



AL400UL - UL Listed, Multi-Agency Approved Power Supply/Charger

Rev. 022892

Overview:

The AL400UL power supply converts a 115VAC / 60Hz input, to a 12VDC or 24VDC power limited output, (see specifications). The AL400UL is UL Listed for fire alarm, burglar alarm, and access control applications.

Specifications:

Agency Listings:

- UL Listed - Fire, Burglar and Access Control Power Supply (UL1481, UL603, UL294).
- ULC Listed.
- MEA - NYC Department of Buildings Approved.
- CSFM - California State Fire Marshal Approved.
- NFPA 72 compliant



MEA
Approved

Input:

- Input 115VAC / 60Hz, 1.45 amp.

Output:

- Class 2 rated.
- 12VDC or 24VDC power limited selectable output.
- Maximum charge current 1.2 amp.
- 4 amp continuous supply current at 12VDC.
- 3 amp continuous supply current at 24VDC.
- Filtered and electronically regulated outputs.

Battery Backup:

- Built-in charger for sealed lead acid or gel type batteries.
- 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.

Additional Features:

- Short circuit and thermal overload protection.
- Unit is complete with power supply, enclosure, cam lock.
- Includes battery leads.

Enclosure Dimensions:

12.25"H x 7.75"W x 4.5"D

Power Supply Voltage Output Selections:

Output	Switch Position
12VDC	SW 1, 2 On, SW 3, 4 Off
24VDC	SW 1, 2 Off, SW 3, 4 On

Stand-by Specifications:

Output	4 hr. of Stand-by & 5 Minutes of Alarm	24 hr. of Stand-by & 5 Minutes of Alarm	60 hr. of Stand-by & 5 Minutes of Alarm
12VDC / 40 AH Battery	Stand-by = 4.0 amp Alarm = 4.0 amp	Stand-by = 1.0 amp Alarm = 4.0 amp	Stand-by = 300mA Alarm = 4.0 amp
24VDC / 12 AH Battery		Stand-by = 200mA Alarm = 3.0 amp	
24VDC / 40 AH Battery	Stand-by = 3.0 amp Alarm = 3.0 amp	Stand-by = 1.0 amp Alarm = 3.0 amp	Stand-by = 300mA Alarm = 3.0 amp

Installation Procedure:

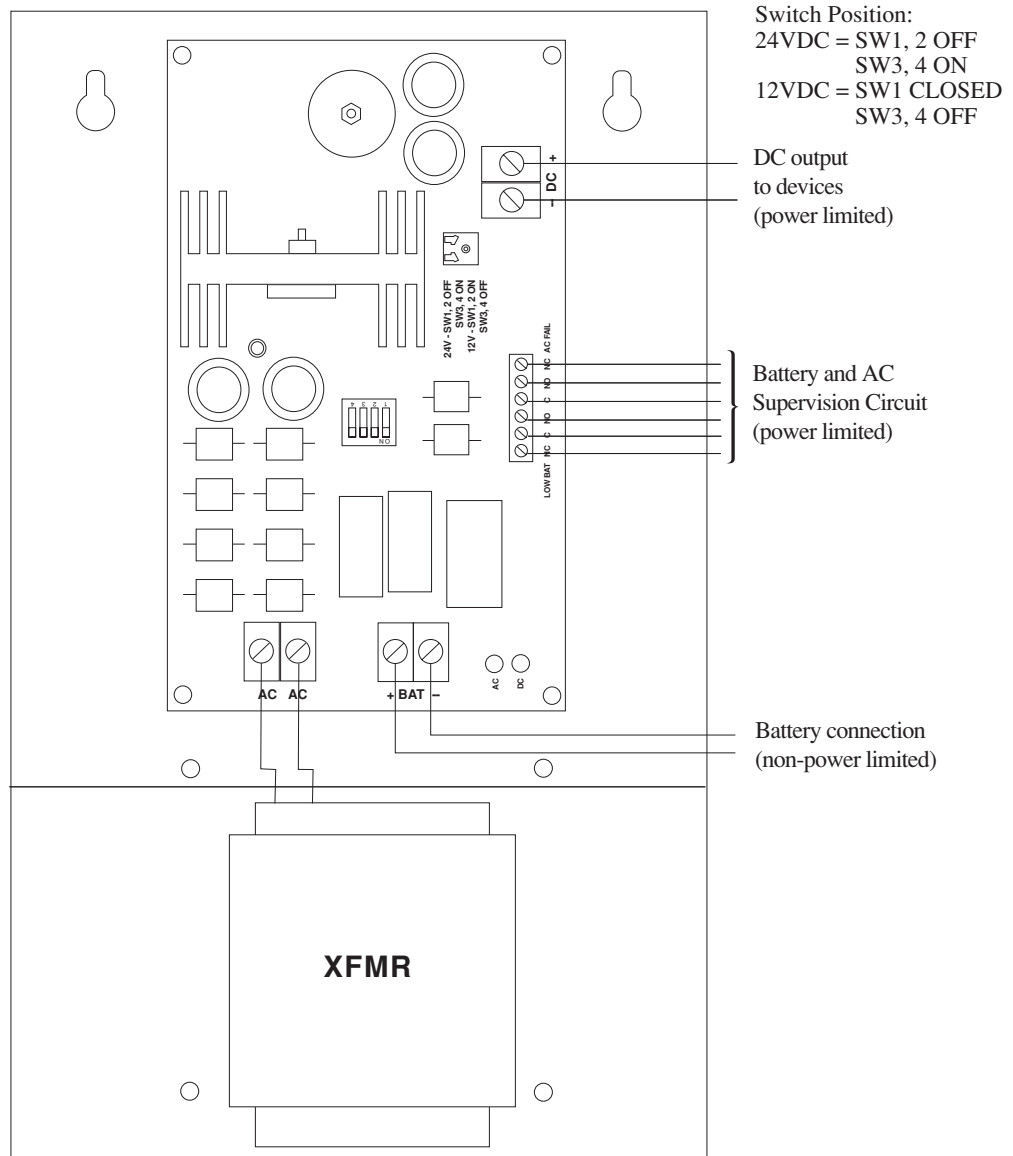
The AL400UL should be installed in accordance with article 760 of The National Electrical Code or NFPA 72 as well as all applicable Local Codes.

1. Mount the AL400UL in desired location.
2. Set the AL400UL to the desired DC output voltage by setting dip switches (*Fig. 1*) to the appropriate position (*see Power Supply Voltage Output Specifications Chart*).
3. Connect AC power (115VAC /60Hz) to black and white flying leads of the transformer(*Fig. 1*).
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).

Keep power limited wiring separate from non-power limited wiring (115VAC / 60Hz Input, Battery Wires). Minimum .25" spacing must be provided.

4. Connect devices to be powered to terminals marked [- DC +] (*Fig. 1*).
Note: Measure output voltage before connecting devices. This helps avoid potential damage.
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. Connect battery to terminals marked [+BAT -] (*Fig. 1*). Use two (2) 12VDC batteries connected in series for 24VDC operation (battery leads included).
6. Connect appropriate signaling notification devices to AC FAIL & BAT FAIL (*Fig. 1*) supervisory relay outputs.

Fig. 1



Wiring:

Use 18 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 (see *Power Supply Voltage Output Specifications Chart*).

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 1.2 amp.

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

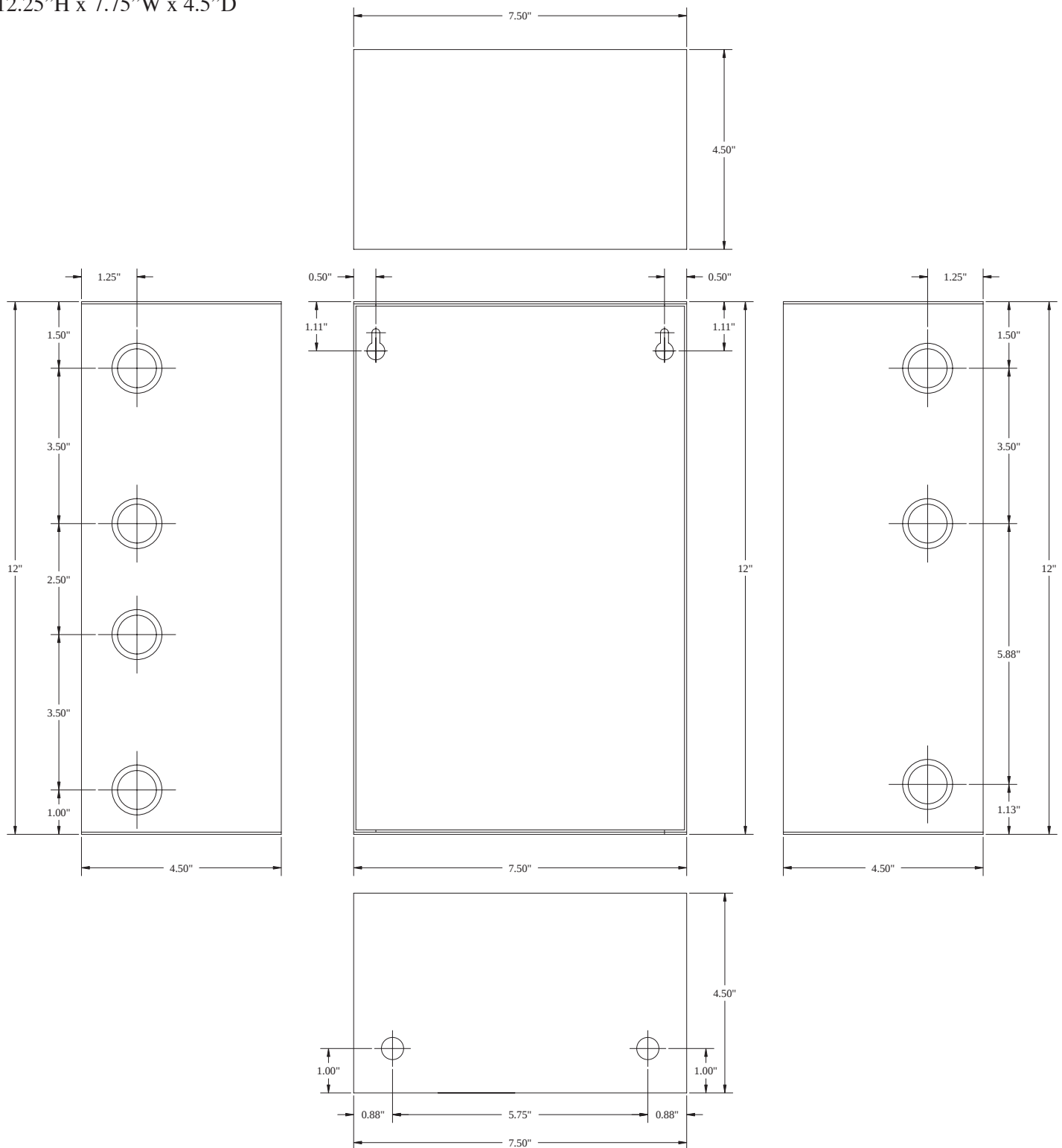
LED Diagnostics:

LED	ON	OFF
AC (Green)	Normal operation.	No AC input.
BAT (Red)	Battery connected.	Battery disconnected.
DC (Red)	Normal operation.	No DC output.

Terminal Identification:

Terminal Legend	Function/Description
AC, AC	Low voltage (28VAC) transformer connections.
– DC +	12VDC @ 4 amp continuous power limited output. 24VDC @ 3 amp continuous power limited output.
AC FAIL N.C., C, N.O.	Used to notify loss of AC power, e.g. connect to local annunciator/alarm panel. Relay normally energized when AC power is present. Contact rating 1 amp @ 30VDC
BAT FAIL N.C., C, N.O.	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
+BAT –	Stand-by battery connections. Maximum charge rate 1.2 amp.

Enclosure Dimensions:
12.25"H x 7.75"W x 4.5"D



Altronix is not responsible for any typographical errors. Product specifications are subject to change without notice.

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