



AL125ULB Access Control Power Supply/Charger

Overview:

AL125ULB is a power-limited power supply/charger that converts a low voltage AC input into two individually PTC protected 12VDC or 24VDC outputs (see specifications). They are intended for use in applications requiring UL Listing for Access Control (UL 294) and applications requiring an interface with Fire Alarm Control Panels.

Specifications:

Agency Listings:

- UL Recognized component.
- NFPA 101 (Life Safety).

Input Rating:

- 24VAC/40VA.

Output Rating:

- 12VDC or 24VDC selectable, Class 2 Rated power-limited outputs.
- 1A total supply current @ 12VDC or 24VDC.
- Filtered and electronically regulated output.*



Battery Backup:

- Built-in charger for sealed lead acid or gel type batteries.
- Maximum charge current: 400mA.
- Automatic switch over to stand-by battery when AC fails.

Special Features:

- “NO” trigger input.
- Supervised Fire Alarm Disconnect (Latching with reset or Non-Latching).

Board Dimensions (L x W x H):

3.8” x 3.0” x 1.5” (96.5mm x 76.2mm x 38.1mm).

***Note:** When unit is powered by battery back up (AC Fail condition), the voltage range is 9.3V-13.2V and 19.55V-26.4V for 12 and 24 volt operation respectively.

Power Supply Output Specifications:

Output VDC	Switch Position	Max. Stand-by Load DC	Max. Alarm Load DC	Battery (optional)
12VDC	SW2 OFF	1A	1A	12VDC
24VDC	SW2 ON	1A	1A	24VDC

Stand-by Specifications:

Output	4 hr. of Stand-by and 5 min. of Alarm
12VDC/4AH Battery	Stand-by = 0.5A Alarm = 1A
24VDC/4AH Battery	Stand-by = 0.5A Alarm = 1A

Output	4 hr. of Stand-by and 5 min. of Alarm
12VDC/7AH Battery	Stand-by = 1A Alarm = 1A
24VDC/7AH Battery	Stand-by = 1A Alarm = 1A

Installation Instructions:

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

See Terminal Identification Chart on page 2 for a description of each terminal function.

1. Mount unit in the desired location/enclosure (mounting hardware included).
2. Connect 24VAC from a UL Listed 40VA plug-in transformer to the terminals marked [XFMR].
Keep power-limited wiring separate from non power-limited wiring (115VAC 50/60Hz Input, Battery Wires). Minimum 0.25” spacing must be provided.
3. Measure output voltage before connecting any devices to ensure proper operation.
Improper or high voltage will damage these devices.
4. Set the desired DC output voltage by setting switch SW2 (*Fig. 1a - Application Diagram, pg. 2*) to the appropriate position (*Power Supply Output Specifications Table, pg. 1*).
5. Connect Fail-Safe locking devices to the terminals marked [COM – and LOCK +]. Connect Fail-Secure locking devices to the terminals marked [COM – and STRIKE +] (*Fig. 1 - Application Diagram, pg. 2*).
6. Connect normally open access control device (i.e. cardreader, request to exit device, access control system) to the terminals marked TRG INPUT [NO, GND] (*Fig. 1 - Application Diagram, pg. 2*).
7. Connect FACP interface to the terminals marked [FACP1 and FACP2]. Wire the 2.2K resistor (supplied) in series for a normally closed input or in parallel for a normally open input (*Fig. 1 - Application Diagram, pg. 2*). If required, set the latching FACP interface mode by closing SW1 (*Fig. 1a - Application Diagram, pg. 2*), and connect a normally open reset device to the terminals marked RESET [NO, GND].
8. Connect battery to the terminals marked [+ BAT –] (battery leads included). Use two (2) 12VDC batteries connected in series for 24VDC operation.

Note: 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.

LED Diagnostics:

Green (AC)	Power Supply Status
ON	Normal operating condition.
OFF	No DC output.
Slow Blink	Loss of AC.
Rapid Blink	Unit is triggered, awaiting reset. Fire alarm interface activated.

Terminal Identification:

Terminal Legend	Function/Description
XFMR	Low voltage transformer connections.
+ AUX –	Aux power output terminals. These terminals will supply 12VDC or 24VDC, not affected by trigger, reset or fire alarm interface.
LOCK + STRIKE + COM –	Switched power output. Fail-Safe [LOCK +] supplies positive power when unit is not triggered and FACP interface is inactive. Fail-Secure [STRIKE +] supplies positive power when unit is triggered and/or fire alarm interface is activated. [COM –] supplies negative power.
FACP1 FACP2	Supervised by 2.2K end of line resistor FACP interface. Short or open will cause power to be dropped to terminal marked [LOCK+] and supply power to terminal marked [STRIKE +]. Condition can be maintained even after restoration of the circuit (latching mode).
TRG INPUT NO, GND	Short between these two terminals will cause power to be dropped to terminal marked [LOCK +] and supplied to terminal marked [STRIKE +].
RESET NO, GND	Momentary short between these terminals would end latching FACP interface condition. Feature active only if latching FACP is selected (SW1 closed).
+ BAT –	Stand-by battery connections.

Application Diagram:

Fig. 1

Fig. 1a - SW2

