



AL600XB220 Power Supply/Charger

Overview:

The AL600XB220 is a power supply/charger that converts a 220VAC (working range 198VAC - 256VAC), 50/60Hz input into a 12VDC or 24VDC @ 6A output (see specifications).

Specifications:

Input:

- 220VAC (working range 198VAC - 256VAC), 50/60Hz, 1.5A.

Output:

- 12VDC or 24VDC selectable power output.
- 6A continuous supply current.
- Filtered and electronically regulated output.

Battery Backup:

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

Visual Indicators:

- AC input, DC output, and BAT trouble LED indicators.

Supervision:

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

Additional Features:

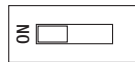
- Short circuit and thermal overload protection.

Board Dimensions (W x L x H approximate):

4.5” x 7.8” x 2.6” (114.3mm x 198.12mm x 66.04mm).

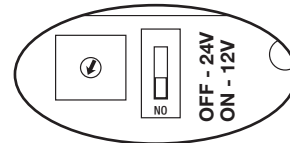
Power Supply Output Selections:

Output	Switch Position
12VDC	SW1 - ON (Fig. 1, on right)
24VDC	SW1 - OFF (Fig. 1, on right)



OFF - 24V
ON - 12V

Fig. 1



Stand-by Specifications:

Output	4 hr. of Stand-by and 5 Minutes of Alarm	24 hr. of Stand-by and 5 Minutes of Alarm	60 hr. of Stand-by and 5 Minutes of Alarm
12VDC / 40AH Battery	Stand-by = 6.0A Alarm = 6.0A	Stand-by = 1.0A Alarm = 6.0A	Stand-by = 300mA Alarm = 6.0A
24VDC / 12AH Battery	—	Stand-by = 200mA Alarm = 6.0A	—
24VDC / 40AH Battery	Stand-by = 6.0A Alarm = 6.0A	Stand-by = 1.0A Alarm = 6.0A	Stand-by = 300mA Alarm = 6.0A

Installation Instructions:

The AL600XB220 should be installed in accordance with article 760 of The National Electrical Code, as well as NFPA 72 and all applicable Local Codes.

1. Mount the AL600XB220 in the desired location/enclosure.
2. Set the AL600XB220 to the desired DC output voltage by setting SW1 (Fig. 1) to the appropriate position (refer to **Power Supply Output Selections** chart).
3. Connect AC power (220VAC 50/60Hz) to the terminals marked [L, G, N] (Fig. 2). Use 18 AWG or larger for all power connections: Battery, DC output, AC input. Use 22 AWG to 18 AWG for AC Fail/Low Battery reporting. **Keep power-limited wiring separate from non power-limited wiring (220VAC 50/60Hz Input, Battery Wires). Minimum 0.25” spacing must be provided.**
CAUTION: Do not touch exposed metal parts. Shut branch circuit power before installing or servicing equipment. There are no user serviceable parts inside. Refer installation and servicing to qualified service personnel.
4. Measure output voltage before connecting devices. This helps avoiding potential damage. Maximum ripple voltage rating is 0.8V.
5. Connect devices to be powered to the terminals marked [+ DC -] (Fig. 2).
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. 2). Use two (2) 12VDC batteries connected in series for 24VDC operation (battery leads included).
7. Connect appropriate signaling notification devices to AC FAIL & BAT FAIL (Fig. 2) supervisory relay outputs. Note: When used in fire alarm, burglar alarm or access control applications, “AC Fail” relay should be utilized to visually indicate that AC power is on. To delay report for 6 hours cut “AC Delay” jumper (Fig. 2a).

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 Selections* 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 0.7A.

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

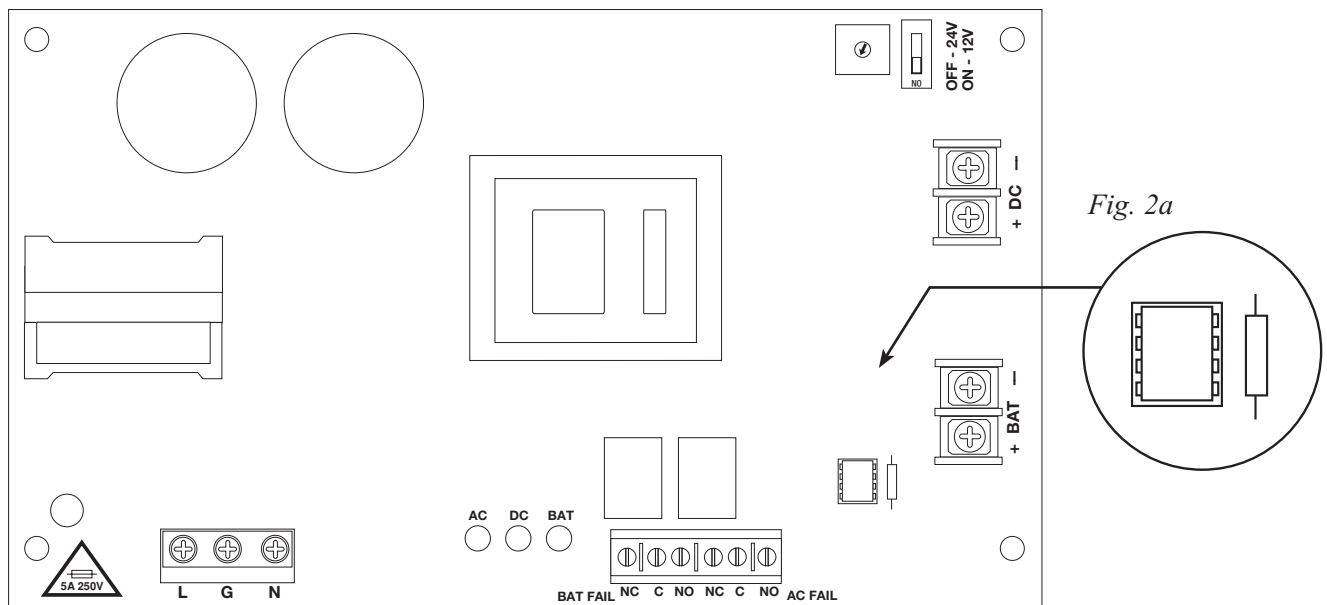
LED Diagnostics:

Red (DC)	Green (AC)	Red (BAT)	Power Supply Status
ON	ON	ON	Normal operating condition.
ON	OFF	ON	Loss of AC. Stand-by battery supplying power.
OFF	ON	OFF	No DC output, Battery Trouble
OFF	OFF	OFF	Loss of AC. Discharged or no stand-by battery. No DC output.
ON	ON	OFF	Battery missing / Low

Terminal Identification:

L, G, N	Connect 220VAC (working range 198VAC - 256VAC), 50/60Hz to these terminals: L to hot, N to neutral, G to ground.
- DC +	12VDC / 24VDC @ 6A continuous non power-limited output.
AC Fail NC, C, NO	Indicates loss of AC power, e.g. connect to audible device or alarm panel. Relay normally energized when AC power is present. Contact rating 1A @ 28VDC. AC or brownout fail is reported within 1 minute of event. To delay reporting for up to 6 hrs., cut "AC delay" jumper and reset power to unit.
Bat Fail NC, C, NO	Indicates low battery condition, e.g. connect to alarm panel. Relay normally energized when DC power is present. Contact rating 1A @ 28VDC. A removed battery is reported within 5 minutes. Battery reconnection is reported within 1 minute. Low battery threshold: 12VDC output threshold set @ approximately 10.5VDC, 24VDC output threshold set @ approximately 21VDC.
+ BAT -	Stand-by battery connections. Maximum charge current 0.7A.

Fig. 2



Altronix is not responsible for any typographical errors.

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