



## **Technical Note TN-006**

### **Load Management System**

ASEA Power Systems' shore power converters now provide a comprehensive Load Management System. Additionally, paralleled shore power converters now provide a Load Sharing system that manages the use of different capacity shore cords. The various features are discussed in detail below.

#### **Shore Cord Alarm**

The Shore Cord Alarm drives the Voltage Droop and Automatic Transfer to Generator features of the Load Management System. The user selects a percentage between 50% and 100% at which to begin alarming. This feature may be enabled or disabled by the user.

#### **Shore Cord Setup**

The actual shore cord amperage is selected by the user from a table of available, international shore cord sizes. This selection causes the converter to now display load level and alarm based on the true available shore cord energy. The new, actual converter capacity (if less than the converter's capacity) is displayed for reference.

#### **Load Sharing**

The slave converter of a paralleled converter system can be forced to draw less current than the master converter, if attached to a shore cord with lesser available power due to lower amperage, lower voltage, or different form (i.e. 1-Phase vs. 3-Phase). This is accomplished via Load Sharing which causes a sharing ratio between the converters identical to the ratio between the two shore cords (up 2:1).

#### **Voltage Droop**

If the yacht's electrical system does not include a power management system that allows for automatic load-shed, the converter's Voltage Droop feature may be used to save up to 10% capacity by reducing the converter output voltage up to 5% (1% to 5% range). This feature may be enabled or disabled by the user and droops upon Shore Cord Alarm.

#### **Automatic Transfer to Generator**

The converter system may be set to automatically transfer to generator (assuming the existence of the Seamless Transfer Option) upon Shore Cord Alarm. The Automatic Transfer would only occur after the Voltage Droop had taken effect if both were enabled. This feature may be enabled or disabled by the user. A signal generated by the converter may be used to start the selected generator. Also, a programmable warm-up delay is available.

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