

Contents

Notes-----	2
Introduction-----	3
Base parameters-----	3
Working principle-----	4
Product installation-----	5
Specific instructions-----	5
Notes and routine inspections-----	6

Notes

1, U, V, W for the controller output terminals, and connecting with the motor. Prohibited the controller input and output terminals reversed, otherwise it will cause damage to the controller.

2, the controller has high voltage filter capacitor storage. Processing, 3 minutes after power to operate. The controller, there is no need for the user to change the part of the reservation, please do not attempt to remove the controller. For changes, please entrusted to professionals.

3, remember, do not pressure test on the controller. If you need to pressure test the motor, please disconnect the motor and controller completely after.

4, this guide is intended for air-cooled series of motors. Detailed installation instructions please see the product manual 4, the product installation.

This manual details the BS series controller's features, specifications, installation, use and control of routine maintenance, please put the controller near safekeeping. To better use your BS series controller, please read these instructions carefully.

Manual

Introduction

Rare earth permanent magnet brushless DC motor and controller from the motor body composition, is a typical mechatronic product. Motor stator windings made of three-phase star connection, the motor rotor by a NdFeB permanent magnet material. Air gap formed in the rotor generated NS-class and white square wave magnetic field, in order to winding accurate motor commutation, the motor is equipped with position sensors, as the polarity of the rotor position signal. Its main features are as follows:

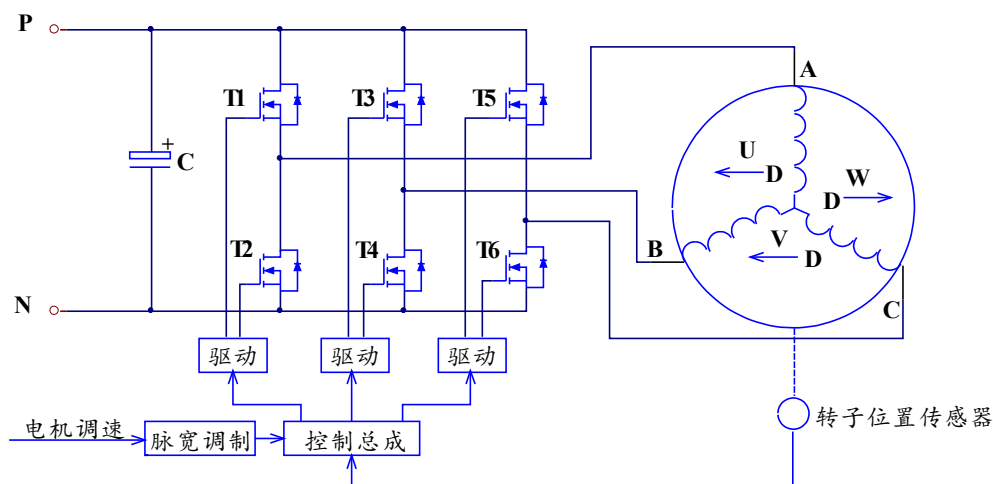
- 1, high efficiency: brushless DC motor rotor that no copper loss nor iron loss, its more efficient than induction motors with the capacity of 5% -12%.
- 2, high power factor: brushless DC motor without power drawn from the exciting current, power factor close to 1.
- 3, starting torque, starting current small: brushless DC motor and adjust the mechanical properties and control of his shock when the DC power cabinet similar to the corresponding features, his large starting torque, starting current, wide speed range but there is no disadvantage caused by brush commutator, electronic exchange to replace the mechanical commutation.
- 4, high output electric motors: motor size and the same maximum operating speed than the asynchronous motor output increased by 30%.
- 5, adaptability: brushless DC motor speed and set the actual speed of the steady-state error, no more than set the speed of $\pm 1\%$.

Basic parameters

See nameplate motor and controller

Work

Rare earth permanent magnet brushless DC motor and controller from the motor of the main component, is a typical mechatronic product. Controller from the power electronic devices and integrated circuits, etc., whose function is to accept the motor start, stop, brake signals to control the motor start, stop, Braking; receiving the signal and Reversible position sensor signal to control the inverter off the power tube to produce a continuous torque; receiving speed command and speed feedback signals used to control and adjust the speed; to provide protection and display. The principle diagram shown in Figure 1:



Fourth, the product installation

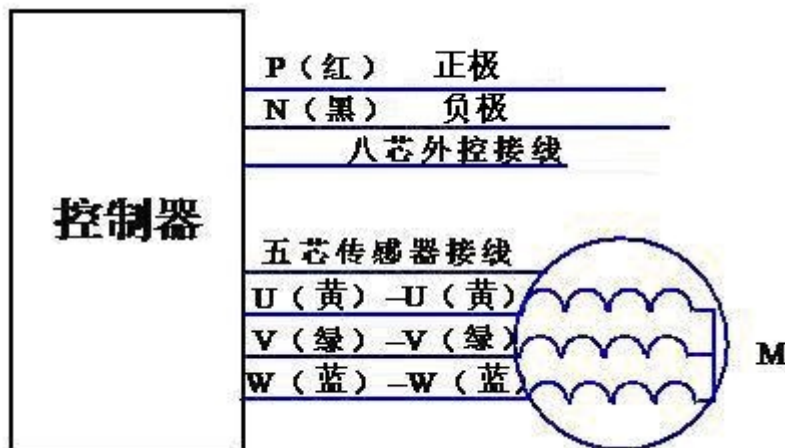
1. Check the product

Before installing the controller, you should confirm the following matters. For questions, should be established and with the company.

Purchased product and ordering content match?

Purchased products damaged in shipping or not?

The company's controller models, the symbols are defined as follows, please carefully identify correctly.



P, N-side DC power supply were connected positive and negative. U, V, W end of the motor three-phase line terminal, respectively, with matching motor leads U (yellow), V (green), W (blue) terminals are connected to the corresponding.

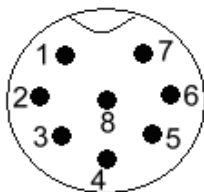
(2) motor position sensor wiring:

Products with position sensor wire at both ends of motor and controller, respectively, can be received (across all five core connectors).

(3) Control circuit wiring:

The control box or the accelerator connected to the controller, on eight core connectors can be.

"External control line" terminals are configured in the control panel, "external control line" port for the 8-core connectors.



Control circuit terminal function:

Terminal No. Terminal description type terminal function

1 empty legs

Control

System

Letter

No. 2 RUN-run, stop the run command and COM shorted

COM disconnect with stop

3 COM-control directive, the public input signal common terminal COM

4 F/R- reverse order and then reverse the short-COM

COM disconnect with the forward

5 RESET-Reset command and COM shorted effective, state of the reset for fault

Model

Intend

Lose

Into 6 V + for the foot to provide +5 V power supply

7 Vin regulate motor speed signal input, the output signal to an external pedal.

8 GND 6,7 feet of land

5, specific instructions

(1) the sensor cable (5 core shielded cable) connection between the controller and motor, and correctly connect the power and controller P, N lines and the connection between the controller and motor.

(2) the accelerator is connected with the controller, after check, electricity, regulating motor speed accelerator can be realized.

6, Notes and daily inspection

1 Note

(1) controller U, V, W output of the controller, must not be receiving the terminal on the power.

(2) controller U, V, W and supporting electrical leads to U (yellow), V (green), W (blue) terminals corresponding phase, and must not take the wrong order, or will cause controller damage. Also pay attention to the motor turning and U, V, W independent of the connection order can only be adjusted by the controller.

(3) When powered, non-implementation of the wiring, inspection and other operations.

(4) the power is off, use the instrument to confirm the controller P, N terminal end of capacitor discharge, before implementation of the operation, otherwise there is risk of electric shock.

(5) the human body would severely damage the internal MOSFET electrostatic sensitive devices such as, do not touch the printed circuit board and internal devices such as IGBT, or it may damage the device or cause damage.

* Warning: This product is exceeded within the safe range of voltage, general officers do not remove any cover parts close to the inner parts, to ensure safety.

This machine is responsible for maintenance by a qualified professional.

2, routine examination

Be sure to check before running the following:

Any screw, nut loose

Installation site conditions: altitude not more than 1000m, ambient temperature at -20 °C ~ +40 °C, to prevent the iron, water droplets and other things fall into the controller.

Abnormal vibration

Abnormal temperature

3, daily and periodic inspection items

Check the target controller controller and motor controller

Check item input voltage conductor wiring terminals

Check the contents of the main circuit input voltage is normal skin is damaged wiring terminals for damage control