

# Analogic proportional servo valves

## Pressure control - Series LRPA4

Running out of stock

3/3-way servo valves for the pressure control (Ø 4-6 mm)



- » Closed loop control circuit
- » Rotating spool with a metal to metal seal
- » Feedback with internal/ external pressure sensor
- » Integrated PID control

The electronic board is directly integrated in the valve body. The LRPA valve, which is available in the version using an external pressure transducer, is suitable for applications with large distances between valve and volume to be adjusted. Besides this, the valve can also be used with other sensors detecting different physical values such as force, speed, torque, etc. to obtain a feedback signal.

LRPA4 proportional servo valves are valves for the high precision pressure control with integrated closed loop circuit. This is a 3/3-way valve, based on a patented rotating spool system with electronic control of the position, a pressure sensor and an electronic PID-control board.

### GENERAL DATA

Power supply	24 V DC +/- 10%, Ripple max. 0.5 V, max. 0.8 A		
Input specified value	0-10 V DC 100 kohm; 0-20 mA 500 ohm; 4-20 mA 500 ohm		
Output "in-position" signal	"LIMIT ERROR": open-collector to GND, max. 20 mA, no protection against the overload		
Output "feedback" signal	0-10 V DC, max 10 mA		
Repeatability	< 0.03 % FS		
Accuracy	< 0.1% FS related to sensor output signal		
External sensor power supply	24 V DC, max. 100 mA		
"Feedback" signal	0- 10 V 100 kohm; 0-20 mA 500 ohm; 4-20 mA 625 ohm		
Flow rate at 6 bar ΔP 1 bar	300 NI/min (LRPA4-34) 450 NI/min (LRPA4-36)		
Temperature range	0 + 50°C		
Relative humidity of air	max. 90%		
Weight	approx. 1 Kg		
Medium	filtered compressed air, unlubricated, according to ISO 8573-1 class 3.4.3, inert gas		
Linearity	< +/- 0.01 %		
Switching time (working pressure of 6 bar)	2.5 ÷ 3 bar	2.5 ÷ 2 bar	2.5 ÷ 5 bar
without load - LRPA4-34	8	13	18
without load - LRPA4-36	7	9	12
with load of 1000 cm³ - LRPA434	50	100	240
with load of 1000 cm³ - LRPA436	35	65	145
Electrical connection	male connector M16 7 poles (version with internal sensor) female connector M16 4 poles (to connect the external transducer)		

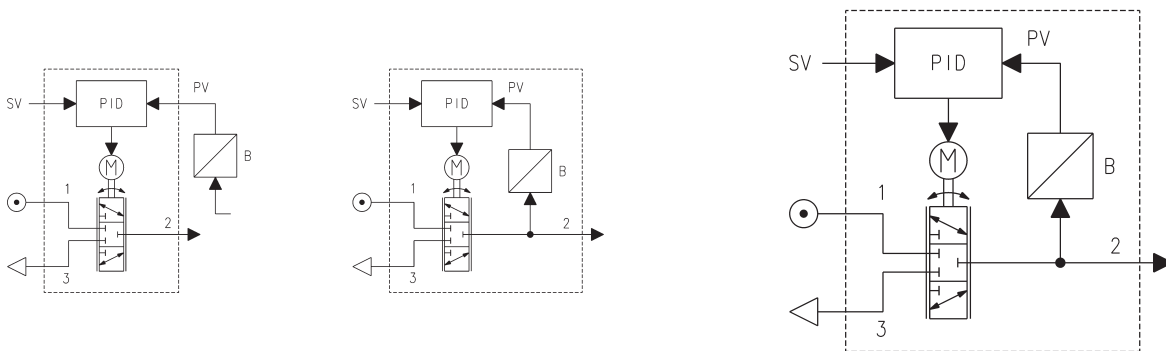
**CODING EXAMPLE**

L	R	P	A	4	-	3	4	-	2	-	2	-	00
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<b>L</b>	SERIES: L = Proportional servo valves
<b>R</b>	TECHNOLOGY: R = rotating spool
<b>P</b>	VERSION: P = pressure control
<b>A</b>	ELECTRONICS: A = analogic
<b>4</b>	MODEL: 4 = with sub-base
<b>3</b>	FUNCTION: 3 = 3/3-way
<b>4</b>	NOMINAL DIAMETER: 4 = 4 mm 6 = 6 mm
<b>2</b>	INPUT COMMAND SIGNAL (Setpoint): 2 = 0-10 V 3 = 0-20 mA 5 = 4-20 mA
<b>2</b>	FEEDBACK SIGNAL: 2 = 0-10 V external transducer 3 = 0-20 mA external transducer 5 = 4-20 mA external transducer B = 1 bar integrated pressure sensor C = 2.5 bar integrated pressure sensor D = 10 bar integrated pressure sensor
<b>00</b>	CABLE: 00 = no cable

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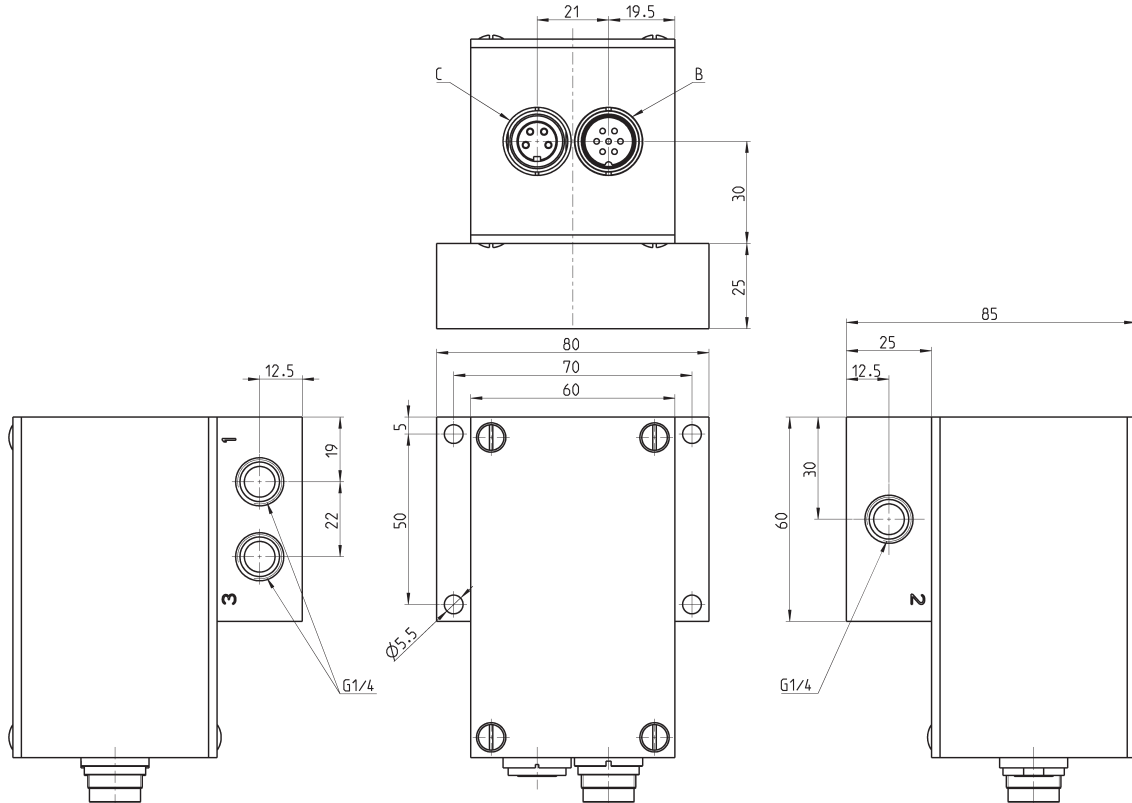
CONTROL

**PNEUMATICAL INSTALLATION**


SV = setpoint value  
 PV = process value  
 B = external or internal sensor  
 PID = proportional control, integrative, derivative

**LRPA4-xx-x-2/3/5-00 SERVO VALVES - PNEUMATICAL INSTALLATION**

Accessories are available in the section 2.15.35



B = male connector M16 7 poles for supply  
 C = female connector M16 4 poles for external transducer

**Female connector M16 4 poles for external transducer**

PIN	FUNCTION	NOTES
1	Electrical supply to the external transducer	24 V DC
2	GND	Internal connection to GND power supply
3	Input from the external transducer	0-10 V or 0-20 mA or 4-20 mA
4	NC	

**B - Supply connector (7 poles male)**

PIN	FUNCTION	NOTES
1	Power supply +24 VDC	
2	Power supply GND	
3	Input command signal (Setpoint Value)	0-10 VDC or 0-20 mA or 4-20mA. The output pressure always follows this signal that has to be as stable as possible. For example: if the sensor has a range of 10 bar and the Setpoint has a Ripple error of 10 mV, this will generate a ripple of 10 mbar on the output.
4	GND input command signal	Pin 4 and 2 must be connected.
5	Output "ERROR"	see technical data
6	Output "LIMIT"	see technical data
7	Output signal of the internal sensor	0-10 VDC. The accuracy-fault of that signal is 2% F.S. and there is an offset of approx. 150 mV.