

ACDC-48VDC-7A

AC/DC 350W Enclosed Switching Power Supply)



Features

- Selectable AC input range: 180 - 264VAC
- Ultra low standby power consumption < 0.75W @230VAC
- Operating ambient temperature range: - 30°C to +70°C
- LED indicator for power on
- Output short circuit, over-current, over-voltage, over-temperature protection
- Built-in DC fan
- Operating up to 5000m altitude

It features selectable AC input and at the same time accepts DC input voltage, cost-effective, low no load power consumption, high efficiency and high reliability. These power supply offer excellent EMC performance and meet IEC/EN61000-4, CISPR32/EN55032, IEC/UL/EN62368, EN60335, GB4943 standards and they are widely used in areas of industrial, LED, street light control, electricity, security, telecommunications, smart home etc.

Selection Guide

Certification	Part No.*	Output Power (W)	Nominal Output Voltage and Current (Vo/Io)	Output Voltage Adjustable Range (V)	Efficiency at 230VAC (%) Typ.	Max. Capacitive Load (μF)
UL/EN/IEC CQC/BIS	LM350-10B48	350.4	48V/7.3A	43.2-52.8	88.5	470

Input Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Input Voltage Range	AC input	High voltage (switch in position of 230)	180	--	264	VAC
Input Voltage Frequency			47	--	63	Hz
Input Current	230VAC		--	3.4	4	A
Inrush Current	230VAC	Cold start	--	60	--	
Leakage Current	240VAC		--	--	0.75	mA
Hot Plug			Unavailable			

Output Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Output Voltage Accuracy	Full load range	48V	--	±1	--	%
Line Regulation	Rated load		--	±0.5	--	
Load Regulation	0% - 100% load	48V	--	±0.5	--	

Output Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	48V	—	200	—	mV
Temperature Coefficient			—	±0.02	—	%/°C
Minimum Load			0	—	—	%
Stand-by Power Consumption	230VAC, 25°C		—	—	0.75	W
Hold-up Time	230VAC		—	16	—	ms
Short Circuit Protection	Recovery time <8s after the short circuit disappear		Hiccup, continuous, self-recover			
Over-current Protection			110% - 180% Io, self-recover			
Over-voltage Protection	48V		55.2V-59.5V (Hiccup, self-recover)			
Over-temperature Protection			Hiccup, self-recover			
Note: *The "Tip and barrel method" is used for ripple and noise test, output parallel 47uF electrolytic capacitor and 0.1uF ceramic capacitor, details please refer to Enclosed Switching Power Supply Application Notes.						

General Specifications

Item		Operating Conditions	Min.	Typ.	Max.	Unit
Isolation Test	Input - ⊕	Electric strength test for 1min., leakage current <3mA	2000	--	--	VAC
	Input - output	Electric strength test for 1min., leakage current <5mA	3000	--	--	
	Output - ⊕	Electric strength test for 1min., leakage current <3mA	500	--	--	
Insulation Resistance	Input - ⊕	Ambient temperature: 25 ± 5°C	100	--	--	M Ω
	Input - output	Relative humidity: < 95%RH, no condensation	100	--	--	
	Output - ⊕	Test voltage: 500VDC	100	--	--	
Operating Temperature			-30	--	+70	°C
Storage Temperature			-40	--	+85	
Fan On/Off Control	Fan On, temperature for Rth3		50	--	--	
	Fan Off, temperature for Rth3		--	--	40	
Operating Humidity	Non-condensing		20	--	90	%RH
Storage Humidity			10	--	95	
Switching Frequency			--	65	--	kHz
Power Derating	Operating temperature derating	+50°C to +70°C	2	--	--	%/°C
	Input voltage derating	180VAC - 264VAC	0	--	--	%/VAC
Safety Standard		IEC/UL62368-1, GB4943.1, IS 13252 (Part1) safety approved & EN62368-1 (Report) Design refer to EN60950-1, EN60335-1				
Safety Class		CLASS I				
MTBF		MIL-HDBK-217F@25°C	>300,000 h			

Mechanical Specifications

Case Material	Metal (AL1100, SGCC)
Dimensions	215.00 mm x 115.00 mm x 30.00mm
Weight	700g (Typ.)
Cooling Method	Forced air cooling

Electromagnetic Compatibility (EMC)

Emissions	CE	CISPR32/EN55032	CLASS A	
	RE	CISPR32/EN55032	CLASS A	
Immunity	ESD	IEC/EN 61000-4-2	Contact $\pm 6\text{KV}$ /Air $\pm 8\text{KV}$	perf. Criteria A
	RS	IEC/EN 61000-4-3	10V/m	perf. Criteria A
	EFT	IEC/EN 61000-4-4	$\pm 2\text{KV}$	perf. Criteria A
	Surge	IEC/EN 61000-4-5	line to line $\pm 2\text{KV}$ /line to ground $\pm 4\text{KV}$	perf. Criteria A
	CS	IEC/EN 61000-4-6	10 Vr.m.s	perf. Criteria A
	DIP	IEC/EN 61000-4-11	0%,70%	perf. Criteria B

Remark: 1. One magnetic bead should be coupled with the output load line during CE/RE testing.

2. Matching our filter FC-L06WX series, can meet the higher level of EMC.

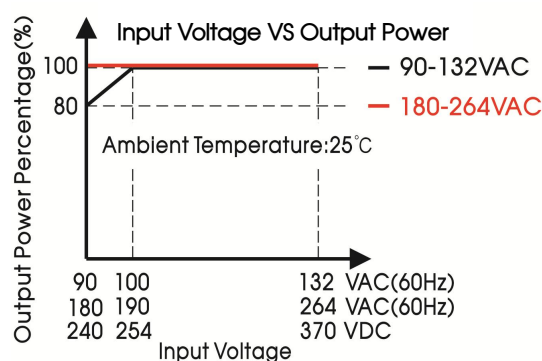
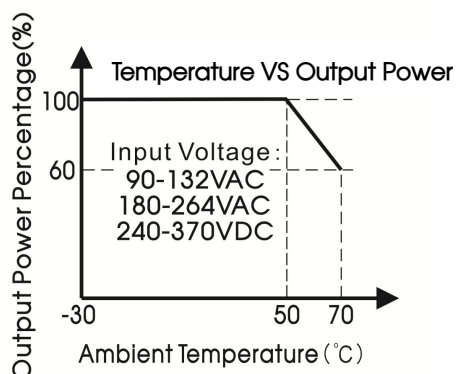
3. The power supply does not meet the requirements of harmonic current stipulated in EN61000-3-2; This power supply is not suitable for the following situations.

- 1) The terminal equipment is used in the European Union;
- 2) The terminal equipment is connected to public mains supply with 220VAC or greater rated nominal voltage that mandatory to meet the requirements of EN61000-3-2;
- 3) The power supply is installed in terminal equipment with average or continuous input power greater than 75W;
- 4) The power supply belong to a part of lighting system;

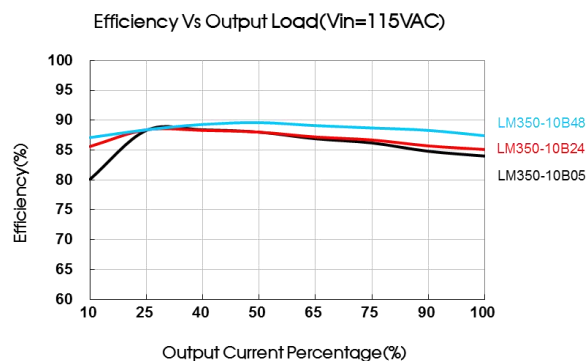
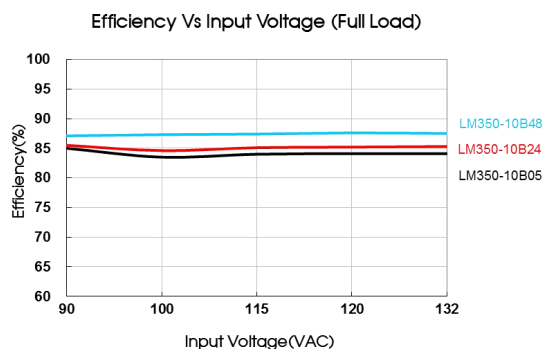
In addition, the power supply can be used in the following terminals which do not need to meet EN61000-3-2;

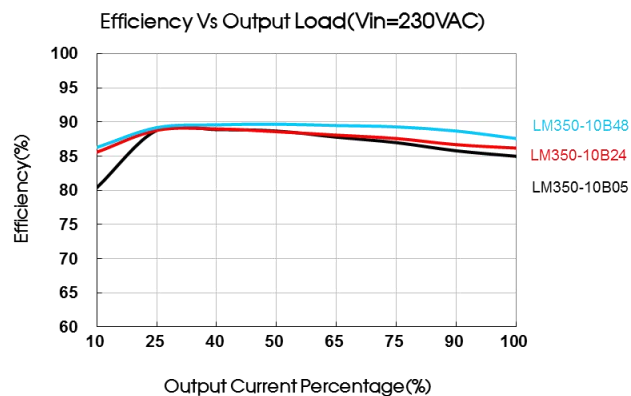
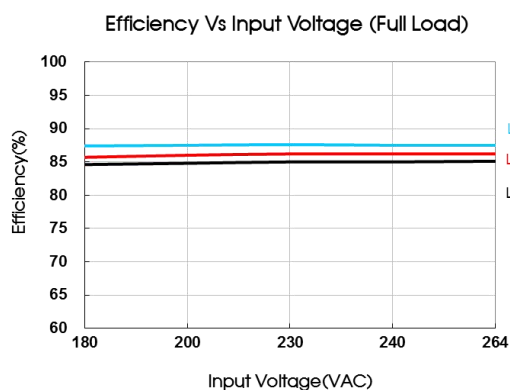
- (1) Professional equipment with total fixed input power greater than 1000W;
 - (2) symmetrical controlled heating element with rated power less than or equal to 200W.
4. If no harmonic current is required or customers can solve harmonic current problems by themselves, this product can be used.

Product Characteristic Curve



Note: This product is suitable for applications using natural air cooling; for applications in closed environment please consult Mornsun FAE.





Dimensions and Recommended Layout

