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 incoproate 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.

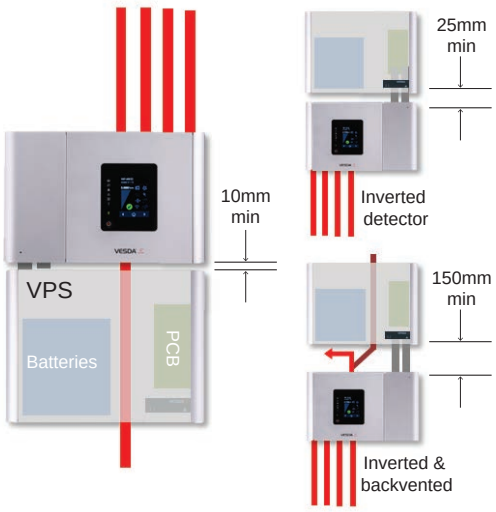
VPS-250-STX & VPS-250-STX-SLV: 2 A load / 24 Ah batteries (max)

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

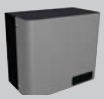
- VdS:
  G209140 & G209193
- CE:
  0786-CPR-20783 and
  0786-CPR-20890
- EN54-4:1997+A1:2002+A2:2006

0786

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 (1 Amp not EN54-4)		2 / 3 Amps (3 Amps not EN54-4)	
Dimensions (H x W x D)	300 x 350 x 135		300 x 350 x 198	
Weight	4.5 kg (without batteries) 16 kg (with max batteries)		5.8 kg (without batteries) 25 kg (with max batteries)	
Temperature	-5º to 40ºC ambient			
Humidity	95% RH non-condensing			
IP Rating	IP 30			
Batteries (not supplied by Xtralis)	2 x 12 V, 7 Ah 2 x 12 V, 12 Ah 4 x 12 V, 7 Ah*		2 x 12 V, 12 Ah 2 x 12 V, 17 Ah 2 x 12V, 24 Ah	
Recommended Battery	Yuasa NP (or equivalent)			
Indications	Output OK: green LED Fault: yellow LED		Output OK: green LED Fault: yellow LED	
Fault Relay	Change-over NO-COM-NC 1A @ 50 VDC			
Fuse Rating	Battery: 3.15 A fast AC supply - 1 A HRC (both 20 mm)		Battery: 5 A fast AC supply - 2 A HRC (both 20 mm) Output: 4 x 2 A	
Cable Entries	6 off 20/25 mm knockouts 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)

www.xtralis.com
UK and Europe +44 1442 242 330 **D-A-CH** +49 431 23284 1 **The Americas** +1 781 740 2223
Middle East +962 6 588 5622 **Asia** +86 21 5240 0077 **Australia and New Zealand** +61 3 9936 7000

The contents of this document are provided on an "as is" basis. No representation or warranty (either express or implied) is made as to the completeness, accuracy or reliability of the contents of this document. The manufacturer reserves the right to change designs or specifications without obligation and without further notice. Except as otherwise provided, all warranties, express or implied, including without limitation any implied warranties of merchantability and fitness for a particular purpose are expressly excluded.
Xtralis, the Xtralis logo, The Sooner You Know, VESDA-E, VESDA, ICAM, ECO, OSID, HeiTel, ADPRO, IntrusionTrace, LoiterTrace, ClientTrace, SmokeTrace, XOa, XOh, iTrace, iCommand, iRespond, iCommission, iPIR, and FMST are trademarks and/or registered trademarks of Xtralis and/or its subsidiaries in the United States and/or other countries. Other brand names mentioned herein are for identification purposes only and may be trademarks of their respective holder(s). Your use of this document does not constitute or create a licence or any other right to use the name and/or trademark and/or label.
This document is subject to copyright owned by Xtralis. You agree not to copy, communicate to the public, adapt, distribute, transfer, sell, modify or publish any contents of this document without the express prior written consent of Xtralis.

Doc. no. 29635_02 Part. no. 30730