AL100UL - UL Listed Linear Power Supply/Charger

Rev. 062001

Overview:

The AL100UL power supply converts 16.5VAC, 20VA to a 12VDC power limited output (see specifications). The AL100UL is UL Listed for burglar alarm applications.

Specifications:

Agency Listings:

- UL Listed Standard for Power Supplies for Use with Burglar Alarm System Units (UL 603).
- CUL Listed - CSA Standard C603-M1988, Burglar Alarm System.
- Class 2 Rated power limited output.

Input:

- 16.5VAC, 20VA from UL Listed, Class 2 transformer.

Output:

- 12VDC power limited output.
- Maximum charge current is .5 amp.
- .75 continuous supply current at 12.5 to 13.9VDC.
- Filtered and electronically regulated output.

Battery Backup:

- Built-in charger for sealed lead acid or gel type batteries.
- Automatic switch over to stand-by battery when AC fails.

Battery Backup (cont'd):

- Low battery disconnect prevents batteries from deep discharge.

Supervision:

- Low battery and AC fail supervision form "C" contacts (1 amp @ 28VDC).

Visual Indicators:

- AC input and DC output LED indicators.

Additional Features:

- Short circuit and thermal overload protection.
- Unit is complete with power supply and enclosure.
- Includes battery leads.

Enclosure Dimensions:

8"H x 7.25"W x 3.5"D

Installation Instructions:

Wiring methods shall be in accordance with the National Electrical Code/NFPA 70/NFPA 72/ANSI, and with all local codes and authorities having jurisdiction. Product is intended for indoor use only.

1. Mount the unit in desired location. Mark and predrill holes in the wall to line up with the top two keyholes in the enclosure. Install two upper fasteners and screws in the wall with the screw heads protruding. Place the enclosure's upper keyholes over the two upper screws, level and secure. Mark the position of the lower two holes. Remove the enclosure. Drill the lower holes and install the two fasteners. Place the enclosure's upper keyholes over the two upper screws. Install the two lower screws and make sure to tighten all screws *(Enclosure Dimensions, pg. 8)*. Secure enclosure to earth ground *(Fig 1, pg. 3)*.
2. Connect a 16.5VAC, 20VA Class 2, UL Listed plug-in transformer to the terminals marked AC.
3. Measure output voltage before connecting devices. This helps avoid potential damage.
4. Connect devices to be powered to terminals marked [+ DC -].
5. Connect the stand-by battery to terminals marked [- BAT +] (battery leads included).
6. Connect appropriate signaling notification devices to AC Fail and Low Bat supervisory relay outputs.
   Note: To meet UL requirements, AC Supervisory outputs must be connected to the zone of Alarm Control Panel or to visual AC trouble indicator.
   Note: 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 are desired, they must be lead acid or gel type.

Maintenance:

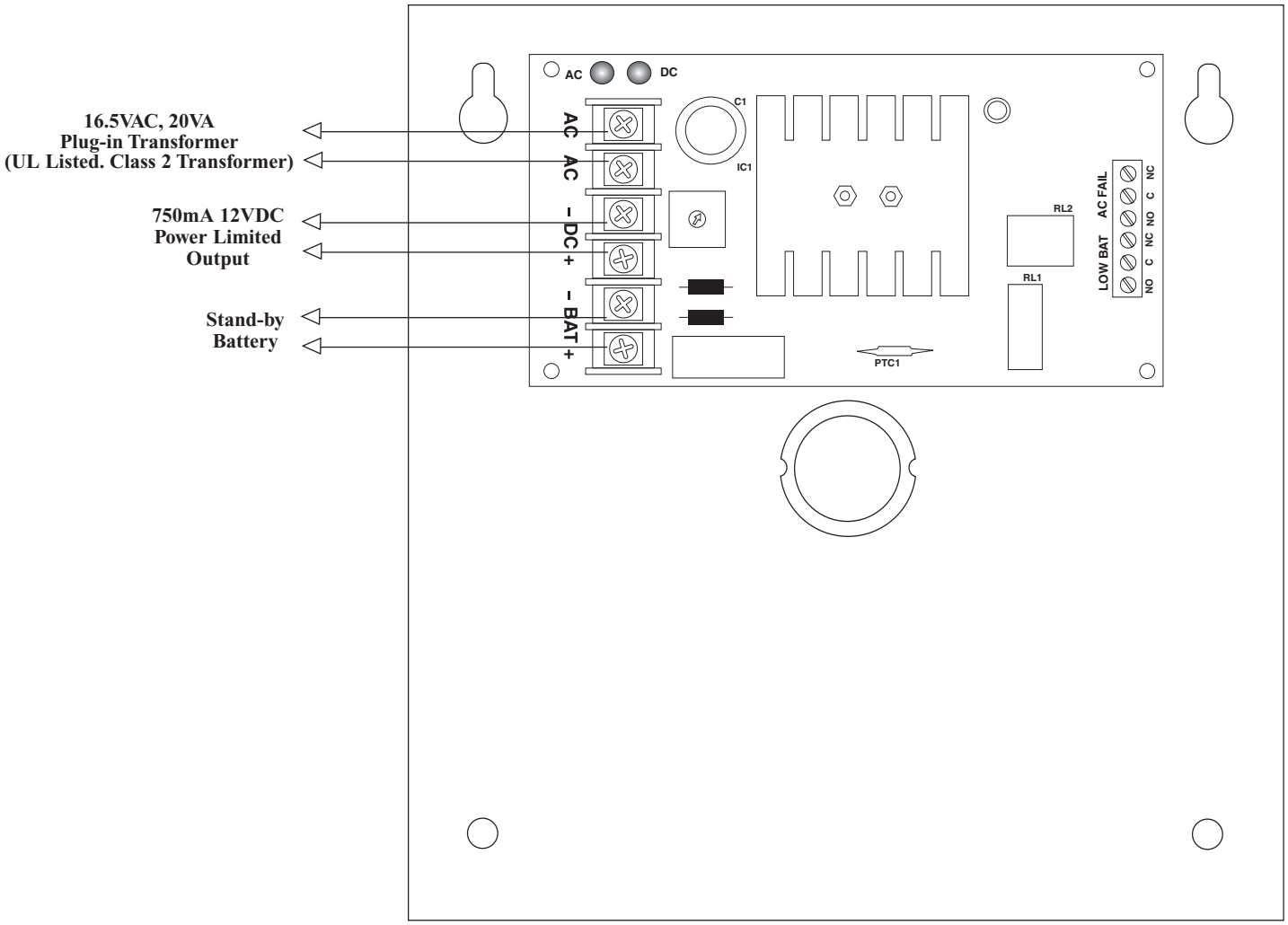
Unit should be tested at least once a year for the proper operation as follows:
Output Voltage Test: Under normal load conditions, the DC output voltage should be checked for proper voltage level (see power supply voltage output specifications chart).
Battery Test: Under normal load conditions check 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 discharge 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.

Stand-by Specifications (Using (1) 4AH 12VDC Battery):

Current Draw	Stand-by Time	Alarm Time
750mA	4 hours	15 mins.

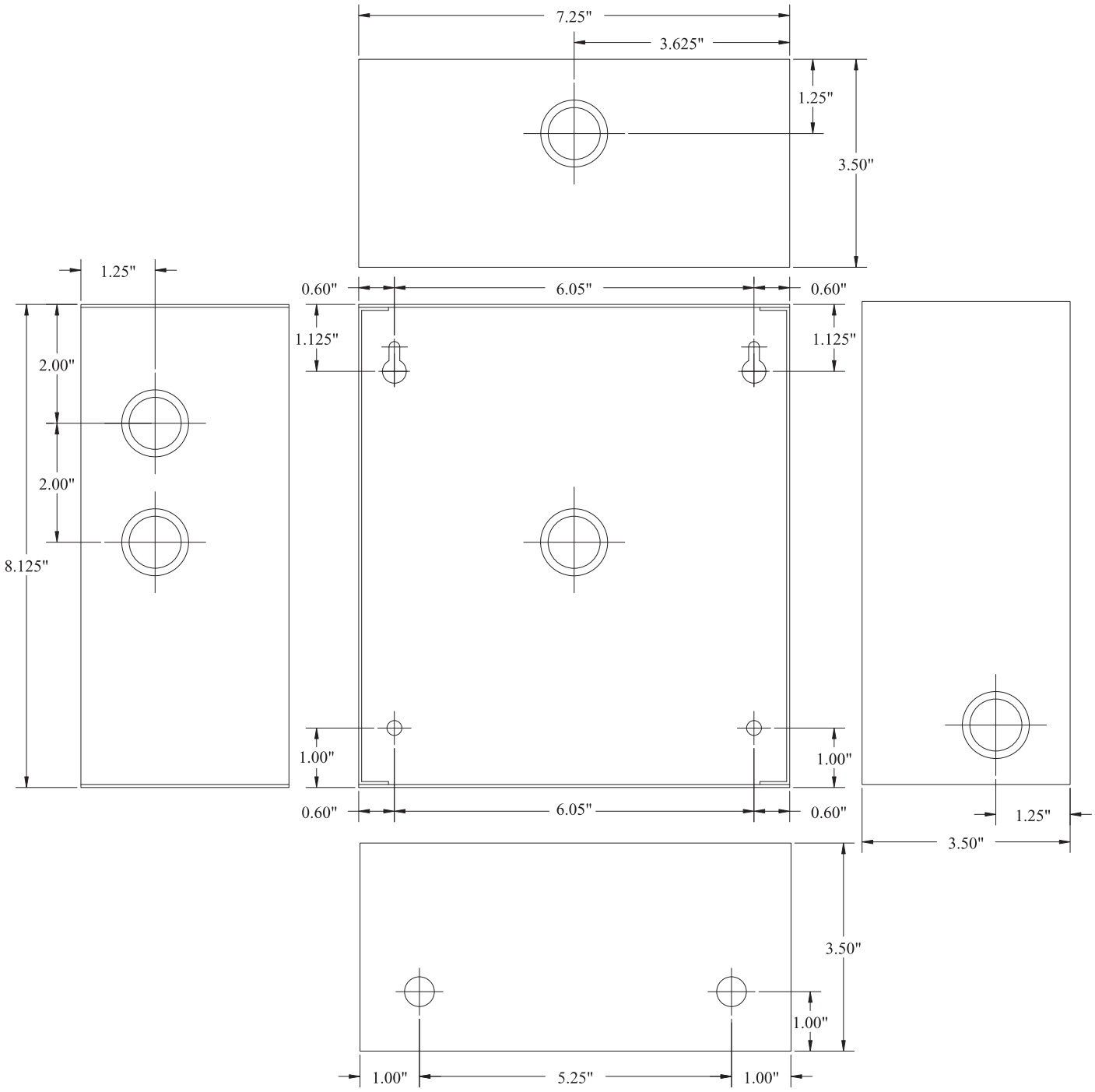


Terminal Identification:

Terminal Legend	**Function/Description**
AC/AC	Low voltage AC input (16.5VAC/20VA). UL Listed. Class 2 plug-in transformer.
– DC +	12VDC @ .75 amp continuous power limited output.
– BAT +	Stand-by battery connections. Maximum charge rate 500mA.
AC FAIL NC, C, NO	Indicates loss of AC, e.g connect audible device or alarm panel. Relay is normally energized when AC power is present. Contact rating 1 amp @ 28VDC.
LOW BAT NC, C, NO	Indicates low battery condition e.g connect audible device or alarm panel. Relay is normally energized. Contact rating 1 amp @ 28VDC.

Enclosure Dimensions:

8.5”H x 7.5” W x 3.5” D



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