

**250 VA to 15 kVA SINGLE PHASE**

## **Series 800A Commercial Power Purification Systems**

Designed to be used with linear  
or non-linear loads including:

- Computers
- Hosts
- Hubs
- PC
- Laboratories
- Distributed Control Systems
- Medical
- All Commercial Facilities



***CONTROLLED POWER COMPANY***

*"World's recognized authority in power treatment"*

# SERIES 800A



**CONTROLLED POWER COMPANY**

## “Series 800A” Commercial Power Purifier

The overall function of the **Series 800A Power Purifier** is to take polluted, fluctuating, and erratic electrical power that exists in all areas today, and purify it for sensitive electronic equipment.

The **Series 800A Power Purifier** is a self-regulating isolation transformer. It was developed to protect against fluctuating voltage, brownouts, noise, short duration power outages, sags, surges, spikes and transients. With the advent of switch mode power supplies (installed in almost every computer), harmonics are introduced into the power lines causing overheating and potential failure of conductors and transformers. For this reason, special transformers are manufactured to handle these harmonics. Transformers with high “K-factors” are designed to not overheat as a result of harmonics in the line. The **Series 800A Power Purifier** has one of the highest “K-factors” – K-30 – and eliminates harmonic current in the power line, preventing damage to building wiring.

The **Series 800A Power Purifier** is ideal for commercial power distribution situations. In addition to the problem of electrical power disturbances, there is often the question of how to effectively and efficiently distribute electrical power at a given installation. Typically, a commercial environment (offices, facilities, etc.) is in a state of perpetual change. When computers and peripherals are added, eliminated, or relocated, the power distribution equipment must be capable of adapting to these changing conditions.

The **Series 800A Power Purifier** is also ideal for industrial and medical applications, such as computer programmable controllers and robotics. Use the **Series 800A Power Purifier** whenever continuous, well-regulated, transient-free power is required for your critical loads.



## Features & Benefits

- State-of-the-art ferroresonant transformer protects sensitive electronic equipment against all power line disturbances, line noise, and transients
- Provides “ride-through” capability for up to (1) full cycle of lost power
- Acts as a large filter to eliminate harmonics that might be reflected into the line from the load
- Solves 99.5% of all power disturbance problems



# SOLUTIONS TO POWER PROBLEMS

**Exceeding the voltage regulating performance of any power conditioning product on the market, the **Series 800A Power Purifier** solves 99.5% of the electrical power problems that exist.**

## Variable Range Regulation (VRR)

In the **Series 800A Power Purifier**, the input regulation band widens as an inverse function of load. Under typical conditions, the input band is +10% to -20%, regulating the output to  $\pm 3\%$ . With a 50% load (common in many installations), the input band is +10% to -30%.

The benefits of VRR are dramatic. Under conditions in which most equipment would cease operation, the **Series 800A Power Purifier** and the equipment plugged into it continue to perform.

## Immunity To Distortion Of Input Waveform Irregularities

The input waveform can be distorted and laden with transients, or may even be a square wave. However, the sine wave output is transient-free and independent of the input irregularities.

## “Ride Through” Capability

With the loss of input power for 1/4 cycle (4 msec), 1/2 cycle (8 msec), or a full cycle (16.6 msec, load-dependent), the stored energy within the **Series 800A Power Purifier** assures that the load sees no power loss.

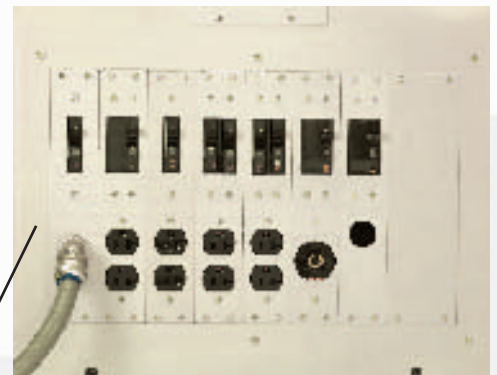
## Short-Circuit Proof

The **Series 800A Power Purifier** is a well-constructed, static magnetic device, which cannot be damaged by electrical shorts in the load.

## Efficient, Effective Power Distribution

Designed for maximum application flexibility, the **Series 800A Power Purifier** back panel interfaces with computer peripherals in any or a combination of (3) output configurations. Changes can be made by installing the proper output distribution panel.

- **Receptacle Interface:** The back panel may be customized to fit a variety of receptacles. This interface option allows peripherals to plug directly into the **Series 800A Power Purifier**.
- **Flexible Extension With Receptacle Termination:** The back panel is designed to accommodate a flexible extension with the desired receptacle termination(s) and number of receptacles.
- **Flexible Extension With Field-Wired Termination:** This is the same as “Receptacle Termination” (above), only the termination is field-installed wiring instead of receptacles.



# SPECIFICATIONS

## Line Regulation

Under normal load conditions, the output voltage remains constant to within  $\pm 3\%$ , with input voltage variations of  $+10\%$  to  $-20\%$ . In addition, usable voltages are available with an input of  $+10\%$  to  $-40\%$  with Variable Range Regulation (VRR).

## Load Regulation

The output voltage maintains itself to within  $\pm 3\%$ , with output load variations of  $0\%$  -  $100\%$ .

## Voltage Recovery

The output voltage returns to 95% of nominal level within 2 cycles and to 100% within 3 cycles when going from no-load to full-load, or vice-versa. Recovery from partial load change is corrected in a shorter period of time.

## Frequency Variations

A 1% change in line frequency from the nominal design frequency, changes output voltage approximately 1.5% in the same direction as the frequency change.

## Efficiency

90% full-load efficiency for standard input and output voltage levels.

## Operating Temperature

$-20^{\circ}\text{C}$ . -  $+40^{\circ}\text{C}$ .

## Distortion

5% maximum, at full-load.

## Transverse Mode Noise Attenuation

120 dB.

## Common Mode Noise Attenuation

140 dB.

## Audible Noise

45 dB - 60 dB, depending on size.

## Operating Frequency

60 Hertz (50 Hertz models available).

## Output Distribution

Total of (5) patch panels available on sizes 5 kVA to 15 kVA. Hard-wiring output uses (1) panel. Each panel accommodates up to (2) interface options.

## Optional Interface Combinations

- Receptacle Interface
- Flexible Extension With Receptacle Termination
- Flexible Extension With Field-Wired Termination

## Listings

- UL 1012
- UL Medical Standards

## SERIES 800A POWER PURIFIER MODEL SELECTION GUIDE

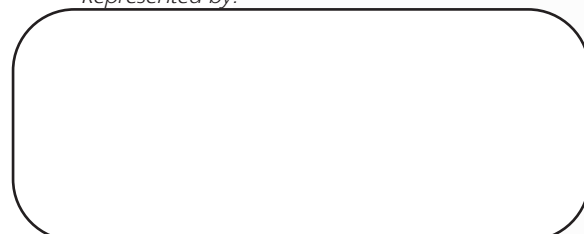
MODEL #	VA RATING	WATT RATING	INPUT VOLTAGE	OUTPUT VOLTAGE***	INPUT INTERFACE	OUTPUT INTERFACE	CABINET W x D x H (INCHES)	WEIGHT (POUNDS)
5AAX-250-8-A	250	250	120	120	5-15P	4-5-20R	8.5 x 12.75 x 9.5	29
5AAX-500-8-A	500	400	120	120	5-15P	4-5-20R	8.5 x 12.75 x 9.5	32
5AAX-700-8-A	700	500	120	120	5-15P	4-5-20R	8.5 x 12.75 x 9.5	35
5AAX-850-8-A	850	600	120	120	5-15P	4-5-20R	8.5 x 12.75 x 9.5	37
5AAX-1K-8-A	1000	700	120	120	5-15P	4-5-20R	8.5 x 12.75 x 17.5	46
5AAX-1.6K-8-A	1600	1200	120	120	5-15P	4-5-20R	8.5 x 12.75 x 17.5	62
5AAX-2.1K-8-A	2100	1500	120	120	5-20P	4-5-20R	8.5 x 12.75 x 17.5	65
5AAX-2.5K-8-A	2500	1750	120	120	5-30P	4-5-20R	8.5 x 12.75 x 17.5	68
5AZX-3.5K-8-A	3500	2450	120	120/240	*	4-5-20R	8.5 x 12.75 x 17.5	72
5MZX-3.5K-8-A	3500	2450	208/240	120/240	*	4-5-20R	8.5 x 12.75 x 17.5	72
5MZX-5K-8-A	5000	3500	208/240	120/240	HW	**	15 x 23.75 x 22.5	176
5MZX-7.5K-8-A	7500	5250	208/240	120/240	HW	**	15 x 23.75 x 22.5	210
5MZX-10K-8-A	10000	7000	208/240	120/240	HW	**	15 x 23.75 x 22.5	256
5MZX-15K-8-A	15000	10500	208/240	120/240	HW	**	15 x 23.75 x 22.5	314

\* 120V-550P, 208/240V-6-20P.  
HW = Hard Wired. Input cords are 8 ft. long.

\*\* 5 panels available for distribution. HW output uses 1 panel, other 4 panels can be used for receptacle interface or cabling. Panels available from 5 to 15 kVA

\*\*\* Load on 120 volt outputs from 3.5 to 15 kVA must be split, when there is a 120/240 output.

Represented by:



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