

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

Product description	Electrical data				
	Lamp wattage	Maximum output power	Line current	Ignition voltage	Operating frequency
PTo 50/220...240 3DIM	50 W	50 W	0.26 A ¹⁾	4.5 kVp	0.165 kHz
PTo 100/220...240 3DIM	97 W	97 W	0.48 A ¹⁾	4.5 kVp	0.165 kHz
PTo 150/220...240 3DIM	147 W	147 W	0.71 A ¹⁾	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 ²⁾
PTo 100/220...240 3DIM	106.00 W	91 %	198...264 V	220...240 V	220...240 V ²⁾
PTo 150/220...240 3DIM	16000 W	91 %	198...264 V	220...240 V	220...240 V ²⁾

Product description	Mains frequency	Power factor λ	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	0.95 ³⁾	35 A ⁴⁾	7 ⁵⁾	13 ⁵⁾	250 V
PTo 100/220...240 3DIM	50...60 Hz	0.95 ³⁾	60 A ⁷⁾	4 ⁵⁾	7 ⁵⁾	250 V
PTo 150/220...240 3DIM	50...60 Hz	0.95 ³⁾	70 A ⁷⁾	4 ⁵⁾	7 ⁵⁾	250 V

Product description	Max. working voltage between LH and LL	Max. working voltage betw. LL/LH & earth	Max. capacitance of wire ECG/lamp	Dimensions & weight			
				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
PTo 100/220...240 3DIM	250 V	250 V	120 pF	158.0 mm	94.0 mm	42.5 mm	148.0 mm
PTo 150/220...240 3DIM	250 V	250 V	120 pF	1580 mm	940 mm	425 mm	148.0 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 ²	0.5...2.5 mm ²	10...11 mm	10...11 mm	73000 g
PTo 100/220...240 3DIM	0.5...2.5 mm ²	0.5...2.5 mm ²	10...11 mm	10...11 mm	900.00 g
PTo 150/220...240 3DIM	0.5...2.5 mm ²	0.5...2.5 mm ²	10...11 mm	10...11 mm	90000 g

Product family datasheet

	Colors & materials	Temperatures & operating conditions		Lifespan	Additional 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 ⁶⁾	ECG outdoor
PTo 100/220...240 3DIM	Plastic	-25...+55 °C	75 °C	60000 h ⁶⁾	ECG outdoor
PTo 150/220...240 3DIM	Plastic	-25...+55 °C	85 °C	60000 h ⁸⁾	ECG outdoor

	Capabilities			
Product description	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
PTo 100/220...240 3DIM	DALI / StepDIM / AstroDIM	1.5 m	Power reduction and switch off at T > 75 °C at the tc point	> 0.5 s
PTo 150/220...240 3DIM	DALI / StepDIM / AstroDIM	1.5 m	Power reduction and switch off at T > 85 °C at the tc point	> 0.5 s

					Certificates & standards
Product description	Dimmable	Restriction on ignition time	Suitable for fixtures with prot. class	Lightning stroke protection	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
PTo 100/220...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
PTo 150/220...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 family datasheet

				Logistical data
Product description	Type of protection	EEL – Energy Label	Standards	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
PTo 100/220...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
PTo 150/220...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

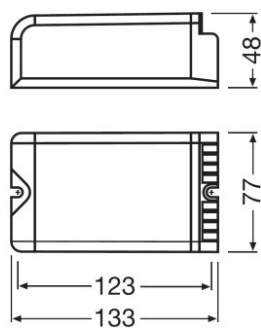
Environmental information Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACH)				
Product description	Date of Declaration	Primary Article Identifier	Candidate List Substance 1	CAS No. of substance 1
PTo 50/220...240 3DIM	07-07-2023	4008321956347	Lead	7439-92-1
PTo 100/220...240 3DIM	26-05-2023	4008321956361	Lead	7439-92-1
PTo 150/220...240 3DIM	26-05-2023	4008321956385	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
PTo 100/220...240 3DIM	The identification of the Candidate List substance is sufficient to allow safe use of the article.	10f1e037-01ef-4172-9116-4160239b4dd0
PTo 150/220...240 3DIM	The identification of the Candidate List substance is sufficient to allow safe use of the article.	eb7b8c7c-7483-4cb5-b5a0-3efaac249b6d

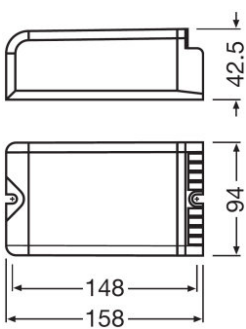
Product family datasheet

- 1) At 230 V_{AC}
- 2) In relation to L/N
- 3) Minimum
- 4) $t_{\text{width}} = 350 \mu\text{s}$ (measured at 50 % I_{peak})
- 5) Type B
- 6) At maximum T_C / 8% failure rate
- 7) $t_{\text{width}} = 250 \mu\text{s}$ (measured at 50 % I_{peak})
- 8) At T_{case} = 80°C at T_C point / 10% failure rate

Product family datasheet



511949_PTo 35 & PTo 503DIM, PTo 703DIM



511950_PTo 100, PTo 150 3DIM

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

Download Data

File

Product family datasheet

	User instruction POWERTRONIC PTo
	Tender documents 339884_Tender Document for POWERTRONIC EVG.eng
	Certificates 554891_EAC PT family
	Certificates PTO PTi ENEC 40035813 020623
	Declarations of conformity PT_FIT PTi PTo CE 3363432 020823
	Declarations of conformity Pti Pto PT-FIT EMC 280722
	Operating instructions 590728_EAC-PTO
	CAD data 3-dim 325151_PTo70 3DIM PTo50 3DIM
	CAD data 3-dim 325152_PTo70 3DIM PTo50 3DIM
	CAD data 3-dim 325153_PTo70 3DIM PTo50 3DIM
	CAD data 3-dim 341253_CAD data 3-dim – PTo100_150 IGS
	CAD data 3-dim 341254_CAD data 3-dim – PTo100_150.STEP

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 20	483 mm x 285 mm x 167 mm	22.99 dm ³	15575.00 g
4008321956361	PTo 100/220...240 3DIM	Shipping carton box 10	313 mm x 273 mm x 193 mm	16.49 dm ³	9756.00 g
4008321956385	PTo 150/220...240 3DIM	Shipping carton box 10	313 mm x 273 mm x 193 mm	16.49 dm ³	10450.00 g

Product family datasheet

Logistical Data

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.