Railway Power Series
CHASSIS MOUNT
xFB600W-110S SERIES
600 WATT 4:1 INPUT
DC-DC CONVERTERS

Railway System

FEATURES

* 600W Isolated Output
* Efficiency to 88%
* Fixed Switching Frequency
* 4:1 Input Range
* Regulated Outputs
* Remote On/Off
* Over Temperature Protection
* Over Voltage/Current Protection
* Continuous Short Circuit Protection
* Shock & Viberation Meets 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 Meets EN45545-2
* Baseplate Cooled

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	Capacitor Load max.
			MIN.	MAX.	NO LOAD	FULL LOAD		
xFB600W-110S12□-CMFD	43-160VDC	12 VDC	0mA	50A	25mA	6.3A	87	10000μF
xFB600W-110S24□-CMFD	43-160VDC	24 VDC	0mA	25A	25mA	6.2A	88	10000μF
xFB600W-110S28□-CMFD	43-160VDC	28VDC	0mA	21.4A	25mA	6.2A	88	10000μF
xFB600W-110S48□-CMFD	43-160VDC	48VDC	0mA	12.5A	25mA	6.2A	88	10000μF

NOTE:

1. Nominal Input Voltage 110VDC
2. □ = P or None.
3. VR 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 Pprotection.
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℃ Unless Otherwise Noted

INPUT SPECIFICATIONS:

Input Voltage Range ..... 110V 43-160V
Input Surge Voltage (100ms max.) ..... 110V..... 180Vdc max.
Under voltage lockout ..... 110Vin power up 42V
110Vin power down 40V
Remote ON/OFF (see note4)

OUTPUT SPECIFICATIONS:

Voltage Accuracy .....±1.0% max.
Transient Response: 25% Step Load Change ..... <500us
Trim Adj. Range (By VR) ..... ±10%
Ripple & Noise, 20MHz BW
12V ..... 60mV RMS, 120mV pk-pk max.
24V ..... 100mV RMS, 240mV pk-pk max.
28V..... 100mV RMS, 280mV pk-pk max.
48V ..... 200mV RMS, 480mV pk-pk max.
Temperature Coefficient ..... ±0.03%/℃ max.
Short Circuit Protection ..... Continuous
Line Regulation (note1) ..... ±0.2% max.
Load Regulation (note2) ..... ±2.0% max.
Over Voltage Protection trip Range ,% Vo nom. 115-140%
Current Limit ..... 105%-140% Nominal Output
Auxiliary Output Voltage/Current ..... 10±3Vdc/20mA max.
Load Share Accuracy ..... ±10% at 50% to 100% Full Load
Start up Time ..... 160ms typ.

GENRAL SPECIFICATIONS:

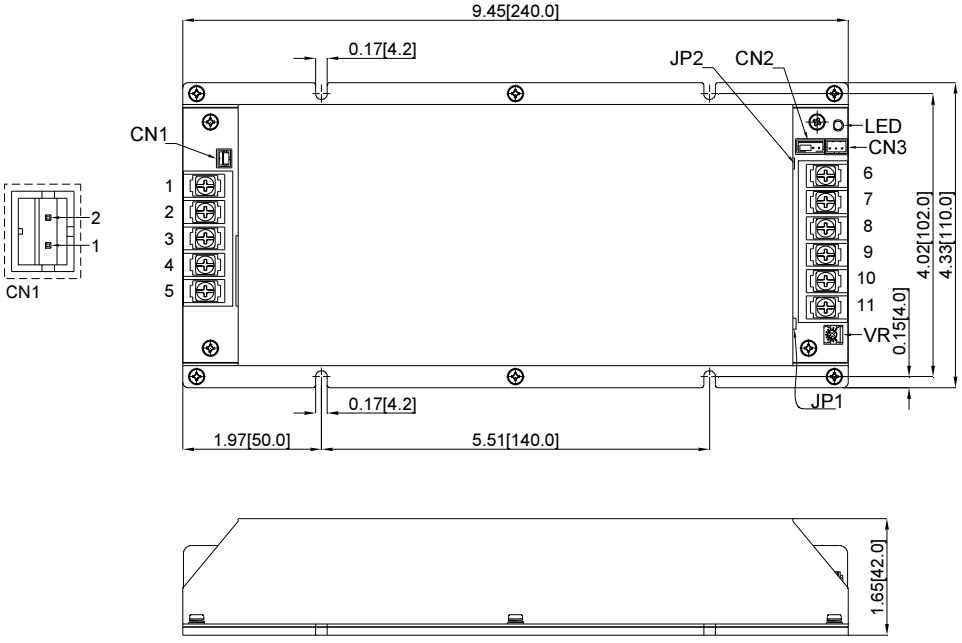
Efficiency ..... See Table
Isolation Voltage ..... Input/Output,Input/Case ..... 2250VDC min.
Output/Case ..... 1500VDC min.
Isolation Resistance ..... 10^7 ohm min.
Isolation Capacitance (DC Module) ..... 4000pF typ
Switching Frequency ..... 250KHz typ.
Operating Case Temperature ..... -40℃ to +100℃
Storage Temperature ..... -40℃ to +105℃
Thermal Shutdown, Case Temperature(DC Module) ..... 110℃ typ.
MTBF ..... MIL-HDBK-217F. GB, 25℃, Full Load ..... 280Khrs typ.
Humidity ..... 95% RH max. Non condensing
Safety ..... Meets UL60950-1 2nd(Basic Insulation)
EMC ..... Meets EN50155(EN50121-3-2:2007)
with External Output Filter Meets EN50155(EN50121-3-2:2015)
Shock/Vibration ..... Meets EN50155(EN61373)
Environmental ..... EN50155(EN60068-2-1,2,30)
Case Material ..... Aluminum
Dimensions ..... 9.45×4.33×1.65 Inches (240.0×110.0×42.0mm)
Weight 995g

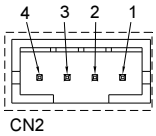
NOTE:

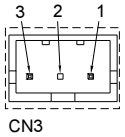
1. Measured from high line to low line.
2. Measured from full load to zero load
3. Output ripple and noise measured with 1uF ceramic capacitor across output.
4. Suffix "P" to the model number with positive logic remote on/off, standard model is negative logic
5. Input connectors PIN1~5 use DINKLE DT-49-B01W-05 series or equivalent. suitable electric wire: 22~12AWG(IEC 0.5~4mm^2)
6. Output connectors PIN6~11 use DINKLE DT-49-B01W-06 series or equivalent. suitable electric wire: 22~12AWG(IEC 0.5~4mm^2)
7. Connector CN1 wafer with TAIWAN KING PIN TERMINAL 8822-02 series or equivalent
8. Connector CN2 wafer with CHYAO SHIUNN TERMINAL JS-1001-04(K) series or equivalent.
9. Connector CN3 wafer with CHIA-SOON TERMINAL B3B-PH-K-S series or equivalent

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







PIN CONNECTION	
Pin	Function
1	PE
2,3	-V Input
4,5	+V Input
6,7,8	-V Output
9,10,11	+V Output
JP1	Short +S&+Vo
JP2	Short -S&-Vo

CN1 (On/Off JP)

PIN CONNECTIONS	
Pin	Function
1	-V Input
2	-On/Off

CN2 (Trim JP)

PIN CONNECTIONS	
Pin	Function
1	-Sense
2	+Sense
3	Trim
4	Rt

CN3 (PC JP)

PIN CONNECTIONS	
Pin	Function
1	AUX
2	IOG
3	PC