

# SG07 Slider type

- High lead: Lead 20
- CE compliance
- Origin on the non-motor side is selectable.



## Ordering method

### SG07

Model	Lead	Model	Brake	Origin position	Grease option	Stroke	Cable length <sup>Note 2</sup>	Robot positioner	I/O	Battery
	20: 20mm 12: 12mm 06: 6mm	S: Straight model	N: With no brake B: With brake	N: Standard <sup>Note 1</sup> Z: Non-motor side	N: Standard grease C: Clean room grease	50 to 800 (60mm pitch)	1K: 1m 3K: 3m 5K: 5m 10K: 10m	SH: TS-SH	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board <sup>Note 3</sup>	B: With battery (Absolute) N: None (Incremental)

Note 1. 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 2. The robot cable is flexible and resists bending.  
 Note 3. Select this selection when using the gateway function. For details, see P.96.

## Basic specifications

Motor	56 □ Step motor
Resolution (Pulse/rotation)	20480
Repeatability <sup>Note 1</sup> (mm)	+/-0.02
Deceleration mechanism	Ball screw φ12
Ball screw lead (mm)	20 12 6
Maximum speed <sup>Note 2, Note 3</sup> (mm/sec)	1200 800 350
Maximum payload (kg)	Horizontal 36 43 46 Vertical 4 12 20
Max. pressing force (N)	60 100 225
Stroke (mm)	50 to 800 (50pitch)
Overall length (mm)	Horizontal Stroke+288 Vertical Stroke+328
Maximum outside dimension of body cross-section (mm)	W65×H64
Cable length (m)	Standard: 1 / Option: 3, 5, 10

Note 1. Positioning repeatability in one direction.  
 Note 2. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.  
 Note 3. It is necessary to change the maximum speed according to the payload. For details, see the "Speed vs. payload" graph shown below.  
 Note. Position detectors (resolvers) are common to incremental and absolute specifications.  
 If the controller has a backup function then it will be absolute specifications.

## Allowable overhang <sup>Note</sup>

Horizontal installation (Unit: mm)	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)		
	A	B	C	A	B	C	A	C	
Lead 20	10kg 3572	458 486		10kg 450	402 3261		2kg 2303	2303	
25kg	2971	220 245		25kg 117	155 2943		4kg 1147	1147	
36kg	3150	140 160		36kg 98	85 2520		4kg 1386	1386	
15kg	3703	363 406		15kg 351	307 3403		12kg 442	442	
Lead 12	30kg 1962	172 196		30kg 134	117 1663		7kg 781	781	
43kg 1430	114 131			43kg 68	59 1070		20kg 252	252	
Lead 6	15kg 3853	363 414		15kg 353	307 3541				
30kg 2105	172 197			30kg 134	117 1752				
46kg 1500	106 122			46kg 58	50 1100				

Note. Distance from center of slider upper surface to carrier center-of-gravity at a guide service life of 10,000 km (Service life is calculated for 600mm stroke models).  
 Note. Calculated by the speed corresponding to the payload.

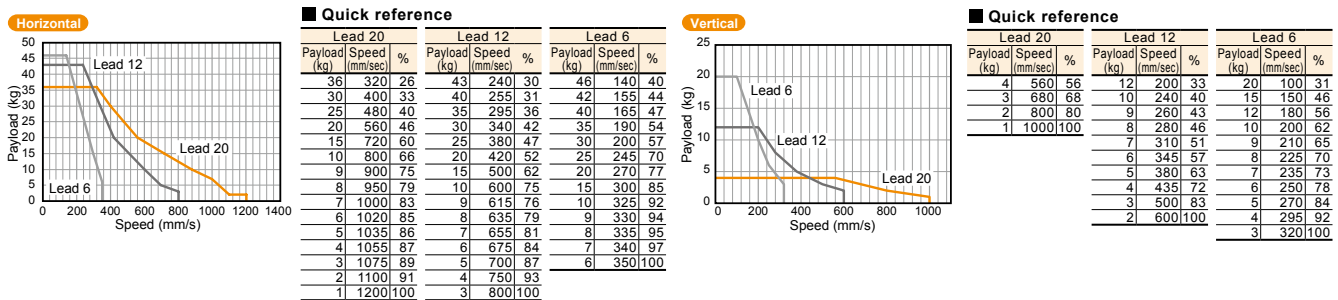
## Static loading moment

Static loading moment (Unit: N·m)		
MY	MP	MR
101	114	101

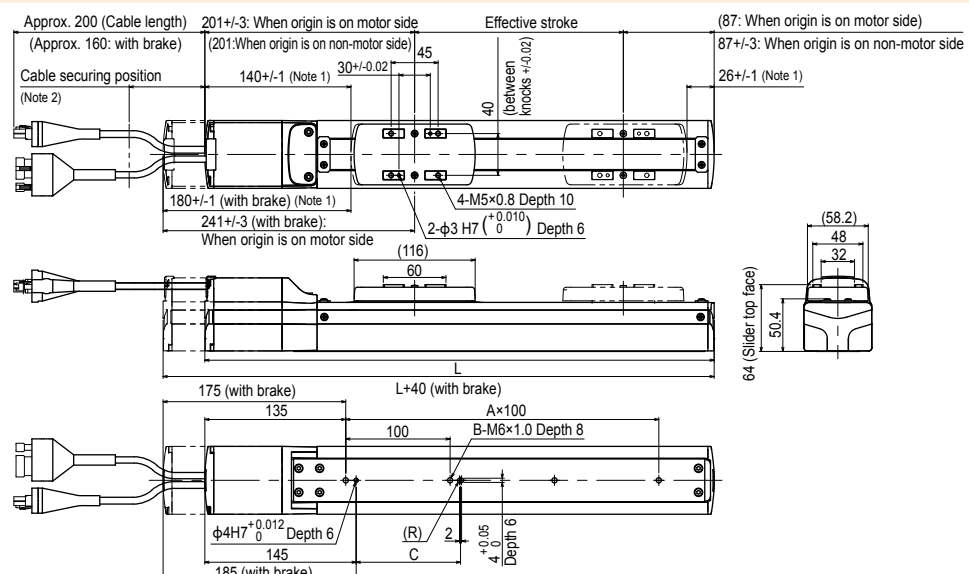
## Controller

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

## Speed vs. payload



## SG07 Straight model S



Effective stroke	Effective stroke																
	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
L	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	
A	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	
B	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	
C	100	100	100	100	100	100	400	400	400	400	400	400	700	700	700	700	
Weight (kg) <sup>Note 4</sup>	2.9	3.2	3.4	3.6	3.9	4.1	4.3	4.6	4.8	5.0	5.3	5.5	5.7	5.9	6.1	6.3	
Maximum speed for each stroke <sup>Note 5</sup> (mm/sec)	Lead20 (Horizontal)	1200															
	Lead20 (Vertical)	1000															
	Lead12 (Horizontal)	800															
	Lead12 (Vertical)	600															
	Lead6 (Horizontal)	350															
Lead6 (Vertical)	320																
Speed setting	-																

Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. Secure the cable with a tie-band 100mm or less from unit's end face to prevent the cable from being subjected to excessive loads.  
 Note 3. The cable's minimum bend radius is R30.  
 Note 4. These are the weights without a brake. The weights are 0.7kg heavier when equipped with a brake.  
 Note 5. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the below.