



AL1042ULADA ***NAC Power Extender***

Installation Guide

(See Application Guide for additional information)





AL1042ULADA - NAC Power Extender

Overview:

The Altronix AL1042ULADA is an extremely cost effective 10 amp remote power supply/battery charger. It may be connected to any 12 or 24 volt Fire Alarm Control Panel (FACP). Primary applications include Notification Appliance Circuit (NAC such as strobes and horns) expansion support to meet ADA requirements. It also provides auxiliary power to support system accessories. The unit delivers electronically regulated and filtered 24 volt power to Class B, Style W, Y or Class A, Style Z NAC loop circuits. Additionally, a separate 1 amp auxiliary output for 4-wire smoke detectors is available. The 10 amp max. alarm current can be divided between the four (4) outputs for powering NAC devices. Each output is rated at 2.5 amp max., and can be independently programmed for Steady, Temporal Code 3 or Strobe Synchronization. All outputs may be programmed for Input to Output Follower Mode (output will follow input. i.e. March Time Input, March Time Output). In non-alarm condition independent loop supervision for Class A, Style Z and/or Class B, Style W, Y FACP NAC circuits is provided. In the event of a loop trouble, the FACP will be notified via the steered input (input 1 or input 2). In addition, there are common trouble output terminals [NC, C, NO] which are used to indicate general loop/system trouble. A common trouble input is provided for optional [NC] (normally closed) devices to report trouble to the FACP. Two (2) FACP signaling outputs can be employed and directed to control supervision and power delivery to any combination of the four (4) outputs.

Specifications:

Agency Listings:

- UL Listed for Control Units for Fire Protective Signaling Systems (UL 864).
- MEA - NYC Department of Buildings Approved.
- CSFM - California State Fire Marshal Approved.
- FM - Factory Mutual Approved.
- NFPA 72 Compliant.

Input:

- Power input 120VAC / 60 Hz, 5 amp.
- Two (2) Class A, Style Z or two (2) Class B, Style W, Y FACP inputs.
- Two (2) NC dry contact trigger inputs.

Output:

- Class 2 Rated power limited outputs.
- 24VDC voltage regulated power limited outputs.
- 10 amp max total alarm current.
- 2.5A max current per output.
- Two auxiliary outputs rated at 1 amp each (1 amp continuous, 1 amp AC disconnect).
- Programmable supervised indicating circuit outputs: Four (4) Class B, Style W, Y or Four (4) Class A, Style Z or Two (2) Class A, Style Z and Two (2) Class B, Style W, Y (*see Application Guide*).
- Thermal and short circuit protection with auto reset.

Battery Backup:

- Built-in charger for sealed lead acid or gel type batteries.
- Automatic switchover to stand-by battery when AC fails.
- Zero voltage drop when switching over to battery backup.

Supervision:

- AC fail supervision (form "C" contact, 1 amp / 28VDC). Factory set for 30 seconds with optional 2.5 to 3 hour delay setting (field selectable).
- Instant local AC trouble reporting relay (form "C" contact, 1 amp / 28VDC).
- Battery presence and low battery supervision (form "C" contact, 1 amp / 28VDC).

Visual Indicators:

- Input and output status LED indicators.

Special Features:

- 2-wire horn/strobe Sync mode allows audible notification appliances (horns) to be silenced while visual notification appliances (strobes) continue to operate.
- Temporal Code 3, Steady Mode, Input to Output Follower Mode (maintains synchronization of notification appliances circuit).
- Compatible with 12VDC or 24VDC fire panels.
- Output loop supervision directed to input 1 or input 2.
- Signal Circuit Trouble Memory - facilitates quick identification of an intermittent/fault (short circuit, open or ground) which has previously occurred on one or more signaling circuit outputs. LEDs indicate/identify which output the fault has occurred.
- Common trouble input and output.
- Ground fault detection.

Added Features:

- Unit includes power supply, logic board enclosure, cam lock, and battery leads.

Enclosure Dimensions and Descriptions:

AL1042ULADA

18"H x 14.5"W x 4.625"D

Product Weight:

20 lbs.

Power Supply Specifications:

AC Input:	120VAC 60Hz, 5 amp, supplied by a maximum 15 amp dedicated branch circuit.
Output:	Four (4) regulated supervised NAC output circuits, 24VDC, 2.5 amp maximum current. One (1) aux. special application 24VDC power output circuit 1 amp, non-supervised total output current must not exceed current 10 amp in Alarm Condition.
Battery:	Use two (2) 12VDC / 12AH or two (2) 12VDC / 7AH batteries connected in series.
Stand-by/Alarm Current Consumption:	90mA/175mA
EOL Resistor (end of line):	2.2K (2200 ohm), Altronix Model # AL-EOL22 (included).
Ground fault maximum test impedance:	1000 ohm.

Stand-by Specifications:

Stand-by Batteries	Stand-by Time Total Amp/Minutes	Alarm Output Current	Aux. Output
24VDC/7AH	24 Hours	10 amp/5 minutes	–
24VDC/12AH (use two (2) 12VDC batteries in series)	24 Hours	10 amp/5 minutes	50mA
24VDC/36AH	24 Hours	10 amp/5 minutes	1 amp

Note: Unit is equipped with two (2) 1 amp max. auxiliary outputs: “AUX1” will automatically disconnect when AC is lost. “AUX2” will remain battery backed up during power outage. For loads connected to “AUX2” please, refer to battery “Stand-by Specifications” above for ratings. When loads are connected to the “AUX1” and or “AUX2” outputs during alarm condition, the remaining outputs may, not exceed 10 amp total alarm current. (example: AUX1 = 1 amp, AUX2 = 1 amp, outputs up to 8 amp).

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.

Carefully review:

Application Guide for AL842ULADA, ALI042ULADA

Power Supply Output Specifications

(pg. 3)

Stand-by Specifications

(pg. 3)

Output Programming Selection Table

(pg. 4)

Sync Mode Selection Table

(pg. 4)

Terminal Identification Table

(pgs. 5-6)

LED Diagnostics

(pg. 6)

1. Mount the unit in 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 the 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 (*Fig. 1, pg. 3*).
2. Connect the line (L), ground (G), and neutral (N) terminals to a separate unswitched AC circuit (120VAC, 60Hz) dedicated to the Fire Alarm System.
3. Measure output voltage before connecting devices. This helps avoid potential damage.
4. Connect battery to terminals marked [+ BAT -] on the Power Supply Board (battery leads included). Use two (2) 12VDC batteries connected in series.

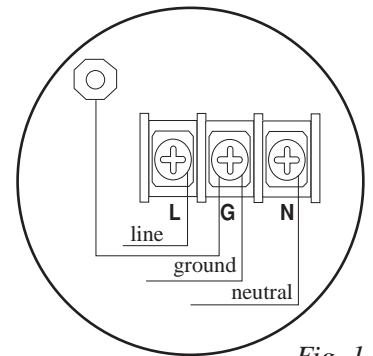


Fig. 1