# PHILIPS LIGHTING Lamp Ballast Limited Warranty

Philips Lighting Electronics, hereinafter referred to as Philips Lighting, warrants that its lamp ballasts will be free from defect in material and workmanship from the date of manufacture by Philips Lighting for the following time periods.

**Impregnated (HID standard) Electromagnetic ballasts 2 Years**

This warranty is conditional upon proper storage, installation, use, maintenance and operating 14 hours per day. This warranty is not applicable to any ballast which is not installed and operated in accordance with applicable national safety standards of the country where installation takes place and with Philips Lighting's instructions and guidelines for the ballast mentioned as below. This warranty is not applicable to abnormal stresses and operating conditions.
Philips Lighting will correct any defects, at Philips Lighting's option, by either repairing any defective part or parts or by replacing any defective part or parts or by making available a new replacement ballast.
If a test needed to appraise whether defects defined herein existed or not, the conditions of the test shall be mutually agreed in writing between Philips and complainant. Philips Lighting shall be notified before the test, and reserves right to participate the test on-site.

THIS WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED. PHILIPS LIGHTING SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

## LIMITATION OF LIABILITY

Philips Lighting will not under any circumstances whether as a result of breach of contract, breach of warranty, tort, strict liability or otherwise be liable for consequential, incidental, special or exemplary damages including but not limited to, loss of profits or revenues, loss of use of ballasts or any other goods or associated equipment or damage to any associated equipment, cost of capital, cost of substitute products, facilities of service, down time cost, or claims of claimant's customers.
Philips Lighting's liability on any claim of any kind for any loss or damages arising out of, resulting from or concerning the product or services furnished hereunder shall not exceed the price of the specific ballast or ballasts, which give(s) rise to the claim.

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## Caution!

### General instructions and guidelines for installing and using the Philips Lighting impregnated (HID standard) electromagnetic ballasts.

### 1. Earthing

The earthing terminal (bottom plate) should connect with the metal housing of luminaire with earthing.

### 2. Lamp type

The matching lamp type to be used with the HID electromagnetic ballast is specified on the ballast. If there are doubts as to whether a lamp is suitable for use with the ballast, contact your nearest Philips Lighting Representative before installing the lamp and ballast.

### 3. Power supply

The main supply voltage is shown on the ballast. Make sure the supply voltage is correct. And the operating range should be +/-10% of the rated voltage

### 4. Wiring

1) When installing ballast, Please don't loose the screw near ballast. Please follow strictly the wiring chart, which is shown on the label or instruction. Please double check whether your wiring is same with wiring chart before connecting to mains.
2) Make sure the good connection between the screw of ballast and the wire, avoid poor connection. If customer use electric screwdriver, please follow this guideline: 0.5~0.6 Nm (M3 screw), 0.8~1.0 Nm (M4 screw). If customer use normal screwdriver, please screw hard.

3) The cross-section range of lead wire is marked on the ballast screw, please select proper lead wire.

## 5. Connection and layout

1) Loose mains/lampholder connection is risky, please check carefully.
2) Please keep proper space between Ignitor, capacitor and ballast, not to close each other firmly. Make sure the lead wire not close firmly to ballast too. If the lead wire has possibility of touch with ballast, the wire need to be tubed with self-extinguishable fiberglass sleeving which can withstand a certain voltage and temperature to isolate from the ballast.

## 6. Maintenance

In order to protect ballast, please replace SON or metal halide lamp when the lamp is at end of life (the behaviors of end of life lamp include flicker, difficulty of ignition, color shifting, etc). To extend the lighting system lifetime, the ignitor with timer protection function is recommended. The igntors with T5 or T15 ending have the timer protection function, such as SN58 T15. By the way, please avoid switching on the luminaries without Lamp installed (only ballast works), which will shorten ballast life.

## 7. Storage and transportation

The ballast is warranted for storage within air circulative environment where no corrosive gas exists. On transportation, careful attention must be given, and rain, snow, water immersion and intense vibration are not allowed.

*If you have any question regarding the installation and operation of the Philips Lighting impregnated (HID standard) electromagnetic ballasts for HID lamps, please contact your local authorized Philips Lighting distributors, dealers or representatives.*

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### Specification of electronic ignitors for H.I.D. lamp circuits

| Ignitor type | Losses (W) | Max. Peak voltage (kV) | Max. load. Cap. Value (pF) | Environment temp.(°C) | Tc (°C) | Mains | |
|---|---|---|---|---|---|---|---|
| | | | | | | Voltage (V) | Fre. (Hz) |
| SI 51 | 1.0 | 0.75 | 35000 | -20~+75 | 80 | 220~240 | 50/60 |
| SI 51 Plus | 1.0 | 0.75 | 35000 | -20~+75 | 80 | | |
| SN 56 | <1.5 | 5.00 | 10000 | -20~+55 | 60 | | |
| SN 57 | 1.0 | 2.50 | 2000 | -20~+75 | 80 | | |
| SN 58 | <0.5 | 5.00 | | -20~+85 | 90 | | |
| SN 58 T5 | <0.9 | 5.00 | | -20~+75 | 80 | | |
| SN 58 T15 | <0.9 | 5.00 | | -20~+75 | 80 | | |

### Ballast wiring diagram

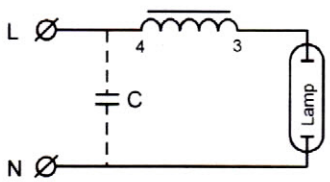


Figure 1

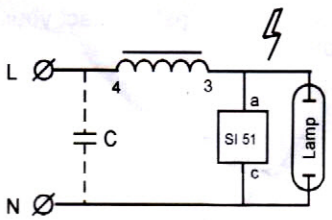


Figure 2

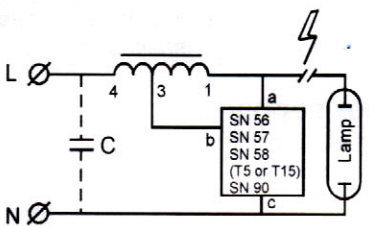


Figure 3

# Philips Lighting Electronics

**Specification for H.I.D. Lamps**

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| Ballast type | Lamp type | Ignitor type | Mains | | Cap. | Wiring |
|---|---|---|---|---|---|---|
| | | | Voltage(V) | Fre.(Hz) | uF/V | diagram |
| BHL 50L 200 | HPL | N.A. | 220 | 50 | 7/250 | Fig. 1 |
| BHL 50L 202 | | | 230 | | | |
| BHL 50L 204 | | | 240 | | | |
| BHL 80L 200 | HPL | N.A. | 220 | 50 | 8/250 | Fig. 1 |
| BHL 80L 202 | | | 230 | | | |
| BHL 80L 204 | | | 240 | | | |
| BHL 125L 200 | HPL | N.A. | 220 | 50 | 10/250 | Fig. 1 |
| BHL 125L 202 | | | 230 | | | |
| BHL 125L 204 | | | 240 | | | |
| BHL 125L 205 | | | 240 | 60 | | |
| BHL 250L 200 | HPL | N.A. | 220 | 50 | 18/250 | Fig. 1 |
| | HPI | SI 51 or SI 51 Plus | | | | Fig. 2 |
| BHL 250L 201 | HPL | N.A. | 220 | 60 | 15/250 | Fig. 1 |
| | HPI | SI 51 or SI 51 Plus | | | | Fig. 2 |
| BHL 250L 202 | HPL | N.A. | 230 | 50 | 18/250 | Fig. 1 |
| | HPI | SI 51 or SI 51 Plus | | | | Fig. 2 |
| BHL 250L 204 | HPL | N.A. | 240 | 50 | 18/250 | Fig. 1 |
| | HPI | SI 51 or SI 51 Plus | | | | Fig. 2 |
| BHL 400L 200 | HPL | N.A. | 220 | 50 | 25/250 | Fig. 1 |
| | HPI | SI 51 or SI 51 Plus | | | 28/250 | Fig. 2 |
| BHL 400L 201 | HPL | N.A. | 220 | 60 | 20/250 | Fig. 1 |
| | HPI | SI 51 or SI 51 Plus | | | 25/250 | Fig. 2 |
| BHL 400L 202 | HPL | N.A. | 230 | 50 | 25/250 | Fig. 1 |
| | HPI | SI 51 or SI 51 Plus | | | 28/250 | Fig. 2 |
| BHL 400L 204 | HPL | N.A. | 240 | 50 | 25/250 | Fig. 1 |
| | HPI | SI 51 or SI 51 Plus | | | 28/250 | Fig. 2 |
| BHL 1000L 202 | HPL-N | N.A. | 220~230 | 50 | 60/250 | Fig. 1 |
| | HPI-T | SI 51 Plus | 220~230 | 50 | 65/250 | Fig 2 |
| BMH 35L 300I TS | CDM | SN 58(T15) | 220 | 50 | 6.5/250 | Fig. 3 |
| BMH 35L 301I TS | | | 220 | 60 | | |
| BMH 35L 302I TS | | | 220~230 | 50 | | |
| BMH 35L 304I TS | | | 240 | 50 | | |
| BMH 70L 300I TS | CDM MHN, MHW | SN 58(T15) | 220 | 50 | 12/250 | Fig. 3 |
| BMH 70L 301I TS | | | 220 | 60 | | |
| BMH 70L 302I TS | | | 220~230 | 50 | | |
| BMH 70L 304I TS | | | 240 | 50 | | |
| BSN 50L 301 I | SON | SN 57 | 220 | 60 | 10/250 | Fig. 3 |
| BSN 70L 300 I | SON | SN 57 | 220 | 50 | 12/250 | Fig. 3 |
| BSN 70L 301 I | | | 220 | 60 | 12/250 | |
| BSN 70L 302 I | | | 230 | 50 | 12/250 | |
| BSN 70L 304 I | | | 240 | 50 | 12/250 | |
| BSN 70L 407 I | | | 230/240 | 50 | 12/250 | |
| BSN 100L 300 I | SON | SN 58(T5) | 220 | 50 | 12/250 | Fig. 3 |
| BSN 100L 300I TS | | | 220 | 50 | | |
| BSN 100L 301 I | | | 220 | 60 | | |

| Ballast type | Lamp type | Ignitor type | Mains | | Cap. | Wiring diagram |
|---|---|---|---|---|---|---|
| | | | Voltage(V) | Fre.(Hz) | uF/V | |
| BSN 100L 302 I | SON | SN 58(T5) | 230 | 50 | 12/250 | Fig. 3 |
| BSN 100L 304 I | | | 240 | 50 | | |
| BSN 150L 300 I | | | 220 | 50 | 18/250 | |
| BSN 150L 300I TS | | | 220 | 50 | 18/250 | |
| BSN 150L 301 I | | | 220 | 60 | 20/250 | |
| BSN 150L 302 I | | | 230 | 50 | 18/250 | |
| BSN 150L 304 I | | | 240 | 50 | 18/250 | |
| BSN 150L 304I TS | | | 240 | 50 | 18/250 | |
| BSN 150L 407 I | | | 230/240 | 50 | 18/250 | |
| BSN 150L 407I TS | | | 230/240 | 50 | 18/250 | |
| BSN 150L 302I TS | CDM MHN, MHW | SN 58(T5) | 230 | 50 | 18/250 | Fig. 3 |
| BSN 150L 301I TS | | | 220 | 60 | 15/250 | |
| BSN 250L 300 I | SON HPI-PLUS | SN 58(T5) | 220 | 50 | 32/250 | Fig. 3 |
| BSN 250L 300I TS | | | 220 | 50 | 32/250 | |
| BSN 250L 301 I | | | 220 | 60 | 30/250 | |
| BSN 250L 302 I | | | 230 | 50 | 32/250 | |
| BSN 250L 304 I | | | 240 | 50 | 32/250 | |
| BSN 400L 300 I | SON HPI-PLUS | SN 58(T5) | 220 | 50 | 50/250 | Fig. 3 |
| BSN 400L 300I TS | | | 220 | 50 | 50/250 | |
| BSN 400L 301 I | | | 220 | 60 | 50/250 | |
| BSN 400L 302 I | | | 230 | 50 | 50/250 | |
| BSN 400L 304 I | | | 240 | 50 | 50/250 | |
| BSN 600L 300I TS | SON | SN 58(T5) | 220 | 50 | 60/250 | Fig. 3 |
| BSN 600L 302I TS | | | 230 | | | |
| BSN 600L 304I TS | | | 240 | | | |
| BSN 1000L 302 I | SON, MHN | SN 56 | 230 | 50 | 100/250 | Fig. 3 |
| BSN 1000L 300 I | SON, MHN | SN 56 | 220 | 50 | 100/250 | Fig. 3 |
| BHLE 250L 200 TS | HPL | N.A. | 220 | 50 | 18/250 | Fig. 1 |
| | HPI | SI 51 or SI 51 Plus | | | | Fig. 2 |
| BHLE 250L 201 | HPL | N.A. | 220 | 60 | 15/250 | Fig. 1 |
| | HPI | SI 51 or SI 51 Plus | | | | Fig. 2 |
| BHLE 250L 202 | HPL | N.A. | 230 | 50 | 18/250 | Fig. 1 |
| | HPI | SI 51 or SI 51 Plus | | | | Fig. 2 |
| BHLE 400L 200 TS | HPL | N.A. | 220 | 50 | 25/250 | Fig. 1 |
| | HPI | SI 51 or SI 51 Plus | | | 28/250 | Fig. 2 |
| BHLE 400L 201 | HPL | N.A. | 220 | 60 | 20/250 | Fig. 1 |
| | HPI | SI 51 or SI 51 Plus | | | 25/250 | Fig. 2 |
| BHLE 400L 202 | HPL | N.A. | 230 | 50 | 25/250 | Fig. 1 |
| | HPI | SI 51 or SI 51 Plus | | | 28/250 | Fig. 2 |
| BMHE 210L 300I TS | CDM | SN 58(T15) | 220 | 50 | 28/250 | Fig. 3 |
| BMHE 315L 300I TS | CDM | SN 58(T15) | 220 | 50 | 40/250 | Fig. 3 |