

# PR BX

POWERBOX Defense Line  
PBUS0040  
48W  
AC/DC Single Output Switch Mode Adaptor

## Features

Meets MIL-STD-461-F  
Rugged design, partly potted  
Internal over temperature protection auto recovery  
Desktop or shelf mount  
Operating temperature +60°C

## Input

Voltage range 100-240VAC nominal.  
Rated voltage 90-100VAC with some power derating.  
Frequency 47-63Hz.

## Output

DC output 12VDC.  
Voltage tolerance 6% max.  
Ripple and noise 150mV p-p max.  
Power 48W min at -40°C to +60°C.  
Minimum load 0A.  
Hold up time 8ms min.  
Overvoltage protection At 135% min.  
Over current Short circuit and over current protection (auto-resetting).  
Over temp. protection Yes, limits output power, auto-resetting.  
Efficiency 81% typ.

## Environmental

Operating temperature See table.  
Storage temperature -40°C to +71°C.  
Humidity Operating: Up to 80% relative humidity without condensation. Storage: Up to 95% relative humidity without condensation.  
Cooling Natural convection.  
Altitude 0-50,000 ft operating, 0-60,000 ft storage.  
Shock and vibration The power supply shall be capable of withstanding without damage the shock, jars, strain, vibration and other conditions incident with normal maintenance or handling.  
Transportation The power supply shall be capable of withstanding any standard means of transportation without damage, assuming that suitable packaging procedures are applied.

Art Code	Temp Limits	Certifications	Mains Cable
PBUS0040	-40°C to +60°C	N/A	US
PBUS0040-B	-40°C to +50°C	UL60950	US
PBUS0040-C	-40°C to +50°C	UL60950	Australia



## General

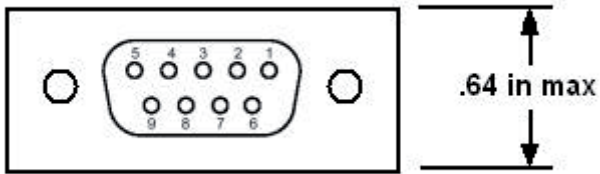
Dimensions (H x W x L) 41 x 101 x 153mm.  
Weight 510g.  
Input cable Fixed, three pin.  
Output connector 9 pin female D subminiature connector with a minimum of 30 micro-inches gold plating. Max width of 0.64 inches, refer to Figure 1.  
Output cable length 3 feet ±6 inches.  
Design and construction The power supply shall meet UL listing UL60950.  
MTBF >50 years power on.  
Lifetime prediction >15 years at 25°C.  
Marking Pin 1 and output cable shield is connected to ground.  
Pins 2, 3, 4, 5: +12VDC.  
Pins 6, 7, 8, 9: +12VDC Return.

## Standards

Safety Designed to meet/certified against UL 60950.  
EMI Fulfills below listed requirements. Limits for Army ground shall apply except for where the Fixed Wing External/Helicopter limit per figure RE102-3 per page 104 of MIL-STD-416F dated December 2007 shall apply.

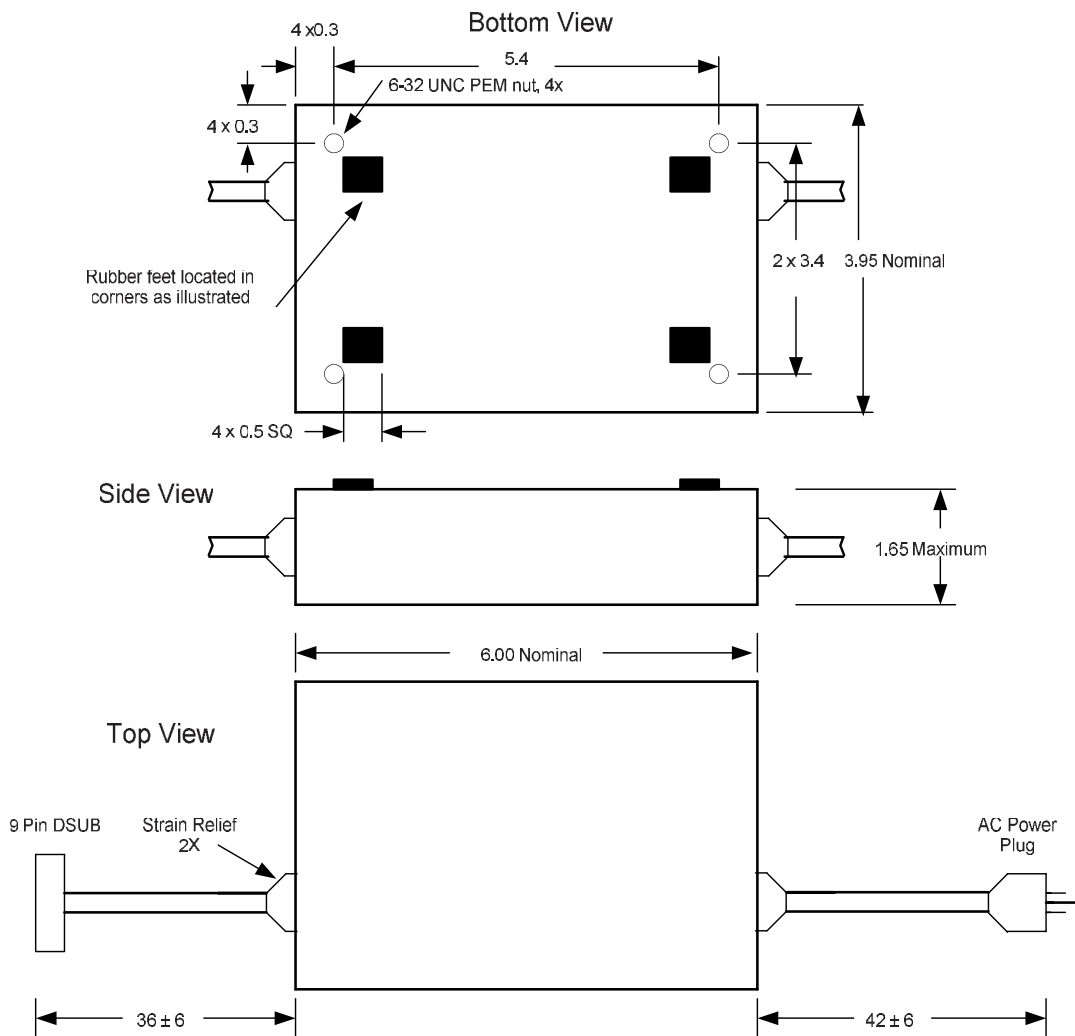
Requirement	Description
CE102	Conducted Emissions on Power Line, 10 kHz to 10 MHz
RE102	Radiated Emissions, Electric Field, 10 kHz to 18 GHz (Limit for Fixed Wing External/Helicopter)
CS101	Conducted Susceptibility, Power Leads 120Hz to 150 kHz
CS114	Conducted Susceptibility, Bulk Cable Injection 10 kHz to 200 MHz
CS115	Conducted Susceptibility, Bulk Cable Injection, Impulse Excitation
CS116	Conducted Susceptibility, Damped Sinusoidal Transients
RS103	Radiated Susceptibility, Electric Field, 2 MHz to 18 GHz, 50 V/m

Fig 1



The connector shall not use protruding features that capture the connector to the shell.  
 The connector shall be equipped with thumbscrew fasteners (tool-less).

Fig 2



- Notes:
1. Not drawn to scale.
  2. Dimensions in inches
  3. See specific text for additional construction details
  4. Unless otherwise Specified Tolerance:  $\pm 0.1$