

The Dynamic series includes a complete range of our newest products, which have been conceived and designed specifically for hydraulic machines. This new series strengthens Autec's presence in the off-highway and mobile sector with dedicated technology, products and resources.



FUNCTIONAL SAFETY remains the hallmark of Autec products. This is reflected in the whole lifecycle of radio remote controls, and involves the different stages of product design, development, manufacturing, testing and check. Safety functions performed by the Dynamic series meet and exceed the requirements of reference standards, anticipating future international standards; they comply with the requirements of the EN ISO 13849-1, which defines 5 Performance Levels (PL a = lowest, PL e = highest), and of the IEC 62061 (with its three Safety Integrity Levels, where SIL1 is the lowest and SIL3 the highest). In particular, the Stop Function is classified as **PL e/SIL3**, and the UMFS and UMWD functions (protection from Unintended Movement From Standstill / in Wrong Direction) are classified under **PL d/SIL2**. The Stop and UMFS functions are certified by TÜV Süddeutschland, the certification body that provides the highest competence in Functional Safety.

DATA INTEGRITY and **SECURITY** of radio communication (so important in a world where wireless systems are pervasive in many environments) meet an extremely high level of protection in the Dynamic series. A high integrity and proprietary coding system excludes the possibility that messages be “corrupted” by any radio communication or electromagnetic source. Each radio remote control uses a unique (produced only once), univocal (specific to each radio remote control) and non reproducible code, that only enables communication with the unit belonging to the same system.

The Dynamic series owes its name to one of its main features: **DYNAMIC ACCESS TO THE FREQUENCY BAND**. These radio remote controls use **TWO-WAY** communication to constantly scan the frequency band and automatically select a free frequency. Even in RF crowded places, where other radio remote controls or devices may cause radio disturbance, Dynamic systems ensure best performances and high reliability, making communication resistant to interference.

Each and any electronic boards undergo tests in temperature chambers, where their functions and correct operation are tested under extreme working conditions. Materials used in the production are designed to resist shocks (fall tests), chemical agents, severe weather, water and dust (IP65).

A removable electronic starting key (**S-KEY**) is present on the transmitter. The S-KEY can be moved, if needed, on a back-up transmitting unit: work is not interrupted if the main unit is damaged or cannot be used. The S-KEY contains the univocal address that enables recognition of the system’s units as well as custom configuration data.

Many functions and options available:

DATA FEEDBACK function: alarm, measurements and signals collected from the machines appear on a large graphic display with custom menus on the portable unit.

CABLE CONTROL: a plug-in cable can be used to replace wireless communication in special situations (i.e. flat battery, prohibited wireless communication).

A wide range of **ELECTRONIC CARDS** handling analog and digital inputs are available for additional functions.



TRANSMITTING UNITS

The series is based on a completely new communication and control electronics offering extreme flexibility of configuration and programming options to reach countless applications. FSA technology ensures short response time, thus providing high level performance and smooth and precise control of movements for the most diverse applications.

FJS TRANSMITTING UNIT

The **FJS** transmitting unit is suitable for a wide range of mobile applications. It may include 2 single- or dual-axis joysticks and several additional actuators chosen from a vast assortment (plus START and STOP).

1.54" graphic display option



FJL TRANSMITTING UNIT

The **FJL** joystick controller has been designed for applications where linear levers are preferred, thus resulting especially appropriate for hydraulic cranes. The FJL transmitting unit includes 4 to 6 proportional levers plus additional actuators. Joysticks are mounted in a row on a surface inclined by 45°, offering easy access to commands. The protecting frame also provides comfortable support for the user's hands and wrists.

1.54" graphic display option



FJM TRANSMITTING UNIT

A large, ergonomic joystick controller provides the greatest number of commands and functions: this is the **FJM** transmitting unit. Up to 4 dual-axis joysticks or 8 single-axis joysticks can be mounted, plus a wide range of actuators (switches, pushbuttons, potentiometers...), thus providing countless customized solutions. FJM adapts to complex applications and special machines with many functions (i.e. drilling machines, track mounted vehicles, tunnelling machines...)

2.7" graphic display option



RECEIVING UNITS

Both receivers successfully withstand the most severe environmental (IP 65, extended temperature range) and vibrations tests, thus resulting considerably robust and suitable for installation on vehicles.

CRS RECEIVING UNIT

The **CRS** receiving unit has been designed for an easy integration in a CAN/CANopen network. It handles up to 12 analogue commands and up to 64 digital commands. Its safety functions are sent both via CAN protocol and through solid state redundant outputs (MOSFET), so as to provide high safety levels (up to “PL = e”).

Its compact dimensions and the limited use of wiring (thanks to CAN communication) makes installations on vehicles easy even in small spaces.

Diagnostic signals are always displayed on the CRS receiver, indicating the state of the unit and of the CAN communication.



ARM RECEIVING UNIT

The **ARM** analogue receiving unit is available with either voltage- or current-driven mother boards, and handles up to 12 bi-directional proportional commands and 64 digital commands. Software programming and a wide range of optional cards make this receiver highly customizable and fit for the most diverse applications. CAN communication is also available on this receiver upon request.

The receivers' outputs are easily set by means of the Remote Setup function, with no need to open the receiver. A special pushbutton on the receiving unit enables the Remote Setup mode and all you have to do is calibrate the desired outputs.

