aimtec
Your Power Partner

Series AM40UW-IZ

40Watt | DC-DC Converter

FEATURES:

- Ultra-Wide Input 4:1 Range
- 1500 & 3000 VDC Isolation
- Efficiency up to 83%
- Regulated Output
- Soft Start
- Adjustable Output Voltage
- Remote ON/OFF Function
- Over Load, Voltage & Short Circuit Protection
- Operating temperature -40°C to + 75°C

CE RoHS

Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Isolation (VDC)	Efficiency (%)
AM40UW-2403SIZ	9-36	3.3	7	1500	82
AM40UW-2405SIZ	9-36	5	7	1500	82
AM40UW-2412SIZ	9-36	12	3	1500	82
AM40UW-2415SIZ	9-36	15	2.3	1500	82
AM40UW-2424SIZ	9-36	24	1.5	1500	82
AM40UW-4803SIZ	18-75	3.3	7	1500	83
AM40UW-4805SIZ	18-75	5	7	1500	83
AM40UW-4812SIZ	18-75	12	3	1500	83
AM40UW-4815SIZ	18-75	15	2.3	1500	83
AM40UW-4824SIZ	18-75	24	1.5	1500	83
AM40UW-2403SH30IZ	9-36	3.3	7	3000	82
AM40UW-2405SH30IZ	9-36	5	7	3000	82
AM40UW-2412SH30IZ	9-36	12	3	3000	82
AM40UW-2415SH30IZ	9-36	15	2.3	3000	82
AM40UW-2424SH30IZ	9-36	24	1.5	3000	82
AM40UW-4803SH30IZ	18-75	3.3	7	3000	83
AM40UW-4805SH30IZ	18-75	5	7	3000	83
AM40UW-4812SH30IZ	18-75	12	3	3000	83
AM40UW-4815SH30IZ	18-75	15	2.3	3000	83
AM40UW-4824SH30IZ	18-75	24	1.5	3000	83

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Isolation (VDC)	Efficiency (%)
AM40UW-2405DIZ	9-36	±5	±3.5	1500	80
AM40UW-2412DIZ	9-36	±12	±1.5	1500	80
AM40UW-2415DIZ	9-36	±15	±1.15	1500	80
AM40UW-4805DIZ	18-75	±5	±3.5	1500	81
AM40UW-4812DIZ	18-75	±12	±1.5	1500	81
AM40UW-4815DIZ	18-75	±15	±1.15	1500	81
AM40UW-2405DH30IZ	9-36	±5	±3.5	3000	80
AM40UW-2412DH30IZ	9-36	±12	±1.5	3000	80
AM40UW-2415DH30IZ	9-36	±15	±1.15	3000	80
AM40UW-4805DH30IZ	18-75	±5	±3.5	3000	81
AM40UW-4812DH30IZ	18-75	±12	±1.5	3000	81
AM40UW-4815DH30IZ	18-75	±15	±1.15	3000	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				VDC
	24	9-36		
	48	18-75		
Filter		π(Pi) Network		
Absolute Maximum Rating				VDC
	24		50	
	48		100	
On/Off control		ON –TTL High or Open ; OFF – TTL Low or short		

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	3 sec	1500 or 3000		VDC
Resistance	500VDC	>1000		MOhm

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Over voltage protection		Zener diode clamp		
Over current protection		>110 FL		%
Short Circuit protection		Continuous		
Short circuit restart		Auto-Restart		
Line voltage regulation		±0.5		% of Vin
Load voltage regulation (Single)	Iout=25% to 100%	±0.5		%
Load voltage regulation (Dual)	Iout=25% to 100%	±2		%
Temperature coefficient		±0.05		%/°C
Ripple & Noise	20MHz Bandwidth (5 & 3.3Vout)	80		mV p-p
	All other output models	1		% p-p Vout
Voltage adjustment range		±5		%
Minimum Load Current		25		% of Max

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	250		KHz
Operating temperature		-40 to +85		°C
Storage temperature		-55 to +115		°C
Maximum case temperature		100		°C
Derating	See chart below	45		°C
Cooling		Free air convection		
Humidity			95	% RH
Case material		Nickel – coated Copper with nonconductive base		
Weight		65		g
Dimensions (L x W x H)		2.00 x 2.00 x 0.40 inches	50.81 x 50.81 10.20 mm	
MTBF		>1 500 000 hrs (MIL-HDBK-217 F at +25 °C)		
Maximum soldering temperature				°C
Transient recovery time	50% load step change		280	uS

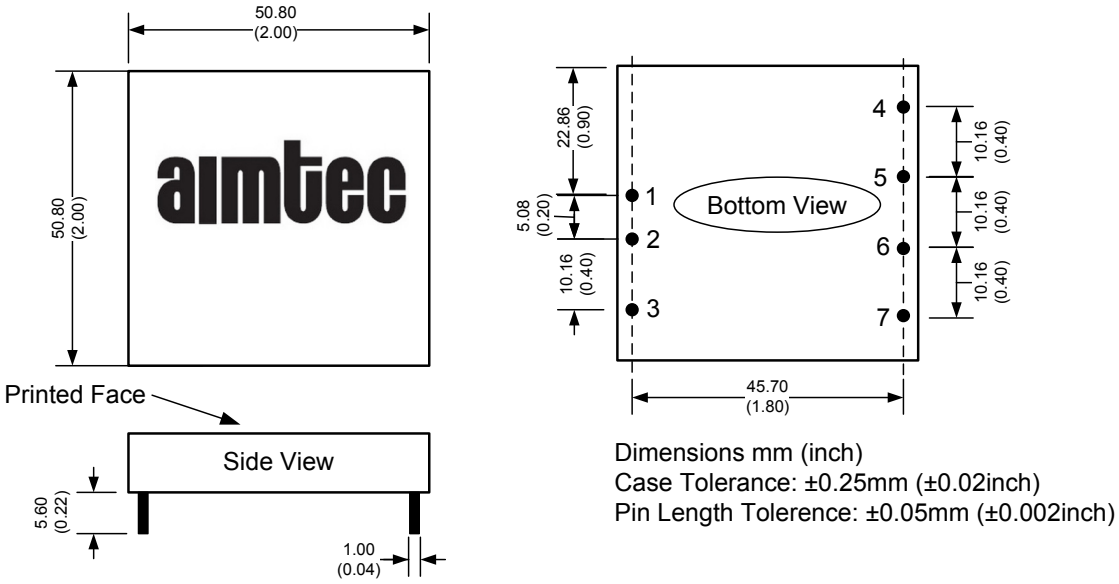
Safety & EMC Specifications

Parameters		
Agency approvals	CE, (on 1500 VDC Isolation models only)	
Standards	EMI - Conducted and radiated emission	EN55022: 2010, class A EN55024: 2010
	Electrostatic Discharge Immunity	IEC 61000-4-2
	RF, Electromagnetic Field Immunity	IEC 61000-4-3
	RF, Conducted Disturbance Immunity	IEC 61000-4-6
	Power frequency Magnetic Field Immunity	IEC 61000-4-8

Pin Out Specifications

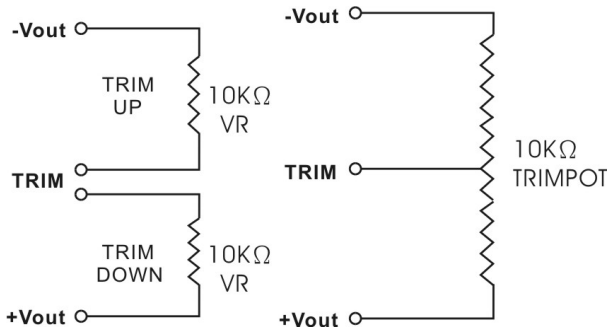
Pin	1000 & 3000VDC	
	Single	Dual
1	+V Input	+V Input
2	-V Input	-V Input
3	On/Off Control	On/Off Control
4	No pin	+V Output
5	+V Output	Common
6	-V Output	-V Output
7	Trim	Trim

Dimensions

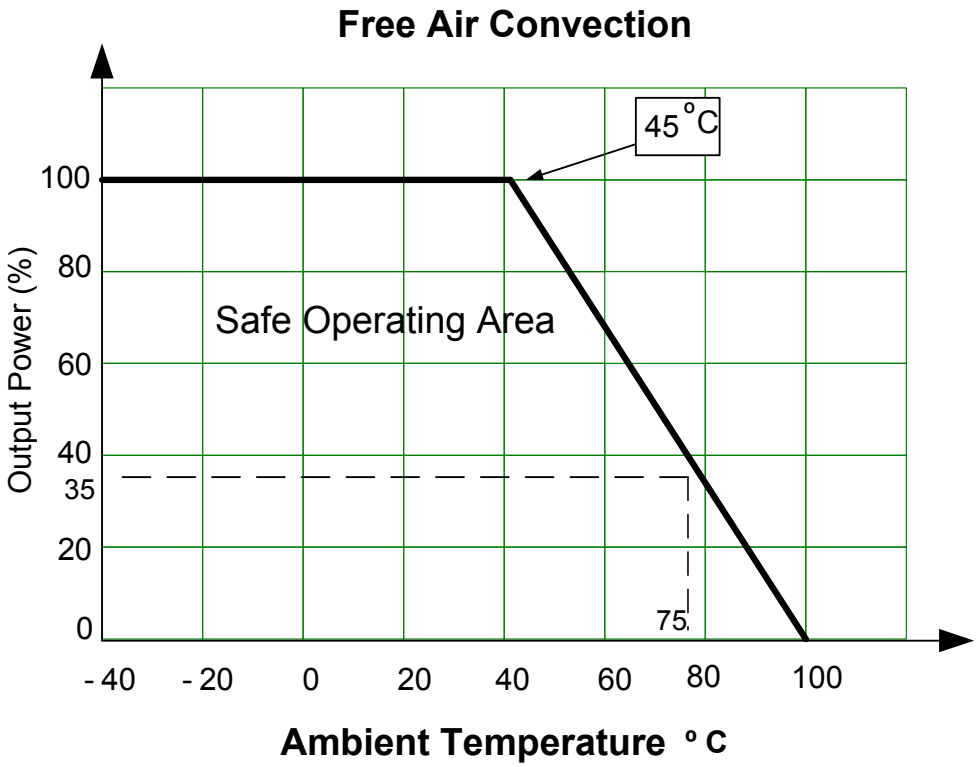


Dimensions mm (inch)
Case Tolerance: ±0.25mm (±0.02inch)
Pin Length Tolerence: ±0.05mm (±0.002inch)

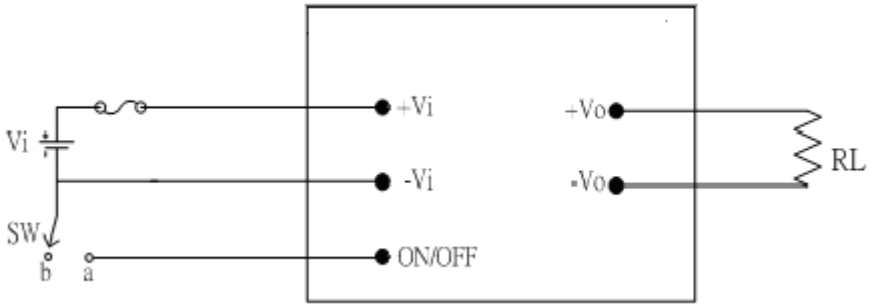
Trimming



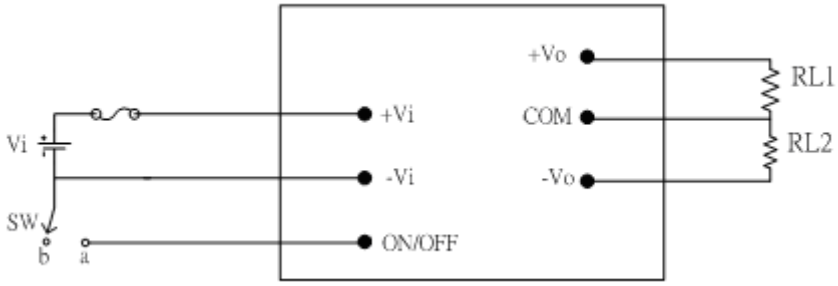
Derating



Control ON/OFF pin connection example
Single Output



Dual Output



Digital Control Circuit: