



ReServ24B

Automatic Power Transfer Switch with Built-in Rapid Battery Charger (24VDC)

Overview:

Altronix ReServ24B provides redundancy and rapid charging of back-up batteries. It is perfect for critical applications where constant power isn't available (switched power) or faster battery charging is required. ReServ24B supports two (2) 24VDC power supplies and automatically transfers from the first power input to the secondary without delay, ensuring that system security is maintained. When power is restored, it's routed to the devices first power input and any excess is used to rapidly recharge the batteries. ReServ24B can be added to any existing or new security/access system to keep systems operating.

Specifications:

Input:

- Inputs Voltage: 23-28VDC, up to 10A each.
- Inputs Fuses: 15A/32V.

Output:

- 22-24VDC, up to 10A.
- Output Fuse: 15A/32V.

Supervision:

- Relays NC 1A @ 28V
- Relay 1 Input 1 status
- Relay 2 Input 2 status
- Relay 3 Battery status

Visual Indicators:

- Green Feed from power supplies (Inputs)
- Red Feed from battery
- Blue Operation/Component/Fuses

LINQ™ Technology

- Interfaces via LINQ2 module
- Provides DC input status, Battery status, Output Voltage, and Output Current

Battery Backup:

- Built-in charger for LiFePO₄, sealed lead acid or gel type batteries. Charges 24V batteries.
- Automatic switch over to stand-by battery when AC fails.
- Charging current: 1A, 2A, 4A, or 6A selectable operation.
- Battery Fuse: 15A/32V.

Applications

- Redundancy: If both INP1 and INP2 are present, the higher voltage powers the output and the charging circuit. If it is disconnected or low, the other input is automatically routed to the output and battery charging.
- If battery discharges below 20V, the output is disabled (either DC input or both will be needed to restart).
- If both DC inputs are low or missing and just the battery is connected, the unit will startup from the battery.

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

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

Installation Instructions:

ReServ24B should be installed in accordance with the National Electrical Code and all applicable Local Regulations.

- Mount the ReServ24B in the desired location/enclosure (mounting hardware is included).
- Connect UL Listed 24VDC (23-28VDC, up to 10A each) power supplies to [+ INP1 -] and [+ INP2 -] terminals of ReServ24B, carefully observing polarity.
- Measure output voltage before connecting devices and batteries. This helps avoiding potential damage.
- Connect device(s) to be powered to [+ OUT -] terminals of ReServ24B. 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 (24VDC Input and Output, 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.

- Set battery charging current (Fig. 1a).

Connect two (2) 12VDC batteries in series or a single 24VDC battery to be charged to the terminals marked [+ BAT -] (Fig. 1).

Follow battery manufacturer's recommendations for their optimal use and to determine maximum recommended charging current.

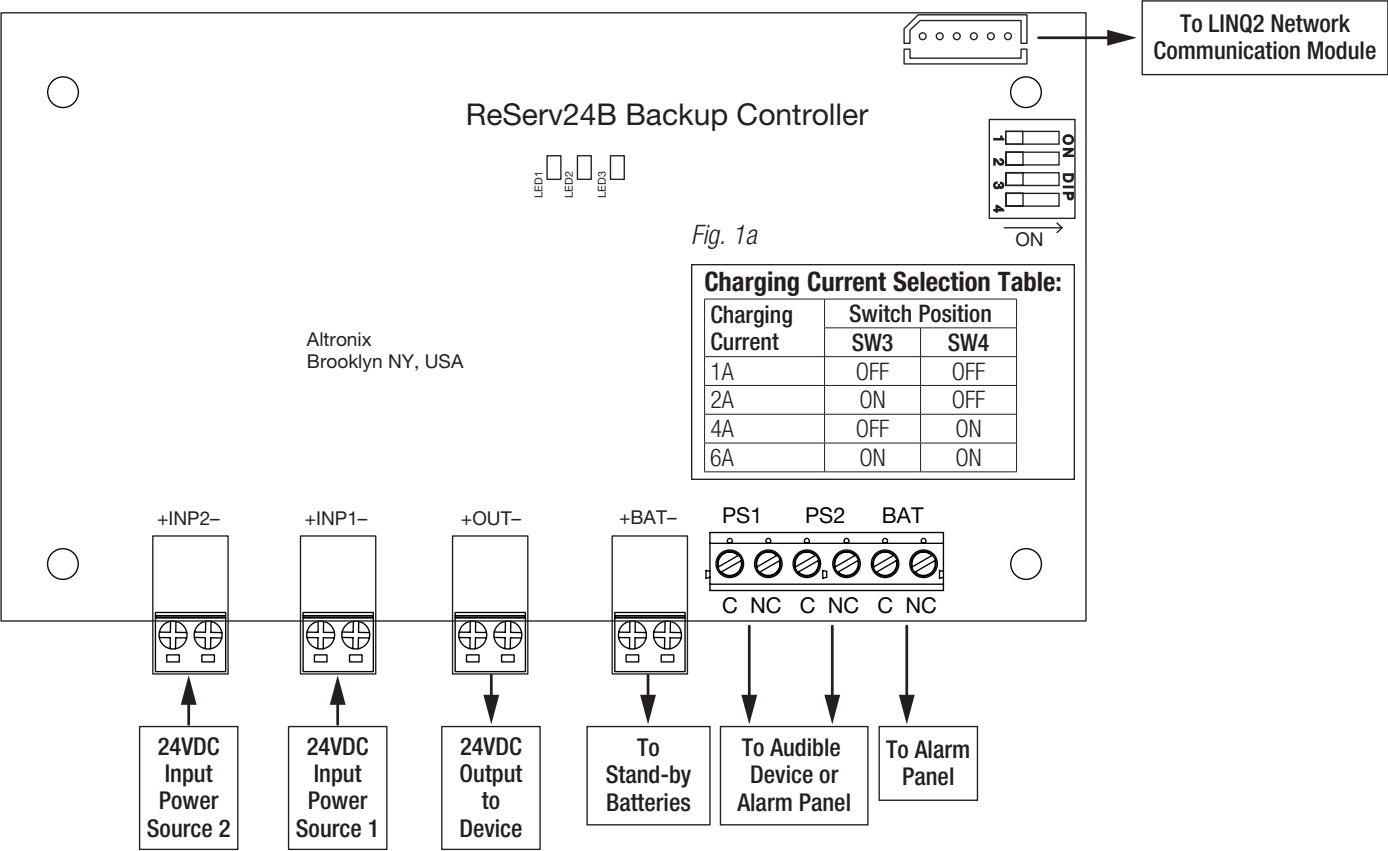
LED Diagnostics:

Green (Input)	Red (Battery)	Blue (Operations)	Status
1, 2 or 3 blinks	Steady On	Blinking	PS1 (1 blink), PS2 (2 blinks). Both PS1 and PS2 (3 blinks) operational, battery connected.
1, 2 or 3 blinks	4 blinks	Blinking	PS1 (1 blink), PS2 (2 blinks). Both PS1 and PS2 (3 blinks) operational, battery is critically low or missing.
1, 2 or 3 blinks	7 blinks	Blinking	Missing battery and charging circuit trouble. PS1, PS2 or both are powering the output.
Off	Blinking	Blinking	Both PS1 and PS2 failed. Battery power, battery low.
Off	Steady On	Blinking	Both PS1 and PS2 failed. Battery power, battery normal.
Blinking	5 blinks	Blinking	No PS1, no PS2. Low battery disconnect was triggered.
4 blinks	4 blinks	4 blinks	No PS1, no PS2. Battery is too low to start operation.
6 blinks	6 blinks	6 blinks	Attempt to start from battery failed.
		1 blink	PS1 Input fuse is blown.
		2 blinks	PS2 Input fuse is blown.
		3 blinks	Possibly, both PS1 and PS2 fuses are blown.

Terminal Identification:

Terminal Legend	Function/Description
+ INP2 –, + INP2 –	24VDC inputs from two (2) different power supplies.
+ OUT –	24VDC output. Device connection.
+ BAT –	Stand-by battery connections.
PS1 C NC PS2 C NC	Used to notify loss of input DC power, e.g. connect to audible device or alarm panel. Relay normally energized when DC power is present. Can also be used to indicate switch from DC power to battery power. Contact rating 1A @ 28VDC.
BAT C 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: 20VDC.

Fig. 1 - Typical Hookup



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