



FEATURES:

- RoHS Compliant
- Ultra wide 4:1 Input range
- Adjustable Output Voltage
- Remote On/Off
- 2" x 1" package
- Soft start
- Industrial temperature range -40 to +85°C
- High efficiency up to 91%
- No minimum load required

Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Maximum capacitive load (µF)	Efficiency (%)
AM20EW-2403SZ	9-36	3.3	5.5	10000	89
AM20EW-2405SZ	9-36	5	4	6800	91
AM20EW-2412SZ	9-36	12	1.67	1000	89
AM20EW-2415SZ	9-36	15	1.33	680	89
AM20EW-4803SZ	18-75	3.3	5.5	10000	89
AM20EW-4805SZ	18-75	5	4	6800	91
AM20EW-4812SZ	18-75	12	1.67	1000	89
AM20EW-4815SZ	18-75	15	1.33	680	89

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Maximum capacitive load (µF)	Efficiency (%)
AM20EW-2405DZ	9-36	±5	±2	±2200	89
AM20EW-2412DZ	9-36	±12	±0.835	±470	88
AM20EW-2415DZ	9-36	±15	±0.665	±330	89
AM20EW-4805DZ	18-75	±5	±2	±2200	89
AM20EW-4812DZ	18-75	±12	±0.835	±470	88
AM20EW-4815DZ	18-75	±15	±0.665	±330	89

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	24 48	9-36 18-75		VDC
Under voltage lockout	24 48	7.9 16	8.6 17.8	VDC
Filter		π (Pi) Network		
Turn on Transient process time		250		µs
Transient Recovery deviation			±3	%
Start up time		20		ms
Absolute Maximum Rating	24 48		-0.7~50 -0.7~100	VDC
Peak Input Voltage time			100	ms
On/Off Control		ON: 3 ~12VDC or open circuit OFF: 0 ~ 1.2VDC or Short circuit between pin 2 and pin 6		
OFF idle current		5		mA
Input Reflected ripple current		20		mA p-p

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
I/O Isolation Tested voltage	3 sec		1600	VDC
Case/Input Isolation tested voltage	3 sec		1600	VDC
Case/Output Isolation tested voltage	3 sec		1600	VDC
Resistance		>1000		MOhm
Capacitance		1200		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy			±1	%
Over voltage protection		Zener diode clamp		
Over current protection		120		% of FL
Short Circuit protection	Auto recovery	Hiccup, indefinite		sec.
Line voltage regulation			±0.5	% of Vin
Load voltage regulation (Single)	0-100% load		±0.5	%
Load voltage regulation (Dual)	Balanced load		±1	%
Cross regulation	Dual output		±5	%
Temperature coefficient			±0.02	%/°C
Ripple & Noise			75	mV p-p
Voltage adjustment range			±10	%

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	330		KHz
Operating temperature	With derating above 65°C	-40 to +85		°C
Storage temperature		-40 to +125		°C
Case temperature			105	°C
Cooling	Free air convection			
Humidity	Non condensing		95	% RH
Case material	Nickel coated copper with non conductive base			
Weight		30		g
Dimensions (L x W x H)	Tolerance ±0.5mm (±0.02 inches)	2.0 x 1.0 x 0.40 inches	50.8 x 25.4 x 10.16 mm	
MTBF	>560 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			

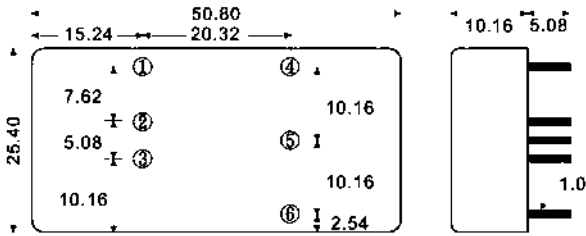
Safety Specifications

Standards	
Safety	IEC/EN 60950-1
EMC – Radiated and conducted emissions	EN55022, class A - with external circuit recommended below
ESD	EN61000-4-2, criteria B
RS	EN61000-4-3, criteria A
EFT	EN61000-4-4, criteria B – with external filter capacitor, 220µF/100V
Surge	EN61000-4-5, criteria B – with external filter capacitor, 220µF/100V
CS	EN61000-4-6, criteria A
PFMF	EN61000-4-8, criteria A

Pin Out Specifications

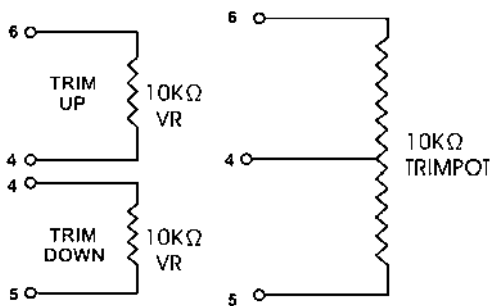
Pin	Single	Dual
1	On/Off Control	On/Off Control
2	-V Input	-V Input
3	+V Input	+V Input
4	-V Output	-V Output
5	Trim	Common
6	+V Output	+V Output

Dimensions

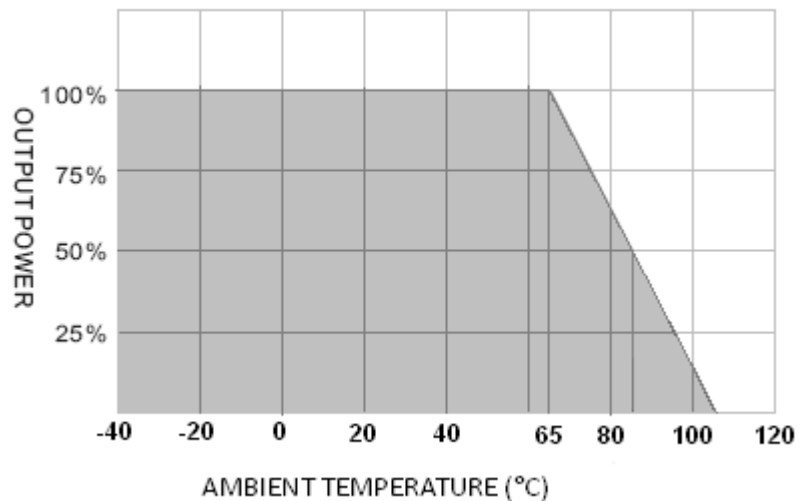


Pin Diameter: 1.0±0.05mm (0.04±0.002 inches)
Pin pitch tolerance: ±0.35mm (±0.014 inches)

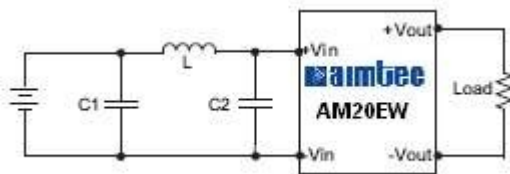
Trimming



Derating Curve



Recommended external circuit to meet the required conducted emissions



Location	Type	Value
C1	1210	2.2μF/100V
C2	1210	2.2μF/100V
L		12μH

These components should be mounted as close as possible to the converter module and length of the leads should be kept shorter to decrease radiated noise.

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. 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. 5. 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.