

# Single Axis Robots RSH3 - Slider Type

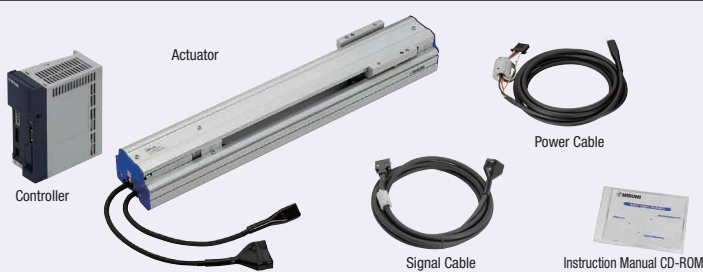


CE

See notes on CE Marking. P440

## Feature: Large, Heavy Load Capacity Actuators

Applicable to Remote Command Control, Remote I/O Control (CC-Link / DeviceNet Specification), Parallel I/O Control and Online Command Control (RS232C Specification).



**Components:** Actuator / Controller / Cable / (Battery) / (Noise Filter)

**Accessories**

Controller I/O Specifications			
Accessories	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**

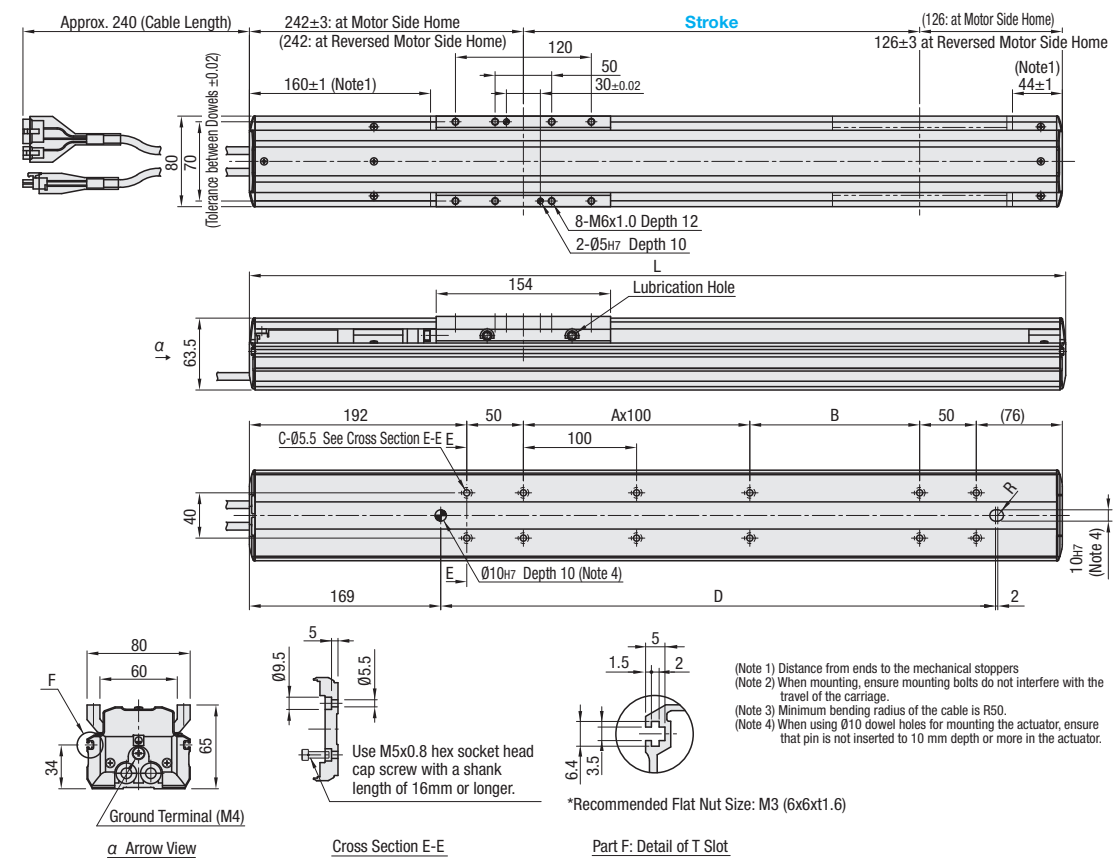
Ball Screw	Motor	Position Detector	Operating Ambient Temperature / Humidity
Ø15 (C7 Rolled)	AC Servo 100W	Resolver	0~40°C, 35~85%RH (No Condensation)

Controller Specifications P437 Cycle Time Graph P441 Clean Room Specifications are available on our website.

## Standard Specifications Terminology & FAQ P440

Type	Lead (mm)	Positioning Repeatability (mm)	Max Load Capacity (kg) Horizontal	Rated Force (N)	Maximum Velocity (Note) (mm/sec)	Stroke (mm)	Rated Running Life	Input Power Supply	Maximum Positioning Point
RSH3	05	±0.01	80	339	300~105	150~1050 (50 Pitch)	10,000 km or More	AC100~115V AC200~230V ±10%	255 points
	10		60	169	600~210				
	20		30	84	1200~420				

(Note) Maximum velocity varies depending on the strokes. Please see Maximum Velocity Table on the next page.



## 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
RSH3	L (mm)	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368	1418
	A (mm)	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9
	B (mm)	150	100	150	100	150	100	150	100	150	100	150	100	150	100	150	100	150	100	150
	C (mm)	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
	D (mm)	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190
	Mass (kg)	4.7	5.0	5.3	5.6	5.9	6.2	6.6	6.9	7.2	7.5	7.8	8.1	8.4	8.7	9.0	9.3	9.7	10.0	10.3

Part Number	Selection								
	Type	Lead (mm)	Controller (1)	I/O Module	W/ or w/o Noise Filter (2)	Cable	Stroke (mm)		
RSH3		05	Specifications Power Supply AC100~115V AC200~230V	Absolute Encoders (w/ Data Storage Battery) Incremental Type C21A C21B C22A C22B	NPN: N PNP: P CC-Link: C DeviceNet: D	None: F0 Included: F1 Specifications P440	Standard 3.5m: R3 5m: R5 10m: R10	Flexible 3.5m: R3 5m: R5 10m: R10	150~1050 (50mm Increment)
		10							
		20							

(1) Controllers are shipped with preset parameters for each type. Data storage batteries are outside the scope of RoHS Directive.  
(2) This product needs a noise filter. When purchasing 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 Noise Filter - Cable - Stroke Days to Ship

RSH305 - C22A - N - F1 - 3 - 400

[Configure Online](#)

Price [Configure Online](#)

## Robot Body Price

Part Number	Unit Price 1~5 pc(s).										
	Stroke (mm)										
RSH3_	150/200	250/300	350/400	450/500	550/600	650/700	750/800	850/900	950/1000	1050	

## Controller Price

Type	Unit Price 1~5 ps(s).	
	C21A/C22A Absolute Encoders (w/ Data Storage Battery)	C21B/C22B Incremental Type
I/O Module		
N		
P		
C		
D		

(Robot Body Price)+(Controller Price)+(Cable Price)+(Noise Filter)=Total Price  
<Ex.> For RSH305-C22A-N-F1-3-400

## Cable Price

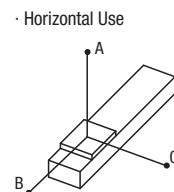
Cable (Standard)	Unit Price 1~5 pc(s).	Cable (Flexible)	Unit Price 1~5 pc(s).
10		R10	

## Noise Filter Price

W/ or w/o Noise Filter	Unit Price 1~5 pc(s).
None: F0	
Included: F1	

**Note**  
Power interruption circuit is not installed in this controller. Please be sure to provide an external power interruption circuit and form an emergency stop circuit. Circuit Examples P438

## Allowable Overhang Load



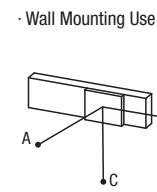
Lead	Mass	mm		
		A	B	C
05	80kg	601	20	17
	60kg	714	34	29
	40kg	851	63	54
	20kg	1094	148	127
	60kg	382	30	25
10	40kg	479	57	47
	20kg	629	137	111
	30kg	279	70	50
	20kg	334	116	81
	10kg	573	256	176
20	80kg	0	0	0
	60kg	0	0	0
	40kg	22	26	604
	20kg	96	112	1005
	60kg	0	0	0
10	40kg	15	19	270
	20kg	80	99	545
	30kg	20	29	160
	20kg	53	75	255
	10kg	147	215	515

When overhang equals 0, use linear guides with selected unit to support load mass.

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

RSH305 - C22A - N - F1 - 3 - 400 - G-E

## Allowable Static Moment



Moment Diagram

	MY	MP	MR
N-m	128	163	143

## Max. Velocity (mm/sec)

Type	Lead (mm)	Stroke (mm)									
		150-600	650	700	750	800	850	900	950	1000	1050
RSH3	05	300	255	225	195	180	165	150	135	120	105
	10	600	510	450	390	360	330	300	270	240	210
	20	1200	1020	900	780	720	660	600	540	480	420

When the stroke is 650mm 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 maximum velocity shown in the table above.

Alterations	Grease Type Alteration	Change of Home Position	Handy Terminal Standard Specification	Handy Terminal w/ Deadman's Switch	Support Software w/ USB Communication Cable	Support Software w/ D-Sub Communication Cable	I/O Cable	Robot Instruction Manual	Controller Instruction Manual
Code	G	E	H	D	S	R	T	MJ / ME	KJ/KE
Spec.	Grease is changed to low particle generation grease. (NSK LG2)	The home position is relocated to the opposite side of the motor.	Handy Terminal is included. Spec. P415, 439	Handy Terminal w/ Deadman's Switch is included. Spec. P415, 439	Support Software w/ USB Communication Cable is included. Spec. P415, 439	Support Software w/ D-Sub Communication Cable is included. Spec. P439	I/O Cable is included. Required for NPN/PNP configurations. Spec. P416, 439	Instruction Manual for robot main structures is included. M.J.: Japanese Language ME: English Language	Instruction Manual for controllers is included. K.J.: Japanese Language KE: English Language

For optional items, see P439. Optional items can be purchased more economically as Alterations than as single items.  
Point data requires Handy Terminal or Support Software.  
Parallel Communication I/O Control requires I/O Cable.