

80W Constant Current -FMS Series



■ Approve



Features

- For luminaires of protection Class I or II, Non-isolated, Built-in
- Input Voltage 220-240VAC
- Protections: SCP/OVP/OTP
- Power Factor: 0.95(Typ.)
- Efficiency : $\geq 93\%$ (Typ.)
- Adjustable Output Current with dip-switch
- 5 years warranty
- IP20

Applications

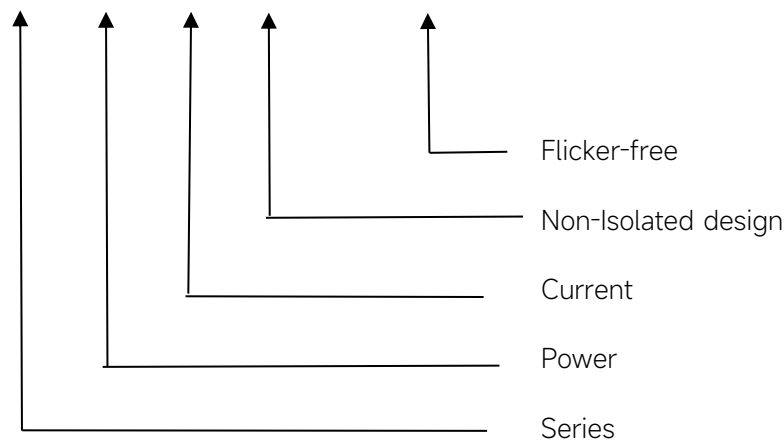
- Linear light

◆ Description

FMS-80-550 N-S CCT LD EXC is an 80W non-Isolated design constant current LED driver that operates from 198-264Vac input with 350 to 550mA output current and a forward voltage range from 40 to 216Vdc. The output current is adjustable by DIP Switch. With it's compact dimensions from 210*30*21 mm. It is easy to integrate in linear light products. To ensure trouble-free operation, protection is provided against output short circuit, over voltage and over temperature.

◆ Model code

FMS-80-550 N-S CCT LD EXC



◆ Specification

Output	Constant Current	350mA	400mA	500mA	550mA
	Voltage Range	40-216VDC	40-187VDC	40-150VDC	40-136VDC
	Unload voltage Max.	250VDC			
	Current Accuracy	±5%			
	Output HF current ripple(≥1KHz)	±5%			
	Output LF current ripple(≤120Hz)	±5%			
	SVM	≤0.4			
	Pst	≤1			
	Efficiency(Typ.)	≥93% @Full load ,230V			
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 DC voltage(VDC)	176-280VDC			
	Frequency(Hz)	0/50/60 Hz			
	Displacement factor	≥0.9			
	Power Factor	0.95 @Full load ,230V			
	Input Current max	0.5A			
	Start-up time	< 0.5S			
	No Load Power	≤0.5W			
	THD (Typ.)	<10%@Full load ,230V			
Protection	Over Load Protection	>103%			
		YES/Auto Resume			
	Over Voltage Protection	YES/Auto Resume			
capability	Short circuit Protection	YES/Auto Resume			
	Surge capability (L-N)	2KV			
	Surge capability (L/N-Ground)	2KV			
Environment	Operating Temperature	-20°C~+50°C			
	Humidity	20%-90%RH			
	Tc	85°C			
	Storage Temperature	-40°C~+85°C			
	Life time	> 50000h@Tc=80°C			
	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;AS/NAS 61347-1, AS/NAS 61347-2-13;AS/NZS 61347.1,AS			
	EMC	GB/T17743, GB17625.1; EN55015, EN61000-3-2, EN61000-3-3, EN61547; 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°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.The over-temperature protection of the product is provided by the IC. 4.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered.. 5.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.	

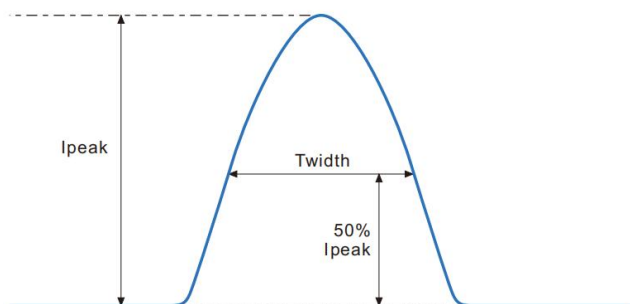
◆ Parameter

Number	Output				Switch position	
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2
1	350mA	40-216VDC	250	75.6	--	--
2	400mA	40-187VDC		74.8	ON	--
3	500mA	40-150VDC		75	--	ON
*4	550mA	40-136VDC		74.8	ON	ON

* Factory default

◆ Inrush Current

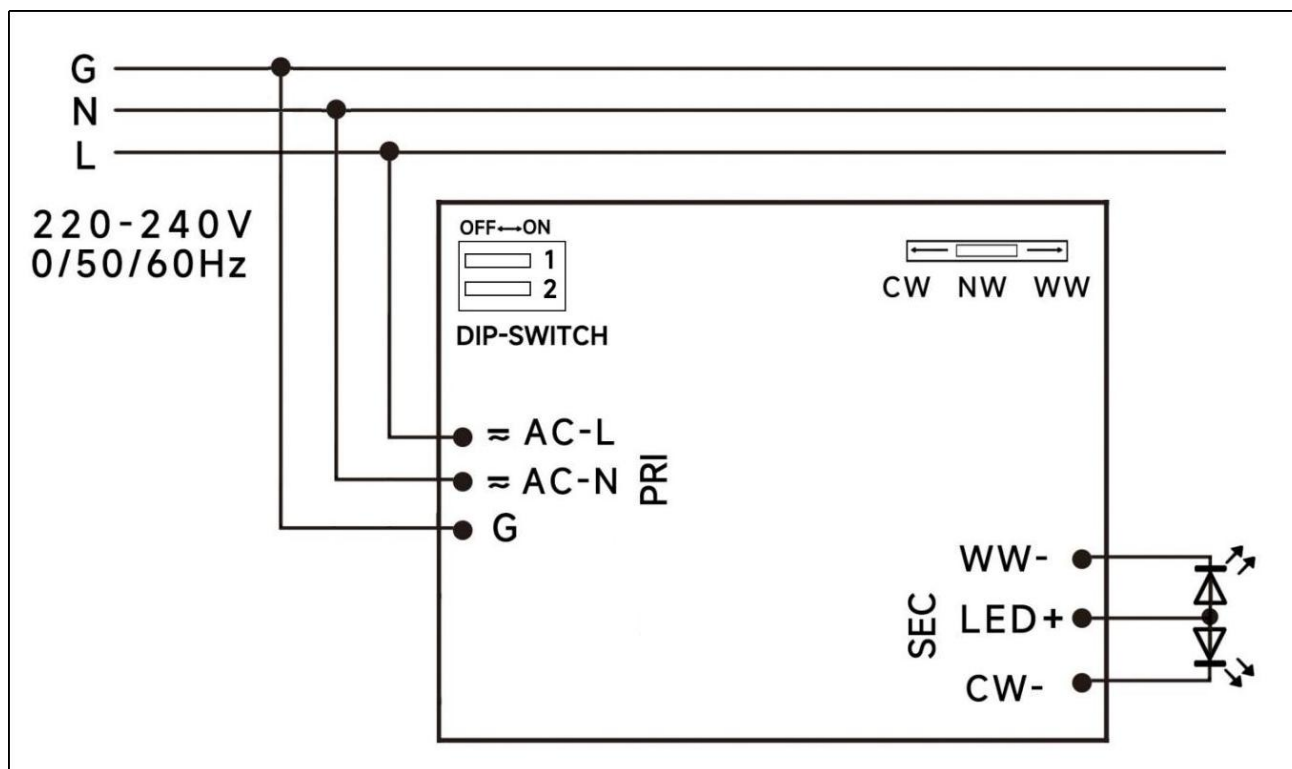
I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
42.4A	174μs	11pcs	17pcs	22pcs	16pcs	25pcs	32pcs



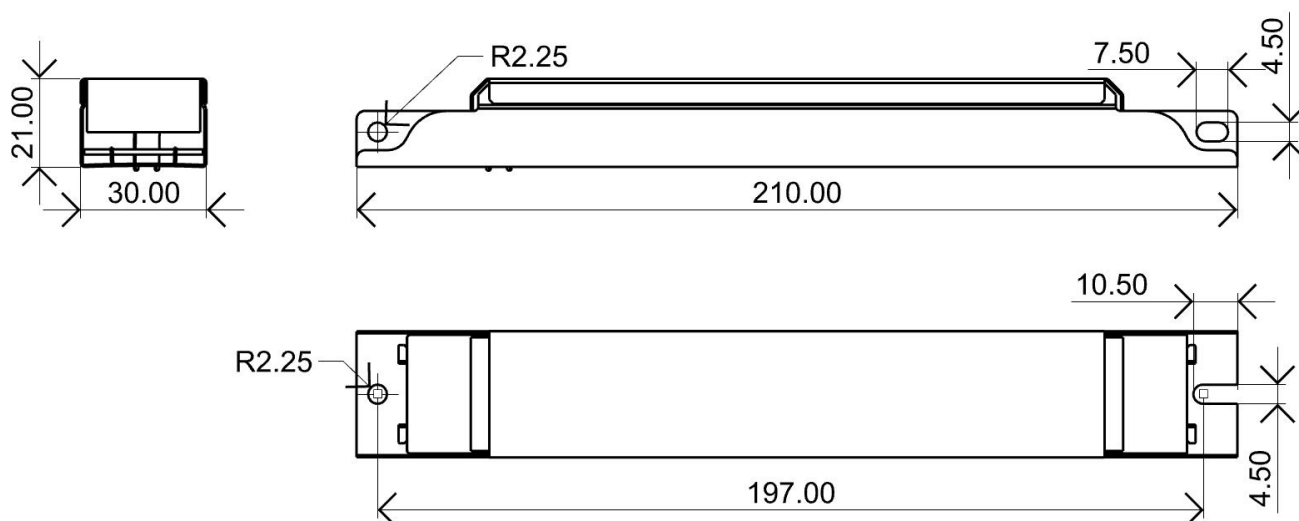
Remarks:

- 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



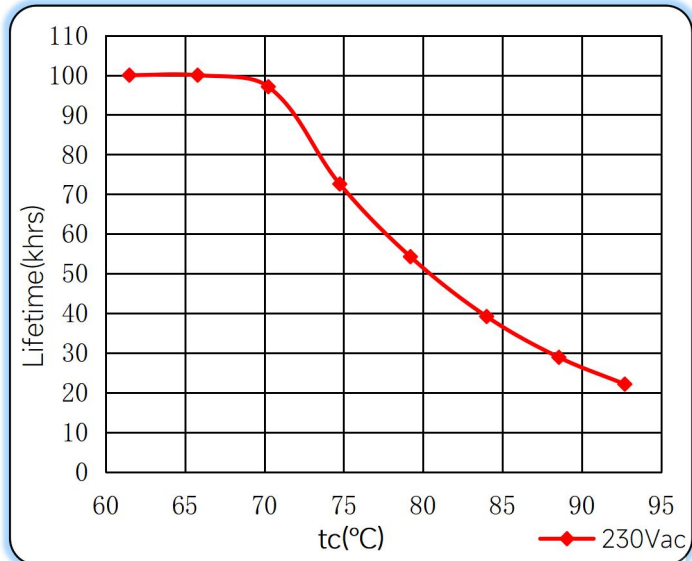
◆ Wiring & Connections

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

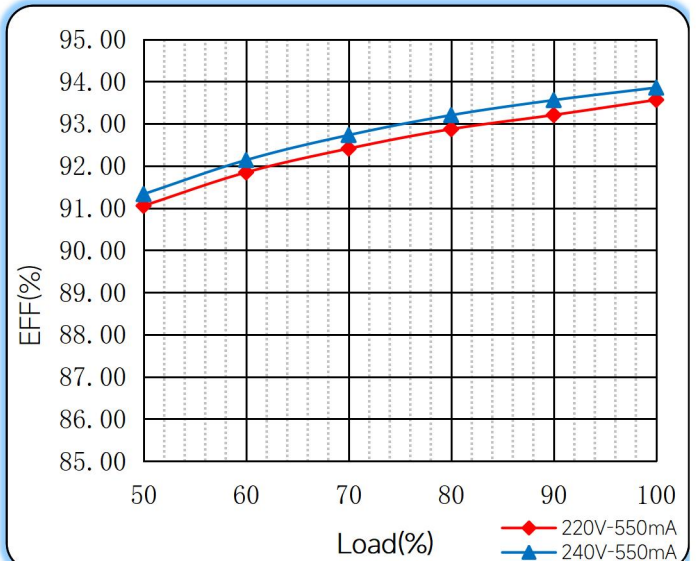
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Curve for FMS-80-550 N-S CCT LD EXC, $I_o=550\text{mA}$

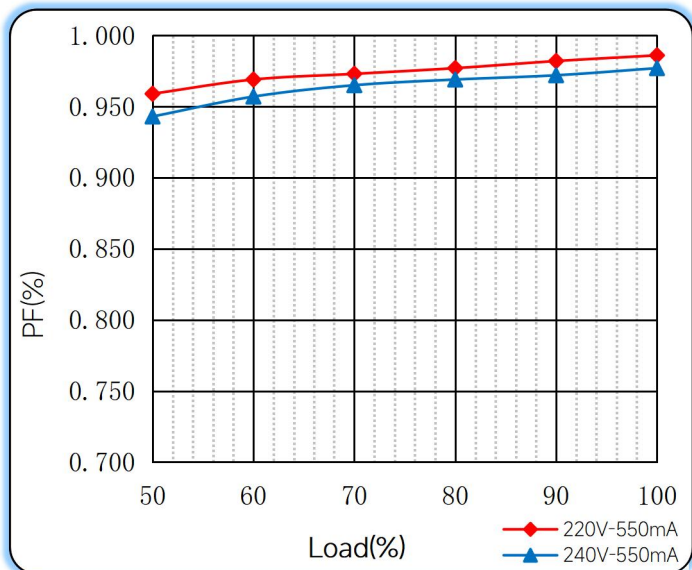
Lifetime vs. Ambient Temperature Curve



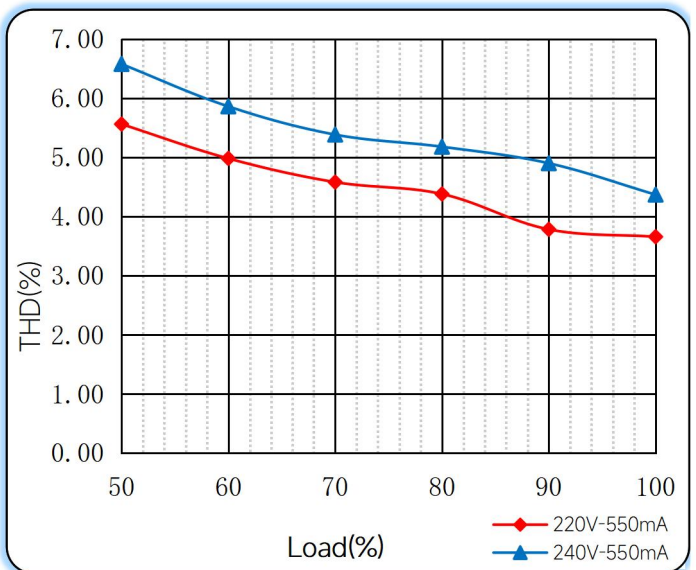
Efficiency vs. Load



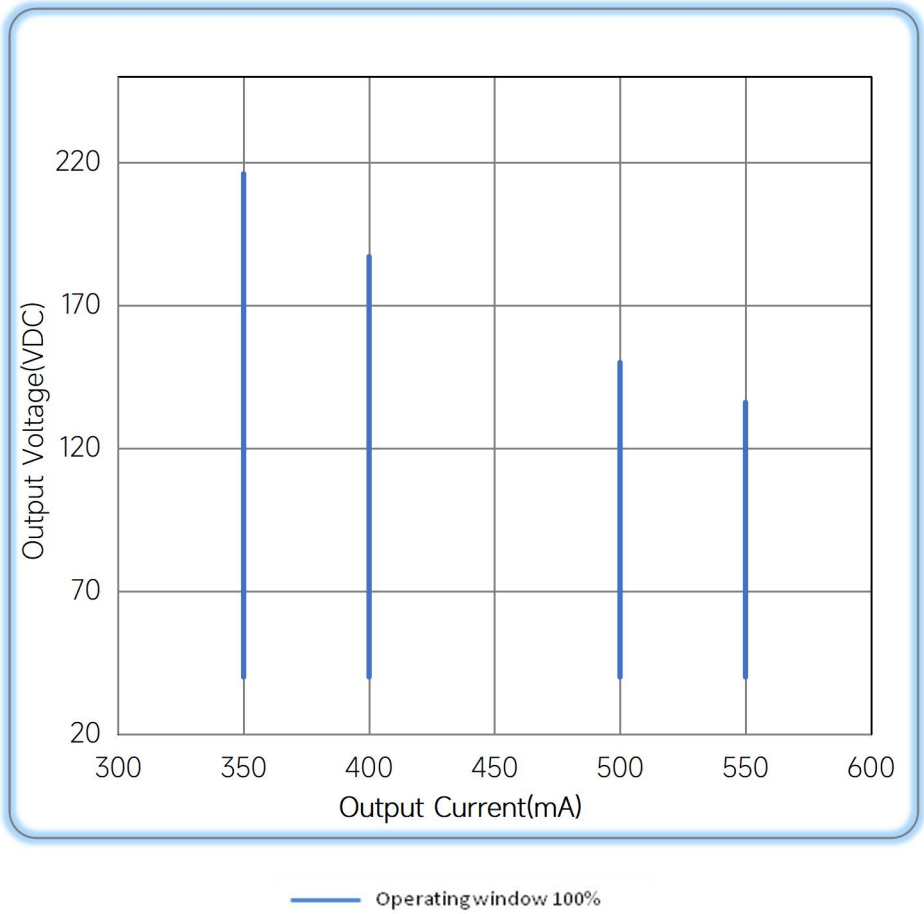
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/06/12

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

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