

# 5 REASONS DIGITAL SWITCHING IS A YACHT NECESSITY

**PowerPlex<sup>®</sup>**





Yacht owners, like most luxury consumers, have high expectations. They want the very best and latest technologies, and an experience that meets today's interactive world of smart phones, homes, and cars. Yet, so many yachts still provide a user experience and foundation that's limited by outdated analog systems.

Now, yacht manufacturers have the tools needed to create a personalized, interactive experience for their customers through digital switching systems.

Fuses, mechanical circuit breakers and switches are replaced by a digital switching power distribution system that runs on a CAN bus network. Such systems use digital circuit control modules or virtual switches to operate various loads, providing a range of advantages for the yacht manufacturer, crew and owner alike.

Why should you, as the boatbuilder, make the shift to digital switching on your next yacht model?

## 1. THE USER EXPERIENCE MEETS THE MODERN WORLD

Digital switching systems may not be new to the marine industry, but advancements are making them the expectation of today's discerning yacht buyer. Instead of toggling switches, the boat's electrical and mechanical systems can be controlled and monitored using touch screen interfaces. And because these systems are built on a digital network, the GUI can be designed and customized to the specific customer or model line. Suddenly, traditionally complex interactions are now as simple as a swipe or tap of the finger.

With a digital switching system, relevant data for electrical loads, sensors, and operations are monitored, processed, and displayed in real time, making it easy to address issues as they

occur. Captains and crew can control systems like lighting and air conditioning, and monitor bilge pumps, batteries, and fresh water levels all from a single screen.

A user can program lighting and entertainment components to respond to a customized sequence. And, the complete electrical onboard system can be configured to operate in a pre-determined way using the scenario-functions such as night mode or cruising mode.

Better yet, certain digital switching systems – such as E-T-A's *PowerPlex*® – even allow on-the-go monitoring and control using a smartphone or other mobile device. Yacht owners and captains can turn on the courtesy or cabin lights before they board or check their security system while on shore.

## 2. THE SAVINGS IS MEASURABLE IN TIME, WEIGHT, AND DOLLARS

Traditional wired systems can weigh a yacht down with hundreds of feet of copper wire and cable. Digital switching systems, on the other hand, use significantly less wire, and eliminate the need for large, space-consuming AC/DC panels: all adding to a lighter, more efficient vessel.

While the weight savings is great, the real savings come from the ease of installation and maintenance. Traditional systems need to be wired much like your home with every switch requiring a corresponding wired connection, and holes being drilled everywhere a line needs to be run. With digital switching, the wire runs are minimal, less intrusive, and less prone to shorts or failures.

Even maintenance costs are reduced. If a problem occurs, digital systems can isolate the fault quickly and precisely. With conventional electrical systems with long wire runs, fixing a problem could take endless hours of troubleshooting. A digital system helps ensure your customer's time at the dock is minimized. Should one node or module fail, it can be quickly and easily replaced.

## 3. SIMPLIFIED INTEGRATION ALLOWS THE SYSTEM TO GROW

In today's tech-driven world, it's expected for a yacht to evolve with its owner. Traditionally, integrating and upgrading analog systems have been costly, time-intensive scenarios, and not aligned with current user behavior.

Digital switching allows flexibility not previously possible in analog systems. Accommodating new equipment becomes as simple as adding a new module or utilizing an I/O position not currently being used. And because these systems work on a CAN bus network, users can install, monitor, and control many other third-party components.

Most systems can even be integrated with a multi-function display so pumps, batteries, and other sensors can be viewed on the same screen as radar and chart plotter data.

Some digital switching manufacturers have made it even easier to support third-party systems. E-T-A's *PowerPlex*®, for instance, has a module called the Gateway which is used to integrate third-party products that may use another CAN bus protocol, and will monitor and isolate these systems and alert the crew if one of the boat's components fails.

## 4. THE MARINE ENVIRONMENT IS NOT A FRIEND TO ELECTRO-MECHANICAL SYSTEMS

The effects of salt air and water can wreak havoc on traditional electronics systems. Corrosion and rust can undermine connections and create vulnerabilities that may lead to system failures.

A digital switching system, however, removes a great deal of this vulnerability. Manufacturers use corrosion and shock resistant components, and there are fewer components to fail. Instead of mechanical circuit breakers, switches, and toggles, digital systems rely on solid-state digital circuit control modules with circuit breakers that protect against power surges and outages. When a problem does occur, like a light shorting out, the system will notify the captain or boat owner of the error and its location.

## 5. THE SUPPORT EXTENDS BEYOND THE YACHT

We've already discussed the benefits of a yacht owner or captain remotely monitoring and controlling the boat. From reviewing a yacht's status to activating lighting systems, such land-based 24/7 access provides priceless peace-of-mind.

But what about when outside assistance is required? No system is immune to failures, but digital switching systems can provide a degree of support not previously available. For example, E-T-A, can remotely view, isolate, and diagnose *PowerPlex*® system errors. Such tele-maintenance enables troubleshooting of very customer-specific issues, and drastically reduces downtimes, stoppages, and costs.

Now, yacht builders and buyers can have the assurance that support is available wherever and whenever it is needed.



# BUILDING THE YACHT OF TOMORROW

Let's face it; digital is here to stay. We live in a world of "smart" – from cars to televisions. Our phones are no longer expected to just be able to make a call; we expect interconnectivity in all facets of our engagement with modern electronics. Why would boat buyers expect anything less from their yachts?



**PowerPlex**<sup>®</sup>

## CONTACT US

1551 Bishop Ct.  
Mt. Prospect, IL 60056

**phone:** 1-800-462-9979

**email:** [usinfo@e-t-a.com](mailto:usinfo@e-t-a.com)

**website:** [powerplex.e-t-a.com/marine](http://powerplex.e-t-a.com/marine)

