

## 42W Constant Current -FDS power supply



■ Approve



### Features

- For luminaires of protection Class II,SELV
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor :0.95
- Efficiency: 89.5%
- Adjustable Output Current with dip-switch
- 5 years warranty

### Applications

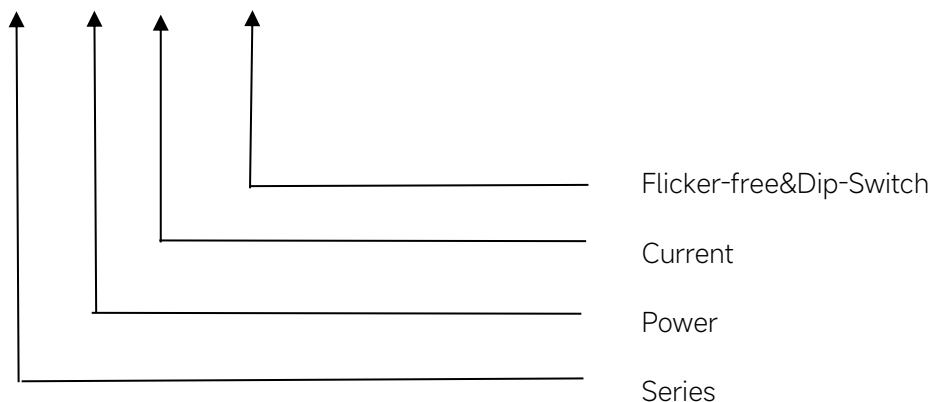
- Track Spot light

### ◆ Description

FDS-42-1050 LD2-3 Wires is a 42W constant current LED driver that operates from 198-264Vac input with 700 to 1050mA output current and a forward voltage range from 15 to 40 Vdc. The output current is adjustable by DIP Switch. With it's compact dimensions from 130 X 34 X 45.5mm it is easy to integrate in track spot light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

### ◆ Model code

#### FDS-42-1050 LD2-3 Wires



## ◆ Specification

|             | Constant Current                 | 700mA                                                                | 800mA | 900mA | 1050mA |
|-------------|----------------------------------|----------------------------------------------------------------------|-------|-------|--------|
| Output      | Voltage Range                    | 15-40VDC                                                             |       |       |        |
|             | Unload voltage Max.              | 59VDC                                                                |       |       |        |
|             | Current Accuracy                 | ±5%                                                                  |       |       | ±7%    |
|             | Output HF current ripple(≥1KHz)  | ±3%                                                                  |       |       |        |
|             | Output LF current ripple(≤120Hz) | ±3%                                                                  |       |       |        |
|             | SVM                              | ≤0.4                                                                 |       |       |        |
|             | P <sub>st</sub>                  | ≤1                                                                   |       |       |        |
|             | Efficiency(Typ.)                 | 89.5%                                                                |       |       |        |
| Input       | Rated input voltage              | 220-240VAC                                                           |       |       |        |
|             | Range of input voltage           | 198-264VAC                                                           |       |       |        |
|             | Maximum voltage                  | 300VAC@1 h maximum,unit might not operate in this abnormal condition |       |       |        |
|             | Frequency(Hz)                    | 50/60 Hz                                                             |       |       |        |
|             | Displacement factor              | ≥0.9                                                                 |       |       |        |
|             | Power Factor                     | >0.95                                                                |       |       |        |
|             | Input Current max                | 0.28A MAX.                                                           |       |       |        |
|             | Start-up time                    | < 0.5S                                                               |       |       |        |
|             | No Load Power                    | ≤0.5W                                                                |       |       |        |
|             | THD (Typ.)                       | <10%                                                                 |       |       |        |
| Protection  | Over Load Protection             | 103-130%                                                             |       |       |        |
|             |                                  | YES/Auto Resume                                                      |       |       |        |
|             | Over Voltage Protection          | > 59VDC                                                              |       |       |        |
|             |                                  | YES/Auto Resume                                                      |       |       |        |
|             | Short circuit Protection         | YES/Auto Resume                                                      |       |       |        |
| capability  | Surge capability (L-N)           | 2KV                                                                  |       |       |        |
|             | Surge capability (L/N-Ground)    | 4KV                                                                  |       |       |        |
| Environment | Operating Temperature            | -20°C~+35°C                                                          |       |       |        |
|             | Humidity                         | 20%-90%RH                                                            |       |       |        |
|             | T <sub>c</sub>                   | 75°C                                                                 |       |       |        |
|             | Storage Temperature              | -20°C~+60°C                                                          |       |       |        |
|             | Life time                        | > 50000h@T <sub>c</sub> =75°C                                        |       |       |        |
|             | Noise                            | ≤25dB(A)@20cm                                                        |       |       |        |
| Surface     | Dimension                        | 130 X 34 X 45.5(LXWXH)mm                                             |       |       |        |
|             | material                         | PC                                                                   |       |       |        |
| Standards   | Safety                           | GB19510. 1, GB19510. 14; IEC61347- 1, IEC61347-2- 13; 61347.2.13     |       |       |        |
|             | EMC                              | GB/T17743, GB17625. 1; EN55015, EN61000-3-2, EN61000-3-3, EN61547    |       |       |        |
|             | ErP                              | Erp2.0 EU 2019/2020                                                  |       |       |        |

|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
|      | RoHS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | RoHS (2011/65/EU) (EU)2015/863 |
| Note | <p>1.All parameters NOT specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.</p> <p>2.Ripple &amp; Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF &amp; 47 uF parallel capacitor.</p> <p>3.Data are typical values obtained from test samples</p> <p>4.The over-temperature protection of the product is provided by the IC.</p> <p>5.All Eaglerise power supply are complied with EMI regulations. Since they are belong to component and will be installed inside system enclosure. When they are integrated into a system, the EMI characteristics of the system must be re-verified again.</p> |                                |

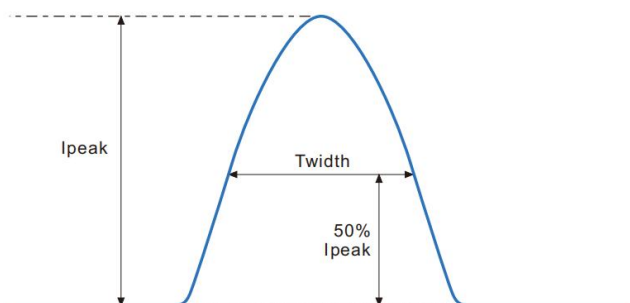
## ◆ Parameter

| Number | Output       |               |                       |           | Switch position |    |
|--------|--------------|---------------|-----------------------|-----------|-----------------|----|
|        | Current (mA) | Voltage (VDC) | Voltage No load (VDC) | Power (W) | 1               | 2  |
| 1      | 700mA        | 15-40VDC      | 59                    | 28        | --              | -- |
| 2      | 800mA        |               |                       | 32        | ON              | -- |
| 3      | 900mA        |               |                       | 36        | --              | ON |
| *4     | 1050mA       |               |                       | 42        | ON              | ON |

\* Factory default

## ◆ Inrush Current

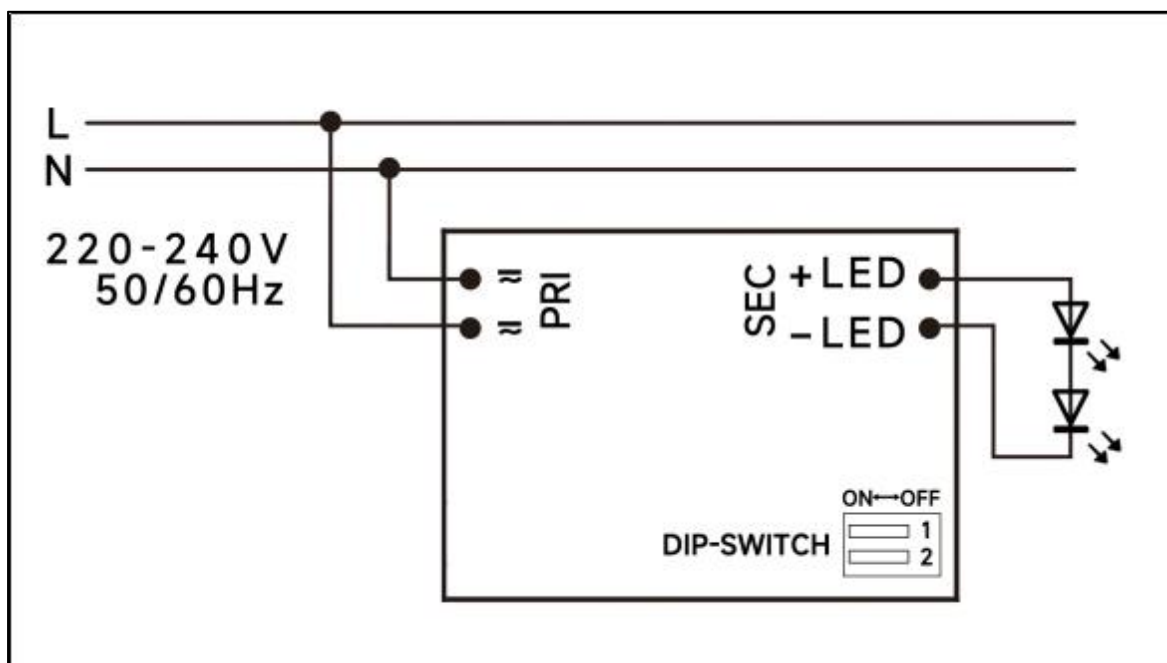
| I <sub>peak</sub> | T <sub>width</sub> | B10   | B16   | B20   | C10   | C16   | C20   |
|-------------------|--------------------|-------|-------|-------|-------|-------|-------|
| 20.4A             | 138μs              | 28pcs | 45pcs | 57pcs | 28pcs | 45pcs | 57pcs |

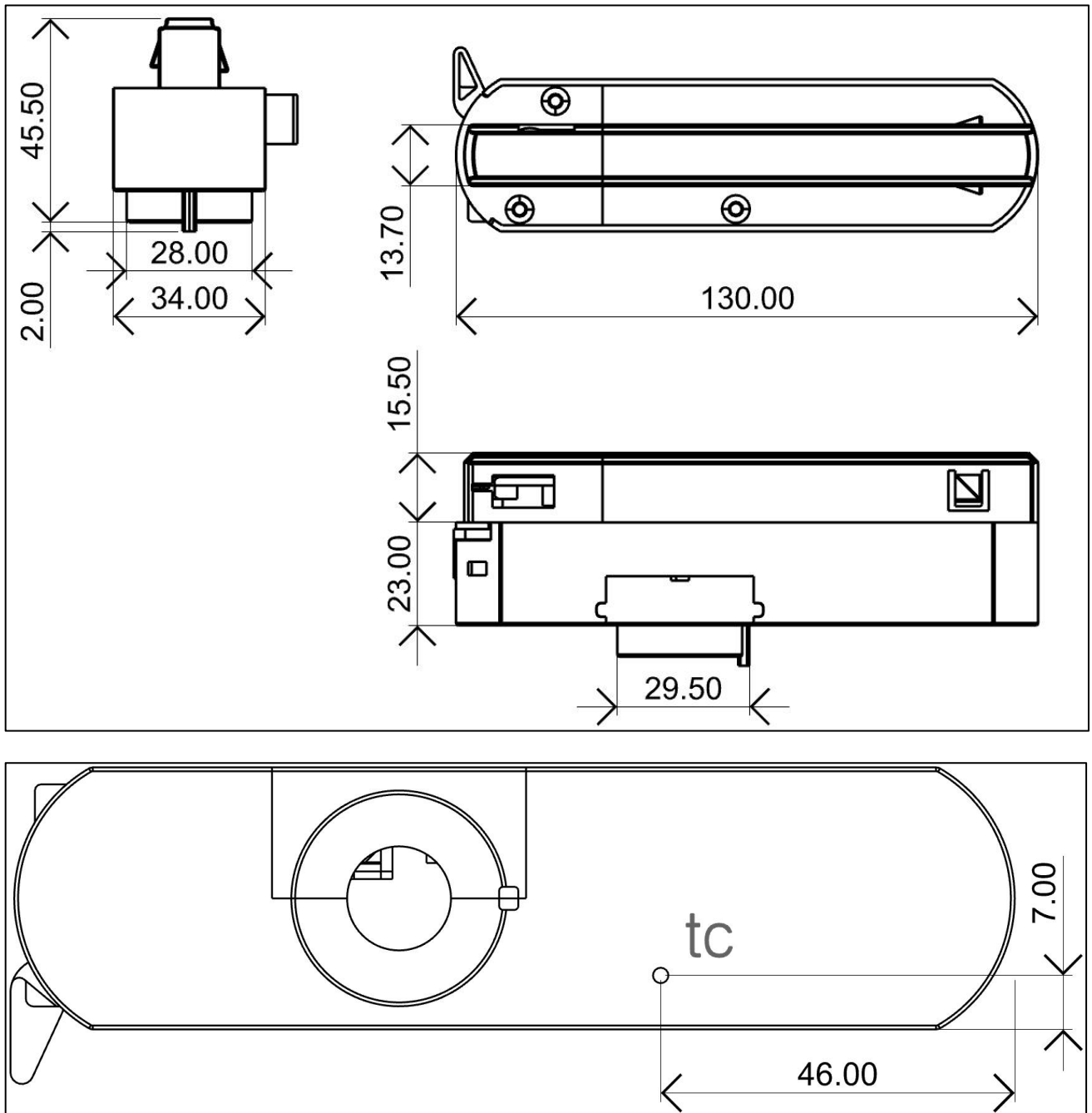


Remarks:

- 1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
- 2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

## ◆ Wiring diagram

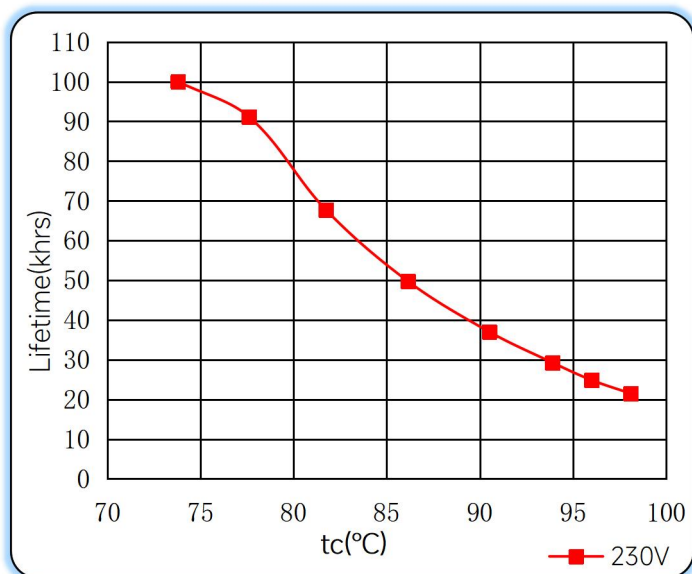




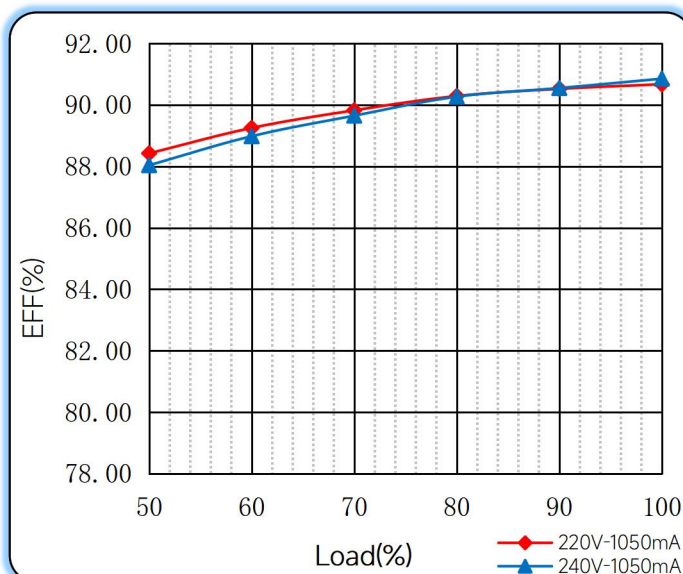
| Specification item |                           | Value (Unit )             |
|--------------------|---------------------------|---------------------------|
| Output             | Output wire cross-section | 0.5...1.5 mm <sup>2</sup> |
|                    | Output wire gauge.        | 16...20 AWG 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

## ◆ Curve for FDS-42-1050 LD2-3 Wires, $I_o=1050\text{mA}$

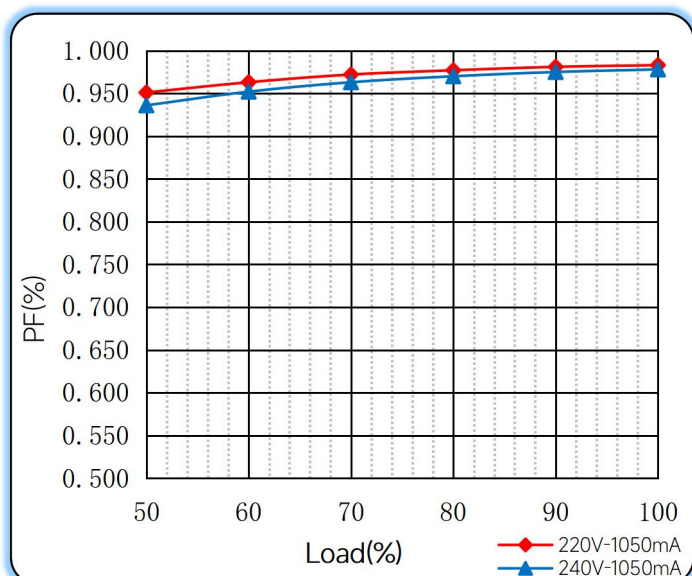
Lifetime vs. Temperature Curve



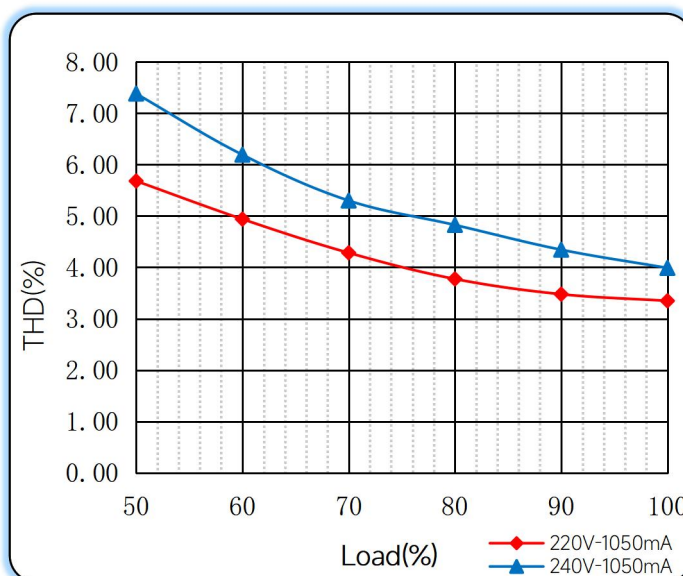
Efficiency vs. Load



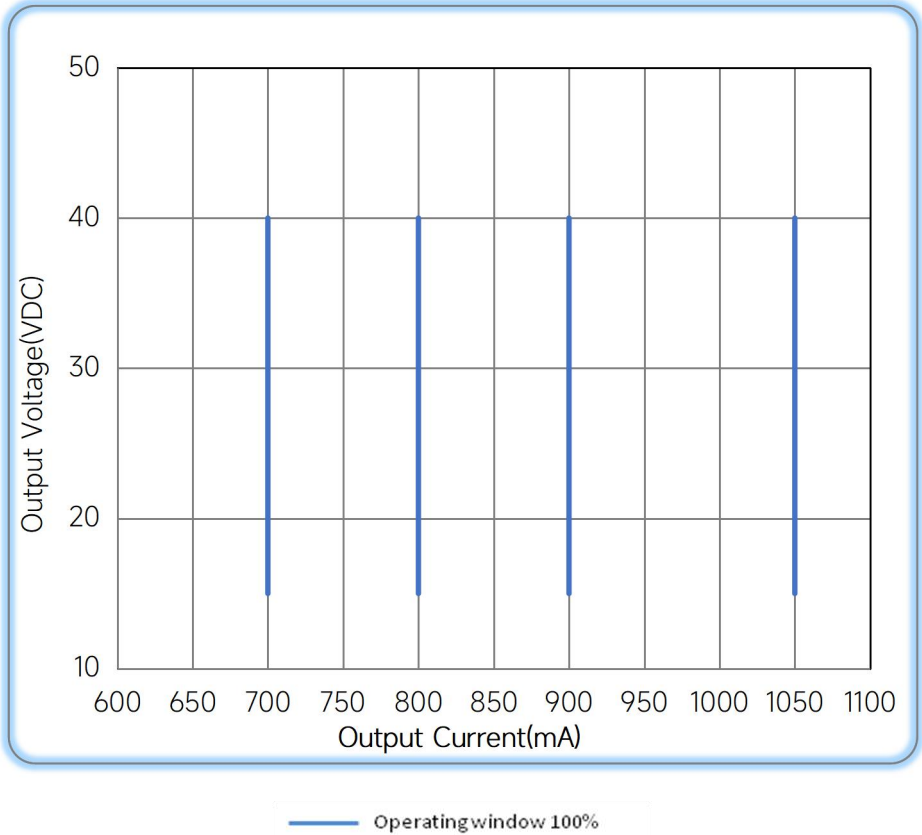
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

| ITEM             | BEFORE | AFTER  | VERSION | DATE       |
|------------------|--------|--------|---------|------------|
| Initial          |        |        | A       | 2023/10/20 |
| Current Accuracy |        | update | B       | 2024/03/12 |

Remark:The final interpretation of the contents of the specification belongs to Eaglerise Electric & Electronic (China) Co., Ltd.

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Manual