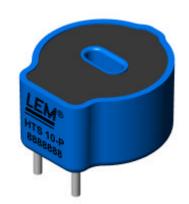


HTS 10-P Current Transducer

The HTS 10-P provides electronic measurement of AC, DC, pulsed, and complex currents with galvanic isolation between the primary (power) circuit and the secondary (measurement) circuit.



Electrical Data

Nominal Current 10 Arms
Measurement Range ± 15 A

Sensitivity @ 25°C (note 1) $VDD \cdot 20 = 100 \text{ mV/A } \pm 30\%$

Overload Capacity $\pm 25 \text{ A}$ for 15 seconds Supply Voltage (note 1) $5.0 \text{ Vpc} \pm 10\%$

Primary to Secondary Isolation 2500 V_{RMS} for 1 minute

Maximum Output (note 2) within 500 mV of each supply rail = 0.5 to 4.5 V

Accuracy-Dynamic Performances

Zero Offset @25°C (note 1) $VDD / 2 = 2.5 VDC \pm 12\%$

Linearity © 25°C < 0.8% typical, 1.2% maximum

Zero Offset Drift ± 2.0 mV/K maximum

Magnetic Offset ± 0.5 % after 45A peak overload

Magnetic Offset ± 0.5 % after 45A peak overload

Gain Drift ± 0.20 %/K maximum

Bandwidth, typical DC - 16 kHz (-3dB; 10 kHz @ -1dB)

Response Time, typical 25 µs (with 2 - 10 A/µs rising or falling edge)

General Data

Operating Temperature -40 to 85 °C Storage Temperature -55 to 95 °C

Current Consumption 12 mA max @ 5.5VDC Output Current (note 3) 1 mA source and sink

Enclosure and Potting UL Recognized materials meeting UL94-V0

Weight 5 grams nominal

Fastening PCB Footprint (as shown on page 2)

Output Reference A positive going output signal is obtained when the primary current flows from the I+ to I- pin.

Notes:

1) This device is ratiometric: sensitivity and offset vary in direct proportion to supply voltage.

2) Output linearity is not guaranteed within 500mV of the supply rails.

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3) Output loading to VDD or Vss must be = $5.1k\Omega$. Tested with $10k\Omega$ from OUT to Vss.

LEM reserves the right to carry out modifications on its transducers without prior notice.

6643 WEST MILL ROAD MILWAUKEE, WI 53218

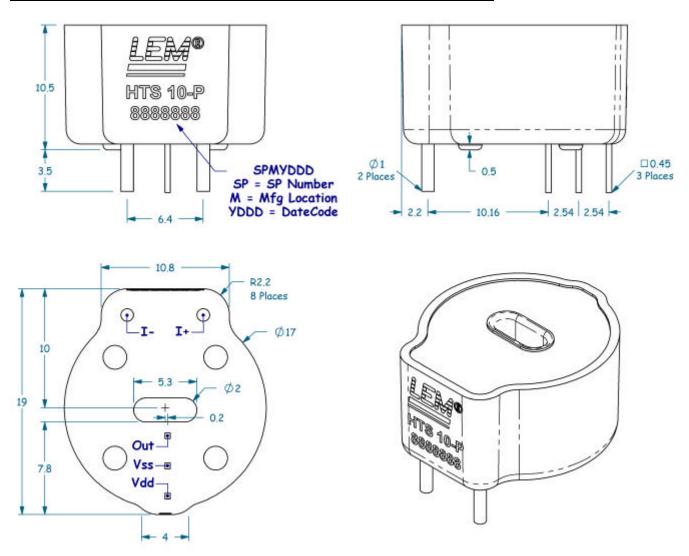
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Dimensions for the HTS 10-P in millimeters (1mm = 0.0394"):



Notes:

A positive going output signal is obtained when the primary current flows from I+ to I-.

Primary wires may also be used through the aperture. Sensitivity is reduced by a factor of 3. A positive going output signal is obtained when the primary current flows from bottom to top.

Optimum performance is attained with a $0.1\mu F$ capacitor between V_{DD} and V_{SS} and a 100pF capacitor between O_{UT} to V_{SS} , placed as close to the HTS 10-P pins as possible.

Recommended PWB hole diameters: 2 x 1.3 for primary, 3 x 0.8 for secondary.

This device is sensitive to electrostatic discharge (ESD) and must be handled appropriately.

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