

L-3 COMMUNICATIONS/ SPD TECHNOLOGIES

The **P**ower is Here™

The L-3/SPD Technologies companies come together to form the only fully integrated, full-line provider of ruggedized, reliable and cost-effective electrical power systems and services to navy vessels around the world, as well as the most demanding commercial power users from the inner city to outer space. The L-3/SPD Technologies companies and brands are:

SPD Electrical Systems

Creating the future in circuit-breaker design, engineering, manufacturing and testing for the world's most demanding applications.

- **Electronic Design (EDI)** — control and monitoring systems for military and commercial marine applications

SPD Switchgear

The most reliable line of electrical power control and distribution products for commercial, industrial and military applications.

Power Paragon

Specialists in power-conversion technology and advanced power systems for mission-critical applications worldwide including:

- Power Systems Group
- Power Switching & Conversion Systems
- Power Magnetics
- EUROATLAS
- JOVYATLAS

Henschel

Design, engineering, manufacturing and integration of machinery control, monitoring and communication systems.

PacOrd

Multifaceted DoD services, installation and integration of shipboard combat systems worldwide.

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EUROATLAS



Photo courtesy
Saab-Bae Gripen AB

Photo courtesy
Royal Australian Navy

LEADING THE WORLD IN
ADVANCED POWER-
CONVERSION SYSTEMS
FOR MILITARY AND
COMMERCIAL APPLICATIONS



The **P**ower is Here™

The Power Behind the Power

Power conversion solutions for the unique needs of military and commercial aircraft.

Meeting the power-conversion requirements of naval surface vessels and submarines.

Rugged military power supplies for land-based weapons and mobile command links.

Bringing established expertise in advanced power technology to commercial applications.



Established almost 40 years ago,

L-3 Communications/EUROATLAS is one of the world's leading developers of static frequency-conversion systems, offering comprehensive product lines consisting of power supplies, converters/inverters, dry-type transformers, power conditioning and electrical power-systems management. For decades, reliable L-3/EUROATLAS equipment has been performing in a wide range of rugged environments in marine, aircraft, ground and armored applications.

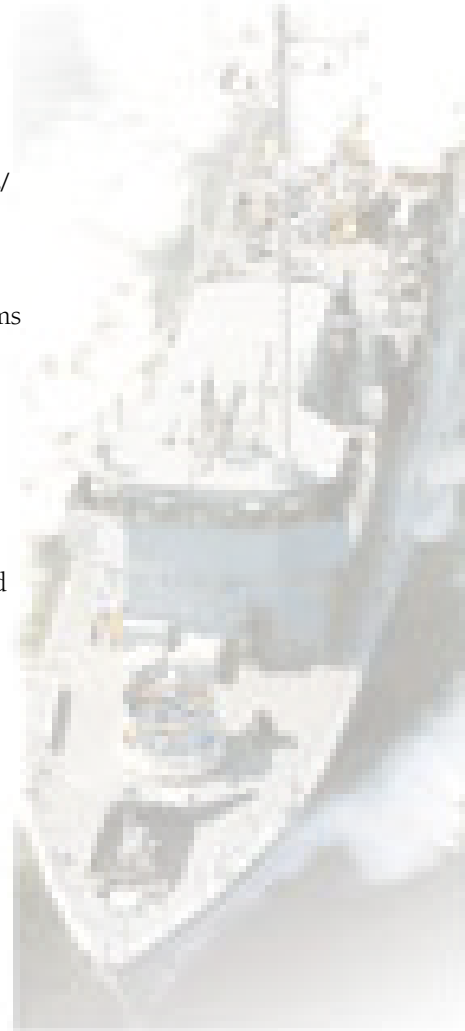


Photo courtesy Royal Australian Navy



Photo courtesy Airbus Industrie



As a worldwide supplier,

L-3/EUROATLAS understands and can easily focus on European design requirements and the logistical standards of many countries. In addition to products, L-3/EUROATLAS provides analytical and engineering expertise to customize systems for military and industrial applications.

Drawing on the experience and technology of its sister company, L-3 Communications/Power Switching & Conversion Systems, L-3/EUROATLAS also supplies rugged and reliable automatic Static Transfer Switches (STS) for use in modern data centers

throughout the world. These units protect critical data and Internet connections by instantly switching to alternate power sources in the event of interruption or abnormal conditions.

L-3/EUROATLAS is part of the L-3 Communications/SPD Technologies team of companies. This association with one of the world's leading military and commercial systems suppliers gives L-3/EUROATLAS a big picture view of its customers' needs. The result is the unique capability of L-3/EUROATLAS — rugged power-conversion systems tailored to the application and highly cost-effective.



Photo courtesy German Ministry of Defense

Photo courtesy Saab-BAe Gripen AB



Powering the World's Military — Air, Sea and Land



Photo courtesy Royal Australian Navy



35 kW AC to DC Converter for the RNIN LCF Frigate



14 kVA Static Frequency Converter for German Minehunter MJ 332



400 Hz DC Static Inverter for German Army Leopard 2 tank

In today's modern military aircraft, precision electronic instrumentation and computerized avionics systems require accurate and reliable power. Rugged and reliable equipment from L-3/EUROATLAS, such as AC-to-DC converters, frequency converters and DC-to-AC inverters provide this vital power component when and where it's needed. The airborne product line also includes a series of Transformer Rectifier Units (TRUs) that convert the prime power source of 115 V, 3-phase, 400 Hz to 28 VDC power. These units have been developed for extreme environmental conditions, minimum space and weight and maximum reliability.

In naval applications, modern surface vessels operate with a primary power source of 440 V, 3-phase, 60 Hz; while the storage batteries of today's submarines supply a DC voltage from 250 V up to 600 V as the primary source. Static power-conversion equipment from L-3/EUROATLAS converts and conditions these different sources to meet the power

requirements of the vessel for many sophisticated demand loads such as command and control systems, radar, sonar, weapons and motors. In constant liaison with customers and naval architects, L-3/EUROATLAS has developed state-of-the-art inverters, converters and rectifiers that incorporate such operational features as high electrical efficiency, low structural and airborne noise, high reliability, single-phase regulation, low weight and minimal size.

Whether on the firing line or in a C³I role over the horizon, advanced land-weapon systems and mobile command links can't simply "plug in" to electrical power. If mission objectives are to be met, highly reliable, precisely engineered electrical power is a necessity. This requires matching one power supply to another. The L-3/EUROATLAS product line of rugged military power supplies for ground applications ranges from matchbox-sized DC-to-DC converters to heavyweight mobile land-based power supplies. This equipment has proven its extraordinary dependability and efficiency under extreme operating conditions over long periods in the field.



Lightweight 125 Amp. TRU for Swedish fighter JAS 39 Gripen



DC-to-60 Hz Inverter System for submarines

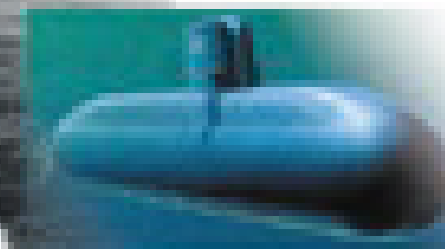
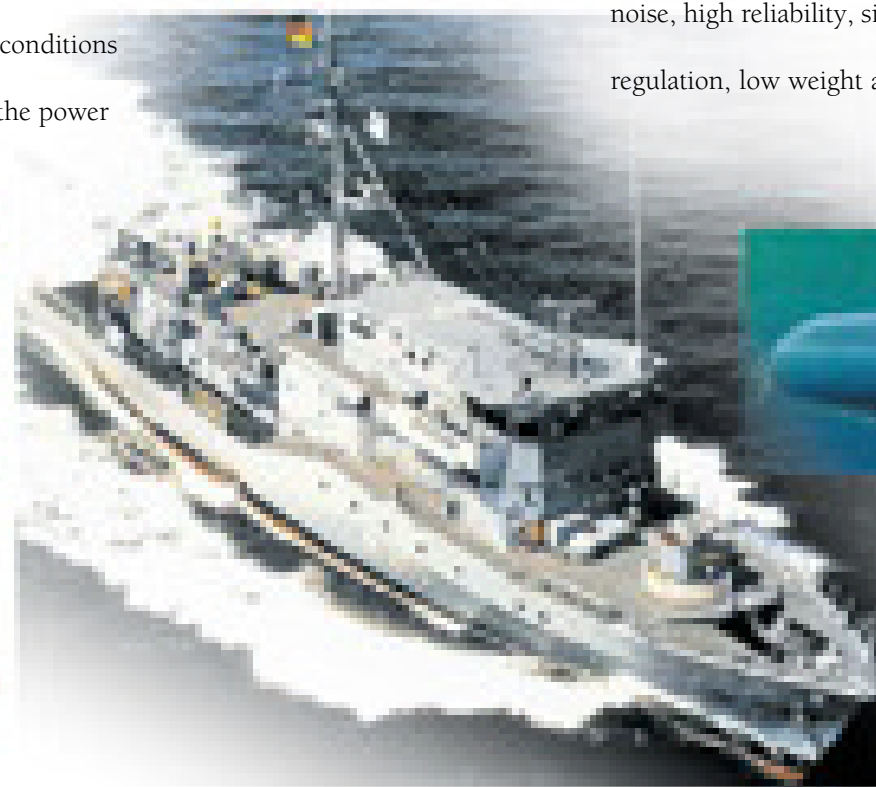


Photo courtesy Royal Australian Navy

Photo courtesy Royal Australian Navy

Photo courtesy German Ministry of Defense



Photo courtesy Airbus Industrie

Proven Power-Conversion Solutions for Commercial Applications

Bringing its experience and expertise

as a military supplier to the commercial aerospace market, L-3/EUROATLAS provides power-conversion equipment for Airbus Industrie and other commercial aircraft. This equipment has passed all flight certification tests and through the years has achieved a solid reputation for high quality and reliability.



Automatic Static Transfer Switch for data centers

Coinciding with Western Europe's

burgeoning Internet and e-business infrastructure growth, L-3/EUROATLAS supplies Static Transfer Switches to the European commercial data-center market. These units utilize silicon-controlled rectifier (SCR) power-switching elements and high-speed digital sensing to identify power-source degradation, transferring critical loads from a primary power source to an alternate power source in the event of interruption or abnormal conditions. This switching of power takes place in less than 1/4 cycle which is 16 times faster than traditional electromechanical switches — appearing seamless to even the most sophisticated computer equipment.

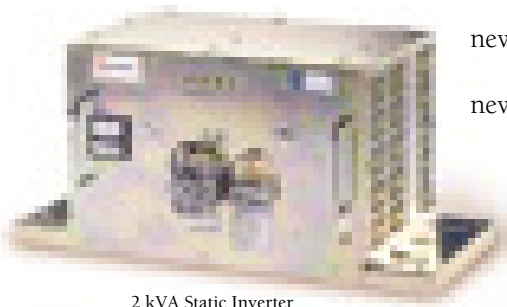
Photo courtesy Airbus Industrie



Miniature Frequency Converter for all types of Airbus aircraft



L-3/EUROATLAS had many years of experience supplying power inverters for Germany's government-run heavy rail system. Since the reunification of Germany and the privatization of the heavy rail system, L-3/EUROATLAS now provides newly redesigned power inverters for the new railway system in Germany.



2 kVA Static Inverter for German railway system



From decades of proven performance in the military arena comes the engineering expertise to develop power-conversion equipment for many commercial applications.

