AL1012ULXB
UL Recognized Power Supply/Charger

Overview:

The AL1012ULXB power supply converts a 115VAC / 60Hz input into a 12VDC non power-limited output (see specifications).

Specifications:

Agency Listings:
- UL Recognized component for Access Control System Units (UL 294).

Input:
- Input 115VAC / 60Hz, 2.6 amp.

Output:
- 12VDC output.
- 10 amp continuous supply current.
- Filtered and electronically regulated output.

Fuse Ratings:
- Input Fuse: 250VAC, 5A
- Output Fuse: 32VDC, 15A

Battery Backup:
- Built-in charger for sealed lead acid or gel type batteries.
- Maximum charge current 0.7 amp.
- Automatic switch over to stand-by battery when AC fails.
- Zero voltage drop when switched over to battery backup.

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

Supervision:
- AC fail supervision (form "C" contacts).
- Battery presence supervision (form "C" contacts).

Additional Features:
- Short circuit and thermal overload protection.

Board Dimensions *(W x L x H approximate)*:
4.5" x 7.25" x 1.75" (114.3mm x 184.15mm x 44.45mm)

Stand-by Specifications:

When 12VDC/12AH battery is used, the unit provides 30 minutes of backup @ 10 amp.

Installation Instructions:

The AL1012ULXB must be installed in accordance with article 760 of the National Electrical Code, ANSI/NFPA 70 and all applicable Local Codes.

1. Mount the AL1012ULXB in the desired location/enclosure.
2. Connect unswitched AC power (115VAC / 60Hz) to the terminals marked [L, G, N] *(Fig. 1, pg. 2)*. Use 18 AWG or larger for all power connections (Battery, AC input, DC output). Use 22 AWG to 18 AWG for power-limited circuits (AC Fail/Low Battery reporting). **Keep power-limited wiring separate from non power-limited wiring (115VAC / 60Hz Input, Battery Wires, DC Output). Minimum 0.25" spacing must be provided.**
3. Measure output voltage before connecting devices. This helps avoiding potential damage.
4. Connect devices to be powered to the terminals marked [+ DC –] *(Fig. 1, pg. 2)*.
5. 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, pg. 2)*.
6. If it is required to connect appropriate signaling notification devices to [AC FAIL] and [BAT FAIL] supervisory relay outputs *(Fig. 1)*, use 22AWG to 18AWG wires.

Maintenance:

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

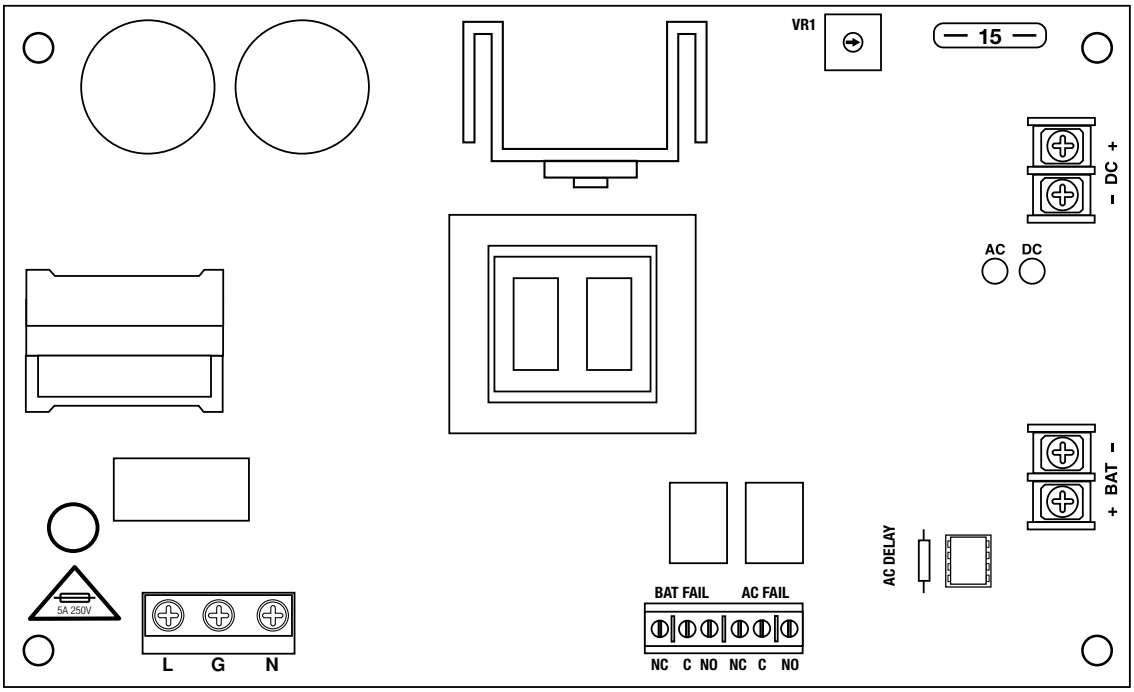
Output Voltage Test: Under normal load conditions, the DC output voltage should be checked for proper voltage level (13.2volts).

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 ensure there is no break in the battery connection wires.

Note: Maximum charging current under discharge is 0.7 amp.

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 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
L, G, N	Connect 115VAC / 60Hz to these terminals: L to hot, N to neutral, G to ground.
+ DC –	12VDC @ 10 amp continuous non power-limited output.
AC FAIL NC, C, NO	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. AC or brownout fail is reported within 1 minute of event.
BAT FAIL NC, C, NO	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. A removed battery is reported within 5 minutes. Battery reconnection is reported within 1 minute. Low battery threshold: @ approximately 10.5VDC.
+ BAT –	Stand-by battery connections. Maximum charge current 0.7 amp.

Altronix is not responsible for any typographical errors.

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