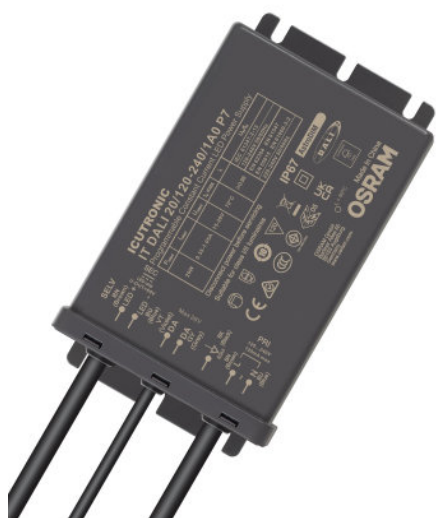


IT DALI 20/120...240/1A0 P7

ICUTRONIC - DALI (AstroDIM) IP67 | Constant current LED drivers



Product family features

- Available with different wattage: 20 W, 40 W, 75 W, 110 W, 150 W, 200 W, 240 W
- AstroDim functionality
- Constant Lumen Output (CLO)
- DALI-2 certified (Part 251, 252, 253)
- DALI dimming (min.10%)
- Output current range 350...1050 mA
- Supply voltage: 120...240 V

Product family benefits

- Versatile DALI driver due to flexible output characteristic
- Fully programmable via T4T software (DALI / AstroDIM / Constant Lumen)
- Lifetime: up to 100,000 h (depending on T_c temperature, max. 10 % failure rate)
- High efficiency
- High surge protection: up to 10 kV
- IP rating: IP67 (Independent installation)
- High efficiency and reliability
- 5 years guarantee

Areas of application

- Industry lighting
- Street and urban lighting
- Suitable for use in outdoor luminaires of protection class I and II



Technical data

Electrical data

| | |
|--|-----------------------------|
| Nominal voltage | 120...240 V |
| Input voltage AC | 120...264 V |
| Nominal current | 011 A ¹⁾ |
| Mains frequency | 50/60 Hz |
| Power factor λ | 095 ²⁾ |
| Total harmonic distortion | < 10 % ³⁾ |
| Device power loss | 4.0 W ⁴⁾ |
| Networked standby power | <0.50 W ⁵⁾ |
| Inrush current | 30 A ⁶⁾ |
| Max. ECG no. on circuit breaker 10 A (B) | 14 ⁷⁾ |
| Max. ECG no. on circuit breaker 16 A (B) | 22 ⁷⁾ |
| Max. ECG no. on circuit breaker 25 A (B) | 34 ⁷⁾ |
| Surge capability (L/N-Ground) | 10 kV ⁸⁾ |
| Surge capability (L-N) | 6 kV |
| Nominal output power | 20 W |
| Maximum output power | 20 W |
| Efficiency in full-load | 86 % ⁵⁾ |
| Nominal output current | 350...1050 mA ⁹⁾ |
| Default output current | 700 mA |
| Output current tolerance | ±5 % |
| Output ripple current (100 Hz) | +/- 5 % ¹⁰⁾ |
| Output PSTLM | ≤1 |
| Output SVM | ≤0.4 |
| Minimum output current | 70 mA ¹¹⁾ |
| Galvanic isolation | SELV |
| Nominal output voltage | 15...29 V |
| U-OUT (working voltage) | 60 V |
| Max. no. of ECGs on 16A MCB with EBN-OS | 45 |

¹⁾ Vin 230v 50Hz

²⁾ Full load at 230 V/50 Hz

³⁾ At full load, 230 V, 50 Hz / see graphs

⁴⁾ At Full load, 230 V, 50 Hz

⁵⁾ at 230 V, 50 Hz

⁶⁾ Max, th = 205 µs @ 50 % Ipk

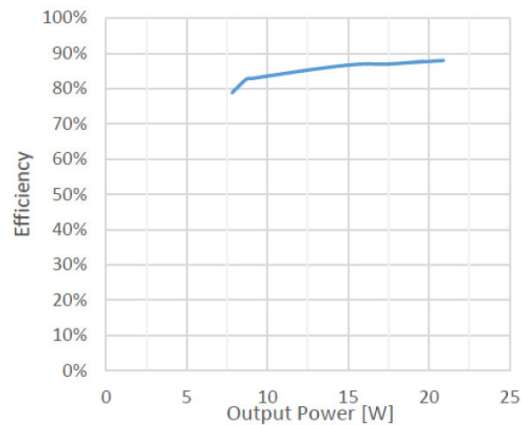
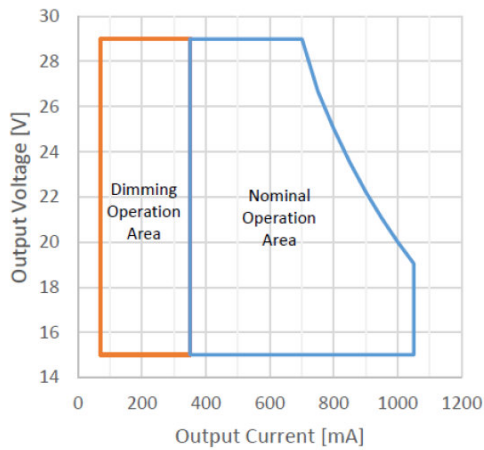
⁷⁾ Type B

⁸⁾ L - N acc to EN 61547 (>15 pulses) / L/N - PE acc to EN 61547 (>15 pulses)

⁹⁾ Default 700 mA; 200...1050 mA adjustable

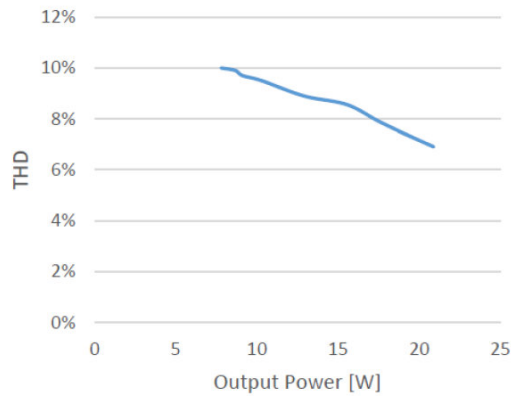
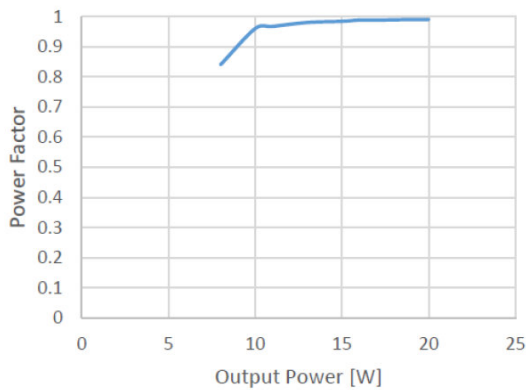
¹⁰⁾ Ripple / average @ 100 Hz

11) Physical Minimum Dimming Current



IT DALI 20 120-240 1A0 P7 Operating Window

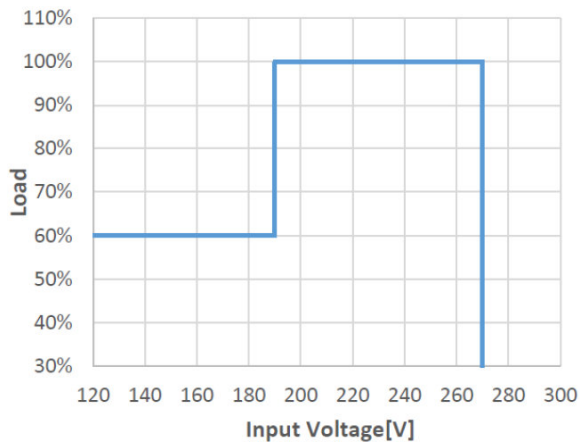
IT DALI 20 120-240 1A0 P7 Typical Efficiency vs. Load



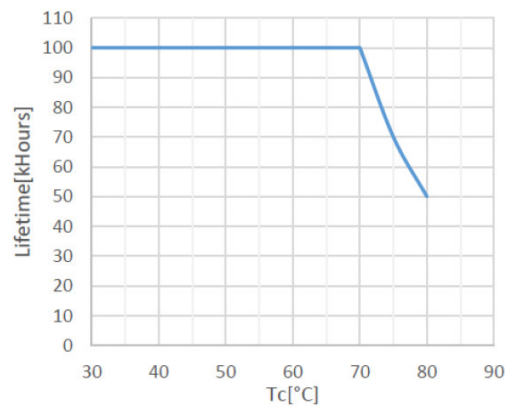
IT DALI 20 120-240 1A0 P7 Typical Power Factor vs. Load

IT DALI 20 120-240 1A0 P7 Typical THD vs Load

Product datasheet

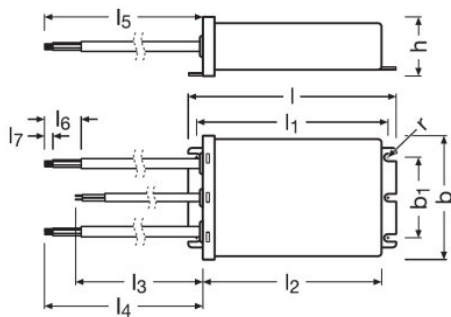


IT DALI 120-240 1A0 P7 Typical Input Voltage vs Load



IT DALI 20 120-240 1A0 P7 Lifetime vs Case Temp

Dimensions & weight



| | |
|-------------------------------------|---------------------|
| Length | 1380 mm |
| Width | 825 mm |
| Height | 380 mm |
| Mounting hole spacing, length | 126.0 mm |
| Mounting hole spacing, width | 52.0 mm |
| Product weight | 54000 g |
| Cable cross-section, input side | 1.0 mm ² |
| Cable cross-section, output side | 1.0 mm ² |
| Wire preparation length, input side | 10 mm |

Temperatures & operating conditions

| | |
|--|------------------------|
| Ambient temperature range | -40...+70 °C |
| Temperature range at storage | -40...+85 °C |
| Maximum temperature at tc test point | 80 °C ¹⁾ |
| Max.housing temperature in case of fault | 120 °C |
| Permitted rel. humidity during operation | 5...95 % ²⁾ |

¹⁾ Measured on tc point indicated on the product label.

²⁾ Non condensing, absolute humidity: 36g/m³

Lifespan

| | |
|--------------|--------------------------------|
| ECG lifetime | 50000 / 100000 h ¹⁾ |
|--------------|--------------------------------|

¹⁾ At maximum T_c = 80°C / 10% failure rate / At maximum T_c = 70°C / 10% failure rate

Capabilities

| | |
|--|---------------------|
| Dimmable | Yes |
| Dimming interface | DALI-2 / AstroDIM |
| Dimming range | 10...100 % |
| Suitable for fixtures with prot. class | I / II |
| Constant lumen function | Programmable |
| NTC input | No |
| Short-circuit protection | Yes |
| No-load proof | Yes |
| Intended for no-load operation | No |
| Max. cable length to lamp/LED module | 2.0 m ¹⁾ |
| Overload protection | Yes |
| LEDset | No |
| Number of channels | 1 |
| DALI-2 Energy Data | Yes ²⁾ |
| DALI-2 Diagnostic Data | Yes ³⁾ |

¹⁾ Output wires must be routed as close as possible to each other

²⁾ Acc. DALI part 252

³⁾ Acc. DALI part 253

Programming

| | |
|------------------------|------|
| Box programming | No |
| Tuner4TRONIC | Yes |
| Tuner4TRONIC Field App | No |
| Programming device | DALI |

Programmable features

| | |
|-----------------------|-------------------|
| Constant Lumen | Yes |
| Driver Guard | No |
| AstroDIM | Yes |
| StepDIM | No |
| MainsDIM | No |
| Emergency Mode | No |
| Configuration Lock | Yes |
| DALI-2 Luminaire Data | Yes ¹⁾ |

¹⁾ Acc. DALI part 251

Certificates & standards

| | |
|---------------------------|---|
| Type of protection | IP67 |
| Standards | Acc. to EN 61347-1/Acc. to EN 61347-2-13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3-2/Acc. to EN 61000-3-3/Acc. to EN 60598-1 (ED.8)/Acc. to EN 62384 |
| Approval marks – approval | CCC / CE / TISI / RCM / ENEC / UKCA / DALI-2 / IP67 |

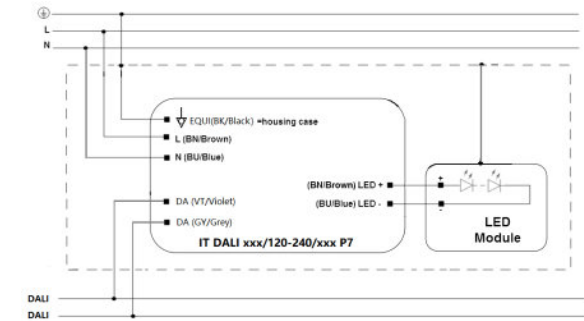
Logistical data

| | |
|----------------|-------------|
| Commodity code | 85044083900 |
|----------------|-------------|

Environmental information

| Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACH) | |
|---|--|
| Date of Declaration | 19-05-2023 |
| Primary Article Identifier | 4052899620308 |
| Candidate List Substance 1 | Lead |
| CAS No. of substance 1 | 7439-92-1 |
| Safe Use Instruction | The identification of the Candidate List substance is sufficient to allow safe use of the article. |
| Declaration No. in SCIP database | 0214fb63-b7a2-4a36-8240-5f2a5e32fafb |

Wiring Diagram



| Item | Value | Unit | Remarks |
|--------------|-------------------------|---------------------------|--|
| INPUT | Cable cross section | 1.0 | mm ² L (Brown/BN), N (Blue/BU), EQUI (Black/BK) |
| | Wire preparation length | 10 | mm |
| | Type of wire | Flexible three core cable | |
| | Lead length | 300 ± 20 | mm |
| OUTPUT | Cable cross section | 1.0 | mm ² LED+ (Brown/BN), LED- (Blue/BU) |
| | Wire preparation length | 10 | mm |
| | Type of wire | Flexible two core cable | |
| | Lead length | 300 ± 20 | mm |
| DALI WIRING | Cable cross section | 0.3 | mm ² DALI+ (Violet/VT), DALI- (Grey/GY) |
| | Wire preparation length | 10 | mm |
| | Type of wire | Flexible two core cable | |
| | Lead length | 220 ± 20 | mm |
| CABLE LENGTH | LED+LED- | < 2 | m |







IT DALI 120 240 P7 Wiring Diagram

IT DALI 120 240 P7 Wiring Diagram



Additional product information

- Input voltage range: Nominal operation at 198 – 264Vac. Workable at 120 – 277Vac without safety issue (refer to [8] Typical Input Voltage vs. Load), but normal performance such as THD, EMI, lifetime etc are not guaranteed;
- Input voltage range: Nominal operation at 198 – 264Vac. Workable also at 120 – 198Vac without safety issue (refer to graph Typical Input Voltage vs. Load), but normal performance such as THD, EMI, lifetime etc are not guaranteed;
- Output overload/voltage protection: In case the input voltage of the load exceeds the output voltage range which is auto defined by output current setting of the driver ($V_o = P_o / I_o$), it automatically reduces the output current. The driver needs a power cycle to restart or DALI command with the correct load connected.
- Output short circuit protection: shut down of driver occur in case of output short circuit without damage to the unit.
- Output over load/voltage protection: In case the input voltage of the load exceeds the output voltage range which is auto defined by output current setting of the driver ($V_o = P_o / I_o$), it automatically reduces the output current. Auto-reversible without mains power on/off;
- No load protection: the driver automatically adjusts the output voltage to the maximum output voltage which is auto defined by output current setting of the driver ($V_o = P_o / I_o$) if no load is connected. The driver needs a power cycle to restart with the correct load connected.
- Over temperature protection: the driver is protected against temporary overheating by shutting down until the overheating eliminated; Auto-reversible when temperature back to normal;
- Disconnect the power before servicing. Terminal block is not included, installation must be performed by qualified person;
- The EQUI (housing) shall be connected to the heat sink of the LED module to improve the surge withstand capability of the system and EMI in critical luminaires.
- Not suitable to be mounted in ceiling corner
- The LED control gear cannot be abutted against or covered by normally flammable materials or used in installations where building insulation or debris is, or may be, present in normal use.
- The external flexible cable or cord of this driver cannot be replaced; if the cord is damaged, the driver shall be destroyed.
- The dimmer should fulfill at least basic insulation between control voltage and dimming circuit (for Australia and New Zealand).
- The minimum clearance distance from the top and sides of the controlgear to normally flammable building elements is $A=B=C=\text{Min.}10\text{mm}$, this clause does not apply when the LED driver is built-in the luminaires (for Australia and New Zealand).
- The startup time to reach the set output current is less than 2s.
- For further details please consult the application note;

Download Data

| File | |
|---|--|
|  | User instruction User Instruction |
|  | Certificates CB Certificate of OT DALI P7 |
|  | Certificates EAC Certificate of OT products |
|  | Certificates ENEC Certificate of IT DALI P7 |
|  | Certificates CCC certificate |
|  | Declarations of conformity IT DALI P7 CE 4287284 120822 |

Product datasheet

| | |
|---|--|
|  | Declarations of conformity IT DALI P7 UK DoC 4287289 120822 |
|  | CAD data IT DALI 20 40 1A0 P7 STEP 300323 |

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 |
|---------------|-----------------------------|------------------------------|--------------------------------------|-----------------------|--------------|
| 4052899620308 | IT DALI 20/120...240/1A0 P7 | Shipping carton box 20 | 589 mm x 218 mm x 207 mm | 26.58 dm ³ | 11654.00 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.

Data privacy

This OSRAM driver can be configured using the Tuner4TRONIC software. This requires registering on www.myosram.com and downloading the Tuner4TRONIC software from the Internet. The Tuner4TRONIC software enables users to access and view the operational data of a luminaire or driver via the corresponding programming interfaces. A password key (Config Lock) must be set up in the driver via the Tuner4TRONIC software in order to control which users can access and view operational data. Follow the instructions for password setup. To grant an external person or company rights to access or view operational data, you can assign password keys. In this case, however, you are responsible for ensuring that the third party concerned takes notice of the information described here. However, OSRAM can read out operating data from devices for maintenance and service purposes even when a password key has been assigned. In individual cases, OSRAM will also use its access rights in order to optimize or improve driver hardware and driver functions. In accordance with data privacy principles, any user of operating data (luminaire manufacturers, third parties with access rights) must ensure that personal data (e.g. name, address, location IDs) are only merged with the prior written consent of the person (end user) concerned. The respective user of the operating data is responsible for providing evidence of consent.

References / Links

* For more information on the multi-level guarantee and the terms and conditions of the guarantee visit <https://>

Product datasheet

► www.inventronics-light.com/multilevel-guarantees

Disclaimer

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