

# SBAP319-32a-24F4WT-T5694A

AC/DC Converter Industrial Input: 32VAC Output : 24Vdc 20A 480W



## Product description:

This rugged, industrial quality power converter utilizes field-proven technology to generate the required output power. It is a mature design with a track record in numerous applications. Cooling is by built-in high quality fans and also conduction via baseplate. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also provides exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. Full electronic protection, low component count, large design headrooms and the exclusive use of components with established reliability contribute to a high MTBF. The unit is manufactured under strict quality control.

**Special Features:** 32Vac input. Conformal coating,

## SPECIFICATIONS

### Input Voltage

32Vac nominal, 47-63Hz  
28-36Vac operating range  
Input Current: 31Arms max

### Input Protection

Inrush current limiting  
Varistor  
Reverse polarity protection  
Internal safety fuse  
Lower voltage than the specified  
minimum input will not damage the unit

### Isolation

1500Vdc input to chassis  
1500Vdc input to output  
500Vdc output to chassis

### Standards

Designed to meet EN60950-1 and  
related standards

### EMI

EN55022 Class A with margins

### Switching Frequency

55kHz  $\pm 3$ kHz

### Output Voltage/Current

24Vdc  $\pm 0.3$ V/20A  
480W continuous  
Output is floating; either terminal  
can be grounded

### Redundancy Diode

Not installed

### Line/Load Regulation

$\pm 1\%$  combined from no load to  
full load

### Dynamic Response

Max 5% voltage deviation for 10% to  
50% load step, with better than 1msec  
recovery time

### Output Ripple / Noise

Better than 60mVrms or 300mVpp  
(@ 20MHz BW)

### Output Overload Protection

Rectangular current limiting with  
short circuit protection.  
Thermal shutdown with automatic  
reset in case of insufficient cooling  
Current Limit set to:  $21.5A \pm 1A$

### Output Overvoltage Protection

Double regulator loop. Second loop  
completely stable and independent of  
main regulator loop  
OVP setting:  $28V \pm 2V$

### Efficiency

83% at full load

### Operating Temperature Range

$0^{\circ}C$  to  $+50^{\circ}C$  baseplate temperature  
for full specification

### Temperature Drift

0.03% per  $^{\circ}C$  over operating  
temperature range

### Cooling

By built-in high quality fans  
and conduction via baseplate

### Environmental Protection

Basic ruggedizing  
Conformal coating

### Shock/Vibration

IEC 61373 Cat 1 A&B

### Humidity

5 - 95% non-condensing

### MTBF

150,000 hours @  $45^{\circ}C$  (Fans excluded)  
Demonstrated MTBF is significantly  
higher

### Indicators

Green OUTPUT ON LED installed visible  
through the cooling slots

### Alarm Output

None

### Package / Dimensions (W x H x L)

F4W: 156 x 65 x 356mm  
(6.2" x 2.5" x 14")  
Mounting holes are clear

### Weight

2.5kg (5.5 lbs)

### Connections

Barrier-type terminal block, 12 poles  
with 3/8" spacing

### RoHS Compliance

Not required, but accepted

### Terminal Block Pin-out

24VDC OUTPUT				GND			32VAC INPUT				
+	+	-	-	NOT USED	NOT USED	NOT USED	≡	-	-	+	+
1	2	3	4	5	6	7	8	9	10	11	12