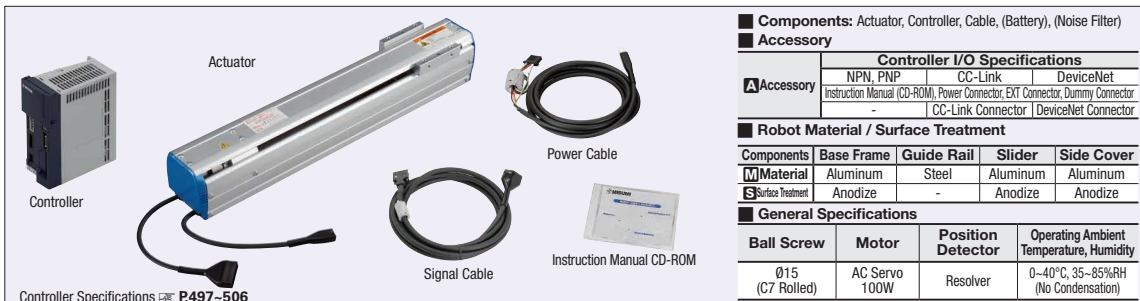


Single Axis Robots RSF4 - Straight Width Space-saving type



See notes on CE Marking. P.456



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

Controller I/O Specifications			
Accessory	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

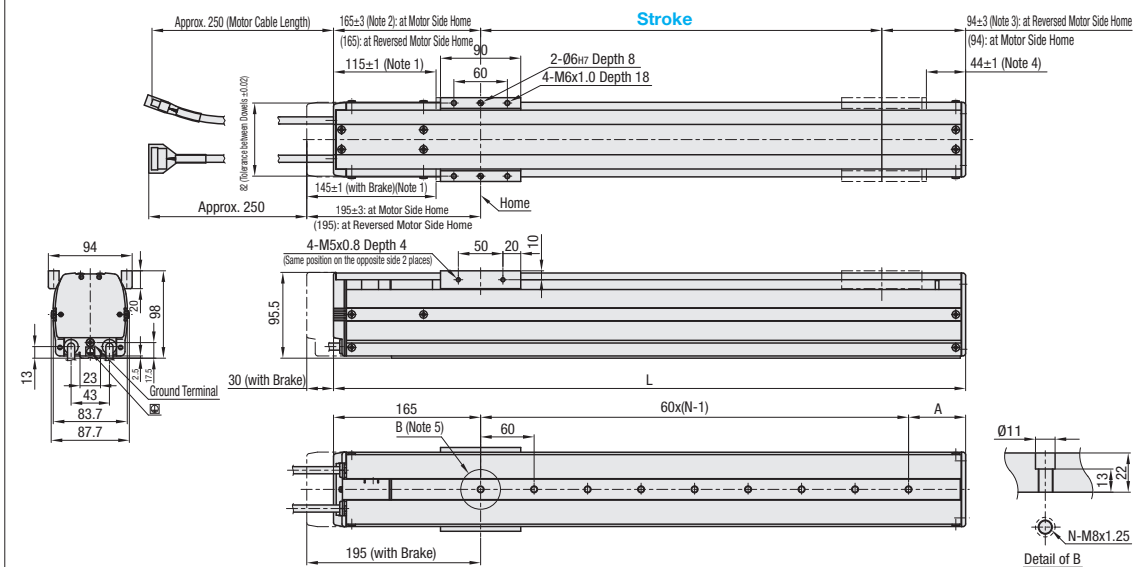
General Specifications

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

Standard Specifications FAQ P.504

Type	Lead (mm)	Repeatability (mm)	Max Load Capacity (kg)		Rated Force (N)	Max. Velocity (Note) (mm/sec)	Stroke (mm)	Rated Running Life	Controller Input Power Supply	Maximum Positioning Point
			Horizontal	Vertical						
RSF4	05	±0.01	80	20	339	~ 300	150~1050 (50 Pitch)	10,000km or More	Single-phase AC 100~115V 200~230V ±10%	255 points
	10		55	10	169	~ 600				
	20		30	4	84	~ 1200				
	30		15	-	56	~ 1800				

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



Note 1. Mechanical stopper position from the ends.
 Note 2. For Large Lead Type (Lead 30), 167.5±4.
 Note 3. For Large Lead Type (Lead 30), 94±4.
 Note 4. For Large Lead Type (Lead 30), 41.5±1.
 Note 5. When mounting, washers cannot be used in Ø11 counter bored holes.
 Note 6. The minimum bending radius of the motor cable is 50mm.

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
RSF4	L (mm)	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109	1159	1209	1259	1309
	A (mm)	64	54	44	94	84	74	64	54	44	94	84	74	64	54	44	94	84	74	64
	N (mm)	4	5	6	6	7	8	9	10	11	11	12	13	14	15	16	16	17	18	19
	Mass (kg)	5.5	5.9	6.2	6.6	6.9	7.3	7.6	8.0	8.3	8.7	9.0	9.4	9.7	10.0	10.3	10.7	11.0	11.4	11.7

The brake adds 0.5kg to the masses.

Part Number	Selection								
	Type	Lead (mm)	With or w/o Brake (1)	Controller	I/O Module	W/ or w/o Noise Filter (2)	Cable Length (m)	Stroke (mm)	Regenerative unit
RSF4	05	None: Leave blank Included: B	Specifications Absolute Encoders (w/ Data Storage Battery) Incremental Type Specifications	NPN: N CC-Link: C DeviceNet: D	None: F0 Included: F1 Specifications P.508	Standard 3.5m: 3 5m: 5 10m: 10	Flexible 3.5m: R3 5m: R5 10m: R10	150~1050 (50mm Increment)	RGT Always select this option when using 700mm or more strokes in vertical applications.
	10								
	20								
	30								

(1) Choose the "Brake" option for use in vertical applications. (W/ brake type is not available for Lead 30) (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: RSF420B - C22A - N - F1 - 3 - 200

Robot Body Price

Part Number	Unit Price 1 ~ 5 pc(s).									
	Stroke (mm)									
	150	200/250	300/350	400/450	500/550	600/650	700/750	800/850	900/950	1000/1050
RSF4										
RSF4B										

Controller Price

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

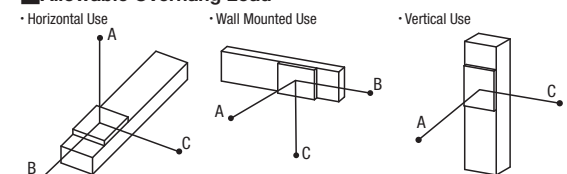
Cable Price

Cable (Standard)	Unit Price 1 ~ 5 pc(s).	
	Cable (Flexible)	Unit Price 1 ~ 5 pc(s).
3		
5		
10		

Noise Filter Price

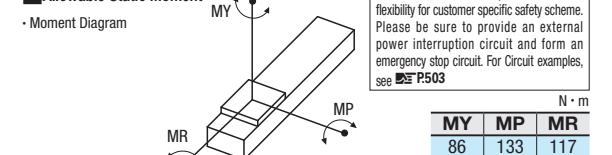
W/ or w/o Noise Filter	Unit Price 1 ~ 5 pc(s).
None: F0	
Included: F1	

Allowable Overhang Load



Lead	Mass	mm			Lead	Mass	mm			Lead	Mass	mm		
		A	B	C			A	B	C			A	B	C
05	50kg	722	42	47	05	10kg	197	133	2360	05	10kg	221	221	
	60kg	657	33	37		15kg	135	135	15kg		135	135		
	80kg	577	23	25		30kg	0	0	427		20kg	92	92	
10	40kg	617	119	127	10	10kg	193	132	910	10	4kg	594	594	
	20kg	422	53	59		20kg	53	0	400		8kg	280	280	
	55kg	420	36	40		30kg	0	0	109		10kg	217	217	
20	5kg	1292	505	462	20	5kg	416	388	1186	20	1kg	600	600	
	15kg	572	158	151		10kg	92	42	386		2kg	1098	1098	
	30kg	455	73	75		30kg	0	0	61		4kg	545	545	
30	5kg	864	501	383	30	5kg	349	384	776	30	5kg	349	384	
	15kg	491	156	140		15kg	87	40	306		15kg	87	40	

Allowable Static Moment



N · m		
MY	MP	MR
86	133	117

Max. Velocity (mm/sec) Please confirm the details of the Max. Speeds based on various strokes with MSUMI Web Simulator.

Type	Lead (mm)	Stroke (mm)							
		150~700	750	800	850	900	950	1000	1050
RSF4	05	300	240	195	150	135			
	10	600	480	390	300	270			
	20	1100~1200	960	780	600	540			
	30	800~1800	1440	1170	900	810			

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.

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

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

Price Example: (Actuator) + (Controller) + (Cable) + (Noise Filter) + (Grease Type Alteration) + (Change of Home Position) = Total Price

Code	G	E	H	D	S	R	T	C	MJ5/KJ3
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
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.503, 507	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: Body KJ3: Controller (C21/C22)

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.
 For details on daisy-chain, see P.505