

# 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
	20: 20mm 12: 12mm 06: 6mm	S: Straight model	N: With no brake B: With brake	N: Standard Z: Non-motor side	N: Standard grease C: Clean room grease	50 to 800 (60mm pitch)	Note 1 1L: 1m 3L: 3m 5L: 5m 10L: 10m

### SH

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

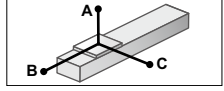
Note 1. The robot cable is flexible and resists bending.  
Note 2. Select this selection when using the gateway function. For details, see P.439.

## Basic specifications

Motor	56 □ Step motor
Resolution (Pulse/rotation)	20480
Repeatability (mm)	+/-0.02
Deceleration mechanism	Ball screw φ12 (Class C10)
Ball screw lead (mm)	20 12 6
Maximum speed (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.

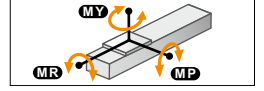
## Allowable overhang



Horizontal installation (Unit: mm)		Wall installation (Unit: mm)		Vertical installation (Unit: mm)	
Lead	Stroke	A	B	A	C
Lead 20	10kg	3572	458	450	3261
	25kg	2971	220	117	2943
	36kg	3150	140	98	2520
	15kg	3703	363	351	3403
Lead 12	30kg	1962	172	134	1663
	43kg	1430	114	68	1070
	15kg	3853	363	353	3541
	30kg	2105	172	134	1752
Lead 6	46kg	1500	106	58	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

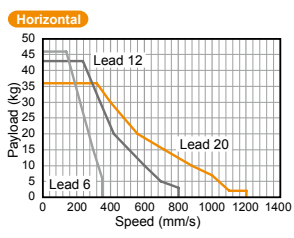


(Unit: N·m)		
MY	MP	MR
101	114	101

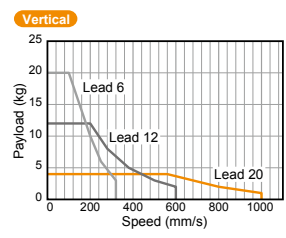
## Controller

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

## Speed vs. payload

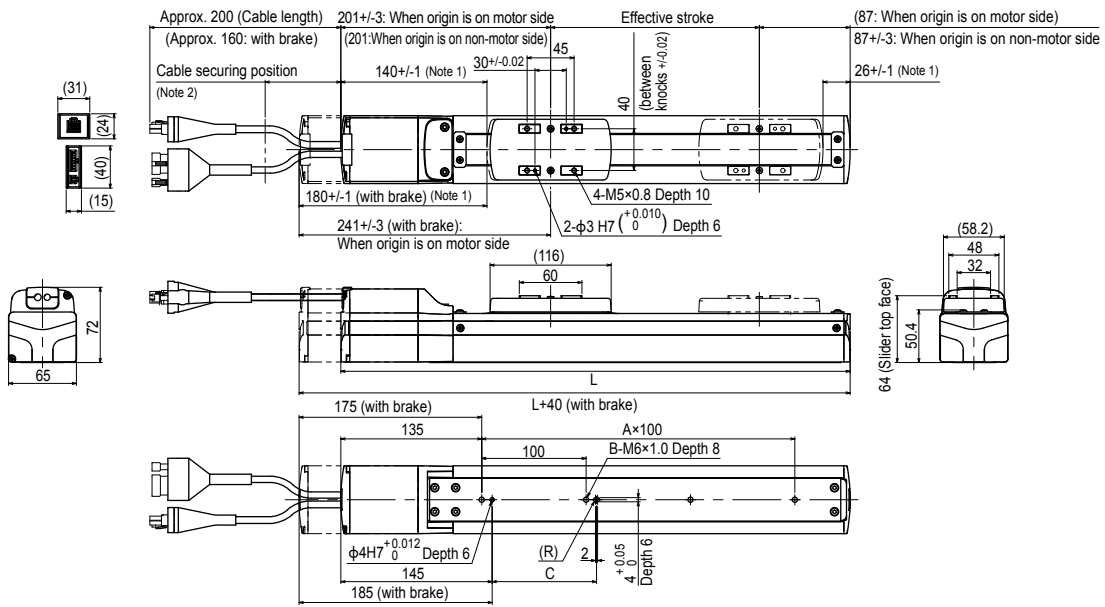


Quick reference					
Lead 20		Lead 12		Lead 6	
Payload (kg)	Speed (mm/sec)	Payload (kg)	Speed (mm/sec)	Payload (kg)	Speed (mm/sec)
36	320	43	240	46	140
30	400	40	255	42	155
25	480	35	295	40	165
20	560	30	340	35	190
15	720	25	380	30	200
10	800	15	420	25	245
8	900	10	500	15	270
8	950	9	600	15	300
7	1000	8	615	10	325
6	1020	7	635	9	330
5	1035	6	655	8	335
4	1055	5	675	7	340
3	1075	4	750	6	350
2	1100	3	800	100	
1	1200	100			



Quick reference					
Lead 20		Lead 12		Lead 6	
Payload (kg)	Speed (mm/sec)	Payload (kg)	Speed (mm/sec)	Payload (kg)	Speed (mm/sec)
4	560	12	200	20	100
3	680	10	240	15	150
2	800	9	260	12	180
1	1000	8	280	10	200
		7	310	9	210
		6	345	8	225
		5	380	7	235
		4	435	6	250
		3	500	5	270
		2	600	4	295
		100		3	320

## SG07 Straight model



Effective stroke	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	4	5	5	6	6	7	7	8	8
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)	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 (mm/sec)	Lead20 (Horizontal)	1200														
	Lead20 (Vertical)	1000														
	Lead12 (Horizontal)	800														
	Lead12 (Vertical)	600														
	Lead6 (Horizontal)	350														
Lead6 (Vertical)	320															
Speed setting	85% 75% 65% 60%															

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.