

Smart LED Driver

Design and Quality EASEIC of USA

LND118AL

Smart E-Dim Dali
DRIVER

SPEC SHEET

18W 3-66V 200-1050mA Dali Dim

LND118AL

633118



SELV RoHS

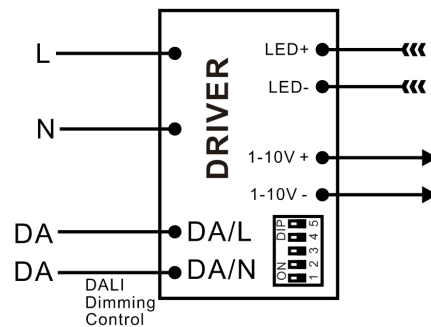
Features

- 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 $\geq 300V/85^{\circ}C$.

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 | LND118AL | | |
| Order Code | 633118 | | |
| Full product name | Smart 18W 3-66V 200-1050mA Dali Dim | | |
| Input Information | | | |
| Line Voltage | 100-240Vac_rms | | |
| Line Current | 0.44A@100VAC | 0.36A@120VAC | 0.19A@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 | | |
| Input Power (Max.) | 21W | | |
| Efficiency @Max Load and 70°C case | 87%@100VAC | 87%@120VAC | 88%@230VAC |
| Inrush Current(Typ.) | Cold Start 55A(twidth=270us measured at 50% Ipeak) at 230VAC | | |
| Leakage Current(Typ.) | <0.5mA/230VAC | | |
| Output Information | | | |
| Output Power | 18W(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°C to +50°C, 20-95% RH non-condensing | | |
| Max Case Temperature(Tc) | 75°C for Life & 85°C for UL Safety | | |
| Dimming Features | | | |
| Dimming Interface | DALI(IEC62386), I-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 °Ccase unless specified otherwise

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Output Current Settings

LND118AL, Constant Current output 200-1050mA.

Multi-power driver supplied with dip-switch for the selection of the output current.

Factory default setting is 200mA.

| LND118AL | | DIP-Switch Settings | | | | | |
|-----------|---------|---------------------|----|----|----|----|----|
| Pout Max. | Vout DC | Iout DC | 1 | 2 | 3 | 4 | 5 |
| 13W | 3-66V | 200mA | -- | -- | -- | -- | -- |
| 16W | 3-66V | 250mA | ON | -- | -- | -- | -- |
| 18W | 3-60V | 300mA | -- | ON | -- | -- | -- |
| 18W | 3-51V | 350mA | ON | ON | -- | -- | -- |
| 18W | 3-45V | 400mA | -- | -- | ON | -- | -- |
| 18W | 3-40V | 450mA | ON | -- | ON | -- | -- |
| 18W | 3-36V | 500mA | -- | ON | ON | -- | -- |
| 18W | 3-32V | 550mA | ON | ON | ON | -- | -- |
| 18W | 3-30V | 600mA | ON | ON | -- | ON | -- |
| 18W | 3-27V | 650mA | -- | -- | ON | ON | -- |
| 18W | 3-25V | 700mA | ON | -- | ON | ON | -- |
| 18W | 3-24V | 750mA | -- | ON | ON | ON | -- |
| 18W | 3-22V | 800mA | ON | ON | ON | ON | -- |
| 18W | 3-21V | 850mA | ON | ON | -- | ON | ON |
| 18W | 3-20V | 900mA | -- | -- | ON | ON | ON |
| 18W | 3-18V | 950mA | ON | -- | ON | ON | ON |
| 18W | 3-18V | 1000mA | -- | ON | ON | ON | ON |
| 18W | 3-17V | 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 |
|----------|-----|-----|-----|-----|
| LND118AL | 10 | 16 | 17 | 28 |

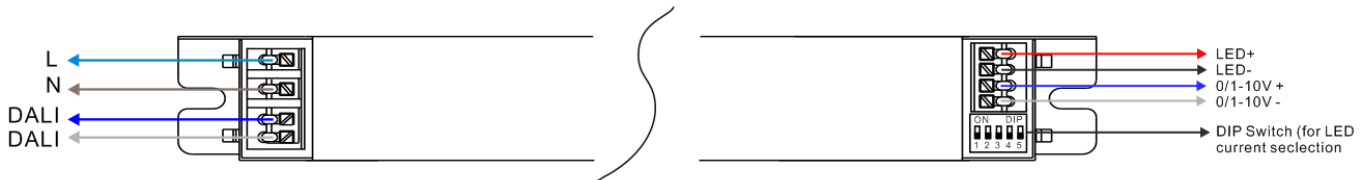
Note: These calculated values are based on MCB S201 series manufactured by ABB

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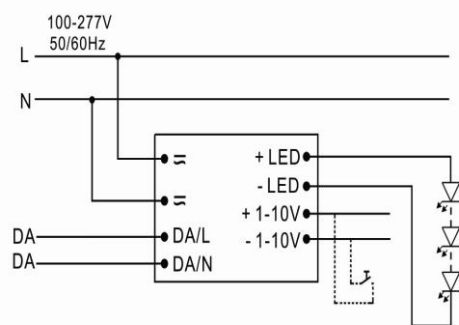
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Terminals

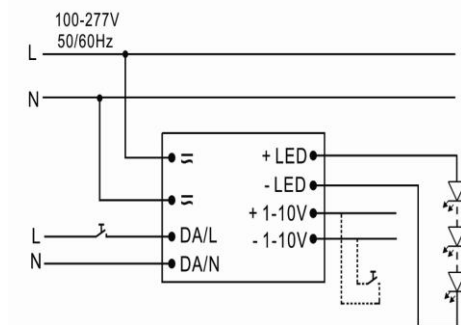


➤ Circuit Diagram

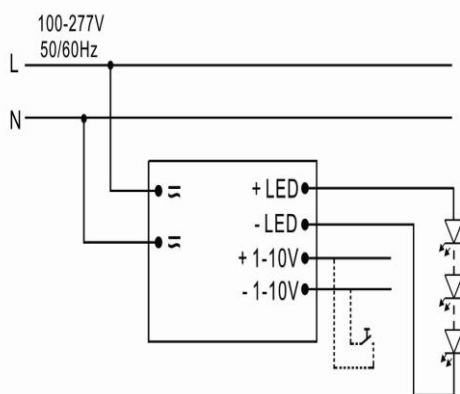
DALI dimming



Switch-Dim Dimming



I-10v dimming



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

2. If connecting DALI interface, the I-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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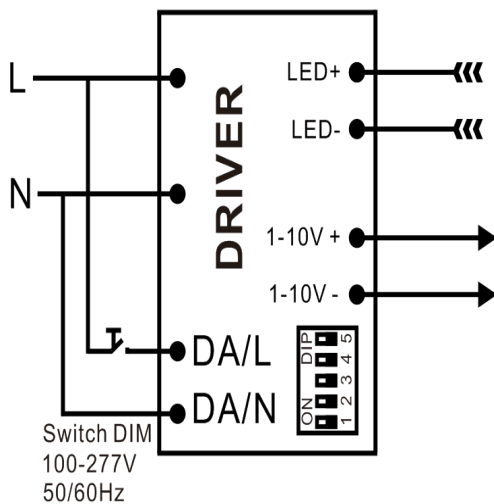
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➤ I-10v Interface dimming control

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

Note: This I-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%.



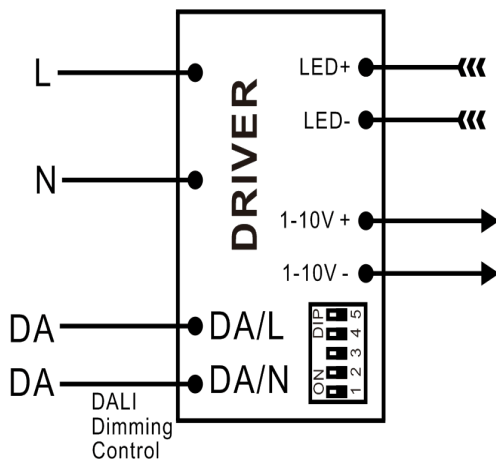
Note: Only use self-reset push button without indicator light.
Risk of short circuit.

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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



DALI RGB



DBC202D



DALI RGBW



DBC402D



DALI RGBWD



DALI SC



DALI CCT4



DALI CCT4U

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

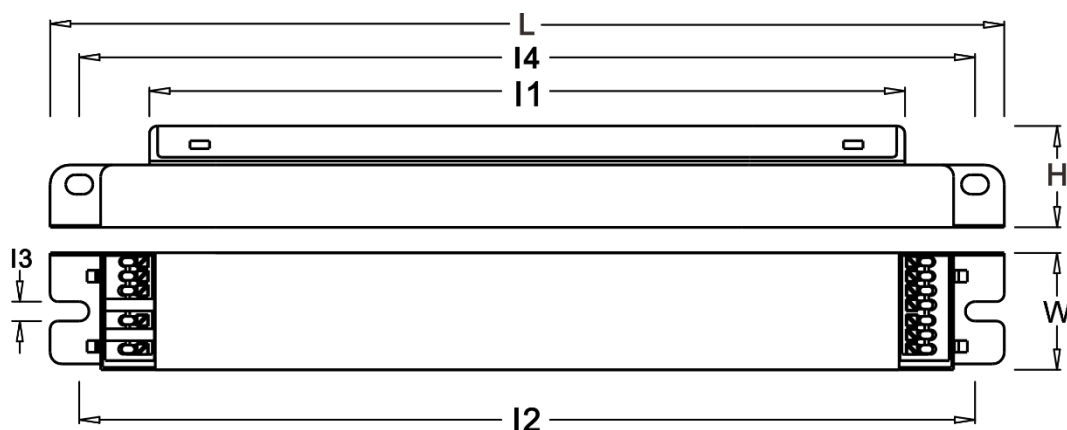
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Mechanical Specifications

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(I1) | 8.7 | 222 |
| Mounting Holes(I2) | 10.6 | 270 |
| Mounting Holes(I3) | 0.2 | 5 |
| Mounting Holes(I4) | 10.6 | 270 |
| Overall Length | 11.0 | 280 |

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