

Constant Voltage LED Driver

SDL60-12/24/48VF6

SDL60-24VF8



Product description

The SDL60 series is an indoor constant voltage DALI LED driver. Its input voltage range is 198-264Vac, with a conversion efficiency of up to 88%. It adopts a fanless design and works at -20°C~+45°C for natural cooling. high power factor, ultra-low total harmonic distortion, low standby power consumption, and all-round protection functions not only greatly improve the reliability of the product, but also ensure the product life cycle. This series of products is designed for LED lighting design and used in indoor lighting. Suitable for various application environments in almost all indoor places where LED lamps can be installed. Comply with DALI2.0 standard (IEC 62386-101, 102, 207, 209), innovative thermal management technology, intelligent protection of power supply life.

Standards

EN61347-1
EN61347-2-13
EN61547
EN55015
EN61000-3-2
EN61000-3-3
EN62384
EN62493
IEC 62386-101,102,207

Characteristics

- AC input range (220-240VAC)
- With active PFC function
- IP20
- Suitable for indoor
- Dimming range: 1-100%
- Protection type: short circuit/over temperature/over voltage/over load protection
- Plastic shell ,filled with glue inside
- Comply with lighting equipment safety regulations
- 5 years warranty

Specifications

| Model | | SDL60-12VF6 | SDL60-24VF6/VF8 | SDL60-48VF6 |
|-----------------------------|------------------------------------------------------------------|---------------------------------------|-------------------------------|-------------------------------|
| Output | turn on time(S) | <680mS | <680mS | <680mS |
| | output power(W) | 6-60 | 6-60 | 6-60 |
| | output voltage(V) | 12 | 24 | 48 |
| | output voltage tolerance | ≤±5% | ≤±5% | ≤±5% |
| | ripple voltage(mV) | ≤240mVp-p | ≤240mVp-p | ≤240mVp-p |
| | Line Regulation | ±1% | ±1% | ±1% |
| | Load Regulation | ±3% | ±3% | ±3% |
| | working current range(A) | 0.5-5 | 0.25-2.5 | 0.125-1.25 |
| Protection | rated DC supply voltage(Vdc) | NA | NA | NA |
| | rated supply voltage(Vac) | 220-240 | 220-240 | 220-240 |
| | voltage range(Vac) | 198-264 | 198-264 | 198-264 |
| | line frequency(Hz) | 50/60 | 50/60 | 50/60 |
| | input current(A) | <0.6 | <0.6 | <0.6 |
| | efficiency (TYPE) | 85%@full load,230Vac | 88%@full load,230Vac | 88%@full load,230Vac |
| | average efficiency(TYPE) (TYPE) | 85%@full load,230Vac | 86.5%@full load,230Vac | 87%@full load,230Vac |
| | no load power consumption(W) | ≤0.5W | ≤0.5W | ≤0.5W |
| | power factor | <u>0.95@230Vac, full load</u> | <u>0.95@230Vac, full load</u> | <u>0.95@230Vac, full load</u> |
| | Displacement factor | 0.95 | 0.95 | 0.95 |
| | THD(typ.) THD (Type) | 8% | 8% | 8% |
| | inrush current(Ipk) (Ipk) | <70A/162uS@50% | <70A/162uS@50% | <70A/162uS@50% |
| | Leakage current (mA) | < <u>0.75mA@264Vac</u> 50Hz | < <u>0.75mA@264Vac</u> 50Hz | < <u>0.75mA@264Vac</u> 50Hz |
| | short circuit protection | power on again after fault correction | | |
| over load protection | hiccup mode, restart automatically after fault correction. | | | |
| over voltage protection | Latch off,power on again after fault correction(under full load) | | | |
| Over temperature protection | Latch off,power on again after fault correction | | | |
| surge capacity | L-N: 1KV | | | |
| Withstand voltage | Input-Output:3000V/5mA/1min | | | |
| Ta(C) | -20...45(See derating curve) | | | |
| Tc max.(C) | max.85 | | | |
| Storage Temperature(°C) | -40...+85°C | | | |

| | | |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Ambient and Life | ambient humidity range | 10%...90%RH, Not condensing |
| | nominal life-time(hrs) | 50'000@Ta |
| Other | dimensions (L×W×H) (mm) 尺寸 | 361.5mm * 30mm * 21.3mm |
| | weight(g) | 230±10G |
| | casing material | Plastics |
| | housing colour | White |
| | type of protection | IP20 |
| | protection class | class II |
| | certificate | |
| Note | <p>1.Tolerance:includes set up tolerance, line regulation and load regulation. 2.Tested at full load,230Vac.Refer to"Power Factor" and "EFFICIENT"curve graphs. 3.Calculate the model's average efficiency for each test voltage by testing at 100%, 75%, 50%, and 25% of rated current and then computing the simple arithmetic average of these four values. 4.All parameters NOT specially mentioned are measured at nominal voltage input, rated load and 25 of ambient temperature. 5.The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.</p> | |

1. Tolerance: including setting tolerance, linear adjustment rate and load adjustment rate.
2. Tested under full load and 230Vac. Refer to the "Power Factor" and "Efficiency" graphs.
3. To calculate the average efficiency of the product, test the voltage at 100%, 75%, 50%, and 25% of the rated current, and then obtain the average of the four values through the arithmetic mean method.
4. All parameters not specifically mentioned are measured at rated voltage input, rated load and 25°C ambient temperature.
5. A power supply is a component used in conjunction with the final device. Since EMC performance will be affected by the complete installation, the final equipment manufacturer must reconfirm that the equipment after complete installation complies with the EMC directive.

| Function | Press time |
|-------------------------------------------------------------|-------------|
| Status no change | <0.05 sec. |
| Push ON/OFF | 0.1-1 sec. |
| Long press to dim down or up | 1.5-10 sec. |
| Long press in the off state, dimming from the minimum value | >1 sec. |

PUSH button dimming/color temperature adjustment.

Dimming: long press .

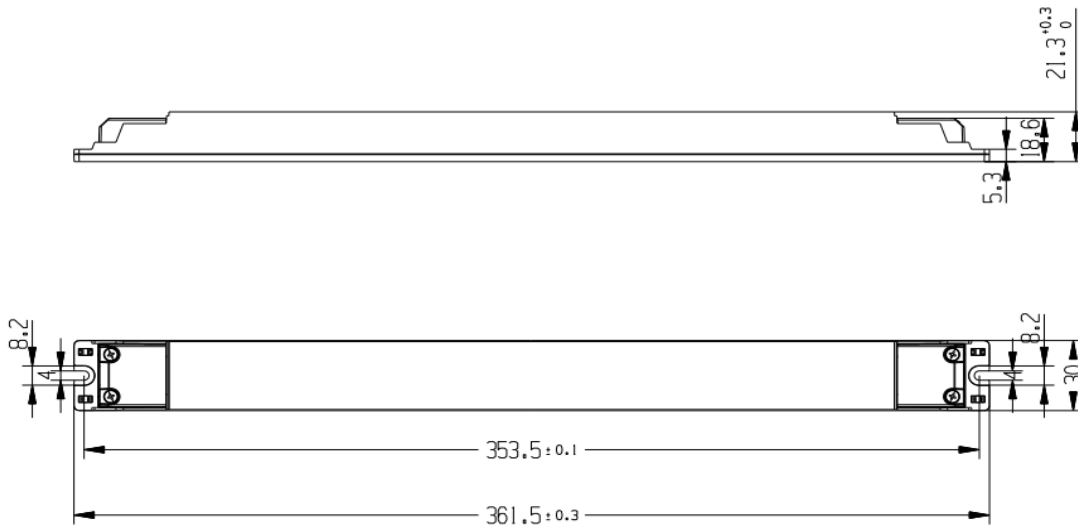
Switch: short press.

Dimming memory: When the light is turned off and turned on again, the light will return to the previously adjusted brightness level.

Each long press will adjust the brightness in the opposite direction.

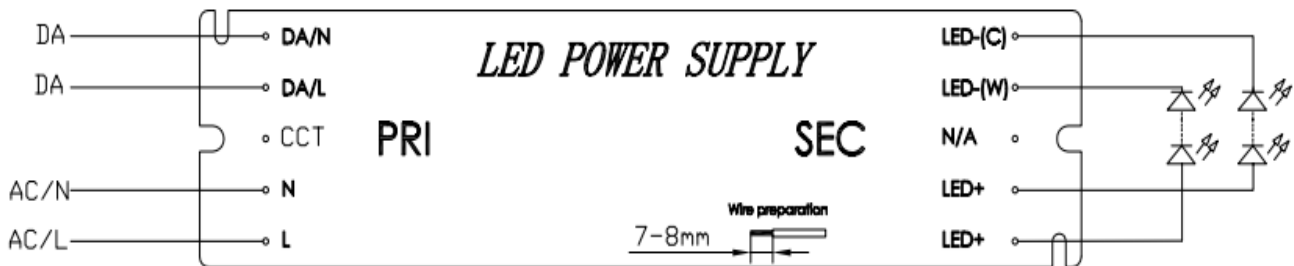
Long press for more than 15S is a synchronization function. All devices will be adjusted to 50%. Press and hold again to adjust the dimming brightness down. (DT8 color temperature will be unified to 4500K. Long press again will adjust the color temperature down.)

Dimensions(mm)

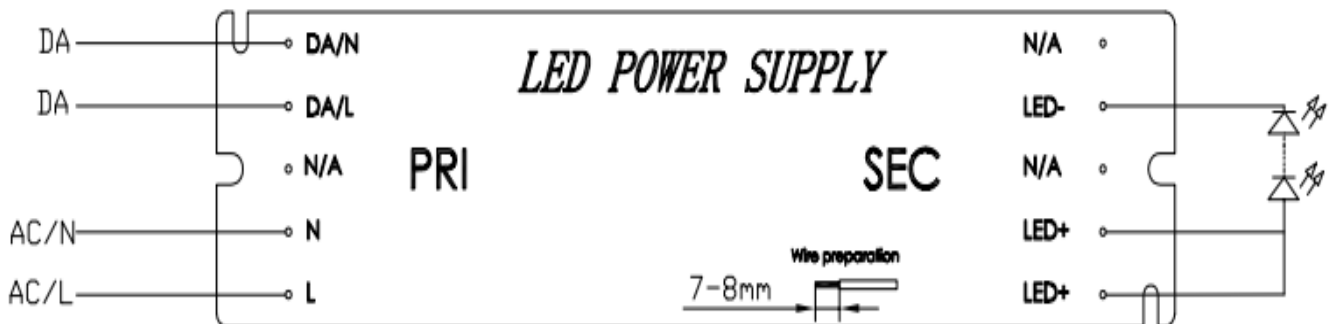


Wiring Diagram

DALI DT8



DALI DT6



Electrical curves

Fig. 1 Output load-Temperature curve

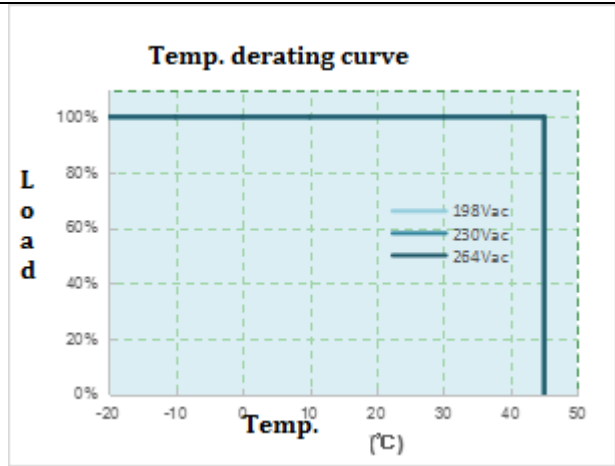


Fig. 2 Static characteristic curve

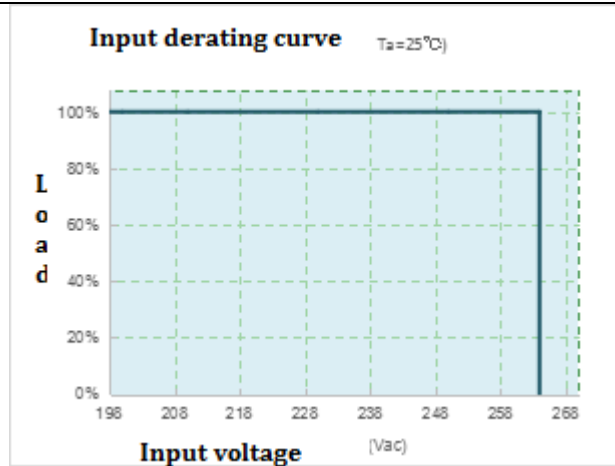


Fig. 3 I-V curve

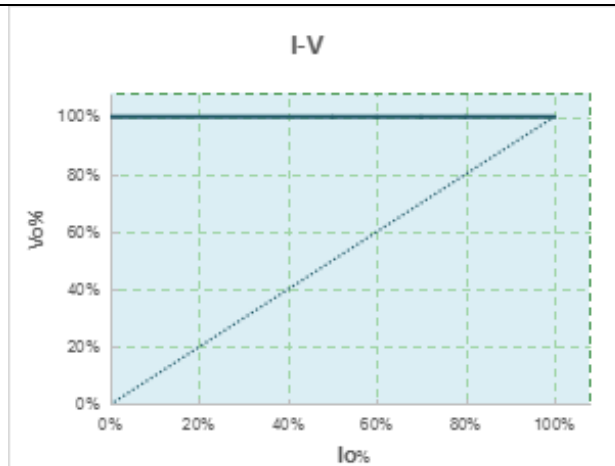


Fig. 4 Power factor characteristic curve

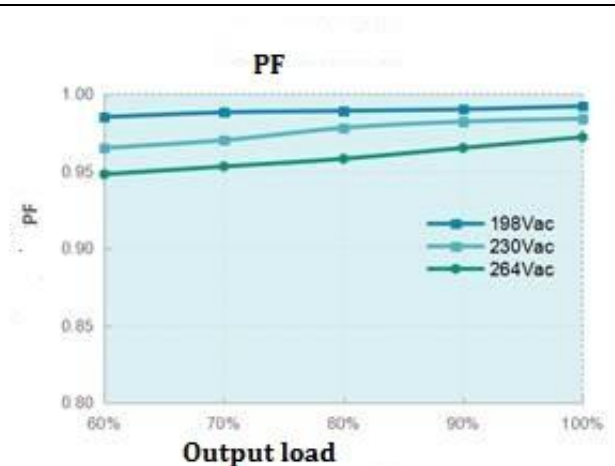


Fig.5 Total harmonic distortion curve (THD)

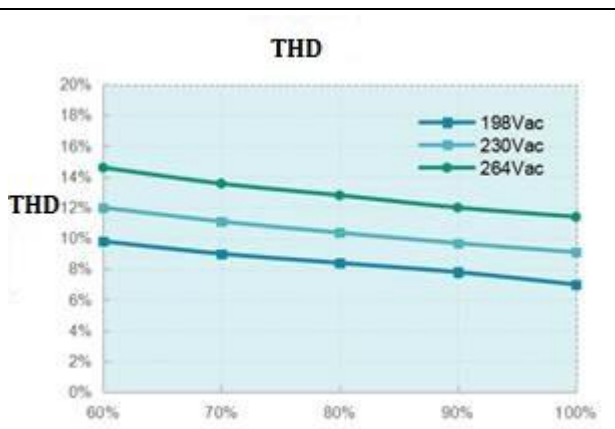
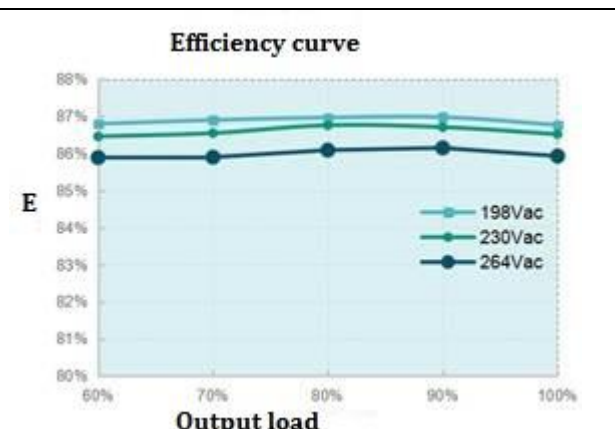


Fig.6 Efficiency-Load curve



MCBS

| Model \ MCBS | B10 | B13 | B16 | B20 | C10 | C13 | C16 | C20 |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|
| SDL60-12VF6 | 10 | 13 | 16 | 20 | 12 | 16 | 20 | 25 |
| SDL60-24VF6/VF8 | 10 | 13 | 16 | 20 | 12 | 16 | 20 | 25 |
| SDL60-48VF6 | 10 | 13 | 16 | 20 | 12 | 16 | 20 | 25 |

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Package

| Model | Carton quantity(pcs) | Carton dimension(mm) | G.W./CTN(kg) |
|-----------------|----------------------|----------------------|--------------|
| SDL60-12VF6 | | | |
| SDL60-24VF6/VF8 | | | |
| SDL60-48VF6 | | | |

Revision history

| Date | Rev. | Remark |
|------------|------|--------------------|
| 2023.8.23 | A2 | Version update |
| 2023.12.18 | A3 | Push diagram added |
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