



Your
bespoke
mechatronic
partner

www.almec.net

We turn ideas into winning solutions

Since 2001, ALMEC provide **cutting-edge electronic and mechatronic solutions** to meet the technological needs of businesses and organizations.

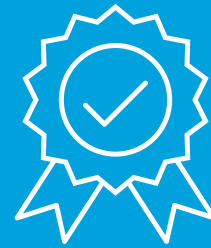
The **customer-centric and tailored-made approach** allowed ALMEC to build long-term relationships and establish itself over the years as a reliable and trusted partner in meeting the technological needs of businesses.



We meet your needs

High-Quality Products

Our focus is the **quality**. We offer products that are **reliable, efficient** and capable of meeting the demanding requirements of modern businesses



Innovation and Technology

We **provide cutting-edge solutions** and offer the latest hardware and software technologies to help businesses stay competitive in an ever-evolving digital landscape.



Ongoing Support

We provide **implementation support, maintenance services**, and **timely updates** to our solutions, enabling clients to receive continuous assistance and to maximize the value and performance of the products and services.



Customized Solutions

Different businesses have unique challenges and requirements, and we work closely with our customers to develop **customized** and **specifically tailored hardware and software solutions** that meet their needs.



Our products



Electronic control units

The polyurethane resin casing, capable of effectively protecting the internal electronics from atmospheric agents, vibrations, and corrosive chemical agents, makes ALMEC electronic control units the optimal choice for outdoor and rugged applications. They can be integrated into CAN-Bus networks or various serial protocols and are programmable by developing software in the C language or using the IEC 61131-3 standard ALMEClab platform.



PLCs

Designed to be connected to a CAN-Bus network or other serial protocols, these PLCs are controllers for DIN rail installations and can be used in applications where system automation flexibility and reliability are mandatory. The PLC's power supply operates within an extended range of 9-36 VDC and complies with PLd and SIL2 standards.



Operator panels

These are HMI devices that can be installed inside the cabin or externally on the machine. They can be mounted on a panel or control console and are integrable into CAN-Bus networks or serial networks. Programmable using dedicated platforms for software and graphics development, they can be customized in terms of displayed graphics and button configurations, enabling highly effective control and diagnostics.



Pushbutton panels

The ALMEC range of radio controls includes a series of transmitting units (keypads and belt consoles) and a receiving unit, with the ability to customize the radio frequencies for use in all European and non-European countries. They are particularly suitable for integration into systems with a high level of safety architecture, ensuring compliance with PLd and SIL2 standards. The graphic designs and button configurations can be customized to meet specific requirements.



Radio remote controls

They have all the features for auxiliary or direct control of cranes, aerial platforms, compactors, and skip loaders, among others. They can operate even in harsh mechanical conditions and withstand the most challenging weather and environmental conditions. The power supply for the keypads operates within an extended range (9-36 VDC), and they can be integrated into CAN-Bus or serial networks.



Angular & tilt sensors

The ALMEC range of angular sensors includes devices with both PLd and SIL2 safety classes (dual-channel, redundancy) and devices with PLC SIL1 safety class (single-channel). They all guarantee high-performance levels in terms of measurement precision and repeatability. Using the ALTILTconfig configuration tool, measurement functionalities can be customized directly from a PC. They are all integratable into a CAN-Bus network, and some models are equipped with analog or digital outputs.

Aerial Platforms

ALMEC offers various solutions and technological products that **improve** the **efficiency**, **safety**, and **performance** of these machines, including:

- **Electronic control systems** - these systems allow precise and safe control of platform functions, such as working height, outrigger extension, platform tilt, and other motion operations.
- **Safety systems** - this includes collision detection and avoidance systems, work area limitation systems, access control security devices, and load monitoring systems to ensure platforms are used safely.
- **Automatic leveling systems** - these systems allow the platform to remain stable even on uneven terrain, guaranteeing a safe working environment for the operators.
- **Telemetry and monitoring systems** - these systems allow real-time monitoring of platform performance, operating conditions, maintenance data, and other parameters, improving fleet management and enabling preventive maintenance.
- **Electronic and mechanical components** such as electronic controls, sensors, joysticks, and other parts necessary for the automation and control of machines.



- | | |
|------------------------------------|-----------------------------------------------------|
| ① ALNW - Wire pushbutton | ⑦ TRS.184 - Tilt measurement |
| ② SPN5M - Electronic control unit | ⑧ RDC EVO - Radio receiving electronic control unit |
| ③ SPN1/2 - Electronic control unit | ⑨ ALNWR - Radio transmitting push button |
| ④ TRS.184 - Angle measurement | ⑩ SPN9 - Electronic control unit |
| ⑤ Pressure sensor | ⑪ MVS.B4E - Operator panel (HMI) |

CANopen

Waste Collection Management Machines

Among the solutions and products offered by ALMEC to **improve** the **efficiency** and **effectiveness** of these machines, there are:

- **Control and automation systems** - these systems allow precise control of machine functions, such as powering the sweeper roller, actuating the brushes, opening and closing the waste boxes, and improving efficiency and productivity.
- **Safety systems** - this includes collision detection and avoidance systems, work area limitation systems, access control security devices and load monitoring systems to ensure safe use of demountables.
- **Monitoring and maintenance systems** - this includes telemetry systems for real-time monitoring of machine performance and operating conditions, as well as maintenance management software for scheduling and optimizing maintenance activities.
- **Electronic and mechanical components** such as electronic controls, sensors, accessories for electro-hydraulic systems, spare parts, and accessories necessary for the operation and maintenance of the machines.



- | | |
|------------------------------------|-----------------------------------------------------|
| ① ALNW - Wire pushbutton | ⑦ TRS.184 - Safety angular sensor |
| ② SPN6M - Electronic control unit | ⑧ RDC EVO - Radio receiving electronic control unit |
| ③ SPN1/2 - Electronic control unit | ⑨ ALNWR - Radio transmitting push button |
| ④ Pressure sensor | ⑩ SPN9 - Electronic control unit |
| ⑤ Distance sensor | ⑪ MVS.B3E - Operator panel (HMI) |

CANopen

Cranes & Mobile Cranes

ALMEC offers various solutions and technological products that **improve** the **efficiency, safety,** and **performance** of these machines, including:

- **Electronic control systems** - these systems allow precise control of crane functions, such as slewing, elevation, boom extension, and load control, improving the accuracy and efficiency of lifting operations.
- **Safety systems** - this includes collision detection and avoidance systems, work area limitation systems, access control security devices, and load monitoring systems to ensure cranes are operated safely.
- **Telemetry and monitoring systems** - these systems allow real-time monitoring of crane performance, operating conditions, maintenance data and other parameters, improving fleet management and enabling preventive maintenance.
- **Electronic and mechanical components** such as electronic controls, sensors, joysticks, and other parts necessary for the automation and control of machines.



- | | |
|------------------------------------|-----------------------------------------------------|
| ① ALNW - Wire pushbutton | ⑦ TRS.184 - Tilt measurement |
| ② SPN5M - Electronic control unit | ⑧ RDC EVO - Radio receiving electronic control unit |
| ③ SPN1/2 - Electronic control unit | ⑨ ALNWR - Radio transmitting push button |
| ④ TRS.184 - Angle measurement | ⑩ SPN9 - Electronic control unit |
| ⑤ Pressure sensor | ⑪ MVS.B4E - Operator panel (HMI) |

Hook-lifts

Among the different technological solutions and products that **improve** the **efficiency** and **effectiveness** of these machines offered by ALMEC are:

- **Lifting and transport systems** - this includes automation and control systems for the precise lifting and positioning of containers, safety systems to protect operators, and quick-attach and release devices to facilitate loading and unloading.
- **Electronic control systems** - these systems allow for precise control of hook-lift functions, such as boom lift and tilt, ram extension and retraction, and other motion operations.
- **Safety systems** - this includes collision detection and avoidance systems, work area limitation systems, access control security devices, and load monitoring systems to ensure the safe use of demountable.
- **Monitoring and telemetry systems** - these systems enable real-time monitoring of demountable performance, operating conditions, maintenance data, and other parameters, improving fleet management and enabling preventative maintenance.
- **Electronic and mechanical components** such as electronic controls, sensors, accessories for electro-hydraulic systems, spare parts, and accessories necessary for the operation and maintenance of the machines.



- | | |
|------------------------------------------|-----------------------------------------------------|
| ① ALNW - Wire pushbutton | ⑥ Proximity sensor |
| ② SPN5M - Electronic control unit | ⑦ TRS.184 - Safety angular sensor |
| ③ AL35R15 - Electropneumatic distributor | ⑧ RDC EVO - Radio receiving electronic control unit |
| ④ Pressure sensor | ⑨ ALNWR - Radio transmitting pushbutton |
| ⑤ Distance sensor | ⑩ MVS.B3E - Operator panel (HMI) |

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Agricultural vehicles & trailers



Seeders



Combine harvesters



Agricultural sprayers

Agri Solutions

In the agricultural machinery sector, ALMEC offers a variety of technological solutions and products that enhance the **efficiency**, **productivity**, and **sustainability** of agricultural operations. We provide **customized** and **cutting-edge solutions** to support modern and sustainable agriculture. Some specific applications include:

- **Automation and control systems:** ALMEC provides automation and control systems for agricultural machines such as tractors, combine harvesters, seeders, spreaders, and other equipment. These systems enable the control and automation of operations, improving the precision and yield of agricultural activities;
- **Electronic and mechanical components:** ALMEC offers a wide range of electronic and mechanical components for agricultural machinery, including electronic controls, engines, sensors, other supplies compatible with hydraulic systems, spare parts, and accessories. These components are designed to meet the specific needs of agricultural machines and ensure reliable and efficient performance.

DC Motor Controllers

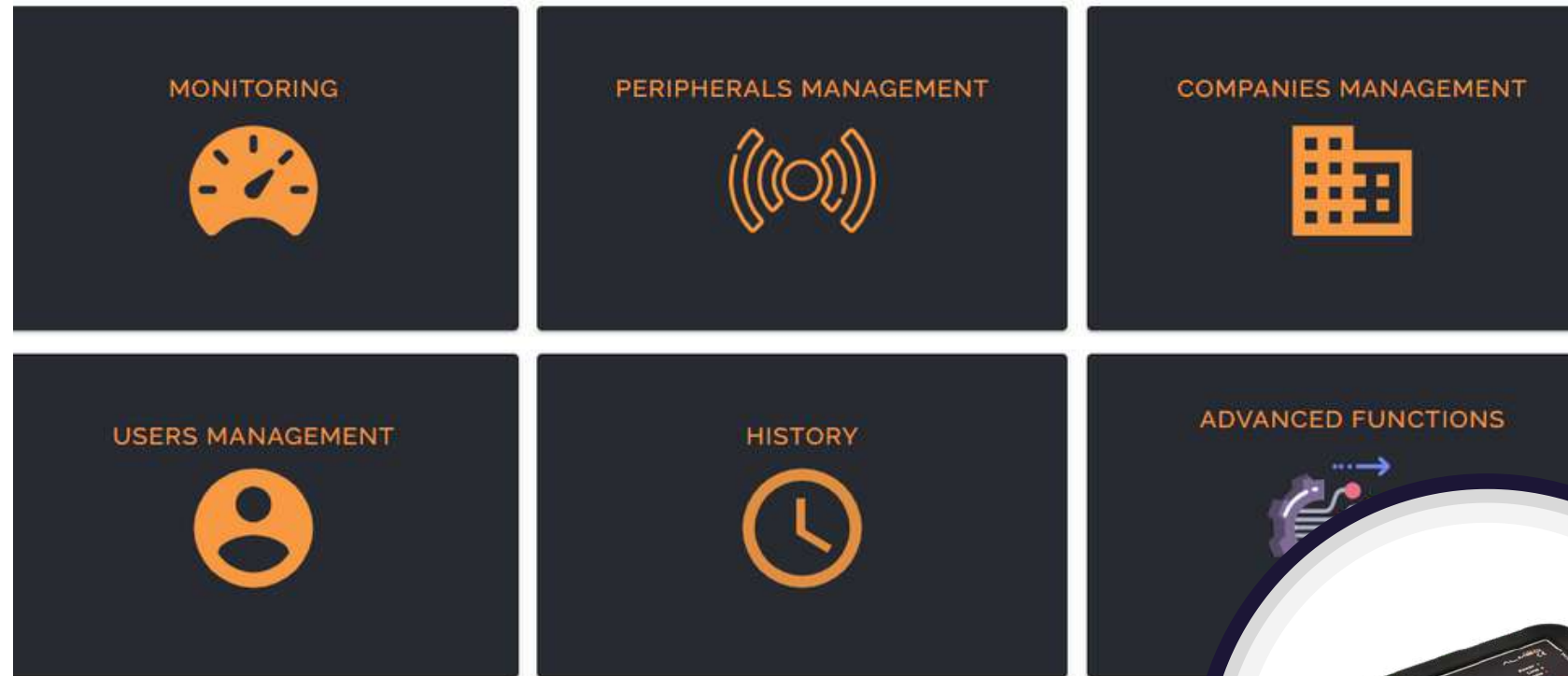
The **SPLIT driver** is designed to **control and manage direct current (DC) dual motor drive systems on vehicles**. This device is particularly suitable for vehicles that require traction and steering control. Among the main features:

- The device has **two proportional power channels**.
- The on-board electronics are equipped with a **redundant microcontroller** to ensure fail-safe operation and an **integrated, configurable tilt sensor** to limit or prevent selected functions when the vehicle is tilted.
- A software tool that can be used for **system diagnosis, software updates** and **device configuration**.
- The **CAN SLAVE version** allows you to manage the device via a CAN BUS network.



ALMECdiag

To continue select one of these menu items:



Fleet management solution

ALMECdiag System: an advanced monitoring and diagnosis subscription-based system that optimizes industrial and mobile machine management.

- Improving efficiency
- Reducing maintenance costs
- Preventing sudden failures
- Tracking your fleet in real-time

The ALMECdiag System provides a **detailed overview of machine status**, enabling operators to make informed decisions to maintain the **efficiency** and **productivity of industrial operations**.



Access control to the vehicle



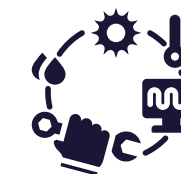
Usage statistics, forecasts & customized reports



Geofunctions and work areas management



Operational management & remote control



Corrective, preventive and predictive maintenance



Performance monitoring & real-time alerts



Business Timeline



Foundation

Using expertise and passion to create innovative electronic systems with high-added value, dedicated to the field of special machine setup. The start of **AL.MEC srl**.

2001



Split

AL.MEC services, branch dedicated to the mechanical equipment of vehicles, and mechanical and hydraulic repair;

AL.MEC engineering, branch for electronic design of products and systems, in the field of special machines set up.

2004



Mechatronics

Combining electronics with mechanics to create complex systems for the control of machines: **MECHATRONICS** branch starts.

The first sample of **SPIDER NODE** was created. The electronic node is pre-wired, programmable, and available in various configurations inserted in a resined case.

2011



New vision

The evolution towards **smart solutions** is mixed with ideas and investments focused on the digital field.

To understand and introduce the potential of **Industry 4.0**, at the door of the new industrial model, in the incubator of "Politecnico di Torino" the startup **ORCHESTRA srl** was founded.

2019



Turning point

Two platforms linked to the world of programming and Industry 4.0 and IoT come to life: **ALMEClab** and **ALMECdiag**, which soon become, a reference point for customers who can take advantage of innovative solutions, that ALMEC offers, for their machines.

At the same time, ALMEC partially acquired **EUROGI srl**, aiming to accelerate the company's growth and in 2023 opens a technology transfer office in India: **ALMEC ASIA PACIFIC**.

2023
EUROGI





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