

## Honeywell Sensing and Control

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### CSNE151-002

CSN Series closed loop current sensor, measures AC, DC or impulse current, 25 amp-turns nominal,  $\pm 43$  amp-turns range, high temperature, potted, 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.

Product Specifications	
Sensor Type	Closed Loop Linear
Sensed Current Type	ac or dc
Sensed Current Range	$\pm 43$ 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	-40 °C to 85 °C [-40 °F to 185 °F]

<b>Storage Temperature Range</b>	-40 °C to 90 °C [-40 °F to 194 °F]
<b>Minimum Measuring Resistance</b>	100 Ohm
<b>Maximum Measuring Resistance</b>	320 Ohm
<b>Housing Material</b>	Glass-filled PBT (UL94-V0)
<b>Mounting</b>	PCB on 17 pins
<b>Pinout Style</b>	7 pin
<b>Accuracy</b>	± 0.5 %
<b>Availability</b>	Global
<b>Comment</b>	Extended operating temperature range and 7 integral primary turns. Sensed current range only applies up to 70 °C.
<b>UNSPSC Code</b>	411121
<b>UNSPSC Commodity</b>	411121 Transducers
<b>Series Name</b>	CSN Series

*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.*