ISB-LXM-400

Single-axis robot/Large, X-axis, standard slider type/Actuator width: 150mm/400W Straight shape

ISPB-LXM-400

Single-axis robot/Large, X-axis, standard slider type/Actuator width: 150mm/400W Straight shape **High precision specification**

Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISB: Standard specification ISPB: High precision specification	LXM	A: Absolute specification I: Incremental specification	400: 400W	40 : 40mm 20 : 20mm 10 : 10mm	100: 100mm ~ 1300: 1300mm (in 50 mm increments)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	N : None S : 3m M: 5m X□□: Specified length	Refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)
ISB[ISPB]-LXM-①-400-40-②-③-④-⑤	Absolute Incremental	400	40	100~1300	1~2400	0.4	1.2	0.4	1.2	40	15	10	4	169.6
ISB[ISPB]-LXM-①-400-20-②-③-④-⑤			20		1~1200	0.4	1.2	0.4	1	90	24	20	10	339.1
ISB[ISPB]-LXM-①-400-10-②-③-④-⑤			10		1~600	0.4	0.7	0.4	0.6	120	60	40	30	678.3

*In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	→P11	Home limit switch	L	→P11
Cable exit from the rear left	A1E	→P11	Home limit switch on the opposite side	LL	→P11
Cable exit from the right	A3S	→P11	Master axis specification	LM	→P12
Cable exit from the rear right	A3E	→P11	Master axis specification (sensor on the opposite side)	LLM	→P12
AQ seal (standard feature)	AQ	→P11	Non-motor side specification	NM	→P12
Brake	B	→P11	Guide with ball retention mechanism	RT	→P12
Creep sensor	C	→P11	Slave axis specification	S	→P12
Creep sensor on the opposite side	CL	→P11	High straightness, precision specification	ST	→P13

Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.005mm]
Drive method (Note 3)	Ball screw Ø20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 104.9N•m Mb: 149.9N•m Mc: 248.9N•m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

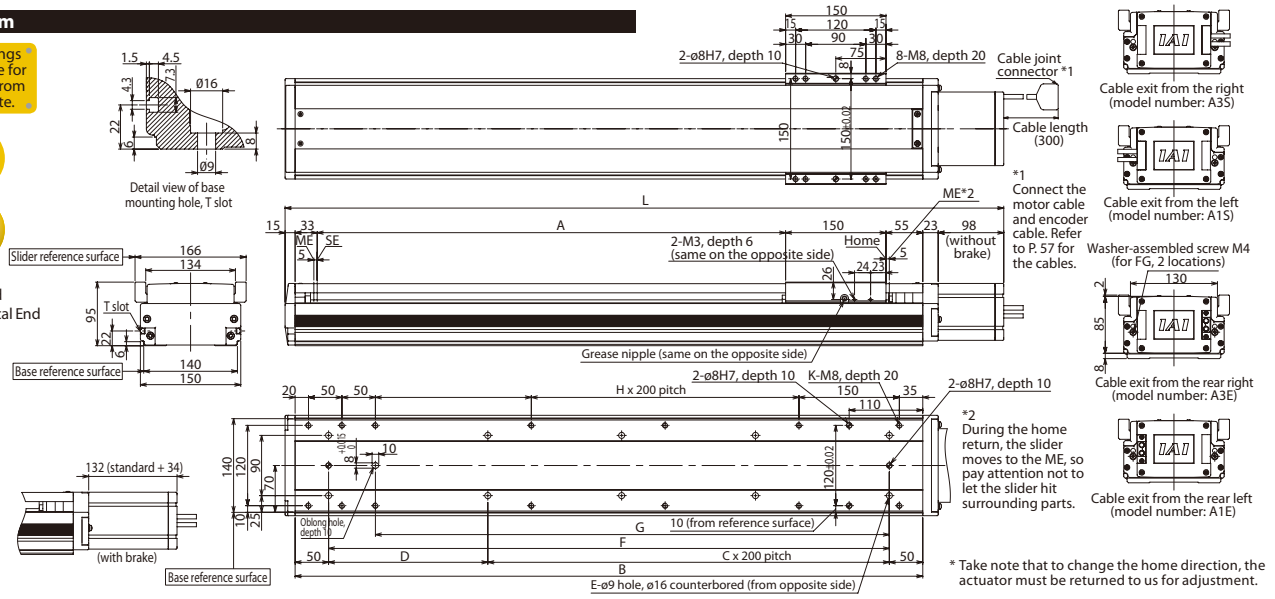
Diagram

* CAD drawings are available for download from our website. *

2D CAD

3D CAD

SE: Stroke End
ME: Mechanical End



* Take note that to change the home direction, the actuator must be returned to us for adjustment.

Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
L	without brake	474	524	574	624	674	724	774	824	874	924	974	1024	1074	1124	1174	1224	1274	1324	1374	1424	1474	1524	1574	1624	1674
	with brake	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708
A		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
B		338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
C		0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
D		238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238
E		4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
F		238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
G		168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
H		0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
J		33	83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233
K		10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
Mass (kg)		9.8	10.7	11.6	12.5	13.3	14.2	15.0	15.9	16.8	17.7	18.5	19.4	20.2	21.1	22.0	22.9	23.7	24.6	25.4	26.3	27.2	28.1	28.9	29.8	30.6
Maximum speed (mm/s)	Lead 40	2400															1840		1530		1290		1100		880	
	Lead 20	1200															920		765		645		550		440	
	Lead 10	600															460		380		320		270		220	

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Connectable encoder type	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	Absolute/ incremental	Program	Single/three-phase 200 VAC	→P56
X-SEL-J/K	4 axes			Single-phase 100/200 VAC	→P56
SSEL	2 axes				→P56
SCON	1 axis		Positioner pulse train control	Single-phase 200 VAC	→P56

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10,000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)