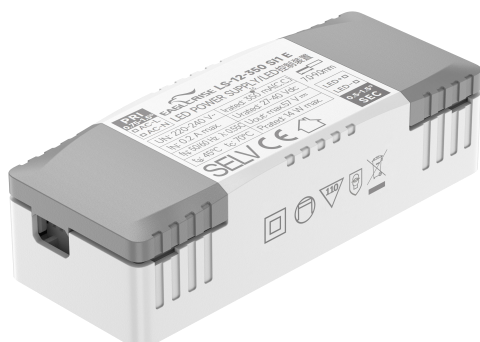


12W Constant Current power supply



■ Approve



Features

- Class II, SELV, Independent
- Input Voltage: 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: 0.6C
- Efficiency: $\geq 82\%$
- 5 years warranty
- IP20

Applications

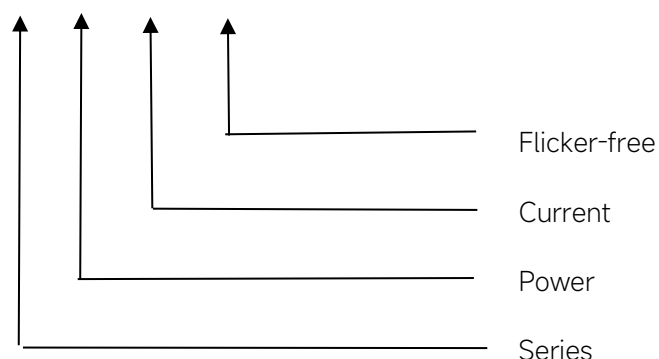
- LED panel, LED down light
- LED spot light

◆ Description

LS-12-XXX SI1 E is a 12W constant current LED driver with 250 and 300mA output current. With it's compact dimensions from 92 x 36 x 25 mm. It is easy to integrate in LED panel, LED down light, LED spot light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

LS-12-XXX SI1 E



◆ Specification

Output	Constant Current	250mA	280mA	300mA	350mA
	Voltage Range	30-40V			
	Unload voltage Max.	59VDC			
	Current Accuracy	±5%			
	Output HF current ripple(≥1KHz)	±5%			
	Output LF current ripple(≤120Hz)	±5%			
	SVM	≤0.4			
	P _{st}	≤1			
	Efficiency(Typ.)	≥82%@Full load,230V			
Input	Rated input voltage	220-240VAC			
	Range of input voltage	198-264VAC			
	Frequency(Hz)	50/60 Hz			
	Displacement factor	≥0.7			
	Power Factor	0.6C@Full load,230V			
	Input Current max	150mA	160mA	180mA	180mA
	Start-up time	< 0.5S			
	No Load Power	≤0.5W			
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			
	T _c	80°C			
	Storage Temperature	-25°C~+60°C			
	Life time	> 50,000h@T _c =80°C			
	Noise	≤20dB(A)@10cm			
Surface	Dimension	92X36X25 (LXWXH)mm			
	material	PP			
statutory	Safety Standards	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

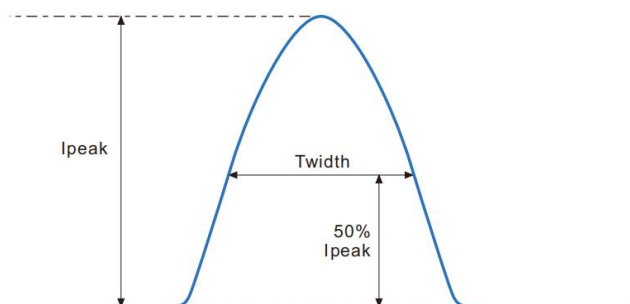
- 1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.
- 2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.
- 3.Data are typical values obtained from test samples
- 4.The over-temperature protection of the product is provided by the IC.
- 5.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 S1 E	250	30-40	59	10
2	LS-12-280 S1 E	280			11.2
3	LS-12-300 S1 E	300			12
4	LS-12-350 S1 E	350			14

◆ Inrush Current

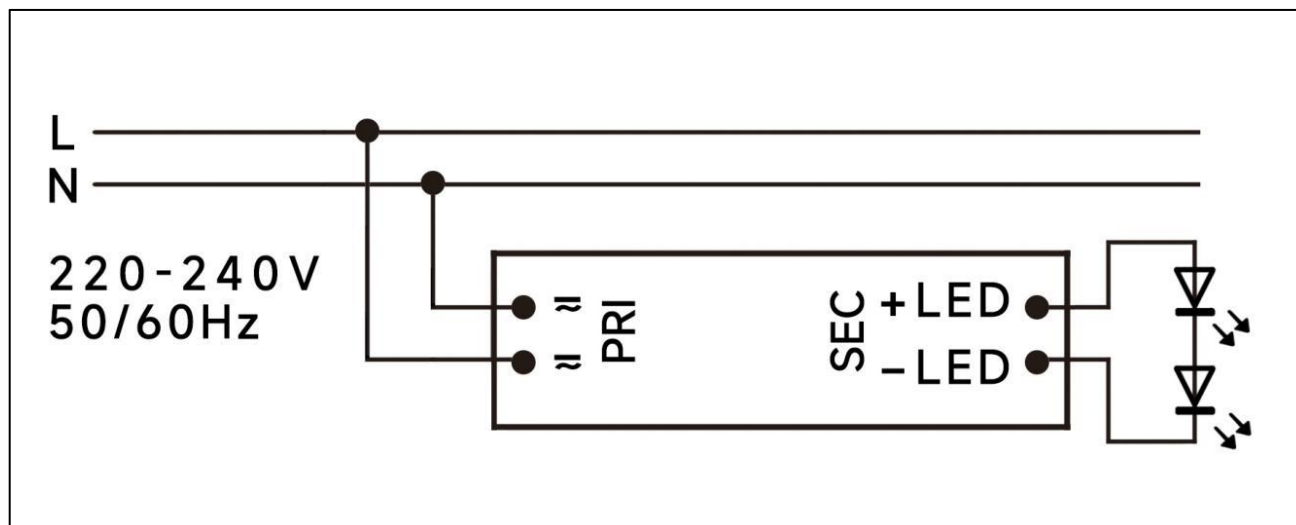
I_{peak}	T_{width}	B10	B16	B20	C10	C16	C20
8.44A	80μs	26pcs	42pcs	53pcs	26pcs	42pcs	53pcs



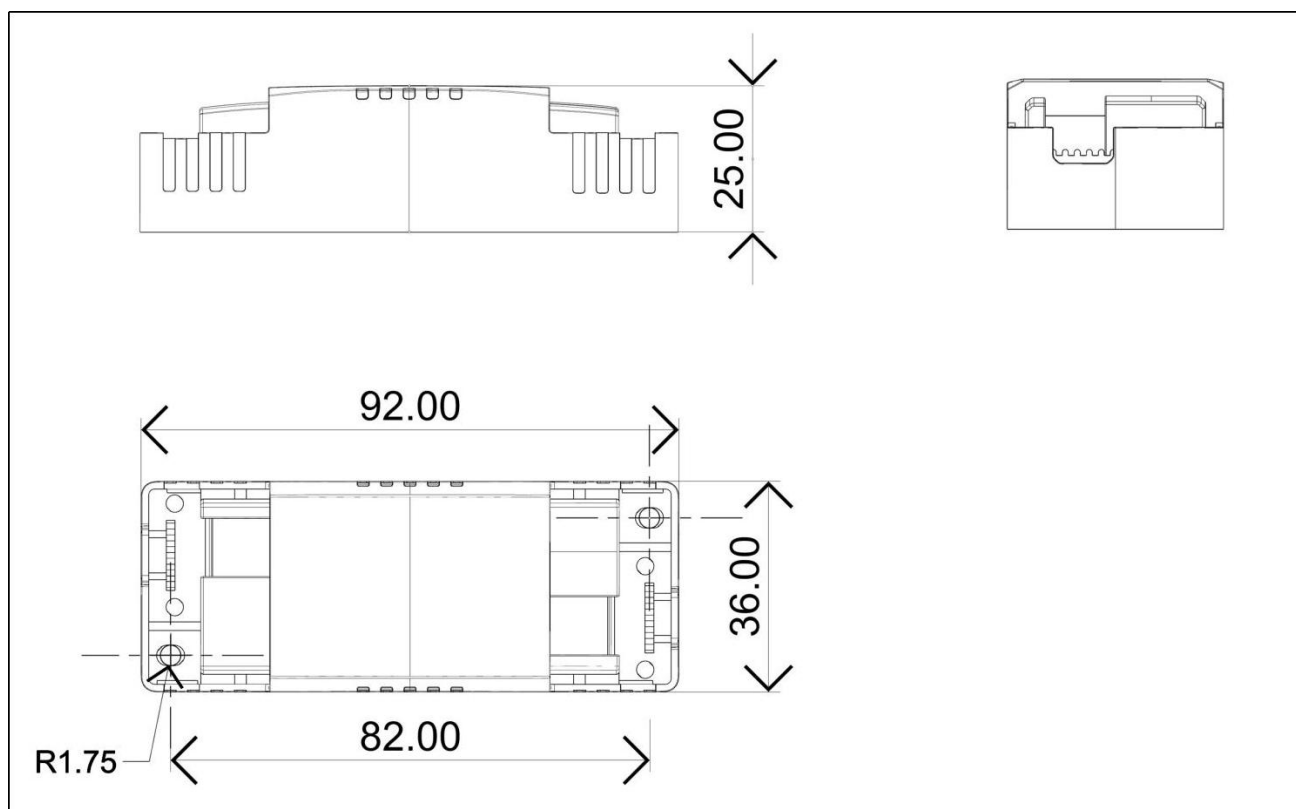
Remarks:

- 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

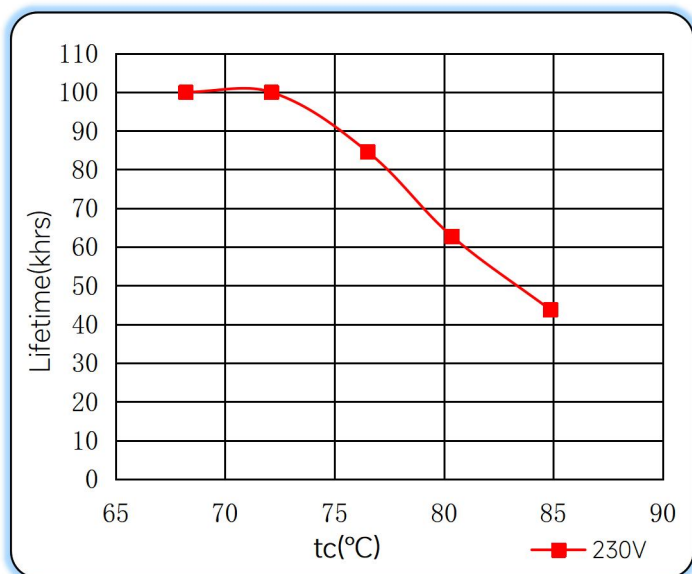
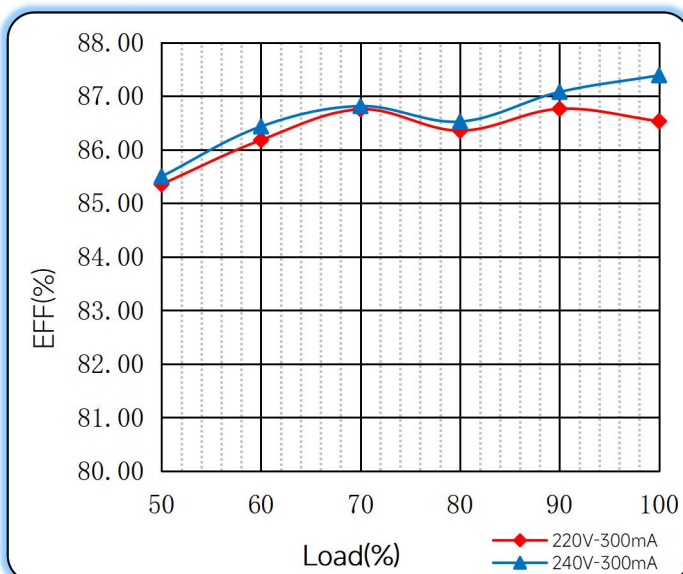
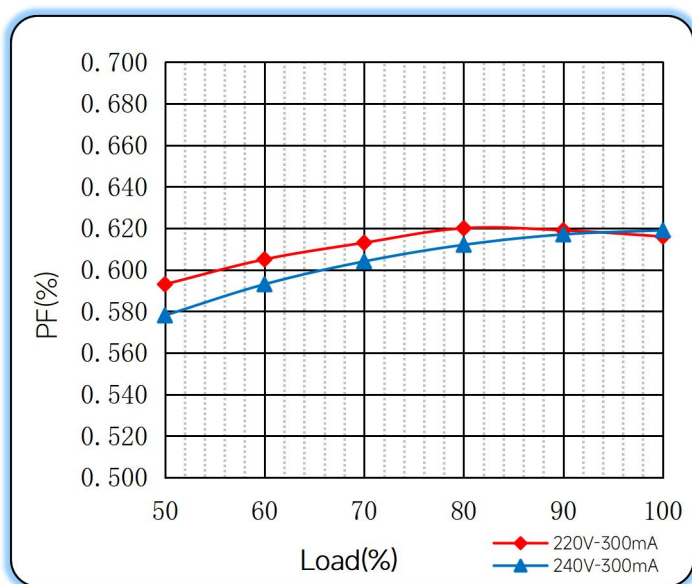
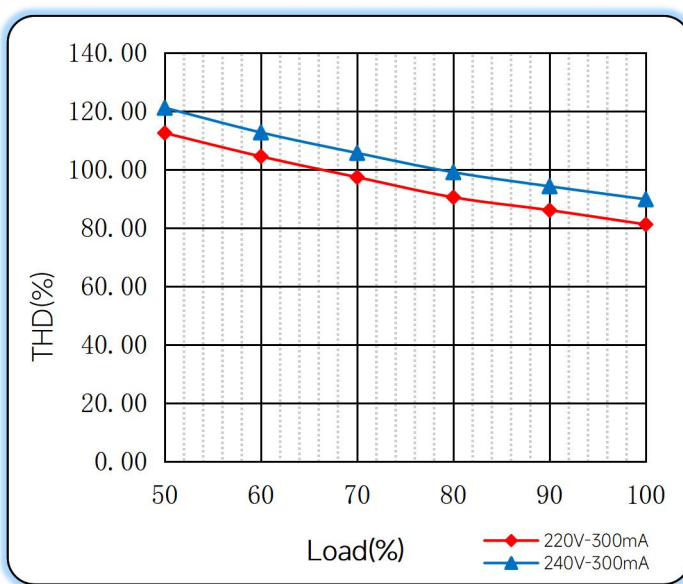
Specification item		Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ²
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

◆ Recommended wire

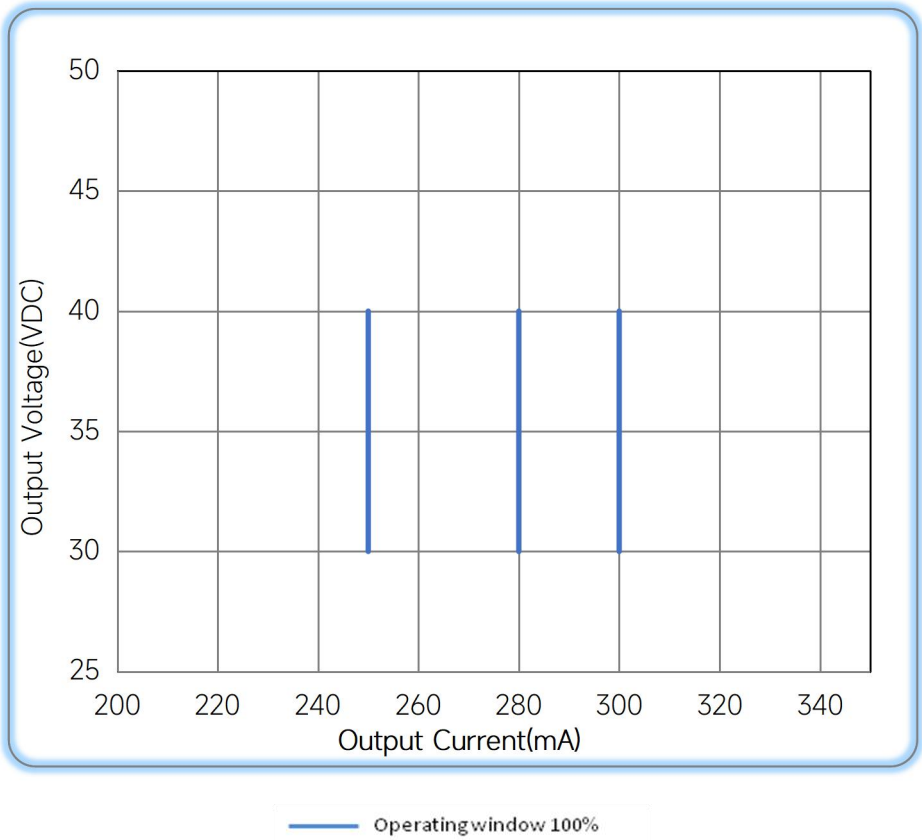
Wire cross-section	Wire type
2*0.5mm ²	H03VVH2-F 2core
2*0.75mm ²	H03VVH2-F 2core
1.5mm ²	CCC 08(RV-90)
16AWG(1.25mm ²)	UL1015

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

◆ Curve for LS-12-300 SI1 E, $I_o=300\text{mA}$

Lifetime vs. Temperature Curve

Efficiency vs. Load

Power Factor Characteristics

THD vs. Load


◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/04/11

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>

