



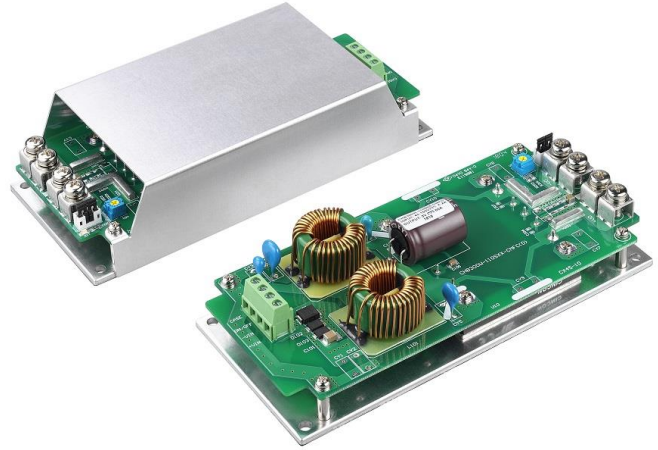
electronic powersolutions

CHASSIS MOUNT CHB200W-110S SERIES 200 WATT 4:1 INPUT DC-DC CONVERTERS



FEATURES

- * 200W Isolated Output
- * Remote On/Off
- * 4:1 Input Range
- * Regulated Outputs
- * Efficiency to 90.5%
- * Fixed Switching Frequency
- * Over Temperature Protection
- * Over Voltage/Current Protection
- * Low No Load Power Consumption
- * Continuous Short Circuit Protection
- * Shock & Vibration Meet EN50155 (EN61373)
- * Safety Meets UL60950-1, EN60950-1, and IEC60950-1
- * UL60950-1 2nd (Basic Insulation) Approval for DC Modules
- * Meets EN50155:2007 for EMC, Environmental and Characteristic
- * Build-In EMI Filter
- * Fire & Smoke Meet EN45545-2
- * Baseplate Cooled



| MODEL NUMBER | INPUT VOLTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT | | INPUT CURRENT | | % EFF. | CAPACITOR LOAD MAX. |
|--|---------------|----------------|----------------|-------|---------------|-----------|--------|---------------------|
| | | | MIN. | MAX. | NO LOAD | FULL LOAD | | |
| CHB200W-110S05□-CMFC CHB200W-110S05□-CMFD | 43-160 VDC | 5 VDC | 0 mA | 40.0A | 15 mA | 2077 mA | 87.5 | 40000uF |
| CHB200W-110S12□-CMFC CHB200W-110S12□-CMFD | 43-160 VDC | 12 VDC | 0 mA | 16.7A | 15 mA | 2035 mA | 90.5 | 16700uF |
| CHB200W-110S24□-CMFC CHB200W-110S24□-CMFD | 43-160 VDC | 24 VDC | 0 mA | 8.3A | 15 mA | 2034 mA | 89 | 8300uF |
| CHB200W-110S28□-CMFC CHB200W-110S28□-CMFD | 43-160 VDC | 28 VDC | 0 mA | 7.14A | 15 mA | 2042 mA | 89 | 7140uF |
| CHB200W-110S48□-CMFC CHB200W-110S48□-CMFD | 43-160 VDC | 48 VDC | 0 mA | 4.2A | 15 mA | 2025 mA | 90.5 | 3000uF |

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 include 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.) 200Vdc max.
 Under voltage lockout 110Vin Power up 42V
 110Vin Power down 39.5V
 Positive Logic Remote On/Off (see note4&5)

OUTPUT SPECIFICATIONS:

Voltage Accuracy $\pm 1.0\%$ max.
 Transient Response: 75%~100% Step Load Change
 Error Band $\pm 5\%$ Vout Nominal, Recovery Time <250us
 Trim Adj. Range (By VR1) $\pm 10\%$
 Ripple & Noise, 20MHz BW (note3)
 5V 60mV RMS, 120mV pk-pk max.
 12V 80mV RMS, 150mV 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 50mS typ.
 Hold up Time See Application Note

GENERAL SPECIFICATIONS:

Efficiency See Table
 Isolation Voltage Input/Output, Input/Case 3000VDC min.
 Output/Case 500VAC min.
 Isolation Resistance 10^8 ohm min.
 Isolation Capacitance 5V 10000pF typ.
 Others 8000pF 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 460Khrs typ.
 Safety Meets UL60950-1
 EMC Meets EN50155(EN50121-3-2:2015)
 With External Output Filter Meets EN50155(EN50121-3-2:2015)
 Shock/Vibration EN50155(EN61373)
 Environmental EN50155(EN60068-2-1,2,30)
 Case Material ... -CMFC Aluminum Base
 -CMFD Aluminum Base and Aluminum Cover
 Dimensions -CMFC 6.50x3.00x1.52 Inches (165.0x76.2x38.5mm)
 -CMFD 6.50x3.09x1.57 Inches (165.0x78.6x40.0mm)
 Weight -CMFC 380g
 -CMFD 435g

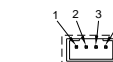
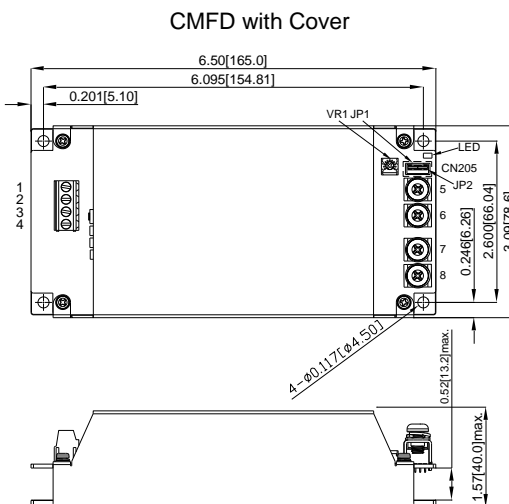
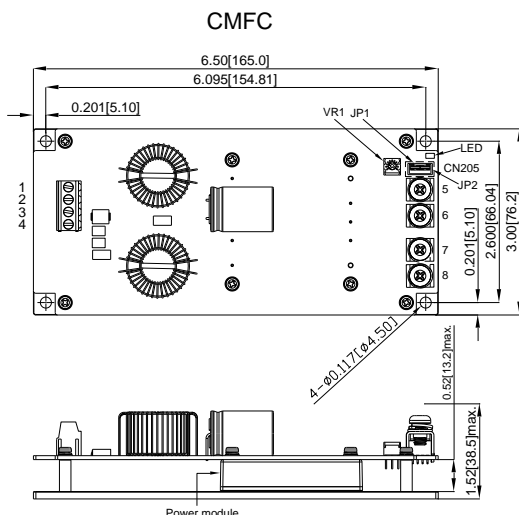
NOTE:

1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Output ripple and noise measured with 1uF ceramic capacitor across output.
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. Input connectors PIN1~4 use DINKLE EK500V-04P series or equivalent, suitable electric wire: 24~10AWG(IEC 0.5~2.5mm²).
7. Connector CN205 wafer with TAIWAN KING PIN TERMINAL P110I series and mate with JST housing PH series or equivalent.
8. Output connectors PIN5~8 use M5 terminal screw.

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

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CN205: PIN CONNECTION

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

*JP1: Short PIN1 & PIN2
 *JP1: Short PIN3 & PIN4

PIN CONNECTION

| Pin | Function |
|-----|--------------|
| 1 | Case |
| 2 | On/Off |
| 3 | -V Input |
| 4 | +V Input |
| 5 | NP/-V Output |
| 6 | -V Output |
| 7 | +V Output |
| 8 | NP/+V Output |

*PIN5 & 8 for 5Vo Only