Single Axis Robots RSDG2 - Rod Type with Support Guide

RS SINGLE AXIS ROBOT

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 ❶~❼.

Ordering Example

Part Number (Type, ❶ Lead, ❷ With or w/o Brake)	❸ Motor Mounting Direction	❹ Controller	❺ I/O Module	❻ Cable Length	❼ Stroke	
RSDG206B	U	C1	N	3	200	(Motor Mounting Direction: U)
RSDG206B		C1	N	3	200	(Motor Mounting Direction: Straight)
RSDG206B	U	P1		3	200	(Motor Mounting Direction: U, Controller: P1)

Controller Specifications P.103~112

■Components: Actuator, Controller, Cable

■Accessory

Accessory	Controller I/O Specifications		
	NPN,PNP	CC-Link	DeviceNet
	Instruction Manual (CD-ROM), Power Connector, Dummy Connector, 6 Mounting Nuts		
	-	CC-Link Connector	DeviceNet Connector

■Robot Material / Surface Treatment

Components	Body	Rod	Cover	Shaft	Ball Bushing
M Material	Aluminum	Steel	ABS	Steel	Steel
S Surface Treatment	Acrylic Paint	-	-	-	-

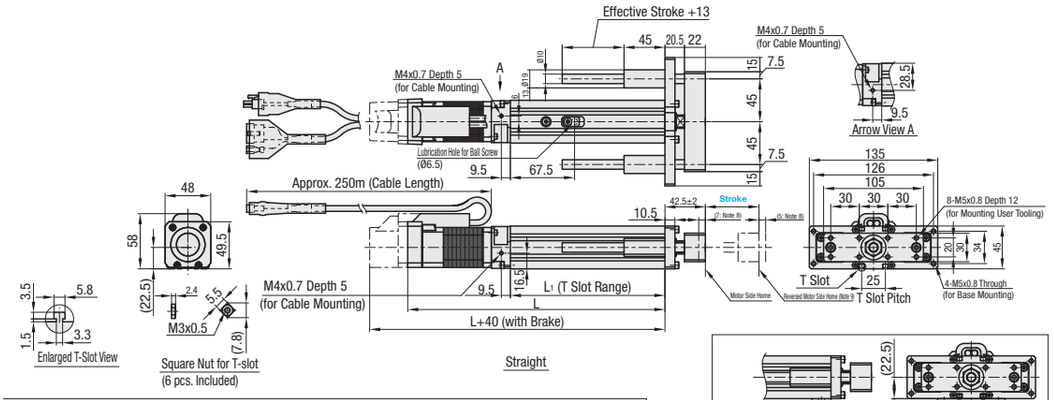
■General Specifications

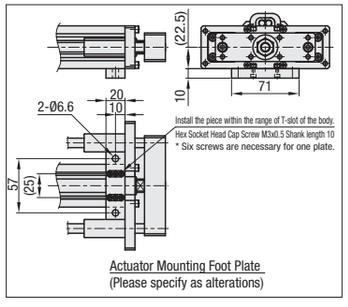
Ball Screw	Motor	Position Detector	Operating Ambient Temperature, Humidity
Ø8 (C10 Rolled)	Stepping	Resolver (Incremental)	0~40°C , 35~85%RH (No Condensation)

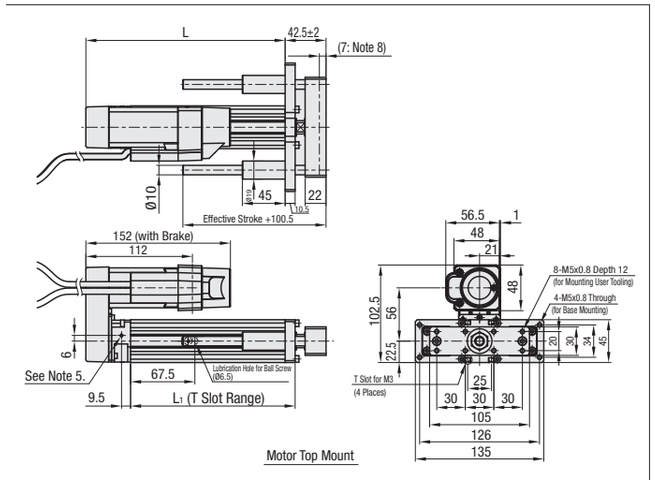
■Standard Specifications FAQ P.110

Type	Lead (mm)	Positioning Repeatability (mm)	Max. Load Capacity (kg) Horizontal	Max. Load Capacity (kg) Vertical	Max. Push Force (N)	Rated Running Life ❶	Lost Motion (mm)	Rod Non-Rotational Accuracy (degrees)	Stroke (mm)	Max. Velocity ❷(mm/sec)	Input Power Supply	Maximum Positioning Point
RSDG2	02	±0.02	45	24	600	5,000 km or More	0.1 or Less	±0.05	50~300 (50 Pitch)	~80	DC24V ±10%	255 points
	06		40	11	300					~250		
	12		25	4	150					~500		

❶1. The Service life in the vertical use may vary depending on the load capacity. Please refer to the "Service Life Table." ❷2. The maximum velocities may vary depending on the load capacity. Please refer to the "Velocity - Maximum Load Capacity Table."







(Note 1) Load can be applied only in axial direction. Please use externally mounted guides together to avoid application of radial loads on the rods.
(Note 2) Reversed Motor Side Home cannot be set in case of Lead 2mm specifications.
(Note3) The cable should be fastened without excessive strains.
(Note 4) The M4 hex-socket head screw can be utilized to fasten the cable (effective screw depth is 5mm).
(Note 5) The minimum bending radius of the cable is 30mm.
(Note 6) The brake adds 0.2 kg to the mass.
(Note 7) Indicates the distance to the mechanical stopper.

Part Number			Selection				
Type	❶ Lead (mm)	❷ With or w/o Brake (❶)	❸ Motor Mounting Direction	❹ Controller (❷)	❺ I/O Module	❻ Cable Length (m)	❼ Stroke (mm)
RSDG2	02 06 12	W/o Brake: Leave blank With Brake: B	Straight: Leave Blank Top Mounting: U	Point Control: C1 Pulse Control: P1 (DC24V ±10%)	NPN: N PNP: P CC-Link: C DeviceNet: D	1 3 5 10 (Flexible Cable)	50~300 (50mm Increment)

(❶1) Choose the "With Brake" option for use in vertical applications. (❷2) When the pulse train type controller is selected, the I/O type selection is not required.

■Dimensions / Mass

Type	Dimensions / Mass	Motor Mounting Direction: Straight, Stroke (mm) 50	100	150	200	250	300	Motor Mounting Direction: U, Stroke (mm) 50	100	150	200	250	300
RSDG2	L1(mm)	162.5	212.5	262.5	312.5	362.5	412.5	162.5	212.5	262.5	312.5	362.5	412.5
	L(mm)	270.5	320.5	370.5	420.5	470.5	520.5	209.5	259.5	309.5	359.5	409.5	459.5
	Mass (kg)(Note 6)	2.0	2.4	2.7	3.0	3.3	3.7	2.2	2.6	2.9	3.2	3.5	3.9

❶The brake adds 0.2 kg to the total mass.

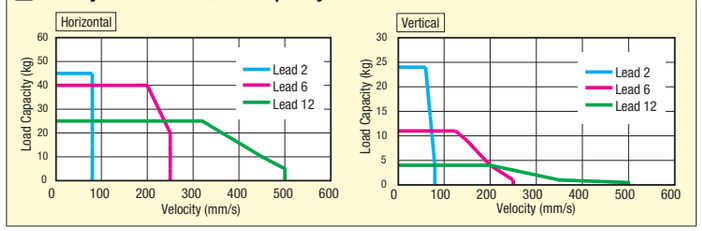
Note

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.

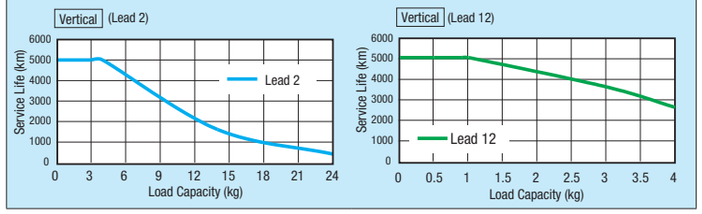
■FAQ

Q1. The actuator does not move.
A1. 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".
Q2. LED light is on. Is there a controller defect?
A2. Blue: PWR (OFF: Control Power Shutoff, Blink: Servo OFF, ON: Servo ON), Red: ERR (OFF: Control Power Shutoff / No Error Alarm, Blink: Error Alarm On (External Factor), ON: Error Alarm On (Internal Factor)
Q3. Teaching cannot be conducted by via I/O.
A3. 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".
Q4. Is low-speed operation possible?
A4. Possible, however, 10 to 20% of max. velocity is the limit depending on the lead.

■Velocity - Maximum Load Capacity Table



■Service Life Table ❶Rated Running Life is 5,000km or more. For the following types, however, service life varies depending on its maximum load capacity, and how it is applied.



Days to Ship
• Motor Mounting Direction: Straight 7 Days
• Motor Mounting Direction: U 10 Days

Alterations

Part Number	Motor Mounting Direction	Controller Type	I/O Type	Cable Length	Stroke	(G , E···etc.)
RSDG206B	U	C1	N	3	200	G-E

Alterations	Handset Terminal Standard Specification	Handset Terminal w/ Deadman's Switch Specifications	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	Actuator Mounting Foot Plate
			Communication Specifications: RS232C	Communication Specifications: RS232C	T: Controller C1 TP: Controller P1	Length: 300mm	ME5: Body KE3:Controller (C1) KE4:Controller (P1) Details P.120		
Code	H	D	S	R	T/TP	C	ME5/KE3/KE4	BC	HP
Spec.	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.	2 plates are included for horizontal mounting. Specifications P.113

❶For optional items, see P.113 ❷It is more economical to order the optional items as alterations than purchasing them individually.
❸Entering point data requires the handy terminal or the support software. ❹An I/O Cable is required for Parallel Communication I/O Control.
❺For details on daisy-chain, see P.111 , 113 ❻Please select the correct I/O cable type for the appropriate controller type.