

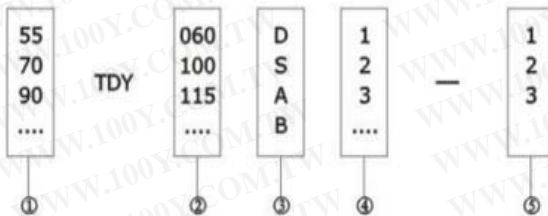
# 110TDY060D4-2

## 永磁低速同步電動機

勝特力材料 886-3-5753170  
勝特力电子(上海) 86-21-34970699  
勝特力电子(深圳) 86-755-83298787  
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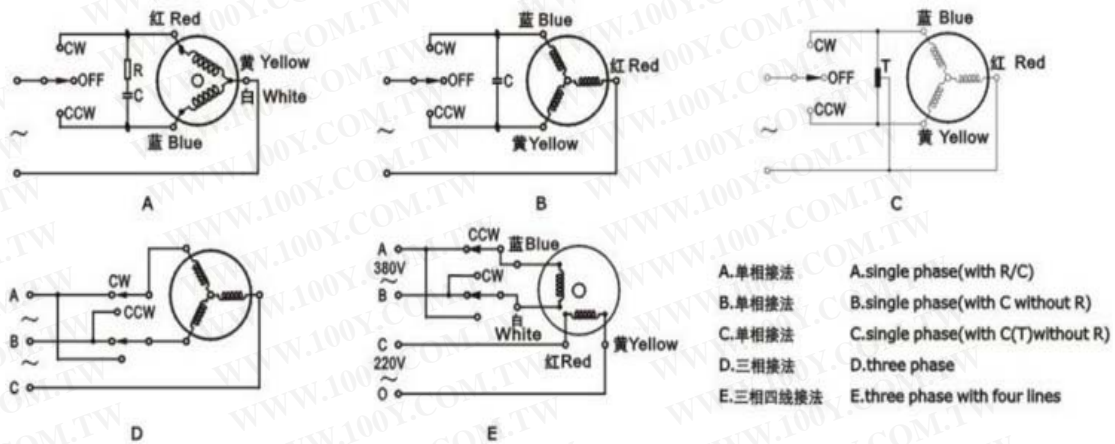
### 型号命名 Motors type identification



- ① 机座号: 定子外径 (mm)  
② 电机转速: 060-60r/min; 115-115.38r/min...  
③ 电源相数: D-单相; S-三相; A-单相去电阻; B-三相四线  
④ 电压/频率: 1-24V/50Hz; 2-36V/50Hz; 3-110V/50Hz; 4-220V/50Hz; 5-380V/50Hz; 6-115V/60Hz; 7-230V/60Hz  
⑤ 电机长度: 1-短尺寸; 2-标准尺寸; 3-长尺寸
- ① Frame size: motor outside dia. in mm  
② Motor speed: 060-60r/min; 115-115.38r/min...  
③ Phase: D-Single phase; S-Three phase; A-Single phase without R; B-Three phase with four lines;  
④ Voltage/Frequency: 1-24V/50Hz; 2-36V/50Hz; 3-110V/50Hz; 4-220V/50Hz; 5-380V/50Hz; 6-115V/60Hz; 7-230V/60Hz  
⑤ Motor length: 1-short stator core length; 2-standard stator core length; 3-long stator core length

## 接线图

### Wiring diagram



## 使用环境

### Ambient condition

- 1、温度(Temperature):  $-25\text{ }^{\circ}\text{C}\sim+40\text{ }^{\circ}\text{C}$
- 2、相对湿度(Relative humidity): 90%~95%
- 3、气压(Atmospheric pressure): 74.8Kpa(2500m)
- 4、振动(Vibration): 10~55Hz, 双振幅(double amplitude)1.5mm
- 5、冲击(Impact):  $150\text{m/s}^2$  (峰值加速度 peak acceleration)

## 典型的使用场合

### Typical application

- |                           |                             |  |          |
|---------------------------|-----------------------------|--|----------|
| * 自动测试设备                  | * 纺织机械                      | * 开关电阻箱的远程控制                           | * 医疗器械   |
| * 阀门电动执行机构                | * 印刷、包装机械                   | * 同步皮带传输系统                             | * 制冷泵    |
| * 天线转动驱动系统                | * X射线扫描                     | * 热交换器                                 | * 自动焊接设备 |
| * Auto-testing equipments | * Textile machines          | * Remote control of switches rheostats |          |
| * Medical equipments      | * Electrical valve actuator | * Printing, packaging machines         |          |
| * Timing belt drives      | * Cryogenic pump            | * Antenna rotors                       |          |

## 多台电机在同一电网同时工作

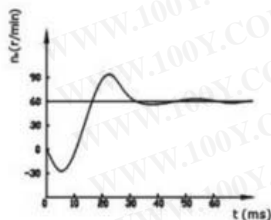
### Parallel motor operation

由于多台电机在静止状态时转子初始位置不相同, 每台电机在同一电源, 同时工作时, 可能会不一致。如第一台电机可能在5ms启动, 第二台电机可能在30ms启动, 而其他电机, 可能在5-30ms内启动, 出现这种情况是允许的, 因此用户要尤其注意在这种状态时的使用情况。

Because of different initial rest position of each motor, maybe they can't runs synchronously when tow or more TDY motors are powered by same power source. For instance, the first motor may start in 5ms, the second may start in 30ms, and others may start in 5-30ms. In this case, users should pay more attention to using status.

## 电机的启/停特性

### Starting and stopping characteristics

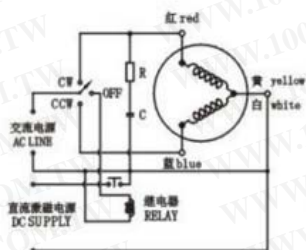


电机能在电源频率的1.5周期内，迅速牵入或牵出同步，对50Hz电源的电机，能在30ms内达到牵入或牵出最终的同步转速，图示为典型50Hz，60r/min电机的启/停特性。

The motors will start and stop within 1.5 cycles of applied frequency, and pull-in and pull-out from synchronous speed are within 30ms for 50Hz frequency. Please refer to starting-stopping characteristics figure of 50Hz&60r/min motors.

## 增加电机自锁转矩

### How to increase motors holding torque

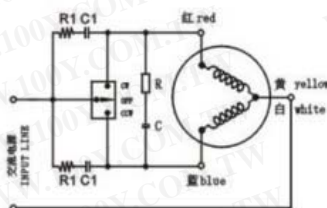


当需要增加电机自锁转矩时，请采用图示的典型接线方法，所需要的有关直流激磁电压值和使用电机规格及要求的自锁转矩值，请向本公司咨询。

If high holding torque is required, please connect the motor according to the following wiring diagram. Please be noted that the holding torque depends on actual DC exciting voltage and specification of motors. Please feel free to contact SOK.

## 电机频繁启/停、正/反和堵转工作时控制开关触点保护线路

### Control switch contact protection



当电机工作于频繁起/停、正/反和堵转工作时，为了对开关触点进行保护，请采用典型的保护线路。由 $0.1\mu\text{F}/400\text{V}$ 和 $330\Omega/1\text{W}$ 组成的放电回路，可以将频繁起/停、正/反转和堵转工作时控制开关触点感应的高压电进行释放，从而延长了控制开关触点的使用寿命。

The figure shows typical control switch contact protection connection, the arcing is eliminated which caused from transient voltage when motor run at frequent starting & stopping, rotation reverse and stalling. Recommended value for additional capacitor and resistor are  $0.1\mu\text{F}/400\text{V}$  and  $330\Omega/1\text{W}$ .

## 电机温度的考虑

### Motors temperature consideration

本系列电机规定最高使用环境温度是 $40^{\circ}\text{C}$ ，当然也可以允许适当的使用在超过此值的环境中，但是必须注意保证电机在使用时安装在散热良好的金属支架，并采用强迫通风冷却。请注意本系列电机在使用时外壳的极限温度为 $100^{\circ}\text{C}$ 。

All SOK TDY motors are rated for a maximum free-air ambient temperature of  $40^{\circ}\text{C}$ . However it is possible to operate in higher ambient temperatures or above the rated voltage if the motors are mounted on metal plates or are forced air cooled. Do not exceed the maximum motor housing temperature of  $100^{\circ}\text{C}$ .

## 启动大的惯量负载

### Starting high inertia load

本公司样本中规定的最大惯量值是电机和负载之间采用刚性连接，如果电机要启动较高惯量的负载，建议电机和负载之间采用柔性连接，如采用橡胶联轴器，具有足够松弛的链轮传动和具有足够柔性的皮带轮传动。在这种情况下使用时其最大负载惯量值可以提高约5-10倍。

The max load inertia is shown as TDY motors specifications sheets, this value is for motors operating with attached rigidly load. If starting high inertia load is required, it is recommended to use flexible coupling or rubber coupling, chain & timing belt drive with sufficient slack. In this case the motors can start high inertia load as five to ten times instead of rigidly coupling attached with the motors shaft.

电机轴上允许承受负载力  
Maximum shaft loads

型号 Type	轴伸直径 Motor shaft dia.	转轴承受最大轴向负载力 Maximum shaft axial load	转轴承受最大径向负载力 Maximum shaft radial load
	mm	Kg	Kg
55TDY	φ6	10.0	6.0
70TDY	φ8	16.0	8.5
90TDY	φ9	21.0	10.0
110TDY	φ11	25.0	12.0
130TDY	φ16	45.0	25.0
150TDY	φ16	45.0	25.0

注意：由于本电机转轴为不锈钢材料，请在表格所示的轴允许承受负载力时使用本电机！

Note: As the motors shaft materials are stainless steel, do not exceed the value show as the table when use the motors please!

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