

24W Constant Current – DIP-Switch



Features

- For luminaries of protection Class I or II, SELV, built-in
- Input Voltage : 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor : > 0.95
- Efficiency : ≥88%
- 5 years warranty

Applications

- Linear light

■ Approve

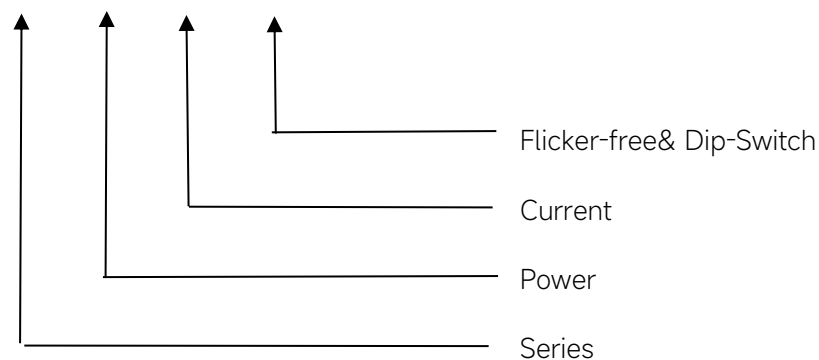


◆ Description

FMS-24-500 LD EXC is a 24W constant current LED driver that operates from 198-264Vac input with 350 to 500mA output current. The output current is selectable by DIP Switch. With it's 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-24-500 LD EXC



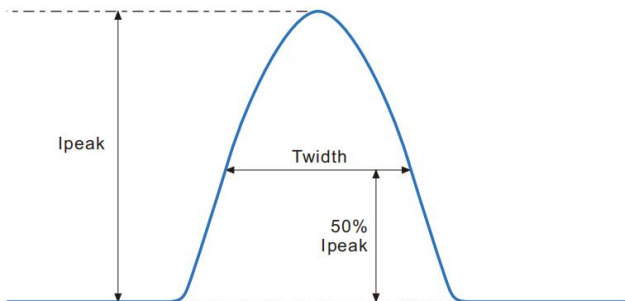
◆ Specification

	Constant Current	350mA	400mA	450mA	500mA
Output	Voltage Range	15-51VDC			15-48VDC
	Unload voltage Max.	59VDC			
	Current Accuracy	±8%		±5%	
	Output HF current ripple(≥1KHz)	±3%			
	Output LF current ripple(≤120Hz)	±3%			
	SVM	≤0.4			
	Pst	≤1			
	Efficiency(Typ.)	88%			
	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		0.16A			
Start-up time		< 0.5S			
No Load Power		≤0.5W			
THD (Typ.)		< 10%.			
Protection	Over Load Protection	103-140% 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~+60°C			
	Life time	> 50000h@Tc=80°C,230VAC			
Surface	Noise	≤25dB(A)@20cm			
	Dimension	210X30X21(LXWXH)mm			
Standards	material	metal case			
	Safety	GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2-13;EN62384			
Standards	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>	

◆ Inrush Current

I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
15.1A	120μs	46pcs	74pcs	93pcs	50pcs	80pcs	100pcs



Remarks:

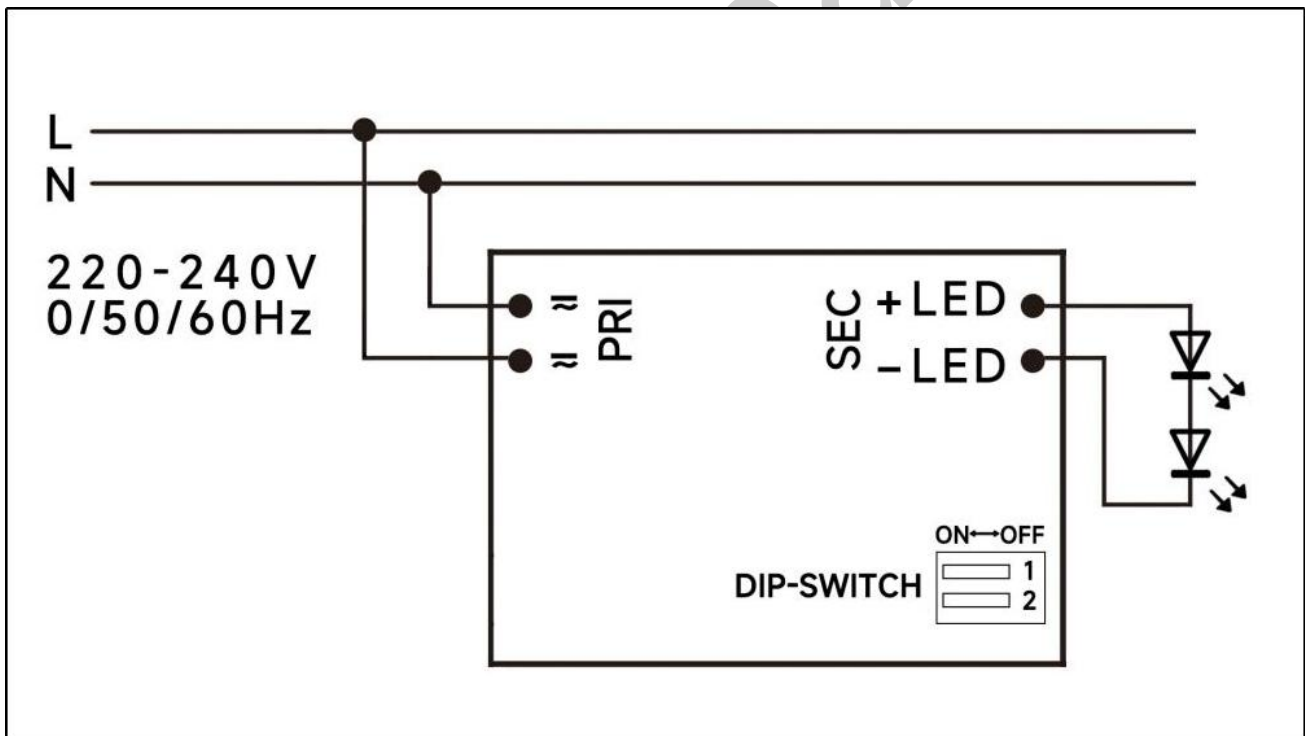
- 1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
- 2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

◆ Parameter

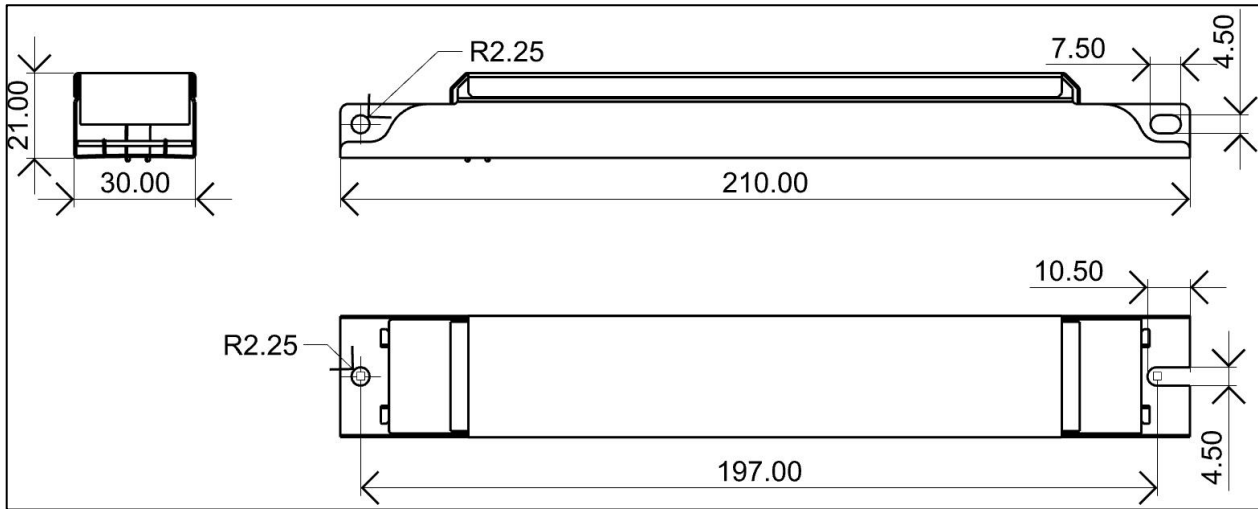
Number	Output				Switch position	
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2
1	350mA	15-51	59	17.9W	--	--
2	400mA			20.4W	ON	--
3	450mA			23W	--	ON
4	500mA	15-48		24W	ON	ON

* Factory default

◆ 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

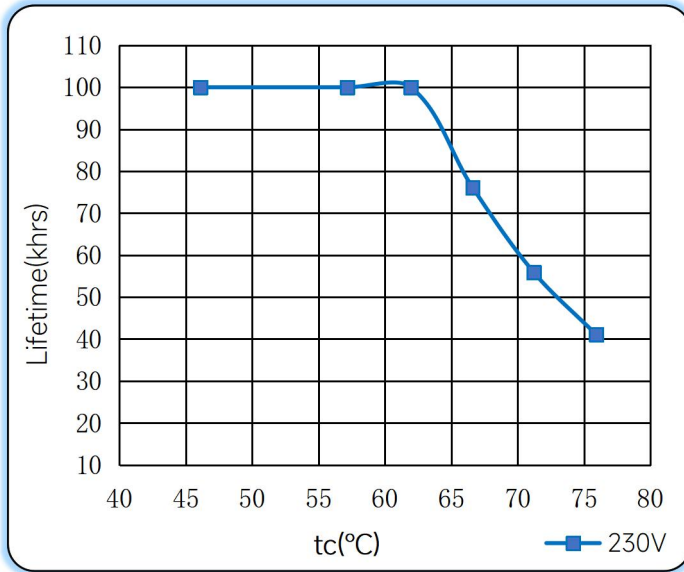
◆ Recommended wire

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

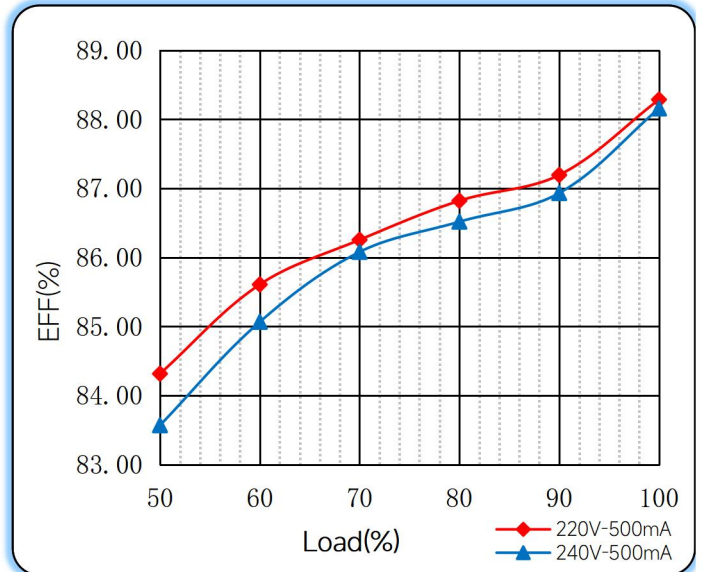
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Curve for FMS-24-500 LD EXC, $I_o=500mA$

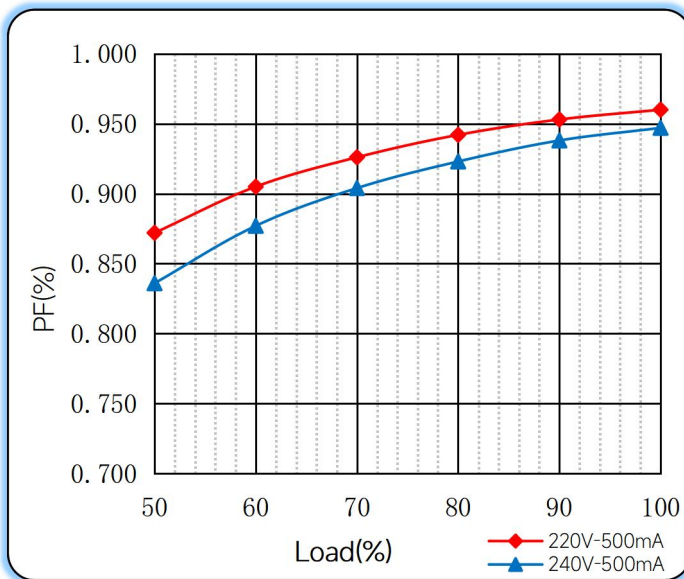
Lifetime vs. Temperature Curve



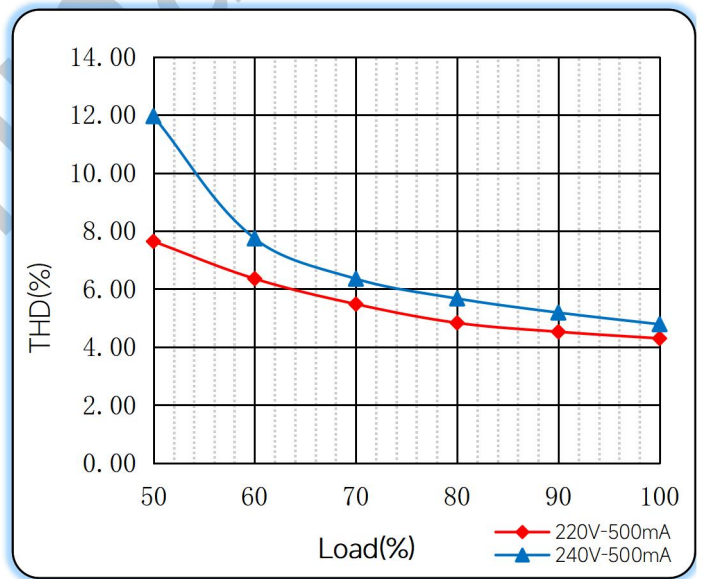
Efficiency vs. Load



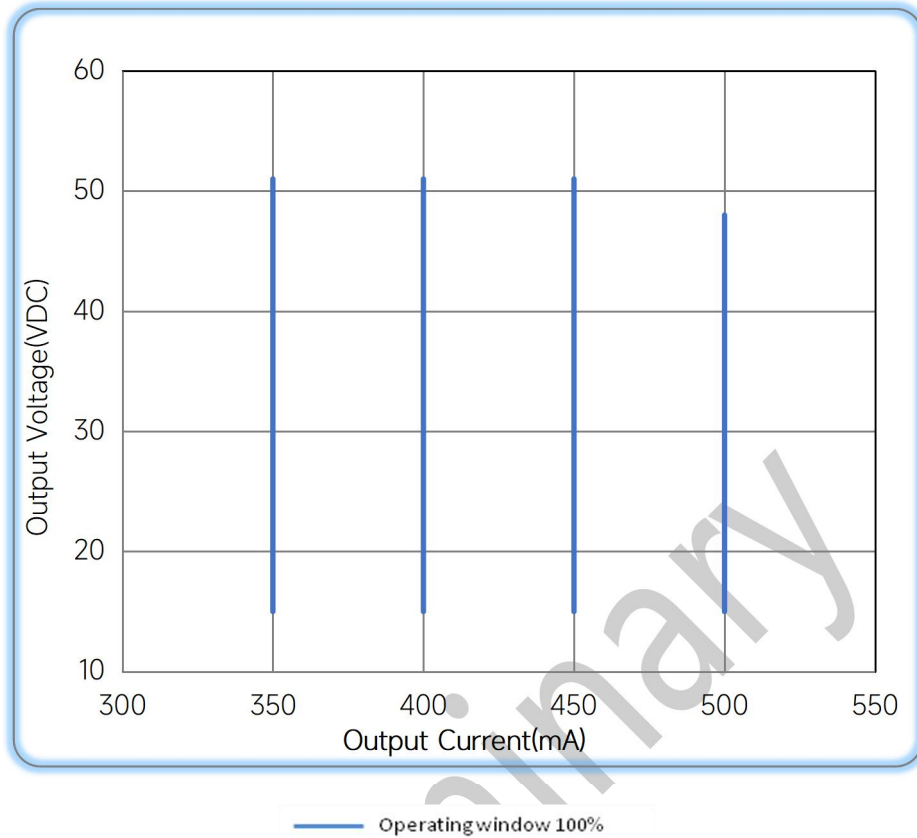
Power Factor Characteristics



THD vs. Load



◆ **Operating window**



◆ **Revision Updates**

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/08/15
Current Accuracy	±5%@350,400mA	±8%350,400mA	B	2023/10/31
Voltage Range	15-54	15-51	B	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