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AMED60-NZ

DIN Rail

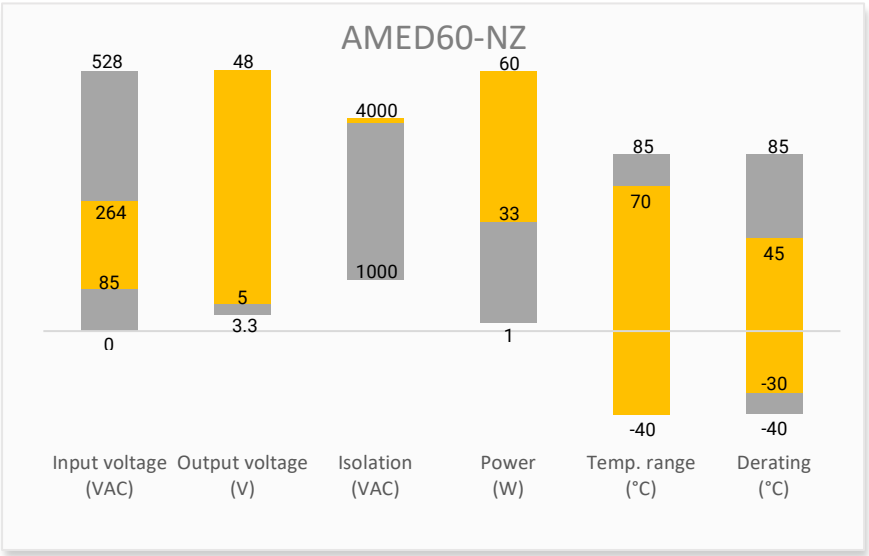
The AMED60-NZ is whole new DIN rail bracket AC-DC converter featuring a cost effective, energy efficient solution. The products offer a high level of stability and immunity to noise, compliant with international IEC/EN/UL62368 and EN61558 standards. These lightweight AC-DC converters also have an extremely compact design for space saving and are ideal for applications such as industrial control equipment machinery and numerous applications for harsh environments.

This new series offers great operating temperatures, from -40°C to 70°C and an isolation of 4000VAC for improved reliability and system safety. Furthermore, a high MTBF of 300,000h, output short circuit protection (OSCP), output over-current protection (OCP) and an output over-voltage protection (OVP) come standard with the series.

Features

- Universal Input: 85 - 264VAC/120 - 370VDC
- Operating Temp: -40 °C to +70 °C
- High isolation voltage: 4000VAC
- Low ripple & noise, 240mV(p-p), max.
- Output short circuit, over-current, over-voltage protection
- Overvoltage category III (OVC III)

Summary



Training

Product Training Video (click to open)

Press Release

Coming Soon!

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 (mA)	Maximum capacitive load (µF)	Efficiency @ 230VAC Typ. (%)
AMED60-5SNZ	85~264/47~63	120~370	32.5	5	6500	20000	84
AMED60-12SNZ	85~264/47~63	120~370	54	12	4500	10000	88
AMED60-15SNZ	85~264/47~63	120~370	60	15	4000	8000	89
AMED60-24SNZ	85~264/47~63	120~370	60	24	2500	4000	90
AMED60-48SNZ	85~264/47~63	120~370	60	48	1250	680	91

Input Specifications				
Parameters	Conditions	Typical	Maximum	Units
Input Current	115VAC		1200	mA
	230VAC		800	mA
Inrush Current	115VAC	30		A
	230VAC	60		A
Leakage Current	264VAC		0.25	mA RMS

Output Specifications				
Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	0 - 100% load	± 2		%
Line regulation	Rated load	± 0.5		%
Load regulation	230VAC	± 1.5		%
Ripple & Noise	20MHz bandwidth, 5 VDC Output		100	mV p-p
	20MHz bandwidth, 12 VDC Output		120	mV p-p
	20MHz bandwidth, 15 VDC Output		120	mV p-p
	20MHz bandwidth, 24 VDC Output		150	mV p-p
	20MHz bandwidth, 48 VDC Output		240	mV p-p
Hold up time	115VAC	15		ms
	230VAC	80		ms
Start up time			3	S
No load power consumption	230VAC, 48 VDC Output		0.4	W
	230VAC, others		0.3	W
Voltage adjustable range	50% load, 5 VDC Output	4.9 - 5.5		V
	50% load, 12 VDC Output	10.8 - 13.8		V
	50% load, 15 VDC Output	13.5 - 18.0		V
	50% load, 24 VDC Output	21.6 - 29.0		V
	50% load, 48 VDC Output	43.2 - 55.2		V

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, Leakage current < 5mA	4000		VAC

General Specifications

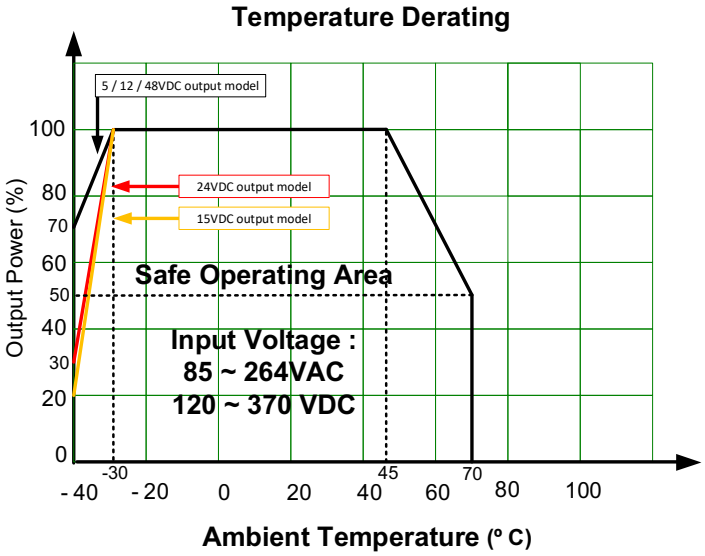
Parameters	Conditions	Typical	Maximum	Units
Overvoltage category	OVC III			
Over Current protection	Self- recovery	≥ 120		% of Iout
Over voltage protection	Voltage clamp or hiccup, 5 VDC Output	≤ 7.5		VDC
	Voltage clamp or hiccup, 12 VDC Output	≤ 16		VDC
	Voltage clamp or hiccup, 15 VDC Output	≤ 20		VDC
	Voltage clamp or hiccup, 24 VDC Output	≤ 36		VDC
	Voltage clamp or hiccup, 48 VDC Output	≤ 60		VDC
Short circuit protection	Hiccup, Continuous, Self-recovery			
Switching Frequency		65		KHz
Operating temperature		-40 to +70		°C
Storage temperature		-40 to +85		°C
Operating altitude			2000	m
Power derating	-40 °C to -30°C, 5 / 12 / 48 VDC Output	3.0		% / °C
	-40 °C to -30°C, 24 VDC Output	7.0		% / °C
	-40 °C to -30°C, 15 VDC Output	8.0		% / °C
	45 °C to 70 °C	2.0		% / °C
	85 to 100 VAC	1.0		% / VAC
Temperature coefficient		± 0.02		% / °C
Protection Class	Class II			
Cooling	Free air convection			
Storage Humidity			95	% RH
Case material	Heat resistant black Plastic (flammability to UL 94V-0)			
Weight		175		g
Dimensions (L x W x H)	3.45 x 2.05 x 2.28 inches (92.66 x 52.00 x 58.00 mm)			
MTBF	> 300 000 hrs (MIL-HDBK -217F, t=+25°C)			

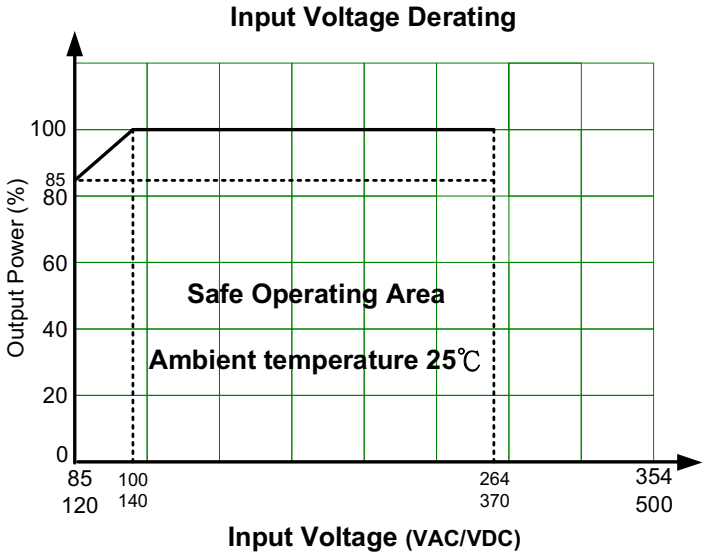
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Safety Specifications

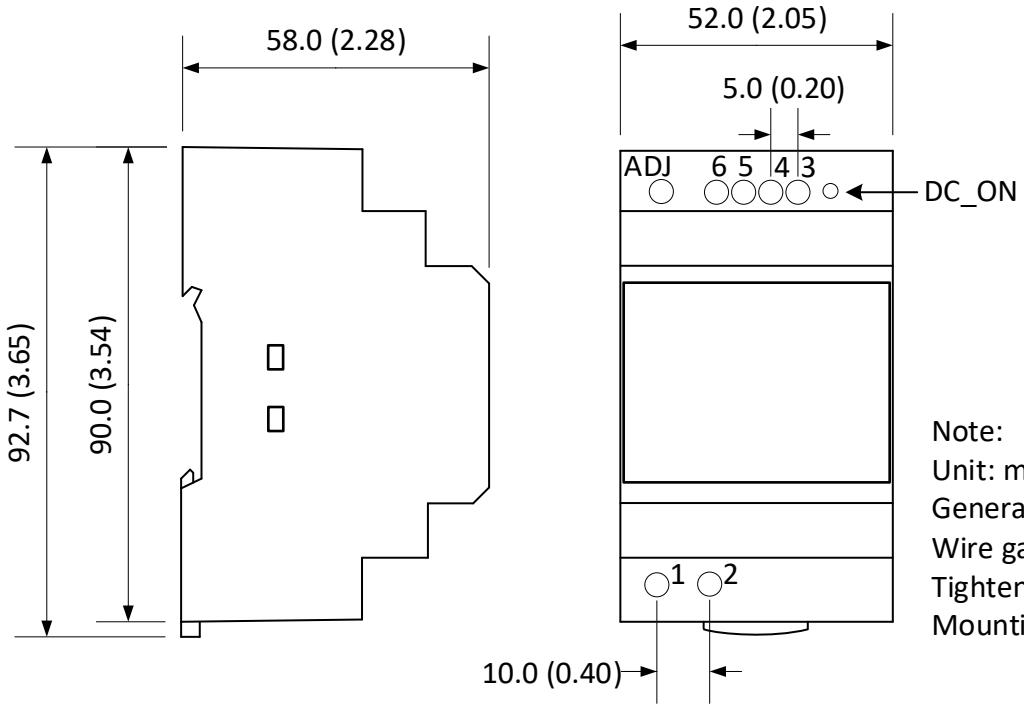
Parameters		
Agency approval	UL 62368-1	
Standards	Designed to meet IEC/EN 62368-1, EN61558-1, BS EN62368-1, IS13252 Part 1	
	EMC - Conducted and radiated emission	CISPR32 / EN55032, Class B
	Electrostatic Discharge Immunity	IEC 61000-4-2 Contact ±6KV, Air ±8KV, Criteria A
	RF, Electromagnetic Field Immunity	IEC 61000-4-3 10V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4 ±2KV, Criteria A
	Surge Immunity	IEC 61000-4-5 L-L ±2KV, Criteria A
	CS, Conducted Disturbance Immunity	IEC 61000-4-6 10V r.m.s, Criteria A
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11 0%, 70%, Criteria A

Derating





Dimensions



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

Note:
Unit: mm (inch)
General tolerance: ±1.0 (0.04)
Wire gauge: 24 – 12AWG
Tightening torque: 0.4N·m Max.
Mounting rail: TS35

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.