*Veris Application Note*

# Wire Wrapping for Low Current Monitoring

**⚠ 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*

Some conductors carry loads below the rating of standard current sensors. To monitor these conductors, employ a simple wire-wrapping technique to amplify the current sensor's input.

Wrap the monitored conductor through the center hole and around the sensor body to produce multiple turns through the iris. This increases the current measured by the transducer.

The controller must then be programmed to account for this wrapping. For example, if the conductor passes through the sensor iris four times, the controller must divide the sensor reading by four to calculate the actual current in the conductor.

## *Wiring Example*

In the example below, the sensor has a minimum current rating of 0.75A. The current in the conductor is only 0.2A. The conductor is therefore wrapped through the sensor's iris 4 times.

*sensor output / # of loops = conductor current*

*0.8A / 4 = 0.2A*