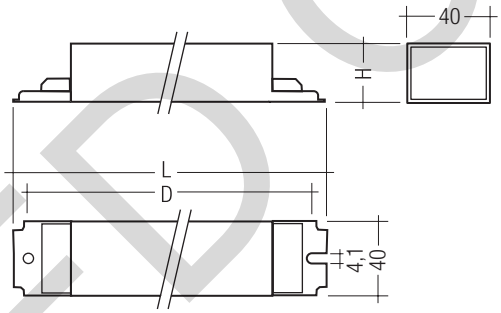
ÖVE RoHS


## PC T8 TEC, 3x36 W

PC TEC T8

### Product description

- CELMA Energy Efficiency Index A2
- Nominal life-time up to 30,000 h (at ta 50 °C with a failure rate max. 0.3 % per 1,000 h)
- Large temperature range (for values see table)
- Reduced lamp preheating for min. 30,000 starts without replacement of lamps
- Automatic start after replacement of defective lamps
- Safety shutdown of defective lamps
- Push terminal for rapid automatic or manual wiring
- Temperature protection as per EN 61347-2-3 C5e
- 3 years guarantee




### Technical data

| | |
|---|---|
| Mains voltage range | 220 – 240 V |
| AC voltage range | 198 – 264 V |
| Mains frequency | 50 / 60 Hz |
| Overvoltage protection | 280 V AC, 48 h |
| Time to light | ≤ 2 s |
| Operating frequency | > 40 kHz |
| Protection type | IP20 |

→

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### Ordering data

| Type | Article number | Packaging, carton | Packaging, low volume | Packaging, high volume | Weight per pc. |
|---|---|---|---|---|---|
| **For luminaires with 3 lamps** | | | | | |
| **PC 3x36 T8 TEC** | **87500152** | 60 pc(s). | 840 pc(s). | 2,520 pc(s). | 0.201 kg |

### Specific technical data

| Lamp wattage | Lamp type | Type | Article number | Dimension L x W x H | Hole spacing D | Lamp power | Circuit power | EEI | Current at 50 Hz | | λ at 50 Hz | | tc point max. | Ambient temperature ta |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 220 V | 240 V | 220 V | 240 V | | |
| **For luminaires with 3 lamps** | | | | | | | | | | | | | | |
| 3 x 36 W | T8 | **PC 3x36 T8 TEC** | 87500152 | 210 x 40 x 30 mm | 198 mm | 96 W | 107 W | A2 | 0.45 A | 0.45 A | 0.96 | 0.96 | 70 °C | -10 ... 50 °C |
| 3 x 36 W | TC-L | **PC 3x36 T8 TEC** | 87500152 | 210 x 40 x 30 mm | 198 mm | 96 W | 107 W | A2 | 0.45 A | 0.45 A | 0.96 | 0.96 | 70 °C | -10 ... 50 °C |

### Standards
EN 55015
EN 61000-3-2
EN 61000-3-3
EN 61347-1
EN 61347-2-3
EN 61547

### AC operation
Mains voltage:
220 – 240 V 50 / 60 Hz
176 – 264 V 50 / 60 Hz including safety tolerance (+10 % / – 20 %)

**Harmonic distortion in the mains supply**

| Type | Lamp type | Wattage | THD at 230 V / 50 Hz |
|---|---|---|---|
| **PC 3x36 T8 TEC** | T8 | 3x36 W | 20 % |
| **PC 3x36 T8 TEC** | TC-L | 3x36 W | 20 % |

**Working voltage**

| Type | Lamp type | Wattage | $U_{out}$ |
|---|---|---|---|
| **PC 3x36 T8 TEC** | T8 | 3x36 W | 300 V |
| **PC 3x36 T8 TEC** | TC-L | 3x36 W | 300 V |

**Ballast lumen factor (EN 60929 8.1)**

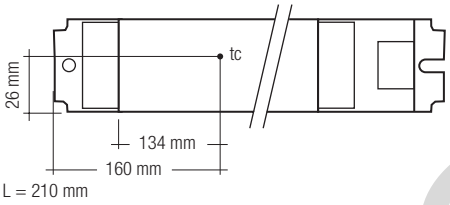
| Type | Lamp type | Wattage | AC-BLF at U = 230 V, 25 °C |
|---|---|---|---|
| **PC 3x36 T8 TEC** | T8 | 3x36 W | 1.00 (±10 %) |
| **PC 3x36 T8 TEC** | TC-L | 3x36 W | 1.00 (±10 %) |

All data are typical values

### Energy class CELMA EEI = A2[1)]

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

### Ambient Temperature
-10 °C to +50 °C



L = 210 mm

The tc point is related to the ballast life duration.

PC T8 TEC is designed for an average life-time of 30,000 hours under reference conditions and with a failure rate of less than 0.3 % for every 1,000 hours of operation.
Reduced temperature will extend ballast life-time.

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**

| Type | Lamp type | Lamp power | ta | 40 °C | 50 °C | 60 °C |
|---|---|---|---|---|---|---|
| PC 3x36 T8 TEC | T8 | 3x36 W | tc | 60 °C | 70 °C | x |
| | | | Life-time | 50,000 h | 30,000 h | x |
| | TC-L | 3x36 W | tc | 60 °C | 70 °C | x |
| | | | Life-time | 50,000 h | 30,000 h | x |

x = not permitted

## Maximum loading of automatic circuit breakers

| Automatic circuit | C10 | C13 | C16 | C20 | B10 | B13 | B16 | B20 | Inrush current | |
|---|---|---|---|---|---|---|---|---|---|---|
| Installation Ø | 1.5 mm² | 1.5 mm² | 1.5 mm² | 2.5 mm² | 1.5 mm² | 1.5 mm² | 1.5 mm² | 2.5 mm² | $I_{max}$ | Pulse |
| **PC 3x36 T8 TEC** | 16 | 21 | 35 | 38 | 9 | 12 | 18 | 20 | 34.6 A | 185 µs |

## Wiring advice

The lead length is dependant on the capacitance of the cable.
Earthing is not required for the device to operate.
Connection to earth reduces radio interference.

With standard solid wire 0.5/0.75 mm² the capacitance of the lead is approx. 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.
Keep lamp wires short. Lamp connection with twin ballast should be made with symmetrical wiring.
Hot leads and cold leads should be separated as much as possible.

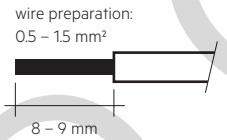
To avoid the damage of the control gear, the wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.)

| Ballast | Terminals | | Maximum capacitance allowed | |
|---|---|---|---|---|
| **Type** | Cold | Hot | Cold | Hot |
| **PC 3x36 T8 TEC** | 7, 8, 11, 14 | 9, 10, 12, 13, 15, 16 | 200 pF | 100 pF |

## Installation instructions

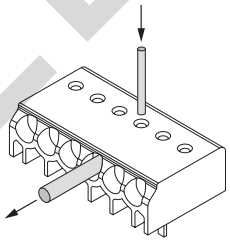
### Wiring type and cross section

The wiring can be in stranded wires with ferrules or solid cable with a cross section of 0.5–1.5 mm². For perfect function of the simple to use push-wire terminals the strip length should be 8–9 mm.




### Release of the wiring

Loosen wire through twisting and pulling or using a ø 1 mm release tool.



### Defective lamp

(Broken Filament, Rectifying Effect, Gas Defect)
If a lamp is defective then the ballast will either switch off and go into the stand-by mode or it will continue to run the lamp in a safe mode of operation.

### T8 lamp information



| Wattage | Length |
|---|---|
| 36 W | 1200 mm |

### TC-L lamp information

| Wattage | Length |
|---|---|
| 36 W | 415 mm |

### RFI

Tridonic ballasts are RFI protected in accordance with CISPR 15. To operate the luminaire correctly and 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
- Connect functional earth, 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

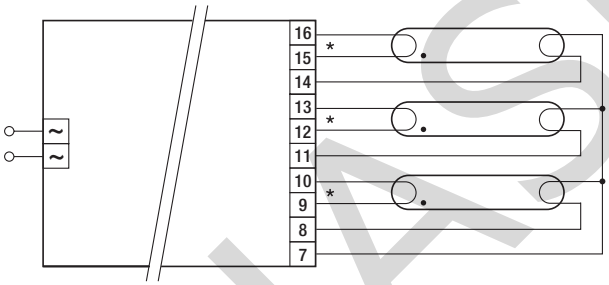
### Insulation and electric strength testing of luminaires

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 insulation 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 insulation 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.

### Wiring diagrams




* leads 9, 10, 12, 13, 15, 16 max. 1,0 m (< 100 pF)
leads 7, 8, 11, 14 max. 2,0 m (< 200 pF)
Protection class I – luminaires: earth of ballast housing required (according to IEC 598)
Protection class II – luminaires: no earth required

PC 3x36 T8 TEC, art. no.: 87500152

### Additional information

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

Guarantee conditions at www.tridonic.com → Services

Life-time declarations are informative and represent no warranty claim.
No warranty if device was opened.