

Basic Logic Valves Series 2L

Cv = .07

Cartridge Ø 4 mm
(5/32" O.D. tube connection)

These basic pneumatic logic valves provide a range of functions including "AND", "NOT", "OR", "YES" and "Memory".

Materials:

- Anodized Body
- Buna-N Seals (NBR)
- Nickel-Plated Brass Collet and Cartridge Assembly

Basic logic functions Series 2L are available in 5 different models and can be mounted separately by means of 2 passing holes in the body. Bracket Mod. 2LQ-8A allows to have the inlets and outlets on the front side, facilitating the mounting of the connection tubes.

All models are constructed with the pressure window incorporated, which allows an easy detection of any problems. Moreover the fittings are incorporated into the valve body and are super-rapid Ø4. The "NOT" element has an actuating pressure of 0.3 bar.



TECHNICAL SPECIFICATIONS

Construction	Poppet Design (spool for Memory)
Valve group	Automatic valves (logic units)
Ports	Cartridge Ø4 mm (5/32" O.D. tube connection)
Operating pressure	32° - 175° F, (dry air necessary down to -4° F)
Lubricant	Not required; otherwise, oil compatible with Buna-N seals (3 - 10° F): ISOVG32 grade (32 centistokes)
Fluid	Air, with or without lubrication

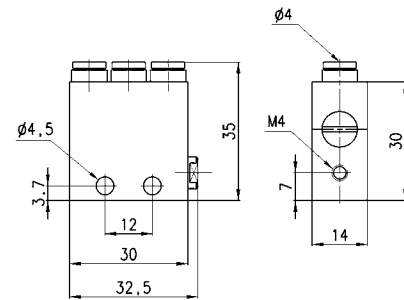
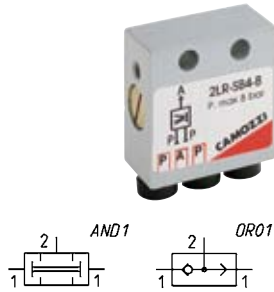
PNEUMATIC DATA

Operating pressure	29 - 116 psi
Nominal flowrate	70 NL/min. (2.47 SCFM), Cv = .007
Dimensions in millimeters	

"Or", "And" Valve Mod. 2LR.../2LD... (5/32" O.D. Cartridges)

Cv = .07

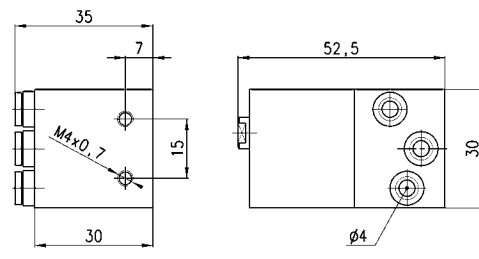
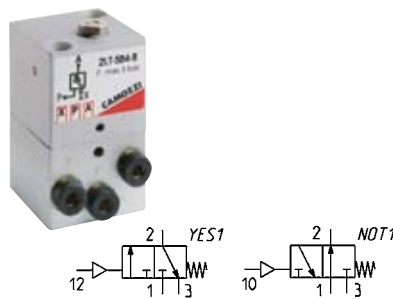
Mod.	
2LR-SB4-B	(OR)
Mod.	
2LD-SB4-B	(AND)



"Yes", "Not" Valve Mod. 2LS.../2LT... (5/32" O.D. Cartridges)

Cv = .07

Mod.	
2LS-SB4-B	(YES)
Mod.	
2LT-SB4-B	(NOT)

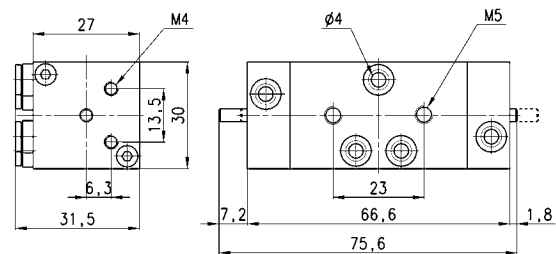
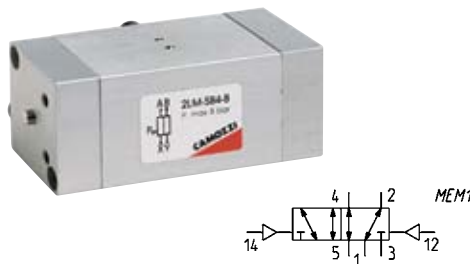


* Minimum actuating pilot pressure is 0.3 bar (4.3 psi), at point "X" (10 or 12)

"Memory" Valve Mod. 2LM... (5/32" O.D. Cartridges)

Cv = .07

Mod.	
2LM-SB4-B	

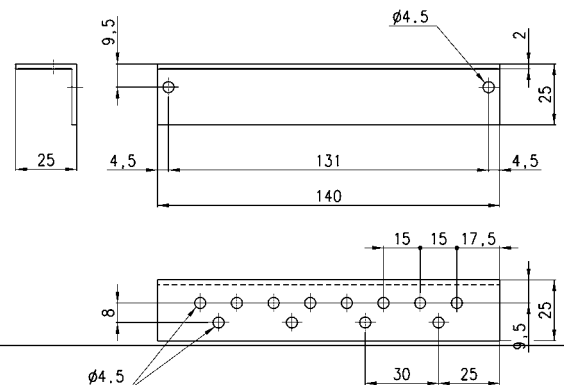


* Operation: Pilot air signals at points 12 or 14 shift spool to direct main air from 1 to 2 or 1 to 4 respectively. "Memory" valve will continue to direct air to same outlet as last signal with or without pilot signal or until manual override stem on side of pilot is depressed.

Right-angle bracket Mod. 2LQ...

Cv = .07

Mod.	
2LQ-BA	



Sender and Receiver Element Series 2L

Mod. 2LB-SE (Sender)

Mod. 2LB-SR (Receiver)

Both the sender and receiver should be supplied with filtered, non-lubricated compressed air. The sender requires a supply pressure of 0.3 - 2 bar. In the case of the receiver (max 8.7 psi), this is done in order to prevent the danger of contamination. The air jet from the sender interrupts the free outflow of the air jet at the receiver. A back pressure is produced which generates a control pressure at outlet A of the receiver. This pressure signal is typically sent to an amplifier valve. If an object breaks the air jet between the sender and the receiver, the signal drops to zero.

The air signal from the receiver element (2LB-SR) will typically become the input pilot signal to the amplifier valve (2LA-AM). Receiver element (2LB-SR) will typically connect its port 2 (or "A"), to the amplifier valve pilot port 12.



TECHNICAL SPECIFICATIONS

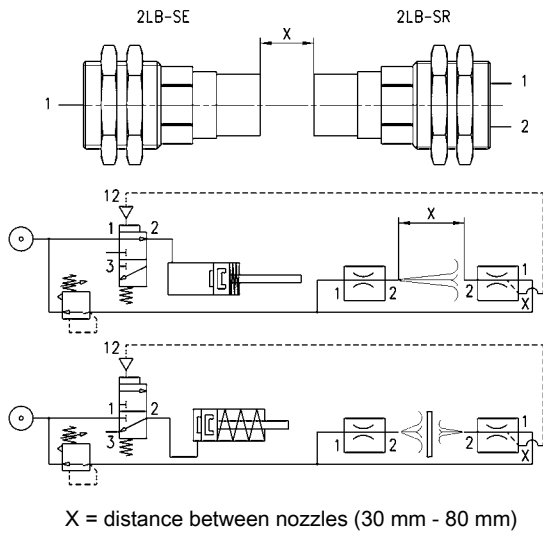
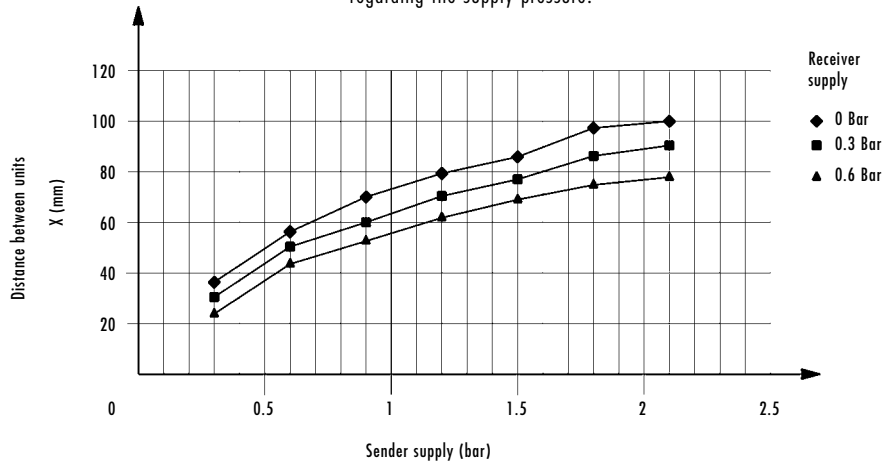
Materials	Anodized - brass
Construction	nozzle without moving parts
Mounting	M22 x 1 threaded body with bulkhead nuts
Installation diameter	22.5 mm
Mounting brackets	B 20-25 (Foot), E 20-25 (Flange)
Ports	M5 (10 - 32 UNF)

PNEUMATIC DATA

Pressure	Sender (2LB-SE): (4.35 - 29 psi) min. 0.3 bar - max. 2 bar
Conditions of functioning	Receiver (2LB-SR): (.6 bar max), 8.7 psi max. PSR ≤ PSE (receiver's pressure is less or equal to sender's pressure)
Air consumption	P (2 bar) @ 45 NL/min; P (29 psi) = 1.59 SCFM
Max. distance between sender and receiver	see graph
Temperature	-20°C + 80°C; (-4° - 175° F)
Fluid	filtered air, without lubricant

Sender and receiver element Mod. 2LB...

Distance between sender and receiver regarding the supply pressure.

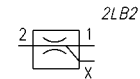
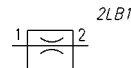
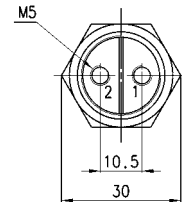
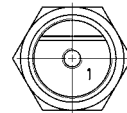
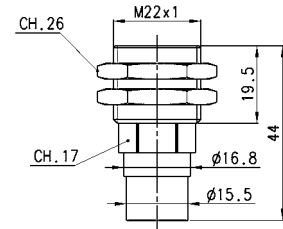
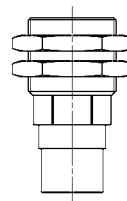


Mod. 2LB-SE

Mod. 2LB-SR

2LB-SE

2LB-SR



Mod.	Type	Min. pressure	Max pressure	Temperature	Symbol
2LB-SE	Sender	0.3 bar	2 bar	-20°C - +60°C	2LB1
2LB-SR	Receiver	0.3 bar	0.6 bar	-20°C - +60°C	2LB2

Series 2L Pneumatically Operated Amplifier Valve

Cv = .13

Mod. 2LA-AM (Amplifier Valve)
3-way/2-position
Ports 1/8" BSPP
*(Will accept Pro-Fit® fittings)

The pneumatically operated amplifier valve is a 3-way/2-position normally closed valve, changing low pressure signals into 2 - 8 bar pressure signals.

The valve construction allows permanent reduced air consumption at rest.

Pilot pressure applied at Port 12 actuates valve and allows pressure (2 - 8 bar) to flow from inlet P to outlet A. 1 → 2. A constant "leak," or air consumption, occurs while unit is at rest from inlet 1 to atmosphere.



TECHNICAL SPECIFICATIONS

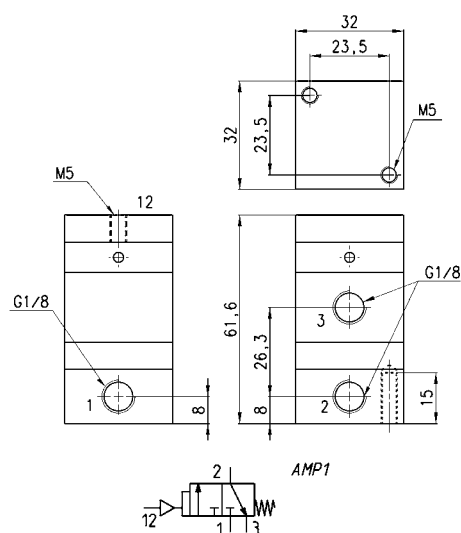
Construction	Poppet type
Valve group	3-way/2-position normally closed
Materials	Aluminum body, Buna-N seals
Mounting	By M5 (10-32 UNF) screws
Ports	1/8" BSP (accepts 1/8" Pro-Fit NPTF)
Installation	In any position
Temperature	32° - 175° F (Dry air required down to -4° F)

PNEUMATIC DATA

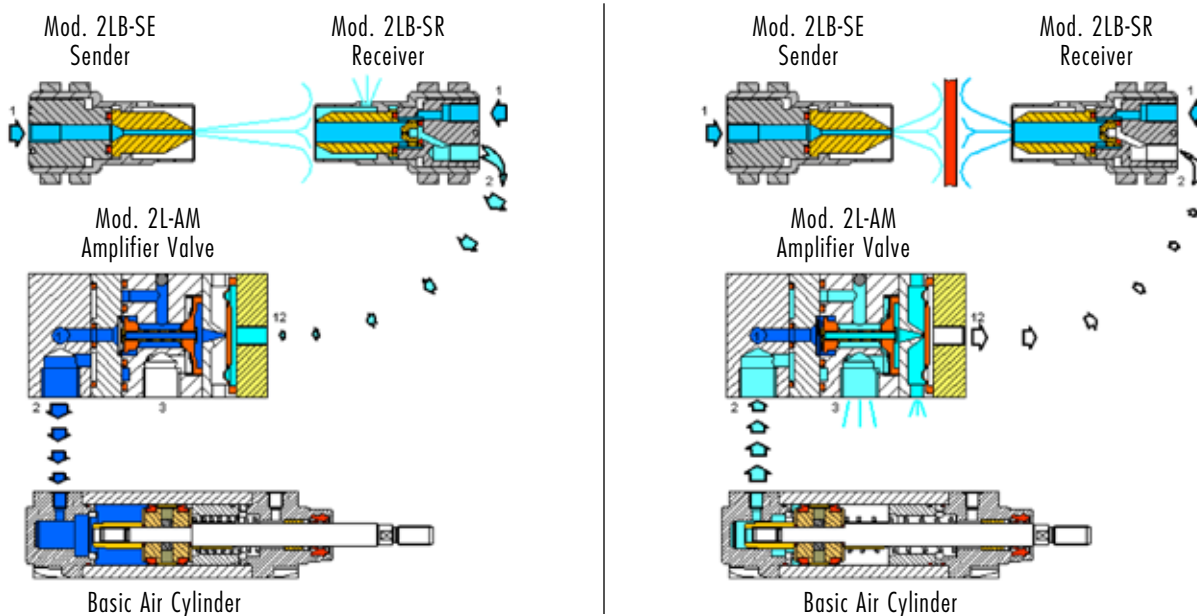
Output pressure	Min. 2 - max. 8 bar (29-116 PSI)
Minimum signal input pressure	0.03 bar (.435 psi)
Maximum signal input pressure	0.6 bar (8.7psi)
Constant air consumption	at rest (6 bar)
	3.3 NL/min (.116 SCFM) via port 1 to atmosphere without signal present at 12
Nominal flow	120 NL/min (4.23 SCFM) P → A (1 → 2) Cv = 0.13 (when actuated)
Fluid	Filtered, not lubricated air

VALVE MOD. 2LA-AM

Cv = .13



Basic Assembly/Circuit Guide



The air signal from the receiver element (2LB-SR) will typically become the input pilot signal to the amplifier valve (2LA-AM). Receiver element (2LB-SR) will typically connect its port 2 (or "A"), to the amplifier valve pilot port 12.

Pilot pressure applied at Port 12 actuates valve and allows pressure (2 - 8 bar) to flow from inlet P to outlet A).
 1 → 2. A constant "leak," or air consumption, occurs while unit is at rest from inlet 1 to atmosphere.

