

# 12W Constant Current power supply



■ Approve



### Features

- Class II, SELV, independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP
- Power Factor : 0.95
- Efficiency : 81%
- 5 years warranty

### Applications

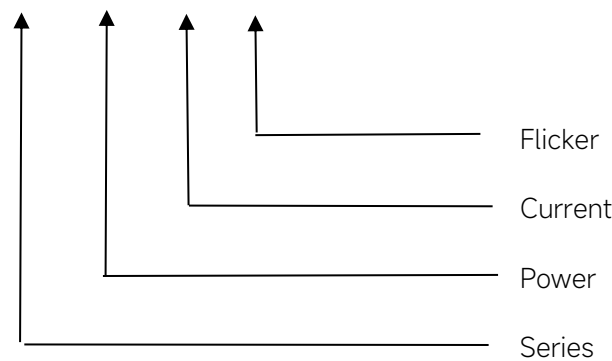
- LED panel, LED down light
- LED spot light

## ◆ Description

LS-12-XXX RI EXC is a 12W constant current LED driver with 250 to 350mA output current. With its compact dimensions from 100x38.2x25mm. It is easy to integrate in LED panel, spot, down light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

## ◆ Model code

### LS-12-XXX RI EXC



## ◆ Specification

Output	Constant Current	250mA	300mA	350mA
	Voltage Range	24-42VDC		24-40VDC
	Unload voltage Max.	59VDC		
	Current Accuracy	±7%		±6%
	Output HF current ripple(≥1KHz)	±5%		
	Output LF current ripple(≤120Hz)	±50%		
	SVM	NA		
	Pst	NA		
	Efficiency(Typ.)	81%@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	0.95		
	Input Current max	0.09A		
	Start-up time	< 0.5S		
	No Load Power	≤0.5W		
	Inrush Current	30A Max@Full load,230V		
	THD (Typ.)	< 25% @Full load,230V		
	Protection	Over Load Protection	103-130%	
YES/Auto Resume				
Over Voltage Protection		59VDC		
	YES/Auto Resume			
Short circuit Protection	YES/Auto Resume			
Environment	Operating Temperature	-20°C~+45°C		
	Humidity	20%-90%RH		
	Tc	75°C		
	Storage Temperature	-25°C~+60°C		
	Life time	> 50000h@Tc=75°C		
	Ripple&Noise	≤20dB(A)@10cm		
Surface	Dimension	100x38.2x25mm		
	material	PP		
Standards	Safety	EN61347- 1, EN61347-2- 13;EN62384		
	EMC	EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN61000-4-5		
	ErP	Erp2.0 EU 2019/2020		

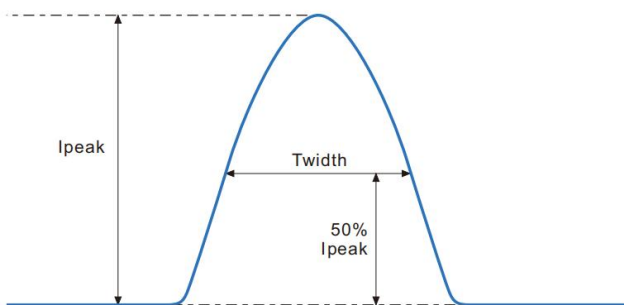
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	<p>1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.</p> <p>2.Ripple &amp; Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF &amp; 47 uF parallel capacitor.</p> <p>3.Data are typical values obtained from test samples</p> <p>4.Switch and dimmer are not recommended to connect between this product output and luminaries.</p>	

## ◆ Model list

Number	Model number	Input			Output			
		Voltage (VAC)	Current (A)	Frequency (Hz)	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
1	LS-12-250 RI EXC	220-240	0.09	50/60	250	24-42	59	10.5
2	*LS-12-300 RI EXC				300	24-42	59	12.6
3	*LS-12-350 RI EXC				350	24-40	59	14

## ◆ Inrush Current

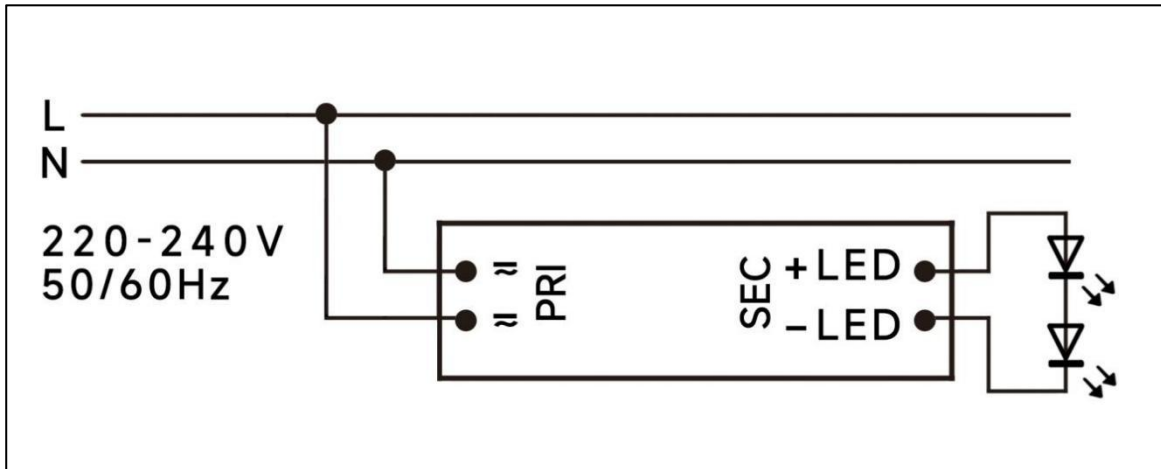
I <sub>peak</sub>	T <sub>width</sub>	B10	B16	B20	C10	C16	C20
8.19A	108μs	88pcs	142pcs	177pcs	88pcs	142pcs	177pcs



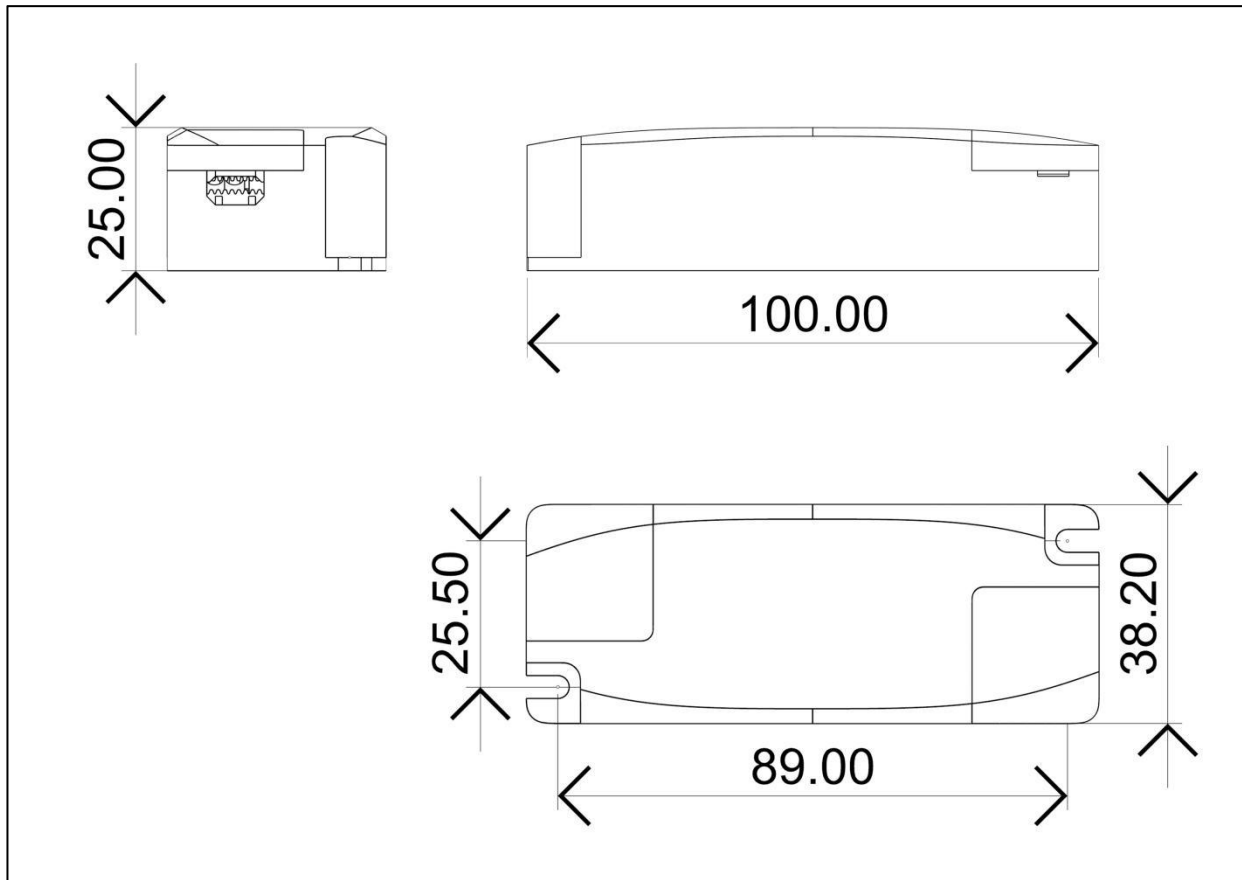
### Remarks:

- 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



Preliminary

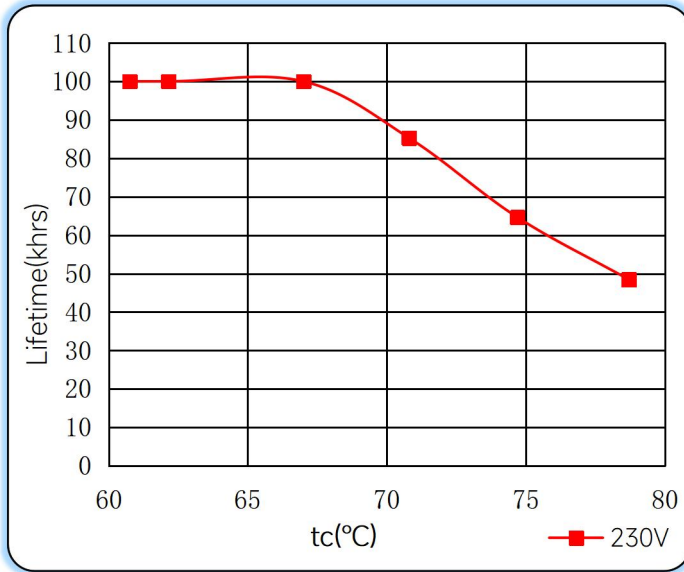
**◆ 2D diagram**

**◆ Wiring & Connections**

Specification item		Value (Unit )
Input	Input wire cross-section	0.5...1.5 mm <sup>2</sup>
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm <sup>2</sup>
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

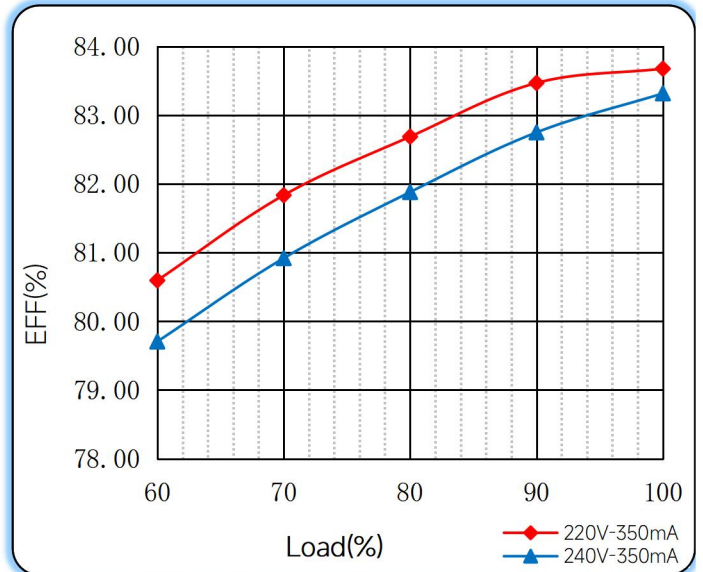
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ **Curve for LS-12-350 RI EXC, I<sub>o</sub>=350mA**

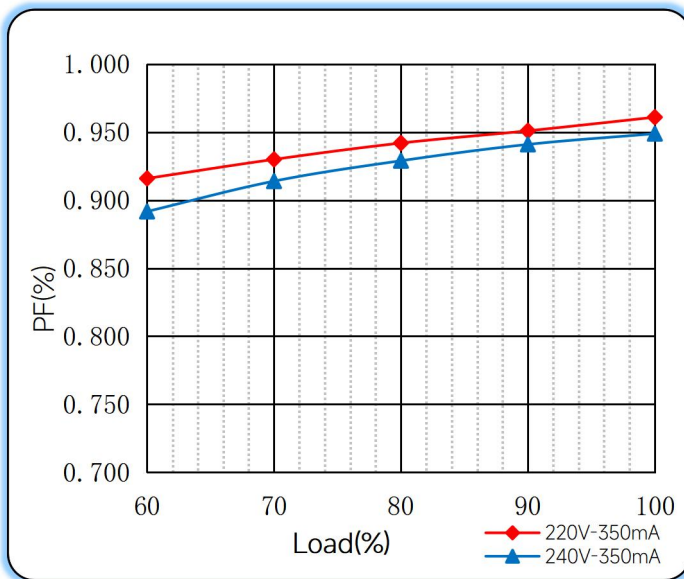
Lifetime vs. Temperature Curve



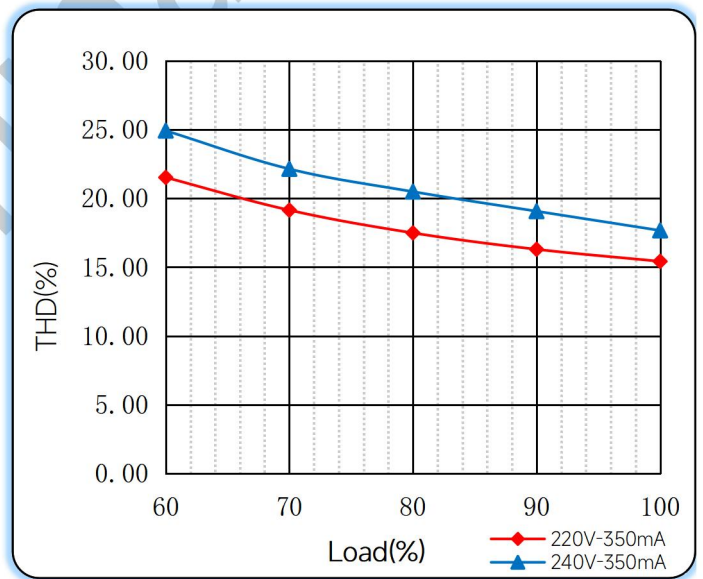
Efficiency vs. Load



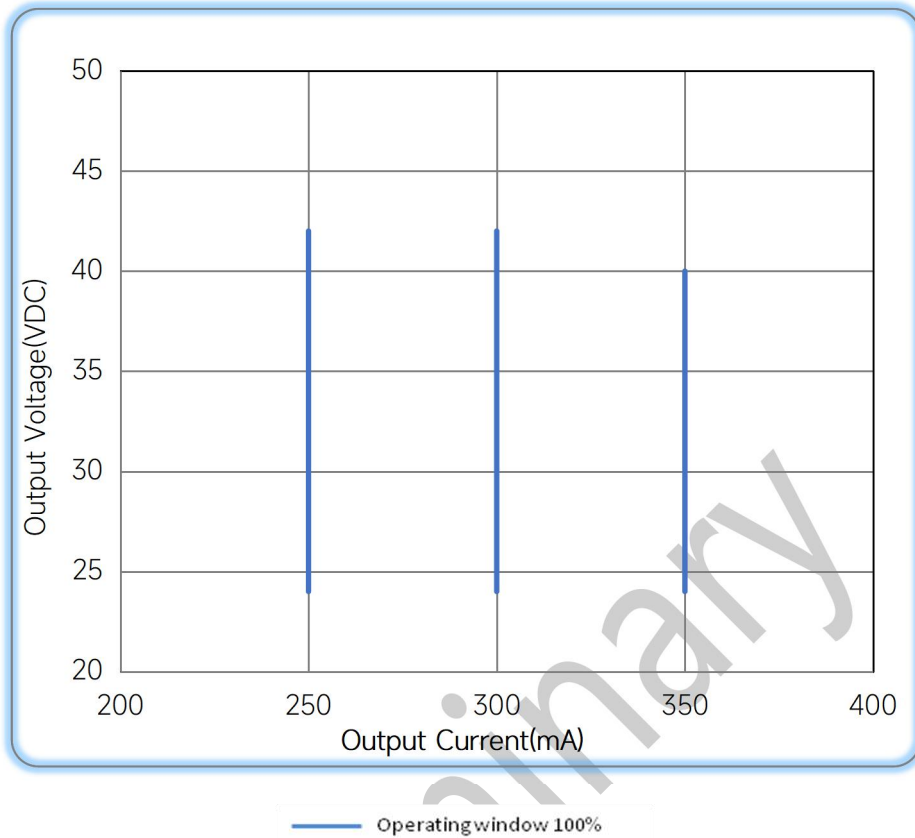
Power Factor Characteristics



THD vs. Load



### ◆ Operating window



### ◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2022/08/23

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

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Manual