

SDV Series electric actuator operating instruction



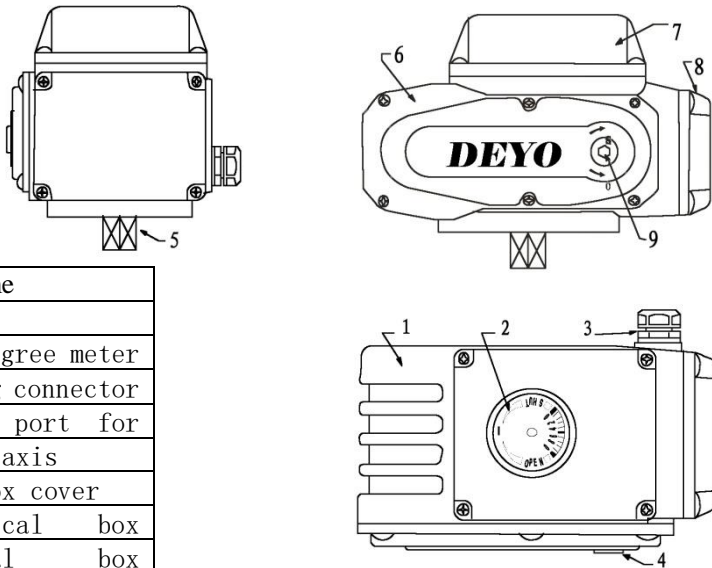
Suzhou Deyo Valve Co.,Ltd

1. Summary

SDV series valve electric actuator compared with similar products has excellent performance, indisputable advantages, its appearance is delicate and small, beautiful and generous, unique internal design, tough wear resistance is not easy to wear.

- Small volume: the volume is only about 35% of similar products;
- Light and cheap people: the weight is equivalent to a third of similar products;
- Beautiful and generous: die-cast aluminum alloy shell, fine and smooth appearance and can reduce electromagnetic interference;
- Complete functions: switch type, passive contact type, proportion type, intelligent adjustment type of everything;
- Precision wear resistance: the worm wheel and the worm rod perfect combination, harmonious linkage, the integration of the worm wheel output effectively reduces the connection gap, so that the transmission accuracy is greatly improved;
- Easy to use: free from electrical inspection, refueling free, rust prevention and waterproof, installation at any Angle;
- Multiple protection: electrical limit, mechanical limit, overheating protection, overload protection, dehumidification protection;
- Speed diversity: 5 seconds, 8 seconds, 15 seconds, 30 seconds, 50 seconds, 100 seconds, etc. (need to be specified);
- CNC adjustment: highly integrated intelligent module, digital setting, digital setting, self-diagnosis highly accurate;
- Safety guarantee: through the AC1500V withstand voltage detection, H class insulation motor, to ensure the body and production safety;
- Simple supporting: single-phase, three-phase, DC power supply, simple external line.

2. appearance map



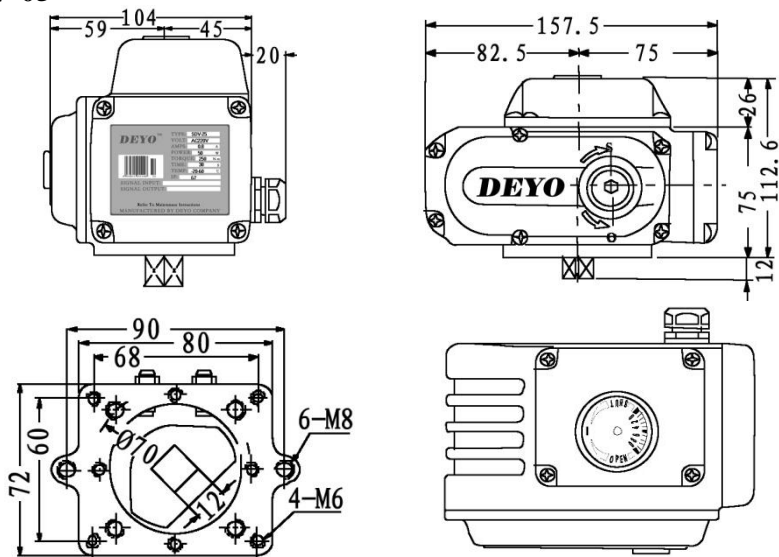
	part name
1	box
2	Open degree meter
3	welding connector
4	Manual port for
5	output axis
6	gear box cover
7	Electrical box
8	Terminal box
9	Manual operation

3. installation

- Installation places can be indoor, outdoor, and underground.
- Installation Notes:
 1. This product is a non-explosion-proof product, so it cannot be installed in the room with explosive gas.
 2. When installing in the splash of water spray, please add a protective cover to avoid water seepage and damage to the machine.
 3. Indoor installation should also be reserved into the line, and the space needed for manual operation.
 4. Add a protective cover for outdoor installation to reduce direct sunlight and avoid accelerated aging of components in the machine.
 5. Please ensure that the manual rubber is blocked and tightly to ensure everything.

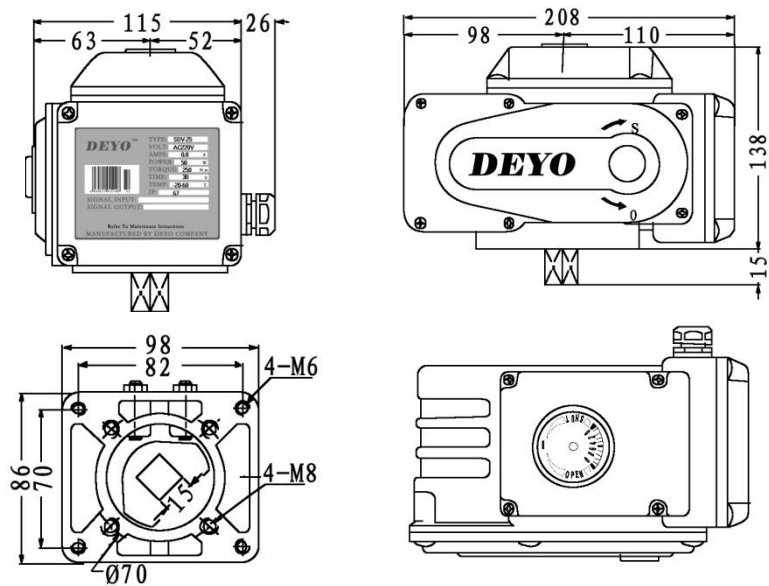
4. Appearance size diagram and performance parameters

SDV-05



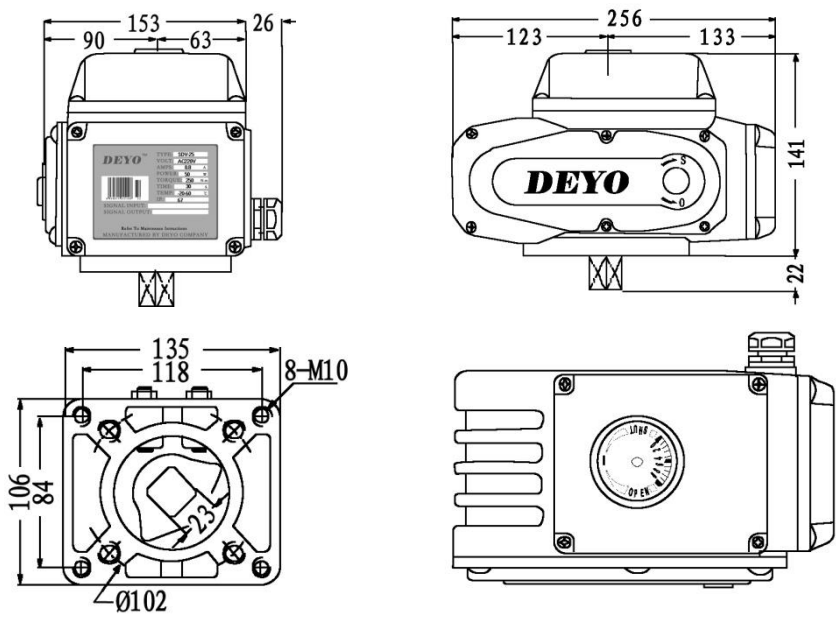
source function	DC24V	AC24V	AC110V	AC220V	AC380V
power of motor	13W	10W	10W	10W	6W
rated current	1.28A	1.50A	0.24A	0.15A	0.07A
output torque	20N.M/50N.M	50N.M			
actuation time	5S/20S	20S			
Turn the Angle	0° -90° ±5°				
control circuit	Switch / passive contact / open signal / intelligent adjustment				
The weight of the machine	2.5Kg				
insulation resistance	100M Ω /250VDC		100M Ω /500VDC		
Pressure resistance grade	500VAC/1min		1500VAC/1min		1800VAC/1min in
levels of protection	IP67				
Install azimuth	Install at any Angle				
Electrical interface	M20 Waterproof cable connector				
ambient temperature	-30℃-+60℃				

SDV-10/15



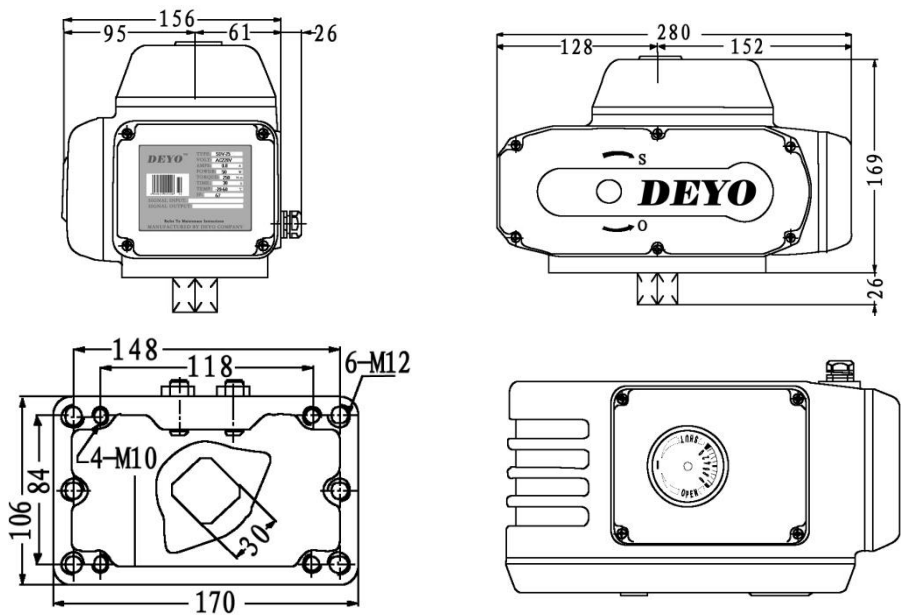
source function	DC24V	AC24V	AC110V	AC220V	AC380V
power of motor	25W/40W	25W/40W	25W/40W	25W/40W	15W/25W
rated current	2.03A	2.12A	0.57A	0.30A	0.10A
output torque	70N.M/10 0N.M	100N.M/150N.M			
actuation time	10S/30S	30S			
Turn the Angle	0° -90° ±5°				
control circuit	Switch / passive contact / open signal / intelligent adjustment				
The weight of the machine	3.9Kg				
insulation resistance	100M Ω /250VDC		100M Ω /500VDC		
Pressure resistance grade	500VAC/1min		1500VAC/1min		1800VAC/ 1 min
levels of protection	IP67				
Install azimuth	Install at any Angle				
Electrical interface	M20 Waterproof cable connector				
ambient temperature	-30°C-+60°C				

SDV-25/50



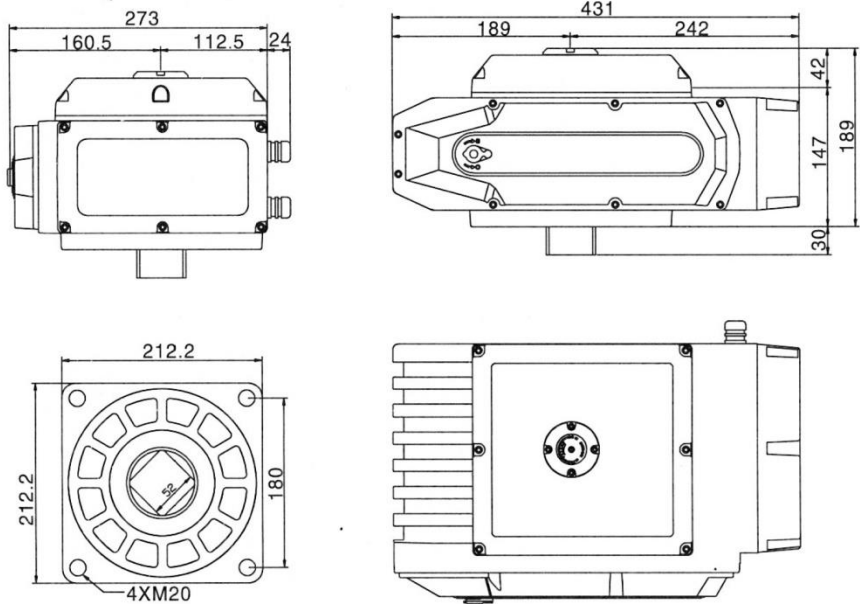
source function	SDV-25			SDV-50		
	DC24V	AC220V	AC380V	DC24V	AC220V	AC380V
power of motor	50W	60W	40W	70W	90W	50W
rated current	3.57A	0.80A	0.29A	5.13A	1.00A	0.29A
output torque	250N.M			500N.M		
actuation time	30S			30S		
Turn the Angle	0° -90° ±5°					
control circuit	Switch / passive contact / open signal / intelligent adjustment					
The weight of the machine	6.8Kg			8.0Kg		
insulation resistance	DC24V: 100M Ω /250VDC AC220/380V: 100M Ω /500VDC					
Pressure resistance grade	DC24:500VAC/1min, AC220:1500VAC/1min, AC380:1800VAC/1min					
levels of protection	IP67					
Install azimuth	Install at any Angle					
Electrical interface	M20 Waterproof cable connector					
ambient temperature	-30℃-+60℃					

SDV-100/200



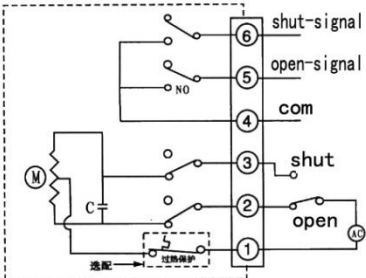
source function	SDV-100		SDV-200	
	AC220V	AC380V	AC220V	AC380V
power of motor	120W	90W	140W	100W
rated current	1.20A	0.44A	1.20A	0.48A
output torque	1000N.M		2000N.M	
actuation time	50S		100S	
Turn the Angle	0° -90° ±5°			
control circuit	Switch / passive contact / open signal / intelligent adjustment			
The weight of the machine	12Kg		12Kg	
insulation resistance	AC220/380V: 100M Ω /500VDC			
Pressure resistance grade	AC220:1500VAC/1min, AC380:1800VAC/1min			
levels of protection	IP67			
Install azimuth	Install at any Angle			
Electrical interface	M20 Waterproof cable connector			
ambient temperature	-30℃-+60℃			

SDV-400/600

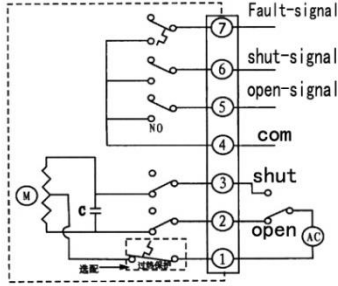


source function	SDV-400		SDV-600	
	AC220V	AC380V	AC220V	AC380V
power of motor	200W	180W	200W	180W
rated current	2.1A	0.9A	2.1A	0.9A
output torque	4000N.M		6000N.M	
actuation time	100S		150S	
Turn the Angle	0° -90° ±5°			
control circuit	Switch / passive contact / open signal / intelligent adjustment			
The weight of the machine	30Kg		31Kg	
insulation resistance	AC220/380V: 100M Ω /500VDC			
Pressure resistance grade	AC220:1500VAC/1min, AC380:1800VAC/1min			
levels of protection	IP67			
Install azimuth	Install at any Angle			
Electrical interface	M20 Waterproof cable connector			
ambient temperature	-30℃-+60℃			

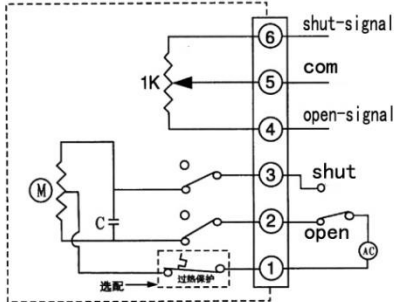
5. Circuit diagram



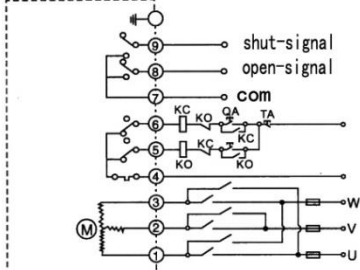
standard switch passive contact signal(S)



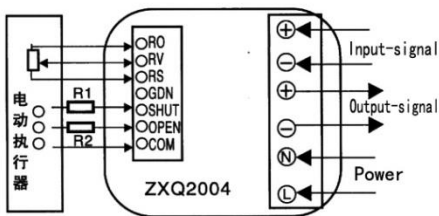
Fault signal output (SG)



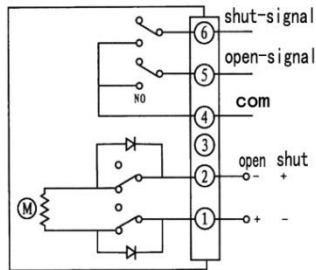
opening potential signal (R)



three-phase passive contact



intelligent adjustment type (Z)



DC power passive contact signal

Special warning: two or more power power actuators can not be connected in parallel, in other words, can not use the same connection to control multiple power actuators, otherwise it will cause out of control and motor overheating!

6. Connect valves

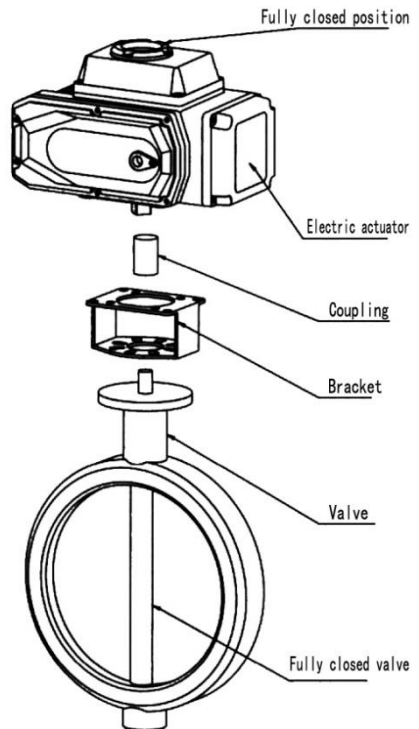
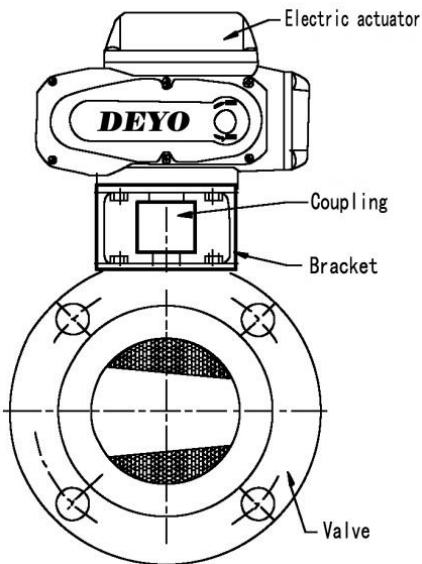
1. Manual turn the valve to confirm that the valve is normal and turn it to the full close position;
2. Gently fix the bracket on the valve with screws;
3. Cover the coupling on the valve stem;
4. After determining the status of the electric actuator is the full off position, set the output axis

Insert it into the coupling fixed to the valve stem;

5. Attach the electric actuator to the bracket with screws (because mechanical

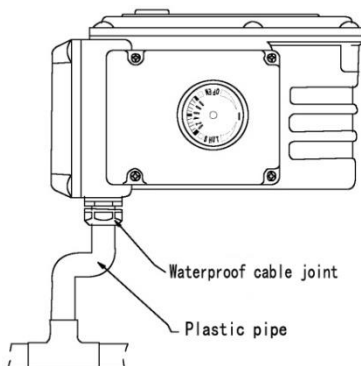
Device inevitable clearance, occasionally appear screw hole position pairs Ununiform, we just need to shake the lever a little slightly Electric actuators, which can solve such problems);

6. Tighten the screws of each component and complete the installation.



7. Distribution connection

- The 6-11 cable is recommended to ensure safe and reliable wiring.
Lock the cable through the lock cover and the wire lock, and fix the cable head to the wiring terminal according to the wiring diagram, and then lock the wire lock cover to secure the cable. If a cable that is not suitable for the inner diameter of the cable connector is used, the water may damage all the internal parts from the waterproof cable connector into the electric actuator.
- When using the cable pipe, take waterproof measures.
Valve electric actuator installation, as shown on the right
The mounting position should be above the cable pipe position,
Ensure that the beads do not flow into the electric actuator along the cable.
- In principle, the signal lines should use the shield lines,
- It shall be separated from the power line.



8. Connect the power supply

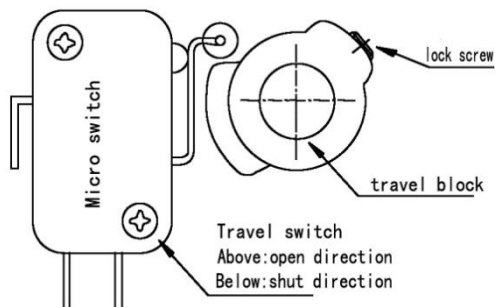
- Please access the power supply by the voltage shown in the product nameplate or circuit diagram.
- The voltage of the power supply shall meet the following requirements:
AC24/110/220/380V \pm 10% 50/60Hz
DC24V-DC220V \pm 5%
- A fuse or a short-circuit switch must be used, with a suitable capacity of between 2 and 3 times the normal operating current of the electric actuator.

9. the switch Angle adjustment

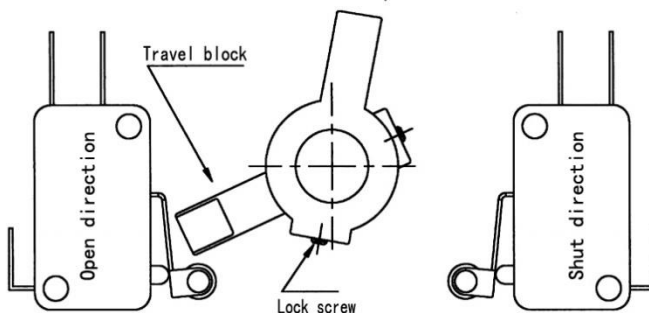
1. Adjustment of the electrical limit position

Release the wire on the limit cam and tap the cam with a screwdriver to adjust the cam and change the opening and closing angle of the electrical limit. After determining the position, tighten the top wire on the cam and adjust it.

Layout diagram of the limit cams and microswitches for the SDV-05 / SDV-10 / 15

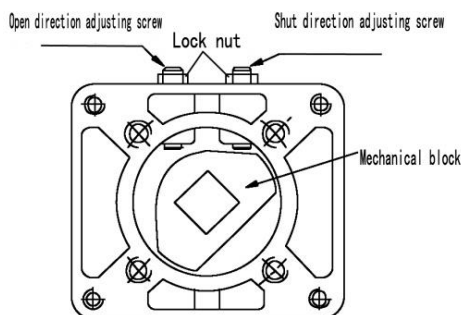


Layout diagram of the limit cams and microswitches for the SDV-25 / 50 / 100 / 200 / 400 / 600



2. Adjustment of the mechanical limit position

- Use the handle to drive the valve to the full off position and make the full off position limit switch move (make a "click" sound when the limit switch moves)
- Release the locking nut on the right and smooth with an inner hexagon wrench
Turn off the top wire to adjust the top wire and adjust the top wire with
The mechanical limit block just offset and then the reverse time direction
The top wire will be adjusted half circle
so that the full close position is mechanical
Limit lag Electrical limit is an angular
distance of about 2.5° , Lock the lock nut.
- Left full open mechanical restriction was
performed in the same way The adjustment.



Special tips: if the mechanical limit is ahead or coincides with the electrical limit, it will cause the electric actuator motor blockage, heating and even lead to the motor burning!

10. Electric trial operation

- Connect the line correctly by pressing the line control diagram pasted in the junction box cover. After confirmation, turn on the power supply.
- The switch is switched to CLOSE, and the electric actuator drives the valve running in the closing direction (along the time) until the shutdown switch moves and the electric actuator stops.
- The switch is switched to OPEN, and the electric actuator drives the valve running in the full open direction (reverse time) until the open limit switch moves and the electric actuator stops.
- After the above adjustment, if the indicated state of the opening meter is not consistent with the actual position of the valve, the central fixing screw of the opening meter plate can be released, and the opening meter position can be adjusted again to make the valve indication correct.