

AMED240W-GY



DIN Rail

The AMED240W-GY is a DIN rail AC/DC converter that features a cost-effective and energy efficient design. The converter can accept power from a single and dual phase power distribution system with an ultra-wide input voltage range of 180-550VAC and an output voltage range from 24-48V. Measuring 40.00 x 113.00 x 125.00mm, ambient air-cooling vents both at the top and bottom of the converter improve its thermal performance. It is also easy to install and remove for maintenance, while efficiently organizing all your electrical cables.

This series offers great operating temperatures, from -30°C to 70°C and features an isolation of 3000VAC for improved reliability and system safety. Furthermore, a high MTBF of 900,000h, output short circuit protection (OSCP), output over-load protection (OLP), output over-voltage protection (OVP), and an over temperature protection (OTP) come standard with the series.

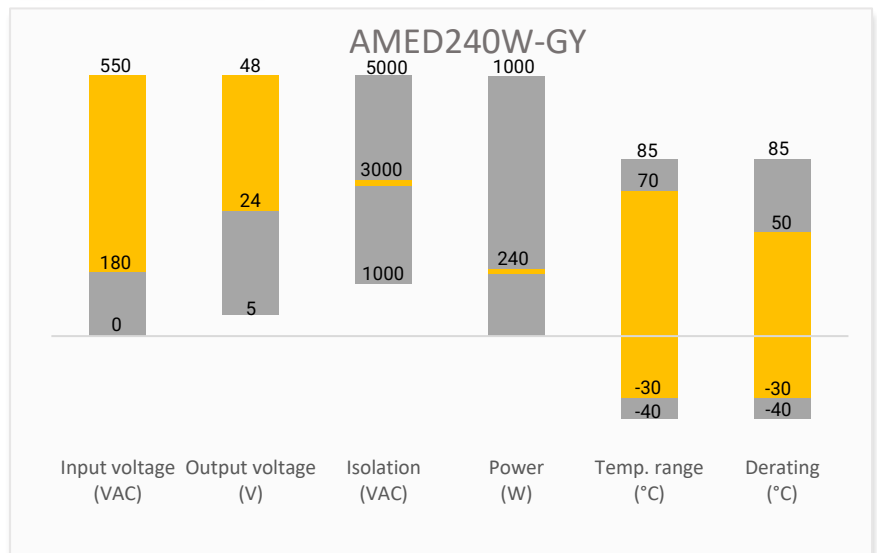
The AMED240W-GY is suitable for electric distribution boxes, grid power, instrumentation, CNC machines, industrial control panels and building automation applications.

Features

- Wide Input: 180 - 550VAC/254 - 780VDC
- Operating Temp: -30 °C to +70 °C
- Isolation voltage: 3000VAC
- Low ripple & noise, 150mV(p-p).
- Short circuit protection, over-voltage protection, overload protection, and over-temperature protection
- DC OK Signal Output indication



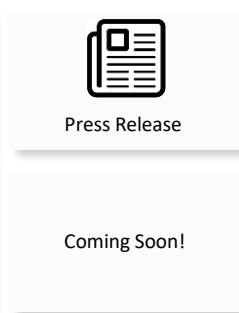
Summary



Training



Product Training Video
(click to open)



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 (A)	Efficiency Typ. (%)
AMED240W-24SGY	180~550/47~63	254~780	240	24	10	91.0
AMED240W-48SGY	180~550/47~63	254~780	240	48	5	91.0

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input Current	400VAC	1.0		A
	230VAC	2.0		A
Inrush Current	Cold Start		50	A
Leakage Current	530VAC	<3.5		mA
Power Factor	400VAC at full load	≥0.84		
	230VAC at full load	≥0.84		

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		± 2.0		%
Line regulation	Rated load	± 0.5		%
Load regulation		± 1.0		%
Ripple & Noise*			150	mV p-p
Start-up time	400VAC input, full load		0.8	s
	230VAC input, full load		1.5	s
Rise time	400VAC input, full load		150	ms
	230VAC input, full load		150	ms
Hold up time	400VAC input, full load	18		ms
	230VAC input, full load	18		ms
Voltage adjustable range	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.

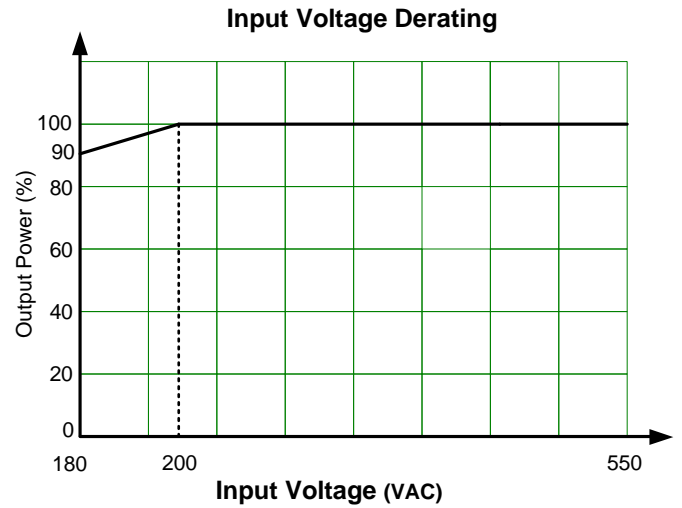
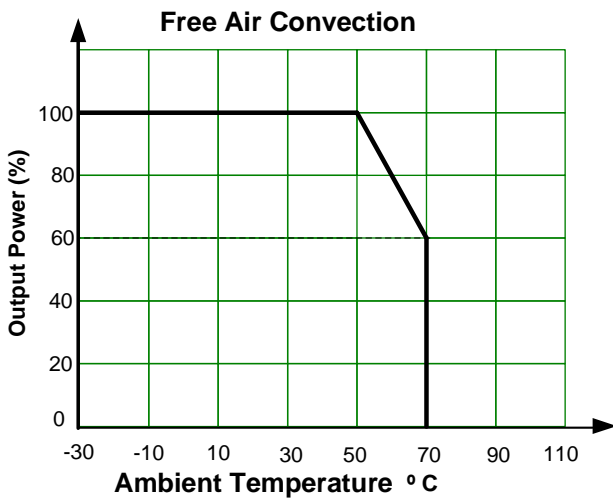
Isolation Specifications

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
Tested Output to P-G signal	60 sec, Leakage current < 2mA	500		VAC
Insulation resistance	I/P to O/P, I/P-FG, O/P-FG, 500VDC, 25°C, 70%RH	100		MΩ

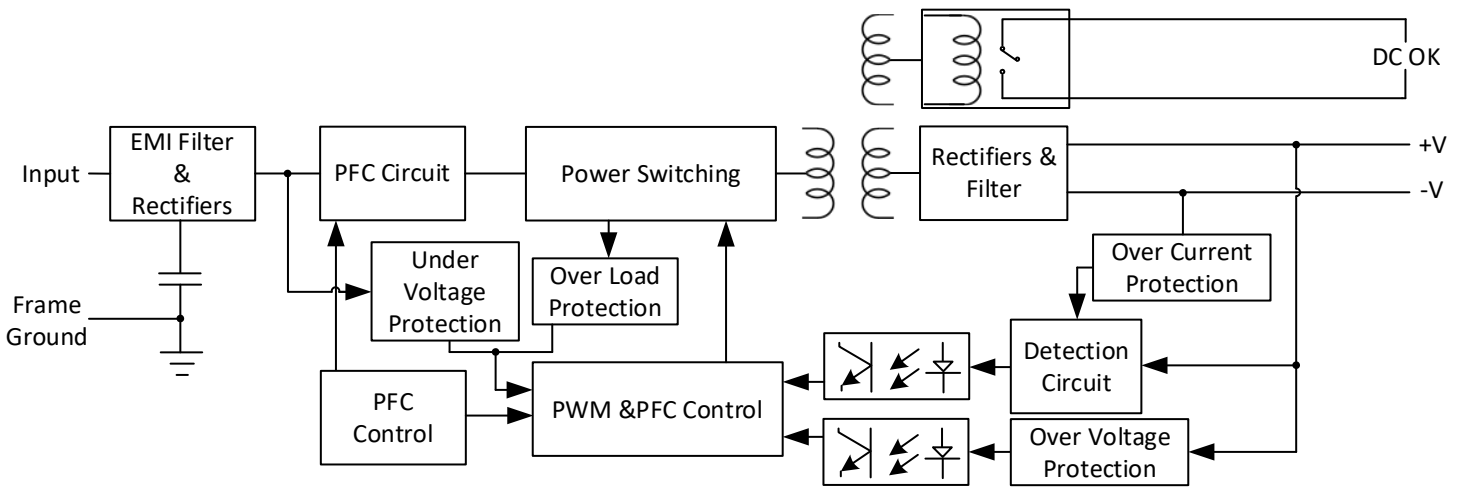
General Specifications				
Parameters	Conditions	Typical	Maximum	Units
Over voltage protection	24 VDC Output, auto-recovery after 1 minute	≤ 33.0		VDC
	48 VDC Output, auto-recovery after 1 minute	≤ 65.0		VDC
Over temperature protection	90°C ± 5°C (TSW) detect on heatsink of power switch, output voltage turn off, auto-recovery			
Overload protection	105 ~ 130% rated output power, constant current limiting, shut down after 3 sec., auto-recovery after 1 minute			
Short circuit protection	Hiccup, auto-recovery			
Operating temperature	20% ~ 95% RH Non-Condensing	-30 to +70		°C
Storage temperature	10 ~ 95% RH	-40 to +85		°C
Power derating	+50°C to +70°C	2.0		% / °C
	180VAC - 200VAC	0.5		% / VAC
Temperature coefficient	0~50°C	± 0.03		% / °C
Cooling	Free air convection			
Case material	Metal			
Weight		1000		g
Dimensions (L x W x H)	2.48 x 4.47 x 4.92 inches (63.00 x 113.50 x 125.00 mm)			
MTBF	900K 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	UL61010-1, UL61010-2-201, 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



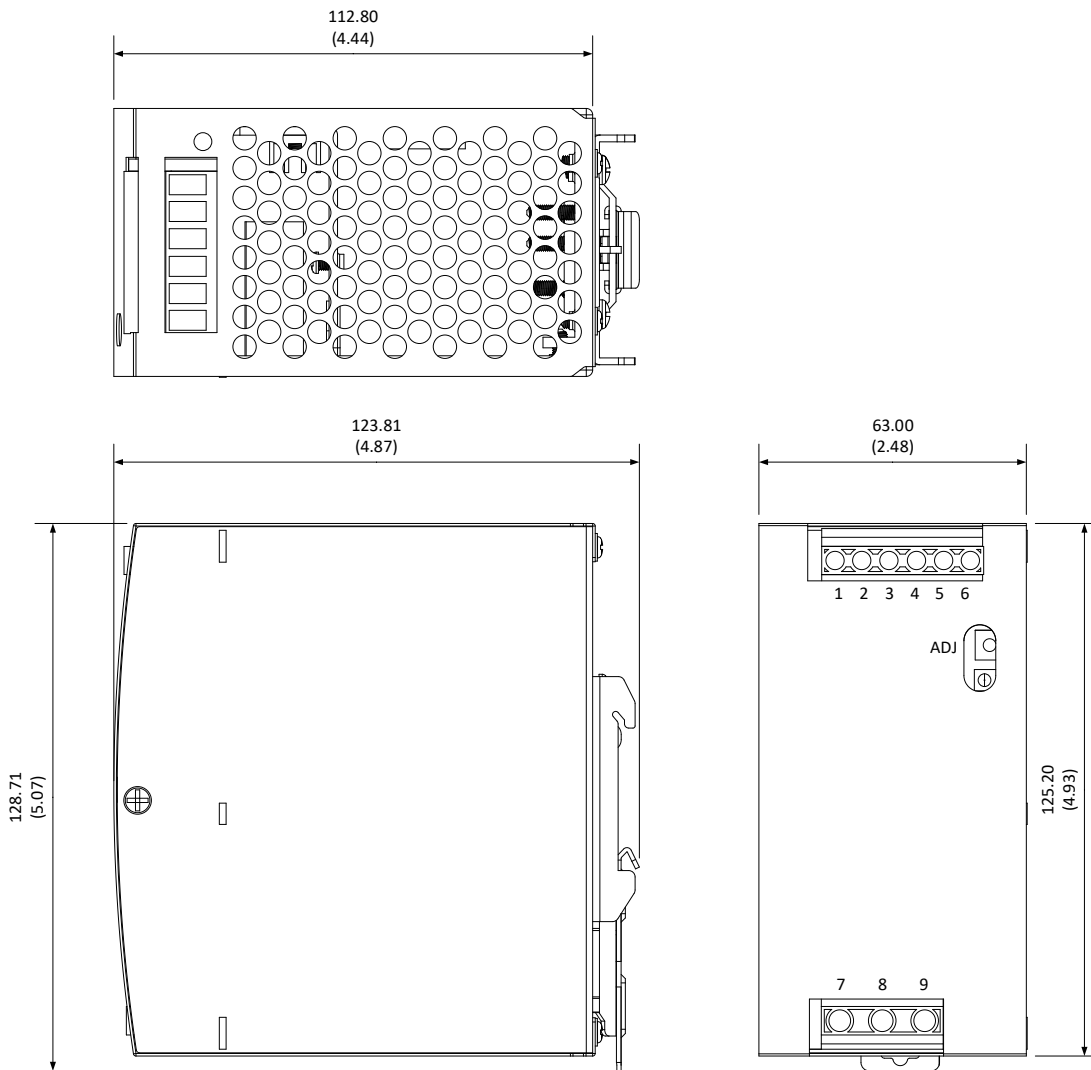
Functional Diagram



DC OK Active Signal Application

Contact Closed	Power Supply Unit turns on / DC OK
Contact Open	Power Supply Unit turns off / DC FAIL
Contact Ratings (maximum)	30V/1 A resistive load

Dimensions



Pin Output Specifications	
Pin	Function
1	Relay Contact
2	Relay Contact
3	+V Output
4	+V Output
5	-V Output
6	-V Output
7	GND \equiv
8	N
9	L
ADJ	Voltage Adjustment

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.