

## Vigilant Dry Contact Alarms

The Vigilant has (2) dry contact alarms on the monitor as shown below: Relay 1 (left) & Relay 2 (right). This guide refers to certain steps that are not covered here (such as adjusting alarms). Refer to the web interface user manual for further clarification on all steps.



The relays operate as follows:

- **Relay 1 Battery Monitor Alarm**: This relay will change state when any of the following alarm thresholds are triggered:
  - Critical battery voltage (high or low)
  - Critical cell voltage (high or low)
  - Critical post temperature (high or low)
  - Critical cell resistance
  - Switchoff voltage
  - o Electrolyte level low
  - Battery case temperature
  - Ground fault
- Relay 2 Watchdog Alarm: This relay will change state when any of the following conditions occur:
  - Loss of power (to the monitor)
  - o CPU lockup/failure



## How to Test

There are certain procedures that can be used to test the relays.

## Relay 1 Test

It's recommended to connect the test meter or device to **NO and C** at the relay. To test, you will need to adjust alarm limits to force certain values into alarm. On the alarm settings page, adjust the threshold for different parameters into the critical warning level to trigger alarms immediately.

Example: Meter is measuring continuity between NO and C. Adjust the critical battery voltage low limit to a value higher than what is currently being measured (e.g., battery voltage is 133.2, set alarm limit to 134V). This will trigger the alarm and the meter should start buzzing.

After testing, be sure to clear the alarms. After you change the threshold back it can take up to 15 minutes for the alarm to clear.

## **Relay 2 Test**

It's recommended to connect the test meter or device to **NC and C** at the relay so that the alarm occurs during failure. There are two tests to perform.

First, test loss of power. Shut down the monitor from the web interface, after 15-20 seconds remove power from the monitor. The meter should start buzzing when the unit is powered off. Restore power and the meter will stop buzzing.

Next test CPU lockup/failure. The only means to do this now is to leave the monitor powered on and perform a software reboot. This will shut down the CPU for a few moments. Click the reboot option under the settings page and the meter should start buzzing almost immediately.