

CASE STUDY:

POWERING THE FUTURE: INTEGRATED SOLUTIONS FOR MARINE MILITARY EQUIPMENT

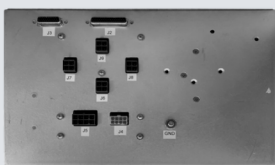
AT A GLANCE

Requirements

- ✓ Efficient and space-saving design with advanced thermal management
- ✓ Two input sources (3-Phase 400Hz, Single Phase 60Hz)
- ✓ Multiple 3-Phase 400Hz switched outputs and multiple 24V 15A output
- ✓ Impressive IP68 rating, providing unrivaled environmental protection against dust and water
- ✓ 20 ratio metric isolated (current transformer) analog readback signals
- ✓ 20 AC/DC voltage readbacks, analog alarms/controls

Benefits

- ✓ Best alignment with MIL-STD-704F thresholds on Main Power Fault behavior
- ✓ Highly efficient power system delivering optimal AC power output
- ✓ Easy integration into customer equipment
- ✓ Ability to adapt to specification changes throughout the development process



OVERVIEW

Power systems for military, marine security, and defense equipment are crucial and require durable designs to withstand harsh weather and corrosive marine environments. These systems must ensure seamless operation and dependable performance in outdoor and maritime conditions.



POWER CHALLENGES

Power system challenges such as mechanical fit, compatibility, and thermal management are paramount in military and marine applications. These power systems must be designed with durability, as they are frequently exposed to harsh weather conditions and environmental elements. When it comes to this specific project, several unique requirements need to be met. Firstly, there were two input sources - a 3 Phase 400Hz and a Single Phase 60Hz. Additionally, multiple 3 Phase 400Hz switched outputs and multiple 24V 15A outputs required an IP68 rating for protection against dust and water immersion. Furthermore, the project called for 20 ratio metric isolated analog readback signals from current transformers and 20 AC/DC voltage readbacks for analog alarms and controls. This project demanded a power system solution that could meet various complex requirements.

ASTRODYNE TDI'S SOLUTION

Astrodyne TDI power solutions are ideal for military, marine security, and defense applications. These durable power systems meet unique requirements, such as multiple input sources and outputs and an IP68 dust and water protection rating. They align with MIL-STD-704F standards for reliable performance and are highly efficient for optimal AC power output. With easy installation and flexibility to accommodate spec changes, Astrodyne TDI power systems are robust and dependable for challenging environments.