

# VESDA-E Power Supplies

VPS-220-STX & VPS-220-STX-SLV  
VPS-250-STX & VPS-250-STX-SLV

VESDA-E Power Supply Units are uniquely designed to complement the style and appearance of VESDA-E aspirating smoke detectors (ASD) and are technically matched to provide sufficient current and battery charging capacity to meet the requirement of EN 54-4.

The STX variants are VdS approved and CE marked to EN54-4 so are particularly suitable for use in territories where these approvals are required. They may also be suitable in territories where ISO 7240-4 is required.

## Style STX product range

Designed with the same width, colour and styling of the VESDA-E detectors, the power supplies visually blend with the VESDA-E detectors. They feature the same curved profile and also incorporate an internal channel which accommodates the exhaust of the VESDA-E detectors. This is particularly useful when it is necessary to run the exhaust pipe back to the protected area (back-venting).

There are two colours. Matt black is standard and matches the finish of the black plastic VESDA-E detectors (the “-P” variants). Alternatively the unit can be supplied with grey (RAL 7047) cover which compliments the extruded aluminium finish of the premium VESDA-E detectors.

### VPS-220-STX & VPS-220-STX-SLV: 0.5 A load / 14 Ah batteries (max)

This is the shallower unit within the range with a depth and width matching the VESDA-E detectors.

Internally is an EN54-4 approved Power Supply rated to provide a 0.5 Amp continuous 24 VDC supply while also charging the batteries (not supplied) which can be a 7, 12 or uniquely, 14 amp/hr arrangement. The unit is therefore able to power the VESDA-E VEP range of detectors for over 24 hours and may also be used to power VESDA-E VEU detectors running upto fan speed 6 for similar periods.

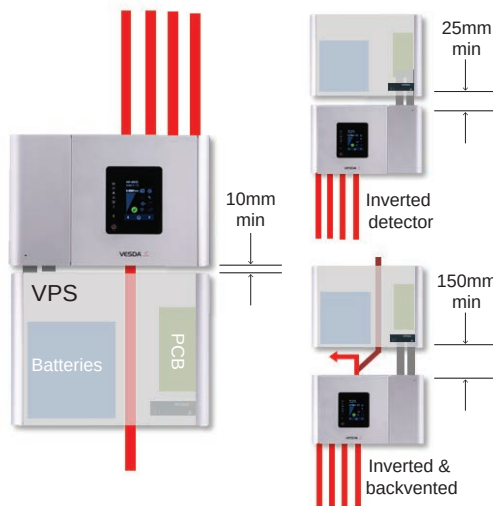
### VPS-250-STX & VPS-250-STX-SLV: 2 A load / 24 Ah batteries (max)

This is the deeper unit designed for installation with a VESDA-E VEU detector running at fan speeds upto 10. The internal charger is EN54-4 approved and is rated to provide a 2 Amp continuous 24 VDC supply. There is space for up to 24 Ah batteries (not provided).

## Installation arrangements

Both units provide cable entry knockouts which line up with the VESDA-E enclosure allowing positioning of the power supply immediately below the VESDA-E detector. The PSU may also be installed above an inverted VESDA-E detector as illustrated opposite.

The front cover supports 2 LEDs giving a quick visual indication of OK and fault condition. A change over fault relay is provided which may be monitored using the General Purpose Input (GPI) of the VESDA-E detector or directly by the fire alarm system panel using a suitable relay input.



## Features

- Available in two sizes: 0.5 A / 14 Ah (max) and 2 A / 24 Ah (max)
- Available in two colours: Black and Silver
- Temperature compensated charging to maximize battery life
- Designed to blend in with VESDA-E detectors
- Knockouts designed to line up with VESDA-E detectors
- External LED indication
- Relay outputs for connection to the general-purpose input for fault monitoring.
- 230 Vac only

## Listings / Approvals

- VdS: G209140 & G209193
- CE: 0786-CPR-20783 and 0786-CPR-20890
- EN54-4:1997+A1:2002+A2:2006



# VESDA-E Power Supplies

VPS-220-STX & VPS-220-STX-SLV  
VPS-250-STX & VPS-250-STX-SLV

## Specifications

|                                     | VPS-220-STX                                                                       | VPS-220-STX-SLV                                                                   | VPS-250-STX                                                                       | VPS-250-STX-SLV                                                                    |
|-------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|                                     |  |  |  |  |
| Nominal AC Supply Voltage           | 230 VAC (tested +10% -15%)                                                        |                                                                                   |                                                                                   |                                                                                    |
| Power Output                        | 19.5-30 VDC                                                                       |                                                                                   | 19.5-30 VDC                                                                       |                                                                                    |
| Load                                | 0.5 / 1.0 Amps<br>(1 Amp not EN54-4)                                              |                                                                                   | 2 / 3 Amps<br>(3 Amps not EN54-4)                                                 |                                                                                    |
| Dimensions<br>(H x W x D)           | 300 x 350 x 135                                                                   |                                                                                   | 300 x 350 x 198                                                                   |                                                                                    |
| Weight                              | 4.5 kg (without batteries)<br>16 kg (with max batteries)                          |                                                                                   | 5.8 kg (without batteries)<br>25 kg (with max batteries)                          |                                                                                    |
| Temperature                         | -5° to 40°C ambient                                                               |                                                                                   |                                                                                   |                                                                                    |
| Humidity                            | 95% RH non-condensing                                                             |                                                                                   |                                                                                   |                                                                                    |
| IP Rating                           | IP 30                                                                             |                                                                                   |                                                                                   |                                                                                    |
| Batteries (not supplied by Xtralis) | 2 x 12 V, 7 Ah<br>2 x 12 V, 12 Ah<br>4 x 12 V, 7 Ah*                              |                                                                                   | 2 x 12 V, 12 Ah<br>2 x 12 V, 17 Ah<br>2 x 12V, 24 Ah                              |                                                                                    |
| Recommended Battery                 | Yuasa NP (or equivalent)                                                          |                                                                                   |                                                                                   |                                                                                    |
| Indications                         | Output OK: green LED<br>Fault: yellow LED                                         |                                                                                   | Output OK: green LED<br>Fault: yellow LED                                         |                                                                                    |
| Fault Relay                         | Change-over NO-COM-NC 1A @ 50 VDC                                                 |                                                                                   |                                                                                   |                                                                                    |
| Fuse Rating                         | Battery: 3.15 A fast<br>AC supply - 1 A HRC<br>(both 20 mm)                       |                                                                                   | Battery: 5 A fast<br>AC supply - 2 A HRC<br>(both 20 mm) Output: 4 x 2 A          |                                                                                    |
| Cable Entries                       | 6 off 20/25 mm knockouts<br>Various positions                                     |                                                                                   |                                                                                   |                                                                                    |
| Detector Exhaust                    | Internal channel to route detector exhaust with 2 x 27 mm knockouts               |                                                                                   |                                                                                   |                                                                                    |
| Color / Finish                      | Matt Black or Grey (RAL 7047)                                                     |                                                                                   |                                                                                   |                                                                                    |
| Mounting                            | 4 x 5 mm holes on 286 x 240 centers                                               |                                                                                   |                                                                                   |                                                                                    |

\* Note: 4x7AH is allowed by EN 54-4 but may not be compliant with installation codes (e.g. BS5839-1).

## Configuration Information

All Style STX units are provided with two internal links as follows:

**Battery monitoring link:** This may be removed in non EN 54-4 installations so that the unit can be operated without batteries without signalling a fault.

**Charge current link:** This may be removed in non EN 54-4 installations (or where small batteries are used) to reduce the current allocated to the charger and thus make it available for the load – as indicated in the specifications given above.

Note: EN 54-4 requires that batteries are recharged to 80% within 24 hours of a full discharge while simultaneously supplying the maximum load current.

## Ordering Information

|                 |                              |
|-----------------|------------------------------|
| VPS-220-STX     | 0.5A 7-14AH PSU - STX Black  |
| VPS-250-STX     | 2A 12-24AH PSU - STX Black   |
| VPS-220-STX-SLV | 0.5A 7-14AH PSU - STX Silver |
| VPS-250-STX-SLV | 2A 12-24AH PSU - STX Silver  |

Note: Batteries are NOT included

## Technical Highlights

Not all Power Supplies are equal:

- Style STX power supplies can be operated on batteries alone which is very useful for initial commissioning of Xtralis detectors as mains power is often unavailable at this time.  
*(simpler alternatives may require mains power to be detected before they will start to power a detector – even if healthy batteries are connected)*
- Style STX power supplies perform full impedance checking of the batteries to ensure that the batteries are in good condition.  
*(simpler alternatives may tolerate weaker batteries which are unlikely to be capable of providing the required hold up time in the event of a mains failure)*
- Style STX units disconnect the load (i.e. power down the Xtralis detector) after a prolonged period of mains failure (>24 hours) to prevent permanent damage to the batteries.  
*(simpler alternatives may successfully disconnect the load when the battery voltage fails but then reconnect it almost immediately because the battery voltage tends to recover when the load is removed. Such units then switch on and off until the battery is permanently below the minimum voltage putting undue stress on the load and draining the batteries unnecessarily)*
- Style STX units use a tiny current (< 3 mA) to monitor for restoration of mains power after disconnecting the load to protect the batteries (see point above) – thus ensuring that the batteries are unlikely to suffer a damaging deep discharge as long as the fault is attended to within a week.  
*(simpler alternatives draw larger currents to monitor for restoration of mains and drive indicators when in load-shed so are more likely to damage batteries by a deep discharge)*

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