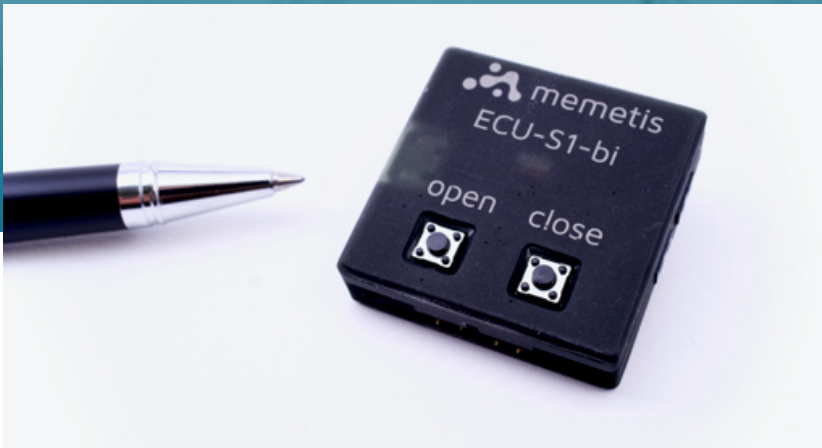


# ELECTRONIC CONTROL UNIT

## ECU-S1-bi for memetis bistable valves



The electronic control unit (ECU) ensures an easy start with memetis miniature valves.

The ECU-S1-bi is specifically developed for the control of a BV1101 bistable valve.

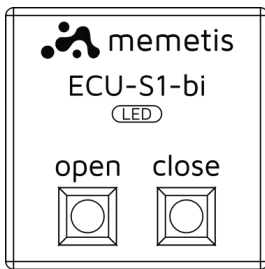
### Features:

- controls 1 memetis bistable valve
- can be powered from USB B Micro or external power supply
- wide input voltage range of 4.5 – 24 V

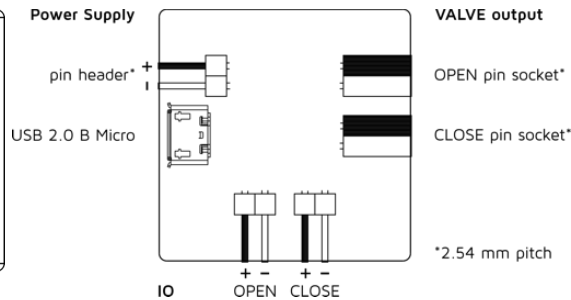
### Specifications

Parameter	ECU-S1-bi
Power supply	<ul style="list-style-type: none"> <li>• 4.5 - 24 V DC, USB 2.0 Micro B Socket <b>OR</b></li> <li>• 2.54 mm pin header, direct internal connection</li> </ul> <b>Attention: do not use both at the same time.</b>
Max. power supply current (standby)	2.25 mA @ 4.5 - 24 V
Max. power supply current (output active)	Connected to memetis bistable valve, 170 mA @ 5 V, 95 mA @ 12 V, 65 mA @ 24 V
VALVE OPEN & CLOSE outputs	500 mA constant current source, automatic switch-off after 300 ms, at most one output will be active at any time, 2.54 mm pin socket
IO OPEN input	0 - 20 V non-isolated digital input, 10 k $\Omega$ pull-down, rising edge enables OPEN output for 300 ms, falling edge disables OPEN output immediately, 2.54 mm pin header
IO CLOSE input	0 - 20 V non-isolated digital input, 10 k $\Omega$ pull-up to internal 3.3 V, rising edge enables CLOSE output for 300 ms, falling edge disables CLOSE output immediately, 2.54 mm pin header
IO input threshold	LOW < 1 V, HIGH > 2.5 V
OPEN push button	Pressing once enables OPEN output for 300 ms
CLOSE push button	Pressing once enables CLOSE output for 300 ms
LED	Off when VALVE output is disabled, permanently on when VALVE output is active and output current in regulation, flashing when output current error detected
Temperature range	-20 °C - 60 °C
Dimensions	32 x 32 x 9.5 mm <sup>3</sup>

## Drawings and Operation



Top view



ECU-S1-bi with a memetis bistable valve on a fluidic adapter. The picture shows the **energy-efficient bundle**.

## Complementary memetis Products



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.

Now available at: [shop.memetis.com](https://shop.memetis.com)



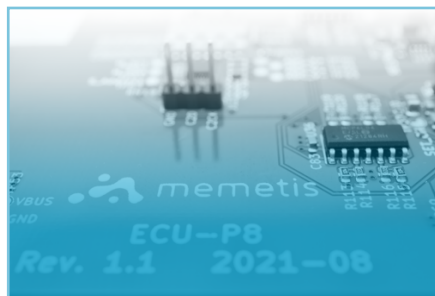
The memetis **ultracompact 2/2-way media separated bistable valve** enables complex fluidic systems with extremely low power consumption. Even **battery operation** becomes possible.



The memetis **fluidic adapter** facilitates connection of tubing to the flange-mount valve. 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.



memetis offers customer-specific **valve driver solutions** to enable new and innovative products.

For **custom configurations** (pre-programmed output current profiles) contact us directly via email: [contact@memetis.com](mailto:contact@memetis.com)

## Contact Information