



## PRESS INFORMATION

10 May 2016

### LEM LH current transducer range pushes Hall effect technology to new limits for small currents

**Key points:**

- **Closed-loop Hall effect ASIC-based current transducers measure from 25A up to 100A DC, AC or pulsed**
- **Exceptional overall accuracy up to 0.5% of  $I_{PN}$  over the temperature range**
- **Wide operating temperature range from -40 to +85°C**
- **PCB mounting**

LEM announces the LH family of transducers, a new range that can be mounted on printed circuit boards (PCBs) for non-intrusive, isolated measurements of DC, AC and pulsed currents from 25A to 100A nominal. The family consists of three new models: LH 25-NP, LH 50-P and LH 100-P.

These new transducers are based on LEM's latest leading-edge ASIC technology, which has been proven in the recently launched LF xx10 current transducer series. Used in a closed loop mode, the ASIC based on Hall effect technology enables comparable performance to higher-cost technologies such as fluxgate. This new family takes advantage of these benefits at lower currents such as 8, 12, 25, 50 and 100A nominal.

The LH 50-P and LH 100-P are designed for 50 and 100A nominal respectively, while the LH 25-NP is a multi-range model that can be configured for 8, 12 or 25A, providing the equivalent of three transducers in one device.

The new series breaks new ground, delivering up to 3.5 times greater global accuracy over the temperature range than the previous generation of Closed Loop Hall effect current transducers. The global accuracy up to 0.5% of  $I_{PN}$  is maintained over the entire temperature range from -40°C to +85°C, with a maximum offset drift of 0.1% of  $I_{PN}$ .

With comparable performance to fluxgate, engineers can achieve better control and increased system efficiency, enabling significant added value to the final application such as more accurate movement of robots or better energy consumption. These benefits can be realised while eliminating the drawbacks of fluxgate such as noise, the problems of start-up with primary current flowing and delays before restarting after an overload.

Operating from a dual supply voltage from +/- 12 to +/- 15V, the LH models can measure peak current up to 2.2 times the primary nominal current while responding quickly to a di/dt step with a response time of less than 0.5 µs.

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This new range is a fully compatible improved performance upgrade for the previous LEM LAH range, using the same footprint and providing the same functionality. It can therefore be easily retrofitted into old installations, offering a variety of compact sizes for each current range and without compromising the high insulation provided between the primary and measurement circuits.

Industrial applications such as variable speed drives, servo motor drives, uninterruptible and switch-mode power supplies, battery-supply installations, power supplies (particularly for welding systems), air conditioning, home appliances, static converters for DC motor drives, as well as robotics are integrating an increasing number of transducers. This allows engineering to achieve high levels of control and automation that improve the performance and energy efficiency of a wide range of products.

LH series current transducers are CE marked and conform to the EN 50178 standard, as well as being covered by LEM's five-year warranty.

#### **LEM – At the heart of power electronics**

LEM is the 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 drives & welding, renewable energies & power supplies, traction, high precision, conventional and green cars businesses. LEM's strategy is to exploit the intrinsic strengths of its core business, and to develop opportunities in existing and new markets with new applications. LEM is a mid-size, global company. It has production plants in Beijing (China), Geneva (Switzerland), Machida (Japan) and Sofia (Bulgaria). With its regional sales offices close to its clients' locations, the company offers a seamless service around the globe. LEM is listed on the SIX Swiss Exchange since 1986; the company's ticker symbol is LEHN

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