

# How To Procedure

## Replacing R Series CPU Battery

Revision: A

Purpose: To show how to change the Battery in an R Series CPU for preventative maintenance (Battery more than 5 years old).

The battery is used for: Program and Device/Label memory backup

Required Tools:

- None

Consumable Parts:

- Quantity one of part number G6-BAT or G7-BAT

## 4.5 Performance Specifications of Battery

This section describes the performance specifications of the battery used for the CPU module.

Item	Q6BAT	Q7BAT <sup>*1</sup>
Type	Manganese dioxide lithium primary battery	
Initial voltage	3.0V	
Nominal current	1800mAh	5000mAh
Battery life when not used	Approximately 5 years (room temperature)	
Lithium content	0.52g	1.55g
Application	To hold backup data and clock data	

\*1 The Q7BAT-SET includes a battery holder.

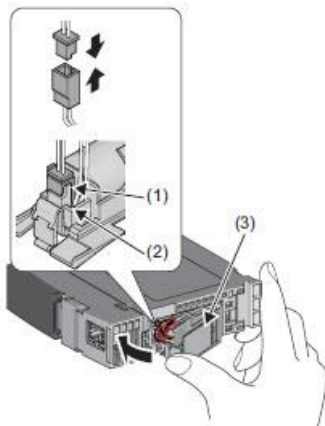
### Battery replacement procedure

When the life of the battery comes to an end, replace the battery, following the procedure below.

Power on the programmable controller for ten minutes or longer before removing the battery from the CPU module. Power off the programmable controller, and then replace the battery.

The CPU module holds the data on the device/label memory for three minutes (backup power time) by the capacitor even after the battery is removed. Note that the data on the device/label memory may be erased if the backup power time is exceeded. Replace the battery within three minutes.

#### Replacement procedure for the Q6BAT



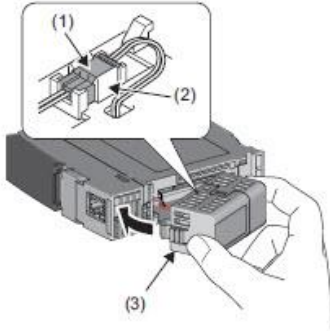
1. Back up the program and data.
2. Power off the programmable controller.
3. Remove the CPU module from the base unit.
4. Open the battery cover located on the bottom of the CPU module.
5. Disconnect the connector plug of the Q6BAT from the jack of the CPU module. When disconnecting the connector, hold the connector part so that the cables are not damaged.
6. Remove the Q6BAT from the battery cover.
7. Set a new Q6BAT to the cover in the right direction (with the positive terminal of the battery facing the connector holder).
8. Securely insert the connector plug of the Q6BAT to the jack of the CPU module. Set the connector (1) to the connector holder (2) on the cover.
9. Close the battery cover (3).
10. Mount the CPU module back on the base unit.
11. Power on the programmable controller.
12. Using the engineering tool, check that SM51 (Battery low latch) is off.

If SM51 is off, the battery has been replaced successfully.

If SM51 is on, the battery may not be installed properly. Repeat the procedure from step 2. If SM51 remains on, the possible cause is a hardware failure of the battery. Perform the procedure with a different battery.

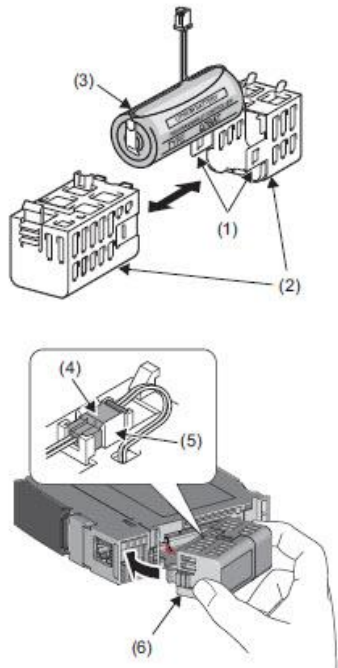
## Replacement procedure from the Q6BAT to the Q7BAT-SET

Replace it by the following procedure.



1. Back up the program and data.
2. Power off the programmable controller.
3. Remove the CPU module from the base unit.
4. Open the battery cover located on the bottom of the CPU module.
5. Disconnect the connector plug of the Q6BAT from the jack of the CPU module.
6. Securely insert the connector plug of the Q7BAT-SET to the jack of the CPU module.
7. Set the connector (1) into the connector holder (2) of the battery holder.
8. Attach the Q7BAT-SET (3) to the CPU module.

## Replacement procedure for the Q7BAT



1. Back up the program and data.
2. Power off the programmable controller.
3. Remove the CPU module from the base unit.
4. Remove the battery holder.
5. Disconnect the connector plug of the Q7BAT from the jack of the CPU module. When disconnecting the connector, hold the connector part so that the cables are not damaged.
6. Separate the holder (2) into two pieces by disengaging the latches (1) on both sides of the holder, and remove the Q7BAT (3).
7. Set the new Q7BAT to the holder in the right direction, checking the positive/negative terminal markings. Connect the holder back into one piece, placing the battery cable into the hole at the connection part. (Press the holder pieces until they click.)
8. Securely insert the connector plug (4) of the Q7BAT to the jack of the CPU module. Set the connector to the connector holder (5) on the cover.
9. Attach the battery holder (6) to the CPU module.
10. Mount the CPU module back on the base unit.
11. Power on the programmable controller.
12. Using the engineering tool, check that SM51 (Battery low latch) is off.

If SM51 is off, the battery has been replaced successfully.

If SM51 is on, the battery may not be installed properly. Repeat the procedure from step 2. If SM51 remains on, the possible cause is a hardware failure of the battery. Perform the procedure with a different battery.

**Mitsubishi Electric Automation, Inc.**

500 Corporate Woods Parkway, Vernon Hills, IL 60061 • phone: 847.478.2100

*An ISO9001 Certified Company*

For further information see MELSEC iQ-R Module Configuration Manual SH(NA)08262ENG