

Scaleable Analog Current Sensors

⚠ **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.

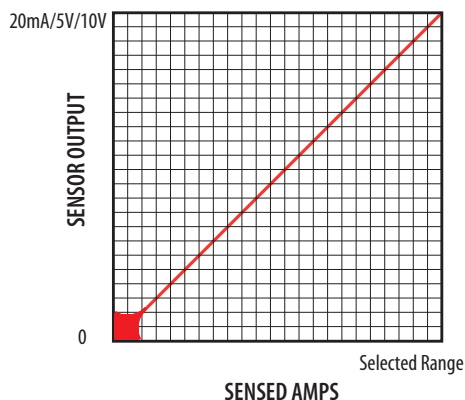
Failure to follow these instructions will result in death or serious injury.

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.

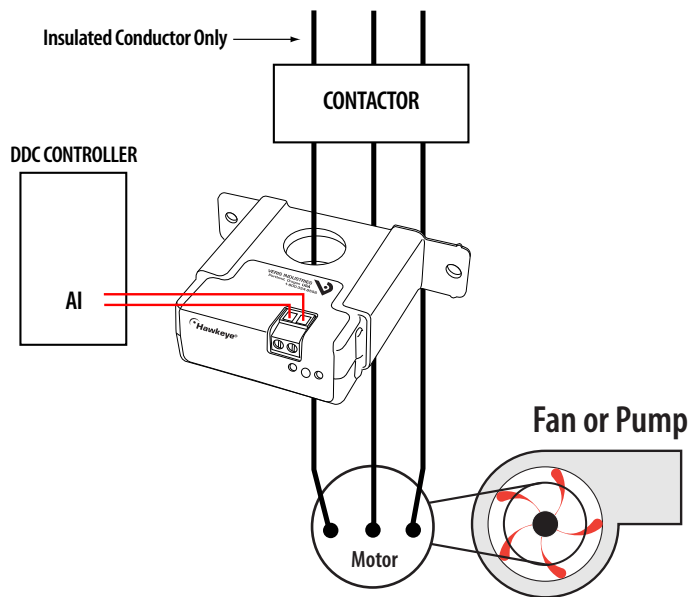
Introduction

Analog current transducers provide a cost-effective means of measuring the load on a fan or pump motor. The sensors provide automation-compatible voltage or current outputs that are proportional to the primary current flowing in the sensed conductor.

Many transducers provide adjustable scaling ranges for maximum resolution. At the time of installation, the approximate current passing through the conductor is determined, and the transducer is scaled so that the maximum output (20 mA, 5 V, or 10 V) will correlate to the maximum anticipated input. The scaling for each of the sensors is indicated on the face of the sensor and can be adjusted using a standard screwdriver.



Typical Installation



Determination of Scaling

When the current transducer is installed and wired as shown above, the span potentiometer must be adjusted to the expected maximum primary amperage. Formulas are used to determine software scaling.

For current output:

$$\text{Amps/mA} = \text{max. expected amps} / 16$$

$$\text{Primary sensed amps} = (\text{mA output} - 4) * (\text{Amps/mA})$$

For voltage output:

$$\text{Amps/V} = \text{max. expected amps} / 5$$

$$\text{Primary sensed amps} = (\text{V output}) * (\text{Amps/V})$$