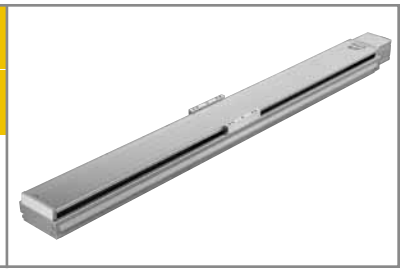
ISB-LXMX-400

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

ISPB-LXMX-400

Single-axis robot/Large, X-axis, mid-support 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	LXMX	A: Absolute specification I: Incremental specification	400: 400W	40: 40mm 20: 20mm	1000: 1000mm ~ 2500: 2500mm (in 100 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 100mm 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]-LXMX-①-400-40-②-③-④-⑤	Absolute Incremental	400	40	1000~2500	1~2400	0.4	Designed exclusively for horizontal use			40	Designed exclusively for horizontal use			169.6
ISB[ISPB]-LXMX-①-400-20-②-③-④-⑤			20		1~1200	0.4				90				339.1

*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

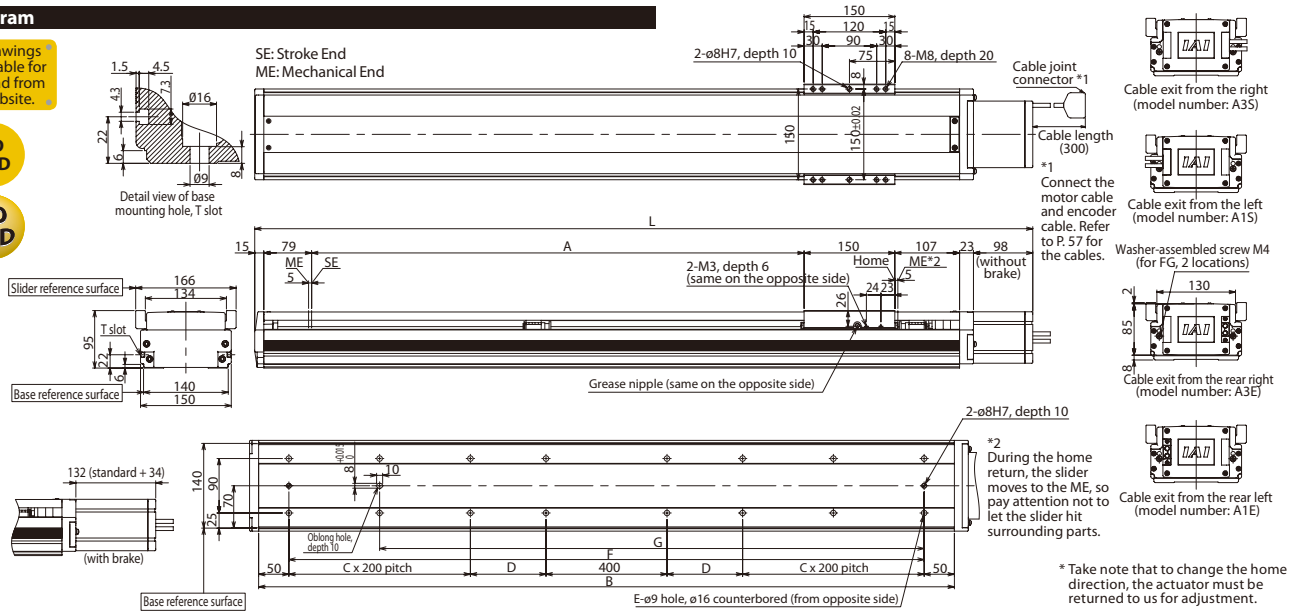
Positioning repeatability (Note 2)	±0.01mm [±0.005mm]
Drive method (Note 3)	Ball screw Ø20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 104.9N•m Mb: 149.9N•m Mc: 248.9N•m
Overhang load length	Ma direction: 750mm max. Mb, 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



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		1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	without brake	1486	1586	1686	1786	1886	1986	2086	2186	2286	2386	2486	2586	2686	2786	2886	2986
	with brake	1520	1620	1720	1820	1920	2020	2120	2220	2320	2420	2520	2620	2720	2820	2920	3020
A		1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
B		1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
C		1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
D		225	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575
E		12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
F		1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
G		1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
Mass (kg)		27.7	29.5	31.3	33.0	34.8	36.5	38.3	40.0	41.8	43.5	45.3	47.0	48.8	50.6	52.3	54.1
Maximum speed (mm/s)	Lead 40	2400			2300	2000	1900	1660	1480	1300	1180	1080	980	880	820	740	680
	Lead 20	1200			1150	1000	950	830	740	650	590	540	490	440	410	370	340

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)