

IAI

Quality and Innovation

IS Cast

Single-axis Robot

ISB/SSPA Series



**S, M sizes added to
the SSPA Series**

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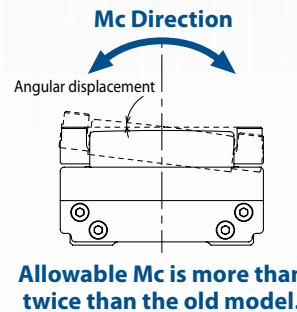
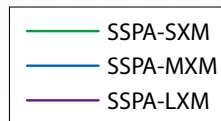
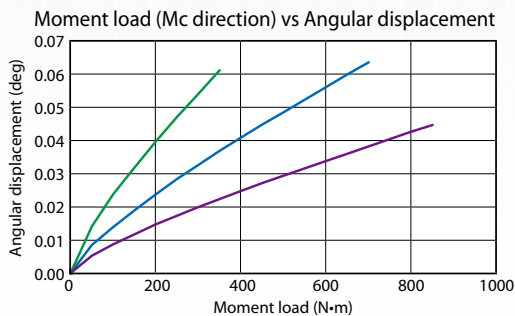
A major revamp of the single-axis robot IS series with improvements all around—from preciseness, rigidity and payload capacity to speed and acceleration/deceleration.

1. Improved preciseness

- The positioning repeatability is twice as high as with a similar conventional product.
 - Due to an improved preciseness of the guide, the dynamic straightness of the slider is now 0.015 mm/m or less. (*)
- | | | |
|--------------------------------|----------------------|-------------|
| | Conventional product | ISB series |
| • Standard specification | ±0.02 mm | → ±0.01 mm |
| • High-precision specification | ±0.01 mm | → ±0.005 mm |
- * Based on the SSPA of high straightness, precision specification. Refer to P. 13 for details.

2. Improved rigidity

- The SSPA series is an iron base type. It has more than twice the allowable moment in the Mc direction in comparison to the old model of the same size.

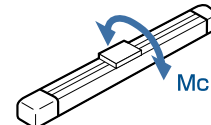


[Comparison between the large iron base type (SSPA-LXM) and the old model]

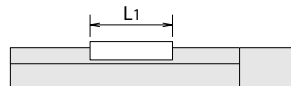
- The same payload and Mc-direction rigidity are achieved at a cross-section area of just 60% that of a conventional product of an extra-large type (ISA-WXM).

| Comparison with conventional product of same payload and Mc-direction rigidity | |
|--|---------------------------------|
| NEW Iron-base type SSPA-LXM | Conventional product |
| <p>Compact size with a cross-section area of just 60%</p> | <p>Extra-large type ISA-WXM</p> |

- The long slider type has a longer slider compared to the standard model. Compared to the old model of the same size, the allowable Mc is increased by 10 to 20%. *Long slider type is only for the ISB/ISPB series.

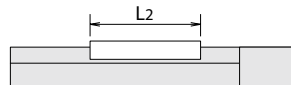


Standard slider type



NEW

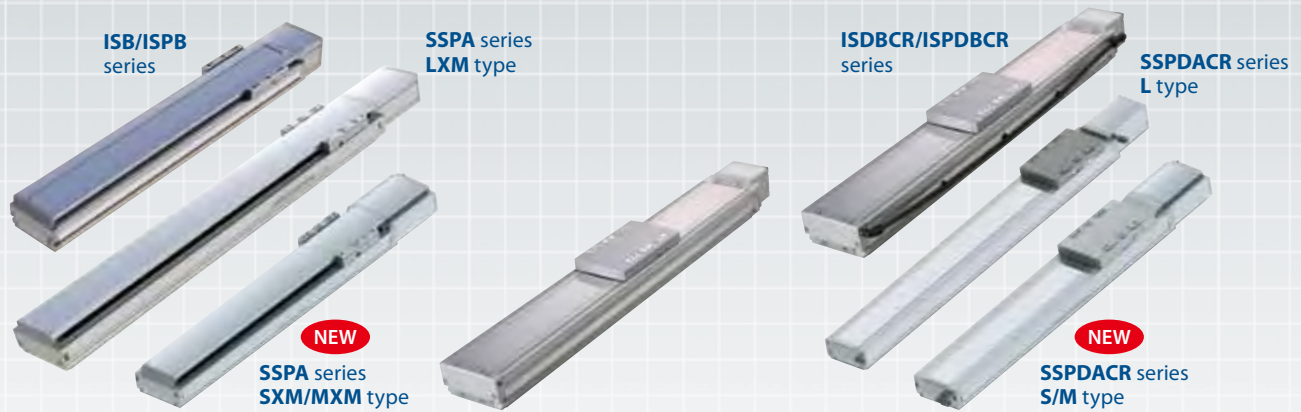
Long slider type



| Type | Standard slider (L1) | Long slider (L2) |
|-----------------|----------------------|------------------|
| Small S | 90mm | 110mm |
| Medium M | 120mm | 150mm |
| Large L | 150mm | 180mm |

1

3. Medium and small types have been added to the iron base series (IS Cast:SSPA/SSPDACR)



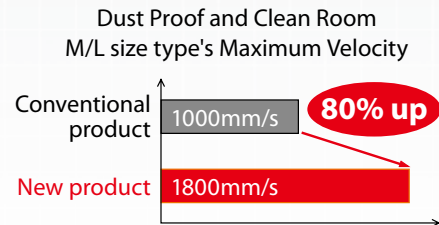
● **Standard specification**
ISB/ISPB/SSPA series

● **Simple, dustproof specification**
ISDB/ISPDB series

● **Cleanroom specification**
ISDBCR/ISPDBCR/
SSPDACR series

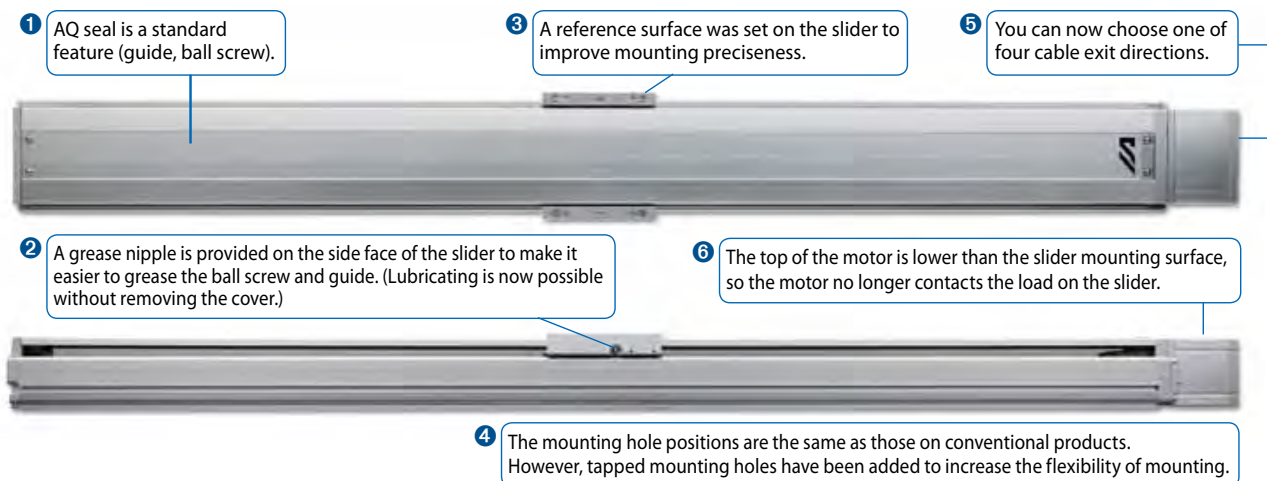
4. Performance Upgrade (note) Specifications will vary depending on the model and lead.

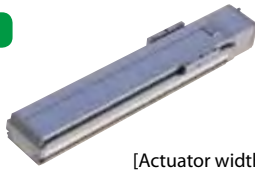


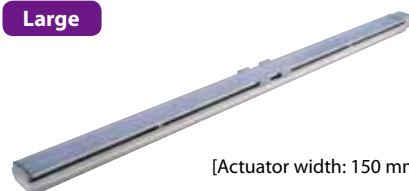
- The payload has increased by approx. 10% with all models.
- The maximum stroke has become longer with all models except for those with an intermediate support.
- The rated acceleration has increased from 0.3 G to 0.4 G, while the maximum acceleration has increased from 1.0 G to 1.2 G.
- The maximum speed of 2500 mm/s (*) is now possible.
(*) Based on the SSPA of lead 50.
- The maximum speed has increased from 1000 mm/s to 1800 mm/s with M/L-size types of the simple, dustproof specification or cleanroom specification.



5. Easier to use

- 1 AQ seal is a standard feature.
- 2 Easier to grease the ball screw and guide.
- 3 A reference surface is set on the slider.
- 4 Greater flexibility of mounting.
- 5 Four cable exit directions to choose from.
- 6 The top of the motor does not contact the load on the slider.



| Use environment | Base material | Series name [Positioning repeatability (mm)] | Actuator size | Slider type (slider length) (Note 1) | Type |
|-----------------|---------------|--|--|---|--------------|
| Standard | Aluminum base | ISB (Standard specification) [±0.01] ISPB (High precision specification) [±0.005] | Small  [Actuator width: 90 mm] | Standard [90mm] | SXM |
| | | | | Long [110mm] | SXL |
| | | | Medium  [Actuator width: 120 mm] | Standard [120mm] | MXM |
| | | | | Long [150mm] | MXL |
| | | | | With mid-support [120mm] | MXMX |
| | | | Large  [Actuator width: 150 mm] | Standard [150mm] | LXM |
| | | | | Long [180mm] | LXL |
| | | | | With mid-support [150mm] | LXMX |
| | | | Large  [Actuator width: 150 mm] | Double sliders with mid-support [250mm] | LXUWX |

(Note 1) When the slider is longer, the dynamic allowable moment becomes more than that of the standard slider. When mid-support is provided, high-speed movement is possible, even over a long stroke, because deflection of the ball screw can be suppressed.

(Note 2) If the stroke is short, the maximum speed may not be reached. When the stroke increases, the maximum speed will drop to prevent reaching a dangerous speed. For details, refer to the page explaining the specifications of each model.

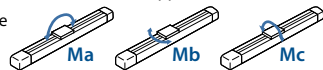
(Note 3) The maximum payload is the value when the actuator is operated at the rated acceleration. The maximum payload will drop if the acceleration is raised. For details, refer to "Table of Payload by Acceleration" on P. 9. The values in () are payloads when a guide with ball retention mechanism (RT) is used.

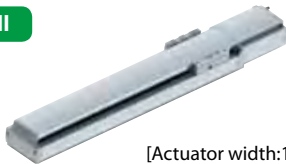





3

| Stroke (mm) | Motor output (W) | Ball screw lead (mm) | Maximum speed (mm/s) (Note 2) | Maximum payload (kg) (Note 3) | | Dynamic allowable moment (N-m) (Note 4) | | | Reference page |
|------------------------------------|------------------|----------------------|-------------------------------|-------------------------------|---|---|-------|-------|----------------|
| | | | | Horizontal | Vertical | Ma | Mb | Mc | |
| 100~900 (in 50mm increments) | 60 | 16 | 960 | 13 | 3.5 (3.0) | 28.4 | 40.2 | 65.7 | P.17 |
| | | 8 | 480 | 27 | 7 (6.5) | | | | |
| | | 4 | 240 | 55 | 14 (13.5) | | | | |
| 130~880 (in 50mm increments) | 60 | 16 | 960 | 13 | 3.5 | 39.7 | 56.7 | 76.3 | P.18 |
| | | 8 | 480 | 27 | 7 | | | | |
| | | 4 | 240 | 55 | 14 | | | | |
| 100~1100 (in 50mm increments) | 100 | 30 | 1800 | 15 | 2.5 (2.0) | 69.6 | 99.0 | 161.7 | P.19 |
| | | 20 | 1200 | 23 | 5 (4.5) | | | | |
| | | 10 | 600 | 45 | 10 (9.5) | | | | |
| | | 5 | 300 | 85 | 20 (19.5) | | | | |
| | 200 | 30 | 1800 | 30 | 6 | | | | P.20 |
| | | 20 | 1200 | 45 | 10 | | | | |
| | | 10 | 600 | 90 | 20 | | | | |
| 120~1070 (in 50mm increments) | 100 | 30 | 1800 | 15 | 2.5 | 105.3 | 150.4 | 193.7 | P.21 |
| | | 20 | 1200 | 23 | 5 | | | | |
| | | 10 | 600 | 45 | 10 | | | | |
| | | 5 | 300 | 85 | 20 | | | | |
| | 200 | 30 | 1800 | 30 | 6 | | | | P.22 |
| | | 20 | 1200 | 45 | 10 | | | | |
| | | 10 | 600 | 90 | 20 | | | | |
| 800~2000 (in 100mm increments) | 200 | 30 | 1800 | 30 | Designed exclusively for horizontal use | 69.6 | 99.0 | 161.7 | P.23 |
| | | 20 | 1200 | 45 | | | | | |
| 100~1300 (in 50mm increments) | 200 | 40 | 2400 | 15 | 4 (3.0) | 104.9 | 149.9 | 248.9 | P.24 |
| | | 20 | 1200 | 45 | 10 (9.0) | | | | |
| | | 10 | 600 | 90 | 20 (19.0) | | | | |
| | 400 | 40 | 2400 | 40 | 10 | | | | P.25 |
| | | 20 | 1200 | 90 | 20 | | | | |
| | | 10 | 600 | 120 | 40 | | | | |
| 120~1270 (in 50mm increments) | 200 | 40 | 2400 | 15 | 4 | 137.8 | 196.8 | 278.5 | P.26 |
| | | 20 | 1200 | 45 | 10 | | | | |
| | | 10 | 600 | 90 | 20 | | | | |
| | 400 | 40 | 2400 | 40 | 10 | | | | P.27 |
| | | 20 | 1200 | 90 | 20 | | | | |
| | | 10 | 600 | 120 | 40 | | | | |
| 1000~2500 (in 100mm increments) | 200 | 20 | 1200 | 45 | Designed exclusively for horizontal use | 104.9 | 149.9 | 248.9 | P.28 |
| | | 400 | 40 | 2400 | | | | | 40 |
| | 400 | 20 | 1200 | 90 | | | | | |
| 1000~2500 (in 100mm increments) | 200 | 20 | 1200 | 45 | Designed exclusively for horizontal use | 179.3 | 254.8 | 247.0 | P.30 |
| | | 400 | 40 | 2400 | | | | | 40 |
| | 400 | 20 | 1200 | 90 | | | | | |

Note 4) The value of moment allowed to be applied when the traveling life of the actuator is set to 10,000 km.

Direction of allowable load moment



| Use environment | Base material | Series name [Positioning repeatability (mm)] | Actuator size | Slider type (slider length) (Note 1) | Type |
|-------------------|---------------|---|---|--------------------------------------|--|
| Standard | Iron base | SSPA (High precision specification) [±0.005] | Small  [Actuator width:100mm] | Standard (90mm) | SXM |
| | | | Medium  [Actuator width:130mm] | Standard (120mm) | MXM |
| | | | Large  [Actuator width:155mm] | Standard (150mm) | LXM |
| Simple, dustproof | Aluminum base | ISDB (Standard specification) [±0.01] | Small  [Actuator width:90mm] | Standard (154mm) | S |
| | | | Medium  [Actuator width:120mm] | Standard (194mm) | M |
| | | | | With mid-support (194mm) | MX |
| | | | Large  [Actuator width:150mm] | Standard (224mm) | L |
| | | | | With mid-support (224mm) | LX |
| | | | | | ISPDB (High precision specification) [±0.005] |
| | | | | | |

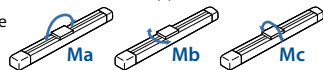
(Note 1) When a mid-support is provided, high-speed movement is possible, even over a long stroke, because deflection of the ball screw can be suppressed.
 (Note 2) If the stroke is short, the maximum speed may not be reached. When the stroke increases, the maximum speed will drop to prevent reaching a dangerous speed. For details, refer to the page explaining the specifications of each model.
 (Note 3) The maximum payload is the value when the actuator is operated at the rated acceleration. The maximum payload will drop if the acceleration is raised. For details, refer to "Table of Payload by Acceleration" on P. 9. The values in () are payloads when a guide with ball retention mechanism (RT) is used.

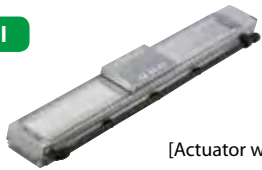


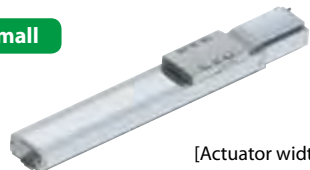
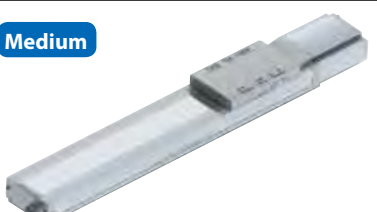
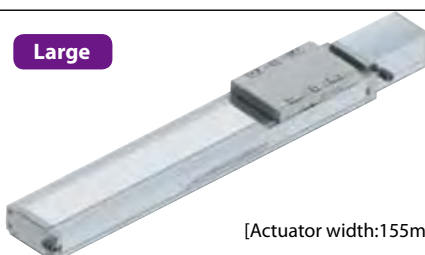
5

| | Stroke (mm) | Motor output (W) | Ball screw lead (mm) | Maximum speed (mm/s) (Note 2) | Maximum payload (kg) (Note 3) | | Dynamic allowable moment (N-m) (Note 4) | | | Reference page |
|--|-----------------------------------|------------------|----------------------|-------------------------------|-------------------------------|---|---|-------|-------|----------------|
| | | | | | Horizontal | Vertical | Ma | Mb | Mc | |
| | 100~1100 (in 50mm increments) | 200 | 30 | 1800 | 30 | 4 | 36.0 | 36.0 | 98.0 | P.32 |
| | | | 20 | 1200 | 45 | 6 | | | | |
| | | | 10 | 600 | 90 | 12 | | | | |
| | 100~1300 (in 50mm increments) | 400 | 40 | 2400 | 45 | 6 | 90.0 | 90.0 | 230.0 | P.33 |
| | | | 20 | 1200 | 90 | 12 | | | | |
| | | | 10 | 600 | 120 | 25 | | | | |
| | 100~1500 (in 50mm increments) | 750 | 50 | 2500 | 60 | 12 (10.0) | 138.8 | 138.8 | 334.5 | P.34 |
| | | | 25 | 1250 | 120 | 25 (23.0) | | | | |
| | 100~800 (in 50mm increments) | 60 | 16 | 960 | 13 | 3 (2.5) | 28.4 | 40.2 | 65.7 | P.36 |
| | | | 8 | 480 | 27 | 6 (5.5) | | | | |
| | | | 4 | 240 | 55 | 14 (13.5) | | | | |
| | 100~1100 (in 50mm increments) | 100 | 30 | 1800 | 15 | 2 (1.5) | 69.6 | 99.0 | 161.7 | P.37 |
| | | | 20 | 1200 | 23 | 4 (3.5) | | | | |
| | | | 10 | 600 | 45 | 10 (9.5) | | | | |
| | | | 5 | 300 | 85 | 20 (19.5) | | | | |
| | | 200 | 30 | 1800 | 30 | 6 | | | | P.38 |
| | | | 20 | 1200 | 45 | 10 | | | | |
| | | | 10 | 600 | 90 | 20 | | | | |
| | | | 5 | 300 | 110 | 40 | | | | |
| | 800~1600 (in 100mm increments) | 200 | 30 | 1800 | 30 | Designed exclusively for horizontal use | 69.6 | 99.0 | 161.7 | P.39 |
| | | | 20 | 1200 | 45 | | | | | |
| | 100~1300 (in 50mm increments) | 200 | 40 | 1800 | 15 | 2.5 (1.5) | 104.9 | 149.9 | 248.9 | P.40 |
| | | | 20 | 1200 | 45 | 9 (8.0) | | | | |
| | | | 10 | 600 | 90 | 20 (19.0) | | | | |
| | | 400 | 40 | 1800 | 40 | 8 | | | | P.41 |
| | | | 20 | 1200 | 90 | 20 | | | | |
| | | | 10 | 600 | 120 | 40 | | | | |
| | 100~1600 (in 100mm increments) | 200 | 40 | 1800 | 15 | Designed exclusively for horizontal use | 104.9 | 149.9 | 248.9 | P.42 |
| | | | 20 | 1200 | 45 | | | | | |
| | | 400 | 40 | 1800 | 40 | | | | | P.43 |
| | | | 20 | 1200 | 90 | | | | | |

(Note 4) The value of moment allowed to be applied when the traveling life of the actuator is set to 10,000 km.

Direction of allowable load moment

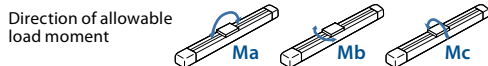


| Use environment | Base material | Series name [Positioning repeatability (mm)] | Actuator size | Slider type (slider length) (Note 1) | Type |
|-----------------|---------------|--|--|--------------------------------------|-----------|
| Cleanroom | Aluminum base | ISDBCR (Standard specification) [±0.01] ISPDBCR (High precision specification) [±0.005] | Small  [Actuator width: 90mm] | Standard (154mm) | S |
| | | | Medium  [Actuator width: 120mm] | Standard (194mm) | M |
| | | | | With mid-support (192mm) | MX |
| | | | Large  [Actuator width: 150mm] | Standard (224mm) | L |
| | | | | With mid-support (220mm) | LX |
| | | | | | |
| | Iron base | <div style="text-align: center;">NEW</div> <div style="text-align: center;">NEW</div> SSPDACR (High precision specification) [±0.005] | Small  [Actuator width: 100mm] | Standard (160mm) | S |
| | | | Medium  [Actuator width: 130mm] | Standard (200mm) | M |
| | | | Large  [Actuator width: 155mm] | Standard (230mm) | L |
| | | | | | |
| | | | | | |
| | | | | | |

(Note 1) When a mid-support is provided, high-speed movement is possible, even over a long stroke, because deflection of the ball screw can be suppressed.
 (Note 2) If the stroke is short, the maximum speed may not be reached. When the stroke increases, the maximum speed will drop to prevent reaching a dangerous speed. For details, refer to the page explaining the specifications of each model.
 (Note 3) The maximum payload is the value when the actuator is operated at the rated acceleration. The maximum payload will drop if the acceleration is raised. For details, refer to "Table of Payload by Acceleration" on P. 9. The values in () are payloads when a guide with ball retention mechanism (RT) is used.

| | Stroke (mm) | Motor output (W) | Ball screw lead (mm) | Maximum speed (mm/s) (Note 2) | Maximum payload (kg) (Note 3) | | Dynamic allowable moment (N-m) (Note 4) | | | Reference page |
|------------------------------------|-------------|------------------|----------------------|-------------------------------|-------------------------------|---|---|-------|-------|----------------|
| | | | | | Horizontal | Vertical | Ma | Mb | Mc | |
| 100~800 (in 50mm increments) | 60 | 60 | 16 | 960 | 13 | 3 (2.5) | 28.4 | 40.2 | 65.7 | P.45 |
| | | | 8 | 480 | 27 | 6 (5.5) | | | | |
| | | | 4 | 240 | 55 | 14 (13.5) | | | | |
| 100~1100 (in 50mm increments) | 100 | 100 | 30 | 1800 | 15 | 2 (1.5) | 69.6 | 99.0 | 161.7 | P.46 |
| | | | 20 | 1200 | 23 | 4 (3.5) | | | | |
| | | | 10 | 600 | 45 | 10 (9.5) | | | | |
| | | | 5 | 300 | 85 | 20 (19.5) | | | | |
| | 200 | 200 | 30 | 1800 | 30 | 6 | | | | P.47 |
| | | | 20 | 1200 | 45 | 10 | | | | |
| | | | 10 | 600 | 90 | 20 | | | | |
| 800~2000 (in 100mm increments) | 200 | 200 | 30 | 1800 | 30 | Designed exclusively for horizontal use | 69.6 | 99.0 | 161.7 | P.48 |
| | | | 20 | 1200 | 45 | | | | | |
| | | | 10 | 600 | 90 | | | | | |
| 100~1300 (in 50mm increments) | 200 | 200 | 40 | 1800 | 15 | 2.5 (1.5) | 104.9 | 149.9 | 248.9 | P.49 |
| | | | 20 | 1200 | 45 | 9 (8.0) | | | | |
| | | | 10 | 600 | 90 | 20 (19.0) | | | | |
| | 400 | 400 | 40 | 1800 | 40 | 8 | | | | P.50 |
| | | | 20 | 1200 | 90 | 20 | | | | |
| | | | 10 | 600 | 120 | 40 | | | | |
| 1000~2500 (in 100mm increments) | 200 | 200 | 40 | 1800 | 15 | Designed exclusively for horizontal use | 104.9 | 149.9 | 248.9 | P.51 |
| | | | 20 | 1200 | 45 | | | | | |
| | 400 | 400 | 40 | 1800 | 40 | | | | | P.52 |
| | | | 20 | 1200 | 90 | | | | | |
| 100~1100 (in 50mm increments) | 200 | 200 | 30 | 1600 | 30 | 4 | 36.0 | 36.0 | 98.0 | P.53 |
| | | | 20 | 1100 | 45 | 6 | | | | |
| | | | 10 | 600 | 90 | 12 | | | | |
| 100~1300 (in 50mm increments) | 400 | 400 | 40 | 1600 | 45 | 6 | 90.0 | 90.0 | 230.0 | P.54 |
| | | | 20 | 1100 | 90 | 12 | | | | |
| | | | 10 | 600 | 120 | 25 | | | | |
| 100~1500 (in 50mm increments) | 750 | 750 | 50 | 1600 | 60 | 12 (10.0) | 138.8 | 138.8 | 334.5 | P.55 |
| | | | 25 | 1100 | 120 | 25 (23.0) | | | | |

(Note 4) The value of moment allowed to be applied when the traveling life of the actuator is set to 10,000 km.



*The selections for each item vary depending on the type. For details, check the page explaining each type.

● Standard type

Example) **ISB** - **MXM** - **A** - **200** - **30** - **1100** - **T2** - **M** - **A3E**

Series Type Encoder type Motor type Lead Stroke Applicable controller Cable length Options

| | | | | | | | | | | | | |
|-------------|---|----------|------------|------|----------------------------------|-------------|----------|-------------|-----------------|---------------------------|--------------|-------------------------------|
| ISB | Aluminum base, standard specification | A | 60 | 60W | 30 | 100 | 100mm | T2 | XSEL-J/K | M | A1S | Cable exit from the left |
| ISPB | Aluminum base, high precision specification | | 100 | 100W | | ? | ? | | XSEL-P/Q | | A1E | Cable exit from the rear left |
| SSPA | Iron base, high precision specification | I | 200 | 200W | * Varies depending on the model. | 2500 | 2500mm | SSEL | A3S | Cable exit from the right | AQ | AQ seal (standard feature) |
| | | | 400 | 400W | | 4 | 4mm | SCON | B | Brake | | |
| | | | 750 | 750W | | 5 | 5mm | N | None | C | Creep sensor | CL |

| | | | |
|-------------|----------------------------------|--------------|---|
| SXM | Small, X-axis, standard type | LXM | Large, X-axis, standard type |
| SXL | Small, X-axis, long slider type | LXL | Large, X-axis, long slider type |
| MXM | Medium, X-axis, standard type | LXMX | Large, X-axis, mid-support type |
| MXL | Medium, X-axis, long slider type | LXUWX | Large, X-axis, mid-support type, double-slider type |
| MXMX | Medium, X-axis, mid-support type | | |

| | |
|-----------|------|
| 4 | 4mm |
| 5 | 5mm |
| 8 | 8mm |
| 10 | 10mm |
| 16 | 16mm |
| 20 | 20mm |
| 25 | 25mm |
| 30 | 30mm |
| 40 | 40mm |
| 50 | 50mm |

* The selectable leads vary depending on the model.

| | |
|------------|------------------|
| N | None |
| S | 3m |
| M | 5m |
| X□□ | Specified length |

* The standard cable is a robot cable.

| | |
|------------|---|
| A1S | Cable exit from the left |
| A1E | Cable exit from the rear left |
| A3S | Cable exit from the right |
| A3E | Cable exit from the rear right |
| AQ | AQ seal (standard feature) |
| B | Brake |
| C | Creep sensor |
| CL | Creep sensor on the opposite side |
| L | Home limit switch |
| LL | Home limit switch on the opposite side |
| LM | Master axis specification |
| LLM | Master axis specification (sensor on opposite side) |
| MD | Electrolytic black coating* |
| NM | Non-motor side specification |
| RT | Guide with ball retention mechanism |
| S | Slave axis specification |
| ST | High straightness, precision specification |

* Electrolytic black coating (MD) is an option only for the SSPA series.

Be sure to specify the AQ seal option (AQ). For the cable exit direction, be sure to specify an applicable code (A1S/A1E/A3S/A3E).

● Simple, dustproof type

Example) **ISDB** - **M** - **A** - **200** - **20** - **500** - **T2** - **M** - **B**

Series Type Encoder type Motor type Lead Stroke Applicable controller Cable length Options

| | | | | | | | | | | | | |
|--------------|------------------------------|----------|------------|------|----------------------------------|-------------|----------|-------------|-----------------|---------------------------|------------|-------------------------------|
| ISDB | Standard specification | A | 60 | 60W | 20 | 100 | 100mm | T2 | XSEL-J/K | M | A1S | Cable exit from the left |
| ISPDB | High precision specification | | 100 | 100W | | ? | ? | | XSEL-P/Q | | A1E | Cable exit from the rear left |
| S | Small, standard type | I | 200 | 200W | * Varies depending on the model. | 1600 | 1600mm | SSEL | A3S | Cable exit from the right | AQ | AQ seal (standard feature) |
| M | Medium, standard type | | 400 | 400W | | 4 | 4mm | SCON | B | Brake | | |
| MX | Medium, mid-support type | | | | | 5 | 5mm | N | None | | | |

| | |
|-----------|--------------------------|
| S | Small, standard type |
| M | Medium, standard type |
| MX | Medium, mid-support type |
| L | Large, standard type |
| LX | Large, mid-support type |

| | |
|-----------|------|
| 4 | 4mm |
| 5 | 5mm |
| 8 | 8mm |
| 10 | 10mm |
| 16 | 16mm |
| 20 | 20mm |
| 30 | 30mm |
| 40 | 40mm |

* The selectable leads vary depending on the model.

| | |
|------------|------------------|
| N | None |
| S | 3m |
| M | 5m |
| X□□ | Specified length |

* The standard cable is a robot cable.

| | |
|------------|---|
| A1S | Cable exit from the left |
| A1E | Cable exit from the rear left |
| A3S | Cable exit from the right |
| A3E | Cable exit from the rear right |
| AQ | AQ seal (standard feature) |
| B | Brake |
| C | Creep sensor |
| CL | Creep sensor on opposite side |
| L | Home limit switch |
| LL | Home limit switch on opposite side |
| LM | Master axis specification |
| LLM | Master axis specification (sensor on opposite side) |
| NM | Non-motor side specification |
| RT | Guide with ball retention mechanism |
| S | Slave axis specification |
| ST | High straightness, precision specification |

Be sure to specify the AQ seal option (AQ). For the cable exit direction, be sure to specify an applicable code (A1S/A1E/A3S/A3E).

● Cleanroom type

Example) **ISDBCR** - **M** - **A** - **200** - **20** - **500** - **T2** - **M** - **RT**

Series Type Encoder type Motor type Lead Stroke Applicable controller Cable length Options

| | | | | | | | | | | | | |
|----------------|---|----------|------------|------|----------------------------------|-------------|----------|-------------|-----------------|---------------------------|------------|-------------------------------|
| ISDBCR | Aluminum base, standard specification | A | 60 | 60W | 20 | 100 | 100mm | T2 | XSEL-J/K | M | A1S | Cable exit from the left |
| ISPDBCR | Aluminum base, high precision specification | | 100 | 100W | | ? | ? | | XSEL-P/Q | | A1E | Cable exit from the rear left |
| SSPDACR | Iron base, high precision specification | I | 200 | 200W | * Varies depending on the model. | 2500 | 2500mm | SSEL | A3S | Cable exit from the right | AQ | AQ seal (standard feature) |
| | | | 400 | 400W | | 4 | 4mm | SCON | B | Brake | | |
| | | | 750 | 750W | | 5 | 5mm | N | None | | | |

| | |
|-----------|--------------------------|
| S | Small, standard type |
| M | Medium, standard type |
| MX | Medium, mid-support type |
| L | Large, standard type |
| LX | Large, mid-support type |

| | |
|-----------|------|
| 4 | 4mm |
| 5 | 5mm |
| 8 | 8mm |
| 10 | 10mm |
| 16 | 16mm |
| 20 | 20mm |
| 25 | 25mm |
| 30 | 30mm |
| 40 | 40mm |
| 50 | 50mm |

* The selectable leads vary depending on the model.

| | |
|------------|------------------|
| N | None |
| S | 3m |
| M | 5m |
| X□□ | Specified length |

* The standard cable is a robot cable.

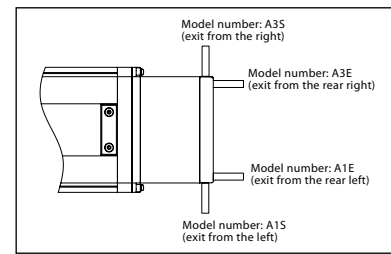
| | |
|------------|---|
| A1S | Cable exit from the left |
| A1E | Cable exit from the rear left |
| A3S | Cable exit from the right |
| A3E | Cable exit from the rear right |
| AQ | AQ seal (standard feature) |
| B | Brake |
| C | Creep sensor |
| CL | Creep sensor on opposite side |
| L | Home limit switch |
| LL | Home limit switch on opposite side |
| LM | Master axis specification |
| LLM | Master axis specification (sensor on opposite side) |
| NM | Non-motor side specification |
| RT | Guide with ball retention mechanism |
| S | Slave axis specification |
| ST | High straightness, precision specification |
| VR | Suction tube joint on opposite side |

Be sure to specify the AQ seal option (AQ). For the cable exit direction, be sure to specify an applicable code (A1S/A1E/A3S/A3E).

Cable Exit Direction

Model number Option **A1S/A1E/A3S/A3E**

You can choose one of four cable exit directions.
* Be sure to specify one of four model numbers.



AQ seal (lubrication unit)

Model number option **AQ**

This unit prevents foreign objects from entering the ball screw and sliding part of the guide, while continuously supplying an appropriate amount of lubricating oil. (Standard feature on all models)
* Be sure to specify the model number option.

Brake

Model number option **B**

When the actuator is used vertically, this mechanism holds the slider in place in the event that the power or servo is turned off, so that the slider will not drop and cause damage to the load. When the brake is equipped, the motor cover becomes longer than the specification without the brake. (Refer to the external view of each model.)

Creep sensor

Model number option **C (standard) /CL (opposite side)**

This sensor shortens the time required for home return. During the home return, the slider moves to the mechanical end at low speed, so actuators with a long stroke take a longer time to complete the home return. The creep sensor is installed near the mechanical end so that the slider can be moved at high speed to the sensor position and when the sensor actuates, the speed is reduced to the specified low level. This way, the time of home return can be shortened. With the standard option (C), this sensor is installed on the right side of the actuator as viewed from the motor. Select the opposite side option (CL) if you want to install the sensor on the opposite side. The external dimensions vary depending on whether or not the sensor and cover are installed. When the creep sensor alone is installed, there is an additional sensor only on the home side and the dimensions change accordingly. If the home limit switch is also used, the dimensions conform to those of the specification with home limit switch.

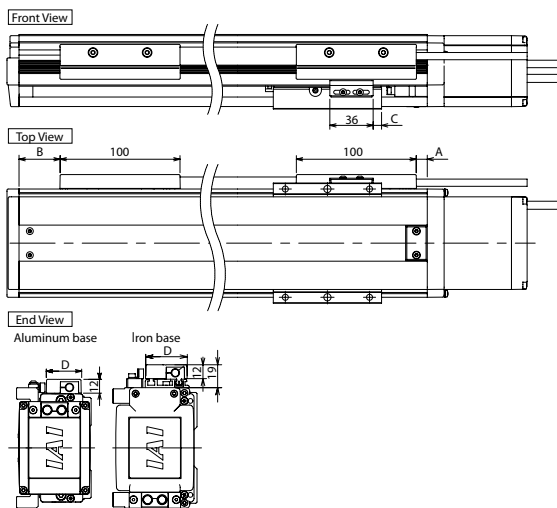
Home limit switch

Model number option **L (standard) /LL (opposite side)**

Normally actuators adopt the "contact" home return mechanism whereby the slider moves until it contacts the stopper at the mechanical end, upon which the slider reverses its course and moves until the Z-phase is detected, and the detected phase is set as the home. The home limit switch is a convenient option that lets you adjust the reversing position or check whether or not the slider has reversed. With the standard option (L), this switch is installed on the right side of the actuator as viewed from the motor. Select the opposite side option (LL) if you want to install the switch on the opposite side. The external dimensions vary depending on whether or not the sensor and cover are installed.
* See reference below.

■ Dimensions with Creep Sensor and Home Limit Switch Installed

The following dimensions apply when the sensor and switch are installed.



* The above dimensions apply when both the limit switch and creep sensor are installed. If the creep sensor alone is installed, the dimensions on the sensor side (home side) will vary.

| Base | Series | Type | A | B | C | D |
|-------------------|---------------|-------|----------------|--------------|------|------|
| Aluminum base | ISB ISPBB | SXM | 9 | 34 | 7 | 29 |
| | | SXL | 19 | 44 | 17 | 29 |
| | | MXM | 18 | 78 | 2 | 34.5 |
| | | MXL | 33 | 93 | 17 | 34.5 |
| | | MXMX | 66 | 126 | 2 | 34.5 |
| | | LXM | 36 | 94 | 17 | 42.5 |
| | | LXL | 41 | 119 | 22 | 42.5 |
| | | LXXM | 88 | 140 | 17 | 42.5 |
| | ISDB ISPDB | LXUWX | 83 | 245 | 12 | 42.5 |
| | | S | 10 | 60 | 37 | 29 |
| | | M | 20 | 89 | 46 | 34.5 |
| | | MX | 68 | 137 | 46 | 34.5 |
| | | L | 31 | 119 | 57 | 42.5 |
| | | LX | 77 | 165 | 57 | 42.5 |
| ISDBCR ISPDBCR | S | 10 | 60 | 37 | 29 | |
| | M | 20 | 89 | 46 | 34.5 | |
| | MX | 68 | 137 | 45 | 34.5 | |
| | L | 31 | 119 | 57 | 42.5 | |
| Iron base | SSPA | LX | 77 | 165 | 55 | 42.5 |
| | | SXM | -8* | 40 | 3 | 34.5 |
| | SSPDACR | MXM | -4* | 74 | 3 | 34.5 |
| | | LXM | 19.5 (16.5) | 86 (83) | 24 | 42.5 |
| | | S | 31.5 | 59.5 | 38 | 34.5 |
| | | M | 40.5 | 91.5 | 43 | 34.5 |
| | | L | 44.5 (41.5) | 111 (108) | 64 | 42.5 |

(Note) The values in () represent dimensions when the creep sensor alone is installed.

* The dimension A for SSPA-SXM/MXM types indicates the distance overhanging from the base cover end to the motor side.

■ Master axis specification for synchronized operation

Model number option **LM** (standard) /**LLM** (opposite side)

Synchronized operation is a function to move two actuator axes of the same specification—one master axis and one slave axis—in identical manners, with the slave axis following the master axis at very high-speed control. If you want to use synchronized operation, specify “LM” for the master axis and “S” for the slave axis.

■ Electrolytic Black Coating

Model number option **MD**

Option is only for the SSPA series.

The actuator base, side face, slider top and side face will have a rust preventative coating. Suitable in environments where rust will be an issue. It also can be used to prevent dust.

■ Non-motor side specification

Model number option **NM**

Normally the home return is implemented on the motor side, but this direction can be set to the non-motor side as well. To change the home return direction, specify it in your order because the encoder must be adjusted.

■ Guide with ball retention mechanism

Model number option **RT**

A spacer (retainer) is inserted between guide balls (made of steel) to reduce noise and for a longer operating life.

*This option is not available for long slider types (SXL/MXL/LXL).

*Take note that the payload will vary if the actuator is used vertically. (Refer to the model/specification table of each model.)

■ Slave axis specification

Model number option **S**

Enter this model number to specify the slave axis in synchronized operation.

■ Suction tube joint on the opposite side

Model number option **VR**

On standard cleanroom actuators, the vacuum joint is installed on the left side of the actuator as viewed from the motor. Specify this option if you want to have this joint on the opposite side.

High straightness, precision specification

Model number option **ST**

This specification represents a precision actuator of high traveling preciseness in terms of dynamic parallelism (horizontal/vertical) and dynamic straightness (horizontal/vertical) of the slider.

The running parallelism and squareness is based on stroke length. The values shown in the chart below is per 1m.

For calculations based on the stroke length, please use the Aluminum Base and Iron Base Calculation Examples below.

| | | Aluminum base | | Iron base | |
|----------|-------------------------------------|--|--|--|--|
| | | Without high straightness, precision specification | With high straightness, precision specification (*) | Without high straightness, precision specification | With high straightness, precision specification (*) |
| 1 | Dynamic parallelism [mm/m or less] | 0.05 | 0.03 [However, if the stroke is less than or equal to 500mm, the squareness will be 0.015mm.] | 0.05 | 0.03 [However, if the stroke is less than or equal to 500mm, the squareness will be 0.015mm.] |
| 2 | Dynamic straightness [mm/m or less] | 0.05 | 0.020 [However, if the stroke is less than or equal to 500mm, the squareness will be 0.01mm.] | 0.05 | 0.015 [However, if the stroke is less than or equal to 500mm, the squareness will be 0.008 mm.] |

(*)The method of preciseness measurement conforms to IAI's inspection standard.

Aluminum Base and Iron Base Calculation Examples.

① Aluminum Base ISB/ISPB/ISDB/ISPDB/ISDBCR/ISPDBCR series

Ex) When the stroke is 1500mm

Parallelism during motion → 0.03mm/1m (parallelism/meter) x 1.5m (stroke) = 0.045mm

Squareness during motion → 0.02mm/1m (squareness/meter) x 1.5m (stroke) = 0.03mm

*Round up to the 3rd decimal place

② Iron Base SSPA/SSPDACR Series

Ex) When the stroke is 900mm

Parallelism during motion → 0.03mm/1m (parallelism/meter) x 0.9m (stroke) = 0.027mm

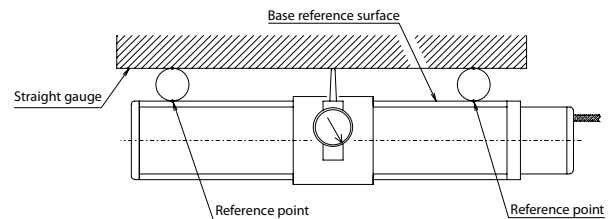
Squareness during motion → 0.015mm/1m (squareness/meter) x 0.9m (stroke) = 0.014mm

*Round up to the 3rd decimal place

1 Dynamic parallelism (horizontal/vertical)

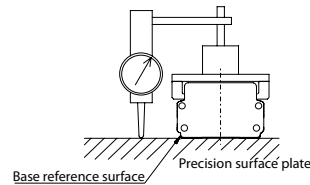
① Parallelism of the base reference surface and the slider motion (horizontal)

With the base affixed on a precision surface plate, an indicator on the slider is caused to contact a straight gauge placed in parallel with two points at both ends of the base reference surface, and then the actuator is moved over the entire stroke. The parallelism of the base reference surface and the slider motion represents the maximum difference between the measured values.



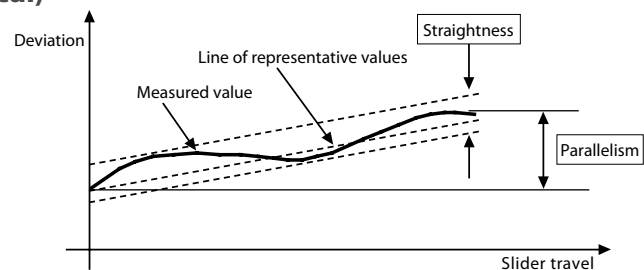
② Parallelism of the base mounting surface and the slider motion (vertical)

With the base affixed on a precision surface plate, an indicator on the slider is caused to contact the surface plate, and then the actuator is moved over the entire stroke. The parallelism of the base mounting surface and the slider motion represents the maximum difference between the measured values.



2 Dynamic straightness (horizontal/vertical)

With the base affixed on a precision surface plate, an indicator on the slider is caused to contact a straight gauge placed in parallel with two points at both ends of the base reference surface, and then the actuator is moved over the entire stroke. The parallelism of the base reference surface and the slider motion represents the maximum difference between the measured values.



[Duty]

The duty represents the utilization ratio of the actuator (time during which the actuator is operating in each cycle). Since an estimation for applicable duty varies depending on the operating conditions (transferring mass, acceleration/deceleration, etc.), calculate the load factor LF and acceleration/deceleration time ratio t_{od} using the formula on the right and read off an appropriate duty from the graph.

$$\text{Duty} = \frac{\text{Operating time}}{\text{Operating time} + \text{Stopped time}} (\%)$$

How to calculate duty

1 Calculate the load factor LF using the formula below:

$$\text{Load factor: LF} = \frac{M \times \alpha}{M_r \times \alpha_r} (\%)$$

•Payload at rated acceleration: M_r •Actual transferring mass: M
 •Rated acceleration/deceleration: α_r •Actual acceleration/deceleration: α

(Note) Refer to the model number/specification table of each model for the payload at rated acceleration and rated acceleration/deceleration.

2 Calculate the acceleration/deceleration time ratio t_{od} using the formula below:

$$\text{Acceleration/deceleration time ratio } t_{od} = \frac{\text{Acceleration time} + \text{Deceleration time}}{\text{Operating time}} (\%)$$

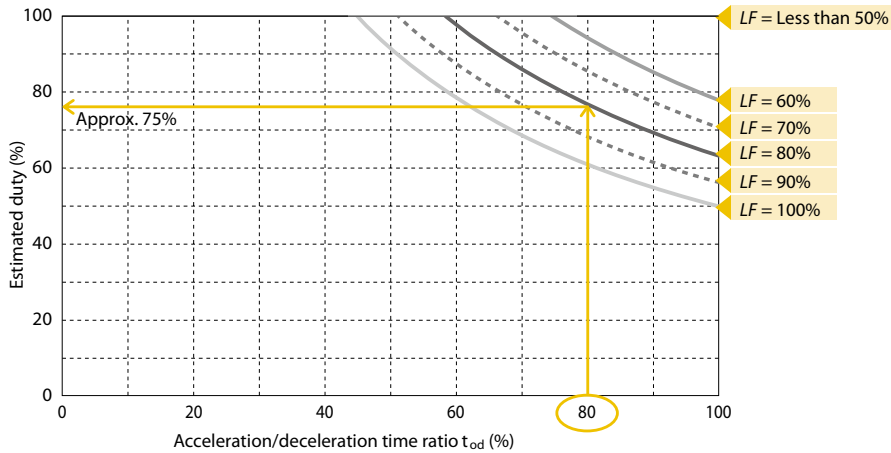
$$\text{Acceleration time} = \frac{\text{Speed (mm/s)}}{\text{Acceleration (mm/s}^2\text{)}} (\text{sec})$$

$$\text{Deceleration time} = \frac{\text{Speed (mm/s)}}{\text{Deceleration (mm/s}^2\text{)}} (\text{sec})$$

Acceleration (mm/s²) = Acceleration (G) x 9,800 mm/s² Deceleration (mm/s²) = Deceleration (G) x 9,800 mm/s²

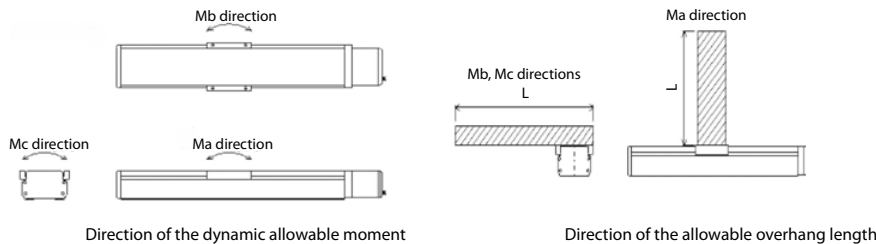
3 Read off the estimated duty from the calculated load factor LF and the acceleration/deceleration time ratio t_{od} .

Example. When the load factor LF is 80% and the acceleration/deceleration time ratio t_{od} is 80%, an estimation for duty is approx. 75%.



[Dynamic allowable moment and overhang load length]


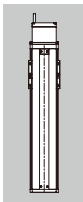


The dynamic allowable moment, calculated from the traveling life of the guide, is the maximum offset load that can be applied to the slider. The traveling life will decrease when the allowable value is exceeded, so use an auxiliary guide, etc., if it is used within the allowable value or the allowable value is exceeded. The overhang load length represents the maximum length that can overhang from the slider when the requirement for dynamic allowable moment is met. Take note that if the specified overhang load length is exceeded, vibration, etc., may occur.



[Mounting]

Check the mounting orientation of each model in the table below.

○: Installable —: Not installable

| Mounting orientation | | Horizontal, flat | Vertical Note 1 | Side-mounted | Ceiling-mounted |
|-----------------------------|------------------------------------|---|---|--|---|
| | |  |  |  |  |
| Series | Type | | | | |
| ISB ISPB | SXM, SXL, MXM, MXL, LXM, LXL | ○ | ○ | ○ Note 2 | ○ Note 3 |
| | MXMX, LXMX, LXUWX | ○ | — | — | — |
| SSPA | SXM, MXM, LXM | ○ | ○ | ○ Note 2 | ○ Note 3 |
| ISDB ISPDB | S, M, L | ○ | ○ | ○ Note 4 | ○ Note 4 |
| | ISDBCR ISPDBCR | MX, LX | ○ | — | — |
| SSPDACR | S, M, L | ○ | ○ | — | — |

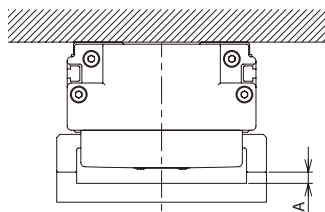
Note 1 When installing the actuator vertically, bring the motor to the top whenever possible. If the actuator is mounted with the motor at the bottom, problems won't occur during normal operation, but if the actuator is stopped for a prolonged period of time, grease may separate depending on the ambient environment (especially when the ambient temperature is high), in which case base oil may flow into the motor unit and could cause problems on rare occasions.

Note 2 The base oil may separate from the grease and can flow out from the opening on the side of the actuator. Also, foreign debris is able to fall into the actuator through the opening on the side of it.

Note 3 When the actuator with screw cover is ceiling mounted, the screw cover can bend and it may interfere with the work part. If the stroke of the ISB exceeds 600mm, or if the stroke of the SSPA exceeds 800mm, please attach the work part by an offset distance A away from the slider.

The table below shows the distance A from the slider seating surface.

| Series | Stroke | Distance A |
|---------------------------|--|-----------------|
| ISB ISPB | 600mm or greater but less than 1000mm | 5mm or greater |
| | 1000mm or greater but less than 1300mm | 10mm or greater |
| SSPA | 800 mm or greater but less than 1500mm | 5mm or greater |



Note 4 When a 400mm stroke actuator with a stainless sheet is side mounted or ceiling mounted, the stainless sheet may be subjected to flexure and can be misaligned. If continued to be used in those conditions, the stainless sheet can be damaged. Please maintain daily and use the manual as a reference for the maintenance procedure of the stainless sheet.

Standard Type

ISB / ISPB / SSPA

| | | | | | | |
|---------------------|--|--|--------------------------|-----------------------|--|--------------------|
| ISB ISPB | Standard (High Precision) Type | Small | X-axis, Standard Type | Width: 90mm | ISB (ISPB)-SXM | P.17 |
| | | | X-axis, Long Slider Type | Width: 90mm | ISB (ISPB)-SXL | P.18 |
| | | Medium | X-axis, Standard Type | Width: 120mm | ISB (ISPB)-MXM-100 | P.19 |
| | | | | Width: 120mm | ISB (ISPB)-MXM-200 | P.20 |
| | | | X-axis, Long Slider Type | Width: 120mm | ISB (ISPB)-MXL-100 | P.21 |
| | | | | Width: 120mm | ISB (ISPB)-MXL-200 | P.22 |
| | | | X-axis, Mid-Support Type | Width: 120mm | ISB (ISPB)-MXMX-200 | P.23 |
| | | | Large | X-axis, Standard Type | Width: 150mm | ISB (ISPB)-LXM-200 |
| | | Width: 150mm | | | ISB (ISPB)-LXM-400 | P.25 |
| | | X-axis, Long Slider Type | | Width: 150mm | ISB (ISPB)-LXL-200 | P.26 |
| | | | | Width: 150mm | ISB (ISPB)-LXL-400 | P.27 |
| | | X-axis, Mid-Support Type | | Width: 150mm | ISB (ISPB)-LXMX-200 | P.28 |
| | | | | Width: 150mm | ISB (ISPB)-LXMX-400 | P.29 |
| | | X-axis, Mid-Support, Double-Slider Type | | Width: 150mm | ISB (ISPB)-LXUWX-200 | P.30 |
| | | | | Width: 150mm | ISB (ISPB)-LXUWX-400 | P.31 |
| | | SSPA | High Precision Type | Small | X-axis, High-Rigidity, Iron-Base Type | Width: 100mm |
| Medium | X-axis, High-Rigidity, Iron-Base Type | | | Width: 130mm | SSPA-MXM-400 | P.33 |
| Large | X-axis, High-Rigidity, Iron-Base Type | | | Width: 155mm | SSPA-LXM-750 | P.34 |

ISB-SXM

Single-axis robot/Small, X-axis, standard slider type/Actuator width: 90mm/60W
Straight shape

ISPB-SXM

Single-axis robot/Small, X-axis, standard slider type/Actuator width: 90mm/60W
Straight shape **High precision specification**

Model Specification Items

| | | | | | | | | | |
|---|-----|---|---|---|--|--|-----------------------------------|--------------|---------|
| Series | SXM | Type | 60 | Encoder type | Lead | Stroke | Applicable controller | Cable length | Options |
| ISB: Standard specification ISPB: High precision specification | | A: Absolute specification I: Incremental specification | 60: 60W 16: 16mm 8: 8mm 4: 4mm | 100: 100mm { 900: 900mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. | | |



* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|-------------------------------|----------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|------------------|---------|-----------------|---------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg)** | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated | Maximum | Rated | Maximum | |
| ISB[ISPB]-SXM-①-60-16-②-③-④-⑤ | Absolute Incremental | 60 | 16 | 100~900 | 1~960 | 0.4 | 1.2 | 0.4 | 0.8 | 13 | 3.5 | 3.5 | 2 | 53.1 |
| ISB[ISPB]-SXM-①-60-8-②-③-④-⑤ | | | 8 | | 1~480 | 0.4 | 0.7 | 0.4 | 0.6 | 27 | 12 | 7 | 5 | 106.1 |
| ISB[ISPB]-SXM-①-60-4-②-③-④-⑤ | | | 4 | | 1~240 | 0.2 | 0.5 | 0.2 | 0.4 | 55 | 30 | 14 | 12 | 212.3 |

* In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

** If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 0.5kg. (Please also refer to P.9).

Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw Ø12mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 28.4N·m Mb: 40.2N·m Mc: 65.7N·m |
| Overhang load length | Ma direction: 450mm max. Mb, Mc directions: 450mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| 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) |

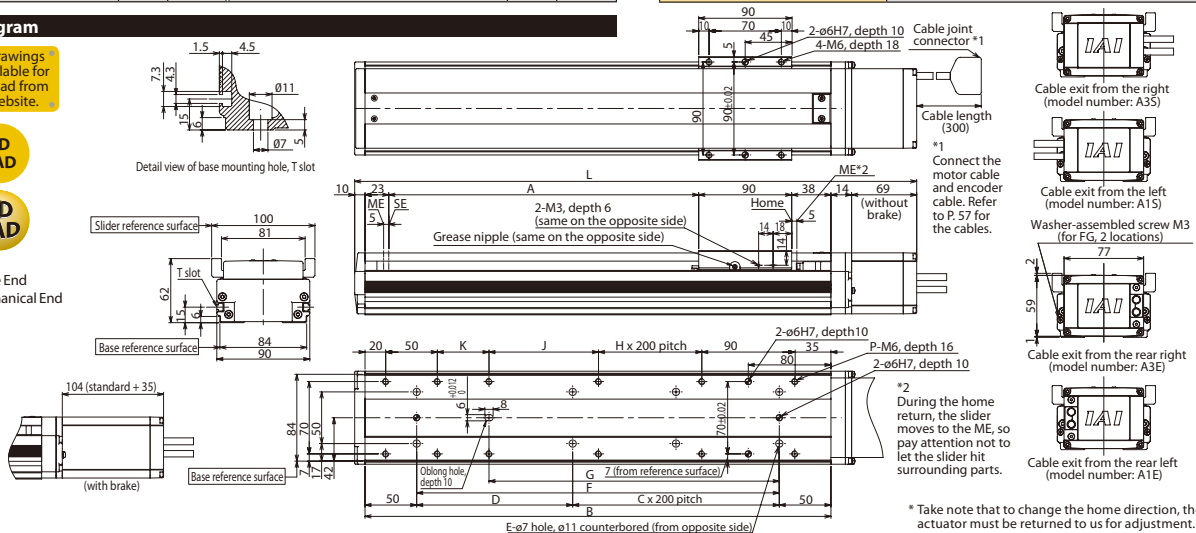
Diagram

CAD drawings are available for download from our website.

2D CAD

3D CAD

SE: Stroke End
ME: Mechanical End



Dimensions, Mass and Maximum Speed by Stroke

| Stroke | *If the brake is equipped, the mass increases by 0.3 kg. *The maximum speed (mm/s) varies depending on the stroke. | | | | | | | | | | | | | | | | | |
|----------------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | |
| L | without brake | 344 | 394 | 444 | 494 | 544 | 594 | 644 | 694 | 744 | 794 | 844 | 894 | 944 | 994 | 1044 | 1094 | 1144 |
| | with brake | 379 | 429 | 479 | 529 | 579 | 629 | 679 | 729 | 779 | 829 | 879 | 929 | 979 | 1029 | 1079 | 1129 | 1179 |
| A | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | |
| B | 251 | 301 | 351 | 401 | 451 | 501 | 551 | 601 | 651 | 701 | 751 | 801 | 851 | 901 | 951 | 1001 | 1051 | |
| C | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | |
| D | 151 | 201 | 251 | 101 | 151 | 201 | 251 | 101 | 151 | 201 | 251 | 101 | 151 | 201 | 251 | 101 | 151 | |
| E | 4 | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | |
| F | 151 | 201 | 251 | 301 | 351 | 401 | 451 | 501 | 551 | 601 | 651 | 701 | 751 | 801 | 851 | 901 | 951 | |
| G | 131 | 131 | 181 | 231 | 281 | 331 | 381 | 431 | 481 | 531 | 581 | 631 | 681 | 731 | 781 | 831 | 881 | |
| H | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | |
| J | 56 | 56 | 106 | 156 | 206 | 256 | 106 | 156 | 206 | 256 | 106 | 156 | 206 | 256 | 106 | 156 | 206 | |
| K | 0 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | |
| P | 8 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 | 14 | 16 | 16 | 16 | |
| Mass (kg) | 3.0 | 3.4 | 3.8 | 4.2 | 4.5 | 4.9 | 5.2 | 5.6 | 5.9 | 6.3 | 6.6 | 7.0 | 7.3 | 7.7 | 8.0 | 8.4 | 8.7 | |
| Maximum speed (mm/s) | Lead 16 | | | | | | 960 | | | | | | 655 | | 515 | | 415 | |
| | Lead 8 | | | | | | 480 | | | | | | 330 | | 260 | | 210 | |
| | Lead 4 | | | | | | 240 | | | | | | 165 | | 130 | | 100 | |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|----------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | | →P56 |
| SSEL | 2 axes | | | | →P56 |
| SCON | 1 axis | | | | →P56 |



(Note 1) Refer to P. 9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10,000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

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ISB-SXM/ISPB-SXM

ISB-SXL

ISPB-SXL

Single-axis robot/Small, X-axis, long slider type/Actuator width: 90mm/60W
Straight shape

Single-axis robot/Small, X-axis, long slider type/Actuator width: 90mm/60W
Straight shape **High precision specification**



Model Specification Items

| | | | | | | | | | | |
|---|---|---|--|--|--|-----------------------------------|--------|-----------------------|--------------|---------|
| Series | SXL | Type | 60 | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
| ISB: Standard specification ISPB: High precision specification | A: Absolute specification I: Incremental specification | 60: 60W 16: 16mm 8: 8mm 4: 4mm | 130: 130mm 180: 180mm 230: 230mm 280: 280mm 330: 330mm 380: 380mm 430: 430mm 480: 480mm 530: 530mm 580: 580mm 630: 630mm 680: 680mm 730: 730mm 780: 780mm 830: 830mm 880: 880mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. | | | | |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|---|-------------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISB[ISPB]-SXL- 1 -60-16- 2 - 3 - 4 - 5 | Absolute Incremental | 60 | 16 | 130~880 | 1~960 | 0.4 | 1.2 | 0.4 | 0.8 | 13 | 3.5 | 3.5 | 2 | 53.1 |
| 8 | | | 1~480 | | 0.4 | 0.7 | 0.4 | 0.6 | 27 | 12 | 7 | 5 | 106.1 | |
| 4 | | | 1~240 | | 0.2 | 0.5 | 0.2 | 0.4 | 55 | 30 | 14 | 12 | 212.3 | |

*In the above model numbers, **1** indicates the encoder type, **2** indicates the stroke, **3** indicates the applicable controller, **4** indicates the cable length, and **5** indicates the option(s).

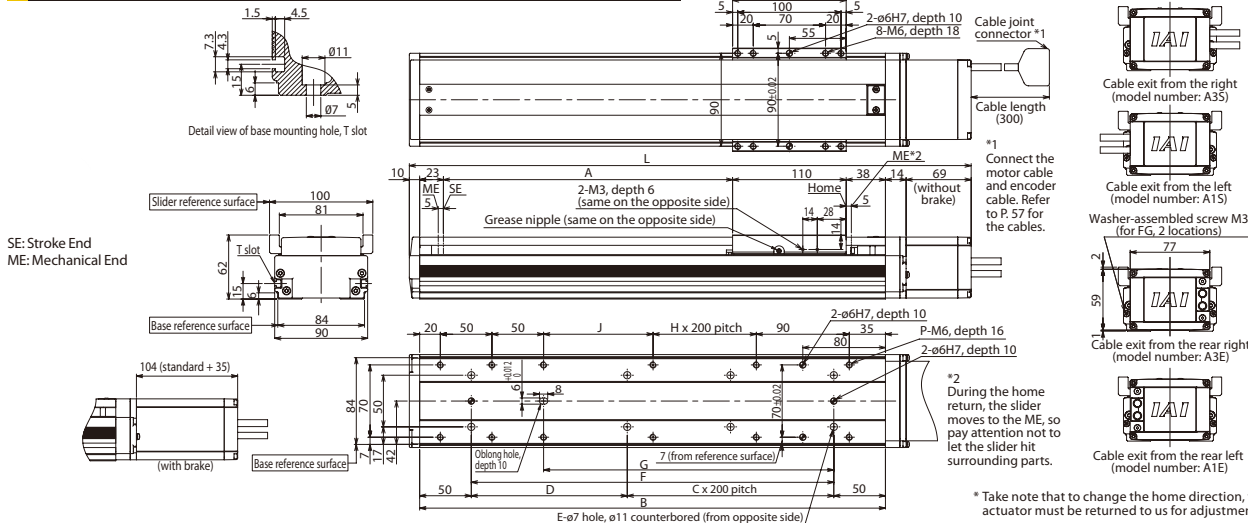
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Slave axis specification | S | →P12 |
| Creep sensor | C | →P11 | High straightness, precision specification | ST | →P13 |
| Creep sensor on the opposite side | CL | →P11 | | | |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm (±0.005mm) |
| Drive method (Note 3) | Ball screw Ø12mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 39.7N·m Mb: 56.7N·m Mc: 76.3N·m |
| Overhang load length | Ma direction: 550mm max. Mb, Mc directions: 550mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| 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) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

| Stroke | L | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|-----|--|--|-----|--|--|-----|--|--|-----|
| | 130 | 180 | 230 | 280 | 330 | 380 | 430 | 480 | 530 | 580 | 630 | 680 | 730 | 780 | 830 | 880 | | | | | | | | | | |
| without brake | 394 | 444 | 494 | 544 | 594 | 644 | 694 | 744 | 794 | 844 | 894 | 944 | 994 | 1044 | 1094 | 1144 | | | | | | | | | | |
| with brake | 429 | 479 | 529 | 579 | 629 | 679 | 729 | 779 | 829 | 879 | 929 | 979 | 1029 | 1079 | 1129 | 1179 | | | | | | | | | | |
| A | 130 | 180 | 230 | 280 | 330 | 380 | 430 | 480 | 530 | 580 | 630 | 680 | 730 | 780 | 830 | 880 | | | | | | | | | | |
| B | 301 | 351 | 401 | 451 | 501 | 551 | 601 | 651 | 701 | 751 | 801 | 851 | 901 | 951 | 1001 | 1051 | | | | | | | | | | |
| C | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | | | | | | | | | | |
| D | 201 | 251 | 301 | 351 | 401 | 451 | 501 | 551 | 601 | 651 | 701 | 751 | 801 | 851 | 901 | 951 | | | | | | | | | | |
| E | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | | | | | | | | | | |
| F | 201 | 251 | 301 | 351 | 401 | 451 | 501 | 551 | 601 | 651 | 701 | 751 | 801 | 851 | 901 | 951 | | | | | | | | | | |
| G | 131 | 181 | 231 | 281 | 331 | 381 | 431 | 481 | 531 | 581 | 631 | 681 | 731 | 781 | 831 | 881 | | | | | | | | | | |
| H | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | | | | | | | | | | |
| J | 56 | 106 | 156 | 206 | 256 | 306 | 356 | 406 | 456 | 506 | 556 | 606 | 656 | 706 | 756 | 806 | | | | | | | | | | |
| P | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 | 14 | 16 | 16 | 16 | | | | | | | | | | |
| Mass (kg) | 3.1 | 3.5 | 3.9 | 4.3 | 4.6 | 5.0 | 5.3 | 5.7 | 6.0 | 6.4 | 6.7 | 7.1 | 7.4 | 7.8 | 8.1 | 8.5 | | | | | | | | | | |
| Maximum speed (mm/s) | Lead 16 | | | | | | | | | | | | | | | | 960 | | | 655 | | | 515 | | | 415 |
| | Lead 8 | | | | | | | | | | | | | | | | 480 | | | 330 | | | 260 | | | 210 |
| | Lead 4 | | | | | | | | | | | | | | | | 240 | | | 165 | | | 130 | | | 100 |

*If the brake is equipped, the mass increases by 0.3 kg. *The maximum speed (mm/s) varies depending on the stroke.

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/ incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | →P56 | |
| SSEL | 2 axes | | | Single-phase 100/200 VAC | →P56 |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |



(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10,000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISB-SXL/ISPB-SXL

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ISB-MXM-100

Single-axis robot/Medium, X-axis, standard slider type/Actuator width: 120mm/100W Straight shape

ISPB-MXM-100

Single-axis robot/Medium, X-axis, standard slider type/Actuator width: 120mm/100W Straight shape **High precision specification**

Model Specification Items

| | | | | | | | | | | |
|---|-----|---|-----------|--|--|------|--|--|-----------------------------------|---------|
| Series | MXM | Encoder type | 100 | Motor type | 100 | Lead | Stroke | Applicable controller | Cable length | Options |
| ISB: Standard specification ISPB: High precision specification | | A: Absolute specification I: Incremental specification | 100: 100W | 30: 30mm 20: 20mm 10: 10mm 5: 5mm | 100: 100mm 110: 110mm (in 50mm increments) | | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. | |



* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|--------------------------------|----------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg)** | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISB[ISPB]-MXM-①-100-30-②-③-④-⑤ | Absolute Incremental | 100 | 30 | 100~1100 | 1~1800 | 0.4 | 1.2 | 0.4 | 1.2 | 15 | 3 | 2.5 | 1 | 56.6 |
| ISB[ISPB]-MXM-①-100-20-②-③-④-⑤ | | | 1~1200 | | 0.4 | 1.2 | 0.4 | 1 | 23 | 6 | 5 | 2.5 | 84.9 | |
| ISB[ISPB]-MXM-①-100-10-②-③-④-⑤ | | | 1~600 | | 0.4 | 0.7 | 0.4 | 0.6 | 45 | 20 | 10 | 7 | 169.8 | |
| ISB[ISPB]-MXM-①-100-5-②-③-④-⑤ | | | 1~300 | | 0.2 | 0.5 | 0.2 | 0.4 | 85 | 45 | 20 | 15 | 339.7 | |

* In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

** If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 0.5kg. (Please also refer to P.9).

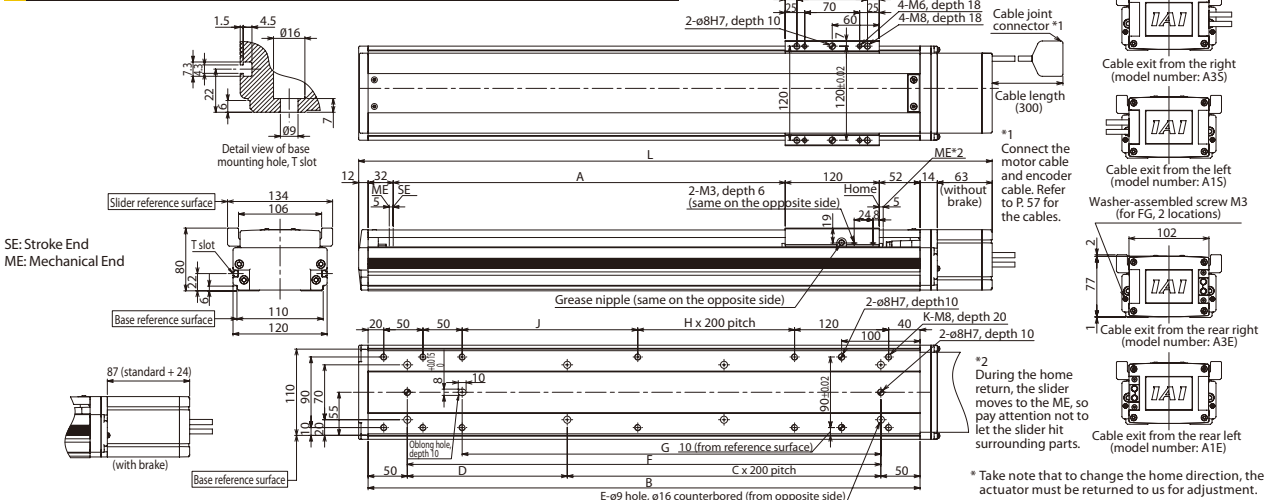
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw Ø16mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 69.6N·m Mb: 99.0N·m Mc: 161.7N·m |
| Overhang load length | Ma direction: 600mm max. Mb, Mc directions: 600mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| 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) |

Diagram



Dimensions, Mass 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 | |
|----------------------|---------------|------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L | without brake | 393 | 443 | 493 | 543 | 593 | 643 | 693 | 743 | 793 | 843 | 893 | 943 | 993 | 1043 | 1093 | 1143 | 1193 | 1243 | 1293 | 1343 | 1393 |
| | with brake | 417 | 467 | 517 | 567 | 617 | 667 | 717 | 767 | 817 | 867 | 917 | 967 | 1017 | 1067 | 1117 | 1167 | 1217 | 1267 | 1317 | 1367 | 1417 |
| A | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | |
| B | 304 | 354 | 404 | 454 | 504 | 554 | 604 | 654 | 704 | 754 | 804 | 854 | 904 | 954 | 1004 | 1054 | 1104 | 1154 | 1204 | 1254 | 1304 | |
| C | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | |
| D | 204 | 254 | 304 | 354 | 404 | 454 | 504 | 554 | 604 | 654 | 704 | 754 | 804 | 854 | 904 | 954 | 1004 | 1054 | 1104 | 1154 | 1204 | |
| E | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | |
| F | 204 | 254 | 304 | 354 | 404 | 454 | 504 | 554 | 604 | 654 | 704 | 754 | 804 | 854 | 904 | 954 | 1004 | 1054 | 1104 | 1154 | 1204 | |
| G | 134 | 184 | 234 | 284 | 334 | 384 | 434 | 484 | 534 | 584 | 634 | 684 | 734 | 784 | 834 | 884 | 934 | 984 | 1034 | 1084 | 1134 | |
| H | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | |
| J | 24 | 74 | 124 | 174 | 224 | 274 | 324 | 374 | 424 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | |
| K | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 | 14 | 14 | 16 | 16 | 16 | 16 | 18 | 18 | |
| Mass (kg) | 6.0 | 6.6 | 7.2 | 7.9 | 8.5 | 9.2 | 9.8 | 10.4 | 11.0 | 11.7 | 12.3 | 13.0 | 13.6 | 14.2 | 14.8 | 15.5 | 16.1 | 16.8 | 17.4 | 18.1 | 18.7 | |
| Maximum speed (mm/s) | Lead 30 | 1800 | | | | | | | | | | | | | | | | | | | | |
| | Lead 20 | 1200 | | | | | | | | | | | | | | | | | | | | |
| | Lead 10 | 600 | | | | | | | | | | | | | | | | | | | | |
| | Lead 5 | 300 | | | | | | | | | | | | | | | | | | | | |

* If the brake is equipped, the mass increases by 0.5kg. * The maximum speed (mm/s) varies depending on the stroke.

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200 VAC | →P56 |
| SSEL | 2 axes | | | →P56 | |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.

(Note 5) When the traveling life is 10,000k. (Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.

(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

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ISB-MXM-100/ISPB-MXM-100

ISB-MXM-200

Single-axis robot/Medium, X-axis, standard slider type/Actuator width: 120mm/200W Straight shape

ISPB-MXM-200

Single-axis robot/Medium, X-axis, standard slider type/Actuator width: 120mm/200W Straight shape **High precision specification**



| Model Specification Items | Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---|--------|------|---|---|--|--|--|-----------------------------------|---------|
| ISB: Standard specification ISPB: High precision specification | MXM | 200 | A: Absolute specification I: Incremental specification | 200: 200W 30: 30mm 20: 20mm 10: 10mm 5: 5mm | 100: 100mm 1100: 1100mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. | |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|--|----------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISB[ISPB]-MXM-[1]-200-30-[2]-[3]-[4]-[5] | Absolute/Incremental | 200 | 30 | 100~1100 | 1~1800 | 0.4 | 1.2 | 0.4 | 1.2 | 30 | 9 | 6 | 2 | 113.9 |
| ISB[ISPB]-MXM-[1]-200-20-[2]-[3]-[4]-[5] | | | 20 | | 1~1200 | 0.4 | 1.2 | 0.4 | 1 | 45 | 12 | 10 | 5 | 170.9 |
| ISB[ISPB]-MXM-[1]-200-10-[2]-[3]-[4]-[5] | | | 10 | | 1~600 | 0.4 | 0.7 | 0.4 | 0.6 | 90 | 40 | 20 | 15 | 341.8 |
| ISB[ISPB]-MXM-[1]-200-5-[2]-[3]-[4]-[5] | | | 5 | | 1~300 | 0.2 | 0.5 | 0.2 | 0.4 | 110 | 80 | 40 | 30 | 683.6 |

*In the above model numbers, [1] indicates the encoder type, [2] indicates the stroke, [3] indicates the applicable controller, [4] indicates the cable length, and [5] indicates the option(s).

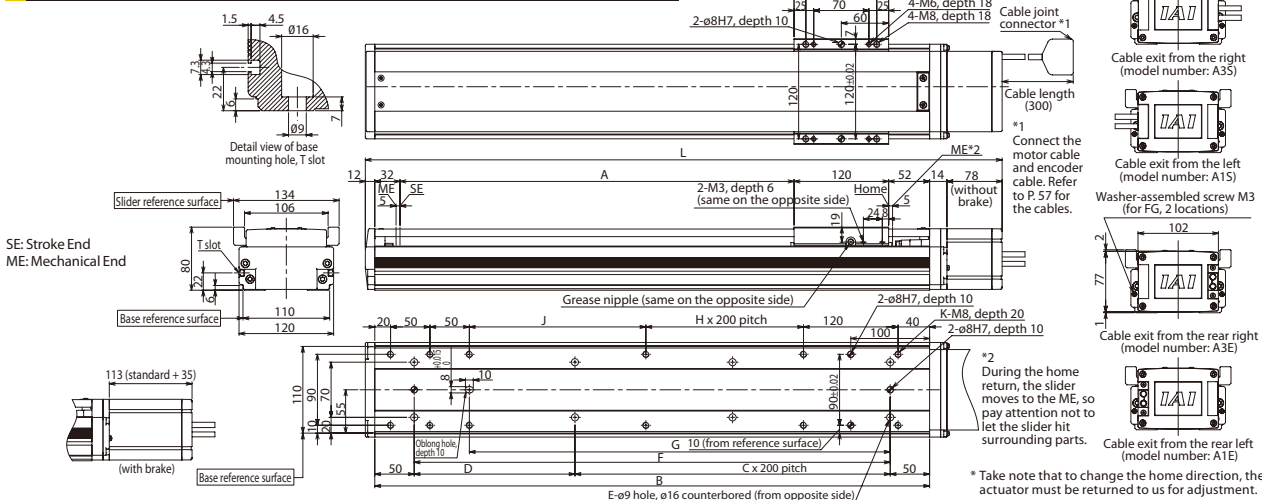
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw Ø16mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 69.6N·m Mb: 99.0N·m Mc: 161.7N·m |
| Overhang load length | Ma direction: 600mm max. Mb, Mc directions: 600mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| 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) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

| Stroke | L | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|------|--|--|--|--|--|-----|
| | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | | | | | | | | |
| without brake | 408 | 458 | 508 | 558 | 608 | 658 | 708 | 758 | 808 | 858 | 908 | 958 | 1008 | 1058 | 1108 | 1158 | 1208 | 1258 | 1308 | 1358 | 1408 | | | | | | | | |
| | 443 | 493 | 543 | 593 | 643 | 693 | 743 | 793 | 843 | 893 | 943 | 993 | 1043 | 1093 | 1143 | 1193 | 1243 | 1293 | 1343 | 1393 | 1443 | | | | | | | | |
| with brake | 304 | 354 | 404 | 454 | 504 | 554 | 604 | 654 | 704 | 754 | 804 | 854 | 904 | 954 | 1004 | 1054 | 1104 | 1154 | 1204 | 1254 | 1304 | | | | | | | | |
| | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | | | | | | | | |
| A | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | | | | | | | | |
| B | 304 | 354 | 404 | 454 | 504 | 554 | 604 | 654 | 704 | 754 | 804 | 854 | 904 | 954 | 1004 | 1054 | 1104 | 1154 | 1204 | 1254 | 1304 | | | | | | | | |
| C | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | | | | | | | | |
| D | 204 | 254 | 304 | 354 | 404 | 454 | 504 | 554 | 604 | 654 | 704 | 754 | 804 | 854 | 904 | 954 | 1004 | 1054 | 1104 | 1154 | 1204 | | | | | | | | |
| E | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 | | | | | | | | |
| F | 204 | 254 | 304 | 354 | 404 | 454 | 504 | 554 | 604 | 654 | 704 | 754 | 804 | 854 | 904 | 954 | 1004 | 1054 | 1104 | 1154 | 1204 | | | | | | | | |
| G | 134 | 184 | 234 | 284 | 334 | 384 | 434 | 484 | 534 | 584 | 634 | 684 | 734 | 784 | 834 | 884 | 934 | 984 | 1034 | 1084 | 1134 | | | | | | | | |
| H | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | | | | | | | | |
| J | 24 | 74 | 124 | 174 | 224 | 274 | 324 | 374 | 424 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | | | | | | | | |
| K | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 | 14 | 16 | 16 | 16 | 16 | 18 | 18 | 18 | | | | | | | | |
| Mass (kg) | 6.4 | 7.1 | 7.7 | 8.4 | 9.0 | 9.6 | 10.2 | 10.9 | 11.5 | 12.2 | 12.8 | 13.4 | 14.0 | 14.7 | 15.3 | 16.0 | 16.6 | 17.3 | 17.9 | 18.5 | 19.1 | | | | | | | | |
| Maximum speed (mm/s) | Lead 30 | | | | | | | | | | | | | | | | 1800 | | | | | | 1290 | | | | | | 690 |
| | Lead 20 | | | | | | | | | | | | | | | | 1200 | | | | | | 860 | | | | | | 460 |
| | Lead 10 | | | | | | | | | | | | | | | | 600 | | | | | | 430 | | | | | | 230 |
| | Lead 5 | | | | | | | | | | | | | | | | 300 | | | | | | 215 | | | | | | 115 |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/Incremental | Program | Single/three-phase 200VAC | →P56 |
| X-SEL-J/K | 4 axes | | | →P56 | |
| SSEL | 2 axes | | | Single-phase 100/200VAC | →P56 |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |



(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
 (Notes 2, 3, 4) The values in [] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
 (Note 5) When the traveling life is 10,000km.
 (Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
 (Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISB-MXM-200/ISPB-MXM-200

ISB-MXL-100

Single-axis robot/Medium, X-axis, long slider type/Actuator width: 120mm/100W Straight shape

ISPB-MXL-100

Single-axis robot/Medium, X-axis, long slider type/Actuator width: 120mm/100W Straight shape **High precision specification**

| Model Specification Items | Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---|--------|------|---|------------|--|--|--|--|-----------------------------------|
| ISB: Standard specification ISPB: High precision specification | MXL | 100 | A: Absolute specification I: Incremental specification | 100: 100W | 30: 30mm 20: 20mm 10: 10mm 5: 5mm | 120: 120mm (in 50mm increments) 1070: 1070mm | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. |



* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|--------------------------------|----------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISB[ISPB]-MXL-1-100-30-2-3-4-5 | Absolute Incremental | 100 | 30 | 120~1070 | 1~1800 | 0.4 | 1.2 | 0.4 | 1.2 | 15 | 3 | 2.5 | 1 | 56.6 |
| ISB[ISPB]-MXL-1-100-20-2-3-4-5 | | | 1~1200 | | 0.4 | 1.2 | 0.4 | 1 | 23 | 6 | 5 | 2.5 | 84.9 | |
| ISB[ISPB]-MXL-1-100-10-2-3-4-5 | | | 1~600 | | 0.4 | 0.7 | 0.4 | 0.6 | 45 | 20 | 10 | 7 | 169.8 | |
| ISB[ISPB]-MXL-1-100-5-2-3-4-5 | | | 1~300 | | 0.2 | 0.5 | 0.2 | 0.4 | 85 | 45 | 20 | 15 | 339.7 | |

*1.0G=9800mm/sec²
*In the above model numbers, 1 indicates the encoder type, 2 indicates the stroke, 3 indicates the applicable controller, 4 indicates the cable length, and 5 indicates the option(s).

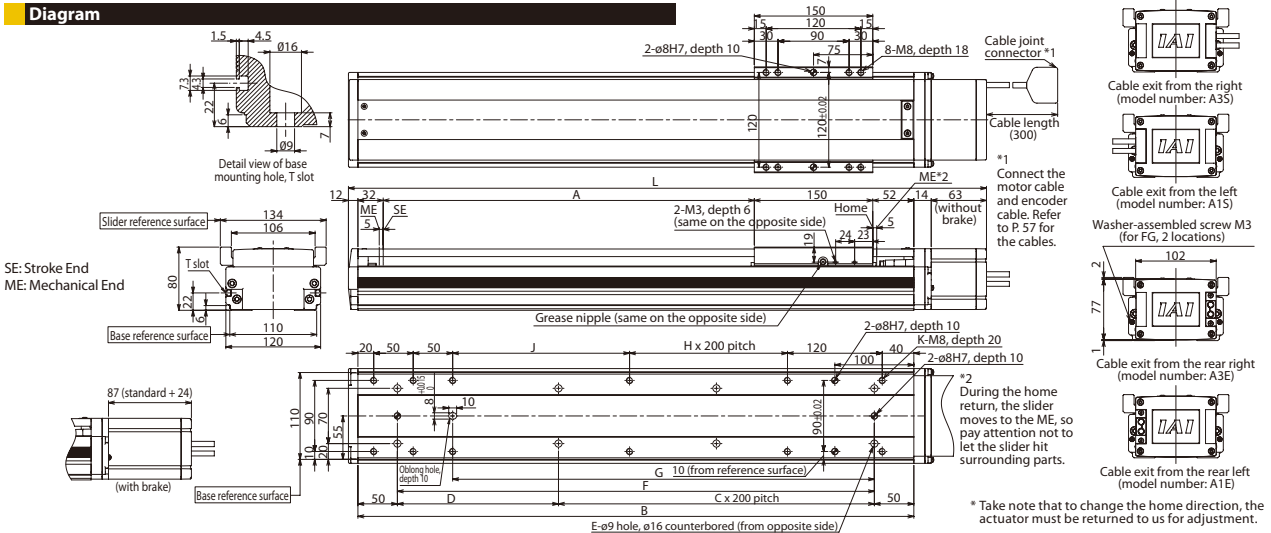
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Slave axis specification | S | →P12 |
| Creep sensor | C | →P11 | High straightness, precision specification | ST | →P13 |
| Creep sensor on the opposite side | CL | →P11 | | | |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm (±0.005mm) |
| Drive method (Note 3) | Ball screw Ø16mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 105.3N·m Mb: 150.4N·m Mc: 193.7N·m |
| Overhang load length | Ma direction: 750mm max. Mb, Mc directions: 750mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| 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) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

| Stroke | 120 | 170 | 220 | 270 | 320 | 370 | 420 | 470 | 520 | 570 | 620 | 670 | 720 | 770 | 820 | 870 | 920 | 970 | 1020 | 1070 | |
|----------------------|---------------|------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L | without brake | 443 | 493 | 543 | 593 | 643 | 693 | 743 | 793 | 843 | 893 | 943 | 993 | 1043 | 1093 | 1143 | 1193 | 1243 | 1293 | 1343 | 1393 |
| | with brake | 467 | 517 | 567 | 617 | 667 | 717 | 767 | 817 | 867 | 917 | 967 | 1017 | 1067 | 1117 | 1167 | 1217 | 1267 | 1317 | 1367 | 1417 |
| A | 120 | 170 | 220 | 270 | 320 | 370 | 420 | 470 | 520 | 570 | 620 | 670 | 720 | 770 | 820 | 870 | 920 | 970 | 1020 | 1070 | |
| B | 354 | 404 | 454 | 504 | 554 | 604 | 654 | 704 | 754 | 804 | 854 | 904 | 954 | 1004 | 1054 | 1104 | 1154 | 1204 | 1254 | 1304 | |
| C | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | |
| D | 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 | |
| F | 254 | 304 | 354 | 404 | 454 | 504 | 554 | 604 | 654 | 704 | 754 | 804 | 854 | 904 | 954 | 1004 | 1054 | 1104 | 1154 | 1204 | |
| G | 184 | 234 | 284 | 334 | 384 | 434 | 484 | 534 | 584 | 634 | 684 | 734 | 784 | 834 | 884 | 934 | 984 | 1034 | 1084 | 1134 | |
| H | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | |
| J | 74 | 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 | |
| Mass (kg) | 6.3 | 6.9 | 7.5 | 8.2 | 8.8 | 9.5 | 10.1 | 10.7 | 11.3 | 12.0 | 12.6 | 13.3 | 13.9 | 14.5 | 15.1 | 15.8 | 16.4 | 17.1 | 17.7 | 18.4 | |
| Maximum speed (mm/s) | Lead 30 | 1800 | | | | | | | | | | | | | | | | | | | |
| | Lead 20 | 1200 | | | | | | | | | | | | | | | | | | | |
| | Lead 10 | 600 | | | | | | | | | | | | | | | | | | | |
| | Lead 5 | 300 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | 1290 | 1045 | | 860 | | 690 | |
| | | | | | | | | | | | | | | | 860 | 695 | | 570 | | 460 | |
| | | | | | | | | | | | | | | | 430 | 345 | | 280 | | 230 | |
| | | | | | | | | | | | | | | | 215 | 170 | | 140 | | 115 | |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|----------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200 VAC | →P56 |
| SSEL | 2 axes | | | | →P56 |
| SCON | 1 axis | | | | →P56 |

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10,000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

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ISB-MXL-100/ISPB-MXL-100

ISB-MXL-200

Single-axis robot/Medium, X-axis, long slider type/Actuator width: 120mm/200W Straight shape

ISPB-MXL-200

Single-axis robot/Medium, X-axis, long slider type/Actuator width: 120mm/200W Straight shape **High precision specification**



Model Specification Items

| | | | | | | | | |
|---|------------|---|------------|--|---|--|--|-----------------------------------|
| Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
| ISB: Standard specification ISPB: High precision specification | MXL 200 | A: Absolute specification I: Incremental specification | 200: 200W | 30: 30mm 20: 20mm 10: 10mm 5: 5mm | 120: 120mm ? : 1070: 1070mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|--|----------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISB[ISPB]-MXL-[1]-200-30-[2]-[3]-[4]-[5] | Absolute/Incremental | 200 | 30 | 120~1070 | 1~1800 | 0.4 | 1.2 | 0.4 | 1.2 | 30 | 9 | 6 | 2 | 113.9 |
| ISB[ISPB]-MXL-[1]-200-20-[2]-[3]-[4]-[5] | | | 20 | | 1~1200 | 0.4 | 1.2 | 0.4 | 1 | 45 | 12 | 10 | 5 | 170.9 |
| ISB[ISPB]-MXL-[1]-200-10-[2]-[3]-[4]-[5] | | | 10 | | 1~600 | 0.4 | 0.7 | 0.4 | 0.6 | 90 | 40 | 20 | 15 | 341.8 |
| ISB[ISPB]-MXL-[1]-200-5-[2]-[3]-[4]-[5] | | | 5 | | 1~300 | 0.2 | 0.5 | 0.2 | 0.4 | 110 | 80 | 40 | 30 | 683.6 |

*In the above model numbers, [1] indicates the encoder type, [2] indicates the stroke, [3] indicates the applicable controller, [4] indicates the cable length, and [5] indicates the option(s).

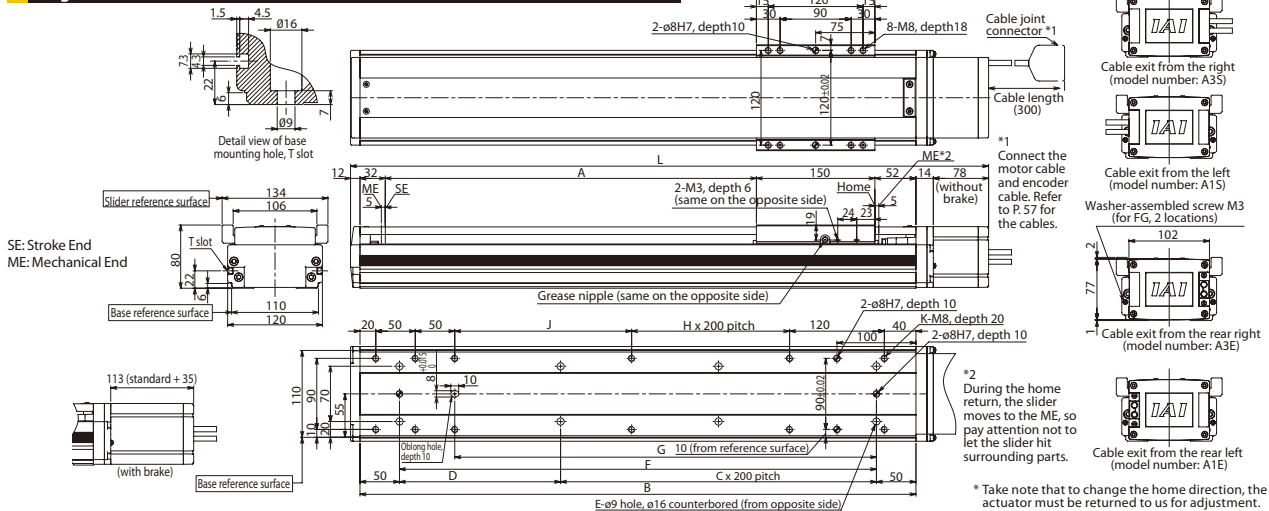
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Slave axis specification | S | →P12 |
| Creep sensor | C | →P11 | High straightness, precision specification | ST | →P13 |
| Creep sensor on the opposite side | CL | →P11 | | | |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm (±0.005mm) |
| Drive method (Note 3) | Ball screw Ø16mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 105.3N·m Mb: 150.4N·m Mc: 193.7N·m |
| Overhang load length | Ma direction: 750mm max. Mb, Mc directions: 750mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | MATERIAL: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| 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) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg. *The maximum speed (mm/s) varies depending on the stroke.

| Stroke | 120 | 170 | 220 | 270 | 320 | 370 | 420 | 470 | 520 | 570 | 620 | 670 | 720 | 770 | 820 | 870 | 920 | 1020 | 1070 | | |
|----------------------|---------------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L | without brake | 458 | 508 | 558 | 608 | 658 | 708 | 758 | 808 | 858 | 908 | 958 | 1008 | 1058 | 1108 | 1158 | 1208 | 1258 | 1308 | 1358 | 1408 |
| | with brake | 493 | 543 | 593 | 643 | 693 | 743 | 793 | 843 | 893 | 943 | 993 | 1043 | 1093 | 1143 | 1193 | 1243 | 1293 | 1343 | 1393 | 1443 |
| A | 120 | 170 | 220 | 270 | 320 | 370 | 420 | 470 | 520 | 570 | 620 | 670 | 720 | 770 | 820 | 870 | 920 | 970 | 1020 | 1070 | |
| B | 354 | 404 | 454 | 504 | 554 | 604 | 654 | 704 | 754 | 804 | 854 | 904 | 954 | 1004 | 1054 | 1104 | 1154 | 1204 | 1254 | 1304 | |
| C | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | |
| D | 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 | |
| F | 254 | 304 | 354 | 404 | 454 | 504 | 554 | 604 | 654 | 704 | 754 | 804 | 854 | 904 | 954 | 1004 | 1054 | 1104 | 1154 | 1204 | |
| G | 184 | 234 | 284 | 334 | 384 | 434 | 484 | 534 | 584 | 634 | 684 | 734 | 784 | 834 | 884 | 934 | 984 | 1034 | 1084 | 1134 | |
| H | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | |
| J | 74 | 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 | |
| Mass (kg) | 6.7 | 7.4 | 8.0 | 8.7 | 9.3 | 9.9 | 10.5 | 11.2 | 11.8 | 12.5 | 13.1 | 13.7 | 14.3 | 15.0 | 15.6 | 16.3 | 16.9 | 17.6 | 18.2 | 18.9 | |
| Maximum speed (mm/s) | Lead 30 | | | | | | 1800 | | | | | | | 1290 | | 1045 | | 860 | | 690 | |
| | Lead 20 | | | | | | 1200 | | | | | | | 860 | | 695 | | 570 | | 460 | |
| | Lead 10 | | | | | | 600 | | | | | | | 430 | | 345 | | 280 | | 230 | |
| | Lead 5 | | | | | | 300 | | | | | | | 215 | | 170 | | 140 | | 115 | |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/Incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | →P56 | |
| SSEL | 2 axes | | | Single-phase 100/200 VAC | →P56 |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload. The values in [] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.

(Note 5) When the traveling life is 10,000km.

(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.

(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISB-MXL-200/ISPB-MXL-200

ISB-MXXM-200

Single-axis robot/Medium, X-axis, mid-support type/Actuator width: 120mm/200W Straight shape

ISPB-MXXM-200

Single-axis robot/Medium, X-axis, mid-support type/Actuator width: 120mm/200W Straight shape **High precision specification**



| Model Specification Items | Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---------------------------|---|------|--------------|---|-----------------------------------|---|--|--|-----------------------------------|
| | ISB: Standard specification ISPB: High precision specification | MXMX | 200 | A: Absolute specification I: Incremental specification | 200: 200W 30: 30mm 20: 20mm | 800: 800mm 2000: 2000mm (in 100mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 100mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|---|--------------|------------------|-----------|---------------------------------|--------------|-----------------------|---------|---|---------|--------------------|----------------------|---|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISB[ISPB]-MXMX- 1 -200-30- 2 - 3 - 4 - 5 | Absolute | 200 | 30 | 800~2000 | 1~1800 | 0.4 | | Designed exclusively for horizontal use | | 30 | | Designed exclusively for horizontal use | 113.9 | |
| ISB[ISPB]-MXMX- 1 -200-20- 2 - 3 - 4 - 5 | Incremental | | 20 | | 1~1200 | 0.4 | | | | 45 | | | 170.9 | |

*In the above model numbers, **1** indicates the encoder type, **2** indicates the stroke, **3** indicates the applicable controller, **4** indicates the cable length, and **5** indicates the option(s).

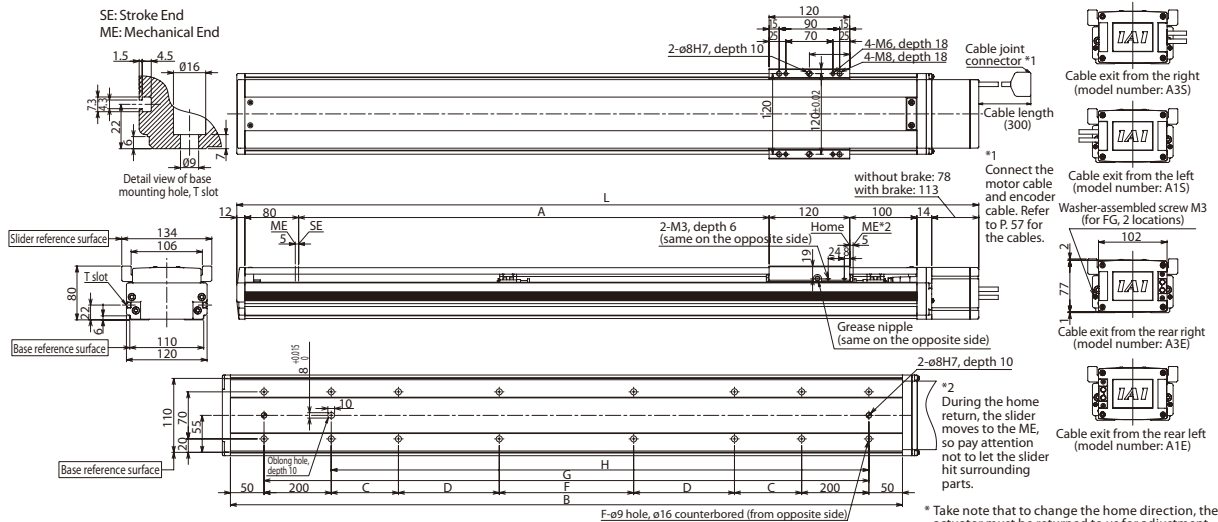
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw Ø16mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 69.6N·m Mb: 99.0N·m Mc: 161.7N·m |
| Overhang load length | Ma direction: 600mm max. Mb, Mc directions: 600mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| 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) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg.

*The maximum speed (mm/s) varies depending on the stroke.

| Stroke | Maximum speed (mm/s) | | | | | | | | | | | | | |
|----------------------|----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | |
| L | without brake | 1204 | 1304 | 1404 | 1504 | 1604 | 1704 | 1804 | 1904 | 2004 | 2104 | 2204 | 2304 | 2404 |
| | with brake | 1239 | 1339 | 1439 | 1539 | 1639 | 1739 | 1839 | 1939 | 2039 | 2139 | 2239 | 2339 | 2439 |
| A | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 |
| B | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 |
| C | 200 | 200 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 200 | 200 | 200 | 200 |
| D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 400 | 400 | 450 | 500 |
| E | 200 | 300 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| F | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 | 16 | 16 | 16 |
| G | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
| H | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 |
| Mass (kg) | 16.5 | 17.8 | 19.1 | 20.3 | 21.6 | 22.9 | 24.1 | 25.4 | 26.7 | 28.0 | 29.2 | 30.5 | 31.8 | 33.1 |
| Maximum speed (mm/s) | Lead 30 | 1800 | | | | | | | | | | | | |
| | Lead 20 | 1200 | | | | | | | | | | | | |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/ incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200 VAC | →P56 |
| SSEL | 2 axes | | | →P56 | |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |



(Note 1) Refer to P. 9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.

(Note 5) When the traveling life is 10,000km.

(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.

(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

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ISB-MXXM-200/ISPB-MXXM-200

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

ISB-LXM-400

Single-axis robot/Large, X-axis, standard slider type/Actuator width: 150mm/400W Straight shape

ISPB-LXM-400

Single-axis robot/Large, X-axis, standard slider type/Actuator width: 150mm/400W Straight shape **High precision specification**

Model Specification Items

| Series | LXM Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---|----------|---|------------|----------------------------------|--|--|--|-----------------------------------|
| ISB: Standard specification ISPB: High precision specification | | A: Absolute specification I: Incremental specification | 400: 400W | 40: 40mm 20: 20mm 10: 10mm | 100: 100mm 1300: 1300mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. |



* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|--------------------------------|-------------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISB[ISPB]-LXM-①-400-40-②-③-④-⑤ | Absolute Incremental | 400 | 40 | 100~1300 | 1~2400 | 0.4 | 1.2 | 0.4 | 1.2 | 40 | 15 | 10 | 4 | 169.6 |
| ISB[ISPB]-LXM-①-400-20-②-③-④-⑤ | | | 20 | | 1~1200 | 0.4 | 1.2 | 0.4 | 1 | 90 | 24 | 20 | 10 | 339.1 |
| ISB[ISPB]-LXM-①-400-10-②-③-④-⑤ | | | 10 | | 1~600 | 0.4 | 0.7 | 0.4 | 0.6 | 120 | 60 | 40 | 30 | 678.3 |

* In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

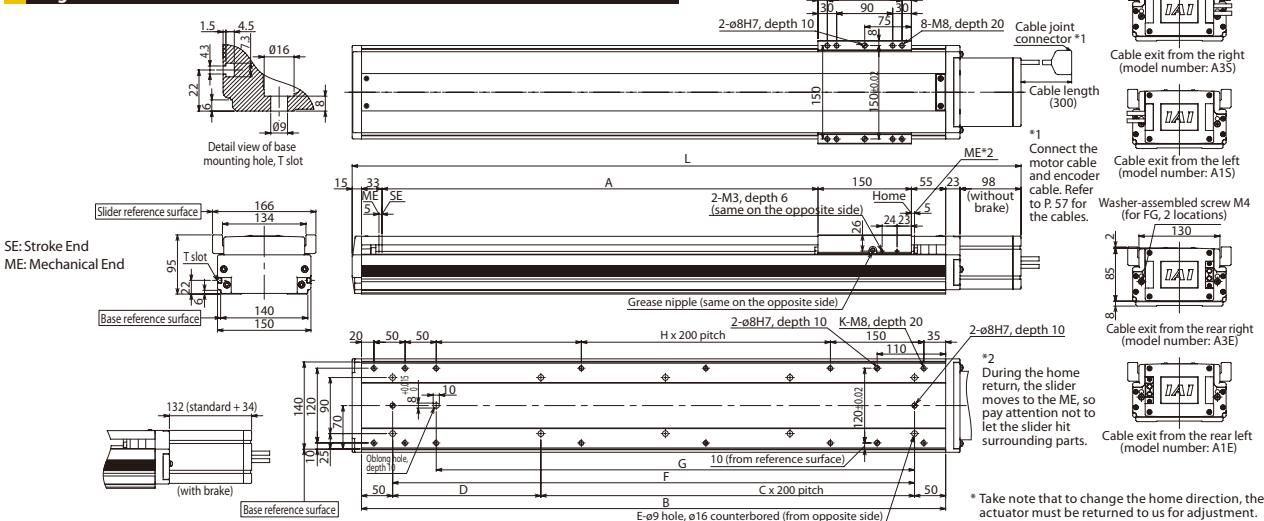
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw Ø20mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm (0.02mm) max. |
| Dynamic allowable load moment (Note 5) | Ma: 104.9N·m Mb: 149.9N·m Mc: 248.9N·m |
| Overhang load length | Ma direction: 750mm max. Mb, Mc directions: 750mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| 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) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

| Stroke | L | | | | | | | | | | | A | | | | | | | | | | | B | | | | | | | | | | | C | | | | | | | | | | | D | | | | | | | | | | | E | | | | | | | | | | | F | | | | | | | | | | | G | | | | | | | | | | | H | | | | | | | | | | | J | | | | | | | | | | | K | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| without brake | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | 474 | 524 | 574 |

ISB-LXL-200

Single-axis robot/Large, X-axis, long slider type/Actuator width: 150mm/200W Straight shape

ISPB-LXL-200

Single-axis robot/Large, X-axis, long slider type/Actuator width: 150mm/200W Straight shape **High precision specification**



Model Specification Items

| Series | LXL Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---|----------|---|------------|----------------------------------|---|--|--|-----------------------------------|
| ISB: Standard specification ISPB: High precision specification | | A: Absolute specification I: Incremental specification | 200: 200W | 40: 40mm 20: 20mm 10: 10mm | 120: 120mm 1270: 1270mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) | |
|--|-------------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|-------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | | |
| ISB[ISPB]-LXL-[1]-200-40-[2]-[3]-[4]-[5] | Absolute Incremental | 200 | 40 | 100~1270 | 1~2400 | 0.4 | 1.2 | 0.4 | 1.2 | 15 | 6 | 4 | 1.6 | 85.5 | |
| ISB[ISPB]-LXL-[1]-200-20-[2]-[3]-[4]-[5] | | | 20 | | 1~1200 | 0.4 | 1.2 | 0.4 | 1 | 45 | 12 | 10 | 5 | | 170.9 |
| ISB[ISPB]-LXL-[1]-200-10-[2]-[3]-[4]-[5] | | | 10 | | 1~600 | 0.4 | 0.7 | 0.4 | 0.6 | 90 | 40 | 20 | 14 | | 341.8 |

*In the above model numbers, [1] indicates the encoder type, [2] indicates the stroke, [3] indicates the applicable controller, [4] indicates the cable length, and [5] indicates the option(s).

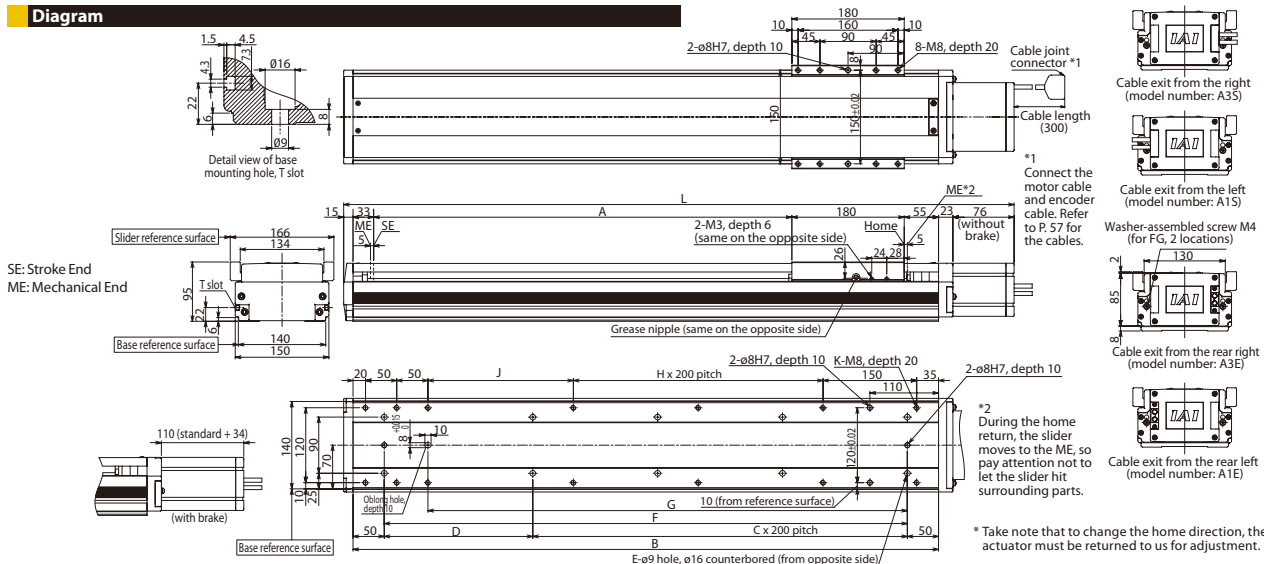
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Slave axis specification | S | →P12 |
| Creep sensor | C | →P11 | High straightness, precision specification | ST | →P13 |
| Creep sensor on the opposite side | CL | →P11 | | | |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm (±0.005mm) |
| Drive method (Note 3) | Ball screw Ø20mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 137.8N·m Mb: 196.8N·m Mc: 278.5N·m |
| Overhang load length | Ma direction: 900mm max. Mb, Mc directions: 900mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| 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) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

| Stroke | L | | | | | | | | | | | | | | | | L | | | | | | | | | | | | | | | |
|----------------------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|--|--|--|--|--|--|
| | 120 | 170 | 220 | 270 | 320 | 370 | 420 | 470 | 520 | 570 | 620 | 670 | 720 | 770 | 820 | 870 | 920 | 970 | 1020 | 1070 | 1120 | 1170 | 1220 | 1270 | | | | | | | | |
| without brake | 502 | 552 | 602 | 652 | 702 | 752 | 802 | 852 | 902 | 952 | 1002 | 1052 | 1102 | 1152 | 1202 | 1252 | 1302 | 1352 | 1402 | 1452 | 1502 | 1552 | 1602 | 1652 | | | | | | | | |
| with brake | 536 | 586 | 636 | 686 | 736 | 786 | 836 | 886 | 936 | 986 | 1036 | 1086 | 1136 | 1186 | 1236 | 1286 | 1336 | 1386 | 1436 | 1486 | 1536 | 1586 | 1636 | 1686 | | | | | | | | |
| 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 | 388 | 438 | 488 | 538 | 588 | 638 | 688 | 738 | 788 | 838 | 888 | 938 | 988 | 1038 | 1088 | 1138 | 1188 | 1238 | 1288 | 1338 | 1388 | 1438 | 1488 | 1538 | | | | | | | | |
| 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 | 288 | 338 | 388 | 438 | 488 | 538 | 588 | 638 | 688 | 738 | 788 | 838 | 888 | 938 | 988 | 1038 | 1088 | 1138 | 1188 | 1238 | 1288 | 1338 | 1388 | 1438 | | | | | | | | |
| 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 | 288 | 338 | 388 | 438 | 488 | 538 | 588 | 638 | 688 | 738 | 788 | 838 | 888 | 938 | 988 | 1038 | 1088 | 1138 | 1188 | 1238 | 1288 | 1338 | 1388 | 1438 | | | | | | | | |
| G | 218 | 268 | 318 | 368 | 418 | 468 | 518 | 568 | 618 | 668 | 718 | 768 | 818 | 868 | 918 | 968 | 1018 | 1068 | 1118 | 1168 | 1218 | 1268 | 1318 | 1368 | | | | | | | | |
| 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 | 83 | 133 | 183 | 233 | 283 | 333 | 383 | 433 | 483 | 533 | 583 | 633 | 683 | 733 | 783 | 833 | 883 | 933 | 983 | 1033 | 1083 | 1133 | 1183 | 1233 | | | | | | | | |
| 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) | 9.8 | 10.7 | 11.5 | 12.4 | 13.2 | 14.1 | 15.0 | 15.9 | 16.7 | 17.6 | 18.4 | 19.3 | 20.2 | 21.1 | 21.9 | 22.8 | 23.6 | 24.5 | 25.4 | 26.3 | 27.1 | 28.0 | 28.8 | 29.7 | | | | | | | | |
| Maximum speed (mm/s) | Lead 40 | 2400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Lead 20 | 1200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Lead 10 | 600 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

*If the brake is equipped, the mass increases by 0.6kg.

*The maximum speed (mm/s) varies depending on the stroke.

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/ incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | →P56 | |
| SSEL | 2 axes | | | Single-phase 100/200 VAC | →P56 |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |



(Note 1) Refer to P. 9 for the relationship of acceleration and payload. The values in [] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.

(Note 5) When the traveling life is 10,000km.

(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.

(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISB-LXL-200/ISPB-LXL-200

ISB-LXL-400

Single-axis robot/Large, X-axis, long slider type/Actuator width: 150mm/400W

ISPB-LXL-400

Single-axis robot/Large, X-axis, long slider type/Actuator width: 150mm/400W Straight shape **High precision specification**

Model Specification Items

| Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---|------|---|---|------------------------------------|--|--|-----------------------------------|---------|
| ISB: Standard specification ISPB: High precision specification | LXL | A: Absolute specification I: Incremental specification | 400: 400W 40: 40mm 20: 20mm 10: 10mm | 120: 120mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. | |



* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|--------------------------------|----------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISB[ISPB]-LXL-①-400-40-②-③-④-⑤ | Absolute/Incremental | 400 | 40 | 100~1270 | 1~2400 | 0.4 | 1.2 | 0.4 | 1.2 | 40 | 15 | 10 | 4 | 169.6 |
| ISB[ISPB]-LXL-①-400-20-②-③-④-⑤ | | | 20 | | 1~1200 | 0.4 | 1.2 | 0.4 | 1 | 90 | 24 | 20 | 10 | 339.1 |
| ISB[ISPB]-LXL-①-400-10-②-③-④-⑤ | | | 10 | | 1~600 | 0.4 | 0.7 | 0.4 | 0.6 | 120 | 60 | 40 | 30 | 678.3 |

* In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

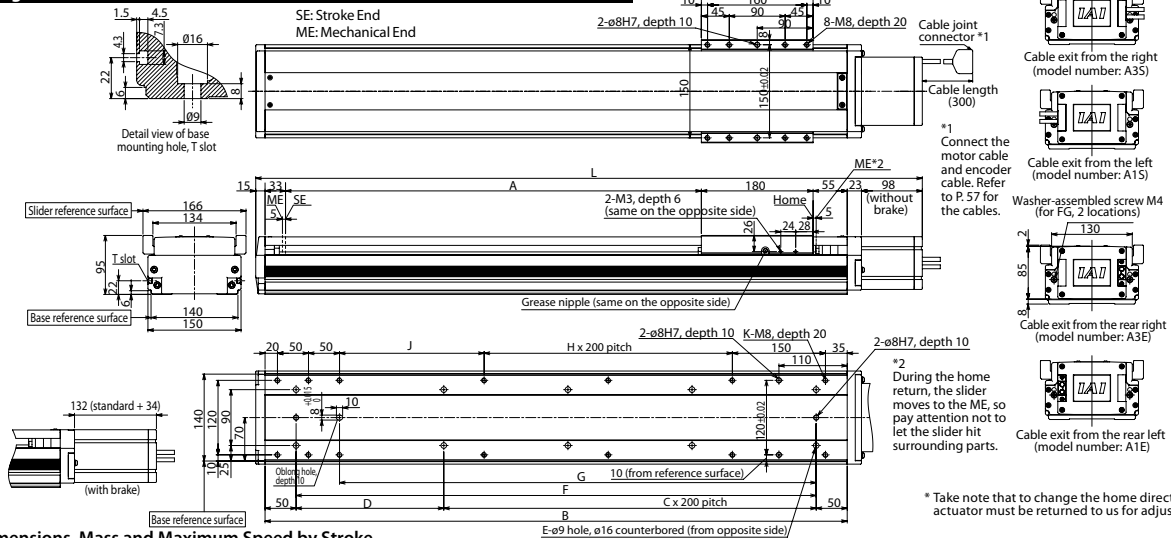
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Slave axis specification | S | →P12 |
| Creep sensor | C | →P11 | High straightness, precision specification | ST | →P13 |
| Creep sensor on the opposite side | CL | →P11 | | | |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw Ø20mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 137.8N·m Mb: 196.8N·m Mc: 278.5N·m |
| Overhang load length | Ma direction: 900mm max. Mb, Mc directions: 900mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| 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) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

| Stroke | L | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|-----|--|
| | 120 | 170 | 220 | 270 | 320 | 370 | 420 | 470 | 520 | 570 | 620 | 670 | 720 | 770 | 820 | 870 | 920 | 970 | 1020 | 1070 | 1120 | 1170 | 1220 | 1270 | | | |
| without brake | 524 | 574 | 624 | 674 | 724 | 774 | 824 | 874 | 924 | 974 | 1024 | 1074 | 1124 | 1174 | 1224 | 1274 | 1324 | 1374 | 1424 | 1474 | 1524 | 1574 | 1624 | 1674 | | | |
| with brake | 558 | 608 | 658 | 708 | 758 | 808 | 858 | 908 | 958 | 1008 | 1058 | 1108 | 1158 | 1208 | 1258 | 1308 | 1358 | 1408 | 1458 | 1508 | 1558 | 1608 | 1658 | 1708 | | | |
| 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 | 388 | 438 | 488 | 538 | 588 | 638 | 688 | 738 | 788 | 838 | 888 | 938 | 988 | 1038 | 1088 | 1138 | 1188 | 1238 | 1288 | 1338 | 1388 | 1438 | 1488 | 1538 | | | |
| C | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | | | |
| D | 288 | 338 | 388 | 438 | 488 | 538 | 588 | 638 | 688 | 738 | 788 | 838 | 888 | 938 | 988 | 1038 | 1088 | 1138 | 1188 | 1238 | 1288 | 1338 | 1388 | 1438 | | | |
| 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 | 288 | 338 | 388 | 438 | 488 | 538 | 588 | 638 | 688 | 738 | 788 | 838 | 888 | 938 | 988 | 1038 | 1088 | 1138 | 1188 | 1238 | 1288 | 1338 | 1388 | 1438 | | | |
| G | 218 | 268 | 318 | 368 | 418 | 468 | 518 | 568 | 618 | 668 | 718 | 768 | 818 | 868 | 918 | 968 | 1018 | 1068 | 1118 | 1168 | 1218 | 1268 | 1318 | 1368 | | | |
| 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 | 83 | 133 | 183 | 233 | 283 | 333 | 383 | 433 | 483 | 533 | 583 | 633 | 683 | 733 | 783 | 833 | 883 | 933 | 983 | 1033 | 1083 | 1133 | 1183 | 1233 | | | |
| 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) | 10.2 | 11.1 | 12.0 | 12.9 | 13.7 | 14.6 | 15.4 | 16.3 | 17.2 | 18.1 | 18.9 | 19.8 | 20.6 | 21.5 | 22.4 | 23.3 | 24.1 | 25.0 | 25.8 | 26.7 | 27.6 | 28.5 | 29.3 | 30.2 | | | |
| Maximum speed (mm/s) | Lead 40 | | | | | | | | | | | 2400 | | | | 1840 | | | | 1530 | | 1100 | | 880 | | | |
| | Lead 20 | | | | | | | | | | | 1200 | | | | 920 | | | | 765 | | 645 | | 550 | | 440 | |
| | Lead 10 | | | | | | | | | | | 600 | | | | 460 | | | | 380 | | 320 | | 270 | | 220 | |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/Incremental | Program | Single-/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200 VAC | →P56 |
| SSEL | 2 axes | | | Single-phase 200 VAC | →P56 |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |



(Note 1) Refer to P. 9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.

(Note 5) When the traveling life is 10,000k.

(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.

(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

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ISB-LXL-400/ISPB-LXL-400

ISB-LXMX-200

Single-axis robot/Large, X-axis, mid-support type/Actuator width: 150mm/200W Straight shape

ISPB-LXMX-200

Single-axis robot/Large, X-axis, mid-support type/Actuator width: 150mm/200W Straight shape **High precision specification**



| Model Specification Items | Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---|--------|------|---|-----------------------|---|--|--|-----------------------------------|---------|
| ISB: Standard specification ISPB: High precision specification | LXMX | 200 | A: Absolute specification I: Incremental specification | 200: 200W 20: 20mm | 1000: 1000mm 2500: 2500mm (in 100mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. | |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 100mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|---|----------------------|------------------|-----------|---------------------------------|--------------|-----------------------|---------|---|---------|--------------------|----------------------|---|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISB[ISPB]-LXMX-[1]-200-20-[2]-[3]-[4]-[5] | Absolute Incremental | 200 | 20 | 1000~2500 | 1~1200 | 0.4 | | Designed exclusively for horizontal use | | 45 | | Designed exclusively for horizontal use | 170.9 | |

*1.0G=9800mm/sec²

*In the above model numbers, [1] indicates the encoder type, [2] indicates the stroke, [3] indicates the applicable controller, [4] indicates the cable length, and [5] indicates the option(s).

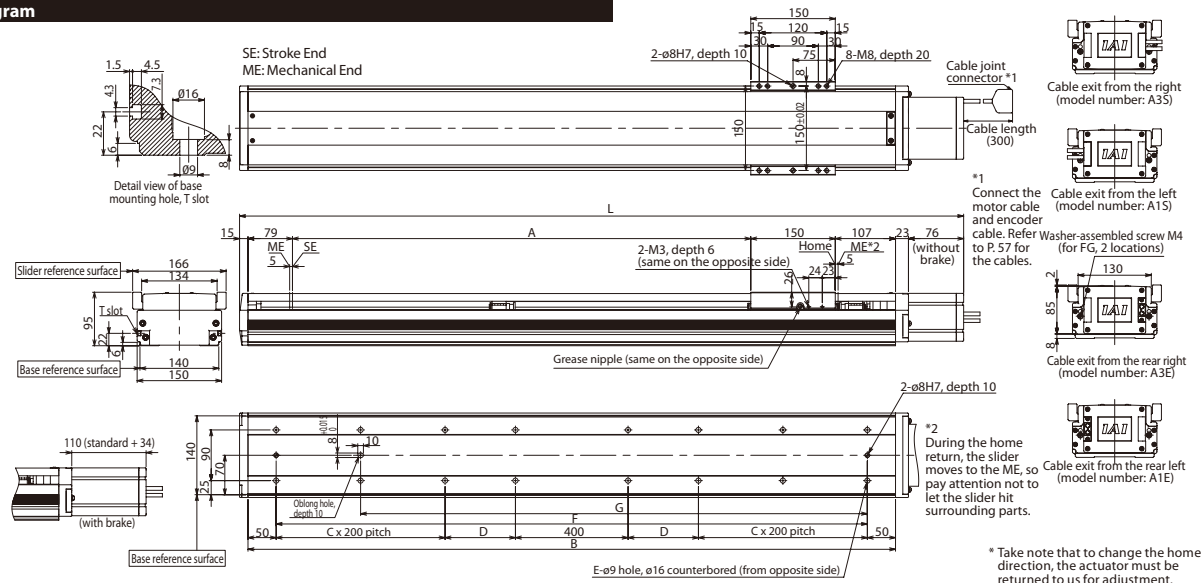
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm (±0.005mm) |
| Drive method (Note 3) | Ball screw Ø20mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 104.9N·m Mb: 149.9N·m Mc: 248.9N·m |
| Overhang load length | Ma direction: 750mm max. Mb, Mc directions: 750mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| 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) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg. *The maximum speed (mm/s) varies depending on the stroke.

| L | Stroke | | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 2500 |
|---|----------------------|---------------|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | without brake | with brake | 1464 | 1564 | 1664 | 1764 | 1864 | 1964 | 2064 | 2164 | 2264 | 2364 | 2464 | 2564 | 2664 | 2764 | 2864 |
| | A | | 1014 | 1114 | 1214 | 1314 | 1414 | 1514 | 1614 | 1714 | 1814 | 1914 | 2014 | 2114 | 2214 | 2314 | 2414 | 2514 |
| | B | | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 | 2450 | 2550 | 2650 | 2750 | 2850 |
| | C | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 |
| | D | | 225 | 275 | 325 | 375 | 425 | 475 | 525 | 575 | 625 | 675 | 725 | 775 | 825 | 875 | 925 | 975 |
| | E | | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 | 16 | 16 | 16 | 20 | 20 | 20 | 20 |
| | F | | 1250 | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 | 2450 | 2550 | 2650 | 2750 |
| | G | | 1050 | 1150 | 1250 | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 | 2450 | 2550 |
| | Mass (kg) | | 27.3 | 29.0 | 30.8 | 32.5 | 34.3 | 36.1 | 37.8 | 39.6 | 41.3 | 43.1 | 44.8 | 46.6 | 48.3 | 50.1 | 51.8 | 53.6 |
| | Maximum speed (mm/s) | | | | | | | | | | | | | | | | | |
| | Lead 20 | | | 1200 | | 1150 | 1000 | 950 | 830 | 740 | 650 | 590 | 540 | 490 | 440 | 410 | 370 | 340 |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200 VAC | →P56 |
| SSEL | 2 axes | | | | →P56 |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |



(Note 1) Refer to P. 9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.

(Note 5) When the traveling life is 10,000km.

(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.

(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISB-LXMX-200/ISPB-LXMX-200

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ISB-LXMX-400

Single-axis robot/Large, X-axis, mid-support type/Actuator width: 150mm/400W Straight shape

ISPB-LXMX-400

Single-axis robot/Large, X-axis, mid-support type/Actuator width: 150mm/400W Straight shape **High precision specification**



| Model Specification Items | Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---------------------------|---|------|--------------|---|-----------------------------------|---|--|--|-----------------------------------|
| | ISB: Standard specification ISPB: High precision specification | LXMX | 400 | A: Absolute specification I: Incremental specification | 400: 400W 40: 40mm 20: 20mm | 1000: 1000mm 2500: 2500mm (in 100mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 100mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|---------------------------------|--------------|------------------|-----------|---------------------------------|--------------|-----------------------|---|--------------|---------|---|----------------------|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISB[ISPB]-LXMX-①-400-40-②-③-④-⑤ | Absolute | 400 | 40 | 1000~2500 | 1~2400 | 0.4 | Designed exclusively for horizontal use | | 40 | Designed exclusively for horizontal use | | 169.6 | | |
| ISB[ISPB]-LXMX-①-400-20-②-③-④-⑤ | Incremental | | 20 | | 1~1200 | 0.4 | | | 90 | | | 339.1 | | |

* In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

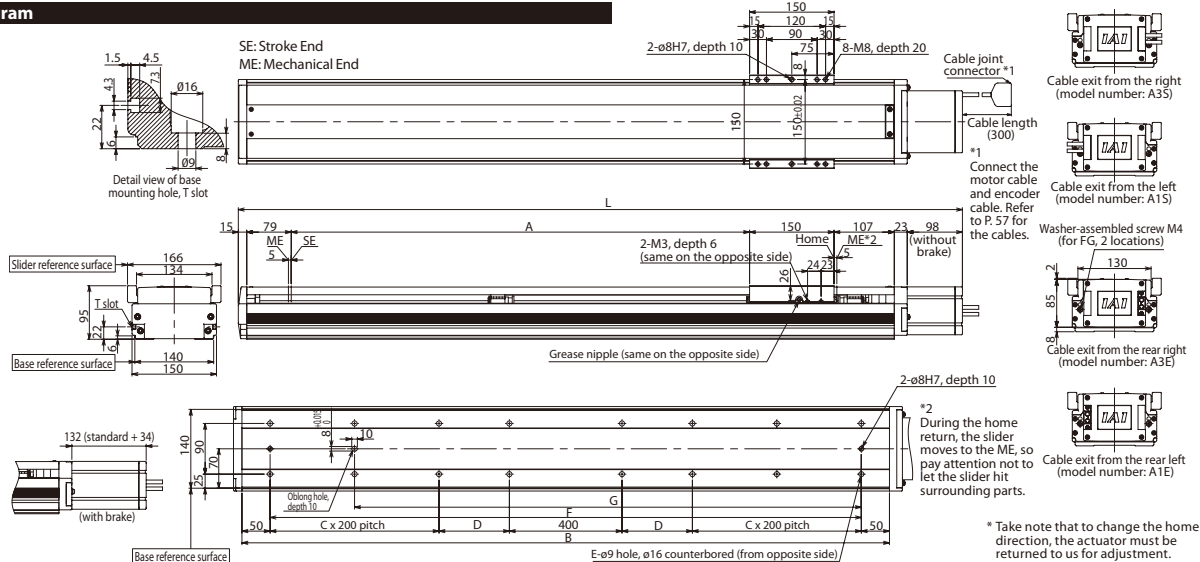
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw Ø20mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 104.9N·m Mb: 149.9N·m Mc: 248.9N·m |
| Overhang load length | Ma direction: 750mm max. Mb, Mc directions: 750mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q SSEL, SCON |
| 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) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg. *The maximum speed (mm/s) varies depending on the stroke.

| Stroke | Lead (mm) | | | | | | | | | | | | | | | | |
|----------------------|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 2500 | |
| L | without brake | 1486 | 1586 | 1686 | 1786 | 1886 | 1986 | 2086 | 2186 | 2286 | 2386 | 2486 | 2586 | 2686 | 2786 | 2886 | 2986 |
| | with brake | 1520 | 1620 | 1720 | 1820 | 1920 | 2020 | 2120 | 2220 | 2320 | 2420 | 2520 | 2620 | 2720 | 2820 | 2920 | 3020 |
| A | 1014 | 1114 | 1214 | 1314 | 1414 | 1514 | 1614 | 1714 | 1814 | 1914 | 2014 | 2114 | 2214 | 2314 | 2414 | 2514 | |
| B | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 | 2450 | 2550 | 2650 | 2750 | 2850 | |
| C | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | |
| D | 225 | 275 | 325 | 375 | 425 | 475 | 525 | 575 | 625 | 675 | 725 | 775 | 825 | 875 | 925 | 975 | |
| E | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 | 16 | 16 | 16 | 20 | 20 | 20 | 20 | |
| F | 1250 | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 | 2450 | 2550 | 2650 | 2750 | |
| G | 1050 | 1150 | 1250 | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 | 2450 | 2550 | |
| Mass (kg) | 27.7 | 29.5 | 31.3 | 33.0 | 34.8 | 36.5 | 38.3 | 40.0 | 41.8 | 43.5 | 45.3 | 47.0 | 48.8 | 50.6 | 52.3 | 54.1 | |
| Maximum speed (mm/s) | Lead 40 | 2400 | | 2300 | 2000 | 1900 | 1660 | 1480 | 1300 | 1180 | 1080 | 980 | 880 | 820 | 740 | 680 | |
| | Lead 20 | 1200 | | 1150 | 1000 | 950 | 830 | 740 | 650 | 590 | 540 | 490 | 440 | 410 | 370 | 340 | |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|--------------------------------|----------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200 VAC | →P56 |
| SSEL | 2 axes | | | Single-phase 200 VAC | →P56 |
| SCON | 1 axis | | Positioner pulse train control | →P56 | |



(Note 1) Refer to P. 9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.

(Note 5) When the traveling life is 10,000km.

(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.

(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

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ISB-LXMX-400/ISPB-LXMX-400

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ISB-LXUWX-200

Single-axis robot/Large, X-axis, mid-support, double-slider type/
Actuator width: 150mm/200W Straight shape

ISPB-LXUWX-200

Single-axis robot/Large, X-axis, mid-support, double-slider type/Actuator
width: 150mm/200W Straight shape **High precision specification**



Model Specification Items

| | | | | | | | | |
|---|-------|---|------------|----------|---|--|--|-----------------------------------|
| Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
| ISB: Standard specification ISPB: High precision specification | LXUWX | A: Absolute specification I: Incremental specification | 200: 200W | 20: 20mm | 1000: 1000mm 2500: 2500mm (in 100mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 100mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|--|----------------------|------------------|-----------|---------------------------------|--------------|-----------------------|---------|---|---------|--------------------|----------------------|---|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISB[ISPB]-LXUWX- [1] -200-20- [2] - [3] - [4] - [5] | Absolute Incremental | 200 | 20 | 1000~2500 | 1~1200 | 0.4 | | Designed exclusively for horizontal use | | 45 | | Designed exclusively for horizontal use | 170.1 | |

*In the above model numbers, [1] indicates the encoder type, [2] indicates the stroke, [3] indicates the applicable controller, [4] indicates the cable length, and [5] indicates the option(s).

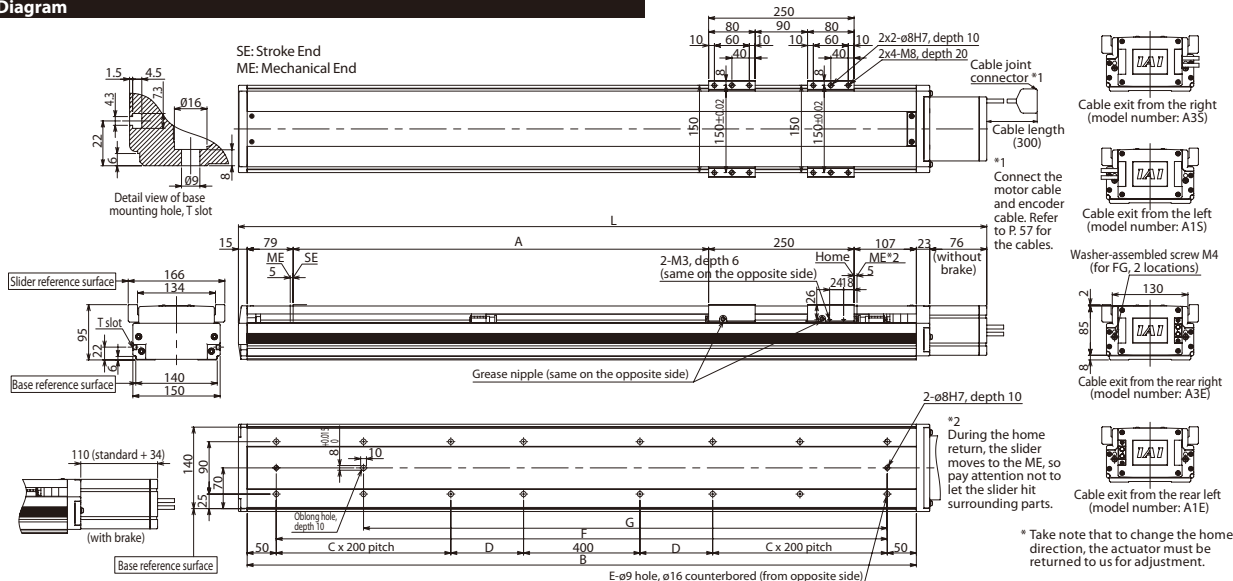
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm (±0.005mm) |
| Drive method (Note 3) | Ball screw Ø20mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 179.3N·m Mb: 254.8N·m Mc: 247.0N·m |
| Overhang load length | Ma direction: 1250mm max. Mb, Mc directions: 1250mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| 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) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

| Stroke | *If the brake is equipped, the mass increases by 0.6kg. *The maximum speed (mm/s) varies depending on the stroke. | | | | | | | | | | | | | | | | |
|---------------------------------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 2500 | |
| L | without brake | 1564 | 1664 | 1764 | 1864 | 1964 | 2064 | 2164 | 2264 | 2364 | 2464 | 2564 | 2664 | 2764 | 2864 | 2964 | 3064 |
| | with brake | 1598 | 1698 | 1798 | 1898 | 1998 | 2098 | 2198 | 2298 | 2398 | 2498 | 2598 | 2698 | 2798 | 2898 | 2998 | 3098 |
| A | 1014 | 1114 | 1214 | 1314 | 1414 | 1514 | 1614 | 1714 | 1814 | 1914 | 2014 | 2114 | 2214 | 2314 | 2414 | 2514 | |
| B | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 | 2450 | 2550 | 2650 | 2750 | 2850 | 2950 | |
| C | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | |
| D | 275 | 325 | 375 | 425 | 475 | 525 | 575 | 625 | 675 | 725 | 775 | 825 | 875 | 925 | 975 | 1025 | |
| E | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 | 16 | 16 | 16 | 20 | 20 | 20 | 20 | 20 | |
| F | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 | 2450 | 2550 | 2650 | 2750 | 2850 | |
| G | 1150 | 1250 | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 | 2450 | 2550 | 2650 | |
| Mass (kg) | 30.4 | 32.1 | 33.9 | 35.6 | 37.4 | 39.1 | 40.9 | 42.6 | 44.4 | 46.1 | 47.9 | 49.7 | 51.4 | 53.2 | 54.9 | 56.7 | |
| Maximum speed (mm/s) Lead 20 | | 1200 | | 1150 | 1000 | 950 | 830 | 740 | 650 | 590 | 540 | 490 | 440 | 410 | 370 | 340 | |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/ incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200 VAC | →P56 |
| SSEL | 2 axes | | | Single-phase 100/200 VAC | →P56 |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |



(Note 1) Refer to P. 9 for the relationship of acceleration and payload. The values in [] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.

(Note 2, 3, 4)

(Note 5) When the traveling life is 10,000km.

(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.

(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISB-LXUWX-200/ISPB-LXUWX-200

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ISB-LXUWX-400

Single-axis robot/Large, X-axis, mid-support, double-slider type/
Actuator width: 150mm/400W Straight shape

ISPB-LXUWX-400

Single-axis robot/Large, X-axis, mid-support, double-slider type/Actuator
width: 150mm/400W Straight shape **High precision specification**



| Model Specification Items | Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---------------------------|---|-------|--------------|---|-----------------------------------|---|--|--|-----------------------------------|
| | ISB: Standard specification ISPB: High precision specification | LXUWX | 400 | A: Absolute specification I: Incremental specification | 400: 400W 40: 40mm 20: 20mm | 1000: 1000mm (in 100mm increments) 2500: 2500mm | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 100mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|----------------------------------|--------------|------------------|-----------|---------------------------------|--------------|-----------------------|---------|---|---------|--------------------|----------------------|---|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISB[ISPB]-LXUWX-①-400-40-②-③-④-⑤ | Absolute | 400 | 40 | 1000~2500 | 1~2400 | 0.4 | | Designed exclusively for horizontal use | | 40 | | Designed exclusively for horizontal use | 169.6 | |
| ISB[ISPB]-LXUWX-①-400-20-②-③-④-⑤ | Incremental | | 20 | | 1~1200 | 0.4 | | | | 90 | | | 339.1 | |

*1.0G=9800mm/sec²
*In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

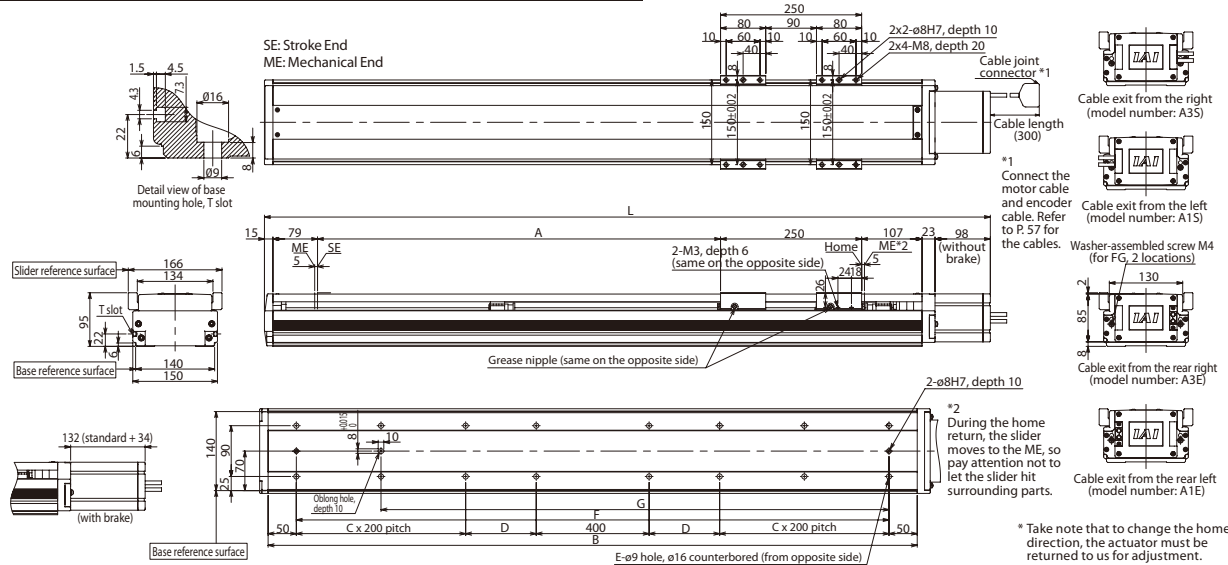
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw Ø20mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 179.3N·m Mb: 254.8N·m Mc: 247.0N·m |
| Overhang load length | Ma direction: 1250mm max. Mb, Mc directions: 1250mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| 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) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

| Stroke | Lead | | | | | | | | | | Mass (kg) | | | | | | | | | | Maximum speed (mm/s) | | | | | | | | | | | | | |
|-----------------|------|------|------|------|------|------|------|------|------|------|-----------|------|------|------|------|------|------|------|------|------|----------------------|------|------|------|------|------|------|------|------|------|------|------|---------|---------|
| | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 2500 | 30.8 | 32.6 | 34.3 | 36.1 | 37.8 | 39.6 | 41.4 | 43.1 | 44.9 | 46.6 | 48.4 | 50.1 | 51.9 | 53.6 | 55.4 | 57.1 | Lead 40 | Lead 20 |
| L without brake | 1586 | 1686 | 1786 | 1886 | 1986 | 2086 | 2186 | 2286 | 2386 | 2486 | 2586 | 2686 | 2786 | 2886 | 2986 | 3086 | | | | | | | | | | | | | | | | | | |
| L with brake | 1620 | 1720 | 1820 | 1920 | 2020 | 2120 | 2220 | 2320 | 2420 | 2520 | 2620 | 2720 | 2820 | 2920 | 3020 | 3120 | | | | | | | | | | | | | | | | | | |
| A | 1014 | 1114 | 1214 | 1314 | 1414 | 1514 | 1614 | 1714 | 1814 | 1914 | 2014 | 2114 | 2214 | 2314 | 2414 | 2514 | | | | | | | | | | | | | | | | | | |
| B | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 | 2450 | 2550 | 2650 | 2750 | 2850 | 2950 | | | | | | | | | | | | | | | | | | |
| C | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | | | | |
| D | 275 | 325 | 375 | 425 | 475 | 525 | 575 | 625 | 675 | 725 | 775 | 825 | 875 | 925 | 975 | 1025 | | | | | | | | | | | | | | | | | | |
| E | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 | 16 | 16 | 16 | 20 | 20 | 20 | 20 | 20 | | | | | | | | | | | | | | | | | | |
| F | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 | 2450 | 2550 | 2650 | 2750 | 2850 | | | | | | | | | | | | | | | | | | |
| G | 1150 | 1250 | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 | 2450 | 2550 | 2650 | | | | | | | | | | | | | | | | | | |

*If the brake is equipped, the mass increases by 0.6kg.

*The maximum speed (mm/s) varies depending on the stroke.

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|--------------------------------|----------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/ incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200 VAC | →P56 |
| SSEL | 2 axes | | | Single-phase 100/200 VAC | →P56 |
| SCON | 1 axis | | Positioner pulse train control | Single-phase 200 VAC | →P56 |



(Note 1) Refer to P. 9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10,000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

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ISB-LXUWX-400/ISPB-LXUWX-400

SSPA-SXM-200

Single-axis robot/Small, X-axis, high-rigidity, iron-base type/Actuator width: 100mm/200W Straight shape High precision specification



Model Specification Items

| | | | | | | | |
|------------------------------------|---|------------|----------------------------------|--|--|--|-----------------------------------|
| SSPA — SXM | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
| SSPA: High precision specification | A: Absolute specification I: Incremental specification | 200: 200W | 30: 30mm 20: 20mm 10: 10mm | 100: 100mm 1100: 1100mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|---------------------------|----------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| SSPA-SXM-□-200-30-□-□-□-□ | Absolute Incremental | 200 | 30 | 100~1100 | 1~1800 | 0.4 | 1.2 | 0.4 | 1.2 | 30 | 10 | 4 | 1 | 113.9 |
| SSPA-SXM-□-200-20-□-□-□-□ | | | 20 | | 1~1200 | 0.4 | 1.0 | 0.4 | 1.0 | 45 | 17 | 6 | 2.4 | 170.9 |
| SSPA-SXM-□-200-10-□-□-□-□ | | | 10 | | 1~600 | 0.4 | 0.7 | 0.4 | 0.6 | 90 | 50 | 12 | 8 | 341.8 |

* In the above model numbers, □ indicates the encoder type, □ indicates the stroke, □ indicates the applicable controller, □ indicates the cable length, and □ indicates the option(s).

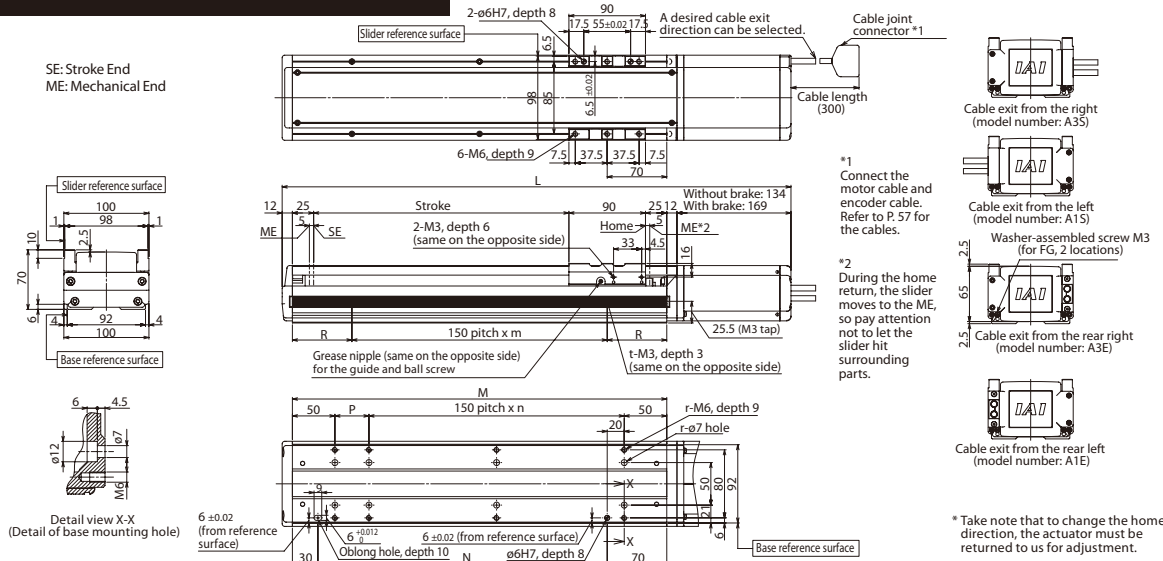
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Guide with ball retention mechanism | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Electrolytic black coating | MD | →P12 |
| Brake | B | →P11 | Non-motor side specification | NM | →P12 |
| Creep sensor | C | →P11 | Master axis specification (sensor on the opposite side) | RT | →P12 |
| Creep sensor on the opposite side | CL | →P11 | Slave axis specification | S | →P12 |
| | | | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability | ±0.005mm |
| Drive method | Ball screw Ø16mm, equivalent to rolled C5 |
| Lost Motion | 0.02mm max. |
| Dynamic allowable load moment (Note 2) | Ma: 36N·m Mb: 36N·m Mc: 98N·m |
| Overhang load length | Ma direction: 450mm max. Mb, Mc directions: 450mm max. |
| Dynamic straightness (Note 3) | 0.015mm/m max. |
| Base | Material: Cast iron with coating |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| Cable length (Note 4) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Ambient operating temperature/humidity | 0 to 40°C, 85%RH max. (non-condensing) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

| Stroke | *If the brake is equipped, the mass increases by 0.6kg. *The maximum speed (mm/s) varies depending on the stroke. | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | |
| L | without brake | 398 | 448 | 498 | 548 | 598 | 648 | 698 | 748 | 798 | 848 | 898 | 948 | 998 | 1048 | 1098 | 1148 | 1198 | 1248 | 1298 | 1348 | 1398 |
| | with brake | 433 | 483 | 533 | 583 | 633 | 683 | 733 | 783 | 833 | 883 | 933 | 983 | 1033 | 1083 | 1133 | 1183 | 1233 | 1283 | 1333 | 1383 | 1433 |
| M | 240 | 290 | 340 | 390 | 440 | 490 | 540 | 590 | 640 | 690 | 740 | 790 | 840 | 890 | 940 | 990 | 1040 | 1090 | 1140 | 1190 | 1240 | 1290 |
| N | 140 | 190 | 240 | 290 | 340 | 390 | 440 | 490 | 540 | 590 | 640 | 690 | 740 | 790 | 840 | 890 | 940 | 990 | 1040 | 1090 | 1140 | 1190 |
| P | 140 | 40 | 90 | 140 | 40 | 90 | 140 | 40 | 90 | 140 | 40 | 90 | 140 | 40 | 90 | 140 | 40 | 90 | 140 | 40 | 90 | 140 |
| R | 45 | 70 | 20 | 45 | 70 | 20 | 45 | 70 | 20 | 45 | 70 | 20 | 45 | 70 | 20 | 45 | 70 | 20 | 45 | 70 | 20 | 45 |
| m | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 7 | 8 |
| n | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 7 |
| r | 4 | 6 | 6 | 6 | 8 | 8 | 8 | 10 | 10 | 10 | 12 | 12 | 12 | 14 | 14 | 14 | 16 | 16 | 16 | 18 | 18 | 18 |
| t | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 9 |
| Mass (kg) | 6.8 | 7.4 | 8.1 | 8.7 | 9.3 | 10.0 | 10.6 | 11.2 | 11.9 | 12.5 | 13.1 | 13.8 | 14.4 | 15.0 | 15.6 | 16.3 | 16.9 | 17.5 | 18.2 | 18.8 | 19.4 | 19.9 |
| Maximum speed (mm/s) | Lead 30 | 1800 | | | | | | | | | | | | | | | | | | | | |
| | Lead 20 | 1200 | | | | | | | | | | | | | | | | | | | | |
| | Lead 10 | 600 | | | | | | | | | | | | | | | | | | | | |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200 VAC | →P56 |
| SSEL | 2 axes | | | →P56 | |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |



(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
 (Note 2) When the traveling life is 10,000 km.
 (Note 3) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
 (Note 4) The maximum cable length is 30 m. Specify a desired length in meters. (Example. X08 = 8 m)

SSPA-SXM-200

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SSPA-MXM-400

Single-axis robot/Medium, X-axis, high-rigidity, iron-base type/Actuator
width: 130mm/400W Straight shape **High precision specification**



| Model Specification Items | SSPA | MXM | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---------------------------|------------------------------------|-----|---|---|---|--|--|-----------------------------------|---------|
| | SSPA: High precision specification | | A: Absolute specification I: Incremental specification | 400: 400W 40: 40mm 20: 20mm 10: 10mm | 100: 100mm 1300: 1300mm (in 50 mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. | |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|---------------------------|-------------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| SSPA-MXM-①-400-40-②-③-④-⑤ | Absolute Incremental | 400 | 40 | 100~1300 | 1~2400 | 0.4 | 1.2 | 0.4 | 1.2 | 45 | 13.5 | 6 | 2 | 169.6 |
| SSPA-MXM-①-400-20-②-③-④-⑤ | | | 20 | | 1~1200 | 0.4 | 1.2 | 0.4 | 1 | 90 | 34 | 12 | 4.8 | 339.1 |
| SSPA-MXM-①-400-10-②-③-④-⑤ | | | 10 | | 1~600 | 0.4 | 0.7 | 0.4 | 0.6 | 120 | 70 | 25 | 16.5 | 678.3 |

* In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

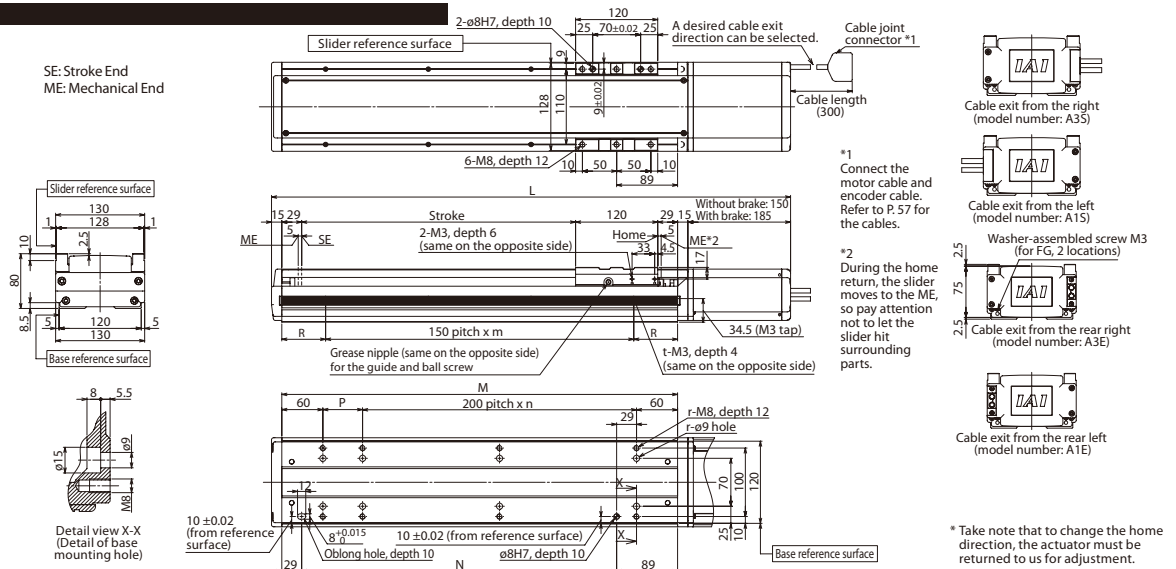
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Guide with ball retention mechanism | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Electrolytic black coating | MD | →P12 |
| Brake | B | →P11 | Non-motor side specification | NM | →P12 |
| Creep sensor | C | →P11 | Master axis specification (sensor on the opposite side) | RT | →P12 |
| Creep sensor on the opposite side | CL | →P11 | Slave axis specification | S | →P12 |
| | | | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability | ±0.005mm |
| Drive method | Ball screw 820mm, equivalent to rolled C5 |
| Lost Motion | 0.02mm max. |
| Dynamic allowable load moment (Note 2) | Ma: 90N·m Mb: 90N·m Mc: 230N·m |
| Overhang load length | Ma direction: 600mm max. Mb, Mc directions: 600mm max. |
| Dynamic straightness (Note 3) | 0.015mm/m max. |
| Base | Material: Cast iron with coating |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| Cable length (Note 4) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Ambient operating temperature/humidity | 0 to 40°C, 85%RH max. (non-condensing) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

| Stroke | L | | | | | | | | | | | | | | | | | | M | | | | | | | | | | | | | | | | | | N | | | | | | | | | | | | | | | | | | P | | | | | | | | | | | | | | | | | | R | | | | | | | | | | | | | | | | | | m | | | | | | | | | | | | | | | | | | n | | | | | | | | | | | | | | | | | | r | | | | | | | | | | | | | | | | | | t | | | | | | | | | | | | | | | | | | Mass (kg) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| without brake | 458 | 508 | 558 | 608 | 658 | 708 | 758 | 808 | 858 | 908 | 958 | 1008 | 1058 | 1108 | 1158 | 1208 | 1258 | 1308 | 1358 | 1408 | 1458 | 1508 | 1558 | 1608 | 1658 | 278 | 328 | 378 | 428 | 478 | 528 | 578 | 628 | 678 | 728 | 778 | 828 | 878 | 928 | 978 | 1028 | 1078 | 1128 | 1178 | 1228 | 1278 | 1328 | 1378 | 1428 | 1478 | 160 | 210 | 260 | 310 | 360 | 410 | 460 | 510 | 560 | 610 | 660 | 710 | 760 | 810 | 860 | 910 | 960 | 1010 | 1060 | 1110 | 1160 | 1210 | 1260 | 1310 | 1360 | 158 | 208 | 258 | 308 | 358 | 408 | 458 | 508 | 558 | 608 | 658 | 708 | 758 | 808 | 858 | 908 | 958 | 1008 | 1058 | 1108 | 1158 | 1208 | 1258 | 1308 | 64 | 14 | 39 | 64 | 14 | 39 | 64 | 14 | 39 | 64 | 14 | 39 | 64 | 14 | 39 | 64 | 14 | 39 | 64 | 14 | 39 | 64 | 14 | 39 | 64 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 | 14 | 14 | 14 | 16 | 16 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | 12.4 | 13.5 | 14.6 | 15.7 | 16.7 | 17.8 | 18.9 | 20.0 | 21.1 | 22.2 | 23.2 | 24.3 | 25.4 | 26.5 | 27.6 | 28.7 | 29.7 | 30.8 | 31.9 | 33.0 | 34.1 | 35.2 | 36.2 | 37.3 | 38.4 |
| Maximum speed (mm/s) | Lead 40 | 2400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Lead 20 | 1200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Lead 10 | 600 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

*If the brake is equipped, the mass increases by 0.6kg. *The maximum speed (mm/s) varies depending on the stroke.

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|----------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/ incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200 VAC | →P56 |
| SSEL | 2 axes | | | Single-phase 100/200 VAC | →P56 |
| SCON | 1 axis | | | Single-phase 200 VAC | →P56 |



(Note 1) Refer to P.9 for the relationship of acceleration and payload.
(Note 2) When the traveling life is 10,000 km.
(Note 3) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 4) The maximum cable length is 30 m. Specify a desired length in meters. (Example. X08 = 8 m)

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SSPA-MXM-400

SSPA-LXM-750

Single-axis robot/Large, X-axis, high-rigidity, iron-base type/Actuator width: 155mm/750W Straight shape **High precision specification**



Model Specification Items

| | | | | | | | | | |
|------------------------------------|------------|---|-----------------------------------|---|--|--|-----------------------------------|---------|--|
| SSPA | LXM | 750 | | | | | | | |
| Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options | |
| SSPA: High precision specification | | A: Absolute specification I: Incremental specification | 750: 750W 50: 50mm 25: 25mm | 100: 100mm 1500: 1500mm (in 50 mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. | | |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|---|--------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg)** | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| SSPA-LXM- 1 -750-50- 2 - 3 - 4 - 5 | Absolute | 750 | 50 | 100~1500 | 1~2500 | 0.4 | 1.2 | 0.4 | 1.2 | 60 | 20 | 12 | 4 | 255 |
| SSPA-LXM- 1 -750-25- 2 - 3 - 4 - 5 | Incremental | | 25 | | 1~1250 | 0.4 | 1.2 | 0.4 | 1.2 | 120 | 40 | 25 | 8 | 510 |

*In the above model numbers, **1** indicates the encoder type, **2** indicates the stroke, **3** indicates the applicable controller, **4** indicates the cable length, and **5** indicates the option(s).
 **If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 2.0kg. (Please also refer to P.9).

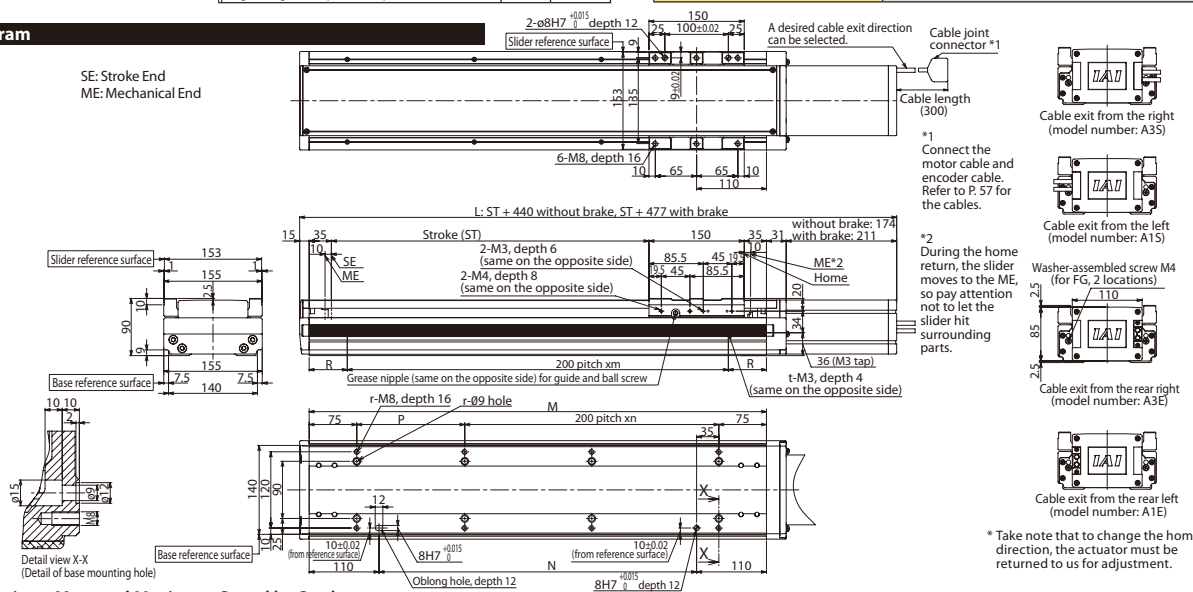
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Guide with ball retention mechanism | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Electrolytic black coating | MD | →P12 |
| Brake | B | →P11 | Non-motor side specification | NM | →P12 |
| Creep sensor | C | →P11 | Master axis specification (sensor on the opposite side) | RT | →P12 |
| Creep sensor on the opposite side | CL | →P11 | Slave axis specification | S | →P12 |
| | | | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability | ±0.005mm |
| Drive method | Ball screw Ø25mm, equivalent to rolled C5 |
| Lost Motion (Note 4) | 0.02mm max. |
| Dynamic allowable load moment (Note 2) | Ma: 138.8N·m Mb: 138.8N·m Mc: 334.5N·m |
| Overhang load length | Ma direction: 750mm max. Mb, Mc directions: 750mm max. |
| Dynamic straightness (Note 3) | 0.015mm/m max. |
| Base | Material: Cast iron with coating |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| Cable length (Note 4) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Ambient operating temperature/humidity | 0 to 40°C, 85%RH max. (non-condensing) |

Diagram



Dimensions, Mass 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 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 | |
|----------------------|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L | without brake | 540 | 590 | 640 | 690 | 740 | 790 | 840 | 890 | 940 | 990 | 1040 | 1090 | 1140 | 1190 | 1240 | 1290 | 1340 | 1390 | 1440 | 1490 | 1540 | 1590 | 1640 | 1690 | 1740 | 1790 | 1840 | 1890 | 1940 |
| | with brake | 577 | 627 | 677 | 727 | 777 | 827 | 877 | 927 | 977 | 1027 | 1077 | 1127 | 1177 | 1227 | 1277 | 1327 | 1377 | 1427 | 1477 | 1527 | 1577 | 1627 | 1677 | 1727 | 1777 | 1827 | 1877 | 1927 | 1977 |
| M | 320 | 370 | 420 | 470 | 520 | 570 | 620 | 670 | 720 | 770 | 820 | 870 | 920 | 970 | 1020 | 1070 | 1120 | 1170 | 1220 | 1270 | 1320 | 1370 | 1420 | 1470 | 1520 | 1570 | 1620 | 1670 | 1720 | |
| N | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 | |
| P | 170 | 220 | 270 | 320 | 370 | 420 | 470 | 520 | 570 | 620 | 670 | 720 | 770 | 820 | 870 | 920 | 970 | 1020 | 1070 | 1120 | 1170 | 1220 | 1270 | 1320 | 1370 | 1420 | 1470 | 1520 | 1570 | |
| R | 60 | 85 | 10 | 35 | 60 | 85 | 10 | 35 | 60 | 85 | 10 | 35 | 60 | 85 | 10 | 35 | 60 | 85 | 10 | 35 | 60 | 85 | 10 | 35 | 60 | 85 | 10 | 35 | 60 | |
| m | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 8 | 8 | |
| n | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | |
| r | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 | 14 | 16 | 16 | 16 | 16 | 18 | 18 | 18 | |
| t | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | |
| Mass (kg) | 21.0 | 23.0 | 25.0 | 26.5 | 28.0 | 29.5 | 31.0 | 33.0 | 35.0 | 36.5 | 38.0 | 39.5 | 41.0 | 43.0 | 45.0 | 46.5 | 48.0 | 49.5 | 51.0 | 52.5 | 54.0 | 56.0 | 58.0 | 59.5 | 61.0 | 62.5 | 64.0 | 66.0 | 68.0 | |
| Maximum speed (mm/s) | Lead 50 | 2500 | | | | | | | | | | | | | | | | | | 2320 | 1950 | 1660 | 1440 | 1250 | 1100 | | | | | |
| | Lead 25 | 1250 | | | | | | | | | | | | | | | | | | 1160 | 970 | 830 | 720 | 620 | 550 | | | | | |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/Incremental | Program | Single-/three-phase 200 VAC | →P56 |
| X-SEL-K | 4 axes | | | Single-phase 100/200 VAC | →P56 |
| X-SEL-J *(note 5) | 4 axes | | | Single-phase 200 VAC | →P56 |
| SSEL | 2 axes | | | Positioner pulse train control | →P56 |
| SCON | 1 axis | | | | →P56 |

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
 (Note 2) When the traveling life is 10,000 km.
 (Note 3) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
 (Note 4) The maximum cable length is 30 m. Specify a desired length in meters. (Example. X08 = 8 m)
 (Note 5) If the actuator is to be used vertically, use a controller other than the XSEL-J type.

SSPA-LXM-750

Simple, Dustproof Type

ISDB / ISPDB

| | | | | | | |
|-----------------------|---------------------------|--------|------------------|--------------|---------------------|-------------|
| ISDB ISPDB | Simple, Dustproof Type | Small | Standard Type | Width: 90mm | ISDB (ISPDB)-S | P.36 |
| | | Medium | Standard Type | Width: 120mm | ISDB (ISPDB)-M-100 | P.37 |
| | | | | Width: 120mm | ISDB (ISPDB)-M-200 | P.38 |
| | | | Mid-Support Type | Width: 120mm | ISDB (ISPDB)-MX-200 | P.39 |
| | | Large | Standard Type | Width: 150mm | ISDB (ISPDB)-L-200 | P.40 |
| | | | | Width: 150mm | ISDB (ISPDB)-L-400 | P.41 |
| | | | Mid-Support Type | Width: 150mm | ISDB (ISPDB)-LX-200 | P.42 |
| | | | | Width: 150mm | ISDB (ISPDB)-LX-400 | P.43 |

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ISDB-S

Single-axis robot/Small, dustproof type/Actuator width: 90mm/60W
Straight shape

ISPDB-S

Single-axis robot/Small, dustproof type/Actuator width: 90mm/60W
Straight shape **High precision specification**

Model Specification Items

| | | | | | | | | | |
|---|---|---|---------|------------------------------|--|--|--|-----------------------------------|---------|
| Series | S | Encoder type | 60 | Motor type | 16 | Stroke | Applicable controller | Cable length | Options |
| ISDB: Standard specification ISPDB: High precision specification | | A: Absolute specification I: Incremental specification | 60: 60W | 16: 16mm 8: 8mm 4: 4mm | 100: 100mm 800: 800mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. | |



* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|---|-------------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg)** | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISDB[ISPDB]-S-[1]-60-16-[2]-[3]-[4]-[5] | Absolute Incremental | 60 | 16 | 100~800 | 1~960 | 0.4 | 1.0 | 0.4 | 0.8 | 13 | 4.5 | 3 | 2 | 53.1 |
| ISDB[ISPDB]-S-[1]-60-8-[2]-[3]-[4]-[5] | | | 8 | | 1~480 | 0.4 | 0.7 | 0.4 | 0.6 | 27 | 12 | 6 | 5 | 106.1 |
| ISDB[ISPDB]-S-[1]-60-4-[2]-[3]-[4]-[5] | | | 4 | | 1~240 | 0.2 | 0.5 | 0.2 | 0.4 | 55 | 30 | 14 | 12 | 212.3 |

* In the above model numbers, [1] indicates the encoder type, [2] indicates the stroke, [3] indicates the applicable controller, [4] indicates the cable length, and [5] indicates the option(s).
** If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 0.5kg. (Please also refer to P.9).

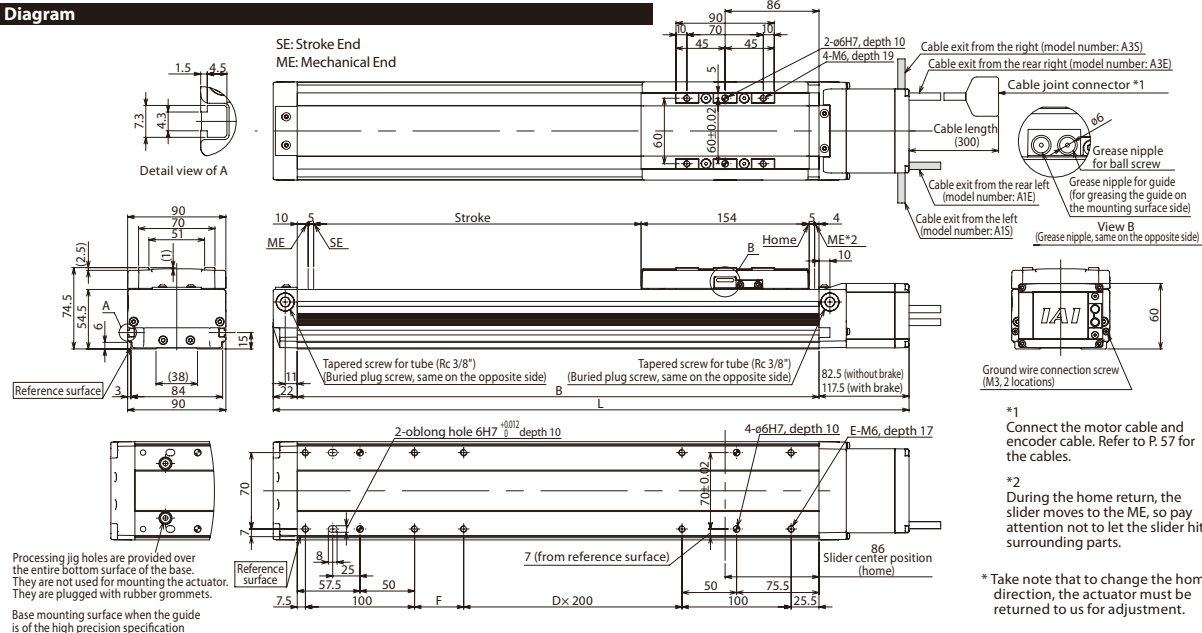
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw ø12mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 28.4N·m Mb: 40.2N·m Mc: 65.7N·m |
| Overhang load length | Ma direction: 450mm max. Mb, Mc directions: 450mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| Cable length (Note 7) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Protection structure | IP30 |
| Ambient operating temperature/humidity | 0 to 40°C, 85%RH max. (non-condensing) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

* If the brake is equipped, the mass increases by 0.2kg. * The maximum speed (mm/s) varies depending on the stroke.

| Stroke | L | | | | | | | | | | | | | | | | |
|----------------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--|--|
| | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | | |
| without brake | 382.5 | 432.5 | 482.5 | 532.5 | 582.5 | 632.5 | 682.5 | 732.5 | 782.5 | 832.5 | 882.5 | 932.5 | 982.5 | 1032.5 | 1082.5 | | |
| | 417.5 | 467.5 | 517.5 | 567.5 | 617.5 | 667.5 | 717.5 | 767.5 | 817.5 | 867.5 | 917.5 | 967.5 | 1017.5 | 1067.5 | 1117.5 | | |
| with brake | 278 | 328 | 378 | 428 | 478 | 528 | 578 | 628 | 678 | 728 | 778 | 828 | 878 | 928 | 978 | | |
| D | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | | |
| E | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 | | |
| F | 45 | 95 | 145 | 195 | 45 | 95 | 145 | 195 | 45 | 95 | 145 | 195 | 45 | 95 | 145 | | |
| Mass (kg) | 4.1 | 4.4 | 4.8 | 5.1 | 5.5 | 5.9 | 6.2 | 6.6 | 7.0 | 7.3 | 7.7 | 8.1 | 8.4 | 8.8 | 9.1 | | |
| Maximum speed (mm/s) | Lead 16 | | | | | | | | | | | | 960 | | | | |
| | Lead 8 | | | | | | | | | | | | 480 | | | | |
| | Lead 4 | | | | | | | | | | | | 240 | | | | |
| | | | | | | | | | | | | | | | | | |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|----------------------------|--------------------------------|
| X-SEL-P/Q | 6 axes | Absolute/ incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | | →P56 |
| SSEL | 2 axes | | | Single-phase 100/200 VAC | →P56 |
| SCON | 1 axis | | | | Positioner pulse train control |



(Note 1) Refer to P.9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPDB series. Other specification values apply commonly to the ISDB and ISPDB.

(Note 5) When the traveling life is 10,000km.

(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.

(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISDB-S/ISPDB-S

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Toll Free Fax (877) SERV099

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sales@electromate.com

ISDB-M-200

Single-axis robot/Medium, dustproof type/Actuator width: 120mm/200W
Straight shape

ISPDB-M-200

Single-axis robot/Medium, dustproof type/Actuator width: 120mm/200W
Straight shape **High precision specification**



Model Specification Items

| | | | | | | | | | | | | | | |
|-------------------------------------|---|------------------------------|-----------|------------|----------|--------------|----------------------|--------------|----------|-----------------------|----------|--------------|-----------------------|-----------------------------------|
| Series | M | Encoder type | 200 | Motor type | 200W | Lead | 30mm | Stroke | 100mm | Applicable controller | XSEL-J/K | Cable length | N | Options |
| ISDB: Standard specification | | A: Absolute specification | 200: 200W | 30: 30mm | 20: 20mm | 100: 100mm | ? | T1: XSEL-J/K | T2: SCON | N: None | S: 3m | M: 5m | X□□: Specified length | Refer to the options table below. |
| ISPDB: High precision specification | | I: Incremental specification | | 10: 10mm | 5: 5mm | 1100: 1100mm | (in 50mm increments) | SSEL | XSEL-P/Q | | | | | |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|--------------------------------|----------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISDB[ISPDB]-M-①-200-30-②-③-④-⑤ | Absolute/Incremental | 200 | 30 | 100~1100 | 1~1800 | 0.4 | 1.0 | 0.4 | 1.0 | 30 | 12 | 6 | 3 | 113.9 |
| ISDB[ISPDB]-M-①-200-20-②-③-④-⑤ | | | 20 | | 1~1200 | 0.4 | 1.0 | 0.4 | 1.0 | 45 | 16 | 10 | 5 | 170.9 |
| ISDB[ISPDB]-M-①-200-10-②-③-④-⑤ | | | 10 | | 1~600 | 0.4 | 0.7 | 0.4 | 0.6 | 90 | 40 | 20 | 15 | 341.8 |
| ISDB[ISPDB]-M-①-200-5-②-③-④-⑤ | | | 5 | | 1~300 | 0.2 | 0.5 | 0.2 | 0.4 | 110 | 80 | 40 | 30 | 683.6 |

* In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

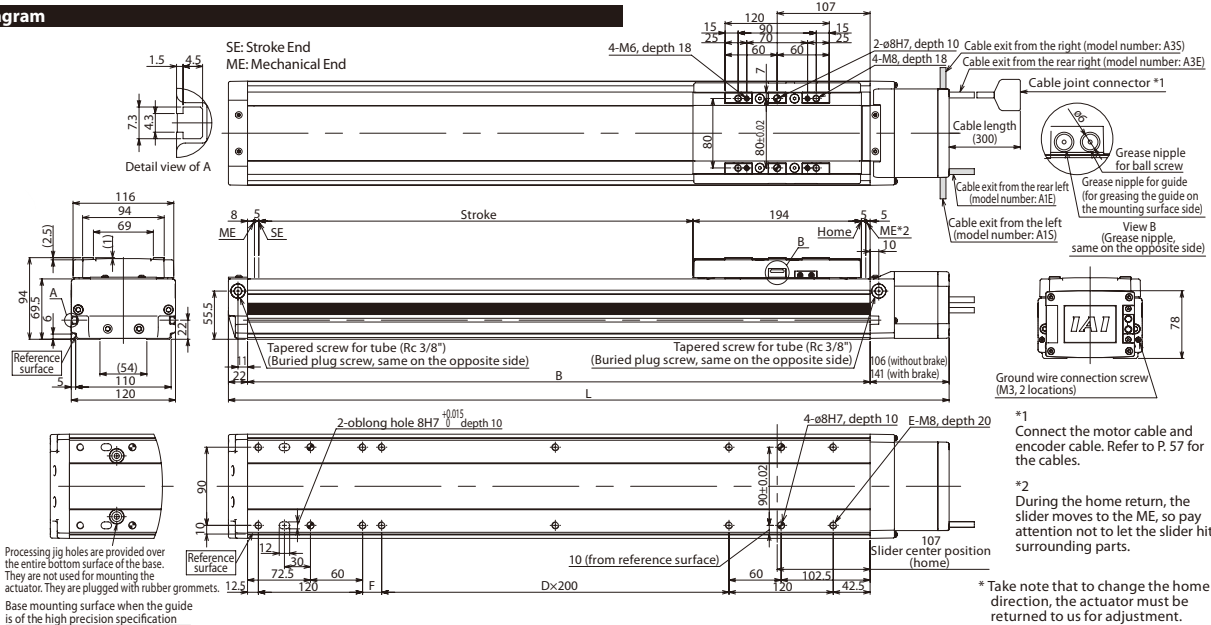
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw ø16mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 69.6N·m Mb: 99.0N·m Mc: 161.7N·m |
| Overhang load length | Ma direction: 600mm max. Mb, Mc directions: 600mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| Cable length (Note 7) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Protection structure | IP30 |
| Ambient operating temperature/humidity | 0 to 40°C, 85%RH max. (non-condensing) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

| Stroke | L | | | | | | | | | | | B | | | | | | | | | | | D | | | | | | | | | | | E | | | | | | | | | | | F | | | | | | | | | | | Mass (kg) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|----|-----|-----|----|----|-----|-----|----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------|------|------|------|------|------|------|-----|-----|-----|-----|-----|---------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| without brake | 445 | 495 | 545 | 595 | 645 | 695 | 745 | 795 | 845 | 895 | 945 | 995 | 1045 | 1095 | 1145 | 1195 | 1245 | 1295 | 1345 | 1395 | 1445 | 317 | 367 | 417 | 467 | 517 | 567 | 617 | 667 | 717 | 767 | 817 | 867 | 917 | 967 | 1017 | 1067 | 1117 | 1167 | 1217 | 1267 | 1317 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 | 14 | 16 | 16 | 16 | 16 | 16 | 16 | 18 | 22 | 72 | 122 | 172 | 22 | 72 | 122 | 172 | 22 | 72 | 122 | 172 | 22 | 72 | 122 | 172 | 22 | 72 | 122 | 172 | 22 | 72 | 122 | 172 | 22 | 7.9 | 8.5 | 9.2 | 9.8 | 10.4 | 11.1 | 11.7 | 12.3 | 13.0 | 13.6 | 14.2 | 14.9 | 15.5 | 16.1 | 16.8 | 17.4 | 18.0 | 18.7 | 19.3 | 19.9 | 20.6 | Lead 30 | 1800 | 1630 | 1440 | 1280 | 1150 | 1035 | 935 | 850 | 780 | 715 | 660 | Lead 20 | 1200 | 1085 | 960 | 855 | 765 | 690 | 625 | 570 | 520 | 475 | 440 | Lead 10 | 600 | 545 | 480 | 430 | 380 | 345 | 310 | 285 | 260 | 240 | 220 | Lead 5 | 300 | 270 | 240 | 215 | 190 | 170 | 155 | 140 | 130 | 120 | 110 |

*If the brake is equipped, the mass increases by 0.4kg. *The maximum speed (mm/s) varies depending on the stroke.

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|--------------------------------|----------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/Incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200 VAC | →P56 |
| SSEL | 2 axes | | Positioner pulse train control | Single-phase 100/200 VAC | →P56 |
| SCON | 1 axis | | | →P56 | |

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPDB series. Other specification values apply commonly to the ISDB and ISPDB.

(Note 5) When the traveling life is 10,000km.

(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.

(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISDB-M-200/ISPDB-M-200

ISDB-MX-200

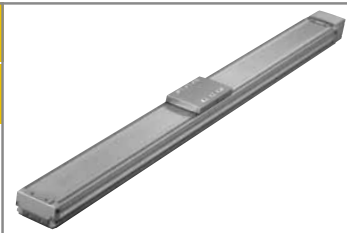
Single-axis robot/Medium, dustproof, mid-support type/Actuator width: 120mm/200W Straight shape

ISPDB-MX-200

Single-axis robot/Medium, dustproof, mid-support type/Actuator width: 120mm/200W Straight shape **High precision specification**

Model Specification Items

| | | | | | | | | | | | | | | | |
|--------|----|--------------|-----|------------|----------|------|--------------------|--------|---|-----------------------|--|--------------|--|---------|-----------------------------------|
| Series | MX | Encoder type | 200 | Motor type | 200:200W | Lead | 30:30mm 20:20mm | Stroke | 800:800mm 1600:1600mm (in 100mm increments) | Applicable controller | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | Cable length | N: None S: 3m M: 5m X□□: Specified length | Options | Refer to the options table below. |
|--------|----|--------------|-----|------------|----------|------|--------------------|--------|---|-----------------------|--|--------------|--|---------|-----------------------------------|



* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 100mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|---------------------------------|--------------|------------------|-----------|---------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISDB[ISPDB]-MX-①-200-30-②-③-④-⑤ | Absolute | 200 | 30 | 800~1600 | 1~1800 | 0.4 | 0.4 | 0.4 | 0.4 | 30 | 45 | 30 | 45 | 113.9 |
| ISDB[ISPDB]-MX-①-200-20-②-③-④-⑤ | Incremental | 200 | 20 | 800~1600 | 1~1200 | 0.4 | 0.4 | 0.4 | 0.4 | 30 | 45 | 30 | 45 | 170.9 |

* In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

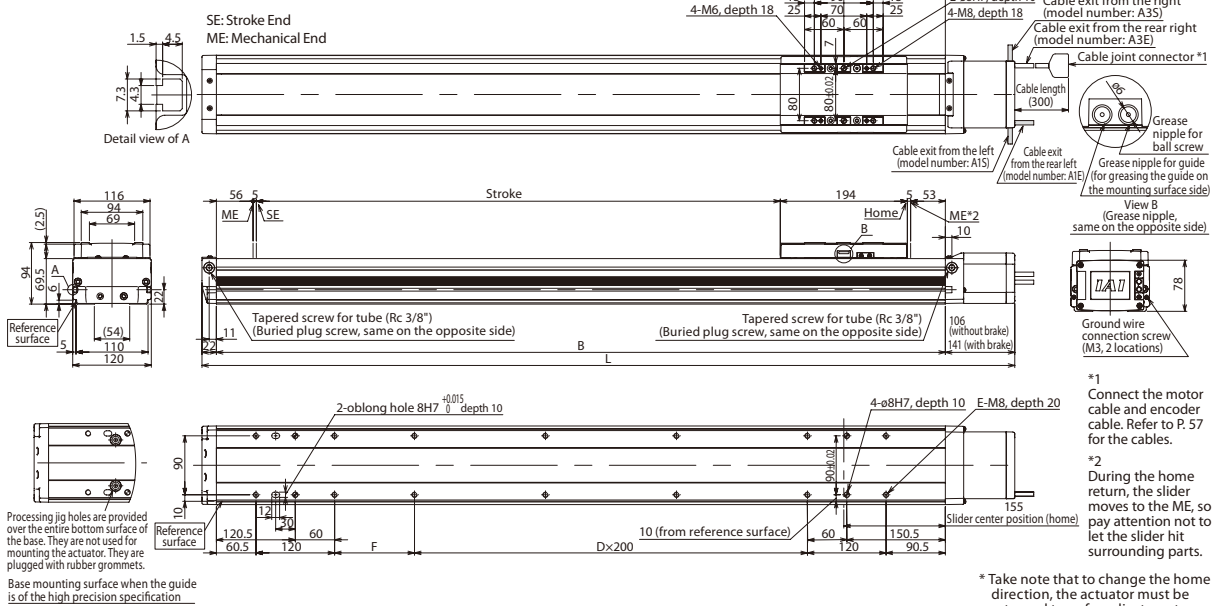
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw ø16mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 69.6N·m Mb: 99.0N·m Mc: 161.7N·m |
| Overhang load length | Ma direction: 600mm max. Mb, Mc directions: 600mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| Cable length (Note 7) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Protection structure | IP30 |
| Ambient operating temperature/humidity | 0 to 40°C, 85%RH max. (non-condensing) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

| Stroke | 800 | | | | 900 | | | | 1000 | | | | 1100 | | | | 1200 | | | | 1300 | | | | 1400 | | | | 1500 | | | | 1600 | | | |
|----------------------|---------------|------|------------|------|---------------|------|------------|------|---------------|------|------------|------|---------------|------|------------|------|---------------|------|------------|------|---------------|------|------------|------|---------------|------|------------|------|---------------|------|------------|--|------|--|--|--|
| | without brake | | with brake | | without brake | | with brake | | without brake | | with brake | | without brake | | with brake | | without brake | | with brake | | without brake | | with brake | | without brake | | with brake | | without brake | | with brake | | | | | |
| L | 1241 | 1341 | 1441 | 1541 | 1641 | 1741 | 1841 | 1941 | 2041 | 2141 | 2241 | 2341 | 2441 | 2541 | 2641 | 2741 | 2841 | 2941 | 3041 | 3141 | 3241 | 3341 | 3441 | 3541 | 3641 | 3741 | 3841 | 3941 | 4041 | 4141 | 4241 | | | | | |
| B | 1113 | 1213 | 1313 | 1413 | 1513 | 1613 | 1713 | 1813 | 1913 | 2013 | 2113 | 2213 | 2313 | 2413 | 2513 | 2613 | 2713 | 2813 | 2913 | 3013 | 3113 | 3213 | 3313 | 3413 | 3513 | 3613 | 3713 | 3813 | 3913 | 4013 | | | | | | |
| D | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 12 | 12 | 13 | 13 | 14 | 14 | 15 | 15 | 16 | 16 | 17 | 17 | | | | | | |
| E | 14 | 14 | 16 | 16 | 18 | 18 | 20 | 20 | 22 | 22 | 24 | 24 | 26 | 26 | 28 | 28 | 30 | 30 | 32 | 32 | 34 | 34 | 36 | 36 | 38 | 38 | 40 | 40 | 42 | 42 | | | | | | |
| F | 122 | 222 | 122 | 222 | 122 | 222 | 122 | 222 | 122 | 222 | 122 | 222 | 122 | 222 | 122 | 222 | 122 | 222 | 122 | 222 | 122 | 222 | 122 | 222 | 122 | 222 | 122 | 222 | 122 | 222 | | | | | | |
| Mass (kg) | 18.3 | 19.6 | 20.9 | 22.2 | 23.4 | 24.7 | 26.0 | 27.3 | 28.6 | 29.9 | 31.2 | 32.5 | 33.8 | 35.1 | 36.4 | 37.7 | 39.0 | 40.3 | 41.6 | 42.9 | 44.2 | 45.5 | 46.8 | 48.1 | 49.4 | 50.7 | 52.0 | 53.3 | 54.6 | 55.9 | | | | | | |
| Maximum speed (mm/s) | Lead 30 | 1800 | | | | 1650 | | | | 1500 | | | | 1350 | | | | 1200 | | | | 1050 | | | | 900 | | | | | | | | | | |
| | Lead 20 | 1200 | | | | 1100 | | | | 1000 | | | | 900 | | | | 800 | | | | 700 | | | | | | | | | | | | | | |

* If the brake is equipped, the mass increases by 0.5kg. * The maximum speed (mm/s) varies depending on the stroke.

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|----------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/ incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | | →P56 |
| SSEL | 2 axes | | | | →P56 |
| SCON | 1 axis | | | | →P56 |



(Note 1) Refer to P. 9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPDB series. Other specification values apply commonly to the ISDB and ISPDB.

(Note 5) When the traveling life is 10,000km.

(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.

(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

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ISDB-MX-200/ISPDB-MX-200

ISDB-L-400

Single-axis robot/Large, dustproof type/Actuator width: 150mm/400W
Straight shape

ISPDB-L-400

Single-axis robot/Large, dustproof type/Actuator width: 150mm/400W
Straight shape **High precision specification**

| Model Specification Items | Series | L Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---------------------------|---|--------|---|---|--|--|--|-----------------------------------|---------|
| | ISDB: Standard specification ISPDB: High precision specification | | A: Absolute specification I: Incremental specification | 400: 400W 40: 40mm 20: 20mm 10: 10mm | 100: 100mm 1300: 1300mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. | |



* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|--------------------------------|-------------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISDB[ISPDB]-L-①-400-40-②-③-④-⑤ | Absolute Incremental | 400 | 40 | 100~1300 | 1~1800 | 0.4 | 1.0 | 0.4 | 1.0 | 40 | 17 | 8 | 5 | 169.6 |
| ISDB[ISPDB]-L-①-400-20-②-③-④-⑤ | | | 20 | | 1~1200 | 0.4 | 1.0 | 0.4 | 1.0 | 90 | 30 | 20 | 10 | 339.1 |
| ISDB[ISPDB]-L-①-400-10-②-③-④-⑤ | | | 10 | | 1~600 | 0.4 | 0.7 | 0.4 | 0.6 | 120 | 60 | 40 | 30 | 678.3 |

*In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

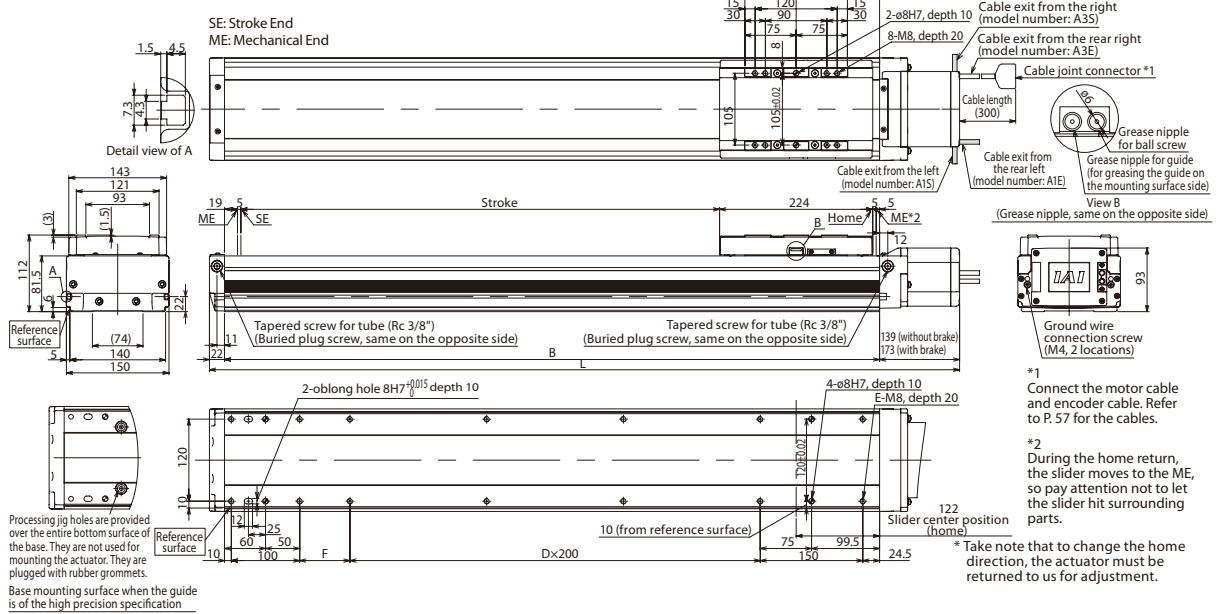
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw ø20mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 104.9N·m Mb: 149.9N·m Mc: 248.9N·m |
| Overhang load length | Ma direction: 750mm max. Mb, Mc directions: 750mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| Cable length (Note 7) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Protection structure | IP30 |
| Ambient operating temperature/humidity | 0 to 40°C, 85%RH max. (non-condensing) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The maximum speed (mm/s) varies depending on the stroke.

| L | Stroke | | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | | | | | | | | | | | |
|----------------------|---------|---------------|------------|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| | | without brake | with brake | 519 | 569 | 619 | 669 | 719 | 769 | 819 | 869 | 919 | 969 | 1019 | 1069 | 1119 | 1169 | 1219 | 1269 | 1319 | 1369 | 1419 | 1469 | 1519 | 1569 | 1619 | 1669 | 1719 | | | | | | | | | | |
| B | | | 358 | 408 | 458 | 508 | 558 | 608 | 658 | 708 | 758 | 808 | 858 | 908 | 958 | 1008 | 1058 | 1108 | 1158 | 1208 | 1258 | 1308 | 1358 | 1408 | 1458 | 1508 | 1558 | 1608 | | | | | | | | | | |
| D | | | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | | | | | | | | | | | |
| E | | | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 14 | 14 | 14 | 14 | 16 | 16 | 16 | 16 | 16 | 18 | 18 | 18 | 18 | 20 | 20 | | | | | | | | | | | |
| F | | | 73.5 | 123.5 | 173.5 | 23.5 | 73.5 | 123.5 | 173.5 | 23.5 | 73.5 | 123.5 | 173.5 | 23.5 | 73.5 | 123.5 | 173.5 | 23.5 | 73.5 | 123.5 | 173.5 | 23.5 | 73.5 | 123.5 | 173.5 | 23.5 | 73.5 | | | | | | | | | | | |
| Mass (kg) | | | 12.2 | 13.1 | 14.0 | 14.8 | 15.7 | 16.6 | 17.4 | 18.3 | 19.2 | 20.0 | 20.9 | 21.8 | 22.7 | 23.5 | 24.4 | 25.3 | 26.1 | 27.0 | 27.9 | 28.7 | 29.6 | 30.5 | 31.4 | 32.2 | 33.1 | | | | | | | | | | | |
| Maximum speed (mm/s) | Lead 40 | | 1800 | | | | | | | | | | | | 1700 | | | | | | | | | | | | 1540 | 1410 | 1290 | 1185 | 1095 | 1015 | 940 | 875 | 815 | | | |
| | Lead 20 | | 1200 | | | | | | | | | | | | 1165 | | | | | | | | | | | | 1045 | 940 | 850 | 770 | 705 | 645 | 595 | 545 | 505 | 470 | 440 | 410 |
| | Lead 10 | | 600 | | | | | | | | | | | | 585 | | | | | | | | | | | | 520 | 470 | 425 | 385 | 350 | 320 | 295 | 275 | 255 | 235 | 220 | 205 |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/ incremental | Program | Single/three-phase 200VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200VAC | →P56 |
| SSEL | 2 axes | | | Single-phase 200VAC | →P56 |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |

| | | |
|---------|----------|---|
| CAUTION | (Note 1) | Refer to P. 9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPDB series. Other specification values apply commonly to the ISDB and ISPDB. |
| | (Note 5) | When the traveling life is 10,000km. |
| | (Note 6) | The value of dynamic straightness is when the high straightness, precision specification (option) is specified. |
| | (Note 7) | The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m) |

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ISDB-L-400/ISPDB-L-400

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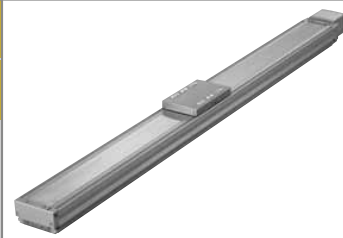
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

ISDB-LX-200

Single-axis robot/Large, dustproof, mid-support type/Actuator width: 150mm/200W Straight shape

ISPDB-LX-200

Single-axis robot/Large, dustproof, mid-support type/Actuator width: 150mm/200W Straight shape **High precision specification**



| Model Specification Items | Series | LX Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---|--------|---------|---|------------|----------------------|---|--|--|-----------------------------------|
| ISDB: Standard specification ISPDB: High precision specification | | | A: Absolute specification I: Incremental specification | 200: 200W | 40: 40mm 20: 20mm | 1000: 1000mm 1600: 1600mm (in 100mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 100mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|---------------------------------|----------------------|------------------|-----------|---------------------------------|--------------|-----------------------|---------|---|---------|--------------------|----------------------|---|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISDB[ISPDB]-LX-①-200-40-②-③-④-⑤ | Absolute Incremental | 200 | 40 | 1000~1600 | 1~1800 | 0.4 | | Designed exclusively for horizontal use | | 15 | | Designed exclusively for horizontal use | | 85.5 |
| ISDB[ISPDB]-LX-①-200-20-②-③-④-⑤ | | | 20 | | 1~1200 | 0.4 | | 45 | | 170.9 | | | | |

*In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

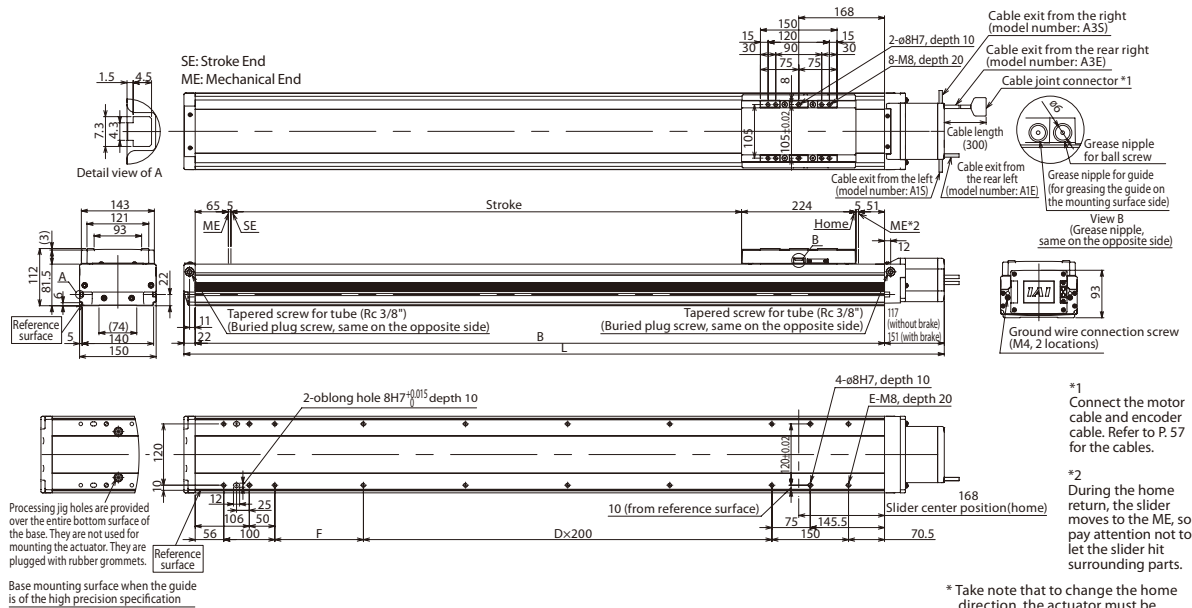
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw ø16mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 104.9N·m Mb: 149.9N·m Mc: 248.9N·m |
| Overhang load length | Ma direction: 750mm max. Mb, Mc directions: 750mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| Cable length (Note 7) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Protection structure | IP30 |
| Ambient operating temperature/humidity | 0 to 40°C, 85%RH max. (non-condensing) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The maximum speed (mm/s) varies depending on the stroke.

| Stroke | Maximum mass (kg) | | | | | | | |
|----------------------|-------------------|-------|-------|-------|-------|-------|-------|------|
| | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | |
| L | without brake | 1489 | 1589 | 1689 | 1789 | 1889 | 1989 | 2089 |
| | with brake | 1523 | 1623 | 1723 | 1823 | 1923 | 2023 | 2123 |
| B | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | |
| D | 4 | 5 | 5 | 6 | 6 | 7 | 7 | |
| E | 16 | 18 | 18 | 20 | 20 | 22 | 22 | |
| F | 173.5 | 173.5 | 173.5 | 173.5 | 173.5 | 173.5 | 173.5 | |
| Mass (kg) | 29.7 | 31.4 | 33.2 | 35.0 | 36.7 | 38.5 | 40.2 | |
| Maximum speed (mm/s) | Lead 30 | 1800 | | | | | | 1660 |
| | Lead 20 | 1200 | | | | | | 830 |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | →P56 | |
| SSEL | 2 axes | | | Single-phase 100/200 VAC | →P56 |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |



(Note 1) Refer to P. 9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPDB series. Other specification values apply commonly to the ISDB and ISPDB.

(Note 5) When the traveling life is 10,000km.

(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.

(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISDB-LX-200/ISPDB-LX-200

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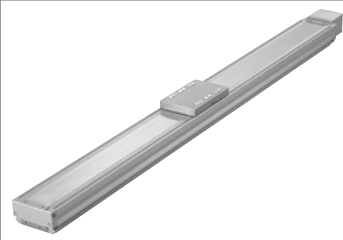
ISDB-LX-400

Single-axis robot/Large, dustproof, mid-support type/Actuator width: 150mm/400W Straight shape

ISPDB-LX-400

Single-axis robot/Large, dustproof, mid-support type/Actuator width: 150mm/400W Straight shape **High precision specification**

| Model Specification Items | Series | LX Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---------------------------|---|---------|---|------------|----------------------|---|--|--|-----------------------------------|
| | ISDB: Standard specification ISPDB: High precision specification | | A: Absolute specification I: Incremental specification | 400: 400W | 40: 40mm 20: 20mm | 1000: 1000mm 1600: 1600mm (in 100mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. |



* Refer to P.10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 100mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) |
|---------------------------------|--------------|------------------|-----------|---------------------------------|--------------|-----------------------|---------|---|---------|--------------------|---|--------------------|----------------------|------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | |
| ISDB[ISPDB]-LX-①-400-40-②-③-④-⑤ | Absolute | 400 | 40 | 1000~1600 | 1~1800 | 0.4 | | Designed exclusively for horizontal use | 40 | | Designed exclusively for horizontal use | 169.6 | | |
| ISDB[ISPDB]-LX-①-400-20-②-③-④-⑤ | Incremental | 400 | 20 | 1000~1600 | 1~1200 | 0.4 | | Designed exclusively for horizontal use | 90 | | Designed exclusively for horizontal use | 339.1 | | |

† In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

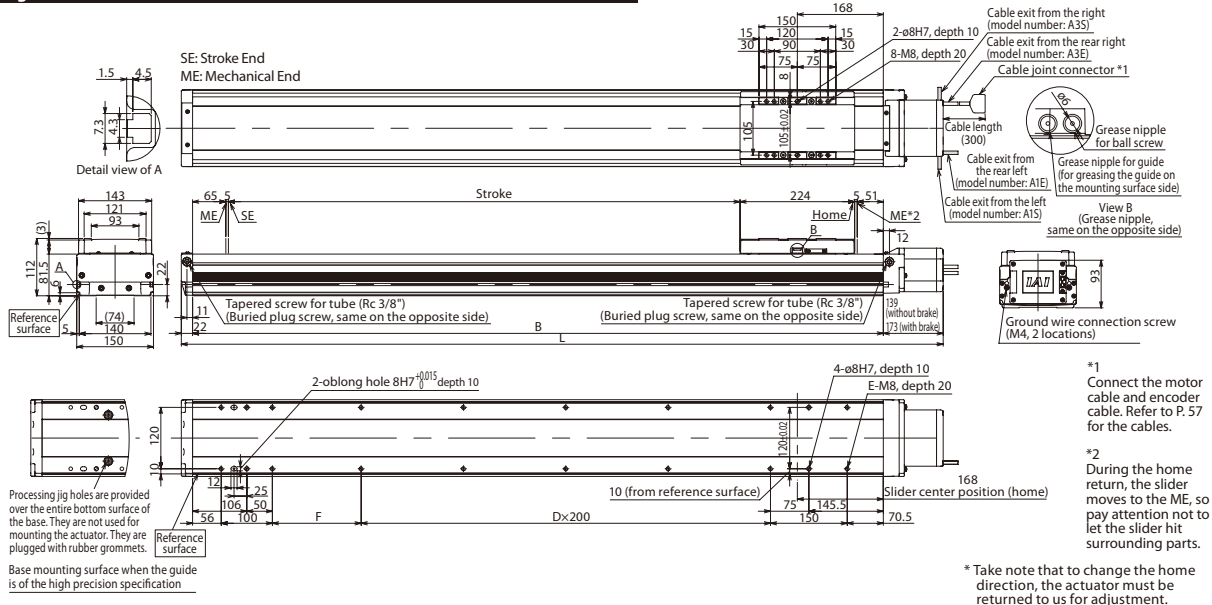
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |

Common Specifications

| | |
|--|--|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw ø20mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 104.9N·m Mb: 149.9N·m Mc: 248.9N·m |
| Overhang load length | Ma direction: 750mm max. Mb, Mc directions: 750mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| Cable length (Note 7) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Protection structure | IP30 |
| Ambient operating temperature/humidity | 0 to 40°C, 85%RH max. (non-condensing) |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The maximum speed (mm/s) varies depending on the stroke.

| Stroke | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 |
|----------------------|---------|------|-------|------|-------|------|-------|
| L without brake | 1511 | 1611 | 1711 | 1811 | 1911 | 2011 | 2111 |
| L with brake | 1545 | 1645 | 1745 | 1845 | 1945 | 2045 | 2145 |
| B | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 |
| D | 4 | 5 | 5 | 6 | 6 | 7 | 7 |
| E | 16 | 18 | 18 | 20 | 20 | 22 | 22 |
| F | 173.5 | 73.5 | 173.5 | 73.5 | 173.5 | 73.5 | 173.5 |
| Mass (kg) | 30.1 | 31.8 | 33.6 | 35.4 | 37.1 | 38.9 | 40.6 |
| Maximum speed (mm/s) | Lead 30 | | 1800 | | | | 1660 |
| | Lead 20 | | 1200 | 1150 | 1000 | 950 | 830 |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|--------------------------------|----------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/ incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200 VAC | →P56 |
| SSEL | 2 axes | | | Single-phase 100/200 VAC | →P56 |
| SCON | 1 axis | | Positioner pulse train control | Single-phase 200 VAC | →P56 |



(Note 1) Refer to P.9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPDB series. Other specification values apply commonly to the ISDB and ISPDB.

(Note 5) When the traveling life is 10,000km.

(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.

(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

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ISDB-LX-400/ISPDB-LX-400

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Cleanroom Type

ISDBCR / ISPDBCR / SSPDACR

| | | | | | | |
|---------------------------|--------------------------------|--------------|-------------------------------|-------------------------|-------------------------|-------------|
| ISDBCR ISPDBCR | Standard (High Precision) Type | Small | Standard Type | Width: 90mm | ISDBCR (ISPDBCR)-S | P.45 |
| | | Medium | Standard Type | Width: 120mm | ISDBCR (ISPDBCR)-M-100 | P.46 |
| | | | | Width: 120mm | ISDBCR (ISPDBCR)-M-200 | P.47 |
| | | Large | Mid-Support Type | Width: 120mm | ISDBCR (ISPDBCR)-MX-200 | P.48 |
| | | | Standard Type | Width: 150mm | ISDBCR (ISPDBCR)-L-200 | P.49 |
| | | | | Width: 150mm | ISDBCR (ISPDBCR)-L-400 | P.50 |
| | | | Mid-Support Type | Width: 150mm | ISDBCR (ISPDBCR)-LX-200 | P.51 |
| | | Width: 150mm | | ISDBCR (ISPDBCR)-LX-400 | P.52 | |
| SSPDACR | High Precision Type | Small | High-Rigidity, Iron-Base Type | Width: 100mm | SSPDACR-S-200 | P.53 |
| | | Medium | High-Rigidity, Iron-Base Type | Width: 130mm | SSPDACR-M-400 | P.54 |
| | | Large | High-Rigidity, Iron-Base Type | Width: 155mm | SSPDACR-L-750 | P.55 |

ISDBCR-S

Single-axis robot for cleanroom/Small/Actuator width: 90mm/60 W
Straight shape

ISPDBCR-S

Single-axis robot for cleanroom/Small/Actuator width: 90mm/60 W
Straight shape **High precision specification**



| Model Specification Items | Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---|--------|------|---|------------|------------------------------|--|--|---|-----------------------------------|
| ISDBCR: Standard specification ISPDBCR: High precision specification | S | 60 | A: Absolute specification I: Incremental specification | 60: 60W | 16: 16mm 8: 8mm 4: 4mm | 100: 100mm 800: 800mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□: Specified length | Refer to the options table below. |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) | Suction flow rate (Nℓ/min) |
|-----------------------------------|-------------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|----------------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg)** | | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | | |
| ISDBCR[ISPDBCR]-S-①-60-16-②-③-④-⑤ | Absolute Incremental | 60 | 16 | 100~800 | 1~960 | 0.4 | 1.0 | 0.4 | 0.8 | 13 | 4.5 | 3 | 2 | 53.1 | 60 |
| ISDBCR[ISPDBCR]-S-①-60-8-②-③-④-⑤ | | | 8 | | 1~480 | 0.4 | 0.7 | 0.4 | 0.6 | 27 | 12 | 6 | 5 | 106.1 | 30 |
| ISDBCR[ISPDBCR]-S-①-60-4-②-③-④-⑤ | | | 4 | | 1~240 | 0.2 | 0.5 | 0.2 | 0.4 | 55 | 30 | 14 | 12 | 212.3 | 15 |

* In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).
** If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 0.5kg. (Please also refer to P.9).

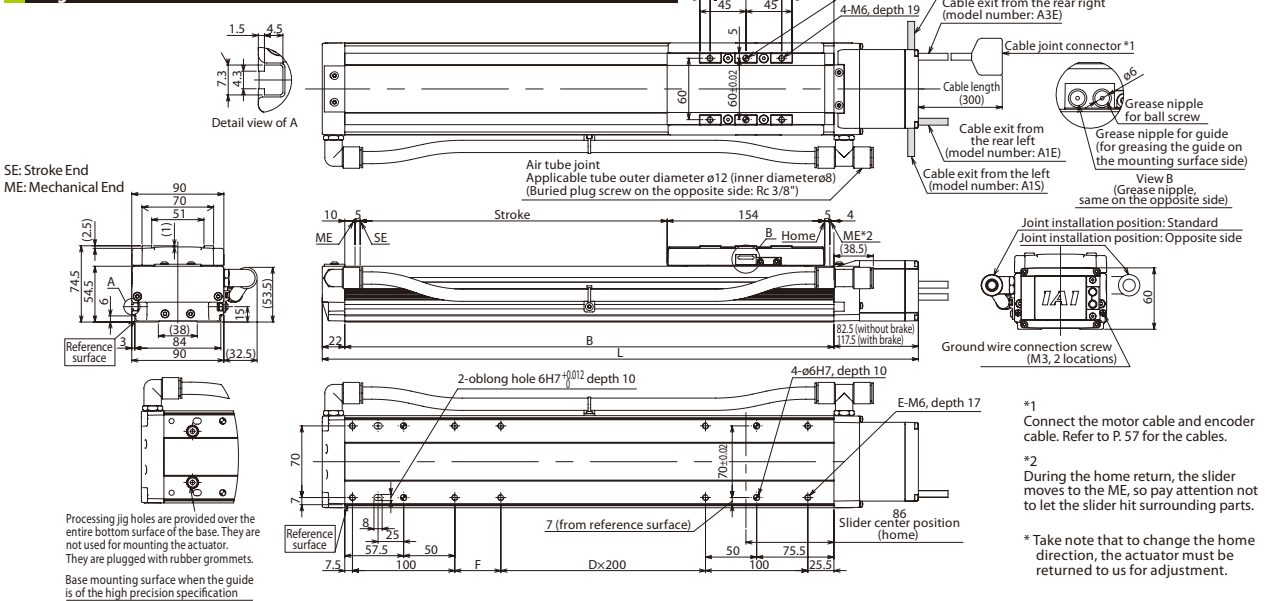
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |
| | | | Suction tube joint on the opposite side | VR | →P12 |

Common Specifications

| | |
|--|---|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw ø12mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 28.4N·m Mb: 40.2N·m Mc: 65.7N·m |
| Overhang load length | Ma direction: 450mm max. Mb, Mc directions: 450mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| Cable length (Note 7) | N: None, S: 3m, M: 5m, X□: Specified length |
| Grease | Low dust-raising grease (for ball screw and guide) |
| Cleanliness degree | Class 10 (0.1µm per 1cf) |
| Suction tube joint | Quick connect joint, applicable tube outer diameter ø12mm |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

* If the brake is equipped, the mass increases by 0.2kg. * The maximum speed (mm/s) varies depending on the stroke.

| L | Stroke | Stroke | | | | | | | | | | Mass (kg) | | Maximum speed (mm/s) | | |
|---|---------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|-------|----------------------|--------|--------|
| | | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
| | without brake | 382.5 | 432.5 | 482.5 | 532.5 | 582.5 | 632.5 | 682.5 | 732.5 | 782.5 | 832.5 | 882.5 | 932.5 | 982.5 | 1032.5 | 1082.5 |
| | with brake | 417.5 | 467.5 | 517.5 | 567.5 | 617.5 | 667.5 | 717.5 | 767.5 | 817.5 | 867.5 | 917.5 | 967.5 | 1017.5 | 1067.5 | 1117.5 |
| | B | 278 | 328 | 378 | 428 | 478 | 528 | 578 | 628 | 678 | 728 | 778 | 828 | 878 | 928 | 978 |
| | D | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| | E | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| | F | 45 | 95 | 145 | 195 | 45 | 95 | 145 | 195 | 45 | 95 | 145 | 195 | 45 | 95 | 145 |
| | Lead 16 | 4.2 | 4.5 | 4.9 | 5.2 | 5.6 | 6.0 | 6.3 | 6.7 | 7.0 | 7.4 | 7.8 | 8.1 | 8.5 | 8.9 | 9.2 |
| | Lead 8 | | | | | | | | | | | | | | | |
| | Lead 4 | | | | | | | | | | | | | | | |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|----------------------------|--------------------------------|
| X-SEL-P/Q | 6 axes | Absolute/ incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | | →P56 |
| SSEL | 2 axes | | | Single-phase 100/200 VAC | →P56 |
| SCON | 1 axis | | | | Positioner pulse train control |



(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [] apply to the ISPDBCR series. Other specification values apply commonly to the ISDBCR and ISPDBCR.
(Note 5) When the traveling life is 10,000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

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ISDBCR-S/ISPDBCR-S

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ISDBCR-M-100

Single-axis robot for cleanroom/Medium/Actuator width: 120mm/100W Straight shape

ISPDBCR-M-100

Single-axis robot for cleanroom/Medium/Actuator width: 120mm/100W Straight shape **High precision specification**



Model Specification Items

| | | | | | | | | | |
|---|---|---|-----------|--|---|--|--|-----------------------------------|---------|
| Series | M | Encoder type | 100 | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
| ISDBCR: Standard specification ISPDBCR: High precision specification | | A: Absolute specification I: Incremental specification | 100: 100W | 30: 30mm 20: 20mm 10: 10mm 5: 5mm | 100: 100mm 1100: 1100mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. | |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) | Suction flow rate (Nl/min) |
|--|----------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|----------------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg)** | | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | | |
| ISDBCR[ISPDBCR]-M-[1]-100-30-[2]-[3]-[4]-[5] | Absolute/Incremental | 100 | 30 | 100~1100 | 1~1800 | 0.4 | 1.0 | 0.4 | 1.0 | 15 | 4 | 2 | 1.2 | 56.6 | 180 |
| ISDBCR[ISPDBCR]-M-[1]-100-20-[2]-[3]-[4]-[5] | | | 1~1200 | | 0.4 | 1.0 | 0.4 | 1.0 | 23 | 8 | 4 | 2.5 | 84.9 | 120 | |
| ISDBCR[ISPDBCR]-M-[1]-100-10-[2]-[3]-[4]-[5] | | | 1~600 | | 0.4 | 0.7 | 0.4 | 0.6 | 45 | 20 | 10 | 7 | 169.8 | 50 | |
| ISDBCR[ISPDBCR]-M-[1]-100-5-[2]-[3]-[4]-[5] | | | 1~300 | | 0.2 | 0.5 | 0.2 | 0.4 | 85 | 45 | 20 | 15 | 339.7 | 20 | |

* In the above model numbers, [1] indicates the encoder type, [2] indicates the stroke, [3] indicates the applicable controller, [4] indicates the cable length, and [5] indicates the option(s).
** If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 0.5kg. (Please also refer to P.9).

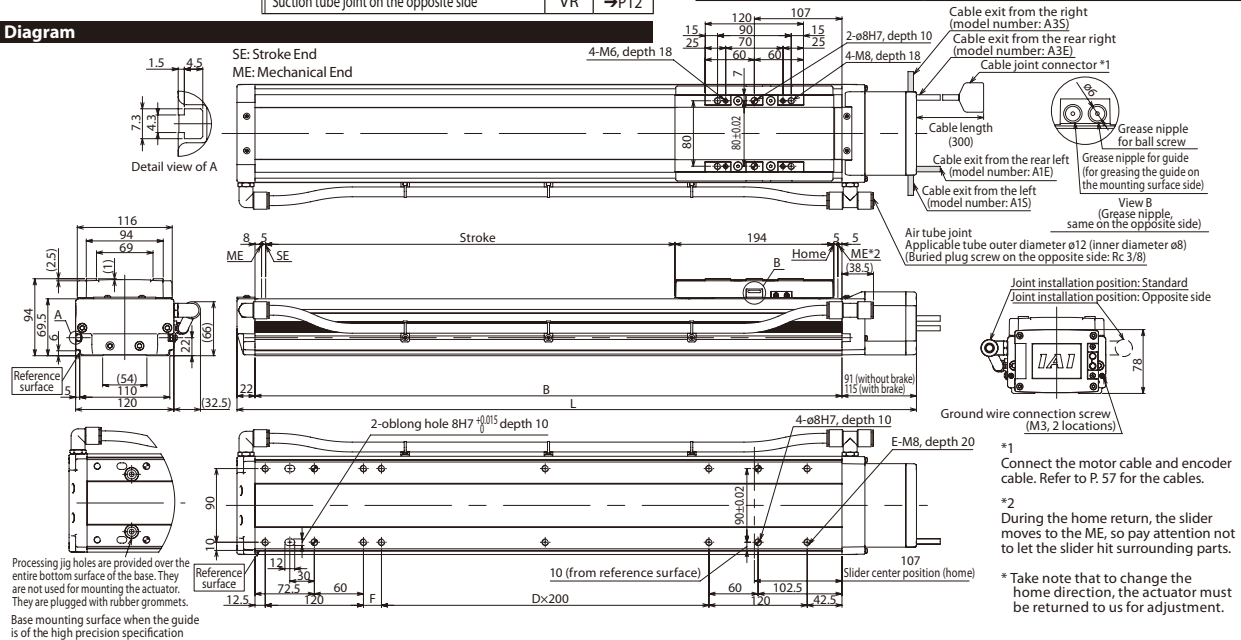
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |
| | | | Suction tube joint on the opposite side | VR | →P12 |

Common Specifications

| | |
|--|---|
| Positioning repeatability (Note 2) | ±0.01mm (±0.005mm) |
| Drive method (Note 3) | Ball screw ø16mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 69.6Nm Mb: 99.0Nm Mc: 161.7Nm |
| Overhang load length | Ma direction: 600mm max. Mb, Mc directions: 600mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q SSEL, SCON |
| Cable length (Note 7) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Grease | Low dust-raising grease (for ball screw and guide) |
| Cleanliness degree | Class 10 (0.1µm per 1cf) |
| Suction tube joint | Quick connect joint, applicable tube outer diameter ø12mm |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

* If the brake is equipped, the mass increases by 0.3kg. * The maximum speed (mm/s) varies depending on the stroke.

| Stroke | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 |
|----------------------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | L | 430 | 480 | 530 | 580 | 630 | 680 | 730 | 780 | 830 | 880 | 930 | 980 | 1030 | 1080 | 1130 | 1180 | 1230 | 1280 | 1330 | 1380 |
| B | 454 | 504 | 554 | 604 | 654 | 704 | 754 | 804 | 854 | 904 | 954 | 1004 | 1054 | 1104 | 1154 | 1204 | 1254 | 1304 | 1354 | 1404 | 1454 |
| D | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 5 |
| E | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 | 14 | 16 | 16 | 16 | 16 | 18 |
| F | 22 | 72 | 122 | 172 | 22 | 72 | 122 | 172 | 22 | 72 | 122 | 172 | 22 | 72 | 122 | 172 | 22 | 72 | 122 | 172 | 22 |
| Mass (kg) | 7.6 | 8.2 | 8.8 | 9.5 | 10.1 | 10.7 | 11.3 | 12.0 | 12.6 | 13.2 | 13.9 | 14.5 | 15.1 | 15.7 | 16.4 | 17.0 | 17.6 | 18.2 | 18.9 | 19.5 | 20.1 |
| Maximum speed (mm/s) | Lead 30 | 1800 | | | | | | | | | | | | | | | | | | | |
| | Lead 20 | 1200 | | | | | | | | | | | | | | | | | | | |
| | Lead 10 | 600 | | | | | | | | | | | | | | | | | | | |
| | Lead 5 | 300 | | | | | | | | | | | | | | | | | | | |
| | | 1630 | 1440 | 1280 | 1150 | 1035 | 935 | 850 | 780 | 715 | 660 | 1085 | 960 | 855 | 765 | 690 | 625 | 570 | 520 | 475 | 440 |
| | | 545 | 480 | 430 | 380 | 345 | 310 | 285 | 260 | 240 | 220 | 270 | 240 | 215 | 190 | 170 | 155 | 140 | 130 | 120 | 110 |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | →P56 | |
| SSEL | 2 axes | | | Single-phase 100/200 VAC | →P56 |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |



(Note 1) Refer to P.9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [] apply to the ISPDBCR series. Other specification values apply commonly to the ISDBCR and ISPDBCR.
(Note 5) When the traveling life is 10,000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISDBCR-M-100/ISPDBCR-M-100

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ISDBCR-M-200

Single-axis robot for cleanroom/Medium/Actuator width: 120mm/200W Straight shape

ISPDBCR-M-200

Single-axis robot for cleanroom/Medium/Actuator width: 120mm/200W Straight shape **High precision specification**



| Model Specification Items | Series | M Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---|--------|--------|---|------------|--|--|--|--|-----------------------------------|
| ISDBCR: Standard specification ISPDBCR: High precision specification | | | A: Absolute specification I: Incremental specification | 200: 200W | 30: 30mm 20: 20mm 10: 10mm 5: 5mm | 100: 100mm 110: 110mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) | Suction flow rate (N ₂ /min) |
|------------------------------------|-------------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|---|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | | |
| ISDBCR[ISPDBCR]-M-①-200-30-②-③-④-⑤ | Absolute Incremental | 200 | 30 | 100~1100 | 1~1800 | 0.4 | 1.0 | 0.4 | 1.0 | 30 | 12 | 6 | 3 | 113.9 | 180 |
| ISDBCR[ISPDBCR]-M-①-200-20-②-③-④-⑤ | | | 20 | | 1~1200 | 0.4 | 1.0 | 0.4 | 1.0 | 45 | 16 | 10 | 5 | 170.9 | 120 |
| ISDBCR[ISPDBCR]-M-①-200-10-②-③-④-⑤ | | | 10 | | 1~600 | 0.4 | 0.7 | 0.4 | 0.6 | 90 | 40 | 20 | 15 | 341.8 | 50 |
| ISDBCR[ISPDBCR]-M-①-200-5-②-③-④-⑤ | | | 5 | | 1~300 | 0.2 | 0.5 | 0.2 | 0.4 | 110 | 80 | 40 | 30 | 683.6 | 20 |

* In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

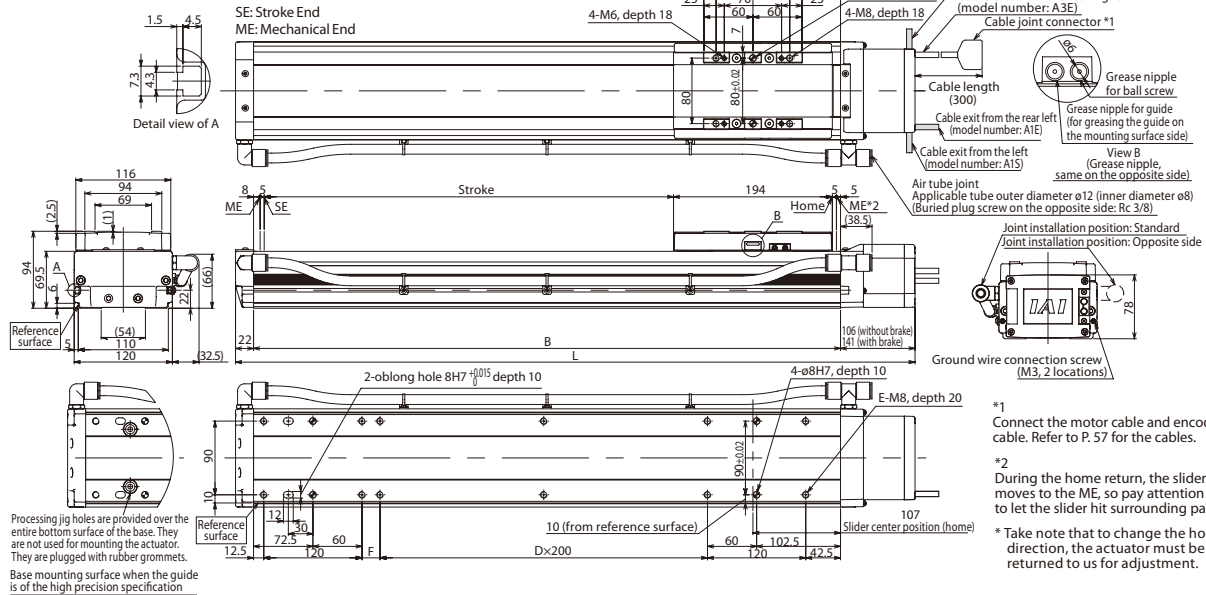
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |
| | | | Suction tube joint on the opposite side | VR | →P12 |

Common Specifications

| | |
|--|---|
| Positioning repeatability (Note 2) | ±0.01mm (±0.005mm) |
| Drive method (Note 3) | Ball screw ø16mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 69.6N·m Mb: 99.0N·m Mc: 161.7N·m |
| Overhang load length | Ma direction: 600mm max. Mb, Mc directions: 600mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| Cable length (Note 7) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Grease | Low dust-raising grease (for ball screw and guide) |
| Cleanliness degree | Class 10 (0.1µm per lcf) |
| Suction tube joint | Quick connect joint, applicable tube outer diameter ø12mm |

Diagram



- *1 Connect the motor cable and encoder cable. Refer to P. 57 for the cables.
- *2 During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.
- * Take note that to change the home direction, the actuator must be returned to us for adjustment.

Dimensions, Mass and Maximum Speed by Stroke

| L | Stroke | Mass (kg) | | | | | | | | | | | | | | | Maximum speed (mm/s) | | | | | | | | | | | | | | |
|----------------------|---------|-----------|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|----------------------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|
| | | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | | | | | | | | | |
| without brake | 445 | 495 | 545 | 595 | 645 | 695 | 745 | 795 | 845 | 895 | 945 | 995 | 1045 | 1095 | 1145 | 1195 | 1245 | 1295 | 1345 | 1395 | 1445 | 1630 | 1440 | 1280 | 1150 | 1035 | 935 | 850 | 780 | 715 | 660 |
| | 480 | 530 | 580 | 630 | 680 | 730 | 780 | 830 | 880 | 930 | 980 | 1030 | 1080 | 1130 | 1180 | 1230 | 1280 | 1330 | 1380 | 1430 | 1480 | 1085 | 960 | 855 | 765 | 690 | 625 | 570 | 520 | 475 | 440 |
| with brake | 317 | 367 | 417 | 467 | 517 | 567 | 617 | 667 | 717 | 767 | 817 | 867 | 917 | 967 | 1017 | 1067 | 1117 | 1167 | 1217 | 1267 | 1317 | 545 | 480 | 430 | 380 | 345 | 310 | 285 | 260 | 240 | 220 |
| D | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 270 | 240 | 215 | 190 | 170 | 155 | 140 | 130 | 120 | 110 |
| E | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 | 14 | 16 | 16 | 16 | 16 | 18 | | | | | | | | | | |
| F | 22 | 72 | 122 | 172 | 22 | 72 | 122 | 172 | 22 | 72 | 122 | 172 | 22 | 72 | 122 | 172 | 22 | 72 | 122 | 172 | 22 | | | | | | | | | | |
| Mass (kg) | 8.0 | 8.6 | 9.2 | 9.9 | 10.5 | 11.1 | 11.7 | 12.4 | 13.0 | 13.6 | 14.3 | 14.9 | 15.5 | 16.1 | 16.8 | 17.4 | 18.0 | 18.6 | 19.3 | 19.9 | 20.5 | | | | | | | | | | |
| Maximum speed (mm/s) | Lead 30 | 1800 | | | | | | | | | | | | | | | | | | | | 1630 | 1440 | 1280 | 1150 | 1035 | 935 | 850 | 780 | 715 | 660 |
| | Lead 20 | 1200 | | | | | | | | | | | | | | | | | | | | 1085 | 960 | 855 | 765 | 690 | 625 | 570 | 520 | 475 | 440 |
| | Lead 10 | 600 | | | | | | | | | | | | | | | | | | | | 545 | 480 | 430 | 380 | 345 | 310 | 285 | 260 | 240 | 220 |
| | Lead 5 | 300 | | | | | | | | | | | | | | | | | | | | 270 | 240 | 215 | 190 | 170 | 155 | 140 | 130 | 120 | 110 |

*If the brake is equipped, the mass increases by 0.4kg. *The maximum speed (mm/s) varies depending on the stroke.

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/ incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | →P56 | |
| SSEL | 2 axes | | | Single-phase 100/200 VAC | →P56 |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |



- (Note 1) Refer to P. 9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPDBCR series. Other specification values apply commonly to the ISDBCR and ISPDBCR.
- (Note 5) When the traveling life is 10,000km.
- (Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
- (Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

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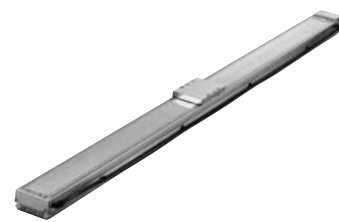
ISDBCR-M-200/ISPDBCR-M-200

ISDBCR-MX-200

Single-axis robot for cleanroom/Medium, mid-support type/Actuator width: 120mm/200W Straight shape

ISPDBCR-MX-200

Single-axis robot for cleanroom/Medium, mid-support type/Actuator width: 120mm/200W Straight shape **High precision specification**



Model Specification Items

| | | | | | | | | | | | | | | | |
|--------|----|--------------|-----|------------|-----------|------|----------------------|--------|---|-----------------------|--|--------------|--|---------|-----------------------------------|
| Series | MX | Encoder type | 200 | Motor type | 200: 200W | Lead | 30: 30mm 20: 20mm | Stroke | 800: 800mm 2000: 2000mm (in 100mm increments) | Applicable controller | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | Cable length | N: None S: 3m M: 5m X□□: Specified length | Options | Refer to the options table below. |
|--------|----|--------------|-----|------------|-----------|------|----------------------|--------|---|-----------------------|--|--------------|--|---------|-----------------------------------|

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 100mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) | Suction flow rate (Nℓ/min) |
|-------------------------------------|--------------|------------------|-----------|---------------------------------|--------------|-----------------------|---------|---|---------|--------------------|----------------------|---|----------------------|------------------|----------------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | | |
| ISDBCR[ISPDBCR]-MX-①-200-30-②-③-④-⑤ | Absolute | 200 | 30 | 800~2000 | 1~1800 | 0.4 | | Designed exclusively for horizontal use | | 30 | | Designed exclusively for horizontal use | | 113.9 | 180 |
| ISDBCR[ISPDBCR]-MX-①-200-20-②-③-④-⑤ | Incremental | 200 | 20 | 800~2000 | 1~1200 | 0.4 | | | | 45 | | | | 170.9 | 120 |

*In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

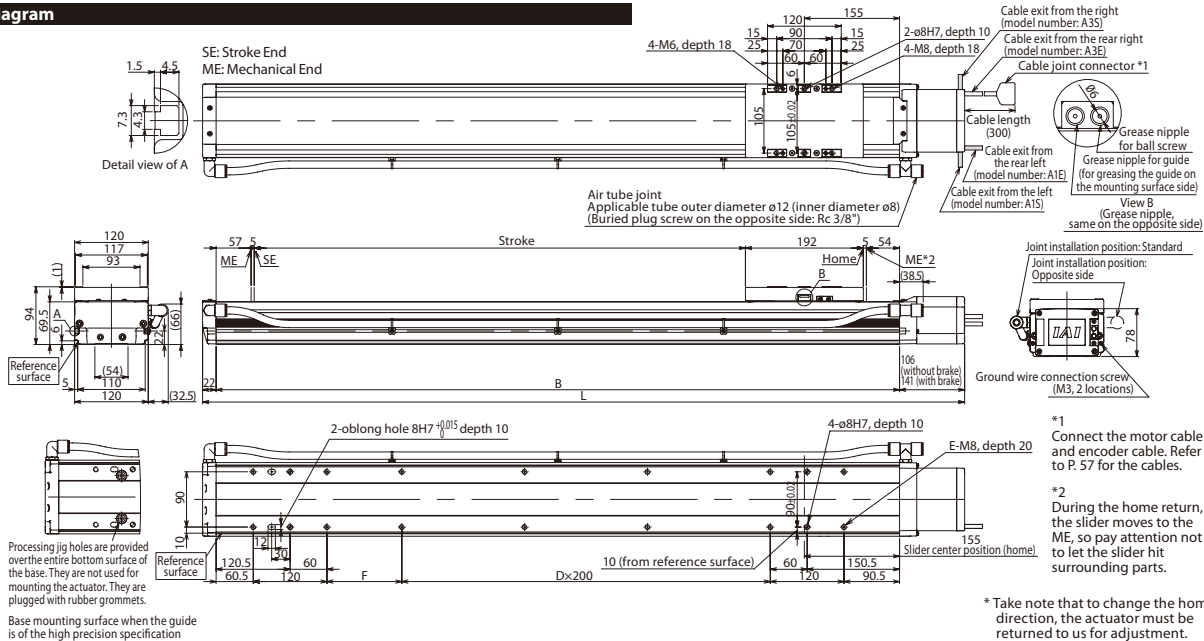
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | LL | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |
| | | | Suction tube joint on the opposite side | VR | →P12 |

Common Specifications

| | |
|--|---|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw ø16mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 69.6N·m Mb: 99.0N·m Mc: 161.7N·m |
| Overhang load length | Ma direction: 600mm max. Mb, Mc directions: 600mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q SSEL, SCON |
| Cable length (Note 7) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Grease | Low dust-raising grease (for ball screw and guide) |
| Cleanliness degree | Class 10 (0.1µm per 1cf) |
| Suction tube joint | Quick connect joint, applicable tube outer diameter ø12mm |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

| Stroke | *If the brake is equipped, the mass increases by 0.5kg. *The maximum speed (mm/s) varies depending on the stroke. | | | | | | | | | | | | | | | |
|-----------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|
| | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | | | |
| L | without brake | 1241 | 1341 | 1441 | 1541 | 1641 | 1741 | 1841 | 1941 | 2041 | 2141 | 2241 | 2341 | 2441 | | |
| | with brake | 1276 | 1376 | 1476 | 1576 | 1676 | 1776 | 1876 | 1976 | 2076 | 2176 | 2276 | 2376 | 2476 | | |
| B | 1113 | 1213 | 1313 | 1413 | 1513 | 1613 | 1713 | 1813 | 1913 | 2013 | 2113 | 2213 | 2313 | | | |
| D | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | | | |
| E | 14 | 14 | 16 | 16 | 18 | 18 | 20 | 20 | 22 | 22 | 24 | 24 | 26 | | | |
| F | 122 | 222 | 122 | 222 | 122 | 222 | 122 | 222 | 122 | 222 | 122 | 222 | 122 | | | |
| Mass (kg) | | 18.5 | 19.8 | 21.0 | 22.3 | 23.6 | 24.9 | 26.2 | 27.4 | 28.7 | 30.0 | 31.3 | 32.5 | 33.8 | | |
| | Maximum speed (mm/s) | | | | | | | | | | | | | | | |
| | Lead 30 | 1800 | | | 1650 | | | 1500 | | | 1425 | | | 1200 | | |
| | Lead 20 | 1200 | | | 1100 | | | 1000 | | | 950 | | | 800 | | |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|----------------------------|--------------------------------|
| X-SEL-P/Q | 6 axes | Absolute/ incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | | →P56 |
| SSEL | 2 axes | | | Single-phase 100/200 VAC | →P56 |
| SCON | 1 axis | | | | Positioner pulse train control |



(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [] apply to the ISPDBCR series. Other specification values apply commonly to the ISDBCR and ISPDBCR.
(Note 5) When the traveling life is 10,000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISDBCR-MX-200/ISPDBCR-MX-200

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ISDBCR-L-400

Single-axis robot for cleanroom/Large/Actuator width: 150mm/400W Straight shape

ISPDBCR-L-400

Single-axis robot for cleanroom/Large/Actuator width: 150mm/400 W Straight shape **High precision specification**



| Model Specification Items | Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---|--------|------|---|------------|----------------------------------|--|--|--|-----------------------------------|
| ISDBCR: Standard specification ISPDBCR: High precision specification | L | 400 | A: Absolute specification I: Incremental specification | 400: 400W | 40: 40mm 20: 20mm 10: 10mm | 100: 100mm ? 1300: 1300mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) | Suction flow rate (Nℓ/min) |
|--|-------------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|----------------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | | |
| ISDBCR[ISPDBCR]-L- 1 -400-40- 2 - 3 - 4 - 5 | Absolute Incremental | 400 | 40 | 100~1300 | 1~1800 | 0.4 | 1.0 | 0.4 | 1.0 | 40 | 17 | 8 | 5 | 169.6 | 180 |
| 1~1200 | | | | | 0.4 | 1.0 | 0.4 | 1.0 | 90 | 30 | 20 | 10 | 339.1 | 120 | |
| 1~600 | | | | | 0.4 | 0.7 | 0.4 | 0.6 | 120 | 60 | 40 | 30 | 678.3 | 50 | |

* In the above model numbers, **1** indicates the encoder type, **2** indicates the stroke, **3** indicates the applicable controller, **4** indicates the cable length, and **5** indicates the option(s).

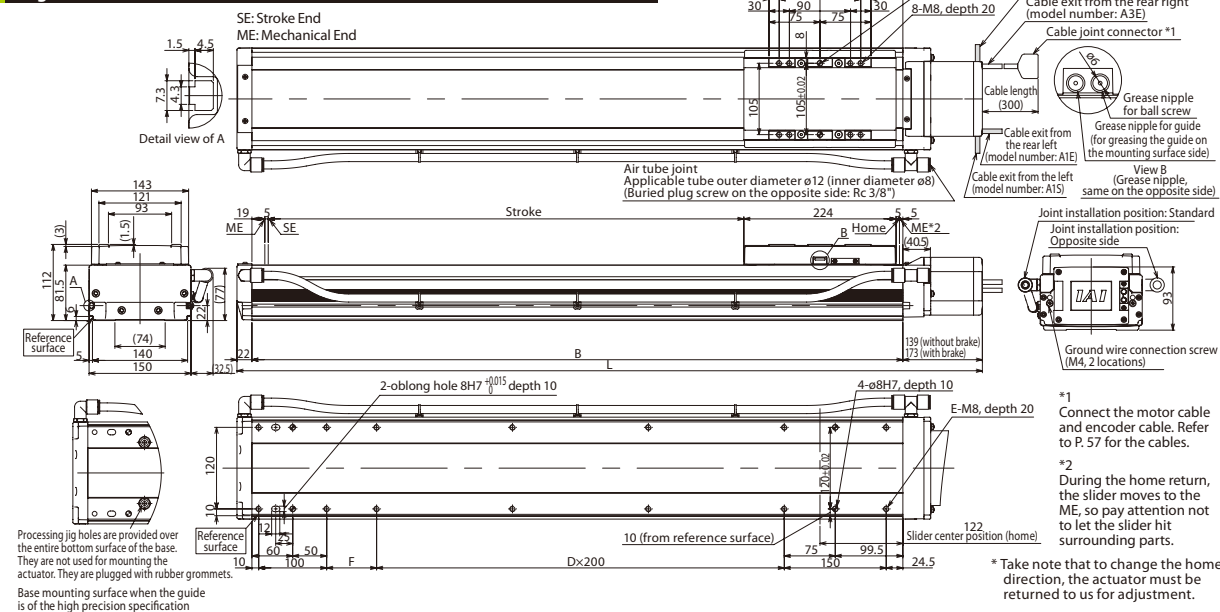
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |
| | | | Suction tube joint on the opposite side | VR | →P12 |

Common Specifications

| | |
|--|---|
| Positioning repeatability (Note 2) | ±0.01mm (±0.005mm) |
| Drive method (Note 3) | Ball screw ø20mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 104.9N·m Mb: 149.9N·m Mc: 248.9N·m |
| Overhang load length | Ma direction: 750mm max. Mb, Mc directions: 750mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white aluminate treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| Cable length (Note 7) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Grease | Low dust-raising grease (for ball screw and guide) |
| Cleanliness degree | Class 10 (0.1µm per 1cf) |
| Suction tube joint | Quick connect joint, applicable tube outer diameter ø12mm |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The maximum speed (mm/s) varies depending on the stroke.

| Stroke | L | | | | | | | | | | | | | | | | E | | | | | | | | | | | | | | | | F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---------|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|--|--|--|--|--|--|--|---|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| without brake | 519 | 569 | 619 | 669 | 719 | 769 | 819 | 869 | 919 | 969 | 1019 | 1069 | 1119 | 1169 | 1219 | 1269 | 1319 | 1369 | 1419 | 1469 | 1519 | 1569 | 1619 | 1669 | 1719 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | 1753 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | 358 | 408 | 458 | 508 | 558 | 608 | 658 | 708 | 758 | 808 | 858 | 908 | 958 | 1008 | 1058 | 1108 | 1158 | 1208 | 1258 | 1308 | 1358 | 1408 | 1458 | 1508 | 1558 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 | 16 | 16 | 16 | 16 | 18 | 18 | 18 | 18 | 18 | 20 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F | 73.5 | 123.5 | 173.5 | 23.5 | 73.5 | 123.5 | 173.5 | 23.5 | 73.5 | 123.5 | 173.5 | 23.5 | 73.5 | 123.5 | 173.5 | 23.5 | 73.5 | 123.5 | 173.5 | 23.5 | 73.5 | 123.5 | 173.5 | 23.5 | 73.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mass (kg) | 12.3 | 13.1 | 14.0 | 14.8 | 15.7 | 16.6 | 17.4 | 18.3 | 19.1 | 20.0 | 20.8 | 21.7 | 22.5 | 23.4 | 24.3 | 25.1 | 26.0 | 26.8 | 27.7 | 28.5 | 29.4 | 30.2 | 31.1 | 31.9 | 32.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maximum speed (mm/s) | Lead 40 | | | | | | | | | | | | | | | | | 1200 | | | | | | | | | | | | | | | | 1800 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Lead 20 | | | | | | | | | | | | | | | | | 600 | | | | | | | | | | | | | | | | 1165 | | | | | | | | | | | | | | | | 1045 | | | | | | | | | | | | | | | |
| | Lead 10 | | | | | | | | | | | | | | | | | 600 | | | | | | | | | | | | | | | | 585 | | | | | | | | | | | | | | | | 520 | | | | | | | | | | | | | | | |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/ incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200 VAC | →P56 |
| SSEL | 2 axes | | | Single-phase 200 VAC | →P56 |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPDBCR series. Other specification values apply commonly to the ISDBCR and ISPDBCR. (Note 5) When the traveling life is 10,000km. (Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified. (Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISDBCR-L-400/ISPDBCR-L-400

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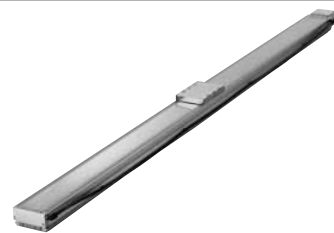
ISDBCR-LX-400

Single-axis robot for cleanroom/Large, mid-support type/Actuator width: 150mm/400W Straight shape

ISPDBCR-LX-400

Single-axis robot for cleanroom/Large, mid-support type/Actuator width: 150mm/400W Straight shape **High precision specification**

| Model Specification Items | Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
|---|--------|------|---|------------|----------------------|---|--|--|-----------------------------------|
| ISDBCR: Standard specification ISPDBCR: High precision specification | LX | 400 | A: Absolute specification I: Incremental specification | 400: 400W | 40: 40mm 20: 20mm | 1000: 1000mm 2500: 2500mm (in 100mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. |



* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 100mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) | Suction flow rate (N ² /min) |
|-------------------------------------|----------------------|------------------|-----------|---------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|---|----------------------|------------------|---|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | | |
| ISDBCR[ISPDBCR]-LX-①-400-40-②-③-④-⑤ | Absolute Incremental | 400 | 40 | 1000~2500 | 1~1800 | 0.4 | | 0.4 | | 40 | | Designed exclusively for horizontal use | | 169.6 | 180 |
| ISDBCR[ISPDBCR]-LX-①-400-20-②-③-④-⑤ | | | | | | 0.4 | | 0.4 | | 90 | | Designed exclusively for horizontal use | | | |

*In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

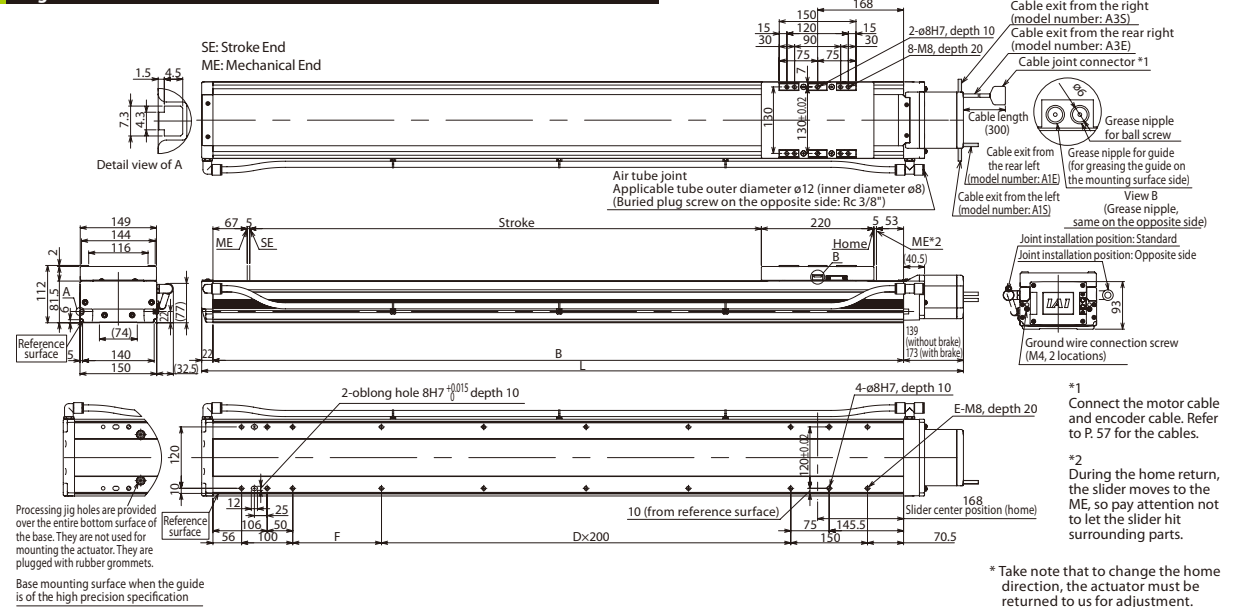
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |
| | | | Suction tube joint on the opposite side | VR | →P12 |

Common Specifications

| | |
|--|---|
| Positioning repeatability (Note 2) | ±0.01mm [±0.005mm] |
| Drive method (Note 3) | Ball screw ø20mm, rolled C10 [equivalent to rolled C5] |
| Lost Motion (Note 4) | 0.05mm [0.02mm] max. |
| Dynamic allowable load moment (Note 5) | Ma: 104.9N·m Mb: 149.9N·m Mc: 248.9N·m |
| Overhang load length | Ma direction: 750mm max. Mb, Mc directions: 750mm max. |
| Dynamic straightness (Note 6) | 0.02mm/m max. |
| Base | Material: Aluminum, with white alumite treatment |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| Cable length (Note 7) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Grease | Low dust-raising grease (for ball screw and guide) |
| Cleanliness degree | Class 10 (0.1µm per 1cf) |
| Suction tube joint | Quick connect joint, applicable tube outer diameter ø12mm |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The maximum speed (mm/s) varies depending on the stroke.

| Stroke | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 2500 | |
|----------------------|---------------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|------|
| L | without brake | 1511 | 1611 | 1711 | 1811 | 1911 | 2011 | 2111 | 2211 | 2311 | 2411 | 2511 | 2611 | 2711 | 2811 | 2911 | 3011 |
| | with brake | 1545 | 1645 | 1745 | 1845 | 1945 | 2045 | 2145 | 2245 | 2345 | 2445 | 2545 | 2645 | 2745 | 2845 | 2945 | 3045 |
| B | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 | 2450 | 2550 | 2650 | 2750 | 2850 | |
| D | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 12 | |
| E | 16 | 18 | 18 | 20 | 20 | 22 | 22 | 24 | 24 | 26 | 26 | 28 | 28 | 30 | 30 | 32 | |
| F | 173.5 | 73.5 | 173.5 | 73.5 | 173.5 | 73.5 | 173.5 | 73.5 | 173.5 | 73.5 | 173.5 | 73.5 | 173.5 | 73.5 | 173.5 | 73.5 | |
| Mass (kg) | 30.2 | 31.9 | 33.6 | 35.4 | 37.1 | 38.8 | 40.6 | 42.3 | 44.0 | 45.8 | 47.5 | 49.2 | 51.0 | 52.7 | 54.4 | 56.2 | |
| Maximum speed (mm/s) | Lead 40 | 1800 | | | | | | | | | | | | | | | |
| | Lead 20 | 1200 | | | | | | | | | | | | | | | |
| | | | 1150 | 1000 | 950 | 830 | 740 | 650 | 590 | 540 | 490 | 440 | 410 | 370 | 340 | | |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/incremental | Program | Single/three-phase 200VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200VAC | →P56 |
| SSEL | 2 axes | | | Single-phase 200VAC | →P56 |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |

CAUTION

(Note 1) Refer to P.9 for the relationship of acceleration and payload. (Notes 2, 3, 4) The values in [] apply to the ISPDBCR series. Other specification values apply commonly to the ISDBCR and ISPDBCR.

(Note 5) When the traveling life is 10,000km.

(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.

(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISDBCR-LX-400/ISPDBCR-LX-400

SSPDACR-S-200

Single-axis robot for cleanroom/Small, high-rigidity, iron-base type/Actuator width: 100mm/200W
Straight shape **High precision specification**



| | | | | | | | | | |
|---------------------------|---------------------------------------|------|---|---|---|--|--|-----------------------------------|---------|
| Model Specification Items | SSPDACR | S | □ | 200 | □ | □ | □ | □ | □ |
| | Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
| | SSPDACR: High precision specification | | A: Absolute specification I: Incremental specification | 200: 200W 30: 30mm 20: 20mm 10: 10mm | 100: 100mm 1100: 1100mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | Refer to the options table below. | |

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) | Suction flow rate (Nℓ/min) |
|----------------------------|----------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|----------------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | | |
| SSPDACR-S-①-200-30-②-③-④-⑤ | Absolute Incremental | 200 | 30 | 100~1100 | 1~1600 | 0.4 | 1.2 | 0.4 | 1.2 | 30 | 10 | 4 | 1 | 113.9 | 150 |
| SSPDACR-S-①-200-20-②-③-④-⑤ | | | 20 | | 1~1100 | 0.4 | 1.0 | 0.4 | 1.0 | 45 | 17 | 6 | 2.4 | 170.9 | 100 |
| SSPDACR-S-①-200-10-②-③-④-⑤ | | | 10 | | 1~600 | 0.4 | 0.7 | 0.4 | 0.6 | 90 | 50 | 12 | 8 | 341.8 | 50 |

* In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

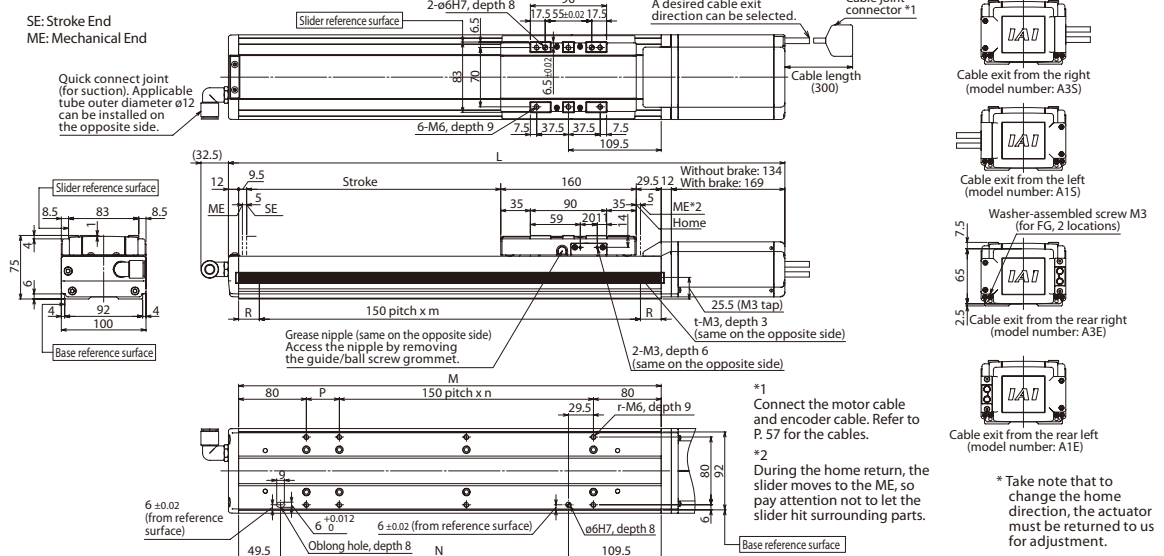
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |
| | | | Suction tube joint on the opposite side | VR | →P12 |

Common Specifications

| | |
|--|---|
| Positioning repeatability | ±0.005mm |
| Drive method | Ball screw ø16mm equivalent to rolled C5 |
| Lost Motion | 0.02mm max. |
| Dynamic allowable load moment (Note 2) | Ma: 36N·m Mb: 36N·m Mc: 98N·m |
| Overhang load length | Ma direction: 450mm max. Mb, Mc directions: 450mm max. |
| Dynamic straightness (Note 3) | 0.015mm/m max. |
| Base | Material: Cast iron with coating |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON |
| Cable length (Note 4) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Grease | Low dust-raising grease (for ball screw and guide) |
| Cleanliness degree | Class 10 (0.1µm per 1cf) |
| Suction tube joint | Quick connect joint, applicable tube outer diameter ø12mm |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

| Stroke | L | | | | | | | | | | | M | | | | | | | | | | | N | | | | | | | | | | | P | | | | | | | | | | | R | | | | | | | | | | | m | | | | | | | | | | | n | | | | | | | | | | | r | | | | | | | | | | | t | | | | | | | | | | | Mass (kg) | | | | | | | | | | | Maximum speed (mm/s) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |

SSPDACR-M-400

Single-axis robot for cleanroom/Medium, high-rigidity, iron-base type/Actuator width: 130mm/400W
Straight shape **High precision specification**



| | | | | | | | | | |
|---------------------------|---------------------------------------|------|---|---|---|--------------------------------------|--|--------------|-----------------------------------|
| Model Specification Items | SSPDACR | M | 400 | | | | | | |
| | Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
| | SSPDACR: High precision specification | | A: Absolute specification I: Incremental specification | 400: 400W 40: 40mm 20: 20mm 10: 10mm | 100: 100mm 1300: 1300mm (in 50mm increments) | T1: XSEL-J/K T2: SCON SSEL-P/Q | N: None S: 3m M: 5m X□□: Specified length | | Refer to the options table below. |

* Refer to P. 10 for the details of items comprising the model number.

| Model number | Encoder type | Motor output (W) | Lead (mm) | Stroke in 50mm increments (mm) | Speed (mm/s) | Acceleration (Note 1) | | | | Payload (Note 1) | | | | Rated thrust (N) | Suction flow rate (Nl/min) |
|----------------------------|----------------------|------------------|-----------|--------------------------------|--------------|-----------------------|---------|--------------|---------|--------------------|----------------------|--------------------|----------------------|------------------|----------------------------|
| | | | | | | Horizontal (G) | | Vertical (G) | | Horizontal (kg) | | Vertical (kg) | | | |
| | | | | | | Rated | Maximum | Rated | Maximum | Rated acceleration | Maximum acceleration | Rated acceleration | Maximum acceleration | | |
| SSPDACR-M-①-400-40-②-③-④-⑤ | Absolute Incremental | 400 | 40 | 100~1300 | 1~1600 | 0.4 | 1.2 | 0.4 | 1.2 | 45 | 13.5 | 6 | 2 | 169.6 | 160 |
| SSPDACR-M-①-400-20-②-③-④-⑤ | | | 20 | | 1~1100 | 0.4 | 1.0 | 0.4 | 1.0 | 90 | 34 | 12 | 4.8 | 339.1 | 110 |
| SSPDACR-M-①-400-10-②-③-④-⑤ | | | 10 | | 1~600 | 0.4 | 0.7 | 0.4 | 0.6 | 120 | 70 | 25 | 16.5 | 678.3 | 60 |

*In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

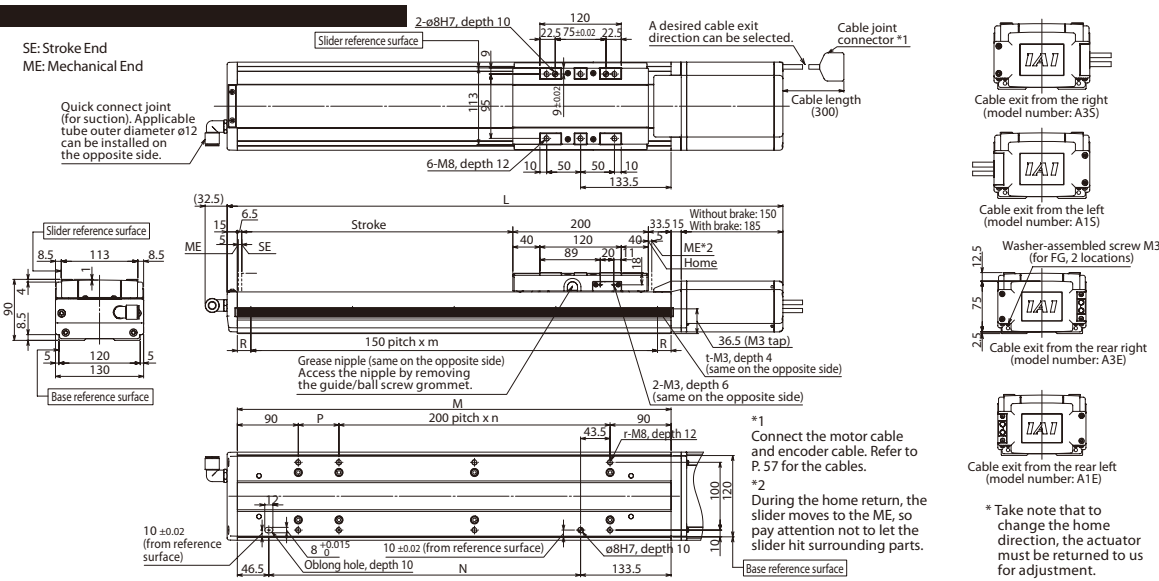
Option

| Name | Model number | Reference page | Name | Model number | Reference page |
|-----------------------------------|--------------|----------------|---|--------------|----------------|
| Cable exit from the left | A1S | →P11 | Home limit switch | L | →P11 |
| Cable exit from the rear left | A1E | →P11 | Home limit switch on the opposite side | LL | →P11 |
| Cable exit from the right | A3S | →P11 | Master axis specification | LM | →P12 |
| Cable exit from the rear right | A3E | →P11 | Master axis specification (sensor on the opposite side) | LLM | →P12 |
| AQ seal (standard feature) | AQ | →P11 | Non-motor side specification | NM | →P12 |
| Brake | B | →P11 | Guide with ball retention mechanism | RT | →P12 |
| Creep sensor | C | →P11 | Slave axis specification | S | →P12 |
| Creep sensor on the opposite side | CL | →P11 | High straightness, precision specification | ST | →P13 |
| | | | Suction tube joint on the opposite side | VR | →P12 |

Common Specifications

| | |
|--|---|
| Positioning repeatability | ±0.005mm |
| Drive method | Ball screw ø20mm equivalent to rolled C5 |
| Lost Motion | 0.02mm max. |
| Dynamic allowable load moment (Note 2) | Ma: 90N·m Mb: 90N·m Mc: 230N·m |
| Overhang load length | Ma direction: 600mm max. Mb, Mc directions: 600mm max. |
| Dynamic straightness (Note 3) | 0.015mm/m max. |
| Base | Material: Cast iron with coating |
| Applicable controller | T1: XSEL-J/K T2: XSEL-P/Q SSEL, SCON |
| Cable length (Note 4) | N: None, S: 3m, M: 5m, X□□: Specified length |
| Grease | Low dust-raising grease (for ball screw and guide) |
| Cleanliness degree | Class 10 (0.1µm per lcf) |
| Suction tube joint | Quick connect joint, applicable tube outer diameter ø12mm |

Diagram



Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg. *The maximum speed (mm/s) varies depending on the 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 | 1250 | 1300 | |
|----------------------|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L | without brake | 520 | 570 | 620 | 670 | 720 | 770 | 820 | 870 | 920 | 970 | 1020 | 1070 | 1120 | 1170 | 1220 | 1270 | 1320 | 1370 | 1420 | 1470 | 1520 | 1570 | 1620 | 1670 | 1720 |
| | with brake | 555 | 605 | 655 | 705 | 755 | 805 | 855 | 905 | 955 | 1005 | 1055 | 1105 | 1155 | 1205 | 1255 | 1305 | 1355 | 1405 | 1455 | 1505 | 1555 | 1605 | 1655 | 1705 | 1755 |
| M | | 340 | 390 | 440 | 490 | 540 | 590 | 640 | 690 | 740 | 790 | 840 | 890 | 940 | 990 | 1040 | 1090 | 1140 | 1190 | 1240 | 1290 | 1340 | 1390 | 1440 | 1490 | 1540 |
| N | | 160 | 210 | 260 | 310 | 360 | 410 | 460 | 510 | 560 | 610 | 660 | 710 | 760 | 810 | 860 | 910 | 960 | 1010 | 1060 | 1110 | 1160 | 1210 | 1260 | 1310 | 1360 |
| P | | 160 | 210 | 260 | 310 | 360 | 410 | 460 | 510 | 560 | 610 | 660 | 710 | 760 | 810 | 860 | 910 | 960 | 1010 | 1060 | 1110 | 1160 | 1210 | 1260 | 1310 | 1360 |
| R | | 20 | 45 | 70 | 20 | 45 | 70 | 20 | 45 | 70 | 20 | 45 | 70 | 20 | 45 | 70 | 20 | 45 | 70 | 20 | 45 | 70 | 20 | 45 | 70 | 20 |
| m | | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 10 |
| n | | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | |
| r | | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 | 14 | 16 | 16 | 16 | |
| t | | 3 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 8 | 9 | 9 | 10 | 10 | 10 | 11 | |
| Mass (kg) | | 13.9 | 15.0 | 16.0 | 17.1 | 18.1 | 19.2 | 20.2 | 21.3 | 22.3 | 23.4 | 24.4 | 25.5 | 26.5 | 27.6 | 28.7 | 29.7 | 30.8 | 31.8 | 32.9 | 33.9 | 35.0 | 36.0 | 37.1 | 38.1 | 39.2 |
| Maximum speed (mm/s) | Lead 40 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Lead 20 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Lead 10 | | | | | | | | | | | | | | | | | | | | | | | | | |

Applicable Controller Specifications

| Applicable Controller | Maximum number of controlled axes | Connectable encoder type | Operating method | Power-supply voltage | Reference page |
|-----------------------|-----------------------------------|--------------------------|------------------|--------------------------------|----------------|
| X-SEL-P/Q | 6 axes | Absolute/ incremental | Program | Single/three-phase 200 VAC | →P56 |
| X-SEL-J/K | 4 axes | | | Single-phase 100/200 VAC | →P56 |
| SSEL | 2 axes | | | Single-phase 200 VAC | →P56 |
| SCON | 1 axis | | | Positioner pulse train control | →P56 |





CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
 (Note 2) When the traveling life is 10,000 km.
 (Note 3) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
 (Note 4) The maximum cable length is 30 m. Specify a desired length in meters. (Example. X08 = 8 m)

SSPDACR-M-400

The ISB/ISPB/SSPA/ISDB/ISPDB/ISDBCR/ISPDCR/SSPDACR can be operated with the following controllers.

Select a controller that meets the specifications of your equipment. *For details, refer to the ROBO Cylinder General Catalog.

| | Controller series/type | SCON | SSEL | XSEL | |
|-----------------------------------|--|---|--|--|--|
| | | | | J/K type | P/Q type |
| Base specifications | External view |  |  |  |  |
| | Features | <ul style="list-style-type: none"> A positioner controller supporting up to 512 positioning points For control modes, the pulse-train input mode is supported in addition to the positioner mode. | <ul style="list-style-type: none"> A program controller capable of 2-axis interpolation operation. Offering excellent cost performance, although scalability is lower than XSEL controllers. | <ul style="list-style-type: none"> A high-function controller capable of interpolation operation involving up to 4 axes. Can be operated on 100 VAC. | <ul style="list-style-type: none"> A high-function controller capable of interpolation operation involving up to 6 axes. Actuators of a total wattage of 2400W can be connected. |
| | Power capacity | 60W/186VA 100W/282VA 200W/469VA 400W/844VA 750W/1569VA | 60W/198VA 100W/294VA 200W/481VA 400W/856VA 750W/1581VA (The above assumes a 1-axis specification.) | The specifications vary. Contact IAI for details. | |
| | Input power supply | Single-phase 100 VAC Single-phase 200 VAC | Single-phase 100 VAC Single-phase 200 VAC | Single-phase 100 VAC Single-phase 200 VAC | Single-phase 200 VAC Three-phase 200 VAC |
| | Operating power-supply voltage range | ±10% | | | |
| | Control specifications | Total maximum output of connected axes (W) | 200W (100-V power-supply specification) 750W (200-V power-supply specification) | 400W (100-V power-supply specification) 800W (200-V power-supply specification) | 400W (XSEL-J, single-phase, 100 V) 800W (XSEL-K, single-phase, 100 V) |
| Maximum number of controlled axes | | 1 axis | 2 axes | 4 axes | 6 axes |
| Position detection method | | Incremental encoder/Absolute encoder | | | |
| Operation method | | Positioner operation Pulse-train control | Program operation Positioner operation (switchable) | Program operation | |
| Program | Program language | — | | Super SEL language | |
| | Number of programs | — | | 64 | 128 |
| | Number of program steps | — | | 6,000 | 9,999 |
| | Number of multi-task programs | — | | 16 | 16 |
| | Number of positions | 512 max. | | 3,000 | 20,000 |
| | Data input devices (optional) | Teaching pendant Model number: CON-PT/CON-T RCM-E/RCM-P PC software Model number: RCM-101-MW (for RS232 communication) RCM-101-USB (for USB communication) | Teaching pendant Model number: SEL-T-J SEL-TD-J IA-T-X-J IA-T-XD-J PC software Model number: IA-101-X-MW-J (for RS232 communication) IA-101-X-USB (for USB communication) | Teaching pendant Model number: IA-T-X/XD SEL-TG (for both XSEL-J/K) SEL-T/TD (for XSEL-K) PC software Model number: IA-101-X-MW (for RS232 communication) IA-101-X-USBMW (for USB communication) | Teaching pendant Model number: SEL-T/TD/TG IA-T-X/XD PC software Model number: IA-101-X-MW IA-101-X-USBMW (for XSEL-P) Model: IA-101-XA-MW (for XSEL-Q) |
| Inputs/Outputs and communication | Standard inputs/outputs | 16 input points/16 output points (NPN/PNP selectable) | 24 input points/8 output points (NPN/PNP selectable) | 32 input points/16 output points (NPN/PNP selectable) | |
| | Extended inputs/outputs | Not supported | | Total 80 input/output points (XSEL-J) Total 336 input/output points (XSEL-K) | Total 384 input/output points |
| | Field network | DeviceNet, CC-Link, ProfiBus | | DeviceNet, CC-Link, ProfiBus, Ethernet | |
| Ambient conditions | Ambient operating temperature/humidity | 0 to 40°C 10 to 95% (non-condensing) | | | |
| | Operating ambience | There shall be no corrosive gases or excessive powder dust. | | | |
| | External dimensions | 58 (W) x 200.5 (H) x 121 (D) (200W or less) 72 (W) x 200.5 (H) x 121 (D) (400W or more) | 100 (W) x 202.6 (H) x 126 (D) (when the absolute battery installed) | 159.4 (W) x 195 (H) x 125.3 (D) (XSEL-J, 1-axis specification) 369.4 (W) x 195 (H) x 125.3 (D) (XSEL-K, 1-axis, 2-axes specification) | 265 (W) x 195 (H) x 125.3 (D) (XSEL-P, 1-axis specification) 222 (W) x 195 (H) x 125.3 (D) (XSEL-Q, 1-axis specification) |
| | Mass | 0.8 to 1.1 kg | 1.4kg | 2.6 to 5.0 kg (XSEL-J) 6.0 to 7.0 kg (XSEL-K) | 5.2 to 5.7 kg (XSEL-P) 4.5 to 5.0 kg (XSEL-Q) |
| | Accessories | I/O flat cable (40 cores) | | I/O flat cable (50 cores) | |

■ When the SCON controller is connected

Note The regenerative resistance unit may be required depending on the actuator used. For details, refer to the ROBO Cylinder General Catalog.

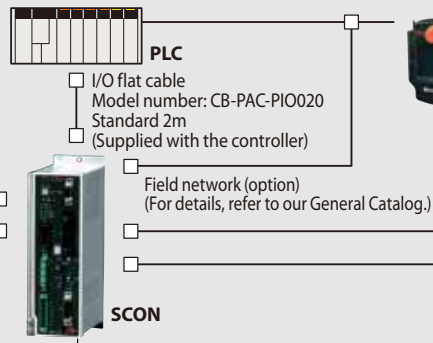


Actuator

Motor cable
Model number: CB-X-MA□□□
(Supplied with the actuator)

Encoder cable
Model number: CB-X1-PA□□□
(for standard specification)
Model number: CB-X1-PLA□□□
(for sensor specification)
(Supplied with the actuator)

Main power Single-phase 100 VAC
Single-phase 200 VAC



Teaching pendant (optional)

Model: CON-PT-M
Model: CON-T
Model: RCM-E
Model: RCM-P

PC software (optional)

RS232 connection version
Model number: RCM-101-MW
USB connection version
Model number: RCM-101-USB

* Be sure to use a noise filter on the power supply.
(For the recommended models, refer to the ROBO Cylinder General Catalog.)

■ When the SSEL controller is connected

Note The regenerative resistance unit may be required depending on the actuator used. For details, refer to the ROBO Cylinder General Catalog.

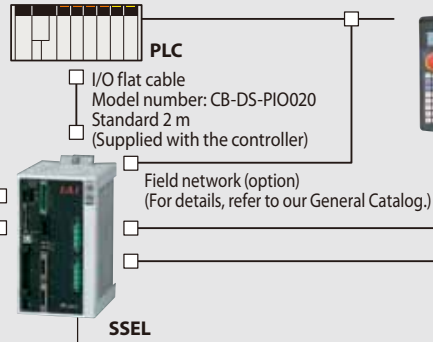


Actuator

Motor cable
Model number: CB-X-MA□□□
(Supplied with the actuator)

Encoder cable
Model number: CB-X1-PA□□□
(for standard specification)
Model number: CB-X1-PLA□□□
(for sensor specification)
(Supplied with the actuator)

Main power Single-phase 100 VAC
Single-phase 200 VAC



Teaching pendant (optional)

Model: SEL-T-J
Model: SEL-TD-J
Model: IA-T-X-J
Model: IA-T-XD-J

PC software (optional)

RS232 connection version
Model number: IA-101-X-MW-J
USB connection version
Model number: IA-101-X-USB

* Be sure to use a noise filter on the power supply.
(For the recommended models, refer to the ROBO Cylinder General Catalog.)

■ When the XSEL-J/K controller is connected

Note The regenerative resistance unit may be required depending on the actuator used. For details, refer to the ROBO Cylinder General Catalog.



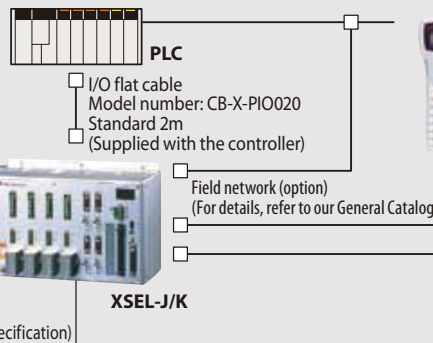
Actuator

Motor cable
Model number: CB-X-MA□□□
(Supplied with the actuator)

Encoder cable
Model number: CB-X-PA□□□
(Supplied with the actuator)

Limit switch cable
Model number: CB-X-LC□□□ (for sensor specification)
(Supplied with the actuator)

Main power Single-phase 100 VAC
Single-phase 200 VAC



Teaching pendant (optional)

Model number: IA-T-X
Model number: IA-T-XD
Model number: SEL-T
Model number: SEL-TD
Model number: SEL-TG
* The SEL-T/SEL-TD cannot be used with the XSEL-J.

PC software (optional)

RS232 connection version
Model number: IA-101-X-MW
USB connection version
Model number: IA-101-X-USBMW

* Be sure to use a noise filter on the power supply.
(For the recommended models, refer to the ROBO Cylinder General Catalog.)

■ When the XSEL-P/Q controller is connected

Note The regenerative resistance unit may be required depending on the actuator used. For details, refer to the ROBO Cylinder General Catalog.



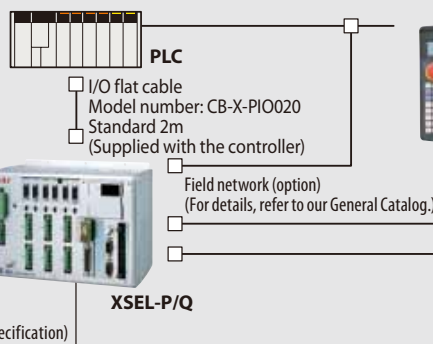
Actuator

Motor cable
Model number: CB-X-MA□□□
(Supplied with the actuator)

Encoder cable
Model number: CB-X1-PA□□□
(Supplied with the actuator)

Encoder cable with limit switch wiring
Model number: CB-X1-PLA□□□ (for sensor specification)
(Supplied with the actuator)

Main power Single-phase 200 VAC
Three-phase 200 VAC



Teaching pendant (optional)

Model number: SEL-T
Model number: SEL-TD
Model number: SEL-TG
Model number: IA-T-X
Model number: IA-T-XD

PC software (optional)

RS232 connection version
Model number: IA-101-X-MW
Model number: IA-101-XA-MW
(for XSEL-Q)
USB connection version
Model number: IA-101-X-USBMW

* Be sure to use a noise filter on the power supply.
(For the recommended models, refer to the ROBO Cylinder General Catalog.)