Features

- AC 100...240V, 50...60Hz input.

- DALI-2 DT8 tunable white.

- Class II, IP42, standby power 0.5W。

- Detect LED open, short, load changes, etc.

- **LED constant current output, max 1A, 45V, 20W.**

- Thermal protection, auto reduce or cut-off power on over-heat.

- Support DALI Data including input/output power, PF, time, etc.

- Global safety compliant, suitable for home and office.

- According to EN61347-1, 61347-2-13.

- High-quality dimming of 0.1-100% by amplitude dimming.

DALI2 CE ◎ ☒ ⊞ ⌂ 300 V 2A SELV RoHS

2. Specification

Technical Data

Model		AGD-CA242CB1
Input	Voltage/Hz	100...240V AC, 50...60Hz
	Leakage	< 0.25mA
	Standby W	< 0.5W
	Power Factor	> 0.95
	Harmonic	15%
Output	Voltage	Max 49V, Nominal 3...45V, dual CC circuit
	Current	Nominal 0.1...1A, default 300mA, programmable
	Power	Max 20W in total of both channels
	PSTLM	<= 1
	SVM	<= 0.4
Protection	Surge capability	L/N-Ground 2kV, L-N 1kV
	Short	Programmable protection point
	Open	Programmable protection point
	Load Change	Realtime measure voltage and current
	Isolation	Main input/output SELV, output/DALI FELV, main input/DALI FELV
Environment	Temperature	Ta: -30...+50℃, Tc: 70℃
	Humidity	20...95%
	Storage	-40...+80℃, 10...95%
Dimming	DALI	DALI-2 IEC 62386 101, 102, 207, 209, 251, 252, 253
	Dim Mode	Dual CC, Dual output, no common pin, mixed dimming
Others	Det. & Data	Input/Output power, accumulated power, on time, PF, etc.
	Dimension	120*46*30mm
	Weight	180g

Dimension

120mm

46mm

30mm
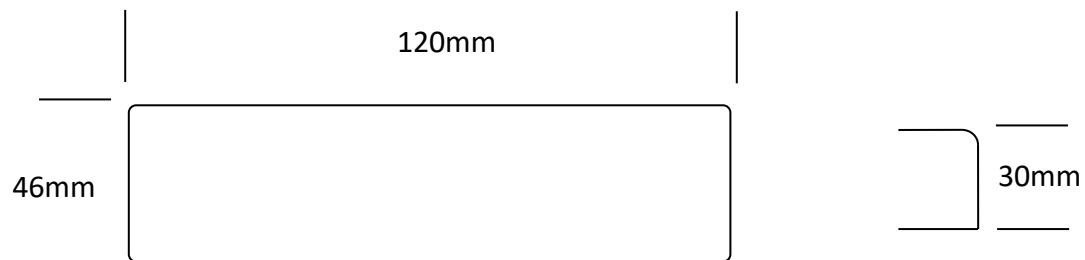
3. Installation

Wiring and circuit diagram
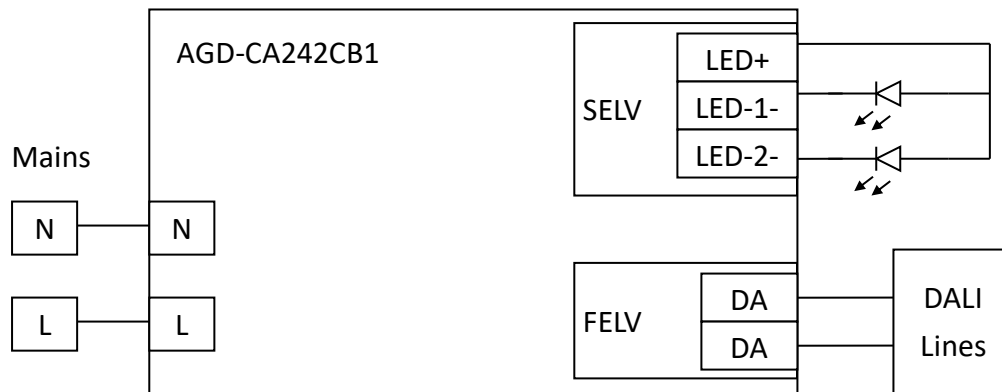
- For better EMC, keep wires between drivers and LEDs as short as possible.
- No invers-polarity protection of LEDs is supported.
- No common pole is supported. Two LED strips should be connected separately.
- Wrong wiring of LED drivers may damage the driver, LEDs, and DALI bus.
- The wiring must be short-circuit protected from earth wire, to avoid dysfunction and damage.
- DA/DA terminals are for DALI bus wires, and they are cataloged FELV, and should be connected to FELV circuit.

Wiring cable and cross section

The cable cross-section of each terminal can be 0.75...1.5mm^2, and the wire preparation length can be10.0...11.0mm. Each terminal should be used one wire only.

Hot plug-in

Hot plug-in is not recommended due to the driver's residual output voltage. Hot plug-in will cause high inrush current and damage the LEDs. Power-off and 15 seconds of cold down is recommended for the installation.

Usage and install

The LED driver is intended to be used as a built-in driver (marked ◎), it must be installed within a luminaire enclosure or protected from human and environment (usually in house ceilings). Good ventilation and 10…15 cm distance from heat source is recommended.

LED current adjust

The LED driver's output current can be programmable with SmartLink tool. The minimum output current is varied over LED voltage. Please, check its operating window for its limitation.

4. Functions

Short-circuit protection

A short circuit at LED output will trigger the driver's safeguard and turn off its output. It can be restarted by reset its mains or dim off-and-on with DALI tools.

Open-circuit/no-load protection

An Open circuit at LED output will also trigger its safeguard and turn off its output. It can be restarted by reset its mains or dim off-and-on with DALI tools. Its output will constantly lower to about zero voltage. No-load or open-circuit will not cause harm to the driver, however, a hot-plug or change of LED engine or luminaires are not recommended. Residual voltage will cause permanent damage to LEDs.

Over-temperature protection

The driver is equipped with temperature sensor, and it will protect against over-temperatures by lowering its output or shutdown when over its curie point. When it is shutdown, you can restart only when its temperature is lower than its safeguard level (usually is Tc – 30). The temperature sensing points are usually located on the hottest points and micro-controller.

Power metering

The driver will monitor and accumulate its input and output power and save to its EEPROM. The driver is designed to accumulate and save the data at 60 second period for 10 years. A power interrupt may cause missing of some accumulated data.

Health diagnostic

The driver's electronic output and input data are measured and readable via DALI data protocol. These data are monitored at run-time and valid after 60 seconds of power-up.

Tunable white dimming

This driver uses channel switching technique to generate different color temperature, and its switching frequency is at 2000Hz. This technique can generate better color temperature performance, but there might be color flickering when a camera used at very closed distance.

Software

This driver is supported by SmartLink configuration tool. You can use SmartLink tool to download and program its parameters such as output current, thermal protecting point, dimming frequency and or many others.

5. Others

Warning / Caution !!

- Risk of electrical shock and energy hazard. All failure should be examined by a qualified technician. Please do not remove the case of the power supply by yourself!
- The openings should be protected from foreign objects or dripping liquids.
- Please do not install LED power supplies in places with high ambient temperature or close to fire source. Please refer to the specifications about the maximum ambient temperature limitations.
- Output current and output wattage must not exceed the rated values on the specifications.
- If the external flexible cable or cord of this switching power supply is damaged,

it shall be exclusively replaced by the manufacturer or his service agent or a similar qualified person in order to avoid a hazard.

- LED power supply needs to be disposed together with lighting equipment after the end of its life.
- The DALI is designed as FELV circuit, its terminal shall connect to FELV circuit. Connecting to SELV will lower its isolation level to FELV.