

OT 180/120...277/700 P5

OPTOTRONIC Outdoor – Non dimmable (SELV) | Constant current LED driver



Product family features

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

Product family benefits

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

Areas of application

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



Technical data

Electrical data

| | |
|--|---------------------------|
| Nominal voltage | 120...277 V |
| Input voltage AC | 108...305 V ¹⁾ |
| Nominal current | 0.86 A ²⁾ |
| Mains frequency | 50...60 Hz |
| Power factor λ | 0.95/0.90 ³⁾ |
| Total harmonic distortion | 10 % ⁴⁾ |
| Device power loss | 18 W ⁵⁾ |
| Inrush current | 110 A ⁶⁾ |
| Max. ECG no. on circuit breaker 10 A (B) | 4 ⁷⁾ |
| Max. ECG no. on circuit breaker 16 A (B) | 7 ⁷⁾ |
| Max. ECG no. on circuit breaker 25 A (B) | 12 ⁷⁾ |
| Surge capability (L/N-Ground) | 6 kV |
| Surge capability (L-N) | 6 kV ⁸⁾ |
| Nominal output power | 180 W ⁹⁾ |
| Maximum output power | 180 W |
| Efficiency in full-load | 90 % ¹⁰⁾ |
| Nominal output voltage | 115...257 V |
| U-OUT (working voltage) | 290 V |
| Nominal output current | 700 mA ¹¹⁾ |
| Output current tolerance | ±5 % |
| Galvanic isolation | basic |

1) Permitted voltage range

2) At 230 V/1.67 A for 120 V_{AC}

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

4) Max. output power at 230 V_{AC}

5) Maximum / At 230 V_{AC}

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

7) Type B

8) @ 2 Ohm, acc. to EN61547

9) Partial Load 80...180 W

10) at 230 V, 50 Hz

11) ±5%

Dimensions & weight



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

¹⁾ ± 30 mm

Temperatures & operating conditions

| | |
|---|---------------------|
| Ambient temperature range | -40...+55 °C |
| Temperature range at storage | -25...80 °C |
| Maximum temperature at tc test point | 90 °C ¹⁾ |
| Max.housing temperature in case of fault | 120 °C |

¹⁾ Maximum at the Tc-point

Lifespan

| | |
|---------------------|-----------------------|
| ECG lifetime | 80000 h ¹⁾ |
|---------------------|-----------------------|

¹⁾ At $T_{case} = 80^{\circ}C$ at T_c 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 ¹⁾ | 65000 ¹⁾ | 80000 ¹⁾ |

¹⁾ Max. 10% failure rate at tc max and input voltage 230 V_{AC}

Capabilities

| | |
|--|----|
| Dimmable | No |
| Suitable for fixtures with prot. class | I |
| Intended for no-load operation | No |
| Number of channels | 1 |

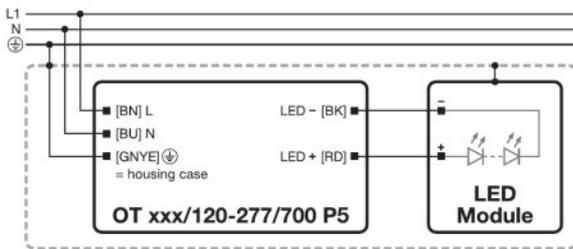
Certificates & standards

| | |
|---------------------------|--|
| Type of protection | IP65 |
| Standards | 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 |
| Approval marks – approval | CE / CQC |

Logistical data

| | |
|----------------|--------------|
| Commodity code | 850440829000 |
|----------------|--------------|

Wiring Diagram



544450_Wiring Diagramm OT xxx120-277700 P5

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 | |
|---|---|
|  | Brochures Technical Application Guide - 4DIMLT2 G2 CE LED drivers (EN) |

Product datasheet

| | |
|---|--|
|  | Certificates 664067_CB Certificate OT100-180-250P5 |
|  | Declarations of conformity OT P5 WP CE 3218662 060921 |
|  | CAD data 3-dim 730732_CAD data OT 180 |

Ecodesign regulation information:

Intended for use with LED modules.

The forward voltage of the LED light source shall be within the defined operating window of the control gear in all operating conditions including dimming if applicable.

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 |
|---------------|-------------------------|------------------------------|--------------------------------------|-----------------------|--------------|
| 4052899259027 | OT 180/120...277/700 P5 | Shipping carton box 10 | 491 mm x 330 mm x 140 mm | 22.68 dm ³ | 11087.00 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.