

## PRODUCT DATASHEET

### PTo 250/220...240 3DIM

POWERTRONIC® OUTDOOR PTo | ECG for HID lamps, for outdoor lighting



#### Areas of application

- Suitable for luminaires of protection classes I and II
- Suitable for outdoor applications in luminaires with IP > 54

#### Product benefits

- Energy savings up to 30 % (compared to CCG operation) thanks to 3DIM (except PTo 35)
- High surge protection: up to 3 kV (L-N) / 4 kV (L/N-PE)
- Automatic safety shutdown of lamps in the event of a defect or at end of life (EoL)
- Excellent thermal behavior for very high limit temperatures  $t_c$  and  $t_a$

#### Product features

- 3DIM functionality (StepDIM/AstroDIM/DALI)
- Energy Efficiency Index EEI: A2
- Lightning protection: up to 10 kV
- Supply voltage: 220...240 V
- Line frequency: 50...60 Hz

- Line harmonics according to EN 61000-3-2
- Immunity according to EN 61547
- RI suppression: to EN 55015
- Safety: to EN 61347-2-12
- Luminous flux factor 1 compared with CCG operation
- Not suitable for DC operation

TECHNICAL DATA

Electrical data

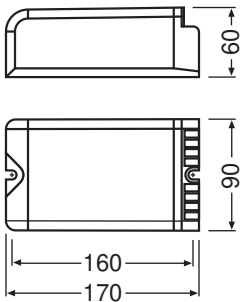
|                                          |                    |
|------------------------------------------|--------------------|
| Nominal wattage                          | 270.00 W           |
| Nominal voltage                          | 220...240 V        |
| Nominal output voltage                   | 250 V              |
| Input voltage AC                         | 198...264 V        |
| U-OUT (working voltage)                  | 250 V              |
| Type of current                          | AC                 |
| Inrush current                           | 4 A <sup>1)</sup>  |
| Mains frequency                          | 50/60 Hz           |
| Power factor λ                           | 0.95 <sup>2)</sup> |
| ECG efficiency                           | 93 %               |
| Max. ECG no. on circuit breaker 10 A (B) | 7 <sup>3)</sup>    |
| Max. ECG no. on circuit breaker 16 A (B) | 11 <sup>3)</sup>   |
| Surge capability (L/N-Ground)            | 4 kV               |
| Surge capability (L-N)                   | 3 kV               |
| Operating frequency                      | 0.200...0.240 kHz  |
| Power loss in stand-by mode              | < 0.5 W            |

1)  $t_{width} = 6\text{ ms}$  (measured at 50 %  $I_{peak}$ )

2) Minimum

3) Type C

Dimensions & Weight



|        |           |
|--------|-----------|
| Length | 170.00 mm |
|--------|-----------|

|                                      |                           |
|--------------------------------------|---------------------------|
| Mounting hole spacing, length        | 160,0 mm                  |
| Width                                | 90.00 mm                  |
| Height                               | 60.00 mm                  |
| Cable cross-section, input side      | 1,0...2,5 mm <sup>2</sup> |
| Cable cross-section, output side     | 1,0...2,5 mm <sup>2</sup> |
| Wire preparation length, input side  | 10...11 mm                |
| Wire preparation length, output side | 10...11 mm                |
| Product weight                       | 1375.00 g                 |

### Colors & materials

|                 |         |
|-----------------|---------|
| Product color   | Black   |
| Casing material | Plastic |
| Body material   | Plastic |

### Temperatures & operating conditions

|                                          |                        |
|------------------------------------------|------------------------|
| Ambient temperature range                | -25...+55 °C           |
| Maximum temperature at tc test point     | 85 °C                  |
| Max.housing temperature in case of fault | 110 °C                 |
| Permitted rel. humidity during operation | 5...85 % <sup>1)</sup> |

<sup>1)</sup> Maximum 56 days/year at 85 %

### Lifespan

|              |                       |
|--------------|-----------------------|
| ECG lifetime | 60000 h <sup>1)</sup> |
|--------------|-----------------------|

<sup>1)</sup> At T<sub>case</sub> = 80°C at T<sub>c</sub> point / 10% failure rate

### Additional product data

|              |                   |
|--------------|-------------------|
| Encapsulated | Yes <sup>1)</sup> |
|--------------|-------------------|

<sup>1)</sup> PCB fully encapsulated + dust proof plastic housing

### Capabilities

|                                        |                                                             |
|----------------------------------------|-------------------------------------------------------------|
| Dimmable                               | Yes                                                         |
| Dimming interface                      | DALI / StepDIM / AstroDIM                                   |
| Dimming range                          | 60...100 %                                                  |
| Overheating protection                 | Power reduction and switch off at T > 85 °C at the tc point |
| Max. cable length to lamp/LED module   | 1,5 m                                                       |
| Suitable for fixtures with prot. class | I / II                                                      |

|                                 |    |
|---------------------------------|----|
| Suitable for emergency lighting | No |
|---------------------------------|----|

### Certificates & Standards

|                           |                                                                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approval marks – approval | ENEC 10 / VDE / VDE-EMC / EAC / C-Tick                                                                                                                        |
| Standards                 | Acc. to EN 61347-2-12 / Acc. to EN 55015 / Acc. to EN 61000-3-2 /<br>Acc. to EN 61547 / Acc. to EN 62386-101 / Acc. to EN 62386-102 / Acc.<br>to EN 62386-103 |
| Protection class          | I                                                                                                                                                             |
| Type of protection        | IP20                                                                                                                                                          |
| Energy efficiency class   | A2                                                                                                                                                            |
| EEL – Energy Label        | A2                                                                                                                                                            |

### LOGISTICAL DATA

|                              |              |
|------------------------------|--------------|
| Temperature range at storage | -40...+85 °C |
|------------------------------|--------------|

### Energy labelling regulation data acc EU 2019/2015

|                                 |          |
|---------------------------------|----------|
| Networked standby power for CLS | < 0.50 W |
|---------------------------------|----------|

### Safety advice

Ballast losses and lamp heat radiation can lead to heat accumulation in a completely closed case. Therefore it is necessary to ensure that the temperature at the measuring point t of the ECG does not exceed the maximum value.

#### Attention!

For safety reasons disconnect the device before replacing the lamp!

### ADDITIONAL PRODUCT INFORMATION

- An external relay connected in front of the SD port is necessary in StepDIM installations. The relay needs to be selected in a way that it is not switched or hold by the occurring leakage currents in the installation.

### DOWNLOAD DATA

| Documents and certificates                                                         |                               |
|------------------------------------------------------------------------------------|-------------------------------|
|  | User instruction              |
|  | Declarations Of Conformity CE |
|  | Certificates                  |

| CAD/BIM files                                                                    |                 |
|----------------------------------------------------------------------------------|-----------------|
|  | CAD data 3D PDF |

LOGISTICAL DATA

| Product code  | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume                |
|---------------|------------------------------|--------------------------------------|--------------|-----------------------|
| 4008321863669 | Unpacked<br>1                |                                      | 1375.00 g    |                       |
| 4008321863676 | Shipping box<br>10           | 403 mm x 265 mm x 205 mm             | 14455.00 g   | 21.89 dm <sup>3</sup> |

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

DISCLAIMER

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.