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AMED150-NZ

DIN Rail

The AMED150-NZ is a whole new DIN rail bracket AC-DC converter series 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 IEC61558 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 -30℃ to 70℃ 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), output over-voltage protection (OVP) and an over-temperature protection come standard with the series.

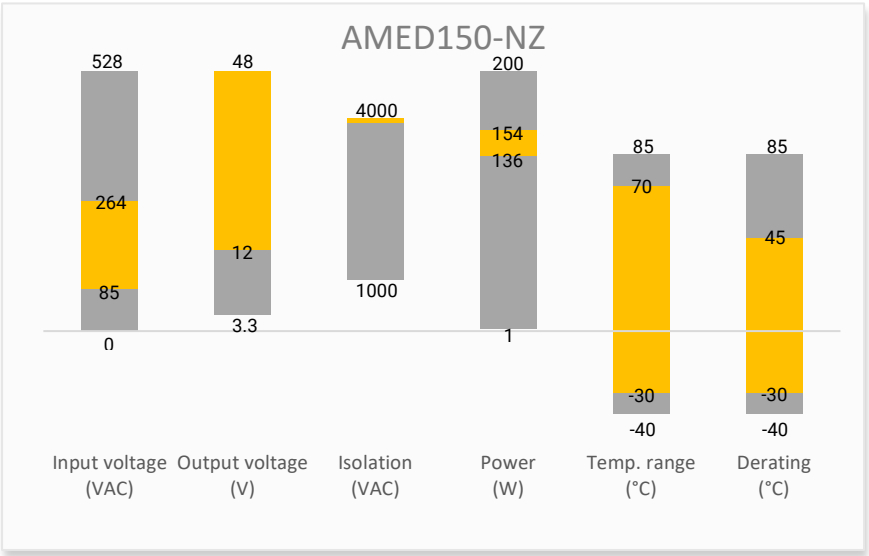
Features

- Universal Input: 85 - 264VAC/120 - 370VDC
- Operating Temp: -30 °C to +70 °C
- High isolation voltage: 4000VAC
- Low ripple & noise, 150mV(p-p), max.
- Output short circuit, over-current, over-voltage, over temperature protection
- Overvoltage category III (OVC III)

RoHS

3yr Warranty

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. (%)
AMED150-12SNZ	85~264/47~63	120~370	135.6	12	11.3	10000	89
AMED150-15SNZ	85~264/47~63	120~370	142.5	15	9.5	8000	89.5
AMED150-24SNZ	85~264/47~63	120~370	150	24	6.25	5000	91.5
AMED150-48SNZ	85~264/47~63	120~370	153.6	48	3.2	2400	91

Input Specifications				
Parameters	Conditions	Typical	Maximum	Units
Input Current	115VAC		3000	mA
	230VAC		1800	mA
Inrush Current	115VAC	35		A
	230VAC	70		A
Leakage Current	240VAC / 50Hz		0.5	mA RMS

Output Specifications				
Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	0 - 100% load, 12 VDC Output	± 2		
	0 - 100% load, others	± 1		%
Line regulation	Rated load	± 1		%
Load regulation	0 - 100% load, 230VAC	± 1		%
Ripple & Noise *	20MHz bandwidth, 12 VDC Output		100	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		150	mV p-p
Hold up time	115VAC	12		ms
	230VAC	30		ms
Start up time	Room temperature	0.5	0.8	S
No load power consumption	230VAC, 12 / 15 /24 VDC Output		0.3	W
	230VAC, 48 VDC Output		0.4	W
Voltage adjustable range	12 VDC Output	10.8 - 13.8		V
	15 VDC Output	13.5 - 18.0		V
	24 VDC Output	21.6 - 29.0		V
	48 VDC Output	43.2 – 52.8		V
* Ripple and Noise are measured at 20MHz bandwidth. Please refer to the application not for specific details. Measured.				

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

General Specifications

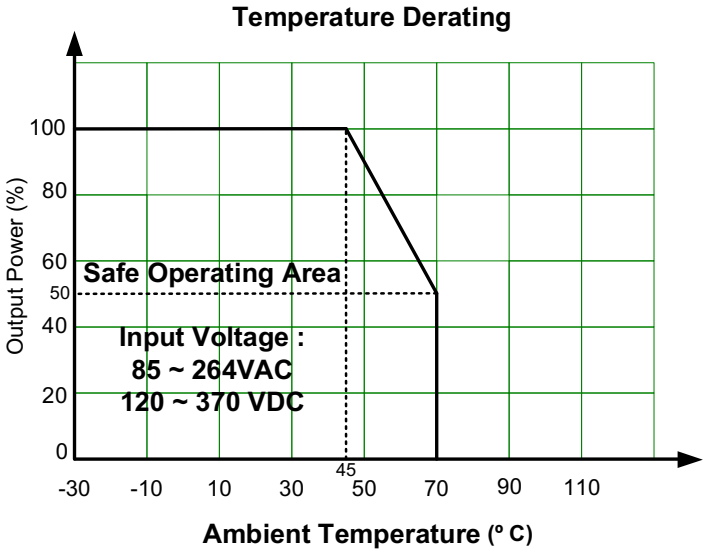
Parameters	Conditions	Typical	Maximum	Units
Overvoltage category	OVC III			
Over Current protection	Self- recovery	≥ 105		% of Iout
	Constant current mode, Vout < 50% rated voltage	Hiccup or current limiting, Self-recovery		
	Constant current mode, Vout ≥ 50% rated voltage	Current limiting, Self-recovery		
Over voltage protection	12 VDC Output, hiccup	≤ 16		VDC
	15 VDC Output, hiccup	≤ 23		VDC
	24 VDC Output, hiccup	≤ 35		VDC
	48 VDC Output, clamp	≤ 60		VDC
Over temperature protection	Activation		85	°C
	Deactivation	50		°C
Short circuit protection	Hiccup, Continuous, Self-recovery			
Switching Frequency		65		KHz
Operating temperature		-30 to +70		°C
Storage temperature		-40 to +85		°C
Operating altitude			2000	m
Power derating	45 °C to 70 °C	2.0		% / °C
	85 to 100 VAC, 12 / 15 VDC Output	1.1		% / VAC
	85 to 100 VAC, 24 / 48 VDC Output	0.78		% / VAC
	100 to 120 VAC, 12 VDC Output		122.4	W
	100 to 120 VAC, 15 VDC Output		128.3	W
	100 to 120 VAC, 24 VDC Output		127.4	W
	100 to 120 VAC, 48 VDC Output		130.6	W
Temperature coefficient		± 0.03		% / °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		330		g
Dimensions (L x W x H)	3.54 x 4.13 x 2.28 inches (90.00 x 105.00 x 58.00 mm)			
MTBF	> 300 000 hrs (MIL-HDBK -217F, t=+25°C)			

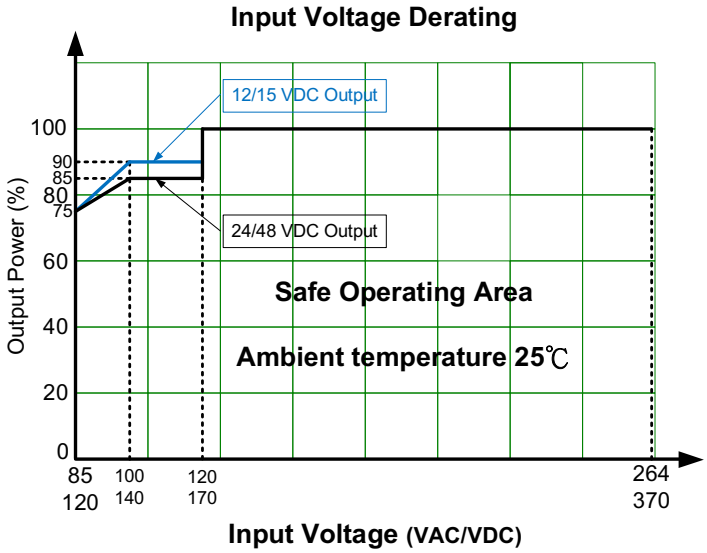
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Safety Specifications

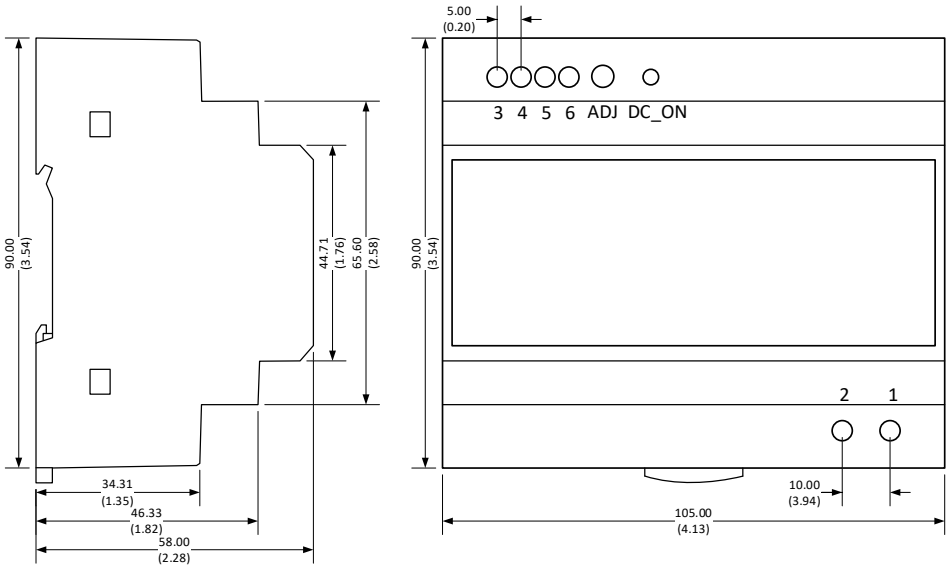
Parameters		
Standards	Designed to meet IEC/EN/UL 62368-1, IEC61558-1, IEC/EN60335-1, UL61010-1, IS13252 Part 1	
	EMC - Conducted and radiated emission	CISPR32 / EN55032, Class B
	Harmonic current (70% load)	IEC 61000-3-2 Class A
	Electrostatic Discharge Immunity	IEC 61000-4-2 Contact ±4KV, Air ±8KV, Criteria A
	RF, Electromagnetic Field Immunity	IEC 61000-4-3 10V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4 ±4KV, Criteria B
	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 61000-4-11 100% dip 1 cycle, 30% dip 25cycles, 100% interruption 250 cycles, Criteria B

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, rail need to connect safety ground