SR04 Rod type

CE compliance | Origin on the non-motor side is selectable: Lead 6, 12

Ordering method

SR04 - [Lead] - [Model] - [Brake] - [Origin position Note 1] - [Bracket plate] - [Stroke] - [Cable length Note 2] - [Robot positioner] - [I/O] - [Battery Note 6]

Model	Lead	Model	Brake	Origin position Note 1	Bracket plate	Stroke	Cable length Note 2	Robot positioner	I/O	Battery Note 6
	12: 12mm 06: 6mm 02: 2mm	S: Straight model R: Space-saving model Note 3 (motor installed on right) L: Space-saving model Note 3 (motor installed on left)	N: With no brake B: With brake	N: Standard Z: Non-motor side	N: No plate H: With plate V: With flange	50 to 300 (50mm pitch)	1L: 1m 3L: 3m 5L: 5m 10L: 10m	S2: TS-S2 Note 4 SH: TS-SH	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ GW: No I/O board Note 5	B: With battery (Absolute) N: None (Incremental)

Robot driver: SD: TS-SD

I/O cable: 1: 1m

Note 1. When "2mm lead" is selected, the origin position cannot be changed (to non-motor side).
Note 2. The robot cable is flexible and resists bending.
Note 3. See P.85 for grease gun nozzles.
Note 4. See P.446 for DIN rail mounting bracket.
Note 5. Select this selection when using the gateway function. For details, see P.439.
Note 6. Select whether or not the battery is provided only when using the TS-SH.

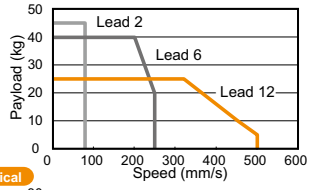
Basic specifications

Motor		42 □ Step motor		
Resolution (Pulse/rotation)		20480		
Repeatability (mm)		+/-0.02		
Deceleration mechanism		Ball screw ϕ8 (Class C10)		Ball screw ϕ10 (Class C10)
Ball screw lead (mm)		12	6	2
Maximum speed Note 1 (mm/sec)		500	250	80
Maximum payload (kg)	Horizontal	25	40	45
	Vertical	5	12	25
Max. pressing force (N)		150	300	600
Stroke (mm)		50 to 300 (50pitch)		
Lost motion		0.1mm or less		
Rotating backlash (°)		+/-1.0		
Overall length (mm)	Horizontal	Stroke+263		
	Vertical	Stroke+303		
Maximum outside dimension of body cross-section (mm)		W48 × H58		
Cable length (m)		Standard: 1 / Option: 3, 5, 10		

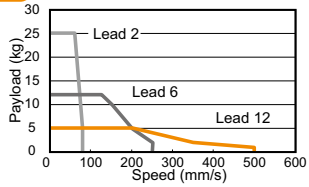
Note 1. The maximum speed needs to be changed in accordance with the payload.
See the "Speed vs. payload" graph shown on the right.
For details, see P. 84.
Additionally, when the stroke is long, the maximum speed is decreased due to the critical speed of the ball screw.
See the maximum speed table shown at the lower portion of the drawing.

Speed vs. payload

Horizontal



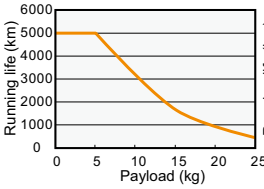
Vertical



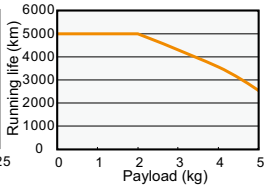
Running life

5000 km on models other than shown below.
Running life of only the model shown below becomes shorter than 5000 km depending on the payload, so check the running life curve.

Vertical Lead 2



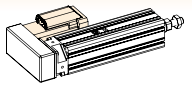
Vertical Lead 12



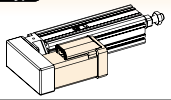
Note. See P.85 for running life distance to life time conversion example.

Motor installation (Space-saving model)

R type Motor installed on right



L type Motor installed on left

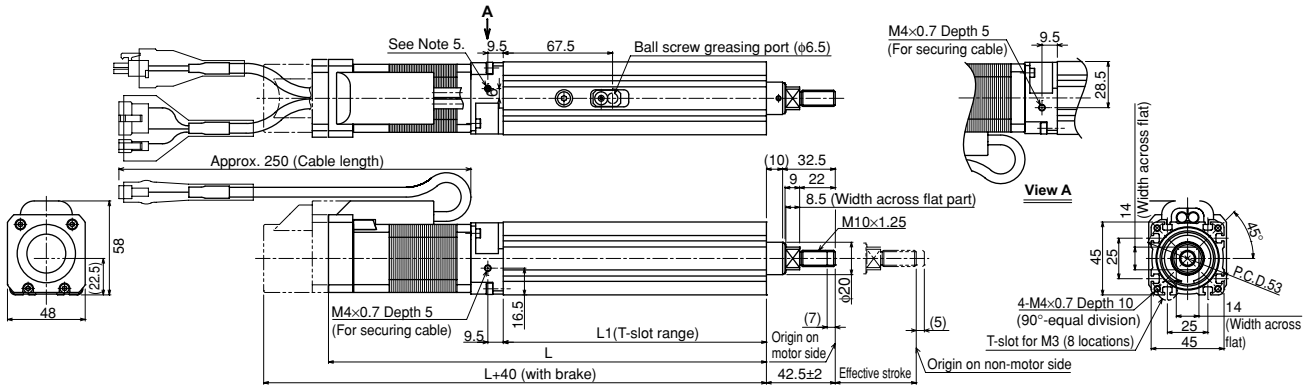


Controller

Controller	Operation method
TS-S2 TS-SH	I/O point trace / Remote command

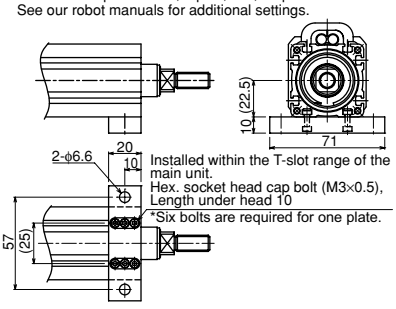
Controller	Operation method
TS-SD	Pulse train control

SR04 Straight model S



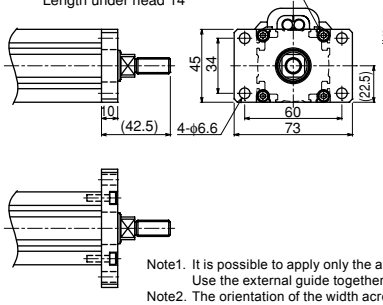
Option: Horizontal installation plate (foot)

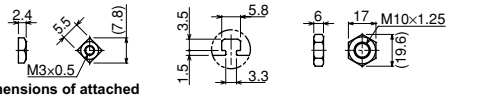
* Contents of option: Plate, 2 pcs., Nut, 12 pcs.
See our robot manuals for additional settings.



Option: Vertical installation plate (flange)

Hex. socket head cap bolt (M4×0.7), Length under head 14





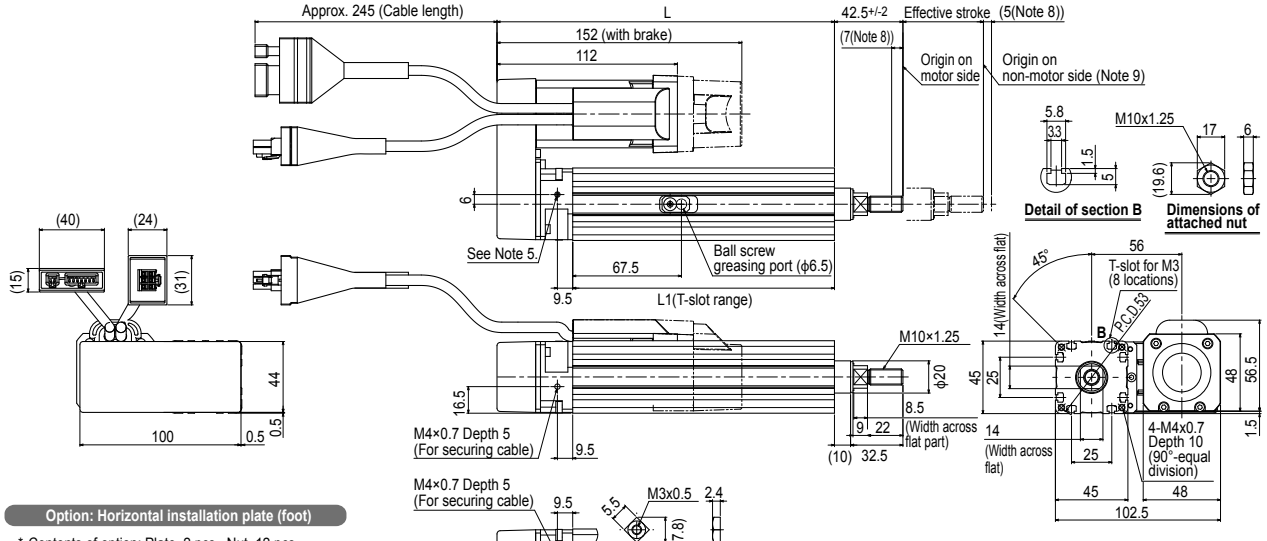
Dimensions of attached square nut for T-slot (6 pcs.) | Details of T-slot | Dimensions of attached nut

Effective stroke		50	100	150	200	250	300
L1		162.5	212.5	262.5	312.5	362.5	412.5
L		270.5	320.5	370.5	420.5	470.5	520.5
Weight (kg) Note 8		1.4	1.7	1.9	2.2	2.4	2.7
Maximum speed for each stroke (mm/sec)	Lead 12	500				440	320
	Lead 6	250				220	160
	Lead 2	80				72	53

Note1. It is possible to apply only the axial load.
Use the external guide together so that any radial load is not applied to the rod.
Note2. The orientation of the width across flat part is undefined to the base surface.
Note3. Use the support guide together to maintain the straightness.
Note4. For lead 2mm specifications, the origin on the non-motor side cannot be set.
Note5. When running the cables, secure cables so that any load is not applied to them.
Note6. Remove the M4 hex. socket head cap set bolts and use them to secure the cables. (Effective screw thread depth 5)
Note7. The cable's minimum bend radius is R30.
Note8. Models with a brake will be 0.2kg heavier.
Note9. Distance to mechanical stopper.

Controller TS-S2 ▶ 438 | TS-SH ▶ 438 | TS-SD ▶ 451

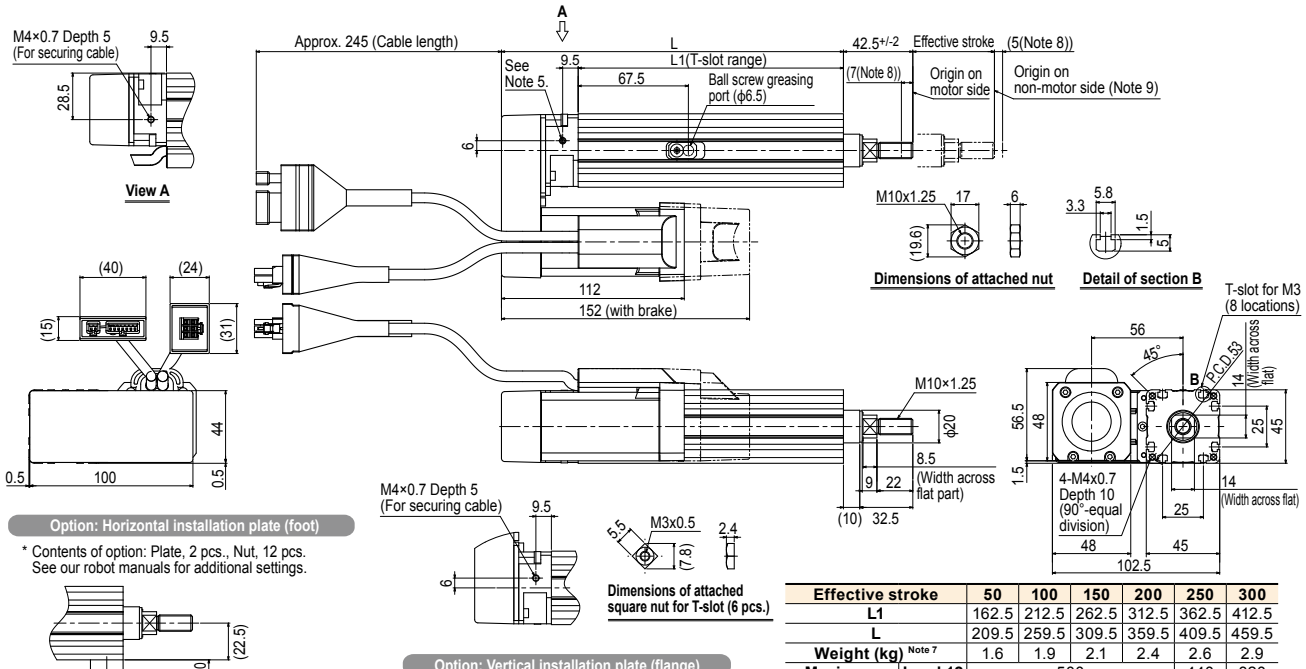
SR04 Space-saving model (motor installed on right) R



Effective stroke		50	100	150	200	250	300
L1		162.5	212.5	262.5	312.5	362.5	412.5
L		209.5	259.5	309.5	359.5	409.5	459.5
Weight (kg) Note 7		1.6	1.9	2.1	2.4	2.6	2.9
Maximum speed for each stroke (mm/sec)	Lead 12	500				440	320
	Lead 6	250				220	160
	Lead 2	80				72	53

Note1. It is possible to apply only the axial load.
Use the external guide together so that any radial load is not applied to the rod.
Note2. The orientation of the width across flat part is undefined to the base surface.
Note3. Use the support guide together to maintain the straightness.
Note4. When running the cables, secure cables so that any load is not applied to them.
Note5. Remove the M4 hex. socket head cap set bolts and use them to secure the cables. (Effective screw thread depth 5)
Note6. The cable's minimum bend radius is R30.
Note7. Models with a brake will be 0.2kg heavier.
Note8. Distance to mechanical stopper.
Note9. For lead 2mm specifications, the origin on the non-motor side cannot be set.
Note10. This unit can be installed with the motor facing up (turned 90 degrees from the position in this drawing).

SR04 Space-saving model (motor installed on left) L



Effective stroke		50	100	150	200	250	300
L1		162.5	212.5	262.5	312.5	362.5	412.5
L		209.5	259.5	309.5	359.5	409.5	459.5
Weight (kg) Note 7		1.6	1.9	2.1	2.4	2.6	2.9
Maximum speed for each stroke (mm/sec)	Lead 12	500				440	320
	Lead 6	250				220	160
	Lead 2	80				72	53

Note1. It is possible to apply only the axial load.
Use the external guide together so that any radial load is not applied to the rod.
Note2. The orientation of the width across flat part is undefined to the base surface.
Note3. Use the support guide together to maintain the straightness.
Note4. When running the cables, secure cables so that any load is not applied to them.
Note5. Remove the M4 hex. socket head cap set bolts and use them to secure the cables. (Effective screw thread depth 5)
Note6. The cable's minimum bend radius is R30.
Note7. Models with a brake will be 0.2kg heavier.
Note8. Distance to mechanical stopper.
Note9. For lead 2mm specifications, the origin on the non-motor side cannot be set.
Note10. This unit can be installed with the motor facing up (turned 90 degrees from the position in this drawing).