



# 电动球型阀

## Electric Ball Valve

EBV Series



### 产品叙述 Product Description

EBV 系列电动球阀为高性能电动控制阀门，提供 V 型球阀与不锈钢卫生级球阀两种结构设计，满足不同产业对于流体控制精度与洁净制程的应用需求。采用精巧一体化设计，具备高输出扭力与快速响应特性，适用于各类气体、液体及轻油介质之管路控制。透过 4-20mA 模拟讯号与 RS485(Modbus)通讯接口，可轻松整合至自动化控制系统，实现稳定且精准的开关与调节控制。

该系列具备全开至全关约 2.5 秒的高速作动性能，相较于一般电动阀具有更快的反应速度，可有效提升系统实时性与控制效率，特别适用于高频动作或需快速响应之应用场景。其中，V 型球阀采用 V 型开口结构，适用于需精密流量调节之应用场景，具备良好线性与稳定控制特性；而不锈钢卫生级球阀则采用法兰卡扣式(Tri-Clamp)连接与全通径设计，具备快速拆装、易清洗及低残留优势，可有效降低污染风险并缩短维护与清洁时间，特别适用于食品、医疗及生技等高洁净制程环境。

本系列产品具备高度客制化弹性，可依据不同制程条件与控制需求，提供优化流体控制解决方案，协助提升系统稳定性与整体运作效率。

The EBV series electric ball valves are high-performance control valves, offering both V-port and stainless steel sanitary ball valves to meet requirements for precise flow control and hygienic applications.

With a compact integrated design, high output torque, and fast response, they are suitable for gases, liquids, and light oils. Supporting 4-20mA and RS485 Modbus, the valves can be easily integrated into automation systems for stable and accurate control.

Featuring a fast actuation time of approximately 2.5 seconds, the EBV series provides significantly quicker response than conventional electric valves, improving system efficiency and responsiveness.

The V-port type ensures precise flow regulation, while the sanitary type with Tri-Clamp connection enables easy cleaning, reduced contamination risk, and is ideal for food, pharmaceutical, and biotech applications.



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### 产品规格 Specifications

型号 Model	EBV-05-15V	EBV-05-20V	EBV-05-25V	EBV-05-25TC	EBV-05-40TC	EBV-05-50TC
阀门通径 Nominal Size	DN15	DN20	DN25	DN25	DN40	DN50
球体型式 Ball Type	V-Port			O-Port		
连接方式 Connection	G1/2"	G3/4"	G1"	φ50.5mm Tri-Clamp	φ64mm Tri-Clamp	φ77.5mm Tri-Clamp
使用压力 Operating Pressure	0-16 Bar					
适用介质 Media	液体、气体、轻油...等 (Liquids, Gases, Light Oil...etc.)					
驱动电源 Power Supply	DC 20-28V					
额定功率 Rated Power	15W					
控制讯号 Control Signal	4-20 mA、RS485					
回馈讯号 Feedback Signal	4-20 mA、RS485					
重复精度 Repeatability	≤ 1%					
流体温度 Medium Temperature	-20 ~ 130°C (PTFE)					
环境温度 Ambient Temperature	-20 ~ 65°C					
作动时间 Actuation Time	2.5 sec(全开到全关 Full Open / Close)					
输出扭力 Rated Torque	15 N·m					
泄漏等级 Leakage Class	Class VI (零泄漏 Zero Leakage)					
使用寿命 Lifetime	≥ 80,000 cycles					
材质 Material	阀体/球阀 Body / Ball : 不锈钢 SS304 Stainless Steel SS304 阀杆 Stem : 不锈钢 SS304 Stainless Steel SS304 阀座 Seat : PTFE 执行器外壳 Actuator Housing : 压铸铝 Die-cast Aluminum					
防护等级 Protection Class	IP65					
电气接口 Electrical Interface	PG13.5 · 600 mm cable					
显示接口 Display	2.4" LCD					

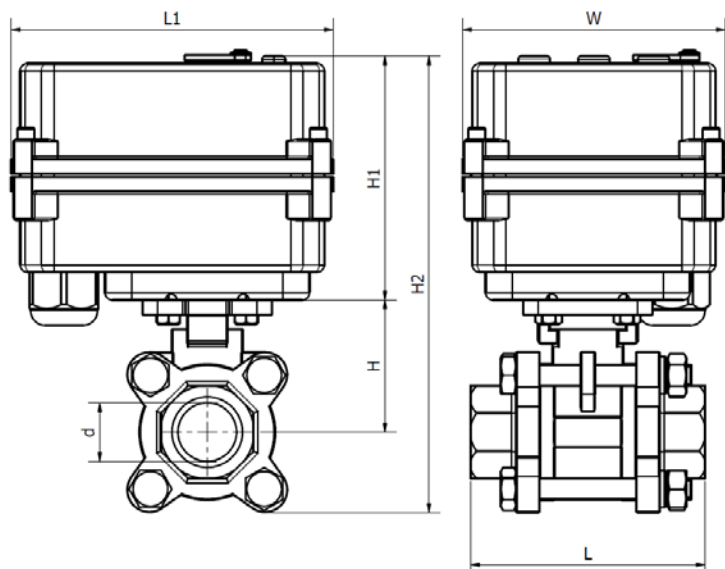


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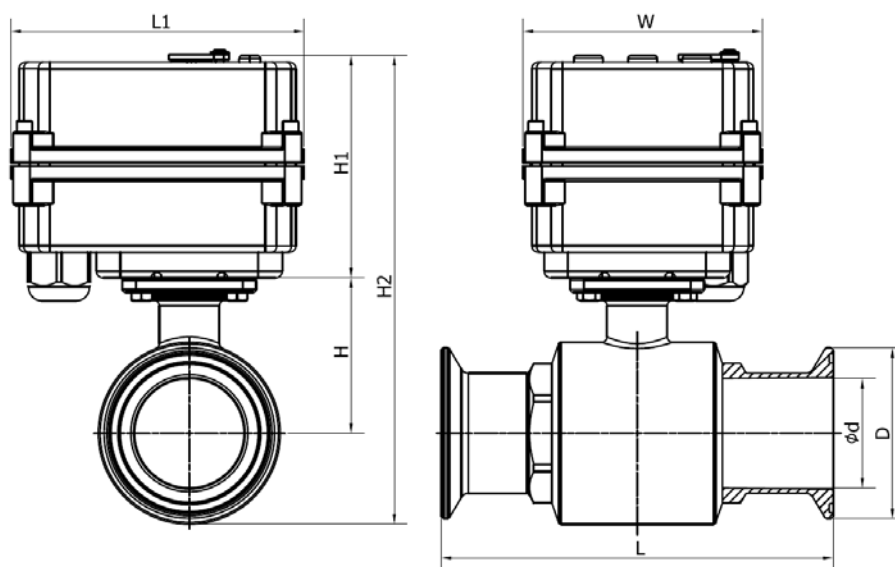
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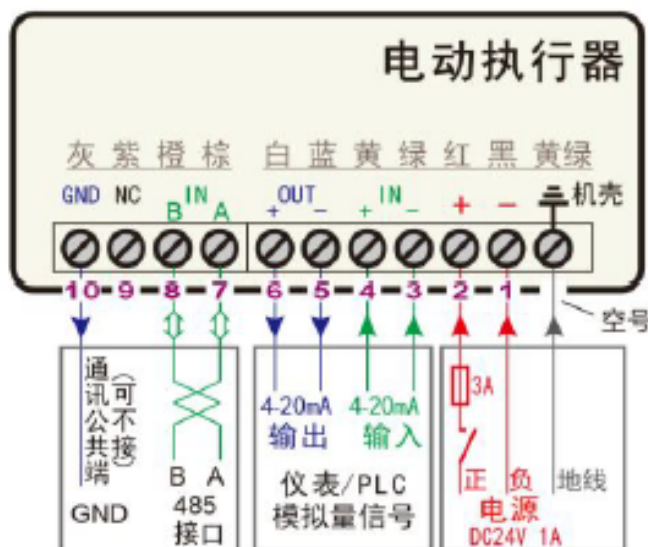
外观尺寸 Product Description



型号 Model	EBV-05-15V	EBV-05-20V	EBV-05-25V
L1	110 mm	110 mm	110 mm
H1	82 mm	82 mm	82 mm
H	42 mm	48 mm	55 mm
H2	124 mm	130 mm	137 mm
W	90 mm	90 mm	90 mm
d	φ15 mm	φ20 mm	φ25 mm
L	72 mm	80 mm	85 mm



型号 Model	EBV-05-25TC	EBV-05-40TC	EBV-05-50TC
L1	110 mm	110 mm	110 mm
H1	82 mm	82 mm	82 mm
H	50 mm	67 mm	74 mm
H2	132 mm	149 mm	156 mm
W	90 mm	90 mm	90 mm
d	φ22 mm	φ41 mm	φ52 mm
D	φ50.5 mm	φ64 mm	φ77.5 mm
L	117 mm	155 mm	155 mm



- 接线端 0：执行器接地线（黄绿线） Terminal 0：Ground (Yellow/Green wire)
- 接线端 1：电源输入负极接线端（黑色） Terminal 1：Power Supply Negative (Black wire)
- 接线端 2：电源输入正极接线端（红色） Terminal 2：Power Supply Positive (Red wire)
- 接线端 3：模拟量讯号输入负极接线端（绿色） Terminal 3：Analog Signal Input Negative (Green wire)
- 接线端 4：模拟量讯号输入正极接线端（黄色） Terminal 4：Analog Signal Input Positive (Yellow wire)
- 接线端 5：模拟量讯号回授负极端（蓝色） Terminal 5：Analog Signal Feedback Negative (Blue wire)
- 接线端 6：模拟量讯号回授正极端（白色） Terminal 6：Analog Signal Feedback Positive (White wire)
- 接线端 7：RS485 套接字 A 接线端（棕色） Terminal 7：RS485 Communication A (Brown wire)
- 接线端 8：RS485 套接字 B 接线端（橙色） Terminal 8：RS485 Communication B (Orange wire)
- 接线端 9：空白（紫色） Terminal 9：Reserved (Purple wire)
- 接线端 10：RS485 通讯 GND 端（灰色） Terminal 10：RS485 Communication GND (Gray wire)

灰 Gray	紫 Purple	橙 Orange	棕 Brown	白 White	蓝 Blue	黄 Yellow	绿 Green	红 Red	黑 Black	黄绿 Yellow/Green
GND 10	空 9	B 8	A 7	+ 6	- 5	+ 4	- 3	+ 2	- 1	≡
↓ RS485 地 可不接 RS485 Communication GND		↕ RS485 接口 RS485 Communication	↕	↓ 4-20mA 输出 Analog Signal Feedback	↓	↑ 4-20mA 输入 Analog Signal Input	↑	↑ DC24 电源 Power Supply	↑	↑ 地线 Ground

产品卷标接线图 Terminal Wiring Diagram



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#### 注意事项与保固说明 Precautions & Warranty

为确保产品正常运作与使用安全，安装前请务必确认电动阀之供电电压与实际电源相符，以避免造成设备损坏或异常。

本产品自买方收货日起，提供 1 年或开关操作达 8 万次(以先到者为准)之保固服务。于保固期间内，如因产品本身质量问题导致故障，本公司将免费提供维修或更换零件/产品之服务，并负担相关来回运费及更换工资。

To ensure proper operation and safety, please verify that the power supply voltage matches the valve's rated voltage before installation to avoid malfunction or damage.

This product is covered by a warranty of 12 months from the date of receipt or 80,000 operating cycles, whichever comes first.

During the warranty period, if any failure is caused by product quality issues, we will provide free repair or replacement of parts/products, including round-trip shipping and labor costs.

以下情况则不在保固范围内，相关维修费用将由使用者自行承担：

The following conditions are not covered under warranty, and any related repair costs shall be borne by the user:

- 超过保固期限或使用次数限制 Exceeding the warranty period or operating cycle limit
- 因不当使用所造成之损坏，包括但不限于：

Damage caused by improper use, including but not limited to:

- ◆ 使用电压超出额定范围 Power supply exceeding the rated voltage

- ◆ 使用环境温度或介质温度超出规定范围

Ambient or media temperature exceeding specified limits

- ◆ 使用介质不符合产品规范

Use of media outside specified conditions

- ◆ 长时间浸水或于不当环境中使用

Long-term submersion or use in improper environments

- ◆ 外力撞击或不当操作导致损坏

Damage caused by external force or improper operation

- ◆ 阀体或球体因长期使用造成之正常磨耗

Normal wear of valve body or ball due to long-term use

- 未经本公司授权，擅自拆卸、改装或维修所造成之损坏

Damage caused by unauthorized disassembly, modification, or repair