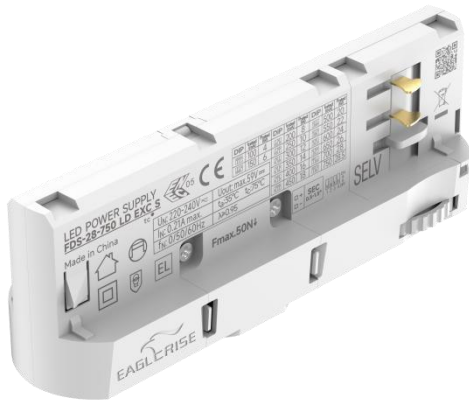


## 28W Constant Current in-track driver



■ Approve



### Features

- For luminaires of protection Class II,SELV
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OTP
- Power Factor:  $\geq 0.95$ @Full Load,230VAC
- Efficiency: 88%
- Adjustable Output Current with dip-switch
- 5 years warranty

### Applications

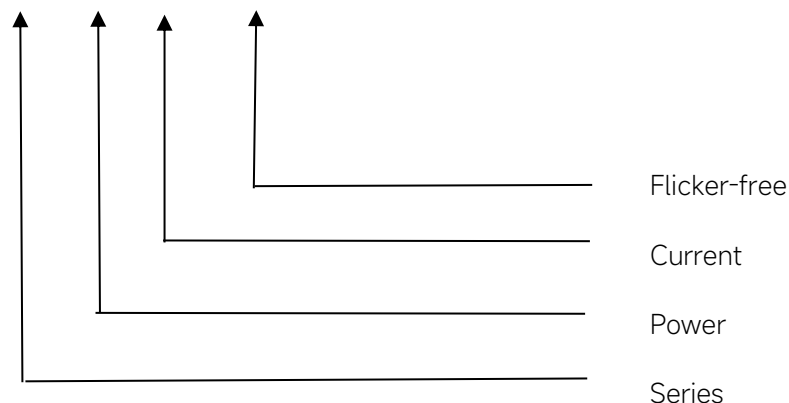
- Track Spot light

### ◆ Description

FDS-28-750 LD EXC S is a 28W constant current LED driver that operates from 198-264Vac input with 100 to 750mA output current and a forward voltage range from 10 to 40Vdc. The output current is adjustable by DIP Switch. With it's compact dimensions from 123.1x31.1x42.2mm. 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-28-750 LD EXC S



## ◆ Specification

|             |                                  |                                                                      |       |     |          |
|-------------|----------------------------------|----------------------------------------------------------------------|-------|-----|----------|
| Output      | Constant Current                 | 100mA                                                                | 150mA | ... | 750mA    |
|             | Voltage Range(VDC)               | 10-40VDC                                                             |       |     | 10-38VDC |
|             | Unload voltage Max.              | 59VDC                                                                |       |     |          |
|             | Current Accuracy                 | ±5%@150-750mA ; ±7%@100mA                                            |       |     |          |
|             | Output HF current ripple(≥1KHz)  | ±5%                                                                  |       |     |          |
|             | Output LF current ripple(≤120Hz) | ±3%                                                                  |       |     |          |
|             | SVM                              | ≤0.4                                                                 |       |     |          |
|             | P <sub>st</sub>                  | ≤1                                                                   |       |     |          |
|             | Efficiency(Typ.)                 | 88%@350-600mA                                                        |       |     |          |
| Input       | Rated input voltage              | 220-240V                                                             |       |     |          |
|             | 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@Full Load,230VAC                                               |       |     |          |
|             | Input Current max                | 0.18A MAX. @Full Load,230VAC                                         |       |     |          |
|             | Start-up time                    | < 0.5S                                                               |       |     |          |
|             | No Load Power                    | ≤0.5W                                                                |       |     |          |
|             | THD (Typ.)                       | <20% @Full Load,230VAC                                               |       |     |          |
| Protection  | Over Load Protection             | 103-130%                                                             |       |     |          |
|             |                                  | YES/Auto Resume                                                      |       |     |          |
|             | Short circuit Protection         | YES/Auto Resume                                                      |       |     |          |
| capability  | Surge capability (L-N)           | 1KV                                                                  |       |     |          |
|             | Surge capability (L/N-Ground)    | NA                                                                   |       |     |          |
| Environment | Operating Temperature            | -25°C~+35°C                                                          |       |     |          |
|             | Humidity                         | 10%-90%RH                                                            |       |     |          |
|             | T <sub>c</sub>                   | 75°C                                                                 |       |     |          |
|             | Storage Temperature              | -25°C...+75°C                                                        |       |     |          |
|             | Life time                        | > 50000h@T <sub>c</sub> =75°C                                        |       |     |          |
|             | Noise                            | ≤25dB(A)@20cm                                                        |       |     |          |
| Surface     | Dimension                        | 123.1x31.1x42.2mm(LXWXH)mm                                           |       |     |          |
|             | material                         | PC                                                                   |       |     |          |
| Standards   | Safety                           | IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;EN62384        |       |     |          |
|             | EMC                              | EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN61000-4-5               |       |     |          |
|             | Energy Efficiency                | Erp2.0 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.
- 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.
- 3.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered.
- 4.Switch and dimmer are not recommended to connect between this product output and luminaries.
- 5.The over-temperature protection of the product is provided by the IC.
- 6.The power supply can be briefly applied to DC.
- 7.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.

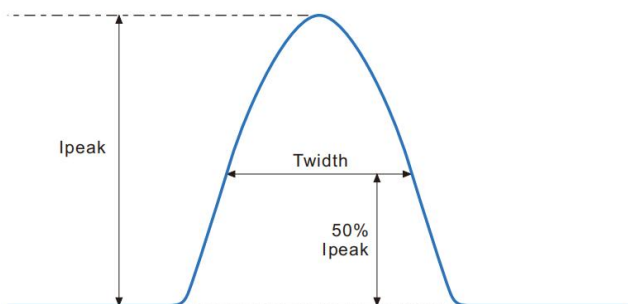
## ◆ Parameter

| Number | Output       |               |                       |           | Switch position |    |    |    |
|--------|--------------|---------------|-----------------------|-----------|-----------------|----|----|----|
|        | Current (mA) | Voltage (VDC) | Voltage No load (VDC) | Power (W) | 1               | 2  | 3  | 4  |
| 1      | 100mA        | 10-40VDC      | 59V                   | 4         | --              | -- | -- | -- |
| 2      | 150mA        |               |                       | 6         | --              | -- | -- | ON |
| 3      | 200mA        |               |                       | 8         | --              | -- | ON | -- |
| 4      | 250mA        |               |                       | 10        | --              | -- | ON | ON |
| 5      | 300mA        |               |                       | 12        | --              | ON | -- | -- |
| 6      | 350mA        |               |                       | 14        | --              | ON | -- | ON |
| 7      | 400mA        |               |                       | 16        | ON              | -- | -- | -- |
| 8      | 450mA        |               |                       | 18        | ON              | -- | -- | ON |
| 9      | 500mA        |               |                       | 20        | ON              | -- | ON | -- |
| 10     | 550mA        |               |                       | 22        | ON              | -- | ON | ON |
| 11     | 600mA        |               |                       | 24        | ON              | ON | -- | -- |
| 12     | 650mA        |               |                       | 26        | ON              | ON | -- | ON |
| 13     | 700mA        |               |                       | 28        | ON              | ON | ON | -- |
| *14    | 750mA        | 10-38VDC      |                       | 28.5      | ON              | ON | ON | ON |

\* Factory default

## ◆ Inrush Current

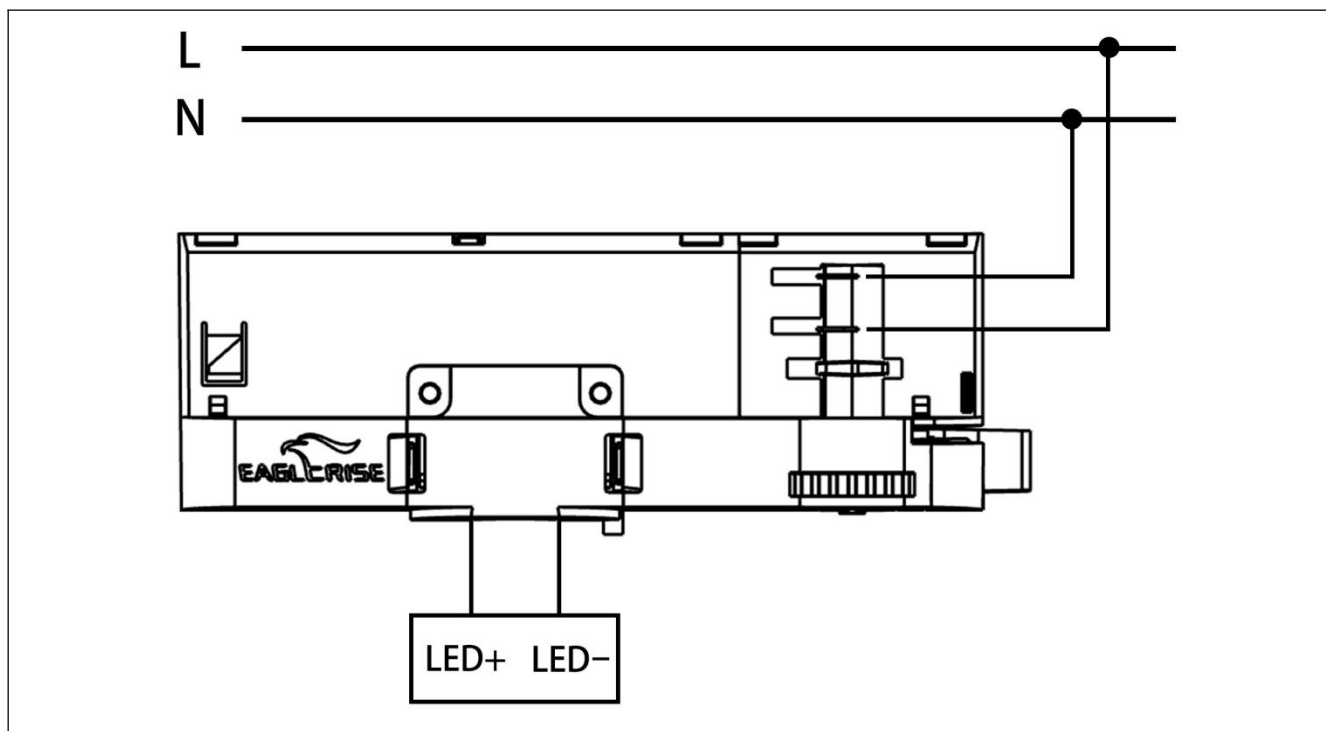
| $I_{peak}$ | Twidth | B10   | B16   | B20   | C10   | C16   | C20    |
|------------|--------|-------|-------|-------|-------|-------|--------|
| 9.5A       | 16μs   | 36pcs | 58pcs | 73pcs | 58pcs | 94pcs | 117pcs |



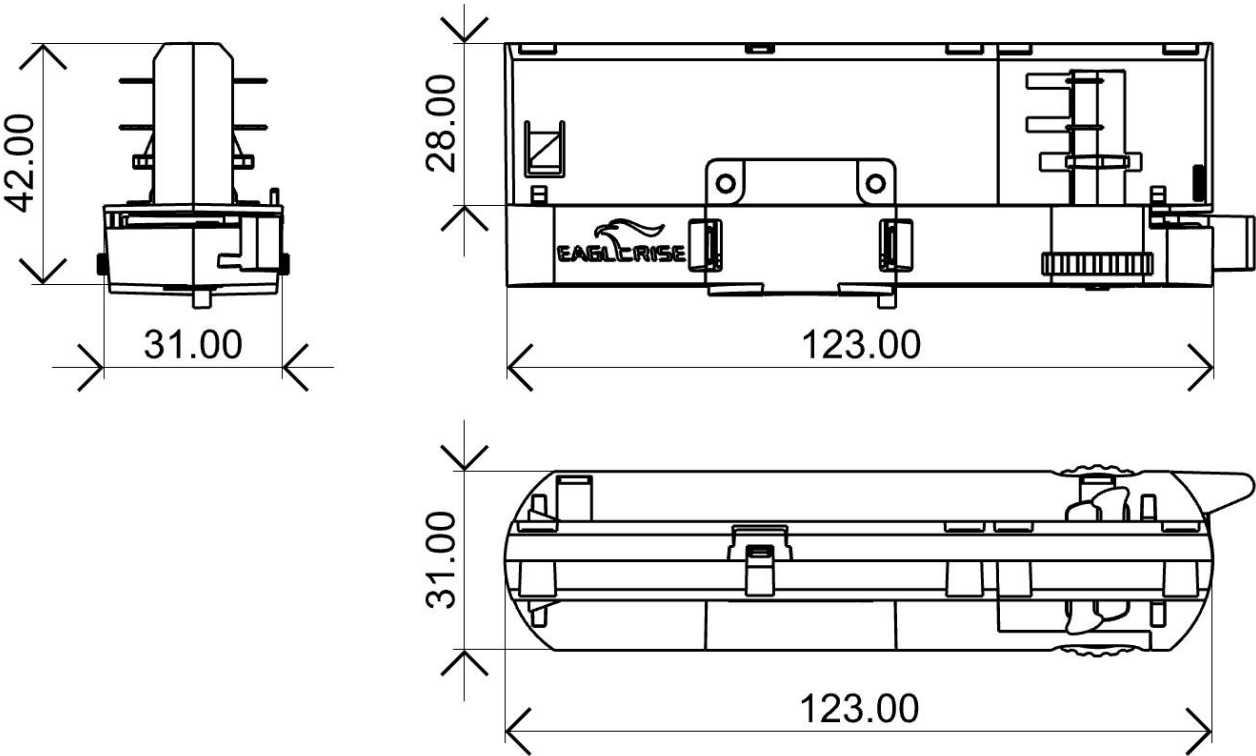
### Remarks:

- 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



◆ 2D diagram



◆ Wiring & Connections

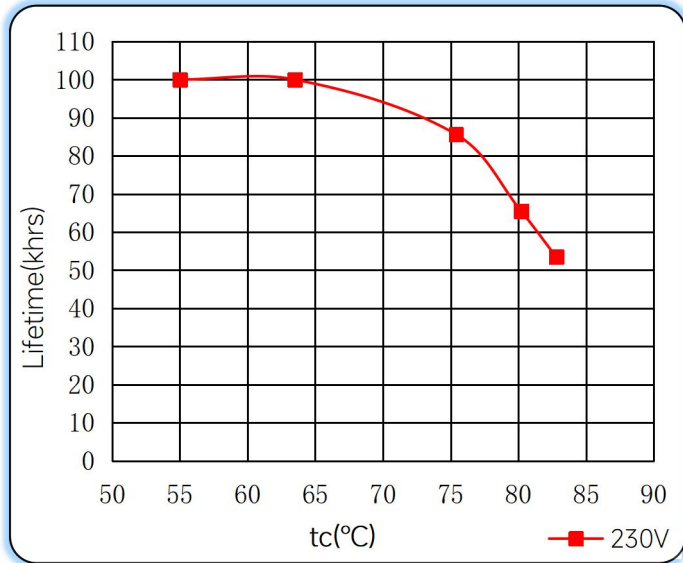
| Specification item |                           | Value (Unit )             |
|--------------------|---------------------------|---------------------------|
| Output             | Output wire cross-section | 0.5...1.5 mm <sup>2</sup> |
|                    | Output wire gauge.        | 16...20 AWG 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

## ◆ Matching brand

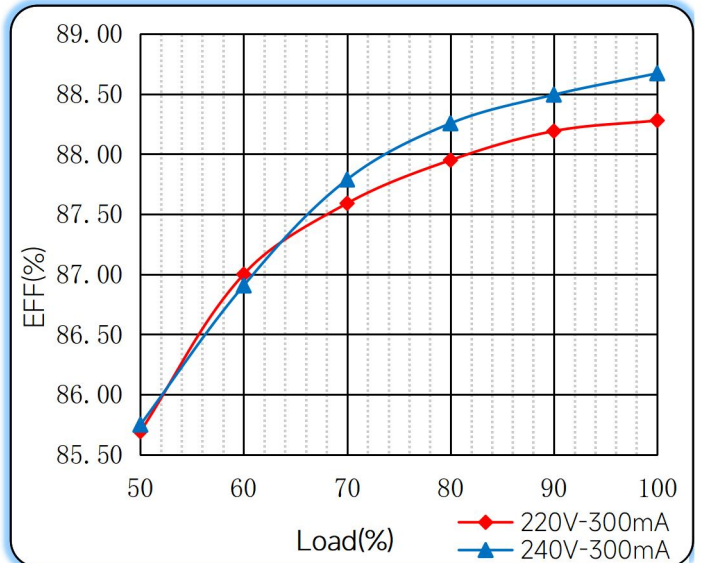
| Serial number | Serial number | Serial number | Serial number |
|---------------|---------------|---------------|---------------|
| 1             | Global        | XTSC&XTSCF6   | 3P            |
| 2             | Stucchi       | 9000XX Series | 3P            |
| 3             | Unipro        | T32B          | 3P            |
| 4             | Eutrac        | 2510x         | 3P            |
| 5             | Lvela         | 7501          | 3P            |
| 6             | ERCO          | ZUMTOBEL      | 3P            |

# ◆ Curve for FDS-28-750 LD EXC S, $I_o=300mA$

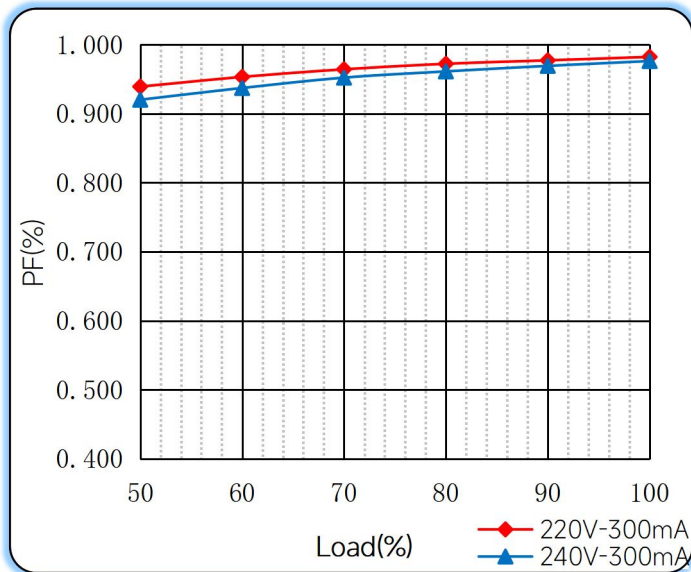
Lifetime vs. Temperature Curve



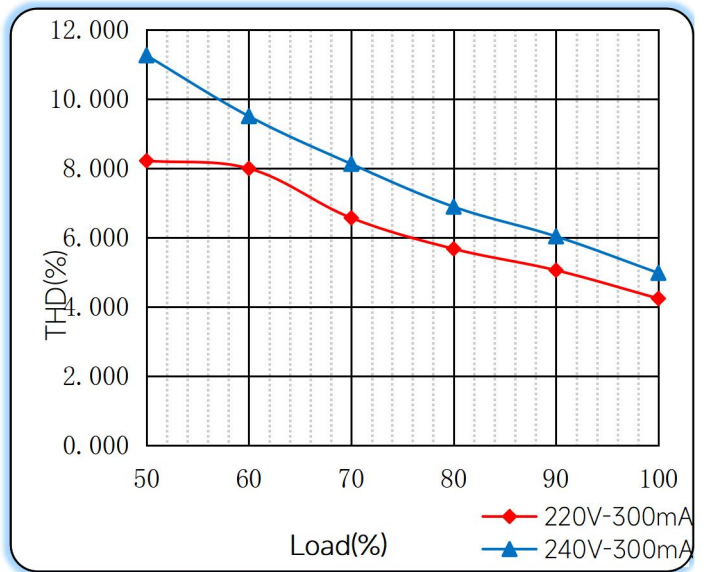
Efficiency vs. Load



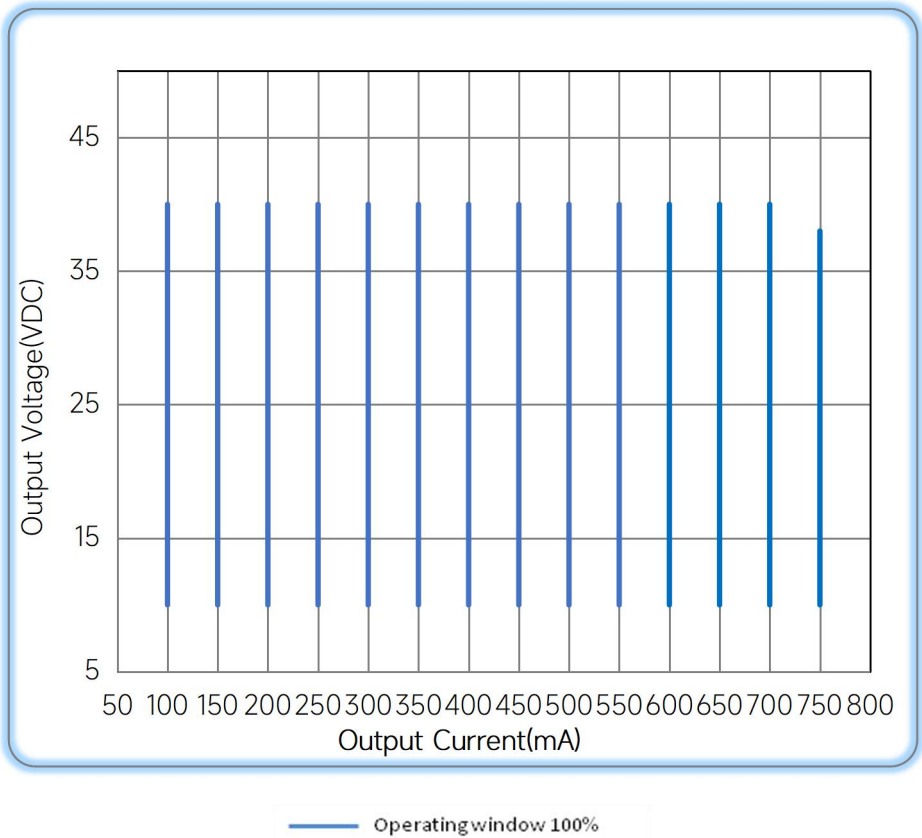
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

| ITEM    | BEFORE | AFTER | VERSION | DATE       |
|---------|--------|-------|---------|------------|
| Initial |        |       | A       | 2024/09/19 |
|         |        |       |         |            |
|         |        |       |         |            |

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

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EAGLERISE



Manual