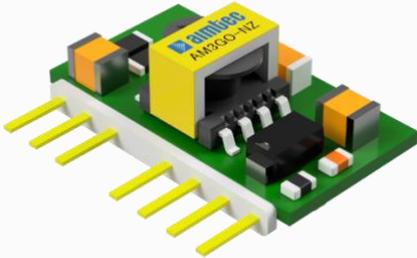Click to
ORDER
samples

AM3GO-NZ

Open frame package

The AM3GO-NZ series is a high-performance open frame DC/DC converter specifically designed for a variety of telecom applications. It features 3W of output power with no requirement for minimum load, a wide input voltage of 36-75VDC, operating temperature up to 85°C and tested I/O isolation of 1500VDC.

Additionally, this series features include input under-voltage protection, output short-circuit, over-current protection, and remote On/Off control.
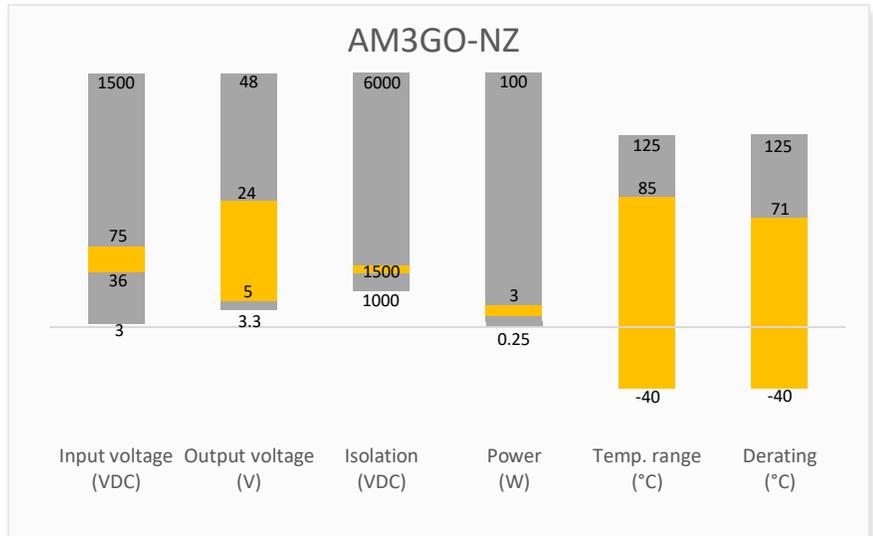
The AM3GO-NZ meets EN 62368 standards and are widely used in the industrial control, electric power instrumentation and communications.
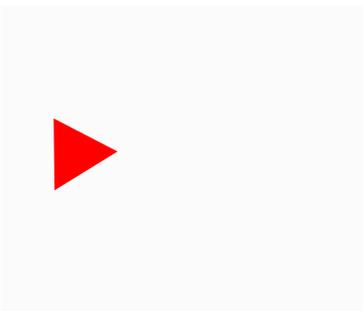
Features

- High I/O Isolation 1500VDC
- Input under voltage protection, output over current and short circuit protection
- Operating Temp: -40 °C to +85 °C
- Compact open frame design and high-power density
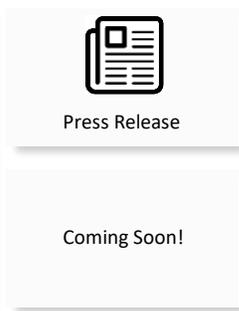- Efficiency up to 82%

RoHS

3 yr Warranty

Summary

AM3GO-NZ

	Value
Input voltage (VDC)	1500 / 75 / 36 / 3
Output voltage (V)	48 / 24 / 5 / 3.3
Isolation (VDC)	6000 / 1500 / 1000
Power (W)	100 / 3 / 0.25
Temp. range (°C)	125 / 85 / -40
Derating (°C)	125 / 71 / -40

Training

Product Training Video
(click to open)

Press Release

Coming Soon!

Application Notes

Applications

IoT

Industrial

Telecom

Portable Equipment

Preliminary

Models & Specifications

Single Output

Model	Input Voltage (VDC)	Output Voltage (VDC)	Maximum Output Current (A)	Maximum capacitive Load (µF)	Efficiency Typ. (%)
AM3GO-4805SNZ	48 (36-75)	5	0.6	1000	80
AM3GO-4812SNZ	48 (36-75)	12	0.25	470	81
AM3GO-4815SNZ	48 (36-75)	15	0.2	330	82
AM3GO-4824SNZ	48 (36-75)	24	0.125	100	82

Input Specification

Parameters	Conditions	Typical	Maximum	Units
Input current	Nominal input voltage, full load /no load	78/4	80/12	mA
Filter	Capacitor filter			
Absolute maximum rating	Maximum duration 1s	>0.7	80	VDC
Input reflected ripple current		50	100	mA
Start-up voltage			36	VDC
Start-up current			0.5	A
UVLO		28		VDC
On/Off control	On	Control pin open or 3.5-12VDC		
	Off	Control pin short to –Vin or 0-1.2VDC		
	Idle current	3	10	mA

Isolation Specification

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, leakage ≤ 1mA	>1500		VDC
Resistance	500VDC	>1000		MΩ
Capacitance	100kHz/0.1V	2200		pF

Output Specification

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	5-100% load	±1	±3	%
Line regulation	LL-HL	±0.5	±1	%
Load regulation	5-100% load	±0.5	±1.5	%
	0-5% load	±3		%
Temperature coefficient			±0.03	%/°C
Ripple & Noise*	Nominal input voltage, 5-100% load	100	200	mV pk-pk
Transient Recovery Time	25% load step change	300	500	µs
Transient Response Deviation	25% load step change, 5V output	±5	±8	%
	25% load step change, others	±2.5	±5	%

* Ripple and Noise are measured at 20MHz bandwidth. Please refer to the application note for specific details.

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency*			460	KHz

Preliminary

Short circuit protection	Continuous, auto recovery			
Over current protection		≥ 160	250	% of Io
Operating temperature	With derating	-40 to +85		°C
Storage temperature		-55 to +125		°C
Soldering temperature	Wave soldering, maximum duration 10s		260	°C
Cooling	Free air convection or forced air convection			
Humidity	Non-condensing	>5	95	% RH
Weight		2.2		g
Dimensions (L x W x H)		0.87 x 0.32 x 0.50 inches (22.00 x 8.20 x 12.80 mm)		
MTBF	1 000 000 hrs (MIL-HDBK -217F, t=+25°C) / Full Load			

* Switching frequency reduced when load < 50%.
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.

Environment Approval

| Parameters	Conditions
Vibration	10-150Hz, 5G, 0.75mm, along all axis

Safety Specifications

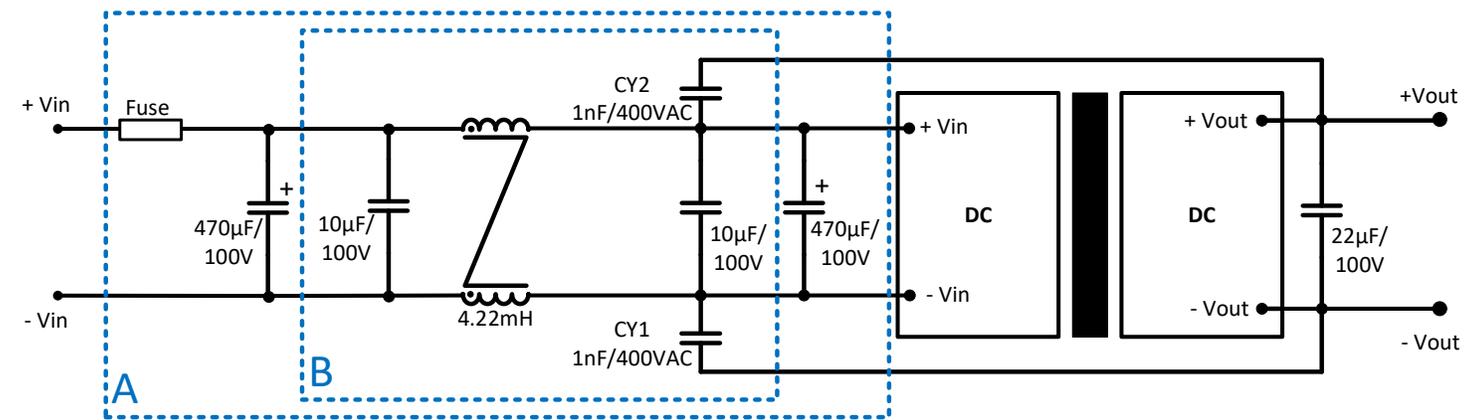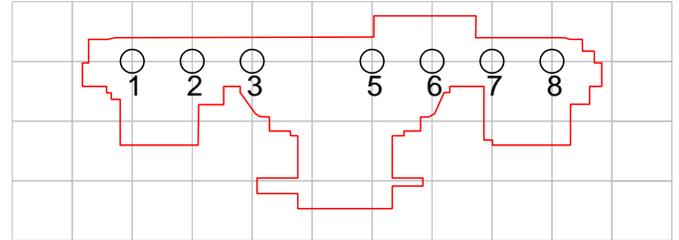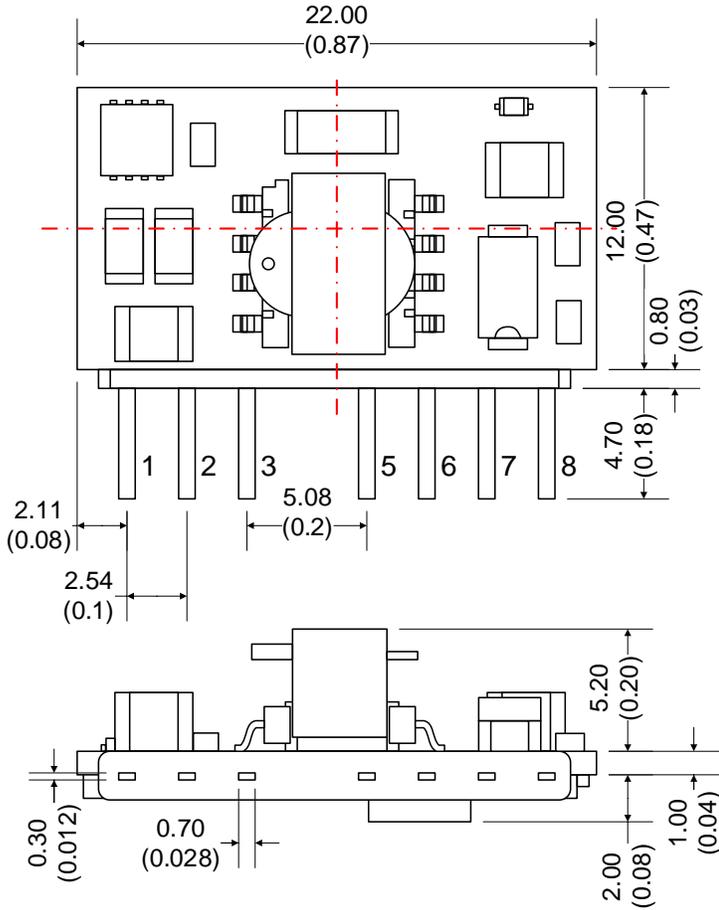| Parameters		
Standards	Information technology Equipment	Design to meet EN 62368
	EMC - Conducted and radiated emission	CISPR32 / EN55032, class B with the recommended EMC circuit part B
	Electrostatic Discharge Immunity	IEC 61000-4-2 Contact ±4KV, Criteria B
	RF, Electromagnetic Field Immunity	EN 61000-4-3, 10V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	EN 61000-4-4, ±2KV, Criteria B with the recommended EMC circuit part A
	Surge Immunity	EN 61000-4-5, ±2KV, Criteria B with the recommended EMC circuit part A
	RF, Conducted Disturbance Immunity	EN 61000-4-6, 3Vr.m.s, Criteria A

Derating

Free Air Convection

Safe Operating Area

Output Power %

Ambient Temperature °C
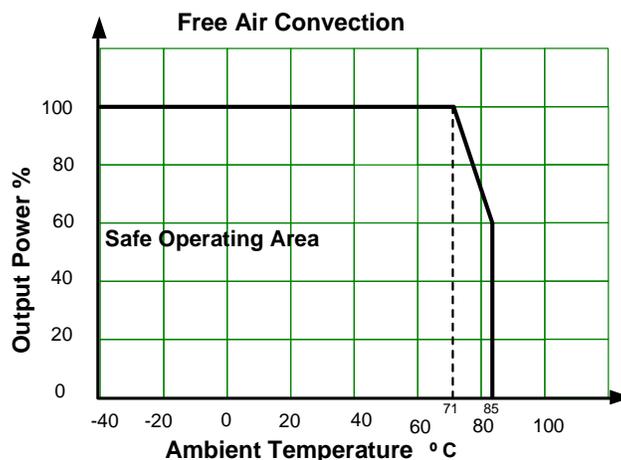
Typical application circuit
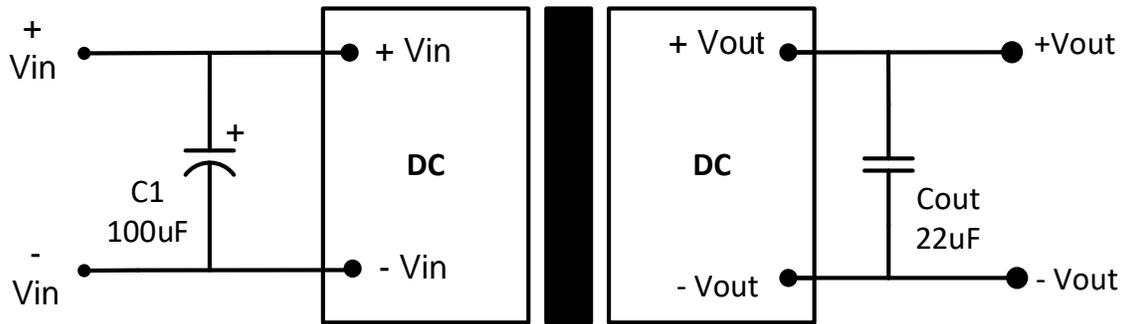
Recommended EMC circuit

Note: Part A for EMC test, Part B for EMI test

Dimensions

22.00
(0.87)

12.00
(0.47)

0.80
(0.03)

4.70
(0.18)

2.11
(0.08)

5.08
(0.2)

2.54
(0.1)

5.20
(0.20)

0.30
(0.012)

0.70
(0.028)

1.00
(0.04)

2.00
(0.08)

Grid size: 2.54 x 2.54mm

Note:
Unit: mm(inch)
General tolerance: ±0.5 (0.02)

Pin Out Specifications	
Pin	Single
1	-Vin
2	+Vin
3	On/Off Control
5	NC
6	+Vout
7	-Vout
8	NC