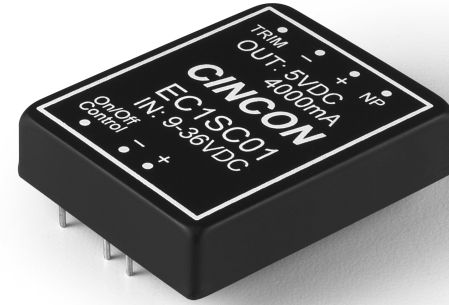


# EC1SC

## 20 WATT WIDE INPUT DC-DC CONVERTERS



### Features

- 20W Isolated Output
- Efficiency to 84%
- 4:1 Input Range
- 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 NO LOAD | INPUT CURRENT FULL LOAD | %EFF | CASE |
|--------------|---------------|----------------|----------------|-----------------------|-------------------------|------|------|
| EC1SC01      |               | 5 VDC          | 4000mA         | 15mA                  | 1029 mA                 | 81   |      |
| EC1SC02      |               | 12 VDC         | 1670mA         | 15mA                  | 1006 mA                 | 83   |      |
| EC1SC03      |               | 15 VDC         | 1330mA         | 15mA                  | 1004 mA                 | 83   |      |
| EC1SC04      | 9-36 VDC      | ±12 VDC        | ±833mA         | 20mA                  | 1004 mA                 | 83   | SC   |
| EC1SC05      |               | ±15 VDC        | ±666mA         | 20mA                  | 1004 mA                 | 83   |      |
| EC1SC06      |               | ±5 VDC         | ±2000mA        | 20mA                  | 1004 mA                 | 83   |      |
| EC1SC07      |               | 3.3 VDC        | 4000mA         | 15mA                  | 705 mA                  | 78   |      |
| EC1SC11      |               | 5 VDC          | 4000mA         | 10mA                  | 508 mA                  | 82   |      |
| EC1SC12      |               | 12 VDC         | 1670mA         | 10mA                  | 497 mA                  | 84   |      |
| EC1SC13      |               | 15 VDC         | 1330mA         | 10mA                  | 496 mA                  | 84   |      |
| EC1SC14      | 18-72 VDC     | ±12 VDC        | ±833mA         | 15mA                  | 496 mA                  | 84   | SC   |
| EC1SC15      |               | ±15 VDC        | ±666mA         | 15mA                  | 496 mA                  | 84   |      |
| EC1SC16      |               | ±5 VDC         | ±2000mA        | 15mA                  | 496 mA                  | 84   |      |
| EC1SC17      |               | 3.3 VDC        | 4000mA         | 10mA                  | 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.<br>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:

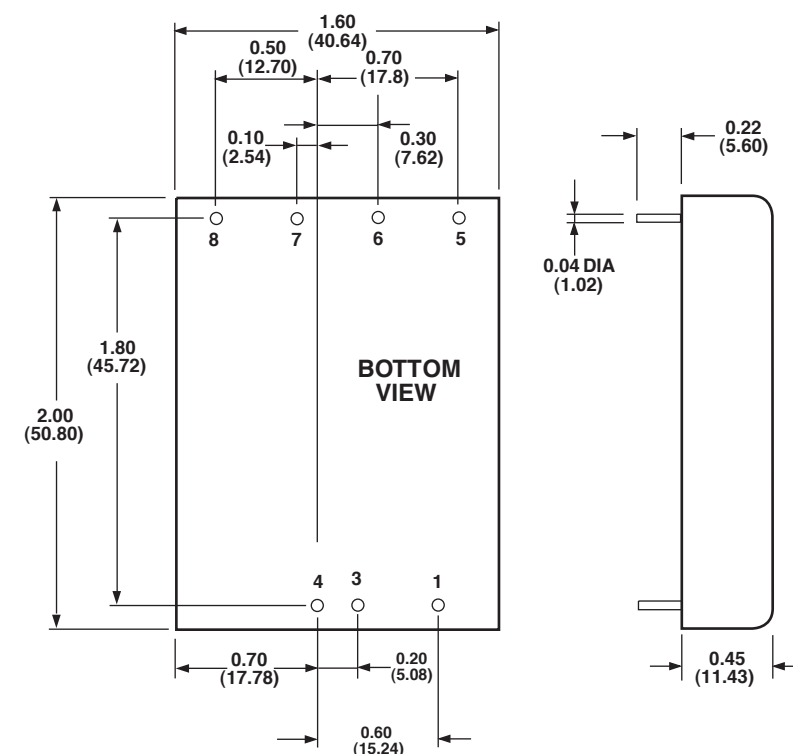
|                                  |                                                  |
|----------------------------------|--------------------------------------------------|
| Efficiency.....                  | See Table                                        |
| Isolation Voltage.....           | 1500 VDC min.                                    |
| Isolation Resistance.....        | 10 <sup>8</sup> Ohms min.                        |
| Switching Frequency .....        | 300KHz Typ.                                      |
| Operating Temperature Range..... | -25°C to +71°C                                   |
| Derating, Above 60°C.....        | Linearly to Zero Power at + 100°C                |
| Case Temperature.....            | 100°C max.                                       |
| Storage Temperature Range.....   | -55°C to +105°C                                  |
| EMI / RFI.....                   | Six Sided Continuous Shield                      |
| Dimensions .....                 | 2 x1.6 x 0.45 inches<br>(50.8 x 40.64 x 11.43mm) |
| Case Material .....              | Black Coated Copper with Non-Conductive Base     |
| Weight.....                      | 53g                                              |

#### 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

### CASE SC

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



#### PIN CONNECTION

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

#### External Output Trimming

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

