News 2010

Proportional servo valves

Series LR

Proportional technology High-Tech

With the new servo valves **Series LR**, Camozzi has extended its range of products in a new highly innovative field of mechatronic control for pneumatic systems.
The most typical applications are pressure regulation with high precision and dosing of industrial gases.
The products of the **Series LR** are high-end servo valves, for regulations with highest dynamics and precision with closed loop control circuit.

General data

Integrated technology to satisfy customer needs

Servo pneumatics valves Series LR are able to control air pressure in a quick and precise way, reducing cycle times of the positioning profiles, utilizing less compressed air and enabling the saving of energy in applications where pneumatic cylinders are used for positioning functions.
Electronic board is integrated in the body of the valve or in the connector of the cartridge version.

Highest reliability and precision of control

The heart of the servo valves is a patented rotating spool system.
The rotating spool has a metal-to-metal seal with the cartridge that ensures a precise frictionless control without the influence of any seals.
With servo-pneumatics, three main functions can be realised: pressure or flow control, control of motion profiles (acceleration and speed), and the positioning of linear actuators.

Multisectorial solutions

For the most important standard applications, stand-alone and ready for use components are available.
With these components an actuation unit, regulation control and a pressure sensor are all integrated into one body.
The cartridge version or the version with sub-base can be used in a wide range of application in different sectors.

The advantages

> Excellence in dynamics and precision
> Response time (0-100%) ~ 5 ms
> Metal to metal seal
> Integrated 3-loop-controller
> Integrated pressure sensor

Servo valves Series LR
Flow control - LRWA0

New

2

CONTROL

3/3 way servo valves for the flow control

- Cartridge design
- Optimal mounting options for different applications
- Rotary slide principal, metal to metal tight
- Space saving design at high flow rate
- Electronic closed loop slide position control high precision
- 3-way-function with nominal size 4 mm or 6 mm

The servo-valves LRWA0-34 and LRWA0-36 are direct driven 3/3-way-valves with patented rotary slide principle and electronic closed loop slide posi-tion control. They are designed as cartridge to provide space- and cost-saving solutions especially in serial products.

The servovalve cartridge has to be supplied with a controller that contains the electronic board and a connection cable. The valve controllers are adjusted to the corresponding cartridges. A correct function needs a cartridge and a controller with identical serial numbers.

GENERAL DATA

Power supply	24 VDC +/- 10%, stabilized, max. 0,8 A
Input specified value	+/- 10V vs. 100 kohm; 0-10V vs. 100 kohm; 0-20 mA vs. 500 ohm
Hysteresis	approx. 1% FS related to slide position
Linearity	approx. 1% FS related to slide position
Frequency limit (-3dB, -90°)	at +/-100% spec. val.: approx. 70 Hz; at +/- 50% spec. val.: approx. 110 Hz
Switching time	0 to 100%: approx. 5 ms; +/- 100%: approx. 7 ms
Temperature range	0 to 50° C
Relative humidity of air	max. 90%
Weight of cartridge	approx. 0,140 kg without cable
Maximum flow rate (fully opened)	6 bar to 0 bar: 700 Nl/min (LRWA0-34) 1100 Nl/min (LRWA0-36) 6 bar to 5 bar: 450 Nl/min (LRWA0-34) 690 Nl/min (LRWA0-36)
Medium	clean air, oiled or not oiled, 5 µm filtered
Supply pressure	-0,9 to 10 bar
Leakage	< 1% of maximum flow rate
Materials	AISI 440B/1; NBR (static)

CODING EXAMPLE

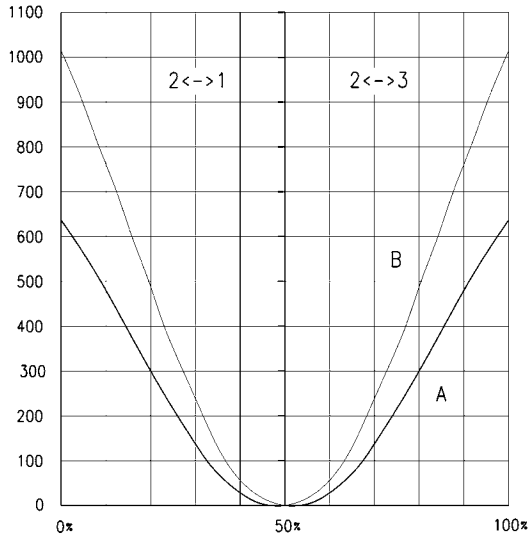
L	R	W	A	0	-	3	4	-	1	-	A	-	05

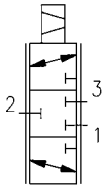
L	SERIES: L = Proportional servo valves
R	TECHNOLOGY: R = rotary
W	VERSION: W = flow control
A	ELECTRONICS: A = analogic
0	MODEL: 0 = cartridge with fixation slot
3	FUNCTION: 3 = 3 way
4	DIAMETER: 4 = 4 mm 6 = 6 mm
1	INPUT SIGNAL: 1 = +/- 10 V 2 = 0-10 V 3= 0-20 mA
A	FEEDBACK SIGNAL: A = internal encoder
05	CABLE: 05 = 0,5 mts 10 = 1 mts 20 = 2 mts

Example: Servo valve LRWA0 diam. 4 mm input, +/- 10V, cable 1m: LRWA0-34-1-A-10
Accessories: Fitting block with G1/4-bores, 51x40x30 mm³, material: aluminium anodised Cod. LRA0C-3

FLOW DIAGRAM(Nl/min) vs INPUT SIGNAL (%)

News





A: LRWA0-34
B: LRWA0-36

SERVO VALVS LRWA0 - PNEUMATICA INSTALLATION

News

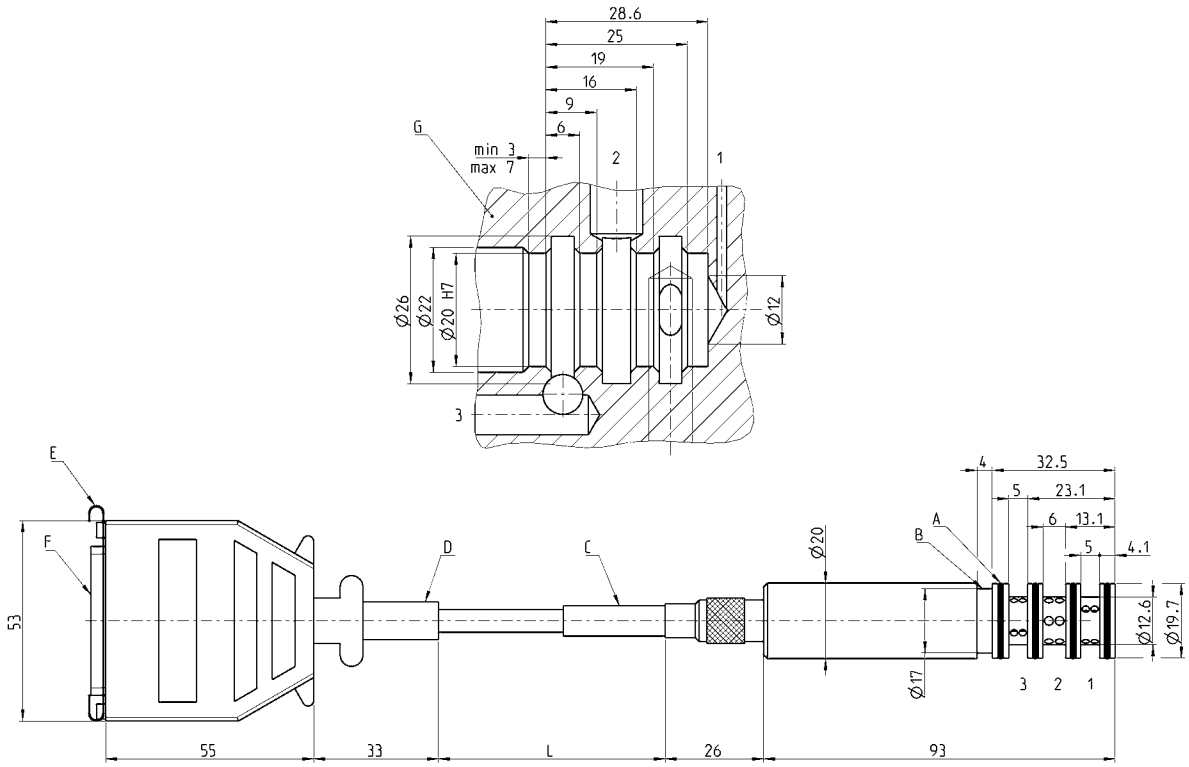
2

CONTROL

The typical modes of installation to control a pneumatical load are the modes I and II (see table); the only difference is the relation between directions of flow and specified value. Low specified electrics values connect always ports 1 and 2, high specified values ports 2 and 3.

The modes III and IV allow flow con¬trol of two pneumatical loads with only one servo valve. The inner diameters of connected fittings and tubes should correspond to the nominal size of the valves, at least 4 mm for LRWA0-34 and 6 mm for LRWA0-36.

THE LENGTH OF THE LEADS SHOULD BE AS SHORT AS POSSIBLE, BETWEEN VALVE-OUTLET AND LOAD NORMALLY < 2 mts



1= PORT 1; 2= PORT 2; 3= PORT 3;
A= O-ring 17x1,5; B= fixation slot; C= bending radius >50; D= bending radius >25; E= fixation slide; F= sub-d-25 pins (male); G= cartridge fitting block

APPLICATION MODES TABLE			
MODES/Ports	1	2	3
Mode I	P	A	R
Mode II	R	A	P
Mode III	A	P	B
Mode IV	A	R	B

ELECTRICAL CONNECTION (Pin configuration)		
PIN	FUNCTION	NOTES
7	power supply +24 VDC	
13	power supply GND	
14	GND Input command signal	max. voltage vs. pin 13: +/- 30 V
15	Input command signal	vs. pin 14
25	N.C.	
6,8	Internal reference potential	never connect to other GNDs!
1	Testpoint motor voltage	+/- 10 V vs. pin 6
24	Testpoint slide position	+/- 1 V vs. pin 6

Servo valves Series LR
Flow control - LRWA2

New

2

3/3 way directly operated servo valves for the flow control

- Rotary slide principal, metal to metal tight
- Space saving design at high flow rate
- Electronic control: precise dosing at low power loss
- Elettronica integrata, pronta per la connessione
- 3-way-function with nominal size 4 mm or 6 mm
- Cabinet mounting on DIN-rail

The servo valves LRWA2-34 and LRWA2-36 are direct driven 3/3-way valves with patented rotary slide principle and electronic closed loop slide position control. The electronic board is integrated into the valve's body ready to connect.

The valves are prepared to be mounted in cabinets on DIN rail.
Two clips allow to snap on the valve to the 35mm DIN rail without any other screws.
The valves have a compact design to provide space-and cost-saving solutions.

GENERAL DATA

Power supply	24 VDC +/- 10%, stabilized, max. 0,8 A
Input specified value	+/- 10V vs. 100 kohm; 0-10V vs. 100 kohm; 0-20mA vs. 500 ohm
Hysteresis	ca. 1% FS related to slide position
Linearity	ca. 1% FS related to slide position
Frequency limit (-3dB, -90°)	at +/-100% spec. val.: approx. 70 Hz; at +/- 50% spec. val.: approx. 110 Hz
Switching time	0 to 100%: approx. 5 ms; +/- 100%: approx. 7 ms
Temperature range	0 to 50° C
Relative humidity of air	max. 90%
Direction of assembly	any
Weight of cartridge	approx. 0,700 kg
Maximum flow rate (fully opened)	6 bar to 0 bar 700 Nl/min (LRWA2-34); 1100 Nl/min (LRWA2-36) 6 bar to 5 bar 450 Nl/min (LRWA2-34); 690 Nl/min (LRWA2-36)
Medium	clean air, oiled or not oiled, 5 µm filtered
Supply pressure	-0,9 to 10 bar
Leakage	< 1% of maximum flow rate

2

CONTROL

CODING EXAMPLE

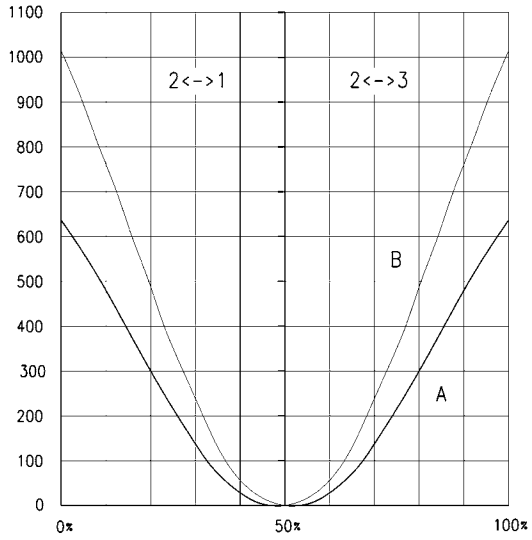
L	R	W	A	2	-	3	4	-	1	-	A	-	00

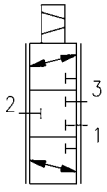
L	SERIES: L = Proportional servo valves
R	TECHNOLOGY: R = rotary
W	VERSION: W = flow control
A	ELECTRONICS: A = analogic
2	MODEL: 2 = compact DIN-RAIL
3	FUNCTION: 3 = 3 way
4	DIAMETER: 4 = 4 mm 6 = 6 mm
1	INPUT SIGNAL: 1 = +/- 10 V 2 = 0-10 V 3 = 0-20 mA
A	FEEDBACK SIGNAL: A = internal encoder
00	CABLE: 00 = no cable

Accessories: CS-LF05HB-D200; CS-LF05HB-D500; CS-LR05HB-D200;CS-LR05HB-D500

FLOW DIAGRAM(Nl/min) vs INPUT SIGNAL (%)

News





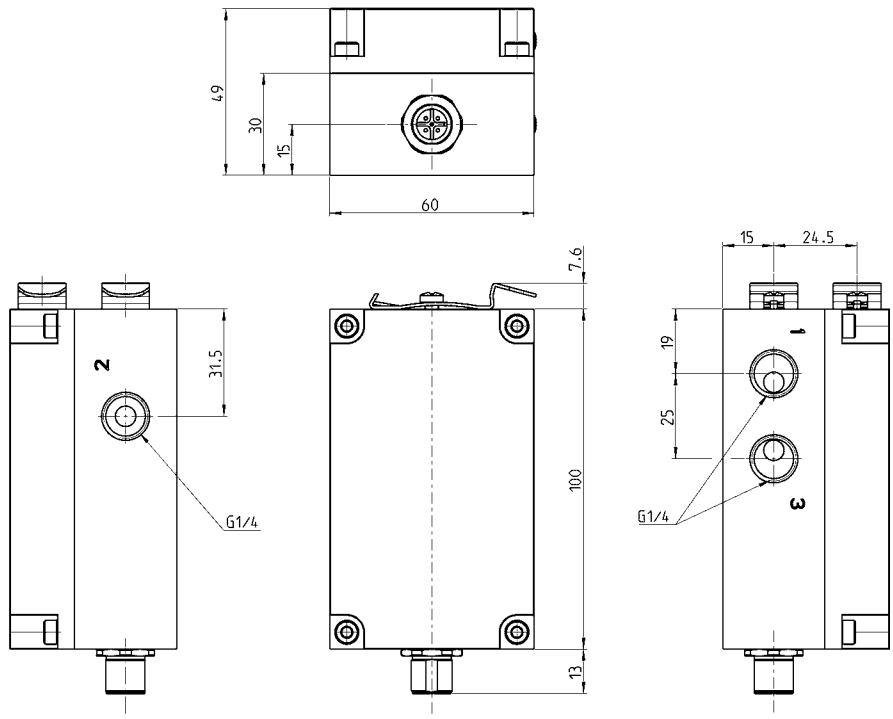
A: LRWA2-34
B: LRWA2-36

SERVO VALVES LRWA2 - PNEUMATICAL INSTALLATION

News

The typical modes of installation to control a pneumatical load are the modes I and II (see chart below); the only difference is the relation between directions of flow and specified value. Low specified electrics values connect always ports 1 and 2, high specified values ports 2 and 3.

The modes III and IV allow flow control of two pneumatical loads with only one servo valve. The inner diameters of connected fittings and tubes should correspond to the nominal size of the valves, at least 4 mm for LRWA2-34 and 6 mm for LRWA2-36.



THE LENGTH OF THE LEADS SHOULD BE AS SHORT AS POSSIBLE, BETWEEN VALVE-OUTLET AND LOAD NORMALLY NOT MORE THAN 2 mts.

APPLICATION MODES TABLE			
MODES/Ports	1	2	3
Mode I	P	A	R
Mode II	R	A	P
Mode III	A	P	B
Mode IV	A	R	B

ELECTRICAL CONNECTION (pin configuration)			
PIN	FUNCTION	NOTES	COLORS OF THE ACCESSORIES CABLE
1	Power supply +24 VDC		Brown
4	Power supply GND		Black
3	Input signal		Blu
2	Input signal GND	Pin 4 and 2 should be connected. If that is not possible, the voltage between both GND's may not increase +/- 30 V.	White
5	N.C.		Grey

Servo valves Series LR
Flow control - LRWA4

New

2

CONTROL

3/3 way servo valves for the flow control

- Rotary slide principal, metal to metal tight
- Space saving design at high flow rate
- Electronic closed loop slide position control, high precision
- Integrated electronics, ready to connect
- 3-way-function with nominal size 4 mm or 6 mm
- Sub-base mounting version

The servo valves LRWA3 and LRWA4 are direct driven 3/3-way valves with patented rotary slide principle and electronic closed loop slide position control.

The servo valves are supplied with the body containing the valve with the electronic board and the corresponding sub-base with G ¼ ports.

GENERAL DATA

Power supply	24 VDC +/- 10%, stabilized, max. 0,8 A
Input specified value	+/- 10VDC vs. 100 kohm ; 0-10VDC vs. 100 kohm ; 0-20mA vs. 500 ohm; +/- 5VDC vs. 100 kohm
Hysteresis	approx. 1% FS related to slide position
Linearity	approx. 1% FS related to slide position
Frequency limit (-3dB, -90°))	at +/-100% spec. val.: approx. 70 Hz; at +/- 50% spec. val.: approx. 110 Hz
Switching time	0 to 100%: approx. 5 ms; +/- 100%: approx. 7 ms
Temperature range	0 to 50° C
Relative humidity of air	max. 90%
Direction of assembly	any
Weight of cartridge	approx. 1,0 kg
Maximum flow rate (fully opened)	6 bar to 0 bar: 500 Nl/min (LRWA4-34) 800 Nl/min (LRWA4-36) 6 bar to 5 bar: 350 Nl/min(LRWA4-34 550 Nl/min(LRWA4-36)
Medium	clean air, oiled or not oiled, 5 µm filtered
Supply pressure	-0,9 to 10 bar
Leakage	< 1% of maximum flow rate

CODING EXAMPLE

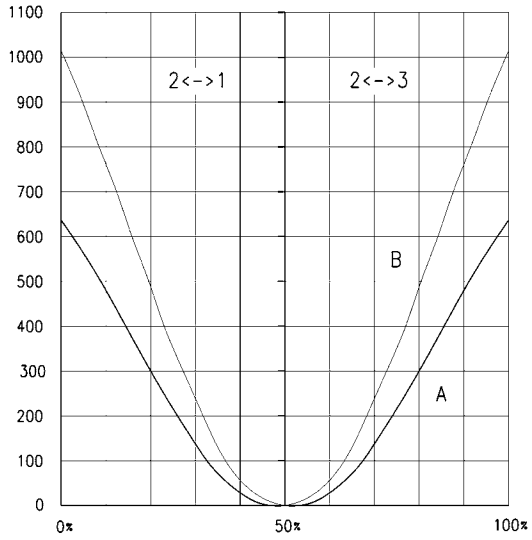
L	R	W	A	4	-	3	4	-	1	-	A	-	00

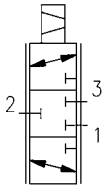
L	SERIES: L = Proportional servo valves
R	TECHNOLOGY: R = rotary
W	FUNCTION: W = flow control
A	ELECTRONICS: A = analogic
4	MODELS: 4 = with sub-base
3	FUNCTION: 3 = 3 way
4	DIAMETER: 4 = 4 mm 6 = 6 mm
1	INPUT SIGNAL: 1 = +/- 10V 2 = 0-10 V 3 = 0-20 mA 4 = +/- 5 V
A	FEEDBACK SIGNAL: A = internal encoder
00	CABLE: 00 = no cable

Accessories: CS-PF07CB

FLOW DIAGRAM(Nl/min) vs INPUT SIGNAL (%)

News





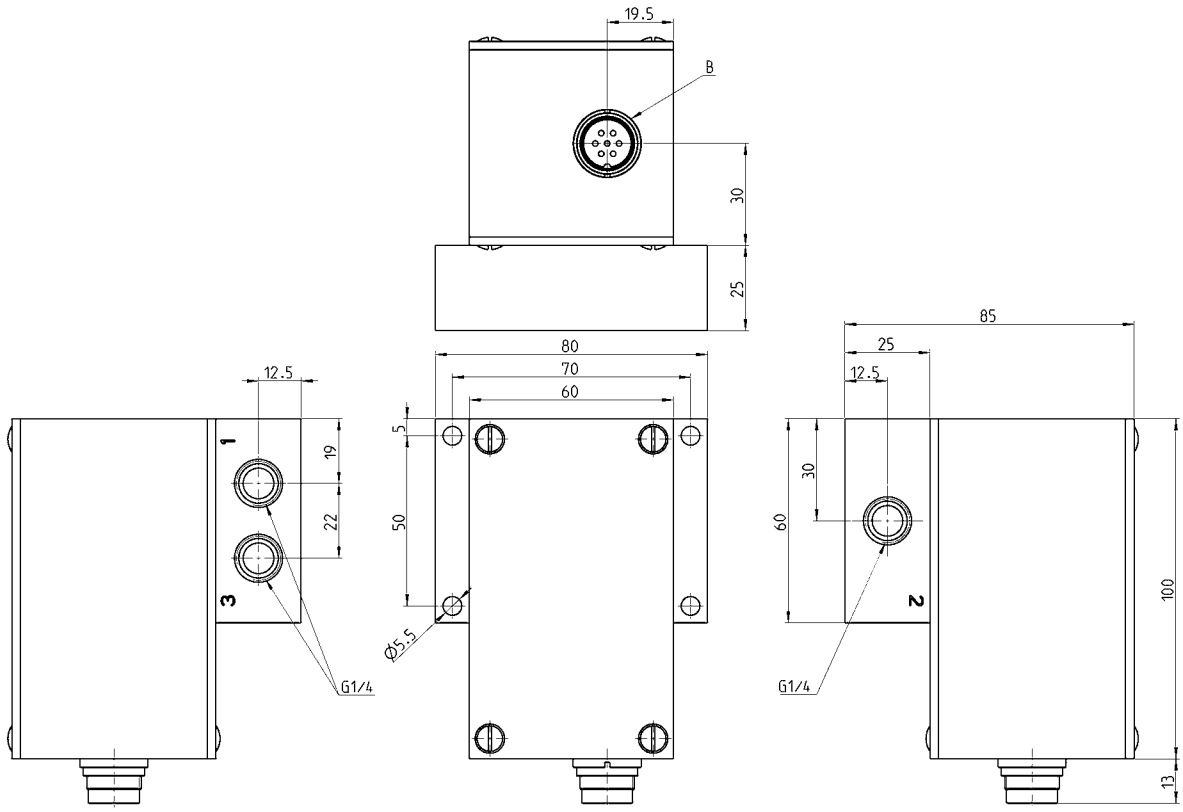
A: LRWA4-34
B: LRWA4-36

SERVO VALVES LRWA4 - PNEUMATICAL INSTALLATION

News

The typical modes of installation to control a pneumatical load are the modes I and II (see chart below); the only difference is the rela¬tion between directions of flow and specified value. Low specified electrics values connect always ports 1 and 2, high specified values ports 2 and 3

The modes III and IV allow flow control of two pneumatical loads with only one servo valve. The inner diameters of connected fittings and tubes should correspond to the nominal size of the valves:
at least 4 mm for LRWA4-34;
at least 6 mm for LRWA4-36.



THE LENGTH OF THE LEADS SHOULD BE AS SHORT AS POSSIBLE, BETWEEN VALVE-OUTLET AND LOAD NORMALLY NOT MORE THAN 2 mts.

APPLICATION MODES TABLE			
MODES/Ports	1	2	3
Mode I	P	A	R
Mode II	R	A	P
Mode III	A	P	B
Mode IV	A	R	B

B - ELECTRICAL CONNECTIONS(Pin configuration)		
	FUNCTION	NOTES
1	Power supply +24 VDC	
2	power supply GND	
3	Input signal	
4	Input signal GND	Pin 4 and 2 should be connected. If that is not possible, the voltage between both GND's may not increase +/- 30 V.
5	N.C.	
6	N.C.	
7	N.C.	

Servo valves Series LR
Pressure control LRPA4

New

2

3/3 servo valves for the pressure control (Ø 4-6 mm)
Selectable sensor range

The servo valves LRPA4 are integrated servopneumatic systems for high precision pressure control loops in pneumatic systems. The devices include a 3/3-way servo valve size 4 resp. 6, a pressure sensor, an electronic PID-controller and the driver electronic for the servo valve. The valves are supplied with 24 VDC and an analogue command signal. There are an analogue output for the real output value and 2 binary outputs for additional system informations.

- Rotary slide principal, metal to metal tight
- Pressure sensor and PID
- Servo valves are fitted ready for installation and function
- Precise pressure control loops
- Supply connector for external pressure transmitter

The valve LRPA can be used with an external pressure transducer instead of the internal sensor (ex. for systems with large distances between servo valve and load); this option allows to use sensors for other physical values (e.g. force, speed, torque, etc.) as transmitter for the feedback signal. The servo valves are fitted ready for installation and function, including a base with G1/4 ports and a connector for the plug to supply the valve with energy and command signal.

GENERAL DATA

Power supply	24 VDC +/- 10%, ripple max. 0.5 Vss, max. 0,8 A
Input specified value	0-10VDC vs. 100 kohm; 0-20mA vs. 500 ohm; 4-20mA vs. 500 ohm
Output "in-position" signal	"LIMIT ERROR": open-collector verso GND, max. 20 mA, nessuna protezione contro il sovraccarico
Output "feedback" signal	0-10 VDC, max 10mA
Repeatability	< 0.03 % FS
Accuracy	< 0,1% FS related to sensor output signal
Alimentazione elettrica verso l'esterno	approx. 24 VDC, max. 100 mA
"Feedback" signal	0- 10 V vs. 100kohm; 0-20 mA vs. 500 ohm; 4-20 mA vs. 625 ohm
Maximum flow rate (fully opened)	6 bar to 0 bar: 550 Nl/min (LRPA3-34) 780 Nl/min (LRPA3-36) 6 bar to 5 bar: 300 Nl/min(LRPA3-34) 450 Nl/min (LRPA3-36)
Temperature range	0 to 50°C
Relative humidity of air	max. 90%
Weight	approx. 1,0 Kg
Medium	clean air, oiled or not oiled, 5 µm filtered
Linearità	<+/- 0,01 %
Switching time without load (LRPA434) **Switching time without load (LRPA436)** **Switching time with load of 1000 cm3 (LRPA434)** **Switching time with load of 1000 cm3 (LRPA436)**	from 2,5 to 3,0 bar: 8ms; from 2,5 to 2,0 bar: 13ms; from 2,5 to 5,0 bar: 18ms (*) from 2,5 to 3,0 bar: 7ms; from 2,5 to 2,0 bar: 9ms; from 2,5 to 5,0 bar: 12ms (*) from 2,5 to 3,0 bar: 50ms; from 2,5 to 2,0 bar: 100ms; from 2,5 to 5,0 bar: 240ms (*) from 2,5 to 3,0 bar: 35ms; from 2,5 to 2,0 bar: 65ms; from 2,5 to 5,0 bar: 145ms (*) (*) Working pressure: 6 bar

2

CONTROL

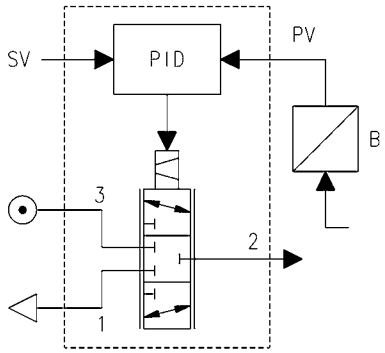
CODING EXAMPLE

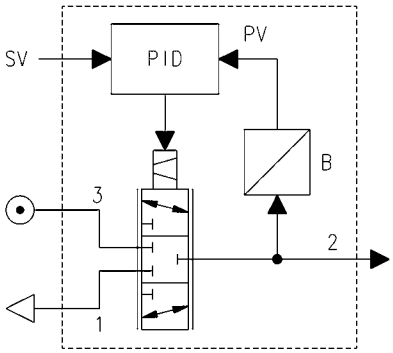
L	R	P	A	4	-	3	4	-	2	-	2	-	00

L	SERIES: L= Proportional servo valves
R	TECHNOLOGY: R= rotary
P	VERSION: P= pressure control
A	ELECTRONICS: A= analogic
4	MODEL: 4= with sub-base
3	FUNCTIONS: 3= 3 way
4	DIAMETER: 4= 4 mm 6= 6 mm
2	INPUT SIGNAL: 2= 0-10 V 3= 0-20 mA 5= 4-20 mA
2	FEEDBACK SIGNAL: 2=0-10 V external 3= 0-20 mA external 5= 4-20 mA esterno B= 1 bar interno C= 2,5 bar interno D= 10 bar interno
00	CABLE: 00= no cable

Accessories: CS-PF07CB; CS-PM04CB

PNEUMATICAL INSTALLATION





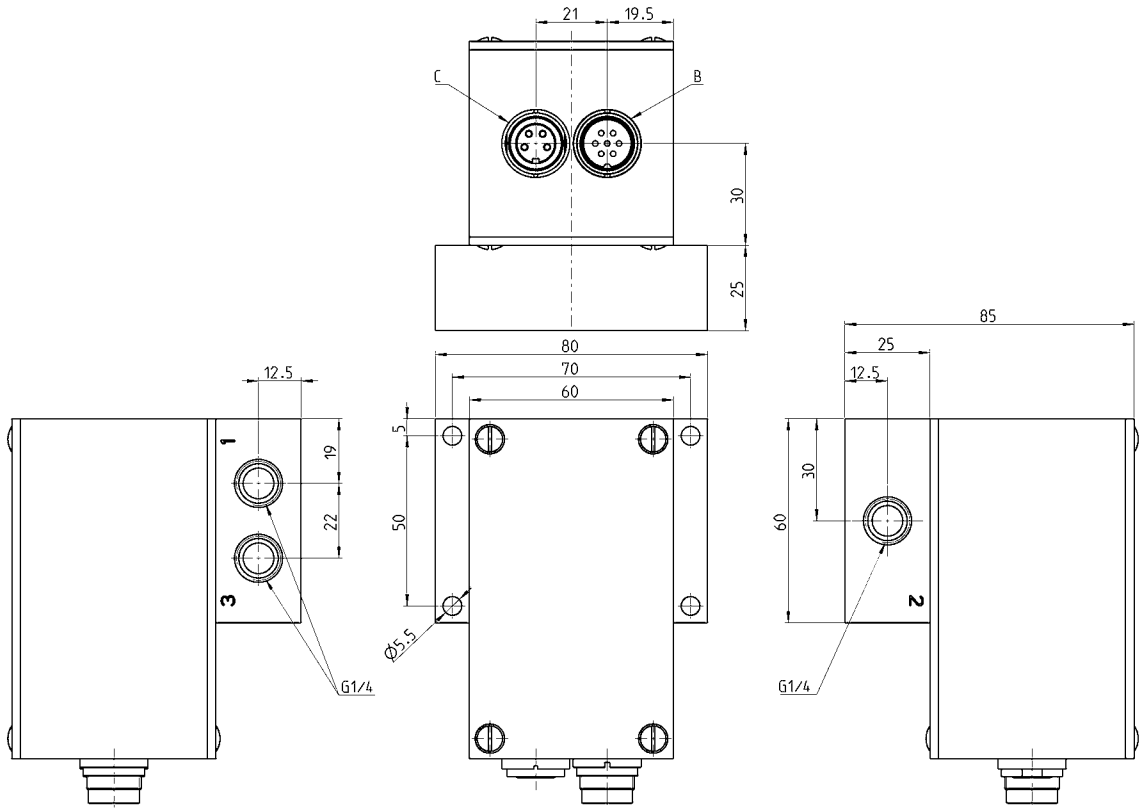
SV= setpoint value
PV= process value
B= sensor
PID= proportional control, integrative, derivative

SERVO VALVES LRPA4 - PNEUMATICAL INSTALLATION

News

They must have an inner diameter acc. to the size of the valves to prevent pressure drops:
at least 4 mm for LRPA4-34
at least 6 mm for LRPA4-36.

For LRPA with internal sensor the tubes to the load should be as short as possible (not more than 2 m). The valves are optimally adjusted by the factory for closed load volumes (no permanent air consumption) of approx. 0.25 l to 2 l min.



B = supply connector (7 poles male)
C = connector for the external pressure transmitter (4 pole female)

C - Connector for for external pressure transmitter (4 pole female) only for LRPA4-XX-X-B/C/D-00 with external sensor		
PIN	FUNCTION	NOTES
1	Output supply	To the transmitter, approx. 24 VDC to pin 2
2	GND	Internal connection to GND power supply
3	Input feedback signal(Process Value)	0-10 V o 0-20 mA o 4-20 mA vs. pin 2
4	N.C.	

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 total range of this signal corresponds to the total range of the sensor for the feedback signal. The output pressure follows always this signal. Therefore the signal has to have a high signal quality: if, for example, the sensor has a range of 10 bar, a ripple of 10 mV on the command signal will generate a ripple of 10 mbar on the output pressure.
4	GND input command signal	Pin 4 and 2 should be connected. If that is not possible, the voltage between both GND's may not increase +/- 30 V.
5	Output "ERROR"	see technical data
6	Output "LIMIT"	see technical data
7	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. The accuracy of controlling itself is much better.

Servo valves Series LR
Positioning control - LRXA4

New

2

CONTROL

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

- Rotary slide principal, metal to metal tight
- Integrated 3-loop-controller
- Available for use with an external pressure transducer
- 3-way-function with nominal size 4 mm or 6 mm
- The valves have a plug to supply a slave-valve directly.
- Servo valves are fitted ready for installation and function

The servo valves LRXA4 are integrated servopneumatic systems for the positioning of pneumatic cylinders. The valves include a 3-way-servovalve size 4 resp. size 6 and a 3-loop-controller for cylinder-positioning with feedbacks for position, velocity and acceleration of the cylinder.

As feedback system linear potentiometers shall be used, these systems may be connected to and supplied from the LRXA-valve directly. Other kinds of measuring systems may be used, if they provide an analogue output signal (0-5V) with floating ground and a sample frequency of more than 1 kHz.
Normally a second servovalve (slave) is necessary to supply the second cylinder chamber. There is a plug on the LRXA-valve to supply this slave-valve directly.

GENERAL DATA

Power supply	24 VDC +/- 10%, ripple max. 0.5 Vss, max. 0,8 A; with slave valve max. 1.6A
Input command signal	0-10VDC vs. 100 kohm; 0-20mA vs. 500 ohm; 4-20mA vs. 500 ohm
Output "in position"	24 VDC, max. 70 mA, open-collector, short circuit protected , adjustable size of window
Output "feedback" signal	0-10 VDC, max. 10 mA
Repeatability	< 0,3% with optimally adjusted control feedbacks
Absolute accuracy & Linearity	determinated by feedback system
Output power supply	5 VDC, max. 10 mA
Input feedback signal	0-10 VDC, max 10mA
Portata massima	6 bar to 0 bar: 500 Nl/min (LRXA4-34) 800 Nl/min (LRXA4-36) 6 bar to 5 bar: 350 Nl/min(LRXA4-34) 550 Nl/min (LRXA4-36)
Temperature range	0 to 50°C
Relative humidity of air	max. 90%
Weight	approx. 1,0 Kg
Medium	clean air, oiled or not oiled, 5 µm filtered
Supply pressure	0 to 10 bar

CODING EXAMPLE

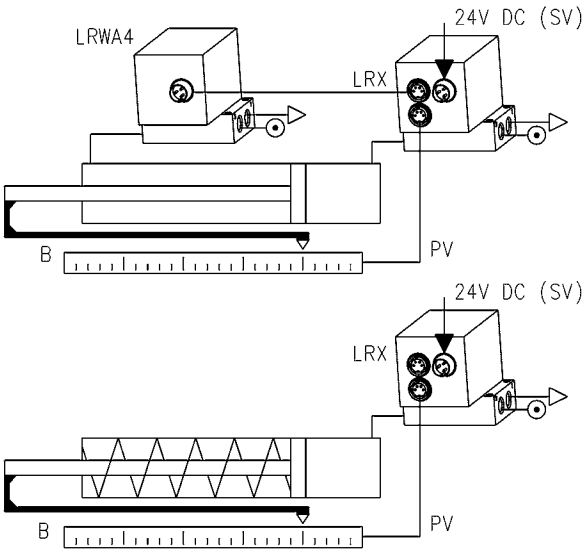
L	R	X	A	4	-	3	4	-	2	-	4	-	00

L	SERIES: L= Proportional servo valves
R	TECHNOLOGY: R= rotary
X	VERSION: X= position control
A	ELECTRONICS: A= analogic
4	MODEL: 4= with sub-base
3	FUNCTION: 3= 3 way
4	DIAMETER: 4= 4 mm 6= 6 mm
2	INPUT SIGNAL: 2= 0-10 V 3= 0-20 mA 5= 4-20 mA
4	FEEDBACK SIGNAL: 4= 0-5 V
00	CABLE: 00= no cable

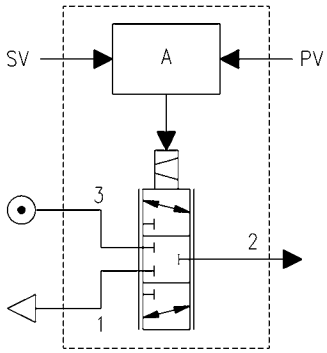
Accessories: CS-PF07CB; CS-PM04CB; CS-PM07CB

PNEUMATICAL INSTALLATION

New



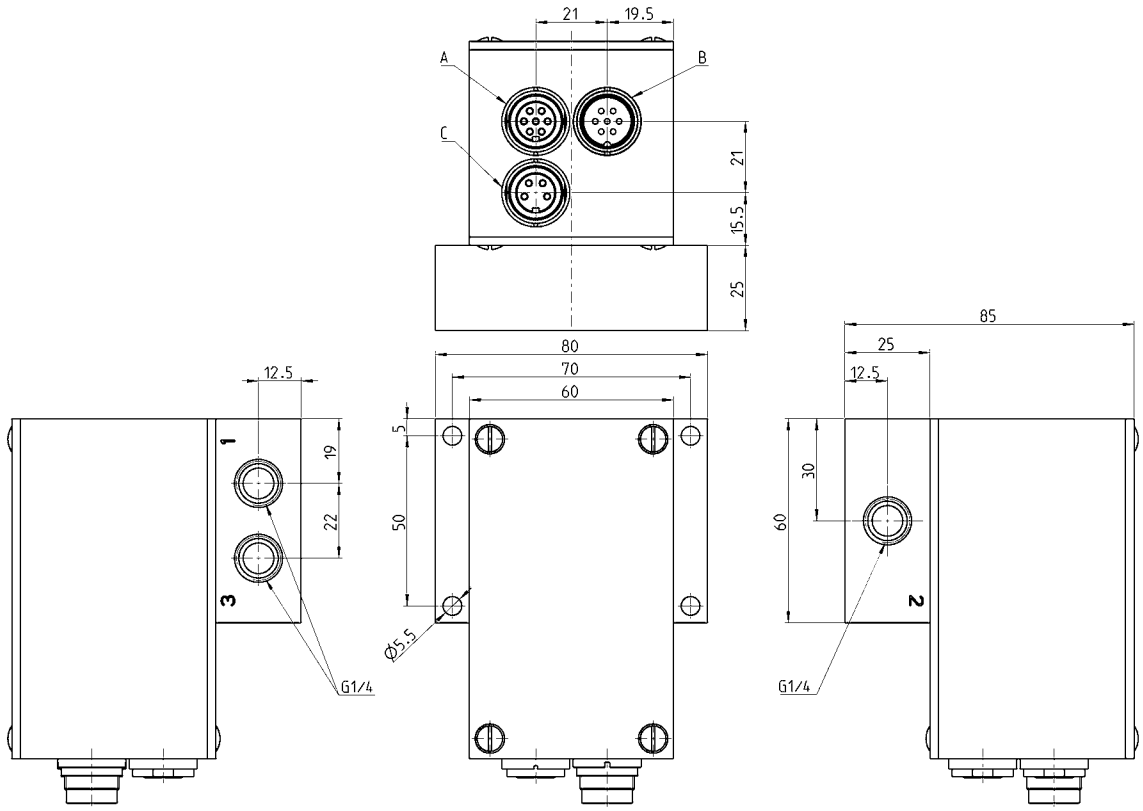
PIC.1 Positioning of a cylinder with master valve LRX and slave valve LRWA4-3X-4-A-00.
PIC.2 Positioning of a cylinder with valve LRX only.



SV=setpoint value; PV=process value; A=3-loop controller; B= in line sensor. Tubes to the cylinder < 2 mts with an inner Ø of at least 4 resp. 6 mm. The Ø of the cylinder has to be dimensioned to provide at least 30% more force than needed.

SERVO VALVES LRXA4 - PNEUMATICAL INSTALLATION

New



A = slave valve connector (7 poles female)
B = supply connector (7 pole male)
C = connector for the feedback system (4 poles female)

C - CONNECTOR FOR THE FEEDBACK SYSTEM 4 POLES (FEMALE)

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 feedback signal(Process Value)	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.

PIN	A - CONNECTOR 7 POLES FEMALE	B - CONNECTOR 7 POLES MALE	
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 Value)	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 +/- 30 V.
5	N.C.	GND output feedback signal	For slave-valve, 0-5V vs. pin 4
6	N.C.	Output In-position	24 VDC vs. pin 2
7	N.C.	Output feedback signal	0-10 VDC vs. pin 5. La precisione di questo segnale è circa del 2% con un offset di circa 150 mV. Non usarlo per documentazioni precise.

ACCESSORIES FOR SERVO VALVES SERIES LR

Fitting block Mod. LRA0C-3

Connector Mod. CS-PM07CB

Connector Mod. CS-PM07CB

Connector Mod. CS-PF07CB

Connector Mod. CS-LR05HB-D200/D500

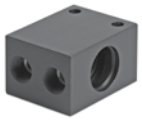
Connector Mod. CS-LF05HB-D200/D500

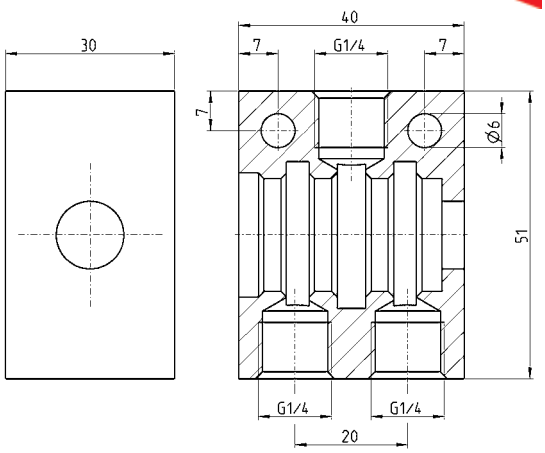
2

CONTROL

Fitting block Mod. LRA0C-3 for vales series LRWA0

New

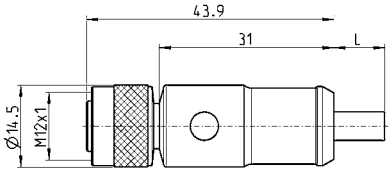




Mod.
LRA0C-3

Connector Mod. CS-LF05HB-D200/D500

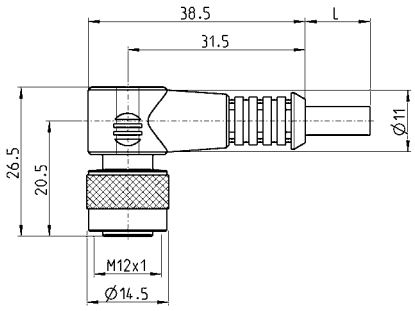
New



Mod.	Cable lenght
CS-LF05HB-D200	200 mm
CS-LF05HB-D500	500 mm

Connector Mod. CS-LR05HB-D200/D500

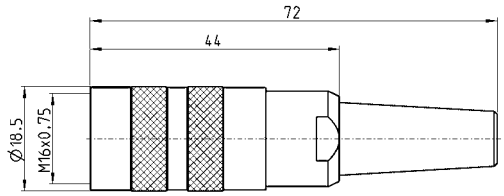
New



Mod.	Cable lenght
CS-LR05HB-D200	200 mm
CS-LR05HB-D500	500 mm

Connector Mod. CS-PF07CB

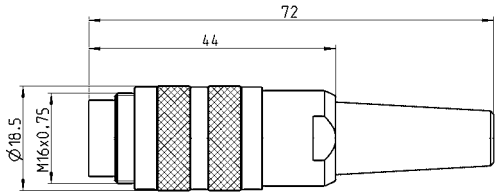
New



Mod.
CS-PF07CB

Connector Mod. CS-PM04CB

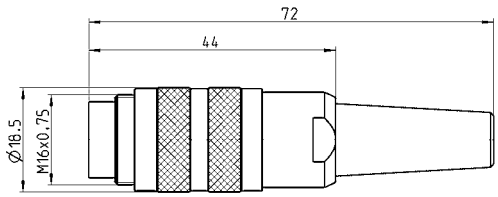
New



Mod.
CS-PM04CB

Connector Mod. CS-PM07CB

New



Mod.
CS-PM07CB