VESDA POWER SUPPLY
VPS-100US, VPS-300US

The VESDA Power supply models (VPS-100US and VPS-300US) are capable of providing operating power including battery backup for the entire VESDA Laser and VESDA-E smoke detectors, in addition to other Xtralis compatible devices listed below.

The VPS-100US has been designed to power a single unit to multiple units depending on application needs. It provides 24 volt operating power to the system as well as a battery charger function which supervises and maintains the standby batteries.

Installation

The VPS-100US and VPS-300US are power limited power supplies that automatically adjust input of a 120VAC or 220VAC 60Hz to three 24VDC power limited outputs.

These power supplies are intended for indoor dry use only and in applications requiring UL Listing for Fire Protective Signaling. They must be installed in accordance with the National Electric Code (NFPA70), the National Fire Code (NFPA72), and all other applicable codes necessary for compliance with the local Authority Having Jurisdiction (AHJ).

Operation

The VPS-100US and VPS-300US are intended for use with products requiring a 24VDC source. Power is available through three individually protected, power limited outputs. A power failure indication is reported via two separate dry relay contacts (Form C), remote and local, which transfers due to:

- AC input loss
- Low AC input voltage
- Loss of battery voltage
- Short circuit of any of the DC power outputs

Components

The VPS-100US consists of the mounting enclosure and the main circuit board. The battery compartment can hold up to two backup batteries (supplied separately).

The VPS-300US 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 Power Supply uses sealed acid, 12VDC, 12 A/hour batteries. To order, use the part number VBT-012 (minimum 2).

Battery Calculations

To facilitate the calculation of the back up battery size, refer to the Battery Calculator (Doc. No. 21062), available on Xtralis website (www.xtralis.com). The battery calculation has to be confirmed to the compliance requirements with local fire protection codes and standards.

Compatible Devices

- VESDA-E Detectors: VEU Series, VEP Series, VES Series
- VESDA Detectors: VLF Series, VLI Series, VLP Series, VLC Series, VLS Series
- VESDA/ VESDA-E Remote Accessories
- OSID Beam Detectors
- VESDA Sensepoint XCL

Features

- Input 120 VAC/60 Hz or 220VAC/60 Hz
- 1.5 A continuous supply current at 24 VDC
- 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
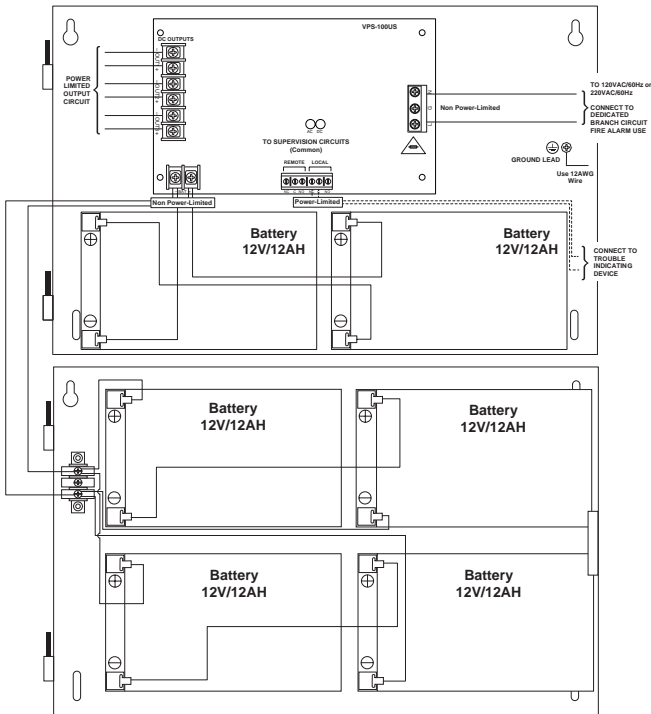
Listings / Approvals

- UL Listed - UL 864
- ULC-S527

Wiring

The below diagram demonstrates the use of battery expansion cabinet with VPS-100US Power Supply.

VPS-300US = combination of the VPS-100US + VBC-001

Specifications

Input Voltage	120VAC/60Hz/1.4A Max. or 220VAC/60Hz/0.9A Max.
Output Voltage	24VDC (nominal)
	Special Applications, Voltage Output Range: 19.96-27.54VDC
	Maximum Total Available Output Current: 1.5A
	Maximum Output Current per Circuit: 1.2A With three output circuits equally loaded the maximum per circuit output current is 500mA.
Dimensions (WHD)	13.9 in. x 9 in. x 4.5 in. (353.1 mm x 228.6 mm x 114.3 mm)
Weight	• VPS-100US: 7.5 lbs (3.4 kg) without batteries • VBC-001: 6 lbs (2.7 kg) without batteries
Relay Contacts	Local and Remote: Rated for 0.35pF
Operating Conditions	Ambient: 32°F to 120°F (0°C to 49°C) Humidity: 10 - 95%RH, non-condensing
Trouble Reporting	Local and Remote Form C relay contacts, Trouble Coded Audio, Trouble Coded Visual
Cable Access	3/4" knockouts in various positions
Cable Termination	Screw Terminal blocks (30–12 AWG)

Ordering Information

Ordering Code	Description
VPS-100US-120	120 VAC Power Supply
VPS-100US-220	220 VAC Power Supply
VPS-300US-120	VPS-100US-120 power supply plus the VBC-001 battery cabinet
VPS-300US-220	VPS-100US-220 power supply plus the VBC-001 battery cabinet
VBT-012	Battery, sealed lead acid, 12 VDC, 12 A/hr (Minimum 2 batteries are required)

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