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AMEDP240-NZ



DIN Rail

The new AMED240-NZ is a low-cost high power DIN-rail mounting AC/DC converter that features a cost-effective, energy efficient green power supply solution. It accepts universal input voltage range of 85-264VAC and an output voltage range from 12-48V, this series can benefit your new industrial system design.

This new series offers great operating temperatures, from -40°C to 70°C also features an isolation of 3000VAC for improved reliability and system safety. Furthermore, a higher MTBF of 300,000h, output short circuit protection (OSCP), output over-current protection (OCP), over temperature protection (OTP) and an output over-voltage protection (OVP) come standard with the series.

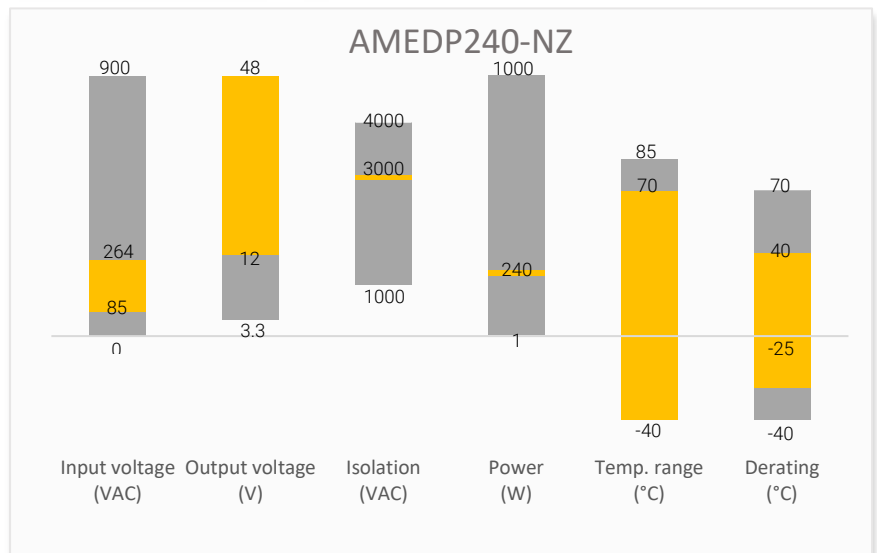
The AMED240-NZ is perfect for electric distribution box, grid power, instrumentation, CNC, industrial control panel, building automation applications.

Features

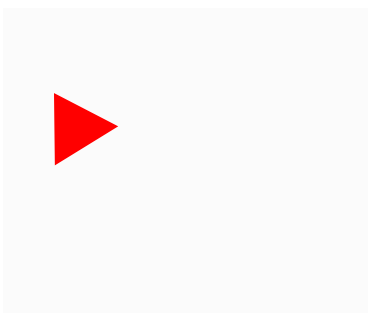
- Ultra-wide Input: 85 - 264VAC/120 - 370VDC
- Operating Temp: -40 °C to +70 °C
- High isolation voltage: 3000VAC
- Low ripple & noise, 150mV(p-p), max.
- Output short circuit, over-current, over-voltage, over-temperature protection



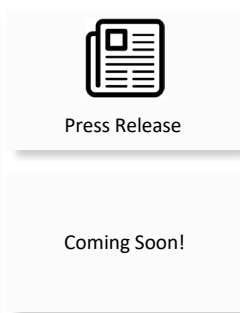
Summary



Training



Product Training Video
(click to open)



Application Notes

Applications



Power Grid



Industrial



Telecom



Instrumentation

Models & Specifications

Single Output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Max Output wattage (W)	Output Voltage (V)	Output Current max (A)	Maximum capacitive load (μF)	Efficiency @ 230VAC Typ. (%)
AMEDP240-12SNZ	85~264/47~63	120~370	192	12	16	160000	93
AMEDP240-24SNZ	85~264/47~63	120~370	240	24	10	40000	94
AMEDP240-48SNZ	85~264/47~63	120~370	240	48	5	10000	94

* Output total power must be secured within the rated value if the output voltage increases via the ADJ potentiometer.

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input Current	115VAC		3	A
	230VAC		1.5	A
Inrush Current	115VAC, cold start	15		A
	230VAC, cold start	30		
Leakage Current	Input to output, 264VAC		< 0.5	mA
	Input to PE, 264VAC		< 1mA	mA
Power factor	115VAC	0.98		
	230VAC	0.95		

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	0 - 100% load, 12 VDC Output	± 2		%
	0 - 100% load, 24,48 VDC Output	± 1		%
Line regulation	Rated load	± 0.5		%
Load regulation	0 - 100% load	± 1		%
Ripple & Noise*	20MHz bandwidth	75	150	mV p-p
Hold up time		20		ms
Voltage adjustable range	12 VDC Output	12 - 14		V
	24 VDC Output	24 - 28		V
	48 VDC Output	48 - 53		V

* Ripple and Noise are measured at 20MHz bandwidth. Please refer to the application not for specific details. Measured with a 47μF electrolytic capacitor and a 0.1μF ceramic capacitor.

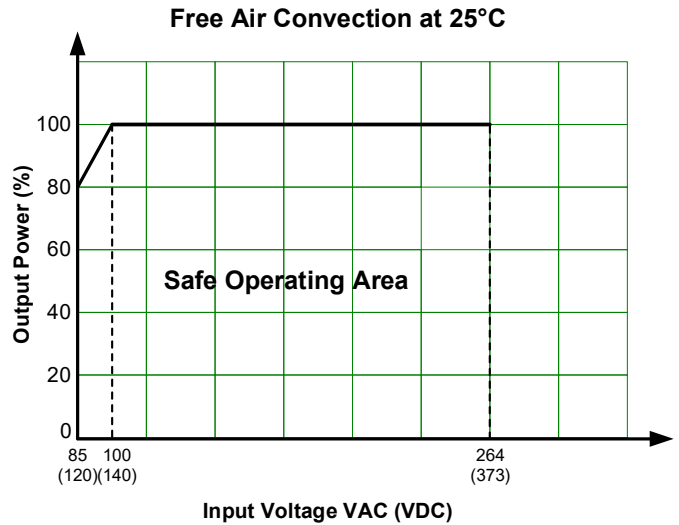
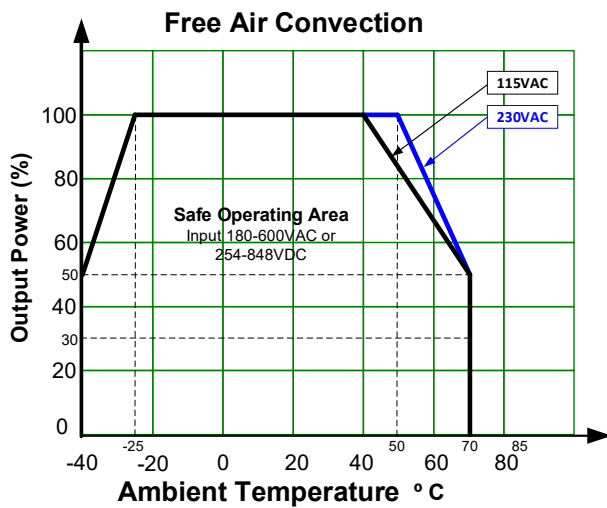
Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, Leakage current < 10mA	3000		VAC
Tested Input to GND voltage	60 sec, Leakage current < 10mA	2000		VAC
Tested Output to GND voltage	60 sec, Leakage current < 10mA	500		VAC
Insulation resistance	I to O, I/O to PE, 500VDC	>50		MΩ

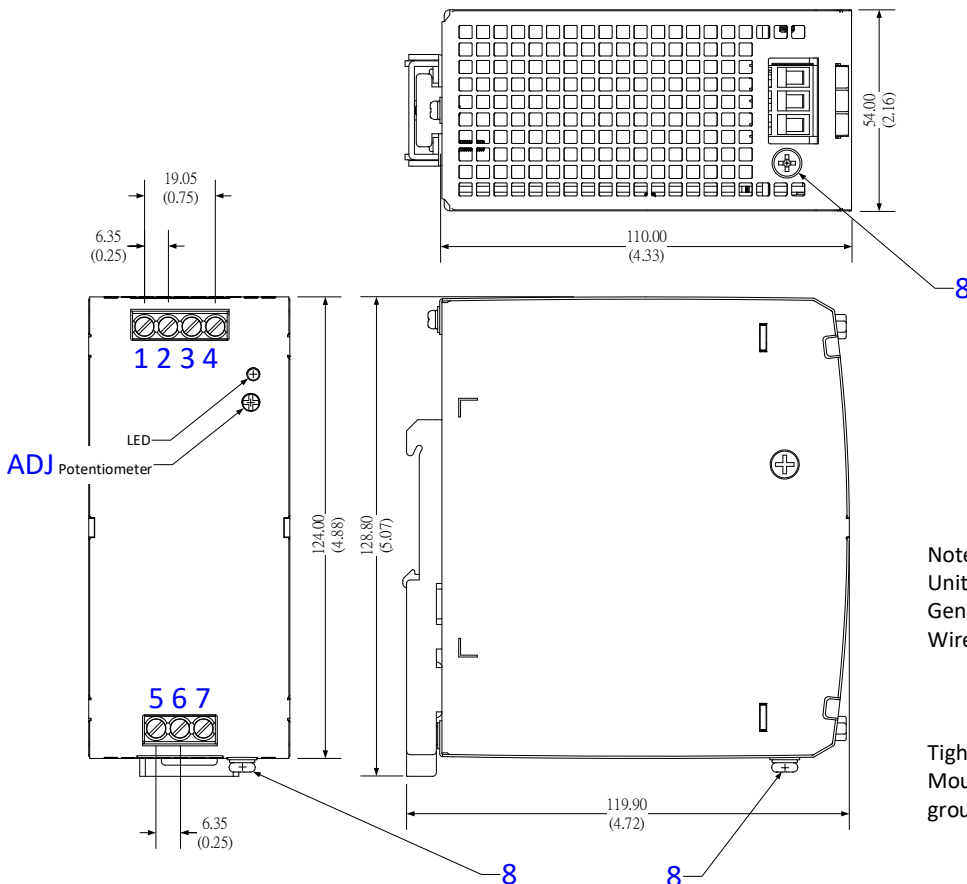
General Specifications				
Parameters	Conditions	Typical	Maximum	Units
Over Current protection	230VAC, rated load, auto- recovery, > 0°C	110-200		% of I _{out}
	230VAC, rated load, auto- recovery, < 0°C	≥ 105		% of I _{out}
Over voltage protection	12 VDC Output, hiccup mode, auto-recovery	≤ 18		VDC
	24 VDC Output, hiccup mode, auto-recovery	≤ 35		VDC
	48 VDC Output, hiccup mode, auto-recovery	≤ 60		VDC
Over temperature protection	230VAC, rated load	80		°C
Short circuit protection	Hiccup mode, continuous, auto-recovery			
	recovery time after short circuit released		< 10	s
Switching frequency		100		kHz
Operating temperature		-40 to +70		°C
Storage temperature		-40 to +85		°C
Power derating	-40°C to -25°C	3.34		% / °C
	115VAC, +40°C to 70°C	1.67		% / °C
	230VAC, +50°C to 70°C	2.5		% / °C
	Input voltage derating, 85VAC - 100VAC	1.33		% / °C
Temperature coefficient		± 0.03		% / °C
Protection Class	Class I			
Cooling	Free air convection			
Operating Humidity	Non-condensing		< 90	% RH
Storage Humidity	Non-condensing		<95	% RH
Altitude			2000	m
Case material	Metal (AL1100, SPCC), Plastic(PC945)			
Weight		600		g
Dimensions (L x W x H)	2.13 x 4.88 x 4.33 inches (54.00 x 124.00 x 110.00 mm)			
MTBF	> 300 000 hrs (MIL-HDBK -217F, t _a =+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		
Agency approval	CE EN62368	
Standards	Designed to meet UL61010-1, IS13252 part 1, IEC/UL/BS62368-1, UL508, EN61558-2-16	
	EMC - Conducted and radiated emission	CISPR32 / EN55032, Class B
	Harmonic current	IEC/EN 61000-3-2, Class A and Class D
	Electrostatic Discharge Immunity	IEC/EN 61000-4-2 Contact ±6KV, Air ±8KV, Criteria A
	RF, Electromagnetic Field Immunity	IEC/EN 61000-4-3 10V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC/EN 61000-4-4 ±2KV, Criteria A
	Surge Immunity	IEC/EN 61000-4-5 L-L ±2KV, L-G ±4KV, Criteria A
	CS, Conducted Disturbance Immunity	IEC/EN 61000-4-6 10V r.m.s, Criteria A
	Voltage dips, Short Interruptions Immunity	IEC/EN 61000-4-11 0%, 70%, Criteria B

Derating



Dimensions



Pin Output Specifications	
Pin	Function
1	+V Output
2	+V Output
3	-V Output
4	-V Output
5	Input (N)
6	Input (L)
7	GND
8	GND
ADJ	Voltage adjustment

Note:

Unit: mm (inch)

General tolerance : ± 1.0 (0.04)

Wire gauge : Input 26 - 10AWG

Output 12V, 12 - 10AWG

Output 24V, 16 - 10AWG

Output 48V, 18 - 10AWG

Tightening torque : 0.79N·m Max.

Mounting rail : TS35, rail needs to connect to safety ground

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.