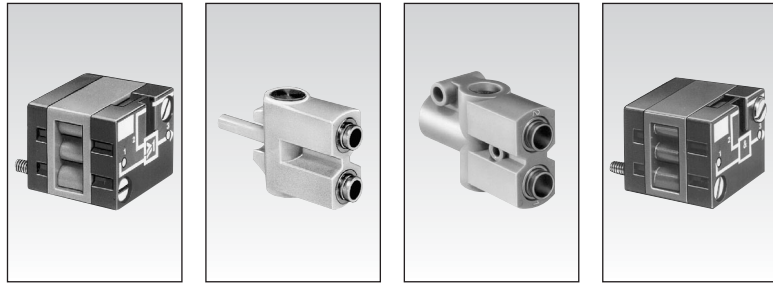


# Logic elements



1

## Part numbers

Functions	OR	81 521 501	81 540 001	81 540 004	81 522 501
AND	—	—	—	—	—
YES	—	—	—	—	—
NOT	—	—	—	—	—
Version		On sub-base page 5/44 - 5/45	Plug-in Ø 5/32" (4mm)	Plug-in Ø 5/32" (4mm)	On sub-base page 5/44 - 5/45

## Symbol



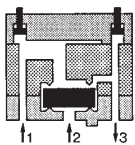
## Characteristics

Push-in connection for semi-rigid tubing (NFE 49100) O.D.	Male/Female/Female	—	Ø 5/32" (4 mm)	—	—
Color	Female/Female/Female	Blue	Blue	Blue	Green
Operating pressure	psi (bar)	30 > 120 (2 > 8)	30 > 120 (2 > 8)	30 > 120 (2 > 8)	30 > 120 (2 > 8)
Orifice diameter	inches (mm)	0.106" (2.7)	0.106" (2.7)	0.157" (4)	0.106" (2.7)
Flow at 90 PSI (6 bars)	cfm (Nl/min)	6 (170)	6 (170)	7 (200)	6 (170)
Pressure indicator		●	—	—	●
Switching time	ms	—	—	—	—
Operating temperature	°F (°C)	+20 > +120 (-5 > +50)	+20 > +120 (-5 > +50)	+20 > +120 (-5 > +50)	+20 > +120 (-5 > +50)
Mechanical life	cycles	10 million	10 million	10 million	10 million
Weight	grams	25	12	25	25

## Pilot/pressure curves

P.p : Pilot pressure  
P.a : Supply pressure

## Principle of operation

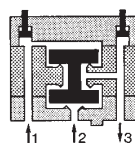


### OR element

The output signal "S" is present when a signal at "a" OR "b" is present

$$S = a \text{ OR } b$$

$$S = a + b$$



### AND element

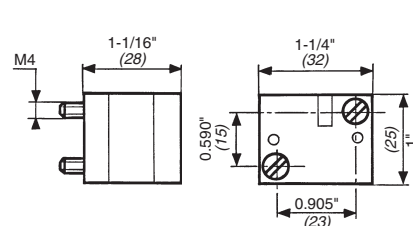
The output signal "S" is present only when signals "a" AND "b" are present simultaneously.

$$S = a \text{ AND } b$$

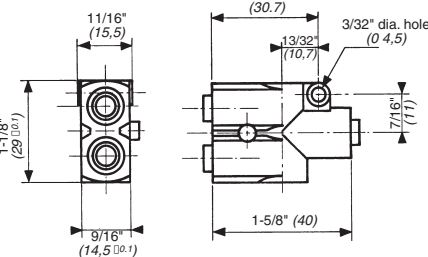
$$S = a \cdot b$$

## Dimensions

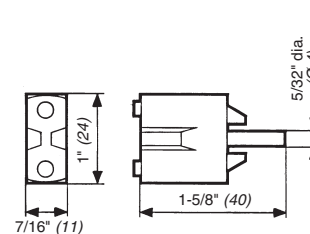
81 521 501 - 81 522 501



81 540 004 - 81 541 010



81 540 001 - 81 541 001



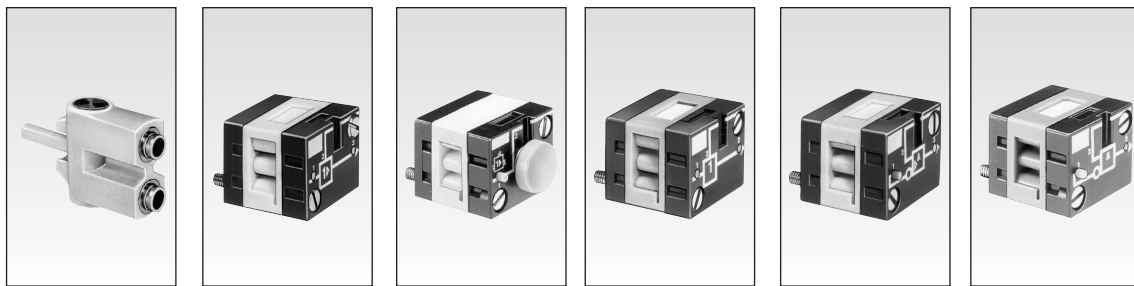
Use (metric) dimensions for critical data.

## Other information

See page 4/8 for mounting plan for logic elements.

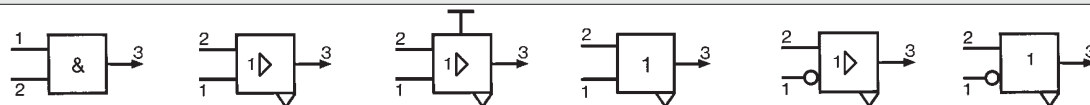
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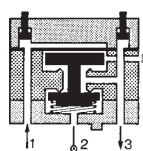
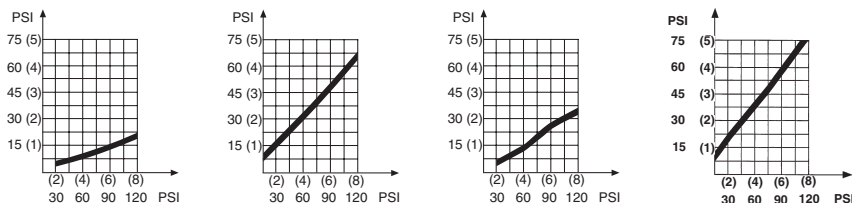


1

<b>81 541 001</b>					
Plug-in Ø 5/32" (4)	<b>81 501 025</b>	<b>81 501 065</b>	<b>81 503 025</b>	<b>81 504 025</b>	<b>81 506 025</b>
	Standard On sub-base page 5/44 - 5/45	Manual override On sub-base page 5/44 - 5/45	Low-ratio On sub-base page 5/44 - 5/45	Standard and inhibition On sub-base page 5/44 - 5/45	Low-ratio On sub-base page 5/44 - 5/45



Ø 5/32" (4 mm)					
Green	Yellow	Yellow	Orange	Light grey	Dark grey
30 > 120 (2 > 8)	30 to 120 (2 to 8)	30 to 120 (2 to 8)	30 to 120 (2 to 8)	30 to 120 (2 to 8)	30 to 120 (2 to 8)
0.106" (2.7)	0.106" (2.7)	0.106" (2.7)	0.106" (2.7)	0.106" (2.7)	0.106" (2.7)
5-1/4 (150)	6 (170)	6 (170)	6 (170)	6 (170)	6 (170)
	•	•	•	•	•
<4	<4	<4	<4	<4	<4
+20 > +120 (-5 > +50)	+20 > +120 (-5 > +50)	+20 > +120 (-5 > +50)	+20 > +120 (-5 > +50)	+20 > +120 (-5 > +50)	+20 > +120 (-5 > +50)
10 million	10 million	10 million	10 million	10 million	10 million
13	30	35	30	30	30

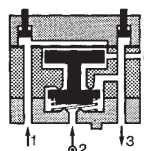


**YES element**

The output signal "S" is only present when the pilot is present :

$S = a$  YES b

$S = a$



**NOT element**

The output signal "s" is present only if the input signal "a" is NOT present. The output signal is therefore the inverse of the pilot signal.

$S = \bar{a}$

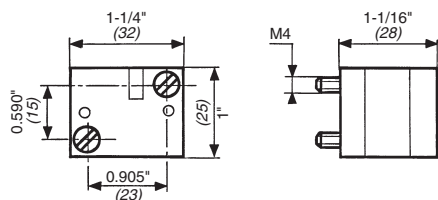
$S = \bar{a}$

If the supply port is connected to a 2nd input "b", the function obtained is called Inhibition.

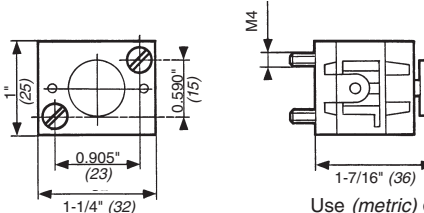
$S = \text{NOT } a \text{ AND } b$

$S = \bar{a} \cdot b$

81 501 025 - 81 503 025  
81 504 025 - 81 506 025



81 501 065



Use (metric) dimensions for critical data.

**To order, specify :**

Standard products	<b>1</b> Part number
Standard products, non stocked	Example : Logic elements 81 521 501

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