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INFORMATION SHEET

| | | | |
|-----------|--------------------------------|-------------|---------|
| Part name | Micro shape memory alloy valve | Part number | 3000181 |
|-----------|--------------------------------|-------------|---------|

Description

The micro shape memory alloy valve is very small with dimensions of 4 x 16 x 16.5 mm and weight of approximately 1g. It is especially suitable for low power consumption applications as it can be actuated with less than 0.3W power. The valve is controlled using a constant current supply of 250mA. The shape memory alloy actuation mechanism is completely silent and moves more slowly than conventional solenoid valves. The perfluoroelastomer diaphragm and PEEK body ensure that the fluid only comes into contact with inert materials.



3000181 Shape memory alloy valve

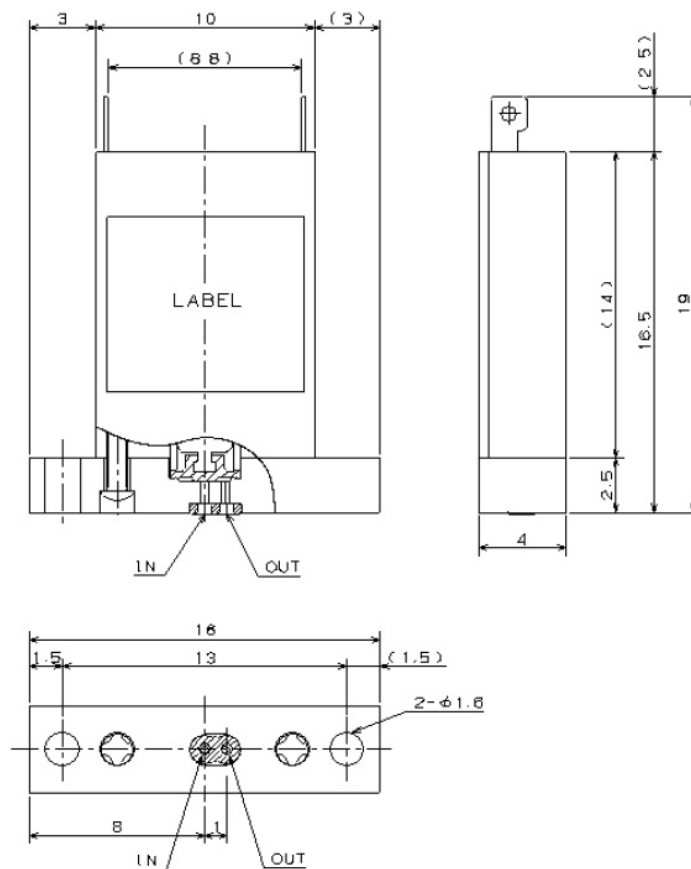
Benefits

- Very low power
- Very small size
- Low internal volume
- Silent operation
- Excellent chemical resistance (wetted materials PEEK and perfluoroelastomer)
- Lightweight
- Pressure range up to 0.8 bar
- Ideal for integration into microfluidic systems

| | Specification | Value |
|----|--------------------------|--|
| 1 | Valve Type | 2-way N.C. (normally closed) ⁽¹⁾ |
| 2 | Orifice Diameter | 0.4 mm |
| 3 | Port Connection | Gasket seal |
| 4 | Operating Pressure Range | IN: 0 – 800 mb OUT: 0 – 300 mb (supply pressure on OUT port) |
| 5 | Compatible Fluids | All fluids compatible with PEEK & perfluoroelastomer Fluids free of particulate |
| 6 | Fluid Temp. Range | 5 – 40 °C |
| 7 | Ambient Temp. Range | 5 – 40 °C |
| 8 | Current | 250mA (circuit for providing constant current source is required) |
| 9 | Operational frequency | Max. 0.5Hz |
| 10 | Power Consumption | < 0.3 W |
| 11 | Weight | 0.9g |
| 12 | Diaphragm Material | Perfluoroelastomer |
| 13 | Gasket Material | Perfluoroelastomer |
| 14 | Body Material | PEEK |

(1) N.O. version can also be manufactured on request

Geometry



3000181 Dimensions