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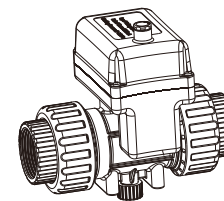
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Rev.A.2607



Ceramic Hard Sealing Ball Valve

User Manual



Please read this manual in details
before using the valve and keep it properly
in order to consult in the future.

0WRX.466.611

Catalogue

1. Model Denotation Method.....1

2. Classification.....2

3. Power Supply4

4. Installation Requirements and Attentions.....5

5. Wiring Diagram.....6

6. Parameter Setting of Open-close Duration Time Control Valve.....9

7. Parameter Setting of Open-close Point-in-time Control Valve.....11

1.Model Denotation Method

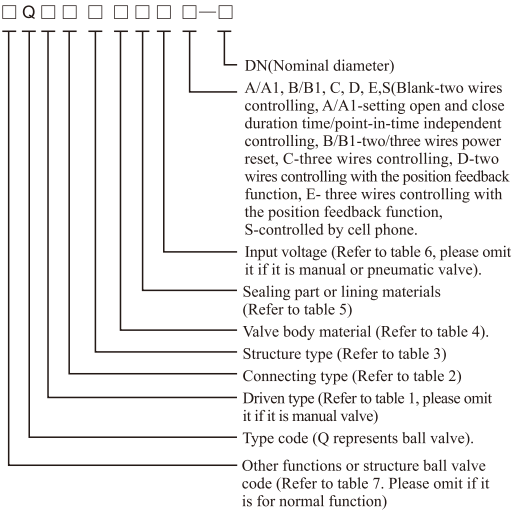


Table 1 Driven Type Code

Driven Type	Solenoid Driven	Worm Gear Driven	Bevel Gear Driven	Pneumatic Driven	Electronic Driven
Code	0	2	5	6	9

Please omit if it is manual ball valve. For pneumatic driven valve, “6K” represents normal open, “6B” represents normal close; For power reset valve, “9K” represents normal open, “9B” represents normal close.

Table 2 Connecting Type Code

Connecting Type	Code	Connecting Type	Code
Female Thread	1	Weld	6
Male Thread	2	Butt Clamp	7
Glue	3	Clamp	8
Flange	4	Clip	9
Hot Melting	5		

Table 3 Structure Type Code

Structure type		Code	Structure type		Code
Floating ball	Straight Flow Path	1	Fixed ball	Four-way Flow Path	6
	Y Shape Three-way Flow Path	2		Straight Flow Path	7
	L Shape Three-way Flow Path	4		T Shape Three-way Flow Path	8
	T Shape Three-way Flow Path	5		L Shape Three-way Flow Path	9

Table 4 Valve Body Material Code

Valve Body Material	PPO	HPb59-1	304	316	316L	UPVC	CPVC	PPH	ABS+GF10	PPE+PA
Code	0	1	2	3	4	5	6	7	8	9

Table 5 Sealing Part or Lining Materials Code

Sealing Part	95% Al ₂ O ₃	SiC	ZrO ₂	Si ₃ N ₄	99% Al ₂ O ₃
Code	1	2	3	4	5

Table 6 Input Voltage Code

Input Voltage	DC6V	DC12V	DC24V	DC36V	AC220V
Code	1	2	3	4	5

If valve has other function or structure, a letter will be added before valve type code.

Table 7 Other Function or Structure Valve Code

Function	Fireproof of Type	Slow-closure Type	Slagging Type	Fast Type	Auxiliary Manual Type	Adjustable Type	(Shaft Seal) Corrugated Pipe Type	Printing and Dyeing
Code	F	H	P	Q	S	V	W	R

Example: Q911011-20; According to the sequence; Q-Ball valve, 9-Electric driven, 1-Female thread, 1-Straight flow path of floating ball, 0-Material of valve body is PPO, 1-95% Al₂O₃ sealing part, 1-Input voltage: DC6V, 20-DN20.

2. Classification (Power off after Open or Close in Place)

1. Two wires controlling (DC)

Two wires as controlling wires, and control ball valve open or close by switching the polarity of motor.

2. Power reset (DC)

Three wires power reset

Three wires as controlling wires, during working status, it means open that one wire is connected with public wire, and it means close that the

other wire is connected with public wire. Charging Super Capacitor for stand-by during working status, once the power off, Super Capacitor discharged for making the valve reset automatically.

3. Can be controlled individually by setting open-close duration time or point-in-time (DC)

(1) Can be controlled individually by setting open-close duration time.

A. The length of duration can be set, without clock function, the valve is cycled open and close according to the set length of time.

B. Two types of open and close time range: 000:01-999:59 (hour: minute) or 000:15-999:59 (minute: second).

(2) Can be controlled individually by setting open- close point-in-time.

A. Can be set open and close for each day from Monday to Sunday at different time points.

B. Each day 5 groups of time points can be set at most. If the number of switch is set to 0, then switch state will keep the same as last day.

C. First use or power-off exceeds three days, time and week needs to be corrected.

4. Valve with the function of position feedback

(1) Five wires as controlling wires (DC)

Two wires as power controlling wires, three wires as feedback wires.

It means open when power controlling wires are connected with forward voltage, and provides signal of opening, otherwise provides signal of closing.

(2) Six wires as controlling wires (DC, AC)

Three wires as power controlling wires, three wires as feedback wires.

It means open when power controlling wires are connected with public wire, and provides signal of opening, otherwise provides signal of closing.

5. Valve with adjustable function

A. The opening degree of valve has equal percentage flow characteristic.

B. The angle of opening can be automatically adjusted by PLC, which is used for adjusting flow, temperature, pressure, etc.

C. Position feedback signal: 0-5V, controlling signal: 0-5V.

6. Auxiliary manual type

When there is no power or air supply, it can open and close the ball valve manually.

7. Valve controlled by cell phone

Installing a cell phone card on the valve to establish interconnected with Android system phone. It can remote control valve open and close and inquire historical information by cell phone.

3.Power Supply

Table 8 Power supply configuration table

Nominal Diameter	Open-close Time (S)	Rated Voltage (V)	Motor Power (W)	Actual Power (W)
DN15/ DN20	12.5	DC6V、12V、 24V	4W	0.8W
DN25			4W	1.5W
DN15/ DN20	5	DC6V、12V、 24V	6W	2.5W
DN25			6W	4W
DN15/ DN20	5	AC220V	6W	0.4W
DN25			6W	0.7W
DN32	10	DC12V	8W	4W
DN40	10	DC24V	12W	7W
DN50	10	DC24V	18W	8W
DN32	45	AC220V	11W	1W
DN40	45	AC220V	11W	3W
DN50	25	AC220V	14W	3.5W
DN65	32	DC24V\AC220V	55W	12W
DN80	32	DC24V\AC220V	55W	14W
DN100	30	AC220V	25W	/
DN125	30	AC220V	35W	/
DN150	30	AC220V	45W	/
DN200	40	AC220V	90W	/

Note: The actual power is tested at the 1.0 Mpa load.

4. Installation Requirements and Attentions

- 1.The power adapter must match with the valve model (Refer to table 8)
- 2.During installation, the flow direction should be same as the symbol “” on valve body, otherwise, it will cause leakage; DN65 and bigger ball valves, when installed horizontally, the actuator must be directed upward (as the Figure 1 shows); When installed vertically, the actuator can be oriented in any direction (as the Figure 2 shows);

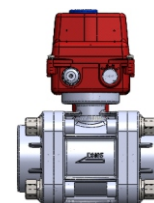


Figure 1

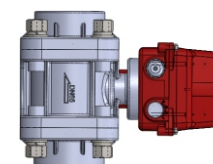
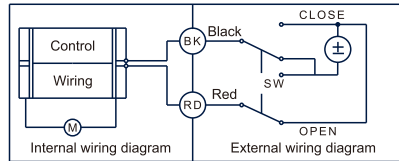


Figure 2

- 3.Non-professional person is not allowed to disassembly, assembly or maintenance for valve;
- 4.As factory default, the power reset valve is normal closed, please note your specific demands when you place an order.
- 5.The valve is not applicable to occasions with larger impurity particles. It should be set up a filter device in front of valve when hard impurity particles reach or are bigger than 0.2mm.
6. It is forbidden to install and use under environmental conditions where the freezing occurs easily.
7. The medium pressure shall not exceed the nominal pressure of the valve.

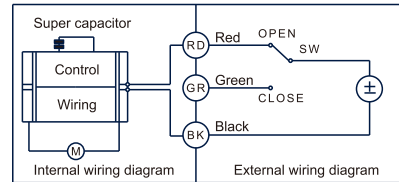
5. Wiring Diagram

1. Two wires control wiring diagram



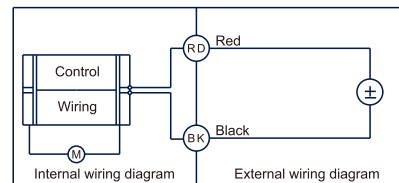
- ① When SW and OPEN are connected, valve opens, and keeps the same position after putting in place.
 - ② When SW and CLOSE are connected, valve closes, and keeps the same position after putting in place.
- Suitable for DC6V, DC12V, DC24V valve. SW is two wire switch.

2. Three wires power reset wiring diagram



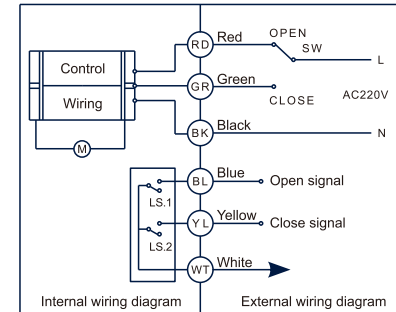
- ① When SW and the red wire are connected, valve opens, and keeps the same position after putting in place.
 - ② When SW and the green wire are connected, valve closes, and keeps the same position after putting in place.
- Suitable for DC12V, DC24V valve.

3. With Open-close time settable wiring diagram



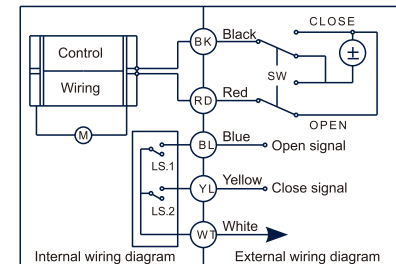
- ① In set duration time or point-in-time, valve opens;
 - ② In set duration time or point-in-time, valve closes;
- Suitable for DC12V, DC24V valve.

4. 220V Three wires control with the function of position feedback wiring diagram



- ① When SW and the red wire are connected, valve opens, and keeps the same position after putting in place. Meanwhile, LS.1 is connected and sent the open signal, which means blue wire and white wire are connected.
 - ② When SW and the green wire are connected, valve closes, and keeps the same position after putting in place. Meanwhile, LS.2 is connected and sent the close signal, which means yellow wire and white wire are connected.
- Suitable for AC220V valve.

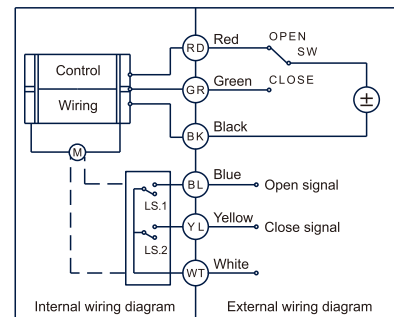
5. DC Two wires control with the function of position feedback wiring diagram



- ① When SW and OPEN are connected, valve opens, and keeps the same position after putting in place. Meanwhile, LS.1 is connected and sent the open signal, which means BL and WT are connected.
- ② When SW and CLOSE are connected, valve closes, and keeps the same position after putting in place. Meanwhile, LS.2 is connected and sent the close signal, which means YL and WT are connected.

Suitable for DC24V valve.

6. DC Three wires control with the function of position feedback wiring diagram

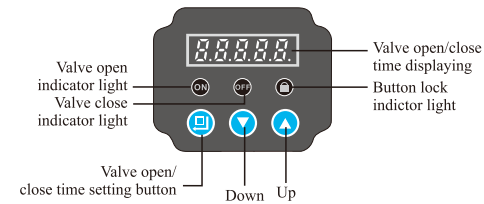


- ① When SW and the red wire are connected, valve opens, and keeps the same position after putting in place. Meanwhile, LS.1 is connected and sent the open signal, which means blue wire and white wire are connected.
- ② When SW and the green wire are connected, valve closes, and keeps the same position after putting in place. Meanwhile, LS.2 is connected and sent the close signal, which means yellow wire and white wire are connected.

Suitable for DC24V valve.

6. Parameter Setting of Open-close Duration Time Control Valve

1. Display



2. Parameter Setting

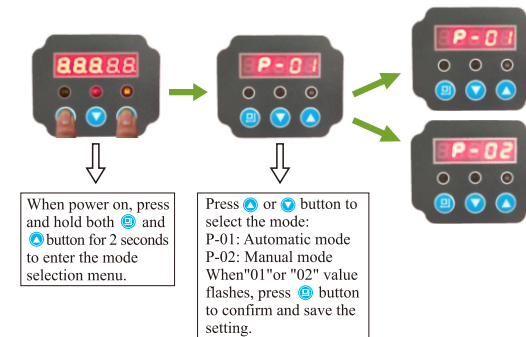
2.1 Buttons lock and unlock

All parameter setting should be carried out with the buttons are unlocked.

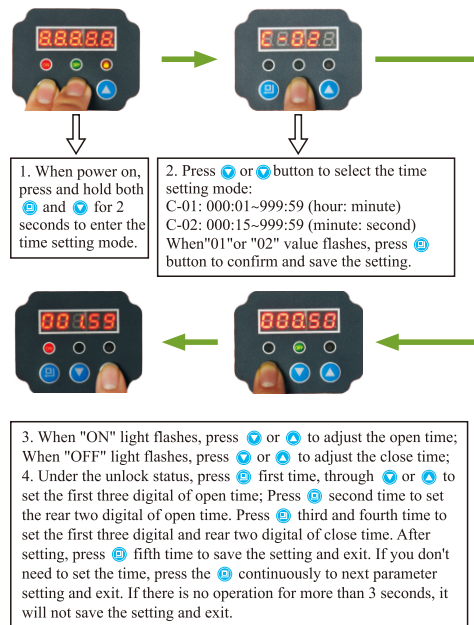


When there is no operation for more than 1 minute, the buttons will be locked. Press and hold both and button for 2 second to unlock.

2.2 P-01 and P-02 mode setting (the factory default value is P-01)



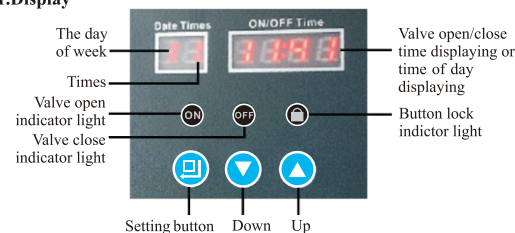
2.3 Setting process under P-01 mode



2.4 Under manual mode P-02, through button (when button is locked, press and hold both and for 2 second to unlock) to control the ball valve open and close.

7. Parameter Setting of Open-close Point-in-time Control Valve

1.Display



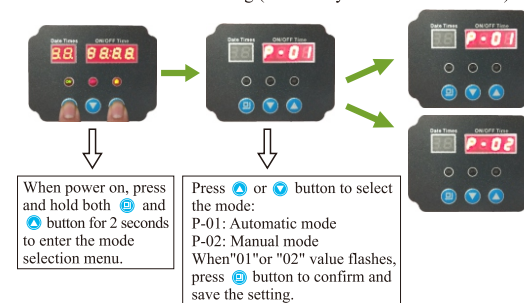
2. Parameter Setting

2.1 Buttons lock

No operations to buttons within 1 minute, lights on which represent buttons are locked. Before operation, press and hold the " " and " " buttons for 2 seconds to unlock.

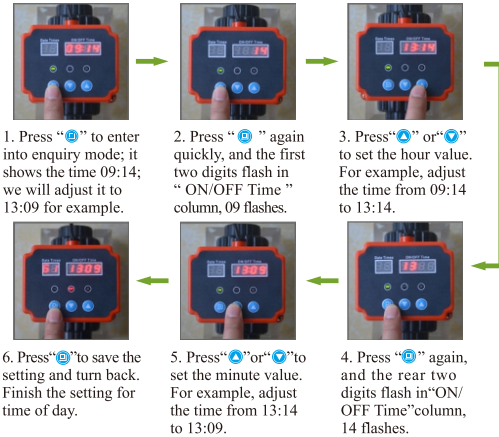


2.2 P-01 and P-02 mode setting (the factory default value is P-01)

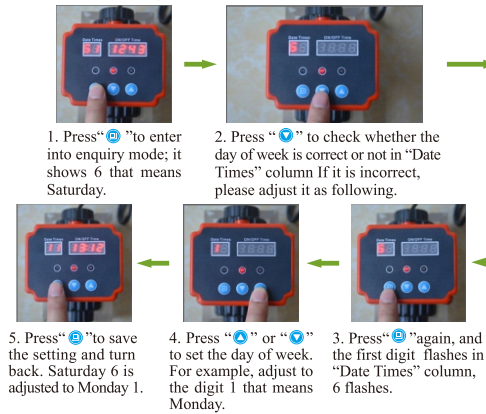


2.3 Setting process under P-01 mode

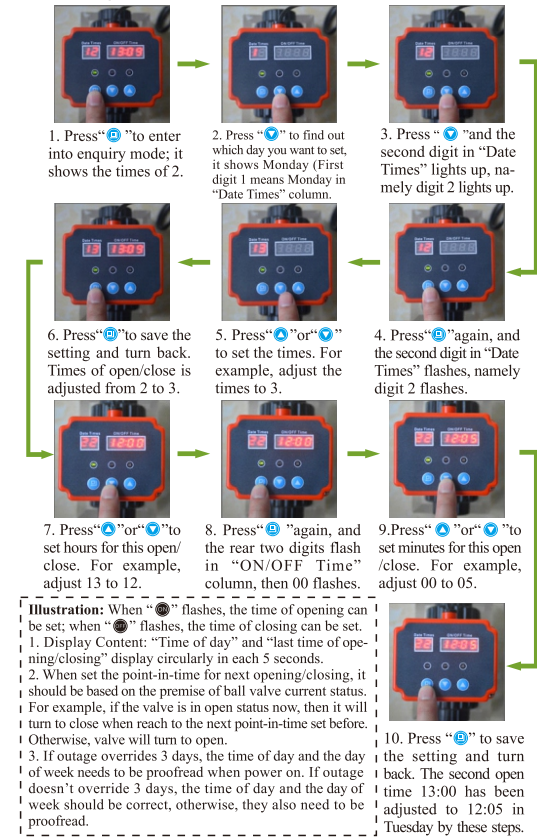
2.3.1 Setting time of day



2.3.2 Proofread the day of week



2.3.3. Setting times



2.4 Under manual mode P-02, through "Enter" button (when button is locked, press and hold both "Up" and "Down" button for 2 second to unlock) to control the ball valve open and close.