

40W Constant Current – DIP-Switch



■ Approve

CE CB EN SELV

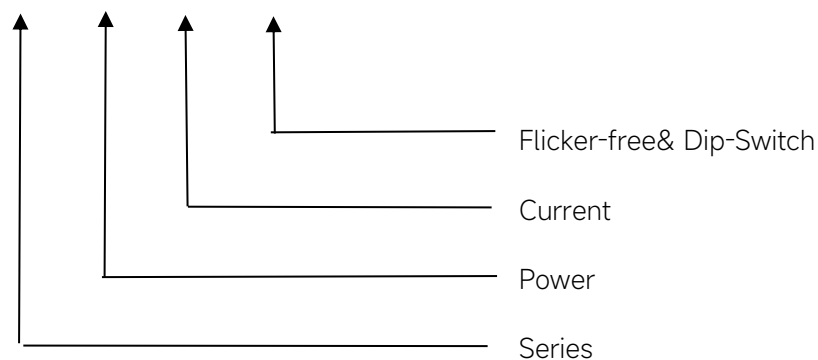


◆ Description

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>	

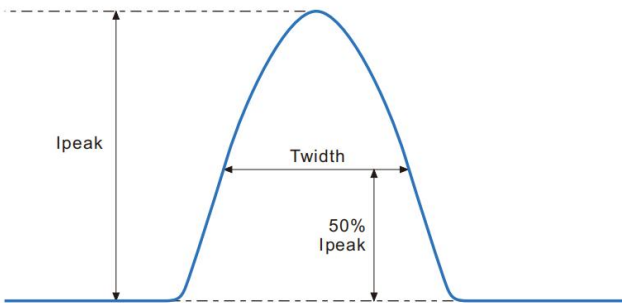
◆ Parameter

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

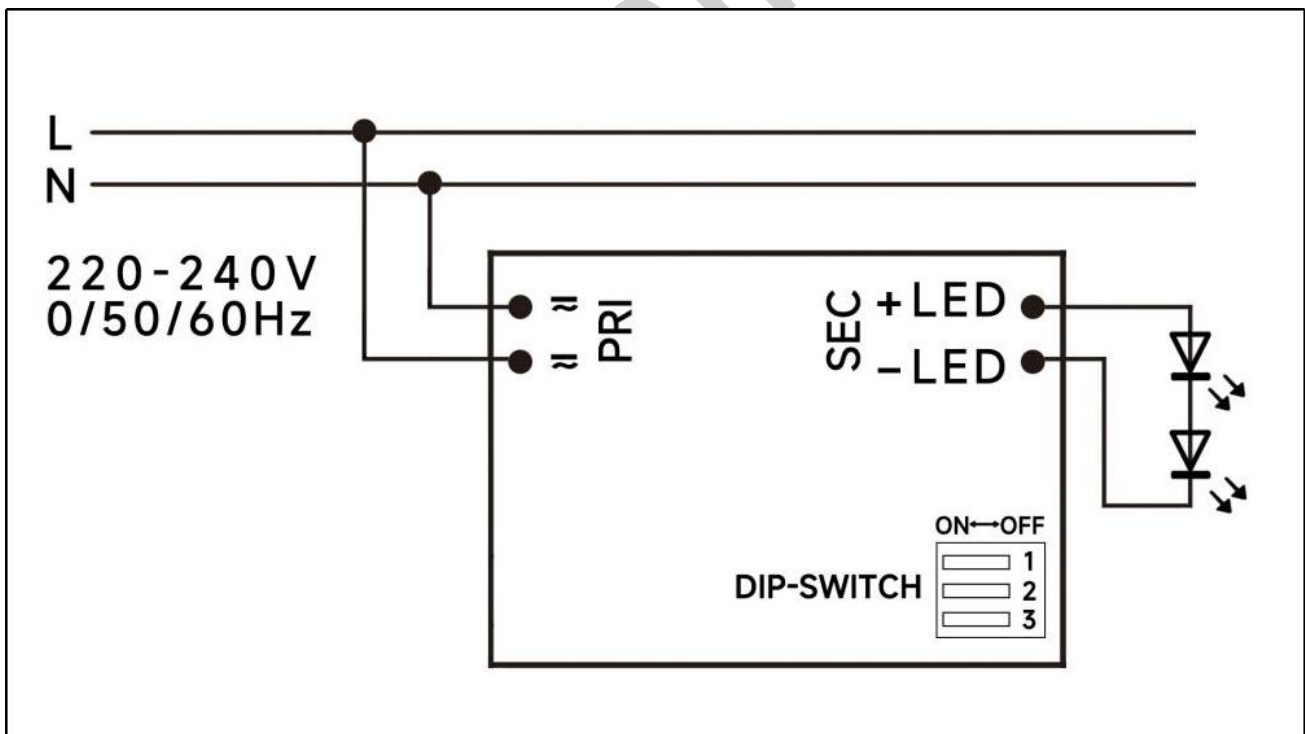
I_{peak}	Twidth	B10	B16	B20	C10	C16	C20
16.8A	162 μ s	28pcs	45pcs	57pcs	28pcs	45pcs	57pcs

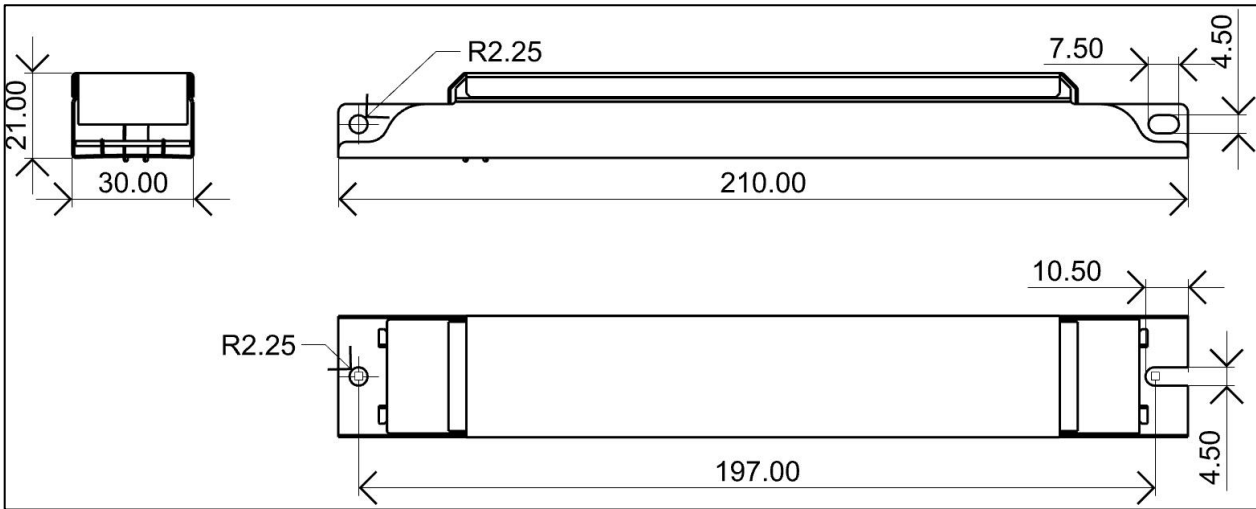


Remarks:

- 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



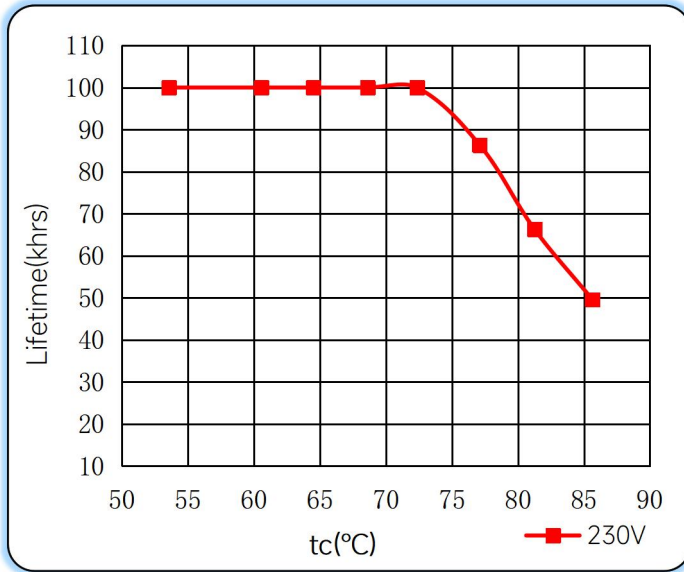
◆ 2D diagram

◆ Wiring & Connections

Specification item		Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ² (With side caps: 0.75...1.5 mm ²)
	Input wire gauge.	16...20 AWG (With side caps: 16...22 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

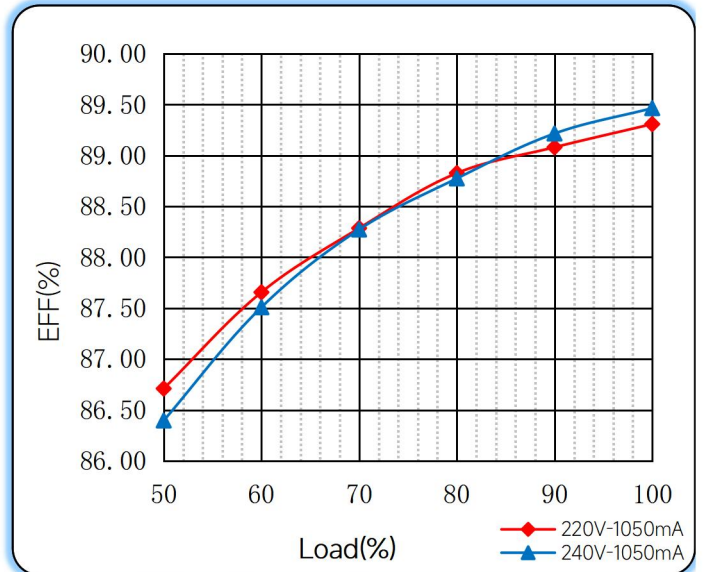
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

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

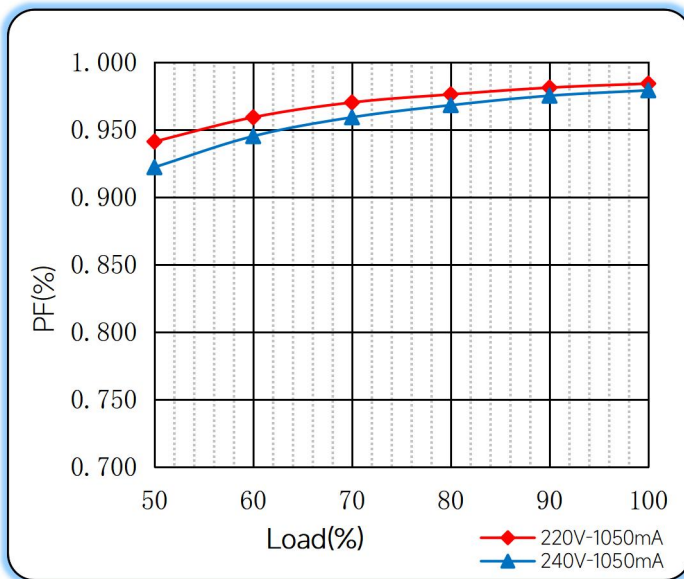
Lifetime vs. Temperature Curve



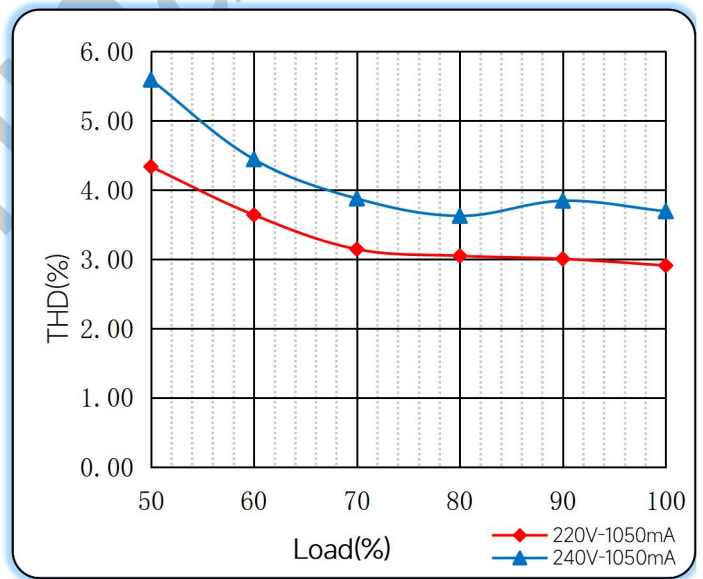
Efficiency vs. Load



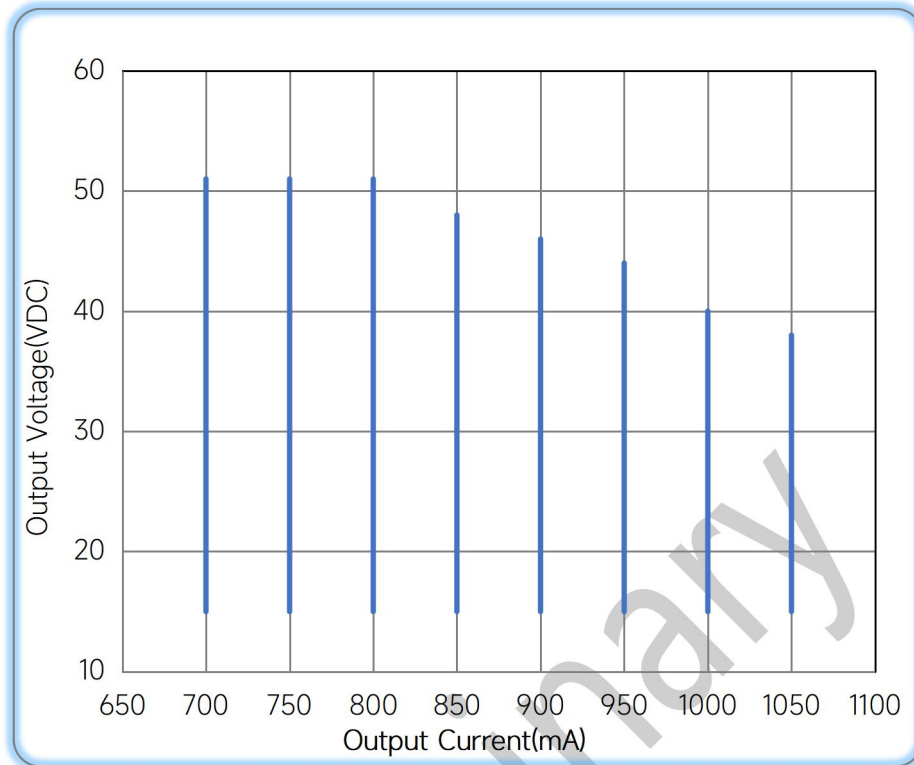
Power Factor Characteristics



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.

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

E-mail: sales@eaglerise.com

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



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Manual