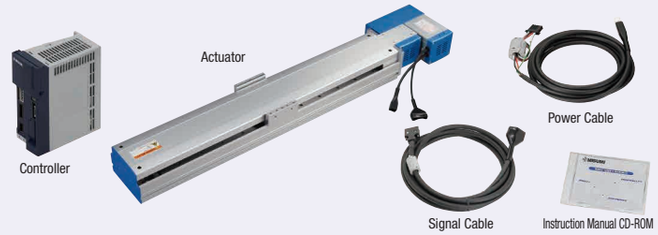
See notes on CE Marking. P.49

CAD Data Folder Name: 07_Actuator

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

Ordering Example

Part Number (Type)	❶ Motor Mounting Direction	❷ Controller	❸ I/O Module	❹ Noise Filter	❺ Cable Length	❻ Stroke
RSB2	L	C21A	N	F1	5	2550



Controller Specifications P.103~112

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

Accessory

	Controller I/O Specifications		
A 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

For General Use

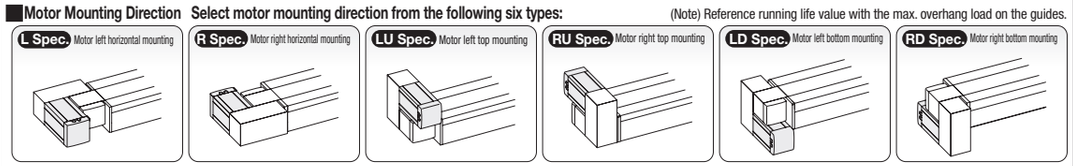
Drive	Motor	Position Detection	Operating Ambient Temperature, Humidity
Belt	AC Servo 100W	Resolver	0~40°C, 35~85%RH (No Condensation)

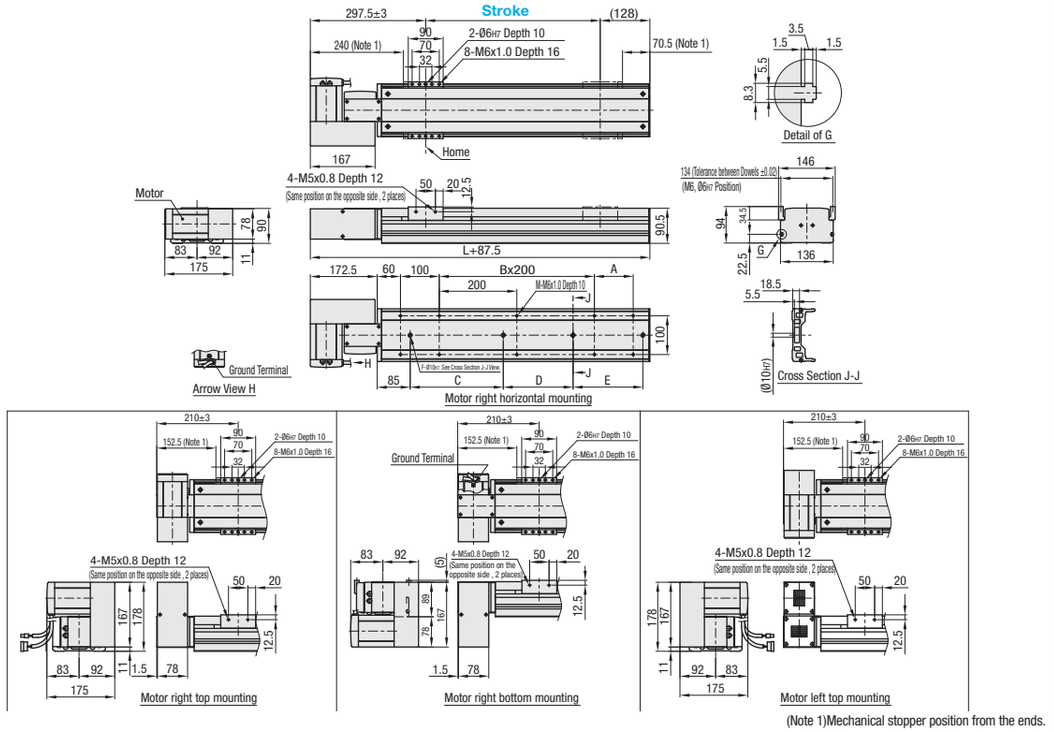
Standard Specifications FAQ P.110

Type	Belt (mm)	Repeatability (mm)	Max Load Capacity (kg) (Horizontal only)	Stroke (mm)	Rated Running Life (Note)	Controller Input Power Supply	Maximum Positioning Point
RSB2	Lead 25 Equivalent	±0.04	20	150~3050 (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	❶ Motor Mounting Direction	❷ Controller (1)	❸ I/O Module	❹ Nose Filter (2)	❺ Cable	❻ Stroke (mm)
RSB2	Motor left horizontal: L Motor right horizontal: R Motor left top: LU Motor right top: RU Motor left bottom: LD Motor right bottom: RD	Specifications / Power Supply: Absolute Encoders (w/ Data Storage Battery) / Incremental Type AC100~: C21A / C21B AC200~230V: C22A / C22B	NPN: N PNP: P CC-LINK: C DeviceNet: D	Not Provided: F0 Provided: F1 Specifications P.115	Standard / Flexible 3.5m: 3 / 3.5m: R3 5m: 5 / 5m: R5 10m: 10 / 10m: R10	150~3050 (50mm Increment)

(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.

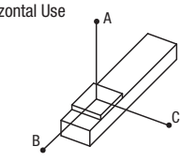
Dimensions / Mass

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	1400	1450	1500	1550	1600
	L (mm)	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938
	M (mm)	6	8				10					12			14				16					18				20			22
	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	50	100	150	200	50
	B (mm)	1					2					3			4				5					6				7			8
	C (mm)	240			420		600					780				960			1140												
	D (mm)	-																						240				420			600
	E (mm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	F (mm)	2																						3							
	Mass (kg)	9.6	10.2	10.8	11.4	12	12.5	13.1	13.7	14.3	14.9	15.5	16	16.6	17.2	17.8	18.4	19	19.5	20.2	20.7	21.3	21.9	22.5	23.1	23.7	24.2	24.8	25.4	26	26.6

TYPE	Dimensions / Mass	Stroke (mm)																													
		1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050
RSB2	L (mm)	1988	2038	2088	2138	2188	2238	2288	2338	2388	2438	2488	2538	2588	2638	2688	2738	2788	2838	2888	2938	2988	3038	3088	3138	3188	3238	3288	3338	3388
	M (mm)	22			24				26				28				30				32				34				36	
	A (mm)	100	150	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	50	100
	B (mm)	8			9				10				11				12				13				14				15	
	C (mm)	1140																												
	D (mm)	600			780				960				1140																	
	E (mm)	-															240				420			600				780		
	F (mm)	3															4													
	Mass (kg)	27.2	27.7	28.3	28.9	29.5	30.1	30.7	31.3	31.9	32.4	33	33.6	34.2	34.8	35.4	35.9	36.5	37.1	37.7	38.3	38.9	39.4	40	40.6	41.2	41.8	42.4	43	43.6

Allowable Overhang Load

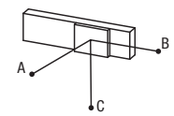
・Horizontal Use



mm

	A	B	C
5kg	2159	1228	943
10kg	1389	623	548
20kg	1102	320	348

・Wall Mounted Use

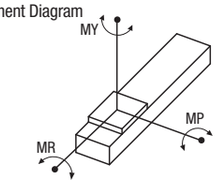


mm

	A	B	C
5kg	1064	816	1468
10kg	564	377	888
20kg	305	156	615

Allowable Static Moment

・Moment Diagram



N・m

MY	MP	MR
226	227	199

Max. Velocity (mm/sec) Please confirm the details of the Max. Speeds based on various strokes with MISUMI web Simulator.

Part Number	Stroke (mm)	
	150~350	450~3050
RSB2	~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. For 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	Noise Filter	Cable Length	Stroke
RSB2	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. Specifications P.109 , 113	A cable to connect multiple controllers. Up to 16 controllers can be connected. Specifications P.111 , 113	ME5: Body KE3:Controller (C1) Details P.114 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.