



# AL300ULX - UL Listed, Multi-Agency Approved Power Supply/Charger

## Overview:

The AL300ULX is a power supply converts a 115 VAC / 60Hz input, to a 12VDC or a 24VDC power limited output, (see specifications). The AL300ULX is UL Listed for fire alarm, burglar alarm, and access control applications.

## Specifications:

- UL listed fire, burglar and access control power supply (UL1481, UL603, UL294).
- NYC Department of Buildings Approved (MEA).
- California State Fire Marshal Approved (CSFM).
- CSA approved (Canada).
- NFPA 72 compliant.
- Class 2 rated.
- Switch selectable 12VDC or 24VDC power limited output.
- Input 115VAC / 60Hz, 1.45 amp.
- Maximum charge current .7 amp.
- 2.5 amps continuous supply current at 12VDC or 24VDC.
- Filtered and electronically regulated outputs.
- Built-in charger for sealed lead acid or gel type batteries.
- Automatic switch over to stand-by battery when AC fails.
- Zero voltage drop when switched over to battery backup.
- AC input and DC output LED indicators.
- AC fail supervision (form "C" contacts).
- Low battery supervision (form "C" contacts).
- Battery presence and low battery supervision (form "C" contacts).
- Short circuit and thermal overload protection.
- Unit is complete with power supply, enclosure, cam lock.
- Includes battery leads.



Enclosure Dimensions: 15.5”H x 12”W x 4.5”D

## Power Supply Output Specifications:

Output VDC	Switch Position
12VDC	SW1 CLOSED
24VDC	SW1 OPEN

## Stand-by Specifications:

Output	4 hr. of Stand-by & 5 Minutes of Alarm	24 hr. of Stand-by & 5 Minutes of Alarm	60 hr. of Stand-by & 5 Minutes of Alarm
12VDC / 40 AH Battery	Stand-by = 2.5 amps Alarm = 2.5 amps	Stand-by = 1.0 amp Alarm = 2.5 amps	Stand-by = 300mA Alarm = 2.5 amps
24VDC / 12 AH Battery		Stand-by = 200mA Alarm = 3.0 amps	
24VDC / 40 AH Battery	Stand-by = 2.5 amps Alarm = 2.5 amps	Stand-by = 1.0 amp Alarm = 2.5 amps	Stand-by = 300mA Alarm = 2.5 amps

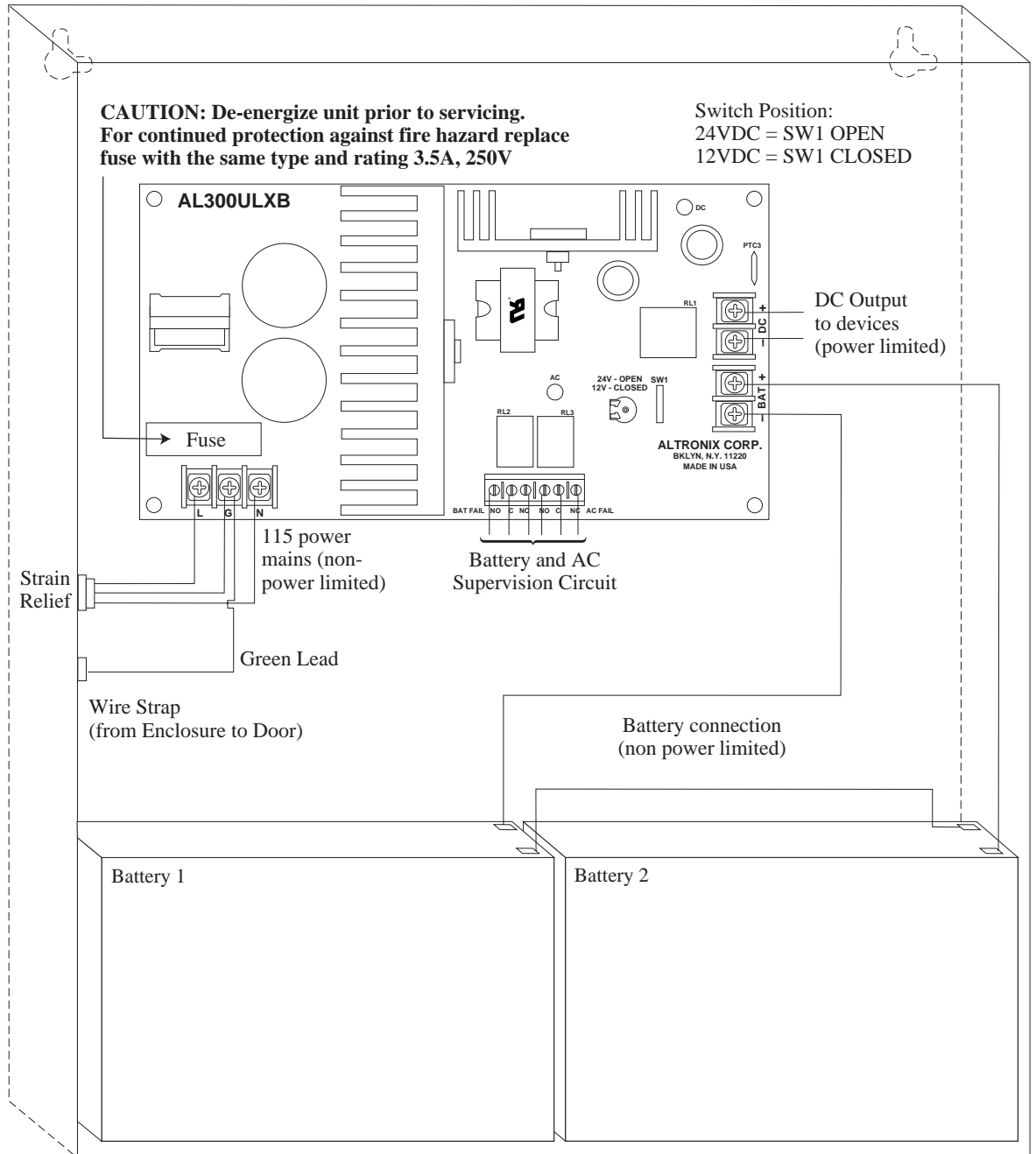
## Installation Instructions:

The AL300ULX should be installed in accordance with article 760 of The National Electrical Code or NFPA 72 as well as all applicable Local Codes.

1. Mount the AL300ULX in desired location.

2. Set the AL300ULX to the desired DC output voltage by setting SW1 (Fig. 1) to the appropriate position (see power supply voltage output selections chart).
  3. Connect AC power (115VAC 50/60 Hz) to terminals marked [L, G, N] (Fig. 1). Use 18 AWG or larger for all power connections (Battery, DC output). Use 22 AWG to 18 AWG for power limited circuits (AC Fail/Low Battery reporting).
- Keep power limited wiring separate from non-power limited wiring (115VAC / 60Hz Input, Battery Wires). Minimum .25" spacing must be provided.**
4. Connect devices to be powered to terminals marked [- DC +] (Fig. 1).  
**Note:** It is good operating practice to measure and verify output voltage before connecting devices to ensure proper operation of equipment.
  5. For Access Control applications, batteries are optional. When batteries are not used a loss of AC will result in the loss of output voltage. When the use of stand-by batteries is desired, they must be lead acid or gel type.
  6. Connect appropriate signaling notification devices to AC FAIL & BAT FAIL (Fig. 1) supervisory relay outputs.

Fig. 1



**Wiring:**

USE 18 AWG or larger for all power connections.

**Note:** Take care to keep power limited circuits separate from non-power limited wiring (115VAC, Battery).

**Maintenance:**

Unit should be tested at least once a year for the proper operation as follows:

Output Voltage Test: Under normal load conditions, the DC output voltage should be checked for proper voltage level (see power supply voltage output specifications chart).

Battery Test: Under normal load conditions check that the battery is fully charged, check specified voltage both at battery terminal and at the board terminals marked [- BAT +] to insure there is no break in the battery connection wires.

**Note:** Maximum charging current under discharges is .7 amp.

**Note:** Expected battery life is 5 years, however it is recommended changing batteries in 4 years or less if needed.

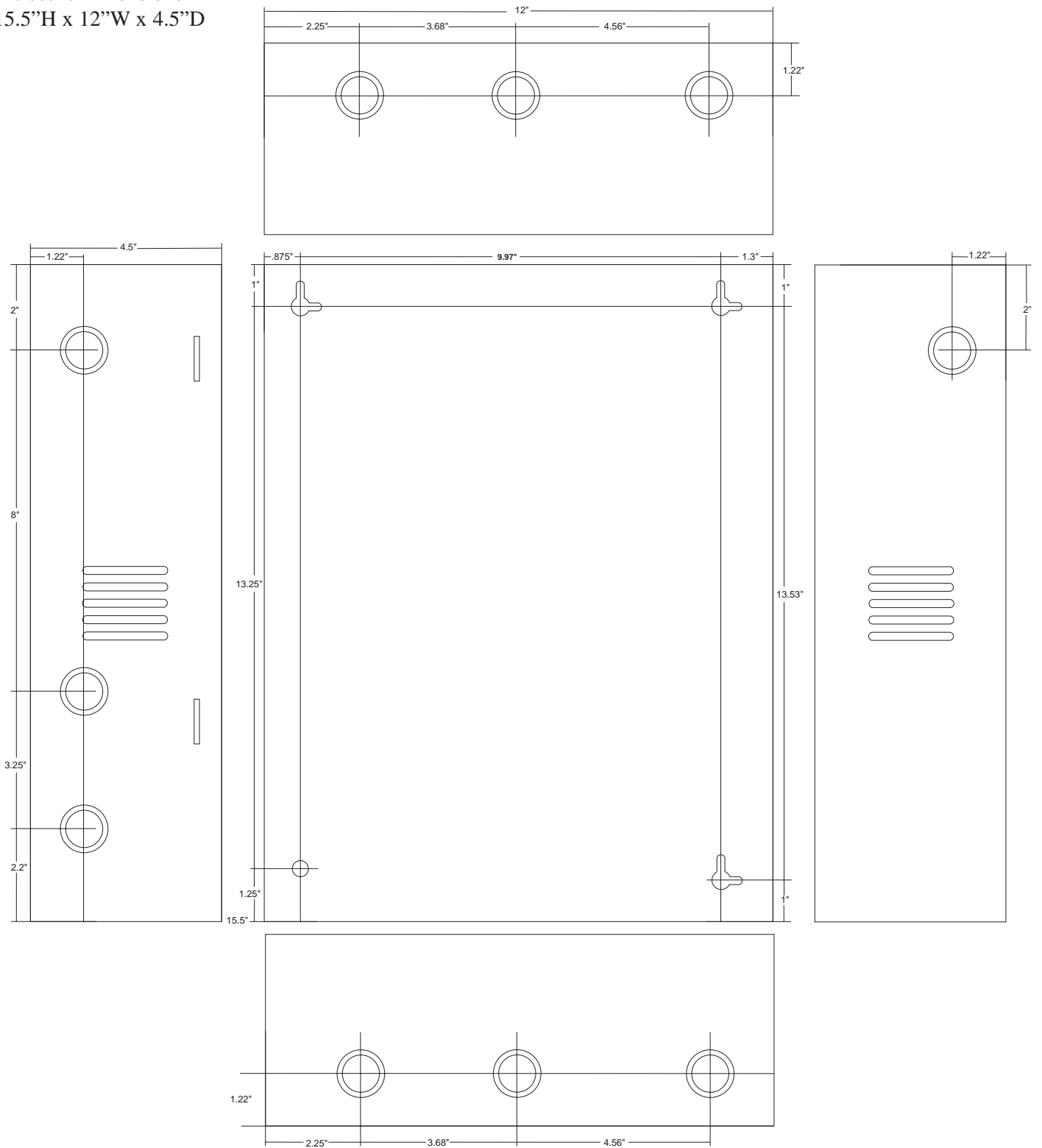
**Terminal Identification:**

Terminal Legend	Function/Description
L, G, N	Connect 115VAC to these terminals: L to Hot, N to Neutral, G to ground.
- DC +	12VDC and 24VDC @ 2.5 amps continuous power limited output.
AC FAIL N.C., C, N.O.	Used to notify loss of AC power, e.g. connect to annunciator/alarm panel. Relay normally energized when AC power is present. Contact rating 1 amp @ 30VDC. AC Fail condition will report approximately one (1) to one minute after loss of AC. To delay report for 6 hours cut jumper J1 on the Power Supply Board (AC trouble output delay option). If this mode is selected the Power Supply Board must be reset by removing all power to it for 30 seconds.
BAT FAIL N.O., C, N.C.	Used to indicate low battery condition, e.g. connect to alarm panel. Relay normally energized when DC power is present. Contact rating 1 amp @ 30VDC. Low battery conditions will report approximately 21VDC (24VDC output setting) or approximately 10.5VDC (12VDC output setting). Battery presence detection will report approximately 5 minutes after battery remains undetected (missing or removed).
- BAT +	Stand-by battery connections. Maximum charge rate .7 amp.

**LED Diagnostics:**

Red (DC)	Green (AC)	Power Supply Status
ON	ON	Normal operating condition
ON	OFF	Loss of AC, Stand-by battery supplying power
OFF	ON	No DC output
OFF	OFF	Loss of AC. Discharged or no stand-by battery. No DC output.

**Enclosure Dimensions:**  
**15.5"H x 12"W x 4.5"D**



MEMBER

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