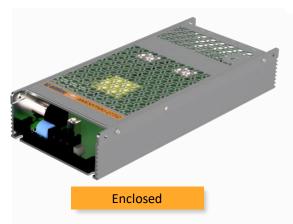


AMESP750U-277JZ







The AMESP750U-277JZ series is an efficient, enclosed, fan less, ultra-narrow, and semi-potted 750W AC/DC power supply module. It offers a wide commercial input voltage range of 85-305VAC, output voltage ranges from 12-48V, low power consumption, high efficiency, high reliability, and safer isolation.

This new series offers great operating temperatures, from -40°C to +85°C with full power up to 45°C and features an isolation of 4000VAC with improved reliability and system safety. Additionally, it has operating altitude of 5000m. Furthermore, a high MTBF of 300,000h, output short circuit protection (OSCP), output over-current protection (OCP), output over-voltage protection (OVP), and over temperature protection (OTP) come standard with the series.

The AMESP750U-277NZ is suitable for street lighting controls, grid power, instrumentation, industrial controls, communication, and civil applications.

Features

- Universal Input: 85 305VAC/120 430VDC
- Operating Temp: -40°C to +85°CHigh isolation voltage: 4000VAC
- Active PFC
- Output short circuit, over-current, over-voltage, over-temperature protection
- Efficiency up to 96%
- 150% peak load output for 1 second
- Operating altitude up to 5000m
- UL/EN62368
- Designed to meet: EN60335, EN61558, GB4943







Training



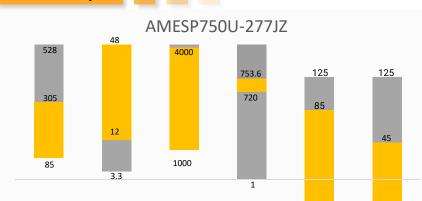
Product Training Video

Press Release

Application Notes

Coming Soon!

Summary



Input voltage Output voltage (VAC) (V)

Isolation (VAC)

Power (W) Temp. range (°C)

-40

Derating (°C)

-40

Applications







Power Grid

Industrial

Telecom



Models & Specifications



Single Output								
Model	Input Voltage (VAC)	Input Voltage (VDC)	Rated Output Power (W)	Nominal Output Voltage/Current (Vo/Io)	Output Voltage Adjustable Range(V)	Max Capacitive Load at Room temp(µF)	Max Capacitive Load at Low temp(μF)	Efficiency @ 230VAC Typ. (%)
AMESP750U-12S277JZ	85-305	120-430	720.0	12/60	12-14.4	12000	6000	94
AMESP750U-24S277JZ	85-305	120-430	751.2	24/31.3	24-28.8	10000	4000	95
AMESP750U-28S277JZ	85-305	120-430	750.4	28/26.8	28-33.6	9000	3500	95
AMESP750U-36S277JZ	85-305	120-430	752.4	36/20.9	36-43.2	8000	3000	95
AMESP750U-48S277JZ	85-305	120-430	753.6	48/15.7	48-57.6	6000	2000	96

Input Specifications					
Parameters	Conditions	Typical	Minimum	Maximum	Units
	115VAC			7.5	Α
Input current	230VAC			3.8	А
Inrush current	Cold Start, 115VAC	20			Α
infusif current	Cold Start, 230VAC	40			Α
Leakage	277VAC, 50Hz			<0.5	mA
Input Frequency			47	63	Hz
Daniel Frankrii	Full Load, 25°C, 115VAC	0.98			
Power Factor	Full Load, 25°C, 230VAC	0.95			
Hot Plug		Unavailable			

Output Specifications				
Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	Full Load Range	±1.0		%
Line regulation	Rated Load	±0.5		%
Load Regulation	0%-100% Load	±0.5		%
Ripple & Noise*	20MHz bandwidth 12V		150	mV p-p
Kippie & Noise	(peak-to-peak value), 25°C 24V/28V/36V/48V		200	mV p-p
Minimum Load	0			%
Stand-by Power Consumption	25°C, 230VAC input		5	W
Peak Load Output	100-277VAC, test for 1s	150%		W
Hold up time	Room Temperature, Full Load, 115VAC/230VAC	12		ms
Note: *The "Tip and harrel moth	od" is used for ripple and poice test, output parallel	47uE alastralyti	s capacitor and O	1uE coramic

Note: *The "Tip and barrel method" is used for ripple and noise test, output parallel 47uF electrolytic capacitor and 0.1uF ceramic capacitor, please refer to enclosed Switching Power Supply Application Notes for specific information.

Isolation Sp	ecification				
	Parameters	Conditions	Minimum	Maximum	Units
	Tested Input-GND		2000		
Isolation	Tested I/O voltage	60 sec, leakage < 5mA	4000		VAC
	Tested Output-GND voltage		1750		
In coloting	Tested Input-GND	Environment temperature: 25 ± 5°C			
Insulation Resistance	Tested I/O voltage	Relative humidity: <95%RH, non-condensing	50		МΩ
Resistance	Tested Output-GND voltage	Testing Voltage: 500VDC			



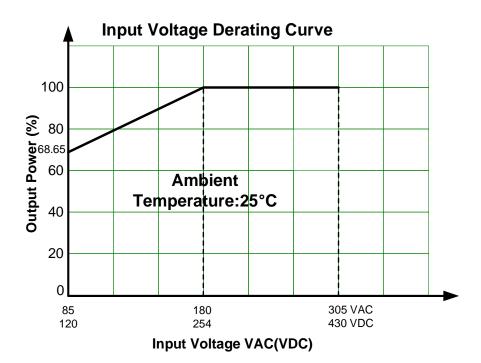
General Specificatio	ns				
Parameters	Conditions	Typical	Minimum	Maximum	Units
Safety class	Class I				
Over current protection	Constant current hiccup protection, Auto recovery	≥ 110		170	% of lout
	12V output, Hiccup, Auto recovery		14.5	17	VDC
	24V output, Hiccup, Auto recovery		29.0	33	VDC
Over voltage protection	28V output, Hiccup, Auto recovery		33.5	38.0	VDC
	36V output, Hiccup, Auto recovery		43.5	49	VDC
	48V output, Hiccup, Auto recovery		59.0	63	VDC
Over temperature protection	Output voltage turn off, Auto recovery after	Output voltage turn off, Auto recovery after the temperature drops			
Short circuit protection	Constant current hiccup protection, continuous, auto-recover, recovery time < 5 sec after short circuit disappears				
Operating temperature	See derating graph		-40	+85	°C
Storage temperature			-40	+85	°C
	45 °C to 85 °C, 12V output with aluminum plate		2		%/°C
	50 °C to 85 °C, 24V/28V/36V/48V output with aluminum plate		2.5		%/°C
Power Derating	45 °C to 85 °C, 12V/24V/28V/36V/48V output (derating from 70% load) without aluminum plate		1.6		%/°C
	85VAC ~ 180VAC input voltage		0.33		%/VAC
Cooling	Free air convection				
Operating humidity	Non-condensing		20	90	% RH
Storage humidity	Non-condensing		10	95	% RH
Case material	Metal (AL6063, SGCC)				
Weight		1300			g
Dimensions (L x W x H)	9.33 x 3.94 x 1.61 inches (237.00 x 10	0.00 x 41.0	0 mm)		
MTBF	> 300,000 hrs (MIL-HDBK - 217F, t=+25°C)				
NOTE: All specifications in output load unless otherwi	this datasheet are measured at an ambient temperature of 25°C, humi ise specified.	dity<75%, r	nominal input	voltage and a	it rated

Safety Specific	ations				
Parameters					
Agency approvals	EN62368-1				
	Information Technology Equipment		Designed to meet UL62368-1, EN60335, EN61558, GB4943		
	EMC - Conducted and radiated emission		CISPR32 / EN55032, class B		
	Harmonic Current		IEC/EN61000-3-2 CLASS A		
	Electrostatic Discharge Immunity		IEC/EN61000-4-2 Contact ±8KV, Air ±15KV, Criteria A		
	RF, Electromagnetic Field Immunity		IEC/EN61000-4-3 10V/m, Criteria A		
	Electrical Fast Transient/Burst Immunity	Input port	IEC/EN61000-4-4 ±2KV, Criteria A		
Standards		Output port	IEC/EN61000-4-4 ±2KV, Criteria A		
Stallualus	Cura Immunitu	Input port	IEC/EN61000-4-5 L-L ±2KV, L-GND ±4KV, Criteria A		
	Surge Immunity	Output port	IEC/EN61000-4-5 L-L ±0.5KV, L-GND ±1KV, Criteria A		
	RF, Conducted Disturbance Immunity	Input port	IEC/EN61000-4-6, 10Vr.m.s, Criteria A		
	Output p		IEC/EN61000-4-6, 10Vr.m.s, Criteria A		
	Power Frequency Magnetic Field		IEC/EN61000-4-8, 10A/m, Criteria A		
	Voltage dips, Short Interruptions Immunity		IEC/EN61000-4-11 0%, 70%, Criteria B		
	Voltage Flicker		IEC/EN6100-3-3		



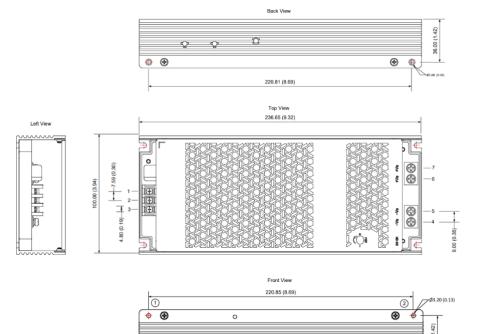


Thermal Derating with Aluminum Plate Without Aluminum Plate **Free Air Convection Free Air Convection** 100 100 - 12V 24V/28V/36V/48V Output Power (%) 80 Output Power (%) 80 Safe Operating Area 60 Safe Operating Area Input Voltage 40 40 Input Voltage 85-305VAC 85-305VAC 120-430VDC 20 20 120-430VDC 12.5 0 40 45 50 80⁸⁵ 40⁴⁵ 80⁸⁵ 60 -40 -20 0 20 100 -40 -20 20 60 100 Ambient Temperature °C Ambient Temperature °C









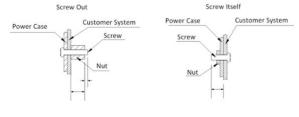


THIRD ANGLE PROJECTION



Pin	-Out
Pin	Mark
1	(
2	AC(N)
3	AC(L)
4	+Vo
5	+Vo
6	-Vo
7	-Vo

Position	Installation Method	Screw Spec.	L	Torque(max)
	Screw Out	M3	Min 10mm	0.4N-m
1 - 2	Screw Itself	M3	Max 8mm	0. 4N-m





Note:

Unit: mm (inch)

ADJ: Output adjustable resistor

Wire range: 22-14AWG

Tightening torque: M3, Max 0.5N-m General tolerances: ±1.00 (±0.039)

Note:

- 1. That is a schematic diagram of side installation, install with M3x6 combination screws, derating refer to without aluminum plate curve.
- 2. That is the schematic diagram of the bottom installation, install with M3×4 round head screws, it is necessary to apply thermal grease on the bottom of the product, derating refer to with aluminum plate curve.

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