

AL6003X220

Triple Output Power Supply/Charger

Installation Guide



Rev. 092807

More than just power.™

Installing Company: _____ Service Rep. Name: _____

Address: _____ Phone #: _____

Overview:

Altronix AL6003X220 triple output access control power supply/charger is specifically designed for use with access control systems and accessories. The AL6003X220 converts a 220VAC 50/60Hz input into three individually PTC protected 5VDC, 12VDC and 24VDC regulated outputs (see specifications).

Specifications:

Input:

- Input 220VAC (working range 198VAC - 256VAC), 50/60Hz, 1.25A.

Output:

- 1.75A continuous supply current @ 5VDC.
- 1.75A continuous supply current @ 12VDC.
- 3A continuous supply current @ 24VDC.
- Filtered and electronically regulated outputs, 100mV peak output voltage ripple.

Supervision:

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

Battery Backup:

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

Additional Features:

- Thermal and short circuit protection with auto reset.
- Power supply is complete with enclosure, cam lock, and battery leads.

Enclosure Dimensions

(H x W x D approximate):

15.5" x 12" x 4.5"

(393.7mm x 304.8mm x 114.3mm)

Stand-by Specifications (current is specified on AL3XB input):

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
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:

Wiring methods shall be in accordance with the National Electrical Code/NFPA 70/NFPA 72/ANSI, and with all local codes and authorities having jurisdiction. Product is intended for indoor use only.

1. Mount unit in the desired location. Mark and predrill holes in the wall to line up with the top two keyholes in the enclosure. Install two upper fasteners and screws in the wall with the screw heads protruding. Place the enclosure's upper keyholes over the two upper screws, level and secure. Mark the position of the lower two holes. Remove the enclosure. Drill the lower holes and install the three fasteners. Place the enclosure's upper keyholes over the two upper screws. Install the two lower screws and make sure to tighten all screws (*Enclosure Dimensions, pg. 4*). Secure enclosure to earth ground.

It is recommended to first review the following tables for screw terminals, switch selection and LED status indications. This will greatly facilitate installation hook-up.

Carefully review:

Stand-by Specifications (pg. 2)

LED Diagnostics (pg. 3)

Terminal Identification Table (pg. 4)

2. Connect AC circuit (220VAC, 50/60Hz) as follows: Green branch wire connects to earth (safety) ground lug. Line and Neutral to the connector on power supply board marked [L, N] respectively (*Fig. 1, pg. 3*). Use 14 AWG or larger for all power connections (Battery, DC output, AC input). 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 (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.

3. Measure output voltage before connecting devices. This helps avoiding potential damage.
4. Connect devices to be powered at 5VDC to the terminals marked [+ 5VDC -].
5. Connect devices to be powered at 12VDC to the terminals marked [+ 12VDC -].
6. Connect devices to be powered at 24VDC to the terminals marked [+ 24VDC -].
7. Connect two (2) 12V stand-by batteries.

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. Batteries must be lead acid or gel type if used. Two (2) 12V stand-by batteries connected in series to terminals marked [+ BAT -] (Fig. 1, pg. 3).

8. It is required to connect supervisory trouble reporting devices to outputs marked [AC FAIL, LOW BAT] (Fig. 1, pg. 3).

Use 22 AWG to 18 AWG for AC Fail and Low Battery reporting. AC Failure will report in 5 minutes.

9. Please ensure that the cover is secured with the provided key lock.

Wiring:

Use 14 AWG or larger for all power connections.

Note: Take care to keep power-limited circuits separate from non power-limited wiring (220VAC, Battery).

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 Voltage 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 0.7A.

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

LED Diagnostics:

Power Supply Board

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:

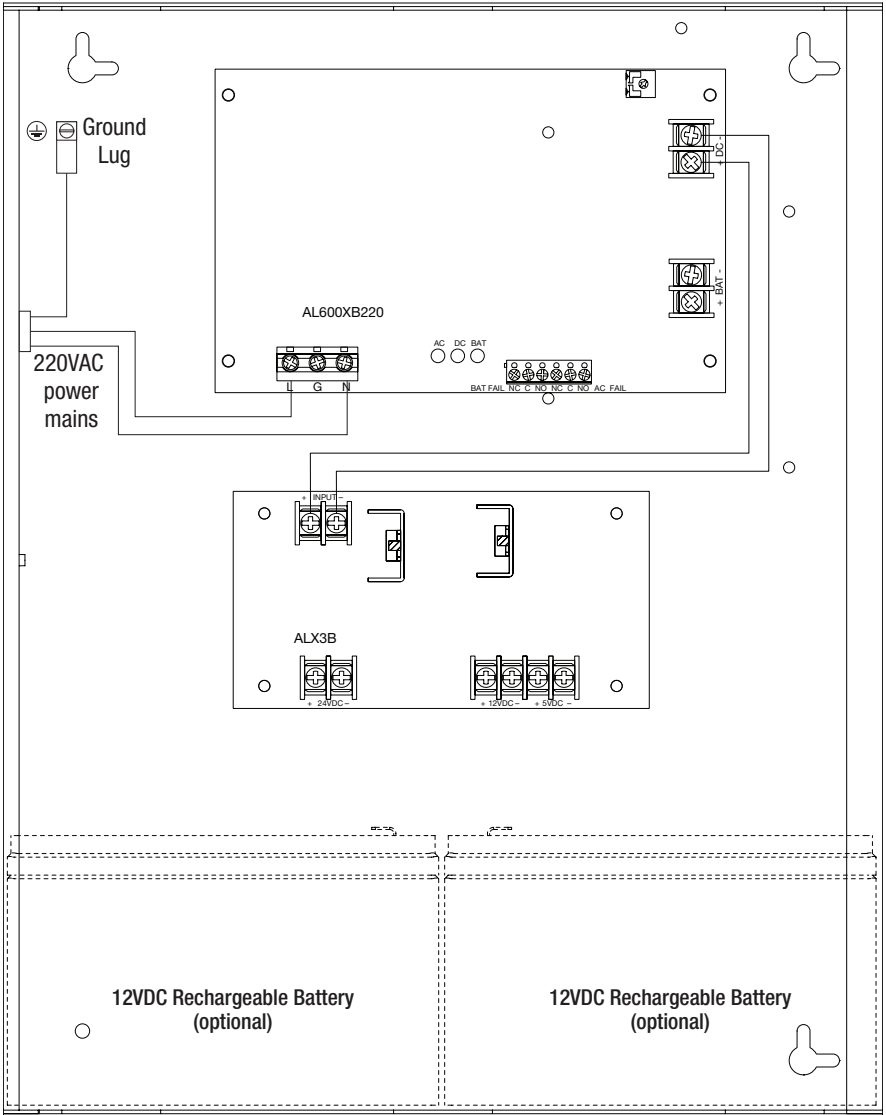
AL600XB220 - Power Supply

Terminal Legend	Function/Description
L, N	220VAC, 50/60Hz
+DC –	24VDC @ 6A total continuous output (supplies power to ALX3B).
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.
Bat Fail NC, C, NO	Indicates low battery condition, e.g. no battery presence. Relay normally energized when DC power is present. Contact rating 1A @ 28VDC. Low battery threshold: 24VDC. Output threshold is set approximately @ 21VDC
+BAT –	Stand-by battery connections. Maximum charge current 0.7A.

ALX3B - Power Output Module

Terminal Legend	Function/Description
+ INPUT –	24VDC from power supply (AL600XB220).
+ 24VDC –	24VDC @ 3A continuous power-limited output
+ 12VDC –	12VDC @ 1.75A continuous power-limited output.
+ 5VDC –	5VDC @ 1.75A continuous power-limited output.

Fig. 1 - AL6003X220

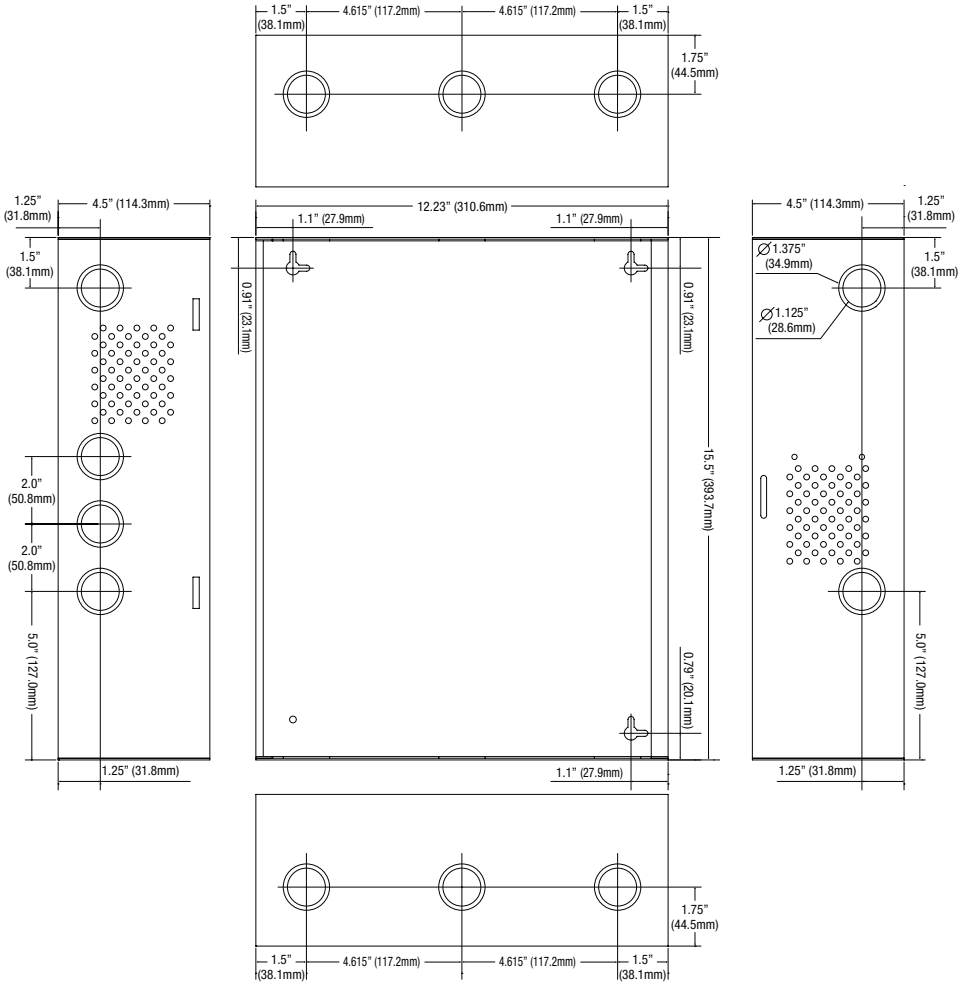


Notes:

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Enclosure Dimensions (H x W x D approximate):

15.5" x 12" x 4.5" (393.7mm x 304.8mm x 114.3mm)



Altronix is not responsible for any typographical errors.

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