



FEATURES:

- RoHS compliant
- High efficiency up to 84%
- Remote On/Off Control
- 8 pin SIP package
- Operating temperature -40°C to + 85°C
- Continuous Short circuit protection
- Wide 2:1 input range
- Input/Output Isolation 1600 & 3000VDC



Models Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Capacitor Load (µF)	Efficiency
AM3G-0503SZ	4.5-9	3.3	700	1600	2200	74
AM3G-0505SZ	4.5-9	5	600	1600	1000	76
AM3G-0512SZ	4.5-9	12	250	1600	470	82
AM3G-0515SZ	4.5-9	15	200	1600	220	82
AM3G-1203SZ	9-18	3.3	700	1600	2200	76
AM3G-1205SZ	9-18	5	600	1600	1000	81
AM3G-1212SZ	9-18	12	250	1600	470	84
AM3G-1215SZ	9-18	15	200	1600	220	84
AM3G-2403SZ	18-36	3.3	700	1600	2200	74
AM3G-2405SZ	18-36	5	600	1600	1000	79
AM3G-2412SZ	18-36	12	250	1600	470	82
AM3G-2415SZ	18-36	15	200	1600	220	84
AM3G-4803SZ	36-72	3.3	700	1600	2200	75
AM3G-4805SZ	36-72	5	600	1600	1000	78
AM3G-4812SZ	36-72	12	250	1600	470	81
AM3G-4815SZ	36-72	15	200	1600	220	81
AM3G-0503SH30Z	4.5-9	3.3	700	3000	2200	74
AM3G-0505SH30Z	4.5-9	5	600	3000	1000	76
AM3G-0512SH30Z	4.5-9	12	250	3000	470	82
AM3G-0515SH30Z	4.5-9	15	200	3000	220	82
AM3G-1203SH30Z	9-18	3.3	700	3000	2200	76
AM3G-1205SH30Z	9-18	5	600	3000	1000	81
AM3G-1212SH30Z	9-18	12	250	3000	470	84
AM3G-1215SH30Z	9-18	15	200	3000	220	84
AM3G-2403SH30Z	18-36	3.3	700	3000	2200	74
AM3G-2405SH30Z	18-36	5	600	3000	1000	79
AM3G-2412SH30Z	18-36	12	250	3000	470	82
AM3G-2415SH30Z	18-36	15	200	3000	220	84
AM3G-4803SH30Z	36-72	3.3	700	3000	2200	75
AM3G-4805SH30Z	36-72	5	600	3000	1000	78
AM3G-4812SH30Z	36-72	12	250	3000	470	81
AM3G-4815SH30Z	36-72	15	200	3000	220	81

Models Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Capacitor Load (µF)	Efficiency (%)
AM3G-0505DZ	4.5-9	±5	±300	1600	±470	77
AM3G-0512DZ	4.5-9	±12	±125	1600	±220	81
AM3G-0515DZ	4.5-9	±15	±100	1600	±100	82
AM3G-1205DZ	9-18	±5	±300	1600	±470	80
AM3G-1212DZ	9-18	±12	±125	1600	±220	83
AM3G-1215DZ	9-18	±15	±100	1600	±100	82
AM3G-2405DZ	18-36	±5	±300	1600	±470	80
AM3G-2412DZ	18-36	±12	±125	1600	±220	83
AM3G-2415DZ	18-36	±15	±100	1600	±100	83
AM3G-4805DZ	36-72	±5	±300	1600	±470	78

Models Dual output (continued)

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Capacitor Load (μF)	Efficiency (%)
AM3G-4812DZ	36-72	±12	±125	1600	±220	80
AM3G-4815DZ	36-72	±15	±100	1600	±100	81
AM3G-0505DH30Z	4.5-9	±5	±300	3000	±470	77
AM3G-0512DH30Z	4.5-9	±12	±125	3000	±220	81
AM3G-0515DH30Z	4.5-9	±15	±100	3000	±100	82
AM3G-1205DH30Z	9-18	±5	±300	3000	±470	80
AM3G-1212DH30Z	9-18	±12	±125	3000	±220	83
AM3G-1215DH30Z	9-18	±15	±100	3000	±100	82
AM3G-2405DH30Z	18-36	±5	±300	3000	±470	80
AM3G-2412DH30Z	18-36	±12	±125	3000	±220	83
AM3G-2415DH30Z	18-36	±15	±100	3000	±100	83
AM3G-4805DH30Z	36-72	±5	±300	3000	±470	78
AM3G-4812DH30Z	36-72	±12	±125	3000	±220	80
AM3G-4815DH30Z	36-72	±15	±100	3000	±100	81

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

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5 12 24 48	5-9 9-18 18-36 36-72		VDC
Filter	Capacitor			
Turn on Transient process time		300		μs
Transient Response deviation			±3	%
Start up time		20		ms
Absolute Maximum Rating	5 Vin 12 Vin 24 Vin 48 Vin	-0.7-15 -0.7-36 -0.7-50 -0.7-100		VDC
Peak Input Voltage time			100	ms
On/Off Control	ON – high impedance or open; OFF – 3-6mA input current through 1KΩ (standby 3mA max)			
Input reflected ripple current*		35		mA p-p

* The input reflected ripple current should be measured with connected 12μH inductor and 47μF input capacitor (ESR<1Ω at 100 KHz)

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec	1600 & 3000		VDC
Resistance		> 1000		MOhm
Capacitance		680		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Cross Regulation (Dual)	25% load on one output and 100% load on second output	±5		%
Short Circuit protection		Continuous		
Short Circuit restart		Auto recovery		
Line voltage regulation	LL~HL	±0.5		%
Load voltage regulation	load 25~100%	±1		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	At 20MHz Bandwidth	75		mV p-p

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	>100		KHz
Operating temperature	Full Load without Derating	-40 to +71		°C
Storage temperature		-40 to +125		°C
Max Case temperature			+100	°C
Cooling	Free air convection			
Humidity			95	%
Case material	Non-conductive black plastic			
Potting material	Epoxy (UL94V-0 rated)			
Pin Material	C5191R-H Solder coated			
Weight		4.8		g
Dimensions (L x W x H)		0.86 x 0.36 x 0.42 inch	21.85 x 9.20 x 10.60 mm	
MTBF		>2 465 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)		

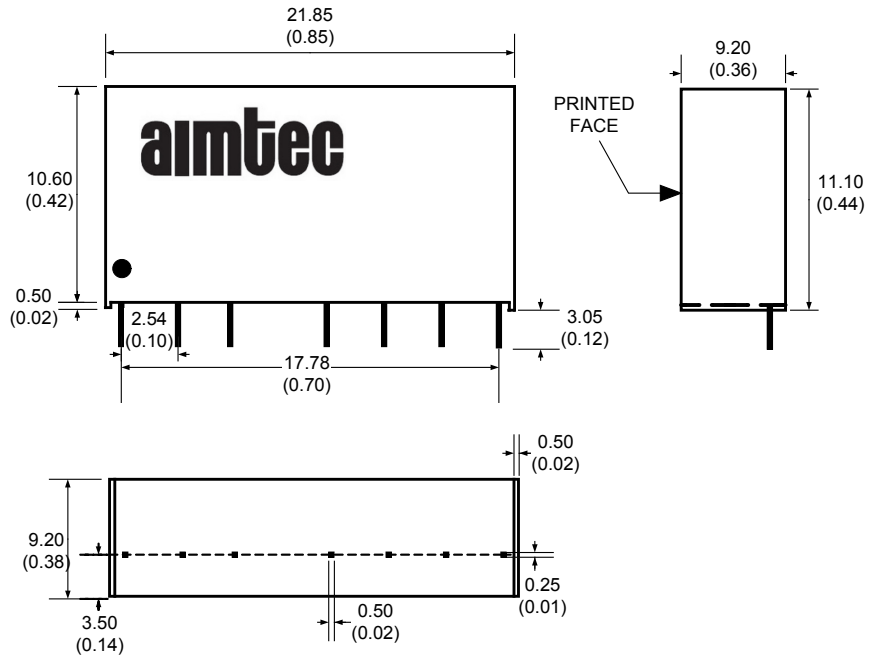
Safety Specifications

Parameters	
Agency Approval	CE
Standards	EN55022 Class A, EN55024
	IEC61000-4-2, Perf. Criteria B
	IEC61000-4-3, Perf. Criteria A
	IEC61000-4-4, Perf. Criteria B (external 220uF/100V cap required)
	IEC61000-4-5, Perf. Criteria B (external 220uF/100V cap required)
	IEC61000-4-6, Perf. Criteria A
	IEC61000-4-8, Perf. Criteria A

Pin Out Specifications

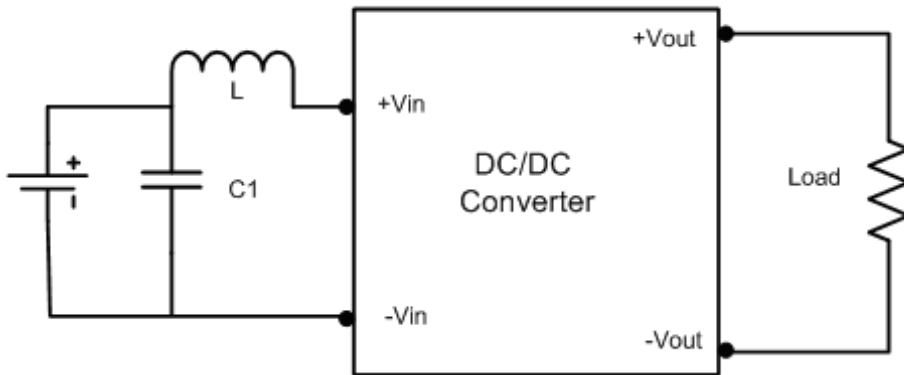
Pin	1600 & 3000VDC	
	Single	Dual
1	- V Input	- V Input
2	+ V Input	+ V Input
3	On/Off Control	On/Off Control
5	N.C.	N.C.
6	+ V Output	+ V Output
7	- V Output	Common
8	N.C.	- V Output

Dimensions

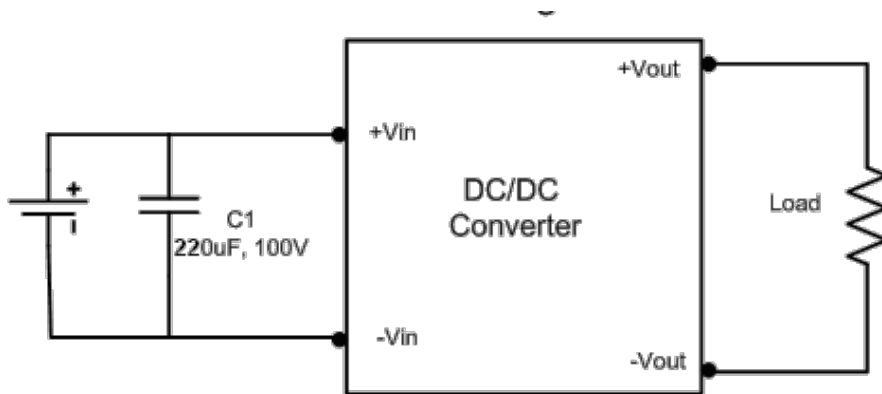


Conducted Emissions:

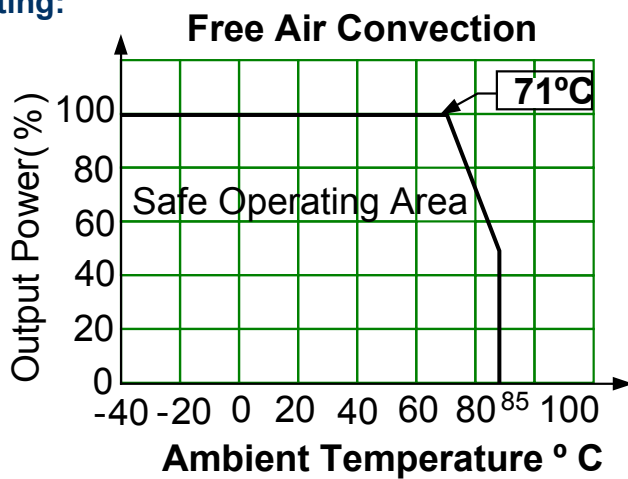
Input Voltage	C1	L1
5V	220uF/25V	5.6uH
12V Single	100uF/100V	18 uH
12V Dual	2.2uF/100V	18uH
24V	10uF/35V	18uH
48V	100uF/100V	56uH



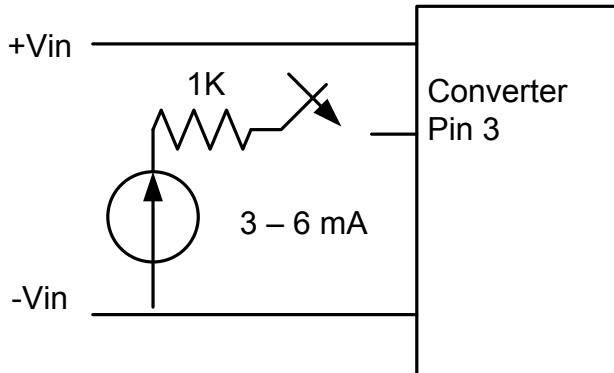
Surge:



Derating:



Control ON/OFF pin connection example:



The voltage could be applied through a limiting resistor. The converter is turned on the external switching circuit is open.

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