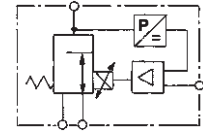


### Technical features P50

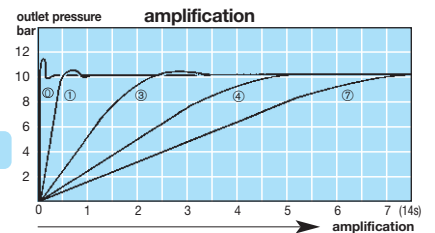
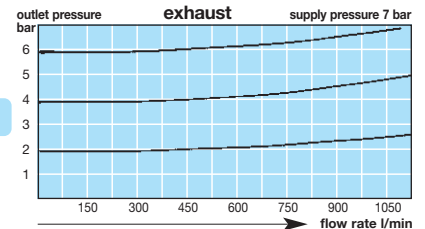
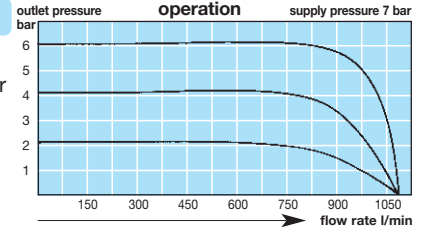
- Electrical closed loop
- Low power consumption, < 1W
- No warm-up, even if pressure is not present
- High flow characteristics
- Adjustable: zero, range and amplification
- Short response time
- Mounting, shock and vibration resistant
- Feedback signal 0 ... 10 V
- Air quality 5 µm sufficient
- Air consumption < 5 l/min



**G<sup>1</sup>/<sub>4</sub>, 1200 l/min  
also programmable**

### General features

<b>construction</b>	Proportional pressure regulator with proven moving coil and flapper / nozzle technology, built-in volume booster and coated glandless spool. The regulator has a single loop, electric feedback from the outlet pressure. Proportional valve for industrial use with 5 µm built-in filter protection.	
<b>mounting position</b>	any preferably vertical to read display	<b>protection class</b> IP 65
<b>temperature</b>	0 °C to 50 °C / 32 °F to 120 °F operating temperature	<b>life:</b> < 30 million, 100% steps
<b>materials</b>	Body: aluminium / nylon Lid: zinc die-casting	End cap: zinc die-casting Elastomer: NBR, nitrile

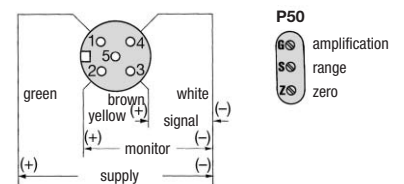


### Pneumatic features

<b>media</b>	Compressed air filtered to 5 µm, non-lubricated or neutral gases	
<b>supply pressure</b>	max. 14 bar	min. 1 bar over maximal outlet pressure
<b>relieving</b>	same orifice as on main valve	
<b>flow rate</b>	1200 l/min at 11 bar supply, 6 bar outlet pressure and 1 bar pressure drop 1400 l/min at 11 bar supply, 6 bar outlet pressure and open outlet	
<b>air consumption</b>	max. 5 l/min max. 0.5% of flow	<b>minimal volume:</b> > 0.1 l at P51 > 0.2 l at P50

### Electrical features

<b>electrical supply</b>	24 V DC ± 25% and 1 W, max. 250 mA Protection against incorrect polarity
<b>input signal</b>	0 to 10 V 4 to 20 mA
<b>CE certification</b>	EN50081-2 and EN50082-2 EN61000-6-2
<b>connection</b>	M5, 5-pin connector straight connector
<b>hint</b>	No warm-up if supply pressure is absent.
<b>feedback signal</b>	0 to 10 V
<b>P50 adjustment</b>	Z: zero + 50% FS S: range - 50% FS G: amplification
<b>P51 adjustment</b>	Z: zero ± 100% FS S: range ± 100% FS G: amplification 0 to 7



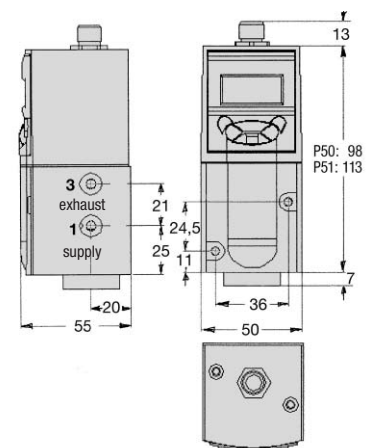
### Accuracy and sensitivity

<b>accuracy</b>	Hysteresis: typ. 0.25% FS Linearity: typ. 0.25% FS	Repeatability < 0.2% FS Responsibility < 0.1% FS
<b>response time</b>	P50: < 80 ms at 10-90% at 0.1l, at 10% amplitude -3dB = 6Hz resp. 90% = 5Hz P51: < 100 ms at 10-90% at 0.1l, at 3 cycles 100% per sec	
<b>temperat. sens.</b>	P50: 0.03% FS / °C typically, for zero and span over operating range P51: 3 mbar / °C typically, for zero and span over operating range	
<b>vibration sens.</b>	< 3% FS at 3g sinus and 10 to 150 Hz in 3 axis	

### P51 Programmable menu structure

<b>display</b>	2 lines,	8-digit	alpha-numerical
<b>button</b>	1: up 2: down	3: right 4: left	OK: enter C: cancel
<b>function</b>	password language zero set range set	pressure unit select amplification select device technical data operation time	fault: pressure window fault: time window loading ramp regular loading ramp with steps

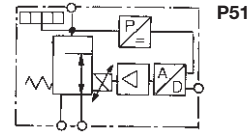
instrument pin construction      adjustment



<b>For your information:</b>	1 bar: 14.8 psi 1 psi: 0.069 bar	1 l/min: 0.035 scfm 1 scfm: 28.3 l/min	1 mm: 0.039 inch 1 inch: 25.4 mm	Pressure gauge: Please consult chapter "Gauges"
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### Technical features P51 (additional to P50)

- 16-bit processor-controlled valve
- fully programmable with on-board diagnostics
- multi language display
- password protection
- pressure programmable in bar, psi, kPa ...
- pressure outlet display
- integrated 5 µm filter
- green LED operation:  
on: ok, flash: pressure outside window
- red LED operation:  
off: ok, flash: pressure not set in time limit
- zero, range, dynamic programmable

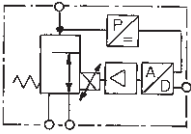


**G<sup>1</sup>/<sub>4</sub>, 1200 l/min  
also programmable**

Dimensions			K <sub>v</sub> - value m <sup>3</sup> /h	Flow rate G	Supply pressure max. recomm. bar	Pressure range bar	Order Number bar
H mm	B mm	D mm					

### Proportional valve w/o display

H	B	D	K <sub>v</sub>	Flow	Supply pressure	Pressure	Order
mm	mm	mm	m <sup>3</sup> /h	G	max. recomm. bar	range bar	Number bar
105	50	54	1.0	1200	-1	-1	<b>P50</b>
					4	3	P50 - V00
					4	3	P50 - 010
					10	8	P50 - 020
					14	10	P50 - 040
					14	14	P50 - 060
					14	14	P50 - 100

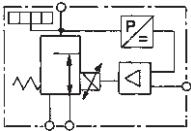


P50



### Proportional valve with display

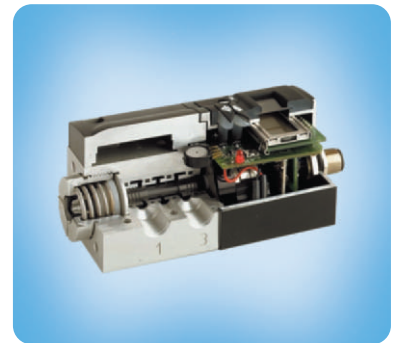
H	B	D	K <sub>v</sub>	Flow	Supply pressure	Pressure	Order
mm	mm	mm	m <sup>3</sup> /h	G	max. recomm. bar	range bar	Number bar
120	50	54	1.0	1200	-1	-1	<b>P51</b>
					4	3	P51 - V00
					4	3	P51 - 010
					10	8	P51 - 020
					14	10	P51 - 040
					14	14	P51 - 060
					14	14	P51 - 100



P51

### Special options add the appropriate letter or number

signal 4...20 mA		1	P5 . . . 1
ISO2 flange		F	P5 . . . F
reverse acting	only required for P50	U	P50 - . . . U
1/4" NPT		N	P5 . . . N
calibrated in psi	only required for P50	P	P50 - . . . P
clips for DIN rail	for mounting on DIN rail	C	P5 . . . C
mounting on booster	including material and adjustment	Z	P5 . . . Z



P51 cross-section

\* at 10 bar supply pressure, 6 bar outlet pressure and Δp = 1 bar

For your information:	1 bar: 14.8 psi	1 l/min: 0.035 scfm	1 mm: 0.039 inch	Pressure gauge: Please consult chapter "Gauges"
	1 psi: 0.069 bar	1 scfm: 28.3 l/min	1 inch: 25.4 mm	



**Order example:  
P50 - 100**