



Manual NO.13637

Electric Motorized Ball Valve

This 2-way motorized ball valve is designed for automatic fluid on/off control. It opens and closes in approximately 2 seconds, with reliable sealing, low flow resistance, and IP68 dust and water resistance. The valve automatically closes when power is cut off, provides open/close position feedback, and cuts off power at the end position to reduce energy consumption and overheating. Its compact design and simple wiring make it easy to install in **water control, HVAC, irrigation, and water treatment systems.**

OPERATION

- Apply the specified power supply: DC 12–24V or AC 24V.
- Connect the valve according to the wiring diagram.
- Once the valve reaches the end position, the actuator automatically cuts off power to reduce energy consumption and prevent overheating.
- To change the valve position, switch the control signal according to the required wiring mode.
- Manual reset is available when needed.

INSTALLATION GUIDELINES

Mounting Position

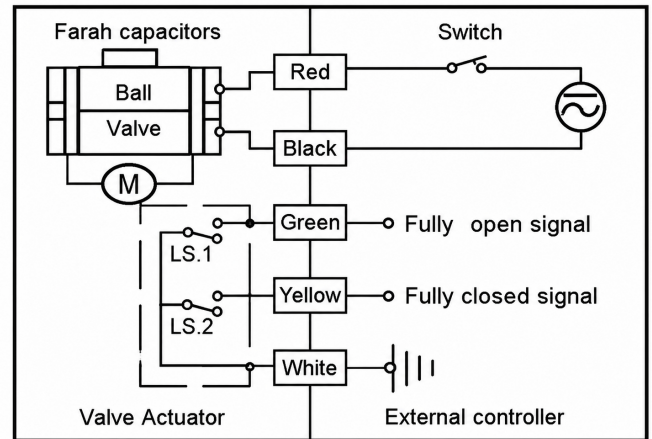
- Recommended: horizontal piping with actuator upright.
- Avoid installing the valve in areas with long-term immersion, excessive vibration, high temperature, high humidity, or corrosive environments.

Piping Installation

- Use suitable sealing material or gaskets and tighten connections evenly.

- Do not overtighten to avoid damage to the valve body or threads.
- Support piping properly to prevent external stress on the valve.

WIRING SCHEMATIC



- When SW is closed, the valve **OPEN**, the actuator **automatically** power off after in place.
- When SW is open, the valve **CLOSED**, the actuator **automatically** power off after in place.
- Green & White connect with the valve's fully open signal wiring.
- Yellow & White connect with the valve's fully closed signal wiring.

Wire	Connection / Function
Red	DC 12-24V Positive / AC 24V Live (Power)
Black	DC 12-24V Negative / AC 24V Neutral (Power)
Green	Fully Open Position Feedback Signal
White	Feedback Common / External Controller Common
Yellow	Fully Closed Position Feedback Signal

⚠Pre-Installation Checks:

- Suitable working voltage: DC 12-24V or AC 24V. Do not exceed the specified working voltage.
- Ensure pipeline pressure, temperature, and medium compatibility meet valve specifications.
- Ensure the power supply is **OFF** before wiring.

SPECIFICATIONS

Maximum Working Pressure	1.0 MPa	Power Supply	DC 12-24V / AC 24V
Circulation Medium	Fluid, air	Input Signal	Switch control
Working Current	≤2A (DC12V), ≤1A (DC24V)	Output Signal	Fully open / fully closed feedback
Locked-Rotor Current	5A (DC12V), 3.5A (DC24V)	Life Time	50,000 cycles
Open/Close Time	≤ 2 seconds	Actuator Rotation	90°
Liquid Temperature	2°C to 90°C	Torque	15 N·m
Environment Temperature	-15°C to 50°C	Valve Body Material	Brass/Stainless Steel/UPVC
Cable Specification	UL 22AWG, 0.5 m	Ball type	Full Port
Manual Override	Yes	Sealing Material	EPDM / FKM & PTFE
Open/Close Indicator	Yes	Actuator Material	Engineering Plastics PPO
Protection Class	IP68		

B150-T Series

Model	Material	D1/D2	d±0.3	L1±1	L2/L3±1	E1	H1±1	H2
USS-MSV90001	Brass	1-1/4"	32	102	25	47	125.4	31
USS-MSV90002	Brass	1-1/2"	38	114	26	54	132.4	36
USS-MSV90003	Brass	2"	49	130	27	66	140.4	44.5
USS-MSV90004	Brass	1/2"	15	57	12	25	109.4	16
USS-MSV90005	Brass	3/4"	20	65.5	15	31	112.9	19
USS-MSV90006	Brass	1"	23.5	71.5	16	38	114.9	22
USS-MSV40057	SS304	1/2"	15	62	14	25	110.5	17
USS-MSV40060	SS304	3/4"	20	72	17	31	113.9	20
USS-MSV40063	SS304	1"	25	79	18	38	116.9	24.5
USS-MSV40066	SS304	1-1/4"	32	102	25	47	125.4	31
USS-MSV40069	SS304	1-1/2"	38	114	26	54	132.4	36
USS-MSV40072	SS304	2"	49	130	27	66	140.4	44.5
USS-MSV90013	UPVC	1/2"	15	107	22.3	25	136.7	27.5
USS-MSV90014	UPVC	3/4"	20	115	25.5	31	141.2	32
USS-MSV90015	UPVC	1"	25	129	28.6	38	156.25	37.25
USS-MSV90016	UPVC	1-1/4"	32	144	32	47	162.4	42.75
USS-MSV90017	UPVC	1-1/2"	40	161	35	54	174	50
USS-MSV90018	UPVC	2"	50	173	38	66	194.4	61.2

ASSEMBLE DIAGRAM

