Product description

- CELMA Energy Efficiency Index A2
- Nominal life-time up to 50,000 h (at max. ta
  with a failure rate max. 0.2 % per 1,000 h)
- Large temperature range (for values see table)
- Automatic start after replacement of defective lamps
- Safety shutdown of defective lamps and at end of life
- For emergency lighting systems as per EN 50172
- Temperature protection as per EN 61347-2-3 C5e

Technical data

<table>
<thead>
<tr>
<th>AC voltage range</th>
<th>198 – 264 V</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC voltage range</td>
<td>176 – 264 V (Lamp start ≥ 198 V DC)</td>
</tr>
<tr>
<td>Overvoltage protection</td>
<td>270 V AC, 360 h</td>
</tr>
<tr>
<td>Defined warm start</td>
<td>≤ 1 s</td>
</tr>
<tr>
<td>Operating frequency</td>
<td>≥ 40 kHz</td>
</tr>
<tr>
<td>Type of protection</td>
<td>IP20</td>
</tr>
</tbody>
</table>

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>PC 1x8 W BASIC sl</td>
<td>22176026</td>
<td>25 pc(s)</td>
<td>1,150 pc(s)</td>
<td>8,050 pc(s)</td>
<td>0.044 kg</td>
</tr>
</tbody>
</table>

Specific technical data

<table>
<thead>
<tr>
<th>Lamp wattage</th>
<th>Lamp type</th>
<th>Type</th>
<th>Article number</th>
<th>Dimensions L x W x H</th>
<th>Hole spacing D</th>
<th>Lamp power</th>
<th>Circuit power</th>
<th>EEI</th>
<th>Current at 50 Hz</th>
<th>λ at 50 Hz</th>
<th>tc point max.</th>
<th>Ambient temperature ta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 8 W</td>
<td>T5</td>
<td>PC 1x8 W BASIC sl</td>
<td>22176026</td>
<td>145 x 22 x 21 mm</td>
<td>136 mm</td>
<td>6.8 W</td>
<td>8.7 W</td>
<td>A2</td>
<td>0.075 A</td>
<td>0.071 A</td>
<td>0.53</td>
<td>-25 ... 60 °C</td>
</tr>
</tbody>
</table>

Data sheet 03/16-537-9
Subject to change without notice.
Standards
EN 55015
EN 60929
EN 61000-3-2
EN 61347-2-3
EN 61347-2-4
EN 61547
according to EN 50172

Glow-wire test
according to EN 60598-1 with increased temperature of 960 °C passed.

AC operation
Mains voltage:
220 – 240 V 50 / 60 Hz
198 – 264 V 50 / 60 Hz including safety tolerance (+10 %)
202 – 254 V 50 / 60 Hz including performance tolerance (+6 % / -8 %)

Min. lamp starting temperature -25 °C

DC operation
220 – 240 Vdc
198 – 264 Vdc certain lamp start
176 – 264 Vdc operating possible

Min. lamp starting temperature -25 °C

With a DC supply L and N terminals are interchangeable.

Emergency lighting
Use in emergency lighting installations according to EN 50172 or for emergency luminaires according to EN 61347-2-3 appendix J.

Instant start after mains interruption < 0.5 s
EBLF ≥ 0.5

Abnormal operation protection
All ballasts are equipped with a protection circuit against abnormal operation. The circuit is used to shut down the ballast if the lamp fails to strike, or if the lamp is defect.

The ballast can be restarted after shut down by turning off the supply for 10 seconds or by replacing the lamp.

Ingress protection
IP 20 for boxed versions

Protection class
The ballasts are suitable for use in class I or class II luminaires.

Energy class CELMA EEI = A2\(^1\)

\(^1\) according to the EU directives on ecodesign requirements (EC) No. 245/2009 and (EC) No. 347/2010

Harmonic distortion in the mains supply
EMC standard EN 61000-3-2 for lighting equipment with active input power ≤ 25 W.

All ballasts comply with the standard EN 61000-3-2 to operate lighting equipment with an active input power ≤ 25 W where distortion limits for current drawn from the supply are 86 % for 3rd harmonic and 61 % for 5th harmonic only.

Mains currents in DC operation

<table>
<thead>
<tr>
<th>Type</th>
<th>Lamp type</th>
<th>Wattage</th>
<th>mains current at U = 220 Vdc</th>
<th>mains current at U = 240 Vdc</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC 1x8 W BASIC</td>
<td>T5</td>
<td>1x8 W</td>
<td>35 mA</td>
<td>35 mA</td>
</tr>
</tbody>
</table>

Remark
The EMC standard applies to the luminaire and reflects the specific properties of each fitting whether single or multi-lamp.

Ballast lumen factor
BLF = 1.00 (at 230 V 50 Hz)

Temperature range
from -25 °C to +50 °C

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.

Expected life-time

<table>
<thead>
<tr>
<th>Type</th>
<th>Lamp type</th>
<th>Lamp power</th>
<th>ta</th>
<th>40 °C</th>
<th>50 °C</th>
<th>55 °C</th>
<th>60 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC 1x8 W BASIC sl</td>
<td>T5</td>
<td>1x8 W</td>
<td>tc</td>
<td>60 °C</td>
<td>70 °C</td>
<td>75 °C</td>
<td>80 °C</td>
</tr>
</tbody>
</table>

x = not permitted

Maximum 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 mm(^2)</td>
<td>1.5 mm(^2)</td>
<td>1.5 mm(^2)</td>
<td>2.5 mm(^2)</td>
<td>1.5 mm(^2)</td>
<td>1.5 mm(^2)</td>
<td>1.5 mm(^2)</td>
<td>2.5 mm(^2)</td>
</tr>
<tr>
<td>PC 1x8 W Basic sl</td>
<td>138</td>
<td>179</td>
<td>221</td>
<td>276</td>
<td>80</td>
<td>179</td>
<td>221</td>
<td>276</td>
</tr>
</tbody>
</table>

Max. load per MCB at supply voltage U\(_n\) = 230 V
**Wiring advice**
The lead length is dependent on the capacitance of the cable.

<table>
<thead>
<tr>
<th>Ballast Type</th>
<th>Terminal</th>
<th>Maximum capacitance allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC 1x83 W Basic st</td>
<td>1, 2</td>
<td>3, 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>120 pF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60 pF</td>
</tr>
</tbody>
</table>

To avoid the damage of the control gear, the wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.)

**Installation instructions**

**Wiring type and cross section**
The wiring can be in stranded wires with ferrules or solid with a cross section of 0.5 – 1.5 mm². Strip 9.5 mm of insulation from the cables to ensure perfect operation of push-wire terminals.

**Release of the wiring**
Press down the “push button” and remove the cable from front.

Ballasts are not suitable for any kind of dimming applications.

**Wiring diagram**

With standard solid wire 0.5/0.75 mm² the capacitance of the lead is 80 pF/m. This value is influenced by the way the wiring is made. In borderline cases the capacitance must be measured inside the luminaire. Lamp connection should be as short as possible and be made with symmetrical wiring.

**RFI**
Tridonic ballasts are RFI protected in accordance with EN 55015. To operate the luminaire correctly and to minimise RFI we recommend the following instructions:
- Connection to the lamps must be kept as short as possible
- Mains leads should be kept apart from lamp leads (ideally 5 – 10 cm distance)
- Do not lead mains leads too closely along the electronic ballast
- Keep the distance of lamp leads from the metal work as large as possible
- Mains wiring to be twisted when through wiring
- Keep the mains leads inside the luminaire as short as possible

**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.

**Additional information**

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

Guarantee conditions at www.tridonic.com → Services

No warranty if device was opened.