Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia offices.

Single Axis Robot RSH1 - Straight

RS SINGLE AXIS ROBOT

Dedicated Website: http://download.misumi.jp/mol/fa_soft.html
Useful Selection Software and Instruction Manuals can be downloaded.

(?)See notes on CE Marking. P.456

Controller Specifications P.497~506 Cycle Time Graph P.455 Clean Room Specifications are available on our website.

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

■Accessory

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

■Robot Material / Surface Treatment

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

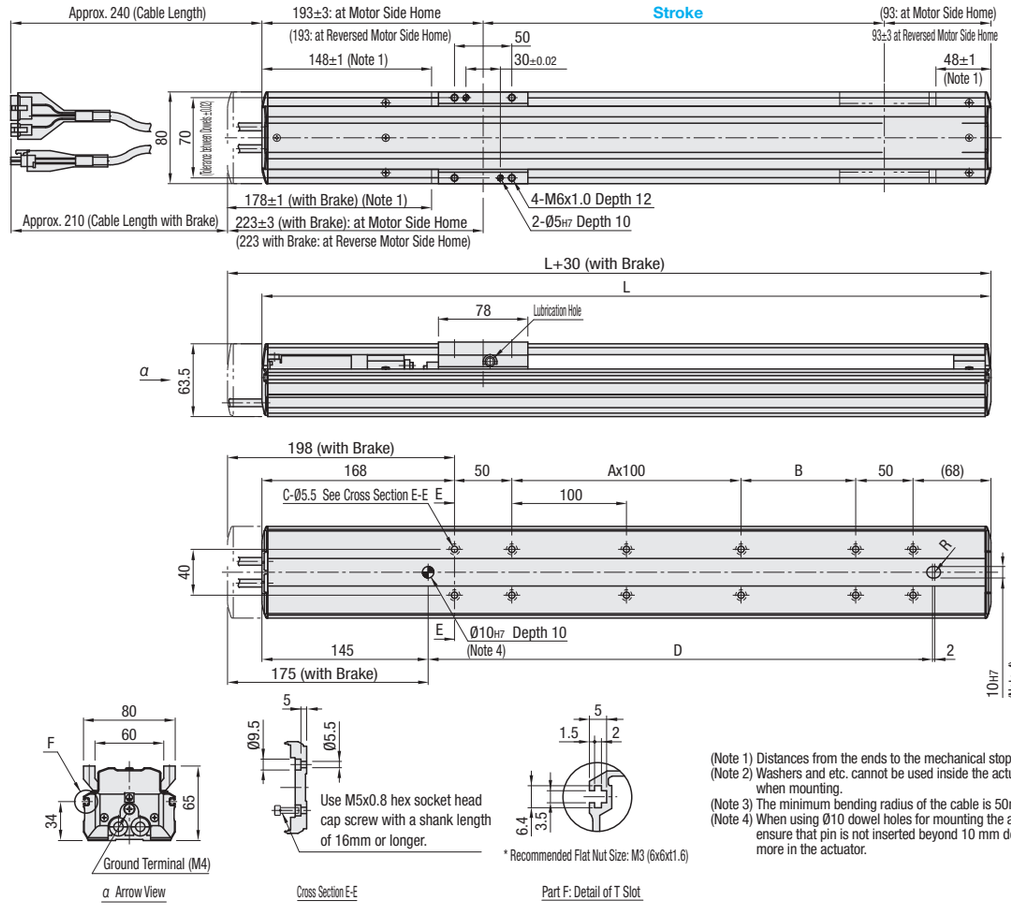
■General Specifications

Ball Screw	Motor	Position Detector	Operating Ambient Temperature, Humidity
Ø12 (C10 Rolled)	AC Servo 100W	Resolver	0~40°C, 35~85%RH (No Condensation)

■Standard Specifications FAQ P.504

Type	Lead (mm)	Positioning Repeatability (mm)	Max Load Capacity (kg) Horizontal	Max Load Capacity (kg) Vertical	Rated Force (N)	Max. Velocity (Note) (mm/sec)	Stroke (mm)	Rated Running Life	Input Power Supply	Maximum Positioning Point
RSH1	06	±0.02	40	8	283	360~180	150~800 (50 Pitch)	10,000 km or More	Single-phase AC 100~115V 200~230V ±10%	255 points
	12		20	4	141	720~360				
	20		12	-	84	1200~600				

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



(Note 1) Distances from the ends to the mechanical stoppers
(Note 2) Washers and etc. cannot be used inside the actuators when mounting.
(Note 3) The minimum bending radius of the cable is 50mm.
(Note 4) When using Ø10 dowel holes for mounting the actuator, ensure that pin is not inserted beyond 10 mm depth or more in the actuator.

■Dimensions / Mass

Type	Dimensions / Mass	Stroke (mm) 150	200	250	300	350	400	450	500	550	600	650	700	750	800
RSH1	L(mm)	436	486	536	586	636	686	736	786	836	886	936	986	1036	1086
	A(mm)	0	0	1	1	2	2	3	3	4	4	5	5	6	6
	B(mm)	100	150	100	150	100	150	100	150	100	150	100	150	100	150
	C(mm)	8	8	10	10	12	12	14	14	16	16	18	18	20	20
	D(mm)	240	290	340	390	440	490	540	590	640	690	740	790	840	890
	Mass (kg)	3.6	3.9	4.2	4.4	4.7	5.0	5.3	5.6	5.9	6.2	6.4	6.7	7.0	7.3

(?)The brake adds 0.3 kg to the mass.

Part Number: Type	Lead (mm)	With or w/o Brake (?1)	Selection: Controller (?2)	I/O Module	W/ or w/o Nose Filter (?3)	Cable	Stroke (mm)
RSH1	06	None: Leave blank	Absolute Encoders (w/ Data Storage Battery): AC100~115V C21A; AC200~230V C22A	NPN: N	None: F0	Standard: 3.5m:3, 5m:5, 10m:10	150~800 (50mm Increment)
	12	Included: B	Incremental Type: C21B; C22B	PNP: P	Included: F1	Flexible: 3.5m:R3, 5m:R5, 10m:R10	
	20			CC-Link: C	Specifications P.508		
				DeviceNet: D			

(?1) Choose the "Brake" option for use in vertical applications. (W/ brake type is not available for Lead 20) (?2) Controllers are shipped with preset parameters for each type. Data storage batteries are outside the scope of RoHS Directive.
(?3) 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.

Ordering Example

Part Number	-	Controller	-	I/O Module	-	W/ or w/o Nose Filter	-	Cable	-	Stroke
RSH106B	-	C22A	-	N	-	F1	-	3	-	400

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.503.

■Robot Body Price

Part Number	Unit Price 1 ~ 2 pc(s) Stroke (mm) 150/200	250/300	350/400	450/500	550/600	650/700	750/800
RSH1□□							
RSH1□□B							

■Controller Price

I/O \ Type	C21A/C22A Absolute Encoders (w/ Data Storage Battery)	C21B/C22B Incremental Type
N		
P		
C		
D		

■Cable Price

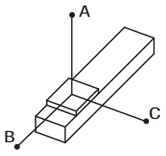
Cable (Standard)	Unit Price	Cable (Flexible)	Unit Price
3		R3	
5		R5	
10		R10	

■Noise Filter Price

W/ or w/o Nose Filter	Unit Price
None: F0	
Included: F1	

■Allowable Overhang Load

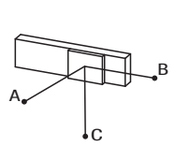
• Horizontal Use



mm

Lead	Mass	A	B	C
06	40kg	113	0	8
	30kg	140	6	20
	20kg	214	16	43
	10kg	403	43	113
12	20kg	103	14	33
	15kg	139	22	51
	10kg	203	39	87
	5kg	364	89	188
20	12kg	85	25	43
	10kg	100	32	54
	5kg	197	76	120

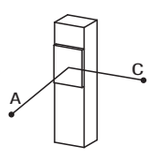
• Wall Mounted Use



mm

Lead	Mass	A	B	C
06	40kg	0	0	0
	30kg	0	0	14
	20kg	25	9	157
	10kg	94	36	369
12	20kg	15	6	55
	15kg	33	15	100
	10kg	69	32	172
	5kg	171	81	340
20	12kg	27	15	55
	10kg	37	23	72
	5kg	104	67	174

• Vertical Use



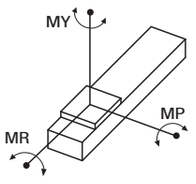
mm

Lead	Mass	A	C
06	8kg	46	46
	6kg	69	69
	4kg	113	113
	2kg	244	245
12	4kg	98	99
	3kg	137	138
	2kg	214	216
	1kg	447	448

(?)When the overhang equals 0, use externally mounted linear guides to support the load mass.

■Allowable Static Moment

• Moment Diagram



N · m

MY	MP	MR
70	95	110

■Max. Velocity (mm/sec) (?)Please confirm the details of the Max. Speeds based on various strokes with web-Cycle Time Simulator.

Type	Lead (mm)	Stroke (mm) 150~550	600	650	700	750	800
RSH1	06	360	324	270	234	216	180
	12	720	648	540	468	432	360
	20	780~1200	1080	900	780	720	600

(?)When the stroke is 600mm or more, the resonance of ball screws may occur according to the operating area (critical speed). In that case, reduce the operation speed by referring to the Max. Velocity shown in the table above.

Alterations

Part Number	-	Controller Type	-	I/O Type	-	Noise Filter Presence	-	Cable	-	Stroke	-	(G, œE···etc.)
RSH106B	-	C22A	-	N	-	F1	-	3	-	400		G-E

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

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	MJ5/KJ3
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 Handset Terminal is included. Specifications P.503, 507	Handset Terminal Handset Terminal w/ Deadman's Switch is included. Specifications P.503, 507	Support Software w / USB Communication Cable is included. Specifications P.503, 507	Support Software w/ D-Sub Communication Cable is included. Specifications P.507	I/O Cable is included. Required for NPN/PNP configurations. Specifications P.507	A cable to connect multiple controllers. Up to 16 controllers max. can be connected. Specifications P.507	Operation Manual is included. For Actuator MJ5: For Controller KJ3:
					Communication Specifications: RS232C	Communication Specifications: RS232C		Length: 300mm	

(?)For optional items, see P. 507. (?)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.