



# HF-Essential II for TL5/TL-D

## HF-E II 236 TL-D 220-240V 50/60Hz

Essentially smart and reliable HF-Essential II is the most cost-effective solution for reliably operation of a fluorescent lamp. It is also the ideal entry-level product for electromagnetic system users who want to take advantage of the benefits provided by electronic ballasts. The cost-saving and reliable HF-Essential II is energy efficiency class A2, and its robust design meets all relevant international safety and performance standards. HF-Essential II is the ideal choice for a broad range of new construction and retrofit applications within the commercial sector, including general surface mounting and office lighting, parking garages, warehouses and other applications. The ballast is primarily designed for Indoor application. For outdoor application, the luminaire should be minimum Class II and need to be sufficiently protected against water & dust. The installation should also be guard against any lightning surge or any other necessary electrical protection as deemed in such typical installation & application.

### Product data

| General Information                          |              |
|--|--------------|
| Lamp Type                                    | TL-D II      |
| Number of Lamps                              | 2 piece/unit |
| Number of Products on MCB (16A Type B) (Nom) | 16           |
| Automatic Restart                            | Yes          |
| Operating and Electrical                     |              |
| Input Voltage                                | 220 to 240 V |
| Input Frequency                              | 50 to 60 Hz  |
| Operating Frequency (Nom)                    | 44.9 kHz     |
| Crestfactor (Nom)                            | 1.8          |

|                                |          |
|--------------------------------|----------|
| Power Factor 100% Load (Nom)   | 0.97     |
| Preheat Time                   | 1.4 s    |
| Mains Voltage Performance (AC) | 220-240V |
| Mains Voltage Safety (AC)      | 184-276V |
| Earth Leakage Current (Max)    | 0.5 mA   |
| Inrush Current Width           | 0.37 ms  |
| Ballast Factor (Nom)           | 0.95     |
| Power Losses (Nom)             | 8.4 W    |
| Inrush Current Peak (Max)      | 20 A     |

## HF-Essential II for TL5/TL-D

### Wiring

|  |  |
|--|--|
| Connector Type Input Terminals                 | Insert   |
| Cable Capacity Output Wires Mutual (Max)       | 150 pF   |
| Connector Type Output Terminals                | Insert   |
| Cable Length Hot Wiring                        | 0.75 m   |
| Wire Striplength                               | 8.0-9.0 mm   |
| Dual Fixture Master/Slave                      | Possible, lamp wires 0.75m max. length<br>[ Master/Slave operation possible] |
| Input Terminal Cross Section                   | 0.50-1.50 mm <sup>2</sup>  |
| Output Terminal Cross Section                  | 0.50-1.50 mm <sup>2</sup>  |
| Cable Capacity Cold Output Wires - Earth (Max) | 150 pF   |
| Cable Capacity Hot Output Wires - Earth (Max)  | 150 pF   |

### System characteristics

|                          |               |
|--------------------------|---------------|
| Rated Ballast-Lamp Power | 36 W          |
| Lamp Power on TL-D       | 30.07/29.95 W |

### Temperature

|                       |        |
|-----------------------|--------|
| T-Ambient (Max)       | 50 °C  |
| T-Ambient (Min)       | -10 °C |
| T-Storage (Max)       | 50 °C  |
| T-Storage (Min)       | -20 °C |
| T-Case Lifetime (Nom) | 80 °C  |
| T-Case Maximum (Max)  | 80 °C  |

### Mechanical and Housing

|         |               |
|---------|---------------|
| Housing | L 211x40x28.7 |
|---------|---------------|

### Emergency Operation

|                                       |              |
|---------------------------------------|--------------|
| Nominal Light Output After 60 Seconds | 100% of EBLF |
|---------------------------------------|--------------|

|   |             |
|---|-------------|
| Normal Operating Voltage (DC)               | 220-240 V   |
| Battery Voltage Guaranteed Operation        | 176-275 V   |
| Battery Voltage Guaranteed Ignition         | 186-275 V   |
| Emergency Ballast Lumen Factor (EBLF) (Nom) | 0.7 %       |
| Nominal Light Output After 5 Seconds        | 50% of EBLF |

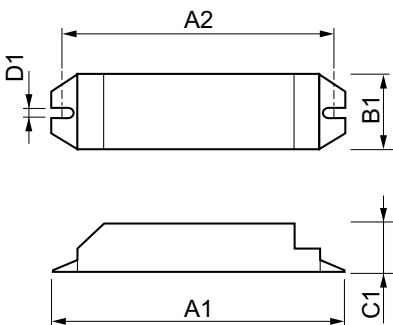
### Approval and Application

|                         |   |
|-------------------------|---|
| Energy Efficiency Index | A2  |
| IP Classification       | IP 20 [ Ingress Protection 20]                                    |
| EMI 9 kHz ... 30 MHz    | EN55015   |
| Vibration Standard      | IEC60068-2-6_2007-Fc  |
| Bumps Standard          | IEC 60068-2-29 Eb   |
| Approval Marks          | CE marking CB Certificate KEMA Keur<br>certificate RoHS Compliant |
| Hum And Noise Level     | < 30 dB(A)  |

### Product Data

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Full product code               | 871829177058900                   |
| Order product name              | HF-E II 236 TL-D 220-240V 50/60Hz |
| EAN/UPC - Product               | 8718291770589                     |
| Order code                      | 913713041166                      |
| Numerator - Quantity Per Pack   | 1                                 |
| Numerator - Packs per outer box | 20                                |
| Material Nr. (12NC)             | 913713041166                      |
| Net Weight (Piece)              | 0.155 kg                          |

## Dimensional drawing



HF-E 236 TL-D II 220-240V 50/60Hz

| Product                              | D1     | C1      | A1       | A2       | B1      |
|--------------------------------------|--------|---------|----------|----------|---------|
| HF-E II 236 TL-D 220-240V<br>50/60Hz | 4.2 mm | 28.7 mm | 211.0 mm | 198.0 mm | 39.6 mm |

