

PRESS RELEASE

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LEM introduces unique HOB-P high bandwidth current sensor that delivers unmatched performance for SiC MOSFET applications

Key points:

- **High cut-off frequency up to 1MHz**
- **Unique short response time of < 200 ns**
- **Open loop multi-range current sensor measures DC, AC or pulsed current up to 250A**
- **Galvanic separation between primary and secondary circuit**
- **Compact design for THT PCB mounting**
- **Low power consumption**
- **Ideal for harsh environments with operating temperature range from -40°C to +105°C**

GENEVA, Nov 23, 2021 – LEM, a leader in electrical measurement solutions, today announced the introduction of a unique new high bandwidth (1MHz) open loop sensor capable of current sensing in some of the harshest environments. This new addition completes the full range family of sensors offering the industry's best performance across four nominal currents. The low power consuming HOB-P series of current transducers was developed specifically to meet high bandwidth sensing requirements when using fast-switching silicon carbide (SiC) MOSFETs in high-voltage pulsed-power circuits where fast and flexible high-voltage pulses are essential.

With a market-leading response time of < 200 ns – compared to average response times of around 3 microseconds – the HOB-P sensor is capable of measuring DC, AC or pulsed current up to 250A. Thanks to a pick-up coil on LEM's application specific integrated circuit (ASIC), the sensor is capable of reacting like a current transformer. At the same time, it is ideally suited to wide bandgap (WBG) power electronics use cases and applications that require enhanced immunity to the dv/dt (acceleration) issues that SiC power modules are prone to. The new sensor delivers much better dv/dt behaviour and lower noise than other sensors on the market.





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Some of the extremely demanding applications that are perfect for LEM's new HOB-P unit – with its operating temperature range of -40°C to +105°C – include hand-held plasma cutters, welders and DC-DC converters.

Other applications are uninterruptible power supplies, switched mode power supplies, AC variable speed and servo motor drives, and static converters for DC motor drives.

Among the features that put the HOB-P sensor ahead of its competitors include galvanic separation between the primary and secondary circuit, an integrated busbar and a compact design that enables space-saving THT (through hole technology) PCB mounting. The new product range includes the HOB-P 50-P, HOB-P 75-P, HOB-P 100-P, HOB-P 130-P, with the four models covering nominal currents of 50 ARMS, 75 ARMS, 100 ARMS and 130 ARMS.

Bastien Musy, VP of Global Product Management for LEM says: "This sensor provides unmatched performance, combining a high bandwidth and a very short response time. It all started with a customer using high-frequency SiC MOSFETs who needed a top performance solution that delivered much faster response times and larger bandwidth in a smaller footprint. We are delighted that we were able to create an open loop solution that not only perfectly meets the requirements from the customer but also addresses broader market expectations."

The HOB-P series of transducers is CE marked and covered by LEM's five-year warranty.

LEM – Life Energy Motion

A leading company in electrical measurement, LEM engineers the best solutions for energy and mobility, ensuring that our customers' systems are optimized, reliable and safe. Our 1,500 people in over 15 countries transform technology potential into powerful answers. We develop and recruit the best global talent, working at the forefront of mega trends such as renewable energy, mobility, automation and digitization.

With innovative electrical solutions, we are helping our 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.

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