

OFF Duration Notice for Sentry -48VDC Remote Power Manager (RPM) 70AMP Outputs

Applicable Products

This Technical Note applies to the following models of Sentry -48VDC Remote Power Managers (RPMs): 4805/35-XLS-12, 4805/35-XMS-12, 4870-XLS-4, and 4870-XMS-4.

Description

The ON/OFF states of the four high amperage (70AMP) outputs are controlled by industrial quality relays with normally-closed contacts. When a relay coil is non-energized, the relay contacts are closed and the output is ON. When a user instructs an output/outlet to power OFF, the relay coil is energized and the relay contacts are pulled to an open/OFF state. Subsequent instruction to power ON the outlet de-energizes the relay coil and the relay contacts should immediately return to a closed/ON state.

Notice

To ensure proper operation as described above, the duration that a high-amperage output is instructed to remain OFF should be limited to 24 hours. Outputs instructed to be OFF for greater than 24 hours may experience a delay in the relay contacts returning to a closed (ON) state when the output is instructed to switch back ON.

Background

Server Technology's Sentry -48VDC RPMs are designed and built to meet the strenuous demands of telecom providers that rely on mission-critical equipment. A key consideration with these users is that the Sentry Remote Power Manager itself not be a point-of-failure. Specifically, if the Remote Power Manager should ever develop a problem, power to the critical gear must **not** be interrupted.

To meet this demand, Sentry -48VDC RPM units employ Always-On architecture. One element of this concept is the use of normally-closed relays. If a logic failure, internal power supply failure, or other type of failure should ever occur, use of normally-closed relays ensures the attached equipment continues to receive power and remain operational.

Symptom

Control State: **On**

Outlet Status: **Off/Error**

An output intentionally kept OFF for greater than 24 hours may result in the output not switching back ON immediately when instructed. If this occurs, the Sentry system will provide an **Off/Error** notification through at least one of the following means:

- Web and Command Line Interfaces; manual viewing
- SNMP Trap; automatic if enabled
- SYSLOG; automatic if enabled
- Email; automatic if enabled

Only two situations can lead to an **Off/Error**. The first situation is an overload that has resulted in the protective fuse for the output being blown (open). A visual inspection of the red LED on the fuse defines the status of the fuse; an illuminated LED indicates the fuse must be replaced. The second situation is the subject of this Technical Note: a 70AMP output kept OFF for an extended amount of time – greater than 24 hours – and the relay not immediately closing when the outlet is instructed to switch back ON. Eventually, as the relay cools, the output should return to an ON state by itself.

Solution

Typically, the only reason to keep an output/outlet OFF for extended periods is the output not being used. In this case, instead of switching the output OFF, the solution is to remove the associated fuse. Removing a fuse ensures the output is OFF while also avoiding wasted energy and excess heat that otherwise occurs when an output is instructed to power OFF and a relay coil is energized. However, removing a fuse also results in repeat error notifications through the means mentioned above. To avoid receipt of related error notices, login to the Sentry system as an Administrator and disable notifications for the output(s) missing a fuse. This is accomplished through the Sentry Remote Power Manager's web interface on the **Configuration > SNMP > Outlet Traps** page by removing the check mark from the Status Trap and the Change Trap checkboxes next to the appropriate outlet(s).