

60W Constant Current -FMS Series



■ Approve



Features

- Class I , Built-in
- Input Voltage :220-240VAC
- Protections: SCP/OLP/OVP
- Power Factor: >0.95@full load
- Efficiency: 90%
- Adjustable Output Current with dip-switch
- 5 years warranty

Applications

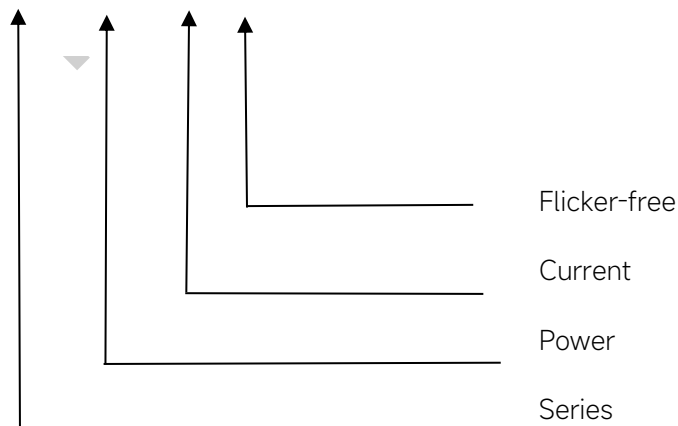
- Linear light

◆ Description

FMS-60-400 LD-F is a 60W isolated design constant current LED driver that operates from 198-264Vac input with 250 to 400mA output current. The output current is adjustable by dip-switch. With it's long 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-60-400 LD-F



◆ Specification

Output	Constant Current	250mA	300mA	350mA	400mA
	Voltage Range	70-240V	70-200V	70-170V	70-150V
	Unload voltage Max.	300VDC			
	Current Accuracy	±5%			
	Output HF current ripple(≥1KHz)	±5%			
	Output LF current ripple(≤120Hz)	±3%			
	SVM	≤0.4			
	Pst	≤1			
	Efficiency(Typ.)	90%			
Input	Rated input voltage(V)	220-240V			
	Range of input voltage(VAC)	198-264VAC			
	Maximum voltage	380VAC@1 h maximum,unit might not operate in this abnormal condition			
	Range input voltage(VDC)	176-280VDC			
	Frequency(Hz)	0/50/60 Hz			
	Displacement factor	>0.95			
	Power Factor	>0.95@full load			
	Input Current max	0.45A			
	Start-up time	< 0.5S			
	No Load Power	≤1W			
	THD (Typ.)	<10%			
Protection	Over Load Protection	> 105%			
		YES/Auto Resume			
	Over Voltage Protection	> 300VDC			
		YES/Auto Resume			
capability	Short circuit Protection	YES/Auto Resume			
	Surge capability (L-N)	2KV			
Environment	Surge capability (L/N-Ground)	2KV			
	Operating Temperature	-20°C~+50°C			
	Humidity	10%-90%RH			
	Tc	80°C			
	Storage Temperature	-25°C~+85°C			
	Life time	> 50000h@Tc=80,230VAC			
Surface	Noise	≤25dB(A)@20cm			
	Dimension	280X30X21(LXWXH)mm			
Standards	material	metal case			
	Safety	IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;EN62384;AS/NZS 61347- 1, AS/NZS 61347-2- 13			

	EMC	EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN62493;EN61000-4-5;EN61000-4-2,3,4,5,6,8,11, EN61547
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	1.All parameters not specially mentioned are measured at 240VAC 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.Temperature test: tested at high temperature(50°C)/low temperature(-20°C)/normal temperature(25°C) 4.Data are typical values obtained from test samples 5.Switch and dimmer are not recommended to connect between this product output and luminaries. 6.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered. 7.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.	

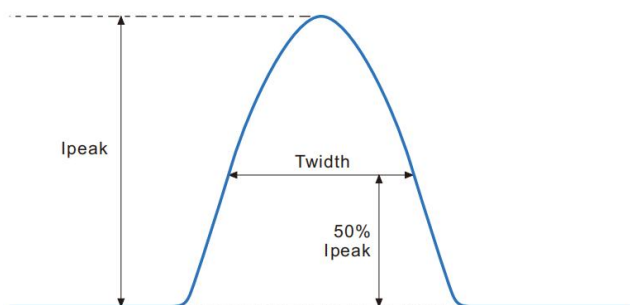
◆ Parameter

Number	Output				Switch position		
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2	3
1	250mA	70-240VDC	300VDC	60	--	--	--
2	300mA	70-200VDC		60	ON	--	--
3	350mA	70-170VDC		59.5	--	ON	--
*4	400mA	70-150VDC		60	ON	ON	ON

* Factory default

◆ Inrush Current

I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
23.8A	268μs	12pcs	20pcs	25pcs	17pcs	28pcs	35pcs

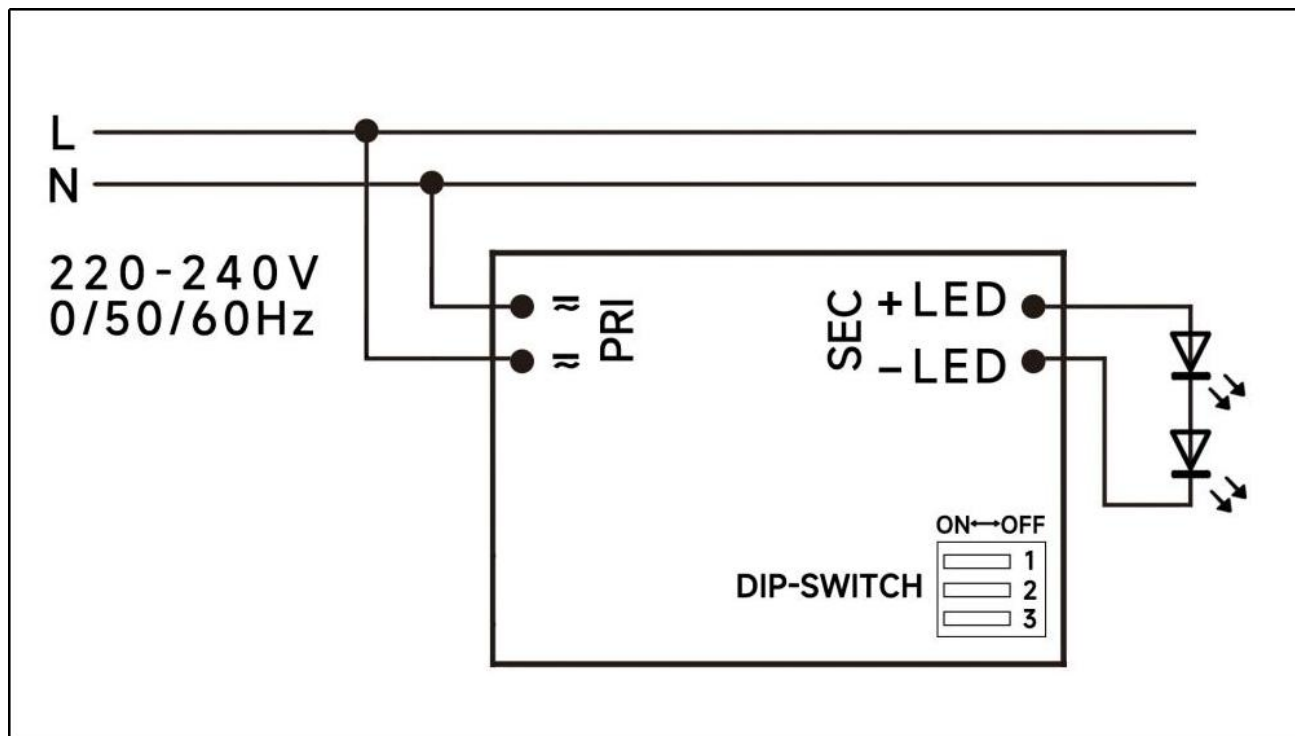


Remarks:

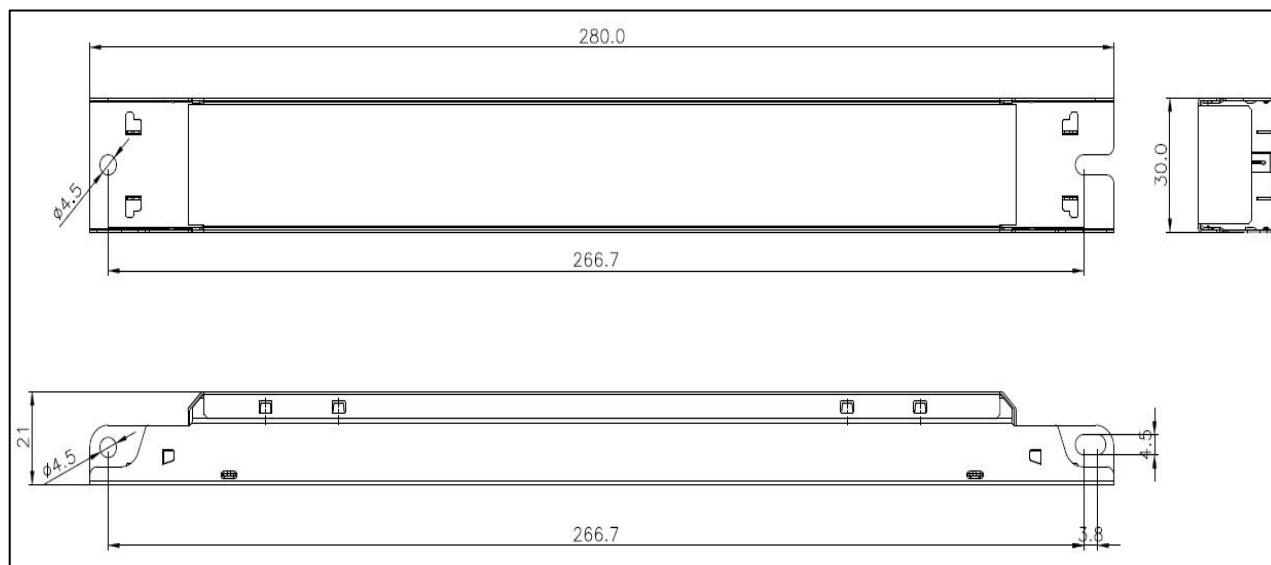
- 1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
- 2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

Preliminary

◆ Wiring diagram



◆ 2D diagram



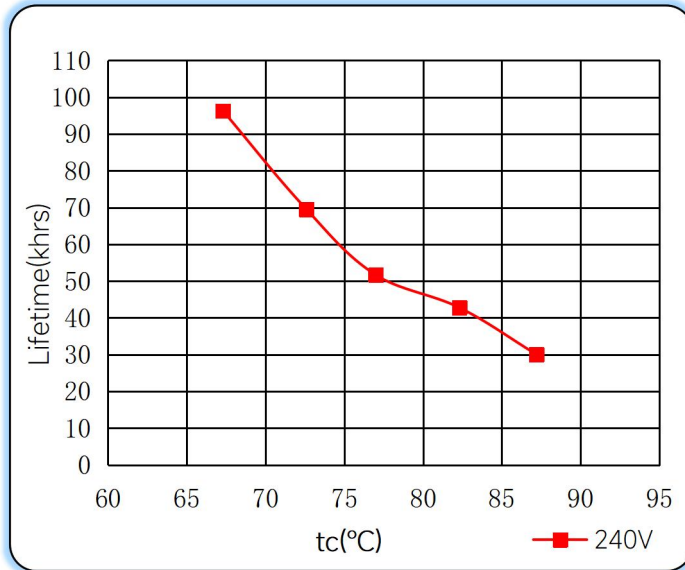
◆ Wiring & Connections

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

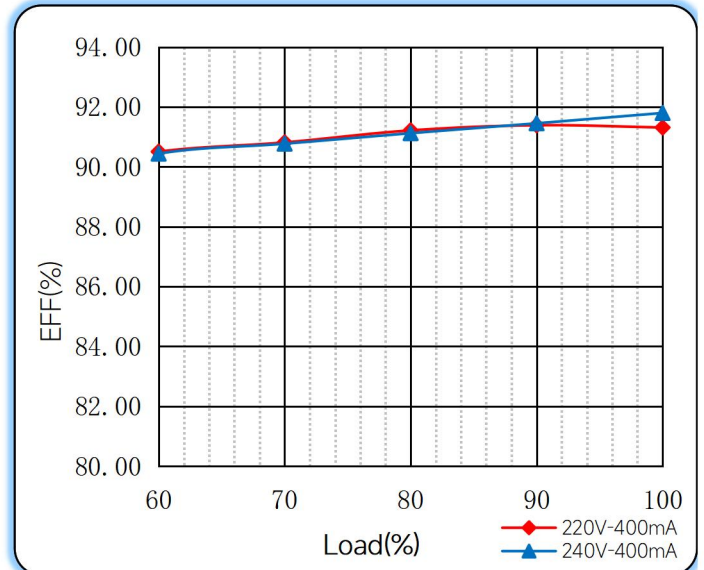
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Curve for FMS-60-400 LD-F, $I_o=400\text{mA}$

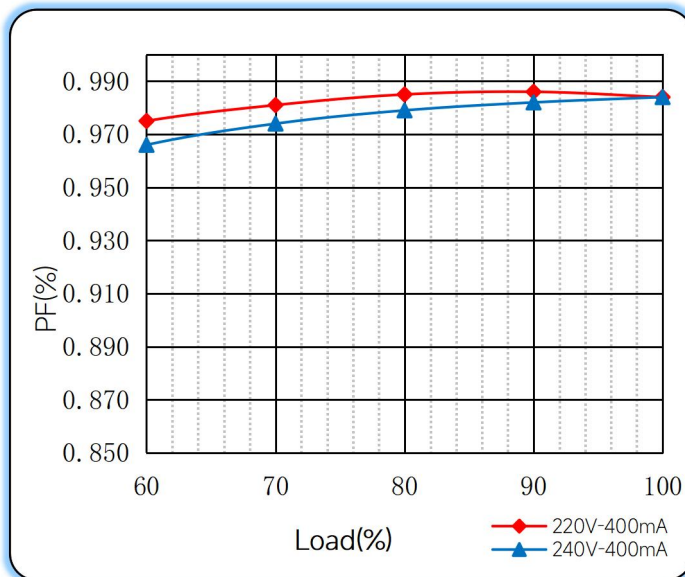
Lifetime vs. Temperature Curve



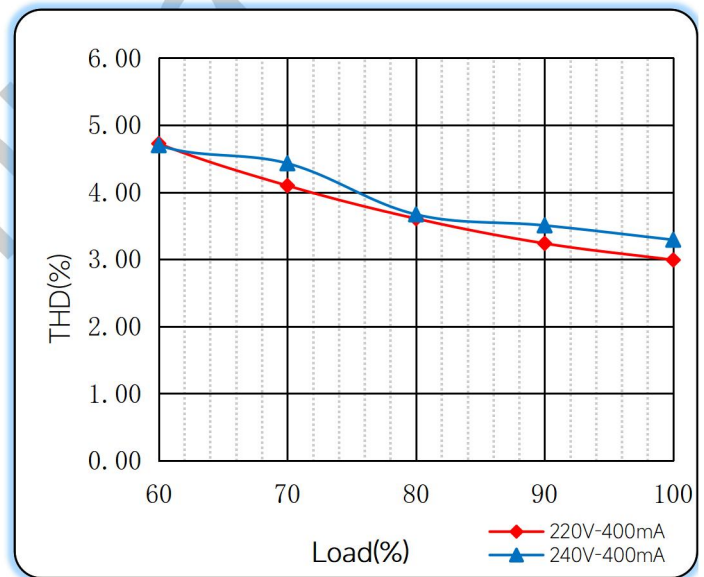
Efficiency vs. Load



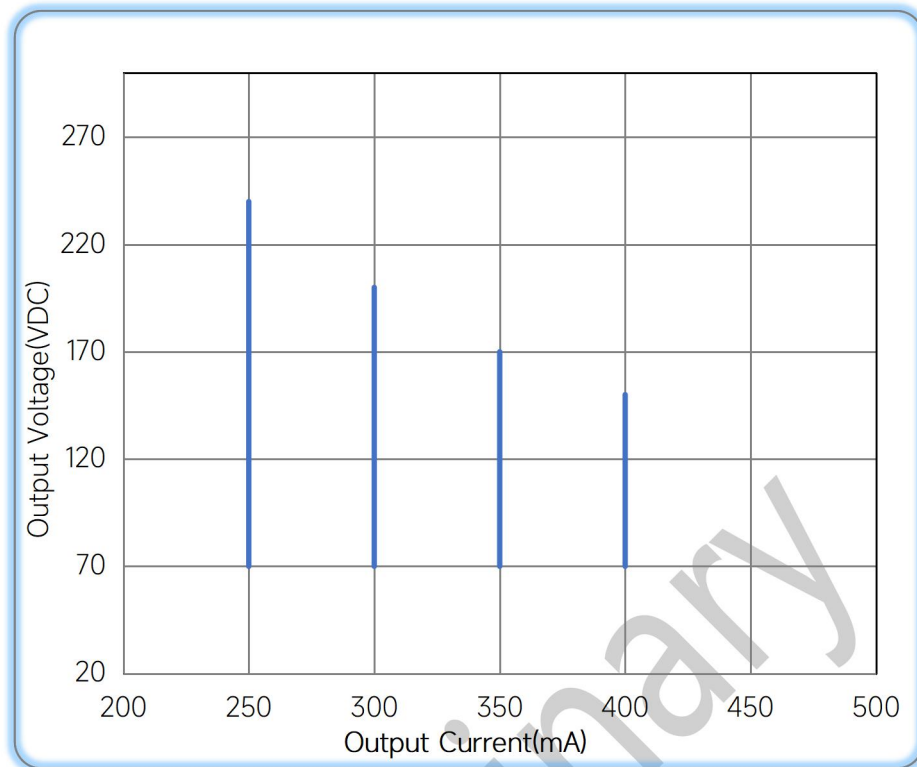
Power Factor Characteristics



THD vs. Load



◆ Operating window



— Operating window 100%

◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/09/05
update			B	2023/12/29

Remark: The final interpretation of the contents of the specification belongs to Astralux.

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