XTRALIS POWER SUPPLIES

VPS-220-E5, VPS-215-E5, VPS-250-E5

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

The Style E variants are VdS certified and CE marked to the EN54-4 so are particularly suitable for use in territories where these approvals are required.



Style E5 Product Range

VPS-220-E5: 0.5A load with 14Ah batteries (max)

This is the original unit within the range. Designed with the same footprint as the VESDA-E; VEP, VES and VEU detectors, this power supply will not look out of place powering these detectors.

Internally is an EN54-4 certified Power Supply rated to provide a 0.5A continuous 24Vdc supply while 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.

With regard to installation, cable entry knockouts line up with those on the VESDA-E detectors allowing for convenient positioning of the power supply directly adjacent to the detector. The front cover is fitted with 2 LEDs giving a quick visual indication of OK and/or fault condition, There is also an internal status LED to aid fault diagnosis. 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-215-E5: 0.5A load with 7Ah batteries (max)

This is the budget unit within the range. It is intended as a low-cost unit to supply a single pipe ASD detector which only requires 7Ah batteries such as the VESDA VLF-250. A simple but elegant construction and no LEDs on the lid keep the cost of the unit to a minimum. The unit can also be inverted where necessary by rotating the lid. The internal charger is EN54-4 certified and internal LEDs are provided to indicate OK (output healthy) and Fault.

VPS-250-E5: 3A load with 38Ah batteries (max)

This power supply is capable of powering larger ASD units including the VESDA-E VEU (at all fan speeds) and the VESDA-E VEA detectors. It may also be used for installations with multiple detectors and/or remote displays. The internal charger is EN54-4 certified to power loads up to 3A with space and charging capacity for batteries up to 38Ah. Uniquely, the unit is supplied with the provision to deliver 4 separately fused outputs – recommended when it is used to power multiple detectors or disparate loads.

The front cover supports 2 LEDs to provide visual indication of Healthy status (OK) or fault condition and various knockouts exist to provide convenient cabling access to detectors, remote displays or subracks. The unit also provides a non-certified setting which enables it to power loads up to 3.4A while recharging batteries up to 38Ah in accordance with EN 54-4.

Features

- Available in three sizes:
  0.5A / 7Ah, 0.5A / 14Ah and 3A / 38Ah
- Temperature compensated charging to maximize battery life
- Designed to blend in with Xtralis detectors
- Knockouts designed to line up with Xtralis detectors
- External LED indication on 220-E5 and 250-E5
- Internal LED indication on 215-E5
- 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-F2658
- EN54-4:
  1997+A1:2002+A2:2006

XTRALIS POWER SUPPLIES
TECHNICAL SPECIFICATIONS

Technical Highlights

Not all Power Supplies are equal:

- Style E 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 E 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 E 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 E 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 E 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-E5 	VPS-215-E5 	VPS-250-E5 
Nominal AC Supply Voltage	230Vac (tested +10% / -15%)		
Power Output	20.0 - 30Vdc	20.0 - 30Vdc	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)	225mm x 351mm x 110mm	226mm x 286mm x 113mm	352mm x 455mm x 182mm
Weight	3kg (without batteries) 14kg (with max batteries)	2.5kg (without batteries) 8kg (with max batteries)	7kg (without batteries) 35kg (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, 7Ah	2 x 12 V, 24Ah 2 x 12 V, 38Ah
Recommended Battery	Tested with Yuasa Yucel Y series (VPS-250-E5 tested with Yuasa NP series)		
Indications	Output OK: green LED Fault: yellow LED External only	Output OK: green LED Fault: yellow LED Internal only	Output OK: green LED Fault: yellow LED External only
Fault Relay	Change-over NO-COM-NC 1A @ 30 Vdc		
Fuse Rating	Battery: 3A MINI Automotive Fuse AC supply - T1A HRC 20mm (both 20mm)		Battery: 7.5A MINI Automotive Fuse AC supply - T2A HRC 20mm (both 20mm) Output: 4x2A
Cable Entries	5 off 20/25mm knockouts Various positions	9 off 20/25mm knockouts Various positions	7 off 20/25mm knockouts Various positions
Color / Finish	Light grey RAL 9018 texture powdercoat		
Mounting	4 x 5mm holes on 270mm x 180mm centres	4 x 5mm holes on 220mm x 180mm centres	4 x 5mm holes on 360mm x 280mm 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 E 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-215-E5	Xtralis 0.5A 7Ah PSU - Style E
VPS-220-E5	Xtralis 0.5A 14Ah PSU - Style E
VPS-250-E5	Xtralis 3A 38Ah PSU - Style E

Note: Batteries are NOT included.

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