AMED15-GY

DIN Rail

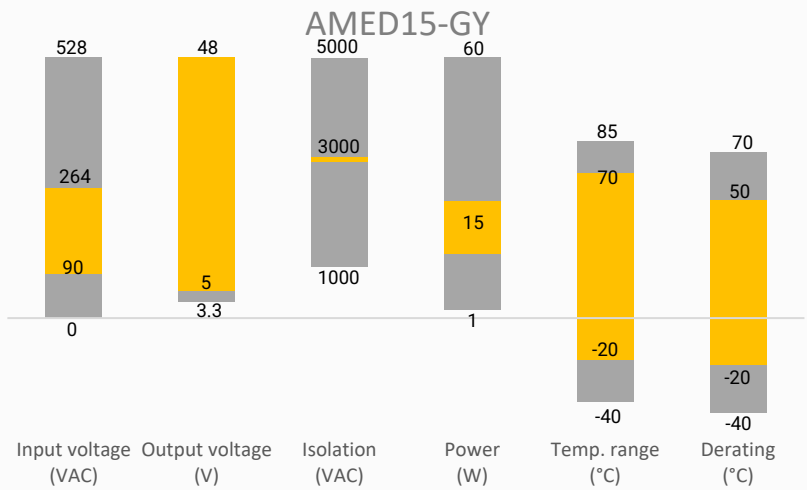
The AMED15-GY is a new step-shape DIN rail AC-DC converter series featuring a cost effective and energy efficient solution. These lightweight AC-DC converters have an extremely compact design and are ideal for applications such as industrial control equipment, building automation and numerous applications for harsh environments. Measuring 18.00 x 90.00 x 58.00mm, these DIN rails have ambient air-cooling vents both at the top and bottom of the converter improving overall thermal performance. Thanks to its DIN rail nature, you can quickly swap the power supply for a higher power one if needed.

This series offers great operating temperatures, from -20°C to 70°C and also features an isolation of 3000VAC for improved reliability and system safety. Furthermore, output short circuit protection (OSCP), overload protection (OLP), and an output overvoltage protection (OVP) come standard with the series.

Features

- Universal Input: 90 - 264VAC/127 - 370VDC
- Operating Temp: -20 °C to +70 °C
- High isolation voltage: 3000VAC
- Low ripple & noise, 240mV(p-p), max.
- Short circuit protection, over-voltage protection, and overload 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

Models & Specifications

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Max Output wattage (W)	Output Voltage (V)	Output Current max (mA)	Efficiency @ 230VAC Typ. (%)
AMED15-5SGY	90~264/47~63	127~370	15	5	2400	80
AMED15-12SGY	90~264/47~63	127~370	15	12	1250	85
AMED15-15SGY	90~264/47~63	127~370	15	15	1000	85.5
AMED15-24SGY	90~264/47~63	127~370	15	24	630	86
AMED15-48SGY	90~264/47~63	127~370	15	48	310	87

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input Current	115VAC		500	mA
	230VAC		250	mA
Inrush Current	115VAC	25		A
	230VAC	45		A

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	0 - 100% load	± 2		%
Line regulation	Rated load	± 1		%
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 input, full load	12		ms
	230VAC input, full load	30		ms
Rise time	Full load	80		ms
Start-up time	Full load		2	S
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 note for specific details. Measured.

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, Leakage current < 5mA	3000		VAC
Insulation Resistance	500VDC, 25°C, 70%RH	100		M Ohms

General Specifications

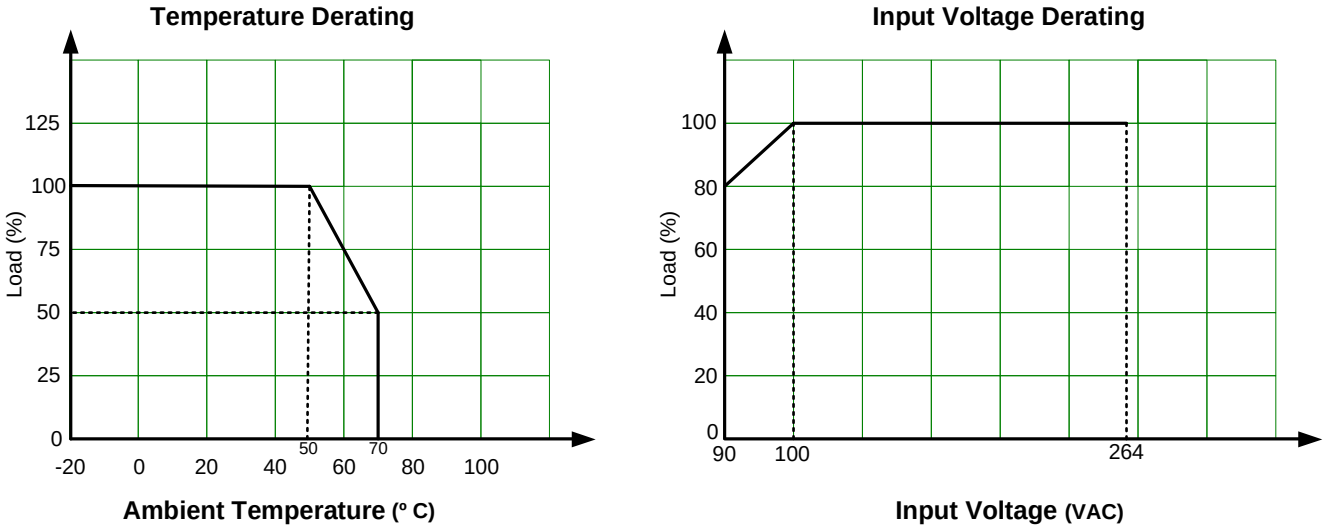
Parameters	Conditions	Typical	Maximum	Units
Overvoltage category	OVC III According to EN61558, EN50178, EN60664-1, EN62477-1			
Over voltage protection	Hiccup, 5 VDC Output	≤ 6.75		VDC
	Hiccup, 12 VDC Output	≤ 16.2		VDC
	Hiccup, 15 VDC Output	≤ 22.5		VDC
	Hiccup, 24 VDC Output	≤ 36		VDC
	Hiccup, 48 VDC Output	≤ 64.8		VDC
Overload protection	110~145% rated output power <50% rated output voltage, hiccup, auto-recovery 50%-100% rated output voltage, constant current limiting, auto-recovery			
Short circuit protection	Hiccup, auto-recovery			
Operating temperature	20~90% RH Non-Condensing	-20 to +70		°C
Storage temperature	10~95% RH Non-Condensing	-40 to +85		°C
Operating altitude			2000	m
Power derating	50 °C to 70 °C	2.5		% / °C
	90 to 100 VAC	2		% / VAC
Temperature coefficient	0~50°C RH Non-Condensing	± 0.03		% / °C
Protection Class	Class II			
Cooling	Free air convection			
Storage Humidity			95	% RH
Case material	Plastic			
Weight		78		g
Dimensions (L x W x H)	0.71 x 3.54 x 2.28 inches (18.00 x 90.00 x 58.00 mm)			

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.

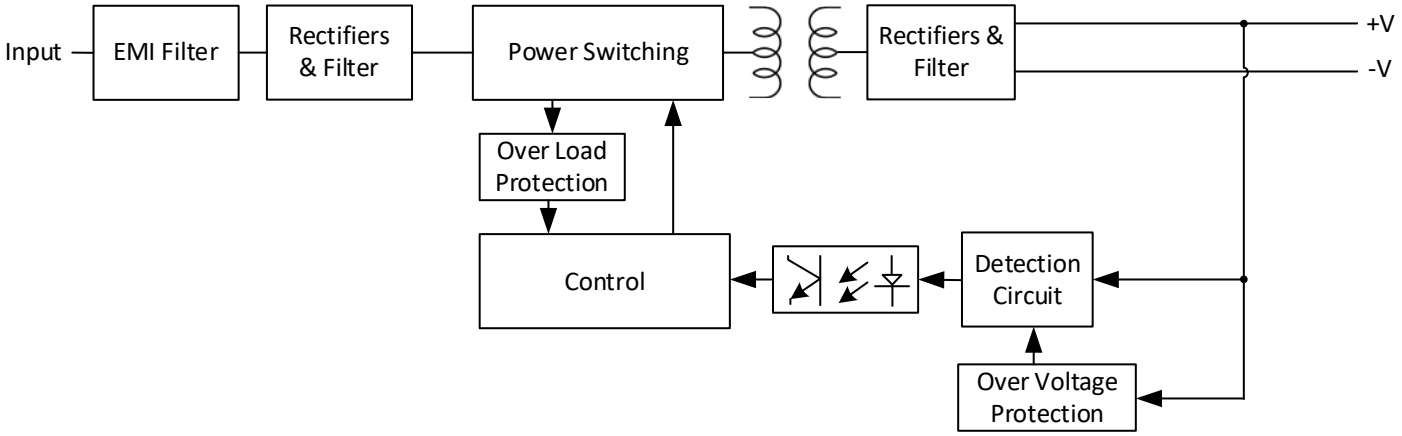
Safety Specifications

Parameters		
Agency Approval	UL62368-1, BS EN/EN62368-1	
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

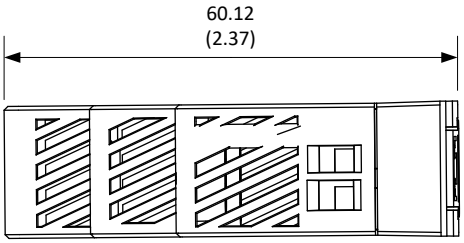
Derating



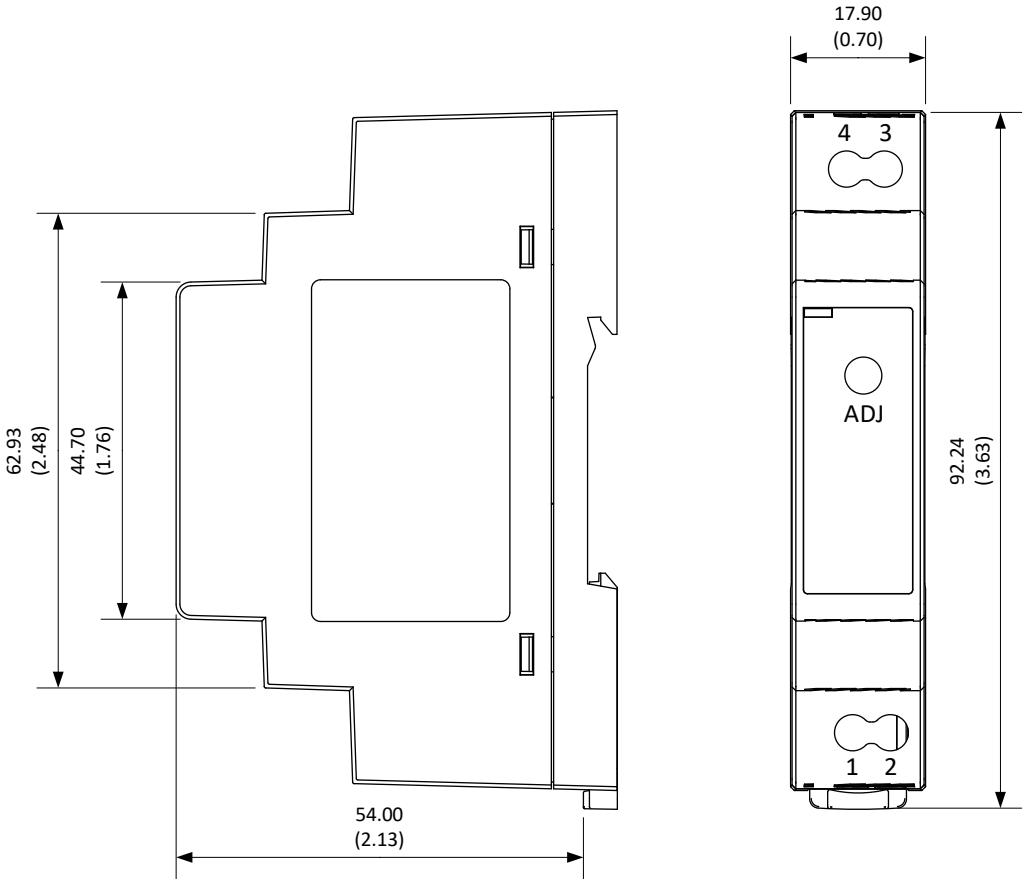
Functional Diagram



Dimensions



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



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

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.