

50W Constant Voltage Driver



Features

- High efficiency up to 87%
- Built-in active PFC function
- All-Around Protection: OLP, SCP,OVP,OTP
- Waterproof(IP67) and Dry/Damp/Wet Location
- Input Surge Protection:4kV line-line
6kV line-ground
- Compact Metal Case, Free Air Convection
- High Reliability & Long Lifetime & 5 Years Warranty

Applications

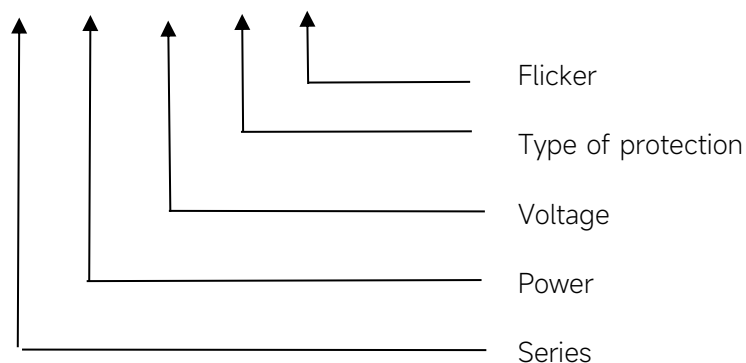
- High ceiling, tunnel lights, outdoor lights

◆ Description

VMS-50-XX IP67 L EXC series is a 50W, constant voltage IP67 LED driver that operates from 198-264Vac input with 12V/24V36V/42V/48V output voltage,excellent power factor and THD feature.With it's dimensions from 127x39x28mm.This series of products is specially designed for direct power supply applications such as LED strips.The high efficiency of these drivers and compact metal case enable them to run cooler, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against input surge, output over voltage, short circuit, and over temperature.

◆ Model code

VMS-50-XX IP67 L EXC



◆ Specification

Output	Constant Voltage	12VDC	24VDC	36VDC	42VDC	48VDC
	Current Range	0~4.17A	0~2.08A	0~1.39A	0~1.19A	0~1.04A
	Unload voltage Max.(VDC)	12.6VDC	25.2VDC	37.8VDC	44.1VDC	50.4VDC
	Voltage Accuracy	±5%				
	Output HF current ripple(≥1KHz)	±5%				
	Output LF current ripple(≤120Hz)	±5%				
	SVM	≤0.4				
	P _{st}	≤1				
	Efficiency(Typ.)	87%				
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	≥0.95				
	Power Factor	>0.96@Full load,230V				
	Input Current max	0.4A				
	Start-up time	< 0.5S				
	No Load Power	≤0.5W				
	THD (Typ.)	<10%@Full load,230V				
Protection	Over Load Protection	105-140%				
	Short circuit Protection	YES/Auto Resume				
capability	Surge capability (L-N)	4KV				
	Surge capability (L/N-Ground)	6KV				
Environment	Operating Temperature	-40°C~+55°C				
	Humidity	20%-90%RH				
	Tc	90°C				
	Storage Temperature	-40°C~+85°C				
	Life time	> 50000h@Tc=75°C				
	Noise	≤25dB(A)@20cm				
Surface	Dimension	127X39X28(LXWXH)mm				
	material	metal case				
Standards	Safety	GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;AS/NZS 61347- 1, AS/NZS 61347-2- 13;AS 61347.2.13;EN62384;				
	EMC	GB/T17743, GB17625. 1;EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN55015, EN61000-3-2, EN61000-3-3, EN61547,EN 62493;EN61000-4-5;EN61000-4-2,3,4,5,6,8,11, 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 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 μ F parallel capacitor.
- 3.This LED driver meets the EMI specifications above, but EMI performance of a lighting fixture also depends on the other devices on the fixture.
- 4.The over-temperature protection of the product is provided by the IC.
- 5.The start-up time is measured under cold start-up, frequent switching on and off may extend the start-up time to different degrees.
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- 7.The LED driver complies with the IP67 (and lower) protection rating standards, but is only suitable for indoor damp environments or outdoor sheltered locations (e.g., with rain protection). All products must not be used underwater or buried in the ground.
- 8.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.

◆ Model list

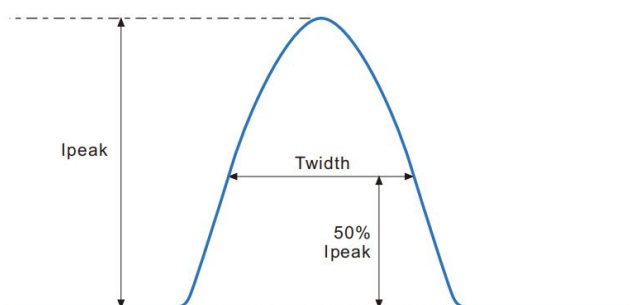
Model	Output Voltage	Output Current Range	Max output Power	Power Factor	Typical Efficiency
VMS-50-12 IP67 L EXC	12V	0~4.17A	50W	0.95	87%
VMS-50-24 IP67 L EXC	24V	0~2.08A	50W	0.95	87%
VMS-50-36 IP67 L EXC	36V	0~1.39A	50W	0.95	87%
VMS-50-42 IP67 L EXC	42V	0~1.19A	50W	0.95	87%
VMS-50-48 IP67 L EXC	48V	0~1.04A	50W	0.95	87%

Note:

Test condition: 230Vac/50Hz, at full Load;

◆ Inrush Current

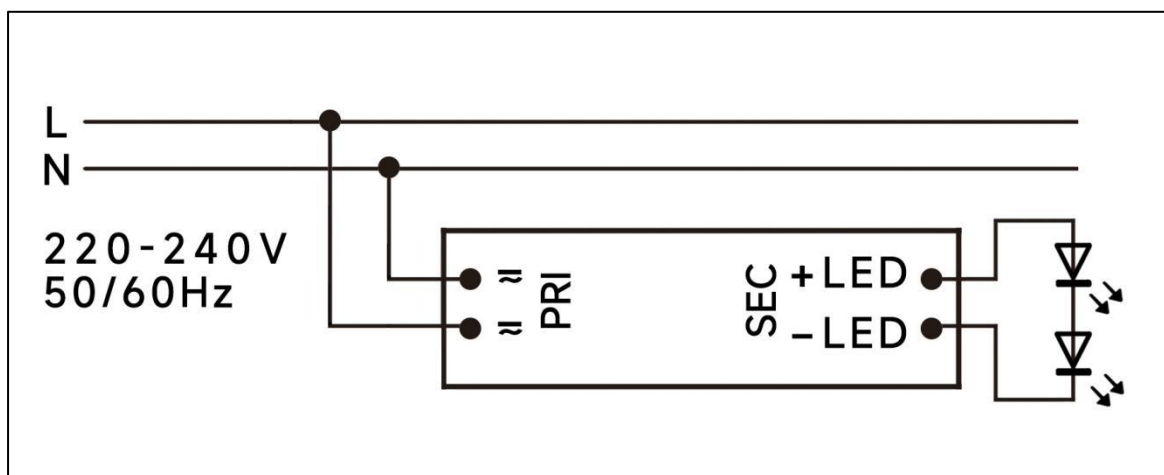
I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
25.2A	224 μ s	14pcs	23pcs	28pcs	20pcs	32pcs	40pcs



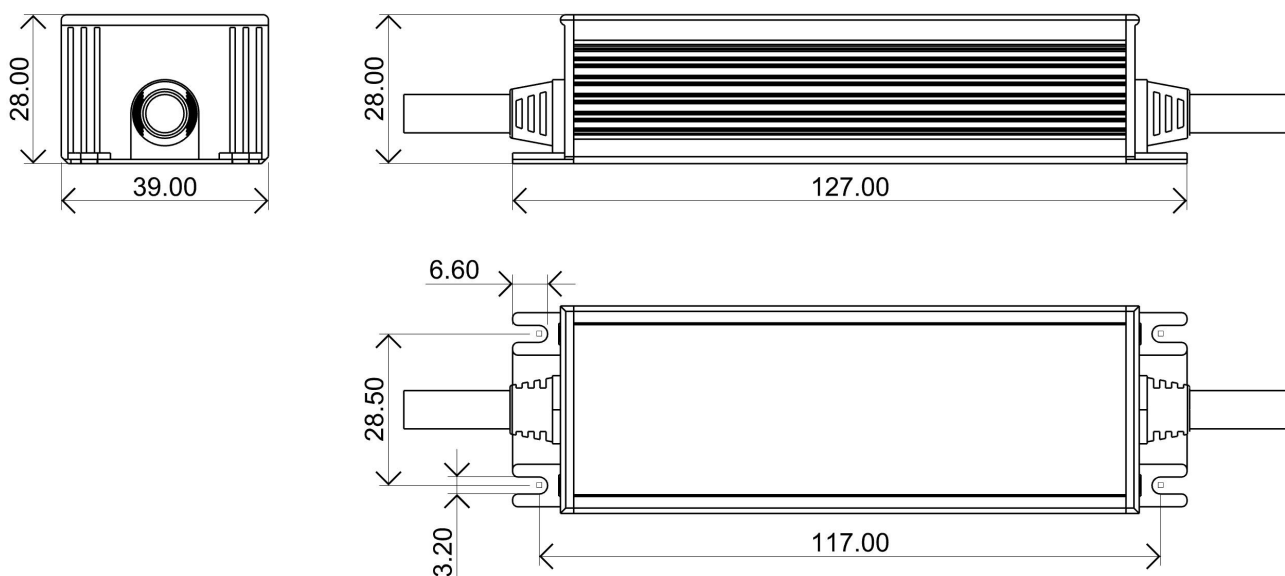
Remarks:

- 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

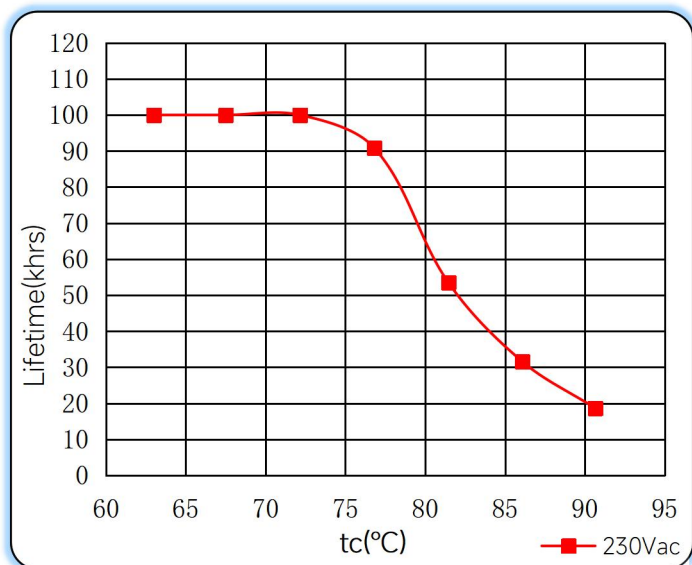


TYPE	Total Length	Outside Color	Inside Wires Color	Wire Model/Diameter
Input wire	0.36M	Black	Brown/Blue	H05RN-F/2x1.0mm ²
Output wire	0.36M	Black	Red/Black	H05RN-F/2x1.0mm ²

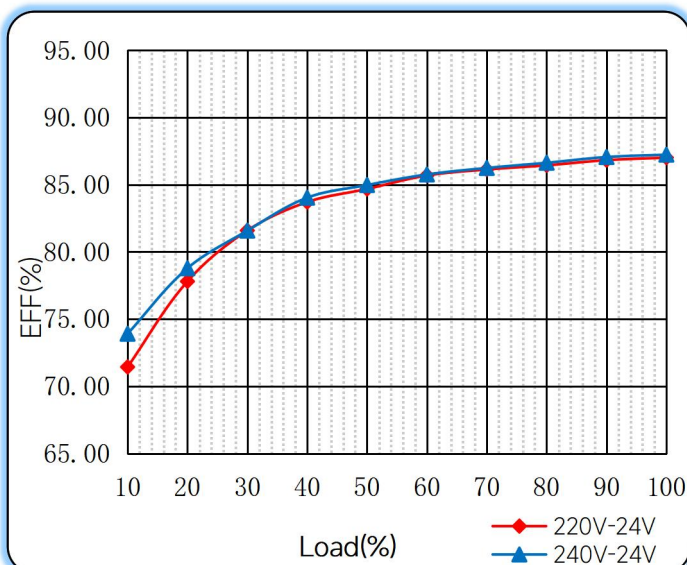
Note: Wire length of input and output can be changed as customer's requirement

◆ Curve for VMS-50-XX IP67 L EXC

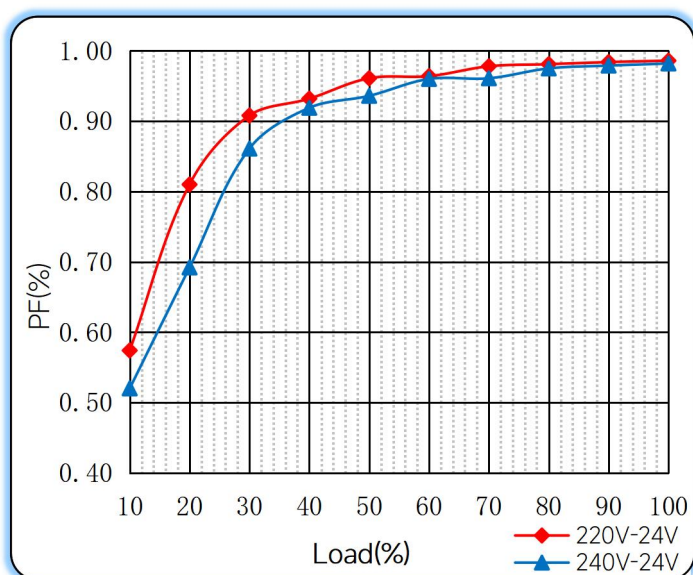
Lifetime vs. Temperature Curve



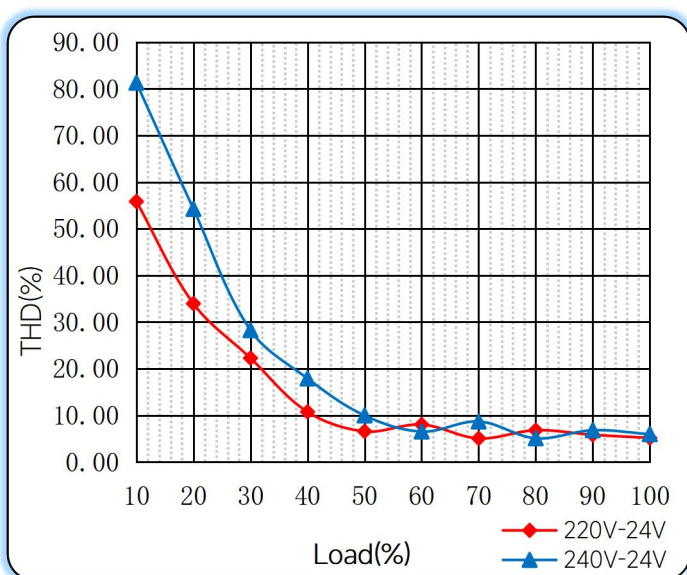
Efficiency vs. Load



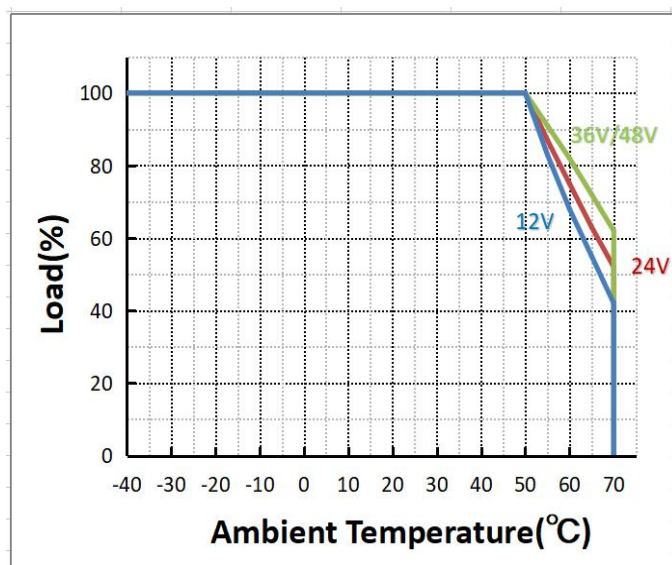
Power Factor Characteristics



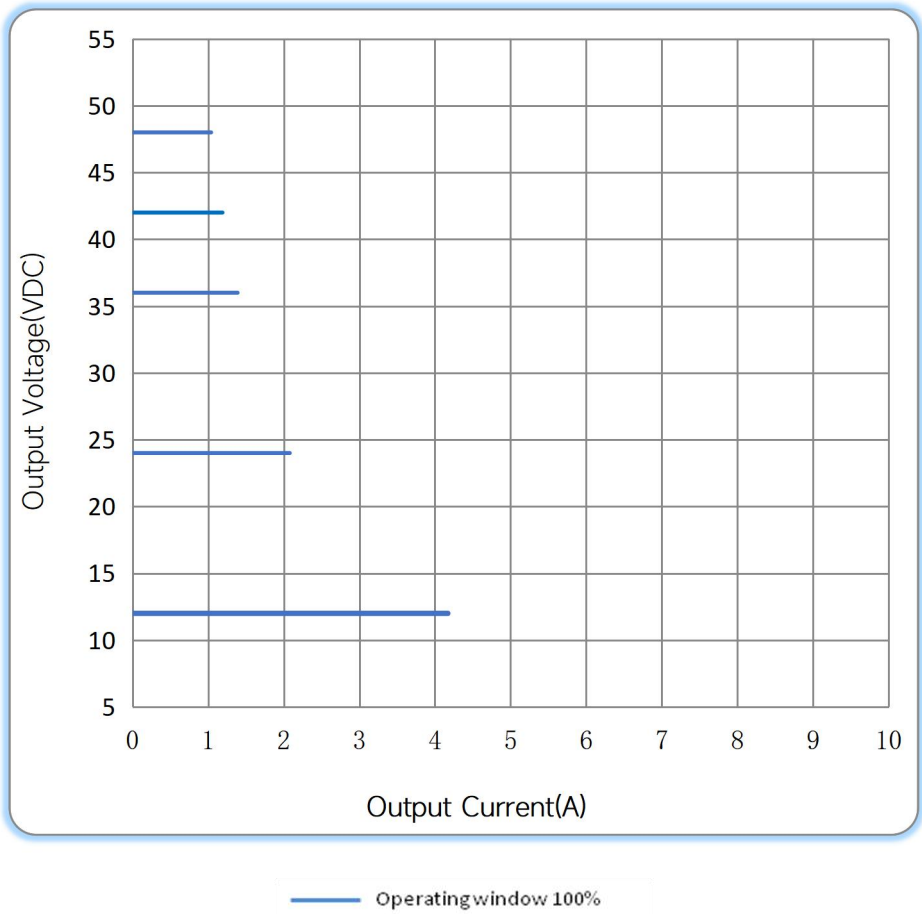
THD vs. Load



Load vs. Ta



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/05/15
Tc	95℃	90℃	B	2024/12/06
Operating Temperature	-40℃~+50℃	-40℃~+55℃	C	2025/06/05

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

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