

Veris Application Note

Monitoring Loads Above 2400A with Enercept Power Meters



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.

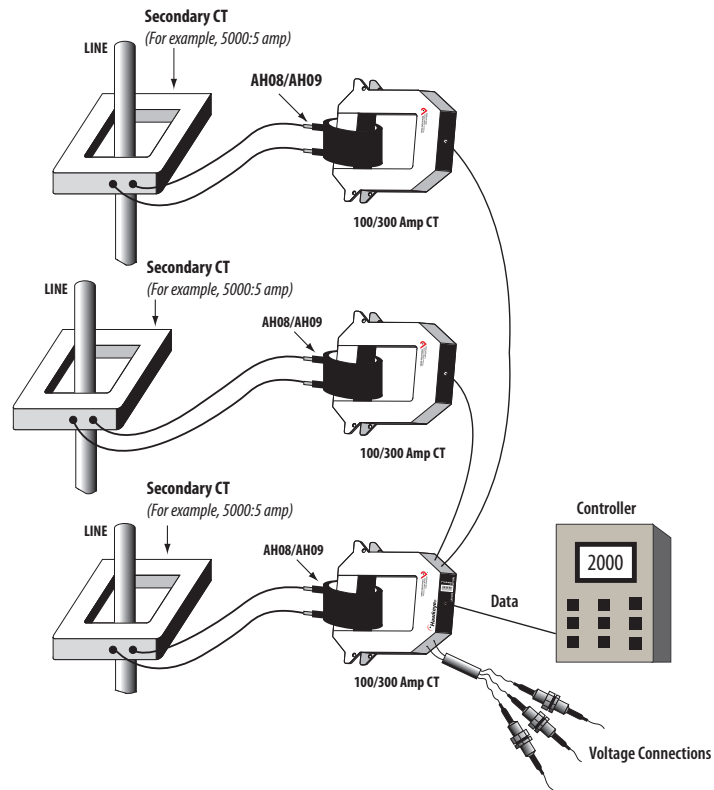
Failure to follow these instructions will result in death or serious injury.

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

Multi-turn coils are intended for use in applications where the monitored load exceeds the 2400A rating of standard power meters. A 5A current transformer is applied to the primary, high-current conductor. The coil then amplifies this 0-5A signal for accurate sensing by a power meter.

The AH08 is a 20-turn coil suitable for 100A meters, such as the 100A Enercept. The AH09 is a 60-turn coil used with 300A meters, such as the 300A Enercept or the H8100 Commercial Energy Meter.



If the meter reports 40 Amps, the actual amperage of the load in the example is 2000 Amps.

To correctly interpret data reported by the energy meter, use a data multiplier:

Data multiplier = primary current on the 5A transformer / current rating of the meter

*Actual current = data multiplier * meter reading*

Example: Using a 100A meter and a 20-turn coil to monitor a 5000A conductor produces a meter reading of 40A.

multiplier = 5000A / 100A = 50

actual current = 50 * 40A = 2000A

Note: When using a multi-turn coil, it is necessary to scale some of the output to account for this: kWh, kW, kVA, kVAR, Amps.