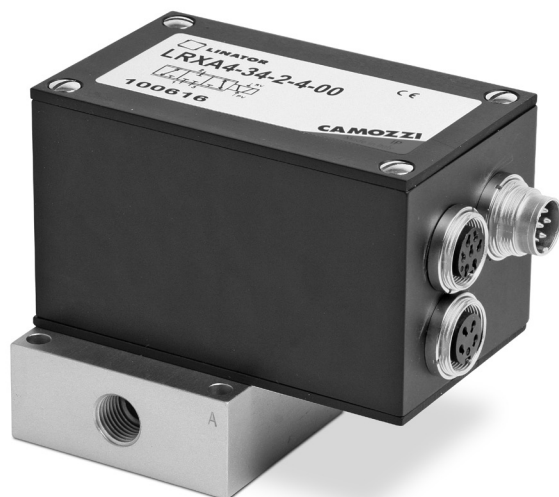


Analogic proportional servo valves Positioning control - Series LRXA4

Running out of stock

3/3-way servo valves which control the positioning of pneumatic cylinders



- » Rotary slide principal, metal to metal seal
- » Precise and quick electronic control
- » Closed loop system for master valve, slave valve and external sensor
- » Connection for the external position transducer signal
- » Connection for the slave valve to control the two cylinder chambers
- » 3-way valve function with nominal diameters 4 mm - 6 mm

LRXA4 servo valves are proportional valves with a high-precision integrated control for the positioning of pneumatic cylinders. The valves include a patented 3-way system based on the rotating spool principle with electronic control of the spool position.

The servo pneumatic closed loop system allows, through the feedback of the external positioning sensor, the control of position, speed and acceleration. The electronic board is directly integrated in the valve body. Through the use of a proper connector, the Master valve mod. LRXA4 is connected to a second LRWA4 valve that will work as a slave-valve.

GENERAL DATA

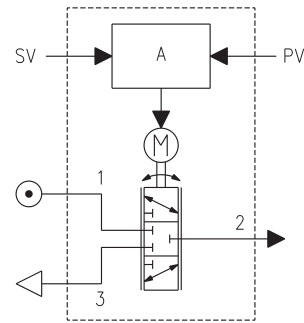
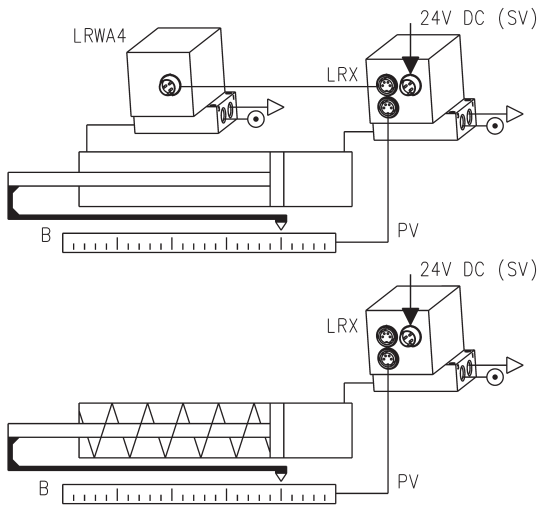
Power supply	24 V DC +/- 10%, Ripple max. 0.5 V, max. 0.8 A; with slave valve max. 1.6 A
Command signal (Setpoint)	0-10 V DC 100 kohm; 0-20 mA 500 ohm; 4-20 mA 500 ohm
Signal of the position transducer	24 V DC, Max. 70 mA, short circuit protected
Repeatability	< 0.1% with optimally adjusted control feedbacks
Absolute accuracy and linearity	determined by feedback system (position sensor)
Output power supply	5 V DC, max. 10 mA, for feedback system
Maximum flow rate at 6 bar ΔP 1 bar	350 NI/min (LRXA4-34) 550 NI/min (LRXA4-36)
Temperature range	0 + 50°C
Relative humidity of air	max. 90%
Weight	1 Kg
Medium	filtered compressed air, unlubricated, according to ISO 8573-1 class 3.4.3, inert gas
Supply pressure	0 + 10 bar

CODING EXAMPLE

L | **R** | **X** | **A** | **4** | **-** | **3** | **4** | **-** | **2** | **-** | **4** | **-** | **00**

L	SERIES: L = proportional servo valves
R	TECHNOLOGY: R = rotating spool
X	VERSION: X = position control
A	ELECTRONICS: A = analogic
4	MODEL: 4 = with sub-base
3	VALVE FUNCTION: 3 = 3/3-way
4	NOMINAL DIAMETER: 4 = 4 mm 6 = 6 mm
2	COMMAND SIGNAL (Setpoint): 2 = 0-10 V 3 = 0-20 mA 5 = 4-20 mA
4	FEEDBACK SIGNAL: 4 = 0-5 V
00	CABLE: 00 = no cable

PNEUMATICAL INSTALLATION

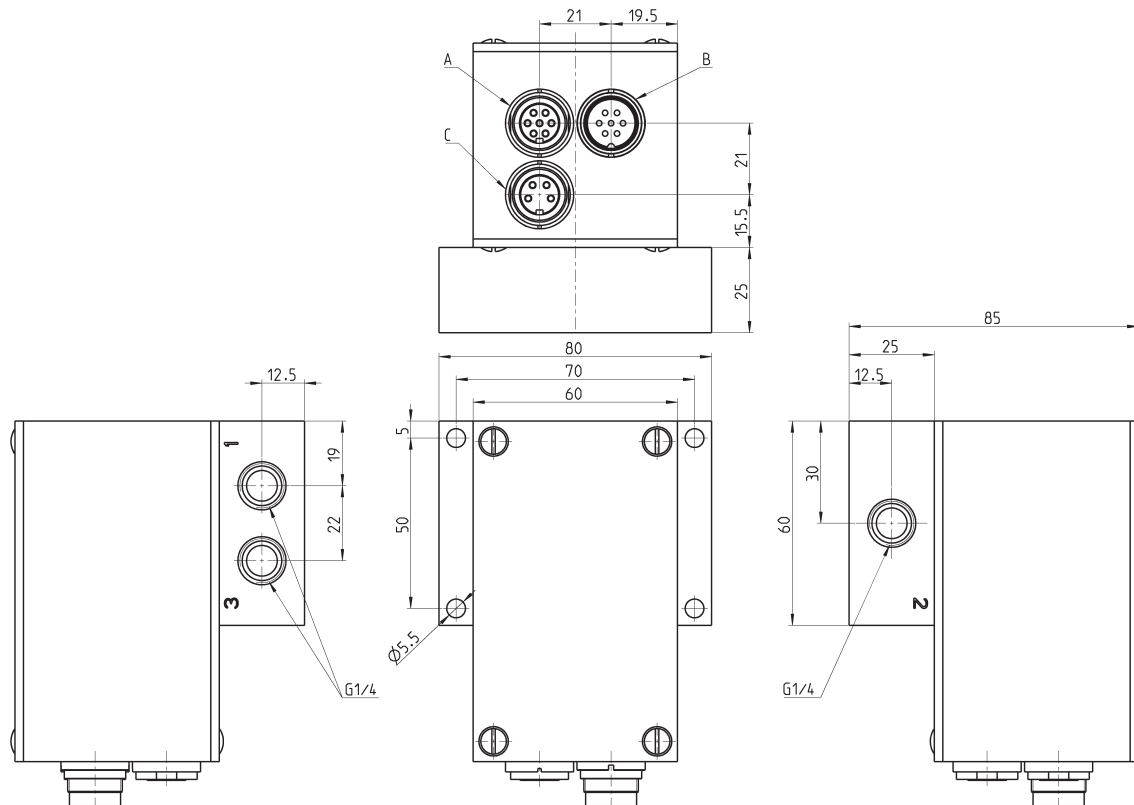


PIC. 1 (above): positioning of a cylinder with master valve LRX and slave valve LRWA4-3X-4-A-00.

PIC. 2: positioning of a cylinder with valve LRX only.

SV = setpoint value; PV = process value;
A = closed loop system for master, slave valve and external sensor.

Tubes to the cylinder < 2 m with an inner Ø of 4 or 6 mm to avoid possible pressure drops. The cylinder has to be dimensioned to provide at least 30% more force than needed.

SERVO VALVES LRXA4 - PNEUMATICAL INSTALLATION


- A = female connector M16 7 poles for slave valve
- B = male connector M16 7 poles for master valve supply
- C = female connector M16 4 poles for the feedback system (position sensor)

FEMALE CONNECTOR M16 4 POLES FOR THE FEEDBACK SYSTEM (POSITION SENSOR)

PIN	FUNCTION	NOTES
1	GND	Potentiometer GND. Never connect this pin to other GNDs. Because of technical reasons the voltage at this pin is about half of the power supply voltage.
2	Input of the feedback signal	Potentiometer output. If there isn't used a potentiometer as feedback system, the output signal of the feedback system has to be 0-5 VDC. The signal must have a floating GND (see remark to pin 1).
3	Output supply	For potentiometer, +5 VDC vs. pin 1
4	Shielding	The cable to the feedback system has to be shielded. At the feedback system's end of the cable the shielding must be connected to the metallic housing of the feedback system, at the valve's end pin 4 is connected internally to the valve housing.

CONNECTORS M16 7 POLES

PIN	FEMALE CONNECTOR M16 7 FOR SLAVE VALVE	MALE CONNECTOR M16 7 POLES FOR MASTER VALVE SUPPLY	NOTES
1	Power supply +24 VDC	Power supply +24 VDC	
2	Power supply GND	Power supply GND	
3	Input signal (for slave valve, +/- 5V vs. pin 4)	Input signal (Setpoint)	The total range of this signal corresponds to the total electric range of the feedback system. The cylinder is positioned always and immediately to the position according to this signal. Therefore this signal has to have a high signal quality: if, for example, the feedback system has a length of 300 mm, a ripple of 10 mVpp on the command signal will generate a positioning ripple of +/- 0.3 mm !!
4	GND input signal (for slave valve, don't connect to other GND!)	GND Input signal	Pin 4 and 2 should be connected. If that is not possible, the voltage between both GND's may not increase +/- 5 V.
5	NC	GND output feedback signal	For slave-valve, 0-5V vs. pin 4
6	NC	Output In-position	24 VDC vs. pin 2
7	NC	Output feedback signal	0-10 VDC vs. pin2. The accuracy-fault of that signal is about 2% and there is an offset of approx. 150 mV. Don't use it for precise documentations