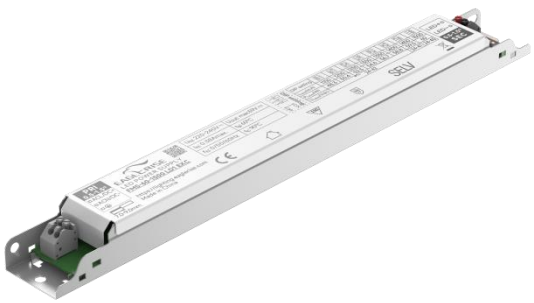
60W Constant Current – DIP-Switch



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 ： ≥90%
- 5 years warranty

Applications

- Linear light

■Approve

CECB SELV

EL CCC

◆ Description

FMS-60-1500 LD1 EXC is a 60W constant current LED driver that operates from 198-264Vac input with 1150 to 1500mA output current. The output current is selectable by DIP Switch. With it's dimensions from 280 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-60-1500 LD1 EXC

- Flicker-free& Dip-Switch
- Current
- Power
- Series

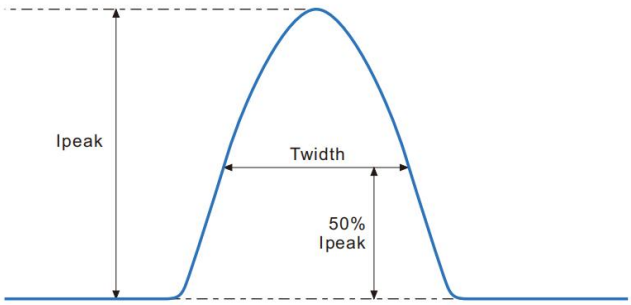
◆ Specification

Output	Constant Current	1150mA	1200mA	1250mA	...	1450mA	1500mA
	Voltage Range	24-42VDC			...	24-41VD	24-40VDC
	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%					
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	0.38A					
	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					
	Over Temperature Protection	YES/Auto Resume					
capability	Surge capability (L-N)	2KV					
	Surge capability (L/N-Ground)	2KV					
Environment	Operating Temperature	-20℃~+60℃					
	Humidity	20%-90%RH					
	Tc	90℃					
	Storage Temperature	-25℃~+80℃					
	Life time	> 50000h@Tc=85℃,230VAC					
	Noise	≤25dB(A)@20cm					
Surface	Dimension	280X30X21(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	1.All parameters NOT specially mentioned are measured at 230VAC input , full load and 25℃ 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.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. 5.The over-temperature protection of the product is provided by the IC. 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.	

◆ Inrush Current

I_{peak}	T_{width}	B10	B16	B20	C10	C16	C20
41.6A	176μs	11pcs	18pcs	22pcs	18pcs	30pcs	37pcs



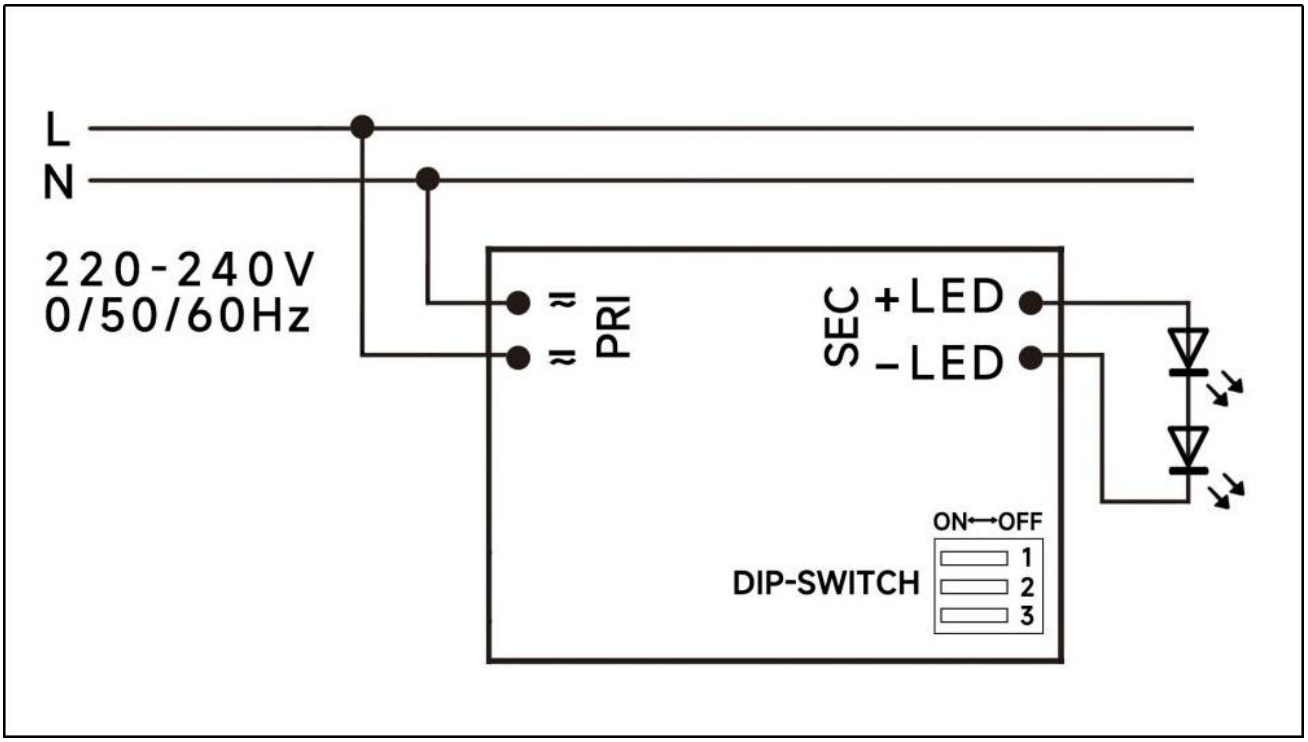
Remarks:
1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

◆ Parameter

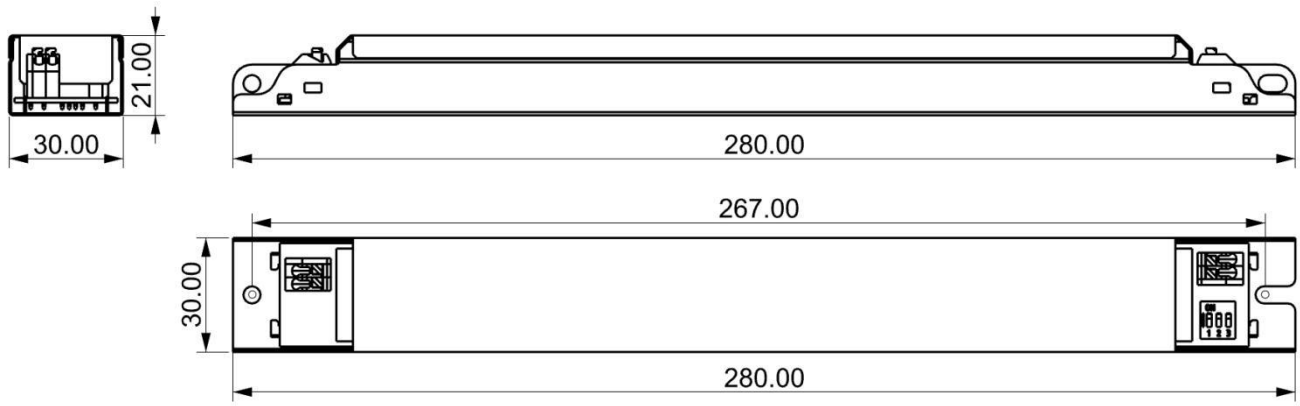
Number	Output				Switch position		
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2	3
1	1150mA	24-42VDC	59	48.3	--	--	--
2	1200mA			50.4	ON	--	--
3	1250mA			52.5	--	ON	--
4	1300mA			54.6	ON	ON	--
5	1350mA			56.7	--	--	ON
6	1400mA			58.8	ON	--	ON
7	1450mA	24-41VDC		59.5	--	ON	ON
*8	1500mA	24-40VDC		60	ON	ON	ON

* Factory default

◆ Wiring diagram



◆ 2D diagram



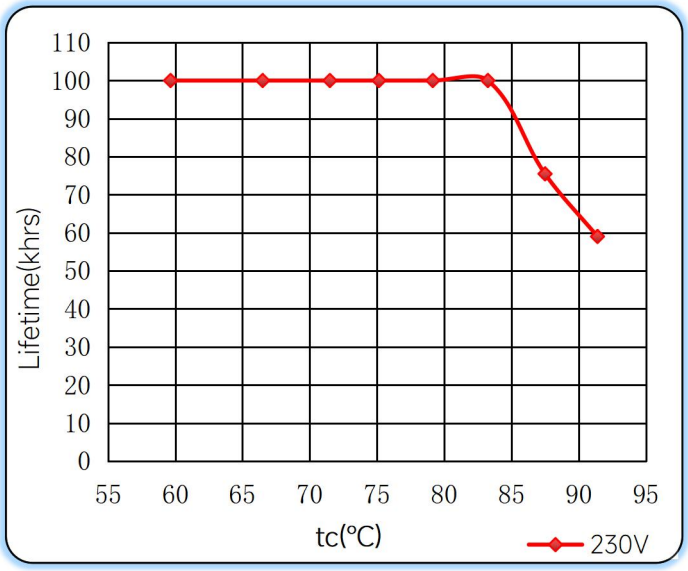
◆ Wiring & Connections

Specification item		Value （Unit ）
Input	Input wire cross-section	0.5...1.5 mm^2 （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

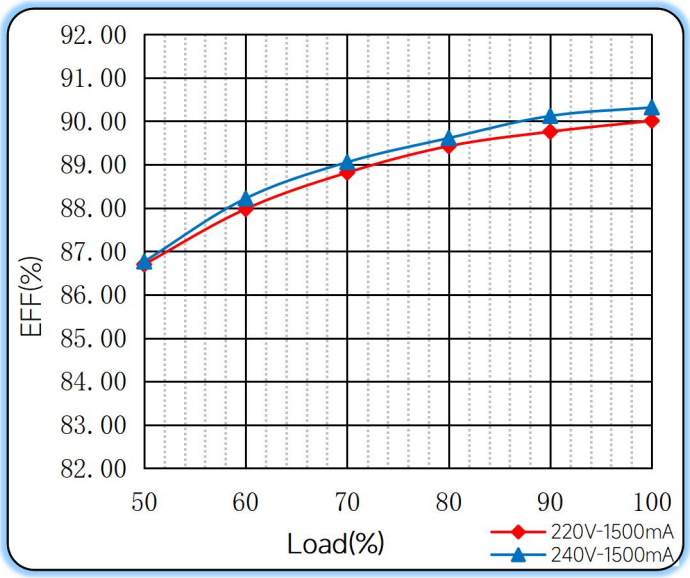
Note:Solid wire is risky to use on an angled terminal.Stranded wire is recommended for this kind of use.

◆ Curve for FMS-60-1500 LD1 EXC, Io=1500mA

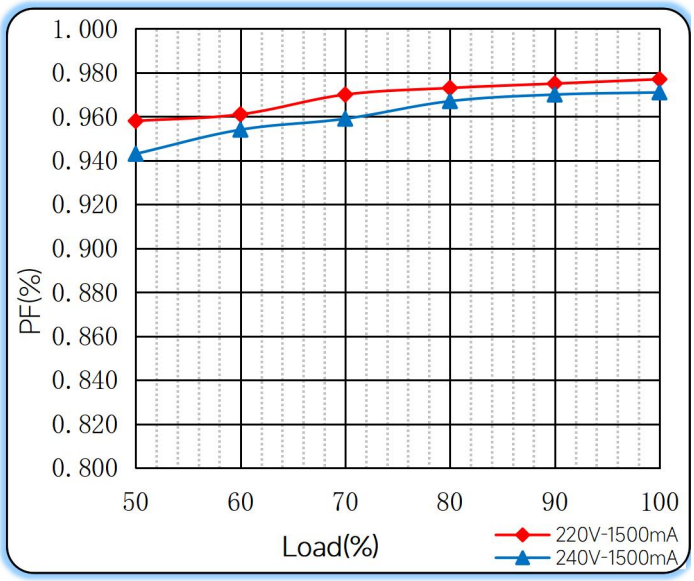
Lifetime vs. Temperature Curve



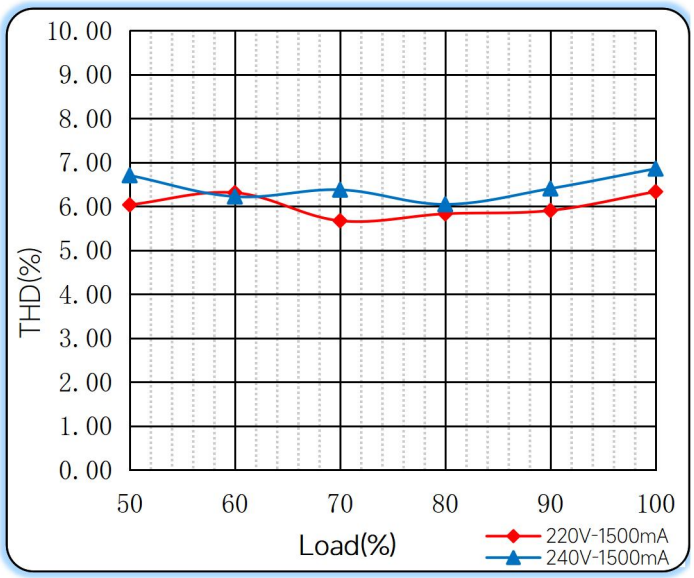
Efficiency vs. Load



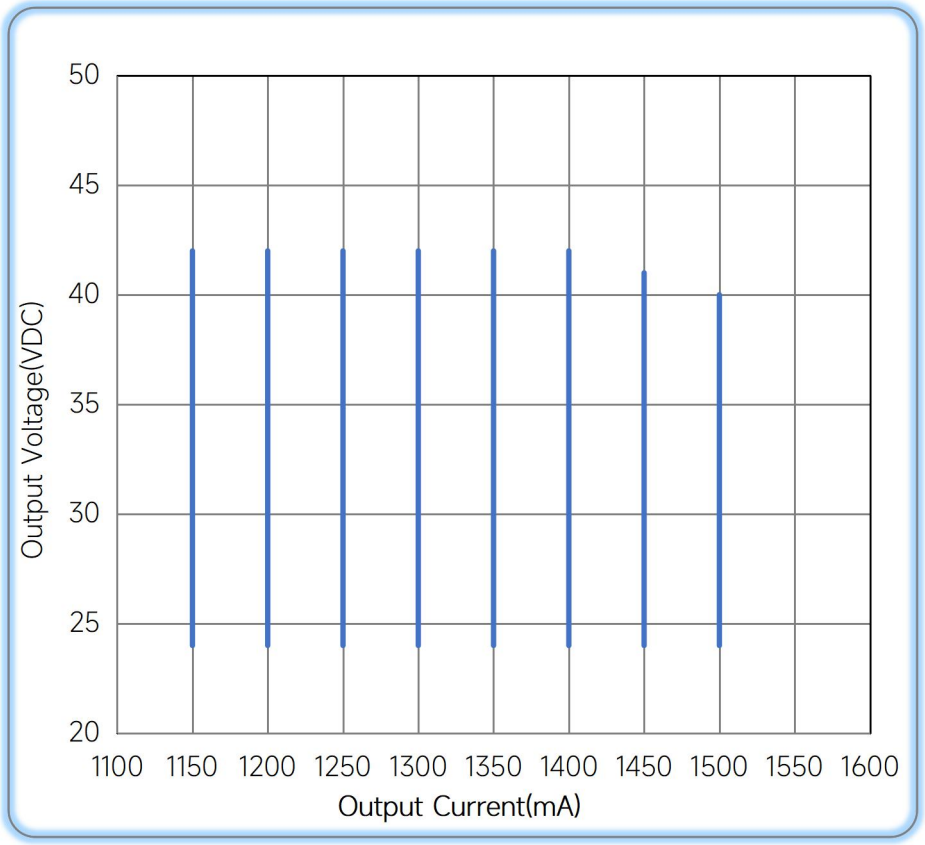
Power Factor Characteristics



THD vs. Load



◆ Operating window



Operating window 100%

◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/08/15

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