

PSH500A Power Supply: Applications and Safety Features

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Summary

The PSH500A power supply is a cost-saving, prepackaged solution for the following applications:

- Provide distributed power to Variable Air Volume (VAV) controllers
- Provide distributed power to various control panels
- Provide distributed power to controllers in critical controlled environments

The PSH500A is available as a model with a low-voltage wiring compartment: PSH500A-LVC.

The PSH500A-LVC power supply isolates the high-voltage compartment and the low-voltage compartment to prevent possible electrical hazard, eliminating the need for Personal Protective Equipment (PPE) when dealing with control power.

Introduction

To provide power to Variable Air Volume (VAV) controllers or control panels, installers conventionally assemble an enclosure or panel. This process requires the purchase of individual components, which includes: transformers, circuit breakers, on/off switches, and other various components.

The PSH500A power supply is a prepackaged solution that bypasses the cost in both time and money that comes with assembling a custom power supply. The PSH500A is an enclosed single 500 VA power supply that can power up multiple VAV controllers or control panels.

The specifications for the PSH500A are as follows:

Transformer	500 VA with five isolated 100 VA outputs
Input Power	480 / 277 / 240 / 120 Vac
Circuit Breaker	4 Amp breaker for each output with on/off switch
Height	12.125"
Width	12.125"
Depth	6.000"
Weight	30.16 lbs
UL-Listed	Yes

Common applications and safety features for the PSH500A are listed in the following sections.

Applications

1. Provide power to VAV controllers where no existing power source is available.

Conventional application process

A VAV system is located in a return air plenum and provides multiple circuits for powering VAV controllers with class 2 wiring.

To power a VAV controller, installers must assemble a custom power supply. This requires the purchase of individual components as well as labor cost.

These purchases include:

- Purchase of a panel
- Purchase of individual transformers
- Purchase of on/off switches and circuit breakers
- Labor cost:
 - \$50 - \$100 per hour labor
 - \$85 - \$100 per point

Each purchase may require separate purchase orders (POs), which may affect a project's overall timeline.

Solution Offered by PSH500A

The PSH500A power supply is a UL-certified prepackaged solution for powering VAV controllers.

Installers can make a single purchase that includes a panel, a transformer, and on/off switches & circuit breakers to save cost on time, labor, and materials.

Less time is spent on assembly and more time is spent on installation.

2. Provide power to control panels in a critical-controlled environment, such as a lab environment.

Conventional application process

Each lab is pressure-controlled; each of the pressure components requires its own isolated power supply.

Installers must build their own power supply, which includes:

- Purchase of a panel
- Purchase of individual transformers
- Purchase of on/off switches and circuit breakers
- Labor cost:
 - \$50 - \$100 per hour labor
 - \$85 - \$100 per point

Solution offered by PSH500A

The PSH500A is a UL-certified prepackaged solution for powering control panels in critical controlled environments.

Installers can make a single purchase that includes a panel, a transformer, and on/off switches & circuit breakers to save cost on time, labor, and materials.

Less time is spent on assembly and more time is spent on installation.

Safety Features: PSH500A-LVC

The PSH500A is available as a model with a low-voltage wiring compartment: PSH500A-LVC.

Conventional service process

To begin servicing a PSH500A power supply, a controls technician must call an electrician to open the power supply and prepare it for service.

When the cover of the power supply is removed, it exposes the installer to high voltage. Before an electrician can open the enclosure, he/she could be required to suit up in full PPE for protection against the high voltage hazard.

The controls technician must also wear PPE when he/she conducts service on the power supply.

Solution offered by PSH500A-LVC

The PSH500A-LVC isolates the low voltage compartment to eliminate possible electrical hazard and the need to wear Personal Protective Equipment (PPE) when accessing the low voltage compartment of the power supply. Saving the expense and time of suiting up in PPE may lead to significant savings in time, money, and discomfort for the control technician.