

Armada ARC 30 Solar Regulator

The E01 error code appears when the controller is sensing an over-discharged battery bank. This can happen for one of two reasons. The first is very straightforward. The battery bank is actually over-discharged. If the battery voltage (12V system) is below 11.1V it will trigger the E01 code. This would typically only happen in RV applications if the RV was not being used for a period of time with the batteries being connected and no solar production. In RV systems with solar power this would be a rare occurrence.

The more likely scenario for the E01 error appearing is when the controller has inadvertently been calibrated for 24V. The ARC-30 is a 12V/24V controller and like most multi voltage controllers, it is auto-sensing. This means that the controller will automatically calibrate for the proper system voltage. However, with this type of controller it is essential for the battery bank to always be connected to the controller first. This allows the controller to calibrate for the proper system voltage. If the solar panels are connected first, the controller can see voltage upwards of 19V-21V. When connected first with this range of voltage, the controller will calibrate for a 24V system. Then, when the 12V battery is connected, it sets off the E01 code thinking that it is an over-discharged 24V battery bank. This is most likely to happen during initial installation, early spring when users are re-installing batteries that were removed during the winter or when old batteries are being replaced with new ones.

The good news is, it is an easy fix to properly calibrate your controller. The controller just needs to be reset by disconnecting the battery and solar leads and reconnecting in the proper order. Follow these easy steps to reset your controller:

- 1. Make a note of the 4 wires before disconnecting. You can use masking tape to write solar +, solar -, battery +, battery - on the 4 wires so there is no confusion when reconnecting.*
- 2. Disconnect the solar leads from the back of the controller, starting with the negative.*
- 3. Disconnect the battery leads from the back of the controller, starting with the negative.*
- 4. Wait 5 minutes*
- 5. Reconnect the battery leads to the back of the controller, starting with the positive.*
- 6. The controller display will light up. Wait 1 minute to allow the controller to calibrate.*
- 7. Reconnect the solar leads, starting with the positive.*

The controller should now be properly calibrated for 12V and the E01 code should disappear. To avoid this happening in the future, always disconnect all 4 wires from the controller when removing the batteries or replacing the batteries (again being careful to note which wires go to which connections on the controller). When reconnecting always start with the battery connections first.

If you still have issues or have other questions you can always email us at info@armadasolar.ca