Replacing a SNAP PAC Rechargeable Battery

INTRODUCTION

Several Opto 22 SNAP PAC controllers and brains have a rechargeable battery that receives charging current whenever the device has power. Because the battery is rechargeable and has a long data retention period with the power off, you should normally not have to change it.

Check your part number in the table below to see the normal data retention period and symptoms of battery failure.

Part number	Retention period	Notes	Battery failure symptoms
SNAP-PAC-S1 SNAP-PAC-S1-FM[a] SNAP-PAC-S1-W	1 year	Serial numbers 625654 and higher*	When power to the controller is cycled, the Autorun flag is cleared, and variables configured as "Persistent" or "Initialize on strategy download" do not retain their values.
SNAP-PAC-S2 SNAP-PAC-S2-W[a]		All models	
SNAP-PAC-R1 SNAP-PAC-R1-B SNAP-PAC-R1-FM[a] SNAP-PAC-R1-W[a] SNAP-PAC-R2 SNAP-PAC-R2-FM[a] SNAP-PAC-R2-W[a]	3 years	Manufactured after July 1, 2007**	
SNAP-PAC-EB1 SNAP-PAC-EB1-FM[a] SNAP-PAC-EB1-W[a] SNAP-PAC-EB2 SNAP-PAC-EB2-FM[a] SNAP-PAC-EB2-W[a] SNAP-PAC-SB1[a] SNAP-PAC-SB2[a]	5 years	Manufactured after August 2007***	When power to the brain is cycled, the real-time clock does not retain its time.

* Serial numbers 625653 and lower have a 3.6-volt TL 5242 /W lithium battery, with 10-year minimum power-off data retention (replacement part number: G4BATT32).
** Models manufactured before July 1, 2007, have a 3-volt CR2032 lithium battery, available in retail stores.
*** Models manufactured before August 2007 have a 3-volt CR2032 lithium battery, available in retail stores.
[a] "Obsolete Product, contact Opto 22 Pre-Sales engineers for more information.

If you notice these symptoms, follow the steps in this technical note to replace the battery. The replacement battery is a FDK Lithium ML2430-CJ1 or equivalent. Opto 22 part number is SNAP-PAC-BATTERY-ML2430.

For Help

If you have difficulty with the battery or the R-series PAC and cannot find the information you need in this document or in the *SNAP PAC R-Series Controllers User's Guide* (form #1595, available on our website), contact Opto 22 Product Support.

Phone: 800-TEK-OPTO (800-835-6786 toll-free in the U.S. and Canada)
951-695-3080
Monday through Friday,
7 a.m. to 5 p.m. Pacific Time

NOTE: Email messages and phone calls to Opto 22 Product Support are grouped together and answered in the order received.

Fax: 951-695-3017

Email: support@opto22.com

Opto 22 website: www.opto22.com

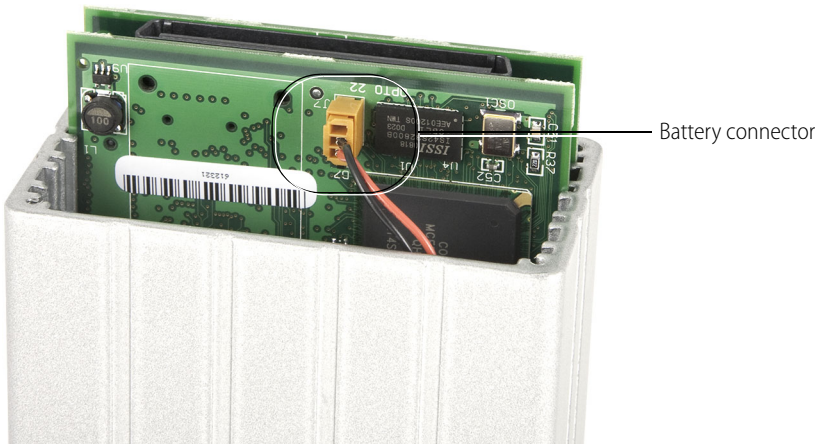
REPLACING THE RECHARGEABLE BATTERY

You can replace the battery if necessary using Opto 22 part number SNAP-PAC-BATTERY-ML2430 or equivalent.

CAUTION: *On a controller, replacing the rechargeable battery erases archived strategies, persistent variables, the autorun flag, and variables initialized on download. Before replacing the battery, make certain any strategy archived on the controller is also archived somewhere else (for example, a PC). After the battery is replaced, archive the strategies again to the controller. See the PAC Control User's Guide for more information and instructions.*

Strategy, firmware, and configuration files stored to flash memory are not erased.

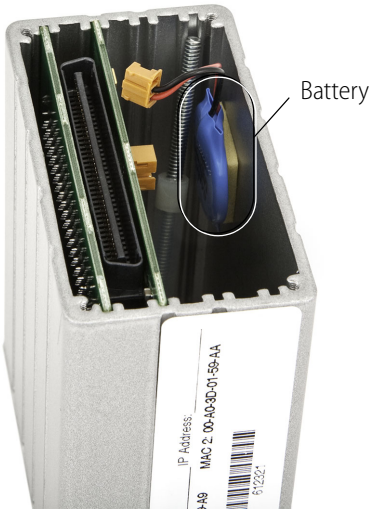
1. Turn off power to the controller or brain. Remove the Ethernet cable(s) and any serial terminals, if used. Unscrew the center hold-down screw enough to remove the PAC from the mounting rack.
2. Turn the PAC over. Unscrew the four small screws holding the bottom plate and save them. Remove the bottom plate.
3. Pull the boards out carefully so you can see where the battery is connected to the board.
   A SNAP PAC R-series controller is shown below. Position varies on other devices.



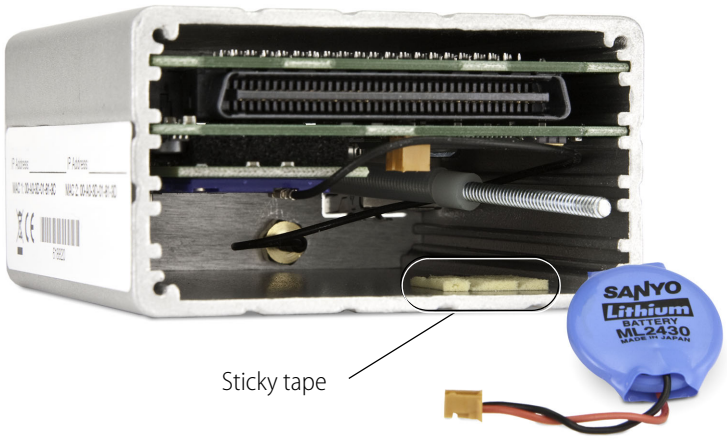
CAUTION: When working inside the can, make certain you do not damage the boards inside.

MADE IN THE USA

4. Carefully unplug the battery from the connector on the board.
   You can see the battery attached to the wall of the metal case.
   The position of the battery varies depending on the device (an R-series PAC is shown here).



5. Notice the battery's position. Carefully pry the battery off the wall.
   (An R-series PAC is shown as an example.)



6. Carefully scrape the remaining sticky tape off the metal wall.
7. On the new battery, remove the paper backing on the sticky tape. With the wires toward you, stick the new battery to the wall of the case in the same position as the old one.
8. Note the polarity of the battery's connector. Plug it into the connector on the board.
9. Ease the boards back into the case and put the bottom plate back on, using the saved screws. Replace the device on the mounting rack, tighten the hold-down screw, and reattach cables.

The controller or brain is ready for use.

OPTO 22 • www.opto22.com
43044 Business Park Dr. Temecula, CA 92590-3614

SALES • sales@opto22.com
800-321-6786 • 1-951-695-3000

SUPPORT • support@opto22.com
800-835-6786 • 1-951-695-3080

MADE IN THE USA