PRESS INFORMATION

10 May 2016

LEM meets the demand for accurate and easy-to-install smart current sensors to empower the Internet of Energy (Smart Cities)

Key points:

- **NEW Split-core compact current transformers (ATO models) and split core thin, light, flexible Rogowski coils (ART models) for easy installation**
- **Class accuracy 1 & 3 according to IEC 61869**
- **Measurement of AC primary currents from 0 to 125 A for ATO models**
- **High rated insulation voltage (1000 V Cat III PD2 reinforced) for ART models**
- **Unique patented ART coil clasp Wide operating temperature range up to -40 to +80ºC (ART models)**

LEM introduces a new LEM City range of products for future Smart Cities offering innovative and high quality solutions for measuring electrical parameters in Smart Grids, Industry 4.0 and renewable energy market.

LEM has developed the “ART” Rogowski current sensor to measure current of up to 10000A AC and beyond. The ART achieves IEC 61869 Class 1 accuracy without the need for additional components like resistors or potentiometers, which can drift over time. In addition, the ART benefits from “Perfect Loop” technology, a unique patented coil clasp that eliminates the inaccuracy caused by sensitivity to the position of the conductor inside the loop as well as providing an innovative, robust and fast “Twist and Click” closure.

An internal shield is provided as standard to guard against external fields, improving accuracy and optimising performance for small current measurements.

The ART series provides the same ease of installation as existing split-core transformers, but with the benefits of being thinner and more flexible.

Whatever the chosen dimension - 70, 125 and 175 mm diameter for the aperture – the ART can be mounted very quickly by simply clipping on to the cable to be measured. Contact with the cable is not necessary, and the ART ensures a high level of safety as well as providing a high rated insulation voltage (1000 V Cat III PD2 - reinforced).

The ART also allows disconnection of the coil to be detected through the use of a security seal passed through a specially designed slot, making it really useful when used with a meter. It can be used in applications requiring a protection degree up to IP 67.

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To complete the LEM City product solutions for the AC current measurement up to 125 A, LEM has also created the ATO series of split-core current transformers in 2 mechanical designs, one with a 10 mm diameter aperture and one with 16 mm for the primary conductor. 32 models are available to accommodate different current ranges, and types of output (current or voltage).

Current output ATO models supply a ratio of 1 mA/A with a class accuracy 3 whilst the voltage output ATO models are available either with a ratio of 225 or 333 mV @ I_{PR} (rated primary current), with a class accuracy 1 according to IEC 61869 standard.

There is no need to disconnect the primary conductor carrying the current to be measured when installing the ATO as it can simply be clipped on. It is easy to fix it to the primary conductor thanks to a cable tie system integrated into the case. ATO models can also be mounted firmly in electrical cabinets on DIN Rails thanks to their DIN Rail adapter.

Intelligent electricity network (Smart Grid) applications such as Power Generators, Home Energy Management (HEM), Battery Monitoring Systems (BMS), Medium Voltage/Low Voltage Substations, Sub-metering, Electrical Vehicle Stations, Solar Power Plants integrate more and more current sensors to ensure reliable integration of distributed renewable energy, energy storage, production and consumption. This leads to the implementation of more current sensors to allow control rooms to automate, to monitor remotely and share real-time data of equipment.

ART and ATO series current sensors are CE marked and conform to the IEC 61869 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.

LEM City answers the demand for an accurate, reliable and easy-to-install energy sensor for future Smart Cities. LEM - at the heart of our planet's energy measurements.
www.lemcity.com

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