

AMED150N-GY



DIN Rail

Click to
ORDER
samples

The AMED150N-GY is a DIN rail AC/DC converter that features a cost-effective design. Offering a commercial input voltage range of 90-264VAC and an output voltage range from 12-48V, this series measures 32.00 x 100.50 x 125.00mm. There are ambient air-cooling vents both at the top and bottom of the converter for improved thermal performance. It is also easy to install and remove for maintenance, while efficiently organizing all your electrical cables.

This new series offers great operating temperatures, from -20°C to 70°C and features an isolation of 3000VAC for improved reliability and system safety. Furthermore, a high MTBF of 2,241,280h, output over-load protection, output short circuit protection, over temperature protection (OTP), and output over-voltage protection (OVP) come standard with the series. A built in DC OK relay contact is integrated in the design.

The AMED150N-GY is suitable for electric distribution boxes, grid power, instrumentation, CNC machines, industrial control panels and building automation applications.

Features

- Universal Input: 90 - 264VAC/127 - 370VDC
- Operating Temp: -20 °C to +70 °C
- High isolation voltage: 3000VAC
- Low ripple & noise, 100mV(p-p), 120mV(p-p), 150mV(p-p) max.
- Short circuit protection, over-voltage protection, overload protection, and over-temperature protection

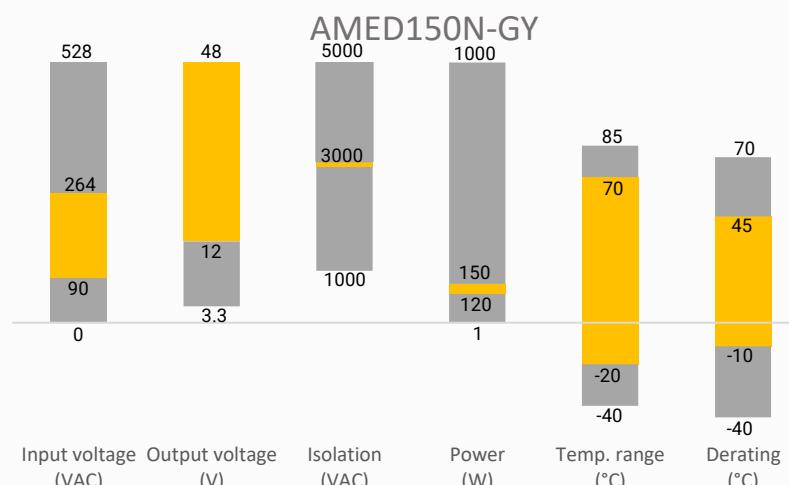


Training



Product Training Video
(click to open)

Summary



Applications



Power Grid



Industrial



Telecom



Application Notes

Models & Specifications



Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Max Output wattage (W)	Output Voltage (V)	Output Current max (A)	Efficiency Typ. (%)
AMED150N-12SGY	90~264/47~63	127~370	120	12	10	85.5
AMED150N-24SGY	90~264/47~63	127~370	120	24	5	88
AMED150N-2406SGY	90~264/47~63	127~370	150W/230VAC	24	6.25	87
AMED150N-48SGY	90~264/47~63	127~370	120	48	2.5	89

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input Current	115VAC		2.25	A
	230VAC		1.3	A
Inrush Current	115VAC, cold start	47.8		A
	230VAC, cold start	92.5		A
Leakage Current	240VAC	<1.0		mA

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	0 - 100% load	± 2		%
Line regulation	Rated load	± 0.5		%
Load regulation	0 - 100% load	± 1		%
Ripple & Noise*	12 VDC Output		100	mV p-p
	24 VDC Output		120	mV p-p
	24 VDC Output (150W)		150	mV p-p
	48 VDC Output		150	mV p-p
Start-up time	230VAC input, full load		1.2	s
	115VAC input, full load		2.5	s
Rise time	230VAC input, full load		60	ms
	115VAC input, full load		60	ms
Hold up time	230VAC input, full load	16		ms
	115VAC input, full load	10		ms
Voltage adjustable range	12 VDC Output	12 - 14		V
	24 VDC Output	24 - 28		V
	48 VDC Output	48 - 55		V

* Ripple and Noise are measured at 20MHz bandwidth. Please refer to the application note 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	500VDC	>100		MΩ

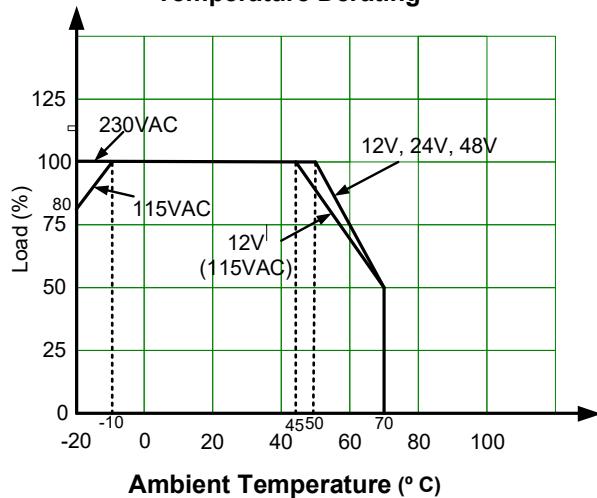
General Specifications				
Parameters	Conditions	Typical	Maximum	Units
Over voltage protection	12 VDC Output, manual-recovery	≤ 17		VDC
	24 VDC Output, manual-recovery	≤ 33		VDC
	48 VDC Output, manual-recovery	≤ 65		VDC
Over temperature protection	Shuts down output voltage, manual-recovery			
Overload protection	105 ~ 130% rated output power, constant current limiting, auto-recovery			
Short circuit protection	Hiccup, auto-recovery			
Operating temperature	20 ~ 95% RH	-20 to +70		°C
Storage temperature	10 ~ 95% RH	-40 to +85		°C
Power derating	12 VDC Output, 115VAC, -20 °C to -10°C	2.0		% / °C
	12 VDC Output, 115VAC, 45 °C to 70°C	2.0		% / °C
	12, 24, 48 VDC Output, 230VAC, 50 °C to 70 °C	2.5		% / °C
	90 to 100 VAC	1		% / VAC
	100 to 165 VAC	0		% / VAC
	165 to 180 VAC (24 VDC Output 150W)	1.33		% / VAC
Cooling	Free air convection			
Storage Humidity	Non-condensing	>10	95	% RH
Operating Humidity	Non-condensing	>20	95	% RH
Case material	Metal			
Weight		600		g
Dimensions (L x W x H)	1.57 x 4.93 x 4.47 inches (40.00 x 125.20 x 113.50 mm)			
MTBF	2241.28K hrs min. Telcordia SR-332 (Bellcore)			
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	UL508, BS EN/EN62368-1 (AMED150N-2406SGY CE only)			
Standards	EMC - Conducted and radiated emission			
	CISPR32 / EN55032, Class B			
	Harmonic Current emission			
	IEC/EN 61000-3-2, Class A			
	Voltage Fluctuations & Flicker			
	IEC/EN 61000-3-3			
	Electrostatic Discharge Immunity			
	IEC/EN 61000-4-2 Contact ±4KV, Air ±8KV, Criteria B			
	RF, Electromagnetic Field Immunity			
	IEC/EN 61000-4-3 3V/m, Criteria A			
	Electrical Fast Transient/Burst Immunity			
	IEC/EN 61000-4-4 ±1KV, Criteria B			
	Surge Immunity			
	IEC/EN 61000-4-5 L-L ±1KV, L-G ±2KV, Criteria B			
	CS, Conducted Disturbance Immunity			
	IEC/EN 61000-4-6 3V, 3V~1V, 1V r.m.s, Criteria A			
	Power Frequency Magnetic Field Immunity			
	IEC/EN 61000-4-8 50, 60Hz, Criteria A			
	Voltage dips, Short Interruptions Immunity			
	IEC/EN 61000-4-11 100% Voltage Dips/Interruptions, 3 cycles, Criteria B			
	EMC Immunity			
	BS EN/EN55035, BS EN/EN61000-6-2(BS EN/EN50082-2)			

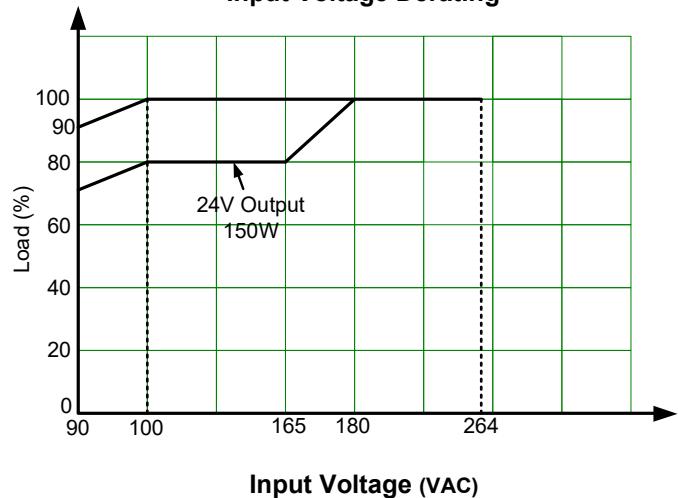
Derating



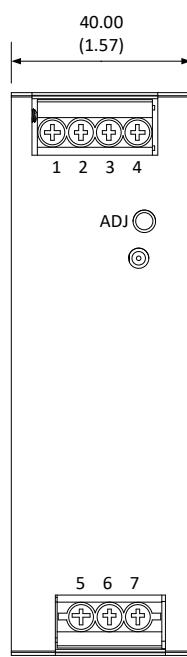
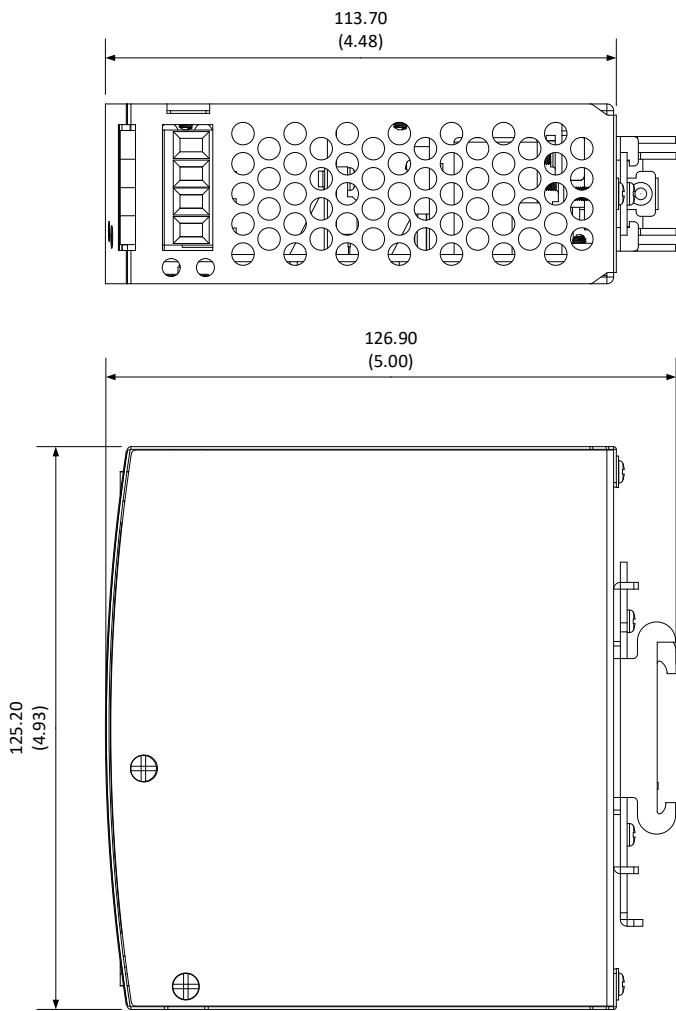
Temperature Derating



Input Voltage Derating

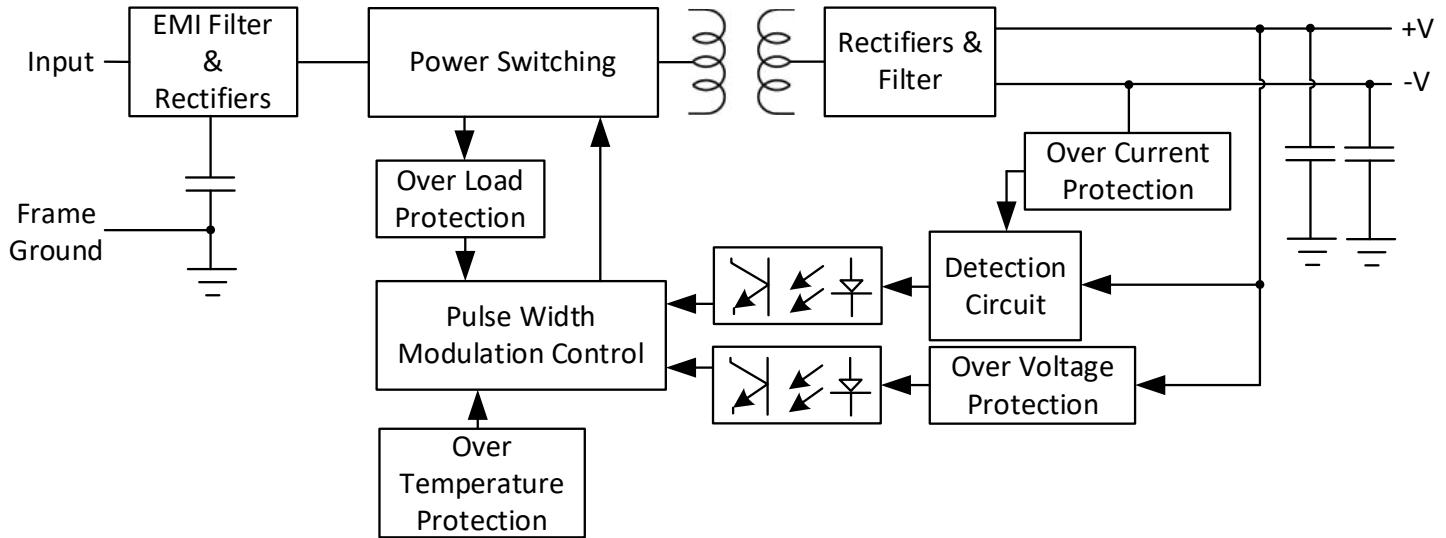


Dimensions



Pin Output Specifications	
Pin	Function
1	-V Output
2	-V Output
3	+V Output
4	+V Output
5	GND \pm
6	N
7	L
ADJ	Voltage Adjustment

Functional Diagram



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.