

NC-VALVE SERIES09

with shape memory alloy actuator



The memetis normally closed 2/2-way valve enables complex fluidic systems in small dimensions with very low power consumption and noiseless switching.

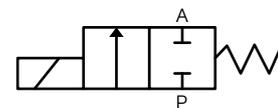
The ultracompact valve is a perfect fit for fluidics in life sciences and other small but complex fluidic applications.

Specifications

Parameter	Value
Functionality	2/2-way seat valve normally closed (NC)
Media (separated)	Liquids and gases
Dimensions	20.0 x 5.0 x 8.0 mm ³
Internal volume	< 4 µl
Nominal width DN	0.75 mm
Max. pressure @input	2.0 bar
Max. pressure @output	1.2 bar
Switching time* on/off	< 0.07 s / < 0.16 s
Typical flow rates*	2600 ml/min (air) 80 ml/min (water)
K _v value	~ 0.006 m ³ /h
Temperature range	< 50 °C
Lifetime	> 10 ⁷ cycles
Housing material**	PPS (or PEEK)
Membrane material**	Silicone
Fluidic connection	Screwed flange connection (FKM O-rings included)
Power consumption*	≤ 0.30 W
Nominal current*	≤ 0.50 A
Electrical connections	Pin-header (pitch 2.54 mm)

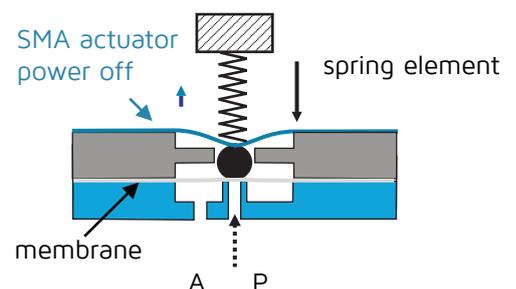
Functionality

2/2-way NC

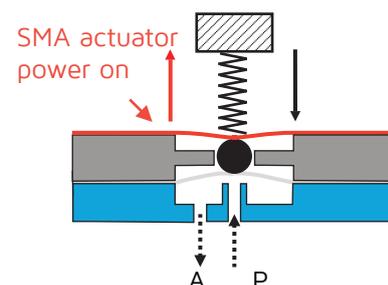


The miniature valve from memetis contains a shape memory alloy actuator that opens the valve.

closed state



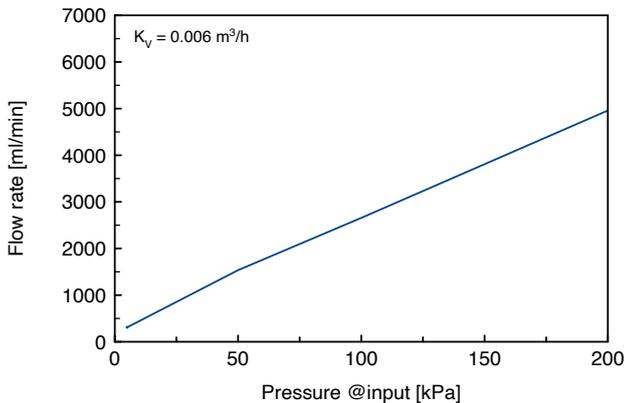
open state



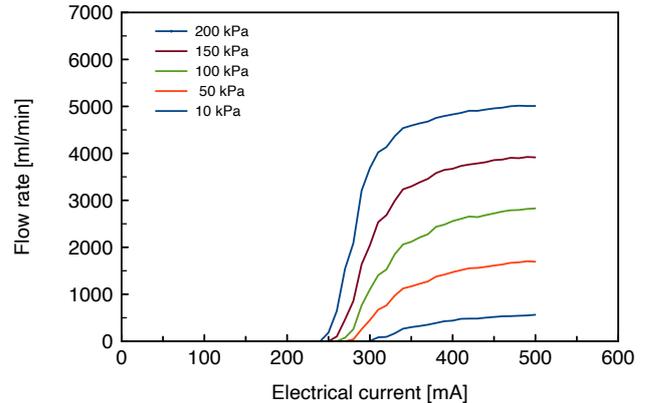
* @20 °C & 1 bar (optimized heating current)

** contact us for other material requirements

Typical Flow Characteristics

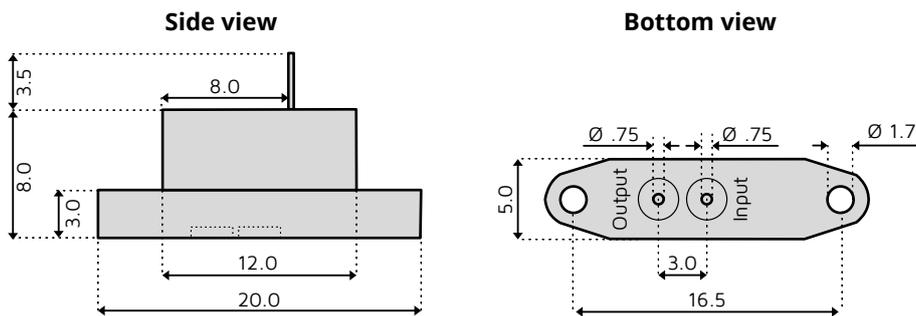


Graph 1: Flow rate of a memetis 2/2-way NC valve (PPS) for pressures up to 2 bar (input pressure) for air at room temperature without output pressure.



Graph 2: Flow rate depending on applied electrical current for a memetis 2/2-way NC valve (PPS). A current of 0.5 A corresponds to a power consumption of 0.3 W.

Drawings and Integration



The memetis NC valve can be integrated by flange mount, using two M1.6 screws. O-rings are integrated in the valve.

Complementary memetis Products



Ready-to-use **electronic control unit (ECU-S1-nc)**, powered by 5 V microUSB-port or external power supply, to control memetis normally closed valve. This ECU offers push buttons and digital input channels.



memetis **fluidic adapter** enables to connect our valves with different fluidic connectors. Available with a Polycarbonate base plate to observe the liquid flow or with a black base plate.



memetis offers customized **smart valve manifolds** to enable easy operation of complex fluidic systems.

Now available in our online shop: shop.memetis.com

Contact information