New Small/Medium-Sized Types of NS Series

NS-S/NS-M

■ **Model** **NS-SX / NS-SZ / NS-MX / NS-MZ**

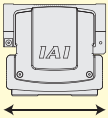
Horizontal and vertical types with single or multi-slider

Multitude of Variations

The extensive product line-up, which allows you to select specifications such as the size, slider type and installation direction, ensures the optimum configuration for any number of applications.

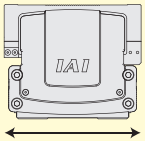
New Additional Sizes

Small



94mm

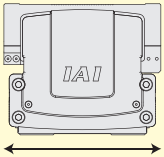
Medium



125mm

Existing Size

Large



145mm

Sliders: 2 types (single slider and multiple sliders)

Install. direction: 2 types (horizontal and vertical)

Cable track installation direction: 4 directions

Medium and large type provided with mid-supports

Model

NS — ( ) — Type — ( ) — Encoder type — ( ) — Motor type — ( ) — Lead — ( ) — Stroke — **T2** — Applicable Controllers — ( ) — Cable length — ( ) — Options

Series

Type	
SXMS	Small horizontal type/single slider
SXMM	Small horizontal type/multi-slider
SZMS	Small vertical type/single slider
SZMM	Small vertical type/multi-slider
MXMS	Medium horizontal type/single slider
MXMM	Medium horizontal type/multi-slider
MXMXS	Medium horizontal type/single slider with mid-support
MZMS	Medium vertical type/single slider
MZMM	Medium vertical type/multi-slider

Encoder type	
A	Absolute
I	Incremental

Motor type	
60	60W
200	200W

Lead	
12	12mm
20	20mm
30	30mm
40	40mm

Stroke	
200	200mm
⟆	⟆
2200	2200mm

Applicable Controllers	
T2	SCON
	SSEL
	XSEL-P/Q

Cable length	
N	No cable
P	1m
S	3m
M	5m
X□□	Length specified

Options	
AQ	AQ seal
RT	Guide with ball-retaining mechanism
B	Brake (for vertical type)
CT1	Standard cable track direction 1
CT2	Standard cable track direction 2
CT3	Standard cable track direction 3
CT4	Standard cable track direction 4

Specification Table

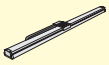
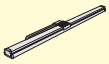
Size	Type	Slider	Appearance	Type	Encoder Type	Motor Type (W)	Lead (mm)	Stroke (mm)	Rated Thrust (N)	Maximum Payload (kg)	Maximum Speed (mm/s)	Maximum Acceleration (G)
Small	Horizontal	Single Slider		SXMS	Absolute Incremental	60	12	400~800	70.8	15	720	0.8
		Multi-Slider		SXMM				200~800				
	Vertical	Single Slider		SZMS				400 ~ 800		3	600	0.7
		Multi-Slider		SZMM				200~800				
Medium	Horizontal	Single Slider		MXMS		200	30	500~1500	113.9	25	1800	1.0
							20		170.9	40	1200	0.8
		Multi-Slider		MXMM			30	300~1500	113.9	25	1800	1.0
							20		170.9	40	1200	0.8
	Horizontal/ With Mid-supports	Single Slider		MXMXS			30	1600 ~2200	113.9	25	1800	0.3
							20		170.9	40	1200	0.3
	Vertical	Single Slider		MZMS			20	500~800	170.9	6	1000	0.5
		Multi-Slider		MZMM				300~800				

Table of Payload by Acceleration Conditions

1. Horizontal Installation

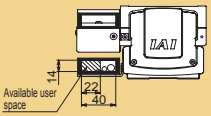
Type	Mid-Support	Motor Output (W)	Lead (mm)	Maximum Speed (mm/s)	Maximum Acceleration (G)	Load Capacity by Acceleration (kg)							
						0.3G	0.4G	0.5G	0.6G	0.7G	0.8G	0.9G	1.0G
Small	No	60	12	720	0.8	15	7	5	3	1	0.5	—	—
Medium	No	200	30	1800	1.0	25	16	10	6	3.5	2	1	0.5
			20	1200	0.8	40	28	18	10	5	2.5	—	—
	Yes		30	1800	0.3	25	—	—	—	—	—	—	—
			20	1200		40	—	—	—	—	—	—	—

2. Vertical Installation

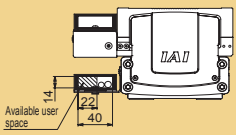
Type	Mid-Support	Motor Output (W)	Lead (mm)	Maximum Speed (mm/s)	Maximum Acceleration (G)	Load Capacity by Acceleration (kg)							
						0.3G	0.4G	0.5G	0.6G	0.7G	0.8G	0.9G	1.0G
Small	No	60	12	600	0.7	3	2	1.5	1	0.5	—	—	—
Medium	No	200	20	1000	0.5	6	4	3	—	—	—	—	—

Internal Dimensions of Cable Track

Small



Medium



Regarding the outer diameter and the number of cables to be stored

(1) Make gaps of at least 2 mm between the outer diameter and the inside wall of the cable and between the cables.

(2) The outer diameter of the cables should be φ12 or less and they should be arranged and used horizontally so that they do not cross each other.

(3) Note that the life of the cables may be extremely shortened due to forces applied on the cables if the number of cables stored exceeds the specification.

NS Update V4 / Addendum New Data Sheet Pages

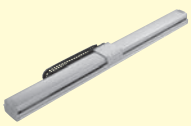
NS-SXMS

Single-Axis Robot Small Nut Rotation Type Main Unit Width 94mm 60W
Horizontal Type Single Slider

■Model

NS — SXMS — ☐ — 60 — ☐ — ☐ — T2 — ☐ — AQ — ☐ — RT

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller	Cable Length	Option
		A: Absolute I: Incremental	60: 60W	12: 12 mm	400: 400mm ↑ 800: 800mm	T2: SCON SSEL XSEL-P/Q	N :No S :3m M :5m X☐☐:Length Specified	See the options table below



Model/Specification

Model	Encoder Type	Motor Output (W)	Lead (mm)	Stroke (mm)	Speed (mm/s)	Acceleration (Note 1)				Payload Capacity (Note 1 & 2)				Rated Thrust (N)
						Horizontal(G)		Vertical(G)		Horizontal(kg)		Vertical(kg)		
						Rated	Maximum	Rated	Maximum	Rated Acceleration	Maximum Acceleration	Rated Acceleration	Maximum Acceleration	
NS-SXMS-①-60-12-②-T2-③-AQ-④-RT	Absolute Incremental	60	12	400~800	720	0.3	0.8	Horizontal Only		15	0.5	Horizontal Only		70.8

*In the model above, ① indicates the type of encoder, ② indicates the stroke, ③ indicates the cable length, and ④ indicates the option.

Option

Name	Model	Reference page	Note
AQ Seal	AQ	→P4	Standard Equipment
Installation Direction of Standard Cable Track	CT1~CT4	→P4	Enter CT1 for standard installation
Guide with Ball-Retaining Mechanism	RT	→P4	Standard Equipment

Common specifications

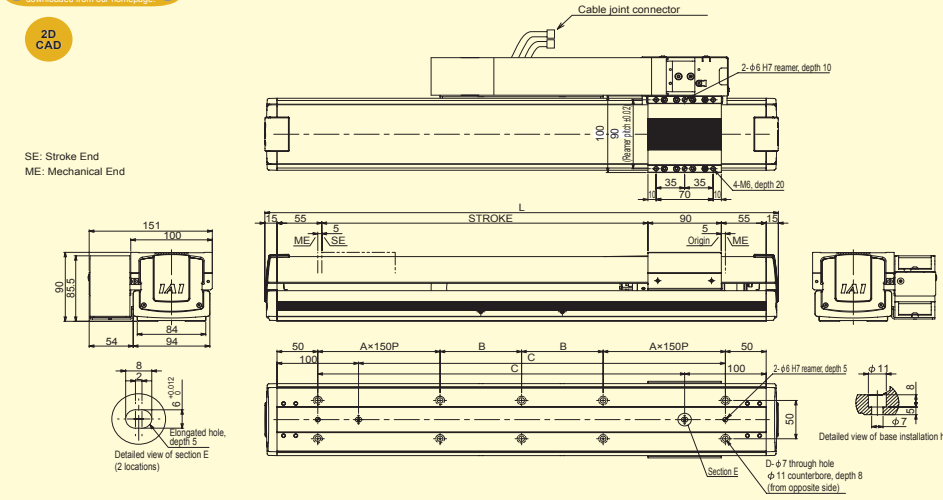
Driving Method	Ball Thread, Diameter φ10 mm, Equivalent to Rolled C10
Repeated Positioning Accuracy	+/- 0.02mm
Backlash	0.05mm or less
Guide	Integrated to Base
Dynamic Allowable Moment(Note 3)	Ma:28.4N·m Mb:40.2N·m Mc:65.7N·m
Overhung load length	Ma Direction: 450mm or less; Mb and Mc Direction: 450mm or less
Base	Material: Aluminium, White Alumite Treatment
Cable Length (Note 4)	N: No cable; S: 3 m; M: 5 m; X☐☐: Length specified
Ambient Temperature	0~40 degrees Celsius, 85% RH or less (No condensation)

Dimensional drawing

The CAD drawings can be downloaded from our homepage.

2D CAD

SE: Stroke End
ME: Mechanical End



Stroke	400	500	600	700	800
L	630	730	830	930	1030
A	1	1	1	2	2
B	100	150	200	100	150
C	450	550	650	750	850
D	10	10	10	14	14
Mass(kg)	5.8	6.5	7.1	7.8	8.4

Applicable Controller Specifications

Applicable Controller	Max. Number of Axes Controlled	Compatible Encoder Type	Operation Method	Power/ Voltage
X-SEL-P/Q	6 axis	Absolute/ Incremental	Programs	Three-Phase/ Single-Phase 230VAC
SSEL	2 axis			Single-Phase 100/230VAC
SCON	1 axis		Positioner Pulse Train Control	

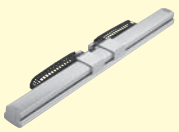
Note

(Note 1) For the relationship between acceleration and payload capacity, see page 3.
(Note 2) The values shown are payload capacities during operation at maximum speed.
(Note 3) For a 10,000-km running life.
(Note 4) The maximum cable length is 30 m. Please specify length in meters.
(E.g., X08 = 8 m)

NS Update V4 / Addendum New Data Sheet Pages

NS-SXMM

Single-Axis Robot Small Nut Rotation Type Main Unit Width 94mm 60W
Horizontal Type Multi-Slider



■Model

NS — SXMM — ☐ — 60 — ☐ — ☐ — T2 — ☐ — AQ — CT1 — RT

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable controller	Cable Length	Option
NS	SXMM	A: Absolute I : Incremental	60: 60W	12: 12 mm	200: 200mm , 800: 800mm	T2: SCON SSEL XSEL-P/Q	N :No S :3m M :5m X☐☐:Length Specified	See the options table below

Model/Specification

Model	Encoder Type	Motor Output (W)	Lead (mm)	Stroke (mm)	Speed (mm/s)	Acceleration (Note 1)				Payload Capacity (Note 1 & 2)				Rated Thrust (N)
						Horizontal (G)		Vertical (G)		Horizontal (kg)		Vertical (kg)		
						Rated	Maximum	Rated	Maximum	Rated Acceleration	Maximum Acceleration	Rated Acceleration	Maximum Acceleration	
NS-SXMM-①-60-12-②-T2-③-AQ-④-RT	Absolute Incremental	60	12	200~800	720	0.3	0.8	Horizontal Only		15	0.5	Horizontal Only		70.8

*In the model above, ① indicates the type of encoder, ② indicates the stroke, ③ indicates the cable length, and ④ indicates the option.

Option

Name	Model	Reference page	Note
AQ Seal	AQ	→P4	Standard Equipment
Installation Direction of Standard Cable Track	CT1	→P4	CT1 for standard
Guide with Ball-Retaining Mechanism	RT	→P4	Standard Equipment

Common specifications

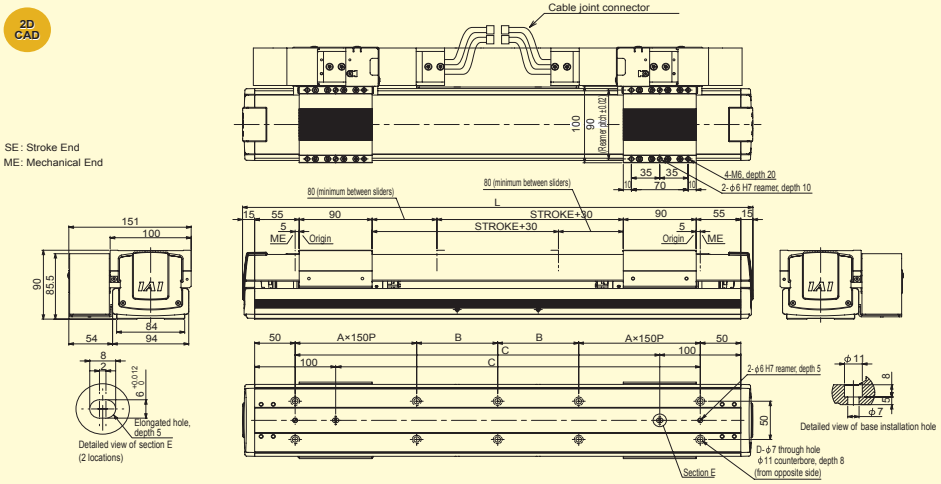
Driving Method	Ball Thread, Diameter φ10 mm, Equivalent to Rolled C10
Repeated Positioning Accuracy	+/- 0.02mm
Backlash	0.05mm or less
Guide	Integrated to Base
Dynamic Allowable Moment (Note 3)	Ma:28.4N·m Mb:40.2N·m Mc:65.7N·m
Overhung load length	Ma Direction: 450mm or less; Mb and Mc Direction: 450mm or less
Base	Material: Aluminium, White Alumite Treatment
Cable Length (Note 4)	N: No cable; S: 3 m; M: 5 m; X☐☐: Length specified
Ambient Temperature	0~40 degrees Celsius, 85% RH or less (No condensation)

Dimensional drawing

The CAD drawings can be downloaded from our homepage.

2D CAD

SE : Stroke End
ME: Mechanical End



Stroke	200	300	400	500	600	700	800
L	630	730	830	930	1030	1130	1230
A	1	1	1	2	2	2	2
B	100	150	200	100	150	200	100
C	450	550	650	750	850	950	1050
D	10	10	10	14	14	14	18
Mass (kg)	7.5	8.1	8.7	9.4	10.0	10.7	11.3

Applicable Controller Specifications

Applicable Controller	Max. Number of Axes Controlled	Compatible Encoder Type	Operation Method	Power/ Voltage
X-SEL-P/Q	6 axis	Absolute/ Incremental	Programs	Three-Phase/ Single-Phase 230VAC
SSEL	2 axis			Single-Phase 100/230VAC
SCON	1 axis		Positioner Pulse Train Control	

Note: A two-axis controller is required to operate the multi-slider.
Two controllers are required for SCON. (Please note that SCON does not have a collision prevention mechanism)

Note

(Note 1) For the relationship between acceleration and payload capacity, see page 3.
(Note 2) The values shown are payload capacities during operation at maximum speed.
(Note 3) For a 10,000-km running life.
(Note 4) The maximum cable length is 30 m. Please specify length in meters.
(E.g., X08 = 8 m)

NS Update V4 / Addendum New Data Sheet Pages

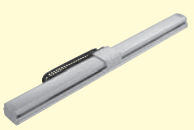
NS-SZMS

Single-Axis Robot Small Nut Rotation Type Main Unit Width 94mm 60W
Vertical Type Single Slider

■Model

NS — SZMS — ☐ — 60 — ☐ — ☐ — T2 — ☐ — AQ — B — ☐ — RT

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable controller	Cable Length	Option
NS	SZMS	A: Absolute I: Incremental	60: 60W	12: 12 mm	400: 400mm , 800: 800mm	T2: SCON SSEL XSEL-P/Q	N: No S: 3m M: 5m X☐☐: Length Specified	See the options table below



Model/Specification

Model	Encoder Type	Motor Output (W)	Lead (mm)	Stroke (mm)	Speed (mm/s)	Acceleration (Note 1)				Payload Capacity (Note 1 & 2)				Rated Thrust (N)
						Horizontal (G)		Vertical (G)		Horizontal (kg)		Vertical (kg)		
						Rated	Maximum	Rated	Maximum	Rated Acceleration	Maximum Acceleration	Rated Acceleration	Maximum Acceleration	
NS-SZMS-①-60-12-②-T2-③-AQ-④-RT	Absolute Incremental	60	12	400~800	600	Vertical Only		0.3	0.7	Vertical Only		3	0.5	70.8

*In the model above, ① indicates the type of encoder, ② indicates the stroke, ③ indicates the cable length, and ④ indicates the option.

Option

Name	Model	Reference page	Note
AQ Seal	AQ	→P4	Standard Equipment
Brake	B	→P4	Standard Equipment
Installation Direction of Standard Cable Track	CT1~CT4	→P4	Enter CT1 for standard installation
Guide with Ball-Retaining Mechanism	RT	→P4	Standard Equipment

Common specifications

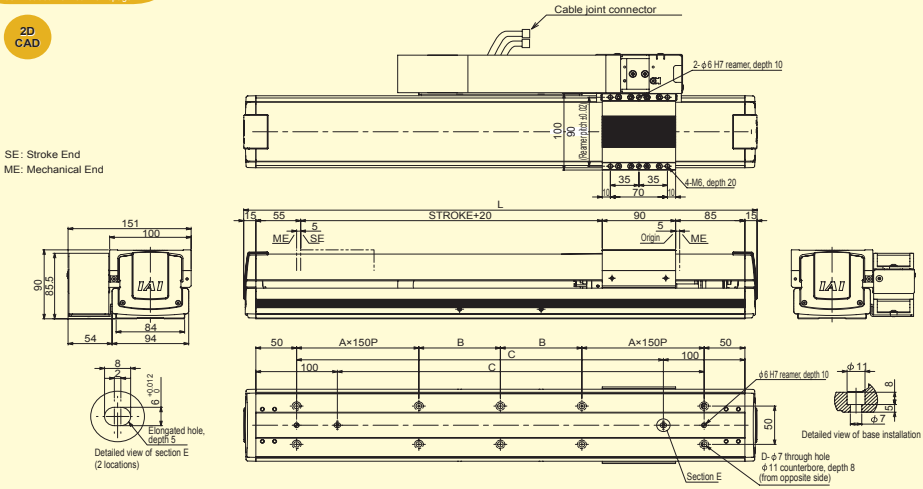
Driving Method	Ball Thread, Diameter φ10 mm, Equivalent to Rolled C10
Repeated Positioning Accuracy	+/- 0.02mm
Backlash	0.05mm or less
Guide	Integrated to Base
Dynamic Allowable Moment(Note 3)	Ma: 28.4 N·m, Mb: 40.2 N·m, Mc: 33.3N·m
Overhung load length	Ma Direction: 450mm or less; Mb and Mc Direction: 450mm or less
Base	Material: Aluminium, White Alumite Treatment
Cable Length (Note 4)	N: No cable; S: 3 m; M: 5 m; X☐☐: Length specified
Ambient Temperature	0~40 degrees Celsius, 85% RH or less (No condensation)

Dimensional drawing

The CAD drawings can be downloaded from our homepage.

2D CAD

SE: Stroke End
ME: Mechanical End



Stroke	400	500	600	700	800
L	680	780	880	980	1080
A	1	1	1	2	2
B	125	175	225	125	175
C	500	600	700	800	900
D	10	10	10	14	14
Mass (kg)	6.2	6.8	7.4	8.1	8.7

Applicable Controller Specifications

Applicable Controller	Max. Number of Axes Controlled	Compatible Encoder Type	Operation Method	Power/ Voltage
X-SEL-P/Q	6 axis	Absolute/ Incremental	Programs	Three-Phase/ Single-Phase 230VAC
SSEL	2 axis			Single-Phase 100/230VAC
SCON	1 axis		Positioner Pulse Train Control	

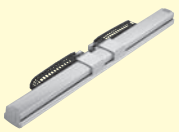
Note

(Note 1) For the relationship between acceleration and payload capacity, see page 3.
(Note 2) The values shown are payload capacities during operation at maximum speed.
(Note 3) For a 10,000-km running life.
(Note 4) The maximum cable length is 30 m. Please specify length in meters.
(E.g., X08 = 8 m)

NS Update V4 / Addendum New Data Sheet Pages

NS-SZMM

Single-Axis Robot Small Nut Rotation Type Main Unit Width 94mm 60W
Vertical Type Mult-Slider



■Model

NS — SZMM — ☐ — 60 — ☐ — ☐ — T2 — ☐ — AQ — B — CT1 — RT

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable controller	Cable Length	Options
NS	SZMM	A: Absolute I: Incremental	60: 60W	12: 12 mm	200: 200mm , 800: 800mm	T2: SCON SSEL XSEL-P/Q	N: No S: 3m M: 5m X□□: Length Specified	See the options table below

Model/Specification

Model	Encoder Type	Motor Output (W)	Lead (mm)	Stroke (mm)	Speed (mm/s)	Acceleration (Note 1)				Payload Capacity (Note 1 & 2)				Rated Thrust (N)
						Horizontal (G)		Vertical (G)		Horizontal (kg)		Vertical (kg)		
						Rated	Maximum	Rated	Maximum	Rated Acceleration	Maximum Acceleration	Rated Acceleration	Maximum Acceleration	
NS-SZMM-①-60-12-②-T2-③-AQ-④-RT	Absolute Incremental	60	12	200~800	600	Vertical Only		0.3	0.7	Vertical Only		3	0.5	70.8

*In the model above, ① indicates the type of encoder, ② indicates the stroke, ③ indicates the cable length, and ④ indicates the option.

Option

Name	Model	Reference page	Note
AQ Seal	AQ	→P4	Standard Equipment
Brake	B	→P4	Standard Equipment
Installation Direction of Standard Cable Track	CT1	→P4	CT1 for standard
Guide with Ball-Retaining Mechanism	RT	→P4	Standard Equipment

Common specifications

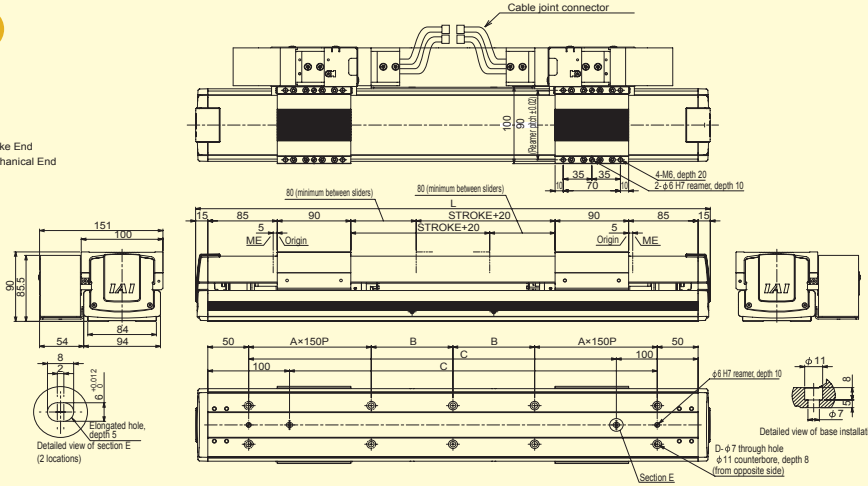
Driving Method	Ball Thread, Diameter φ10 mm, Equivalent to Rolled C10
Repeated Positioning Accuracy	+/- 0.02mm
Backlash	0.05mm or less
Guide	Integrated to Base
Dynamic Allowable Moment(Note 3)	Ma: 28.4 N·m, Mb: 40.2 N·m, Mc: 33.3N·m
Overhung load length	Ma Direction: 450mm or less; Mb and Mc Direction: 450mm or less-
Base	Material: Aluminium, White Alumite Treatment
Cable Length (Note 4)	N: No cable; S: 3 m; M: 5 m; X□□: Length specified
Ambient Temperature	0~40 degrees Celsius, 85% RH or less (No condensation)

Dimensional drawing

The CAD drawings can be downloaded from our homepage.

2D CAD

SE: Stroke End
ME: Mechanical End



Stroke	200	300	400	500	600	700	800
L	680	780	880	980	1080	1180	1280
A	1	1	1	2	2	2	3
B	125	175	225	125	175	225	125
C	500	600	700	800	900	1000	1100
D	10	10	10	14	14	14	18
Mass (kg)	7.7	8.4	9.0	9.7	10.3	10.9	11.6

Applicable Controller Specifications

Applicable Controller	Max. Number of Axes Controlled	Compatible Encoder Type	Operation Method	Power/ Voltage
X-SEL-P/Q	6 axis	Absolute/ Incremental	Programs	Three-Phase/ Single-Phase 230VAC
SSEL	2 axis			Single-Phase 100/230VAC
SCON	1 axis		Positioner/ Pulse Train Control	

Note: A two-axis controller is required to operate the multi-slider.
Two controllers are required for SCON. (Please note that SCON does not have a collision prevention mechanism)

Note

(Note 1) For the relationship between acceleration and payload capacity, see page 3.
(Note 2) The values shown are payload capacities during operation at maximum speed.
(Note 3) For a 10,000-km running life.
(Note 4) The maximum cable length is 30 m. Please specify length in meters.
(E.g., X08 = 8 m)

NS Update V4 / Addendum New Data Sheet Pages

NS-MXMS

Single-Axis Robot Medium Nut Rotation Type Main Unit Width 125mm 200W
Horizontal Type Single Slider

■Model

NS — MXMS — [ ] — 200 — [ ] — [ ] — T2 — [ ] — AQ — [ ] — RT

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable controller	Cable Length	Option
NS	MXMS	A: Absolute I: Incremental	200: 200W	30: 30mm 20: 20 mm	500: 500mm / 1500: 1,500mm	T2: SCON SSEL XSEL-P/Q	N: No S: 3m M: 5m X□□: Length Specified	See the options table below

Model/Specification

Model	Encoder Type	Motor Output (W)	Lead (mm)	Stroke (mm)	Speed (mm/s)	Acceleration (Note 1)				Payload capacity (Note 1 & 2)				Rated Thrust (N)
						Horizontal (G)		Vertical (G)		Horizontal (kg)		Vertical (kg)		
						Rated	Maximum	Rated	Maximum	Rated Acceleration	Maximum Acceleration	Rated Acceleration	Maximum Acceleration	
NS-MXMS-①-200-30-②-T2-③-AQ-④-RT	Absolute Incremental	200	30	500~1500	1800	0.3	1.0	Horizontal Only		25	0.5	Horizontal Only		113.9
NS-MXMS-①-200-20-②-T2-③-AQ-④-RT			20		1200	0.3	0.8			40	2.5			170.9

*In the model above, ① indicates the type of encoder, ② indicates the stroke, ③ indicates the cable length, and ④ indicates the option.

Option

Name	Model	Reference page	Note
AQ Seal	AQ	→P4	Standard Equipment
Installation Direction of Standard Cable Track	CT1~CT4	→P4	Enter CT1 for standard installation
Guide with Ball-Retaining Mechanism	RT	→P4	Standard Equipment

Common specifications

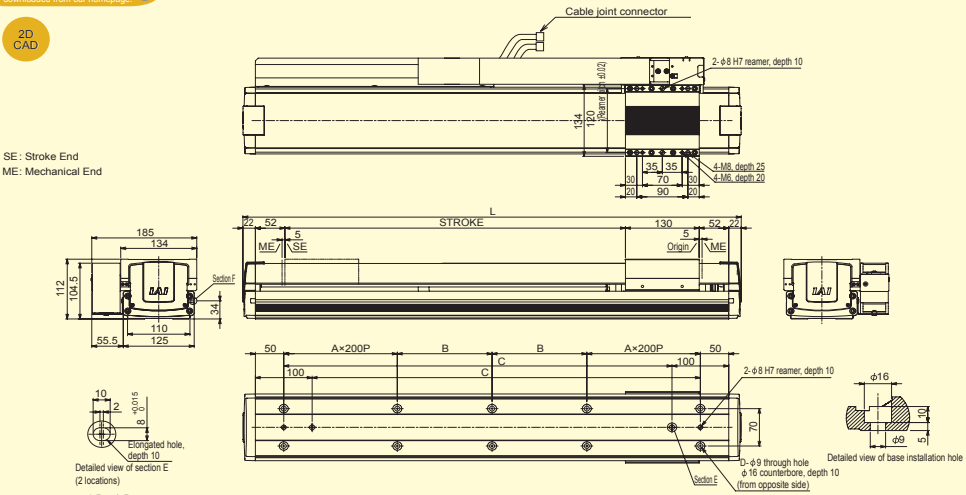
Driving Method	Ball Thread, Diameter φ16 mm, Equivalent to Rolled C5
Repeated Positioning Accuracy	+/- 0.01 mm
Backlash	0.02 mm or less
Guide	Integrated to Base
Dynamic Allowable Moment(Note 3)	Ma: 69.6N·m, Mb: 99.0N·m, Mc: 161.7N·m
Overhung load length	Ma Direction: 600mm or less; Mb and Mc Direction: 600mm or less
Base	Material: Aluminium, White Alumite Treatment
Cable Length (Note 4)	N: No cable; S: 3 m; M: 5 m; X□□: Length specified
Ambient Temperature	0~40 degrees Celsius, 85% RH or less (No condensation)

Dimensional drawing

The CAD drawings can be downloaded from our homepage.

2D CAD

SE: Stroke End
ME: Mechanical End



Stroke	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L	778	878	978	1078	1178	1278	1378	1478	1578	1678	1778
A	0	1	1	1	1	2	2	2	2	3	3
B	317	167	217	267	317	167	217	267	317	167	217
C	584	684	784	884	984	1084	1184	1284	1384	1484	1584
D	6	10	10	10	10	14	14	14	14	18	18
Mass (kg)	11.9	13.1	14.4	15.6	16.8	18.0	19.3	20.5	21.7	23.0	24.2

Applicable Controller Specifications

Applicable Controller	Max. Number of Axes Controlled	Compatible Encoder Type	Operation Method	Power/ Voltage
X-SEL-P/Q	6 axis	Absolute/ Incremental	Programs	Three-Phase/ Single-Phase 230V AC
SSEL	2 axis			Single-Phase 100/230VAC
SCON	1 axis		Positioner Pulse Train Control	

Note

(Note 1) For the relationship between acceleration and payload capacity, see page 3.
(Note 2) The values shown are payload capacities during operation at maximum speed.
(Note 3) For a 10,000-km running life.
(Note 4) The maximum cable length is 30 m. Please specify length in meters. (E.g., X08 = 8 m)
(Note 5) When an axis with a long stroke (1,300 mm or more) is used hanging from the ceiling, the cover of the body may hang down and contact the slider. Therefore, in cases of such use, please contact our sales representative in advance.

NS Update V4 / Addendum New Data Sheet Pages

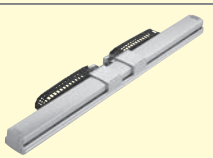
NS-MXMM

Single-Axis Robot Medium Nut Rotation Type Main Unit Width 125mm 200W
Horizontal Type Multi-Slider

■Model

NS — MXMM — ☐ — 200 — ☐ — ☐ — T2 — ☐ — AQ — CT1 — RT

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable controller	Cable Length	Option
		A: Absolute I : Incremental	200: 200W	30: 30mm 20: 20 mm	300: 300mm , 1500: 1,500mm	T2: SCON SSEL XSEL-P/Q	N :No S :3m M:5m X☐☐:Length Specified	See the options table below



Model/Specification

Model	Encoder Type	Motor Output (W)	Lead (mm)	Stroke (mm)	Speed (mm/s)	Acceleration (Note 1)				Payload capacity (Note 1 & 2)				Rated Thrust (N)
						Horizontal (G)		Vertical (G)		Horizontal (kg0		Vertica (kg)		
						Rated	Maximum	Rated	Maximum	Rated Acceleration	Maximun Acceleration	Rated Acceleration	Maximun Acceleration	
NS-MXMM-①-200-30-②-T2-③-AQ-④-RT	Absolute Incremental	200	30	300~1500	1800	0.3	1.0	Horizontal Only		25	0.5	Horizontal Only		113.9
NS-MXMM-①-200-20-②-T2-③-AQ-④-RT			20		1200	0.3	0.8			40	2.5			170.9

*In the model above, ① indicates the type of encoder, ② indicates the stroke, ③ indicates the cable length, and ④ indicates the option.

Option

Name	Model	Reference page	Note
AQ Seal	AQ	→P4	Standard Equipment
Installation Direction of Standard Cable Track	CT1	→P4	CT1 for standard
Guide with Ball-Retaining Mechanism	RT	→P4	Standard Equipment

Common specifications

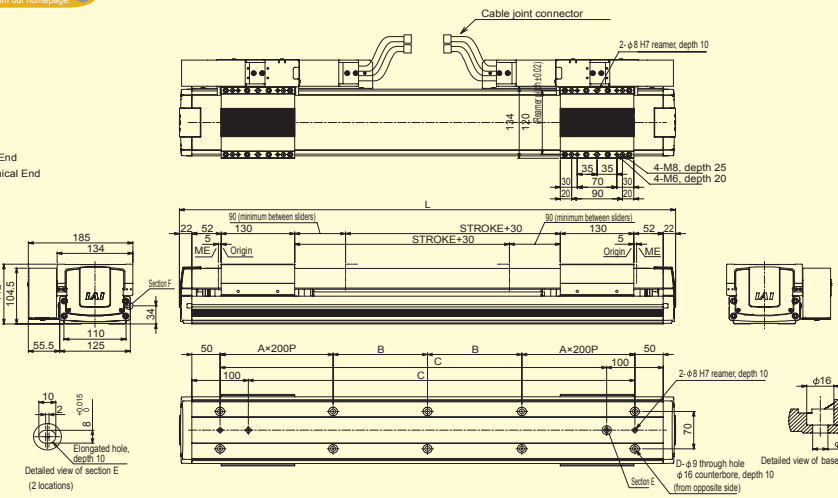
Driving Method	Ball Thread, Diameter φ16 mm, Equivalent to Rolled C5
Repeated Positioning Accuracy	+/- 0.01 mm
Backlash	0.02 mm or less
Guide	Integrated to Base
Dynamic Allowable Moment (Note 3)	Ma: 69.6N·m, Mb: 99.0N·m, Mc: 161.7N·m
Overhung load length	Ma Direction: 600mm or less; Mb and Mc Direction: 600mm or less
Base	Material: Aluminium, White Alumite Treatment
Cable Length (Note 4)	N: No cable; S: 3 m; M: 5 m; X☐☐: Length specified
Ambient Temperature	0~40 degrees Celsius, 85% RH or less (No condensation)

Dimensional drawing

The CAD drawings can be downloaded from our homepage.

2D CAD

SE: Stroke End
ME: Mechanical End



Stroke	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L	828	928	1028	1128	1228	1328	1428	1528	1628	1728	1828	1928	2028
A	1	1	1	1	2	2	2	2	3	3	3	3	4
B	142	192	242	292	142	192	242	292	142	192	242	292	142
C	634	734	834	934	1034	1134	1234	1334	1434	1534	1634	1734	1834
D	10	10	10	10	14	14	14	14	18	18	18	18	22
Mass (kg)	15.6	16.8	18	19.2	20.5	21.7	22.9	24.2	25.4	26.6	27.9	29.1	30.3

Applicable Controller Specifications

Applicable Controller	Max. Number of Axes Controlled	Compatible Encoder Type	Operation Method	Power/ Voltage
X-SEL-P/Q	6 axis	Absolute/ Incremental	Programs	Three-Phase/ Single-Phase 230VAC
SSEL	2 axis			Single-Phase 100/230VAC
SCON	1 axis		Positioner/ Pulse Train Control	

Note: A two-axis controller is required to operate the multi-slider.
Two controllers are required for SCON. (Please note that SCON does not have a collision prevention mechanism)

Note

(Note 1) For the relationship between acceleration and payload capacity, see page 3.
(Note 2) The values shown are payload capacities during operation at maximum speed.
(Note 3) For a 10,000-km running life.
(Note 4) The maximum cable length is 30 m. Please specify length in meters. (E.g., X08 = 8 m)
(Note 5) When an axis with a long stroke (1,300 mm or more) is used hanging from the ceiling, the cover of the body may hang down and contact the slider. Therefore, in cases of such use, please contact our sales representative in advance.

NS Update V4 / Addendum New Data Sheet Pages

NS-MXMXS

Single-Axis Robot Medium Nut Rotation Type Main Unit Width 125mm 200W
Horizontal Type With Mid-Support Single Slider

■Model

NS — MXMXS — ☐ — 200 — ☐ — ☐ — T2 — ☐ — AQ — ☐ — RT

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable controller	Cable Length	Option
		A: Absolute I : Incremental	200: 200W	30: 30mm 20: 20 mm	1600: 1,600mm ↓ 2200: 2,200mm	T2: SCON SSEL XSEL-P/Q	N :No S :3m M :5m X☐☐:Length Specified	See the options table below

Model/Specification

Model	Encoder Type	Motor Output (W)	Lead (mm)	Stroke (mm)	Speed (mm/s)	Acceleration (Note 1)		Payload capacity (Note 1 & 2)				Rated Thrust (N)
						Horizontal (G)		Vertical (G)		Horizontal (kg)		Vertical (kg)		
						Rated	Maximum	Rated	Maximum	Rated Acceleration	Maximum Acceleration	Rated Acceleration	Maximum Acceleration	
NS-MXMXS-☐-200-30-☐-T2-☐-AQ-☐-RT	Absolute Incremental	200	30	1600~2200	1800	0.3		Horizontal Only		25		Horizontal Only		113.9
NS-MXMXS-☐-200-20-☐-T2-☐-AQ-☐-RT			20		1200	0.3				40				170.9

*In the model above, ☐ indicates the type of encoder, ☐ indicates the stroke, ☐ indicates the cable length, and ☐ indicates the option.

Option

Name	Model	Reference page	Note
AQ Seal	AQ	→P4	Standard Equipment
Installation Direction of Standard Cable Track	CT1~CT4	→P4	Enter CT1 for standard installation
Guide with Ball-Retaining Mechanism	RT	→P4	Standard Equipment

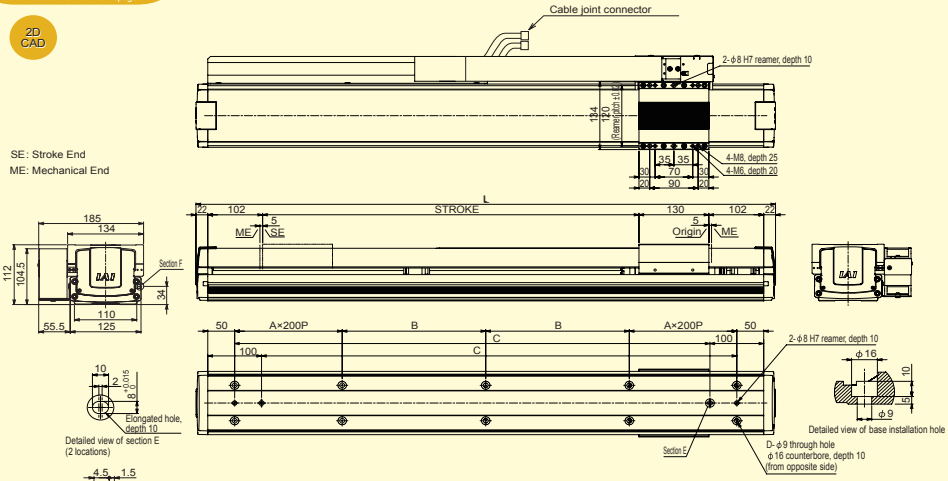
Common specifications

Driving Method	Ball Thread, Diameter φ16 mm, Equivalent to Rolled C5
Repeated Positioning Accuracy	+/- 0.01 mm
Backlash	0.02 mm or less
Guide	Integrated to Base
Dynamic Allowable Moment (Note 3)	Ma: 69.6N·m, Mb: 99.0N·m, Mc: 161.7N·m
Overhung load length	Ma Direction: 600mm or less; Mb and Mc Direction: 600mm or less
Base	Material: Aluminium, White Alumite Treatment
Cable Length (Note 4)	N: No cable; S: 3 m; M: 5 m; X☐☐: Length specified
Ambient Temperature	0~40 degrees Celsius, 85% RH or less (No condensation)

Dimensional drawing

The CAD drawings can be downloaded from our homepage.

2D CAD



Stroke	1600	1700	1800	1900	2000	2100	2200
L	1978	2078	2178	2278	2378	2478	2578
A	3	4	4	4	4	5	5
B	317	167	217	267	317	167	217
C	1784	1884	1984	2084	2184	2284	2384
D	18	22	22	22	22	26	26
Mass (kg)	26.2	27.5	28.7	29.9	31.2	32.4	33.6

Note: Due to their structure, models with a mid-support cannot be positioned horizontally on their side or vertically.

Applicable Controller Specifications

Applicable Controller	Max. Number of Axes Controlled	Compatible Encoder Type	Operation Method	Power/ Voltage
X-SEL-P/Q	6 axis	Absolute/ Incremental	Programs	Three-Phase/ Single-Phase 230VAC
SSEL	2 axis			Single-Phase 100/230VAC
SCON	1 axis		Positioner Pulse Train Control	

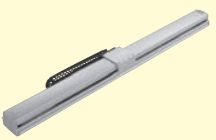
Note

(Note 1) The maximum acceleration is 0.3 G.
(Note 2) The values shown are payload capacities during operation at maximum speed.
(Note 3) For a 10,000-km running life.
(Note 4) The maximum cable length is 30 m. Please specify length in meters. (E.g., X08 = 8 m)
(Note 5) When an axis with a long stroke (1,300 mm or more) is used hanging from the ceiling, the cover of the body may hang down and contact the slider. Therefore, in cases of such use, please contact our sales representative in advance.

NS Update V4 / Addendum New Data Sheet Pages

NS-MZMS

Single-Axis Robot Medium Nut Rotation Type Main Unit Width 125mm 200W
Vertical Type Single Slider



■Model

NS — MZMS — ☐ — 200 — ☐ — ☐ — T2 — ☐ — AQ — B ☐ — RT

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable controller	Cable Length	Options
		A:Absolute I:Incremental	200: 200W	20: 20 mm	500: 500mm ↓ 800: 800mm	T2: SCON SSEL XSEL-P/Q	N:No S:3m M:5m X☐☐:Length Specified	See the options table below

Model/Specification

Model	Encoder Type	Motor Output (W)	Lead (mm)	Stroke (mm)	Speed (mm/s)	Acceleration (Note 1)				Payload capacity (Note 1 & 2)				Rated Thrust (N)
						Horizontal (G)		Vertical (G)		Horizontal (kg)		Vertical (kg)		
						Rated	Maximum	Rated	Maximum	Rated Acceleration	Maximum Acceleration	Rated Acceleration	Maximum Acceleration	
NS-MZMS-①-200-20-②-T2-③-AQ-④-RT	Absolute Incremental	200	20	500~800	1000	Vertical Only		0.3	0.5	Vertical Only		6	3	170.9

*In the model above, ① indicates the type of encoder, ② indicates the stroke, ③ indicates the cable length, and ④ indicates the option.

Option

Name	Model	Reference page	Note
AQ Seal	AQ	→P4	Standard Equipment
Brake (*)	B	→P4	Standard Equipment
Installation Direction of Standard Cable Track	CT1~CT4	→P4	Enter CT1 for standard installation
Guide with Ball-Retaining Mechanism	RT	→P4	Standard Equipment

(*) A brake box is attached for powering the brake.

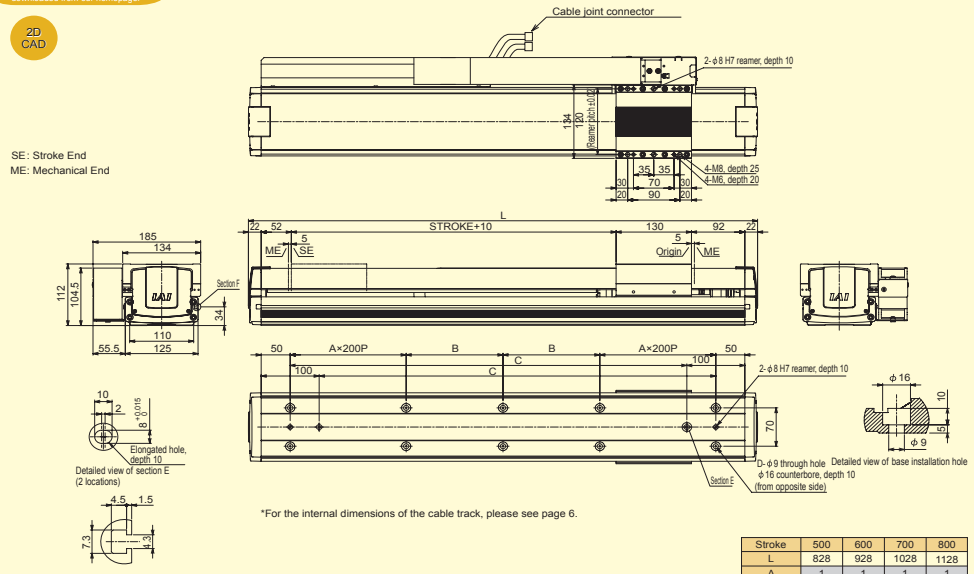
Common specifications

Driving Method	Ball Thread, Diameter φ16 mm, Equivalent to Rolled C5
Repeated Positioning Accuracy	+/- 0.01 mm
Backlash	0.02 mm or less
Guide	Integrated to Base
Dynamic Allowable Moment (Note 3)	Ma: 69.6N·m, Mb: 99.0N·m, Mc: 81.3N·m
Overhung load length	Ma Direction: 600mm or less; Mb and Mc Direction: 600mm or less
Base	Material: Aluminium, White Alumite Treatment
Cable Length (Note 4)	N: No cable; S: 3 m; M: 5 m; X☐☐: Length specified
Ambient Temperature	0~40 degrees Celsius, 85% RH or less (No condensation)

Dimensional drawing

The CAD drawings can be downloaded from our homepage.

2D CAD



*For the internal dimensions of the cable track, please see page 6.

Stroke	500	600	700	800
L	828	928	1028	1128
A	1	1	1	1
B	142	192	242	292
C	634	734	834	934
D	10	10	10	10
Mass (kg)	13.5	14.8	16.0	17.2

Applicable Controller Specifications

Applicable Controller	Max. Number of Axes Controlled	Compatible Encoder Type	Operation Method	Power/Voltage
X-SEL-P/Q	6 axis	Absolute/ Incremental	Programs	Three-Phase/ Single-Phase 230VAC
SSEL	2 axis			Single-Phase 100/230VAC
SCON	1 axis		Positioner Pulse Train Control	

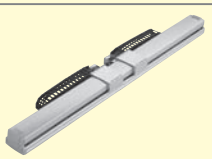
Note

(Note 1) For the relationship between acceleration and payload capacity, see page 3.
(Note 2) The values shown are payload capacities during operation at maximum speed.
(Note 3) For a 10,000-km running life.
(Note 4) The maximum cable length is 30 m. Please specify length in meters.
(E.g., X08 = 8 m)

NS Update V4 / Addendum New Data Sheet Pages

NS-MZMM

Single-Axis Robot Medium Nut Rotation Type Main Unit Width 125mm 200W
Vertical Type Multi-Slider



■Model

NS — MZMM — ☐ — 200 — ☐ — ☐ — T2 — ☐ — AQ — B — CT1 — RT

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable controller	Cable Length	Options
NS	MZMM	A: Absolute I : Incremental	200: 200W	20: 20 mm	300: 300mm ↑ 800: 800mm	T2: SCON SSEL XSEL-P/Q	N: No S: 3m M: 5m X☐☐: Length Specified	See the options table below

Model/Specification

Model	Encoder Type	Motor Output (W)	Lead (mm)	Stroke (mm)	Speed (mm/s)	Acceleration (Note 1)				Payload capacity (Note 1 & 2)				Rated Thrust (N)
						Horizontal (G)		Vertical (G)		Horizontal (kg)		Vertical (kg)		
						Rated	Maximum	Rated	Maximum	Rated Acceleration	Maximum Acceleration	Rated Acceleration	Maximum Acceleration	
NS-MZMM-①-200-20-②-T2-③-AQ-④-RT	Absolute Incremental	200	20	300~800	1000	Vertical Only		0.3	0.5	Vertical Only		6	3	170.9

*In the model above, ① indicates the type of encoder, ② indicates the stroke, ③ indicates the cable length, and ④ indicates the option.

Option

Name	Model	Reference page	Note
AQ Seal	AQ	→P4	Standard Equipment
Brake (*)	B	→P4	Standard Equipment
Installation Direction of Standard Cable Track	CT1	→P4	CT1 for standard
Guide with Ball-Retaining Mechanism	RT	→P4	Standard Equipment

(*) A brake box is attached for powering the brake.

Common specifications

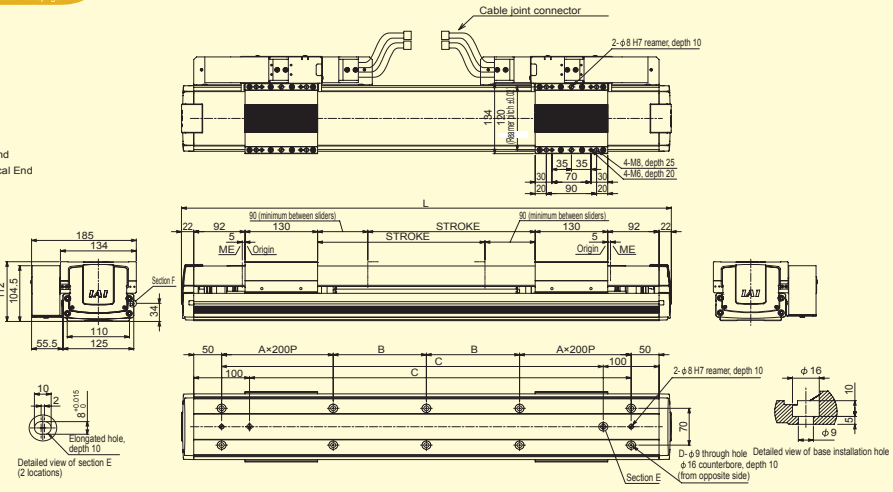
Driving Method	Ball Thread, Diameter φ16 mm, Equivalent to Rolled C5
Repeated Positioning Accuracy	+/- 0.01 mm
Backlash	0.02 mm or less
Guide	Integrated to Base
Dynamic Allowable Moment (Note 3)	Ma: 69.6N·m, Mb: 99.0N·m, Mc: 81.3N·m
Overhung load length	Ma Direction: 600mm or less; Mb and Mc Direction: 600mm or less
Base	Material: Aluminium, White Alumite Treatment
Cable Length (Note 4)	N: No cable; S: 3 m; M: 5 m; X☐☐: Length specified
Ambient Temperature	0~40 degrees Celsius, 85% RH or less (No condensation)

Dimensional drawing

The CAD drawings can be downloaded from our homepage.

2D CAD

SE: Stroke End
ME: Mechanical End



Stroke	300	400	500	600	700	800
L	878	978	1078	1178	1278	1378
A	1	1	1	1	2	2
B	167	217	267	317	167	217
C	684	784	884	984	1084	1184
D	10	10	10	10	14	14
Mass (kg)	17.2	18.4	19.7	20.9	22.1	23.4

Applicable Controller Specifications

Applicable Controller	Max. Number of Axes Controlled	Compatible Encoder Type	Operation Method	Power/ Voltage
X-SEL-P/Q	6 axis	Absolute/ Incremental	Programs	Three-Phase/ Single-Phase 230VAC
SSEL	2 axis			Single-Phase 100/230VAC
SCON	1 axis		Positioner Pulse Train Control	

Note: A two-axis controller is required to operate the multi-slider.
Two controllers are required for SCON. (Please note that SCON does not have a collision prevention mechanism)

Note

(Note 1) For the relationship between acceleration and payload capacity, see page 3.
(Note 2) The values shown are payload capacities during operation at maximum speed.
(Note 3) For a 10,000-km running life.
(Note 4) The maximum cable length is 30 m. Please specify length in meters.
(E.g., X08 = 8 m)

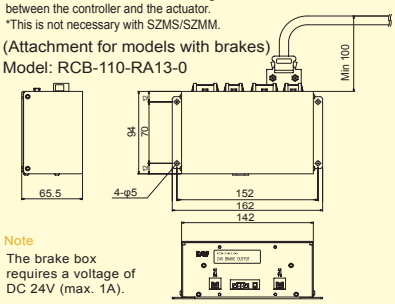
Controller

	Controller Series/Type	SCON	SSEL	XSEL	
				P (Standard) Type	Q (Global) Type
Basic Specifications	Form				
	Power Capacity	Maximum: 844VA	Maximum: 1660VA (For 400W 2-axis operation)	Maximum: 4988VA (For 6-axis operation total of 2400W)	
	Input Power	Single-Phase AC 230V	Single-Phase AC 100V Single-Phase AC 230V	Three-Phase AC 230V Single-Phase AC 230V	
	Range of Operating Power Voltages	±10%			
Control Specifications	Maximum total connected axes output (W)	750W(for 230V power supply)	400W(for 100V power supply) 800W(for 230V power supply)	2400W(For three-phase) 1600W(For single-phase)	
	Max. Number of Axes Controlled	1 axis	2 axis	6 axis	
	Position Detection Method	Incremental Encoder/Absolute Encoder			
	Safety Circuit Configuration	Duplexing not possible		Duplexing not possible	Duplexing possible
	Operation Method	Positioner Operation Pulse Train Control	Program Operation Positioner Operation (Switchable)	Program Operation Only	
Programs	Number of Programs	—	128		
	Number of Program Steps	—	9999		
	Number of Multi-Task Programs	—	8	16	
	Number of Positions	Maximum: 512	20000		
	Data Input Device (Optional)	Teaching Box Model: CON-T-ENG PC-Supported Software Model: RCM-101-MW (For RS232 Communication) RCM-101-USB (For USB Communication)	Teaching Box Model: SEL-T-J/SEL-TD-J PC-Supported Software Model: IA-101-X-MW-J (For RS232 Communication) IA-101-X-USB (For USB Communication)	Teaching Box Model: SEL-T/SEL-TD PC-Supported Software Model: IA-101-X-MW (For RS232 Communication) IA-101-X-USBMW (For USB Communication)	Teaching Box Model: SEL-TD PC-Supported Software Model: IA-101-XA-MW (With RS232 Communication Safety Category-Supported Cable)
Input/Output and Communication	Standard Input/Output	Input: 16 points/Output: 16 points (NPN/PNP Selection Allowed)	Input: 24 points/Output: 8 points (NPN/PNP Selection Allowed)	Input: 32 points/Output: 16 points (NPN/PNP Selection Allowed)	
	Expanded Input/Output	Not Possible		Maximum Input: 192 Maximum Output: 192	
	Field Network	DeviceNet, CC-Link, ProfiBus	DeviceNet, CC-Link, ProfiBus	DeviceNet, CC-Link, ProfiBus, Ethernet	
General Specifications	Ambient Temperature/Humidity during Operation	0~40°C 10~95%(No condensation)			
	Ambient Air during Operation	No Corrosive gas. Especially no dust.			
	Outer Dimensions	72(W)×200.5(H)×121(D)	100(W)×202.6(H)×126(D) When the absolute battery is installed	340(W)×195(H)×125.3(D) (For 6-axis absolute specification)	
	Mass	1.1 kg	1.4kg	5.7kg(For 6-axis absolute specification)	
	Attachments	I/OFlat Cable(40 Cores)	I/OFlat Cable(34 Cores)	I/OFlat Cable(50 Cores)	

■Brake Box (Attachment)

With the vertical types (MZMS/MZMM/LZMS/LZMM), this device must be installed while wiring the encoder between the controller and the actuator.
*This is not necessary with SZMS/SZMM.

(Attachment for models with brakes)
Model: RCB-110-RA13-0



Note
The brake box requires a voltage of DC 24V (max. 1A).

■Regenerative Resistance Unit (Optional)

▮Features This unit converts the regenerative current from a decelerating motor into heat. Refer to the following table to determine the required number of regenerative resistors according to the total wattage of the actuator.

▮Models REU-1 (for XSEL)
REU-2 (for SCON/SSEL)

	Horizontal			Vertical		
	XSEL	SSEL	SCON	XSEL	SSEL	SCON
0	~100W	~200W	~100W	~100W	~200W	~100W
1	~500W	~800W	~400W	~800W	~600W	~400W
2	~800W			~1200W	~800W	~750W
3	~1200W			~1600W		
4	~2000W			~2000W		
5	~2400W			~2400W		

*Depending on the operating conditions, the number of regenerative resistors required may be larger than the number listed in the table above.
*If two regenerative resistance units are required for SCON/SSEL, use model REU-1 as the second unit.