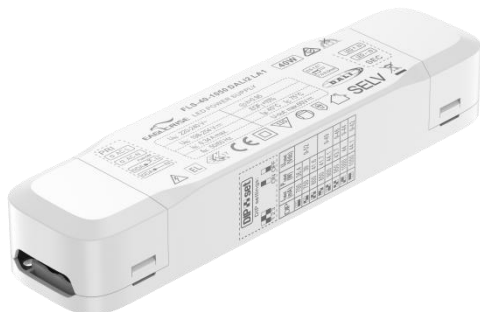


## 40W DALI+PUSH Dimming power supply



■ Approve



### Features

- Class II, SELV, independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: > 0.95
- Efficiency: 87%
- Support DALI-2, Push Dimming
- 5 years warranty

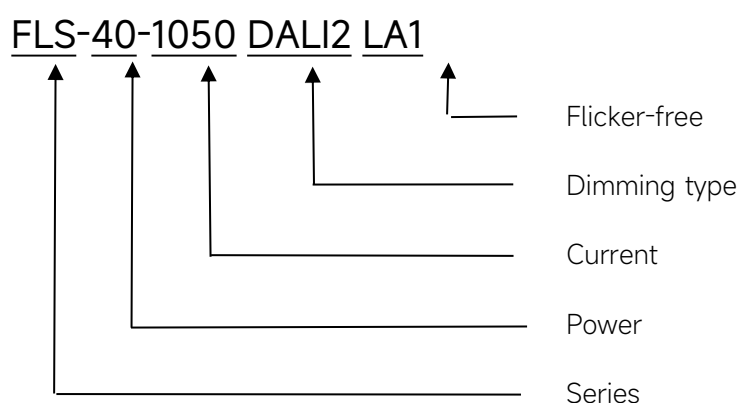
### Applications

- LED panel, down light

### ◆ Description

FLS-40-1050 DALI2 LA1 is a 40W constant current LED driver with 700 to 1050mA output current and a forward voltage range from 9 to 52Vdc. The output current is adjustable by DIP Switch. With it's dimensions from 187 x 45 x 30.5mm. It is easy to integrate in LED Panel and down light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

### ◆ Model code



## ◆ Specification

|             |                                  |   |     |     |      |     |      |      |      |
|-------------|----------------------------------|---|-----|-----|------|-----|------|------|------|
| Output      | Constant Current (mA)            | 700   | 750 | 800 | 850  | 900 | 950  | 1000 | 1050 |
|             | Voltage Range (VDC)              | 9-52  |     |     | 9-49 |     | 9-46 | 9-44 | 9-42 |
|             | Unload voltage Max.              | 60VDC   |     |     |      |     |      |      |      |
|             | Current Accuracy                 | ±5%   |     |     |      |     |      |      |      |
|             | Output HF current ripple(≥1KHz)  | ±10%  |     |     |      |     |      |      |      |
|             | Output LF current ripple(≤120Hz) | ±3%   |     |     |      |     |      |      |      |
|             | SVM                              | ≤0.4  |     |     |      |     |      |      |      |
|             | P <sub>st</sub>                  | ≤1  |     |     |      |     |      |      |      |
|             | Efficiency(Typ.)                 | 87%@Full load   |     |     |      |     |      |      |      |
| Input       | Rated input voltage              | 220-240VAC  |     |     |      |     |      |      |      |
|             | Range of input voltage           | 198-264VAC  |     |     |      |     |      |      |      |
|             | Range input voltage(DC)          | 198-280VDC  |     |     |      |     |      |      |      |
|             | Frequency(Hz)                    | 0/50/60 Hz  |     |     |      |     |      |      |      |
|             | Displacement factor              | ≥0.9  |     |     |      |     |      |      |      |
|             | Power Factor                     | >0.95@Full load   |     |     |      |     |      |      |      |
|             | Input Current                    | 0.34A   |     |     |      |     |      |      |      |
|             | Start-up time                    | < 0.7S  |     |     |      |     |      |      |      |
|             | No Load Power                    | ≤0.5W   |     |     |      |     |      |      |      |
|             | Standby Power                    | ≤0.5W   |     |     |      |     |      |      |      |
|             | Network standby power            | ≤0.5W   |     |     |      |     |      |      |      |
|             | THD (Typ.)                       | <10%@Full load  |     |     |      |     |      |      |      |
| Dimming     | Dimming                          | YES   |     |     |      |     |      |      |      |
|             | Dimming mode                     | DALI-2 (IEC 62386-101,102,207) & Push Dimming (Corridor Function) |     |     |      |     |      |      |      |
|             | Dimming depth                    | 1%  |     |     |      |     |      |      |      |
|             | Dimming current range            | 1 ~100%   |     |     |      |     |      |      |      |
| Protection  | Over Load Protection             | 103-120%  |     |     |      |     |      |      |      |
|             |                                  | YES/Latch off   |     |     |      |     |      |      |      |
|             | Over Voltage Protection          | > 60VDC   |     |     |      |     |      |      |      |
|             |                                  | YES/Latch off   |     |     |      |     |      |      |      |
|             | Short circuit Protection         | YES/Latch off   |     |     |      |     |      |      |      |
|             | Over Temperature Protection      | YES/Auto Resume   |     |     |      |     |      |      |      |
| Environment | Operating Temperature            | -20°C~+45°C   |     |     |      |     |      |      |      |
|             | Humidity                         | 20%-90%RH   |     |     |      |     |      |      |      |
|             | T <sub>c</sub>                   | 75°C  |     |     |      |     |      |      |      |
|             | Storage Temperature              | -25°C~+60°C   |     |     |      |     |      |      |      |
|             | Lifetime                         | >50000h,@T <sub>c</sub> =75°C                                     |     |     |      |     |      |      |      |
| Surface     | Dimension                        | 187X45X30.5(LXWXH)mm  |     |     |      |     |      |      |      |

|           |  |                                |
|-----------|--|--------------------------------|
| Standards | IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;EN61347- 1, EN61347-2- 13, EN62384;GB/T17743;EN61547<br>GB 19510.1,GB 19510.14;GB/T 17743,GB 17625.1;EN IEC 55015,EN IEC 61000-3-2,EN 61000-3-3  |                                |
| Others    | ErP  | EU 2019/2020                   |
|           | RoHS   | RoHS (2011/65/EU) (EU)2015/863 |
| Note      | 1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.<br>2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor. |                                |

## ◆ Parameter

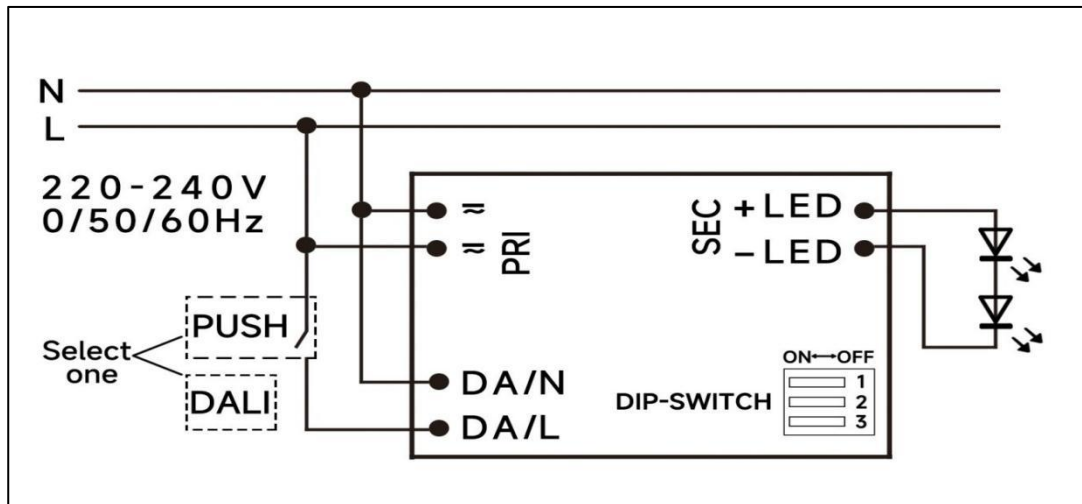
| Number | Output      | Switch position |    |    |
|--------|-------------|-----------------|----|----|
|        | Current(mA) | 1               | 2  | 3  |
| 1      | 700         | --              | -- | -- |
| 2      | 750         | ON              | -- | -- |
| 3      | 800         | --              | ON | -- |
| 4      | 850         | ON              | ON | -- |
| 5      | 900         | --              | -- | ON |
| 6      | 950         | ON              | -- | ON |
| 7      | 1000        | --              | ON | ON |
| 8*     | 1050        | ON              | ON | ON |

\* Factory default

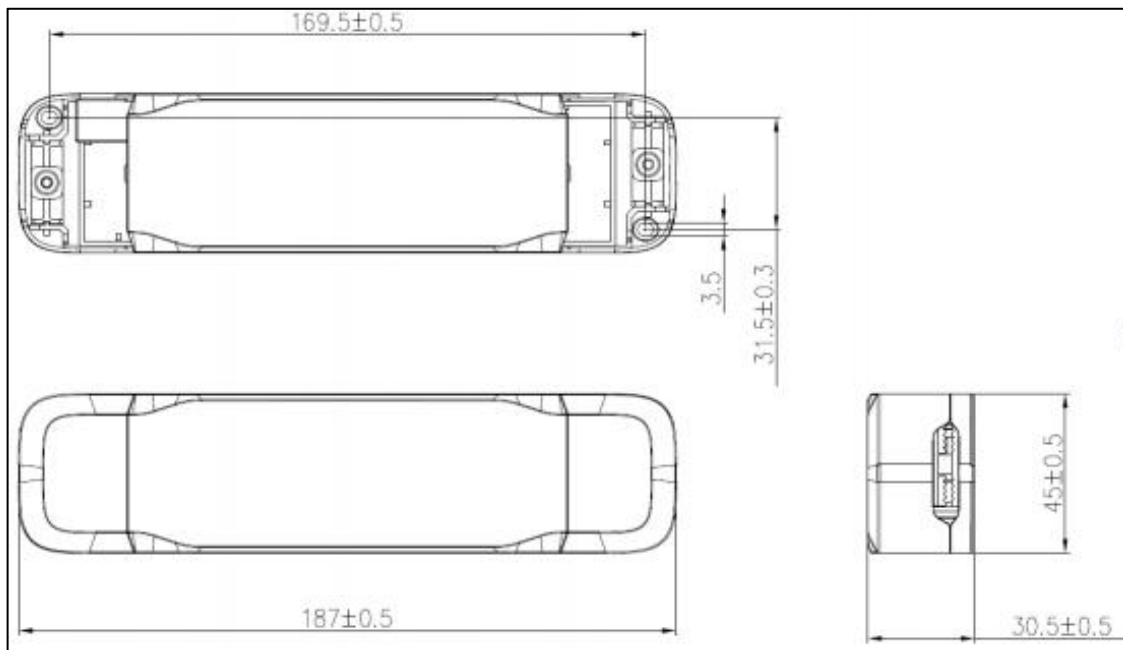
## ◆ Circuit Breaker

| I <sub>peak</sub> | T <sub>width</sub> | B10   | B16   | B20   | C10   | C16   | C20   |
|-------------------|--------------------|-------|-------|-------|-------|-------|-------|
| 5.76A             | 62.4μs             | 23pcs | 37pcs | 47pcs | 23pcs | 37pcs | 47pcs |

## ◆ Wiring diagram



## ◆ 2D diagram

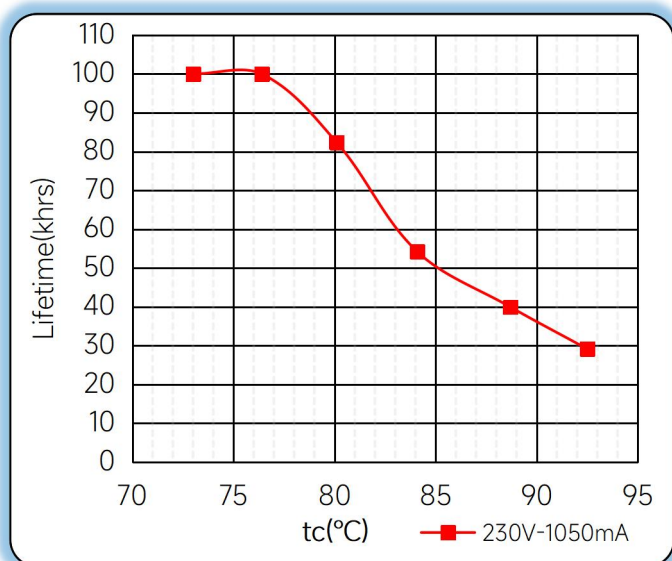


## ◆ Wiring & Connections

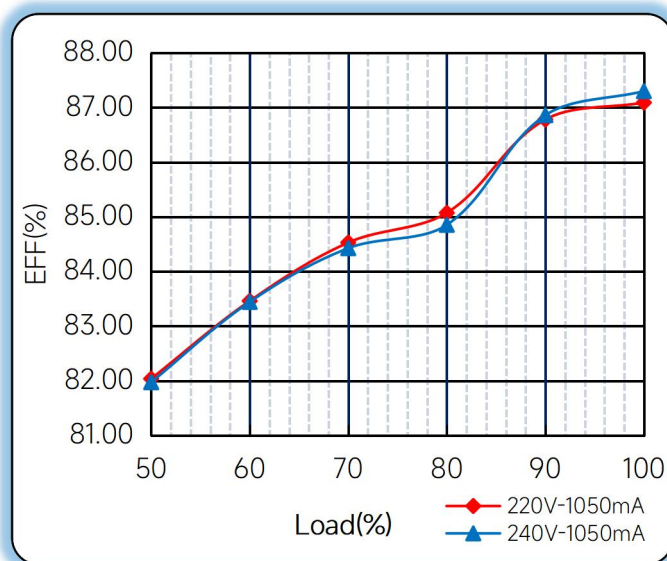
| Specification item |                           | Value (Unit )             |
|--------------------|---------------------------|---------------------------|
| Input              | Input wire cross-section  | 0.5...1.5 mm <sup>2</sup> |
|                    | Input wire gauge          | 16...20 AWG               |
|                    | Input wire strip length   | 8...9mm                   |
| Output             | Output wire cross-section | 0.5...1.5 mm <sup>2</sup> |
|                    | Output wire gauge         | 16...20 AWG               |
|                    | Output wire strip length  | 8...9mm                   |

## ◆ Curve for FLS-40-1050 DALI2 LA1, $I_o=1050\text{mA}$

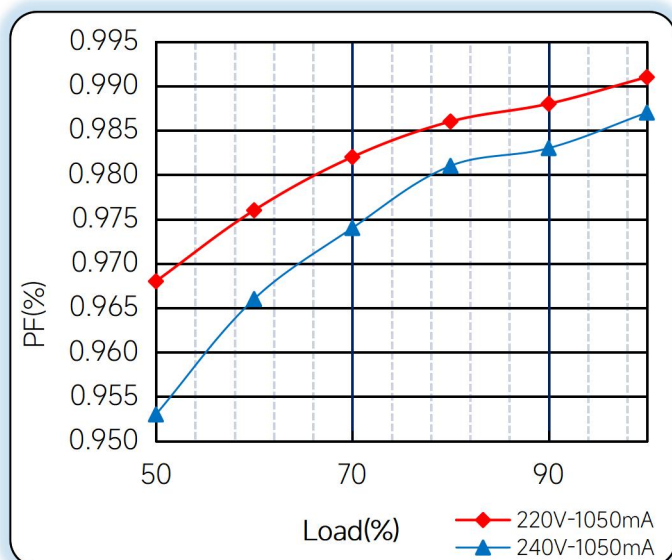
Lifetime vs. Temperature Curve



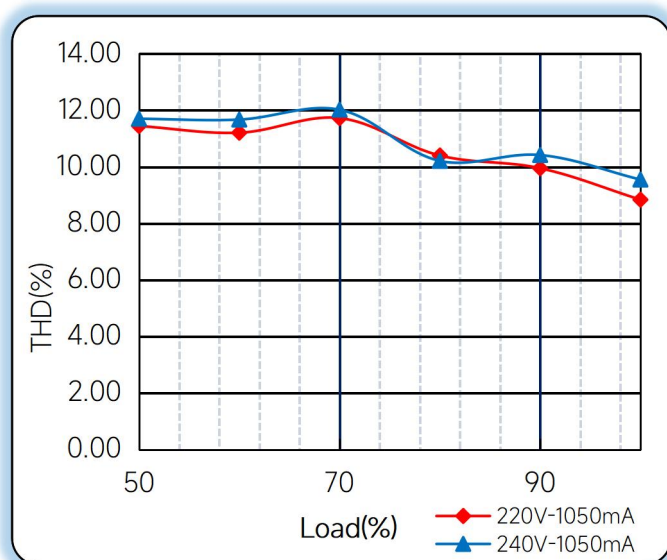
Efficiency vs. Load



Power Factor Characteristics



THD vs. Load



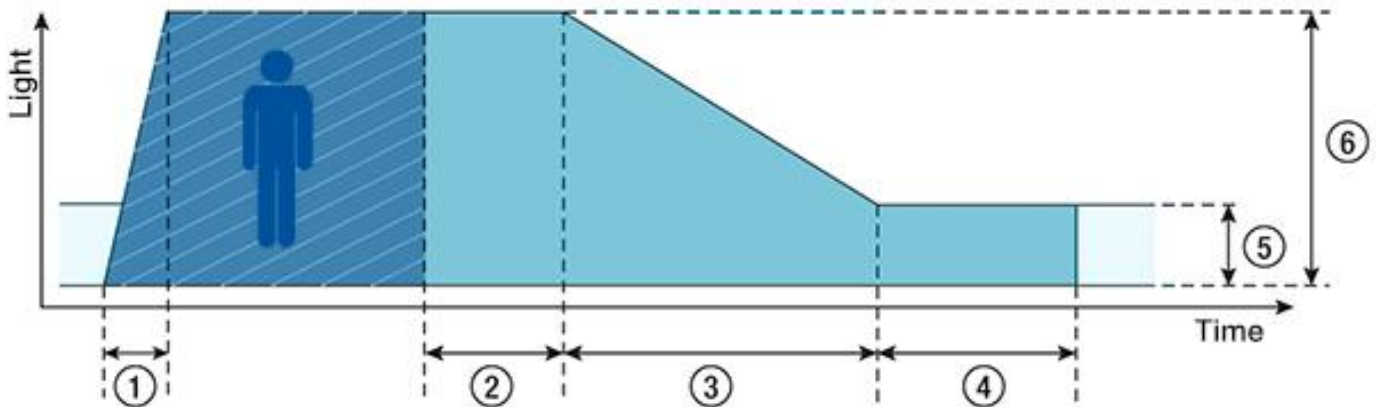
## ◆ Push dimming operation

| Action                   | Action duration | Function  |
|--------------------------|-----------------|---|
| Short push               | <0.5s           | Turn on/off   |
| Short push<br>twice      | <0.5s           | LED on: Save current brightness level<br>LED off: Delete saved level and turn on at 100% brightness   |
| Short push five<br>times | <3s             | Quit Corridor mode  |
| Long push                | 0.5-14s         | Dimming up or down  |
| Long push                | 15s-2mins       | Sync all LEDs to be 100% brightness   |
| Long push                | >2mins          | Enter Corridor mode - LED keep 100% brightness for 2mins.<br>Then brightness will turn to be 10% within 32s if no action during 2mins<br>100% brightness. |

### Note:

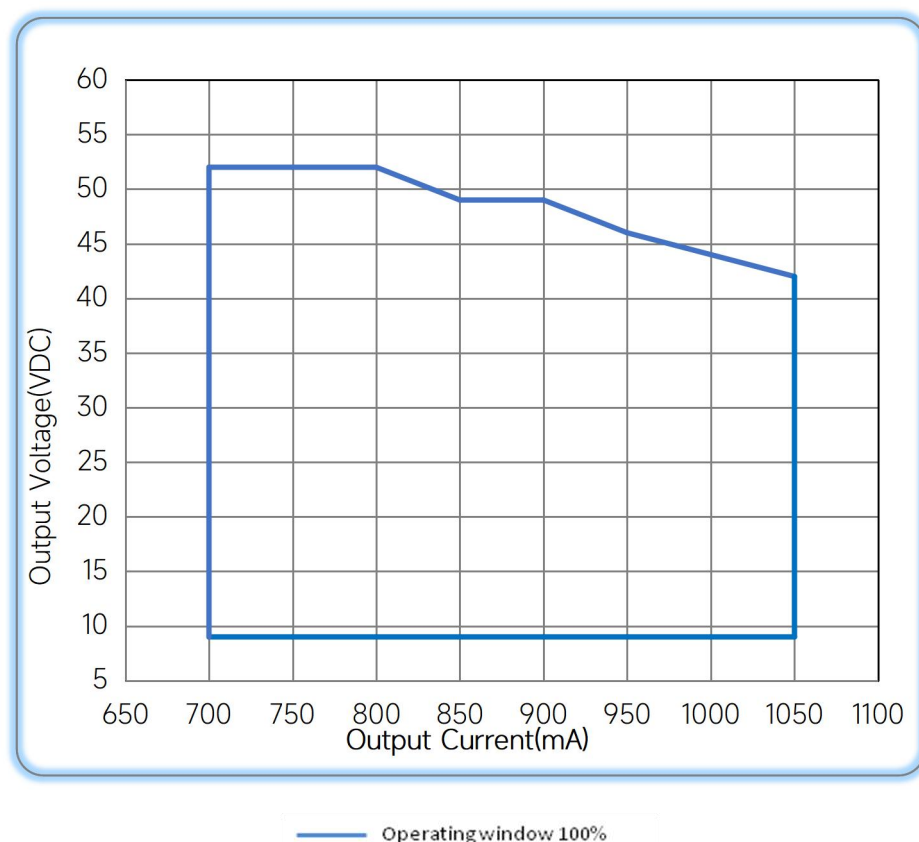
- 1.The factory default brightness is at 100%.
- 2.Up to 30 drivers can perform the PUSH dimming at the same time when utilizing one common push button
- 3.The maximum length of the cable from the push button to the last driver is 200 meters.

## ◆ Corridor mode



- ◆ ① **Fade-in time(0.5s)**: the time that starts as soon as the presence of a person is detected. During the fade-in time the luminous intensity is faded up to the presence value.
- ◆ ② **Run-on time(120s)**: the time that starts as soon as the presence of a person is no longer detected. If the presence of a person is detected again during the run-on time the run-on time is restarted from zero. If no presence is detected during the run-on time the fade time is started as soon as the run-on time expires.
- ◆ ③ **Fade time(32s)**: the time during which the luminous intensity is faded from the presence value to the absence value.
- ◆ ④ **Switch-off delay (Never Off)**: the time during which the absence value is held before the lighting is switched off. Depending on the profile selected the switch-off delay may have different values or may not be defined.
- ◆ ⑤ **Absence value(default: 10 %)**: the luminous intensity when there is no person present.
- ◆ ⑥ **Presence value (default: 100 %)**: the luminous intensity when persons are present.

## ◆ Operating window



## ◆ Revision Updates

| ITEM          | BEFORE | AFTER | VERSION | DATE       |
|---------------|--------|-------|---------|------------|
| Initial       |        |       | A       | 2022/05/04 |
| Start-up time | 0.6S   | 0.7S  | A       | 2022/08/12 |

Tel: +86-0757-86256822, +86-0757-86256831

E-mail: sales@eaglerise.com

Website : <https://lighting.eaglerise.com>



EAGLERISE



Manual