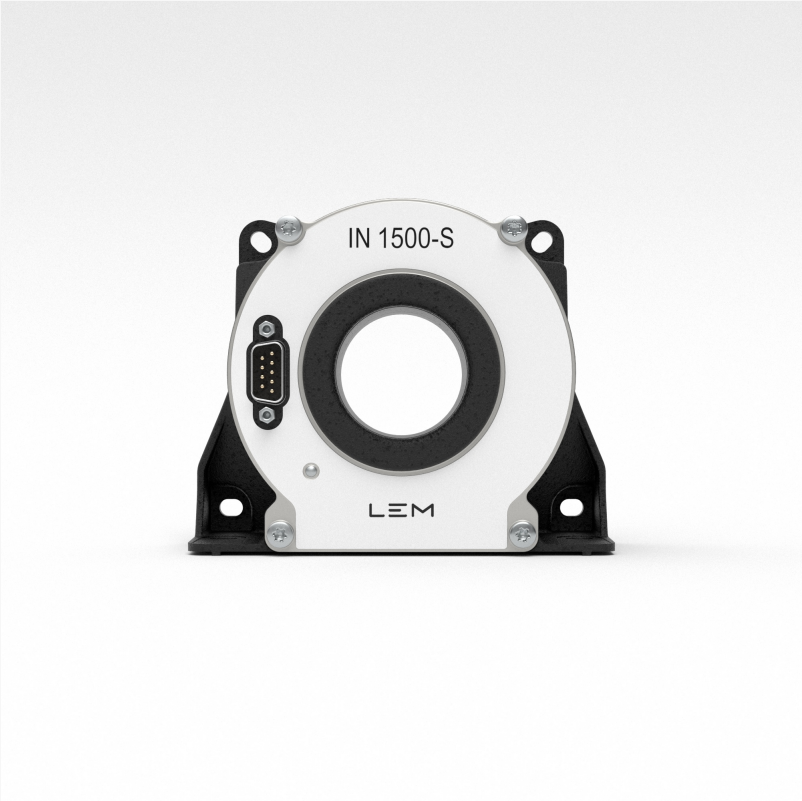
LEM reinforces leadership in high-precision segment with two new products, completing its IN family of current sensors

LEM continues to improve and innovate its existing IN product family of current sensors



LEM_IN 1500-S_Face

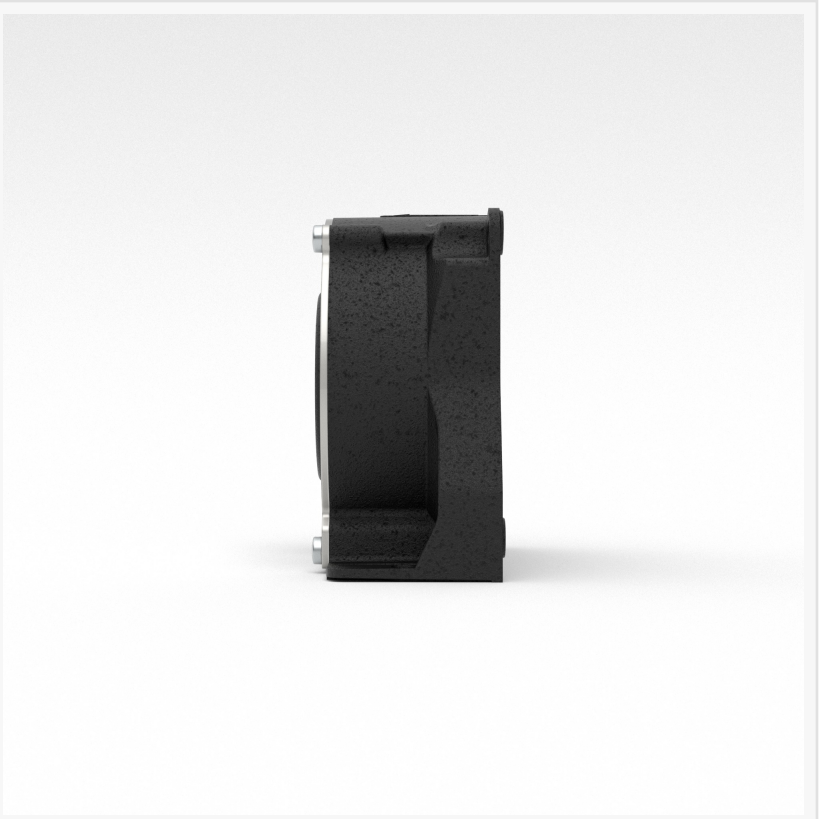
GENEVA, SWITZERLAND, April 30, 2025 /EINPresswire.com/ -- LEM (SIX: LEHN) Electrical measurement technology specialist LEM adds two new members to its IN family of current sensors, suitable for a range of demanding systems in the medical, test and measurement, energy metering and power sectors.

The IN 1500-S current sensor is specifically designed for high performance and precision in 1500A nominal current applications, while the IN 1000-SHF current sensor is suitable for applications requiring very wide bandwidth. The new products are the latest additions to the highly successful IN family of high-precision sensors, known for their high reliability in applications such as MRI, calibration units, power meters, and energy measurement.

“Our high-precision range of current sensors is a flagship of unparalleled expertise in electrical measurement - no competitor has the same range, with the same performances,” said Marco Locatelli, Global Product Manager for smart grid and high precision at LEM. “The IN 1500-S offers all the advantages of the IN family for 1500A nominal current applications, such as high accuracy and low noise, while IN 1000-SHF is our champion for high bandwidth.”

With IN 1500-S, the IN family for current sensing now boasts eight devices, and it is LEM’s most advanced high-precision range of current sensors yet, underpinned by LEM’s closed-loop current

transducers that use a highly-accurate zero-flux detectors based on LEM's fluxgate technology. The current sensors achieve ultra-high precision current measurements for DC, AC and pulsed currents.



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Using fluxgate technology in transducers for precise current measurement is not new; however, it has limitations linked to a ripple that stems from the excitation voltage. LEM's innovation takes fluxgate current transducers to previously unachieved performance levels through digital technology, gaining not only a major reduction of the ripple from the fluxgate driving signal but significantly improving the device's immunity to temperature effects, interference and supply voltage variation. In addition, LEM has used FPGAs for faster start-up, and the devices are also UL/UR certified for the Americas.

> Our high-precision range of current sensors is a flagship of unparalleled expertise in electrical measurement - no competitor has the same range, with the same performances"
>
> *Marco Locatelli, Global Product Manager for smart grid and high precision*

The IN family already boasts the IN 100-S, IN 200-S, IN 400-S, IN 500-S, IN 1000-S, IN 1200-S and IN 2000-S devices, for nominal currents of 100A, 200A, 400A, 500A, 1000A, 1200A and 2000A, respectively. Part IN 1500-S for 1500A now completes the lineup. All of them have a D-Sub 9-pin male interface connector, and large apertures for various sizes of cables and busbars. Their metal housing improves immunity to external interference and improves power dissipation. A status signal indicates the transducer's state and an LED indicator confirms normal operation.

Their other main characteristics, including that of the new IN 1500-S device, are:

- Best-in-class accuracy, with excellent linearity (to ±0.0002%) and minimum electrical offset;
- Broad frequency bandwidth: up to 2MHz @ ±3dB;
- Overcurrent and protection embedded in the design;
- Extended operating temperature range, between -40°C and +85°C, except IN 1500-S which

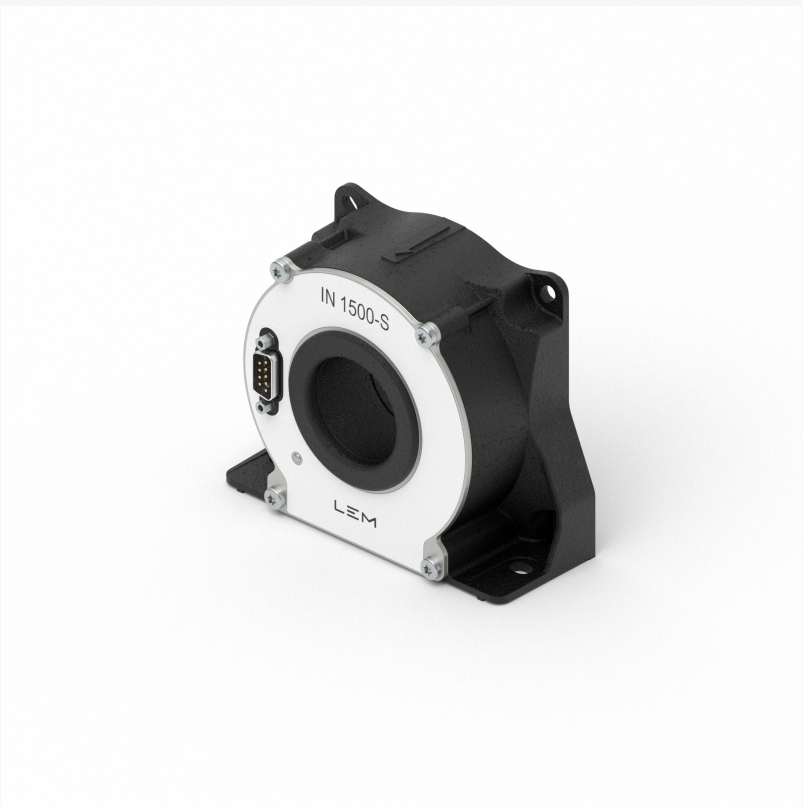
operates between -40°C and +50°C;
• Extremely high stability: up to 0.1ppm/month.

The second device LEM is launching now is the IN 1000-SHF, bringing a breakthrough in current measurement. IN 1000-SHF pushes the bandwidth to 2.5MHz (at ±3dB), with a delay time of just under 1ns (at 10% of nominal current) – that's a thousand times quicker than the IN 1000-S model and over five times the bandwidth. Electrical offset is improved by a factor of two, to ±5ppm at +25°C, temperature drift by a factor of three, to ±0.1ppm/K over its full operating temperature range, and the peak-to-peak noise level is under 0.218ppm – more than 82 times better than the standard IN 1000-S model. Current output is 1A at Ip = 1000A.

Its operating temperature range is -40°C to +85°C, and like with the IN 1500-S, an external LED shows its normal operation and there's an additional output to show the state of the transducer. It is offered in a compact package, suitable for flat or vertical panel mounting.

With these characteristics, and its extreme accuracy, this makes in IN 1000-SHF a unique offering on the market.

All LEM IN devices are suitable for a wide range of industrial, laboratory and medical applications, which require high-precision sensors, including:



LEM_IN 1500-S_WithBackground_0225

LEM - Leader in Electrical Measurement

- Feedback elements in high-performance gradient amplifiers for MRI;
- Feedback elements in high-precision, high-stability power supplies, in power analyzers and oscilloscopes;
- Calibration units;
- Energy measurement;
- Feedback element for power meters (e.g. EV test benches) and T&M equipment; and
- Medical equipment like various scanners.

LEM will show its extensive range of IN current sensors at PCIM, held in Nuremberg, Germany, from the 6th to the 8th of May 2025, in Hall 9 on Booth 202.

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LEM – Life Energy Motion
Leading the world in electrical measurement, LEM engineers the best solutions for energy and mobility, ensuring that its customers' systems are optimized, reliable and safe. With 1,700 people in over 17 countries transforming technology potential into powerful answers, LEM develops and recruits the best global talent, working at the forefront of megatrends such as renewable energy, mobility, automation and digitization. Through its innovative electrical solutions, LEM is helping customers and society accelerate the transition to a sustainable future. Listed on the SIX Swiss Exchange since 1986, the company's ticker symbol is LEHN.

Eden Shelley
Napier Partnership
+441243531123 ext.
eden@napierb2b.com
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