

ETQ/ETX
EXTENSION MODULE RANGE

1. GENERAL SAFETY	3
1.1 General Safety	3
1.2 Introduction	3
2. GENERAL OPERATING DESCRIPTION.....	3
2.1 Manual Bypass	3
2.2 Changing the input/output voltages	4
2.3 ETX 3kVA/01 (3.6).....	4
3.1 Layout and Connections Type 1.....	5
3.2 Layout and Connections Type 2.....	5
3.3 Layout and Connections Type 3.....	6
3.4 Layout and Connections Type 4.....	6
3.5 Layout and Connections Type 5.....	7
3.6 ETX 3kVA/01 Front and Rear Panel Layouts.	8
3.7 ETX to ETD Fixing brackets.....	9
3.8 ETX to UPS Connection Block Diagram.....	10

1. GENERAL SAFETY

1.1 General Safety

- ◆ Please note the following recommendations and guidelines for the safe operation of your Elite UPS.
- ◆ Authorised personnel must perform all maintenance and service functions. The UPS contains several internal power sources, which can be hazardous.
- ◆ The internal battery can generate an electric shock. All batteries removed from the UPS for replacement, must be disposed of according to the current health and safety regulations. **DO NOT** throw batteries into a fire: they might explode. **DO NOT** attempt to open the batteries: they are sealed lead acid maintenance-free. The acid electrolyte can harm unprotected skin and eyes.
- ◆ The UPS contains its own energy source (the battery). The output power sockets may be live, even when the UPS is not connected to a power source.
- ◆ **DO NOT** operate the UPS if it appears to be leaking battery electrolyte, or if a dry white power residue is present on the batteries.
- ◆ The detachable power cable is intended to serve as a disconnection device. Make sure that the cable connection to the rear of the UPS is easily accessible.
- ◆ **DO NOT** allow water near the UPS. **DO NOT** place a foreign object inside the UPS.
- ◆ The UPS generates approximately 1mA of leakage current. To ensure a safe maximum limit of 3.5mA, limit the total leakage current of the loads to a maximum of 2.5mA. Should the load leakage current be over this limit, a qualified electrician should install the UPS in compliance with IEC 309. An industrial type plug must be used for connection to the mains supply.
- ◆ In emergencies disconnect the power cable from the wall outlet and turn off the UPS using the rear ON/OFF switch.

1.2 Introduction

The ETX series expansion modules provide a range of voltage and filter options to standard Elite range ups. These include autotransformers to alter the input and/or output voltages, AITs to eliminate common mode and other types of noise from the supply, and bypass switches to supply the load while the ups is repaired or replaced.

2. GENERAL OPERATING DESCRIPTION

- ◆ Place the ETX on a flat and stable surface.
- ◆ Avoid placing the ETX in direct sunlight or hot air.
- ◆ Keep ambient temperatures between 0°C and 25°C to prevent poor battery performance .
- ◆ Relative room humidity must be lower than 90%.
- ◆ Avoid dusty areas.
- ◆ Take care to place the ETX at least 50mm away from surrounding walls and do not cover the ventilation slots.
- ◆ Refer to the diagrams for the interconnections between the module and UPS.
- ◆ For operation refer to the ups operating manual.

2.1 Manual Bypass (where fitted)

The rotary make before break bypass switch is situated on the rear of the ETX.

In the NORMAL (1) position the mains input feeds the UPS and the UPS supports the load.

In the BYPASS (2) position the load is transferred to the incoming mains via the line conditioner (if fitted). Mains is still supplied to the input to the UPS.

Once in bypass the UPS may be switched off without dropping the load.

NOTES:

In manual bypass mode the load will be dropped in the event of a mains failure.

ALTHOUGH THE UPS IS SWITCHED OFF **DANGEROUS VOLTAGES** ARE STILL PRESENT INSIDE THE UPS CASE AND NO UNAUTHORISED PERSONNEL SHOULD REMOVE THE UPS COVER.

When switching from NORMAL to BYPASS and back the UPS may alarm for a few seconds as it switches to auto bypass. This is part of it's normal operation.

2.2 Changing the input/output voltages.

Some ETX modules provide a voltage selection option, refer to specification label on the rear of the unit for available voltages and the factory setting.

ONLY QUALIFIED PERSONNEL SHOULD CARRY OUT THIS PROCEDURE.

The ETX module should be disconnected from all supply sources both incoming mains and ups. Remove the cover by unscrewing the 10 cover fixing screws. Note: be careful not to damage the earth connection when removing the cover.

To change the selected voltage find the terminal block on the correct transformer (see note), with suitable screw driver move the connection to the desired voltage terminal and re-tighten.

NOTE:

Where a unit contains step up and step down transformers the one nearest the REAR (termination end) is the INPUT and the one nearest the FRONT of the unit is the OUTPUT transformer.

Step up/step down transformers terminal blocks will be labelled in the following format:

0v - 110v - 120v - 0v - 230v

in this format the 110v and 120v are the available taps.

Conditioning transformers have primary and secondary terminal blocks and are mounted at the rear of the unit, their adjustment is on the secondary side with a terminal block in the following format:

0 - 110 - 120V

Again the 110 and 120V are the available taps.

Once the change has been made check that the correct voltage has been selected and that the termination is properly tightened.

Replace the cover, ensuring earth connection is secure, and refit the fixing screws.

Where-ever possible check the output voltage with a multimeter before connecting to the load as damage to equipment can result from the incorrect voltage being applied.

2.3 ETX 3kVA/01 (Fig 3.6)

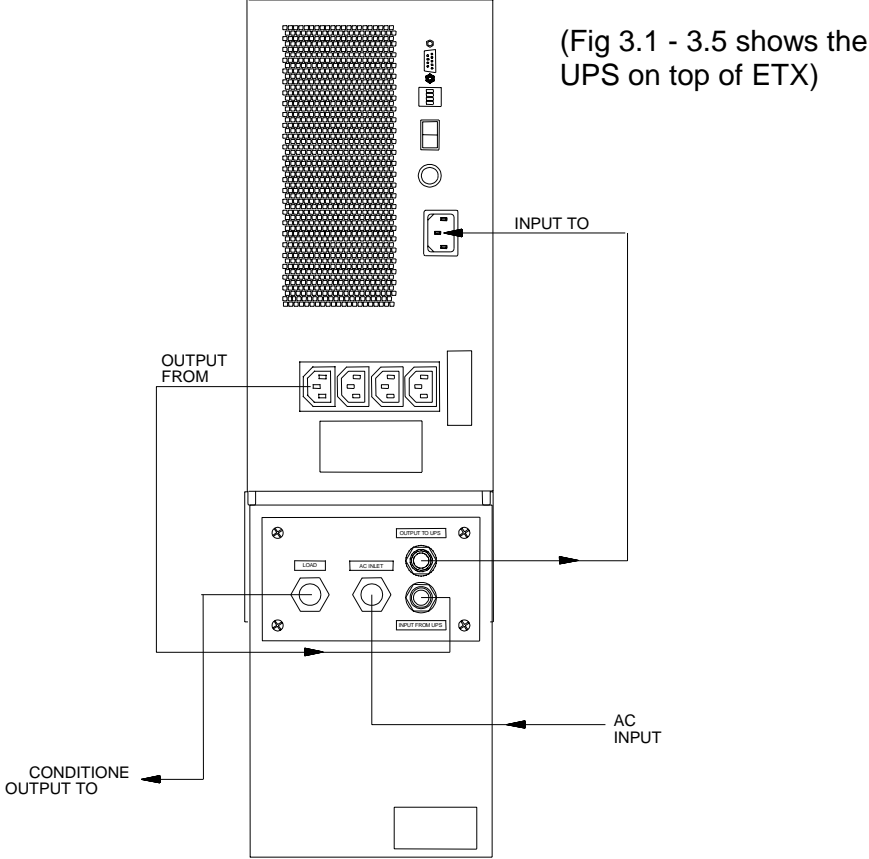
ETX 3kVA has a three-position voltage selection switch on the front panel. The center position (2) disconnects both supplies from the unit. In the left position (1) the input supply is 110Vac and uses the YELLOW industrial plug. In the right position the input supply is 230Vac (3) and uses the BLUE industrial plug. The input of the ups is connected via the 16A Blue industrial socket and ups output via the BS 13A plug. The load (110Vac) is connected using the two 32A Yellow industrial sockets.

NOTES:

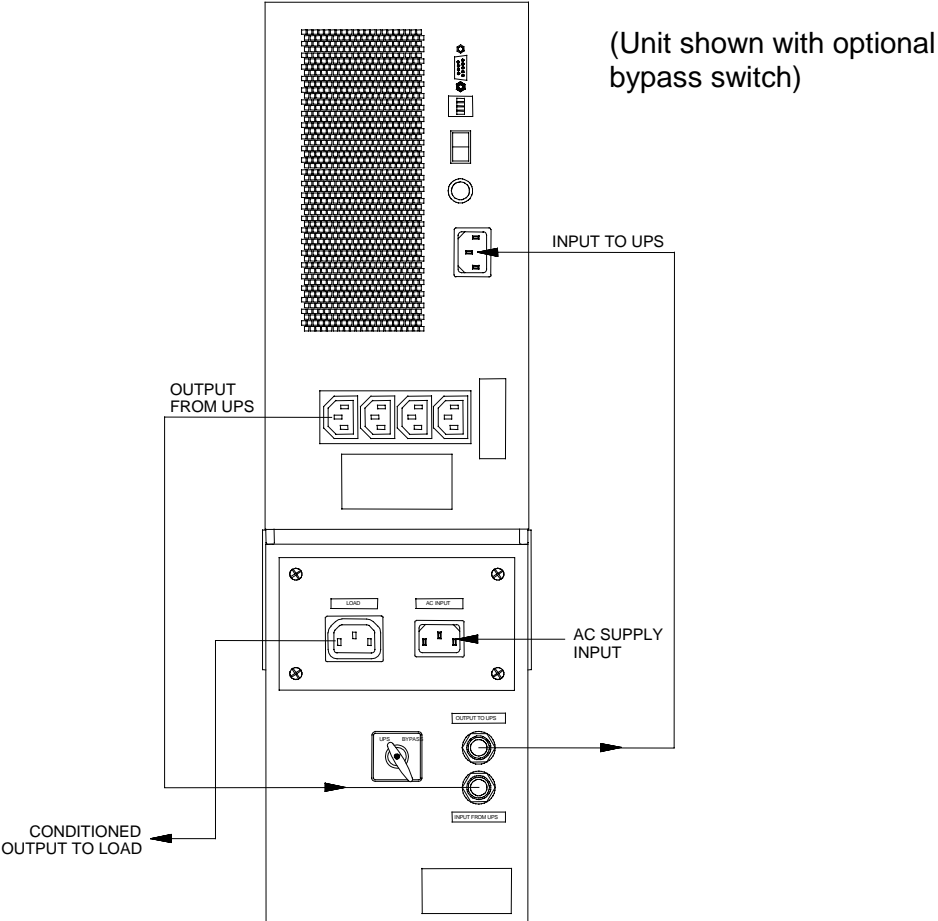
If the switch is left in the center position while the ups is on it will switch to batteries and eventually drop the load once the batteries have been exhausted.

Total load must not exceed the UPS specification, see manual.

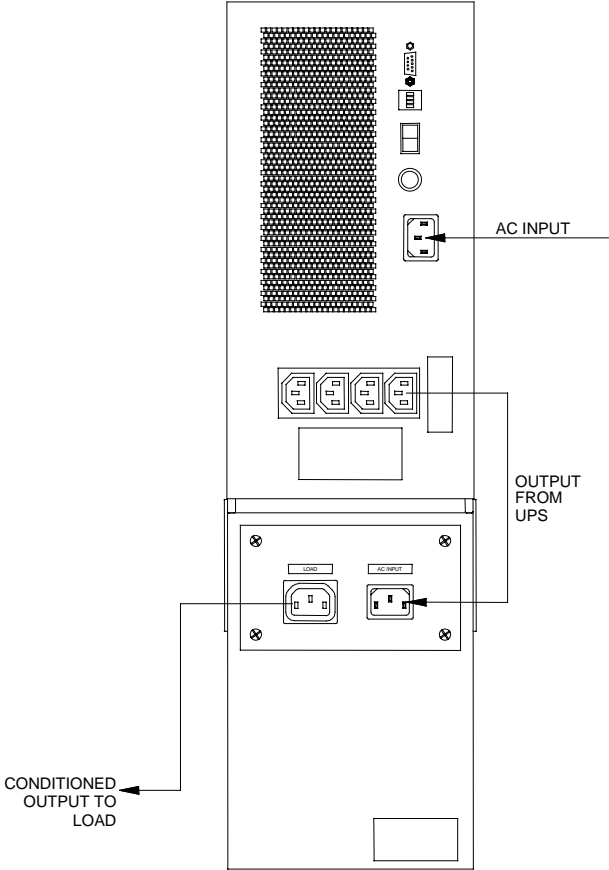
3.1 Layout and Connections - Type 1



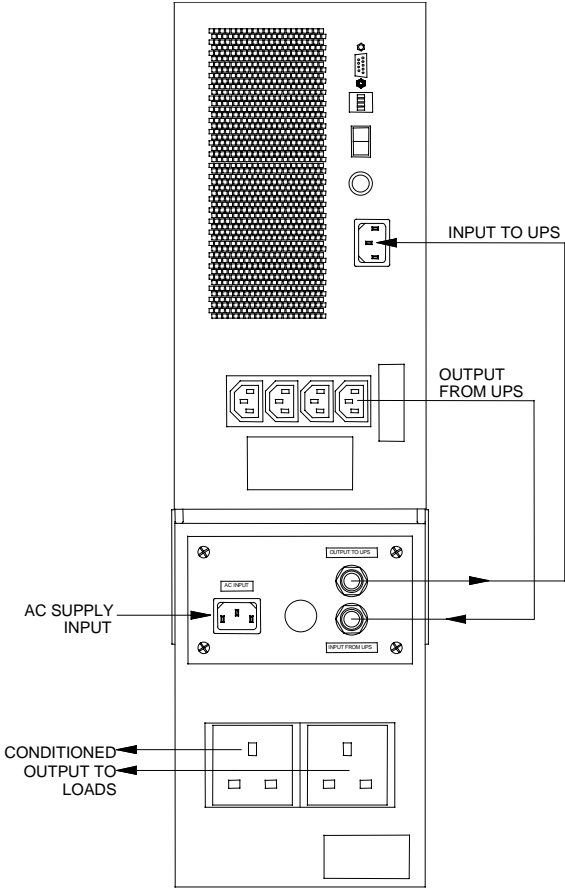
3.2 Layout and Connections - Type 2



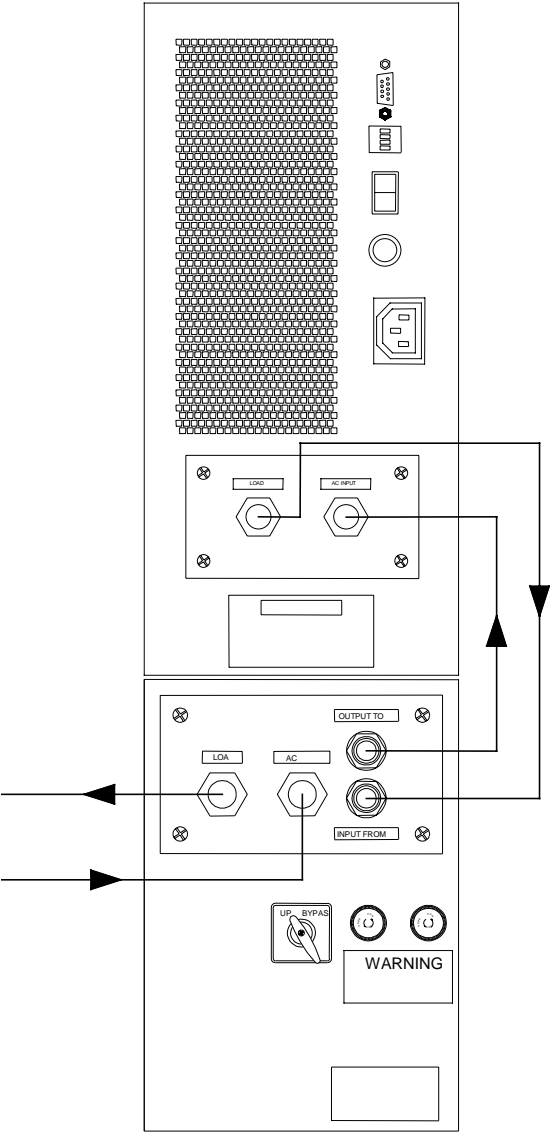
3.3 Layout and Connections - Type 3



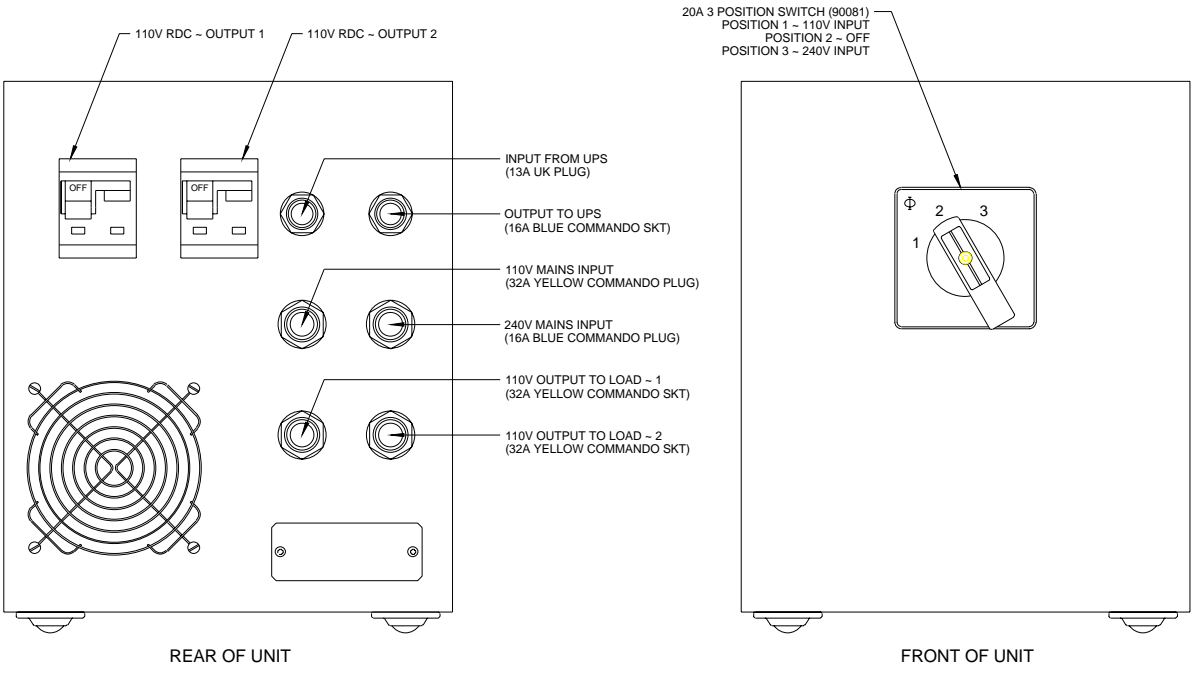
3.4 Layout and Connections - Type 4



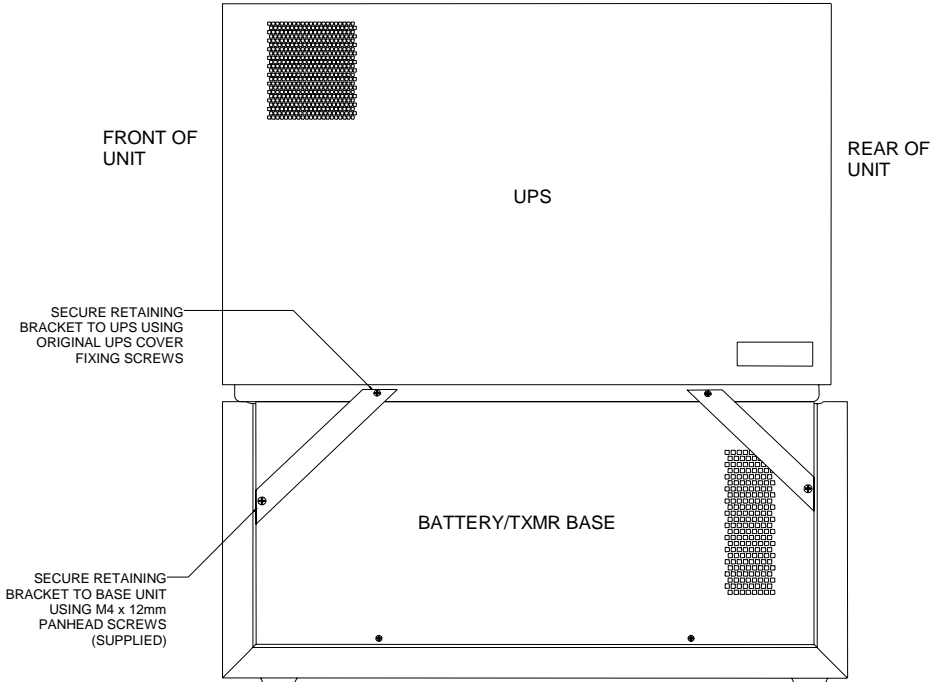
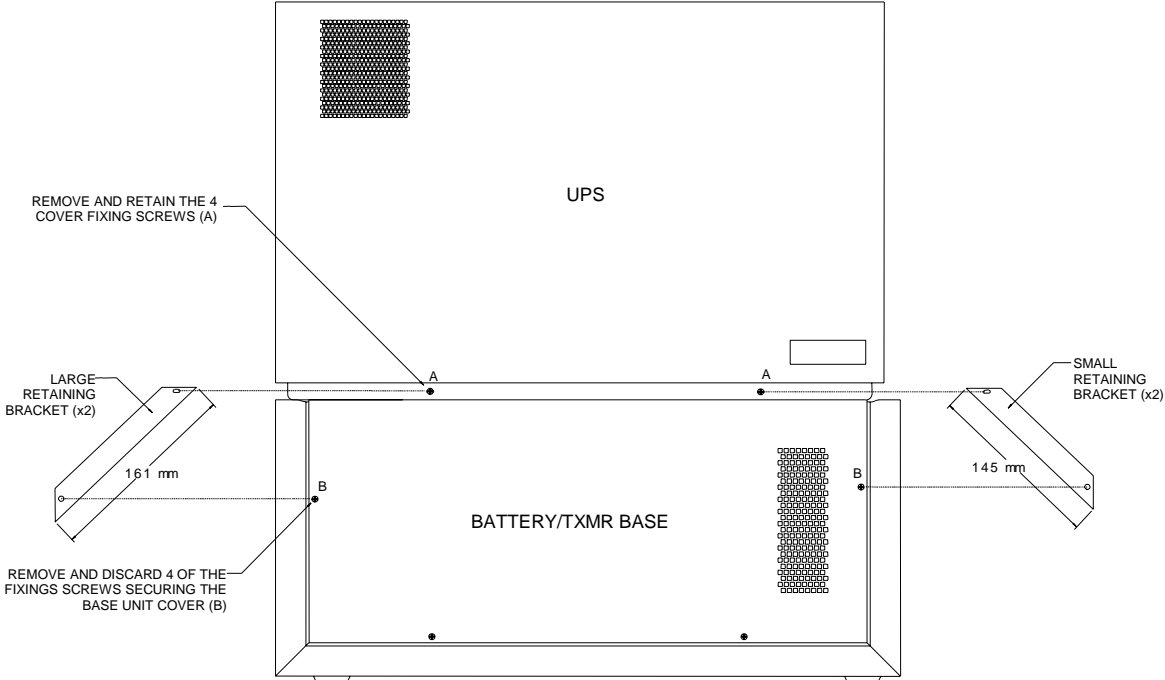
3.5 Layout and Connections - Type 5



3.6 ETX 3kVA/01 Front and Rear Panel Layouts.



3.7 ETX to ETD Fixing brackets



3.8 ETX to UPS Connection Block Diagram.

The following block diagram shows the various components which can be fitted to the ETX module

