

# EC1SC

S E R I E S



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



### Features

- 20W Isolated Output
- 2" x 1.6" Case
- 4 : 1 Input Range
- Regulated Outputs
- Efficiency to 84%
- Pi Input Filter
- Continuous Short Circuit Protection
- Meets EN55022 Class A, Conducted
- Remote On/Off Control

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF.	SIZE
				NO LOAD	FULL LOAD		
EC1SC01		5 VDC	4000mA	15 mA	1029 mA	81	2" x 1.6"
EC1SC02		12 VDC	1670mA	15 mA	1006 mA	83	
EC1SC03		15 VDC	1330mA	15 mA	1004 mA	83	
EC1SC04	9-36VDC	±12 VDC	±833mA	20 mA	1004 mA	83	
EC1SC05		±15 VDC	±666mA	20 mA	1004 mA	83	
EC1SC06		±5 VDC	±2000mA	20 mA	1004 mA	83	
EC1SC07		3.3 VDC	4000mA	15 mA	705 mA	78	
EC1SC11		5 VDC	4000mA	10 mA	508 mA	82	2" x 1.6"
EC1SC12		12 VDC	1670mA	10 mA	497 mA	84	
EC1SC13		15 VDC	1330mA	10 mA	496 mA	84	
EC1SC14	18-72VDC	±12 VDC	±833mA	15 mA	496 mA	84	
EC1SC15		±15 VDC	±666mA	15 mA	496 mA	84	
EC1SC16		±5 VDC	±2000mA	15 mA	496 mA	84	
EC1SC17		3.3 VDC	4000mA	10 mA	353 mA	78	

NOTE: 1. Nominal Input Voltage 24 or 48 VDC

### Specifications

#### INPUT SPECIFICATIONS:

Input Voltage Range.....24V.....9-36V  
 48V.....18-72V  
 Input Filter.....Pi Type  
 Positive Logic Remote ON/OFF Control.....See Note3

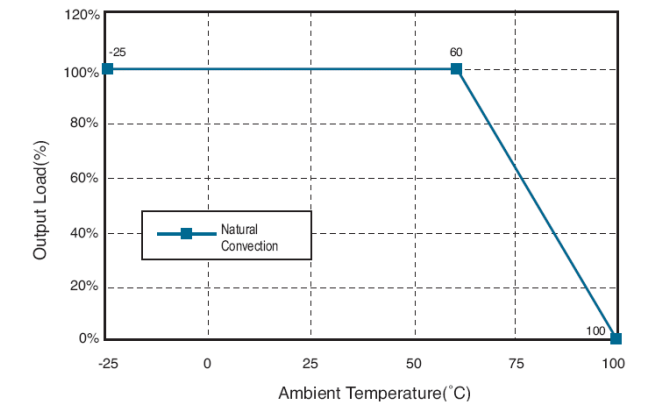
#### OUTPUT SPECIFICATIONS:

Voltage Accuracy Single Output.....±1.0% max.  
 Voltage Accuracy Dual + Output.....±1.0% max.  
 Voltage Accuracy Dual - Output.....±2.0% max.  
 Voltage Balance, Dual Output at Full Load.....±1.0% max.  
 Transient Response  
 Single 25% Step Load Change .....<500µ sec.  
 Dual-FL-1/2L ±1% Error Band .....<500µ sec.  
 External Trim Adj. Range .....±10%  
 Ripple & Noise, 20MHz BW.....20mV RMS, max.  
 75mV p-p max.  
 Temperature Coefficient.....±0.02%/°C max.  
 Short Circuit Protection.....Continuous  
 Line Regulation<sup>1</sup>, Single / Dual Output .....±0.5% max.  
 Load Regulation<sup>2</sup>, Single / Dual Output.....±0.5% max.

#### GENERAL SPECIFICATIONS:

Efficiency.....See Table  
 Isolation Voltage.....1500 VDC min.  
 Isolation Resistance.....10<sup>8</sup> Ohms min.  
 Switching Frequency .....300KHz Typ.  
 Operating Ambient Temperature Range.....-25°C to +71°C  
 De-rating, Above 60°C.....Linearly to Zero Power at 100°C  
 Case Temperature<sup>4</sup>.....100°C max.  
 Cooling.....Natural Convection  
 Storage Temperature Range.....-55°C to +105°C  
 EMI / RFI.....Six Sided Continuous Shield  
 Dimensions .....2.00 x 1.60 x 0.45 inches  
 (50.8 x 40.6 x 11.4mm)  
 Case Material ...Black Coated Copper with Non-Conductive Base  
 Weight......53g

### EC1SC Series Derating Curve

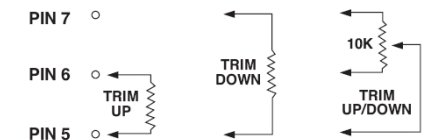


#### NOTE:

1. Measured From High Line to Low Line.
2. Measured From Full Load to 1/4 Load.
3. Remote On/Off Control:  
 Logic Compatibility.....CMOS or Open Collector TTL  
 EC-ON.....>+5.5VDC or Open Circuit  
 EC-OFF.....< 1.8 VDC  
 Control Common.....Referenced to Input Minus
4. Maximum case temperature under any operating condition should not exceed 100°C.

### External Output Trimming

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

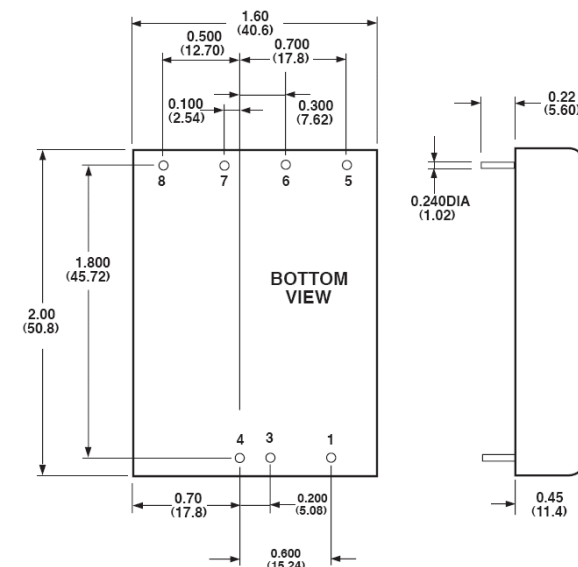


### PIN CONNECTION

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

### CASE SC

All Dimensions In Inches(mm)  
 Tolerance Inches: .xx= ±.04, .xxx= ±.010  
 Millimeters: .xx= ±1.0, .xxx= ±0.25



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