

LGXS05L Advanced model



Motor-less Single Axis Actuator

Ordering method

LGXS05L		
Model	Lead designation	Stroke
	20, 20 mm	50 to 800
	10, 10 mm	(50 mm pitch)
	5, 5 mm	

[Caution]

This system is provided as mechanical actuator unit and not including any adapters or electric components. Motor, driver and other components required for installation are user's responsibility. Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator. The product performance may not be satisfied depending on the compatible motor.

Specifications

Adaptable motor	100 W
Repeatability ^{Note 1}	+/-0.005 mm
Deceleration mechanism	Ground ball screw ϕ 12 (C5 class)
Stroke	50 mm to 800 mm (50 mm pitch)
Maximum speed (or equivalent)	1333 mm/sec 666 mm/sec 333 mm/sec
Ball screw lead	20 mm 10 mm 5 mm
Maximum payload (or equivalent) ^{Note 3}	Horizontal
	Vertical
Rated thrust (or equivalent) ^{Note 3}	Horizontal
	Vertical
Maximum dimensions of cross section of main unit	W 48 mm x H 65 mm
Overall length	ST + 161.5 mm
Degree of cleanliness ^{Note 4}	ISO CLASS 3 (ISO14644-1) or equivalent
Intake air ^{Note 5}	30 N ℓ /min to 100 N ℓ /min
Using ambient temperature and humidity	0 to 40 °C, 35 to 80 %RH (non-condensing)

- Note 1. Positioning repeatability in one direction.
 Note 2. When a moving distance is short and depending on an operation condition, it may not reach the maximum speed.
 Note 3. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
 Note 4. When using in a clean environment, attach a suction air joint. The degree of cleanliness is the cleanliness level achieved when using at 1000 mm/sec or less.
 Note 5. The required suction amount will vary according to the operating conditions and operating environment.
 Note. See P.23 for acceleration/deceleration and inertia moment.

Allowable overhang ^{Note}

LGXS05L-20	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	B	C	
3kg	1760	560	427	3kg	397	488	1599	1kg	1490	1490
8kg	739	201	154	8kg	107	128	528	2kg	732	732
12kg	611	134	105	12kg	52	61	331	3kg	480	480

LGXS05L-10	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	B	C	
6kg	2418	388	333	6kg	277	316	2194	4kg	554	554
12kg	1400	187	161	12kg	101	115	1086	6kg	360	360
24kg	875	86	74	24kg	12	14	276			

LGXS05L-5	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	B	C	
10kg	3144	254	225	10kg	162	181	2817	5kg	501	501
20kg	1850	120	106	20kg	42	47	1282	10kg	235	235
32kg	1560	70	62	32kg	0	0	0	12kg	190	190

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.
 Note. Service life is calculated for 600 mm stroke models.

Static loading moment

(Unit: N·m)		
MY	MP	MR
72	72	64

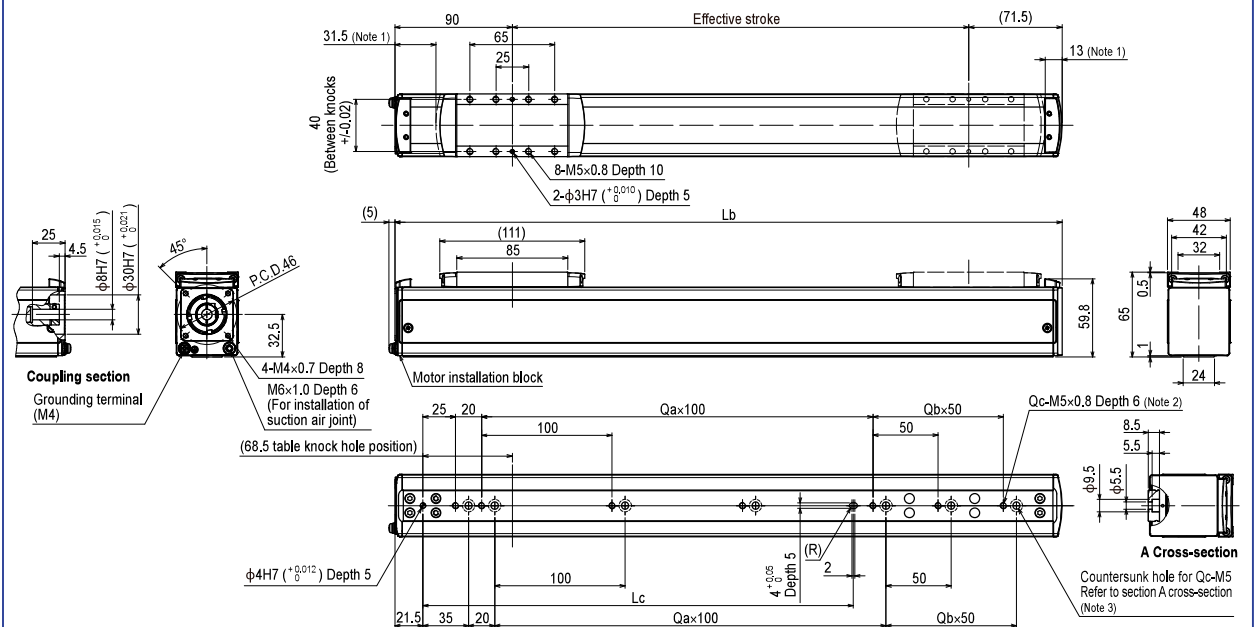
Adaptable Servo Motor

Specification	Flange size	<input type="checkbox"/> 40
	Wattage	100 W
Manufacturer	Model	
Yasukawa Electric Corp.	SGMJV-01 SGM7J-01	
Keyence Corp.	SV- <input type="checkbox"/> 010 SV2- <input type="checkbox"/> 010	
Mitsubishi Electric Corp.	HF-KP13 ^{Note} HG-KR13 ^{Note}	

Note. To combine with the conversion adapter <GX-BEND-40>, the shim plate (t1) is necessary.

Conversion adapter product model	Shim plate part number
GX-BEND-40	KES-M2295-00

LGXS05L



Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Lb	211.5	261.5	311.5	361.5	411.5	461.5	511.5	561.5	611.5	661.5	711.5	761.5	811.5	861.5	911.5	961.5
Lc	130	130	130	130	130	330	330	330	330	330	330	630	630	630	630	630
Qa	1	1	1	1	3	3	3	3	3	3	6	6	6	6	6	6
Qb	0	1	2	3	0	1	2	3	4	5	0	1	2	3	4	5
Qc	3	4	5	6	5	6	7	8	9	10	8	9	10	11	12	13
Weight (kg)	1.4	1.5	1.7	1.8	2.0	2.2	2.3	2.5	2.6	2.8	2.9	3.1	3.2	3.4	3.5	3.7
Maximum speed (mm/sec)	Lead 20	1333														
	Lead 10	666														
	Lead 5	333														
	Speed setting	-														
													1066	933	800	666
													532	466	400	333
													266	233	200	166
													80%	70%	60%	50%

- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
 Note 2. When using the tap holes to mount the body, remove the set screws first.
 Note 3. When using the countersunk holes (section A cross section) to mount the body, remove the cap from the inner side and then fix. The length under head of the hex socket head bolts (M5 x 0.8) used must be 15 mm or less.

Features

Basic model LBAS

LBAS Acceleration/Deceleration Inertia Moment

Advanced model LGXS

LGXS Acceleration/Deceleration Inertia Moment

Option

Acceleration/Deceleration

LGXS05L

Model	LGXS05L -5 Horizontal/Wall hanging	LGXS05L -5 Vertical	LGXS05L -10 Horizontal/Wall hanging	LGXS05L -10 Vertical	LGXS05L -20 Horizontal/Wall hanging	LGXS05L -20 Vertical
Payload [kg]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]
0	3.04	3.34	4.26	4.86	5.07	5.07
1	2.97	3.18	4.08	4.56	4.86	4.86
2	2.91	3.03	3.9	4.3	4.66	4.66
3	2.85	2.88	3.74	4.06	4.46	4.46
4	2.79	2.73	3.58	3.85	4.25	
5	2.73	2.58	3.42	3.66	4.05	
6	2.67	2.43	3.28	3.49	3.85	
7	2.61	2.28	3.13		3.65	
8	2.55	2.13	3		3.44	
9	2.49	1.98	2.87		3.24	
10	2.43	1.83	2.74		3.04	
11	2.37	1.68	2.62		2.83	
12	2.31	1.53	2.51		2.63	
13	2.24		2.41			
14	2.18		2.3			
15	2.12		2.21			
16	2.06		2.12			
17	2		2.04			

Model	LGXS05L -5 Horizontal/Wall hanging	LGXS05L -5 Vertical	LGXS05L -10 Horizontal/Wall hanging	LGXS05L -10 Vertical	LGXS05L -20 Horizontal/Wall hanging	LGXS05L -20 Vertical
Payload [kg]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]
18	1.94		1.96			
19	1.88		1.89			
20	1.82		1.83			
21	1.76		1.77			
22	1.7		1.72			
23	1.64		1.67			
24	1.58		1.63			
25	1.52					
26	1.45					
27	1.39					
28	1.33					
29	1.27					
30	1.21					
31	1.15					
32	1.09					

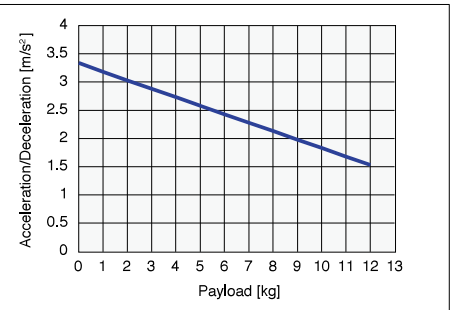
Payload – Acceleration/Deceleration Graph (Estimate)

LGXS05L-5

Horizontal/Wall hanging



Vertical

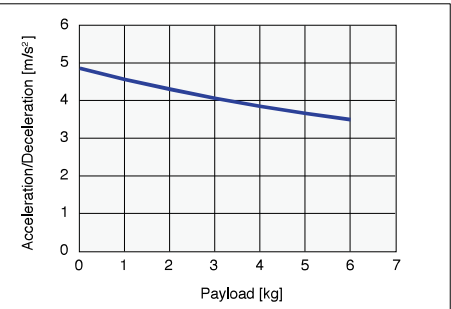


LGXS05L-10

Horizontal/Wall hanging

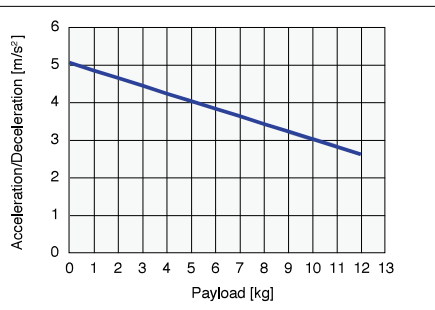


Vertical

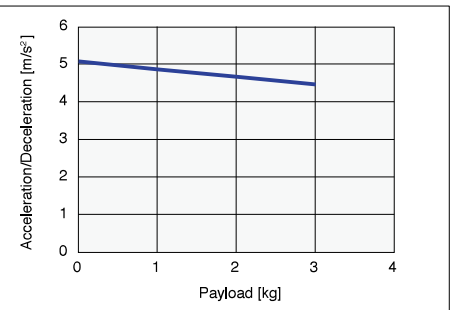


LGXS05L-20

Horizontal/Wall hanging



Vertical



Inertia Moment

LGXS05L

Model	Effective stroke [mm]															
	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
LGXS05L-5	0.144	0.152	0.160	0.168	0.176	0.184	0.192	0.200	0.208	0.216	0.224	0.232	0.240	0.248	0.256	0.264
LGXS05L-10	0.153	0.161	0.169	0.177	0.185	0.193	0.201	0.209	0.217	0.225	0.233	0.241	0.249	0.257	0.265	0.273
LGXS05L-20	0.192	0.200	0.208	0.216	0.224	0.232	0.240	0.248	0.256	0.264	0.271	0.279	0.287	0.295	0.303	0.311

Features

Basic model LBAS

LBAS Acceleration/Deceleration Inertia Moment

Advanced model LGXS

LGXS Acceleration/Deceleration Inertia Moment

Option