MICRO REGULATOR ELECTRONIC PROPORTIONAL
SERIES K8P

Proportional regulator for the pressure control

- High precision
- Reduced response times
- Minimum consumption
- Self-regulation function
- Flexibility of use
- Compact design
- Suitable for use with oxygen

Series K8P electronic proportional micro regulators have evolved from our Series K8 mini-solenoid valves. Series K8P regulators guarantee excellent pressure regulation, fast response times, self-regulation and low energy consumption.
Series K8P is a high performance proportional pressure regulator which is suitable for use in all applications where high precision, quick response times and low consumption are required.

The K8P regulator adjusts the outlet pressure through the operation of two K8 monostable valves according to the inlet signal and to the retroactivity of the internal pressure sensor.
A self-adjusting function has been integrated into the regulator control algorithm to guarantee the highest levels of performance apart from the volume connected.

GENERAL DATA

Fluids	filtered compressed air, unlubricated, according to ISO 8573-1 class 7.4.4, oxygen, inert gases (argon, molecular nitrogen)
Pressures	Regulated pressure 0,5 ÷ 10 bar 0,15 ÷ 3 bar 0,35 ÷ 7 bar 0,05 ÷ 1 bar Max inlet pressure 11 bar 4 bar 8 bar 1,5 bar
Working temperature	0 ÷ 50°C
Analogical input	0-10 V DC 4-20 mA Ripple ≤ 0,2%
Analogical output	0,5 - 9,5 V [Feedback]
Analog input impedance	20.000 Ω for versions 0-10 V 250 Ω for versions 4-20 mA
Maximum flow	12 l/min with regulated pressure = 6 bar (IN Pres. 10 bar) 6 l/min with regulated pressure = 3 bar (IN Pres. 4 bar) 8 l/min with regulated pressure = 7 bar (IN Pres. 8 bar) 2 l/min with regulated pressure = 1 bar (IN Pres. 1,5 bar)
Supply / Use	24 V - ~ 1 W
Function	3/2 NC
Linearity	≤ ±1% FS
Hysteresis	±0,5% FS
Resolution	±0,5% FS (referred to the command signal)
Repeatability	±0,5% FS
Minimal set point change	50 mV => 50 mB (10 bar) 100 mV => 30 mB (3 bar)
Electrical connection	M8 4 Pin (Male)
Protection class	IP65 (with standard sub-base or with single use) IP51 (with Light sub-base and Light Sub-base for the pressure remote reading)
In compliance with the European Directive 2004/108/EC	

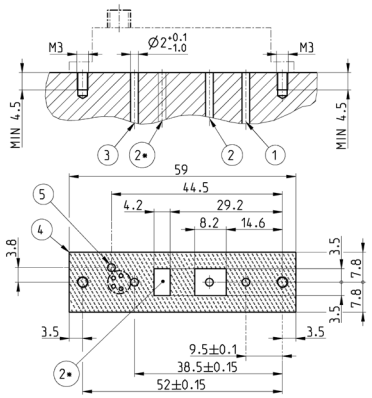
MICRO REGULATOR ELECTRONIC PROPORTIONAL
SERIES K8P - CODING EXAMPLE

CODING EXAMPLE

K8P	-	0	-	D	5	2	2	-	0	OX1

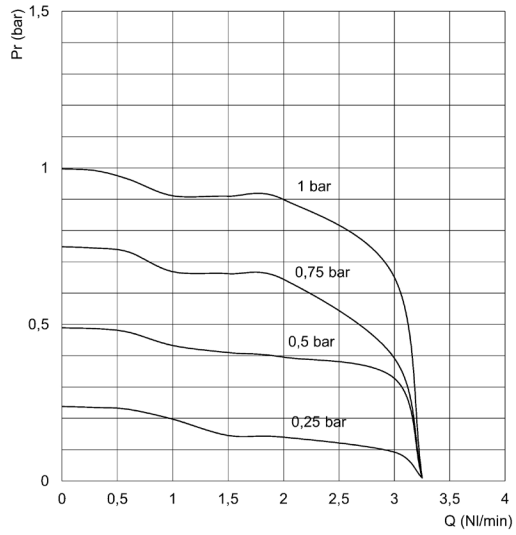
K8P	SERIES
0	BODY DESIGN: 0 = Stand alone S = Standard Sub-base L = Light Sub-base T = Light Sub-base for the pressure remote reading
D	WORKING PRESSURE: D = 0 - 10 bar E = 0 - 3 bar F = 0 - 7 bar B = 0 - 1 bar
5	VALVE FUNCTIONS: 5 = 3/2-way NC
2	COMMAND: 2 = 0-10 V DC 3 = 4-20 mA
2	OUTPUT SIGNAL: 2 = 0-10 V
0	CABLE LENGTH: 0 = without cable 2F = straight cable, 2 m 2R = right angle cable (90 degrees), 2 m 5F = straight cable, 5 m 5R = right angle cable (90 degrees), 5 m
OX1	VERSIONS: = standard OX1 = for use with oxygen (in compliance with ASTM G93-03 Level E)
	APPLICATIONS The K8P proportional regulator can be used as a pilot valve to control the opening of high flow valves or to check the high flow pressure regulators proportionally (version with sub-base for the pressure remote reading). It enables proportional control of power in lifting systems and can be used with inert gas to maintain a constant pressure in pneumatic cylinders or expansion valve chambers. It has also been designed to maintain a constant pressure during the pulling power applied to the wires in winding machines, to modulate pressure during the smoothing process in woodworking machines or to adjust the opening of diaphragm valves.

Interface for single use without sub-base



	Notes
1 = Inlet pressure	Pneumatic connection
2 = Outlet pressure	Pneumatic connection
2* = area for possible positioning of outlet port 2	Do not exceed the indicated outline
3 = Exhaust	Pneumatic connection
4 = OUTLET DIMENSION	
5 = VENT PORT FOR IP65	Optional when a OR seal is mounted

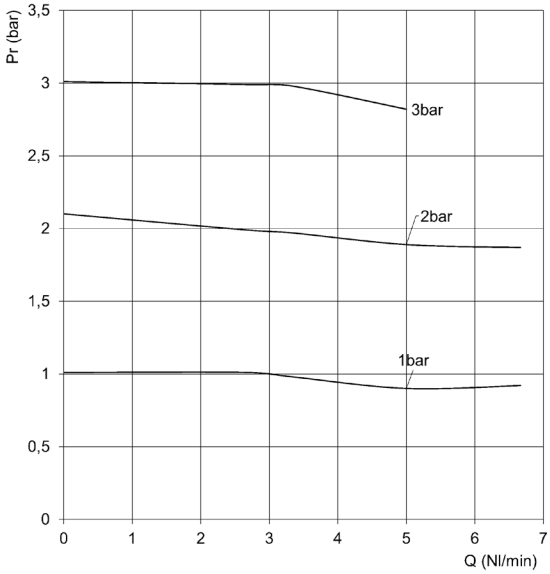
FLOW DIAGRAMS



0-1 bar version

Pr = Outlet pressure (bar)*
Q = Flow (Nl/min)*

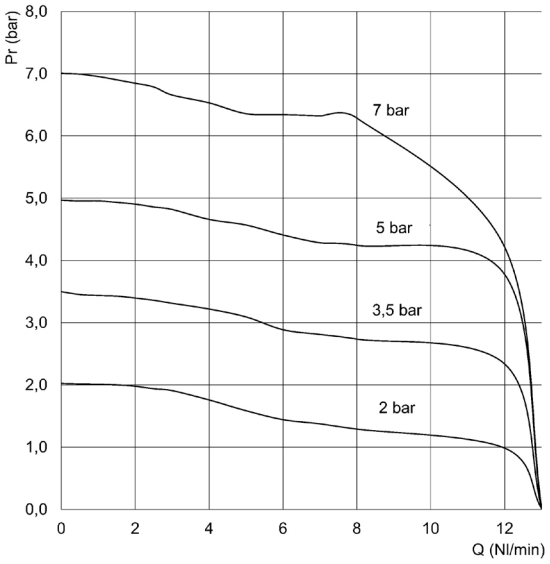
*** = Inlet pressure 2 bar**



0-3 bar version

Pr = Outlet pressure (bar)*
Q = Flow (Nl/min)*

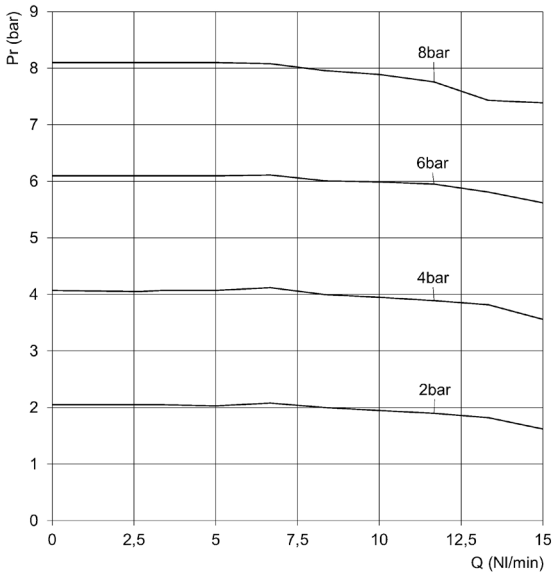
*** = Inlet pressure 4 bar**



0-7 bar version

Pr = Outlet pressure (bar)*
Q = Flow (Nl/min)*

*** = Inlet pressure 8 bar**



0-10 bar version

Pr = Outlet pressure (bar)*
Q = Flow (Nl/min)*

*** = Inlet pressure 10 bar**

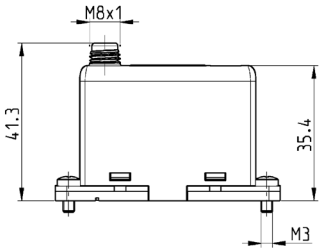
MICRO REGULATOR ELECTRONIC PROPORTIONAL
SERIES K8P - DIMENSIONAL CHARACTERISTICS

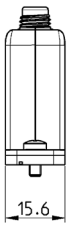
Series K8P electronic proportional micro regulator

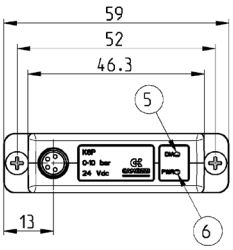
M8 4-POLE MALE CONNECTOR

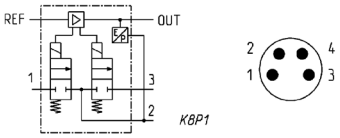
Pin 1: +24 V DC (Power supply)
Pin 2: Command analogical signal 0-10 V DC or 4-20 mA
Pin 3: 0 V (Ground) common also for the command signal
Pin 4: Output analogical signal (according to the regulated pressure)

5 Red LED
6 Green LED









PROPORTIONAL TECHNOLOGY

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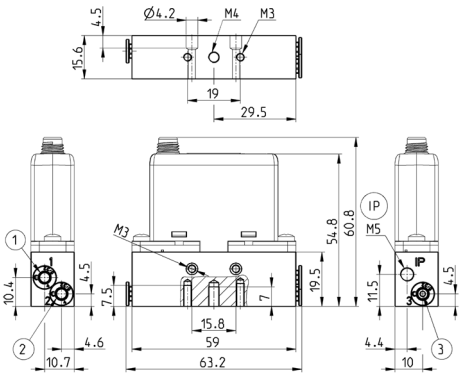
Mod.	Working pressure	Use with oyxgen	Command
K8P-*-D522-**	0-10 bar	no	0-10 V DC
K8P-*-E522-**	0-3 bar	no	0-10 V DC
K8P-*-D532-**	0-10 bar	no	4-20 mA
K8P-*-E532-**	0-3 bar	no	4-20 mA
K8P-*-B522-**	0-1 bar	no	0-10 V DC
K8P-*-F522-**	0-7 bar	no	0-10 V DC
K8P-*-B532-**	0-1 bar	no	4-20 mA
K8P-*-F532-**	0-7 bar	no	4-20 mA
K8P-*-B522-OX1**	0-1 bar	yes	0-10 V DC
K8P-*-F522-OX1**	0-7 bar	yes	0-10 V DC
K8P-*-E522-OX1**	0-3 bar	yes	0-10 V DC
K8P-*-B532-OX1**	0-1 bar	yes	4-20 mA
K8P-*-F532-OX1**	0-7 bar	yes	4-20 mA
K8P-*-E532-OX1**	0-3 bar	yes	4-20 mA

* = sub-bases and single use can be supplied for all versions
** = all the cables can be supplied for all versions

Standard Sub-base

The use of a silencer (Mod. 2939 4) on the exhaust is recommended.

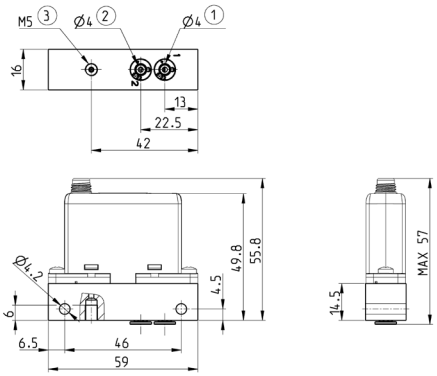


Mod.
K8P-AS

1 = Inlet pressure
2 = Outlet pressure
3 = Exhaust
IP = IP65 connection

Light Sub-base

The use of a silencer (Mod. 2931 M5, 2938 M5, 2901 M5) on the exhaust is recommended.

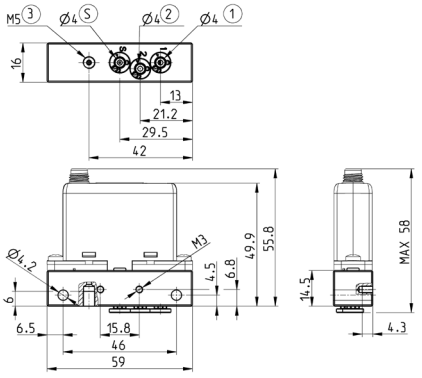


Mod.
K8P-AL

1 = Inlet pressure
2 = Outlet pressure
3 = Exhaust

Light Sub-base for the pressure remote reading

The use of a silencer (Mod. 2931 M5, 2938 M5, 2901 M5) on the exhaust is recommended.

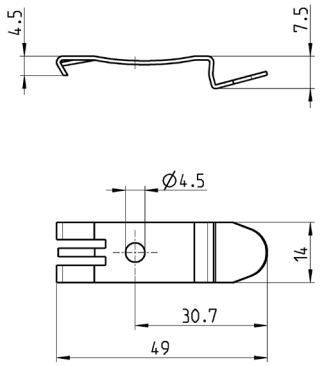


Mod.
K8P-AT

1 = Inlet pressure
2 = Outlet pressure
3 = Exhaust
S = remote-mounted sensor

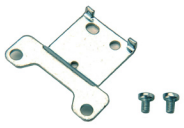
MICRO REGULATOR ELECTRONIC PROPORTIONAL
SERIES K8P - ACCESSORIES

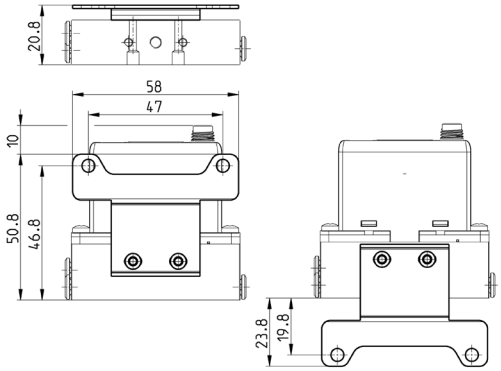
Mounting bracket for DIN rail Open Frame



Mod.
PCF-K8P

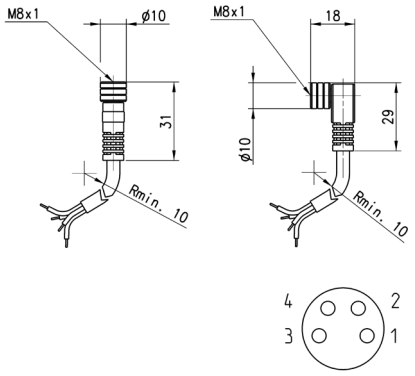
Bracket for horizontal mounting, for standard sub-base





Mod.
K8P-B1

Extension with M8 4-pin female connector



Mod.	Type of connector	Cable length (m)
CS-DF04EG-E200	straight	2
CS-DF04EG-E500	straight	5
CS-DR04EG-E200	90°	2
CS-DR04EG-E500	90°	5