**EB-Standard PLT/PLC**

**Product description**
Compact, lightweight, high-frequency electronic ballast for PL-T, PL-C compacted fluorescent lamps.

**Features and benefits**
- The combination of EB-Standard and PL-T/PL-C lamps offers opportunities for miniaturization and reduced cost of ownership, thanks to the limited dimensions and the high system efficacy.
- Programmed start: flicker-free warm start, preheating the lamp electrodes; this enables the lamps to be switched on and off without reducing useful life.
- Equipped with electrode heating cut-off circuit, ensuring optimal lamp operation with respect to lumen curve of the lamp and reduction in system energy losses.
- Automatic stop circuit is activated within five seconds in case of lamp failure (safety stop); once the lamp has been replaced, the ballast resets automatically.
- Up to 50% longer lamp life than with conventional ballasts.
- Up to 20% reduction in energy consumption at constant luminous flux compared with conventional gear.
- Low energy consumption due to the use of EII technology.
- Smart power: constant light independent of mains voltage fluctuations.

**Applications**
Typical areas of application include:
- Department stores, shops, supermarkets
- Office buildings, for example, insurance companies, banks, government ministries
- Hotels
- Airports, railway stations
- Hospitals

**Philips quality**
This implies optimum quality regarding:
- System supplier
  As manufacturers of lamps, electronic control gear and lighting control equipment, Philips ensures that, from the earliest development stage, optimum lamp/ballast performance is maintained.
- International standards
  Philips EB-S electronic ballasts comply with all relevant international rules and regulations.

**Compliances and approvals**
- RFI < 30 MHz EN 55015 (IEC) *
- Harmonics EN 61000-3-2 (IEC)
- Immunity EN 61547 (IEC)
- Safety EN 61347-2-3 (IEC)
- Performance EN 60929 (IEC)
- Vibration & bump tests EN 6068-2-6 Fc (IEC) EN 60068-2-29 Eb (IEC)
- Quality standard ISO 9001
- Environmental standard ISO 14001
- Approval marks ENEC KEMA CCC AS/NZS
- CE marking

* Tested with ballast functional ground connected to earth

**Dimensions in mm**

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**Designations and Dimensions**

<table>
<thead>
<tr>
<th>Product ID</th>
<th>A1</th>
<th>A2</th>
<th>B1</th>
<th>B2</th>
<th>C1</th>
<th>D1</th>
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<tbody>
<tr>
<td>113/118/126 PLT/PLC</td>
<td>104</td>
<td>93.5</td>
<td>68</td>
<td>57.5</td>
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<td>213/218/226 PLT/PLC</td>
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<td>111</td>
<td>79</td>
<td>67</td>
<td>33</td>
<td>4.2</td>
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</tbody>
</table>
### Technical data: (all typical values at Vmains = 230V)

<table>
<thead>
<tr>
<th>Lamp Qty.</th>
<th>Ballast</th>
<th>System Power W</th>
<th>Lamp Power W</th>
<th>Ballast Losses W</th>
<th>NOMINAL Lamp Lumen Lm</th>
<th>EEI</th>
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<tbody>
<tr>
<td>1</td>
<td>EB-S 113 PLT/C</td>
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<td>900</td>
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<tr>
<td>2</td>
<td>EB-S 118 PLT/C</td>
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<td>16.5</td>
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<td>1200</td>
<td>A2</td>
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<tr>
<td>2</td>
<td>EB-S 218 PLT/C</td>
<td>38</td>
<td>16.5</td>
<td>5</td>
<td>1200</td>
<td>A2</td>
</tr>
<tr>
<td>1</td>
<td>EB-S 126 PLT/C</td>
<td>27</td>
<td>24</td>
<td>3</td>
<td>1800</td>
<td>A2</td>
</tr>
<tr>
<td>2</td>
<td>EB-S 226 PLT/C</td>
<td>54</td>
<td>24</td>
<td>6</td>
<td>1800</td>
<td>A2</td>
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<td>125</td>
<td>2.5</td>
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<td>A3</td>
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<td>EB-S 113 PLT/C</td>
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<tr>
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<td>EB-S 218 PLT/C</td>
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<td>16.5</td>
<td>5</td>
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<td>A2</td>
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<td>EB-S 126 PLT/C</td>
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<td>24</td>
<td>3</td>
<td>1800</td>
<td>A2</td>
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<tr>
<td>2</td>
<td>EB-S 226 PLT/C</td>
<td>54</td>
<td>24</td>
<td>6</td>
<td>1800</td>
<td>A2</td>
</tr>
</tbody>
</table>

### Technical data:

- **Lamps factor:**
  - Ip-lp = between lamp wires
  - Ip-lp/gnd = between lamp wires and ground

- **Typical wire capacitance:**
  - 50 pF/m (spacing between wires 0.5 mm)
  - 72 pF/m (spacing between wires 0.5 mm)

- **Tolerance:** ± 3 kHz
**Technical data for installation**

<table>
<thead>
<tr>
<th>Mains operation</th>
<th>QTY Lamp</th>
<th>Input current A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated mains voltage</td>
<td>220 - 240 V</td>
<td>0.07</td>
</tr>
<tr>
<td>with tolerances for safety:</td>
<td>187 - 264 V</td>
<td>0.12</td>
</tr>
<tr>
<td>with tolerances for performance:</td>
<td>202 - 254 V</td>
<td>0.08</td>
</tr>
<tr>
<td>Mains frequency</td>
<td>50/60 Hz</td>
<td>0.17</td>
</tr>
<tr>
<td>Operating frequency (typical)</td>
<td>&gt; 42K Hz (45K Hz)</td>
<td>0.11</td>
</tr>
<tr>
<td>Power factor</td>
<td>&gt; 0.95</td>
<td></td>
</tr>
</tbody>
</table>

Smart power: with AC mains voltage fluctuations, 202-254V
Luminous flux varies by +/-2% max

**DC voltage operation (during emergency back-up)**
- Yes for limited time (48hrs) only
- Required battery voltage for guaranteed ignition: 198 - 254V DC
- Required battery voltage for burning lamps: 176 - 254V DC
- Nominal light output is obtained at DC voltage of: 220 - 240V DC

**Notes:**
1. For a continuous DC application, an external fuse should be used in the luminaire.
2. Continuous low DC voltages (< 198 V) can influence the lifetime of the ballast.

**Ignition time**
- < 2.0 s

**Earth leakage current**
- < 0.7 mA (peak) per ballast

**Overvoltage protection**
- 48 hrs at 276V AC
- 2 hrs at 320V AC

**Dual fixture; master-slave operation**
- not advisable

**Automatic restart after lamp replacement or voltage dip**
- yes: tested with a dip down to 30% with a duration of 10 mains cycles

**Insulation resistance test**
- 500 V DC from Line/Neutral to Earth (not between Line and Neutral)

**Notes:**
1. Data is based on a main supply with an impedance of 400 mΩ (equal to 15 m cable of 2.5mm² and another 20m to the middle of the power distribution), under worst-case conditions. With an impedance of 800 mΩ the number of ballasts can be increased by 10%.
2. Measurements will be verified in real installations; therefore data are subject to change.
3. In some cases the maximum number of ballasts is not determined by the MCB but by the maximum electrical load of the lighting installation.
4. Note that the maximum number of ballasts is given when these are all switched on at the same moment, i.e. by a wall switch.
5. Measurements were carried out on single-pole MCB’s. For multi-pole MCB’s it is advisable to reduce the number of ballasts by 20%.
**Electronics**

**EB-Standard PLT/PLC**

**Fluorescent and compact fluorescent lamps control gear**

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**Technical data for design and mounting HF ballasts in fixtures**

Temperatures

- Temperature range to ignite lamp: 0º – 50ºC with ignition aid
- Max. t-case: 65ºC

Lifetime of a ballast depends on the temperature of the ballast. This means there is a relation between the Tc point on the ballast and its lifetime. The EB-Standard ballast for PL-T/C applications has a specified lifetime of 50,000 hrs, with a maximum of 10% failures guaranteed, at a measured T-case of 65ºC.

Hum and noise level: inaudible

Permitted humidity is tested according to EN61347-1 par. 11. Note that no moisture or condensation may enter the ballast.

The ballasts that are thermally protected use a protective method of another type providing equivalent thermal protection.

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**Connector types:**

Connection wiring is greatly specified by the use of insert contacts with push buttons.

**Wire cross-section:**

- 1-lamp circuit, keep 1 & 2 lead wires short
- 2-lamp circuit, keep 1, 2, 3 & 5 lead wires short

- On the mains side: 0.5 - 1.5 mm
- On the lamp side: 0.5 - 1.5 mm
- Strip length: 7.5 - 8.5 mm

**Note:**

For optimal performance, please ensure correct earthing and wiring before power on.

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**Ordering and packing data**

<table>
<thead>
<tr>
<th>Ballast</th>
<th>Ordering number</th>
<th>Single unit</th>
<th>Carton packing</th>
<th>Dimensions</th>
<th>Weight gross</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Weight net</td>
<td>Qty.</td>
<td>Qty.</td>
<td>Weight gross</td>
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<tr>
<td>EB-S 113 PLT/C</td>
<td>9137 100650</td>
<td>0.12</td>
<td>12</td>
<td>12</td>
<td>1.6</td>
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<tr>
<td>EB-S 213 PLT/C</td>
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<td>12</td>
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<td>2.1</td>
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<tr>
<td>EB-S 118 PLT/C</td>
<td>9137 100652</td>
<td>0.12</td>
<td>12</td>
<td>12</td>
<td>1.7</td>
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<tr>
<td>EB-S 218 PLT/C</td>
<td>9137 100653</td>
<td>0.17</td>
<td>12</td>
<td>12</td>
<td>2.2</td>
</tr>
<tr>
<td>EB-S 126 PLT/C</td>
<td>9137 100654</td>
<td>0.12</td>
<td>12</td>
<td>12</td>
<td>1.7</td>
</tr>
<tr>
<td>EB-S 226 PLT/C</td>
<td>9137 100655</td>
<td>0.18</td>
<td>12</td>
<td>12</td>
<td>2.4</td>
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<table>
<thead>
<tr>
<th>Pallet unit</th>
<th>Cartons/pcs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>48/576</td>
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</table>