HOCHIKI
america corporation

FN-600ULX
Power Supply/Charger

Installation Guide

UL MEA Approved FM APPROVED

Rev. 120104X

Overview:

The FN-600ULX is a power supply that converts a 115VAC / 60Hz input, to a 12VDC or 24VDC regulating output (see specifications below).

Specifications:

Agency Listings:

- UL File # S4707:
  UL Listed for Access Control System Units (UL 294).
  UL Listed Standard for Safety for Fire Protective Signaling Systems (UL 1481).
- MEA - NYC Department of Buildings Approved.
- CSFM - California State Fire Marshal Approved.
- FM - Factory Mutual Approved

Input:

- Input 115VAC / 60Hz, 1.9 amp.

Output:

- Single 12VDC or 24VDC selectable output.
- 6 amp continuous supply current at 12VDC or 24VDC.
- Filtered and electronically regulated outputs.
- Short circuit and thermal overload protection.

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 .7 amp.
- Zero voltage drop when switched over to battery backup.

Supervision:

- AC fail supervision (form "C" contacts).
- Low battery supervision (form "C" contacts).
- Battery presence supervision (form “C” contacts).

Additional Features:

- AC input and DC output LED indicators.
- Power supply, enclosure, cam lock and battery leads.

Enclosures:

FN-600ULX-G (Grey Enclosure)
FN-600ULX-R (Red Enclosure)
FN-600ULX-C (Charcoal Grey Enclosure)
FN-600ULX-B (Black Enclosure)
Dimensions: 13”H x 13.5”W x 3.25”D

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 FN-600ULX in desired location.
2. Set the unit to the desired DC output voltage by setting SW1 *(Fig. 1A, pg. 4)* to the appropriate position *(Power Supply Output Specifications Chart, below)*.
3. Secure cabinet to earth ground. Connect AC power (115VAC / 60 Hz to terminals marked [L, G, N] *(Fig. 1, pg. 4)*.
   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, DC Output, Battery Wires). Minimum .25” spacing must be provided.
4. Measure output voltage before connecting device. This helps avoid potential damage.
   When servicing the unit, AC mains should be removed.
5. Connect devices to be powered to terminals marked [+ DC -], carefully observing correct polarity (*Fig. 1, pg. 4*).
6. 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.
7. Connect appropriate signaling notification devices to terminals marked [AC FAIL & BAT FAIL] *(Fig. 1, pg. 4)* supervisory relay outputs.
   Note: When used in fire alarm or access control applications, “AC Fail” relay must be used to provide a visual indication of AC power on.
8. Please insure that the cover is secured with the provided Key Lock.

Power Supply Output Specifications:

Output VDC	Switch Position
12VDC	SW1 CLOSED
24VDC	SW1 OPEN

Stand-by Specifications (total current shown):

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 = 6 amp Alarm = 6 amp	Stand-by = 1.0 amp Alarm = 6 amp	Stand-by = 300mA Alarm = 6 amp
24VDC / 12 AH Battery		Stand-by = 200mA Alarm = 6.0 amp	
24VDC / 40 AH Battery	Stand-by = 6 amp Alarm = 6 amp	Stand-by = 1.0 amp Alarm = 6 amp	Stand-by = 300mA Alarm = 6 amp

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.

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 or 24VDC @ 6 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.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. Low battery conditions will report approximately 21VDC (24VDC output setting) or approximately 10.5VDC (12VDC output setting). 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.

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 *(Power Supply Output Specifications Chart, pg. 2)*.

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.

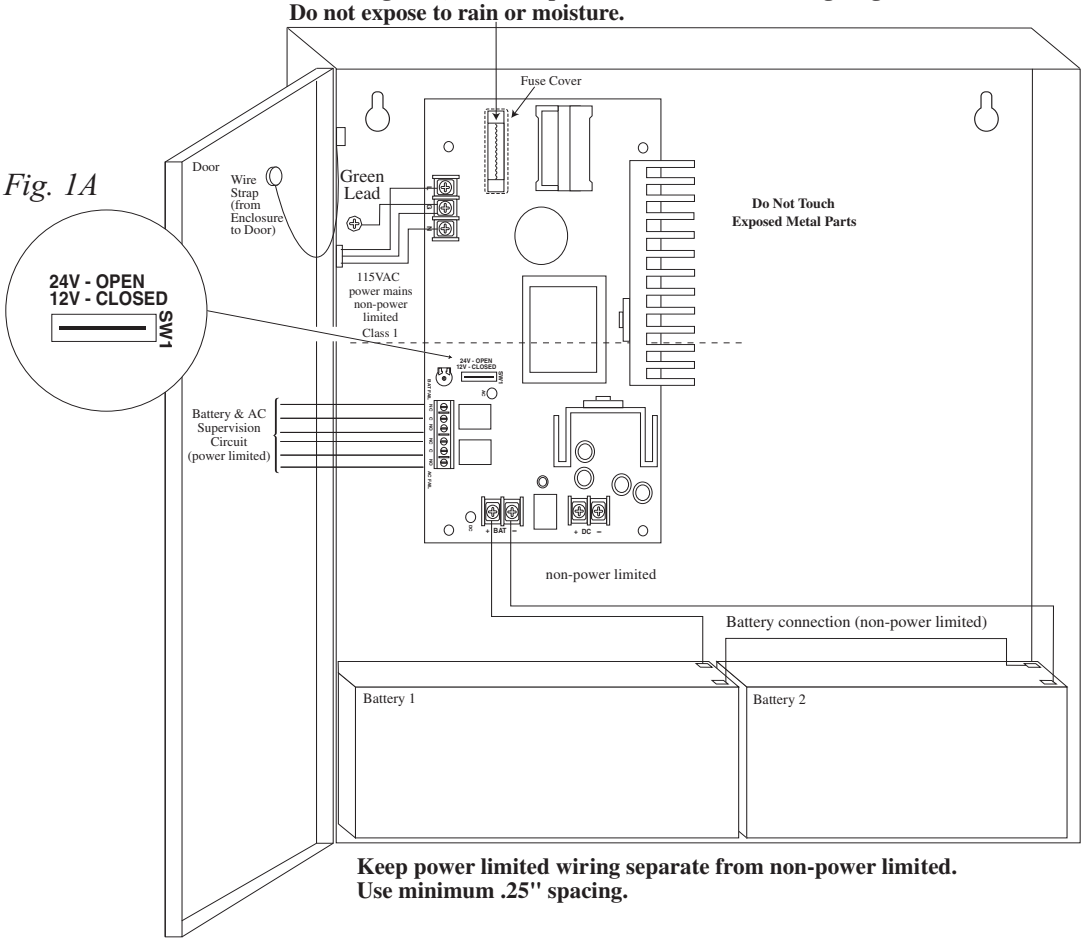
Note: Maximum charging current under discharges is .7 amp.

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

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. Do not expose to rain or moisture.

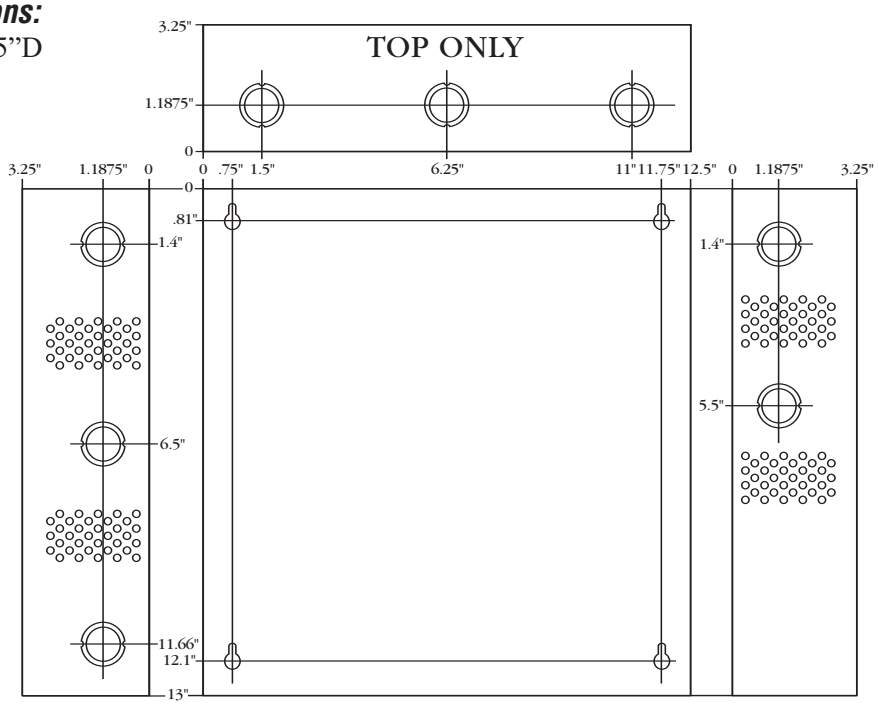
Fig. 1A



Keep power limited wiring separate from non-power limited. Use minimum .25" spacing.

Enclosure Dimensions:

13”H x 13.5”W x 3.25”D



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