AMED75-277JZ

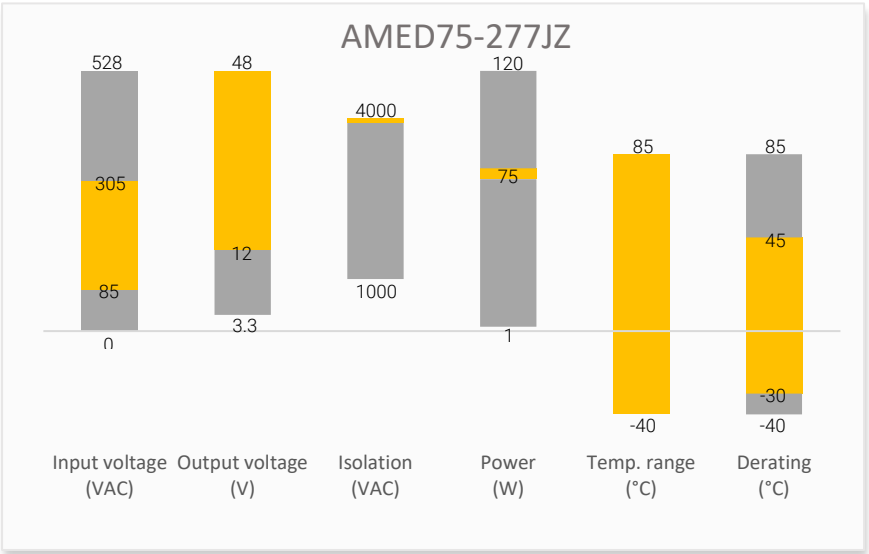
DIN Rail

The new AMED75-277JZ is a brand-new AC/DC converter that offers much greater cost effectiveness due to material normalization and production automation also leading to improved reliability and performance. Offering a commercial input voltage range of 85-305VAC and an output voltage range from 12-48V, this series will offer many benefits to your new system design.
This new series offers great operating temperatures, from -40°C to 85°C also features an isolation of 4000VAC for improved reliability and system safety. Furthermore, a higher MTBF of 300,000h, output short circuit protection (OSCP), output over-current protection (OCP), over temperature protection (OTP) and an output over-voltage protection (OVP) come standard with the series.
The AMED75-277JZ is suitable for electric distribution box, grid power, instrumentation, industrial controls, building automation applications.

Features

- Universal Input: 85 - 305VAC/120 - 430VDC
- Operating Temp: -40 °C to +85 °C
- High isolation voltage: 4000VAC
- Low ripple & noise, 150mV(p-p), max.
- Output short circuit, over-current, over-voltage, over-temperature protection

Summary



Training

Product Training Video
(click to open)

Press Release

Coming Soon!

Application Notes

Applications

Power Grid

Industrial

Telecom

Instrumentation

Models & Specifications

Single Output							
Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Max Output wattage (W)	Output Voltage (V)	Output Current max (A)	Maximum capacitive load (µF)	Efficiency @ 230VAC Typ. (%)
AMED75-12S277JZ	85~305/47~63	120~430	75.6	12	6.3	6000	88
AMED75-24S277JZ	85~305/47~63	120~430	76.8	24	3.2	1500	90
AMED75-48S277JZ	85~305/47~63	120~430	76.8	48	1.6	1000	91

*Add suffix "-Q" for optional conformal coating (ex. AMED75-12S277JZ-Q is conformal coating version).

Input Specifications				
Parameters	Conditions	Typical	Maximum	Units
Input Current	115VAC		2	A
	230VAC		1	A
Inrush Current	115VAC, cold start	30		A
	230VAC, cold start	50		A
Leakage Current	277VAC/60Hz	<0.5		mA

Output Specifications				
Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	Full load, 12 VDC Output	± 2		%
	Full load, 24,48 VDC Output	± 1		%
Line regulation	Rated load	± 0.5		%
Load regulation	0 - 100% load	± 1		%
Ripple & Noise*	12 VDC Output		80	mV p-p
	24 VDC Output		120	mV p-p
	48 VDC Output		150	mV p-p
Hold up time	115VAC	12		ms
	230VAC	60		ms
No load power consumption	115VAC	0.5	1.0	W
	230VAC	1.0	1.5	W
Voltage adjustable range	12 VDC Output	12 - 14		V
	24 VDC Output	24 - 28		V
	48 VDC Output	48 - 53		V

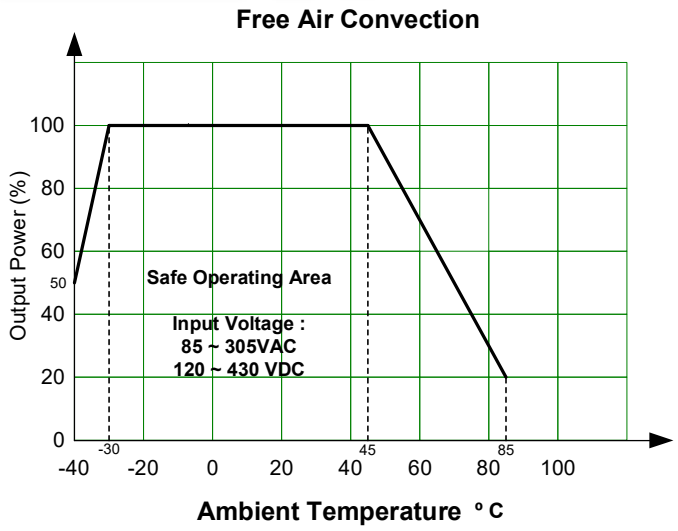
* Ripple and Noise are measured at 20MHz bandwidth. Please refer to the application not for specific details. Measured with a 47µF electrolytic capacitor and a 0.1µF ceramic capacitor.

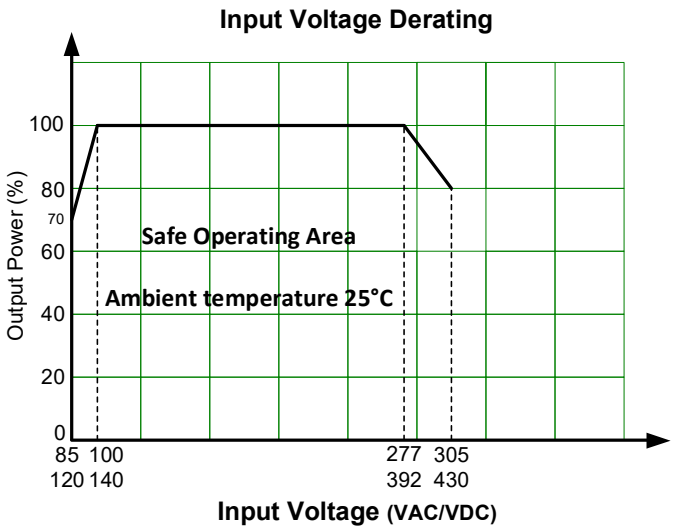
Isolation Specifications				
Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, Leakage current < 10mA	4000		VAC
Tested Input to GND voltage	60 sec, Leakage current < 10mA	2000		VAC
Tested Output to GND voltage	60 sec, Leakage current < 10mA	500		VAC
Insulation resistance	500VDC	>50		MΩ

General Specifications				
Parameters	**Conditions**	**Typical**	**Maximum**	**Units**
Over Current protection	230VAC, rated load, self- recovery, room temp.	110 - 150		% of Iout
	230VAC, rated load, self- recovery, low/high temp.	>105		% of Iout
Over voltage protection	12 VDC Output, Hiccup, self-recover	≤ 17		VDC
	24 VDC Output, Hiccup, self-recover	≤ 33		VDC
	48 VDC Output, Hiccup, self-recover	≤ 60		VDC
Over temperature protection	230VAC, rated load, output voltage turn off, self-recover after the temperature drops			
Short circuit protection	Constant current mode, Continuous, Self-recovery (Recovery time < 5S)			
Switching Frequency		65		KHz
Operating temperature		-40 to +85		°C
Storage temperature		-40 to +85		°C
Power derating	-40°C to -30°C	5.0		% / °C
	45 °C to 85°C	2.0		% / °C
	85 to 100 VAC	2.0		% / VAC
	277 to 305 VAC	0.71		% / VAC
Temperature coefficient		± 0.03		% / °C
Protection Class	Class I			
Cooling	Free air convection			
Storage Humidity	Non-condensing	>10	95	% RH
Operating Humidity	Non-condensing	>20	90	% RH
Case material	Metal (AL1100, SGCC)			
Weight		340		g
Dimensions (L x W x H)	4.33 x 3.45 x 1.26 inches (110.00 x 87.50 x 32.00 mm)			
MTBF	> 300 000 hrs (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.				

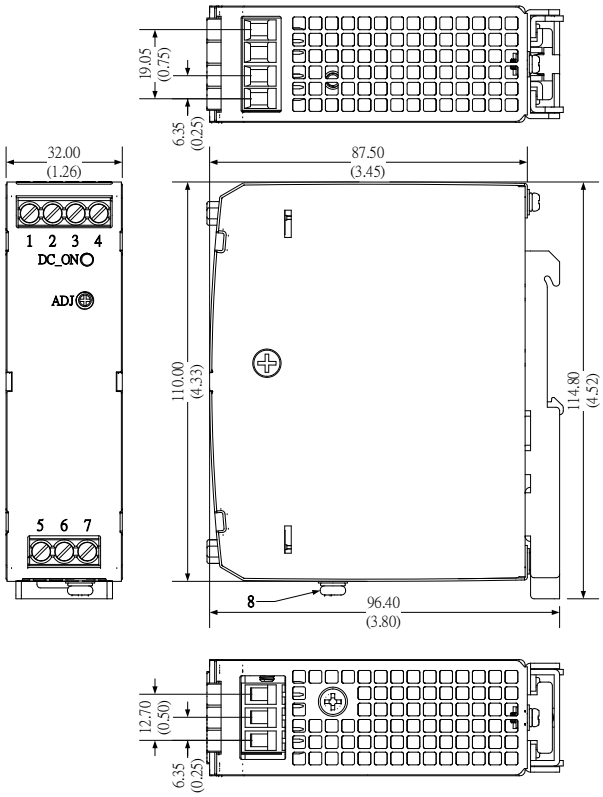
Safety Specifications		
Parameters		
Agency approval	EN/BS EN 62368-1	
Standards	Designed to meet UL61010-1, UL62368-1, EN 60335, EN 61588, GB4943	
	EMC - Conducted and radiated emission	CISPR32 / EN55032, Class B
	Harmonic current	IEC/EN 61000-3-2, Class A
	Electrostatic Discharge Immunity	IEC/EN 61000-4-2 Contact ±6KV, Air ±8KV, Criteria A
	RF, Electromagnetic Field Immunity	IEC/EN 61000-4-3 10V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC/EN 61000-4-4 ±2KV, Criteria A
	Surge Immunity	IEC/EN 61000-4-5 L-L ±2KV, L-G ±4KV, Criteria A
	CS, Conducted Disturbance Immunity	IEC/EN 61000-4-6 10V r.m.s, Criteria A
	Voltage dips, Short Interruptions Immunity	IEC/EN 61000-4-11 0%, 70%, Criteria B

Derating





Dimensions



Pin Output Specifications	
Pin	Function
1	+V Output
2	+V Output
3	-V Output
4	-V Output
5	Input (N)
6	Input (L)
7	GND ⏚
ADJ	Voltage adjustment

Note:
Unit: mm (inch)
General tolerance : ±1.0 (0.04)
Wire gauge : 26 - 10AWG
Tightening torque : 0.4N·m Max.
Mounting rail : TS35, rail need to connect safety ground
7 or 8 must be connected to earth ⏚