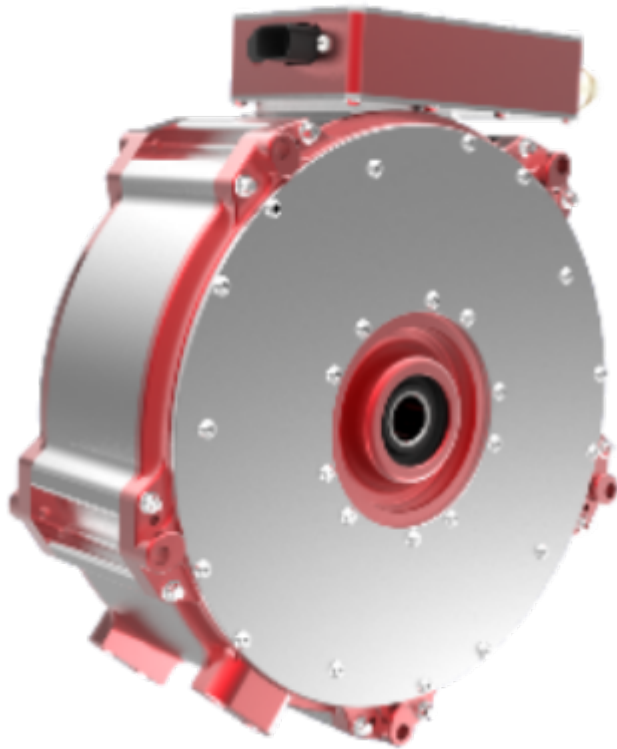


BM-HFMDB



SYNCHRO-SYM Technologies

– BM-HFMDB: Only Bi-directional, Multiphase, High Frequency, Electricity Micro-Distribution Bus –

Our Mission:

***Innovate For Our Clean, Efficient,
and Sustainable Energy Future!***

BM-HFMDB

BM-HFMDB → BOTTOM LINE UP FRONT:

BM-HFMDB is a *patented Isolated Bi-directional, Multiphase, High Frequency, electricity Micro-Distribution Bus* for electric vehicles, ships, solar farms, and wind farms, etc. with a new isolated electromagnetically symmetrical magnetic sharing circuit and control architecture that comprises modular, scalable, and versatile frequency, phase, and voltage level translation power conditioning nodes, which can be placed anywhere along its length with fault tolerance and considerably higher power density, lower harmonic content, higher efficiency, lower cost and fewer electronic stages in a system of systems (SoS) application, such as an electric vehicle, ship, train or airplane.

BM-HFMDB → DETAILS:

BM-HFMDB is a patented *isolated bi-directional, multiphase, high frequency, electricity micro distribution bus system* with a new electromagnetically symmetrical magnetic sharing circuit and control architecture that comprises compact, modular, scalable, isolated, common mode rejecting, and versatile frequency, phase, and voltage level translation power conditioning nodes in a system of systems (**SoS**), such as electric vehicles, ships, solar and wind farms, etc. With the micro-distribution bus as the intermediate stage (instead of a DC Link Stage), the power conditioning nodes are based on modified brushless multiphase self commutated controller (**BMSCC**) building blocks that require fewer electronic stages with considerably lower harmonic content (e.g., smooth sinusoidal or DC waveforms) and as a result, BM-HFMDB provides the highest efficiency and lowest cost electrical micro-distribution system for a SoS application, such as electric vehicles or airplanes.

Traditionally, three stage electronic power inverters, which comprise a DC Link Stage sandwiched between a first and second active stages of electronic switches, are placed along a micro-distribution bus, such as a DC bus, to service the system of systems (SOS) of an electric vehicle or ship system, such as electric motor, generator, and accessory systems, but only **BMSCC** can be modified as a power conditioning node comprising only a single stage (secondary or the primary stage) of power conditioning electronics with half of the PDF-HFT windings (e.g., secondary or primary) directly implementing BEM's patented *isolated bi-directional* multiphase, soft-switching high frequency, AC micro distribution bus (**BM-HFMDB**) as the intermediate stage. As a result, BM-HFMDB services the SOS with fewer electronic stages (e.g., *higher power density*), purer sinusoidal waveforms, lower cost, and higher efficiency.

BM-HFMDB → WHITE PAPERS:

[BALANCED MULTIPHASE HIGH FREQUENCY MICRO-DISTRIBUTION POWER
BUS
\(BM-HFMDB\)](#)
