ELVE FLOW
PLUG & PLAY MICROFLUIDICS

OEM RANGE

CATALOG

2024

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.
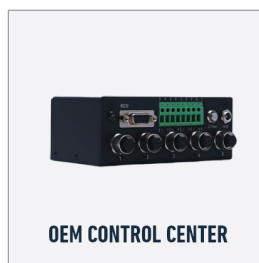
CONTACT:
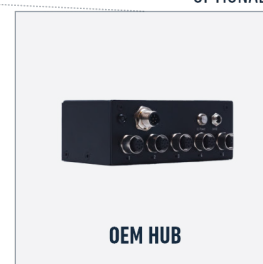+33(0).184.163.807
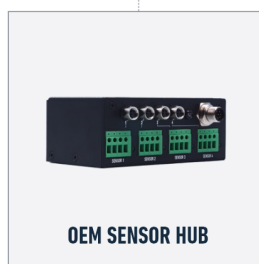contact@elveflow.com
www.elveflow.com

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
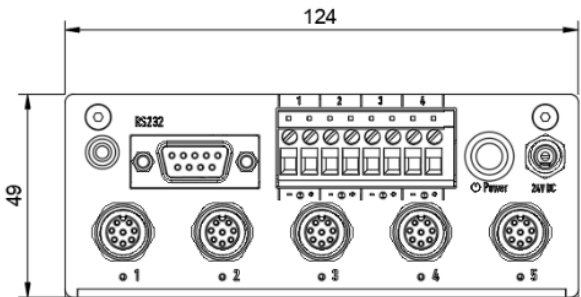# CONTROL CENTER

SEAMLESS AUTOMATION FOR COMPLEX SYSTEMS

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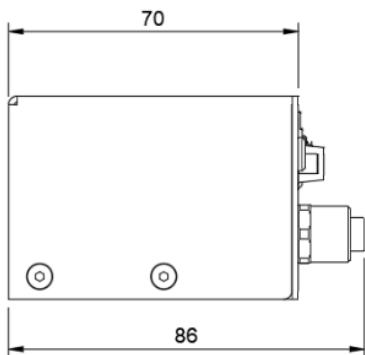
- ✔ **RELIABLE COMMUNICATION**
- ✔ **EASY INTEGRATION**
- ✔ **SOFTWARE INCLUDED**

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.
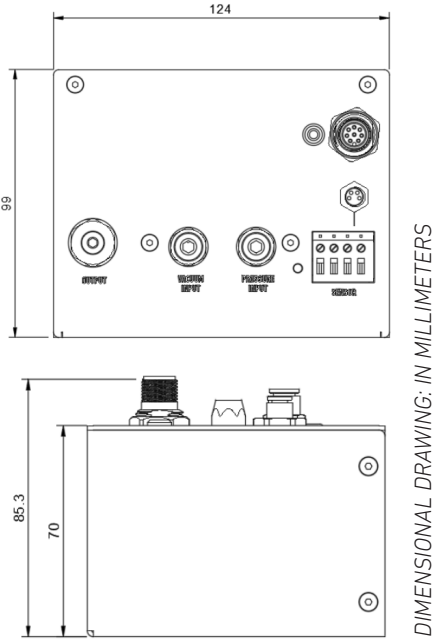
✔ **RELIABLE COMMUNICATION**

✔ **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/

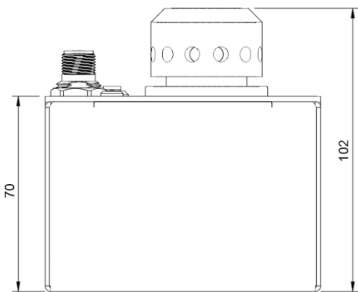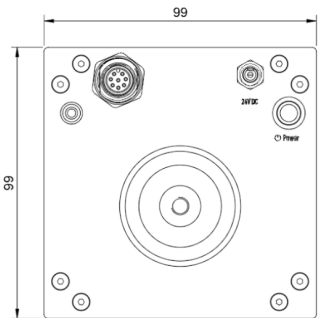## A ROTARY VALVE FOR
QUICK MEDIUM SWITCHES

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/
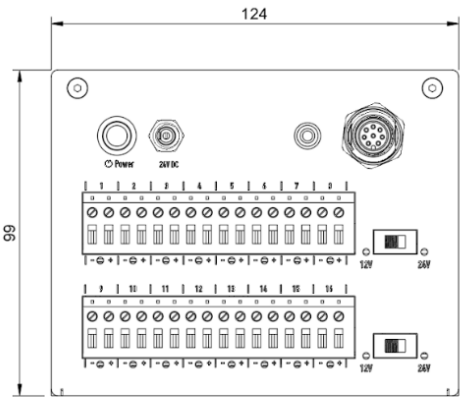

SIMPLIFY CONTROL OVER **UP TO 16 VALVES**

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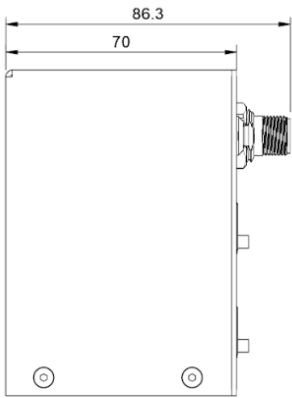
✔ **RELIABLE COMMUNICATION**

✔ **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

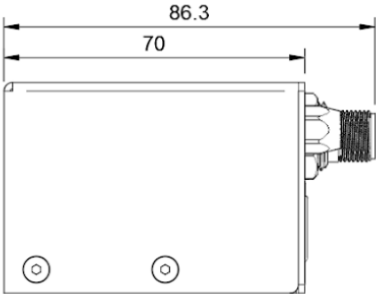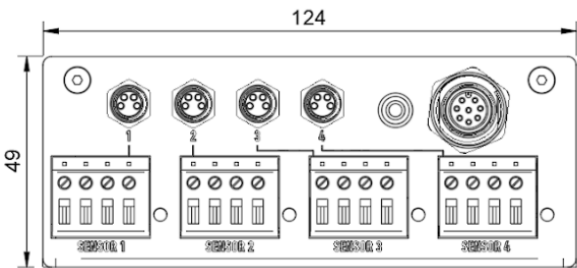## PRECISE DATA COLLECTION FOR MONITORING ACCURACY

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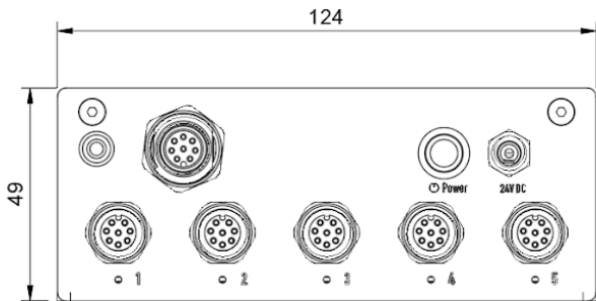
Introducing the Elveflow OEM Hub, your ideal partner in enhancing the capability and efficiency of your control systems.

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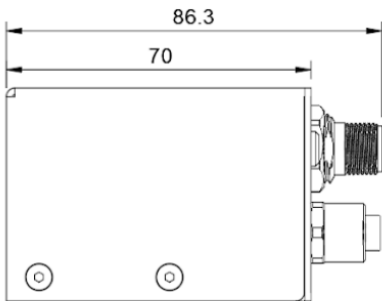
✔ **OPTIMIZED ELECTRICAL PERFORMANCE**

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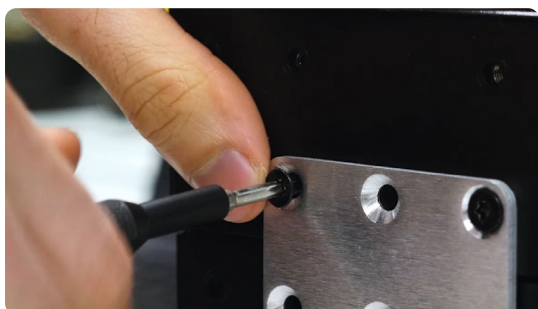WWW.ELVEFLOW.COM/MICROFLUIDIC-OEM-CUSTOM-FLUIDIC-SYSTEMS/OEM-ACCESSORIES

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**
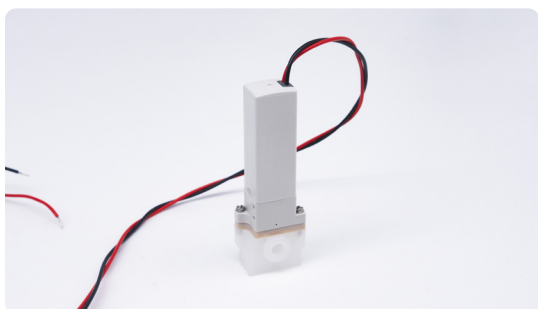
ASSEMBLY KIT

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

GENERAL INFORMATION
contact@elveflow.com
+33(0).184.163.807

www.elveflow.com

ELVEFLOW an ELVESYS brand

172 rue de Charonne
75011 Paris, FRANCE

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