

# EC3SCW

S E R I E S

## 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

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	SIZE
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC3SCW-24S3V3	9-36 VDC	3.3 VDC	0mA	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	0mA	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

### Specifications

#### 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

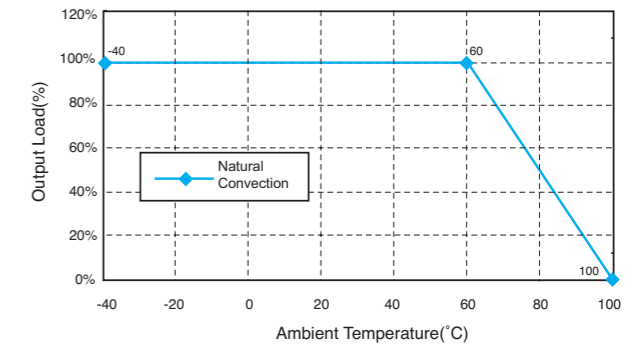
#### OUTPUT SPECIFICATIONS:

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 Regulation<sup>1</sup>.....±0.5% max.  
 Load Regulation<sup>2</sup>.....±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:

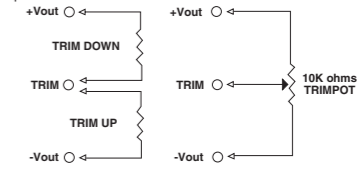
Efficiency.....See Table  
 Isolation Voltage.....Input/Output.....1500VDC max.  
 Isolation Resistance.....10<sup>9</sup> Ohm min.  
 Switching Frequency .....24Vin.....300KHz, Typ.  
 48Vin.....250KHz, Typ.  
 Operating Ambient Temperature .....-40°C to +85°C  
 De-Rating Above 60°C.....Linearly to Zero Power at 100°C  
 Case Temperature<sup>3</sup>.....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:

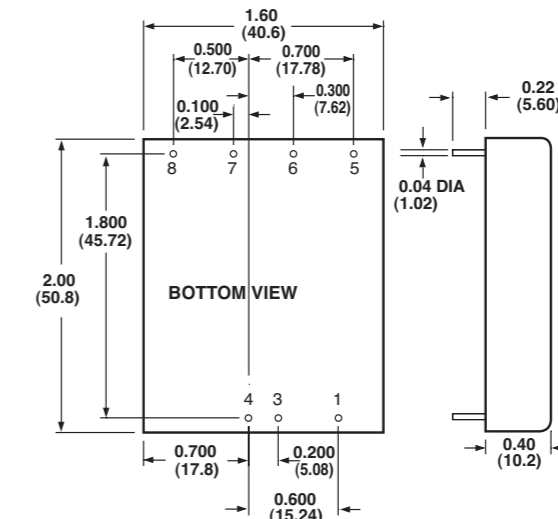
1. Measured From High Line to Low Line
2. Measured From Full Load to 10% Load
3. Logic Compatibility.....CMOS or Open Collector TTL, ref. to - Vin  
 Module ON.....>3.5VDC to 75VDC or Open Circuit  
 Module OFF.....<1.2VDC
4. Suffix "N" to the Model Number with Negative Logic Remote ON/OFF  
 Module 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.