Model CLSM-50 **Closed Loop Hall Effect**

Description

The Model CLSM-50 is a closed loop Hall effect 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

Applications

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

Electrical Specifications

CLSM-50

Nominal current (I_N)	±50 A rms
Current range	0 to ±400 A peak*
Nominal output current (I_M)	50 mA
Turns Ratio	1000 / 1
Measuring Resistance (R_M)	refer to table 1
Overall accuracy at 25°C	±0.5% of I_N
Supply voltage (Vdc)	±12 to ±18
Current consumption	15 mA + output current

*at ±18V power supply, Rm <1 Ω, 25°C

Accuracy-Dynamic Performance

Zero current offset at 25°C	< ±0.2mA
Offset current temperature drift (0°C to +70°C)	< ±0.25mA
Linearity	better than ±0.1%
Response time	better than 1µs
di / dt	better than 50A/µs
Frequency range	DC to 100KHz (-3dB)

General Information

Operating temperature	-25°C to +85°C
Storage temperature	-40°C to +100°C
Package	flame retardant plastic case, UL94V-0
Isolation voltage	5kV/50Hz/1 min.
Output reference	To obtain a positive output on terminal M, input current must flow in the direction of the arrow (conventional flow)
Weight	22 grams
Mounting	Designed to mount directly on PCB via through hole connection pins
Aperture size	0.256" x 0.512" (6.5 x 13 mm)

Notes:

1. Busbar temperature should not exceed 100°C.
2. The dynamic performance is the best when the busbar fills the aperture.
3. Due to continuous process improvement, all specifications are subject to change without notice.

Mechanical **Dimensions**

All dimensions are in inches (millimeters)

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Mechanical Dimensions

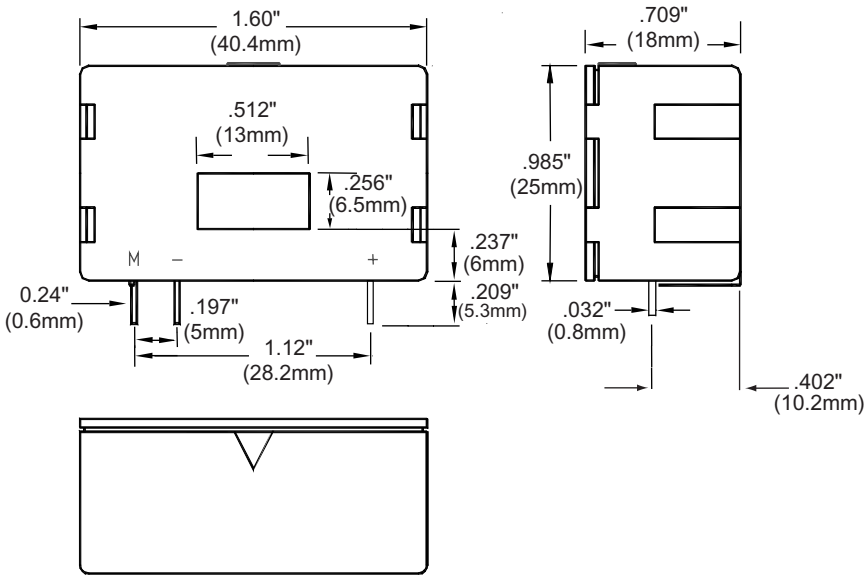
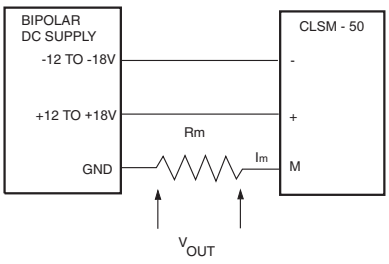


Table 1 (Rm Max)

At maximum input amps (peak) / Supply voltage	50 A	100 A	300 A	400 A
±12 V	70Ω	50Ω	–	–
±15 V	200Ω	80Ω	5Ω	–
±18 V	250Ω	100Ω	10Ω	1Ω

Connection Schematic



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