GENERAL
Fluid
Operating pressure
Ambient temperature
Orifice
Flow (Qv at 6 bar)
Switching time
Mechanical life (at 6 bar)

OR LOGIC ELEMENT
(Logical sum)
Operation:
Output signal «3» is present when a pressure signal «1» OR «2» is present (or both simultaneously).

\[ 3 = 1 + 2 \]

AND LOGIC ELEMENT
(Logical product)
Operation:
The output signal «3» can only be present if pressure signals «1» AND «2» are simultaneously present.

\[ 3 = 1 \cdot 2 \]

YES LOGIC ELEMENT
(logical identity)
Operation:
The output signal «3» is present if control signal «1» is present.

\[ 3 = 1 \]

NOT LOGIC ELEMENT AND PRESSURE DELAY END OF STROKE RELAY
(logical negation)
Operation:
If control signal «1» is not present, output port «3» is pressurized. The output signal thus inverts the control signal:

\[ 3 = \text{NOT } 1 \]

If the signal of a variable is connected to port «2», the obtained function is called inhibit:

\[ 3 = 2 \text{ NAND } 1 \]

Series 331

Logic elements

<table>
<thead>
<tr>
<th>Logic elements</th>
<th>OR</th>
<th>AND</th>
<th>YES</th>
<th>NOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air or neutral gas filtered, lubricated or not</td>
<td>0 to 12 bar</td>
<td>0 to 12 bar</td>
<td>0 to 12 bar</td>
<td>0 to 12 bar</td>
</tr>
<tr>
<td>2 to 8 bar</td>
<td>-10°C to +60°C</td>
<td>-10°C to +60°C</td>
<td>-10°C to +60°C</td>
<td>-10°C to +60°C</td>
</tr>
<tr>
<td>-5°C to +50°C</td>
<td>0 4 mm</td>
<td>0 4 mm</td>
<td>0 4 mm</td>
<td>0 4 mm</td>
</tr>
<tr>
<td>200 l/min (ANR)</td>
<td>280 l/min (ANR)</td>
<td>280 l/min (ANR)</td>
<td>280 l/min (ANR)</td>
<td>280 l/min (ANR)</td>
</tr>
<tr>
<td>3 ms</td>
<td>12 ms</td>
<td>12 ms</td>
<td>12 ms</td>
<td>12 ms</td>
</tr>
<tr>
<td>&gt; 10³ cycles</td>
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<td>&gt; 10³ cycles</td>
</tr>
</tbody>
</table>

Memory relay

<table>
<thead>
<tr>
<th>Memory relay</th>
<th>OR</th>
<th>AND</th>
<th>YES</th>
<th>NOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air or neutral gas filtered, lubricated or not</td>
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<td>0 to 12 bar</td>
<td>0 to 12 bar</td>
<td>0 to 12 bar</td>
</tr>
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<td>-10°C to +60°C</td>
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<tr>
<td>-5°C to +50°C</td>
<td>0 4 mm</td>
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<td>0 4 mm</td>
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</tr>
<tr>
<td>200 l/min (ANR)</td>
<td>280 l/min (ANR)</td>
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<td>280 l/min (ANR)</td>
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</tr>
<tr>
<td>3 ms</td>
<td>12 ms</td>
<td>12 ms</td>
<td>12 ms</td>
<td>12 ms</td>
</tr>
<tr>
<td>&gt; 10³ cycles</td>
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<td>&gt; 10³ cycles</td>
<td>&gt; 10³ cycles</td>
</tr>
</tbody>
</table>
RELAY WITH POSITIVE OUTPUT THRESHOLD 
(YES with threshold)

Operation:
The output signal «3» is present when the pressure from input signal «1» has reached the relay switch threshold.

RELAY WITH NEGATIVE OUTPUT THRESHOLD 
(NO with threshold)

Operation:
The output signal «3» disappears when the pressure from input signal «1» has reached the relay switch threshold. This signal is present when input signal «1» disappears («2» = supply pressure).

* dimension H, see page: 7

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**LOGIC ELEMENTS**

**MEMORY RELAY**

Series 333

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1. Version intended for use in potentially explosive atmospheres caused by gases, vapours, mists an/or dusts - ATEX directive 2014/34/EU

Classification: Ex II 2GDc IIB T6X

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4 - Pneumatic Automation
### GENERAL

**Fluid**  
Compressed air or neutral gas filtered, lubricated or not

**Ambient temperature**  
-5°C to +50°C

**Operating pressure**  
2 to 8 bar

**Orifice**  
Ø 2.7 mm

**Flow (Qv at 6 bar)**  
170 l/min (ANR)

**Accuracy at constant pressure**  
± 5 %

**Reset time**  
0,1 s w/ 20 cm of flexible tube w/ OD Ø 4 exterior

### ADJUSTABLE TIMER RELAY

**0 - 15 s and 0 - 30 s (logic element interface)**  
These 2 relays deliver a delayed output signal «3» compared to input signal «1».

![ADJUSTABLE TIMER RELAY diagram](image)

### ADJUSTABLE TIMER RELAY 0 - 15 s (CNOMO interface - LT type)

Delayed output signal «3» compared to input signal «1». CNOMO 06.05.80 interface

![ADJUSTABLE TIMER RELAY 0 - 15 s (CNOMO interface - LT type) diagram](image)

### PULSE GENERATORS (logic element interface)

Converts a maintained signal «2» into a pulse «3» with a fixed duration (T = 0.4 s) or adjustable.

![PULSE GENERATORS diagram](image)

### ADJUSTABLE ONE-WAY FLOW REGULATORS (logic element interface)

1. **Simple flow regulator**:  
   - operating pressure: 2 à 8 bar  
   - max. flow adjustment: 0 à 130 l/min (ANR)

2. **Sensitive flow regulator**:  
   - operating pressure: 1 to 8 bar  
   - max. flow adjustment: 0 to 30 l/min (ANR)  
   - w/ one turn of screw.

![ADJUSTABLE ONE-WAY FLOW REGULATORS diagram](image)
### GENERAL

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Leak sensor relay</th>
<th>Amplifier relays</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating pressure</td>
<td>Air or neutral gas, filtered, lubricated or not</td>
<td>2 to 6 bar</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>-5°C to +50°C</td>
<td>-5°C to +50°C</td>
</tr>
<tr>
<td>Orifice</td>
<td>Ø 2,5 mm</td>
<td>Ø 2,5 mm</td>
</tr>
<tr>
<td>Flow (Qv à 6 bar)</td>
<td>5 l/min (ANR)</td>
<td>6 l/min (ANR)</td>
</tr>
<tr>
<td>Hysteresis</td>
<td>&gt; 5% of pilot pressure</td>
<td>3 x 10⁷ cycles</td>
</tr>
<tr>
<td>Mechanical life (at 6 bar)</td>
<td>&gt; 10⁷ cycles</td>
<td>3 x 10⁷ cycles</td>
</tr>
</tbody>
</table>

**LEAK SENSOR RELAY**

**logic element interface**

**positive output**

**Operation:**

Relay designed to supply air to a leak sensor.

The relay and leak sensor unit allows detecting the presence of a part by shutting off the bleed at the sensor.

<table>
<thead>
<tr>
<th>Fluid</th>
<th>catalogue number</th>
<th>dim. H* (mm)</th>
<th>weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air or neutral gas</td>
<td>333000022</td>
<td>53</td>
<td>0,035</td>
</tr>
</tbody>
</table>

* dimension H, see page: 7

**SIMPLE AMPLIFIER RELAY**

**logic element interface**

**Operation:**

Relay designed to supply air to a proximity or gap sensor. An output signal at normal industrial pressure is delivered on a low pressure input.

<table>
<thead>
<tr>
<th>Fluid</th>
<th>catalogue number</th>
<th>dim. H* (mm)</th>
<th>weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air or neutral gas</td>
<td>333000019</td>
<td>77</td>
<td>0,150</td>
</tr>
</tbody>
</table>

* dimension H, see page: 7

**SENSITIVE AMPLIFIER RELAY**

**logic element interface**

**Operation:**

An output signal at normal industrial pressure is delivered on a very low pressure input. Relay designed to supply air to a proximity or gap sensor.

<table>
<thead>
<tr>
<th>Fluid</th>
<th>catalogue number</th>
<th>dim. H* (mm)</th>
<th>weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air or neutral gas</td>
<td>333000020</td>
<td>92</td>
<td>0,186</td>
</tr>
</tbody>
</table>

* dimension H, see page: 7

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All leaflets are available on: [www.asco.com](http://www.asco.com)
SUBBASES FOR LOGIC ELEMENTS AND OTHER COMPONENTS

Logic elements, relays, and components with logic element interface can be mounted on two types of subbases:

- Simple subbase (or end plate if mounted with joinable subbases)
- Joinable subbases (equipped with a connection selector for integrated wiring)

These subbases are equipped with rotatable instant fittings and can be fitted on an Omega EN 50022 symmetrical DIN rail.

A - Simple subbase or pair of end plates.
B - Joinable subbase.
1 - Input port (1, green).
2 - Output port (3, red).
3 - Input or pressurized port (2, yellow) OD Ø 4 mm.
4 - Input port inside subbase.
5 - Input pressure indicator (green).
6 - Output pressure indicator (red).
7 - 1/4-turn attaching screw.
8 - Marking area.
9 - Arrow indicating fluid flow direction.
10 - Mortise assembly.
11 - Tenon assembly.
12 - Selector

NOTE: Subbases are equipped with 360°-rotatable instant fittings and are particularly accessible due to front-end wiring. Tubes are connected to the left- or right and sides of the subbase, significantly reducing space requirements.

CONNECTION SELECTOR

The connection selector delivered with each joinable subbase can be positioned for the following two functions:

- IN-SERIES WIRING (with bypass)
- IN-PARALLEL WIRING

<table>
<thead>
<tr>
<th>Description</th>
<th>Catalogue Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple subbase</td>
<td>35900019</td>
</tr>
<tr>
<td>ATEX</td>
<td>35901019</td>
</tr>
<tr>
<td>Joinable subbase</td>
<td>35900021</td>
</tr>
<tr>
<td>ATEX</td>
<td>35901021</td>
</tr>
</tbody>
</table>

ACCESSORIES

<table>
<thead>
<tr>
<th>Description</th>
<th>Catalogue Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set of 10 plugs L3126 04 00 (OD Ø 4 mm)</td>
<td>33400015</td>
</tr>
</tbody>
</table>

NOTE: To mount a set of N components, «N - 1» joinable subbases (35900021) + 1 simple subbase (end of plate) (35900019).

SPECIFICATIONS

<table>
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<td>35900021</td>
</tr>
<tr>
<td>ATEX</td>
<td>35901021</td>
</tr>
</tbody>
</table>

Classifications:

- A - Simple subbase / end plate.
- B - Joinable subbases.
- C - Omega symmetrical DIN rail.
- D - Rotatable instant fittings for flexible tube OD Ø 4 mm.
- H - Height with component.
- N - Number of subbases.

Weight:
- Simple subbase : 0.056 kg
- Joinable subbase : 0.056 kg
- The yellow rotatable instant fitting delivered with the simple subbase (end plate) is mounted at the ends of the joinable subbases.

(1) Version intended for use in potentially explosive atmospheres caused by gases, vapours, mists and/or dusts - ATEX directive 2014/34/EU

Classification: II 2GDc IIB T6X

All leaflets are available on: www.asco.com
ADJUSTABLE TIMER RELAY (CNOMO) - SUBBASE

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Description</th>
<th>Catalogue number</th>
</tr>
</thead>
<tbody>
<tr>
<td>simple subbase - with OD Ø 4 mm fittings (polyamide 6/6)</td>
<td>35300069</td>
</tr>
<tr>
<td>simple subbase - G1/4 tapped (zamak)</td>
<td>35300049</td>
</tr>
</tbody>
</table>

Subbase 35300069

1. Connection with fittings for flexible tube w/ OD Ø 4 mm.
2. Timing set control
3. 2 attaching holes Ø 3.5, filed Ø 6.5 mm depth 3.5 mm.
4. Mounting clips on Omega EN 50022 symmetrical DIN rail
   (Set of 10, catalogue number 33400036)

Weight (subbase + timer relay): 0.280 kg

Subbase 35300049

1. G1/4 tapped connection
2. 2 attaching holes Ø 4.5, filed Ø 8 mm depth 6 mm.

Weight (subbase + timer relay): 0.394 kg