

AMESP600-277NZ



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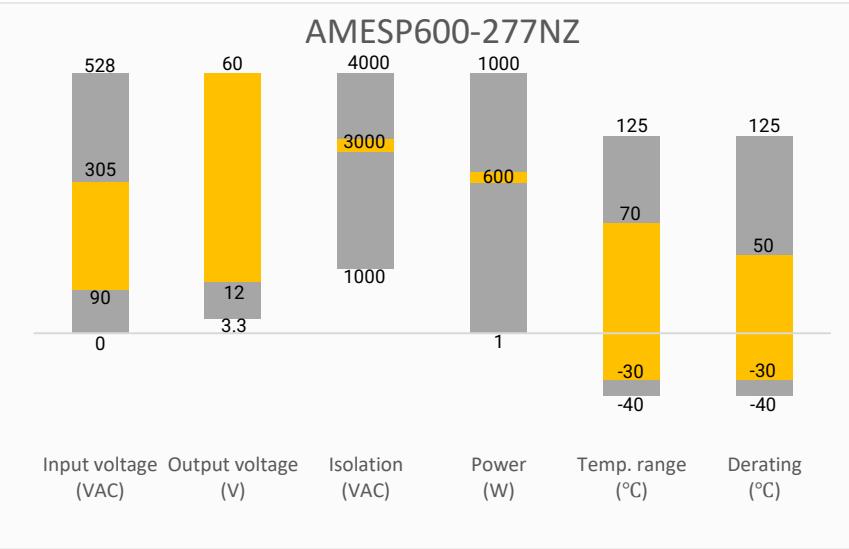


Enclosed

Features

- Universal Input: 90 - 305VAC/127 - 430VDC
- Operating Temp: -30 °C to +70 °C
- PFC>0.95
- High isolation voltage: Up to 3000VAC
- Low ripple & noise, 360mV(p-p) typ.
- Output short circuit, over-current, over-voltage and over temperature protection
- Regulated Output
- Optional conformal coating
- Active power factor correction

Summary



Training



Product Training Video
(click to open)

Applications



Power Grid



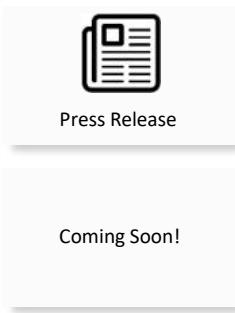
Industrial



Telecom



Instrumentation



Application Notes

Models & Specifications



Single Output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Max Output Wattage (W)	Output Voltage (V)	Output Voltage Adjustable Range (V)	Output Current max (A)	Maximum capacitive load (μF)	Average Efficiency (%)
AMESP600-12S277NZ-P	90-305/47-63	127-430	600	12	10.0-13.2	50	45000	90
AMESP600-15S277NZ-P	90-305/47-63	127-430	600	15	13.5-18.0	40	40000	90
AMESP600-24S277NZ-P	90-305/47-63	127-430	600	24	20.0-26.4	25	10000	91
AMESP600-36S277NZ-P	90-305/47-63	127-430	601.2	36	28.0-40.0	16.7	6000	91
AMESP600-48S277NZ-P	90-305/47-63	127-430	600	48	41.0-56.0	12.5	4000	92
AMESP600-60S277NZ-P	90-305/47-63	127-430	600	60	56.0-64.0	10	3000	92

Note: The “-P” suffix indicates a terminal protective cover (ex. AMESP600-12S277NZ-P). For optional conformal coating, add “Q” after the “-P” (ex. AMESP600-12S277NZ-PQ is conformal coated version with terminal protective cover).

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input current	115VAC	12		A
	230VAC	7.5		A
Inrush current	115VAC, cold start	35		A
	230VAC, cold start	60		A
Power factor	115VAC, Full load	0.98		
	230VAC, Full load	0.95		
Leakage current	240VAC	2		mA
Remote control	Power ON, open or 0 ~ 0.8VDC between RC+(Pin 4) & RC-(Pin3) on CN100 Power OFF, 4 ~ 10VDC between RC+(Pin 4) & RC-(Pin3) on CN100			

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	Full load, 12V, 15V output	±1.5		%
	Full load, 24V, 36V, 48V, 60V output	±1		%
Line regulation	Full load	±0.5		%
	0-100% load, 12V, 15V output	±1		%
Load regulation	0-100% load, 24V, 36V, 48V, 60V output	±0.5		%
	12V, 15V output		200	mV p-p
Ripple & Noise*	24V output		240	mV p-p
	36V output		270	mV p-p
	48V, 60V output		360	mV p-p
	115VAC	16		ms
Hold up time	230VAC	20		ms

* Ripple and Noise are measured at 20MHz bandwidth with a 47μF electrolytic capacitor and a 0.1μF ceramic capacitor. Please refer to the application note for specific details.

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		3000	VAC
Tested Input to GND voltage	60 sec		2000	VAC
Tested Output to GND voltage	60 sec		500	VAC
Resistance (I/O, I/O to GND) *	500VDC		100	MΩ

* Tested under 25±5°C ambient temperature with relative humidity <95% and no condensation.

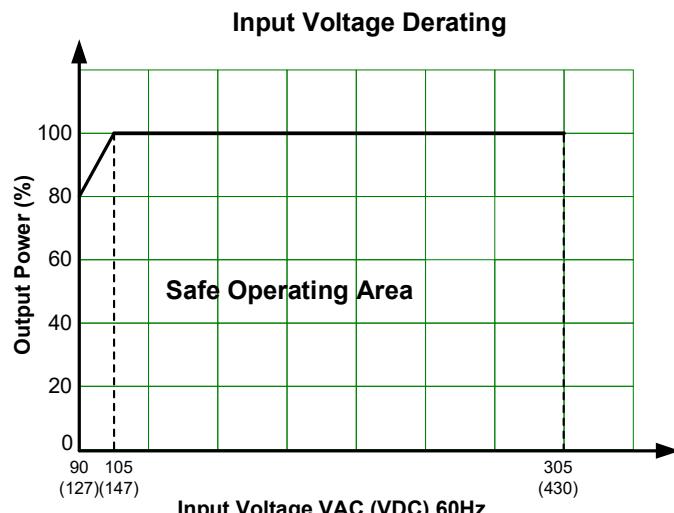
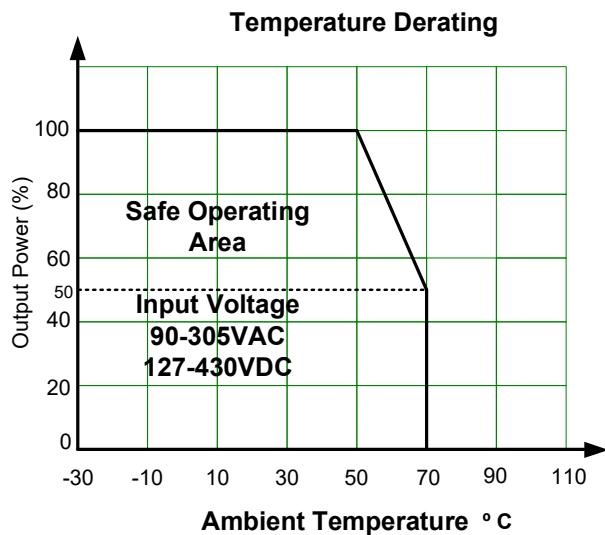
General Specifications

Parameters	Conditions	Typical	Maximum	Units
Safety class	Class I			
Over voltage category	OVC III			
Over Current protection	Constant current limiting, Auto recovery	≥ 105	130	% of Iout
	Shut-down, Manual recovery, 12V output		16.2	VDC
	Shut-down, Manual recovery, 15V output		21.8	VDC
	Shut-down, Manual recovery, 24V output		32.4	VDC
	Shut-down, Manual recovery, 36V output		48.6	VDC
	Shut-down, Manual recovery, 48V output		64.6	VDC
	Shut-down, Manual recovery, 60V output		76.8	VDC
Over temperature protection	Shut-down, Auto recovery			
Short circuit protection	Hiccup, Continuous, Auto recovery			
Remote sense	Compensate voltage drop on the load wiring up to 0.3V Connect Load side +Vout with +S(Pin 2) on CN100 and load side -Vout with -S(Pin 1) on CN100			
Operating temperature	See derating graph	-30 to +70		°C
Storage temperature		-40 to +85		°C
Power derating	50 °C to 70 °C	2.5		% / °C
	90VAC ~ 105VAC@60Hz	1.33		% / VAC
Temperature coefficient	0 ~ 50 °C	± 0.03		% / °C
Cooling	Forced air cooling			
Fan control (Typ.)	Fan always on			
Humidity	Non-condensing, Storage	≥ 10	95	% RH
	Non-condensing, Operating	≥ 20	90	% RH
Case material	Metal			
Weight		1300		g
Dimensions (L x W x H)	9.06 x 5.00 x 1.59inch (230.0 x 127.0 x 40.5mm)			
Vibration	10 ~ 500Hz, 2G 10min / 1cycle, 60min. Each along X, Y, Z axes			
MTBF	> 180 000 hrs MIL-HDBK-217(25°C)			
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.				

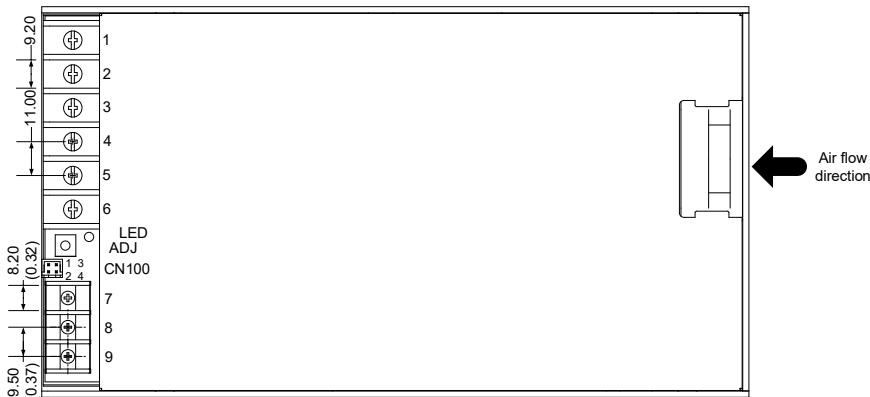
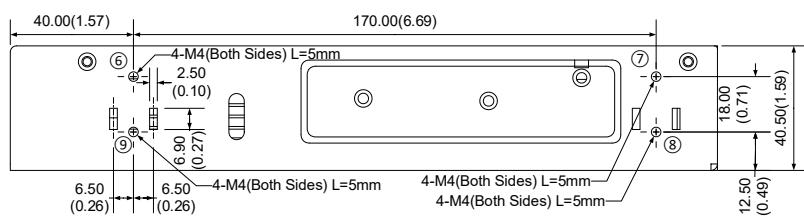
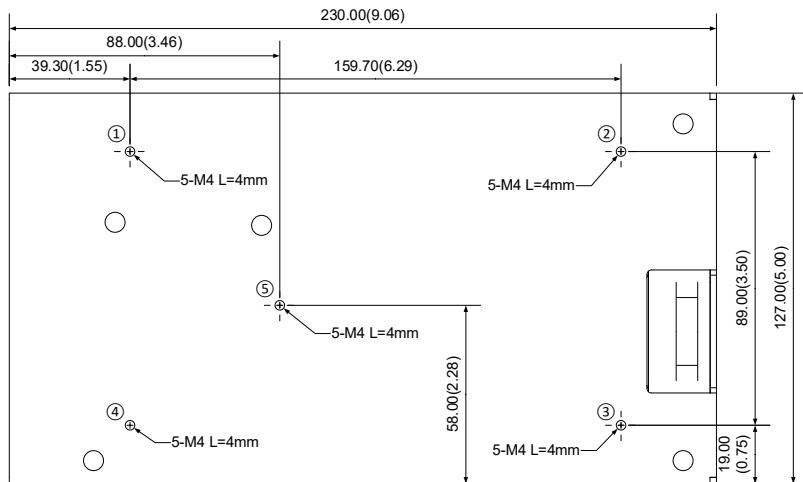
Safety Specifications

Parameters	Over voltage category	Design to meet III; According to EN62368-1
Standards	Information technology Equipment	Design to meet UL62368-1, TUV BS EN/EN62368-1
	EMC - Conducted and radiated emission	CISPR32 / EN55032, class B
	Harmonic current	IEC 61000-3-2, class A
	Voltage flicker	IEC 61000-3-3
	Electrostatic Discharge Immunity	IEC 61000-4-2, Criteria A
	RF, Electromagnetic Field Immunity	IEC 61000-4-3, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4, Criteria A
	Surge Immunity	IEC 61000-4-5, Criteria A
	RF, Conducted Disturbance Immunity	IEC 61000-4-6, Criteria A
	Power-frequency Magnetic Field	IEC 61000-4-8, Criteria A
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11, Criteria B

Derating



Dimensions



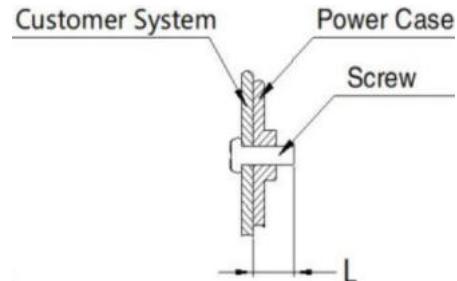
Note:
Unit: mm(inch)
ADJ: Output adjustable resistor
Wire gauge: 22-12AWG
Connector tightening torque: M3.5, 0.8N-m
General tolerance: $\pm 1.0(0.04)$
At least one of the ① - ⑨ location must be connected to PE

Pin Output Specifications

Pin	Single
1	+V Output
2	+V Output
3	+V Output
4	-V Output
5	-V Output
6	-V Output
7	PE GND
8	AC Input (N)
9	AC Input (L)

CN100 Specifications

Pin	Description	Mating Housing	Terminal
1	-S		
2	+S		
3	RC-	HRS DF11-4DS or equivalent	HRS DF11-**SC or equivalent
4	RC+		



Screw Spec.	L(max)	Torque(max)
M3	4mm	0.4 N-m

NOTE: 1. Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. 2. Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. 3. Mechanical drawings and specifications are for reference only. 4. All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. 5. Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. 6. This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.