

40W Constant Current – DIP-Switch



■ Approve

CE CB EN SELV

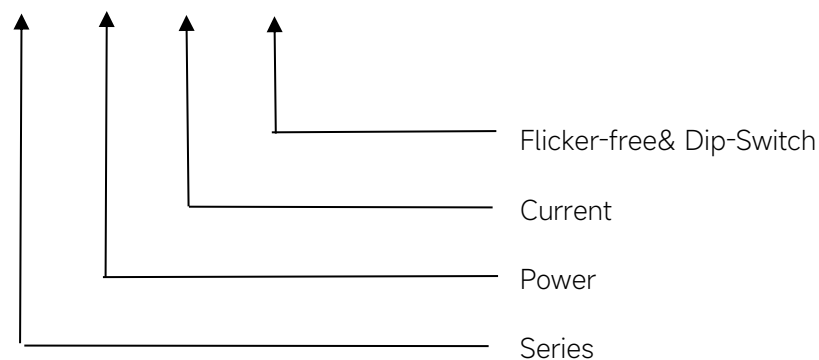


◆ Description

FMS-40-1050 LD EXC is a 40W constant current LED driver that operates from 198-264Vac input with 700 to 1050mA output current. The output current is selectable by DIP Switch. With its dimensions from 210 x 30 x 21mm. It is easy to integrate in linear light products. To ensure trouble-free operation, protection is provided against output short circuit, over Load and over temperature.

◆ Model code

FMS-40-1050 LD EXC



Features

- For luminaires of protection Class I or II, SELV, built-in
- Input Voltage : 220-240VAC
- Protections: SCP/OVP/OTP
- Power Factor : > 0.95
- Efficiency: 90% @ 700~850mA;
89% @ 900~1050mA
- 5 years warranty

Applications

- Linear light

◆ Specification

| | | | | | | | | |
|-------------|----------------------------------|--|-------|-------|-----|--------|---------|----------|
| Output | Constant Current | 700mA | 750mA | 800mA | ... | 1000mA | 1050mA | |
| | Voltage Range | 15-51VDC | | | | | 15-40VD | 15-38VDC |
| | Unload voltage Max. | 59VDC | | | | | | |
| | Current Accuracy | ±5% | | | | | | |
| | Output HF current ripple(≥1KHz) | ±3% | | | | | | |
| | Output LF current ripple(≤120Hz) | ±3% | | | | | | |
| | SVM | ≤0.4 | | | | | | |
| | Pst | ≤1 | | | | | | |
| | Efficiency(Typ.) | 90%@700~850mA;89%@900~1050mA | | | | | | |
| 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 | | | | | | |
| | Range of input voltage(VDC) | 176-280VDC | | | | | | |
| | Frequency(Hz) | 0/50/60 Hz | | | | | | |
| | Power Factor | 0.95 | | | | | | |
| | Input Current max | 0.28A | | | | | | |
| | Start-up time | < 0.5S | | | | | | |
| | No Load Power | ≤0.5W | | | | | | |
| | THD (Typ.) | < 10%. | | | | | | |
| Protection | Over Load Protection | 101-160% 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) | 2KV | | | | | | |
| Environment | Operating Temperature | -20°C~+60°C | | | | | | |
| | Humidity | 20%-90%RH | | | | | | |
| | Tc | 80°C | | | | | | |
| | Storage Temperature | -25°C~+80°C | | | | | | |
| | Life time | > 50000h@Tc=80°C,230VAC | | | | | | |
| | Noise | ≤25dB(A)@20cm | | | | | | |
| Surface | Dimension | 210X30X21(LXWXH)mm | | | | | | |
| | material | metal case | | | | | | |
| Standards | Safety | GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2-13;EN62384 | | | | | | |
| | EMC | GB/T17743, GB17625. 1;EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN61000-4-5; | | | | | | |

| | | |
|------|---|--------------------------------|
| | 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 & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.</p> <p>3.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered..</p> <p>4.EL compatible with IEC 61347-2-13 Annex J, compatible with EN 60598-2-22 emergency lighting fixtures, compatible with EN 50172 central battery system applications.</p> <p>5.The over-temperature protection of the product is provided by the IC.</p> <p>6.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> | |

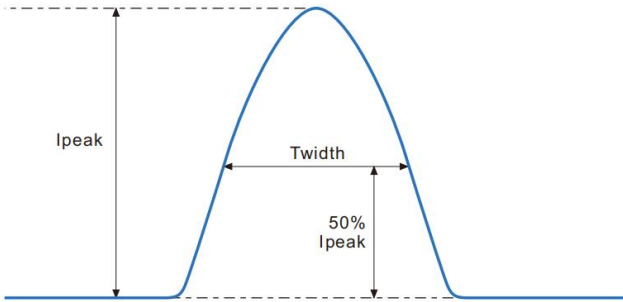
◆ Parameter

| Number | Output | | | | Switch position | | |
|--------|--------------|---------------|-----------------------|-----------|-----------------|----|----|
| | Current (mA) | Voltage (VDC) | Voltage No load (VDC) | Power (W) | 1 | 2 | 3 |
| 1 | 700mA | 15-51VDC | 59 | 35.7 | -- | -- | -- |
| 2 | 750mA | | | 38.3 | ON | -- | -- |
| 3 | 800mA | | | 40.8 | -- | ON | -- |
| 4 | 850mA | 15-48VDC | | 40.8 | ON | ON | -- |
| 5 | 900mA | 15-46VDC | | 41.4 | -- | -- | ON |
| 6 | 950mA | 15-44VDC | | 41.8 | ON | -- | ON |
| 7 | 1000mA | 15-40VDC | | 40 | -- | ON | ON |
| *8 | 1050mA | 15-38VDC | | 39.9 | ON | ON | ON |

* Factory default

◆ Inrush Current

| I_{peak} | Twidth | B10 | B16 | B20 | C10 | C16 | C20 |
|------------|-------------|-------|-------|-------|-------|-------|-------|
| 16.8A | 162 μ s | 28pcs | 45pcs | 57pcs | 28pcs | 45pcs | 57pcs |

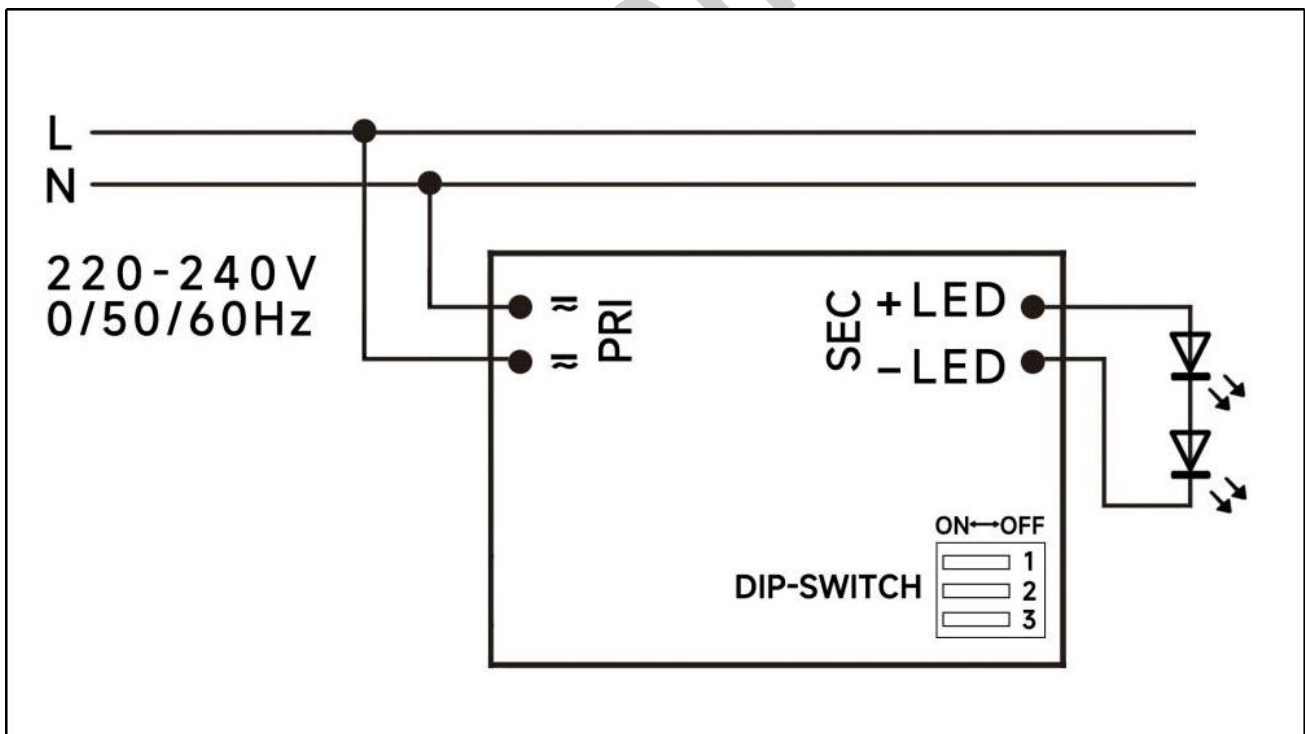


Remarks:

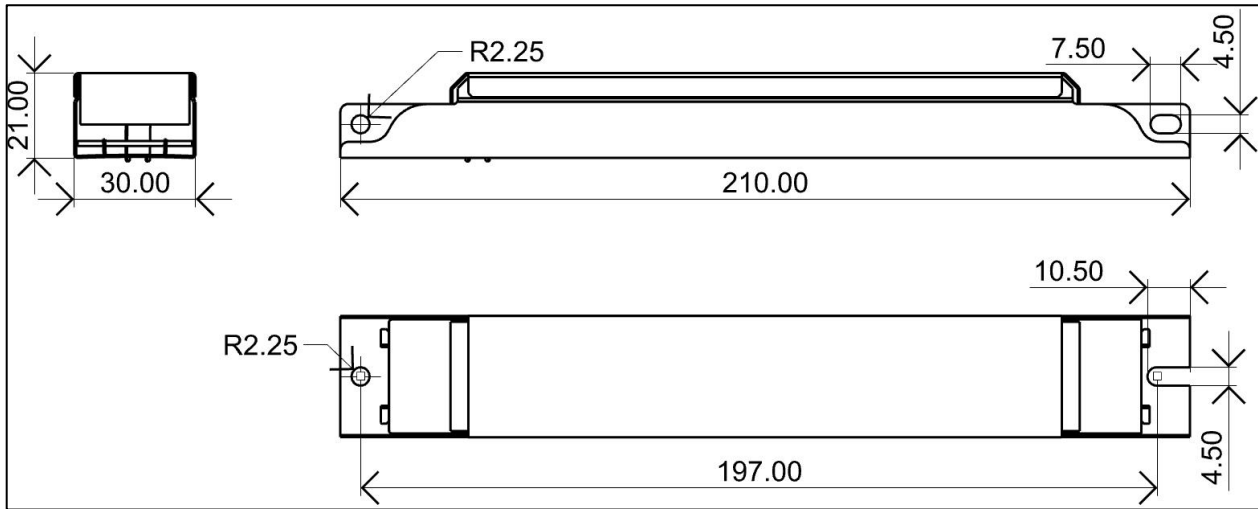
1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.

2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

◆ Wiring diagram



◆ 2D diagram



◆ Wiring & Connections

| Specification item | | Value (Unit) |
|--------------------|---------------------------|---------------------------|
| Input | Input wire cross-section | 0.5...1.5 mm ² |
| | Input wire gauge. | 16...20 AWG |
| | Input wire strip length | 7...9mm |
| Output | Output wire cross-section | 0.5...1.5 mm ² |
| | Output wire gauge. | 16...20 AWG |
| | Output wire strip length | 7...9mm |

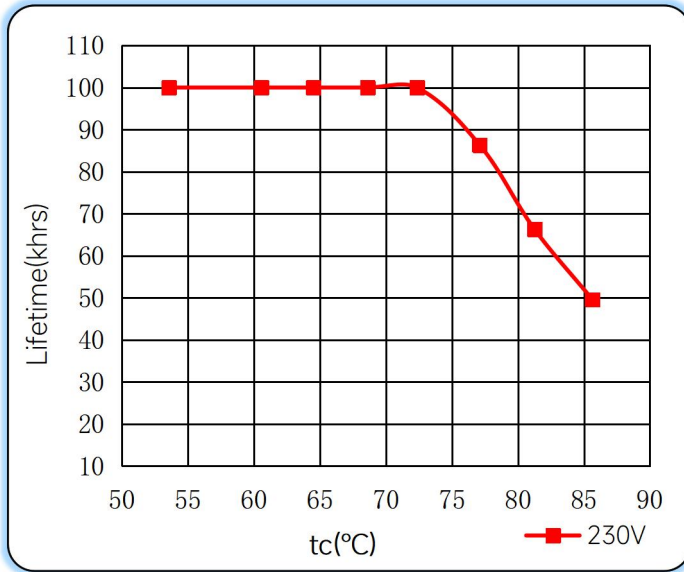
◆ Recommended wire

| Wire cross-section | Wire type |
|-----------------------------|-----------------|
| 2*0.5mm ² | H03VVH2-F 2core |
| 2*0.75mm ² | H03VVH2-F 2core |
| 1.5mm ² | CCC 08(RV-90) |
| 16AWG(1.25mm ²) | UL1015 |

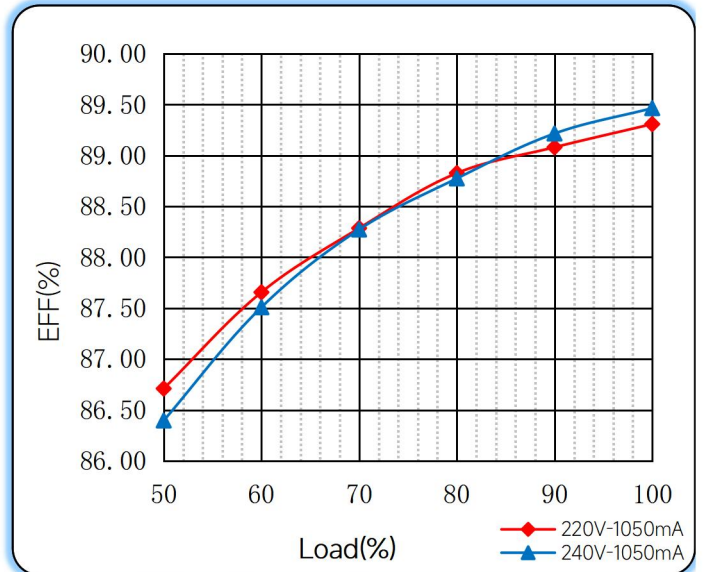
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ **Curve for FMS-40-1050 LD EXC, I_o=1050mA**

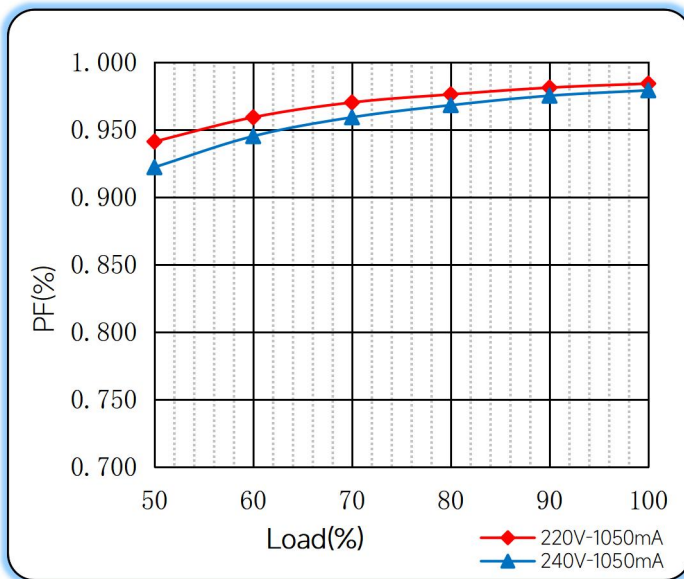
Lifetime vs. Temperature Curve



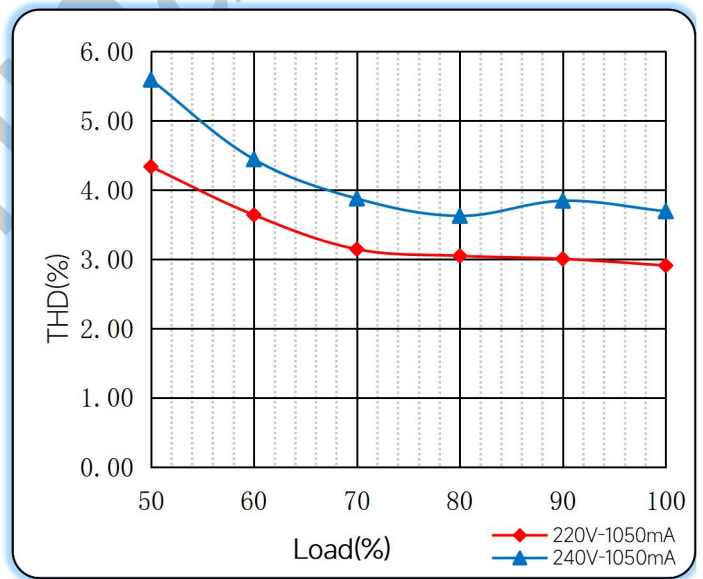
Efficiency vs. Load



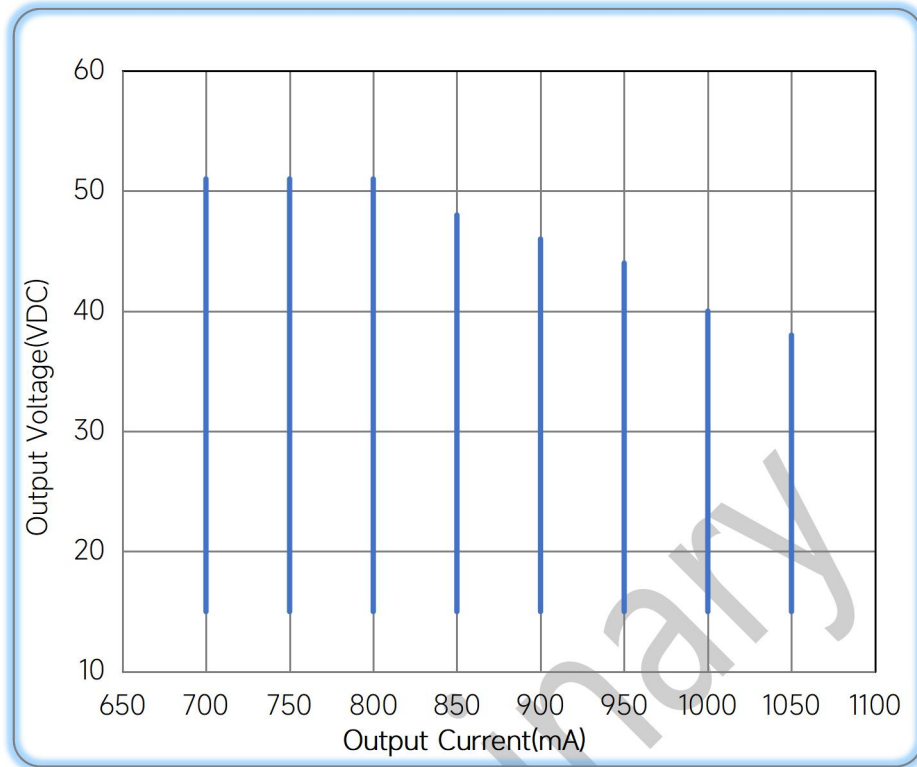
Power Factor Characteristics



THD vs. Load



◆ **Operating window**



— Operating window 100%

◆ **Revision Updates**

| ITEM | BEFORE | AFTER | VERSION | DATE |
|------------------|--------|----------------------------------|---------|------------|
| Initial | | | A | 2023/08/15 |
| Efficiency(Typ.) | 90% | 90%@700~850mA; 89%@900~1050mA | B | 2024/01/24 |
| Voltage Range | 15-54 | 15-51 | C | 2024/04/18 |

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

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Manual