

12W Constant Current power supply



Features

- Class I, SELV, Built-in
- Input Voltage: 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: 0.95@Full load
- Efficiency: 80%@Full load
- 5 years warranty
- IP20

Applications

- LED panel, LED down light

■ Approve

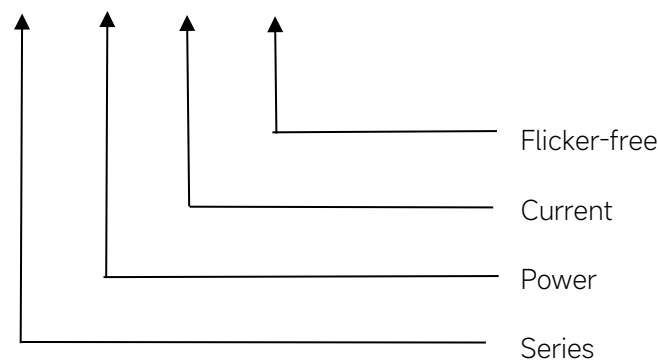


◆ Description

MS-12-XXX LI-TP is a 12W constant current LED driver with 200 to 350mA output current. With it's compact dimensions from 190mmx30mmx25mm. It is easy to integrate in LED Panel, and down lights product. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

MS-12-XXX LI



◆ Specification

	Constant Current (mA)	200mA	230mA	250mA	300mA	350mA	
Output	Voltage Range(VDC)	24-42VDC				24-40VDC	
	Unload voltage Max.(VDC)	55VDC					
	Current Accuracy	±7%					
	Output HF current ripple(≥1KHz)	±5%					
	Output LF current ripple(≤120Hz)	±5%					
	SVM	< 0.4					
	P _{st}	< 1					
	Efficiency(Typ.)	80%@Full load,230V					
	Input	Rated input voltage(VAC)	220~240VAC				
Range of input voltage(VAC)		198-264VAC					
Range of input voltage(VDC)		198~280VDC					
Frequency(Hz)		0/50/60Hz					
Displacement factor		> 0.9					
Power Factor		0.95@Full load,230V					
Input Current max		0.073A					
Start-up time		< 0.5S					
No Load Power		<0.5W					
THD (Typ.)		<20%@Full load,230V					
Protection	Over Load Protection	103-120%					
		YES/Auto Resume					
	Over Voltage Protection	>55VDC					
		YES/Auto Resume					
Short circuit Protection	YES/Auto Resume						
Over Temperature Protection	YES/Auto Resume						
Environment	Operating Temperature	-25°C~60°C					
	Humidity	10%~90%					
	Tc	75°C					
	Storage Temperature	-25°C~80°C					
	Life time	> 50000h @Tc=75°C					
Surface	Dimension	190x30x25mm					
Standards	EN 61347-1,EN 61347-2-13; IEC 61347-1,IEC 61347-2-13; EN 62384; EN IEC 55015,EN IEC 61000-3-2,EN 61000-3-3						
Others	ErP	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.Switch and dimmer are not recommended to connect between this product output and luminaries.						

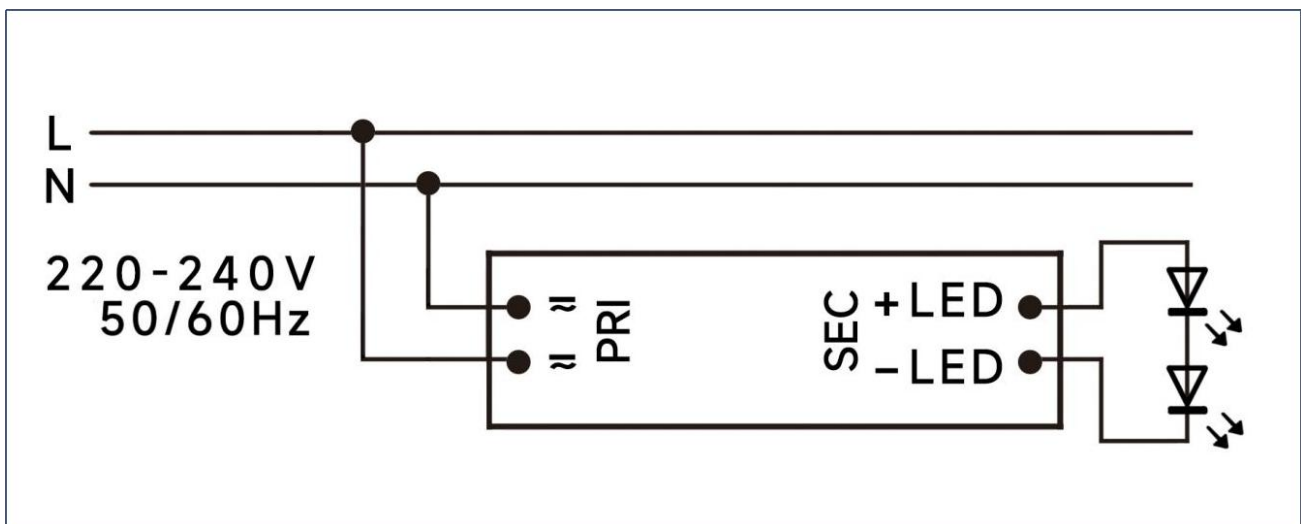
◆ Model list

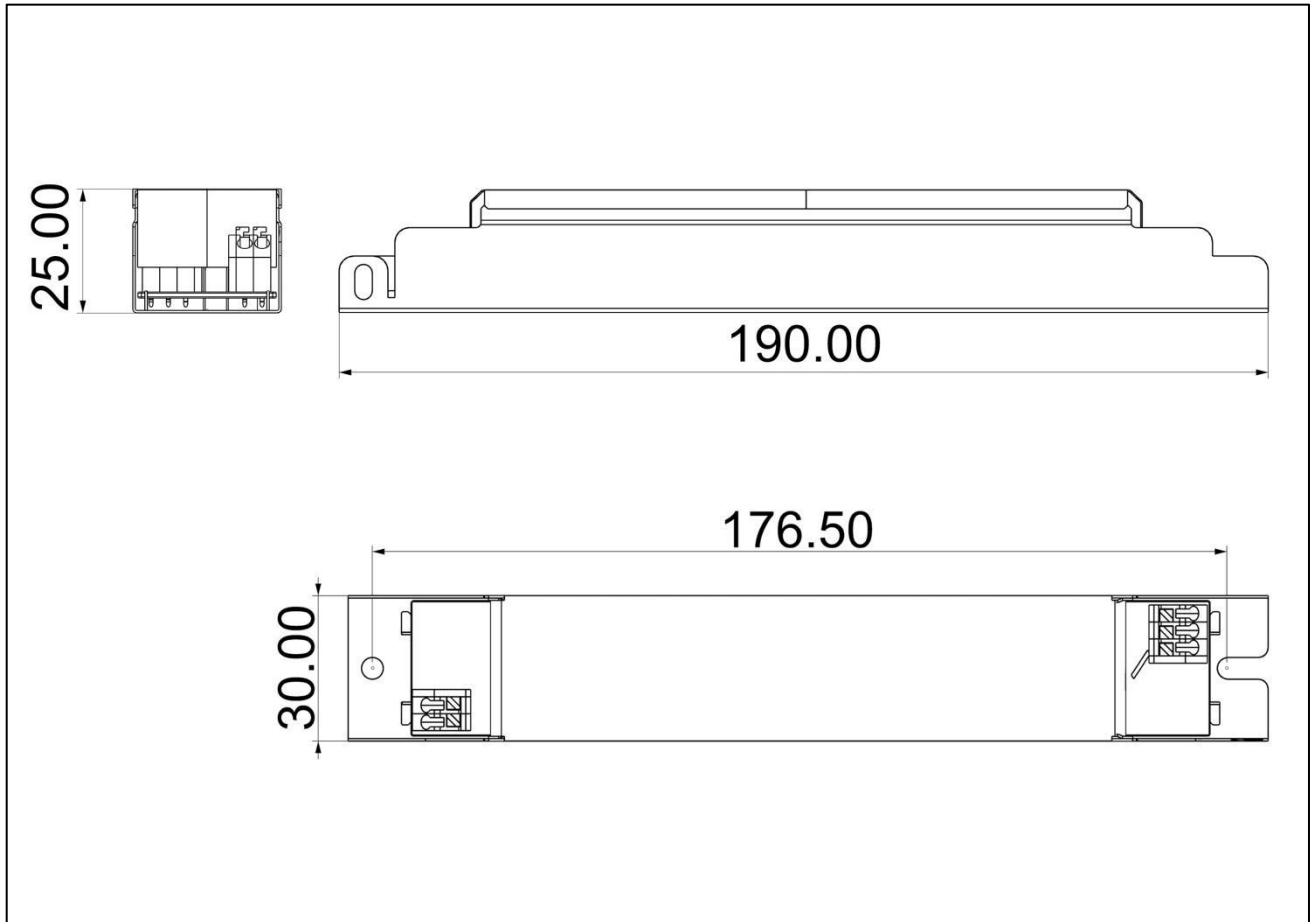
Number	Model number	Output			
		Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
1	*MS-12-200 LI	200	24-42	55	8.4
2	MS-12-230 LI	230			9.66
3	*MS-12-250 LI	250			10.5
4	*MS-12-300 LI	300			12.6
5	*MS-12-350 LI	350	24-40		14

Circuit Breaker

I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
0.7A	29.6μs	32pcs	51pcs	64pcs	32pcs	51pcs	64pcs

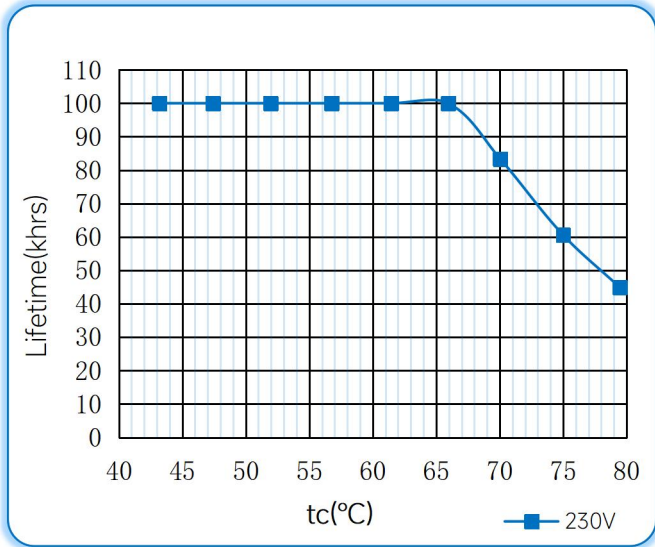
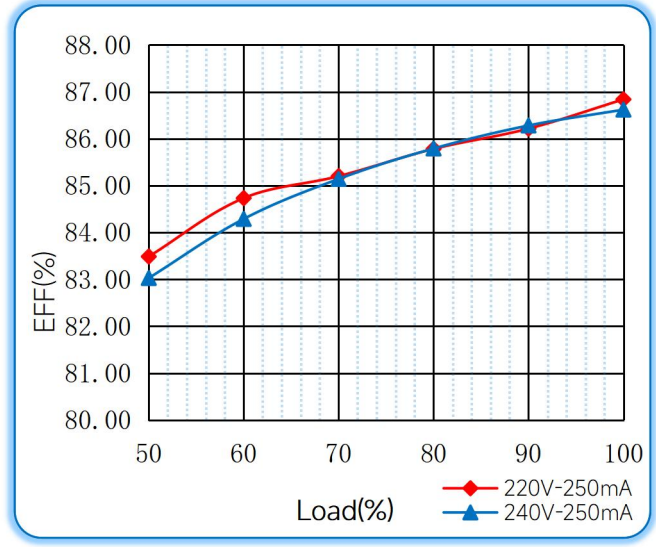
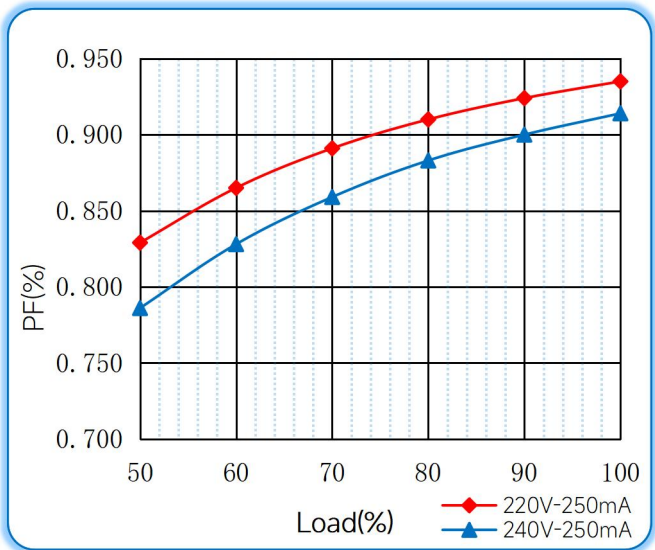
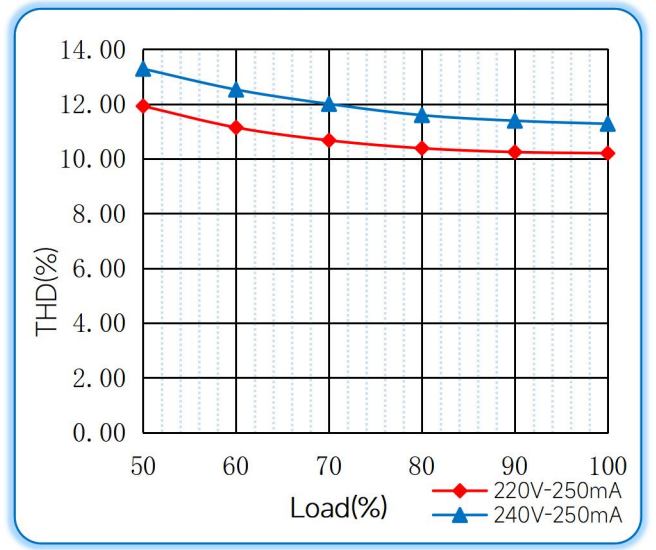
◆ Wiring diagram



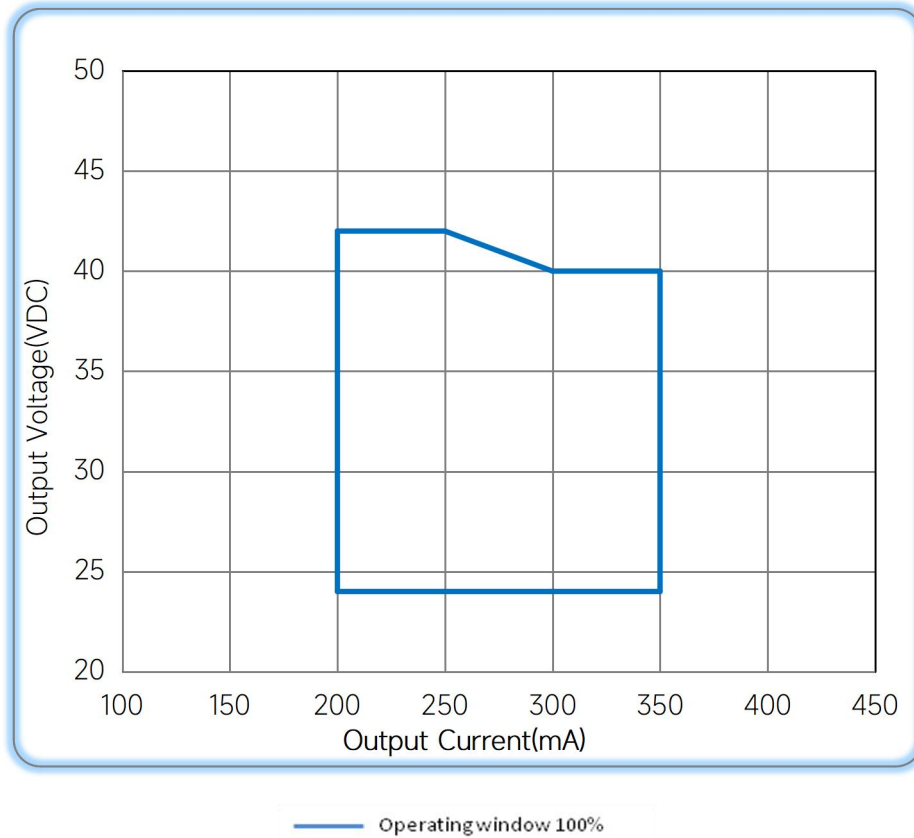
◆ 2D diagram

◆ 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

◆ Curve for MS-12-250 LI, I_o=250mA

Lifetime vs. Temperature Curve

Efficiency vs. Load

Power Factor Characteristics

THD vs. Load


◆ **Operating window**



◆ **Revision Updates**

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/05/23

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Manual