

VESDA-E POWER SUPPLIES

VPS-220-STX5 & VPS220-STX5-SLV

VPS-250-STX5 & VPS250-STX5-SLV



VESDA-E Power Supply Units are uniquely designed to complement the style and appearance of VESDA-E aspirating smoke detectors (ASDs) 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 certified and CE marked to EN54-4 so are particularly suitable for use in territories where these approvals are required.



Style STX Product Range

Designed with the same widths and styling of the VESDA-E detectors, these power supplies geometrically 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 25mm exhaust pipe back to the protected area (back-venting).

The units are available in two colours; Matt black is standard and works in harmony with the finish of the black plastic VESDA-E detectors (the “-P” variants) or contrasts with the extruded aluminium finish of other variants. Alternatively, the unit can also be supplied with a grey (RAL 7047) cover which complements* the extruded aluminium finish of the premium VESDA-E Detectors.

VPS-220-STX5 & VPS220-STX5-SLV: 0.5A load with 14Ah batteries (max)

These are the shallower units in the range with depth and width matching the VESDA-E detectors. Internally, they provide an EN 54-4 certified Power Supply rated to provide a 0.5A continuous 24Vdc supply whilst also charging the batteries (not supplied) which can be a 7, 12 or uniquely, 14Ah arrangement. As such the unit can be used with confidence to power, and provide 24hr standby (plus 0.5hr in alarm), for the VESDA VLF-500, VESDA-E VEP & VESDA-E VES detectors and also the VESDA-E VEU detectors up to fan speed 5.

The unit also provides a non-certified setting which enables it to power loads up to 1A while recharging batteries up to 12Ah in accordance with EN 54-4.

VPS-250-STX5 & VPS250-STX5-SLV: 3A load with 24Ah batteries (max)

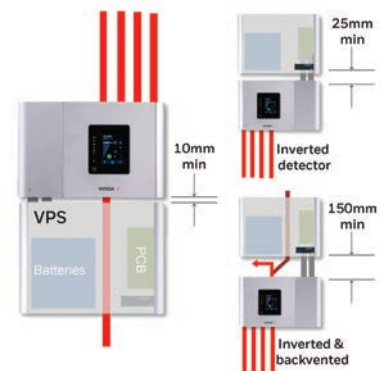
These are the deeper units designed for installation with a VESDA-E VEU detector (at all fan speeds). The internal charger is EN 54-4 certified and is rated to provide a 3A continuous 24Vdc supply. There is space for up to 24Ah batteries (not provided). The unit also provides a non-certified setting which enables it to power loads up to 3.4A while recharging batteries up to 24Ah in accordance with EN 54-4.

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. There is also an internal status LED to aid fault diagnosis.

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.



* The painted cover of the SLV variant provides an acceptable match with finish of the extruded aluminium detectors in most lights but is not guaranteed.

Features

- Available in two sizes: 0.5A / 14Ah (max) and 3A / 24Ah (max)
- Available in two colours: Black and grey
- 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.
- 230Vac only

Listings / Approvals





- VdS:
G220003 & G220018
- CE:
0786-CPR-21681 & 0832-CPR-F2659
- EN54-4:
1997+A1:2002+A2:2006

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 because 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 regular 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 to prevent permanent damage to the batteries. *(simpler alternatives may 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 (< 8mA) 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 when in load-shed, so are more likely to damage batteries by a deep discharge).*
- Style STX units provide an Internal status LED to aid fault diagnostics. *(simpler alternatives only provide the mandatory fault LED and provide no insight as to the cause of the fault).*

Specifications

	VPS-220-STX5	VPS220-STX5-SLV	VPS-250-STX5	VPS250-STX5-SLV
				
Nominal AC Supply Voltage	230Vac (tested +10% -15%)			
Power Output	20.0 - 30 Vdc		20.0 - 30Vdc	
Load	0.5 / 1.0A (1A non-certified to EN54-4)		3 / 3.4A (3.4A non-certified to EN 54-4)	
Dimensions (H x W x D)	300mm x 350mm x 135mm		300mmx 350mm x 198mm	
Weight	4.5kg (without batteries) 16kg (with max batteries)		5.8kg (without batteries) 25kg (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, 7Ah 2 x 12 V, 12Ah 4 x 12 V, 7Ah*		2 x 12 V, 12Ah 2 x 12 V, 17Ah 2 x 12V, 24Ah	
Recommended Battery	Tested with Yuasa Yucel Y series			
Indications	Output OK: green LED Fault: yellow LED		Output OK: green LED Fault: yellow LED	
Fault Relay	Change-over NO-COM-NC 1A @ 30Vdc			
Fuse Rating	Battery: 3A MINI Automotive Fuse AC supply - T1A HRC 20mm (both 20mm)		Battery: 7.5 A MINI Automotive Fuse AC supply - T2A HRC 20mm (both 20mm)	
Cable Entries	6 off 20/25mm knockouts - Various positions			
Detector Exhaust	Internal channel to route detector exhaust with 2 x 27mm knockouts			
Color / Finish	Matt Black or Grey (RAL 7047)			
Mounting	4 x 5 mm holes on 286mm x 240mm centres			

* Note: 4x7Ah is allowed by EN 54-4 but may not be compliant with installation codes (e.g. BS 5839-1).

Configuration Information

All Style STX units are configurable using DIP switches:

- **Battery monitoring** may be disabled in non EN 54-4 installations so that the unit can be operated on mains only without signalling a battery fault
- **Charge current** may be reduced in non EN 54-4 installations - limiting the current allocated to the charger and thus make it available for the load – as indicated in the specifications table
- **Battery resistance** fault threshold can be altered for maintenance purposes
- **Mains failure** can be simulated to simplify testing

Ordering Information

Ordering Code	Description
VPS-220-STX5	0.5A 7-14Ah PSU - STX Black
VPS-250-STX5	3A 12-24Ah PSU - STX Black
VPS220-STX5-SLV	0.5A 7-14Ah PSU - STX Silver
VPS250-STX5-SLV	3A 12-24Ah PSU - STX Silver

Note: Batteries are NOT included.