

Installation Instructions

H748

Solid-Core Adjustable Current Switch w/SPDT Command Relay



H748

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• *This product is not intended for life or safety applications. This product is not intended for installation in hazardous or classified locations.*

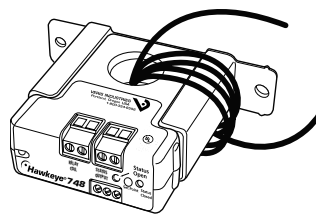
• *Potential electrocution hazard exists. Installing sensors in an energized motor control center or on any energized conductor can be hazardous.*

• *Read instructions thoroughly prior to installation*

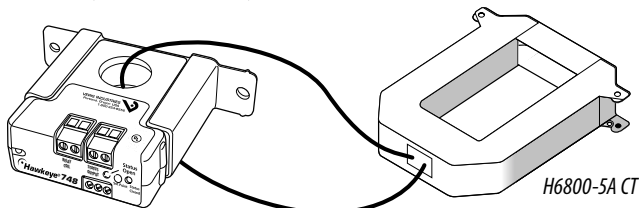
Severe injury or death can result from electrical shock during contact with high voltage conductors or related equipment. Disconnect and lock-out all power sources during installation and service. Applications shown are suggested means of installing sensors, but it is the responsibility of the installer to ensure that the installation is in compliance with all national and local codes. Installation should be attempted only by individuals familiar with codes, standards, and proper safety procedures for high-voltage installations.

INSTALLATION NOTES

1. For currents less than 1 Amp: To provide adequate current, wrap the conductor through the center hole and around the sensor body to produce multiple passes and increase measured current. • Measured current = Actual current times the number of passes.



2. For currents greater than 135 Amps: In order to monitor currents greater than 135 Amps, a 5 Amp current transformer may be used. Run the CT secondary wire through the current sensor. Terminate the two secondary wires of the 5 Amp CT to each other. Then install the 5 Amp CT (H6800 Series) on the conductor being monitored. **CAUTION: CT's can contain hazardous voltages. Install CT's in accordance to manufacturers specifications and instructions. (Terminate the secondary CT before applying current through it.)**



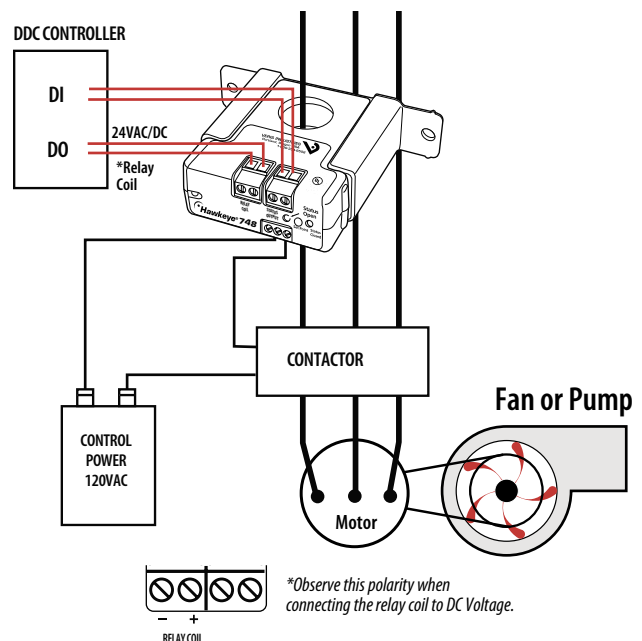
INSTALLATION

1. Ensure power conductor to be monitored is disconnected and locked out
2. Install the adjustable mounting bracket to the back of the electrical enclosure.
3. Slide the conductor to be monitored through the sensing hole of the current switch. Terminate the conductor.

NOTES:

- To monitor current under 1 Amp please see installation note #1.
 - To monitor current above 135 Amps please see installation note #2.
4. Wire the Current Switch/Command Relay as shown below.
Note: Current switch contacts are solid state and work just like dry contacts. When the switch is closed 1 Ohm is present. When the switch is open, more than 1 Meg Ohm is present.
 5. Calibrate the current switch (see calibration section pg. 2)

WIRING EXAMPLE



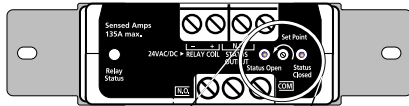
CALIBRATION AFTER INSTALLATION

Orient the current switch so the status output terminal is facing you and follow method (A) (undercurrent) or (B) (over-current), below. The monitored motor must be running normally.

A. For under current status indication: (Belt loss, coupling shear, fan & pump status)



STEP 1: Turn the setpoint screw clockwise until the Status Closed LED turns off and the Status Open LED turns on.



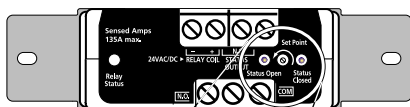
STEP 2: Slowly turn the setpoint screw counter-clockwise until the Status Closed LED turns on and the Status Open LED turns off.

STEP 3: Turn the setpoint screw 1/4 turn more counter-clockwise to create a grace margin.

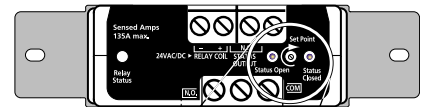
STEP 4: The sensor is now calibrated to provide indication of current flows below normal full load amps.

Output Status:
Normal: Output Closed
Alarm: Output Open

B. For over current status indication: (Locked rotor, seized impeller)



STEP 1: Turn the setpoint screw counter-clockwise until the Status Open LED turns off and the Status Closed LED turns on. (Sensor should be in this state right out of the box.)



STEP 2: Slowly turn the setpoint screw clockwise until the Status Closed LED turns off and the Status Open LED turns on.

STEP 3: Turn the setpoint screw 1/4 turn more clockwise to create a grace margin.

STEP 4: The sensor is now calibrated to provide indication of current flows above normal full load amps.

Output Status:
Normal: Output Open
Alarm: Output Closed

SPECIFICATIONS

| | |
|-----------------------------|-------------------------------------|
| Amperage Range | 1-135A Continuous |
| Sensor Supply Voltage | Induced from monitored conductor |
| Relay Coil | 24VAC/DC 10mA |
| Relay Contact | SPDT: 8(3.5)A@250VAC, 30VDC, 1/4 HP |
| Isolation | 600VAC rms. |
| Temperature Range | -15° to 60° C |
| Humidity Range | 0-95% non-condensing |
| Status Output Ratings..... | N.O. 1.0A@30VAC/DC |
| | not polarity sensitive |
| Off-state Leakage..... | 0 (open switch represents 1+ MEG |
| | ohms of resistance) |
| Listings | UL508 E150462 |



TROUBLESHOOTING

1. **The unit will not come on at all.**
 - A. Check to be sure that no more than 30VAC/DC or 0.1A has passed through the contact. Voltages or currents above these levels will damage the unit.
 - B. Verify that the conductor you are monitoring is carrying at least 1 Amp. If the sensor is monitoring less than 1 Amp, employ installation note #1 (pg. 1)
2. **Set-point screw has no stops. Keeps turning.**
 - A. The 20 turn set-point screw has a slip clutch which prevents damage at either end. To start the calibration process over again turn the screw 20 full turns counter-clockwise. This sets the device in its original and most sensitive position. Resume calibration from the beginning.
3. **Both LED's are lit.**
 - A. If the setpoint screw has been turned too far to the right the user will be notified that the current switch is out of calibration by seeing both LED's lit. To correct this, turn the set-point screw 20 full turns counter-clockwise and resume calibration from the beginning.
4. **Relay chatters or will not change states.**
 - A. Ensure that not more than 24VAC/DC has been applied to the relay coil.
 - B. Parallel applications with AC transformers can damage the relay.

Please use appropriate snubbing device. (for more information, see veris.com for application note VN01)