



AL201ULB Access Control Power Supply/Charger

Overview:

The AL201ULB is a power-limited power supply/charger that converts a 24VAC input into a 12VDC output (see specifications). It is intended for use in applications requiring UL Listing for Access Control System Units (UL 294).

Specifications:

Agency Listing:

- UL Recognized component.
- CE Approved.

Input:

- 24VAC, 40VA from UL Listed, Class 2 transformer.

Output:

- 12VDC output.
- Class 2 Rated power-limited output.
- 1.75A continuous supply current.
- Filtered and electronically regulated output.
- Short circuit and thermal overload protection.



Battery Backup:

- Battery leads included.
- Automatic switch over to stand-by battery when AC fails.
- Maximum charge current 0.4A.

Supervision:

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

Visual Indicators:

- AC input and DC output LED indicators.

Board Dimensions (W x L x H approx.):

3” x 5.75” x 1.2” (76.2mm x 146.05mm x 30.48mm).

Power Supply Output Specifications:

Output VDC	Max. Stand-by Load DC	Max. Alarm Load DC	Battery (optional)
12VDC	1.75A	1.75A	12VDC / 7AH

Stand-by Specifications:

Output	4 hr. of Stand-by and 5 Minutes of Alarm
12VDC / 7 AH Battery	Stand-by = 1.25A

Installation Instructions:

The AL201ULB should be installed in accordance with article 760 of The National Electrical Code or NFPA 72, as well as all applicable Local Codes.

See **Terminal Identification Chart** on Pg. 2 for a description of each terminal function.

1. Mount the AL201ULB in the desired location/enclosure.
2. Connect 24VAC/40VA transformer to the terminals marked [XFMR INPUT].
Use 18 AWG or larger for all power connections (Battery, AC input). Use 22 AWG to 18 AWG for power-limited circuits (DC output, AC FAIL and LOW BAT supervisory relays).
Keep power-limited wiring separate from non power-limited wiring (115VAC / 60Hz Input, Battery Wires). Minimum 0.25” spacing must be provided.
3. Connect battery to the terminals [+ BAT -] as marked on the unit (battery leads included).
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 is desired, they must be lead acid or gel type.
4. Measure output voltage before connecting devices. This helps avoiding potential damage.
5. Connect devices to be powered to the terminals marked [+ DC -] (Fig. 1).
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 a visual AC trouble indicator.

Maintenance:

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

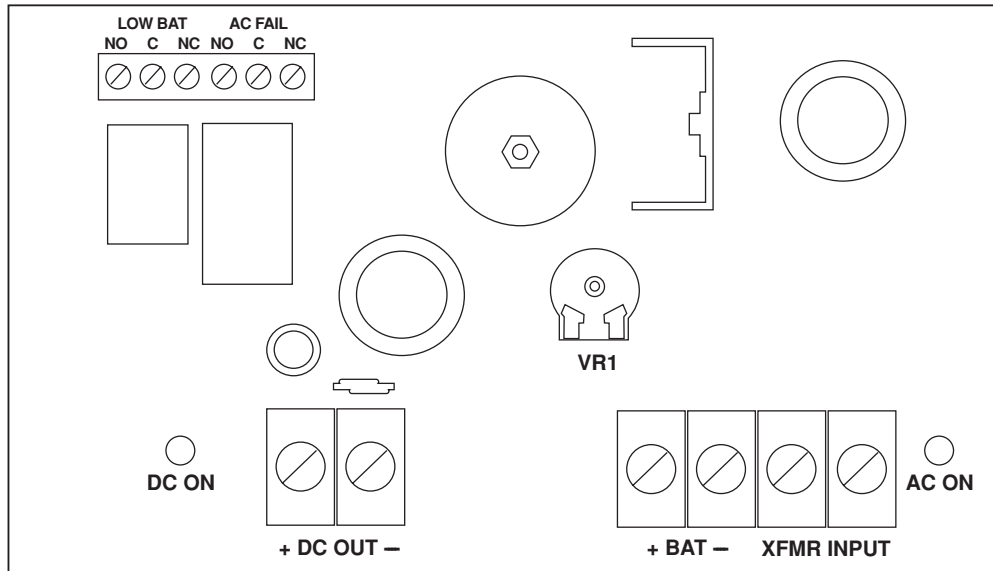
Output Voltage Test: Under normal load conditions, the DC output voltage should be checked for proper voltage level (*Power Supply Output Specifications Chart*).

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 400mA.

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

Fig. 1



LED Diagnostics:

Red (DC)	Green (AC)	Power Supply Status
ON	ON	Normal function
ON	OFF	Battery backup is powering output
OFF	ON	No DC output
OFF	OFF	Loss of AC. Discharged or missing stand-by battery. No DC output.

Terminal Identification:

Terminal Legend	Function/Description
XFMR INPUT	Low voltage AC input.
+ DC OUT -	Continuous positive (+) DC power output voltage. Common negative (-) output (ground).
+ BAT -	Stand-by battery connections.
AC FAIL NO, C, NC	Indicates loss of AC, e.g connect audible device or alarm panel. Relay is normally energized when AC power is present. Contact rating 1A @ 28VDC.
LOW BAT NO, C, NC	Indicates low battery condition e.g connect audible device or alarm panel. Relay is normally energized. Contact rating 1A @ 28VDC.