

NETWORK APPLICATION NOTE

Switching Electronic Loads with NETWORK™ Vareo

Problem

When switching certain load types, the LED on the Network Keypad may not be a true indicator of the status of the load. The current design of the NVC card detects the on/off status of the switch or dimmer by looking at the load voltage. This method works well with standard lighting loads such as incandescent and magnetic low-voltage, but because the electronic switch has a small amount of current leakage in the off-state, it causes a small amount of voltage to appear across the load even when the switch is off.

This voltage is detected by the card and causes the Network system to misread the status of the switch. As a result, the switch cannot be turned on from a Network keypad because it always reads the switch as being on. Load types that are known to have this high impedance off-state condition include:

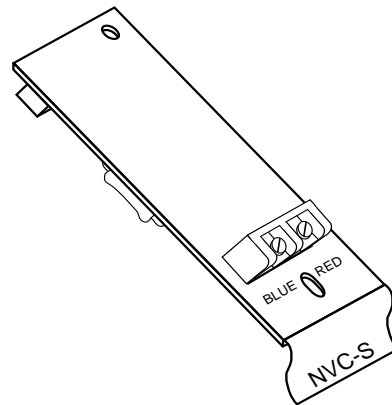
- Electronic ballasts for compact fluorescent lamps
- Electronic transformers for low-voltage lighting

Solution

The solution to this problem is a newly designed NVC-S card which has special circuitry to desensitize the load voltage detection. With the NVC-S card, the small voltage appearing across the load in the off-state is not misread as an on-state as on a NVC card.

Because of the special circuitry, the on-state level detection is also desensitized. The VETS electronic switch is on for an entire half cycle and has enough voltage at the peak of the half cycle to be detected as a valid on condition. However, if the NVC-S card is used with a dimmer, the dimmed voltage may not be enough to detect a valid on-state.

As a result, the NVC-S card should only be used to solve status reading problems on certain high impedance loads being controlled by a VETS switch. The NVC-S card should never be used with a dimmer.



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If you need assistance call the toll-free **Lutron Hotline:**

(800) 523-9466 (U.S.A., Canada, and the Caribbean)
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