



EC8AW SERIES

15 WATT 4:1 INPUT RANGE

DC-DC CONVERTERS



FEATURES

- * 15W Isolated Output
- * DIP-24 Metal Package
- * Very High Efficiency Up to 90%
- * Low No Load Power Consumption
- * 4:1 Input Range
- * Regulated Outputs
- * Conductive EMI Meet EN55032 Class A Without External Components
- * Continuous Short Circuit Protection
- * No Tantalum Capacitor Inside
- * Safety Meets IEC/EN/UL 62368-1



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.		CAPACITIVE LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD	(2)	(3)	
EC8AW-24S33	9-36 VDC	3.3 VDC	0 mA	4000 mA	8 mA	625 mA	88	88	4000 μ F
EC8AW-24S05	9-36 VDC	5 VDC	0 mA	3000 mA	8 mA	694 mA	90	90	3000 μ F
EC8AW-24S12	9-36 VDC	12 VDC	0 mA	1250 mA	8 mA	694 mA	90	90	1250 μ F
EC8AW-24S15	9-36 VDC	15 VDC	0 mA	1000 mA	8 mA	694 mA	90	90	1000 μ F
EC8AW-24D12	9-36 VDC	$\pm$ 12 VDC	0 mA	$\pm$ 625 mA	8 mA	702 mA	89	89	625 μ F
EC8AW-24D15	9-36 VDC	$\pm$ 15 VDC	0 mA	$\pm$ 500 mA	8 mA	694 mA	90	90	500 μ F
EC8AW-48S33	18-75 VDC	3.3 VDC	0 mA	4000 mA	6 mA	309 mA	89	89	4000 μ F
EC8AW-48S05	18-75 VDC	5 VDC	0 mA	3000 mA	6 mA	347 mA	90	90	3000 μ F
EC8AW-48S12	18-75 VDC	12 VDC	0 mA	1250 mA	6 mA	347 mA	90	90	1250 μ F
EC8AW-48S15	18-75 VDC	15 VDC	0 mA	1000 mA	6 mA	347 mA	90	90	1000 μ F
EC8AW-48D12	18-75 VDC	$\pm$ 12 VDC	0 mA	$\pm$ 625 mA	6 mA	351 mA	89.5	89.5	625 μ F
EC8AW-48D15	18-75 VDC	$\pm$ 15 VDC	0 mA	$\pm$ 500 mA	6 mA	347 mA	90	90	500 μ F

NOTE: 1. Nominal Input Voltage 24 or 48VDC

2. Measure at 12VDC for EC8AW 24 Vin, 24VDC for EC8AW 48 Vin

3. Measure at Nominal Input Voltage

SPECIFICATIONS

All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted

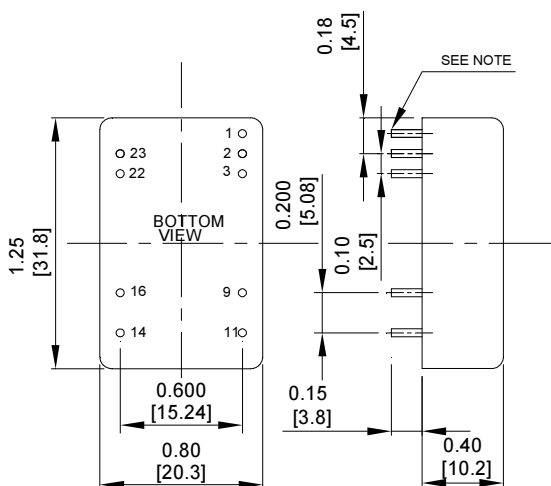
INPUT SPECIFICATIONS:

Input Voltage Range	24V	9-36V
	48V	18-75V
Input Surge Voltage (100ms max.)	24V	50Vdc max.
	48V	100Vdc max.
Under Voltage Lockout	24Vin power up	8.8V
	24Vin power down	8V
	48Vin power up	17V
	48Vin power down	16V
Input Filter	Pi Type	
Remote On/Off Control		
Logic Compatibility	CMOS or Open Collector TTL, Referenced to -Vin	
Module On	>3.5VDC to Vin or Open Circuit	
Module Off	<1.2VDC	

OUTPUT SPECIFICATIONS:

Voltage Accuracy	±1.5% max.	
Voltage Balance (Dual)	±1.0% max.	
Transient Response: 75% - 100% Step Load Change		
Error Band	±5% Vout Nominal	
Recovery Time	< 250µs	
Ripple & Noise, 20MHz BW (note3)	Single	75mV pk-pk max.
	Dual	75mV pk-pk max.
Temperature Coefficient	±0.03%/°C	
Line Regulation (note1)	Single	±0.2% max.
	Dual	±0.5% max.
Load Regulation (note2)	Single	±0.5% max.
	Dual	±1.0% max.
Cross Regulation (Dual Output) Load Cross Variation 10%/100%	±5% max.	
Current Limit	110% - 160% Nominal Output	
Output Short Circuit Protection	Continuous (Hiccup Mode)	
Over Voltage Protection (Zener Diode Clamp)		
3.3V	3.9Vdc typ., 5V	6.2Vdc typ.
12V	15Vdc typ., 15V	18Vdc typ.
Start up Time	15ms typ.	

Case A Dimensions:



NOTE: Pin Size is 0.02±0.002 Inch (0.5±0.05 mm) DIA
All Dimensions in Inches (mm)
Tolerances Inches: X.XX= ±0.02 , X.XXX= ±0.010
Millimeters: X.X= ±0.5 , X.XX= ±0.25

GENERAL SPECIFICATIONS:

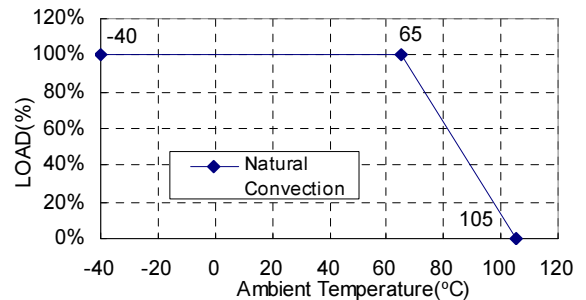
Efficiency	See Table	
Isolation Voltage	Input/Output	1500VDC min.
Isolation Resistance	10 ⁹ ohm min.	
Isolation Capacitance	1000pF typ.	
Switching Frequency	300KHz typ.	
EMI/RFI	Conductive EMI Meet EN55032 Class A	
Operating Ambient Temperature	-40°C to +85°C	
De-rating. Above 65°C	Linearly to Zero Power at 105°C	
Case Temperature (note4)	105°C max.	
Cooling	Natural Convection	
Storage Temperature	-40°C to +125°C	
Humidity	95% RH max. Non Condensing	
MTBF	MIL-HBDK-217F. GB. 25°C. Full Load	XXS33/05 ... 960Khrs typ.
	Others	125Khrs typ.

Dimensions	DIP	1.25x0.80x0.40 inches (31.8x20.3x10.2 mm)
Case Material	Black Coated Copper with Non-Conductive Base	
Weight	18g	

NOTE:

1. Measured from high line to low line.
2. Measured from full load to min. load.
3. Measured with 0.1µF MLCC.
4. Maximum case temperature under any operating condition should not be exceeded 105°C

Typical Derating curve for Natural Convection



PIN CONNECTION		
Pin	Single Output	Dual Output
1	Remote on/off	Remote on/off
2,3	-V Input	-V Input
4,5	NP	NP
9	NP	Common
10	NP	NP
11	NC	-V Output
12	NP	NP
13	NP	NP
14	+V Output	+V Output
15	NP	NP
16	-V Output	Common
20,21,24	NP	NP
22,23	+V Input	+V Input

* NC-NO CONNECTION WITH PIN

* NP-NO PIN