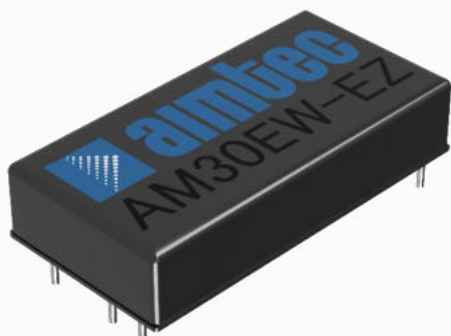


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AM30EW-EZ



2 x 1

The AM30EW-EZ is a 30W DC/DC converter that offers a regulated output which contributes to a more stable and reliable output performance. It features a wide 4:1 input voltage range of 9-75VDC, which will benefit your new system design.

This series offers great operating temperatures, from -40°C to 85°C. Furthermore, an isolation of 1600VDC, continuous output short circuit protection (OSCP), over-current protection (OCP) and over-voltage protection (OVP) come standard with the series.

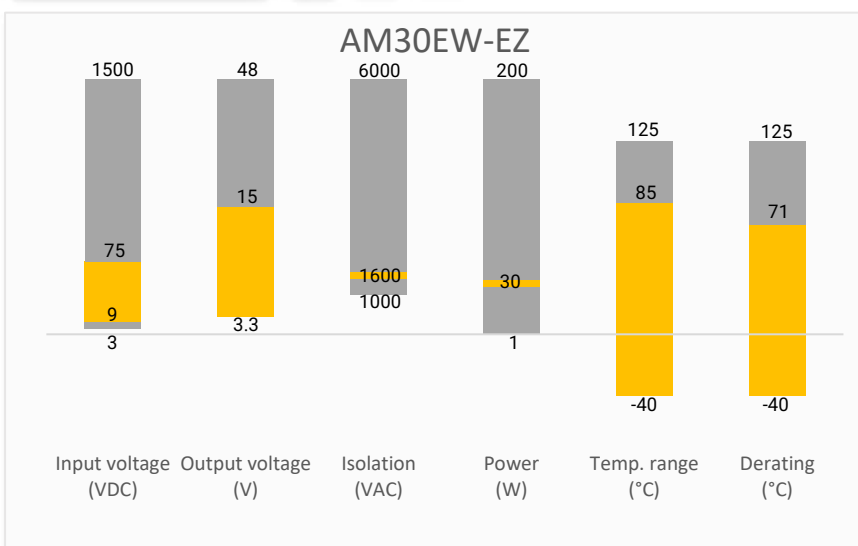
The AM30EW-EZ is suitable for grid power, instrumentation, industrial controls, communication, and civil applications.

Features

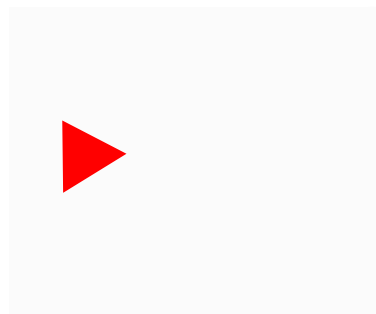
- Operating Temp: -40 °C to +85 °C
- Isolation voltage: 1600VDC
- High efficiency: Up to 86% typ.
- Regulated single output
- Output short circuit, over-current, over-voltage
- Standard 2 x1 package
- Made in Taiwan



Summary



Training



Product Training Video
(click to open)



Press Release

Coming Soon!

Application Notes

Applications



Power Grid



Industrial



Telecom



Instrumentation

Models & Specifications



Single Output

Model	Input Voltage (VDC)	Output Voltage (VDC)	Nominal Vin Input Current Max (mA)		Output Current Max (mA)	Maximum capacitive load (μF)	Efficiency Full Load Typ (%)
			No Load	Full Load			
AM30EW-2403SEZ	24 (9-36)	3.3	120	1265	7500	20000	82
AM30EW-2405SEZ	24 (9-36)	5	130	1488	6000	14400	84
AM30EW-2412SEZ	24 (9-36)	12	50	1471	2500	3000	85
AM30EW-2415SEZ	24 (9-36)	15	50	1471	2000	2000	85
AM30EW-4803SEZ	48 (18-75)	3.3	70	629	7500	20000	82
AM30EW-4805SEZ	48 (18-75)	5	80	744	6000	14400	84
AM30EW-4812SEZ	48 (18-75)	12	30	727	2500	3000	86
AM30EW-4815SEZ	48 (18-75)	15	30	727	2000	2000	86

Add suffix "-K" for optional heat sink.

Dual Output

Model	Input Voltage (VDC)	Output Voltage (VDC)	Nominal Vin Input Current Max (mA)		Output Current Max (mA)	Maximum capacitive load (μF)	Efficiency Full Load Typ (%)
			No Load	Full Load			
AM30EW-2412DEZ	24 (9-36)	±12	60	1471	1250	±2000	85
AM30EW-2415DEZ	24 (9-36)	±15	60	1471	1000	±1300	85
AM30EW-4812DEZ	48 (18-75)	±12	30	727	1250	±2000	86
AM30EW-4815DEZ	48 (18-75)	±15	30	727	1000	±1300	86

Add suffix "-K" for optional heat sink.

Input Specification

Parameters	Conditions	Typical	Maximum	Units
Voltage types			4:1	
Absolute maximum rating	24Vin, 100mS max.		50	VDC
	48Vin, 100mS max.		100	VDC
Input reflected ripple current	Nominal Vin and full load	20		mA _{p-p}
Start-up time	Nominal Vin and constant resistive load, Power up	40		mS
	Nominal Vin and constant resistive load, Remote ON/OFF	30		mS
Start-up voltage	24V input	9		V _{dc}
	48V input	18		V _{dc}
Shutdown voltage	24V input	8		V _{dc}
	48V input	16		V _{dc}
Protection	Fuse Recommended			
On/Off control	On	Open		
	Off	Short to ground		
	Nominal Vin	-0.5 ~ +0.5		mA
	Nominal Vin	3.0		mA

Isolation Specification

Parameters	Conditions	Typical	Maximum	Units
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Tested isolation voltage	Input To Output, 10 sec	≥1600		VDC
Resistance	Input / output, 500VDC	≥1000		MΩ
Capacitance		2200		pF

Output Specification

Parameters	Conditions	Typical	Maximum	Units
Voltage Tolerance	100% load @ Vin (nom.)		±2	%
Line Regulation	LL to HL at Full Load		±0.5	%
Load Regulation	Single		±0.5	%
Load Regulation	Dual, Balance Load, 25% to 100% Load		±1.0	%
Transient Recovery Time	25% load step change	250	350	μs
External Trim Adj. Range	±10% of Output			
Ripple & Noise*			100	mV pk-pk

* Ripple and Noise are measured at 20MHz bandwidth. Please refer to the application note for specific details.

General Specifications

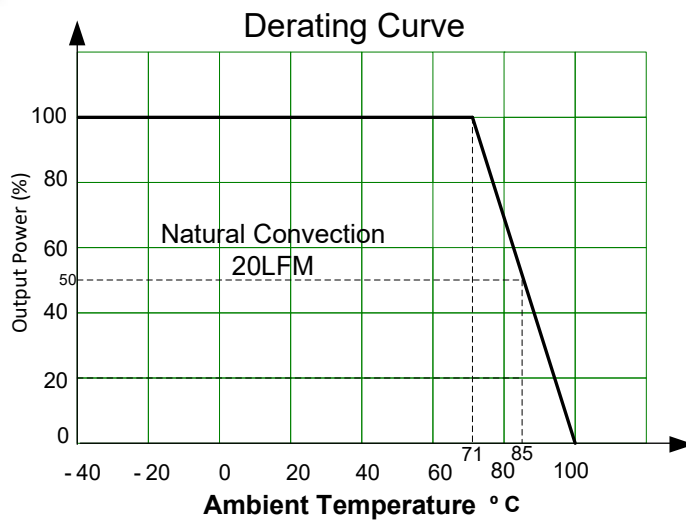
Parameters	Conditions	Minimum	Typical	Maximum	Units
Switching frequency			300		KHz
Short circuit protection	Hiccup, Auto recovery				
Over load protection	Nominal input		150		%
Over voltage protection	3.3V Output		3.9		VDC
	5V Output		6.2		VDC
	12V Output		15 & ±15		VDC
	15V Output		18 & ±18		VDC
Operating temperature	Without Heatsink	-40		85	°C
	With Heatsink	-40		87	°C
Case temperature				105	°C
Storage temperature		-55		125	
Temperature coefficient	100% Load			± 0.03	%/°C
Cooling	Natural Convection (20LFM)				
Humidity			≥5	95	% RH
Weight	Without Heatsink		36.5		g
	With Heatsink		43.1		g
Dimensions (L x W x H)	Without Heatsink	2.00x 1.00 x 0.42 inches (50.8 x 25.4 x 10.6 mm)			
	With Heatsink	2.00x 1.00 x 0.60 inches (50.8 x 25.4 x 15.3 mm)			
Case material	Nickel coated copper with non-conductive base				
MTBF	≥ 434 700 hrs (MIL-HDBK -217F, t=+25°C)				

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.

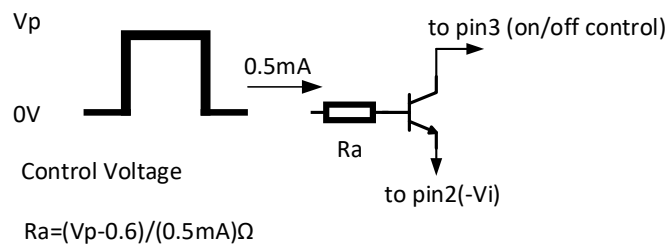
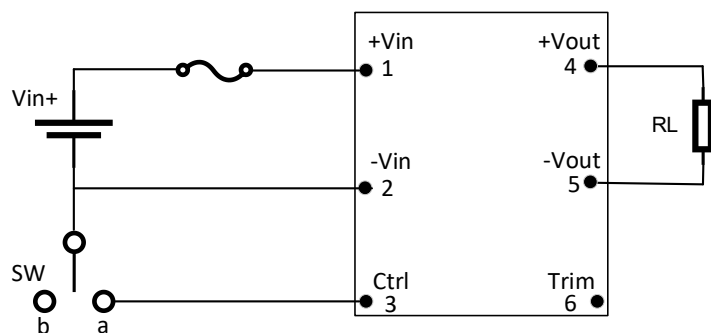
Safety Specifications

Parameters		
Standards	EMI - Conducted and radiated emission	EN55032 Class A, EN61000-4-3 10 V/m Perf. Criteria A
	Electrostatic Discharge Immunity	EN61000-4-2 Air ±8KV Perf. Criteria A Contact ±6KV Perf. Criteria A
	RF, Electromagnetic Field Immunity	EN61000-4-6 10 Vrms Perf. Criteria A
	Electrical Fast Transient/Burst Immunity	EN61000-4-4 ± 2KV Perf. Criteria A
	Surge Immunity	EN61000-4-5 ± 1KV Perf. Criteria A

Derating



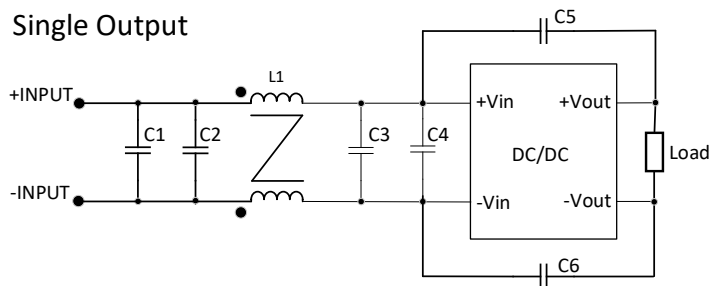
Remote On/Off Note



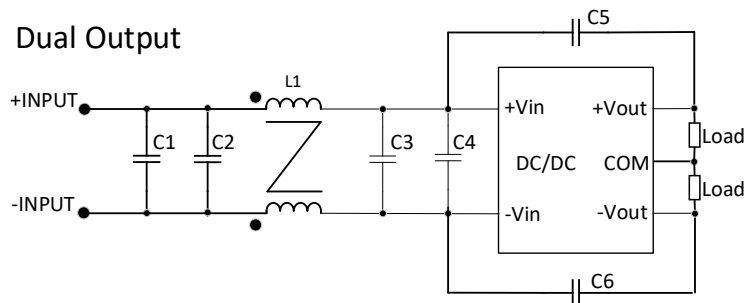
When pin3 is shorted to pin2, D/D ON=>OFF
When pin3 is left open, D/D=>ON

Recommended Filter Circuit

Single Output



Dual Output

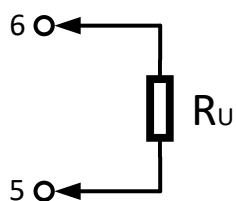


Part Number	C2	C3	C5, C6	L1
Specifications	6.8 μ F/100V	22 μ F/100V	1000pF/2KV	120 μ H

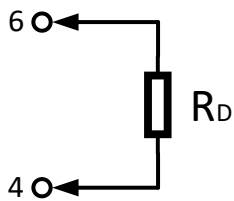
External Output Trimming

The output can be externally trimmed by using the method shown below.

TRIM UP

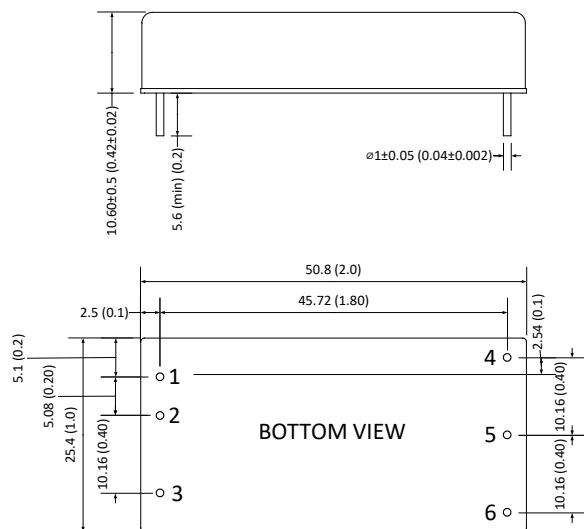


TRIM DOWN



Dimensions

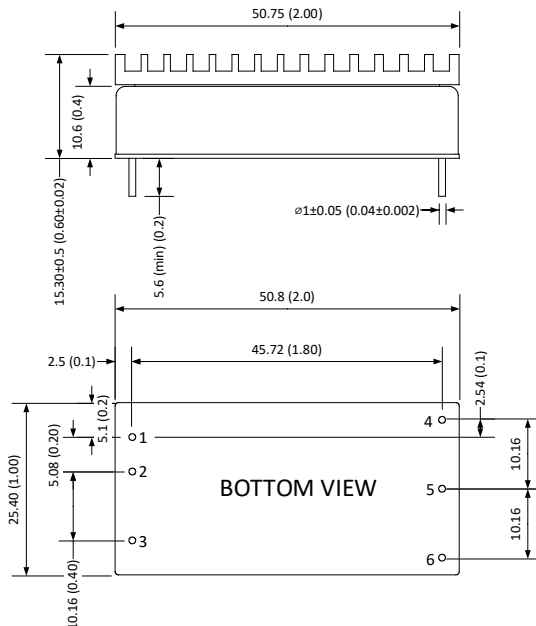
Without Heat Sink



Unit: mm (in)

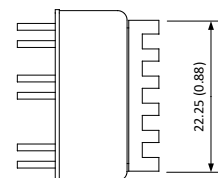
Tolerance: XX.X±0.5 , XX.XX±0.25

With Heat Sink



Unit: mm (in)

Tolerance: XX.X±0.5 , XX.XX±0.25



Pin Out Specifications

Pin	1	2	3	4	5	6
Single	+Vin	-Vin	On/off control	+Vout	-Vout	Trim
Dual	+Vin	-Vin	On/off control	+Vout	COM	-Vout

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