

12V VALVES

ELECTRIC CONTROL WATER VALVES



- Electronic actuation & precision control
- Multiple configurations available, supporting a wide application range
- For ICE and BEV systems
- Coolant mixture 50% water / 50% glycol
- Brushless motors available
- Durable internal components
- Sealed housing and connectors
- Compact & Lightweight construction
- Low power consumption
- Wide operating temp range

Calatherm offer a range of electric water and coolant control valves, engineered for precise thermal management in modern automotive systems. These valves regulate the coolant flow within electric vehicle battery systems, and HVAC circuits, enabling accurate temperature control under varying operating conditions.

By replacing traditional mechanical valves with intelligent electronic actuation, our solutions allow faster response times, improved efficiency, and greater integration with vehicle control units.

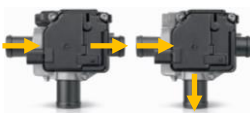
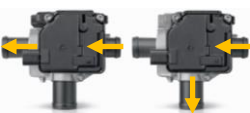
Designed to meet stringent automotive OEM requirements, our electric water valves feature compact packaging, robust materials, and high reliability for operation in demanding thermal environments. They are suitable for both conventional internal combustion vehicles and new-energy platforms, including hybrid and fully electric vehicles.

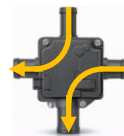
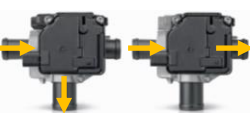
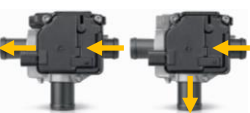
When integrated into advanced thermal management systems, these valves help optimise heat distribution, protect critical components, and reduce overall energy consumption.

BENEFITS

- Fine-tuned control of coolant flow improves heat distribution and system balance.
- Improved energy efficiency through reduced unnecessary coolant circulation (compared to mechanical valves).
- Faster response to changing thermal loads, increasing overall system responsiveness.
- For ICE and BEV systems where thermal management is critical.
- Simplified system integration through wide compatibility and feedback features.
- Supports fault codes and live status for enhances system monitoring.
- Electronic control reduces mechanical wear and lowers service intervention needs.
- Smooth operation, quieter than mechanical valves.
- Helps deliver precise HVAC performance for better passenger comfort.

TECHNICAL SPECIFICATION

Model	VALVE-4-12-BL-1-1	VALVE-3-12-BL-1-1	VALVE-3-12-BL-2-1	VALVE-3-12-BL-3-1
Image				
Type	Brushless	Brushless	Brushless	Brushless
Direction	4 Way	3 Way	3 Way	3 Way
Size	118 x 118 x 92.4 mm	118 x 89.5 x 92.4 mm	118 x 89.5 x 92.4 mm	118 x 89.5 x 92.4 mm
Voltage	9 ~ 16 VDC	9 ~ 16 VDC	9 ~ 16 VDC	9 ~ 16 VDC
Current	0.6 A Max	0.6 A Max	0.6 A Max	0.6 A Max
Max. Pressures	320 kPa(G)	320 kPa(G)	320 kPa(G)	320 kPa(G)
Working Temp	-40°C / +120°C	-40°C / +120°C	-40°C / +120°C	-40°C / +120°C
Ingress	IP67	IP67	IP67	IP67
Noise	≤ 45 dB	≤ 45 dB	≤ 45 dB	≤ 45 dB
Nozzle	20 / 22.4 mm Bulge	20 / 22.4 mm Bulge	20 / 22.4 mm Bulge	20 / 22.4 mm Bulge
Mass	240 g	229 g	229 g	229 g
Comms	LIN	LIN	LIN	LIN

Model	VALVE-4-12-B-1-1	VALVE-3-12-B-1-1	VALVE-3-12-B-2-1	VALVE-3-12-B-3-1
	VALVE-4-12-B-1-2	VALVE-3-12-B-1-2	VALVE-3-12-B-2-2	VALVE-3-12-B-3-2
	VALVE-4-12-B-1-3	VALVE-3-12-B-1-3	VALVE-3-12-B-2-3	VALVE-3-12-B-3-3
Image				
Type	Brushed	Brushed	Brushed	Brushed
Direction	4 Way	3 Way	3 Way	3 Way
Size	118 x 115 x 79.6 mm	118 x 96.5 x 79.6 mm	118 x 96.5 x 79.6 mm	118 x 96.5 x 79.6 mm
Voltage	9 ~ 16 VDC	9 ~ 16 VDC	9 ~ 16 VDC	9 ~ 16 VDC
Current	0.6 A Max	0.6 A Max	0.6 A Max	0.6 A Max
Max. Pressures	320 kPa(G)	320 kPa(G)	320 kPa(G)	320 kPa(G)
Working Temp	-40°C / +120°C	-40°C / +120°C	-40°C / +120°C	-40°C / +120°C
Ingress	IP67	IP67	IP67	IP67
Noise	< 45 dB	< 45 dB	< 45 dB	< 45 dB
Nozzle	20 / 22.4 mm Bulge	20 / 22.4 mm Bulge	20 / 22.4 mm Bulge	20 / 22.4 mm Bulge
Mass	294 g	229 g	229 g	229 g
Comms	LIN	LIN	LIN	LIN
	Analogue	Analogue	Analogue	Analogue
	PWM	PWM	PWM	PWM