

Products for Marine Applications

ABB provides an extensive range of electrical products for demanding marine applications. Proven and reliable product solutions combined with true global support ensure a world-class service for ship owners, operators, shipyards, OEMs, panel builders and integrators.



ABB

Specifically designed and certified

With its wealth of broad maritime engineering expertise and long experience, ABB delivers products, solutions and services that meet the highest requirements of marine installations. Certified to the major international classification standards, our products provide high system functionality and integrity. The demanding conditions of the marine industry influence product design and engineering, products that are based on the proven ABB electric power, drives and automation product platform. Our worldwide sales and after sales network also adds to our ability to provide competent support wherever it is needed.

Your partner – whatever the application

ABB provides machinery suppliers (OEM), panel builders and integrators with compatible products that allow shipyards, ship owners and operators to harmonise electrical products onboard and thereby optimise operation, maintenance and support throughout the lifetime of the vessel. Top performance products, short delivery times and product availability via global distribution networks are all aspects of our service that are highly valued by our customers.

In addition to stand-alone products, ABB offers shipyards and shipowners the system deliveries in areas such as power generation and distribution, electrical propulsion and total solutions. In such deliveries ABB makes a system solution for vessels by using ABB marine products combined with a long marine system knowledge and experience. We also take a responsibility of conceptual design, detail engineering, project management and commissioning of the system. More information about marine systems can be obtained at <http://www.abb.com/marine>

Wide range of products

The comprehensive ABB product portfolio encompasses all equipment and components typically required for machineries onboard the

vessel. Products include: complete series of synchronous motors and generators; low and medium voltage drives and soft starters, low and high voltage motors, transformers and switchboards. Breakers, switches and control products for integration into switchboards and panels as well as instrumentation sensors and solutions for various measurements are also key products. The power and voltage range meets all industry requirements with high efficiency ratings to minimise onboard energy consumption. Our ABB product platform ensures high quality design, optimum compatibility and extensive product lifetime services. More comprehensive data can be obtained from our extensive web pages at <http://www.abb.com>, alongside information about our global presence.

For all applications

Pumps, compressors, air conditioning, ventilation, cranes, thrusters, winches, steering gears, generators, main and distribution switchboards, panels, protection and control systems are typical application areas for ABB products.

We also provide a wide range of components for hazardous onboard environments which meet the respective regulatory requirements.





Life cycle services and support

ABB's global presence guarantees service and support wherever it is needed. Contact lists, spare parts information and other service and support data can be found at <http://www.abb.com>.

Product support and service

ABB has global presence through its worldwide organization and network of selected partners. This provides customers with fast delivery and competent product support whatever the location. ABB guarantees to supply a full range of genuine spare parts for ABB products and the regional logistic centers are committed to efficient delivery. We can provide systematic life cycle management with proactive service products that aim to maximise production process availability, reliability and performance.

Marine Services Centers

With dedicated marine services centers, strategically positioned around the world, we are committed to providing lifecycle service and support wherever your business takes you. ABB considers lifecycle services an important component of each total delivery. Our work begins during the conceptual phase of each project and continues throughout the life of the vessel. Through services such as proactive preventive maintenance programs and spare parts management, the unique requirements of each vessel are met.

Competence is a key factor in smooth sailing. Our commitment continues through to the ABB Marine Academy where we can offer you a complementary range of learning solutions. Our solutions are designed to give the necessary technical understanding and working skills to guarantee full functionality of your ABB installation. More information can be obtained at <http://www.abb.com/marine>





Low voltage motors

ABB offers a complete range of low voltage motors, ensuring that the right motor can be found for every need including special and hazardous environments.

Low voltage motors are available in aluminum, steel and cast iron frames with an output range of 0.09–1200 kW. More information at <http://www.abb.com/motors&drives>

Applications:

In the marine industry, low voltage motors are used, both on- and under deck, in applications such as engine room pumps, steering pumps, cargo pumps, ventilation fans, deck cranes, thrusters, winches, hydraulic power packs, and compressors.



Low voltage drives

ABB low voltage variable speed drives offer powerful and accurate performance for any application in powers of 0.55 up to 5600 kW. ABB's AC drives, with asynchronous or permanent magnet synchronous motors, combine environmental benefits with reduced operating cost. The drives fulfill marine and offshore requirements, with design and operation tested in line with approval requirements. Approved ABB drives ensure reliable and economic operation in all conditions in a complete and compact package. More information at <http://www.abb.com/motors&drives>

Applications:

LV drives are used in main propulsion, steering, thrusters, compressors, pumps, fans, winches, and a number of other onboard systems.



Synchronous motors and generators

High efficiency and robust construction make our synchronous motors (up to 50 000 kW) and generators (up to 50 000 kVA) ideal for the marine industry. A high degree of standardization enables shorter delivery times and greater versatility in all applications. Reliability and high efficiency results in considerable savings over the life time of the motor. Precise torque control with ABB frequency converters, noise and vibration reduction, protection by enclosure, cooling method and terminal box arrangements are considered in design. More information at <http://www.abb.com/motors&drives>

Applications:

Synchronous motors and generators are mainly used as propulsion motors, main, auxiliary and shaft generators in various vessel types.



Induction motors

ABB offers a comprehensive range (up to 18 000 kW) of reliable and high efficiency induction motors. Of low and medium voltage and built around a modular and cast iron platform, they are designed for demanding operating conditions. The simplicity of these platforms allows them to be perfectly engineered according to each individual customer's requirements for application areas that include special and hazardous environments. More information at <http://www.abb.com/motors&drives>

Applications:

In the marine industry, induction motors are used in applications such as compressors, pumps, winches, fans, blowers, propulsion and ship thrusters.

Wide range of products



Breakers and switches

Low voltage breakers

ABB's moulded-case and air circuit-breakers provide the optimal solution for applications up to 6300 A with voltages up to 1150 V in AC and DC. In addition to the ability to include communication features, they are particularly suitable in all conditions where the status of the circuit-breaker, information exchange of any kind and measurements need to be transmitted remotely.

More information at: <http://www.abb.com/lowvoltage>

Applications:

Moulded-case and air circuit-breakers are widely used for protection of the main power circuits and in the auxiliary circuits in all the main configurations for all marine applications.

Low voltage switches

In fusible electrification systems the switch fuse provides superior short circuit protection up to 800 A for voltages up to 690 V. Switch-disconnectors are available up to 3150 A, in 1- to 4-pole versions. These switches ensure safe operation, protecting both people and equipment, eliminating the risk of electrical accidents. Switch fuses are available for all kinds of fuse links.

More information at <http://www.abb.com/lowvoltage>

Applications:

Switch fuses are tested and classified for marine use for isolation, breaking, making and short circuit protection and switch-disconnectors for isolation, breaking and making.



Medium voltage drives

ABB medium voltage drives with their modularity, energy efficiency and superior performance are the perfect solution for modern marine requirements in the power range up to 28 000 kW. The use of the latest IGCT (Integrated Gate Commutated Thyristor) power semiconductors results in an intrinsically less complex, more efficient and highly reliable medium voltage converter. The compact construction produces a small footprint and lightweight design, giving greater flexibility to ship designers and making more space available for other needs.

More information at <http://www.abb.com/motors&drives>

Applications:

The modular platform is extremely versatile, providing a basis for marine certified standard single drives, transformerless solutions, multi-motor-drives and systems with built-in redundancy. ABB medium voltage drives are used in advanced propulsion schemes and auxiliary applications in all types of vessel and floating structure.



Control products

Claimed to be the most extensive range in the marine market, ABB provides softstarters (3 A to 1810 A), contactors and motor protection products (6 A to 2000 A), electronic products and relays, arc guard (TVOC) and pilot devices, terminal blocks and automation devices.

Flexible components for customised automation solutions for operating, control, networking and switching are also available with a multitude of standard field busses and networks.

More information at <http://www.abb.com/lowvoltage>

Applications:

With reliability and performance built into every piece of equipment, these products are used in demanding marine industry applications by switchboard, panel and console builders.

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 103,000 people.

The comprehensive ABB electrical product portfolio addresses all typical equipment and component requirements for machineries onboard the vessel. Our products include a complete series of synchronous motors and generators, low and medium voltage drives and soft starters, low and high voltage motors, transformers and switchboards. Breakers, switches and control products for integration into switchboards and panels are also included as are instrumentation sensors and solutions for a range of different measurement requirements. ABB is also the leading supplier of electric power and propulsion systems for the marine industry.

The ABB logo consists of the letters 'A', 'B', and 'B' in a bold, red, sans-serif font. The 'A' is slightly larger than the 'B's, and they are all connected together.

<http://www.abb.com>
<http://www.abb.com/instrumentation>
<http://www.abb.com/lowvoltage>
<http://www.abb.com/motors&drives>
<http://www.abb.com/marine>

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