



FEATURES:

- Wide input voltage range (2:1)
- Efficiency up to 88%
- Isolation voltage of 1500VDC
- Input under voltage lockout
- Operating temperature: -40 °C to +85 °C
- No load consumption ≤ 0.12W
- Continuous Short Circuit Protection
- Over Current, Over Voltage Protection



Models Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load(uF)	Efficiency (%)
AM6C-1205S-NZ	9-18	5	1200	1500	1000	81
AM6C-1212S-NZ	9-18	12	500	1500	470	85
AM6C-2403S-NZ	18-36	3.3	1500	1500	1800	77
AM6C-2405S-NZ	18-36	5	1200	1500	1000	82
AM6C-2412S-NZ	18-36	12	500	1500	470	85
AM6C-2415S-NZ	18-36	15	400	1500	220	86
AM6C-2424S-NZ	18-36	24	250	1500	100	87

Models Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load(uF)	Efficiency (%)
AM6C-1205D-NZ†	9-18	±5	±600	1500	470	81
AM6C-1212D-NZ†	9-18	±12	±250	1500	100	85
AM6C-2405D-NZ†	18-36	±5	±600	1500	470	83
AM6C-2412D-NZ†	18-36	±12	±250	1500	100	87
AM6C-2415D-NZ†	18-36	±15	±200	1500	100	87

Only the model AM6C-2405S-NZ can add suffix “-ST” for optional screw terminal bottom plate or “-STD” for optional DIN Rail screw terminal bottom plate and reverse voltage protection. The optional package will be EOL by 30 Dec, 2020.

*† - Reference the Safety table

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	12	9-18		VDC
	24	18-36		
Filter	π(Pi) Network			
Input under-voltage lockout	12		5.5 - 6.5	VDC
	24		14 - 15.5	
Absolute Maximum Rating	12		-0.7 - 25	VDC
	24		-0.7 - 50	
Peak Input Voltage time			1	s
No Load Input Current	12		25	mA
	24		15	
Input reflected current		20		mA

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	1 min, ≤1mA		1500	VDC
Resistance	Isolation 500VDC	>1000		MOhm
Capacitance	100kHz, 0.1V	1000		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2	±3	%
Voltage balance (Dual Output Models)	Balanced Load	±1.5		%
Cross Regulation (Dual Output Models)	50% load on one output – 10% to 100% load on second load		±5	%
Over voltage protection		110-160		% of Vout
Short Circuit protection	Continuous, Auto recovery			
Over current protection		110-190		% of Iout
Line voltage regulation	LL-HL, full load	±1		% of Vin
Load voltage regulation	5% -100% load	±1.5		%
Temperature coefficient	Full load	±0.03		%/°C
Ripple & Noise	20MHz Bandwidth	75		mV p-p
Transient recovery time	25% load step change	500		µs
Transient recovery deviation	25% load step change	±5	±8	%

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	300		KHz
Operating temperature	With derating above 71°C	-40 to +85		°C
Storage temperature		-55 to +125		°C
Maximum case temperature			105	°C
Cooling	Free convection			
Humidity			95	% RH
Case material	Aluminum alloy			
Weight	Pin mountable	14		g
	-ST option	36		
	-STD option	56		
Dimensions (L x W x H)	Aluminum case	1 x 1 x 0.46 inches 25.40 x 25.40 x 11.70 mm		
	Optional packages	See dimensions drawing		
MTBF	>1,000,000 hours (MIL-HDBK -217F, Ground Benign, t=+25°C)			
Maximum soldering temperature	10sec, 1.5mm from case		300	°C

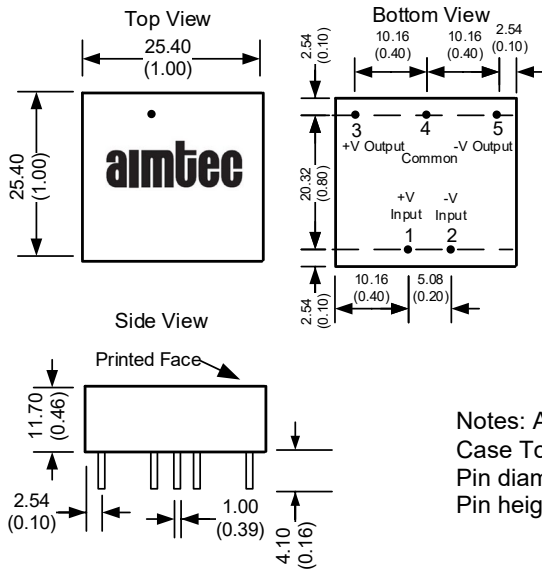
Environmental Specifications

Parameters		
Vibration	Test mode	10-55Hz
	Acceleration	10G, 30min one cycle, every axis tested

Safety Specifications

Parameters		
Standards	Information Technology Equipment	Designed to meet UL60950-1 (models marked with †), EN55022 Class B, with the recommended circuit below, EN55024
	Electrostatic Discharge Immunity	IEC 61000-4-2, Contact ±4KV, 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 the recommended circuit below
	Surge Immunity	IEC 61000-4-5, ±2KV, Criteria B, with the recommended circuit below
	RF, Conducted Disturbance Immunity	IEC 61000-4-6, 3 Vrms, Criteria A
	Voltage dips, Short interruptions and Voltage Variations Immunity	IEC61000-4-29, 0-70%, Criteria B

Dimensions

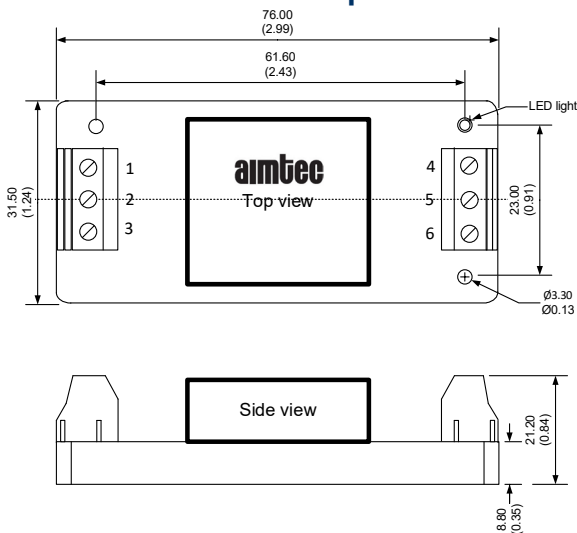


Notes: All dimensions are typical in millimeters (inches).
Case Tolerance ± 0.25 (± 0.01)
Pin diameter tolerance ± 0.1 (± 0.004)
Pin height tolerance ± 0.5 (± 0.02)

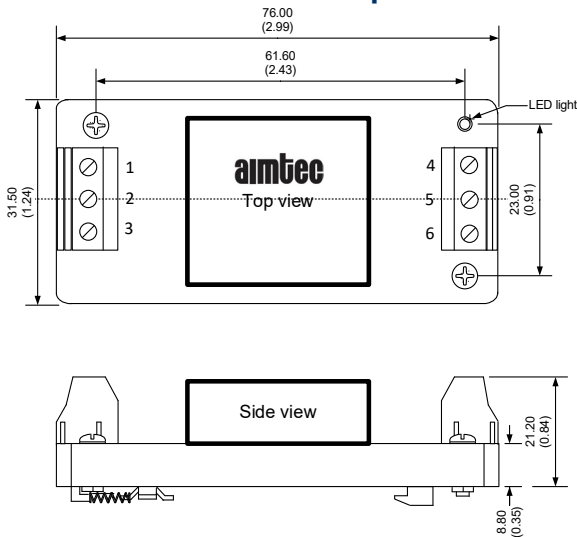
Pin Out Specifications

Pin	Single	Dual
1	+V Input	+V Input
2	-V Input	-V Input
3	+V Output	+V Output
4	No pin	Common
5	-V Output	-V Output

Dimensions with -ST options



Dimensions with -STD options



Pin Out Specifications

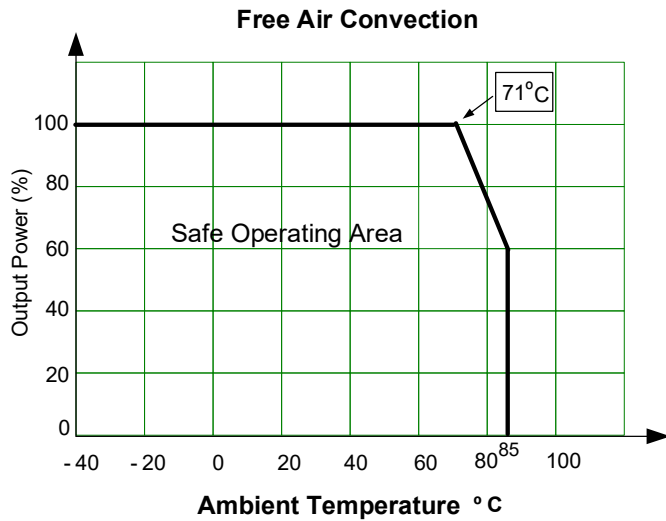
Pin	Single	Dual
1	No Connection	No Connection
2	-V Input	-V Input
3	+V Input	+V Input
4	-V Output	-V Output
5	No Connection	Common
6	+V Output	+V Output

Dimensions: mm (inch)
Case Tolerance: ± 0.50 (0.02)
Wire gauge: 24-12AWG
Torque Tightening: Max 0.4N*m

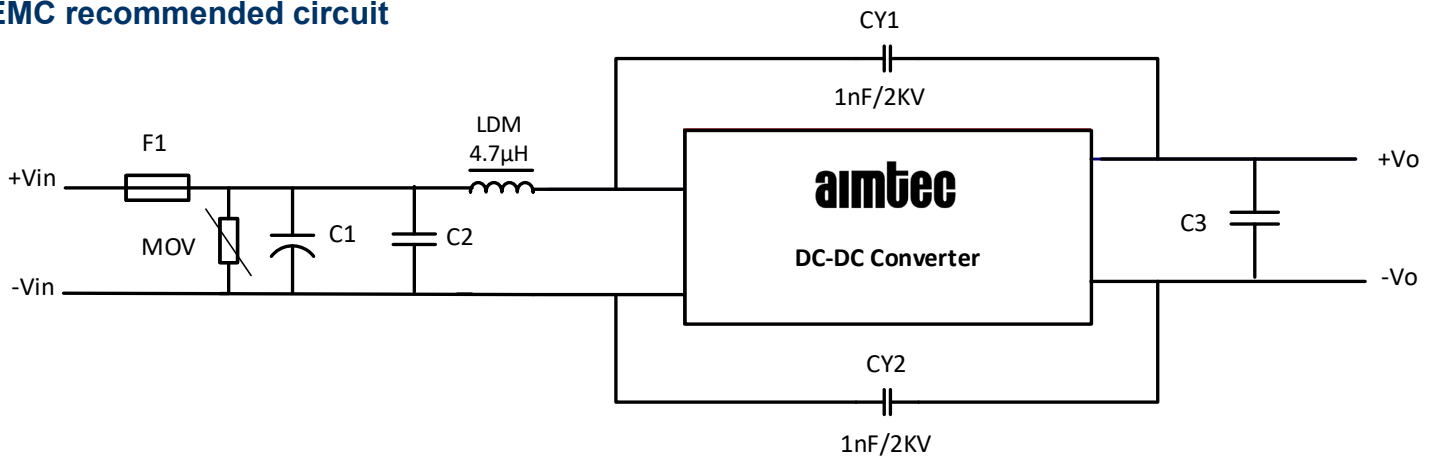
Pin	Single	Dual
1	No Connection	No Connection
2	-V Input	-V Input
3	+V Input	+V Input
4	-V Output	-V Output
5	No Connection	Common
6	+V Output	+V Output

Dimensions: mm (inch)
Case Tolerance: ± 0.50 (0.02)
Wire gauge: 24-12AWG
Mounting Rail: TS35
Torque Tightening: Max 0.4N*m

Derating



EMC recommended circuit



	12V input	24V input	48V input
MOV	S14K20	S20K30	S14K60
C1	1000µF/35V	1000µF/50V	330µF/100V
C2	1µF/50V		1µF/100V
C3	10µF/50V		10µF/100V

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