

# 500W AC-DC Power Supply with Active PFC-input, Rugged Industrial Quality PFC 319-F4 Series

- Active power factor correction (PFC)
- Internal module ruggedized
- Single regulated output
- Full electronic protection
- Rugged, field-proven design
- N+1 redundancy available



The rugged industrial quality AC-DC power supplies with active power factor corrected input utilize field proven topology to generate the required output power. Cooling is by conduction via baseplate. Additional cooling is achieved by natural convection through the cooling slots. 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. An optional built-in redundancy diode allows for parallel and N+1 operation. An output fail alarm is available on request. Full electronic protection, low component count, large design headroom and the exclusive use of components with established reliability contribute to a high MTBF. The unit is manufactured at our plant under strict quality control.

## SPECIFICATIONS

### Input Voltage

Universal 95-264Vac, 47 - 63Hz  
Input current: 6Arms at 95V  
Power Factor is min. 0.97 at full load for the entire input range.  
Power factor meets EN61000-3-2  
Other voltages on request

### Input Protection

Inrush current limiting  
Varistor  
Internal safety fuse  
Lower voltage than the specified min. input will not damage the unit

### Isolation

2250VDC input to chassis  
4300VDC input to output  
8mm spacing  
1000VDC output to chassis

### Standards

Designed to meet EN62368-1 and corresponding UL and CSA standards

### EMI

EN55032 Class A as minimum

### Switching Frequency

55KHz ±3KHz

### Hold Up Time

Minimum 10ms at full load for 5% drop of output voltage at nominal input

### Output Voltage/Current

12Vdc, 24Vdc, 48Vdc or 125Vdc  
500W continuous output power  
Output is floating; either terminal can be grounded  
Other outputs and increased output power on request

### Redundancy Diode

Not installed. Available as option  
Not available for 12V version

### Line/Load Regulation

±1% combined from zero 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

Less than 1% of output voltage peak to peak or 0.2% RMS of the output voltage (20MHz BW)

### Output Overload Protection

Rectangular current limiting with short-circuit protection (no hiccup)  
Thermal shutdown in case of insufficient cooling (self-resetting)

### Output Over-voltage Protection

Double regulator loop completely stable and independent of main loop

### Efficiency

Output voltage dependent.  
Typically higher than 80% at full load

### Operating Temperature Range

0°C to +50°C for full specification, Extended temp. range available

### Temperature Drift

0.03% per °C over operating temperature range

### Cooling

Conduction to customer heatsink or chassis and natural convection

### Environmental Protection

Basic ruggedizing  
Conformal coating

### Shock/Vibration

IEC 61373 Cat 1 A&B

### Humidity

5 - 95% non-condensing

### MTBF

150,000 hours @ 45 °C  
Demonstrated MTBF is significantly higher

### Indicators

None

### Control Input

None

### Alarm Output

Not installed  
Optional output Fail Alarm

### Dimensions

F4: 130 x 62 x 351 mm  
5.1" x 2.43" x 13.82"  
Including baseplate, excludes connectors  
Mounting holes are clear.

### Weight

2.2 kg (4.9 lb.)

### Connections

12 pole barrier type terminal block with 3/8" spacing

### RoHS Compliance

Compliant

### Warranty

Two years subject to application within good engineering practice

ABSOPULSE power supplies are designed and built to customer requirements. The specifications on this data sheet are generic guidelines only and are subject to change.

OEM of industrial and railway quality DC-DC converters, AC-DC power supplies and battery chargers, DC-AC sine-wave inverters, phase and frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom or standard. ABSOPULSE is a BABT-approved Facility.



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