

MITSUBISHI ELECTRIC AC SERVO TECHNICAL BULLETIN

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[Issue No.] SV-A-0003

[Title] Servo Battery Guide (MELSERVO-J4 series)

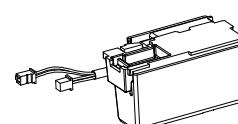
[Data of Issue] June 2020

[Relevant Models] MELSERVO-J4 series

Thank you for your continued support of Mitsubishi Electric AC servo products.

This bulletin explains AC servo battery models, supported servo amplifiers, battery life, installation procedure, and FAQ.

1. Supported Battery

Battery model	Appearance	Supported servo amplifier	Manufacturer model ^{*1}
<p>Sold separately</p> <ul style="list-style-type: none">·MR-BAT6V1SET-A^{*2}·MR-BAT6V1 (Built-in battery for replacement)		<ul style="list-style-type: none">·MR-J4-_GF_(-RJ)·MR-J4W2-0303B6·MR-J4-03A6(-RJ)	2CR17335A
<p>Sold separately</p> <ul style="list-style-type: none">·MR-BAT6V1SET^{*2}·MR-BAT6V1 (Built-in battery for replacement)		<ul style="list-style-type: none">·MR-J4-_A_(-RJ)·MR-J4-_B_(-RJ)·MR-J4-DUA_(-RJ) <ul style="list-style-type: none">·MR-J4-_B_-RJ010·MR-J4-DUB_(-RJ)	2CR17335A
<p>Sold separately</p> <ul style="list-style-type: none">·MR-BT6VCASE (Battery case) <p>* Please purchase five MR-BAT6V1 (battery) separately and install them.</p>		<ul style="list-style-type: none">·MR-J4-_GF_(-RJ)·MR-J4-_A_(-RJ)·MR-J4-_B_(-RJ)·MR-J4W-_B_·MR-J4-DUA_(-RJ) <ul style="list-style-type: none">·MR-J4-_B_-RJ010·MR-J4-DUB_(-RJ)	2CR17335A
<p>Sold separately</p> <ul style="list-style-type: none">·MR-BAT6V1BJ (Battery for junction battery cable (MRBT6VCBL03M)) <p>For transporting servo motors separately</p> <p>* The built-in batteries are not replaceable.</p>		<ul style="list-style-type: none">·MR-J4-_GF_(-RJ)^{*3}·MR-J4-_A_(-RJ)·MR-J4-_B_(-RJ)·MR-J4-DUA_(-RJ) <ul style="list-style-type: none">·MR-J4-_B_-RJ010·MR-J4-DUB_(-RJ)	-

*1 This shows a battery manufacturer model. The battery manufacturer model and our battery model are indicated on the battery label. Use our batteries because batteries purchased from the manufacturer do not have wires and cannot be connected.

The production date of the battery is described on the rating plate of the battery.

*2 MR-BAT6V1 battery is built in the battery.

*3 Contact your local sales office when using MR-BAT6V1BJ with MR-J4-350GF4(-RJ).

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2. Battery Life

Battery model	Battery life ¹	Battery life in use (Reference)
MR-BTA6V1	5 years from the production date	Refer to each servo amplifier instruction manual such as "11.8.6 MR-BAT6V1 battery" in "MR-J4-_A_(-RJ)/MR-J4-03A6(-RJ) Servo Amplifier Instruction Manual".
MR-BTA6V1BJ		Refer to each servo amplifier instruction manual such as "11.8.3 MR-BAT6V1BJ battery for junction battery cable" in "MR-J4-_A_(-RJ)/MR-J4-03A6(-RJ) Servo Amplifier Instruction Manual".

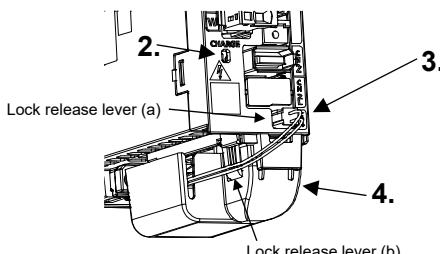
¹ Quality of the batteries degrades by the storage condition. The battery life is **5 years from the production date** regardless of the connection status. Replace the batteries **within 3 years since the operation start** regardless of the power supply of the servo amplifier on/off.

3. Battery Replacement (MR-BAT6V1SET)

Notices about replacing a battery for absolute position data backup

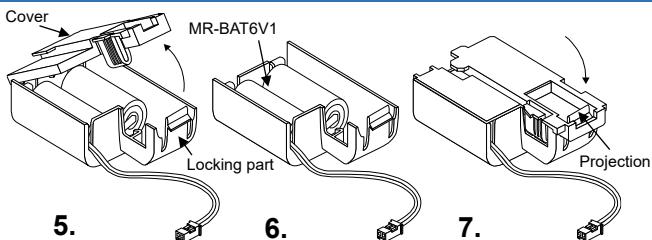
Before replacing the battery, **turn OFF the main circuit power** and wait for 15 minutes or longer (until the charge light turns off). Otherwise, an electric shock may occur. When replacing the battery, **keep the control circuit power ON**. Replacing the battery with the control circuit power OFF will erase the absolute position data.

Battery removal procedure



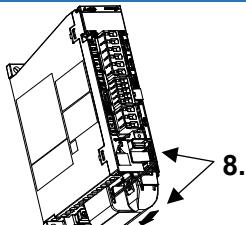
1. Wait for 15 minutes or longer **after turning OFF the main circuit power**. (**Only the control circuit power is ON**.)
2. After checking that the charge light is turned off, check the voltage between P+ and N- with a voltage tester or others.
3. While pressing the lock release lever (a), pull out the battery connector.
4. While pressing the lock release lever (b), slide the battery case toward you.

Built-in battery replacement procedure



5. While pressing the locking part, open the cover.
6. Replace the built-in battery with a new MR-BAT6V1.
7. Press the cover until it is fixed with the projection of the locking part to close the cover.

Battery installation procedure



8. Install a battery case to the servo amplifier, and insert the battery connector to CN4.

 **Notice** When the MR-BAT6V1SET battery life runs out, replace the built-in MR-BAT6V1 battery.

Refer to each servo amplifier instruction manual such as "11.8 Battery" in "MR-J4-_A_(-RJ)/MR-J4-03A6(-RJ) Servo Amplifier Instruction Manual" for replacing the batteries other than MR-BAT6V1SET.

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4. FAQ

Questions	Answers
What will happen when the voltage of the battery for absolute position data backup drops in an absolute position detection system?	When the battery voltage drops in an absolute position detection system, [AL. 9F Battery warning] occurs. When the voltage further drops, [AL. 25 Absolute position erased] occurs at the control circuit power-ON, and the absolute position data will be erased. Replace the battery when [AL. 9F Battery warning] occurs.
Is it necessary to use the battery for absolute position data backup to configure an absolute position detection system?	Yes. Install the battery to the servo amplifier. However, the battery is not necessary when the absolute position detection system is configured with a linear servo motor.
Can Q6BAT be used for the MR-J4 servo amplifiers?	No. Use the batteries listed in this bulletin.
What will happen to the absolute position data when the encoder cable is disconnected from the servo amplifier for transportation of an absolute position detection system?	The data will be erased. Set the home position again before the operation. When a battery for junction battery cable (MR-BAT6V1BJ) and a junction battery cable (MR-BT6VCBL03M) are used together, the absolute position data can be held even when the encoder cable is disconnected from the servo amplifier.

5. Revision

Version	Date	Description
-	June 2020	First edition

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