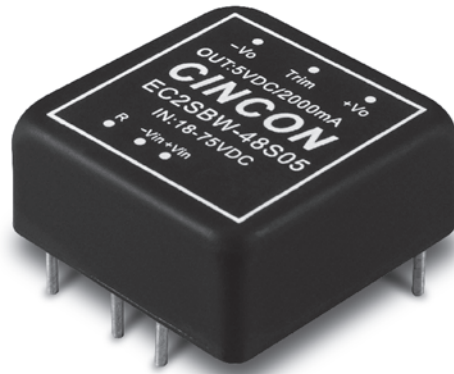


EC2SBW

S E R I E S

10 WATT 4 : 1 INPUT DC-DC CONVERTERS



Features

- 10W Isolated Output
- 1"x1"x0.4" Shielded Metal Case
- Efficiency to 86%
- 4 : 1 Input Range
- Regulated Outputs
- Input under-voltage Protection
- Remote ON/OFF
- Continuous Short Circuit Protection
- Without Tantalum Capacitors inside
- CE Mark Meets 2004/108/EC
- Safety Meets UL60950-1, EN60950-1, and IEC60950-1

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	Capacitor Load max.
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC2SBW-24S33	9-36 VDC	3.3 VDC	0 mA	2500 mA	5 mA	425 mA	81	3300uF
EC2SBW-24S05		5 VDC	0 mA	2000 mA	5 mA	496 mA	84	2200uF
EC2SBW-24S12		12 VDC	0 mA	835 mA	10 mA	486 mA	86	1000uF
EC2SBW-24S15		15 VDC	0 mA	666 mA	10 mA	486 mA	86	680uF
EC2SBW-24D05		± 5 VDC	0 mA	±1000 mA	10 mA	496 mA	84	1200uF
EC2SBW-24D12		± 12 VDC	0 mA	±416 mA	10 mA	486 mA	86	470uF
EC2SBW-24D15		± 15 VDC	0 mA	±333 mA	10 mA	486 mA	86	330uF
EC2SBW-48S33	18-75 VDC	3.3 VDC	0 mA	2500 mA	5 mA	210 mA	82	3300uF
EC2SBW-48S05		5 VDC	0 mA	2000 mA	5 mA	248 mA	84	2200uF
EC2SBW-48S12		12 VDC	0 mA	835 mA	5 mA	243 mA	86	1000uF
EC2SBW-48S15		15 VDC	0 mA	666 mA	5 mA	243 mA	86	680uF
EC2SBW-48D05		± 5 VDC	0 mA	±1000 mA	5 mA	248 mA	84	1200uF
EC2SBW-48D12		± 12 VDC	0 mA	±416 mA	8 mA	243 mA	86	470uF
EC2SBW-48D15		± 15 VDC	0 mA	±333 mA	8 mA	243 mA	86	330uF

NOTE: 1. Nominal Input Voltage 24 or 48 VDC

Specifications

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 typ.
	24Vin power down	8.0V typ.
	48Vin power up	17V typ.
	48Vin power down	16V typ.
Input Filter		LC Type
Positive Logic Remote on/off Control: ³		
Logic Compatibility		CMOS or Open Collector TTL, ref. to -Vin
Module ON		>+3.5V to 36VDC or Open Circuit
Module OFF		<1.2VDC

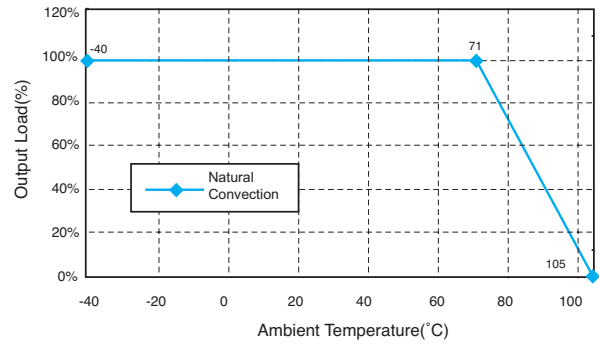
OUTPUT SPECIFICATIONS:

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
Ripple & Noise, 20MHz BW ⁴		
	Vo=3.3 & 5V	75mV pk-pk max.
	Vo=12 & 15V	100mV pk-pk max.
Temperature Coefficient		±0.03%/°C max.
Short Circuit Protection		Continuous
Line Regulation ¹		±0.5% max.
Load Regulation ² ... Single		±0.5% max.
	Dual	±1.0% max.
Cross Regulation(Dual output) Load cross variation 25%/100%		±5% max
Over Voltage Protection		Zener or TVS Clamp
External Trim Adj. Range (single output models only)		±10%
Start up time		3.5ms typ.

GENERAL SPECIFICATIONS:

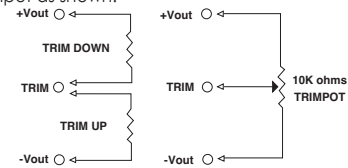
Efficiency		See Table
Isolation Voltage		1500 VDC min.
Isolation Resistance		10 ⁹ ohm min.
Isolation Capacitance		1000pF typ.
Switching Frequency		100KHz min.
Operating Ambient Temperature Range		-40°C to +85°C
Derating, Above 71°C		Linearly to Zero Power at +105°C
Case Temperature ⁵		105°C max.
Cooling		Natural Convection
Storage Temperature Range		-55°C to +125°C
Humidity		95% RH max. Non condensing
MTBF		MIL-STD-217F, GB
		T.B.D. hrs
Dimensions		1.00x1.00x0.4 inches (25.4x25.4x10.2 mm)
Case Material		Black Coated Copper with Non-Conductive Bas
Weight		18g

EC2SBW 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 min. Load.
3. Suffix "N" to the Model Number with Negative Logic Remote ON/OFF
 Module ON

Module OFF

4. The output ripple and noise is measured with 10uF tantalum and 1uF ceramic capacitor across output.
5. Maximum case temperature under any operating condition should not be exceeded 105°C.

PIN CONNECTION

Pin	DIP Function	
	Single	Dual
1	+Input	+V Output
2	- Input	- Input
3	+V Output	+V Output
4	Trim	Common
5	-V Output	-V Output
6	Remote	Remote

SIZE SB

All Dimensions In Inches(mm)
 Tolerance Inches: x.xx= ±0.04, x.xxx= ±0.010
 Millimeters: x.x= ±1.0, x.xx= ±0.25

