

# SG07 Slider type

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



## Ordering method

### SG07

<b>Model</b>	<b>Lead</b>	<b>Model</b>	<b>Brake</b>	<b>Origin position</b>	<b>Grease option</b>	<b>Stroke</b>	<b>Cable length</b> <sup>Note 2</sup>	<b>Robot positioner</b>	<b>I/O</b>	<b>Battery</b>
	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.66.

## Basic specifications

<b>Motor</b>	56 □ Step motor
<b>Resolution (Pulse/rotation)</b>	20480
<b>Repeatability</b> <sup>Note 1</sup> (mm)	+/-0.02
<b>Deceleration mechanism</b>	Ball screw φ12
<b>Ball screw lead (mm)</b>	20 12 6
<b>Maximum speed</b> <sup>Note 2 Note 3</sup> (mm/sec)	1200 800 350
<b>Maximum payload (kg)</b>	Horizontal 36 43 46 Vertical 4 12 20
<b>Max. pressing force (N)</b>	60 100 225
<b>Stroke (mm)</b>	50 to 800 (50pitch)
<b>Overall length (mm)</b>	Horizontal Stroke+288 Vertical Stroke+328
<b>Maximum outside dimension of body cross-section (mm)</b>	W65×H64
<b>Cable length (m)</b>	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. It is necessary to change the maximum speed according to the payload. For details, see the "Speed vs. payload" graph shown below.  
 Note 3. 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

Horizontal installation (Unit: mm)				Wall installation (Unit: mm)				Vertical installation (Unit: mm)		
Lead	A	B	C	Lead	A	B	C	Lead	A	C
20	10kg 3572	458	486	20	10kg 450	402	3261	20	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
12	15kg 3703	363	406	12	15kg 351	307	3403	12	12kg 442	442
	30kg 1962	172	196		30kg 134	117	1663	6	7kg 781	781
	43kg 1430	114	131		43kg 68	59	1070		20kg 252	252
6	15kg 3853	363	414	6	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.

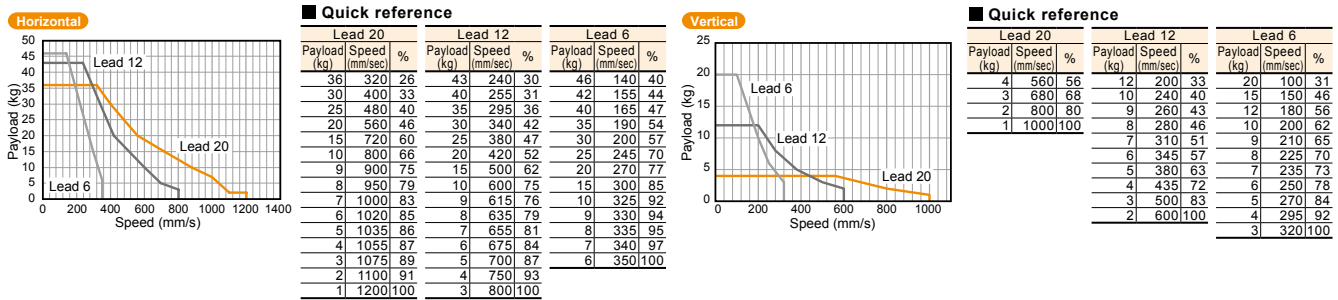
## Static loading moment

	MY	MP	MR
(Unit: N·m)	101	114	101

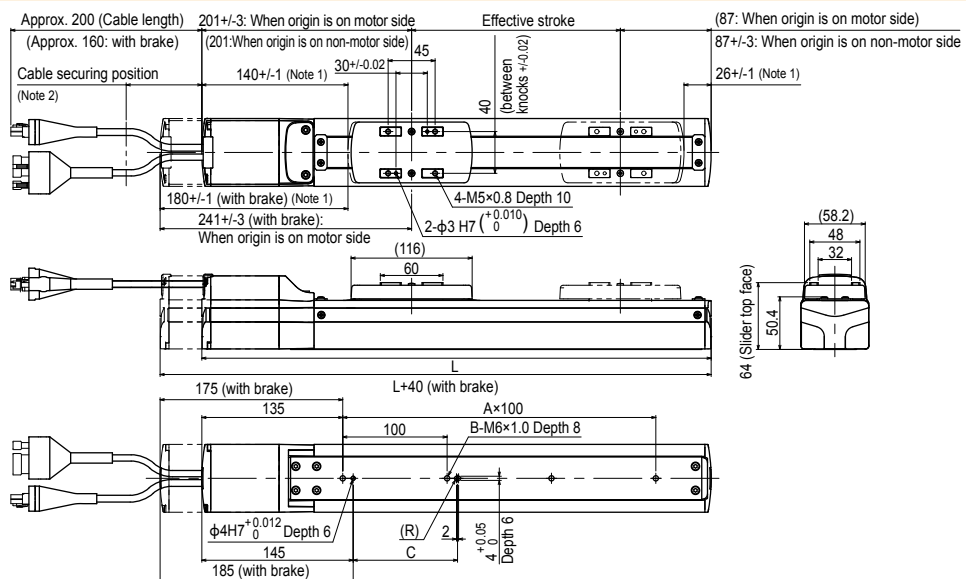
## Controller

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

## Speed vs. payload



## SG07 Straight model



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	
<b>Weight (kg)</b> <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	
<b>Maximum speed for each stroke</b> <sup>Note 5</sup> (mm/sec)	Lead20 (Horizontal)	1200															
	Lead20 (Vertical)	1000															
	Lead12 (Horizontal)	800															
	Lead12 (Vertical)	600															
	Lead6 (Horizontal)	350															
Lead6 (Vertical)	320																
<b>Speed setting</b>	-																

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.