

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 ¹⁾
Mains frequency	50/60 Hz
Power factor λ	0.95 ²⁾
ECG efficiency	93 %
Max. ECG no. on circuit breaker 10 A (B)	7 ³⁾
Max. ECG no. on circuit breaker 16 A (B)	11 ³⁾
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 ⁴⁾

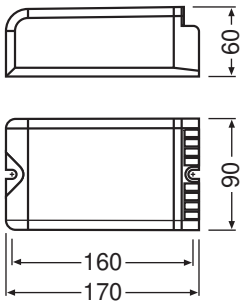
1) $t_{width} = 6\text{ ms}$ (measured at 50 % I_{peak})

2) Minimum

3) Type C

4) Only in DALI operation mode

Dimensions & Weight



Length	170.00 mm
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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 ²
Cable cross-section, output side	1,0...2,5 mm ²
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 % ¹⁾

¹⁾ Maximum 56 days/year at 85 %

Lifespan

ECG lifetime	60000 h ¹⁾
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¹⁾ At T_{case} = 80°C at T_c point / 10% failure rate

Additional product data

Encapsulated	Yes ¹⁾
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¹⁾ 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
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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 / Acc. to EN 61547 / Acc. to EN 62386-101 / Acc. to EN 62386-102 / Acc. 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
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Energy labelling regulation data acc EU 2019/2015

Networked standby power for CLS	< 0.50 W
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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	Document name
 User instruction / safety instructions	334206_Technical guide - POWERTRONIC for HID-lamps (GB)
 User instruction / safety instructions	590728_EAC-PTO
 Declarations of conformity	339884_Tender Document for POWERTRONIC EVG.eng

Documents and certificates		Document name
	Declarations of conformity	VD EMC Certificate 40025469
	Declarations of conformity	EU Declaration of Conformity 3363432
	Certificates	554891_EAC PT family
	Certificates	VDE ENEC Certificate 40035813
	EU Data Act	Connected Products and Related Software and Services
CAD/BIM files		Document name
	CAD data 3D PDF	490066_PTo 250 3DIM

LOGISTICAL DATA

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

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.