



PE12DA 12W DALI Dimming driver



General description

PE12DA is one of the constant current dimming LED driver developed by my company with high power factor, high efficiency, high precision, the use of the efficient stable low loss switch control chip and the high performance components makes it with low noise, energy saving, environmental protection, long life and other characteristics.

Using active PFC design ,high power factor correction, high efficiency.

PE12DA use standard DALI signal interface, can match with all DALI control system in the market.

DALI full name: Digital Addressable Lighting Interface

The input terminal is fast terminal block connector, which is easy to stall.



Features:

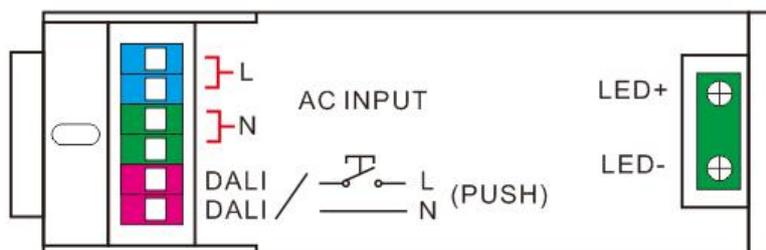
- Standard DALI dimming interface
- With PUSH function to realize PUSH dimming
- Output flicker free
- International universal AC input voltage (up to 265VAC)
- With the active PFC function
- Protections: short circuit/over voltage/over current
- Natural cold wind
- Big terminal locked by screw
- Suitable for LED home lighting and commercial lighting
- Safe no load protection device
- Economic and convenient installation
- Conform to the world lighting equipment safety standards
- Protection class II
- Three years warranty

**Electrical specification**

Model No		PE12DA24	PE12DA42
Output	Rated power	8.4W	12.6W
	Open circuit voltage	27V	52V
	Constant current range	2-24V	2-42V
	Current accuracy	±3%	±3%
	Max Constant current	350mA	300mA
	Ripple	350mVp-p	400mVp-p
Input	Voltage range	100~250VAC	
	Frequency range	47 ~ 63Hz	
	Power factor correction	PF>0.95/220VAC, PF>0.99/110VAC	
	Efficiency (Typ.)	84%	84%
	Alternating current	0.095A /220VAC 0.18A/1100VAC	
	Leak current	<0.25mA /230VAC	
Environment	Operating temperature	-40~ +60℃	
	Operating humidity	20-85%RH	
	Storage temperature humidity	-40~ 85℃ 10~95%RH	
	Temperature coefficient	±0.03%/℃(0-60℃)	
Safety and electromagnetic compatibility	Safety standard	EN 61347-2-13:2006 /EN 61347-1:2008	
	Withstand voltage	I/P-O/P:3.75KVAC	
	Insulation resistance	I/P-O/P:100M Ohms / 500VDC /25℃/70%RH	
	Electromagnetic interference	EN55015	
	harmonic current	EN6000-3-2/EN6000-3-3	
	Electromagnetic susceptibility	EN6000-4-2	
Other	dimension	(L*W*H) = 135mm * 43.5mm * 27mm	
	package		

Notice:

- 1.All the parameters were tested in the input 230VAC, the rated load, 25 C ambient temperature conditions if no special instructions.
2. The dimming driver should be used with the terminal equipment, So the customer should re-test the EMC of the whole set of equipment

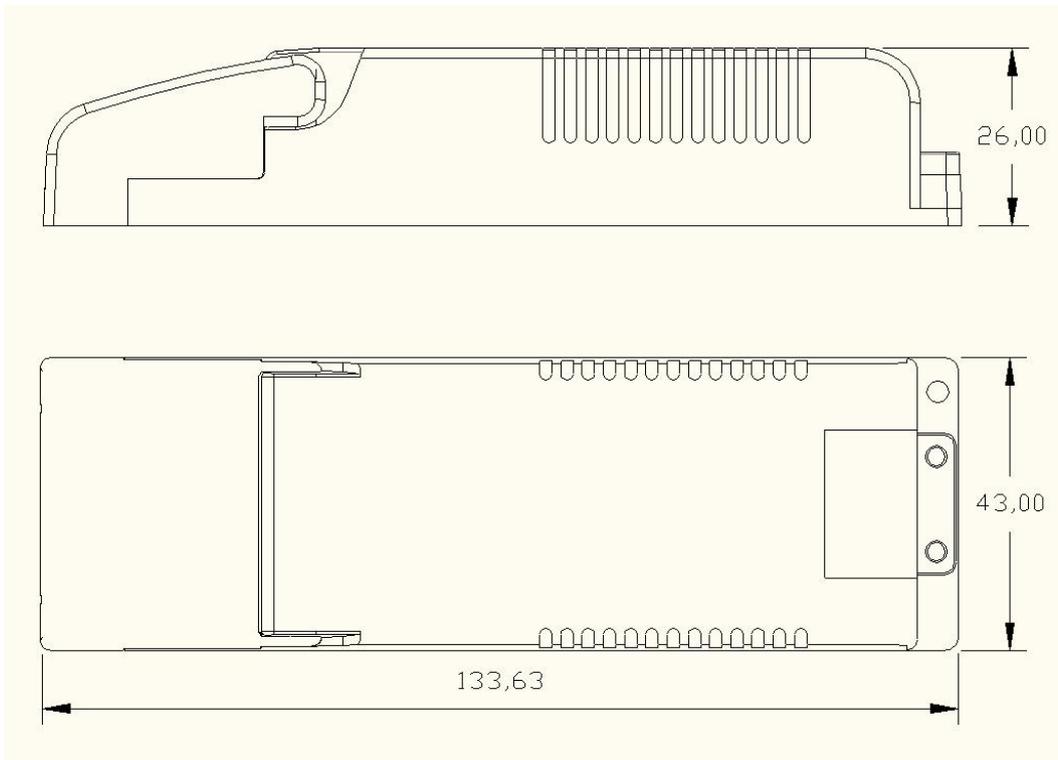
Dimming operating method



※ DALI (digital addressable lighting interface) directly connect to the DALI control system, signal line needn't distinguish the positive and the negative electrode

※ PUSH function: The AC voltage is connected to the two port of the DALI through an automatic reset switch, to realize PUSH dimming. Click switch to realize switch function, long press dimming

Boundary dimension



Wiring

The input terminal: wire gauge 22AWG-14AWG ($0.315\text{mm}^2 - 2.06\text{mm}^2$), wire stripping requirement:9-10mm

The output terminal: wire gauge 22AWG-12AWG ($0.315\text{mm}^2 - 3.15\text{mm}^2$), wire stripping requirement :6-7mm.

The use of guidance

This product has a press line cap at the input, with self-locking clamping, it can be opened up with a screwdriver, then you will see the input terminal connected with the AC line L and the null line N. The output terminal connect according to the product label, notice positive and negative pole.

Note:

* * 1: please pay attention to the distinction between input and output, connect correctly, then power on

* *2: please connect first the load of the DC output, open the power supply after checking; in the constant current mode, if power on at open circuit, please turn off the power supply and can't connect the LED until the electric energy stored by the output release , or it may damage the LED;

The abnormal conditions and the corresponding treatment methods:

1, the LED lamp doesn't bright after the dimming driver is connected at the first time ,please turn off the AC input and check as follow:

A) Whether or not DC output bad contact;



B) Whether DC output polarity is reversed, or the LED board is welded anti;

C) Whether AC input is bad contact; test after eliminating these failures.

2, the device has good connection, LED lights, but the LED flicker, please turn off the AC input, then check the DC output:

a) overload, under load.

b) Whether or not the parameters and actual parameters match.

3, please timely communicate with us if you any questions in the using, we will try our best to solve the problems with you.

Statement

The pictures and specifications is for reference only, in kind prevail, specifications are subject to change with further notice.

Appendix

Digital Addressable Lighting Interface (DALI)

DALI slave unit will send data only master unit requests, that is, adopt command answering mode

There are 64 slave units at most in the same DALI network, each unit has a separate address (short address), A slave unit can also be assigned to a certain group, and a slave unit can belong to different group, slave unit can exist up to 16 groups at the same time. Each unit can set 16 scenarios

The main features of the DALI protocol

- a) Asynchronous serial communication
- b) 1200 Baud rate, using the Manchester encoding format
- c) Two lines differential signal.
- d) The high level when differential voltage is larger than 9.5v.
- e) The low level when differential voltage is less than 6.5v.
- f) The master unit controls communication process.
- g) One DALI bus can connect with 64 slave units.
- h) Each slave unit can be individually addressed.

DALI Electrical specification

DALI bus is high level in idle state.

The method that the slave unit control the bus :

- 1、 Don't interference the host signal at the high level output.
- 2、 DALI bus directly short circuit to each other at the low level output.
- 3、 DALI bus maximum current is 250mA
- 4、 Cannot carry out two-way communication at the same time.
- 5、 The maximum length of the transmission cable is 300 meters, or voltage drop is no more than 2v