



# AL600ULXB UL Recognized Power Supply/Charger

## Overview:

The AL600ULXB is a power supply/charger that converts a 115VAC 60Hz input into a 6 amp, 12VDC or 24VDC non power-limited output (see specifications).

## Specifications:

### Agency Listings:

- UL Recognized component for: Access Control System Units (UL 294), Power Supplies for Fire Protective Signaling Systems (UL 1481).



### Input:

- Input 115VAC 60Hz, 3.5 amp.

### Output:

- 12VDC or 24VDC selectable non power-limited output.
- 6 amp continuous supply current.
- Filtered and electronically regulated output.

### Battery Backup:

- Built-in charger for sealed lead acid or gel type batteries.
- Maximum charge current 0.7 amp.

### Battery Backup (cont'd):

- Automatic switch over to stand-by battery when AC fails.
- Zero voltage drop when switched over to battery backup.

### Visual Indicators:

- AC input, DC output and BAT trouble LED indicators.

### Supervision:

- AC fail supervision (form “C” contacts).
- Low battery and battery presence supervision (form “C” contacts).

### Additional Features:

- Short circuit and thermal overload protection.

### Board Dimensions (W x L x H approximate):

4.5” x 7.8” x 2.6” (114.3mm x 198.12mm x 66.04mm)

## Power Supply Output Selections:

Output	Switch Position
12VDC	SW1 - CLOSED (Fig. 1, on the right)
24VDC	SW1 - OPEN (Fig. 1, on the right)

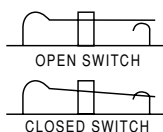
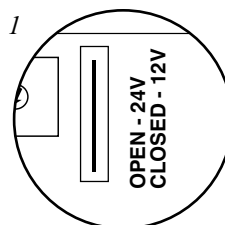


Fig. 1



## 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 / 40AH Battery	Stand-by = 6.0 amp Alarm = 6.0 amp	Stand-by = 1.0 amp Alarm = 6.0 amp	Stand-by = 300mA Alarm = 6.0 amp
24VDC / 12AH Battery	—	Stand-by = 200mA Alarm = 6.0 amp	—
24VDC / 40AH Battery	Stand-by = 6.0 amp Alarm = 6.0 amp	Stand-by = 1.0 amp Alarm = 6.0 amp	Stand-by = 300mA Alarm = 6.0 amp

## Installation Instructions:

The AL600ULXB should be installed in accordance with article 760 of The National Electrical Code as well as NFPA 72 and all applicable Local Codes.

1. Mount the AL600ULXB in the desired location/enclosure.
2. Set the AL600ULXB to the desired DC output voltage by setting SW1 (Fig. 1) to the appropriate position (refer to Power Supply Output Selections chart).
3. Connect AC power (115VAC 60Hz) to the terminals marked [L, G, N] (Fig. 2). Use 18 AWG or larger for all power connections (Battery, DC output, AC input).  
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 0.25” spacing must be provided.**

4. Measure output voltage before connecting devices. This helps avoiding potential damage.  
Maximum ripple voltage rating is 0.8V.
5. Connect devices to be powered to the terminals marked [+ DC -] (Fig. 2).

6. 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 use of stand-by batteries is desired, they must be lead acid or gel type. Connect battery to the terminals marked [+ BAT –] (Fig. 2). Use two (2) 12VDC batteries connected in series for 24VDC operation (battery leads included).
7. Connect appropriate signaling notification devices to AC FAIL & BAT FAIL (Fig. 2) supervisory relay outputs. Note: When used in fire alarm, burglar alarm or access control applications, “AC Fail” relay should be utilized to visually indicate that AC power is on. To delay report 6 hours cut “AC Delay” jumper (Fig. 2a).

Fig. 2

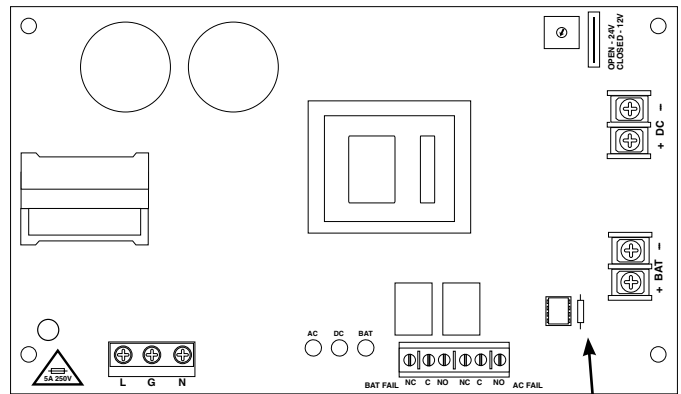
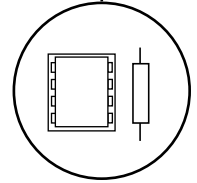


Fig. 2a



### 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 (refer to *Power Supply Output Selections chart*).

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

**Note:** Maximum charging current under discharge is 0.7 amp.

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

### LED Diagnostics:

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

### Terminal Identification:

L, G, N	Connect 115VAC 60Hz to these terminals: L to hot, N to neutral, G to ground.
– DC +	12VDC / 24VDC @ 6 amp continuous non power-limited output.
AC Fail NC, C, NO	Indicates loss of AC power, e.g. connect to audible device or alarm panel. Relay normally energized when AC power is present. Contact rating 1 amp @ 28VDC. AC or brownout fail is reported within 1 minute of event. To delay reporting of up to 6 hrs., cut “AC delay” jumper and reset power to unit.
Bat Fail NC, C, NO	Indicates low battery condition, e.g. connect to alarm panel. Relay normally energized when DC power is present. Contact rating 1 amp @ 28VDC. A removed battery is reported within 5 minutes. Battery reconnection is reported within 1 minute. Low battery threshold: 12VDC output threshold set @ approximately 10.5VDC, 24VDC output threshold set @ approximately 21VDC.
+ BAT –	Stand-by battery connections. Maximum charge current 1.2 amp.