



電動球型閥

Electric Ball Valve

EBV Series



產品敘述 Product Description

EBV 系列電動球閥為高性能電動控制閥門，提供 V 型球閥與不鏽鋼衛生級球閥兩種結構設計，滿足不同產業對於流體控制精度與潔淨製程的應用需求。採用精巧一體化設計，具備高輸出扭力與快速響應特性，適用於各類氣體、液體及輕油介質之管路控制。透過 4-20mA 類比訊號與 RS485(Modbus)通訊介面，可輕鬆整合至自動化控制系統，實現穩定且精準的開關與調節控制。

該系列具備全開至全關約 2.5 秒的高速作動性能，相較於一般電動閥具有更快的反應速度，可有效提升系統即時性與控制效率，特別適用於高頻動作或需快速響應之應用場景。其中，V 型球閥採用 V 型開口結構，適用於需精密流量調節之應用場景，具備良好線性與穩定控制特性；而不鏽鋼衛生級球閥則採用法蘭卡扣式(Tri-Clamp)連接與全通徑設計，具備快速拆裝、易清洗及低殘留優勢，可有效降低污染風險並縮短維護與清潔時間，特別適用於食品、醫療及生技等高潔淨製程環境。

本系列產品具備高度客製化彈性，可依據不同製程條件與控制需求，提供最佳化流體控制解決方案，協助提升系統穩定性與整體運作效率。

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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產品規格 Specifications

型號 Model	EBV-05-15V	EBV-05-20V	EBV-05-25V	EBV-05-25TC	EBV-05-40TC	EBV-05-50TC
閥門通徑 Nominal Size	DN15	DN20	DN25	DN25	DN40	DN50
球體型式 Ball Type	V-Port			O-Port		
連接方式 Connection	G1/2"	G3/4"	G1"	φ50.5mm Tri-Clamp	φ64mm Tri-Clamp	φ77.5mm Tri-Clamp
使用壓力 Operating Pressure	0-16 Bar					
適用介質 Media	液體、氣體、輕油...等 (Liquids, Gases, Light Oil...etc.)					
驅動電源 Power Supply	DC 20-28V					
額定功率 Rated Power	15W					
控制訊號 Control Signal	4-20 mA、RS485					
回饋訊號 Feedback Signal	4-20 mA、RS485					
重覆精度 Repeatability	≤ 1%					
流體溫度 Medium Temperature	-20 ~ 130°C (PTFE)					
環境溫度 Ambient Temperature	-20 ~ 65°C					
作動時間 Actuation Time	2.5 sec(全開到全關 Full Open / Close)					
輸出扭力 Rated Torque	15 N·m					
泄漏等級 Leakage Class	Class VI (零洩漏 Zero Leakage)					
使用壽命 Lifetime	≥ 80,000 cycles					
材質 Material	閥體/球閥 Body / Ball : 不鏽鋼 SS304 Stainless Steel SS304 閥桿 Stem : 不鏽鋼 SS304 Stainless Steel SS304 閥座 Seat : PTFE 執行器外殼 Actuator Housing : 壓鑄鋁 Die-cast Aluminum					
防護等級 Protection Class	IP65					
電氣接口 Electrical Interface	PG13.5 · 600 mm cable					
顯示介面 Display	2.4" LCD					

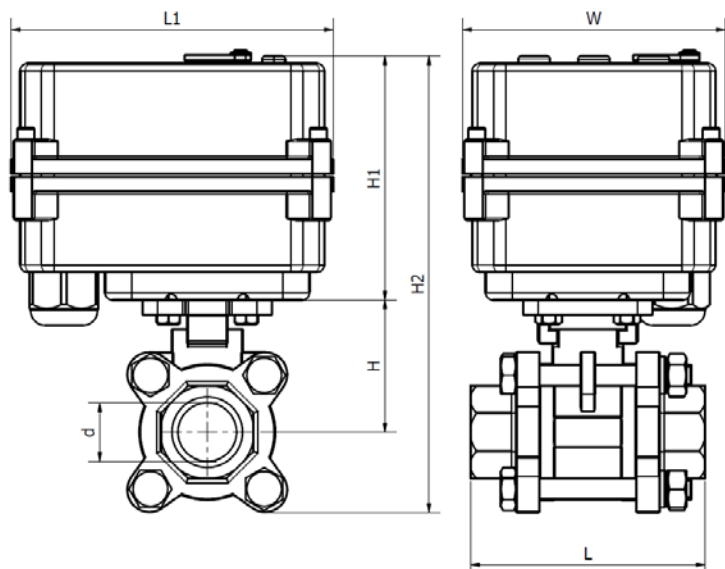


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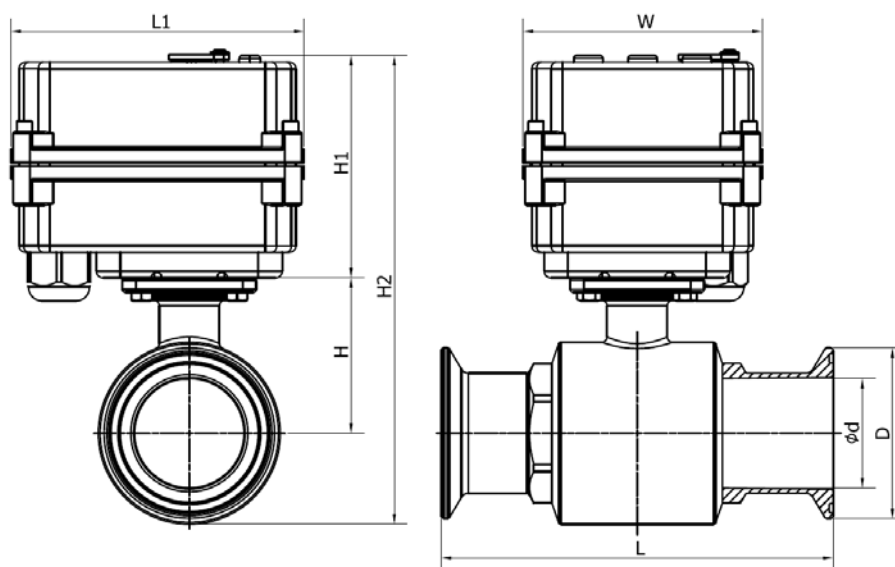
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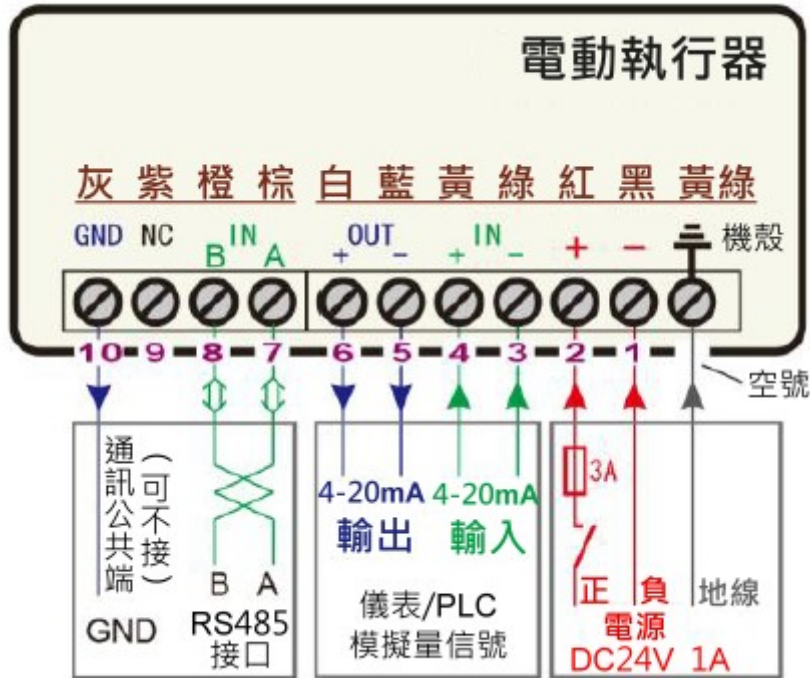
外觀尺寸 Product Description



型號 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



型號 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



- 接線端 0：執行器接地線（黃綠線） Terminal 0：Ground (Yellow/Green wire)
- 接線端 1：電源輸入負極接線端（黑色） Terminal 1：Power Supply Negative (Black wire)
- 接線端 2：電源輸入正極接線端（紅色） Terminal 2：Power Supply Positive (Red wire)
- 接線端 3：類比量訊號輸入負極接線端（綠色） Terminal 3：Analog Signal Input Negative (Green wire)
- 接線端 4：類比量訊號輸入正極接線端（黃色） Terminal 4：Analog Signal Input Positive (Yellow wire)
- 接線端 5：類比量訊號回授負極端（藍色） Terminal 5：Analog Signal Feedback Negative (Blue wire)
- 接線端 6：類比量訊號回授正極端（白色） Terminal 6：Analog Signal Feedback Positive (White wire)
- 接線端 7：RS485 通訊端 A 接線端（棕色） Terminal 7：RS485 Communication A (Brown wire)
- 接線端 8：RS485 通訊端 B 接線端（橙色） Terminal 8：RS485 Communication B (Orange wire)
- 接線端 9：空白（紫色） Terminal 9：Reserved (Purple wire)
- 接線端 10：RS485 通訊 GND 端（灰色） Terminal 10：RS485 Communication GND (Gray wire)

灰 Gray	紫 Purple	橙 Orange	棕 Brown	白 White	藍 Blue	黃 Yellow	綠 Green	紅 Red	黑 Black	黃綠 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 輸出 Analog Signal Feedback	↓	↑ 4-20mA 輸入 Analog Signal Input	↑	↑ DC24 電源 Power Supply	↑	↑ 地線 Ground

產品標籤接線圖 Terminal Wiring Diagram



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注意事項與保固說明 Precautions & Warranty

為確保產品正常運作與使用安全，安裝前請務必確認電動閥之供電電壓與實際電源相符，以避免造成設備損壞或異常。

本產品自買方收貨日起，提供 1 年或開關操作達 8 萬次(以先到者為準)之保固服務。於保固期間內，如因產品本身品質問題導致故障，本公司將免費提供維修或更換零件/產品之服務，並負擔相關來回運費及更換工資。

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.

以下情況則不在保固範圍內，相關維修費用將由使用者自行負擔：

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

- 超過保固期限或使用次數限制 Exceeding the warranty period or operating cycle limit
- 因不當使用所造成之損壞，包括但不限於：

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

- ◆ 使用電壓超出額定範圍 Power supply exceeding the rated voltage

- ◆ 使用環境溫度或介質溫度超出規定範圍

Ambient or media temperature exceeding specified limits

- ◆ 使用介質不符合產品規範

Use of media outside specified conditions

- ◆ 長時間浸水或於不當環境中使用

Long-term submersion or use in improper environments

- ◆ 外力撞擊或不當操作導致損壞

Damage caused by external force or improper operation

- ◆ 閥體或球體因長期使用造成之正常磨耗

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

- 未經本公司授權，擅自拆卸、改裝或維修所造成之損壞

Damage caused by unauthorized disassembly, modification, or repair