Smart LED Driver

Design and Quality EASEIC of USA

LND154AL

Smart E-Dim Dali DRIVER

SPEC SHEET

54W 3-66V 200-1050mA Dali Dim
LND154AL
633154



SELV RoHS

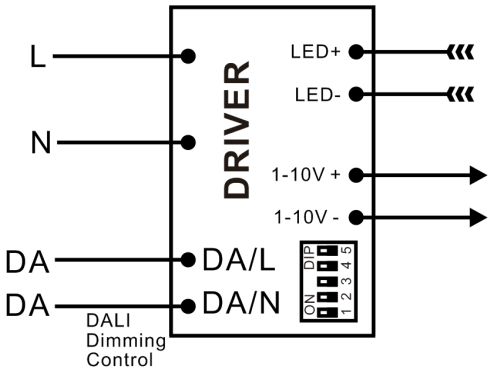
Features

- Multilevel current output, Constant current output 200-1050mA
- Multi-power driver supplied with dip-switch for the selection of the output current
- DALI 2, with DALI Feedback
- 1-10v
- Analogue flicker-free dimming.
- Dimming range from 0 -100%, LED start at 0.1% possible.
- PUSH-Dim, dimming and switching via push-button function.
- Universal AC input (100~277Vac)
- Designed for LED lighting applications
- Can be switched on and off on secondary circuit for power LED.
- Protections: Short circuit , Over voltage, Over Current
- 5 year warranty

Benefits

- Enables design of low profile and compact fixtures
- Helps to maximize energy savings and allows application specific light levels
- Supports majority of available dimming solutions

Wire Diagram



Note:

Install in accordance with National and Local Electrical Codes.

Use 16-24 AWG solid copper wire rated >=300V/85°C.

Strip wire 3/8".

Please pay special attention to wiring installation guidelines, Wrong wiring will cause damage to the LED driver.

Before connection the power, make sure you have access to the LED load.

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Electrical Specifications

Ordering Information			
Type	LND154AL		
Order Code	633154		
Full product name	Smart 54W 3-66V 200-1050mA Dali Dim		
Input Information			
Line Voltage	100-240Vac_rms		
Line Current	0.69A@100VAC	0.61A@120VAC	0.31A@230VAC
Line Frequency	50/60Hz		
Min, Mains Voltage operational	90[min]		
Max, Mains Voltage operational	277[max]		
THD(total)	<10%		
Power Factor(PF)	>0.95@230V full load		
Input Power (Max.)	61.5W		
Efficiency @Max Load and 70℃ case	87%@100VAC	87%@120VAC	88%@230VAC
Inrush Current(Typ.)	Cold Start 39A(twidth=270us measured at 50% Ipeak) at 230VAC		
Leakage Current(Typ.)	<0.5mA/230VAC		
Output Information			
Output Power	54W(See Output current settings table)		
Output voltage	3V to 66V		
Output Constant Current	200-1050mA ±5%(See Output current settings table)		
Maximum open circuit voltage	<75V		
Output Current Ripple (ripple=peak to peak)	2% of nominal output voltage (whichever is greater),measured at 20Mhz bandwidth with 0.1uf ceramic capacitor in parallel with 10uf electrolytic capacitor connected at the end of the output connector.		
Protections	Over Current, Over Voltage, Short Circuit and Open Circuit Protection for LED+ and LED-		
Ambient Temp Range	-20℃ to +50℃, 20-95% RH non-condensing		
Max Case Temperature(Tc)	75℃ for Life & 85℃ for UL Safety		
Dimming Features			
Dimming Interface	DALI(IEC62386), 1-10v, PWM, Resistor, Switch Dim		
DALI Dimming Specifications	Sink Current <2mA		
Dimming range	0-100%		
Environment & Approbation			
Environmental Protection Rating	UL damp and dry		
Agency Approbations	UL8750,UL1310, CSA-C22.2 No.250.0-08,ENEC EN61347-1,EN61347-2-13 independent, EN62384, TUV EN60950-1		
Electromagnetic Compliance	FCC Title 47 Part 15 Class A Compliance to EN55015,EN61000-3-2 Class C(@100% Load);en6100-3-3 Compliance to EN61000-4-2,3,4,5,6,8,11;EN61547,EN55024, light industry level(surge 2KV), criteria A		
Audible noise	<24dB Class A		
Other information			
Dimension	280x30x26mm (LxWxH)		
Packing	0.23Kg(0.51lbs); 40Pcs/10.1kg(22.2Lbs)		

All the specifications are typical and at 25 ℃Tcase unless specified otherwise

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Output Current Settings

LND154AL, Constant Current output 200-1050mA.
Multi-power driver supplied with dip-switch for the selection of the output current.
Factory default setting is 200mA.

LND154AL		DIP-Switch Settings					
Pout Max.	Vout DC	Iout DC	1	2	3	4	5
13W	3-66V	200mA	--	--	--	--	--
16W	3-66V	250mA	ON	--	--	--	--
20W	3-66V	300mA	--	ON	--	--	--
23W	3-66V	350mA	ON	ON	--	--	--
26W	3-66V	400mA	--	--	ON	--	--
30W	3-66V	450mA	ON	--	ON --	--	--
33W	3-66V	500mA	--	ON	ON	--	--
36W	3-66V	550mA	ON	ON	ON	--	--
39W	3-66V	600mA	ON	ON	--	ON	--
42W	3-66V	650mA	--	--	ON	ON	--
46W	3-66V	700mA	ON	--	ON	ON	--
49W	3-66V	750mA	--	ON	ON	ON	--
52W	3-66V	800mA	ON	ON	ON	ON	--
54W	3-63V	850mA	ON	ON	--	ON	ON
54W	3-60V	900mA	--	--	ON	ON	ON
54W	3-56V	950mA	ON	--	ON	ON	ON
54W	3-54V	1000mA	--	ON	ON	ON	ON
54W	3-51V	1050mA	ON	ON	ON	ON	ON

Suggested max. number of the LNX units that can be connected to a MCB@230VAC

MCB	B10	B16	C10	C16
LND154AL	10	16	17	28

Note: These calculated values are based on MCB S201 series manufactured by ABB

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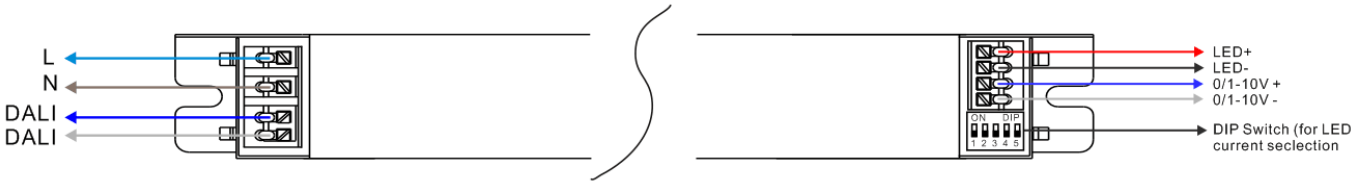
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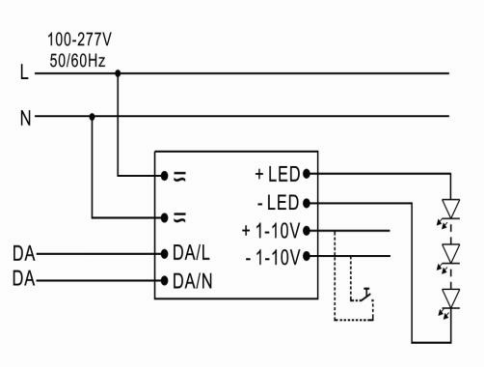
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Terminals

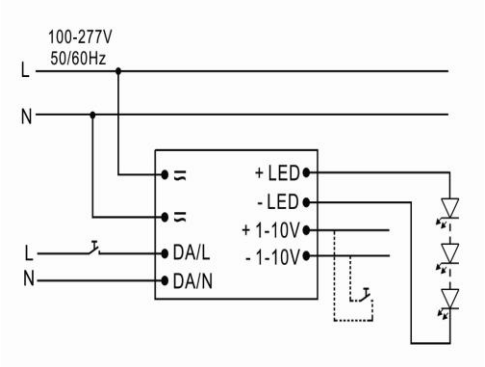


➢ Circuit Diagram

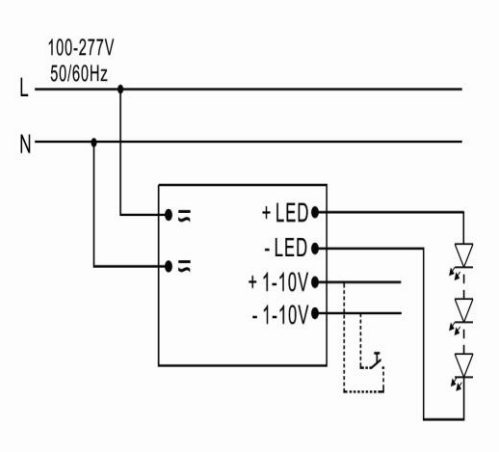
DALI dimming



Switch-Dim Dimming



1-10v dimming



Note: 1. Unused terminals have been omitted for clarity.

2. If connecting DALI interface, the 1-10v and switch-dim function are disabled. Please refer to the relevant section in this datasheet for details.

3. Digital DALI signal or switchDIM can be wired on the same terminals (DA/N and DA/L).

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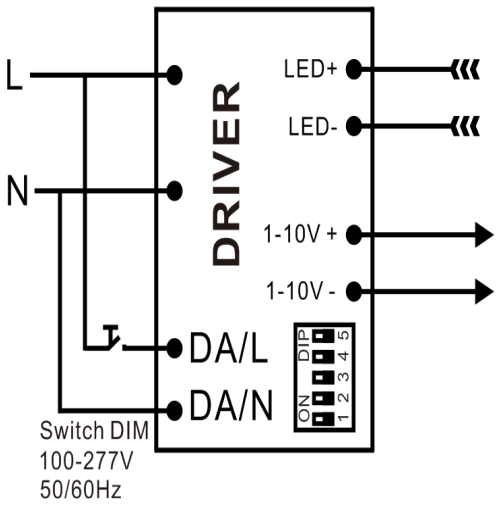
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➢ 1-10v Interface dimming control

The 1-10V input is operable via commercially available simple rotary wall switches designed for 1-10V dimming equipment or from dedicated system central dimming controllers.

Note: This 1-10v terminal also could be used for switch-dim terminal, but different from DALI switch dim terminal, this switch dim terminal just could be worked with low voltage switch(It means not need to wire connect with L). When use this port for switch, firstly need to press the switch for 4 or 5 times, then let it come into switch dim function, If you wire more than 2 lamps, you could find maybe these lamps not be synchronous. At this situation, if you want them keep synchronous, short press switch more than 6 or 7 times, when all these lamps under control, whether these lamp brightness is same or not, long press the switch and then all these lamps will increase 100% brightness. Then it will memory this and all these lamps will be synchronous.

➢ Switch-Dim dimming control(DALI side high voltage Push dim)



Digital DALI signal or switchDIM can be wired on the same terminals (DA/N and DA/L).

By pressing the push button for less than one second the LEDs turn on or off. By pressing the push button for more than one second the light intensity of the LEDs is dimmed according to the following modalities:

- ✧ If the light intensity is not at maximum, by pressing the key there will be an increase of this to maximum or to the corresponding level at the moment the key is released;
- ✧ A further pressure on the key inverts the dimming direction to the minimum value or to the corresponding level at the moment the key is released;
- ✧ If light intensity is at maximum by pressing the key there will be a decrease to the minimum value or to the corresponding level at the moment the key is released.

Total length of PUSH cables <20m. Factory dimming setting at 100%.

Note: Only use self-reset push button without indicator light. Risk of short circuit.

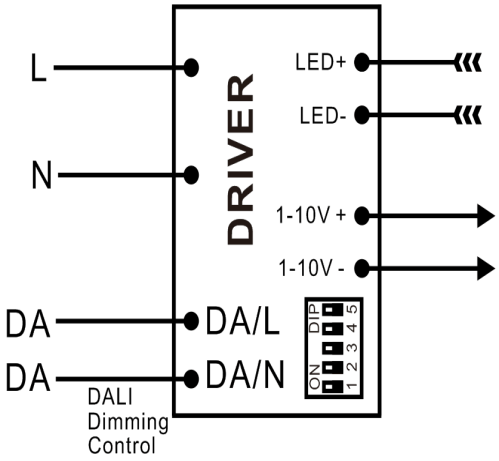
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➢ DALI interface dimming control



LND series of LED dimming driver, in line with DALI protocol specification IEC62386, acceptable compliance with ON / OFF, scenes and dimming DALI controller instruction norms issued.

Each DALI subnets can only have a maximum of 64 DALI slave devices (DALI LED dimming drivers).

Each DALI LED dimming drivers will consume 2mA control terminal of the current.

DALI connections of up to 300 m can be made with any 2 wire 0.5 - 1.5 mm2 mains rated cable.

DALI cable must be mains-rated and the maximum voltage drop along the length of the cable must not exceed 2V.

In rare instances where the environment may be electrically noisy, due to adjacent circuits carrying high switching currents, we recommend a 2 wire twisted pair screened and sheathed cable.

DALI Interface Lighting Controller



DBC102D



DBC202D



DBC402D



DALI RGB



DALI RGBW



DALI RGBWD



DALI SC



DALI CCT4



DALI CCT4U

More DALI Lighting control modules and details , please browse www.easeic.com

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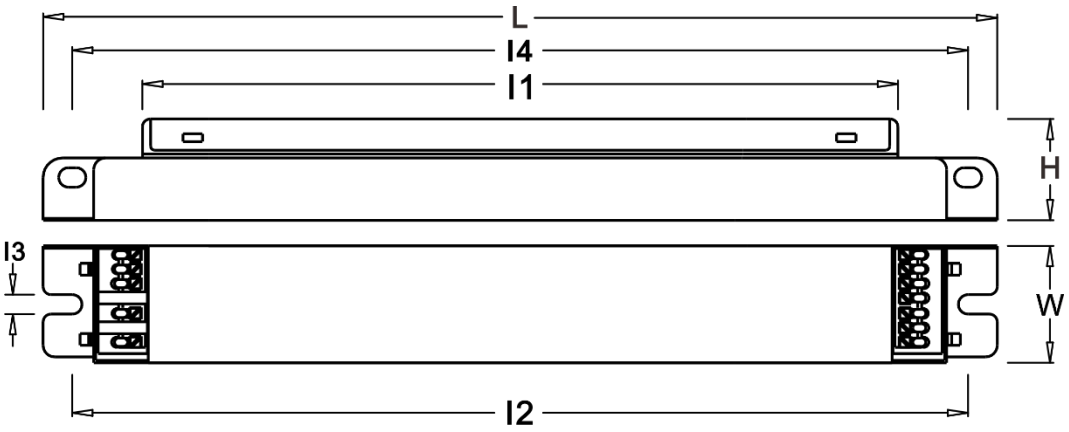
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Mechanical Specifications

Mechanical Drawing:



Dimensions

	In.	mm
Case Length(L)	11.0	280
Case Width(W)	1.2	30
Case Height(H)	1.0	26
Mounting Holes(l1)	8.7	222
Mounting Holes(l2)	10.6	270
Mounting Holes(l3)	0.2	5
Mounting Holes(l4)	10.6	270
Overall Length	11.0	280

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