

Description

The Model CLSM-25M 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

- Fast Response
- Small Size, Low Cost
- High Overload Capacity
- Moistureproof, Shockproof
- Measures DC, AC and pulsed currents

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-25M**

Nominal current (I_N)	 $\pm 25A.t$ rms
Current range ⁽²⁾	 0 to $\pm 50A.t$ ($\pm 200A.t$ Peak) ⁽³⁾
Nominal output current (I_M)	 ± 25 mA
Turns Ratio	 1-2-3-4-/1000
Measuring Resistance (R_M)	 refer to table 1
Overall accuracy at 25°C	 $\pm 0.5\%$ of I_N Max.
Supply voltage (Vdc)	 ± 12 to ± 18
Isolation voltage	 5kV/50Hz/min.

Accuracy-Dynamic Performance

Zero current offset at 25°C	 $< \pm 0.15$ mA
Offset current temperature drift ⁽¹⁾ (between 0°C and +70°C)	 $< \pm 0.3$ mA
Linearity	 better than $\pm 0.1\%$
Response time	 less than 1 μ s
di / dt	 better than 50A/ μ s
Frequency range	 DC to 200KHz (-3dB)

General Information

Operating temperature	 -40°C to +85°C
Storage temperature	 -40°C to +90°C
Current consumption	 10 mA + output current
Secondary Internal Resistance (at 25°C)	 48 Ω
Package	 flame retardant plastic case, UL94V-0
Weight	 17 grams
Mounting	 Designed to mount directly on PCB via through hole connection pins
Output reference	 To obtain a positive output on terminal M, input current must flow in the direction of the arrow (conventional flow)

Notes:

1. Excludes zero current offset
2. The sensor offers a choice of 4 measuring ranges (refer to table 2 and mechanical dimensions)
3. With $\pm 18V R_M$, $< 1\Omega$, at +25°C, for 3 seconds only.
4. 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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Table 1 (Rm Max)

At max input amp turns (peak) Supply voltage	25 A.T.	50 A.T.	100 A.T.	200 A.T.
± 12 V	300 Ω	120 Ω	30 Ω	--
± 15 V	420 Ω	280 Ω	60 Ω	--
± 18 V	540 Ω	240 Ω	90 Ω	1 Ω

Connection Schematic

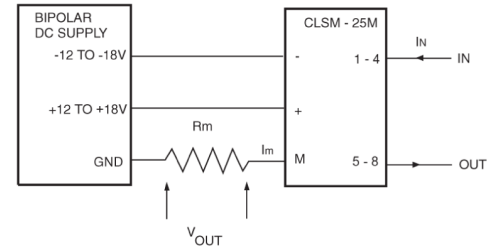
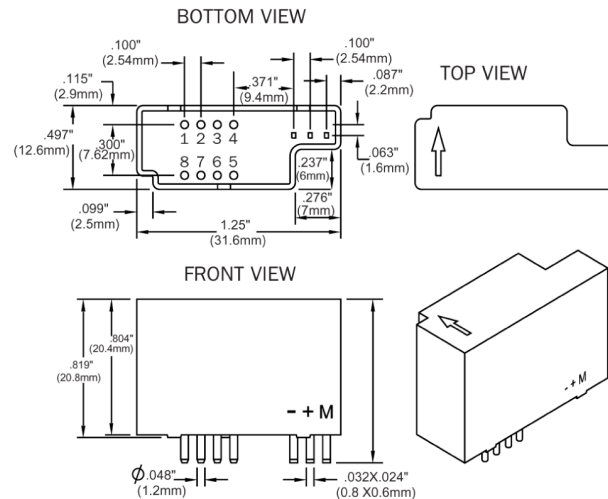


Table 2 Primary Turns (Input Pins) Connection

Primary Turns	Nom. Input Current (A)	Nom. Output Current (mA)	Turns Ratio	Input Resistance (m Ω)	Input Pins Connection
1	25	25	1/1000	0.1	
2	12	24	2/1000	0.7	
3	8	24	3/1000	1.5	
4	6	24	4/1000	2.3	

Mechanical Dimensions



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