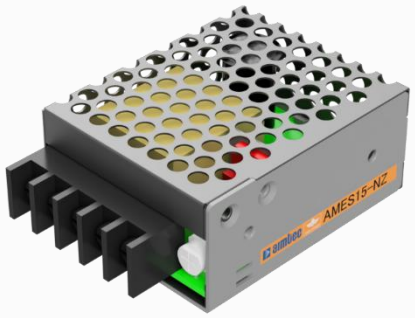
Click to ORDER samples

AMES15-NZ



Enclosed

The AMES15-NZ is an 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 90-264VAC and an output voltage range from 5-48V, this series will offer many benefits to your new system design.
This series offers great operating temperatures, from -20°C to 60°C and also features an isolation of 3000VAC for improved reliability and system safety. Furthermore, a high MTBF of 600,000h, output short circuit protection (OSCP), output over-current protection (OCP) and an output over-voltage protection (OVP) and an over temperature protection (OTP) come standard with the series.
The AMES15-NZ is suitable for street lighting controls, grid power, instrumentation, industrial controls, communication, and civil applications.

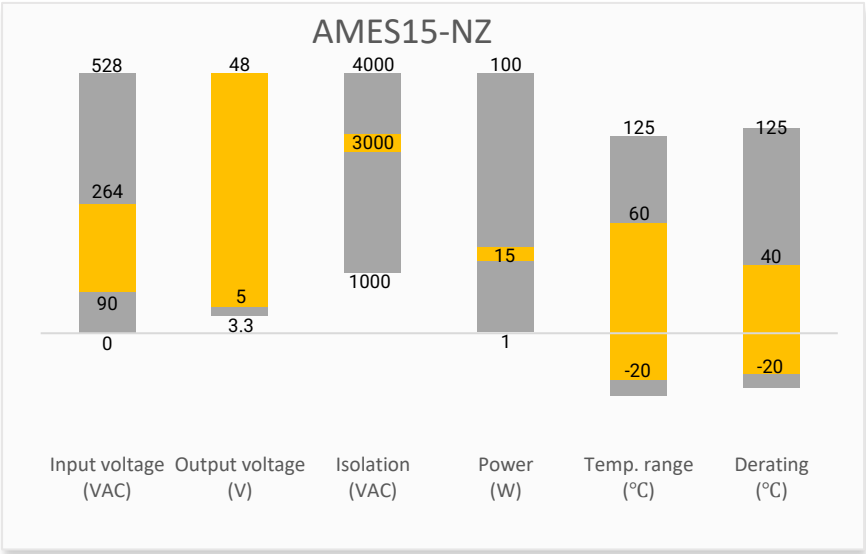
Features

- Universal Input: 90 - 264VAC
- Operating Temp: -20 °C to +60 °C
- High isolation voltage: Up to 3000VAC
- Output short circuit, over-current, over-voltage and over temperature protection
- Regulated Output

RoHS

3yr Warranty

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)	Max Output Wattage (W)	Output Voltage (V)	Output Current max (A)	Maximum capacitive load (µF)	Average Efficiency (%)
AMES15-5SNZ-P	90-264/50-60	15	5	3	2400	75
AMES15-12SNZ-P	90-264/50-60	15.6	12	1.3	1800	79
AMES15-24SNZ-P	90-264/50-60	15	24	0.625	600	80
AMES15-48SNZ-P	90-264/50-60	15	48	0.313	300	81

Note: The "-P" suffix indicates a terminal protective cover (ex. AMES15-5SNZ-P). For optional conformal coating, add "Q" after the "-P" (ex. AMES15-5SNZ-PQ is conformal coated version with terminal protective cover).

Input Specifications				
Parameters	Conditions	Typical	Maximum	Units
Input current	115VAC		0.35	A
	230VAC		0.25	A
Inrush current	cold start, 230VAC/50Hz	65		A
Leakage current	240VAC		2	mA

Output Specifications				
Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	Full load, 5V output	±2		%
	Full load, Others	±1		%
Line regulation	Full load	±0.5		%
Load regulation	0-100% load, 5V output	±1.5		%
	0-100% load, Others	±0.5		%
Ripple & Noise*	5V output	75		mV p-p
	12V output	120		mV p-p
	24V,48V output	200		mV p-p
Hold up time	115VAC	≥ 20		ms
	230VAC	≥ 70		ms
Start-up time	115VAC	1		S
	230VAC	0.5		S
Rise time	115/230VAC	30		mS

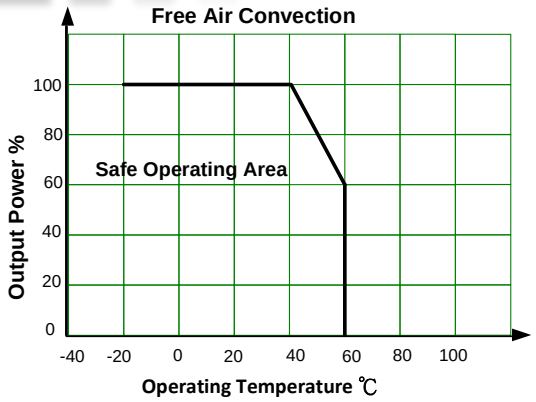
* Ripple and Noise are measured at 20MHz bandwidth with a 47µF electrolytic capacitor and a 0.1µF ceramic capacitor. Please refer to the application note for specific details.

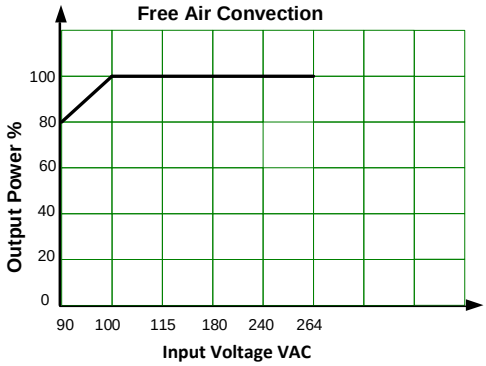
Isolation Specifications				
Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		3000	VAC
Tested Input to GND voltage	60 sec		2000	VAC
Tested Output to GND voltage	60 sec		500	VAC
Resistance (I/O, I/O to GND)	500VDC		100	MΩ

General Specifications				
Parameters	**Conditions**	**Typical**	**Maximum**	**Units**
Safety class	Class I			
Over voltage category	III (designed to meet EN61558)			
Over current protection	Hiccup, Auto recovery	≥ 105		% of Iout
Over voltage protection	5V output, shut down, Manual recovery		6.75	VDC
	12V output, shut down, Manual recovery		16.2	VDC
	24V output, shut down, Manual recovery		32.4	VDC
	48V output, shut down, Manual recovery		64.8	VDC
Short circuit protection	Hiccup, Continuous, Auto recovery			
Over temperature protection	Shut down, Manual recovery			
Operating temperature	See derating graph	-20 to +60		℃
Storage temperature		-40 to +85		℃
Power consumption			0.5	W
Power derating	40℃ to 60℃	2		% / ℃
	90VAC to 100VAC	2		% / VAC
Ambient temperature derating	Operating altitude > 2000m	5		℃ / 1000m
Cooling	Free air convection			
Humidity	Non-condensing, Storage	≥ 10	95	% RH
	Non-condensing, Operating	≥ 20	95	% RH
Case material	Metal			
Weight		130		g
Dimensions (L x W x H)		2.46 x 2.01 x 1.10inch (62.5 x 51.0 x 28.0mm)		
MTBF	> 600 000 hrs (MIL-HDBK -217F, t=+25℃)			
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25℃, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.				

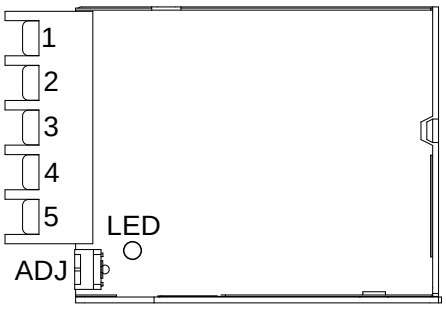
Safety Specifications		
Parameters		
Standards	Information technology Equipment	Design to meet UL62368-1, TUV BS EN/EN62368-1, IEC60950-1:20
	EMC - emission	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2, -3 Class A, GB9254 Class B
	EMC - immunity	EN/EN61000-4-2, 11 perf. Criteria B; EN/EN61000-4-3, 4, 5, 6, 8 perf. Criteria A; BS EN/EN55035

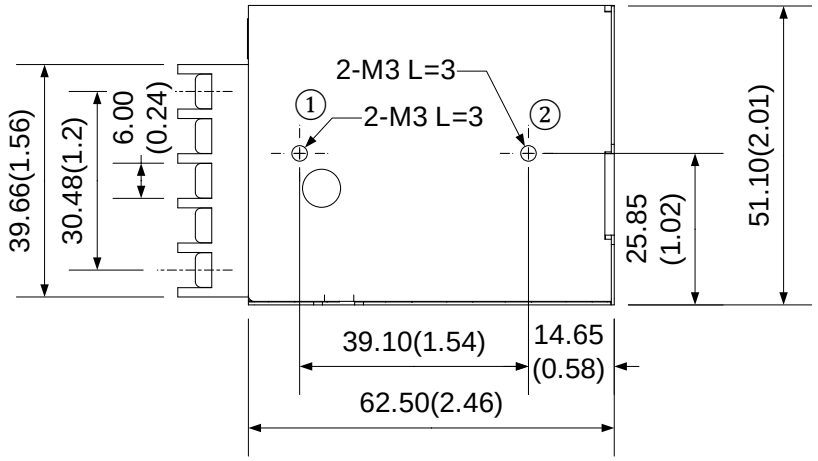
Derating



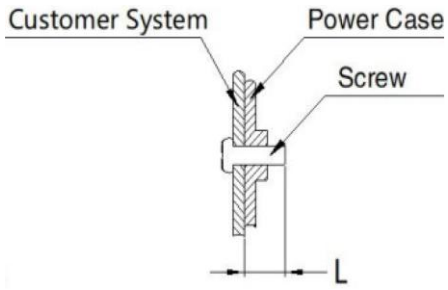


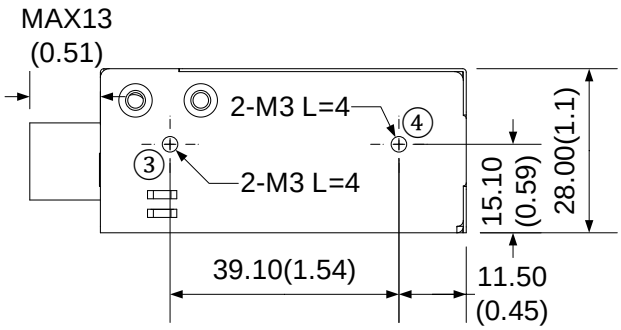
Dimensions





Note:
Unit: mm(inch)
Connector screw: M3.5
At least one of the ① - ④ location must be connected to PE





Single Pin Output Specifications	
Pin	Function
1	Input (L)
2	Input (N)
3	PE GND
4	-V Output
5	+V Output