

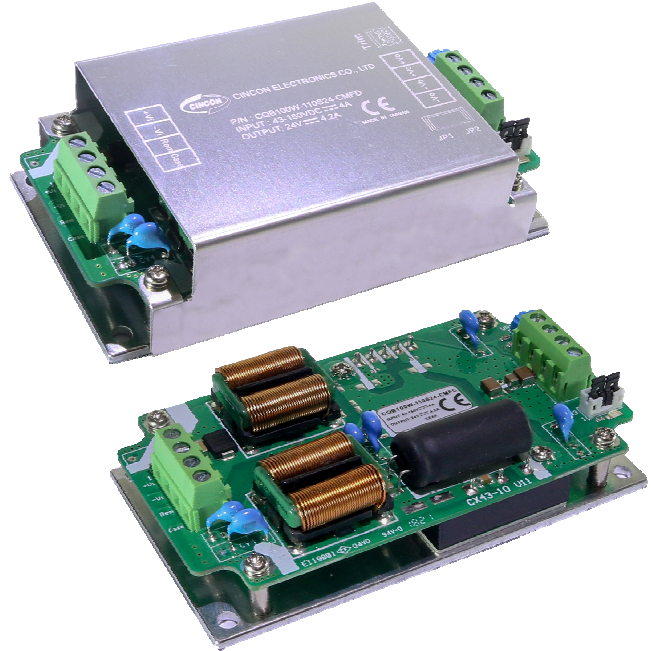


CHASSIS MOUNT CQB100W-110S SERIES 100 WATT 4:1 INPUT DC-DC CONVERTERS



FEATURES

- * 100W Isolated Output
- * Efficiency to 91%
- * 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
- * Build-In EMI Filter
- * Fire & Smoke Meets EN45545-2
- * Shock & Vibration Meets EN50155 (EN61373)
- * Safety Meets IEC/EN/UL 62368-1
- * UL60950-1 2nd (Basic Insulation) Approval for DC Modules
- * EN50155:2007 for EMC, Environmental and Characteristic



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	CAPACITOR LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD		
CQB100W-110S05□-CMFC CQB100W-110S05□-CMFD	43-160 VDC	5 VDC	0 mA	20.0 A	15 mA	1.03A	89	20000μF
CQB100W-110S12□-CMFC CQB100W-110S12□-CMFD	43-160 VDC	12 VDC	0 mA	8.4 A	15 mA	1.01A	91	8400μF
CQB100W-110S15□-CMFC CQB100W-110S15□-CMFD	43-160 VDC	15 VDC	0 mA	6.7 A	15 mA	1.01A	91	6700μF
CQB100W-110S24□-CMFC CQB100W-110S24□-CMFD	43-160 VDC	24 VDC	0 mA	4.2 A	15 mA	1.04A	88	4200μF
CQB100W-110S28□-CMFC CQB100W-110S28□-CMFD	43-160 VDC	28 VDC	0 mA	3.6 A	15 mA	1.04A	88	3600μF
CQB100W-110S48□-CMFC CQB100W-110S48□-CMFD	43-160 VDC	48 VDC	0 mA	2.1 A	15 mA	1.02A	89.5	1000μF

NOTE:

1. Nominal Input Voltage 110VDC
2. □ = N or None.
3. VR1 is Used for Output Voltage Adjustment.
4. Refer to Application Note for Thermal Resistance and Derating Informations.
5. TVS is Included for Input Surge Voltage Protection.
6. Recommend an External Fuse for Input Reverse Polarity Protection (Shunt Diode is Included Inside).

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	38.5V
Positive Logic Remote On/Off (see note 4&5)		

OUTPUT SPECIFICATIONS:

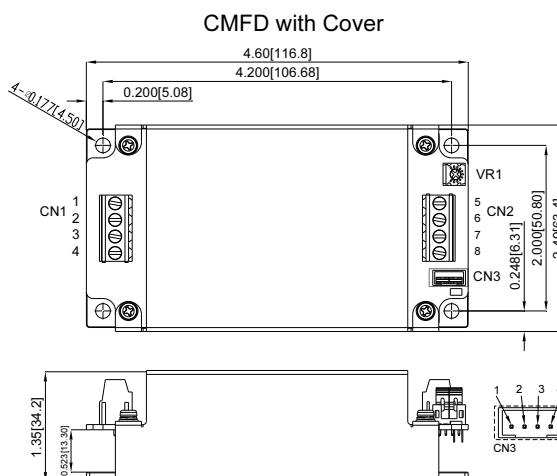
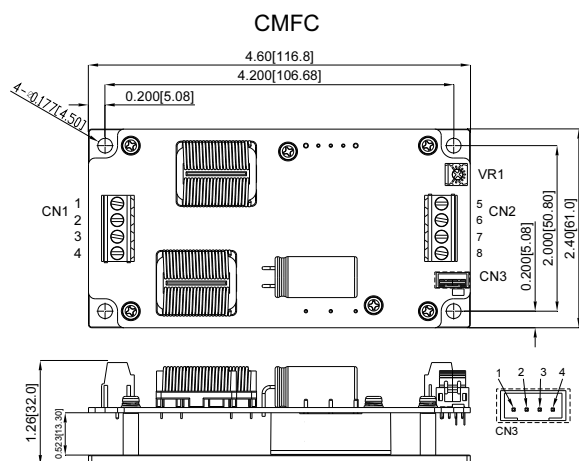
Voltage Accuracy	$\pm 1.0\%$ max.
Transient Response: 25% Step Load Change	<250usec
Trim Adj. Range (By VR1)	15V.....+10%,-20%
	Others..... $\pm 10\%$
Ripple & Noise, 20MHz BW	
5V	40mV RMS, 60mV pk-pk max.
12V/15V	40mV RMS, 100mV pk-pk max.
24V&28V	100mV RMS, 200mV pk-pk max.
48V	150mV RMS, 300mV pk-pk max.
Temperature Coefficient	$\pm 0.02\%/^{\circ}\text{C}$ max.
Short Circuit Protection	Continuous
Line Regulation (note1)	$\pm 0.2\%$ max.
Load Regulation (note2)	5V $\pm 0.5\%$ max.
	Others $\pm 0.2\%$ max.
Over Voltage Protection Trip Range, % Vo nom.	115-140%
Current Limit	110%-160% Nominal Output
Start up Time	100ms typ.
Hold up Time	See Application Note

NOTE:

- Measured from high line to low line.
- Measured from full load to zero load.
- Output ripple and noise measured with 1uF ceramic capacitor across output.
- Logic Compatibility open collector ref to -input
Module on >3.5Vdc to 160Vdc or open circuit
Module off 0 to< 1.2Vdc
- 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
- Output connector CN3 wafer with TAIWAN KING PIN TERMINAL P110I series and mate with JST housing PH series or equivalent.
- CN1 & CN2 connection: DINKLE EK500V-04P series or equivalent, suitable electric wire: 24~12AWG(IEC 0.5~2.5mm²).

Case 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



CN1&CN2
PIN CONNECTION

Pin	Function
1	+V Input
2	-V Input
3	Remote
4	Case
5	+V Output
6	+V Output
7	-V Output
8	-V Output

CN3
PIN CONNECTION

Pin	Function
1	-V Output
2	-Sense
3	+Sense
4	+V Output

GENERAL SPECIFICATIONS:

Efficiency	See Table
Isolation Voltage	
Input/Output	3000VDC min.
Input/Case	2250VDC min.
Output/Case	500VAC min.
Isolation Resistance	10 ⁸ Ohm min.
Isolation Capacitance(DC Module)	1500pF typ.
Switching Frequency	300KHz typ.
Operating Case Temperature	-40°C to +100°C
Storage Temperature	-40°C to +105°C
Thermal Shutdown, Case Temperature(DC Module)	110°C typ.
Humidity	95% RH max. Non Condensing
MTBF	MIL-HDBK-217F, GB, 25°C, Full Load 611 Khrs typ.
Safety	Meets UL62368-1
EMC	Meets EN50155(EN50121-3-2:2008) with External Output Filter Meets EN50155(EN50121-3-2:2015)
Shock/Vibration	Meets EN50155(EN61373)
Environmental	EN50155(EN60068-2-1,2,30)
Case Material	-CMFC Aluminum Base -CMFD Aluminum Base and Aluminum Cover
Dimensions	-CMFC 4.60x2.40x1.26 Inches (116.8x61.0x32.0 mm) -CMFD 4.60x2.49x1.35 Inches (116.8x63.4x34.2 mm)
Weight	-CMFC 215g -CMFD 300g

Mouser Electronics

Authorized Distributor

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Cincon:

<u>CQB100W-110S05-CMFC</u>	<u>CQB100W-110S05-CMFD</u>	<u>CQB100W-110S05N-CMFC</u>	<u>CQB100W-110S05N-CMFD</u>
<u>CQB100W-110S12-CMFC</u>	<u>CQB100W-110S12-CMFD</u>	<u>CQB100W-110S28N-CMFC</u>	<u>CQB100W-110S28N-CMFD</u>
<u>CQB100W-110S48-CMFC</u>	<u>CQB100W-110S48-CMFD</u>	<u>CQB100W-110S48N-CMFC</u>	<u>CQB100W-110S48N-CMFD</u>
<u>CQB100W-110S24-CMFC</u>	<u>CQB100W-110S24-CMFD</u>	<u>CQB100W-110S24N-CMFC</u>	<u>CQB100W-110S24N-CMFD</u>
<u>CQB100W-110S28-CMFC</u>	<u>CQB100W-110S28-CMFD</u>	<u>CQB100W-110S12N-CMFC</u>	<u>CQB100W-110S12N-CMFD</u>
<u>CQB100W-110S15-CMFC</u>	<u>CQB100W-110S15-CMFD</u>	<u>CQB100W-110S15N-CMFC</u>	<u>CQB100W-110S15N-CMFD</u>