Servo valves Series LR
Flow control - LRWA0

New

3/3 way servo valves for the flow control

- Cartridge design
- Optimal mounting options for different applications
- Rotary slide principal, metal to metal seal
- 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)

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CONTROL

CODING EXAMPLE

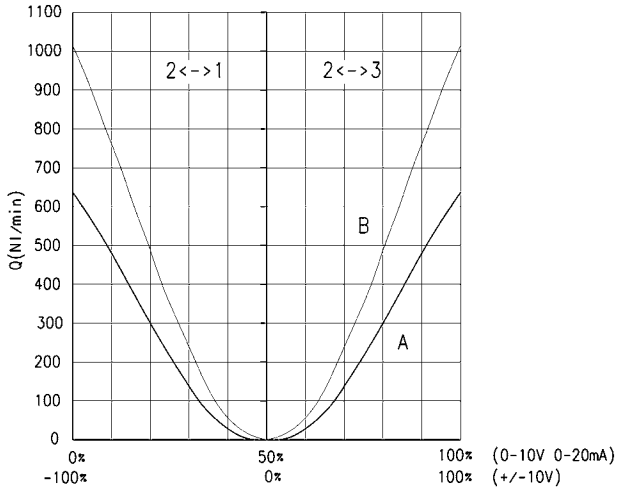
L	R	W	A	0	-	3	4	-	1	-	A	-	05

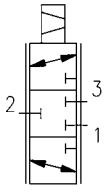
L	SERIES: L = Proportional servo valves
R	TECHNOLOGY: R = rotary
W	VERSION: W = flow control
A	ELECTRONICS: A = analogic
0	MODEL: 0 = cartridge with fixation slot
3	FUNCTION: 3 = 3 way
4	DIAMETER: 4 = 4 mm 6 = 6 mm
1	INPUT SIGNAL: 1 = +/- 10 V 2 = 0-10 V 3= 0-20 mA
A	FEEDBACK SIGNAL: A = internal encoder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

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

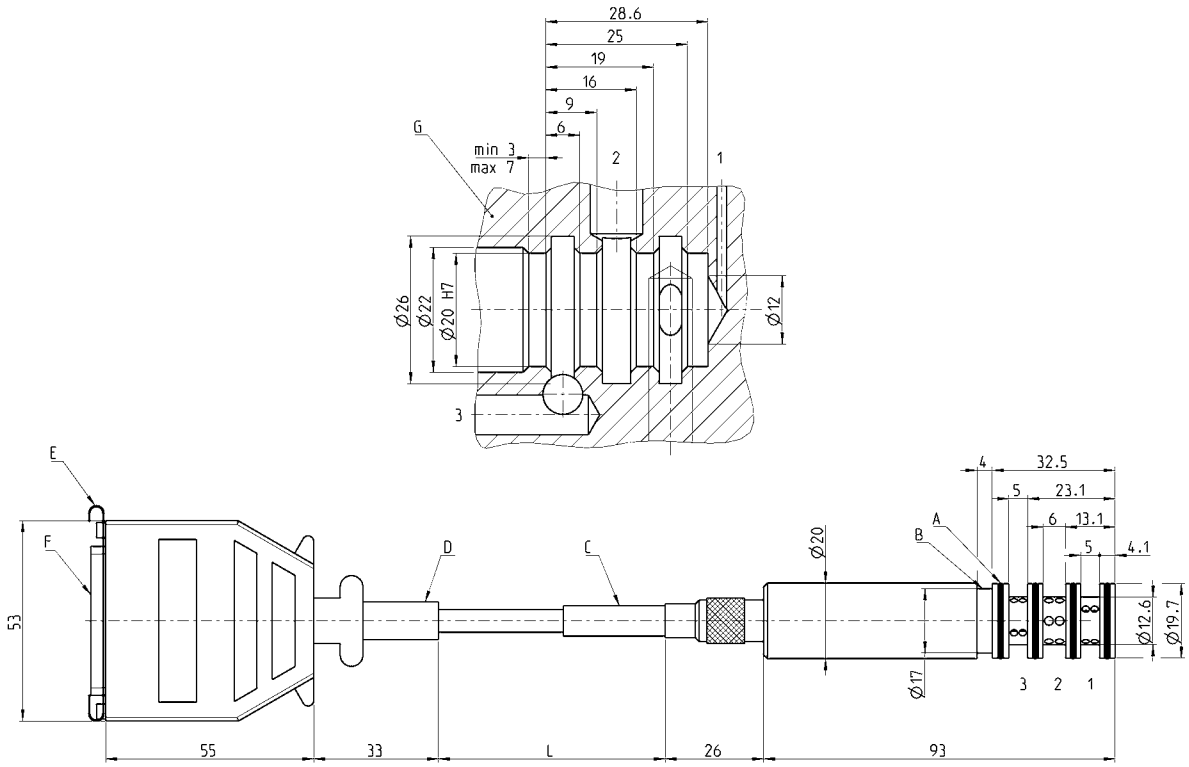
SERVO VALVS LRWA0 - PNEUMATIC INSTALLATION

News

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
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