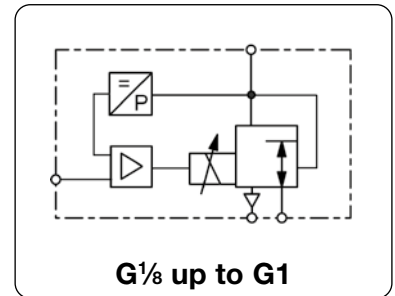
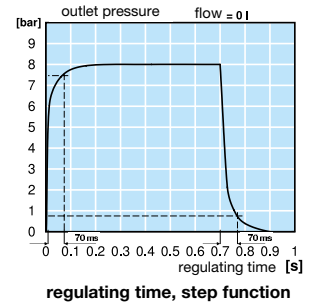


Description	The pneumatic proportional regulator controls the outlet pressure in proportion to an electrical command input signal. It comprises a complete closed loop servo system in a compact mono block assembly with proportional solenoid valve, electronic regulation and internal pressure transducer. The valve works as a 3-port/2-way valve with proportional magnet. The digital control system offers advantages at installation and commissioning for adapting the valve to special applications. The regulator can be set and optimised using a PC, PR adapter and software. Data record can be saved and used for further valves. The valve has no constant bleed. At absence of input signal or supply voltage the valve exhausts.		
Software	Display:	signal, outlet pressure, parameter, pressure switch signal etc.	
	Scope function:	view setpoint, outlet pressure, internal signals from PID control	
	Parameters:	command signal, zero point, overload threshold, ramp	
	Valve diagnosis:	parameters factory set or customised, optimization of the valve	



General technical features

Description	3-port/2-way valve with proportional magnet and digital control
Mounting position	any, preferably vertical
Protection class	IP65 with mounted coupling socket
Shock resistance	3G
Temperature range	0 °C to 60 °C / 32 °F to 140 °F, fluid / ambient temperature
Material	Body: brass (for G ¹ / ₈ and G ¹ / ₄) or aluminium (for G ¹ / ₂ and G1) Inner valve: brass and stainless steel Seals: NBR/Buna-N, EPDM or FKM on request, FKM for 50 bar version



Pneumatic features

Media	dry, lubricated, unlubricated and 5 µm filtered compressed air or non-corrosive gases
Supply pressure	see chart
Flow rate	see chart, at 6 bar supply pressure and 5 bar outlet pressure
Exhaust	same nominal size as on inlet valve, thus same relief capacity
Air consumption	without air consumption

Electrical features

Supply voltage	24 V DC ±10%
Electrical connection	M12, 5-pin coupling socket
Power consumption	12 W at G ¹ / ₈ , 24 W at G ¹ / ₄ , 34 W at G ¹ / ₂ , 44 W at G1
Current consumption	500 mA at G ¹ / ₈ , 1000 mA at G ¹ / ₄ , 1400 mA at G ¹ / ₂ , 1800 mA at G1
Command signal	0-10 V, 0-20 mA, 4-20 mA
Impedance	100 kΩ at voltage signal (0.1 mA current consumption) 250 Ω at current signal
Setpoint input	0-10 V, 0-20 mA, 4-20 mA

Accuracy

Linearity	< ± 0.5% FS
Hysteresis	< ± 1.0% FS
Repeatability	± 0.5% FS
Response sensitivity	± 1.0% FS

Adjustment and parameter settings

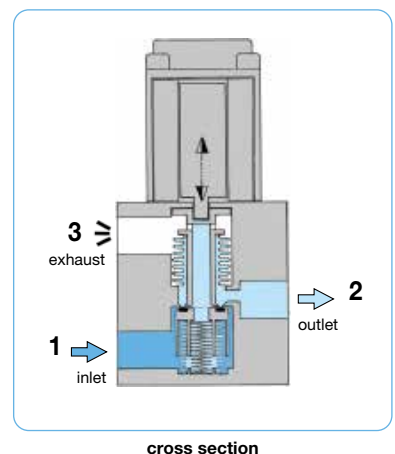
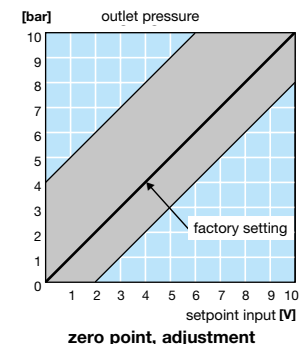
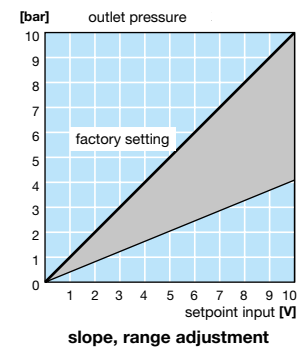
Zero point / range	Zero point and range can be calibrated percentagewise.
Control mode / Amplification	Through the software different control modes may be chosen. All parameters of P/Pi/PID controllers can be tuned.
Diagnosis	A diagnostic tool including data recording is available within the software.
Characteristic curve	Increasing or decreasing curve can be set (increasing by standard).

Downstream regulation for vacuum/positive pressure regulators (V1)

Recommended when tank shall be evacuated or filled with positive pressure. At inlet port (1) either compressed air or atmosphere has to be applied. The use of a filter is advisable.

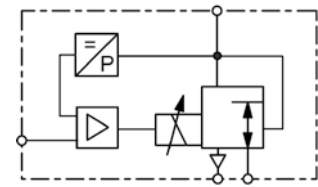
Downstream regulation for vacuum regulators (V3)

Recommended when tank shall be evacuated. Exhaust port (3) will be closed. Inlet port (1) must be connected with vacuum pump. Outlet port (2) has to be connected with consumer or tank.



Technical features

• Pressure range	0...0.1 bar bis 0...50 bar	• Linearity	< ± 0.5% FS
• Command signal	0-10 V, 0-20 mA, 4-20 mA	• Hysteresis	< ± 1.0% FS
• Output signal	0-10 V, 0-20 mA, 4-20 mA	• Response sensitivity	± 1.0% FS
• Regulating time	< 1 s	• Repeatability	± 0.5% FS
• Pressure sensor	100 / 500 mbar, 1 / 5 / 10 / 16 / 20 / 30 / 50 bar	• Rated input	12 / 22 / 30 / 44 W
• Flow rate	250 / 820 / 1700 / 6500 l/min	• Relief capacity	full nominal size



G¹/₈ up to G1
0 ... 100 mbar/50 bar

Dimensions			Nominal size	K _v -value	Flow rate	Supply max.	Connection thread	Pressure range	Order number	
A	B	C	DN	(m³/h)	l/min*1	bar	G	bar		E*
mm	mm	mm								

Proportional pressure regulator 0-10 V command signal, supply voltage 24 V DC, with coupling socket

PP

35	83	57	3	0.18	210	-1	G ¹ / ₈	0...-1.0	PPA00-00V3
						2		0... 0.1	PPA00-A100
						2		0... 0.5	PPA00-A500
						2		0... 1.0	PPA00-0100
						8		0... 3.0	PPA00-0300
						12		0... 6.0	PPA00-0600
						12		0... 10	PPA00-1000
						18		0... 16	PPA00-1600
						22		0... 20	PPA00-2000
						30		0... 25	PPA00-2500
52	105	68	6	0.6	700	-1	G ¹ / ₄	0...-1.0	PP000-00V3
						2		0... 0.1	PP000-A100
						2		0... 0.5	PP000-A500
						2		0... 1.0	PP000-0100
						8		0... 3.0	PP000-0300
						12		0... 6.0	PP000-0600
						12		0... 10	PP000-1000
						18		0... 16	PP000-1600
						22		0... 20	PP000-2000
						40		0... 30	PP000-3000
						60		0... 50	PP000-5000
70	136	85	12	1.2	1400	-1	G ¹ / ₂	0...-1.0	PP100-00V3
						2		0... 1.0	PP100-0100
						8		0... 3.0	PP100-0300
						12		0... 6.0	PP100-0600
						12		0... 10	PP100-1000
						14		0... 12	PP100-1200
96	190	101	20	4.8	5600	-1	G1	0...-1.0	PP200-00V3
						2		0... 1.0	PP200-0100
						8		0... 3.0	PP200-0300
						12		0... 6.0	PP200-0600
						12		0... 10	PP200-1000
						14		0... 12	PP200-1200

Special options, add the appropriate letter or number

setpoint input	0-20 mA	1		4-20 mA	PP . . 2-....
feedback output	0-10 V	1	0-20 mA	4-20 mA	PP . 3. -....
deviant pressure range	indicate on order				PP . . . -XX. .
for absolute pressure					PP0A
body made of stainless steel	P ₂ = max. 20 bar, body / inner parts, 1.4304, EPDM, G ¹ / ₄ and G ¹ / ₂				PPSS
body made of aluminium	valve body only, max. 20 bar			G ¹ / ₄ only	PP019
for oxygen	specially cleaned, FKM elastomer				PP15
cascade regulation	w/o monitor signal 2. sensor, electr. feedback 0-10 V				PPKU
	w/o monitor signal 2. sensor, electr. feedback 4-20 mA				PPKI

Accessories, enclosed

PR adapter	with USB plug and 1 m cable	PDUSB
software	basic version "light"	PDSOFT1*2
coupling socket	M12x1, 5-pin with 2 m cable, 5 x 0.25 angular	KM12-C5-2
	5 m cable, 5 x 0.25 angular	KM12-C5-5
adapter cable	M12x1, 5-pin with 0.2 m cable	PRK-PR-PP

*1 at 6 bar supply pressure and 5 bar outlet pressure
*2 You do not need any software to use the valve!

Technical details: see previous page

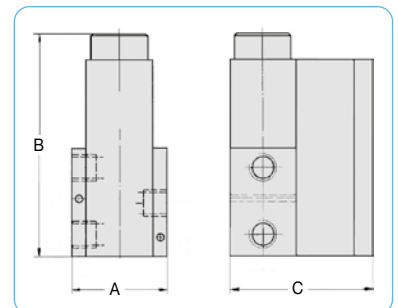
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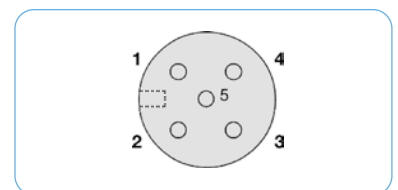
PPA



PP0



dimensions



view from solder pin side

pin	description	5-wire cable (2m)
1	24 V supply voltage	brown
2	analog input signal	white
3	supply earth	blue
4	analog earth	
5	analog outlet signal	black
5	digital pressure switch signal	grey
housing	EMC shield	shield

connection diagram

* Product group



Order example:
PPA00-00V3