

MS Series

Current Sensor

Current Sensors

Description

The miniature MS Series are current sensors that measures DC and AC currents and provides electrical isolation between the circuit being measured and the output. The unipolar power source, small size and low cost make them the most cost effective solution for Hall effect current sensing in the industry.

Features

- High accuracy
- Wide frequency range
- Excellent linearity
- Safety isolation
- P.C. board mount

Applications

- Industrial
- Ideal Replacement for Shunt or CT
- Battery Monitoring
- Load Monitoring at the point of Distribution
i.e. Mount on PCB, the back plane or fuse
- Automotive
- Appliances
- U.P.S. (Uninterruptable Power Supply)



Specifications

MS-15

MS-30

Electrical Data

Measurement Range	±15 AMPS	±30 AMPS
Sensitivity (at +25°C)	0.09 V/A to 0.14 V/A	0.03 V/A to 0.045 V/A
Overload Capacity	±25 AMPS	±45 AMPS
Supply Voltage (See Note 2)	+5.0 VDC ±0.5 V	
Isolation Between Primary and Output	1250 VRMS for 1 minute	

Accuracy - Dynamic Information

Zero Offset (at +25°C)	2.5V±0.3V
Linearity (at +25°C)	1% Typical
Zero Offset Drift	±2.0mV/°C
Gain Variation	±0.18%/°C
Frequency Range (See Note 1)	DC 20 kHz

General Information

Operating Temperature.....	-40°C to +85°C
Storage Temperature	-55°C to +95°C
Current Consumption	12 mA max
Output Burden	1mA source/10mA sink MAX
Enclosure	UL94-V0
Insulation Resistance	200M Ohm min at 1000V
Weight	8g nominal
Fastening.....	PCB Footprint (as shown on reverse)
Output Reference	A positive output signal is obtained when the primary current flows in the direction of the polarity arrow.

Notes:

1. Response time is affected by the proximity of the return conductor and ferrous metals.
It is best to test the sensor in the actual environment to obtain representative performance.
2. This device is ratiometric and sensitivity will vary with changes in supply voltage.
Percent variation in sensitivity can be calculated with the formula
$$\% \text{ sensitivity} = ((V_{DD}/5V) - 1) \times 100\%$$
3. Due to continuous process improvement, specifications subject to change without notice.

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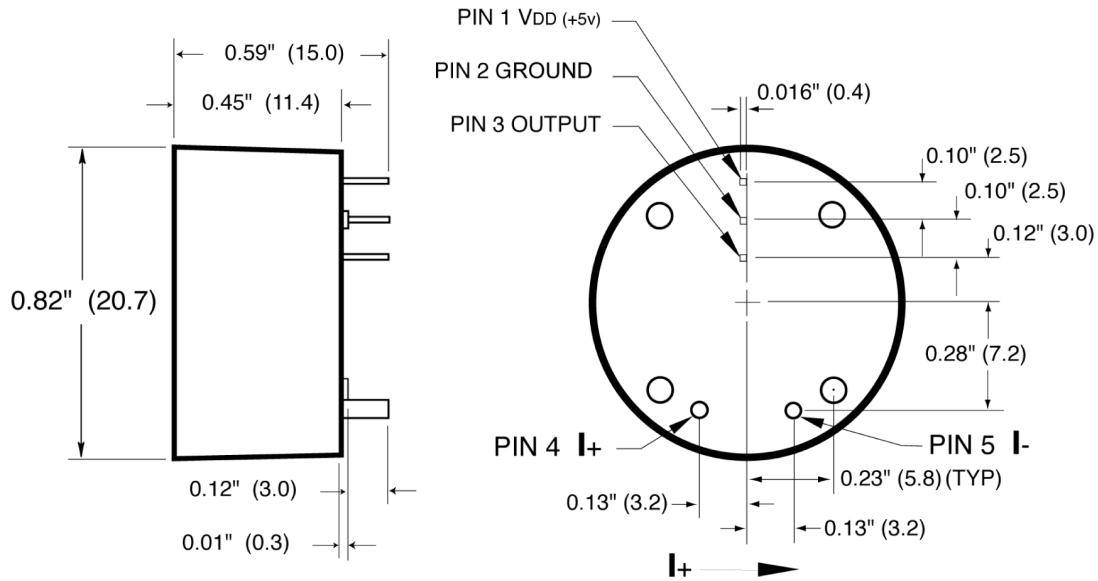


Rev. date 04/2003

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Mechanical Dimensions

All dimensions are in inches (millimeters)



Tolerance: $\pm 0.01"$ ($\pm 0.254\text{mm}$)

Pins 4,5: MS-15 (18 AWG)
MS-30 (13 AWG)

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