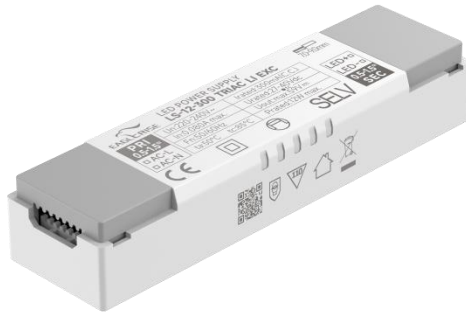


12W Triac Dimming power supply



■ Approve



Features

- For luminaires of protection Class II, SELV, Independent
- Input Voltage: 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: 0.9C @Full Load, 230VAC
- Efficiency: 83%
- 5 years warranty
- IP20

Applications

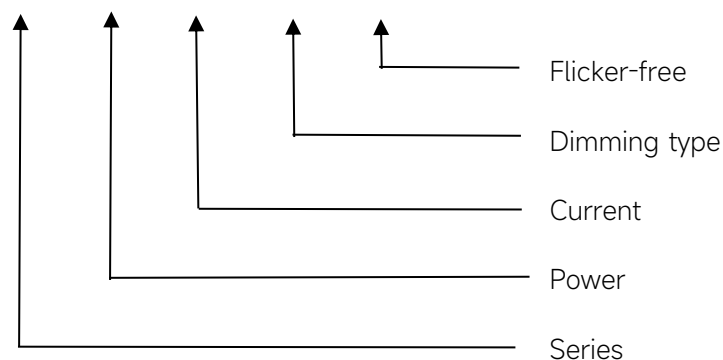
- LED panel, LED down light
- LED spot light

◆ Description

LS-12-XXX TRIAC LI EXC is a 12W constant current LED driver that operates from 198-264Vac input with 250 to 350mA output current. With it's compact dimensions from 115 x 30 x 20.5 mm it is easy to integrate in LED panel, pendant light and down light products. To ensure trouble-free operation, protection is provided against output short circuit, over load, over voltage and over temperature.

◆ Model code

LS-12-XXX TRIAC LI EXC



◆ Specification

Output	Constant Current (mA)	250	300	350
	Voltage Range(VDC)	27-40	27-40	
	Unload voltage Max.	59VDC		
	Current Accuracy	±7%@220-240V	±6%@220-240V	±5%@220-240V
	Output HF current ripple(≥1KHz)	±5%		
	Output LF current ripple(≤120Hz)	±5%		
	SVM	≤0.4		
	Pst	≤1		
	Efficiency(Typ.)	83%@full load 230V		
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	0.9C@Full Load,230VAC		
	Input Current max (A)	0.07A	0.09A	0.08A
	Start-up time	< 0.5S		
	No Load Power	≤0.5W		
	THD (Typ.)	<25%		
Dimming	Dimming	YES		
	Dimming mode	Triac, Leading edge & trailing edge dimmable		
	Dimming depth	10%@220-240V		
	Dimming current range	10 ~ 100%		
Protection	Over Load Protection	103-130%		
		YES/Auto Resume		
	Over Voltage Protection	59VDC		
		YES/Auto Resume		
capability	Short circuit Protection	YES/Auto Resume		
	Surge capability (L-N)	1KV		
Withstand voltage	Surge capability (L/N-Ground)	NA		
	Input-Output	3750V/ 5mA/ 60S		
Environment	Operating Temperature	-20°C~+50°C		
	Humidity	20%-90%RH		
	Tc	80°C		
	Storage Temperature	-25°C~+60°C		
	Life time	> 50000h@Tc=75°C		
	Ripple&Noise	≤25dB(A)@20cm		

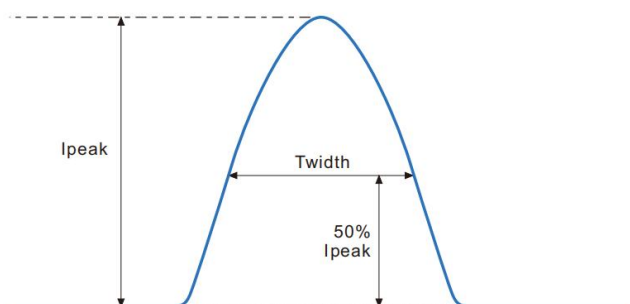
Surface	Dimension	115 x30 x 20.5mm
	material	PC
Standards	Safety	GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13; EN62384
	EMC	GB/T17743, GB17625. 1;EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN61000-4-5;EN61000-4-2,3,4,5,6,8,11, EN61547
	Energy Efficiency	Erp2.0 EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	1.All parameters not specially mentioned are measured at 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 & 47uF parallel capacitor. 3.The over-temperature protection of the product is provided by the IC. 4.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

Number	Model number	Output			
		Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
1	LS-12-250 TRIAC LI EXC	250	27-40	59	10
2	LS-12-300 TRIAC LI EXC	300	27-40		12
3	LS-12-350 TRIAC LI EXC	350			14

◆ Inrush Current

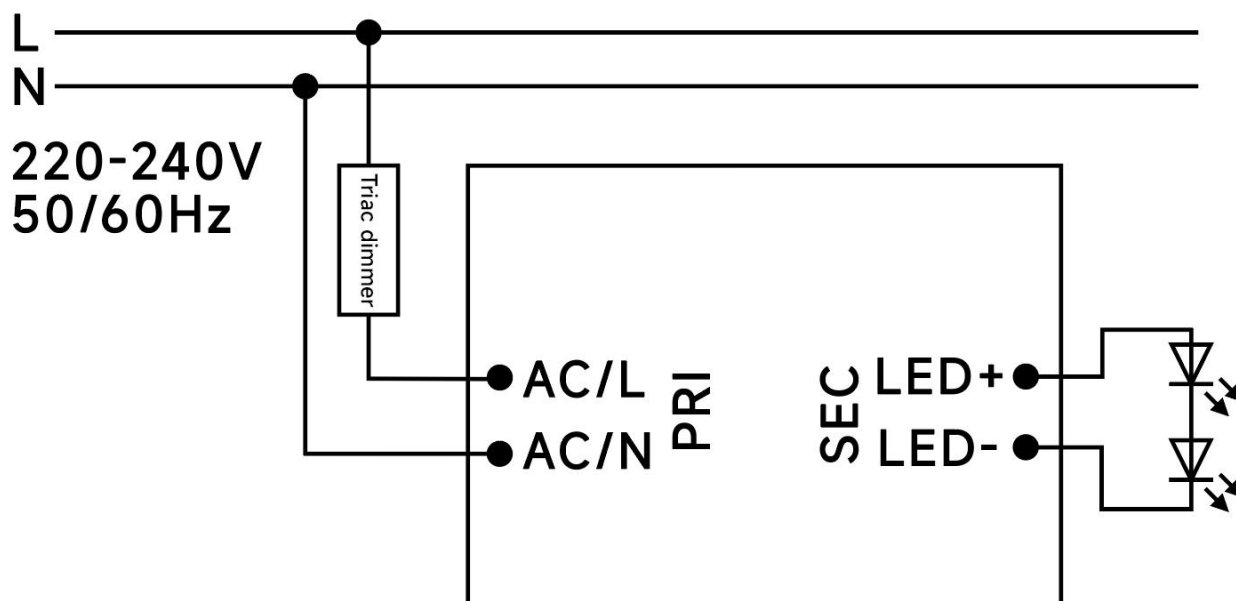
I_{peak}	Twidth	B10	B16	B20	C10	C16	C20
2.02A	56 μ s	100pcs	160pcs	200pcs	100pcs	160pcs	200pcs



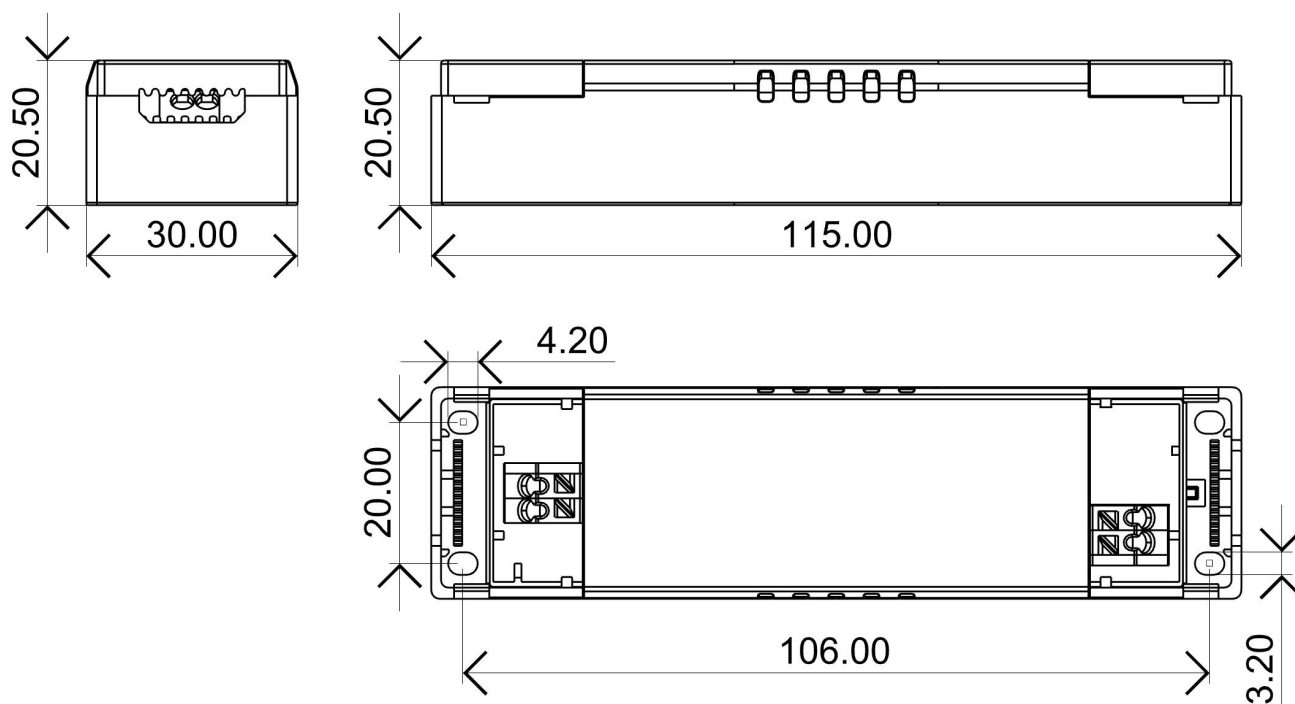
Remarks:

- 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.

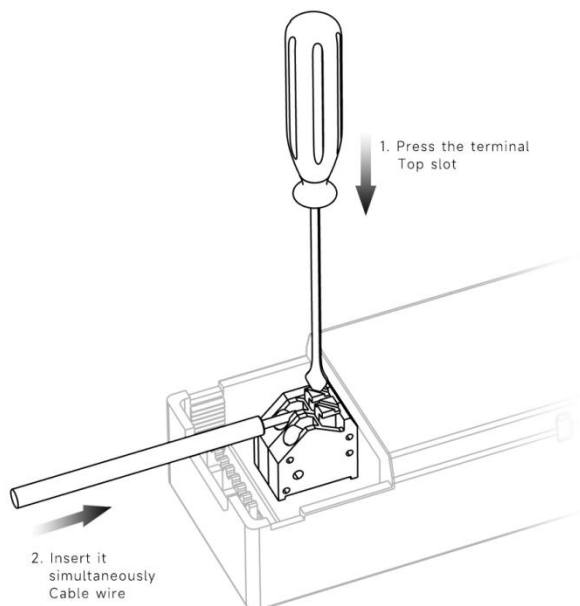
◆ Wiring diagram



◆ 2D diagram



Terminal



◆ 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.

◆ 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

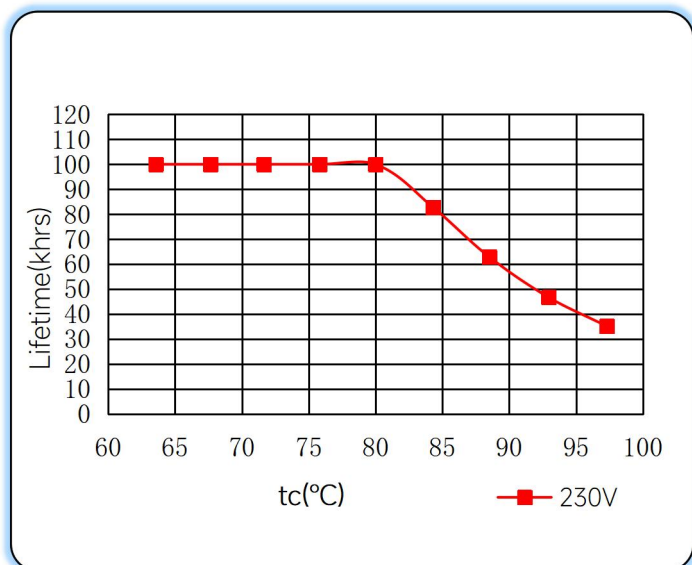
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Packaging

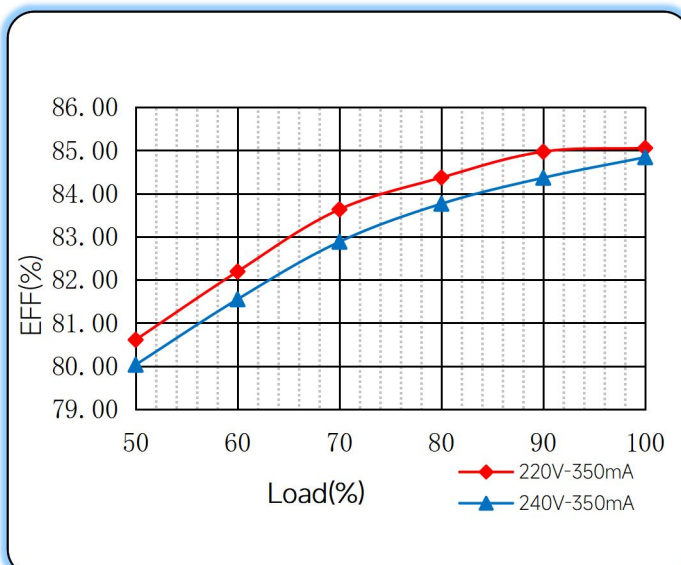
Model	Product Dimensions(mm)	weight/piece	Outer carton dimension(mm)	Quantity/carton	Net weight/carton(Kg)	Gross weight/carton(Kg)
LS-12-XXX TRIAC LI EXC	115X30X20.5	0.055	370X275X215	112	6.1	6.7

◆ Curve for LS-12-350 TRIAC LI EXC, $I_o=350\text{mA}$

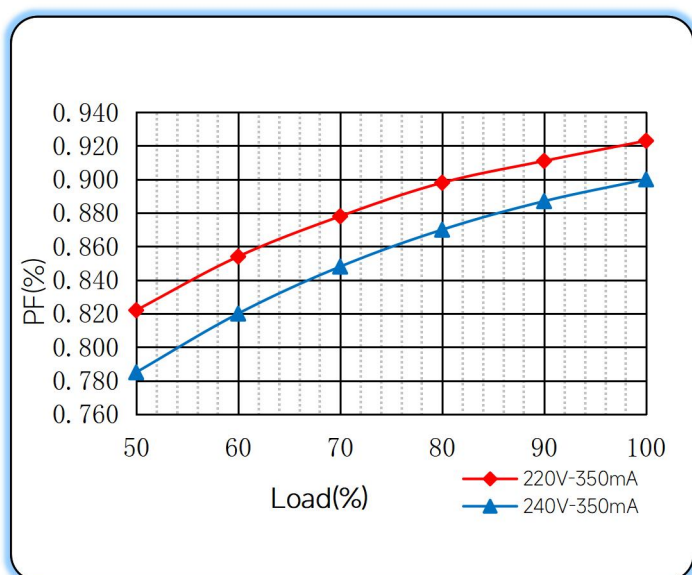
Lifetime vs. Temperature Curve



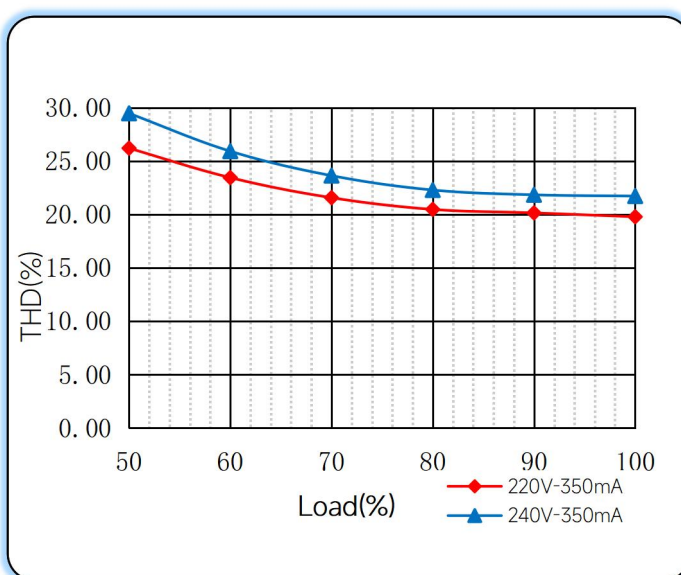
Efficiency vs. Load



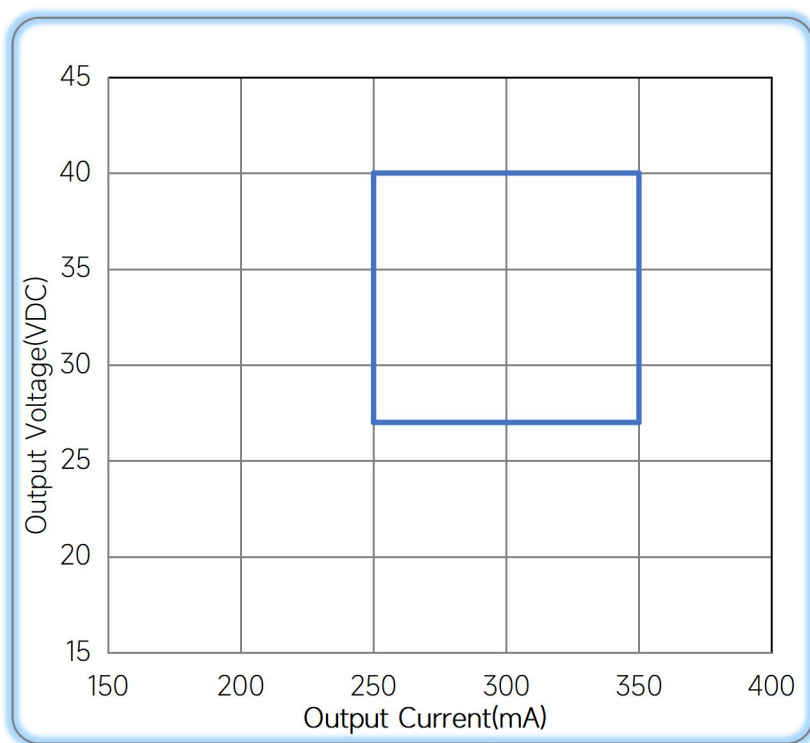
Power Factor Characteristics



THD vs. Load



◆ Operating window



— Operating window 100%

◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2025/01/16
Power Factor	0.95	0.95C@Full Load,230VAC	B	2025/09/04
Current Accuracy	±5%	±6%@250-300mA ±5% @350mA	C	2025/11/21
Power Factor	0.95C	0.9C	D	2025/11/24

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

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