



# Single Axis Robots Clean Spec. RS3C - Straight



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 ①-⑦.

Ordering Example: Part Number (Type, ① Lead, ② With or w/o Brake) - ③ Fitting Mounting Direction - ④ Controller - ⑤ I/O Module - ⑥ Cable Length - ⑦ Stroke

RS3C06B - 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.

**Components: Actuator, Controller, Cable**

**Accessory**

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

**Robot Material / Surface Treatment**

Components	Guide Rail	Slider	Side Cover
Material	Steel	Aluminum	Aluminum
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)

Black plastic specification is applied to the main body. (Please specify as alterations)

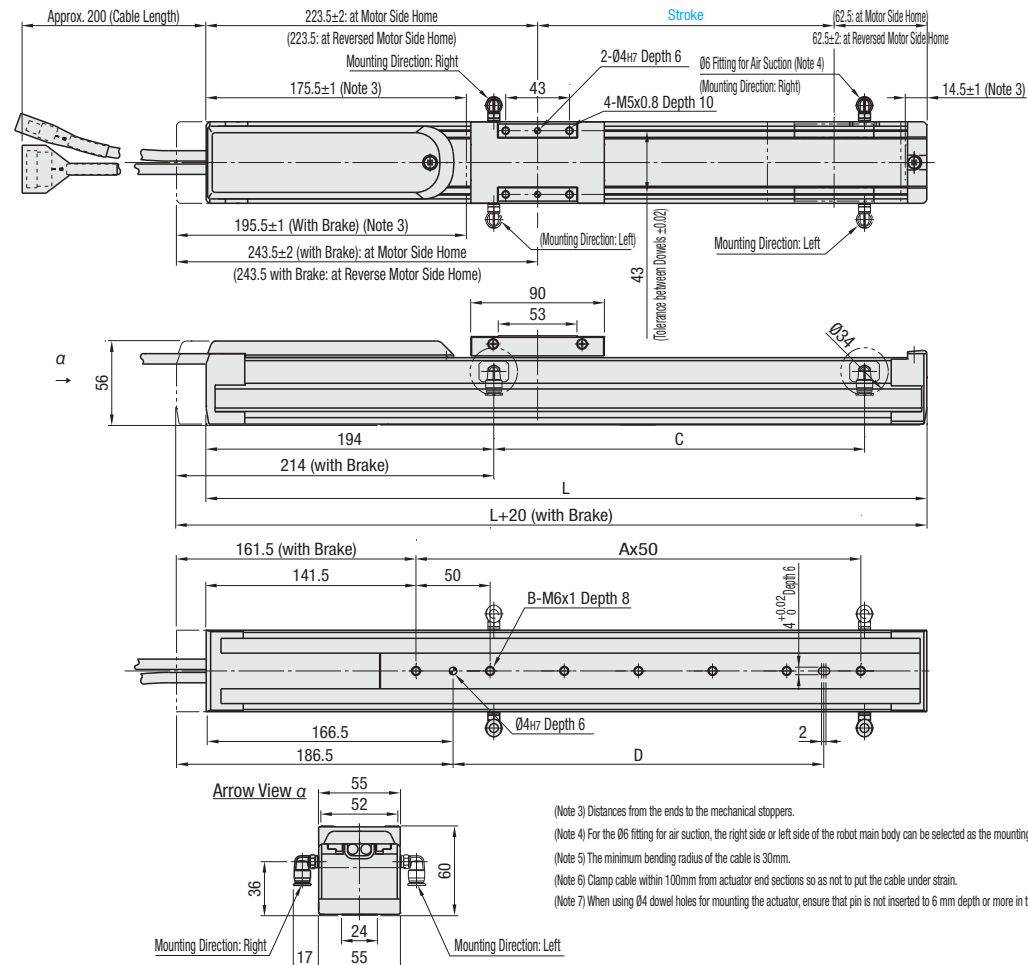
Instruction Manual CD-ROM

Controller Specifications P.103~112

## Standard Specifications FAQ P.110

Type	Lead (mm)	Repeatability (mm)	Max. Load Capacity (kg)		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)
			Horizontal	Vertical								
RS3C	06	±0.02	12	4	120	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		8	2	60		600~380					
	20		6	-	36		1000~633					

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



Part Number		Selection					
Type	① Lead (mm)	② With or w/o Brake (①)	③ Fitting Mounting Direction	④ Controller	⑤ I/O Module	⑥ Cable Length (m)	⑦ Stroke (mm)
RS3C	06	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)
	12						
	20						

(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
RS3C	L	336	386	436	486	536	586	636	686	736	786	836	886	936	986	1036	1086
	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	90	140	190	240	290	340	390	440	490	540	590	640	690	740	790	840
	D	100	150	200	250	300	350	400	450	500	500	500	500	500	500	500	500
	Mass (kg)	2.5	2.7	2.9	3.1	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4

The brake adds 0.2 kg to the total mass.

## Allowable Overhang Load

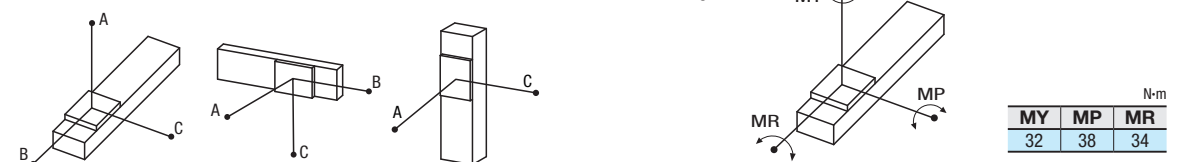
Horizontal Use

Wall Mounted Use

Vertical Use

## Allowable Static Moment

Moment Diagram



Lead	Mass	mm			Lead	Mass	mm			Lead	Mass	mm		
		A	B	C			A	B	C			A	B	C
06	12kg	465	39	64	06	12kg	28	17	338	06	4kg	113	113	
	10kg	442	47	78		10kg	43	26	355		2kg	244	245	
	8kg	480	61	100		8kg	64	39	413		2kg	224	224	
12	6kg	573	83	136	12	6kg	101	62	519	12	8kg	55	34	305
	8kg	403	56	88		8kg	85	55	334		4kg	146	96	449
	6kg	399	76	118		6kg	71	49	262		4kg	118	88	309
20	4kg	500	118	179	20	4kg	146	96	449	20	2kg	262	203	554
	6kg	352	71	104		6kg	71	49	262		2kg	262	203	554
	4kg	366	109	148		4kg	118	88	309		2kg	262	203	554

## Max. Velocity (mm/sec)

Type	Lead (mm)	Stroke (mm)				
		50~600	650	700	750	800
RS3C	06	300(250)	280(250)	250	220	190
	12	600(500)	560(500)	500	440	380
	20	1000	933	833	733	633

Values in ( ) are for vertical application.

## 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

- The actuator does not move.
- 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".
- LED light is on. Is there a controller defect?
- Blue: PWR (OFF: Control Power Shutdown, Blink: Servo OFF, ON: Servo ON), Red: ERR (OFF: Control Power Shutdown / No Error Alarm, Blink: Error Alarm On (External Factor), ON: Error Alarm On (Internal Factor))
- Teaching cannot be conducted by via I/O.
- 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".
- Is low-speed operation possible?
- Possible, however, 10 to 20% of max. velocity is the limit depending on the lead.

Days to Ship 7 Days

Alterations: Part Number RS3C06B - Fitting Mounting Direction R - Controller Type C1 - I/O Type N - Cable Length 3 - Stroke 400 - (E, H...etc.) 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 ME5: Body KE3: Controller (C1) KE4: Controller (P1) Details P.114	Main Body Plastic Color Alterations
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. 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	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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