AL300ULB - Power Supply/Charger

Overview:

The AL300ULB is a power supply/charger that converts a 28VAC / 100VA input into a 12VDC or 24VDC output (see specifications).

Specifications:

Input:
- Input 28VAC / 100VA.

Output:
- 12VDC or 24VDC selectable output.
- 2.5 amp continuous supply current.
- Filtered and electronically regulated output.

Battery Backup:
- Built-in charger for sealed lead acid or gel type batteries.
- Maximum charge current 600mA.
- Automatic switch over to stand-by battery when AC fails.

Visual Indicators:
- AC input and DC output LED indicators.

Supervision:
- AC fail supervision (form "C" contacts).
- Low battery supervision (form "C" contacts).

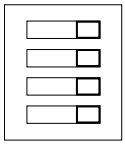
Additional Features:
- Short circuit and thermal overload protection.

Board Dimensions *(W x L x H approximate)*:
4.0" x 7.0" x 1.75" (101.6mm x 177.8mm x 51.05mm)

Power Supply Output Specifications:

Output VDC	Switch Position
12VDC	SW1, SW2 ON, SW3, SW4 OFF
24VDC	SW1, SW2 OFF, SW3, SW4 ON

(AL300ULB Board)
Output Dip Switches



Stand-by Specifications:

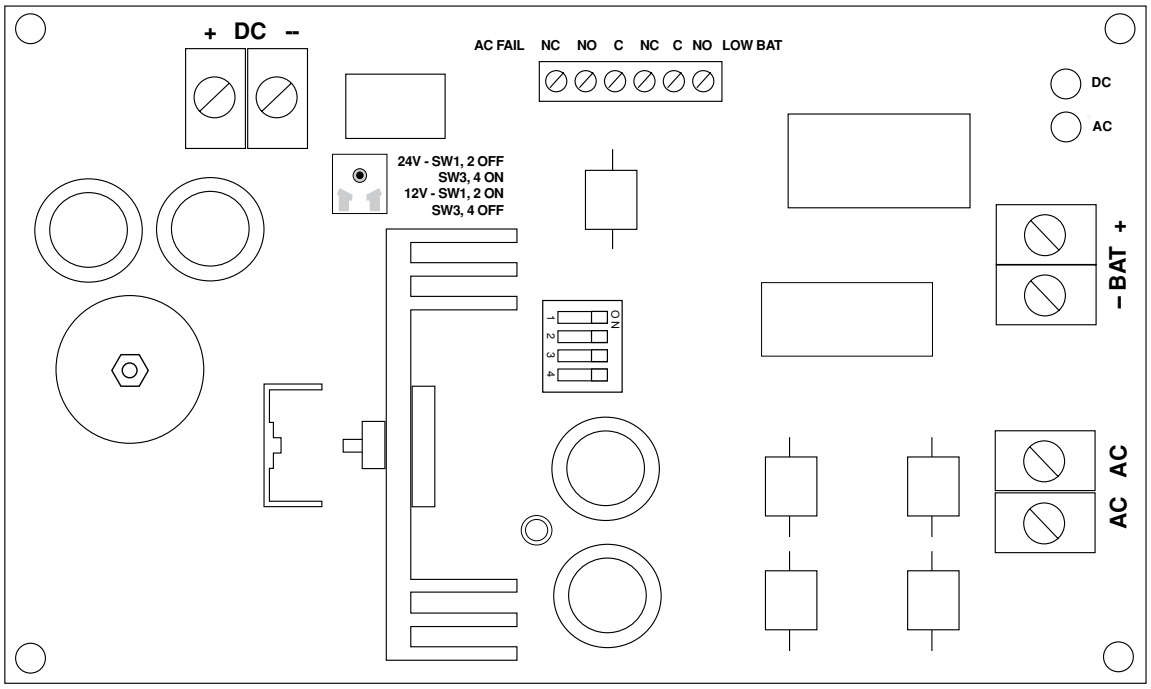
Output	4 hr. of Stand-by & 5 Minutes of Alarm	24 hr. of Stand-by & 5 Minutes of Alarm	60 hr. of Stand-by & 5 Minutes of Alarm
12VDC / 40 AH Battery	Stand-by = 2.5 amp Alarm = 2.5 amp	Stand-by = 1.0 amp Alarm = 2.5 amp	Stand-by = 300mA Alarm = 2.5 amp
24VDC / 12 AH Battery	————	Stand-by = 200mA Alarm = 2.5 amp	————
24VDC / 40 AH Battery	Stand-by = 2.5 amp Alarm = 2.5 amp	Stand-by = 1.0 amp Alarm = 2.5 amp	Stand-by = 300mA Alarm = 2.5 amp

Installation Instructions:

The AL300ULB should be installed in accordance with article 760 of The National Electrical Code or NFPA 72 as well as all applicable Local Codes.

1. Mount the AL300ULB in the desired location/enclosure.
2. Connect 28VAC / 100VA transformer to the terminals marked [AC, AC].
   Use 18 AWG or larger for all power connections (Battery, DC output).
   Use 22 AWG to 18 AWG for power-limited circuits (AC Fail/Low Battery reporting).
3. Set the AL300ULB to the desired DC output voltage by setting switches to the appropriate positions *(refer to Power Supply Output Specifications Table)*.
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. 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 the terminals marked [- BAT +] *(Fig. 1)* (battery leads included).
   Use two (2) 12VDC batteries connected in series for 24VDC operation.
7. Connect supervisory trouble reporting devices to the outputs marked [LOW BAT, AC FAIL] *(Fig. 1)* supervisory relays marked [NC, NO, C,]. Use 22 AWG to 18 AWG for AC Fail & Low Battery reporting.

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 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 0.6 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)	Function/Description
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	Low voltage AC input 28VAC / 100VA.
+DC –	12VDC / 24VDC @ 2.5 amp continuous supply current.
AC FAIL N.C., N.O., C	Used to notify loss of AC power, e.g. connect to audible device or alarm panel. Relay normally energized when AC power is present. Contact rating 1 amp @ 28VDC.
LOW BAT 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 @ 28VDC.
– BAT +	Stand-by battery connections. Maximum charge current 600mA.

140 58th Street, Brooklyn, New York 11220 USA, 718-567-8181, fax: 718-567-9056
web site: www.altronix.com, e-mail: info@altronix.com, Lifetime Warranty, Made in U.S.A.