

EC1SC

S E R I E S

20 WATT 4 : 1 INPUT RANGE DC-DC CONVERTERS



Features

- 20W Isolated Output
- 2"x1.6" Six-Sided Shield Metal Case
- Efficiency to 84%
- 4 : 1 Input Range
- Pi Input Filter
- Continuous Short Circuit Protection
- Meets EN55022 Class A, Conducted
- Remote On/Off Control
- CE Mark Meets 2004/108/EC
- UL60950-1 Approval

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

NOTE: 1. Nominal Input Voltage 24 or 48 VDC

Specifications

INPUT SPECIFICATIONS:

Input Voltage Range.....	24V.....	9-36V
	48V.....	18-72V
Input Surge Voltage(100ms max.).....	24V.....	50Vdc max.
	48V.....	100Vdc max.
Input Filter.....		Pi Type
Positive Logic Remote ON/OFF /Control		See Note3

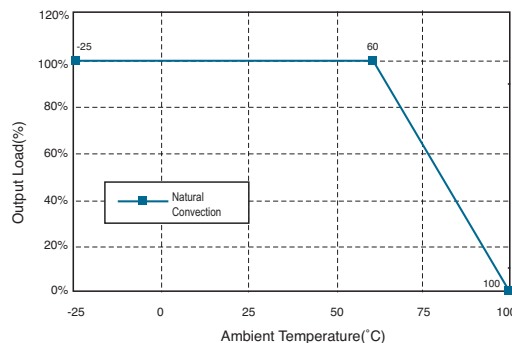
OUTPUT SPECIFICATIONS:

Voltage Accuracy	
Single Output	±1.0% max.
Dual +Output	±1.0% max.
Dual -Output	±2.0% max.
Voltage Balance, Dual Output at Full Load	±1.0% max.
Transient Response	
Single 25% Step Load Change	< 500µs
Dual FL-1/2±1% Error Band	< 500µs
External Trim Adj. Range	±10%
Ripple & Noise, 20MHz BW	20mV RMS, max.
	75mV pk-pk max.
Temperature Coefficient	±0.02%/°C max.
Short Circuit Protection	Continuous
Line Regulation (note 1)	±0.5% max.
Load Regulation (note 2).....	±0.5% max.
Start up time	270ms typ.

GENERAL SPECIFICATIONS:

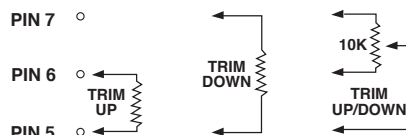
Efficiency.....	See Table
Isolation Voltage.....	Input/Output.....1500VDC min.
Isolation Resistance.....	10 ⁹ ohm min.
Isolation Capacitance	100pF typ
Switching Frequency.....	300KHz typ.
Operating Ambient Temperature	-25°C to +71°C
De-Rating, Above 60°C.....	Linearly to Zero Power at 100°C
Case Temperature.....	100°C max.
Storage Temperature Range	-55°C to +105°C
Humidity	95% RH max. Non condensing
MTBF	MIL-STD-217F, GB, 25°C, Full Load
	1500Khrs typ.
EMI/RFI	Six Sided Continuous Shield
Dimensions	2.00x1.60x0.45 inches (50.8x40.6x11.4 mm)
Case Material	Black Coated Copper with Non-Conductive Base
Weight	53g

EC1SC 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 1/4 Load.
3. Remote On/Off Control:
 Logic Compatibility CMOS or Open Collector TTL
 EC-ON >+5.5VDC to 75VDC or Open Circuit
 EC-OFF <1.8 VDC
 Control Common.....Referenced to Input Minus
4. Maximum case temperature under any operating condition should not be exceeded 100°C.

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: x.xx= ±0.04, x.xxx= ±0.010
 Millimeters: x.x= ±1.0, x.xx= ±0.25

