

Xtralis Power Supplies

VPS-220-E, VPS-215-E,
VPS-250-E

Xtralis Power Supply Units are uniquely designed to complement the style and appearance of Xtralis 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 Style E variants are VdS approved and CE marked to the EN54-4 so are particularly suitable for use in territories where these approvals are required. It may also be suitable in territories where ISO 7240-4 is required.



Style E product range

VPS-220-E: 0.5 A load / 14 Ah batteries (max)

This is the premier unit within the range. Designed with the same foot print, colour and layout as the VESDA VLP and VESDA VLS, the power supply will visually blend with the 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 making it suitable for most multi-pipe ASD systems.

With regard to installation, cable entry knockouts all line up with the VESDA VLP and VESDA VLS enclosure allowing positioning of the power supply directly adjacent to the detector. The front cover supports 2 LEDs giving a quick visual indication of OK and/or fault condition.

VPS-215-E: 0.5 A load / 7 Ah 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. A simple but elegant construction and no LEDs on the lid keep the cost of the unit to a minimum. This unit is still engineered to compliment the product with cable entry knockouts lining up with the cable entries on various Xtralis detectors including the VESDA VLC and the ICAM IAS and ICAM LAS products. The unit can also be inverted where necessary. The internal charger is EN54-4 approved and internal LEDs are provided to indicate OK (output healthy) and Fault.

VPS-250-E: 2 A load / 38 Ah batteries (max)

This power supply is designed for installation with multiple detectors and/or remote displays. The internal charger is EN54-4 approved and there is space for up to 38 Ah batteries. With 4 separate fused outputs, this is a very versatile unit which can deliver to a combined, 24 Vdc, load of up to 2 amps.

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.

Features

- Available in three sizes: 0.5 A / 7Ah, 0.5A / 14 Ah and 2 A / 38 Ah
- 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 220E and 250E
- Internal LED indication on 215E
- Relay outputs for connection to the general-purpose input for fault monitoring.
- 230 Vac only




Listings / Approvals

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

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VPS-250-E

Specifications

	VPS-220-E	VPS-215-E	VPS-250-E
			
Nominal AC Supply Voltage	230 Vac (tested +10%—15%)		
Power Output	19.5-30 Vdc	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)	225 x 351 x 110	226 x 286 x 113	352 x 455 x 182
Weight	3 kg (without batteries) 14 kg (with max batteries)	2.5 kg (without batteries) 8 kg (with max batteries)	7 kg (without batteries) 35 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 2 x 12 V, 12 Ah 4 x 12 V, 7 Ah	2 x 12 V, 7 Ah	2 x 12 V, 24 Ah 2 x 12 V, 38 Ah
Recommended Battery	Yuasa NP (or equivalent)		
Indications	Output OK: green LED Fault: yellow LED Internal only	Output OK: green LED Fault: yellow LED External only	Output OK: green LED Fault: yellow LED External only
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: 4x2 A
Cable Entries	5 off 20/25 mm knockouts Various positions	9 off 20/25 mm knockouts Various positions	7 off 20/25 mm knockouts Various positions
Color / Finish	Light grey RAL 9018 texture powdercoat		
Mounting	4 x 5 mm holes on 270 x 180 centers	4 x 5 mm holes on 220 x 180 centers	4 x 5 mm holes on 360 x 280 centers

Ordering Information

VPS-215-E Xtralis 0.5A 7AH PSU - Style E
VPS-220-E Xtralis 0.5A 14AH PSU - Style E
VPS-250-E Xtralis 2A 38AH PSU - Style E

Note: Batteries are NOT included

Configuration Information

All Style E 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 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. The removal of either link invalidates the approval.

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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 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 E 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 E 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 E 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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