

ADVANCED ROTAVALVE DATASHEET

RECIRCULATION



Elveflow Advanced RotaValve Recirculation is a 6 ports and 2 positions valve module for recirculation experiments.

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General specifications

Dimensions (mm)	99 x 99 x 90 mm
Weight (g)	730 g
Control Center connection	M12 8 pins (shielded cable 25 cm recommended)
Power connection	DC power connector, Plug, 3A, 2.1mm, 12mm
Valve type	6 ports / 2 positions
Maximum supported pressure (bar)	7 bar
Fluidic connectors	Standard 1/4-28 UNF, flat-bottom
Wetted materials	PCTFE and PTFE
Switching time (ms)	down to 150 ms (for 180 degrees)
Dead volume (1)	None
Internal diameter (mm)	0.5 mm
Internal volume (2)	2.5 μL
Carryover volume (3)	0.5 μL
Mounting orientation	Any

(1) Volume that is stuck in the system (dead end), which is not clearly swept and relies on diffusion to clear out

(2) Volume inside the system from entrance to exit

(3) Volume of liquid that will be mixed with the next liquid. It is not stuck, but will be swept next time a liquid passes

Electrical specifications

Input voltage (V)	24V
Maximum power consumption (W)	45W
Typical power (W)	3 W, 12 W in rotation

Provided power supply specifications

Supply - Voltage range (V)	100 to 240 VAC
Supply - AC frequency (Hz)	50 to 60 Hz
Output - Maximum current output (A)	2.5A Peak
Output - Maximum power (W)	60W

Communication specifications

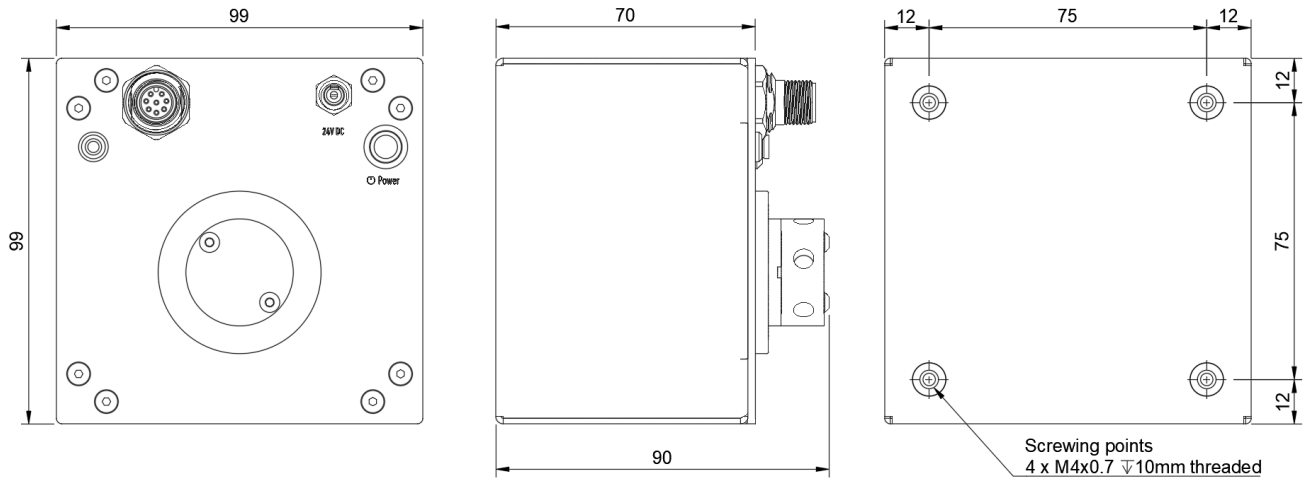
Interface	M12 8 pins
Communication type	Universal Asynchronous Receiver-Transmitter (UART)
Serial communication parameters	230400 bauds

Control and monitoring

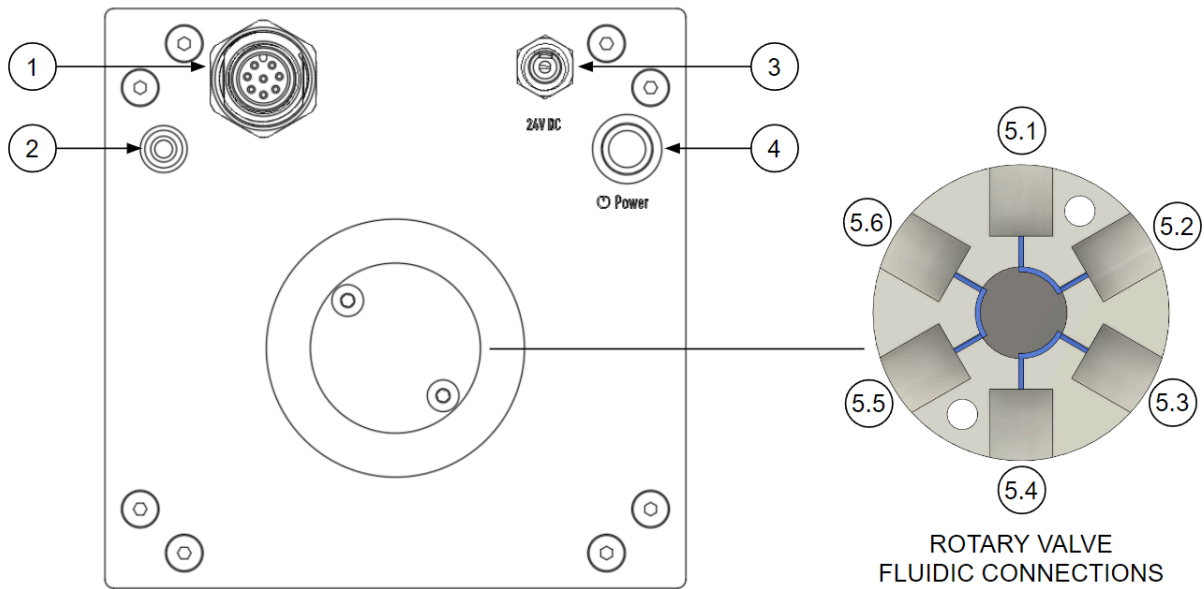
UART commands	Valve position & monitoring
Software control	ESI via a Advanced Control Center only

Dimensional drawing

(Dimensions in mm)



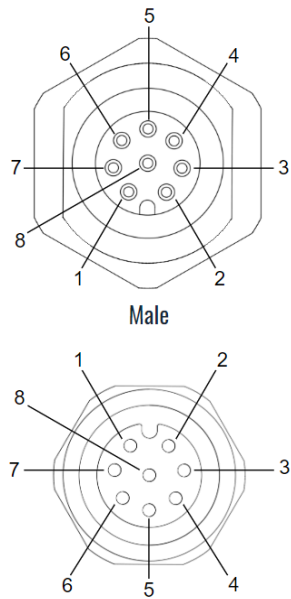
Connections



1	Connection to Advanced Control Center (or Advanced Hub)	M12 male - 8 pins
2	Communication LED	Green LED - ON when communicating
3	Power button with LED	Green LED - ON when device powered
4	Power supply	Jack 24V DC - 40W
5.x	6 Fluidic ports, connected 2 by 2	1/4-28 UNF Flat bottom

M12 Pin out

1	RX
2	TX
3	Ground
4	/
5	5V DC
6	/
7	Ground
8	24V DC



Assembly recommendations

Use the four M4 screwing points (see dimensional drawing).

The module can be used in any orientation.