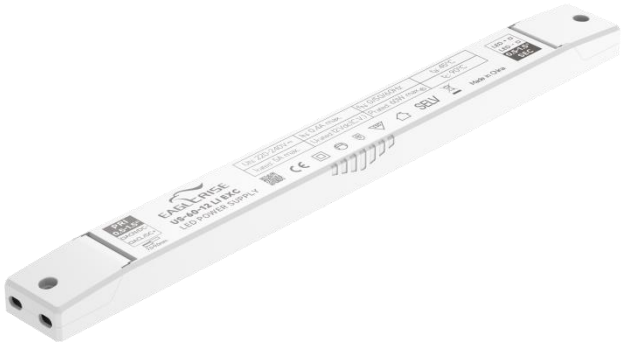
60W constant Voltage-US Series



Features

- For luminaries of protection Class II, SELV, Independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: ≥0.95 (Typ.)
- Efficiency: ≥88% (Typ.)
- 5 years warranty

Applications

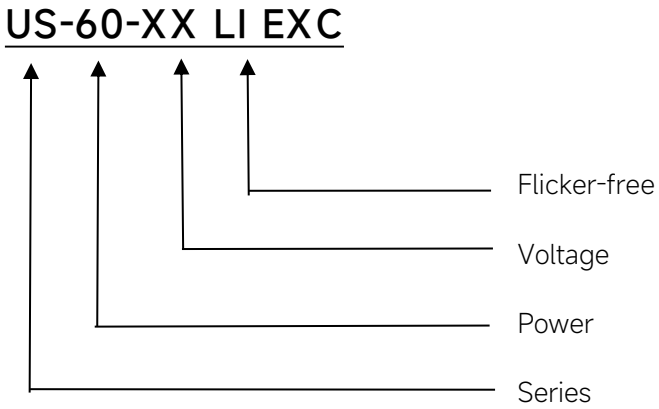
- LED strips

■Approve

◆ Description

US-60-XX LI EXC is a 60W constant voltage LED driver that operates from 198-264Vac input with 12V or 24V output voltage. With it's compact dimensions from 298X30X16mm. It is easy to integrate in LED strips products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code



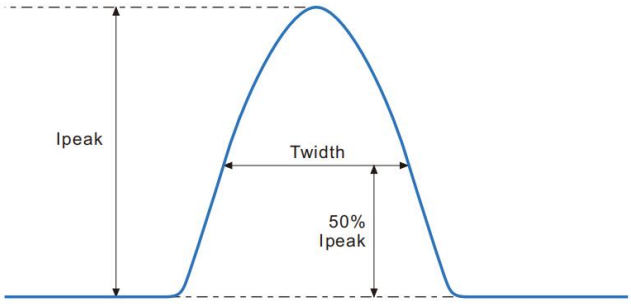
◆ Specification

Output	Constant Voltage	12VDC	24VDC
	Current Range	0-5A	0-2.5A
	Voltage Accuracy	±5%	
	Output HF current ripple(≥1KHz)	±5%	
	Output LF current ripple(≤120Hz)	±5%	
	SVM	≤0.4	
	Pst	≤1	
	Efficiency(Typ.)	≥88%@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 voltage(VDC)	176-280VDC	
	Frequency(Hz)	0/50/60 Hz	
	Displacement factor	≥0.9	
	Power Factor	≥0.95@Full load,230V	
	Input Current max	0.4A	
	Start-up time	< 0.5S	
	No Load Power	≤0.5W	
	THD (Typ.)	< 10%@Full load,230V	
Protection	Over Load Protection	105-150%	
		YES/Auto Resume	
	Over Current Protection	> 6A	> 3A
		YES/Auto Resume	
	Short circuit Protection	YES/Auto Resume	
	Over Temperature Protection	YES/Auto Resume	
capability	Surge capability (L-N)	1KV	
	Surge capability (L/N-Ground)	NA	
Environment	Operating Temperature	-20℃~+50℃	
	Humidity	20%-90%RH	
	Tc	90℃	
	Storage Temperature	-20℃~+60℃	
	Life time	> 50000h@Tc=80℃	
	Ripple & Noise	≤20dB(A)@10cm	
Surface	Dimension	298X30X16(LXWXH)mm	
	material	PC	
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;EN61000-4-2,3,4,5,6,8,11, EN61547
	Energy Efficiency	Erp2.0 EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	1.All parameters NOT specially mentioned are measured at 240VAC input , full load and 25℃ 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.Switch and dimmer are not recommended to connect between this product output and luminaries. 4.The efficiency testing will be affected by the instrument used and the results may also be different. 5.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered. 6.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. 7.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.	

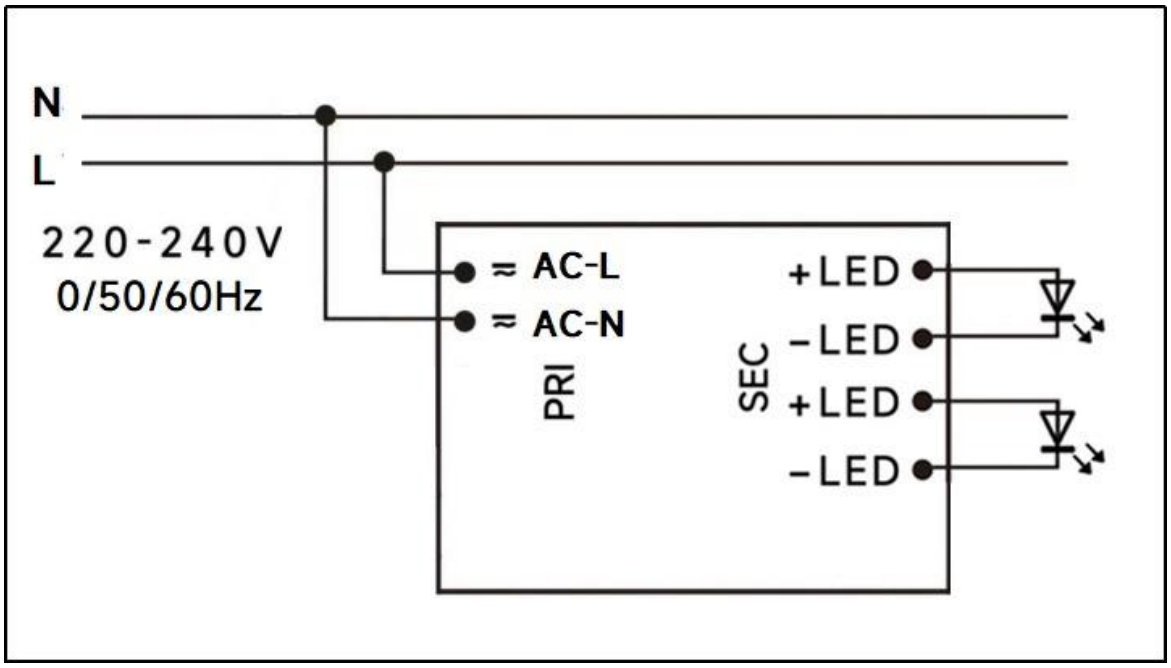
◆ Inrush Current

I_{peak}	T_{width}	B10	B16	B20	C10	C16	C20
41.6A	**254μs**	7pcs	12pcs	15pcs	12pcs	20pcs	25pcs

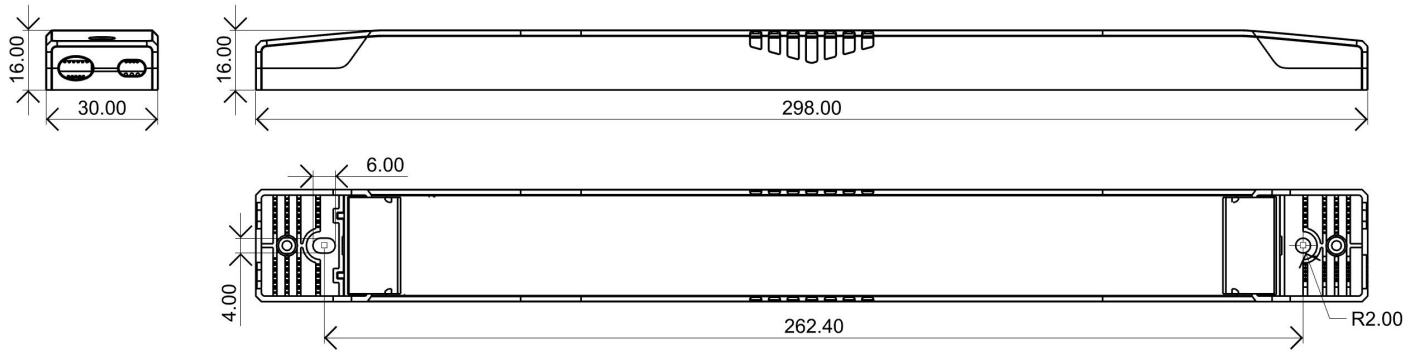


Remarks:
1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

◆ 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

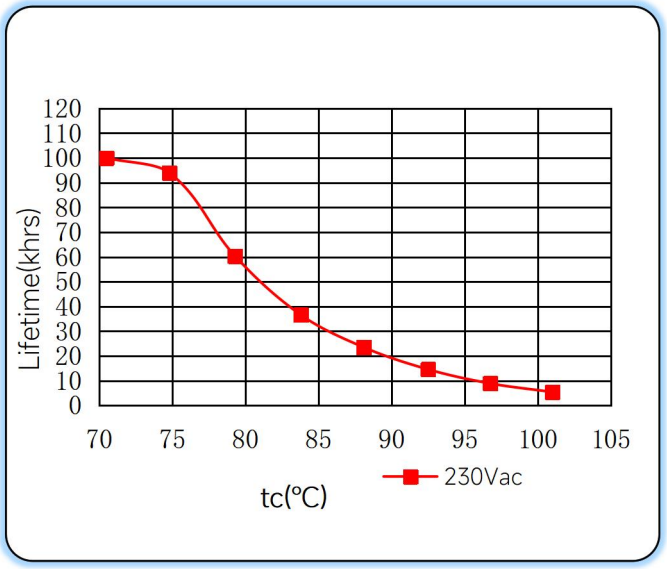
◆ Recommended wire

Wire cross-section	Wire type
2*0.5mm^2	H03VVH2-F 2core
2*0.75mm^2	H03VVH2-F 2core
1.5mm^2	CCC 08(RV-90)
16AWG(1.25mm^2)	UL1015

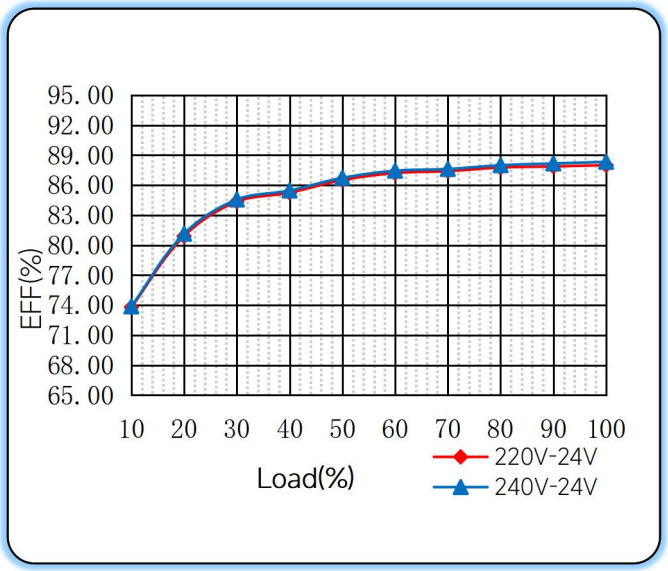
Note:Solid wire is risky to use on an angled terminal.Stranded wire is recommended for this kind of use.

◆ Curve for US-60-24 LI1 EXC

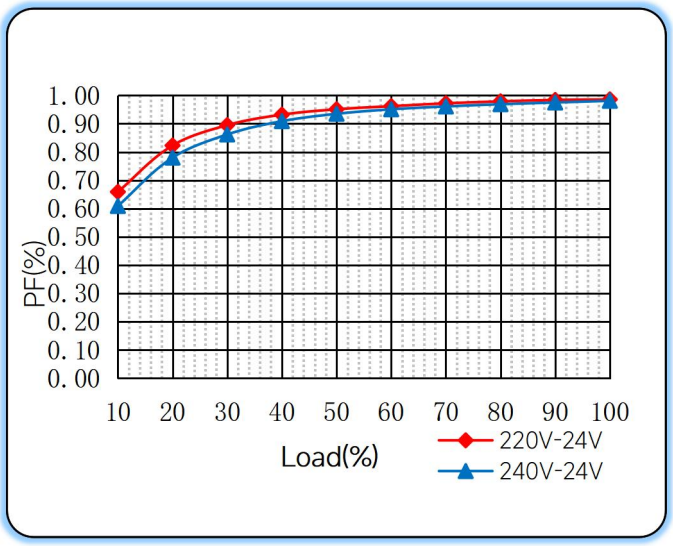
Lifetime vs. Temperature Curve



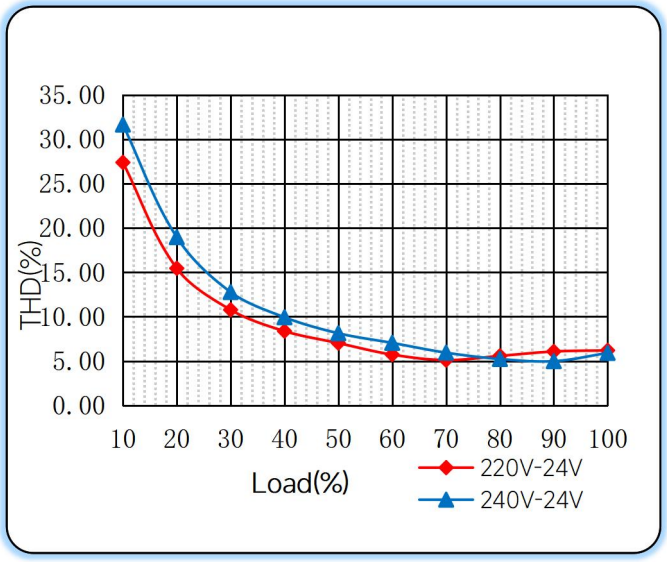
Efficiency vs. Load



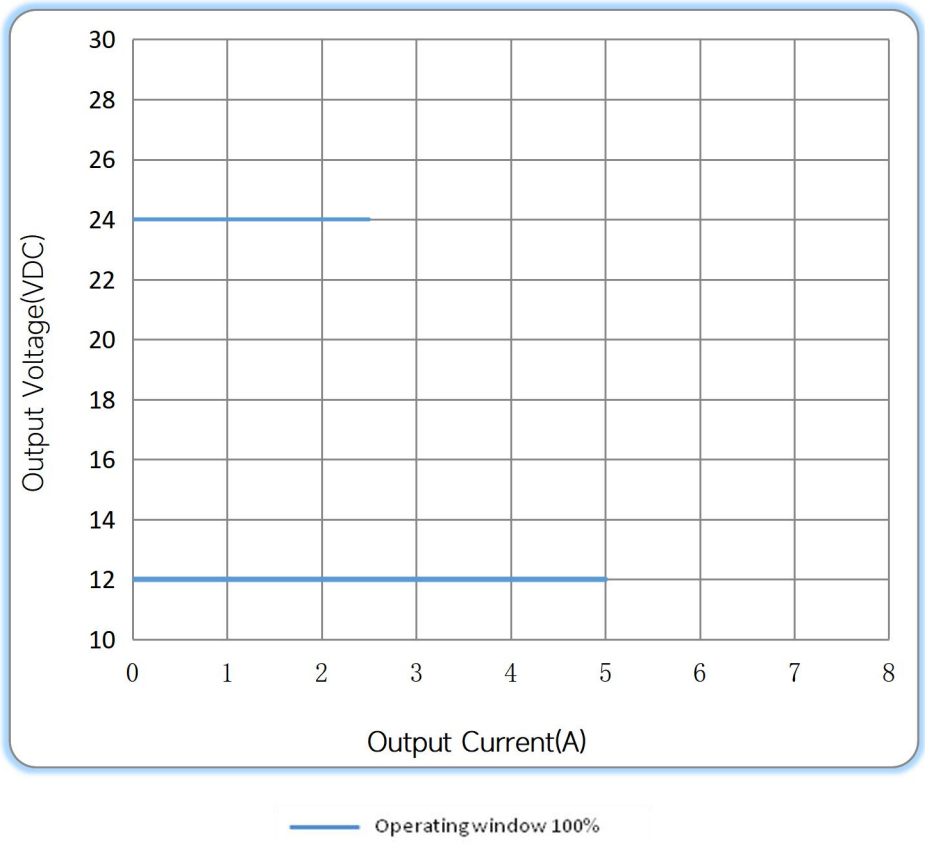
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/07/11

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

Tel: +86-0757-86256822, +86-0757-86256831
E-mail: sales@eaglerise.com
Website : https://lighting.eaglerise.com

EAGLERISE

Manual