

# 超大扭矩伺服馬達

## PB系列

### MEGATORQUE MOTOR™

#### PB series

MOTION & CONTROL™

# NSK

RoHS  
compliant

新製品

New Product

專利申請中

Patent pending

系列  
擴大

Product series  
expanded

追求容易使用和高性價比(CP值)的新系列。  
能幫助設備、裝置的生產性之向上提升。

New product to contribute to reducing cost and improving productivity of machines with its incredible usability and excellent cost performance.



#### ■ 特長 *Feature*

- 小型化、有便於配線和配管的大口徑中空孔。  
Compact size servo motor with large through hole for wiring and piping.
- 以脈衝列輸入，驅動很簡單。  
Positioning by using standard Pulse train positioning command.
- 馬達增益機能自動調整，設定很簡單。  
Auto Tuning Function for easy start up.

#### ■ 主要的用途 *Typical applications*

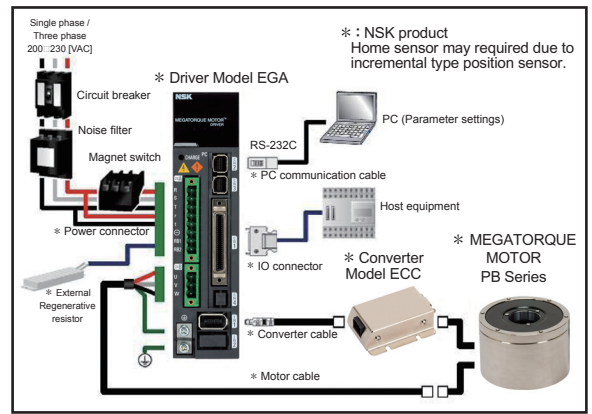
- 減速機＋伺服馬達機構的直接驅動化  
Replacing Gear speed-reducer with AC servo motor with Direct Drive motor.
- 將以往的旋轉和搬送機構變得更小型化  
Reducing size and envelope of conventional positioning/transfer system.

# 超大扭矩馬達 PB系列 MEGATORQUE MOTOR™ PB series

## 馬達規格 Motor specifications

性能項目	公稱型號	M-PB1006JN001	M-PB3015JN001	M-PB3030JN001	M-PB3060JN001
馬達外徑 [mm]		φ 102		φ 152	
最大輸出扭矩 [N·m]		6	15	30	60
額定輸出扭矩 [N·m]		2	5	10	20
額定出力*1 [W]		63	157	314	126
徑向偏擺精度 [μm]			50		
徑向偏擺精度 [μm]			50		
馬達高度 [mm]		75		92	126
馬達中空孔徑 [mm]		φ 35		φ 56	
最高回轉速度 [s <sup>-1</sup> ]			10		8
額定回轉速度 [s <sup>-1</sup> ]			5		1
回轉位置檢出器分解能 [分割 / 轉]			524 288		
絕對位置定位精度 [秒]			112 *2		
反覆位置定位精度 [秒]			±5		
容許軸向負載 (水平設置時)*3 [N]		1 000		2 000	
容許軸向負載 (倒吊設置時)*3 [N]		120		200	
容許徑向負載*4 [N]		270		540	
容許力矩負載 [N·m]		9		20	
轉子慣性力矩 [kg·m <sup>2</sup> ]		0.0026	0.014	0.016	0.021
容許負載慣性力矩 [kg·m <sup>2</sup> ]		0 ~ 0.26	0 ~ 1.1	0 ~ 1.4	0 ~ 3.1
馬達質量 [kg]		2.6	5.8	7.2	10.2

## 系統構成 System configuration

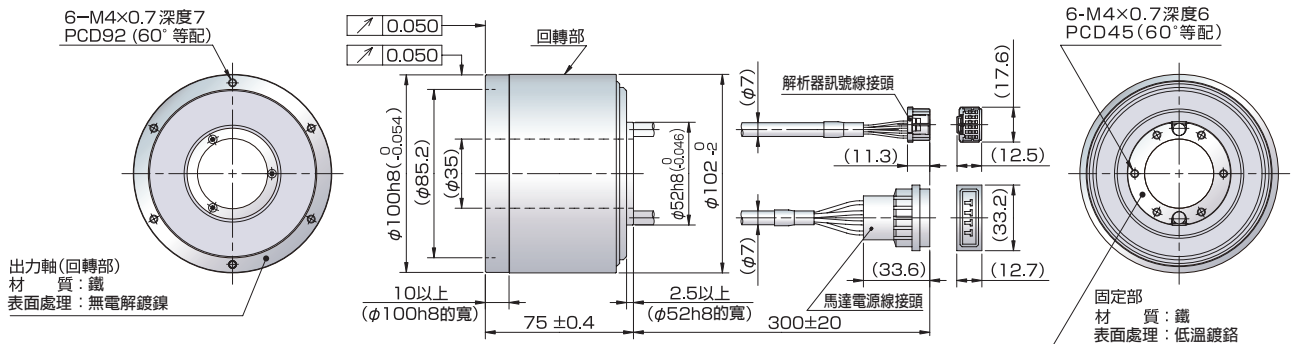


MEGATORQUE MOTOR is a kind of servo motor.

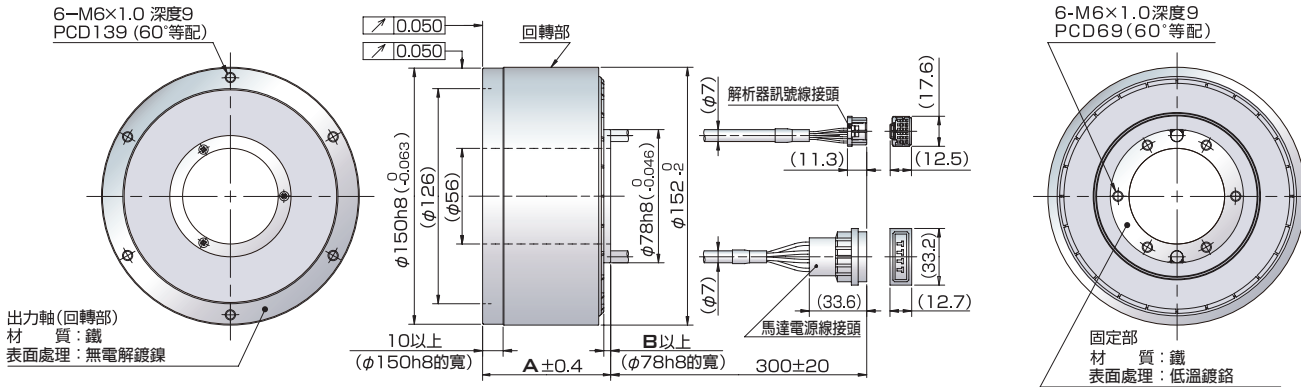
- \* 1 額定輸出是在回轉速度之下來計算出額定扭矩的。
- \* 2 環境溫度 25 ± 5 [°C] 時。
- \* 3 徑向荷重為 0 [N] 時。
- \* 4 軸向荷重為 0 [N] 時。
- 所搭載的負荷請使用於容許負載的慣性力矩的範圍內。

## 馬達外形尺寸 Motor dimensions

### M-PB1006JN001



### M-PB3015JN001, M-PB3030JN001, M-PB3060JN001



## 組合例 Combination examples

A: M-PB3015JN001 = 75, M-PB3030JN001 = 92, M-PB3060JN001 = 126  
B: M-PB3015JN001 = 3, M-PB3030JN001 = 3, M-PB3060JN001 = 4

馬達 Motor	變流器 Converter	驅動器 Driver (質量 Mass)	馬達電源線 Motor Cable	變流器訊號線 Converter Cable
M-PB1006JN001	M-ECC-PB1006GA201	M-EGA-15A2301 (0.75 [kg])	M-CA *** A101	M-CA *** A101
M-PB3015JN001	M-ECC-PB3015GA201		*** : Cable length	*** : Cable length
M-PB3030JN001	M-ECC-PB3030GA201		002 : 2 [m] 004 : 4 [m] 008 : 8 [m]	002 : 2 [m] 004 : 4 [m] 008 : 8 [m]
M-PB3060JN001	M-ECC-PB3060GA201	M-EGA-30A2301 *5 (0.9 [kg])		

\* 5 : 將主回路電源用單相電源連接時，電源電壓請使用 220 ~ 230[VAC] ± 10%。  
In connection of single phase power voltage to main circuit power, apply 220 to 230[VAC] ± 10%.

\* 電源連接頭、IO 連接頭、PC 訊號線等是另外販賣的。  
Option parts such as Power connector, IO connector and PC communication cable are sold separately.

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