AMED20-GY

DIN Rail

The AMED20-GY is a slim DIN-rail mounting AC/DC converter that features a cost-effective, energy efficient design. It accepts an input voltage range of 90-264VAC, and has an output voltage range from 5-24V. Measuring only 23.00 x 100.00 x 92.00mm, the DIN rail is easy to install and remove for maintenance, while efficiently organizing all your electrical cables.

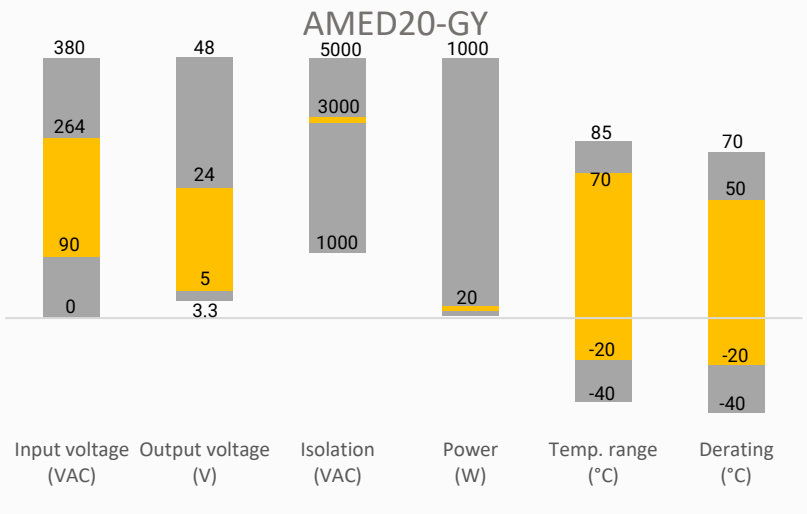
This new series offers great operating temperatures, from -20°C to 70°C and also features an isolation of 3000VAC for improved reliability and system safety. Furthermore, a high MTBF of 2,363,700h, output over-load protection, output short circuit protection, and output over-voltage protection (OVP) come standard with the series.

The AMED20-GY is suitable for electric distribution boxes, grid power, instrumentation, CNC machines, industrial control panels and building automation applications.

Features

- Wide Input: 90 - 264VAC/127 – 370VDC
- Operating Temp: -20 °C to +70 °C
- Isolation voltage: 3000VAC
- Low ripple & noise, 80mV(p-p), 120mV(p-p), 150mV(p-p).
- Short circuit protection, over-voltage protection, and overload protection.
- DC OK Signal Output indication

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 (A)	Efficiency @ 230VAC Typ. (%)
AMED20-5SGY	90~264/47~63	127~370	15	5	3	76
AMED20-12SGY	90~264/47~63	127~370	20	12	1.67	80
AMED20-15SGY	90~264/47~63	127~370	20	15	1.34	81
AMED20-24SGY	90~264/47~63	127~370	24	24	1	84

Input Specifications				
Parameters	**Conditions**	**Typical**	**Maximum**	**Units**
Input Current	115VAC	0.33		A
	230VAC	0.21		A
Inrush Current	230VAC, cold start	35	70	A
Leakage Current	240VAC	<1		mA

Output Specifications				
Parameters	**Conditions**	**Typical**	**Maximum**	**Units**
Voltage accuracy	0 - 100% load, 12 VDC Output	± 2		%
Line regulation	Rated load	± 1		%
Load regulation	0 - 100% load, 5, 12, 15, 24 VDC Output	± 5		%
Ripple & Noise*	5 VDC Output		80	mV p-p
	12 VDC Output		120	mV p-p
	15 VDC Output		120	mV p-p
	24 VDC Output		150	mV p-p
Start-up time	230VAC input, full load		0.5	s
	115VAC input, full load		1.0	s
Rise time	Full load	30		ms
Hold up time	230VAC input, full load	50		ms
	115VAC input, full load	20		ms
Voltage adjustable range	5 VDC Output	4.75 - 5.5		V
	12 VDC Output	10.8 - 13.2		V
	15 VDC Output	13.5 - 16.5		V
	24 VDC Output	21.6 - 26.4		V

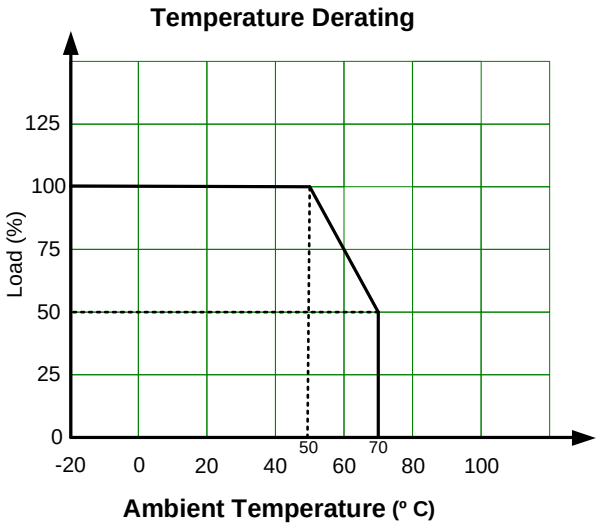
*** Ripple and Noise are measured at 20MHz bandwidth. Please refer to the application note for specific details. Measured with a 47µF electrolytic capacitor and a 0.1µF ceramic capacitor.**

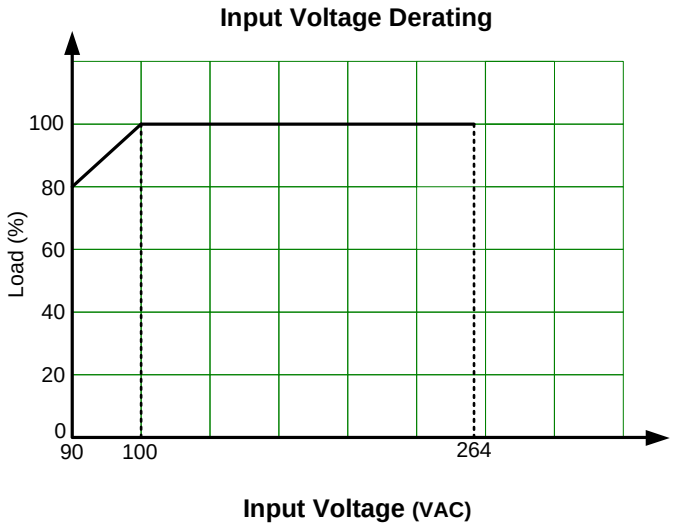
Isolation Specifications				
Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, Leakage current < 10mA	3000		VAC
Tested Input to GND voltage	60 sec, Leakage current < 10mA	2000		VAC
Tested Output to GND voltage	60 sec, Leakage current < 10mA	500		VAC
Tested Output to P-G signal	60 sec, Leakage current < 2mA	500		VAC
Insulation resistance	I to O, I/O to PE, 500VDC	100		MΩ

General Specifications				
Parameters	Conditions	Typical	Maximum	Units
Over voltage protection	5 VDC Output, manual-recovery	≤ 6.75		VDC
	12 VDC Output, manual-recovery	≤ 16.2		VDC
	15 VDC Output, manual-recovery	≤ 20.25		VDC
	24 VDC Output, manual-recovery	≤ 32.4		VDC
Overload protection	105~150% rated output power, hiccup, auto-recovery			
Short circuit protection	Hiccup, Continuous, auto-recovery			
Operating temperature	20% ~ 90% RH Non-Condensing	-20 to +70		°C
Storage temperature	10 ~ 95% RH	-40 to +85		°C
Power derating	+50 °C to +70°C	2.5		% / °C
	90VAC - 100VAC	2		% / VAC
Cooling	Free air convection			
Storage Humidity	Non-condensing		10~95	% RH
Case material	Plastic			
Weight		150		g
Dimensions (L x W x H)	0.91 x 3.94 x 3.62 inches (23.00 x 100.00 x 92.00 mm)			
MTBF	> 2363.7K 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.				

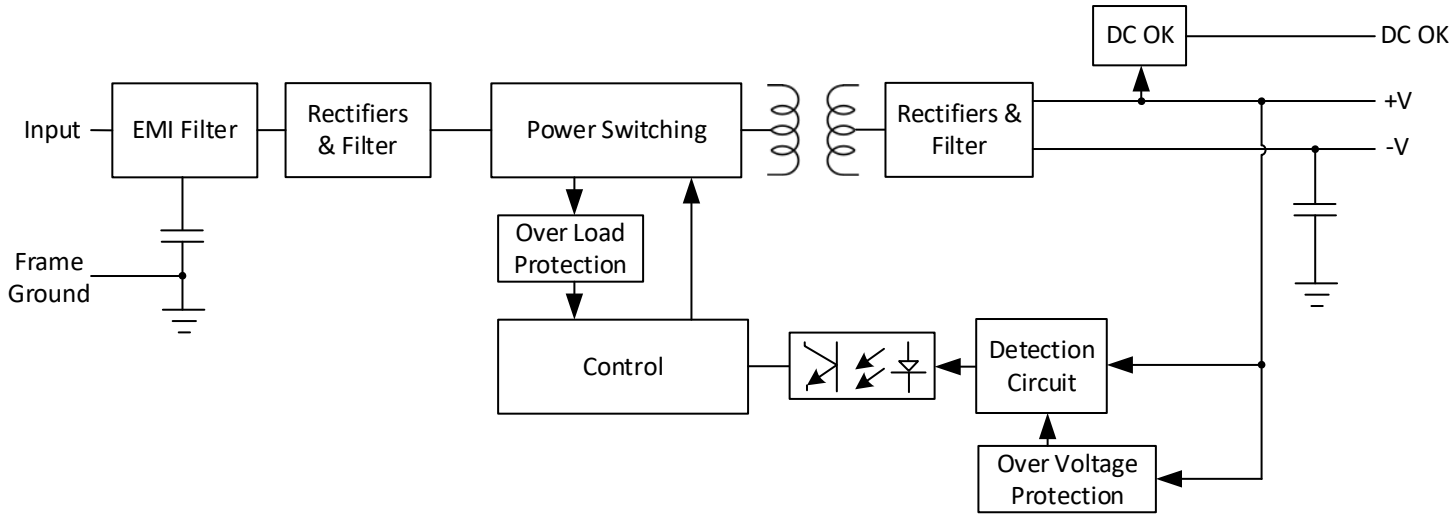
Safety Specifications		
Parameters		
Agency approval	UL508, BS/EN62368-1	
Standards	EMC - Conducted and radiated emission	CISPR32 / EN55032, Class B
	Harmonic Current emission	IEC/EN 61000-3-2, Class A
	Voltage Fluctuations & Flicker	IEC/EN 61000-3-3
	Electrostatic Discharge Immunity	IEC/EN 61000-4-2 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



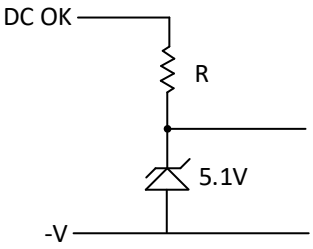


Functional Diagram



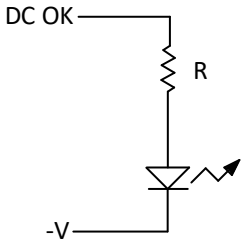
DC OK Active Signal Application

A) 5V Signal



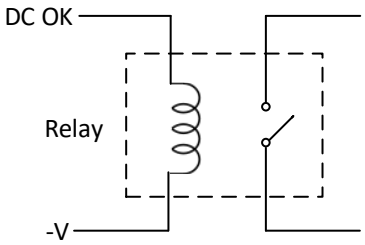
Model	R
5V	≥200Ω
12V	≥1.5KΩ
15V	≥2KΩ
24V	≥3.9KΩ

B) Light Emitting Diode



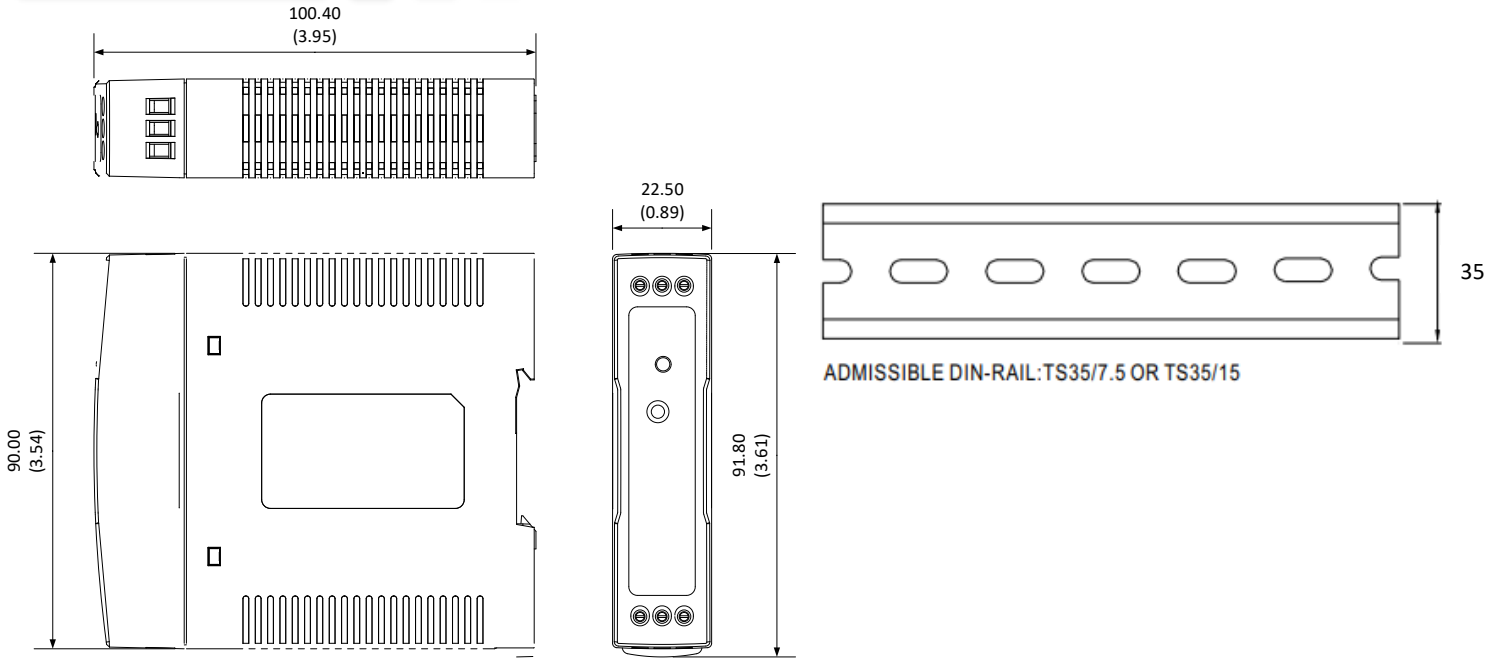
Model	R
5V	≥1KΩ
12V	≥2.4KΩ
15V	≥3KΩ
24V	≥4.7KΩ

C) Relay



Model	R
5V	≥120Ω
12V	≥700Ω
15V	≥700Ω
24V	≥1.2KΩ

Dimensions



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