Switch Mode Power Supplies Single Output
AC/DC Power Supply with PFC

## ABU125-480

## Description:

The ABU125-480 is a single output power supply. This power supply is designed for a wide variety applications where high reliability is desired, including applications for the industrial and telecommunications markets. Excellent performance specifications are provided, together with compliance to European EMC (EN55022, Class B and EN61000-3-2), and Low Voltage directive.

Specifications (@25C)
Input Characteristics:

Input Voltage:
Input Frequency Range:
Input Current:
Max Inrush Current:
Power Factor:
Leakage Current:

## Output Characteristics:

Output Voltage:
Output Current (Convection):
Output Power (Convection):
Adjustable Output Range:
Ripple \& Noise ${ }^{1}$ :
Load Regulation:
Line Regulation:
Efficiency:
Start-up Time:
Rise-up Time:
Hold-up Time:
Over Current Protection:
Over Voltage Protection:

## General Specifications:

Dimension (LxWxH):
Weight:
Cooling:
Isolation Resistance:
Dielectric Strength:
Warranty:
MTBF:

90-264VAC, 127-373VDC
$47-63 \mathrm{~Hz}$
1.6A @ 115VAC, 0.8A @ 230VAC typ.

30A@115VAC, 60A@230VAC at cold start
$>0.95 / 230 \mathrm{VAC},>0.98 / 115 \mathrm{VAC}$ at full load
$<2.4 \mathrm{~mA} / 240 \mathrm{Vac}$
$48 \mathrm{VDC} \pm 2.0 \% \mathrm{Vdc}$
0-2.09A
100W
$45.6-50.4 \mathrm{~V}$. Output voltage can be adjusted at VR51
$240 \mathrm{mVp}-\mathrm{p}$
$\pm 1.0 \%$
$\pm 0.5 \%$
88.0\%
$1500 \mathrm{~ms} / 230 \mathrm{VAC}, 3000 \mathrm{~ms} / 115 \mathrm{VAC}$, full load
$30 \mathrm{~ms} / 230 \mathrm{VAC}, 30 \mathrm{~ms} / 115 \mathrm{VAC}$, full load
$14 \mathrm{~ms} / 230 \mathrm{VAC}, 14 \mathrm{~ms} / 115 \mathrm{VAC}$, full load
$2.86-3.9 \mathrm{~A}$. Hiccup mode. Resets automatically once the fault condition is removed.
$55.2-64.8 \mathrm{VDC}$.

127(5.0) $\times 76.2(3.0) \times 27.0(1.05) \mathrm{mm}$ (in)
300 g
Natural Convection or FAN at 15CFM
I/P—O/P, I/P—FG, O/P—FG: 500VDC/100M Ohms
I/P—O/P:3KVAC; I/P—FG:1.5KVAC; O/P—FG:0.5KVAC
3 years
200K hrs. min. MIL-HDBK-217F ( $25^{\circ} \mathrm{C}$ )

## Environmental Specifications:

## Operating Temperature:

 Operating Humidity:Storage Temperature:
Storage Humidity: Temperature Drift: Vibration:
$-20^{\circ}$ to $50^{\circ} \mathrm{C}$ at full load (Refer to output load derating curve)
20 to $90 \%$ RH, non-condensing
-40 to $85^{\circ} \mathrm{C}$
10 to $95 \%$ RH, non-condensing
$<0.04 \% /{ }^{\circ} \mathrm{C}\left(0-50^{\circ} \mathrm{C}\right)$
$10-500 \mathrm{~Hz}, 2 \mathrm{G} 10 \mathrm{~min} /$ cycle, period of 60 min , each $\mathrm{X}, \mathrm{Y} \& \mathrm{Z}$ axis

## EMC \& Safety Specifications ${ }^{2}$ :

EMI Emissions:
Harmonic Current:
EMS Immunity:
Safety Approval:

Compliance to EN55022, CISPR22 Class B (Conducted \& Radiated)
Compliance to EN61000-3-2, 3
Compliance to EN61000-4-2, 3-6, 8 \& 11; EN55024 heavy, light industry level, criteria A
UL 60950-1, (insulation class -1)


[^0]2 The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.

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## Outline Dimensions (mm):

NOTE :


1. All I/O connection shall

Follow specified Model Label.
2. Temp $=+50^{\circ} \mathrm{C}$ (max) at full load.

## Connections:

AC Input Connector (CON1) JST B3P-VH or equivalent

| JST B3P-VH or equivalent |
| :--- |
| P1 Assignment <br> P AC/N <br> P3 (N.C.)$\quad \mathrm{AC} / \mathrm{L}$ |



DC Output Connector (CON51)


DC Output Connector (ON52-Optional)


## Block Diagram:

PWM Fosc $=66 \mathrm{KHz}$


Derating Curve:


RoHS Compliance: As of manufacturing date February 2016, all standard products meet the requirements of 2015/863/EU, known as the RoHS 3 initiative.

* Upon printing, this document is considered "uncontrolled". Please contact Triad Magnetics' website for the most current version.

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[^0]:    1 Ripple and noise are measured at 20 MHz of bandwidth by using a 12 " twisted-pair wire termination with a 0.1 uF \& 47 uF parallel capacitors.

