

21W Constant Current -FDS power supply



■ Approve



Features

- For luminaires of protection Class II,SELV
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor :0.9
- Efficiency :88%
- Adjustable Output Current with dip-switch
- 5 years warranty

Applications

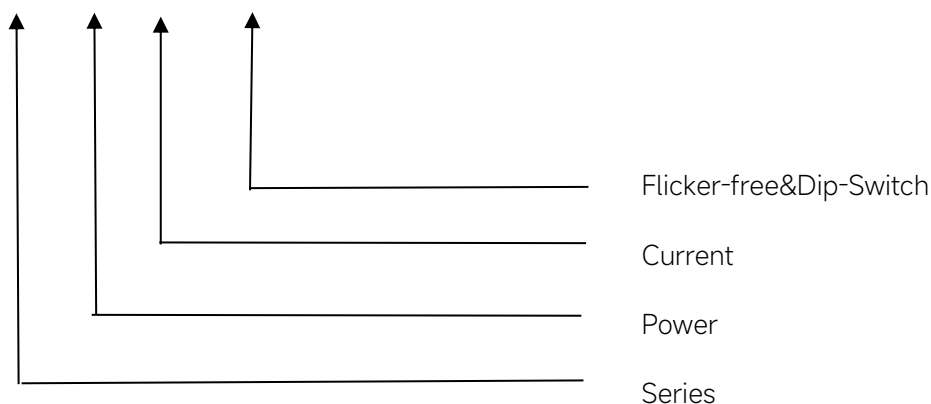
- Track Spot light

◆ Description

FDS-21-500 LD2-3 Wires is a 21W constant current LED driver that operates from 198-264Vac input with 350 to 500mA output current and a forward voltage range from 15 to 42 Vdc. The output current is adjustable by DIP Switch. With it's compact dimensions from 130 X 34 X 45.5mm it is easy to integrate in track spot light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

FDS-21-500 LD2-3 Wires



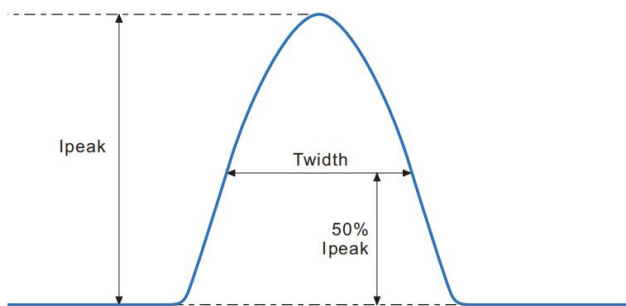
◆ Specification

Output	Constant Current	350mA	400mA	450mA	500mA
	Voltage Range	15-42VDC			
	Unload voltage Max.	59VDC			
	Current Accuracy	±7%		±5%	
	Output HF current ripple(≥1KHz)	±3%			
	Output LF current ripple(≤120Hz)	±3%			
	SVM	≤0.4			
	P _{st}	≤1			
	Efficiency(Typ.)	88%			
Input	Rated input voltage	220-240VAC			
	Range of input voltage	198-264VAC			
	Maximum voltage	300VAC@1 h maximum,unit might not operate in this abnormal condition			
	Frequency(Hz)	50/60 Hz			
	Displacement factor	≥0.9			
	Power Factor	>0.9			
	Input Current max	0.15A MAX.			
	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			
capability	Surge capability (L-N)	2KV			
	Surge capability (L/N-Ground)	4KV			
Environment	Operating Temperature	-20℃~+35℃			
	Humidity	20%-90%RH			
	Tc	70℃			
	Storage Temperature	-20℃~+60℃			
	Life time	> 50000h@Tc=70℃			
	Noise	≤25dB(A)@20cm			
Surface	Dimension	130 X 34 X 45.5(LXWXH)mm			
	material	PC			
Standards	Safety	GB19510. 1, GB19510. 14; IEC61347- 1, IEC61347-2- 13; 61347.2.13			
	EMC	GB/T17743, GB17625. 1; EN55015, EN61000-3-2, EN61000-3-3, EN61547			
	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°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.Data are typical values obtained from test samples 4.The over-temperature protection of the product is provided by the IC. 5.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.
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◆ Inrush Current

I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
12.8A	113.6μs	53pcs	85pcs	106pcs	53pcs	85pcs	106pcs



Remarks:

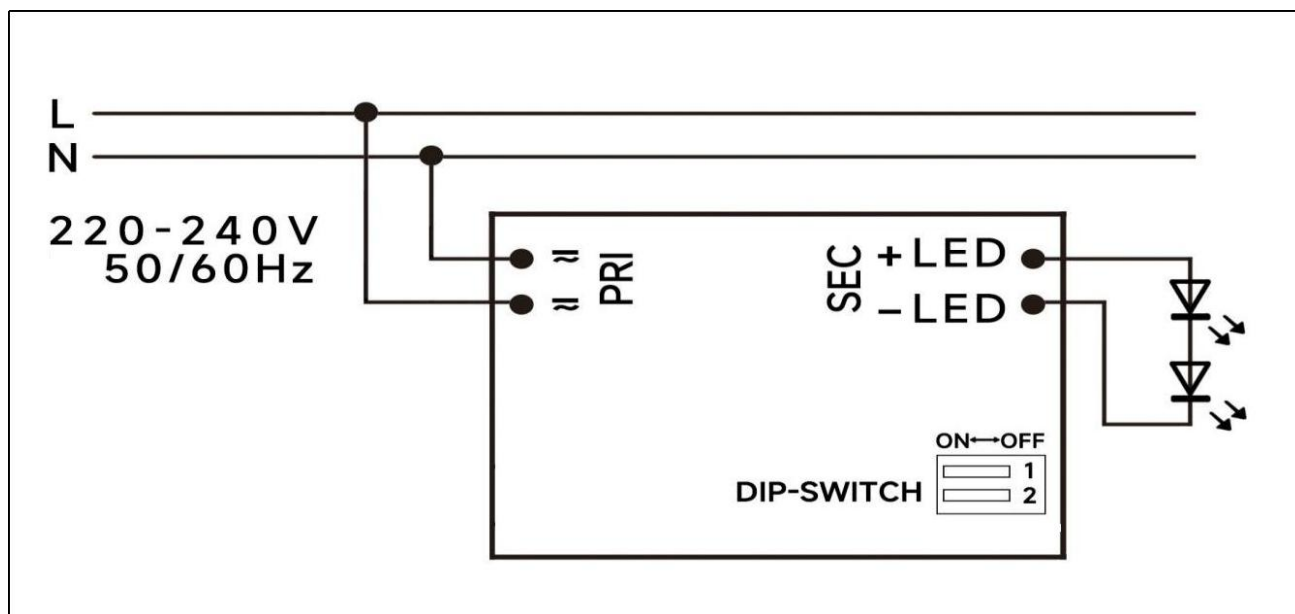
- 1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
- 2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

◆ Parameter

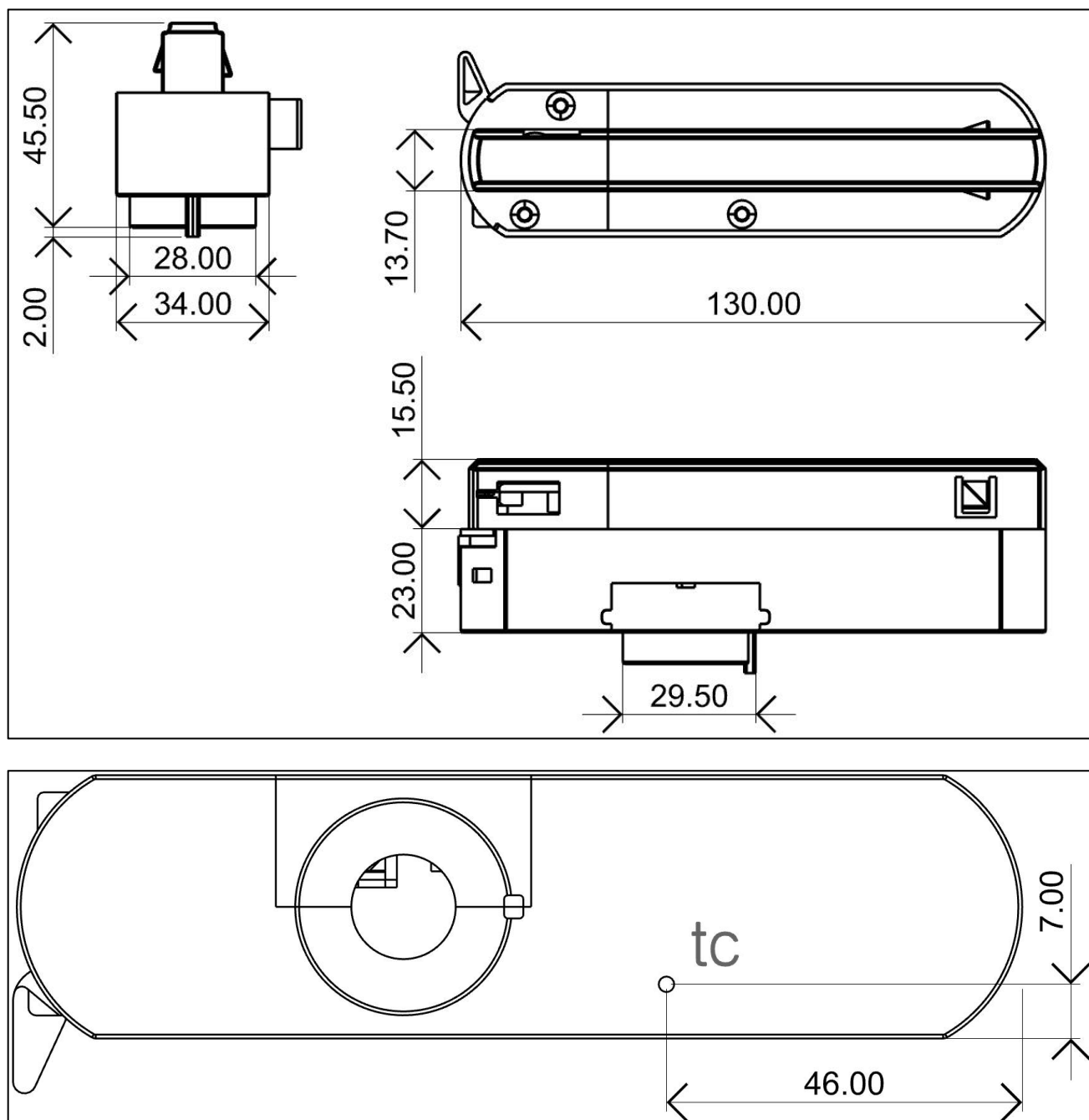
Number	Output				Switch position	
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2
1	350mA	15-42VDC	59	14.7	--	--
2	400mA			16.8	ON	--
3	450mA			18.9	--	ON
*4	500mA			21	ON	ON

* Factory default

◆ Wiring diagram

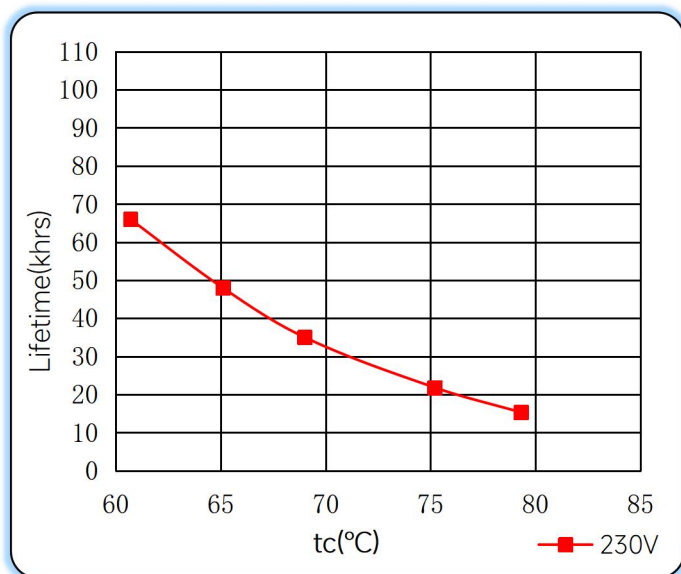


◆ 2D diagram

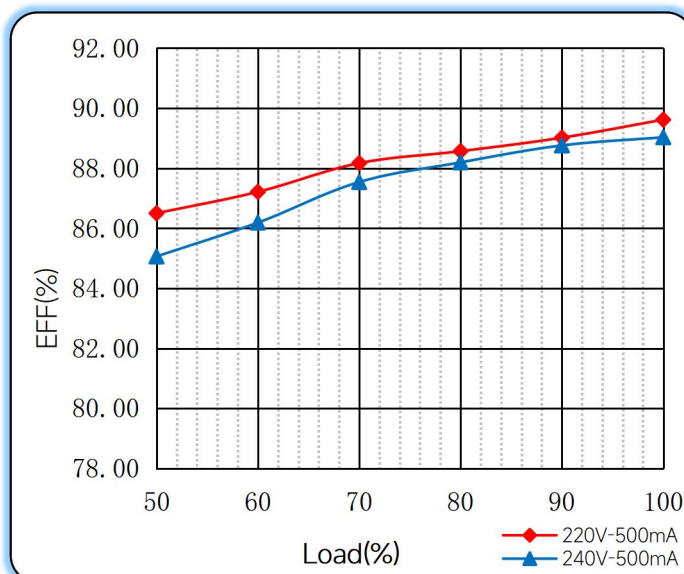


◆ Curve for FDS-21-500 LD2-3 Wires, $I_o=500\text{mA}$

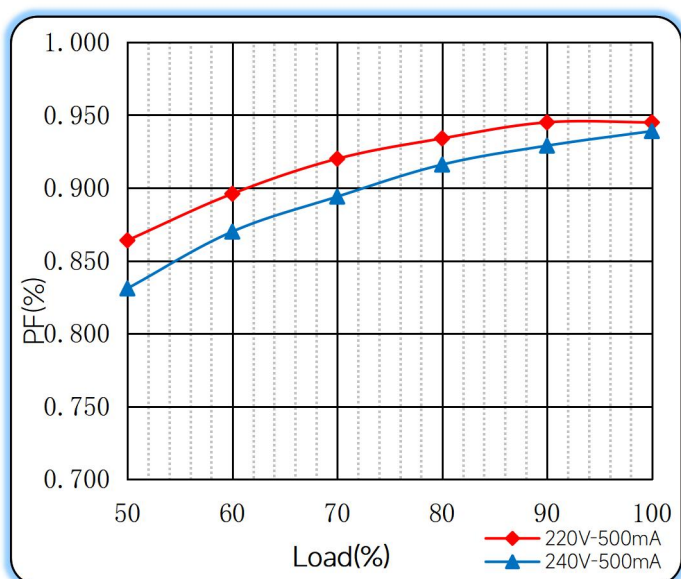
Lifetime vs. Temperature Curve



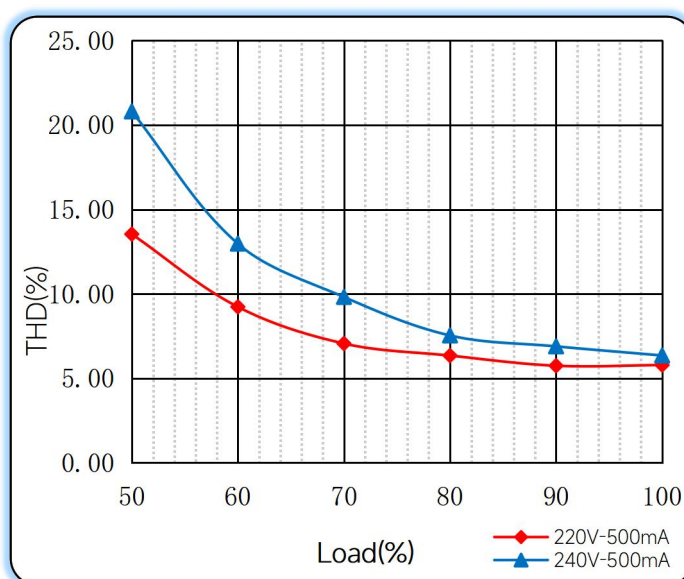
Efficiency vs. Load



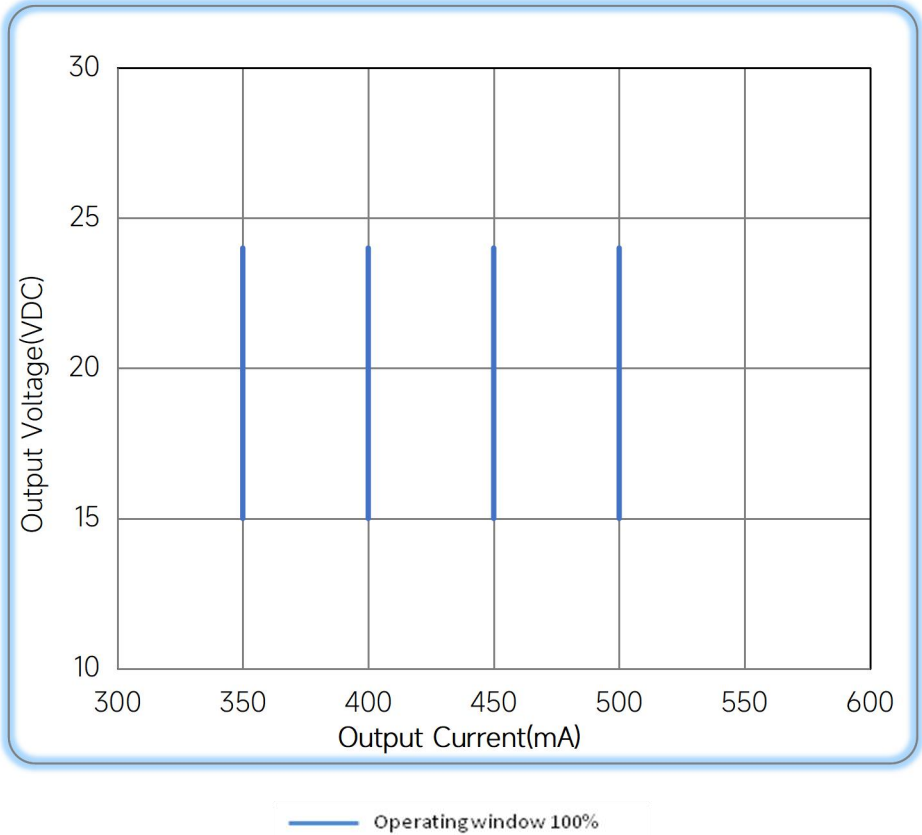
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/08/17
Current Accuracy		Update	B	2024/03/21

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

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EAGLERISE



Manual