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AMED30-GY

DIN Rail

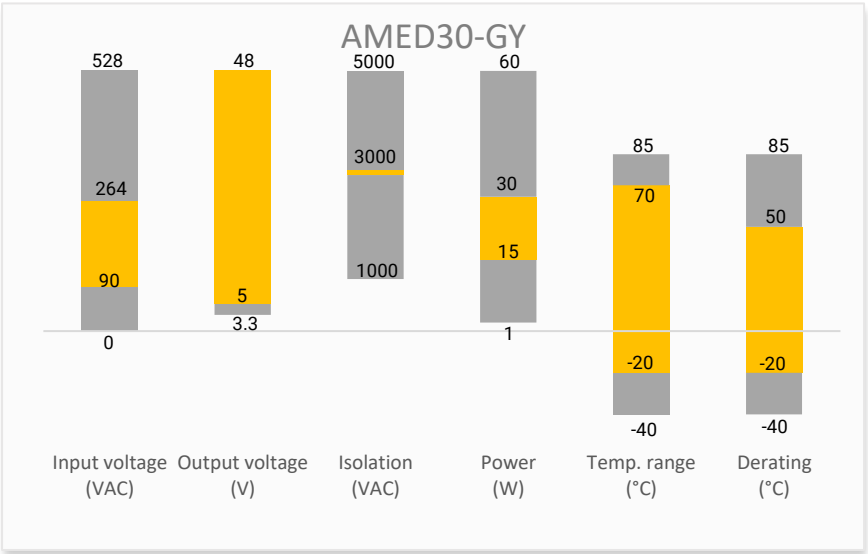
The AMED30-GY is a new step shape DIN rail AC-DC converter series featuring a cost effective, energy efficient solution. These lightweight AC-DC converters also have an extremely compact design and are ideal for applications such as industrial control equipment, building automation and numerous applications for harsh environments. Measuring 35.00 x 90.00 x 58.00mm, this series has ambient air-cooling vents both at the top and bottom of the converter to improve thermal performance. Thanks to its DIN rail nature, you can quickly swap the power supply for a higher power one if needed.

This new 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. (%)
AMED30-5SGY	90~264/47~63	127~370	15	5	3000	82
AMED30-12SGY	90~264/47~63	127~370	24	12	2000	88
AMED30-15SGY	90~264/47~63	127~370	30	15	2000	89
AMED30-24SGY	90~264/47~63	127~370	30	24	1250	89
AMED30-48SGY	90~264/47~63	127~370	30	48	630	90

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input Current	230VAC input, full load		880	mA
	115VAC input, full load		480	mA
Inrush Current	230VAC input, full load	25		A
	115VAC input, full load	45		A

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	0 - 100% load	± 2		%
Line regulation	Rated load	± 1		%
Load regulation	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	230VAC input, full load	30		ms
	115VAC input, full load	12		ms
Start up time	230VAC input, full load		0.5	S
	115VAC input, full load		0.5	S
Voltage adjustable range	50% load, 5 VDC Output	4.5 - 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

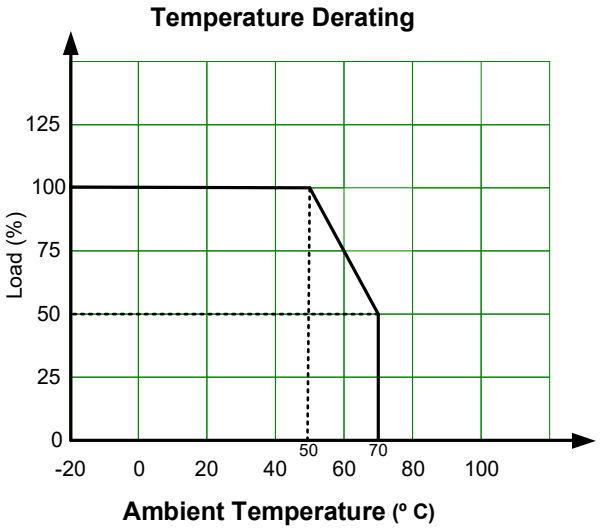
Isolation Specifications

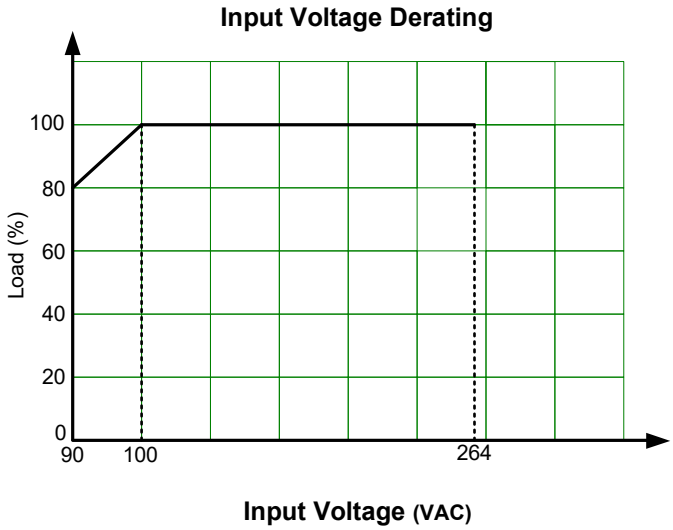
Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, Leakage current < 5mA	3000		VAC
Insulation Resistance	500VDC, 25°C, 70%RH	100		M Ohms

General Specifications				
Parameters	**Conditions**	**Typical**	**Maximum**	**Units**
Overvoltage category	OVC III; According to EN61558, EN50178, EN60664-1, EN62477-1			
Over voltage protection	Voltage clamp or hiccup, 5 VDC Output	≤ 7.5		VDC
	Voltage clamp or hiccup, 12 VDC Output	≤ 18		VDC
	Voltage clamp or hiccup, 15 VDC Output	≤ 22.5		VDC
	Voltage clamp or hiccup, 24 VDC Output	≤ 36		VDC
	Voltage clamp or hiccup, 48 VDC Output	≤ 67.2		VDC
Overload protection	The overload protection trigger condition is 105~160% rated output power. After the overload protection is triggered, the output voltage decreases as the load increases. When 100%~50% rated output voltage, the protection mode is output constant current limiting. When <50% rated output voltage, the protection mode is hiccup. Recover automatically after fault condition is removed.			
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		120		g
Dimensions (L x W x H)	1.38 x 3.54 x 2.28 inches (35.00 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.				

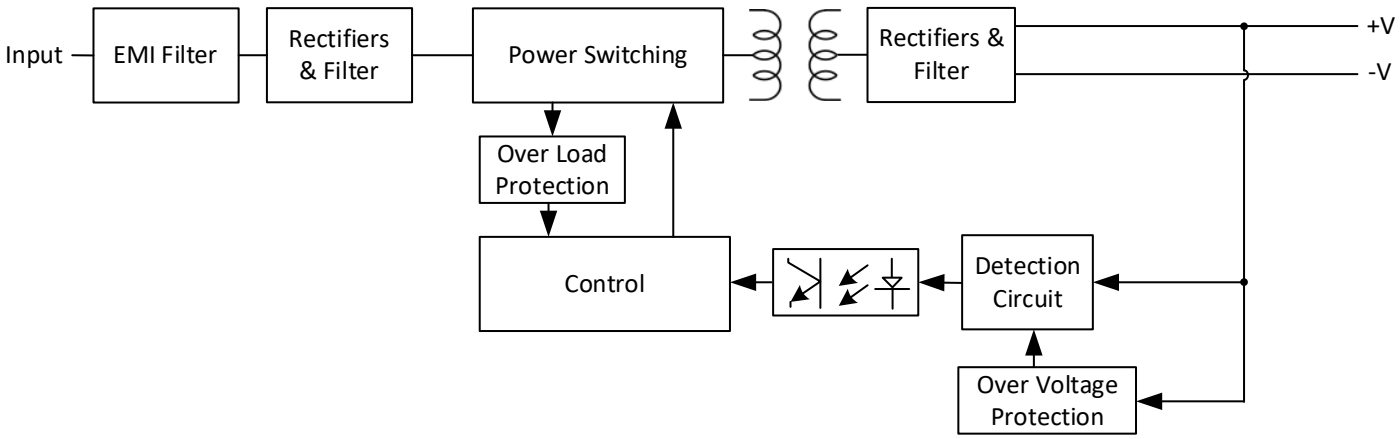
Safety Specifications		
Parameters		
Agency approval	UL 62368-1, BS EN/EN62368-1	
Standards	EMC - Conducted and radiated emission	CISPR32 / EN55032, Class B, BS EN/EN IEC61000-3-2,3
	EMC - Conducted and radiated emission	CISPR32 / EN55032, Class B
	Harmonic Current emission	IEC/EN 61000-3-2, Class A
	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

Derating

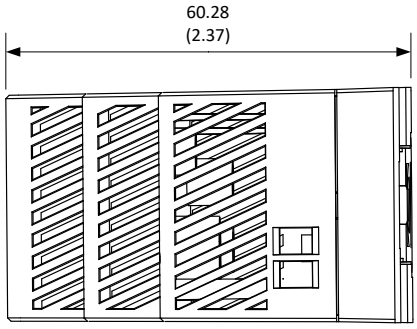




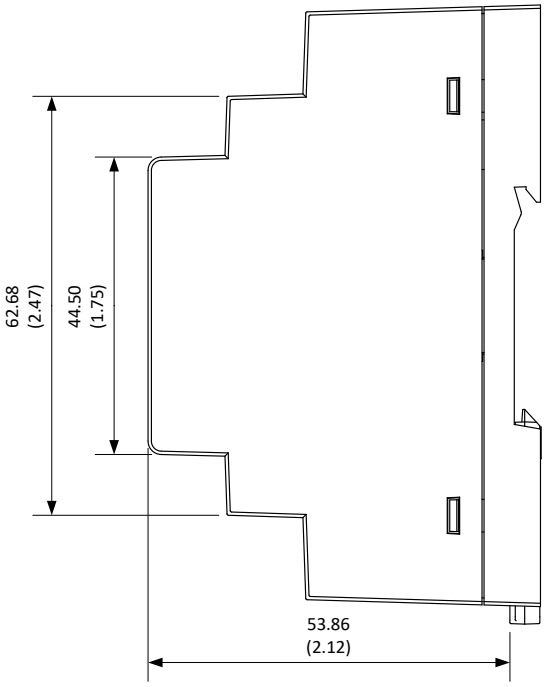
Functional Diagram

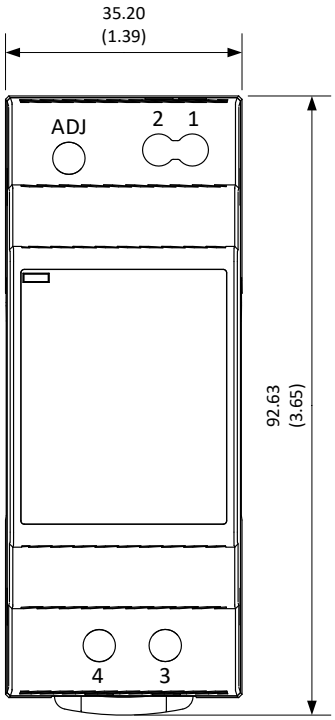


Dimensions



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