



electronicpowersolutions

CE **UL** **US** **CB**
E176177

FEATURES

- * 150W Isolated Output
- * Efficiency up to 89%
- * Fixed Switching Frequency
- * Regulated Outputs
- * Remote On/Off
- * Low No Load Power Consumption
- * Over Temperature Protection
- * Over Voltage/Current Protection
- * Continuous Short Circuit Protection
- * Quarter Brick Size meet industrial Standard
- * UL60950-1 2nd (Reinforced Insulation) Approval
- * CB Test Certificate IEC60950-1
- * Shock & Vibration Meets EN50155 (EN61373)
- * Fire & Smoke Meets EN45545-2

CQB150-300S SERIES

150 WATT 2:1 INPUT

DC-DC CONVERTERS

SINGLE OUTPUT



| MODEL NUMBER | INPUT VOLTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT | | INPUT CURRENT | | % EFF. | CAPACITOR LOAD MAX. |
|---------------|---------------|----------------|----------------|--------|---------------|-----------|--------|---------------------|
| | | | MIN. | MAX. | NO LOAD | FULL LOAD | | |
| CQB150-300S05 | 180-425 VDC | 5 VDC | 0 mA | 30 A | 10 mA | 580 mA | 86 | 10000 μ F |
| CQB150-300S12 | 180-425 VDC | 12 VDC | 0 mA | 12.5 A | 10 mA | 560 mA | 89 | 8800 μ F |
| CQB150-300S15 | 180-425 VDC | 15 VDC | 0 mA | 10 A | 10 mA | 560 mA | 89 | 8800 μ F |
| CQB150-300S24 | 180-425 VDC | 24 VDC | 0 mA | 6.3 A | 10 mA | 570 mA | 88.5 | 3300 μ F |
| CQB150-300S28 | 180-425 VDC | 28 VDC | 0 mA | 5.4 A | 10 mA | 570 mA | 88.5 | 3300 μ F |
| CQB150-300S48 | 180-425 VDC | 48 VDC | 0 mA | 3.2 A | 10 mA | 570 mA | 89 | 1000 μ F |

NOTE:

1. Nominal Input Voltage 300 VDC.
2. Require a Ceramic Capacitor 1500pF Connected Between -Vin to Case for All Models.
3. An External Input Capacitor 68 μ F for All Models are Recommended to Reduce Input Ripple Voltage.
4. Measure at Nominal Input Voltage.

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range 300V 180-425V
 Input over voltage protection Module On440V typ.
 Module Off 450V typ.
 Under voltage lockout 300Vin Power Up 170V
 300Vin Power Down 160V
 Positive Logic Remote On/Off (note 4&5)
 Input Filter (note7) PI Type

OUTPUT SPECIFICATIONS:

Voltage Accuracy ±1.0% max.
 Transient Response: 75%-100% Step Load Change
 Error Band ±5% Vout
 Recover Time <250us
 External Trim Adj. Range +10%, -20%
 Ripple & Noise, 20MHz BW(note3)
 5V 60mV RMS, 100mV pk-pk, max.
 12V&15V 60mV RMS, 150mV pk-pk max.
 24V&28V 100mV RMS, 280mV pk-pk max.
 48V 200mV RMS, 480mV pk-pk max.
 Temperature Coefficient ±0.02%/°C max.
 Short Circuit Protection Continuous
 Line Regulation (note1) ±0.2% max.
 Load Regulation (note2) ±0.2% max.
 Over Voltage Protection trip Range, % Vo nom. 115-140%
 Current Limit 110%-160% Nominal Output
 Start up Time 280ms typ.

GENERAL SPECIFICATIONS:

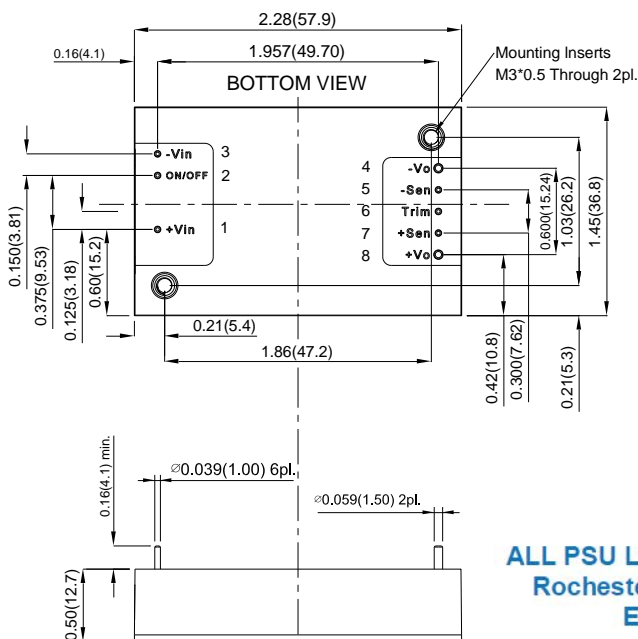
Efficiency See Table
 Isolation Voltage Input/Output 3000VAC min.
 Input/Case 2500VAC min.
 Output/Case 500VAC min.
 Isolation Resistance 10⁸ ohm min.
 Switching Frequency 360KHz typ.
 Operating Case Temperature -40°C to +105°C
 Storage Temperature -55°C to +105°C
 Thermal Shutdown, Case Temperature 110°C typ.
 Humidity 95% RH max. Non condensing
 MTBF ... MIL-HDBK-217F, GB, 25°C, Full Load ... 48V 1000Khrs typ.
 Others800Khrs typ.
 Dimensions 2.28x1.45x0.50 inches (57.9x36.8x12.7 mm)
 Case Material Aluminum Base Plate with Plastic Case
 Weight 65g

NOTE:

1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Output ripple and noise measured with 10uF aluminum and 1uF ceramic capacitor across output for 48Vout and with 10uF tantalum and 1Uf ceramic capacitor for others.
4. Logic compatibility open collector ref to -Input
 Module on >3.5Vdc to 75Vdc or open circuit
 Module off 0 to< 1.2Vdc
5. Suffix "N" to the model number with negative logic remote on/off
 Module on 0 to< 1.2Vdc
 Module off >3.5Vdc to 75Vdc or open circuit
6. Suffix "-C" to the model number with clear mounting insert (3.2mm DIA.).
7. An external input capacitor 68uF for all models are recommended to reduce input ripple voltage.
8. Require a disc ceramic capacitor 1500pF (type KX Class X1 Y1 series Murata) connected between -vin to case for all models.

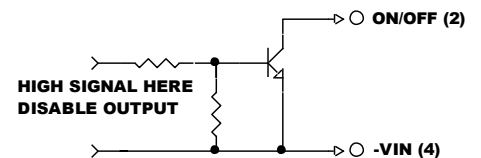
QB Dimensions:

All Dimensions in Inches(mm)
 Tolerance Inches:x.xx=±0.02 ,x.xxx=±0.010
 Millimeters:x.x=±0.5 , x.xx=±0.25

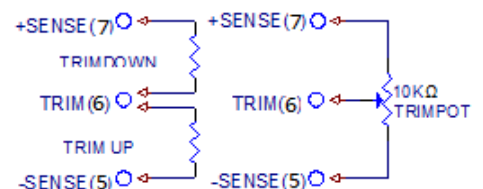


| PIN CONNECTION | |
|----------------|-----------|
| PIN | Function |
| 1 | +V Input |
| 2 | On/Off |
| 3 | -V Input |
| 4 | -V Output |
| 5 | -Sense |
| 6 | Trim |
| 7 | +Sense |
| 8 | +V Output |

REMOTE ON/OFF CONTROL



EXTERNAL OUTPUT TRIM



ALL PSU Ltd, Unit D6 Laser Quay, Culpeper Close, Medway City Estate,
 Rochester, Kent, ME2 4HU, Tel : 01634 725527, Fax : 01634 739111
 Email : sales@allpsu.co.uk, Web : www.allpsu.co.uk