DHFB600 SERIES

600 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 180-425V)
Under Voltage Lockout ..... power up: 170V / power down: 160V
Positive Logic Remote On/Off Logic .....See note
Input Filter ..... Capacitive
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) ..... 12V: 75mV RMS, 150mVpK-pK max
24V: 120mV RMS, 240mVpK-pK max
48V: 200mV RMS, 480mVpK-pK max
Temperature Coefficient.....± 0.03%/°C max
Short Circuit Protection.....Continuous
Line Regulation (High Line t 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℃ To+100℃
Storage Temperature Range.....-55℃ To +105℃
Thermal Shutdown case Temperature ..... 105℃
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.
DHFB600-C2	180-425	12	50.0	10mA	89.5	10000μF
DHFB600-C9	180-425	24	25.0	10mA	90.5	10000μF
DHFB600-C9B	180-425	48	12.5	10mA	91.0	8000μF
DHFB600-C2N	180-425	12	50.0	10mA	89.5	10000μF
DHFB600-C9N	180-425	24	25.0	10mA	90.5	10000μF
DHFB600-C9BN	180-425	48	12.5	10mA	91.0	8000μF

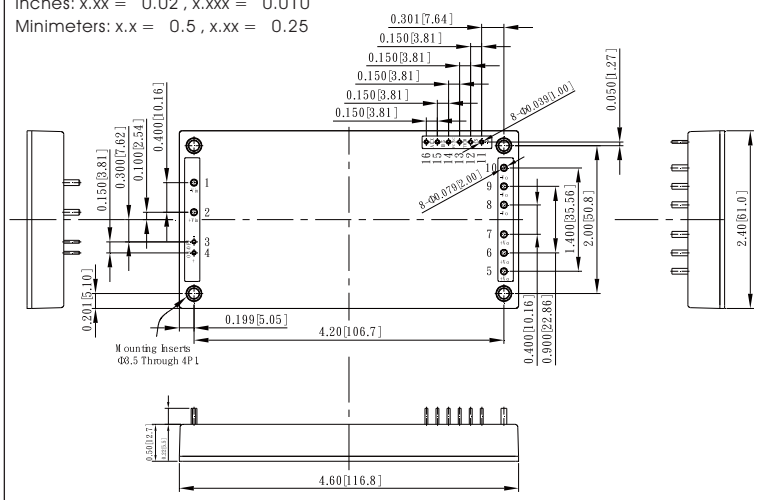
Note:
1: All Specifications Typical at Nominal Line, Full Load, and 25℃. Unless Otherwise Noted.
2. Nominal Input Voltage 300 VDC.
3. Output Ripple & Noise Measured with Min. Capacitor 470μF & 1μF Ceramic Capacitor Across Output
4. The Output Adjustment Circuit and Trim Equations as Figure 1 and Figure 2.
5. An External Input Capacitor 300μF for All Models Are Recommended to Reduce Input Ripple Voltage.
6. Remote ON/OFF Logic Compatibility.....Open collector Ref. 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
Minimeters: x.x = 0.5 , x.xx = 0.25



The output voltage can be determined by below equations:

$$Vf = \frac{1.24 \times \left(\frac{Rt \times 33}{Rt + 33}\right)}{7.68 + \frac{Rt \times 33}{Rt + 33}}$$

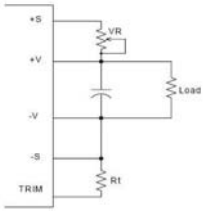
Vout = (Vo + VR) x Vf
Unit: KΩ
Vo: Nominal output voltage
Rt=6.8KΩ

Output voltage = TRIM
Terminal voltage * Nominal output voltage

Pin Connection

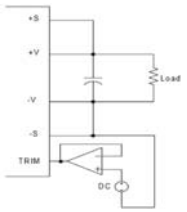
Pin Number	Connection
1	- V Input
2	+ V Input
3	- On / Off
4	+ On / Off
5~7	+ V Output
8~10	- V Output
11	- Sense
12	+ Sense
13	Trim
14	PC
15	IOG
16	AUX

Figure 1.



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

Figure 2.



The schematic of output voltage adjusted by using external DC voltage