

## 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

### Electrical Data

	<u>MS-15</u>	<u>MS-30</u>
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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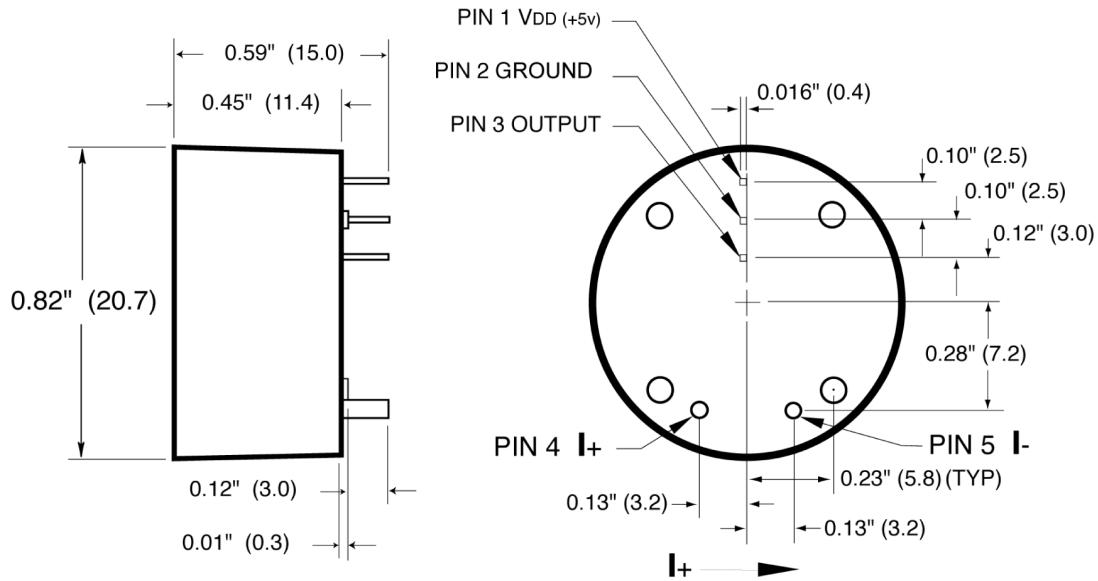


Rev. date 04/2003

# MS Current Sensor

## 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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