

Introduction

The Xtralis Power Supply 01-EP02-02E is designed to be installed inside an Xtralis "FT" Aspirating Smoke Detector.

It is compatible with the following models (and variants thereof):

ICAM IFT-1
ICAM IFT-4
ICAM IFT-6
ICAM IFT-15
VESDA VFT-15

It accommodates 17 Ah batteries (e.g, 2x YUASA NP12-17 batteries) which can provide a standby capacity to power the unit for over 24 hours in the event of mains failure*.

Description

The 01-EP02-02E uses the same PSU module as the VPS-250-E but is provided with metalwork to provide a battery tray and safety cover such that it can be conveniently installed inside an FT Aspirating Smoke Detector (ASD).

The battery tray is tilted slightly toward the rear so that the batteries do not slide forward – even if there is vibration present. Furthermore, the battery retention bracket ensures that the batteries are 100% restrained.

The safety cover ensures that no high voltage areas on the PSU module are exposed or accessible when the main cover of the ASD is removed. Thus, once installed, it is safe for suitably trained technicians (who are not qualified to work with mains) to maintain the ASD detector itself.

A combined earth tag and restraining clamp is provided. Using a plastic cable tie (provided in the installation kit), the incoming mains cable is restrained to ensure that the mains terminations inside the unit are never subjected to undue stress.

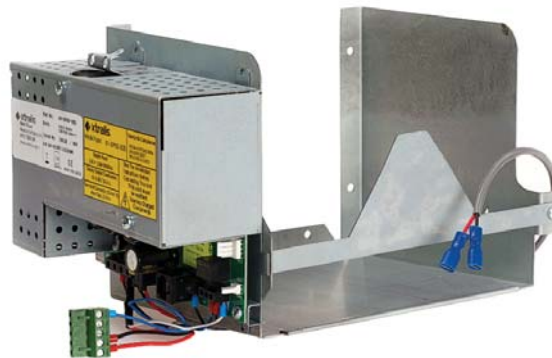
The unit is pre-wired:

- Connection of the power and fault signalling to the FT is achieved by simply plugging the 5-way green terminal block into the FT Detector. The FT unit monitors the fault relay on the 01-EP01-02E and will signal a fault on its own fault relay when there is a problem with the supply.
- In addition to the obvious battery leads, the installation kit includes battery terminal fittings, and the link cable needed to link the two 12 V batteries.

Supply and approvals

The unit is supplied as a field installed option and should be installed by appropriately trained engineers who are qualified to work with 230 Vac. It may be ordered as a factory fit installation when ordered simultaneously with the FT detector.

The unit is 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.



Features

- Supports a 2 A load and 17 Ah batteries
- Temperature compensated charging to maximize battery life
- Designed to fit inside Xtralis FT detectors
- Supplied pre-wired for fast and error free installation
- 230 Vac only

Listings / Approvals

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



** IMPORTANT NOTE: The support time provided by 17 Ah batteries is dependent on the fan speed setting and the details of the pipe/hole configuration. EN54-4 requires that the batteries are charged to 80% of their capacity within 24 hours of a full discharge while supplying a full load current (i.e. 2 amps). It does NOT specify the standby time needed. Please refer to local codes in relation to the standby times.*

Specifications

	01-EP02-02E
Nominal AC Supply Voltage	230 Vac (tested +10%—15%)
Power Output	19.5-30 Vdc
Load (see note 1)	2 / 3 amps (3 amps not EN54-4)
Weight	2 kg (without batteries) 15 kg (with max batteries)
Dimensions (H x W x D)	275 mm x 175 mm x 170 mm
Temperature	-5° to 40°C ambient
Humidity	95% RH non-condensing
Batteries (not supplied by Xtralis)	2 x 12 V, 17 Ah (2 x 12 V, 38 Ah housed external to the detector)
Recommended Battery	Yuasa NP (or equivalent)
Fault Relay	Change-over NO-COM-NC 1 A @ 50 Vdc
Fuse Rating	Battery: 5 A fast AC supply - 2 A HRC (both 20 mm)
Mounting	6 x M4 screws and washers (supplied)

Ordering Information

01-EP02-02E Mains PSU E Series 230 Vac - Style E (for field installation)

01-EP02-02E-INST Mains PSU E Series 230 Vac - Style E (factory installed)

Note: Batteries are NOT included

Note: The factory fitted model must be ordered simultaneously with the detector

Configuration Information

The 01-EP02-02E is 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.

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 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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