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## OT 180/120...277/700 P5

OPTOTRONIC | Constant current ECG for LED modules



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### Areas of application

- Street and urban lighting
- Industry
- Suitable for luminaires of protection class I

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### Product benefits

- High surge protection: up to 6 kV (L-N) / 6 kV (L/N-PE)
- High efficiency and reliability
- Great flexibility due to wide operating temperature range of -40...50 °C or 55 °C
- High IP protection (IP65)

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### Product features

- Available with different wattage: 50 W, 100 W, 180 W, 250 W
- Input voltage: 120...277 V
- Output current: 700 mA
- Overtemperature protection

## Technical data

### Electrical data

<b>Nominal voltage</b>	120...277 V
<b>Input voltage AC</b>	108...305 V <sup>1)</sup>
<b>Nominal current</b>	0.86 A <sup>2)</sup>
<b>Mains frequency</b>	50...60 Hz
<b>Power factor <math>\lambda</math></b>	0.95/0.90 <sup>3)</sup>
<b>Total harmonic distortion</b>	10 %
<b>Device power loss</b>	18 W <sup>4)</sup>
<b>Inrush current</b>	110 A <sup>5)</sup>
<b>Max. ECG no. on circuit breaker 10 A (B)</b>	4 <sup>6)</sup>
<b>Max. ECG no. on circuit breaker 16 A (B)</b>	7 <sup>6)</sup>
<b>Max. ECG no. on circuit breaker 25 A (B)</b>	12 <sup>6)</sup>
<b>Surge capability (L/N-Ground)</b>	6 kV
<b>Surge capability (L-N)</b>	6 kV <sup>7)</sup>
<b>Nominal output power</b>	180 W <sup>8)</sup>
<b>ECG efficiency</b>	90 % <sup>9)</sup>
<b>Nominal output voltage</b>	115...257 V
<b>U-OUT (working voltage)</b>	290 V
<b>Nominal output current</b>	700 mA <sup>10)</sup>
<b>Output current tolerance</b>	±5 %
<b>Galvanic isolation</b>	basic

1) Permitted voltage range

2) At 230 V/1.67 A for 120 V<sub>AC</sub>

3) Minimum/Full load at 230 V/Half load at 230 V

4) Maximum / At 230 V<sub>AC</sub>

5)  $t_{width} = 200 \mu s$  (measured at 50 %  $I_{peak}$ )

6) Type B

7) @ 2 Ohm, acc. to EN61547

8) Partial Load 80...180 W

9) At full load and 230 V

10) ±5%

## Dimensions & weight



<b>Length</b>	251.0 mm
<b>Width</b>	60.0 mm
<b>Height</b>	39.0 mm
<b>Mounting hole spacing, length</b>	236.3 mm
<b>Product weight</b>	1000.00 g
<b>Cable cross-section, input side</b>	0.75 mm <sup>2</sup>
<b>Cable cross-section, output side</b>	0.5 mm <sup>2</sup>
<b>Wire preparation length, input side</b>	10 mm
<b>Cable/wire length, output side</b>	355 mm <sup>1)</sup>
<b>Cable/wire length, input side</b>	355 mm <sup>1)</sup>

<sup>1)</sup> ± 30 mm

## Temperatures & operating conditions

<b>Ambient temperature range</b>	-40...+55 °C
<b>Maximum temperature at tc test point</b>	90 °C <sup>1)</sup>
<b>Max.housing temperature in case of fault</b>	120 °C
<b>Permitted rel. humidity during operation</b>	5...85 %

<sup>1)</sup> Maximum at the T<sub>C</sub>-point

## Lifespan

<b>ECG lifetime</b>	80000 h <sup>1)</sup>
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<sup>1)</sup> At T<sub>case</sub> = 80°C at T<sub>C</sub> point / 10% failure rate

# Product datasheet

## Expected Lifetime

Product name				
OT 180/120...277/700 P5	ECG ambient temperature [ta]	55	50	45
	Temperature at tc-point [°C]	90	85	80
	Lifetime [h]	50000 <sup>1)</sup>	65000 <sup>1)</sup>	80000 <sup>1)</sup>

<sup>1)</sup> Max. 10% failure rate at tc max and input voltage 230 V<sub>AC</sub>

## Capabilities

<b>Dimmable</b>	No
<b>Suitable for fixtures with prot. class</b>	I
<b>NTC input</b>	No
<b>Overheating protection</b>	Automatic reversible
<b>Overload protection</b>	Automatic reversible
<b>Short-circuit protection</b>	Automatic reversible
<b>No-load proof</b>	Yes
<b>Max. cable length to lamp/LED module</b>	10 m

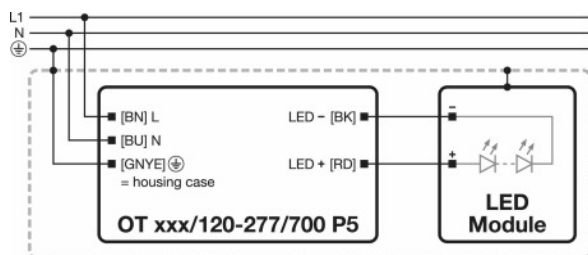
## Certificates & standards

<b>Type of protection</b>	IP65
<b>Standards</b>	Acc. to IEC 61347-1/Acc. to IEC 61347-2-13/Acc. to IEC 62384/Acc. to CISPR 15/Acc. to IEC 61547/Acc. to FCC 47 part 15 class B/Acc. to IEC 61000-3-2/Acc. to IEC 61000-3-3
<b>Approval marks – approval</b>	CE / CCC

## Logistical data

<b>Temperature range at storage</b>	-25...80 °C
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## Wiring Diagram





Wiring diagram

### Additional product information

- The driver withstands an input voltage of up to 350 Vac for a maximum of two hours. Shut down of output load might occur in case the supply voltage exceeds the declared input voltage range.
- The driver may increase the output current up to a maximum of 1.5 A in case the input voltage of the load is lower than the allowed minimum output voltage until the short circuit is removed or the correct load is connected. Make sure the system is safely operated, if this event might occur.
- In case the input voltage of the load exceeds the output voltage range of the driver, it automatically reduces the output current to keep the output voltage controlled to the maximum allowed output voltage.
- The driver automatically reduces the output current in case the maximum allowed output power is exceeded.
- Hot-plug of the load or external switching on the secondary side is not allowed.
- The protective earth (GNYE/PE wire, housing) has to be connected to the heat sink of the LED module to improve the capability of the system to withstand a surge and EMI in critical luminaires.
- Time to reach the set output current upon start-up is less than 2 s.
- The driver is intended for built-in use. The luminaire manufacturer is responsible to prevent direct exposure for example to sunlight, water, snow, ice.

### Download Data

File
 Certificates CB Certificate OT100-180-250P5
 Declarations of conformity CE Conformity OT xx700 P5

## Product datasheet

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### Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4052899259027	OT 180/120...277/700 P5	Shipping carton box 10	491 mm x 330 mm x 140 mm	22.68 dm <sup>3</sup>	11187.00 g

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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.

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### Disclaimer

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