



## AMM-6005H SERIES

### 600 WATT 2:1 INPUT DC-DC CONVERTERS

#### FEATURES

- \* 600W 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
- \* UL/C-UL 60950 Certified
- \* Fully Isolated 3000VAC
- \* Off-line systems using PFC front-ends



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% Eff.	CAPACITIVE LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD		
AMM-6005HS3V3	175-425VDC	3.3VDC	0 mA	100 A	15 mA	1.33 A	83	10000uF
AMM-6005HS05	175-425VDC	5VDC	0 mA	100 A	15 mA	1.57 A	85	10000uF
AMM-6005HS12	175-425VDC	12VDC	0 mA	50 A	100 mA	2.25 A	89	10000uF
AMM-6005HS15	175-425VDC	15VDC	0 mA	40 A	100 mA	2.25 A	89	10000uF
AMM-6005HS24	175-425VDC	24VDC	0 mA	25 A	100 mA	2.20 A	91	10000uF
AMM-6005HS28	175-425VDC	28VDC	0 mA	21.4A	100 mA	2.20 A	91	10000uF
AMM-6005HS48	175-425VDC	48VDC	0 mA	12.5 A	100 mA	2.20 A	91	10000uF

NOTE: 1. Nominal Input Voltage 300 VDC

2. The output terminal required a minimum capacitor 470uF 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..... 175-425V  
 Input over voltage protection.....Turn on.....480V  
                                                           Turn off.....500V  
 Under voltage lockout .....300V in power up ..... 175V  
                                                           300V in power down.....160V  
 Remote ON/OFF(5)  
 Input Filter ..... C Type

## OUTPUT SPECIFICATIONS:

Voltage Accuracy : ..... 1.5% max.  
 Transient Response:25% Step Load Change .....<500u sec.  
 External Trim Adj. Range(4) .....  
                                                           6 0 - 1 1 0 %  
 Load share Accuracy..... 10% at 50% to 100%Full Load  
 Auxiliary output voltage/current.....10 3Vdc/20mA max.  
 Ripple & Noise, 20MHz BW (3)  
 5V......50mV RMS max., 90mV pk-pk max.  
 12V......60mV RMS max., 120mV pk-pk max.  
 15V......80mV RMS max., 150mV pk-pk max.  
 24V......100mV RMS max., 240mV pk-pk max.  
 28V......120mV RMS max., 260mV pk-pk max.  
 48V......200mV RMS max., 480mV pk-pk max.  
 Temperature Coefficient..... 0.03%/ C  
 Short Circuit Protection.....Continuous  
 Line Regulation(1) ..... 0.2%  
 Load Regulation(2) ..... 0.5%  
 Over Voltage Protection trip Range ,% Vo nom..... 115-140%  
 Current Limit.....105% ~140% Nominal Output

## GENERAL SPECIFICATIONS:

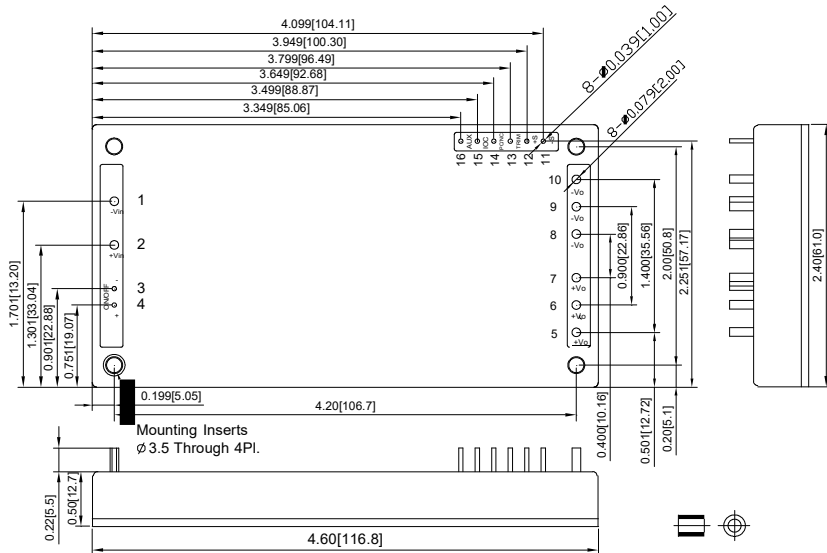
Efficiency.....See Table  
 Isolation Voltage .....Input/Output..... 3000VAC min.  
                                                           Input/Case.....2500VAC min.  
                                                           Output/Case..... 500VAC min.  
 Isolation Resistance ..... 10<sup>8</sup> ohm min.  
 Switching Frequency ..... 200KHz, Typ.  
 Operating Case Temperature ..... -40°C to 100°C  
 Storage Temperature..... -55°C to +105°C  
 Thermal Shutdown, Case Temp. .... 105°C Typ.  
 Humidity ..... 95% RH max. Non condensing  
 MTBF..... MIL-STD-217F, GB .....T.B.D. hrs  
 Dimensions ..... 4.60 2.40x0.50 inches(116.8x61.0 12.7 mm)  
 Case Material .....Aluminum Baseplate with Plastic Case  
 Weight ..... 230g Typ

## NOTE :

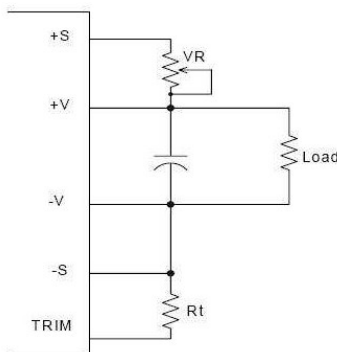
1. Measured From High Line to Low Line
2. Measured From Full Load to Zero Load
3. Output Ripple and Noise measured with 1uF Ceramic capacitor across output
4. Trim-up .....Connect a Resistor between Trim Pin and +Sense  
 Trim-down.....Connect a Resistor between Trim Pin and -Sense
5. Refer application note.

## CASE FB

All Dimensions In Inches(mm)  
 Tolerances     Inches: .XX±0.02 .XXX±0.010 ±0.004  
                     Millimeters: .X±0.5 .XX±0.25 ±0.1



PIN CONNECTIONS	
PIN NUMBER	FUNCTION
1	-Vin
2	+Vin
3	-ON/OFF
4	+ON/OFF
5 - 7	+Vo
8 - 10	-Vo
11	-S
12	+S
13	TRIM
14	PC/NC
15	IOG
16	AUX



The output voltage can be determined by below equations:

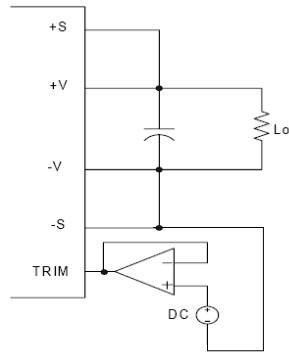
$$V_f = \frac{1.24}{7.68} \left( \frac{R_t}{R_t + 33} \right)$$

$$V_{out} = (V_o + V_r) V_f$$

Unit: KΩ

V<sub>o</sub>: 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.