

20-30 WATT 4:1 INPUT RANGE DC-DC CONVERTERS



Features:

- 20-30W Isolated Output
- 2" x 1.6" Six-Sided Shield Metal Case
- 4 : 1 Input Range
- Regulated Outputs
- Efficiency to 91%
- Fixed 300KHz Switching Frequency
- Continuous Short Circuit Protection
- Remote On/Off Control

Electrical Characteristics:

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		%EFF	SIZE
			MIN	MAX	NO LOAD	FULL LOAD		
EC3SCW-24S3V3	9-36 VDC	3.3 VDC	0 mA	7500mA	50mA	1172mA	87	2" x 1.6"
EC3SCW-24S05		5 VDC		6000mA	60mA	1404mA	89	
EC3SCW-24S12		12 VDC		2500mA	80mA	1374mA	91	
EC3SCW-24S15		15 VDC		2000mA	50mA	1374mA	91	
EC3SCW-48S3V3	18-75 VDC	3.3 VDC	0 mA	7500mA	30mA	586mA	88	2" x 1.6"
EC3SCW-48S05		5 VDC		6000mA	30mA	694mA	90	
EC3SCW-48S12		12 VDC		2500mA	40mA	687mA	91	
EC3SCW-48S15		15 VDC		2000mA	50mA	687mA	91	

NOTE: 1. Nominal Input Voltage 24 or 48 VDC

Specification

INPUT SPECIFICATIONS:

Input Voltage Range.....	24V.....	9-36V
	48V.....	18-75V
Under Voltage lockout.....	24Vin Power Up.....	8.8V Typ
	24Vin Power Down.....	8.0V Typ
	48Vin Power Up.....	17V Typ
	48Vin Power Down.....	16V Typ
Positive Logic Remote ON/OFF (see note 3 & 4)		
Input Filter.....		Pi Type

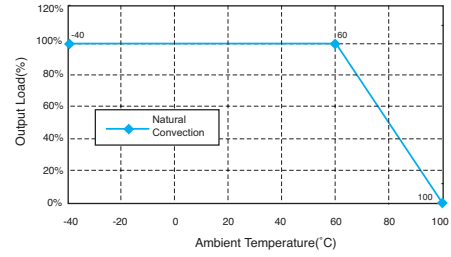
OUTPUT SPECIFICATIONS:

Voltage Accuracy.....		±1.5% max.
Transient Response: 75% - 100% Step Load Change		
Error Band.....		±5% Vout Nominal
Recovery Time.....		<300us
External Adjustment Range, %Vo.....	////	±10%
Ripple & Noise, 20MHz BW (Measured with 0.1µF MLCC)		
3.3V & 5V.....		20mV RMS, max. 75mV pk-pk, max
12V & 15V.....		20mV RMS, max. 100mV pk-pk, max
Temperature Coefficient.....		±0.02%/°C
Line Regulation1.....		± 0.5% max.
Load Regulation2.....		± 0.5% max.
Output Over Voltage Protection (Zener or TVS Clamp)		
3.3V.....		3.9V
5V.....		6.2V
12V.....		15V
15V.....		18V
Output Current Limit, % Nominal Output.....		110% ~ 150%
Output Short Circuit Protection.....		Continuous (Hiccup Mode)

GENERAL SPECIFICATIONS:

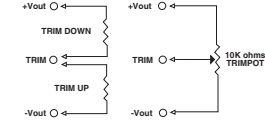
Efficiency.....		See Table
Isolation Voltage.....	Input/Output.....	1500VDC max.
Isolation Resistance.....		108 Ohm min.
Switching Frequency	24Vin.....	300KHz, Typ.
	48Vin.....	250KHz, Typ.
Operating Ambient Temperature		-40°C to + 85°C
De-Rating Above 60°C.....		Linearly to Zero Power at 100°C
Case Temperature5.....		100°C max.
Cooling		Natural Convection
Storage Temperature.....		-55°C to + 125°C
Thermal Shutdown, Case Temperature.....		110°C Typ.
Dimensions:		
Metal Case.....		2.00 x 1.60 x 0.40 inches(50.8 x 40.6 x 10.2mm)
Metal Case Material..		Black Coated Copper with Non-Conductive Base

EC3SCW Series Derating Curve



External Output Trimming

Output may optionally be externally trimmed (±10%) with a fixed resistor or an external trimpot as shown.



NOTE:

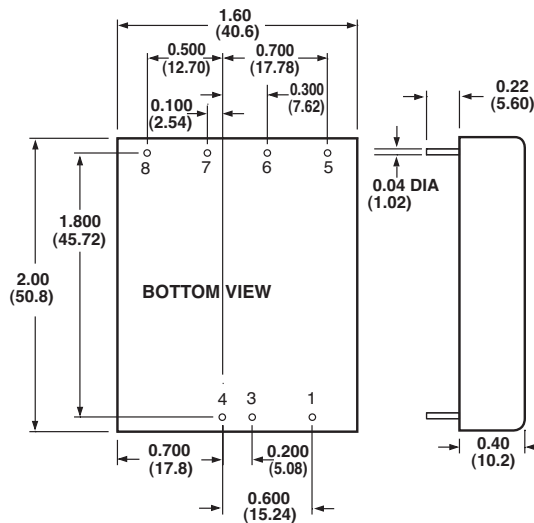
1. Measured From High Line to Low Line
2. Measured From Full Load to 10% Load
3. Logic Compatibility.....CMOS or Open Collector TTL, ref. to - Vin
Module ON.....>3.5VDC to 75VDC or Open Circuit
Module OFF.....<1.2VDC
4. Suffix"N"to the Model Number with Negative Logic Remote ON/OFF
Module ON.....<1.2VDC
Module OFF.....>3.5VDC to 75VDC or Open Circuit
5. Maximum case temperature under any operating condition should not exceed 100°C.

PIN CONNECTION

Pin	Function
1	On/Off Control
3	-V Input
4	+V Input
5	Trim
6	-V Output
7	+V Output
8	No Pin

Mechanical Specification

All Dimensions In Inches(mm)
Tolerance Inches: .xx= ±0.04, .xxx= ±0.10
Millimeters: .x= ±1.0, .xx= ±0.25



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

Data sheets are subject to change without notice