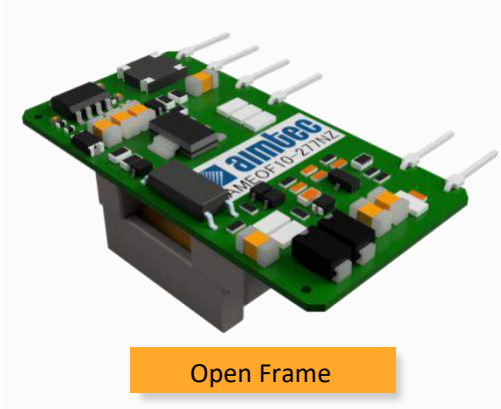


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**AMEOF10-277NZ**



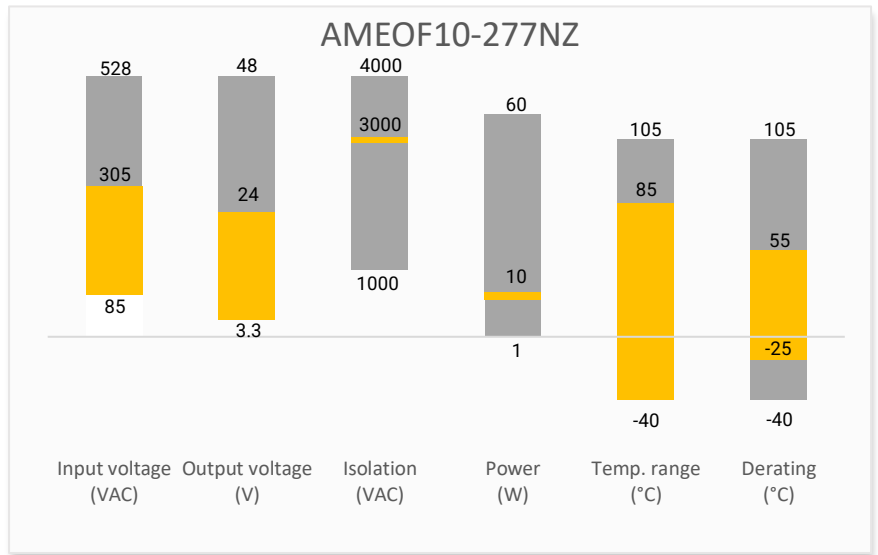
Open Frame

AMEOF10-277NZ series is one of Aimtec highly efficient green 10W AC-DC converters. They feature a wide input voltage range of 85-305VAC, high efficiency up to 82%, low power consumption and CLASS II reinforced insulation. The large variety of EMC external circuits meet the needs of multiple industries. This new series offers great operating temperatures, from -40°C to 85°C and an isolation of 3000VAC for improved reliability and system safety. Furthermore, a high MTBF of 300,000h, output short circuit protection (OSCP), output over-current protection (OCP) and an output over-voltage protection (OVP) come standard with the series. All models are suitable for industrial controls, instrumentation and smart home applications with size constraints.


**Features**

- Universal Input: 85 - 305VAC/100 - 430VDC
- Operating Temp: -40 °C to +85 °C
- High isolation voltage: 3000VAC
- Low ripple & noise, 150mV(p-p), max.
- Output short circuit, over-current, over voltage protection
- Open frame package


**Summary**



**Training**



Product Training Video  
(click to open)



Press Release

Coming Soon!

Application Notes

**Applications**



## 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 ( $\mu$ F)	Efficiency @ 230VAC (%)
AMEOF10-03S277NZ	85~305/47~63	100~430	6.6	3.3	2	1500	70
AMEOF10-05S277NZ	85~305/47~63	100~430	10	5	2	1500	76
AMEOF10-09S277NZ	85~305/47~63	100~430	10	9	1.1	1000	78
AMEOF10-12S277NZ	85~305/47~63	100~430	10	12	0.83	680	80
AMEOF10-15S277NZ	85~305/47~63	100~430	10	15	0.67	470	81
AMEOF10-24S277NZ	85~305/47~63	100~430	10	24	0.42	330	82
AMEOF10-03SL277NZ	85~305/47~63	100~430	6.6	3.3	2	1500	70
AMEOF10-05SL277NZ	85~305/47~63	100~430	10	5	2	1500	76
AMEOF10-09SL277NZ	85~305/47~63	100~430	10	9	1.1	1000	78
AMEOF10-12SL277NZ	85~305/47~63	100~430	10	12	0.83	680	80
AMEOF10-15SL277NZ	85~305/47~63	100~430	10	15	0.67	470	81
AMEOF10-24SL277NZ	85~305/47~63	100~430	10	24	0.42	330	82

### Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input Current	115VAC		300	mA
	230VAC		150	
Inrush current	115VAC	15		A
	230VAC	30		
External fuse	Slow blow type	1		A

### Output Specifications

Parameters	Conditions	Typical	Maximum	Units	
Voltage accuracy	Full load	3.3V output	$\pm 1.5$	$\pm 3$	%
		other	$\pm 1$	$\pm 2$	
Line regulation	Full load	$\pm 0.5$	$\pm 1$	%	
Load regulation	0-100% load	$\pm 1$	$\pm 1.5$	%	
Ripple & Noise	20MHz bandwidth	80	150	mV p-p	

### Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec, 5mA max		3000	VAC

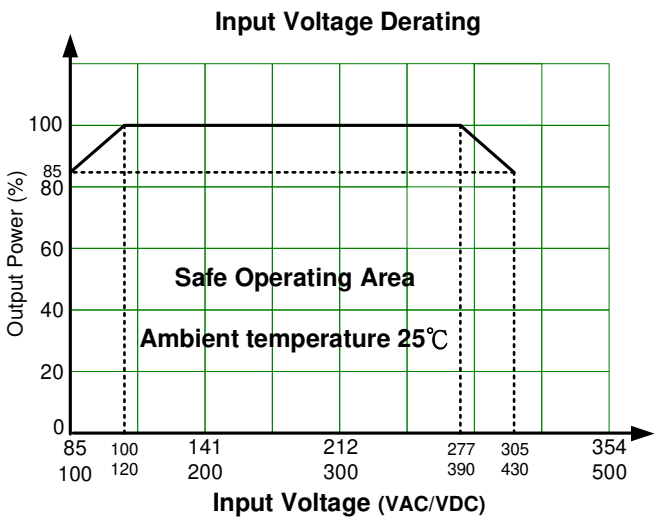
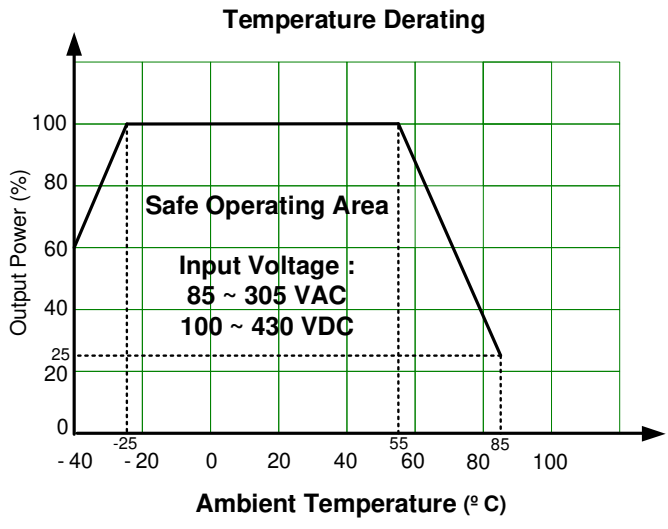
### General Specifications

Parameters	Conditions	Typical	Maximum	Units
Safety class	Class II			
Over Current protection	Auto recovery	$\geq 110$		% of Iout
Short circuit protection	Hiccup, Continuous			
Over voltage protection	3.3V / 5V output model	$\leq 9$ VDC (output voltage clamp or hiccup)		

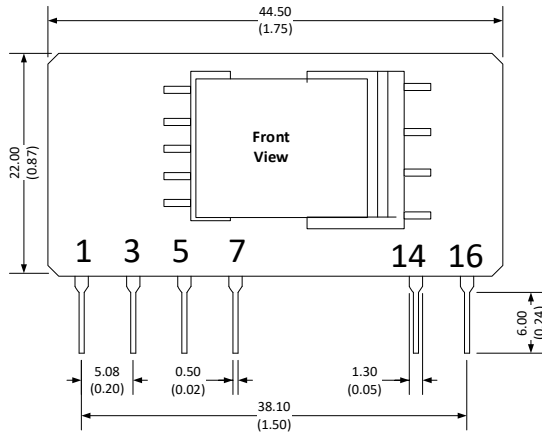
Power derating	9V output model	≤ 15VDC (output voltage clamp or hiccup)	
	12V / 15V output model	≤ 25VDC (output voltage clamp or hiccup)	
	24V output model	≤ 35VDC (output voltage clamp or hiccup)	
	-40 °C to -25 °C	2.67	% / °C
	+55 °C to +85 °C	2.5	% / °C
Operating temperature	-40 to +85	°C	
	Storage temperature	-40 to +105 °C	
Temperature coefficient	±0.02	% / °C	
Cooling	Free air convection		
Storage Humidity		95	% RH
Weight		11	g
Dimensions (L x W x H)	1.75 x 0.94 x 0.59 inches (44.50 x 24.00 x 15.00mm)		
MTBF	> 300 000 hrs (MIL-HDBK -217F, t=+25°C)/Full Load		
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 approvals	UL 62368-1	
Standards	Design to meet EN60335 / EN62368-1	
	EMC - Conducted and radiated emission	CISPR32 / EN55032, Class A, (With EMI Class A circuit) CISPR32 / EN55032, Class B, (With EMI Class B circuit)
	Electrostatic Discharge Immunity	IEC 61000-4-2 Contact ±6KV, Criteria B
	RF, Electromagnetic Field Immunity	IEC 61000-4-3 10V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4 ±2KV, Criteria B, (With EMS Class III circuit) IEC 61000-4-4 ±4KV, Criteria B, (With EMS Class IV circuit)
	Surge Immunity	IEC 61000-4-5 L-L ±1KV, Criteria B, (With EMS Class III circuit) IEC 61000-4-5 L-L ±2KV, Criteria B, (With EMS Class IV circuit) IEC 61000-4-5 L-L ±4KV, Criteria B, (With EFT Class IV, Surge L-G ±4KV circuit)
	RF, Conducted Disturbance Immunity	IEC 61000-4-6 10Vr.m.s, Criteria A
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11 0%, 70%, Criteria B

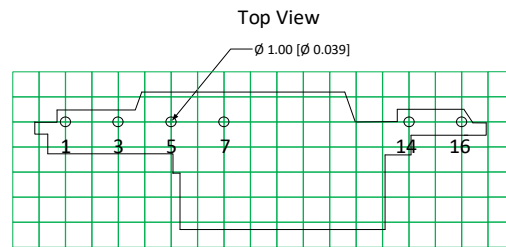
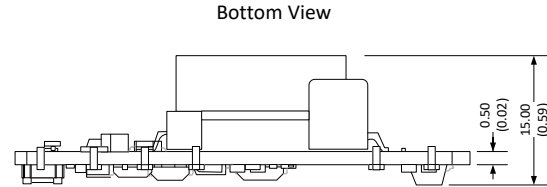
## Derating



## Dimensions

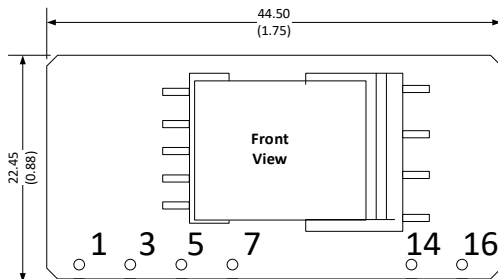


Note:  
Unit: mm [inch]  
Pin section tolerances:  $\pm 0.10$  [ $\pm 0.004$ ]  
General tolerances:  $\pm 0.50$  [ $\pm 0.020$ ]



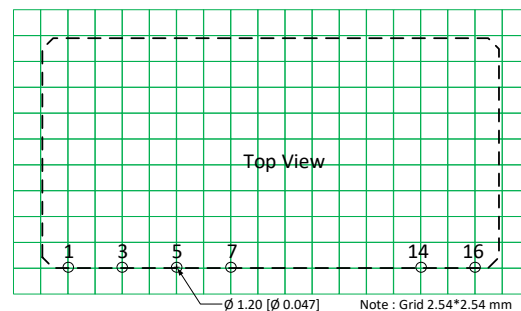
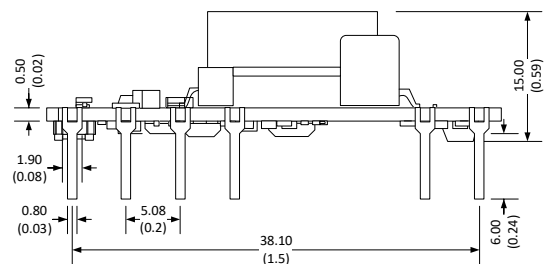
Note : Grid 2.54\*2.54 mm

## L Model Dimensions



Note:  
Unit: mm [inch]  
Pin section tolerances:  $\pm 0.10$  [ $\pm 0.004$ ]  
General tolerances:  $\pm 0.50$  [ $\pm 0.020$ ]

Pin Output Specifications	
Pin	Function
1	AC Input (N)
3	AC Input (L)
5	+V_Cap
7	-V_Cap
14	-V Output
16	+V Output

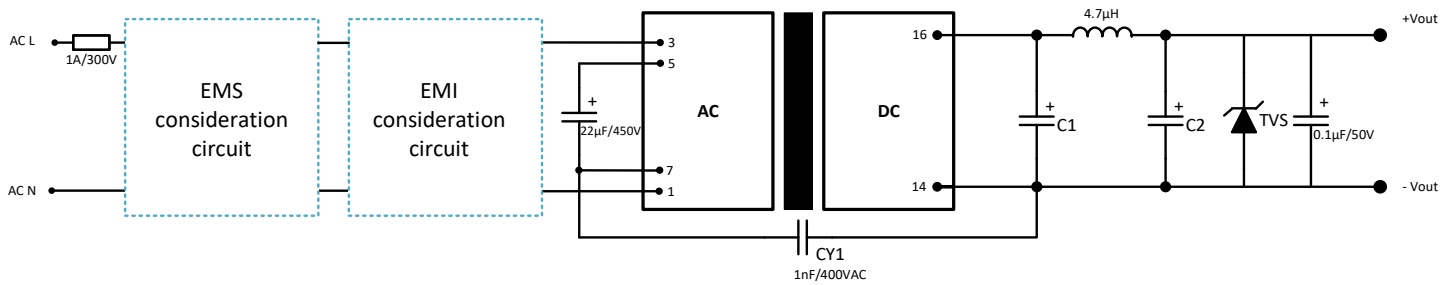


Note : Grid 2.54\*2.54 mm

Note:

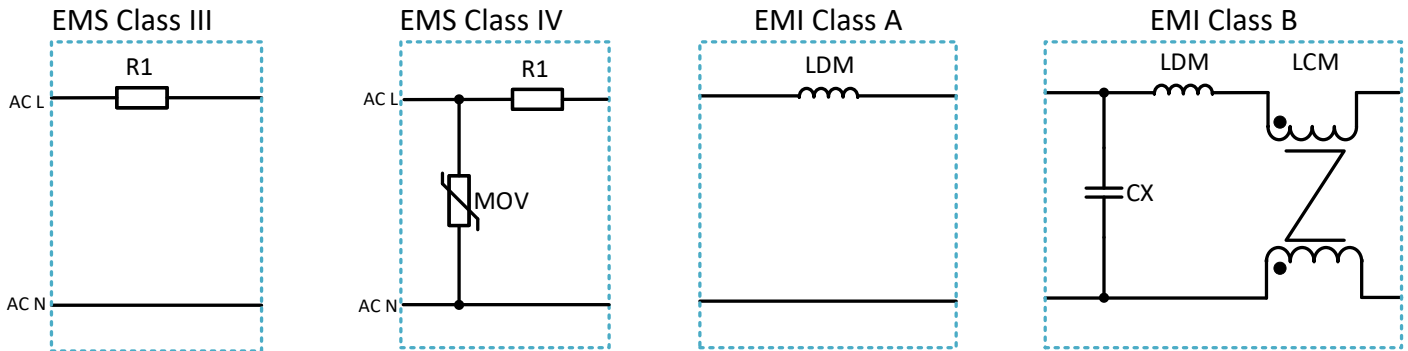
1. Capacitor between pin5 and pin7 is necessary.
2. External circuit on the output side is necessary. Please refer to the recommended circuit.
3. It is needed to have distance  $\geq 6.4$ mm for safety between external components in primary circuit and secondary circuit.
4. The layout of the device is for reference only, please refer to the actual product.

## Recommended EMC external circuit



A suppressor diode (TVS) with 1.2 times of the output voltage rating is recommended.

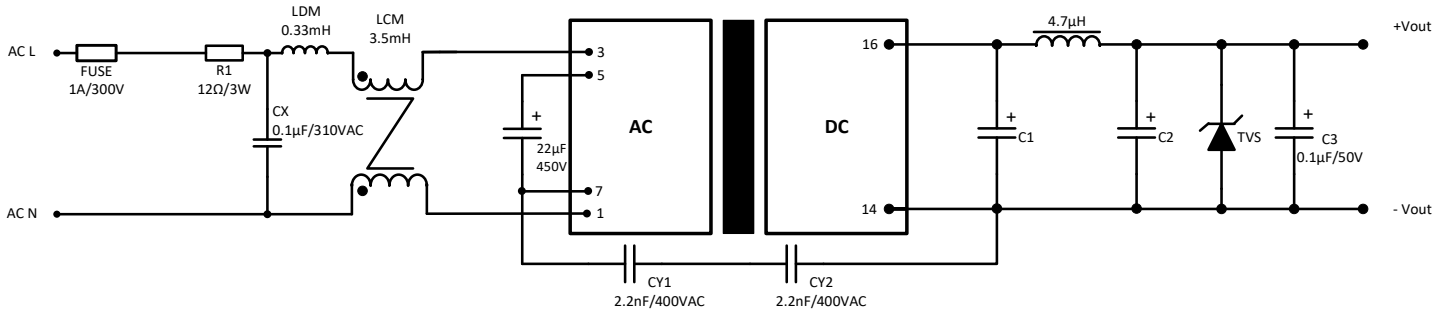
### EMI & EMS Recommended Circuit



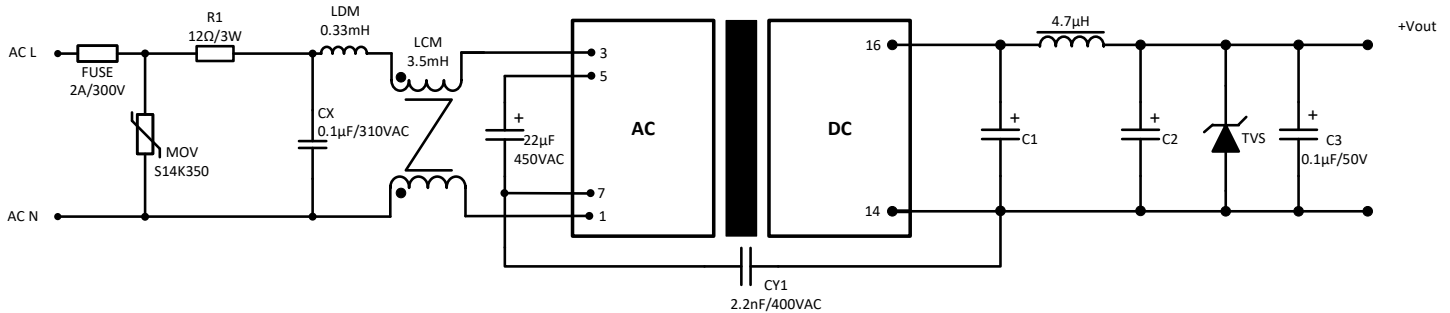
Component	EMS		EMI	
	Class III	Class IV	CLASS A	CLASS B
MOV	-	S14K350	-	-
R1	12Ω/3W	12Ω/3W	-	-
CX	-	-	-	0.1μF/310VAC
LCM	-	-	-	3.5mH
LDM	-	-	4.7mH	0.33mH
FUSE	1A/300V	2A/300V	1A/300V	1A/300V

Model name	C1	C2
3.3 VDC output	470μF/16V (Solid capacitor)	150μF/35V
5 VDC output	470μF/16V (Solid capacitor)	150μF/35V
9 VDC output	220μF/16V (Solid capacitor)	100μF/35V
12 VDC output	220μF/16V (Solid capacitor)	100μF/35V
15 VDC output	470μF/35V	47μF/35V
24 VDC output	220μF/35V	47μF/35V

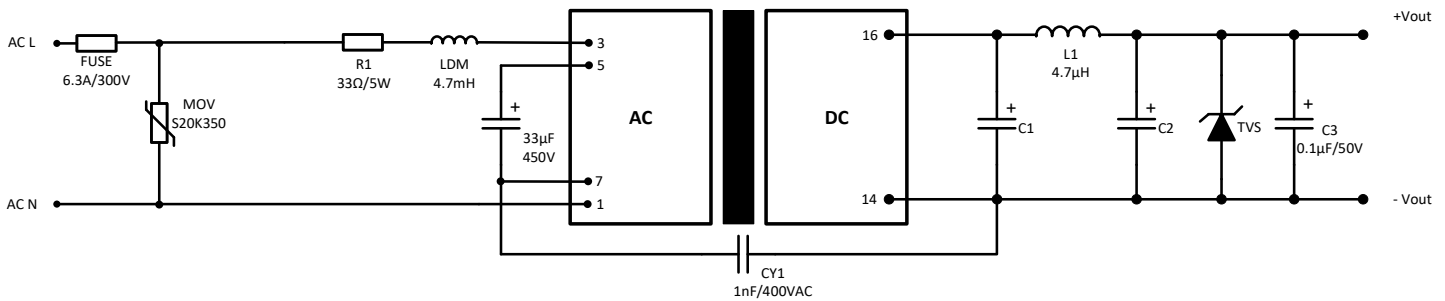
## Recommended EMC circuit for EN60335



## Recommended EMC circuit for EMI Class B, EMS Class IV



## Recommended EMC circuit for EFT Class IV, Surge L-G ±4KV



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