

# ISA-LXMX-400

Single-Axis Robot: Large X-Axis Mid-Support Type, Actuator Width 150mm, 400W, Straight Shape

# ISPA-LXMX-400

Single-Axis Robot: Large X-Axis Mid-Support Type, Actuator Width 150mm, 400W, Straight Shape High-Precision Specification

Type Large X-axis (150-mm wide) mid-support type

Stroke 1000 ~ 2500mm

Load capacity 80kg (horizontal)

Model specification items — Series — Type — Encoder type — Motor output — Lead — Stroke — Applicable controller — Cable length — Options

ISA[ISPA] — LXMX — A — 400 — 40 — 2500 — T1 — S — NM

\* Refer to page 11 for the details of model specification items.

## Models/Specifications

Model	Encoder type	Motor output (W)	Lead (mm)	Stroke (mm) In increments of 100mm	Speed (Note 1) (mm/s)	Acceleration (Note 2)		Load capacity (Note 2)				Rated thrust (N)		
						Horizontal (G)		Vertical (G)		Horizontal (kg)			Vertical (kg)	
						Rated	Maximum	Rated	Maximum	Rated	Maximum		Rated	Maximum
ISA [ISPA] -LXMX-A-400-40-***-T1-△-□	Absolute	400	40	1000 ~ 2500	1 ~ 2000	0.3		Horizontal application only	40		Horizontal application only	170.0		
ISA [ISPA] -LXMX-A-400-20-***-T1-△-□			20		1 ~ 1000	0.3			80			340.1		
ISA [ISPA] -LXMX-I-400-40-***-T1-△-□	Incremental		40		1 ~ 2000	0.3			40			170.0		
ISA [ISPA] -LXMX-I-400-20-***-T1-△-□			20		1 ~ 1000	0.3			80			340.1		

\* In the above model names, \*\*\* indicates the stroke, △ the cable length and □ the applicable options.

\*1.G=9800mm/sec<sup>2</sup>

## Options

Name	Code	Page	Name	Code	Page
AQ seal	AQ	P13	Master-axis designation	LM	P14
Brake	B	P13	Master-axis designation (sensor on opposite side)	LLM	P14
Creep sensor	C	P13	Reverse homing specification	NM	P14
Creep sensor on opposite side	CL	P13	Guide with ball-retaining mechanism	RT	P14
Home limit switch	L	P14	Slave-axis designation	S	P14
Home limit switch on opposite side	LL	P14			

## Common Specifications

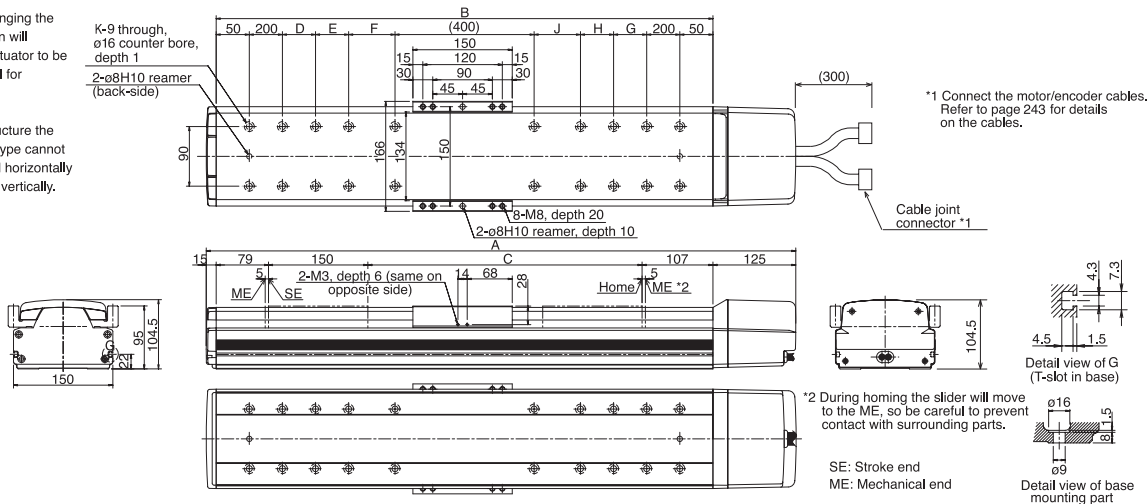
\* Refer to page 10 for the details of common specification items.

Positioning repeatability (Note 3)	±0.02mm [±0.01mm]
Drive system (Note 4)	Ball screw ø20mm, rolled C10 [equivalent to rolled C5]
Lost motion (Note 5)	0.05mm or less [0.02mm or less]
Guide	integrated with base
Allowable static moment	Refer to page 242
Allowable dynamic moment	Ma: 104.9N•m Mb: 149.9N•m Mc: 248.9N•m
Overhang load length	Ma direction: 750mm or less, Mb/Mc directions: 750mm or less
Base	Material: Aluminum, with white alumite treatment
Cable length (Note 6)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

## Dimensions

\* Note that changing the home direction will require the actuator to be returned to IAI for adjustment.

\* Due to its structure the mid-support type cannot be positioned horizontally on its side or vertically.



## Dimensions, Weight and Maximum Speed by Stroke

Stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
A	1490	1590	1690	1790	1890	1990	2090	2190	2290	2390	2490	2590	2690	2790	2890	2990
B	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
C	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
D	225	275	325	375	425	475	525	575	200	200	200	200	200	200	200	200
E	0	0	0	0	0	0	0	0	425	475	525	575	200	200	200	200
F	0	0	0	0	0	0	0	0	0	0	0	0	425	475	525	575
G	225	275	325	375	425	475	525	575	200	200	200	200	200	200	200	200
H	0	0	0	0	0	0	0	0	425	475	525	575	200	200	200	200
J	0	0	0	0	0	0	0	0	0	0	0	0	425	475	525	575
K	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
Weight (kg)	28.5	30.0	31.5	33.0	34.5	36.0	37.5	39.0	40.5	42.0	43.5	45.0	46.5	48.0	49.5	51.0
Maximum speed (mm/s)	2000					1900					1080					
Lead 40						1900					1080					
Lead 20	1000					950					540					

## Applicable Controller Specifications

Applicable controller	Maximum number of controlled axes	Compatible encoder type	Program operation	Positioner operation	Pulse-train control	Supply voltage	Page
X-SEL	4 axes	Absolute/incremental	○	△	×	AC100/200V	
E-Con	1 axis	Absolute/incremental	×	○	×	AC100/200V	
P-Driver	1 axis	Incremental	×	×	○	AC100/200V	



Caution

(Note 1) The strokes that are set in increments of 50 mm are semi-standard settings.  
 (Note 2) Refer to page 40 for the relationship of acceleration and load capacity.  
 (Notes 3, 4, 5) The figures in brackets apply to the ISPA Series.  
 Other specification values apply to both the ISA and ISPA Series.  
 (Note 6) The maximum cable length is 30 m. Specify the desired length in meters (e.g., X08 = 8 m).

\* Refer to page 9 for other points to note.