

SHAPE MEMORY ALLOY VALVE

2/2-way shape memory alloy diaphragm isolation valve
Orifice diameter 0.4 mm (DN) | 0.8 mm (DN)
Low Cost

SMV Series



Shape Memory Alloy valve driver
12 VDC - 24 VDC

By using a shape memory alloy instead of a magnet, the switching is almost silent and requires an extremely low power of only 0.3 W.

With this technology the switching is significantly slower compared to solenoid valves, which means that the valves are especially suitable in applications that need to react sensitively to fast flow movements.

The compact design of only 4.0 x 18.4 x 19 mm and the O-ring connection allow space-saving integration in micro-fluidic systems.

The design and manufacturing method allows this valve to be used as a disposable and **low-cost solution**.

SPECIFICATIONS

	SMV Series
Type	2/2-way NC
Orifice diameter	0.4 mm (DN) 0.8 mm (DN)
Port connection	Hose Barbs O-Ring
Electrical supply	Constant current: 250 mA (Operation with resistor between valve and power supply: 45 Ω - 5 W using 12 VDC, 10 Ω - 1 W using 2x AA battery)
Operating pressure range	Inlet: 0 - 1000 mbar (Customised models: 0 - 2000 mbar 0 - 2500 mbar) Outlet: 0 - 500 mbar (Customised models: 0 - 1000 mbar)
Diaphragm material	FPM EPDM FFKM
Body material	PPS PEEK
Response time	approx. 600 ms
Fluid temperature range	5 - 40°C
Ambient temperature range	5 - 40°C
Power consumption	0.3 W
Operating duration	max. 0.6 Hz
Outer dimensions (depending on the model)	4.0 x 18.4 x 19.0 mm
Weight	approx. 1 g

Customisable to specific requirements (e.g. higher pressure range, different operating mode, higher temperature range, different port connections, ...)