



EBC48

External Rapid Battery Charger (48VDC)

Overview:

Altronix EBC48 external battery charger provides rapid charging of back-up batteries. Ideal when integrated with Altronix NetWay Spectrum Hardened Switches working with POE240 or POE360/POE367 power supplies to recharge 32AH in under 8 hours. Perfect for applications where constant power isn't available (switched power) such as a light pole or other location. During the day, when the power is off, the battery will power the devices (up to 100W total) for 16 hours. When power is restored, it's routed to the devices first and any excess is used to rapidly recharge the battery. EBC48 is a great alternative to expensive solar deployments, trenching to achieve a pathway for traditional electrical connectivity.

Specifications:

Input:

- 56VDC input (POE240, POE360, POE367).

Output:

- Charging four (4) 12V batteries in series.
- 2A or 4A selectable operation.

Supervision:

- AC Fail Supervision (form "C" contacts).
- BAT Supervision: indicates low or missing batteries (form "C" contacts).

Visual Indicators:

- Feed from power supply (green).
- Feed from battery (red).
- Battery trouble (blinking red).

Applications

- Deployed on poles where only intermittent power is available
- EBC48 can support cameras as well as edge-based PoE access controllers, and digital signage as well
- Provides long term backup for extended power outages
- Great alternative to expensive solar deployments
- Paired with a LTE router can rapidly charge batteries in-house prior to an event where power will not be constant or available

Board Dimensions (L x W x H approx.):

5.5" x 3" x 1" (139.7mm x 76.2mm x 25.4mm)

Installation Instructions:

EBC48 should be installed in accordance with the National Electrical Code and all applicable Local Regulations.

1. Mount the EBC48 in the desired location/enclosure (mounting hardware is included).
2. Set the EBC48 to the desired output current via SW1 (*refer to Charging Current Output Selection Table*).
3. Connect [+ INP -] terminals of EBC48 to 56VDC output from POE240, POE360, POE367 or any 56VDC power supply which matches the below chart (*Charging Current Output Selection Table*).
4. Measure output voltage before connecting devices and batteries. This helps avoiding potential damage.
5. Connect device(s) to be powered to [+ OUT -] terminals of EBC48. 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 or Missing Battery reporting).

Keep power-limited wiring separate from non power-limited wiring (115VAC 50/60Hz or 56VDC Input, Battery Wires).

Minimum 0.25" spacing must be provided.

CAUTION: Do not touch exposed metal parts. Shut branch circuit power before installing or servicing equipment.

There are no user serviceable parts inside. Refer installation and servicing to qualified service personnel.

6. Connect four (4) 12V lead acid or gel type batteries, connected in series to be charged to the terminals marked [- BAT +] (*Fig. 1*).
7. For low battery disconnect option, utilize Altronix RDC48 relay module. (*Refer to Fig. 2, pg. 2 for hookup diagram*).

CAUTION: Do not use batteries below 7AH. 7AH/12V batteries must be charged using only 2A charging current.

Charging Current Output Selection Table:

Switch Position	Battery Charging Current	Current Available for Devices	
		POE240 (4.3A/240W total)	POE360 or POE367 (6.5A/360W total)
SW 1 - Option 1	2A	2.3A/120W	4.5A/240W
SW 1 - Option 2	4A	0.3A/16W	2.5A/130W

LED Diagnostics:

Red (DC)	Green (AC)	Power Supply Status
OFF	ON	Normal operating condition. Powered from AC.
Blinking	ON	Low or missing battery (up to 3 minutes to respond). Threshold for low battery is 42VDC
ON	OFF	System is on battery power.
OFF	OFF	Loss of AC. Discharged or no stand-by battery. No DC output.

Battery Backup Calculator:

Battery	Charging Current	Full Charge Time	Approximate Back-Up Time	
			120W	240W
7AH	2A	4 hr.	2.5 hr.	1.25 hr.
	N/A	N/A		
12AH	2A	7 hr.	4.5 hr.	2.25 hr.
	4A	3.5 hr.		
32AH	2A	16 hr.	12.8 hr.	6.4 hr.
	4A	8 hr.		

*Note: Calculation is based on Power Sonic PSL-48320-G2C LiFePO₄ battery

Terminal Identification:

Terminal Legend	Function/Description
+ INP –	56VDC input from POE240, POE360 or POE367.
+ OUT –	56VDC output. Hardened switch / device connection.
+ BAT –	Stand-by battery connections.
NO AC NC	Used to notify loss of AC power, e.g. connect to audible device or alarm panel. Relay normally energized when AC power is present. Can also be used to indicate switch from AC power to battery power. Contact rating 1A @ 28VDC.
NO BAT NC	Used to indicate low or missing batteries, e.g. connect to alarm panel. Relay normally energized when DC power is present. Contact rating 1A @ 28VDC. Low battery threshold: 42VDC.

Fig. 1

Typical Hookup

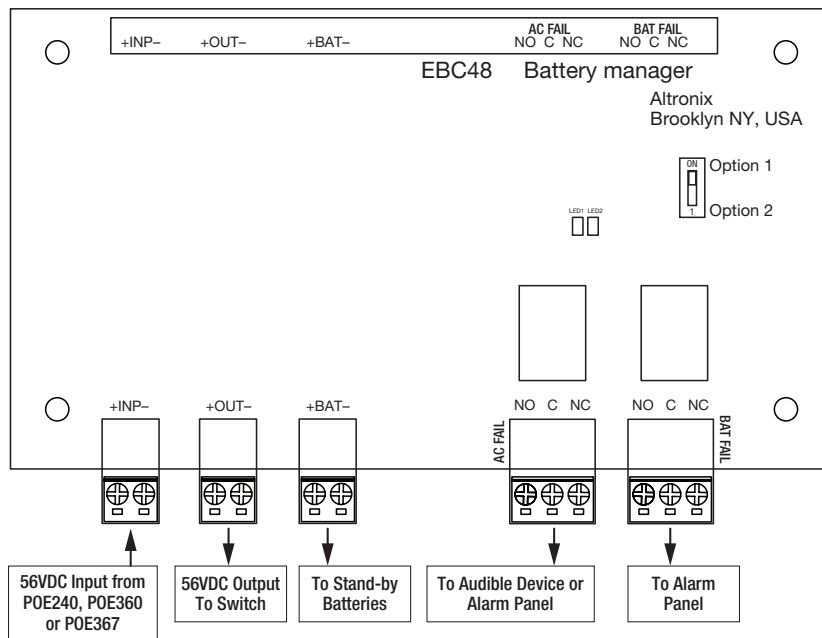
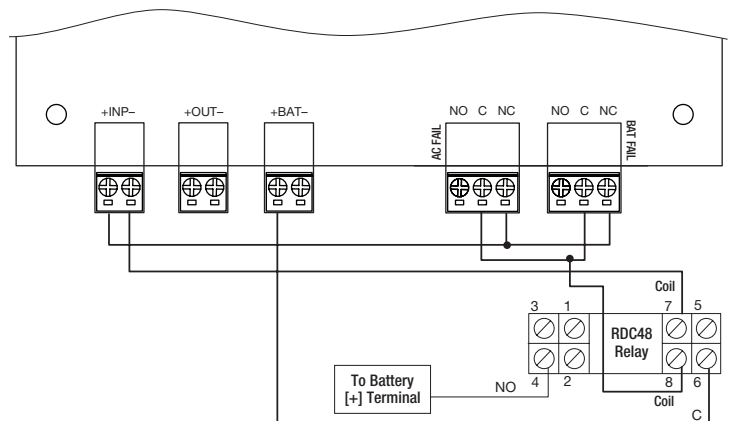


Fig. 2

Low Battery Disconnect Hookup Option
Utilizing RDC48 Relay Module (sold separately)



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