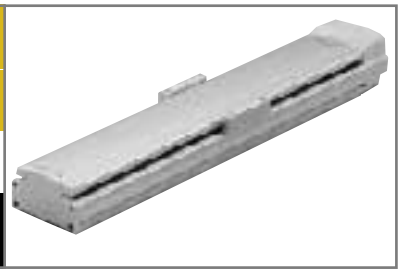
ISA-LXM-200 Single-Axis Robot: Large X-Axis Long Slider Type, Actuator Width 150mm, 200W, Straight Shape

ISPA-LXM-200 Single-Axis Robot: Large X-Axis Long Slider Type , Actuator Width 150mm, 200W, Straight Shape High-Precision Specification



Type	Stroke	Load capacity
Large X-axis (150-mm wide) long slider type	100 ~ 1200mm	80kg (horizontal)/19kg (vertical)

■ Model specification items

Series	Type	Encoder type	Motor output	Lead	Stroke	Applicable controller	Cable length	Options
ISA[ISPA] – LXM –	A	– 200	– 10	– 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 acceleration	Maximum acceleration	Rated acceleration	Maximum acceleration	
ISA [ISPA] -LXM-A-200-20-✻✻✻-T1-△-□	Absolute	200	20	100 ~ 1200	1 ~ 1000	0.3	1.0	0.3	0.8	40	12	9	4	170.5
ISA [ISPA] -LXM-A-200-10-✻✻✻-T1-△-□			10		1 ~ 500	0.3	0.6	0.3	0.5	80	40	19	14	340.1
ISA [ISPA] -LXM-I-200-20-✻✻✻-T1-△-□	Incremental		20		1 ~ 1000	0.3	1.0	0.3	0.8	40	12	9	4	170.5
ISA [ISPA] -LXM-I-200-10-✻✻✻-T1-△-□			10		1 ~ 500	0.3	0.6	0.3	0.5	80	40	19	14	340.1

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

*1.0G=9800mm/sec²

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			

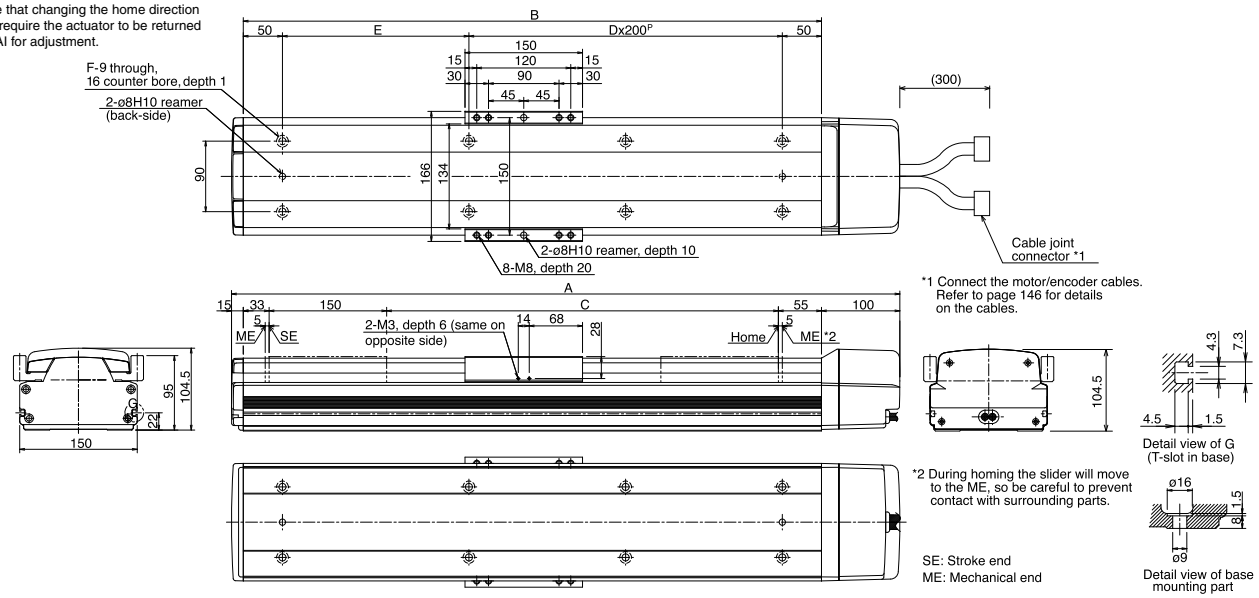
Common Specifications

* 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]
Backlash (Note 6)	0.05mm or less [0.02mm or less]
Guide	Integrated with base
Allowable load moment	Ma: 104.9N • m Mb: 149.9N • m Mc: 248.9N • m
Overhung 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: No cable, S: 3m, M: 5m, X□□ : Length specification

Dimensions

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



*1 Connect the motor/encoder cables. Refer to page 146 for details on the cables.

*2 During homing the slider will move to the ME, so be careful to prevent contact with surrounding parts.

SE: Stroke end
ME: Mechanical end

■ 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	453	503	553	603	653	703	753	803	853	903	953	1003	1053	1103	1153	1203	1253	1303	1353	1403	1453	1503	1553
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	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138
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)	11.0	11.8	12.5	13.3	14.0	14.8	15.5	16.3	17.0	17.8	18.5	19.3	20.0	20.8	21.5	22.3	23.0	23.8	24.5	25.3	26.0	26.8	27.5
Maximum speed (mm/s) Lead 20	1000														1000	830		690		585		500	
Maximum speed (mm/s) Lead 10	500														470	385		320		270		235	

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	➔ P241
E-Con	1 axis	Absolute/incremental	×	○	×	AC100/200V	➔ P227
P-Driver	1 axis	Incremental	×	×	○	AC100/200V	➔ P234

Caution

(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.