

The VESDA Power Supply is capable of providing operating power including battery backup for the entire VESDA Laser Smoke Detector product line. The VESDA Power Supply has been designed to power a single unit to multiple units depending on application needs. It provides 24 volt operating power to the VESDA system as well as a battery charger function which supervises and maintains the standby batteries. Consult "Power Supply Capabilities" for details.



## Installation

The VESDA Power Supply models VPS-100US and VPS300US are power-limited power supplies. They convert 120VAC/60Hz input into 24 VDC power-limited outputs. The VPS units are intended for use in applications requiring UL listing for fire protection signalling.

The VPS-100US or VPS-300US shall be installed in accordance with the National Electric Code (NFPA 70) and in accordance with any local regulations. See wiring diagrams for proper assembly.

## Fault Reporting

A Power Supply Fault indicator is provided via a dry relay contact (Form C), which changes state due to the following conditions:

- AC input loss
- Low AC input voltage (Brown-out)
- Loss of battery voltage
- A short circuit of the battery leads
- A short circuit of any of the DC power outputs

## Power Supply Capabilities

### LaserPLUS or LaserSCANNER

VPS-100US-XXX provides power for: 1 LaserPLUS or LaserSCANNER, or up to 5 remote (single box) units, or 1 subrack assembly. Battery requirements: (2) 12 volt/12 Amp-hour batteries.

VPS-300US-XXX provides power for: up to 3 LaserPLUS or LaserSCANNER detectors, or up to 15 remote (single box) units, or up to 3 subrack assemblies. Battery requirements:

- 2 detectors or 2 subracks or 10 remotes require (4) 12volt/12 Amp-hour batteries.
- 3 detectors or 3 subracks or 15 remotes require (6) 12volt/12 Amp-hour batteries.

### LaserCOMPACT

VPS-100US-XXX provides power for: up to 2 LaserCOMPACT detectors, or up to 5 remote (single box) units, or 1 subrack assembly. Battery requirements: (2) 12volt/12 Amp-hour batteries.

VPS-300US-XXX provides power for: up to 6 LaserCOMPACT detectors, or up to 15 Remote (single box) units, or up to 3 subrack assemblies. Battery requirements:

- 4 detectors or 2 subracks or 10 remotes require (4) 12volt/12 Amp-hour batteries.
- 6 detectors or 3 subracks or 15 remotes require (6) 12volt/12 Amp-hour batteries.

## Features

- Input 120VAC/60Hz
- 1.5 amp continuous supply current at 27.6VDC
- Filtered and electronically regulated output
- AC fail supervision
- Low AC (brown-out) supervision
- Battery supervision
- Built-in charger for sealed lead acid or gel-type batteries
- Automatic switch over to standby battery when AC fails
- AC input LED indicator
- UL 1481 listed

## LaserFOCUS-250

VPS-100US-XXX provides power for 2 LaserFOCUS-250 detectors, or up to 5 remote (single box) units, or 1 sub rack assembly. Battery requirements: (2) 12 volt / 12 Amp-hour batteries.

VPS-300US-XXX provides power for 6 LaserFOCUS-250 detectors, or up to 15 remote (single box) units, or 3 sub rack assemblies. Battery requirements:

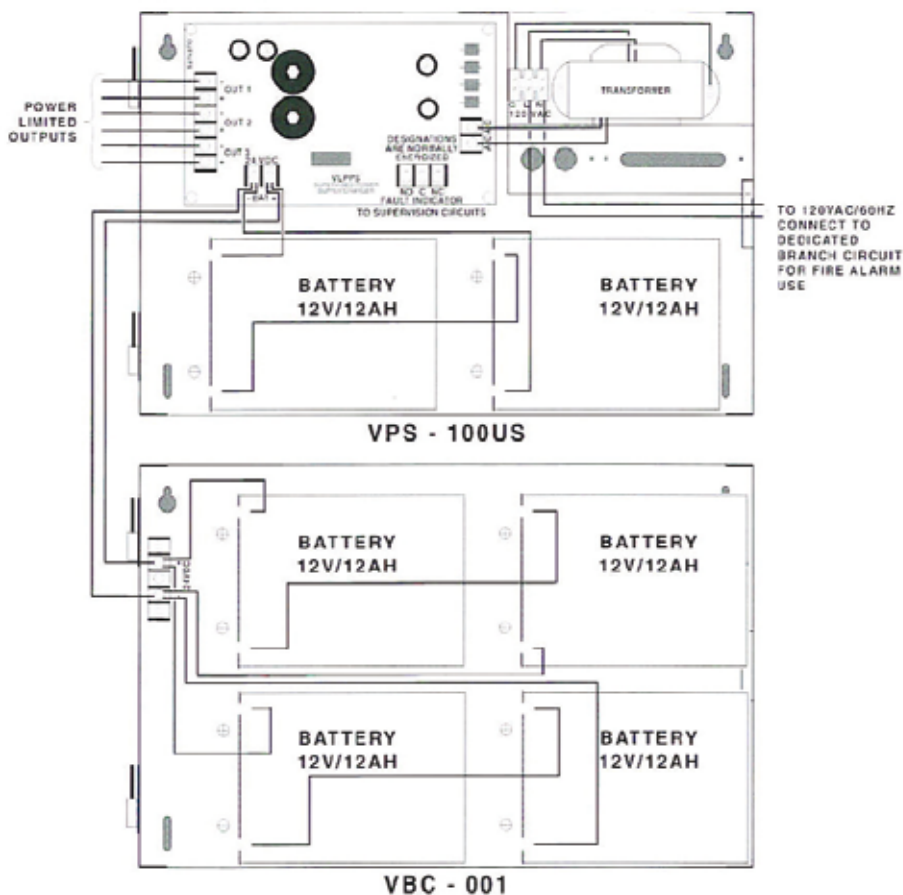
- 4 detectors or 2 sub racks or 10 remotes require (4) 12 Volt / 12 Amp-hour batteries.
- 6 detectors or 3 sub racks or 15 remotes require (6) 12 Volt / 12 Amp-hour batteries.

## LaserFOCUS-500

VPS-100US-XXX provides power for 1 LaserFOCUS-500 detector, or up to 5 remote (single box) units, or 1 sub rack assembly. Battery requirements: (2) 12 volt / 12 Amp-hour batteries.

VPS-300US-XXX provides power for 3 LaserFOCUS-500 detectors, or up to 15 remote (single box) units, or 3 sub rack assemblies. Battery requirements:

- 2 detectors or 2 sub racks or 10 remotes require (4) 12 Volt / 12 Amp-hour batteries.
- 3 detectors or 3 sub racks or 15 remotes require (6) 12 Volt / 12 Amp-hour batteries.



## Specifications

### Components:

The VPS-100US consists of three main components: the mounting enclosure, the transformer and the main circuit board. It uses two backup batteries (supplied separately).

The VPS300US consists of one VPS-100US Power Supply and one VBC-001 Battery Cabinet. Together the two units can hold up to 6 batteries (supplied separately).

Note: The VESDA Power Supply uses sealed acid, 12VDC, 12 Amp/hour batteries. To order, use part number VBT-012 (minimum 2).

**Input:**  
120 VAC/60Hz; 1.4 amp max.

**Output:**  
27.6 VDC (Nominal) 1.5 Amps (Max.)  
Max. output Current when a single 24 VDC output is used:  
1.2 amps  
Max. output when the three 24 VDC outputs are used:  
0.500 Amps per output

**Dimensions (WHD):**  
13.9 in. x 9 in. x 4.5 in.

**Weight:**  
VPS-100 US 10lbs. without batteries  
VBC-001 6lbs. without batteries

**Operating Temperature:**  
Power supply ambient: 32 ° to 120 °F  
Humidity: 10 - 95%RH, non-condensing

**Trouble Relay:**  
Common trouble relay rated 2A @ 30VDC  
(Form C: NO/NC)  
During normal operation, the power supply Fault Reporting Relay is energized.

**Cable Access:**  
1 inch knock outs in various positions

**Cable Termination:**  
Screw terminal blocks  
30 - 12 AWG

## Ordering Information

| P/N           | DESCRIPTION  | REQUIREMENTS  |
|---------------|--|---|
| VPS-100US-XXX | Power Supply   | Use XXX field to specify input voltage: 120 or 220 VAC. |
| VPS-300US-XXX | Power Supply Model VPS-100US-XXX and Battery Cabinet model VBC-001 | Use XXX field to specify input voltage: 120 or 220 VAC. |
| VBT-012       | Battery, sealed lead acid, 12 VDC, 12 Amp/hr                       | Minimum of 2 required                                   |