Veris Application Note

Monitoring Lighting Circuits and Heaters

⚠ DANGER ⚠

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Follow safe electrical work practices. See NFPA 70E in the USA, or applicable local codes.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Read, understand and follow the instructions before installing this product.
- Turn off all power supplying equipment before working on or inside the equipment.
- Use a properly rated voltage sensing device to confirm power is off.
  DO NOT DEPEND ON THIS PRODUCT FOR VOLTAGE INDICATION
- Only install this product on insulated conductors.

Failure to follow these instructions will result in death or serious injury.

The information provided herein is intended to supplement the knowledge required of an electrician trained in high voltage installations. There is no intent to foresee all possible variables in individual situations, nor to provide all training needed to perform these tasks. The installer is ultimately responsible to assure that a particular installation will be and remain safe and operable under the specific conditions encountered.

Introduction

Resistive loads such as lighting circuits and resistance heaters do not require adjustable thresholds to measure operation. To effectively monitor these loads, current switches with a digital on/off output provide a cost-effective means to get positive status to an automation panel. These devices turn on at low currents (down to 0.15 A), and they remain on (closed) until the current draw drops to 0 A.

Advantages of go/no go switches over relay contacts:

1. Relay contacts will indicate contact closure, but they do not measure actual loads (amps), and so will not detect failures between the relay and the load such as broken wires, etc.
2. Many lighting loads are 277 volts, and thus require an expensive specialized relay to determine status. Sensors work on any voltage up to 600 volts
3. Current sensors are available in several small sizes, to be installed in any location.

Wiring Example