SR05 Rod type

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

Ordering method

SR05 – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – [ ]

Model	Lead	Model	Brake	Origin position Note 2	Bracket plate	Stroke	Cable length Note 4
	12: 12mm 06: 6mm 02: 2mm	S: Straight model R: Space-saving model Note 1 (motor installed on right) L: Space-saving model Note 1 (motor installed on left)	N: With no brake B: With brake	N: Standard Note 3 Z: Non-motor side	N: No plate H: With plate V: With flange	50 to 300 (50mm pitch)	1K: 1m 3K: 3m 5K: 5m 10K: 10m

S2

Robot positioner	I/O
S2: TS-S2 Note 5	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board Note 6

SH

Robot positioner	I/O	Battery
SH: TS-SH	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board Note 6	B: With battery (Absolute) N: None (Incremental)

SD – **1**

Robot driver	I/O cable
SD: TS-SD	1: 1m

Note 1. See P.337 for grease gun nozzles.
Note 2. When "2mm lead" is selected, the origin position cannot be changed (to non-motor side).
Note 3. If changing from the origin position at the time of purchase, the machine reference amount must be reset. For details, refer to the manual.
Note 4. The robot cable is flexible and resists bending.
Note 5. See P.600 for DIN rail mounting bracket.
Note 6. Select this selection when using the gateway function.

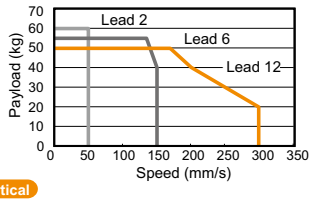
Basic specifications

Motor		56 □ Step motor		
Resolution (Pulse/rotation)		20480		
Repeatability (mm)		+/-0.02		
Deceleration mechanism		Ball screw ϕ12		
Ball screw lead (mm)		12	6	2
Maximum speed Note 1 (mm/sec)		300	150	50
Maximum payload (kg)	Horizontal	50	55	60
	Vertical	10	20	30
Max. pressing force (N)		250	550	900
Stroke (mm)		50 to 300 (50pitch)		
Lost motion		0.1mm or less		
Rotating backlash (°)		+/-1.0		
Overall length (mm)	Horizontal	Stroke+276		
	Vertical	Stroke+316		
Maximum outside dimension of body cross-section (mm)		W56.4 × H71		
Cable length (m)		Standard: 1 / Option: 3, 5, 10		

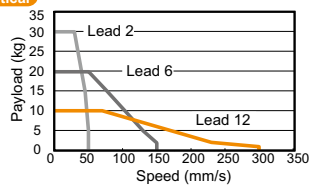
Note 1. The maximum speed needs to be changed in accordance with the payload.
See the "Speed vs. payload" graph shown on the right.
For details, see P. 336.

Speed vs. payload

Horizontal



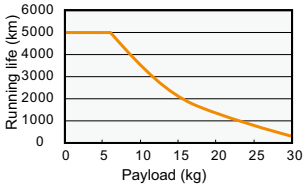
Vertical



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.

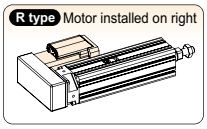
Vertical | Lead 2



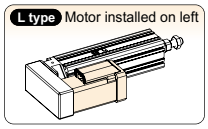
Note. See P.337 for running life distance to life time conversion example.

Motor installation (Space-saving model)

R type Motor installed on right



L type Motor installed on left

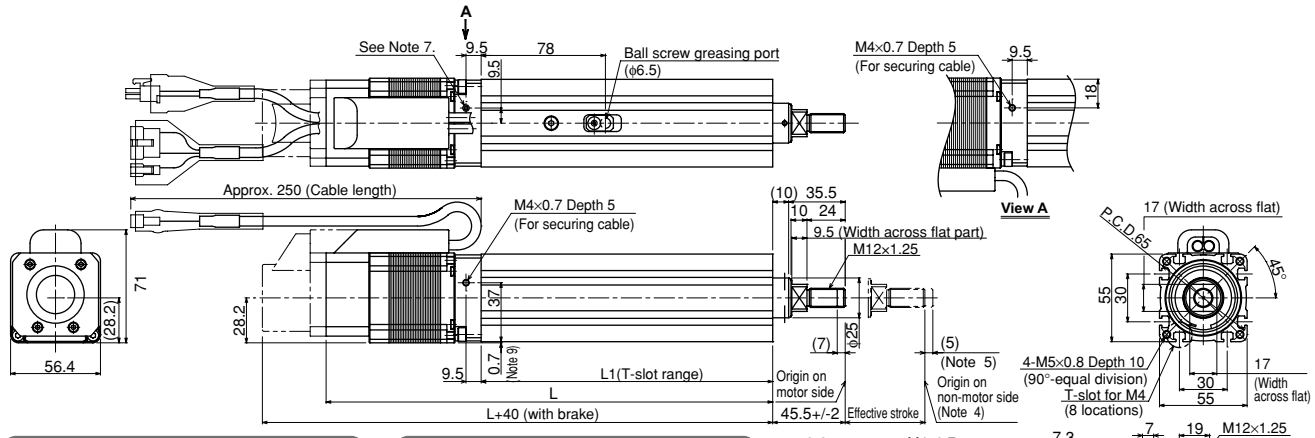


Controller

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

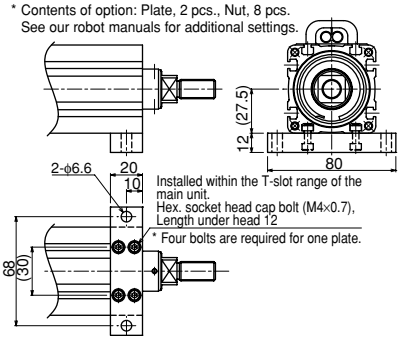
Controller	Operation method
TS-SD	Pulse train control

SR05 Straight model S



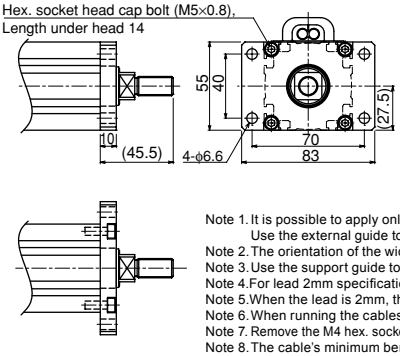
Option: Horizontal installation plate (foot)

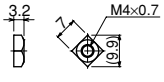
* Contents of option: Plate, 2 pcs., Nut, 8 pcs.
See our robot manuals for additional settings.



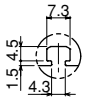
Option: Vertical installation plate (flange)

Hex. socket head cap bolt (M5×0.8), Length under head 14

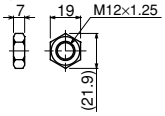




Dimensions of attached square nut for T-slot (6 pcs.)



Details of T-slot

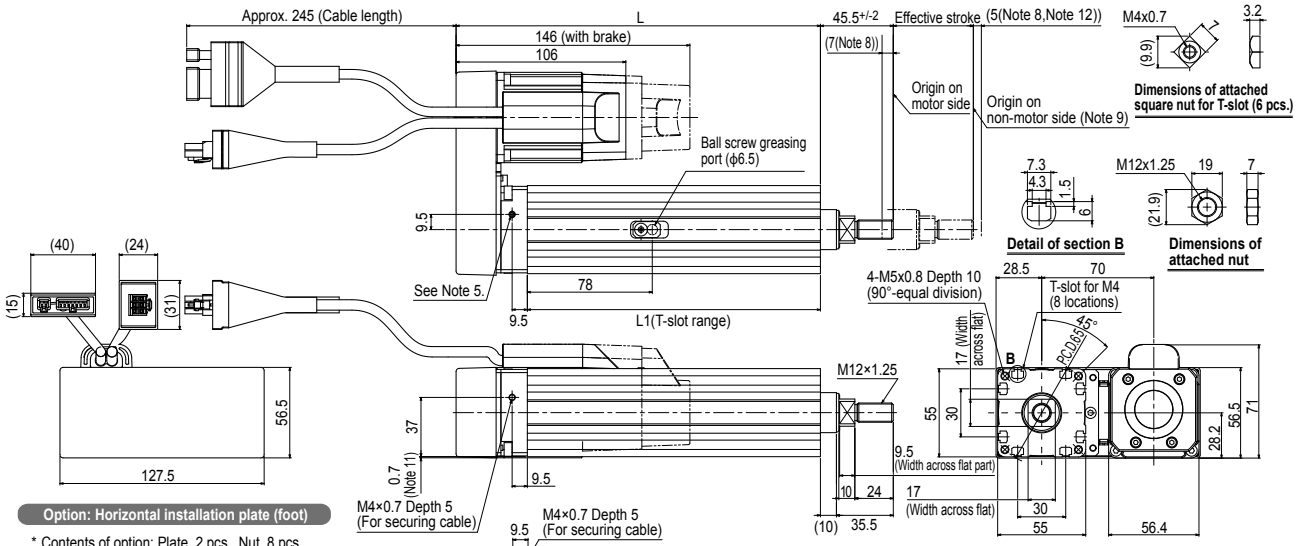


Dimensions of attached nut

Effective stroke	50	100	150	200	250	300
L1	183	233	283	333	383	433
L	280.5	330.5	380.5	430.5	480.5	530.5
Weight (kg) Note 10	2.2	2.6	3.0	3.3	3.7	4.1

Note 1. 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.
Note 2. The orientation of the width across flat part is undefined to the base surface.
Note 3. Use the support guide together to maintain the straightness.
Note 4. For lead 2mm specifications, the origin on the non-motor side cannot be set.
Note 5. When the lead is 2mm, this dimension is 27mm.
Note 6. When running the cables, secure cables so that any load is not applied to them.
Note 7. Remove the M4 hex. socket head cap set bolts and use them to secure the cables. (Effective screw thread depth 5)
Note 8. The cable's minimum bend radius is R30.
Note 9. Take great care as the outer case of the motor projects from the bottom of the main unit.
Note 10. Models with a brake will be 0.2kg heavier.
Note 11. Distance to mechanical stopper.

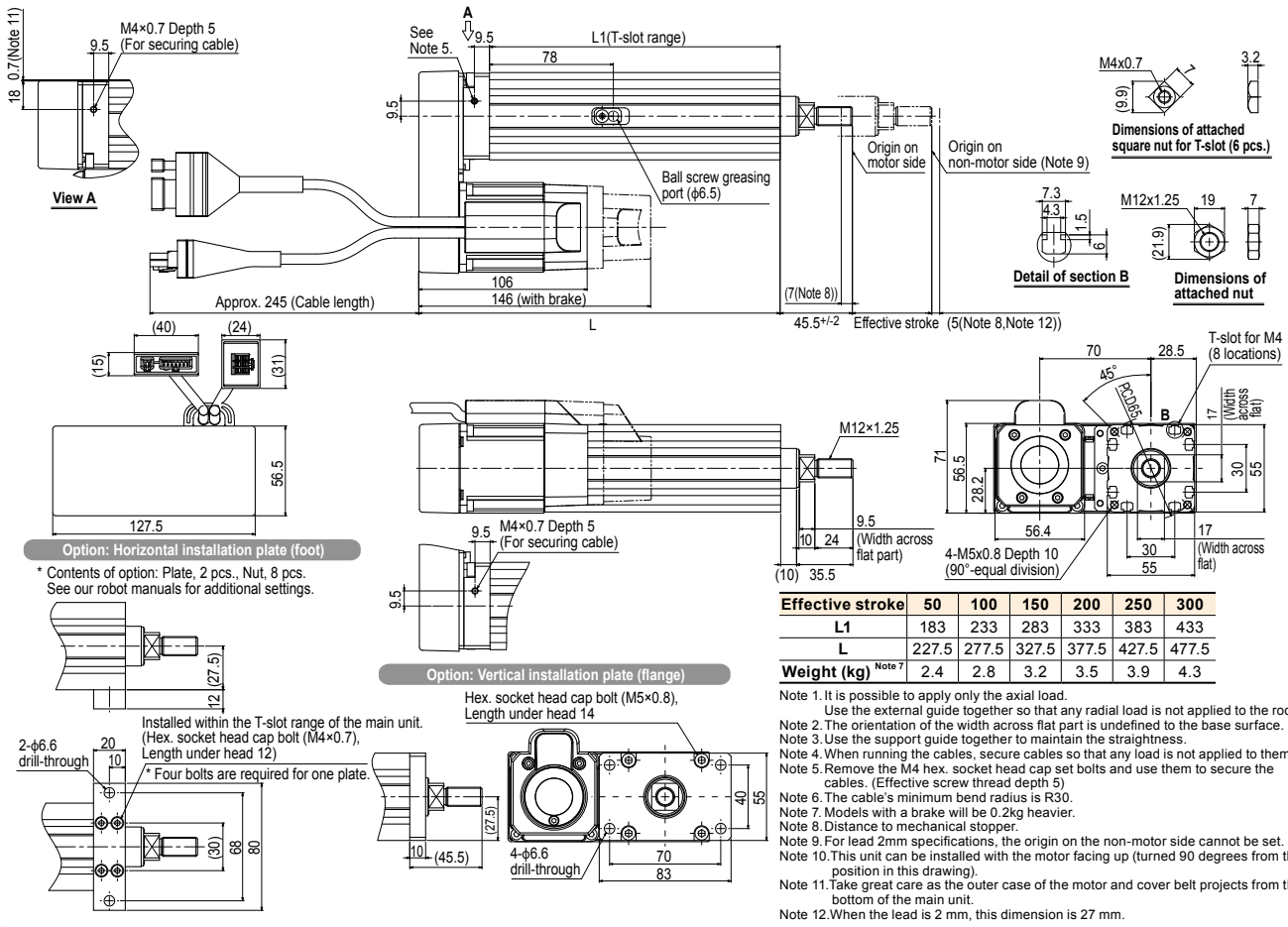
SR05 Space-saving model (motor installed on right) R



Effective stroke	50	100	150	200	250	300
L1	183	233	283	333	383	433
L	227.5	277.5	327.5	377.5	427.5	477.5
Weight (kg) Note 7	2.4	2.8	3.2	3.5	3.9	4.3

Note 1. 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.
Note 2. The orientation of the width across flat part is undefined to the base surface.
Note 3. Use the support guide together to maintain the straightness.
Note 4. When running the cables, secure cables so that any load is not applied to them.
Note 5. Remove the M4 hex. socket head cap set bolts and use them to secure the cables. (Effective screw thread depth 5)
Note 6. The cable's minimum bend radius is R30.
Note 7. Models with a brake will be 0.2kg heavier.
Note 8. Distance to mechanical stopper.
Note 9. For lead 2mm specifications, the origin on the non-motor side cannot be set.
Note 10. This unit can be installed with the motor facing up (turned 90 degrees from the position in this drawing).
Note 11. Take great care as the outer case of the motor and cover belt projects from the bottom of the main unit.
Note 12. When the lead is 2mm, this dimension is 27mm.

SR05 Space-saving model (motor installed on left) L



Effective stroke	50	100	150	200	250	300
L1	183	233	283	333	383	433
L	227.5	277.5	327.5	377.5	427.5	477.5
Weight (kg) Note 7	2.4	2.8	3.2	3.5	3.9	4.3

Note 1. 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.
Note 2. The orientation of the width across flat part is undefined to the base surface.
Note 3. Use the support guide together to maintain the straightness.
Note 4. When running the cables, secure cables so that any load is not applied to them.
Note 5. Remove the M4 hex. socket head cap set bolts and use them to secure the cables. (Effective screw thread depth 5)
Note 6. The cable's minimum bend radius is R30.
Note 7. Models with a brake will be 0.2kg heavier.
Note 8. Distance to mechanical stopper.
Note 9. For lead 2mm specifications, the origin on the non-motor side cannot be set.
Note 10. This unit can be installed with the motor facing up (turned 90 degrees from the position in this drawing).
Note 11. Take great care as the outer case of the motor and cover belt projects from the bottom of the main unit.
Note 12. When the lead is 2 mm, this dimension is 27 mm.