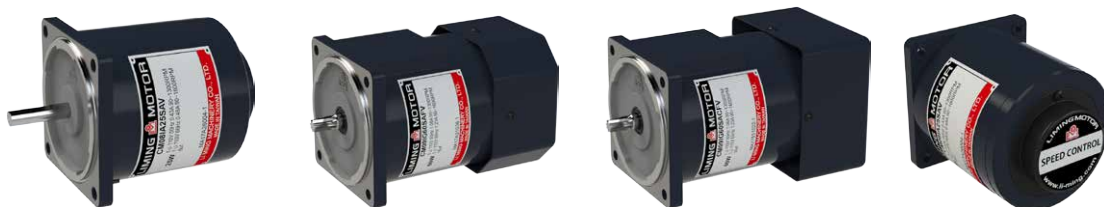


# 單相可逆調速馬達

## Single-Phase Reversible Speed Variable Motor



### ■ 單相可逆調速馬達 Single-Phase Reversible Speed Variable Motor

特徵：適用於單相馬達做速度調整控制。(50Hz: 90~14000rpm、60Hz: 90~1700rpm)

(注：三相馬達做速度控制時一般則用變頻器控制)

Feature: Applicable for speed adjustment for single-phase motor

(Note: The frequency converter is used for 3-phase motor, to control speed.)

### ■ 馬達一般規格 Motor General Specification

絕緣阻抗：在馬達的線圈與外殼間以 DC500V 高阻計測定，其數值在 100MΩ 以上。

絕緣耐壓：在馬達的線圈與外殼間施加 50Hz 或 60Hz、1.5KV、1 分鐘無發生異常現象。

溫度上升：於馬達額定運轉後以電阻法測定，溫度上升值在 80℃ 以下。

絕緣等級：B 種 (130℃)

保護等級：導線型 IP20，端子盒型 IP54。

使用溫度：-10℃ ~+50℃ (電容連續運轉馬達 -10℃ ~+40℃) (不結凍狀態)。

使用濕度：85% 以下 (不結露狀態)。

強制風扇 (選配)：電壓 AC(110V, 220V) 提供馬達低轉速時加強散熱。

Insulation impedance: Measure with DC500V high resistance gauge between the coil and casing of motor, the reading is 100M or higher.

Insulation resistance to pressure: Apply 50Hz or 60Hz, 1.5V between the coil and casing of motor for one minute without irregularity resulted.

Temperature rise: To specify by resistance method after motor reaches rated operation, temperature is less than 80℃.

Insulation: B (130℃)

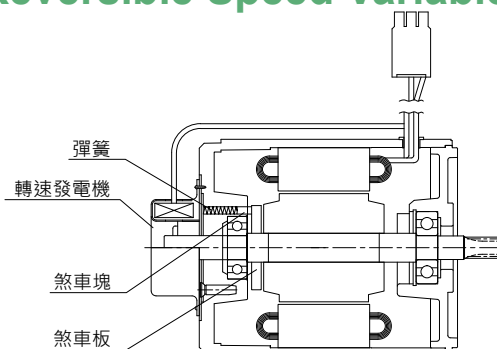
Protection: Motor with conductive wire is IP20; motor with terminal box is IP54.

Operating temperature: -10℃ ~+50℃ (Capacitor operation motor -10℃ ~+40℃) (No freezing)

Operating humidity: 85% or less (No condensation)

Electronc Fan (Optional): Voltage AC (110V, 220V) helps to dissipate heat at low motor speeds.

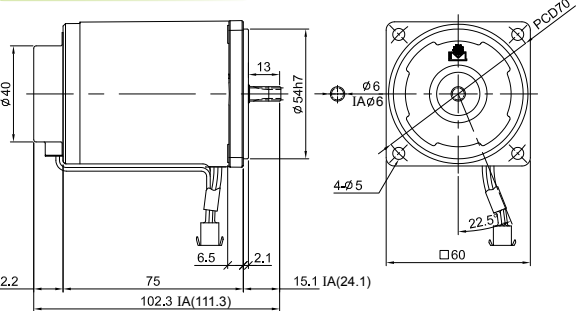
### ■ 可逆調速馬達機構 Reversible Speed Variable Motor Machinery



馬達線圖 Motor

CM06 □ 6V

註：IA (\*) 為 IA 型相關尺寸

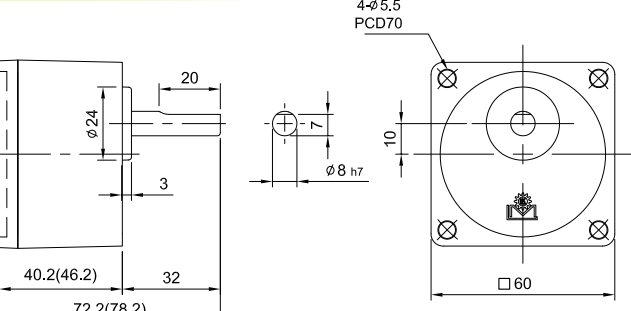


重量 Weight : 1kg ±5%

減速機線圖 Gear Head

CG06B □ S □

註：(\*) 為 1/90~1/300 之尺寸



直接連結減速馬達時之容許轉矩 Permissible Torque of Direct Link Gearmotor

| 輸出功率<br>Output Power | 馬達型號<br>Motor Model | 減速機型號<br>Reducer Model | 減速比<br>Ratio | 轉速 Speed<br>(RPM) |      | 容許 Permissible<br>(kgf·cm) |      | 低速<br>Low Speed | 減速機出力軸旋轉方向<br>Rotating direction of output<br>shaft of speed reducer |
|----------------------|---------------------|------------------------|--------------|-------------------|------|----------------------------|------|-----------------|----------------------------------------------------------------------|
|                      |                     |                        |              | 50Hz              | 60Hz | 50Hz                       | 60Hz |                 |                                                                      |
| 6W                   | CM06RG06            | CG06 □                 | 3            | 500               | 600  | 1.2                        | 1.0  | 30              | (A) 與馬達同一方向旋轉<br>Rotating in the same<br>direction as the motor      |
|                      |                     |                        | 5            | 300               | 360  | 1.9                        | 1.5  | 18              |                                                                      |
|                      |                     |                        | 6            | 250               | 300  | 2.3                        | 1.8  | 15              |                                                                      |
|                      |                     |                        | 7.5          | 200               | 240  | 2.9                        | 2.3  | 12              |                                                                      |
|                      |                     |                        | 9            | 166               | 200  | 3.4                        | 2.8  | 10              |                                                                      |
|                      |                     |                        | 12.5         | 120               | 144  | 4.7                        | 3.9  | 7.2             |                                                                      |
|                      |                     |                        | 15           | 100               | 120  | 5.7                        | 4.7  | 6               |                                                                      |
|                      |                     |                        | 18           | 83                | 100  | 6.8                        | 5.6  | 5               | (B) 與馬達相反方向旋轉<br>Rotating in the opposite<br>direction to the motor  |
|                      |                     |                        | 25           | 60                | 72   | 9.3                        | 7.0  | 3.6             |                                                                      |
|                      |                     |                        | 30           | 50                | 60   | 11                         | 8.3  | 3               |                                                                      |
|                      |                     |                        | 36           | 42                | 50   | 13                         | 10   | 2.5             |                                                                      |
|                      |                     |                        | 50           | 30                | 36   | 16                         | 13.8 | 1.8             |                                                                      |
|                      |                     |                        | 60           | 25                | 30   | 20                         | 16   | 1.5             |                                                                      |
|                      |                     |                        | 75           | 20                | 24   | 24                         | 20   | 1.2             | (C) 與馬達同一方向旋轉<br>Rotating in the same<br>direction as the motor      |
|                      |                     |                        | 90           | 17                | 20   | 30                         | 24   | 1               |                                                                      |
|                      |                     |                        | 100          | 15                | 18   | 30                         | 30   | 0.9             |                                                                      |
|                      |                     |                        | 120          | 12.5              | 15   | 30                         | 30   | 0.75            |                                                                      |
|                      |                     |                        | 150          | 10                | 12   | 30                         | 30   | 0.6             |                                                                      |
|                      |                     |                        | 180          | 8.3               | 10   | 30                         | 30   | 0.5             |                                                                      |
|                      |                     |                        | 200          | 7.5               | 9    | 30                         | 30   | -               |                                                                      |
|                      |                     |                        | 240          | 6.25              | 7.5  | 30                         | 30   | -               |                                                                      |
|                      |                     |                        | 300          | 5                 | 6    | 30                         | 30   | -               |                                                                      |

6W 可逆調速馬達規格表

| 框號尺寸<br>SIZE<br>(mm) | 極數<br>Poles<br>(P) | 輸出功率<br>Output<br>(W) | 規格<br>Type               | 電壓<br>Voltage<br>(V) | 頻率<br>Frequency<br>(Hz) | 負荷<br>Duty<br>(min) | 額定 Rated Load     |                   |                       |                       | 電容器<br>Capacitor<br>(μf / V) | 啟動電流<br>Starting Current<br>(A) | 啟動轉矩<br>Starting Torque<br>(kgf·cm) |
|----------------------|--------------------|-----------------------|--------------------------|----------------------|-------------------------|---------------------|-------------------|-------------------|-----------------------|-----------------------|------------------------------|---------------------------------|-------------------------------------|
|                      |                    |                       |                          |                      |                         |                     | 輸入功率<br>Input (W) | 電流<br>Current (A) | 轉速 Speed<br>(RPM/min) | 轉矩 Torque<br>(kgf·cm) |                              |                                 |                                     |
| 60                   | 4                  | 6                     | CM06RG6SAV<br>CM06RA9SAV | 100                  | 50                      | 30                  | 33                | 0.34              | 90                    | 0.56                  | 4 / 250                      | 0.34                            | 0.54                                |
|                      |                    |                       |                          |                      |                         |                     | 25                | 0.26              | 1300                  | 0.44                  |                              |                                 |                                     |
|                      |                    |                       |                          | 100                  | 60                      | 30                  | 35                | 0.35              | 90                    | 0.57                  | 4 / 250                      | 0.35                            | 0.55                                |
|                      |                    |                       |                          |                      |                         |                     | 26                | 0.26              | 1600                  | 0.41                  |                              |                                 |                                     |
|                      |                    |                       |                          | 110                  | 50                      | 30                  | 38                | 0.35              | 90                    | 0.5                   | 3 / 250                      | 0.35                            | 0.46                                |
|                      |                    |                       |                          |                      |                         |                     | 27                | 0.26              | 1300                  | 0.43                  |                              |                                 |                                     |
|                      |                    |                       | CM06RG6SBV<br>CM06RA6SBV | 110                  | 60                      | 30                  | 37                | 0.34              | 90                    | 0.53                  | 3 / 250                      | 0.34                            | 0.48                                |
|                      |                    |                       |                          |                      |                         |                     | 26                | 0.24              | 1600                  | 0.41                  |                              |                                 |                                     |
|                      |                    |                       |                          | 230                  | 50                      | 30                  | 30                | 0.13              | 90                    | 0.63                  | 0.8 / 450                    | 0.13                            | 0.73                                |
|                      |                    |                       |                          |                      |                         |                     | 24                | 0.1               | 1300                  | 0.46                  |                              |                                 |                                     |
|                      |                    |                       |                          | 230                  | 60                      | 30                  | 33                | 0.14              | 90                    | 0.65                  | 0.8 / 450                    | 0.15                            | 0.75                                |
|                      |                    |                       |                          |                      |                         |                     | 29                | 0.12              | 1600                  | 0.35                  |                              |                                 |                                     |
|                      |                    |                       |                          | 240                  | 50                      | 30                  | 33                | 0.13              | 90                    | 0.7                   | 0.8 / 450                    | 0.14                            | 0.8                                 |
|                      |                    |                       |                          |                      |                         |                     | 26                | 0.11              | 1300                  | 0.47                  |                              |                                 |                                     |
|                      |                    |                       |                          | 240                  | 60                      | 30                  | 36                | 0.15              | 90                    | 0.7                   | 0.8 / 450                    | 0.15                            | 0.84                                |
|                      |                    |                       |                          |                      |                         |                     |                   | 0.13              | 1600                  | 0.34                  |                              |                                 |                                     |

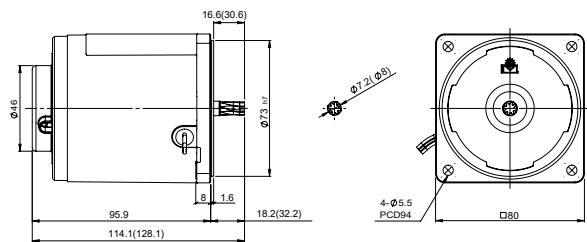
如馬達特性變更，恕不另行通知，以馬達銘牌為準。  
In case of change of motor characteristics, no further notice shall be given. The information shown on the nameplate of motor is taken as standard.



## 馬達線圖 Motor

CM08 □ 25V

註：IA (\*) 為 IA 型相關尺寸

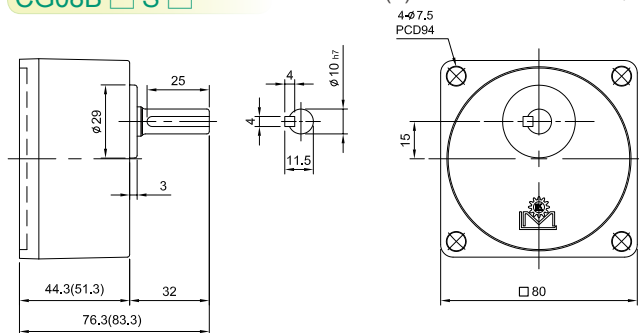


重量 Weight : 1.5kg ±5%

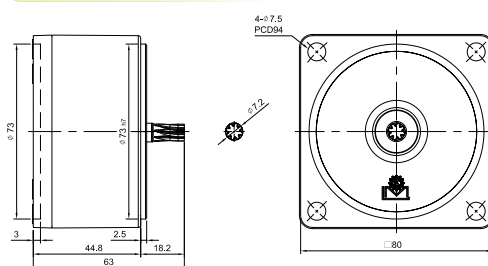
## 減速機線圖 Gear Head

CG08B □ S □

註：(\*) 為 1/90~1/300 之尺寸



CG08B □ X



直接連結減速馬達時之容許轉矩 Permissible Torque of Direct Link Gearmotor

| 輸出功率<br>Output Power | 馬達型號<br>Motor Model | 減速機型號<br>Reducer Model | 減速比<br>Ratio | 轉速 Speed<br>(RPM) |      | 容許 Permissible<br>(kgf·cm) |      | 低速<br>Low Speed | 減速機出力軸旋轉方向<br>Rotating direction of output<br>shaft of speed reducer |
|----------------------|---------------------|------------------------|--------------|-------------------|------|----------------------------|------|-----------------|----------------------------------------------------------------------|
|                      |                     |                        |              | 50Hz              | 60Hz | 50Hz                       | 60Hz |                 |                                                                      |
| 25W                  | CM08RG25            | CG08 □                 | 3            | 500               | 600  | 5.0                        | 4.1  | 30              | (A) 與馬達同一方向旋轉<br>Rotating in the same<br>direction as the motor      |
|                      |                     |                        | 5            | 300               | 360  | 7.8                        | 6.3  | 18              |                                                                      |
|                      |                     |                        | 6            | 250               | 300  | 9.4                        | 7.6  | 15              |                                                                      |
|                      |                     |                        | 7.5          | 200               | 240  | 11.8                       | 9.5  | 12              |                                                                      |
|                      |                     |                        | 9            | 166               | 200  | 14.1                       | 11.4 | 10              |                                                                      |
|                      |                     |                        | 12.5         | 120               | 144  | 19.6                       | 16   | 7.2             |                                                                      |
|                      |                     |                        | 15           | 100               | 120  | 23                         | 19   | 6               |                                                                      |
|                      |                     |                        | 18           | 83                | 100  | 28                         | 23   | 5               |                                                                      |
|                      |                     |                        | 25           | 60                | 72   | 38                         | 31   | 3.6             | (B) 與馬達相反方向旋轉<br>Rotating in the opposite<br>direction to the motor  |
|                      |                     |                        | 30           | 50                | 60   | 46                         | 37   | 3               |                                                                      |
|                      |                     |                        | 36           | 42                | 50   | 55                         | 45   | 2.5             |                                                                      |
|                      |                     |                        | 50           | 30                | 36   | 76                         | 62   | 1.8             |                                                                      |
|                      |                     |                        | 60           | 25                | 30   | 80                         | 75   | 1.5             |                                                                      |
|                      |                     |                        | 75           | 20                | 24   | 80                         | 80   | 1.2             |                                                                      |
|                      |                     |                        | 90           | 17                | 20   | 80                         | 80   | 1               |                                                                      |
|                      |                     |                        | 100          | 15                | 18   | 80                         | 80   | 0.9             |                                                                      |
|                      |                     |                        | 120          | 12.5              | 15   | 80                         | 80   | 0.75            | (C) 與馬達同一方向旋轉<br>Rotating in the same<br>direction as the motor      |
|                      |                     |                        | 150          | 10                | 12   | 80                         | 80   | 0.6             |                                                                      |
|                      |                     |                        | 180          | 8.3               | 10   | 80                         | 80   | 0.5             |                                                                      |
|                      |                     |                        | 200          | 7.5               | 9    | 80                         | 80   | -               |                                                                      |
|                      |                     |                        | 240          | 6.25              | 7.5  | 80                         | 80   | -               |                                                                      |
|                      |                     |                        | 300          | 5                 | 6    | 80                         | 80   | -               |                                                                      |

25W 可逆調速馬達規格表

| 框號尺寸<br>SIZE<br>(mm) | 極數<br>Poles<br>(P) | 輸出功率<br>Output<br>(W) | 規格<br>Type                 | 電壓<br>Voltage<br>(V) | 頻率<br>Frequency<br>(Hz) | 負荷<br>Duty<br>(min) | 額定 Rated Load     |                   |                       |                       | 電容器<br>Capacitor<br>( $\mu$ f / V) | 啟動電流<br>Starting Current<br>(A) | 啟動轉矩<br>Starting Torque<br>(kgf·cm) |
|----------------------|--------------------|-----------------------|----------------------------|----------------------|-------------------------|---------------------|-------------------|-------------------|-----------------------|-----------------------|------------------------------------|---------------------------------|-------------------------------------|
|                      |                    |                       |                            |                      |                         |                     | 輸入功率<br>Input (W) | 電流<br>Current (A) | 轉速 Speed<br>(RPM/min) | 轉矩 Torque<br>(kgf·cm) |                                    |                                 |                                     |
| 80                   | 4                  | 25                    | CM08RG25SAV<br>CM08RA25SAV | 100                  | 50                      | 30                  | 99                | 0.89              | 90                    | 1.4                   | 6 / 250                            | 0.89                            | 1.1                                 |
|                      |                    |                       |                            |                      |                         |                     | 46                | 0.5               | 1250                  | 1.9                   |                                    |                                 |                                     |
|                      |                    |                       |                            | 100                  | 60                      | 30                  | 99                | 0.84              | 90                    | 1.3                   | 6 / 250                            | 0.84                            | 1.1                                 |
|                      |                    |                       |                            |                      |                         |                     | 41                | 0.42              | 1550                  | 1.5                   |                                    |                                 |                                     |
|                      |                    |                       |                            | 110                  | 50                      | 30                  | 104               | 1                 | 90                    | 1.6                   | 6 / 250                            | 1                               | 1.4                                 |
|                      |                    |                       |                            |                      |                         |                     | 49                | 0.5               | 1300                  | 1.9                   |                                    |                                 |                                     |
|                      |                    |                       | CM08RG25SBV<br>CM08RA25SBV | 110                  | 60                      | 30                  | 99                | 0.9               | 90                    | 1.6                   | 6 / 250                            | 0.9                             | 1.5                                 |
|                      |                    |                       |                            |                      |                         |                     | 43                | 0.4               | 1640                  | 1.4                   |                                    |                                 |                                     |
|                      |                    |                       |                            | 220                  | 50                      | 30                  | 98                | 0.46              | 90                    | 2                     | 2 / 450                            | 0.46                            | 1.9                                 |
|                      |                    |                       |                            |                      |                         |                     | 59                | 0.27              | 1250                  | 1.9                   |                                    |                                 |                                     |
|                      |                    |                       |                            | 220                  | 60                      | 30                  | 97                | 0.44              | 90                    | 2                     | 2 / 450                            | 0.44                            | 2                                   |
|                      |                    |                       |                            |                      |                         |                     | 58                | 0.26              | 1550                  | 1.5                   |                                    |                                 |                                     |
|                      |                    |                       |                            | 230                  | 50                      | 30                  | 106               | 0.47              | 90                    | 2.3                   | 2 / 450                            | 0.48                            | 1.9                                 |
|                      |                    |                       |                            |                      |                         |                     | 60                | 0.27              | 1250                  | 1.9                   |                                    |                                 |                                     |
|                      |                    |                       |                            | 230                  | 60                      | 30                  | 105               | 0.46              | 90                    | 2.2                   | 2 / 450                            | 0.46                            | 2.1                                 |
|                      |                    |                       |                            |                      |                         |                     | 61                | 0.26              | 1600                  | 1.5                   |                                    |                                 |                                     |
|                      |                    |                       |                            | 240                  | 50                      | 30                  | 116               | 0.49              | 90                    | 2.4                   | 2 / 450                            | 0.49                            | 2.2                                 |
|                      |                    |                       |                            |                      |                         |                     | 63                | 0.27              | 1300                  | 1.8                   |                                    |                                 |                                     |
|                      |                    |                       |                            | 240                  | 60                      | 30                  | 114               | 0.48              | 90                    | 2.5                   | 2 / 450                            | 0.48                            | 2.2                                 |
|                      |                    |                       |                            |                      |                         |                     | 65                | 0.27              | 1600                  | 1.5                   |                                    |                                 |                                     |

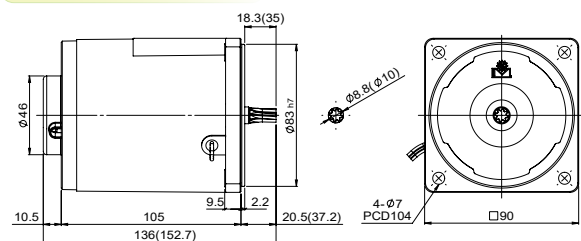
如馬達特性變更，恕不另行通知，以馬達銘牌為準。

In case of change of motor characteristics, no further notice shall be given. The information shown on the nameplate of motor is taken as standard.

## 馬達線圖 Motor

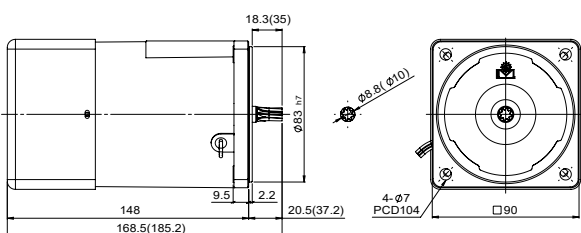
### CM09 □ 40V

註：IA (\*) 為 IA 型相關尺寸



重量 Weight : 2.3kg  $\pm 5\%$

### CM09 □ 40CFV

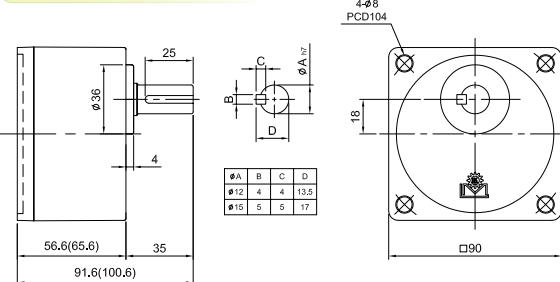


重量 Weight : 2.8kg  $\pm 5\%$

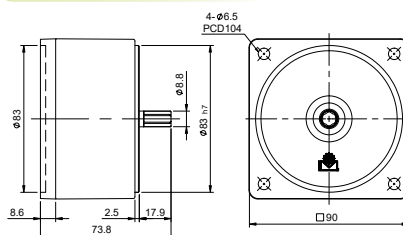
## 減速機線圖 Gear Head

### CG09B □ S □

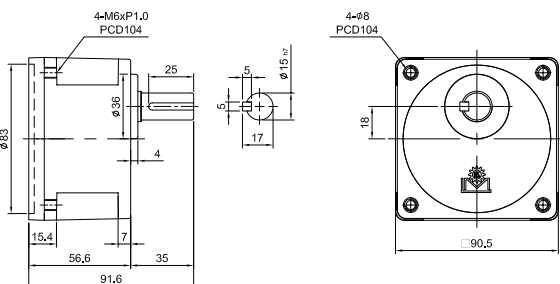
註：(\*) 為 1/90~1/240 之尺寸



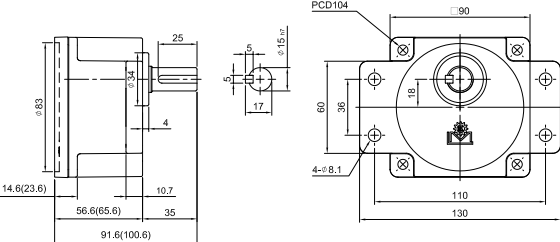
### CG09B □ X



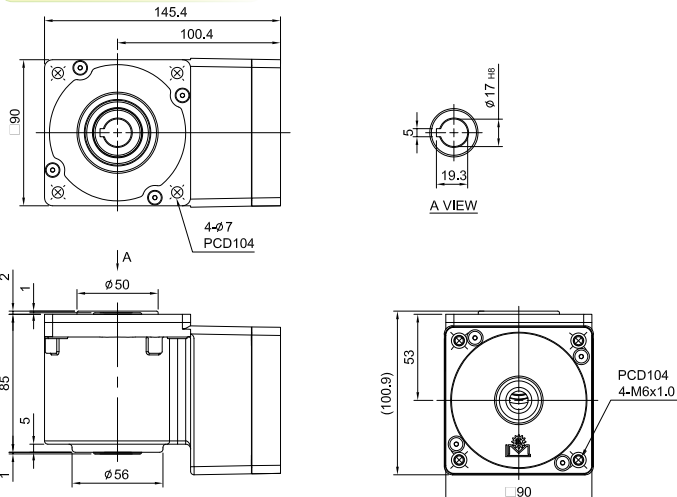
### CGCU09B □ S □



### CGU09B □ S □



### CGB09B □ H □



■ 直接連結減速馬達時之容許轉矩 Permissible Torque of Direct Link Gearmotor

| 輸出功率<br>Output Power | 馬達型號<br>Motor Model | 減速機型號<br>Reducer Model | 減速比<br>Ratio | 轉速 Speed<br>(RPM) |      | 容許 Permissible<br>(kgf-cm) |      | 低速<br>Low Speed | 減速機出力軸旋轉方向<br>Rotating direction of output<br>shaft of speed reducer |
|----------------------|---------------------|------------------------|--------------|-------------------|------|----------------------------|------|-----------------|----------------------------------------------------------------------|
|                      |                     |                        |              | 50Hz              | 60Hz | 50Hz                       | 60Hz |                 |                                                                      |
| 40W                  | CM09RG40            | CG09 □                 | 3            | 500               | 600  | 7.3                        | 6.3  | 30              | (A) 與馬達同一方向旋轉<br>Rotating in the same<br>direction as the motor      |
|                      |                     |                        | 5            | 300               | 360  | 12                         | 10   | 18              |                                                                      |
|                      |                     |                        | 6            | 250               | 300  | 14.7                       | 12   | 15              |                                                                      |
|                      |                     |                        | 7.5          | 200               | 240  | 18                         | 15   | 12              |                                                                      |
|                      |                     |                        | 9            | 166               | 200  | 22                         | 19   | 10              |                                                                      |
|                      |                     |                        | 12.5         | 120               | 144  | 30                         | 26   | 7.2             |                                                                      |
|                      |                     |                        | 15           | 100               | 120  | 36                         | 30   | 6               |                                                                      |
|                      |                     |                        | 18           | 83                | 100  | 43                         | 37   | 5               | (B) 與馬達相反方向旋轉<br>Rotating in the opposite<br>direction to the motor  |
|                      |                     |                        | 25           | 60                | 72   | 54                         | 45   | 3.6             |                                                                      |
|                      |                     |                        | 30           | 50                | 60   | 65                         | 54   | 3               |                                                                      |
|                      |                     |                        | 36           | 42                | 50   | 77                         | 65   | 2.5             |                                                                      |
|                      |                     |                        | 50           | 30                | 36   | 100                        | 90   | 1.8             |                                                                      |
|                      |                     |                        | 60           | 25                | 30   | 100                        | 100  | 1.5             |                                                                      |
|                      |                     |                        | 75           | 20                | 24   | 100                        | 100  | 1.2             | (C) 與馬達同一方向旋轉<br>Rotating in the same<br>direction as the motor      |
|                      |                     |                        | 90           | 17                | 20   | 100                        | 100  | 1               |                                                                      |
|                      |                     |                        | 100          | 15                | 18   | 100                        | 100  | 0.9             |                                                                      |
|                      |                     |                        | 120          | 12.5              | 15   | 100                        | 100  | 0.75            |                                                                      |
|                      |                     |                        | 150          | 10                | 12   | 100                        | 100  | 0.6             |                                                                      |
|                      |                     |                        | 180          | 8.3               | 10   | 100                        | 100  | 0.5             |                                                                      |
|                      |                     |                        | 200          | 7.5               | 9    | 100                        | 100  | -               |                                                                      |
|                      |                     |                        | 240          | 6.25              | 7.5  | 100                        | 100  | -               |                                                                      |

■ 直接連結減速馬達時之容許轉矩 (中空軸) Permissible Torque of Direct Link Gearmotor (Hollow Output Shaft)

| 輸出功率<br>Output Power                                                 | 馬達型號<br>Motor Model | 減速機型號<br>Reducer Model         | 減速比 Ratio<br>/<br>頻率 (Hz) | 9                                                                   | 15  | 18  | 22.5 | 27  | 37.5 | 45  | 54   | 75                                                              | 90   | 108  | 150  | 180  |      |
|----------------------------------------------------------------------|---------------------|--------------------------------|---------------------------|---------------------------------------------------------------------|-----|-----|------|-----|------|-----|------|-----------------------------------------------------------------|------|------|------|------|------|
| 40W                                                                  | CM09RG40            | CGB09 <input type="checkbox"/> | 50Hz                      | 轉速 RPM                                                              | 166 | 100 | 83   | 66  | 55   | 40  | 33   | 27                                                              | 20   | 16   | 13   | 10   | 8.3  |
|                                                                      |                     |                                |                           | 容許 Nm                                                               | 2   | 3.4 | 4    | 5.1 | 6.1  | 8.5 | 10.2 | 12.2                                                            | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 |
|                                                                      |                     |                                | 60Hz                      | 轉速 RPM                                                              | 200 | 120 | 100  | 80  | 66   | 48  | 40   | 33                                                              | 24   | 20   | 16   | 12   | 10   |
|                                                                      |                     |                                |                           | 容許 Nm                                                               | 1.7 | 2.9 | 3.4  | 4.3 | 5.2  | 7.2 | 8.7  | 10.4                                                            | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 |
| 減速機出力軸旋轉方向<br>Rotating direction of output<br>shaft of speed reducer |                     |                                |                           | (A) 與馬達相反方向旋轉<br>Rotating in the opposite<br>direction to the motor |     |     |      |     |      |     |      | (B) 與馬達同一方向旋轉<br>Rotating in the same<br>direction as the motor |      |      |      |      |      |

■ 40W 可逆調速馬達規格表

| 框號尺寸<br>SIZE<br>(mm) | 極數<br>Poles<br>(P) | 輸出功率<br>Output<br>(W) | 規格<br>Type                 | 電壓<br>Voltage<br>(V) | 頻率<br>Frequency<br>(Hz) | 負荷<br>Duty<br>(min) | 額定 Rated Load     |                   |                       |                       | 電容器<br>Capacitor<br>(μf/V) | 啟動電流<br>Starting Current<br>(A) | 啟動轉矩<br>Starting Torque<br>(kgf-cm) |
|----------------------|--------------------|-----------------------|----------------------------|----------------------|-------------------------|---------------------|-------------------|-------------------|-----------------------|-----------------------|----------------------------|---------------------------------|-------------------------------------|
|                      |                    |                       |                            |                      |                         |                     | 輸入功率<br>Input (W) | 電流<br>Current (A) | 轉速 Speed<br>(RPM/min) | 轉矩 Torque<br>(kgf-cm) |                            |                                 |                                     |
| 90                   | 4                  | 40                    | CM09RG40SAV<br>CM09RA40SAV | 100                  | 50                      | 30                  | 170               | 1.8               | 90                    | 2.4                   | 12 / 250                   | 1.8                             | 2.3                                 |
|                      |                    |                       |                            |                      |                         |                     | 77                | 0.8               | 1350                  | 3                     |                            |                                 |                                     |
|                      |                    |                       |                            | 100                  | 60                      | 30                  | 160               | 1.7               | 90                    | 2.4                   | 12 / 250                   | 1.7                             | 2.2                                 |
|                      |                    |                       |                            |                      |                         |                     | 76                | 0.7               | 1650                  | 2.7                   |                            |                                 |                                     |
|                      |                    |                       |                            | 110                  | 50                      | 30                  | 205               | 1.9               | 90                    | 2.9                   | 12 / 250                   | 2                               | 2.6                                 |
|                      |                    |                       |                            |                      |                         |                     | 87                | 0.85              | 1650                  | 3                     |                            |                                 |                                     |
|                      |                    |                       |                            | 110                  | 60                      | 30                  | 193               | 1.83              | 90                    | 2.9                   | 12 / 250                   | 1.8                             | 2.8                                 |
|                      |                    |                       |                            |                      |                         |                     | 99                | 0.9               | 1600                  | 3.9                   |                            |                                 |                                     |
|                      |                    |                       | CM09RG40SBV<br>CM09RA40SBV | 220                  | 50                      | 30                  | 131               | 0.6               | 90                    | 3                     | 4 / 450                    | 0.6                             | 2.8                                 |
|                      |                    |                       |                            |                      |                         |                     | 80                | 0.37              | 1300                  | 3                     |                            |                                 |                                     |
|                      |                    |                       |                            | 220                  | 60                      | 30                  | 130               | 0.6               | 90                    | 3                     | 4 / 450                    | 0.6                             | 3                                   |
|                      |                    |                       |                            |                      |                         |                     | 96                | 0.47              | 1600                  | 2.5                   |                            |                                 |                                     |
|                      |                    |                       |                            | 230                  | 50                      | 30                  | 144               | 0.63              | 90                    | 3.3                   | 4 / 450                    | 0.64                            | 3                                   |
|                      |                    |                       |                            |                      |                         |                     | 87                | 0.38              | 1300                  | 3.4                   |                            |                                 |                                     |
|                      |                    |                       |                            | 230                  | 60                      | 30                  | 143               | 0.63              | 90                    | 3.3                   | 4 / 450                    | 0.62                            | 3.3                                 |
|                      |                    |                       |                            |                      |                         |                     | 102               | 0.47              | 1600                  | 2.5                   |                            |                                 |                                     |
|                      |                    |                       |                            | 240                  | 50                      | 30                  | 156               | 0.66              | 90                    | 3.6                   | 4 / 450                    | 0.66                            | 3.5                                 |
|                      |                    |                       |                            |                      |                         |                     | 92                | 0.4               | 1300                  | 3.5                   |                            |                                 |                                     |
|                      |                    |                       |                            | 240                  | 60                      | 30                  | 157               | 0.66              | 90                    | 3.6                   | 4 / 450                    | 0.65                            | 3.4                                 |
|                      |                    |                       |                            |                      |                         |                     | 107               | 0.48              | 1600                  | 2.5                   |                            |                                 |                                     |

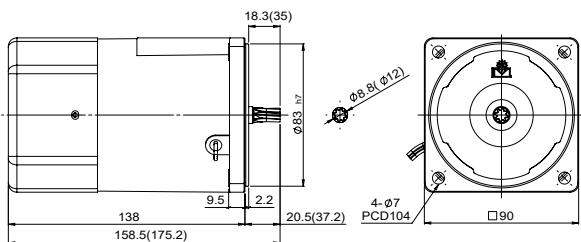
如馬達特性變更，恕不另行通知，以馬達銘牌為準。

In case of change of motor characteristics, no further notice shall be given. The information shown on the nameplate of motor is taken as standard.

## 馬達線圖 Motor

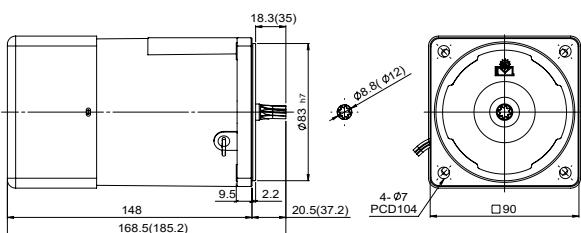
CM09 □ 60FV

註：IA (\*) 為 IA 型相關尺寸



重量 Weight : 2.5kg ±5%

CM09 □ 60CFV

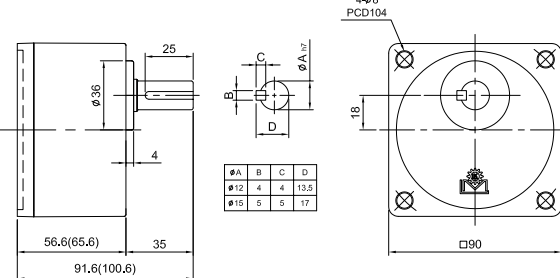


重量 Weight : 2.8kg ±5%

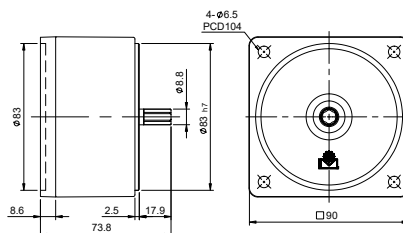
## 減速機線圖 Gear Head

CG09B □ S □

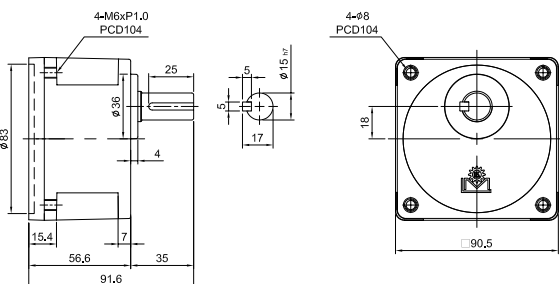
註：(\*) 為 1/90~1/240 之尺寸



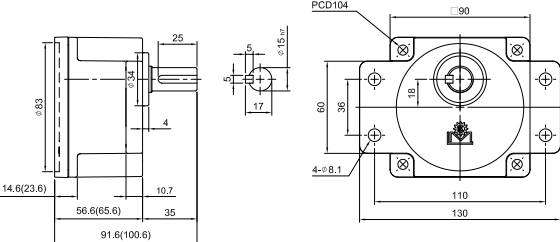
CG09B □ X



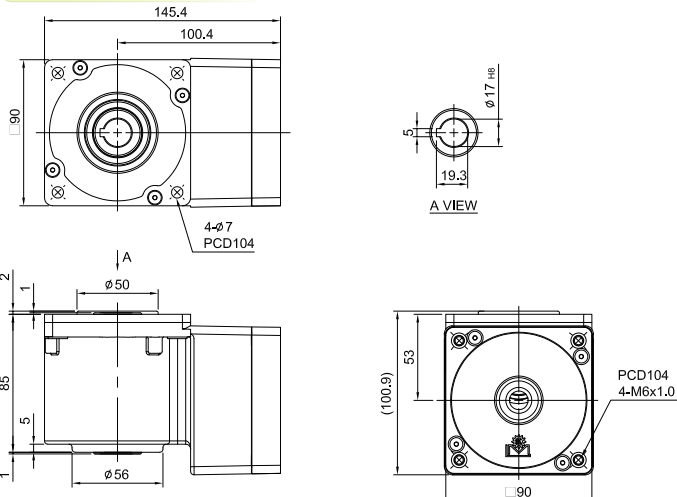
CGCU09B □ S □



CGU09B □ S □



CGB09B □ H □





■ 直接連結減速馬達時之容許轉矩 Permissible Torque of Direct Link Gearmotor

| 輸出功率<br>Output Power | 馬達型號<br>Motor Model | 減速機型號<br>Reducer Model | 減速比<br>Ratio | 轉速 Speed (RPM) |      | 容許 Permissible (kgf-cm) |      | 低速<br>Low Speed | 減速機出力軸旋轉方向<br>Rotating direction of output shaft of speed reducer |
|----------------------|---------------------|------------------------|--------------|----------------|------|-------------------------|------|-----------------|-------------------------------------------------------------------|
|                      |                     |                        |              | 50Hz           | 60Hz | 50Hz                    | 60Hz |                 |                                                                   |
| 60W                  | CM09RG60            | CG09 □                 | 3            | 500            | 600  | 12                      | 9.8  | 30              | (A) 與馬達同一方向旋轉<br>Rotating in the same direction as the motor      |
|                      |                     |                        | 5            | 300            | 360  | 19                      | 16   | 18              |                                                                   |
|                      |                     |                        | 6            | 250            | 300  | 22                      | 19   | 15              |                                                                   |
|                      |                     |                        | 7.5          | 200            | 240  | 28                      | 24   | 12              |                                                                   |
|                      |                     |                        | 9            | 166            | 200  | 34                      | 28   | 10              |                                                                   |
|                      |                     |                        | 12.5         | 120            | 144  | 48                      | 40   | 7.2             |                                                                   |
|                      |                     |                        | 15           | 100            | 120  | 55                      | 47   | 6               |                                                                   |
|                      |                     |                        | 18           | 83             | 100  | 62                      | 55   | 5               | (B) 與馬達相反方向旋轉<br>Rotating in the opposite direction to the motor  |
|                      |                     |                        | 25           | 60             | 72   | 82                      | 69   | 3.6             |                                                                   |
|                      |                     |                        | 30           | 50             | 60   | 98                      | 83   | 3               |                                                                   |
|                      |                     |                        | 36           | 42             | 50   | 118                     | 100  | 2.5             |                                                                   |
|                      |                     |                        | 50           | 30             | 36   | 164                     | 138  | 1.8             |                                                                   |
|                      |                     |                        | 60           | 25             | 30   | 196                     | 160  | 1.5             |                                                                   |
|                      |                     |                        | 75           | 20             | 24   | 200                     | 175  | 1.2             |                                                                   |
|                      |                     |                        | 90           | 17             | 20   | 200                     | 200  | 1               | (C) 與馬達同一方向旋轉<br>Rotating in the same direction as the motor      |
|                      |                     |                        | 100          | 15             | 18   | 200                     | 200  | 0.9             |                                                                   |
|                      |                     |                        | 120          | 12.5           | 15   | 200                     | 200  | 0.75            |                                                                   |
|                      |                     |                        | 150          | 10             | 12   | 200                     | 200  | 0.6             |                                                                   |
|                      |                     |                        | 180          | 8.3            | 10   | 200                     | 200  | 0.5             |                                                                   |
|                      |                     |                        | 200          | 7.5            | 9    | 200                     | 200  | -               |                                                                   |
|                      |                     |                        | 240          | 6.25           | 7.5  | 200                     | 200  | -               |                                                                   |

■ 直接連結減速馬達時之容許轉矩 (中空軸) Permissible Torque of Direct Link Gearmotor (Hollow Output Shaft)

| 輸出功率<br>Output Power                                                 | 馬達型號<br>Motor Model | 減速機型號<br>Reducer Model         | 減速比 Ratio<br>/<br>頻率 (Hz) |        | 9                                                                   | 15  | 18  | 22.5 | 27  | 37.5 | 45   | 54   | 75                                                              | 90   | 108  | 150  | 180  |      |
|----------------------------------------------------------------------|---------------------|--------------------------------|---------------------------|--------|---------------------------------------------------------------------|-----|-----|------|-----|------|------|------|-----------------------------------------------------------------|------|------|------|------|------|
| 60W                                                                  | CM09RG60            | CGB09 <input type="checkbox"/> | 50Hz                      | 轉速 RPM | 166                                                                 | 100 | 83  | 66   | 55  | 40   | 33   | 27   | 20                                                              | 16   | 13   | 10   | 8.3  |      |
|                                                                      |                     |                                |                           | 容許 Nm  | 3.2                                                                 | 5.4 | 6.5 | 8.2  | 9.8 | 13.6 | 16.4 | 19.6 | 19.6                                                            | 19.6 | 19.6 | 19.6 | 19.6 | 19.6 |
|                                                                      |                     |                                | 60Hz                      | 轉速 RPM | 200                                                                 | 120 | 100 | 80   | 66  | 48   | 40   | 33   | 24                                                              | 20   | 16   | 12   | 10   |      |
|                                                                      |                     |                                |                           | 容許 Nm  | 2.6                                                                 | 4.3 | 5.2 | 6.5  | 7.8 | 10.9 | 13.1 | 15.7 | 15.7                                                            | 15.7 | 15.7 | 15.7 | 15.7 | 15.7 |
| 減速機出力軸旋轉方向<br>Rotating direction of output<br>shaft of speed reducer |                     |                                |                           |        | (A) 與馬達相反方向旋轉<br>Rotating in the opposite<br>direction to the motor |     |     |      |     |      |      |      | (B) 與馬達同一方向旋轉<br>Rotating in the same<br>direction as the motor |      |      |      |      |      |

■ 60W 可逆調速馬達規格表

| 框號尺寸<br>SIZE (mm) | 極數<br>Poles (P) | 輸出功率<br>Output (W) | 規格<br>Type                   | 電壓<br>Voltage (V) | 頻率<br>Frequency (Hz) | 負荷<br>Duty (min) | 額定 Rated Load     |                   |                    |                    | 電容器<br>Capacitor (μf/V) | 啟動電流<br>Starting Current (A) | 啟動轉矩<br>Starting Torque (kgf-cm) |
|-------------------|-----------------|--------------------|------------------------------|-------------------|----------------------|------------------|-------------------|-------------------|--------------------|--------------------|-------------------------|------------------------------|----------------------------------|
|                   |                 |                    |                              |                   |                      |                  | 輸入功率<br>Input (W) | 電流<br>Current (A) | 轉速 Speed (RPM/min) | 轉矩 Torque (kgf-cm) |                         |                              |                                  |
| 90                | 4               | 60                 | CM09RG60SAFV<br>CM09RA60SAFV | 100               | 50                   | 30               | 161               | 1.6               | 90                 | 3.7                | 20 / 250                | 1.6                          | 3.7                              |
|                   |                 |                    |                              |                   |                      |                  | 115               | 1.2               | 1250               | 4.6                |                         |                              |                                  |
|                   |                 |                    |                              | 100               | 60                   | 30               | 165               | 1.6               | 90                 | 3.8                | 20 / 250                | 1.6                          | 3.8                              |
|                   |                 |                    |                              |                   |                      |                  | 131               | 1.3               | 1550               | 3.6                |                         |                              |                                  |
|                   |                 |                    |                              | 110               | 50                   | 30               | 192               | 1.7               | 90                 | 4.6                | 20 / 250                | 1.7                          | 4.4                              |
|                   |                 |                    |                              |                   |                      |                  | 120               | 1.1               | 1300               | 4.5                |                         |                              |                                  |
|                   |                 |                    |                              | 110               | 60                   | 30               | 199               | 1.8               | 90                 | 4.7                | 20 / 250                | 1.8                          | 4.7                              |
|                   |                 |                    |                              |                   |                      |                  | 145               | 1.4               | 1600               | 3.6                |                         |                              |                                  |
|                   |                 |                    | CM09RG60SBFV<br>CM09RA60SBFV | 220               | 50                   | 30               | 223               | 1                 | 90                 | 4.1                | 4 / 450                 | 1                            | 3.7                              |
|                   |                 |                    |                              |                   |                      |                  | 110               | 0.5               | 1350               | 4.4                |                         |                              |                                  |
|                   |                 |                    |                              | 220               | 60                   | 30               | 218               | 1                 | 90                 | 4                  | 4 / 450                 | 1                            | 3.7                              |
|                   |                 |                    |                              |                   |                      |                  | 113               | 0.5               | 1650               | 3.5                |                         |                              |                                  |
|                   |                 |                    |                              | 230               | 50                   | 30               | 245               | 1                 | 90                 | 4.5                | 4 / 450                 | 1                            | 4                                |
|                   |                 |                    |                              |                   |                      |                  | 118               | 0.5               | 1350               | 4.4                |                         |                              |                                  |
|                   |                 |                    |                              | 230               | 60                   | 30               | 238               | 1                 | 90                 | 4.4                | 4 / 450                 | 1                            | 4                                |
|                   |                 |                    |                              |                   |                      |                  | 118               | 0.5               | 1650               | 3.5                |                         |                              |                                  |
|                   |                 |                    |                              | 240               | 50                   | 30               | 263               | 1.1               | 90                 | 5                  | 4 / 450                 | 1                            | 4.4                              |
|                   |                 |                    |                              |                   |                      |                  | 128               | 0.5               | 1350               | 4.5                |                         |                              |                                  |
|                   |                 |                    |                              | 240               | 60                   | 30               | 258               | 1.1               | 90                 | 4.7                | 4 / 450                 | 1                            | 4.7                              |
|                   |                 |                    |                              |                   |                      |                  | 128               | 0.5               | 1650               | 3.7                |                         |                              |                                  |

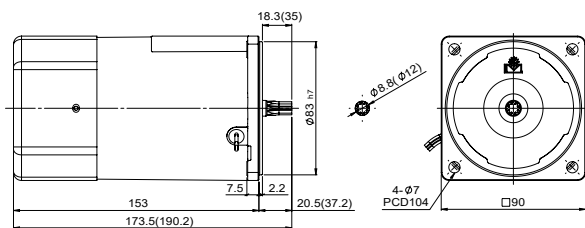
如馬達特性變更，恕不另行通知，以馬達銘牌為準。

In case of change of motor characteristics, no further notice shall be given. The information shown on the nameplate of motor is taken as standard.

## 馬達線圖 Motor

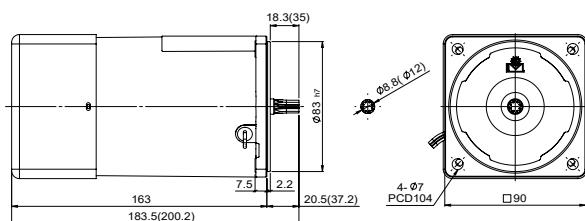
### CM09 □ 90FV

註：IA (\*) 為 IA 型相關尺寸



重量 Weight : 3.3kg ±5%

### CM09 □ 90CFV

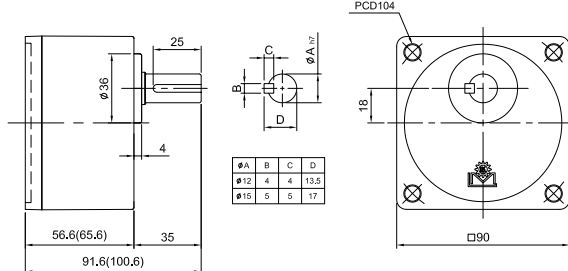


重量 Weight : 3.7kg ±5%

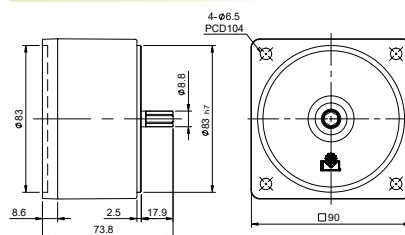
## 減速機線圖 Gear Head

### CG09B □ S □

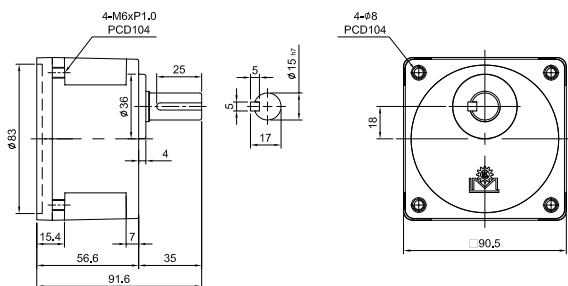
註：(\*) 為 1/90~1/240 之尺寸



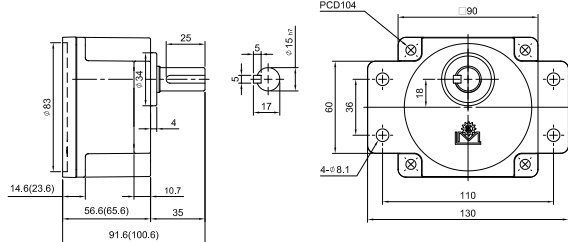
### CG09B □ X



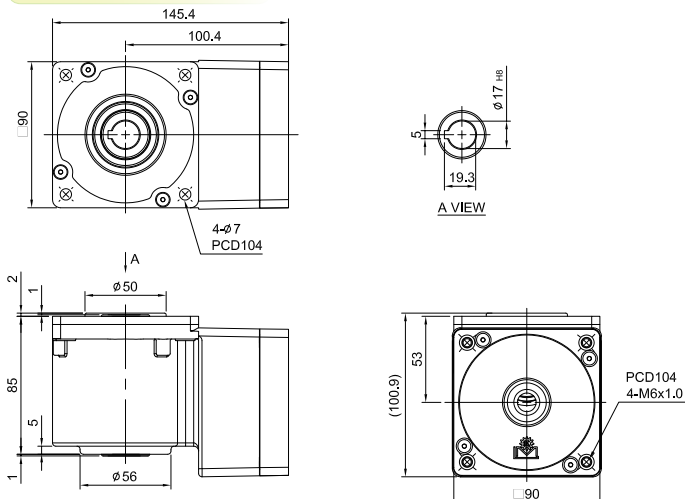
### CGCU09B □ S □



### CGU09B □ S □



### CGB09B □ H □



■ 直接連結減速馬達時之容許轉矩 Permissible Torque of Direct Link Gearmotor

| 輸出功率<br>Output Power | 馬達型號<br>Motor Model | 減速機型號<br>Reducer Model | 減速比<br>Ratio | 轉速 Speed (RPM) |      | 容許 Permissible (kgf-cm) |      | 低速<br>Low Speed | 減速機出力軸旋轉方向<br>Rotating direction of output shaft of speed reducer |
|----------------------|---------------------|------------------------|--------------|----------------|------|-------------------------|------|-----------------|-------------------------------------------------------------------|
|                      |                     |                        |              | 50Hz           | 60Hz | 50Hz                    | 60Hz |                 |                                                                   |
| 90W                  | CM09RG90            | CG09 □                 | 3            | 500            | 600  | 18                      | 14   | 30              | (A) 與馬達同一方向旋轉<br>Rotating in the same direction as the motor      |
|                      |                     |                        | 5            | 300            | 360  | 28                      | 24   | 18              |                                                                   |
|                      |                     |                        | 6            | 250            | 300  | 34                      | 28   | 15              |                                                                   |
|                      |                     |                        | 7.5          | 200            | 240  | 43                      | 35   | 12              |                                                                   |
|                      |                     |                        | 9            | 166            | 200  | 51                      | 42   | 10              |                                                                   |
|                      |                     |                        | 12.5         | 120            | 144  | 71                      | 60   | 7.2             |                                                                   |
|                      |                     |                        | 15           | 100            | 120  | 85                      | 70   | 6               |                                                                   |
|                      |                     |                        | 18           | 83             | 100  | 96                      | 80   | 5               | (B) 與馬達相反方向旋轉<br>Rotating in the opposite direction to the motor  |
|                      |                     |                        | 25           | 60             | 72   | 125                     | 103  | 3.6             |                                                                   |
|                      |                     |                        | 30           | 50             | 60   | 150                     | 124  | 3               |                                                                   |
|                      |                     |                        | 36           | 42             | 50   | 178                     | 149  | 2.5             |                                                                   |
|                      |                     |                        | 50           | 30             | 36   | 200                     | 200  | 1.8             |                                                                   |
|                      |                     |                        | 60           | 25             | 30   | 200                     | 200  | 1.5             |                                                                   |
|                      |                     |                        | 75           | 20             | 24   | 200                     | 200  | 1.2             |                                                                   |
|                      |                     |                        | 90           | 17             | 20   | 200                     | 200  | 1               | (C) 與馬達同一方向旋轉<br>Rotating in the same direction as the motor      |
|                      |                     |                        | 100          | 15             | 18   | 200                     | 200  | 0.9             |                                                                   |
|                      |                     |                        | 120          | 12.5           | 15   | 200                     | 200  | 0.75            |                                                                   |
|                      |                     |                        | 150          | 10             | 12   | 200                     | 200  | 0.6             |                                                                   |
|                      |                     |                        | 180          | 8.3            | 10   | 200                     | 200  | 0.5             |                                                                   |
|                      |                     |                        | 200          | 7.5            | 9    | 200                     | 200  | -               |                                                                   |
|                      |                     |                        | 240          | 6.25           | 7.5  | 200                     | 200  | -               |                                                                   |

■ 直接連結減速馬達時之容許轉矩 (中空軸) Permissible Torque of Direct Link Gearmotor (Hollow Output Shaft)

| 輸出功率<br>Output Power                                              | 馬達型號<br>Motor Model | 減速機型號<br>Reducer Model         | 減速比 Ratio<br>/<br>頻率 (Hz) |        | 9                                                                | 15  | 18  | 22.5 | 27   | 37.5 | 45   | 54   | 75                                                           | 90   | 108  | 150  | 180  |
|-------------------------------------------------------------------|---------------------|--------------------------------|---------------------------|--------|------------------------------------------------------------------|-----|-----|------|------|------|------|------|--------------------------------------------------------------|------|------|------|------|
| 90W                                                               | CM09RG90            | CGB09 <input type="checkbox"/> | 50Hz                      | 轉速 RPM | 166                                                              | 100 | 83  | 66   | 55   | 40   | 33   | 27   | 20                                                           | 16   | 13   | 10   | 8.3  |
|                                                                   |                     |                                |                           | 容許 Nm  | 4.8                                                              | 8   | 9.6 | 12   | 14.4 | 20   | 24   | 28.8 | 28.8                                                         | 28.8 | 28.8 | 28.8 | 28.8 |
|                                                                   |                     |                                | 60Hz                      | 轉速 RPM | 200                                                              | 120 | 100 | 80   | 66   | 48   | 40   | 33   | 24                                                           | 20   | 16   | 12   | 10   |
|                                                                   |                     |                                |                           | 容許 Nm  | 3.9                                                              | 6.5 | 7.8 | 9.8  | 11.8 | 16.4 | 19.6 | 23.6 | 23.6                                                         | 23.6 | 23.6 | 23.6 | 23.6 |
| 減速機出力軸旋轉方向<br>Rotating direction of output shaft of speed reducer |                     |                                |                           |        | (A) 與馬達相反方向旋轉<br>Rotating in the opposite direction to the motor |     |     |      |      |      |      |      | (B) 與馬達同一方向旋轉<br>Rotating in the same direction as the motor |      |      |      |      |

■ 90W 可逆調速馬達規格表

| 框號尺寸<br>SIZE (mm) | 極數<br>Poles (P) | 輸出功率<br>Output (W) | 規格<br>Type                   | 電壓<br>Voltage (V) | 頻率<br>Frequency (Hz) | 負荷<br>Duty (min) | 額定 Rated Load     |                   |                       |                       | 電容器<br>Capacitor (μf/V) | 啟動電流<br>Starting Current (A) | 啟動轉矩<br>Starting Torque (kgf-cm) |
|-------------------|-----------------|--------------------|------------------------------|-------------------|----------------------|------------------|-------------------|-------------------|-----------------------|-----------------------|-------------------------|------------------------------|----------------------------------|
|                   |                 |                    |                              |                   |                      |                  | 輸入功率<br>Input (W) | 電流<br>Current (A) | 轉速 Speed<br>(RPM/min) | 轉矩 Torque<br>(kgf-cm) |                         |                              |                                  |
| 90                | 4               | 90                 | CM09RG90SAFV<br>CM09RA90SAFV | 100               | 50                   | 30               | 240               | 2.5               | 90                    | 4.7                   | 24 / 250                | 2.5                          | 4.7                              |
|                   |                 |                    |                              |                   |                      |                  | 147               | 1.5               | 1300                  | 6.7                   |                         |                              |                                  |
|                   |                 |                    |                              | 100               | 60                   | 30               | 235               | 2.4               | 90                    | 5                     | 24 / 250                | 2.4                          | 4.8                              |
|                   |                 |                    |                              |                   |                      |                  | 160               | 1.6               | 1600                  | 5.6                   |                         |                              |                                  |
|                   |                 |                    |                              | 110               | 50                   | 30               | 291               | 2.7               | 90                    | 6                     | 24 / 250                | 2.7                          | 5.7                              |
|                   |                 |                    |                              |                   |                      |                  | 155               | 1.4               | 1350                  | 6.6                   |                         |                              |                                  |
|                   |                 |                    |                              | 110               | 60                   | 30               | 285               | 2.6               | 90                    | 5.8                   | 24 / 250                | 2.7                          | 5.8                              |
|                   |                 |                    |                              |                   |                      |                  | 170               | 1.6               | 1650                  | 5.4                   |                         |                              |                                  |
|                   |                 |                    | CM09RG90SBFV<br>CM09RA90SBFV | 220               | 50                   | 30               | 288               | 1.3               | 90                    | 6.5                   | 6 / 450                 | 1.3                          | 6.1                              |
|                   |                 |                    |                              |                   |                      |                  | 151               | 0.7               | 1350                  | 6.5                   |                         |                              |                                  |
|                   |                 |                    |                              | 220               | 60                   | 30               | 280               | 1.3               | 90                    | 6.5                   | 6 / 450                 | 1.3                          | 6.3                              |
|                   |                 |                    |                              |                   |                      |                  | 173               | 0.8               | 1600                  | 5.4                   |                         |                              |                                  |
|                   |                 |                    |                              | 230               | 50                   | 30               | 318               | 1.4               | 90                    | 7.3                   | 6 / 450                 | 1.4                          | 6.6                              |
|                   |                 |                    |                              |                   |                      |                  | 157               | 0.7               | 1350                  | 6.5                   |                         |                              |                                  |
|                   |                 |                    |                              | 230               | 60                   | 30               | 306               | 1.3               | 90                    | 7.1                   | 6 / 450                 | 1.4                          | 6.9                              |
|                   |                 |                    |                              |                   |                      |                  | 180               | 0.8               | 1650                  | 5.2                   |                         |                              |                                  |
|                   |                 |                    |                              | 240               | 50                   | 30               | 343               | 1.5               | 90                    | 8                     | 6 / 450                 | 1.4                          | 7.4                              |
|                   |                 |                    |                              |                   |                      |                  | 163               | 0.7               | 1350                  | 6.5                   |                         |                              |                                  |
|                   |                 |                    |                              | 240               | 60                   | 30               | 334               | 1.4               | 90                    | 7.6                   | 6 / 450                 | 1.4                          | 7.6                              |
|                   |                 |                    |                              |                   |                      |                  | 188               | 0.8               | 1650                  | 5.3                   |                         |                              |                                  |

如馬達特性變更，恕不另行通知，以馬達銘牌為準。

In case of change of motor characteristics, no further notice shall be given. The information shown on the nameplate of motor is taken as standard.