

## POWERTRONIC OUTDOOR PTo

ECG for HID lamps, for outdoor lighting



### Product family features

- 3DIM functionality (StepDIM/AstroDIM/DALI)
- Energy Efficiency Index EEL: 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

### Product family 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  $t_a$

### Areas of application

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

Product family datasheet

Technical data

|                       | Electrical data |                      |                      |                  |                     |
|-----------------------|-----------------|----------------------|----------------------|------------------|---------------------|
| Product description   | Lamp wattage    | Maximum output power | Line current         | Ignition voltage | Operating frequency |
| PTo 50/220...240 3DIM | 50 W            | 50 W                 | 0.26 A <sup>1)</sup> | 4.5 kVp          | 0.165 kHz           |

| Product description   | System wattage | Efficiency in full-load | Input voltage AC | Nominal voltage | Nominal input voltage (SD port) |
|-----------------------|----------------|-------------------------|------------------|-----------------|---------------------------------|
| PTo 50/220...240 3DIM | 5500 W         | 91 %                    | 198...264 V      | 220...240 V     | 220...240 V <sup>2)</sup>       |

| Product description   | Mains frequency | Power factor $\lambda$ | Inrush current     | Max. ECG no. on circuit breaker 10 A (B) | Max. ECG no. on circuit breaker 16 A (B) | U-OUT (working voltage) |
|-----------------------|-----------------|------------------------|--------------------|------------------------------------------|------------------------------------------|-------------------------|
| PTo 50/220...240 3DIM | 50...60 Hz      | 095 <sup>3)</sup>      | 35 A <sup>4)</sup> | 7 <sup>5)</sup>                          | 13 <sup>5)</sup>                         | 250 V                   |

|                       | Dimensions & weight                    |                                          |                                   |         |        |        |                               |
|-----------------------|----------------------------------------|------------------------------------------|-----------------------------------|---------|--------|--------|-------------------------------|
| Product description   | Max. working voltage between LH and LL | Max. working voltage betw. LL/LH & earth | Max. capacitance of wire ECG/lamp | Length  | Width  | Height | Mounting hole spacing, length |
| PTo 50/220...240 3DIM | 250 V                                  | 250 V                                    | 120 pF                            | 1330 mm | 770 mm | 480 mm | 123.0 mm                      |

| Product description   | Cable cross-section, input side | Cable cross-section, output side | Wire preparation length, input side | Wire preparation length, output side | Product weight |
|-----------------------|---------------------------------|----------------------------------|-------------------------------------|--------------------------------------|----------------|
| PTo 50/220...240 3DIM | 0.5...2.5 mm <sup>2</sup>       | 0.5...2.5 mm <sup>2</sup>        | 10...11 mm                          | 10...11 mm                           | 73000 g        |

|                       | Colors & materials | Temperatures & operating conditions |                                      | Lifespan              | Addition al product data |
|-----------------------|--------------------|-------------------------------------|--------------------------------------|-----------------------|--------------------------|
| Product description   | Casing material    | Ambient temperature range           | Maximum temperature at tc test point | ECG lifetime          | Design / version         |
| PTo 50/220...240 3DIM | Plastic            | -25...+55 °C                        | 75 °C                                | 60000 h <sup>6)</sup> | ECG outdoor              |

Product family datasheet

| Product description   | Capabilities              |                                      |                                                             |                |
|-----------------------|---------------------------|--------------------------------------|-------------------------------------------------------------|----------------|
|                       | Dimming interface         | Max. cable length to lamp/LED module | Overheating protection                                      | ECG reset time |
| PTo 50/220...240 3DIM | DALI / StepDIM / AstroDIM | 1.5 m                                | Power reduction and switch off at T > 75 °C at the tc point | > 0.5 s        |

| Product description   | Dimmable | Restriction on ignition time | Suitable for fixtures with prot. class | Lightning stroke protection                                                         | Certificates & standards               |
|-----------------------|----------|------------------------------|----------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------|
|                       |          |                              |                                        |                                                                                     | Approval marks – approval              |
| PTo 50/220...240 3DIM | Yes      | 20 min                       | I / II                                 | With connected equipotentiality-terminal 10 surges with 10 kV acc. to IEC 61000-4-5 | ENEC 10 / VDE / VDE-EMC / EAC / C-Tick |

| Product description   | Type of protection | EEI – Energy Label | Standards                                                                                                                                   | Logistical data |
|-----------------------|--------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
|                       |                    |                    |                                                                                                                                             | Commodity code  |
| PTo 50/220...240 3DIM | IP20               | A2                 | Acc. to EN 61347-2-12/Acc. to EN 55015/Acc. to EN 61000-3-2/Acc. to EN 61547/Acc. to EN 62386-101/Acc. to EN 62386-102/Acc. to EN 62386-103 | 85041080900     |

| Product description   | Environmental information<br>Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACH) |                            |                            |                        |
|-----------------------|----------------------------------------------------------------------------------------------------|----------------------------|----------------------------|------------------------|
|                       | Date of Declaration                                                                                | Primary Article Identifier | Candidate List Substance 1 | CAS No. of substance 1 |
| PTo 50/220...240 3DIM | 07-07-2023                                                                                         | 4008321956347              | Lead                       | 7439-92-1              |

| Product description   | Safe Use Instruction                                                                               | Declaration No. in SCIP database    |
|-----------------------|----------------------------------------------------------------------------------------------------|-------------------------------------|
| PTo 50/220...240 3DIM | The identification of the Candidate List substance is sufficient to allow safe use of the article. | 7fefa735-72b5-403f-ae1-0c1d44848b0d |

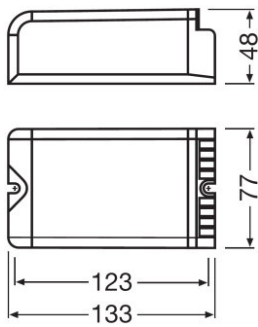
1) At 230 V<sub>AC</sub>  
2) In relation to L/N  
3) Minimum  
4) t<sub>width</sub> = 350 μs (measured at 50 % I<sub>peak</sub>)

Product family datasheet

5) Type B

6) At maximum  $T_c$  / 8% failure rate

## Product family datasheet



511949\_PTo 35 & PTo 503DIM, PTo 703DIM

### 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!

### Application advice

For more detailed application information and graphics please see product datasheet.

### 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.
- In order to achieve good radio interference suppression:1. Keep the cable between ECG and lamp as short as possible.2. The single lamp wires must be routed as close as possible to each other.

### Sales and Technical Support

Sales and Technical Support [www.osram.com](http://www.osram.com)

### Download Data

File

Product family datasheet

|                                                                                   |                                                                    |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------|
|  | User instruction<br>POWERTRONIC PTo                                |
|  | Tender documents<br>339884_Tender Document for POWERTRONIC EVG.eng |
|  | Certificates<br>554891_EAC PT family                               |
|  | Certificates<br>PTO PTi ENEC 40035813 020623                       |
|  | Declarations of conformity<br>PT_FIT PTi PTo CE 3363432 020823     |
|  | Declarations of conformity<br>Pti Pto PT-FIT EMC 280722            |
|  | Operating instructions<br>590728_EAC-PTO                           |
|  | CAD data 3-dim<br>325151_PTo70 3DIM PTo50 3DIM                     |
|  | CAD data 3-dim<br>325152_PTo70 3DIM PTo50 3DIM                     |
|  | CAD data 3-dim<br>325153_PTo70 3DIM PTo50 3DIM                     |

Ecodesign regulation information:

Separate control gear and light sources must be disposed of at certified disposal companies in accordance with Directive 2012/19/EU (WEEE) in the EU and with Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 in the UK. For this purpose, collection points for recycling centres and take-back systems (CRSO) are available from retailers or private disposal companies, which accept separate control gear and light sources free of charge. In this way, raw materials are conserved and materials are recycled.

Logistical Data

| Product code  | Product description   | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Volume                | Gross weight |
|---------------|-----------------------|------------------------------|--------------------------------------|-----------------------|--------------|
| 4008321956347 | PTo 50/220...240 3DIM | Shipping carton box<br>20    | 483 mm x 285 mm x 167 mm             | 22.99 dm <sup>3</sup> | 15575.00 g   |

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.