



### CSNE151-100



Actual product appearance may vary.

**CSN Series closed loop current sensor, measures ac, dc or impulse current, 25 amp-turns nominal,  $\pm 90$  amp-turns range, 1000 turn**

#### Features

- Current sensing up to 1275 amps (depending on product listing)
- 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

#### Potential 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	
Product Type	Closed Loop Linear
Sensed Current Type	ac or dc
Sensed Current Range	$\pm 90$ A
Package Style	Series Connect PCB Mount
Output Type	Current
Maximum Continuous Current	$\pm 50$ A
Nominal Operate Current @ 25 °C	25 A RMS
Supply Current	$\pm 12$ mA + output
Supply Voltage	$\pm 12.0$ Vdc to $\pm 15.0$ Vdc

Offset Current	< $\pm 0.15$ mA
Offset Current Drift	< $\pm 0.6$ mA
Coil Resistance @ 25 °C	66 Ohm
Response Time	< 0.2 $\mu$ s
Coil Turns	1000
Output Nominal	25 mA
Operating Temperature Range	-40 °C to 85 °C [-40 °F to 185 °F]
Storage Temperature Range	-40 °C to 90 °C [-40 °F to 194 °F]
Minimum Measuring Resistance	54 Ohm
Maximum Measuring Resistance	360 Ohm
Housing Material	Glass-filled PBT (UL94-V0)
Mounting	PCB on 11 pins
Pinout Style	4 pin
Accuracy	$\pm 0.5$ %
Availability	Global
Comment	Miniature 25 A sensor with four integral primary turns. (Accuracy guaranteed to 90 A.)
UNSPSC Code	411121
UNSPSC Commodity	411121 Transducers
Series Name	CSN