

IT DALI 110/120-240/1A0 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 input voltage	120...240 V
Mains frequency	50/60 Hz
Input voltage AC	120...264 V
Total harmonic distortion	< 10 % ¹⁾
Power factor λ	0.84C...0.99 ²⁾
Efficiency in full-load	93 % ³⁾
Device power loss	9.0 W ⁴⁾
Inrush current	66 A ⁵⁾
Max. ECG no. on circuit breaker 10 A (B)	9 ⁶⁾
Max. ECG no. on circuit breaker 16 A (B)	14 ⁶⁾
Surge capability (L/N-Ground)	10 kV ⁷⁾
Surge capability (L-N)	6 kV
Nominal output voltage	75...157 V
U-OUT (working voltage)	180 V
Nominal output current	350...1050 mA ⁸⁾
Default output current	700 mA
Output current tolerance	±5 %
Output ripple current (100 Hz)	+/- 5 % ⁹⁾
Output PSTLM	≤1
Output SVM	≤0.4
Nominal output power	110 W
Maximum output power	110 W
Galvanic isolation	Double

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

2) Full load at 230 V / 50 Hz

3) at 230 V, 50 Hz

4) At Full load, 230 V, 50 Hz

5) Max, $t_h = 145 \mu s$ @ 50 % I_{pk}

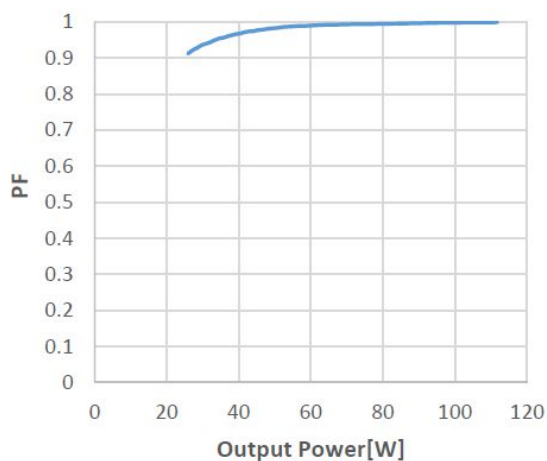
6) Type B

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

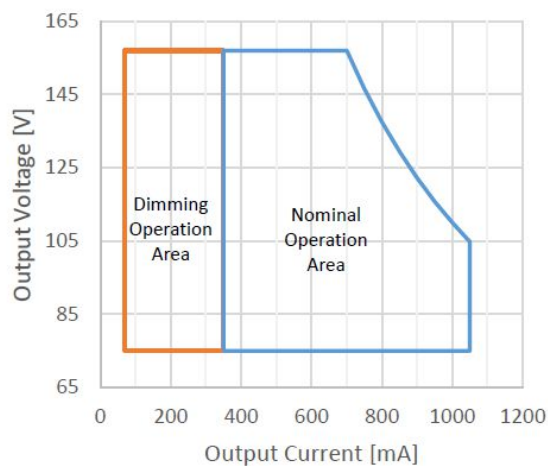
8) Default 700 mA; 200...1050 mA adjustable

9) Ripple / average @ 100 Hz

Typical Power Factor v Load



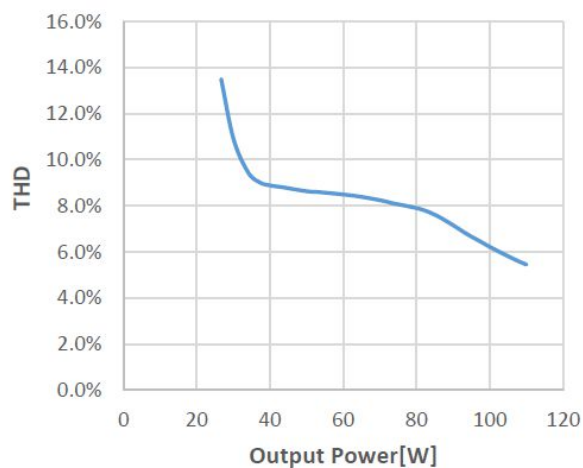
Operating Window



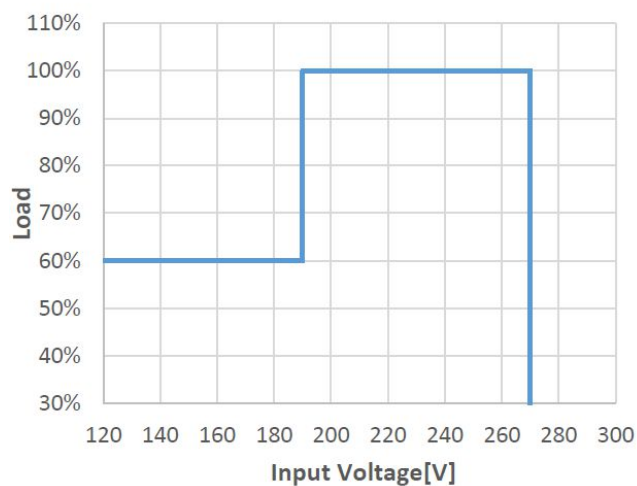
IT DALI 110 120 240 1A0 P7 Typical Power Factor vs. Load

IT DALI 110 120 240 1A0 P7 Operating Window

Typical THD v Load



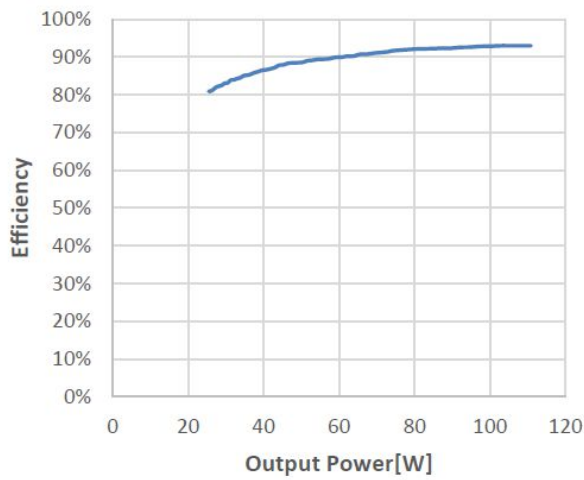
Typical THD v Load



IT DALI 110 120 240 1A0 P7 Typical THD vs Load

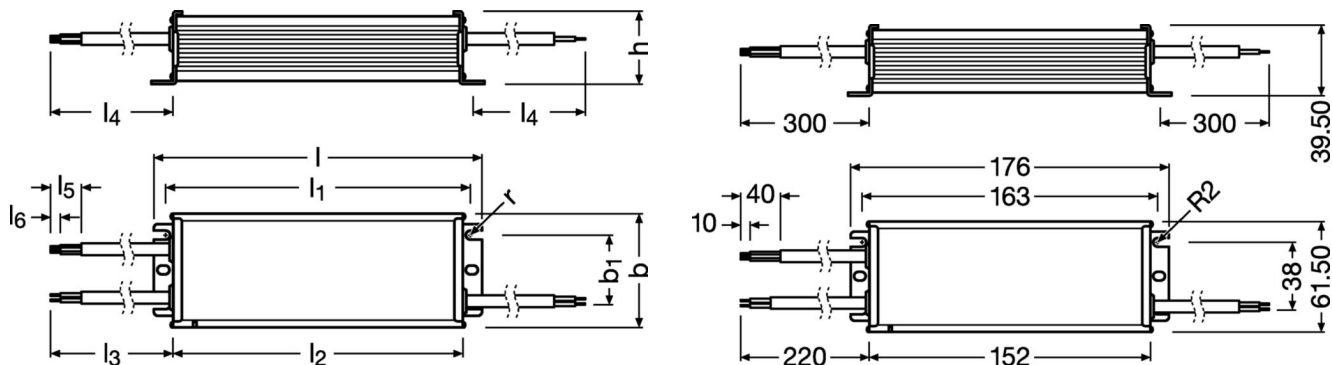
IT DALI 120-240 1A0 P7 Typical Input Voltage vs Load

Typical Efficiency v Load 230 V 50 Hz



IT DALI 110 120 240 1A0 P7 Typical Efficiency vs. Load

Dimensions & weight



Length	176.0 mm
Width	61.5 mm
Height	39.5 mm
Mounting hole spacing, length	163.0 mm
Mounting hole spacing, width	38 mm
Cable cross-section, input side	1.0 mm²
Cable cross-section, output side	1.0 mm²
Wire preparation length, input side	10 mm
Wire preparation length, output side	10 mm
Product weight	650.00 g

Colors & materials

Casing material	Aluminium
-----------------	-----------

Temperatures & operating conditions

Ambient temperature range	-40...+60 °C
Maximum temperature at tc test point	85 °C ¹⁾
Max.housing temperature in case of fault	120 °C
Temperature range at storage	-40...+85 °C
Permitted rel. humidity during operation	5...95 % ²⁾

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

2) Non-condensing

Lifespan

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

1) At maximum $T_c = 80^\circ\text{C}$ / 10% failure rate / At maximum $T_c = 70^\circ\text{C}$ / 10% failure rate

Capabilities

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

1) Acc. DALI part 253

2) Acc. DALI part 252

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

Programming

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

Programmable features

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

1) Acc. DALI part 251

Certificates & standards

Approval marks – approval	CCC / CE / TISI / RCM / ENEC / UKCA / DALI-2 / 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
Type of protection	IP67
Protection class	I,II

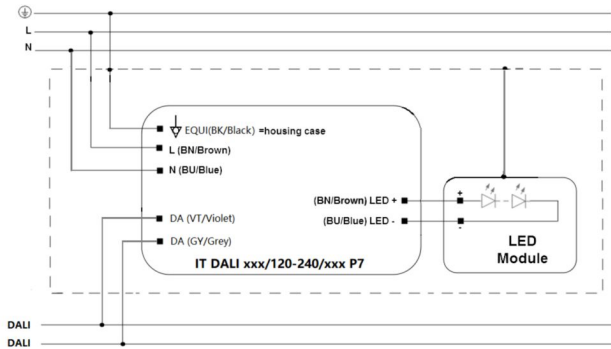
Logistical data

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

Environmental information

Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACH)	
Date of Declaration	04-06-2024
Primary Article Identifier	4052899620339
Declaration No. in SCIP database	In work

Wiring Diagram



IT DALI 120 240 P7 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
DIMMING	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

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 $A=B=C=Min.10mm$, 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		
Certificates	PDF	► EAC Certificate of OT products
Certificates	PDF	► ENEC Certificate of IT DALI P7
Certificates	PDF	► CCC certificate
CAD data	Compressed	► IT DALI 110 1A0 P7 STEP 300323
Mandatory Publications	PDF	► IT DALI P7 CE 4287284 120822
Mandatory Publications	PDF	► IT DALI P7 UK DoC 4287289 120822
User instruction	PDF	► User Instruction

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
4052899620339	IT DALI 110/120-240/1A0 P7	Shipping carton box 15 Pieces	449 x 252 x 163 mm	18.44 dm ³	10412.00 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://www.inventronics-light.com/multilevel-guarantees>

Accessories Optional

Product description	Accessory name	Accessory code
IT DALI 110/120-240/1A0 P7	DALI magic	▶4062172379328
IT DALI 110/120-240/1A0 P7	DALI magic	▶6977078996907

Disclaimer

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