Electronic compact ballasts
lamps TC-DEL, TC-TEL

PC TCT PRO sl 26/32 W 220–240 V 50/60/0 Hz

- Defined warm start < 1.5 s
- Constant light output independent of fluctuations in mains voltage
- Average service life = 50,000 h
  (at ta max. with a failure rate ≤ 0.2 % per 1000 operating hours)
- AC operation 198–254 V
- DC operation 176–280 V, ignition must be ≥ 198 V
- Power factor > 0.96
- Overvoltage protection 320 VAC for 1 hour
- Overvoltage indication starting at input voltage 267–306 VAC
- Undervoltage protection (shut down) below 150 VAC / 176 VDC
- Operating frequency ≥ 40 kHz

- Suitable for automatic and manual wiring with insulation displacement connector (IDC)
- Wide operating temperature range from -25 °C to +55 °C
- Suitable for use in emergency lighting installations in accordance with EN 50172
- Safe switch off of defective lamps
- Automatic re-start after lamp change
- For luminaires with "V" or "V" and "V" in acc. with EN 60598/VDE 0710 and VDE 0711
- Suitable for luminaires with protection class SK I and SK II
- Ingress protection IP 20
- Thermal protection according to EN 61347-2-3 C5e

<table>
<thead>
<tr>
<th>Lamp type</th>
<th>Ballast type</th>
<th>Article number</th>
<th>Length D mm</th>
<th>Weight kg</th>
<th>Lamp power W</th>
<th>Circuit power W</th>
<th>CEma class</th>
<th>Current at 50Hz 220V A</th>
<th>λ at 50Hz 220V A</th>
<th>Current at 50Hz 240V A</th>
<th>λ at 50Hz 240V A</th>
<th>Temperature range °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>2x26 TC-DEL</td>
<td>PC 2/26/32 TCT PRO sl</td>
<td>22176115</td>
<td>234</td>
<td>220</td>
<td>0.28</td>
<td>48</td>
<td>53.5</td>
<td>A2</td>
<td>0.23</td>
<td>0.23</td>
<td>0.98</td>
<td>0.98</td>
</tr>
<tr>
<td>2x26 TC-TEL</td>
<td>PC 2/26/32 TCT PRO sl</td>
<td>22176115</td>
<td>234</td>
<td>220</td>
<td>0.28</td>
<td>48</td>
<td>53.5</td>
<td>A2</td>
<td>0.23</td>
<td>0.23</td>
<td>0.98</td>
<td>0.98</td>
</tr>
<tr>
<td>2x32 TC-TEL</td>
<td>PC 2/26/32 TCT PRO sl</td>
<td>22176115</td>
<td>234</td>
<td>220</td>
<td>0.28</td>
<td>64</td>
<td>68.9</td>
<td>A2</td>
<td>0.32</td>
<td>0.30</td>
<td>0.99</td>
<td>0.97</td>
</tr>
</tbody>
</table>

EEI A2 = measured according to EN 50294

Approvals:
- EN 55015
- EN 61347-2-4
- EN 61347-2-3
- EN 60929
- EN 61000-3-2
- EN 61547
- acc. EN 50172

Datablatt 09/14-92-6 Druckfehler und technische Änderungen vorbehalten.
PHASED OUT

Electronic compact ballasts
lamps TC-DEL, TC-TEL

Lamp starting characteristics
Warm start
Starting time 1.5 secs with AC and DC operation
Cathode heating will be reduced after preheat time

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 %)

DC operation
220–240 V 0 Hz
198–280 V 0 Hz certain lamp start
176–280 V 0 Hz operating range
Light output level in DC operation: 100 %

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 = 1.00

Intelligent Voltage Guard
Intelligent Voltage Guard is the name of the new electronic monitor from TridonicAtco. This innovative feature of the PC PRO family of control gear from TridonicAtco immediately shows if the mains voltage rises above or falls below certain thresholds. Measures can then be taken quickly to prevent damage to the control gear.
• If the mains voltage rises above ≥ 306 V the lamps start flashing on and off.
• This signal “demands” disconnection of the power supply to the lighting system.
• If the mains voltage falls below 150 V the control gear automatically disconnects the lamp circuit to protect the control gear from being irreparably damaged.

Smart Heating
PC PRO, ignition technology (smart heating) optimises lamp start and ensures no energy is wasted. After the lamp ignition the filament heating is reduced automatically to a defined minimum value. This reduction in filament heating, saves energy, yet maintains the proper operating conditions for the lamp. The lamp is always operated within specification.

Mains currents in DC operation

<table>
<thead>
<tr>
<th>Type</th>
<th>wattage W</th>
<th>Mains current at Uₐ = 220 VDC</th>
<th>Mains current at Uₐ = 240 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC 2/26/32 TCT PRO sl 220-240 V 50/60 Hz</td>
<td>2x26</td>
<td>240 mA</td>
<td>220 mA</td>
</tr>
<tr>
<td>PC 2/26/32 TCT PRO sl 220-240 V 50/60 Hz</td>
<td>2x32</td>
<td>308 mA</td>
<td>280 mA</td>
</tr>
</tbody>
</table>

Harmonic distortion in the mains supply

<table>
<thead>
<tr>
<th>Type</th>
<th>wattage W</th>
<th>THD</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC 2/26/32 TCT PRO sl 220-240 V 50/60 Hz</td>
<td>2x26</td>
<td>&lt; 10 %</td>
</tr>
<tr>
<td>PC 2/26/32 TCT PRO sl 220-240 V 50/60 Hz</td>
<td>2x32</td>
<td>&lt; 10 %</td>
</tr>
</tbody>
</table>

Working voltage

<table>
<thead>
<tr>
<th>Type</th>
<th>wattage W</th>
<th>Uₐ</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC 2/26/32 TCT PRO sl 220-240 V 50/60 Hz</td>
<td>2x26</td>
<td>300</td>
</tr>
<tr>
<td>PC 2/26/32 TCT PRO sl 220-240 V 50/60 Hz</td>
<td>2x32</td>
<td>300</td>
</tr>
</tbody>
</table>

Ballast lumen factor

EN 60929 8.1

<table>
<thead>
<tr>
<th>Type</th>
<th>wattage W</th>
<th>AC/DC-BLF</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC 2/26/32 TCT PRO sl 220-240 V 50/60 Hz</td>
<td>2x26</td>
<td>≥ 1</td>
</tr>
<tr>
<td>PC 2/26/32 TCT PRO sl 220-240 V 50/60 Hz</td>
<td>2x32</td>
<td>≥ 1</td>
</tr>
</tbody>
</table>

ASIC light management
ASIC (Application specific integrated circuit) is the very latest in lighting management design technology. The lamp friendly warm start is delivering maximum lamp life and enables high switching frequency applications.

Energy class CELMA EEI = A²

² according to the EU directives on ecodesign requirements (EC) No. 245/2009 and (EC) No. 347/2010

Temperature range
-25 °C to +55 °C

tc point is related to the ballast life time. PC PRO is designed for an average service life of 50,000 hours under reference conditions and with a failure probability of less than 10 %. This corresponds to an average failure rate of 0.2 % for every 1,000 hours of operation.

Verdrahtungshinweise
The lead length is dependant on the capacitance of the cable. For safety reasons, the PC PRO must only be earthed in the case of a safety class 1 luminaire. Earthing is not required for the device to operate. Connection to earth reduces radio interference.

<table>
<thead>
<tr>
<th>Ballast</th>
<th>Terminal</th>
<th>Maximum capacitance allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC 2/26/32 TCT PRO sl</td>
<td>11, 12, 13, 14</td>
<td>Cold 200 pF Hot 100 pF</td>
</tr>
</tbody>
</table>

With standard solid wire 0.5/0.75 mm² the capacitance of the lead is 30–80 pF/m. This value is influenced by the way the wiring is made. Lamp connection should be made with symmetrical wiring. Hot leads (9, 10) and cold leads (11, 12, 13, 14) should be separated as much as possible.

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 2/26/32 TCT PRO sl</td>
<td>TC-DEL</td>
<td>2x26 W</td>
<td>1000,000 h</td>
<td>70,000 h</td>
<td>50,000 h</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>PC 2/26/32 TCT PRO sl</td>
<td>TC-TEL</td>
<td>2x32 W</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

x = not permitted
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 2H1.5 mm²</td>
<td>1.5</td>
<td>1.5</td>
<td>2.5</td>
<td>4.0</td>
<td>1.5</td>
<td>1.5</td>
<td>2.5</td>
<td>4.0</td>
</tr>
<tr>
<td>PC 2/26/32 TCT PRO sl</td>
<td>22</td>
<td>30</td>
<td>38</td>
<td>48</td>
<td>11</td>
<td>15</td>
<td>19</td>
<td>24</td>
</tr>
</tbody>
</table>

Installation instructions

**IDC interface**
- solid wire with a cross section of 0.5 mm² according to the specification from WAGO

**Horizontal interface**
- solid wire with a cross section of 0.5–1.5 mm² according to the specification from WAGO
- strip 7.5–8.5 mm of insulation from the cables to ensure perfect operation of the screw terminals

RFI
TridonicAtco ballasts are RFI protected in accordance with EN 55015 and EN 55022. To operate the luminaire correctly and to minimise RFI we recommend the following instructions:
- Connection to the lamps of the “hot leads” must be kept as short as possible (marked with *)
- Mains leads should be kept apart from lamp leads (ideally 5–10 cm distance)
- Do not run mains leads adjacent to the electronic ballast
- Twist the lamp leads
- Keep the distance of lamp leads from the metal work as large as possible
- Ballast must be earthed, either over the terminal or over the mounting screw of the ballast
- Mains wiring to be twisted when through wiring
- Keep the mains leads inside the luminaire as short as possible

Packaging
box of 10
63 carton/pallet
630 pieces/pallet

Defective lamp
If a lamp is defective, the ballast switches off and goes into standby. There is an automatic restart once the lamp has been changed.

Circuit diagram PC 2x26/32 TCT PRO sl