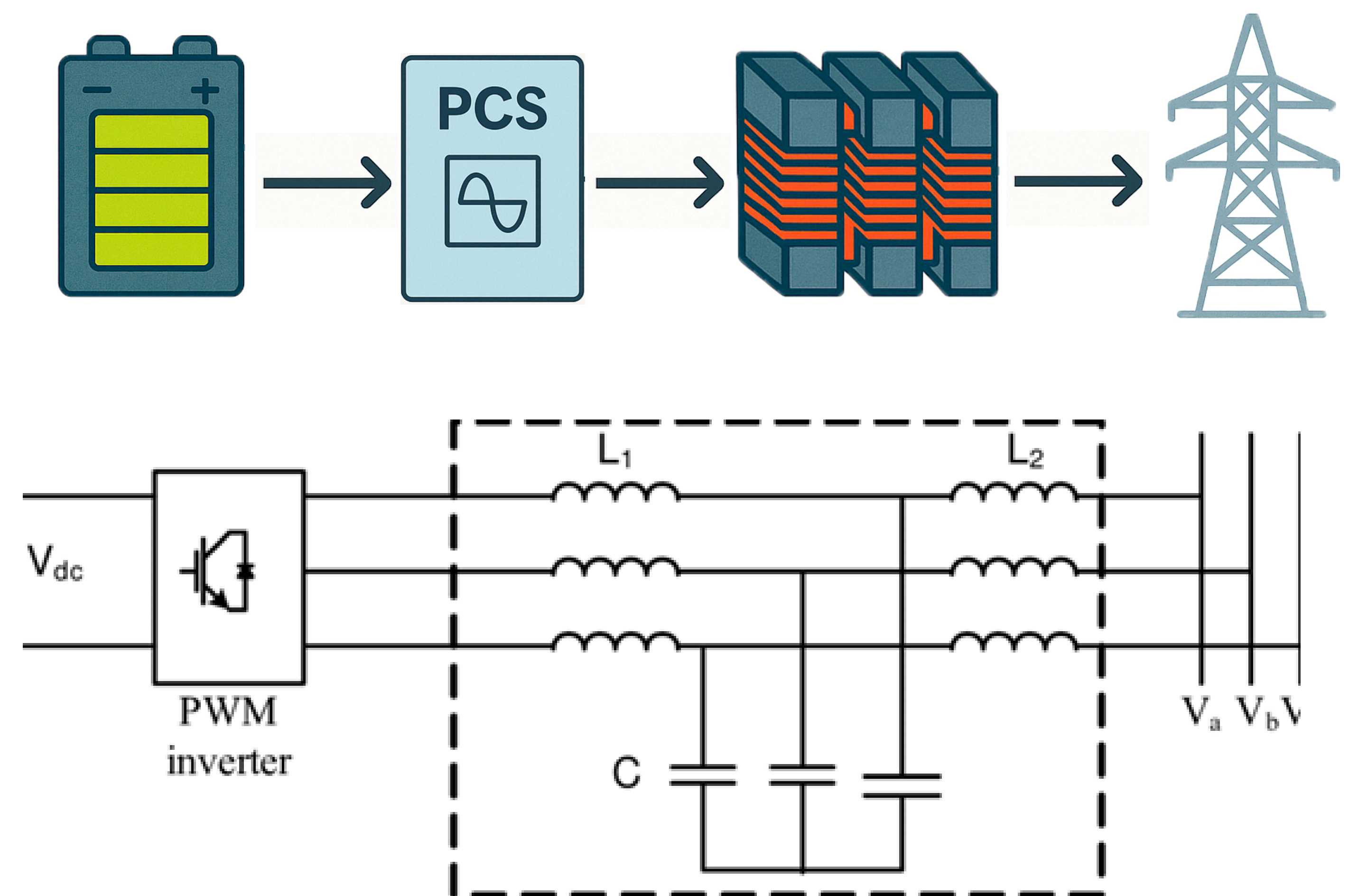


High-Frequency Filter Inductors for Power Conversion Systems

MARKET TRENDS

In battery energy storage systems (BESS), **power conversion systems (PCS)** are shifting toward **higher switching frequencies**. This raises current ripple yet enables smaller, more cost-efficient modules, which are crucial for the compact, scalable layouts BESS projects demand.

As a result, traditional laminated-core LCL filters are being replaced by **amorphous-metal**, **ferrite** and **powder-core** alternatives that excel at **high-frequency operations**, trimming both size and losses.



TYPICAL REQUIREMENTS

- Power Requirements: 50kW to 1MW.
- Nominal Voltages: 380V to 800V.
- Peak current: Up to 600A.
- Fundamental Frequency: 50/60 Hz.
- Operating Frequency: 15kHz to 40 kHz.
- High ripple currents.
- Good thermal management.

PRAX approach:

Custom high-frequency filter inductors

- Ferrite toroidal cores with Xgap technology + flat wires: Low inductance tolerance, core losses and better dissipation.
- Block cores of amorph material for low core losses and high permeability.
- Low inductance tolerances: <10%.
- Customizable design for meeting mechanical requirements.



Do you like this solution?

Please contact Heynen for distribution in BENELUX.

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