

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 ^{Note 2}	Robot positioner	I/O	Battery
	20: 20mm 12: 12mm 06: 6mm	S: Straight model	N: With no brake B: With brake	N: Standard ^{Note 1} 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 ^{Note 3}	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 ^{Note 1} (mm)	+/-0.02
Deceleration mechanism	Ball screw ϕ 12
Ball screw lead (mm)	20 12 6
Maximum speed ^{Note 2 Note 3} (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 ^{Note}

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	
Lead 12	25kg 2971	220 245		25kg 117	155 2943		4kg 1147	1147	
Lead 6	36kg 3150	140 160		36kg 98	85 2520		4kg 1386	1386	
Lead 12	15kg 3703	363 406		15kg 351	307 3403		12kg 442	442	
Lead 6	30kg 1962	172 196		30kg 134	117 1663		7kg 781	781	
Lead 12	43kg 1430	114 131		43kg 68	59 1070		20kg 252	252	
Lead 6	15kg 3853	363 414		15kg 353	307 3541				
Lead 6	30kg 2105	172 197		30kg 134	117 1752				
Lead 6	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.

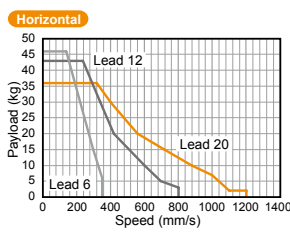
Static loading moment

	MY	MP	MR
(Unit: N·m)	101	114	101

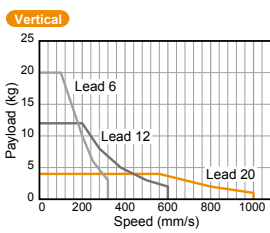
Controller

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

Speed vs. payload

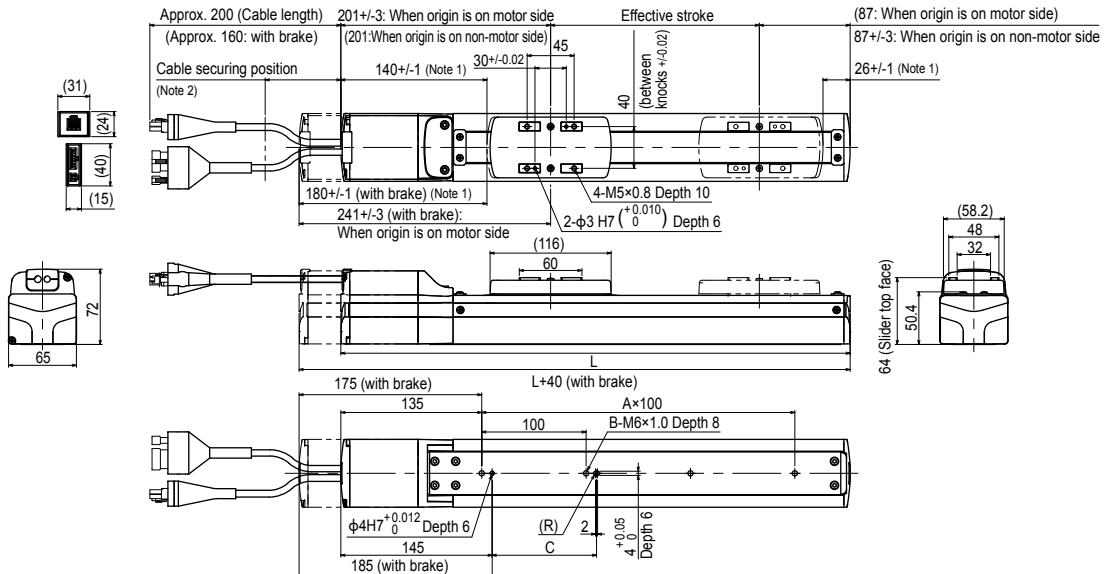


Lead 20			Lead 12			Lead 6		
Payload (kg)	Speed (mm/sec)	%	Payload (kg)	Speed (mm/sec)	%	Payload (kg)	Speed (mm/sec)	%
36	320	26	43	240	30	46	140	40
30	400	33	40	255	31	42	155	44
25	480	40	35	295	36	40	165	47
20	560	46	30	340	42	35	190	54
15	720	60	25	380	47	30	200	57
10	800	66	20	420	52	25	245	70
9	900	75	15	500	62	20	270	77
8	950	79	10	600	75	15	300	85
7	1000	83	9	615	76	10	325	92
6	1020	85	8	635	79	9	330	94
5	1035	86	7	655	81	8	335	95
4	1055	87	6	675	84	7	340	97
3	1075	89	5	700	87	6	350	100
2	1100	91	4	750	93			
1	1200	100	3	800	100			



Lead 20			Lead 12			Lead 6		
Payload (kg)	Speed (mm/sec)	%	Payload (kg)	Speed (mm/sec)	%	Payload (kg)	Speed (mm/sec)	%
4	560	56	12	200	33	20	100	31
3	680	68	10	240	40	15	150	46
2	800	80	9	260	43	12	180	56
1	1000	100	8	280	46	10	200	62
			7	310	51	9	210	65
			6	345	57	8	225	70
			5	380	63	7	235	73
			4	435	72	6	250	78
			3	500	83	5	270	84
			2	600	100	4	295	92
						3	320	100

SG07 Straight model ^S



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
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) ^{Note 4}	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 ^{Note 5} (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.