**Product description**

- For quartz and ceramic lamps
- Also for mobile luminaires with connectors
- Pulse packets for increased ignition energy (pulseCONTROL technology)
- Flicker-free light
- Colour stability thanks to constant power
- Low power loss
- Low weight
- No acoustic resonance
- Safety shutdown if a lamp is faulty or missing
- Greatly reduced reignition time
- Hardly any EMC interference in the ignition phase
- Automatic shutdown on overheating
- With integrated cable clamp and terminal cover
- No tools required for installing the terminal cover and cable clamps
- Push-in terminals up to 2.5 mm²
- Casing: polycarbonate, white

**Technical data**

- **Mains voltage range**: 220 – 240 V
- **AC voltage range**: 198 – 254 V
- **DC voltage range**: 198 – 320 V
- **Mains frequency**: 0 / 50 / 60 Hz
- **Max. ignition voltage**: 5 kVp
- **Operating frequency**: 145 Hz
- **Type of protection**: IP20

**Standards**, page 2

**Wiring diagrams and installation examples**, page 2

**Ordering data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Article number</th>
<th>Packaging, carton</th>
<th>Packaging, low volume</th>
<th>Packaging, high volume</th>
<th>Weight per pc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>For luminaires with 1 lamp</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCI 35 TOP C021</td>
<td>87500208</td>
<td>20 pcs.</td>
<td>280 pcs.</td>
<td>1,120 pcs.</td>
<td>0.260 kg</td>
</tr>
<tr>
<td>PCI 50 TOP C021</td>
<td>87500210</td>
<td>20 pcs.</td>
<td>280 pcs.</td>
<td>1,120 pcs.</td>
<td>0.262 kg</td>
</tr>
<tr>
<td>PCI 70 TOP C021</td>
<td>87500209</td>
<td>20 pcs.</td>
<td>280 pcs.</td>
<td>1,120 pcs.</td>
<td>0.265 kg</td>
</tr>
</tbody>
</table>

**Specific technical data**

<table>
<thead>
<tr>
<th>Lamp voltage</th>
<th>Lamp type</th>
<th>Type</th>
<th>Article number</th>
<th>Dimensions L x W x H</th>
<th>Lamp power</th>
<th>Circuit power</th>
<th>EEI</th>
<th>Efficiency</th>
<th>Current at 50 Hz 230 V</th>
<th>λ at 50 Hz 230 V</th>
<th>Max. cable length to lamp</th>
<th>tc point max.</th>
<th>Ambient temperature ta tc/ta for ≥ 30,000 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 35 W</td>
<td>H</td>
<td>PCI 35 TOP C021</td>
<td>87500208</td>
<td>159.4 x 82 x 34 mm</td>
<td>39 W</td>
<td>44 W</td>
<td>A2</td>
<td>&gt; 88 %</td>
<td>0.20 A</td>
<td>0.97</td>
<td>1.5 m / 120 pf</td>
<td>70 °C</td>
<td>-20 ... +55 °C</td>
</tr>
<tr>
<td>1 x 50 W</td>
<td>H</td>
<td>PCI 50 TOP C021</td>
<td>87500210</td>
<td>159.4 x 82 x 34 mm</td>
<td>50 W</td>
<td>56 W</td>
<td>A2</td>
<td>&gt; 89 %</td>
<td>0.25 A</td>
<td>0.96</td>
<td>1.5 m / 120 pf</td>
<td>65 °C</td>
<td>-20 ... +50 °C</td>
</tr>
<tr>
<td>1 x 70 W</td>
<td>H</td>
<td>PCI 70 TOP C021</td>
<td>87500209</td>
<td>159.4 x 82 x 34 mm</td>
<td>73 W</td>
<td>80 W</td>
<td>A2</td>
<td>&gt; 90 %</td>
<td>0.35 A</td>
<td>0.97</td>
<td>1.5 m / 120 pf</td>
<td>75 °C</td>
<td>-20 ... +45 °C</td>
</tr>
</tbody>
</table>

\( ^{\text{a}} \) At \( \text{ta} = 25 ^\circ \text{C} \).
Installation instructions

Wiring type and cross section
Stranded wire or solid wire up to 2.5 mm² may be used for wiring. Strip 10–11 mm of insulation from the cables to ensure perfect operation of the push-in terminals.

Use one wire for each terminal connector only.

Use each strain relief channel for one cable only.

Fixing conditions
Dry, acidfree, oilfree, fatfree. The maximum ambient temperature must not be exceeded. It is not suitable for fixing in corner. Whenever possible keep the ballast away from hot parts. It helps increasing the life-time of the ballast.

If several ballasts are installed in masts, boxes, etc., measures must be taken to avoid overheating of individual components.
To prevent the use of a wrong lamp type we recommend to mark the luminaire with the correct lamp type that fits to the ballast.

Note on wiring
The length of the lamp wires is limited by the value of cable capacitance. The maximum of 120 pF would enable connection of approximately 1.5 metres of lamp wire.

In class 1 luminaires it is necessary to earth the ballast and the luminaire, in class 2 luminaires not.

Safety switch off
End of life of the lamps
At the end of their useful life, lamps often cycle on/off. The PCI ballast recognises this condition and switches off the lamp, after three complete on/off cycles and whilst the supply has been unswitched. Complete lamp switch off enables easy identification of a defective lamp in the application. After a change of the faulty lamp and an interruption of the mains supply (mains reset) the ballast will strike the lamp. When there is no lamp in circuit or a defective lamp is connected to the ballast, the ballast will switch off after appr. 25 minutes.

Overtemperature shutdown
The units shut down at Δt approx. +12 °C compared with tc. A mains reset must be carried out so that the units switch on again.

Overload strength
320 Vac / 1 h
280 Vac / 10 h

Standards
EN 55015 (radio interference)
EN 61000-3-2 (mains harmonics)
EN 61347-2-12
EN 61547 (interference immunity)
EN 61167

Harmonic distortion in the mains supply

<table>
<thead>
<tr>
<th>Type</th>
<th>THD at 230V/50Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCI 35 TOP</td>
<td>&lt; 10%</td>
</tr>
<tr>
<td>PCI 50 TOP</td>
<td>&lt; 10%</td>
</tr>
<tr>
<td>PCI 70 TOP</td>
<td>&lt; 10%</td>
</tr>
</tbody>
</table>

Ballast lumen factor EN 60929 8.1

<table>
<thead>
<tr>
<th>Type</th>
<th>AC/DC-BLF at U = 186–254V, 25°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCI 35 TOP</td>
<td>1.00</td>
</tr>
<tr>
<td>PCI 50 TOP</td>
<td>1.00</td>
</tr>
<tr>
<td>PCI 70 TOP</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Loading of automatic circuit breakers

<table>
<thead>
<tr>
<th>Automatic circuit breaker type</th>
<th>C10</th>
<th>C13</th>
<th>C16</th>
<th>C20</th>
<th>B10</th>
<th>B13</th>
<th>B16</th>
<th>B20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation Ø</td>
<td>1.5 mm²</td>
<td>1.5 mm²</td>
<td>1.5 mm²</td>
<td>2.5 mm²</td>
<td>1.5 mm²</td>
<td>1.5 mm²</td>
<td>1.5 mm²</td>
<td>2.5 mm²</td>
</tr>
<tr>
<td>PCI 35 TOP</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>PCI 50 TOP</td>
<td>14</td>
<td>25</td>
<td>36</td>
<td>42</td>
<td>8</td>
<td>14</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>PCI 70 TOP</td>
<td>14</td>
<td>25</td>
<td>36</td>
<td>42</td>
<td>8</td>
<td>14</td>
<td>18</td>
<td>18</td>
</tr>
</tbody>
</table>

PAC 1761-1492-5

PHACO
Temperature range

The ta temperature value is the basis for specifying the rated life. The relationship between the tc temperature and the ta temperature depends on the design of the luminaire. If the measured tc temperature is approximately 5 K under the tc max. temperature the ta temperature should be checked and, if necessary, measurements should be taken on the critical components (e.g. electrolytic capacitor).

Detailed information is available on request. PCI TOP C021 is designed for an average life of 30,000 hours under rated conditions, with a failure probability of less than 10%. This corresponds to an average failure rate of 0.3% per 1,000 hours of operation.

The specified tc temperature is the maximum permitted value (rated temperature according to EN 61347-1). Above this safety-related value the thermal cutout protects the device against damage. The expected life-time values are shown in the following table. The tc values are the relevant values here.

Storage conditions

Humidity: 5% up to max. 85%, not condensed (max. 56 days/year at 85%)

Storage temperature: -40 °C up to max. +80 °C

The devices have to be within the specified temperature range (ta) before they can be operated.

Isolation and electric strength testing of luminaires

Electronic devices can be damaged by high voltage. This has to be considered during the routine testing of the luminaires in production.

According to IEC 60598-1 Annex Q (informative only) or ENEC 303-Annex A, each luminaire should be submitted to an isolation test with 500 V DC for 1 second. This test voltage should be connected between the interconnected phase and neutral terminals and the earth terminal.

The isolation resistance must be at least 2 MΩ.

As an alternative, IEC 60598-1 Annex Q describes a test of the electrical strength with 1500 V AC (or 1.414 x 1500 V DC). To avoid damage to the electronic devices this test must not be conducted.

Expected life-time

<table>
<thead>
<tr>
<th>Type</th>
<th>Lamp type</th>
<th>Lamp power</th>
<th>tc</th>
<th>35 °C</th>
<th>40 °C</th>
<th>45 °C</th>
<th>50 °C</th>
<th>55 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCI 35 TOP</td>
<td>1x35 W</td>
<td>tc 50 °C</td>
<td>&gt; 50,000 h</td>
<td>&gt; 50,000 h</td>
<td>50,000 h</td>
<td>40,000 h</td>
<td>30,000 h</td>
<td></td>
</tr>
<tr>
<td>PCI 50 TOP</td>
<td>1x50 W</td>
<td>tc 50 °C</td>
<td>&gt; 50,000 h</td>
<td>&gt; 50,000 h</td>
<td>40,000 h</td>
<td>30,000 h</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>PCI 70 TOP</td>
<td>1x70 W</td>
<td>tc 65 °C</td>
<td>&gt; 50,000 h</td>
<td>&gt; 50,000 h</td>
<td>30,000 h</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

... not permitted

Additional information

Additional technical information at www.tridonic.com → Technical Data

Guarantee conditions at www.tridonic.com → Services

No warranty if device was opened.