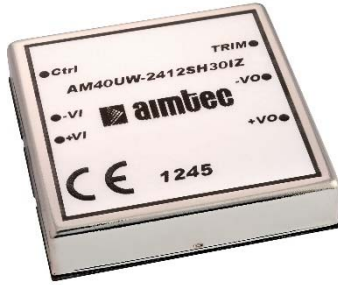


Series AM40UW-IZ

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

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)	I _{out} =25% to 100%	± 0.5		%
Load voltage regulation (Dual)	I _{out} =25% to 100%	± 2		%
Temperature coefficient		± 0.05		%/°C
Ripple & Noise	20MHz Bandwidth (5 & 3.3V _{out})	80		mV p-p
	All other output models	1		% p-p V _{out}
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 +75		°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

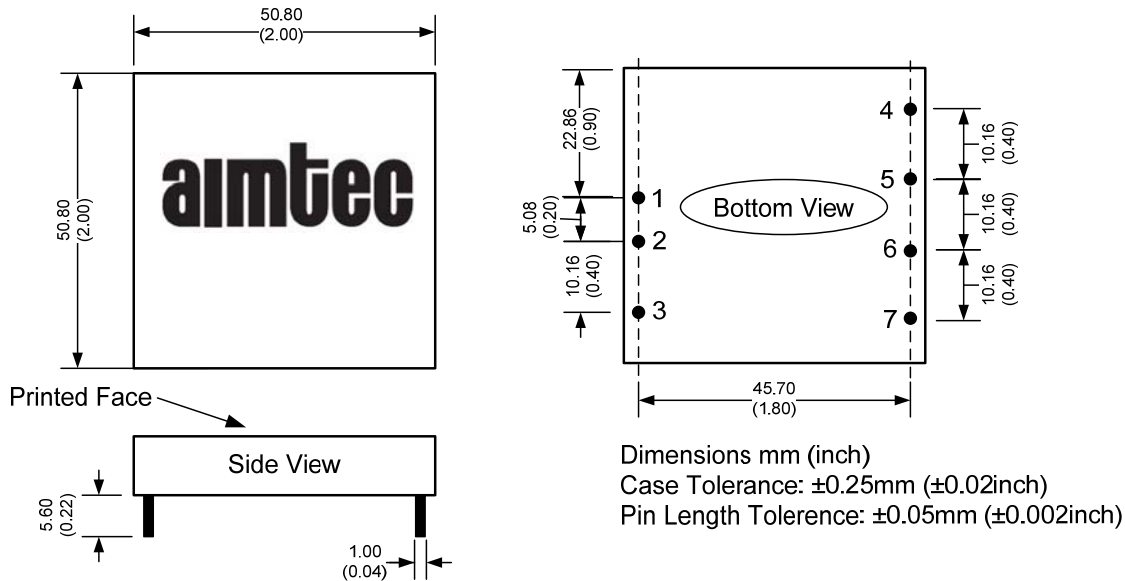
Safety & EMC Specifications

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	

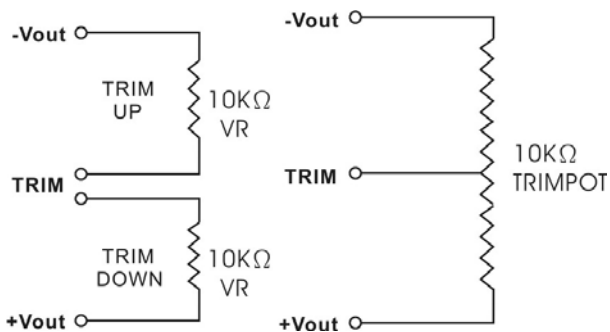
Pin Out Specifications

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

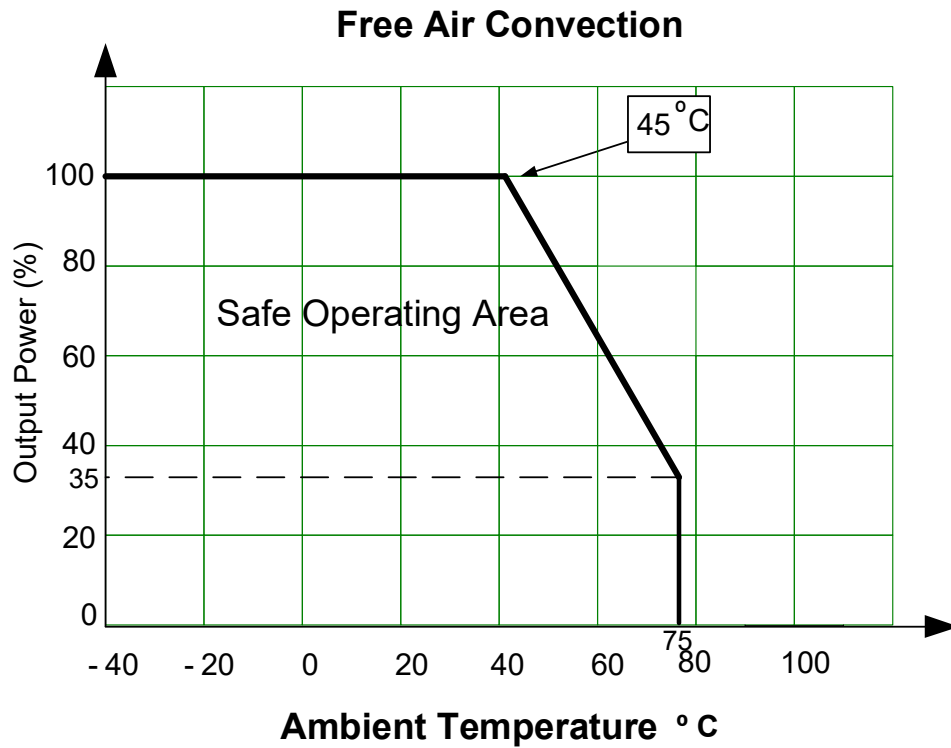
Dimensions



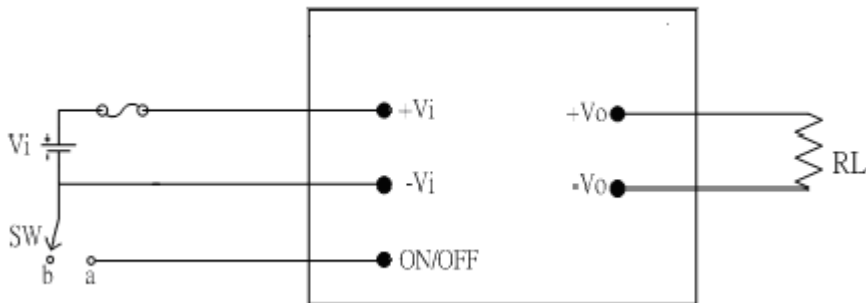
Trimming



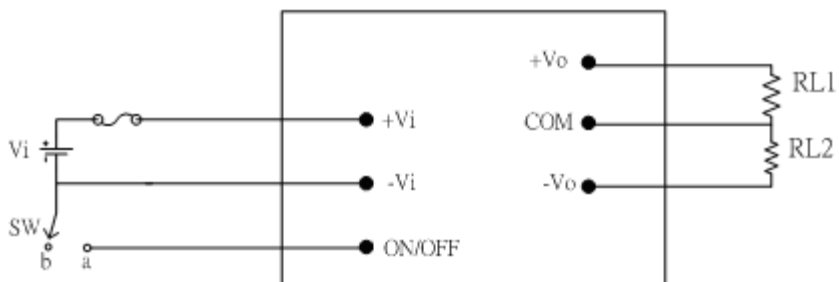
Derating



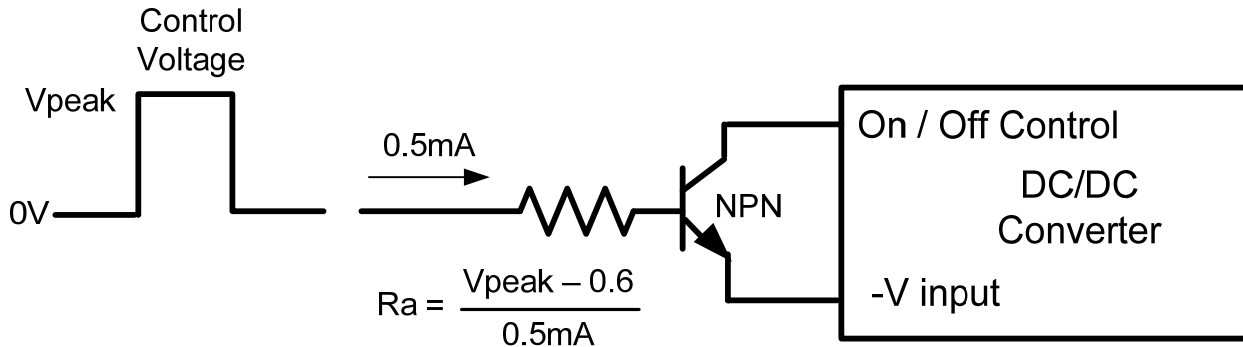
Control ON/OFF pin connection example Single Output



Dual Output



Digital Control Circuit:



NOTE: 1. Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. 2. Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. 3. Mechanical drawings and specifications are for reference only. 4. All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. 5. Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. 6. This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.