



# OLS120D2X Dual Output Offline Power Supply/Charger

## Installation Guide

### Overview:

Altronix OLS120D2X dual output power supply/charger converts a 115VAC, 50/60Hz or 230VAC, 50/60Hz input to a 12VDC/24VDC output and a 12VDC fixed output (see specifications). This unit has a wide range of applications for access control and security system accessories that require additional power.

### Features:

#### Input:

- Universal input 115VAC, 50/60Hz, 0.95A or 230VAC, 50/60Hz, 0.6A.
- Input fuse rated @ 5A/250V.

#### Output:

- DC1: 12VDC or 24VDC @ 3A.
- DC2: 12VDC @ 1A.
- **Note:** If DC2 is not used, DC1 rating is 12VDC or 24VDC rated @ 4A max.
- Filtered and electronically regulated output.
- Short circuit and thermal overload protection.

#### Battery Backup:

- Built-in charger for sealed lead acid or gel type batteries.
- Maximum charge current 0.7A.

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

- Automatic switch over to stand-by battery when AC fails.

#### Supervision:

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

#### Visual Indicators:

- AC input and DC output LED indicators.

#### Features:

- Power ON/OFF switch (interrupts mains).
- Includes battery leads.

#### Enclosure Dimensions (H x W x D approx.):

- 13.5" x 13" x 3.25" (342.9mm x 330.2mm x 82.6mm)
- Accommodates two (2) 12VDC/7AH batteries.

## Installation Instructions:

Wiring methods should 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 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.
2. Slide [Power ON/OFF] switch to the OFF position (*Fig. 1, pg. 3*).
3. Set the DC1 output voltage via DIP switch: OFF for 24VDC operation or ON for 12VDC operation (*Fig. 1, pg. 3*). DC2 output voltage is fixed at 12VDC operation.

**Keep power-limited wiring separate from non power-limited wiring (115VAC/230VAC, 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. Connect AC circuit (115VAC or 230VAC, 50Hz/60Hz) as follows: Green branch wire connects to earth (safety) ground  $\oplus$ . Line and Neutral to the connector on power supply board marked [L, N] respectively. Use 18 AWG or larger for all power connections (Battery, DC output). Use 22 AWG to 18 AWG for power-limited circuits (AC Fail/Low Battery reporting).
5. Slide [Power ON/OFF] switch to the ON position (*Fig. 1, pg. 3*).
6. Measure output voltage across both output terminals marked [- DC1 +], [- DC2 +] before connecting devices. This helps avoiding potential damage.
7. Slide [Power ON/OFF] switch to the OFF position (*Fig. 1, pg. 3*).

8. Connect 12VDC or 24VDC (depending on DIP switch setting) device to be powered to the terminals marked [- DC1 +]. Connect 12VDC device to be powered to the terminals marked [- DC2 +] (Fig. 1, pg. 3).
9. When use of stand-by batteries is desired, they must be lead acid or gel type.  
Connect battery/batteries to the terminals marked [- BAT + ] (Fig. 1, pg. 2).  
**12VDC operation only:** Use one (1) 12VDC battery for 12VDC backup.  
**24VDC and 12VDC simultaneous operation:** Use two (2) 12VDC batteries connected in series for 24VDC backup.
10. When batteries are not used, a loss of AC will result in the loss of output voltage.
11. Connect appropriate signaling notification devices to AC Fail & Low battery supervisory relay outputs marked [NC, C, NO].
12. Slide [Power ON/OFF] switch to the ON position (Fig. 1, pg. 3).

### 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 (12VDC @ 13.7 or 24VDC @ 27.4) 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 0.7A.

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

### LED Diagnostics:

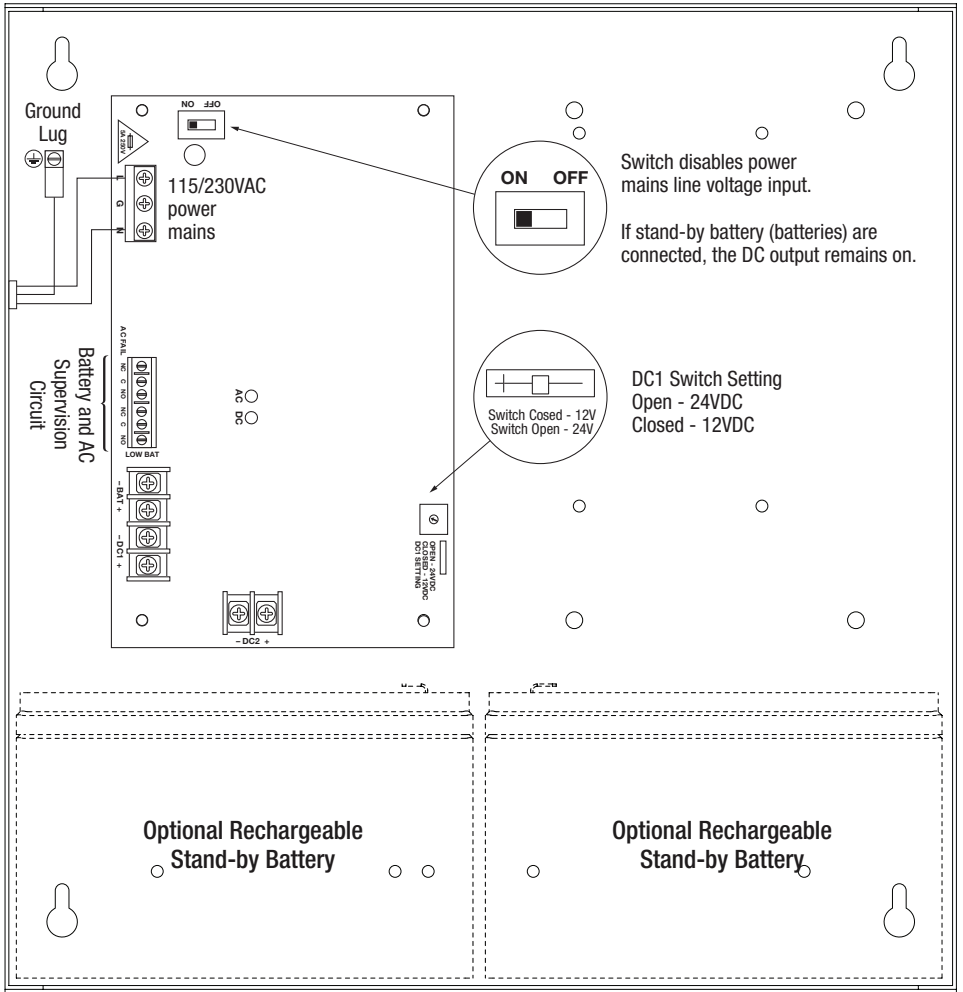
Red (DC1)	Green (AC)	Power Supply Status
ON	ON	Normal operating condition.
ON	OFF	Loss of AC. Stand-by battery is supplying power.
OFF	ON	No DC output. Short circuit or thermal overload condition.
OFF	OFF	Loss of AC. Discharged or no stand-by battery. No DC output.

### Terminal Identification:

Terminal Legend	Function/Description
L, G, N	Connect 115VAC/230VAC to these terminals: L to Hot, N to Neutral.
- DC1 +	DC1 - 12VDC or 24VDC @ 3A and DC2 - 12VDC @ 1A <b>Note:</b> If DC2 is not used, DC1 rating is 12VDC or 24VDC rated @ 4A max.
- DC2 +	12VDC @ 1A.
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 @ 115VAC / 28VDC
Low Battery NC, C, NO	Indicates low battery condition, e.g. connect to alarm panel. Relay normally energized when DC power is present. Contact rating 1A @ 115VAC / 28VDC. Low battery threshold: 2VDC output threshold set @ approximately 10.5VDC, 24VDC output threshold set @ approximately 21VDC.
- BAT +	Stand-by battery connections. Maximum charge rate 0.7A.

Fig. 1 - OLS120D2X

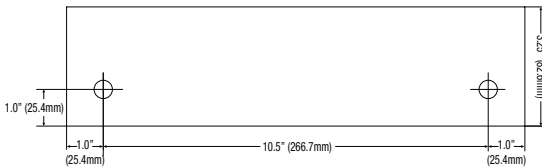
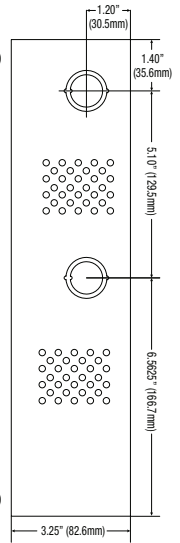
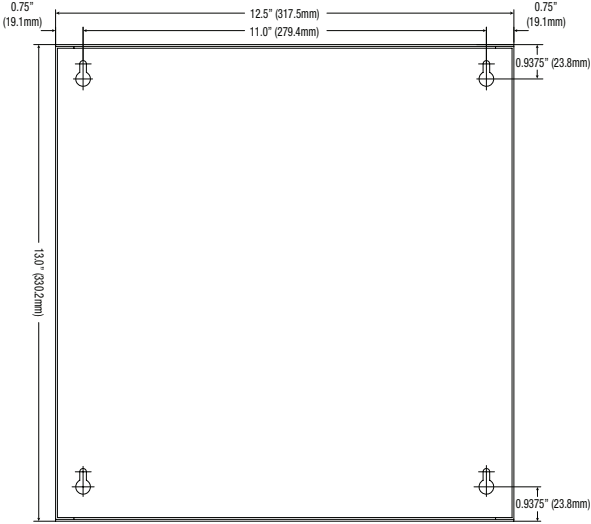
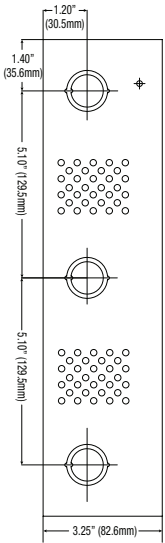
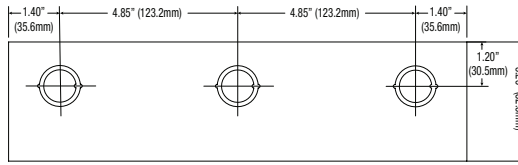
**CAUTION: De-energize unit prior to servicing.**



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

# Enclosure Dimensions (BC300):

13.5" x 13" x 3.25" (342.9mm x 330.2mm x 82.6mm)



Altronix is not responsible for any typographical errors.

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