Product Overview

The H908 is a current-sensitive switching device that monitors current (amperage) in the conductor passing through it. A change in amperage in the monitored conductor that crosses the switch (setpoint) threshold plus the hysteresis value causes the resistance of the FET status output to change state, similar to the action of a mechanical switch. In this model, the setpoint is adjustable through the action of a twenty (20) turn potentiometer (see the CALIBRATION section). The status output is suitable for connection to building controllers or other appropriate data acquisition equipment operating at up to 30 volts. The H908 requires no external power supply to generate its output.

The H908 housing offers unprecedented mounting flexibility. The mounting bracket can be attached in three different places. Additionally, the bracket is compatible with the Veris AH01 DIN Rail clip, allowing DIN mounting.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Sensor Power</td>
<td>Induced from the monitored conductor</td>
</tr>
<tr>
<td>Amperage Range</td>
<td>2.5 to 135 A continuous</td>
</tr>
<tr>
<td>Status Output Ratings</td>
<td>N.O. 1.0 A@30 VAC/DC, not polarity sensitive</td>
</tr>
<tr>
<td>Insulation Class</td>
<td>600 VAC RMS (UL); 300 VAC (CE)</td>
</tr>
<tr>
<td>Setpoint</td>
<td>Adjustable, 2.5 A or less</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>-15° to 60°C (5° to 140°F)</td>
</tr>
<tr>
<td>Humidity Range</td>
<td>10-90% RH non-condensing</td>
</tr>
<tr>
<td>Hysteresis</td>
<td>10% typical</td>
</tr>
<tr>
<td>Off State Resistance</td>
<td>Open switch represents &gt;1 MΩ</td>
</tr>
<tr>
<td>On State Resistance</td>
<td>Closed switch represents &lt; 200 mΩ</td>
</tr>
<tr>
<td>Terminal Block Wire Size</td>
<td>24 to 14 AWG (0.2 to 2.1 mm²)</td>
</tr>
<tr>
<td>Terminal Block Torque</td>
<td>3.5 to 4.4 in-lbs (0.4 to 0.5 N-m)</td>
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</table>

**COMPLIANCE INFORMATION**

- **Agency Approvals**: UL508 open device listing, CE: EN61010-1
- **Installation Category**: Cat. III, pollution degree 2

For applications requiring double or reinforced insulation, please contact the factory. The product design provides basic insulation only. Do not use the LED indicators as evidence of applied voltage.
**Installation Guide**

**Current Monitoring**

**H908**

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**Dimensions**

![Dimensions Diagram]

**Installation**

**Disconnect and lock out power to the enclosure containing the conductor to be monitored.**

1. Locate a mounting surface for the removable mounting bracket that will allow the monitored conductor to pass through the center window when it is installed and that will keep the product at least \( \frac{1}{2}" \) (13 mm) from any uninsulated conductors. Determine cable routing for the controller connection, allowing the wiring to reach the mounting location.

2. Drill holes to mount the bracket to the chosen surface using the included screws.

3. Wire the output connections from the sensor to the controller (solid-state contact).

4. Snap the sensor over the conductor and clip the assembly to the mounting bracket.

5. Secure the enclosure and reconnect power.

6. Calibrate the sensor with the load running normally.
Notes

For load currents greater than sensor maximum rating:

Use a 5 Amp (H68xx series) current transformer (CT) as shown. This technique can be combined with wrapping (see below) to add range for a low current load on a high current source.

![Diagram of current transformer setup](image)

**CAUTION**

**RISK OF EQUIPMENT DAMAGE**

- Derate the product's maximum current for the number of turns through the sensing window using the following formula.
- Rated Max. Amperes ÷ Number of Turns = Max. monitored Amperes
- E.g.: 100A ÷ 4 Turns = 25 Amps max. in monitored conductor
- Failure to follow these instructions can result in overheating and permanent equipment damage.

DANGER: 5A CTs can present hazardous voltages. Install CTs in accordance with manufacturer's instructions. Terminate the CT secondary before applying current.

For load currents less than sensor minimum rating:

Wrap the monitored conductor through the center window and around the sensor body to produce multiple turns. This increases the current measured by the transducer. Program the controller to account for the extra turns (e.g., if four turns pass through the sensor (as shown) divide the normal reading by 4).

![Diagram of conductor wrapping](image)
**Installation Guide**
**Current Monitoring**
**H908**

**Calibration**

Before beginning calibration, establish normal load conditions. Then choose either A or B below.

**A. To monitor under-current (belt loss, coupling shear, status)**

1. Turn setpoint screw clockwise until Status Open LED turns on.

2. Slowly turn the screw counter clockwise until the Status Closed LED turns on.

3. Turn the screw an additional ¼ turn counter clockwise for operational margin.

**B. To monitor over-current (mechanical problems, seized impeller)**

1. Turn setpoint screw counter clockwise until Status Closed LED turns on.

2. Slowly turn the setpoint screw clockwise until the Status Open LED just turns on.

3. Turn the setpoint screw an additional ¼ turn clockwise for operational margin.

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**Troubleshooting**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
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</table>
| No Reading at Controller | • Check sensor calibration (see above)  
                          | • Check for amperage in monitored conductor (> 2.5A)  
                          | • Assure that sensor core mating surfaces are clean and that the core clamp is completely closed |
| Setpoint screw has no stops | The setpoint screw has a slip-clutch at both ends of its travel to avoid damage. Twenty turns CCW will reset the sensor to be most sensitive. Repeat calibration above. |
| Both LEDs are lit       | Setpoint screw is too far clockwise. See solution above.                  |