



Constant Voltage Dimmable Driver

Model:LV60W24 DALI



| Model | Output Current | Input Current | Input Power | Output Power Range | PF (230V Full Load) | Efficiency (230V Full Load) | Output Voltage |
|--------------|----------------|---------------|-------------|--------------------|---------------------|-----------------------------|----------------|
| LV60W24 DALI | 0-2500mA | ≤0.35A | ≤70W | 0-60W | ≥0.95 | ≥87% | 24V |

*** Test result @230V, 50Hz, Full Load**

1. Parameters

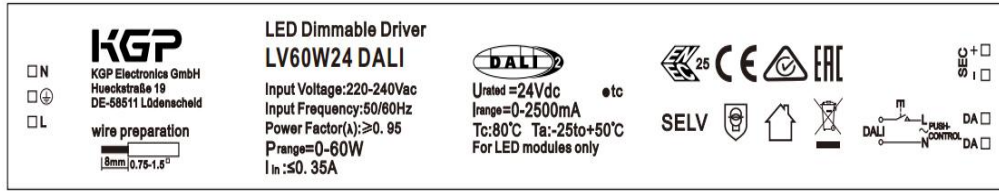
| Category | Item | Technical Norm |
|----------------|--------------------------------|--|
| Features | Output Type | Constant Voltage |
| | Dimming Type | DALI-2 |
| | Output Features | Isolation |
| | IP Grade | IP20 |
| | Insulation Class | Class I |
| Input | Rated Input Voltage | 220-240VAC |
| | Range of Input Voltage | 176-264VAC |
| | Range of DC Input Voltage | 176-280VDC |
| | Frequency | 50/60Hz |
| | Input Current | ≤0.35A |
| | Input Power | ≤70W |
| | Power Factor | ≥0.95 (230VAC, full load) |
| | THD | ≤15% (230VAC, full load) |
| | No-load Power Consumption | ≤0.5W @230VAC (DIM to off) |
| Inrush Current | ≤21A/280us (230VAC, full load) | |
| Output | Output Voltage | 24VDC+/-3% |
| | No Load Voltage | 24.8VDC Max. |
| | Output Current | 0-2500mA |
| | Max. Output Power | 60W |
| | Efficiency | ≥87% (230VAC, full load) |
| | Voltage Ripple | 3% (Vmax-Vmin) / (Vmax+Vmin) |
| | PstLM | ≤1 |
| | SVM | ≤0.4 |
| | Current Accuracy | N/A |
| | Start up Time | ≤0.65S (230VAC, full load) |
| Control Method | PUSH dimming terminal | PUSH dimming terminal (Max. lead wire length: 20m,same port of DALI) |

| | | |
|--|--------------------------|--|
| | DALI function | DALI dimming (Max. lead wire length: 300m) logarithm or linear dimming curve selectable |
| | PUSH-button | Max parallel connections qty for Push-dim 15PCS. |
| | Dimming range | DALI dimming: 1%-100% (1KHz) |
| Protection | Short Circuit Protection | Auto Recovery |
| | Overload Protection | Auto Recovery |
| | No-load Protection | Auto Recovery |
| | Insulation voltage | 3000V 5mA 60S between P-S, 1500V 5mA 60S between P-E |
| | Insulation resistance | >100M ohm @ 500VDC |
| | Leakage current | < 250 μ A, I/P to O/P or I/P to PE @230V input |
| Environment | Ta/Operation Temperature | -25...+50°C |
| | Ts/Storage Temperature | -40...+80°C |
| | Tc/Enclosure Temperature | 80°C |
| | Humidity | 10%...90%RH |
| | Atmosphere | 86-108KPa |
| Construction | Connection Method | Push-in Terminal |
| | Installation | Build-in |
| | PRI Wire preparation | 0.75-1.5□ |
| | SEC Wire preparation | 0.75-1.5□ |
| | Dimension | 250*30*21mm (L*W*H) |
| Standards | Certification | ENEC/CE/SAA |
| | Safety Standards | EN61347-1:2015, EN61347-2-13:2014/A1:2017, EN62493:2015, AS61347.2.13:2018, AS/NZS 61347.1:2016 Inc A1 |
| | EMC Standards | EN55015:2013/A1:2015, EN61000-3-2:2014, EN61000-3-3:2013, EN61547:2009 |
| | Performance | EN62384; IEC 62386-101 ; BS EN 62386-102 ; BS EN 62386-207 |
| | Surge | L-N/1KV (L/N)-PE/2KV |
| Others | RoHS | 2011/65/EU |
| | Life Time | 50000h @Ta / Tc |
| | Warranty | 5years , F.R. < 10000ppm |
| <p>Remark: 1.All Parameters, if not specified, are measured at 230VAC/50Hz and 25°C ambient temperature. 2.LED Driver is a component of the luminaires, Luminaires and wire layout will affect the EMC, please check the EMC with end products again.</p> | | |

2. Connected quantities of different current Breaker

| TYPE | Connected quantities of different current Breaker | | | | | | Input Voltage | Inrush Current (A) | Time (μ s) |
|--------|---|--------------------|--------------------|--------------------|------------------|------------------|---------------|--------------------|-----------------|
| | current (A) | 10 | 13 | 16 | 20 | 25 | | | |
| | Installation wire diameter | 1.5mm ² | 2.5mm ² | 2.5mm ² | 4mm ² | 4mm ² | | | |
| TYPE B | | 11 | 15 | 18 | 23 | 29 | @230VAC | 21 | 280 |
| TYPE C | | 19 | 25 | 30 | 38 | 48 | | | |
| TYPE D | | 38 | 50 | 61 | 76 | 95 | | | |

3. Label



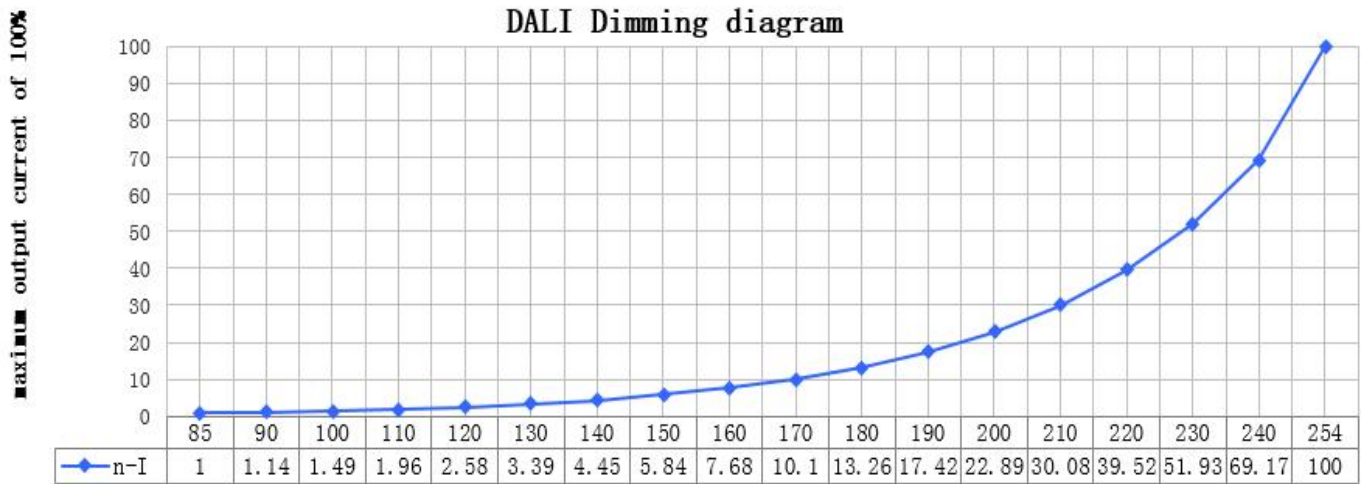
4. DALI dimming curve

4.1 formula for DALI dimming.

$$X(n) = 10^{\left\{ \left[\frac{(n-1)}{(253/3)} \right] - 1 \right\}}$$

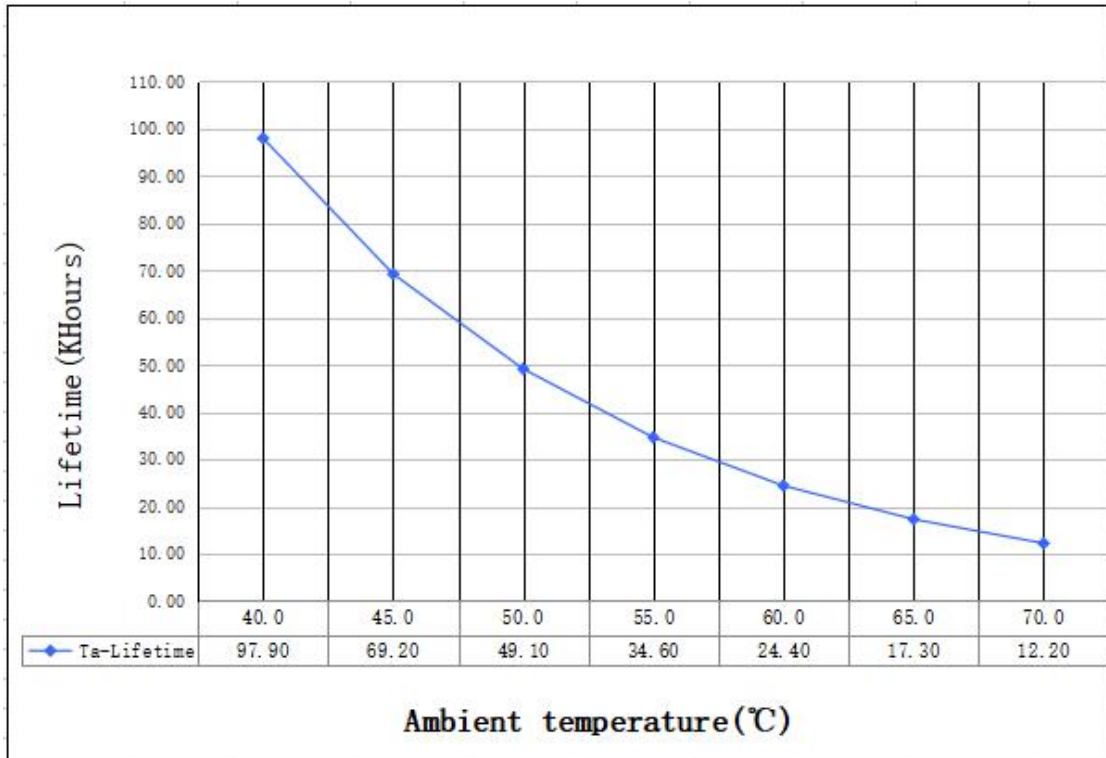
Here, n means the target dimming stage of the total 254 stages.

X(n) means the percent of the maximum output current

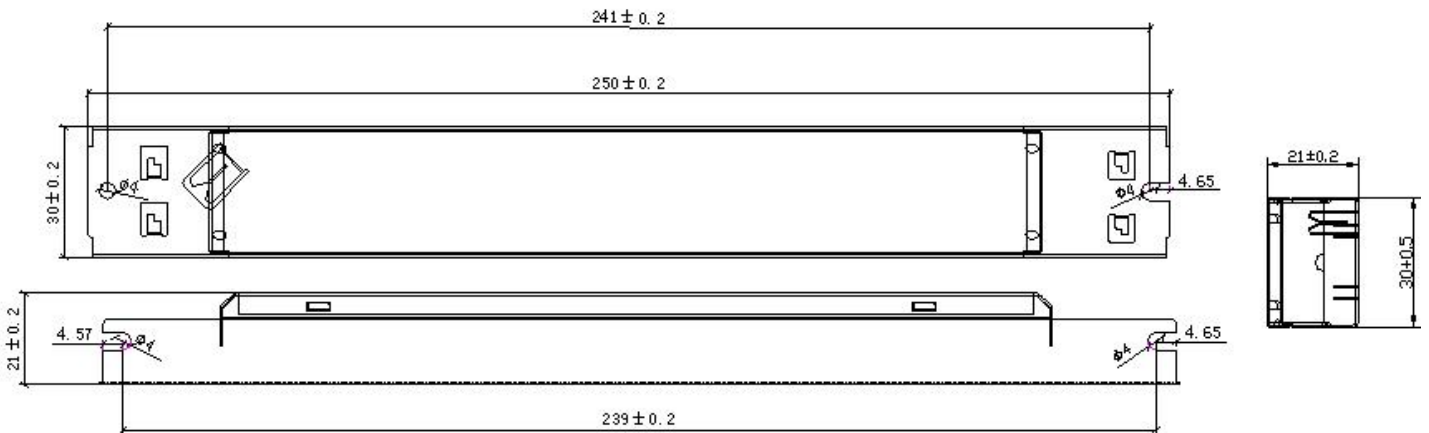


target dimming stage of the total 254 stages

5. Lifetime curve



6. Dimension (Unit: mm)



7. Packing information

| Packing way | Carton L*W*H(mm) | Pcs/Carton | Net weight/ Pcs(kg) | Net weight/ Carton(kg) | Gross weight / Carton(kg) |
|------------------------------|---------------------|------------|------------------------|---------------------------|------------------------------|
| With white box and manual | 420*280*210 | 60 | 0.216 | 12.96 | 13.42 |
| Without white box and manual | 420*280*180 | 60 | 0.04 | 12.96 | 13.34 |

8. Wiring Diagram

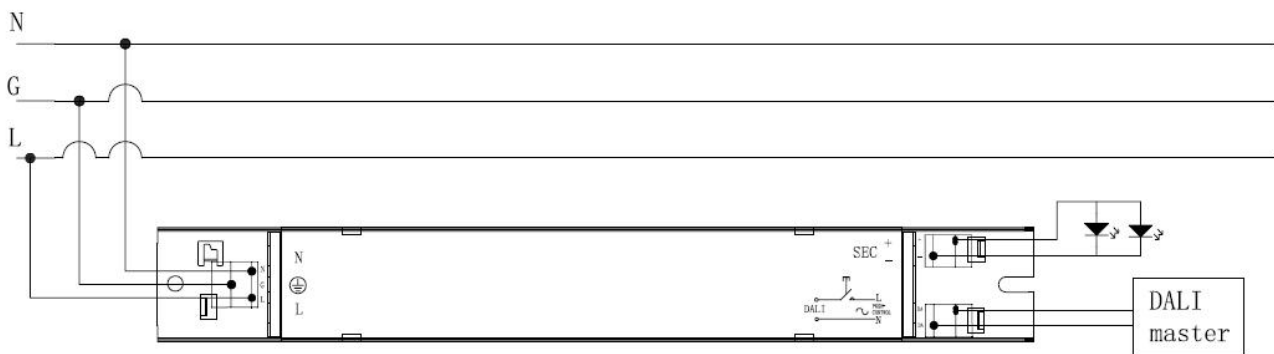
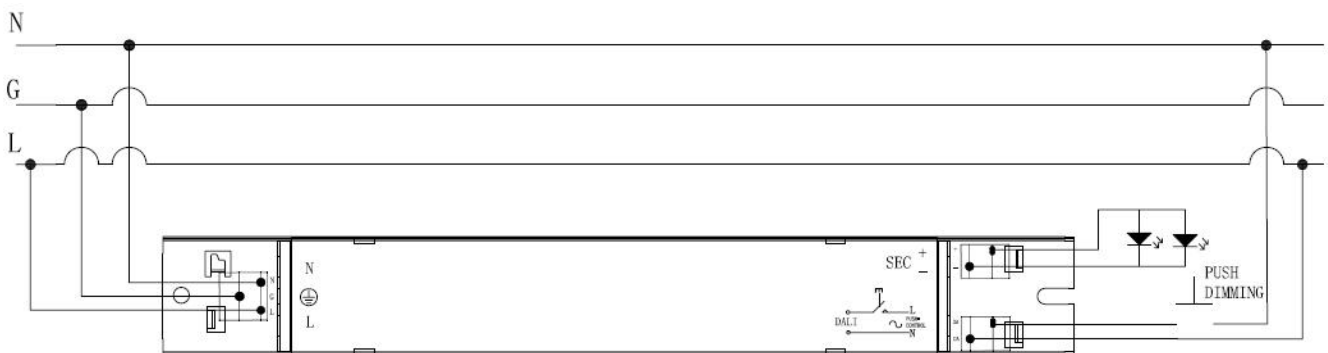


Fig. A:LV60W24 DALI

9. PUSH DIMMING (see wiring diagram)



9.1 On / off:

Short push (120ms-600ms) on the switch

Stepless dimming: long push (> 0.6sec) on the switch

9.2 Power-on memory function

When the LED driver is powered on, it will restore the memory before the LED driver is powered off.

(brightness remembers the brightness after the last dimming is stable, and the bright ness during dimming is not memorized).

9.3 Light on/off

If the light is on, the light will be off after a short press. If the light is off, the light will be on after a short press. The time range of short press is 120-600mS.

9.4 PUSH Dimming

Press and hold the push switch for a long time, the light will enter the dimming state, if the previous time is dimming, it will automatically turn to dimming the next time. After releasing the reset button, the dimming stops and the current illuminance is maintained. The dimming range is 3.8%-100%. The default is to dim when the power is first long-press. If the brightness of the power-on is the maximum brightness, the first long-press is to dim. (Long press 0.6-3S to start dimming.)

9.5 Forced synchronization

Long press for 10 seconds to turn on all the lights and turn on the same brightness (50%), and continue to quickly short press will not change. After a short period of time without short press operation, the module exits the synchronization mode, and the short press restores the switch function.

9.6 PUSH Dimming rate

Long press the push switch 10S to switch the dimming rate to 3S, Long press the push switch 20S to switch the dimming rate to 6S, and it can also be changed by MAGIC or production software

10. Wiring instruction

- All connections must be kept as short as possible to ensure good EMI behaviour
- Mains leads should be kept apart from LED Driver and other leads (ideally 5 – 10 cm distance)
- Advice the maximum length of output wires is 3 m
- Secondary switching is not permitted (Except for constant voltage)
- Incorrect wiring can damage LED modules.
- The wiring must be protected against short circuits to earth (sharp edged metals parts, metal cable clips, louver, etc.)

11. REVISION HISTORY

| DATE | REV | REMARK |
|------------|------|---------------------------------------|
| 2022-10-26 | V1.0 | Initial release. |
| 2023-8-31 | V1.1 | Update the number of circuit breakers |
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