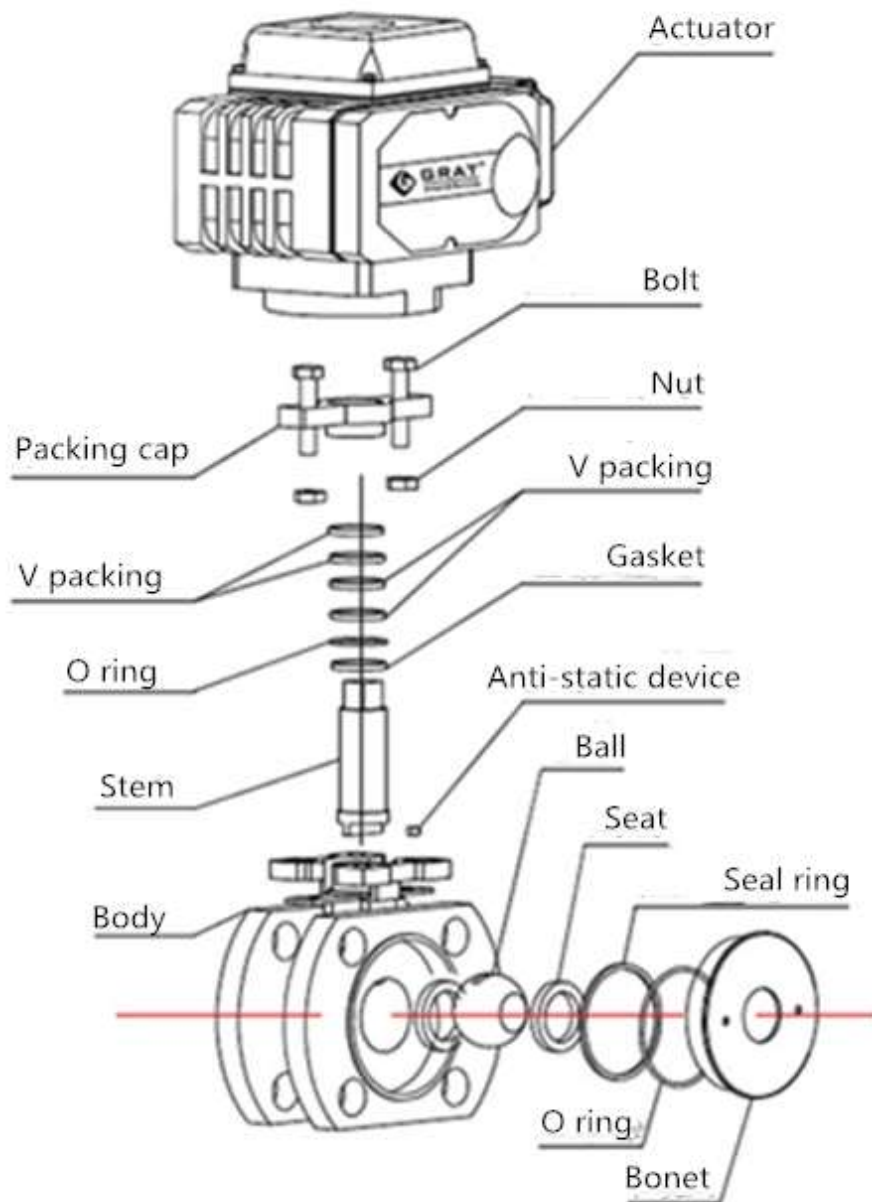


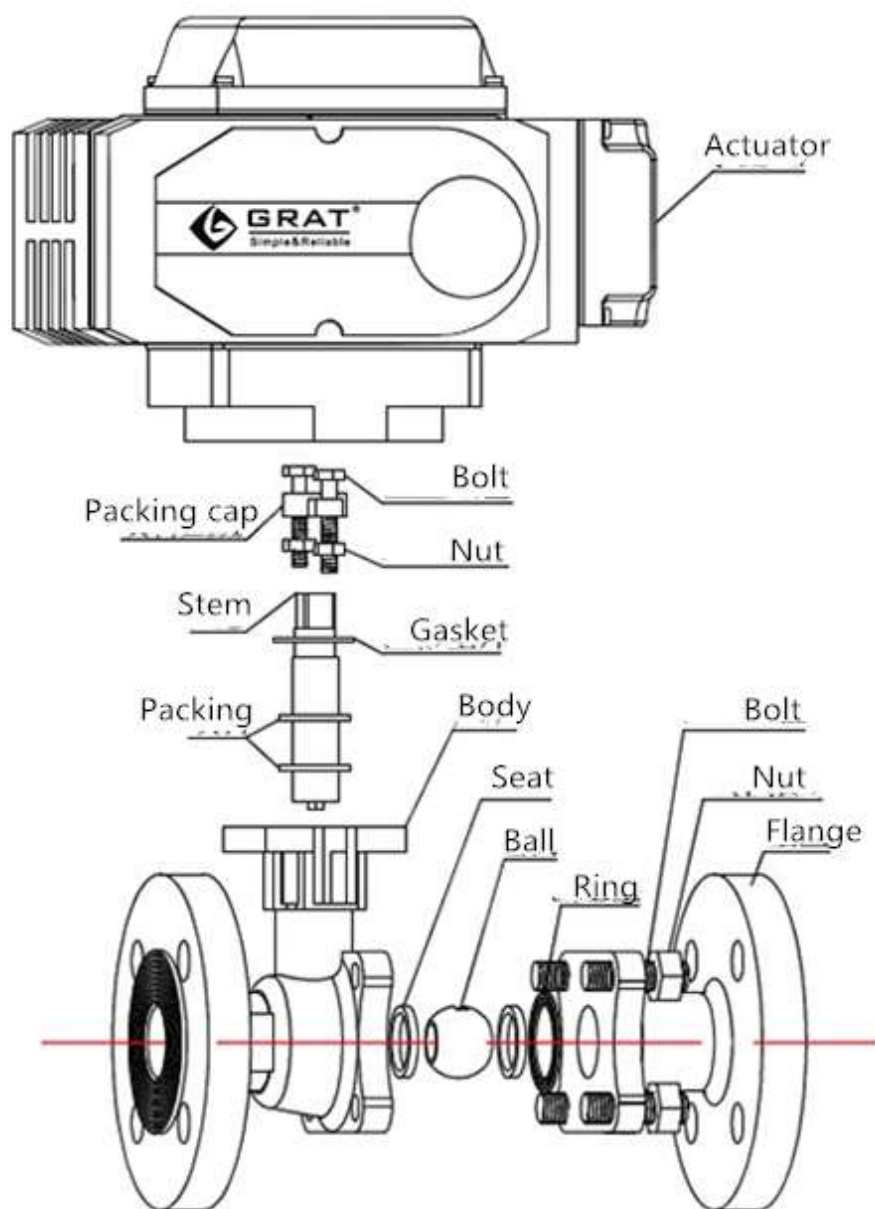


## Electric Bal Valve Manual

## 1、 Electric Ball Valve Structure



### Short Face-to-Face Electric Ball Valve Structure



## Flange Electric Ball Valve Structure

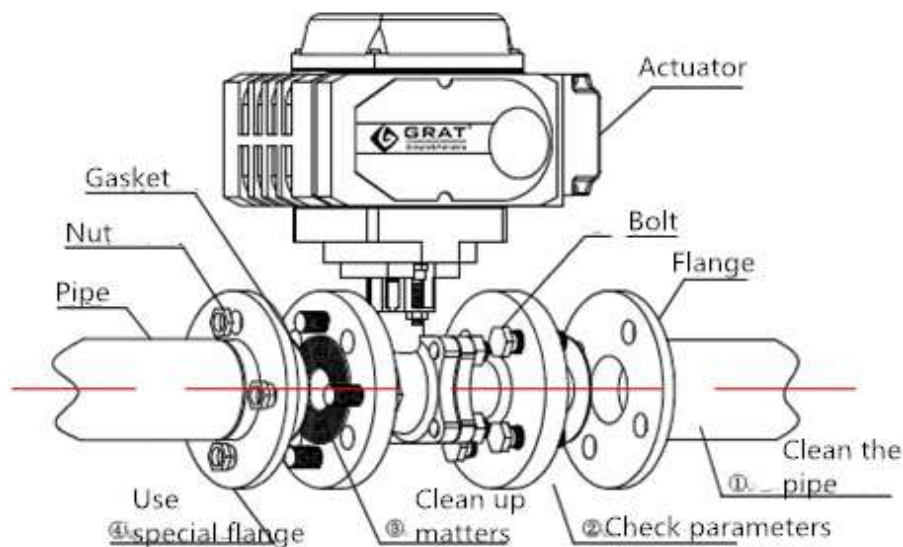
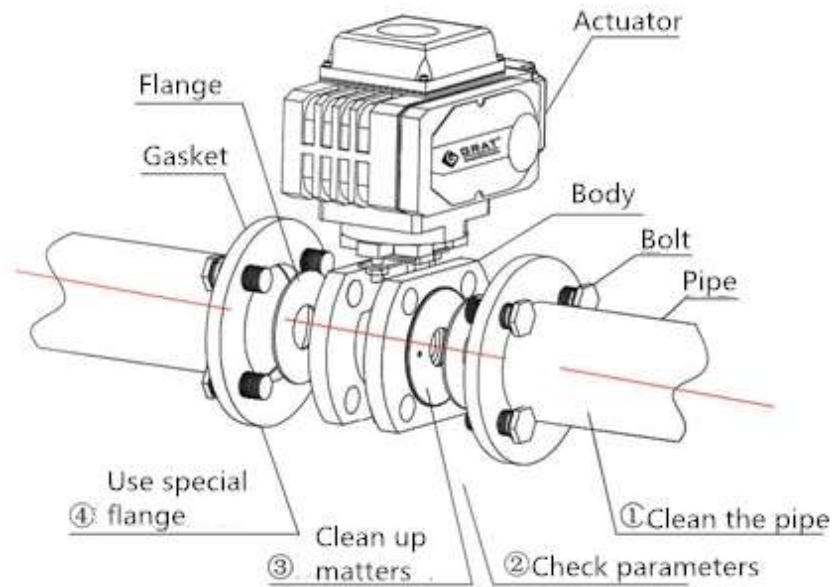
## 2、Electric Ball Valve Installation Steps

### 2.1 Preperation Before Installation

Add: No. 62, Guanggu Avenue, Wuhan.

Web: [www.grat.com.cn](http://www.grat.com.cn)

Email: [ft@grat.com.cn](mailto:ft@grat.com.cn)



Note: 1、 The pipeline before and after the valve should be ready, the front and rear pipelines should be coaxial, and the sealing surfaces of the two flanges should be parallel

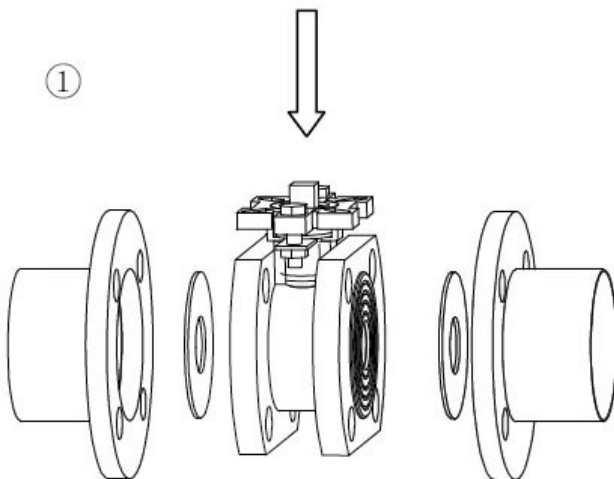
2、 The pipeline should be able to withstand the weight of the valve,

otherwise the pipeline must be equipped with appropriate support

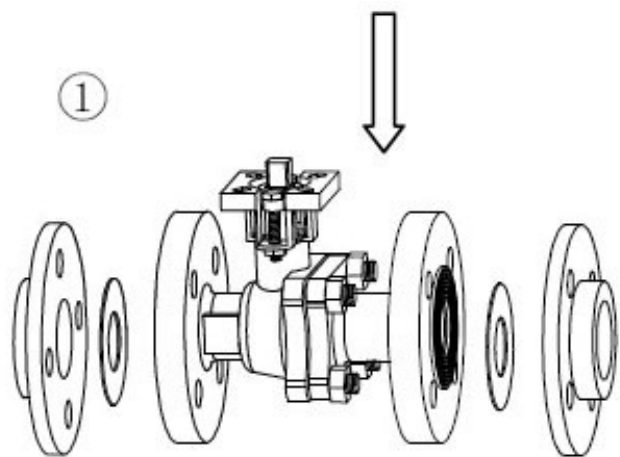
3、The electric ball valve can be installed on the pipeline at any angle, and it is not recommended to install it upside down for maintenance.

## 2.2 Electric Ball Valve Installation Steps

2.2.1 Place the valve between the two mounted flanges;

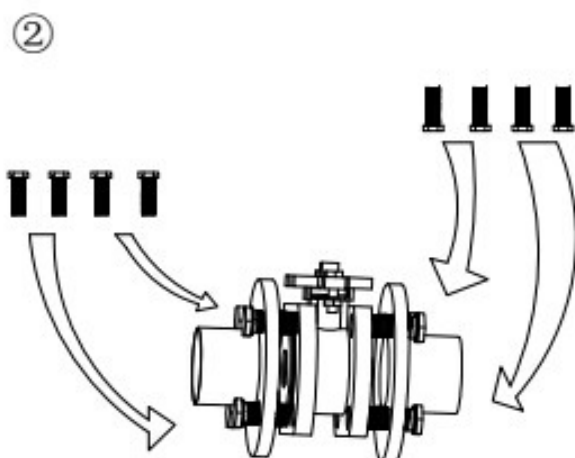


Short face-to-face electric ball valve

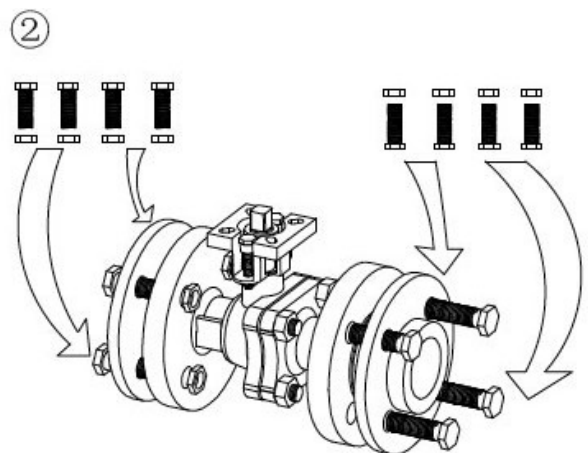


Flange electric ball valve

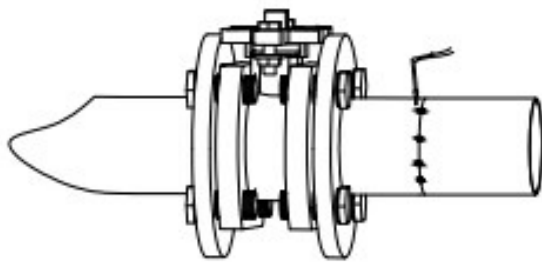
2.2.2 Gently insert the bolt into the flange hole and tighten the nut slightly to correct the flatness of the flange surface;



usi

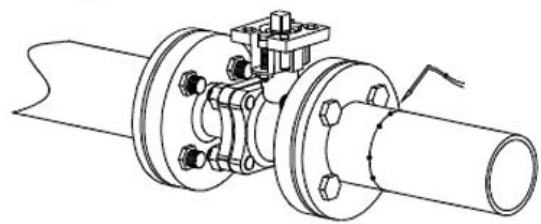


③



Short face-to-face electric ball valve

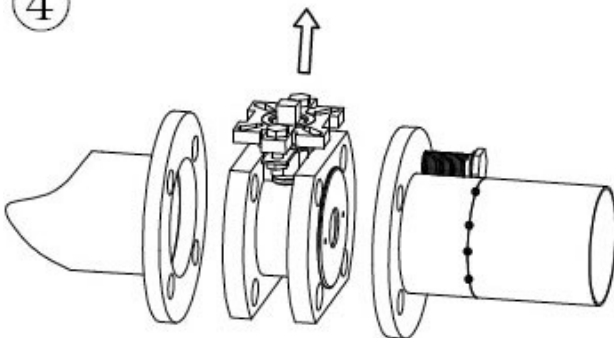
③



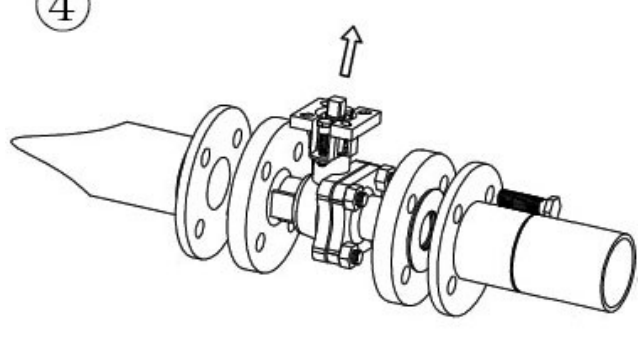
Flange electric ball valve

#### 2.2.4 Remove the valve

④

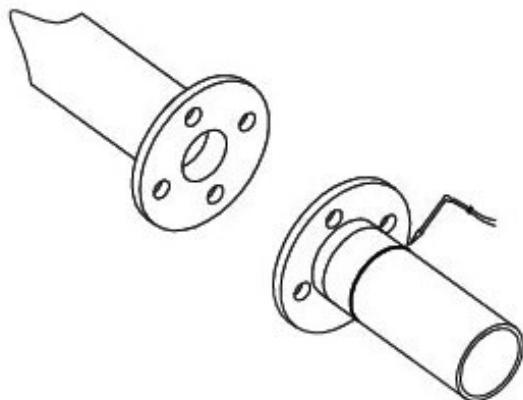


④

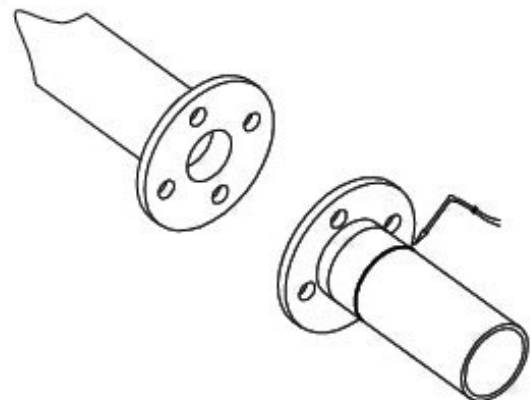


#### 2.2.5 Fully weld the flange to the pipe

⑤



⑤

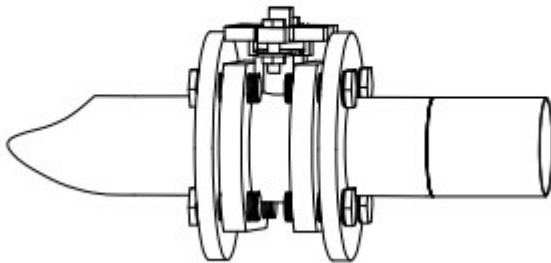


2.2.6 Wait for the weld to cool before installing the valve to ensure that the valve has enough space in the flange to prevent the valve from being damaged; correct

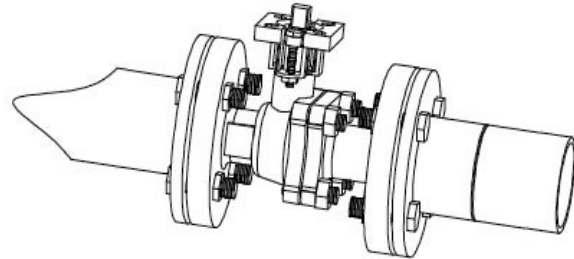


the valve position and tighten the bolt; cross-equalize tighten all nuts

⑥



⑥

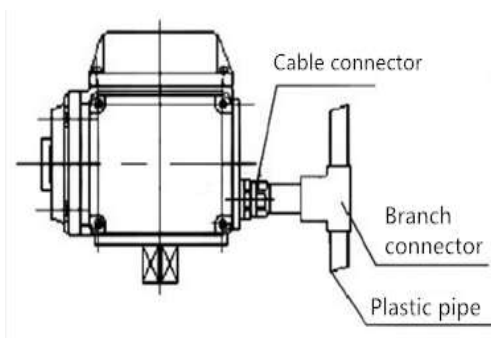


#### 2.2.7 Make sure the valve can open and close freely

The electric ball valve has adjusted the opening and closing stroke of the control mechanism when it is shipped from the factory. To prevent mistakes when the power is turned on, the user must first manually open the device to the half (50%) position before turning on the power for the first time. Electric switch, check the switch, check the direction of the valve to open the direction of the dial.

### 2.3 Install the cable

Please follow the wiring diagram when installing the wire tube

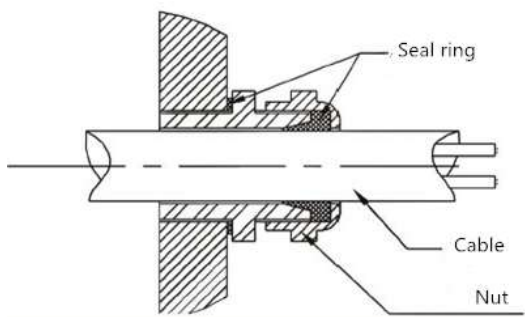


①Take full waterproof measures

②The machine should be higher than the wire tube

●Please use the wire tube with outer diameter  $\Phi 9$ - $\Phi 11$

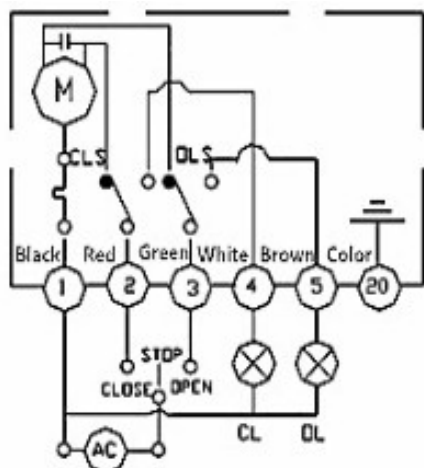
A As shown in the following figure: When installing the cable, do not use the cable tube that does not match the diameter of the cable lock. Make sure that the cable connector is tightly sealed. Otherwise, rain may easily seep from the cable lock and damage the components inside the machine.



Use shielded cables for signal lines.

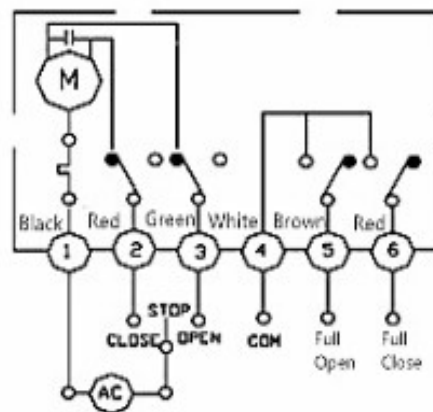
- Do not wire in parallel with the power line.

### 3、请按对应代号电路图接线



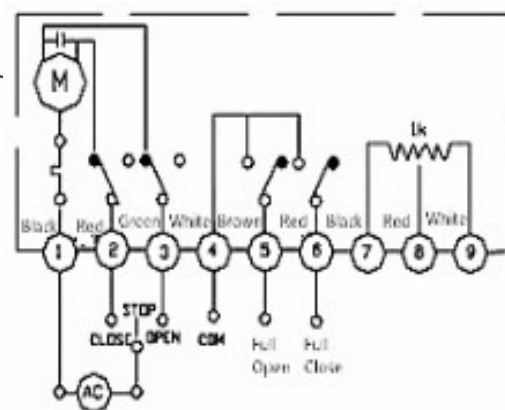
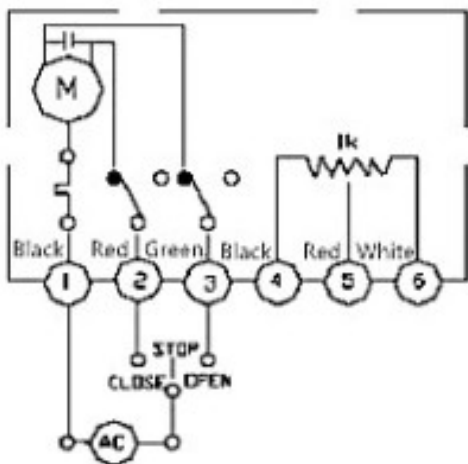
Type: S

Function: On/Off action, no output signal



Type: MS

Function: On/Off action, output passive contact signal



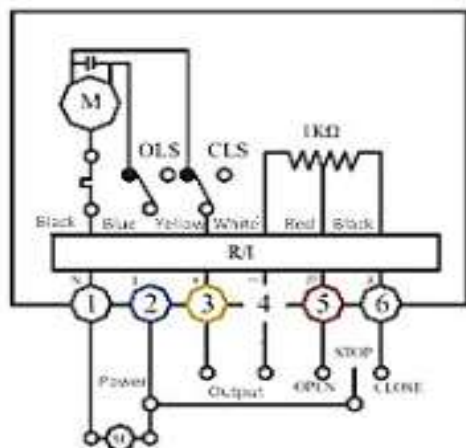
Type: SP

Function: On/Off action, The opening angle of the valve is controlled by the switch circuit corresponding to the resistance value of the potentiometer, and the intermediate position control function



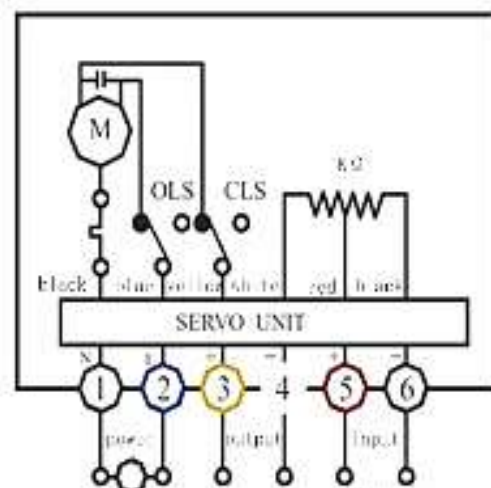
Type: **PIU**

Function: On/Off action, output 0~1K $\Omega$  signal.



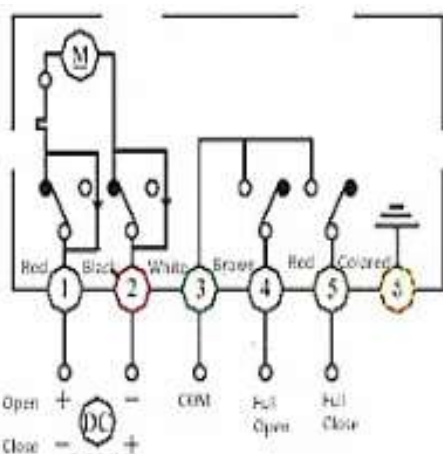
Type: **CPT**

Function: On/Off action, output 4~20mA position signal.



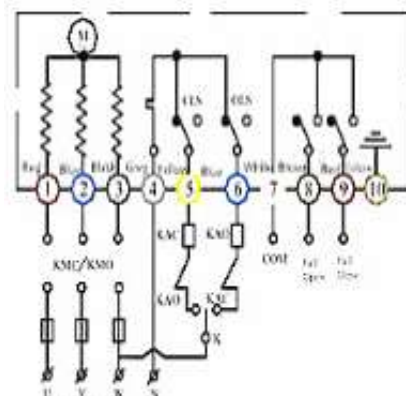
Type: **PCU**

Function: Regulation action, input 4~20mA control signal, output 4~20mA location signal.



Type: **G**

Function: The external DC power supply outputs DC switching control to the circuit to open and close the program and output a set of passive contact signals corresponding to fully open and fully closed positions.



Type: **H**

Function: The external three-phase power inverting circuit outputs the three-phase AC switching control to open and close the operation, and outputs a set of passive contact signals corresponding to the fully open and fully closed positions.

#### 4、Electric Ball Valve Common Faults and Solutions

Malfunctions	Solution
Ball valve media failure, valve blockage	Elimination of impurities, cleaning the valve cavity
Flange seal leakage	Replace the gasket and press the flange bolts (evenly)
Leakage at the packing	Correct replacement of packing
Valve closed spool still leaking	Check replacement valve seat seal
Electric actuator movement, valve does not move	Check the replacement coupling



Scan to view maintenance information!





Simple&Reliable

Wuhan Grat Control Valve Co.,Ltd

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Web: [www.grat.com.cn](http://www.grat.com.cn)

Tel: 027-60706976/60706977