Amplifier with intégral régulator, positive output

Setting Flow
Fixing rail 35mm wide

Part numbers
Amplifiers with integral regulator 81 510 001 Positive output

Symbol

Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure to make</td>
<td></td>
</tr>
<tr>
<td>Reduced pressure supplied at port B (bar)</td>
<td></td>
</tr>
<tr>
<td>Flow through port A (Nm³/h)</td>
<td></td>
</tr>
<tr>
<td>Consumption of amplifier only (NI/h)</td>
<td></td>
</tr>
<tr>
<td>Permissible overload for 1 hour (bar)</td>
<td></td>
</tr>
<tr>
<td>Operating temperature (°C)</td>
<td></td>
</tr>
<tr>
<td>Mechanical life operations</td>
<td></td>
</tr>
<tr>
<td>Weight (g)</td>
<td></td>
</tr>
<tr>
<td>Detectors (see page 28)</td>
<td></td>
</tr>
<tr>
<td>Nominal range (mm)</td>
<td></td>
</tr>
<tr>
<td>Min. total consumption for detection (NI/h)</td>
<td></td>
</tr>
<tr>
<td>Max. total consumption for short response (NI/h)</td>
<td></td>
</tr>
<tr>
<td>Time to 0.5 x regulated pressure (sec)</td>
<td></td>
</tr>
<tr>
<td>Min. detectable</td>
<td></td>
</tr>
<tr>
<td>Dimensions: nominal sensing distance (mm)</td>
<td></td>
</tr>
<tr>
<td>Max. frequency of use (Hz)</td>
<td></td>
</tr>
<tr>
<td>Force exerted by the jet on the parts (N)</td>
<td></td>
</tr>
<tr>
<td>To be detected</td>
<td></td>
</tr>
</tbody>
</table>

Connection
To use with detectors page 32

Principle of operation
This amplifier is suitable for providing a supply to associated sensors.

Dimensions
Push-in connection for semi-rigid tubing Ø 4 mm (NFE 49100)
Pressure switches - vacuum (electrical output)

- Conform to the Low Voltage Directive
- Can be used without enclosure according to IEC 664-1 pollution group III

### Part numbers

<table>
<thead>
<tr>
<th>Pressure and vacuum switches</th>
<th>UL and cUL approval</th>
<th>Standard electrical contact</th>
<th>Weight</th>
<th>Operation</th>
<th>Electrical life</th>
</tr>
</thead>
<tbody>
<tr>
<td>MH15213 (R) -10</td>
<td>3 A - 220-230 V</td>
<td>V4 83 170 4 I W2</td>
<td>0.75 A</td>
<td>Normally open contact</td>
<td>106</td>
</tr>
<tr>
<td>MH15213 (R) -10</td>
<td>5 A - 220-230 V</td>
<td>V4 83 170 4 I W2</td>
<td>1 A</td>
<td>Normally open contact</td>
<td>106</td>
</tr>
</tbody>
</table>

### Characteristics

- Pressure and vacuum switching for semi-rigid tubing (NFE 49100)
- UL and cUL approval
- Standard electrical contact
- Weight
- Operation
- Electrical life

### Operation

- Pressure operated
- Vacuum operated

### Electrical life

- (Crouzet microswitch "V4" ref 83 170 4-1-W2)

### Other information

- On request:
  - Microswitch V4 ref. 83 170 6 / 92 high current
  - Microswitch V4 ref. 83 170 9 / 92 low current
Adjustable pressure switches (manostats) (pneumatic output)

- 100 % pneumatic

Also available in ATEX version for use in potentially explosive atmospheres in accordance with 94/9/EC Directive

**Part numbers (and adjustment ranges)**

<table>
<thead>
<tr>
<th>Adjustment range</th>
<th>81 502 140</th>
<th>81 502 150</th>
<th>81 502 160</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 - 1.5 bar</td>
<td>Positive output</td>
<td>Positive output</td>
<td>Positive output</td>
</tr>
<tr>
<td>2 - 8 bar</td>
<td>Negative output</td>
<td>Negative output</td>
<td>Negative output</td>
</tr>
</tbody>
</table>

**Accuracy**

- 50% at 0.1 - 0.5 bar
- 2% at 2 - 8 bar

**Connection - sub-base pages 54/55**

**Operating temperature**

- 2°C to 40°C

**Mechanical life operations**

- 3 x 10⁶ operations

**Weight**

- 160 g

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**Characteristics**

- Orifice diameter mm: 1.5
- Flow at 4 bars Nl/min: 170
- Hysteresis 100/300/600 mb
- Connection - sub-base pages 54/55
- Operating temperature °C: -5 to +50
- Mechanical life operations: 3 x 10⁶
- Weight g: 160

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**Connections**

- Example of pressure threshold adjustment (mini regulator - manostat)

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**Principle of operation**

The manostats provide an on or off output signal when the input signal reaches a predetermined pressure threshold.

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**Dimensions**

81 502 140 - 81 502 150 - 81 502 160
81 505 140 - 81 505 150 - 81 505 160

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**Other information**

Pressure switches with electrical output on request.

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ATEX version products are available in the following catalogues: Pneumatic products for explosive atmospheres or on our website www.crouzet.com

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Adjustable vacuum switches (vacuostat)

- 100 % pneumatic

For vacuum -0.1 to -0.9 Bar

**Part numbers**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Positive output</th>
<th>Negative output</th>
<th>Electrical output</th>
</tr>
</thead>
</table>

**Symbol**

**Characteristics**

- Adjustment range b: 0.1 to -0.9
- Flow at 6 bars Nl/min: 170
- Hysteresis mb: 80
- Connection - sub-base pages 54/55
- Operating temperature °C: -5 to +50
- Mechanical life operations: 3 x 10⁶
- Weight g: 160

**Connections**

- Example of use:
  - Vacuum handling (vacuum generator, vacuum pad, vacuostats).

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**Principle of operation**

Vacuostats provide an on or off output signal when the input signal reaches a predetermined pressure threshold.

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**Dimensions**

81 505 110
81 508 110
81 502 110

---

**Other information**

Pressure switches with electrical output on request.

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ATEX version products are available in the following catalogues: Pneumatic products for explosive atmospheres or on our website www.crouzet.com
Vacuum handling components

» Sur le principe du Venturi
» Facilement raccordable

Also available in ATEX version for use in potentially explosive atmospheres in accordance with 94/9/EC Directive

### Part numbers

<table>
<thead>
<tr>
<th>Vacuum generators</th>
<th>81 531...</th>
<th>81 541...</th>
<th>81 545...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-base mounting</td>
<td>81 531...</td>
<td>81 541...</td>
<td>81 545...</td>
</tr>
<tr>
<td>Plug-in</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Characteristics

<table>
<thead>
<tr>
<th>Push-in connectors for semi-rigid tubing (NFE 49100)</th>
<th>Ø 4 mm</th>
<th>Ø 6 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male/Female/Female (MFF)</td>
<td>2 → 8</td>
<td>2 → 8</td>
</tr>
<tr>
<td>Female/Female/Female (FFF)</td>
<td>2 → 8</td>
<td>2 → 8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating pressure (bar)</th>
<th>2 → 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply pressure (bar)</td>
<td>13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vacuum pad material</th>
<th>75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (g)</td>
<td></td>
</tr>
</tbody>
</table>

Detection of the pressure decrease can be achieved by the use of manostats (see pages 38/39)

### Dimensions

**81 531 001**
- Sub-base mounting

**81 545 001**
- 2 push-in connectors Ø 4 mm
- Plug-in male for push-in connector

**81 545 005**
- 3 push-in connectors Ø 6 mm

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