

# e D H F B 7 5 0

S E R I E S



## 750 Watts Full Brick Type 2:1 High Input Voltage Isolated DC - DC Converters

### FEATURES

- ◆ Industry Full-Brick Package
- ◆ 3000VAC I/O Isolation / Regulated Outputs
- ◆ Fixed 200KHz Switching Frequency
- ◆ Over Voltage / Current / Temperature Protection
- ◆ Input Under Voltage Protection
- ◆ Remote On/Off & Single Wire Parallel

### SPECIFICATIONS

Input Voltage Range.....300V(Range 200-425V)  
 Under Voltage Lockout.....power up: 195V / power down: 180V  
 Positive Logic Remote On/Off Logic.....See note  
 Input Filter.....C Type  
 Voltage Accuracy.....±1% max.  
 External Load Capacitance .....See Model Number Table  
 External Trim Adj. Range.....60~110%  
 Load Share Accuracy..... ±10% at 50% to 100% Full Load  
 Auxiliary Output Voltage/Current ..... 10±3Vdc/20mA max.  
 R & N (20MHz BW).....12/15V: 150mV RMS, 300mVpK-pK max.  
 24/28V: 300mV RMS, 600mVpK-pK max.  
 36V: 300mV RMS, 650mVpK-pK max.  
 48V: 350mV RMS, 750mVpK-pK max.  
 Temperature Coefficient.....± 0.03%/°C max.  
 Short Circuit Protection.....Continuous  
 Line Regulation (High Line † Low Line).....± 0.2% max.  
 Load Regulation (Full Load to Zero Load).....± 0.5% max.  
 OVP Trip Range, % Vo Nom..... 115~140%  
 Current Limit.....105%~125% Nominal Output  
 Isolation Voltage.....Input to Output..... 3000Vac  
 Input to Case..... 2500Vac  
 Output to Case..... 500Vac  
 Isolation Resistance.....10M Ω min.  
 Operating Case Temperature.....-40°C To +85°C  
 Storage Temperature Range.....-55°C To +105°C  
 Thermal Shutdown case Temperature.....95°C  
 Case Material.....Aluminum Baseplate w/plastic Case

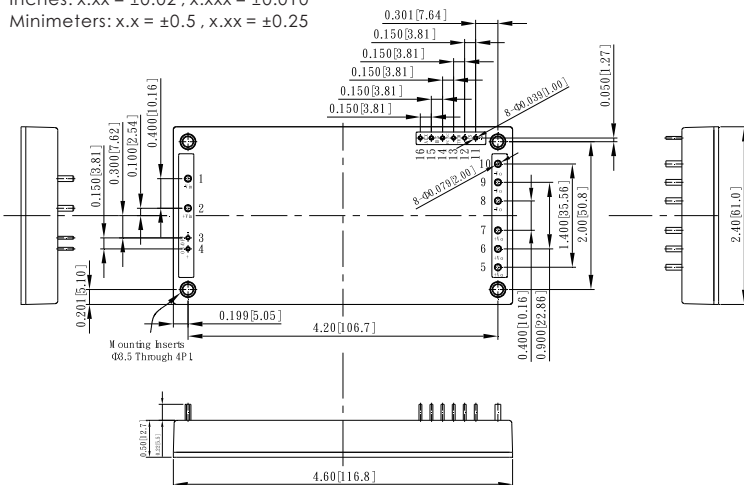


Model Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (A)	No Load Input Current	EFF. Typ. %	Capacitor Load Max.
eDHF750-C2	200-425	12	62.5	10mA	89	10000µF
eDHF750-C3	200-425	15	50.0	10mA	89	10000µF
eDHF750-C9	200-425	24	31.2	10mA	90	10000µF
eDHF750-C9C	200-425	28	26.7	10mA	90	10000µF
eDHF750-C9A	200-425	36	20.8	10mA	90	8000µF
eDHF750-C9B	200-425	48	15.6	10mA	91.0	8000µF
eDHF750-C2N	200-425	12	62.5	10mA	89	10000µF
eDHF750-C3N	200-425	15	50.0	10mA	89	10000µF
eDHF750-C9N	200-425	24	31.2	10mA	90	10000µF
eDHF750-C9CN	200-425	28	26.7	10mA	90	10000µF
eDHF750-C9AN	200-425	36	20.8	10mA	90	8000µF
eDHF750-C9BN	200-425	48	15.6	10mA	91	8000µF

- Note:
- 1: All Specifications Typical at Nominal Line, Full Load, and 25°C. Unless Otherwise Noted.
  - 2: The Output Terminal Required a Minimum Capacitor 1000uF to Maintain Specified Regulation.
  - 3: Measure at Nominal Input Voltage 300 VDC.
  - 4: Output Ripple & Noise Measured with 1µF Ceramic Capacitor & 1000µF Aluminum Capacitor Across Output
  - 5: The Output Adjustment Circuit and Trim Equations Show as Figure 1 and Figure 2.
  - 6: An External Input Capacitor 300µF for All Models Are Recommended to Reduce Input Ripple Voltage.
  - 7: Remote ON/OFF Logic Compatibility.....Open collector Refer To -V Pin  
 Suffix = Blank, Positive Remote Logic.  
 Module ON..... >3.5Vdc to 75Vdc or Open circuit  
 Module OFF..... 0 to < 1.2Vdc  
 Suffix = N, Negative Remote Logic.  
 Module ON..... 0 to < 1.2Vdc  
 Module OFF..... >3.5Vdc to 75Vdc or Open circuit

### MECHANICAL DRAWING (Unit: inch(mm))

Note:  
 All Dimensions in Inches [mm]  
 Tolerance  
 Inches: x.xx = ±0.02, x.xxx = ±0.010  
 Millimeters: x.x = ±0.5, x.xx = ±0.25

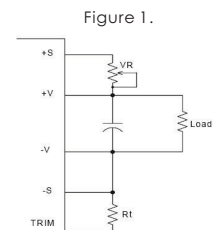


The output voltage can be determined by below equations:

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

$V_{out} = (V_o + V_R) \times V_f$   
 Unit: KΩ  
 $V_o$ : Nominal output voltage

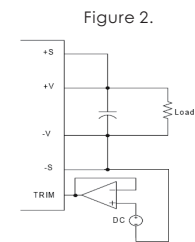
Output voltage = TRIM Terminal voltage \* Nominal output voltage



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

#### Pin Connection

Pin Number	Connection
1	- V Input
2	+ V Input
3	- On / Off
4	+ On / Off
5-7	+ V Output
8-10	- V Output
11	- Sense
12	+ Sense
13	Trim
14	PC
15	IOG
16	AUX



The schematic of output voltage adjusted by using external DC voltage