

# ISA-LXM-400

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

# ISPA-LXM-400

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

Type Large X-axis (150-mm wide) long slider type

Stroke 100 ~ 1200mm

Load capacity 80kg (horizontal)/19kg (vertical)



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

ISA[ISPA] - LXM - A - 400 - 40 - 1200 - T1 - S - B

\* 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 50mm (Note 1)	Speed (Note 2) (mm/s)	Acceleration (Note 3)				Load capacity (Note 3)				Rated thrust (N)	
						Horizontal (G)		Vertical (G)		Horizontal (kg)		Vertical (kg)			
						Rated	Maximum	Rated	Maximum	Rated	Maximum	Rated	Maximum		
ISA [ISPA] -LXM-A-400-40-***-T1-△-□	Absolute	400	40	100 ~ 1200	1 ~ 2000	0.3	1.0	0.3	1.0	40	15	9	4	170.0	
ISA [ISPA] -LXM-A-400-20-***-T1-△-□			20		1 ~ 1000	0.3	1.0	0.3	0.8	80	24	19	10	340.1	
ISA [ISPA] -LXM-I-400-40-***-T1-△-□	Incremental		40		1 ~ 2000	0.3	1.0	0.3	1.0	40	15	9	4	170.0	
ISA [ISPA] -LXM-I-400-20-***-T1-△-□			20		1 ~ 1000	0.3	1.0	0.3	0.8	80	24	19	10	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			

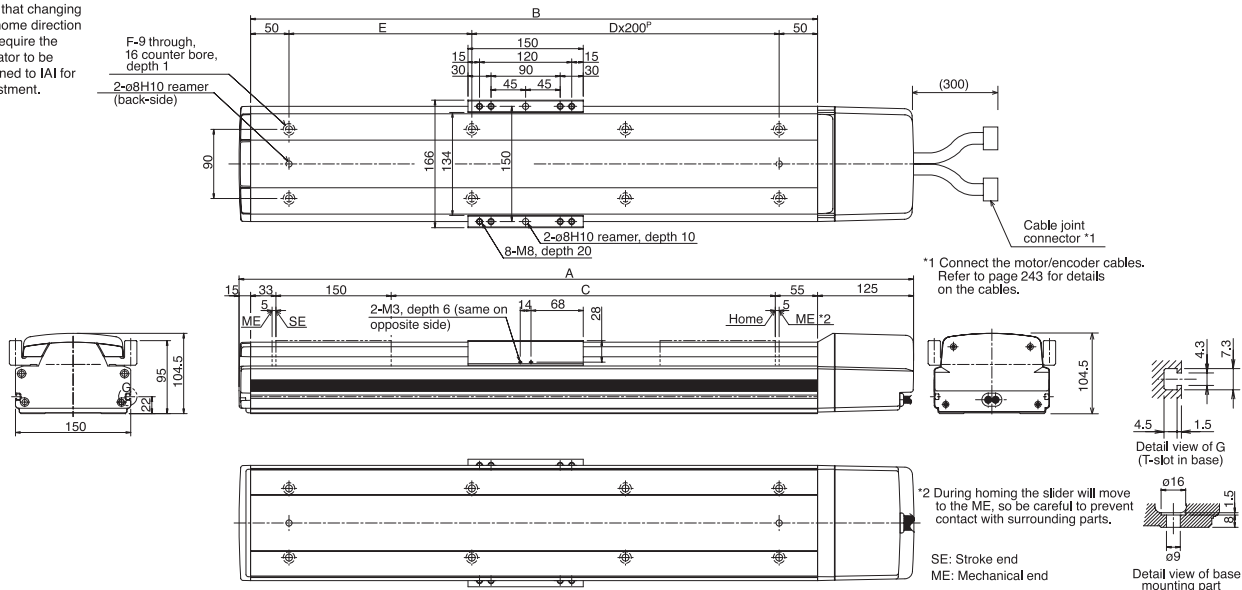
## Common Specifications

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

Positioning repeatability (Note 4)	±0.02mm [±0.01mm]
Drive system (Note 5)	Ball screw ø20mm, rolled C10 [equivalent to rolled C5]
Lost motion (Note 6)	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 7)	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.



## Dimensions, Weight and Maximum Speed by 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
A	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178	1228	1278	1328	1378	1428	1478	1528	1578
B	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
C	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
D	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338
F	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16
Weight (kg)	12.0	12.8	13.5	14.3	15.0	15.8	16.5	17.3	18.0	18.8	19.5	20.3	21.0	21.8	22.5	23.3	24.0	24.8	25.5	26.3	27.0	27.8	28.5
Maximum speed (mm/s)	2000																1660	1380		1170		1000	
Lead 40	1000																830	690		585		500	
Lead 20																							

## 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	



(Note 1) The strokes that are set in increments of 50 mm are semi-standard settings.  
 (Note 2) A longer stroke will result in a lower maximum speed to prevent the ball screw from reaching a dangerous speed. (Refer to the above table for the maximum speed at a given stroke.)  
 (Note 3) Refer to page 40 for the relationship of acceleration and load capacity. (Notes 4, 5, 6) The figures in brackets apply to the ISPA Series.  
 Other specification values apply to both the ISA and ISPA Series.  
 (Note 7) 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.