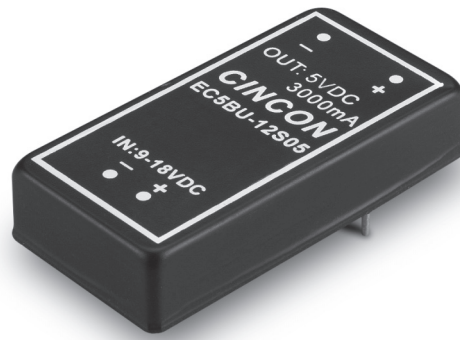


EC5BU

S E R I E S

15 WATT 2:1 INPUT DC-DC CONVERTERS



Features

- 15W Isolated Output
- Efficiency to 90%
- 2:1 Input Range
- Regulated Outputs
- Fixed Switching Frequency
- Input Under Voltage Protection
- Over Current Protection
- Conductive EMI Meets EN55022 Class A
- 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		
EC5BU-12S33	9-18 VDC	3.3 VDC	0 mA	4000 mA	90 mA	1280 mA	85	4000uF
EC5BU-12S05		5 VDC	0 mA	3000 mA	85 mA	1453 mA	88	3000uF
EC5BU-12S12		12 VDC	0 mA	1250 mA	70 mA	1420 mA	88	1330uF
EC5BU-12S15		15 VDC	0 mA	1000 mA	70 mA	1420 mA	88	1000uF
EC5BU-12D05		±5 VDC	0 mA	±1500mA	45 mA	1470mA	85	1470uF
EC5BU-12D12		±12 VDC	0 mA	±625mA	45 mA	1436mA	87	660uF
EC5BU-12D15		±15 VDC	0 mA	±500mA	45 mA	1420mA	88	550uF
EC5BU-24S33	18-36 VDC	3.3 VDC	0 mA	4000 mA	50 mA	640 mA	86	4000uF
EC5BU-24S05		5 VDC	0 mA	3000 mA	50 mA	718 mA	89	3000uF
EC5BU-24S12		12 VDC	0 mA	1250 mA	20 mA	695 mA	90	1330uF
EC5BU-24S15		15 VDC	0 mA	1000 mA	20 mA	695 mA	90	1000uF
EC5BU-24D05		±5 VDC	0 mA	±1500mA	25 mA	726 mA	86	1470uF
EC5BU-24D12		±12 VDC	0 mA	±625mA	25 mA	710 mA	88	660uF
EC5BU-24D15		±15 VDC	0 mA	±500mA	25 mA	702 mA	89	550uF
EC5BU-48S33	36-75 VDC	3.3 VDC	0 mA	4000 mA	25 mA	320 mA	86	4000uF
EC5BU-48S05		5 VDC	0 mA	3000 mA	30 mA	359 mA	88	3000uF
EC5BU-48S12		12 VDC	0 mA	1250 mA	20 mA	347 mA	90	1330uF
EC5BU-48S15		15 VDC	0 mA	1000 mA	20 mA	351 mA	90	1000uF
EC5BU-48D05		±5 VDC	0 mA	±1500mA	20 mA	363 mA	86	1470uF
EC5BU-48D12		±12 VDC	0 mA	±625mA	20 mA	355 mA	88	660uF
EC5BU-48D15		±15 VDC	0 mA	±500mA	20 mA	351 mA	89	550uF

NOTE: 1. Nominal Input Voltage 12, 24 or 48 VDC

Specifications

INPUT SPECIFICATIONS:

Input Voltage Range.....	12V.....	9-18V
	24V.....	18-36V
	48V.....	36-75V
Under voltage lockout	12Vin power up: 8.4V,	power down: 8V
	24Vin power up: 17V,	power down: 16V
	48Vin power up: 34V,	power down: 32V
Input Surge Voltage (100ms max.).....	12Vin	25Vdc max.
	24Vin	50Vdc max.
	48Vin	100Vdc max.
Input Filter	PI Type	

OUTPUT SPECIFICATIONS:

Voltage Accuracy	±1.5% max.	
Voltage Balance (Dual)	±2.0% max.	
Transient Response: 25% Step Load Change	<500μ sec.	
Ripple and Noise, 20MHz BW (Measured with 0.1μF MLCC) ...	100mV p-p max.	
Temperature Coefficient	±0.03%/°C max.	
Short Circuit Protection	Continuous	
Line Regulation ¹	Single	±0.2% max.
	Dual	±0.5% max.
Load Regulation ²	Single	±0.2% max.
	Dual	±1.0% max.
Cross Regulation (Dual output) Load cross variation 10%/100%	±5% max.	
Over Voltage Protection	Zener or TVS Clamp	
Current Limit	110% - 140% Nominal Output	
Start up time	20ms. max.	

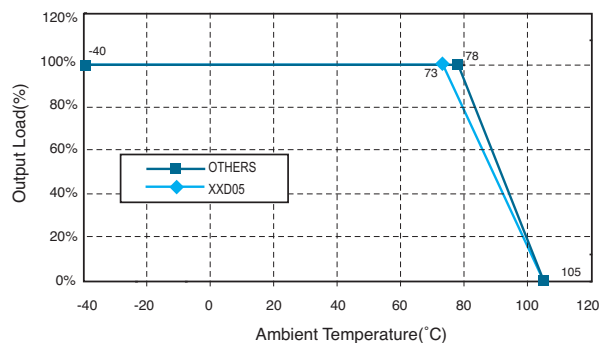
OPTION:

- Suffix "T" to the Model Number With Remote Positive On/Off Control:
Logic Compatibility ...CMOS or Open Collector TTL, Referenced to -Vin
Module On
- Suffix "A" to the Model Number with Output Voltage Adjustable
External Trim Adj. Range ±10%, Single Output Models Only

GENERAL SPECIFICATIONS:

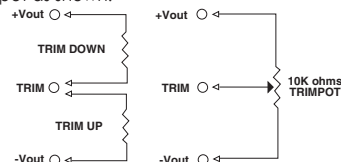
Efficiency	See Table	
Isolation Voltage	1500 VDC min.	
Isolation Resistance	10 ⁹ Ohms min.	
Isolation Capacitance	1000pF typ.	
Switching Frequency	350KHz typ.	
EMI/RFI	Conductive EMI Meets EN55022 Class A	
Case Grounding	Connect Case to -Vin with Decoupling Y Cap	
Operating Ambient Temperature Range	-40°C to +85°C	
Derating, Above 78°C	Linearly to Zero Power at +105°C	
Case Temperature ⁴	105°C	
Cooling	Natural Convection	
Storage Temperature Range	-55°C to +125°C	
Humidity	95% RH max. Non condensing	
MTBF	MIL-STD-217-F, GB, 25°C, Full Load	
Dimensions	2.00x1.00x0.4 inches (50.8x25.4x10.2mm)	
Case Material	Black Coated Copper with Non-Conductive Base	
Weight	35g	

EC5BU Series Derating Curve



External Output Trimming

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



NOTE:

- Measured From High Line to Low Line
- Measured From Full Load to min. Load
- Maximum case temperature under any operating condition should Not be exceeded 105°C.

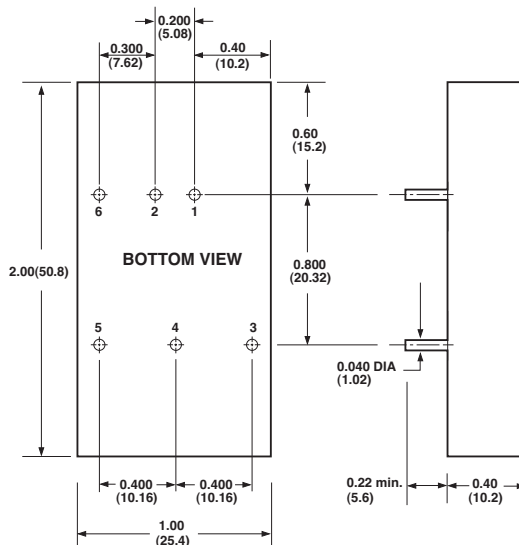
PIN CONNECTION

Pin	Function
1	+Input
2	-Input
3	+Output
4	Common/NP/Trim(Optional)
5	-V Output
6	NP/Remote(Optional)

*NP-NO PIN ON SINGLE OUTPUT

CASE B

All Dimensions In Inches(mm)
Tolerances Inches: x.xx= ±0.04, x.xxx= ±0.010
Millimeters: x.x= ±1, x.xx= ±0.25



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