Model CLN-500 **Closed Loop Hall Effect**

Current Sensors

Description

Model CLN-500 is a closed loop current sensor that accurately measures DC and AC currents and provides electrical isolation between the current carrying conductor and the output of the sensor.

Features

- Noncontact measurement of high current
- Measures DC, AC and impulse currents
- Current sensing up to 400A peak
- Very fast response and high accuracy
- High overload capacity
- Light duty industrial housing
- Solid core with aperture

Applications

- Variable speed drives for motors
- Welding Equipment
- Power supply Equipment
- Measure and control system
- Over current protection
- Protection of power semiconductors

Electrical Specifications

	CLN-500	
Nominal current (I_N)	500 A rms	
Measuring range	0 to ±1200 A	
Sense resistor	**R. min.**	**R. max.**
with ±12V at ±1000 A peak	n/a	n/a
at ±1200 A peak	n/a	n/a
with ±15V at ±500 A peak	0 ohm	50 ohm
at ±1000 A peak	0 ohm	5 ohm
at ±1500 A peak	n/a	n/a
with ±18 V at ±1000 A peak	n/a	n/a
at ±1500 A peak	n/a	n/a
with ±24 V at ±500 A peak	10 ohm	130 ohm
at ±1200 A peak	10 ohm	25 ohm
Nominal analog output current	100 mA	
Turns ratio	1:5000	
Overall accuracy at 25°C	±0.5% of I_N	
Supply voltage (VDC)	±15 to ±24 (±5%)	
Dielectric strength (between the current carrying conductor and the output of the sensor)	6 kV rms/50 Hz/1 min.	

Accuracy-Dynamic Performance

Zero current offset at 25°C	±0.2 mA max.
Offset current temperature drift (between 0°C and +70°C)	±0.2 mA typ., ±0.3 mA max.
Linearity	better than ±0.1%
Response time	less than 1 µs
di/dt accurately followed	better than 50 A/µs
Bandwidth	0 to 100 kHz (-1dB)

General Information

Operating temperature	-40°C to +85°C
Storage temperature	-40°C to +90°C
Current drain (plus output current)	22 mA (at ±24V)
Coil resistance	50 ohm (at 70°C)
Package	flame retardant plastic case
Weight	340 grams
Mounting	Panel mount via 4 slots
Aperture size	1.02 inch dia. (26 mm)
Output connection	3 Faston terminals 0.248" x 0.031" (6.30mm x 0.80mm)
Output reference	To obtain a positive output on the terminal marked "O/P", aperture current must flow in the direction of the arrow (conventional flow)

Notes:

1. The temperature of the current carrying conductor should not exceed 100°C.

Mechanical **Dimensions**

All dimensions are in inches (millimeters)

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