# 转矩电动机
# TORQUE MOTOR

## 特征 Feature

● **具有垂下特征，可调速范围宽大** The Speed Can Vary Widely, Depending on the Sloping Characteristics

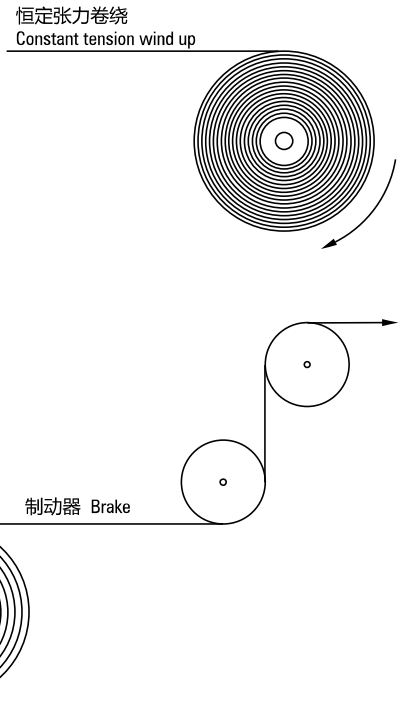
转矩电动机由于起动转矩大，具有垂下的特征，因此，能够通过改变电压进行调速。（电动机的转矩与电压的平方成正比）

Torque motors have a high starting torque and Torque motors have a high starting torque and sloping characteristics, allowing easy speedcontrol simply by changing the voltage of the power supply. (The motor torque changes approximately proportion to the square of the voltage)

● **适用于卷取作业** Suitable For Winding Applications

以固定的张力连续卷取定速运转的物体时，若卷轴机直径增大至2倍，则电动机的输出转矩亦增大至2倍，而电动机转速则减半。作业时须保持这一比例关系。

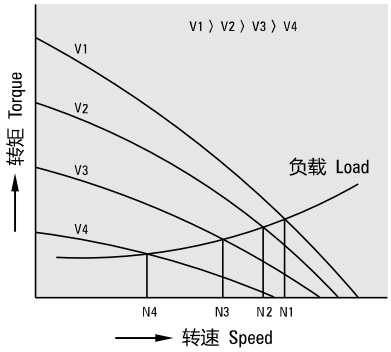
In an application where an object is released continuously at a constant speed and wound up with constant tension, the torque must be doubled and the speed must be halved if the diameter of the winding spool is doubled.




● **可作为制动使用** Use As A Brake

电动机在转速-转矩特性的制动领域，可作为制动来使用。此外，也可以通过直流励磁进行固定张力控制。

By using the motor in the braking region of the speed-torque characteristics, it can serve as a brake. Constant tension operation can be achieved by applying a DC voltage.




## 转速–转矩特性图的阅读方法 How To Read Speed - Torque Characteristics

转矩电动机的转矩几乎与电压的平方成正比变化。通过改变电动机通电电压，就能够得到各电压下分别具有垂下特性的转速-转矩特性曲线。

The motor torque changes approximately proportion to the square of the voltage. When the voltage supplied to the motor is changed, speed - torque curves with a sloping characteristics (torque is highest at zero speed and decreases steadily with increasing speed) shifts to that of the corresponding voltage.

负载转矩为T0时，将电压调整为100V、80V、60V的话，电动机会分别以N1、N2、N3转速旋转。如上所述，通过改变电压，能够很简单地改变转速。

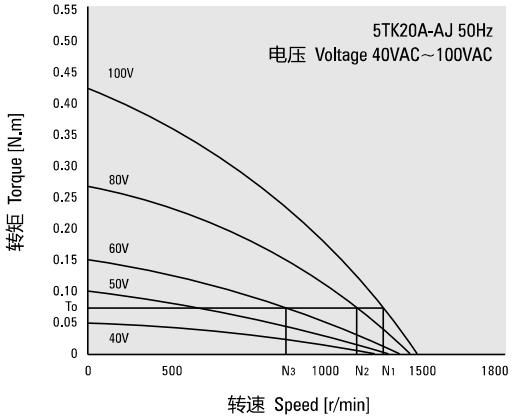
When the voltage is changed to 100V, 80V and 60V while the load torque is T0, the motor rotates at the speeds N1, N2 and N3 respectively. Thus, the speed can be changed easily by varying the voltage.

使用转矩电动机时，请了解必需的转矩和转速，根据是连续使用还是短时间使用，参照转速-转矩特性作出选择。在堵转状态下使用时，选择基准只考虑转矩。

When choosing a torque motor, first determine the required torque and speed. Then select a motor using the speed - torque characteristics curves to determine whether the motor should be operated under continuous duty or limited duty. When used under locked rotor conditions, only the torque factor is considered.

用于连续运转等会造成温度上升问题的场合时，可通过选用较大输出功率的产品以调整电压方式控制转速、转矩。

The temperature rise of the motor may cause a problem during continuous operation. In this case, choose a motor with an output power large enough for continuous operation and adjust the voltage to control the torque and speed.



## 转矩电动机电压控制方法 Voltage Control Of Torque Motors

电压控制的一般方法是，使用双向可控硅中等的相位控制方式。是一种如图所示，通过改变触发双向可空硅的相位角α，使输入电压像斜线部分那样变化的控制方法。

The method most commonly used to control voltage is by phase control using a triac. As shown in Fig.1, by changing the phase angle α at which the triac switches, the input voltage is controlled as represented by the phase angle areas of the graph.

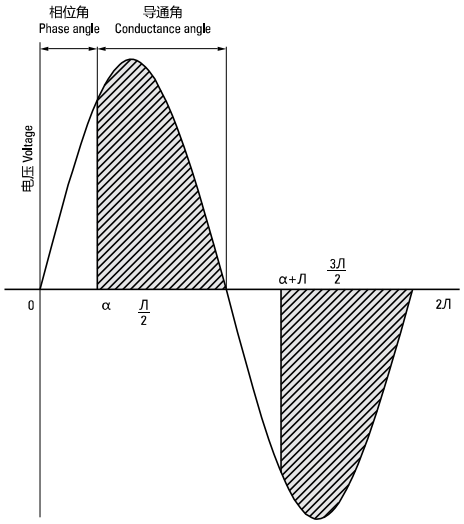



图-1 相位控制
Fig-1 Phase control

## 装有减速器时的输出转矩 Gear Motor – Torque Table

由于具有垂下特性，因此，转矩电动机可以实现从停止状态到最高转速之间的任一转速。装有减速器·中间减速器时的容许转矩，请参照转速转矩特性曲线图，根据所使用的转速和转矩，按照下面的公式算出。

减速器输出轴转速NG=电动机转速*1/减速器减速比

减速器输出轴转矩TG=电动机转矩*减速器减速比*减速器传动效率

Due to the sloping characteristics, torque motors can be operated over a wide speed range, from locked rotor condition to the maximum speed. The permissible torque when a gearhead and a decimal gearhead are directly connected can be calculated according to the following formula, using the speed and torque determined from the speed – torque characteristics.

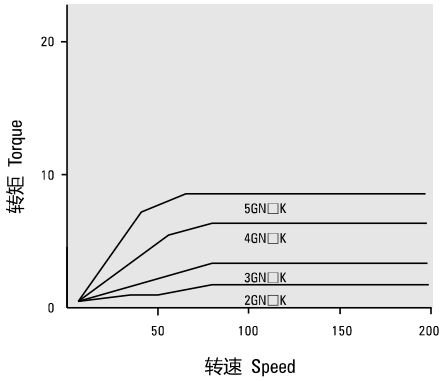
Peed of gearhead output shaft NG=Motor speed*1/gearhead gear ratio

Output torque of gearhead TG=Motor torque*gearhead gear ratio*gearhead efficiency

## 请注意，减速器的输出轴转矩不可大于减速器的最大的最大容许转矩

## Please Note, The Output Torque Of The Gearhead Must Be Lower Than The Maximum Permissible Torque

● **减速器的最大容许转矩** Maximum Permissible Torque Of Gearheads




| 减速器型号 Gearhead Model | 减速器减速比 Gearhead Gear Ratio | 减速器传动效率 Gearhead Efficiency |
|---|---|---|
| 2GN□K<br>3GN□K<br>4GN□K<br>5GN□K | 3～18 | 81% |
| | 25～36 | 73% |
| | 50～200 | 66% |

●减速器、中间减速器另售。
Gearheads and decimal gearheads are sold separately.

●减速器型号的□中为减速比的数值。
Enter the gear ratio in the box (□) within the model name.

## 规格Specifications

● 3W、6W、10W、20W

| 型号Model・类型 Type 导线型 Lead Wire Type | | 使用额定（堵转）Rating At Locked Rotor | 电压 Voltage | 频率 Frequency | 起动转矩 Starting Torque | 最大输出功率 Max. Output Power | 最大输出功率时转速 Speed At Max. Output Power | 最大输出功率时转矩 Torque At Max. Output Power | 电容器容量 Capacitor |
|---|---|---|---|---|---|---|---|---|---|
| 齿轮轴型 Pinion Shaft | 圆轴型 Round Shaft | | V | Hz | mN.m | W | r/min | mN.m | μF |
| 2TK3GN-A | 2TK3A-A | 5MIN 连续CONT | 110 | 50 | 69 | 3.2 | 750 | 41 | 7.0/250 |
| | | | 60 | | 25 | 1.3 | | 16 | |
| | | 5MIN 连续CONT | 110 | 60 | 69 | 3.2 | 900 | 37 | 6.0/250 |
| | | | 60 | | 25 | 1.3 | | 11 | |
| 2TK3GN-C | 2TK3A-C | 5MIN 连续CONT | 220 | 50 | 69 | 3.2 | 750 | 41 | 1.5/450 |
| | | | 140 | | 25 | 1.2 | | 16 | |
| | | 5MIN 连续CONT | 220 | 60 | 69 | 3.2 | 900 | 37 | 1.2/450 |
| | | | 140 | | 25 | 1.2 | | 11 | |
| 3TK6GN-A | 3TK6A-A | 5MIN 连续CONT | 110 | 50 | 134 | 6.0 | 750 | 80 | 8.0/250 |
| | | | 60 | | 68 | 2.5 | | 36 | |
| | | 5MIN 连续CONT | 110 | 60 | 134 | 6.5 | 900 | 74 | 7.0/250 |
| | | | 60 | | 68 | 2.8 | | 30 | |
| 3TK6GN-C | 3TK6A-C | 5MIN 连续CONT | 220 | 50 | 134 | 6.0 | 750 | 80 | 2.0/450 |
| | | | 140 | | 68 | 2.5 | | 36 | |
| | | 5MIN 连续CONT | 220 | 60 | 134 | 6.5 | 900 | 74 | 1.5/450 |
| | | | 140 | | 68 | 2.8 | | 30 | |
| 4TK10GN-A | 4TK10A-A | 5MIN 连续CONT | 110 | 50 | 235 | 10 | 750 | 127 | 10.0/250 |
| | | | 60 | | 74 | 3.0 | | 46 | |
| | | 5MIN 连续CONT | 110 | 60 | 25 | 10 | 900 | 127 | 8.0/250 |
| | | | 60 | | 69 | 3.0 | | 38 | |
| 4TK10GN-C | 4TK10A-C | 5MIN 连续CONT | 220 | 50 | 265 | 10 | 750 | 127 | 2.5/450 |
| | | | 140 | | 98 | 3.0 | | 46 | |
| | | 5MIN 连续CONT | 220 | 60 | 225 | 10 | 900 | 127 | 2.0/450 |
| | | | 140 | | 90 | 3.0 | | 38 | |
| 5TK20GN-A | 5TK20A-A | 5MIN 连续CONT | 110 | 50 | 363 | 20 | 750 | 224 | 15.0/250 |
| | | | 60 | | 137 | 6.0 | | 76 | |
| | | 5MIN 连续CONT | 110 | 60 | 294 | 26 | 900 | 216 | 12.0/250 |
| | | | 60 | | 108 | 6.0 | | 64 | |
| 5TK20GN-C | 5TK20A-C | 5MIN 连续CONT | 220 | 50 | 363 | 20 | 750 | 224 | 3.5/450 |
| | | | 140 | | 137 | 6.0 | | 76 | |
| | | 5MIN 连续CONT | 220 | 60 | 294 | 26 | 900 | 216 | 3.0/450 |
| | | | 140 | | 108 | 6.0 | | 64 | |

●各种安全规格以电动机铭牌上的型号取得认证。

When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

## 种类 Type

● **电动机** Motor

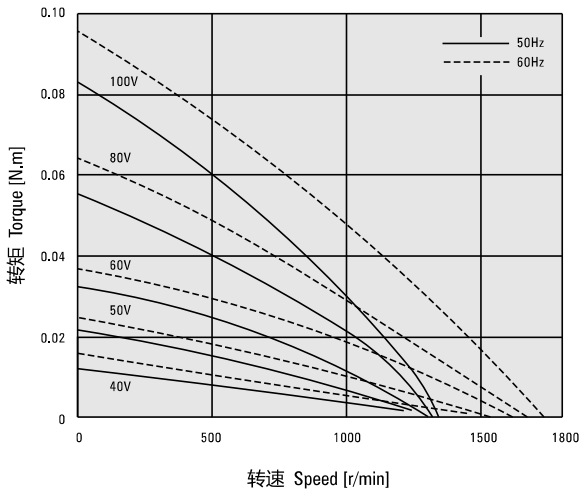
| 机型 Type | 型号 Model | |
|---|---|---|
| | 齿轮轴型 Pinion Shaft | 圆轴型 Round Shaft |
| 3W | 2TK3GN-A | 2TK3A-A |
| | 2TK3GN-C | 2TK3A-C |
| 6W | 3TK6GN-A | 3TK6A-A |
| | 3TK6GN-C | 3TK6A-C |
| 10W | 4TK10GN-A | 4TK10A-A |
| | 4TK10GN-C | 4TK10A-C |
| 20W | 5TK20GN-A | 5TK20A-A |
| | 5TK20GN-C | 5TK20A-C |

| 适用电动机输出功率（齿轮轴）Applicable Motor Output Power (Pinion Shaft Type) | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| 3W | 2GN□K | 3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200 |
| | 2GN10XK (中间减速器 Decimal gearhead) | |
| 6W | 3GN□K | 3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200 |
| | 3GN10XK (中间减速器 Decimal gearhead) | |
| 10W | 4GN□K | 3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200 |
| | 4GN10XK (中间减速器 Decimal gearhead) | |
| 20W | 5GN□K | 3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200 |
| | 5GN10XK (中间减速器 Decimal gearhead) | |

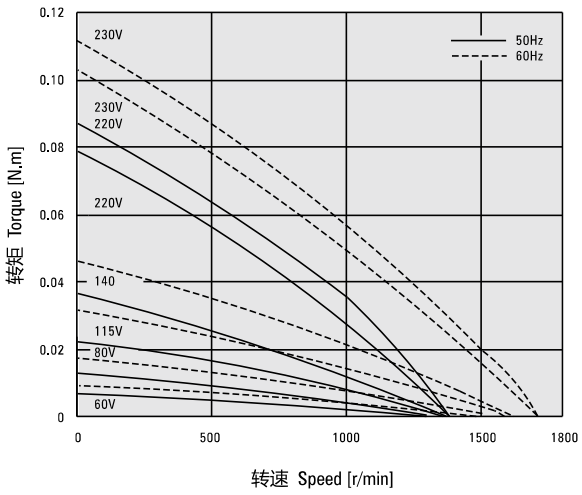
●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

## 转速–转矩特性（参考值）Speed - Torque Characteristics (Reference Values)

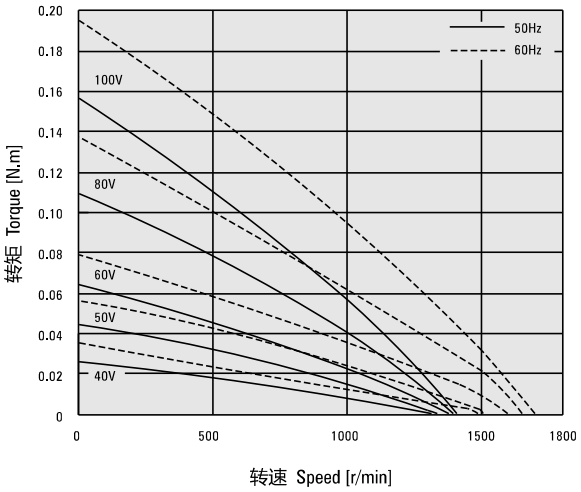
● 2TK3GN-A、2TK3A-A



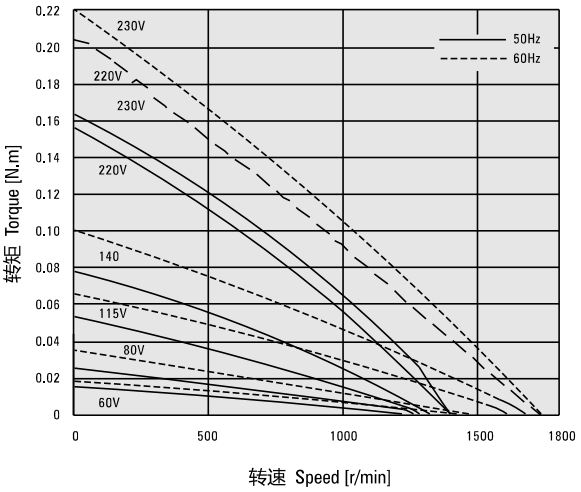

● 2TK3GN-C、2TK3A-C



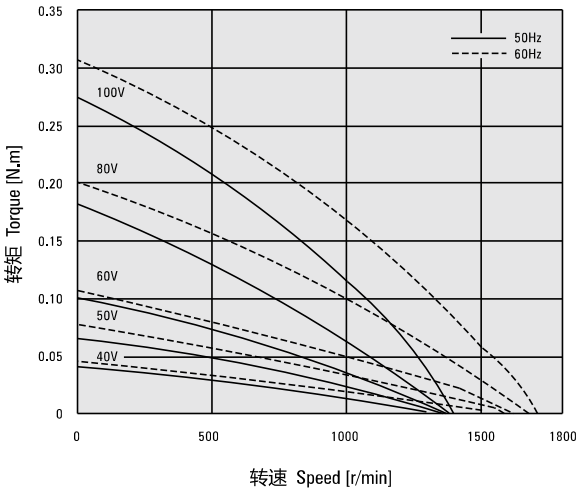
● 3TK6GN-A、3TK6A-A



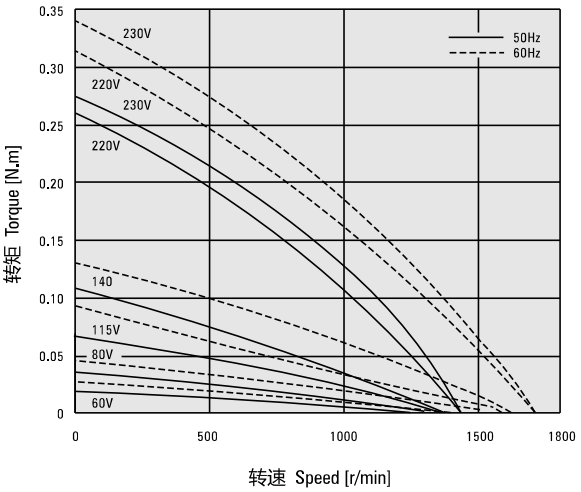

● 3TK6GN-C、3TK6A-C



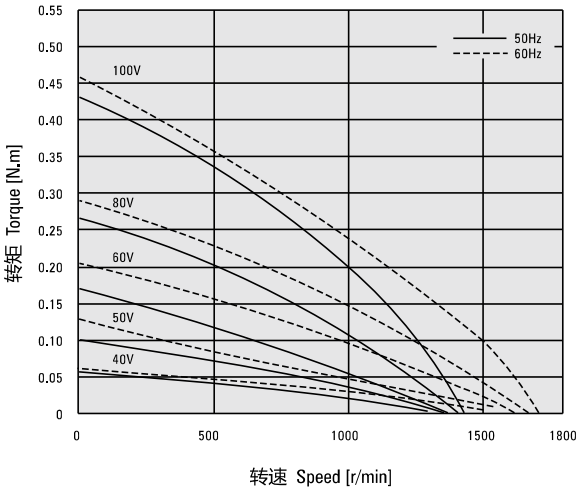

● 4TK10GN-A、4TK10A-A



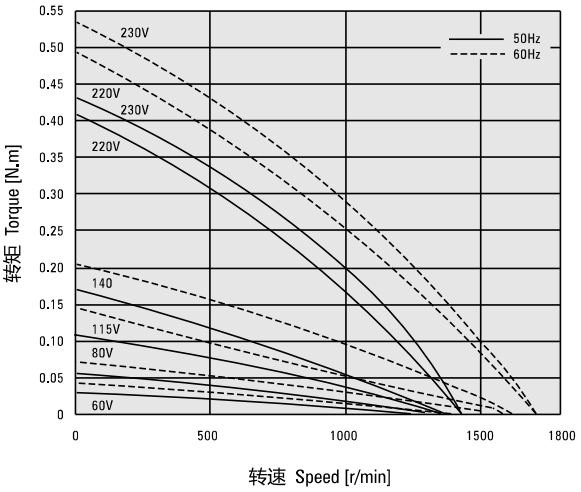

● 4TK10GN-C、4TK10A-C




● 5TK20GN-A、5TK20A-A




● 5TK20GN-C、5TK20A-C



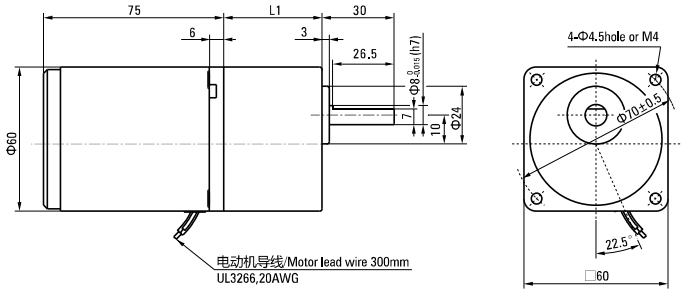
## 外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

### 3W

**电动机/减速器** Motor/Gearhead

重量 Weight：电动机 Motor： 0.75kg　　减速器 Gearhead： 0.4kg




| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| 2TK3GN-A<br>2TK3GN-C | 2GN□K | 3～200 | 41.5 |

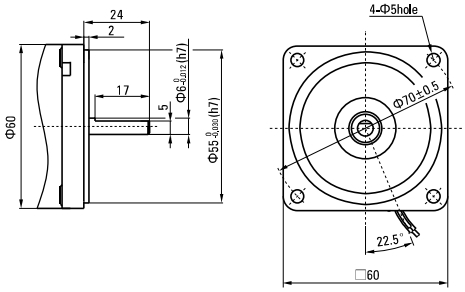
●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name
●减速比3～18可以做成短箱体 (L1＝32)
Gear ratio 3～18, short case is possible (L1＝32)

**圆轴型的转轴部分** Shaft Section Of Round Shaft Type

2TK3A-A　2TK3A-C

除重量及轴部外电动机外形与齿轮轴型相同。

Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.

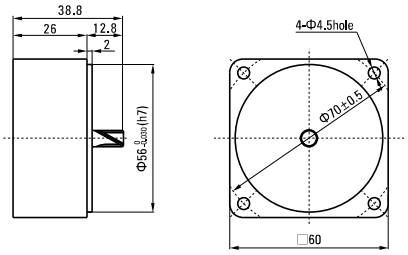



**中间减速器** Decimal Gearhead

可安装2TK3GN型 Can be connected to 2TK3GN type

2GN10XK

重量 Weight：0.24kg



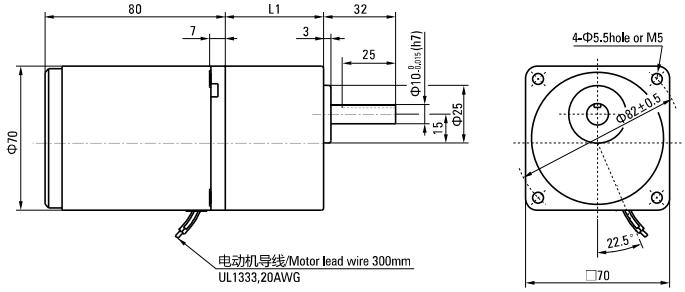

## 外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝Mounting screws are included with gearhead.

### 6W

**电动机/减速器** Motor/Gearhead

重量 Weight：电动机 Motor： 1.1kg　　减速器 Gearhead： 0.5kg

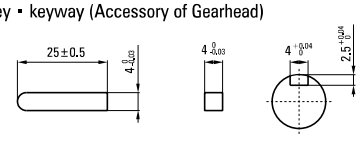



| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| 3TK6GN-A<br>3TK6GN-C | 3GN□K | 3～200 | 42 |

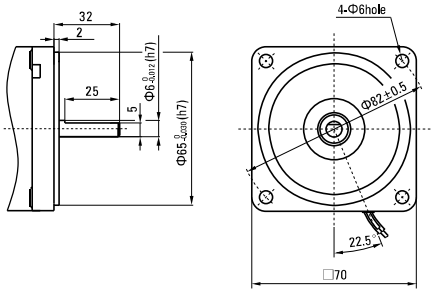
●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name
●减速比3～18可以做成短箱体 (L1＝32)
Gear ratio 3～18, short case is possible (L1＝32)

**键・键槽（减速器附件）**

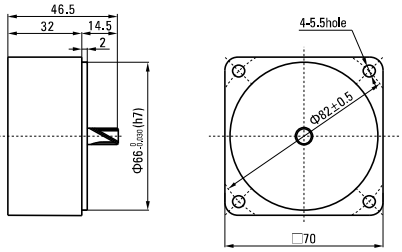
Key・keyway (Accessory of Gearhead)



● **圆轴型的转轴部分** Shaft Section Of Round Shaft Type
3TK6A-A　3TK6A-C
除重量及轴部外电动机外形与齿轮轴型相同。
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.




● **中间减速器** Decimal Gearhead
可安装3TK6GN型Can be connected to 3TK6GN type
3GN10XK
重量 Weight：0.31kg

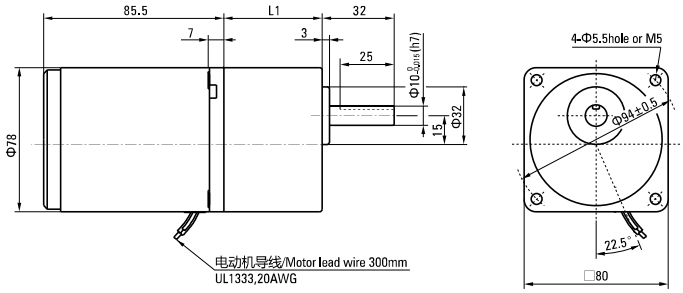



## ■外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

● **10W**

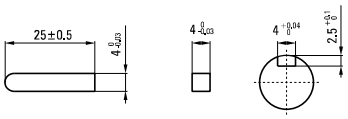
● **电动机/减速器** Motor/Gearhead
重量 Weight：电动机 Motor： 1.6kg　　减速器 Gearhead： 0.8kg



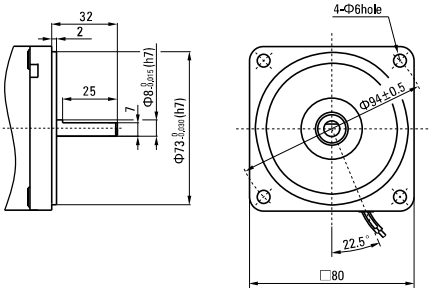

| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| 4TK10GN-A<br>4TK10GN-C | 4GN□K | 3～200 | 43.5 |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name
●减速比3～18可以做成短箱体 (L1＝32)
Gear ratio 3～18, short case is possible (L1＝32)

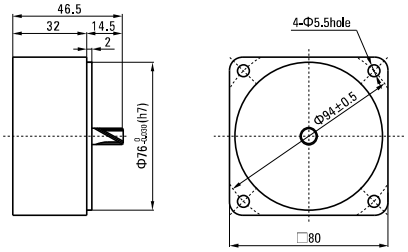
● **键・键槽（减速器附件）**
Key・Keyway (Accessory Of Gearhead)




● **圆轴型的转轴部分** Shaft Section Of Round Shaft Type
4TK10A-A　4TK10A-C
除重量及轴部外电动机外形与齿轮轴型相同。
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.




● **中间减速器** Decimal Gearhead
可安装4TK10GN型Can be connected to 4TK10GN type
4GN10XK
重量 Weight：0.41kg



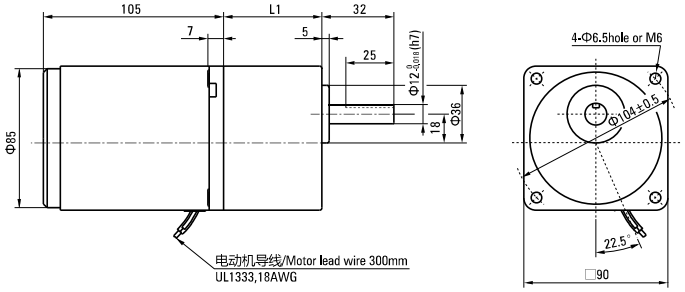
## 外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

● 20W

● **电动机/减速器** Motor/Gearhead

重量 Weight：电动机 Motor： 2.4kg　　减速器 Gearhead： 1.35kg

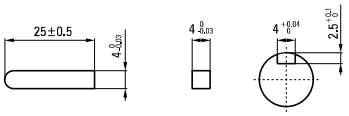



| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| 5TK20GN-A<br>5TK20GN-C | 5GN□K | 3～200 | 60 |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

●减速比3～18可以做成短箱体 (L1＝32)
Gear ratio 3～18, short case is possible (L1＝32)

● **键・键槽（减速器附件）**
Key・Keyway (Accessory Of Gearhead)

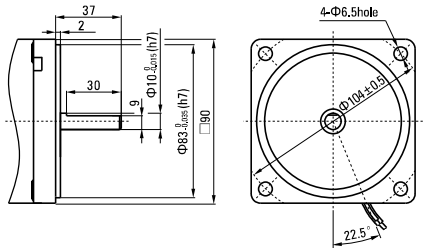



● **圆轴型的转轴部分** Shaft Section Of Round Shaft Type

5TK20A-A　5TK20A-C

除重量及轴部外电动机外形与齿轮轴型相同。

Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.

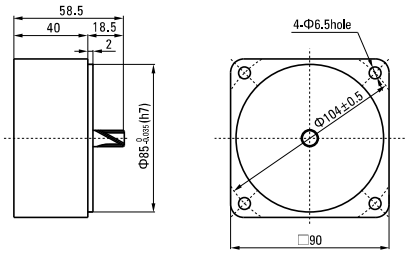



● **中间减速器** Decimal Gearhead

可安装5TK20GN型 Can be connected to 5TK20GN type

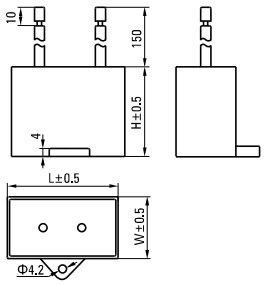
5GN10XK

重量 Weight：0.6kg




## 电容器外形尺寸 Formal Dimension Of Capacitor

| 型号Model | | 电容器型号 Capacitor Model | L | W | H |
|---|---|---|---|---|---|
| 齿轮轴型 Pinion Shaft | 圆轴型 Round Shaft | | | | |
| 2TK3GN-A | 2TK3A-A | ZD70CFAUL | 47 | 24.0 | 37 |
| | | ZD60CFAUL | 48 | 23.0 | 32 |
| 3TK6GN-A | 3TK6A-A | ZD80CFAUL | 48 | 26.5 | 38 |
| | | ZD70CFAUL | 47 | 24.0 | 37 |
| 4TK10GN-A | 4TK10A-A | ZD100CFAUL | 58 | 26.0 | 38 |
| | | ZD80CFAUL | 48 | 26.5 | 38 |
| 5TK20GN-A | 5TK20A-A | ZD150CFAUL | 58 | 32.0 | 43 |
| | | ZD120CFAUL | 58 | 30.0 | 40 |
| 2TK3GN-C | 2TK3A-C | ZD15BFAUL | 36 | 12.5 | 24 |
| | | ZD12BFAUL | 36 | 12.0 | 22 |
| 3TK6GN-C | 3TK6A-C | ZD20BFAUL | 36 | 15.0 | 25 |
| | | ZD15BFAUL | 36 | 12.5 | 24 |
| 4TK10GN-C | 4TK10A-C | ZD25BFAUL | 38 | 17.0 | 28 |
| | | ZD20BFAUL | 36 | 15.0 | 25 |
| 5TK20GN-C | 5TK20A-C | ZD35BFAUL | 38 | 19.5 | 31 |
| | | ZD30BFAUL | 38 | 18.5 | 29 |




● 常规电容器出线为引线,也可根据客户要求配置插片式187#

Note: Conventional capacitor is a lead wire type. Inserted 187# is optional

●电动机型号的□中为表示带端子箱型的记号(T)

Enter the code that represents the terminal box type (T) in the box (□) within the model name

## 连接图 Wiring Diagram

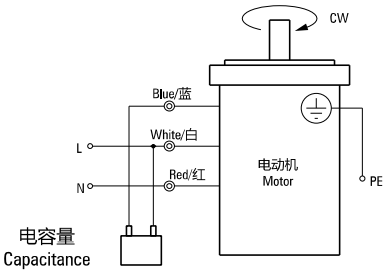
●运转方向指从电动机轴看来的方向。CW表示顺时针方向，CCW表示逆时针方向。
The direction of motor rotation is as viewed from the shaft end of motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction.

●表中所记品名为齿轮轴型，圆轴型亦同。
Name indicated in the list is pinion shaft type, also valid for the equivalent round shaft type.

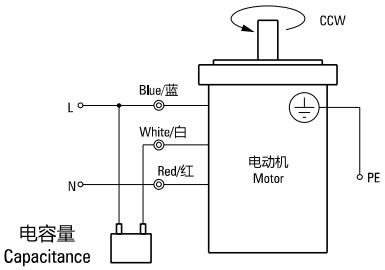
●品名的□中为附属电容器种类的J、U或E记号。
Specify the type of the capacitor to be included by entering J、U or E in the box (□) within the model name.

2TK3GN-A、2TK3GN-C、3TK6GN-A、3TK6GN-C
4TK10GN-A、4TK10GN-C、5TK20GN-A、5TK20GN-C

顺时针方向CW




逆时针方向CCW




请注意 Note：

单相电动机运转方向的转换应在电动机停止后进行。
Change the direction of single-phase motor rotation only after bring the motor to a stop.

若在电动机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。
If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

# AC&DC GEAR MOTOR CATALOGUE

181-218

ZD LEADER

## DC GEAR MOTOR
## 直流减速电动机



## 电动机型号说明 Description Of Motor Model

| Z | 5(5) | D(W) | 60 | - | 24 | GU | - | 30S |
|---|---|---|---|---|---|---|---|---|
| ① | ② | ③ | ④ | | ⑤ | ⑥ | | ⑦ |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ① | 公司名称 Comanpy | 中大电机 ZD MOTOR | | | | | |
| ② | | 型号尺寸 (Model dimension) | | | | | |
| | 机座号 Code | 2 | 3 | 4 | 5 | 55 | 6 |
| | 电机安装法兰 Mounting flange (mm) | 60×60 | 70×70 | 80×80 | 90×90 | 90×90 | 104×104 |
| | 机壳直径 Case diameter (mm) | 60 | 60 | 80 | 80 | 90 | 90 |
| ③ | 电机种类 Motor type | D: 直流电动机 DC motor<br>DW: 针对60、70系列电机D后加W表示外置电刷电机<br>For 60、70 series motor, DW means external brush motor | | | | | |
| ④ | 输出功率 Output power | (例 Example) 60:60W | | | | | |
| ⑤ | 电源电压 Voltage | (例 Example) 24:24V | | | | | |
| ⑥ | 电机轴形状 Shape of motor shaft | GN: 普通型斜齿 GN: General helical gear<br>GU: 加强型斜齿 GU: Reinforced helical gear | | | A1: 铣键槽 A1: Milling keyway<br>A: 铣扁 A: Flat type | | |
| ⑦ | 电机转速 Speed | (例 Example) 30S:3000RPM | | | | | |

备注：如果电机需刹车器可在型号最好增加-M符号，如Z5(5)D60-24GU-30S-M，刹车器电压与电机额定电压相同；型号中电机可解读为机壳外径90mm、GU型、额定电压24VDC、额定功率60W、额定转速3000RPM、配24VDC刹车器。

Note: we use M to symbolise the brake, such as Z5(5)D60-24GU-30S-M, the brake voltage is the same as the rated voltage of the motor, Type of motor can be interpreted as a case diameter of 90mm, GU type, rated voltage 24VDC, rated power 60W, rated speed of 3000RPM, with brake 24VDC.

## 减速器型号说明 Description Of Reducer Model

| 5 | GN | 50 | K |
|---|---|---|---|
| ① | ② | ③ | ④ |

| | | |
|---|---|---|
| ① | 型号尺寸 Model dimension | 2: 60mm 3: 70mm 4: 80mm 5: 90mm 6: 104mm |
| ② | 齿轮种类 Gear type | Gn: 普通型斜齿轴 GN: General helical gear<br>GU: 加强型斜齿轴 GU: Reinforced helical gear |
| ③ | 减速比 Gear ratio | 例 Example: 50 减速比 Gear ratio of 1:50<br>10X 仅限减速器1:10的中间减速比 10X denotes the decimal gearhead of ratio 1:10 |
| ④ | 轴承种类 Bearing type | K: 滚珠轴承（对GU型方箱体标注为KB）<br>K: Bearing (Make KB for type GU square case) |

备注：非标准分体式的编号为：在电动型号或减速型号前加 "V" （请在定货时写明具体参数要求）

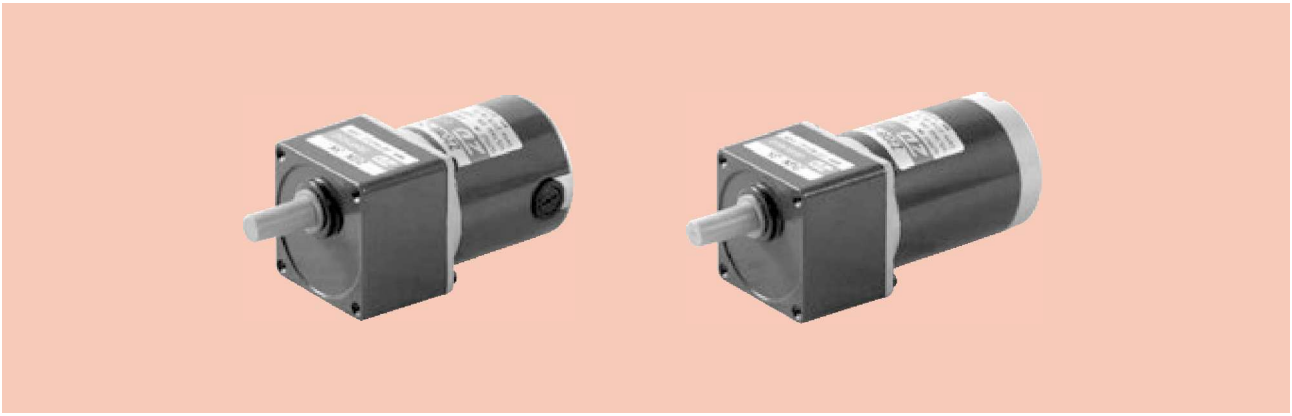
Note: The code of the non-standard split type is to add "V" before the model number of the motor or reducer (Please specify the detailed parameter requirement in the purchase order)

## 电动机的一般规格 Deneral Specification Of Motors

| 项 目Items | 规 格Specifications |
|---|---|
| 绝缘电阻<br>Insulation resistance | 于常温·常湿下的电动机额定运行后，以DC 500V电阻表测量线圈·外壳间时，测量值为20兆欧以上.<br>In the circumstance of normal ambient temperature and humidity, the resistance can be up to 20MΩ or more when DC 500V megger is applied between the windings and the frame after rated motor operations. |
| 绝缘耐压<br>Dielectric withstanding | 于常温·常湿下电动机额定运行后，在线圈和机壳间施加一分钟50Hz或60Hz、1.5kV的电压，亦无异常.<br>In the circumstance of normal ambient temperature and humidity, there will be no problem to withstand 1.5kV at 50/60hz between the windings and the frame for 1 minute after rated motor operation. |
| 温度上升<br>Temperature rise | 运转电机后，用温度计法来测量时，电机表面最热点温升数值在80℃以下.<br>The temperature rise should be lower than 80℃ measured by resistance method when the motor is working. |
| 绝缘等级<br>Insulation class | B级 (130℃)<br>Class B (130℃) |
| 使用温度<br>Use temperature | -10℃~+40℃ (无冰冻)<br>-10℃~+40℃ (Non freezing) |
| 使用湿度<br>Use humidity | 85%以下 (无结露的场所)<br>≤85% (Place without dew) |

# 直流电动机
# DC MOTORS

## 6W □60mm



## 电机性能参数 Motor Performance Parameters

| 型号 Model | 电压 Voltage | 功率 Power | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 电刷寿命 Brush Life | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电流Current | | |
| | V | W | r/min | A | r/min | mN.m | A | H | kg |
| Z2D06-12 □ | 12 | 6 | 3200 | 0.6 Max. | 2950 | 19 | 0.8 | 2000 | 0.6 |
| Z2DW06-12□ | 12 | 6 | 3200 | 0.6 Max. | 2950 | 19 | 0.8 | 2000 | 0.6 |
| Z2D06-24 □ | 24 | 6 | 3200 | 0.3 Max. | 2950 | 19 | 0.5 | 2000 | 0.6 |
| Z2DW06-24□ | 24 | 6 | 3200 | 0.3 Max. | 2950 | 19 | 0.5 | 2000 | 0.6 |
| Z2D06-90 □ | 90 | 6 | 3000 | 0.2 Max. | 2800 | 20 | 0.3 | 2000 | 0.6 |
| Z2DW06-90□ | 90 | 6 | 3000 | 0.2 Max. | 2800 | 20 | 0.3 | 2000 | 0.6 |

●电机电压、功率及转速可在配件尺寸等条件允许下根据客户要求定制。
Motor voltage, power and speed will be customized according to his requestment under the allowed circumstance of adoptable dimension.
●D后如加W即Z2DW06-12GN表示外置电刷齿轴电机，如无W则为标准内置电刷齿轴电机：外置电刷电机，用户可自行在外部更换电刷：内置电刷电机更换电刷时需将电机拆装后方可更换。
We use W after D in the model to express the external brush motor, such as Z2DW06-12GN. If no W, it means the standard internal brush motor. For external brush motor, you can replce the brush directly. For internal ones, we need to disassembly the motor first.

## 种类 Type

### 电动机 Motor

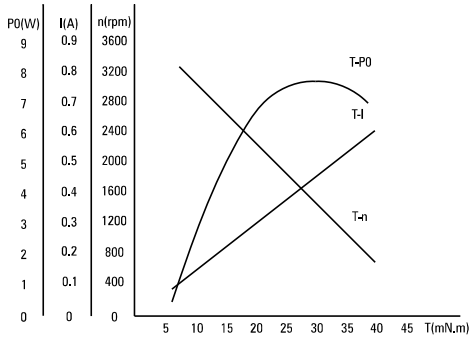
| 机型 Type | 型号Model | |
|---|---|---|
| | 齿轮轴型 Pinion Shaft | 圆轴型 Round Shaft |
| 导线型 Lead Wire Type | Z2D06-12GN | Z2D06-12A |
| | Z2DW06-12GN | Z2DW06-12A |
| | Z2D06-24GN | Z2D06-24A |
| | Z2DW06-24GN | Z2D06-24A |
| | Z2D06-90GN | Z2D06-90A |
| | Z2DW06-90GN | Z2DW06-90A |

### 平行轴减速器（另售）Parallel Shaft Gearhead (Sold Separately)

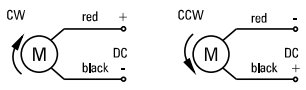
| 减速器种类 Gearhead Type | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| 长寿命●低噪音 Long Life ● Low Noise | 2GN□K | 3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200 |
| | 2GN10XK（中间减速器 Decimal Gearhead） | |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

### 电机特性曲线 Characteristic Curve Of Motor




### 电机接线图 Wiring Diagram Of Motor




●标准引出线长度：300mm±10，型号：UL1015，规格：AWG20；电机引出线长度、型号在配件尺寸等条件允许的情况下可根据客户要求定制。
Stanclard length of lead wire: 300mm±10, model: Ul1015, type: AWG20; lead wire length, model will be customerised by dient requestmant under allowed circumstamce of adoptable dimension.

## 装有减速器时的容许转矩 Gear Motor-Torque Table

- 减速器另售·中间减速器另售。
  Gearheads are sold separately. Decimal gearheads are not available.
- 减速品型号的□中为减速比的数值。
  Enter the gear ratio in the box (□) within the model name.
- ▭色表示与电动机同一方向运转，其他则为相反方向。
  The colored background ▭ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- 转速是以电动机的额定转速为基准除以减速比而算出来的数值。实际转速将随负载大小变化而比所示数值减少2%~20%左右。
  The speed is calculated by dividing the motor's synchronous speed by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- 希望以大于下表的减速比进行进一步减速时，可在电动机与减速机之间安装减速比为10的中间减速机。
  这时的容许转矩为3N·m。
  To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 3N·m.

## 容许力矩单位 Allowance Torque Unit：上段 Upside（N.m）/下段 Belowside（kgf.cm）

| 型号 Type | 减速比 Gear Ratio | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z2D06-24GN | 转速 Speed r/min | 983 | 819 | 590 | 492 | 393 | 328 | 295 | 236 | 197 | 164 | 148 | 118 | 98 | 82 | 74 | 59 | 49 | 39 | 33 | 30 | 25 | 20 | 16 | 15 |
| | 2GN□K | 0.05 | 0.06 | 0.08 | 0.09 | 0.12 | 0.14 | 0.16 | 0.20 | 0.24 | 0.28 | 0.28 | 0.35 | 0.42 | 0.51 | 0.57 | 0.71 | 0.76 | 0.96 | 1.15 | 1.27 | 1.53 | 1.91 | 2.29 | 2.55 |
| | | 0.46 | 0.56 | 0.77 | 0.93 | 1.16 | 1.39 | 1.54 | 1.93 | 2.31 | 2.78 | 2.78 | 3.47 | 4.16 | 5.00 | 5.55 | 6.94 | 7.49 | 9.37 | 11.2 | 12.5 | 15.0 | 18.7 | 22.5 | 25.0 |

## 容许悬挂负载·容许轴向负载 To Allow The Hoisting Of The Load Allow Axial Load

电动机（圆轴型）→215页　　Motor (Round shaft) →P215
减速机→215页　　Gearhead→P215

## 减速机的容许负载惯性惯量 J Permissible Load Inertia J For Gearhead

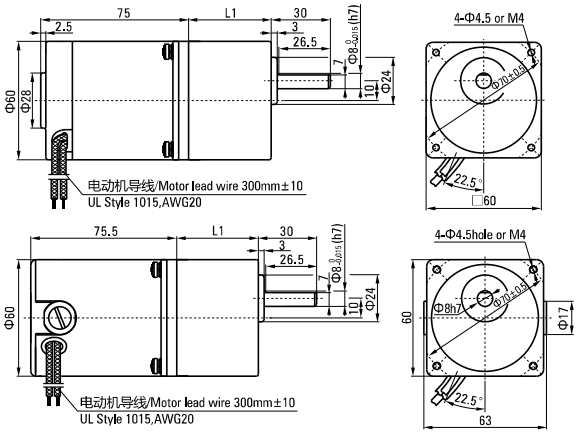
→215页→P215

## 外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

● **导线型** Lead Wiring Type

重量 Weight：电动机 Motor： 0.6kg　　减速器 Gearhead： 0.4kg

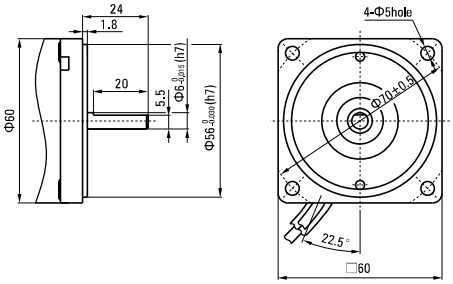



| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| Z2D06-12GN<br>Z2DW06-12GN<br>Z2D06-24GN<br>Z2DW06-24GN<br>Z2D06-90GN<br>Z2DW06-90GN | 2GN□K | 3~200 | 41 |

●减速器型号的□中为减速比的数值 Enter the gear ratio in the box (□) within the model name
●减速比3~18可以做成短箱体 (L1=32) Gear ratio 3~18, short case is possible (L1=32)

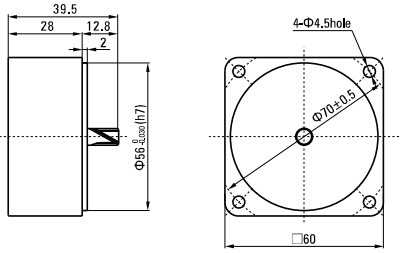
● **圆轴型的转轴部分** Shaft Section Of Round Shaft Type

除重量及轴部外电动机外形与齿轮轴型相同。
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



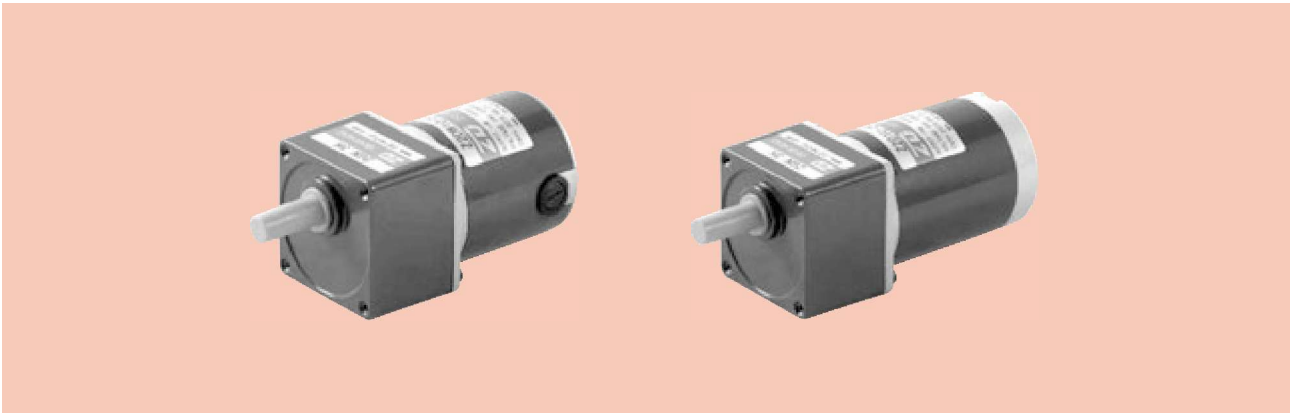

● **中间减速器** Decimal Gearhead

可安装在GN齿轮轴型上Can be connected to GN pinion shaft type
电动机外形与齿轮轴型相同
2GN10X
重量 Weight：0.24kg



# 直流电动机
# DC MOTORS

## ■10W □60mm



## ■电机性能参数 Motor Performance Parameters

| 型号 Model | 电压 Voltage | 功率 Power | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 电刷寿命 Brush Life | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电流Current | | |
| | V | W | r/min | A | r/min | mN.m | A | H | kg |
| Z2D10-12 □ | 12 | 10 | 3200 | 1.0 Max. | 2800 | 34 | 2.0 | 2000 | 0.7 |
| Z2DW10-12□ | 12 | 10 | 3200 | 1.0 Max. | 2800 | 34 | 2.0 | 2000 | 0.7 |
| Z2D10-24 □ | 24 | 10 | 3300 | 0.5 Max. | 3000 | 32 | 0.9 | 2000 | 0.7 |
| Z2DW10-24□ | 24 | 10 | 3300 | 0.5 Max. | 3000 | 32 | 0.9 | 2000 | 0.7 |
| Z2D10-90 □ | 90 | 10 | 3200 | 0.3 Max. | 2800 | 34 | 0.6 | 2000 | 0.7 |
| Z2DW10-90□ | 90 | 10 | 3200 | 0.3 Max. | 2800 | 34 | 0.6 | 2000 | 0.7 |

●电机电压、功率及转速可在配件尺寸等条件允许下根据客户要求定制。
Motor voltage, power and speed will be customized according to his requestment under the allowed circumstance of adoptable dimension.
●D后如加W即Z2DW06-12GN表示外置电刷齿轴电机，如无W则为标准内置电刷齿轴电机：外置电刷电机，用户可自行在外部更换电刷：内置电刷电机更换电刷时需将电机拆装后方可更换。
We use W after D in the model to express the external brush motor, such as Z2DW06-12GN. If no W, it means the standard internal brush motor. For external brush motor, you can replce the brush directly. For internal ones, we need to disassembly the motor first.

## ■种类 Type

### ● 电动机 Motor

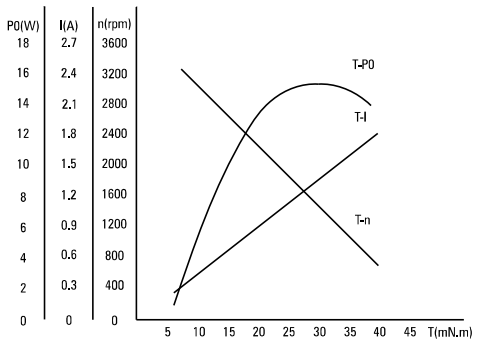
| 机型 Type | 型号Model | |
|---|---|---|
| | 齿轮轴型 Pinion Shaft | 圆轴型 Round Shaft |
| 导线型 Lead Wire Type | Z2D10-12GN | Z2D10-12A |
| | Z2DW10-12GN | Z2DW10-12A |
| | Z2D10-24GN | Z2D10-24A |
| | Z2DW10-24GN | Z2D10-24A |
| | Z2D10-90GN | Z2D10-90A |
| | Z2DW10-90GN | Z2DW10-90A |

### ● 平行轴减速器（另售）Parallel Shaft Gearhead (Sold Separately)

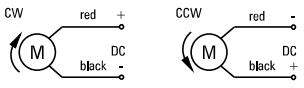
| 减速器种类 Gearhead Type | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| 长寿命●低噪音 Long Life ● Low Noise | 2GN□K | 3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200 |
| | 2GN10XK（中间减速器 Decimal Gearhead） | |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

### ● 电机特性曲线 Characteristic Curve Of Motor




### ● 电机接线图 Wiring Diagram Of Motor




●标准引出线长度: 300mm±10, 型号: UL1015, 规格: AWG20; 电机引出线长度、型号在配件尺寸等条件允许的情况下可根据客户要求定制。
Stanclard length of lead wire: 300mm±10, model: Ul1015, type: AWG20; lead wire length, model will be customerised by dient requestmant under allowed circumstamce of adoptable dimension.

## 装有减速器时的容许转矩 Gear Motor-Torque Table

- 减速器另售·中间减速器另售。
  Gearheads are sold separately. Decimal gearheads are not available.
- 减速品型号的□中为减速比的数值。
  Enter the gear ratio in the box (□) within the model name.
- ▭色表示与电动机同一方向运转，其他则为相反方向。
  The colored background ▭ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- 转速是以电动机的额定转速为基准除以减速比而算出来的数值。实际转速将随负载大小变化而比所示数值减少2%~20%左右。
  The speed is calculated by dividing the motor's synchronous speed by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- 希望以大于下表的减速比进行进一步减速时，可在电动机与减速机之间安装减速比为10的中间减速机。
  这时的容许转矩为3N·m。
  To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 3N·m.

## 容许力矩单位 Allowance Torque Unit：上段 Upside（N.m）/下段 Belowside（kgf.cm）

| 型号 Type | 减速比 Gear Ratio | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z2D10-24GN | 转速 Speed r/min | 1000 | 833 | 600 | 500 | 400 | 333 | 300 | 240 | 200 | 167 | 150 | 120 | 100 | 83 | 75 | 60 | 50 | 40 | 33 | 30 | 25 | 20 | 17 | 15 |
| | 2GN□K | 0.08 | 0.09 | 0.13 | 0.15 | 0.19 | 0.23 | 0.26 | 0.32 | 0.39 | 0.46 | 0.46 | 0.58 | 0.70 | 0.84 | 0.93 | 1.16 | 1.25 | 1.75 | 1.88 | 2.09 | 2.51 | 3.00 | 3.00 | 3.00 |
| | | 0.76 | 0.91 | 1.26 | 1.52 | 1.90 | 2.27 | 2.53 | 3.16 | 3.79 | 4.55 | 4.55 | 5.69 | 6.82 | 8.19 | 9.10 | 11.4 | 12.3 | 15.4 | 18.4 | 20.5 | 24.6 | 30.0 | 30.0 | 30.0 |

## 容许悬挂负载·容许轴向负载 To Allow The Hoisting Of The Load Allow Axial Load

电动机（圆轴型）→215页　　Motor (Round shaft) →P215
减速机→215页　　Gearhead→P215

## 减速机的容许负载惯性惯量 J Permissible Load Inertia J For Gearhead

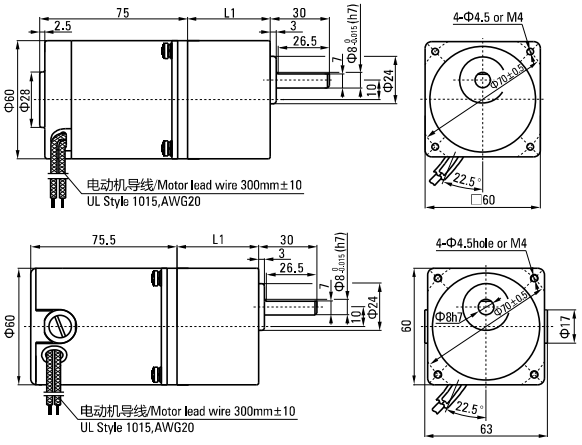
→215页→P215

## 外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

● **导线型** Lead Wiring Type

重量 Weight：电动机 Motor： 0.7kg　　减速器 Gearhead： 0.4kg

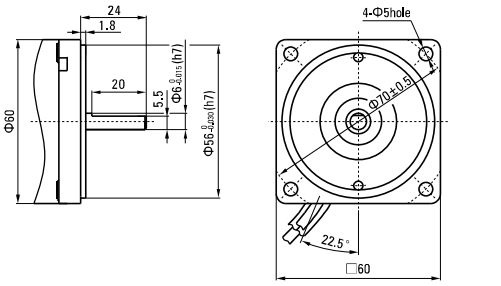



| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| Z2D10-12GN<br>Z2DW10-12GN<br>Z2D10-24GN<br>Z2DW10-24GN<br>Z2D10-90GN<br>Z2DW10-90GN | 2GN□K | 3~200 | 41 |

●减速器型号的□中为减速比的数值 Enter the gear ratio in the box (□) within the model name
●减速比3~18可以做成短箱体 (L1=32) Gear ratio 3~18, short case is possible (L1=32)

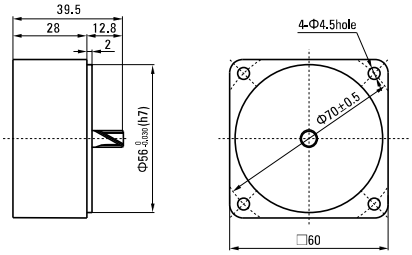
● **圆轴型的转轴部分** Shaft Section Of Round Shaft Type

除重量及轴部外电动机外形与齿轮轴型相同。
Excluding weight and the shaft section motor shape are the same as t hose of the pinion shaft type.



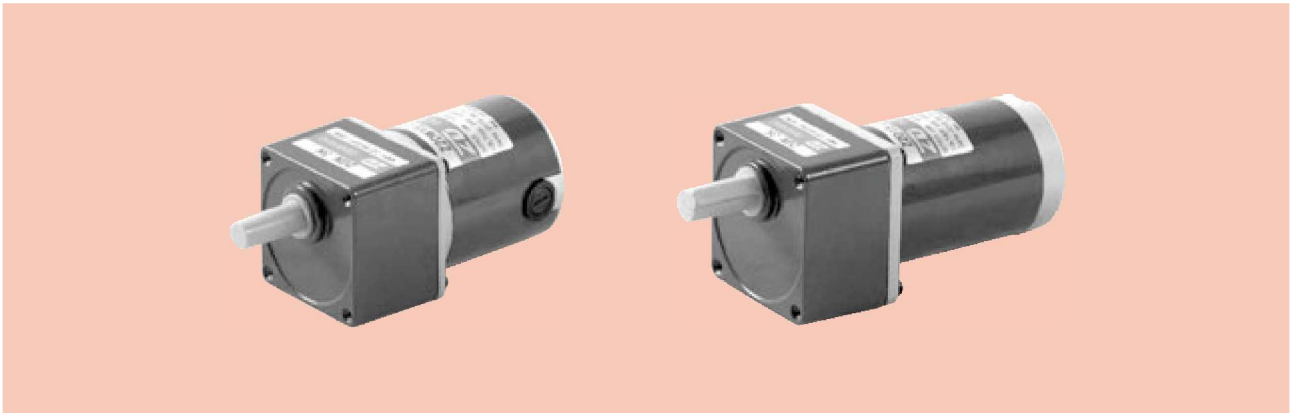

● **中间减速器** Decimal Gearhead

可安装在GN齿轮轴型上Can be connected to GN pinion shaft type
电动机外形与齿轮轴型相同
2GN10X
重量 Weight：0.24kg



# 直流电动机
# DC MOTORS

## ■15W □60mm



## ■电机性能参数 Motor Performance Parameters

| 型号 Model | 电压 Voltage | 功率 Power | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 电刷寿命 Brush Life | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电流Current | | |
| | V | W | r/min | A | r/min | mN.m | A | H | kg |
| Z2D15-12 □ | 12 | 15 | 3200 | 0.8 Max. | 2950 | 48 | 2.0 | 2000 | 0.9 |
| Z2DW15-12□ | 12 | 15 | 3200 | 0.8 Max. | 2950 | 48 | 2.0 | 2000 | 0.9 |
| Z2D15-24 □ | 24 | 15 | 3300 | 0.4 Max. | 3000 | 48 | 1.0 | 2000 | 0.9 |
| Z2DW15-24□ | 24 | 15 | 3300 | 0.4 Max. | 3000 | 48 | 1.0 | 2000 | 0.9 |
| Z2D15-90 □ | 90 | 15 | 3200 | 0.2 Max. | 3000 | 48 | 0.4 | 2000 | 0.9 |
| Z2DW15-90□ | 90 | 15 | 3200 | 0.2 Max. | 3000 | 48 | 0.4 | 2000 | 0.9 |

●电机电压、功率及转速可在配件尺寸等条件允许下根据客户要求定制。
Motor voltage, power and speed will be customized according to his requestment under the allowed circumstance of adoptable dimension.
●D后如加W即Z2DW06-12GN表示外置电刷齿轴电机，如无W则为标准内置电刷齿轴电机：外置电刷电机，用户可自行在外部更换电刷：内置电刷电机更换电刷时需将电机拆装后方可更换。
We use W after D in the model to express the external brush motor, such as Z2DW06-12GN. If no W, it means the standard internal brush motor. For external brush motor, you can replce the brush directly. For internal ones, we need to disassembly the motor first.

## ■种类 Type

### ● 电动机 Motor

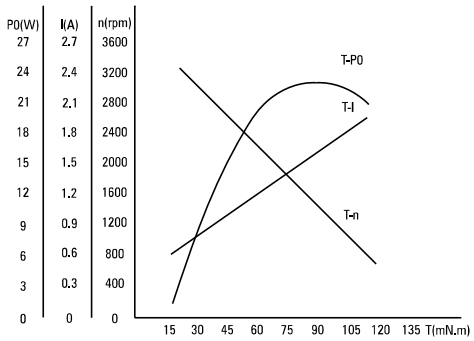
| 机型 Type | 型号Model | |
|---|---|---|
| | 齿轮轴型 Pinion Shaft | 圆轴型 Round Shaft |
| 导线型 Lead Wire Type | Z2D15-12GN | Z2D15-12A |
| | Z2DW15-12GN | Z2DW15-12A |
| | Z2D15-24GN | Z2D15-24A |
| | Z2DW15-24GN | Z2D15-24A |
| | Z2D15-90GN | Z2D15-90A |
| | Z2DW15-90GN | Z2DW15-90A |

### ● 平行轴减速器（另售）Parallel Shaft Gearhead (Sold Separately)

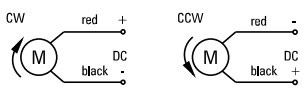
| 减速器种类 Gearhead Type | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| 长寿命●低噪音 Long Life ● Low Noise | 2GN□K | 3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200 |
| | 2GN10XK（中间减速器 Decimal Gearhead） | |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

### ● 电机特性曲线 Characteristic Curve Of Motor




### ● 电机接线图 Wiring Diagram Of Motor




●标准引出线长度: 300mm±10, 型号: UL1015, 规格: AWG20; 电机引出线长度、型号在配件尺寸等条件允许的情况下可根据客户要求定制。
Stanclard length of lead wire: 300mm±10, model: Ul1015, type: AWG20; lead wire length, model will be customerised by dient requestmant under allowed circumstamce of adoptable dimension.

## 装有减速器时的容许转矩 Gear Motor-Torque Table

- 减速器另售·中间减速器另售。
  Gearheads are sold separately. Decimal gearheads are not available.
- 减速品型号的□中为减速比的数值。
  Enter the gear ratio in the box (□) within the model name.
- ▭色表示与电动机同一方向运转，其他则为相反方向。
  The colored background ▭ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- 转速是以电动机的额定转速为基准除以减速比而算出来的数值。实际转速将随负载大小变化而比所示数值减少2%~20%左右。
  The speed is calculated by dividing the motor's synchronous speed by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- 希望以大于下表的减速比进行进一步减速时，可在电动机与减速机之间安装减速比为10的中间减速机。
  这时的容许转矩为3N·m。
  To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 3N·m.

## 容许力矩单位 Allowance Torque Unit：上段 Upside（N.m）/下段 Belowside（kgf.cm）

| 型号 Type | 减速比 Gear Ratio | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z2D15-24GN | 转速 Speed r/min | 1000 | 833 | 600 | 500 | 400 | 333 | 300 | 240 | 200 | 167 | 150 | 120 | 100 | 83 | 75 | 60 | 50 | 40 | 33 | 30 | 25 | 20 | 17 | 15 |
| | 2GN□K | 0.12 | 0.14 | 0.19 | 0.23 | 0.29 | 0.35 | 0.39 | 0.48 | 0.58 | 0.70 | 0.70 | 0.87 | 1.04 | 1.25 | 1.39 | 1.74 | 1.88 | 2.35 | 2.82 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| | | 1.14 | 1.36 | 1.90 | 2.27 | 2.84 | 3.41 | 3.79 | 4.74 | 5.69 | 6.82 | 6.82 | 8.53 | 10.23 | 12.28 | 13.65 | 17.1 | 18.4 | 23.0 | 27.6 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |

## 容许悬挂负载·容许轴向负载 To Allow The Hoisting Of The Load Allow Axial Load

电动机（圆轴型）→215页　　Motor (Round shaft) →P215
减速机→215页　　Gearhead→P215

## 减速机的容许负载惯性惯量 J Permissible Load Inertia J For Gearhead

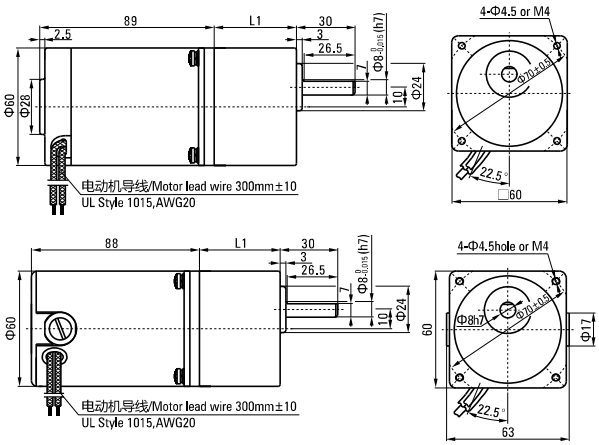
→215页→P215

## 外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

● **导线型** Lead Wiring Type

重量 Weight：电动机 Motor： 0.9kg　　减速器 Gearhead： 0.4kg

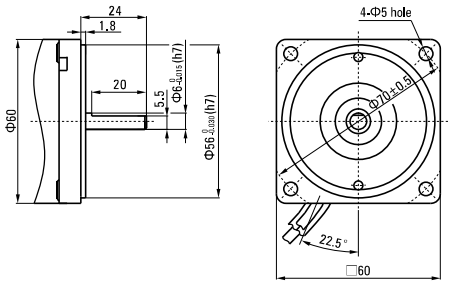



| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| Z2D15-12GN<br>Z2DW15-12GN<br>Z2D15-24GN<br>Z2DW15-24GN<br>Z2D15-90GN<br>Z2DW15-90GN | 2GN□K | 3~200 | 41 |

●减速器型号的□中为减速比的数值 Enter the gear ratio in the box (□) within the model name
●减速比3~18可以做成短箱体 (L1=32) Gear ratio 3~18, short case is possible (L1=32)

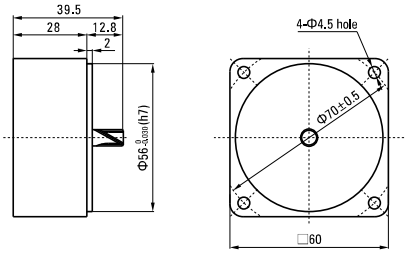
● **圆轴型的转轴部分** Shaft Section Of Round Shaft Type

除重量及轴部外电动机外形与齿轮轴型相同。
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



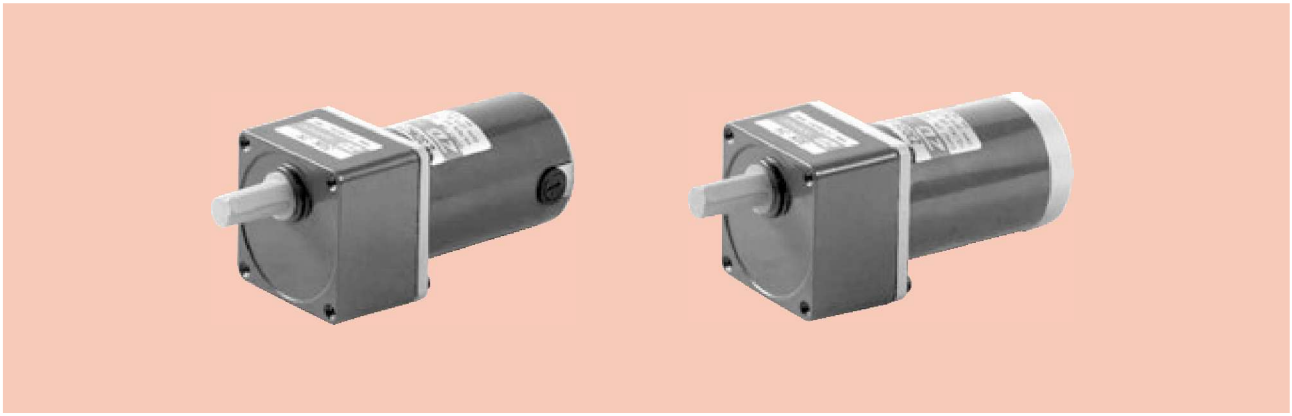

● **中间减速器** Decimal Gearhead

可安装在GN齿轮轴型上Can be connected to GN pinion shaft type
电动机外形与齿轮轴型相同
2GN10X
重量 Weight：0.24kg



# 直流电动机
# DC MOTORS

## ■25W □70mm



## ■电机性能参数 Motor Performance Parameters

| 型号 Model | 电压 Voltage | 功率 Power | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 电刷寿命 Brush Life | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电流Current | | |
| | V | W | r/min | A | r/min | mN.m | A | H | kg |
| Z3D25-12 □ | 12 | 25 | 3300 | 1.0 Max. | 3000 | 80 | 3.5 | 2000 | 1.0 |
| Z3DW25-12□ | 12 | 25 | 3300 | 1.0 Max. | 3000 | 80 | 3.5 | 2000 | 1.0 |
| Z3D25-24 □ | 24 | 25 | 3200 | 0.5 Max. | 2800 | 85 | 1.6 | 2000 | 1.0 |
| Z3DW25-24□ | 24 | 25 | 3200 | 0.5 Max. | 2800 | 85 | 1.6 | 2000 | 1.0 |
| Z3D25-90 □ | 90 | 25 | 3100 | 0.3 Max. | 2700 | 88 | 0.6 | 2000 | 1.0 |
| Z3DW25-90□ | 90 | 25 | 3100 | 0.3 Max. | 2700 | 88 | 0.6 | 2000 | 1.0 |

●电机电压、功率及转速可在配件尺寸等条件允许下根据客户要求定制。
Motor voltage, power and speed will be customized according to his requestment under the allowed circumstance of adoptable dimension.
●D后如加W即Z2DW06-12GN表示外置电刷齿轴电机，如无W则为标准内置电刷齿轴电机：外置电刷电机，用户可自行在外部更换电刷：内置电刷电机更换电刷时需将电机拆装后方可更换。
We use W after D in the model to express the external brush motor, such as Z2DW06-12GN. If no W, it means the standard internal brush motor. For external brush motor, you can replce the brush directly. For internal ones, we need to disassembly the motor first.

## ■种类 Type

● **电动机** Motor

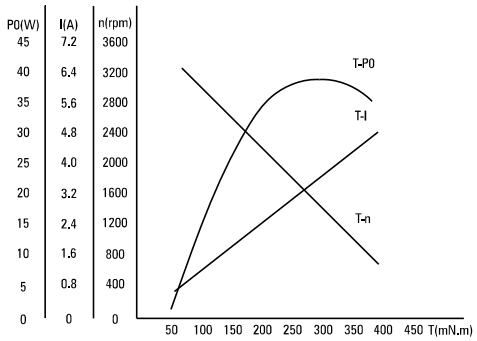
| 机型 Type | 型号Model | |
|---|---|---|
| | 齿轮轴型 Pinion Shaft | 圆轴型 Round Shaft |
| 导线型 Lead Wire Type | Z3D25-12GN | Z3D25-12A |
| | Z3DW25-12GN | Z3DW25-12A |
| | Z3D25-24GN | Z3D25-24A |
| | Z3DW25-24GN | Z3D25-24A |
| | Z3D25-90GN | Z3D25-90A |
| | Z3DW25-90GN | Z3DW25-90A |

● **平行轴减速器（另售）** Parallel Shaft Gearhead (Sold Separately)

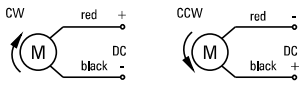
| 减速器种类 Gearhead Type | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| 长寿命●低噪音 Long Life ● Low Noise | 3GN□K | 3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200 |
| | 3GN10XK（中间减速器 Decimal Gearhead） | |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

● **电机特性曲线** Characteristic Curve Of Motor




● **电机接线图** Wiring Diagram Of Motor




●标准引出线长度: 300mm±10, 型号: UL1015, 规格: AWG20; 电机引出线长度、型号在配件尺寸等条件允许的情况下可根据客户要求定制。
Stanclard length of lead wire: 300mm±10, model: Ul1015, type: AWG20; lead wire length, model will be customerised by dient requestmant under allowed circumstamce of adoptable dimension.

## 装有减速器时的容许转矩 Gear Motor-Torque Table

- 减速器另售·中间减速器另售。
  Gearheads are sold separately. Decimal gearheads are not available.
- 减速品型号的□中为减速比的数值。
  Enter the gear ratio in the box (□) within the model name.
- ▭色表示与电动机同一方向运转，其他则为相反方向。
  The colored background ▭ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- 转速是以电动机的额定转速为基准除以减速比而算出来的数值。实际转速将随负载大小变化而比所示数值减少2%~20%左右。
  The speed is calculated by dividing the motor's synchronous speed by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- 希望以大于下表的减速比进行进一步减速时，可在电动机与减速机之间安装减速比为10的中间减速机。
  这时的容许转矩为5N·m。
  To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 5N·m.

## 容许力矩单位 Allowance Torque Unit：上段 Upside（N.m）/下段 Belowside（kgf.cm）

| 型号 Type | 减速比 Gear Ratio | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z3D25-24GN | 转速 Speed r/min | 933 | 778 | 560 | 467 | 373 | 311 | 280 | 224 | 187 | 156 | 140 | 112 | 93 | 78 | 70 | 56 | 47 | 37 | 31 | 28 | 23 | 19 | 16 | 14 |
| | 3GN□K | 0.21 | 0.25 | 0.35 | 0.41 | 0.52 | 0.62 | 0.69 | 0.86 | 1.04 | 1.24 | 1.24 | 1.55 | 1.86 | 2.24 | 2.49 | 3.11 | 3.73 | 4.66 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| | | 2.03 | 2.44 | 3.38 | 4.06 | 5.08 | 6.09 | 6.77 | 8.46 | 10.2 | 12.2 | 12.2 | 15.2 | 18.3 | 21.9 | 24.4 | 30.5 | 36.6 | 45.7 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 |

## 容许悬挂负载·容许轴向负载 To Allow The Hoisting Of The Load Allow Axial Load

电动机（圆轴型）→215页　　Motor (Round shaft) →P215
减速机→215页　　Gearhead→P215

## 减速机的容许负载惯性惯量 J Permissible Load Inertia J For Gearhead

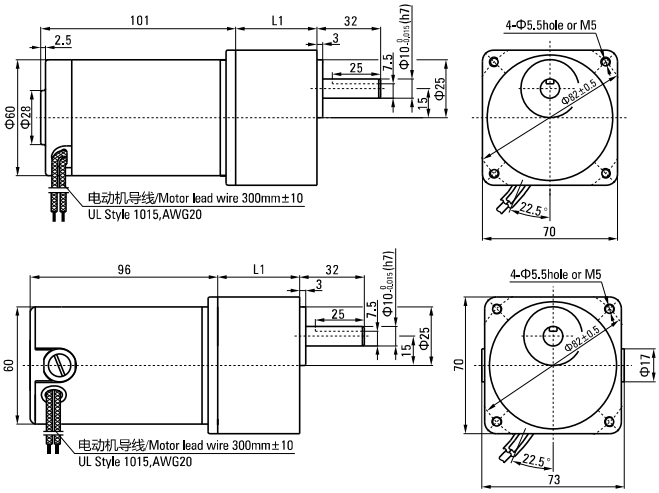
→215页→P215

## 外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

● **导线型** Lead Wiring Type

重量 Weight：电动机 Motor： 1.0kg　　减速器 Gearhead： 0.55kg




| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| Z3D25-12GN<br>Z3DW25-12GN<br>Z3D25-24GN<br>Z3DW25-24GN<br>Z3D25-90GN<br>Z3DW25-90GN | 3GN□K | 3~200 | 42 |

●减速器型号的□中为减速比的数值 Enter the gear ratio in the box (□) within the model name
●减速比3~18可以做成短箱体 (L1=32) Gear ratio 3~18, short case is possible (L1=32)

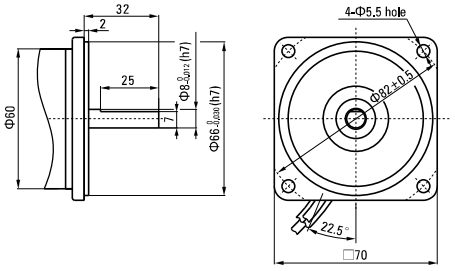
● **键●键槽（减速器附件）**

Key●Keyway (The Key Is Included With The Gearhead)



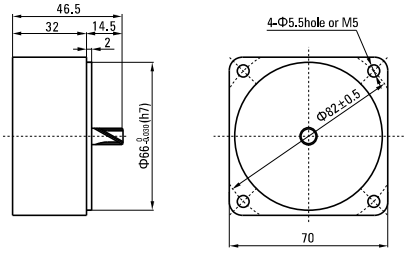

● **圆轴型的转轴部分** Shaft Section Of Round Shaft Type

除重量及轴部外电动机外形与齿轮轴型相同。
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.




● **中间减速器** Decimal Gearhead

可安装在GN齿轮轴型上Can be connected to GN pinion shaft type
电动机外形与齿轮轴型相同
3GN10X
重量 Weight：0.31kg



# 直流电动机
# DC MOTORS

## ■25W □80mm



## ■电机性能参数 Motor Performance Parameters

| 型号 Model | 电压 Voltage | 功率 Power | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 电刷寿命 Brush Life | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电流Current | | |
| | V | W | r/min | A | r/min | mN.m | A | H | kg |
| Z4D25-12□ | 12 | 25 | 3200 | 1.4 Max. | 3100 | 77 | 3.6 | 2000 | 1.7 |
| Z4D25-24□ | 24 | 25 | 3000 | 0.7 Max. | 2850 | 84 | 1.7 | 2000 | 1.7 |
| Z4D25-90□ | 90 | 25 | 3200 | 0.2 Max. | 3000 | 80 | 0.5 | 2000 | 1.7 |

●电机电压、功率及转速可在配件尺寸等条件允许下根据客户要求定制。
Motor voltage, power and speed will be customized according to his requestment under the allowed circumstance of adoptable dimension.

## ■种类 Type

● **电动机** Motor

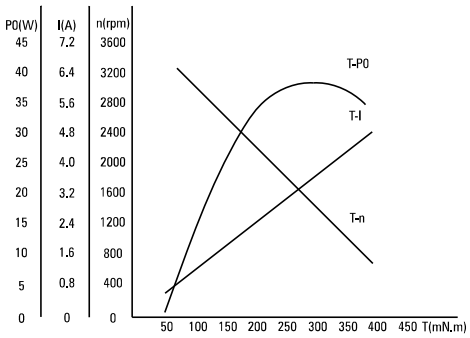
| 机型 Type | 型号Model | |
|---|---|---|
| | 齿轮轴型 Pinion Shaft | 圆轴型 Round Shaft |
| 导线型 Lead Wire Type | Z4D25-12GN | Z4D25-12A |
| | Z4D25-24GN | Z4D25-24A |
| | Z4D25-90GN | Z4D25-90A |

● **平行轴减速器（另售）** Parallel Shaft Gearhead (Sold Separately)

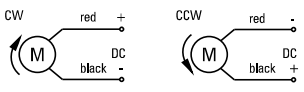
| 减速器种类 Gearhead Type | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| 长寿命●低噪音 Long Life ● Low Noise | 4GN□K | 3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200 |
| | 4GN10XK（中间减速器 Decimal Gearhead） | |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

● **电机特性曲线** Characteristic Curve Of Motor




● **电机接线图** Wiring Diagram Of Motor




●标准引出线长度: 300mm±10, 型号: UL1015, 规格: AWG20; 电机引出线长度、型号在配件尺寸等条件允许的情况下可根据客户要求定制。
Stanclard length of lead wire: 300mm±10, model: Ul1015, type: AWG20; lead wire length, model will be customerised by dient requestmant under allowed circumstamce of adoptable dimension.

## 装有减速器时的容许转矩 Gear Motor-Torque Table

- 减速器另售·中间减速器另售。
  Gearheads are sold separately. Decimal gearheads are not available.
- 减速品型号的□中为减速比的数值。
  Enter the gear ratio in the box (□) within the model name.
- ▭色表示与电动机同一方向运转，其他则为相反方向。
  The colored background ▭ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- 转速是以电动机的额定转速为基准除以减速比而算出来的数值。实际转速将随负载大小变化而比所示数值减少2%~20%左右。
  The speed is calculated by dividing the motor's synchronous speed by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- 希望以大于下表的减速比进行进一步减速时，可在电动机与减速机之间安装减速比为10的中间减速机。
  这时的容许转矩为8N·m。
  To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 8N·m.

## 容许力矩单位 Allowance Torque Unit：上段 Upside（N.m）/下段 Belowside（kgf.cm）

| 型号 Type | 减速比 Gear Ratio | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z4D25-24GN | 转 速 Speed r/min | 950 | 792 | 570 | 475 | 380 | 317 | 285 | 228 | 190 | 158 | 143 | 114 | 95 | 79 | 71 | 57 | 48 | 38 | 32 | 29 | 24 | 19 | 16 | 14 |
| | 4GN□K | 0.20 | 0.24 | 0.34 | 0.41 | 0.51 | 0.61 | 0.68 | 0.85 | 1.02 | 1.22 | 1.36 | 1.53 | 1.83 | 2.20 | 2.44 | 3.05 | 3.30 | 4.12 | 4.95 | 5.50 | 6.60 | 8.00 | 8.00 | 8.00 |
| | | 1.99 | 2.39 | 3.32 | 3.99 | 4.99 | 5.98 | 6.65 | 8.31 | 10.0 | 12.0 | 13.3 | 15.0 | 18.0 | 21.5 | 23.9 | 29.9 | 32.3 | 40.4 | 48.5 | 53.9 | 64.6 | 80.0 | 80.0 | 80.0 |

## 容许悬挂负载·容许轴向负载 To Allow The Hoisting Of The Load Allow Axial Load

电动机（圆轴型）→215页　　Motor (Round shaft) →P215
减速机→215页　　Gearhead→P215

## 减速机的容许负载惯性惯量 J Permissible Load Inertia J For Gearhead

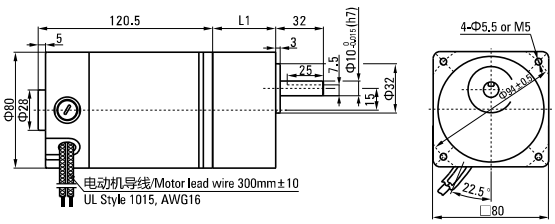
→215页→P215

## 外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

● **导线型** Lead Wiring Type

重量 Weight：电动机 Motor： 1.7kg　　减速器 Gearhead： 0.80kg




| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| Z4D25-12GN<br>Z4D25-24GN<br>Z4D25-90GN | 4GN□K | 3~200 | 42.5 |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name
●减速比3~18可以做成短箱体 (L1=32)
Gear ratio 3~18, short case is possible (L1=32)

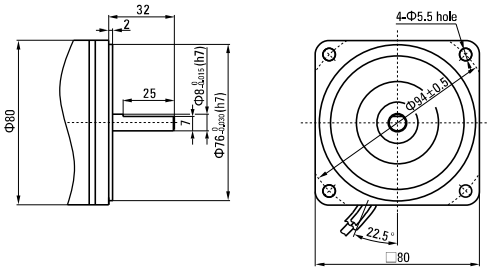
● **键●键槽（减速器附件）**

Key●Keyway (The Key Is Included With The Gearhead)



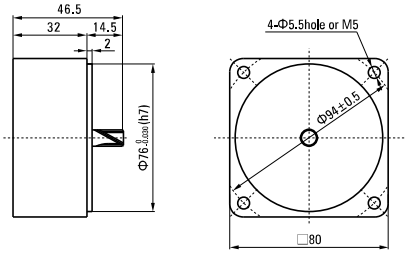

● **圆轴型的转轴部分** Shaft Section of Round Shaft Type

除重量及轴部外电动机外形与齿轮轴型相同。
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.




● **中间减速器** Decimal gearhead

可安装在GN齿轮轴型上Can be connected to GN pinion shaft type
电动机外形与齿轮轴型相同
4GN10X
重量 Weight：0.41kg



# 直流电动机
# DC MOTORS

## 40W □80mm



## 电机性能参数 Motor Performance Parameters

| 型号 Model | 电压 Voltage | 功率 Power | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 电刷寿命 Brush Life | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电流Current | | |
| | V | W | r/min | A | r/min | mN.m | A | H | kg |
| Z4D40-12□ | 12 | 40 | 3100 | 2.0 Max. | 2800 | 136 | 5.2 | 2000 | 1.8 |
| Z4D40-24□ | 24 | 40 | 3100 | 0.8 Max. | 3000 | 127 | 2.1 | 2000 | 1.8 |
| Z4D40-90□ | 90 | 40 | 3200 | 0.3 Max. | 3000 | 127 | 0.7 | 2000 | 1.8 |

●电机电压、功率及转速可在配件尺寸等条件允许下根据客户要求定制。
Motor voltage, power and speed will be customized according to his requestment under the allowed circumstance of adoptable dimension.

## 种类 Type

● **电动机** Motor

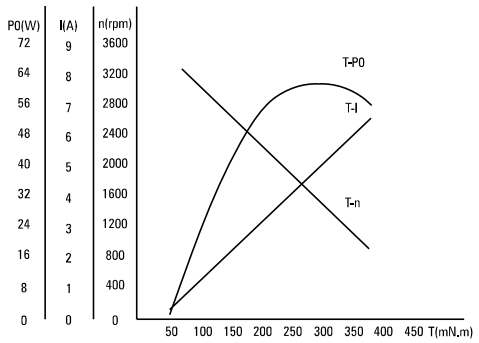
| 机型 Type | 型号Model | |
|---|---|---|
| | 齿轮轴型 Pinion Shaft | 圆轴型 Round Shaft |
| 导线型 Lead Wire Type | Z4D40-12GN | Z4D40-12A |
| | Z4D40-24GN | Z4D40-24A |
| | Z4D40-90GN | Z4D40-90A |

● **平行轴减速器（另售）** Parallel Shaft Gearhead (Sold Separately)

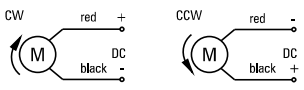
| 减速器种类 Gearhead Type | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| 长寿命●低噪音 Long Life ● Low Noise | 4GN□K | 3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200 |
| | 4GN10XK（中间减速器 Decimal Gearhead） | |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

● **电机特性曲线** Characteristic Curve Of Motor




● **电机接线图** Wiring Diagram Of Motor




●标准引出线长度: 300mm±10, 型号: UL1015, 规格: AWG16; 电机引出线长度、型号在配件尺寸等条件允许的情况下可根据客户要求定制。
Stanclard length of lead wire: 300mm±10, model: Ul1015, type: AWG16; lead wire length, model will be customerised by dient requestmant under allowed circumstamce of adoptable dimension.

## 装有减速器时的容许转矩 Gear Motor-Torque Table

- 减速器另售·中间减速器另售。
  Gearheads are sold separately. Decimal gearheads are not available.
- 减速品型号的□中为减速比的数值。
  Enter the gear ratio in the box (□) within the model name.
- ▭色表示与电动机同一方向运转，其他则为相反方向。
  The colored background ▭ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- 转速是以电动机的额定转速为基准除以减速比而算出来的数值。实际转速将随负载大小变化而比所示数值减少2%~20%左右。
  The speed is calculated by dividing the motor's synchronous speed by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- 希望以大于下表的减速比进行进一步减速时，可在电动机与减速机之间安装减速比为10的中间减速机。
  这时的容许转矩为8N·m。
  To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 8N·m.

## 容许力矩单位 Allowance Torque Unit：上段 Upside（N.m）/下段 Belowside（kgf.cm）

| 型号 Type | 减速比 Gear Ratio | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z4D40-24GN | 转速 Speed r/min | 1000 | 833 | 600 | 500 | 400 | 333 | 300 | 240 | 200 | 167 | 150 | 120 | 100 | 83 | 75 | 60 | 50 | 40 | 33 | 30 | 25 | 20 | 17 | 15 |
| | 4GN□K | 0.31 | 0.37 | 0.52 | 0.62 | 0.77 | 0.93 | 1.03 | 1.29 | 1.55 | 1.86 | 2.06 | 2.32 | 2.78 | 3.34 | 3.71 | 4.64 | 5.01 | 6.27 | 7.52 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 |
| | | 3.03 | 3.64 | 5.05 | 6.06 | 7.58 | 9.10 | 10.1 | 12.6 | 15.2 | 18.2 | 20.2 | 22.7 | 27.3 | 32.7 | 36.4 | 45.5 | 49.1 | 61.4 | 73.7 | 80.0 | 80.0 | 80.0 | 80.0 | 80.0 |

## 容许悬挂负载·容许轴向负载 To Allow The Hoisting Of The Load Allow Axial Load

电动机（圆轴型）→215页　　Motor (Round shaft) →P215
减速机→215页　　Gearhead→P215

## 减速机的容许负载惯性惯量 J Permissible Load Inertia J For Gearhead

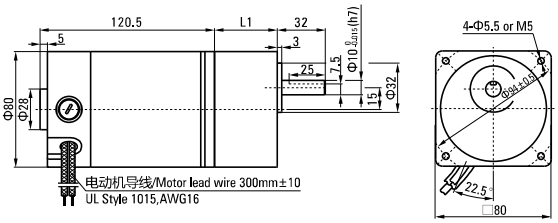
→215页→P215

## 外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

● **导线型** Lead Wiring Type

重量 Weight：电动机 Motor： 1.8kg　　减速器 Gearhead： 0.80kg




| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| Z4D40-12GN<br>Z4D40-24GN<br>Z4D40-90GN | 4GN□K | 3~200 | 42.5 |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name
●减速比3~18可以做成短箱体 (L1=32)
Gear ratio 3~18, short case is possible (L1=32)

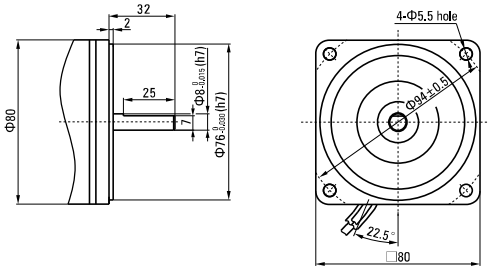
● **键●键槽（减速器附件）**

Key●Keyway (The Key Is Included With The Gearhead)



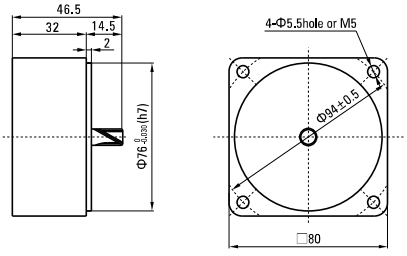

● **圆轴型的转轴部分** Shaft Section of Round Shaft Type

除重量及轴部外电动机外形与齿轮轴型相同。
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.




● **中间减速器** Decimal Gearhead

可安装在GN齿轮轴型上Can be connected to GN pinion shaft type
电动机外形与齿轮轴型相同
4GN10X
重量 Weight：0.41kg



# 直流电动机
# DC MOTORS

## 40W □90mm



## 电机性能参数 Motor Performance Parameters

| 型号 Model | 电压 Voltage | 功率 Power | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 电刷寿命 Brush Life | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电流Current | | |
| | V | W | r/min | A | r/min | mN.m | A | H | kg |
| Z5D40-12□ | 12 | 40 | 3100 | 2.0 Max. | 2800 | 136 | 5.2 | 2000 | 1.9 |
| Z5D40-24□ | 24 | 40 | 3000 | 1.0 Max. | 2800 | 136 | 2.6 | 2000 | 1.9 |
| Z5D40-90□ | 90 | 40 | 3200 | 0.3 Max. | 3000 | 127 | 0.7 | 2000 | 1.9 |

●电机电压、功率及转速可在配件尺寸等条件允许下根据客户要求定制。
Motor voltage, power and speed will be customized according to his requestment under the allowed circumstance of adoptable dimension.

## 种类 Type

● **电动机** Motor

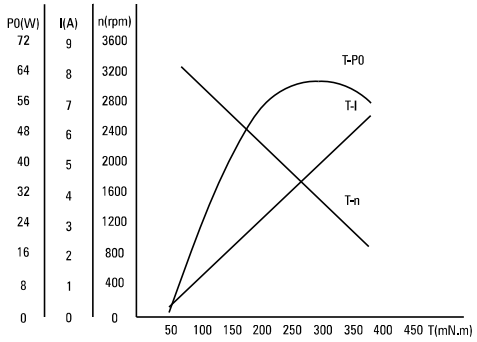
| 机型 Type | 型号Model | | |
|---|---|---|---|
| | 齿轮轴型 Pinion Shaft | 圆轴型 Round Shaft | 圆轴型 Round Shaft |
| 导线型 Lead Wire Type | Z5D40-12GN | Z5D40-12A | Z5D40-12A1 |
| | Z5D40-24GN | Z5D40-24A | Z5D40-24A1 |
| | Z5D40-90GN | Z5D40-90A | Z5D40-90A1 |

● **平行轴减速器（另售）** Parallel Shaft Gearhead (Sold Separately)

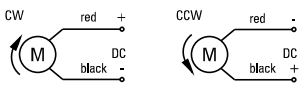
| 减速器种类 Gearhead Type | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| 长寿命●低噪音 Long Life ● Low Noise | 5GN□K | 3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200 |
| | 5GN10XK（中间减速器 Decimal Gearhead） | |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

● **电机特性曲线** Characteristic Curve Of Motor




● **电机接线图** Wiring Diagram Of Motor




●标准引出线长度: 300mm±10, 型号: UL1015, 规格: AWG16; 电机引出线长度、型号在配件尺寸等条件允许的情况下可根据客户要求定制。
Stanclard length of lead wire: 300mm±10, model: Ul1015, type: AWG16; lead wire length, model will be customerised by dient requestmant under allowed circumstamce of adoptable dimension.

## 装有减速器时的容许转矩 Gear Motor-Torque Table

- 减速器另售·中间减速器另售。
  Gearheads are sold separately. Decimal gearheads are not available.
- 减速品型号的□中为减速比的数值。
  Enter the gear ratio in the box (□) within the model name.
- ▭色表示与电动机同一方向运转，其他则为相反方向。
  The colored background ▭ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- 转速是以电动机的额定转速为基准除以减速比而算出来的数值。实际转速将随负载大小变化而比所示数值减少2%~20%左右。
  The speed is calculated by dividing the motor's synchronous speed by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- 希望以大于下表的减速比进行进一步减速时，可在电动机与减速机之间安装减速比为10的中间减速机。
  这时的容许转矩为10N·m。
  To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 10N·m.

## 容许力矩单位 Allowance Torque Unit：上段 Upside（N.m）/下段 Belowside（kgf.cm）

| 型号 Type | 减速比 Gear Ratio | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z5D40-24GN | 转速 Speed r/min | 933 | 778 | 560 | 467 | 373 | 311 | 280 | 224 | 187 | 156 | 140 | 112 | 93 | 78 | 70 | 56 | 47 | 37 | 31 | 28 | 23 | 19 | 16 | 14 |
| | 5GN□K | 0.33 | 0.40 | 0.55 | 0.66 | 0.83 | 0.99 | 1.11 | 1.38 | 1.66 | 1.79 | 1.99 | 2.49 | 2.98 | 3.58 | 3.58 | 4.48 | 5.37 | 6.71 | 8.06 | 8.95 | 10.0 | 10.0 | 10.0 | 10.0 |
| | | 3.25 | 3.90 | 5.41 | 6.50 | 8.12 | 9.75 | 10.8 | 13.5 | 16.2 | 17.5 | 19.5 | 24.4 | 29.2 | 35.1 | 35.1 | 43.9 | 52.6 | 65.8 | 78.9 | 87.7 | 100 | 100 | 100 | 100 |

## 容许悬挂负载·容许轴向负载 To Allow The Hoisting Of The Load Allow Axial Load

电动机（圆轴型）→215页　　Motor (Round shaft) →P215
减速机→215页　　Gearhead→P215

## 减速机的容许负载惯性惯量 J Permissible Load Inertia J For Gearhead

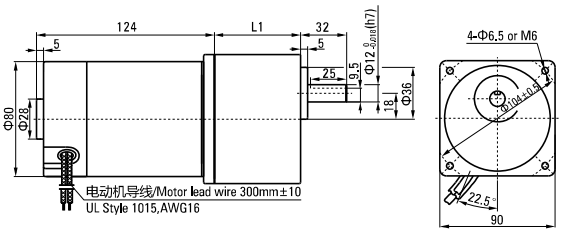
→215页→P215

## 外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

● **导线型** Lead Wiring Type

重量 Weight：电动机 Motor： 1.9kg　　减速器 Gearhead： 1.35kg




| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| Z5D40-12GN<br>Z5D40-24GN<br>Z5D40-90GN | 5GN□K | 3~200 | 42.5 |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name
●减速比3~18可以做成短箱体 (L1=32)
Gear ratio 3~18, short case is possible (L1=32)

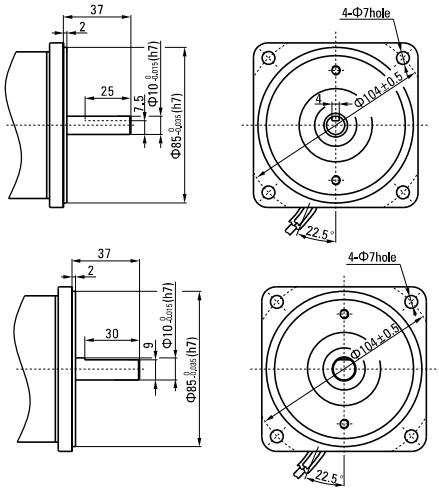
● **键●键槽（减速器附件）**

Key●Keyway (The Key Is Included With The Gearhead)



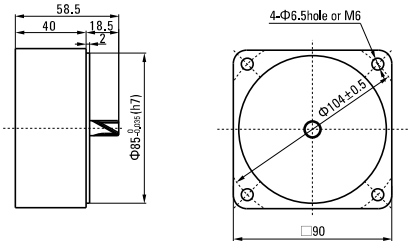

● **圆轴型的转轴部分** Shaft Section Of Round Shaft Type

除重量及轴部外电动机外形与齿轮轴型相同。
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.




● **中间减速器** Decimal Gearhead

可安装在GN齿轮轴型上Can be connected to GN pinion shaft type
电动机外形与齿轮轴型相同
5GN10X
重量 Weight：0.41kg



# 直流电动机
# DC MOTORS

## 60W □90mm



## 电机性能参数 Motor Performance Parameters

| 型号 Model | 电压 Voltage | 功率 Power | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 电刷寿命 Brush Life | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电流Current | | |
| | V | W | r/min | A | r/min | mN.m | A | H | kg |
| Z5D60-12□ | 12 | 60 | 3000 | 2.0 Max. | 2600 | 220 | 9.0 | 2000 | 2.2 |
| Z5D60-24□ | 24 | 60 | 3100 | 1.0 Max. | 2800 | 205 | 3.8 | 2000 | 2.2 |
| Z5D60-90□ | 90 | 60 | 3100 | 0.3 Max. | 2900 | 198 | 1.0 | 2000 | 2.2 |

●电机电压、功率及转速可在配件尺寸等条件允许下根据客户要求定制。
Motor voltage, power and speed will be customized according to his requestment under the allowed circumstance of adoptable dimension.

## 种类 Type

### 电动机 Motor

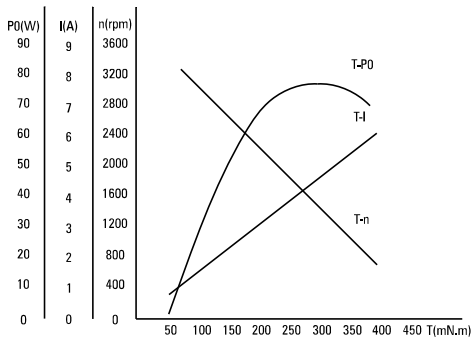
| 机型 Type | 型号Model | | |
|---|---|---|---|
| | 齿轮轴型 Pinion Shaft | 圆轴型 Round Shaft | 圆轴型 Round Shaft |
| 导线型 Lead Wire Type | Z5D60-12GU | Z5D60-12A | Z5D60-12A1 |
| | Z5D60-24GU | Z5D60-24A | Z5D60-24A1 |
| | Z5D60-90GU | Z5D60-90A | Z5D60-90A1 |

### 平行轴减速器（另售）Parallel Shaft Gearhead (Sold Separately)

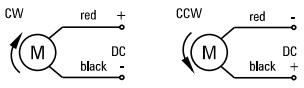
| 减速器种类 Gearhead Type | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| 长寿命●低噪音 Long Life ● Low Noise | 5GU□KB | 3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200 |
| | 5GU10XK（中间减速器 Decimal Gearhead） | |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

### 电机特性曲线 Characteristic Curve Of Motor




### 电机接线图 Wiring Diagram Of Motor




●标准引出线长度: 300mm±10, 型号: UL1015, 规格: AWG16; 电机引出线长度、型号在配件尺寸等条件允许的情况下可根据客户要求定制。
Stanclard length of lead wire: 300mm±10, model: Ul1015, type: AWG16; lead wire length, model will be customerised by dient requestmant under allowed circumstamce of adoptable dimension.

## 装有减速器时的容许转矩 Gear Motor-Torque Table

- 减速器另售·中间减速器另售。
  Gearheads are sold separately. Decimal gearheads are not available.
- 减速品型号的□中为减速比的数值。
  Enter the gear ratio in the box (□) within the model name.
- ▭色表示与电动机同一方向运转，其他则为相反方向。
  The colored background ▭ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- 转速是以电动机的额定转速为基准除以减速比而算出来的数值。实际转速将随负载大小变化而比所示数值减少2%~20%左右。
  The speed is calculated by dividing the motor's synchronous speed by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- 希望以大于下表的减速比进行进一步减速时，可在电动机与减速机之间安装减速比为10的中间减速机。
  这时的容许转矩为20N·m。
  To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 20N·m.

## 容许力矩单位 Allowance Torque Unit：上段 Upside（N.m）/下段 Belowside（kgf.cm）

| 型号 Type | 减速比 Gear Ratio | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z5D60-24GU | 转速 Speed r/min | 933 | 778 | 560 | 467 | 373 | 311 | 280 | 224 | 187 | 156 | 140 | 112 | 93 | 78 | 70 | 56 | 47 | 37 | 31 | 28 | 23 | 19 | 16 | 14 |
| | 5GU□KB | 0.50 | 0.60 | 0.83 | 0.99 | 1.24 | 1.49 | 1.49 | 1.86 | 2.24 | 2.69 | 2.69 | 3.36 | 4.03 | 4.83 | 5.37 | 6.71 | 8.06 | 10.1 | 10.9 | 12.1 | 14.5 | 18.1 | 20.0 | 20.0 |
| | | 4.87 | 5.85 | 8.12 | 9.75 | 12.2 | 14.6 | 14.6 | 18.3 | 21.9 | 26.3 | 26.3 | 32.9 | 39.5 | 47.4 | 52.6 | 65.8 | 78.9 | 98.7 | 107 | 118 | 142 | 178 | 200 | 200 |

## 容许悬挂负载·容许轴向负载 To Allow The Hoisting Of The Load Allow Axial Load

电动机（圆轴型）→215页　　Motor (Round shaft) →P215
减速机→215页　　Gearhead→P215

## 减速机的容许负载惯性惯量 J Permissible Load Inertia J For Gearhead

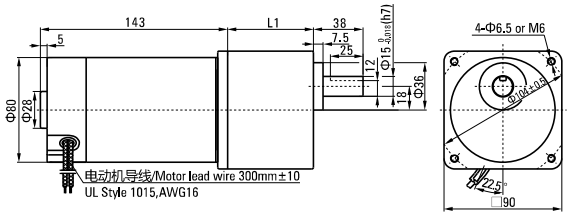
→215页→P215

## 外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

● **导线型** Lead Wiring Type

重量 Weight：电动机 Motor： 2.2kg　　减速器 Gearhead： 1.5kg

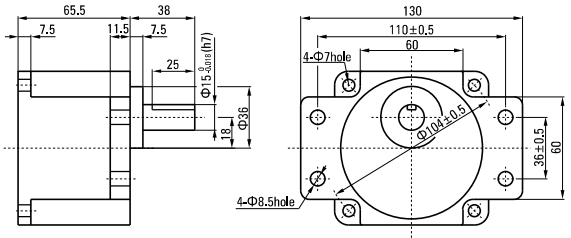



| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| Z5D60-12GU<br>Z5D60-24GU<br>Z5D60-90GU | 5GU□KB | 3~200 | 65.5 |

●减速器型号的□中为减速比的数值Enter the gear ratio in the box (□) within the model name

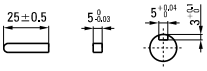
● **凸缘安装型减速器** Flange Mounting Reducer

可安装在GU齿轮轴型上Can be mounted on GU type gear shaft 5GU□K
重量 Weight:1.5kg



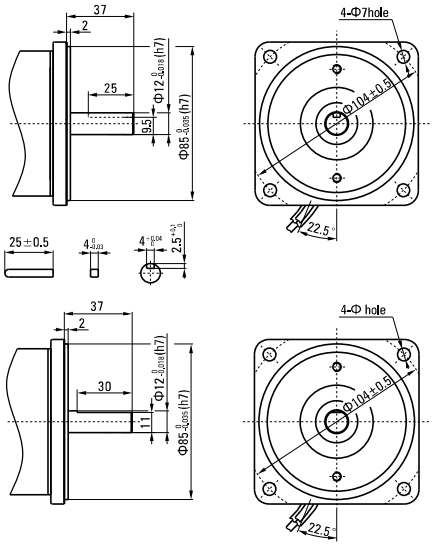

● **键●键槽（减速器附件）**

Key●Keyway (The Key Is Included With The Gearhead)



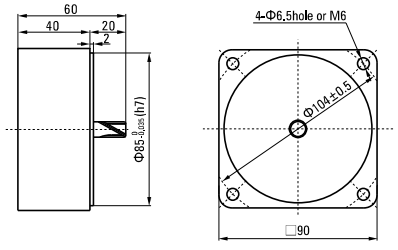

● **圆轴型的转轴部分** Shaft Section Of Round Shaft Type

除重量及轴部外电动机外形与齿轮轴型相同。
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.




● **中间减速器** Decimal Gearhead

可安装在GU齿轮轴型上Can be connected to GU pinion shaft type
电动机外形与齿轮轴型相同
5GU10X
重量 Weight：0.651kg



# 直流电动机
# DC MOTORS

## 90W □90mm



## 电机性能参数 Motor Performance Parameters

| 型号 Model | 电压 Voltage | 功率 Power | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 电刷寿命 Brush Life | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电流Current | | |
| | V | W | r/min | A | r/min | mN.m | A | H | kg |
| Z5D90-12□ | 12 | 90 | 3100 | 2.0 Max. | 2600 | 330 | 12.0 | 2000 | 2.2 |
| Z5D90-24□ | 24 | 90 | 3300 | 1.0 Max. | 2800 | 307 | 5.00 | 2000 | 2.2 |
| Z5D90-90□ | 90 | 90 | 3000 | 0.3 Max. | 2900 | 307 | 1.40 | 2000 | 2.2 |

●电机电压、功率及转速可在配件尺寸等条件允许下根据客户要求定制。
Motor voltage, power and speed will be customized according to his requestment under the allowed circumstance of adoptable dimension.

## 种类 Type

### 电动机 Motor

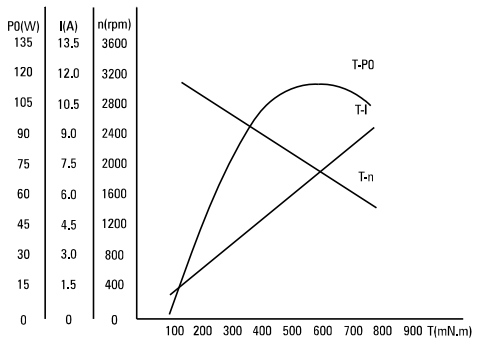
| 机型 Type | 型号Model | | |
|---|---|---|---|
| | 齿轮轴型 Pinion Shaft | 圆轴型 Round Shaft | 圆轴型 Round Shaft |
| 导线型 Lead Wire Type | Z5D90-12GN | Z5D90-12A | Z5D90-12A1 |
| | Z5D90-24GN | Z5D90-24A | Z5D90-24A1 |
| | Z5D90-90GN | Z5D90-90A | Z5D90-90A1 |

### 平行轴减速器（另售）Parallel Shaft Gearhead (Sold Separately)

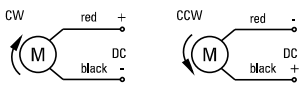
| 减速器种类 Gearhead Type | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| 长寿命●低噪音 Long Life ● Low Noise | 5GU□KB | 3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200 |
| | 5GU10XK（中间减速器 Decimal Gearhead） | |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

### 电机特性曲线 Characteristic Curve Of Motor




### 电机接线图 Wiring Diagram Of Motor




●标准引出线长度: 300mm±10,型号: UL1015, 规格: AWG16; 电机引出线长度、型号在配件尺寸等条件允许的情况下可根据客户要求定制。
Standard length of lead wire: 300mm±10, model: UI1015, type: AWG16; lead wire length, model will be customerised by dient requestmant under allowed circumstamce of adoptable dimension.

## 装有减速器时的容许转矩 Gear Motor-Torque Table

- 减速器另售·中间减速器另售。
  Gearheads are sold separately. Decimal gearheads are not available.
- 减速品型号的□中为减速比的数值。
  Enter the gear ratio in the box (□) within the model name.
- ▭色表示与电动机同一方向运转，其他则为相反方向。
  The colored background ▭ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- 转速是以电动机的额定转速为基准除以减速比而算出来的数值。实际转速将随负载大小变化而比所示数值减少2%~20%左右。
  The speed is calculated by dividing the motor's synchronous speed by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- 希望以大于下表的减速比进行进一步减速时，可在电动机与减速机之间安装减速比为10的中间减速机。
  这时的容许转矩为20N·m。
  To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 20N·m.

## 容许力矩单位 Allowance Torque Unit：上段 Upside（N.m）/下段 Belowside（kgf.cm）

| 型号 Type | 减速比 Gear Ratio | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z5D90-24GU | 转速 Speed r/min | 933 | 778 | 560 | 467 | 373 | 311 | 280 | 224 | 187 | 156 | 140 | 112 | 93 | 78 | 70 | 56 | 47 | 37 | 31 | 28 | 23 | 19 | 16 | 14 |
| | 5GU□KB | 0.75 | 0.90 | 1.24 | 1.49 | 1.86 | 2.24 | 2.24 | 2.80 | 3.36 | 4.03 | 4.03 | 5.03 | 6.04 | 7.25 | 8.06 | 10.1 | 12.4 | 15.1 | 16.3 | 18.1 | 20.0 | 20.0 | 20.0 | 20.0 |
| | | 7.31 | 8.77 | 12.2 | 14.6 | 18.3 | 21.9 | 21.9 | 27.4 | 32.9 | 39.5 | 39.5 | 49.3 | 59.2 | 71.1 | 78.9 | 98.7 | 118 | 148 | 160 | 178 | 200 | 200 | 200 | 200 |

## 容许悬挂负载·容许轴向负载 To Allow The Hoisting Of The Load Allow Axial Load

电动机（圆轴型）→215页　　Motor (Round shaft) →P215
减速机→215页　　Gearhead→P215

## 减速机的容许负载惯性惯量 J Permissible Load Inertia J For Gearhead

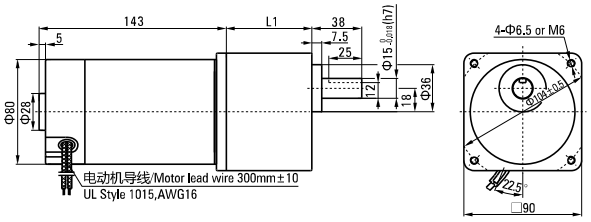
→215页→P215

## 外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝Mounting screws are included with gearhead.

● **导线型** Lead Wiring Type

重量 Weight：电动机 Motor： 2.2kg　　减速器 Gearhead： 1.5kg



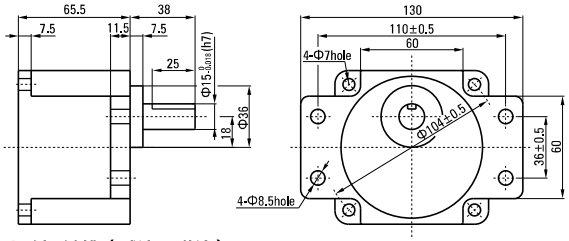

| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| Z5D90-12GU<br>Z5D90-24GU<br>Z5D90-90GU | 5GU□KB | 3~200 | 65.5 |

●减速器型号的□中为减速比的数值 Enter the gear ratio in the box (□) within the model name

● **凸缘安装型减速器** Flange Mounting Reducer

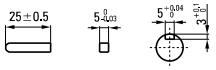
可安装在GU齿轮轴型上Can be mounted on GU type gear shaft 5GU□K

重量 Weight:1.5kg




● **键●键槽（减速器附件）**

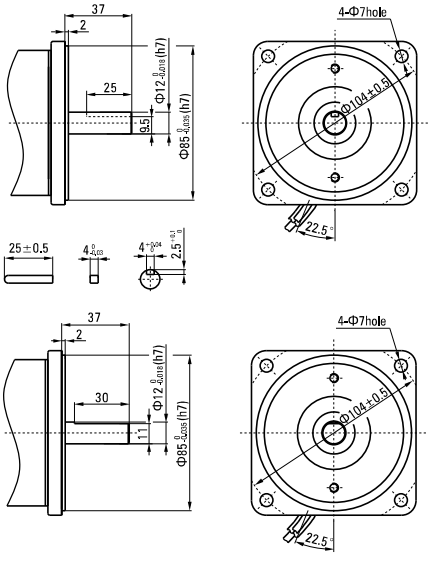
Key●Keyway (The Key Is Included With The Gearhead)




● **圆轴型的转轴部分** Shaft Section Of Round Shaft Type

除重量及轴部外电动机外形与齿轮轴型相同。

Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



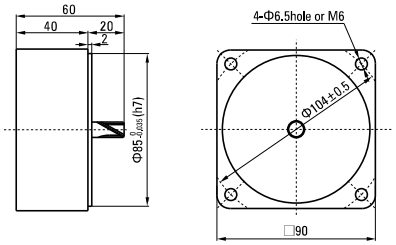

● **中间减速器** Decimal Gearhead

可安装在GU齿轮轴型上Can be connected to GU pinion shaft type

电动机外形与齿轮轴型相同

5GU10X

重量 Weight：0.651kg



# 直流电动机
# DC MOTORS

## 120W □90mm



## 电机性能参数 Motor Performance Parameters

| 型号 Model | 电压 Voltage | 功率 Power | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 电刷寿命 Brush Life | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电流Current | | |
| | V | W | r/min | A | r/min | mN.m | A | H | kg |
| Z5D120-12□ | 12 | 120 | 3100 | 2.0 Max. | 2500 | 458 | 15.0 | 2000 | 2.2 |
| Z5D120-24□ | 24 | 120 | 3200 | 1.0 Max. | 2600 | 441 | 7.00 | 2000 | 2.2 |
| Z5D120-90□ | 90 | 120 | 3000 | 0.3 Max. | 2600 | 441 | 2.00 | 2000 | 2.2 |

●电机电压、功率及转速可在配件尺寸等条件允许下根据客户要求定制。
Motor voltage, power and speed will be customized according to his requestment under the allowed circumstance of adoptable dimension.

## 种类 Type

### 电动机 Motor

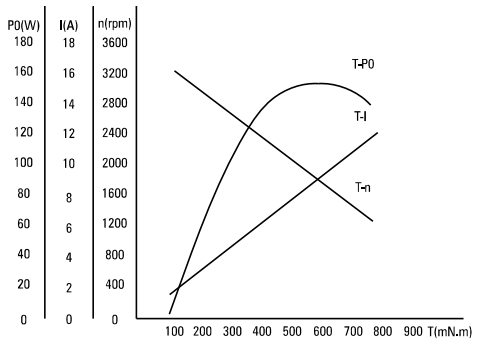
| 机型 Type | 型号Model | | |
|---|---|---|---|
| | 齿轮轴型 Pinion Shaft | 圆轴型 Round Shaft | 圆轴型 Round Shaft |
| 导线型 Lead Wire Type | Z5D120-12GN | Z5D120-12A | Z5D120-12A1 |
| | Z5D120-24GN | Z5D120-24A | Z5D120-24A1 |
| | Z5D120-90GN | Z5D120-90A | Z5D120-90A1 |

### 平行轴减速器（另售）Parallel Shaft Gearhead (Sold Separately)

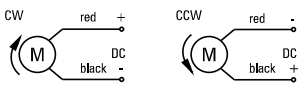
| 减速器种类 Gearhead Type | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| 长寿命●低噪音 Long Life ● Low Noise | 5GU□KB | 3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200 |
| | 5GU10XK（中间减速器 Decimal Gearhead） | |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

### 电机特性曲线 Characteristic Curve Of Motor




### 电机接线图 Wiring Diagram Of Motor




●标准引出线长度: 300mm±10,型号: UL1015, 规格: AWG16; 电机引出线长度、型号在配件尺寸等条件允许的情况下可根据客户要求定制。
Stanclard length of lead wire: 300mm±10, model: Ul1015, type: AWG16; lead wire length, model will be customerised by dient requestmant under allowed circumstamce of adoptable dimension.

## 装有减速器时的容许转矩 Gear Motor-Torque Table

- 减速器另售·中间减速器另售。
  Gearheads are sold separately. Decimal gearheads are not available.
- 减速品型号的□中为减速比的数值。
  Enter the gear ratio in the box (□) within the model name.
- ▭色表示与电动机同一方向运转，其他则为相反方向。
  The colored background ▭ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- 转速是以电动机的额定转速为基准除以减速比而算出来的数值。实际转速将随负载大小变化而比所示数值减少2%~20%左右。
  The speed is calculated by dividing the motor's synchronous speed by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- 希望以大于下表的减速比进行进一步减速时，可在电动机与减速机之间安装减速比为10的中间减速机。
  这时的容许转矩为20N·m。
  To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 20N·m.

## 容许力矩单位 Allowance Torque Unit：上段 Upside（N.m）/下段 Belowside（kgf.cm）

| 型号 Type | 减速比 Gear Ratio | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z5D120-24GU | 转速 Speed r/min | 867 | 722 | 520 | 433 | 347 | 289 | 260 | 208 | 173 | 144 | 130 | 104 | 87 | 72 | 65 | 52 | 43 | 35 | 29 | 26 | 22 | 17 | 14 | 13 |
| | 5GU□KB | 1.07 | 1.29 | 1.79 | 2.14 | 2.68 | 3.21 | 3.21 | 4.02 | 4.82 | 5.78 | 5.78 | 7.23 | 8.68 | 10.4 | 11.6 | 14.5 | 17.4 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| | | 10.5 | 12.6 | 17.5 | 21.0 | 26.2 | 31.5 | 31.5 | 39.4 | 47.2 | 56.7 | 56.7 | 70.9 | 85.0 | 102 | 113 | 142 | 170 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |

## 容许悬挂负载·容许轴向负载 To Allow The Hoisting Of The Load Allow Axial Load

电动机（圆轴型）→215页　　Motor (Round shaft) →P215
减速机→215页　　Gearhead→P215

## 减速机的容许负载惯性惯量 J Permissible Load Inertia J For Gearhead

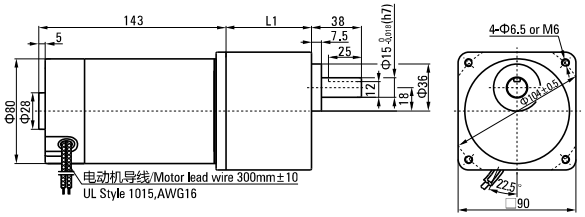
→215页→P215

## 外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

● **导线型** Lead Wiring Type

重量 Weight：电动机 Motor： 2.2kg　　减速器 Gearhead： 1.5kg



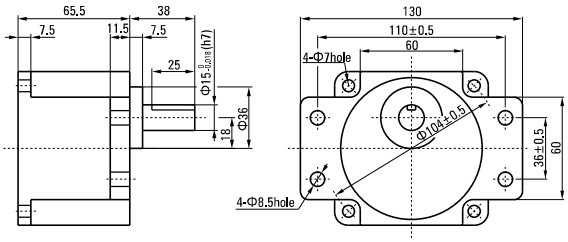

| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| Z5D120-12GU<br>Z5D120-24GU<br>Z5D120-90GU | 5GU□KB | 3~200 | 65.5 |

●减速器型号的□中为减速比的数值 Enter the gear ratio in the box (□) within the model name

● **凸缘安装型减速器** Flange Mounting Reducer

可安装在GU齿轮轴型上Can be mounted on GU type gear shaft 5GU□K

重量 Weight:1.5kg




● **键●键槽（减速器附件）**

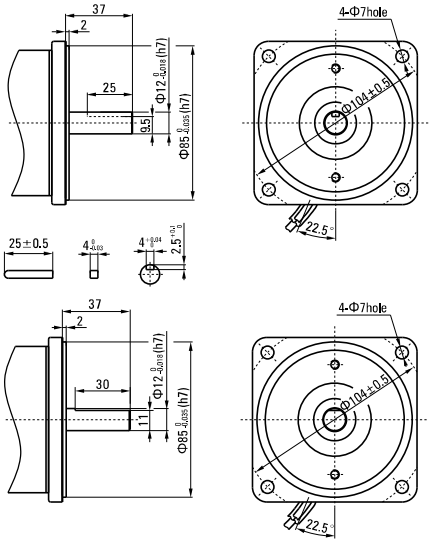
Key●Keyway (The Key Is Included With The Gearhead)




● **圆轴型的转轴部分** Shaft Section Of Round Shaft Type

除重量及轴部外电动机外形与齿轮轴型相同。

Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



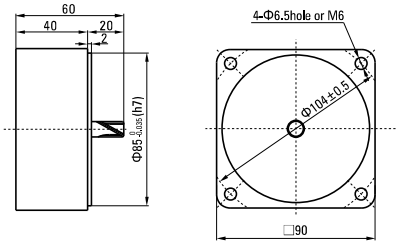

● **中间减速器** Decimal Gearhead

可安装在GU齿轮轴型上Can be connected to GU pinion shaft type

电动机外形与齿轮轴型相同

5GU10X

重量 Weight：0.651kg



# 直流电动机
# DC MOTORS

## ■250W □90mm



## ■电机性能参数 Motor Performance Parameters

| 型号 Model | 电压 Voltage | 功率 Power | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 电刷寿命 Brush Life | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电流Current | | |
| | V | W | r/min | A | r/min | mN.m | A | H | kg |
| Z55D250-24 □ | 24 | 250 | 3400 | 3.0 Max. | 3000 | 796 | 16.0 | 2000 | 3.2 |
| Z55D250-90 □ | 90 | 250 | 3300 | 1.2 Max. | 3000 | 796 | 4.20 | 2000 | 3.2 |
| Z55D250-220□ | 220 | 250 | 3300 | 0.9 Max. | 3000 | 796 | 2.20 | 2000 | 3.2 |

●电机电压、功率及转速可在配件尺寸等条件允许下根据客户要求定制。
Motor voltage, power and speed will be customized according to his requestment under the allowed circumstance of adoptable dimension.

## ■种类 Type

● **电动机** Motor

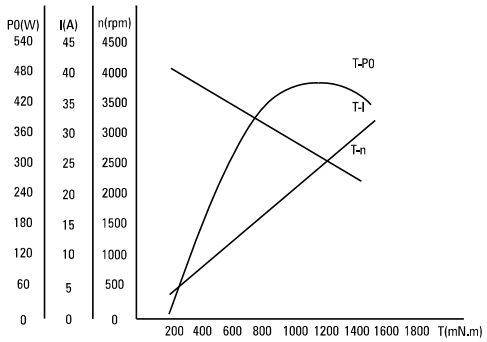
| 机型 Type | 型号Model | | |
|---|---|---|---|
| | 齿轮轴型 Pinion Shaft | 圆轴型 Round Shaft | 圆轴型 Round Shaft |
| 导线型 Lead Wire Type | Z55D250-24GN | Z55D250-24A | Z55D250-24A1 |
| | Z55D250-90GN | Z55D250-90A | Z55D250-90A1 |
| | Z55D250-220GN | Z55D250-220A | Z55D250-220A1 |

● **平行轴减速器（另售）** Parallel Shaft Gearhead (Sold Separately)

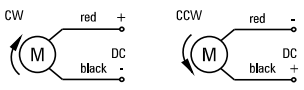
| 减速器种类 Gearhead Type | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| 长寿命●低噪音 Long Life ● Low Noise | 5GU□KB | 3、3.6、5、6、7.5、9、10、12.5、15、18、20、25、30、36、40、50、60、75、90、100、120、150、180、200 |
| | 5GU10XK（中间减速器 Decimal Gearhead） | |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

● **电机特性曲线** Characteristic Curve Of Motor




● **电机接线图** Wiring Diagram Of Motor




●标准引出线长度: 300mm±10,型号: UL1015, 规格: AWG14; 电机引出线长度、型号在配件尺寸等条件允许的情况下可根据客户要求定制。
Stanclard length of lead wire: 300mm±10, model: UI1015, type: AWG14; lead wire length, model will be customerised by dient requestmant under allowed circumstamce of adoptable dimension.

## 装有减速器时的容许转矩 Gear Motor-Torque Table

- 减速器另售·中间减速器另售。
  Gearheads are sold separately. Decimal gearheads are not available.
- 减速品型号的□中为减速比的数值。
  Enter the gear ratio in the box (□) within the model name.
- ▭色表示与电动机同一方向运转，其他则为相反方向。
  The colored background ▭ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- 转速是以电动机的额定转速为基准除以减速比而算出来的数值。实际转速将随负载大小变化而比所示数值减少2%~20%左右。
  The speed is calculated by dividing the motor's synchronous speed by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- 希望以大于下表的减速比进行进一步减速时，可在电动机与减速机之间安装减速比为10的中间减速机。
  这时的容许转矩为20N·m。
  To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 20N·m.

## 容许力矩单位 Allowance Torque Unit：上段 Upside（N.m）/下段 Belowside（kgf.cm）

| 型号 Type | 减速比 Gear Ratio | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z55D250-24GU | 转速 Speed r/min | 1000 | 833 | 600 | 500 | 400 | 333 | 300 | 240 | 200 | 167 | 150 | 120 | 100 | 83 | 75 | 60 | 50 | 40 | 33 | 30 | 25 | 20 | 17 | 15 |
| | 5GU□KB | 1.93 | 2.32 | 3.22 | 3.87 | 4.83 | 5.80 | 5.80 | 7.25 | 8.70 | 10.4 | 10.4 | 13.1 | 15.7 | 18.8 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| | | 19.0 | 22.7 | 31.6 | 37.9 | 47.4 | 56.9 | 56.9 | 71.1 | 85.3 | 102 | 102 | 128 | 154 | 184 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |

## 容许悬挂负载·容许轴向负载 To Allow The Hoisting Of The Load Allow Axial Load

电动机（圆轴型）→215页　　Motor (Round shaft) →P215
减速机→215页　　Gearhead→P215

## 减速机的容许负载惯性惯量 J Permissible Load Inertia J For Gearhead

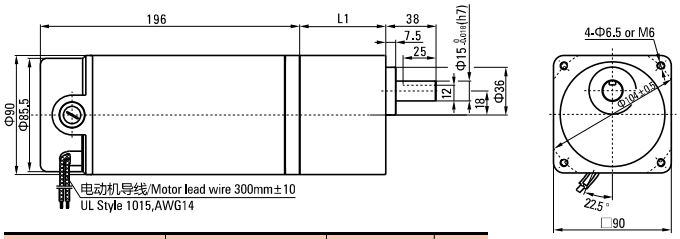
→215页→P215

## 外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

● **导线型** Lead Wiring Type

重量 Weight：电动机 Motor： 3.2kg　　减速器 Gearhead： 1.5kg



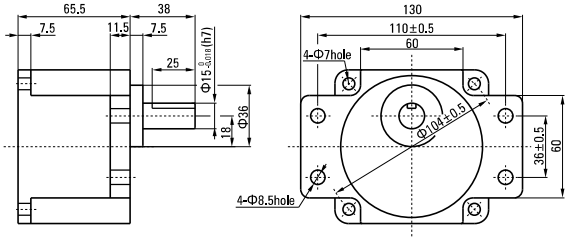

| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| Z55D250-24GU<br>Z55D250-90GU<br>Z55D250-220GU | 5GU□KB | 3~200 | 65.5 |

●减速器型号的□中为减速比的数值 Enter the gear ratio in the box (□) within the model name

● **凸缘安装型减速器** Flange Mounting Reducer

可安装在GU齿轮轴型上Can be mounted on GU type gear shaft 5GU□K

重量 Weight:1.5kg




● **键●键槽（减速器附件）**

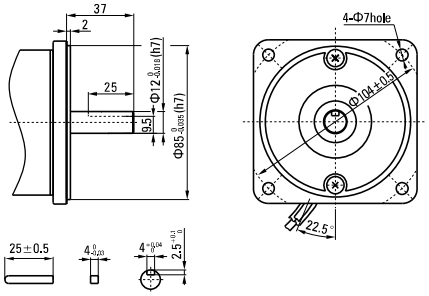
Key●Keyway (The Key Is Included With The Gearhead)

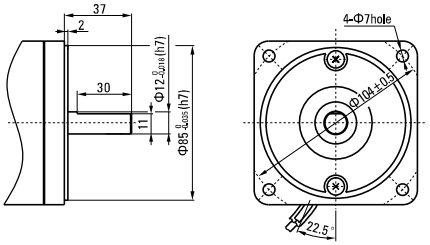



● **圆轴型的转轴部分** Shaft Section Of Round Shaft Type

除重量及轴部外电动机外形与齿轮轴型相同。

Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



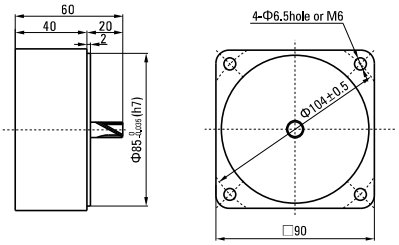

● **中间减速器** Decimal Gearhead

可安装在GU齿轮轴型上Can be connected to GU pinion shaft type

电动机外形与齿轮轴型相同

5GU10X

重量 Weight：0.651kg



# 直流电动机
# DC MOTORS

## ■250W □104mm



## ■电机性能参数 Motor Performance Parameters

| 型号 Model | 电压 Voltage | 功率 Power | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 电刷寿命 Brush Life | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电流Current | | |
| | V | W | r/min | A | r/min | mN.m | A | H | kg |
| Z6D250-24 □ | 24 | 250 | 3400 | 3.0 Max. | 3000 | 796 | 16.0 | 2000 | 3.2 |
| Z6D250-90 □ | 90 | 250 | 3300 | 1.0 Max. | 3000 | 796 | 4.00 | 2000 | 3.2 |
| Z6D250-220□ | 220 | 250 | 3300 | 0.8 Max. | 3000 | 796 | 2.00 | 2000 | 3.2 |

●电机电压、功率及转速可在配件尺寸等条件允许下根据客户要求定制。
Motor voltage, power and speed will be customized according to his requestment under the allowed circumstance of adoptable dimension.

## ■种类 Type

● **电动机** Motor

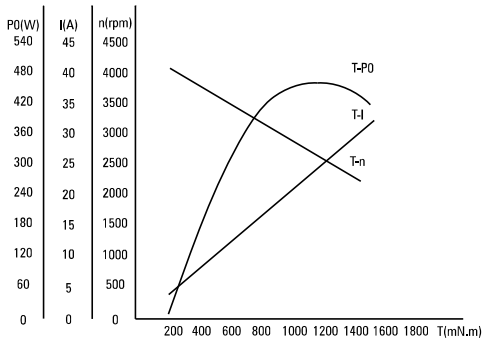
| 机型 Type | 型号Model | | |
|---|---|---|---|
| | 齿轮轴型 Pinion Shaft | 圆轴型 Round Shaft | 圆轴型 Round Shaft |
| 导线型 Lead Wire Type | Z6D250-24GU | Z6D250-24A | Z6D250-24A1 |
| | Z6D250-90GU | Z6D250-90A | Z6D250-90A1 |
| | Z6D250-220GU | Z6D250-220A | Z6D250-220A1 |

● **平行轴减速器（另售）** Parallel Shaft Gearhead (Sold Separately)

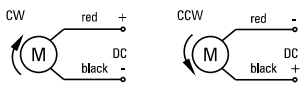
| 减速器种类 Gearhead Type | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| 长寿命●低噪音 Long Life ● Low Noise | 6GU□K | 3、3.6、5、6、7.5、9、12.5、15、18、25、30、36、50、60、75、90、100、120、150、180、200 |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

● **电机特性曲线** Characteristic Curve Of Motor




● **电机接线图** Wiring Diagram Of Motor




●标准引出线长度: 300mm±10, 型号: UL1015, 规格: AWG14; 电机引出线长度、型号在配件尺寸等条件允许的情况下可根据客户要求定制。
Stanclard length of lead wire: 300mm±10, model: UI1015, type: AWG14; lead wire length, model will be customerised by dient requestmant under allowed circumstamce of adoptable dimension.

## 装有减速器时的容许转矩 Gear Motor-Torque Table

- 减速器另售·中间减速器另售。
  Gearheads are sold separately. Decimal gearheads are not available.
- 减速品型号的□中为减速比的数值。
  Enter the gear ratio in the box (□) within the model name.
- ▭色表示与电动机同一方向运转，其他则为相反方向。
  The colored background ▭ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- 转速是以电动机的额定转速为基准除以减速比而算出来的数值。实际转速将随负载大小变化而比所示数值减少2%~20%左右。
  The speed is calculated by dividing the motor's synchronous speed by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- 希望以大于下表的减速比进行进一步减速时，可在电动机与减速机之间安装减速比为10的中间减速机。
  这时的容许转矩为40N·m。
  To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 40N·m.

## 容许力矩单位 Allowance Torque Unit：上段 Upside（N.m）/下段 Belowside（kgf.cm）

| 型号 Type | 减速比 Gear Ratio | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 12.5 | 15 | 18 | 25 | 30 | 36 | 50 | 60 | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z6D250-24GN | 转速 Speed r/min | 1000 | 833 | 600 | 500 | 400 | 333 | 240 | 200 | 166 | 120 | 100 | 83 | 60 | 50 | 40 | 33 | 30 | 25 | 20 | 16 | 15 |
| | 6GU□K | 1.93 | 2.32 | 3.22 | 3.87 | 4.83 | 5.80 | 7.25 | 8.70 | 10.4 | 13.1 | 15.7 | 18.8 | 26.1 | 31.3 | 39.2 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 |
| | | 19.0 | 22.7 | 31.6 | 37.9 | 47.4 | 56.9 | 71.1 | 85.3 | 102 | 128 | 154 | 184 | 256 | 307 | 384 | 400 | 400 | 400 | 400 | 400 | 400 |

## 容许悬挂负载·容许轴向负载 To Allow The Hoisting Of The Load Allow Axial Load

电动机（圆轴型）→215页　　Motor (Round shaft) →P215
减速机→215页　　Gearhead→P215

## 减速机的容许负载惯性惯量 J Permissible Load Inertia J For Gearhead

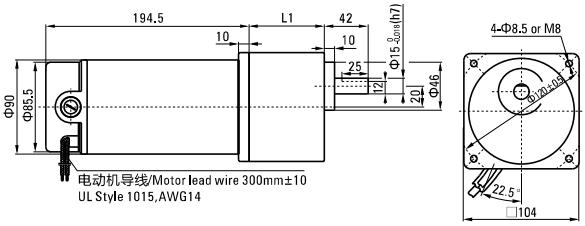
→215页→P215

## 外形图（单位 mm）Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

● **导线型** Lead Wiring Type

重量 Weight：电动机 Motor： 3.2kg　　减速器 Gearhead： 1.5kg

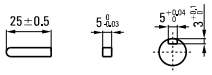



| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio | L1 |
|---|---|---|---|
| Z6D250-24GU<br>Z6D250-90GU<br>Z6D250-220GU | 6GU□K | 3~200 | 72 |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

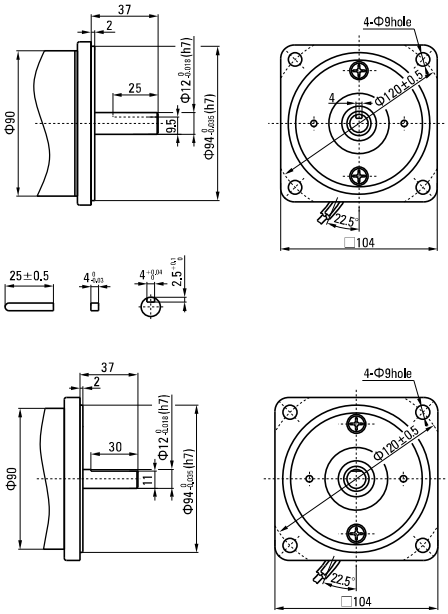
● **键●键槽（减速器附件）**

Key●Keyway (The Key Is Included With The Gearhead)

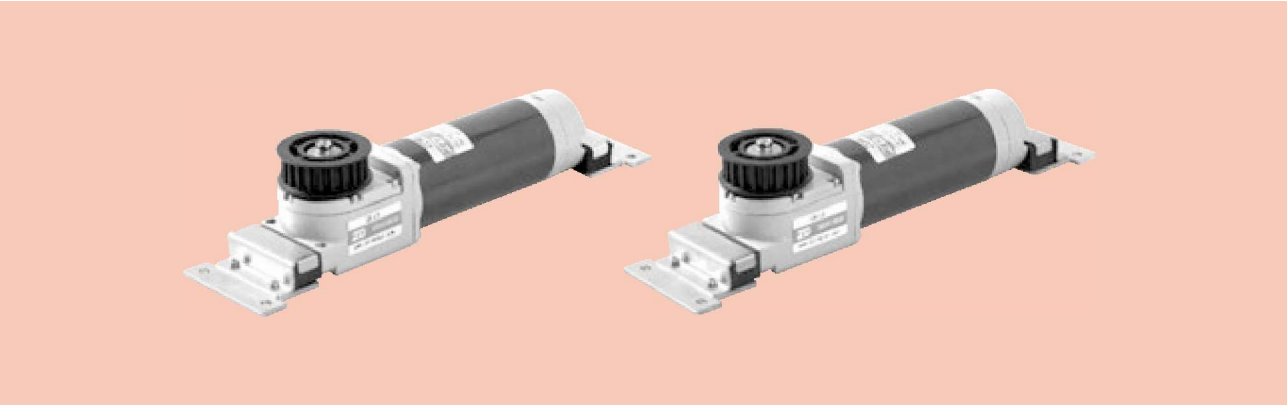



● **圆轴型的转轴部分** Shaft Section Of Round Shaft Type

除重量及轴部外电动机外形与齿轮轴型相同。
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



# 有刷开门电机
# BRUSH DOOR MOTORS



## 产品特点 Product Characters

本产品采用DC永磁有刷马达做运转主体，可与微电脑控制系统方面对接，与电脑控制系统配合实现自我监察，制定最佳运作模式产品具有：噪声低、体积小、重量轻、寿命长、适用范围广等优点；同时可满足客户对自动门升级的需要。

This product adopted PMDC brush motor as the main part of rotor. It can be matched with computer system of control. It can realise self-supervise through matching with computer, and you can set the best working model. Such asspeed, impetus, resistant power and so on. It has characters of low noise, small volume. Light, long life and wide use. Meanwhile, it can meet the customers' request of update.

## 电机性能参数 Motor Performance Parameters

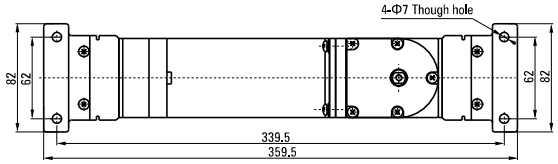
| 型号 Model | 功率 Power | 电压 Voltage | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 整机允许力矩 Allowable Torque Motor | | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电Current | GK8.5 | GK13 | |
| | W | V | r/min | A | r/min | mN.m | A | mN.m | mN.m | kg |
| ZDMJ-1 | 60 | 24 | 2300 | 0.4Max. | 1800 | 318 | 4.0 | 1840 | 2650 | 1.2 |
| ZDMJ-2 | 60 | 90 | 2300 | 0.3Max. | 1800 | 318 | 1.1 | | | 1.0 |

## 外形图 Dimensiond (单位Unit:mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead

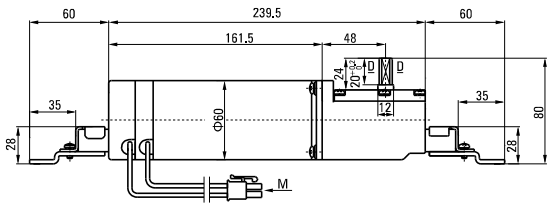
● **导线型** Lead Wiring Type

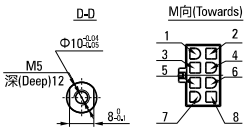
重量 Weight：电动机 Motor： 1.8kg　减速器 Gearhead： 0.8kg




| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| ZDMJ-1 | GK□ | 8.5 |
| ZDMJ-2 | | 13 |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name




| 插孔意义Meanings Of Pins | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Hcw | Hccw | +5V | HGEND | / | MOTOR GND | MOTOR + | MOTOR - |

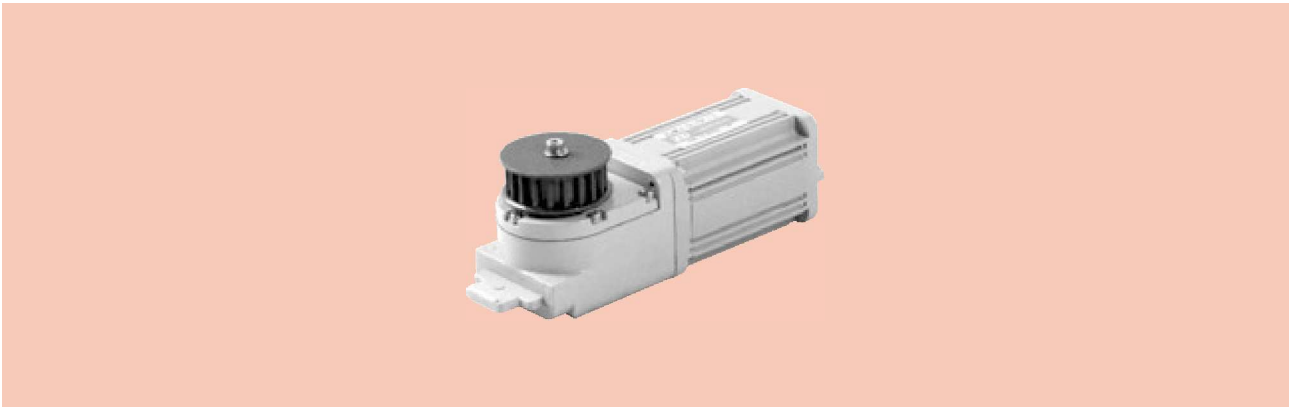
●电机引出线型号:UL1015，AWG20，红色&黑色，引出线长度为500

## 主要技术要求 Main Data

1.基本技术参数: DC24V, 600W, 2500RPM S1, B CLASS, IP40
2.额定力矩: 229mN.m
3.光机空载噪音: < 50dB, L=50cm
4.耐电压: AC660V, 1S, 泄漏电流 < 5mA
5.绝缘电阻: > 50MΩ500V
6.工作寿命: 4000H
7.环保要求: 符合ROHS指令

1.Basic specification: DC24V, 600W, 2500RPM S1, B CLASS, IP40
2.Rated torque of bare motor: 229mN.m
3.No-load noise of whole motor: < 50dB, L=50cm
4.VE: AC660V, 1S, 5mA
5.Insulation resistance > 50MΩ500V
6.Life: 4000H
7.Ambient request: ROHS

# 无刷开门电机
# BRUSHLESS DOOR MOTORS



## 产品特点 Product Characters

本产品采用DC无刷直流马达做运转主体，可更方便的与微电脑控制系统对接，更方便的与电脑控制系统配合实现自我监察，制定最佳运作模式，如速度、推动力、制动力等。产品具有：寿命长、噪声低、体积小、重量轻、适用范围广等优点；同时可满足客户对自动门升级的需要。

This product adopted PMDC brush motor as the main part of rotor. It can be matched with computer system of control. It can realise self-supervise through matching with computer, and you can set the best working model. Such asspeed, impetus, resistant power and so on. It has characters of low noise, small volume. Light, long life and wide use. Meanwhile, it can meet the customers' request of update.

## 电机性能参数 Motor Performance Paramters

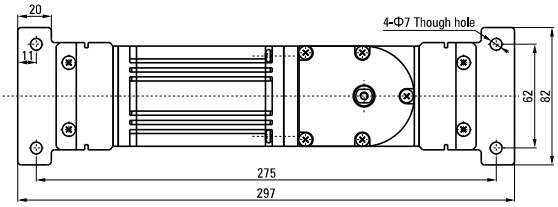
| 型号 Model | 功率 Power | 电压 Voltage | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 整机允许力矩 Allowable Torque Motor | | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电Current | GK8.5 | GK13 | |
| | W | V | r/min | A | r/min | mN.m | A | mN.m | mN.m | kg |
| ZDMJ-3 | 60 | 24 | 3000 | 0.6Max. | 2500 | 229 | 4.0 | 1320 | 2000 | 1.2 |

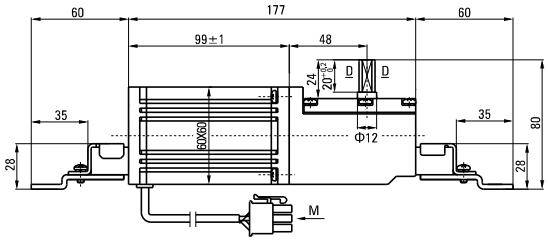
## 外形图 Dimensiond (单位Unit:mm)

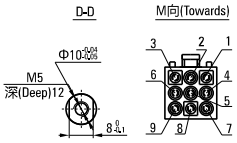
减速器附有安装用螺丝 Mounting screws are included with gearhead

● **导线型** Lead Wiring Type

重量 Weight：电动机 Motor： 1.2kg　减速器 Gearhead： 0.8kg




| 插孔意义Meanings of pins | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| W | V | U | +5V | / | GND | Hu | Hv | Hw |

| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| ZDMJ-3 | GK□ | 8.5 |
| | | 13 |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

## 主要技术要求 Main Data

1.基本技术参数: DC24V, 60W, 2500RPM S1, B CLASS, IP40
2.额定力矩: 229mN.m
3.光机空载噪音: < 50dB, L=40cm
4.耐电压: AC660V, 1S, 泄漏电流 < 5mA
5.绝缘电阻: > 50MΩ500V
6.工作寿命: 4000H
7.环保要求: 符合ROHS指令

1.Basic specification: DC24V, 60W, 2500RPM S1, B CLASS, IP40
2.Rated torque of bare motor: 229mN.m
3.No-load noise of whole motor: < 50dB, L=50cm
4.VE: AC660V, 1S, 5mA
5.Insulation resistance > 50MΩ500V
6.Life: 4000H
7.Ambient request: ROHS

# 无刷开门电机
# BRUSHLESS DOOR MOTORS



## 产品特点 Product Characters

本产品采用DC无刷直流马达做运转主体，可更方便的与微电脑控制系统对接，更方便的与电脑控制系统配合实现自我监察，制定最佳运作模式，如速度、推动力、制动力等。产品具有：寿命长、噪声低、体积小、重量轻、适用范围广等优点；同时可满足客户对自动门升级的需要。

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## 电机性能参数 Motor Performance Paramters

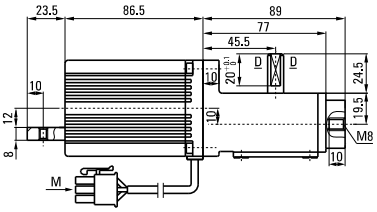
| 型号 Model | 功率 Power | 电压 Voltage | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 整机允许力矩 Allowable Torque Motor | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电Current | GK12.5 | |
| | W | V | r/min | A | r/min | mN.m | A | mN.m | kg |
| ZDMJ-4 | 60 | 24 | 3000 | 0.6Max. | 2500 | 229 | 4.0 | 1950 | 1.0 |

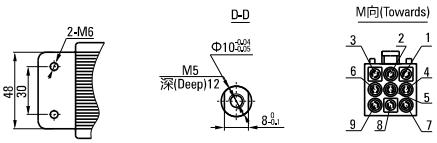
## 外形图 Dimensiond (单位Unit:mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead

● **导线型** Lead Wiring Type

重量 Weight：电动机 Motor： 1.0kg　减速器 Gearhead： 0.5kg




| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| ZDMJ-4 | GK□ | 12.5 |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

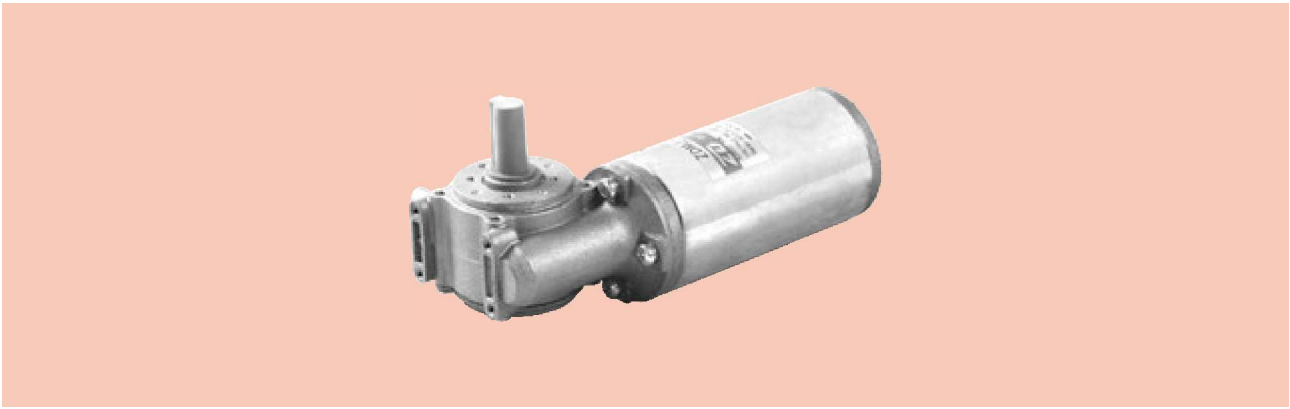
| 插孔意义Meanings Of Pins | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| U | V | W | +5V | / | GND | Hu | Hv | Hw |

## 主要技术要求 Main Data

1.基本技术参数: DC24V, 60W, 2500RPM S1, B CLASS, IP40
2.额定力矩: 229mN.m
3.光机空载噪音: < 50dB, L=50cm
4.耐电压: AC660V, 1S, 泄漏电流 < 5mA
5.绝缘电阻: > 50MΩ500V
6.工作寿命: 4000H
7.环保要求: 符合ROHS指令

1.Basic specification: DC24V, 60W, 2500RPM S1, B CLASS, IP40
2.Rated torque of bare motor: 229mN.m
3.No-load noise of whole motor: < 50dB, L=50cm
4.VE: AC660V, 1S, 5mA
5.Insulation resistance > 50MΩ500V
6.Life: 4000H
7.Ambient request: ROHS

# 有刷开门电机
# BRUSH DOOR MOTORS



## 产品特点 Product Characters

本产品采用DC永磁有刷马达做运转主体，可与微电脑控制系统方面对接，与电脑控制系统配合实现自我监察，制定最佳运作模式产品具有：噪声低、体积小、重量轻、寿命长、适用范围广等优点；同时可满足客户对自动门升级的需要。

This product adopted PMDC brush motor as the main part of rotor. It can be matched with computer system of control. It can realise self-supervise through matching with computer, and you can set the best working model. Such asspeed, impetus, resistant power and so on. It has characters of low noise, small volume. Light, long life and wide use. Meanwhile, it can meet the customers' request of update.

## 电机性能参数 Motor Performance Parameters

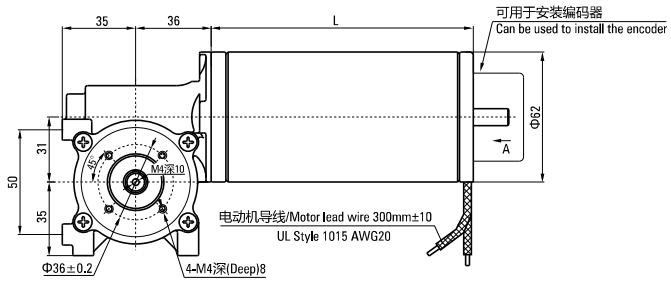
| 型号 Model | 功率 Power | 电压 Voltage | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 整机允许力矩 Allowable Torque Motor | | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电Current | GX10 | GX15 | |
| | W | V | r/min | A | r/min | mN.m | A | mN.m | mN.m | kg |
| ZDMJ-5A | 90 | 24 | 3900 | 1.1Max. | 3350 | 257 | 5.4 | 1539 | 2309 | 1.8 |
| ZDMJ-5B | 90 | 36 | 4250 | 0.9Max. | 3350 | | 3.7 | | | 1.8 |
| ZDMJ-5C | 90 | 48 | 3900 | 0.7Max. | 3350 | | 2.7 | | | 1.8 |
| ZDMJ-5D | 90 | 60 | 4000 | 0.5Max. | 3350 | | 2.2 | | | 1.8 |

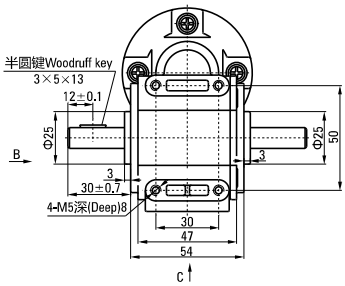
## 外形图 Dimensiond (单位Unit:mm)

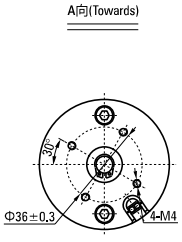
减速器附有安装用螺丝 Mounting screws are included with gearhead

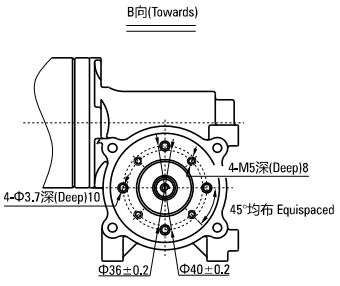
● **导线型** Lead Wiring Type

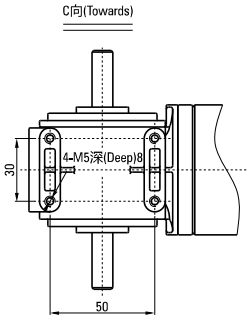
重量 Weight：电动机 Motor： 1.8kg　减速器 Gearhead： 0.8kg



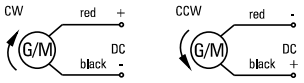



| 电动机型号 Motor Model | 电动机长度（L） Motor Length(L) | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|---|
| ZDMJ-5A | 125.0 | GK□ | 10 |
| ZDMJ-5B | 113.5 | | |
| ZDMJ-5C | 113.5 | | 15 |
| ZDMJ-5D | 125.0 | | |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name

**电机接线图** Wiring Diagram Of Motor



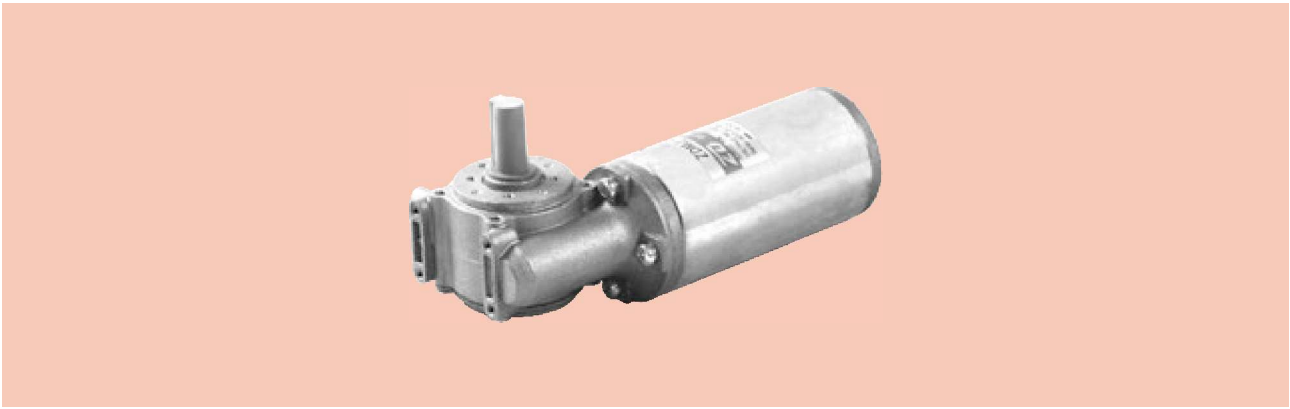

●转向：红"+"、黑"-"时，从轴伸端看为顺时针; 客户要求或特殊情况除外;
Turn: red "+", black "-", from the axis of the shaft to see the end of the clockwise; Exception of the user requirements or special circumstances;
●标准引出线长度：300mm±10，型号：UL1015 规格：AWG20;
Standard lead length: 300mm±10, type: UL1015 specification: AWG20;

## 主要技术要求 Main Data

1.基本技术参数: 详见参数性能表
2.其他参数: S1工作制, B 级绝缘，IP20；
3.光机空载噪音: ＜50dB, L=40cm
4.耐电压: AC660V, 1S, 5mA
5.绝缘电阻: ＞20MΩ, 500V
6.工作寿命: ＞2500H
7.环保要求: 符合ROHS指令

1.Basic specification: See parameter performance table
2.Rated torque of bare motor: S1 working system, class B insulation, IP20;
3.No-load noise of whole motor: < 50dB, L=40cm
4.VE: AC660V, 1S, 5mA
5.Insulation resistance > 20MΩ5,00V
6.Life: > 2500H
7.Ambient request: ROHS

# 无刷开门电机
# BRUSHLESS DOOR MOTORS



## 产品特点 Product Characters

本产品采用DC无刷直流马达做运转主体，可更方便的与微电脑控制系统对接，更方便的与电脑控制系统配合实现自我监察，制定最佳运作模式，如速度、推动力、制动力等。产品具有：寿命长、噪声低、体积小、重量轻、适用范围广等优点；同时可满足客户对自动门升级的需要。

This product adopted PMDC brush motor as the main part of rotor. It can be matched with computer system of control. It can realise self-supervise through matching with computer, and you can set the best working model. Such asspeed, impetus, resistant power and so on. It has characters of low noise, small volume. Light, long life and wide use. Meanwhile, it can meet the customers' request of update.

## 电机性能参数 Motor Performance Paramters

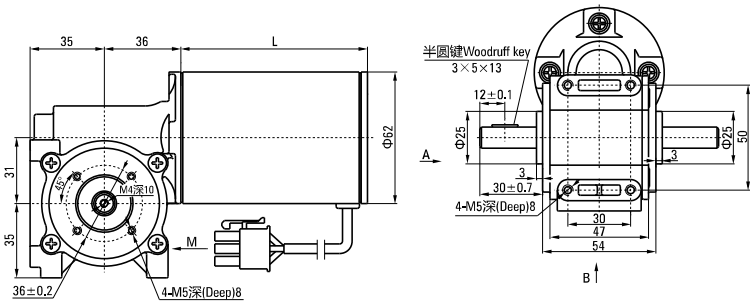
| 型号 Model | 功率 Power | 电压 Voltage | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 整机允许力矩 Allowable Torque Motor | | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电Current | GX10 | GX15 | |
| | W | V | r/min | A | r/min | mN.m | A | mN.m | mN.m | kg |
| ZDMJ-6 | 60 | 24 | 3400 | 0.7Max. | 3000 | 191 | 3.5 | 1146 | 1719 | 1.8 |

## 外形图 Dimensiond (单位Unit:mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead

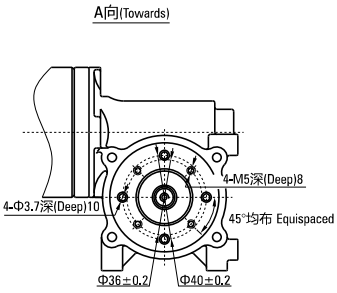
● **导线型** Lead Wiring Type

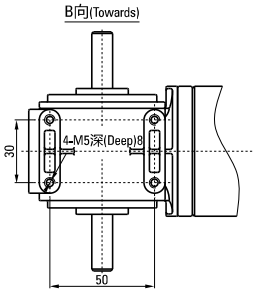
重量 Weight：电动机 Motor： 1.8kg　减速器 Gearhead： 0.8kg

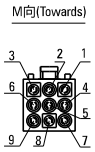



| 电动机型号 Motor Model | 电动机长度（L） Motor Length(L) | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|---|
| ZDMJ-6 | 88 | GK□ | 10 |
| | | | 15 |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name



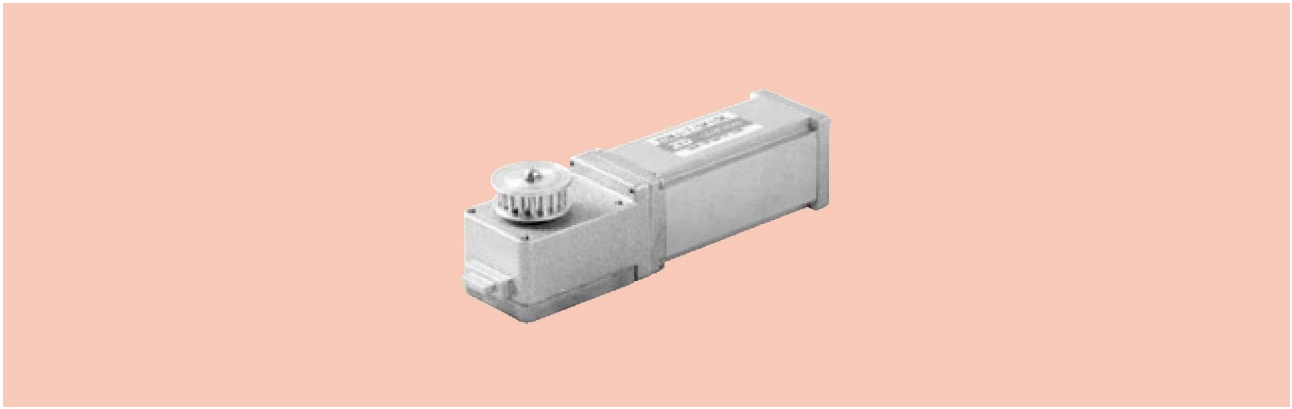

| 插孔意义Meanings Of Pins | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| U | V | W | Vcc | / | GND | Hu | Hv | Hw |

## 主要技术要求 Main Data

1.基本技术参数: DC24V, 60W, 3000RPM S1, B CLASS, IP20
2.光机空载噪音: < 50dB, L=40cm
3.耐电压: AC660V, 1S, 5mA
4.绝缘电阻: > 50MΩ500V
5.工作寿命: ≥ 5000H

1.Basic specification: DC24V,60W,2500RPM S1,B CLASS,IP20
2.No-load noise of whole motor: < 50dB,L=40cm
3.VE: AC660V,1S,5mA
4.Insulation resistance > 50MΩ500V
5.Life: ≥ 5000H

# 无刷开门电机
# BRUSHLESS DOOR MOTORS



## 产品特点 Product Characters

本产品采用DC无刷直流马达做运转主体，可更方便的与微电脑控制系统对接，更方便的与电脑控制系统配合实现自我监察，制定最佳运作模式，如速度、推动力、制动力等。产品具有：寿命长、噪声低、体积小、重量轻、适用范围广等优点；同时可满足客户对自动门升级的需要。

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## 电机性能参数 Motor Performance Paramters

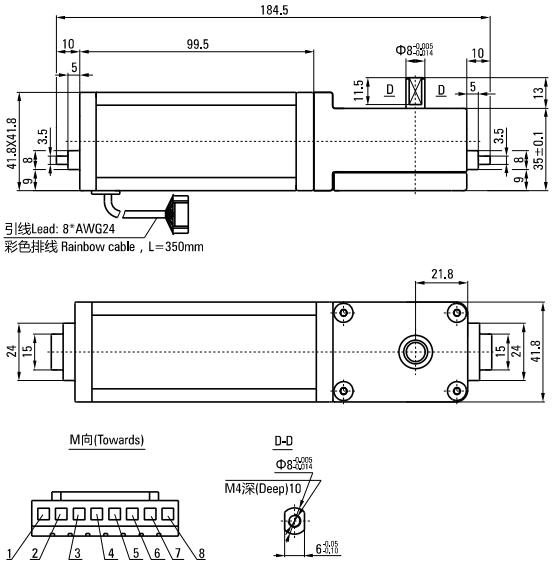
| 型号 Model | 功率 Power | 电压 Voltage | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 整机允许力矩 Allowable Torque Motor | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电Current | GK10 | |
| | W | V | r/min | A | r/min | mN.m | A | mN.m | kg |
| ZDMJ-7 | 25 | 24 | 3100 | 0.6Max. | 2500 | 95.5 | 1.8 | 573 | 1.0 |

## 外形图 Dimensiond (单位Unit:mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead

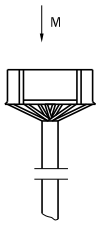
● **导线型** Lead Wiring Type

重量 Weight：电动机 Motor： 1.0kg 减速器 Gearhead： 0.4kg




| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| ZDMJ-7 | GK□ | 10 |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name



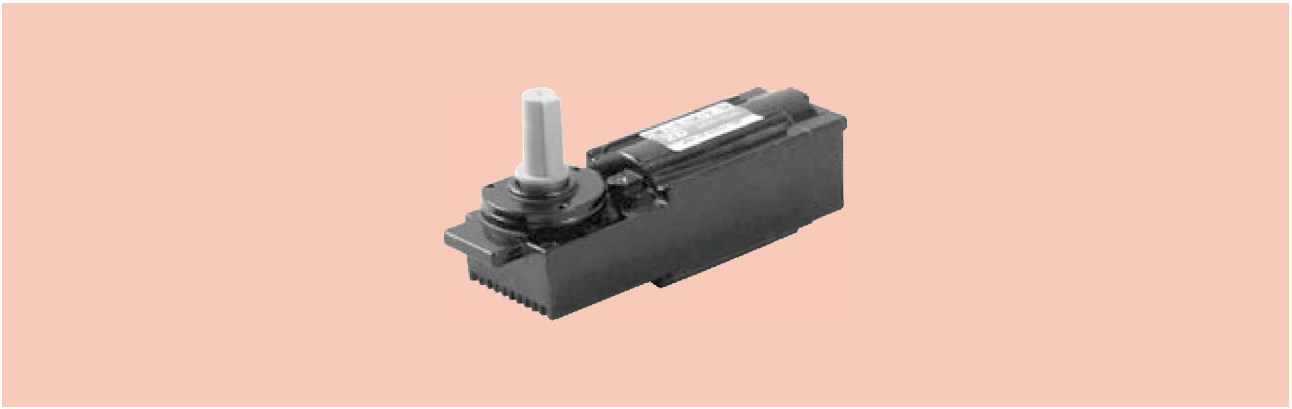

| 插孔意义Meanings Of Pins | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| U | W | V | Hw | Hu | Hv | Vcc | GND |

## 主要技术要求 Main Data

1.基本技术参数: DC24V, 25W, 250RPM S1, B CLASS, IP20
2.光机空载噪音: < 50dB, L=40cm
3.耐电压: AC660V, 1S, 5mA
4.绝缘电阻: > 50MΩ500V
5.工作寿命: ≥ 5000H

1.Basic specification: DC24V,25W,250RPM S1,B CLASS,IP20
2.No-load noise of whole motor: < 50dB,L=40cm
3.VE: AC660V,1S,5mA
4.Insulation resistance > 50MΩ500V
5.Life: ≥ 5000H

# 无刷开门电机
# BRUSHLESS DOOR MOTORS



## 产品特点 Product Characters

本产品采用DC无刷直流马达做运转主体，可更方便的与微电脑控制系统对接，更方便的与电脑控制系统配合实现自我监察，制定最佳运作模式，如速度、推动力、制动力等。产品具有：寿命长、噪声低、体积小、重量轻、适用范围广等优点；同时可满足客户对自动门升级的需要。

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## 电机性能参数 Motor Performance Paramters

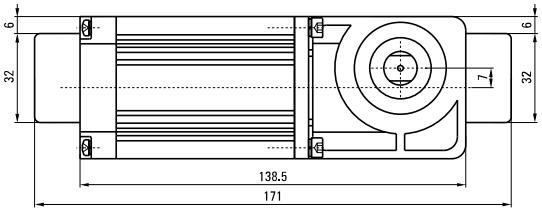
| 型号 Model | 功率 Power | 电压 Voltage | 空载参数No-load Parameters | | 负载参数Load Parameters | | | 整机允许力矩 Allowable Torque Motor | 电机重量 Motor Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | 转速Speed | 电流Current | 转速Speed | 力矩Torque | 电Current | GK12.7 | |
| | W | V | r/min | A | r/min | mN.m | A | mN.m | kg |
| ZDMJ-8 | 40 | 24 | 4300 | 0.6Max. | 3000 | 127 | 2.5 | 1455 | 1.5 |

## 外形图 Dimensiond (单位Unit:mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead

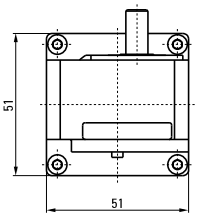
● **导线型** Lead Wiring Type

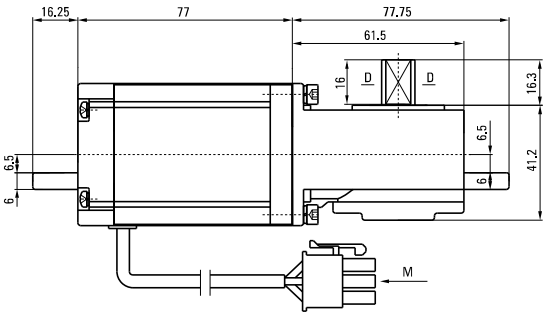
重量 Weight：电动机 Motor： 1.5kg 减速器 Gearhead： 0.7kg

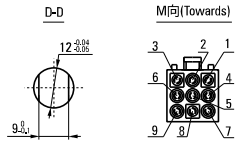



| 电动机型号 Motor Model | 减速器型号 Gearhead Model | 减速比 Gear Ratio |
|---|---|---|
| ZDMJ-8 | GK□ | 12.7 |

●减速器型号的□中为减速比的数值
Enter the gear ratio in the box (□) within the model name




| 插孔意义MeaningsOf Pins | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| U | V | W | Vcc | / | GND | Hu | Hv | Hw |

## 主要技术要求 Main Data

1.基本技术参数: DC24V, 40W, 236RPM S1, B CLASS, IP40
2.光机空载噪音: < 50dB, L=40cm
3.耐电压: AC660V, 1S, 5mA
4.绝缘电阻: > 50MΩ500V
5.工作寿命: ≥ 5000H

1.Basic specification: DC24V,40W,236RPM S1,B CLASS,IP40
2.No-load noise of whole motor: < 50dB,L=40cm
3.VE: AC660V,1S,5mA
4.Insulation resistance > 50MΩ500V
5.Life: ≥ 5000H