



Ordering method

AGXS07

Model	Acceleration/deceleration specifications	Lead	Shape	Motor specification	Side cover	Stroke	Cable length	Cable entry location	Robot positioner	Driver: Power capacity	Regenerative unit	I/O	Battery
	No entry: Standard H: High agility	30: 30 mm 20: 20 mm 10: 10 mm 5: 5 mm	S: Straight R: Right bending L: Left bending	S: Standard/With no brake BK: Standard/With brake BL: Battery-less absolute/With no brake BKBL: Battery-less absolute/With brake	No entry: Standard W: With T-groove (both sides) R: With T-groove (right side) L: With T-groove (left side)	50 to 1100 (50mm pitch)	R3: 3 m R5: 5 m R10: 10 m	R: From rear of motor F: From front of motor	EP-01	A10: 200W or less	No entry: None R: With EP-RJ	EP: EtherNet/IP™ PT: PROFINET ES: EtherCAT NS: NPN CC: CC-Link	B: With battery N: None

Note 1. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.

Note 2. For the high acceleration/deceleration specifications, the stroke is 50 to 650 mm (50 mm pitch).

Note 3. The robot cable is flexible and resists bending.

Note 4. When the actuator is used vertically and the stroke is 500 mm or more, the regenerative unit is needed.

Note 5. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

Specifications

AC servo motor output	100 W
Repeatability <small>Note 1</small>	+/-0.005 mm
Deceleration mechanism	Ground ball screw ϕ 15 (C5 class)
Stroke	50 mm to 1100 mm (50 mm pitch)
Maximum speed <small>Note 2</small>	1800 mm/sec 1200 mm/sec 600 mm/sec 300 mm/sec
Ball screw lead	30 mm 20 mm 10 mm 5 mm
Maximum payload	Horizontal: 10 kg, 25 kg, 45 kg, 85 kg Vertical: 2 kg, 4 kg, 8 kg, 16 kg
Rated thrust	56 N, 84 N, 169 N, 339 N
Maximum dimensions of cross section of main unit	W 70 mm x H 76.5 mm
Overall length	Straight: ST + 276.5 mm Bending: ST + 232 mm
Degree of cleanliness <small>Note 3</small>	ISO CLASS 3 (ISO14644-1) or equivalent
Intake air <small>Note 4</small>	30 N ℓ /min to 115 N ℓ /min
Position detector	Absolute encoder Battery-less absolute encoder
Resolution	23 bits
Using ambient temperature and humidity	0 to 40 °C, 35 to 80 %RH (non-condensing)

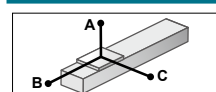
Note 1. Positioning repeatability in one direction.

Note 2. When a moving distance is short and depending on an operation condition, it may not reach the maximum speed. If the effective stroke exceeds 700 mm, the ball screw may resonate. (Critical speed)

Note 3. At this time, make the adjustment to decrease the speed while referring to the maximum speed shown in the table. 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.

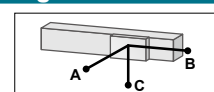
Note 4. The required suction amount will vary according to the operating conditions and operating environment.

Note. See P.119 for acceleration/deceleration.

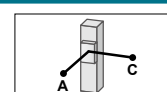
Allowable overhang Note

AGXS07-30

Horizontal installation	(Unit: mm)	A	B	C
2kg	3078	1509	1221	
6kg	1191	501	418	
10kg	957	317	282	

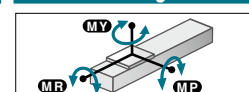


Wall installation	(Unit: mm)	A	B	C
2kg	1237	1442	2975	
6kg	393	435	1062	
10kg	244	251	793	



Vertical installation	(Unit: mm)	A	C
1kg	2335	2335	
2kg	1158	1158	

Static loading moment



	MY	MP	MR
	138	121	121

Controller

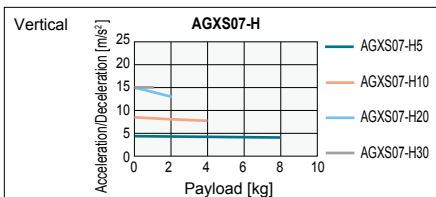
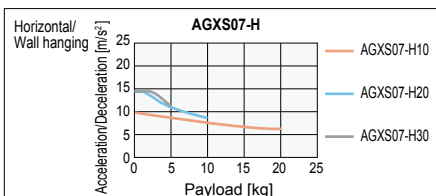
Controller	Operation method
EP-01	I/O point trace/ Remote command

When used with high acceleration or deceleration (High agility mode)

Specifications

Stroke	50 mm to 650 mm (50 mm pitch)
Ball screw lead	30 mm, 20 mm, 10 mm, 5 mm
Maximum payload	Horizontal: 5 kg, 10 kg, 20 kg, - Vertical: 1 kg, 2 kg, 4 kg, 8 kg
Maximum acceleration	Horizontal: 14.72 m/s ² (1.5 G), 14.72 m/s ² (1.5 G), 9.64 m/s ² (1 G), - Vertical: 14.72 m/s ² (1.5 G), 14.72 m/s ² (1.5 G), 8.44 m/s ² (0.9 G), 4.32 m/s ² (0.4 G)

Payload - Acceleration / Deceleration Graph (Estimate)

Allowable overhang Note

AGXS07-H30

Horizontal installation	(Unit: mm)	A	B	C
2kg	1020	897	608	
5kg	461	346	245	

AGXS07-H20

Horizontal installation	(Unit: mm)	A	B	C
3kg	1224	758	640	
6kg	684	369	321	
10kg	459	214	190	

AGXS07-H10

Horizontal installation	(Unit: mm)	A	B	C
5kg	2208	622	665	
12kg	991	249	266	
20kg	637	142	152	

AGXS07-H5

Vertical installation	(Unit: mm)	A	C
3kg	1093	1093	
5kg	639	639	
8kg	384	384	

AGXS07-H20

Wall installation	(Unit: mm)	A	B	C
3kg	600	692	1175	
6kg	274	303	621	
10kg	138	147	376	

AGXS07-H10

Wall installation	(Unit: mm)	A	B	C
5kg	603	556	2129	
12kg	200	182	890	
20kg	83	75	497	

AGXS07-H5

Vertical installation	(Unit: mm)	A	C
1kg	1793	1793	
2kg	891	891	

AGXS07-H10

Horizontal installation	(Unit: mm)	A	B	C
5kg	2208	622	665	
12kg	991	249	266	
20kg	637	142	152	

AGXS07-H20

Wall installation	(Unit: mm)	A	B	C
5kg	603	556	2129	
12kg	200	182	890	
20kg	83	75	497	

AGXS07-H5

Vertical installation	(Unit: mm)	A	C
1kg	3012	3012	
2kg	1487	1487	
4kg	725	725	

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.

Effective stroke and maximum speed during high acceleration or deceleration

Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650
Maximum speed (mm/sec)	Lead 30												
	Lead 20												
	Lead 10												
	Lead 5												

Note. The bending unit cannot be used for the high agility mode.

Note. The high agility mode is used in an effective stroke range of 50 to 650 (50 mm pitch).

Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.

The speed may not reach the maximum speed if the movement distance is short or depending on the operating conditions.

Note. When the actuator is used with the high acceleration/deceleration specifications, the operation duty and motor load factor need to be considered. (See P.93.)

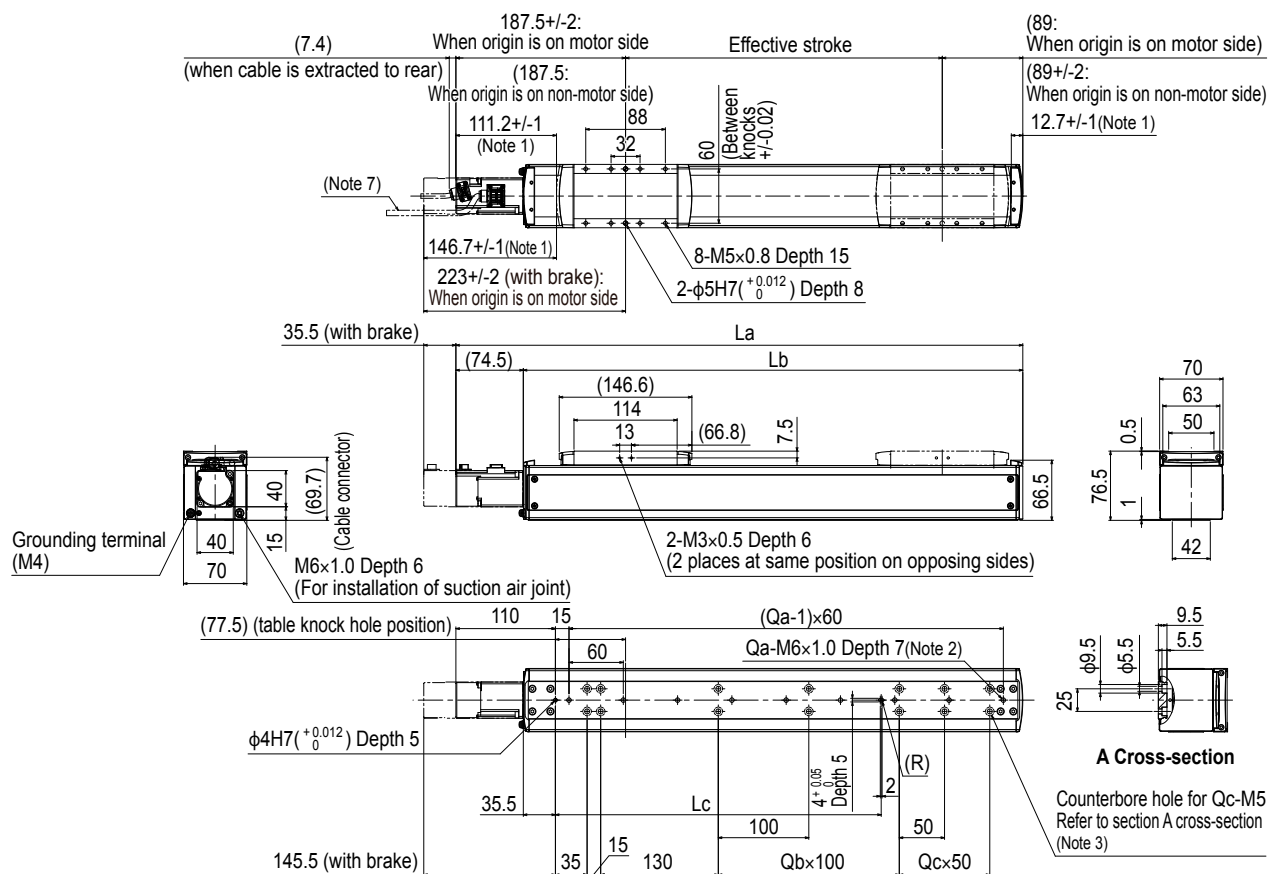
Note. See P.121 for acceleration/deceleration.

Access the website below.

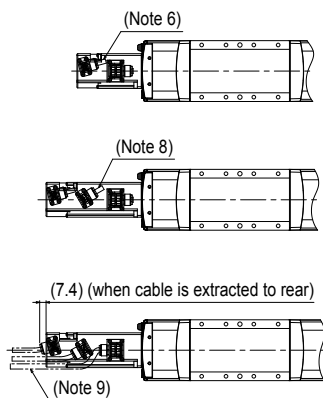


► The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.

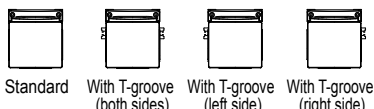
AGXS07 Straight type (S)



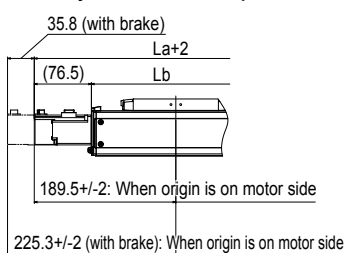
Direction of robot cable extraction



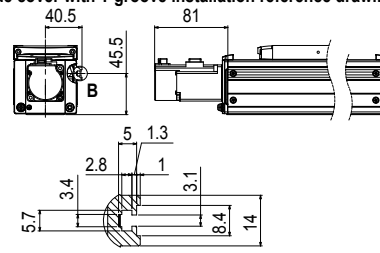
Side cover variations



Battery-less absolute axis specification



Side cover with T-groove installation reference drawing



Note 1. Stop positions are determined by the mechanical stoppers at both ends.

Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located 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 counterbore 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.

Note 5. Weight without brake. The weight with the brake is 0.2 kg heavier than the value in the weight column.

Note 6. The robot cable is extracted from the front.

Note 7. The robot cable is extracted from the rear.

Note 8. The robot cable (with brake) is extracted from the front.

Note 9. The robot cable (with brake) is extracted from the rear.

Note 10. The fixed minimum bending radius of the robot cable is R30. When using the robot cable as a flexible cable, use it with a minimum bending radius of R50 or more.

Note 11. Side cover with T-groove is used to install the sensor.

Note 12. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
La	326.5	376.5	426.5	476.5	526.5	576.5	626.5	676.5	726.5	776.5	826.5	876.5	926.5	976.5	1026.5	1076.5	1126.5	1176.5	1226.5	1276.5	1326.5	1376.5
Lb	252	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002	1052	1102	1152	1202	1252	1302
Lc	160	160	160	160	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360
Qa	4	5	5	6	7	8	9	10	10	11	12	13	14	15	15	16	17	18	19	20	20	21
Qb	0	0	0	0	2	2	2	2	2	2	2	2	2	6	6	6	6	6	6	6	6	6
Qc	0	1	2	3	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	8	9
Qd	6	8	10	12	10	12	14	16	18	20	22	24	18	20	22	24	26	28	30	32	34	36
Weight (kg) Note 5	3.6	3.8	4.1	4.4	4.7	4.9	5.2	5.5	5.7	6.0	6.3	6.6	6.8	7.1	7.4	7.6	7.9	8.2	8.5	8.7	9.0	9.3
Maximum speed (mm/sec)	Lead 30	1530														1350	1170	990	900	810	720	630
	Lead 20	1020														900	780	660	600	540	480	420
	Lead 10	510														450	390	330	300	270	240	210
	Lead 5	255														225	195	165	150	135	120	105
Speed setting		85%														75%	65%	55%	50%	45%	40%	35%

