AMED120-GY

DIN Rail

The AMED120-GY is a high efficiency DIN rail AC/DC converter that features a cost-effective power supply design. Offering a commercial input voltage range of 90-264VAC and an output voltage range from 12-48V, this series will offer many benefits to your new system design. This converter measures 40.00 x 125.20 x 113.50mm and has 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 series offers great operating temperatures from -25°C to 70°C and features an isolation of 3000VAC for improved reliability and system safety. Furthermore, a high MTBF of 1,764,600h, output over-load protection, output short circuit protection, over temperature protection, and output over-voltage protection come standard with the series. A built in DC OK relay contact is also present.

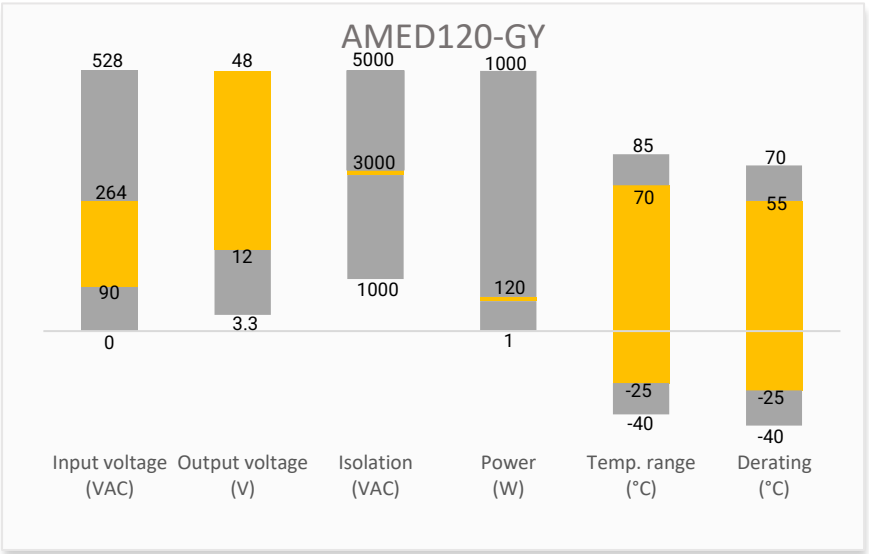
The AMED120-GY is suitable for electric distribution boxes, grid power, instrumentation, CNC machines, industrial control panels and building automation applications.

Features

- Universal Input: 90 - 264VAC/127 - 370VDC
- Operating Temp: -25 °C to +70 °C
- High isolation voltage: 3000VAC
- Low ripple & noise, 120mV(p-p), max.
- Short circuit protection, over-voltage protection, over temperature protection, and overload protection.

RoHS · 3yr Warranty · CE · UKCA · cULus LISTED · With PFC

Summary



Training

Product Training Video (click to open)

Press Release

Application Notes

Coming Soon!

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. (%)
AMED120-12SGY	90~264/47~63	127~370	120	12	10	89
AMED120-24SGY	90~264/47~63	127~370	120	24	5	91
AMED120-48SGY	90~264/47~63	127~370	120	48	2.5	91

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input Current	115VAC		1.4	A
	230VAC		0.7	A
Inrush Current	115VAC, cold start	35		A
	230VAC, cold start	70		A
Leakage Current	240VAC	<1.0		mA
Power factor	115VAC, at full load	0.96		
	230VAC, at full load	0.93		

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		100	mV p-p
	48 VDC Output		120	mV p-p
Start-up time	230VAC input, full load		1.5	s
	115VAC input, full load		3	s
Rise time	230VAC input, full load		60	ms
	115VAC input, full load		60	ms
Hold up time	230VAC input, full load	20		ms
	115VAC input, full load	20		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.

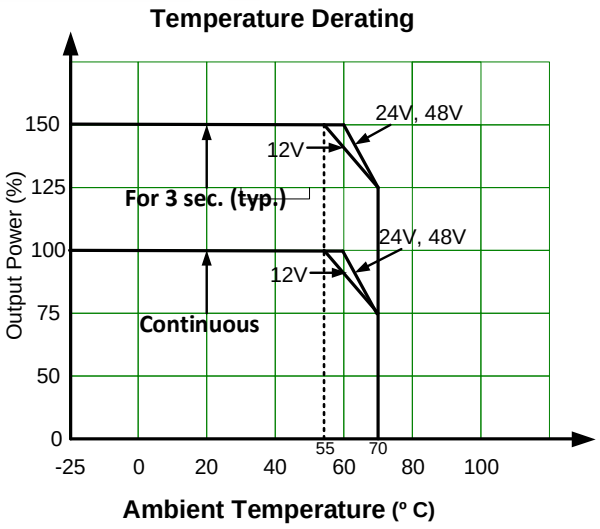
Isolation Specifications

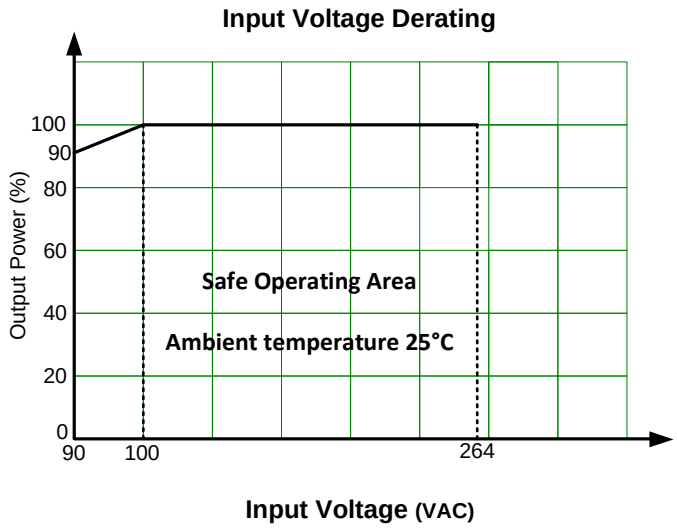
Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, Leakage current < 10mA	3000		VAC
Tested Input to GND voltage	60 sec, Leakage current < 10mA	2000		VAC
Tested Output to GND voltage	60 sec, Leakage current < 10mA	500		VAC
Tested Output to P-G signal	60 sec, Leakage current < 2mA	500		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	Detected on heatsink power switch, auto-recovery	95 ± 5		°C
Overload protection	Works normally within 110 ~ 150% rated output power for more than 3 seconds, output voltage turns off, auto-recovery >150% rated output power, constant current limiting, auto-recovery within 3 seconds, shut down if over 3 seconds			
Short circuit protection	Hiccup, Continuous, auto-recovery			
Operating temperature		-25 to +70		°C
Storage temperature	10 ~ 95% RH	-40 to +85		°C
Power derating	12 VDC Output, 230VAC, 55 °C to 70°C	1.67		% / °C
	24,48 VDC Output, 230VAC, 60 °C to 70 °C	2.5		% / °C
	90 to 100 VAC	1		% / VAC
Temperature coefficient	0 ~50°C	± 0.03		% / °C
Cooling	Free air convection			
Storage Humidity	Non-condensing	>10	95	% RH
Operating Humidity	Non-condensing	>20	95	% RH
Case material	Metal			
Weight		670		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	1764.6K hrs min. Telcordia SR-332(Bellcore); 292.1K hrs min. (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.				

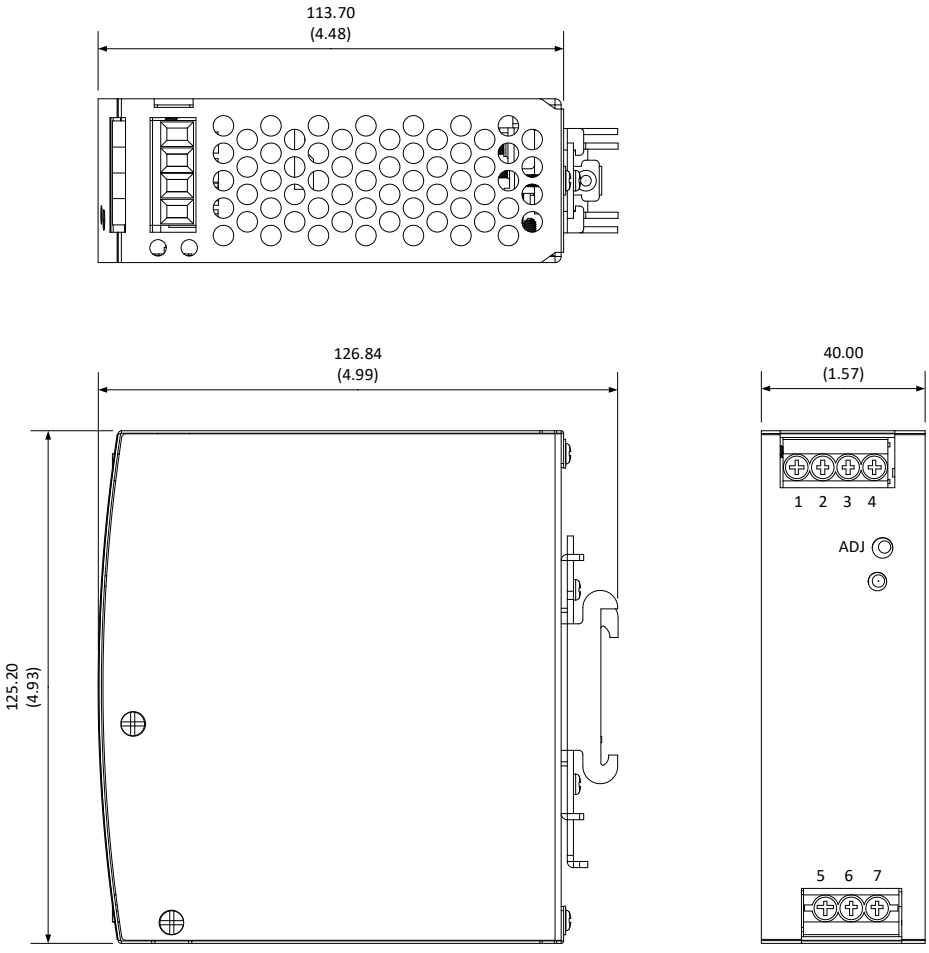
Safety Specifications		
Parameters		
Agency approval	UL508, BS EN/EN62368-1	
Standards	EMC - Conducted and radiated emission	CISPR32 / EN55032, Class B
	Harmonic Current emission	IEC/EN 61000-3-2, Class A
	Voltage Fluctuations & Flicker	IEC/EN 61000-3-3
	Electrostatic Discharge Immunity	IEC/EN 61000-4-2 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
	EMC Immunity	BS EN/EN55024, BS EN/EN61000-6-2(BS EN/EN50082-2), BS EN/EN61204-3, Heavy Industry Level

Derating



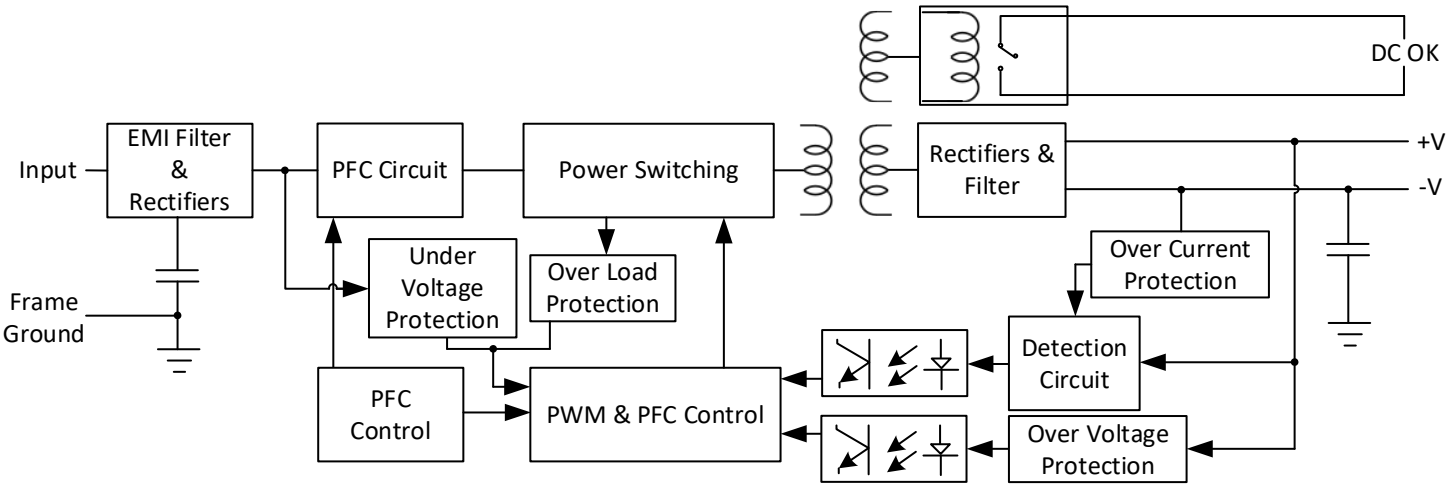


Dimensions



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

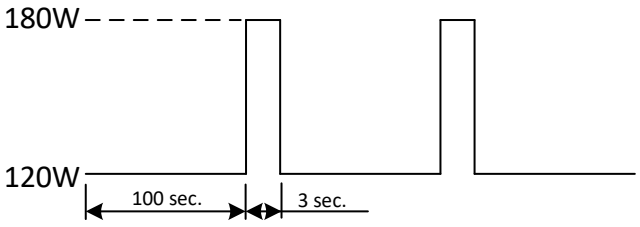
Functional Diagram



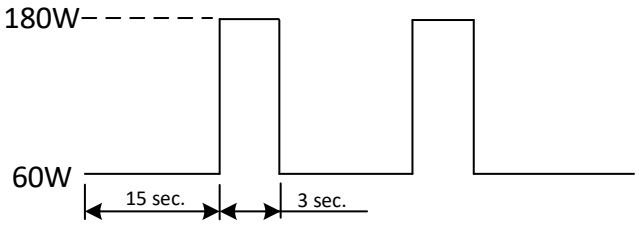
DC OK Relay Contact

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

Peak Loading



Full Load



Half Load

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