



## CFB750-300 SERIES 750 WATT 2:1 INPUT DC-DC CONVERTERS



### FEATURES

- \* 750W Isolated Output
- \* Efficiency to 91%
- \* Fixed Switching Frequency
- \* Input Under Voltage Protection
- \* Over Temperature Protection
- \* Over Voltage/Current Protection
- \* Remote On/Off
- \* Industry Full-Brick Package
- \* Single Wire Parallel
- \* Safety Meets IEC/EN/UL 62368-1
- \* Fully Isolated 3000VAC



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% Eff.	CAPACITIVE LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD		
CFB750-300S12	200-425VDC	12VDC	0 mA	62.5 A	10 mA	2.84 A	89	10000uF
CFB750-300S15	200-425VDC	15VDC	0 mA	50 A	10 mA	2.84 A	89	10000uF
CFB750-300S24	200-425VDC	24VDC	0 mA	31.2 A	10 mA	2.78 A	90	10000uF
CFB750-300S28	200-425VDC	28VDC	0 mA	26.7 A	10 mA	2.78 A	90	10000uF
CFB750-300S36	200-425VDC	36VDC	0 mA	20.8 A	10 mA	2.78 A	90	8000uF
CFB750-300S48	200-425VDC	48VDC	0 mA	15.6 A	10 mA	2.78 A	91	8000uF

#### NOTE:

1. Nominal Input Voltage 300 VDC.
2. The Output Terminal Required a Minimum Capacitor 1000uF to Maintain Specified Regulation.
3. Measure at Nominal Input Voltage.

# SPECIFICATIONS

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

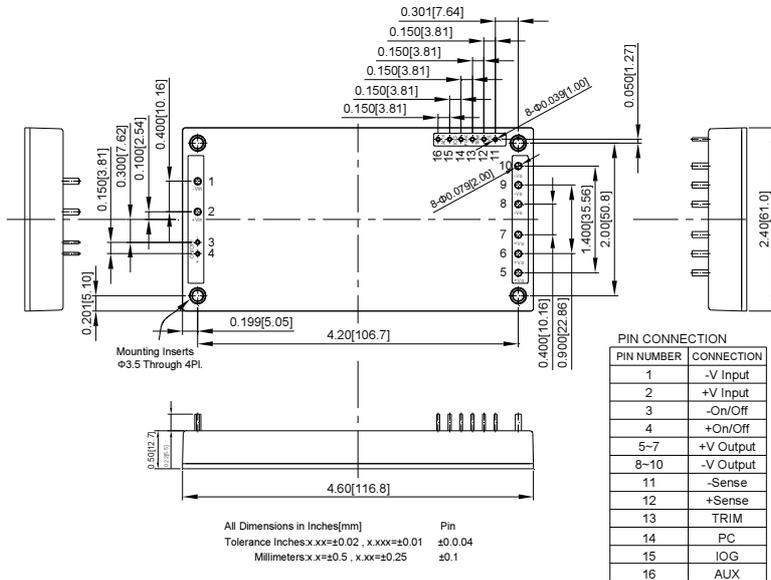
## INPUT SPECIFICATIONS:

Input Voltage Range	300V	200-425V
Input Over Voltage Protection	module on	480V
	module off	500V
Under Voltage Lockout	300Vin power up	195V
	300Vin power down	180V
Positive Logic Remote On/Off (note5&6)		
Input Filter		C Type

## OUTPUT SPECIFICATIONS:

Voltage Accuracy	±1.0% max.
Transient Response: 25% Step Load Change	<500us
External Trim Adj. Range (note4)	60-110%
Load Share Accuracy	±10% at 50% to 100% Full Load
Auxiliary Output Voltage/Current	10±3Vdc/20mA max.
Ripple & Noise, 20MHz BW (note3)	
12V&15V	150mV RMS, 300mV pk-pk max.
24V&28V	300mV RMS, 600mV pk-pk max.
36V	300mV RMS, 650mV pk-pk max.
48V	350mV RMS, 750mV pk-pk max.
Temperature Coefficient	±0.03%/°C
Short Circuit Protection	Continuous
Line Regulation (note 1)	±0.2% max.
Load Regulation (note 2)	±0.5% max.
Over Voltage Protection Trip Range, %Vo Nom.	115-140%
Current Limit	105-125% Nominal Output
Start up Time	50ms typ.

## CASE FB

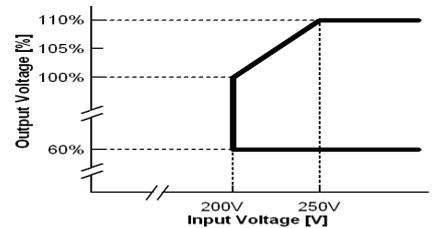


## GENERAL SPECIFICATIONS:

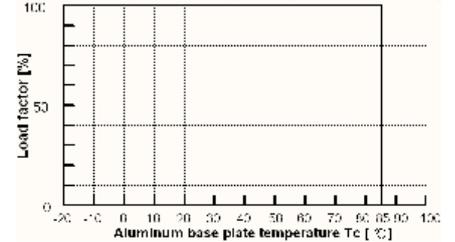
Efficiency	See Table
Isolation Voltage	Input/Output 3000VAC min. Input/Case 2500VAC min. Output/Case 500VAC min.
Isolation Resistance	10 <sup>7</sup> Ohm min.
Switching Frequency	200KHz typ.
Operating Case Temperature	-40°C to 85°C
Storage Temperature	-55°C to +105°C
Thermal Shutdown, Case Temp.	95°C typ.
Humidity	95% RH max. Non Condensing
MTBF	MIL-HDBK-217F, GB 370Khrs typ.
Dimensions	4.60x2.40x0.50 inches(116.8x61.0x12.7 mm)
Case Material	Aluminum Baseplate with Plastic Case
Weight	230g typ.

## 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 and 1000uF aluminum capacitor across output.
4. The output adjustment circuit and trim equations show as Figure1 and Figure2.
5. Logic compatibility.....open collector refer to -Vin  
 Module on >3.5Vdc to 75Vdc or Open Circuit  
 Module off 0 to <1.2Vdc
6. 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



CFB750 Output Voltage Adjustment Range



CFB750-300SXX Derating

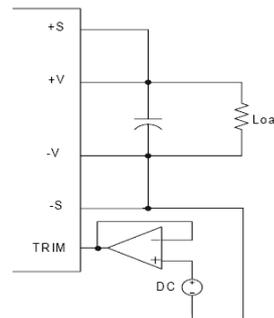
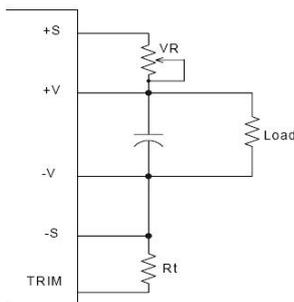
The output voltage can be determined by below equations:

$$V_f = \frac{1.24 \times \left( \frac{R_t \times 33}{R_t + 33} \right)}{7.68 + \frac{R_t \times 33}{R_t + 33}}$$

$$V_{out} = (V_o + V_R) \times V_f$$

Unit: KΩ  
Vo: Nominal Output Voltage

Fig.1 The schematic of output voltage adjusted by using external resistor and/or variable resistor.



Output Voltage = TRIM Terminal Voltage \* Nominal Output Voltage

Fig.2 The schematic of output voltage adjusted by using external DC voltage.