# Series 2L
# basic logic valves

Cartridge Ø 4 mm.
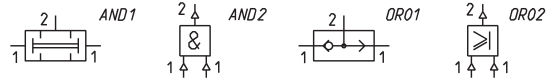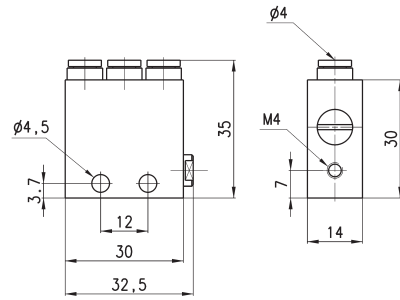or - and - yes - not - memory

SERIES 2L BASIC LOGIC VALVES

**Series 2L basic logic functions 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.

## GENERAL DATA

| | |
|---|---|
| **Construction** | poppet (spool memory) |
| **Materials** | aluminium body; NBR seals; OT58 brass |
| **Valve group** | automatic valves (logic units) |
| **Ports** | cartridge ø 4 |
| **Operating temperature** | 0°C ÷ 60°C (-20°C with dry air) |
| **Operating pressure** | 2 bar ÷ 10 bar |
| **Nominal flowrate** | 100 Nl/min. (6 bar ΔP = 1) |
| **Fluid** | filtered air, without lubricant.<br>If lubricated air is used, it is recommended to use oil ISO VG32. Once applied the lubrication should never be interrupted. |

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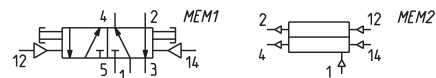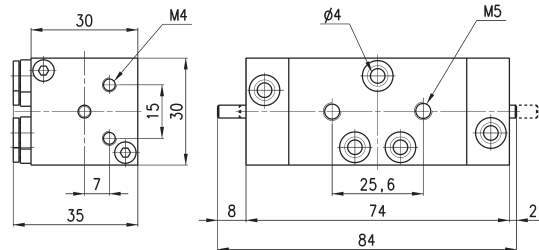
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## Basic logic valves AND / OR

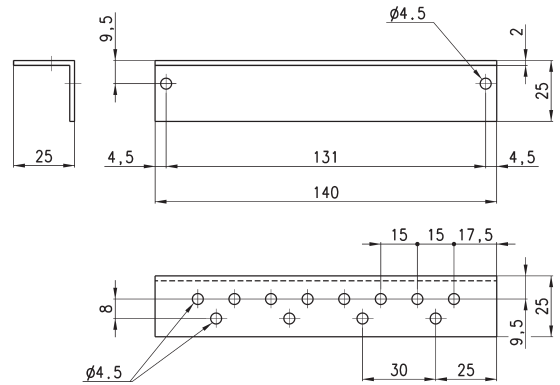| Mod. | Function | Pneumatic symbol | Logic symbol |
|------|----------|------------------|--------------|
| 2LD-SB4-B | AND | AND1 | AND2 |
| 2LR-SB4-B | OR | OR01 | OR02 |

## Basic logic valves YES / NOT
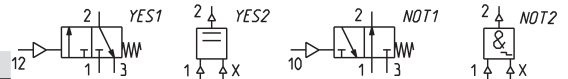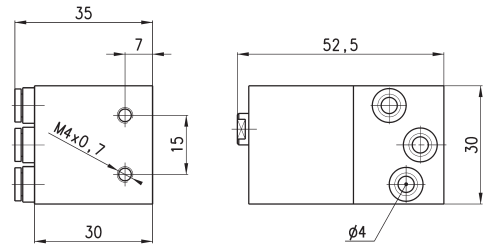
| Mod. | Function | Pneumatic symbol | Logic symbol |
|------|----------|------------------|--------------|
| 2LS-SB4-B | YES | YES1 | YES2 |
| 2LT-SB4-B | NOT | NOT1 | NOT2 |

## Basic logic valves "Memory"

| Mod. | Function | Pneumatic symbol | Logic symbol |
|------|----------|------------------|--------------|
| 2LM-SB4-B | Memory | MEM1 | MEM2 |

## Right-angled bracket

| Mod. |
|---|
| **2LQ-8A** |

## Pneumatically operated 3/2 NC amplifier valve - G1/8 ports

The amplifier valve Mod. 2LA-AM is able to change low pressure signals into signals with pressure from 2 to 8 bar. The poppet type construction shows a minimum permanent air consumption at rest.

Mounting: with M5 screws
Installation: in any position
Fluid: filtered air, without lubricant

Materials:
- AL body
- NBR seals

*AMP1*
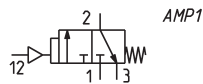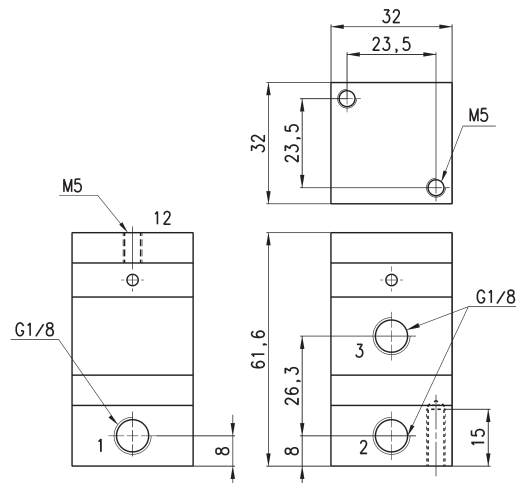
| Mod. | Working pressure (bar) | Min/max operating pressure (bar) | Permanent air consumption at rest (Nl/min) | Nominal flow (Nl/min ΔP 1) |
|---|---|---|---|---|
| **2LA-AM** | 2 ÷ 8 | 0.03 / 0.6 | 3.3 | 120 |

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## Sender and receiver sensor Series 2L - M5 ports

Materials: aluminium - brass
Construction: nozzle without moving parts
Threading mounting: M22 x 1
Mounting diameter: 22.5 mm
Mounting bracket: B20-25, E20-25
Max air consumption: P 2 bar   45 Nl/min
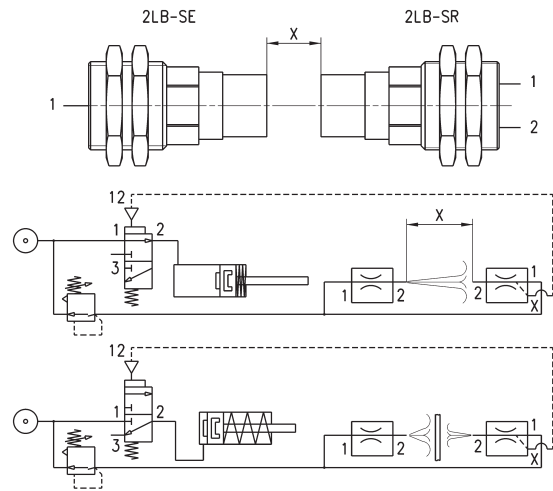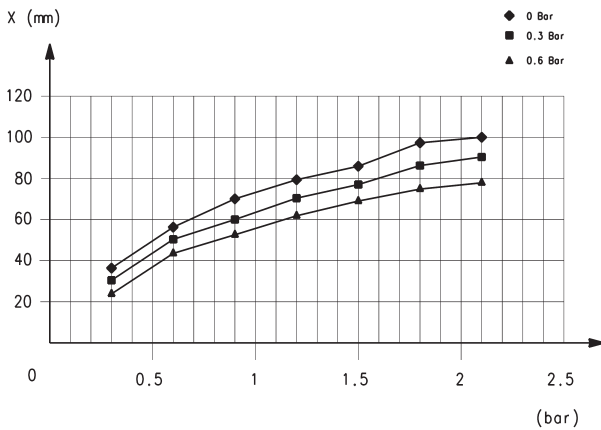Fluid: filtered air, without lubricant

Conditions of functioning: the receiver pressure (2LB-SR) has to be lower or equal compared with the sender pressure (2LB-SE)

The receiver nozzle (2LB-SR) is supplied to ensure the self-cleaning. The air jet of the sender (2LB-SE) avoids the free outflow of the air jet from the receiver. A back pressure is thus produced that generates at outlet A a pilot pressure which is sent to the amplifier drive. When an object interrupts the air jet between the two sensors, this signal becomes zero.
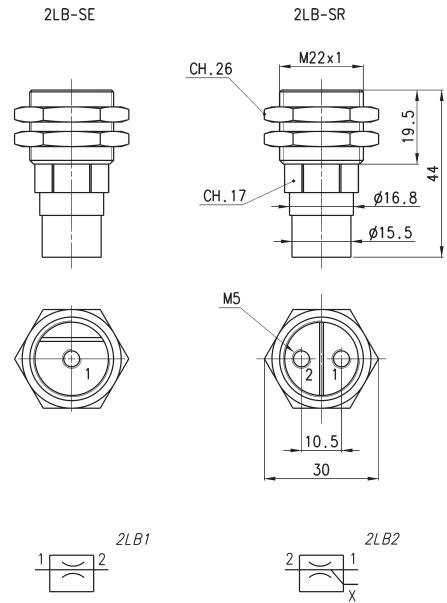
| Mod. | Type | Min. pressure | Max pressure | Temperature | Symbol |
|------|------|---------------|--------------|-------------|--------|
| **2LB-SE** | Sender | 0.3 bar | 2 bar | -20°C ÷ +60°C | 2LB1 |
| **2LB-SR** | Receiver | 0.3 bar | 0.6 bar | -20°C ÷ +60°C | 2LB2 |

## SENDER AND RECEIVER SENSORS SERIES 2L

DISTANCE DIAGRAM between
SENDER (2LB-SE) and RECEIVER (2LB-SR)
according to the supply pressures

X = distance between nozzles (30 mm ÷ 80 mm)