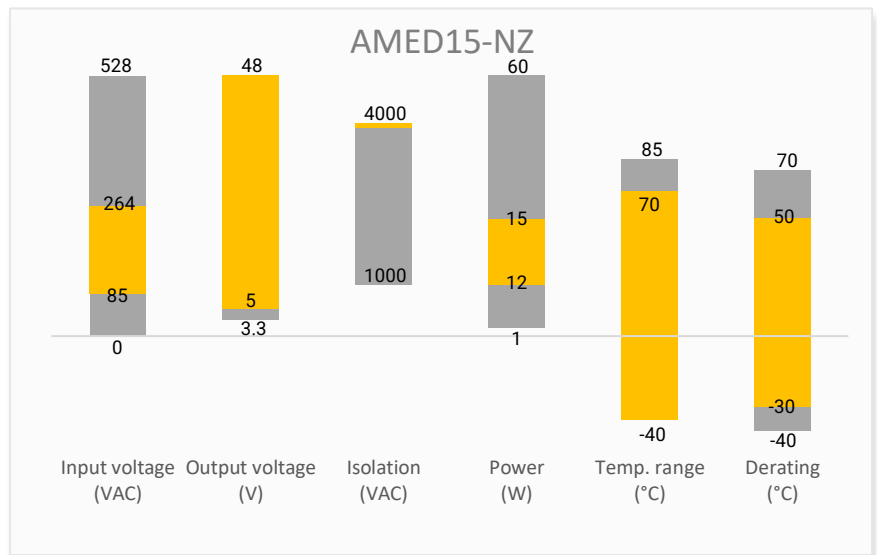# AMED15-NZ

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samples

DIN Rail

The AMED15-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 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℃ 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) 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
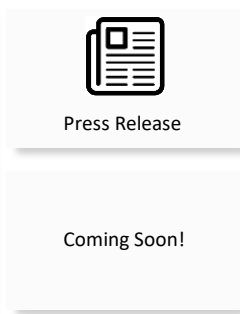- Overvoltage category II (OVC II)

RoHS

3 yr Warranty

Summary

AMED15-NZ

Input voltage (VAC)	528 / 264 / 85 / 0	
Output voltage (V)	48 / 5 / 3.3	
Isolation (VAC)	4000 / 1000	
Power (W)	60 / 15 / 12 / 1	
Temp. range (°C)	85 / 70 / -40	
Derating (°C)	70 / 50 / -30 / -40	

Training

▶

Press Release

Coming Soon!

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 (mA)	Maximum capacitive load (µF)	Efficiency @ 230VAC Typ. (%)
AMED15-5SNZ	85~264/47~63	120~370	12	5	2400	2000	80
AMED15-12SNZ	85~264/47~63	120~370	15	12	1250	1500	85
AMED15-15SNZ	85~264/47~63	120~370	15	15	1000	1100	85.5
AMED15-24SNZ	85~264/47~63	120~370	15.2	24	630	700	86
AMED15-48SNZ	85~264/47~63	120~370	15.4	48	320	300	87

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input Current	115VAC		500	mA
	230VAC		250	mA
Inrush Current	115VAC	15		A
	230VAC	25		A
Leakage Current	240VAC	0.5		mA RMS

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	0 - 100% load, 5 VDC Output	± 2		%
	0 - 100% load, Others	± 1		%
Line regulation	Rated load	± 0.5		%
Load regulation	0 - 100% load, 230VAC	± 1		%
Ripple & Noise*	20MHz bandwidth, 5 VDC Output		80	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	12		ms
	230VAC	30		ms
Start up time			2	S
No load power consumption	230VAC		0.3	W
Voltage adjustable range	5 VDC Output	4.5 - 5.5		V
	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 - 55.2		V

* Ripple and Noise are measured at 20MHz bandwidth with a 47µF electrolytic capacitor and a 0.1µF ceramic capacitor terminated on a 12" twisted pair wire. Please refer to the application not for specific details. Measured.
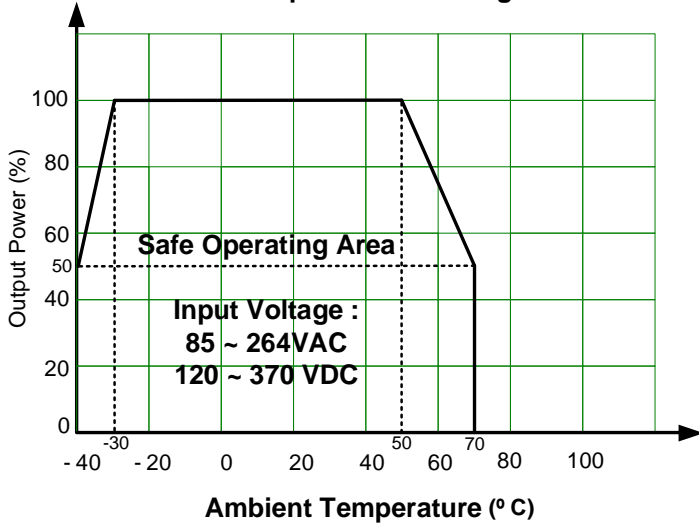
Isolation Specifications

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 II			
Over Current protection	Constant voltage mode, Self- recovery	≥ 110		% 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	Hiccup, 5 VDC Output	≤ 6.75		VDC
	Hiccup, 12 VDC Output	≤ 16.2		VDC
	Hiccup, 15 VDC Output	≤ 22.5		VDC
	Hiccup, 24 VDC Output	≤ 36		VDC
	Hiccup, 48 VDC Output	≤ 64.8		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	5.0		% / °C
	50 °C to 70 °C	2.5		% / °C
	85 to 100 VAC	1.34		% / 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		60		g
Dimensions (L x W x H)	3.54 x 0.69 x 2.28 inches (90.00 x 17.50 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.
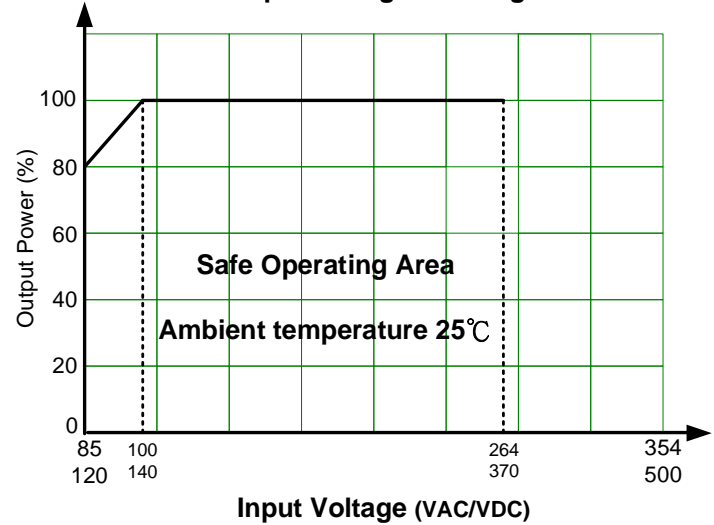
Safety Specifications

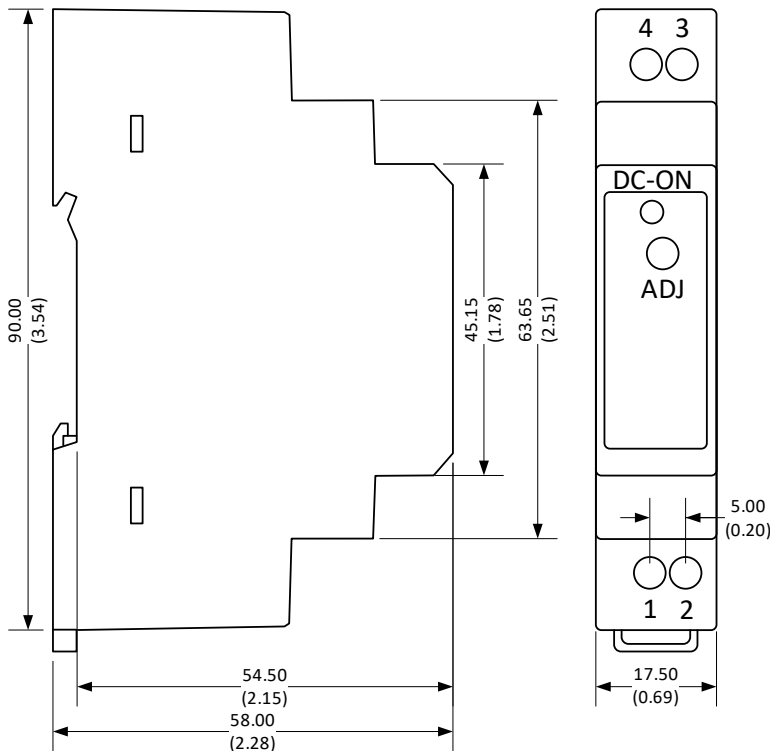| Parameters		
Standards	Designed to meet UL/IEC/EN 62368-1, IEC/EN61558-1, IEC/EN61010-1, IEC60335-1	
	EMC - Conducted and radiated emission	CISPR32 / EN55032, Class B
	Harmonic current	IEC 61000-3-2 Class A
	Electrostatic Discharge Immunity	IEC 61000-4-2 Contact ±4KV, Air ±8KV, Criteria A
	RF, Electromagnetic Field Immunity	IEC 61000-4-3 10V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4 ±2KV, Criteria A
	Surge Immunity	IEC 61000-4-5 L-L ±1KV, 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

Temperature Derating

Output Power (%) vs Ambient Temperature (º C)

Safe Operating Area

**Input Voltage :
85 ~ 264VAC
120 ~ 370 VDC**

Input Voltage Derating

Output Power (%) vs Input Voltage (VAC/VDC)

Safe Operating Area

Ambient temperature 25℃

Dimensions

90.00 (3.54)
45.15 (1.78)
63.65 (2.51)
54.50 (2.15)
58.00 (2.28)
17.50 (0.69)
5.00 (0.20)

DC-ON
ADJ
4 3
1 2

Pin Output Specifications	
Pin	Function
1	Input (N)
2	Input (L)
3	-V Output
4	+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 must be connected to safety ground