FB1100/FB1200 Flow Computer Coin Cell Battery Field Replacement Guide

For Part Numbers (Kits):

- 395620-03-1: Coin Cell Battery

EMERSON

Device Safety Considerations

- ## Reading these Instructions

  Before operating the device, read these instructions carefully and understand their safety implications. In some situations, improperly using this device may result in damage or injury. Keep this manual in a convenient location for future reference. Note that these instructions may not cover all details or variations in equipment or cover every possible situation regarding installation, operation, or maintenance. Should problems arise that are not covered sufficiently in the text, immediately contact Customer Support for further information.

- ## Protecting Operating Processes

  A failure of this device – for whatever reason -- may leave an operating process without appropriate protection and could result in possible damage to property or injury to persons. To protect against this, you should review the need for additional backup equipment or provide alternate means of protection (such as alarm devices, output limiting, fail-safe valves, relief valves, emergency shutoffs, emergency switches, etc.). Contact Remote Automation Solutions for additional information.

- ## Returning Equipment

  If you need to return any equipment to Remote Automation Solutions, it is your responsibility to ensure that the equipment has been cleaned to safe levels, as defined and/or determined by applicable federal, state and/or local law regulations or codes. You also agree to indemnify Remote Automation Solutions and hold Remote Automation Solutions harmless from any liability or damage which Remote Automation Solutions may incur or suffer due to your failure to ensure device cleanliness.

- ## Grounding Equipment

  Ground metal enclosures and exposed metal parts of electrical instruments in accordance with OSHA rules and regulations as specified in *Design Safety Standards for Electrical Systems*, 29 CFR, Part 1910, Subpart S, dated: April 16, 1981 (OSHA rulings are in agreement with the National Electrical Code). You must also ground mechanical or pneumatic instruments that include electrically operated devices such as lights, switches, relays, alarms, or chart drives.
  Important: Complying with the codes and regulations of authorities having jurisdiction is essential to ensuring personnel safety. The guidelines and recommendations in this manual are intended to meet or exceed applicable codes and regulations. If differences occur between this manual and the codes and regulations of authorities having jurisdiction, those codes and regulations must take precedence.

- ## Protecting from Electrostatic Discharge (ESD)

  This device contains sensitive electronic components which be damaged by exposure to an ESD voltage. Depending on the magnitude and duration of the ESD, it can result in erratic operation or complete failure of the equipment. Ensure that you correctly care for and handle ESD-sensitive components.

System Training

A well-trained workforce is critical to the success of your operation. Knowing how to correctly install, configure, program, calibrate, and trouble-shoot your Emerson equipment provides your engineers and technicians with the skills and confidence to optimize your investment. Remote Automation Solutions offers a variety of ways for your personnel to acquire essential system expertise. Our full-time professional instructors can conduct classroom training at several of our corporate offices, at your site, or even at your regional Emerson office. You can also receive the same quality training via our live, interactive Emerson Virtual Classroom and save on travel costs. For our complete schedule and further information, contact the Remote Automation Solutions Training Department at 800-338-8158 or email us at *education@emerson.com*.

Ethernet Connectivity

This automation device is intended to be used in an Ethernet network which **does not** have public access. The inclusion of this device in a publicly accessible Ethernet-based network is **not recommended**.

Removing/Replacing Batteries

The coin cell SRAM backup battery preserves data in SRAM memory in the event of a power loss and provides backup power to the real-time clock.

Refer to the table below for the correct field replacement part number.

Item	Field Replacement Kit Part Number
Coin cell lithium battery for SRAM backup	395620-03-1
UL Kit File Number: E192567	

Ambient Temperature Range

May be used up to a *maximum* ambient temperature of 80°C and a *minimum* ambient temperature of –40°C; refer to the data plate attached to the device for ambient temperature.

Required Tools

- #1 Phillips-head screwdriver
- Hexagonal torque wrenches with 3mm and #1 Phillips-head bits. Ranges must include 4 to 6 in-lbs (0.5 to 0.7 N-m), and 10 to 12 in-lbs (1.1 to 1.4 N-m).

Important
Use **only** accessories (batteries) supplied with the flow computer or sold by Emerson as spare parts for this flow computer. Substituting a part you obtain elsewhere (such as a battery) **voids your approval certification**.

⚠ DANGER

EXPLOSION HAZARD: Ensure the area in which you perform this operation is non-hazardous. Performing this operation in a hazardous area could result in an explosion.

⚠ DANGER

EXPLOSION HAZARD: Never remove end cap(s) in a hazardous location. Removing end cap(s) in a hazardous location could result in an explosion.

⚠ WARNING

EXPLOSION HAZARD - Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous.

⚠ WARNING

EXPLOSION HAZARD – Change batteries **only** in an area known to be non-hazardous.

Note

Use these cell batteries only in devices where the servicing of the cell circuit and replacement of the lithium cells is done by a trained technician.

Important

If this equipment is used in a manner not specified by the manufacturer, the protection provided by equipment may be impaired.

Removing/Replacing the SRAM Backup Battery

UL Listed Battery Field Installed Accessory Kit for use in Class I, Division 1, Groups C, and D; and Class I, Division 2, Groups A, B, C, and D

- Integral Coin Cell Battery for SRAM Backup Part No. 395620-03-1 for use with UL Listed Class I, Division 1, Groups C, and D; and Class I, Division 2, Groups A, B, C, and D Model Series FB1100 and FB1200

A lithium coin cell battery provides backup power for the SRAM and the real-time clock. The SRAM backup battery can last for up to 10,000 hours of cumulative operation, and only runs if the main power system fails. You do not need to power down the unit to replace the SRAM backup battery.

Important

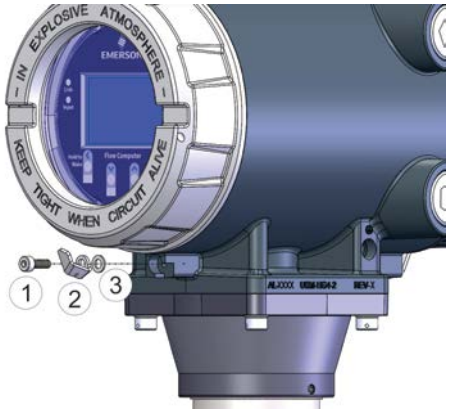
Replacement SRAM backup batteries **must be** either the Rayovac® Model BR2335 **or** the Panasonic® Model BR2330.

⚠ WARNING

EXPLOSION HAZARD - Batteries must only be changed in an area known to be non-hazardous. See notices at the front of this document.

1. Remove the retaining clamp assembly on the front end cap (if present) using a 3 mm hexagonal wrench.

Components of Retaining Clamp Assembly



1 Screw
2 Retaining Clamp
3 Washer

2. Grasp the end cap.

Front End Cap

3. Unscrew the end cap by turning it counter-clockwise until it comes off. Set the end cap aside in a safe location.

Note

If you need more leverage, place a long screwdriver or other appropriate tool across the two notches in the end cap to act as a pry bar.

Front End Cap Removal

4. With a #1 Phillips-head screwdriver, loosen the four captive fastening screws on the HMI module.

Captive Fastening Screws

5. Grasp the HMI module and remove it by gently pulling it straight out.
6. Grasp the coin cell battery and remove it from its slot.

Removing/Replacing the Coin Cell Battery

7. Insert the new coin cell battery in the slot. The positive side (+) must be on top.

⚠ CAUTION

When inserting the SRAM coin cell battery push the battery **gently** into its slot until it stops. The battery should slide in easily. Do not use excessive force.

8. To replace the HMI module, line up the printed circuit board (PCB) with the slot on the back and gently press it back on. Tighten the four captive fastening screws with a torque of 4 to 6 in-lbs (0.5 to 0.7 N-m).

9. Carefully align the end cap threads with the threads of the enclosure and replace the front end cap. Screw the end cap clockwise (eight full turns) until it is tightly sealed to the enclosure. End caps must have at least 8 full threads engaged upon reassembly.

Note

If you need more leverage, place a long screwdriver or other appropriate tool across the two notches in the end cap to act as a pry bar.

10. If applicable, tighten the retaining clamp onto the end cap using a 3mm hexagonal wrench. When tightening, torque to 10 to 12 in-lbs (1.1 to 1.4 N-m).

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