



*Representative photograph, actual product appearance may vary.*

*Due to regional agency approval requirements, some products may not be available in your area. Please contact your regional Honeywell office regarding your product of choice.*

## CSNE151

**CSN Series closed loop current sensor, measures AC, DC or impulse current, 25 amp-turns nominal,  $\pm 36$  amp-turns range, smaller housing, 1000 turn**

### Features

- Current sensing up to 1200 amps
- Measures ac, dc and impulse currents
- Competitive cost/performance ratio
- Rapid response
- High overload capability
- High level of electrical isolation between primary and secondary circuits
- Industrial operating temperature range
- Small size and weight

### Typical Applications

- Variable speed drives
- Overcurrent protection
- Ground fault detectors
- Current feedback control systems
- Robotics
- UPS and telecommunication power supplies
- Welding power supplies
- Automotive - Battery management systems
- Wattmeters

### Description

The CSN Series of closed loop current sensors are based on the principles of the Magnetoresistive or Hall effects, and the null balance or zero magnetic flux method (feedback system). The magnetic flux in the sensor core is constantly controlled at zero. The amount of current required to balance zero flux is the measure of the primary current flowing through the conductor, multiplied by the ratio of the primary to secondary windings. This closed loop current is the output from the device and presents an image of the primary current reduced by the number of secondary turns at any time. This current can be expressed as a voltage by passing it through a resistor.



## CSNE151

CSN Series closed loop current sensor, measures AC, DC or impulse current, 25 amp-turns nominal,  $\pm 36$  amp-turns range, smaller housing, 1000 turn

| Product Specifications       |                                                     |
|------------------------------|-----------------------------------------------------|
| Sensor Type                  | Closed Loop Linear                                  |
| Sensed Current Type          | ac or dc                                            |
| Sensed Current Range         | $\pm 36$ A                                          |
| Package Style                | Series Connect PCB Mount                            |
| Output Type                  | Current                                             |
| Maximum Continuous Current   | $\pm 36$ A                                          |
| Supply Current               | $\pm 10$ mA + output                                |
| Supply Voltage               | $\pm 15.0$ Vdc                                      |
| Offset Current               | $< \pm 0.15$ mA                                     |
| Offset Current Drift         | $< \pm 0.6$ mA                                      |
| Coil Resistance @ 70 °C      | 110 Ohm                                             |
| Response Time                | $< 1$ $\mu$ s                                       |
| Coil Turns                   | 1000                                                |
| Output Nominal               | 25 mA                                               |
| Operating Temperature Range  | 0 °C to 70 °C [32 °F to 158 °F]                     |
| Storage Temperature Range    | -40 °C to 90 °C [-40 °F to 194 °F]                  |
| Minimum Measuring Resistance | 100 Ohm                                             |
| Maximum Measuring Resistance | 320 Ohm                                             |
| Housing Material             | Glass-filled PBT (UL94-V0)                          |
| Mounting                     | PCB on 13 pins                                      |
| Pinout Style                 | 5 pin                                               |
| Accuracy                     | $\pm 0.5$ %                                         |
| Availability                 | Global                                              |
| Comment                      | Standard 25 A sensor with 5 integral primary turns. |
| UNSPSC Code                  | 411121                                              |
| UNSPSC Commodity             | 411121 Transducers                                  |
| Series Name                  | CSN Series                                          |





## **WARNING**

### **MISUSE OF DOCUMENTATION**

- The information presented in this product sheet (or catalog) is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**

© Copyright Honeywell Inc.1998-2006 All rights reserved.