

VESDA Series

Power Supplies

Models VPS-100US-120, VPS-100US-220, VPS-300US-120, VPS-300US-220, VPS-400US-48, VBC-001 and VBT-012

ARCHITECT AND ENGINEER SPECIFICATIONS

- Filtered and electronically regulated output
- Hi and low AC 'fail' supervision
 - 'Form C' contact
- Battery supervision
 - Automatic switch over to standby battery when AC fails
- Built-in charger for sealed lead-acid or gel-type batteries
- AC-input light-emitting diode (LED) indicators
-  UL Listed,  ULC Listed; FM, CSFM and NYC Fire Dept. Approved



Product Overview

The VESDA power supplies from Siemens – Fire Safety is capable of providing power with battery backup for the entire VESDA Laser-series of smoke detectors. Each VESDA power supply can power from a single detector to multiple units, depending on the configuration.

Further, each power supply provides 24VDC power to the VESDA system, and has the added ability to convert AC power to charge batteries.

(See: **Power Supply Capabilities** section immediately below for further details.)

Power Supply Capabilities

– Model VPS-100US-series

used for LaserPLUS or LaserSCANNER detectors:

The Model VPS-100US-series of power supplies provides power to any of the following:

- One (1) LaserPLUS or LaserSCANNER detectors, or
- Up to five (5) remote (single-box) units, or
- One (1) sub-rack assembly

The battery requirement for each Model VPS-100US-series of power supplies is as follows:

- Two (2) 12 Volt / 12 Ampere-hour batteries

– Model VPS-300US-series

used for LaserPLUS or LaserSCANNER detectors:

The Model VPS-300US-series of power supplies provides power to any of the following:

- Up to three (3) LaserPLUS or LaserSCANNER detectors, or
- Up to 15 remote (single-box) units, or
- Up to three (3) sub-rack assemblies

The battery requirements for each Model VPS-300US-series of power supplies are as follows:

- Two (2) detectors or two (2) sub-rack assemblies, or
- 10 remotes that require four (4) 12 Volt / 12 Ampere-hour batteries
- Three (3) detectors or three (3) sub-rack assemblies, or
- 15 remotes that require six (6) 12 Volt / 12 Ampere-hour batteries

– Model VPS-100US-series

used for LaserCOMPACT detectors:

The Model VPS-100US-series of power supplies provides power to any of the following:

- Two (2) LaserCOMPACT detectors, or
- Up to five (5) remote (single-box) units, or
- One (1) sub-rack assembly

The battery requirement for each Model VPS-100US-series of power supplies is as follows:

- Two (2) 12 Volt / 12 Ampere-hour batteries

VESDA Series Power Supplies 1170

Product Overview – (continued) Power Supply Capabilities

– Model VPS-300US–series used for LaserCOMPACT detectors:

The Model VPS-300US–series of power supplies provides power to any of the following:

- Up to six (6) LaserCOMPACT detectors, or
- Up to 15 remote (single-box) units, or
- Up to three (3) sub-rack assemblies

The battery requirements for each Model VPS-300US–series of power supplies are as follows:

- Four (4) detectors or two (2) sub-rack assemblies, or
- 10 remotes that require four (4) 12 Volt / 12 Ampere-hour batteries
- Six (6) detectors or three (3) sub-rack assemblies, or
- 15 remotes that require six (6) 12 Volt / 12 Ampere-hour batteries

Specifications Components

The Model VPS-100US–series of power supplies consists of three (3) main components:

- Mounting enclosure
- Transformer
- Main circuit board

Further, the Model VPS-100US–series uses two (2) backup batteries (supplied separately).

Meanwhile, the Model VPS-300US–series of power supplies consists of one (1) Model VPS-100US–series, as well as one (1) Model VBC-001 battery cabinet. When used together, there are a total six (6) batteries, maximum, which are each supplied separately.

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

Installation

The VESDA Models VPS-100US– and VPS-300US–series are power-limited power supplies that convert 120VAC / 60Hz input into 24VDC power-limited outputs. These units are intended for use in applications requiring UL Listed for fire-protection signaling.

Each series of VESDA power supplies should be installed in accordance with the national electric code, NFPA 72, and in accordance with any local regulations.

(See: **Wiring Diagram** section for further details.)

Technical Data

Input Power: 120VAC / 60 Hz;
1.4 Amps, max.

Output Power: 27.6 VDC (nominal)

- **Output Current, max:** 1.5 Amps
- **Output Current, max:** 1.2 Amps
[when used with a single circuit]
- **Output Current, max:** 500mA, per circuit
[when all three (3) outputs are used]

Trouble-event Relay: 27.6 VDC (nominal)

- **Common Trouble relay rating:** 2A @ 30VDC
(*Form C: normally open (N.O) / normally closed (N.C))
- During normal operation, the Fault Reporting Relay of the power supply is energized

Operating Temperature:

– **Power Supply Ambient Range:** +32°F (0°C) to 120°F (49°C)

Relative Humidity: 10 – 95%; non-condensing

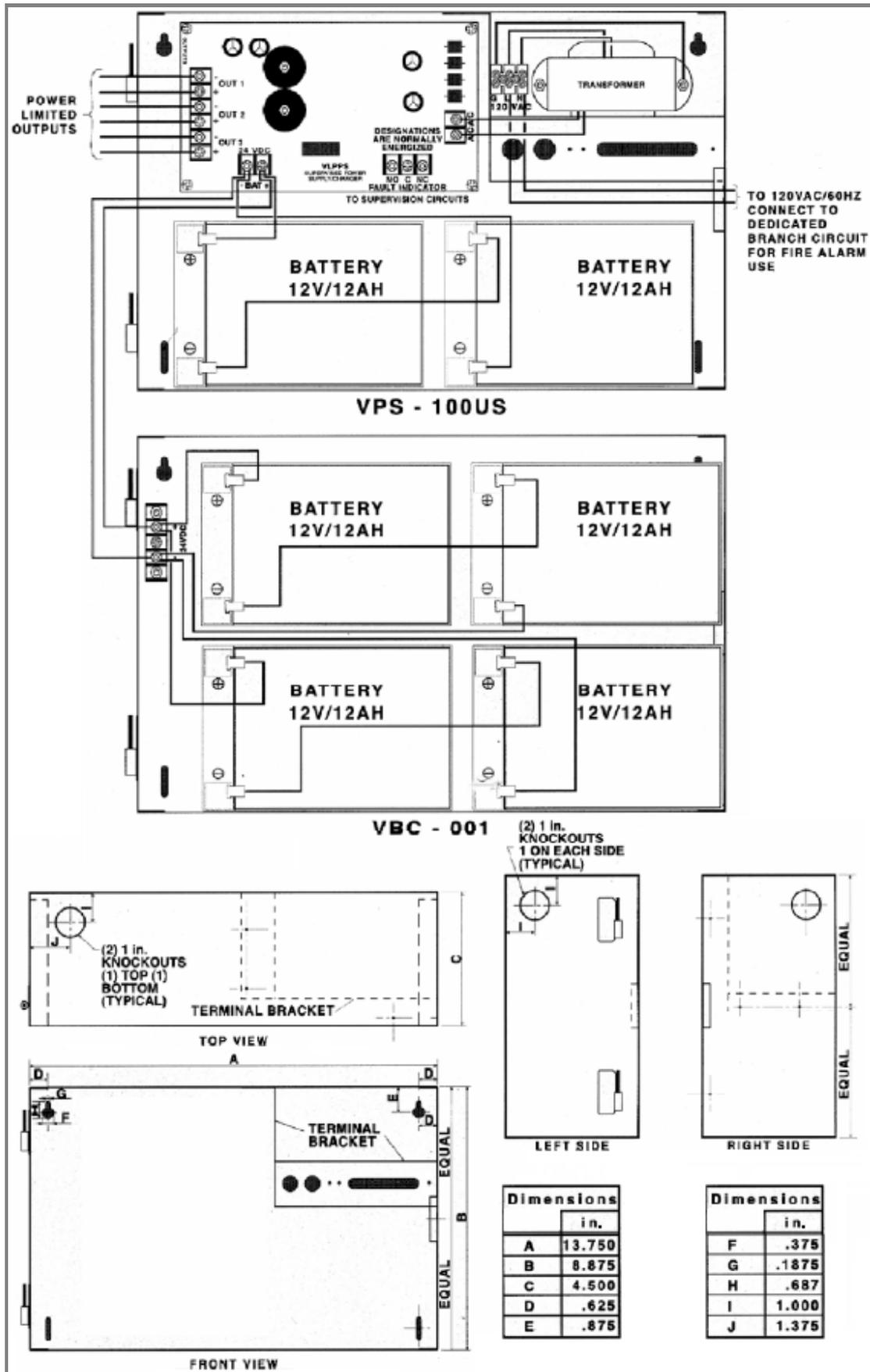
Field Wiring: 12 – 30 American Wire Gauge (AWG)
[Cable Termination] [screw terminal blocks]

Cable Access: 1–inch knockouts in various positions

Dimensions: 9" (23 cm.) [H];
13.9" (35 cm.) [W];
4.5" (11.4 cm.) [D]

Weight: 10 Lbs. (4536 Kg.) for Model VPS-100–series
(without batteries) → 6 Lbs. (2722 Kg.) for Model VBC-001

Wiring Diagram



Details for Ordering

Model Number	Part Number	Description
VSP-100US-120	500-699810	120 VAC power supply for 100US series
VSP-100US-220	500-699811	220 VAC power supply for 100US series
VSP-300US-120	500-699812	120 VAC power supply for 300US series
VSP-300US-220	500-699813	220 VAC power supply for 300US series
VSP-400US-48	500-699814	48 VAC power supply for 100US series
VBT-012	500-699815	12V, 12AH battery, minimum of two (2) required
VBC-001	500-699816	Battery cabinet

Notice: This marketing data sheet is not intended to be used for system design or installation purposes. For the most up-to-date information, refer to each product's installation instructions.

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April 2012
Supersedes sheet dated 4/03
(Rev. 1)