



# ***AL1012ULX Series Power Supply/Charger***

## ***Installation Guide***

### ***Models Include:***








- ***AL1012ULX***
  - ***Single Output***
- ***AL1012ULXPD4***
  - ***Four (4) Fused Outputs***
- ***AL1012ULXPD8***
  - ***Eight (8) Fused Outputs***
- ***AL1012ULXPD16***
  - ***Sixteen (16) Fused Outputs***
- ***AL1012ULXPD4CB***
  - ***Four (4) PTC Outputs***
- ***AL1012ULXPD8CB***
  - ***Eight (8) PTC Outputs***
- ***AL1012ULXPD16CB***
  - ***Sixteen (16) PTC Outputs***



### Overview:

The AL1012ULX is a power supply that converts a 115VAC / 60Hz input, to a 12VDC output (see specifications). The AL1012ULX is a base unit for a series of UL Listed multi-output power supply/chargers, including: AL1012ULXPD4, AL1012ULXPD4CB, AL1012ULXPD8, AL1012ULXPD8CB, AL1012ULXPD16, AL1012ULXPD16CB (Refer to AL1012ULX Series Power Supply Configuration Reference Chart).

### AL1012ULX Series Power Supply Configuration Reference Chart:

Altronix Model Number	Accessory Power Distribution Module(s)	Number of Outputs	Class 2 Rated Power Limited Outputs	Fused Outputs	PTC Outputs	Output Rating (amp) Per Output	Agency Listings	UL Listings and File Numbers
AL1012ULX	-	1	-	-	-	10		UL 294 (File # BP6714)  UL Listed for Access Control Systems.  "Signal Equipment" Evaluated to CSA Standard C22.2 No.205-M1983
AL1012ULXPD4	PD4UL	4	-	x	-	3.5		
AL1012ULXPD4CB	PD4ULCB	4	x	-	x	2.5		
AL1012ULXPD8	PD8UL	8	-	x	-	3.5		
AL1012ULXPD8CB	PD8ULCB	8	x	-	x	2.5		
AL1012ULXPD16	PD8UL	16	-	x	-	3.5		
AL1012ULXPD16CB	PD8ULCB	16	x	-	x	2.5		

### Specifications:

#### Input:

- Input 115VAC / 60Hz, 1.9 amp.
- AC input and DC output LED indicators.

#### Output:

- 12VDC output.
- 10 amp total supply current at 12VDC.
- Filtered and electronically regulated outputs.
- Short circuit and thermal overload protection.

#### Battery Backup:

- Maximum charge current .7 amp.
- Built-in charger for sealed lead acid or gel type batteries.

#### Battery Backup (cont'd):

- Automatic switch over to stand-by battery when AC fails.
- Zero voltage drop when switched over to battery backup.

#### Supervision:

- AC fail supervision (form "C" contacts).
- Battery presence and low battery supervision (form "C" contacts).

#### Added Features:

- Power supply, enclosure, cam lock and battery leads.

## **Installation Instructions:**

The unit 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 unit in desired location.
2. Connect AC power (115VAC / 60 Hz to terminals marked [L, G, N] (*Fig. 1, pg. 5*). 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 (115VAC / 60Hz Input, Battery Wires). Minimum .25" spacing must be provided.
3. Measure output voltage before connecting device. This helps avoid potential damage.
4. Connect devices to be powered:
  - a. For Power Supply Board connect to terminals marked [+ DC -] (*Fig. 1, pg. 5*).
  - b. For Power Distribution Module(s) connect devices to be powered to terminal pairs 1 to 4 marked [1P & 1N thru 4P & 4N] (*Fig. 2, pg. 6*) or 1 to 8 marked [1P & 1N thru 8P & 8N] (*Fig. 3, pg. 6*) carefully observing correct polarity.When servicing the unit, AC mains should be removed.
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.
6. Connect appropriate signaling notification devices to terminals marked [AC FAIL & BAT FAIL] (*Fig. 1, pg. 5*) supervisory relay outputs.

**Note:** When used in fire alarm, burglar alarm or access control applications, "AC Fail" relay must be used to provide a visual indication of AC power on.

### **Wiring:**

USE 14 AWG or larger for all power connections.

**Note:** Take care to keep power limited circuits separate from non-power limited wiring (115VAC, 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.

**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 discharges is .7 amp.

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

**LED Diagnostics:  
AL600ULXB - 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.

**PD4/PD4CB/PD8/PD8CB - Power Distribution Module**

Green	Power Distribution Module Status
ON	Normal operating condition.

**Terminal Identification:  
AL600ULXB - Power Supply Board**

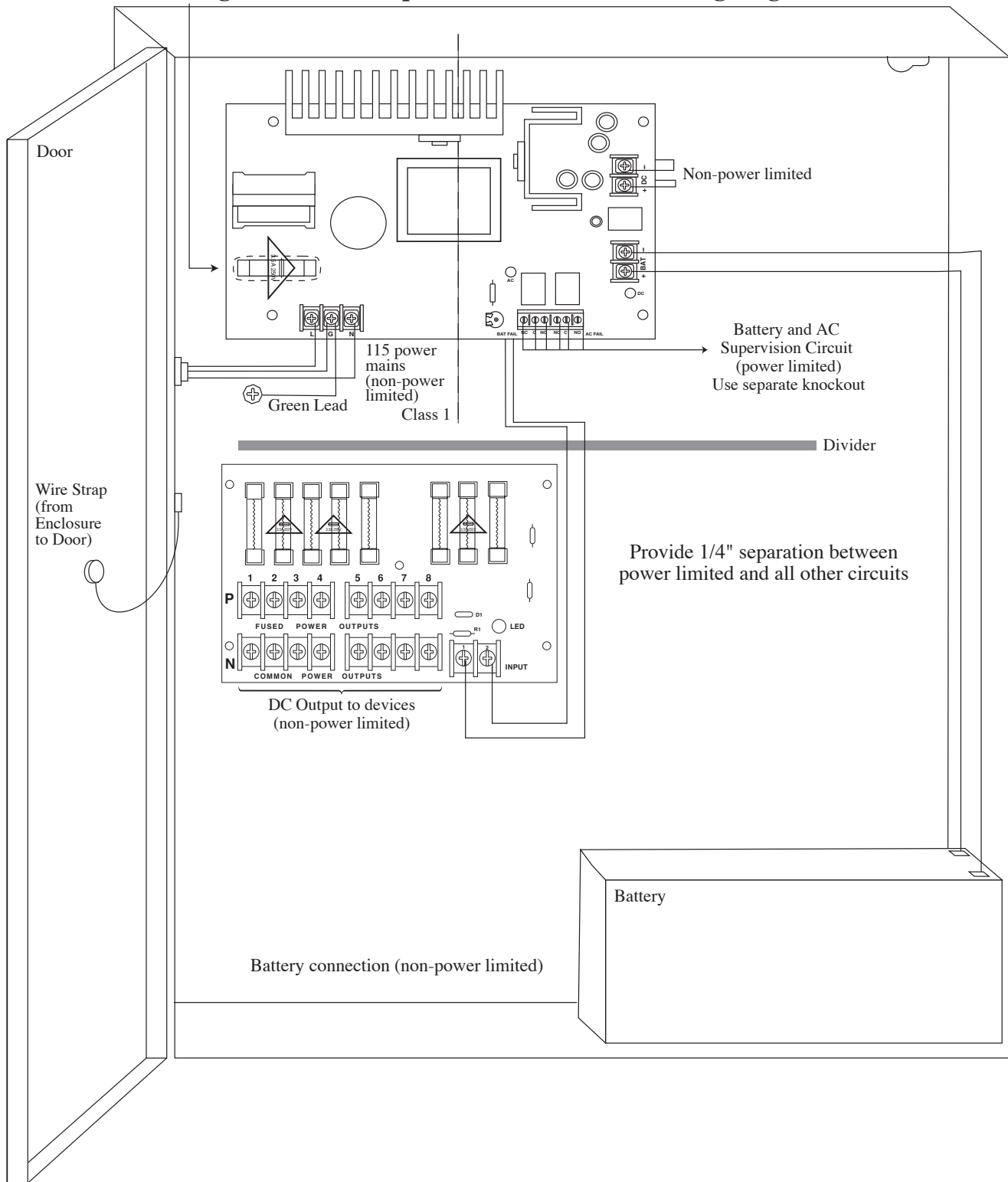
Terminal Legend	Function/Description
L, G, N	Connect 115VAC to these terminals: L to Hot, N to Neutral, G to ground.
- DC +	12VDC @ 10 amp continuous non-power limited output.
AC FAIL N.C., C, N.O.	Used to notify loss of AC power, e.g. connect to annunciator/alarm panel. Relay normally energized when AC power is present. Contact rating 1 amp @ 30VDC. AC Fail condition will report approximately one (1) to one minute after loss of AC. To delay report for 6 hours cut jumper J1 on the Power Supply Board (AC trouble output delay option). If this mode is selected the Power Supply Board must be reset by removing all power to it for 30 seconds.
BAT FAIL N.O., C, N.C.	Used to indicate low battery condition, e.g. connect to alarm panel. Relay normally energized when DC power is present. Contact rating 1 amp @ 30VDC. Low battery conditions will report approximately 10.5VDC Battery presence detection will report approximately 1 minute after battery remains undetected (missing or removed).
- BAT +	Stand-by battery connections. Maximum charge rate .7 amp.

**PD4/PD4CB/PD8/PD8CB - Power Distribution Module**

Terminal Legend		Function/ Description
PD4/PD4CB	PD8/PD8CB	
1P to 4P	1P to 8P	Positive DC power outputs.
1N to 4N	1N to 8N	Negative DC power outputs.

Fig. 1

**CAUTION: De-energize unit prior to servicing. For continued protection against risk of electric shock and fire hazard replace fuse with the same type and rating 3.5A, 250V. Replace fuse cover before energizing.**



## Power Distribution Module(s):

Fig. 2

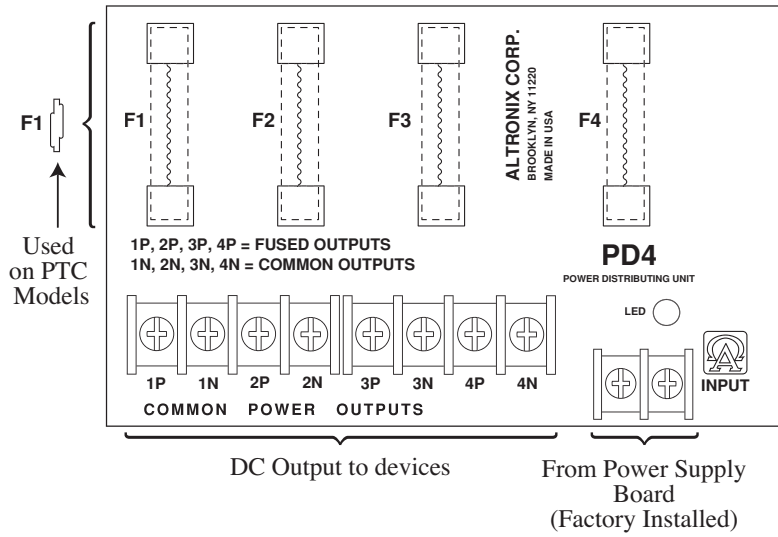
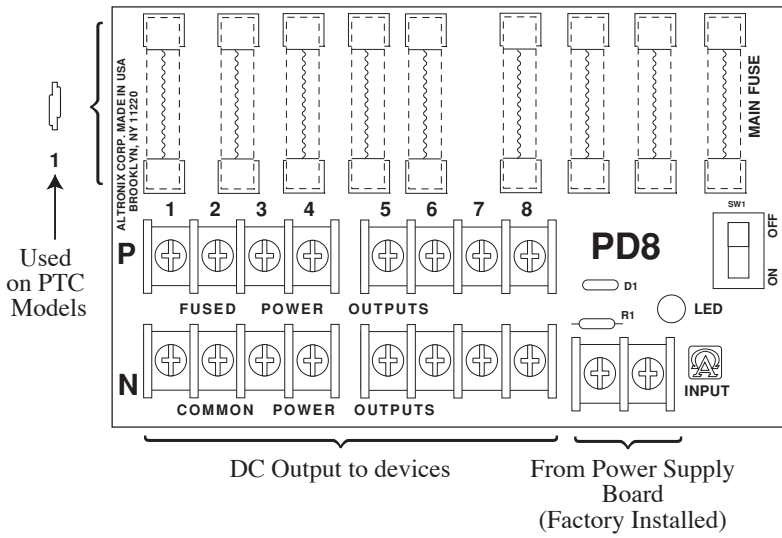
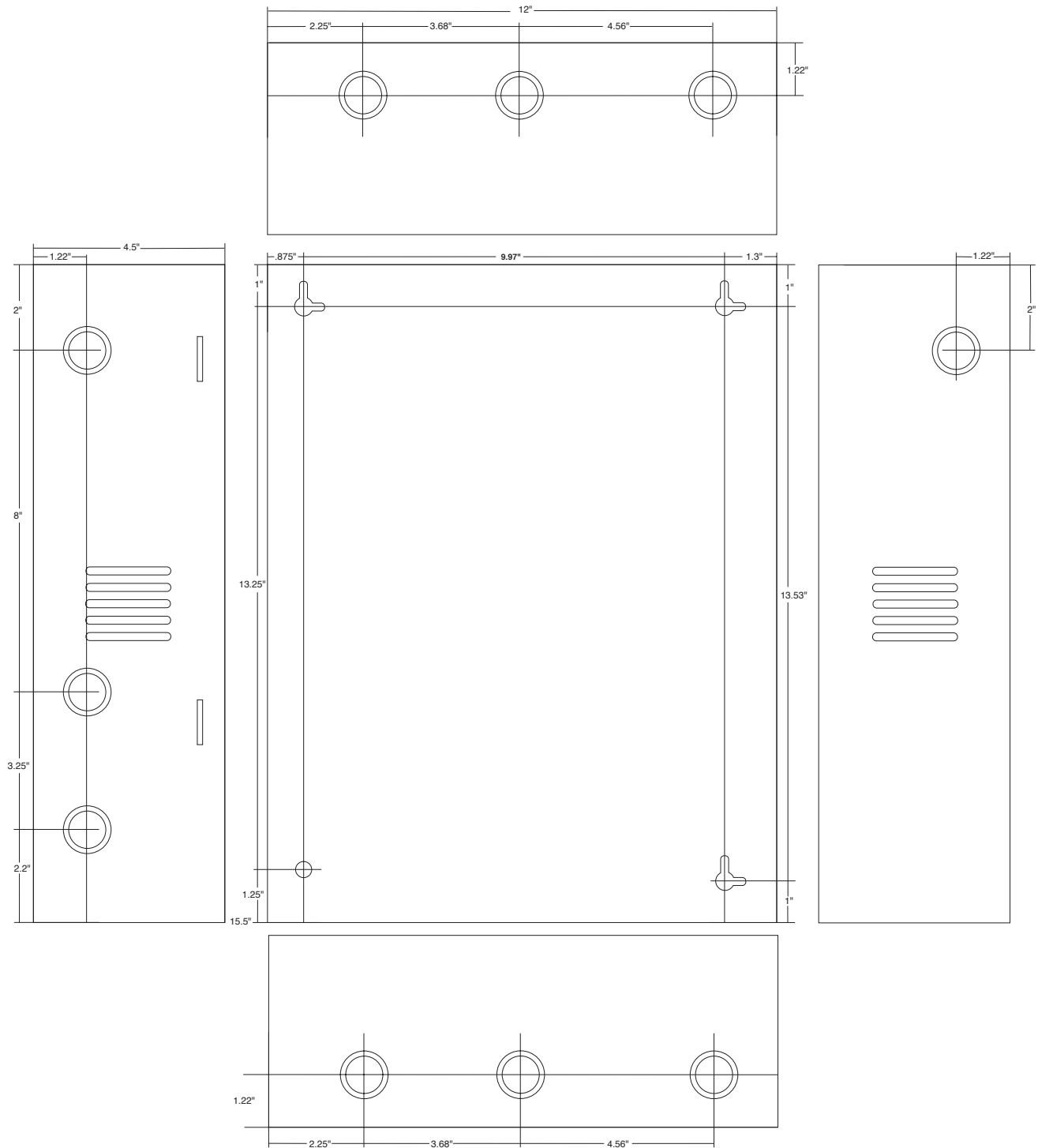


Fig. 3



**Notes:**

**Enclosure Dimensions:**  
 15.5"H x 12"W x 4.5"D



Altronix is not responsible for any typographical errors.

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