

AMEL20-277HAGY



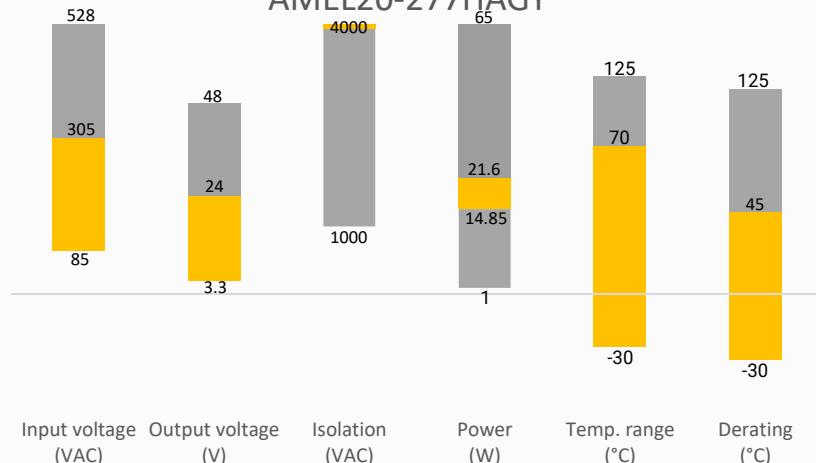
Encapsulated

Features

- Universal Input: 85 - 305VAC/120 - 430VDC
- Operating Temp: -30 °C to +70 °C
- High isolation voltage: 4000VAC
- Output short circuit, over-current, over-voltage protection
- Low no-load power consumption of 0.1W
- Designed to meet: IEC/EN/UL62368-1, EN60335-1

Summary

AMEL20-277HAGY



Training



Product Training Video
(click to open)

Applications



Press Release

Coming Soon!



Power Grid



Industrial



Telecom

Application Notes

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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)	AVG. Efficiency (%)
AMEL20-3S277HAGY	85-305/50-60	120-430	14.85	3.3	4.5	6600	76
AMEL20-5S277HAGY	85-305/50-60	120-430	20	5	4	5000	79
AMEL20-9S277HAGY	85-305/50-60	120-430	20.7	9	2.3	2500	82
AMEL20-12S277HAGY	85-305/50-60	120-430	21.6	12	1.8	2000	84
AMEL20-15S277HAGY	85-305/50-60	120-430	21	15	1.4	820	84
AMEL20-24S277HAGY	85-305/50-60	120-430	21.6	24	0.9	470	85

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input current	115VAC		600	mA
	230VAC		400	mA
	277VAC		300	mA
Inrush current	115VAC, cold start	20		A
	230VAC, cold start	40		A
Leakage	277VAC		0.25	mA

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Line regulation	Full load	±0.5		%
Load regulation	10-100% load	±0.5		%
Ripple & Noise*	20MHz bandwidth		200	mV p-p
Hold up time	115VAC	10		ms
	230VAC	40		ms

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

Isolation Specification

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec	4000		VAC
Resistance	500VDC	>100		MΩ

General Specifications

Parameters	Conditions	Typical	Maximum	Units

Overvoltage category	OVC III			
Over current protection	Hiccup, Auto recovery	≥ 115	190	% of I_{out}
Over voltage protection	3.3Vout, shut off o/p voltage, clamping by Zener diode		4.95	VDC
	5Vout, shut off o/p voltage, clamping by Zener diode		6.75	VDC
	12Vout, shut off o/p voltage, clamping by Zener diode		16.2	VDC
	15Vout, shut off o/p voltage, clamping by Zener diode		20.25	VDC
	24Vout, shut off o/p voltage, clamping by Zener diode		32.4	VDC
Short circuit protection	Hiccup, Continuous, Auto recovery			
Operating temperature	See derating graph	-30 to +70		°C
Storage temperature		-40 to +85		°C
No-load power consumption		0.1		W
Power Derating	+45 °C to +70 °C, 3.3/5Vout	2		%/°C
	+50 °C to +70 °C, 12/15/24Vout	2.5		%/°C
	85VAC to 100VAC	1.33		%/VAC
Temperature coefficient	(0~50°C)	± 0.03		%/°C
Cooling	Free air convection			
Humidity	Non-condensing	10	95	% RH
	Non-condensing, Operating	20	90	% RH
Vibration	10 ~ 500Hz, 5G 10min. /1cycle, period for 60min. each along X,Y,Z axes			
Weight		65		g
Dimensions (L x W x H)		2.07 x 1.08 x 0.91 inches (52.50 x 27.40 x 23.00 mm)		
MTBF	> 1 500 000 hrs (MIL-HDBK -217F, $t=+25^{\circ}\text{C}$)			

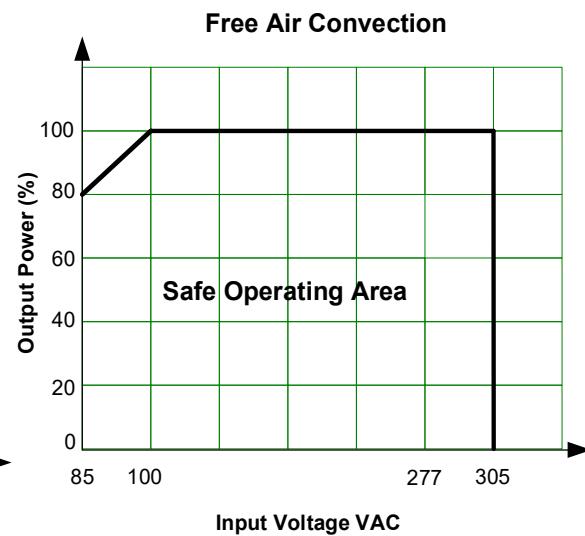
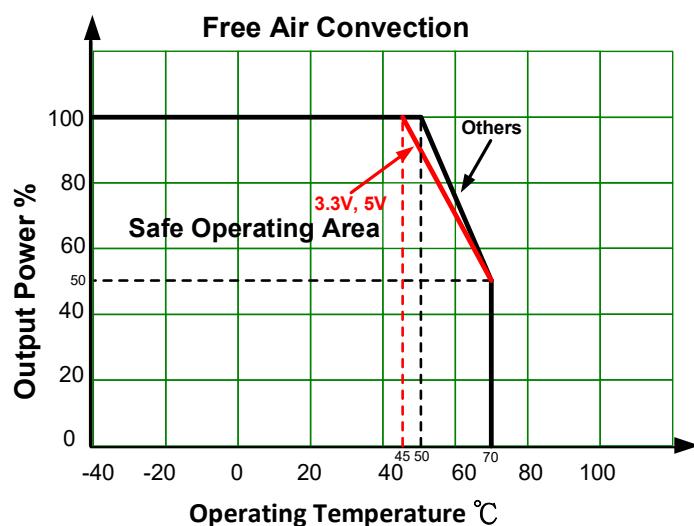
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Safety Specifications

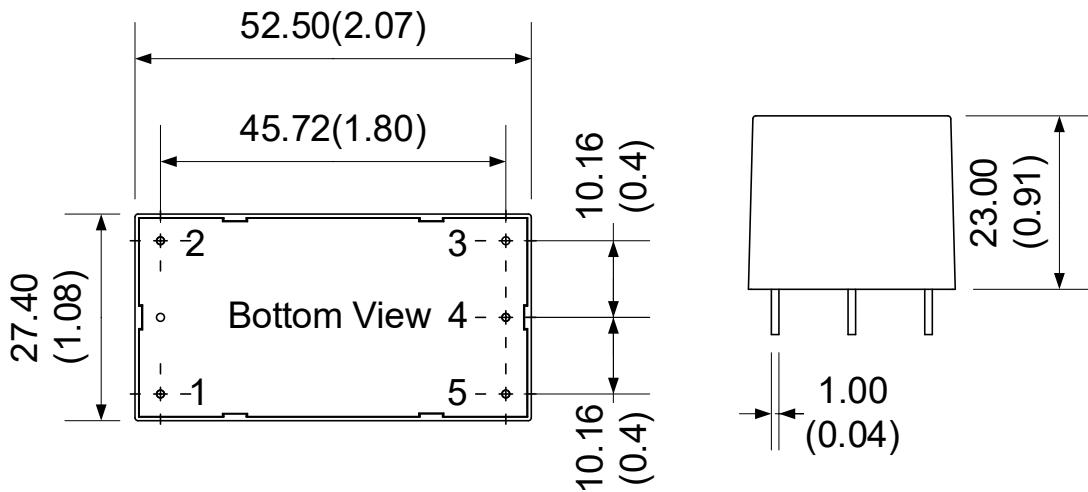
Parameters

Standards	Information technology Equipment	Design to meet IEC62368-1, UL62368-1, TUV BS EN/EN62368-1, IEC/EN60335-1
	EMC Emission	EN55032 (CISPR32) CNS13438 Class B, EN61000-3-2 Class A, EN61000-3-3
	EMC Immunity	BS EN/EN61000-4-2,3,4,5,6 Level 3, criteria A;BS EN/EN61000-4-8 Level 4, criteria A;BS EN/EN61000-4-11

Derating



Dimensions



Note:

Unit: mm(inch)

General tolerance: ± 0.5 (± 0.02)

Pin diameter tolerance: ± 0.25 (± 0.01)

Pin Output Specifications	
Pin	Function
1	AC Input (N)
2	AC Input (L)
3	No Pin
4	-V Output
5	+V Output

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