



AL176ULB Access Control Power Supply/Charger

Overview:

The AL176ULB is a power limited power supply/charger that converts a 28VAC input, into 12VDC or 24VDC output, (see specifications). They are intended for use in applications requiring UL Listing for Access Control (UL294).

Specifications:

- UL recognized component.
- Class 2 rated.
- Input 28VAC 56VA (Altronix model # T2856).
- Selectable 12VDC or 24VDC power limited output.
- 1.75 amps continuous supply current @ 12VDC or 24VDC.
- Filtered and electronically regulated output.
- Maximum charge current: 400mA.
- Automatic switch over to stand-by battery when AC fails (zero voltage drop).
- AC fail supervision (form "C" 1 amp @ 28VDC).
- Low battery supervision (form "C" 1 amp @ 28VDC).
- AC input and DC output LED indicators.
- Short circuit and thermal overload protection.
- Unit includes: power supply, and battery leads.

Board Dimensions: 3"H x 5.75"W x 1.2"H



Power Supply Output Specifications:

Output VDC	Jumper	Max. Stand-by Load DC	Max. Alarm Load DC	Battery (optional)
12VDC	Jumper Removed	1.75 amps	1.75 amps	12VDC
24VDC	Jumper On	1.75 amps	1.75 amps	24VDC

Stand-by Specifications:

Output	4 hr. of Stand-by & 5 Minutes of Alarm
12VDC / 7 AH Battery	Stand-by = 1.25 amps
24VDC / 7 AH Battery	Alarm = 1.25 amps

Installation Instructions:

The AL176ULB 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 page 2 for a description of each terminal function.**

1. Mount the AL176ULB in desired location/enclosure.
2. Connect 28VAC 56VA (Altronix model # T2856) transformer to 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 .25" spacing must be provided.
3. Set the AL176ULB to the desired DC output voltage by either removing/leaving jumper.
(see **power supply output specifications**).

Note: It is good operating practice to measure and verify output voltage before connecting devices to ensure proper operation of equipment.

4. Connect battery to terminals [+ BAT -] as marked on the unit (battery leads included). Use two (2) 12VDC batteries connected in series for 24VDC operation.

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.

5. 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.

- For Access Control Device connections refer to Terminal Identification Chart.

Maintenance:

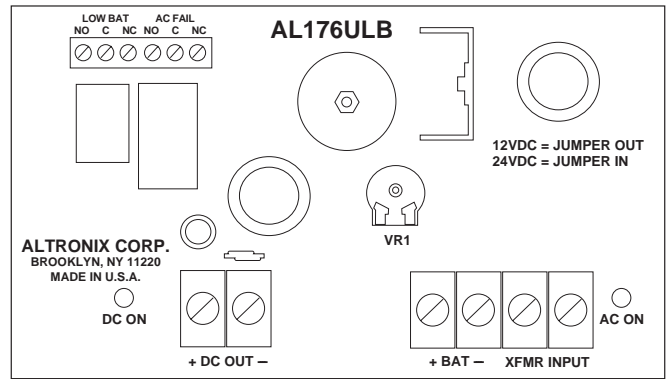
Unit should be tested at least once a year for the proper operation as follows:

Output Voltage Test: Under normal load conditions, the DC output voltage should be checked for proper voltage level (see power supply 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 400mA.

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 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 (28VAC 56VA).
+ DC OUT -	Continuous positive (+) DC power output voltage. Common negative (-) output (ground).
+ BAT -	Stand-by battery connections.
AC FAIL N.O., C, N.C.	Used to notify 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 N.O., C, N.C.	Used to notify low battery condition e.g connect audible device or alarm panel. Relay is normally energized. Contact rating 1 amp @ 28VDC.



Altronix is not responsible for any typographical errors. Product specifications are subject to change without notice.