

# OPEN FRAME PROPORTIONAL CONTROLLER



# OPEN FRAME MODULAR CONTROL FOR INDUSTRY 4.0



The new Open Frame "Proportional Controller" system is a platform for providing closed loop control of flow, pressure and position and is suitable for Industry 4.0 applications. The system is composed of two modules: Master and Slave.

## Configurations

### Flow control by using pressure sensors

- The Master module used alone allows the creation of a two-way flow control valve in a closed loop configuration.
- The use of the Master-Slave combination allows the creation of a three-way flow control valve with the same performance.

### Pressure control with pressure sensor

- The use of the Master- Slave combination allows pressure control.

### Closed loop position control for pneumatic cylinders

- The use of the Master-Slave combination plus an external precision transducer enables position control.

## BENEFITS



**Flow control  
in a closed loop**



**Customised,  
turnkey solutions**



**Serial communication**



**Modular**

## Applications

The Series Open Frame can be easily configured to meet specific application needs, to provide the most efficient, turnkey solutions, thus reducing assembly times and system complexity. The different Master and Slave modules can be combined and driven through simple serial communications, making the control of complex applications easier.

Typical applications could include the mixing of different gases, piloting different pressures in different parts of the machine, or the positioning of a pneumatic cylinder through a single control signal.



### ANESTHESIA DEVICES

Control and mixing of gases on three channels and nebulisation on two channels, all integrated in one system, controlled in CANopen.



### LASER CUTTING MACHINES

High precision pressure control to monitor the position of the laser reflection mirror.



### BLOW MOULDING MACHINES

Precise flow control for blow moulding machines or plastic extrusion machines.

### DRINKS DISPENSERS

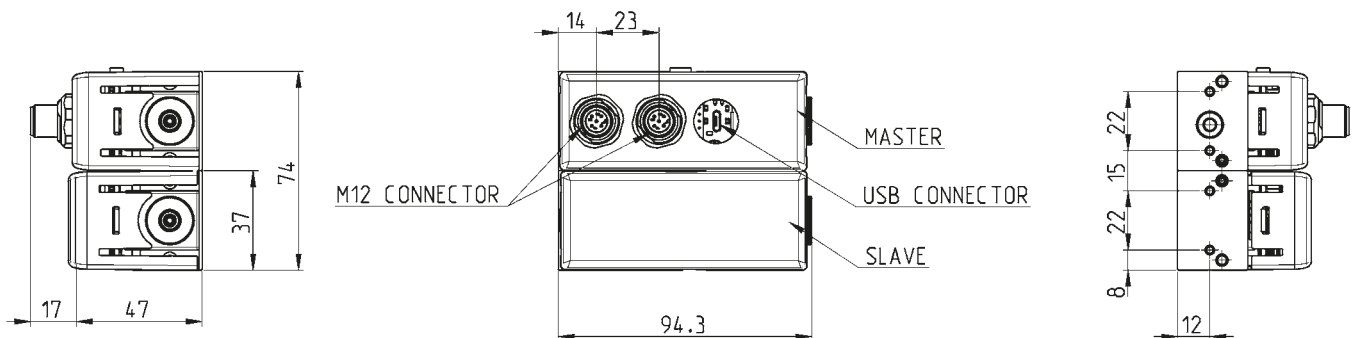
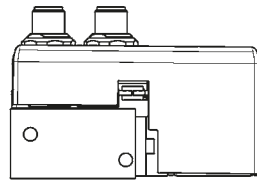
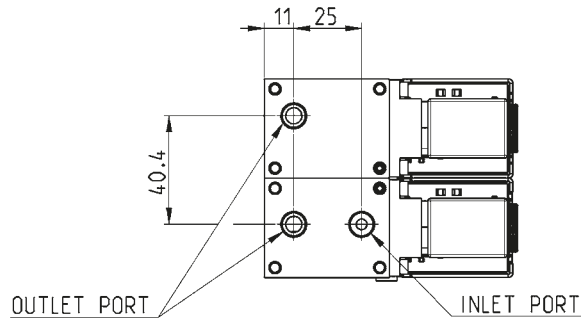
Combination of pressure control, fluid pumping and pressure control for carbon dioxide lines.



## General data

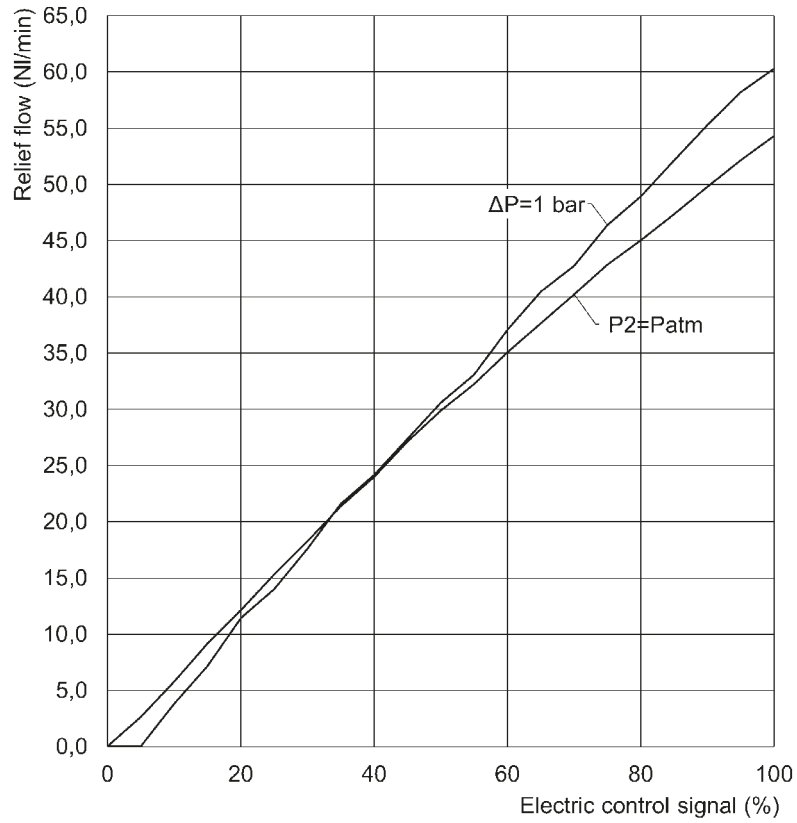
<b>Media</b>	compressed air, inert gases and oxygen. Filtering according to ISO 8573-1 class 7.4.4
<b>Supply pressure</b>	from -1 a 10 bar
<b>Operating pressure</b>	from -1 a 10 bar
<b>Max flow</b>	115 NL/min 200 NL/min with parallel valve
<b>Seals</b>	FKM, NBR, EPDM
<b>Number of ways</b>	2-vie 3-vie parallel
<b>Supply voltage</b>	24V DC +/-10%
<b>Current absorbed</b>	0,3 A (Master module) 0,3 A (Slave module)
<b>Control interface</b>	CANopen CiA 301 RS485 IO-Link (connection type B)
<b>Analogical input</b>	0-10 V o 4-20mA
<b>Analogical output</b>	0-10 V
<b>MECHANICAL</b>	
<b>Size</b>	LxWxH 38x47x94,3 mm
<b>Weight</b>	300 g
<b>Ports</b>	G1/8
<b>ENVIRONMENT</b>	
<b>Environmental temperature</b>	-5 + 60°C (with the dew point of the fluid lower than 2°C at the min. working temperature)
<b>Protection class</b>	IP20
<b>OPERATION</b>	
<b>Resolution: pressure control</b>	±0,1% FS
<b>Resolution: flow control</b>	±1% FS
<b>Repeatability</b>	±0,1% FS
<b>PWM frequency</b>	1 kHz

## Dimensional characteristics

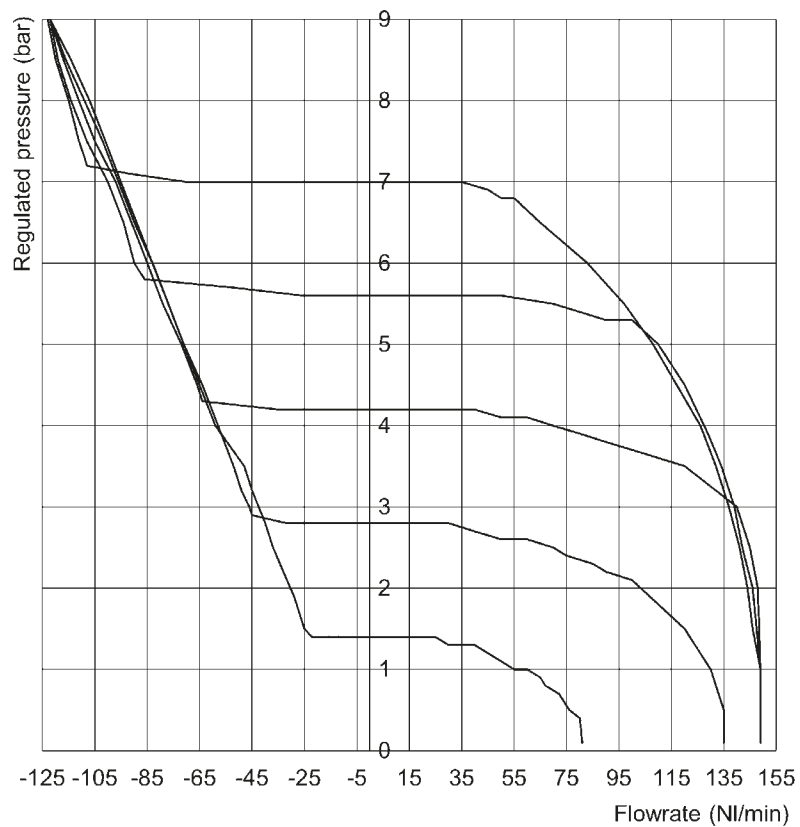


# Flow diagrams

## FLOW CONTROL



## PRESSURE REGULATION





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