

Press Information

May 2007

LEM's new isolated surface-mount current transducer family operates from single +5V supply

Key points:

- **Open-loop Hall-effect technology combined with ASIC**
- **Access to the internal voltage reference**
- **Small size and low cost for PCB SMD mounting**
- **Four ranges for measurements from 5 to 20 A_{RMS}**

LEM has extended its range of current transducer families designed to operate from a single +5V power supply with the introduction of the HMS model. The new unit measures only 16 (L) x 13.5 (W) x 12 (H) mm and integrates a primary conductor. It is directly surface-mounted onto a printed circuit board, reducing manufacturing costs.

Four standard models are available to cover nominal AC, DC, pulsed and mixed isolated current measurement of 5, 10, 15 or 20 A_{RMS}, up to 50 kHz, with a measuring span of up to $\pm 3 \times I_{PN}$. The same mechanical design is used for all four models so that they can be used to measure current across a complete range of end products.

The internal reference voltage (2.5V) is provided on a separate pin or can be forced by an external reference (between 2 and 2.8V) for reference thermal drift cancellation. Gain and offset are fixed and set so that, at I_{PN} , the output voltage is equal to Ref in or Ref out ± 0.625 V.

A unique LEM ASIC designed for use with open-loop Hall-effect technology has been used to provide performance improvements. These include better offset and gain drifts and linearity, in addition to an extended operating temperature range (-40 to +85°C) compared to traditional discrete technology.

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An additional version of the HMS transducer is being developed for PCB mounting through holes instead of surface mounting and will be available in the next few months.



The transducers are CE marked, conform to the EN 50178 standard and are recognised for industrial applications such as home appliances, variable speed drives, UPS, SMPS, power inverters (solar, wind, etc) and air-conditioners.

The HMS is supplied with a five-year warranty, as are all LEM industrial products.

LEM

LEM is a market leader in providing innovative and high quality solutions for measuring electrical parameters. Its core products – current and voltage transducers – are used in a broad range of applications in industrial, traction, energy, automation and automotive markets. LEM's strategy is to exploit the intrinsic strengths of its core business, and develop opportunities in new markets with new applications. LEM is a mid-size, global company with approximately 700 employees worldwide. It has production plants in Geneva (Switzerland), Machida (Japan), Beijing (China), plus regional sales offices, and offers a seamless service worldwide. Further information is available at: www.lem.com

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