

# ISB-MXL-400

±10μm Standard
Battery-less absolute
Medium X-axis
Long Slider type
Actuator width 120mm
400w



Model Specification Items	ISB	MXL	WA	400	48			T2		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options*	
			WA: Battery-less absolute	400: 400W	48: 48mm	120: 120mm 1270: 1270mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	N : None S : 3m M : 5m X□□ : Specified length	Refer to the options table below.	

- Please refer to P.9 for more information about the model specification items.
- Controller is not included.

Please be sure to include the AQ seal (AQ) and one of the symbols for cable exit direction.

Actuator Specifications					
Model number	Motor output (W)	Lead (mm)	Payload (Note 1)	Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)	
ISB-MXL-WA-400-48-①-T2-②-③	400	48	20	6	120~1270 (Every 50mm)

• Legend: ① Stroke ② Cable length ③ Options

(Note 1) The value of payload is when operating at an acceleration of 0.4G. When the acceleration is increased, the payload will be reduced. Please contact IAI for more information.

(Note 2) The value of dynamic straightness is when the high straightness, precision specification option is specified.

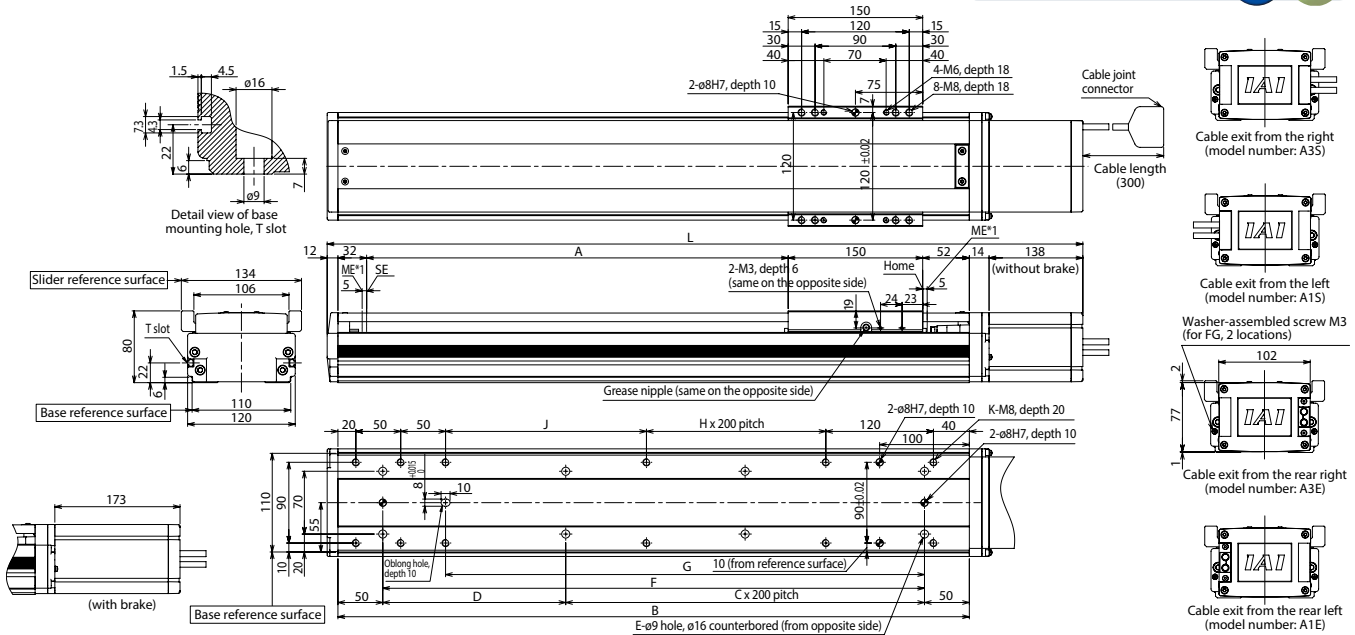
Option					
Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	→P10	Home limit switch on the opposite side	LL	→P10
Cable exit from the rear left	A1E	→P10	Master axis specification	LM	→P11
Cable exit from the right	A3S	→P10	Master axis specification (sensor on the opposite side)	LLM	→P11
Cable exit from the rear right	A3E	→P10	Non-motor end specification	NM	→P11
AQ seal (standard feature)	AQ	→P10	Slave axis specification	S	→P11
Brake	B	→P10	High straightness, precision specification (stroke 120~570)	ST	→P12
Creep sensor	C	→P10	High straightness, precision specification (stroke 620~1270)	ST	→P12
Creep sensor on the opposite side	CL	→P10	Double slider specification	W	→P11
Home limit switch	L	→P10			

Actuator Specifications	
Positioning repeatability	±0.01mm
Drive method	Ball screw φ16mm, rolled C10
Lost motion	0.05mm max.
Dynamic allowable load moment (*)(**)	Ma: 123N·m Mb: 176N·m Mc: 227N·m
Overhang load length(**)	Ma direction: 750mm max. Mb, Mc directions: 750mm max
Dynamic straightness (Note 2)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

\* Assumes a standard rated life of 10,000km. The operational life will vary depending on operation and installation conditions. Please refer to P16 for details on operational life.  
 \*\* Please refer to P13 for the dynamic allowable load moment and overhang load length for the double slider option.

## Diagram

CAD drawings can be downloaded from our website.  
[www.intelligentactuator.com](http://www.intelligentactuator.com)



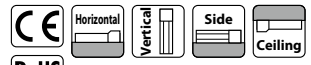
- \*1 When the slider is returning to its home position, Please be careful of interference from surrounding objects, as it will travel until it reaches the ME.  
 ME: Mechanical End SE: Stroke End
- \* Please return the actuator to us if a home direction change is necessary after purchase.
- \* The allowable moment offset reference position is 37.5mm from the slider work mounting position.

## Dimensions and Mass by Stroke

Stroke	Stroke (mm)																								
	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270	
L	without brake	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368	1418	1468	1518	1568	1618	1668
	with brake	553	603	653	703	753	803	853	903	953	1003	1053	1103	1153	1203	1253	1303	1353	1403	1453	1503	1553	1603	1653	1703
A	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270	
B	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304	1354	1404	1454	1504	
C	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	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	
E	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	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304	1354	1404	
G	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234	1284	1334	
H	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	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	
K	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)	without brake	7.9	8.6	9.2	9.8	10.5	11.1	11.7	12.4	13.0	13.6	14.3	14.9	15.5	16.2	16.8	17.5	18.1	18.7	19.4	20.0	20.6	21.3	21.9	22.5
	with brake	8.5	9.2	9.8	10.4	11.1	11.7	12.3	13	13.6	14.2	14.9	15.5	16.1	16.8	17.4	18	18.7	19.3	19.9	20.6	21.2	21.9	22.5	23.1
Maximum speed (mm/s)	Lead 48	1325	1575	1825	2025	2200	2350	2400	2500	2500	2500	2500	2500	2270	2030	1825	1645	1495	1365	1250	1150	1060	980	910	845

## Applicable Controllers

Applicable Controller	Maximum number of controlled axes	Operating method			Power-supply voltage	Maximum number of positioning points	Reference page
		Positioner	pulse train control	program			
SCON-CB/CGB	1 axes	●	●	-	Single-phase AC200V	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG	1 axes	-	-	●			
SSEL-CS	2 axes	●	●	●	Single-phase AC100/200V	20000	
XSEL-P/Q/RA/SA	8 axes	-	-	●	Single-phase AC200V / three-phase AC200V	55,000 (depend on type)	



\* Some limitations may apply to Vertical/side/ceiling mountings depending on the model. Please contact IAI for more information.