Single Axis Robots Clean Spec. RS2C - Straight

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 ❶~❼.

Ordering Example

Part Number (Type, ❶ Lead, ❷ With or w/o Brake)	-	❸ Fitting Mounting Direction	-	❹ Controller	-	❺ I/O Module	-	❻ Cable Length	-	❼ Stroke
RS2C06B	-	R	-	C1	-	N	-	3	-	400

Features: The fitting for air suction is included with as the standard equipment, and the low dust generation grease is adopted.

Controller Specifications P.103~112

■**Components:** Actuator, Controller, Cable

■**Accessory**

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

■**Robot Material / Surface Treatment**

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

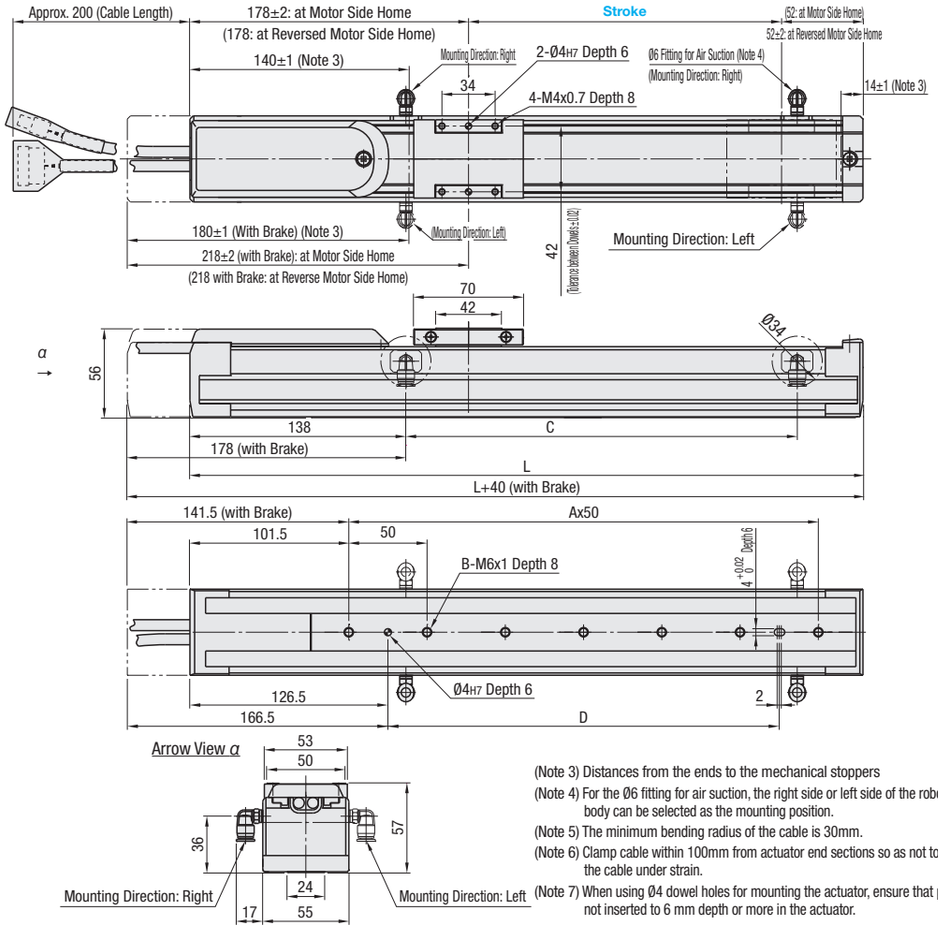
■**General Specifications**

Ball Screw	Motor	Position Detector	Operating Ambient Temperature, Humidity
Ø12 (C10 Rolled)	Stepping	Resolver (Incremental)	0~40°C , 35~85%RH (No Condensation)

■**Standard Specifications** FAQ P.110

Type	Lead (mm)	Repeatability (mm)	Max. Load Capacity (kg) Horizontal	Max. Load Capacity (kg) Vertical	Max. Push Force (N)	Stroke (mm)	Max. Velocity (Note 1) (mm/sec)	Rated Running Life	Controller Input Power Supply	Maximum Positioning Point	Cleanliness (Note 2)	Sucked Amount (ℓ/min)
RS2C	06	±0.02	10	2	90	50~800 (50 Pitch)	300~190	10,000 km or More	DC24V ±10%	255 points	CLASS10 (Based on 0.1μm particle per 1cf)	90
	12		6	1	45		600~380					
	20		4	-	27		1000~633					

(Note 1) Maximum velocities allowed may vary depending on the stroke length selected. Please refer to the "Max Velocity" table. (Note 2) When the Suction Blower is used with the sucked amount of 90ℓ/min



(Note 3) Distances from the ends to the mechanical stoppers

(Note 4) For the Ø6 fitting for air suction, the right side or left side of the robot main body can be selected as the mounting position.

(Note 5) The minimum bending radius of the cable is 30mm.

(Note 6) Clamp cable within 100mm from actuator end sections so as not to put the cable under strain.

(Note 7) When using Ø4 dowel holes for mounting the actuator, ensure that pin is not inserted to 6 mm depth or more in the actuator.

Part Number			Selection				
Type	❶ Lead (mm)	❷ With or w/o Brake (?1)	❸ Fitting Mounting Direction	❹ Controller	❺ I/O Module	❻ Cable Length (m)	❼ Stroke (mm)
RS2C	06 12 20	W/o Brake: Leave blank With Brake: B	Right: R Left: L	Point Control: C1 Pulse Control: P1 (DC24V ±10%)	NPN: N PNP: P CC-Link: C DeviceNet: D	1 3 5 10 (Flexible Cable)	50~ 800 (50mm Increment)

(?1) Choose the "With Brake" option for use in vertical applications. (W/ brake type is not available for Lead 20)

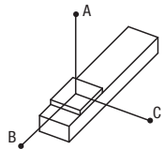
■**Dimensions / Mass**

Type	Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
RS2C	L (mm)	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030
	A	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	B	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	C (mm)	90	140	190	240	290	340	390	440	490	540	590	640	690	740	790	840
	D (mm)	100	150	200	250	300	350	400	450	500	500	500	500	500	500	500	500
	Mass (kg)	2.1	2.3	2.5	2.7	2.9	3.1	3.3	3.5	3.7	3.9	4.1	4.3	4.5	4.6	4.8	5.0

(?)The brake adds 0.2 kg to the total mass.

■**Allowable Overhang Load**

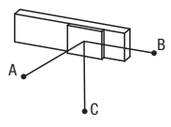
· Horizontal Use



mm

Lead	Mass	A	B	C
06	10kg	344	29	62
	8kg	332	37	79
	4kg	503	78	165
12	6kg	335	47	95
	4kg	347	72	139
20	4kg	334	67	120
	2kg	413	139	218

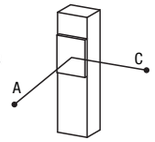
· Wall Mounted Use



mm

Lead	Mass	A	B	C
06	8kg	47	22	355
	6kg	76	35	377
	4kg	134	63	496
12	6kg	63	31	263
	4kg	109	57	300
20	4kg	92	51	265
	2kg	192	123	372

· Vertical Use

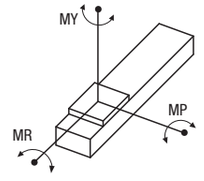


mm

Lead	Mass	A	C
06	2kg	148	148
	1kg	312	312
12	1kg	286	286
	0.5kg	578	579

■**Allowable Static Moment**

· Moment Diagram



N · m

MY	MP	MR
25	33	30

■**Max. Velocity (mm/sec)**

Type	Lead (mm)	Stroke (mm) 50~600	650	700	750	800
RS2C	06	300	280	250	220	190
	12	600	560	500	440	380
	20	1000	933	833	733	633

Note

Power interruption circuit is not provided in this controller in order to provide maximum flexibility for customer specific safety scheme.
Please be sure to provide an external power interruption circuit and form an emergency stop circuit. 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: **7** Days

Alterations

Part Number	-	Fitting Mounting Direction	-	Controller Type	-	I/O Type	-	Cable Length	-	Stroke	-	(E , H···etc.)
RS2C06B	-	R	-	C1	-	N	-	3	-	400	-	E-H

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	Main Body Plastic Color Alterations
							T: Controller C1 TP: Controller P1		ME5: Body KE3:Controller (C1) KE4:Controller (P1) Details P.114	
Code	G	E	H	D	S	R	T/TP	C	ME5/KE3/KE4	BC
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. For Specifications, see 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	Operation Manual is included.	Change the actuator plastic parts color to black.

(?)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. (?)Please select the correct I/O cable type for the appropriate controller type.

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