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For Immediate Release



Alencon Systems Introduces the BOSS BOX and SPOT BOX – More Power, Greater Flexibility for DC Power Projects

New packaging and control options from Alencon via the BOX platform allow for more cost-effective and flexible deployments for large scale power projects requiring DC:DC conversion including solar plus storage, PV repowering, battery augmentation and EV charging



Figure 1: Alencon Systems is now deploying the BOSS BOX and SPOT BOX, highly configurable deployment form factors of its galvanically isolated DC:DC converters that offer the benefits of a centralized location with the flexibility, resiliency and serviceability offered from Alencon's more granular devices.

Hatboro, PA – Alencon Systems LLC is pleased to announce its latest innovations in DC:DC power conversion – the BOSS BOX and the SPOT BOX. These products are scalable, centralized units of DC:DC power conversion built on Alencon’s unique, galvanically isolated, bi-directional and uni-directional platforms. The BOSS BOX and SPOT BOX blend Alencon’s unique controls and hardware technology to offer project owners and developers the best of both worlds – the simplicity of a central location with the flexibility, granularity, resiliency and serviceability of modular components. The BOX platform targets projects requiring large amounts of DC:DC power conversion including large scale DC-coupled Solar + Storage, PV Repowering, EV charging, Battery Balancing and Energy Storage Augmentation among others.

“In a world where increased levels of DC power conversion are required due to the explosive growth of solar, storage and electric vehicles, the BOX line of products leverages the Alencon DC:DC platform’s unique galvanic isolation and control technology to easily scale to a project’s needs from hundreds of kilowatts to megawatts in a safe and cost-effective manner,” states Alencon Systems President Hanan Fishman.

“Using Alencon’s patented galvanically isolated building blocks, the BOX platform is able to map wide differences in DC voltage on either side of the device. The ability to map wide differences in voltage is absolutely critical to support a variety of DC based power applications from coupling solar and storage, repowering older PV systems, charging electric vehicles of all kinds and augmenting existing energy storage deployments with new and different battery chemistries.”

Alencon's DC:DC platform's galvanic isolation also allows project owners to place numerous BOSS and SPOT modules in parallel safely because each module has very little capacitance on its output, meaning the fault current contribution of even many BOSS or SPOT modules placed in parallel can be measured in microfarads. This unique feature leads to very low contributions of fault current to a DC system, which can be a challenging aspect of other manufacturers' large, non-isolated DC:DC converter offerings.

The BOX is outdoor rated and requires no externally provided auxiliary power sources. The BOX is cooled with forced air and leverages the outdoor rating of each of its component SPOT or BOSS modules. Since the BOX is made up of individual DC:DC converters, it has no field service parts. Individual BOSS or SPOT can easily be swapped out, leading to an unprecedentedly high level of resilience as even if there is a hardware failure, there will be very little impact on the performance of the overall system.

BOSS BOX

The BOSS BOX – where BOX is an acronym for “Battery Optimized Container” - is a bi-directional DC:DC conversion platform made up of a configurable number of Alencon’s 80 KW Bi-directional Optimizer for Storage Systems (BOSS) modules. Each BOSS BOX can be configured to scale power conversion from about 250 KW to 2.5 MW depending on project requirements. The BOSS BOX offers unprecedented levels of control, allowing varying levels of control from entire cabinets to individual DC:DC converters. This level of granular control can be particularly helpful in controlling batteries to the rack level while integrating them with large solar projects using the DC-coupled technique.

SPOT BOX

The SPOT BOX is a uni-directional DC:DC conversion platform made up of configurable number of Alencon’s 80 KW string power optimizer and transmitter (SPOT) modules. The SPOT BOX is a particularly cost effective solution for boosting voltage from aged 600 volt PV arrays to new 1000 or 1500 volt transformerless inverters. Other applications can also include the uni-directional charging of electrical vehicles from a centralized DC-bus or battery.

Quick to Deploy, Easy to Service

Both the BOSS BOX and SPOT BOX come pre-wired with appropriately sized copper busses to assure quick field installation. All individual BOSS or SPOT modules are installed on standard 19-inch racks with sliding trays and optional input/output fused

disconnects for quick installation and field service. The BOX form factors also offer a highly flexible level of control through the unique features of the ACE – the Alencon Communications Environment, including easy integration into third party energy management (EMS), supervisory control and data acquisition (SCADA) and other control systems via an intuitive, standardized Modbus TCP-IP interface

About Alencon Systems

Alencon's solutions for ALternative ENergy CONversion provide high modularity and scalability for systems from hundreds of kilowatts to \-hundreds of megawatts. By helping to dramatically reduce balance of system costs and increase power production through new inverter and energy harvesting technology, Alencon helps advance the state of the art and increase the financial viability of solar power. Headquartered in Hatboro, Pennsylvania, has been building PV power conversion hardware since 2009, drawing on the combined decades of power electronics experience of its engineering team.

Press Contact:

Alencon Systems Contact:

Hanan Fishman

President, Alencon Systems

Phone: (484) 436-0035 ext. 103

hfishman@alenconsystems.com

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