



FEATURES

- * 100W Isolated Output
- * Efficiency up to 92%
- * Fixed Switching Frequency
- * 4:1 Input Range
- * 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 (Basic Insulation) Approval
- * CB Test Certificate IEC60950-1
- * Meets EN50155 with External Circuits
- * Shock & Vibration Meets EN50155 (EN61373)
- * Fire & Smoke Meets EN45545-2
- * 3000m Operating Altitude

CQB100W-110S SERIES

100 WATT 4:1 INPUT

DC-DC CONVERTERS

SINGLE OUTPUT



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	CAPACITIVE LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD		
CQB100W-110S05	43-160 VDC	5.0 VDC	0 mA	20 A	10 mA	1.00A	91	20000 μ F
CQB100W-110S12	43-160 VDC	12 VDC	0 mA	8.4 A	10 mA	1.00A	92	8400 μ F
CQB100W-110S24	43-160 VDC	24 VDC	0 mA	4.2 A	10 mA	1.03A	89	4200 μ F
CQB100W-110S28	43-160 VDC	28 VDC	0 mA	3.6 A	10 mA	1.04A	88.5	3600 μ F
CQB100W-110S48	43-160 VDC	48 VDC	0 mA	2.1 A	10 mA	1.02A	90	1000 μ F

NOTE:

1. Nominal Input Voltage 110VDC
2. An external input capacitor 220 μ F for all models are recommended to reduce input ripple voltage.

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range 110V 43-160V
 Input Surge Voltage (100ms max.) 110V..... 200Vdc max.
 Under voltage lockout 110Vin power up 41.5V
 110Vin power down 38V
 Positive Logic Remote On/Off (note 4&5)
 Input Filter (note 7)..... PI Type

OUTPUT SPECIFICATIONS:

Voltage Accuracy ±1.0% max.
 Transient Response: 75%-100% Step Load Change
 Error Band ±5% Vout Nominal, Recovery Time <250us
 External Trim Adj. Range ±10%
 Ripple & Noise, 20MHz BW (note 3)
 5V 40mV RMS, 100mV pk-pk max.
 12V 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 (note 1) ±0.2% max.
 Load Regulation (note 2) ±0.2% max.
 Over Voltage Protection trip Range, % Vo nom. 115-140%
 Current Limit 110%-160% Nominal Output
 Start up Time 60ms typ.

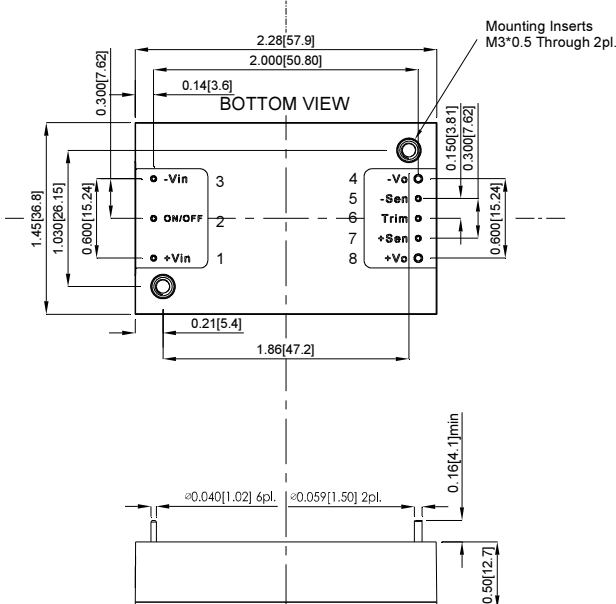
GENERAL SPECIFICATIONS:

Efficiency See Table
 Isolation Voltage
 Input/Output 3000VDC min.
 Input/Case..... 2250VDC min.
 Output/Case 500VAC min.
 Isolation Resistance 10⁸ ohm min.
 Isolation Capacitance 1500pF typ.
 Switching Frequency 300KHz typ.
 Operating Case Temperature -40°C to +105°C
 Storage Temperature -55°C to +125°C
 Thermal Shutdown, Case Temperature 110°C typ.
 Humidity 95% RH max. Non condensing
 MTBF ... MIL-HDBK-217F, GB, 25°C, Full Load ... 5V/12V 720Khrs typ.
 Others 840Khrs typ.
 Dimensions 2.28×1.45×0.50 inches (57.9×36.8×12.7 mm)
 Safety UL60950-1 2nd (Basic Insulation)
 EMC (note 8) EN50155(EN50121-3-2) with External Filter
 Shock/Vibration EN50155(EN61373)
 Environmental EN50155(EN60068-2-1)
 Case Material Aluminum Base Plate with Plastic Case
 Weight 68g

NOTE:

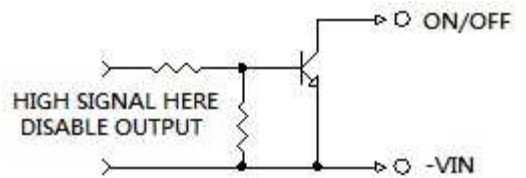
1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Output ripple and noise measured with 10uF aluminum and 1uF ceramic capacitor across output for 48Vout and with 10uF tantalum and 1uF ceramic capacitor for others.
4. Logic compatibility open collector ref to -Input
 Module on >3.5Vdc to 160Vdc 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 160Vdc or open circuit
6. Suffix "-C" to the model number with clear mounting insert (3.2mm DIA.).
7. An external input capacitor 220uF for all models are recommended to reduce input ripple voltage.
8. For information about EN50155 and RIA12, refer to application note.

All Dimensions In Inches(mm)
 Tolerances 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

