

## Series AM10CW-FZ

## 10 Watt | DC-DC Converter



### **FEATURES**:

- Wide 4:1 Input Voltage Range
- High efficiency up to 88%
- Remote On/Off
- Standard 1"x1" Package
- 1500 VDC Isolation
- Operating Temperature -40°C to +85°C
- Over Voltage, Over load protection
- Output Short Circuit Protection



Models Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Max Capacitive Load(uF)	Efficiency (%)
AM10CW-2403S-FZ	9-36	3.3	2200	3300	82
AM10CW-2405S-FZ	9-36	5	2000	2200	85
AM10CW-2412S-FZ	9-36	12	830	680	88
AM10CW-2415S-FZ	9-36	15	660	330	88
AM10CW-2424S-FZ	9-36	24	410	100	87
AM10CW-4803S-FZ	18-75	3.3	2200	3300	80
AM10CW-4805S-FZ	18-75	5	2000	2200	84
AM10CW-4812S-FZ	18-75	12	830	680	87
AM10CW-4815S-FZ	18-75	15	660	330	87
AM10CW-4824S-FZ	18-75	24	410	100	87

### Models Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Max Capacitive Load(uF)	Efficiency (%)
AM10CW-2405D-FZ	9-36	±5	±1000	±1000	85
AM10CW-2412D-FZ	9-36	±12	±410	±470	88
AM10CW-2415D-FZ	9-36	±15	±330	±220	87
AM10CW-4805D-FZ	18-75	±5	±1000	±1000	84
AM10CW-4812D-FZ	18-75	±12	±410	±470	87
AM10CW-4815D-FZ	18-75	±15	±330	±220	87

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 renge	24	9-36		VDC	
Voltage range	48	18-75		VDC	
Filter		Pi			
Start up time		77		ms	
Absolute Maximum Rating	24		50	VDC	
	48		100		
Peak Input Voltage time			100	ms	
On/Off control	ON –Open or 3.5 to 12V/<0.2mA				
On/On control	OFF –Short to pin 2 (-Vin) or 0 to 0.7V				
Idle Input Current	At OFF state		12	mA	
Input reflected current			62	mA p-p	
Transient response settling time	50% load step change		550	μs	
Transient response deviction	di/dt=0.8A/µs		≤5	%	
Transient response deviation	3.3Vou		≤6	70	



# **Series AM10CW-FZ**

10 Watt | DC-DC Converter

**Isolation Specifications** 

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage		1500		VDC
Resistance	500VDC		>1000	MOhm
Capacitance		1100		pF

**Output Specifications** 

Parameters	Conditions	Typical	Maximum	Units	
Voltage accuracy		±1		%	
Over voltage protection	3.3 Vout 3.9 5 Vout 6.2 12 Vout 15 15 Vout 18 24 Vout 27			V	
Short Circuit protection	Continuous				
Short circuit restart		Auto-Recovery			
Line voltage regulation	LL to HL at full load	±1		% of Vin	
Load voltage regulation (Single)	0% to Full load	±1		%	
Load valtage regulation (Dual)	Balanced Load	±0.5		%	
Load voltage regulation (Dual)	Unbalanced load 25 to 100% load	±5		%	
Temperature coefficient			±0.02	%/°C	
Ripple & Noise	20MHz Bandwidth	80		mV p-p	

**General Specifications** 

ocheral opcomoduons				
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	330kHz		KHz
Operating temperature	With derating above 60°C	With derating above 60°C -40 to +85		°C °C
Storage temperature		-55 to +125		
Maximum case temperature			105	°C
Cooling	Natural convection			
Humidity		% RH		
Case material	Nickel-coated copper			
Weight	17.4 g			
Dimensions (L x W x H)	1 x 1 x 0.4 inches 25.4 x 25.4 x 10.2 mm			
MTBF	>1,580,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			<b>(</b> )

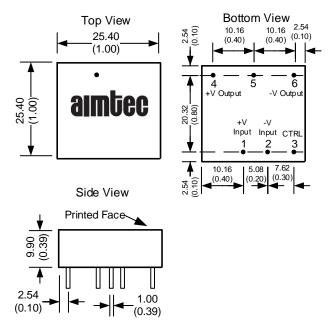
## **Pin Out Specifications**

Pin	Single	Dual
1	+V input	+V input
2	-V Input	-V Input
3	On/Off Control	On/Off Control
4	+V Output	+V Output
5	No Pin	Common
6	-V output	-V output





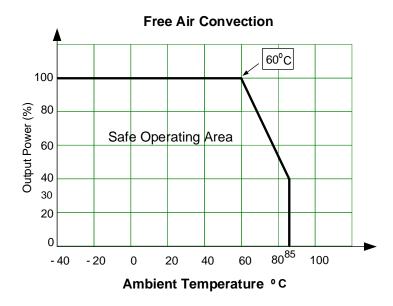
#### **Dimensions**



#### Notes:

All dimensions are typical in millimeters (inches). Pin Pitch Tolerance ±0.35 (±0.014) Case Tolerance ±0.50 (±0.02)

### **Derating**



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.