40W Constant Current -FMS Series

Features

- Class I , Non-isolated, Built-in
- Input Voltage :220-240VAC
- Protections: SCP/OVP/OLP/OTP
- Power Factor: 0.95(Typ.)
- Efficiency: ≥90%(Typ.)
- Adjustable Output Current with dip-switch
- 5 years warranty
- IP20

Applications

- Linear light

■Approve

◆ Description

FMS-40-350 N-S LD1 E is a 40W constant current LED driver that operates from 198-264Vac input with 200 to 350mA output current. The output current is adjustable by DIP Switch. With it's dimensions from 168 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 voltage and over temperature.

◆ Model code

FMS-40-350 N-S LD1 E

- LD1 E — Flicker-free
- N-S — Non-Isolated design
- 350 — Current
- 40 — Power
- FMS — Series

◆ Specification

Output	Constant Current	200mA	250mA	300mA	350mA
	Voltage Range	40-200VDC	40-160VDC	40-133VDC	40-114VDC
	Unload voltage Max.(VDC)	250VDC			
	Current Accuracy	±5%			
	Output LF current ripple(≤120Hz)	±5%			
	SVM	≤0.4			
	Pst	≤1			
	Efficiency(Typ.)	≥90%@Full load ,220-240V			
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			
	Displacement factor	≥0.9			
	Power Factor	0.95@Full load ,220-240V			
	Input Current max	0.25A			
	Start-up time	＜0.5S			
	No Load Power	≤0.5W			
	THD (Typ.)	<10% @Full load ,220-240V			
Protection	Over Load Protection	>105%			
		YES/Auto Resume			
	Over Voltage Protection	>250V			
		YES/Auto Resume			
	Short circuit Protection	YES/Auto Resume			
	Over Temperature Protection	YES/Auto Resume			
		Ta≥75° C，reducing the output current			
capability	Surge capability (L-N)	2KV			
	Surge capability (L/N-Ground)	2KV			
Environment	Operating Temperature	-20℃ ~+50℃			
	Humidity	20%-90% RH			
	Tc	85℃			
	Storage Temperature	-25℃ ~+60℃			
	Life time	＞50000h@Tc=75℃ ,230VAC			
	Noise	≤25dB(A)@20cm			
Surface	Dimension	168 x 30 x 21(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 . 3.Switch and dimmer are not recommended to connect between this product output and luminaries. 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. 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.	

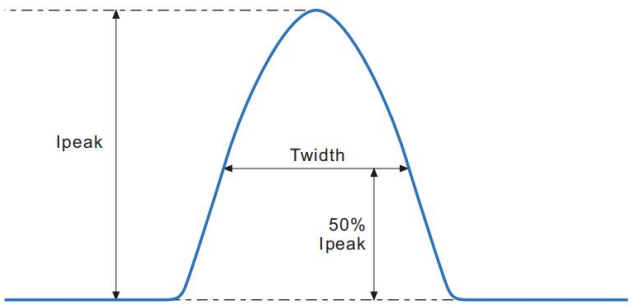
◆ Parameter

Number	Output				Switch position	
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2
1	200mA	40-200VDC	250	40W	--	--
2	250mA	40-160VDC		40W	ON	--
3	300mA	40-133VDC		39.9W	--	ON
*4	350mA	40-114VDC		39.9W	ON	ON

* Factory default

◆ Inrush Current

I^{peak}	Twidth	B10	B16	B20	C10	C16	C20
24.9A	**124μs**	27pcs	43pcs	54pcs	32pcs	51pcs	64pcs

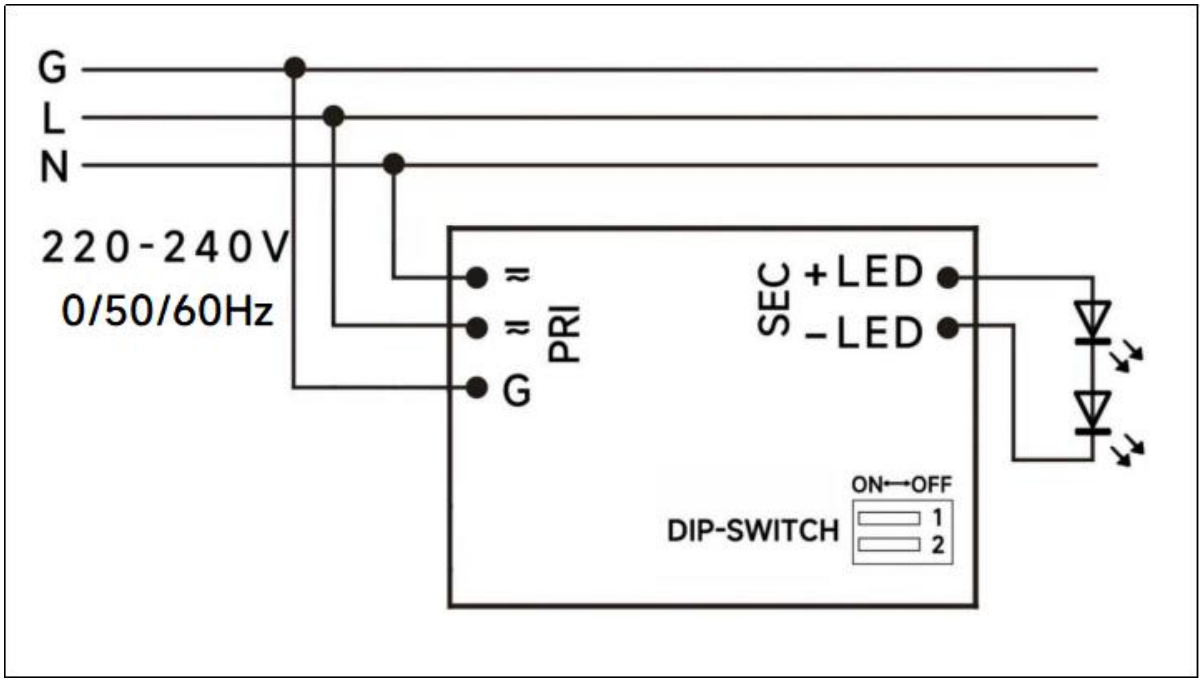


Remarks:

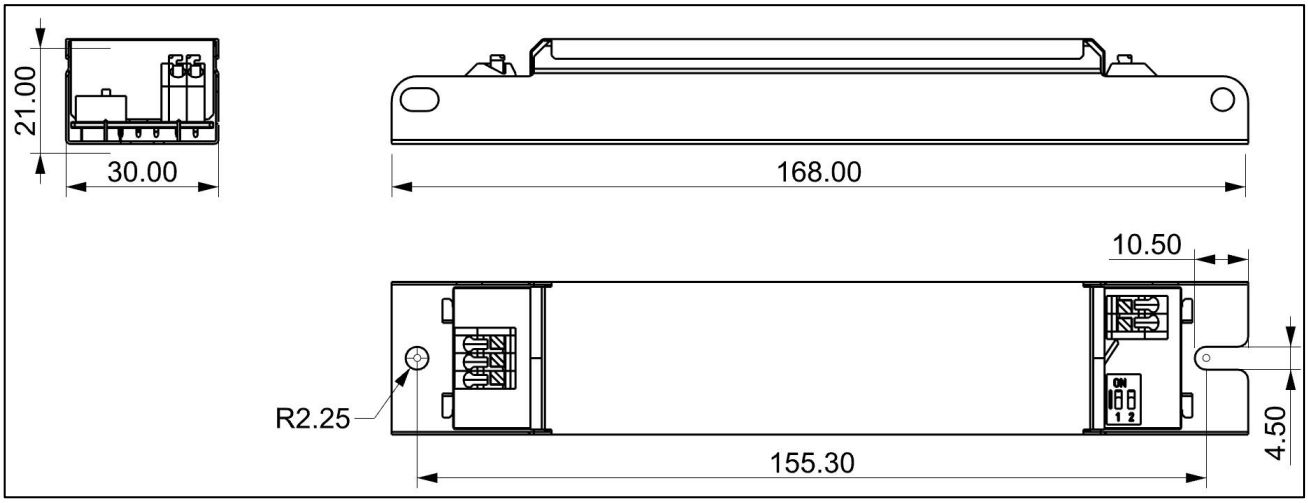
1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.

2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

◆ Wiring diagram



◆ 2D diagram



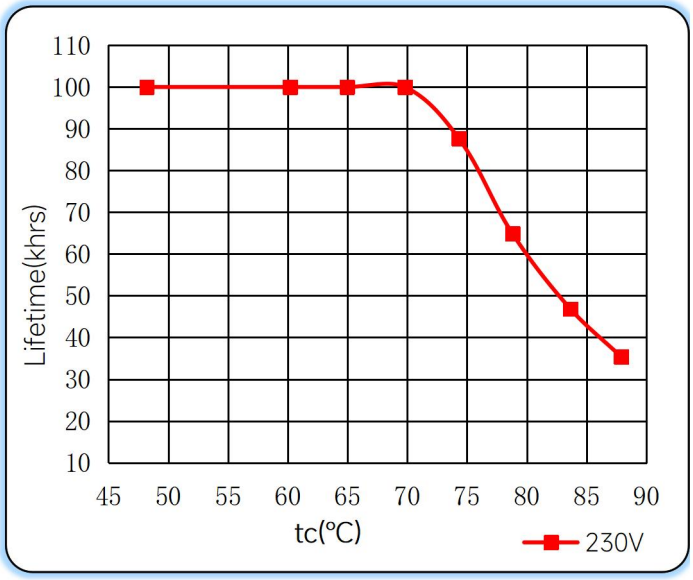
◆ Wiring & Connections

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

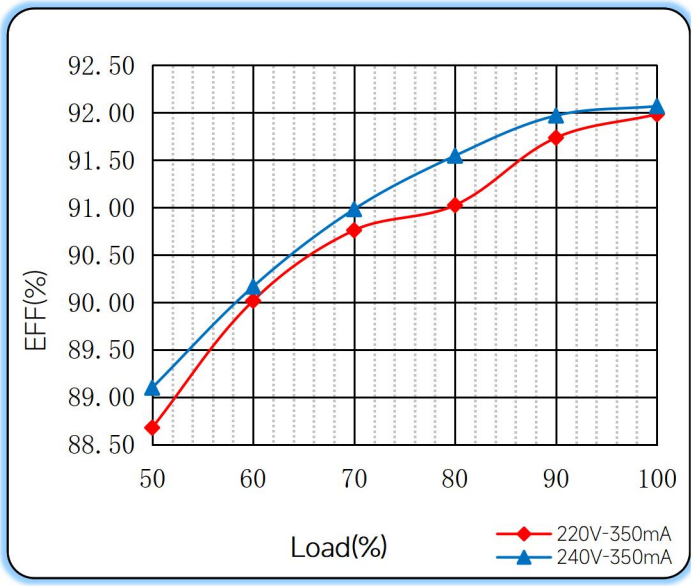
Note:Solid wire is risky to use on an angled terminal.Stranded wire is recommended for this kind of use.

◆ Curve for FMS-40-350 N-S LD1 E, Io=350mA

Lifetime vs. Temperature Curve

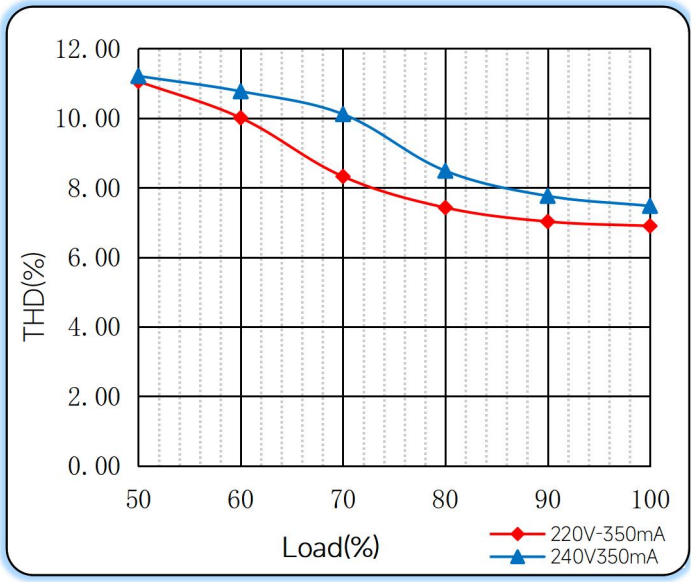


Efficiency vs. Load

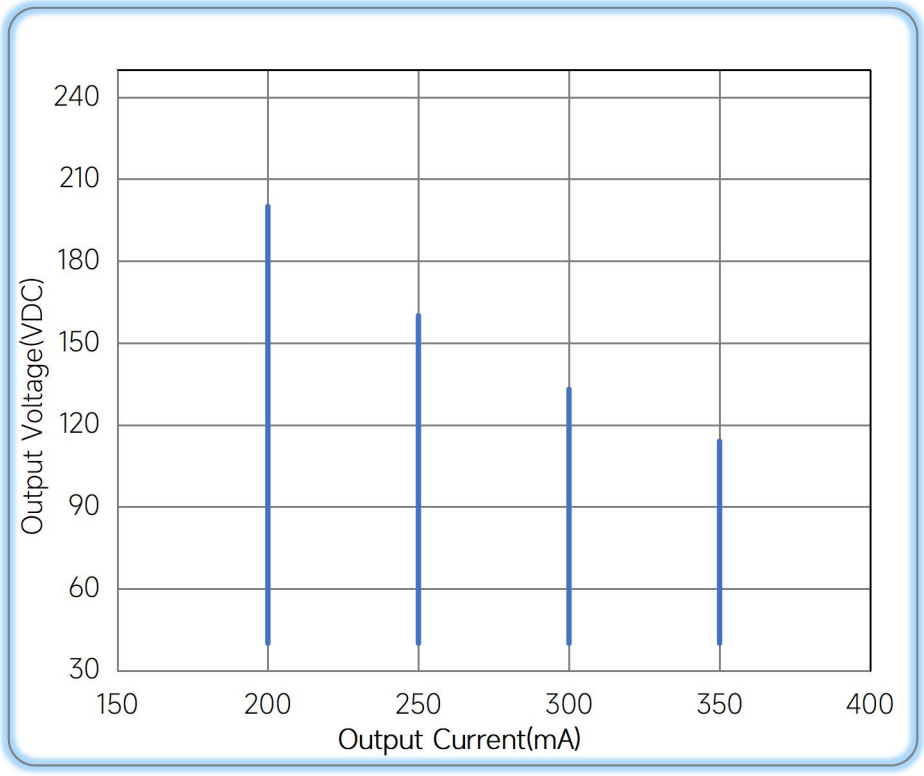


Power Factor Characteristics

THD vs. Load



◆ Operating window



Operating window 100%

◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/01/09

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