

Pre-RMA testing BMV Battery Monitors



6. Pre-RMA test form - BMV battery monitors

1. General

Product, system and fault information	
Date	
Model Number	
Serial number	
Date of installation (if known)	
Date of failure (if known)	
Battery type, brand name and overall capacity (if known)	

2. Initial check

Initial check	
Does the shunt have mechanical, water or corrosion damage?	<input type="checkbox"/> Yes, no warranty; replace the shunt. <input type="checkbox"/> No.
Does the shunt have damage to its electrical connectors?	<input type="checkbox"/> Yes, no warranty; replace the shunt. <input type="checkbox"/> No.
Does the shunt board have mechanical, water or corrosion damage?	<input type="checkbox"/> Yes, no warranty; replace the shunt board. <input type="checkbox"/> No.
Does the shunt board have damage to its electrical connectors?	<input type="checkbox"/> Yes, no warranty; replace the shunt board. <input type="checkbox"/> No.
Is the shunt board securely fastened to the shunt?	<input type="checkbox"/> Yes. <input type="checkbox"/> No, tighten both screws.
Does the head unit have mechanical, water or corrosion damage?	<input type="checkbox"/> Yes, no warranty; replace the head unit. <input type="checkbox"/> No.
Does the head unit have damage to any of its electrical connectors?	<input type="checkbox"/> Yes, no warranty; replace the head unit. <input type="checkbox"/> No.
Does the head unit have burn marks or melting marks on its housing, or smell burned?	<input type="checkbox"/> Yes. <input type="checkbox"/> No.
Remove the fuse from the red power cable and test the fuse for continuity using a digital multimeter. In the case of a BMV 702 or 712, repeat this test for the fuse in the other cable.	<input type="checkbox"/> Yes, no warranty; replace the fuse. <input type="checkbox"/> No.
Test the red cable(s) for continuity using a multimeter. And inspect the cable(s) for damage. Is there an issue with the cable(s)?	<input type="checkbox"/> Yes, no warranty; replace the cable(s). <input type="checkbox"/> No.
Test the six strands in the RJ12 data cable for continuity using a cable tester and inspect the cable terminals for damage. Is there an issue with the RJ12 Cable?	<input type="checkbox"/> Yes, no warranty; replace the RJ12 cable. <input type="checkbox"/> No.

3. First power up

Power the unit up and check	
Connect the battery monitor to a 12V power supply or a 12V battery: <ul style="list-style-type: none"> • Connect the negative to the "battery" side of the shunt. • Connect the positive to the B1 connector on the shunt. • Connect the BMV head unit via an RJ12 cable to the shunt. Does the battery monitor power up?	<input type="checkbox"/> Yes, go to step 4. <input type="checkbox"/> No.
Is there a DC short circuit? And if so, determine by process of elimination if the problem is caused by the head unit or the shunt board?	<input type="checkbox"/> Yes, short circuit in the head unit; lodge a warranty claim. <input type="checkbox"/> Yes, short circuit in the shunt board; lodge a warranty claim. <input type="checkbox"/> No.
By process of elimination, determine if the reason the battery monitor is not powering up is caused by the head unit or by the shunt board?	<input type="checkbox"/> The head unit causes the problem; lodge a warranty claim. <input type="checkbox"/> The shunt board causes the problem; lodge a warranty claim.

4. Bluetooth

Bluetooth check	
Is the product a "Smart" product, i.e., does it have built-in Bluetooth?	<input type="checkbox"/> Yes. <input type="checkbox"/> No, go to step 5.
Is Bluetooth active, i.e., do you see the unit listed in the device list of the VictronConnect app?	<input type="checkbox"/> Yes, go to step 5. <input type="checkbox"/> No.
If Bluetooth is not active, it is unlikely to be a faulty Bluetooth module. More likely, Bluetooth has been turned off in the VictronConnect settings. To re-activate Bluetooth, consult the product manual. Is Bluetooth active now?	<input type="checkbox"/> Yes, go to step 5. <input type="checkbox"/> No.
If Bluetooth is still not active, rule out the following: <ul style="list-style-type: none"> • Are there problems with your phone or tablet? • Are you within Bluetooth range? • Only one phone or tablet can connect via Bluetooth at a time; is perhaps another phone or tablet already connected? • Consult the product manual and the VictronConnect manual to try to resolve the Bluetooth issue. Is Bluetooth active now?	<input type="checkbox"/> Yes. <input type="checkbox"/> No, lodge a warranty claim.

5. Firmware and settings

Update the firmware and reset the settings to default	
Connect via an interface (or Bluetooth) to the VictronConnect app and navigate to the unit. Is this possible?	<input type="checkbox"/> Yes. <input type="checkbox"/> No, not possible; lodge a warranty claim.

Update the firmware and reset the settings to default

Check if the firmware is up to date. If the firmware is not up to date, update the firmware to the most recent version using the VictronConnect app:

- Go to the VictronConnect settings page.
- On the settings page, click on the "3 dots" symbol in the top right-hand corner.
- Select "Product info".
- On the product info page, check and/or update the firmware.

- Yes, the firmware has been updated.
- Yes, the firmware was already up to date.
- No, not possible to update the firmware.

Save the unit's settings. File the settings under its serial number and keep the file on record for future reference. To save the settings:

- Go to the VictronConnect settings page.
- On the settings page, click on the "disk" symbol at the top.

- Yes, the settings file has been saved.
- No, not possible to save the settings.

Reset all settings to default:

- Go to the VictronConnect settings page.
- On the settings page, click on the "3 dots" symbol in the top right-hand corner of the page and select "Reset to defaults".

- Yes, the settings are set to default.
- No, not possible to set the settings to default.

Does the VictronConnect app display any error codes? If so, try to resolve the errors by consulting the product manual.

Did it get resolved?

- No errors, go to 6.
- There were errors, but they were resolved.
- There were errors, but they were not resolved.

Write down the error number and name.

Error number:
Error name:

6. Functionality**Battery monitor functionality check**

Measure the battery DC voltage. Compare this to the voltage indicated on the BMV head unit display or the VictronConnect app. Are they both the same (a deviation of up to 1% is allowed)?

- Yes.
- No, lodge warranty claim.

Connect a DC load or charger of approximately 50A to the load side of the BMV shunt. Measure the charge current with a DC current clamp. Is the current the same as is indicated in the VictronConnect app (a deviation of up to 1% is allowed)?

- Yes.
- No, lodge warranty claim.

Leave the DC charger or load connected for some time, is the "state of charge" (SoC) reading slowly changing?

- Yes.
- No, lodge warranty claim.

Are all display segments functional and legible?

- Yes.
- No, lodge warranty claim.

Is the display backlight functional? The backlight should turn on as soon as a button is pressed.

Note: The display backlight can also have been turned off in the settings (setting #50). See the product manual for more information on this.

- Yes.
- No, lodge warranty claim.

7. Remarks

Provide additional fault information or add issues not already covered in earlier questions

8. RMA lodgement

For your information purposes, provide details after lodging the RMA	
RMA type:	<input type="checkbox"/> Warranty claim. <input type="checkbox"/> Non-warranty repair or replacement request.
RMA lodgement date	
Victron Energy RMA number	
Your reference number	