

8W Constant Current power supply



■ Approve



Features

- Class II, SELV, Independent
- Input Voltage: 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: 0.6C
- Efficiency: $\geq 78\%$ @70-80mA
 $\geq 80\%$ @ ≥ 100 mA
- 5 years warranty
- IP20

Applications

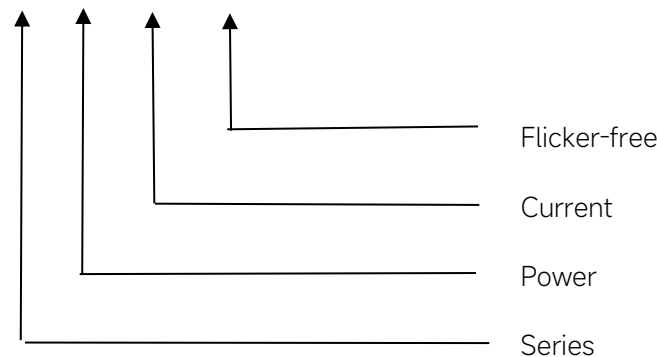
- LED panel, LED down light
LED spot light

◆ Description

LS-8-XXX SI2 E is a 8W constant current LED driver with 70-700mA 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-8-XXX SI2 E



◆ Specification

Output	Constant Current (mA)	70	80	100	120	150	160	180	...	700	
	Voltage Range(VDC)	30-40							...	8-11.4	
	Unload voltage Max.(VDC)	59							...	28	
	Current Accuracy	±8%			±7%	±7%	±6%	±5%			
	Output HF current ripple(≥1KHz)	±5%									
	Output LF current ripple(≤120Hz)	±5%									
	SVM	≤0.4									
	P _{st}	≤1									
	Efficiency(Typ.)	≥78%			≥80%						
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 (mA)	30	40	50	70	80	90	100	...	110	
	Start-up time	< 0.5S									
	No Load Power	≤0.5W									
	Standby Power	≤0.5W									
Protection	Over Load Protection	103-130%									
		YES/Auto Resume									
	Over Voltage Protection	59V									
	YES/Auto Resume										
	Short circuit Protection	YES/Auto Resume									
Environment	Operating Temperature	-20°C~+45°C									
	Humidity	20%-90%RH									
	T _c	75°C									
	Storage Temperature	-20°C~+60°C									
	Life time	> 50,000h@T _c =65°C (> 50,000h@T _c =65°C@220mA)									
	Noise	≤20dB(A)@10cm									
Surface	Dimension	92X28X21 (LXWXH)mm									
	material	PP									
Standards	Safety	GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;AS/NZS 61347- 1, AS/NZS 61347-2- 13;AS 61347.2.13;EN62384;									
	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;EN61000-4-2,3,4,5,6,8,11, EN61547									
	ErP	Erp2.0 EU 2019/2020									
	RoHS	RoHS (2011/65/EU) (EU)2015/863									

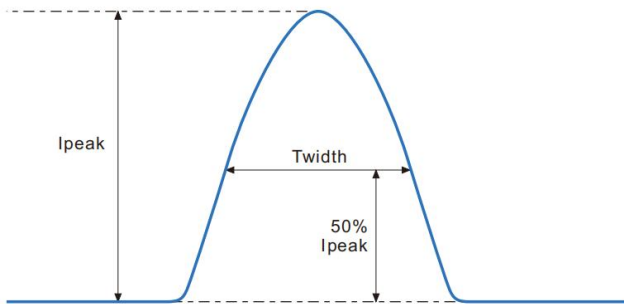
Note	<p>1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.</p> <p>2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.</p> <p>3.Data are typical values 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>
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◆ Model list

Number	Model number	Input		Output		
		Input Current max (mA)	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
1	*LS-8-70 SI2 E	30	70	30-40	59	2.8
2	*LS-8-80 SI2 E	40	80			3.2
3	*LS-8-100 SI2 E	50	100			4
4	*LS-8-120 SI2 E	70	120			4.8
5	*LS-8-150 SI2 E	80	150			6
6	*LS-8-160 SI2 E	90	160			6.4
7	*LS-8-180 SI2 E	100	180			7.2
8	*LS-8-200 SI2 E	110	200			8
9	*LS-8-220 SI2 E	120	220			8.8
10	LS-8-300 SI2 E	100	300	18-24	40	7.2
11	LS-8-350 SI2 E	120	350	18-24	40	8.4
12	LS-8-700 SI2 E	110	700	8-11.4	28	8

◆ Inrush Current

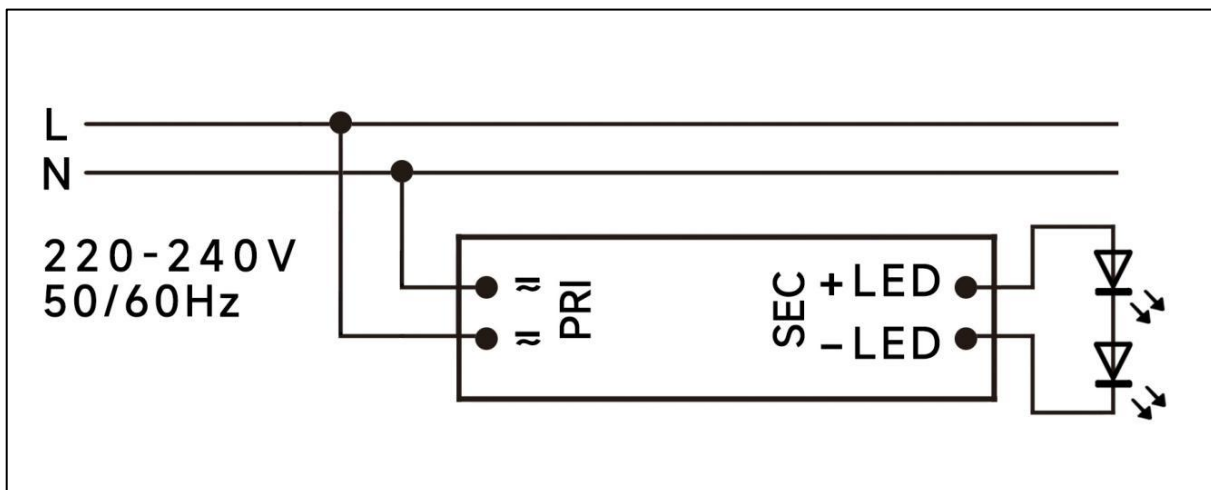
I_{peak}	Twidth	B10	B16	B20	C10	C16	C20
8.6A	80 μ s	36pcs	58pcs	72pcs	36pcs	58pcs	72pcs



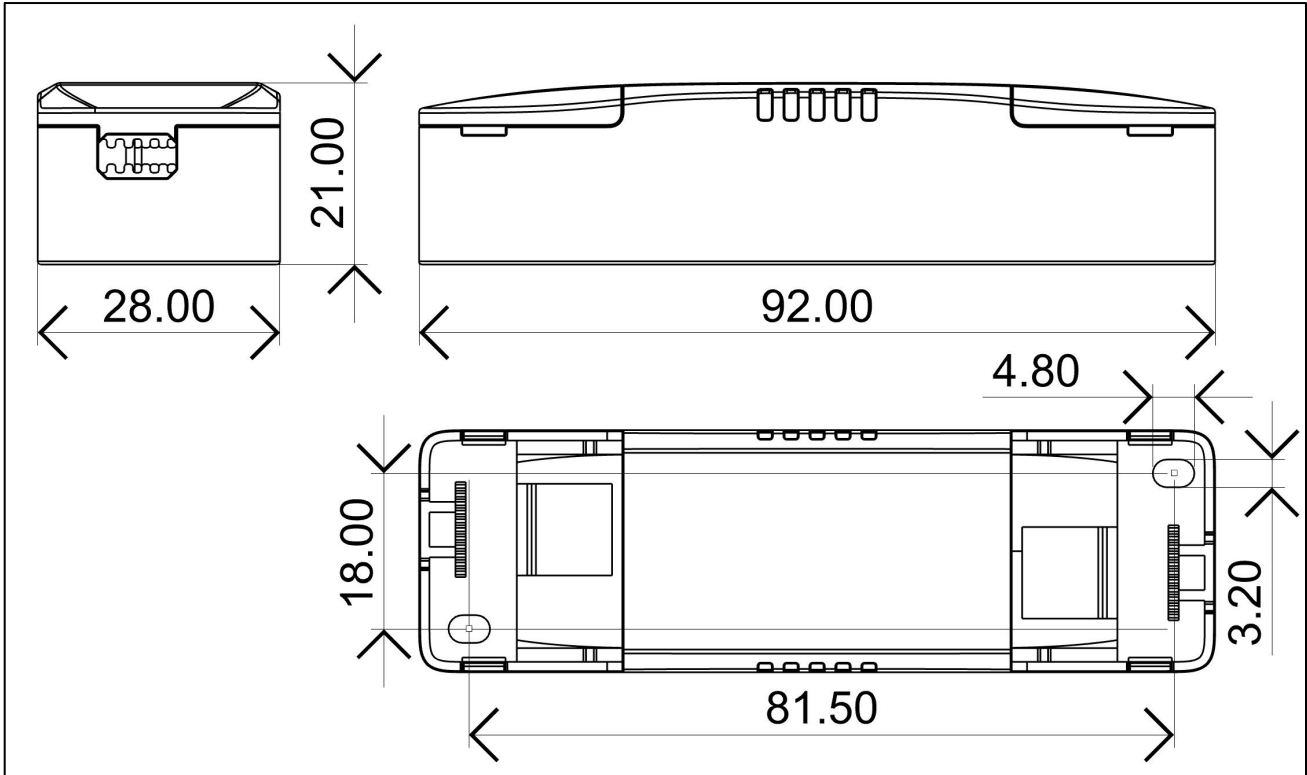
Remarks:

- 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

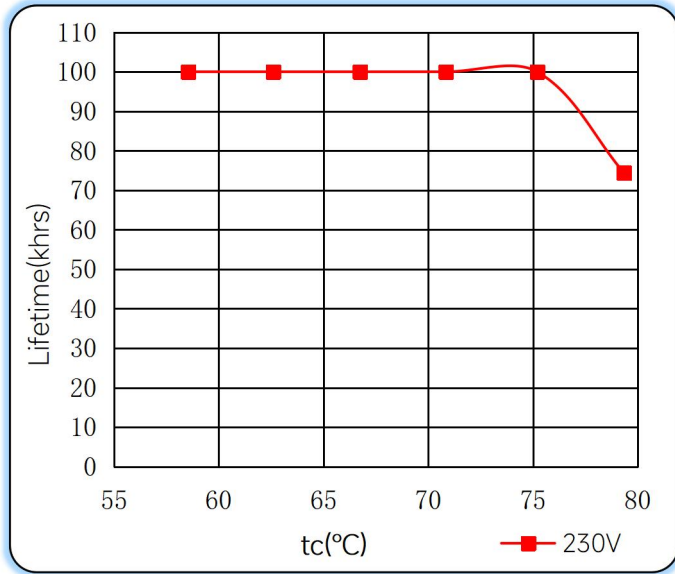
◆ Recommended wire

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

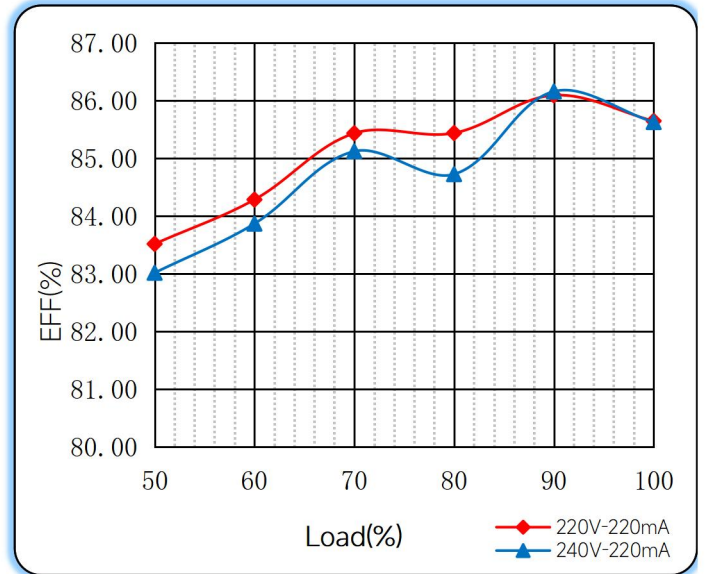
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Curve for LS-8-220 SI2 E, I_o=220mA

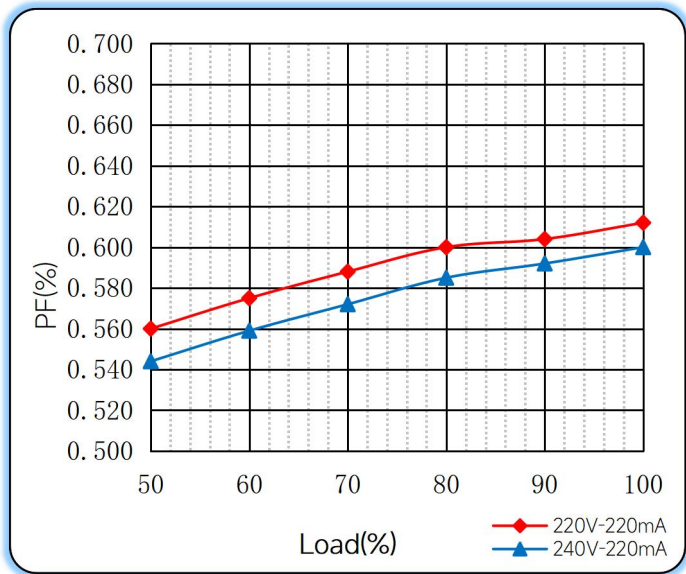
Lifetime vs. Temperature Curve



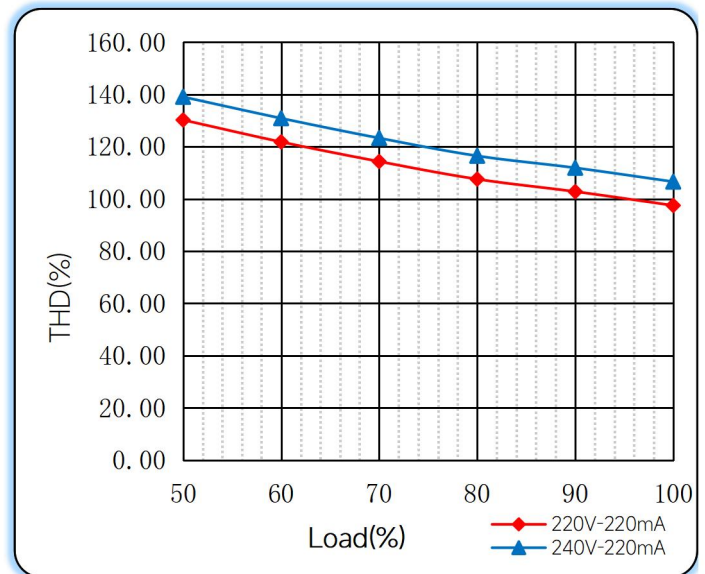
Efficiency vs. Load



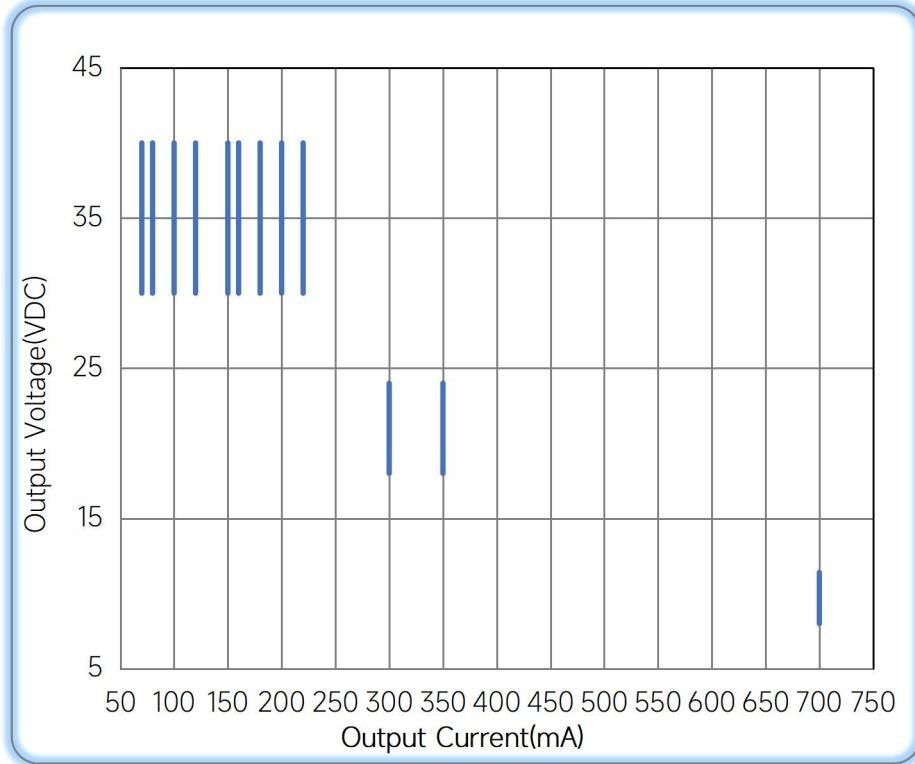
Power Factor Characteristics



THD vs. Load



◆ Operating window



— Operating window 100%

◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/08/23
Over Load Protection	103-120%	103-130%	B	2023/09/22
Current Accuracy		update	C	2023/11/20
Efficiency		update	D	2024/03/08

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

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