

PowerBuss AC-600-28

ISOLATED 28Vout 600 Watt AC to DC MILITARY Bus Converter **With Integral MIL-STD-461E EMI Filter**



Highlights of the PowerBuss AC-600 Series:

- 600 Watts of Isolated **5V***, 12V, or 28V out Low Noise, Tightly Regulated Power. (*5V rated at 400W)
- Complete solution with no NRE (non-recurring engineering).
 - Complete Power System with no extra parts required.
 - MIL-STD-461, EMI Filtered.
 - Power Factor Corrected (PFC) Input for MIL-STD-1399, MIL-STD-461 (CE101) compliance.
 - Active Inrush Current Limit.
 - Multiple Cooling Options:
 - 1) Conduction through Baseplate
 - 2) Convection through optional Finned Heat-sink
 - 3) Convection/Fan Plenum
 - Droop & Precision Current Share Options

Features

High Efficiency: Up to 87%
 Conduction Cooled: -40°C to 100°C
 Inrush Current Limited
 Overload/Short Circuit Protection
 Overvoltage Protection
 Parallel Capable (Droop & Precision)
 Over Temperature Protection
 AC Power Fail, BIT, & Converter Enable

Environmental

Temperature..... -40°C to +100°C *
 Storage temperature..... -55°C to +125°C
 Weight..... TBD

* Baseplate Temperature

Standards

MIL-STD- 704
 MIL-STD-1399
 MIL-STD-461

Electrical Specifications

Input

Voltage..... 85-265 VAC
 Input Voltage Transient (Line-Neut).... 180Vac MIL-STD-704F
 Input Frequency Range..... 47 to 440 Hz
 Efficiency 85% (typ)
 Power Factor..... 0.99 (typ)

Output

Voltage..... 28 VDC ± 1%
 Output Power..... 600 Watts
 Output Voltage Trim Range..... +/- 10%
 Over Voltage..... 115% (typ)
 Over Current..... 120% (typ)

Isolation

Input/Output..... 1000 VDC
 Output/Chassis..... 200 VDC
 Input/Chassis..... 1000 VDC
 Isolation Resistance..... 10 MegOhm Min


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Specification Table


	Min	Typ	Max	Units
INPUT				
Input Voltage Range	85	115/220	265	Vac
Input Frequency Range	47	N/A	440	Hz.
Power Factor at Full Load Out	0.98	0.99	1.0	N/A
Efficiency @ 115 Vin	80.0	85.0	N/A	%
Efficiency @ 220 Vac	83.0	87.5	N/A	%
Isolation: Input to Chassis	1000	N/A	N/A	Vdc
Output				
Voltage Setpoint – No Load	27.72	28.00	28.28	VDC
Load Regulation	N/A	0.5	1.0	%
Line Regulation	N/A	0.2	0.5	%
Ripple (20 Mhz Bandwidth)	N/A	50	280	millivolts Pk-PK
Transient Response: % Voltage Overshoot/Undershoot for 50% load Changes	0	3	5	%
Transient Response: Settling time for output voltage to settle within 1% with 50% load changes	N/A	100	250	usecs
Over-Current Protection	110	120	150	% Iout Rated
Over-Voltage Protection	110	N/A	130	% Vout Rated
Isolation: Output to Chassis	200	N/A	N/A	Vdc
Isolation: Input to Output	1000	N/A	N/A	Vdc
Signals				
Sense Voltage (Total of output and return)	N/A	N/A	0.5	Volts
On/Off Control	(Option) Consult Factory			
Output Power Good (On/ Off)	5 / 0	N/A	11 / 0.8	Volts
AC Power OK (On-Open Collector/ Off-Closed Collector – 5 ma)	N/A	N/A	10 / 0.1	Volts
Downstream Converter Enable (On-Open Collector/ Off-Closed Collector – 5 ma)	N/A	N/A	10 / 0.1	Volts

MODEL NUMBER

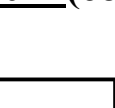
PBAC - 600 - 28.0 – (cooling options see below)



PowerBuss



Output Watts



Output Voltage

Options:

Add suffix F = Finned Heat-sink (consult factory for operating temp.)

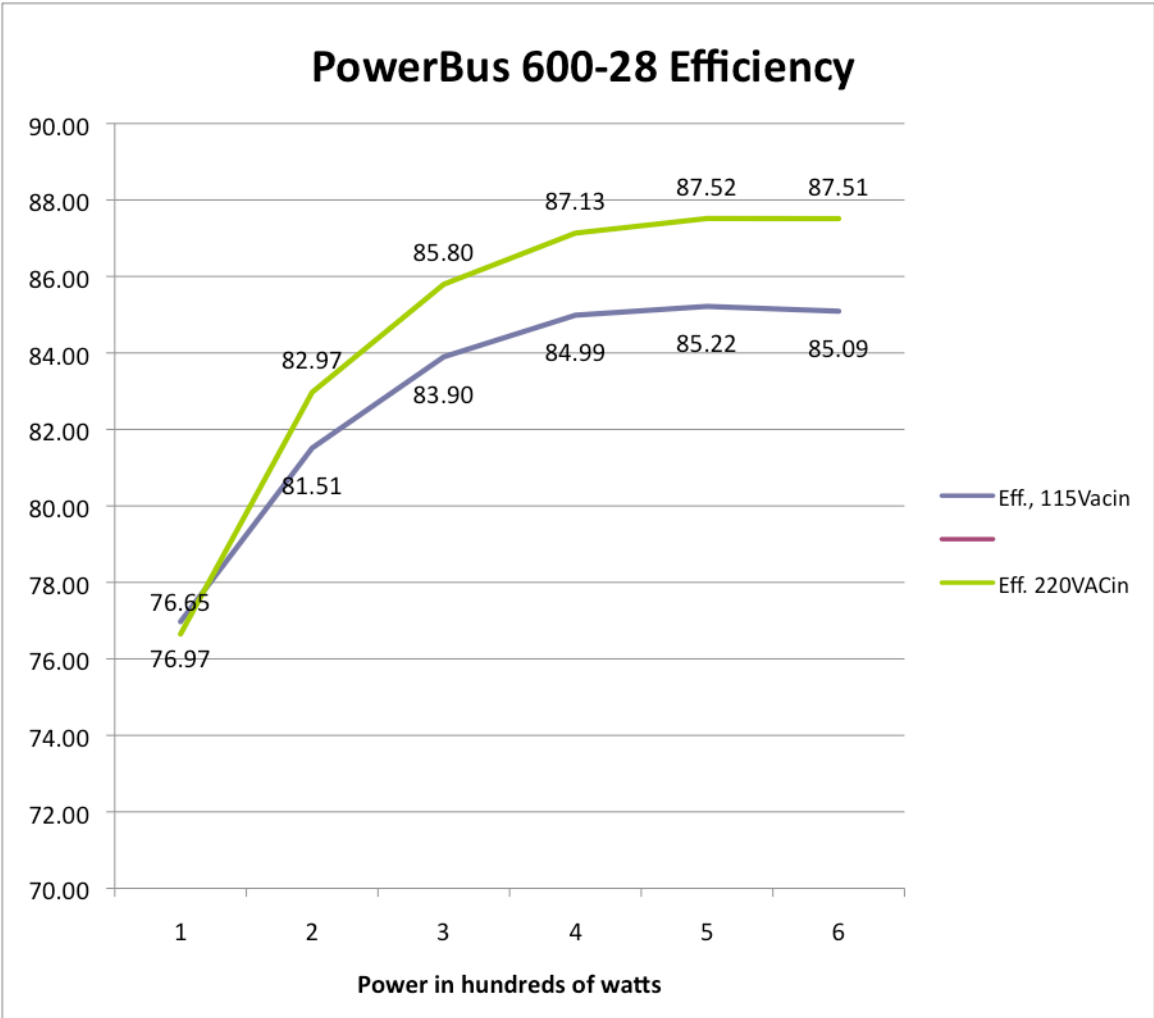
Add suffix FP = Finned Heat-sink with Fan Plenum (consult factory for operating temp.)

Add suffix HU = Additional Hold-Up Time Capacitor Option (Consult Factory)

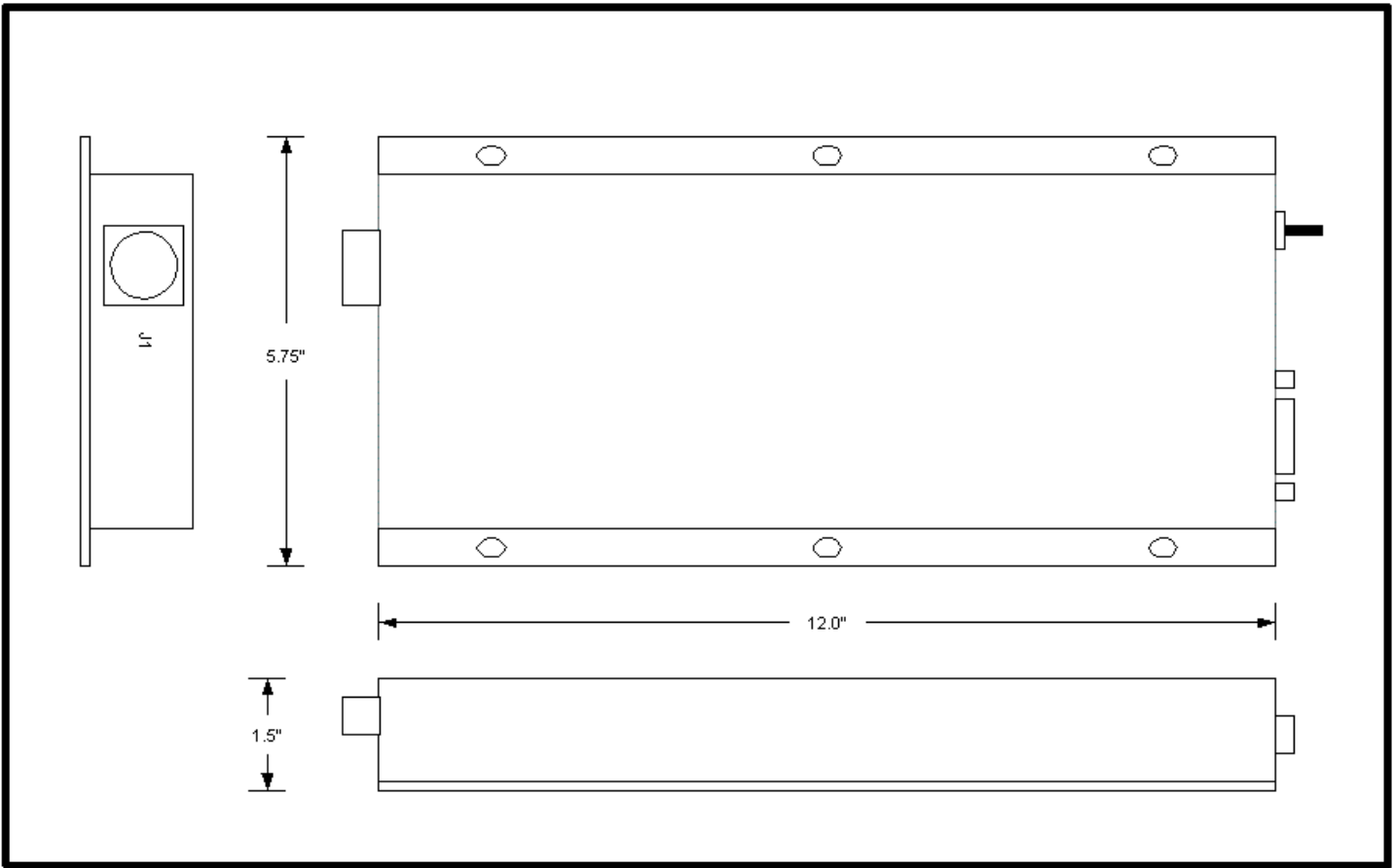
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EFFICIENCY CURVES



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AC/DC POWER BUSS 600W