



# AL600ULB - UL Recognized Power Supply/Charger

Rev. 100302

### Overview:

The AL600ULB is a power supply that converts a 28VAC / 200VA input, to a 12VDC or a 24VDC output, (see specifications).

### Specifications:

#### Agency Listings:

- UL Recognized component for Access Control System Units (UL 294), Standard for Safety for Fire Protective Signaling Systems (UL 1481).

#### Input:

- Input 28VAC / 200VA.

#### Output:

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

#### Battery Backup:

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

#### Power Supply Output Selection:

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 = 6 amp Alarm = 6 amp	Stand-by = 1.0 amp Alarm = 6 amp	Stand-by = 300mA Alarm = 6 amp
24VDC / 12 AH Battery		Stand-by = 200mA Alarm = 6.0 amp	
24VDC / 40 AH Battery	Stand-by = 6 amp Alarm = 6 amp	Stand-by = 1.0 amp Alarm = 6 amp	Stand-by = 300mA Alarm = 6 amp

#### Installation Instructions:

The AL600ULB 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 AL600ULB in location/enclosure.
2. Set the AL600ULB to the desired DC output voltage by setting SW1 to the appropriate position (refer to Power Supply Voltage Output Selection chart).
3. Connect two (2) 28VAC / 200VA transformers (connected in parallel) to terminals marked [AC]. Use 14 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 .25" spacing must be provided.**

4. Measure output voltage before connecting device. This helps avoid potential damage.
5. Connect devices to be powered to terminals marked [+ DC -] (Fig. 1).  
When servicing the unit, AC mains should be removed.
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 the use of stand-by batteries is desired, they must be lead acid or gel type. Connect battery to terminals marked [+ BAT -] (Fig. 1).



#### Battery Backup (continued):

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

#### Visual Indicators:

- AC input and DC output 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 (approximate):

4.3"W x 7.1"L x 2.3"H

7. Connect appropriate signaling notification devices to [AC FAIL & BAT FAIL] (Fig. 1) supervisory relay outputs. **Note:** When used in fire alarm, burglar alarm or access control applications, “AC Fail” relay must be used to provide a visual indication of AC power on.

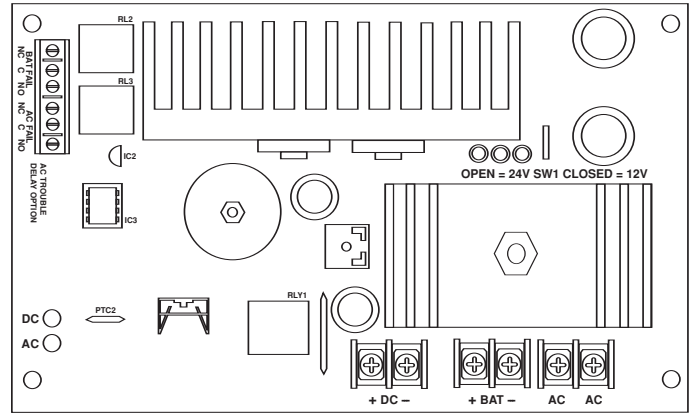


Fig. 1

**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 Voltage Output Specification 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 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)	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.

**Terminal Identification:**

Terminal Legend	Function/Description
AC/AC	Connect 28VAC to these terminals from 2 connected in parallel transformers.
+DC -	12VDC or 24VDC @ 6 amp continuous non-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.C., C, N.O.	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 1 minute after battery remains undetected (missing or removed).
+ BAT -	Stand-by battery connections. Maximum charge current 1.2 amp.

Altronix is not responsible for any typographical errors.

