Pneumatic Interlocking Valve for rolling stock
General information

The pneumatic interlocking valve is a safety device, installed in the pneumatic circuit providing air supply to the pantograph or any other pneumatic driven device. During maintenance operations, the pneumatic interlocking valve is manually switched in the OFF position, interrupting the air supply and releasing the air pressure in the pneumatic circuit of the device it operates. In this safety position, removal of the interlocking key(s) prevents inappropriate operation of the pneumatic interlocking valve, and guarantees the safety of the maintenance operations. As example, the lowered position of the pantograph is guaranteed through the pneumatic interlocking valve, providing the highest safety to the maintenance staff working on high voltage equipments.

Applications

Pneumatic interlocking for railway rolling stock.

Main features

- Safety interlocking device
- Manual operation through one or several interlocking key(s)
- Indoor mounting
- Reference standards IEC 61373, NF F16-101 /-102

Operating principle

Position: ON

Compressed air is let in to the device (e.g. pantograph) through the valve.

Position: OFF (maintenance operations)

Key turned in the OFF position, the device (e.g. pantograph) is disconnected from the air supply and compressed air escapes through the exhaust.

Data for product selection

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Unit</th>
<th>BSV2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PNEUMATIC CIRCUIT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air pressure</td>
<td>[MPa]</td>
<td>0.4 to 1</td>
</tr>
<tr>
<td><strong>LOW VOLTAGE AUXILIARY CIRCUIT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Auxiliary contacts</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of contacts (refer to definition page 3)</td>
<td>potential free</td>
<td></td>
</tr>
<tr>
<td>Rated voltage</td>
<td>[V_{DC}]</td>
<td>24 to 110</td>
</tr>
<tr>
<td>Conventional thermal current</td>
<td>[A]</td>
<td>10</td>
</tr>
<tr>
<td>Switching categories according to EN60947 (silver contacts)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- AC-15 230 V_{DC} 1.0 A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- DC-13 110 V_{DC} 0.5 A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum let-through current at 24 V_{DC} (1)</td>
<td>[mA]</td>
<td>≥ 10 (silver contacts) or 4 ≤ I &lt; 10 (gold contacts)</td>
</tr>
</tbody>
</table>

(1) for a dry and clean environment.

OPERATING CONDITIONS

| Installation | indoor |
| Altitude | [m] | ≤ 1400 |
| Working ambient temperature | T_{amb} [°C] | −30 to +70 |
| Humidity | | 5K2 class |
| Pollution degree | | PD4 |
| Minimum mechanical durability | N [Cycles] | ≥ 20'000 |
Main dimensions

Dimensions without tolerances are indicative. All dimensions are in mm. The maximum allowed flatness deviation of the support frame is 0.5 mm.

Weight: 1 kg ±0.25 kg

Options (subject to additional costs)

Auxiliary switches

The position of the pneumatic interlocking valve (ON or OFF) can be identified by means of two optional auxiliary switches “Aux1” and “Aux2”. The auxiliary switches are activated when the key locks is in position securing the ON or OFF status of the device.
### Designation code for ordering

#### Designation code information

- Be sure to establish the designation code from our latest version of the brochure by downloading it from our website “www.secheron.com”.
- Be careful to write down the complete alphanumerical designation code with 7 characters when placing your order.
- For technical reasons, some variants and options indicated in the designation code might not be combined.
- The bold part of this designation code defines the device type, and the complete designation defines the identification number of the product, as displayed on the identification plate attached to the product.

<table>
<thead>
<tr>
<th>Example of customer’s choice</th>
<th>Line</th>
<th>BSV2</th>
<th>B</th>
<th>1</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>

#### Designation code (options are subject to additional costs) - Order form

<table>
<thead>
<tr>
<th>Line</th>
<th>Description</th>
<th>Designation</th>
<th>Standard</th>
<th>Options</th>
<th>Customer’s choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Product type</td>
<td>Pneumatic interlocking valve</td>
<td>BSV2</td>
<td>A</td>
<td>BSV2</td>
</tr>
<tr>
<td>11</td>
<td>Key configuration (1)</td>
<td></td>
<td></td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>1A (slave)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1A (master) + 1B (slave)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1A (master) + 2B (slave)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Key and lock codification for each unit</td>
<td>No</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Auxiliary contacts</td>
<td>None</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Aux1 — 1a + 1b (switch PF) — silver type</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aux1 — 1a + 1b (switch PF) — gold type</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aux1 and Aux2 — 2a + 2b (switch PF) — silver type</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aux1 and Aux2 — 2a + 2b (switch PF) — gold type</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

(1) A–blue, B–yellow; different key colors can be ordered.

The offered key system is of type Kaba 8. For any other request, please contact Sécheron.

---

Place and date: Name: Signature:

Sécheron SA  
Rue du Pré-Bouvier 25  
1217 Meyrin - Geneva  
CH-Switzerland  
Tel: +41 22 739 41 11  
Fax: +41 22 739 48 11  
info@secheron.com  
www.secheron.com

This document is not contractual and contains information corresponding to the level of technology at the date of printing. Sécheron reserves the right to modify and/or improve the product, whose characteristics are described in these documents, as required by new technology at any time. It is the purchaser’s responsibility to inform himself, no matter what the circumstances, of the product’s maintenance conditions and requirements. Sécheron reserves all rights, especially those arising from our “General Delivery Conditions”.

Copyright© 2014 Sécheron SA