

## 5kW Rugged, Industrial Quality Rack-mount AC-DC Power System with PFC 1kW Plug-in Modules PFC 622F-5K-6U19 Series

- Electronic power factor correction (PFC)
- Rugged industrial quality
- Up to 5000W per 19" shelf
- Up to 1000W per plug-in module
- Full electronic protection
- Fan cooling
- Field-proven design
- Hot swappable, N+1 redundant



**PFC 622F-EH plug-in module (1kW)**  
6U x 16HP x 220mm + plus connector



**PFC 622F-5K-6U19 system 4U x 19" x 12"**  
can be loaded with up to 5 plug-in modules

This is a modular, industrial quality AC-DC power supply system with power factor corrected input. It can be built with up to five 1kW PFC 622F-EH plug-in power supply modules assembled in a 6U x 19" card-frame, delivering a maximum of 5000W or 4000W with N+1 redundancy. Each hot-insertable module has a built-in redundancy diode which allows for parallel connection and N+1 redundant operation. This feature also makes the system suitable for battery charging. This mature design has large design headroom and is rated for operation over the specified temperature range without de-rating. Each plug-in module is cooled by two high quality built-in fans. Full electronic protection and the use of components with established reliability results in a high demonstrated MTBF confirmed by a track record in numerous applications. The system is manufactured at our plant under strict quality control.

### SPECIFICATIONS

#### Input Voltage

95-264Vac (Universal) 47... 63Hz  
Input Current: 14Arms max. per plug in module  
Power Factor is better than 0.97 at full load for the entire input range.  
Meets EN61000-3-2

#### Input Protection

On each plug-in module:  
Inrush current limiting  
Varistor  
Internal safety fuse  
Lower voltage than the specified minimum 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 EN 60950-1 and corresponding UL and CSA standards

#### EMI

EN55032 Class A as minimum

#### Hold Up Time

Min. 10ms at any input for 5% drop in the output voltage

#### Switching Frequency

50-150KHz Boost section  
(dependent on the load)  
55KHz  $\pm$ 3KHz for the DC/DC (half-bridge) section

#### Output Voltage/Current

24Vdc/41A, 48Vdc/20A,  
110V/9A or 125V/8A per module  
Max output 1000W per module  
Max output 5000W per shelf  
Consult factory for other outputs

#### Redundancy Diode

Installed on each plug-in module  
Hot insertion allowed

#### Line/Load Regulation

$\pm$ 1.5% combined from zero load to full load including redundancy diode

#### Dynamic Response

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

#### Output Ripple/Noise

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

#### Overload Protection

Rectangular current limiting with short-circuit protection (constant current )  
Thermal shutdown on each module in case of insufficient cooling (self resetting)

#### Output Overvoltage Protection

Each plug in module has over voltage protection

#### Efficiency

Output voltage dependent.  
Typically 80% at full load

#### Operating Temperature Range

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

#### Temperature Drift

0.03% per °C over operating temperature range

#### Cooling

Each plug-in module has two high quality built in fans

#### Environmental Protection

Basic ruggedizing  
Ruggedizing and conformal coating as option

#### MTBF

135,000 hours @ 45° C (fans excluded) for each plug-in module  
Demonstrated MTBF is significantly higher.

#### Indicators

On front panel of each module:  
Green "Output ON" LED connected before redundancy diode

#### Controls

None  
Options available

#### Alarm Output

Form C Module fail alarm on the shelf. Optocoupler alarm on the module

#### Package / Dimensions

Plug-in module:  
6U x 16HP x 220mm (PCB)  
Shelf:  
6U x 19" x 12"

#### Connections

H15 Connector on plug-in module  
Terminal blocks on the shelf

#### RoHS Compliance

Compliant

#### Warranty

Two years subject to application within good engineering practice

**Enhancements to these general specifications and customizing can be accommodated upon request. Specifications are subject to change.**

*Designer and manufacturer of quality converters, inverters, UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard. Absopulse is a BABT-approved Facility*



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