SR03 Rod type

CE compliance | Origin on the non-motor side is selectable

SR03-S

SR03-R

Ordering method

SR03 - [Lead] - [Model] - [Brake] - [Origin position] - [Bracket plate] - [Stroke] - [Cable length Note 3]

Model	Lead	Model	Brake	Origin position	Bracket plate	Stroke	Cable length Note 3
	12: 12mm 06: 6mm	S: Straight model R: Space-saving model Note 1 (motor installed on right) L: Space-saving model Note 1 (motor installed on left) U: Space-saving model Note 1 (motor installed on top)	N: With no brake B: With brake	N: Standard Note 2 Z: Non-motor side	N: No plate H: With plate V: With flange	50 to 200 (50mm pitch)	1K: 1m 3K: 3m 5K: 5m 10K: 10m

S2

Robot positioner	I/O
S2: TS-S2 Note 4	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board Note 5

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 5	B: With battery (Absolute) N: None (Incremental)

SD — **1**

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

Note 1. See P.153 for grease gun nozzles.
Note 2. 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 3. The robot cable is flexible and resists bending.
Note 4. See P.522 for DIN rail mounting bracket.
Note 5. Select this selection when using the gateway function. For details, see P.66.

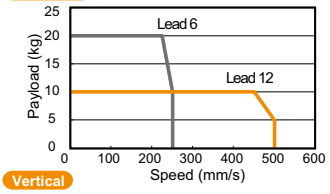
Basic specifications

Motor		42 □ Step motor	
Resolution (Pulse/rotation)		20480	
Repeatability (mm)		+/-0.02	
Deceleration mechanism		Ball screw ϕ8	
Ball screw lead (mm)		12	6
Maximum speed Note 1 (mm/sec)		500	250
Maximum payload (kg)	Horizontal	10	20
	Vertical	4	8
Max. pressing force (N)		75	100
Stroke (mm)		50 to 200 (50pitch)	
Lost motion		0.1mm or less	
Rotating backlash (°)		+/-1.0	
Overall length (mm)	Horizontal	Stroke+236.5	
	Vertical	Stroke+276.5	
Maximum outside dimension of body cross-section (mm)		W48 × H56.5	
Cable length (m)		Standard: 1 / Option: 3, 5, 10	

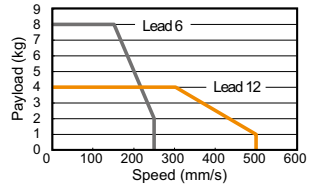
Note 1. The maximum speed needs to be changed in accordance with the payload.
See the "Speed vs. payload" graph shown on the right.
For details, see P. 152.

Speed vs. payload

Horizontal



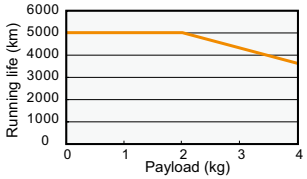
Vertical



Running life

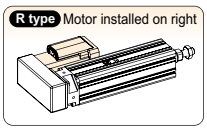
5000 km on models other than shown below.
Running life of only the model shown below becomes shorter than 5000 km depending on the payload, so check the running life curve.

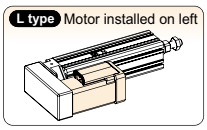
Vertical — Lead 12

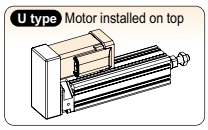


Note. See P.153 for running life distance to life time conversion example.

Motor installation (Space-saving model)


R type Motor installed on right


L type Motor installed on left

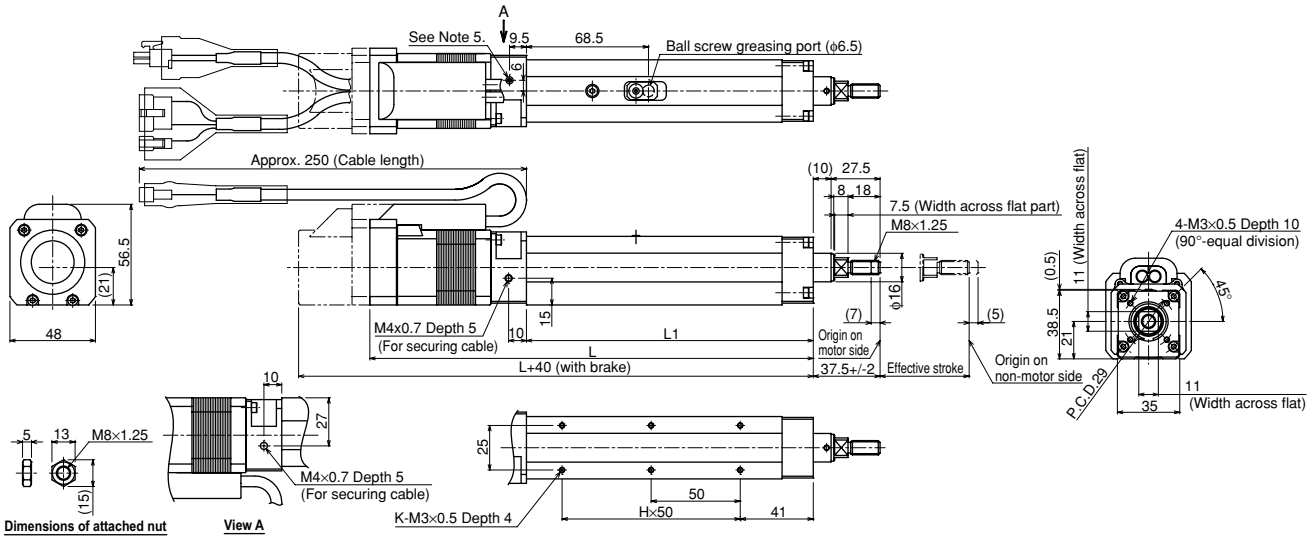

U type Motor installed on top

Controller

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

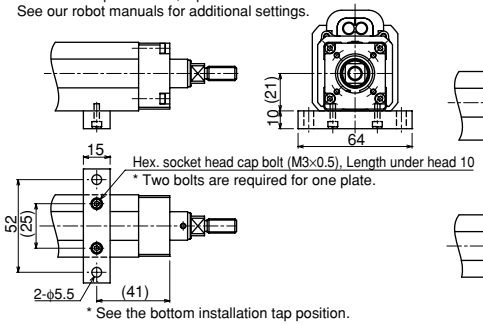
Controller	Operation method
TS-SD	Pulse train control

SR03 Straight model S



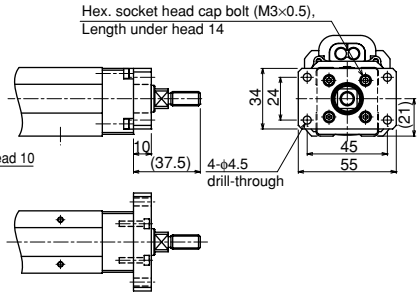
Option: Horizontal installation plate (foot)

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



* See the bottom installation tap position.

Option: Vertical installation plate (flange)

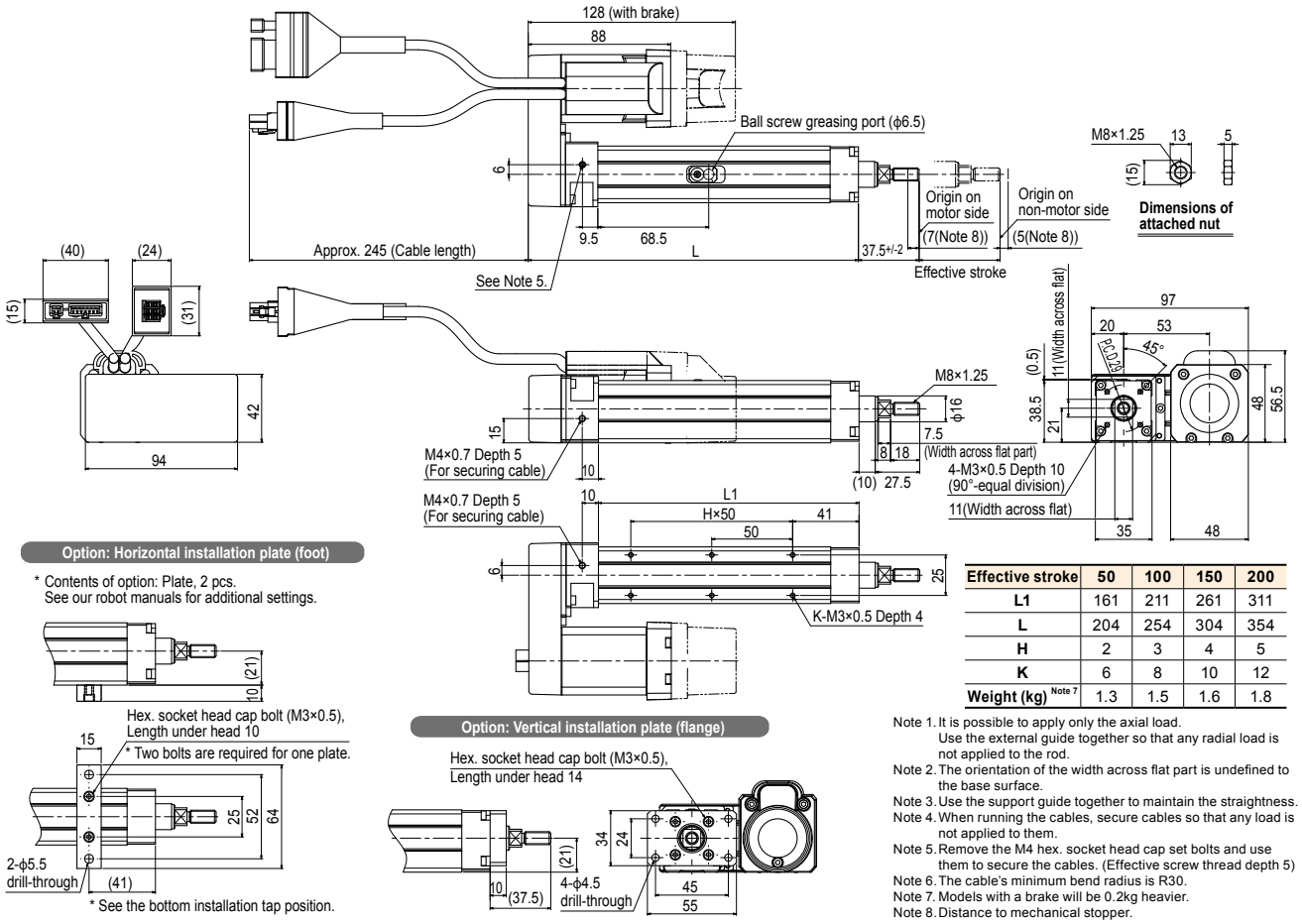


Effective stroke	50	100	150	200
L1	161	211	261	311
L	249	299	349	399
H	2	3	4	5
K	6	8	10	12
Weight (kg) Note 7	1.1	1.3	1.4	1.6

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.

Controller | TS-S2 ▸ 514 | TS-SH ▸ 514 | TS-SD ▸ 524

SR03 Space-saving model (motor installed on right) R



Option: Horizontal installation plate (foot)

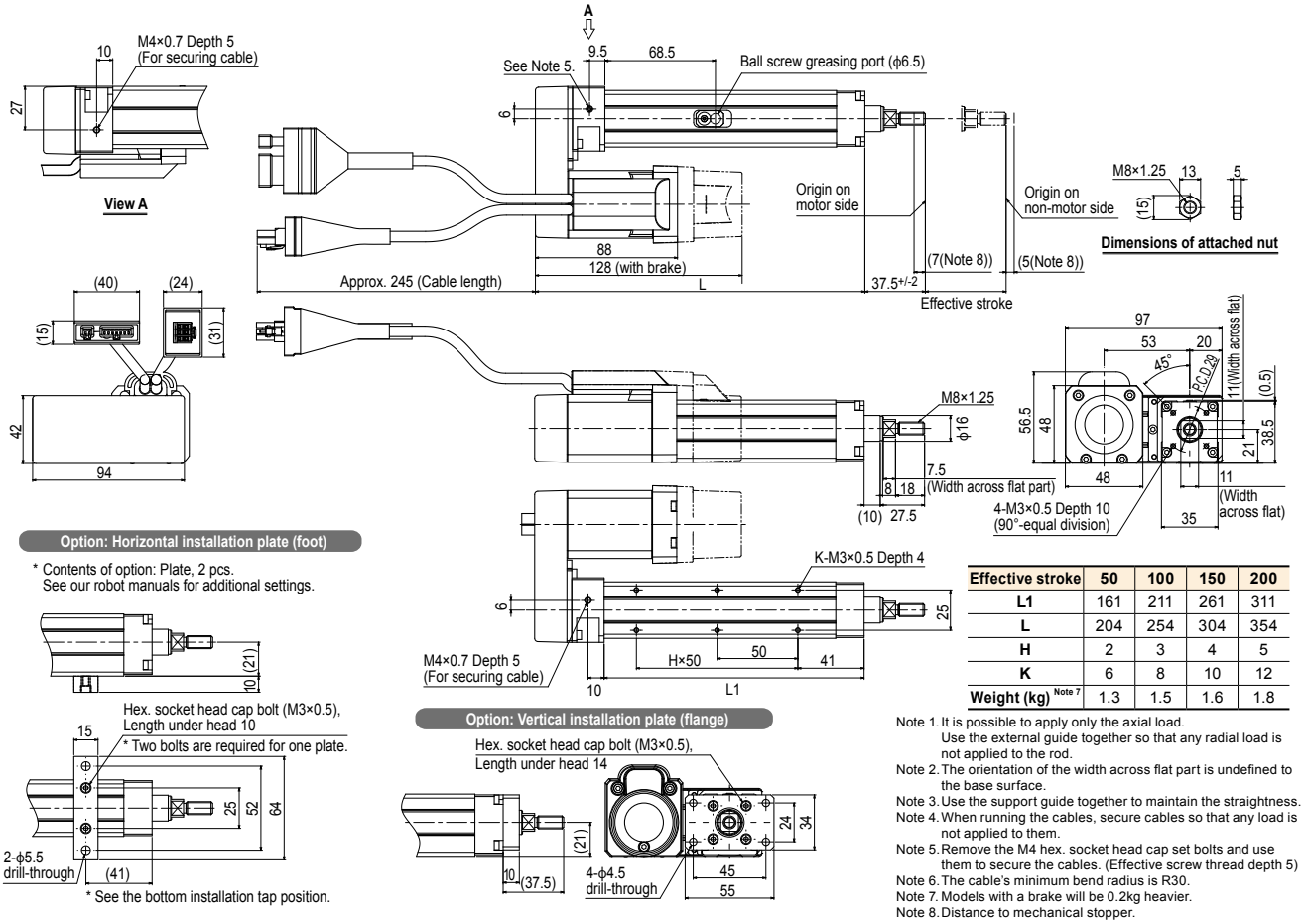
* Contents of option: Plate, 2 pcs.
See our robot manuals for additional settings.

Option: Vertical installation plate (flange)

Effective stroke	50	100	150	200
L1	161	211	261	311
L	204	254	304	354
H	2	3	4	5
K	6	8	10	12
Weight (kg) Note 7	1.3	1.5	1.6	1.8

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.

SR03 Space-saving model (motor installed on left) L



Option: Horizontal installation plate (foot)

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

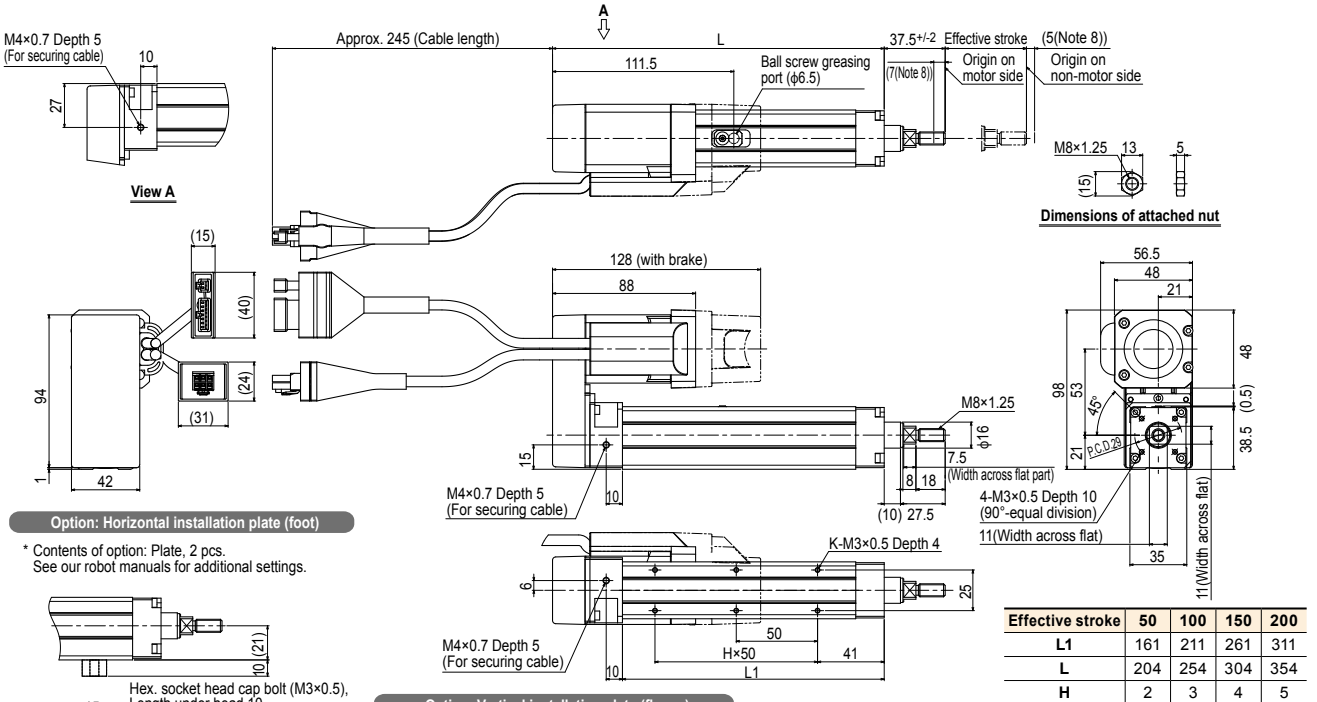
Option: Vertical installation plate (flange)

Effective stroke	50	100	150	200
L1	161	211	261	311
L	204	254	304	354
H	2	3	4	5
K	6	8	10	12
Weight (kg) Note 7	1.3	1.5	1.6	1.8

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.

Controller TS-S2 ▸ 514 TS-SH ▸ 514 TS-SD ▸ 524

SR03 Space-saving model (motor installed on top) U



Effective stroke	50	100	150	200
L1	161	211	261	311
L	204	254	304	354
H	2	3	4	5
K	6	8	10	12
Weight (kg) Note 7	1.3	1.5	1.6	1.8

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.

Controller TS-S2 ▶ 514 TS-SH ▶ 514 TS-SD ▶ 524