

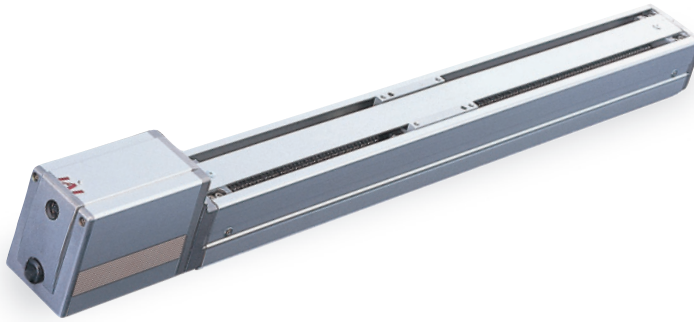
# ERC2-SA6C

Controller Integrated, Slider Type, Actuator Dimensions 58mm, Pulse Motor, Straight Type

Model Description **ERC2-SA6C-I-PM**

|        |      |                              |                 |                              |  |  |   |   |
|--------|------|------------------------------|-----------------|------------------------------|--|--|---|---|
| Series | Type | Encoder type                 | Motor type      | Lead                         | Stroke   | I/O Type   | Cable length  | Option  |
| ERC2   | SA6C | I: Incremental specification | PM: Pulse motor | 12: 12mm<br>6: 6mm<br>3: 3mm | 50-50mm<br>~<br>600:600mm (set in 50-mm steps) | NP: PIO (NPN) type<br>PN: PIO (PNP) type<br>SE: SIO type | N: None<br>S: 3m<br>XX □: Length designation<br>W □ □: Cable with connectors<br>R □ □: Robot cable<br>RW □ □: Robot cable with connectors | P: 1m<br>M: 5m<br>B: Brake<br>NM: Reversed-home Specification |

See preceding section for model descriptions.

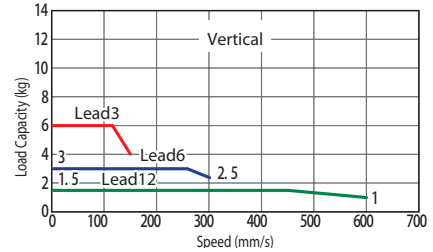
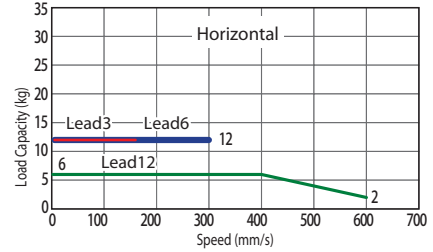


Technical Reference P.451

- POINT** Notes on selection
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the desirable maximum speed in the Actuator Specification Table below.
  - Since the ERC2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the speed vs. payload graph at right.
  - The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with 3 lead).
- The above values are maximum acceleration.

### Speed vs. Payload Graph

A characteristic of the ERC2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.



### Actuator Specification Table

#### Leads and Payloads

(Note 1) Please note that the maximum payload decreases as the speed increases.

| Model                     | Lead (mm) | Maximum payload (Note 1) |               | Stroke (mm)            |
|---------------------------|-----------|--------------------------|---------------|------------------------|
|                           |           | Horizontal (kg)          | Vertical (kg) |                        |
| ERC2-SA6C-I-PM-12-①-②-③-④ | 12        | Up to 6                  | Up to 1.5     | 50 to 600 (every 50mm) |
| ERC2-SA6C-I-PM-6-①-②-③-④  | 6         | 12                       | Up to 3       |                        |
| ERC2-SA6C-I-PM-3-①-②-③-④  | 3         | 12                       | Up to 6       |                        |

Legend ① Stroke ② I/O Type ③ Cable Length ④ Options

#### Stroke and Maximum Speed

| Stroke / Lead | 50 to 550 (every 50mm) | 600 (mm) |
|---------------|------------------------|----------|
|               | 12                     | 600      |
| 6             | 300                    | 255      |
| 3             | 150                    | 125      |

(Unit = mm/s)

#### ① Price by Stroke and ② I/O Type

| ① Stroke (mm) | Type code     |    |
|---------------|---------------|----|
|               | SA6C          |    |
|               | ② By I/O Type |    |
|               | NP/PN         | SE |
| 50            | —             | —  |
| 100           | —             | —  |
| 150           | —             | —  |
| 200           | —             | —  |
| 250           | —             | —  |
| 300           | —             | —  |
| 350           | —             | —  |
| 400           | —             | —  |
| 450           | —             | —  |
| 500           | —             | —  |
| 550           | —             | —  |
| 600           | —             | —  |

#### ③ Cable Length Price List

| Type           | Cable symbol           | Standard price |
|----------------|------------------------|----------------|
| Standard type  | P (1m)                 | —              |
|                | S (3m)                 | —              |
|                | M (5m)                 | —              |
| Special length | X06 (6m) - X10 (10m)   | —              |
|                | W01 (1m) - W03 (3m)    | —              |
|                | W04 (4m) - W05 (5m)    | —              |
| Connectors     | W06 (6m) - W10 (10m)   | —              |
|                | R01 (1m) - R03 (3m)    | —              |
|                | R04 (4m) - R05 (5m)    | —              |
| Robot cable    | R06 (6m) - R10 (10m)   | —              |
|                | RW01 (1m) - RW03 (3m)  | —              |
|                | RW04 (4m) - RW05 (5m)  | —              |
| Connectors     | RW06 (6m) - RW10 (10m) | —              |
|                | RW01 (1m) - RW03 (3m)  | —              |
| Robot cable    | RW04 (4m) - RW05 (5m)  | —              |
|                | RW06 (6m) - RW10 (10m) | —              |

See P364 for maintenance cables.

#### ④ Option Price List

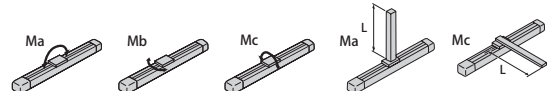
| Title                       | Option code | See page | Standard price |
|-----------------------------|-------------|----------|----------------|
| Brake                       | B           | P437     | —              |
| Reversed-home specification | NM          | P442     | No charge      |

#### Actuator Specification

| Item                                    | Description  |
|---|--|
| Drive System                            | Ball screw $\phi$ 10mm rolled C10                        |
| Positioning Repeatability               | $\pm$ 0.05mm   |
| Backlash                                | 0.1mm or less  |
| Allowable load moment                   | Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m                       |
| Overhang load length                    | Ma direction 150mm or less Mb-Mc direction 150mm or less |
| Ambient operating temperature, humidity | 0 to 40°C, 85% RH or less (non-condensing)               |

Direction of allowable load moment

Overhang load length



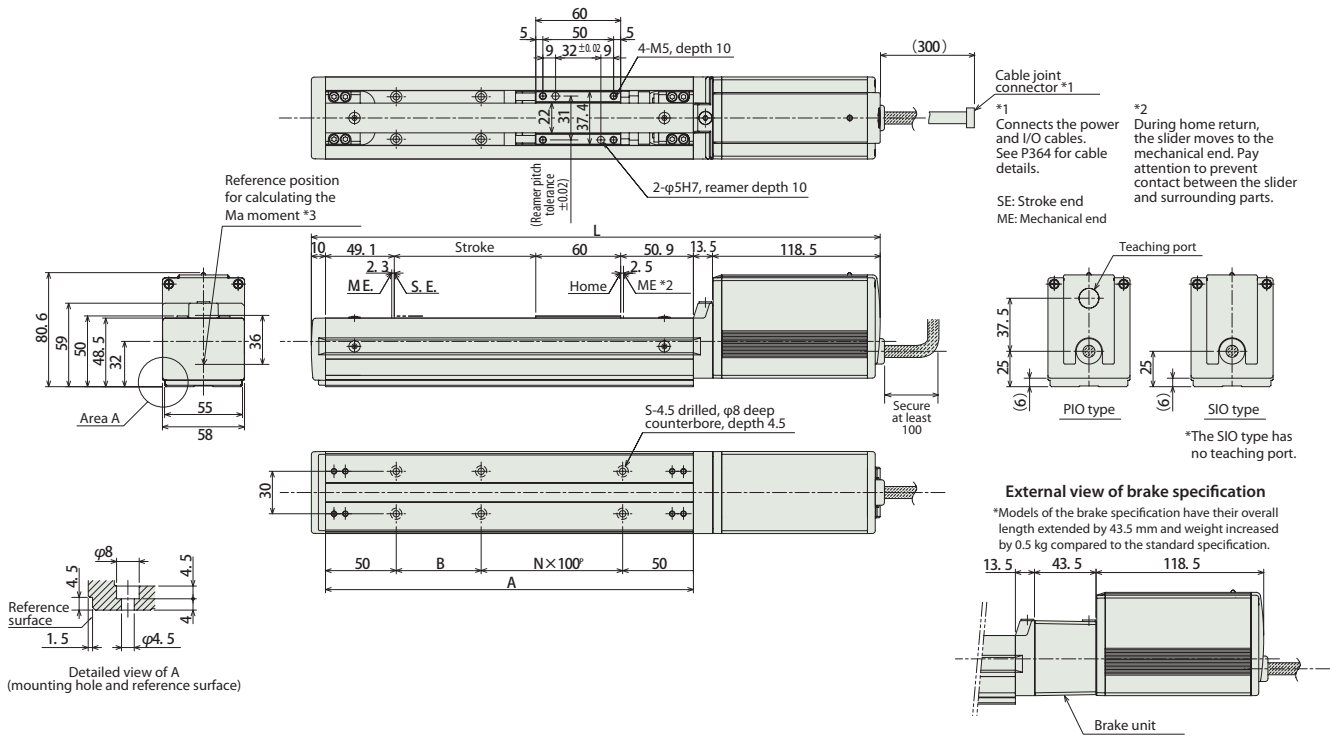
Dimensional Drawings

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



\* With the reversed-home specification, the dimension on the motor side (distance from the ME to the home) and that on the counter-motor side are reversed

Information on special orders P.454



■ Dimensions and Weight by Stroke

| Stroke      | 50  | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L           | 352 | 402 | 452 | 502 | 552 | 602 | 652 | 702 | 752 | 802 | 852 | 902 |
| A           | 210 | 260 | 310 | 360 | 410 | 460 | 510 | 560 | 610 | 660 | 710 | 760 |
| B           | 10  | 60  | 10  | 60  | 10  | 60  | 10  | 60  | 10  | 60  | 10  | 60  |
| N           | 1   | 1   | 2   | 2   | 3   | 3   | 4   | 4   | 5   | 5   | 6   | 6   |
| S           | 6   | 6   | 8   | 8   | 10  | 10  | 12  | 12  | 14  | 14  | 16  | 16  |
| Weight (kg) | 1.9 | 2.0 | 2.1 | 2.3 | 2.4 | 2.6 | 2.7 | 2.8 | 3.0 | 3.1 | 3.3 | 3.4 |

I/O Type (Actuator with Integrated Controller)

I/O Type

The integrated controller in the ERC2 Series can be selected from the following 3 types based on the type of external input and output (I/O). Select the type according to your application

| Title                         | External View | Model                     | Features  | Maximum number of positioning points | Input power | Power-supply capacity | Standard price     | See page |
|-------------------------------|---------------|---------------------------|---|--------------------------------------|-------------|-----------------------|--------------------|----------|
| PIO Type (NPN Specifications) |               | ERC2-SA6C-I-PM-□-□-NP-□-□ | Simple control type with up to 16-point positioning   | 16                                   | DC24V       | Maximum 2A            | (See page at left) | P355     |
| PIO Type (PNP Specifications) |               | ERC2-SA6C-I-PM-□-□-PN-□-□ | This type is compatible with the PNP specification I/O commonly used overseas. This is the PNP specification for the I/O type | 16                                   |             |                       |                    |          |
| SIO Type                      |               | ERC2-SA6C-I-PM-□-□-SE-□-□ | Field Network Connection Serial Type (Gateway unit used)  | 64                                   |             |                       |                    |          |