

# GX07

Single-axis AC servo motor robot



## Ordering method

<b>GX07</b>			<b>EU</b>				<b>A10</b>		
<b>Model</b>	<b>Lead</b>	<b>Motor specification</b>	<b>Motor type</b> <sup>Note1</sup>	<b>Stroke</b>	<b>Cable length</b> <sup>Note2</sup>	<b>Cable entry location</b>	<b>Driver</b>	<b>Brake unit</b> <sup>Note3</sup>	<b>Absolute battery</b>
	30: 30mm 20: 20mm 10: 10mm 5: 5mm	S40: Standard / With no brake BK40: Standard / With brake BL40: Battery-less absolute / With no brake BKBL40: Battery-less absolute / With brake		50 to 1100 (50mm pitch)	R3: 3m R5: 5m R10: 10m	R: From rear of motor F: From front of motor	A10:YHX-A10-SET	V: With brake unit N: None	B: With absolute battery N: None

Note 1. RoHS2 (EU) 2015/863 compliant motor  
 Note 2. All robot cables are flexible cables. The robot cable dimensions drawing is provided on page 732.  
 Note 3. The brake unit cannot be used with an external brake power input.

## Specifications

<b>Motor</b>	40 □ / 100 W
<b>Repeatability</b> <sup>Note 1</sup>	+/-0.005 mm
<b>Deceleration mechanism</b>	Ground ball screw φ 15 (Class C5)
<b>Stroke</b>	50 mm to 1100 mm (50mm pitch)
<b>Maximum speed</b> <sup>Note 2</sup>	1800 mm/sec / 1200 mm/sec / 600 mm/sec / 300 mm/sec
<b>Ball screw lead</b>	30 mm 20 mm 10 mm 5 mm
<b>Maximum payload</b>	Horizontal 10 kg 25 kg 45 kg 85 kg Vertical 2 kg 4 kg 8 kg 16 kg
<b>Rated thrust</b>	56 N 84 N 169 N 339 N
<b>Maximum dimensions of cross section of main unit</b>	W 70 mm × H 76.5 mm
<b>Overall length (Horizontal)</b>	ST + 270.5 mm
<b>Overall length (Vertical)</b>	ST + 311 mm
<b>Degree of cleanliness</b> <sup>Note 3</sup>	ISO CLASS 3 (ISO14644-1) or equivalent
<b>Intake air</b> <sup>Note 4</sup>	30 Nl/min to 115 Nl/min
<b>Controller</b>	YHX series

Note 1. Positioning repeatability in one direction.  
 Note 2. The maximum speed may not be reached if the travel distance is short or because of other operation conditions. If the effective stroke exceeds 700 mm, the ball screw may resonate. (Critical speed)  
 At this time, make the adjustment to decrease the speed while referring to the maximum speed shown in the table.  
 Note 3. When using in a clean environment, attach a suction air joint. The degree of cleanliness is the cleanliness when using at 1000 mm/sec or less.  
 Note 4. The required suction amount will vary according to the operating conditions and operating environment.

## Static loading moment

	(Unit: N·m)		
	<b>MY</b>	<b>MP</b>	<b>MR</b>
	138	121	121

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

<b>GX07-30</b>	<b>Horizontal installation</b> (Unit: mm)	<b>Wall installation</b> (Unit: mm)	<b>Vertical installation</b> (Unit: mm)
	A B C	A B C	A C
2kg	3078 1509 1221	1237 1442 2975	1k 2335 2335
6kg	1191 501 418	6kg 393 435 1062	2kg 1158 1158
10kg	957 317 282	10kg 244 251 793	
<b>GX07-20</b>	<b>Horizontal installation</b> (Unit: mm)	<b>Wall installation</b> (Unit: mm)	<b>Vertical installation</b> (Unit: mm)
	A B C	A B C	A C
10kg	1327 370 358	10kg 313 304 1164	1kg 3416 3416
20kg	1136 186 188	20kg 131 119 804	2kg 1701 1701
25kg	1509 163 173	25kg 109 97 1010	4kg 841 841
<b>GX07-10</b>	<b>Horizontal installation</b> (Unit: mm)	<b>Wall installation</b> (Unit: mm)	<b>Vertical installation</b> (Unit: mm)
	A B C	A B C	A C
15kg	2420 338 372	15kg 306 271 2192	3kg 1688 1688
30kg	1531 160 176	30kg 106 94 1155	6kg 827 827
45kg	1181 101 111	45kg 39 34 623	8kg 612 612
<b>GX07-5</b>	<b>Horizontal installation</b> (Unit: mm)	<b>Wall installation</b> (Unit: mm)	<b>Vertical installation</b> (Unit: mm)
	A B C	A B C	A C
30kg	2915 172 197	30kg 122 106 2458	6kg 907 907
50kg	2535 96 110	50kg 34 30 1476	9kg 591 591
85kg	2024 49 56	85kg 0 0 0	16kg 314 314

Note. Distance from center of slider upper surface to carrier center-of-gravity at a guide service life of 10,000 km.

Note. Service life is calculated for 600mm stroke models.

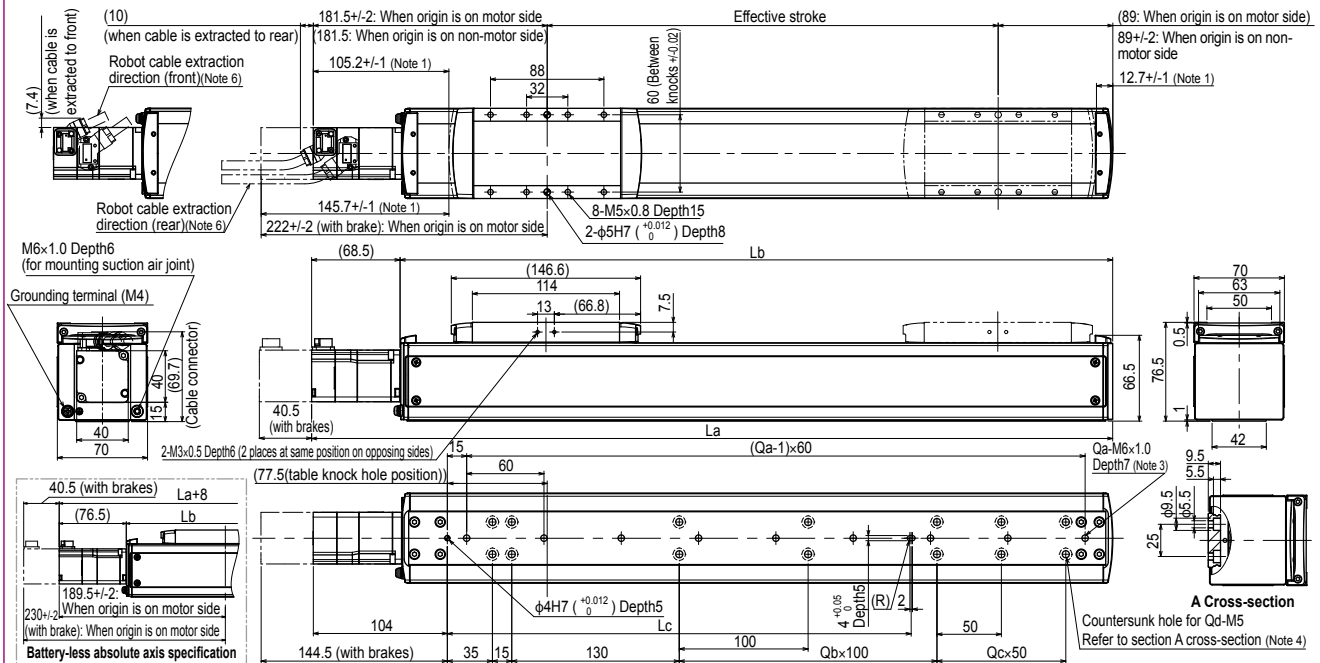
## Robot cable

<b>R3R (3 m/extracted to rear)</b>	Encoder cable + Power cable set model	KES-M4710-30
<b>R5R (5 m/extracted to rear)</b>	Encoder cable + Power cable set model	KES-M4710-50
<b>R10R (10 m/extracted to rear)</b>	Encoder cable + Power cable set model	KES-M4710-A0
<b>R3F (3 m/extracted to front)</b>	Encoder cable + Power cable set model	KES-M4720-30
<b>R5F (5 m/extracted to front)</b>	Encoder cable + Power cable set model	KES-M4720-50
<b>R10F (10 m/extracted to front)</b>	Encoder cable + Power cable set model	KES-M4720-A0

## Driver unit

<b>10A Spec.</b>	<b>Model</b>	YHX-A10-SET
	<b>Control method</b>	Standard profile

## GX07



<b>Effective stroke</b>	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	
<b>La</b>	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5	1120.5	1170.5	1220.5	1270.5	1320.5	1370.5	
<b>Lb</b>	252	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002	1052	1102	1152	1202	1252	1302	
<b>Lc</b>	160	160	160	160	360	360	360	360	360	360	360	360	360	360	760	760	760	760	760	760	760	760	
<b>Qa</b>	4	5	5	6	7	8	9	10	10	11	12	13	14	15	15	16	17	18	19	20	20	21	
<b>Qb</b>	0	0	0	0	2	2	2	2	2	2	2	2	2	2	6	6	6	6	6	6	6	6	
<b>Qc</b>	0	1	2	3	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	8	9	
<b>Qd</b>	6	8	10	12	10	12	14	16	18	20	22	24	18	20	22	24	26	28	30	32	34	36	
<b>Weight (kg)</b> <sup>Note 5</sup>	3.6	3.8	4.1	4.4	4.7	4.9	5.2	5.5	5.7	6	6.3	6.6	6.8	7.1	7.4	7.6	7.9	8.2	8.5	8.7	9	9.3	
<b>Lead 30</b>	1800																						
<b>Maximum speed</b>	1200																						
<b>Lead 10</b>	600																						
<b>Lead 5</b>	300																						
<b>Speed setting</b>	-																						
																85%	75%	65%	55%	50%	45%	40%	35%

Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. Adjustments are required when changing the return-to-origin direction. (The standard origin is on the motor side.)  
 Note 3. When using the tap holes to mount the body, remove the set screws first.  
 Note 4. When using the countersunk holes (section A cross-section) to mount the body, remove the cap from the inner side and then fix.  
 Note 5. This is the weight without brakes. When brakes are mounted, the weight will be 0.2 kg heavier than the body weight given in the table.  
 Note 6. The specifications of the robot cable will vary according to the extraction direction.  
 Note 7. When secured in place, the minimum bending radius of the robot cable is R30.