



# ***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* below).

## AL1012ULX Series Power Supply Configuration Reference Chart:

Altronix Model Number	Accessory Power Distribution Module(s)	Number of Output(s)	Class 2 Rated Power-Limited Output(s)	Fused Outputs	PTC Outputs	Output Rating (amp) per Output	Power Supply Output Fuse Rating	Agency Listings	UL Listings and File Numbers
AL1012ULX	—	1	—	—	—	10	15A/32V		UL 294 (File # BP6714)
AL1012ULXPD4	PD4UL	4	—	✓	—	3.5	15A/32V		UL Listed for Access Control Systems.
AL1012ULXPD4CB	PD4ULCB	4	✓	—	✓	2.5	15A/32V		
AL1012ULXPD8	PD8UL	8	—	✓	—	3.5	15A/32V		
AL1012ULXPD8CB	PD8ULCB	8	✓	—	✓	2.5	15A/32V		
AL1012ULXPD16	Two (2) PD8UL	16	—	✓	—	3.5	15A/32V		
AL1012ULXPD16CB	Two (2) PD8ULCB	16	✓	—	✓	2.5	15A/32V		“Signal Equipment” Evaluated to CSA Standard C22.2 No.205-M1983

Stand-by: 15 minutes of Stand-by at 10 amps.

## Specifications:

### Input:

- Input 115VAC / 60Hz, 2.6 amp.
- Input fuse rated @ 5A/250V.

### 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 0.7 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).

### LED Indicators:

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

## 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 two 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. 8*). Secure enclosure to earth ground.
2. Connect AC power (115VAC / 60 Hz) to the terminals marked [L, 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).

**Note: Keep power-limited wiring separate from non power-limited wiring (115VAC / 60Hz Input, Battery Wires). Minimum 0.25" spacing must be provided.**

3. Measure output voltage before connecting device. This helps avoiding potential damage.
4. Connect devices to be powered:
  - a. For Power Supply Board: connect to the terminals marked [+ DC -] (*Fig. 1, pg. 5*).
  - b. For Power Distribution Module(s): connect devices to be powered to the terminal pairs 1 to 4 marked [1P & 1N through 4P & 4N] (*Fig. 2, pg. 6*) or 1 to 8 marked [1P & 1N through 8P & 8N] (*Fig. 3, pg. 6*), carefully observing correct polarity.

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 the 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 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 discharges is 0.7 amp.

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

### **LED Diagnostics:**

#### **AL1012ULXB - 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.
OFF	No Power Output.

### **Terminal Identification:**

#### **AL1012ULXB - Power Supply Board**

Terminal Legend	Function/Description
L, N	Connect 115VAC to these terminals: L to Hot, N to Neutral. Do not use the [G] terminal.
– DC +	12VDC @ 10 amp continuous non power-limited output.
AC FAIL NC, C, NO	Indicates 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 NO, C, NC	Indicates 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 0.7 amp.

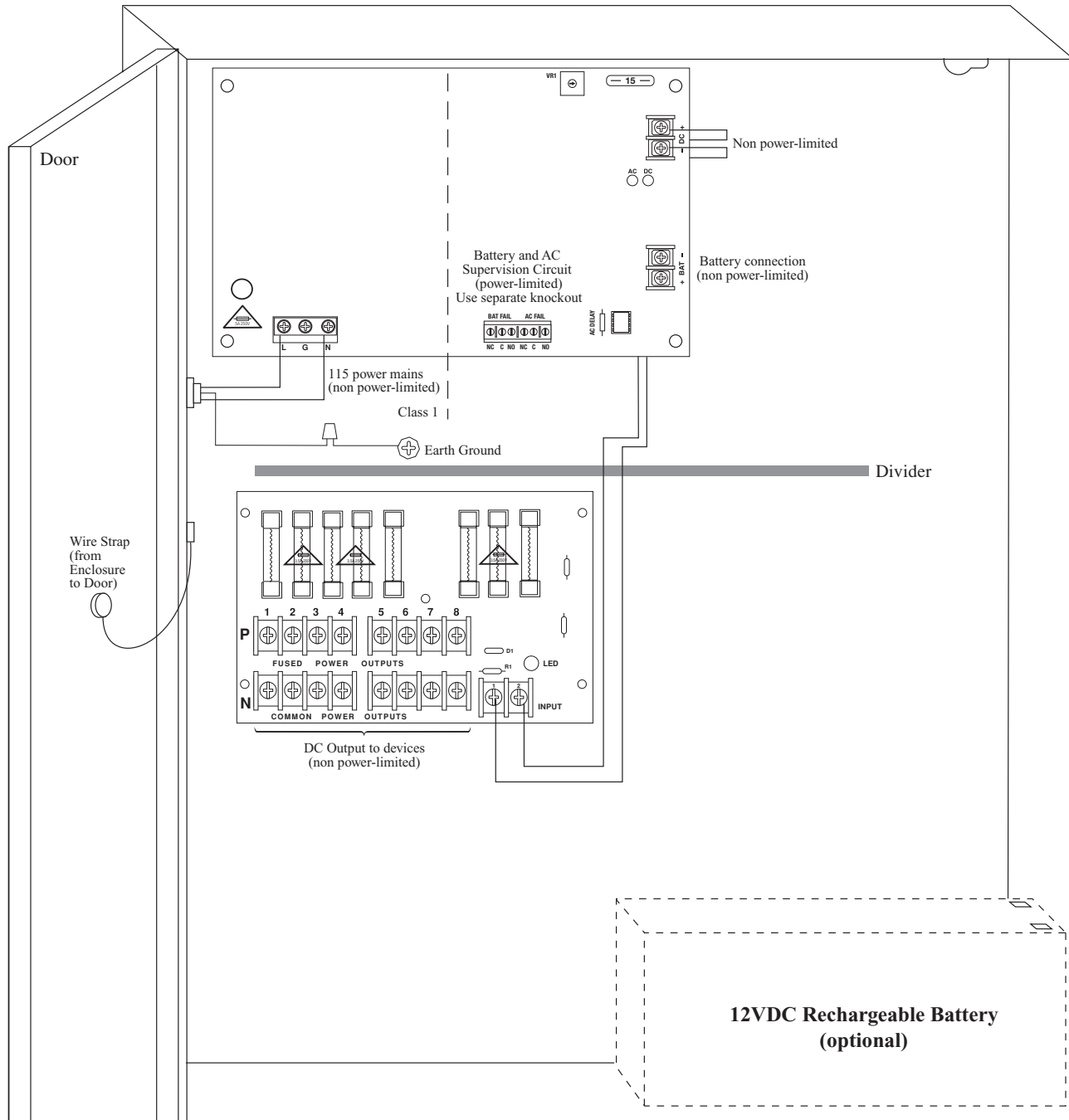
### ***Terminal Identification:***

#### ***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.**



**CAUTION: Optional rechargeable stand-by batteries must match the power supply output voltage setting.**

**Keep power-limited wiring separate from non power-limited. Use minimum 0.25" spacing.**

## Power Distribution Module(s):

Fig. 2

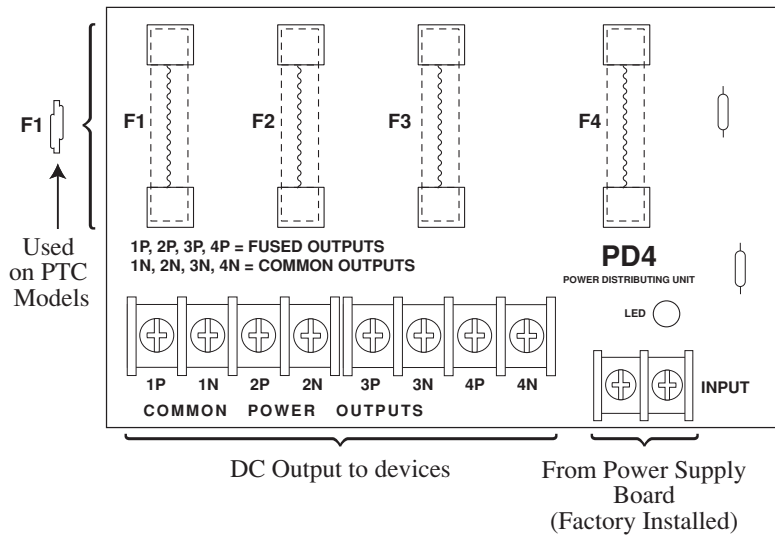
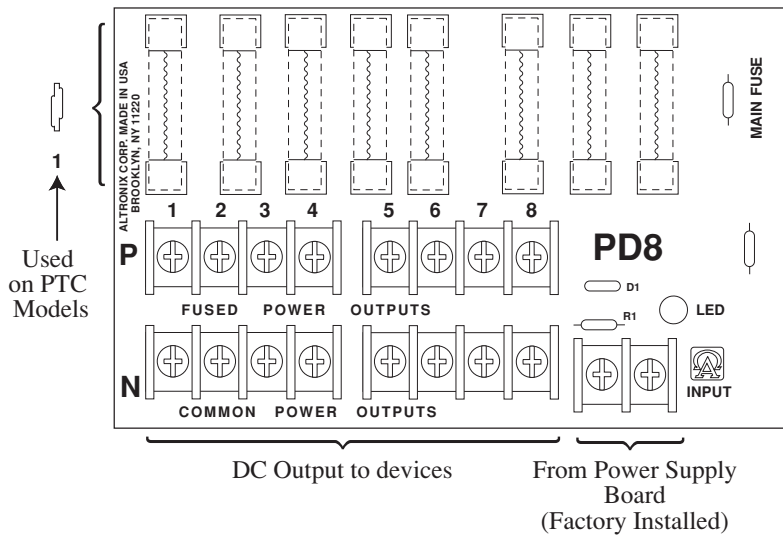


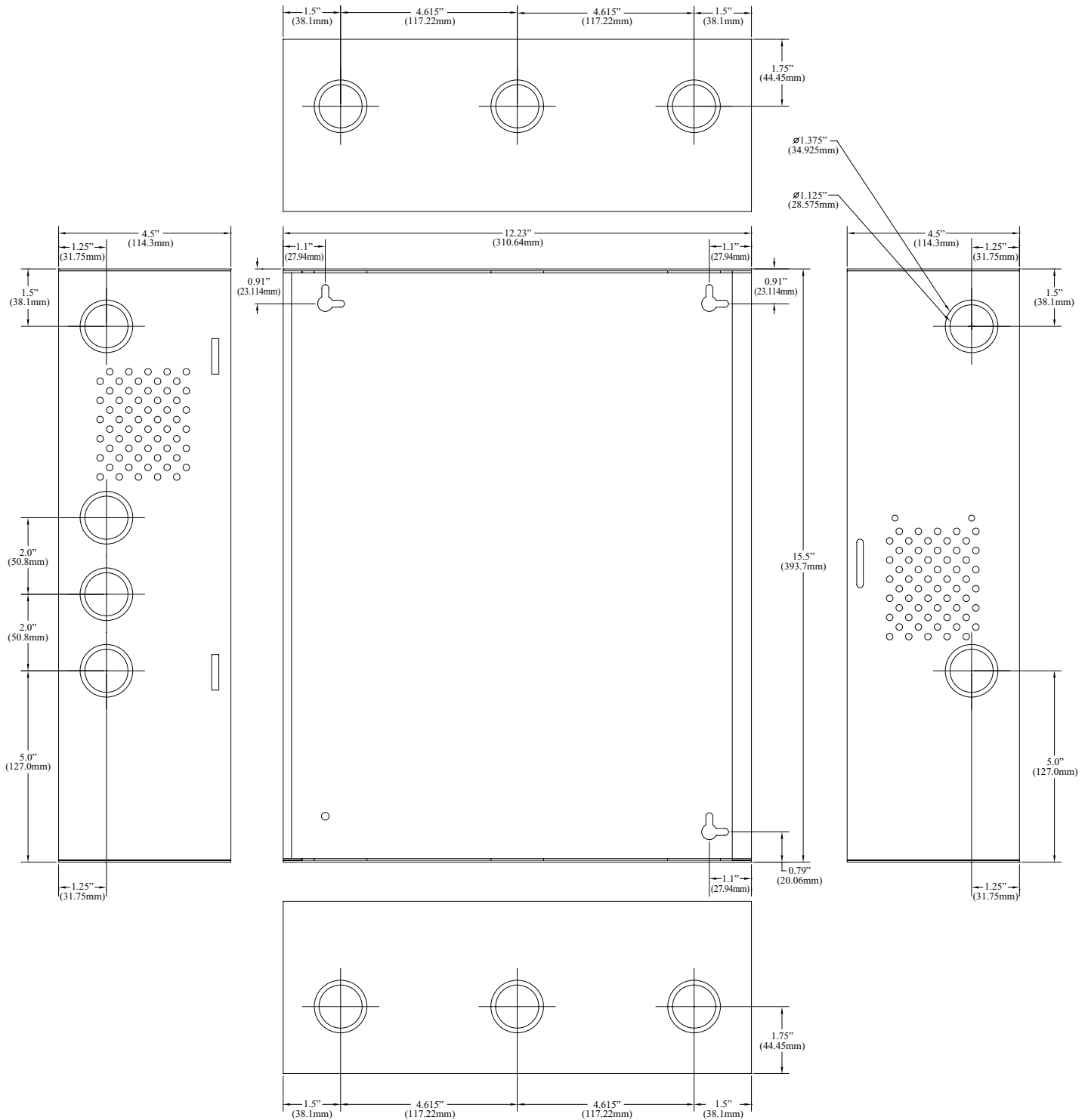
Fig. 3



**Notes:**

## Enclosure Dimensions (BC400):

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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 IAL1012ULX series

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