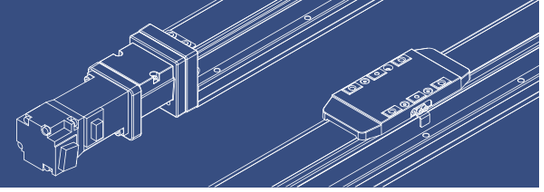
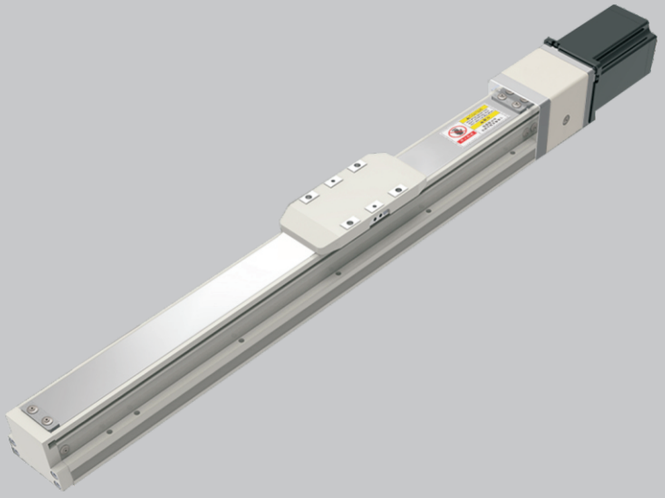
# SAG4 100W伺服電機 單軸/1-axis

軌道內嵌 Built-in Guideway | 螺桿驅動 Ball Screw Drive



AUTOMATION

2024 綜合資料 ⓔwww.saseiko.com



此圖僅供參考，出貨規格詳見尺寸圖面
The picture is just for the reference. Please check the the actual dimensions on the drawing.

| 最大行程 Maximum Stroke | 最高速度 Maximum Speed | 馬達容量 Motor Output | 滾珠螺桿 Ball Screw |
|---|---|---|---|
| 800mm | 500mm/s | 100W | ⌀10mm |

## 型號表示方式 Ordering Method

SAG4 - L 2 - 100 - BC - H100B - C P 4 - W 00

**本體型號** Model

**螺桿導程** Ball Screw Lead

| | |
|---|---|
| 02 | 2mm |
| 05 | 5mm |
| 10 | 10mm |

**行程** Stroke

| |
|---|
| 50-800mm |
| 50間隔 50 mm Pitch |

**感應器型式** Sensor Type

| | |
|---|---|
| 空白 | NPN型 |
| P | PNP型 |

**馬達位置** Motor Position

| | |
|---|---|
| BC | 馬達外露 Motor Exposed |
| BM | 馬達下折 Motor Bottom Side |
| BL | 馬達左折 Motor Left Side |
| BR | 馬達右折 Motor Right Side |

**馬達廠牌、功率** Motor Brand、Power Output

| | | | | |
|---|---|---|---|---|
| P | 松下 Panasonic | 100 | 100W | B |
| M | 三菱 Mitsubishi | 200 | - | |
| T | 台達 Delta | 400 | - | |
| Y | 安川 Yaskawa | 750 | - | |
| H | 匯川 Inovance | | | |

* 红色部分马达尺寸相同
M, T, Y, H type have same motor size.
* 无刹车时不表示B
If no brake no B description.

**原點感應器** Home Sensor

| | |
|---|---|
| 外掛型 Out Side | |
| C | 馬達側 Motor Side |
| D | 反馬達側 OppoSite Motor Side |
| 無 SENSOR No Sensor | |
| E | 無 SENSOR No Sensor |

※選擇行程50時，有以下限制：
When the stroke is 50mm, the sensor installation has the following restrictions:
1. 原點與極限需放置於不同側。
Home sensor and limit sensor has to be installed on the different side of body.
2. 滑座左右兩側皆需安裝感應片。
Both sides of slider need to install the sensor trigger device.

**端點極限感應器** Limit Sensor

| | |
|---|---|
| 外掛型 Out Side | |
| 3 | 1只 1 Pc |
| 4 | 2只 2 Pcs |
| 無 SENSOR No Sensor | |
| 5 | 無 SENSOR No Sensor |

**驅動器** Driver

| | |
|---|---|
| W | 不含電機及驅動 Without Motor and Driver |
| A | 脈衝型(標準型) Pulse Type (Standard) |
| E | EtherCAT(总線型) EtherCAT (Bus Type) |
| P | Profinet(总線型) Profinet (Bus Type) |

**電線長度** Wire

| | |
|---|---|
| 00 | 不帶線 Without Wire |
| 03 | 3米線(默認) 3 Meters (Default) |
| 05 | 5米線 5 Meters |
| 08 | 8米線 8 Meters |



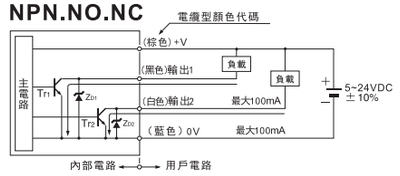
## 基本仕樣 Specification

| | | | | | |
|---|---|---|---|---|---|
| 規格 Spec | 位置重複精度 Repeatability (mm) | | ±0.01 | | |
| | 螺桿導程 Ball Screw Lead (mm) | | 2 | 5 | 10 |
| | 最高速度 Maximum Speed (mm/s) | | 100 | 250 | 500 |
| | 最大可搬重量 Maximum Payload | 水平使用 Horizontal (kg) | 25 | 20 | 12 |
| | | 垂直使用 Vertical (kg) | 8 | 8 | 3.5 |
| | 定格推力 Rated Thrust (N) | | 854 | 285 | 142 |
| | 標準行程 Stroke Pitch (mm) | | 50-800mm/50間隔 50 mm Pitch | | |
| 部品 Parts | AC伺服馬達容量 AC Servo Motor Output (W) | | 100 | | |
| | 滾珠螺桿外徑 Ball Screw Ø (mm) | | C7 ϕ 10 | | |
| | 連軸器 Coupling (mm) | | 7X8 | | |
| | 原點感應器 Home Sensor | 外掛 Outside | NPN / PNP可选 | | |

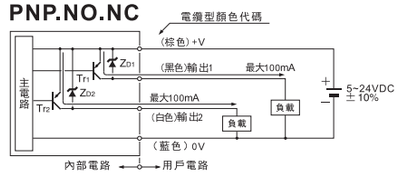
※行程超過550時，會產生螺桿偏擺，此時請將速度調降。
When the stroke is over550mm, the run-out of the ballscrew will occur. We recommend to low down the working speed under this circumstances.
※馬達加減速設定0.2秒。
Acceleration and deacceleration value is set 0.2 second.

## 感應器接線圖<原點及端點> Sensor Layout

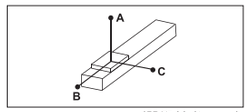
**NPN.NO.NC**




**PNP.NO.NC**

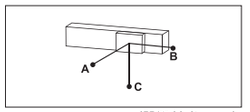



## 容許負載力距表 Allowable Overhang



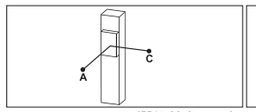

(單位 Unit : mm)

| 水平安裝 Horizontal Installation | | A | B | C |
|---|---|---|---|---|
| 導程 2 Lead | 12kg | 1000 | 55 | 80 |
| | 18kg | 750 | 35 | 50 |
| | 25kg | 500 | 23 | 32 |
| 導程 5 Lead | 10kg | 550 | 53 | 70 |
| | 15kg | 350 | 32 | 45 |
| | 20kg | 250 | 22 | 31 |
| 導程 10 Lead | 8kg | 305 | 59 | 75 |
| | 10kg | 240 | 45 | 57 |
| | 12kg | 195 | 37 | 47 |




(單位 Unit : mm)

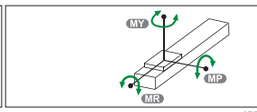
| 壁掛安裝 Wall Installation | | A | B | C |
|---|---|---|---|---|
| 導程 2 Lead | 12kg | 80 | 55 | 1000 |
| | 18kg | 50 | 35 | 750 |
| | 25kg | 32 | 23 | 500 |
| 導程 5 Lead | 10kg | 72 | 52 | 550 |
| | 15kg | 45 | 32 | 345 |
| | 20kg | 31 | 22 | 250 |
| 導程 10 Lead | 8kg | 75 | 59 | 300 |
| | 10kg | 58 | 45 | 240 |
| | 12kg | 47 | 37 | 190 |




(單位 Unit : mm)

| 垂直安裝 Vertical Installation | | A | C |
|---|---|---|---|
| 導程 2 Lead | 4kg | 195 | 195 |
| | 8kg | 100 | 100 |
| | - | - | - |
| 導程 5 Lead | 4kg | 150 | 150 |
| | 8kg | 75 | 75 |
| | - | - | - |
| 導程 10 Lead | 2kg | 260 | 260 |
| | 3.5kg | 150 | 150 |
| | - | - | - |

## 靜態容許負載慣量 Static Loading Moment




(單位 Unit : N.m)

| | |
|---|---|
| MY | 79 |
| MP | 79 |
| MR | 116 |

※力距表所表示的數據，代表重心。
The torque value in the chart indicate the center of gravity.
※符合型錄規範的正常使用下，保證壽命為10000公里。
Operation life is 10,000km when the product is using under the specified conditions.
※倒吊使用無法套用標準規範，如有需求請洽詢我司業務。
Data information is not for ceiling-mount inverse use. Contact us for the details if you want to apply ceiling-mount inverse usage.

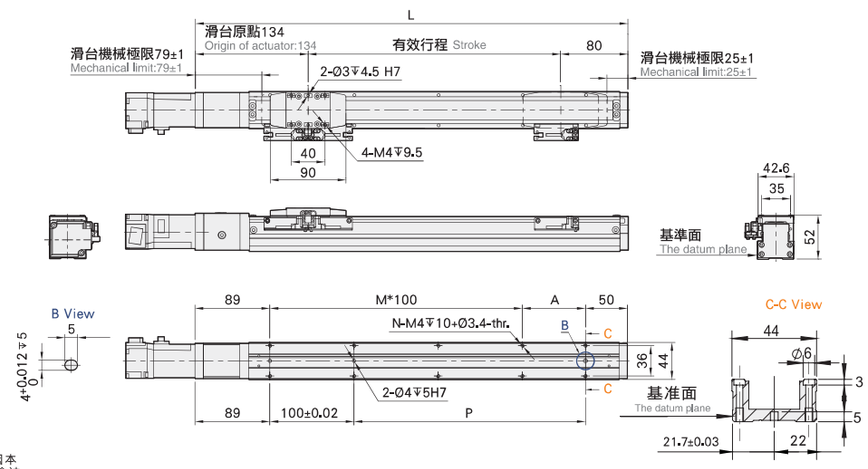
## 搭配步進馬達一覽表 Options of Stepper Motors

| 廠牌 Brand | 馬達記號 Mark | 煞車有無 Brake | 馬達容量 Watt | 電源電壓 AC-Voltage | 伺服馬達型號 Motor Model | 驅動器型號 Driver Model |
|---|---|---|---|---|---|---|
| 三菱 Mitsubishi | M | 無煞車(水平仕樣) No Brake (Horizontal Type) | 100 | 220 | HG-KN13J-S100 | MR-JE-10A |
| | | 有煞車(垂直仕樣) With Brake (Vertical Type) | 100 | 220 | HG-KN13BJ-S100 | MR-JE-10A |
| 松下 Panasonic | P | 無煞車(水平仕樣) No Brake (Horizontal Type) | 100 | 220 | MSMF012L1U2M | MADLN05SE |
| | | 有煞車(垂直仕樣) With Brake (Vertical Type) | 100 | 220 | MSMF012L1V2M | MADLN05SE |
| 台達 Delta | T | 無煞車(水平仕樣) No Brake (Horizontal Type) | 100 | 220 | ECM-B3L-C20401RS1 | ASD-B3-0121-L |
| | | 有煞車(垂直仕樣) With Brake (Vertical Type) | 100 | 220 | ECM-B3L-C20401SS1 | ASD-B3-0121-L |

## 馬達外露/馬達下折
## Motor Exposed / Motor Bottom Side

### BC 馬達外露 Motor Exposed

單位 Unit : mm

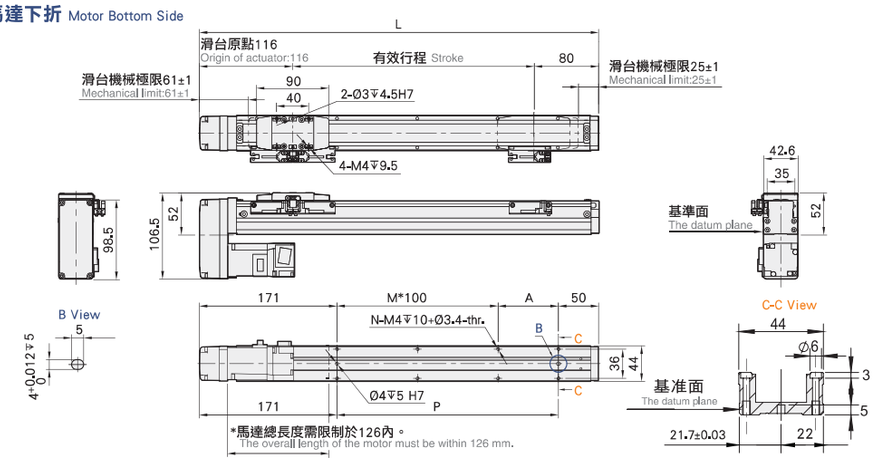



※行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。
When the stroke is 50mm, if fixing the body from the top to the bottom, the ixing hole will be blocked by slider and only can be uses 4 screws to ix;as a result, suggest that ixing actuator body from the bottom to the top.

| 有效行程 Stroke | 50※ | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 264 | 314 | 364 | 414 | 464 | 514 | 564 | 614 | 664 | 714 | 764 | 814 | 864 | 914 | 964 | 1014 |
| A | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 |
| M | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 |
| N | 6 | 6 | 8 | 8 | 10 | 10 | 12 | 12 | 14 | 14 | 16 | 16 | 18 | 18 | 20 | 20 |
| P | 25 | 75 | 125 | 175 | 225 | 275 | 325 | 375 | 425 | 475 | 525 | 575 | 625 | 675 | 725 | 775 |
| KG | 0.95 | 1.12 | 1.29 | 1.47 | 1.65 | 1.83 | 2.01 | 2.19 | 2.37 | 2.55 | 2.73 | 2.91 | 3.09 | 3.27 | 3.45 | 3.63 |

### BM 馬達下折 Motor Bottom Side

單位 Unit : mm




※行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。
When the stroke is 50mm, if fixing the body from the top to the bottom, the ixing hole will be blocked by slider and only can be uses 4 screws to ix;as a result, suggest that ixing actuator body from the bottom to the top.

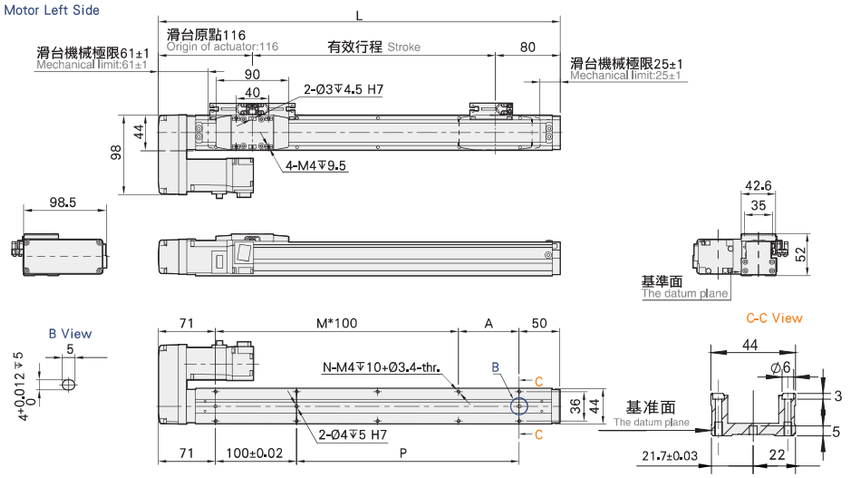
| 有效行程 Stroke | 50※ | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 246 | 296 | 346 | 396 | 446 | 496 | 546 | 596 | 646 | 696 | 746 | 796 | 846 | 896 | 946 | 996 |
| A | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 |
| M | 0 | 0 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 |
| N | 4 | 4 | 6 | 6 | 8 | 8 | 10 | 10 | 12 | 12 | 14 | 14 | 16 | 16 | 18 | 18 |
| P | 25 | 75 | 125 | 175 | 225 | 275 | 325 | 375 | 425 | 475 | 525 | 575 | 625 | 675 | 725 | 775 |
| KG | 1.04 | 1.22 | 1.40 | 1.58 | 1.76 | 1.94 | 2.12 | 2.30 | 2.48 | 2.66 | 2.84 | 3.02 | 3.20 | 3.38 | 3.56 | 3.74 |

* 馬達下折時，若選用剎車馬達，或是超出馬達總長度限制時無法套用標準PIN孔，如有需求請洽我司業務。
When motor with brake assembled on lower side, or the totall length over than spec limit, it may not use standard pinhole. Please contact our sales department if you need more information & requirement.

## 馬達左折/馬達右折
## Motor Left Side / Motor Right Side

### BL 馬達左折 Motor Left Side

單位 Unit : mm

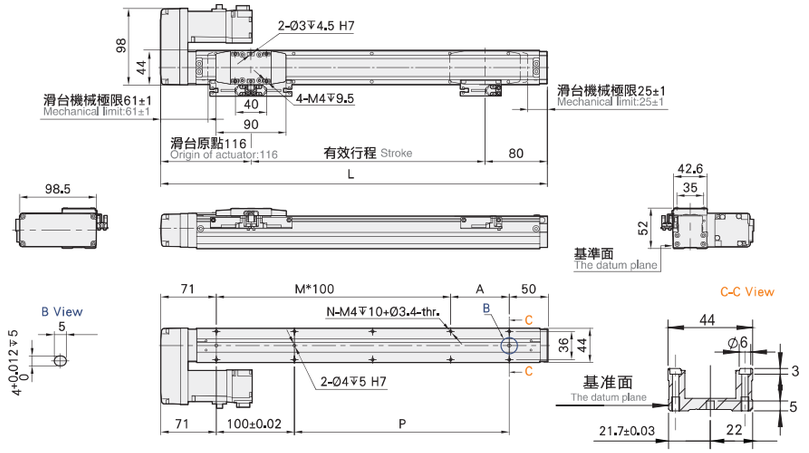



※行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。
When the stroke is 50mm, if fixing the body from the top to the bottom, the ixing hole will be blocked by slider and only can be uses 4 screws to ix;as a result, suggest that ixing actuator body from the bottom to the top.

| 有效行程 Stroke | 50※ | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 246 | 296 | 346 | 396 | 446 | 496 | 546 | 596 | 646 | 696 | 746 | 796 | 846 | 896 | 946 | 996 |
| A | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 |
| M | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 |
| N | 6 | 6 | 8 | 8 | 10 | 10 | 12 | 12 | 14 | 14 | 16 | 16 | 18 | 18 | 20 | 20 |
| P | 25 | 75 | 125 | 175 | 225 | 275 | 325 | 375 | 425 | 475 | 525 | 575 | 625 | 675 | 725 | 775 |
| KG | 1.04 | 1.22 | 1.40 | 1.58 | 1.76 | 1.94 | 2.12 | 2.30 | 2.48 | 2.66 | 2.84 | 3.02 | 3.20 | 3.38 | 3.56 | 3.74 |

### BR 馬達右折 Motor Right Side

單位 Unit : mm




※行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。
When the stroke is 50mm, if fixing the body from the top to the bottom, the ixing hole will be blocked by slider and only can be uses 4 screws to ix;as a result, suggest that ixing actuator body from the bottom to the top.

| 有效行程 Stroke | 50※ | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 246 | 296 | 346 | 396 | 446 | 496 | 546 | 596 | 646 | 696 | 746 | 796 | 846 | 896 | 946 | 996 |
| A | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 |
| M | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 |
| N | 6 | 6 | 8 | 8 | 10 | 10 | 12 | 12 | 14 | 14 | 16 | 16 | 18 | 18 | 20 | 20 |
| P | 25 | 75 | 125 | 175 | 225 | 275 | 325 | 375 | 425 | 475 | 525 | 575 | 625 | 675 | 725 | 775 |
| KG | 1.04 | 1.22 | 1.40 | 1.58 | 1.76 | 1.94 | 2.12 | 2.30 | 2.48 | 2.66 | 2.84 | 3.02 | 3.20 | 3.38 | 3.56 | 3.74 |