HCSA High Current Sensor

HCSA is a high-performance current sensor offering outstanding features and durability at low cost.

HCSA monitors AC for high current, with analog output, and two sense ranges. The industry-standard 4–20mA analog output is electrically isolated from the circuit being monitored and the sensor is completely self-contained in a compact package.

Suitable for a wide range of applications to provide predictive diagnostics on equipment, over-current detection and energy reduction.

HCSA sensors can be used to accurately monitor the operation and status of fans, pumps, and other equipment.

Sense Mode

HCSA is a loop powered current transducer with 4–20mA linear output. Output is directly proportional to the current passing through the torroid.

**FEATURES**

- Accurate current sensing for proportional 4–20mA analog output over power supply range of 12–40VDC
- Analog output isolated from sensed current input for safety
- Reverse polarity protection
- LED indicator shows output on (brighter=more current)
- 100% solid state with no moving parts to fail
- Easy installation with one mounting screw or bolt
- Compact 2”x2” package
- 100% Calibrated and tested before shipping
- Totally encapsulated for protection from harsh environments
- 100% operational testing
- RoHS compliant

Timing Mode: **CURRENT LOOP TRANSMITTER**

Category: **AC CURRENT SENSOR**

Series: **HCSA**

**4–20mA CURRENT SENSOR**
**SPECIFICATIONS**

- **Sensed Current Range**: 1A to 10A or 2A to 20A
- **Current Loop Voltage**: 12VDC to 40VDC
- **Current Loop Range**: 4mA to 20mA
- **Response time**: 50mS max
- **Accuracy**: +/- 5% typ.
- **Linearity**: +/- 2%, typ.
- **Operating Temperature**: -25°C to +60°C
- **Packaging**: 2”x2” encapsulated circuitry with 0.25” QC terminals

Current Loop Transmitter with Current Transformer input
Full wave rectifier followed by average detector
LED luminosity proportional with Loop Current

**OPTIONS SELECTION**

<table>
<thead>
<tr>
<th>Mode of Operation</th>
<th>Series</th>
<th>Sensed Current</th>
<th>Input Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>4–20mA Current Sensor with Analog Output</td>
<td>HCSA</td>
<td>10 1–10Amps 20 2–20Amps</td>
<td>12–40VDC</td>
</tr>
</tbody>
</table>

**EXAMPLE** **HCSA 10** 4–20mA current sensor with analog output, 12–40VDC input and 1–10Amp AC current sensing