



EC1SC SERIES

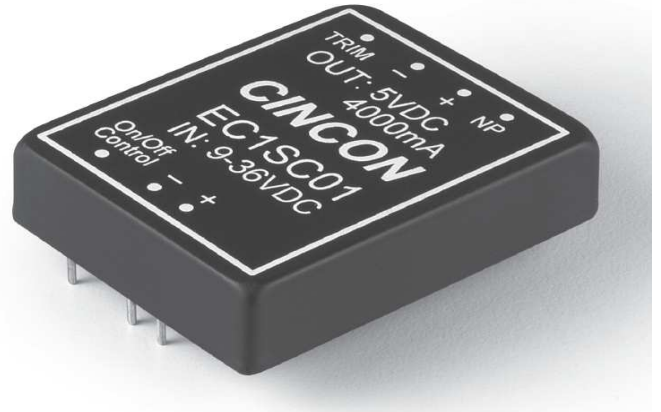
20 WATT 4:1 INPUT RANGE

DC-DC CONVERTERS



FEATURES

- * 20W Isolated Output
- * 2" X 1.6" 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 | 5VDC | 4000 mA | 15 mA | 1029 mA | 81 | 4000uF |
| EC1SC02 | 9-36 VDC | 12VDC | 1670 mA | 15 mA | 1006 mA | 83 | 1670uF |
| EC1SC03 | 9-36 VDC | 15VDC | 1330 mA | 15 mA | 1004 mA | 83 | 1330uF |
| EC1SC04 | 9-36 VDC | ±12VDC | ±833 mA | 20 mA | 1004 mA | 83 | 833uF |
| EC1SC05 | 9-36 VDC | ±15VDC | ±666 mA | 20 mA | 1004 mA | 83 | 666uF |
| EC1SC06 | 9-36 VDC | ±5VDC | ±2000 mA | 20 mA | 1004 mA | 83 | 2000uF |
| EC1SC07 | 9-36 VDC | 3.3VDC | 4000 mA | 15 mA | 705 mA | 78 | 4000uF |
| EC1SC11 | 18-72 VDC | 5VDC | 4000 mA | 10 mA | 508 mA | 82 | 4000uF |
| EC1SC12 | 18-72 VDC | 12VDC | 1670 mA | 10 mA | 497 mA | 84 | 1670uF |
| EC1SC13 | 18-72 VDC | 15VDC | 1330 mA | 10 mA | 496 mA | 84 | 1330uF |
| EC1SC14 | 18-72 VDC | ±12VDC | ±833 mA | 15 mA | 496 mA | 84 | 833uF |
| EC1SC15 | 18-72 VDC | ±15VDC | ±666 mA | 15 mA | 496 mA | 84 | 666uF |
| EC1SC16 | 18-72 VDC | ±5VDC | ±2000 mA | 15 mA | 496 mA | 84 | 2000uF |
| EC1SC17 | 18-72 VDC | 3.3VDC | 4000 mA | 10 mA | 353 mA | 78 | 4000uF |

NOTE: 1. Nominal Input Voltage 24 or 48VDC

SPECIFICATIONS

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

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:

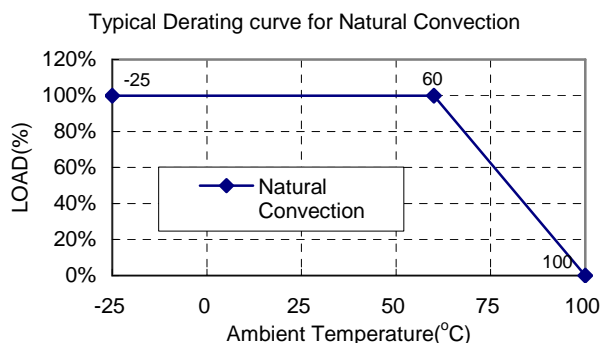
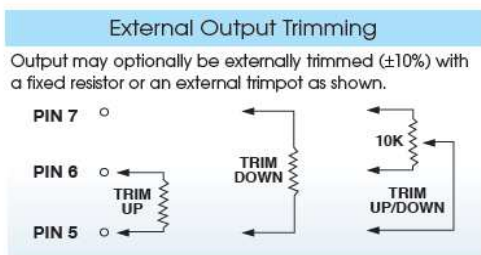
| | |
|---|---------------------------------|
| Voltage Accuracy | |
| Single Output | ±1.0% max. |
| Dual +Output | ±1.0% max. |
| Dual -Output | ±2.0% max. |
| Voltage Balance, Dual Output at Full Load | |
| | ±1.0% max. |
| Transient Response | |
| Single 25% Step Load Change | <500u sec. |
| Dual FL-1/2L±1% Error Band | <500u 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 (note 1) | ±0.5% max. |
| Load Regulation (note 2) | ±0.5% max. |
| Start up time | 270ms Typ. |

GENERAL SPECIFICATIONS:

| | |
|-------------------------------------|--|
| Efficiency | See Table |
| Isolation Voltage | 1500 VDC min |
| Isolation Resistance | 10 ⁸ ohms |
| Isolation Capacitance | 1000pF Typ. |
| 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(note 4) | 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 Load1500Khrs Typ. |
| EMI/RFI | Six Sided Continuous Shield |
| Dimensions | 2.00×1.60×0.45 inches (50.8×40.6×11.4mm) |
| Case Material | Black Coated Copper with Non-Conductive Base |
| Weight | 53g |

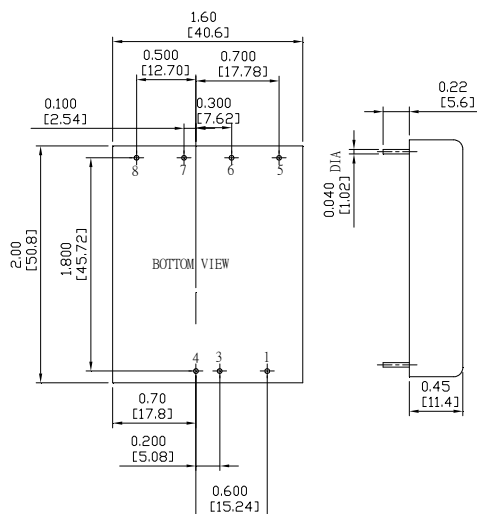
NOTE:

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 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



Case SC Dimensions:

All Dimensions In Inches(mm)
 Tolerances Inches: X.XX= ±0.04 , X.XXX= ±0.010
 Millimeters: X.X= ±1.0 , X.XX=±0.25



| PIN CONNECTIONS | | |
|-----------------|----------------|----------------|
| 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 |

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