ELECTRONIC CONTROL UNIT

ECU-P2



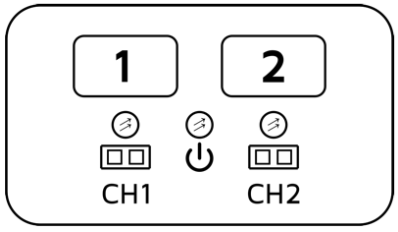
The electronic control unit (ECU) ensures an easy start with memetis miniature valves.
The ECU-P2 offers a wide range of options for programming and customization.

Features:

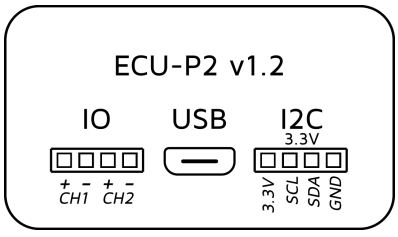
- 2 output valve control channels with measurement capabilities
- supports self-sensing and error detection
- fully programmable with USB and I2C
- easy-to-use Python library for USB and I2C communication
- can be powered from PC/laptop or USB power supply

Specifications

Parameter	ECU-P2
Functionality	Constant current driver for memetis valves with measurement capabilities
Output	2 channels, current 25 - 1400 mA
Measurement capability	Voltage & current
Power supply	4.5 - 5.5 V DC, USB 2.0 Micro B Socket
Max. input current	100 mA, 500 mA or 1500 mA (depends on USB power supply, following USB BC specification), internally limited
Max. total output power	0.5 W, 2.5 W or 7.5 W, depends on USB power supply
Connectivity	USB & I2C, using a custom serial protocol
IO digital inputs	1.8 - 5.5 V, fully isolated
I2C interface	3.3 V only, not 5 V tolerant
Data and current output	Standard 0.1'' pin strip female
Temperature range	-20 °C - 60 °C
Dimensions	88.0 x 45.5 x 25.5 mm³



Front view



Back view

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

Ordering Information

Product Code	Configured for	Color
ECU-P2-nc	memetis **normally-closed** valves (Series09)	Cyan
ECU-P2-bi	memetis **bistable** valves (BV1101)	Black

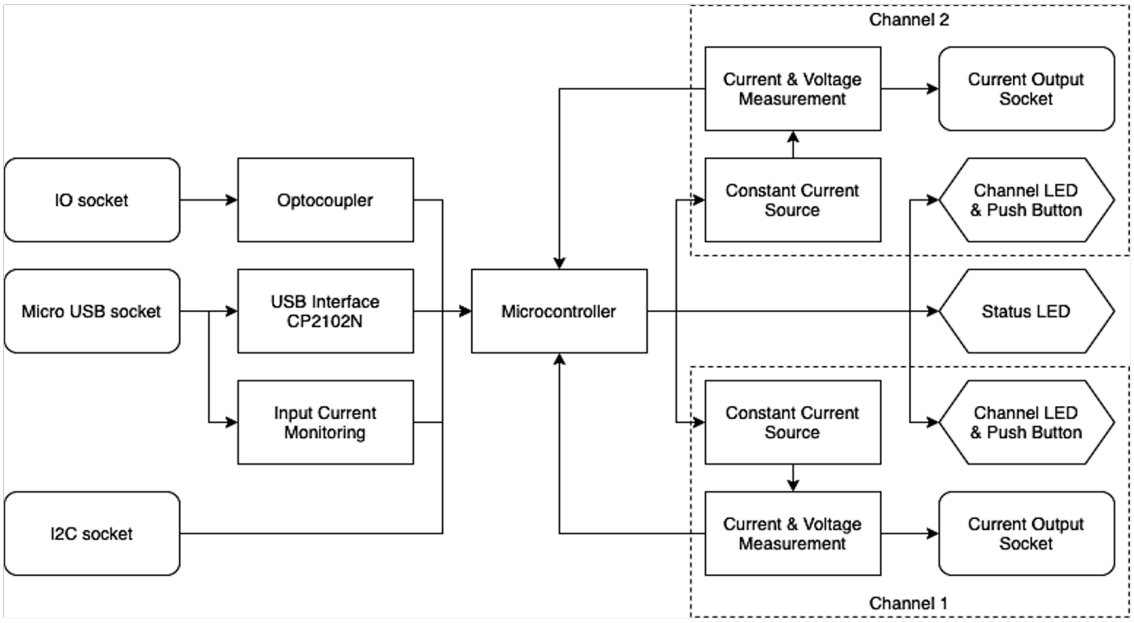
Operation Modes / Functionality

Parameter	ECU-P2-nc	ECU-P2-bi
Automatic mode	500 mA continuous	500 mA for 300 ms
Push button	Toggle output	Short current pulse
IO digital input HIGH	Output on	Output on, switches off automatically
IO digital input LOW	Output off	Output off
USB/I2C enable command*	Output on	Output on, switches off automatically
USB/I2C disable command*	Output off	Output off
Manual mode (USB/I2C)	Full output current range	
Channel LEDs (blue)	Flash if output current error	
Power LED (white)	Flashes if input power supply limitations exceeded	

*see Python library at https://gitlab.com/memetis/ecu-p/python

Find the **Python Getting Started Guide** here: https://memetis.gitlab.io/ecu-p/python/

Functionality Diagram



Contact Information

memetis GmbH, Gablonzer Str. 27, 76185 Karlsruhe, Germany
Tel. +49 721 47000240, Email contact@memetis.com