ELVE FLOW
PLUG & PLAY MICROFLUIDICS

OEM RANGE

CATALOG

2024

WWW.ELVEFLOW.COM/MICROFLUIDIC-OEM-CUSTOM-FLUIDIC-SYSTEMS/PRODUCTS/

STATE OF THE ART
industrial OEM range

Elveflow is an Elvesys brand. We build premium flow handling instruments since 2012. We are proud to have provided **more than 2,000 systems** so far to both academics and industrial users.

We introduce the OEM range, a comprehensive suite of fluid control modules designed for seamless integration into your laboratory setup or industrial applications. Our OEM range offers precision, flexibility, and ease of use for a wide array of fluid control requirements.
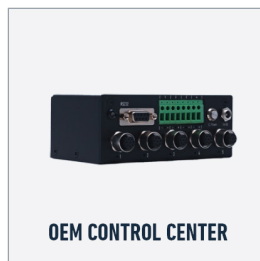
CONTACT:
+33(0).184.163.807
contact@elveflow.com
www.elveflow.com
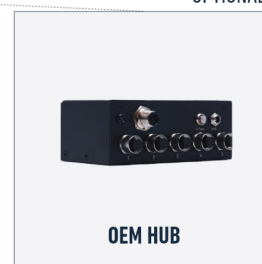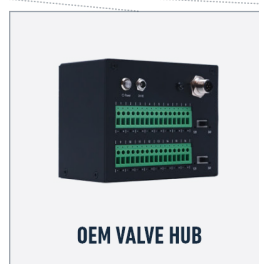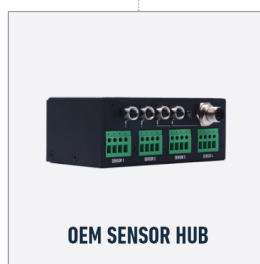
ADDRESS:
172 Rue de Charonne,
75011 Paris
France

OEM RANGE

ELVE FLOW
PLUG & PLAY MICROFLUIDICS

SIX MODULES METICULOUSLY ENGINEERED TO REDEFINE CONTROL AND INTEGRATION IN DIVERSE APPLICATIONS.

OEM CONTROL CENTER

TWO MODES:
– RS232 CONNECTION
– STANDALONE USE

OPTIONAL

OEM PRESSURE CONTROLLER

OEM ROTAVALVE

OEM SENSOR HUB

OEM VALVE HUB

OEM HUB

The OEM range simplifies system management by handling up to 25 modules with a single serial connection. It seamlessly integrates with any control system featuring a serial port and enables straightforward communication to the control center, ensuring maximum scalability and compatibility.

MODULES

OEM
CONTROL CENTER
WWW.ELVEFLOW.COM/MICROFLUIDIC-OEM-CUSTOM-FLUIDIC-SYSTEMS/OEM-PRODUCTS/OEM-CONTROL-CENTER/
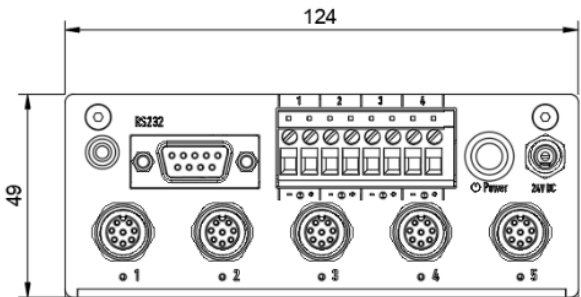

SEAMLESS AUTOMATION FOR COMPLEX SYSTEMS

Introducing the compact and efficient OEM Control Center, designed to effortlessly automate and integrate your system into complex environments.
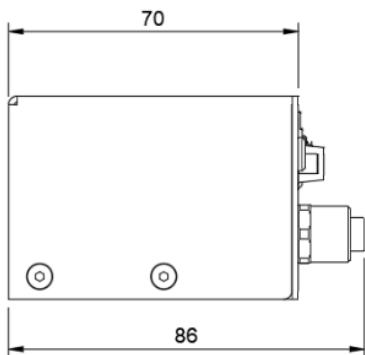
✔ **RELIABLE COMMUNICATION**

✔ **EASY INTEGRATION**

✔ **SOFTWARE INCLUDED**

DIMENSIONAL DRAWING: IN MILLIMETERS

SPECIFICATIONS

Interface	RS232
Communication type	Universal Asynchronous Receiver-Transmitter (UART)
Computer connection	RS232 - DB-9
Number of module connections	5
Number of controlled valves	4
Type of valves	2 wires 24 V
ESI compatibility	Yes
Number of channels available	5, up to 25 using OEM Hubs
Internal sequencer	Autonomous from PC
	Internal sequence storage

OEM
PRESSURE CONTROLLER
WWW.ELVEFLOW.COM/MICROFLUIDIC-OEM-CUSTOM-FLUIDIC-SYSTEMS/OEM-PRODUCTS/OEM-PRESSURE-CONTROLLER/

PRECISION CONTROL
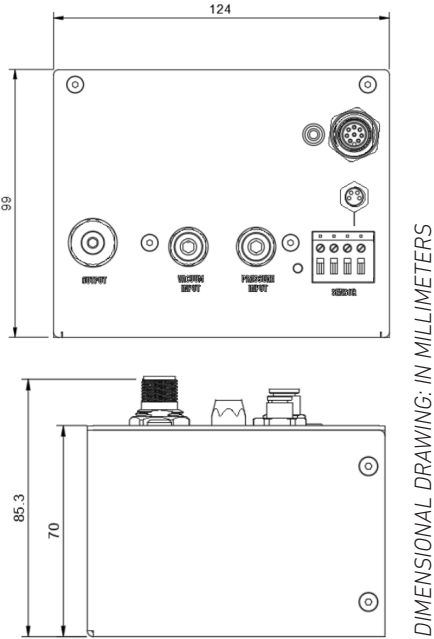## FOR OPTIMIZED PERFORMANCE

Its compact design seamlessly integrates into any system with ease. Whether you prioritize precision or reliability, this controller exceeds expectations.

✔ **RELIABLE COMMUNICATION**

✔ **EFFORTLESS OPERATION**

✔ **OPTIMAL PRESSURE MANAGEMENT**

SPECIFICATIONS

Interface	M12 8 pins
Communication type	Universal Asynchronous Receiver-Transmitter (UART)
Sensor communication	I2C, analog
Sensor compatibility	Elveflow sensors (MFS, MPS, bubble detector and MFP), Analog sensors with 0/10 V input signal and with up to 24V supply
Number of sensor connections	1
Digital sensor supply voltage (V)	5 V
Analog sensor supply voltage (V)	5 to 24 V
Software control	ESI via a OEM Control Center only

DIMENSIONAL DRAWING: IN MILLIMETERS

Channel pressure range	0 to 200 mbar (0 to 2.9 psi)	0 to 2,000 mbar (0 to 29 psi)	0 to 8,000 mbar (0 to 116 psi)	-900 to 1,000 mbar (-13 to 14.5 psi)	-900 to 6,000 mbar (-13 to 87 psi)
Pressure supply	1.5 bar (or Max pressure + 0.5 bar) to 10 bar				
	Non corrosive, non explosive, dry and oil-free gases, e.g. air, argon, N2, CO2, …				
Vacuum supply	/			Any value from -0.7 to -1 bar	
				Compatible with vacuum pump or vacuum line	

OEM
ROTAVALVE

WWW.ELVEFLOW.COM/MICROFLUIDIC-OEM-CUSTOM-FLUIDIC-SYSTEMS/OEM-PRODUCTS/OEM-ROTAVALVE/

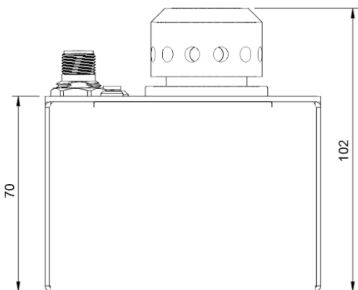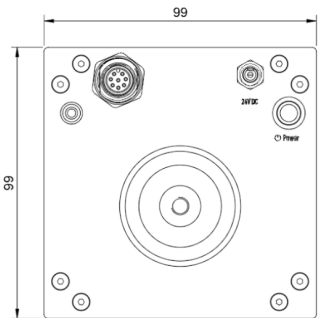## A ROTARY VALVE FOR
QUICK MEDIUM SWITCHES

With its capacity for versatile configurations, from recirculation to sequential injection across a range of ports, this module sets a new standard for precision and efficiency in your systems.

✔ **VERSATILE CONFIGURATIONS**

✔ **COMPACT AND POWERFUL**

✔ **SEAMLESS INTEGRATION**

DIMENSIONAL DRAWING: IN MILLIMETERS

2 DESIGNS AVAILABLE:
DISTRIBUTION OR RECIRCULATION.

SPECIFICATIONS

	Distribution	Recirculation
Interface	M12 8 pins	
Communication type	Universal Asynchronous Receiver-Transmitter (UART)	
Valve type	12 positions / 13 ports rotative valve	6 ports / 2 positions rotative valve
Maximum supported pressure (bar)	7 bar	
Fluidic connectors	Standard 1/4-28 UNF, flat-bottom	
Wetted materials	PCTFE and PTFE	
Dead volume [1]	None	
Internal diameter (mm)	0.5 mm	
Software control	ESI via a OEM Control Center only	

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

OEM
VALVE HUB
WWW.ELVEFLOW.COM/MICROFLUIDIC-OEM-CUSTOM-FLUIDIC-SYSTEMS/OEM-PRODUCTS/OEM-VALVE-HUB/
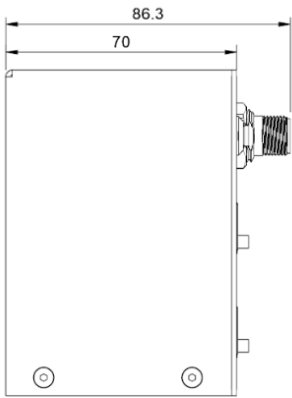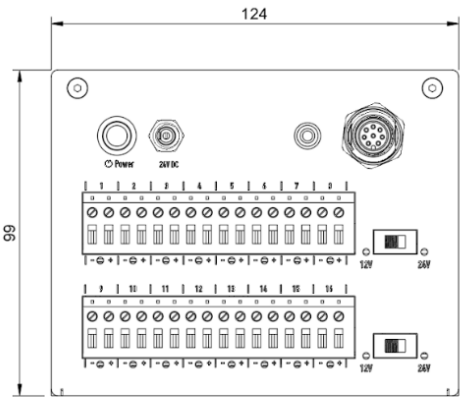

SIMPLIFY CONTROL OVER **UP TO 16 VALVES**

Engineered to simplify control over up to 16 valves effortlessly, this module ensures smooth operations with ease.

- ✔ **RELIABLE COMMUNICATION**
- ✔ **EASY INTEGRATION**
- ✔ **UP TO 16 VALVES**

DIMENSIONAL DRAWING: IN MILLIMETERS

SPECIFICATIONS

Interface	M12 8 pins
Communication type	Universal Asynchronous Receiver-Transmitter (UART)
Number of controlled valves	16
Type of valves	2 wires 24 or 12V (switchable by line of 8 valves)
Maximum valve power / valve channel (W)	4.8 W for 24 V 2.4 W for 12 V
Software control	ESI via a OEM Control Center only

OEM
SENSOR HUB
WWW.ELVEFLOW.COM/MICROFLUIDIC-OEM-CUSTOM-FLUIDIC-SYSTEMS/OEM-PRODUCTS/OEM-SENSOR-HUB/

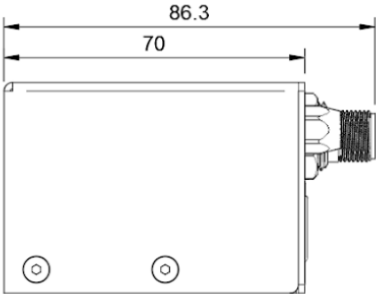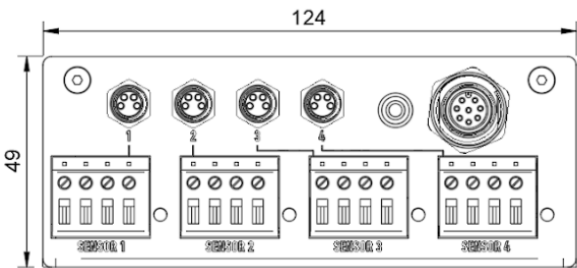## PRECISE DATA COLLECTION FOR MONITORING ACCURACY

Revolutionize your data collection process with its meticulously designed four-channel configuration, taking your monitoring capabilities to new heights.

✔ **UNMATCHED PRECISION MONITORING**

✔ **SEAMLESS INTEGRATION**

✔ **EFFICIENT PERFORMANCE**

DIMENSIONAL DRAWING: IN MILLIMETERS

SPECIFICATIONS

Interface	M12 8 pins
Communication type	Universal Asynchronous Receiver-Transmitter (UART)
Sensor communication	I2C, Analog
Sensor compatibility	Elveflow sensors (MFS, MPS, bubble detector and MFP) Analog sensors with 0/10 V input signal and with up to 24 V supply
Number of sensor connections	4
Input range (analog)	0 - 10 V
Sensor supply voltage (analog)	5 to 24 V

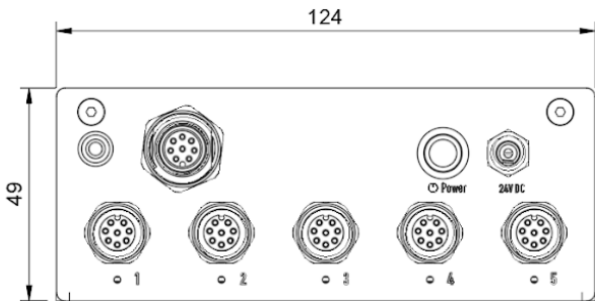# OEM
HUB

CONTROL FIVE ADDITIONAL MODULES
ON A SINGLE CHANNEL

Introducing the Elveflow OEM Hub, your ideal partner in enhancing the capability and efficiency of your control systems.

✔ **EXPAND YOUR SYSTEM**
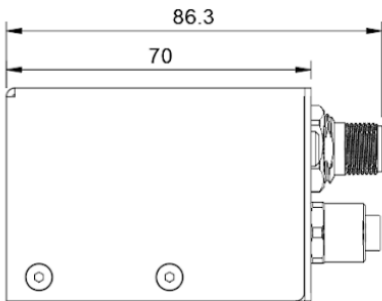
✔ **OPTIMIZED ELECTRICAL PERFORMANCE**

✔ **VERSATILE MOUNTING AND ASSEMBLY**

DIMENSIONAL DRAWING: IN MILLIMETERS

SPECIFICATIONS

Interface	M12 8 pins
Communication type	Universal Asynchronous Receiver-Transmitter (UART)
Number of module connections	5
Software control	ESI via a OEM Control Center only
Number of channels available	5

OEM
ACCESSORIES
WWW.ELVEFLOW.COM/MICROFLUIDIC-OEM-CUSTOM-FLUIDIC-SYSTEMS/OEM-ACCESSORIES
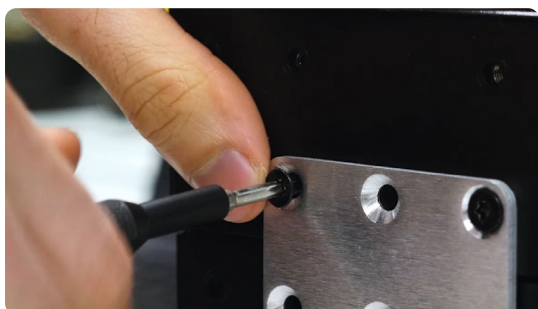
ADAPTER

Elveflow OEM range adapter M12 to USB connects any OEM module to a computer without the OEM Control Center.

> ✔ **EASY PROTOTYPING**
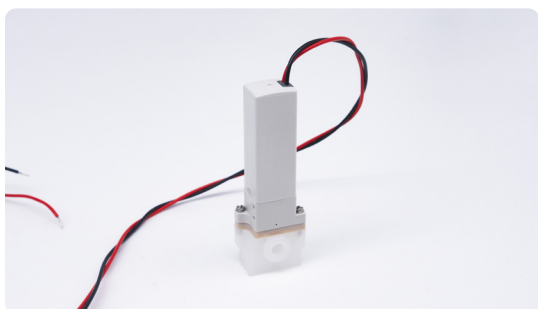> ✔ **COMPACT AND POWERFUL**

ASSEMBLY KIT

Elveflow OEM range is easy to integrate thanks to the mechanical integration kit. It enables to assemble the modules rapidly to create space-saving systems.

> ✔ **VERSATILE CONFIGURATIONS**
> ✔ **EASE OF USE**

VALVES

Elveflow provides meticulously chosen microfluidic valves, ideal for diverse applications. With <20 ms switching time, low internal volume, high chemical compatibility, and seamless flow, they ensure top performance.

> ✔ **2- AND 3-WAY MICROFLUIDIC VALVES**

PLUG & PLAY MICROFLUIDICS

ELVE FLOW an **ELVESYS** brand