Model CLSM-50S   Closed Loop Hall Effect

Description

The Model CLSM-50S 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
- Moistureproof, Shockproof
- Noncontact measurement of high current
- Measures DC, AC and impulse currents
- Current sensing up to 400A peak [1]
- 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
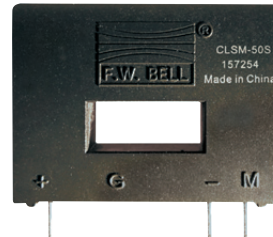
Electrical Specifications

CLSM-50S

Nominal current (I_N) .... ±50 A
Current range .... 0 to ±100 A
Nominal output current (I_M) .... ±50 mA
Turns Ratio .... 1000 / 1
Measuring Resistance (R_M) .... 0 to 100Ω
Overall accuracy at 25ºC .... ±0.5% of I_N
Supply voltage (Vdc).. ±12 to ±18
Current consumption .... 15 mA + Output current

Accuracy-Dynamic Performance

Zero current offset at 25ºC.. < ±0.2mA
Offset current temperature drift (0ºC to +70ºC) [2] .... < 0.3mA
Linearity .... better than ±0.1%
Response time .... better than 0.5µs
di / dt .... better than 50A/µs
Frequency range .... DC to 200KHz (-3dB)

General Information

Operating temperature .... -25ºC to +85ºC
Storage temperature .... -25ºC to +90ºC
Package .... flame retardant plastic case, UL94V-0
Isolation voltage .... 5kV/50Hz/min.
Output reference.. To obtain a positive output on terminal M, input current must flow in the direction of the arrow (conventional flow)
Weight ....28 grams
Mounting ....Designed to mount directly on PCB via through hole connection pins
Aperture size .... 0.276" x 0.630" (7 x 16 mm)

Notes:
1. With ±18V Rm <1Ω, at +25ºC, for 3 seconds only.
2. Excludes zero current offset
3. Busbar temperature should not exceed 100ºC.
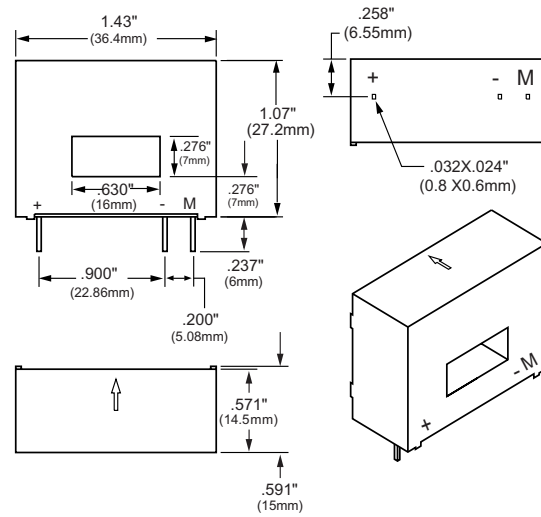4. The dynamic performance is the best when the busbar fills the aperture.

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Mechanical **Dimensions**

All dimensions are in inches (millimeters)

Model **CLSM-50S**

Mechanical Dimensions

1.43"
(36.4mm)

1.07"
(27.2mm)

.276"
(7mm)

.630"
(16mm)

- M

.276"
(7mm)

+

.900"
(22.86mm)

.237"
(6mm)

.200"
(5.08mm)

.258"
(6.55mm)

+

- M

.032X.024"
(0.8 X0.6mm)

.571"
(14.5mm)

.591"
(15mm)

- M

+

Connection Schematic

BIPOLAR DC SUPPLY	CLSM - 50S
-12 TO -18V	-
+12 TO +18V	+
GND	M

R_{SENSE}

Im

V_{OUT}

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