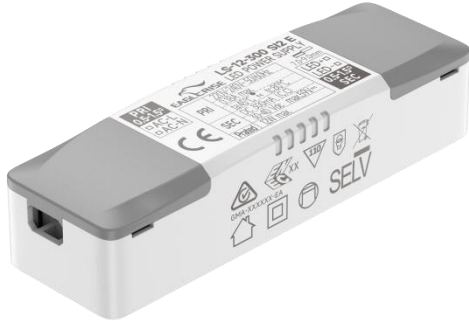


12W Constant Current power supply



■ 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

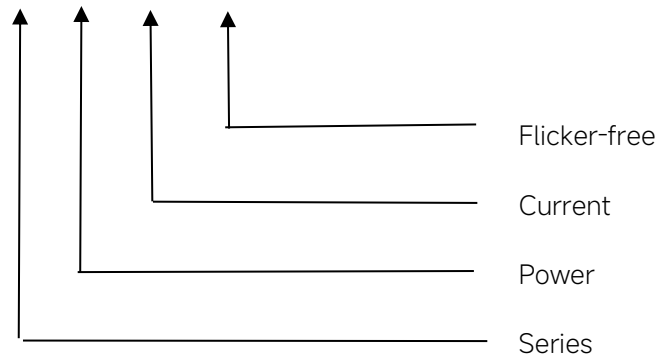
- LED panel, LED down light
LED spot light

◆ Description

LS-12-XXX SI2 E is a 12W constant current LED driver with 250 and 700mA output current. With it's compact dimensions from 92 x 28 x 21 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 SI2 E



◆ Specification

Output	Constant Current	250mA	280mA	300mA	350mA	500mA	600mA	700mA
	Voltage Range	30-40V				18-24V	15-20V	13-17.2V
	Unload voltage Max.	59VDC				40VDC	35VDC	
	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		160mA		
	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						
capability	Surge capability (L-N)	1KV						
	Surge capability (L/N-Ground)	NA						
Environment	Operating Temperature	-20°C~+45°C						
	Humidity	20%-90%RH						
	Tc	80°C				85°C		
	Storage Temperature	-25°C~+60°C						
	Life time	> 50,000h@Tc=80°C						
Surface	Noise	≤20dB(A)@10cm						
	Dimension	92X28X21 (LXWXH)mm						
statutory	material	PP						
	Safety Standards	GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;AS/NZS 61347- 1, AS/NZS 61347-2- 13;EN62384						
statutory	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						

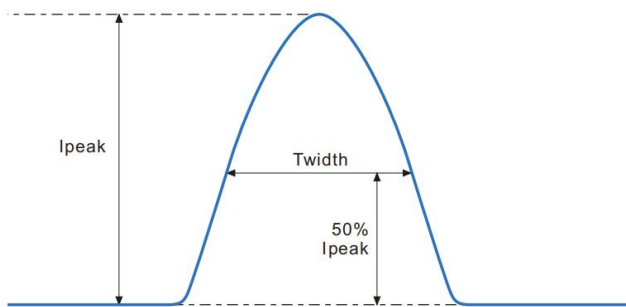
	Energy Efficiency	Erp2.0 EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	<p>1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.</p> <p>2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.</p> <p>3.Data are typical values obtained from test samples</p> <p>4.The over-temperature protection of the product is provided by the IC.</p> <p>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.</p>	

◆ Model list

Number	Model number	Output			
		Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
1	LS-12-250 SI2 E	250	30-40	59	10
2	LS-12-280 SI2 E	280			11.2
3	LS-12-300 SI2 E	300			12
4	LS-12-350 SI2 E	350			14
5	LS-12-500 SI2 E	500	18-24	40	12
6	LS-12-600 SI2 E	600	15-20	35	12
7	LS-12-700 SI2 E	700	13-17.2	35	12

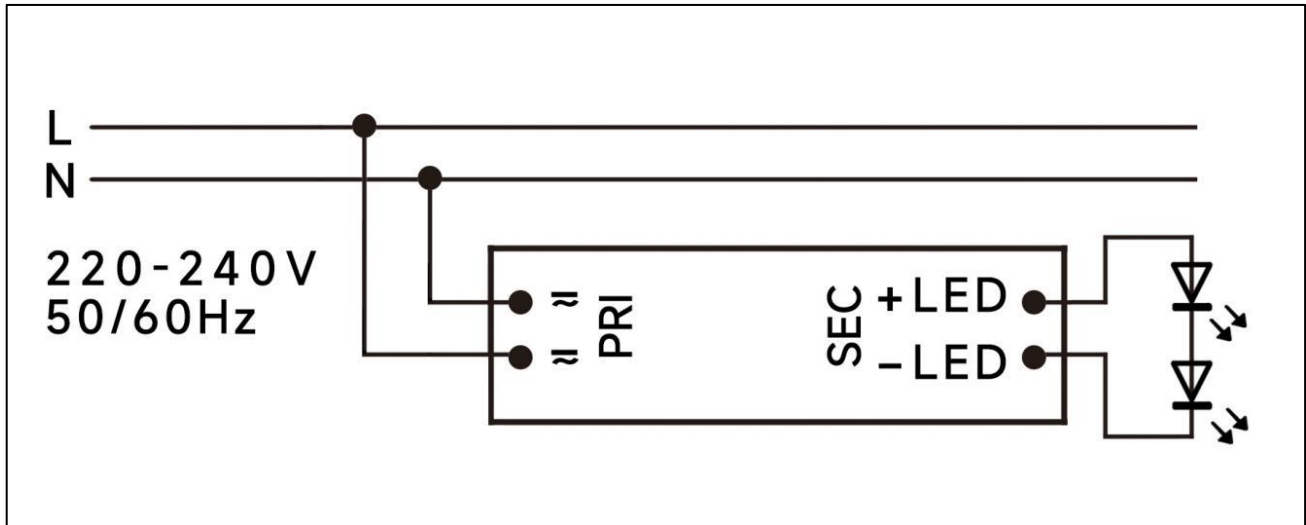
◆ Inrush Current

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

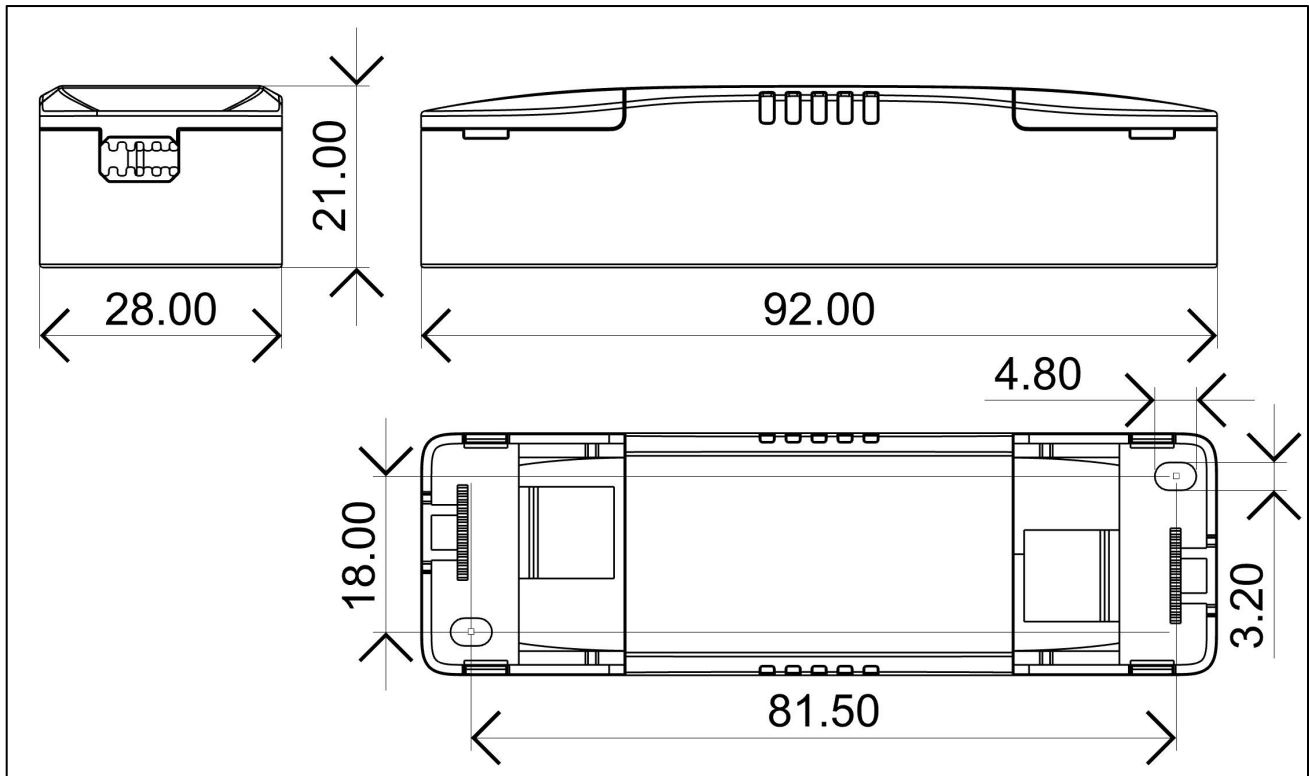


Remarks:

- 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 (With side caps: 0.75...1.5 mm ²)
	Input wire gauge.	16...20 AWG (With side caps: 16...22 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

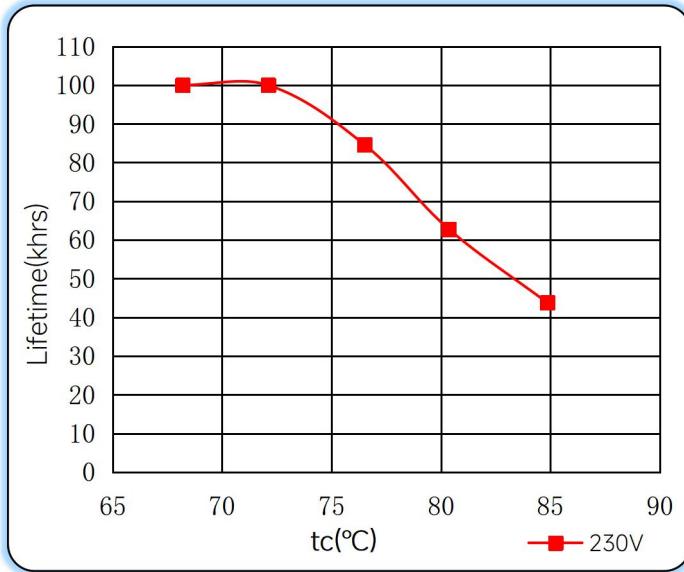
◆ Recommended wire

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

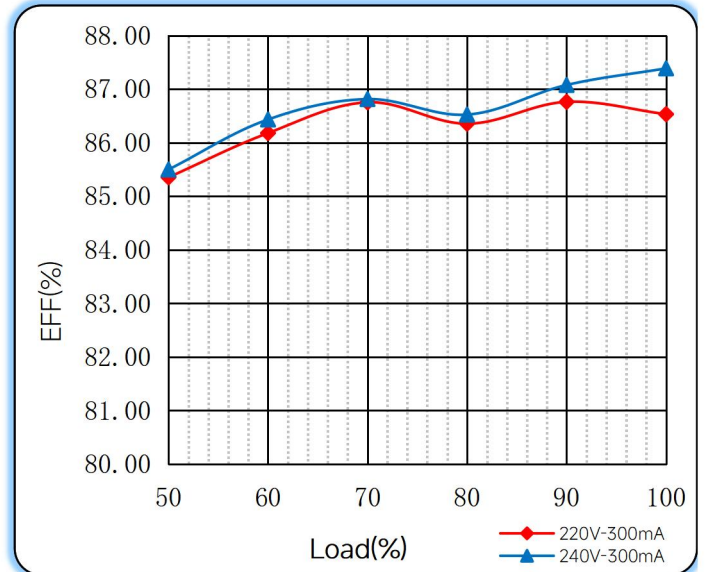
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Curve for LS-12-300 SI2 E, I_o=300mA

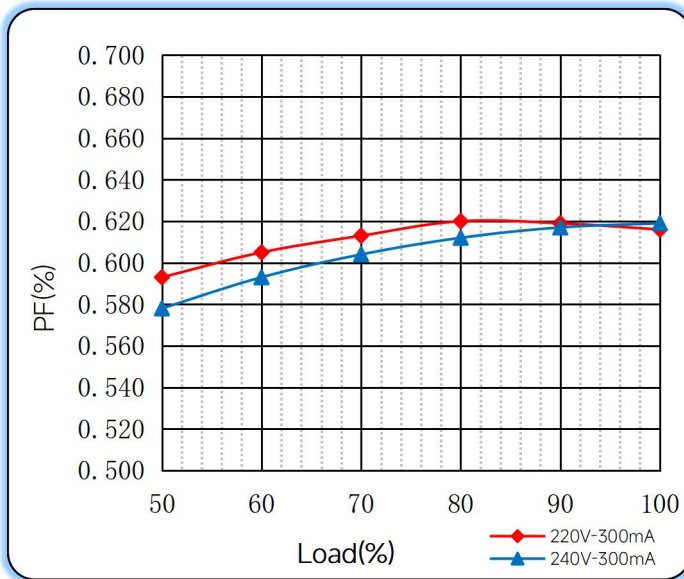
Lifetime vs. Temperature Curve



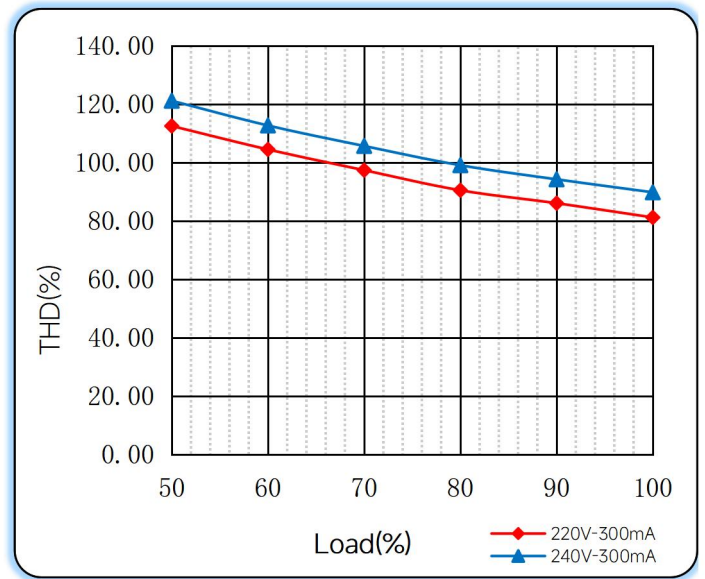
Efficiency vs. Load



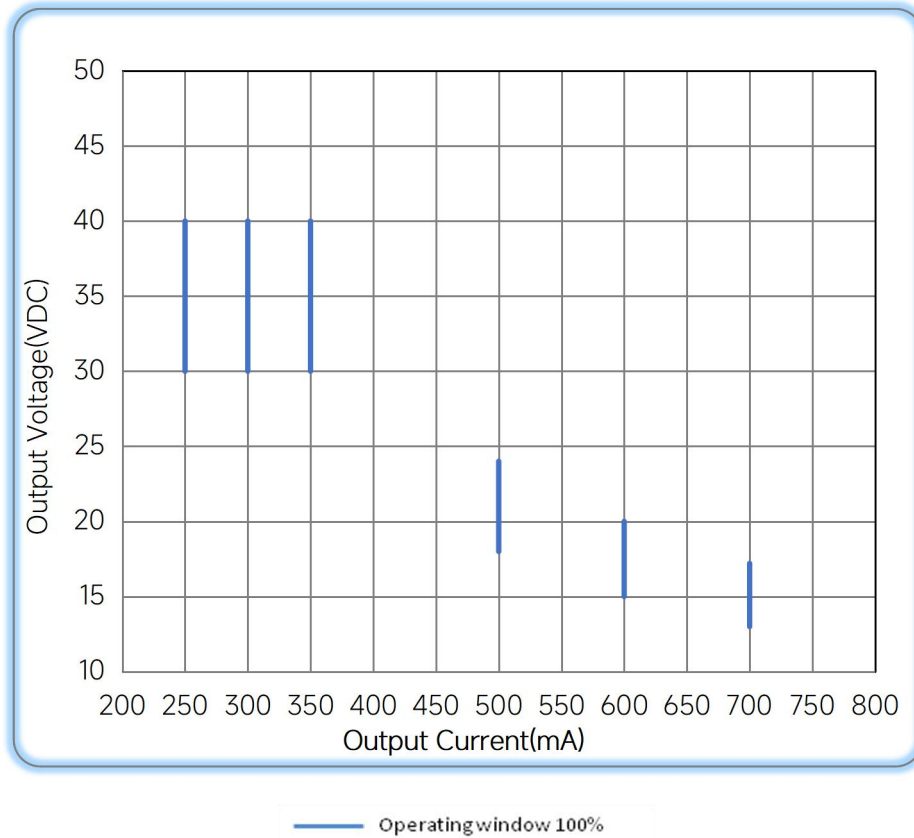
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/08/23
Over Load Protection	103-120%	103-130%	B	2023/09/22
Current Accuracy		update	C	2023/11/20

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

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