

# Single Axis Robots RS2 - Straight



Dedicated Website: [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html)  
Useful Selection Software and Instruction Manuals can be downloaded.

See notes on CE Marking. P456

**Components:** Actuator, Controller, Cable  
**Accessory:** Controller I/O Specifications

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

**Robot Material / Surface Treatment**

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

**General Specifications**

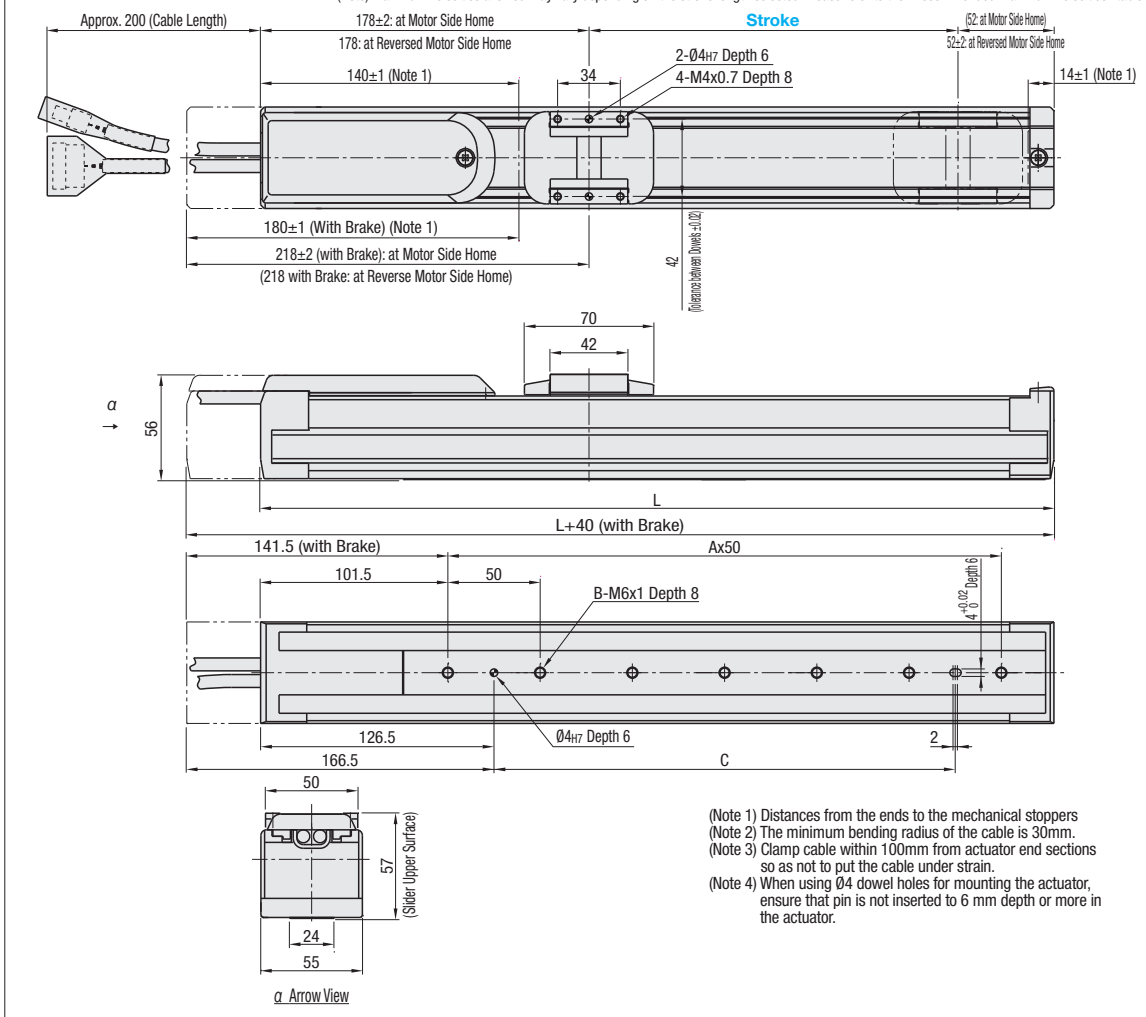
Ball Screw	Motor	Position Detector	Operating Ambient Temperature, Humidity
Ø12 (C10 Rolled)	Stepping	Resolver (Incremental)	0~40°C, 35~85%RH (No Condensation)

Controller Specifications P497-506 Cycle Time Graph P455 Clean Room Specifications are available on our website.

**Standard Specifications** FAQ P504

Type	Lead (mm)	Positioning Repeatability (mm)	Max Load Capacity (kg)		Max. Push Force (N)	Stroke (mm)	Max. Velocity (Note) (mm/sec)	Rated Running Life	Input Power Supply	Maximum Positioning Point
			Horizontal	Vertical						
RS2	06	±0.02	10	2	90	50~800 (50 Pitch)	300~190	10,000 km or More	DC24V ±10%	255 points
	12		6	1	45	600~380				
	20		4	-	27	1000~633				

(Note) Maximum velocities allowed may vary depending on the stroke length selected. Please refer to the "Recommended Maximum Velocities" table.



**Dimensions / Mass**

Type	Dimensions / Mass	Stroke (mm)																
		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
RS2	L (mm)	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	
	A (mm)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
	B (mm)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
	C (mm)	100	150	200	250	300	350	400	450	500	500	500	500	500	500	500	500	500
	Mass (kg)	2.1	2.3	2.5	2.7	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	

Type	Part Number		Controller (2)	Selection		Stroke (mm)
	Lead (mm)	With or w/o Brake (1)		I/O Module	Cable Length (m)	
RS2	06	None: Leave blank Included: B	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 "Brake" option for use in vertical applications. (The brake option is not available for Lead 20) (2) When the pulse train type controller is selected, the I/O type selection is not required.

**Ordering Example**

Part Number - Controller - I/O Module - Cable Length - Stroke

RS206B - C1 - N - 3 - 400  
RS206B - P1 - - - 3 - 400 (Controller: P1)

### Robot Body Price

Part Number	Unit Price 1 ~ 2 pc(s)															
	Stroke (mm)															
	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
RS2□□																
RS2□□B																

### Controller Price

Type	I/O Module	Unit Price
C1	N	
	P	
	C	
	D	
P1	-	

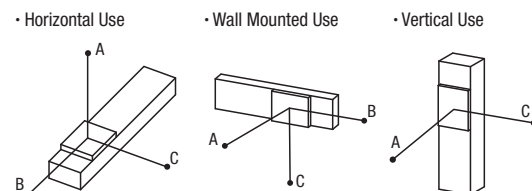
### Cable Price

Cable Length (m)	Unit Price
1	
3	
5	
10	

### Note

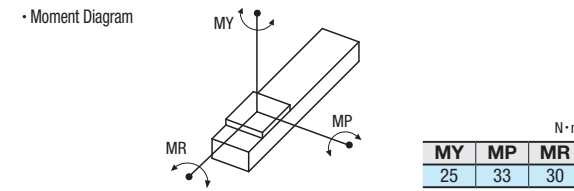
Power interruption circuit is not provided in this controller in order to provide maximum flexibility for customer specific safety scheme. Please be sure to provide an external power interruption circuit and form an emergency stop circuit. For Circuit examples, see P503.

### Allowable Overhang Load



Lead	Mass	mm			Lead	Mass	mm			Lead	Mass	mm		
		A	B	C			A	B	C			A	B	C
06	10kg	344	29	62	06	8kg	47	22	355	06	2kg	148	148	
	8kg	332	37	79		6kg	76	35	377		1kg	312	312	
	4kg	503	78	165		4kg	134	63	496		0.5kg	286	286	
12	6kg	335	47	95	12	6kg	63	31	263	12	4kg	109	57	300
	4kg	347	72	139		4kg	109	57	300		4kg	92	51	265
	2kg	413	139	218		2kg	192	123	372					

### Allowable Static Moment



### Max. Velocity (mm/sec)

Please confirm the details of the Max. Speeds based on various strokes with MISUMI web Simulator.

Type	Lead (mm)	Stroke (mm)				
		50~600	650	700	750	800
RS2	06	300	280	250	220	190
	12	400~600	560	500	440	380
	20	350~1000	933	833	733	633

For stroke ranges 650mm or more, ball screws may resonate in certain operation areas (critical speed). In that case, reduce the operation speed by referring to the Max. Velocity shown in the table above.

<Price Example> The prices are for the part numbers on the left.  
(Robot Body Price) + (Controller Price) + (Cable Price) +  
(Grease Type Alteration Charge) + (Home Position Alteration Charge) = Total Price

**Alterations**

Part Number - Controller Type - I/O Module - Cable Length - Stroke - (G, E... etc.)

RS206B - C1 - N - 3 - 400 - G-E

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
Code	G	E	H	D	S	R	T/TP	C	MJ5/KJ3/KJ4	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 P503, 507	Handset Terminal w/ Deadman's Switch is included. Specifications P503, 507	Support Software w/ USB Communication Cable is included. Specifications P503, 507	Support Software w/ D-Sub Communication Cable is included. Specifications P507	I/O Cable is included. Required for NPN/PNP configurations. Specifications P507	A cable to connect multiple controllers. Up to 16 controllers can be connected. Specifications P507	Operation Manual is included. For Actuator MJ5; For Controller KJ3; KJ4.	Change the actuator plastic parts color to black.

For optional items, see P507. 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.