



FN-400ULX
Power Supply/Charger
Installation Guide



Overview:

The FN-400ULX 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 Power Supplies for Use with Burglar-Alarm Systems (UL 603), UL Listed Hospital Signaling and Nurse Call Equipment (UL 1069), 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 Approved.



Output (cont'd):

- 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 0.7 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:

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

Enclosure:

FN-400ULX-R (Red)
FN-400ULX-C (Charcoal Grey)
Dimensions: 13"H x 13.5"W x 3.25"D

Input:

- Input 115VAC, 60Hz, 3 amp.
- AC input and DC output LED indicators.

Output:

- Class 2 Rated power limited output.
- 12VDC or 24VDC selectable output.
- 4 amp total supply current at 12VDC or 3 amp total supply current at 24VDC.

Power Supply Voltage Output Selections:

Output	Switch Position
12VDC	SW1 - CLOSED (Fig. 1, on right)
24VDC	SW1 - OPEN (Fig. 1, on right)

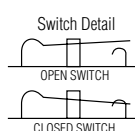
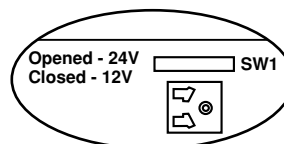


Fig. 1



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 / 40AH 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 / 12AH Battery	—	Stand-by = 200mA Alarm = 3.0 amp	—
24VDC / 40AH 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 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. Set the FN-400ULX to the desired DC output voltage by setting SW1 (Fig. 1, pg. 2, Fig. 2c, pg. 3) to the appropriate position (refer to Power Supply Voltage Output Selections chart).
3. Connect AC power (115VAC 60Hz) to terminals marked [L, G, N] (Fig. 2, pg. 3). 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 0.25" spacing must be provided.

4. Connect devices to be powered to terminals marked [+ DC -] (Fig. 2, pg. 3).
5. Measure output voltage before connecting devices. This helps avoid potential damage.
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. Connect battery to terminals marked [+ BAT -] (Fig. 2, pg. 3). Use two (2) 12VDC batteries connected in series for 24VDC operation (battery leads included).

7. Connect appropriate signaling notification devices to AC FAIL & BAT FAIL (Fig. 2a, pg. 3) supervisory relay outputs.
Note: When used in fire alarm, burglar alarm or access control applications, "AC Fail" relay should be utilized to visually indicate that AC power is on. To delay report 6 hours cut "AC Delay" jumper (Fig. 2b, pg. 3).
8. Please insure that the door is secured with the provided cam lock.

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 (refer to Power Supply Voltage Output Specifications chart).

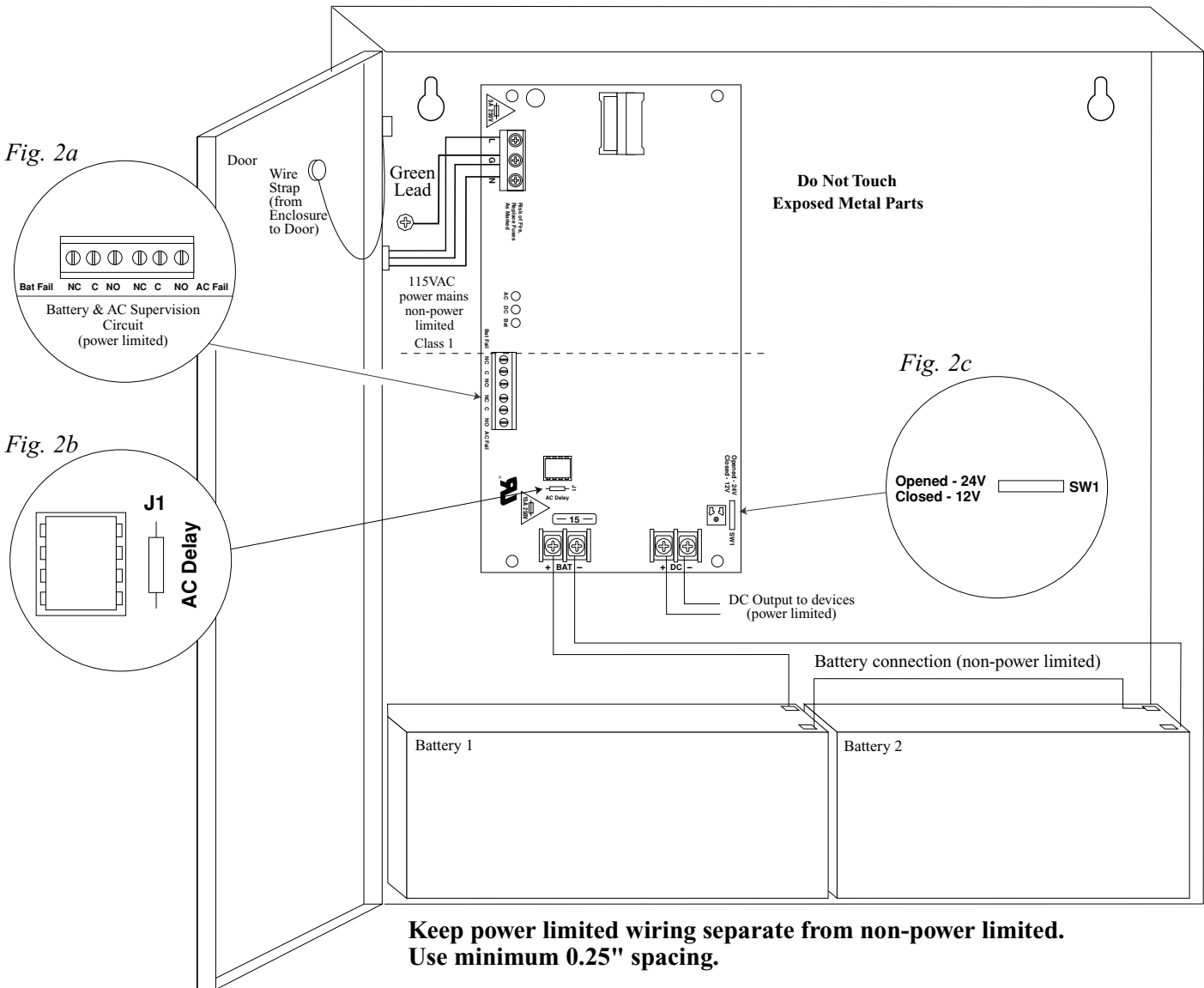
Battery Test: Under normal load conditions check that the battery is fully charged, check specified voltage both at battery terminal and at the board terminals marked [+ BAT -] to insure there is no break in the battery connection wires.

Note: Maximum charging current under discharge is 0.7 amp.

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

Fig. 2

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. Do not expose to rain or moisture.



LED Diagnostics:

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.

Red (Bat)	Battery Status
ON	Normal operating condition.
OFF	Battery fail/low battery.

Terminal Identification:

Terminal Legend	Function/Description
L, G, N	Connect 115VAC 60 Hz. to these terminals: L to hot, N to Neutral, G to ground.
+ DC -	12VDC @ 4 amp or 24VDC @ 3 amp continuous power limited output.
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 1 amp @ 28VDC. AC or brownout fail is reported within 1 minute of event. To delay reporting of up to 6 hrs., cut "AC delay" jumper and reset power to unit.
Bat Fail NC, C, NO	Indicates low battery condition, e.g. connect to alarm panel. Relay normally energized when DC power is present. Contact rating 1 amp @ 28VDC.
+ BAT -	Stand-by battery connections. Maximum charge current 0.7 amp.

Enclosure Dimensions:

13"H x 13.5"W x 3.25"D

