



AL200UL - UL Listed Power Supply/Charger

Overview:

The unit converts a 16.5VAC input to a fully regulated DC output. This is performed by first rectifying and filtering the 16.5VAC input to a smooth DC voltage, which is then regulated down to it's specified DC output voltage.

Specifications:

- UL603 Burglar Alarm Installations.
- Class 2 rated power limited output.
- Input 16.5VAC, 40VA (TP1640 xfmr).
- 1.75 amp continuous supply current at 6VDC or 12VDC.
- Filtered and electronically regulated output.
- Built-in charger for sealed lead acid or gel type batteries.
- Automatic switch over to stand-by battery when AC fails.
- Low battery disconnect prevents batteries from deep discharge.
- AC input and DC output LED indicators.
- Thermal overload protection.
- Short circuit protection.
- Unit is complete with power supply and enclosure.



Enclosure Dimensions: 12"H x 7.25" W x 4.5" D

Power Supply Output Specifications:

Output VDC	SW1 Slide Switch Position	SW2 Clip Switch Position	Max. Stand-by Load DC
6VDC	SW1 - 6V	SW2 - CLOSED	1.75 amps
12VDC	SW1 - 12V	SW2 - OPEN	1.75 amps

Installation Instructions:

The AL200UL should be installed in accordance with the National Electric Code and all applicable local regulations.

1. Mount the AL200UL in desired location.
2. Connect a 16.5VAC, 40VA (TP1640) plug-in transformer to the terminals marked [AC].
3. Connect devices to be powered to terminals marked [+ DC -].
Note: It is good operating practice to measure and verify output voltage before connecting devices to ensure proper operation of equipment.
4. Connect the stand-by battery to terminals marked [- BAT +] (battery leads included).

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 500mA.

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.

Testing:

At least once a year the unit should be tested for proper operation as follows:

1. **VOLTAGE TEST:** Under normal load conditions the output voltage from the power supply terminal block should have the proper voltage reading as specified (see installation diagram voltage table) across it's (DC+) & (DC-) terminals. If necessary voltage calibration can be adjusted with the on board trimpot. This should only be performed for a few tenths of a volt change.
2. **BATTERY TEST:** Under normal load conditions check that the battery is fully charged to specified DC output voltage while AC input is still present. Disconnect AC. There should be DC voltage present at the output that will be no lower than 1 volt of originally measured battery voltage. If there is no voltage present then the factory authorized battery fuse should be replaced. (See LED Lights Diagnostic table on installation diagram.)

Replacement Parts:

The only replaceable part is the factory authorized battery fuse, M318003 250VAC/3 amp. UL Listed fuse.

Fault Conditions:

Under short circuit conditions the battery fuse will blow. This fuse must be replaced for battery to offer proper back-up. Upon removal of the short the unit should still supply it's specified output voltage as long as AC input voltage is present. The green AC LED should be on with AC applied, if not the transformer's internal fuse could be blown and the transformer (16.5VAC/40VA UL Listed transformer) must be replaced.

Battery:

8AH (Amp Hour) batteries should be placed vertically inside power supply cabinet. These should always be kept charged with the power supply. In the event they were left uncharged for extended periods of time they could lose specified capacity and may have to be replaced. Normal charging temperature range is from 32-104 degrees F. Normal Discharge is from 5- 122 degrees F.

NOTE: Battery shelf life is approximately 5 years. It is recommended to change batteries in 4 years for added reliability.

Application:

This unit is UL Listed for burglar-Alarm Systems, UL603, and is used to power UL selection, intrusion devices, etc. It cannot be used to power a mercantile bell, however it can power a residential bell.

Unit is factory set to maximum allowable output of 6.9VDC or 13.75VDC

Terminal Identification:

Terminal Legend	Function/Description
AC/ AC	Low voltage AC input (16.5VAC / 40VA). Altronix part # TP1640.
+ DC -	6VDC or 12VDC 1.75 amp continuous power limited output.
- BAT +	Stand-by battery connections. Maximum charge rate 500mA.

