MRS MARINE

Smart, scalable and easily connected control solutions for marine OEM applications

MRS MARINE

A division of the MRS Electronic Group

marine.mrs-electronic.com

Contents

About MRS Marine

MRS Marine is a division of the MRS Electronic Group, a German company with over 25 years of experience in developing and producing innovative electronic and software solutions across various industries.

Our expertise lies in the niche market of compact and reliable products such as relays, gateways, controllers, and HMI systems.

1999

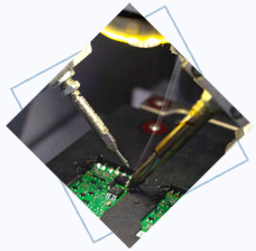
Management-Buy-Out and renaming into MRS Electronic

2006, 2011 & 2019

Increasing the company buildings by an amount of 5500 m²

2015 - 2018

Internationalization of our business and establishment of MRS Marine as the Marine Competence Center



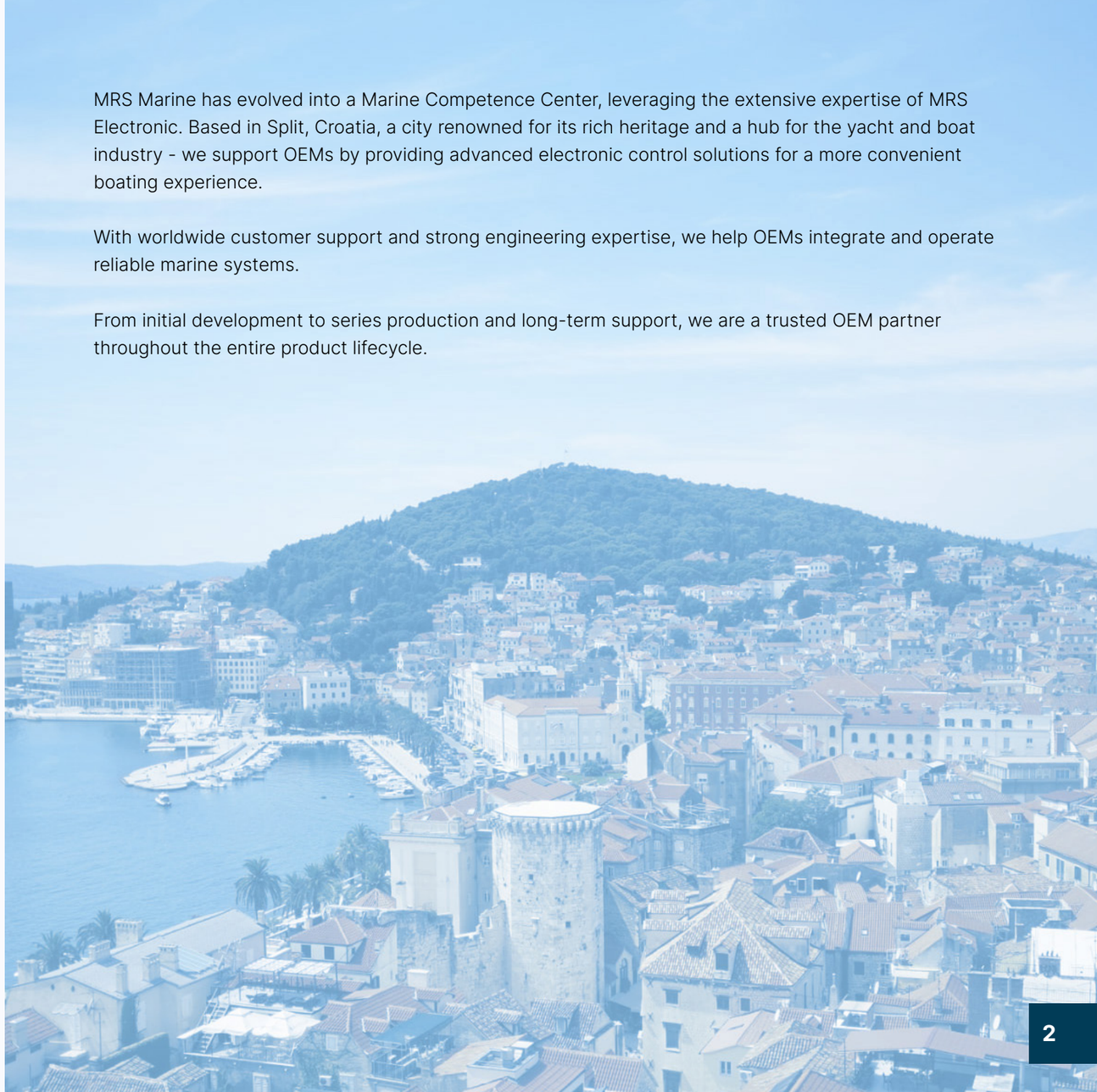
2026

Ongoing investments in automation, efficiency improvements, and quality

MRS Marine has evolved into a Marine Competence Center, leveraging the extensive expertise of MRS Electronic. Based in Split, Croatia, a city renowned for its rich heritage and a hub for the yacht and boat industry - we support OEMs by providing advanced electronic control solutions for a more convenient boating experience.

With worldwide customer support and strong engineering expertise, we help OEMs integrate and operate reliable marine systems.

From initial development to series production and long-term support, we are a trusted OEM partner throughout the entire product lifecycle.



Product Portfolio

Controllers

Programmable electronic modules for reliable device control and automation on board.

Gateways

Communication hubs linking multiple control units and CAN, LIN and NMEA2000 networks, forming the backbone of integrated onboard systems.

Smart Relays

Configurable electromechanical switching modules for controlling onboard power circuits.

Multifunctional HMI-Displays

Marine-ready interfaces providing clear system visualization and intuitive control of onboard functions.

Why OEMs choose us?

- Modular control platforms for series production
- Flexible programming - by MRS or the OEM
- Reduced wiring, faster integration
- Long-term availability and lifecycle support
- Marine-proven hardware and in-house (made in Germany) production
- Simple installation and user friendly operation
- Compact and space efficient design
- Low voltage PLC (Operating voltage 9-32 V)
- Certification up to IP6K8
- Suitable for retrofit
- CAN / NMEA 2000 ready
- Certifications: CE, RoHS, ECE R10

Product portfolio covering 100+ marine electronic products

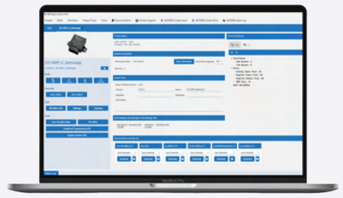
Controllers

Gateways

Relays

HMI-Systems

Connectivity



Software Tools

Controllers

Connected Controllers

Motor Controllers

PLC Controllers

CAN I/O — CC16WP:

- 32-bit processor
- 9-32 V operating voltage
- Protection rating up to IP6K8

Gateways

Microplex Gateway
3CAN LIN

Micro Gateway

Universal Gateway 5x CAN

Micro PLC CAN LIN

Relays

Solid State Relays

Pulse Relays

Time Relays

Toggle Relays

Voltage Monitors

Frequency Monitors

Flashers

Multifunctional HMI-Displays

MConn 7:

- LCD screen size and shape can be adapted (7 to 12.3 inches)
- 2x CAN interfaces and 1x LIN interface
- 1x Ethernet interface
- 22 I/Os
- 1x microphone input and audio output
- 4x analog inputs

TConn:

- TConn 4.3:
  Resolution of 480 × 272 pixels
- TConn 7:
  Resolution of 800 × 480 pixels
- Deutsch DT plug

Applics Studio — Programming Software

Flexible programming - managed by MRS or fully in your hands

Our controllers can be fully programmed and adapted using MRS Applics Studio, either by our engineers or directly by you, our OEM partner. No extensive programming knowledge is required. Graphical programming enables fast implementation and easy future modifications.

Simple Creation
create control logic without writing code.

Integrated Library
predefined function blocks for common marine applications.

Improved Overview
by using different diagram pages.

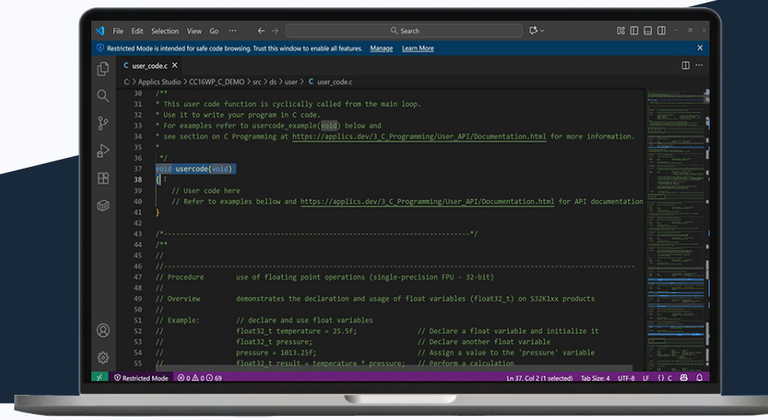
Own Graphic Blocks
build custom logic tailored to your products.

Intuitive Warning Bar
shows problems with the created program and helps to solve them.

Combined Modules
can be created with C code and managed in own graphical libraries.

MRS Applics Studio is the development environment from MRS Electronic. It is used to program MRS CAN controllers of the 8-, 16-, and 32-bit generations. With our powerful and user-friendly Applics Studio programming tool, you can create software for MRS controllers and program MRS modules quickly and easily. It simplifies the programming of controllers that work with CAN, LIN, or input and output signals (I/O).

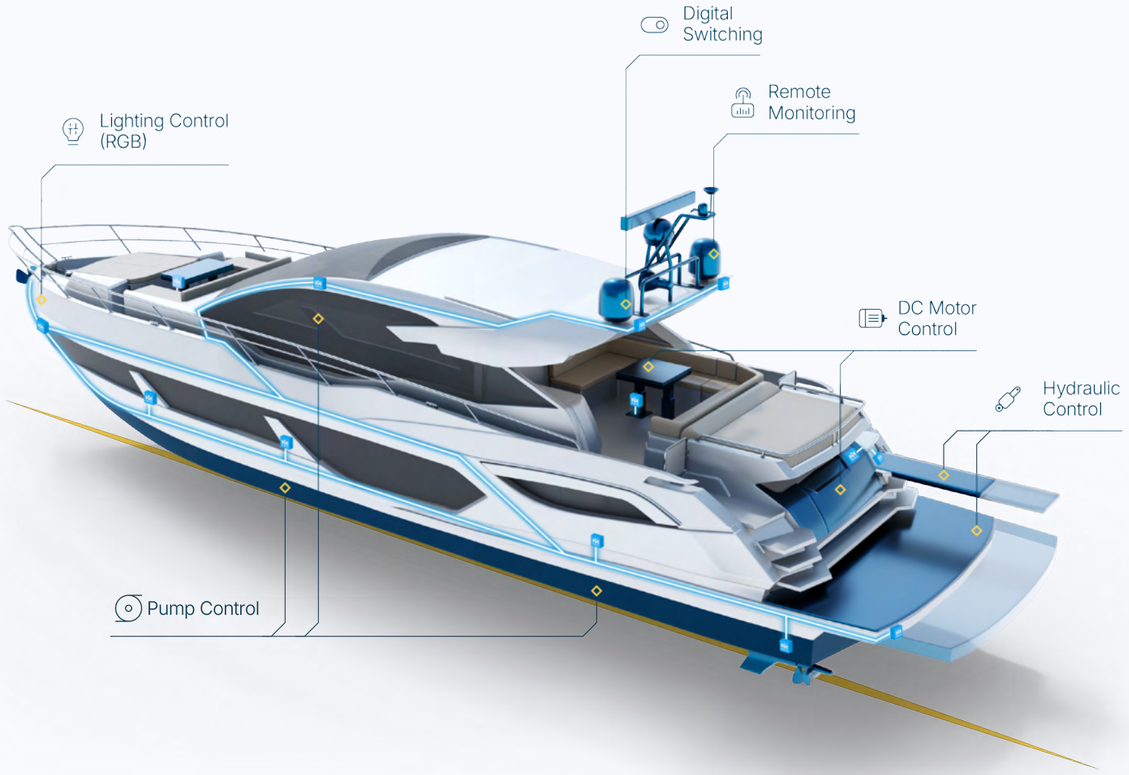
- Independent, self-developed graphical programming environment
- Dropdown menu for inputs, outputs and data points
- Importing/exporting SYM and DBC files
- Graphical libraries can be created and exported
- Easier integration into external programs like IDEs
- New User API



With Applics Studio, we provide OEM partners with a unified and consistent toolchain that can be deployed across the entire product portfolio. This gives our partners a reliable foundation for seamless integration - featuring a modern user interface, advanced diagnostic capabilities, and intuitive operation - ultimately enabling faster development cycles, simplified service processes, and increased added value for the end customers.

Parameter changes and functional adjustments can be made during commissioning or service without redesigning the system.

We provide the control behind your systems



Designed for OEM integration • Modular systems • Series production support

Key Application Areas

Reliable and flexible control system solutions developed for OEMs building hydraulic, mechanical, and marine components. Our modular control architectures support seamless integration, scalable system design, and long-term reliability in demanding marine environments. From hydraulic and DC motor control to pumps, lighting, and digital switching systems, our solutions enable precise control, seamless integration, and reliable operation across the entire boat or yacht.

Hydraulic Control

DC Motor Control

Pump Control

Lighting Control

Application: Hydraulic Control

Modular hydraulic control systems for seamless OEM integration

Reliable, scalable, and adaptable to different hydraulic architectures.

Our control modules provide precise, programmable control of hydraulic functions such as lifting, lowering, positioning, and load handling. Designed for demanding marine environments, they support safe operation, smooth motion, and long-term system reliability.

Electronic control of directional, pressure relief, and flow valves for marine hydraulic valve control

Directional Valves

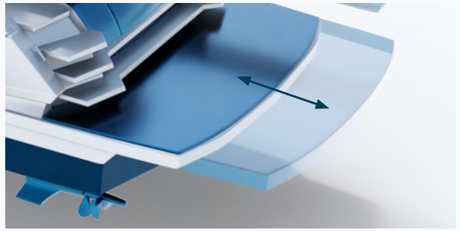
Pressure Relief Valves

Hydraulic Flow Valves

Application areas of hydraulic controllers

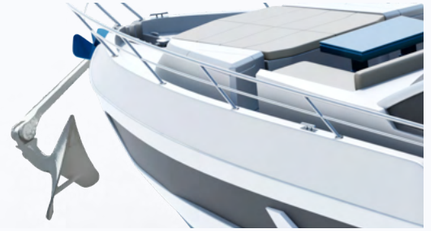
Compact, reliable solution for exceptional performance

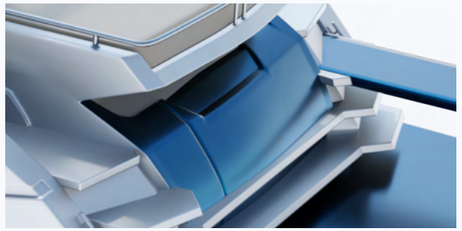
Automated motion control with integrated safety interlocks for critical hydraulic functions.



Secure and programmable hatch control. Effortless, precise motion for swim platforms and tender garages - combining hydraulic power with electronic control.

Precise deployment and retraction control. MRS Marine controller ensures **safe and controlled anchor handling** through a fully automated hydraulic anchor arm system.





The controller ensures smooth and **low-noise operation** while optimizing energy efficiency in onboard systems.

Designed for OEM integration

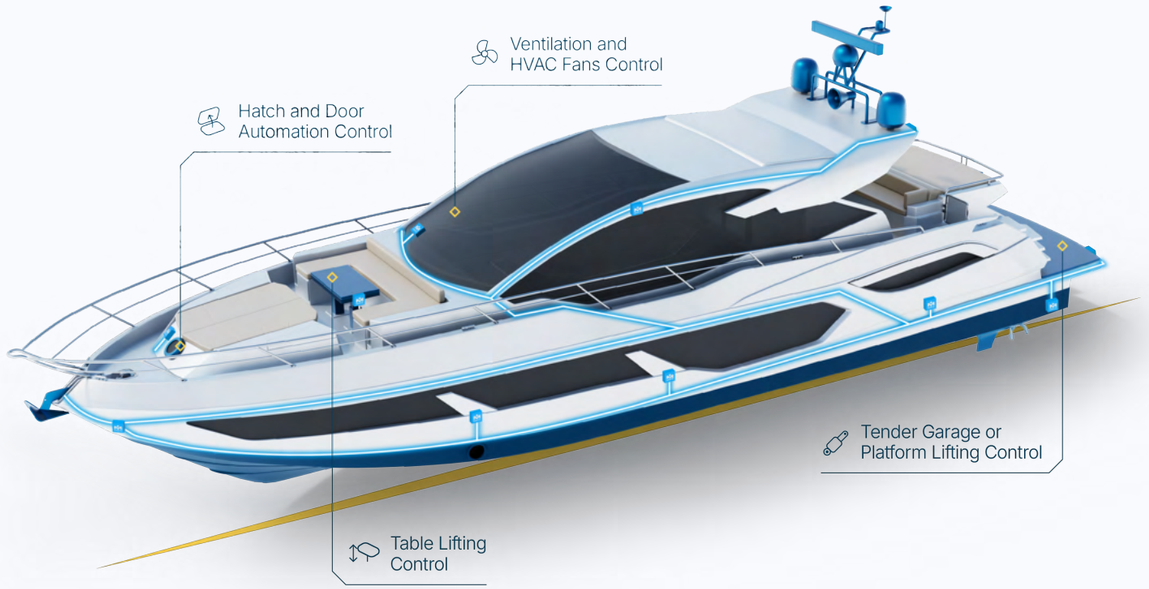
Modular hardware • Custom software • Series production support

Application: DC Motor Control

High-efficiency DC motor control engineered for dependable OEM applications

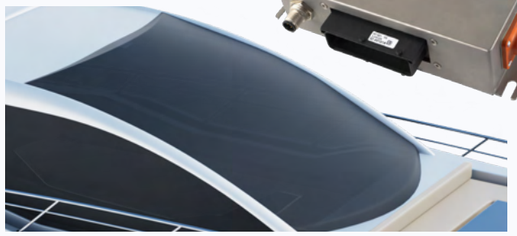
From operating automated hatch and door actuation, ventilation or HVAC fans to controlling tender garage or platform lifting systems, these intelligent control units ensure precise, smooth, and reliable DC motor operation across core marine systems.

Application areas of electronic DC motor controllers

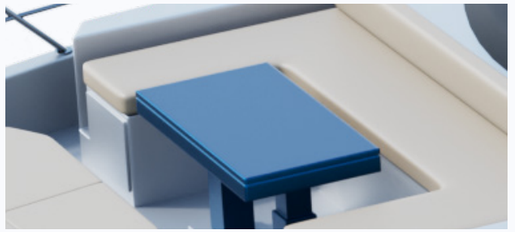


Compact, reliable solution for exceptional performance

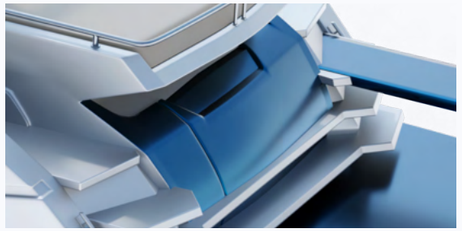
The controller delivers **speed regulation, fault diagnostics, and robust performance** for continuous duty ventilation systems.



The DC Motor Controller delivers precise, reliable control, ensuring **smooth actuation** of deck hatches, doors, engine bay covers, or service compartments.



The solution provides precise **motion control with soft start and stop functions**, preventing wear and reducing stress on mechanical components.



The controller ensures **smooth and low-noise operation** while optimizing energy efficiency in onboard systems.

Designed for OEM integration
Modular hardware • Custom software • Series production support

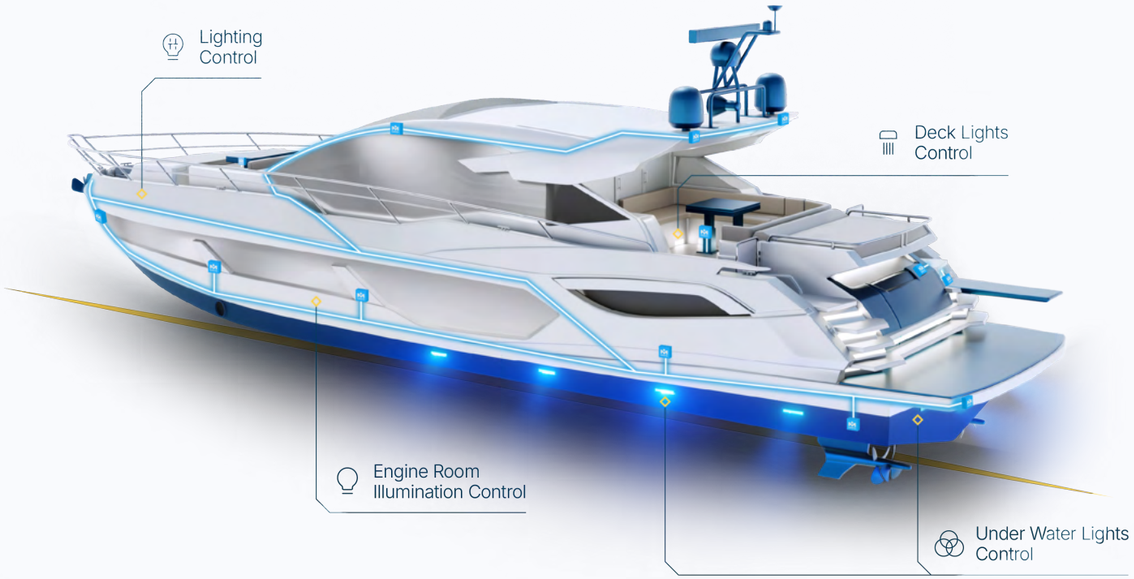
Application: Lighting Control

Cost-effective marine lighting control designed for flexible OEM installations

The MRS Marine Lighting Controller provides reliable, zone-based control for single-color and RGB LED lighting systems. It supports scalable lighting architectures across different boat concepts.

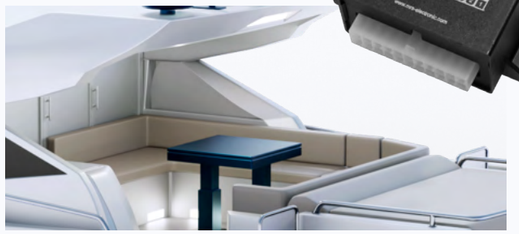
Designed for demanding marine environments, our solutions combine robust and compact hardware, flexible programming, and easy integration with OEM systems. With MRS Marine control, you can count on precise lighting control for decks, cabins, engine rooms, navigation areas, and underwater zones.

Application areas for lighting control



Compact, reliable solution for exceptional performance

Robust and scalable LED control
Supports on/off switching and PWM dimming for single-color LED lighting systems across up to eight independent channels, optimized for marine electrical environments.



Advanced RGB lighting control
Provides synchronized RGB LED control for underwater and above-water lighting, enabling multi-zone color management and coordinated lighting effects.

Zone-based system architecture
Allows independent control of interior, exterior, and functional lighting zones, supporting both ambient and operational lighting requirements.

Reliable operation in marine conditions
Ensures stable, low-noise operation, reducing electrical and thermal stress on lighting components and extending system lifetime. Sealed against water and dust, and resistant to vibration.

Designed for OEM integration
Modular hardware • Custom software • Series production support

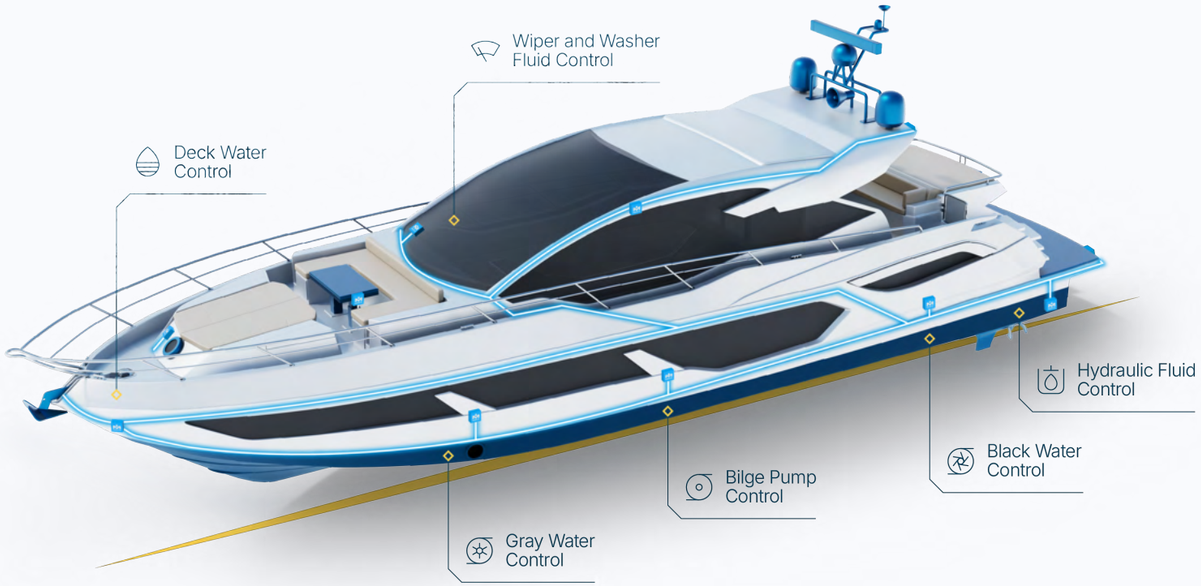
Application: Pump Control

Reliable pump control ensuring consistent performance across critical onboard systems

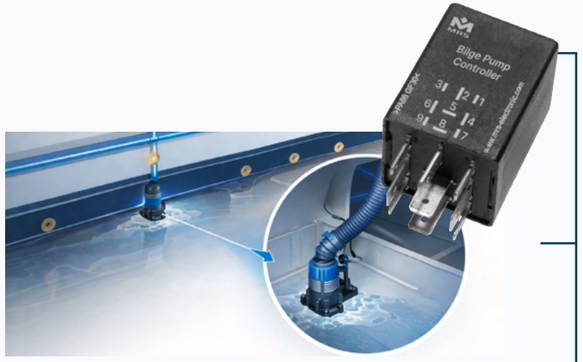
MRS Electronic's pump controllers enhance marine pump systems with intelligent control and built-in protection, helping OEMs improve reliability, system performance, and product lifetime. The pump controller offers plug-and-play solution for various pump systems, supporting both standalone and networked configurations.

By actively protecting pumps against common challenges such as dry-running, overheating, and voltage fluctuations, it reduces mechanical stress and minimizes service and warranty issues in marine environments.

Application areas for pump control

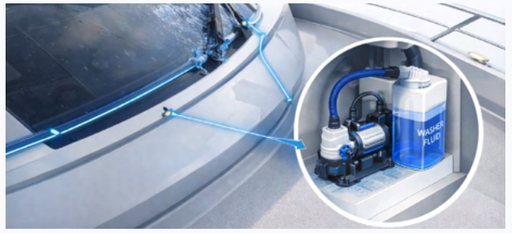


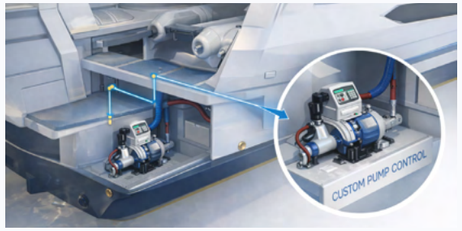
MRS Electronic's specialized pump controllers deliver **precise and intelligent operation** of critical boat systems, with advanced protection against common challenges such as dry-running, overheating, and voltage fluctuations.



This smart controller enables OEM water pressure systems with integrated **tank monitoring and dry-run protection**, ensuring consistent freshwater delivery.

Engineered for high-performance control of washer fluid pumps and associated wiper functions, it offers features like **intermittent wiping, synchronized operation, and automatic return-to-park** positioning.





The MRS Marine Custom Pump Controller provides a flexible OEM platform for developing differentiated pump solutions, tailored to specific applications, pump types, and duty cycles.

Designed for OEM integration

Modular hardware • Custom software • Series production support

Application: Digital Switching

Enhanced control, simplified wiring, and increased onboard reliability - for OEM electrical systems

MRS Digital Switching replaces traditional mechanical switches and complex wiring, connecting control panels, sensors, and actuators through a digital network. Keeping in mind precise needs of our OEM partners, Digital Switching is designed as flexible, scalable, and reliable onboard electrical solution. By combining standard components like our CAN controllers, PLCs, relays, and HMIs into innovative solutions, we can create tailored systems for optimal performance and user satisfaction.

As an optimal solution for modern boat concepts, digital switching simplifies system integration and improves overall system reliability. It allows OEMs to design electrical architectures that are easier to configure, expand, and maintain throughout the product lifecycle.

Centralized system control

Enables centralized monitoring and control of lighting, equipment, power distribution, and auxiliary systems via HMI interfaces and distributed control modules. Every onboard function is at your fingertips - simple, intuitive, and reliable.

Flexible and reconfigurable architectures

Supports easy reconfiguration of electrical circuits through Applics Studio, reducing hardware changes and enabling efficient control management.

Reduced wiring and improved reliability

Minimizes wiring complexity by replacing point-to-point connections with digital networks (CAN Bus/NMEA2000), improving installation space efficiency and long-term reliability.

Integrated safety and diagnostics

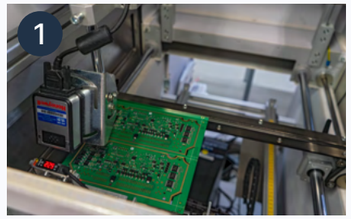
With real-time feedback through integrated displays, it provides system diagnostics, fault detection, and protection mechanisms that enhance operational safety and simplify service and maintenance.

Designed for OEM integration
Modular hardware • Custom software • Series production support

Our production process

We develop reliable, high-performance marine electronics, engineered and manufactured in Germany

Combining advanced production facilities, internationally recognized certifications, and decades of engineering experience, we develop reliable, high-performance marine electronics, engineered and manufactured in Germany. Each product undergoes multiple quality testing, at least four times, meeting the highest quality and safety requirements of the marine industry.



Product labeling station

For marine products, reliable traceability starts with the careful selection and procurement of components. To ensure full transparency, at an early stage we are affixing a label to the PCB.

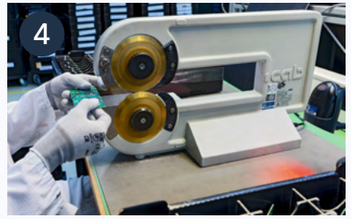
SMD production

In our SMD production line, PCB assembly begins with the application of solder paste using a precise printing process. The quality of the solder paste deposition is verified through solder paste inspection (SPI). The boards are then fitted with components such as resistors, capacitors, and processors, followed by soldering in a controlled reflow oven.

AOI

Following the SMD process, both the components and soldering results are inspected using Automatic Optical Inspection (AOI).

TISAX®

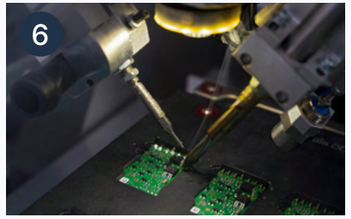


Depaneling

To separate individual PCBs from the panel, we use processes such as roller cutting or CNC milling, depending on the specific design and requirements.

Manual assembly

Components such as connectors, relays, and displays are manually installed onto the individual circuit boards.



Soldering

The manually installed connectors are soldered to the PCB using wave soldering, selective soldering, or robotic soldering processes.

Potting / Coating

The module is either fully potted or coated. This protects the electronics against moisture, corrosion, and dust, while also enhancing mechanical strength, thermal stability, and electrical insulation.

ICT/EOL

Electrical functional testing is performed before and after potting or coating to verify the assemblies. Once all specified requirements are fulfilled, the module is parameterized, and the software is programmed onto the module.

Printing

The finished product is marked using pad printing or, in exceptional cases, with an applied label. Customers can choose between a customized design or the standard MRS marking.

MRS Electronic worldwide

Your partner for scalable marine control systems, from control architecture to long-term OEM partnership

MARINE COMPETENCE CENTER

1 **Split, Croatia**

HEADQUARTER

2 **Rottweil, Germany**

LOCATIONS

3 Krakow, Poland
4 Istanbul, Türkiye

SALES REPRESENTATIVE

5 Espoo, Finland
6 Riga, Latvia

FAQ

Your partner for scalable marine control systems, from control architecture to long-term OEM partnership

→ Are MRS Marine solutions specifically designed for OEM applications?
Yes. All MRS Marine Electronic solutions are developed specifically for marine OEM use. Hardware, software, and system architecture are designed to withstand demanding marine environments and to support series production, long-term availability, and reliable operation across the full boat lifecycle.

→ How flexible are MRS systems when adapting to different boat models?
Our control platforms are modular and software-configurable, allowing OEMs to reuse the same hardware across multiple boat models. Functional variants are managed through software and parameters, reducing hardware changes, wiring effort, and complexity in series production.

→ Can OEMs program and modify the control logic themselves?
Yes. OEMs can independently create, modify, and maintain control logic using MRS Applics Studio. The graphical programming approach allows functional changes without extensive software expertise, enabling faster development, easier customization, and greater independence throughout the product lifecycle.

→ How does Applics Studio support faster development and easier future changes?
Applics Studio provides a unified toolchain with predefined function blocks, integrated diagnostics, and clear system visualization. This enables rapid implementation and efficient modifications during production or service - without redesigning hardware or rewriting code.

→ How do you ensure long-term availability and lifecycle support?
All products are developed and manufactured in-house, ensuring full control over component selection, software maintenance, and product lifecycle management. We support long-term availability, stable revisions, and backward compatibility, critical for marine OEM programs with extended service lifetimes.

→ How do you work with OEMs from development to series production?
We support OEMs throughout the entire process - from concept definition and system architecture to validation, series production, and long-term support. Dedicated engineering and OEM sales contacts ensure efficient communication, technical alignment, and a stable partnership beyond initial delivery.

If you would like to discuss your specific OEM application, our engineering team is ready to support you.

Meet our Support Team

As part of the **MRS Electronic Group**, with over 25 years of proven expertise in electronic control solutions, we stand alongside our partners and clients, offering direct access to technical specialists who understand the challenges of real-world marine environments.

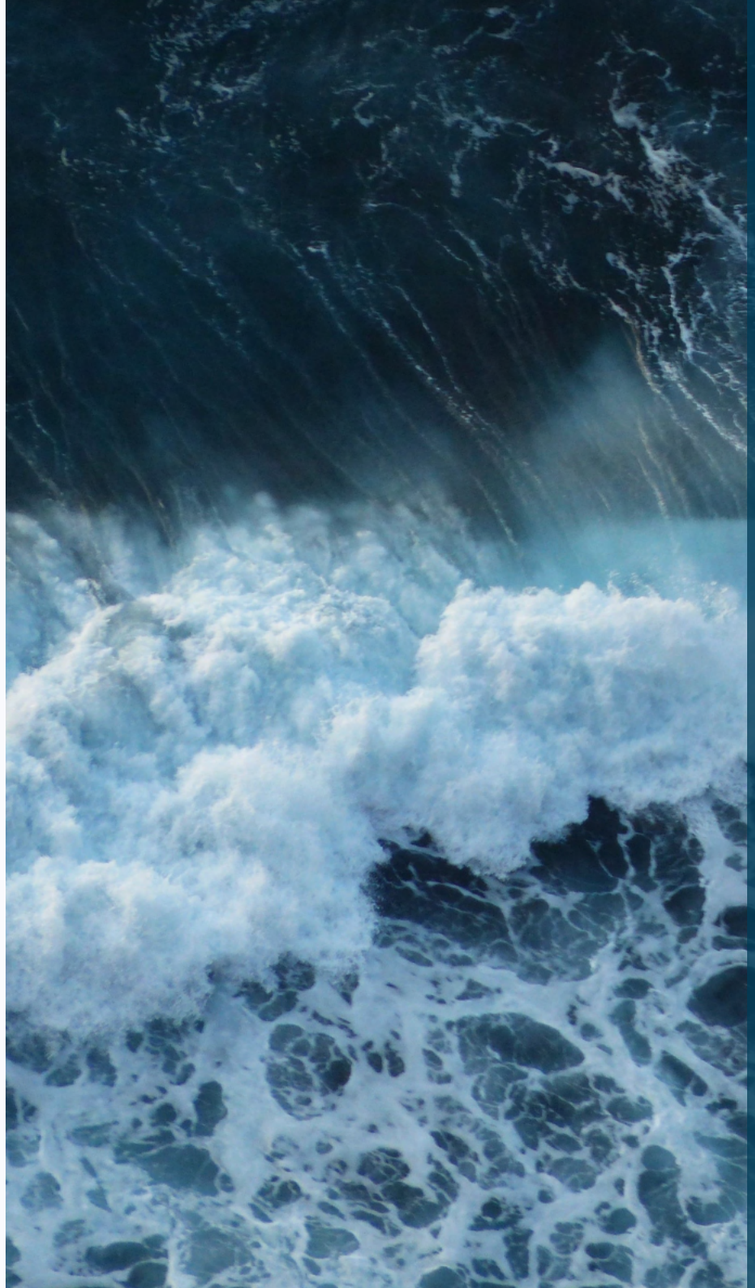
Driven by professionalism and teamwork, our mission is to build strong, long-lasting relationships with our clients and to be by your side throughout your maritime journey.

Global presence
to foster strong, collaborative partnerships.

Responsive communication
to minimize downtime.

Solution-focused engineering
tailored to your exact system needs.

Local support network
ensuring on-site presence where it matters most.



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Application Engineer

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Application Engineer

Engineering support focused on reliable system design, testing, and long-term performance.

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Davor Tomaić

OEM Sales

Dedicated OEM contact ensuring clear communication, technical alignment, and longterm partnership.

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MRS MARINE

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