



Press Information

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900A current transducer from LEM sets new benchmark for accuracy and drift

Key points:

- **Excellent linearity with linearity error $\epsilon_L \leq 3\text{ppm}$**
- **Extremely low temperature drift with offset current temperature coefficient
 $\text{TCI}_{\text{OE}} < 0.3\text{ppm}/^\circ\text{K}$**
- **Very low output noise**
- **Wide frequency bandwidth of 200kHz**

LEM has introduced its new high accuracy ITL 900 current transducer for precise measurement of DC, AC and pulsed currents up to $\pm 900\text{A}$. The ITL 900 is the highest accuracy current transducer available on the market today, allowing more precise measurement and control of currents in wide range of industrial, medical and instrumentation applications.

The ITL 900 provides linearity error (ϵ_L) of less than or equal to 3ppm over an operating temperature range of +10 to +50°C, offset stability over four hours of less than 0.5ppm, offset current temperature coefficient (TCI_{OE}) of less than 0.3ppm/°K .

The new transducer offers a wide measurement bandwidth of more than 200kHz (-3dB), allowing fast current transients to be accurately measured. Other advantages include negligible self-magnetisation, a current overload capability, and galvanic isolation between the high-power primary circuit and the electronic secondary circuit.

The ITL 900 also has very low output noise, with random noise less than $15\mu\text{At}_{\text{rms}}$ and coherent noise of less than $50\mu\text{At}_{\text{rms}}$ at 50 or 60Hz. The ITL 900 works on an internal clock that can also be synchronised to an external clock signal, increasing immunity to periodic noise.

The new transducer is based on a double fluxgate closed loop technology that has been adapted and improved by LEM. Conventional transducers, based on open loop (uncompensated) Hall effect technology, cannot provide the extremely low non-linearity error, very low noise floor or low thermal

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offset drift required in many applications such as high performance gradient amplifiers for magnetic resonance imaging (MRI) or precision current-regulated devices like high accuracy power supplies, test bench power analysis calibration equipment, and laboratory and metrology equipment.

The ITL 900 is CE marked and is supplied with a five-year warranty, as are all LEM industrial products.

LEM – At the heart of power electronics

LEM is the global leader in providing innovative and high quality solutions for measuring electrical parameters. Its current and voltage transducers are used in a broad range of applications in industrial, traction, energy & automation and automotive markets. LEM is a high growth global company with approximately 950 employees worldwide. It has production plants in Geneva (Switzerland), Copenhagen (Denmark), Machida (Japan), Beijing (China) and regional sales offices close to its customers' locations. LEM has been listed on the SIX Swiss Exchange since 1986; the company's ticker symbol is LEHN.

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