

LMF350-23BxxUH Series

350 Watts

- 85-305VAC / 120-430 VDC Input
- -40 to 85°C Fan-less operation
- 150% peak for 1 sec
- EN55032 Level B conducted & radiated
- 4000VAC isolation
- Meets EN60335-1 for home appliance



The LMF350-23BxxUH series of industrial enclosed AC-DC power supplies offer up to 350W of silent power accepting an extended input range from 85-350VAC or 120-430VDC input. The series conforms to the latest ITE/AV safety approval EN/IEC/UL 62368-1 and conforms to EN60335 / EN61558 for home appliance. Outputs are available from 5 to 48V complete with short circuit, over current and over voltage protections. They operate in extended temperatures of -40 to 85°C up to 5000m altitude

Dimensions:

8.661 x 2.441 x 1.083" (220 x 62 x 27.5mm)

Models & Ratings

Model Number ⁽¹⁾	Output power	Output voltage	Output voltage adjustable range	Output current	Efficiency ⁽¹⁾	Capacitive load 85-0°C / -40-0°C
LMF350-23B05UH	300W	5V	4.5-5.5V	60A	90%	12000uF/6000uF
LMF350-23B12UH	350.4W	12V	11.4-12.6V	29.2A	92%	1000uF/4000uF
LMF350-23B24UH	350.4W	24V	22.8-25.2V	14.6A	94%	8000uF/3000uF
LMF350-23B36UH	351W	36V	34.2-37.8V	9.75A		6000uF/2000uF
LMF350-23B48UH	350.4W	48V	45.6-50.4V	7.32A		4000uF/1000uF

Notes

1. Typical at 100% load 230VAC.

Key specifications

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
AC Input range	85		305	VAC	See page 3 for de-rating curve
Operating temperature	-40		85	°C	See page 3 for de-rating curve
Efficiency	90		94	%	See table above
Dimensions	8.661 x 2.441 x 1.083" (220 x 62 x 27.5mm)				
EMC	EN55032 Level B Conducted and Radiated. EN61000-3 and EN61000-4, harmonics, flicker, Surge, EFT, ESD, conducted and radiated.				
Safety	EN62368-1, designed to meet UL62368-1, EN61558-1, EN60335-1				

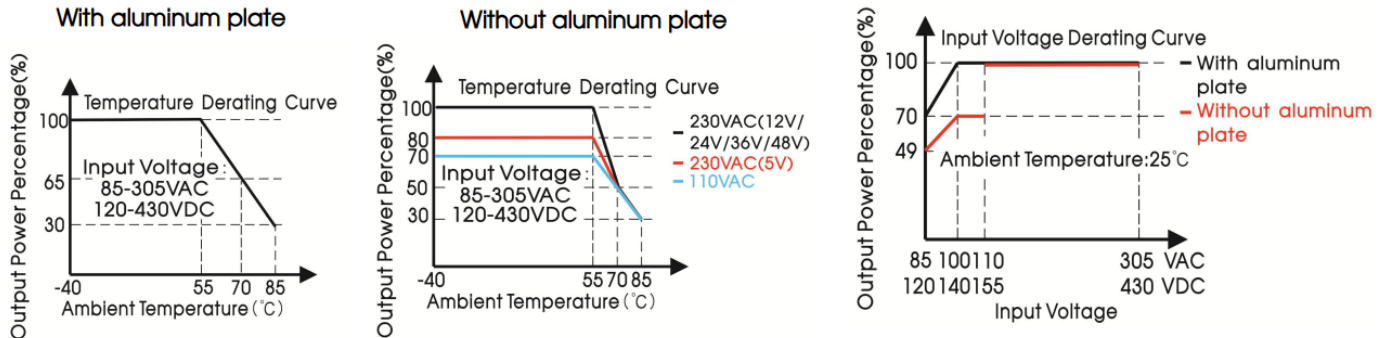
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Input					
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Input voltage	85		305	VAC	See page 3 for de-rating curve, 120-430DC
Input frequency	47		63	Hz	
Input current			4	A	115VAC
			2		230VAC
Inrush current	30		60		60A at 230 VAC and 30A at 115VAC at 25°C
Power factor		0.98			At full load 115VAC
					At full load 230VAC
Leakage current			0.5	mA	

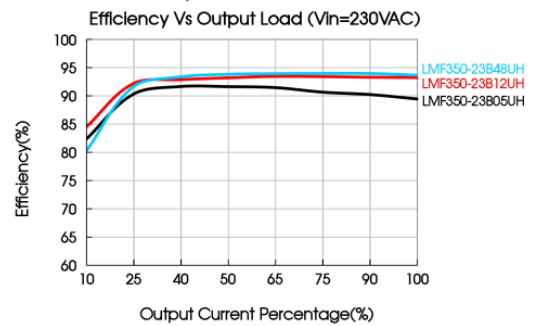
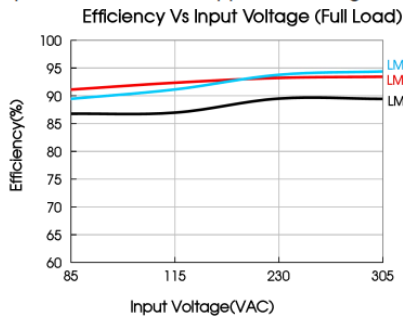
Output					
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Output voltage	5		48	VDC	See Model & Ratings table
Set point accuracy		±1	±2	%	±2 for 5V only
Line regulation		±0.3	±0.5	%	At rated load. ±0.5 for 5V only
Load regulation		±0.5	±1	%	0-100% load 230VAC. ±1 for 5V only
Ripple & Noise		200	240	mVpp	20MHz BW 47uF and 0.1uF cap. 200mV for 5/12V
Hold up time		12		mS	115VAC full load room temp
Overload / Short circuit protection	110		200	%	Trip & restart 1s.
Overvoltage protection			6.5	VDC	5V Latch reset
			15.6		12V Latch reset
			31.6		24V Latch reset
			46.8		36V Latch reset
			62.4		48V Latch reset
Over temperature protection					Self recovery after temperature drops

General						
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions	
Efficiency	90		94	%	See models and ratings table	
Isolation: Input to Output	4000			VAC		
		Input to Ground	2000		VAC	
		Output to Ground	1500		VAC	
Insulation resistance	50			MΩ	500VDC, 25°C and <95RH	
Power density			15.28	W/In ³		
MTBF	300			kHrs	MIL-HDBK-217F, rated load, 25°C	
Weight		680		g		
Case material	Metal (AL6063, SGCC)					

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- Note: 1. With an AC input voltage between 85-100VAC and a DC input between 120-140VDC the output power must be derated as per the temperature derating curves;
2. This product is suitable for applications using natural air cooling; for applications in closed environment please consult Mornsun FAE.



Environmental

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating temperature	-40		85	°C	See curve above
Storage temperature	-40		85	°C	
Cooling					Base plate or convection cooled
Humidity	10		95	%RH	Non-condensing.
Operating altitude			5000	M	5°C/1000m derating above 2000m

EMC: Emissions

	Standard	Test level	Criteria	Notes & Conditions
Conducted	EN55032	B		
Radiated	EN55032	B		
Harmonic current	EN61000-3-2			Class A
Voltage flicker	EN61000-3-3			Compliant

EMC: Immunity

	Standard	Test level	Criteria	Notes & Conditions
ESD	EN61000-4-2	3	A	±6kV contact, ±8kV air
Radiated	EN61000-4-3	3	A	10V/m
EFT	EN61000-4-4	3	A	±2kV
Surges	EN61000-4-5		A	Line to line ±2kV, Common ±4kV
Conducted	EN61000-4-6	3	A	10Vrms
Dips and interruptions	EN61000-4-11	0% 70%	B	
Intercom interference test	MS-SOP-DQC-007		B	

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Application note:

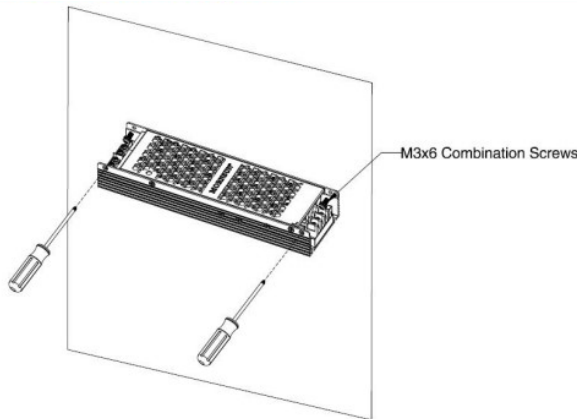


Figure 1

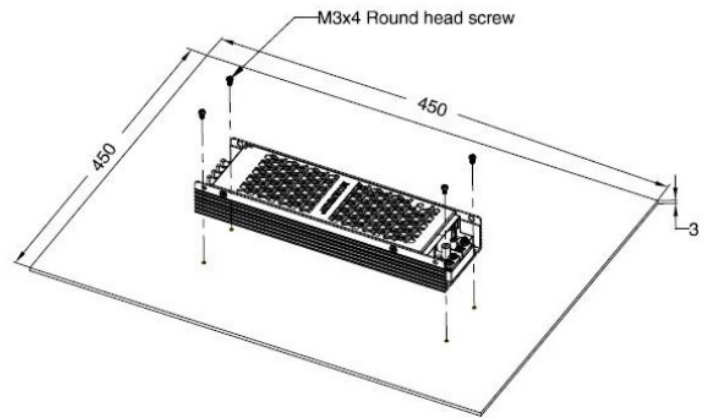


Figure 2

Notes

Figure 1 shows a side plate install offering no conduction cooling.

Figure 2 shows a base plate installation offering conduction cooling. Please use thermal compound to thermally bond product to baseplate

Mechanical Details

